467, 467 Silage Special, and 567 Round Balers

OPERATOR'S MANUAL
467, 467 Silage Special, and 567 Round Balers

OME126851 Issue F2 (ENGLISH)

CALIFORNIA
Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

John Deere Ottumwa Works
LITHO IN U.S.A.

DCY

OME126851 F2

Introduction

Forward

E48423 –UN–17JUL00

567 with MegaWide Pickup, CoverEdge™ Net Wrap, and Optional Push Bar

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages. (See your John Deere dealer to order.)

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the implement will travel when going forward.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

THE TIRE MANUFACTURER'S warranty applicable to your machine may not apply outside the U.S.

AG,OUO6059,150 –19–21JUN00–1/1

Contents

Continued on next page

All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Continued on next page

Continued on next page

Safety

Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

T81389 –UN–07DEC88

DX,ALERT –19–29SEP98–1/1

Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

TS187 –19–30SEP88

DX,SIGNAL –19–03MAR93–1/1

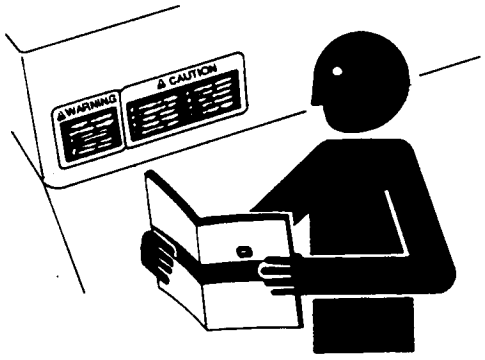
Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

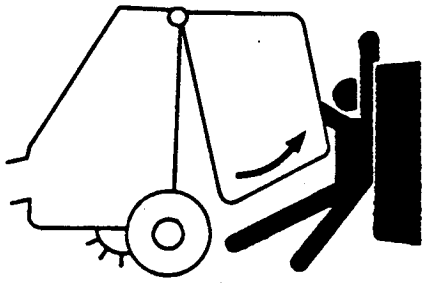


TS201 –UN–23AUG88

AG,OUO6059,152 –19–21JUN00–1/1

Protect Bystanders

To prevent crushing injury be sure bystanders stand clear before operating gate, and/or push bar (if equipped) and unloading bale.



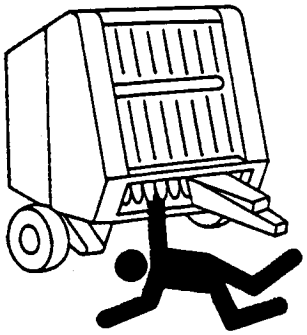
E32162 –UN–12SEP88

AG,OUO6059,153 –19–21JUN00–1/1

Operate Baler Safely

To avoid injury or death by being pulled into the machine:

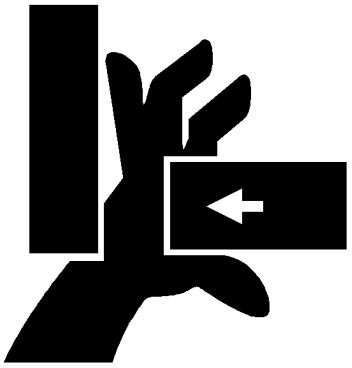
- DO NOT attempt to feed crop or twine into baler or unplug feed area WHILE BALER IS RUNNING. The baler feeds material faster than you can release it.
- Disengage PTO and shut off engine.
- Stand clear of baler at all times when machine is operating.



E32161 –UN–12SEP88

EX,435C,B –19–01SEP88–1/2

If baler plugs during twine arm cycle, it is recommended that twine arms be manually positioned to release any “hold” they may have on the crop plug. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to the arms is ON.



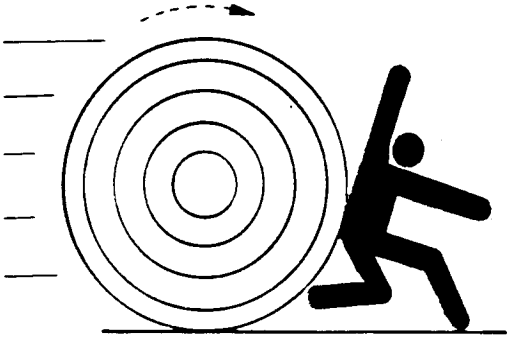
E47598 –UN–07JAN00

EX,435C,B –19–01SEP88–2/2

Operate Safely on Slopes

Be especially careful when operating on hillsides. The baler may tip sideways if it strikes a hole, ditch, or other irregularity.

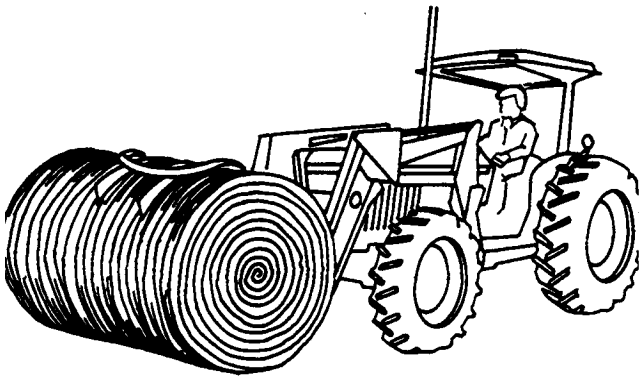
To prevent injury or damage from a rolling bale, discharge bales on level ground or in such a manner that the bale will not roll.



E36866 –UN–30APR92

EX,435C,C –19–14JUL92–1/1

Handle Round Bales Safely



To help prevent personal injury, do not handle round bales without approved John Deere Round Bale Handling attachments.

Improper use of loaders to handle round bales can result in serious injury or death to the tractor/loader operator. This could be caused by the bale rolling back down the loader into the operator's station.

To attain optimum stability and visibility:

- Do not handle bales that exceed the bale weight limitations of the loader.
- Carry the bale slowly and as low as possible to the ground.
- Operate the loader controls smoothly, avoiding jerky operation.
- When handling round bales on a slope, always approach the bale with the tractor facing uphill.
- Never use the tractor/loader to stop a rolling bale.

EX,435C,D –19–01SEP88–1/1

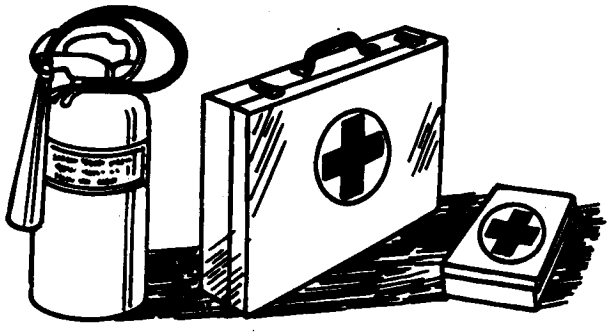
Keep Riders Off Machine

Keep riders off.

Riders are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

EX,945IC,H –19–13FEB97–1/1

Prepare for Emergencies



TS291 –UN–23AUG88

Be prepared if a fire starts.

1. Eject bale immediately.
2. Move tractor and baler upwind 9 m (30 ft) away from flammable material.
3. Raise gate and engage gate lock valve.
4. Use fire extinguisher or other water supply to put out fire.

A 9.5 L (2-1/2 gal) pressurized-water fire extinguisher is recommended. See manufacturers recommendation for inspection and maintenance.

Keep first aid kit handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

EX,435C,J –19–25OCT96–1/1

Fire Prevention

TS227 –UN–23AUG88

To reduce the risk of fire, follow these guidelines, especially in dry crop conditions:

- Equip the baler with a water-type fire extinguisher. Large capacity water fire extinguishers are recommended because application of water can cool hot parts to prevent a fire. (See Attachments section.)
- Keep foreign material (crop, chaff, twine, net wrap material, etc.) from building up on the machine near potentially hot areas, such as bearings on ends of baler rolls and slip clutch. Remove this buildup as part of the regular service operations.
- Avoid high pressure power-washing adjacent to the bearings on ends of baler rolls to prevent damaging seals.
- Check bearings on ends of baler rolls regularly for early signs of failure replace as necessary. (See Lubrication and Maintenance section or see your John Deere dealer.)
- If noticeable changes in machine performance occur which might indicate a part is beginning to fail, stop baling immediately and investigate the cause of any sounds, smells, or sights which are unusual.
- Promptly eject bales after they have been tied or wrapped. Do not use the baler to transport bales from the field. Do not bring a baler, with a bale inside it, into a building. Never leave a baler unattended with a bale inside the chamber.
- Use extreme care if it is necessary to park a baler in a field of dry crop or stubble. Whenever possible, park baler on bare ground or in an area surrounded by bare ground. Before leaving a baler which has been operating, verify there are no areas which are hot enough to start a fire. Do not leave the baler unattended near bales which have been baled wet, because spontaneous combustion can occur.
- If service operations require using a welder, cutting torch or grinder on the baler, refer to FIRE PREVENTION in Service—Baler section for guidelines which may prove useful in preventing a fire.
- Use extreme care when smoking around the baler.

EX,566C,N –19–16DEC97–1/1

In Case of Fire

TS227 –UN–23AUG88

Stop baling immediately at the first sign of trouble. This may be a scorched smell, an unusual sound, or the sight of smoke or flame.

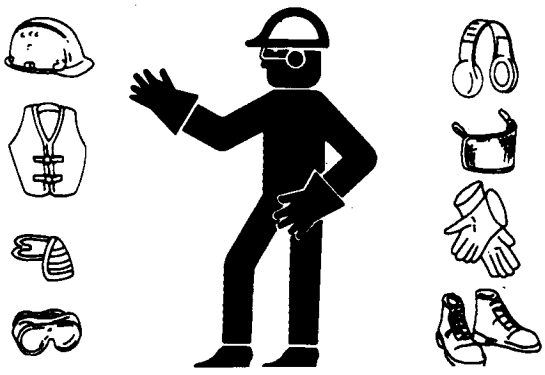
Do not risk personal injury. If a fire is too far advanced, do not try to extinguish it.

If you can safely extinguish the fire, proceed carefully and follow these guidelines:

- Position the tractor upwind from the baler to avoid the fire from overtaking the tractor.
- Open the baler gate to eject any crop material from the bale chamber, and drive away from this material.
- Use a fire extinguisher or other source to spray water at the base of the flame, and to cool adjacent parts. Do not position yourself under an open baler gate. It may fall if baler is on fire.

EX,566C,O –19–05SEP97–1/1

Wear Protective Clothing



TS206 –UN–23AUG88

Wear close fitting clothing and safety equipment appropriate to the job.

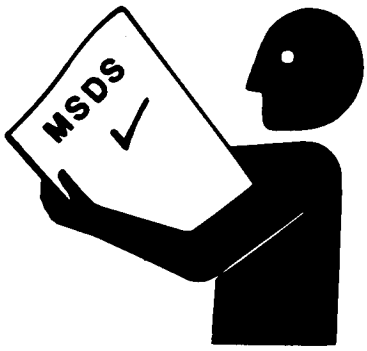
Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

DX,WEAR –19–10SEP90–1/1

Handle Chemical Products Safely



TS1132 –UN–26NOV90

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)

DX,MSDS,NA –19–03MAR93–1/1

Stay Clear of Rotating Drivelines

TS1644 –UN–22AUG95

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

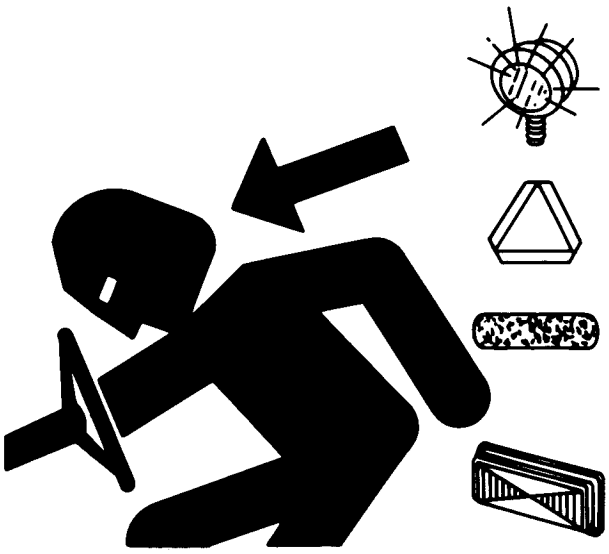
Wear close fitting clothing. Stop the engine and be sure PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

DX,PTO –19–12SEP95–1/1

Use Safety Lights and Devices

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere dealer.



TS951 –UN–12APR90

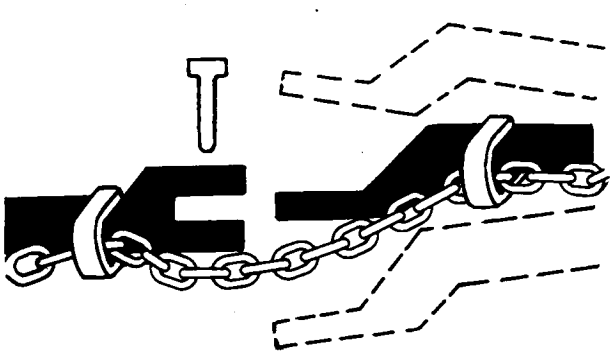
DX,FLASH –19–07JUL99–1/1

Use a Safety Chain

A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

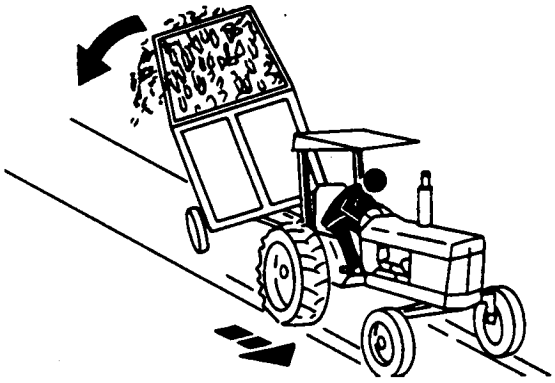
See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.



TS217 –UN–23AUG88

DX,CHAIN –19–03MAR93–1/1

Tow Loads Safely



TS216 –UN–23AUG88

Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

Observe these recommended maximum road speeds, or local speed limits which may be lower:

- If towed equipment does not have brakes, do not travel more than 32 km/h (20 mph) and do not tow loads more than 1.5 times the tractor weight.
- If towed equipment has brakes, do not travel more than 40 km/h (25 mph) and do not tow loads more than 4.5 times the tractor weight.

Ensure the load does not exceed the recommended weight ratio. Add ballast to recommended maximum for tractor, lighten the load, or get a heavier towing unit. The tractor must be heavy and powerful enough with adequate braking power for the towed load. Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

DX,TOW –19–02OCT95–1/1

Observe Maximum Transport Speed

The maximum transport speed for this implement is 32 km/h (20 mph).

Some tractors are capable of operating at speeds that exceed the maximum transport speed of this implement. Regardless of the maximum speed capability of the tractor being used to tow this implement, do not exceed the implement's maximum transport speed.

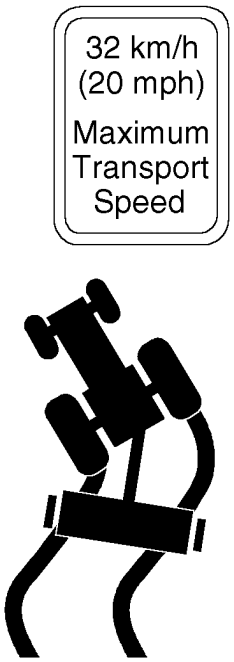
Exceeding the implement's maximum transport speed can result in:

- Loss of control of the tractor/implement combination
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to the implement structure or its components

Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and when on inclines.

Do not attempt transport if the fully loaded implement weighs more than 1.5 t (3,300 lb) and more than 1.5 times the weight of the tractor.

Never tow this implement with a motor vehicle.



A46805 –19–12JUN01

DX,TOW2 –19–18JUN01–1/1

Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet , and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.

TS218 –UN–23AUG88

DX,SERV –19–17FEB99–1/1

Remove Paint Before Welding or Heating

TS220 –UN–23AUG88

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 76 mm (3 in.) from area to be affected by heating.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT –19–19JUL01–1/1

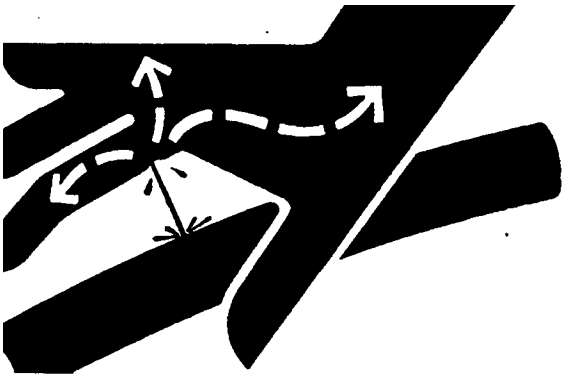
Avoid Heating Near Pressurized Fluid Lines

TS953 –UN–15MAY90

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.

DX,TORCH –19–03MAR93–1/1

Avoid High-Pressure Fluids



X9811 –UN–23AUG88

Escaping fluid under pressure can penetrate the skin causing serious injury.

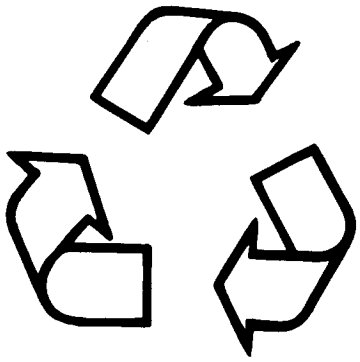
Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

DX,FLUID –19–03MAR93–1/1

Dispose of Waste Properly



TS1133 –UN–26NOV90

Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

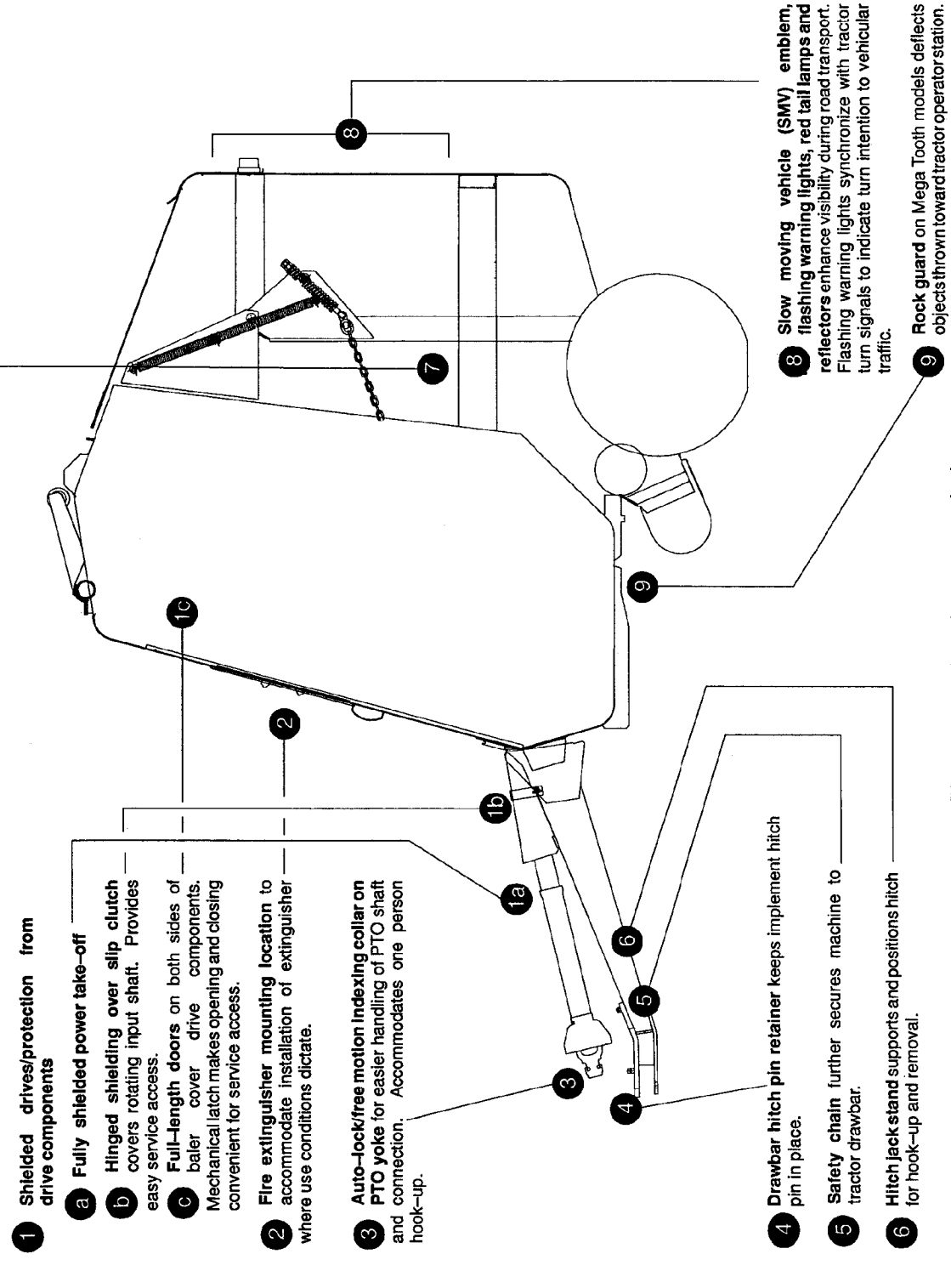
Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.

DX,DRAIN –19–03MAR93–1/1

John Deere Round Baler Safety Features

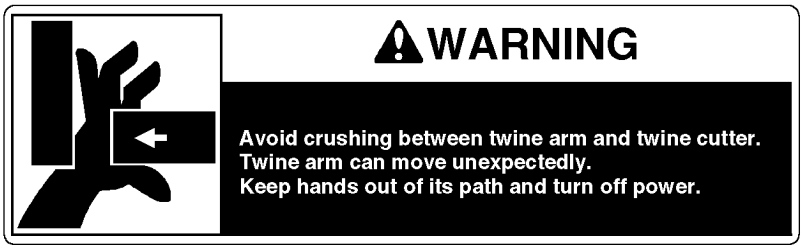


EX,05,SO213 –19–18APR98–1/1

Safety Signs

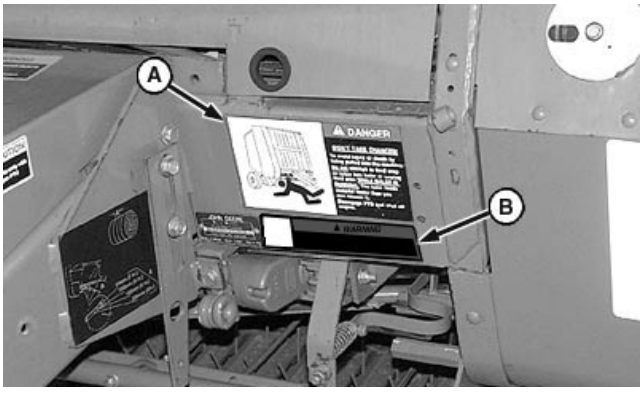
E39573 –19–13NOV95

(A)—Left-Hand and Right-Hand Sides



E47586 –19–05JAN00

(B)—Left-Hand Side Only



E47587 –UN–05JAN00

Front Frame (Left-Hand Side Shown)

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E39245 –19–12JUN96

MEGATOOTH™ Pickup Only

E41808 –UN–17DEC96

PTO Cover

E51221 –19–30JAN02

E51215 –19–30JAN02

E39574 –19–13NOV95

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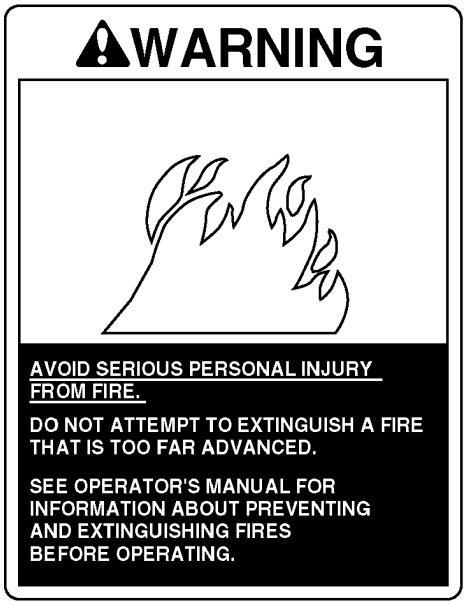
Front, Left-Hand Side

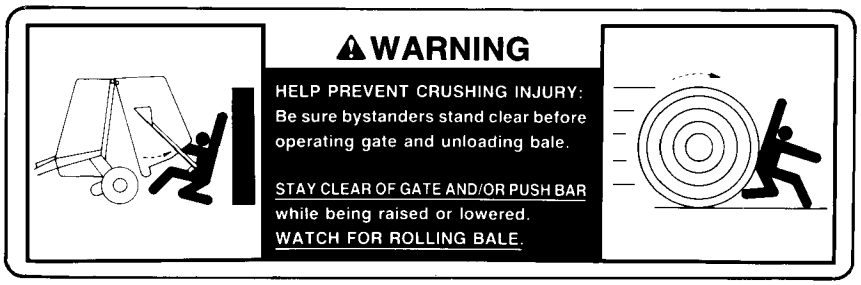
E47612 –UN–07JAN00



E43293 –19–22JUL97

OUO6059,000143D –19–04FEB02–3/13

E39568 –UN–13NOV95



E39576 –19–14NOV95

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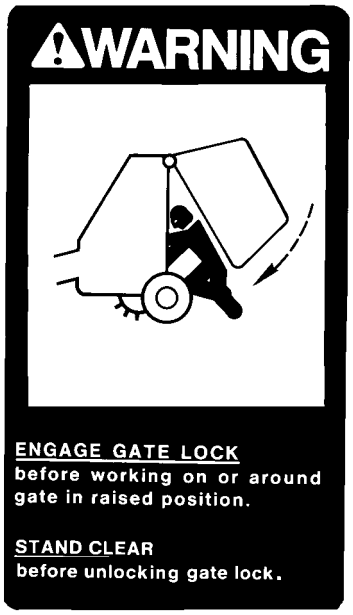

E39577 –19–14NOV95

E39569 –UN–13NOV95

Left-Hand Side

E39570 –UN–13NOV95

Left-Hand Side (Door Open)

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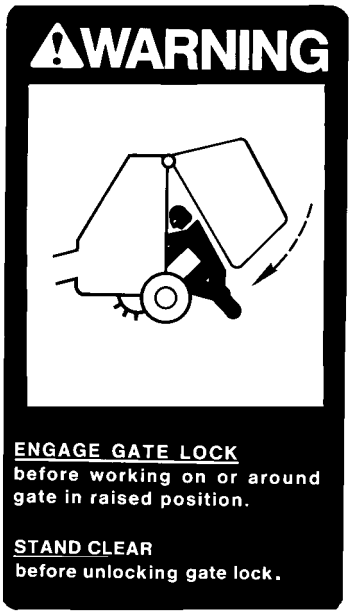
OUO6059,000143D –19–04FEB02–5/13



E39577 –19–14NOV95

E40052 –UN–04JUN96

Right-Hand Side

E40053 –UN–04JUN96

Right-Hand Side (Door Open)

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OUO6059,000143D –19–04FEB02–6/13

E36929 –19–22JUL92

E39571 –UN–13NOV95

Right-Hand Side

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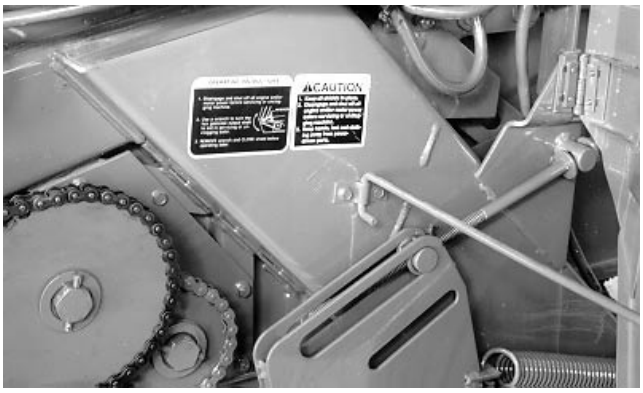
OUO6059,000143D –19–04FEB02–7/13

E36929 –19–22JUL92



E39572 –UN–13JUN96

Left-Hand Side

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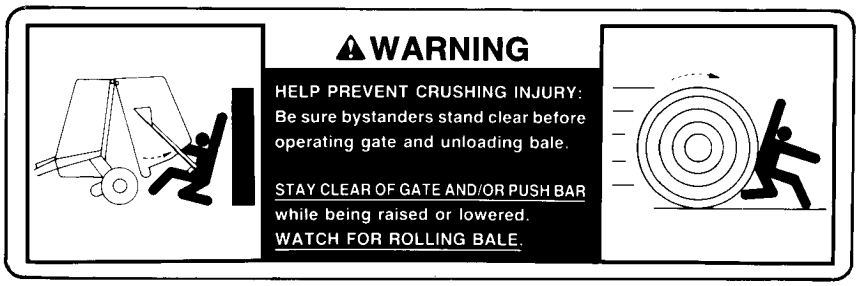
OUO6059,000143D –19–04FEB02–8/13

E48204 –UN–21JUN00

Surface Wrap Unit (If Equipped)



E39576 –19–14NOV95

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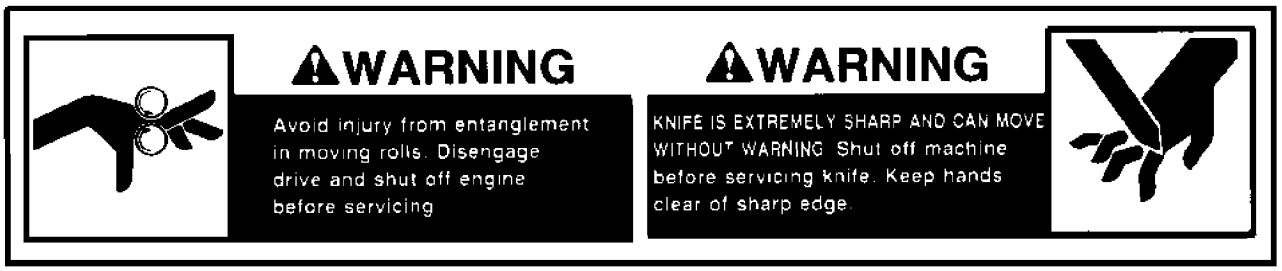
OUO6059,000143D –19–04FEB02–9/13

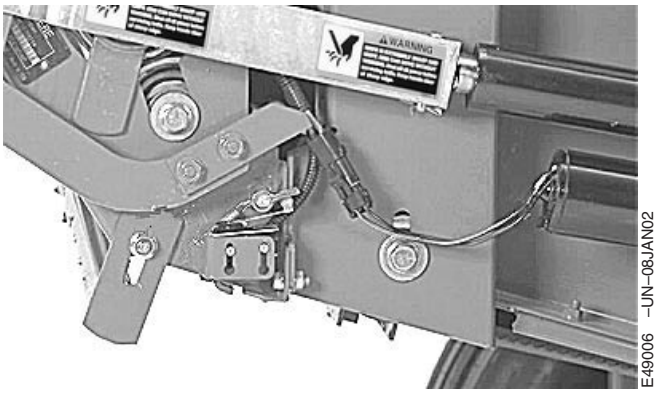
E48316 –UN–31JUL00

Surface Wrap Unit (If Equipped)—Cover Open



E35529 –19–15JUL96

OUO6059,000143D –19–04FEB02–10/13



E49006 –UN–08JAN02

E48741 –19–01AUG00

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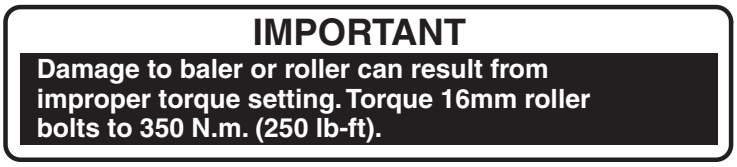
OUO6059,000143D –19–04FEB02–11/13

E51273 –UN–25FEB02

Right-Hand Side Shown

E51271 –19–25FEB02



E51272 –19–27FEB02

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OUO6059,000143D –19–04FEB02–12/13

E51345 –UN–28MAR02

Left-Hand Side Shown

E50423 –19–10SEP01

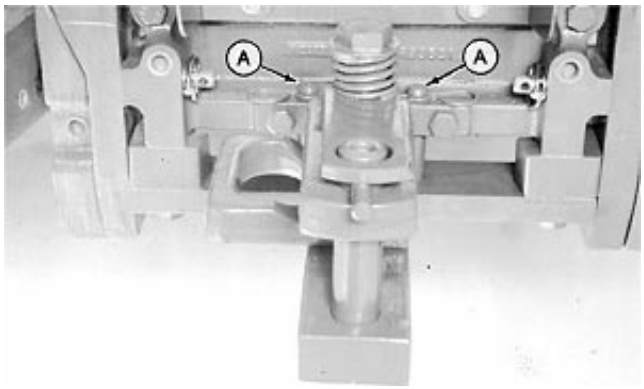
OUO6059,000143D –19–04FEB02–13/13

Adjusting Tractor Drawbar

CAUTION: To avoid personal injury, use locking pins to hold drawbar stationary when operating PTO-driven implements.

1. Remove locking pins (A) and slide drawbar to center position (shown).
2. Install locking pins.
3. Remove clevis assembly, if equipped.

A—Locking Pins



John Deere 7000 Series Tractor Shown

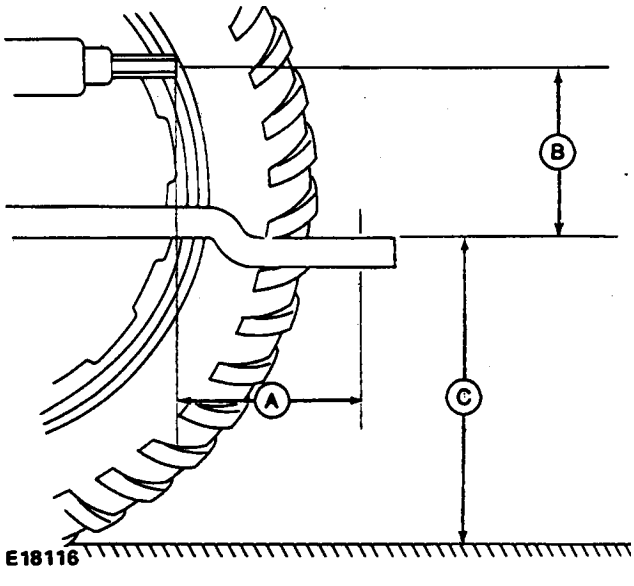
AG,OUO6059,154 –19–21JUN00–1/3

IMPORTANT: If shaft adapter is used to reduce 44 mm (1-3/4 in.) diameter shaft to 35 mm (1-3/8 in.) diameter shaft, measure from end of adapter to drawbar hole.

Failure to conform to the following setup dimensions can result in serious powerline damage.

4. If drawbar is offset, turn drawbar so offset is down, as shown.
5. Set drawbar to the following dimensions:

PTO Size	A mm (in.)	B mm (in.)	C mm (in.)
540 rpm	356 (14)	152—305 (6—12)	330—508 (13—20)
1000 rpm	406 (16)	—	—



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AG,OUO6059,154 –19–21JUN00–2/3

IMPORTANT: To avoid powerline damage when front of tractor "noses" down, there must be a minimum of 76— 89 mm (3—3.5 in.) clearance between powerline and top of hitch strap (A). Measure on level ground.

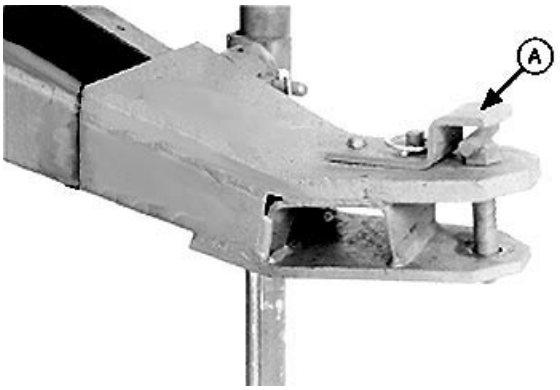
If tractor drawbar is too low the following problems may occur:

- Drag tall windrows
- Reduce feeding capacity by closing the feed opening
- Reduce pickup transport clearance
- Inadequate pickup float at recommended spring settings
- Slow bale discharge

To increase drawbar height, flip drawbar over (offset up).

If tractor drawbar is too high the following problems may occur:

- Pickup teeth won't touch ground
- Gate may not clear the bale during discharge



E44325 –UN–14AUG97

A—Hitch Strap

AG,OUO6059,154 –19–21JUN00–3/3

Using Heavy-Duty Tractor Drawbar

IMPORTANT: Some tractors may not be equipped with a drawbar strong enough for use with the baler. If so, replace drawbar with a heavy-duty drawbar.

Inspect your tractor drawbar frequently for cracking or bending. Replace it immediately if any damage is observed.

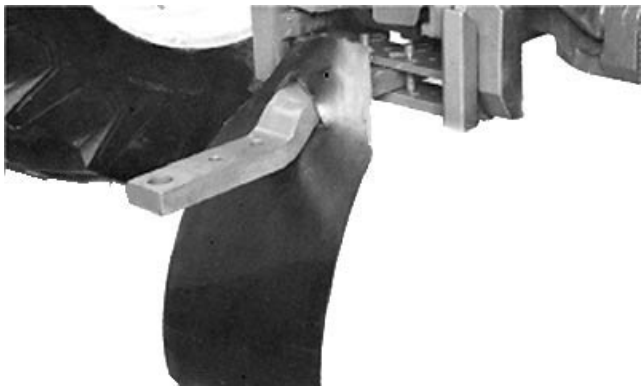
See your John Deere dealer for information on special heavy-duty drawbars that are available for many John Deere tractor models.

EX,466SV,A –19–01OCT96–1/1

Using Drawbar Shield

If a tractor drawbar catches and disturbs the windrow under the tractor, a drawbar shield can be used.

Order drawbar shield from your John Deere dealer or make shield using 2 or 4 ply belting (See MAKING DRAWBAR SHIELD in this section.)

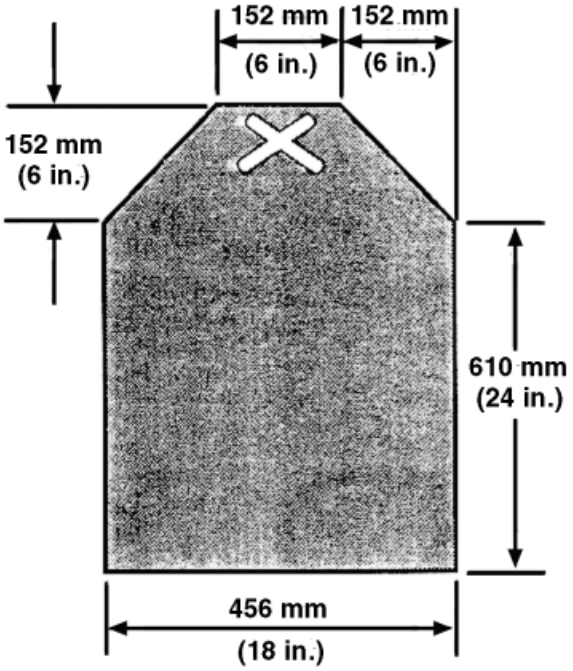


E26220 –UN–20FEB96

AG,OUO6017,1575 –19–25OCT99–1/1

Making Drawbar Shield

Use 2 or 4 ply belting.



E39660 –UN–02FEB96

AG,OUO6017,1576 –19–25OCT99–1/1

Three-Point Hitch Position

IMPORTANT: To prevent damage to PTO driveline when making turns, lock tractor lower lift links in the up position.

Lock tractor lower lift links in the up position. (Refer to tractor Operator's manual.)

EX,566V,O –19–08JUL96–1/1

Adjusting Tractor Wheels


E21602 –UN–12SEP88

NOTE: Adjust tractor wheels toward upper end of specifications to improve:

- *Bale shape by crowding ends of pickup*
- *Ability to pick up crop*

Adjust front wheels to provide an inside tire-to-tire dimension according to specifications.

Tire-to-Tire Inside Dimension	
467 and 467S	1372—1524 mm (54—60 in.)
567	1676—1829 mm (66—72 in.)

AG,OUO6059,155 –19–21JUN00–1/2


E21603 –UN–12SEP88

Adjust rear tractor wheels to provide an outside tire dimension of 2591—2743 mm (102—108 in.).

IMPORTANT: Do not make extremely short turns or cause the baler to jackknife while backing, as damage may occur to the PTO driveline and gathering wheels.

If gathering wheels are installed, the outside dimension of the rear wheels must not exceed:

- 467 and 467S; 2286 mm (90 in.)
- 567; 2388 mm (94 in.)

NOTE: If tread setting is too narrow, operator will not be able to make properly shaped bales without driving on windrow. This may result in bales with soft ends and loose twine. (See INTERPRETING BALE SHAPE BARS and WEAVING IN THE WINDROW in Operating the Baler section.)

AG,OUO6059,155 –19–21JUN00–2/2

Checking Ballast, Wheel Spacing, and Tire Inflation

Provide sufficient weight to stabilize tractor when operating on hilly land or other adverse conditions. (See your tractor Operator's manual).

To insure proper stability, adjust ballast, wheel spacing and tire inflation according to tractor Operator's manual.

EX,435V,D –19–26AUG97–1/1

Setting Tractor Hydraulic Outlets

The tractor must have one double-acting selective control valve (SCV).

If baler is equipped with optional Hydraulic Pickup Lift, the tractor must have an additional SCV. *(Two hydraulic circuits total.)*

Set tractor hydraulic remote outlets to provide approximately 5 second gate opening time.

For 6000 and 7000 Series John Deere tractors, adjust SCV lever for no detent, so lever returns to neutral when released.

For 8000 Series John Deere tractors, set detent time at 0. (See Hydraulics and Selective Control Valves section in tractor Operator's manual.)

For tractors with low hydraulic flow (less than 25 L/min [6.5 gpm]), install orifice in bale density control valve to prevent pinching belts when closing gate. (See INSTALL ORIFICE IN TRACTORS WITH LOW HYDRAULIC FLOW in the Service—Baler section.)

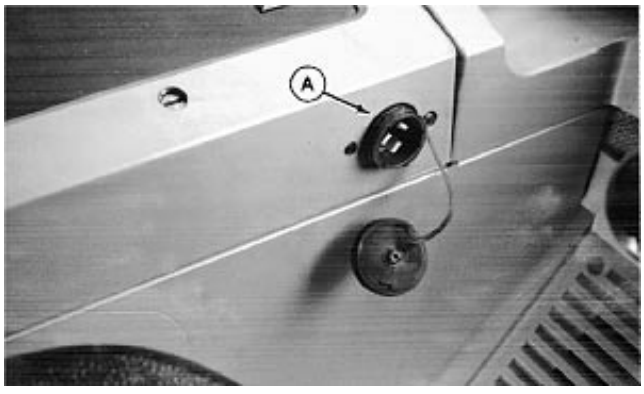
EX,566V,E1 –19–16DEC97–1/1

Tractor Convenience Outlet

John Deere 55 Series, 6000, 7000, or 8000 models

Plug BALETRAK *PLUS*® into the standard convenience outlet (A) located on side console.

A—Convenience Outlet



John Deere 7000 Series Tractor Shown

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AG,OUO6059,202 –19–10JUL00–1/3

Other tractor models without a convenience power outlet

Order convenience outlet kit AE50549 from your John Deere dealer. Only this kit should be used to provide a convenience outlet due to its wire size, lack of splices, and the circuit breaker included in kit. When installing kit, attach the power and ground wires directly to the battery terminal clamp bolts, only.

IMPORTANT: The BALETRAK *PLUS*® monitor-controller is polarity sensitive. The red lead from the monitor-controller power input MUST be installed on the positive (+) side of a 12 volt system. Failure to do so will cause failure of the internal 30 amp fuse in the monitor-controller.

E39605 –UN–27NOV95

Continued on next page

AG,OUO6059,202 –19–10JUL00–2/3

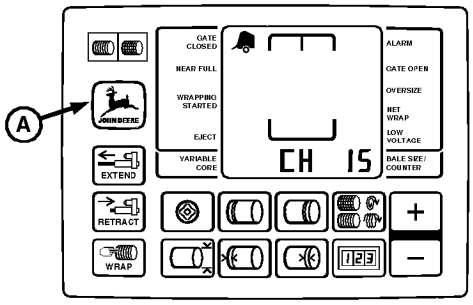
Other tractor models with a convenience power outlet

Complete the following check to determine if the convenience power outlet provides adequate power for the BALETRAK *PLUS*® system.

1. With tractor engine running, press and hold DEERE key (A). Set monitor-controller selector switch to TWINE mode. *Monitor-controller ON.*
2. Continue to hold DEERE key (A) and press PLUS key until “CH 15” appears in digital display.
3. Release DEERE key (A). View tractor voltage readout.
4. Using the EXTEND key, extend the twine actuator slightly.
5. Push and hold the RETRACT key until the actuator stalls out in the cutoff position and note the voltage displayed. Avoid holding the RETRACT key for more than 5 seconds after the actuator stalls out.
6. If voltage is less than 9.7, install convenience outlet kit AE50549. Order from your John Deere dealer.

IMPORTANT: The BALETRAK *PLUS*® monitor-controller is polarity sensitive. The red lead from the monitor-controller power input MUST be installed on the positive (+) side of a 12 volt system. Failure to do so will cause failure of the internal 30 amp fuse in the monitor-controller.

NOTE: Only this kit should be used to provide a convenience outlet due to its wire size, lack of splices , and the circuit breaker included in the kit. When installing the kit, attach power and ground wires directly to the battery terminal clamp bolts only.



E47602 –UN–07JAN00

A—Deere Key

AG,OUO6059,202 –19–10JUL00–3/3

Installing BALETRAK *PLUS*® Monitor-Controller on Open-Station Tractor

NOTE: Monitor-controller mounting bracket is available from your John Deere dealer.

Mount monitor-controller bracket on cowling or fender area. Be sure to check for mounting hardware clearance before drilling.

An additional monitor-controller unit is available to allow convenient changing of baler from one tractor to another.

E40573 –UN–22JUN96

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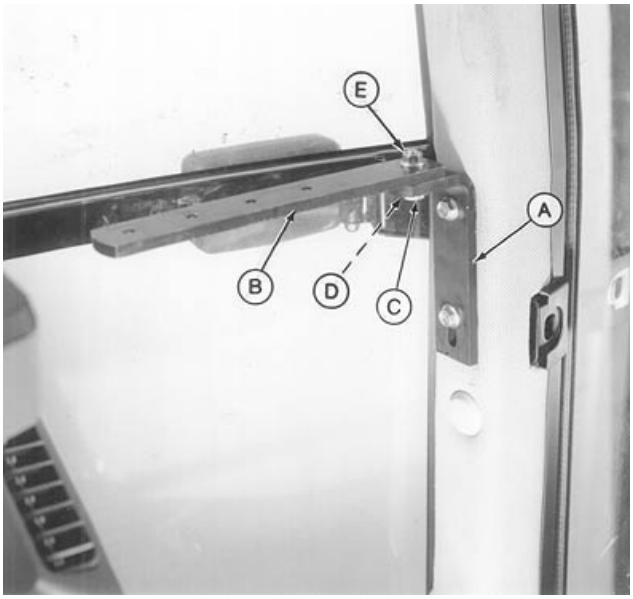
AG,OUO6059,201 –19–10JUL00–1/1

Installing BALETRAK *PLUS*® Monitor-Controller in ComfortGard™ Cab

1. Remove the top two plugs from lower right-hand front cab post.
2. Install angle (A) to cab post. Fasten with two M10 x 20 flange-head cap screws.
3. Install monitor-controller strap (B) to angle (A). Fasten with M10 x 35 cap screw (C), washer (D) and flange nut (E).

A—Angle
B—Monitor-Controller Strap
C—Cap Screw, M10 x 35
D—Washer
E—Flange Nut



E38450 –UN–25APR95

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ComfortGard is a trademark of Deere & Company

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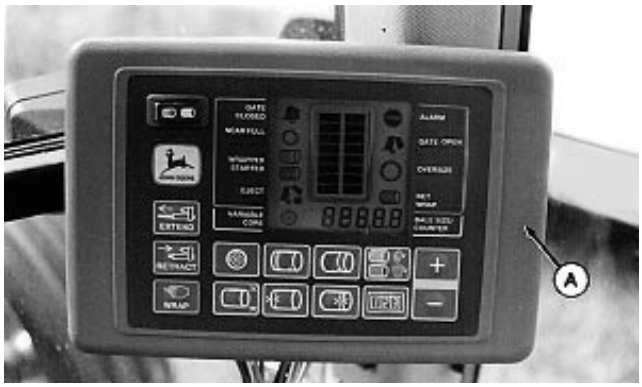
AG,OUO6059,200 –19–10JUL00–1/3

4. Put monitor-controller (A) pivot bracket on top of mounting bracket. Fasten with M6 x 16 cap screw.

5. Route harness along right-hand side of cab, away from operating levers, and toward the rear of cab.

A—Monitor-Controller

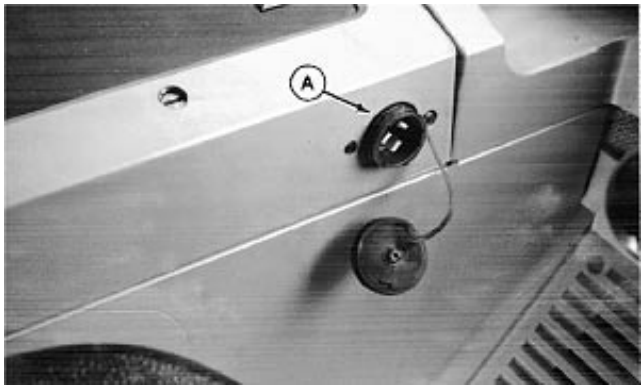


AG,OUO6059,200 –19–10JUL00–2/3

6. Connect harness power plug to convenience outlet (A).

7. Route harness through grommet in back of cab, or drill a 44 mm (1-3/4 in.) diameter hole in rear wall if required.

A—Convenience Outlet



John Deere 7000 Series Tractor

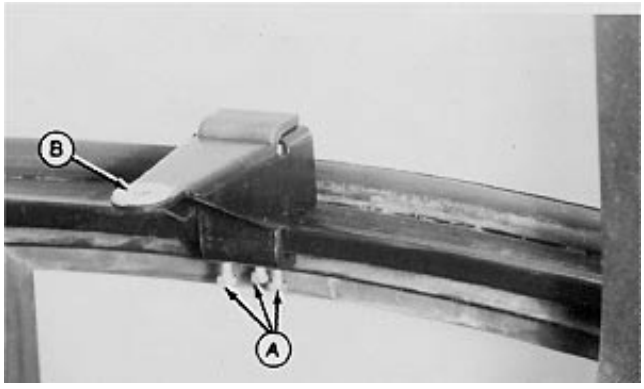
AG,OUO6059,200 –19–10JUL00–3/3

Installing BALETRAK *PLUS*® Monitor-Controller In SOUND-GARD® Cab

1. Assemble monitor-controller bracket (B) to base.

2. Attach base to window ledge. Fasten with three 5/16 x 1-3/4 in. cap screws (A).

A—Cap Screws, 5/16 x 1-3/4 in.
B—Bracket



BALETRAK PLUS is a registered trademark of Deere & Company
SOUND-GARD is a registered trademark of Deere & Company

Continued on next page

AG,OUO6017,1579 –19–26OCT99–1/3

3. Put monitor-controller (A) pivot bracket on top of mounting bracket. Fasten with M6 x 16 cap screw.

4. Route harness along right-hand side of cab, away from operating levers, and toward the rear of cab.

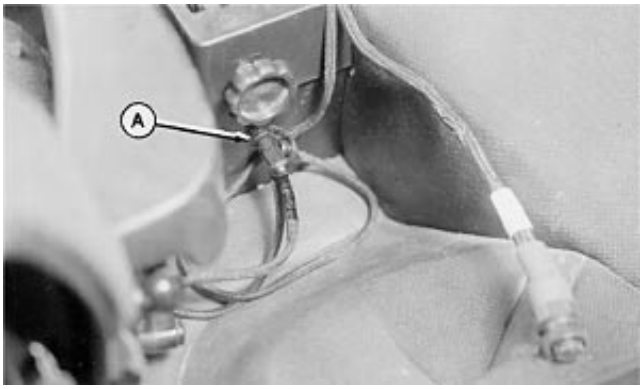
A—Monitor-Controller

AG,OUO6017,1579 –19–26OCT99–2/3

5. Connect harness power plug to convenience outlet (A).

6. Route harness through grommet in back of cab, or drill a 44 mm (1-3/4 in.) diameter hole in rear wall if required.

A—Convenience Outlet



AG,OUO6017,1579 –19–26OCT99–3/3

Using Extended Rear-View Mirror

Install an extended rear-view mirror on tractor to improve visibility of traffic behind the baler when towing on public roads. See your John Deere dealer.

EX,566V,N –19–27JUN96–1/1

Preparing the Baler

Checking Oversize Bale Switch

IMPORTANT: Damage to baler will occur if overfilled. To avoid baler damage, test switch prior to operating. Intent of switch is to alert operator that bale size has exceeded 1.8 m (6 ft.).

- **See TESTING GATE LATCH AND OVERSIZE BALE SWITCHES in Service—Baler section.**
- **See TESTING NET WRAP SWITCH in Service—Net Wrap section.**

AG,OUO6017,1580 –19–26OCT99–1/1

Selecting Twine

A good quality twine plays a very important part in proper baler operation. Select the twine which meets the ASAE standards for a more trouble-free baling operation.

Twine of good tensile strength and uniformity in size should be selected for proper baling operation. This will also help prevent twine from breaking during handling and transporting of bales.

EX,566I,A –19–31JAN96–1/1

Loading Left-Hand and Right-Hand Twine Boxes

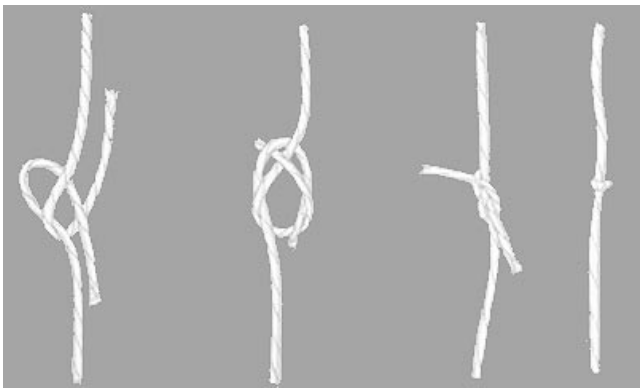
1. Place three balls of good quality twine in each twine box. Be sure twine is pulled from end of the ball marked "top".

IMPORTANT: The twine knot must be small enough to pass through the guides and twine arm.

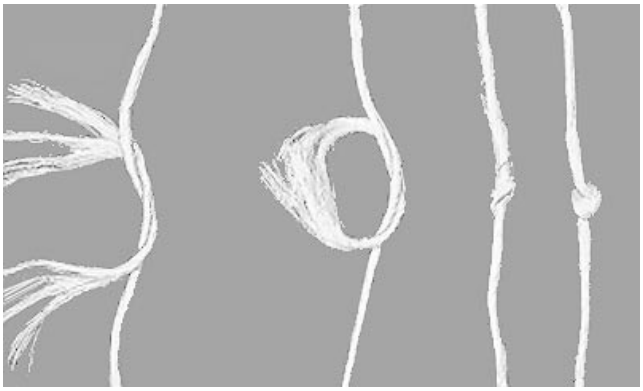
2. Join twine by tying the inside end of one ball to the outside of other ball.

   - Tie plastic twine balls together with a sheet bend knot.
   - Tie sisal twine balls together with a square or modified square knot.

3. Trim loose ends of twine as close to knot as possible.



Plastic Twine (Sheet Bend Knot)



Sisal Twine (Modified Square Knot)

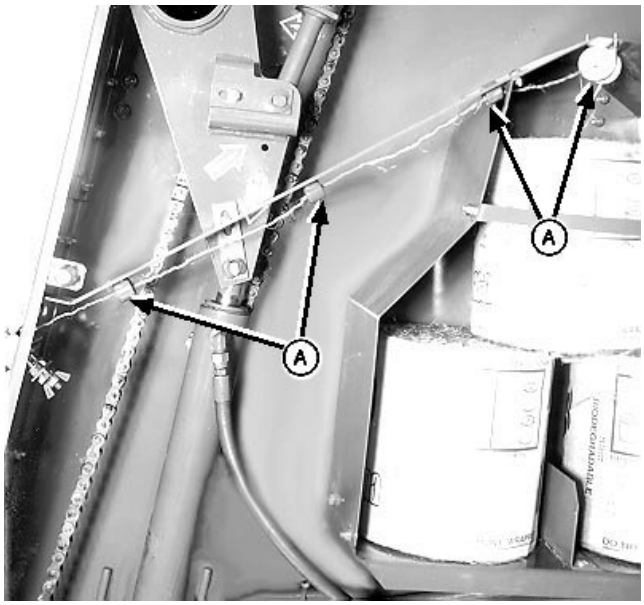
AG,OUO6059,203 –19–10JUL00–1/1

Routing Twine from Left-Hand Twine Box (Front Twine Arm)

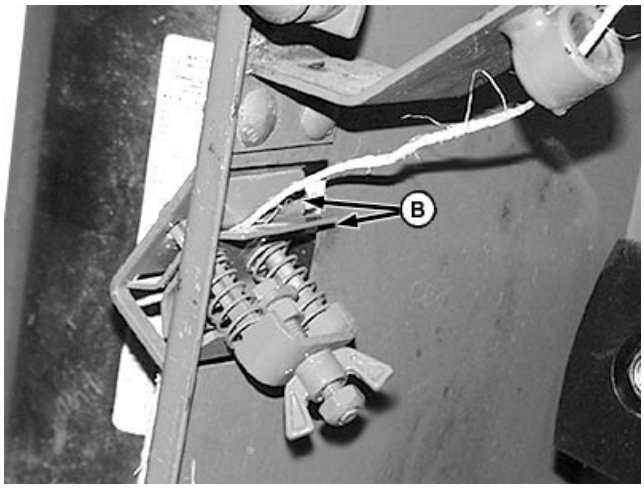
NOTE: A twine threading diagram is located on right-hand side of tongue.

1. Pull twine through guides (A), twine tension plates (B) and frame opening.

A—Twine Guides
B—Twine Tension Plates



E39768 –UN–26MAR96



E47613 –UN–07JAN00

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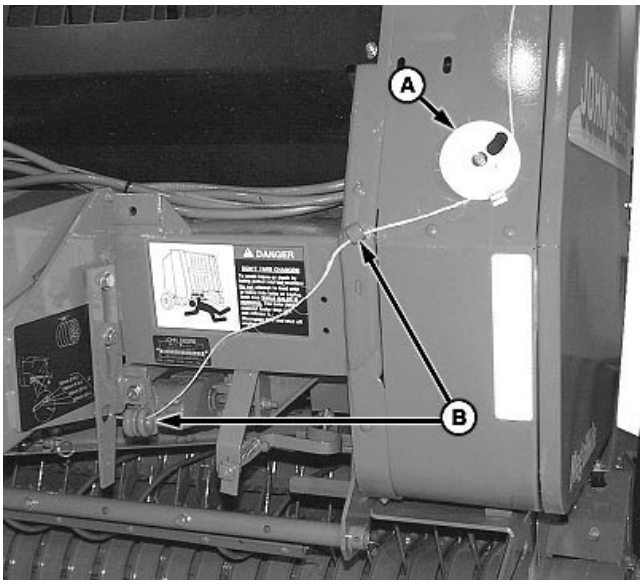
AG,OUO6059,199 –19–10JUL00–1/4

2. Wrap twine a FULL turn around twine moving indicator (A) when using plastic or small sisal twine. Check that indicator (A) is free to spin.

   Route twine around indicator (A) approximately one-quarter wrap, as shown, when using large sisal twine. *Wrapping large sisal twine a full turn around the indicator may cause the twine to cling to itself and break, or cause excessive twine tension.*

NOTE: If equipped with MEGATOOTH™ pickup, remove quick-lock pins and rotate curtains away from front frame.

3. Route twine through guides (B).



E48321 –UN–07JUL00

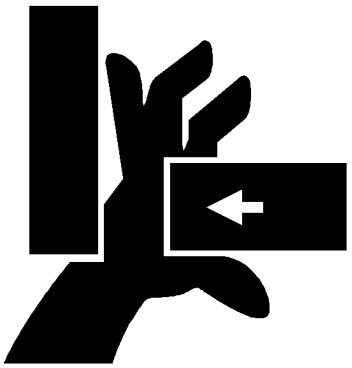
A—Twine Indicator
B—Twine Guides

Continued on next page

AG,OUO6059,199 –19–10JUL00–2/4

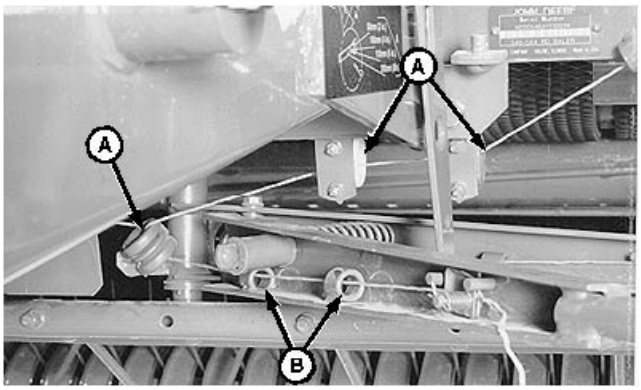
CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.



E47598 –UN–07JAN00

4. Route twine through guides (A) and front twine arm guides (B).



E40140 –UN–21JUN96

A—Twine Guides
B—Twine Arm Guides

Continued on next page

AG,OUO6059,199 –19–10JUL00–3/4

NOTE: Remove any crop buildup from tension plate area before threading twine.

5. Route twine over tension plate (A) and under guide pins. Pull on twine to get twine between plates.

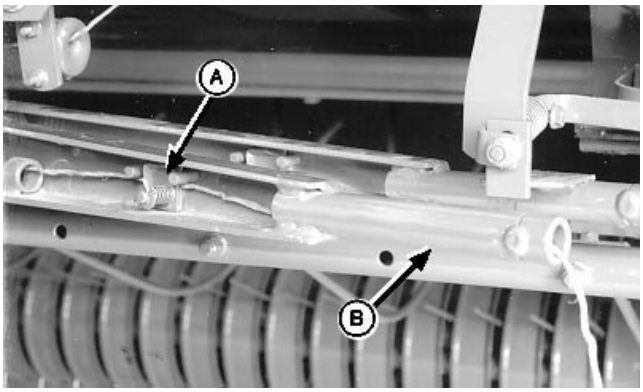
6. Pull twine through twine tube (B). Pull on twine to remove slack between guides. Twine pull should meet specifications with twine perpendicular to the twine arm. To adjust twine tension, refer to ADJUSTING TWINE TENSION in Operating the Baler section.

Specification

Twine Tension—Pull (Force)..... 22—45 N (5—10 lb force)

7. Cut twine 305—381 mm (12—15 in.) beyond twine tube (B).

NOTE: If equipped with MEGATOOTH™ pickup, return curtains to position and fasten with quick-lock pins.



E40524 –UN–15JUN96

A—Twine Tension Plate
B—Twine Tube

AG,OUO6059,199 –19–10JUL00–4/4

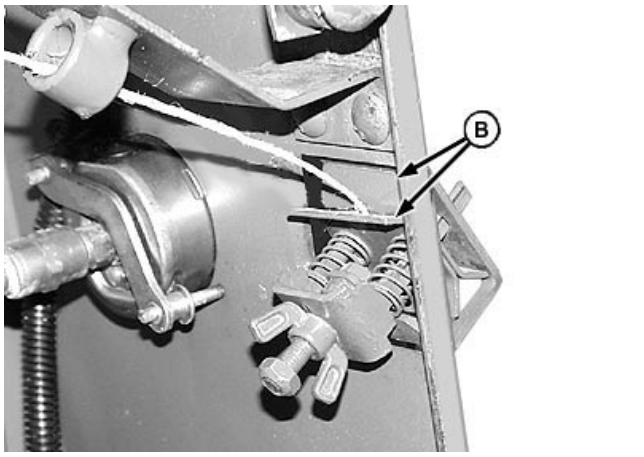
Routing Twine from Right-Hand Twine Box (Rear Twine Arm)

NOTE: A twine threading diagram is located on right-hand side of tongue.

1. Pull twine through guides (A), twine tension plates (B) and frame opening.

A—Twine Guides
B—Twine Tension Plates

E40600 –UN–26JUN96



E47614 –UN–07JAN00

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AG,OUO6059,198 –19–10JUL00–1/5

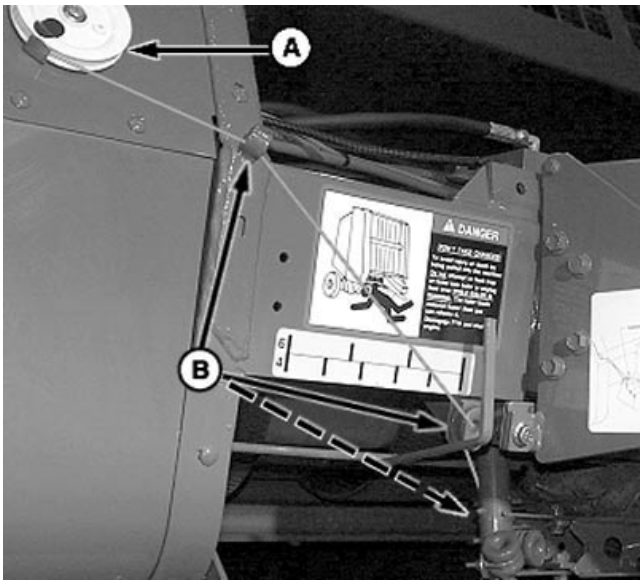
2. Wrap twine a FULL turn around twine moving indicator (A) when using plastic or small sisal twine. Check that indicator (A) is free to spin.

   Route twine around indicator (A) approximately one-quarter wrap, as shown, when using large sisal twine. *Wrapping large sisal twine a full turn around the indicator may cause the twine to cling to itself and break, or cause excessive twine tension.*

NOTE: If equipped with MEGATOOTH™ pickup, remove quick-lock pins and rotate curtains away from front frame.

3. Route twine through guides (B).

A—Twine Indicator
B—Twine Guides



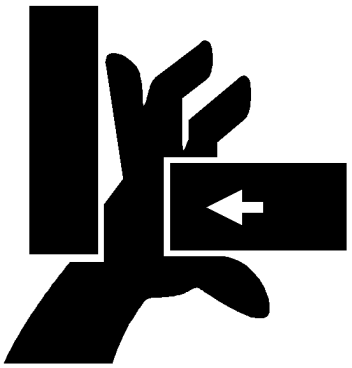
467S Shown

Continued on next page

AG,OUO6059,198 –19–10JUL00–2/5

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

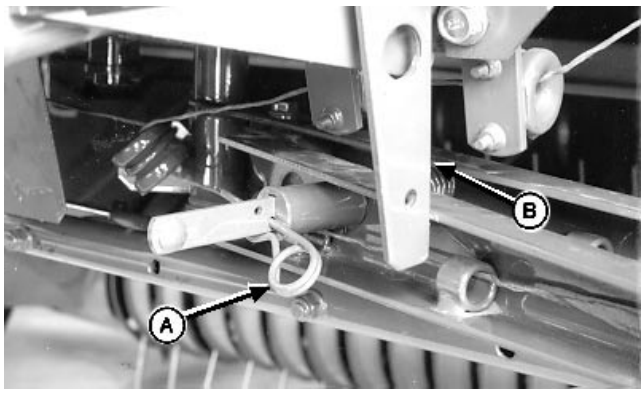
If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.



E47598 –UN–07JAN00

4. Hold twine arm tubes together and remove spring pin (A). Release twine arm tubes.

5. Lift twine arm stop (B) and move front twine arm away from rear twine arm.



E40534 –UN–19JUN96

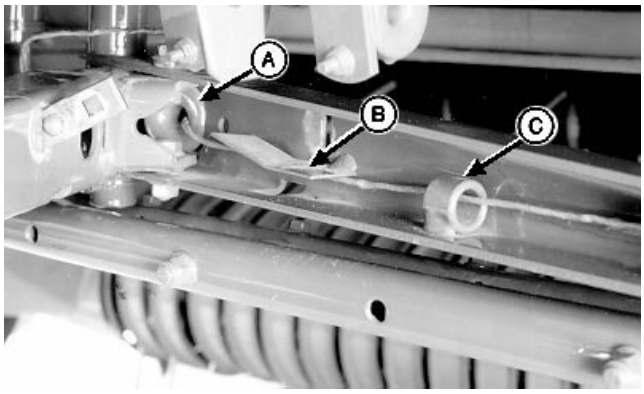
A—Spring Pin
B—Twine Arm Stop

AG,OUO6059,198 –19–10JUL00–3/5

NOTE: Twine spacing linkage removed for illustration purposes only.

6. Route twine through guide (A), under guide (B), and through guide (C).

A—Twine Guide
B—Twine Guide
C—Twine Guide



E40533 –UN–19JUN96

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AG,OUO6059,198 –19–10JUL00–4/5

NOTE: Remove any crop buildup from tension plate area before threading twine.

7. Route twine over tension plate (A) and under guide pins. Pull on twine to get twine between plates.

8. Pull twine through twine tube (B). Pull on twine to remove slack between guides. Twine pull should meet specifications with twine perpendicular to the twine arm. To adjust twine tension, refer to ADJUSTING TWINE TENSION in Operating the Baler section.

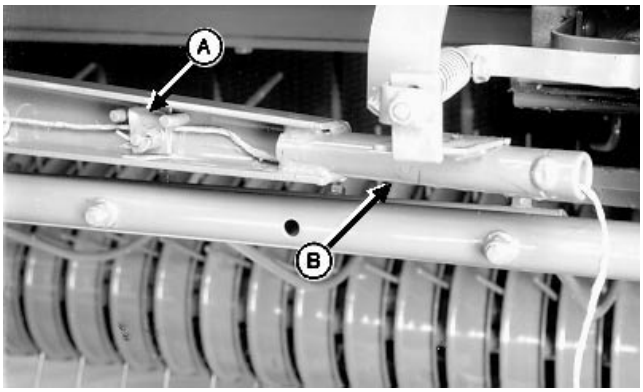
Specification

Twine Tension—Pull (Force)..... 22—45 N (5—10 lb force)

9. Cut twine 305—381 mm (12—15 in.) beyond twine tube (B).

10. Install spring pin, removed in step 4, in one of the four positions for desired twine spacing. (See SETTING TWINE SPACING in Operating the Baler section.)

NOTE: If equipped with MEGATOOTH™ pickup, return curtains to position and fasten with quick-lock pins.



E40535 –UN–19JUN96

A—Twine Tension Plate
B—Twine Tube

AG,OUO6059,198 –19–10JUL00–5/5

Wheel Spindle Positions—Regular or MEGATOOTH™ Pickup

Normal position (A) is recommended for most baling conditions.

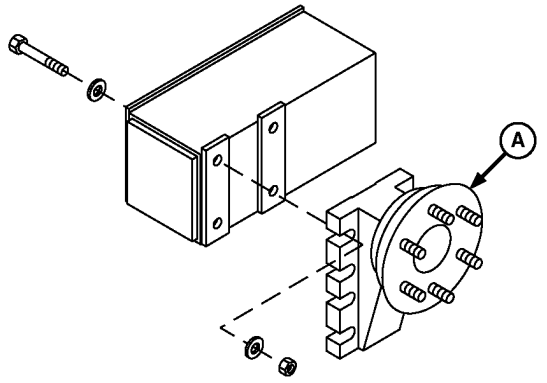
- Recommended with push bar.
- Pickup teeth may not touch the ground with pickup completely lowered depending on tractor drawbar height.

Lowered baler position (B) is recommended for short, dry, slick, or brittle crop conditions. (See BALING SHORT, DRY, SLICK CROPS in Operating the Baler section.)

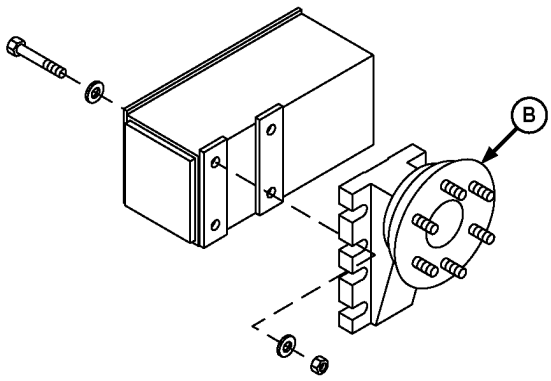
- Recommended with push bar.
- Pickup feeding capacity may be reduced especially in normal crop conditions.
- Pickup transport clearance will be reduced.
- Pickup gauge wheels (if equipped) will not provide a minimum of 25 mm (1 in.) of tooth to ground clearance. Use mechanical crank to control pickup height. (See ADJUSTING GAUGE WHEELS in Operating the Baler section.)
- Adjust pickup float springs to provide more force (float). (See ADJUSTING PICKUP FLOAT SPRINGS in Service—Baler section.)

Raised baler position (C) is recommended for cornstalks, straw crops with tall stubble, or soft ground conditions. (See BALING CORNSTALKS in Operating the Baler section.)

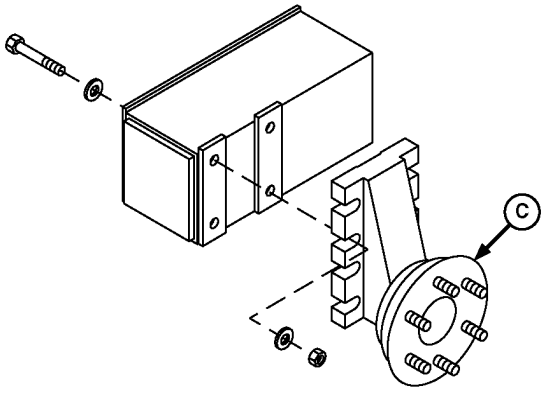
- Recommended with push bar.
- Pickup teeth will not touch the ground with pickup completely lowered.
- If pickup will not lower or bounces excessively, adjust pickup float springs to provide less force (float). (See ADJUSTING PICKUP FLOAT SPRINGS in Service—Baler section.)



E43294 –UN–22JUL97



E43295 –UN–22JUL97



E43296 –UN–22JUL97

A—Normal Position
B—Lowered Baler Position
C—Raised Baler Position

MEGATOOTH is a trademark of Deere & Company

AG,OUO6059,157 –19–22JUN00–1/1

Wheel Spindle Positions—MegaWide Pickup

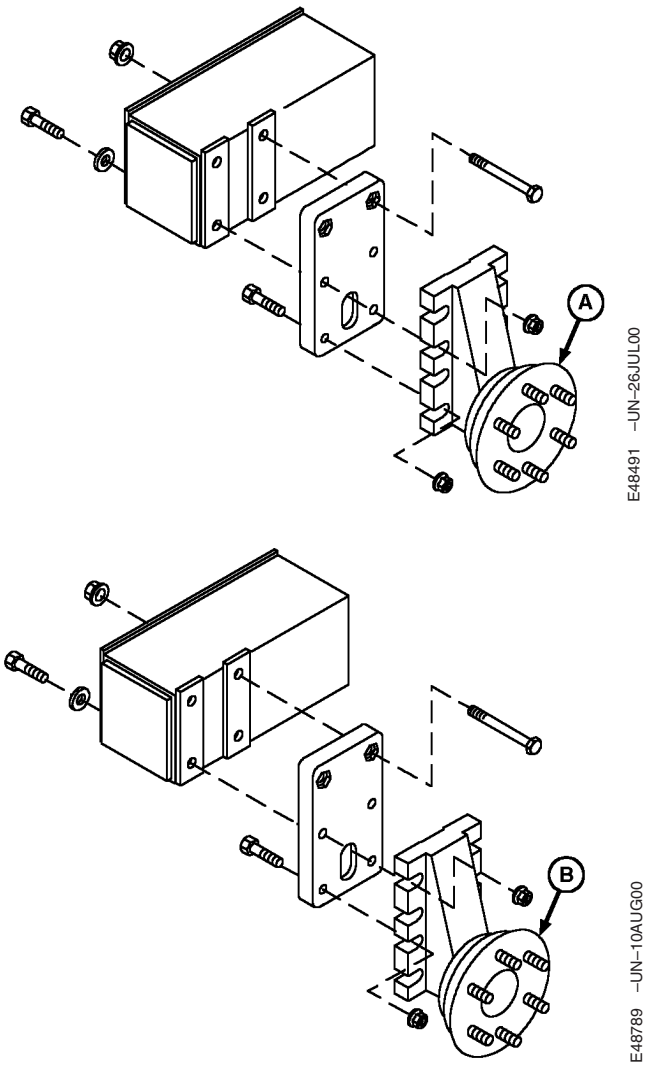
Normal position (A) is recommended for most baling conditions.

- Recommended for push bar.
- Pickup teeth may touch the ground with pickup completely lowered depending on tractor drawbar height.

Raised position (B) is recommended for straw crops with tall stubble and soft ground conditions.

- Recommended for push bar.
- Pickup teeth will not touch the ground with pickup completely lowered.

A—Normal Position
B—Raised Position



AG,OUO6059,25 –19–05MAY00–1/1

Adjusting Wheel Spindles

Wheel spindle positions are determined by tire size, pickup type, and crop conditions. (Refer to WHEEL SPINDLE POSITIONS in this section.)

1. Lift one side of baler using a floor jack.

2. Remove nuts, washers, and spindle.

NOTE: If removed, install spindle mounting bolts with nuts on outside of machine.

3. Reposition wheel spindle and reinstall hardware. Tighten nuts to specifications.

Specification	
Wheel Spindle Nuts—Torque	235 N•m (173 lb-ft)

4. Repeat procedure on opposite side.

AG,OUO6017,1588 –19–26OCT99–1/1

Tire Inflation Pressures

Tires	kPa (bar) (psi)
Hi-Flotation, 31 x 13.5-15, 8 PR[a]	207 (2.1) (30)
Regular or MEGATOOTH™ Pickup Gauge Wheels, 16 x 6.5-8, 4 PR	193 (1.9) (28)
[a]When making consistently heavy bales and/or operating with CoverEdge net wrap and bale push bar options, tires may be inflated up to 248 kPa (2.5 bar) (36 psi).	

AG,OUO6059,204 –19–10JUL00–1/1

Checking Wheel Nut Torque

IMPORTANT: Install wheels with valve stems toward the INSIDE. Incorrect assembly can cause wheel nuts to loosen.

Install wheel with valve stem toward the INSIDE. Fasten with six 1/2-in. nuts.

Whenever a wheel has been removed and installed, check torque after one hour of operation. Wheel nuts should be tightened to specifications.

Specification

Wheel Nuts—Torque ..... 115 N•m (85 lb-ft)

E48489 –UN–31JUL00

AG,OUO6059,197 –19–10JUL00–1/1

Preparing Baler for Net Wrap

Selecting Net Wrap Material

In order to achieve optimum performance, we recommend the use of high-quality net wrap. Use only John Deere approved net wrap material (See your John Deere dealer.)

467 and 467S; Use a roll size of 3000 m (9860 ft).

567; Use a roll size of 2000 m (6560 ft).

Edge to Edge net wrap is available, but requires spacer plugs in end of roll and adjustments made to the net wrap attachment. (See Adjusting Net Wrap Stretch in Service Section.)

AG,OUO6059,27 –19–05MAY00–1/1

Care of Net Wrap Material

Protect net wrap material from moisture and damage.

Snags can cause erratic performance and affect bale appearance and weatherability.

Store in a cool, dry place, away from direct sunlight.

Do not remove protective covering until ready for use.

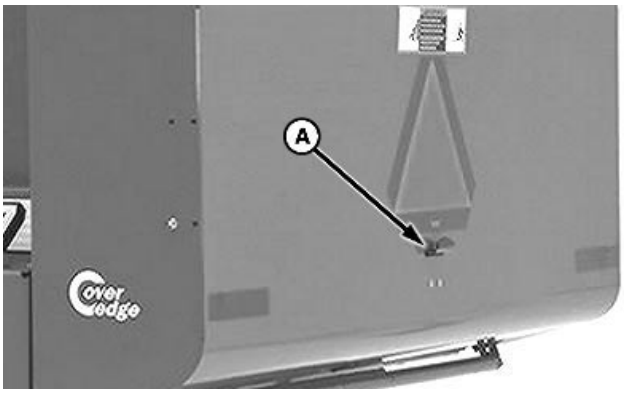
AG,OUO6059,26 –19–05MAY00–1/1

Opening and Closing Net Wrap Cover

CAUTION: Be sure PTO is disengaged, tractor engine is shut off and monitor-controller power plug is disconnected from tractor convenience outlet before opening cover.

Cover is spring loaded and will move up quickly when released.

1. Pull rearward on handle (A) and raise cover.
2. To close, pull cover down and push shut.



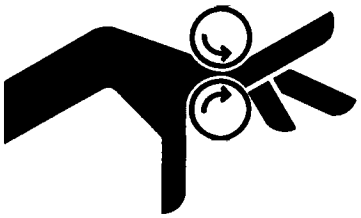
E48310 –UN–06JUL00

A—Handle

AG,OUO6059,196 –19–10JUL00–1/1

Using Net Wrap After Extended Storage

CAUTION: Avoid injury from net wrap system cycling and entanglement in moving rolls. Disengage PTO, shut off tractor engine and disconnect monitor-controller power plug from tractor convenience outlet before servicing.



E40200 –UN–08JUL96

To minimize startup problems after storage or after extended twine wrapping operation:

1. Raise net wrap cover. (See OPENING AND CLOSING NET WRAP COVER in this section.)

OUO6059,000143C –19–29JAN02–1/7

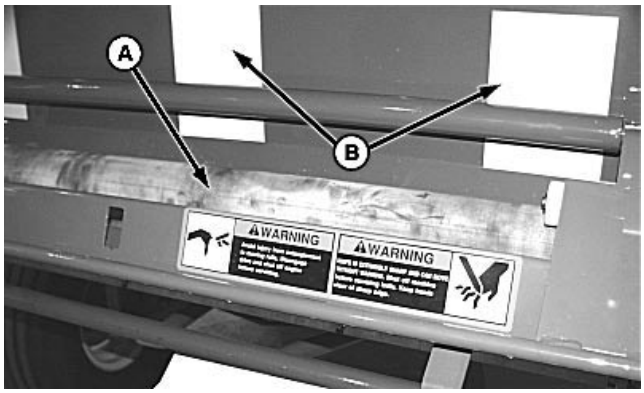
CAUTION: Be careful when working around the knife. It is sharp.

Be sure bystanders stand clear before operating net wrap.

2. Remove excessive dust or crop material from feed roll (A) and stainless steel net roll supports (B) with a dry cloth.

A—Feed Roll
B—Stainless Steel Plates

TS268 –UN–23AUG88



E48261 –UN–28JUN00

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OUO6059,000143C –19–29JAN02–2/7

3. Pull lever (A) out and up.

IMPORTANT: Current overload protection to net actuator is bypassed when using channel 14. Extended use of channel 14 may cause actuator damage.

NOTE: Channel 14 allows operator use of EXTEND and RETRACT keys to position net actuator for service.

   a. Turn tractor key to ON position. Do not start tractor engine.

   b. Press and hold DEERE key while setting monitor-controller selector switch to NET. "CH 01" will appear in the digital display.

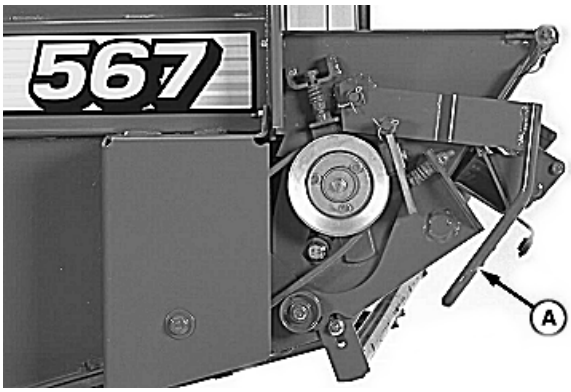
   c. Continue to hold DEERE key and press PLUS key to advance to "CH 14". Release DEERE key.

   d. Press and hold EXTEND or RETRACT key to move counterknife to the down position.

   e. Turn tractor key to OFF position. Remove key. Set monitor-controller selector switch to OFF (centered) position. Disconnect monitor-controller power plug from tractor convenience outlet.

4. Pull lever out and latch in down position.

5. Close net wrap cover.



E51042 –UN–02JAN02

A—Lever

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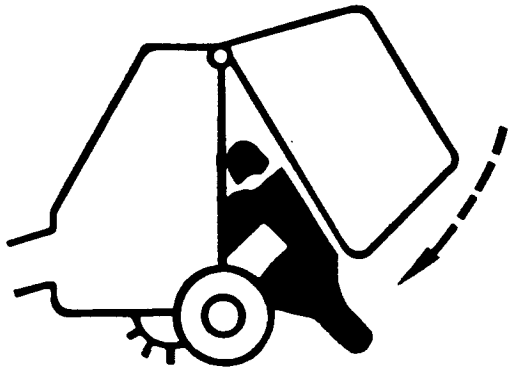
CAUTION: When positioning the gate to provide access for service, always be sure tension arm is fully raised, and against its stops. This is to prevent the gate from rotating downward unexpectedly while service work is being performed. ALWAYS raise the gate fully and lower it to the desired opening height before engaging the gate lock. Crop material can hold the tension arm at a lower position, and if this material is disturbed during service, the tension arm can swing up, and the gate can swing suddenly downward, even if the gate lock is engaged. Verifying that tension arm is positioned against its stops will avoid this situation. Failure to do this may result in serious injury or death.

Close the gate any time baler must be left unattended.



TS698 –UN–21SEP89

IMPORTANT: Do not lower gate with the lower net wrap guide assembly detached from the belt guide or damage to the guide will result.

Do not operate the baler belts with the lower net wrap guide assembly detached from the belt guide, or belt damage may result.

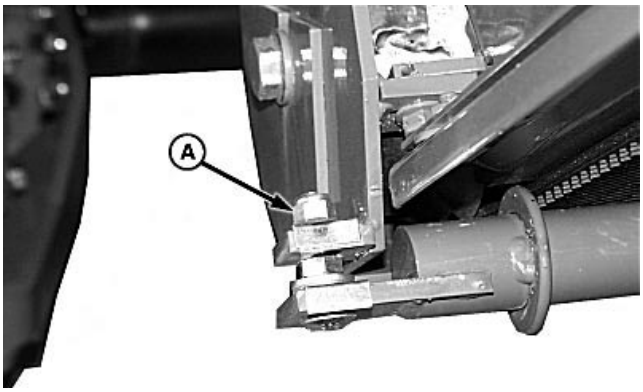
6. Start tractor engine.
7. Raise gate fully, then lower gate until lower front gate roll is approximately 1 m (3-1/3 ft) above the ground.
8. Shut off tractor engine and remove key.
9. Lock gate.

Continued on next page

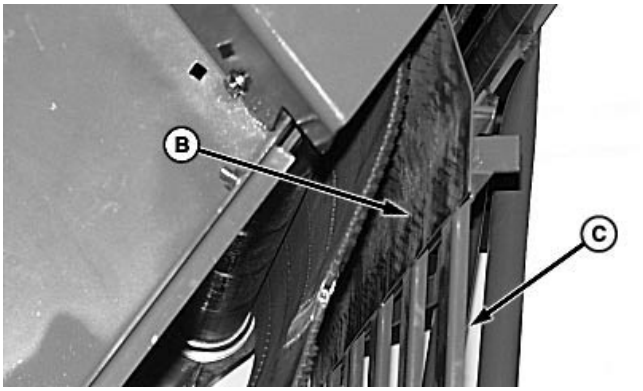
CAUTION: Guide will swing back when lower lock nuts are removed. DO NOT let guide swing back freely, may cause machine damage.

10. Remove lock nut (A) holding front corners of lower net wrap guide assembly to gate upright.
11. Repeat on opposite side.
12. Swing front of guide assembly (C) away from gate roll.
13. Polish all of sheet metal area (B) until smooth using SCOTCH-BRITE®or ultra-fine sandpaper. When using sandpaper, polish marks must be parallel to movement of mesh.

A—Lock Nut
B—Sheet Metal Area
C—Guide Assembly



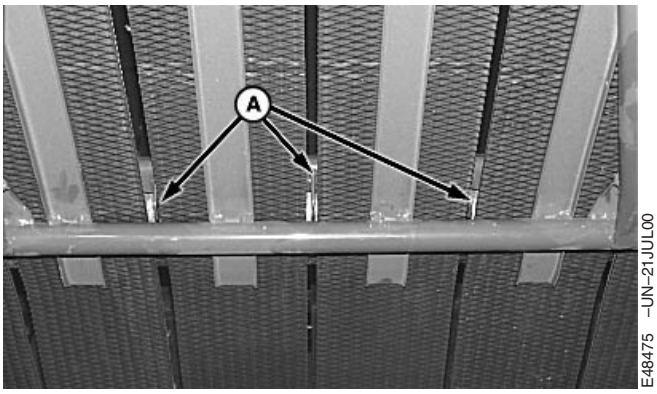
Left-Hand Shown



SCOTCH-BRITE is a registered trademark of the 3M Company.

OUO6059,000143C –19–29JAN02–5/7

14. Position belts between guide straps (A).
15. Swing front of assembly toward the bottom front roll.



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OUO6059,000143C –19–29JAN02–6/7

16. Align the holes and install lock nut (A).

IMPORTANT: If belt guide strap clearance is excessive, damage to baler belts can occur.

If belt guide strap clearance is insufficient, slitting of net material during feeding can occur.

17. Check and adjust clearance between ends of all belt guide straps and the bottom cross-member. (See CHECKING AND ADJUSTING LOWER NET WRAP GUIDE in Service—Net Wrap section.)

18. Tighten lock nut (A) on each side.

19. Start tractor engine.

20. Unlock gate and lower fully.

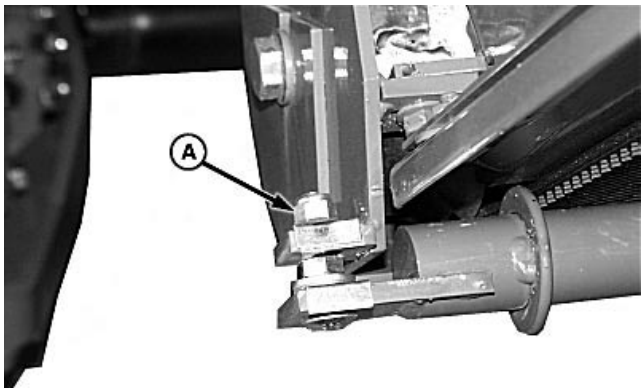
21. Shut off tractor engine.

IMPORTANT: If Steps 22 through 25 are not followed, net will be fed continuously during the next bale.

22. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Set monitor-controller selector switch to NET.

23. Press WRAP key to return net knife arms to home (forward) position.

24. Turn tractor key to OFF position. Remove key. Set monitor-controller selector switch to OFF (centered) position.



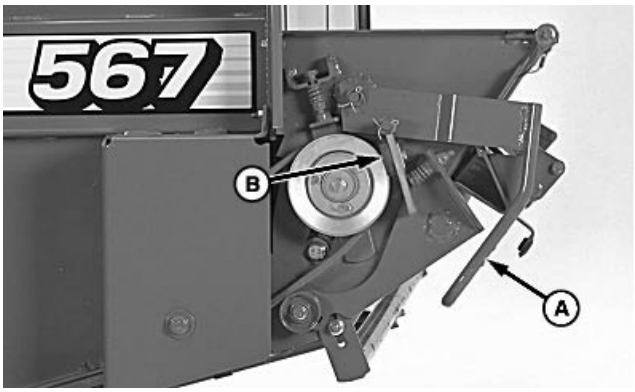
A—Lock Nut

OUO6059,000143C –19–29JAN02–7/7

Manually Releasing Net Wrap Brake

IMPORTANT: It is recommended to disengage and engage net wrap brake DAILY, before starting baler operation. This helps to slightly reposition the feed rolls and avoid wrappage due to cling of net material on the rubber roll surface.

1. Disengage PTO, shut off tractor engine and disconnect monitor-controller power plug from tractor convenience outlet.
2. Open net wrap cover.
3. Move lever (A) out and back to disengage roller brake pad (B).
4. To re-engage net wrap drive, return lever (A) to engaged position and check that pad (B) contacts belt pulley.
5. Close net wrap cover.



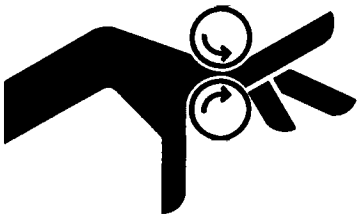
E48226 –UN–23JUN00

A—Lever
B—Brake Pad

AG,OUO6059,188 –19–23JUN00–1/1

Threading Net Wrap and Routing Through Rolls

CAUTION: Avoid injury from net wrap system cycling and entanglement in moving rolls. Disengage PTO, shut off tractor engine and disconnect monitor-controller power plug from tractor convenience outlet before servicing.



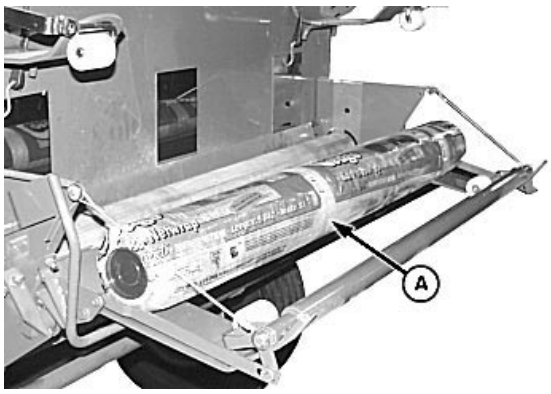
E40200 –UN–08JUL96

NOTE: If using existing (shorter) roll of net wrap, see your John Deere dealer for instructions to position roll of material in the CoverEdge™ net wrap unit.

1. Open net wrap cover.

NOTE: Remove all package material (staples, tape, etc.) from net wrap roll before installing.

2. Swing lower tension arm out, and lift net wrap roll (A) to loading position.

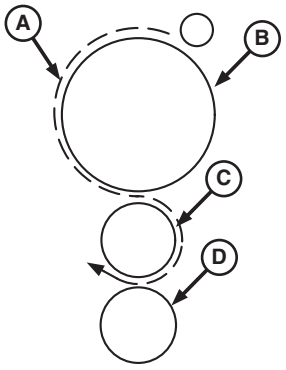


E51064 –UN–08JAN02

A—Net Wrap Roll

AG,OUO6059,195 –19–10JUL00–1/5

3. Net wrap needs to have two large stripes toward the right-hand side of machine. Thread net wrap (A) through rolls (C and D) as illustrated.



E48781 –UN–09AUG00

A—Net Wrap
B—Net Wrap Roll
C—Rubber Roll
D—Steel Roll

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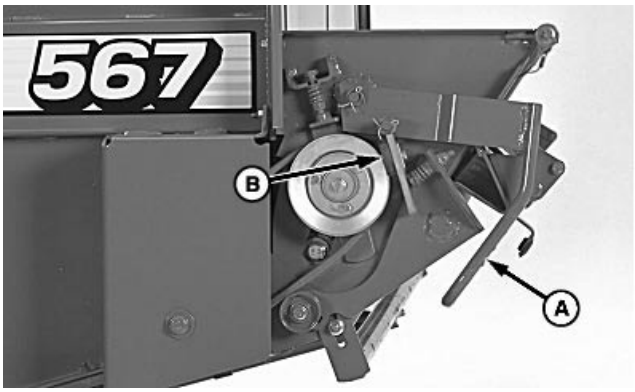
AG,OUO6059,195 –19–10JUL00–2/5

4. Pull lever (A) out and back to disengage roller brake pad (B).

A—Lever
B—Brake Pad



AG,OUO6059,195 –19–10JUL00–3/5

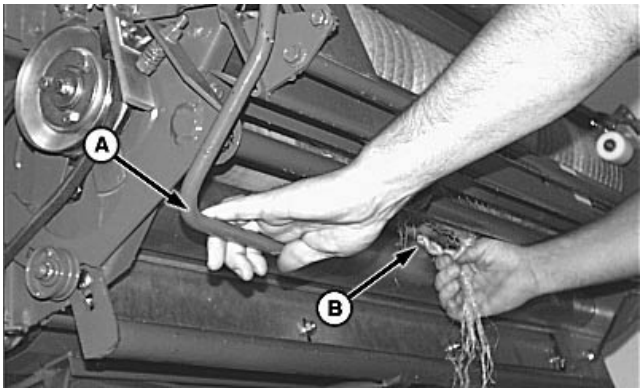
IMPORTANT: Do not thread more than 25 mm (1 in.) of loop between the two rolls or it may cause material to wrap around the rolls.

IMPORTANT: Avoid knife contact with rubber roll. Any knife cuts in the rubber roll covering may result in more frequent wrapping around the rolls and may require roll replacement.

NOTE: If net wrap is not being pulled off the front face of roll, the net roll has been installed backwards. (Refer to Step 1 for correct installation.)

5. Gather the loose ends of net wrap together. Twist material (B) and make a loop. Thread the loop between rolls. Cut excess material off. Ratching the brake lever (A) will turn rubber roll and start net wrap between two rolls. Engage and disengage brake lever about three times to advance net through feed roll.

6. To avoid wrapping rubber roll, release brake lever and reset brake before using.



A—Lever
B—Net Wrap

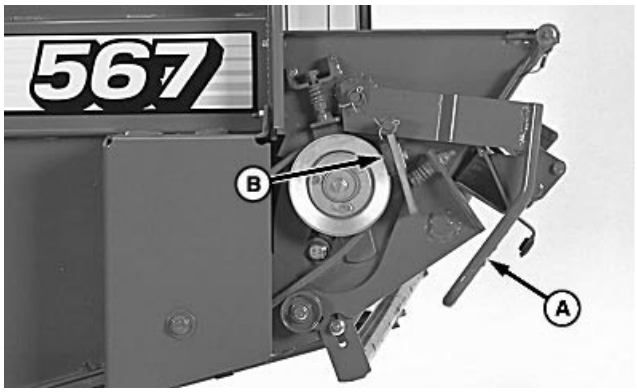
Continued on next page

AG,OUO6059,195 –19–10JUL00–4/5

7. Pull lever (A) out and back toward rear of machine. Make sure brake pad (B) contacts belt pulley.

8. Close net wrap cover.

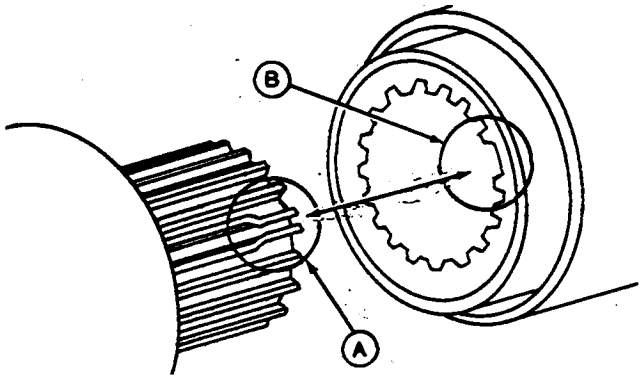
A—Lever
B—Brake Pad



AG,OUO6059,195 –19–10JUL00–5/5

Assembling Main PTO Driveline Splined Telescoping Members (If Necessary)

1. Wipe excess grease from shaft and sleeve to see timing marks.
2. Align crimped pair of shaft teeth (A) with locating groove in sleeve (B).
3. Assemble telescoping members together.
4. Apply multipurpose grease, or equivalent, to lubrication fitting at sleeve before operating. (See Lubrication and Maintenance section.)

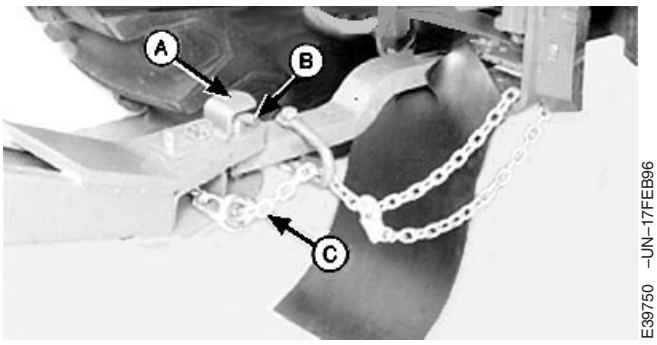


A—Shaft Teeth
B—Sleeve

AG,OUO6059,205 –19–10JUL00–1/1

Attaching Baler to Tractor Drawbar

1. Adjust tractor drawbar. (See ADJUSTING TRACTOR DRAWBAR in Preparing the Tractor section.)
2. Remove quick-lock pin, raise and rotate bracket (A) 90°. Remove hitch pin (B).
3. Back up tractor to baler. Align tractor drawbar with front of baler tongue.
4. Engage tractor parking brake and/or place transmission in "Park".
5. Shut off tractor engine and remove key.
6. Install hitch pin. Raise and rotate bracket (A) over hitch pin. Install quick-lock pin.
7. Route safety chain (C) through loop on drawbar (if equipped) and connect to tractor drawbar supporting structure, as shown. Do not fasten to drawbar. remove all slack except what is needed for turns.
8. Connect PTO driveline. (See CONNECTING PTO DRIVELINE in this section.)



A—Bracket
B—Hitch Pin
C—Safety Chain

Continued on next page

AG,OUO6059,206 –19–10JUL00–1/2

9. Turn handle on jackstand to take load off of jackstand.

10. Remove quick-lock pin, pin and jackstand.

11. Install jackstand in storage location (shown) with handle facing toward baler. Fasten with pin and quick-lock pin.

E39738 –UN–15MAY96

AG,OUO6059,206 –19–10JUL00–2/2

Connecting PTO Driveline

CAUTION: Shut off tractor engine before attaching PTO driveline. Entanglement in rotating driveline can cause serious injury or death.

Never operate 540 rpm baler with 1000 rpm PTO tractor.

IMPORTANT: Keep driveline and powershaft splines clean of paint, dirt, and chaff. Apply John Deere Moly High Temperature EP Grease or John Deere EP Moly Grease on tractor PTO shaft before connecting PTO driveline.

TS198 –UN–23AUG88

1. Shut off tractor engine and remove key.

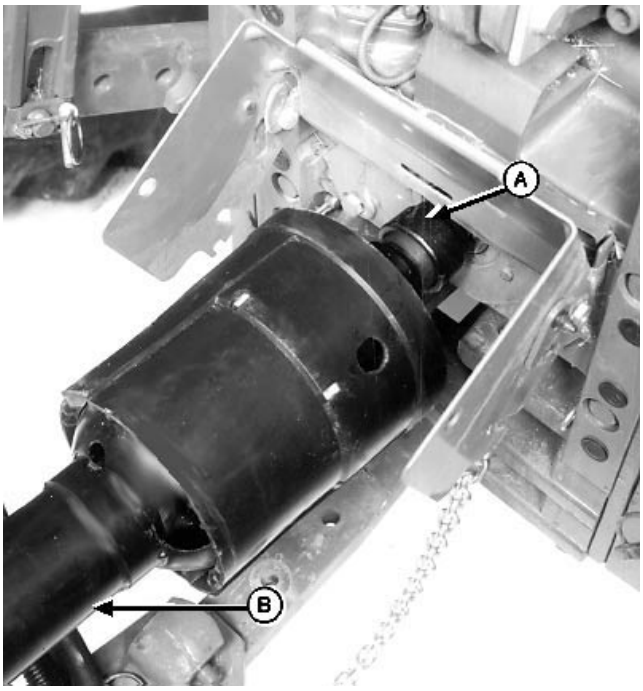
2. Raise tractor PTO shield, if equipped.

Continued on next page

AG,OUO6059,207 –19–10JUL00–1/2

3. Pull back on collar (A). Collar will "click" and hold in ready position.
4. Align splines by rotating baler driveline. Push driveline onto tractor PTO shaft until collar (A) snaps forward.
5. To check if latched, pull back on shield (B). Do not pull on collar (A) as this will release latch.
6. Lower tractor PTO shield.

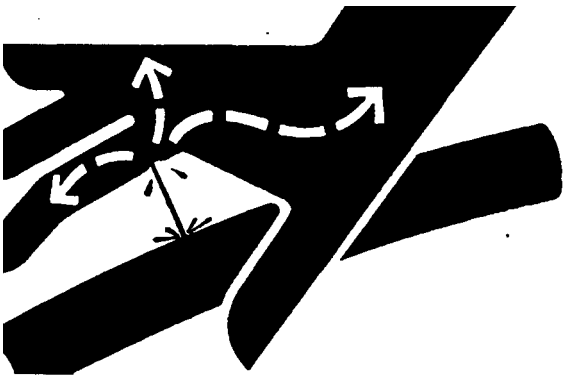
A—Collar
B—Shield



E39987 –UN–28JUN96

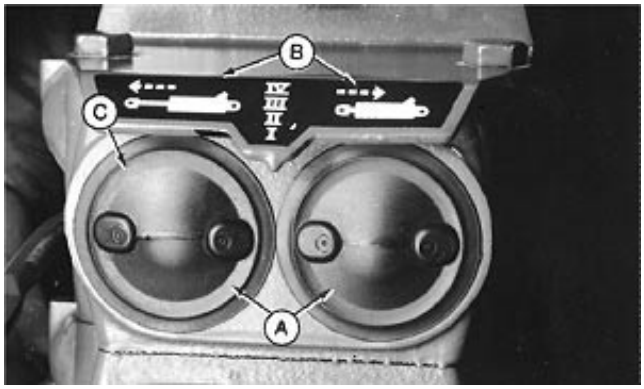
AG,OUO6059,207 –19–10JUL00–2/2

Attaching to Tractor Hydraulic System



X9811 –UN–23AUG88

A—Dust Covers



RW21239 –UN–18JUN92

B—Symbols

C—Receptacle

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.

IMPORTANT: All hydraulic couplers must be clear of debris, dust, and sand. Use protective caps on fluid openings until ready to make connection. Foreign material can damage the hydraulic system.

NOTE: To help identify and properly connect hydraulic hoses, Hose Identification Kits are available from your John Deere dealer.

Tractor remote cylinder receptacles are labeled I through IV. Receptacles are identified from bottom to top.

ISO hydraulic couplers are standard with the baler. If they do not fit the tractor, see your John Deere dealer.

1. Clean off dust covers (A).
2. Check to be sure symbols (B) on receptacle identification plate, indicating cylinder movement, match cylinder travel direction.

CAUTION: On 7000 Series John Deere tractors; Push SCV lever lockout to the right (transport lock) before attaching implements to prevent implement movement and possible personal injury.

3. Insert large hydraulic hose into "extended side" receptacle (C) (SCV I).

Continued on next page

4. Insert small hydraulic hose into remaining receptacle (SCV I). *This arrangement will raise the gate when the tractor SCV lever is moved to the rear.*

5. If equipped with optional Hydraulic Pickup Lift, insert hydraulic hoses into next set of tractor receptacles (SCV II).

6. Push hoses firmly into tractor receptacles.

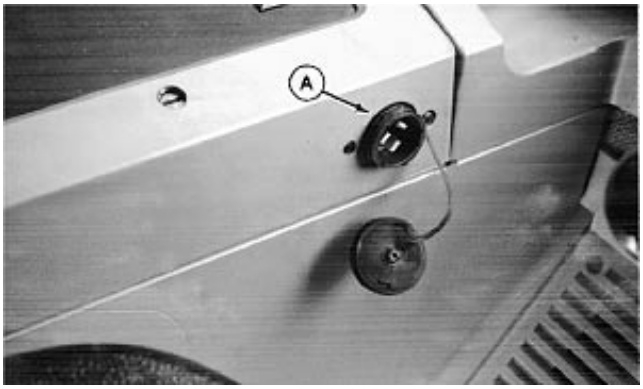
AG,OUO6059,208 –19–10JUL00–2/2

Using Tractor Convenience Outlet

NOTE: Outlet is usually protected by a 30-amp fuse. The key switch must be in the ON or ACCESSORY position when using the outlet.

Convenience outlet (A) is used to power BALETRAK *PLUS*® monitor-controller.

A—Convenience Outlet



RW22076 –UN–04DEC92

John Deere 7000 Series Tractor Shown

BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6059,209 –19–10JUL00–1/1

Connecting Baler Wiring Harness to Tractor

1. Route baler wiring harness into tractor operator's platform/station.

2. Connect baler wiring harness to BALETRAK *PLUS*® monitor-controller harness connector. Line up timing mark on connectors and tighten locking ring. *Monitor-controller power plug is connected to tractor convenience outlet.*

E40554 –UN–25JUN96

BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6059,210 –19–10JUL00–1/1

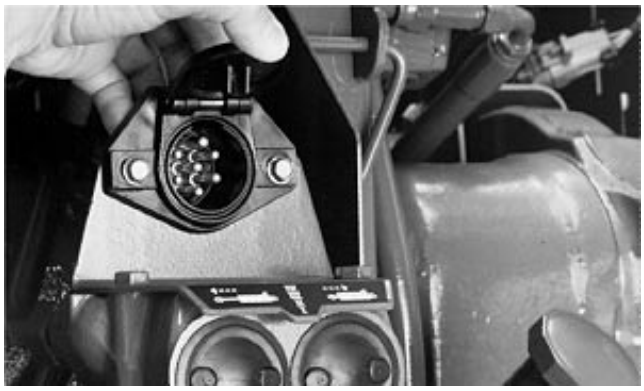
Connecting Tail/Warning Light Plug to Tractor

NOTE: Field installation of Seven-Terminal Auxiliary Electric Kit (RE17282) is required if towing tractor is not equipped with an electrical outlet.

Make sure baler tail and warning lights operate with tractor tail and warning lights and turn signals.

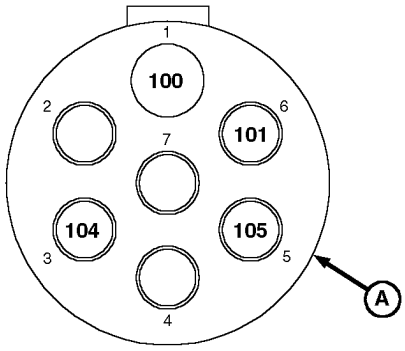
Connect tail/warning light plug (A) to seven-terminal outlet on tractor. Check tail/warning light function. (See LIGHTING ENHANCEMENT MODULE OPERATION in Transporting section.)

Terminal	Circuit	Function	Wire Color
1	100	Ground	Black
2		Open	
3	104	Left-Hand Turn/Warning Light	Yellow
4		Open	
5	105	Right-Hand Turn/Warning Light	Green
6	101	Tail Lights	Brown
7		Open	



RW55134 –UN–03DEC93

Tractor Seven-Terminal Outlet



E47631 –UN–08JAN00

Baler Tail/Warning Light Plug

A—Baler Tail/Warning Light Plug

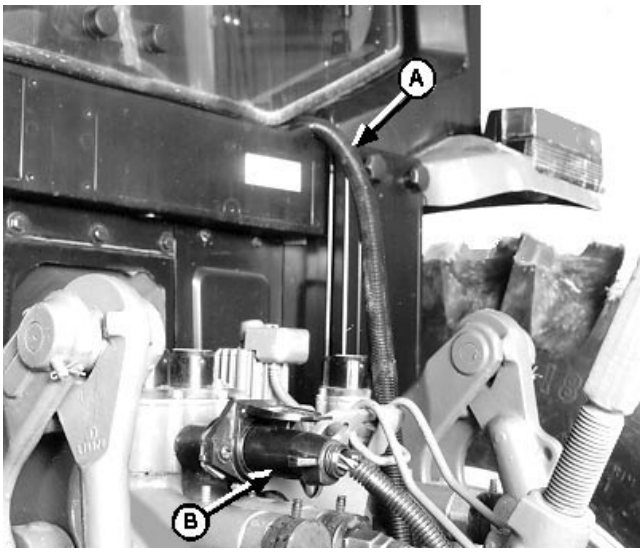
AG,OUO6059,211 –19–10JUL00–1/1

Detaching Baler From Tractor

CAUTION: To prevent personal injury caused by unexpected movement:

- **Park machines on a level surface**
- **Engage tractor parking brake and/or place transmission in "Park"**
- **Disengage PTO**
- **Shut off tractor engine and remove key**

1. Park baler on a level surface, or block both baler wheels so baler cannot roll after detaching from the tractor.
2. Engage tractor parking brake and/or place transmission in "Park".
3. Shut off tractor engine and remove key.
4. Disconnect baler wiring harness (A) and tail/warning light plug (B). Store wiring harness in baler tongue.



A—Baler Wiring Harness
B—Tail/Warning Light Plug

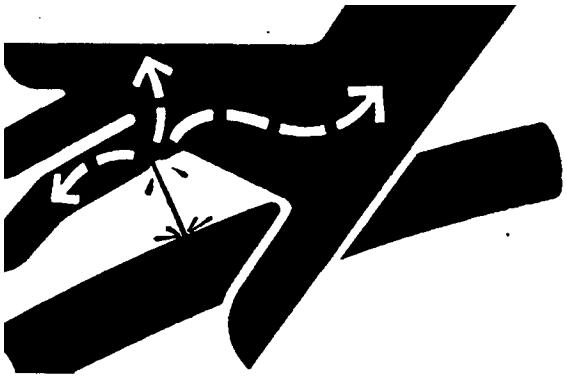
Continued on next page

AG,OUO6059,212 –19–10JUL00–1/3

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

On 7000 Series John Deere tractors; Push SCV lever lockout to the right (transport lock) before detaching implements to prevent implement movement and possible personal injury.



X9811 –UN–23AUG88

RW21394 –UN–18JUN92

A—Lever

5. Push lever (A) down to disconnect hydraulic hoses from tractor receptacles. Store hydraulic hoses in baler tongue.

6. Remove quick-lock pin, pin and jackstand from storage location. Put jackstand in tongue support location. Fasten with pin and quick-lock pin. Turn handle to take load off of tractor drawbar.

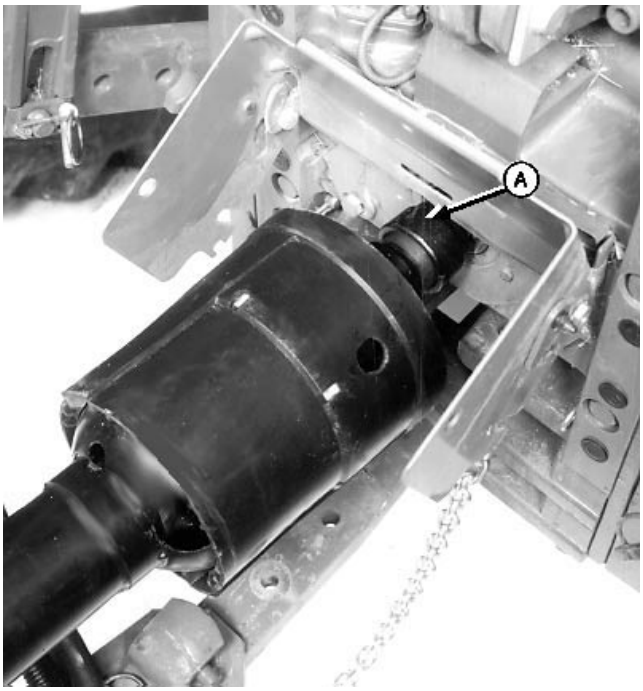
Continued on next page

AG,OUO6059,212 –19–10JUL00–2/3

CAUTION: Shut off tractor engine before detaching PTO driveline. Entanglement in rotating driveline can cause serious injury or death.

TS198 –UN–23AUG88

7. Raise tractor PTO shield, if equipped.
8. Support driveline and pull back on collar (A). Slide driveline off tractor shaft. Place driveline on jackstand handle.
9. Lower tractor PTO shield.
10. Disconnect safety chain from tractor.
11. Remove hitch pin.
12. Carefully drive tractor away from baler.



E39743 –UN–17FEB96

A—Collar

AG,OUO6059,212 –19–10JUL00–3/3

Preparing Baler for Transport

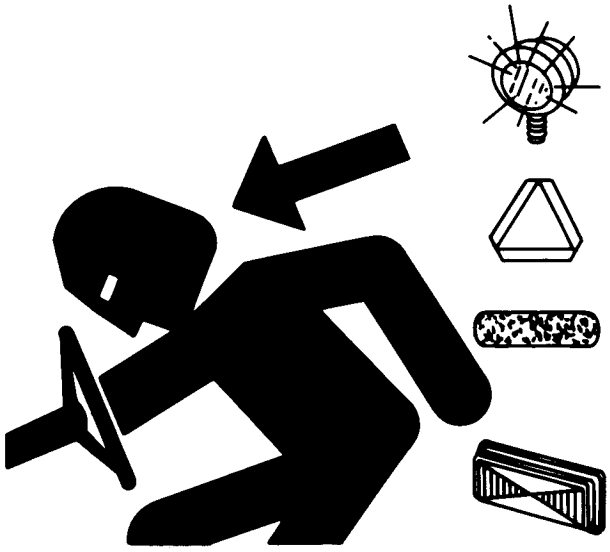
CAUTION: To avoid injury to others, transport baler with bale chamber empty.

1. Empty bale chamber before transporting.
2. Close gate completely.
3. Raise pickup fully.
4. Raise gathering wheels, if equipped.

Continued on next page

CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.

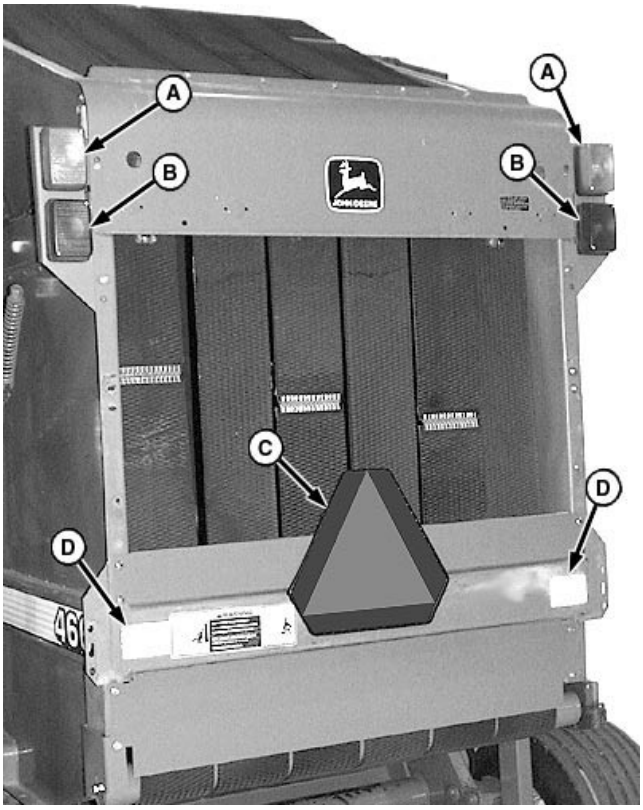
Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that has been damaged or lost.



TS951 –UN–12APR90

5. Be sure SMV emblem (C), turn/warning lights (A), tail lights (B) and reflectors (D) are clean and visible. Make sure baler turn/warning lights operate with tractor warning lights and turn signals.

A—Turn/Warning Lights (Amber)
B—Tail Lights (Red)
C—SMV Emblem
D—Reflectors



E47615 –UN–07JAN00

Continued on next page

AG,OUO6059,213 –19–10JUL00–2/4

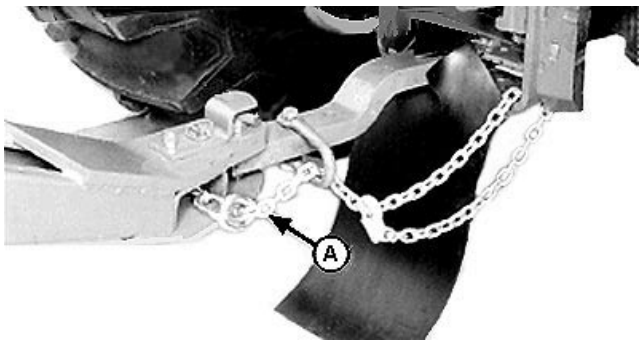
6. Make sure jackstand is in storage position, as shown.

AG,OUO6059,213 –19–10JUL00–3/4

CAUTION: A safety chain will help control drawn equipment should it accidentally separate from the drawbar. Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning. Do not use safety chain for towing.

7. Make sure safety chain (A) is attached to drawbar support or other specified anchor locations. Do not fasten to drawbar. Provide only enough slack in the chain to permit turning.

8. If transporting machine behind a tractor without connecting PTO driveline, remove PTO driveline assembly. Transport parts in another vehicle to prevent possible loss, damage, and contamination to driveline assembly.



A—Safety Chain

AG,OUO6059,213 –19–10JUL00–4/4

Follow Safe Transport Procedures

CAUTION: To help prevent severe injury or death to you or someone else, follow recommended transport procedures:

- **Transport with bale chamber empty.**
- **Raise pickup fully.**
- **Travel at a reasonable and safe speed. Do not exceed weight and speed guidelines shown in TOW LOADS SAFELY found in the Safety section. Reduce speed considerably when traveling over rough ground.**
- **Stop slowly.**
- **Avoid possible loss of control or tractor overturn. Tow only with correctly ballasted tractor.**
- **Sound tractor horn before backing baler up.**

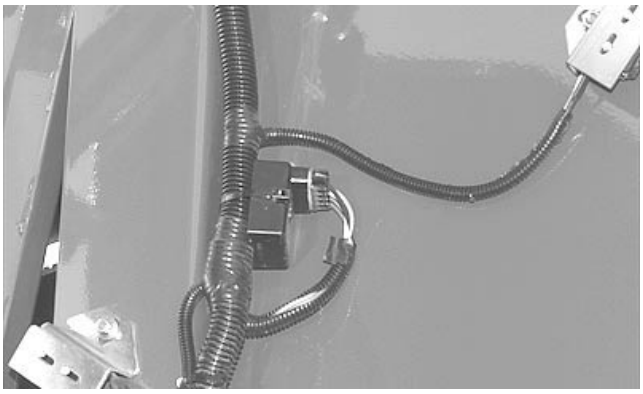
If necessary, add ballast as described in your tractor operator's manual. Add ballast to tractor as required to maintain stability.

AG,OUO6017,1611 –19–03NOV99–1/1

Lighting Enhancement Module Operation

In addition to tail and warning lights, the lighting circuit incorporates a lighting enhancement module. This module causes red tail lights to function as turn signals as well as tail lights. During normal transport, both amber warning lights will flash in unison at high intensity and both red tail lights will illuminate steady at low intensity.

When a turn is signaled, the red tail light in direction of turn will flash at high intensity in unison with the amber warning light. The opposite side amber and red lights will illuminate steady at high intensity.



Located on Right-Hand Sidesheet

AG,OUO6017,1612 –19–03NOV99–1/1

Keep Riders Off Machine

CAUTION: Keep riders off. Riders are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

TS249 –UN–23AUG88

EX,945IL,F –19–13FEB97–1/1

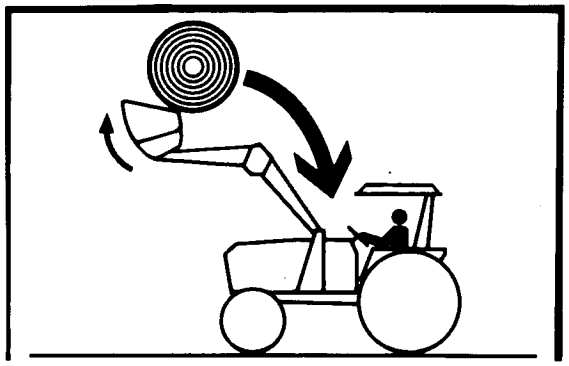
Using Extended Rear-View Mirror

CAUTION: When towing the baler on public roads, an extended mirror to improve visibility of traffic behind the baler is recommended. See your John Deere dealer.

EX,435L,D –19–07SEP88–1/1

Handling Round Bales

Handling Round Bales With Bale Fork



W00226 –UN–04DEC91

CAUTION: To help prevent personal injury or death caused by falling loads:

- **DO NOT handle round bales unless loader is equipped with an approved bale handling attachment. Otherwise, the bale can fall on the operator when the loader is raised.**
- **For 30, 40, 50 and 55 series tractor, set control lever stops to prevent levers from going to detent position.**
- **For 6000 and 7000 series tractors, set detent selector knobs on tops of valves to "loader" position.**
- **For 8000 series tractors, set detent time at 0.**
- **Handle raised loads with caution.**
- **Carry loads low and drive slowly.**

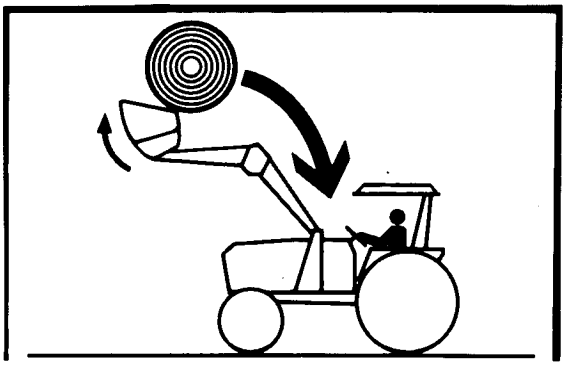
W00356 –UN–07APR92

To help prevent handling and stability problems, DO NOT exceed the following round bale weight limitations:

Loader Model	Maximum Bale Weight kg (lb)
JD 100 JD 146/3 cylinder tractor JD 175	450 (1000)
JD 146/4 cylinder tractor JD 245	680 (1500)
JD 148 JD 158 JD 260 JD 265 JD 280	900 (2000)
JD 620 JD 640	450 (1000)
JD 720 JD 725 JD 740	900 (2000)

AG,OUO6017,1613 –19–03NOV99–1/1

Handling Round Bales With Grapple



W00226 –UN–04DEC91

W00357 –UN–07APR92

CAUTION: To help prevent personal injury or death caused by falling loads:

- **DO NOT handle round bales unless loader is equipped with an approved bale handling attachment. Otherwise, the bale can fall on the operator when the loader is raised.**
- **For 30, 40, 50 and 55 series tractor, set control lever stops to prevent levers from going to detent position.**
- **For 6000 and 7000 series tractors, set detent selector knobs on tops of valves to "loader" position.**
- **For 8000 series tractors, set detent time at 0.**
- **Handle raised loads with caution.**
- **Carry loads low and drive slowly.**

To help prevent handling and stability problems, DO NOT exceed the following round bale weight limitations:

Loader Model	Maximum Bale Weight kg (lb)
JD 146 JD 245	450 (1000)
JD 148 JD 158 JD 260 JD 265 JD 280	900 (2000)
JD 620 JD 640	450 (1000)
JD 720 JD 725 JD 740	900 (2000)

AG,OUO6017,1615 –19–03NOV99–1/1

Handling Round Bales With Net Wrap

Do not snag or tear the wrapping material. Snags or tears in the net wrapping can reduce weatherability of the bales and detract from hay quality when bales are stored outside.

EX,566H,A –19–10JUN96–1/1

Feeding Round Bales

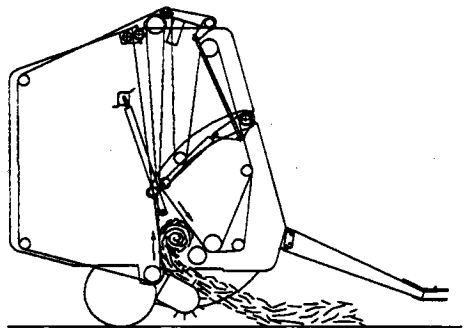
Improperly disposing of waste can threaten the environment and ecology. Remove wrapping material from bales before they are fed to reduce possible problems of material wrapping in machinery, ingestion by livestock etc. Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.

AG,OUO6059,28 –19–05MAY00–1/1

Operating the Baler

How the Baler Forms a Bale

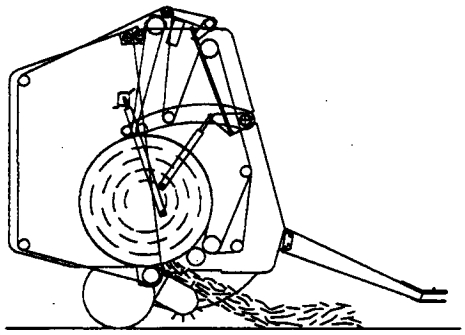
1. Starting the bale.



E32238 –UN–12SEP88

EX,435J,B –19–02NOV88–1/4

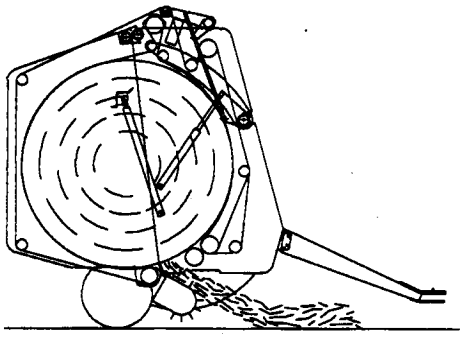
2. Forming the bale.



E32239 –UN–12SEP88

EX,435J,B –19–02NOV88–2/4

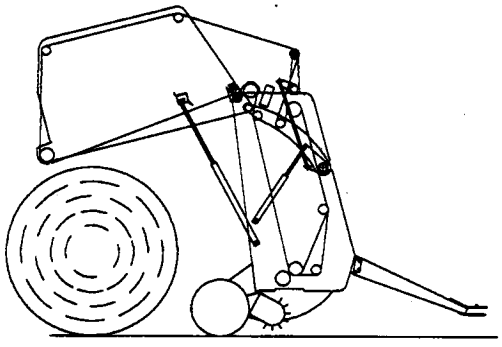
3. Completed bale.



E32240 –UN–12SEP88

EX,435J,B –19–02NOV88–3/4

4. Discharging the bale.



E32241 –UN–12SEP88

EX,435J,B –19–02NOV88–4/4

Crop Preparation

Make windrows either:

- Up to one-half the width of the baler pickup.
- The full width of the baler pickup to eliminate weaving.

Unless bales are being made for silage or a preservative is being applied to hay, wait until moisture content of hay is 20% or drier before baling.

For additional information and a more in-depth description on hay and forage harvesting, refer to John Deere's Fundamentals of Machine Operation (FMO) Manual FMO14104B. This manual covers all types of vehicles, regardless of manufacturer, starting with basic theory and proceeding through complex systems. To order this manual and others, see the John Deere Service Literature form at the back of this manual or see your John Deere dealer.

TS1646 –UN–02OCT95

EX,566J,BK –19–08DEC97–1/1

Breaking In Baler

IMPORTANT: Belts and drive loads increase as the bale size approaches maximum diameter. Frequent forming of oversize bales can lead to premature failures.

A break-in period of approximately 50 bales can increase the life and reduce maintenance of baler. During the break-in period, a smaller and lower density bale is recommended.

Baler is preset at factory. Density knob on tension valve has been turned counterclockwise two turns from maximum and the BALETRAK *PLUS*® monitor-controller setting for bale diameter is 66 in. (1.6 m).

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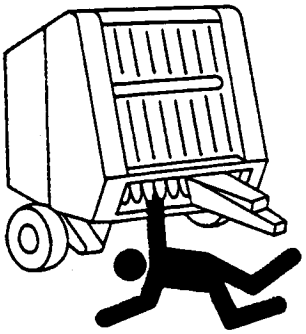
EX,566J,A1 –19–02SEP97–1/1

Keep Riders Off Machine

TS249 –UN–23AUG88



E32161 –UN–12SEP88

CAUTION: Keep riders off. Riders are subject to injury or death such as being struck by foreign objects and being thrown off the machine. Riders may also fall off and be run over by machine.

EX,566J,AN –19–02SEP97–1/1

BALETRAK *PLUS*® Monitor-Controller System Introduction

E40554 –UN–25JUN96

The BALETRAK *PLUS*® system provides the operator with accurate and useful information to help him make the best bales possible, and to automatically operate the wrapping system (twine or optional net wrap) and optional variable core system.

In addition, the system allows the operator to conveniently tailor these functions to suit his specific requirements by adjusting certain controller settings as desired. In most cases, these adjustments are made from the tractor seat without the inconvenience or delays required on previous models. The operator can manually extend or retract the twine arms, or initiate a wrap cycle, by pushing a single button.

The system is preset, functional, and ready to use when you receive your baler. It is recommended to operate the baler briefly with the factory settings, to familiarize yourself before you adjust or reset them. The BALETRAK *PLUS*® system will "remember" the settings loaded at the time the power is shut off.

If necessary, the BALETRAK *PLUS*® system can be used to troubleshoot Baler malfunctions, and has convenient channels available to ensure proper baler switch and sensor adjustments.

The BALETRAK *PLUS*® system monitors and/or controls the following baling operations and conditions:

- Bale Diameter
- Bale Shape
- Twine Wrapping
- Net Wrapping (if equipped)
- Bale Eject
- Bale Count
- Gate Closed
- Variable Core Diameter (if equipped)
- Alarms
  - – Gate Open
  - – Oversize Bale
  - – Low Tractor Voltage

Continued on next page

– Net Wrap Misfed or Miscut (if equipped)
The BALETRAK *PLUS*® system uses "diagnostic channels" for testing switches and "setup channels" for adjusting bale shape sensitivity.

AG,OUO6017,1617 –19–03NOV99–2/2

BALETRAK *PLUS*® Monitor-Controller Description

The monitor-controller (A) uses switches, a liquid crystal display (LCD), and a microprocessor to monitor and control the baling and wrapping operations. The following conditions can be set (programmed) into the controller by the operator:

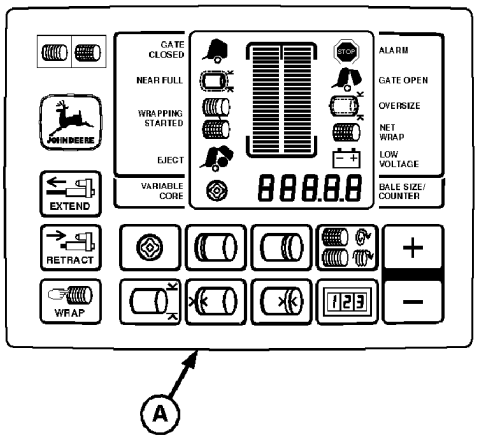
- Bale Diameter
- Twine Wrap:
  - – Spacing
  - – Number of End Wraps (Both Ends)
  - – Twine End Wrap Distance (Both Ends)
  - – Re-Extension Wrap Distance
  - – Cinch Wrap
- Net Wrap; Number of Wraps
- Variable Core Diameter (optional)

NOTE: The conditions set by the operator will revert back to the initial settings when controller is reset (Channel 01).

The monitor-controller is mounted on the tractor and is powered by the tractor's 12-volt electrical system. When first turned on, the controller performs a self-test to ensure that the system is ready to operate. The controller, then sends a brief communication signal to the wrap actuator (twine or net wrap) and waits for a reply before starting normal operations. If a reply signal is not received, the controller will not go into operating mode and the STOP indicator will light.

The monitor-controller uses four sensors and four switches to perform the following:

- The sensors are used for monitoring:
  - – Bale Diameter
  - – Bale Shape
  - – Twine Wrapping
- The switches are used for monitoring:
  - – Gate Latches (Open/Closed)
  - – Oversize Bale
  - – Net Wrapping (optional)



E47503 –UN–07JAN00

A—Monitor-Controller

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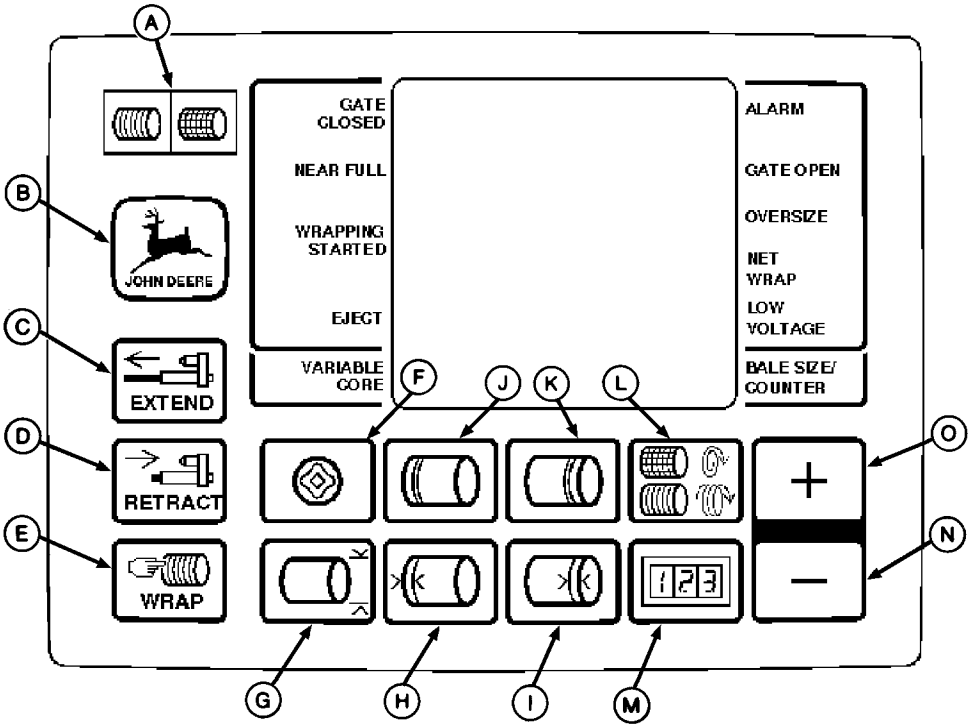
Continued on next page

To perform the wrapping process, the controller provides current to operate the bale wrap actuator (twine or optional net). This is done automatically by the controller or manually by the operator pressing the wrap key.

AG,OUMX005,1509 –19–02AUG00–2/2

BALETRAK *PLUS*® Monitor-Controller Keys and Switches



A—Selector Switch (Twine-ON/OFF/ Net-ON[1])
B—Set-Up Key
C—Actuator Extend—Manual (Twine Only[2])
D—Actuator Retract—Manual (Twine Only[2])
E—Wrap Cycle—Manual Start
F—Variable Core Diameter[1]
G—Bale Diameter
H—Left-Hand End Wrap Distance (Twine Only)
I—Right-Hand End Wrap Distance (Twine Only)
J—Number of Left-Hand End Wraps (Twine Only)
K—Number of Right-Hand End Wraps (Twine Only)
L—Twine Spacing/Number of Net Wraps
M—Bale Counters
N—Minus Key
O—Plus Key

NOTE: When any key is pressed, except for DEERE Set-Up key (B), buzzer will beep.

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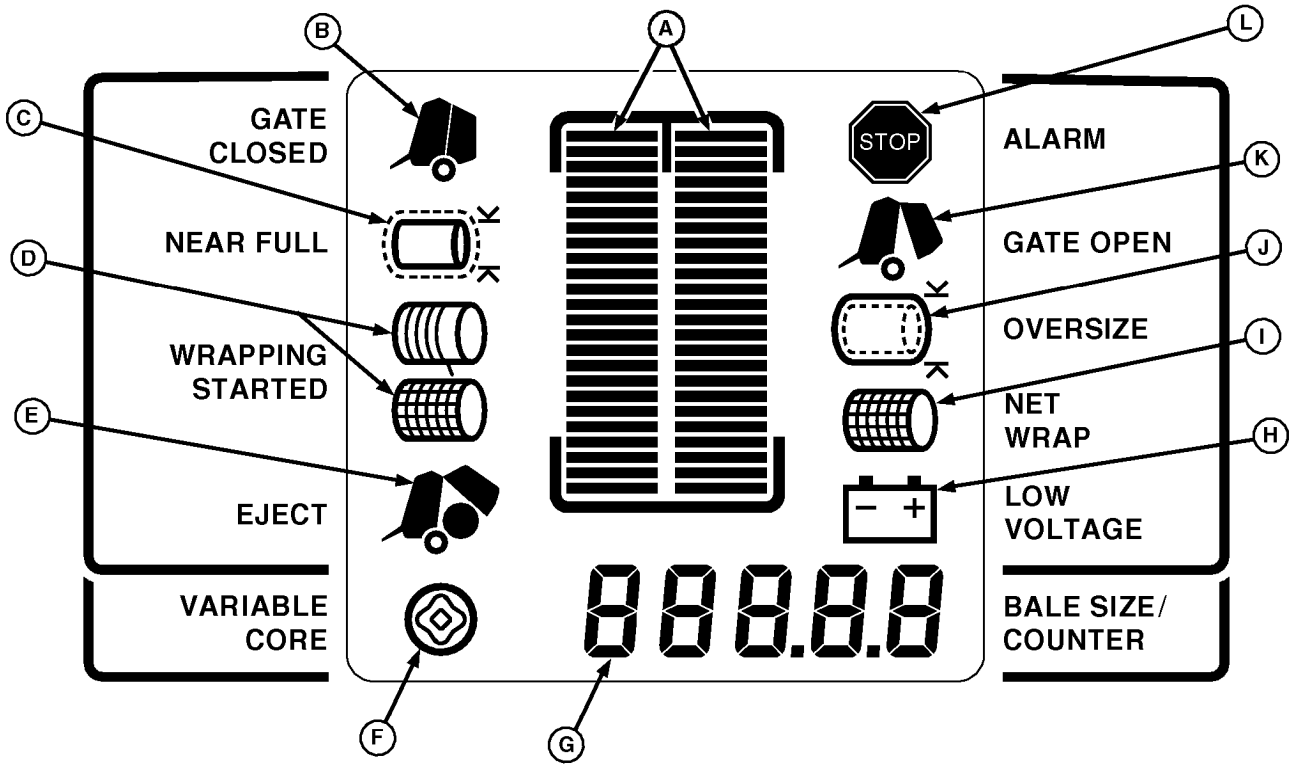
[1]Optional equipment.

[2]Net actuator does not move when EXTEND/RETRACT keys are pressed with selector switch in Net-On. To move net actuator for servicing net unit, see TEST TWINE OR NET WRAP ACTUATOR CURRENT (CHANNEL 14) in this section.

AG,OUO6059,215 –19–10JUL00–1/1

BALETRAK *PLUS*® Monitor-Controller Displays and Indicators



A—Bale Shape Bars
B—Gate Closed
C—Near Full
D—Wrapping Started (Twine or Net)
E—Eject
F—Variable Core ON[1]
G—Digital Display (Bale Size/Counter)
H—Low Voltage Alarm
I—Net Wrap Alarm[1]
J—Oversize Alarm
K—Gate Open Alarm
L—Stop Indicator (Flashing or Steady)
M—Audible Alarm (Not Shown)

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[1]Optional equipment.

EX,MONITOR,AL1 –19–02SEP97–1/1

BALETRAK *PLUS*® Monitor-Controller Setup Values and Initial Settings

BALE DIAMETER	
Readout Display Range	22—75 in. (0.56—1.9 m)
Diameter Adjustment Range	32—72 in. (0.81—1.83 m)
Diameter Initial Setting[a]	66 in. (1.68 m)
Near Full Size Range	0.5—10.0 in. (0.01—0.25 m)
Near Full Size Initial Setting[a]	4.5 in. (0.11 m)
Bale Shape Sensitivity Range	1 (slowest)—5 (fastest)
Bale Shape Sensitivity Initial Setting[a]	3 (medium)
TWINE WRAP	
Spacing Range	2—10 in. (0.05—0.25 m)
Spacing Initial Setting[a]	4 in. (0.10 m)
Number of End Wraps Range	
Left-Hand End	0—10 Wraps
Right-hand End	0.6—10 Wraps
Number of End Wraps Initial Setting[a]	2 Wraps
Left-Hand End Wrap Distance Range	3—10 in. (0.08—0.25 m)
Right-Hand End Wrap Distance Range	
467 and 467S	3—10 in. (0.08—0.25 m)
567	2—10 in. (0.05—0.25 m)
End Wrap Distance Initial Setting (Right and Left-Hand)[a]	4 in. (0.11 m)
Re-Extension Wrap Distance Range	5—20 in. (0.13—0.51 m)
Cinch Wrap Initial Setting (From Left-Hand End)	10 in. (0.25 m)
NET WRAP	
Number of Wraps	1.2—5
Number of Wraps Initial Setting[a]	2
Time Delay Range (From Full-Size Bale Alert to Start of Net Wrap Cycle)	0—8 Seconds
Time Delay Initial Setting[a]	2 Seconds
VARIABLE CORE DIAMETER	
Diameter Adjustment Range	24—67 in. (0.61—1.7 m)
Diameter Initial Setting[a]	36 in. (0.92 m)
[a]Settings revert to these values when monitor-controller is reset. (See BALETRAK PLUS® MONITOR-CONTROLLER—RESET TO INITIAL SETTINGS [CH 01] in this section.)	

BALETRAK *PLUS*® Monitor-Controller Diagnostic and Setup Modes

There are two types of channelled programs:

- Diagnostic
- Setup

Setup Channels are used to:

- Adjust bale shape bar display.
- Set near-full indicator set point.
- Reset monitor-controller to initial settings.
- Adjust net wrap delay.
- Set bale shape display sensitivity.
- Access dry straw twine wrap program.
- Adjust bale diameter
- Adjust twine wrap

NOTE: Diagnostic procedures are located in the Service—Baler section.

Diagnostic Channels are used to:

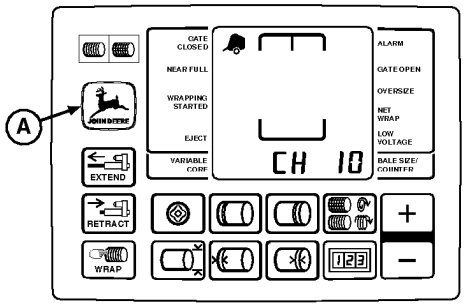
- Check positions of sensors and switches.
- Test twine or net actuators.
- Test LCD display.
- Test tractor voltage.

To enter Diagnostic and Setup Channels:

1. Turn tractor key to ON position. Do not start tractor engine. Press and hold DEERE key (A). Set selector switch to TWINE or NET symbol to turn monitor-controller ON.

2. Continue to hold DEERE key (A) and press PLUS key until desired channel appears in digital display. Release key to see the current value for this channel.

   To change channels, press and hold DEERE key (A) and use the PLUS and MINUS keys to access other channels.



E47603 –UN–07JAN00

A—DEERE Key

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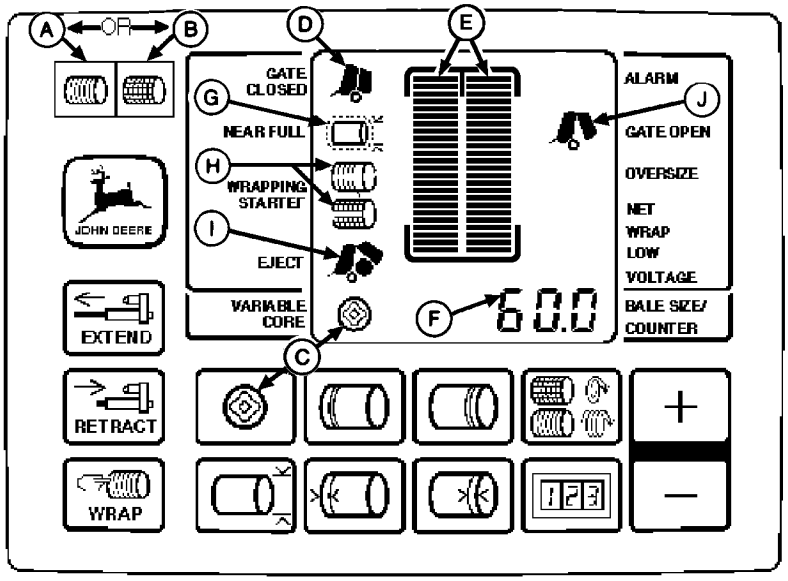
AG,OUO6059,217 –19–10JUL00–1/1

BALETRAK *PLUS*® Monitor-Controller Diagnostic and Setup Channels

NOTE: Channel listings and page numbers can be found under Operating the Baler or Service—Baler in the Contents or under section "C" in the Index.

CHANNEL NUMBER	FUNCTION
1	Return to Initial Settings
3	Adjust Twine Wrap Sensor With Sound
5	Adjust Bale Diameter Sensor With Sound
7	Adjust Right Bale Shape Bar Display and Sensor With Sound
9	Adjust Left Bale Shape Bar Display and Sensor With Sound
10	Test Net Wrap Switch
11	Test Oversize Bale Switch
12	Test Right-Hand Gate Latch Switch
13	Test Left-Hand Gate Latch Switch
14	Test Twine or Net Actuator Current
15	Check Tractor Voltage
16	Test Liquid Crystal Display
17	Dry Straw Twine Wrap Program
18	Adjust Re-Extension Wrap Distance and Cinch Wrap
19	NOT USED
20	NOT USED
21	NOT USED
22	NOT USED
23	NOT USED
24	Adjust Bale Shape Sensitivity
25	Adjust Near-Full Indicator
26	Net Wrap Delay
27	NOT USED
The following channels have been programmed to perform adjustments WITHOUT the audible alarm.	
CHANNEL NUMBER	**FUNCTION**
2	Adjust Twine Wrap Sensor
4	Adjust Bale Diameter Sensor
6	Adjust Right Bale Shape Bar Display and Sensor
8	Adjust Left Bale Shape Bar Display and Sensor

Operating BALETRAK *PLUS*® Monitor-Controller



E47505 –UN–07JAN00

A—Twine Symbol
B—Net Symbol
C—Variable Core Key
D—Gate Closed Indicator
E—Bale Shape Bars
F—Digital Display
G—Near Full Indicator
H—Wrapping Started Indicator
I—Eject Indicator
J—Gate Open Indicator

Turn tractor key to ON position. Set selector switch to **TWINE** (A) or **NET** (B) to turn monitor-controller ON.

GATE CLOSED (D) should be ON. Engage PTO and raise throttle setting to PTO rated speed. Drive forward and start into windrow.

Observe bale shape bars (E). Strive to keep bale shape bars in the green zone. All bars may not light during variable core forming. Avoid having bale shape bars on the red zone, as this indicates slack belts. Digital display (F) will show bale diameter increasing in 0.50 in. (0.01 m) increments within display range of 24—75 in. (0.61—1.9 m).

NEAR FULL indicator (G) flashes and beeps twice when bale reaches a diameter 4-1/2 in. (0.11 m) smaller than the bale diameter setting.

WRAPPING STARTED indicator (H) (Twine or Net) will light, beep, and start wrapping automatically when bale reaches diameter setting. Stop travel and maintain engine speed at rated PTO during wrap and ejection cycle. When wrapping with twine, observe twine arm pointer and twine pulleys on the baler for proper operation. When wrapping is completed and actuator returns to home position, **EJECT** indicator (I) will light and stay on until gate is opened.

When wrapping with net, net application and cutoff will be completed and indicated by the **EJECT** indicator (I) displaying and staying on until the gate is opened.

Confirm twine has been cut by observing twine pulleys. Back up (if not equipped with push bar). Eject bale using hydraulic control lever. **GATE OPEN** indicator (J) lights during normal ejection.

With bale ejected, drive forward (if not equipped with push bar). Close gate with hydraulic control lever. **GATE OPEN** indicator will go out and **GATE CLOSED** indicator will come on indicating normal operations can continue.

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Continued on next page

A wrap and gate latch open cycle adds one bale to both the total and resetable bale counters. Resetable counter is automatically displayed for 8 seconds when a bale is added.

If equipped with Variable Core solenoid valve; Depress optional **VARIABLE CORE** key (C) if soft core is desired. Variable Core indicator will light when optional variable core feature is selected. *Indicator will light with or without solenoid valve installed.*

AG,OUO6059,219 –19–10JUL00–2/2

Resetting BALETRAK *PLUS*® Monitor-Controller To Initial Settings (Channel 01)

All adjustable monitor-controller settings can be simultaneously reset to initial settings using the following procedure:

1. Turn tractor key to ON position. Do not start tractor engine.

2. Press and hold DEERE key (A). Set selector switch to TWINE or NET symbol to turn monitor-controller ON. Hold DEERE key (A) until "CH 01" (B) is displayed.

3. Release key; digital display should show "50".

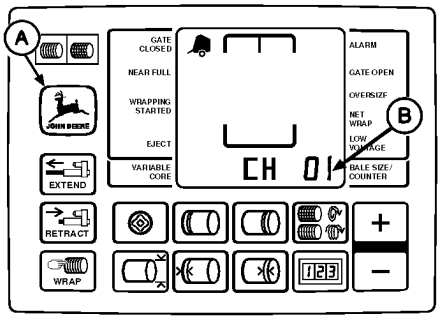
4. Simultaneously press and hold PLUS and MINUS keys until digital display changes from "50" to "99"; then release keys.

NOTE: Display change is a visual indication that adjusted set points have reverted back to initial settings. (See BALETRAK PLUS® MONITOR-CONTROLLER SETUP VALUES AND INITIAL SETTINGS, in this section, to see which settings have changed.)

5. Set monitor-controller selector switch to OFF (centered) position to enter initial settings into memory.

   - If in English units, the reset values will be in English.
   - If in metric units, the reset values will be in metric.

6. Turn tractor key to OFF position. Remove key.



E47605 –UN–07JAN00

A—DEERE Key
B—"CH 01" Displayed

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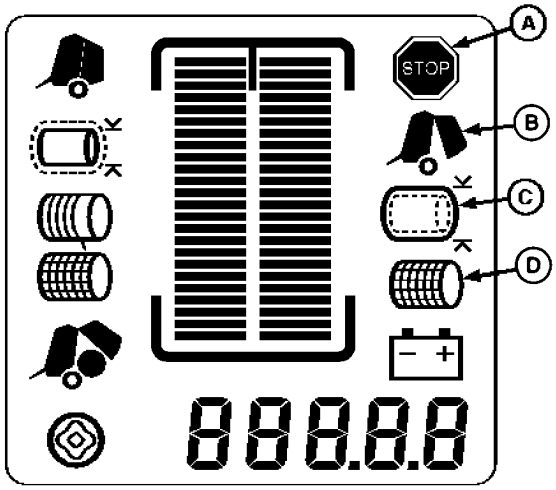
AG,OUO6059,220 –19–10JUL00–1/1

Activating BALETRAK *PLUS*® Monitor-Controller Alarms



A—Stop Indicator **B—Gate Open Indicator** **C—Oversize Bale Indicator** **D—Net Wrap Indicator**

IMPORTANT: Continuing to operate with a GATE OPEN or OVERSIZE alarm will result in baler damage.

Three conditions can activate the flashing **STOP** indicator (A) and alarm. Should the flashing **STOP** display and the alarm sound during normal operation, stop baling immediately. Take corrective action to silence alarm and cancel visual indicators.

The following conditions will activate the flashing **STOP** indicator (A) and alarm:

- **GATE OPEN (B):** One gate latch is open and one is closed. Continuing to operate will twist gate and result in machine damage.
- **OVERSIZE (C):** Bale is above maximum allowable diameter. Continuing to operate with oversize bale in chamber can cause severe gate damage, roller breakage, and belt splice damage.
- **NET WRAP (D):** Net did not feed or knife did not cut net.

A flashing **STOP** indicator with no alarm can also appear at start-up if wiring to actuator is disconnected or damaged, or if monitor-controller fuse is blown.

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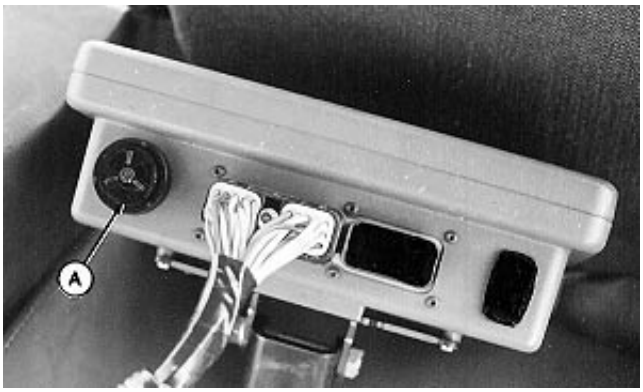
AG,OUO6017,1624 –19–04NOV99–1/1

Adjusting Audible Alarm Volume

Open or close alarm door (A) to obtain desired volume.

A—Alarm Door



AG,OUO6017,1625 –19–04NOV99–1/1

Setting Bale Diameter

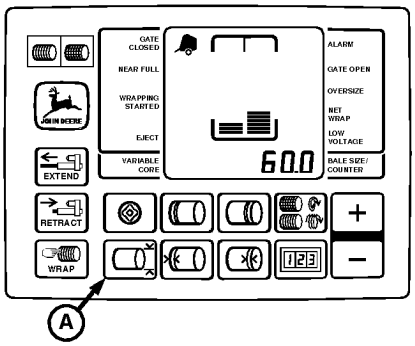
Initial setting for bale diameter is 66 in. (1.68 m).

Bale diameter can be set from 32 to 72 in. (0.81 to 1.83 m) at 0.5-in. (0.01 m) increments.

- Press and hold BALE DIAMETER key (A) and PLUS key to raise diameter setting.
- Press and hold BALE DIAMETER key (A) and MINUS key to lower diameter setting.

Optional variable core diameter setting should normally be at least 4 in. (0.10 m) under bale diameter setting.

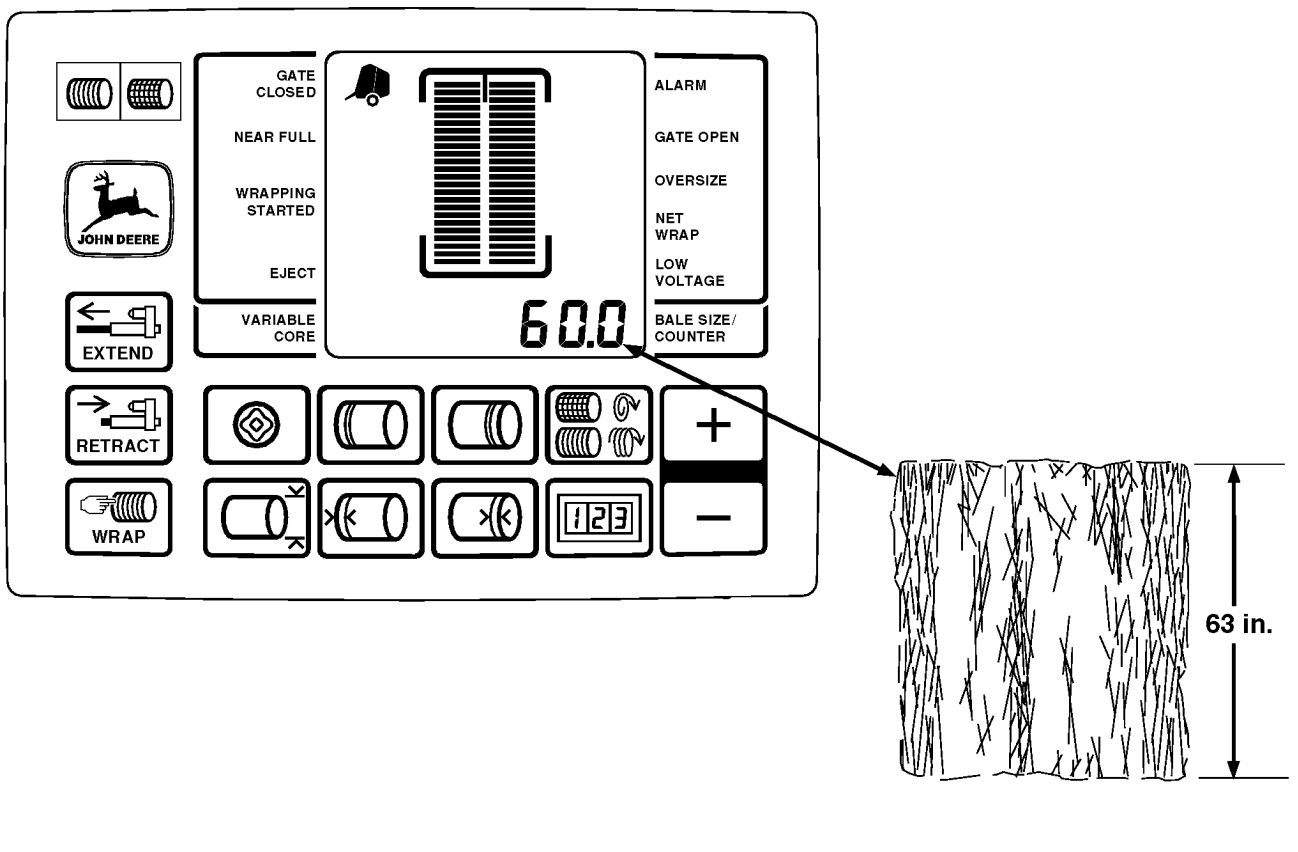
Variable core setting need not be changed if bale size is increased, unless desired.



A—Bale Diameter Key

AG,OUO6017,1626 –19–04NOV99–1/1

Adjusting Bale Diameter Display



1. Make a bale and tie/wrap.
2. Before ejecting the bale, note the monitor-controller display for bale size/diameter setting.
3. Eject the bale and compare actual size of bale to the monitor-controller bale diameter setting.

NOTE: To check actual bale size, measure bale horizontally and vertically on both ends. Add the four measurements together and divide by four to determine average bale diameter.

4. Determine the actual bale size difference from the monitor-controller setting.

   For example, if the bale diameter setting is 60 in. (1.52 m), but the actual bale measures 63 in. (1.60 m), the bale is 3 in. (0.08 m) larger than the monitor bale diameter setting.

5. If bale diameter setting and actual bale size do not agree, make the following adjustment:

   - Lock gate in closed position.
   - Using tractor selector valve, raise belt tension arm until monitor-controller display reads between 50 and 60 in. (0.76 and 1.52 m). Note the displayed size.

   CAUTION: Adjusting bale diameter sensor may cause the twine arms or net wrap actuator to cycle if set size is exceeded during the adjustment. Stay clear of these areas.

   - Adjust bale diameter sensor on the tension arm so monitor-controller displays "actual" bale diameter.

Continued on next page

For example, if monitor-controller display reads 56 and the actual bale is 3 in. (0.08 m) larger than the displayed diameter, adjust sensor until 59 is displayed on monitor.

- Lower belt tension arm.
- Unlock gate.

6. Repeat steps 1 through 5 as necessary.

AG,OUO6017,1627 –19–04NOV99–2/2

Understanding Optional Variable Core Feature

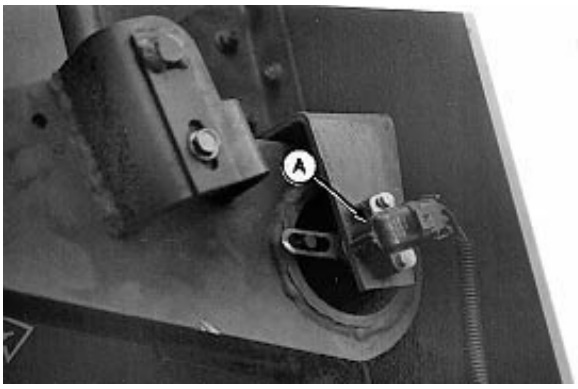
Variable (soft) core feature uses the bale diameter sensor (A) and solenoid valve (B) to lower hydraulic pressure to the tension cylinders. This results in a lower density core at the center of the bale.

The baler tensioning valve block must be equipped with optional solenoid valve for variable core system to be functional.

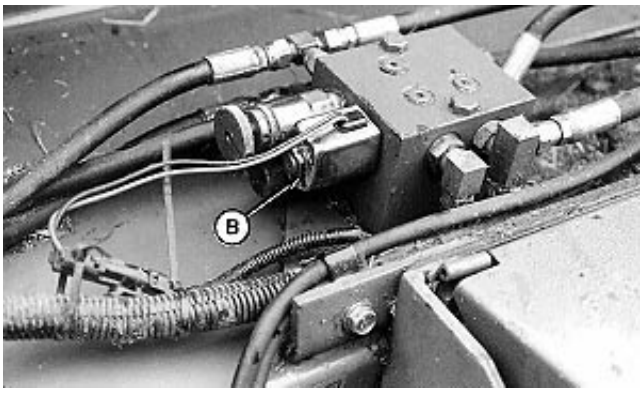
With variable core ON, the solenoid restricts full system pressure from reaching the tension cylinders until variable core diameter setting is sensed at the bale diameter sensor.

When bale size reaches variable core diameter setting, the solenoid allows full system pressure to the tension cylinders. The bale is finished at full system pressure forming tighter, denser, outer layers.

Variable core operation can be confirmed by observing baler hydraulic pressure gauge. Pressure should increase from a low pressure indication to the preset pressure when variable core setting is reached.



E38418 –UN–12DEC95

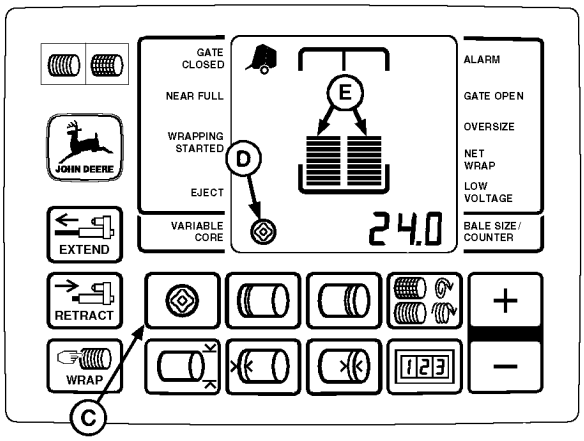


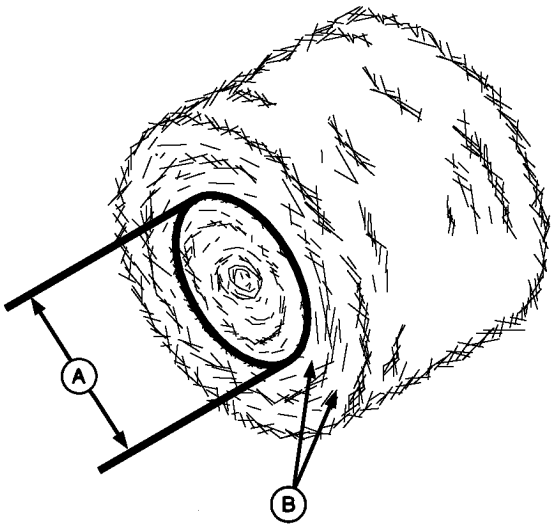
E38419 –UN–09FEB95

A—Bale Diameter Sensor
B—Solenoid Valve

AG,OUO6017,1628 –19–04NOV99–1/1

Adjusting Variable Core Diameter (If Equipped)





E47509 –UN–07JAN00

A—Variable Core Diameter **C—VARIABLE CORE Key** **D—Core ON Indicator** **E—Bale Shape Bars**
B—High Density Outer Layers

The variable core diameter (A) can be adjusted from 24 in. (0.61 m) up to 67 in. (1.7 m) at 0.5-in. (0.01 m) increments.

The initial setting for variable core diameter is 36 in. (0.9 m).

Set variable core diameter (A) at least 4 in. (0.10 m) under bale diameter setting so tight, dense, outer layers are formed. High density outer layers (B) helps the bale hold its shape when wrapped and repel water.

To set variable core diameter (A):

- Depress and hold VARIABLE CORE key (C).
- Press the PLUS or MINUS key until desired setting appears in digital display. Release key to enter setting into memory. This setting will be used whenever the variable core feature is selected.

To use variable core feature:

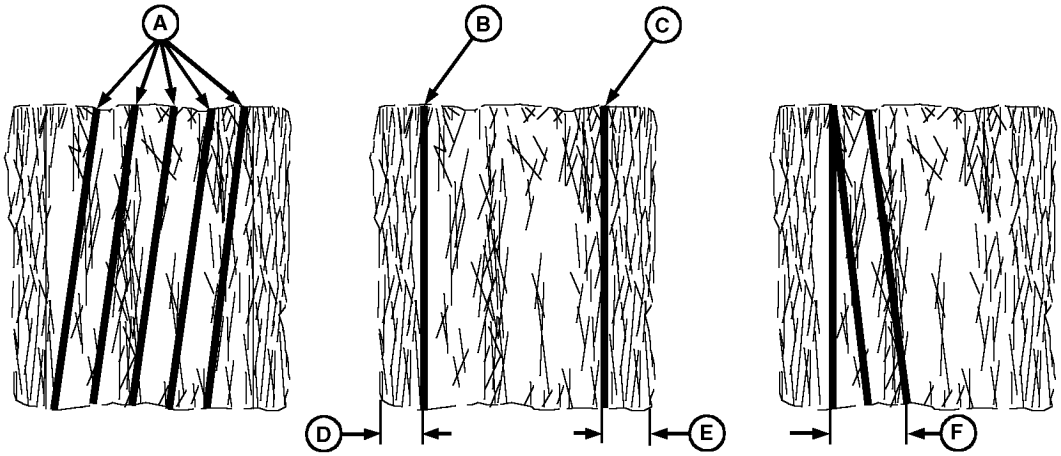
- Depress VARIABLE CORE key (C); core indicator (D) will stay on throughout the baling process.
- To check variable core setting; depress and hold VARIABLE CORE key (C) to display setting. Release and depress VARIABLE CORE key (C) to activate variable core feature. Core indicator (D) should display on monitor-controller.

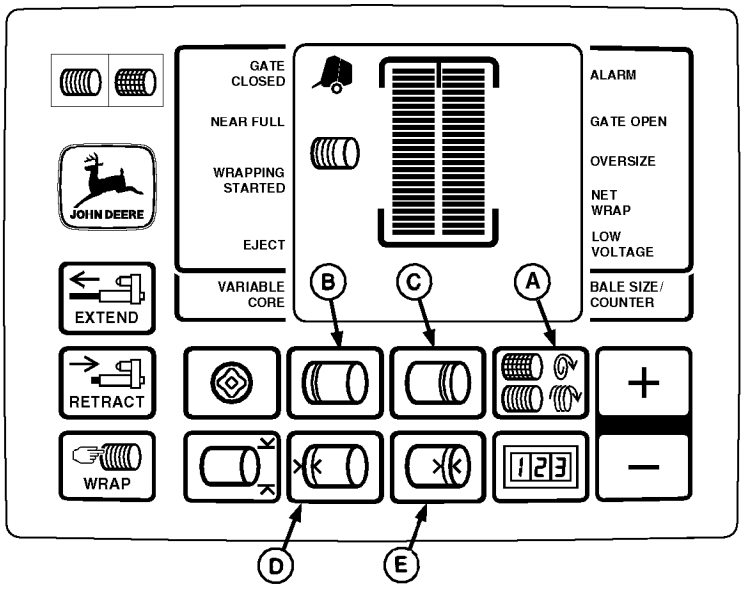
- To turn variable core feature OFF, depress VARIABLE CORE key (C) and core indicator (D) will go out.
- Variable core remains in last operation mode when monitor-controller is turned off and on.

NOTE: Bale shape bars (E) may not reach maximum height when variable core is being formed, due to lower bale forming pressure.

AG,OUO6017,1629 –19–04NOV99–1/1

Understanding Twine Wrap Terms and Settings





E48752 –UN–01AUG00

A—Twine Spacing
B—Number of Left-Hand End Wraps
C—Number of Right-Hand End Wraps
D—Left-Hand End Wrap Distance
E—Right-Hand End Wrap Distance
F—Re-Extension and/or Cinch Wrap Distance

There are seven factors involved in properly placing twine on the bale. The factors are:

- Twine Spacing
- Number of Left-Hand End Wraps

Continued on next page

- Number of Right-Hand End Wraps
- Left-Hand End Wrap Distance
- Right-Hand End Wrap Distance
- Re-Extension Wrap Distance
- Cinch Wrap

NOTE: The monitor-controller is programmed to apply approximate twine spacing in the center of the bale. Twine spacing will decrease toward the ends of bale.

Twine Spacing (A) is the distance between twine wraps. Spacing is increased or decreased depending on how fast the twine arms move across the bale.

Mechanical twine arm spacing ranges are between 2, 4, 6, and 8 in. (0.05, 0.10, 0.15, and 0.20 m).

Monitor-controller twine spacing range is between 2—10 in. (0.05—0.26 m) at 0.5 in. (0.01 m) increments. Initial setting is 4 in. (0.10 m).

To obtain uniform twine spacing on a bale, the setting for twine arm spacing and the monitor-controller setting for twine spacing must be the same.

Number of Left-Hand End Wraps (B) and Right-Hand End Wraps (C) controls how long the twine arms pause at the end of the bale to apply the set number of end wraps for the bale diameter. End wrap setting ranges between 0.6—10 wraps. Initial setting is 2 wraps.

NOTE: The setting for the number of end wraps is approximate for each twine arm. With various settings of adjustable twine guide, the twine from both arms will be the same distance from the end of bale. The bale will have twice the number of end wraps as indicated on the monitor-controller. (See SETTING TWINE END WRAP DISTANCE in this section.)

Left-Hand (D) or Right-Hand (E) End Wrap Distance limits the twine arm travel to the outer ends of the bale. An initial setting of 4 in. (0.10 m) has been set for both sides. The settings can be changed in 0.5 in. (0.01 m) increments.

- 467 and 467S; End wrap distance settings for left and right-hand sides range between 3—10 in. (0.08—0.25 m).
- 567; End wrap distance settings:
  - Left-hand side ranges between 3—10 in. (0.08—0.25 m)
  - Right-hand side ranges between 2—10 in. (0.05—0.25 m)

NOTE: End wrap distances are an approximate indication where twine will be placed on the bale.

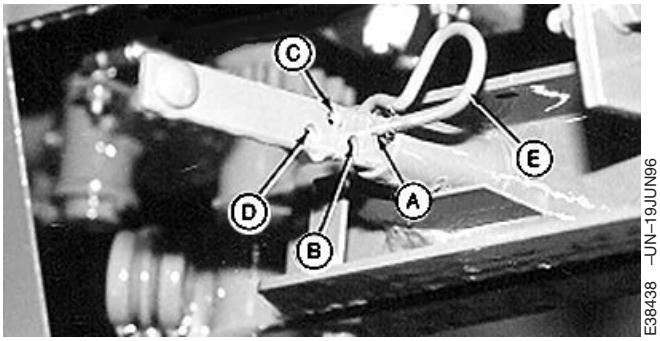
To place twine the same distance from the edge on both ends, a slightly different setting may be required for each end.

Check setting of mechanical twine guide when revising monitor-controller settings.

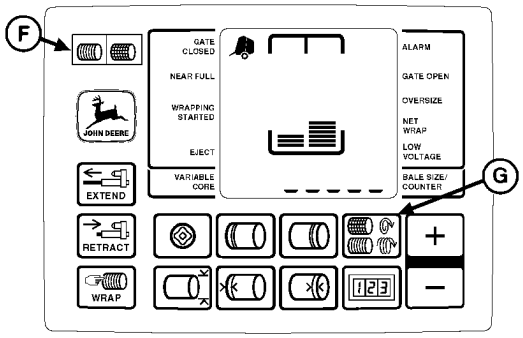
Re-Extension Wrap Distance (F) is a feature that may help prevent twine unrolling. It places a wrap of twine back toward middle of bale from left-hand end wrap location AFTER the set number of end wraps have been applied. Re-Extension wrap settings range between 5—20 in. (0.12—0.50 m).

Cinch Wrap is a feature that may decrease loose twine and improve twine spacing on left-hand end of the bale. It places a wrap of twine approximately 10 in. (0.25 m) away from left-hand end wrap location PRIOR to applying the set number of end wraps.

Setting Twine Spacing



E38438 –UN–19JUN96



E47511 –UN–07JAN00

A—2 in. (0.05 m) Twine Arm Spacing
B—4 in. (0.10 m) Twine Arm Spacing
C—6 in. (0.15 m) Twine Arm Spacing
D—8 in. (0.20 m) Twine Arm Spacing
E—Spring Pin
F—Twine Symbol
G—Twine Spacing Key

Set Mechanical Twine Arm Spacing:

The monitor-controller maintains twine spacing for various bale diameters at rated PTO speed.

1. Set distance between the twine arms by installing spring pin (E) in the desired position:

Hole ID	Twine Arm Spacing
A	2.0 in. (0.05 m)
B	4.0 in. (0.10 m)
C	6.0 in. (0.15 m)
D	8.0 in. (0.20 m)

2. When operating at rated PTO speed, the monitor-controller twine spacing setting should be the same as the mechanical twine arm spacing.

3. When operating less than rated PTO speed, set monitor-controller twine spacing setting less than mechanical twine arm spacing. This number will vary with different PTO speeds. Check twine spacing on bale and adjust monitor-controller setting to get desired twine spacing.

Set Monitor-Controller Twine Spacing:

1. Turn tractor key to ON position. Do not start tractor engine. Set selector switch toward TWINE symbol (F) to turn monitor-controller ON.

2. Press and hold TWINE SPACING key (G). Press PLUS or MINUS keys until desired twine spacing, 2.0—10.0 in. (0.05—0.26 m), appears in digital display.

   Use the following chart as a guideline. Monitor-controller settings may vary with crop conditions and between balers.

Engine rpm	Mechanical Setting	Monitor-Controller Setting
Rated Speed	4.0 in. (0.10 m)	4.0 in. (0.10 m)
1800 rpm	4.0 in. (0.10 m)	3.5 in. (0.09 m)
1500 rpm	4.0 in. (0.10 m)	3.0 in. (0.08 m)
1300 rpm	4.0 in. (0.10 m)	2.5 in. (0.06 m)

3. Release TWINE SPACING key to enter setting into memory. Be sure monitor-controller twine spacing setting and mechanical twine arm spacing setting agree with each other.

Continued on next page

4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

AG,OUMX005,1510 –19–02AUG00–2/2

Setting Number of Twine End Wraps

Set Number of Right-Hand and Left-Hand End Wraps:

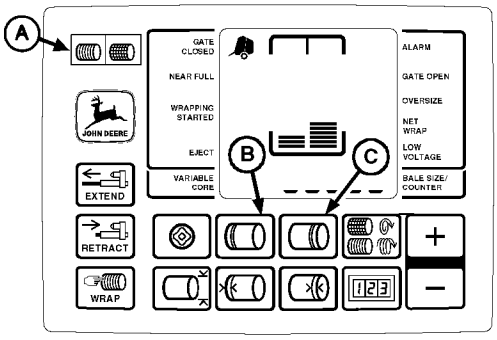
NOTE: The bale will have twice the number of left-hand end wraps, as indicated on the monitor-controller, when the twine contacts the twine guide. (See SETTING TWINE END WRAP DISTANCE in this section.) The setting for the number of end wraps is approximate for each twine arm.

1. Turn tractor key to ON position. Do not start tractor engine. Set selector switch toward TWINE symbol (A) to turn monitor-controller ON.

2. Press and hold left-hand END WRAP key (B) or right-hand END WRAP key (C). Press PLUS or MINUS keys until desired number of end wraps (1—10) appears in digital display.

3. Release END WRAP key to enter setting into memory.

4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E47512 –UN–07JAN00

A—Twine Symbol
B—Left-Hand End Wrap Key
C—Right-Hand End Wrap Key

AG,OUO6017,1632 –19–04NOV99–1/1

Setting Twine End Wrap Distance

Set Mechanical Twine Guide For End Wrap Distance

NOTE: 467 and 467S; Equipped with left-hand twine guide only. (See UNDERSTANDING TWINE WRAP TERMS AND SETTINGS in this section.)

The twine guide controls twine wrap distance from left-hand end of bale. Twine wrap distance can be adjusted from 89—190 mm (3-1/2—7-1/2 in.) at 25 mm (1 in.) increments.

For most baling conditions, adjust twine guide to position (B). This setting will position twine end wraps approximately 114 mm (4-1/2 in.) from end of bale.

For dry, slick crops such as straw, coastal Bermuda grass, or flax, increase twine wrap distance to prevent twine from falling off bale.

For crops, such as alfalfa, that fill the bale ends well and produce square shoulders, decrease twine end wrap distance to improve bale appearance and reduce bale spoilage.

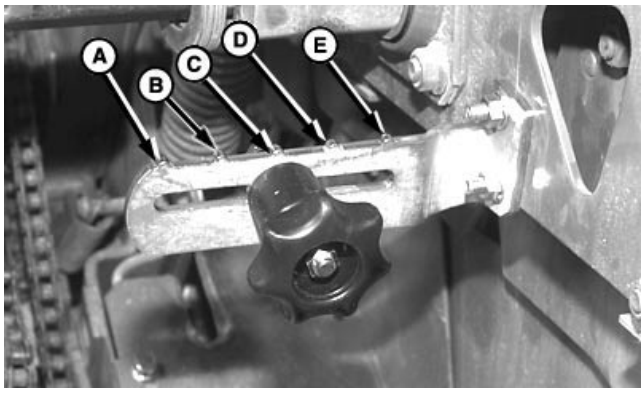
To adjust guide:

1. Loosen knob.

2. Move knob as follows:

   - Toward baler sidesheet to increase twine end wrap distance
   - Away from baler sidesheet to decrease twine end wrap distance

3. Tighten knob.



Right-Hand Side Shown

A—Twine End Wrap Distance—89 mm (3-1/2 in.)
B—Twine End Wrap Distance—114 mm (4-1/2 in.)
C—Twine End Wrap Distance—140 mm (5-1/2 in.)
D—Twine End Wrap Distance—165 mm (6-1/2 in.)
E—Twine End Wrap Distance—190 mm (7-1/2 in.)

Continued on next page

AG,OUMX005,1511 –19–02AUG00–1/2

Set Right-Hand and Left-Hand End Wrap Distance

NOTE: To ensure twine placement is controlled by mechanical twine guide, adjust monitor-controller twine end wrap distance 0.50—1.00 in. (0.005—0.03 m) less than mechanical twine guide setting. This adjustment will increase number of end wraps.

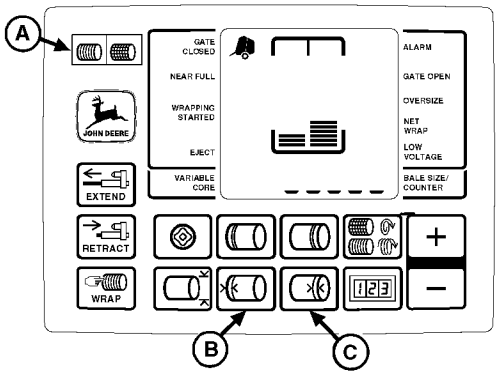
1. Turn tractor key to ON position. Do not start tractor engine. Set selector switch toward TWINE symbol (A) to turn monitor-controller ON.

2. Press and hold left-hand (B) or right-hand (C) END WRAP DISTANCE keys. Press PLUS or MINUS keys until desired distance 3—10 in. (0.08—0.25 m) appears in digital display. (End wrap distances are approximate.)

   To place twine the same distance from the edge on both ends, a slightly different setting may be required for each end.

3. Release END WRAP DISTANCE key to enter setting into memory. Repeat procedure for opposite end of bale.

4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E47543 –UN–07JAN00

A—Twine Symbol
B—Left-Hand End Wrap Distance
C—Right-Hand End Wrap Distance

AG,OUMX005,1511 –19–02AUG00–2/2

Setting Number of Net Wraps (If Equipped)

NOTE: Net wrap settings range between 1.2—5 wraps (in 0.1 wrap increments), with initial setting of two wraps.

1. Turn tractor key to ON position. Do not start tractor engine. Set selector switch toward NET symbol (A) to turn monitor-controller ON.

2. Press and hold NET WRAP key (B). Press PLUS or MINUS keys until desired number of wraps (2—5) appears in digital display.

3. Release NET WRAP key to enter setting into memory.

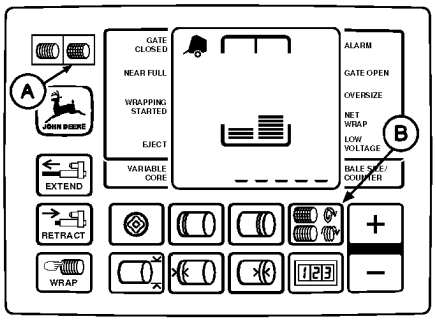
4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

NOTE: Two wraps are suitable for most crops, but three or more wraps are needed for:

- *Short, dry, slick crops*
- *Long, stiff, cane-type crops*
- *Cornstalks*

5. If machine RPM is less than rated PTO speed, use the following chart as a guideline for desired wraps.

NET WRAP CHART		
Engine RPM	Desired No. Of Wraps	Approximate Monitor Setting Needed
Rated PTO	2	2
	3	3
1800 RPM	2	2.4
	3	3.6
1500 RPM	2	2.9
	3	4.3
1300 RPM	2	3.3
	3	5.0



E47514 –UN–07JAN00

A—NET Symbol
B—NET WRAP Key

AG,OUO6017,1635 –19–04NOV99–1/1

Recommended Baling Guidelines

For consistent density and properly shaped bales the following conditions must be set:

- Bale shape sensors properly adjusted. (See ADJUSTING BALE SHAPE SENSORS in Service—Baler section.)
- Correct tractor tire spacing. (See ADJUSTING TRACTOR WHEELS in Preparing the Tractor section.)
- Proper driving technique.

Baling windrow one-half width or less than bale chamber:

1. Start feeding windrow in the center of baler.

2. Move quickly to one side for several yards feeding the baler, as close as possible to the sidesheet, without leaving hay in the field.

NOTE: Weaving back and forth across the windrow should be done quickly in a crisp zigzag fashion to balance crop intake side-to-side. Weaving too often or too slowly puts too much crop in the center of the bale and should be avoided.

3. Move quickly to the other side for several yards feeding the baler, as close as possible to the sidesheet, without leaving hay in the field.

4. Move quickly back to the other side feeding the baler, as close as possible to the sidesheet. Continue feeding this side until the top bar on the monitor-controller display lights or the other bale shape bars drop into the red.

5. Then quickly drive to the other side and continue feeding this side until the top bar on the monitor-controller display lights or the other bale shape bars drop into the red.

6. Continue to feed in this manner, weaving from one side to the other and taking one set of bars to the top and then the other, until the near full indicator is flashing. Then finish up the bale by getting the bars on both sides as high and as even as possible before reaching full size. Both sides should be in the green zone when finished and, if possible, finish bale by feeding the left side.

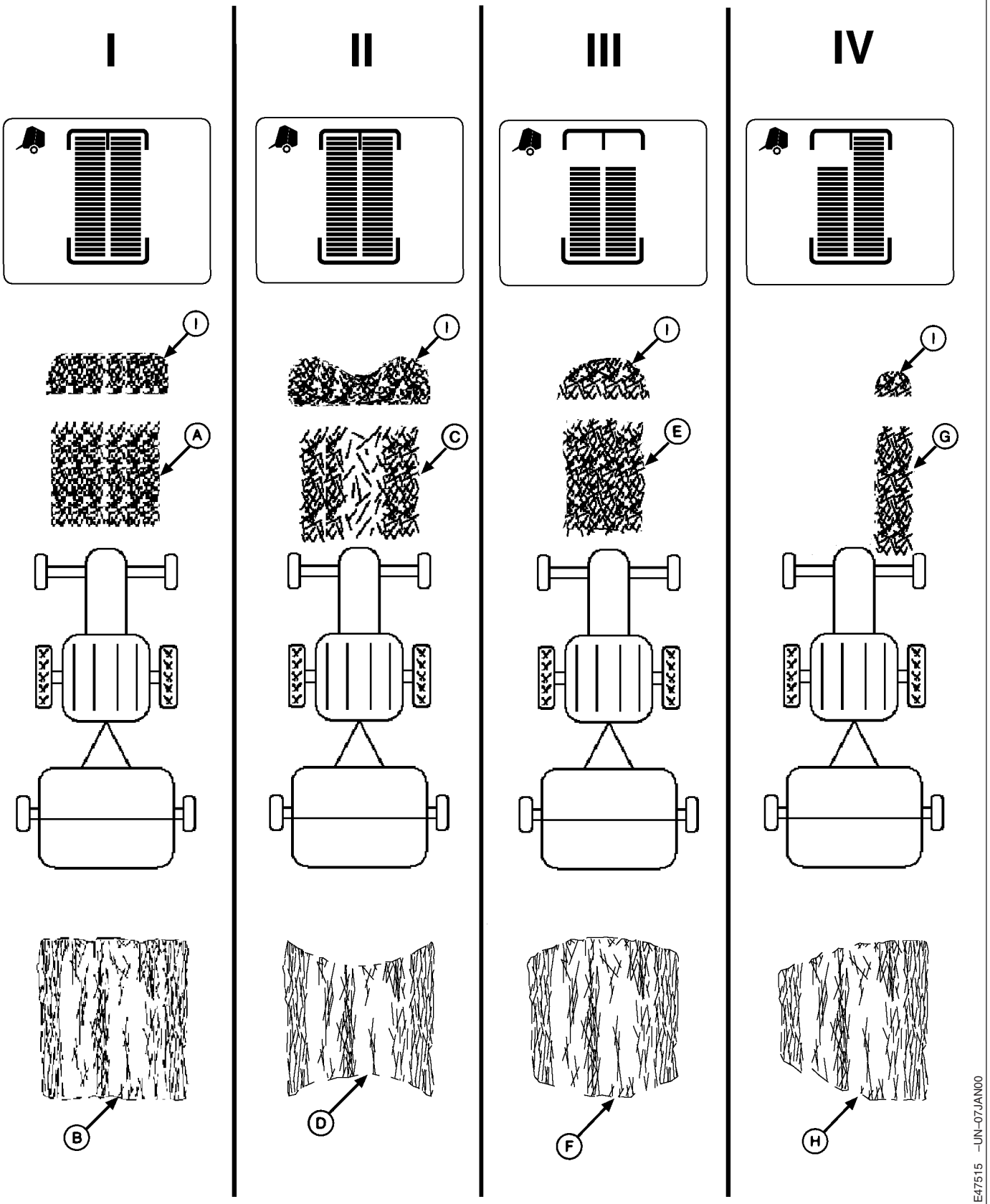
As bale diameter increases, bars are less sensitive to rise and fall as hay is fed into the baler. **Do not weave from one side unless the top bar is lit or the bars are at least in the green zone. Avoid baling for extended periods with either of the bale shape displays in the red zone.**

The tensioning valve, which controls bale density, is set at less than maximum pressure, when shipped from the factory. This is to provide for a break-in period of approximately 50 bales. To change bale density see ADJUSTING BALE DENSITY in this section. If operating at less than maximum pressure, with variable core engaged, or in some crop conditions, the top bar or bars on monitor-controller may not come on. If after driving on one side for several inches of bale growth while feeding the crop as close as possible to the sidesheet, and the top bar has not come on, then the highest bar that has come on becomes the “top bar”.

If it is desired long term to operate at less than maximum pressure, then the bale shape sensors can be adjusted to cause the top bar of the display to come on by using ADJUSTING BALE SHAPE BAR DISPLAY—FIELD PROCEDURE in Service—Baler section.

AG,OUO6017,1636 –19–04NOV99–1/1

Interpreting Bale Shape Indicators



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AG,OUO6059,32 –19–05MAY00–1/2

A—Uniform Windrow
B—Best Shaped Bale
C—Full-Width Windrow
D—Hourglass Shaped Bale
E—Less than Full-Width Windrow
F—Barrel Shaped Bale
G—Narrow Windrow
H—Cone Shaped Bale
I—Windrow Cross Section

The illustration on the facing page and the following information describes the relationship between the monitor-controller display, windrow variations and actual bale shape.

To ensure optimum bale shape and maximum bale density, the top bar should be shown on BOTH sides of the bale shape indicator display as shown in Example I. The top bars should be displayed when bale is being wrapped. Refer to RECOMMENDED BALING GUIDELINES in this section.

I— Best shape bales (B) are formed when windrow (A) has uniform density side-to-side and the width is the same as bale chamber.

Weaving is not necessary. If this is not practical, create windrows up to one-half the width of the bale chamber and follow the bale shape bars. (Refer to RECOMMENDED BALING GUIDELINES in this section.)

II— If full-width windrow (C) is heavy on the outside edges and light at the center, an hourglass shaped bale (D) will be formed even though bale shape bars are balanced and all lit. This may also happen with wide windrows on balers equipped with MegaWide pickup.

If possible, weaving back and forth across windrow will help fill the middle of the bale. Otherwise, proper windrow formation (raking, etc.) may be needed.

III— Bale shape bars will not reach maximum height and a barrel shaped bale (F) is formed if any of the following conditions exist:

- Windrow width (E) is approximately 2/3—3/4 the width of the baler.
- Windrow correct but operator may not be weaving over far enough.
- The windrow is full width but heavier density in the middle of the windrow.
- Weaving back and forth too frequently.

If windrow is almost as wide as the bale chamber, reduce tractor rpm and increase ground speed to spread material across pickup.

Windrow preparation should be less than one-half bale chamber or full width of bale chamber. If necessary, rake windrow to obtain correct width.

Bale shape bars may not reach maximum height when operating at reduced bale density and/or using variable core option. This is also true when operating in certain crops such as light coastal Bermuda Grass or short wheat straw, because ends of bale are soft.

IV— If narrow windrow (G) is baled without weaving back and forth, a cone shaped bale (H) will be formed.

- Operator feeding one side more than other.

Weave back and forth across narrow windrow to keep bale shape bars as high as possible. (Refer to WEAVING IN THE WINDROW in this section.)

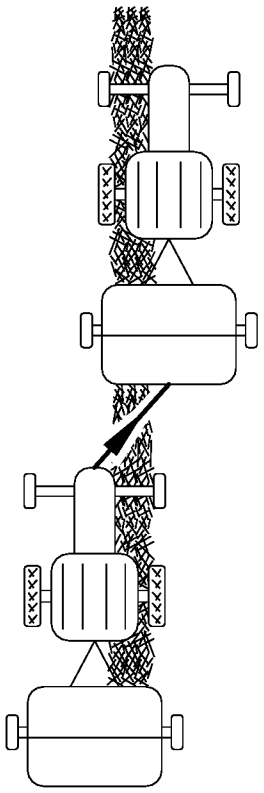
NOTE: Bale shape bars sensitivity is adjustable between very responsive and very dampened. (Refer to SETTING BALE SHAPE SENSITIVITY [ADVANCED OPERATIONAL INFORMATION] [CHANNEL 24] in this section.)

AG,OUO6059,32 –19–05MAY00–2/2

Weaving in the Windrow

Weaving back and forth across the windrow should be done quickly in a crisp zigzag fashion to balance crop intake side-to-side. Weaving too often or too slowly puts too much crop in the center of the bale and should be avoided.

Move quickly to one side for several yards feeding the baler, as close as possible to the sidesheet, without leaving hay in the field. Then, move quickly to the other side for several yards feeding the baler, as close as possible to the sidesheet. (See RECOMMENDED BALING GUIDELINES in this section.)



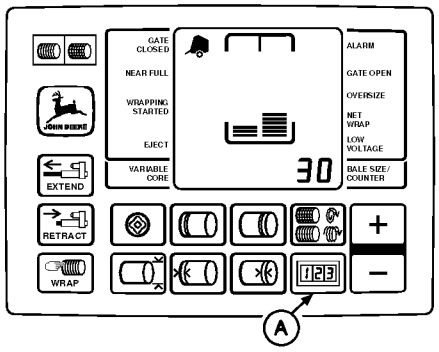
E38408 –UN–21FEB95

AG,OUO6017,1638 –19–04NOV99–1/1

Viewing and Resetting Bale Counters

BALETRAK *PLUS*® monitor-controller is equipped with two bale counters; RESETABLE and TOTAL BALE.

The RESETABLE counter can be cleared or modified as desired, while the TOTAL BALE counter cannot be reset or cleared. A wrap and gate latch open cycle will add one bale to both of the counters.



E47516 –UN–07JAN00

A—COUNTER Key

To view counter memory:

NOTE: When key (A) is pressed, display will show bale count for 8 seconds, then revert back to regular display.

1. Depress COUNTER key (A) once to display RESETABLE counter.
2. Depress COUNTER key twice to display TOTAL BALE counter.

To clear RESETABLE counter memory:

1. Press COUNTER key (A) once, then release.
2. While count is displayed, press MINUS key. Count display will reset to "0".

NOTE: Bale count in RESETABLE counter can be increased to add fields together, or decreased, to remove aborted bales (such as bales not wrapped correctly). Adding or removing bales from RESETABLE counter will not affect the TOTAL BALE counter.

To change number of bales in RESETABLE counter:

1. Press and hold COUNTER key (A).
2. While holding key (A), press PLUS or MINUS key to change bale count as desired.

Using Manual Actuator, Wrap, and Bypass Switches

Press and release WRAP key (C) to start an automatic twine or net wrap cycle before bale reaches preset diameter.

Once started, the bale wrapping cycle uses current settings stored in the monitor-controller memory (number of wraps, end wraps, and end wrap distance). This feature is useful to wrap an undersized bale when finishing a field. Monitor-controller resumes fully automatic operation on next bale.

EXTEND (A) and RETRACT (B) keys are used to manually operate **twine actuator only**. Pressing either key during an automatic wrap cycle will cancel the cycle and move actuator as desired.

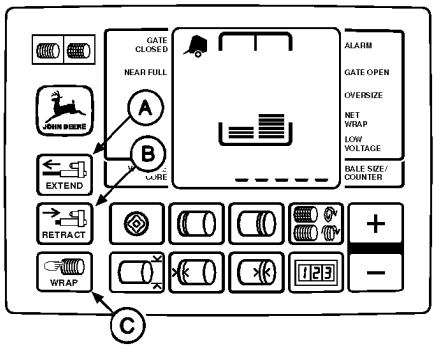
NOTE: Twine end wrap spacing distance will be overridden when EXTEND or RETRACT keys are used.

For example, if right-hand end wrap distance is set at 5 in. (0.13 m) and EXTEND key is pressed, twine arm will not stop at the 5 in. (0.13 m) setting. It will either contact right-hand sidesheet, or actuator will be fully extended.

Bale can be finished using the EXTEND (A) or RETRACT (B) keys, or by pressing WRAP key (C) to start an automatic wrap cycle.

When using EXTEND (A) and RETRACT (B) keys, bale counter will not register additional bales.

Bypass switch on the baler harness can also be used to manually operate twine actuator in the event of an electronic failure. (See USING BYPASS SWITCH [TWINE WRAP ONLY] in this section for additional information.)



E47517 –UN–07JAN00

A—EXTEND Key
B—RETRACT Key
C—WRAP Key

AG,OUO6017,1640 –19–04NOV99–1/1

Using Bypass Switch (Twine Wrap Only)

Bypass switch (A) allows direct operation of the twine actuator in the event of an electronic failure. Move switch to retract or extend twine actuator. Actuator is fully retracted when twine arms are in home position.

To use bypass switch:

1. Unplug TWINE ACTUATOR connector from NORMAL OPERATION connector in monitor-controller harness near rocker switch.

2. Remove dust cap from BYPASS connector. Install dust cap on NORMAL OPERATION connector.

3. Plug TWINE ACTUATOR connector into BYPASS connector.

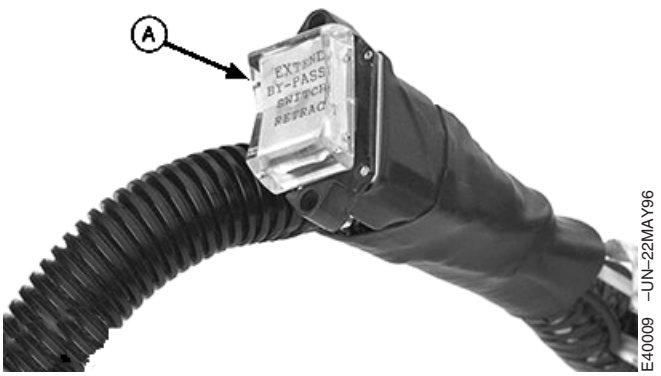
NOTE: Twine arms will not cycle automatically if bypass switch is connected.

To return to electronic operation:

1. Unplug TWINE ACTUATOR connector from BYPASS connector.

2. Remove dust cap from NORMAL OPERATION connector. Install dust cap on BYPASS connector.

3. Plug TWINE ACTUATOR connector into NORMAL OPERATION connector.



A—Bypass Switch

AG,OUO6017,1641 –19–04NOV99–1/1

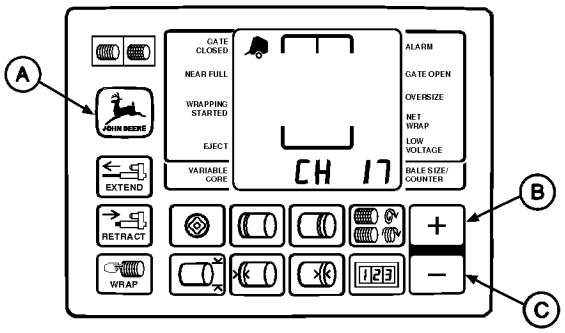
Using Dry Straw Twine Wrap Program (Advanced Operational Information) (Channel 17)

When baling dry straw, it may be desirable to quickly place twine across full width of bale to prevent straw from flaking off in the baler.

The dry straw twine program provides for full speed twine arm movement from right to left, after the normal full speed starting pass from left to right. The twine arms will return to the right side, pause to place the set number of right-end wraps on the bale, and continue to apply twines as set in the monitor-controller.

To access program:

1. Turn tractor key to ON position. Do not start tractor engine.
2. Press and hold DEERE key (A) while setting selector switch to TWINE symbol to turn monitor-controller ON.
3. Continue to hold DEERE key (A) and press PLUS key (B) until "CH 17" appears in digital display.
4. Release DEERE key (A) and "0" should be displayed.
5. Press PLUS key (B) to "1" to activate program.
6. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory. This program will stay active until "CH 17" is accessed again and the MINUS key (C) is used to return display to "0" (OFF).
7. Turn tractor key to OFF position. Remove key.



A—DEERE Key
B—PLUS Key
C—MINUS Key

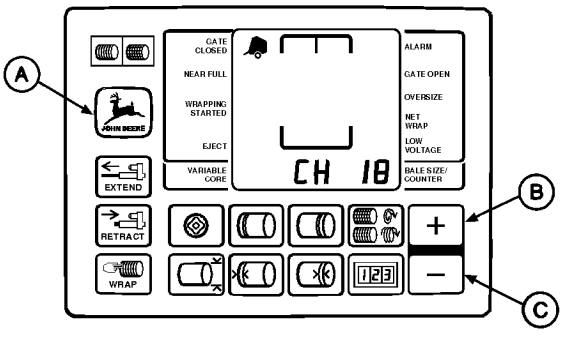
AG,OUO6017,1642 –19–04NOV99–1/1

Setting Twine Re-Extension or Cinch Wrap Distance (Advanced Operational Information) (Channel 18)

Re-Extension is a feature that may help prevent twine unrolling. It places a wrap of twine back toward the middle of the bale from the left-hand end wrap location by the distance indicated by the setting. This is done **after** the set number of end wraps have been applied.

Cinch Wrap is a feature that may decrease loose twine and improve twine spacing on the left-hand side of the bale. It places a wrap of twine approximately 10 in. (0.25 m) away from the left-hand end wrap location **prior** to applying the set number of end wraps.

Setting	Feature
00[a]	OFF
05	Approximately 5 in. of re-extension
10	Approximately 10 in. of re-extension
15	Approximately 15 in. of re-extension
20	Approximately 20 in. of re-extension
Cinch	Cinch Wrap ON
[a]Indicates both re-extension and cinch wrap are off.	



E48761 –UN–02AUG00

A—DEERE Key
B—PLUS Key
C—MINUS Key

To access special wrap programs:

1. Turn tractor key to ON position. Do not start tractor engine.
2. Press and hold DEERE key (A) while setting selector switch to TWINE symbol to turn monitor-controller ON.
3. Continue to hold DEERE key (A) and press PLUS key (B) until "CH 18" appears in digital display.
4. Release DEERE key (A) and view current setting (see chart).
   - Press PLUS key (B) to increase setting.
   - Press MINUS key to reduce setting.
5. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory.

Continued on next page

6. Turn tractor key to OFF position. Remove key.

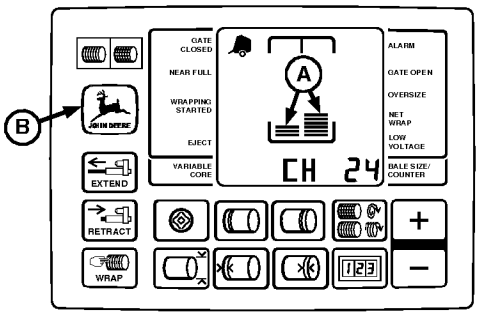
AG,OUMX005,1512 –19–02AUG00–2/2

Setting Bale Shape Sensitivity (Advanced Operational Information) (Channel 24)

The sensitivity of the bale shape bars (A) is factory set at 3 to dampen sensor signals. The reaction of bale shape bars to actual changes in the bale shape can be adjusted to be very responsive or very dampened.

Decreasing the setting makes the bale shape bars less responsive (slower to react) to bale shape changes.

Increasing the setting makes the bale shape bars very responsive (fast to react) to crop intake. It may be desirable to increase bale shape sensitivity when rapidly forming bales.



E47518 –UN–07JAN00

A—Bale Shape Bars
B—DEERE Key

SETTING	REACTION
1	Slowest
2	Slow
3	Mid-Point (Initial Setting)
4	Fast
5	Fastest

To adjust bale shape sensitivity:

1. Turn tractor key to ON position. Do not start tractor engine.
2. Press and hold DEERE key (B) while setting selector switch to TWINE or NET symbol to turn monitor-controller ON.
3. Continue to hold DEERE key and press PLUS key until "CH 24" appears in digital display. Release DEERE key and view current sensitivity setting "(1—5)".
4. Use PLUS key to increase setting, making indicators more responsive. Use MINUS key to reduce setting, making indicators less responsive.
5. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory.
6. Turn tractor key to OFF position. Remove key.

AG,OUO6017,1643 –19–04NOV99–1/1

Setting Near-Full Indicator Set Point (Advanced Operational Information) (Channel 25)

NEAR-FULL indicator (A) informs operator when bale has almost reached desired size, based on the bale diameter setting. The point below the diameter setting, at which the indicator comes on, is adjustable between 0.5—10.0 in. (0.01—0.27 m), in 0.5 in. (0.01 m) increments.

Initial setting is 4.5 in. (0.11 m).

If bale diameter is set at 72 in. (1.83 m) and the near-full distance is left at initial setting of 4.5 in. (0.11 m), the near-full indicator will come on when bale diameter reaches 67.5 in. (1.72 m).

If bale diameter setting is changed, near-full indicator set point need not change, unless a different near-full distance is desired.

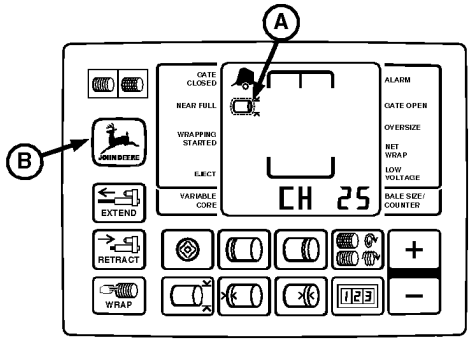
To change near-full indicator set point:

1. Turn tractor key to ON position. Do not start tractor engine.
2. Press and hold DEERE key (B) while setting selector switch to TWINE or NET symbol to turn monitor-controller ON.
3. Continue to hold DEERE key (B) and press PLUS key until "CH 25" appears in digital display.
4. Release DEERE key and view current near full setting 0.5—10.0 in. (0.01—0.27 m).

NOTE: Increasing near-full distance to highest setting of 10.0 in. (0.27 m) provides maximum time between NEAR-FULL indication and the wrapping cycle.

Decreasing near full distance to lowest setting of 0.5 in. (0.01 m) will minimize the time between the NEAR-FULL indication and the wrapping cycle.

5. Use PLUS and MINUS keys to change near-full distance to desired setting.



E47601 –UN–07JAN00

A—Near-Full Indicator
B—DEERE Key

Continued on next page

6. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory.

7. Turn tractor key to OFF position. Remove key.

AG,OUO6017,1644 –19–04NOV99–2/2

Adjusting Net Wrap Delay (Advanced Operation Information) (Channel 26)

The initial setting for net wrap delay is 2 seconds. This provides time to stop forward travel and avoid getting crop between layers of wrap.

If the operation requires additional delay before wrapping starts, such as operating on a hillside or baling at high ground speed, net wrap delay can be adjusted from 0 to 8 seconds.

To change setting:

1. Turn tractor key to ON position. Do not start tractor engine.

2. Press and hold DEERE key (A) while setting selector switch to NET symbol to turn monitor-controller ON.

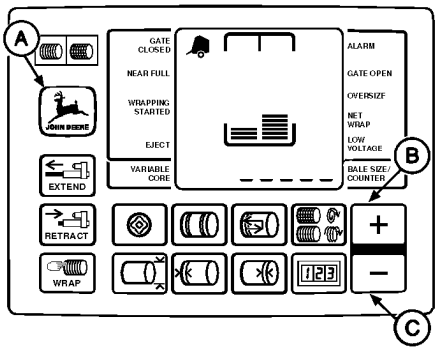
3. Continue to hole DEERE key and press PLUS key until "CH 26" appears in digital display.

4. Release DEERE key and view current setting.

5. Use PLUS and MINUS keys (B and C) to change net wrap delay to desired setting (0 to 8 seconds).

6. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory.

7. Turn tractor key to OFF position. Remove key.



E47519 –UN–07JAN00

A—DEERE Key
B—PLUS Key
C—MINUS Key

AG,OUO6017,1645 –19–04NOV99–1/1

Changing Monitor-Controller Display to Metric or English Units

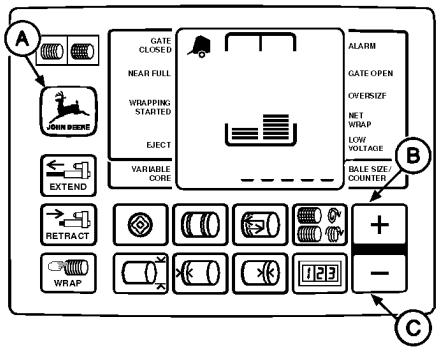
NOTE: Monitor-controller is initially set to display in English units (inches; in.).

To change to Metric units (meters; m):

1. Turn tractor key to ON position. Do not start tractor engine.
2. Set selector switch to TWINE or NET symbol to turn monitor-controller ON and allow it to go to normal operating mode.
3. Simultaneously press and hold DEERE (A) and PLUS key (B) approximately three seconds, until "SI" shows in digital display. Release keys.
4. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory.
5. Turn tractor key to OFF position. Remove key.

To change to English units (inches; in.):

1. Turn tractor key to ON position. Do not start tractor engine.
2. Set selector switch to TWINE or NET symbol to turn monitor-controller ON and allow it to go to normal operating mode.
3. Simultaneously press and hold DEERE (A) and MINUS key (C) approximately three seconds, until "E" shows in digital display. Release keys.
4. Set monitor-controller selector switch to OFF (centered) position, to enter setting into memory.
5. Turn tractor key to OFF position. Remove key.



E47519 –UN–07JAN00

A—DEERE Key
B—PLUS Key
C—MINUS Key

AG,OUMX005,1514 –19–02AUG00–1/1

Changing Baler Model Program

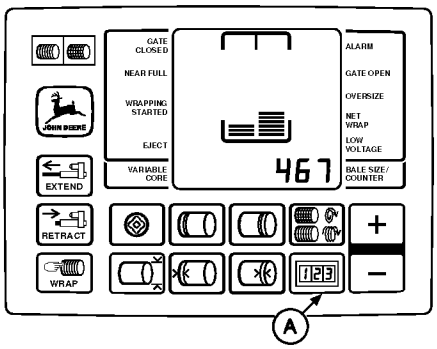
The monitor-controller software includes two baler model programs—467 and 567. Each program is written specifically for the baler model for which the monitor-controller was originally supplied.

When replacing monitor-controller with a new unit, or moving monitor-controller to a different model baler, review and revise the model program if necessary.

NOTE: The twine system will not operate correctly unless the displayed model number agrees with the baler model number.

To change model program:

1. Turn tractor key to ON position. Do not start tractor engine.
2. Press and hold COUNTER key (A) while setting selector switch to TWINE or NET symbol to turn monitor-controller ON; current model setting will show in digital display.
3. Continue holding COUNTER key (A) and press PLUS key to change digital display model number.
4. When desired model number appears in display, release COUNTER key (A). Monitor-controller will go into normal operation, using operating parameters for the selected model.
5. Set monitor-controller selector switch to OFF (centered) position.
6. Turn tractor key to OFF position. Remove key.



E48328 –UN–07JUL00

A—COUNTER Key

AG,OUO6059,33 –19–05MAY00–1/1

Bale Density Gauge

The gauge indicates the relative pressure within the hydraulic bale tension system while forming a bale.

Turning the bale density knob counterclockwise will cause the needle to move toward the minus sign and make lighter bales.

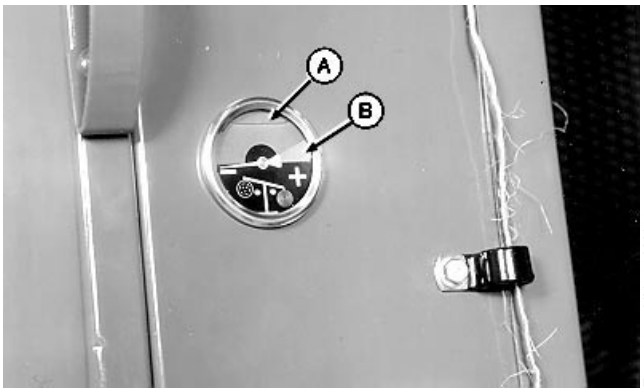
Turning the bale density knob clockwise will cause the needle to move toward the plus sign and make heavier bales.

NOTE: The gauge will not register a higher setting until more hay is fed into the baler.

The green band (A) represents normal baler operating pressure range.

If the needle reaches the red band (B):

1. Make sure tractor selector valve returns to neutral while baling.
2. Reduce bale density.
3. Check for faulty gauge or relief valve.



A—Green Band
B—Red Band

AG,OUO6017,1649 –19–04NOV99–1/1

Adjusting Bale Density

NOTE: To adjust the bale density, close gate and lower belt tension arm. This will allow the bale density knob to be turned more easily.

Tension valve has been preset at the factory. Operate baler at this setting for a break-in period of approximately 50 bales. This will reduce maintenance and increase the life of the baler.

The correct adjustment for this break-in period may be checked by the following procedure:

Loosen locking ring (B) and turn knob (A) clockwise until seated. Turn knob (A) counterclockwise two turns. Tighten locking ring (B).

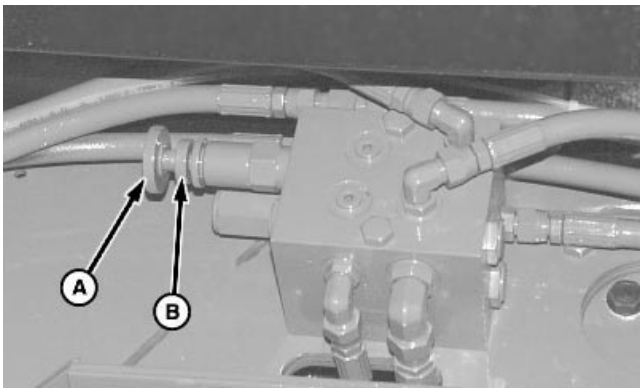
After the break-in period, adjust bale density as follows:

1. Loosen locking ring (B).

2. Turn knob (A) as desired:

   - Counterclockwise for lighter bales
   - Clockwise for heavier bales

3. Tighten locking ring (B).



E48230 –UN–26JUN00

A—Knob
B—Locking Ring

AG,OUMX005,1513 –19–02AUG00–1/1

Adjusting Twine Tension

CAUTION: To avoid injury or death by being pulled into the machine:

DO NOT attempt to feed twine into baler or pull twine from twine arms WHILE BALER IS RUNNING. The baler feeds material faster than you can release it.

Disengage PTO and shut off tractor engine.

Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

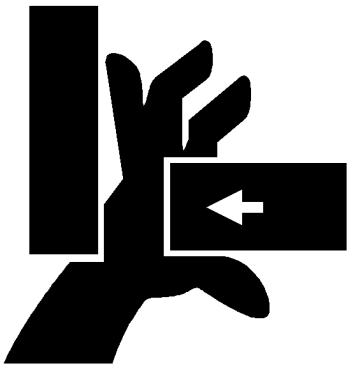
NOTE: It may be necessary to adjust twine tension when changing to a different size twine or when changing from sisal to plastic.

Twine tension is controlled by spring-loaded tension plates (A).

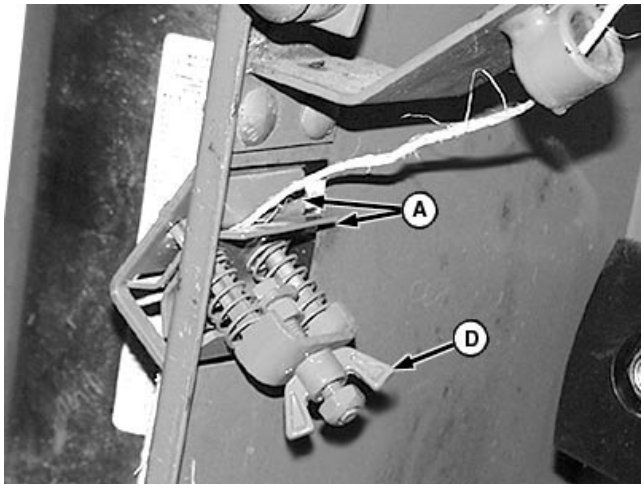
Adjust twine tension while pulling twine perpendicular to end of twine tube.

- If twine tension is too high, the twine may not start to wrap around the bale or twine may break.
- If twine tension is too loose, the twine may not hold the bale adequately.

TS679 –UN–28SEP89



E47598 –UN–07JAN00



E47616 –UN–07JAN00

Left-Hand Twine Tension Plate Shown

A—Tension Plates (Door Bands)
D—Wing Nut

Continued on next page

To adjust twine tension:

1. Lower pickup to avoid twine arm from bending pickup teeth.

2. Move twine arms to home position. Make sure twine is routed correctly. (See ROUTING TWINE in Preparing the Baler section.)

Continued on next page

3. Remove crop buildup from tension plates (A) located on door bands and from tension plates (B) located on twine arms.

4. Attach spring scale to twine from rear twine arm (C). Pull twine perpendicular to the twine arm. Twine pull should be within specifications.

Specification

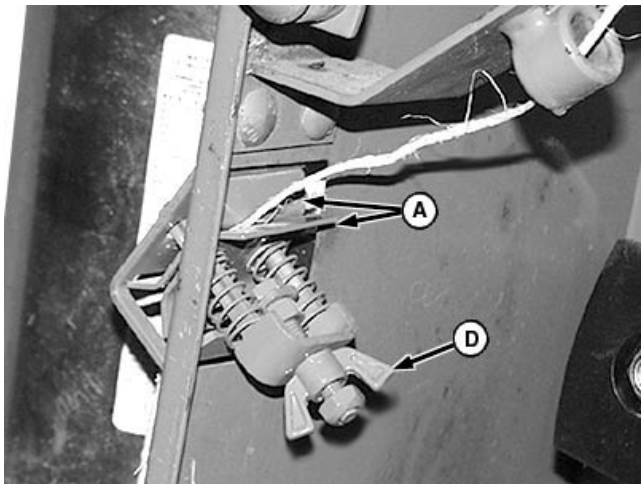
Twine Pull—Tension..... 22—45 N (5—10 lb force)

- Tighten wing nut (D) to increase tension on twine.
- Loosen wing nut (D) to decrease tension on twine.

5. Repeat Step 4 to adjust twine tension for front twine arm (E).

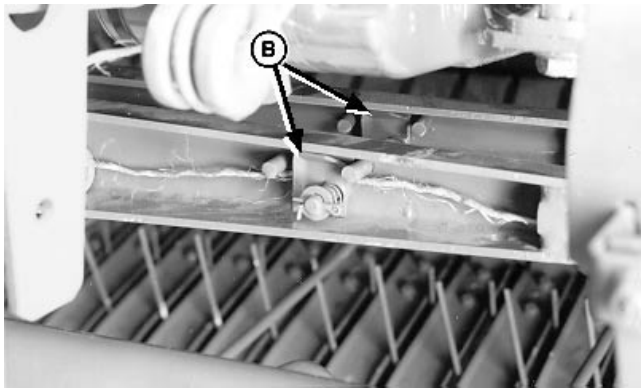
6. Cut twine 305—381 mm (12—15 in.) beyond end of twine arms (C and E).

A—Tension Plates (Door Bands)
B—Tension Plates (Twine Arms)
C—Rear Twine Arm
D—Wing Nut
E—Front Twine Arm

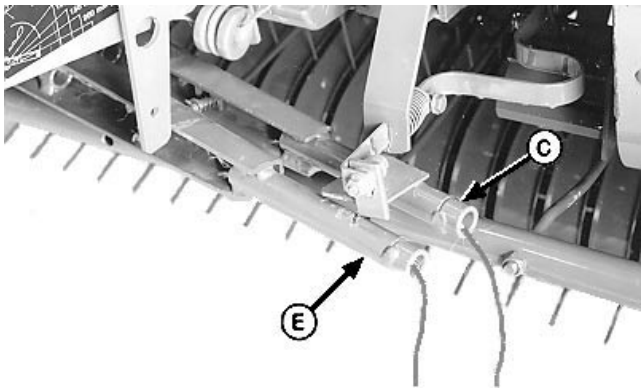


E47616 –UN–07JAN00

Left-Hand Twine Tension Plate Shown



E39752 –UN–17FEB96



E39751 –UN–19FEB96

AG,OUO6017,1651 –19–04NOV99–3/3

Adjusting Pickup Height

IMPORTANT: Operating with pickup teeth contacting the ground will cause pickup damage.

Operate pickup teeth as high as possible yet harvest field adequately.

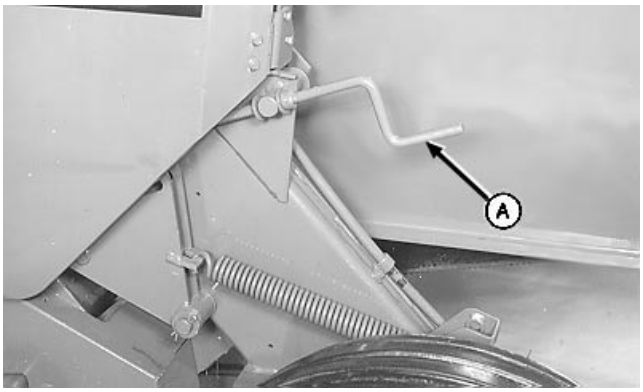
Adjust pickup tooth height to obtain a ground clearance of 25—50 mm (1—2 in.) for an initial setting. The final adjustment will be determined by field conditions.

To adjust pickup height:

- Turn crank (A) clockwise to raise the pickup
- Turn crank (A) counterclockwise to lower the pickup

If baler is equipped with a hydraulic pickup lift, the crank acts as the downstop controlling pickup operating height. This feature allows the pickup to return to the same operating height after raising and lowering hydraulically.

Always raise pickup to transport position when crossing ditches, moving from field to field, etc.



A—Pickup Turn Crank

AG,OUO6077,922 –19–08AUG00–1/1

Adjusting Gauge Wheels

IMPORTANT: Gauge wheels must be positioned so pickup is as high as possible, but still allow the pickup teeth to clean the field adequately. Operating with pickup teeth contacting the ground will cause pickup damage.

NOTE: Pickup gauge wheels are optional on regular pickup.

Three factors determine the adjustment for gauge wheels:

- Tractor drawbar height
- Wheel spindle position
- Baler tire size

If any one of these factors change, adjust gauge wheels.

Position gauge wheels to operate pickup teeth as high as possible and clean field adequately.

1. Park baler on a level surface. Baler hitch height must match the drawbar height of the tractor used for baling.

2. Regular and MEGATOOTH™ Pickup; Check gauge wheel tire inflation pressure. Inflate tires to specifications if necessary.

Specification	
Tire Inflation—Pressure	193 kPa (1.9 bar) (28 psi)

3. Loosen lock nut (A) and raise wheel to top of slot. Tighten lock nut. Repeat on opposite side.

E39899 –UN–17APR96

Regular and MEGATOOTH Pickup

E48327 –UN–07JUL00

MegaWide Pickup

A—Lock Nut

Continued on next page

NOTE: When baler is in lowered position, a minimum pickup teeth ground clearance of 25 mm (1 in.) is not possible using gauge wheels due to a limited adjustment slot in gauge wheel arms. Position and tighten gauge wheel in top of slot and adjust tooth-to-ground clearance with the mechanical crank. (See ADJUSTING PICKUP HEIGHT in this section.)

4. Adjust pickup until pickup teeth have a minimum of 25 mm (1 in.) ground clearance.

5. Loosen lock nut (A) and lower wheel until it contacts the ground. Tighten lock nut (A). Repeat on opposite side. *(Final adjustment will be determined by field conditions.)*

IMPORTANT: Distance between the gauge wheel and ground must always be equal to or less than the distance between pickup teeth and ground. If not, gauge wheels will not protect pickup.

Pickup float springs must be adjusted after gauge wheels are installed.

6. For initial pickup float spring setting with gauge wheels installed, see ADJUSTING PICKUP FLOAT in Service—Baler section. If excessive bouncing of the pickup occurs, decrease float spring force as needed.

AG,OUMX005,1515 –19–02AUG00–2/2

Adjusting Gathering Wheel Height (If Equipped)

IMPORTANT: Gathering wheels should never be in heavy contact with the ground or damage to gathering wheels may occur.

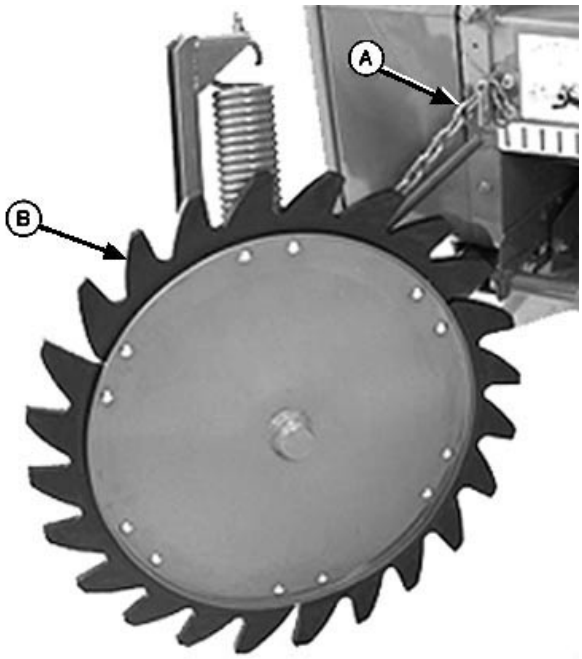
NOTE: Gathering wheels are not available for the MegaWide pickup.

1. Remove chain (A) from chain anchor support and lower wheel (B) to ground.

2. Raise chain (A) one link and install back in chain anchor support. Wheel should be approximately 25 mm (1 in.) from the ground.

   If less than one chain link is needed for an adjustment, twist the chain and install back in chain anchor support.

NOTE: This is an initial setting; final adjustment will be determined by field conditions.



E40021 –UN–29MAY96

A—Chain
B—Gathering Wheel

AG,OUO6059,35 –19–05MAY00–1/1

Checking Baler Performance in the Field

A performance check for the baler can be done after baler break-in period of 50 bales.

1. Set tractor tires at least as wide as the baler pickup (inside tire-to-tire dimension). (See ADJUSTING TRACTOR WHEELS in Preparing the Tractor section.)

2. Form a uniform windrow full width of baler pickup long enough to make one complete bale. Windrow width should be:

   - 467 and 467S; 1.22 m (4 ft)
   - 567; 1.52 m (5 ft)

3. Adjust bale density valve for maximum density (turn valve knob clockwise until it stops).

4. Run tractor at 1800—2000 rpm. Certain crop conditions may require reduced engine speed and shifting transmission to higher gear to increase ground speed. Select a gear that will be approximately 6—8 km/h (4—5 mph).

5. Bale windrow. Observe bale density gauge on the baler and the bale shape bar on the monitor-controller.

   - After bale size reaches 0.91 m (3 ft) or larger, the bale density gauge needle should almost reach the red zone.
   - As the bale is being formed, the bale shape bars should both be at 24 bars.

6. Bale should be tight with uniform density and even on both corners. If not, refer to Troubleshooting section.

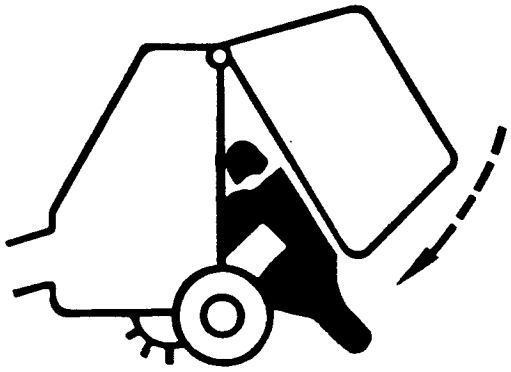
AG,OUO6059,36 –19–05MAY00–1/1

Locking the Gate

CAUTION: While working inside or around the baler with an open gate, the gate lock lever must be moved to locked position. Use this safety feature any time gate is open. Close gate any time the baler must be left unattended.

Gate lock valve (A) locks each gate lift cylinder independently with gate in any position. If the hydraulic lift system fails on one side of machine, the gate would still be held open by the other gate cylinder.

A—Gate Lock Valve



TS698 –UN–21SEP89

E48329 –UN–07JUL00

AG,OUMX005,1516 –19–02AUG00–1/1

Unplugging Baler With Hydraulic Pickup Lift (If Equipped)

1. Back clear of windrow.
2. Operate tractor at 1500—2100 rpm and engage PTO.

IMPORTANT: Do not prolong operating a raised pickup to clear the baler or the pickup drive may be damaged.

3. Raise and lower pickup a couple of times by moving tractor selector valve.
4. If baler does not clear, shut off PTO and tractor. (See UNPLUGGING BALER UNDER POWER in this section.)
5. If baler clears, return pickup to operating height and continue baling.

AG,OUO6017,1658 –19–04NOV99–1/1

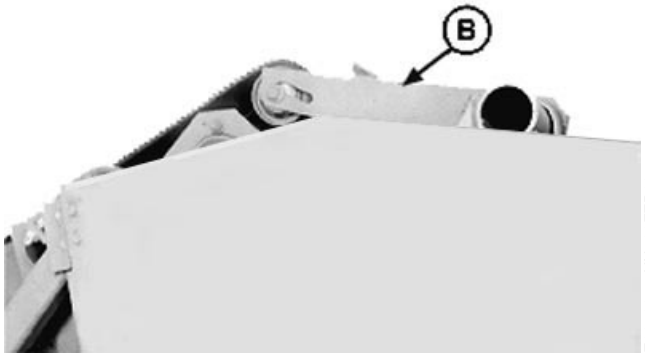
Unplugging Baler Under Power

1. Shut off tractor.
2. Place gate lock valve in "Lock" position (A).
3. Raise belt tension arm with tractor selector valve until upper arm (B) starts to move.
4. Engage PTO.

IMPORTANT: If belts slip, lower belt tension arm. Do not prolong belt slippage as damage may occur to the baler.

5. If belts slip, lower belt tension arm.
6. If baler clears, unlock gate lock valve and continue baling.
7. If baler does not clear, unlock gate, discharge bale, and shut off tractor.
8. With gate open, put gate lock valve in "Lock" position (A).
9. Lower pickup and unplug manually.
10. Raise pickup to operating height.
11. Unlock gate lock valve, lower gate, and continue baling.

E48329 –UN–07JUL00



E39711 –UN–06FEB96

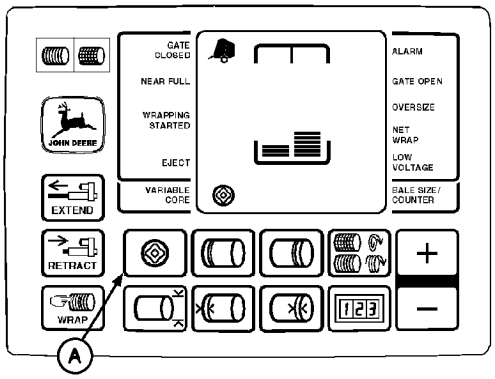
A—Locked Position
B—Upper Arm

Continued on next page

AG,OUMX005,1518 –19–02AUG00–1/2

If baler is equipped with variable (soft) core option (A), unplugging can be done from the tractor station following these steps:

1. Set variable core diameter 4—6 in. (0.11—0.16 m) above displayed bale size.
2. Engage variable core valve (A).
3. Engage PTO slowly to unplug.
4. If baler does not clear, discharge bale and shut off tractor.
5. With gate open, put gate lock valve in "Lock" position.
6. Lower pickup and unplug manually.
7. Raise pickup to operating height.
8. Reset variable core to setting prior to plugging and continue baling.



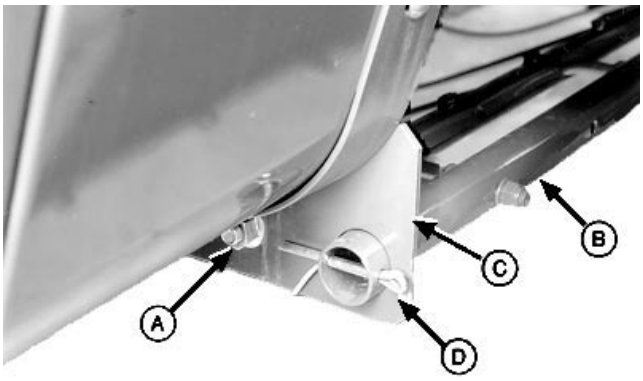
E47522 –UN–07JAN00

A—Variable Core Option

AG,OUMX005,1518 –19–02AUG00–2/2

Removing Compressor Rack Assembly

1. Remove cap screw and lock nut (A). Remove cotter pin (D) from right-hand end of compressor rack tube.
2. Slide compressor rack (B) away from right-hand bracket (C).
3. Lower right-hand end and remove compressor rack from left-hand bracket.



E40057 –UN–17JUN96

MEGATOOTH™ Pickup Shown

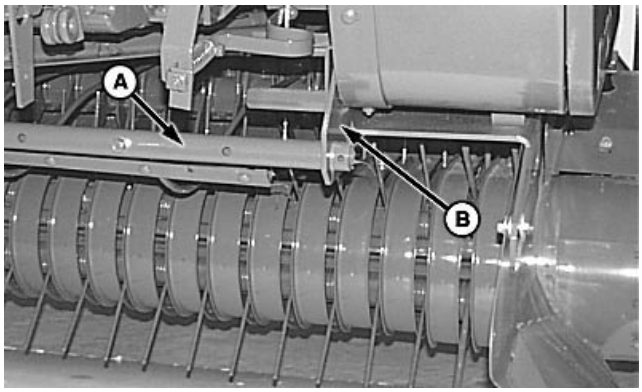
A—Lock Nut
B—Compressor Rack
C—Right-Hand Bracket
D—Cotter Pin

AG,OUO6017,1660 –19–04NOV99–1/1

Installing Compressor Rack Assembly

1. Install compressor rack (A) in left-hand bracket (B).

A—Compressor Rack
B—Left-hand Bracket



MegaWide Pickup Shown

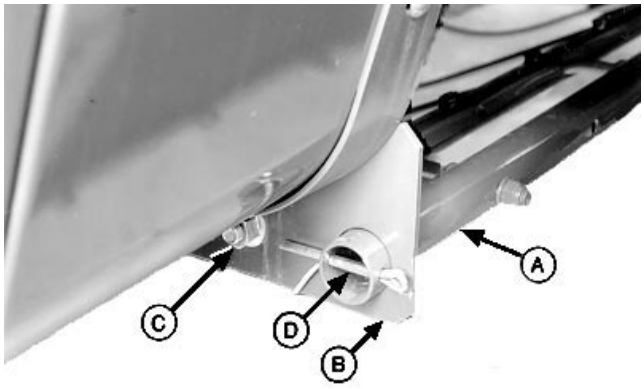
AG,OUO6059,37 –19–05MAY00–1/2

2. Lift right-hand end and slide compressor rack (A) into bracket (B).

3. Install cap screw and lock nut (C). Install cotter pin (D) into right-hand end of compressor rack tube.

NOTE: Make sure compressor rods do not interfere with twine arm. Adjust individual rods, as necessary, or adjust compressor rack assembly for clearance.

4. Adjust to desired operating height. Tighten lock nut (C). (See ADJUSTING COMPRESSOR RACK ASSEMBLY in this section.)



MEGATOOTH™ Pickup Shown

A—Compressor Rack
B—Bracket
C—Lock Nut
D—Cotter Pin

AG,OUO6059,37 –19–05MAY00–2/2

Adjusting Compressor Rack Assembly

To improve feeding, the compressor rack may be adjusted up or down.

1. Loosen lock nut (A).

NOTE: Make sure compressor rods do not interfere with twine arm. Adjust individual rods, as necessary, for clearance.

2. Adjust rack to desired height.

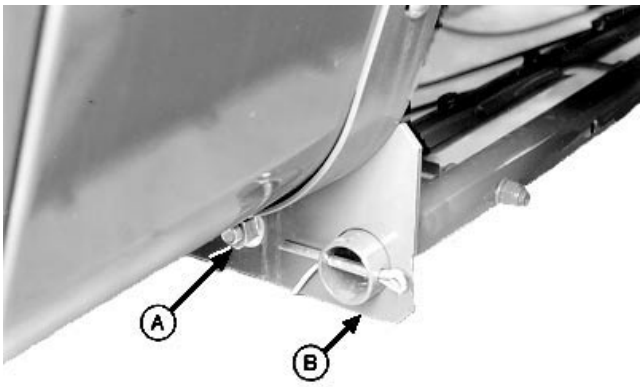
   For an initial height setting, adjust compressor rack strap parallel to edge of mounting bracket (B).

3. Tighten lock nut (A).

IMPORTANT: Belt damage may occur if crop is allowed to build up on top of compressor rack.

In short, dry, slick crops it may be necessary to remove compressor rods or compressor rack, if material builds up on top of rods. (See REMOVING COMPRESSOR RACK ASSEMBLY in this section.)

NOTE: Reinstall compressor rack or compressor rods when buildup conditions cease or when returning to bale hay crops.



E40570 –UN–23SEP99

A—Lock Nut
B—Mounting Bracket

AG,OUMX005,1519 –19–02AUG00–1/1

Adjusting Compressor Rod Channel (MEGATOOTH™ and MegaWide Pickup)

Compressor rod channel reduces compressor rod breakage and helps keep rods from being caught and held by starter roll.

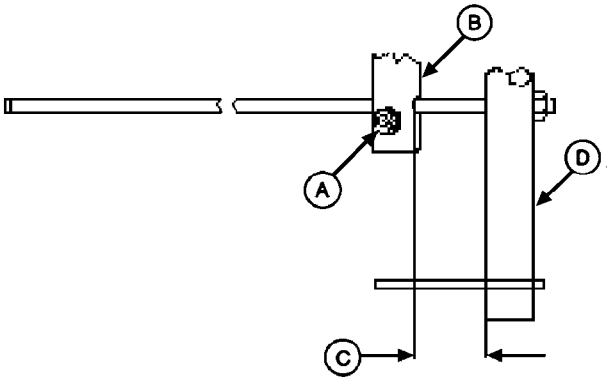
Adjust channel whenever compressor rods are replaced or if channel has been removed.

1. Loosen nuts (A) on compressor rod channel (B).
2. Adjust channel (B) until dimension (C) is within specifications between compressor tube (D) and channel (B).

Specification	
Compressor Tube-to-Channel—Distance	50 mm (2 in.)

NOTE: Do not overtighten nuts. Overtightening can cause channel to collapse and not retain compressor rods.

3. Tighten nuts (A).



A—Nuts
B—Compressor Rod Channel
C—Dimension
D—Compressor Tube

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AG,OUO6059,269 –19–17JUL00–1/1

Starting a Bale in Difficult Conditions

1. Refer to BALING SHORT, DRY, SLICK CROPS; BALING CORNSTALKS; BALING WET HAY; and BALING LONG, STIFF, CANE-TYPE CROPS in this section.

2. Regular Pickup; Check pickup belt tension and condition. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)

   MEGATOOTH™ or MegaWide Pickup; Check pickup slip clutch. (See CHECKING PICKUP SLIP CLUTCH TORQUE in Service—Baler section.)

3. Check for broken or missing pickup teeth.

4. To ensure smooth uninterrupted crop flow while starting a bale, try the following:

   - Select a gear that will give 6—8 km/h (4—5 mph) forward travel speed at rated PTO speed.
   - Reduce tractor engine speed to low idle (900—1200 rpm) when starting the bale.
   - Drive forward at least 3 m (10 ft) without stopping to allow enough crop into the baler to start rolling.
   - Resume rated PTO speed.

5. If windrows are wide and ropy, do the following:

   a. Operate pickup as high as practical.

   b. Start in a slow gear, allowing crop to feed in from the sides.

   c. Approach windrow with crop centered on pickup to reduce plugging at crop dividers. Do not cut across the windrow.

   d. Travel forward slowly, as needed, to allow material to feed smoothly.

6. Use variable core feature, if equipped, for long, stiff, cane-type crops.

7. Make windrows narrower than the bale chamber width and avoid getting crop under deflectors to improve bale starting in crops such as bahia grass, coastal bermuda grass, sudex, sudan grass, and star grass.

8. Check belt and starter roll bars for excessive wear that may contribute to bale starting problems. (See CHECKING PICKUP TOOTH END PLAY in Service—Baler section.)

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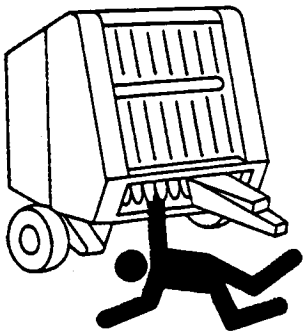
AG,OUO6059,39 –19–05MAY00–1/1

Baling Short, Dry, Slick Crops



E32161 –UN–12SEP88

CAUTION: DON'T TAKE CHANCES! To avoid injury or death by being pulled into the machine:

Do not attempt to feed crop or twine into baler or unplug feed area while baler is running. The baler feeds material faster than you can release it.

Disengage PTO and shut off engine.

To reduce plugging try one or more of the following techniques:

1. Regular Pickup; Check pickup belt tension and condition. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)

   MEGATOOTH™ or MegaWide Pickup; Check pickup slip clutch. (See CHECKING PICKUP SLIP CLUTCH TORQUE in Service—Baler section.)

2. Check for missing or broken pickup teeth.

3. Raise pickup as high as practical.

4. Reduce engine speed to 1500 rpm or below (reduces chaffing) and shift transmission to higher gear to maintain ground speed.

5. Reduce bale density as necessary. (See ADJUSTING BALE DENSITY in this section.)

6. Remove individual compressor rods, leaving one center rod and one rod on each end of the cross tube. If material still accumulates, remove compressor rack assembly. **Always replace compressor rack under normal conditions.** (See REMOVING or INSTALLING COMPRESSOR RACK ASSEMBLY in this section.)

7. Make larger windrows (rake together as necessary), but keep windrows narrower than bale chamber width.

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Continued on next page

8. Disengage PTO anytime crop is not being fed into baler, such as turns and field borders.

9. In extremely short, dry conditions, it may be necessary to lower the baler. (Refer to WHEEL SPINDLE POSITIONS in Preparing the Baler section.)

10. Adjust pickup float springs to provide more force (float). (See ADJUSTING PICKUP FLOAT SPRINGS in Service—Baler section.)

11. When baling dry straw, it may be necessary to place twine across full width of bale or use net wrap (if equipped) to prevent straw from coming out of feed opening while tying. (See USING DRY STRAW TWINE WRAP PROGRAM [ADVANCED OPERATION INFORMATION] [CHANNEL 17] in this section.)

NOTE: Two wraps are suitable for most crops, but three or more wraps are needed for:

- *Short, dry, slick crops*
- *Long, stiff, cane-type crops*
- *Cornstalks*

12. If machine RPM is less than rated PTO speed, use the following chart as a guideline for desired wraps.

NET WRAP CHART		
Engine RPM	Desired No. Of Wraps	Approximate Monitor Setting Needed
Rated PTO	2	2
	3	3
1800 RPM	2	2.4
	3	3.6
1500 RPM	2	2.9
	3	4.3
1300 RPM	2	3.3
	3	5.0

If bales fail to start rotating due to one or both sides of the windrow extending outside width of bale chamber, try the following suggestions:

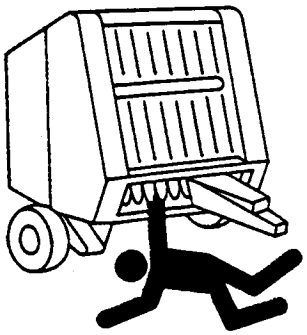
1. Make windrows narrower than bale chamber width.

Continued on next page

2. Center baler over windrow while starting, to avoid getting crop under the crop dividers.

AG,OUO6059,40 –19–05MAY00–3/3

Baling Cornstalks



E32161 –UN–12SEP88

CAUTION: DON'T TAKE CHANCES! To avoid injury or death by being pulled into the machine:

Do not attempt to feed crop or twine into baler or unplug feed area while baler is running. The baler feeds material faster than you can release it.

Disengage PTO and shut off engine.

1. Cut or rake stalks prior to baling to improve pickup tooth life.

2. Do not rake more than six rows together or plugging may occur at the pickup area. Higher productivity can be obtained by baling smaller windrows at faster ground speeds. Avoid crowding the edges of the windrow and avoid windrows wider than the baler chamber to reduce plugging at the crop dividers.

   - Since cornstalks tend to roll and spread out in front of the pickup, windrows 1/2—3/4 the width of the bale chamber usually do not require weaving, and reduce plugging at crop dividers.
   - Windrows less than 1/2 the width of the bale chamber, and normal weaving allows one side of the pickup to clear as the other side is feeding.

3. Be sure to maintain rated PTO speed

4. Increase feed opening by:

   - Lowering pickup as low as practical.
   - Adjusting wheel spindles to raise baler to the next highest position from normal. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.) Return baler height to normal position in hay so that pickup teeth are closer to the ground.
   - Removing starter roll scraper assembly (if equipped).
   - Raising front of baler by offsetting tractor drawbar. (See ADJUSTING THE DRAWBAR in Preparing the Tractor section.)

Continued on next page

- Adjust compressor rack assembly as high as possible without compressor rods interfering with twine arm. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in this section.)

5. Install hydraulic pickup lift kit. (See Attachments section.)

6. Check for missing or broken teeth. Replace if necessary.

7. Regular Pickup; Check pickup belt tension and condition. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)

   MEGATOOTH™ or MegaWide Pickup; Check pickup slip clutch. (See CHECKING PICKUP SLIP CLUTCH TORQUE in Service—Baler section.)

8. Remove compressor rack if cornstalks build up on top of rods. (See REMOVING COMPRESSOR RACK ASSEMBLY in this section.)

9. Add extra compressor rods if cornstalks push up between existing rods and cause plugging.

10. Remove outside rods. If material still accumulates, remove compressor rack assembly. **Always replace compressor rack under normal conditions.** (See REMOVING or INSTALLING COMPRESSOR RACK ASSEMBLY in this section.)

NOTE: Two wraps are suitable for most crops, but three or more wraps are needed for:

- *Short, dry, slick crops*
- *Long, stiff, cane-type crops*
- *Cornstalks*

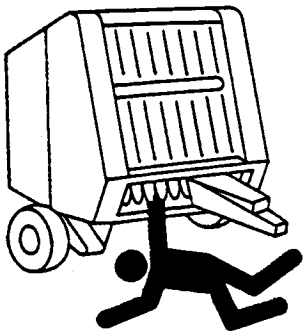
11. If machine RPM is less than rated PTO speed, use the following chart as a guideline for desired wraps.

Continued on next page

NET WRAP CHART		
Engine RPM	Desired No. Of Wraps	Approximate Monitor Setting Needed
Rated PTO	2	2
	3	3
1800 RPM	2	2.4
	3	3.6
1500 RPM	2	2.9
	3	4.3
1300 RPM	2	3.3
	3	5.0

AG,OUO6059,41 –19–05MAY00–3/3

Baling Long, Stiff, Cane-Type Crops



E32161 –UN–12SEP88

CAUTION: DON'T TAKE CHANCES! To avoid injury or death by being pulled into the machine:

Do not attempt to feed crop or twine into baler or unplug feed area while baler is running. The baler feeds material faster than you can release it.

Disengage PTO and shut off engine.

If bales fail to start rotating due to crop wedging into top of starting chamber, try the following suggestions:

1. Regular Pickup; Check pickup belt tension and condition. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)

   MEGATOOTH™or MegaWide Pickup; Check pickup slip clutch. (See CHECKING PICKUP SLIP CLUTCH TORQUE in Service—Baler section.)

2. Condition crop as much as possible so stems will bend and form bale core without wedging.

3. Make windrows narrower than bale chamber width.

4. Approach windrow with crop centered in pickup.

   - Avoid getting crop under crop dividers.

5. Approach windrow at an angle and immediately turn and drive forward.

   - This allows stems to bend and start bale core.
   - Avoid getting crop under crop dividers.

6. If equipped with hydraulic pickup lift, raise and lower pickup during bale starting. This is usually done at reduced ground speed.

7. Travel forward at least 3 m (10 ft) without stopping to allow enough crop into baler to start rolling.

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8. Surface moisture on bottom of windrow causes crop to slip more easily against forming belts. Turn windrows with a rake or tedder to improve bale starts.

NOTE: Two wraps are suitable for most crops, but three or more wraps are needed for:

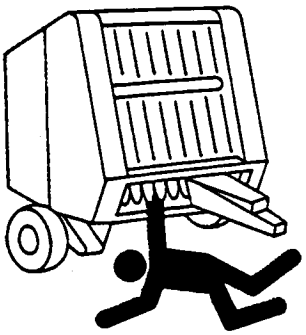
- *Short, dry, slick crops*
- *Long, stiff, cane-type crops*
- *Cornstalks*

9. Reduce bale density or use variable (soft) core feature. (See ADJUSTING BALE DENSITY or ADJUSTING VARIABLE (SOFT) CORE DIAMETER in this section.) Reduced belt tension allows belts to deflect and start bale.

NET WRAP CHART		
Engine RPM	Desired No. Of Wraps	Approximate Monitor Setting Needed
Rated PTO	2	2
	3	3
1800 RPM	2	2.4
	3	3.6
1500 RPM	2	2.9
	3	4.3
1300 RPM	2	3.3
	3	5.0

AG,OUO6059,42 –19–05MAY00–2/2

Baling Wet Hay



E32161 –UN–12SEP88

CAUTION: DON'T TAKE CHANCES! To avoid injury or death by being pulled into the machine:

Do not attempt to feed crop or twine into baler or unplug feed area while baler is running. The baler feeds material faster than you can release it.

Disengage PTO and shut off engine.

If bales fail to start rotating due to windrows being wet on the bottom, try the following suggestions:

1. Regular Pickup; Check pickup belt tension and condition. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)

   MEGATOOTH™ or MegaWide Pickup; Check pickup slip clutch. (See CHECKING PICKUP SLIP CLUTCH TORQUE in Service—Baler section.)

2. Increase feed opening by:

   - Lowering pickup as low as practical.
   - Make sure wheel spindles are in normal position. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)
   - Adjust compressor rack assembly as high as possible without compressor rods interfering with twine arm. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in this section.)

3. Select a gear which will give a 6—8 km/h (4—5 mph) forward travel speed at rated PTO speed.

4. Reduce tractor engine speed to low idle (900—1200 rpm) while starting.

5. Approach windrow with crop centered on pickup to reduce plugging at crop dividers. Do not cut across the windrow.

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6. Travel forward at least 3 m (10 ft) without stopping to allow enough crop into the baler to start rolling.

7. Resume rated PTO speed.

8. Be sure the tractor drawbar pin or hitch parts are not dragging and bunching the windrow. Use drawbar shielding as necessary. (See USING DRAWBAR SHIELD in Preparing the Tractor section.)

9. Surface moisture on bottom of windrow causes crop to slip more easily against forming belts. Turn windrows with a rake or tedder to improve bale starts.

AG,OUO6059,43 –19–05MAY00–2/2

Fire Prevention

Equip the baler with a water-type fire extinguisher. Extinguisher should be properly charged and easily accessible in an emergency. Large capacity water fire extinguishers are recommended because application of water can cool hot parts to prevent a fire. If a fire does occur, water will help drown the flame and cool off hot parts, to prevent the fire from rekindling. Train operators on proper use of the extinguisher and the need to keep it charged at all times. If baler is subject to cold weather, use an approved nonflammable anti-freeze solution to prevent damage.

If noticeable changes in machine performance occur which might indicate a part is beginning to fail, stop baling immediately and investigate the cause of any sounds, smells, or sights which are unusual. Stopping quickly can limit the damage done, and help to keep part temperatures below the point where a fire will start.

Promptly eject bales after they have been tied or wrapped. Do not use the baler to transport bales from the field. Do not bring a baler, with a bale inside it, into a building. Never leave a baler unattended with a bale inside the chamber.

Use extreme care if it is necessary to park a baler in a field of dry crop or stubble. Whenever possible, park baler on bare ground or in an area surrounded by bare ground. Before leaving a baler which has been operating, verify there are no areas which are hot enough to start a fire. Do not leave the baler unattended near bales which have been baled wet, because spontaneous combustion can occur.

Use extreme care when smoking around the baler.

For further information, refer to FIRE PREVENTION in the Safety section.

EX,566J,BR –19–16DEC97–1/1

Extinguishing a Fire

TS227 –UN–23AUG88

CAUTION: Avoid serious personal injury from fire. Do not attempt to extinguish a fire that is too far advanced.

Stop baling immediately at the first sign of trouble. This may be a scorched smell, an unusual sound, or the sight of smoke or flame.

If you can safely extinguish the fire, proceed carefully and follow these guidelines:

1. Position the tractor upwind from the baler to avoid the fire from overtaking the tractor.
2. Open the baler gate to eject any crop material from the bale chamber, and drive away from this material.
3. Use a fire extinguisher or other source to spray water at the base of the flame, and to cool adjacent parts. Do not position yourself under an open baler gate or raised tension arm because they may fall if baler is on fire.

AG,OUO6017,1667 –19–04NOV99–1/1

Bale Push Bar Operation (If Equipped)

E48199 –UN–21JUN00

CAUTION: Bale push bar is activated when gate is opened. Be sure bystanders are clear and there is sufficient clearance behind baler when opening gate.

When gate is closed (normal baling operation), the push bar remains in home position behind the axle. The chains attached to the gate pins, and the tension springs hold the push bar in this position.

As the gate is opened, the chains go slack until the gate is raised high enough to allow the bale to fall to the ground. During this time the tension springs, which are slightly over center, hold the push bar in home position.

Continued on next page

AG,OUO6059,268 –19–17JUL00–1/3

As the gate is raised farther, the chains pull the push bar back, making the tension springs go over center to the rear. During the upper part of the gate travel, the chain force and the tension spring force swing the push bar back, rolling the bale to the rear and clear of the gate.

The tension springs hold the push bar up while the gate is lowered and until it is almost closed. This position of the push bar prevents the bale from rolling forward underneath the gate (in gently rolling ground conditions).

E48198 –UN–21JUN00

AG,OUO6059,268 –19–17JUL00–2/3

As the gate is closed, the chains tighten and pull the push bar forward to home position.

E48200 –UN–21JUN00

AG,OUO6059,268 –19–17JUL00–3/3

Operating Baler With Bale Push Bar (If Equipped)

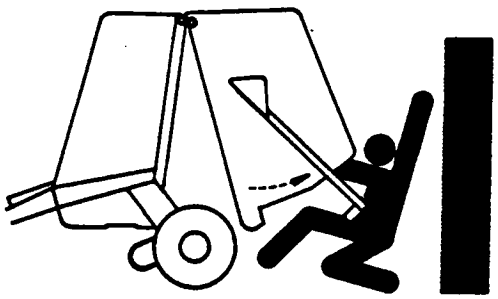
CAUTION: Bale push bar is activated when gate is opened. Be sure bystanders are clear and there is sufficient clearance behind baler when opening the gate.

To prevent injury or damage from a rolling bale, discharge bales on level ground or in such a manner that the bale will not roll.

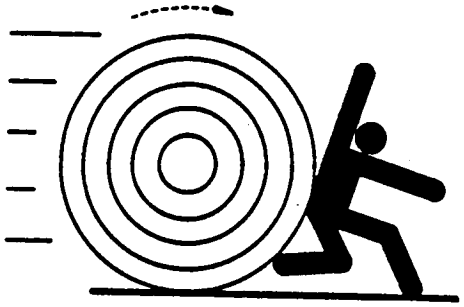
NOTE: Tractor hydraulic flow must be at least 25 L/min (6.5 gpm) to operate bale push bar when making full diameter and full density bales. Set tractor hydraulic flow controls at maximum.

1. Be sure that both chains (A) are attached to the gate pins (B). (See ENGAGING BALE PUSH BAR in this section.)

A—Chains
B—Gate Pins



E32671 –UN–29NOV88



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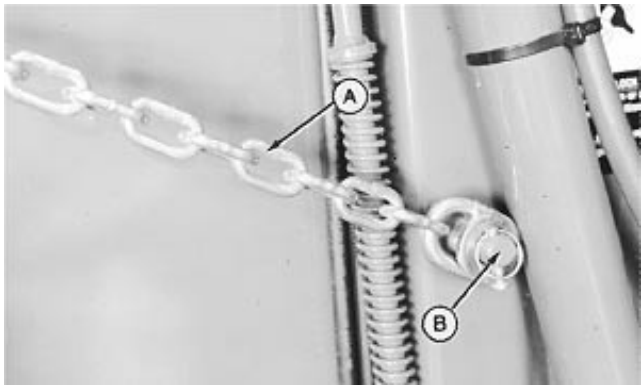

E37418 –UN–22JUL93

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AG,OUO6059,267 –19–17JUL00–1/3

2. Form and wrap bale as usual.

CAUTION: To prevent injury or damage from a rolling bale, discharge bales on level ground or in such a manner that the bale will not roll.

3. Backing up baler is not required unless in rolling terrain conditions where runaway bales are likely. In these conditions, lock out the push bar and position baler so bale will not roll after being ejected.

4. Raise gate to eject bale. Hold tractor hydraulic lever until gate is fully raised. Do not stop gate while raising.

NOTE: A slight forward movement of the tractor may be felt as the bale is rolled back by the push bar.

E48198 –UN–21JUN00

AG,OUO6059,267 –19–17JUL00–2/3

5. Lower the gate. Keep hydraulic lever engaged until BALETRAK *PLUS*® monitor-controller displays gate closed symbol.

6. Proceed making the next bale.

NOTE: If a bale sticks in the bale chamber, the push bar may swing back before the bale has dropped to the ground. This will prevent the gate from closing. Raise gate fully and drive forward to clear the bale. Push bar will roll over bales up to 1829 mm (6 ft) in diameter.

E48200 –UN–21JUN00

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AG,OUO6059,267 –19–17JUL00–3/3

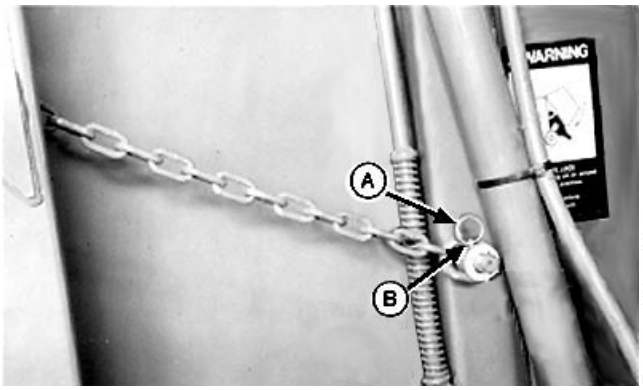
Locking Out Bale Push Bar (If Equipped)

Bale push bar will remain in home position, regardless of gate movement, when in the locked out position.

To lock out push bar:

1. Remove retaining ring (A) from pin (B).
2. Remove pin (B) and washer from gate pin.

A—Retaining Ring
B—Pin



AG,OUO6017,1670 –19–04NOV99–1/3

3. Remove tension from chain by rotating spring assembly (A). Remove end chain link from gate pin.
4. Let chain hang free to remove any twists.

A—Spring Assembly

Continued on next page

AG,OUO6017,1670 –19–04NOV99–2/3

IMPORTANT: Both chains must be attached to lockout pins to lock out push bar. Damage can occur to the push bar and gate if one chain is left attached to the gate pin or is unhooked completely.

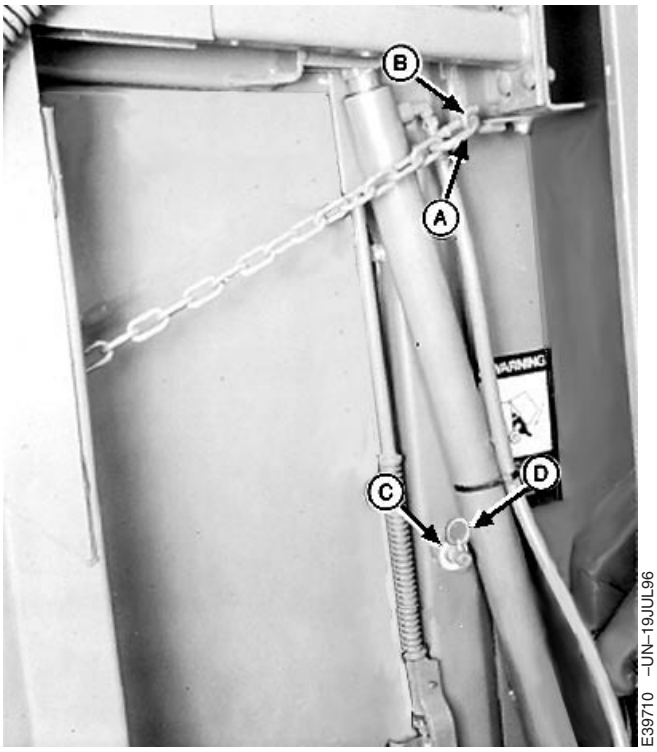
5. Attach the end chain link (A) on lockout hook (B). Release spring assembly.

6. Install washer (C). Put pin UP through gate pin and fasten with retaining ring (D).

7. Repeat on opposite side.

NOTE: If operating the baler with push bar locked out, it will be necessary to back up baler before ejecting the bale.

A—Chain Link
B—Lockout Hook
C—Washer
D—Retaining Ring



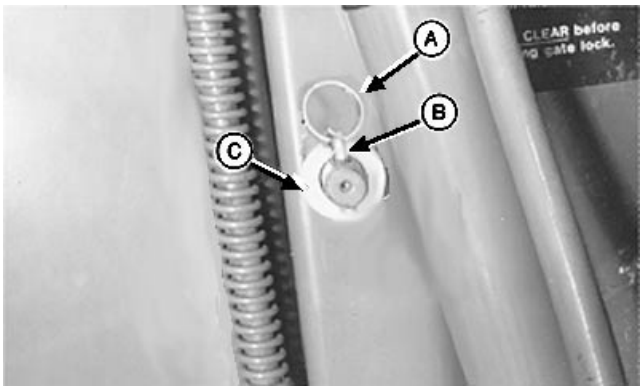
AG,OUO6017,1670 –19–04NOV99–3/3

Engaging Bale Push Bar (If Equipped)

1. Remove retaining ring (A) from pin (B).

2. Remove pin (B) and washer (C) from gate pin.

A—Retaining Ring
B—Pin
C—Washer

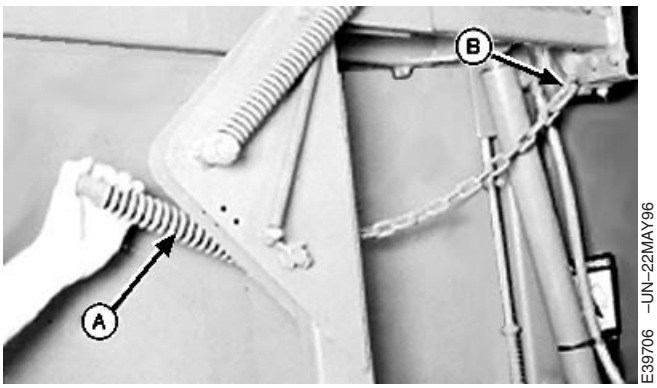


AG,OUO6059,266 –19–17JUL00–1/3

3. Remove tension from chain by rotating the spring assembly (A) to the rear. Remove end chain link from lockout hook (B).

4. Let chain hang free to remove any twists.

A—Spring Assembly
B—Lockout Hook



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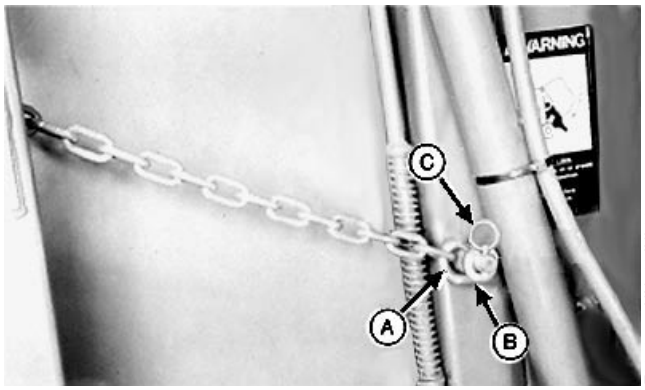
AG,OUO6059,266 –19–17JUL00–2/3

IMPORTANT: Both chains must be attached to gate pins before operating the push bar. Damage can occur to the push bar and gate if one chain is left in the lockout position or is unhooked completely.

5. Attach end chain link (A) on gate pin.
6. Install washer (B). Put pin UP through gate pin and fasten with retaining ring (C).
7. Repeat on opposite side.



A—End Chain Link
B—Washer
C—Retaining Ring

AG,OUO6059,266 –19–17JUL00–3/3

Hitch Conversion Kit

IMPORTANT: Operating the baler on tractors with 51 mm (2 in.) thick drawbar may cause hitch to bend open where it attaches to tractor drawbar.

For use to modify baler hitch when operating on tractors with 51 mm (2 in.) thick drawbar.

AG,OUO6017,1301 –19–23SEP99–1/1

Pickup Gauge Wheels (Regular Pickup)

NOTE: Gauge wheels are standard equipment on the MEGATOOTH™ and MegaWide pickup.

Improves pickup flotation in uneven terrain.

E40017 –UN–29MAY96

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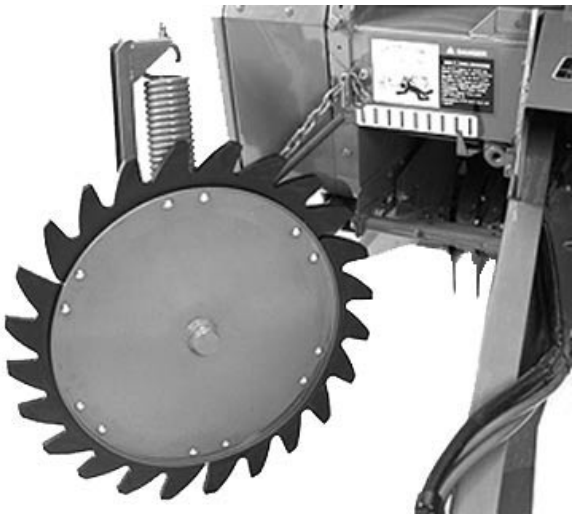
AG,OUO6059,265 –19–17JUL00–1/1

Gathering Wheels

NOTE: Gathering wheels are not available if equipped with MegaWide pickup.

Helps reduce crop loss in uneven windrows. The wheels also have a special "breakaway" feature to minimize damage from hitting obstructions.

Gathering wheels are mounted on each side of baler in front of the pickup.



E40020 –UN–29MAY96

AG,OUO6059,44 –19–05MAY00–1/1

Bale Push Bar

Operates mechanically with the rear gate to assure dependable operation.

Two long spring-loaded arms and a center bar push the bale rearward with a positive force to ensure clearance for closing the gate.

Push bar arms remain extended until gate is closed to prevent the bale from rolling back into the gate toward baler.

Push bar arms can be easily locked out if operation is not desired.

E48179 –UN–21JUN00

AG,OUO6059,190 –19–23JUN00–1/1

CoverEdge™ Surface Wrap Unit

Wraps rolling surface of bale for a smooth weather resistant surface.

Increases baler productivity and improves ability to retain higher hay quality in storage.

Wrap time is reduced to only two turns of the bale (approximately six seconds or less), reducing loss of leaves and short material. Complete wrap and ejection time for full size bales is approximately 20 seconds or less.

Twine is not required when using surface wrap. Net material clings to itself and holds the bale.

Operator can select twine or surface wrap application conveniently from the tractor seat using the BALETRAK *PLUS*® monitor-controller.

The roll of surface wrap is loaded in the unit at the back of the baler, making it easy to load.

E48204 –UN–21JUN00

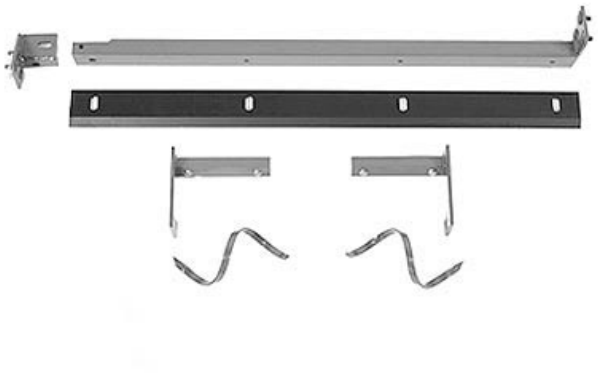
BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6059,191 –19–23JUN00–1/1

High-Moisture Kit (467 and 567)

For use when baling high-moisture crops.

- Reduces wrappage of wet hay on the starter roll and staggered belt roll.
- Improved scraper bar with machined sharpened knife that scrapes crop from starter roll
- Spirals and scrapers add additional cleaning of wet crop from the staggered roll.



E50966 –UN–10JAN02

AG,OUO6059,46 –19–05MAY00–1/1

Hydraulic Pickup Lift

The hydraulic pickup lift allows operator to lift pickup for transport from the tractor seat. Hydraulic lines attach to tractor hydraulic system. Tractor must be equipped with a second set of hydraulic outlets.

The baler pickup lift crank allows pickup to return to a preset height when pickup is lowered.

E40019 –UN–29MAY96

AG,OUO6017,1677 –19–04NOV99–1/1

Variable Core Valve

Reduces hydraulic pressure for easier bale starts in difficult conditions.

Reduces core density and is adjustable for soft core size.

Operator can engage, disengage or adjust conveniently from the tractor seat using the BALETRAK *PLUS*® monitor-controller.

E40056 –UN–04JUN96

BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6017,1678 –19–04NOV99–1/1

BALETRAK *PLUS*® Monitor-Controller

A second monitor-controller can be ordered for installation on a second tractor, if desired.

E40554 –UN–25JUN96

BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6017,1681 –19–04NOV99–1/1

Monitor-Controller Mounting Brackets

Required for installation of BALETRAK *PLUS*® monitor-controller on 6000 and 7000 Series tractors with COMFORTGARD™ operator's station, and for John Deere tractors with SOUND-GARD® operator's stations.

E40571 –UN–22JUN96

For ComfortGard ™ Operator's Station

E40572 –UN–22JUN96

For SOUND-GARD® Operator's Station

BALETRAK PLUS is a registered trademark of Deere & Company
COMFORTGARD is a trademark of Deere & Company
SOUND-GARD is a registered trademark of Deere & Company

EX,566K,O1 –19–02SEP97–1/1

Mounting Kit For Open Station 6000 and 7000 Series Tractors

Required for installation of BALETRAK *PLUS*® monitor-controller.

E40573 –UN–22JUN96

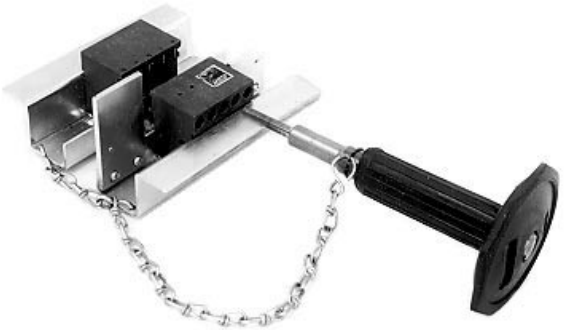
BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6017,1682 –19–04NOV99–1/1

Belt Lacing Tool

For repairing failed splices or for splicing broken belts.

Allows tight, even spacing of segments when repairing belts.



E39821 –UN–21MAR96

AG,OUO6017,1683 –19–04NOV99–1/1

Skiving Tool

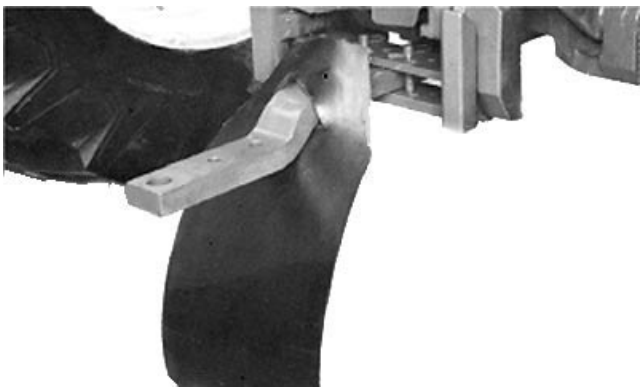
Enables easy removal of rubber layers on belts in preparation for belt splicing.

E39822 –UN–21MAR96

AG,OUO6017,1684 –19–04NOV99–1/1

Drawbar Shield

Keeps windrow from catching on tractor drawbar. (See USING DRAWBAR SHIELD in Preparing the Tractor section.)



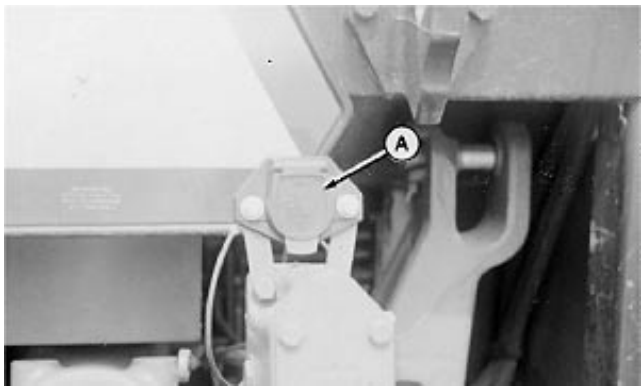
E26220 –UN–20FEB96

AG,OUO6017,1685 –19–04NOV99–1/1

Electrical Outlet Socket

This seven-terminal auxiliary outlet socket (A) may be installed on tractors to plug in electrical equipment such as the tail/warning light plug.

A—Seven-Terminal Auxiliary Outlet Socket



AG,OUMX005,1094 –19–09JAN00–1/1

Rear-View Mirror Extension

To improve visibility of traffic behind the baler, an extended mirror is recommended. See your John Deere dealer.

EX,435K,O –19–08SEP88–1/1

PTO Conversion Parts

IMPORTANT: Never hook up a 540 rpm baler to a 1000 rpm tractor.

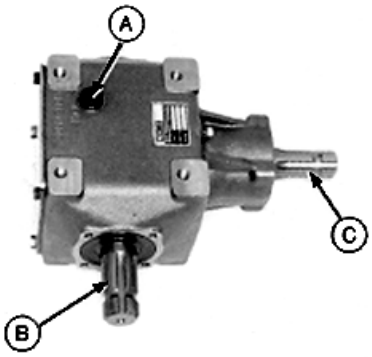
The baler can be configured to operate with a tractor having 540 or 1000 rpm PTO. Conversion parts are available to adapt to either tractor speed:

- 540 to 1000 rpm
- 1000 to 540 rpm

Conversion parts consist of a yoke, cross kit, shaft, slip clutch disk spring, and instructions for converting the gear case. Kits can be ordered through your John Deere dealer.

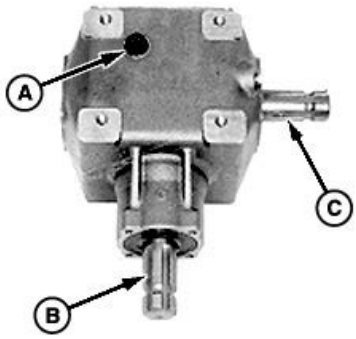
A—Dipstick
B—Input Shaft
C—Output Shaft

E32611 –UN–28MAR96



E35534 –UN–28MAR96

Gear Case—540 rpm Position



E33499 –UN–07SEP00

Gear Case—1000 rpm Position

AG,OUO6059,192 –19–23JUN00–1/1

Fire Extinguisher

A 9.5 L (2-1/2 gal) pressurized-water fire extinguisher can be mounted in the holes that are provided on the baler. (See your John Deere dealer.)

Equip the baler with a water-type fire extinguisher. Extinguisher should be properly charged and easily accessible in an emergency. Large capacity water fire extinguishers are recommended because application of water can cool hot parts to prevent a fire. If a fire does occur, water will help drown the flame and cool off hot parts, to prevent the fire from rekindling. Train operators on proper use of the extinguisher and the need to keep it charged at all times. if baler is subject to cold weather, use an approved nonflammable anti-freeze solution to prevent damage.

AG,OUO6059,48 –19–05MAY00–1/5

Install Fire Extinguisher—467 and 567

NOTE: If bracket holes do not align with holes in baler, drill new holes in the bracket, NOT the baler.

1. Install bracket on left-hand front panel. Fasten with four M8 x 25 cap screws (A), 9 x 28 x 3 mm washers, and nuts.

A—Cap Screws, M8 x 25

Continued on next page

AG,OUO6059,48 –19–05MAY00–2/5

2. Fill, pressurize and test fire extinguisher. If baler is subjected to cold weather, a nonflammable antifreeze solution should be used to prevent damage to extinguisher.

3. Fasten fire extinguisher to bracket.

E40552 –UN–21JUN96

AG,OUO6059,48 –19–05MAY00–3/5

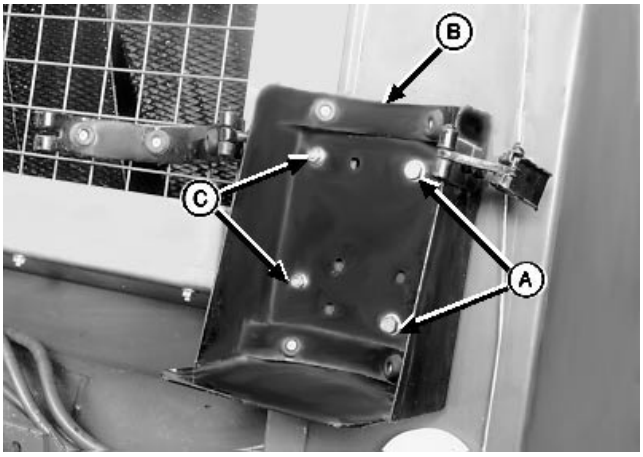
Install Fire Extinguisher—467 Silage Special

NOTE: If bracket holes do not align with holes in baler, drill new holes in the bracket, NOT the baler.

1. Install two M10 x 35 cap screws (A) through front of baler. Install flange nut on each cap screw (nuts are used as spacers.) Tighten nuts.

2. Install bracket (B) on baler. Install flange nuts on cap screws (A).

3. Install flange nuts (C).



E41649 –UN–23OCT96

A—Cap Screws, M10 x 35
B—Bracket
C—Flange Nuts

Continued on next page

AG,OUO6059,48 –19–05MAY00–4/5

4. Fill, pressurize, and test fire extinguisher. If baler is subjected to cold weather, a nonflammable antifreeze solution should be used to prevent damage to extinguisher.

5. Fasten fire extinguisher to bracket.

AG,OUO6059,48 –19–05MAY00–5/5

Allied Equipment

The following Allied equipment is available for the baler from your John Deere dealer:

- Preservative applicator
- "Baler's Choice" Preservative
- Baler Twine
- Rolls of Net Wrap
- Stalk Shredder or Crop Processor
- Automatic Chain Oiler

AG,OUO6059,264 –19–17JUL00–1/1

Grease

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

The following greases are preferred:

- John Deere SD POLYUREA GREASE

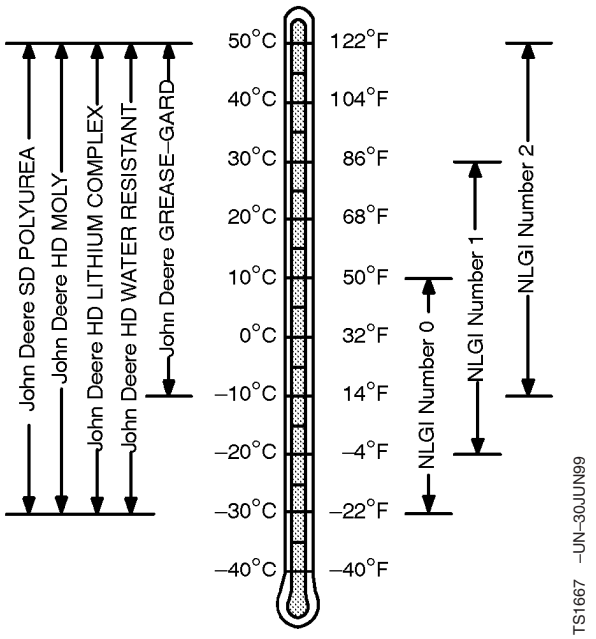
The following greases are also recommended:

- John Deere HD MOLY GREASE
- John Deere HD LITHIUM COMPLEX GREASE
- John Deere HD WATER RESISTANT GREASE
- John Deere GREASE-GARD

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB

IMPORTANT: Some types of grease thickener are not compatible with others.



DX,GREA1 –19–07JUL99–1/1

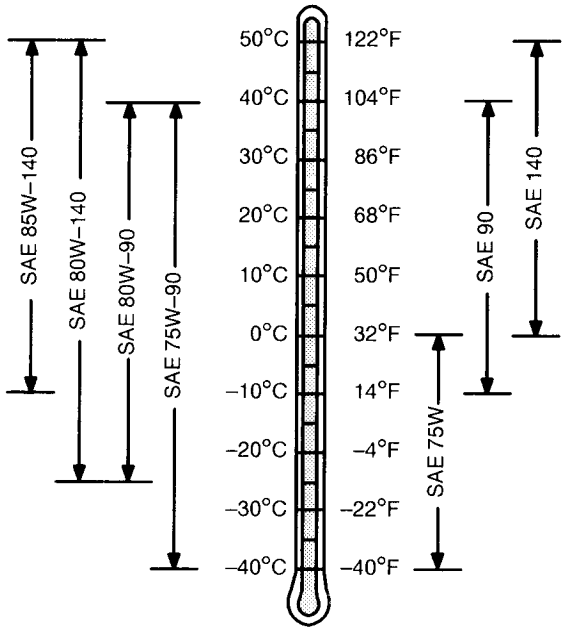
Gear Case Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GL-5 GEAR LUBRICANT
- John Deere EXTREME-GARD™

Other oils may be used if they meet API Service Classification GL-5.



EXTREME-GARD is a trademark of Deere & Company.

EX,348N,GA1 –19–22AUG95–1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic oils.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER –19–18MAR96–1/1

Observe Lubrication Symbols

 Lubricate with John Deere EP Moly or an equivalent SAE multipurpose-type grease (unless otherwise specified) at hourly intervals indicated on the symbols.

 Lubricate with SAE 30 or heavier oil at hourly intervals indicated on the symbols.

 Brush periodically with John Deere EP Moly or an equivalent SAE multipurpose-type grease.

EX,446N,G –19–18JUN96–1/1

Perform Lubrication and Maintenance

CAUTION: Do not clean, lubricate, or adjust machine while it is in motion.

IMPORTANT: The maintenance intervals recommended are based on normal conditions. Severe or unusual conditions may require more frequent lubrication.

Perform each lubrication and service illustrated in this section at the beginning of the season and at the end of the season.

Clean lubrication fittings before using grease gun. Replace lost or broken fittings immediately. If a new fitting fails to take grease, remove and check for failure of adjoining parts.

EX,910IN,L1 –19–04MAR97–1/1

Fire Prevention

Keep foreign material (crop, chaff, twine, net wrap material, etc.) from building up on the machine near potentially hot areas, such as bearings and slip-clutch. Remove this buildup as part of the regular service operations.

Avoid high pressure power-washing adjacent to the bearings to prevent damaging seals.

Regularly check bearings for early signs of failure, and replace as indicated. Turn off power to baler and check for unusual noises, hot parts, smells of scorching, and discolored paint or metal. To check condition of bearings:

- Open gate and lock it.
- With the belts slackened, rotate each of the rollers by hand, paying attention to "dry" or "grinding" noises, or rough rotation.
- Push and pull on the roller.
- Watch and feel for looseness in the bearings.

Soon after operation, the temperature at each bearing location can be checked to see if it is noticeably hotter than the others. Replace worn or damaged bearings.

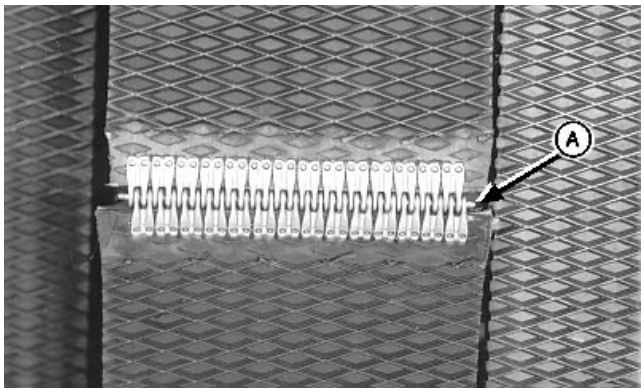
EX,566N,V –19–16DEC97–1/1

Belt Pins

Check pins (A) for wear or damage every 2000 bales (every 1000 bales in sandy conditions), otherwise broken pins are very difficult to remove. Replace pins if broken, or if more than one-third of pin thickness is worn. Do not deform ends of pins when installing new ones.

To remove pin, grip pin with pliers and turn 90 degrees (1/4 turn) before pulling or tapping out.

A—Pins



E39736 –UN–24MAY96

EX,566N,R1 –19–08DEC97–1/1

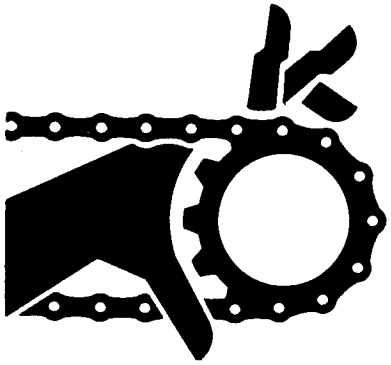
Every 10 Hours

Chains

CAUTION: To help prevent injury, do not lubricate chains with machine running.

Liberally apply SAE 30 or heavier oil to chains every 10 hours of operation.

Lubricate chains immediately after operation when the chains are still warm. Let the machine stand idle for a short period to ensure effective oil penetration, resulting in longer chain life.



TS284 –UN–23AUG88

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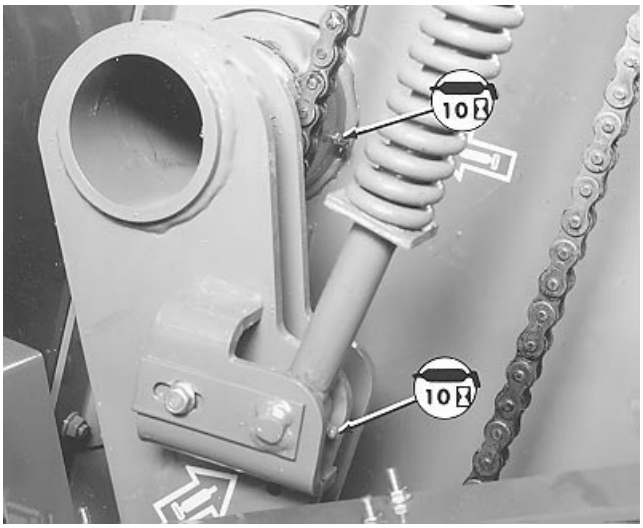
AG,OUO6059,263 –19–17JUL00–1/6

Tension Arm Pivots



E39579 –UN–15NOV95

AG,OUO6059,263 –19–17JUL00–2/6

Tension Cylinder Rods

E39583 –UN–15NOV95

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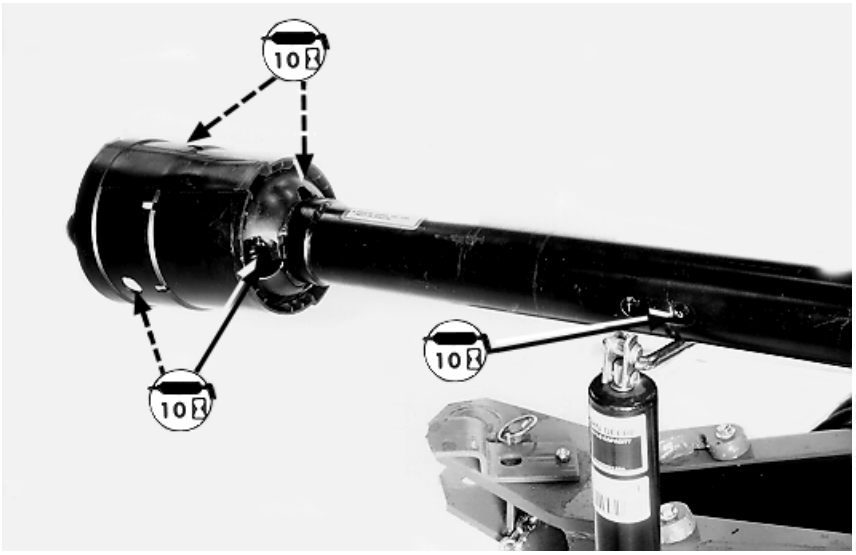
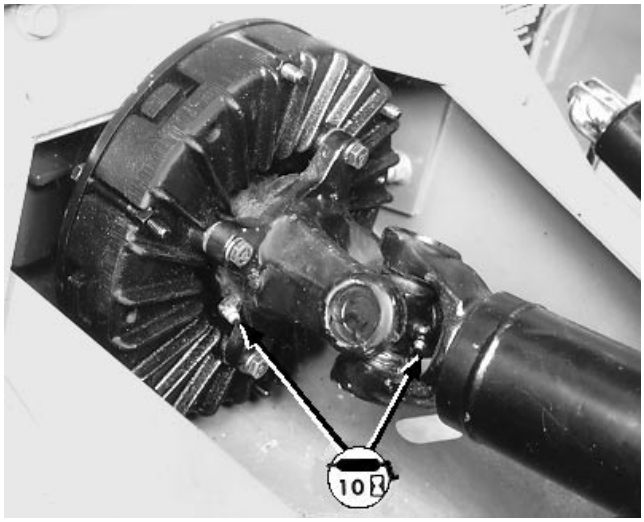
AG,OUO6059,263 –19–17JUL00–3/6



E39701 –UN–05FEB96

PTO Driveline



E39734 –UN–15FEB96

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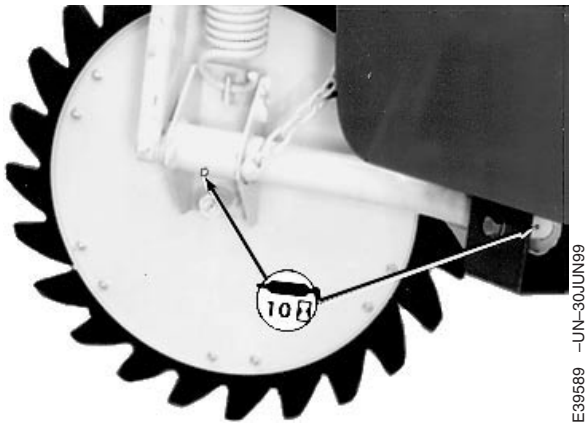
AG,OUO6059,263 –19–17JUL00–4/6

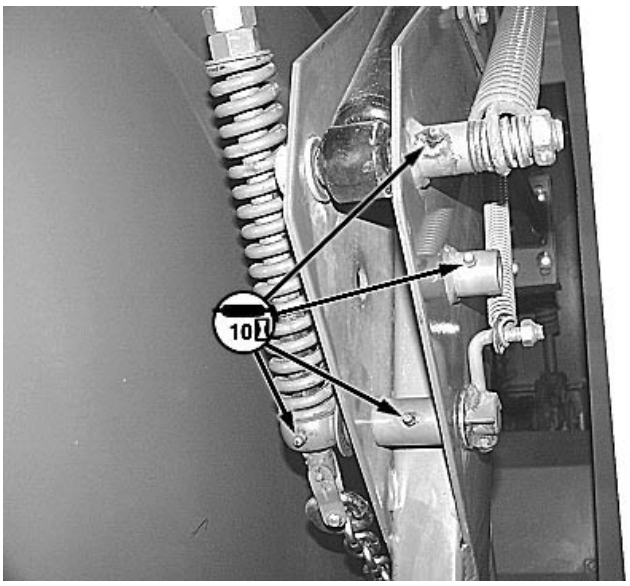
Gathering Wheels and Support Pivot (If Equipped)



E39589 –UN–30JUN99

AG,OUO6059,263 –19–17JUL00–5/6

Push Bar Shock Absorber and Spring Bolt (If Equipped)



E48339 –UN–10JUL00

AG,OUO6059,263 –19–17JUL00–6/6

Every 30 Hours

Bale Shape Sender Arms

E47617 –UN–07JAN00

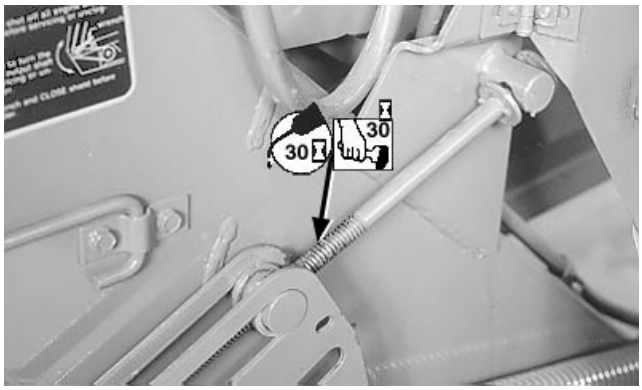
Continued on next page

AG,OUO6059,49 –19–05MAY00–1/6

Pickup Lift Crank

Lubricate crank threads with SAE 30 or heavier oil, or with John Deere EP Moly or an equivalent SAE multipurpose grease.

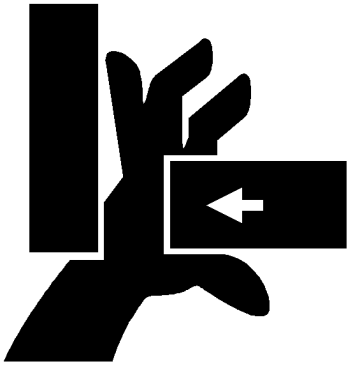
A—Pickup Crank Thread



E47610 –UN–07JAN00

AG,OUO6059,49 –19–05MAY00–2/6

Twine Arms and Twine Actuator Rod



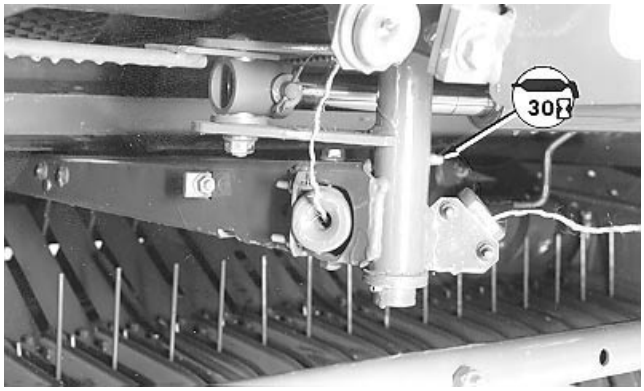
E47598 –UN–07JAN00

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

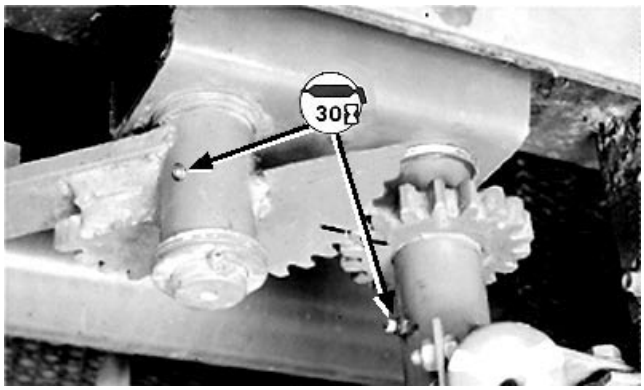
If equipped with a MEGATOOTH™ pickup; Rotate curtains out of the way to access lubrication fittings and actuator rod.

Clean off foreign material/crop buildup from actuator rod.



E39603 –UN–20NOV95

467 and 467S



E39777 –UN–22FEB96

567

MEGATOOTH is a trademark of Deere & Company

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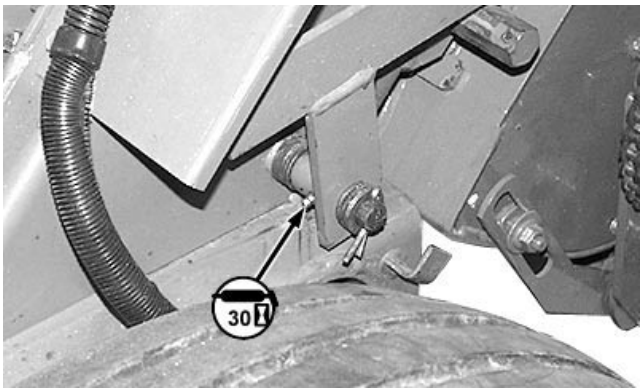
AG,OUO6059,49 –19–05MAY00–3/6

Pickup Drive Idler Pivot

NOTE: Shield removed for photographic purpose.



Right-Hand Side

AG,OUO6059,49 –19–05MAY00–4/6

Pickup Gauge Wheels (Regular and MEGATOOTH™)

Lubricate both left and right-hand wheels.

Right-Hand Side Shown

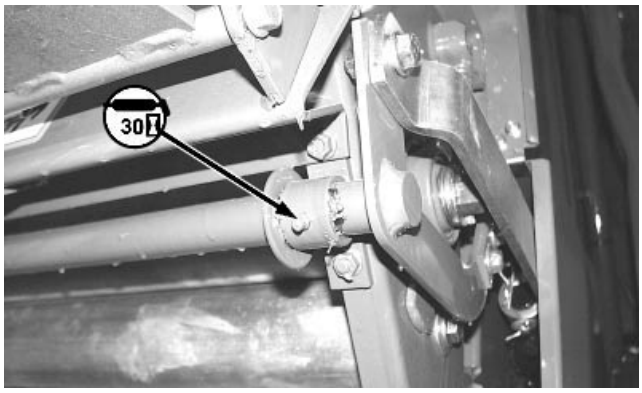
Continued on next page

AG,OUO6059,49 –19–05MAY00–5/6

CoverEdge™ Net Wrap Counterknife Arm Pivot (If Equipped)

IMPORTANT: Do not over lubricate counterknife arm pivot lubrication fittings. This will result in grease getting onto the rubber roll, causing wrappage.

Lubrication fittings are located on both left and right-hand sides.



Right-Hand Side Shown

AG,OUO6059,49 –19–05MAY00–6/6

Every 100 Hours

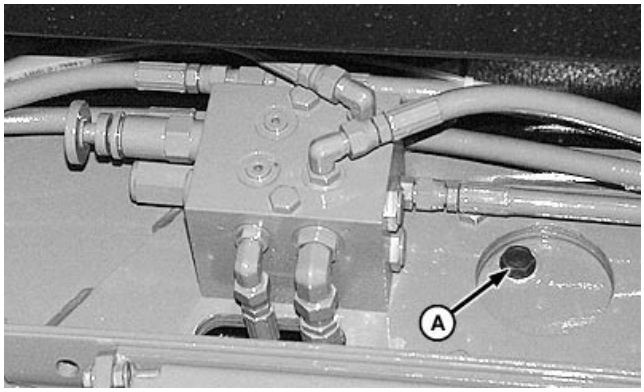
Gear Case

IMPORTANT: Do not over fill gear case as this will result in overheating and oil leakage.

Check level of lubricant with dipstick (A). Lubricant must fall between notches on the dipstick. If dipstick has only one notch, minimum oil level is at the notch; maximum oil level is 15 mm (0.591 in.) above the notch.

Refill as necessary using SAE 85-140 API GL-5 gear lubricant. Drain and refill gear case once each season.

Specification	
Gear Case—Capacity	1.2 L (1.25 U.S. qt)



A—Dipstick

AG,OUO6017,1690 –19–05NOV99–1/1

Annually

Baler Wheel Bearings and Gathering Wheel Bearings (If Equipped)

Remove the wheels; then clean, repack, and adjust bearings. Use John Deere EP Moly or an equivalent SAE multipurpose type grease, or wheel bearing grease.

E39740 –UN–16FEB96

Baler Wheel Shown

AG,OUO6059,262 –19–17JUL00–1/5

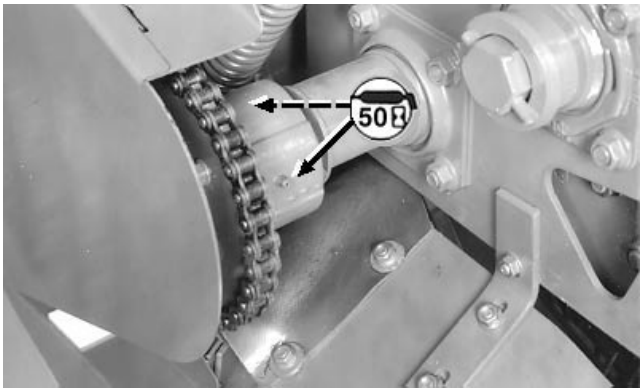
Slip Clutch—MEGATOOTH™ or MegaWide Pickup

IMPORTANT: Do not over-lubricate slip clutch grease fittings or clutches may not slip. Apply only two shots per grease fitting. Use only a hand grease gun to lubricate slip clutch fittings.

Fittings needs to be greased once a year or if slippage occurs.

Lubrication fittings are designed to release excess pressure.

- Keep lubrication fittings clear.



E39741 –UN–16FEB96

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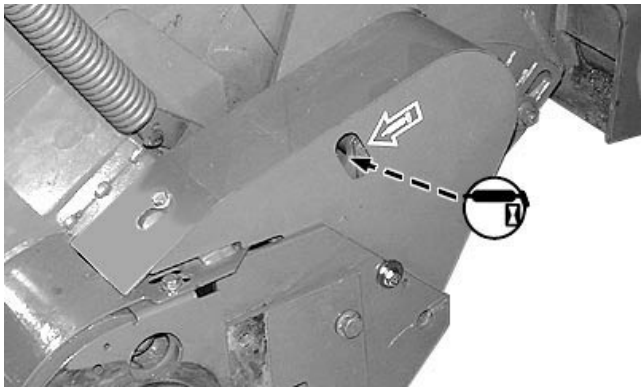
AG,OUO6059,262 –19–17JUL00–2/5

Pickup Idler Arm

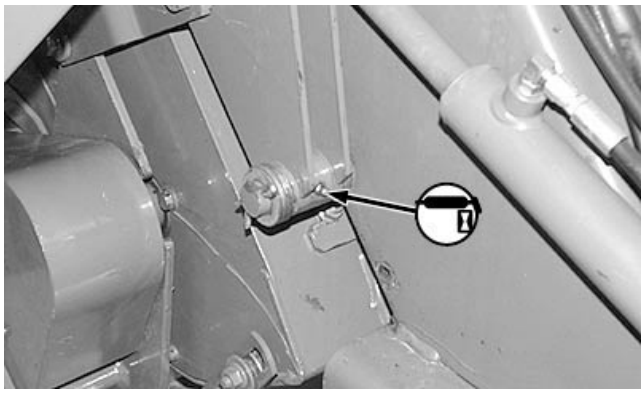
Regular and MEGATOOTH™ (Right-Hand Side)



MegaWide (Left-Hand Side)

AG,OUO6059,262 –19–17JUL00–3/5

Pickup Lift Bellcrank Pivot



MegaWide Shown

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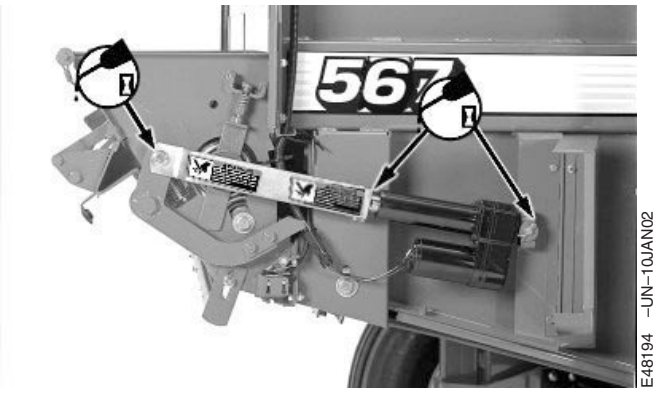
AG,OUO6059,262 –19–17JUL00–4/5

CoverEdge™ Net Wrap Actuator (If Equipped)

Lubricate rod end and base end actuator and link mounting pins with SAE 30 or heavier oil.



AG,OUO6059,262 –19–17JUL00–5/5

PTO Driveline Difficulties

Symptom	Problem	Solution
Driveline will not telescope correctly	Shield bent or rusted.	Replace shield.
	Lack of lubrication.	Clean and lubricate.
	Tractor drawbar not installed correctly.	Check dimensions. Install drawbar correctly.
	Driveline bent or twisted.	Replace.
	Telescoping splines galled or worn.	Replace shaft and tube as necessary, apply John Deere EP Moly High-Temperature Grease, or equivalent.
Driveline vibrates excessively	Balls/sockets worn.	Replace worn or damaged parts. Inject with John Deere EP Moly High-Temperature Grease, or equivalent.
	Driveline bent or twisted.	Replace.
	Driveline cross bearings worn.	Replace bearings.
	Constant velocity joint worn or damaged.	Replace worn or damaged parts.
	Splines on tractor shaft worn.	Replace tractor shaft.
Driveline will not stay engaged	Splines on yoke worn.	Replace yoke.
	Worn pawls.	Replace parts.

EX,566O,K –19–08DEC97–1/1

Main Drive Slip Clutch Difficulties

Symptom	Problem	Solution
Clutch does not slip	Distance between rear plate and pressure plate is less than specifications.	Adjust clutch. (See ADJUSTING MAIN DRIVE SLIP CLUTCH in Service—Baler section.)
	Seized or rusted.	Slip the clutch. (See SLIPPING THE MAIN DRIVE SLIP CLUTCH in Service—Baler section.)
	Warped pressure plate and/or clutch disk.	Replace pressure plate and/or clutch disk. (See your John Deere dealer.)
Clutch slips excessively	Distance between rear plate and pressure plate is more than 7.1 mm (0.280 in.).	Adjust clutch. (See ADJUSTING MAIN DRIVE SLIP CLUTCH in Service—Baler section.)
	Friction material on or around knurling disk.	Clean out friction material from knurling clutch disk.
	Disk spring weak from overheating.	Replace disk spring.
	Worn friction disk.	Replace. (See your John Deere dealer.)

AG,OUO6017,1692 –19–08NOV99–1/1

Drive Chain Difficulties

Symptom	Problem	Solution
Prematurely failed drive chains	Lack of lubrication.	Lubricate chains more often.
	Operating too tight or too loose.	Adjust chain tension.
	Misalignment of drive sprockets and idlers.	Align all sprockets and idlers. (See your John Deere dealer.)

AG,OUO6017,1693 –19–08NOV99–1/1

Gear Case Difficulties

Symptom	Problem	Solution
Gear case noisy	Lack of lubricant.	Check and add fluid if necessary.
	Loose or worn bearings.	See your John Deere dealer.
	Gears not meshing correctly.	See your John Deere dealer.
Gear case excessively hot (Over 105°C [220° F])	Oil level too high.	Operate with oil level at mark on dipstick.
	Lack of lubricant.	Check and add fluid if necessary.
	Defective bearings.	See your John Deere dealer.
	Bearings not installed correctly.	See your John Deere dealer.
	Bearings adjusted too tight.	See your John Deere dealer.
Leaking oil	Worn oil seals.	See your John Deere dealer.
	Missing or defective vent.	See your John Deere dealer.
	Oil level too high	Drain to correct level. Operate with oil level at proper place on dipstick. (See EVERY 100 HOURS in Lubrication and Maintenance section.)
Gears noisy or wear prematurely	Lack of lubrication.	Add oil to correct level or replace worn gears.

AG,OUO6017,1694 –19–08NOV99–1/1

Diagnosing Hydraulic Functions

Symptom	Problem	Solution
Baler won't feed; Hay plugged at feed opening.	Bale density is too high.	Turn adjustable relief valve knob counterclockwise to decrease density. (See ADJUSTING BALE DENSITY in Operating the Baler section.) Adjust variable (soft) core (If equipped). If not equipped, install variable (soft) core option. Check adjustable relief valve. Replace if defective. (See your John Deere dealer.) Adjust variable core diameter (if equipped). (See procedure in Operating the Baler section.)
	Gate opens while baling due to internal leakage in system component(s).	Repair or replace leaking component. (See your John Deere dealer.)

Continued on next page

Symptom	Problem	Solution
Bale sticks in chamber.	New baler.	Reduce density until bales have worn paint off sidesheets. (See ADJUSTING BALE DENSITY in Operating the Baler section.) Follow break-in instructions in Operating the Baler section.
	Bale density too high.	Turn adjustable relief valve knob counterclockwise to decrease density. (See ADJUSTING BALE DENSITY in Operating the Baler section.) Check relief valve. Replace if defective. (See your John Deere dealer.)
	Damp crop or "gummy" buildup on side sheets.	Clean sidesheets.
	Excessive sidesheet friction.	Check straightness and straighten front sidesheets of baler if needed. (See your John Deere dealer.)

Continued on next page

Symptom	Problem	Solution
Bale density too low.	Faulty tension cylinder.	Repair cylinder if leaking. (See your John Deere dealer.)
	Faulty relief valve.	Check relief valve. Replace if defective. (See your John Deere dealer.)
	Damaged O-rings and/or backup rings on relief or check valves.	Replace. (See your John Deere dealer.)
	Damaged seat or poppet in relief or check valves.	Replace. (See your John Deere dealer.)
	Foreign material keeping check or relief valve poppet from seating.	Clean or replace. (See your John Deere dealer.)
	Density control valve adjusted for light bales.	Adjust for heavier bale. (See ADJUSTING BALE DENSITY and CHECKING BALER PERFORMANCE IN THE FIELD in Operating the Baler section.)
	Dirty hydraulic oil in tractor.	Change tractor filter and/or oil.
Bale density control knob hard to turn.	Raised gate and/or belt tension arm causes additional turning resistance.	Adjust with gate closed and belt tension arm down.
	Dry thread on adjusting screw.	Apply a few drops of oil or a dry graphite lubricant to the threads.
	Locking ring locked against valve body.	Unscrew locking ring before adjusting density control knob. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
Bale density low on one side.	Bale forming procedure incorrect.	Review INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.

Continued on next page

Symptom	Problem	Solution
Bale density gauge reading in red.	Tractor selector valve (SCV) not in neutral position while baling.	Move hydraulic lever to neutral while baling.
	Defective density gauge.	Replace. (See your John Deere dealer.)
	Adjustable relief valve set too high.	Adjust valve. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Defective adjustable relief valve.	Replace valve. (See your John Deere dealer.)
Gate opens while baling.	Tension gate cylinder extends when gate is closed and tractor selector control valve (SCV) is in neutral.	Air in hydraulic system. Open and close gate several times to remove air.
		Faulty relief valve. (See your John Deere dealer.)
	Tractor selector control valve (SCV) leaking.	Repair or replace. (See your John Deere dealer.)
	Internal leak in baler hydraulic system.	Repair. (See your John Deere dealer.)
Gate will not close or lock.	Adjustable relief valve setting too low.	Turn adjustable relief valve knob clockwise to increase relief setting. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Obstruction between gate and frame.	Remove obstruction
	Hydraulic flow of tractor too low.	Adjust tractor hydraulic flow. (See your tractor Operator's manual.)
		Add orifice to bale tensioning valve. (See INSTALLING ORIFICE IN TRACTORS WITH LOW HYDRAULIC FLOW in Service—Baler section.)
	Orifice at quick-disconnect (SCV) end of small diameter hose not installed correctly.	Reverse direction of orifice.

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Symptom	Problem	Solution
Gate closes erratically	4-to-1 check valve interchanged with 12-to-1 check valve.	Install check valves in correct positions. (See your John Deere dealer.)
	Orifice at quick-disconnect (SCV) end of small diameter hose not installed correctly.	Reverse direction of orifice.
	Crop buildup on belts.	Remove buildup operate PTO while closing gate.

AG,OUO6059,261 –19–17JUL00–5/5

Automatic Twine Wrap

Symptom	Problem	Solution
EXTEND/RETRACT and switches will not move twine actuator. STOP flashes.	Electric actuator does not have electrical power.	Check if twine arms move using bypass switch. (See procedure in Operating the Baler section.) •If arms move; 30A fuse inside monitor-controller is blown. Replace fuse. •If arms do not move; Check tractor convenience outlet for blown fuse or defective circuit breaker. Replace fuse or circuit breaker if necessary. Check electric actuator connector for: •Proper connection •Corrosion •Broken wires •Tractor voltage
Twine too tight on bale or twine breaks while wrapping.	Twine routing wrong.	Check for correct routing. (See Preparing the Baler section.)
	Bad twine, knots in twine, new ball with tight core, wet twine.	Pull out bad twine or replace twine.
	Twine tension too high.	Reduce twine tension. (See ADJUSTING TWINE TENSION in Preparing the Baler section.)
	Wrong twine tension plate pin or springs.	Replace with correct parts.
	Crop buildup at twine guides.	Remove crop buildup.
	Deep grooves worn in twine guide.	Replace twine guide.
	Sisal twine binding at twine indicator wheel.	Route sisal twine 1/4 of a turn only around twine indicator wheel.

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Symptom	Problem	Solution
Twine falls off twine indicator wheel.	Retaining strap behind twine indicator wheel is not in correct position.	Adjust retaining strap. (See ADJUSTING TWINE INDICATOR RETAINING STRAP in Service—Baler section.)
	Plastic twine not wrapped a full turn around pulley.	Wrap twine a full turn around indicator wheel.
Twine too loose on bale.	Broken or missing twine tension spring.	Replace spring.
	Crop buildup between twine tension plates.	Remove crop buildup.
	Wrong tension spring pin.	Replace pin.
	Bale density low in certain sections.	Review INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.
	Twine tension too low.	Increase twine tension. (See ADJUSTING TWINE TENSION in Preparing the Baler section.)
	Worn twine tension plates.	Replace worn parts.
	Less than two wraps of twine on end of bale.	Increase number of wraps. (See SETTING NUMBER OF TWINE END WRAPS in Operating the Baler section.)
	Faulty bale tensioning valve.	Repair or replace valve. (See your John Deere dealer.)
	Belt tension/gate cylinder leaking.	Check for cylinder leaks. Repair as necessary. (See your John Deere dealer.)
	Twine not wrapped a full turn around twine indicators.	Wrap twine a full turn around twine indicators.

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Symptom	Problem	Solution
Twine tension not uniform across width of bale.	Twine catching on bent compressor rod.	Straighten rod.
	Bale tension not uniform from side-to-side.	Check for correct twine routing. (See Preparing the Baler section for twine routing.) See Operating the Baler section for proper baling technique. Check for leaks in tension system. Repair or replace parts as necessary. (See your John Deere dealer.) Adjust bale shape sensors. (See procedure in Service—Baler section.)
	Faulty bale tensioning valve.	Repair or replace valve. (See your John Deere dealer.)
	Belt tension cylinder leaks.	Repair or replace cylinder. (See your John Deere dealer.)
	Monitor-controller bale shape bars read high before bale ends are tight.	Adjust bale shape sensors. (See procedure in Service—Baler section.) Review INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.

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Symptom	Problem	Solution
Twine loose and/or wide twine spacing on left-hand side of bale.	Faulty bale tensioning valve.	Repair or replace valve. (See your John Deere dealer.)
	Belt tension cylinder leaks.	Repair or replace cylinder. (See your John Deere dealer.)
		Avoid overfilling right-hand side. Review INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.
	Monitor-controller bale shape bars read high before bale ends are tight.	Adjust bale shape sensors. (See procedure in Service—Baler section.)
	Twine slips with in loose crop.	Activate “Cinch” Wrap on Ch. 18 of monitor.
Twine loose on right-hand side of bale.	Twine not anchored well and slips around bale.	Too much twine tension. Twine catches late. (See ADJUSTING TWINE TENSION in Operating the Baler section.)
		Incorrect twine routing. (See ROUTING TWINE in Preparing the Baler section.)
	Excess right-hand end wraps pull down end of bale and create loose twine or wide twine spacing near right-hand end.	Continue to drive forward until twine pulleys are moving.
Lack of density in left-hand side of bale.	Left-hand bale shape bar reaches top when left-hand belt is tight. Right-hand bar reaches top with tight right-hand belt resulting in overfilling right-hand side.	Adjust bale shape sensors. (See procedure in Service—Baler section.)
	Left-hand end wraps pull down end of bale and create loose twine and/or wide twine spacing near left-hand end.	Adjust bale shape sensors. (See procedure in Service—Baler section.)

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Symptom	Problem	Solution
Twine arms move to right-hand side of baler and will not return, or returns part way and stops.	Twine arm caught on compressor rod.	Regular or MEGATOOTH™ Pickup; Align compressor rod down. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.) Mega-Wide Pickup; Make sure assembly pivots freely. (See INSTALLING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.)
	Buildup of crop or cornstalks on compressor rods prevents twine arm travel.	See BALING CORNSTALKS in Operating the Baler section. Raise baler. (See ADJUSTING WHEEL SPINDLES in Preparing the Baler section.)
	MEGATOOTH™ Pickup; Compressor rod caught above starter roll.	Install or adjust compressor rod channel. (See ADJUSTING COMPRESSOR ROD CHANNEL [MEGATOOTH™ PICKUP] in Operating the Baler section.)
	Broken harness wire near slip clutch due to incorrect harness routing.	Route and clamp wiring harness away from slip clutch.

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Symptom	Problem	Solution
Twine spacing not consistent.	Twine arm speed and arm spacing are not matched.	Decrease twine spacing to reduce helix angle. (See SETTING TWINE SPACING in Operating the Baler section.)
	Twine not routed correctly.	Route twine correctly. (See ROUTING TWINE in Preparing the Baler section.)
	Baling dry, slick crops, such as coastal Bermuda grass, straw, prairie grasses, or flax. Twine will lag behind twine arm because of crop trying to come out of feed opening, then suddenly catching up with twine arm, leaving a space without twine.	Bale when crop has more moisture. Reduce engine speed to 1500 rpm or lower and shift to a higher gear. Use Dry Straw Twine Wrap program. (See procedure in Operating the Baler section.) Lower baler. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)
	High twine tension on front twine arm causing distance between twine arms to change from setting.	Adjust twine tension. (See procedure in Operating the Baler section.)
	Twine indicator wheels binding.	Free up indicator wheels.
	Twine or twine arm contacting compressor rod.	Regular or MEGATOOTH™ Pickup; Lower compressor rack or align rod. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.) Mega-Wide Pickup; Make sure assembly pivots freely. (See INSTALLING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.)
	Varying tractor engine speed.	Maintain consistent engine speed while wrapping all bales.

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Symptom	Problem	Solution
	Bale density varies across width of bale or shape not cylindrical.	Review INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.

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AG,OUO6059,59 –19–05MAY00–7/11

Symptom	Problem	Solution
No twine on bale or twine not caught by bale.	Twine wrapped around twine tube.	Reduce twine tension, if necessary, on thin plastic twine. (See ADJUSTING TWINE TENSION in Operating the Baler section.)
	Twine from end of twine tube too short.	With tractor shut off, pull out twine until 305—381 mm (12—15 in.) is exposed from end of twine arms.
		Remove crop buildup at twine arm tension plates.
		Reduce twine tension, if necessary, on thin plastic twine. (See ADJUSTING TWINE TENSION in Operating the Baler section.)
		Use heavier twine.
		Replace worn twine tension plates at twine arm.
		Replace broken or missing spring at twine tension plate on twine arm.
	Twine tension too high.	Reduce twine tension. (See ADJUSTING TWINE TENSION in Preparing the Baler section.)
		Replace worn twine guides.
	Twine snagged on guide.	Check for correct twine routing.
	Twine not fed in with crop.	Do not stop forward travel of tractor as soon as monitor-controller WRAPPING STARTED indicator comes on. Allow a few seconds for twine to be fed in with hay.
	Twine box empty.	Add twine. (See LOADING TWINE BOXES in Preparing the Baler section.)
	Too many pickup teeth missing.	Replace pickup teeth.

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Symptom	Problem	Solution
Twine too close to edge of bale.	Adjustable twine guide out of adjustment.	Adjust twine guide. (See SETTING TWINE END WRAP DISTANCE in Operating the Baler section.)
	Barrel or cone shaped bales.	Fill ends of bale by crowding windrow. Adjust bale shape sensors as necessary. (See procedure in Service—Baler section.)
	Not extending actuator fully when operating twine wrap system.	Twine arm sensor out of adjustment. (See ADJUSTING TWINE WRAP SENSOR in Service—Baler section.)
	Twine guide too close to edge of bale.	Adjust twine guide. (See SETTING TWINE END WRAP DISTANCE in Operating the Baler section.)
	Baling dry, slick crops such as straw or flax.	Use more twine. Increase twine distance from end of bale. (See UNDERSTANDING TWINE WRAP TERMS AND SETTINGS in Operating the Baler section.)
	Twine arm travels too far at right-hand side of baler, due to manually moving twine arms using monitor-controller EXTEND key.	If recycling twine arm, press monitor-controller WRAP key so setting for end twine spacing occurs.
	Twine arm travel on right-hand side is out of adjustment.	Adjust. (See UNDERSTANDING TWINE WRAP TERMS AND SETTINGS in Operating the Baler section.)

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Symptom	Problem	Solution
Twine not cut.	Bale is ejected before twine is cut.	Look at twine to see that it has stopped moving before discharging bale.
	Twine cutter out of adjustment.	Adjust twine cutter tension. (See procedure in Service—Baler section.)
	Dull knife or uneven edge not making contact with anvil.	Rotate, sharpen, or replace knife.
	Front twine arm stop installed backwards.	Install stop with trimmed edge toward twine arm.
	Crop buildup on top of anvil.	Adjust height of twine cutter to twine arm. (See procedure in Service—Baler section.)
	Twine cutter anvil not level.	Adjust twine cutter so anvil is level (parallel with bottom edge of frame).
	Knife not contacting anvil fully.	Adjust knife so full length of knife edge makes contact with anvil. (See CHECKING KNIFE ADJUSTMENT in Service—Baler section.)
	Obstruction causing twine not to be guided under knife.	Remove obstruction.
	Bent twine guide rod.	Straighten or replace.
	Anvil is worn under knife.	Replace anvil.
	Binding in twine knife pivot or cutter linkage.	Repair or replace so linkage operates freely.
	Incorrect twine routing or bad ball of twine causing high twine tension.	Correct cause of high tension.

Continued on next page

Symptom	Problem	Solution
	Twine is above starter roll and misses twine guide.	Stop forward travel immediately when WRAPPING STARTED indicator is displayed and beeps. Reduce travel speed nearing completion of bale. Install compressor rack if removed. (See procedure in Operating the Baler section.) Add additional compressor rods.
	Twine not routed correctly.	Route twine correctly. (See ROUTING TWINE in Preparing the Baler section.)
	Low voltage prevents twine arms from activating twine cutter.	See your John Deere dealer.
	Twine tension too high, preventing twine arms from going to "home" position.	Reduce twine tension. (See ADJUSTING TWINE TENSION in Operating the Baler section.)
Twine unrolling.		Slow gate raise time by adjusting SCV flow to 7 - 8 seconds, to reduce bale rolling distance. Maintain engine rpm during discharge. Let bale turn 25 seconds after cutting. Increase twine tension. (See ADJUSTING TWINE TENSION in Operating the Baler section.) Reduce number of end wraps on left-hand side.
Twine actuator does not come all the way home. Twine does not cut off.	Low voltage to the monitor-controller under load.	Check tractor voltage. (See procedure in Service—Baler section.)

BALETRAK *PLUS*® Monitor-Controller Difficulties

Symptom	Problem	Solution
Monitor-Controller LCD display and switches do not work.	Monitor-controller connection to tractor is unplugged.	Plug in connection.
Monitor-controller functions do not display. STOP indicator is displayed.	Monitor-controller was hooked up with reverse polarity causing the 30 amp fuse to fail.	Check polarity of 12 volt power supply. Replace 30 amp fuse. (See REPLACING MONITOR-CONTROLLER FUSES AND RELAYS in Service—Baler section.)
	Intermittent voltage loss due to loose connectors.	Disconnect and inspect connectors for bent or pushed back terminals.
	Intermittent connection in wiring harness due to broken or frayed wire.	Inspect wiring harness and repair or replace.
Twine arm actuator does not function. Stop indicator displays. Alarm does not sound.	The internal monitor-controller fuse (30 amp) has blown.	Replace fuse. (See REPLACING MONITOR-CONTROLLER FUSES AND RELAYS in Service—Baler section.)
	Twine arm actuator failed.	Replace actuator. (See your John Deere dealer.)
		Inspect wiring harness and repair or replace.
	Twine arm wedged against back side of knife.	Use monitor-controller RETRACT key and retract twine arm. Clean and lubricate knife pivot.
Twine arm actuator does not function. Stop indicator displays and alarm sounds.	Twine arm actuator failed.	Replace actuator. (See your John Deere dealer.)
		Inspect wiring harness and repair or replace.
	Twine arm wedged against back side of knife.	Use monitor-controller RETRACT key and retract twine arm. Clean and lubricate knife pivot.

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Symptom	Problem	Solution
Twine actuator does not complete its travel. STOP indicator displays and alarm sounds.	Twine wrap sensor failed.	Replace sensor. (See your John Deere dealer.)
	Incorrect twine wrap sensor adjustment.	Adjust twine wrap sensor. (See procedure in Service—Baler section.)
	Twine arm travel restricted by foreign object or hay buildup.	Inspect and remove blockage.
STOP indicator is displayed on monitor-controller when activated.	Monitor-controller selector switch is set for net wrap. Baler is not equipped with net wrap unit.	Set monitor-controller selector switch for twine wrap.
	Twine/net actuator disconnected.	Check actuator connectors.
	Wiring is loose or cut.	Check wiring harness connector for breaks.
Automatic twine cycle does not function. STOP indicator displays and alarm sounds.	Defective gate latch switch.	Replace switch. (See your John Deere dealer.)
	Incorrect gate latch switch adjustment.	Adjust gate latch switches. (See procedure in Service—Baler section.)
	Gate not closed completely and does not activate one gate switch.	Remove hay buildup from gate area. Operate baler at tractor rated PTO speed when closing the gate.
	Released selective control valve too soon after closing gate.	Continue to hold selective control valve 2 seconds after gate closes.
	Gate twisted and does not close completely.	See your John Deere dealer.
	Manual BYPASS wiring harness connected.	Return twine actuator connector to NORMAL OPERATION connector. (See USING BYPASS SWITCH [TWINE WRAP ONLY] in Operating the Baler section.)

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Symptom	Problem	Solution
Twine arm actuator stops at full extension and will not retract.	Monitor-controller set for incorrect baler model.	Change monitor-controller setting. (See CHANGING BALER MODEL PROGRAM in Operating the Baler section.)
	Twine wrap sensor failed.	Replace sensor. (See your John Deere dealer.)
	Incorrect twine wrap sensor adjustment.	Adjust twine wrap sensor. (See procedure in Service—Baler section.)
		Inspect wiring harness. Repair or replace.
Twine spacing to edge of bale is greater than monitor-controller setting.	Incorrect mechanical twine guide setting.	Adjust mechanical twine guide. (See SETTING TWINE SPACING in Operating the Baler section.)
	Incorrect twine wrap sensor adjustment.	Adjust twine wrap sensor. (See procedure in Service—Baler section.)
Number of end wraps is different than monitor-controller setting.	Incorrect mechanical twine guide adjustment.	Adjust mechanical twine guide. (See SETTING TWINE SPACING in Operating the Baler section.)
	Incorrect bale diameter sensor adjustment.	Adjust bale diameter sensor. (See procedure in Service—Baler section.)
	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or at a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.
	Defective twine wrap sensor.	Replace sensor. (See your John Deere dealer.)

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Symptom	Problem	Solution
Erratic twine spacing. (Also refer to Automatic Twine Spacing "Twine spacing not consistent." in this section.)	Twine catching on foreign object or compressor rods.	Inspect and remove blockage or adjust compressor rods. (See ADJUSTING COMPRESSOR RACK ASSEMBLY [REGULAR OR MEGATOOTH™ PICKUP] in Operating the Baler section.)
	Incorrect monitor-controller settings.	Reset to factory initial settings and reset baler model number. (See procedures in Operating the Baler section.)
	Twine wrap sensor failed.	Replace sensor. (See your John Deere dealer.)
	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or at a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.
	Distance between twine arms incorrect for monitor-controller setting.	Set twine arm spacing for monitor-controller setting. (See SETTING TWINE SPACING in Operating the Baler section.)
		Inspect wiring harness. Repair or replace.
Net wrap indicator and alarm activates.	Knife did not cut the net wrap material.	Adjust brake. (See ADJUSTING NET WRAP STRETCH in Service—Net Wrap section.)
		Sharpen net wrap cutoff knife. (See procedure in Service—Net Wrap section.)
	Incorrect net wrap switch adjustment.	Adjust switch. (See procedure in Service—Net Wrap section.)
	Net wrap switch actuator lever not free to rotate.	Check actuator lever for obstruction or corrosion in hinged area.

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Symptom	Problem	Solution
Twine or net wrapping settings not consistent with different bale sizes.	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.
	Incorrect bale diameter sensor adjustment.	Adjust sensor. (See ADJUSTING BALE DIAMETER SENSOR in Service—Baler section.)
Bale shape is inconsistent with monitor-controller reading.	Operator not following recommended procedure.	See INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.
	Incorrect bale shape bar and sensor adjustments.	Adjust bale shape bar display and bale shape sensors. (See procedures in Service—Baler section.)
	Bale shape sensors failed.	Replace sensors. (See procedure in Service—Baler section.)
	Broken bale shape sensor arm spring.	Replace spring.
Bale size inconsistent with monitor-controller setting.	Incorrect bale diameter sensor adjustment.	Adjust bale diameter sensor. (See procedure in Service—Baler section.)
	Bale diameter sensor failed.	Replace sensor. (See procedure in Service—Baler section.)
Near-full size indicator does not display on monitor-controller.	Bale diameter sensor failed.	Replace sensor. (See procedure in Service—Baler section.)
Bales are not dense.	Variable core feature is activated.	Turn variable core off.
	Variable core set for too large of diameter.	Reduce variable core diameter setting or turn off feature.
	Variable core solenoid failed.	Replace solenoid. (See your John Deere dealer.)
	Bale diameter sensor failed.	Replace sensor. (See procedure in Service—Baler section.)

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Symptom	Problem	Solution
	Incorrect bale diameter sensor adjustment.	Adjust bale diameter sensor. (See procedure in Service—Baler section.)
Gate open indicator is on when gate is closed.	Incorrect gate latch switch adjustment.	Adjust switch(es). (See ADJUSTING GATE LATCH SWITCHES in Service—Baler section.)
	Defective gate latch switch(es).	Replace switch(es). (See your John Deere dealer.)
GATE CLOSED indicator is not displayed after attempting to close gate; STOP indicator may flash and buzzer may sound.	Gate did not close because gate lock engaged.	Unlock gate.
	Gate not fully closed due to an obstruction or twisted condition.	Remove obstruction or straighten gate.
	Belts pinched between lower gate roll and axle tube.	Raise gate fully and close gate at full tractor rpm. If tractor has low hydraulic flow, install orifice. (See INSTALLING ORIFICE IN TRACTORS WITH LOW HYDRAULIC FLOW in Service—Baler section.)
		Operate PTO while closing.
GATE CLOSED indicator goes out, STOP indicator and buzzer come on while baling.	Gate latch not adjusted properly.	Adjust gate latch stop. (See procedure in Service—Baler section.)
	Gate latch switches not adjusted properly.	Adjust gate latch switches. (See procedure in Service—Baler section.)
	Tractor selector control valve (SCV) leaking oil to gate hydraulic cylinder.	Repair tractor selector control valve (SCV). (See your John Deere dealer.)
	Gate latch hooks yielded.	Replace hooks and adjust gate latch. (See ADJUSTING GATE LATCH STOP in Service—Baler section.)

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Symptom	Problem	Solution
	Air in hydraulic system.	Open and close gate several times to remove air.
	Internal leak in gate hydraulic cylinder.	Repair or replace cylinder. (See your John Deere dealer.)
	Hydraulic cylinder not completely retracted when gate is closed.	Hold tractor SCV lever 2—3 seconds after GATE CLOSED indicator is displayed.
STOP indicator and buzzer come on when gate is closed.	Gate is not latched on one side.	Hold tractor SCV lever 2—3 seconds after GATE CLOSED indicator is displayed to make sure both sides are latched.
		Repair or adjust latch stop. (See ADJUSTING GATE LATCH STOP in Service—Baler section.)
	Gate latch switches not adjusted properly.	Adjust gate latch switches. (See procedure in Service—Baler section.)
	Defective gate latch switch(es).	Check gate latch switches. (See TESTING GATE LATCH AND OVERSIZE BALE SWITCHES in Service—Baler section.) Replace if necessary. (See your John Deere dealer.)
	Twine arm difficulties.	See "TWINE WRAP SYSTEM".
	Net wrap did not cut at end of wrap cycle.	See NET WRAP DIFFICULTIES in this section.
	Poor connections or broken wires to gate latch switches.	Test wires for continuity. Repair as necessary.
	Oversize bale switch out of adjustment.	Adjust oversize bale switch. (See procedure in Service—Baler section.)
	Shorted wires to oversize bale switch.	Test wire shorts. Repair as necessary.

Continued on next page

Symptom	Problem	Solution
	Net wrap switch out of adjustment.	Adjust net wrap switch. (See procedure in Service—Net Wrap section.)
	Defective net wrap switch.	Replace switch. (See your John Deere dealer.)
	Poor connections or broken wires to net wrap switch.	Test wires for continuity. Repair as necessary.
GATE CLOSED indicator is displayed, but gate is open or not latched.	Gate latch switches not adjusted properly.	Adjust gate latch switches. (See procedure in Service—Baler section.)
	Defective gate latch switch(es).	Check gate latch switches. (See TESTING GATE LATCH AND OVERSIZE BALE SWITCHES in Service—Baler section.) Replace if necessary. (See your John Deere dealer.)
	Crop buildup in latch area restricting hook engagement.	Remove buildup.
	Shorted wires to gate latch switches.	Test wires for shorts. Repair as necessary.
One or both bar graphs on LCD display do not correspond to shape of bale being formed.	Operator not interpreting signal properly.	Review INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.
	Bale shape sensors not adjusted properly.	Adjust bale shape sensors. (See procedure in Service—Baler section.)
	Defective bale shape sensor(s).	Replace bale shape sensor(s). (See procedure in Service—Baler section.)
	Broken wire(s) between monitor-controller and bale shape sensor(s) or poor connection at harness connectors.	Check continuity. Repair wires or connections as necessary.

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Symptom	Problem	Solution
	Faulty display.	Test display. (See TESTING LIGHTED CRYSTAL DISPLAY (LCD) in Service—Baler section.)
Flashing STOP indicator is displayed when monitor-controller is turned on.	Internal monitor-controller fuse (30 amp) has blown.	Replace fuse. (See REPLACING MONITOR FUSES AND RELAYS in Service—Baler section.)
Low voltage light comes on.	Low voltage to monitor-controller under load.	Check voltage. (See CHECKING TRACTOR VOLTAGE in Service—Baler section.)
Bale counter does not count bales.	For the monitor-controller to count a bale, an automatic wrap cycle must be followed by a gate opening cycle.	Check that both gate latch switches are functioning properly. (See TEST GATE LATCH SWITCHES in Service—Baler section.)
Monitor-controller functions do not display. STOP indicator displays.	Monitor-controller was hooked up with reverse polarity causing the 30 amp fuse to fail.	Check polarity of 12 volt power supply. Replace 30 amp fuse inside monitor-controller. (See REPLACING FUSES AND RELAYS in Service—Baler section.)
	Intermittent voltage loss due to loose connectors.	Disconnect and inspect connectors for bent or pushed back terminals.
	Intermittent connection in wiring harness due to broken or frayed wire.	Inspect wiring harness and repair or replace.
STOP indicator is displayed on monitor-controller when activated.	Twine/net actuator disconnected.	Check actuator connectors.
	Wiring is loose or cut.	Check wiring harness connector for breaks.
Twine Wrap System: EXTEND/RETRACT and WRAP switches will not move twine actuator. STOP flashes.	The internal monitor-controller fuse (30 amp) has blown.	Replace fuse. (See REPLACING MONITOR FUSES AND RELAYS in Service—Baler section.)
	Wiring has a break in it.	Check wiring harness for breaks and check connectors for pushed back pins.

Continued on next page

Symptom	Problem	Solution
Twine arm actuator does not come all the way home. Twine does not cut off.	Low voltage to the monitor-controller under load.	See your John Deere dealer.
Twine arm actuator does not function. Stop indicator displays.	The internal monitor-controller fuse (30 amp) has blown.	Replace fuse. (See REPLACING MONITOR FUSES AND RELAYS in Service—Baler section.)
	Twine arm actuator failed.	Replace actuator. (See your John Deere dealer.)
		Inspect wiring harness and repair or replace.
	Twine arm wedged against front side of knife.	Use monitor-controller RETRACT key to retract twine arm. Clean and lubricate knife pivot.
Twine actuator does not complete its travel. STOP indicator displays and alarm sounds.	Twine wrap sensor failed.	Replace twine wrap sensor. (See procedure in Service—Baler section.)
	Incorrect twine wrap sensor adjustment.	Adjust twine wrap sensor. (See procedure in Service—Baler section.)
	Twine arm travel restricted by foreign object or hay buildup.	Inspect and remove blockage.
Automatic twine cycle does not function. STOP indicator displays and alarm sounds.	Defective gate latch switch(es).	Replace switch(es). See your John Deere dealer.
	Incorrect gate latch switch adjustment.	Adjust gate latch switches. (See procedure in Service—Baler section.)
	Gate not closed completely and does not activate one gate switch.	Remove hay buildup from gate area.
		Operate baler at tractor rated PTO speed when closing the gate.
	Released selective control valve too soon after closing gate.	Continue to hold selective control valve 2 seconds after gate closes.

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Symptom	Problem	Solution
	Gate twisted and does not close completely.	See your John Deere dealer.
	Manual BYPASS wiring harness connected.	Return twine actuator connector to NORMAL OPERATION connector. (See USING BYPASS SWITCH [TWINE WRAP ONLY] in Operating the Baler section.)
Twine arm actuator stops at full extension and will not retract.	Monitor-controller set for incorrect baler model.	Change monitor-controller setting. (See CHANGING BALER MODEL PROGRAM in Operating the Baler section.)
	Twine arm position sensor failed.	Replace sensor. (See REPLACING TWINE WRAP SENSOR in Service—Baler section.)
	Incorrect twine arm position sensor adjustment.	Adjust twine wrap sensor. (See procedure in Service—Baler section.)
		Inspect wiring harness. Repair or replace.
Twine spacing to edge of bale is greater than monitor-controller setting.	Incorrect mechanical twine guide setting.	Adjust mechanical twine guide. (See SETTING TWINE SPACING and SETTING TWINE END WRAP DISTANCE in Operating the Baler section.)
	Incorrect twine wrap sensor adjustment.	Adjust twine wrap sensor. (See procedure in Service—Baler section.)
Number of end wraps is different than monitor-controller setting.	Incorrect bale diameter sensor adjustment.	Adjust bale diameter sensor. (See procedure in Service—Baler section.)
	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or at a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.

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Symptom	Problem	Solution
	Defective twine wrap sensor.	Replace sensor. (See REPLACING TWINE WRAP SENSOR in Service—Baler section.)
Erratic twine spacing.	Incorrect monitor-controller settings.	Reset to factory initial settings and check baler model number. (See RESETTING BALETRAK *PLUS*® TO INITIAL FACTORY SETTINGS and CHANGE BALER MODEL PROGRAM in Operating the Baler section.)
	Twine wrap sensor failed.	Replace sensor. (See REPLACING TWINE WRAP SENSOR in Service—Baler section.)
	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or at a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.
	Distance between twine arms incorrect for monitor-controller setting.	Set twine arm spacing for monitor-controller setting. (See SETTING TWINE SPACING in Operating the Baler section.)
		Inspect wiring harness. Repair or replace.
Twine wrapping settings not consistent with different bale sizes.	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.
	Incorrect bale diameter sensor adjustment.	Adjust sensor. (See ADJUSTING BALE DIAMETER SENSOR in Service—Baler section.)
Net Wrap System: Net actuator will not function during auto cycle. STOP flashes.	The internal monitor-controller fuse (30 amp) has blown.	Replace fuse. (See REPLACING MONITOR FUSES AND RELAYS in Service—Baler section.)

Continued on next page

Symptom	Problem	Solution
	Wiring has a break in it.	Check wiring harness for breaks and check connectors for pushed back pins.
Net actuator does not move when EXTEND/RETRACT switches are pressed in net mode.	The EXTEND/RETRACT switches are not intended to control net actuator.	See TESTING TWINE WRAP ACTUATOR CURRENT (CHANNEL 14) in Service—Baler section.
Net actuator does not come all the way home. Net does not cut off.	Low voltage to the monitor-controller under load.	See your John Deere dealer.
Net wrap indicator and alarm activates.	Knife did not cut the net wrap material.	Adjust knife and brake. (See CHECKING NET WRAP KNIFE ARM BRAKE in Service—Net Wrap section.) Sharpen knife. (See SHARPENING NET WRAP CUTOFF KNIFE in Service—Net Wrap section.) Adjust knife to rubber flap. (See ADJUSTING NET WRAP KNIFE ARM STOP in Service—Net Wrap section.)
	Incorrect net wrap switch adjustment.	Adjust net wrap switch. (See procedure in Service—Net Wrap section.)
	Net wrap switch actuator lever not free to rotate.	Check actuator lever for obstruction or corrosion in hinged area.
Net wrapping settings not consistent with different bale sizes.	Not operating at tractor rated PTO speed.	Operate at rated PTO speed or a consistent speed. A constant speed less than rated PTO speed will require a different monitor-controller setting.
	Incorrect bale diameter sensor adjustment.	Adjust sensor. (See ADJUSTING BALE DIAMETER SENSOR in Service—Baler section.)

Feeding Difficulties

Symptom	Problem	Solution
Baler won't feed hay, plugged at feed opening.	Missing pickup teeth.	Replace teeth.
	Regular Pickup; Pickup drive idler not adjusted properly or pickup belt damaged.	Adjust idler or replace belt, if necessary. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)
	MEGATOOTH™ or MegaWide Pickup; Slip clutch worn.	Replace slip clutch. (See your John Deere dealer.)
	Compressor rack too low.	Raise rack. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.)
	Gate opening while baling.	Adjust gate latch stop. (See procedure in Service—Baler section.)
		Check for leaking gate hydraulic cylinders and/or tractor valve. Repair or replace as necessary. (See your John Deere dealer.)
	Plugging at crop dividers.	See "Plugging at crop dividers" in Pickup Difficulties in this section.
	Gate not closed and/or latched.	Eject bale. Close gate.
	Baler too low. Wheel spindles not installed in normal position.	Install spindles in normal position. (See BALING WET HAY in Operating the Baler section.)
	Oversize bale.	Alarm can not be heard by operator. Adjust alarm volume. (See ADJUSTING AUDIBLE BALE SIZE ALARM VOLUME in operating the baler section of the operators manual.

Continued on next page

Symptom	Problem	Solution
	PTO driveline slip clutch is slipping.	Adjust clutch. (See ADJUSTING MAIN DRIVE SLIP CLUTCH in Service—Baler section.) Check clutch for warped pressure plate which can result in much lower capacity.
	Wrappage of foreign material on starter roll.	Remove material.
	Large windrows and/or too fast ground speed.	Reduce windrow size and/or reduce speed.
	MegaWide pickup baler has wrong hitch installed.	MegaWide pickup hitch has a dimple at the bottom to clear slip clutch.
	Incorrect belt routing.	Properly route belts. (See INSTALLING BELTS in Service—Baler section.)

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Symptom	Problem	Solution
Baler will not feed short, dry, slick or brittle crops. (Refer to BALING SHORT, DRY, SLICK CROPS in Operating the Baler section.)	Pickup too low.	Raise pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
	Dry material flaking off bale collects and blocks feed opening.	Disengage PTO when turning between windrows and when not feeding material.
	PTO speed too fast.	Reduce engine speed to 1500 rpm or lower and shift to higher gear.
		MEGATOOTH™ and MegaWide Pickup; Install optional slowdown sprockets.
	Excessive buildup on top of compressor rack.	Remove all compressor rods except one center rod and one rod on each end of cross tube.
	Regular Pickup; Pickup drive idler not adjusted properly or pickup belt damaged.	Adjust idler or replace belt, if necessary. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)
	MEGATOOTH™ or MegaWide Pickup; Slip clutch worn.	Replace slip clutch. (See your John Deere dealer.)
	Bale density too high.	Decrease density. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Windrows too small.	Make larger windrows by raking.
	Weathered windrows (rained on several times).	Make larger windrows by raking.
	Brittle crop breaks into smaller pieces easily.	Bale with dew on crop especially rotary combined straw.

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Symptom	Problem	Solution
	Bale fails to start rotating due to one or both sides of windrow extending outside of bale edge especially in dry bahia grass or coastal bermuda grass.	Make windrow narrower than bale width even with wide pickup. Center baler over windrow while starting.
Baler will not feed cornstalks. (Refer to BALING CORNSTALKS in Operating the Baler section.)	Pickup too high.	Lower pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.) Raise baler. (Refer to ADJUSTING WHEEL SPINDLES in Preparing the Baler section.)
	Windrows too large.	Make windrows smaller. Slow ground speed. Maintain PTO speed.
	Missing pickup teeth.	Replace teeth.
	Regular Pickup; Pickup drive idler not adjusted properly or pickup belt damaged.	Adjust idler or replace belt, if necessary. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)
	MEGATOOTH™ or Meg-Wide Pickup; Slip clutch worn.	Replace slip clutch. (See your John Deere dealer.)
	Compressor rack too low.	Raise rack. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.)

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Symptom	Problem	Solution
Baler will not feed long, stiff, cane-type crops (Refer to BALING LONG, STIFF, CANE-TYPE CROPS in Operating the Baler section.)	Material plugs at pickup and feed opening.	See BALING LONG, STIFF, CANE-TYPE CROPS in Operating the Baler section.
	Bale fails to start rotating due to crop wedging into top of starting chamber.	See BALING LONG, STIFF, CANE-TYPE CROPS in Operating the Baler section.
	Compressor rack too low.	Raise rack. (See ADJUSTING COMPRESSOR RACK ASSEMBLY in Operating the Baler section.)
Baler will not feed wet hay.	Surface moisture on bottom of windrow.	See BALING WET HAY in Operating the Baler section.
Starter roll chain breaks.	PTO driveline slip-clutch spring disk too tight or clutch plates seized.	Adjust or slip the main drive clutch. (See procedures in Service—Baler section.)
		See STARTING A BALE IN DIFFICULT CONDITIONS in Operating the Baler section.

AG,OUO6059,51 –19–05MAY00–5/5

Pickup Difficulties

Symptom	Problem	Solution
Pickup teeth do not revolve.	Feed opening plugged with crop.	Reduce ground speed and/or windrow size.
	Regular Pickup; Pickup drive idler not adjusted properly or pickup belt damaged.	Adjust idler or replace belt, if necessary. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)
	MEGATOOTH™ or MegaWide Pickup; Slip clutch worn.	Replace slip clutch. (See your John Deere dealer.)
	Starter roll or pickup drive chain broken or missing.	Repair or replace. (See your John Deere dealer.)
	Broken cam and/or other internal pickup parts.	Check for failed or worn cam and/or internal parts. Repair or replace as necessary. (See your John Deere dealer.)
Pickup will not float or drop freely.	Excess or insufficient float assist.	Adjust pickup float springs. (See procedure in Service—Baler section.)
	Binding between flare and end strippers.	Remove chaff and dirt. Straighten any bent parts.
		Regular Pickup; Install gauge wheels to improve ground gauging.
	If equipped with gauge wheels; Crop or mud buildup between flare pivot plate and pickup gauge wheel arm.	Replace flare pivot plate. (See your John Deere dealer.)

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Symptom	Problem	Solution
Not picking up hay cleanly.	Pickup teeth set too high.	Lower pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
	Belts pinched between pickup and lower front gate roller while closing gate.	Check that flow restrictor valve is installed correctly near gate lock valve for balers equipped with surface wrap.
	Too much float spring tension, causing pickup to bounce or stay up.	Reduce float spring tension. (See ADJUSTING PICKUP FLOAT SPRINGS in Service—Baler section.)
	Damaged crop dividers and/or stripper, causing pickup to stay up.	Straighten or replace damaged parts. (See your John Deere dealer.)
	Ground speed too fast.	Reduce ground speed.
	Windrows too light.	Rake heavier windrows.
	Pickup teeth bent or broken.	Straighten or replace teeth. (See your John Deere dealer.)
	Baler too high.	Lower baler. (See ADJUSTING WHEEL SPINDLES in Preparing the Baler section.)
	Light crop rolls forward instead of picking up.	Rake heavy windrows if possible. Operate baler at 1/2 to 2/3 normal rpm, and shift tractor to higher gear to maintain desired ground speed. MEGATOOTH™ or Mega-Wide (467 and 467S) Pickup; Install speed reduction sprocket at slip clutch. Reduce engine speed to 1500 rpm or lower and shift to a higher gear.
	Overcrowding ends.	Reduce crowding. Install converging wheels if not equipped.
	Tractor tires smashing crop into stubble.	Widen wheel spacing. (See ADJUSTING TRACTOR WHEELS in Preparing the Tractor section.)

Continued on next page

Symptom	Problem	Solution
Pickup teeth digging in ground.	Pickup set too low.	Raise pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
	Gauge wheels (if equipped) are set too high relative to teeth.	Adjust gauge wheels. (See procedure in Operating the Baler section.)
	Poor pickup flotation.	Increase float spring tension. Check pivots. (See ADJUSTING PICKUP FLOAT SPRINGS in Service—Baler section.)
	Soft ground. Pickup won't raise high enough.	Raise baler. (See ADJUSTING WHEEL SPINDLES in Preparing the Baler section.)
		Turn tractor drawbar over. (See ADJUSTING THE DRAWBAR in Preparing the Tractor section.)
		467 and 567; Install Hi-flotation tires.
	Rough terrain.	Regular or Mega-Wide (467 and 467S) Pickup; Install gauge wheels.
	If equipped, gauge wheel tire flat.	Inflate or repair as necessary. (See TIRE INFLATION in Preparing the Baler section.)
Pickup teeth contact starter roll.	Pickup raised too high.	MEGATOOTH™ and Regular Pickup; Adjust upstop bracket inward so tab does not align with slot in end stripper. Repeat for other side.

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AG,OUO6059,52 –19–05MAY00–3/5

Symptom	Problem	Solution
Pickup teeth bent or broken.	Pickup set too low.	Raise pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
		Adjust gauge wheels (if equipped). (See ADJUSTING GAUGE WHEELS in Operating the Baler section.)
	Foreign material inside pickup strippers and/or broken teeth.	Remove material and/or replace teeth.
	Baling cornstalks.	Raise pickup. Higher tooth breakage can be expected. (See BALING CORNSTALKS in Operating the Baler section.)
	Operating twine arms with pickup in transport position.	Lower pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
Pickup too high with baler in lowered position.	Wheel spindles installed upside down.	Install spindles in correct position. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)
	Baler height too high for crop condition.	Adjust baler to lower position on spindles. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)

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AG,OUO6059,52 –19–05MAY00–4/5

Symptom	Problem	Solution
Plugging at crop dividers.	Overcrowding ends.	Reduce crowding. Install gathering wheels. (See Attachments section.)
	Pickup set too low.	Raise pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
	Tractor tires smashing crop into stubble.	Widen wheel spacing. (See ADJUSTING TRACTOR WHEELS in Preparing the Tractor section.)
	Pivoting crop divider overlaps (shingles) stationary end stripper on the wrong side.	Straighten pivoting crop divider as needed to give proper overlap (shingle). Front crop dividers should be inside end stripper panel.
Inside of strippers worn.	Strippers bent up hitting tooth coils.	Raise pickup. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
		Check for binding at crop dividers.
		Increase float. (See ADJUSTING PICKUP FLOAT SPRINGS in Service—Baler section.)
		Regular or Mega-Wide (467 and 467S) Pickup; Install gauge wheels. (See Attachments section.)
		Bend strippers down for clearance and check tooth coils on pickup teeth for damage.

AG,OUO6059,52 –19–05MAY00–5/5

Bale Quality

Symptom	Problem	Solution
Cone shaped bale. Monitor-controller bale shape bars read high and even	Bale shape sensors out of adjustment.	Adjust. (See ADJUSTING BALE SHAPE SENSORS in Service—Baler section.)
	Broken spring on sender arm.	Replace spring.
	Outside belts are not the same length.	Belts should be the same length within 38 mm (1.496 in.). (See REPAIRING BELTS in Service—Baler section.)
Barrel shaped bale. Bale shape bars read high and even	Bale shape sensors out of adjustment.	Adjust. (See ADJUSTING BALE SHAPE SENSORS in Service—Baler section.)
	Outside belts too short.	Check and correct belt length. (See REPAIRING BELTS in Service—Baler section.)

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Symptom	Problem	Solution
Baler will not make dense bales	Density control adjusted for light bales.	Adjust for heavier bale. (See ADJUSTING BALE DENSITY and CHECKING BALER PERFORMANCE IN THE FIELD in Operating the Baler section.)
	Internal leak in belt tension hydraulic cylinder(s).	Repair or replace as necessary. (See your John Deere dealer.)
	Internal leak in tension valve due to faulty O-ring on adjustable relief valve or 4-to-1 check valve.	Repair or replace as necessary. (See your John Deere dealer.)
	Dirty or defective relief valve.	Clean or replace. (See your John Deere dealer.)
	Bale ends not filled tightly.	Crowd more hay in ends of baler. (See INTERPRETING BALE SHAPE INDICATORS in Operating the Baler section.)
	Extremely light crop conditions.	Make larger windrows by raking.
	Dirty hydraulic oil in tractor.	Change tractor filter and/or oil.
	Bale forming belts too short or too long.	Check length and correct. (See REPAIRING BELTS in Service—Baler section.)
Baler will not make full size bale	Bale diameter sensor is out of adjustment.	Adjust bale diameter sensor. (See procedure in Service—Baler section.)
Ends of bale have rough appearance (dry hay crops)	Not filling bale ends properly.	Drive to fill bale ends. (See INTERPRETING BALE SHAPE INDICATORS and CHECKING BALER PERFORMANCE IN THE FIELD in Operating the Baler section.)
		Remove gate fillers (if equipped).
	Gate deflectors may cause ends of bale to have rough appearance.	Remove gate deflectors (if equipped). If gate deflectors are removed, bale may stick in chamber.

General Baler Difficulties

Symptom	Problem	Solution
Monitor-controller GATE CLOSED indicator does not come on and GATE OPEN indicator stays on.	Obstruction between gate and frame.	Remove obstruction.
	Hay buildup on belts in gate area in some crop conditions.	Remove buildup. Operate PTO while closing gate.
	Too much clearance between latch hooks and shim pad.	Adjust gate latch stop. (See procedure Service—Baler section.)
	Hay buildup at gate latch area due to incorrect routing of hydraulic pickup lift hoses.	Route hoses correctly.
Monitor-controller GATE CLOSED and STOP indicators are on.	Gate latch switch not adjusted properly.	Adjust gate latch switch. (See procedure in Service—Baler section.)
	Tractor hydraulic valve leaking oil into baler.	Repair tractor hydraulic valve. (See your John Deere Dealer.)
	Air in hydraulic system.	Open and close gate several times to remove air.
	Internal leak in gate hydraulic cylinder.	Repair or replace cylinder. (See your John Deere dealer.)
	Hydraulic cylinder not completely retracted when gate is closed.	Hold tractor selector control valve lever 2 to 3 seconds after green light is on.
	Gate not latched.	When closing gate, hold tractor selector valve until green light comes on.
	Gate latches not adjusted properly.	Adjust gate latch stop. (See procedure in Service—Baler section.)
	Gate sprung.	Straighten. (See your John Deere dealer.)

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Symptom	Problem	Solution
Gate not latched.	Obstruction between gate and frame.	Remove obstruction.
	Hay buildup on belts in gate area in some crop conditions.	Remove buildup. Operate PTO while closing gate.
	Too much clearance between latch hooks and shim pad.	Adjust gate latch stop. (See procedure in Service—Baler section.)
	Hay buildup at gate latch area due to incorrect routing of hydraulic pickup lift hoses.	Route hoses correctly.
Belts do not track properly.	Belt tracking rollers out of adjustment.	Adjust rollers. (See ADJUSTING BELT TRACKING in Service—Baler section.)
	Belts not correct length.	Correct belt length. (See REPAIRING BELTS in Service—Baler section.)
	Belts not cut square when splicing.	Resplice belt. (See REPAIRING BELTS in Service—Baler section.)
	Twine or mud buildup on baler rolls.	Remove buildup.
	Belts not routed correctly.	See belt routing diagram and reroute belts. (See INSTALLING BELTS in Service—Baler section.)
	Bad bearing on roll.	Rotate all rolls by hand and inspect for loose bearings, etc. Repair or replace as necessary. (See your John Deere dealer.)
Bale density gauge reading in red.	Tractor selector valve not in neutral position while baling.	Move hydraulic lever to neutral while baling.
	Defective density gauge.	Replace gauge. (See your John Deere dealer.)
	Defective bale density valve cartridge.	Replace or repair valve. (See your John Deere dealer.)

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Symptom	Problem	Solution
Diamond surfaces on bale forming belts are rubbing together.	Upper belt tension roll in shipping position.	Move to operating position. (See ADJUSTING BELT TRACKING in Service—Baler section.)
	Crop or mud buildup on rolls.	Clean rolls.
	Belt tension arm not fully down.	Lower tension arm with tractor hydraulic lever.
	Belts not routed properly.	See belt routing diagram and reroute. (See INSTALLING BELTS in Service—Baler section.)
	Belts too short.	Repair belts. (See REPAIRING BELTS in Service—Baler section.)

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AG,OUO6059,158 –19–22JUN00–3/10

Symptom	Problem	Solution
Starter roll wraps with hay.	Regular Pickup; Pickup drive idler not adjusted properly or pickup belt damaged.	Adjust idler or replace belt, if necessary. (See ADJUSTING PICKUP BELT IDLER in Service—Baler section.)
	MEGATOOTH™ or Mega-Wide (467 and 467S) Pickup; Slip clutch worn.	Replace slip clutch. (See your John Deere dealer.)
	Mega-Wide Pickup (467 and 467S); Main drive slip clutch slipping.	Adjust pickup main drive chain. (See ADJUSTING PICKUP DRIVE CHAINS [Mega-WIDE PICKUP—467 and 467S] in Service—Baler section.)
		Adjust starter roll scraper. (See procedure in Service—Baler section.)
	Windrow wet on bottom.	Turn windrow. (See BALING WET HAY in Operating the Baler section.)
	Ground speed and rpm too high when starting bale.	Reduce rpm until bale core has formed.
	Windrow too large.	Decrease windrow size.
	Material pinched under pickup crop divider, tire, or gauge wheels (if equipped).	Start bale with windrow centered on pickup. Gathering wheels may help for scattered windrows.
	Nicks or rough places on starter roll.	Smooth with file.
Bale density control knob hard to turn.	Raised gate and/or belt tension arm causes additional turning resistance.	Adjust with gate closed and belt tension arm down. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Dry thread on adjusting screw.	Apply a few drops of oil or a dry graphite lubricant to the threads.
	Locking ring locked against valve body.	Unscrew locking ring before adjusting density control knob.

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Symptom	Problem	Solution
Belt lacing failure.	Belts are not the same length.	Repair belts. (See REPAIRING BELTS in Service—Baler section.)
	Belts not tracking correctly.	Adjust belt tracking. (See procedure in Service—Baler section.)
	Making oversized bales.	Check maximum bale size adjustment. (See ADJUSTING OVERSIZE BALE SWITCH in Service—Baler section.)
	Belts not routed correctly.	Route belts correctly. (See INSTALLING BELTS in Service—Baler section.)
	Material wrapping on rolls.	Remove material from rolls.
Belt splice pins break.	Excessive wear on pins.	Check pins for wear or breakage every 2000 bales (every 1000 bales in sandy conditions). Replace pins if broken, or if more than one-third of pin thickness is worn through.
	Incorrect belt length can cause excessive load on shorter belts.	See REPAIRING BELTS in Service—Baler section.

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Symptom	Problem	Solution
Belt slipping or not turning.	Belt tension arm not returning all the way down to tension belts.	Operate tractor at full rpm when closing gate to ensure tension arm tightens belts before gate close indicator comes on.
	Water dripping off belts and rollers.	Avoid baling in rain or frosted crop.
		Reduce density. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Belts too long.	Check belts for proper length. (See REPAIRING BELTS in Service—Baler section.)
	Excessive wrappage of net material around top idler roll (No. 11) pinches belt against top baler frame tube.	Remove wrappage around starter roll.
	Upper tension arm compression spring out of adjustment.	Adjust spring. (See ADJUSTING TAKE-UP ARM COMPRESSION SPRING in Service—Baler section.)
Gate latch closes or locks before gate is closed.	Gate lock valve spool is not in full unlocked position (snap ring should be against housing).	Make sure valve spool is not binding. If handle contacts bracket before spool is fully out, bend bracket slightly to allow full travel of valve spool in both directions.
	Binding at gate pivots.	Eliminate binding.

Continued on next page

Symptom	Problem	Solution
Gate twisted.	Gate becomes unlatched on one side when baling begins, or gate becomes unlatched while baling.	Hold lever 2 to 3 seconds after GATE CLOSED indicator is on before beginning to bale. (Do not rely upon sound of gate closing.) See your John Deere dealer to straighten gate.
	Gate latches not adjusted properly.	Adjust gate latches. (See ADJUSTING GATE LATCH STOP in Service—Baler section.)
	Gate latch switches not adjusted properly.	Check gate latch switch adjustment. (See ADJUSTING GATE LATCH SWITCHES in Service—Baler section.)
	Tractor selector valve leaking.	Repair or replace as necessary. (See your John Deere dealer.)
	Broken or stretched latch hook.	Replace parts.
Bale sticks in chamber.	Paint on sidesheets of new baler.	Reduce density until baler has made several bales to polish sidesheet. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Bale density too high.	Lower bale density at control valve. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Bale sticks in front frame due to damp crop.	Install High-Moisture Kit. (See Attachments section.)
	Excessive side sheet friction caused by "gummy" buildup on side sheets.	Remove buildup. Make sure gate deflectors (if equipped) are installed in gate.

Continued on next page

Symptom	Problem	Solution
Damage to belt diamond pattern. Belts cut or broken.	Material buildup on compressor rack causing belts to contact starter roll.	See BALING SHORT, DRY, SLICK CROPS and BALING CORNSTALKS in Operating the Baler section.
	Foreign objects in windrow (rocks, sticks, etc.).	Operate with pickup as high as possible. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
		Remove foreign objects from windrow.
	Wrappage on lower drive roll forcing belt into starter roll.	Remove wrappage.
	Bale forming belts contacting each other.	See "Diamond surfaces on bale forming belts are rubbing together" in this section.
Belt edges fuzzy.	Normal break-in.	After break-in period, the fuzziness will stop.
		Trim loose cords.
Wear on belt guides and/or tension arm.	Improper belt tracking or tension arm not centered.	Adjust belt tracking or extension arm. (See ADJUSTING BELT TRACKING in Service—Baler section.)

Continued on next page

Symptom	Problem	Solution
Belts pinched between lower gate roll and axle tube.	Gate is closing before tension arm removes slack from belts.	Operate tractor at full rpm when closing gate to ensure that tension arm tightens belts. If operating with low hydraulic flow tractor, see INSTALLING ORIFICE IN TRACTORS WITH LOW HYDRAULIC FLOW in Service—Baler section. If equipped with net wrap, the flow restrictor valve supplied with the bundle must be installed. (Pin must be installed through the valve toward the bottom.)
	Tractor selector control valve lever in detent while closing gate.	Adjust selector control valve lever for no detent, so lever returns to neutral when released. (See your tractor Operator's manual.)
	Contaminated check valves in tensioning valve assembly.	Repair or replace as necessary. (See your John Deere dealer.)
Belts turn over or cross.	Closing gate with PTO engaged and strong winds prevailing and/or side hill operation.	Disengage PTO before opening gate.
	Operating baler empty with gate up and no tension on belts for extended periods.	Do not operate in this manner for an extended time.
	Driving too long on one side of windrow at bale start. Hay pushes out between belts.	Center pickup on windrow at bale start.
Tension arm rubbing sidesheet.	Tension arm not centered between sides.	Adjust tension arm. (See ADJUSTING BELT TRACKING in Service—Baler section.)

Continued on next page

Symptom	Problem	Solution
New belts track back and forth on rolls.	Wax from belts builds up on rolls.	Use oil dry granules or talcum powder to polish rolls.
	Belts not correct length.	Belt lengths need to be within 38 mm (1-1/2 in.) of each other. (See REPAIRING BELTS in Service—Baler section.)
	Bad fabric or construction of belt.	Repair or replace belt. (See procedures in Service—Baler section.)

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Push Bar Difficulties

Symptom	Problem	Solution
Push bar misses bale.	Bale does not drop from chamber freely when gate is opened.	Reduce bale density until baler has made several bales to polish sidesheet. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
		See your John Deere dealer for bale chamber inspection.
	Push bar cross tube installed backwards.	Install cross tube correctly.
	Chain retainer or gate pin swings push bar back.	Use correct bolts in chain connector links.
		Shim push bar frames to clear gate pins during gate swing cycle.
	Push bar leaves home position early.	Make sure push bar arm pivots are not lubricated.
		Operation in steep hills may require backing up and ejecting bale on cross-hill or level ground, or locking out push bar.
		Replace weak springs.
	Gate open to fast.	Gate opening time is to short. Set to five second minimum.

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Symptom	Problem	Solution
Push bar has insufficient force to move bale.	Flow restrictor valve installed upside down in gate lock valve.	Install flow restrictor valve on fitting with pin closest to the bottom. (See your John Deere dealer.)
	Operating in too steep of hills.	Lock out push bar and back up to eject bales. Eject bales cross-hill.
	Discharging bale at low rpm.	Operate tractor at full rpm.
	Hesitation during gate opening cycle.	Hold tractor selector control valve lever until push bar cycle in completed.
Twine unrolls off bale.	Loose ends of twine gets caught by crop stubble as push bar rolls the bale.	Allow bale to make two or three turns before raising the gate. Slow gate lift time by using tractor selector-control valve, so bale does not roll very far. Use mechanical twine guide to control end-wrap distance instead of monitor-controller adjustment. (See SETTING TWINE END WRAP DISTANCE in Operating the Baler section.) Increase twine tension. (See ADJUSTING TWINE TENSION in Operating the Baler section.) Disengage push bar. (See LOCKING OUT BALE PUSH BAR in Operating the Baler section.)

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High-Moisture Kit (Silage Baling) Difficulties

NOTE: Refer to BALING WET HAY in Operating the Baler section for proper baling procedures when making silage bales.

Symptom	Problem	Solution
Starter roll wraps with scraper installed.	Damaged scraper bar or too much clearance between scraper and starter roll bars.	Repair or replace scraper bar. (See ADJUSTING STARTER ROLL SCRAPER [IF EQUIPPED] in Service—Baler section.)
	Nicks on starter roll bars catch hay.	Remove nicks with a file.
467S; Excessive main drive clutch slippage.	Rocks caught between cleaning auger and staggered roll.	Remove rocks. Check for bent cleaning auger. raise pickup height. (See ADJUSTING PICKUP HEIGHT in Operating the Baler section.)
467 and 567; Staggered roll spirals wrap.	Weld not on trailing side of spiral. Nicks or excess weld catches hay.	Relocate welds on trailing edge of spirals. Remove nicks by filing or grinding.
	Excessive scraper clearance.	Adjust scraper to obtain 0.5—0.8 mm (0.02—0.03 in.) clearance to spirals on the roll.
	Spirals installed incorrectly on roll.	Turn roll end for end. Roll must be installed with spirals converging toward the center of machine.
467 and 567; Staggered belt roll wraps in center of roll.	Acceptable if not over 8 mm (0.315 in.) thick. Generally does not continue to grow.	Remove wrappage once a day or as necessary.
Ticking noises while running empty baler.	467 and 567; Scrapers contacting spirals or starter roll bars. Spirals contacting sidesheet.	Adjust scraper to obtain 0.5—0.8 mm (0.02—0.03 in.) clearance to spiral on the roll. Center roll in sidesheet as necessary.
	467S Cleaning auger contacting staggered roll.	Check clearance between auger and staggered roll. (See ADJUSTING CLEARANCE BETWEEN CLEANING AUGER AND STAGGERED BELT ROLL in Service—Baler section.)

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Symptom	Problem	Solution
467 and 567; Loose buildup over spiral scrapers.	Normally occurs on downhill side and self-cleans on uphill side.	Remove once a day or as necessary.
Belts slipping or not turning.	Excessive sidesheet friction caused by "gummy" buildup on sidesheets.	Be sure gate deflectors are installed in gate.
		Remove buildup by scraping or using high-pressure washer.
		Avoid baling when moisture content causes "gummy" buildup. Bale crop when moisture content is different.
	Extremely dry crop conditions.	See Baling Short, Dry, Slick Crop.
	Water dripping down from belts and rolls.	Avoid baling in rain or frosted conditions. Reduce bale density. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Belts pinched between gate roll and baler axle.	Operate tractor at full rpm when closing the gate. This allows the tension arm to tighten the belts before gate is closed.
	Upper tension arm compression spring out of adjustment.	Adjust spring. (See ADJUSTING TAKE-UP ARM COMPRESSION SPRING in Service—Baler section.)
Bale does not eject.	Bale sticks in front frame due to "gummy" buildup on baler sides.	Remove buildup. Be sure gate deflectors are installed in gate.
		Avoid baling when moisture content causes "gummy" buildup. Bale crop when moisture content is different.
	Belt tension arm not returning all the way down to tension belts.	Operate tractor at full rpm when closing the gate. This allows the tension arm to tighten the belts before gate is closed.
	Belts too long.	Check belts for correct length. (See REPAIRING BELTS in Service—Baler section.)

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Symptom	Problem	Solution
Bale sticks in chamber.	New baler.	Reduce density until baler has made several bales to polish sidesheets. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Bale density too high.	Lower bale density at control valve. (See ADJUSTING BALE DENSITY in Operating the Baler section.)
	Bale sticks in front frame due to damp crop.	Be sure gate deflectors are installed in gate. Remove paint from inside of sidesheets.

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Net Wrap Difficulties

Symptom	Problem	Solution
Net wrap material wrapped around rubber feed roll. **IMPORTANT: Do not cut net wrap material from rubber feed roll. Any knife cuts in the rubber roll covering may result in more frequent wrapping around the roll and may require roll replacement. (See CORRECTING NET WRAP FEEDING PROBLEMS in Service—Net Wrap section.)**	Brake on net Feed roll not tight enough.	Adjust brake (Refer to CHECKING AND ADJUSTING NET WRAP FEED ROLL BRAKE in Service - Net Wrap section)
	Static electricity or dampness causing net wrap material to cling to the roll.	Dust the rubber drive roll and outside of net wrap with baby powder.
	Net Wrap clings to rubber roll from weight of net wrap for extended periods of time (overnight or longer).	Unlock and relock brake on V-Belt pulley before each use.
	Dirt, crop material, rust, or roughness on pan surface.	Clean and polish upper pan surface with SCOTCH-BRITE® or ultra fine sandpaper. Polish marks must be parallel to movement of mesh. (Refer to USING NET WRAP AFTER EXTENDED STORAGE in Preparing Baler for Net Wrap section.)
	Dust and/or moisture on surface of rubber roll causing net wrap to stick to roll.	Be sure to tape across cover hinge joint at top of cover is intact. Replace if necessary. (See your John Deere dealer.)

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Symptom	Problem	Solution
		Clean rolls. (See USING NET WRAP AFTER EXTENDED STORAGE in Preparing Baler for Net Wrap section.)
		Dry off rolls if dew is present. Thread net wrap.
	Lower net wrap guide (pan) not contacting belts.	Adjust guide. (See your John Deere dealer.)
	Angle not holding the net wrap.	See ADJUSTING NET WRAP KNIFE in Service—Net Wrap section.
	Feed roll pressure set too high.	Adjust feed roll pressure. (See ADJUSTING FEED ROLL PRESSURE in Service—Net Wrap section.)
	Rubber roll damaged or sticky.	Clean by wiping with clean rag or soap and water. NEVER use solvents. Replace roller if damaged.
	V-Belt idler out of adjustment.	Check idler. (See CHECKING NET V-BELT IDLER ADJUSTMENT in Service—Net Wrap section.)
	Net wrap material sticky from adhesive used in packaging (tape, etc.).	Remove any sticky material from the supply roll by unrolling, cutting and discarding.
	Net wrap material improperly routed, or too much of the end loop started through feed rolls when threading.	Route and thread net wrap correctly. (See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.)
	Lower portion of front wall of net wrap too close to rubber roll.	Bend lower portion of front wall away from roll to give at least 3 mm (0.118 in.) clearance.

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Symptom	Problem	Solution
Net wrap material wrapped around top idler roll.	Bale diameter too large.	Reduce bale diameter
	Belts are muddy and sticky.	Clean belts.
	Belts are full of burrs or thorns.	Clean belts.
	Belt lacing pins are catching the net wrap material.	Make sure splices are smooth.
	Net not cutting off cleanly	Sharpen knife, adjust cut-off angle to obtain clean cut-off.
		Remove and clean brush behind cut-off knife.

Continued on next page

Symptom	Problem	Solution
Bale not wrapped (ALARM SOUNDS) Stop and Net Wrap indicators are displayed.	Wrap material incorrectly threaded.	Rethread net. (See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.)
	Net wrap material wrapped around rubber feed roll.	Remove material from roll. (See NET WRAP DIFFICULTIES in this section), also, (See CORRECTING NET WRAP FEEDING PROBLEMS in Service—Net Wrap Section.)
	Net wrap material not started between feed roll.	Rethread net. (See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.)
	Net wrap roll installed backwards.	Install roll correctly. (See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.)
	Net wrap feed roll drive not engaged.	Check for broken, worn, or too long V-belt. (See CHECKING V-BELT IDLER ADJUSTMENT in Service—Net Wrap section.) Check for binding at counterknife arm pivots and V-belt idler pivot. Check for movement of actuator.
	Feed roll pressure set too low.	Adjust feed roll pressure. (See ADJUSTING FEED ROLL PRESSURE in Service—Net Wrap section.)
	Roll of net wrap material larger than 305 mm (12 in.).	Use correct size roll of net wrap. (See your John Deere dealer.)
	Net wrap supply roll empty.	Install new roll. (See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.)
	Actuator not moving.	See your John Deere dealer

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Symptom	Problem	Solution
Bale not wrapped. (NO ALARM, STOP and NET WRAP indicators not displayed).	Net wrap fed to other areas of the machine:	Locate and remove net wrap material before making the next bale. Otherwise, improper belt tracking and further incorrect feeding may result, if material is not removed promptly and the cause is not corrected.
	a) Starter roll wrappage.	Remove all burrs, weld splatters, rough spots, and imperfections on starter roll. Mud or sticky crop residue can cause occasional starter roll wrappage.
	b) Net wrapped on top idler roller	Bale diameter too large - Reduce baler diameter to 72 in. or smaller. (Measure a bale to check actual bale size, ensure its 72 in. or less.) Check for mud or sticky crop on belts and rolls. Clean if necessary. Make sure all belt pin ends are pointed toward back side of belt toward rolls, so the net wrap does not catch on bent ends of pins. Check for cut or damaged belt surface. Trim loose belt edges, repair, or replace. (See REPAIRING BELTS in Service—Baler section.)
	c) Monitor controller not in net mode	Set monitor switch to NET POSITION.
	d) Baler drive roll wrappage.	Do not damage rubber strips when removing net wrap material.
	e) Net splitting.	See “Net wrap is split around bale or stays behind the pickup” in this section.

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Symptom	Problem	Solution
	f) Net wrap caught in rough belt splices (net wrap is not transferred from belts to bale during wrapping cycle).	Make sure splices are smooth.
		Inspect and repair broken or damaged belt splices.
	g) Net wrap bunched behind lower belt guide on gate due to crop buildup.	Remove crop buildup from lower gate area. In some crops, reducing PTO rpm while baling will reduce buildup tendency. Ejecting bale with PTO running will reduce buildup in some conditions. (See BALING SHORT, DRY, SLICK CROPS in Operating the Baler section.)
		For extreme crop conditions install Build-Up Reduction Scraper Kit. (See Attachments section.)
	g) Bale forming belts sticky from silage buildup.	Diamond pattern on belts must be dry. Bale silage at a lower moisture content.
	h) Broken or damaged belt splices.	Repair belt splices.
	j) Adjacent belts track toward each other causing belts to “pinch” and pull net wrap around rolls.	Adjust belt tracking or move belt to another location to improve belt tracking. (See ADJUSTING BELT TRACKING in Service—Baler section.)
		Remove wrappage on baler rolls.
	Actuator or controller disconnected.	Check connections and/or wires.
	Monitor-controller not in NET mode.	Put monitor-controller selector switch on NET position.

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Symptom	Problem	Solution
Bale not uniformly wrapped (NO ALARM—stop and net wrap indicators are NOT displayed).	Buildup of crop, etc., behind lower belt guide on gate.	Clean out buildup. In some crops, reducing PTO rpm will reduce buildup tendency. Ejecting bale with PTO running will reduce buildup in some conditions. Install Build-Up Reduction Scraper Kit. (See Attachments section.)
	Insufficient number of wraps.	Make sure the net wrap supply roll has not run out. Controller should be set to apply a minimum of two wraps. (Refer to OPERATING NET WRAP CONTROL in Operating the Baler section.)
	Net wrap buildup at rear of pan.	Net wrap pan is not contacting belts at rear of pan. Adjust pan to contact belts.
	Belts not tracking properly.	Refer to ADJUSTING BELT TRACKING in Service—Baler section.
	Too much tension on net wrap causing holes or tears in net wrap.	Reduce net wrap tension by adding shims between pulley halves. See (ADJUSTING NET WRAP TENSION - Section 70)
	Net wrap cover not closed.	Cover must be closed and latched for best bale coverage.
	Net wrap cover gas spring(s) weak.	Check springs on both sides of net wrap cover. Replace if necessary.
	Windguard angle damage or missing on MEGA-WIDE pickup frame.	Install angle—See your John Deere Dealer.
	Net wrap not routed between steel and rubber roll .	See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.

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Symptom	Problem	Solution
	Roll of net wrap material too narrow.	See your John Deere dealer. Use only approved material for best results.
	Net wrap partially on bale, partially on feed roll or baler roll.	See “Bale not wrapped (cutoff signal does activate)” in this section.
	Bale has crop between layers of net wrap on the bale or loose crop is outside the net wrap on the bale.	Stop forward travel immediately when the full bale alarm stops. Net wrap begins to feed at that time, and any crop picked up after this will be placed between the layers of net wrap or outside the wrapping. Adjust monitor to delay starting wrap on CH. 26.

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Symptom	Problem	Solution
Alarm Sounds. STOP and NET WRAP indicators are displayed on monitor-controller and alarm sounds when bale is wrapped correctly.	Switch activating flap is not adjusted or binding.	Adjust and correct binding or lube pivots. (See ADJUSTING NET WRAP SWITCH in Service—net wrap section).
	Net wrap material is not cut off cleanly.	Sharpen net wrap cutoff knife. (See SHARPENING NET WRAP CUTOFF KNIFE in service—Net Wrap section.)
		Adjust net wrap knife arm brake. (See CHECKING NET WRAP FEED ROLL BRAKE in Service—Net Wrap section.)
		Tighten rubber roll pressure springs. (See ADJUSTING NET WRAP FEED ROLL PRESSURE in Service— Net Wrap section.)
	Net wrap switch needs adjustment.	Adjust. (See ADJUSTING NET WRAP SWITCH in Service—Net Wrap section.)
	Angle/actuator stop not adjusted	Adjust knife arm correctly. (See ADJUSTING NET WRAP Angle in Service—Net Wrap section.)
	Return spring on net wrap switch are is missing or damaged.	Replace spring.
	Cutoff indicator flap binding.	Check for bent or damaged parts. Repair or replace as necessary.
	Microswitch failed.	Check net wrap switch. (See CHECKING AND ADJUSTING SWITCH in Service—Baler section.) Replace if necessary.
	Wire connections unplugged, corroded, or dirty.	Inspect connections in harness next to oversize bale switch, just ahead of the net wrap unit on right-hand side, and at the net wrap microswitch.

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Symptom	Problem	Solution
Net wrap not cut off at end of wrapping cycle. (Alarm Sounds—Stop an Net Wrap indicators displayed.)	Brake on rubber feed roll out of adjustment or worn.	Check and adjust brake. (See CHECKING NET WRAP FEED ROLL BRAKE in Service—Net Wrap section.)
	Cutoff angle not returning to cutting position freely.	Check for proper lubrication and binding at knife arm pivots. See your John Deere dealer if binding occurs.
		Check for voltage to net actuator.
	Dull knife.	Sharpen knife with file. Knife must be very sharp for clean cutoff. (See SHARPENING NET WRAP CUTOFF KNIFE in Service—Net Wrap section.)
	Net wrap cover open.	Cover must be closed for best cutoff.
	Cutoff angle out of adjustment.	Adjust. (See ADJUSTING NET WRAP COUNTERKNIFE ARM in Service - Net Wrap section).
Net wrap loose around bale.	Inadequate tension on net.	Increase tension (See ADJUSTING NET WRAP STRETCH in Surface Wrap section.)
	Net Wrap travelling over idler roll (#11) due to too large bale.	Ensure bales are not larger than 183 cm (72 in.) when measured. Reduce monitor size setting if necessary.
		Make smaller bale. (See ADJUSTING SWITCH OVERSIZE BALE in Service—Baler section.)
	V-belt idler out of adjustment.	Check idler. (See CHECKING V-BELT IDLER ADJUSTMENT in Service—Net Wrap section.)
	Weak gas spring(s).	Check spring(s) for proper force.
	Too many wraps applied.	Normally no more than three wraps are needed. Excess wraps may appear to be loose.

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Symptom	Problem	Solution
Varying number of wraps from one bale to the next.	Varying PTO speed while wrapping from one bale to the next.	Maintain rated PTO speed while wrapping. If difficult crop conditions require varying PTO speed while baling, return to rated speed for wrapping.
	Bale size and shape not uniform.	Make bales uniform in shape. Follow operating instructions in Operating the Baler section. *NOTE: If wrapping a smaller bale with override switches, the small bale will have a higher number of wraps unless controller is readjusted.*
	Too much clearance between net wrap guide and CoverEdge drive roll.	Adjust rear of pan to contact belts at lower rear gate roller (see CHECKING and ADJUSTING LOWER NET WRAP GUIDE in service Net Wrap.)

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Symptom	Problem	Solution
Net wrap is split around bale or stays behind the pickup.	Buildup of crop stems, etc., in lower gate belt guide area.	Remove buildup. In some crops, reducing PTO rpm will reduce buildup tendency. Ejecting bale with PTO running will reduce buildup in some conditions. Install Build-Up Reduction Scraper Kit. (See Attachments section.)
	Insufficient clearance between lower guide crossbar and belt guide straps. Crop fills gap between crossbar and belt guide straps.	Adjust clearance to 4 mm (0.157 in.) (See CHECKING AND ADJUSTING LOWER NET WRAP GUIDE in Service—Net Wrap section.)
	Too much pressure between net wrap guide and belts, causing strips to become hot.	(see CHECKING MODEL PAN CHANNELS and ADJUSTING LOWER NET WRAP GUIDE in service Net Wrap.)
	Extremely steamy crops causing splitting or snagging.	Use more wraps of net wrap material.
	Too much clearance between lower guide crossbar and belt guide straps. (Belts track underneath belt guides and split net.)	Check for proper clearance. (See CHECKING AND ADJUSTING LOWER NET WRAP GUIDE in Service—Net Wrap section.)
	Belts not tracking correctly.	See ADJUSTING BELT TRACKING in Service—Baler section.
	Material snagging on splices or pins.	Make sure splices are smooth.
Net wrap breaking due to excess tension.	Incorrect number of shims between pulley halves for net wrap being used.	See ADJUSTING NET WRAP STRETCH in service Net Wrap.
	Not enough wraps of net.	Adjust for at least two full wraps. More wraps in difficult crops like (Straw, corn stalks, etc.)
Cover does not stay open.	Weak gas spring(s).	Replace spring(s).

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Symptom	Problem	Solution
Net is not out to edge of bale. (Using edge to edge material)	Roll of net too narrow.	See your John Deere dealer. Use only approved material for best results.
	Roll of net wrap not center in baler.	Use centering plugs. See your John Deere dealer.
	Overfilling ends of bale producing an hourglass shaped bale. Confirm net is to ends of bale in chamber. Net will move away from ends of bale after discharging bale.	Decrease windrow width, especially if equipped with MegaWide pickup (467 and 467S).
CoverEdge material not going over edge of bale.	Crop material blocking net wrap path.	Remove crop, check scraper, and cast gate filler adjustments. Reduce rpm. (See BALING SHORT, DRY, SLICK CROPS in Operating the Baler.)
	Belt tracking incorrect.	Be sure right-hand or left-hand end belts do not continuously contract guide washers. On pan, belts should be centered between washers.
	Not enough tension on net wrap.	Check tension. If needed, Increase tension by removing approximately two shims from between pulley halves. (See ADJUST NET WRAP STRETCH in Service—Net Wrap Section).

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Service—Baler

Detailed Service Information

Refer to the technical (repair) manual for detailed service information or see your John Deere dealer.

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Practice Safe Service Procedures

CAUTION: To help prevent personal injury caused by unexpected movement, be sure to service the machine on a level surface.

If machine is connected to a tractor, engage tractor parking brake and/or place transmission in "Park", shut off engine and remove key.

If machine is detached from tractor, block wheels to prevent movement.

Engage gate lock lever when working inside or around baler with an open gate. Failure to do so can result in serious personal injury or death.

Before servicing or adjusting baler:

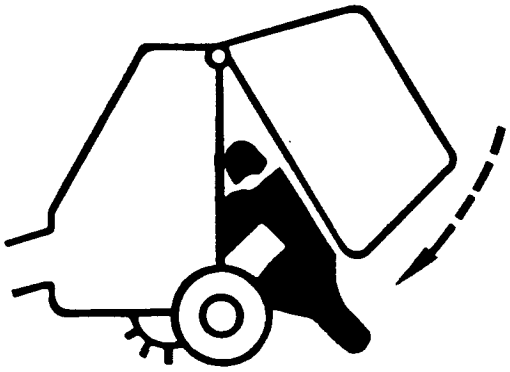
1. **Disengage all power.**
2. **Shut off tractor engine.**
3. **Wait until all moving parts have stopped.**
4. **Let all components cool.**

IMPORTANT: Disconnect monitor-controller wiring harnesses from baler when servicing electrical systems or when welding on baler. Over-voltage can damage the electronic controls.

While working inside or around the baler with an open gate, the gate lock lever (A) must be moved to locked position. Use this safety feature any time gate is open. Close gate anytime the baler must be left unattended.

If bale push bar is installed, be sure bystanders are clear and there is sufficient clearance behind baler when opening gate for service.

If gate is partially raised, push bar may remain in the home position held only by slight spring force. If arms are pushed backwards, they will spring upward slowly under spring force. When servicing machine with gate open, raise gate fully and lock the gate, or lock out push bar. (See LOCKING OUT BALE PUSH BAR in Operating the Baler section.)



TS698 –UN–21SEP89

E48329 –UN–07JUL00

A—Gate Lock Lever

AG,OUMX005,1520 –19–02AUG00–1/1

Fire Prevention

Keep foreign material (crop, chaff, twine, net wrap material, etc.) from building up on the machine near potentially hot areas, such as bearings and slip clutch. Remove this buildup as part of the regular service operations.

Avoid high pressure power-washing adjacent to the bearings to prevent damaging seals.

Check bearings regularly for early signs of failure, replace as necessary. Turn off power to baler and check for unusual noises, hot parts, smells of scorching, and discolored paint or metal. Check condition of bearings. (See FIRE PREVENTION in Lubrication and Maintenance section.)

If service operations require using a welder, cutting torch or grinder on the baler, these guidelines may prove useful in preventing a fire:

1. Park baler on pavement or bare ground.
2. Remove chaff to minimize exposure of flammable material to sparks; if chaff cannot be removed, soak it thoroughly with water before starting. Protect hoses and belts from exposure to sparks, arcs or flames.
3. Be sure a fully charged water-type fire extinguisher or other source of water is ready for immediate use.
4. Use an assistant to watch for fire while welding, cutting or grinding.
5. After welding, cutting or grinding is finished, wait long enough to allow parts to cool down before starting to bale. Verify that no sparks or slag have started a fire before leaving service area.

AG,OUO6017,1706 –19–09NOV99–1/1

Keep Service Area Clean

CAUTION: Understand service procedure before doing work. Keep area clean and dry

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.

TS218 –UN–23AUG88

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil or debris.

Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

1N4,610P,A1 –19–26MAR97–1/1

Service Tires Safely

TS952 –UN–12APR90

CAUTION: Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

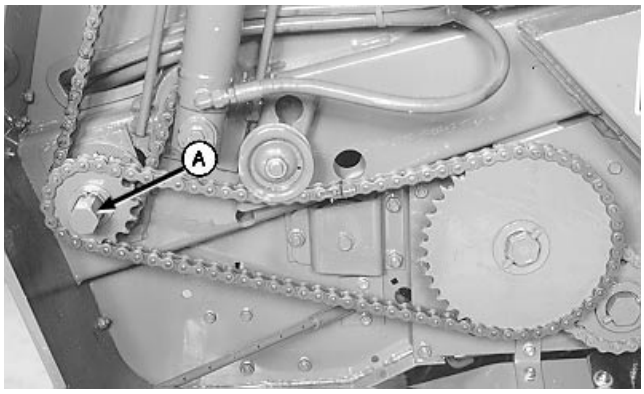
Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

EX,435P,B –19–14JUL92–1/1

Rotating Output Shaft By Hand



E39594 –UN–20NOV95

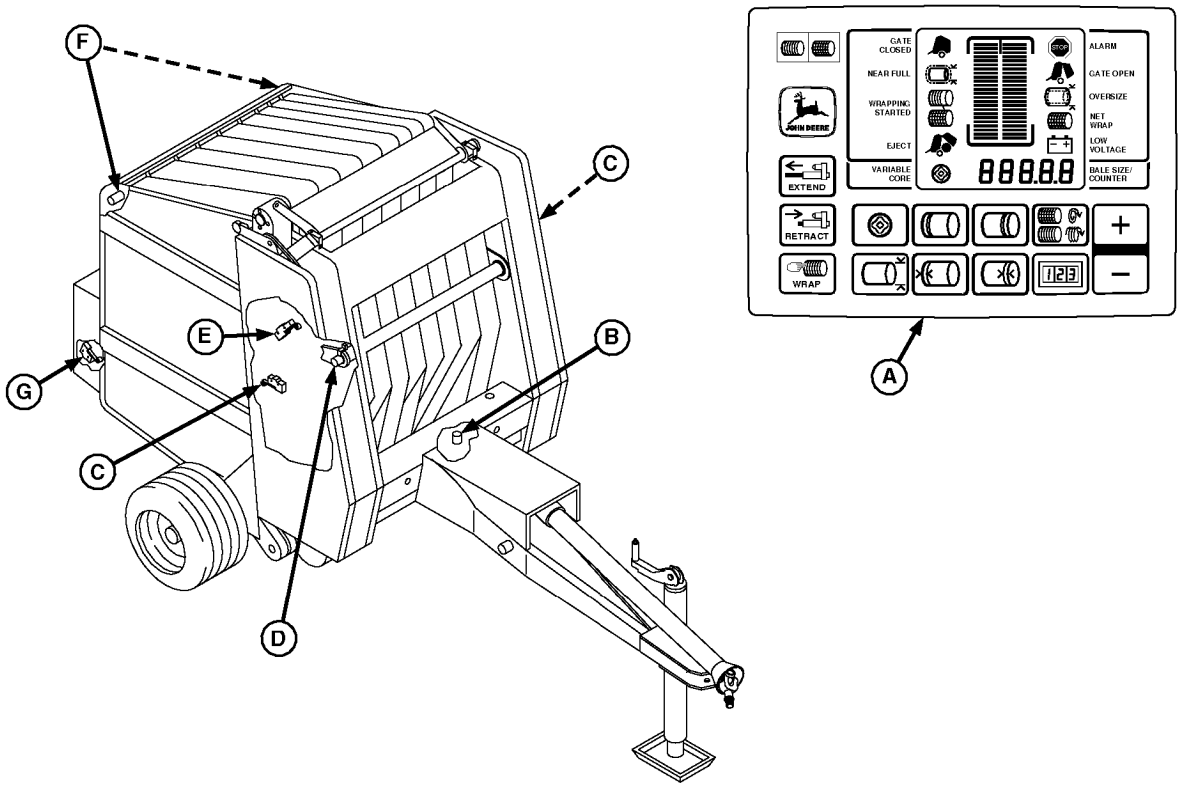
CAUTION: Never use any type of tool or wrench on shaft while tractor engine is running. Always remove tool from shaft as soon as you are finished using it.

An open-end wrench can be placed on the gear case output shaft (A) if it is necessary to rotate the shaft by hand.

A—Gear Case Output Shaft

EX,566J,B –19–12NOV96–1/1

BALETRAK *PLUS*® Component Locations



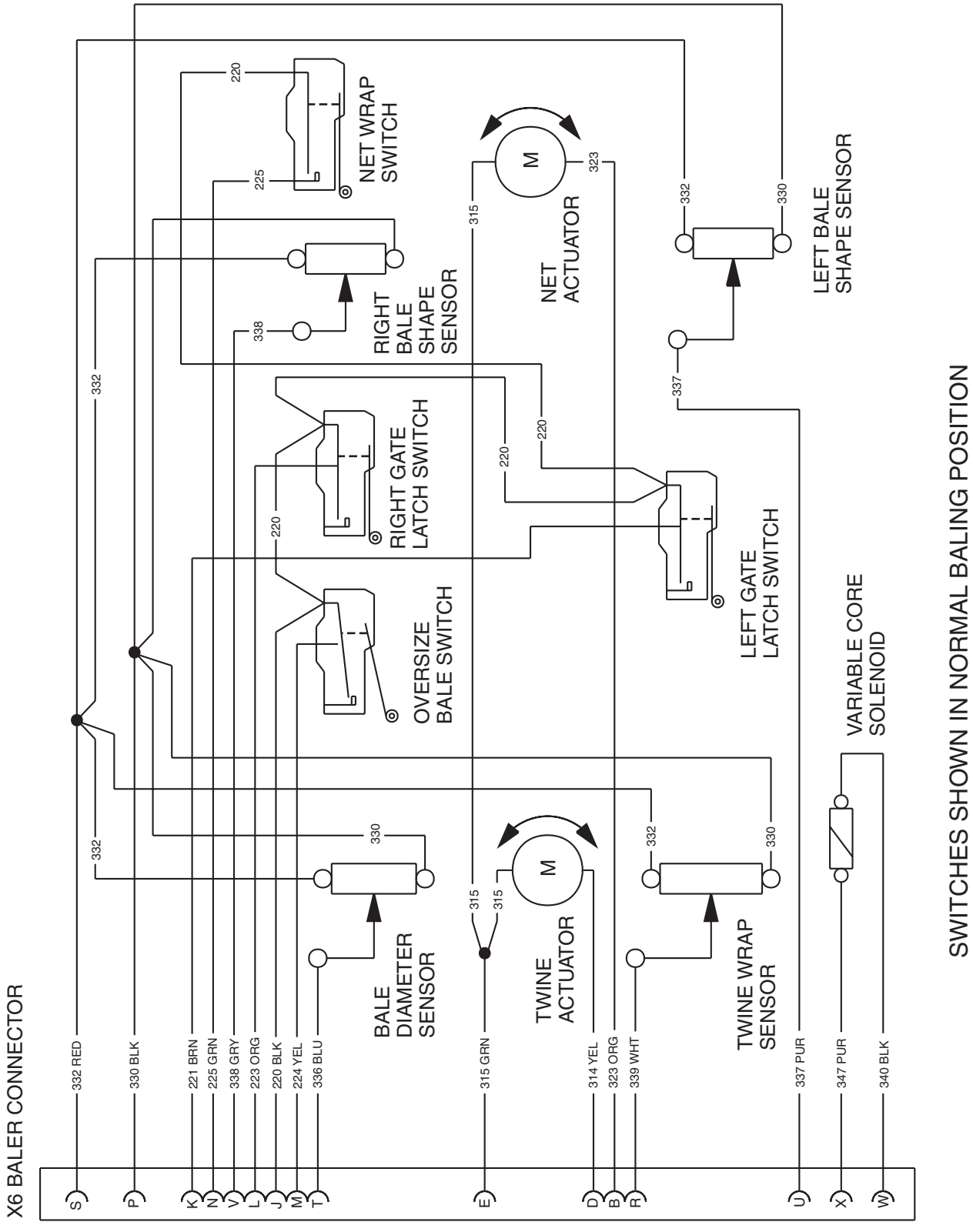
E47533 –UN–07JAN00

A—Monitor-Controller (located on tractor)
B—Twine Wrap Sensor
C—Gate Latch Switches
D—Bale Diameter Sensor
E—Oversize Bale Switch
F—Bale Shape Sensors
G—Net Wrap Switch (If Equipped)

BALETRAK PLUS is a registered trademark of Deere & Company

AG,OUO6017,1707 –19–09NOV99–1/1

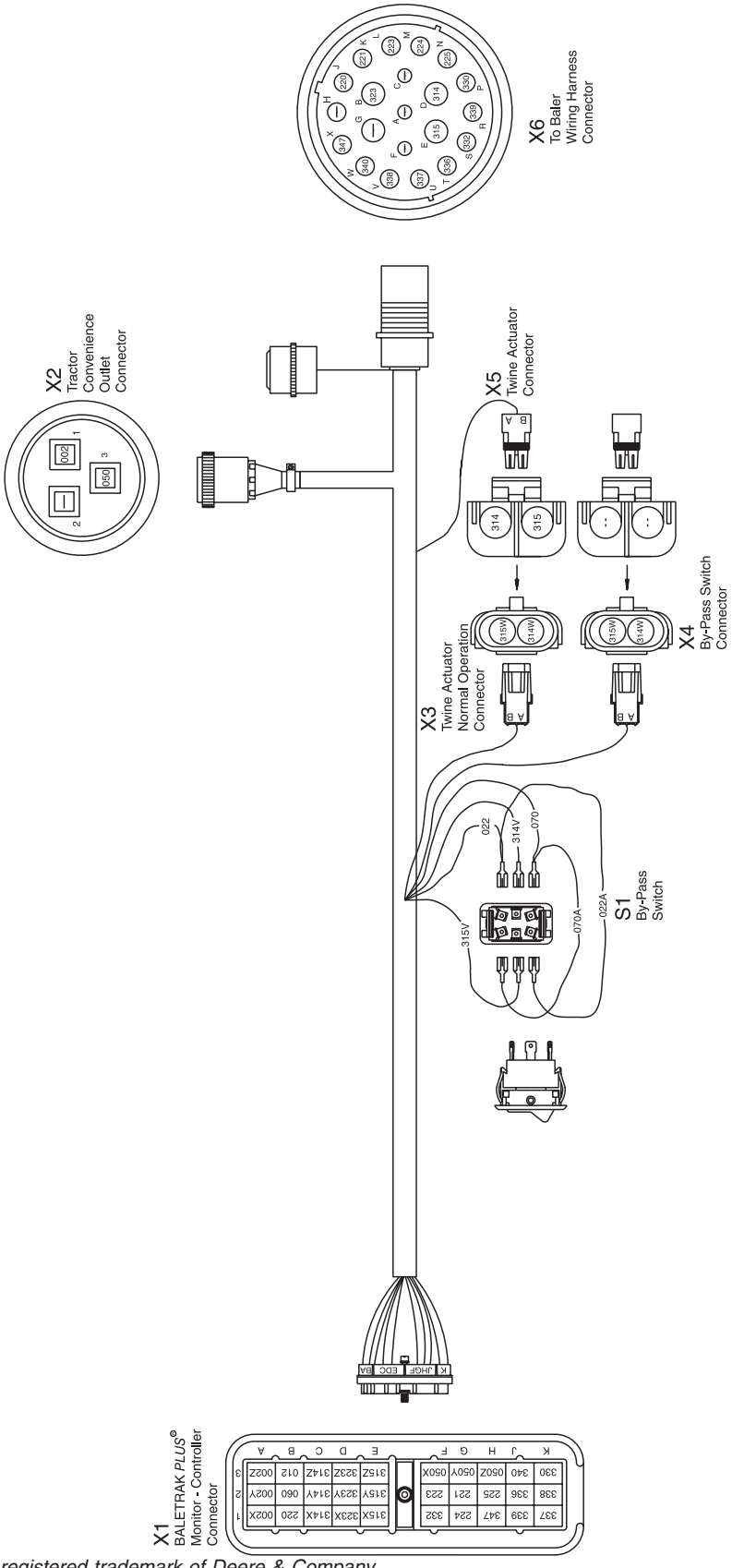
Wiring Diagram—BALETRAK® *PLUS* Control System



BALE-TRAK is a trademark of Deere & Company

AG,OUO6059,300 –19–09AUG00–1/1

Wiring Harness Diagram—BALETRAK *PLUS*® Monitor-Controller



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E51088 –19–17JAN02

AG,OUO6017,1708 –19–09NOV99–1/3

X1 BALETRAK *PLUS*® Monitor-Controller Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
1A	002X	Power	Red
1B	220	Ground	Black
1C	314X	Twine Actuator	Yellow
1D	323X	Net Actuator	Orange
1E	315X	Twine/Net Actuator	Green
1F	332	Sensor	Red
1G	224	Oversize Bale Switch	Yellow
1H	347	Variable Core	Purple
1J	339	Twine Arm Sensor	White
1K	337	Left Bale Shape Sensor	Purple
2A	002Y	Power	Red
2B	060	Ground	Black
2C	314Y	Twine Actuator	Yellow
2D	323Y	Net Actuator	Orange
2E	315Y	Twine/Net Actuator	Green
2F	223	Right Gate Latch Switch	Orange
2G	221	Left Gate Latch Switch	Brown
2H	225	Net Switch	Green
2J	336	Bale Diameter Sensor	Blue
2K	338	Right Bale Shape Sensor	Gray
3A	002Z	Power	Red
3B	012	Power	Red
3C	314Z	Twine Actuator	Yellow
3D	323Z	Net Actuator	Orange
3E	315Z	Twine/Net Actuator	Green
3F	050X	Ground	Black
3G	050Y	Ground	Black
3H	050Z	Ground	Black
3J	340	Ground	Black
3K	330	Ground	Black

X2 Tractor Convenience Outlet Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
1	002	Power	Red
2		Open	
3	050	Ground	Black

X3 Twine Actuator Normal Operation Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	314W	Twine Actuator	Yellow
B	315W	Twine/Net Actuator	Green

X4 By-Pass Switch Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	314W	Twine Actuator	Yellow
B	315W	Twine/Net Actuator	Green

X5 Twine Actuator Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	314	Twine Actuator	Yellow
B	315	Twine/Net Actuator	Green

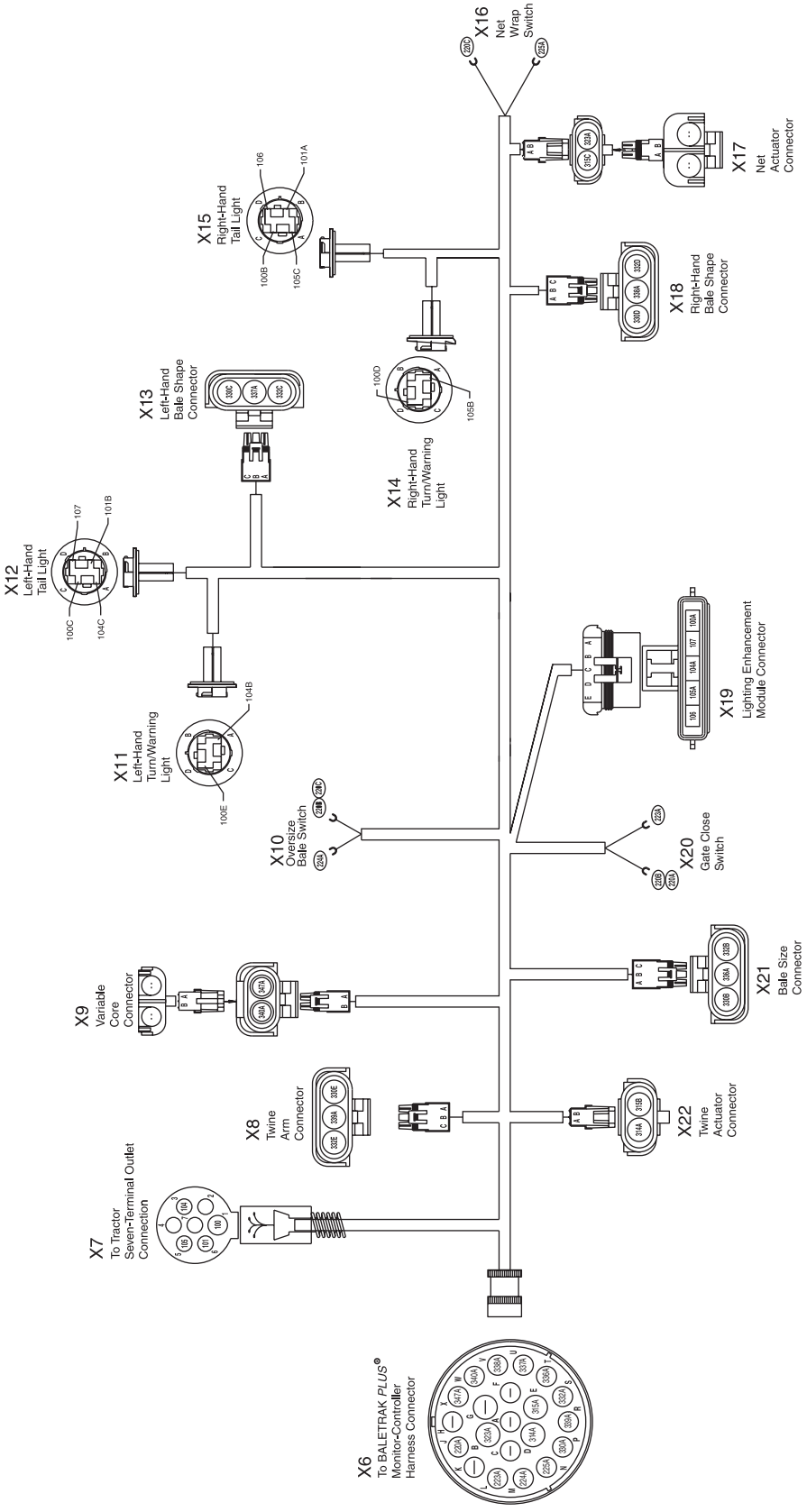
Continued on next page

X6 To Baler Wiring Harness Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A		Open	
B	323	Net Actuator	Orange
C		Open	
D	314	Twine Actuator	Yellow
E	315	Twine/Net Actuator	Green
F		Open	
G		Open	
H		Open	
J	220	Ground	Black
K	221	Left Gate Latch Switch	Brown
L	223	Right Gate Latch Switch	Orange
M	224	Oversize Bale Switch	Yellow
N	225	Net Switch	Green
P	330	Ground	Black
R	339	Twine Arm Sensor	White
S	332	Sensor	Red
T	336	Bale Diameter Sensor	Blue
U	337	Left Bale Shape Sensor	Purple
V	338	Right Bale Shape Sensor	Gray
W	340	Ground	Black
X	347	Variable Core	Purple

S1 ByPass Switch Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
—	315V	Twine/Net Actuator	Green
—	070A	Ground	Black
—	022A	Power	Red
—	070	Ground	Black
—	314V	Twine Actuator	Yellow
—	022	Ground	Black

AG,OUO6017,1708 –19–09NOV99–3/3

Wiring Harness Diagram—Baler



E51089 –19–26FEB02

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AG,OUMX005,1521 –19–02AUG00–1/4

X6 To BALETRAK *PLUS*® Monitor-Controller Harness Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A		Open	
B	323A	Net Actuator	Orange
C		Open	
D	314A	Twine Actuator	Yellow
E	315A	Twine/Net Actuator	Green
F		Open	
G		Open	
H		Open	
J	220A	Ground	Black
K	221A	Left Gate Latch Switch	Brown
L	223A	Right Gate Latch Switch	Orange
M	224A	Oversize Bale Switch	Yellow
N	225A	Net Switch	Green
P	330A	Ground	Black
R	339A	Twine Arm Sensor	White
S	332A	Sensor	Red
T	336A	Bale Size Sensor	Blue
U	337A	Left Bale Shape Sensor	Purple
V	338A	Right Bale Shape Sensor	Gray
W	340A	Ground	Black
X	347A	Power	Purple

X7 To Tractor Seven-Terminal Outlet Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
1	100	Ground	Black
2		Open	
3	104	LH Turn/Warning Light	Yellow
4		Open	
5	105	RH Turn/Warning Light	Green
6	101	Tail Lights	Brown
7		Open	

X8 Twine Arm Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	330E	Ground	Black
B	339A	Sensor	White
C	332E	Sensor	Red

X9 Variable Core Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	347A	Power	Purple
B	340A	Ground	Black

X10 Oversize Bale Switch Leads			
Terminal	**Circuit**	**Function**	**Wire Color**
—	224A	Power	Yellow
—	220B	Ground	Black

Continued on next page

AG,OUMX005,1521 –19–02AUG00–2/4

X11 Left-Hand Turn/Warning Light Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	104B	Power	Yellow
B		Open	
C		Open	
D	100E	Ground	Black

X12 Left-Hand Gate Latch Switch Leads			
Terminal	**Circuit**	**Function**	**Wire Color**
—	220D	Ground	Black
—	221A	Power	Brown

X13 Left-Hand Tail Light Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	104C	LH Turn/Warning Light	Yellow
B	101B	LH Tail Lamp	Brown
C	100C	Ground	Black
D	107	LH Flasher	Orange

X14 Left-Hand Bale Shape Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	332C	Sensor	Red
B	337A	Left Bale Shape Sensor	Purple
C	330C	Ground	Black

X15 Right-Hand Turn/Warning Light Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	105B	Power	Green
B		Open	
C		Open	
D	100D	Ground	Black

X16 Right-Hand Tail Light Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	105C	RH Turn/Warning Light	Green
B	101A	RH Tail Lamp	Brown
C	100B	Ground	Black
D	106	RH Flasher	Violet

X17 Net Wrap Switch Leads			
Terminal	**Circuit**	**Function**	**Wire Color**
—	220D	Ground	Black
—	225A	Power	Green

X18 Net Actuator Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	315C	Net Actuator	Green
B	323A	Net Actuator	Orange

X19 Right-Hand Bale Shape Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	330D	Ground	Black
B	338A	Right Bale Shape Sensor	Gray
C	332D	Sensor	Red

X20 Lighting Enhancement Module Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	100A	Ground	Black
B	107	Left-Hand Flasher	Orange
C	104A	Left-Hand Turn/Warning Light	Yellow
D	105A	Right-Hand Turn/Warning Light	Green
E	106	Right-Hand Flasher	Violet

X21 Right-Hand Gate Latch Switch Leads			
Terminal	**Circuit**	**Function**	**Wire Color**
—	220B	Ground	Black
—	223A	Power	Orange

X22 Bale Diameter Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	330B	Ground	Black
B	336A	Bale Diameter Sensor	Blue
C	332B	Sensor	Red

Continued on next page

X23 Twine Actuator Connector			
Terminal	**Circuit**	**Function**	**Wire Color**
A	314A	Twine Actuator	Yellow
B	315B	Twine Actuator	Green

AG,OUMX005,1521 –19–02AUG00–4/4

Replacing Monitor-Controller Fuse and Relays

1. Remove six Torx-head screws (A) to separate monitor-controller switch/display panel from circuit board base.

A—Torx-Head Screw (6 used)

E40963 –UN–20NOV96

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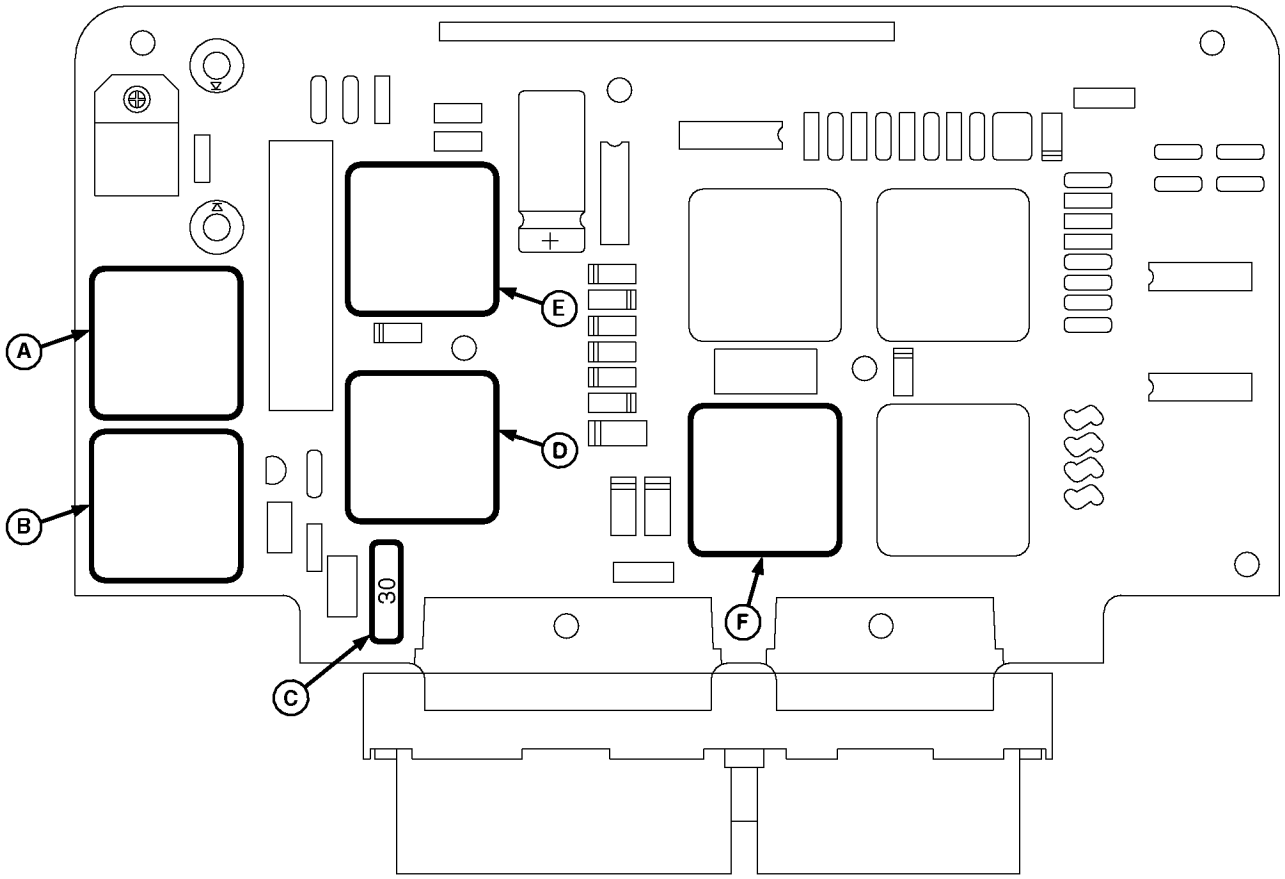
AG,OUMX005,1522 –19–02AUG00–1/2



E38451 –UN–02JUL96

Monitor-Controller Circuit Board Base

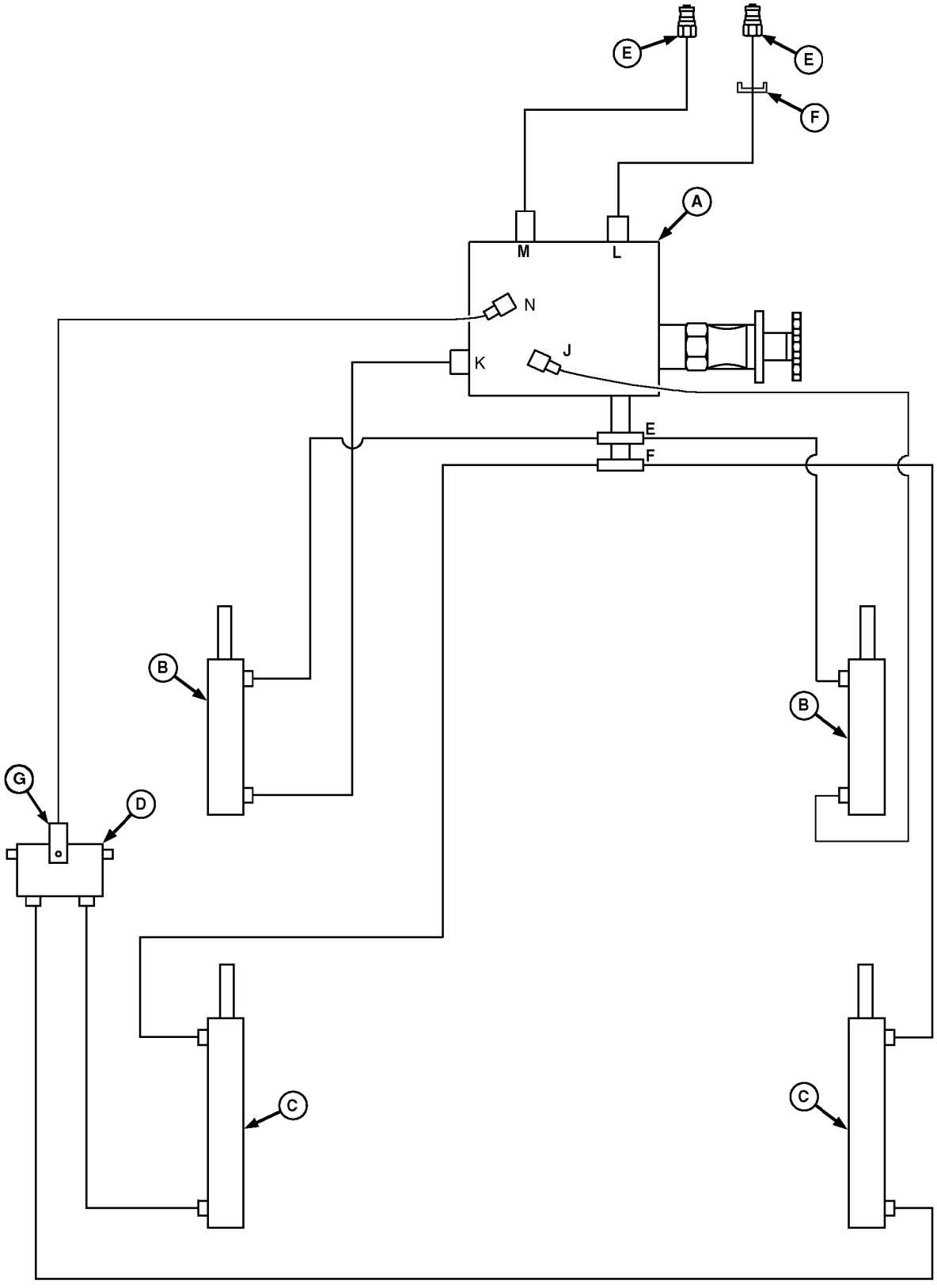
A—Relay, Extend (K4)
B—Relay, Battery + (K5)
C—Fuse, 30 Amp (Green), Actuator
D—Relay, Twine/Net (K2)
E—Relay, Retract (K3)
F—Relay, Variable Core (K6)

NOTE: A spare fuse is located on monitor-controller switch/display panel.

2. Replace fuse (C) or relays (A, B, or D—F) as necessary.

AG,OUMX005,1522 –19–02AUG00–2/2

Hydraulic System Diagram



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AG,OUO6059,259 –19–17JUL00–1/2

A—Tensioning Valve
B—Tension Cylinders
C—Gate Cylinders
D—Gate Lock Valve
E—To Tractor SCV Ports
F—Orifice (Stamped 358)
G—Flow Restrictor Valve (Optional)

John Deere 467, 467S, and 567 Balers have a hydraulic system that controls bale tension and operates the gate. This hydraulic system is powered by the tractor.

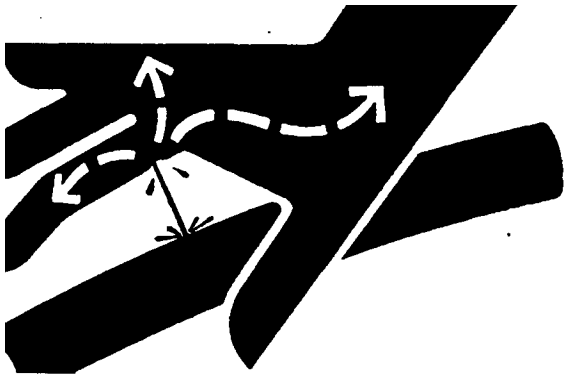
The hydraulic system uses four major components:

- Tensioning valve (A)—Used to direct oil flow, check flow, and limit hydraulic pressures.
- Tensioning *(double-acting)* cylinders (B)—Used to control bale tensioning.
- Gate *(double-acting)* cylinders (C)—Used to raise and lower the gate.
- Gate lock valve (D)—A two-position spool valve used to block flow of oil, both to and from the base ports of gate cylinders (C).
- Optional flow restrictor valve (G)—Used if baler is equipped with net wrap system and/or push bar.

NOTE: When gate lock is engaged, the tension arm can still be operated. This is because the tension arm is controlled by a separate set of hydraulic cylinders.

AG,OUO6059,259 –19–17JUL00–2/2

Installing Orifice in Tractors With Low Hydraulic Flow



X9811 –UN–23AUG88

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.

To avoid injury from escaping fluid under pressure, stop engine and relieve the pressure in the system before disconnecting or connecting hydraulic or other lines. Tighten all connections before applying pressure.

For tractors with hydraulic flow less than 25 L/min (6.5 gpm), the gate may close before the belt tension arm returns. This may result in belts being pinched between the lower gate roller and axle tube. To correct this situation, install orifice which is available through your John Deere dealer.

1. Raise shield.

2. Clean fittings and valve area before disconnecting hydraulic hoses.

Continued on next page

3. Tag and disconnect hydraulic hoses (A—E). Cap and plug all openings.

NOTE: Tensioning valve is removed for photographic purposes. If necessary, remove nuts from mounting cap screws (F) to raise valve to remove fitting and O-ring (H).

4. Remove tee fittings and O-rings (G and H).

IMPORTANT: Be sure orifice is installed flush with valve. It must not be tilted.

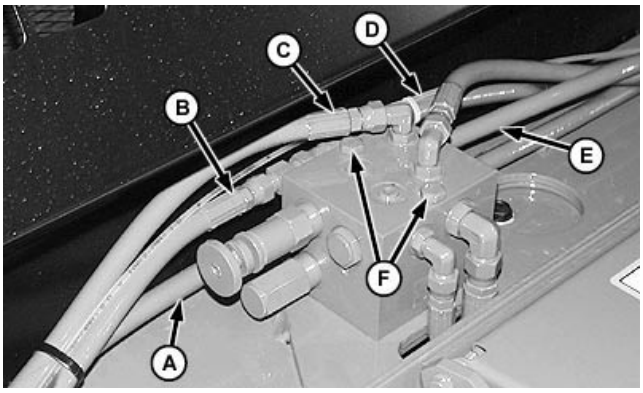
5. Install orifice in bottom port “F” of valve block with smooth face towards fitting (H).

6. Install O-rings and tee fittings.

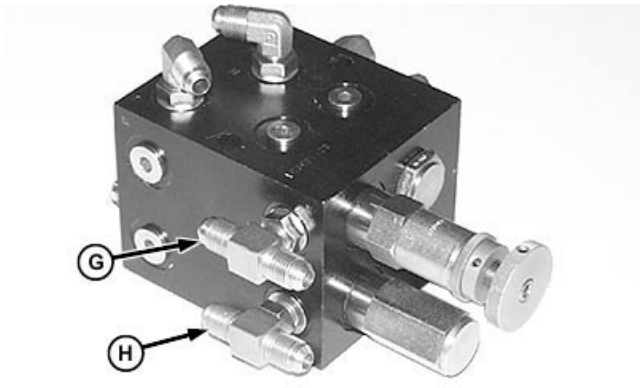
7. Connect all hydraulic hoses.

8. If removed, install and tighten nuts on cap screws in tensioning valve.

9. Lower shield.



E48766 –UN–02AUG00

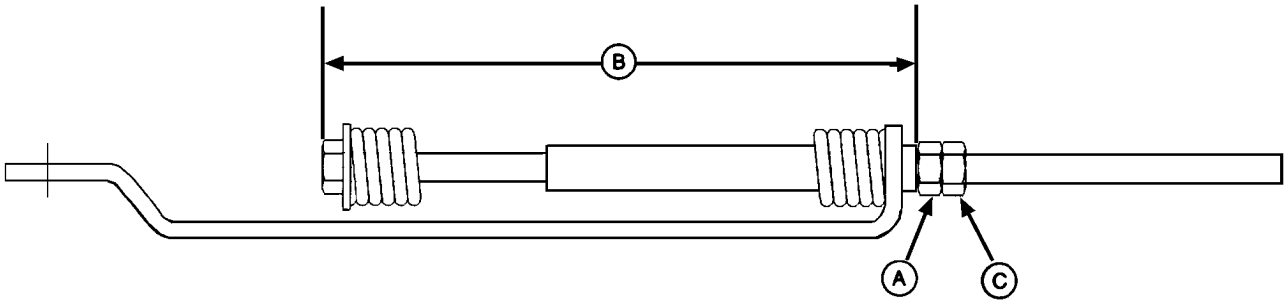


E48767 –UN–02AUG00

A—Hydraulic Hose, To RH Gate Cylinder Rod End
B—Hydraulic Hose, To RH Tension Cylinder Rod End
C—Hydraulic Hose, To RH Tension Cylinder Base End
D—Hydraulic Hose, To LH Tension Cylinder Rod End
E—Hydraulic Hose, To LH Gate Cylinder Rod End
F—Tensioning Valve Mounting Cap Screws
G—Tee Fitting and O-Ring (Valve Port “E”)
H—Tee Fitting and O-Ring (Valve Port “F”)

AG,OUMX005,1523 –19–02AUG00–2/2

Adjusting Initial Length of Pickup Drive Belt Idler Spring—Regular Pickup (467 and 567)



E39757 –UN–20FEB96

A—Nut **B—Distance** **C—Jam Nut**

IMPORTANT: If spring assembly has been removed, the initial length of spring must be adjusted before adjusting the belt idler.

1. Adjust nut (A) until distance (B) is within specifications.

Specification	
Drive Belt Idler Spring—Initial Length	215 mm (8-1/2 in.)

2. Tighten jam nut (C) against nut (A).
3. Install spring assembly on baler.
4. Adjust pickup drive belt idler. (See ADJUSTING PICKUP DRIVE BELT IDLER—REGULAR PICKUP [467 AND 567] in this section.)

AG,OUO6059,258 –19–17JUL00–1/1

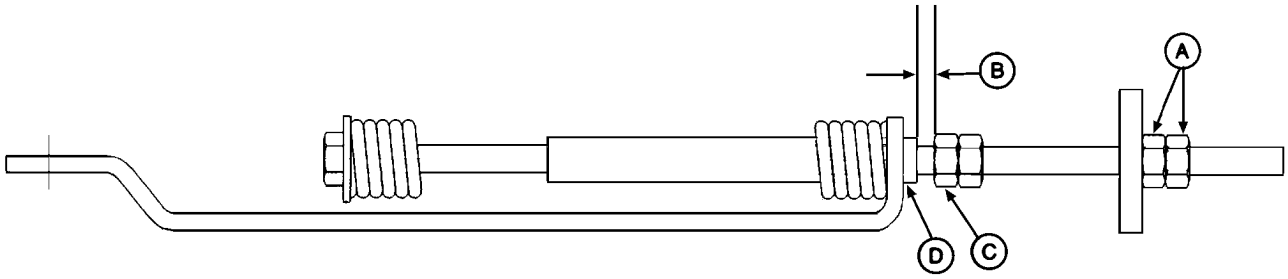
Adjusting Pickup Drive Belt Idler—Regular Pickup (467 and 567)

IMPORTANT: Belt tensioner is designed to protect pickup components. Overtightening reduces this protection. Check adjustment daily.

1. Before adjusting idler, perform the following:
   a. Start tractor engine and engage PTO.

Continued on next page

AG,OUO6059,257 –19–17JUL00–1/2



E39756 –UN–20FEB96

A—Jam Nuts **B—Clearance** **C—Nut** **D—Spacer**

b. Observe spacer (D) relative to nut (C).

- If total movement is more than specifications, there may be a burnt or thin spot in the belt or something in the sheave groove.

Specification

Spacer-to-Nut—Movement ..... 3 mm (1/8 in.)

- Inspect belt and replace if necessary.

2. Adjust pickup belt idler as follows:

a. Stop tractor engine and remove key.

b. Loosen jam nuts (A).

c. Adjust spring until clearance (B) between nut (C) and top of spacer (D) is within specifications.

Specification

Spacer-to-Nut—Clearance..... 4—6 mm (5/32—1/4 in.)

d. Tighten jam nuts (A).

AG,OUO6059,257 –19–17JUL00–2/2

Adjusting Pickup Drive Chains—MEGATOOTH™ Pickup

To ensure that all slack is removed from chains;

- Close gate and engage PTO a few seconds.
- Stop tractor engine and remove key.

1. Open right-hand side door.

MEGATOOTH is a trademark of Deere & Company

Continued on next page

AG,OUO6059,256 –19–17JUL00–1/3

2. Remove shield (A).

A—Shield

AG,OUO6059,256 –19–17JUL00–2/3

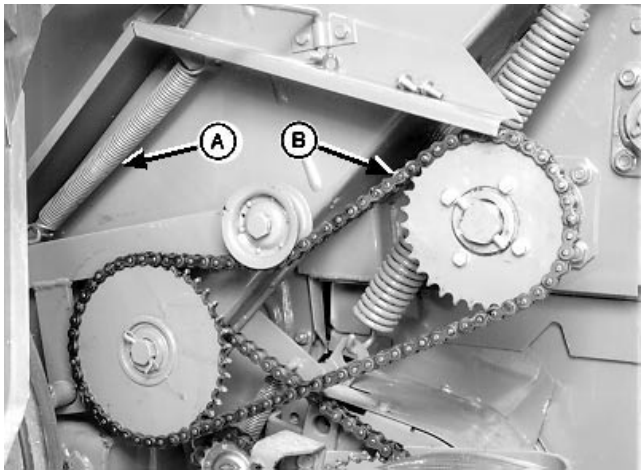
3. Measure distance between hooks on spring (A). Distance should be within specifications.

Specification	
Idler Spring Hook-to-Hook—Distance	270 mm (10-5/8 in.)

4. If distance is less than specified, remove one link from drive chain (B).

5. Install shield and close side door.

A—Idler Spring
B—Drive Chain



AG,OUO6059,256 –19–17JUL00–3/3

Adjusting Pickup Drive Chains—MegaWide Pickup

To ensure that all slack is removed from chains;

- Close gate and engage PTO a few seconds.
- Stop tractor engine and remove key.

1. Open side doors.

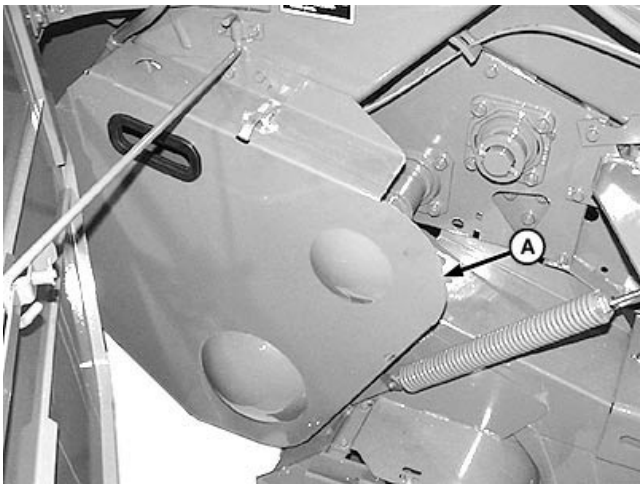
Continued on next page

AG,OUO6059,53 –19–05MAY00–1/5

2. **Right-Hand Side;**

   a. Remove shield (A).

   A—Shield



AG,OUO6059,53 –19–05MAY00–2/5

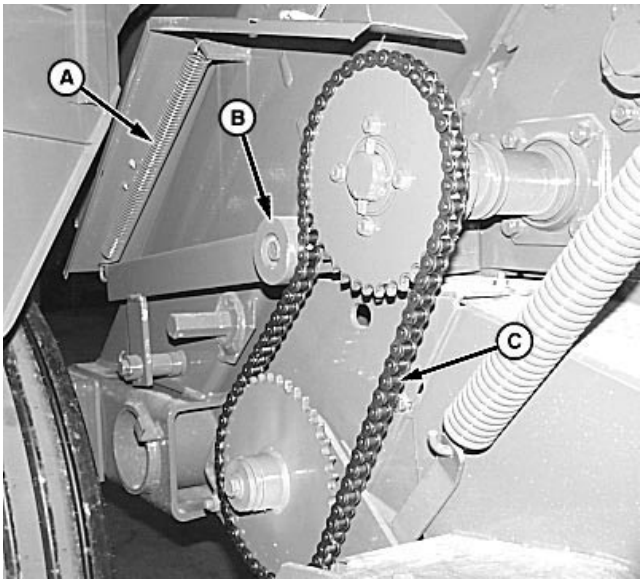
   b. Check distance between hooks on spring (A). If distance is less than specifications, flip/replace idler block (B) or remove one link from chain (C).

Specification

Main Drive Chain Idler Spring	
Hook-to-Hook—Distance	384 mm (15-1/8 in.)

   c. Install shield.

   A—Idler Spring
   B—Idler Block
   C—Main Drive Chain



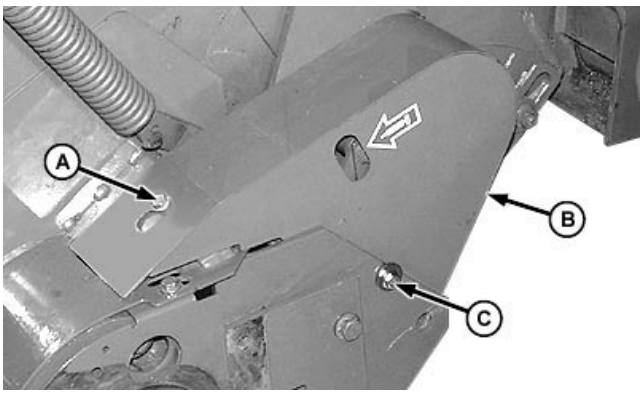
AG,OUO6059,53 –19–05MAY00–3/5

3. **Left-Hand Side;**

   a. Loosen cap screws (A and C).

   b. Lift up on rear of shield (B) and slide toward front of machine to remove.

   A—Cap Screw
   B—Shield
   C—Cap Screw



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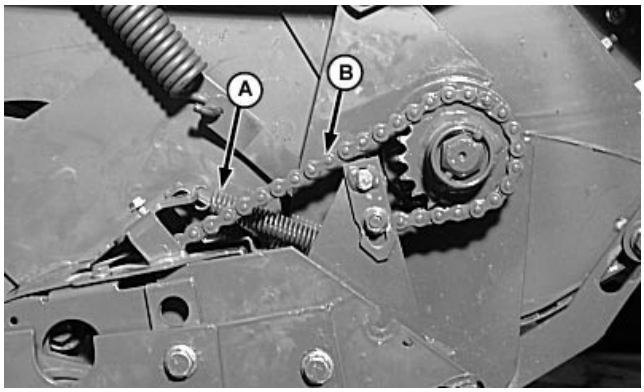
AG,OUO6059,53 –19–05MAY00–4/5

c. If bottom of chain is contacting top of chain, remove one link from chain (B).

d. Install shield and tighten cap screws.

4. Close side doors.

A—Idler Spring
B—Drive Chain



AG,OUO6059,53 –19–05MAY00–5/5

Adjusting Lower Drive Roll Chain

To ensure that all slack is removed from chains;

- Close gate and engage PTO a few seconds.
- Stop tractor engine and remove key.

1. Open left-hand side door.

Continued on next page

AG,OUO6059,225 –19–11JUL00–1/2

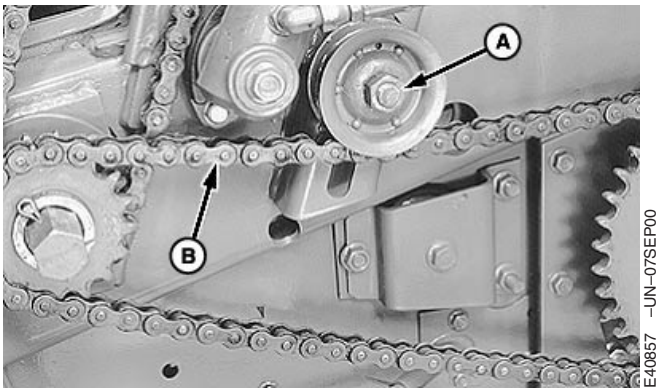
2. Loosen idler sheave nut (A).

3. Adjust idler:

   - **467 and 567;** Push idler DOWN against chain (B) to specifications.
   - **467S;** Push idler UP against chain (B) to specifications.

Specification

Idler-to-Chain—Force ..... 22—44 N (5—10 lb force)

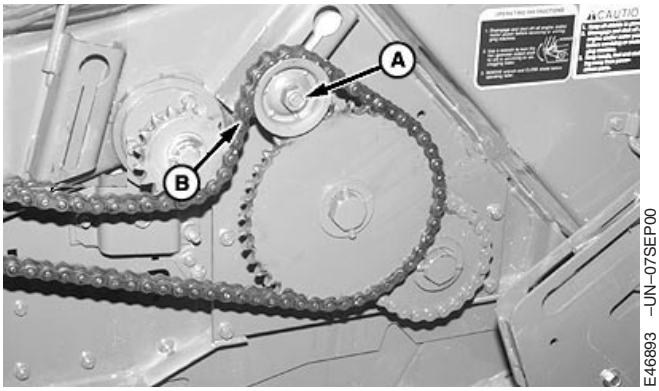


467 and 567

4. Tighten idler nut (A) to specifications.

Specification

Idler Nut—Torque ..... 163 N•m (120 lb-ft)



467S

5. Close left-hand side door.

A—Idler Sheave Nut
B—Chain

AG,OUO6059,225 –19–11JUL00–2/2

Adjusting Upper Drive Roll Chain

Open left-hand side door.

Continued on next page

AG,OUMX005,1524 –19–03AUG00–1/2

If spring dimension (A) from coil end to coil end is not within specifications perform the following:

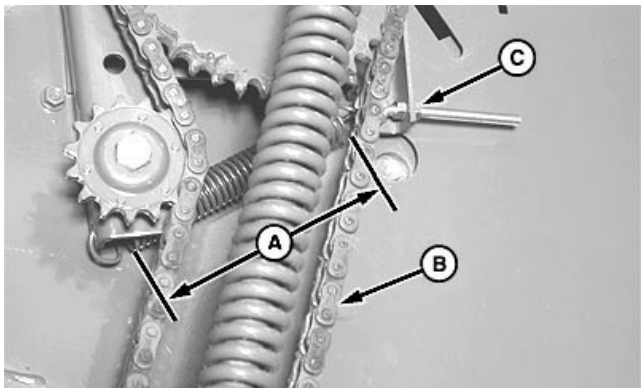
Specification	
Upper Drive Roll Chain Spring—Distance	170—220 mm (6-3/4—8-3/4 in.)

1. Loosen nut (C) to release chain tension.
2. Separate chain (B) at master link.
   - If dimension (A) is less than specified, remove two chain links.

NOTE: Do no install chain half links.

   - If dimension (A) is more than specified, add two chain links.

3. Assemble master link in chain (B).
4. Tighten nut (C) against angle.
5. Close left-hand side door.



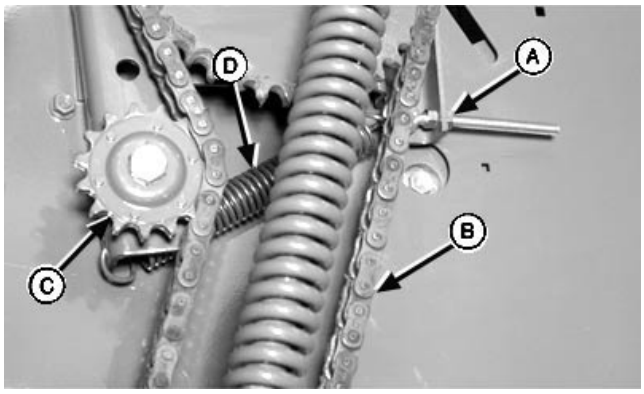
E45784 –UN–07SEP00

A—Dimension
B—Chain
C—Nut

AG,OUMX005,1524 –19–03AUG00–2/2

Servicing Upper Chain and Idler

1. Loosen nut (A) to release spring tension.
2. Service chain (B), idler (C), and spring (D).
3. Assemble in reverse order of disassembly using the following special instructions:
   - Adjust upper drive roll chain. (See ADJUSTING UPPER DRIVE ROLL CHAIN in this section.)



E45785 –UN–09DEC98

A—Nut
B—Chain
C—Idler
D—Spring

AG,OUO6017,1718 –19–09NOV99–1/1

Rotating or Replacing Upper Drive Roll Chain Guides

Rotate Guides

1. When worn grooves in guides (A) exceed specifications, loosen nuts (B).

Specification

Chain Guides—Worn Grooves ..... 6—7 mm (1/4—5/16 in.)

2. Rotate guides (A) and tighten nuts (B) to specifications.

Specification

Mounting Nuts—Torque ..... 95 N•m (70 lb-ft)

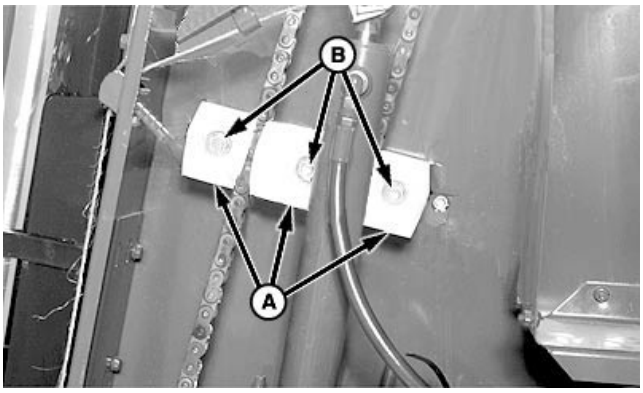
Make sure guides do not twist out of position when tightening mounting nuts.

Replace Guides

1. Remove nut(s) (B).
2. Rotate guide(s) (A) away from chain.
3. Pull guide(s) straight out and remove.
4. Install new in reverse order of removal using the following special instructions:
   - Tighten nut(s) (B) to specifications.

Specification

Mounting Nut—Torque ..... 95 N•m (70 lb-ft)



E45786 –UN–08SEP00

A—Guides
B—Nuts

AG,OUMX005,1525 –19–03AUG00–1/1

Rotating or Replacing Upper Drive Roll Chain Idler Bushing

Rotate Bushing

1. When worn grooves in bushing (A) exceeds specifications, remove cap screw (B).

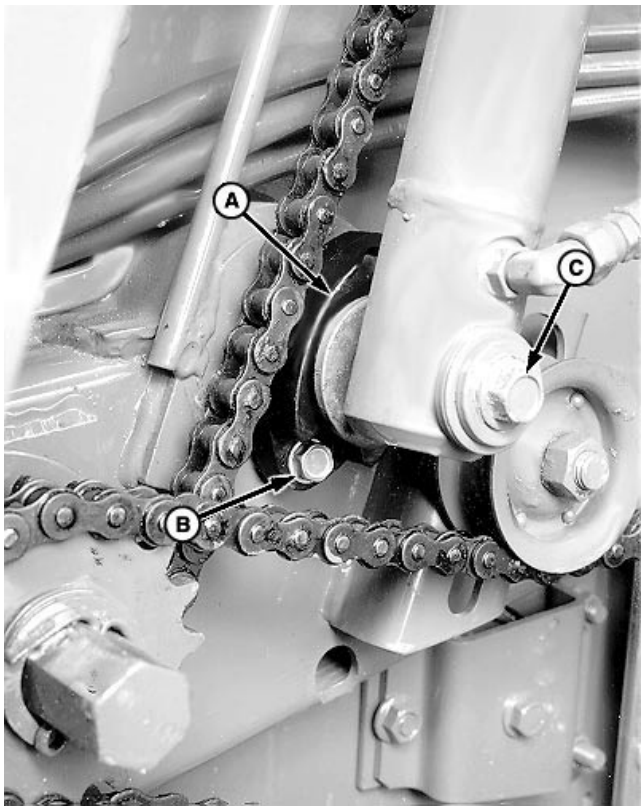
Specification	
Bushing—Worn Grooves	6—7 mm (1/4—5/16 in.)

2. Rotate bushing (A) and install cap screw (B).

Replace Bushing

1. Remove cap screw and washer (C).
2. Remove tension cylinder and washer from pin.
3. Remove cap screw (B) and bushing (A).
4. Install new bushing. Fasten with cap screw (B).
5. Install washer and cylinder onto pin.
6. Install cap screw and washer (C). Tighten to specifications.

Specification	
Tension Cylinder-to-Force—Torque	140 N•m (105 lb-ft)



E40602 –UN–08SEP00

A—Bushing
B—Cap Screw
C—Cap Screw and Washer

AG,OUMX005,1528 –19–03AUG00–1/1

Adjusting Main PTO Driveline Slip Clutch

IMPORTANT: If distance between rear plate and tab on pressure plate is not within specifications, slip clutch will not slip, causing damage to drive components or may slip too easily.

Failure to follow the order of the following steps may damage the clutch.

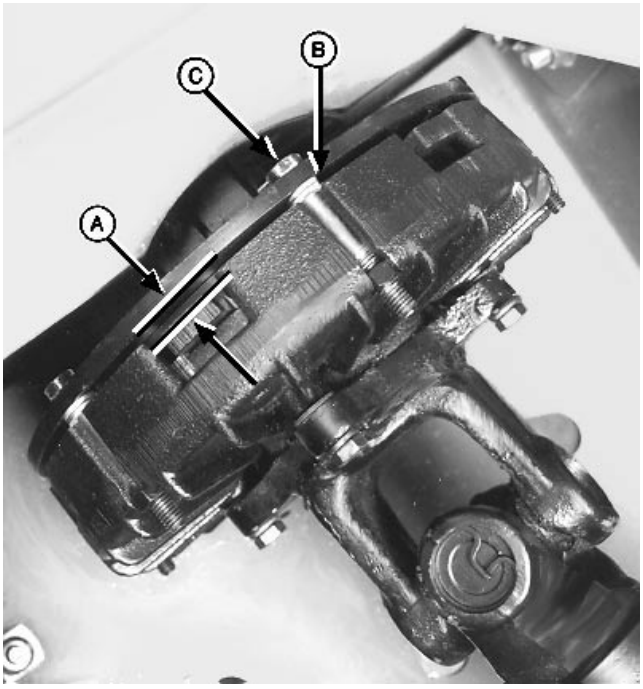
NOTE: Clutch assembly can be adjusted while on machine.

1. Stop tractor engine.
2. Measure distance (A).

Specification	
Rear Plate-to-Tab on Pressure Plate—Distance	4.7—7.1 mm (0.185—0.280 in.)

NOTE: If distance (A) is less than specification, go to step 4.

3. If distance (A) exceeds specification, perform the following special instructions:
   a. Remove one cap screw (C) from clutch.
   b. Remove one washer (B) between rear plate and clutch housing.
   c. Install washer (B) between head of cap screw (C) and rear plate.
   d. Tighten cap screw.
   e. Repeat steps a—d for remaining five cap screws.
4. If distance (A) is less than specification, perform the following special instructions:
   a. Remove one cap screw (C) from clutch.
   b. Remove one washer (B) between head of cap screw (C) and rear plate.



E39742 –UN–06MAR96

A—Distance
B—Washer
C—Cap Screw

Continued on next page

c. Install washer (B) between rear plate and clutch housing.

d. Tighten cap screw.

e. Repeat steps a—d for remaining five cap screws.

5. Measure distance (A). If distance is still not within specification, and there are no washers between rear plate and housing, replace clutch friction disks. (See your John Deere dealer.)

AG,OUMX005,1527 –19–03AUG00–2/2

Slipping Main PTO Driveline Slip Clutch

CAUTION: Make sure gate is locked. If gate is not locked while performing this procedure, the gate could close suddenly causing injury or death.

TS698 –UN–21SEP89

1. Raise gate using tractor hydraulics.
2. Turn off tractor engine and remove key.
3. Lock gate.
4. Disconnect PTO driveline from tractor.

Continued on next page

AG,OUMX005,1526 –19–03AUG00–1/2

IMPORTANT: Loosen slip clutch bolts evenly. Failure to do so will cause clutch to fail.

If baler is operated with a seized-up clutch, damage to drive train may result.

NOTE: Do not loosen cap screws more than three turns.

5. Loosen six slip clutch cap screws (A) evenly, one to two turns at a time.

6. Rotate clutch by hand and check clearance (B) between cap screw heads and frame of baler. If necessary, tighten cap screws evenly until there is no contact between cap screws and baler frame.

CAUTION: Never use any type of tool or wrench on shaft while tractor engine is running. Always remove tool from shaft immediately after use.

7. Put a 1-1/4 in. socket (C) and wrench with long handle on output shaft of gear case. Extend handle, if necessary, to contact baler axle or ground to keep wrench from rotating as shown.

8. Insert bar (D) between yoke and U-joint as shown.

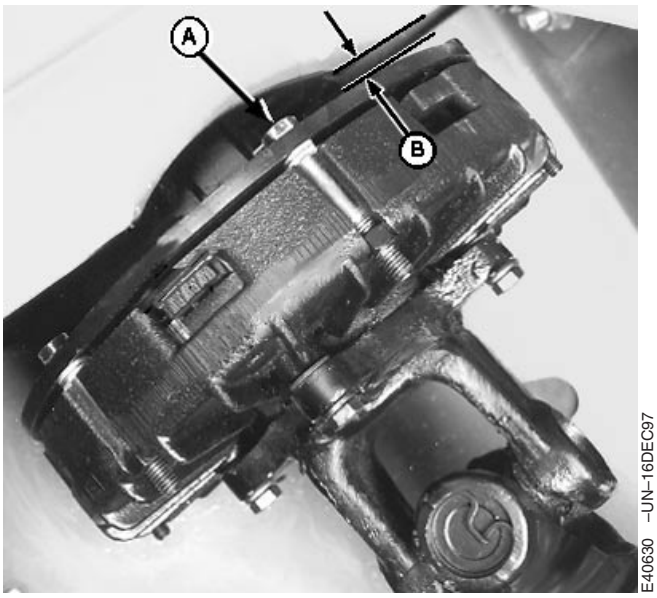
9. Slip the clutch.

10. Remove socket (C) and bar (D).

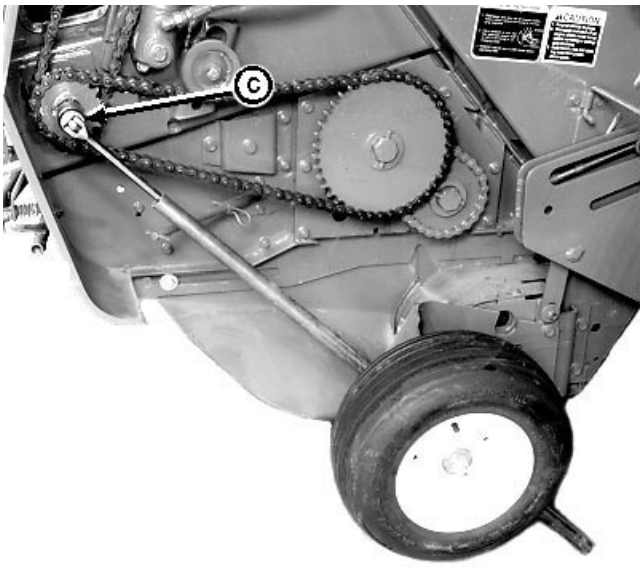
11. Adjust slip clutch. (See ADJUSTING MAIN PTO DRIVELINE SLIP CLUTCH in this section.)

12. Unlock and lower gate.

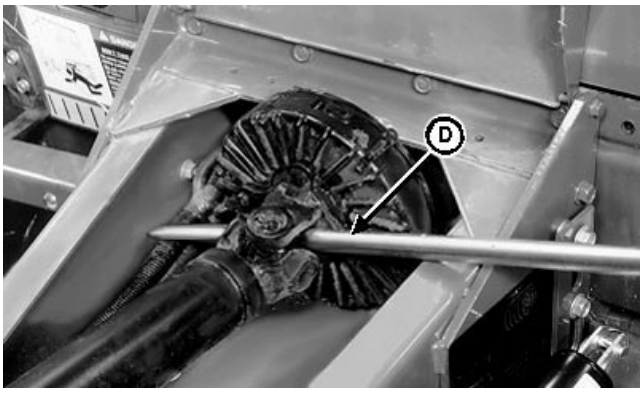
A—Cap Screw (6 used)
B—Clearance
C—Socket
D—Bar



E40630 –UN–16DEC97



E40635 –UN–16DEC97



E41718 –UN–16DEC97

AG,OUMX005,1526 –19–03AUG00–2/2

Checking Pickup Slip Clutch Torque (MEGATOOTH™ or MegaWide)

NOTE: Excessive pickup slip clutch slipping can be caused by improper pickup height, gauge wheel, or float spring adjustments.

A new clutch should slip within specifications when slipped at the gear case output hex shaft. As the clutch wears, it will gradually transmit less power due to slipping, and feeding performance may be unsatisfactory.

Specification	
New Clutch—Slip	260—340 N•m (190—250 lb-ft)

If a used clutch slips below the following specifications, replace outer housing and ratchets with springs or replace complete slip clutch.

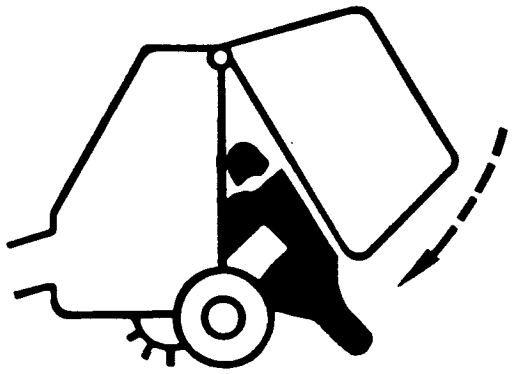
Specification	
Used Clutch—Slip (Maximum)	203 N•m (150 lb-ft)

MEGATOOTH is a trademark of Deere & Company

AG,OUO6059,54 –19–05MAY00–1/5

CAUTION: Make sure gate is locked. If gate is raised and not locked while performing this procedure, the gate could close suddenly causing injury or death.

IMPORTANT: If slip clutch does not slip at 340 N•m (250 lb-ft), clutch is not working correctly. Replace slip clutch to avoid possible damage to pickup.



TS698 –UN–21SEP89

To check slip clutch torque:

1. Raise gate fully and lock gate.
2. To reduce torque reading variations, tighten lower drive roll chain. (See ADJUSTING LOWER DRIVE ROLL CHAIN in this section.)
3. Raise pickup.
4. Disconnect PTO from tractor.

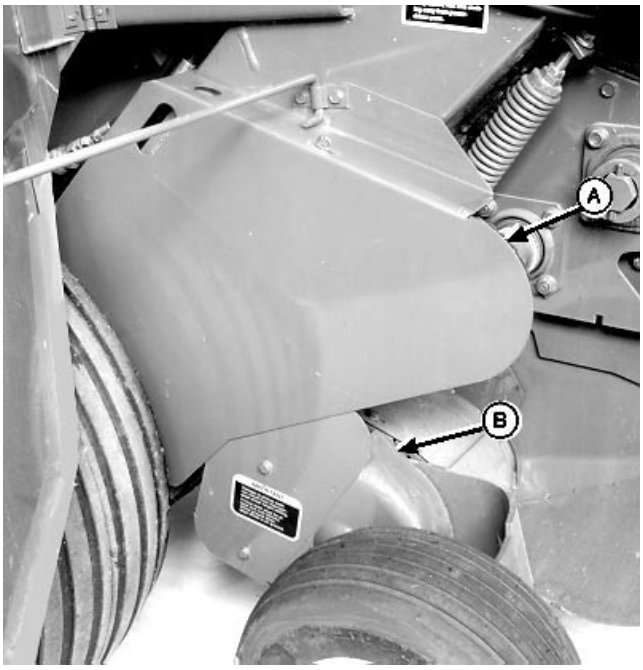
Continued on next page

AG,OUO6059,54 –19–05MAY00–2/5

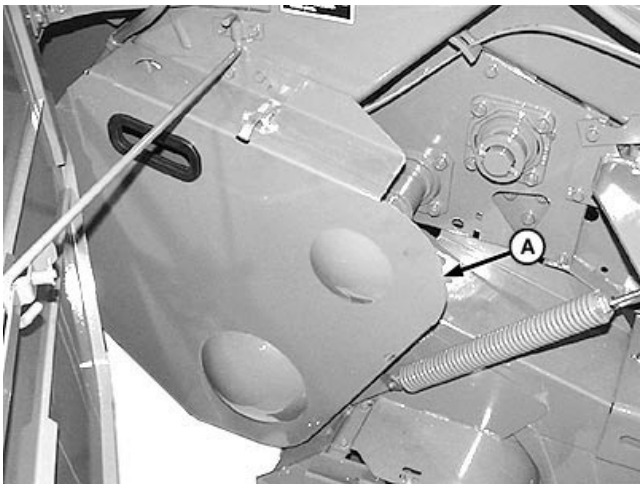
5. MEGATOOTH™ Pickup; Remove right-hand shields (A and B).

   MegaWide Pickup; Remove right-hand shield (A).

   A—Right-Hand Shield
   B—Shield



MEGATOOTH™ Pickup



MegaWide Pickup

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AG,OUO6059,54 –19–05MAY00–3/5

6. MEGATOOTH Pickup; Remove quick-lock pin (A) and washers from reel shaft.

   MegaWide Pickup; Remove cap screw (A) and washers from auger/rotor shaft assembly.

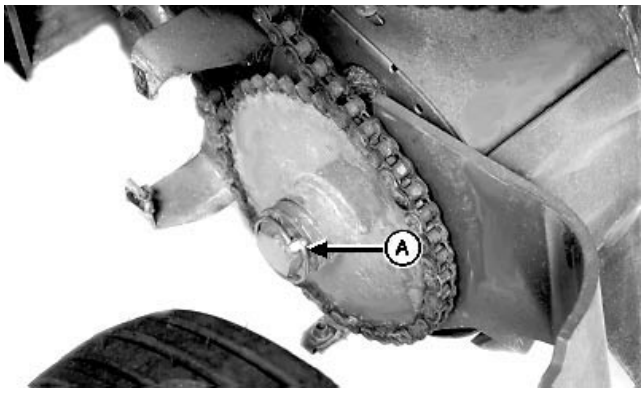
CAUTION: Use at least a 1 in. drive breaker bar or weld a heavy 1-1/4 in. socket to a 10 x 76 x 914 mm bar to hold shaft in place. Smaller breaker bar or wrench will break or bend.

7. Install a tool on reel or auger/rotor shaft to prevent the shaft from rotating counterclockwise.

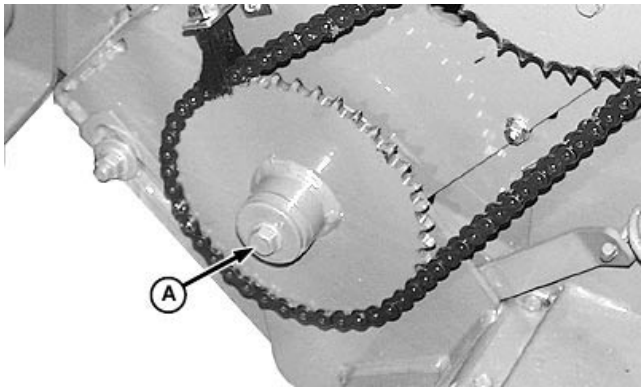
8. To avoid chain from jumping the sprocket while trying to slip the clutch:

   - Tighten the chain.
   - Make sure idler arm pivots freely and is spring loaded.
   - Add alignment marks (or tape) on the clutch sprocket and on the hex shaft going through the clutch. These "marks" will determine whether the clutch slipped or the chain jumped during each slip test.

A—Quick-Lock/Cap Screw



MEGATOOTH Pickup—Reel Shaft



MegaWide Pickup—Auger/Rotor Shaft

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AG,OUO6059,54 –19–05MAY00–4/5

NOTE: Rotate output shaft and slip clutch a minimum of four ratchets before recording measurements.

9. To identify clutch specifications:

   - Set click-type torque wrench to 260 N•m (190 lb-ft)
   - Install torque wrench (A), with extension, on hex output shaft at left-hand side of baler.
   - Turn wrench clockwise. Wrench should click before clutch slips. Repeat procedure three times.
   - Set torque wrench to 340 N•m (250 lb-ft)
   - Turn wrench clockwise. Clutch should slip before wrench clicks. Repeat procedure three times.

10. If clutch slips below the following specifications, replace outer housing and ratchets with springs or replace complete clutch.

Specification

Pickup Clutch—Slip (Maximum)..... 203 N•m (150 lb-ft)

CAUTION: Never use any type of tool or wrench on shaft(s) while tractor engine is operating. Always remove tool(s) from shaft as soon as procedure is finished.

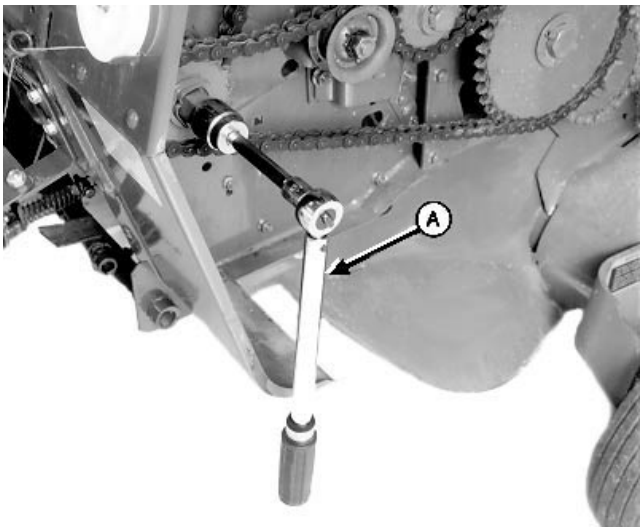
11. Remove tools from shafts.

NOTE: MEGATOOTH Pickup; Install washer with hex bore toward quick-lock pin.

12. Install washers and quick-lock pin or cap screw.

13. Install right-hand shields.

14. Unlock and close gate.



A—Torque Wrench

AG,OUO6059,54 –19–05MAY00–5/5

Checking Belt Tracking

IMPORTANT: If belts are new and have not been used, add oil dry or baby powder to simulate crop dust or the belts may not track properly on the rolls.

1. Remove any wrappage or buildup on rolls.
2. Determine if gate closes evenly using the following instructions:
   a. Open gate using tractor hydraulics.
   b. Stop tractor engine.
   c. Move tractor SCV lever to float position to allow gate to close freely.
   d. If both sides of gate contact main frame at the bottom, proceed to Step 3.
   e. If one side makes contact but the other side has a gap between gate and frame, see your John Deere dealer for proper procedure to straighten the gate.
3. Park baler on a level surface. With baler empty and gate closed, engage PTO and run at slow speed. Be sure gate is fully closed, and pressure gauge is reading 10:00 or higher. Check the tracking of the belts.

NOTE: If adjusting is necessary, raise gate with tractor selector control valve (SCV) until tension arm rotates, releasing belt tension. Lock gate.

4. Shut off tractor engine. Adjust rolls, if necessary. (See ADJUSTING BELT TRACKING in this section.)

OUO6059,000003F –19–05SEP00–1/1

Adjusting Belt Tracking

IMPORTANT: Check belt tracking before making any belt tracking adjustments.

If belts are new and have not been used, add oil dry or baby powder to simulate crop dust and allow belts to track freely.

NOTE: Check tracking with tractor at lowest RPM. Hold tractor hydraulic lever in gate closing position to apply tension to belts while checking.

1. If adjustment is needed, raise tension arm fully before adjusting rolls.

   Light contact with belt guides is acceptable, but belts should not curl against guide straps.

   Use small movements of No. 8 roll in slot. Let baler run at least 30—40 seconds to observe tracking between adjustments.

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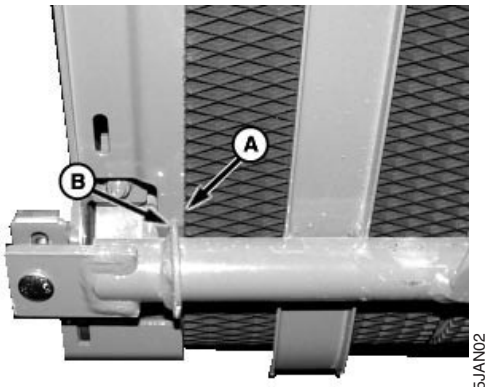
AG,OUO6059,161 –19–22JUN00–1/6

2. Check tracking of outside belts (A) relative to guide washers (B). **There must be clearance between outer edge of belt and guide washer on both sides of baler.**Some occasional contact between belt and washer is allowable, but continuous contact is not allowable.

A—Outside Belt
B—Guide Washer



E51208 –UN–25JAN02

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AG,OUO6059,161 –19–22JUN00–2/6

3. If belts are not centered at lower belt guide (A), make the following adjustments:

   • If belts track to the left:

   a. Loosen cap screw (B) at right side.

   b. Raise RIGHT end of lower rear gate roll.

   c. Tighten cap screw (B).

   • If belts track to the right:

   a. Loosen cap screw (B) at right side.

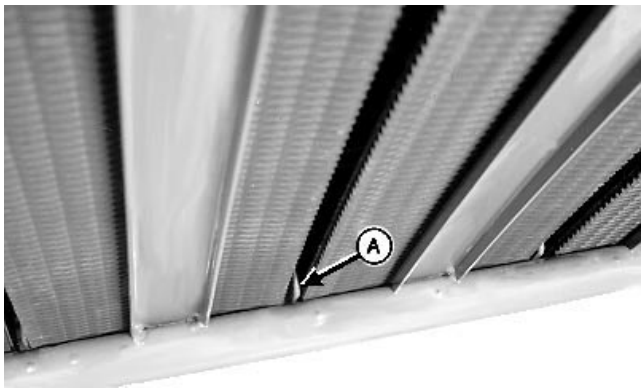
   b. Lower RIGHT end of lower rear gate roll.

   c. Tighten cap screw (B).

NOTE: After adjustment, be sure neither belt contacts guide washers continuously as described previously.

Light contact with belt guides is acceptable, but belts should not curl against guide straps.

A—Lower Belt Guide
B—Cap Screw



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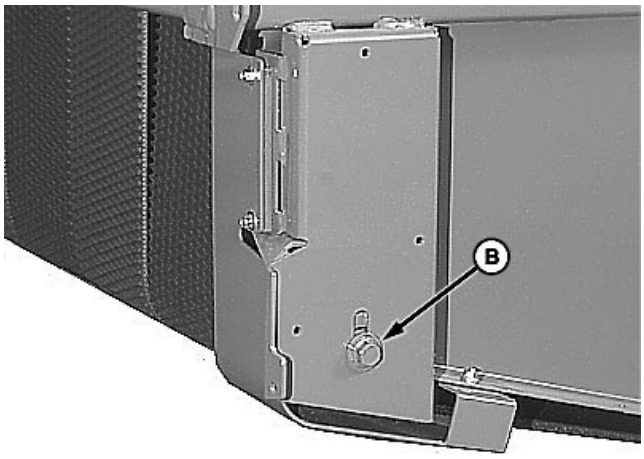

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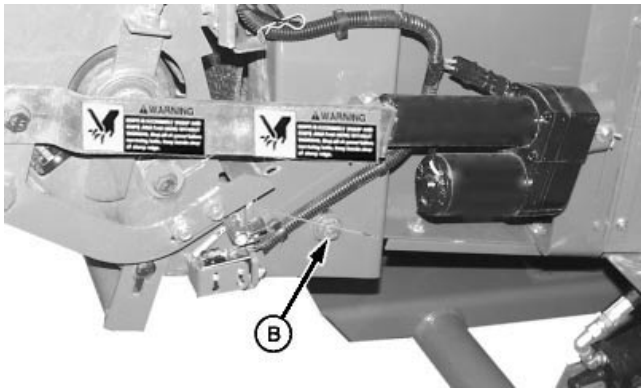

E48252 –UN–08JAN02

With CoverEdge™ Net Wrap

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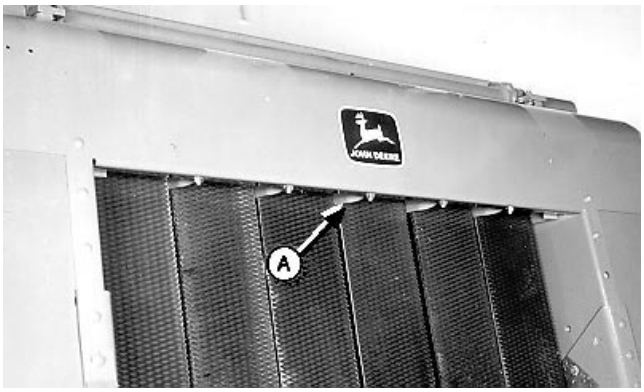
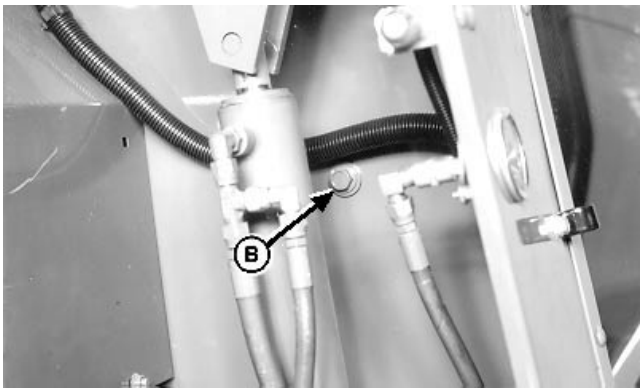
AG,OUO6059,161 –19–22JUN00–3/6



A—Front Belt Guide



B—Front Idler Roll

4. If belts are not centered at the upper front belt guide (A), make the following adjustments:

   • If belts track to the right:

   a. Loosen cap screw (B) at right-hand side.

   b. Raise RIGHT end of front idler roll.

   c. Tighten cap screw (B).

   OR

   a. Loosen cap screw at left-hand side.

   b. Lower LEFT end of front idler roll.

   c. Tighten cap screw.

   • If belts track to the left:

   a. Loosen cap screw (B) at left-hand side.

   b. Raise LEFT end of front idler roll.

   c. Tighten cap screw.

   OR

   a. Loosen cap screw at right-hand side.

   b. Lower RIGHT end of front idler roll.

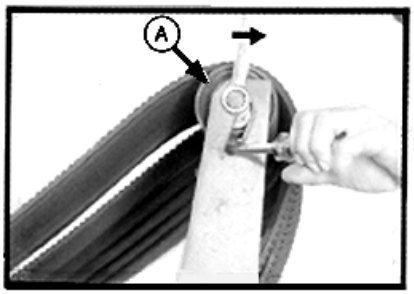
   c. Tighten cap screw (B).

Continued on next page

5. If belts are not centered at the upper rear guide, make the following adjustment:

   - If belts track to the right, move RIGHT end of take-up roll (A) (in direction shown) in short leg of “L” shaped slot.
   - If belts track to the left, move LEFT end of take-up roll (A) (in direction shown) in short leg of “L” shaped slot.

   A—Take-Up Roll



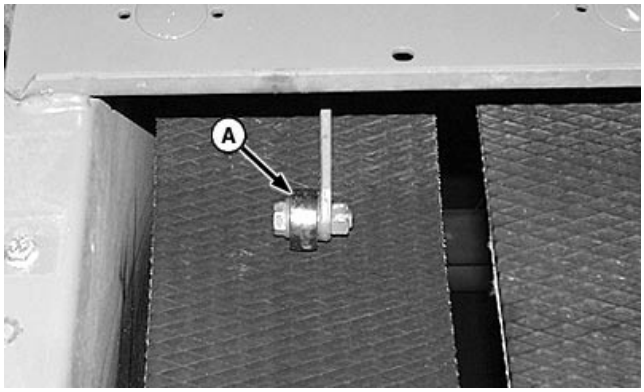
E39725 –UN–09FEB96

AG,OUO6059,161 –19–22JUN00–5/6

6. If outside belts track to the outside, rubbing the lower belt guide or side of baler, adjust as as follows:

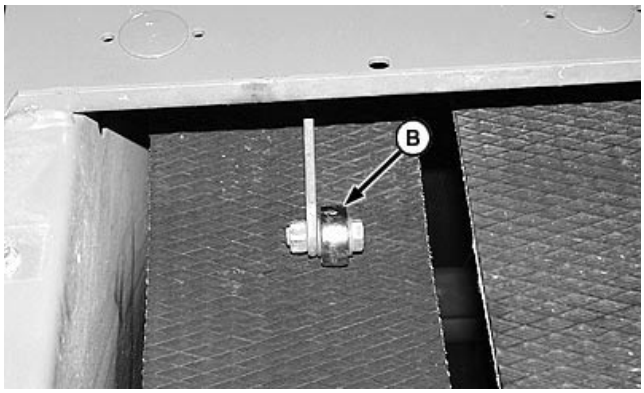
   - Move roller from the normal outside position (A) on the sender arm to inside position (B). The belt will track towards the middle of the baler.

   A—Roller (Normal Outside Position)
   B—Roller (Inside Position)



E47618 –UN–07JAN00

Left-Hand Side Shown



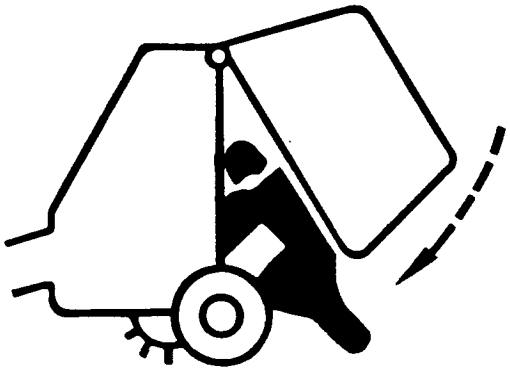
E47619 –UN–07JAN00

AG,OUO6059,161 –19–22JUN00–6/6

Adjusting Lower Feed Roll Scraper

CAUTION: To avoid injury or death caused by unexpected lowering of the gate, engage gate lock before working on, around, or under gate in raised position.

1. Open gate to convenient height and lock with gate lock valve.
2. Move tractor selector valve to raise belt tension arm to highest position. Shut off tractor.



TS698 –UN–21SEP89

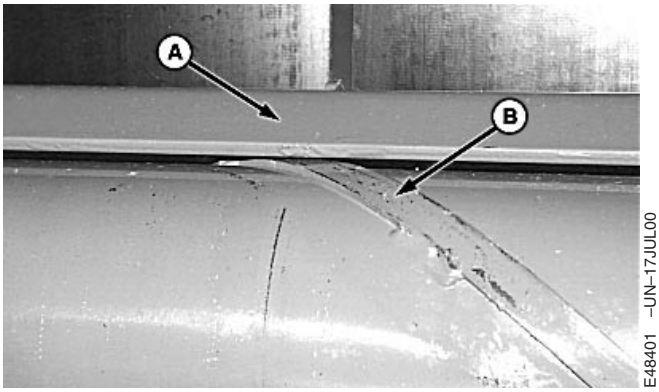
AG,OUO6059,255 –19–17JUL00–1/2

3. Loosen mounting lock nut on one side of scraper (A) at a time.
4. Using feeler gauge, adjust scraper (A) on one side at a time until roll-to-scraper clearance at the spiral straps is within specifications at tightest points. Tighten lock nuts..

Specification

Lower Front Gate
Roll-to-Scraper—Clearance..... 2.5—5.5 mm (3/32—7/32 in.)

5. Rotate roll (B) to make sure scraper does not hit strap at any point when roll is rotated.
6. Unlock gate and lower completely.



E48401 –UN–17JUL00

467S

A—Scraper
B—Gate Roll

AG,OUO6059,255 –19–17JUL00–2/2

Adjusting Starter Roll Scraper (If Equipped)

CAUTION: Be careful when working around starter roll scraper. The knife is sharp and can cause serious injury.

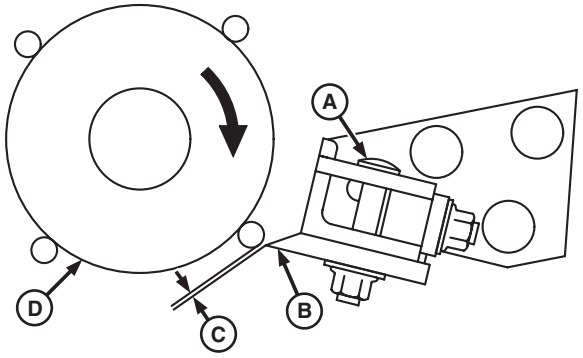
Rotate starter roll in direction shown to avoid pinching fingers.

TS268 –UN–23AUG88

1. Clear area of all debris between knife and starter roll.
2. Loosen cap screws (A).
3. Clearance (C) must be within specifications.

Specification	
Scraper Bar-to-Starter Roll—Clearance	0.5—1.0 mm (0.020—0.040 in.)

4. Tighten cap screws (A).
5. Manually rotate starter roll (D) to check clearance at all bars. Readjust if necessary.



E51108 –UN–17JAN02

A—Cap Screws
B—Scraper Bar
C—Clearance
D—Starter Roll

AG,OUO6059,254 –19–17JUL00–1/1

Adjusting Idler Roll Scrapers (If Equipped)

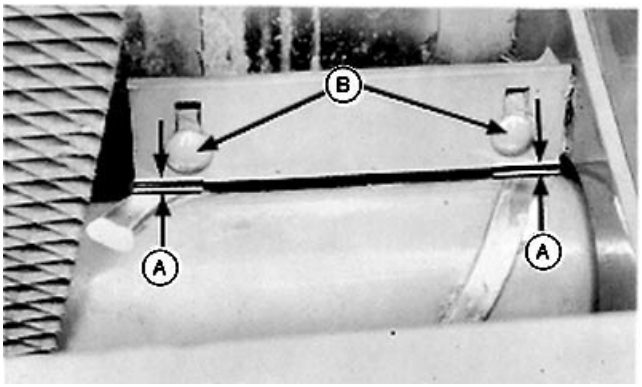
NOTE: Spirals must be free of weld splatter and surface damage before making adjustment.

1. Loosen nuts on round-head bolts (B).
2. Adjust right and left-hand scrapers to obtain clearance (A) between scraper and spirals on roll to within specifications. Tighten nuts on round-head bolts (B).

Specification

Scraper-to-Spirals on Roll—Clearance ..... 0.5—2.3 mm (0.020—0.091 in.)

3. Rotate roll manually and check clearance. If clearance exceeds specifications, check that roll spirals are flat to roll.
4. With gate closed and belts tensioned, engage PTO. There should be no contact between scrapers and spirals. If necessary, adjust scraper clearance.



E37398 –UN–24JUN99

A—Clearance
B—Round-Head Bolts

AG,OUO6059,253 –19–17JUL00–1/1

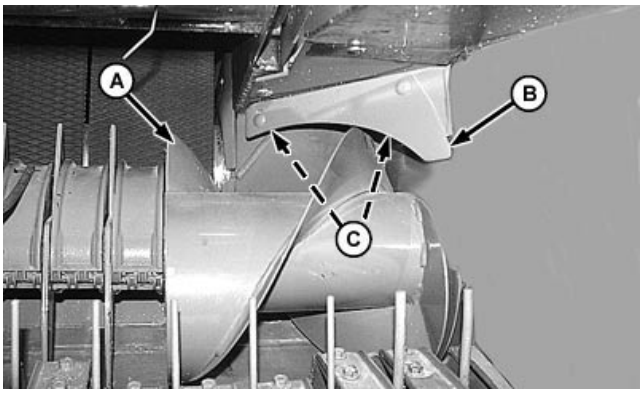
Adjusting Auger Scrapers (MegaWide Pickup)

1. Loosen nuts (C).
2. Position scraper (B) to auger (A) according to specifications at closest point. Rotate auger to check clearance.

Specification

Scraper-to-Auger—Clearance (Minimum)..... 1 mm (1/32 in.)

3. Tighten nuts.
4. Repeat procedure on opposite side.



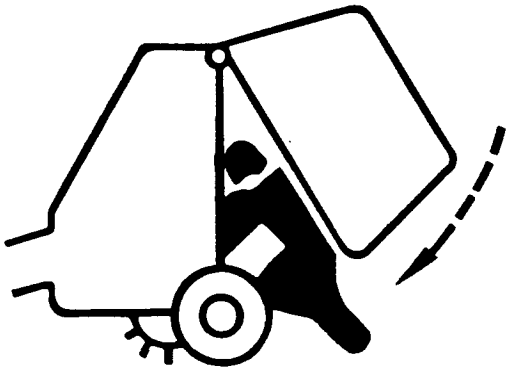
E48190 –UN–03AUG00

Left-Hand Side Shown

A—Auger
B—Scraper
C—Nuts

AG,OUO6059,270 –19–17JUL00–1/1

Checking and Adjusting Clearance Between Cleaning Auger and Staggered Belt Roll (467S)



TS698 –UN–21SEP89

CAUTION: Make sure gate is in the raised position and locked. If gate is not raised and locked while performing this procedure, the gate could close suddenly causing injury or death.

NOTE: Shield removed for illustration purposes.

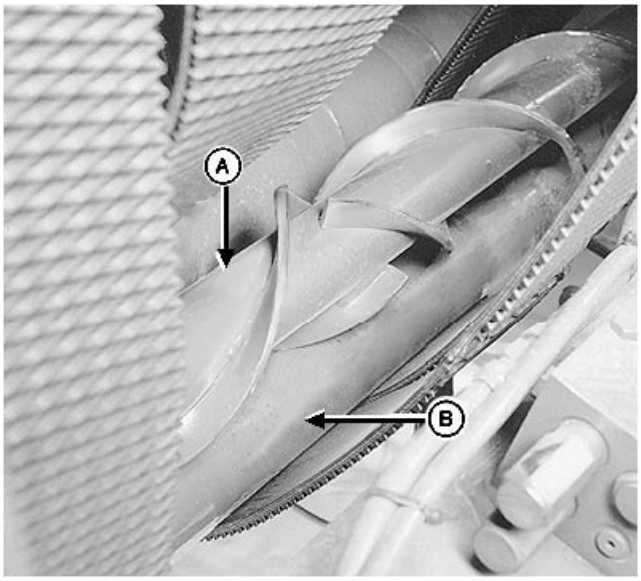
The cleaning auger (A) must operate close to the staggered belt roll (B) and belts to function correctly.

Clearance between auger flighting and outside diameter of staggered belt roll should be within specifications with gate fully closed and belts tensioned.

Specification	
Auger Flighting-to-Staggered Belt Roll OD—Clearance	1—3 mm (1/32—1/8 in.)

Check Clearance

1. Start tractor engine.
2. Raise gate, shut OFF tractor engine, and remove key.
3. Lock the gate.
4. Disconnect cleaning auger drive chain.
5. Remove any crop or mud buildup on roll.
6. Check clearance with a feeler gauge at both ends and in the middle of the baler. Rotate auger and check for eccentricity.



E41086 –UN–04OCT96

A—Cleaning Auger
B—Staggered Belt Roll

Continued on next page

Adjust Clearance

1. Loosen staggered belt roll shaft cap screw (A) and roll bracket nuts (B) on right and left-hand side of baler.

2. At both ends of staggered belt roll, put a 2 mm (0.078 in.) shim between flighting and outside diameter of staggered belt roll.

IMPORTANT: When tightening mounting hardware, make sure roll is free to rotate with a minimum gap of 1 mm (0.039 in.) between roll and hole in sidesheet.

3. Hold roll firmly against shim and tighten all mounting hardware.

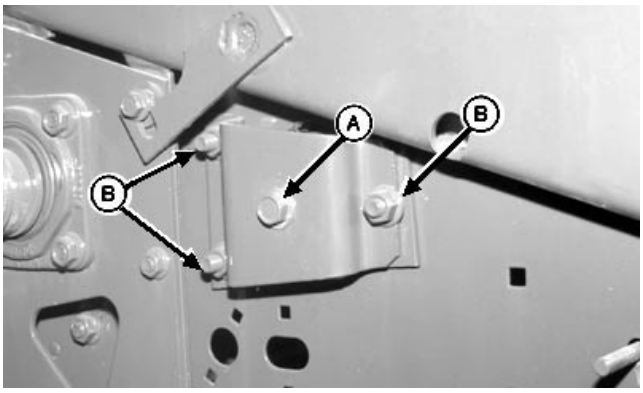
4. Remove shims.

5. Start tractor engine. Close gate, shut OFF tractor engine, and remove key.

6. Manually rotate auger. Check clearance between roll and auger flighting near both sidesheets and at a center location. Clearance should be within specifications. If not, reposition roller or check straightness of cleaning auger.

Specification	
Auger Flighting-to-Staggered Belt Roll OD—Clearance	1—3 mm (1/32—1/8 in.)

7. Reconnect cleaning auger chain. Adjust chain idler. (See ADJUSTING LOWER BELT AND CLEANING AUGER DRIVE ROLL CHAIN in this section.)



Right-Hand Side Shown

A—Roll Shaft Cap Screw
B—Roll Bracket Nuts

AG,OUO6059,252 –19–17JUL00–2/2

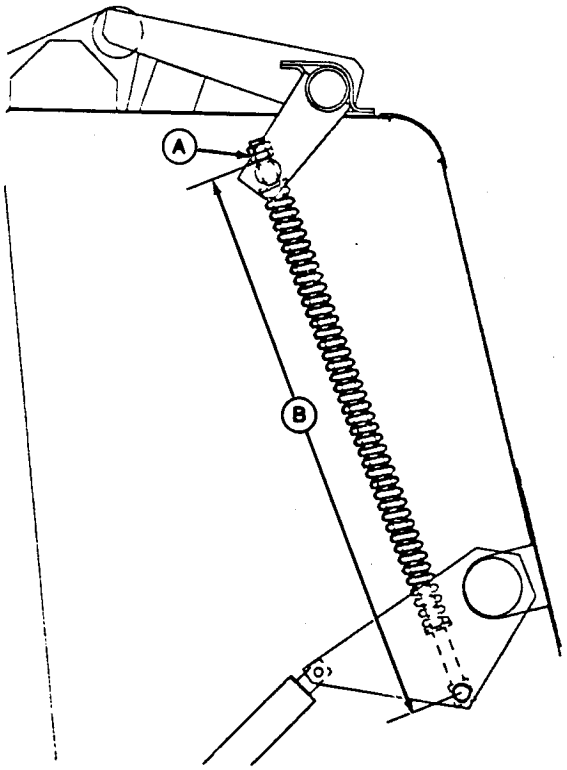
Adjusting Take-Up Arm Compression Springs

If springs have been replaced or stop nuts have been removed, adjust springs as follows:

1. With empty baler, close the gate and lower tension arm. Remove any wrappage or buildup on rolls.
2. If forming belts are installed, go to Step 4.
3. If installing springs on baler without out forming belts installed, adjust stop nuts (A) until dimension (B) is within specifications.

Specification	
Take-Up Arm Compression Spring—Length	998 ± 1.5 mm (39.3 ± 0.04 in.)

A—Stop Nuts
B—Dimension



E36256 –UN–23JUL91

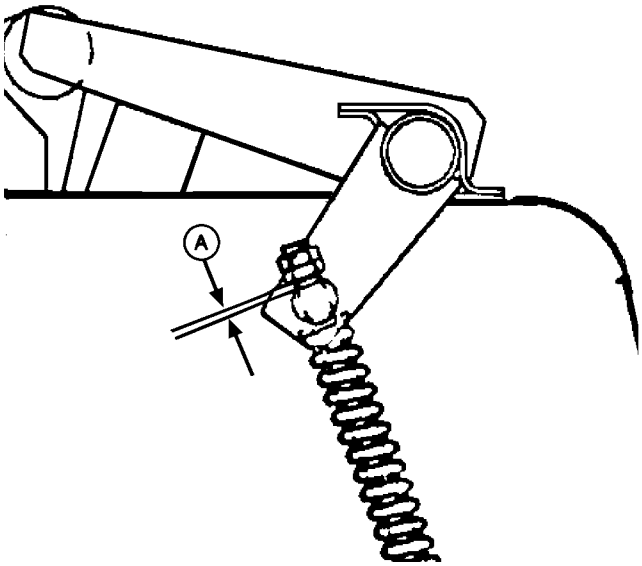
AG,OUO6017,1730 –19–10NOV99–1/2

4. With forming belts installed, adjust stop nuts until gap (A) between nut and pivot is within specifications.

Specification	
Nut-to-Pivot—Gap	8—12 mm (0.315—0.472 in.)

5. Engage tractor PTO, raise and lower tension arm.
6. Check gap (A) on right and left-hand springs. Adjust if necessary.

A—Gap



E39705 –UN–06FEB96

AG,OUO6017,1730 –19–10NOV99–2/2

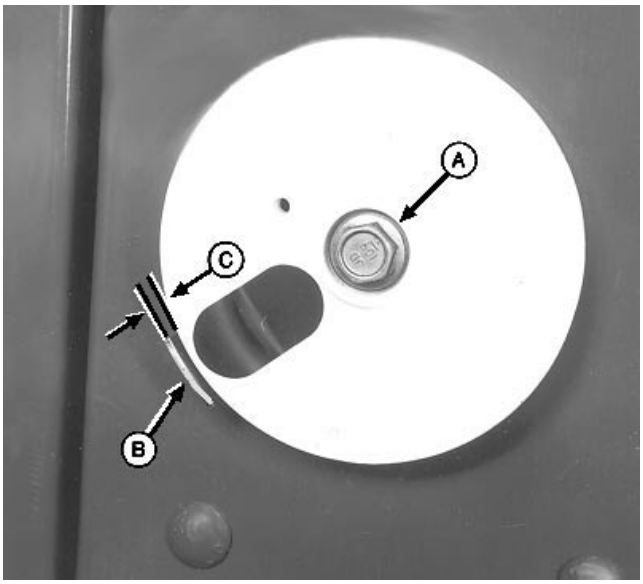
Adjusting Twine Indicator Retaining Strap

1. Loosen cap screw (A).
2. Position retaining strap (B) as follows:
   - Right-hand side of baler; Eight O'clock position
   - Left-hand side of baler; Four O'clock position
3. Adjust dimension (C) between strap and twine indicator wheel according to specifications.

Specification

Strap-to-Twine Indicator Wheel—Distance	0.4—0.8 mm (0.016—0.031 in.)

4. Tighten cap screw (A).
5. Twine indicator wheel must spin freely after adjustment.



E39735 –UN–16FEB96

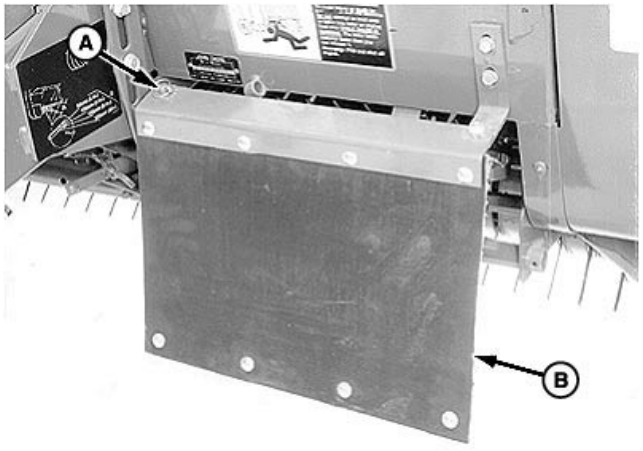
Right-Hand Side Shown

A—Cap Screw
B—Retaining Strap
C—Distance

AG,OUMX005,1529 –19–03AUG00–1/1

Adjusting Twine Cutter Tension

1. If equipped with MEGATOOTH™ pickup; Remove quick-lock pin (A) and rotate left-hand curtain (B) away from front frame.
2. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.
3. Using monitor-controller EXTEND key, move twine arms behind twine cutter.
4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E39273 –UN–06SEP00

567 Shown

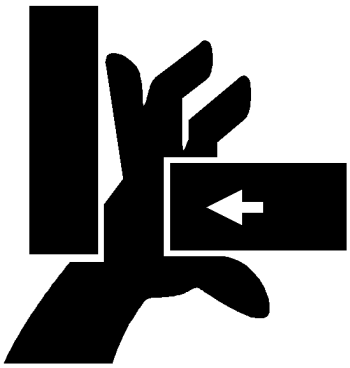
A—Quick-Lock Pin
B —Left-Hand Curtain

Continued on next page

AG,OUMX005,1530 –19–03AUG00–1/6

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.



E47598 –UN–07JAN00

AG,OUMX005,1530 –19–03AUG00–2/6

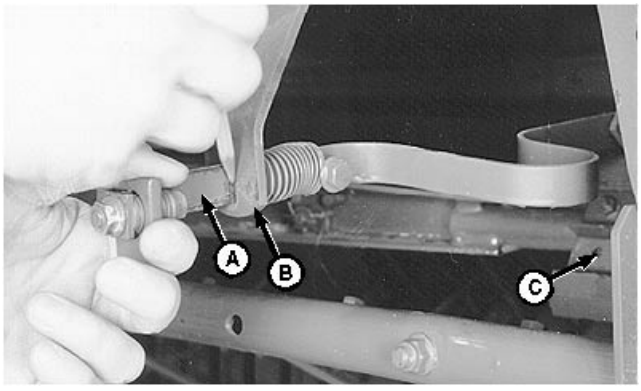
CAUTION: Be careful when working around the knife. It is sharp.

5. Pull cutter strap (A) gently forward until knife (C) contacts hex anvil. Remove slack, but DO NOT deform cutter strap.

6. Mark along cutter strap (A) at support (B), as shown.

A—Cutter Strap
B—Support
C—Knife

TS268 –UN–23AUG88



E39276 –UN–19JUN96

Continued on next page

AG,OUMX005,1530 –19–03AUG00–3/6

7. Make sure twine arm stop (A) is in the down position.

8. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

9. Cycle twine arms (B) to home position using monitor-controller WRAP key.

10. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

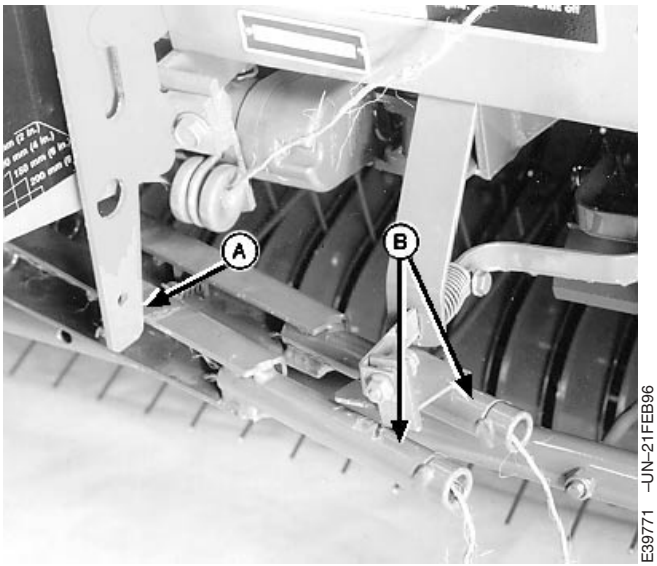
11. Distance (C) between mark on cutter strap and strap support should be within specifications.

Specification

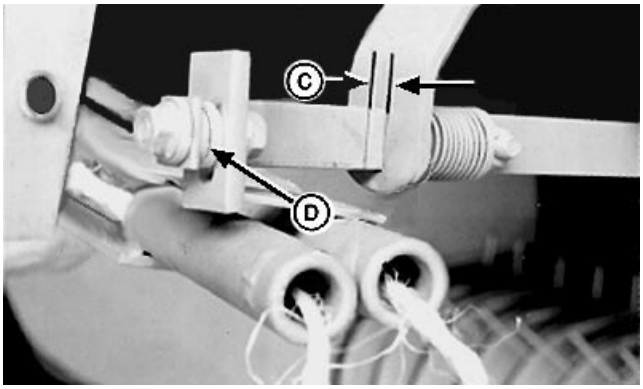
Mark on Cutter Strap-to-Strap Support—Distance..... 5—7 mm (3/16—9/32 in.)

- To decrease distance (C), move washers (D) from front of strap to rear of strap.
- To increase distance, move washers from rear of strap to front of strap.

If twine cutter adjustment cannot be made by moving washers on cutter strap, refer to TWINE ELECTRIC ACTUATOR INSTALLATION ADJUSTMENT in this section.



E39771 –UN–21FEB96



E39773 –UN–29JUN96

A—Twine Arm Stop
B—Twine Arms
C—Dimension
D—Washers

Continued on next page

AG,OUMX005,1530 –19–03AUG00–4/6

12. If washers have been moved, check overlap dimension (E) between bottom edge of tab (B) and bottom edge of strap (C). Dimension (E) should be within specifications.

Specification	
Bottom Edge of Tab-to-Bottom Edge of Strap—Overlap Distance	2—4 mm (3/32—5/32 in.)

To check overlap dimension:

a. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

b. Using monitor-controller RETRACT key, move twine arms until twine arm (D) lightly contacts tab (B) and strap (C).

c. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

d. Loosen nut (A) and adjust tab (B) to obtain specification (E) between bottom edge of tab (B) and bottom side of contact strap (C). Keep tab (B) vertical and tighten nut (A).

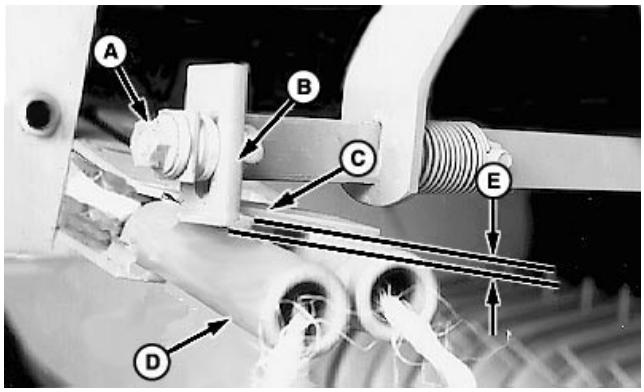
e. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

f. Move twine arms completely forward using monitor-controller RETRACT key.

g. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

h. Check overlap dimension (E). Front twine arm must pass under tab (B). If necessary, adjust tab (B). Light contact between tab (B) and front twine arm (D) is acceptable.

i. Make sure distance between mark on cutter strap and strap support is to specification.



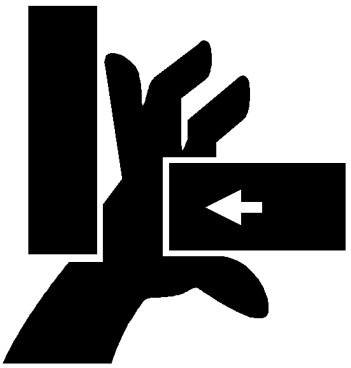
A—Nut
B—Tab
C—Strap
D—Twine Arm
E—Dimension

Continued on next page

13. If equipped with MEGATOOTH™ pickup; Rotate left-hand curtain toward front frame and secure with quick-lock pin.

AG,OUMX005,1530 –19–03AUG00–6/6

Adjusting Clearance Between Cutter Link Support and Twine Arm



E47598 –UN–07JAN00

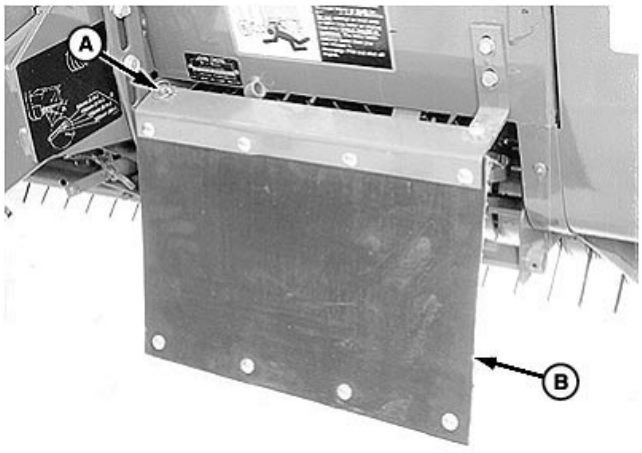
CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

IMPORTANT: Do not operate twine arms with pickup in raised position, or damage to pickup teeth may occur.

1. If equipped with MEGATOOTH™ pickup, remove quick-lock pin and rotate left-hand curtain away from front frame.

2. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.



E39273 –UN–06SEP00

567 Shown

A—Quick-Lock Pin
B—Left-Hand Curtain

Continued on next page

AG,OUMX005,1531 –19–03AUG00–1/2

3. Press EXTEND or RETRACT key to move twine arm (A) under cutter link support (B).

4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

5. Measure clearance (C) between bottom edge of cutter link support (B) and top of twine arm strap. Clearance (C) should be within specifications.

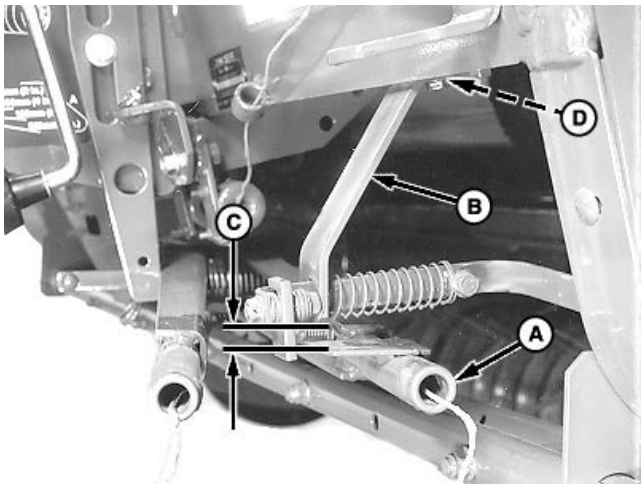
Specification	
Bottom Edge of Cutter Link Support-to-Top of Twine Arm Strap—Clearance	6—12 mm (1/4—1/2 in.)

   - If clearance (C) is less than specifications, remove shims (D) between cutter link support (B) and underneath crossbeam. If shims do not exist, lower twine arms relative to cutter link support. (See ADJUSTING TWINE ARM-TO-STARTER ROLL, CUTTER LINK SUPPORT AND TWINE ARM STOP in this section.)
   - If clearance (C) is more than specifications, add shims (D).

6. Change shims by loosening two self-tapping screws.

7. Remove end play at front of cutter link support toward center of baler. Tighten screws.

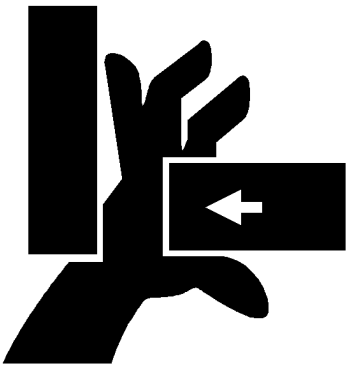
8. If equipped with MEGATOOTH™ pickup, rotate curtain toward front frame and fasten with quick-lock pin.



A—Twine Arm
B—Cutter Link Support
C—Clearance
D—Shims

AG,OUMX005,1531 –19–03AUG00–2/2

Adjusting Front Twine Arm



E47598 –UN–07JAN00

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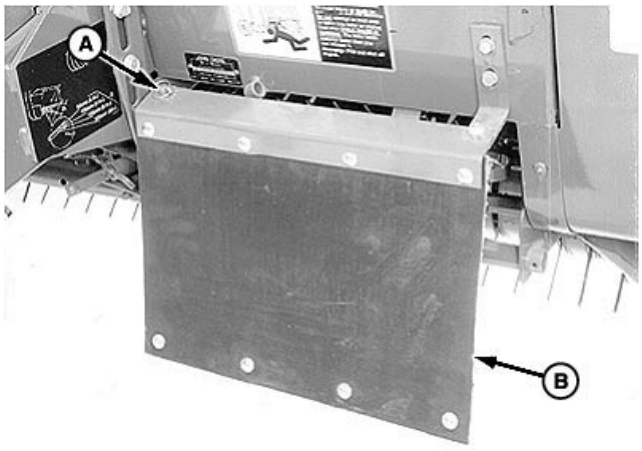
If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

1. If equipped with MEGATOOTH™ pickup; Remove quick-lock pin (A) and rotate left-hand curtain (B) away from front frame.
2. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.
3. Move twine arms to home position using monitor-controller RETRACT key.
4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E39273 –UN–06SEP00

567 Shown

A—Quick-Lock Pin
B—Left-Hand Curtain

Continued on next page

AG,OUMX005,1532 –19–03AUG00–1/2

5. Remove cap screw and nut (E), spring-locking pin (D), washer (G), spacer (H), spring (C), and twine spacing strap (F).

6. Measure dimension (I) between tops of twine arms (J and K). Twine arm (K) must be higher than twine arm (J) according to specifications.

Specification

Top of Front Twine Arm-to-Top of Rear Twine Arm—Distance ..... 4.5—7.5 mm (3/16—5/16 in.)

7. To adjust, loosen nut (A) enough so end of twine arm can be moved manually with some resistance.

   - If dimension (I) is less than specifications, move end of twine arm down until correct dimension is obtained.
   - If dimension is greater than specifications, move end of twine arm up until correct dimension is obtained.

8. Tighten nut (A) to specifications.

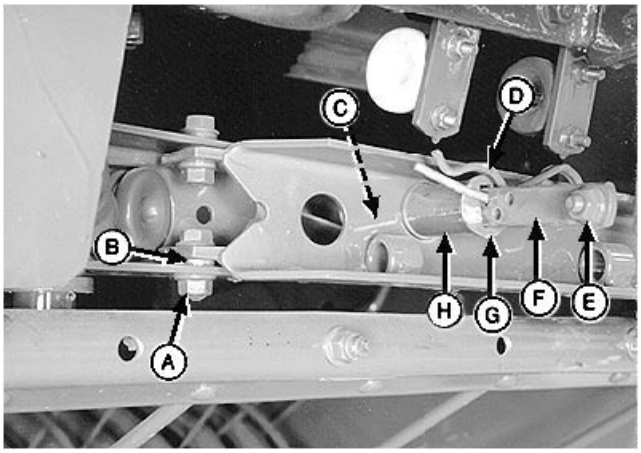
Specification

Twine Arm Pivot Nut—Torque ..... 80 N•m (60 lb-ft)

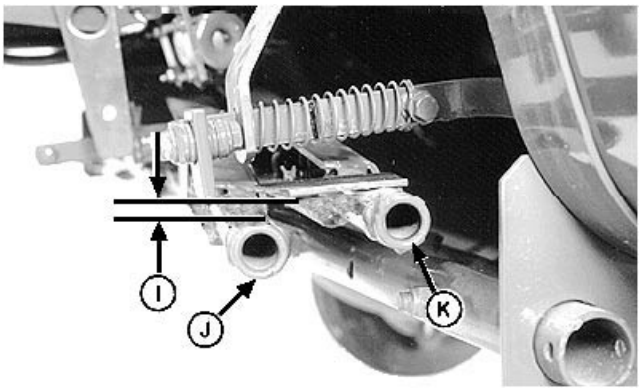
9. Check dimension (I). Adjust as necessary.

10. Install twine spacing strap, spring, spacer, washer, cap screw, and nut. Install spring-locking pin (D) in desired hole. Adjust twine spacing. (See SETTING TWINE SPACING in Operating the Baler section.)

11. If equipped with MEGATOOTH™ pickup; Rotate left-hand curtain toward front frame and secure with quick-lock pin.



E40629 –UN–02JUL96



E40628 –UN–01JUL96

A—Cap Screw and Nut
B—Bushing
C—Spring
D—Spring-Locking Pin
E—Cap Screw and Nut
F—Twine Spacing Strap
G—Washer
H—Spacer
I—Dimension
J—Front Twine Arm
K—Rear Twine Arm

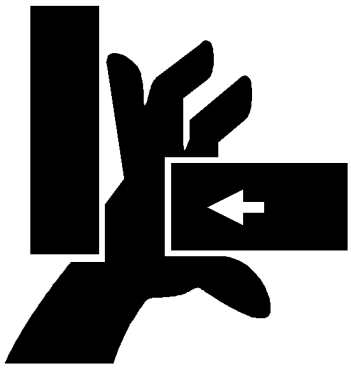
AG,OUMX005,1532 –19–03AUG00–2/2

Adjusting Twine Cutter-to-Twine Arm

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

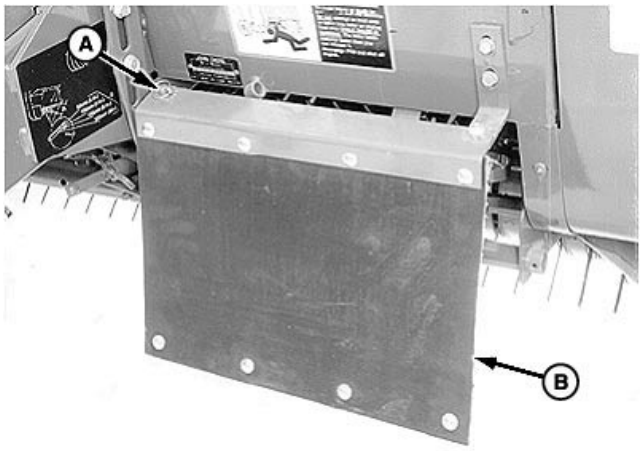
Twine knife has two cutting edges. Be careful when working around the knife. It is sharp.



E47598 –UN–07JAN00

TS268 –UN–23AUG88

1. If equipped with MEGATOOTH™ pickup; Remove quick-lock pin (A) and rotate left-hand curtain (B) away from front frame.
2. Remove crop material from knife and hex anvil area.



E39273 –UN–06SEP00

A—Quick-Lock Pin
B—Left-Hand Curtain

567 Shown

Continued on next page

AG,OUMX005,1533 –19–03AUG00–1/2

3. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol (A) to turn monitor-controller ON.

4. Press monitor-controller EXTEND key (B) to move front twine arm tube until centered over hex anvil.

5. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

6. Loosen nuts (C).

7. Adjust twine cutter assembly, so clearance (F) between knife hex anvil (D) and front twine arm tube (E) is within specifications. Twine cutter bracket should be level (*parallel with bottom edge of frame*).

Specification

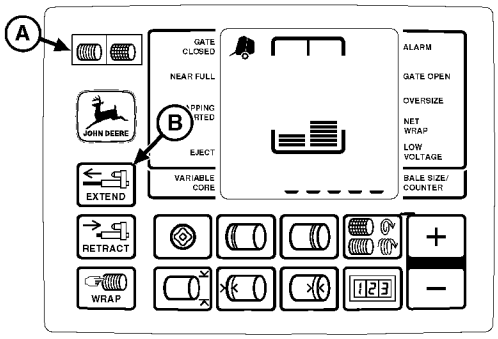
Knife Hex Anvil-to-Front Twine Arm Tube—Clearance ..... 0.5—3.5 mm (0.020—0.138 in.)

8. Tighten nuts (C).

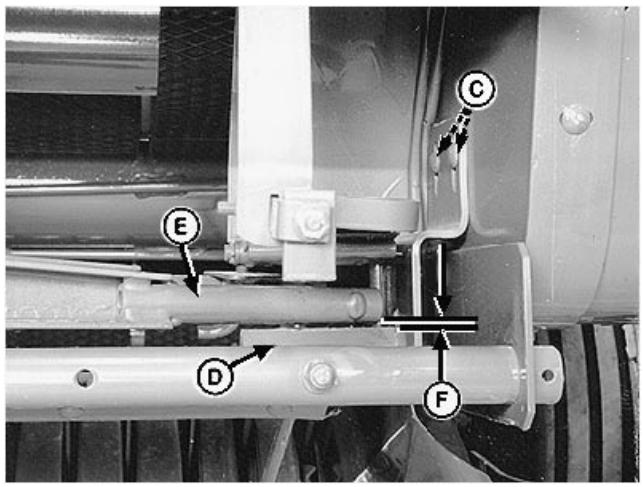
9. If rear twine arm contacts bottom side of knife support and minimum clearance in Step 7 is obtained, bend twine cutter bracket so hex anvil is parallel to twine arm.

10. Check knife adjustment. (See CHECKING AND ADJUSTING TWINE CUTTER KNIFE in this section.)

11. If equipped with MEGATOOTH™ pickup; Rotate left-hand curtain toward front frame and secure with quick-lock pin.



E47663 –UN–18JAN00



E40624 –UN–29JUN96

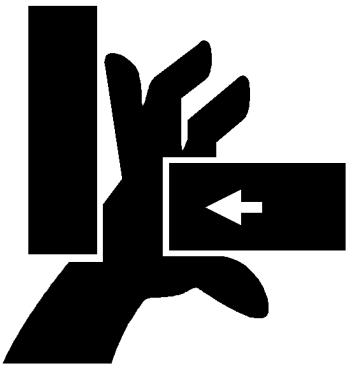
A—Twine Symbol
B—Extend Key
C—Nuts
D—Knife Hex Anvil
E—Twine Arm Tube
F—Clearance

AG,OUMX005,1533 –19–03AUG00–2/2

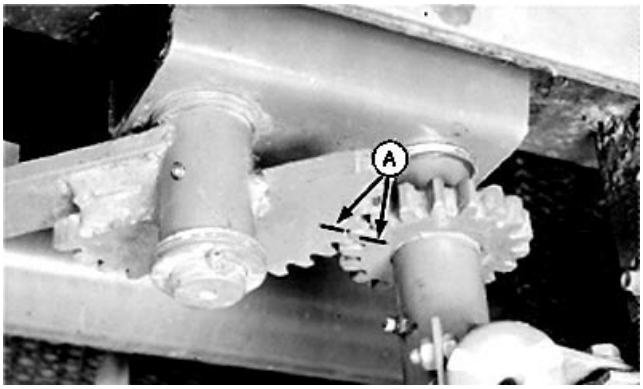
Twine Arm Timing (567)

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.



E47598 –UN–07JAN00



E39695 –UN–31JAN96

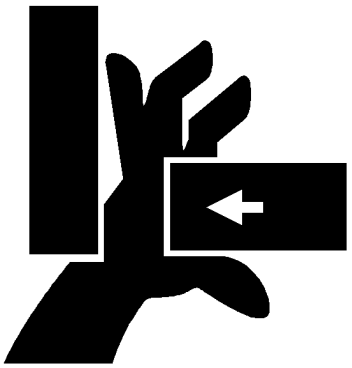
A—Timing Marks

When replacing or servicing twine arm or drive gear, make sure timing marks (A) are lined up as shown.

If equipped with MEGATOOTH™ pickup; Rotate curtains out of the way to view timing marks.

AG,OUO6059,249 –19–17JUL00–1/1

Checking and Adjusting Twine Cutter Knife



E47598 –UN–07JAN00

TS268 –UN–23AUG88

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

Twine knife has two cutting edges. Be careful when working around the knife. It is sharp.

IMPORTANT: Make sure cutter anvil is properly adjusted before adjusting knife. (See ADJUSTING TWINE CUTTER-TO-TWINE ARM in this section.)

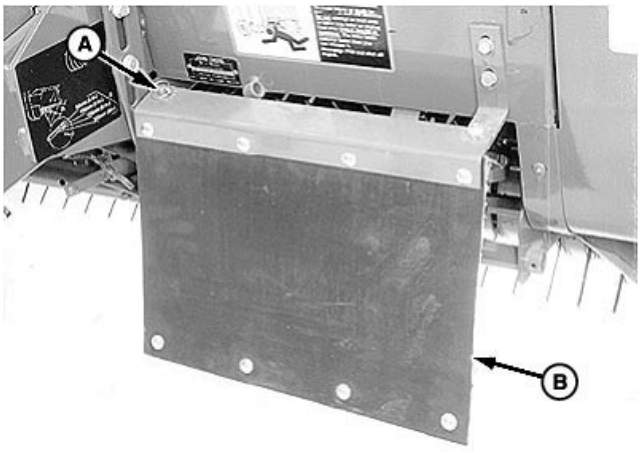
Do not operate twine arms with pickup in raised position, or damage to pickup teeth may occur.

NOTE: Make sure knife edge is straight. If not, rotate, replace, or sharpen knife.

If knife edge is less that 3 mm (1/8 in.) from rear of hex flat, the knife has become too short due to sharpening. Invert or replace knife, if necessary.

1. If equipped with MEGATOOTH™ pickup, remove quick-lock pin and rotate left-hand curtain away from front frame.

2. Remove crop material from knife and hex anvil area.



E39273 –UN–06SEP00

567 Shown

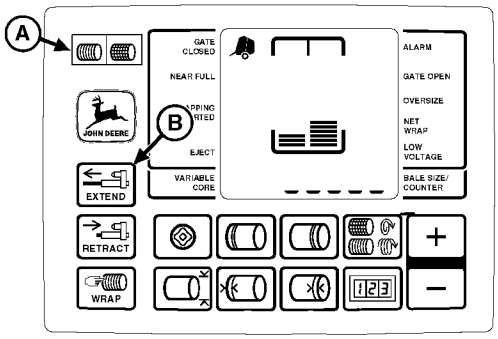
A—Quick-Lock Pin
B—Left-Hand Curtain

Continued on next page

3. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol (A) to turn monitor-controller ON.

4. Press monitor-controller EXTEND key (B) to move twine arm behind twine cutter.

5. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E47663 –UN–18JAN00

A—Twine Symbol
B—Extend Key

AG,OUMX005,1534 –19–03AUG00–2/3

6. Pull cutter strap (A) forward until knife (B) contacts hex anvil (C). If full length of knife does not contact hex anvil, adjust knife.

   To adjust knife:

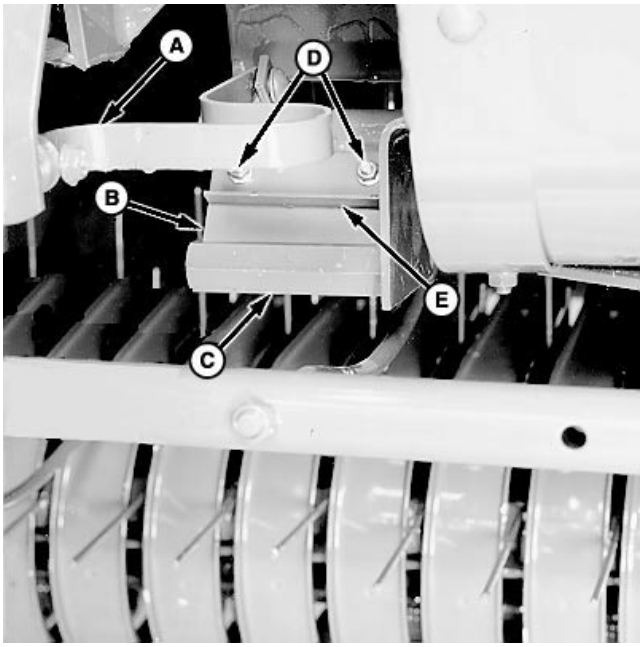
   a. Loosen nuts (D).

   b. Pull angle (E) down until full width of knife (B) contacts hex anvil (C). Knife edge should be near center of hex flat.

   c. Tighten nuts (D). Pull cutter strap forward to make sure full width of knife contacts hex anvil. If not, repeat adjustment procedure.

   d. Check twine cutter-to-twine arm clearance. (See ADJUSTING TWINE CUTTER-TO-TWINE ARM in this section.)

7. If equipped with MEGATOOTH™ pickup, rotate curtain toward front frame and fasten with quick-lock pin.

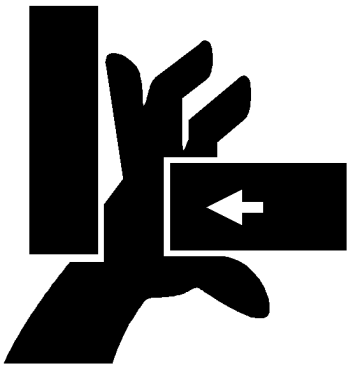


E39690 –UN–06SEP00

A—Cutter Strap
B—Knife
C—Hex Anvil
D—Nuts
E—Angle

AG,OUMX005,1534 –19–03AUG00–3/3

Twine Electric Actuator Installation Adjustment



E47598 –UN–07JAN00

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

NOTE: 467 and 467S are illustrated for the following procedure. On the 567, actuator is installed on right-hand side.

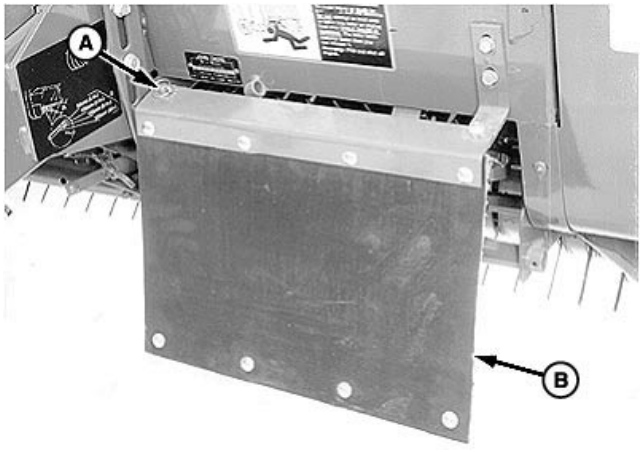
If electric actuator has been removed or replaced, or the twine cutter tension adjustment cannot be made by moving washers on the cutter strap, make the following adjustment:

Continued on next page

AG,OUMX005,1535 –19–03AUG00–1/6

1. If equipped with MEGATOOTH™ pickup, remove quick-lock pin and rotate curtain away from front frame.

A—Quick-Lock Pin
B—Left-Hand Curtain



E39273 –UN–06SEP00

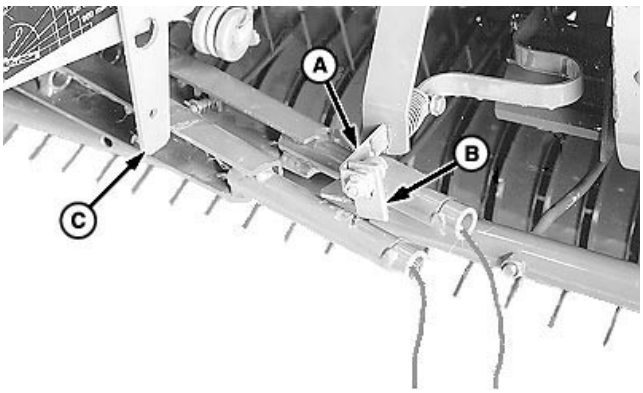
567 Shown

AG,OUMX005,1535 –19–03AUG00–2/6

2. Adjust cutter strap (A) by putting two washers in front of contact tab (B) and four washers behind contact tab (B). Make sure twine arm stop (C) is in the down position.

3. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

A—Twine Cutter Strap
B—Contact Tab
C—Twine Arm Stop



E40625 –UN–06SEP00

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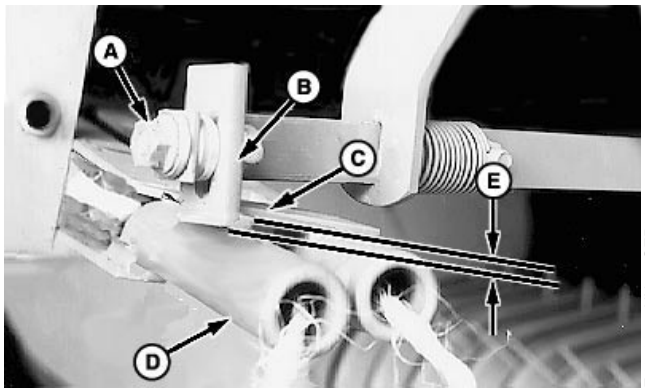
AG,OUMX005,1535 –19–03AUG00–3/6

4. Press monitor-controller RETRACT key and move twine arms until twine arm (D) lightly contacts tab (B) and strap (C).

5. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

6. Loosen nut (A) and adjust tab (B) to obtain dimension (E) between bottom edge of tab (B) and bottom side of strap (C) according to specifications. Keep tab (B) vertical and tighten nut (A).



A—Nut
B—Tab
C—Strap
D—Twine Arm
E—Dimension

Specification	
Bottom Edge of Tab-to-Bottom Side of Strap—Overlap	2—4 mm (3/32—5/32 in.)

7. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

8. Move twine arms completely forward using monitor RETRACT key.

9. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

10. Check overlap dimension (E). Front twine arm must pass under tab (B). If necessary, adjust tab (B). Light contact between tab (B) and front twine arm (D) is acceptable.

11. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

12. Move twine arms behind twine cutter using monitor-controller EXTEND key.

13. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

Continued on next page

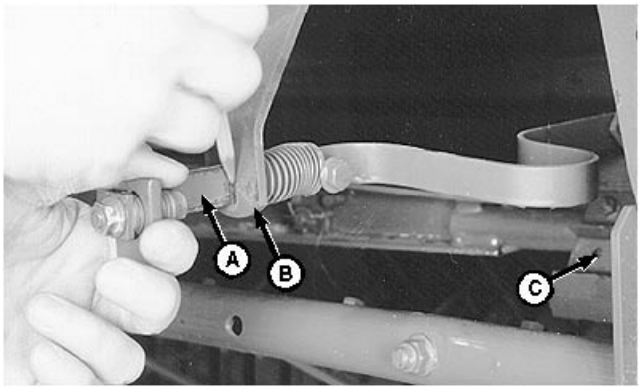
CAUTION: Be careful when working around the knife. It is sharp.

14. Pull cutter strap (A) gently forward until knife (C) contacts hex anvil. Remove slack, but DO NOT deform cutter strap.

15. Mark along cutter strap (A) at support (B), as shown.

A—Cutter Strap
B—Support
C—Knife

TS268 –UN–23AUG88



E39276 –UN–19JUN96

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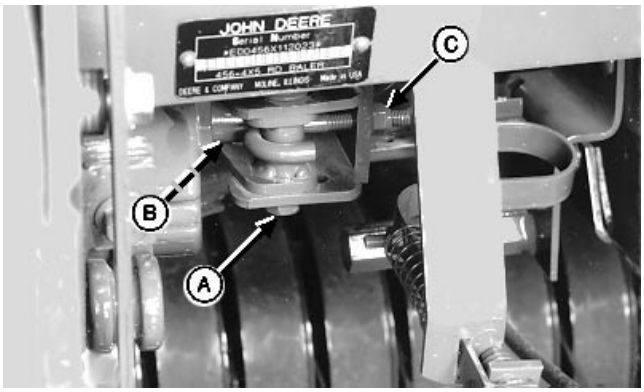
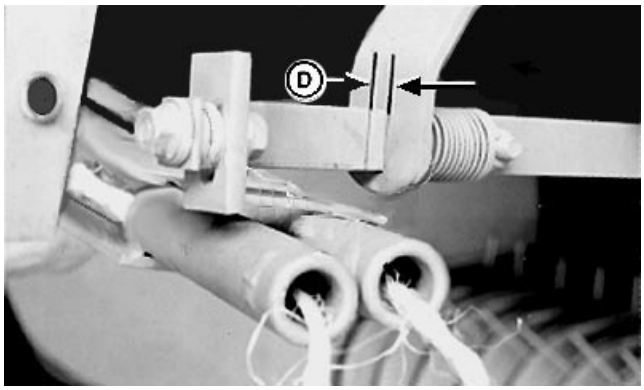
AG,OUMX005,1535 –19–03AUG00–5/6



E40647 –UN–17JUL96



E40626 –UN–29JUN96

A—Cap Screw **B—Cap Screw** **C—J-Bolt Nut** **D—Twine Cutter Dimension**

16. Loosen cap screw (A and B).
17. Loosen J-bolt nut (C).
18. Move cap screw (A) to end of slot toward actuator.
19. Tighten cap screws (A and B) just enough so actuator pivot can be moved by hand, but with some resistance.
20. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.
21. Using monitor-controller RETRACT key, move twine arms to home position.
22. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.
23. Tighten J-bolt nut (C) to obtain dimension (D) between mark on cutter strap and strap support according to specifications.

Specification

Mark on Cutter Strap-to-Strap Support—Distance ..... 5—7 mm (3/16—9/32 in.)

24. Tighten cap screw (A) to specifications.

Specification

Cap Screw (A)—Torque ..... 140 N•m (103 lb-ft)

25. Tighten cap screw (B) to specifications.

Specification

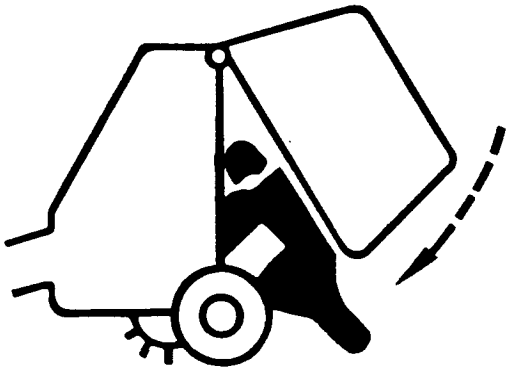
Cap Screw (B)—Torque ..... 95 N•m (70 lb-ft)

26. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.
27. Using monitor-controller RETRACT key, cycle twine arm to home position (actuator fully retracted).
28. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.
29. Check twine cutter dimension (D).
30. If dimension (D) is less than specified, loosen cap screws (A and B). Tighten J-bolt nut (C) until dimension (D) is obtained. Tighten cap screws (A and B).

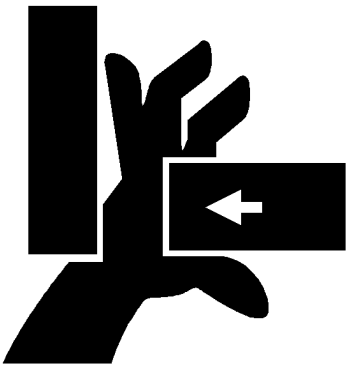
    If dimension (D) is more than specified, loosen cap screws (A and B). Loosen J-bolt nut (C) until dimension (D) is obtained. Tighten cap screws (A and B).
31. If equipped with MEGATOOTH™ pickup, rotate curtain toward front frame and fasten with quick-lock pin.

AG,OUMX005,1535 –19–03AUG00–6/6

Adjusting Twine Arm-to-Starter Roll, Cutter Link Support, and Twine Arm Stop



TS698 –UN–21SEP89



E47598 –UN–07JAN00

CAUTION: Make sure gate is in the full raised position and locked. If the gate is not fully raised and locked while performing this procedure, the gate could close suddenly causing injury or death.

Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

NOTE: Adding or removing shims located between the twine arm support and crossbeam will affect dimensions at the following locations:

- *Twine arm-to-starter roll:*
  - *Twine arm pointing directly toward rear.*
  - *Twine arm toward right side of baler.*
  - *Twine arm toward left side of baler.*
- *Twine arm-to-cutter link support.*
- *Twine arm-to-twine arm stop.*

Check dimensions at all locations before making any adjustments. Adding or removing shims at one location may change the dimension at another location.

1. Start tractor engine and raise gate fully.

Continued on next page

2. Lower pickup so twine arms will not contact pickup teeth.

3. Shut off tractor engine and remove key. Lock the gate.

4. Remove lower drive roll chain so starter roll can be rotated by hand.

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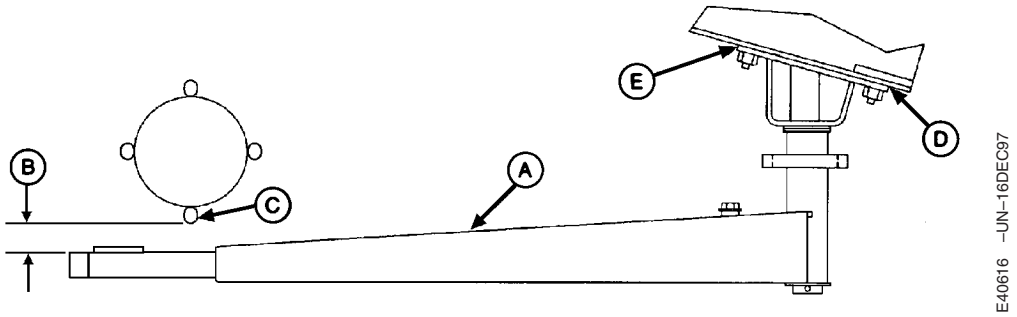
AG,OUMX005,1536 –19–03AUG00–2/6



A—Twine Arm
B—Dimension
C—Starter Roll Rod
D—Shim Location
E—Shim Location

Adjust Twine Arm-to-Starter Roll

1. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

2. Press EXTEND key to move twine arms so rear twine arm (A) points toward rear of baler.

3. Set monitor-controller selector switch to OFF position (centered) position. Turn tractor key to OFF position. Remove key.

4. Rotate starter roll until starter roll rod (C) is closest to the twine arm tube.

5. By hand, remove end play at end of twine arm toward starter roll. Check dimension (B) between starter roll rod (C) and twine arm tube. Dimension (B) should be within specifications.

Specification	
Starter Roll Rod-to-Twine Arm Tube—Distance	6—12 mm (1/4—1/2 in.)

6. If dimension (B) is less than specified:

   - Remove shims, as necessary, at location (D) between twine arm support and crossbeam.

     Remove an equal amount of shims at the right-hand and left-hand mounting bolts. (One shim moves twine arm approximately 3 mm [1/8 in.].)

     OR

   - Add shims, as necessary, at location (E) between twine arm support and crossbeam. Add an equal amount of shims at the right-hand and left-hand mounting bolts.

7. If dimension (B) is more than specified:

   - Remove shims, as necessary, at location (E) between twine arm support and crossbeam. Remove an equal amount of shims at the right-hand and left-hand mounting bolts. (One shim moves twine arm approximately 3 mm [1/8 in.].)

     OR

   - Add shims, as necessary, at location (D) between twine arm support and crossbeam.

8. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

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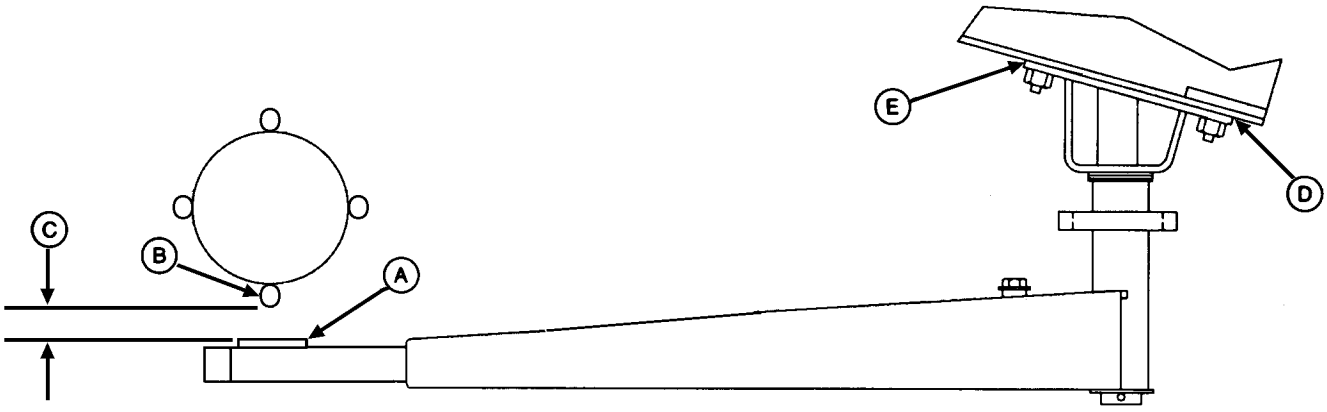


E41680 –UN–31OCT96

A—Strap
B—Starter Roll Rod
C—Dimension
D—Shim Location
E—Shim Location

9. Press monitor-controller EXTEND key to move twine arms to right of center so strap (A) is below starter roll rod (B).
10. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.
11. Rotate starter roll until starter roll rod (B) is closest to twine arm strap (A).
12. By hand, remove twine arm end play at end of twine arm toward starter roll.
13. Check dimension (C) between starter roll rod (B) and strap (A). Dimension (C) should be to specifications.

Specification	
Starter Roll Rod-to-Strap—Clearance (Minimum)	3 mm (1/8 in.)

14. If dimension (C) is less than specified, add an equal number of shims at right-hand location (D and E), or remove an equal number of shims at left-hand location (D and E).
15. Turn tractor key to ON position. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.
16. Press monitor-controller RETRACT key to move twine arm left of center so strap (A) is below starter roll rod (B).
17. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.
18. Rotate starter roll until starter roll rod (B) is closest to twine arm strap (A).
19. If dimension (C) is less than specified, add an equal number of shims at the left-hand locations (D and E), or remove an equal number of shims at the right-hand locations (D and E).

Continued on next page

AG,OUMX005,1536 –19–03AUG00–4/6

Adjust Twine Arm-to-Cutter Link Support

1. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.

2. Press monitor-controller RETRACT key to move twine arms until twine arm (A) lightly contacts the cutter link contact tab.

3. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

4. Check dimension (C) between top of twine arm strap and bottom edge of cutter link support (B). Dimension (C) should be within specifications.

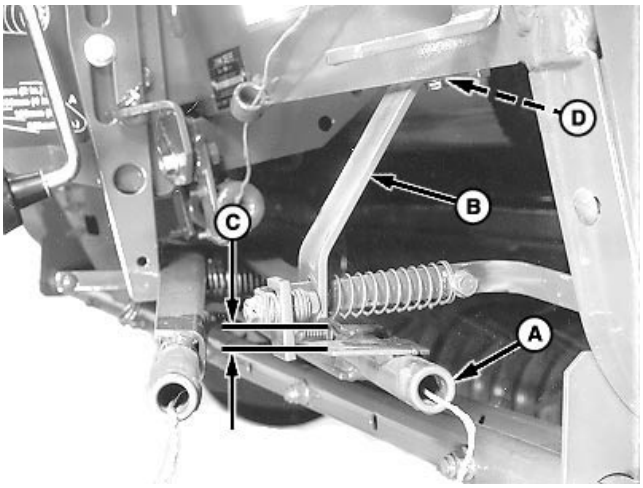
Specification	
Top of Twine Arm Strap-to-Bottom Edge of Cutter Link Support—Clearance	6 mm (1/4 in.)

5. If dimension (C) is less than specified and no shims exist at location (D) between support (B) and crossbeam:

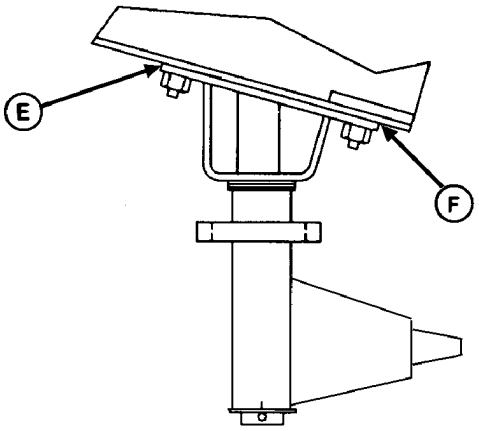
   - Add an equal number of shims between twine arm support and crossbeam at left-hand locations (E and F).

     OR

   - Remove an equal number of shims between twine arm support and crossbeam at right-hand locations (E and F).



E40634 –UN–06SEP00



E41682 –UN–24OCT96

A—Twine Arm
B—Cutter Link Support
C—Dimension
D—Shim Location
E—Shim Location
F—Shim Location

Continued on next page

AG,OUMX005,1536 –19–03AUG00–5/6

Adjust Twine Arm-to-Twine Stop

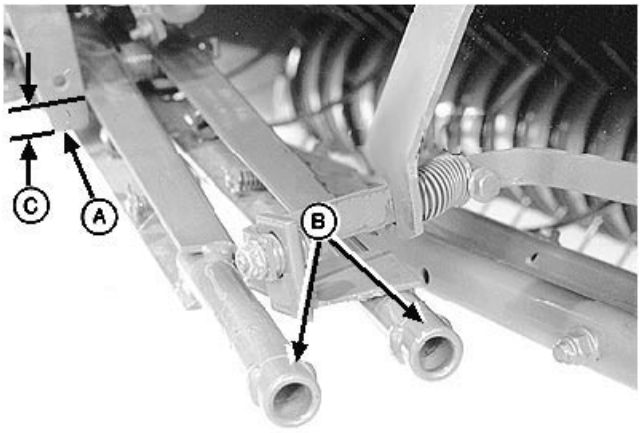
1. Make sure twine arm stop (A) is in the down position.
2. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to TWINE symbol to turn monitor-controller ON.
3. Press monitor-controller RETRACT key to return twine arms (B) to home position.
4. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.
5. Check overlap (C). There should be a minimum overlap between bottom of stop (A) and front twine arm surface to within specifications.

Specification	
Bottom of Stop-to-Front Arm Surface—Overlap	2 mm (3/32 in.)

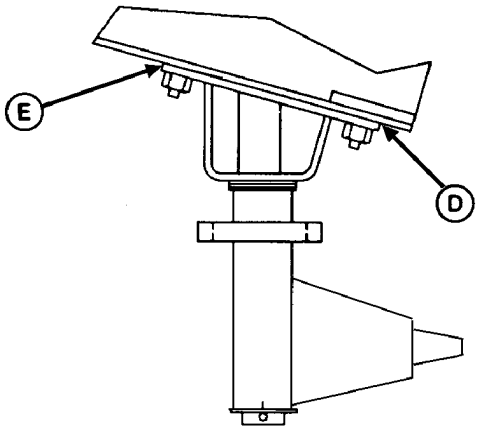
6. If dimension (C) is less than specified:
   - Add an equal number of shims at the right-hand locations (D and E).

     OR

   - Remove an equal number of shims at the left-hand locations (D and E).



E40623 –UN–01JUL96



E40617 –UN–07OCT96

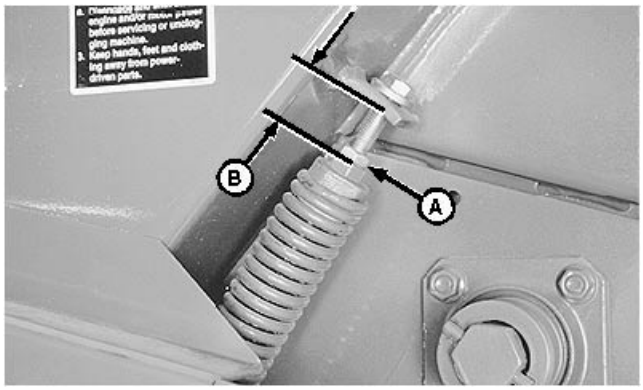
A—Twine Arm Stop
B—Twine Arms
C—Minimum Overlap
D—Shim Location
E—Shim Location

Check twine arm adjustments

1. Check clearances again between twine arm and starter roll, twine arm and cutter link support, and twine arm to twine arm stop. If twine arm to starter roll dimension has changed due to adjusting twine arm to cutter link support or twine arm stop, adjust shims between twine arm and crossbeam as needed.
2. Adjust twine cutter-to-twine arm. (See ADJUSTING TWINE CUTTER-TO-TWINE ARM in this section.)
3. Install lower drive roll chain.
4. Unlock and close gate.

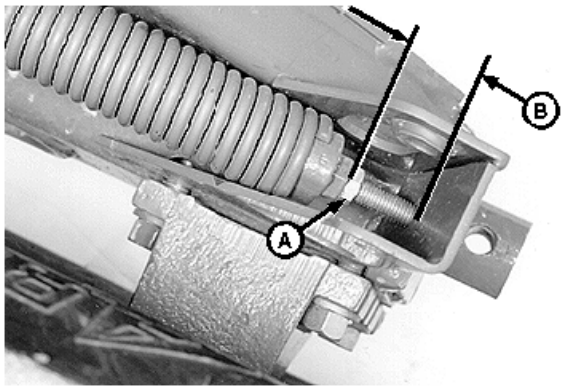
AG,OUMX005,1536 –19–03AUG00–6/6

Adjusting Pickup Float Springs—Regular Pickup (467 and 567)



E39271 –UN–19JUN96

Right-Hand Side



E39270 –UN–19JUN96

Left-Hand Side

A—Jam Nut

B—Float Spring Setting Dimension

NOTE: If equipped with hydraulic pickup lift; Remove cap screw from base end of cylinder (left-hand side) to gain access for spring adjustment.

Dimension (B) is an initial float spring setting for pickup tooth-to-ground clearance of 25—50 mm (1—2 in.) with wheel spindles in the normal position. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)

More spring force will be needed if:

- Operating at pickup tooth-to-ground clearance above 50 mm (2 in.) with wheel spindles in the normal position.
- The baler has been lowered at the wheel spindles to improve feeding. (See BALING SHORT, DRY, SLICK CROPS in Operating the Baler section.)

Less spring force will be needed if:

- The pickup does not lower completely to desired operating height.
- The pickup bounces too much and leaves crop.
- The baler has been raised at the wheel spindles to improve feeding. (See BALING CORNSTALKS in Operating the Baler section.)

1. Loosen jam nut (A).

IMPORTANT: Any dimension less than 60 mm (2-3/8 in.) at the right-hand spring will stretch or weaken the spring.

2. Tighten screw into spring plug until dimension (B), between spring plug and spring anchor, is attained.

	467	567
WITHOUT GAUGE WHEELS		
Right-Hand Side	170 mm (6-11/16 in.)	140 mm (5-1/2 in.)
Left-Hand Side	155 mm (6-3/32 in.)	140 mm (5-1/2 in.)
WITH GAUGE WHEELS		
Right-Hand Side	100 mm (3-15/16 in.)	60 mm (2-3/8 in.)
Left-Hand Side	100 mm (3-15/16 in.)	10 mm (25/64 in.)

3. Tighten jam nut (A).

AG,OUO6059,226 –19–12JUL00–1/1

Adjusting Pickup Float Springs—MEGATOOTH™ Pickup

NOTE: If equipped with hydraulic pickup lift; Remove cap screw from base end of cylinder (left-hand side) to gain access for spring adjustment.

Dimension (B) is an initial float spring setting for pickup tooth-to-ground clearance of 25—50 mm (1—2 in.) with wheel spindles in the normal position. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)

More spring force will be needed if:

- Operating at pickup tooth-to-ground clearance above 50 mm (2 in.) with wheel spindles in the normal position.
- The baler has been lowered at the wheel spindles to improve feeding. (See BALING SHORT, DRY, SLICK CROPS in Operating the Baler section.)

Less spring force will be needed if:

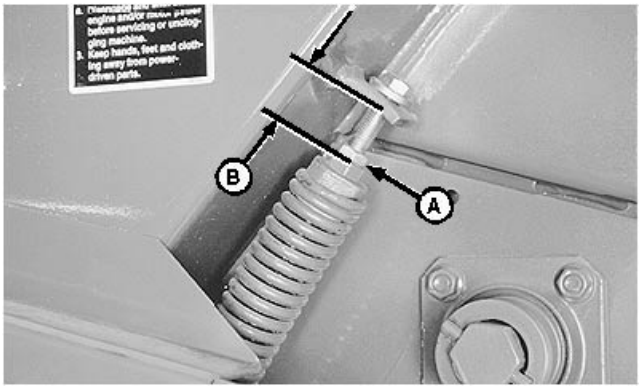
- The pickup does not lower completely to desired operating height.
- The pickup bounces too much and leaves crop.
- The baler has been raised at the wheel spindles to improve feeding. (See BALING CORNSTALKS in Operating the Baler section.)

1. Loosen jam nut (A).

2. Tighten screw into spring plug until dimension (B), between spring plug and spring anchor, is attained.

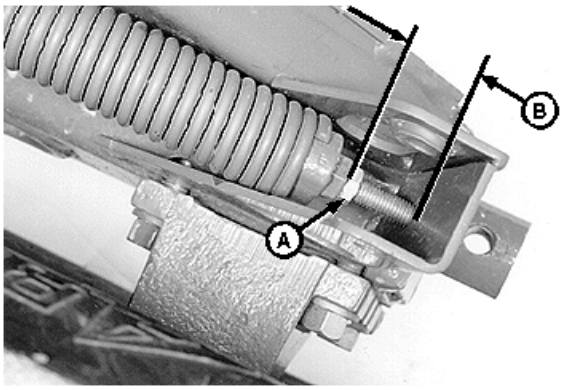
DIMENSION (B)	
467 and 467S (Both Sides)	20 mm (25/32 in.)
567 (Both Sides)	10 mm (25/64 in.)

3. Tighten jam nut (A).



E39271 –UN–19JUN96

Right-Hand Side



E39270 –UN–19JUN96

Left-Hand Side

A—Jam Nut
B—Float Spring Setting Dimension

MEGATOOTH is a trademark of Deere & Company

AG,OUO6059,227 –19–12JUL00–1/1

Adjust Pickup Float Springs—MegaWide Pickup

Dimension (B) is an initial float spring setting for pickup tooth-to-ground clearance of 25—50 mm (1—2 in.) with wheel spindles in the normal position. (See WHEEL SPINDLE POSITIONS in Preparing the Baler section.)

More spring force will be needed if:

- Operating at pickup tooth-to-ground clearance above 50 mm (2 in.) with spindles in the normal position.
- The baler has been lowered at the wheel spindles to improve feeding. (See BALING SHORT, DRY, SLICK CROPS in Operating the Baler section.)

Less spring force will be needed if:

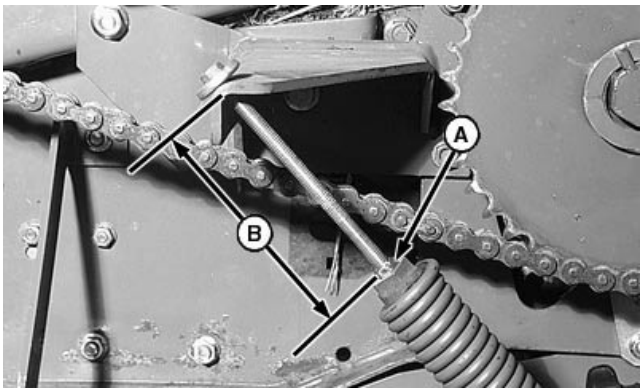
- The pickup does not lower completely to desired operating height.
- The pickup bounces too much and leaves crop.
- The baler has been raised at the wheel spindles to improve feeding. (See BALING CORNSTALKS in Operating the Baler section.)

1. Loosen jam nut (A).

2. Tighten screw into spring plug until dimension (B), between spring plug casting and anchor, is attained. Dimension (B) is intended for pickup tooth ground clearance of 25—50 mm (1—2 in.) with wheel spindles in normal position.

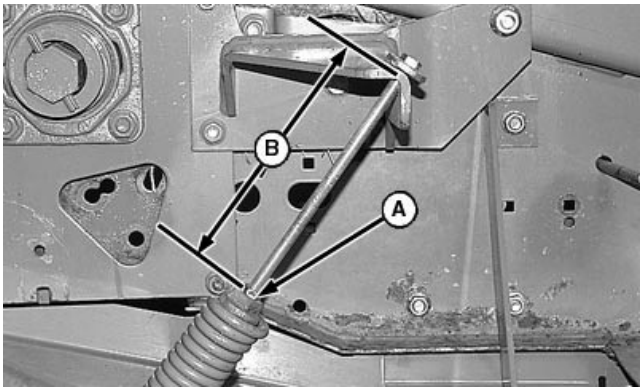
DIMENSION (B)	
467 and 467S (Both Sides)	75 mm (3 in.)
567 (Both Sides)	55 mm (2 in.)

3. Tighten jam nut (A).



E48174 –UN–19JUN00

Left-Hand Side



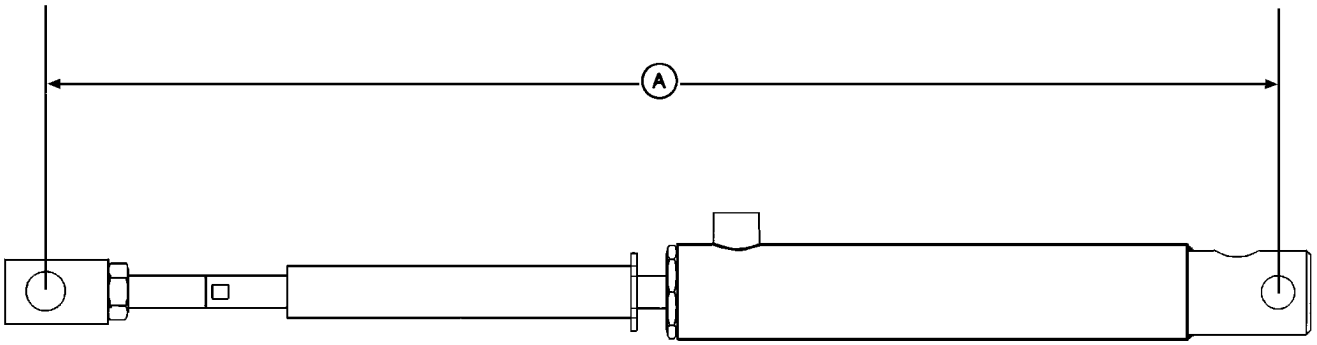
E48175 –UN–19JUN00

Right-hand Side

A—Jam Nut
B—Float Spring Setting Dimension

AG,OUMX005,1537 –19–03AUG00–1/1

Adjusting Initial Length of Hydraulic Lift Cylinder (If Equipped)



E39758 –UN–20FEB96

A—Distance

IMPORTANT: If the hydraulic pickup lift cylinder has been removed, the initial length of cylinder must be adjusted before installing the cylinder.

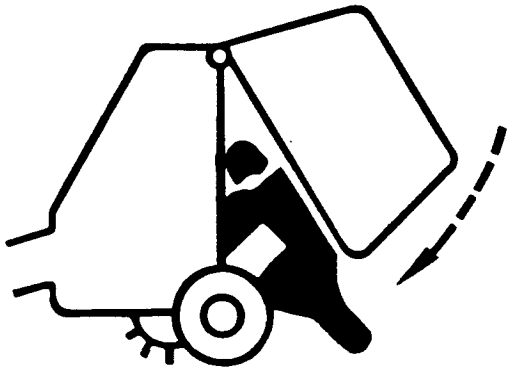
1. Extend cylinder fully.
2. Install cylinder stop, jam nut, washer (MegaWide pickup only) and end block onto cylinder rod.
3. Turn cylinder rod into end block until distance (A), from center of hole in base end of cylinder-to-center hole in end block, is within specifications.

Specification	
Center of Hole in Base End of Cylinder-to-Center Hole in End Block—Distance (Initial Length)	606 mm (23-7/8 in.)

4. Install cylinder on baler.

AG,OUMX005,1538 –19–03AUG00–1/1

Checking Pickup Tooth End Play



TS698 –UN–21SEP89

CAUTION: To avoid injury or death caused by unexpected lowering of the gate, engage gate lock before working on, around, or under gate in raised position.

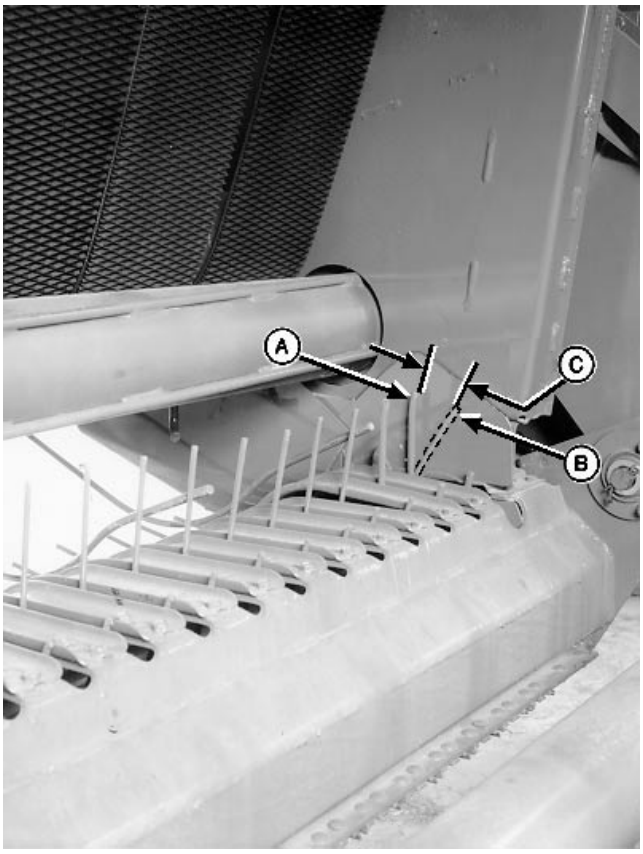
Excessive tooth end play in the feed opening area will reduce bale starting and feeding performance. Worn cams, spider bores, cam arm shafts, and cam bearings contribute to excessive tooth end play.

To check for end play:

1. Fully raise and lock gate.
2. Raise the pickup to transport position.

CAUTION: Never use any type of tool or wrench on shaft while tractor engine is running. Always remove tool from shaft as soon as you are finished using it.

3. Put a wrench on the gear case output shaft. Turn wrench clockwise until a row of pickup teeth are straight up.
4. Rotate the tooth bar forward, by hand, until the rotation has stopped. Mark the position of the outside tooth tip (A) on the end stripper panel.
5. Rotate the tooth bar rearward, by hand, until the rotation has stopped. Mark the position of the outside tooth tip (B) on the end stripper panel. Measure and record the distance between marks.
6. Mark the row and repeat steps 3 through 5 on the remaining rows of teeth.
7. If the average distance (C) between marks exceeds specifications, check wear in cam(s), spider bores, cam arm shafts, and cam bearings, and replace as needed.



E40646 –UN–15JUL96

A—Tooth Tip Position
B—Tooth Tip Position
C—Dimension

Specification	
Marks on End Stripper Panel—Distance	51 mm (2 in.)

Continued on next page

8. Return pickup to operating height.

9. Remove wrench from output shaft.

AG,OUO6017,1745 –19–12NOV99–2/2

Adjusting Gate Latch Stop

NOTE: Door is removed for illustration purposes only.

1. Remove any material buildup between gate and frame.

Continued on next page

AG,OUMX005,1539 –19–03AUG00–1/2

2. Close and latch gate. Push gate latch (A) forward by hand to remove slack. If distance between gate latch stop (B) and stop pad (C) is not within specifications, shim as necessary using the following instructions:

Specification	
Gate Latch Stop-to-Stop Pad—Distance	1—3 mm (1/32—1/8 in.)

   a. Loosen cap screw (D). *(Shims are slotted so cap screw does not have to be removed.)*

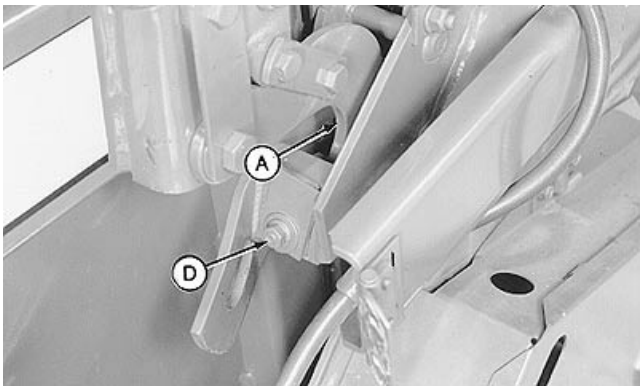
NOTE: If proper adjustment cannot be obtained, check for twisted gate by closing gate with tractor engine off. If there is a gap on one side when other side is contacting, see your John Deere dealer for correct procedure to straighten gate.

   b. If distance is greater than specified, transfer shims from storage position to shimming position until specification is obtained.

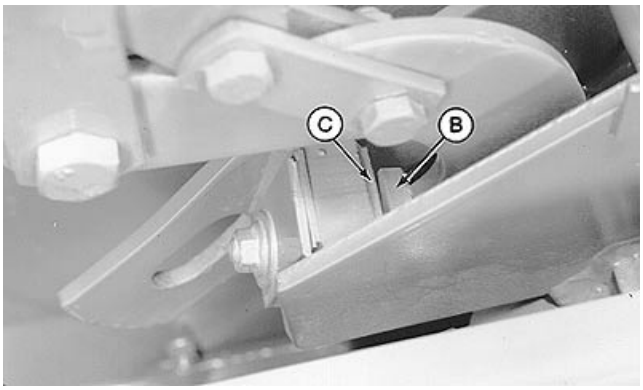
      If distance is less than specified, transfer shims from shimming position to storage position until specification is obtained.

   c. Center shims and stop pad and tighten cap screw (D). If necessary, repeat procedure on opposite side.

3. Check belt tracking. (See CHECKING BELT TRACKING in this section.)



E40982 –UN–04DEC96



E40983 –UN–04DEC96

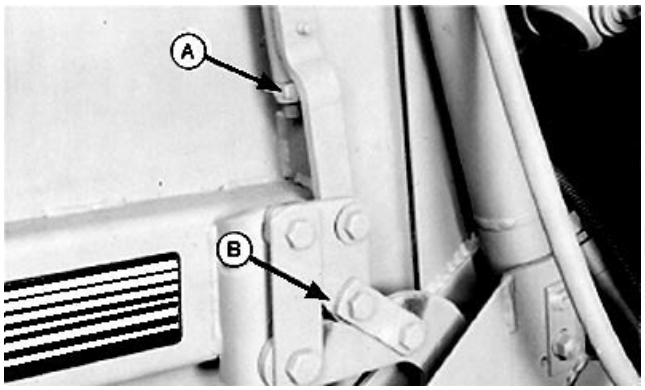
A—Gate Latch
B—Gate Latch Stop
C—Stop Pad
D—Cap Screw

AG,OUMX005,1539 –19–03AUG00–2/2

Adjusting Gate Latch Linkage

1. Close gate completely. Make sure gate cylinders are fully retracted.
2. Adjust nut (A) until plate (B) just touches relief notch in hook.
3. Repeat on opposite side.

A—Nut
B—Plate



E39717 –UN–06FEB96

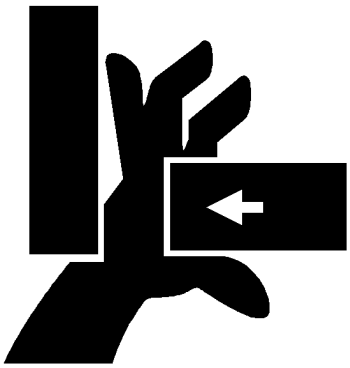
AG,OUO6059,168 –19–22JUN00–1/1

Replacing Twine Wrap Sensor

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

1. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

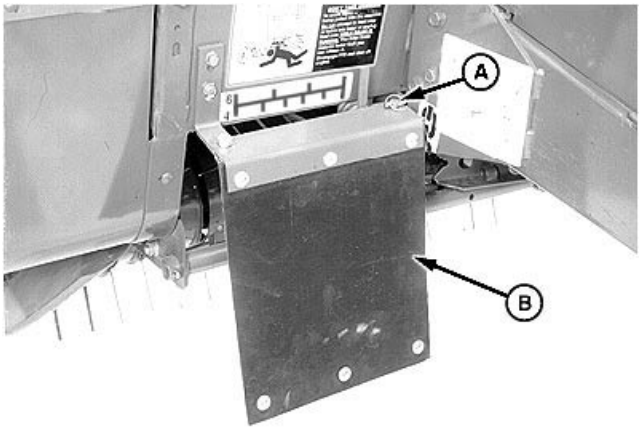


E47598 –UN–07JAN00

Continued on next page

AG,OUMX005,1541 –19–03AUG00–1/5

2. MEGATOOTH™ pickup; Remove quick lock pin (A) and rotate curtains (B) away from front frame.



E48317 –UN–06JUL00

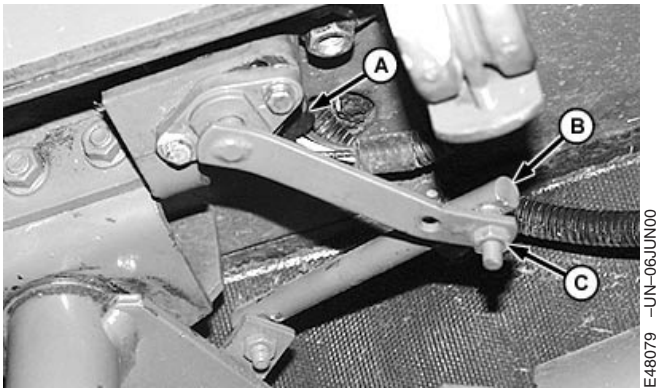
Right-Hand Side (467) Shown

AG,OUMX005,1541 –19–03AUG00–2/5

3. Remove nut (C) and disconnect link (B).

4. Disconnect wiring connector (A).

A—Wiring Connector
B—Link
C—Nut

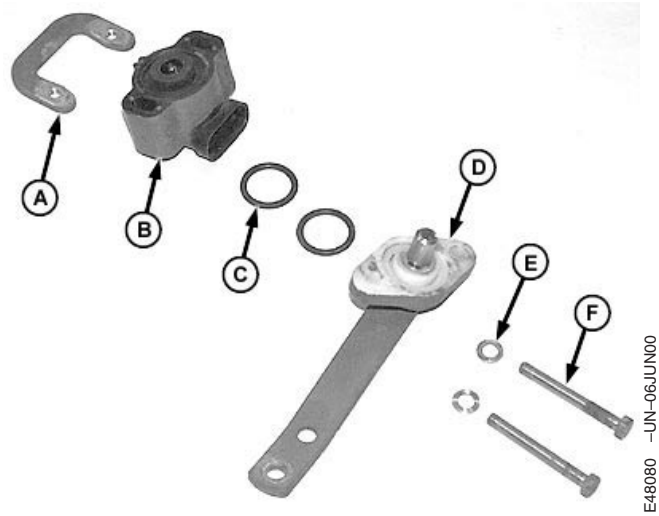


E48079 –UN–06JUN00

AG,OUMX005,1541 –19–03AUG00–3/5

5. Remove parts (A—F). Replace sensor (B).

A—Mounting Strap
B—Sensor
C—O-Ring (2 used)
D—Arm Assembly
E—Washer (2 used)
F—Mounting Screw (2 used)



E48080 –UN–06JUN00

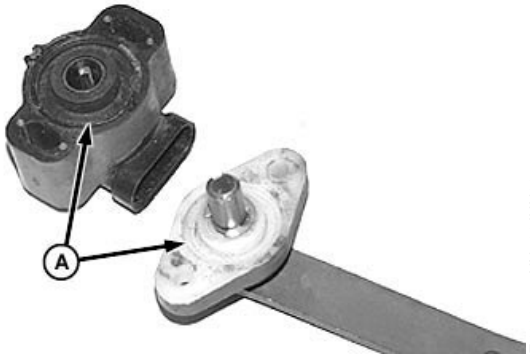
Continued on next page

AG,OUMX005,1541 –19–03AUG00–4/5

6. Install new sensor in reverse order of removal using the following special instructions:

   - Make sure O-rings are inserted in grooves (A).
   - Adjust sensor. (See ADJUSTING TWINE WRAP SENSOR [CHANNEL 03] in this section.)

A—Grooves



AG,OUMX005,1541 –19–03AUG00–5/5

Replacing Bale Diameter Sensor

1. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

AG,OUMX005,1540 –19–03AUG00–1/4

NOTE: Sensor is located on right-hand side of tension arm.

2. Disconnect wiring connector (A).

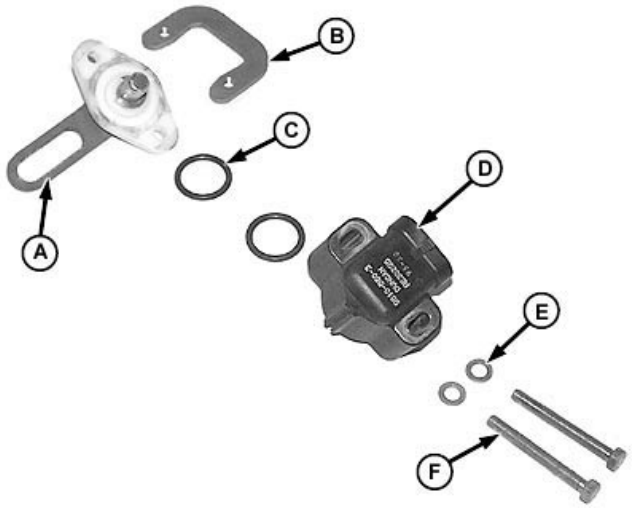
A—Wiring Connector

Continued on next page

AG,OUMX005,1540 –19–03AUG00–2/4

3. Remove parts (A—F). Replace sensor (D).

A—Arm Assembly
B—Mounting Strap
C—O-Ring (2 used)
D—Sensor
E—Washer (2 used)
F—Mounting Screw (2 used)

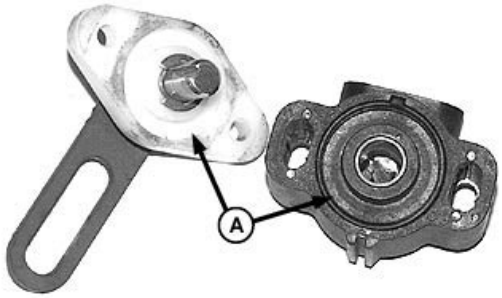


AG,OUMX005,1540 –19–03AUG00–3/4

4. Install new sensor in reverse order of removal using the following special instructions:

   - Make sure O-rings are inserted in grooves (A).
   - Adjust sensor. (See ADJUSTING BALE DIAMETER SENSOR [CHANNEL 05] in this section.)

A—Grooves



AG,OUMX005,1540 –19–03AUG00–4/4

Replacing Bale Shape Sensor

1. Engage gate lock and raise tension arm.

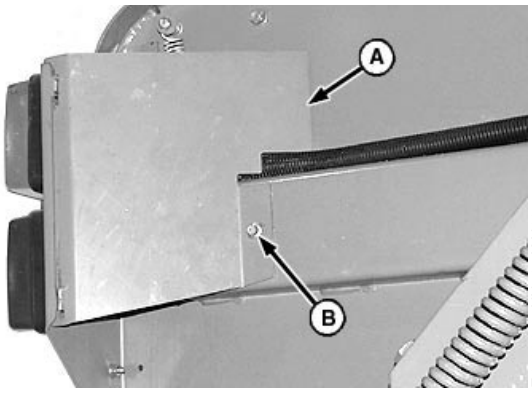
2. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

Continued on next page

AG,OUMX005,1542 –19–03AUG00–1/5

3. To replace sensor remove rolling thread cap screw (B). Rotate shield (A) away from baler.

A—Shield
B—Rolling Thread Cap Screw

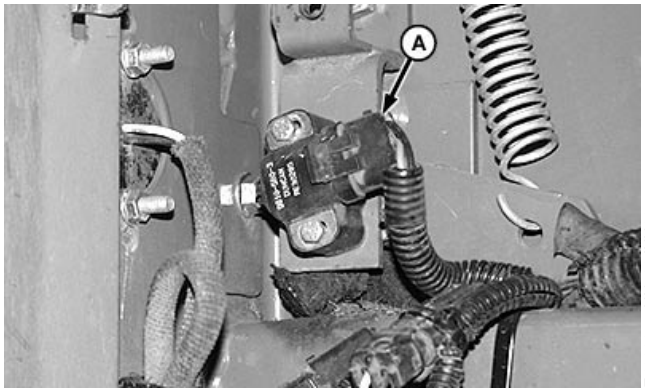


Right-Hand Side Shown

AG,OUMX005,1542 –19–03AUG00–2/5

4. Disconnect wiring connector (A).

A—Sensor

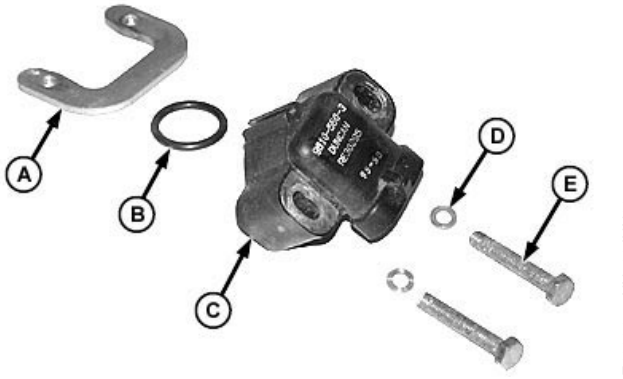


Right-Hand Side Shown

AG,OUMX005,1542 –19–03AUG00–3/5

5. Remove parts (A—E).

A—Mounting Strap
B—O-Ring
C—Sensor
D—Washer (2 used)
E—Mounting Screw (2 used)



Continued on next page

AG,OUMX005,1542 –19–03AUG00–4/5

6. Install new sensor in reverse order of removal using the following special instructions:

   - Make sure O-ring is inserted in groove (A).
   - Adjust sensor. (See ADJUSTING BALE SHAPE SENSOR [CHANNELS 07 and 09] in this section.)

   A—Groove

E48085 –UN–06JUN00

AG,OUMX005,1542 –19–03AUG00–5/5

Replace Gate Latch Switch(es)

NOTE: 457, 457S, and 557 have one gate latch switch located on right-hand side. 467, 467S, and 567 have two switches, one on each side.

1. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

NOTE: Label wires before disconnecting from switch to ensure proper connection to new switch terminals.

2. Label wires.

Continued on next page

AG,OUO6017,1095 –19–19AUG99–1/2

3. Remove mounting hardware and bracket with switch (A).

4. Disconnect wires from switch.

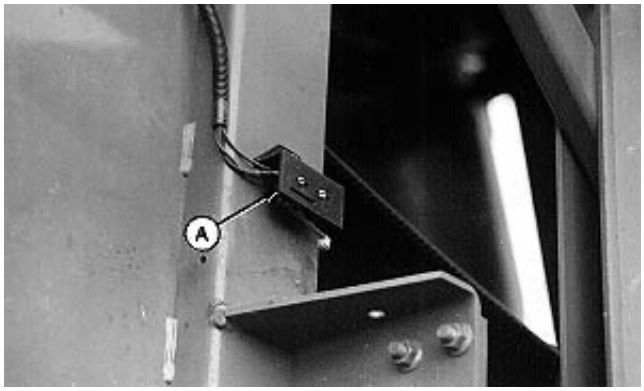
5. Remove switch from mounting bracket.

6. Install new switch in reverse order of removal using the following special instructions:

   - Adjust switch or bracket position for proper operation. (See ADJUST GATE LATCH SWITCH(ES) Group 21 of this section.)
   - Confirm switch operation by taking test readings using monitor-controller. (See TEST GATE LATCH AND OVERSIZE BALE SWITCHES [CHANNELS 11, 12 AND 13] in Group 21 of this section.)

A—Switch

457, 457S, and 557



467, 467S, and 567

AG,OUO6017,1095 –19–19AUG99–2/2

Replace Oversize Bale Switch

1. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

NOTE: Label wires before disconnecting from switch to ensure proper connection to new switch terminals.

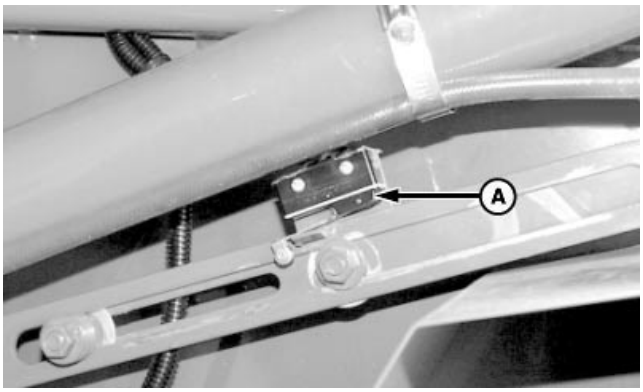
2. Label wires.

Continued on next page

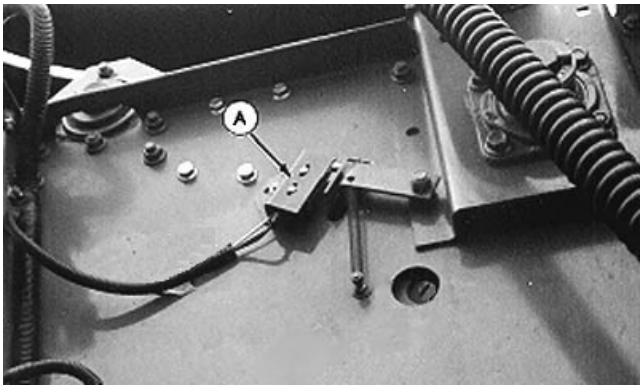
AG,OUO6017,1097 –19–19AUG99–1/2

3. Remove mounting hardware and bracket with switch (A).
4. Remove switch from mounting bracket.
5. Disconnect wires from switch.
6. Install new switch in reverse order of removal using the following special instructions:
   - Adjust switch or bracket position for proper operation. (See ADJUST OVERSIZE BALE SWITCH in Group 21 of this section.)
   - Confirm switch operation by taking test readings using monitor-controller. (See TEST GATE LATCH AND OVERSIZE BALE SWITCHES [CHANNELS 11, 12 AND 13] in Group 21 of this section.)

A—Oversize Bale Switch



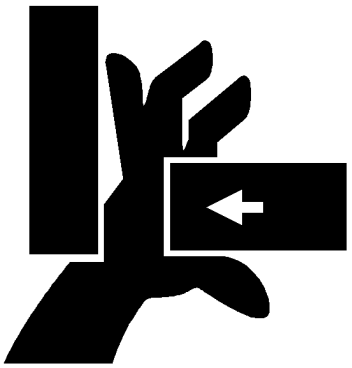
457, 457S, and 557



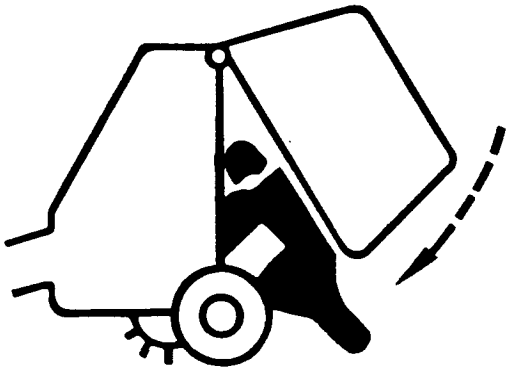
467, 467S, and 567

AG,OUO6017,1097 –19–19AUG99–2/2

Adjusting Twine Wrap Sensor (Channel 03—With Sound)



E47598 –UN–07JAN00



TS698 –UN–21SEP89

CAUTION: Twine arms can move unexpectedly when twine arm power is on. Stay out of the path of twine arms at all times when twine arm power is on. During service or adjustment procedures for twine arms or twine cutter mechanism, turn off power to twine arms BEFORE placing your hands in the path of twine arm travel.

If there is crop material which is holding twine arms from moving freely during twine arm cycle, it is recommended that twine arms be manually positioned to release any "hold" they may have on the crop material. Turn off power to twine arms. This will help to make the unplugging operation easier and prevent twine arms from moving unexpectedly while your hands may be in the path of the twine arms. Stay out of the path of twine arms at all times when power to twine arms is ON.

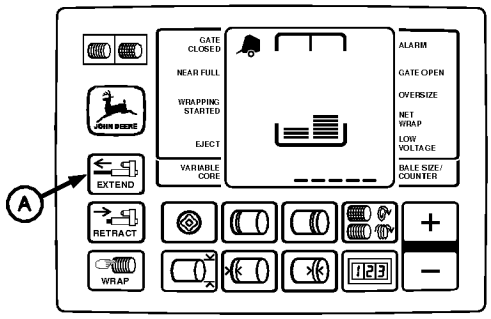
To avoid injury or death caused by unexpected lowering of the gate, engage gate lock before working on, around, or under gate in raised position.

1. Raise and lock gate. Shut off tractor engine.
2. Turn tractor key to ON position. Do not start engine.
3. Set selector switch toward TWINE symbol to turn monitor-controller ON.
4. Lower pickup to prevent twine arms from bending pickup teeth.

Continued on next page

5. Press monitor-controller EXTEND key (A) and move twine arms to right-hand side of baler, past center position.

A—EXTEND Key



E47524 –UN–07JAN00

AG,OUMX005,1543 –19–03AUG00–2/5

NOTE: Twine arms have a short range of free travel when stationary. Setting should be made with arm position with slack removed toward right-hand sidesheet.

Twine arm viewed from rear of baler.

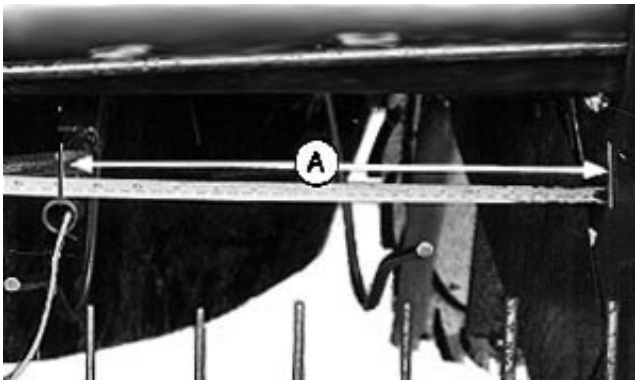
Dimension (A) is the distance between the center of the rear twine arm and the right-hand sidesheet.

6. Using the RETRACT key on the monitor-controller, move twine arms to the **left** until dimension (A) is to distance specified.

NOTE: If dimension (A) is exceeded while moving twine arms to the left, stop, move back to the right past dimension, then left again to dimension.

DIMENSION (A)	
467 and 467S	387 mm (15-1/4 in.)
567	782 mm (30-25/32 in.)

7. When twine arm is at specified position, set monitor-controller selector switch to OFF (centered) position.



E38430 –UN–12DEC95

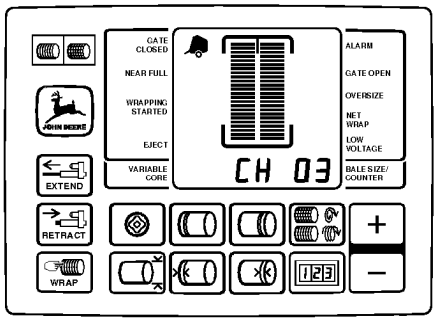
467 Shown

A—Distance Between Center of Rear Twine Arm and Right-Hand Sidesheet

Continued on next page

AG,OUMX005,1543 –19–03AUG00–3/5

8. Press and hold DEERE key while setting selector switch toward TWINE symbol to turn monitor-controller ON. Continue to hold DEERE key and press PLUS key until "CH 03" appears in the digital display.



E47525 –UN–07JAN00

AG,OUMX005,1543 –19–03AUG00–4/5

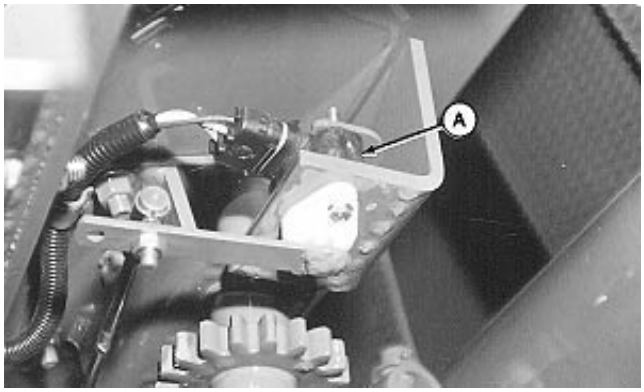
9. If buzzer does not emit a "setup tone" and display readout is above or below specified setup value, twine wrap sensor (A) is out of adjustment.

TWINE WRAP SENSOR SETUP		
Baler Model	**Channel**	**Value**
467 and 467S	03	174
567	03	128

10. To adjust sensor, loosen mounting cap screws. Rotate sensor until buzzer emits a tone and the specified setup value shows in the digital display. Tighten mounting cap screws.

11. Move twine arms back to “home” position. Unlock and lower gate.

12. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

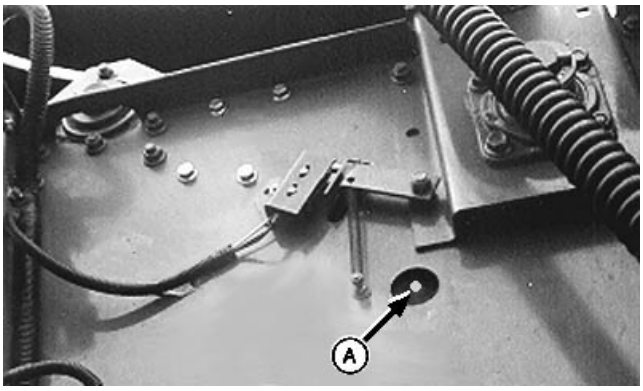


E38442 –UN–25MAR95

A—Twine Wrap Sensor

AG,OUMX005,1543 –19–03AUG00–5/5

Adjusting Bale Diameter Sensor (Channel 05—With Sound)



E39729 –UN–14FEB96

1. Lock gate in closed position.

2. Start tractor engine.

IMPORTANT: Calibration hole is an “open” hole, not one with a cap screw.

3. Using tractor selector valve, raise belt tension arm until calibration hole (A) in tension arm is centered in baler access hole.

NOTE: If calibration hole in tension arm goes past baler access hole while raising tension arm, lower tension arm and repeat Step 3 as necessary.

4. Engage tractor parking brake and/or place transmission in "Park".

5. Shut off tractor engine.

6. Turn tractor key to ON position. Do not start tractor engine.

7. Press and hold DEERE key (B) while setting selector switch toward TWINE or NET symbol to turn monitor-controller ON.

8. Continue to hold DEERE key (B) and press PLUS key (C) until "CH 05" appears in digital display. Release DEERE key (B) and view bale size sensor number.

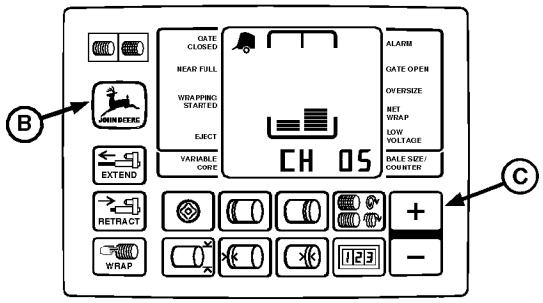
9. Loosen mounting hardware and rotate sensor (D) fully clockwise. Rotate sensor counterclockwise until "208" is displayed and a steady tone sounds.

NOTE: If “208” is exceeded while rotating sensor counterclockwise or while tightening screws, rotate sensor clockwise and repeat Steps 9 and 10 as necessary.

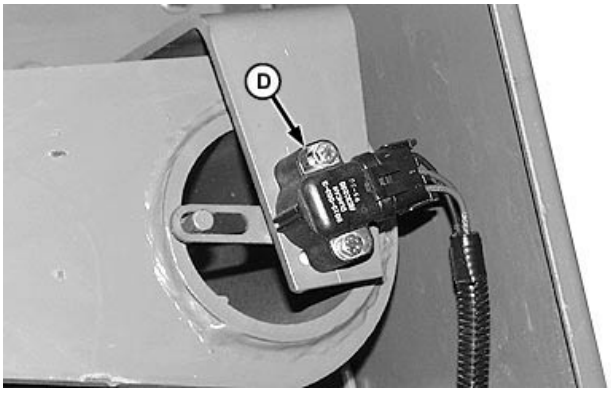
10. Tighten sensor mounting screws.

11. To check adjustment:

    - Lower belt tension arm using tractor selector valve.



E47526 –UN–07JAN00



E48037 –UN–22MAY00

A—Calibration Hole
B—Monitor DEERE Key
C—Monitor PLUS Key
D—Sensor

Continued on next page

- Raise belt tension arm until calibration hole appears at bottom of baler access hole.

NOTE: If tension arm is raised too fast and monitor-controller setting goes above "208", the steady tone will not sound at the correct time.

- Continue very slowly raising tension arm and STOP raising tension arm when "208" is displayed on monitor-controller or a steady tone sounds.

12. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position.

13. Lower belt tension arm using tractor selector valve.

14. Unlock gate.

AG,OUMX005,1544 –19–03AUG00–2/2

Adjusting Bale Shape Bar Display—Field Procedure (Channels 07 and 09)

The best bales will be formed at maximum density with dry hay. Check and adjust the bale density to the highest pressure that will ever be used. It is suggested to set baler at maximum density. (See ADJUSTING BALE DENSITY in Operating the Baler section.)

IMPORTANT: Calibration should be done with variable core off (if equipped).

When in the calibration mode neither the automatic wrap cycle or oversize bale warning will function. There is a risk of making an oversize bale without knowing and causing damage to baler. Observe the mechanical size indicator on front of baler and avoid baling near the red zone. It may be necessary to make two bales to adjust both sensors.

NOTE: Proper windrow formation is important for this adjustment. Windrow width MUST be half or less than half of the bale chamber width OR full width. If it is full width, it must be uniform density.

1. Begin baling and make a 50—55 in. (1.27—1.40 m) bale in the chamber.
2. Stop tractor leaving engine running.
3. Turn monitor-controller off.
4. Press and hold DEERE key while setting selector switch to TWINE or NET mode to turn monitor-controller on in calibration mode.
5. Continue to hold DEERE key and press PLUS key until “CH 07” appears in the digital display.
6. Release DEERE key and begin driving down the windrow to feed crop into the extreme right side of baler. Be sure to crowd the end of the pickup to completely fill the right end of bale. If necessary, allow some hay to be missed off the end of the pickup to ensure maximum end density.
7. Drive until calibration numbers on digital display stop increasing. Continue for a short distance, stop, and disengage PTO. The belt on right side is now at its tightest.
8. The number on monitor-controller should be “176” and a tone should be heard.

   If “176” is not displayed:

   - Shut off tractor engine.
   - Press and hold DEERE key while setting selector switch to TWINE or NET symbol to turn on monitor-controller.
   - Continue to hold DEERE key and press PLUS key until “CH 07” appears in digital display.
   - Loosen right-hand bale shape sensor.
   - Rotate sensor very slowly until the number “176” appears in digital display and a tone is heard.

IMPORTANT: Do not overtighten sensor or damage may occur.

   - Tighten sensor maintaining “176” is display.

NOTE: It may be necessary to return monitor-controller to normal operating mode to finish bale in baler to avoid creating an oversize bale.

9. Repeat procedure for left side except use “CH 09”.
10. After bale shape sensors have been adjusted, turn monitor-controller off to exit calibration mode, then back on, for normal operation.

AG,OUO6017,1753 –19–12NOV99–1/1

Adjusting Bale Shape Sensor (Channels 07 and 09—With Sound)

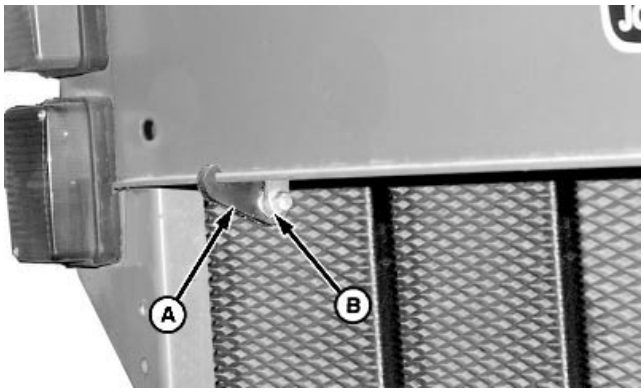
NOTE: Number of bale shape indicator "bars" displayed is 24.

E97193 Bale Shape Gauge Strap (A) is available through your John Deere dealer.

1. Use E97193 Bale Shape Gauge Strap (A):

   a. Install strap (A) over roller bearing (B).

   b. Attach end of strap over baler frame cross-member. Make sure lip of cross-member is seated in notch of Strap.



Left-Hand Side Shown

A—Bale Shape Gauge Strap
B—Bearing

Continued on next page

If Bale Shape Gauge Strap (E97193) is not available:

a. Put a board approximately 51 x 102 x 457 mm (2 x 4 x 18 in.) between roller bearing and belt as shown.

b. Position board to hold bale shape sender arm so rear of roller bearing is 62 mm (2-7/16 in.) (A) from rear edge of panel (B).

2. Press and hold DEERE key (C) while setting selector switch to TWINE or NET symbol to turn monitor-controller ON.

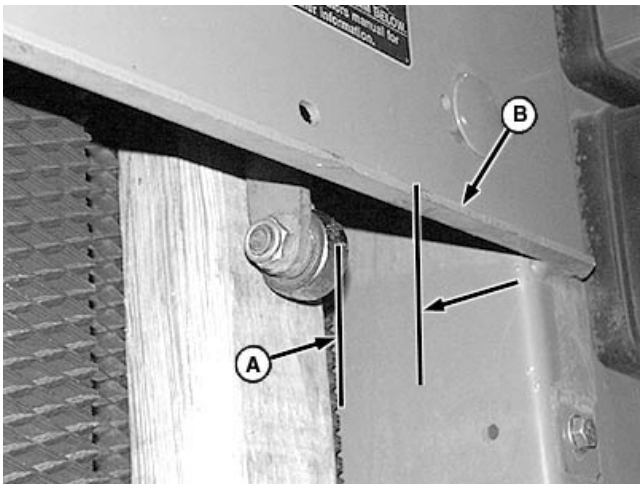
3. Continue to hold DEERE key (C) and press PLUS key (D) until:

   - "CH 07" is displayed to adjust right side
   - "CH 09" is displayed to adjust left side

4. Release DEERE key (C) to display sensor value.

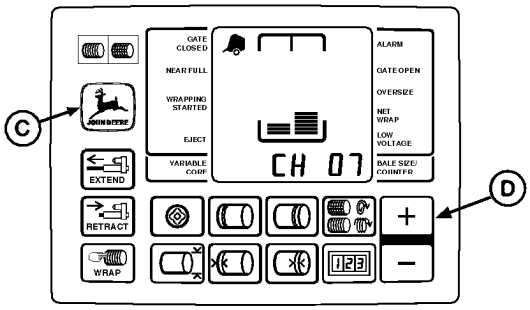
5. If buzzer does not emit a “setup tone” and display readout is above or below setup value of “176", bale shape sensor (E) is out of adjustment.

A—Dimension
B—Rear Edge of Panel
C—DEERE Key
D—PLUS Key



E47620 –UN–07JAN00

Right-Hand Side Shown

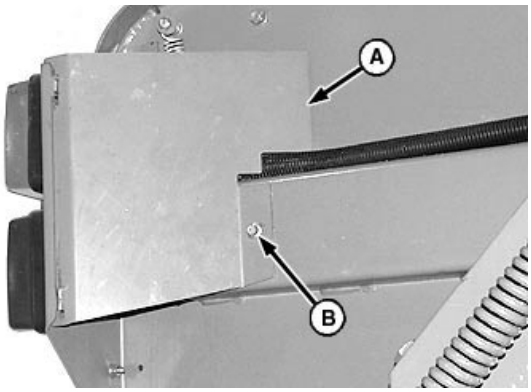


E47528 –UN–07JAN00

Continued on next page

6. To adjust sensor, remove rolling thread cap screw (B). Rotate shield (A) away from baler.

A—Shield
B—Rolling Thread Cap Screw



Right-Hand Side Shown

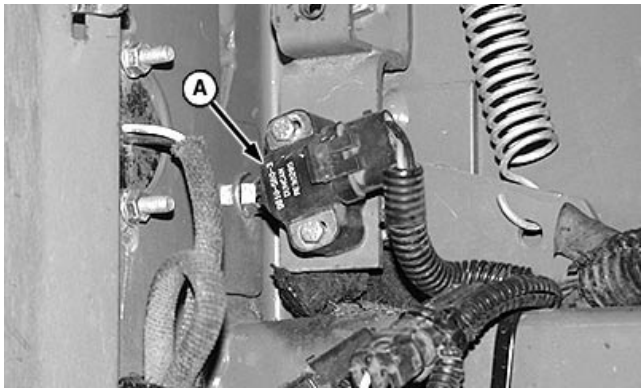
AG,OUMX005,1545 –19–03AUG00–3/4

7. Loosen sensor mounting hardware and rotate sensor (A) until buzzer emits a tone and “176” is displayed. Tighten sensor mounting hardware.

8. Install shield by rotating toward baler and fastening with mounting cap screw.

9. Repeat procedure to adjust opposite side. Use appropriate channel for adjustment.

A—Bale Shape Sensor



AG,OUMX005,1545 –19–03AUG00–4/4

Testing Gate Latch and Oversize Bale Switches—Monitor-Controller Assisted Test (Channels 11, 12, and 13)

NOTE: Microswitch position and operation can be checked by using the monitor-controller diagnostic channels.

1. Start tractor engine.

Continued on next page

AG,OUMX005,1546 –19–03AUG00–1/2

2. Press and hold DEERE key (A) while setting selector switch to TWINE or NET symbol to turn monitor-controller ON.

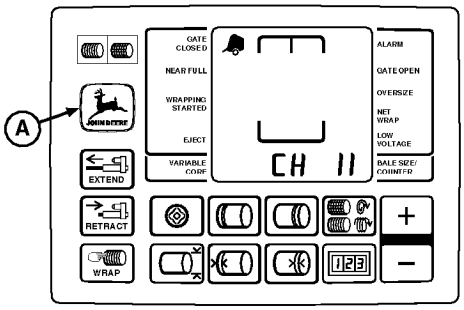
3. Continue to hold DEERE key and press PLUS key until digital display shows desired channel.

4. Release key and view reading (gate closed).

NOTE: Tension arm must be fully raised for oversize bale switch to be closed.

5. Open gate and view reading or listen for tone.

6. If readings are not as shown, adjust switch position and test again. (See ADJUSTING GATE LATCH SWITCHES and ADJUSTING OVERSIZE BALE SWITCHES in this section.)



E47607 –UN–07JAN00

A—DEERE Key

Diagnostic Channel	Function	Gate Closed Reading	Gate Open Reading
11	Oversize Bale Switch	12 (Switch Open)	00 (Zero) (Switch Closed) (Tone)
12	Right-Hand Gate Switch	00 (Zero) (Switch Closed)	12 (Switch Open) (Tone)
13	Left-Hand Gate Switch	00 (Zero) (Switch Closed)	12 (Switch Open) (Tone)

7. If switch adjustment does not produce normal readings:

   a. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

   b. Check for correct wiring connections. (See WIRING HARNESS DIAGRAM—BALER in this section.)

   c. Check wiring harness for cuts and breaks.

   d. Check harness connectors for damaged (pushed back) terminals.

   e. Replace switch if necessary. (See your John Deere dealer.)

AG,OUMX005,1546 –19–03AUG00–2/2

Testing Twine Wrap Actuator Current (Channel 14)

IMPORTANT: Current overload protection to twine actuator is bypassed when using channel 14. Extended use of channel 14 may cause actuator damage.

NOTE: Channel 14 allows operator use of EXTEND and RETRACT keys to position twine actuator for service.

This test is used to determine the working condition of the actuator through its entire range of operation.

To test actuator (motor and linkage):

1. Turn tractor key to ON position. Do not start tractor engine.

2. Press and hold DEERE key (A) while setting selector switch to TWINE symbol to turn monitor-controller ON.

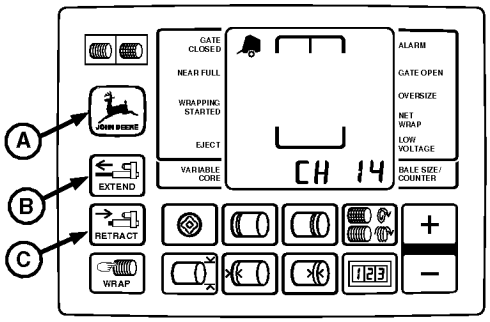
3. Continue to hold DEERE key and press PLUS key until "CH 14" appears in digital display.

NOTE: Current flow readings shown on digital display are relative numbers, not indications of measurable units (amps).

4. Release DEERE key; digital display will change to show actuator static current flow reading of "0" to "1".

5. Use EXTEND and RETRACT keys (B and C) to operate actuator in both directions. Display should show a current flow reading between "4" and "7" while actuator motor is operating during mid stroke (no load).

   - Below normal readings indicate low tractor voltage, or poor or corroded harness connections
   - Above normal readings indicate binding linkage or partially shorted motor windings
   - Current spike reading indicates mechanical obstruction to linkage



E47604 —UN—07JAN00

A—DEERE Key
B—EXTEND Key
C—RETRACT Key

Continued on next page

NOTE: Twine actuator is at full stroke position when actuator is fully extended.

6. Continue to operate actuator to full stroke position. Display should show stall (*load*) current reading between "40" and "55".

   - Below normal reading indicates bad or corroded harness connections
   - Above normal reading indicates partially shorted motor windings or actuator binding

7. Press EXTEND or RETRACT keys to move twine arms to "home" position.

8. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

AG,OUO6059,247 –19–17JUL00–2/2

Testing Tractor Convenience Outlet Voltage (Channel 15)

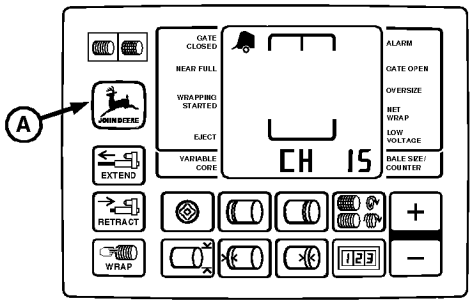
Complete the following check to determine if the convenience outlet provides adequate power to the BALETRAK *PLUS*® system.

1. Start tractor engine.
2. Press and hold DEERE key (A) while setting selector switch to TWINE symbol to turn monitor-controller ON.
3. Continue to hold DEERE key and press PLUS key until "CH 15" appears in the digital display.
4. Release DEERE key and view voltage readout.
5. Using EXTEND key, extend twine actuator slightly.
6. Push and hold RETRACT key until actuator stalls out in the cutoff position and note voltage displayed. Avoid holding the RETRACT key after actuator stalls out for more than 5 seconds.

Specification

Convenience Outlet—Voltage (Minimum)	9.7 V

7. If voltage is less than specifications, install Convenience Outlet Kit AE50549. Only this kit should be used to provide a convenience outlet due to its wire size, lack of splices and circuit breaker included in this kit. When installing this kit, attach power and ground wires directly to battery terminal clamp bolts, only. (See TRACTOR CONVENIENCE OUTLET in Preparing the Tractor section.)
8. Set monitor-controller selector switch to OFF (centered) position. Turn off tractor engine and remove key.



E47602 –UN–07JAN00

A—DEERE Key

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AG,OUMX005,1547 –19–03AUG00–1/1

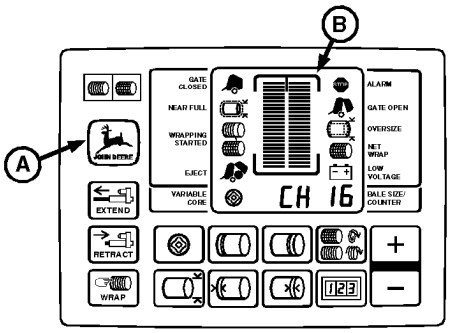
Testing Liquid Crystal Display (LCD) Panel (Channel 16)

Use the following test procedure to check if a segment of the LCD panel has failed.

1. Turn tractor key to ON position. Do not start tractor engine.
2. Press and hold DEERE key (A) while setting selector switch to TWINE or NET symbol to turn monitor-controller ON.
3. Continue to hold DEERE key (A) and press PLUS key until "CH 16" appears in digital display.

NOTE: Number of bale shape indicator “bars” displayed is 24 bars per side.

4. Release keys and view entire LCD panel (B). Make sure all segments and indicators are displayed. If not, see your John Deere dealer.
5. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E47529 –UN–07JAN00

A—DEERE Key
B—LCD Panel

AG,OUMX005,1548 –19–03AUG00–1/1

Adjusting Oversize Bale Switch

1. Close and latch gate.

2. Raise oversize bale lever (A) to dimension (B) above lower end of slot.

Specification	
Lever-to-Lower End of Slot—Dimension	13 mm (0.512 in.)

NOTE: Gate must be closed for oversize bale indicator to be displayed.

3. Check bale lever-to-switch roller contact point. The switch contacts should be closed (OVERSIZE BALE indicator/alarm must be activated on the monitor-controller) and clearance (C) between switch arm and switch body within specifications.

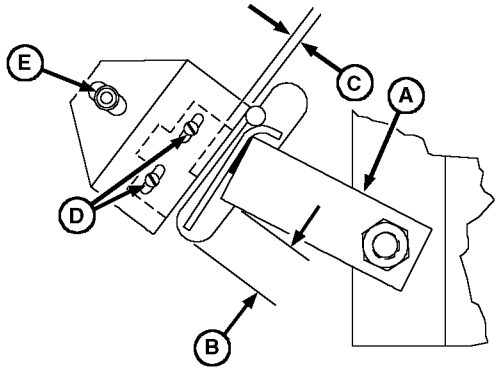
Specification	
Switch Arm-to-Switch Body—Clearance	0.79—2.38 mm (0.030—0.100 in.)

4. If necessary, loosen switch screws (D) and/or bracket cap screw (E). Position switch so bale lever contacts roller at point shown.

IMPORTANT: Switch or switch bracket must not interfere with bale lever at any point of lever travel or damage to switch may occur.

5. Raise lever to the top of slot to check for interference and binding. Adjust switch if necessary.

6. Confirm switch operation by taking test readings using monitor-controller. (See TESTING GATE LATCH AND OVERSIZE BALE SWITCHES [CHANNEL 11, 12 AND 13] in this section.)



E48030 –UN–15MAY00

A—Lever
B—Dimension, 13 mm (0.512 in.)
C—Clearance
D—Switch Screws
E—Cap Screw

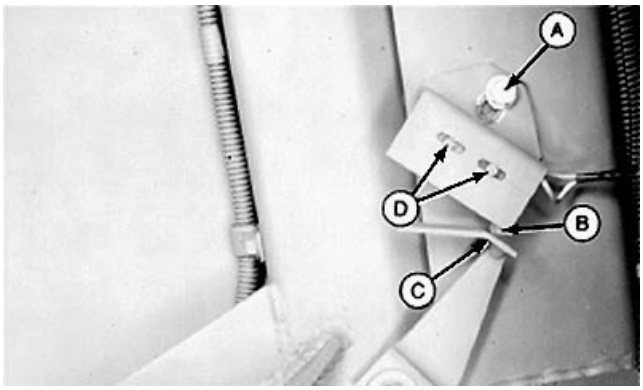
AG,OUMX005,1549 –19–03AUG00–1/1

Adjusting Gate Latch Switches

1. Close and latch gate. (*Gate cylinders should be fully retracted.*)
2. If necessary, loosen screws (D) and move switch front-to-rear so roller (B) is centered on short leg of ramp (C).
3. Push switch arm against switch body and measure clearance between roller and ramp. Clearance should meet specifications.

Specification	
Roller-to-Ramp—Clearance	0.05—2.00 mm (0.02—0.08 in.)

4. Loosen cap screw (A) and adjust switch up-and-down to obtain specified clearance.
5. Repeat on opposite side.
6. Confirm switch operation by taking test readings using monitor-controller. (See TESTING GATE LATCH AND OVERSIZE BALE SWITCHES—MONITOR ASSISTED [CHANNELS 11, 12 AND 13] in this section.)



E32156 –UN–07FEB96

A—Cap Screw
B—Roller
C—Ramp
D—Screws

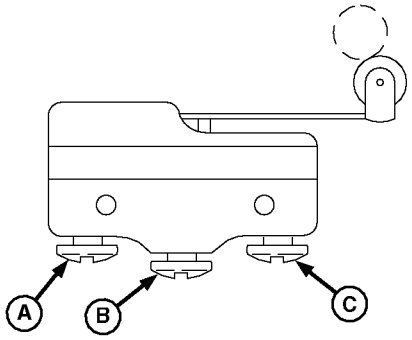
AG,OUO6059,177 –19–22JUN00–1/1

Checking Microswitches

NOTE: Label wires before disconnecting from switch to ensure proper connection to switch terminals.

Only terminals (A and B) are used.

1. Disconnect all wires from switch.
2. Attach continuity tester leads to common (A) and normally open (B) terminals.
   - When switch lever is released, there should be no continuity through the switch.
   - When lever is depressed (click is heard), there should be continuity through the switch.
3. Move lead from normally open (B) to normally closed (C) terminal.
   - When switch lever is released, there should be continuity through the switch.
   - When lever is depressed (click is heard), there should be no continuity through the switch.
4. If continuity test results are not as described, replace switch.



E38432 –UN–21FEB95

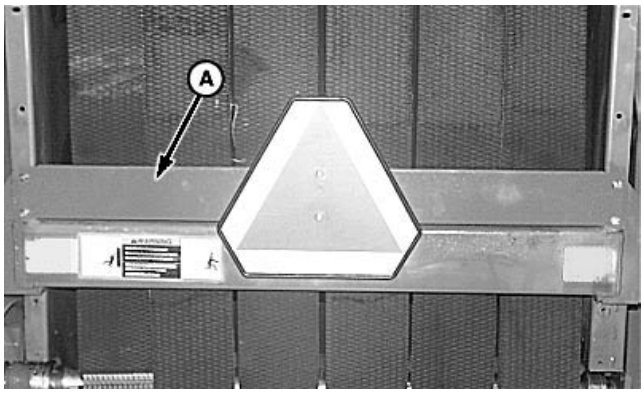
A—Common Terminal
B—Normally Open Terminal
C—Normally Closed Terminal

AG,OUO6059,178 –19–22JUN00–1/1

Raising Gate With Hoist

1. Remove four round head bolts and top belt shield (A) with SMV sign.
2. Wrap chain hoist around cross frame member and raise gate.
3. When finished, replace shield and SMV sign.

A—Shield



E48287 –UN–19JUL00

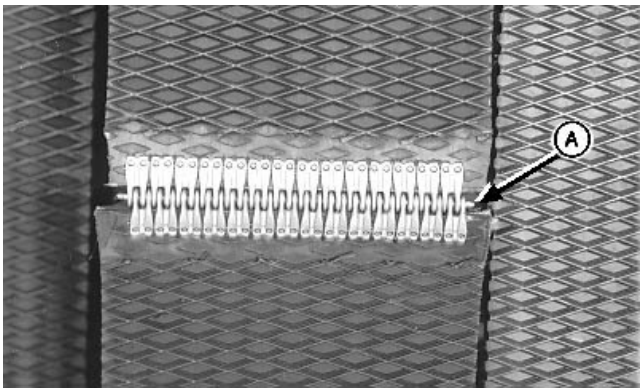
AG,OUO6059,179 –19–22JUN00–1/1

Checking Belt Pins

Check pins (A) for wear or damage every 2000 bales (every 1000 bales in sandy conditions) otherwise broken pins are very difficult to remove. Replace pins if broken, or if more than one-third of pin thickness is worn. Do not deform ends of pins when installing new ones.

To remove pin, grip pin with pliers and turn 90 degrees (1/4 turn) before pulling or tapping out.

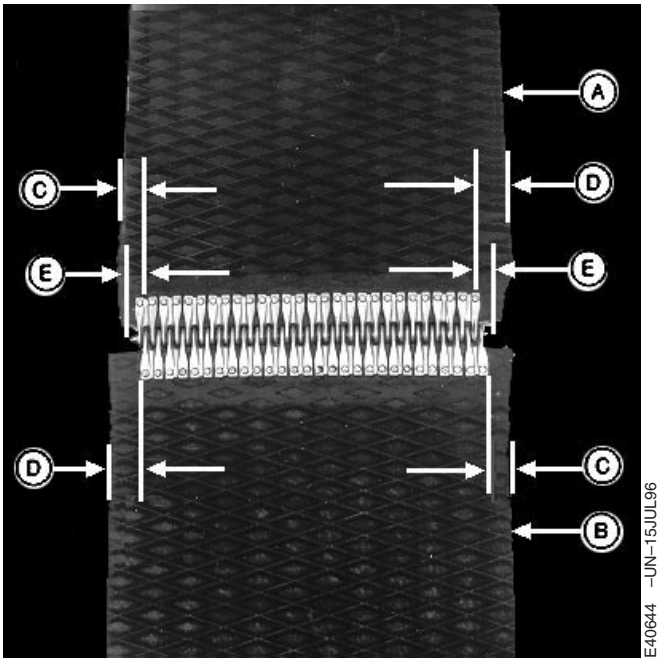
A—Pins

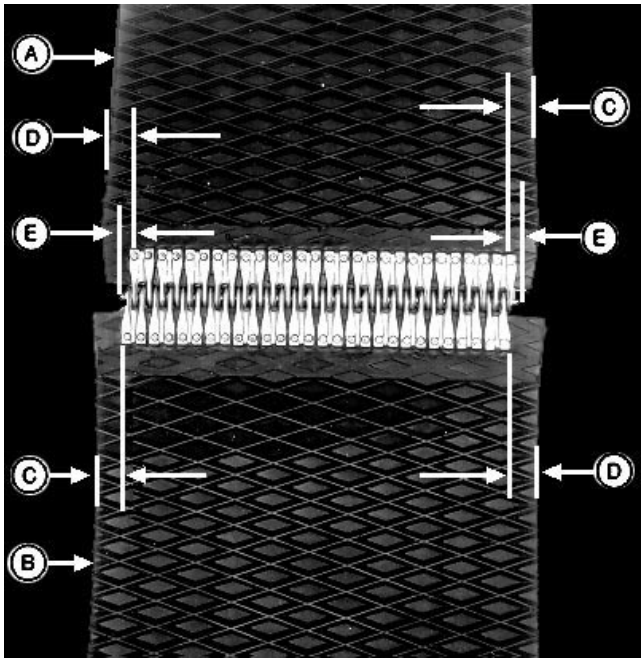


E39736 –UN–24MAY96

AG,OUO6059,180 –19–22JUN00–1/1

Correct Belt Lacing and Pin Installation





A—Belt Edge
B—Belt Edge
C—Dimension, 11 mm (0.433 in.)
D—Dimension, 14 mm (0.551 in.)
E—Dimension, 3 mm (0.118 in.)

IMPORTANT: When belts are assembled, edges must be aligned to prevent belt damage.

The laces use the same number of segments on each end of belt. This requires the laces to be offset slightly, as illustrated.

Belts illustrated are laced and pinned correctly with belt edges aligned.

The belt expands when laces are installed. Check alignment of belt edges approximately 51 mm (2 in.) back from end of belt. Belt edges (A and B) should be aligned when belt is joined.

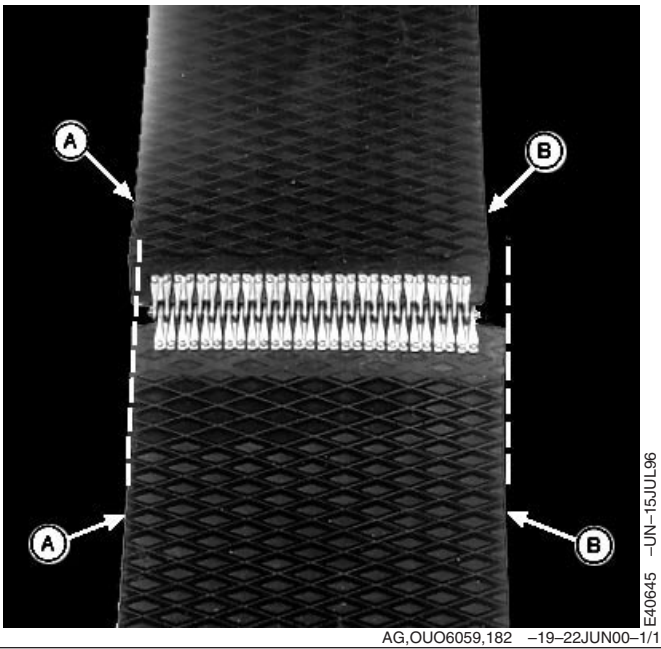
AG,OUO6059,181 –19–22JUN00–1/1

Incorrect Belt Lacing and Pin Installation

IMPORTANT: When belts are assembled, edges must be aligned to prevent belt damage.

Belt illustrated is pinned incorrectly. The edges (A and B) of belt do not align. Remove pin and offset laces one loop to align belt

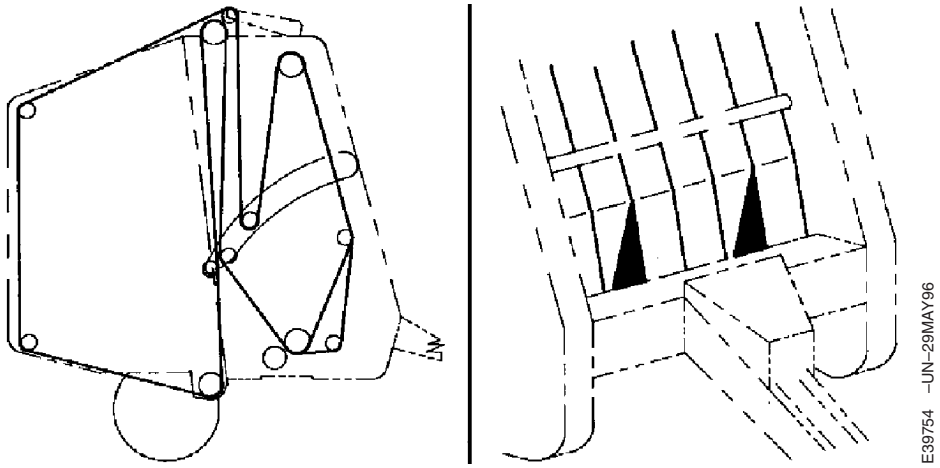
A—Belt Edges
B—Belt Edges



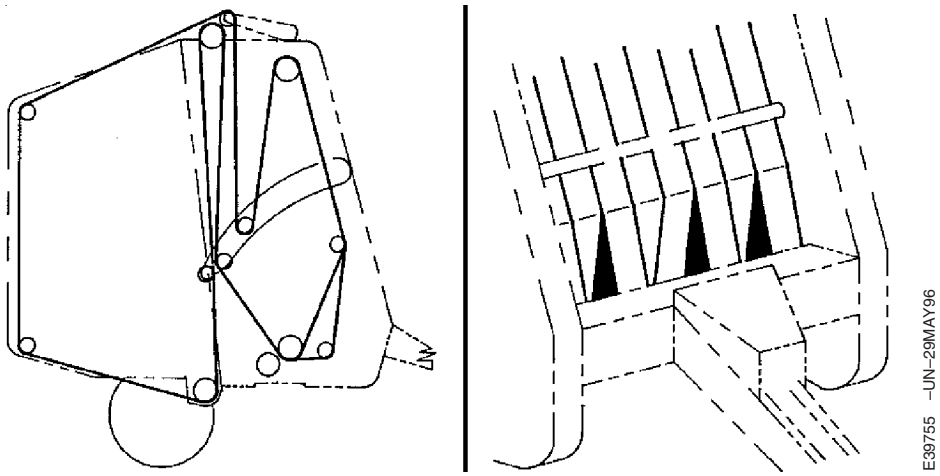
E40645 –UN–15JUL96

AG,OUO6059,182 –19–22JUN00–1/1

Installing Belts



467 and 467S



567

NOTE: See illustration for location of long and short belts. Install belts with diamond portion of the belt to the outside. Make sure belts are installed through the individual guides.

Refer to Specification section for proper length of belts.

1. Open gate.
2. Using tractor hydraulics, lower tension arm to tighten belts.
3. Engage PTO and rotate belts until splice appears between bottom gate roll and tension arm roll.
4. Raise tension arm to loosen belts.
5. Shut off tractor engine and remove key.
6. Lock gate.

Continued on next page

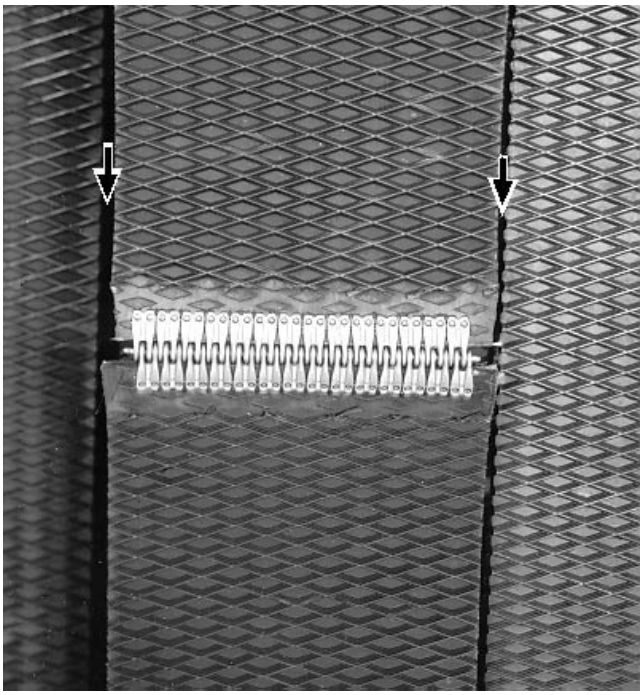
7. Remove splicing pin. Hook trimmed end of new belt to square end of old belt with splicing pin. Pull new belt through baler using the old belt.

   Thread belts so when viewed in the direction of travel (see illustration), the square cornered end of belt leads the end with trimmed corners.

8. Fasten belt ends together with new pin. Make sure belt sides are correctly aligned when installing pins. Do not deform ends of lacing pins during installation. Laces are slightly offset to allow alignment of belt ends.

9. Repeat steps 2—8 for other belts.

10. Unlock and close gate.



E39737 –UN–16FEB96

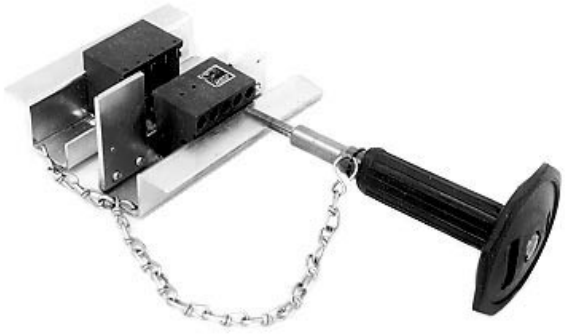
AG,OUO6059,183 –19–22JUN00–2/2

Repairing Belts

A belt lacing tool is available for repairing belts.

NOTE: Belts may fray at the edges. Cutoff the frayed cords as they appear; this reduces the chances of frayed cords being caught as the bale is formed, causing additional fraying or damage to the belts.

1. Remove broken belt.



E39821 –UN–21MAR96

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AG,OUO6059,187 –19–23JUN00–1/11

2. Remove damaged area using a square and a sharp knife. Check to be sure belt end was cut squarely.

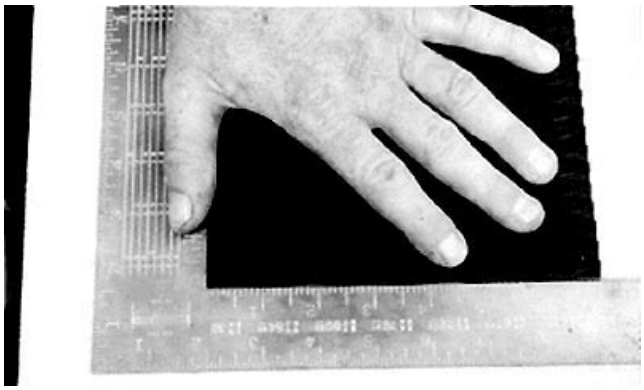
IMPORTANT: If belt lengths are less than specified, belts will contact each other between the rear two tension arm rollers when baler is empty and gate is closed. When this happens, excessive wear to the belt diamond pattern will occur.

Make sure all belts are within 38 mm (1-1/2 in.) of the other belts of similar length. There should not be more than 152 mm (6 in.) difference between the long and short belts.

NOTE: If belts are shorter than the specified dimensions, a short piece of belt may be added. Splices (on same belt) should be at least 305 mm (12 in.) apart.

3. Check belt length. Make sure belt is neither longer or shorter than specified.

E40026 –UN–30MAY96



E21798 –UN–24JUN99

467, 467S, and 567 Belt Lengths			
	Minimum	**Repair**	**Maximum**
Short Belts	13259 mm (522 in.)	13335 mm (525 in.)	13386 mm (527-1/4 in.)
Long Belts	13411 mm (528 in.)	13475 mm (530-1/2 in.)	13538 mm (533 in.)

Continued on next page

AG,OUO6059,187 –19–23JUN00–2/11

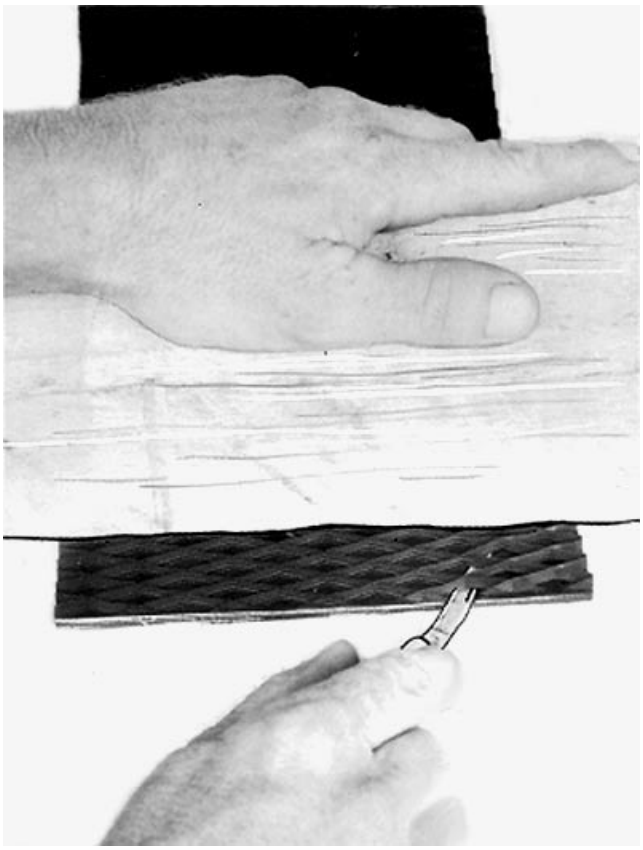
IMPORTANT: Cut only the diamond pattern. Cutting deeper can damage the belt cords.

Do not use a grinder to remove diamond pattern. Heat from grinder can cause damage to rubber and fabric.

4. Remove diamond pattern from belt using a knife or skiving tool.

NOTE: To reduce cutting effort, dip knife blade in liquid soap.

- If using a knife:
  - Use approximately 25—51 mm (1—2 in.) thick board to hold belt as shown.
  - Measure 25 mm (1 in.) from end of belt. Use a sharp knife to remove diamond pattern while being careful not to cut to the cord.



E21799 –UN–24JUN99

AG,OUO6059,187 –19–23JUN00–3/11

- If using a skiving tool:
  - Lay belt on a flat surface against a back stop.
  - Adjust skiving tool pressure plate to thickness of belt using thumb screw (A).
  - Turn thumb screw (A) down another half turn and lock with outer screw (B).
  - Holding skiver firmly against belt, push skiver along full width of belt.
  - Repeat, if necessary, until diamond pattern is removed.

A—Thumb Screw
B—Outer Screw

E39823 –UN–24JUN99

Continued on next page

AG,OUO6059,187 –19–23JUN00–4/11

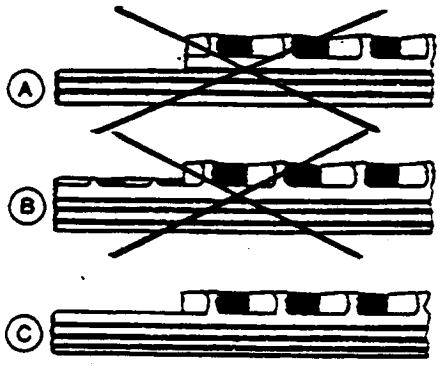
IMPORTANT: Do not leave more than 0.5 mm (0.020 in.) of pattern on belt in area to be laced. If too much material is left on belt, hooks will not fasten properly to belt.

Do not remove too much material. If belt cords show, repeat steps 2—4. Make sure belt length is still within specifications. Add section of belt if necessary.

Belt (A) is cut too deep. Damage to belt cords will occur.

Belt (B) is cut too high. Hooks will not fully penetrate through the belt.

Belt (C) is cut correctly.



E27606 –UN–12SEP88

Belt Cross Section

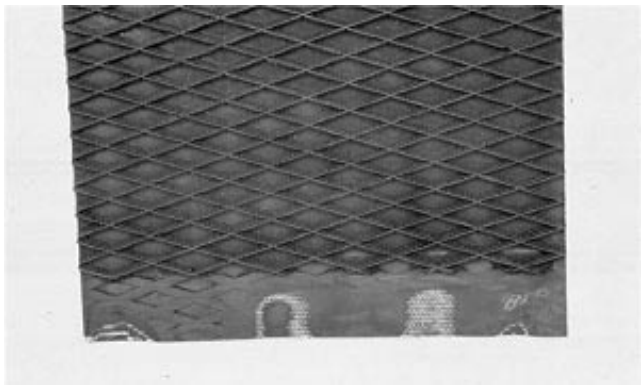
A—Cut Too Deep
B—Cut Too High
C—Cut Correctly

AG,OUO6059,187 –19–23JUN00–5/11

More examples of incorrectly cut belts:

- Top photo shows vertical cut too deep; belt cords have been damaged (cut), seriously weakening the belt.
- Bottom photo shows too much diamond pattern was removed, exposing the belt cords.

E27614 –UN–12SEP88



E27615 –UN–12SEP88

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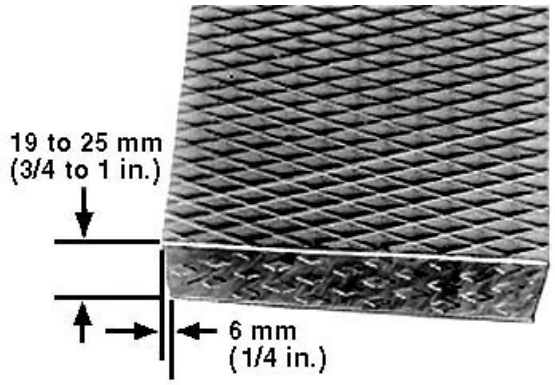
AG,OUO6059,187 –19–23JUN00–6/11

IMPORTANT: Trailing end of belt must be trimmed using dimensions shown in illustration. DO NOT vary from these dimensions.

5. Trim trailing end of belt as shown.

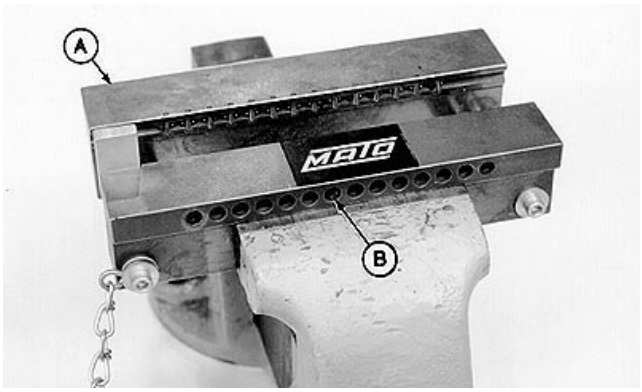


E39835 –UN–27MAR96

AG,OUO6059,187 –19–23JUN00–7/11

6. Put belt lacer tool (A) in vice with holes (B) toward the operator. The shoulder of lacer should rest on jaws of vise.

A—Lacer Tool
B—Holes



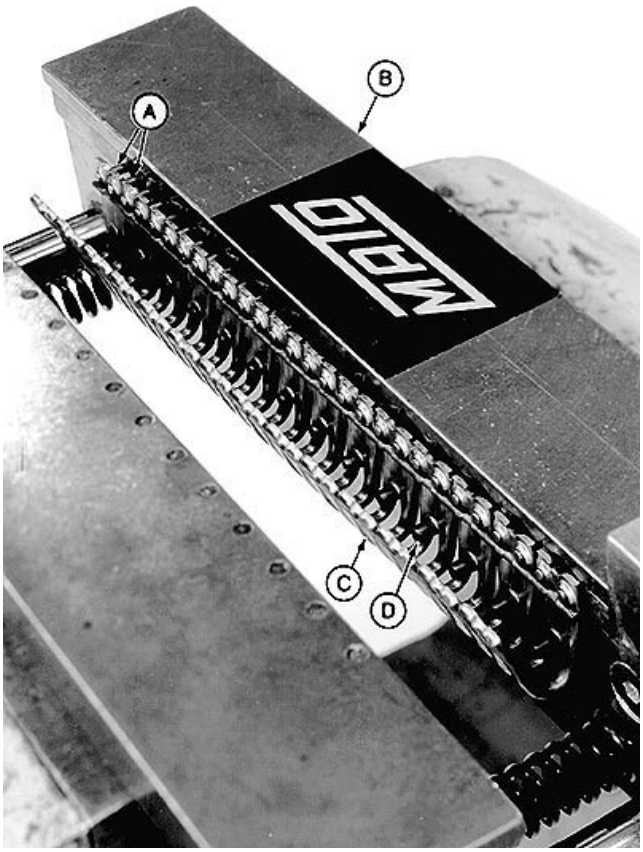
E40773 –UN–08AUG96

AG,OUO6059,187 –19–23JUN00–8/11

7. Install lacing strip (C) in lacer tool (B). Make sure two rivet pins (A) of each lacing segment is inserted into each of the tools' 14 holes. The lacing segments should rest against stop pins (D).

8. Tighten vise until lacing strip is lightly gripped and belt can be easily inserted.

A—Rivet Pins
B—Lacer Tool
C—Lacing Strip
D—Stop Pins



E40774 –UN–08AUG96

Continued on next page

AG,OUO6059,187 –19–23JUN00–9/11

9. Install belt (B) in lacing strip with diamond pattern away from operator. While holding edge of belt against stop plate (A), uniformly push belt down to the stop pins. Make sure lacing strip is against stop pins.

10. Make sure belt and lacing are positioned squarely in lacer tool. Close vise on belt and lacing until distance between lacer jaws equals width of belt.

IMPORTANT: If using a hand punch, using too large of a hammer or striking punch too hard can damage lacing tool or belt lacing.

If using pneumatic hammer, too high air pressure and/or too long riveting time can damage lacing tool or belt lacing.

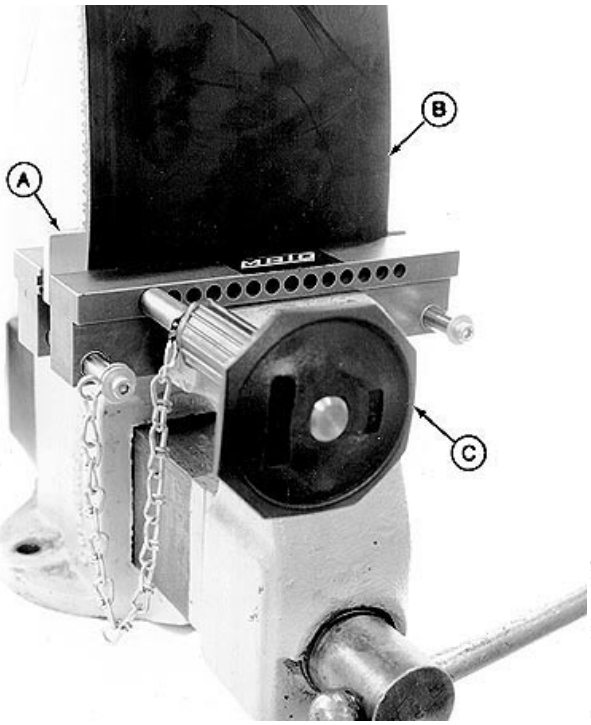
11. Drive rivets through belt using a punch (C) or pneumatic hammer (D).

    Rivet the two outer lacing segments first, then working from the outside to the inside, rivet the rest of lacing segments.

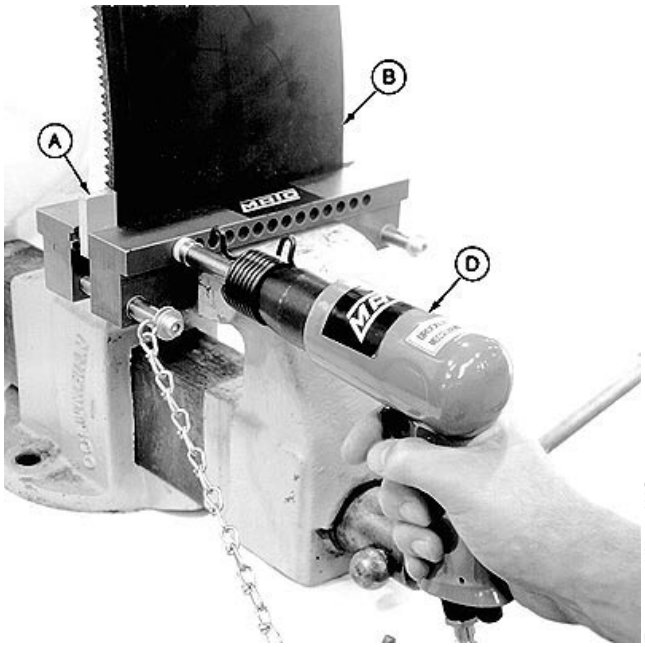
    - If using punch (C), drive rivets until shoulder on punch shaft contacts lacer jaw. Hit punch an additional time to ensure contact between shoulder and lacer jaw.
    - If using pneumatic hammer (D), set air pressure to 500—600 kPa (5—6 bar) (72—87 psi). Operate hammer for 1—2 seconds for each rivet. Re-riveting is usually not necessary.

12. Remove belt from vise and inspect lacing. All rivets should be driven through belt and show punch marks in center of rivets.

A—Stop Plate
B—Belt
C—Hand Punch
D—Pneumatic Hammer



E40775 –UN–08AUG96



E40776 –UN–08AUG96

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AG,OUO6059,187 –19–23JUN00–10/11

IMPORTANT: Do not hit loop area of fastener when using hammer to flatten heads of rivets.

Do not hit rivets too hard or rivets may buckle and damage joints.

13. Put belt and lacing on a solid base. Flatten heads of rivets using the flat face of a small hammer. Strike several rivets at a time using a light tapping motion. Rivets should be flush with splice.

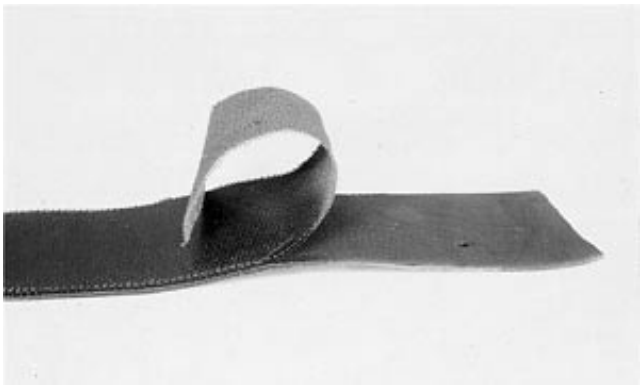
14. Repeat procedure for other end of belt.

E40027 –UN–30MAY96

AG,OUO6059,187 –19–23JUN00–11/11

Belts Eligible For Warranty Replacement

Upper belts are warrantable if the material and/or workmanship is defective and machine is under warranty. Ply separation is considered warranty if within the item warranty.



E27607 –UN–12SEP88

AG,OUO6017,1770 –19–01DEC99–1/1

Belts Not Eligible for Warranty Replacement

The following illustrations are belts damaged by accumulation of crop and/or foreign objects on top of compressor rack and between belts in the starter roll area. A small slug of the buildup will pass between the lower drive roll and the belt, which forces the belt into the starter roll. The bars of the starter roll remove chunks of rubber from the belt and/or tear the belt fabric.

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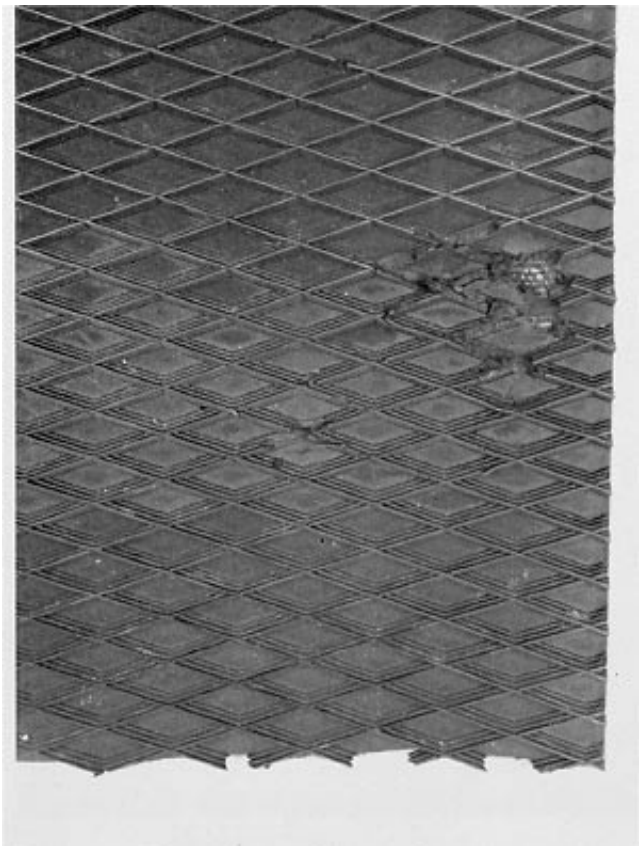
AG,OUO6017,1771 –19–01DEC99–1/7

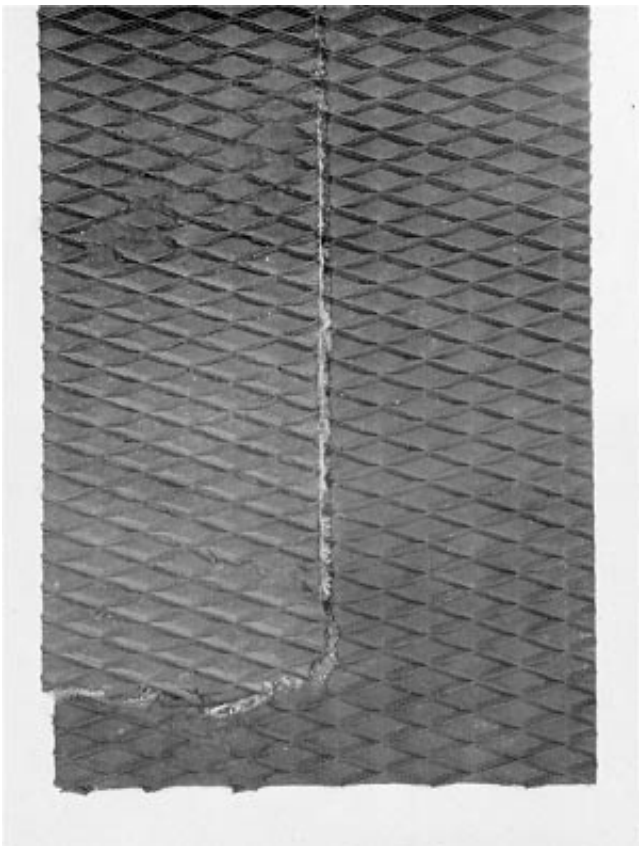
- Chunks of rubber missing from surface of belt.



AG,OUO6017,1771 –19–01DEC99–2/7

NOTE: This is not ply separation.

- Belts with holes and/or tears.



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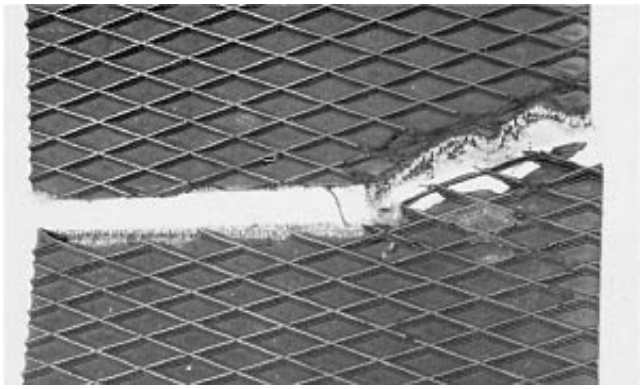
AG,OUO6017,1771 –19–01DEC99–3/7

- Belts that are cut and/or torn in two.



E27610 –UN–12SEP88

AG,OUO6017,1771 –19–01DEC99–4/7

- Back side of belt showing damage caused by foreign objects.

E27611 –UN–12SEP88

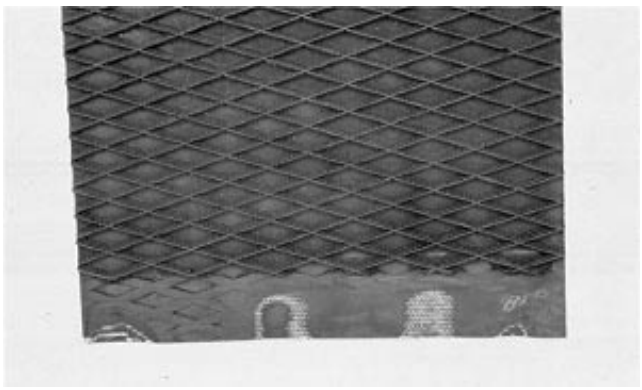
AG,OUO6017,1771 –19–01DEC99–5/7

- Belt fabric cut when cutting down toward surface of the belt to remove diamond pattern.

E27614 –UN–12SEP88

AG,OUO6017,1771 –19–01DEC99–6/7

- Too much of diamond pattern removed for belt lacing.



E27615 –UN–12SEP88

AG,OUO6017,1771 –19–01DEC99–7/7

Service—Net Wrap

Detailed Service Information

Refer to the technical (repair) manual for detailed service information or see your John Deere dealer.

TS224 –UN–17JAN89

AG,OUMX005,1097 –19–09JAN00–1/1

Practice Safe Service Procedures

TS268 –UN–23AUG88

CAUTION: To help prevent personal injury caused by unexpected movement, be sure to service the machine on a level surface.

If machine is connected to a tractor, engage tractor parking brake and/or place transmission in "Park", shut off engine and remove key.

If machine is detached from tractor, block wheels to prevent movement.

Before servicing net wrap unit:

1. **Disengage all power.**
2. **Shut off tractor engine.**
3. **Wait until all moving parts have stopped.**
4. **Let all components cool.**

To avoid personal injury from inadvertent movement of net actuator, disconnect monitor-controller power plug from tractor convenience outlet or unplug connector at net wrap actuator.

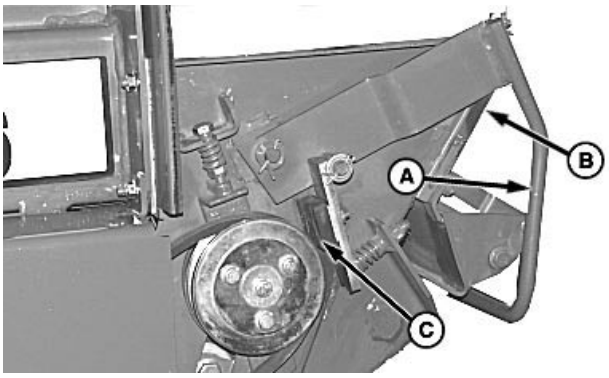
On some tractors, convenience outlet is wired directly to the battery. Turning tractor key to OFF position will NOT disconnect power to monitor-controller. Disconnect monitor-controller power plug from tractor convenience outlet or unplug connector at net wrap actuator.

EX,567P,CJ –19–18JUL00–1/1

Releasing Net Wrap Feed Roll Brake

The manual brake release disengages the net feed rolls. Release the brake when threading net wrap or servicing the net wrap unit.

1. Disengage tractor PTO, shut off tractor engine and disconnect monitor-controller power plug from tractor convenience outlet.
2. Open net wrap cover.
3. Pull lever (A) out and up and rest on latch (B) to disengage roller brake pad (C).
4. To engage net wrap drive, return lever (A) to engaged position. Check that pad (B) contacts belt pulley.
5. Close net wrap cover.



E48357 –UN–12JUL00

A—Brake Lever
B—Latch
C—Brake Pad

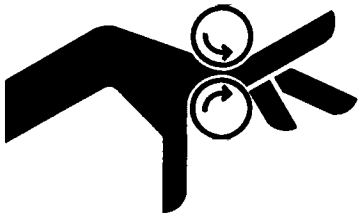
AG,OUO6059,229 –19–12JUL00–1/1

Correcting Net Wrap Feeding Problems

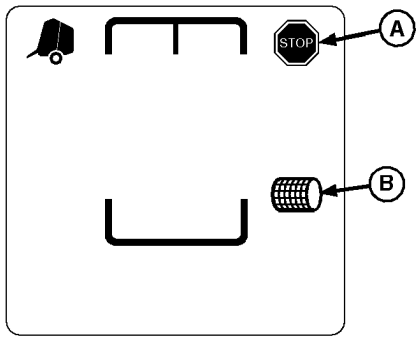
CAUTION: Avoid injury from entanglement in moving rolls. Disengage tractor PTO, shut off tractor and disconnect monitor-controller power plug before servicing.

STOP (A) and NET WRAP (B) indicators will display and the alarm will sound if net does not feed properly or if the knife does not cut the net.

A—STOP Indicator
B—NET WRAP Indicator



E40200 –UN–08JUL96



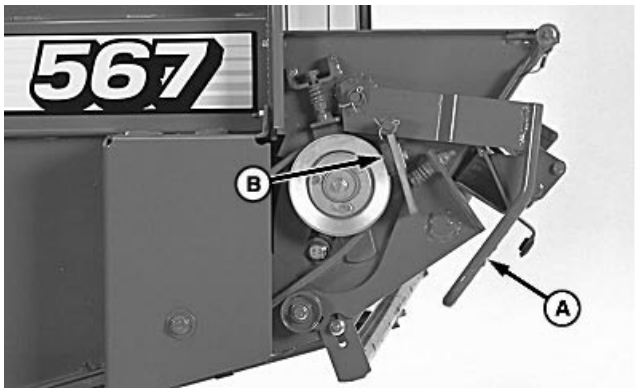
E47600 –UN–07JAN00

Continued on next page

AG,OUO6059,246 –19–17JUL00–1/4

To correct net feeding or knife problems:

1. Disengage tractor PTO, shut off tractor engine and disconnect monitor-controller power plug from tractor convenience outlet.
2. Open net wrap cover.
3. Pull lever (A) out and back to disengage roller brake pad (B).
4. Inspect brake pad and belt for wear and damage; replace if necessary.



E48226 –UN–23JUN00

A—Brake Lever
B—Brake Pad

AG,OUO6059,246 –19–17JUL00–2/4

IMPORTANT: Do not cut net wrap material from rubber feed roll. Any knife cuts in the rubber roll covering may result in more frequent wrapping around the rolls and may require roller replacement.

5. Pull net wrap material away from the supply roll and steel roll. Cut net wrap material.
6. Remove and discard all of the wrapped material, including all strings, staples, etc.
7. Wipe off rubber drive roll and check for any sticky material. If necessary, roll may be washed with soap and water. NEVER use solvents to clean rubber roll. Allow rolls to dry before threading or wrappage may occur again.
8. Thread net wrap material. (See THREADING NET WRAP AND ROUTING THROUGH ROLLS in Preparing Baler for Net Wrap section.)
9. If static electricity or dampness causes net wrap material to cling to the rolls, dust the rubber drive roller with baby powder.
10. If feed roll has been cut, repair if necessary. (See REPAIRING CUTS ON FEED ROLL in this section.)

E48359 –UN–12JUL00

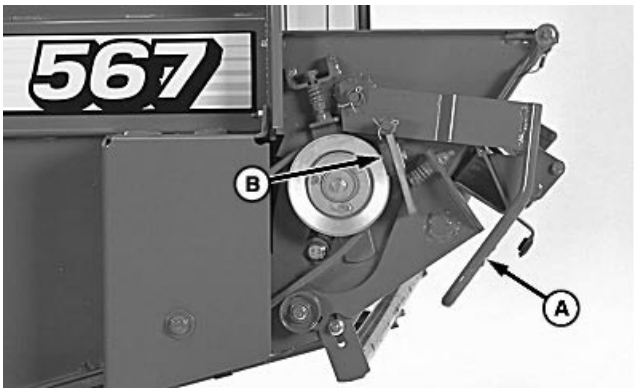
Continued on next page

AG,OUO6059,246 –19–17JUL00–3/4

11. Pull lever (A) out and down towards the front of machine to engage roller brake pad. Make sure brake pad (B) contacts belt pulley.

12. Close net wrap cover.

A—Brake Lever
B—Brake Pad



E48226 –UN–23JUN00

AG,OUO6059,246 –19–17JUL00–4/4

Repairing Cuts on Rubber Feed Roll

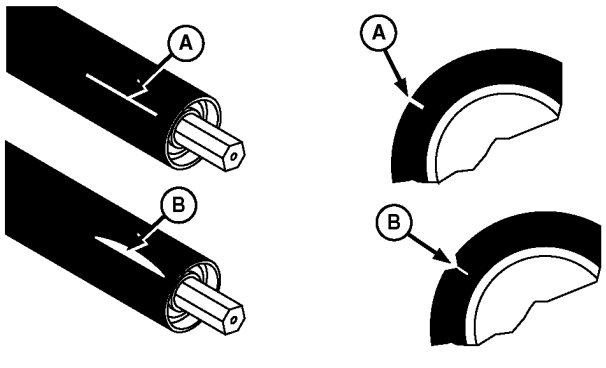
NOTE: Horizontal (length wise) cuts on rubber feed roll can cause net wrap to be "pinched" in cut and wrap around feed rolls. This procedure will fix the cut so net wrap will not be "pinched" in cut. If damage to feed roll is excessive, feed roll should be replaced.

1. Locate horizontal cut (A) on rubber feed roll.

2. Use a sharp knife to cut along side the existing cut and make a "V" groove (B) approximately 1 mm (1/32 in.) deep. Be sure to remove all loose pieces of rubber.

   The "V" groove removes the sharp corners of the cut reducing the possibility of the net wrap being "pinched" in cut.

3. Repeat step 2 on the other side of the cut if necessary or if the cut is directly towards the center of the feed roll.



E42638 –UN–10APR97

A—Horizontal Cuts
B—"V" Groove

AG,OUMX005,1550 –19–03AUG00–1/1

Adjusting Net Wrap Counterknife

1. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.

2. Press WRAP key and return counterknife arm to home position (extend actuator).

Continued on next page

AG,OUO6059,230 –19–13JUL00–1/5

CAUTION: To avoid personal injury from unexpected knife movement, disconnect net actuator wiring connector or power plug.

Knife is sharp. Use care when working around the knife.


TS268 –UN–23AUG88

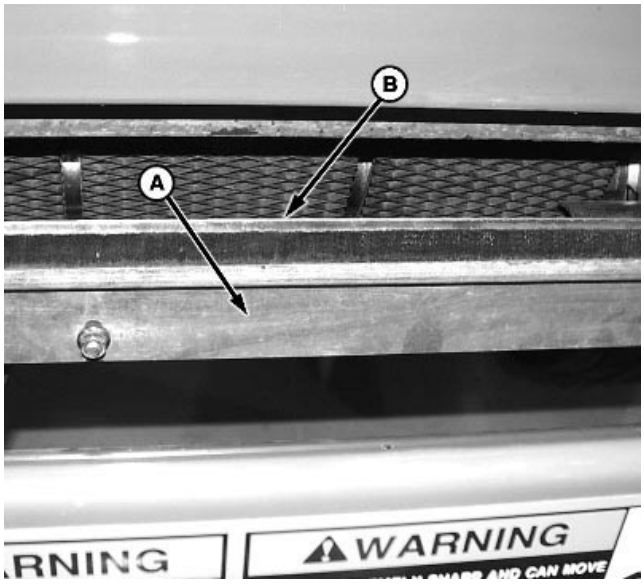
3. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.
4. Open net wrap cover.

AG,OUO6059,230 –19–13JUL00–2/5

NOTE: Roll removed for photographic purpose only.

5. Remove brush (A) to see alignment between knife (B) and counterknife.

A—Brush
B—Knife



E48362 –UN–13JUL00

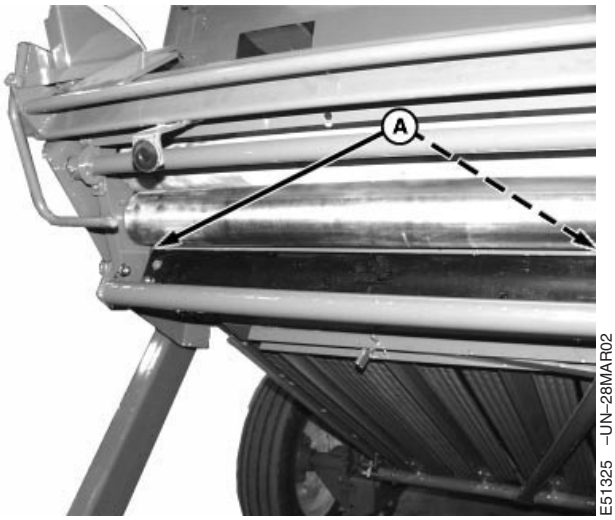
Continued on next page

AG,OUO6059,230 –19–13JUL00–3/5

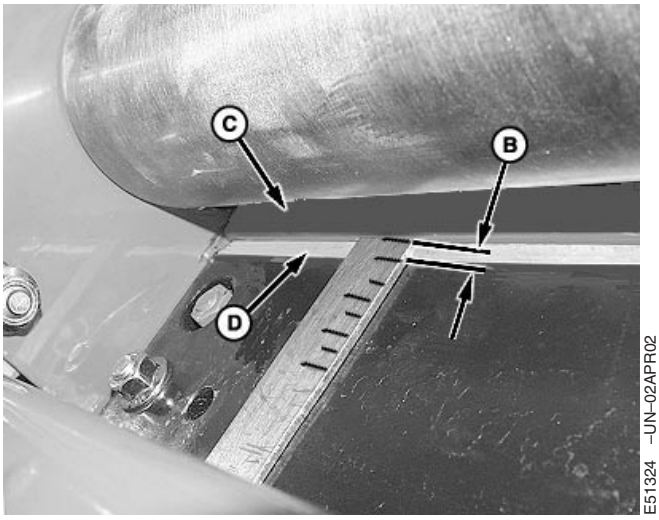
6. **Counterknife angle must contact knife within 100 mm (3.93 in.) of each end (A).**

   Check clearance between front of knife edge-to-counterknife edge (B). Counterknife (C) should be sitting against beveled edge of knife (D). NOT on knife's sharp edge. Clearance should be equal on both ends of knife.

   A—Counterknife Edge
   B—Dimension, 6—16 mm (0.236—0.63 in.)
   C—Counter knife
   D—Knife Bevel



E51325 –UN–28MAR02



E51324 –UN–02APR02

Continued on next page

AG,OUO6059,230 –19–13JUL00–4/5

7. To adjust counterknife, loosen flange nuts (A and D) on both sides of counterknife. Move in slotted holes (B) until adjustment is made and tighten flange nuts (A and D). Additional adjustment may be needed by loosening nuts (C) and moving in slots. Tighten nuts (C).

8. Install brush to knife with brush up to the bottom edge of counterknife.

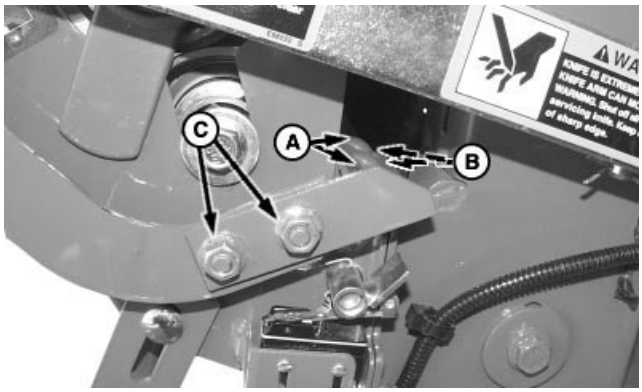
9. Tighten hardware.

IMPORTANT: Current overload protection to net actuator is bypassed when using channel 14. Extended use of channel 14 may cause actuator damage.

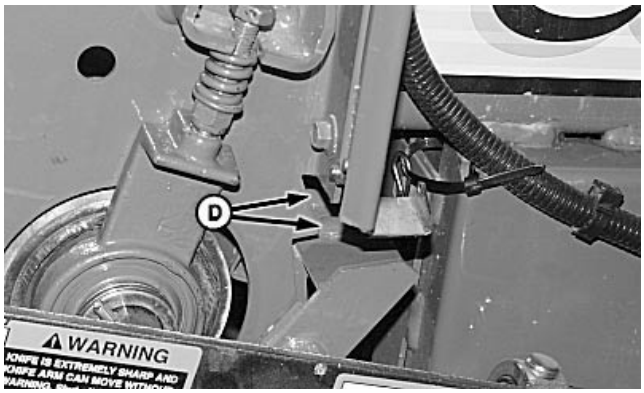
11. Check net wrap switch adjustment. (See ADJUSTING NET WRAP SWITCH in this section.)

12. Close net wrap cover.

A—Nuts
B—Slots
C—Nuts
D—Nuts



E50973 –UN–07DEC01



E51038 –UN–19DEC01

AG,OUO6059,230 –19–13JUL00–5/5

Checking and Adjusting Net Wrap Feed Roll Brake

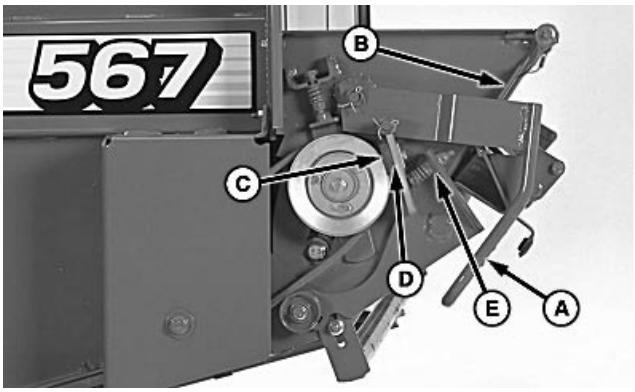
1. Open net wrap cover.
2. Make sure brake lever (A) is engaged under tab (B).
3. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.
4. Press WRAP key to cycle net actuator.

CAUTION: To avoid personal injury from unexpected counterknife movement, disconnect net actuator wiring connector or power plug.

5. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.
6. Check that brake pad (C) contacts belt sheave. If not, perform the following:
   a. Check that spring length (E) is within specifications. Adjust by tightening or loosing bolt.

Specification	
Spring—Length	22 ± 0.5 mm (0.87 ± 0.20 in.)

   b. If spring length is according to specifications, loosen nut on brake pad. Install shims (D), as needed, between brake pad (C) and bracket until brake pad contacts belt sheave.
7. Release brake handle (A), install one more shim, and tighten nut. Engage brake handle (A).
8. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.
9. Press WRAP key to cycle net wrap.



E48371 –UN–01AUG00

A—Brake Lever
B—Tab
C—Brake Pad
D—Shims
E—Spring

Continued on next page

10. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.

IMPORTANT: Do not tighten bolt (A) more than 65 N•m (50 lb-ft) or damage to bolt may occur.

11. Check roller torque by turning bolt (A) clockwise with torque wrench. Roller torque should be within specification for brake sheave to slip against rubber pad.

Specification	
Rubber Pad Brake-to-Sheave—Brake Roller Torque	40—65 N•m (30—50 lb-ft)

If torque is less than specification, net cutoff may not function correctly and adjustment shims should be installed.

12. To adjust feed roll brake:

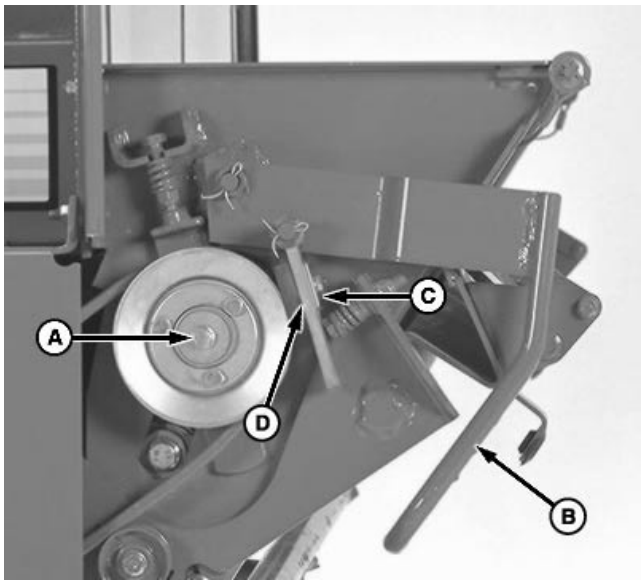
    a. Release feed roll brake by pulling out and up on handle (B).

NOTE: If worn, rubber brake pad can be reversed.

    b. Loosen nuts. Install shims (C) one at a time, between brake pad (D) and bracket until torque is within specifications. Put extra shims behind bracket, tighten nuts.

IMPORTANT: After making this adjustment, turn monitor-controller ON. Press WRAP key to return net knife arms to home position. Turn monitor-controller off to cancel STOP alarm. If this procedure is not followed, net will be fed continuously during the next bale.

    c. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.



E48483 –UN–24JUL00

A—Cap Screw
B—Lever
C—Shims
D—Brake Pad

Continued on next page

d. Press WRAP key to cycle net wrap actuator. *Counterknife at home (downward) position.*

e. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.

f. Check feed roll brake torque with actuator rod retracted. If torque is not within specifications, repeat procedure.

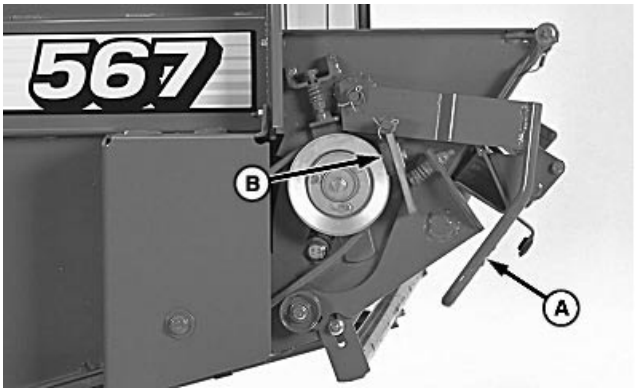
13. Close net wrap cover.

AG,OUMX005,1551 –19–03AUG00–3/3

Adjusting Net Wrap Feed Roll Pressure

1. Open net wrap cover.
2. Pull lever (A) out and up to disengage roller brake pad (B).
3. Remove any foreign material or net wrap from between the rolls.

A—Brake Lever
B—Brake Pad



E48226 –UN–23JUN00

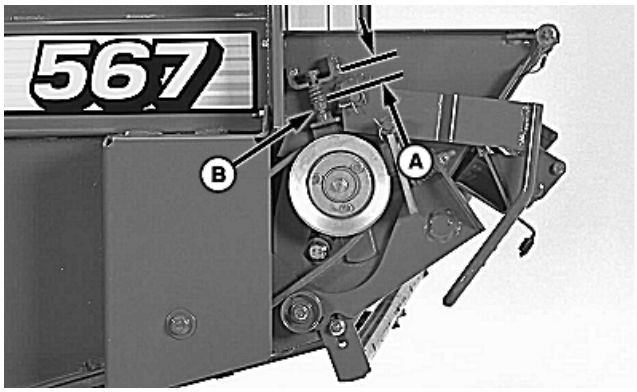
Continued on next page

AG,OUO6059,232 –19–14JUL00–1/2

NOTE: Too much pressure can cause net wrap to wrap on rubber roll. A lack of pressure will prevent net wrap from being fed by the rolls to the bale or may cause poor placement of net wrap material on the bale.

When feed roll brake is actuated, it is normal for rolls to be slightly separated on left-hand end.

4. Adjust spring length by loosening or tightening spring adjusting nut (B) until dimension (A) is within specifications.



E48375 –UN–14JUL00

Specification	
Feed Roll Spring—Distance	20.5 mm (0.807 in.)

A—Distance
B—Adjusting Nut

5. Repeat on opposite side.

AG,OUO6059,232 –19–14JUL00–2/2

Test Net Wrap Switch—Monitor-Controller Assisted Test (Channel 10)

NOTE: Microswitch position and operation can be checked by using the monitor-controller diagnostic channels.

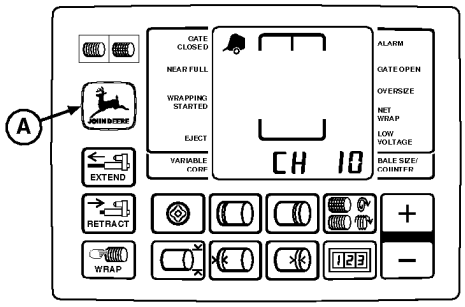
1. Turn tractor key to ON position. Do not start engine.

Continued on next page
OUO6059,000143E –19–05FEB02–1/2

2. Press and hold DEERE key (A) while setting selector switch to NET WRAP symbol to turn monitor-controller ON. Continue to hold DEERE key and press PLUS key until “CH 10” appears in digital display.

3. Release key and view reading (Switch Closed Internally).

Diagnostic Channel	Function	Switch Closed Reading	Switch Open Reading
10	Net Wrap Switch	00 (Zero)—Normal	12—Net Cutting (Tone)



E47603 –UN–07JAN00

4. Depress lever (B) to open switch internally. View second reading or listen for tone (Switch Open).

5. If readings are not as shown, Check wire hookup. (See CHECK AND ADJUST NET WRAP SWITCH in this instruction.)

6. If switch adjustment does not produce normal readings:

   a. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

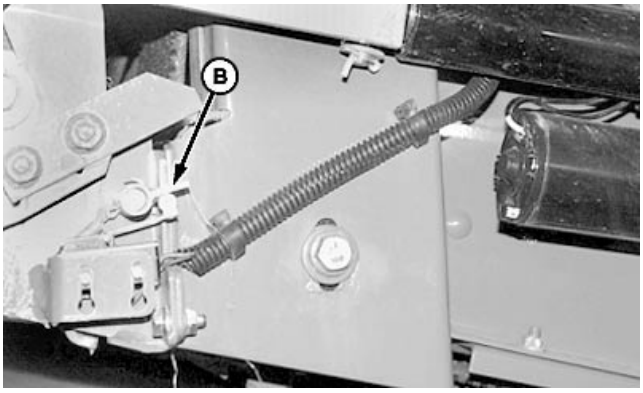
   b. Check for correct wiring connections.

   c. Check wiring harness for cuts and breaks.

   d. Check harness connectors for damaged (pushed in) terminals.

   e. Check that wires are not shorted to each other or to ground.

   f. Replace switch if necessary.



E48466 –UN–20JUL00

A—DEERE Key
B—Lever

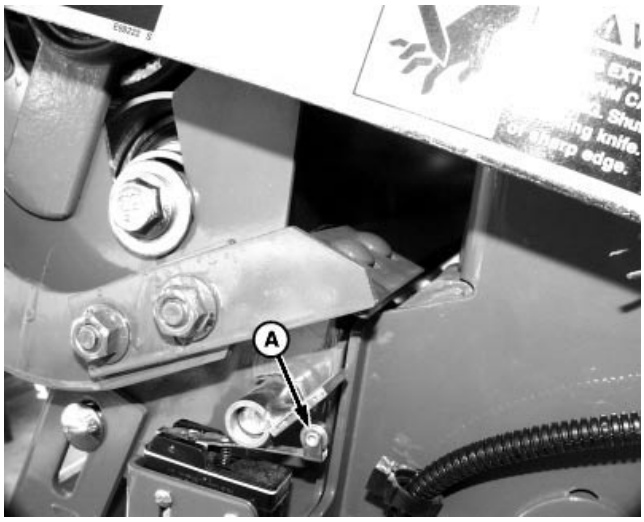
OUO6059,000143E –19–05FEB02–2/2

Checking and Adjusting Net Wrap Switch

CAUTION: Knife is extremely sharp and net wrap cut-off arm can move with out warning. Shut off all power before servicing knife. Keep hands clear of sharp edge.

1. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.
2. Press WRAP key to cycle net wrap actuator. *Net wrap cut-off arm at home (downward) position.*
3. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.
4. Open net wrap cover.
5. Clean area around switch.
6. Push switch arm (A) fully down and listen for switch to “click.” Release switch arm and listen for another “click.”

TS268 –UN–23AUG88



E51047 –UN–02JAN02

A—Switch Arm

Continued on next page

OUO6059,000143F –19–05FEB02–1/3

7. Initially adjust switch as shown. Move actuator flap (B) horizontal to the seam between net wrap frame and gate frame.

8. Hold flap in position. Loosen mounting screws, adjust switch clearance (A) between switch arm and body of switch to within specifications.

Specification

Switch Arm-to-Body of Switch—
Clearance (A) ..... 0.2—1 mm
(0.008—0.040 in.)

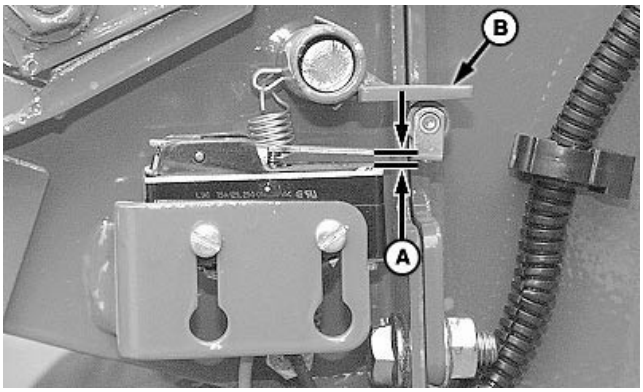
9. Tighten screws.

10. Release actuator flap slowly. Switch arm should be fully released with flap released. If flap is holding switch arm down, check for cause and correct.

11. If not within specifications;

    - Check connections on spring.
    - Make sure switch arm moves down and returns freely. Check for pivot binding or squeaking.
    - Clean around switch and adjust if needed.

12. Check net switch signal to monitor-controller. (See TEST NET WRAP SWITCH—MONITOR-CONTROLLER ASSISTED TEST [CHANNEL 10] in TM, Section 50, Group 38).



E49125 –UN–08JAN01

A—Clearance
B—Actuator Flap

Continued on next page

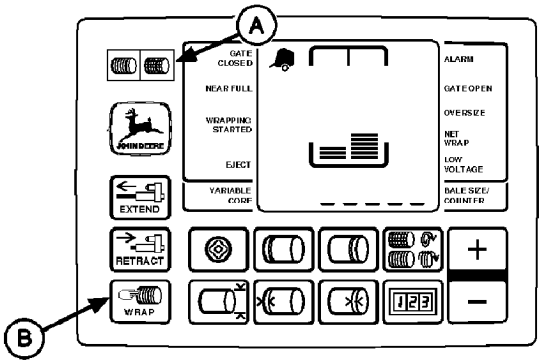
13. Close net wrap cover.

14. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Set monitor-controller selector switch to NET symbol (A) to turn monitor-controller ON.

15. Press WRAP key (B) to cycle net wrap actuator. *Net wrap cut-off arm must be at home (downward) position.*

IMPORTANT: If this procedure is not followed, net will be fed continuously during the next bale.

16. Turn monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.



E47530 –UN–07JAN00

A—NET Symbol
B—WRAP Key

OUO6059,000143F –19–05FEB02–3/3

Final Adjustment of Net Wrap Switch—In Field

1. Make level firm bale in chamber with monitor-controller in net mode. Stop tractor before auto wrap cycle begins.

2. Set number of wraps of net to “3”.

3. With PTO running at rated speed, press WRAP key. After five seconds, turn monitor box switch to “OFF” position.

CAUTION: Shut off tractor PTO, engine, place in park, and remove key.

4. Unhook harness at tractor.

5. Open shield to access cut-off switch. Net should hold the actuator flap in a horizontal position.

Continued on next page

OUO6038,0000272 –19–20DEC00–1/2

6. Adjust switch to ensure roller arm-to-flap clearance (A) is within specifications.

Specification

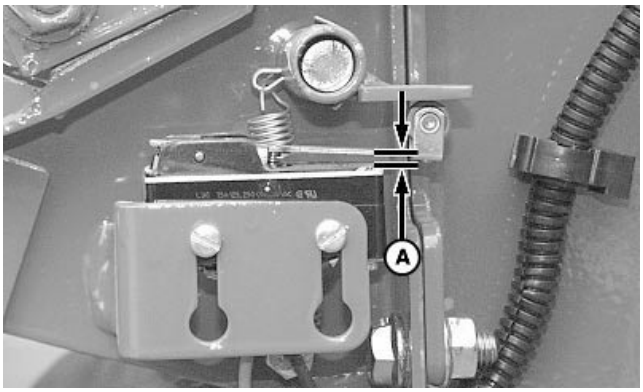
Switch Arm-to-Body of Switch—
Clearance (A) ..... 0.2—1 mm
(0.008—0.040 in.)

7. Reconnect wire harness.

8. Start tractor. Turn on PTO. Then Press WRAP key. Net should cycle and cut-off normally.

IMPORTANT: Failure to press WRAP key will result in continuous feeding of net and no cut-off.

9. Set monitor to number of wraps desired.



A—Clearance

OUO6038,0000272 –19–20DEC00–2/2

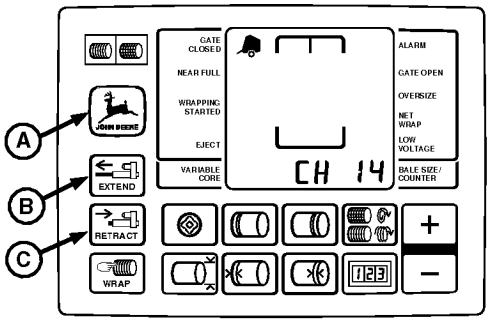
Removing and Installing Net Wrap Cutoff Knife

IMPORTANT: Current overload protection to net actuator is bypassed when using channel 14. Extended use of channel 14 may cause actuator damage.

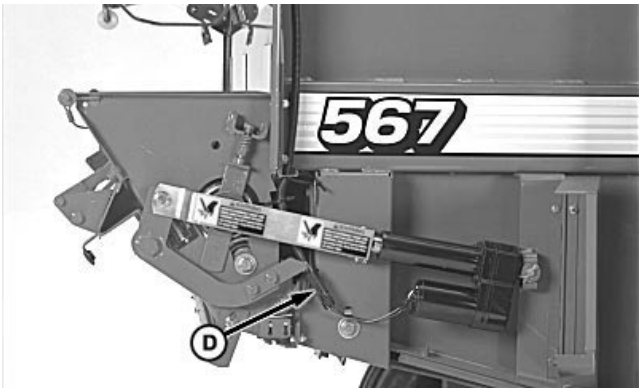
1. Turn tractor key to ON position. Press and hold DEERE key (A) while turning monitor-controller selector switch to NET. “CH 01” will appear in the digital display.
2. Continue to hold DEERE key and press PLUS key to advance to “CH 14”. Release DEERE key.
3. Press and hold EXTEND key (B) to move counterknife to the up position.
4. Turn tractor key to OFF position and remove key. Turn off monitor-controller.
5. Open net wrap cover.

CAUTION: To avoid personal injury from unexpected knife movement, disconnect net actuator wiring connector.

6. Disconnect net actuator wiring harness (D).



E47604 –UN–07JAN00



E48385 –UN–08JAN02

A—DEERE Key
B—Extend Key
C—Retract Key
D—Wire Harness

Continued on next page

AG,OUMX005,1553 –19–03AUG00–1/3

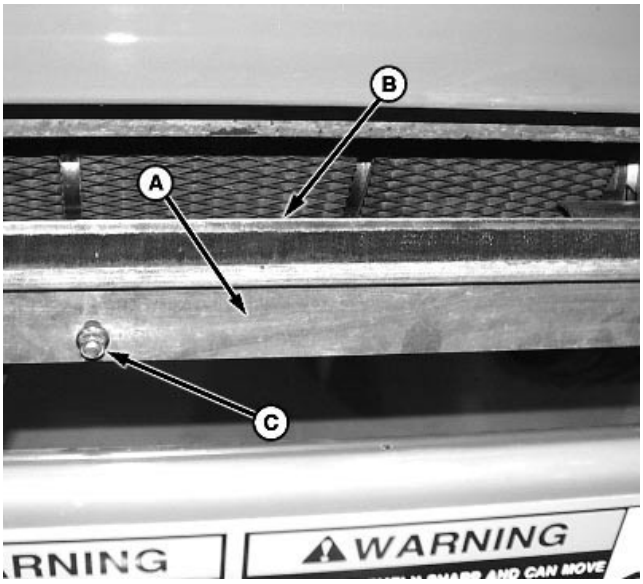
CAUTION: Cutoff knife is sharp. Wear gloves when handling cutoff knife.

NOTE: Roll removed for illustration only.

7. Remove brush (A) from cutoff knife (B) by removing four round-head bolts and nuts (C).

A—Brush
B—Cutoff Knife
C—Nut

TS268 –UN–23AUG88



E48386 –UN–14JUL00

Continued on next page

AG,OUMX005,1553 –19–03AUG00–2/3

8. Remove two round-head bolts and nuts (A) on each end of cutoff knife. Remove cutoff knife from knife bracket.

9. Repair or replace if necessary.

10. Install cutoff knife with beveled surface up and facing rear of machine.

11. Install round-head bolts and nuts (A) so the round heads facing front of machine. Tighten to specifications.

Specification	
Cutoff Knife-to-Knife Bracket—Torque	55 N•m (40 lb-ft)

12. Install brush to cutoff knife by using four round-head bolts and nuts. Do not tighten at this time.

13. Brush bottom edge aligns to bottom edge of cutoff knife, tighten all nuts to specifications.

Specification	
Cutoff Knife-to-Knife Bracket Nut—Torque	55 N•m (40 lb-ft)

14. Connect net actuator wiring connector.

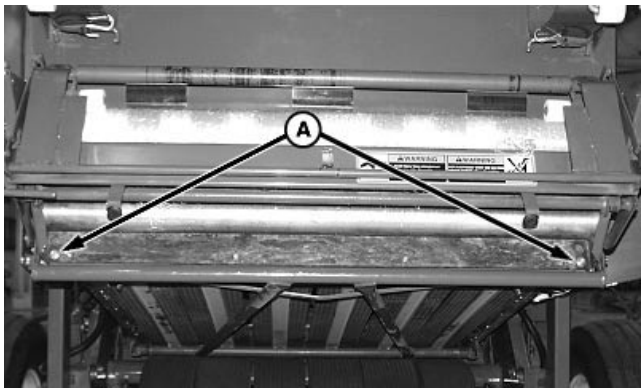
IMPORTANT: Make sure to move net wrap counterknife fully downward to "home" position. If baler is operated with counterknife at the up position, net will feed continuously during baling.

15. Turn tractor key to ON position.

16. Press WRAP key on monitor-controller to move counterknife fully downward to the "home" position.

17. Turn tractor key to OFF position. Turn off monitor-controller.

18. Close net wrap cover.



E48384 –UN–14JUL00

A—Bolts and Nuts

AG,OUMX005,1553 –19–03AUG00–3/3

Sharpening Net Wrap Cutoff Knife

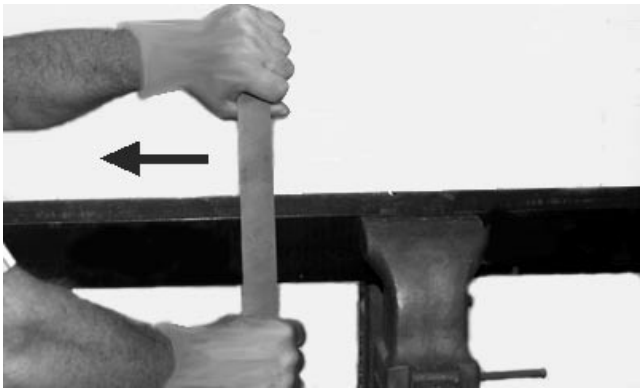
NOTE: Sharpen cutoff knife when strings of net wrap material or patches of net wrap extend from the cutoff knife to gate roll, or when cutoff knife does not cut the net wrap material.

CAUTION: Cutoff knife is sharp. Wear gloves when handling cutoff knife.

1. Remove cutoff knife. (See REMOVING AND INSTALLING CUTOFF KNIFE in this section.)
2. Put cutoff knife in vice or lay cutoff knife on work bench and secure with clamps.
3. Use file, as illustrated, to sharpen knife edge. This procedure (similar to using a draw knife), will produce a sharp knife.

A—Cutoff Knife

TS268 –UN–23AUG88



E41644 –UN–16OCT96

AG,OUMX005,1554 –19–03AUG00–1/1

Testing Net Wrap Actuator Current (Channel 14)

IMPORTANT: Current overload protection to twine actuator is bypassed when using channel 14. Extended use of channel 14 may cause actuator damage.

NOTE: Channel 14 allows operator use of EXTEND and RETRACT keys to position net actuator for service.

This test is used to determine the working condition of the actuator through its entire range of operation.

To test actuator (motor and linkage):

1. Turn tractor key to ON position. Do not start tractor engine.

2. Press and hold DEERE key (A) while setting selector switch to NET symbol to turn monitor-controller ON.

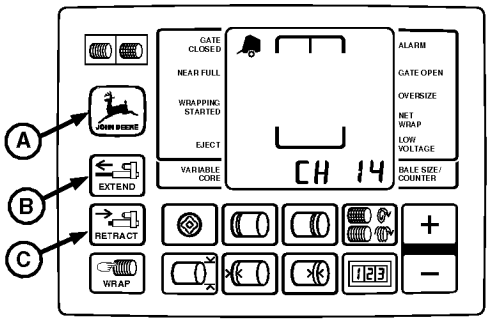
3. Continue to hold DEERE key and press PLUS key until "CH 14" appears in digital display.

NOTE: Current flow readings shown on digital display are relative numbers, not indications of measurable units (amps).

4. Release DEERE key; digital display will change to show actuator static current flow reading of "0" to "1".

5. Use EXTEND and RETRACT keys (B and C) to operate actuator in both directions. Display should show a current flow reading between "4" and "7" while actuator motor is operating during mid stroke (no load).

   - Below normal readings indicate low tractor voltage, or poor or corroded harness connections
   - Above normal readings indicate binding linkage or partially shorted motor windings
   - Current spike reading indicates mechanical obstruction to linkage



E47604 —UN—07JAN00

A—DEERE Key
B—EXTEND Key
C—RETRACT Key

Continued on next page

NOTE: Net wrap actuator is at full stroke position when actuator is fully extended.

6. Continue to operate actuator to full stroke position. Display should show stall (*load*) current reading between "40" and "55".

   - Below normal reading indicates bad or corroded harness connections
   - Above normal reading indicates partially shorted motor windings or actuator binding

7. Press EXTEND or RETRACT keys to move counterknife to "home" position.

8. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key.

AG,OUMX005,1557 –19–03AUG00–2/2

Removing Net Wrap Actuator

NOTE: Use monitor-controller channel 14 when removing net wrap actuator. This allows EXTEND and RETRACT keys to control actuator position and remove load from actuator mounting pins.

1. Open net wrap cover.

Continued on next page

AG,OUMX005,1555 –19–03AUG00–1/2

2. Unlatch and fully open actuator door.

IMPORTANT: Current overload protection to net actuator is bypassed when using channel 14. Extended use of channel 14 may cause actuator damage.

3. Turn tractor key to ON position. Do not start tractor engine.

4. Press and hold DEERE key. Set selector switch to NET symbol to turn monitor-controller ON. “CH 01” will appear in the digital display.

5. Continue to hold DEERE key and press PLUS key to advance to “CH 14”. Release DEERE key.

NOTE: Retracting the actuator completely will cause the mounting pins to bind.

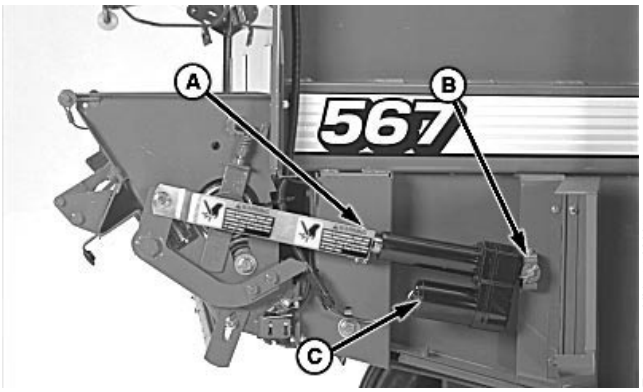
6. Press and hold EXTEND or RETRACT key to move actuator (C) back and forth to release load from mounting pins (A and B).

7. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.

8. Disconnect actuator wiring connector.

NOTE: Record location of washers on mounting pins used to aid in installation of actuator.

9. Remove mounting pins (A and B), washers, and actuator (C).



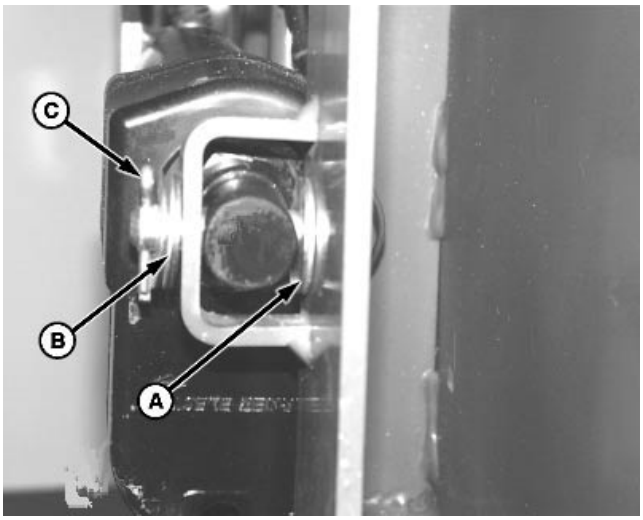
A—Pin
B—Pin
C—Actuator

AG,OUMX005,1555 –19–03AUG00–2/2

Installing Net Wrap Actuator

1. Install base end of actuator (motor down) on right-hand side of gate with one crowned pin. Insert pin through inside hole in actuator support, through one 13 x 25 x 3 mm washer (A), actuator, and second hole in support.
2. Install two 13 x 25 x 3 mm washers (B) and 4 x 25 cotter pin (C).

A—Washer, 13 x 25 x 3 mm
B—Washers, 13 x 25 x 3 mm (2 used)
C—Cotter Pin, 4 x 25 mm



E48087 –UN–12JUN00

Continued on next page

AG,OUO6059,238 –19–15JUL00–1/2

3. Install link (A) over rod end of actuator as shown. Insert one crowned pin from top through link and actuator rod.

4. Install 13 x 25 x 3 mm washer and 4 x 25 mm cotter pin.

5. Connect wire harness (B) to actuator.

6. Shut actuator door.

IMPORTANT: After installing actuator, turn monitor-controller ON. Press WRAP key to return counterknife arms to home position. Turn monitor-controller off to cancel STOP alarm. If this procedure is not followed, net will be fed continuously during the next bale.

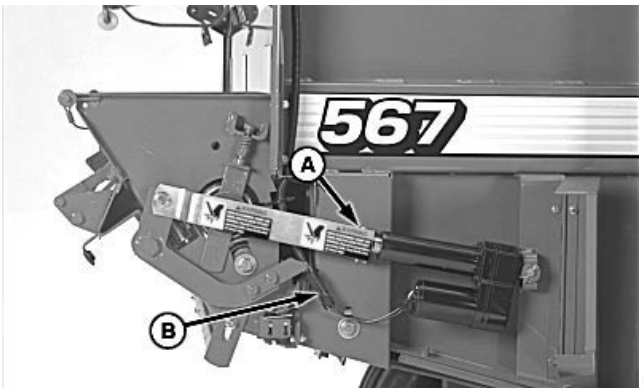
7. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.

8. Cycle actuator several times using WRAP key. Observe actuator to make sure it fully extends and fully retracts. If not, check for binding at mounting pins and washers, clean electrical connections, and check for low tractor voltage. There should be a minimum of 9.7 volts with tractor engine running and the net actuator installed.

9. Press WRAP key and return net knife to home (downward) position.

10. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.

11. Check and adjust feed roll brake (See CHECKING AND ADJUSTING FEED ROLL BRAKE in this section.)



A—Pin
B—Wire Harness

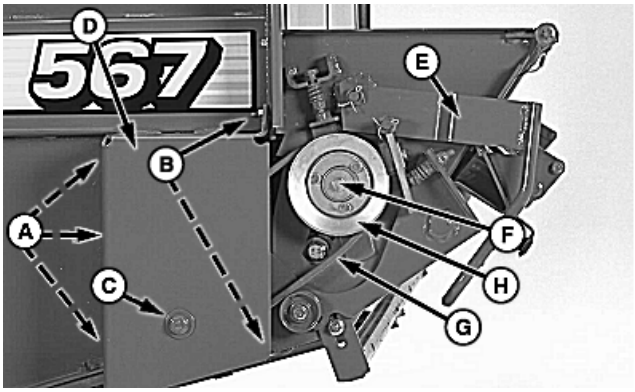
AG,OUO6059,238 –19–15JUL00–2/2

Removing and Installing Net Wrap V-Belt

1. Lock gate.
2. Start tractor and raise tension arm fully using tractor hydraulics.
3. Turn tractor key to off position. Remove key.
4. Disconnect monitor-controller power plug from tractor convenience outlet.
5. Open net wrap cover.
6. Put support under drive roll to help support weight of roll.

AG,OUO6059,244 –19–17JUL00–1/2

7. Remove cap screws (A), and cap screws and nuts (B).
8. Remove cap screw (C) and shield (D).
9. Raise brake lever and place on tab.
10. Remove cap screw, washer (F) and sheave (H).
11. Remove and replace belt (G).
12. Install in reverse of removal using the following special instructions:
    - Check belt tracking (See ADJUSTING BELT TRACKING in Service—Baler section.)



A—Cap Screws
B—Cap Screws and Nuts
C—Cap Screw
D—Shield
E—Brake Lever
F—Cap Screw and Washer
G—Belt
H—Sheave

AG,OUO6059,244 –19–17JUL00–2/2

Checking and Adjusting Lower Net Wrap Guide

NOTE: Do not tighten lock nuts (A) at this time.

1. Install M10 x 50 round-head bolt (E), through cross bar (F), shims (C), two 10.5 x 18 x 1.60 mm washers (G) and M10 nut (B).
2. Store shims not in use at location (D).
3. Tighten nut (B).
4. Swing lower guide into position and attach to lower roll mounting plate with lock nut (A). Tighten nuts on both sides.
5. Check that belts are not pinched between lower belt guide straps (H) and crossbar (I). Belts must be positioned between the guide straps.

NOTE: Use 5/32 in. drill bit as a gauge to check clearance between guide straps and crossbar.

6. Check and adjust clearance between ends of all belt guide straps and bottom crossbar. Clearance must be within specifications.

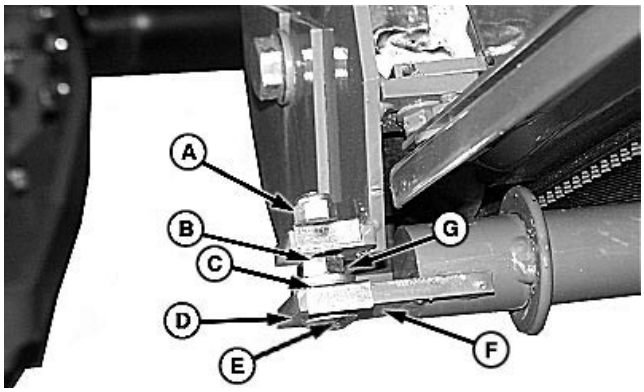
Specification	
Ends of Belt Guides-to-Bottom Crossbar—Clearance	3—5 mm (0.118—0.197 in.)

To obtain clearance;

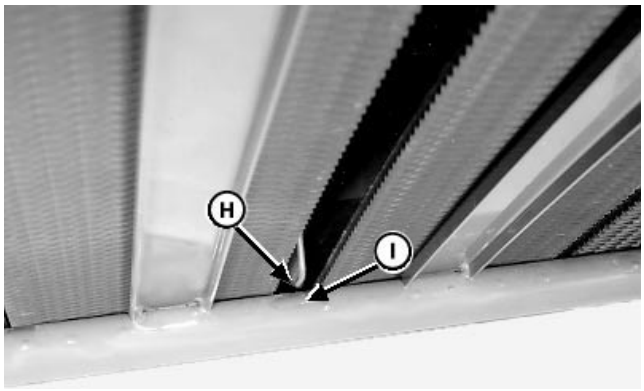
a. Loosen lock nut (A) and nut (B).

b. Add or subtract washer (G) and shims (C) on both sides.

c. Tighten nut (B). Then tighten lock nut (A) on both sides.



E49028 –UN–18OCT00



E49054 –UN–26OCT00

A—Lock Nut, M10
B—Nut, M10
C—Shims
D—Shims—Storage Position
E—Round-Head Bolt, M10 x 50
F—Crossbar Mounting Bracket
G—Washer, 10.50 x 18 x 1.60 mm
H—Belt Guide Strap
I—Crossbar

Continued on next page

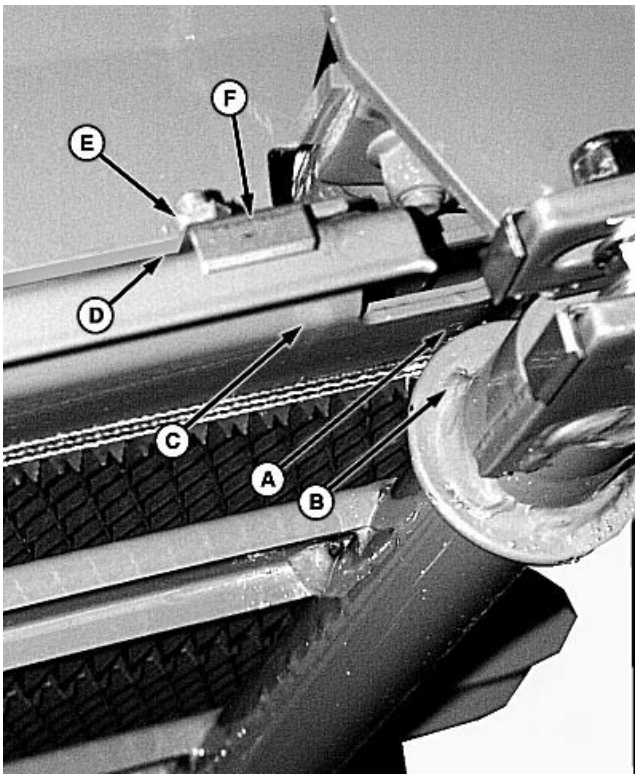
7. Check clearance (A) between guide washer (B) and lower net wrap guide (C). Clearance should be within specifications.

Specification

Belt Guide Washer-to-Lower Net Wrap Guide—Clearance ..... 1—4 mm (0.039—0.157 in.)

8. If clearance is not within specifications, loosen nut (E) and add or subtract shims (F) between net wrap guide and deflector (D) as necessary. Tighten nut.

9. Check belt guide washer-to-lower net wrap guide clearance (A).



A—Clearance
B—Belt Guide Washer
C—Lower Net Wrap Guide
D—Placement Of Shim
E—Nut
F—Shims

AG,OUMX005,1556 –19–03AUG00–2/7

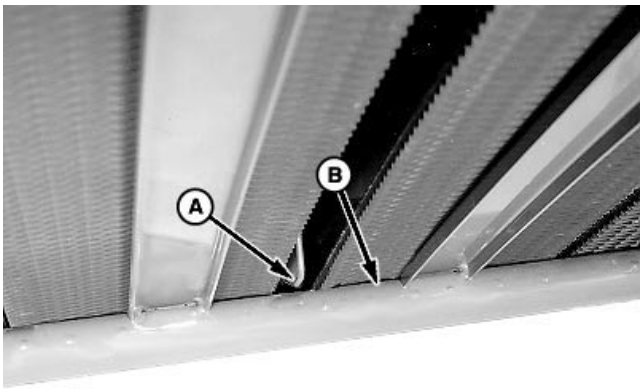
10. Check that belts are not pinched between lower belt guide straps (A) and crossbar (B). Belts must be positioned between the guide straps.

NOTE: Use 5/32 in. drill bit as a gauge to check clearance between guide straps and crossbar.

11. Check clearance between ends of all belt guide straps and bottom crossbar. Clearance must meet specifications.

Specification

Ends of Belt Guides-to-Bottom Crossbar—Clearance ..... 3—5 mm (0.118—0.197 in.)



A—Belt Guide Strap
B—Crossbar

Continued on next page

AG,OUMX005,1556 –19–03AUG00–3/7

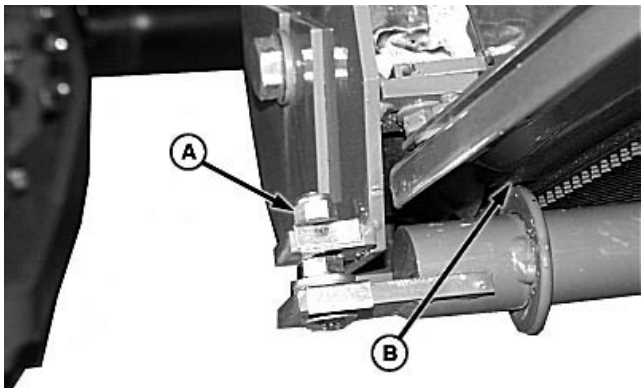
12. Check belt guide washer-to-crop deflector angle clearance (B) on both sides of machine. Clearance should be within specifications.

Specification

Belt Guide Washer-to-Crop Deflector Angle—Clearance	1—4 mm (0.039—0.157 in.)

13. Remove lock nuts (A) and insert washers as necessary.

14. Install and tighten lock nuts.



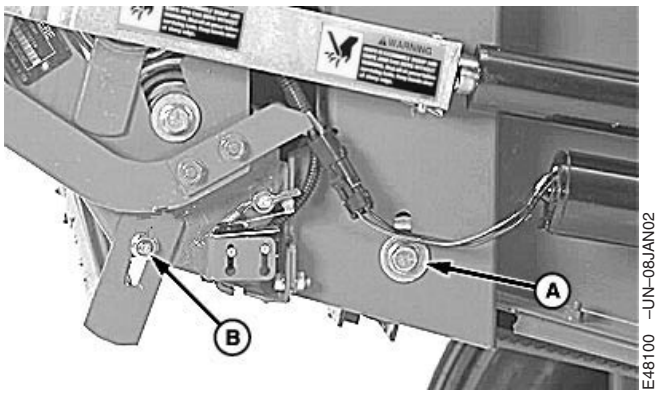
A—Lock Nut
B—Clearance

AG,OUMX005,1556 –19–03AUG00–4/7

IMPORTANT: When pan adjustment is complete, the pan should be contacting at least two belts. If pan is not touching belts, adjust crosstube to a higher position moving pan closer to the belts. Adjust both ends of crosstube as needed.

15. If lower rear gate roll is adjusted at the bottom of slot (A), adjust right-hand side crosstube to lowest position (B), as shown.

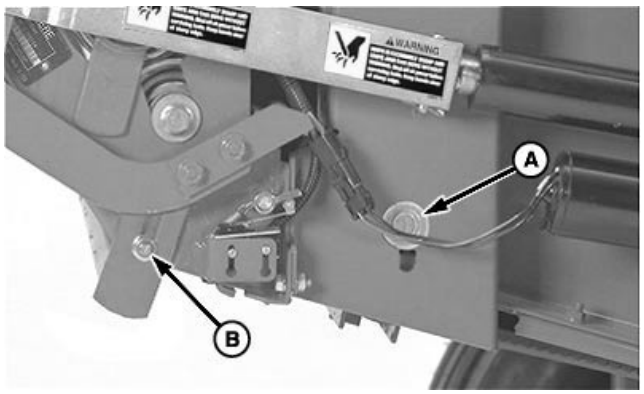
A—Roll Low Position
B—Guide Low Position



AG,OUMX005,1556 –19–03AUG00–5/7

16. If lower rear gate roll is adjusted at the top of slot (A), adjust right-hand side crosstube to highest position (B), as shown.

A—Roll High Position
B—Guide High Position



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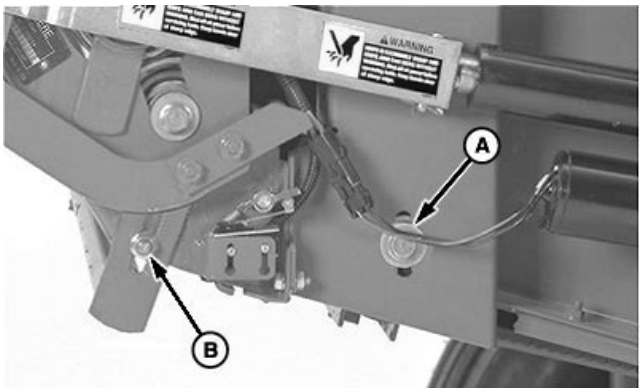
AG,OUMX005,1556 –19–03AUG00–6/7

17. If lower rear gate roll is adjusted to a position (A) between top and bottom of the slot, adjust right-hand cross tube to corresponding position (B) between top and bottom of slot.

18. Adjust belt tracking. (See ADJUSTING BELT TRACKING in Service—Baler section.)

A—Roll Middle Position
B—Guide Middle Position



AG,OUMX005,1556 –19–03AUG00–7/7

Adjusting Net Wrap Stretch

1. Unroll 1 m (3 ft) of material from roll of net being used. Locate a “starting” point in the net and, with net wrap pulled snug, measure between 10 weaves as shown in illustration. Divide the measurement by 10 to obtain the initial net measurement.

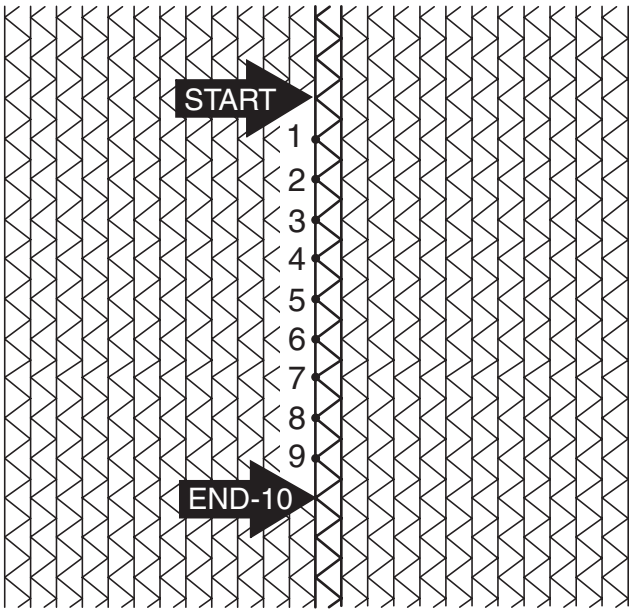
2. Thread net properly and make, wrap and dump a bale

NOTE: Make a uniform, cylindrical bale. (DO NOT try to measure net stretch on a “barrel shaped”, lumpy,or crooked bale) Measure stretch on the bale at a point where net feels tightest.

3. Locate the end cut-off on the bale. Use the net directly under the cut-off as a “starting” point for measurement.

4. Take the measurement between 10 weaves as shown in illustration. Divide the measurement by 10 to obtain the net stretch value.

5. The net stretch value should be 3—4 mm (0.118—0.157 in.) greater than the value measured in Step 1. If measurement is not within this range proceed to Step 6.



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OUMX005,0000082 –19–02OCT00–1/2

6. Put pressure on brake lever (D) while loosing three cap screws (C) and cap screw and washer (A).

7. Release brake lever (D).

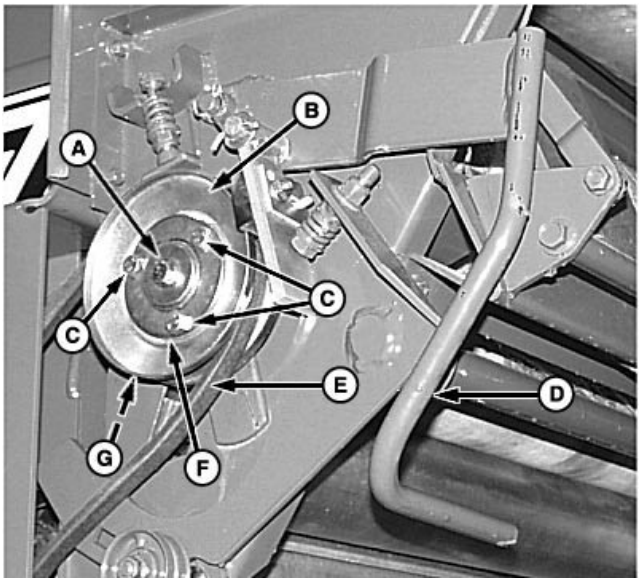
8. Remove cap screw and washer (A). Remove sheave (B) and belt (E).

9. Separate sheave (B) by removing three cap screws (C).

10. Transfer shims (G) to and from stored location (F) to meet net stretch value of 3—4 mm (0.118—0.157 in.) more than the value measured in Step 1.

    - Decreasing the number of shims (G) between sheave halves will increase the distance (stretch).
    - Increasing the number of shims (G) will decrease the distance (stretch).

11. If proper stretch cannot be obtained, see CHECKING AND ADJUSTING NET WRAP V-BELT IDLER TENSION in this section.



E51264 –UN–25FEB02

A—Cap Screw and Washer
B—Sheave
C—Cap Screws (3 used)
D—Lever
E—Belt
F—Shims (Stored)
G—Shims (In Use)

OUMX005,0000082 –19–02OCT00–2/2

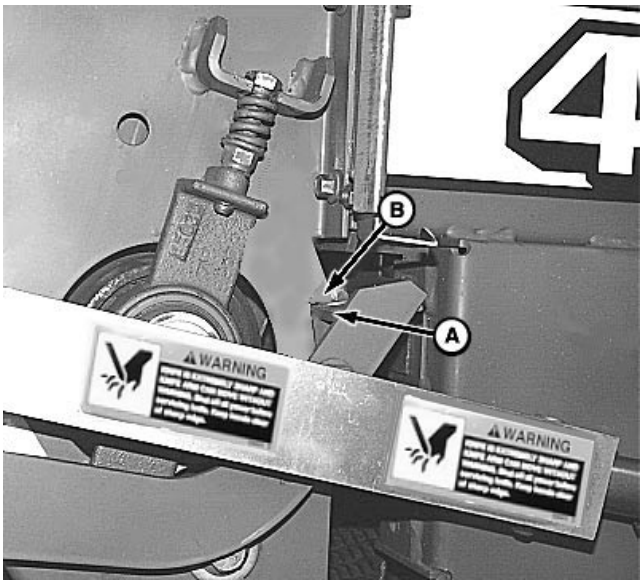
Checking and Adjusting Net Wrap V-Belt Idler Tension

TS268 –UN–23AUG88

CAUTION: Protect bystander. To prevent injury, be sure bystanders stand clear before operating net wrap unit or baler.

1. Remove v-belt and idler pulley from left side of unit.
2. Connect monitor-controller power plug to tractor convenience outlet.
3. Turn tractor key to ON position. Do not start tractor engine.
4. Press and hold DEERE key while setting selector switch to NET symbol to turn monitor-controller ON.
5. Continue to hold DEERE key and press PLUS key until “CH 14” appears in digital display.
6. Press RETRACT key to extend actuator fully (angle to highest position).
7. Check position of right-hand net wrap cut-off arm (A). Arm must contact tab (B) FIRMLY. If correct, proceed to Step 8.

   If position is not correct, adjust base end of mounting bracket as follows to obtain firm contact:



E51045 –UN–03JAN02

A—Angle
B—Tab

CAUTION: To avoid personal injury from unexpected knife movement, disconnect net wrap actuator wiring connector or power plug when making adjustment or working in area.

   a. Disconnect monitor-controller power plug from tractor convenience outlet.

Continued on next page

b. Loosen two screws (A) on top of bracket, two round-head bolts (B) and nuts on bottom end of bracket.

c. Connect monitor-controller power plug to tractor convenience outlet. Repeat Steps 3—5.

d. Retract actuator fully (to shortest position), and tighten bracket mounting bolts.

e. Extend actuator and recheck for firm contact.

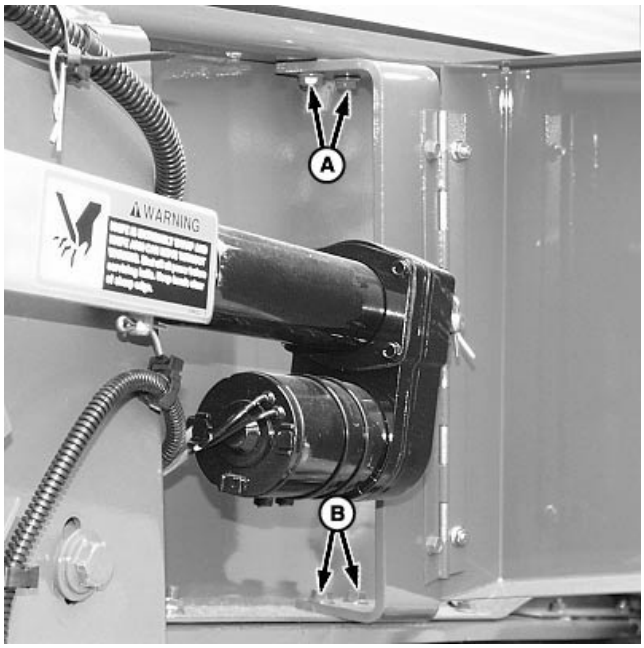
f. Retract actuator fully.

8. Install V-belt, cap screw, and pulley as removed. Torque to specification.

Specification

M10 x 25 Cap Screw—Torque ..... 65 N•m (50 lb-ft) Maximum

A—Screws
B—Round-Head Bolts



E49027 –UN–18OCT00

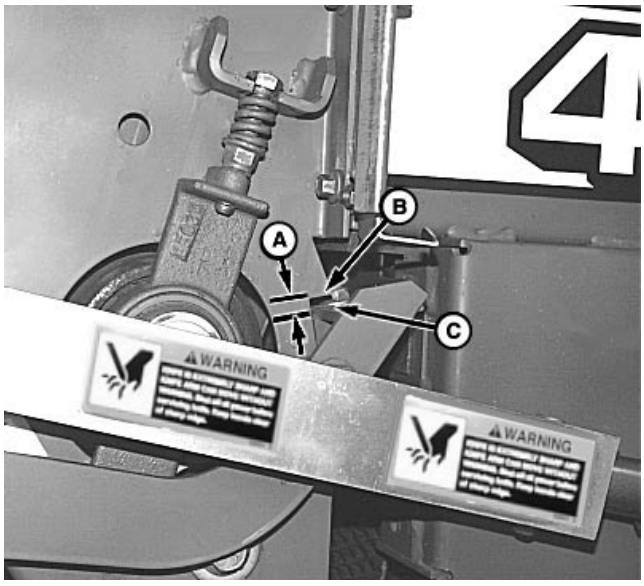
OUMX005,0000024 –19–06SEP00–2/6

9. **Right-Hand Side ONLY;**Extend actuator. Check that clearance (A) from angle (C) to tab (B) on sidesheet is within specifications.

Specification

Angle-to-Tab On Sidesheet—
Clearance ..... 6—15 mm (0.236—0.591 in.)

A—Clearance
B—Tab
C—Angle



E51046 –UN–03JAN02

Right-Hand Side

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OUMX005,0000024 –19–06SEP00–3/6

10. If clearance is not within specifications. Adjust idler (A) in idler arm slot until clearance is within specified range.

11. Retract actuator and re-extend to check for correct adjustment. If adjustment is still not correct, re-adjust idler (A) and re-check.

12. Close net wrap cover and shut actuator door.

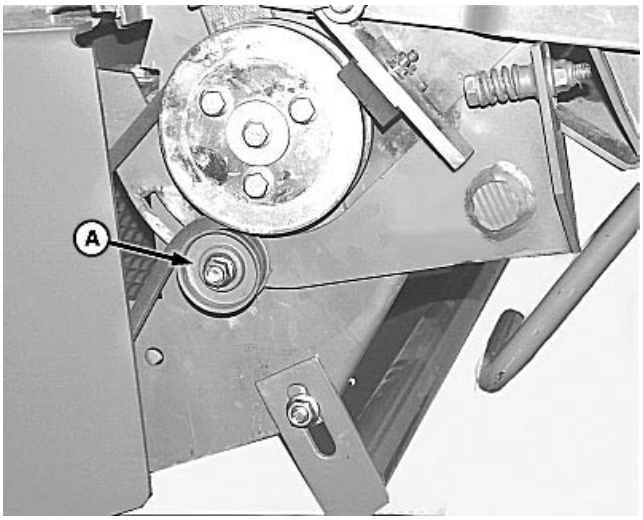
IMPORTANT: After adjustment, turn monitor-controller ON. Press WRAP key to return net wrap cut-off arm to home position. Turn monitor-controller off to cancel STOP alarm. If this procedure is not followed, net will be fed continuously during the next bale.

13. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Do not start tractor engine. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.

14. Cycle actuator several times using WRAP key.

15. Press WRAP key and return net knife to home (downward) position.

16. Set monitor-controller selector switch to OFF (centered) position. Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.



E51252 –UN–11FEB02

A—Idler

Continued on next page

17. **Perform Torque Check**

    Check roller torque by turning bolt (A) clockwise with torque wrench. **Do not tighten bolt (A) more than 40 N•m (35 lb-ft) or damage to bolt may occur.**

Specification	
Rubber Pad Brake-to-Sheave Brake Roller Torque—Torque	20—40 N•m (14—34 lb-ft)

18. If torque is less than specification, net cutoff may not function correctly and adjustment shims should be installed.

19. To adjust feed roll brake:

    a. Release feed roll brake by pulling out and up on handle (B).

NOTE: If worn, rubber brake pad can be reversed.

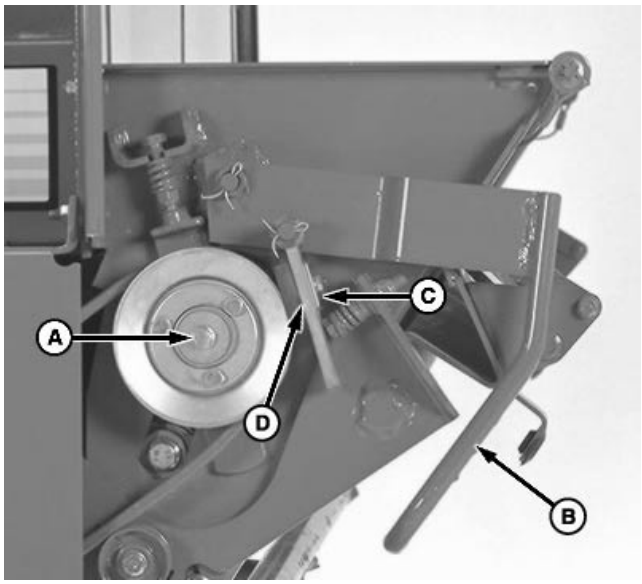
    b. Loosen nut. Install shims (C) one at a time, between brake pad (D) and bracket until torque is within specifications. Put extra shims behind bracket.

IMPORTANT: After making this adjustment, turn monitor-controller ON. Press WRAP key to return net knife arms to home position. Turn monitor-controller off to cancel STOP alarm. If this procedure is not followed, net will be fed continuously during the next bale.

    c. Connect monitor-controller power plug to tractor convenience outlet. Turn tractor key to ON position. Set monitor-controller selector switch to NET symbol to turn monitor-controller ON.

    d. Press WRAP key to cycle net wrap actuator. Counterknife at home (downward) position

    e. Set monitor-controller selector switch to OFF (centered) position Turn tractor key to OFF position. Remove key. Disconnect monitor-controller power plug from tractor convenience outlet.



E48483 –UN–24JUL00

A—Cap Screw
B—Lever
C—Shims
D—Brake Pad

Continued on next page

f. Check feed roll brake torque with actuator rod retracted. If torque is not within specifications, repeat procedure.

OUMX005,0000024 –19–06SEP00–6/6

Storing Baler (End of Season)

1. Move baler to a dry place. If baler must be stored outside, belt life can be prolonged by covering or removing belts to protect from sunlight and ozone exposure.

2. Remove twine from twine boxes. Store twine inside during storage season.

   If net wrap is installed, remove roll of net wrap material and store in a cool, dry place.

3. Clean baler thoroughly inside and out. Trash and dirt will draw moisture and cause rust.

4. Apply a few drops of oil to all pivot points and linkages.

5. Thoroughly lubricate baler. (See Lubrication and Maintenance section.)

6. Apply a thin layer of grease to threads of all adjustment bolts.

7. If equipped with push bar, apply a thin layer of grease to exposed rods of push bar shock absorbers.

8. Paint all parts from which paint has been worn.

   If net wrap is installed, paint surfaces of mechanism, especially inside surfaces of net wrap box, where paint is worn or chipped to prevent rust. Do not paint plated or stainless steel areas. Do not get paint on rubber feed roll. Dust rubber feed roll with baby powder.

9. Clean all chains by washing them with diesel fuel. Dry well and coat with a heavy oil.

10. Put blocking under baler frame to take load off tires. DO NOT DEFLATE TIRES. If exposed, put cover over tires to protect them from light, grease, and oil.

11. If equipped with fire extinguisher, follow manufacturers recommendation for inspection and maintenance. If baler is subjected to cold weather, drain or treat fire extinguisher fluid with a nonflammable antifreeze solution to prevent damage.

12. Order replacement parts as needed.

AG,OUMX005,1558 –19–03AUG00–1/1

Removing Baler from Storage (Beginning of Season)

1. Check and fill gear case to dipstick level. (See Lubrication and Maintenance section.)
2. Remove heavy oil from the chains and lubricate with 30W or heavier oil.
3. Lubricate complete machine. (See Lubrication and Maintenance section.) This will force any collected moisture out of the bearings.
4. Check tires for correct air pressure.
5. Make sure main drive slip clutch is free to slip. (See SLIPPING THE MAIN DRIVE SLIP CLUTCH in Service—Baler section.)
6. Tighten all hardware.
7. Check all belt splice pins for breakage and wear. Replace as necessary.
8. If equipped with fire extinguisher, follow manufacturers recommendation for inspection and maintenance. Refill, pressurize and test the fire extinguisher.
9. Review Operator's manual and check adjustments.
10. If equipped with gathering wheel, lubricate fittings and trip wheel. If wheel does not pivot freely by hand, remove wheel bracket from tube. Apply grease to pivoting surfaces and reassemble.
11. Check function of oversize bale alarm. (See TESTING GATE LATCH AND OVERSIZE BALE SWITCHES in Service—Baler section.)
12. If net wrap unit is installed, check areas that will contact net wrap. These areas must be clean and smooth to help prevent mesh wrappage on rubber roll. Clean any rusty or corroded areas with a nonabrasive scouring pad. (See USING NET WRAP AFTER EXTENDED STORAGE in Preparing Baler for Net Wrap section.)

AG,OUMX005,1559 –19–03AUG00–1/1

Specifications

BALETRAK *PLUS*® Monitor-Controller Specifications

BALETRAK *PLUS*® Monitor-Controller	
Near-Full Bale	Indicator displayed/audible alarm
Full Bale	Indicator displayed/audible alarm
Auto-Wrap	Indicator displayed/audible alarm
Oversize Bale Protection	STOP/oversize indicator/audible alarm
Gate Closed	Indicator displayed
Nighttime Operation	Display area backlight
Continuous Twine Application	Indicator displayed
Net Wrap Application	Indicator displayed
Auto Wrap Cycle	Activates when bale reaches preset size
Gate Latched	Indicator displayed
Bale Full Size—Wrapping Started	Indicator displayed
Wrapping Completed—Eject Bale	Indicator displayed
Bale Shape	Vertical bars displayed: 24 each column
Wrap of Undersize Bale	Touch wrap key
Bale Size Indicator	Digital display
Set Bale Size	Hold bale size key/touch plus or minus key
Set Twine Spacing/Net Wraps	Hold key/touch plus or minus key
Set Number of End Wraps, Right or Left	Hold key/touch plus or minus key
Set End Wrap Location, Right or Left	Hold key/touch plus or minus key
Set Re-extension and Cinch Wrap	Hold key/touch plus or minus key
Out of Net Wrap	STOP indicator displayed/audible alarm
Surface Wrap Cutoff	Indicator displayed
Selection of Twine or Net Wrap	Module rocker switch
Control of Variable Core	Diameter setting and on/off key
On Board Diagnostics	Digital LCD
Bale Counters	Resetable and total
Manual Actuator Movement with Electronic By-pass	Separate switch in harness
Low Voltage Indicator	Indicator displayed

AG,OUO6059,242 –19–17JUL00–1/1

467, 467 Silage Special and 567 Round Baler Specifications[1]

	467	467 Silage Special	567
BALER DIMENSION			
Length: Gate Closed; w/o CoverEdge™Net Wrap	3708 mm (146 in.)		3708 mm (146 in.)
Length: Gate Closed; w/CoverEdge™ Net Wrap	4150 mm (163.4 in.)		4150 mm (163.4 in.)
Length: Gate Open	4750 mm (187 in.)		4750 mm (187 in.)
Height: Gate Closed	2794 mm (110 in.)		2794 mm (110 in.)
Height: Gate Open	3683 mm (145 in.)		3683 mm (145 in.)
Width: Regular or MEGATOOTH™ Pickup	2491 mm (98.1 in.)	2500 mm (98.4 in.)	2847 mm (112.1 in.)
Width: MegaWide Pickup	1804 mm (71 in.)	1804mm (71 in.)	2210mm (87 in.)
BALER WEIGHT	1889 kg (4165 lb)	1889 kg (4165 lb)	2146 kg (4730 lb)
BALE			
Diameter	813—1829 mm (32—72 in.)		813—1829 mm (32—72 in.)
Width	1168 mm (46 in.)		1565 mm (61.6 in.)
Typical Weight[a]	748 kg (1650 lb)		998 kg (2200 lb)
Maximum Weight	998 kg (2200 lb)		1089 kg (2400 lb)
REGULAR PICKUP			
Width: Inside	1166 mm (45.9 in.)	—	1560 mm (61.4 in.)
Width: On Flare	1410 mm (55.5 in.)	—	1803 mm (71 in.)
Width: Between Outer Teeth	1123 mm (44.2 in.)	—	1519 mm (59.8 in.)
Drive	Roller chain with V-belt	—	Roller chain with V-belt
Toothbars	4	—	4
Number of Teeth	36 (72 tines)	—	48 (96 tines)
Tooth Spacing	66 mm (2.6 in.)	—	66 mm (2.6 in.)
Stripper Diameter	254 mm (10 in.)	—	254 mm (10 in.)
MEGATOOTH™ PICKUP			
Width; Inside	1166 mm (45.9 in.)		1560 mm (61.4 in.)
Width: On Flare	1410 mm (55.5 in.)		1803 mm (71 in.)
Width: Between Outer Teeth	1123 mm (44.2 in.)		1519 mm (59.8 in.)
Drive	Roller chains with slip clutch		Roller chains with slip clutch
Toothbars	4		4
Number of Center Teeth	28 (56 tines)		40 (80 tines)
Number of Mega Teeth	16 (16 tines)		16 (16 tines)
Tooth Spacing	66 mm (2.6 in.)		66 mm (2.6 in.)
Stripper Diameter	254 mm (10 in.)		254 mm (10 in.)
[a]Depending on crop conditions.			

[1](Specifications and design subject to change without notice.)

Continued on next page

	467	467 Silage Special	567
MegaWide PICKUP			
Width: Inside	1560 mm (61.4 in.)		1864 mm (73.4 in.)
Width: On Flare	1803 mm (71 in.)		2210 mm (87 in.)
Width: Between Outer Teeth	1519 mm (59.8 in.)		1519 mm (59.8 in.)
Drive	Roller chains with slip clutch		Roller chains with slip clutch
Toothbars	4		4 Left-Hand and 4 Right-Hand
Number of Center Teeth	40 (80 tines)		56 (112 tines)
Number of Outside (Mega)Teeth	16 (16 tines)		8 (8 tines)
Tooth Spacing	66 mm (2.6 in.)		66 mm (2.6 in.)
Stripper Diameter	254 mm (10 in.)		254 mm (10 in.)
FORMING BELTS			
Number	6		8
Width	178 mm (7 in.)		178 mm (7 in.)
Type	3-Ply combination nylon polyester, diamond tread friction surface, with plate-type splices		3-Ply combination nylon polyester, diamond tread friction surface, with plate-type splices
Length	(2) 13335 mm (525 in.) (4) 13475 mm (530.5 in.)		(4) 13335 mm (525 in.) (4) 13475 mm (530.5 in.)
BALE WRAP (BALETRAK *PLUS*®)			
Type	Twine wrap (standard) CoverEdge™ Net wrap (optional)		Twine wrap (standard) CoverEdge™ Net wrap (optional)
Control	Self-activating; automatic at desired bale size		Self-activating; automatic at desired bale size
Actuator Type	Electric, double twine arm		Electric, double twine arm
Twine Spacing	Adjustable		Adjustable
ELECTRICAL BALE FORMING INDICATORS			
Bale Shape	BALETRAK *PLUS*®		BALETRAK *PLUS*®
Twine Arm Position	BALETRAK *PLUS*®		BALETRAK *PLUS*®
Bale Size Alert	BALETRAK *PLUS*®		BALETRAK *PLUS*®
GEAR CASE OIL CAPACITY (On Baler)	1.2 L (1.25 U.S. qt)		1.2 L (1.25 U.S. qt)
TIRE SIZE	31 x 13.5-15, 8 ply rating		31 x 13.5-15, 8 ply rating
POWER TRAIN			
PTO Shaft Speed	540 or 1000 rpm		540 or 1000 rpm
Drive Protection	Slip clutch		Slip clutch

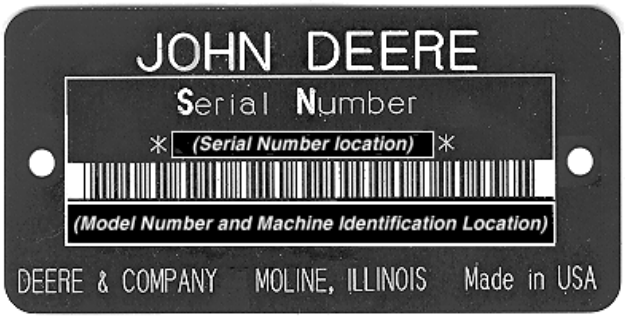
Continued on next page

	467	467 Silage Special	567
TRACTOR RECOMMENDED			
Minimum Power	48.5 kW (65 hp)		56 kW (75 hp)
Hydraulics (Recommended):			
Control Valve	One double-acting selective control valve		One double-acting selective control valve
Flow (Minimum)	22.7—24.6 L/min (6—6.5 gpm)		22.7—24.6 L/min (6—6.5 gpm)

AG,OUO6059,241 –19–17JUL00–3/3

Record Product Identification Numbers

Each machine has the identification plate shown. The letters and numbers stamped on the plates identify a component or assembly. ALL these characters are needed when ordering parts or identifying a machine for any John Deere product support program. When ordering parts, always furnish model and serial number as given on serial number plate. The serial number is above the bar code and the machine model and type is below the bar code. It will assist your John Deere dealer in giving you prompt and efficient service.



E40547 –UN–21JUN96

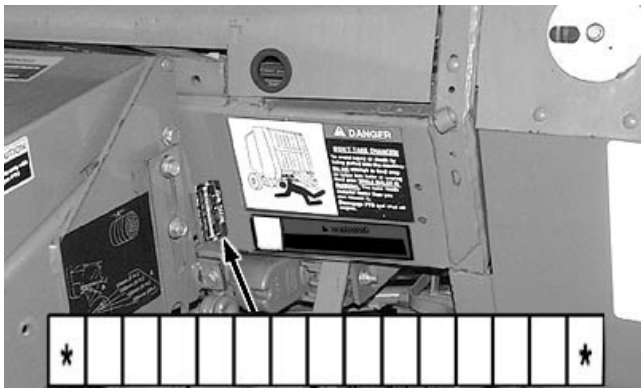
Also, they are needed for law enforcement to trace your machine if it is ever stolen.

ACCURATELY record these characters in the spaces provided in each of the following photographs.

EX,566S,E –19–02SEP97–1/1

Record Baler Serial Number

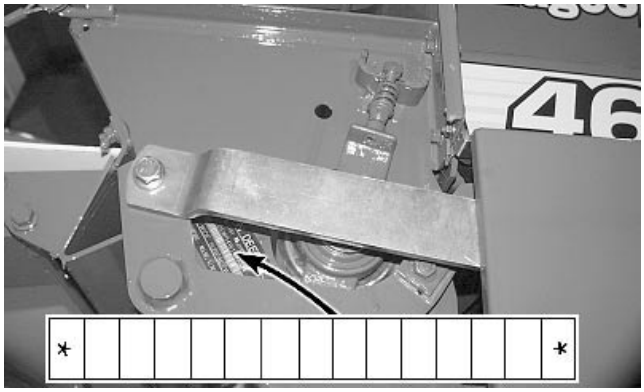
The baler serial number plate is located on the front, left-hand side of frame.



AG,OUMX005,1092 –19–09JAN00–1/1

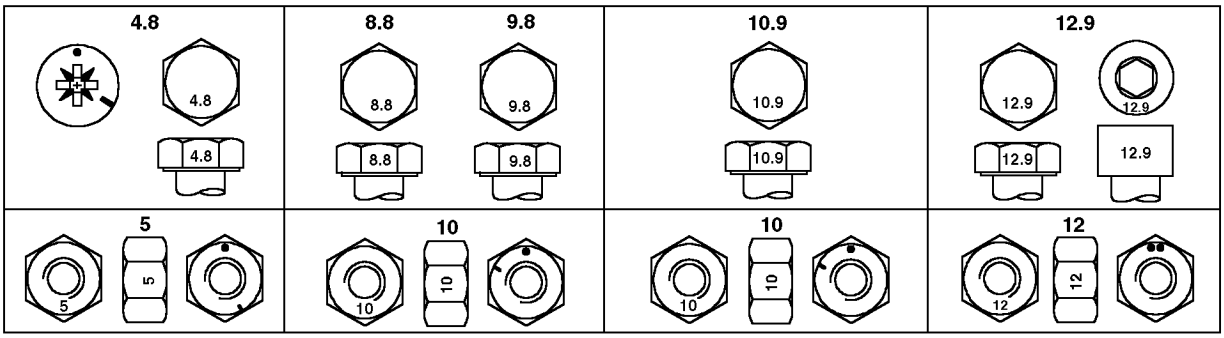
Record Net Wrap Serial Number (If Equipped)

The net wrap serial number plate is located on the right-hand side of frame.



AG,OUO6059,240 –19–17JUL00–1/1

Metric Bolt and Cap Screw Torque Values



TORQ2 –UN–07SEP99

Top, Property Class and Head Markings; Bottom, Property Class and Nut Markings

	Class 4.8		Class 8.8 or 9.8		Class 10.9		Class 12.9	
Size	**Lubricated[a] N•m(lb-ft)**	**Dry[b] N•m(lb-ft)**	**Lubricated[a] N•m(lb-ft)**	**Dry[b] N•m(lb-ft)**	**Lubricated[a] N•m(lb-ft)**	**Dry[b] N•m(lb-ft)**	**Lubricated[a] N•m(lb-ft)**	**Dry[b] N•m(lb-ft)**
M6	4.7 (3.5)	6 (4.4)	9 (6.6)	11.5 (8.5)	13 (9.5)	16.5 (12.2)	15.5 (11.5)	19.5 (14.5)
M8	11.5 (8.5)	14.5 (10.7)	22 (16)	28 (20.5)	32 (23.5)	40 (29.5)	37 (27.5)	47 (35)
M10	23 (17)	29 (21)	43 (32)	55 (40)	63 (46)	80 (59)	75 (55)	95 (70)
M12	40 (29.5)	50 (37)	75 (55)	95 (70)	110 (80)	140 (105)	130 (95)	165 (120)
M14	63 (46)	80 (59)	120 (88)	150 (110)	175 (130)	220 (165)	205 (150)	260 (190)
M16	100 (74)	125 (92)	190 (140)	240 (175)	275 (200)	350 (255)	320 (235)	400 (300)
M18	135 (100)	170 (125)	265 (195)	330 (245)	375 (275)	475 (350)	440 (325)	560 (410)
M20	190 (140)	245 (180)	375 (275)	475 (350)	530 (390)	675 (500)	625 (460)	790 (580)
M22	265 (195)	330 (245)	510 (375)	650 (480)	725 (535)	920 (680)	850 (625)	1080 (800)
M24	330 (245)	425 (315)	650 (480)	820 (600)	920 (680)	1150 (850)	1080 (800)	1350 (1000)
M27	490 (360)	625 (460)	950 (700)	1200 (885)	1350 (1000)	1700 (1250)	1580 (1160)	2000 (1475)
M30	660 (490)	850 (625)	1290 (950)	1630 (1200)	1850 (1350)	2300 (1700)	2140 (1580)	2700 (2000)
M33	900 (665)	1150 (850)	1750 (1300)	2200 (1625)	2500 (1850)	3150 (2325)	2900 (2150)	3700 (2730)
M36	1150 (850)	1450 (1075)	2250 (1650)	2850 (2100)	3200 (2350)	4050 (3000)	3750 (2770)	4750 (3500)

[a] *"Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings.*

[b] *"Dry" means plain or zinc plated without any lubrication.*

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

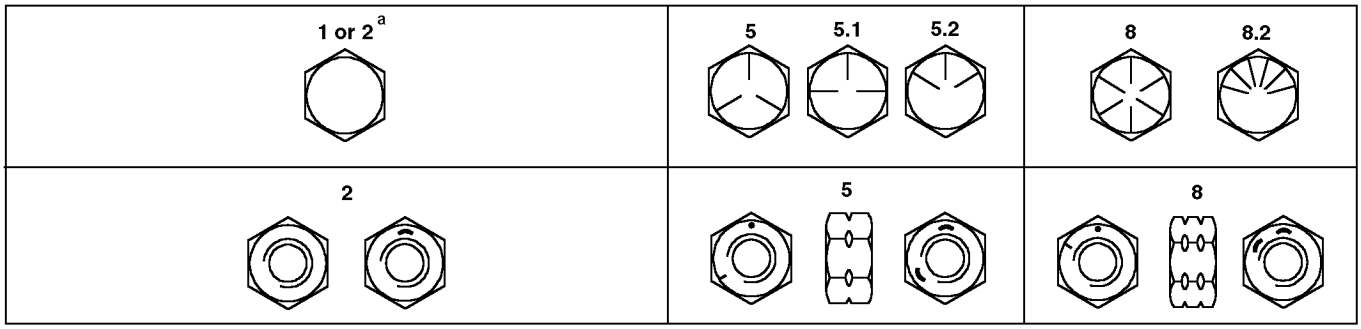
Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

DX,TORQ2 –19–01OCT99–1/1

Unified Inch Bolt and Cap Screw Torque Values



TORQ1A –UN–27SEP99

Top, SAE Grade and Head Markings; Bottom, SAE Grade and Nut Markings

	Grade 1 (No Mark)		Grade 2[a] (No Mark)		Grade 5, 5.1 or 5.2		Grade 8 or 8.2	
Size	**Lubricated[b] N•m(lb-ft)**	**Dry[c] N•m(lb-ft)**	**Lubricated[b] N•m(lb-ft)**	**Dry[c] N•m(lb-ft)**	**Lubricated[b] N•m(lb-ft)**	**Dry[c] N•m(lb-ft)**	**Lubricated[b] N•m(lb-ft)**	**Dry[c] N•m(lb-ft)**
1/4	3.8 (2.8)	4.7 (3.5)	6 (4.4)	7.5 (5.5)	9.5 (7)	12 (9)	13.5 (10)	17 (12.5)
5/16	7.7 (5.7)	9.8 (7.2)	12 (9)	15.5 (11.5)	19.5 (14.5)	25 (18.5)	28 (20.5)	35 (26)
3/8	13.5 (10)	17.5 (13)	22 (16)	27.5 (20)	35 (26)	44 (32.5)	49 (36)	63 (46)
7/16	22 (16)	28 (20.5)	35 (26)	44 (32.5)	56 (41)	70 (52)	80 (59)	100 (74)
1/2	34 (25)	42 (31)	53 (39)	67 (49)	85 (63)	110 (80)	120 (88)	155 (115)
9/16	48 (35.5)	60 (45)	76 (56)	95 (70)	125 (92)	155 (115)	175 (130)	220 (165)
5/8	67 (49)	85 (63)	105 (77)	135 (100)	170 (125)	215 (160)	240 (175)	305 (225)
3/4	120 (88)	150 (110)	190 (140)	240 (175)	300 (220)	380 (280)	425 (315)	540 (400)
7/8	190 (140)	240 (175)	190 (140)	240 (175)	490 (360)	615 (455)	690 (510)	870 (640)
1	285 (210)	360 (265)	285 (210)	360 (265)	730 (540)	920 (680)	1030 (760)	1300 (960)
1-1/8	400 (300)	510 (375)	400 (300)	510 (375)	910 (670)	1150 (850)	1450 (1075)	1850 (1350)
1-1/4	570 (420)	725 (535)	570 (420)	725 (535)	1280 (945)	1630 (1200)	2050 (1500)	2600 (1920)
1-3/8	750 (550)	950 (700)	750 (550)	950 (700)	1700 (1250)	2140 (1580)	2700 (2000)	3400 (2500)
1-1/2	990 (730)	1250 (930)	990 (730)	1250 (930)	2250 (1650)	2850 (2100)	3600 (2650)	4550 (3350)

[a] Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

[b] "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings.

[c] "Dry" means plain or zinc plated without any lubrication.

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

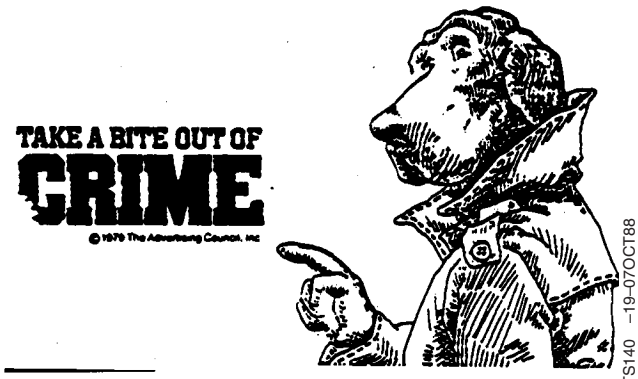
Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

DX,TORQ1 –19–01OCT99–1/1

Crime Prevention Tips

Help Prevent Crime

You can help take a bite out of crime by properly documenting ownership and discouraging theft.



TS140 –19–07OCT88

DX,CRPRV,A –19–03MAR93–1/1

Record Ag Identification Numbers

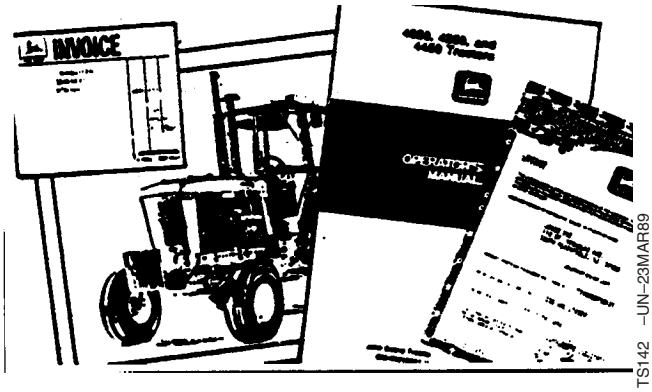
1. Mark your machines with your own unique numbering system.
2. Record the Product Identification Number (PIN) of the unit and also individual component identification numbers for engines, axles, pumps, etc. Include the PIN numbers on all documentation, such as insurance, financial, and warranty papers.

TS161 –UN–23MAR89

DX,CRPRV,B –19–03MAR93–1/1

Keep Proof of Ownership

1. Take color photographs from several angles of each machine.
2. Maintain an up-to-date inventory of all your machines.
3. Keep your documented identification numbers, color photographs, and inventory in a safe, secure location.



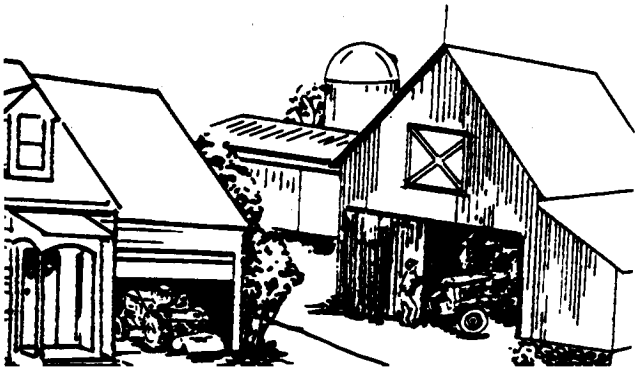
TS142 –UN–23MAR89

DX,CRPRV,C –19–03MAR93–1/1

Park Indoors Out of Sight

Make machines hard to move:

- Park large equipment in front of exits.
- Lower equipment to the ground. Remove key.
- Remove battery when unit is in storage.
- Lock cab doors, windows, and vandal-proof devices.
- Set wheels in widest position making loading more difficult. Lock building.



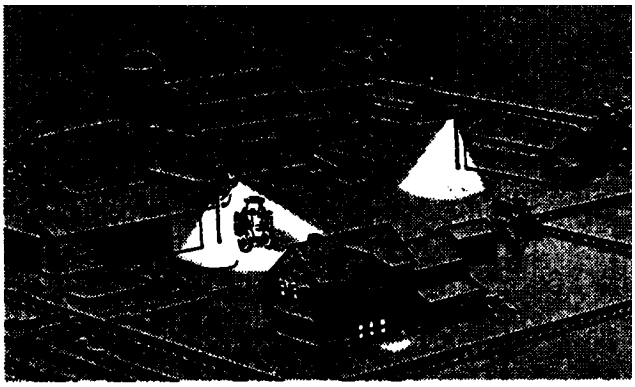
TS143 –UN–23AUG88

DX,CRPRV,D –19–03MAR93–1/1

When Parking Outdoors

Make machines hard to move:

- Park in a well-lighted, fenced area.
- Lower all equipment to the ground.
- Remove ignition key. Remove battery when unit is in storage.
- Lock cab doors, windows, and vandal-proof devices.
- Set wheels in widest position making loading more difficult.

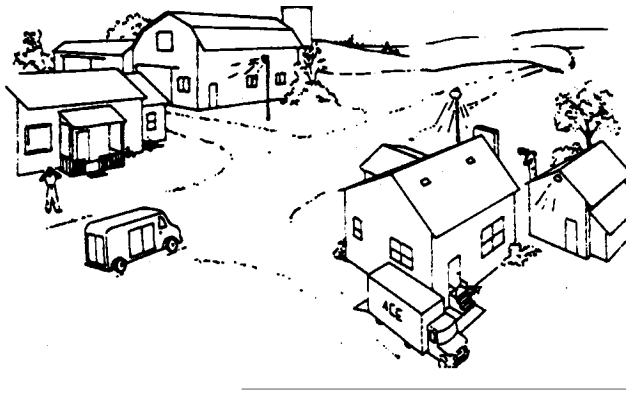


TS155 –UN–23AUG88

DX,CRPRV,E –19–03MAR93–1/1

Reduce Vandalism

1. Install vandal-proof devices.
2. Participate in a neighborhood watch program. Take written notes of suspicious vehicles or persons and report your findings to law enforcement agency.
3. Regularly verify that identification plates have not been removed. If they have, notify law enforcement agency. Order duplicate plates from your dealer.



TS145 –UN–23AUG88

DX,CRPRV,F –19–03MAR93–1/1

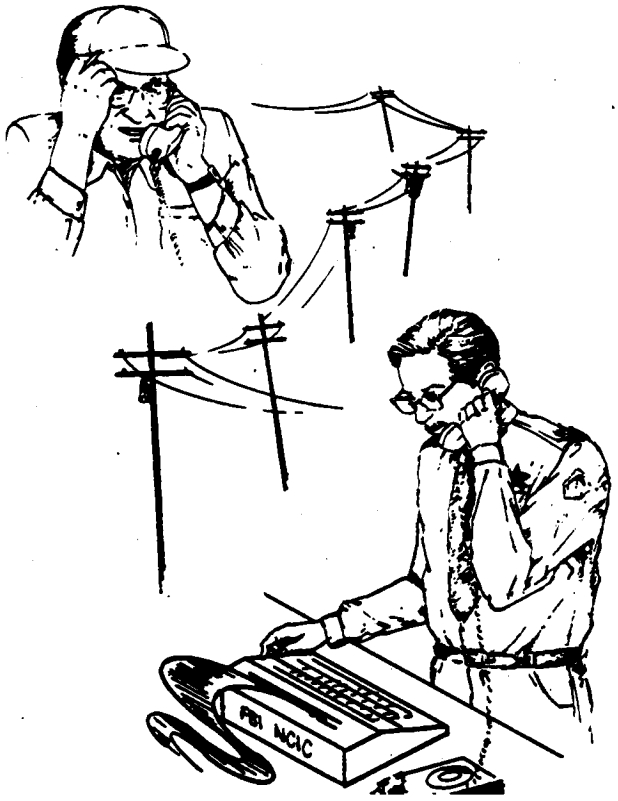
Report Thefts Immediately

1. Immediately notify your local law enforcement agency and insurance agent.

2. Provide a complete description of the machine, all of the documented identification numbers and color photographs.

3. Request verification of the identification numbers after they have been entered with any regional or national crime information center. Double check the numbers to be sure they are correct.

4. Notify your John Deere dealer of the theft and request that its loss be posted with full description and identification numbers.



TS146 –UN–09JAN89

DX,CRPRV,G –19–03MAR93–1/1

Index

Page

C

Page

D

E

Page

F

G

H

Page

I

K

L

M

Page

John Deere Service Literature Available

Technical Information

Technical information is available from John Deere. Some of this information is available in electronic as well as printed form. Order from your John Deere dealer or call **1-800-522-7448**. Please have available the model number, serial number, and name of the product.

Available information includes:

- PARTS CATALOGS list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.
- OPERATOR'S MANUALS providing safety, operating, maintenance, and service information. These manuals and safety signs on your machine may also be available in other languages.
- OPERATOR'S VIDEO TAPES showing highlights of safety, operating, maintenance, and service information. These tapes may be available in multiple languages and formats.
- TECHNICAL MANUALS outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in separate component technical manuals
- FUNDAMENTAL MANUALS detailing basic information regardless of manufacturer:
  - Agricultural Primer series covers technology in farming and ranching, featuring subjects like computers, the Internet, and precision farming.
  - Farm Business Management series examines "real-world" problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
  - Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
  - Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.

TS189 –UN–17JAN89

TS191 –UN–02DEC88

TS224 –UN–17JAN89

TS1663 –UN–10OCT97

DX,SERVLIT –19–11NOV97–1/1

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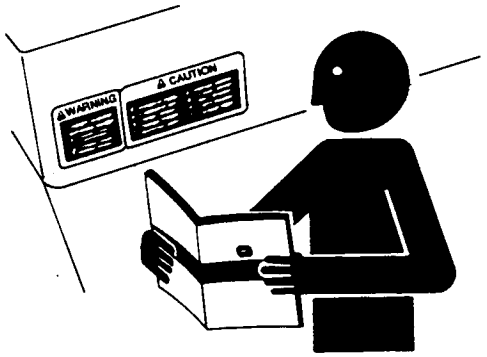
PN=419

John Deere Service Keeps You On The Job

John Deere Is At Your Service



TS201 –UN–23AUG88

CUSTOMER SATISFACTION is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts and service:

–Maintenance and service parts to support your equipment.

–Trained service technicians and the necessary diagnostic and repair tools to service your equipment.

CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

–Machine model and product identification number

–Date of purchase

–Nature of problem

2. Discuss problem with dealer service manager.

3. If unable to resolve, explain problem to dealership manager and request assistance.

4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance.

5. If a problem is not resolved to your satisfaction, contact the Ag Customer Assistance Center at 1-866-99DEERE (866-993-3373) or e-mail us at agriculture@johndeere.com.

DX,IBC,2 –19–02APR02–1/1