

# 7721 COMBINE



JOHN DEERE

## OPERATORS MANUAL

7721  
COMBINE

OMH120061 B5 English

JOHN DEERE HARVESTER WORKS  
OMH120061 B5

LITHO IN THE U.S.A.  
ENGLISH



## INTRODUCTION



**This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.**

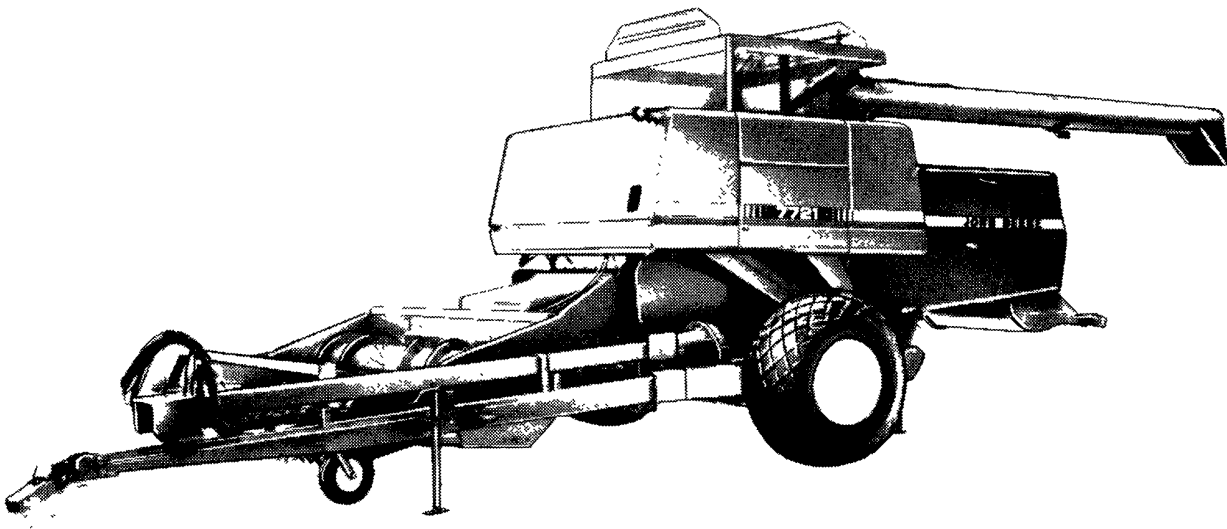
Your operator's manual contains SI metric equivalents which follow immediately after the U.S. customary units of measure.

"Right-hand and "left-hand" sides are determined by facing in the direction the combine will travel when in use.

Record the identification number(s) in the space provided following Specifications. Accurately record all of the characters because (should the product be stolen) tracing is sometimes through a computer match of letters and numbers. Also, your dealer needs this information when ordering parts. If you carry your operator's manual on the machine for reference, be sure to also record the identification number(s) on a separate sheet of paper and file it in a secure place not on the machine so you will still have a record in case the machine is stolen.

The warranty on this combine appears on your copy of the purchase order which you should have received from your dealer when making your purchase. 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.

Warranty and field improvements are a part of John Deere's product support program for customers who operate and maintain their equipment as described in this manual. 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.





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# Safety

## SAFETY DECALS



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H281987

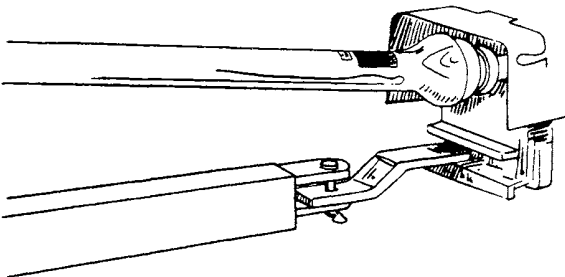


**CAUTION, WARNING or DANGER:** Decals with these headings and symbol indicate the possibility of personal injury.

**IMPORTANT:** Decals with this heading indicate the possibility of damage to the machine.

Decals are located in areas where they apply.

## AVOID CONTACT WITH MOVING PARTS



A19405

A19405

Keep guards and shields in place at all times while operating the combine. Always disengage tractor PTO and shut off engine before removing guards or shields.

Unauthorized modifications to the machine may impair the function and or safety and affect machine life.

Keep hands, feet, and clothing away from power-driven parts.

Never clean, lubricate, or adjust the combine when it is running.

Everyone must be clear before starting tractor engine or running combine.

Never attempt to clear obstructions off the header unless the PTO is disengaged and the tractor engine is shut off.

## OPERATE SAFELY



H55333

H55333

Clothing worn by operator must be fairly tight and belted. Loose jackets, shirts, or sleeves must never be worn.

The gearshift lever of tractor must be in neutral and the PTO lever disengaged before starting tractor engine.

Be careful when operating on hillsides so the combine or tractor will not tip sideways.

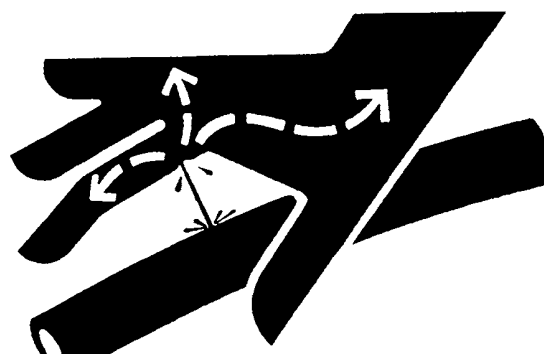
Always keep the tractor in gear when going down hills.

## AVOID HIGH PRESSURE LEAKS

Escaping hydraulic fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pin holes and nozzles which eject fluids under high pressure. Use a piece of cardboard or wood to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.

Cracking hydraulic line fittings to lower the feeder house will result in an instantaneous dropping of feeder house or feeder house and header.



X38\*1

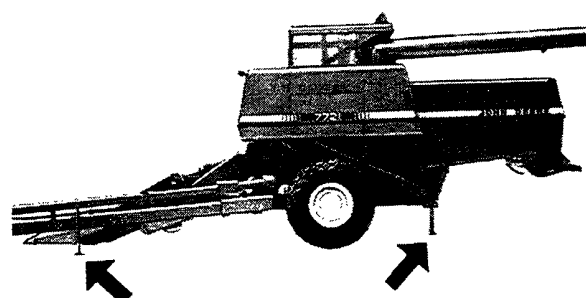
## LEAVING COMBINE UNATTENDED

Before leaving the combine unattended, support the header with either the hydraulic cylinder safety stop or with blocks, or lower it to the ground.

Lower hitch and separator support stands and block wheels.

If combine is attached to tractor, place tractor transmission in park, stop engine and remove tractor key.

**CAUTION:** Before platform is removed attach support stand to separator and place in "down" position as shown. Adjust stand to contact ground so hitch tube will not fly upward when platform is removed.



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H31854

## TRANSPORT SAFELY

Never ride or allow anyone on the tractor, drawbar, or hitch.

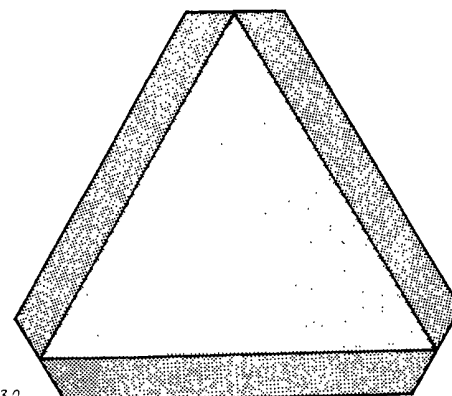
Be extra careful when transporting the combine in hilly country.

Use a tractor large enough to maintain control.

When transporting the combine on a road or highway, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local governmental regulations.

Tow only with an agricultural tractor equipped with stationary drawbar.

Do not transport combine over 20 MPH (32.2 km/h).

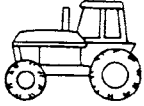





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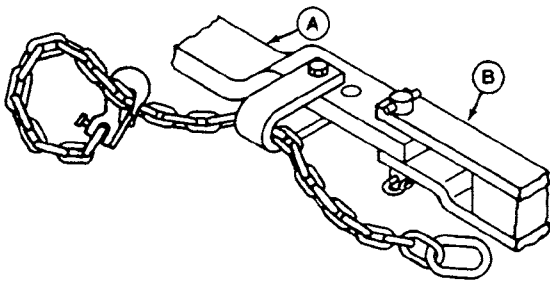
## RECOMMENDED MAXIMUM TOWING SPEEDS

For safe braking performance and control during transport, do not exceed recommended maximum towing speed given in table below. When operating on slopes or less than good traction conditions, these towing speeds must be reduced. Always refer to this table before transporting combine.

<b>Gross Tractor Weight</b> 	<b>Total Weight of Combine with Empty Grain Tank and Attaching Equipment</b>   		
	10,000 lbs. (4536 kg)	16,000 lbs. (7200 kg)	18,000 lbs. (8100 kg)
0-5,000 lbs. (0-2270 kg)	Do not tow	Do not tow	Do not tow
5,000-8,000 lbs. (2270-3632 kg)	10 mph (16.1 km/h)	Do not tow	Do not tow
8,000-9,000 lbs. (3632-4086 kg)	10 mph (16.1 km/h)	10 mph (16.1 km/h)	Do not tow
9,000-10,000 lbs. (4086-4536 kg)	10 mph (16.1 km/h)	10 mph (16.1 km/h)	10 mph (16.1 km/h)
10,000-16,000 lbs. (4536-7258 kg)	20 mph (32.2 km/h)	10 mph (16.1 km/h)	10 mph (16.1 km/h)
16,000-18,000 lbs. (7258-8100 kg)	20 mph (32.2 km/h)	20 mph (32.2 km/h)	10 mph (16.1 km/h)
18,000 lbs. (8100 kg)—Up	20 mph (32.2 km/h)	20 mph (32.2 km/h)	20 mph (32.2 km/h)

H32651

## USE A SAFETY CHAIN



A safety chain will help control drawn equipment (B) should it accidentally separate from the drawbar (A) while transporting. 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.

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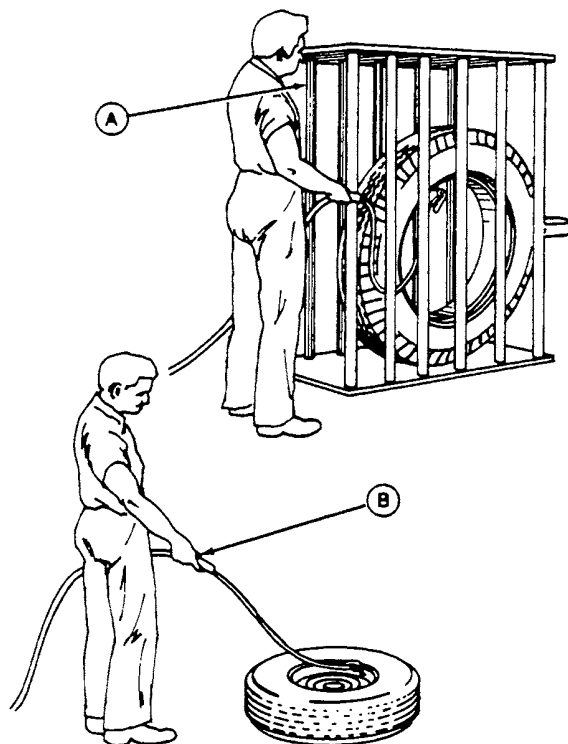
## SERVICE TIRES SAFELY

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified repair service.

When sealing tire beads on rims, never exceed 35 psi (240 kPa) (2.4 bar) or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, re-lubricate bead, and reinflate.

Detailed tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55, Tires and Tracks, available through your John Deere dealer. Such information is also available from the Rubber Manufacturers Association and from tire manufacturers.

- A—Use a safety cage if available.
- B—Do not stand over tire. Use a clip-on chuck and extension hose.

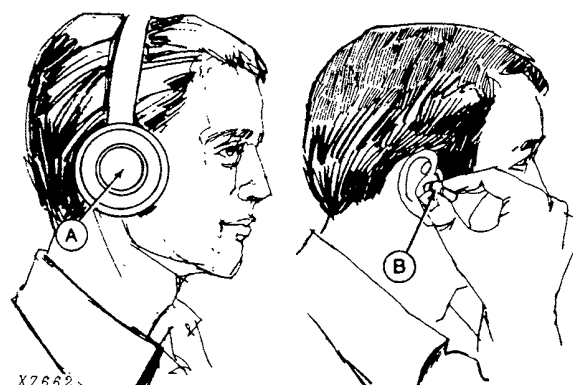


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## NOISE

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

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



- A—Earmuffs
- B—Earplugs

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A 062

### SEPARATOR LADDER

Do not climb on rear separator ladder or any part of combine while combine is moving or running. Check tailings at lower door only after combine has been stopped and turned off.

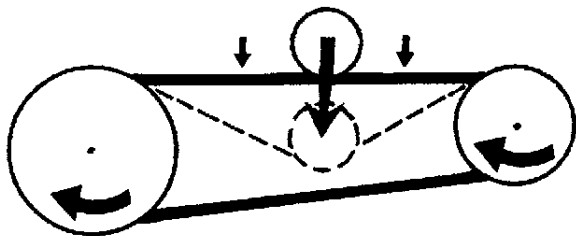
### FIRE EXTINGUISHER



Have a multipurpose dry chemical fire extinguisher filled and handy. Know how to use it.  
DO NOT refuel with the tractor engine running.  
DO NOT smoke or use a lantern when refueling.

RW2383

### SERVICING DRIVES AND DRIVE RELATED AREAS



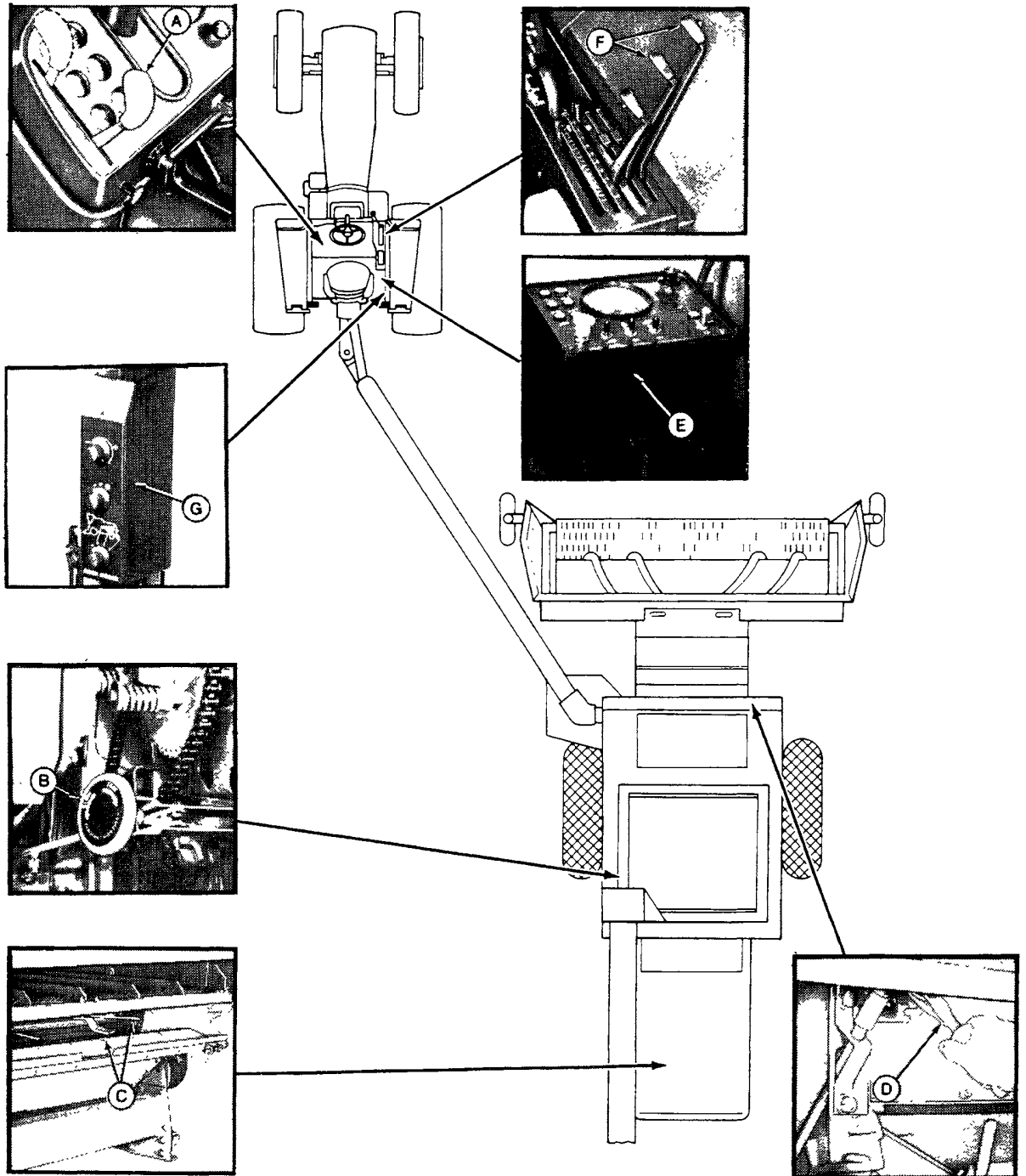
Shut off engine and remove key before servicing the combine in either a belt driven area or any area receiving power from a belt drive. Some drives, due to their clutching and declutching characteristics, can be engaged when the engine is running by the applying or removing of outside forces.

Replace any shields that were removed.

H07564



# Combine Function Controls



A—PTO Clutch Lever  
 B—Cleaning Fan Speed Control Wheel  
 C—Chaffer and Sieve Levers  
 D—Concave Spacing Control Ratchet

See page 26  
 See page 72  
 See pages 114,115  
 See page 71

E—Control Box  
 F—Header Height and Unloading Auger  
 Swing Controls  
 G—HARVESTRAK™ Combine Monitor

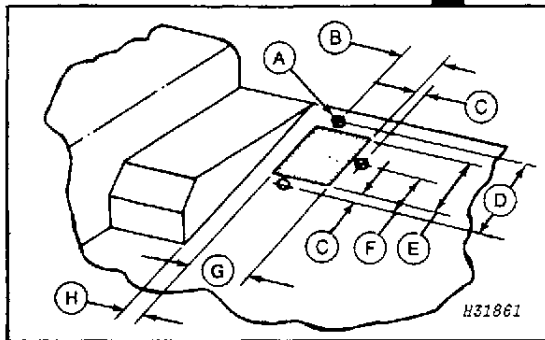
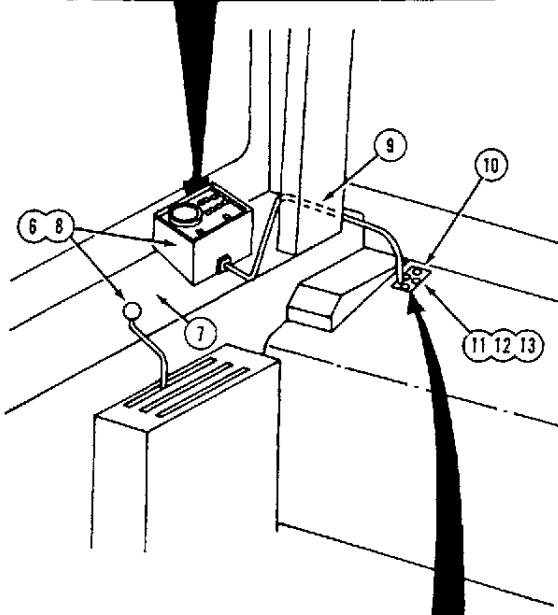
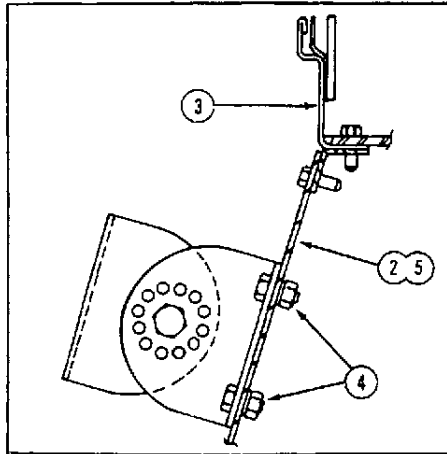
See page 27  
 See page 26  
 See page 135

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# Initial Tractor Preparation

## INSTALLING CONTROL BOX IN TRACTORS WITH PRE-SOUND GARD CABS (1968-1971)



**IMPORTANT:** This combine must be used with tractors having a minimum of 125 (93 kW) PTO horsepower and be equipped with 1000 RPM PTO.

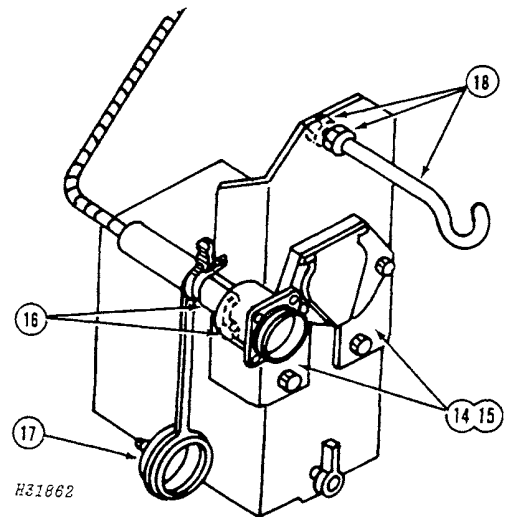
1. (Not Illustrated) Install seven pin connector following the instructions provided with it.
2. Remove five 1/4 x 5/8-inch screws and remove base on back of control box.
3. Discard adapter for Sound Gard Cabs.
4. Attach mounting brackets to base with four 1/4 x 1/2-inch cap screws, lock washers, and nuts.
5. Attach base to control box with the five screws removed in step 2.
6. Position control box to allow for full movement of the hydraulic control levers.
7. Using the mounting bracket as a guide, mark through the bracket for four holes. Center punch fender and drill four 11/32-inch diameter holes.
8. Attach control box with mounting bracket to fender with four 5/16 x 5/8-inch cap screws, lock washers, 11/32 x 1-1/8 x .060-inch flat washers, and special cage nuts.
9. Route harness around cab post.
10. Cut panel and drill holes to the dimensions shown for the right hand rear deck area of the cab.
11. Attach harness plate to rear deck with three 1/4 x 7/8-inch machine screws, lock washers, and nuts.
12. Remove plug and route harness through harness plate.
13. Slip grommet over harness and press grommet into harness plate.

A—Three 9/32-Inch  
(7 mm) Diameter Holes  
B—2 inches (51 mm)  
C—19/64-Inch (7 mm)  
D—4-19/32 Inches (118 mm)

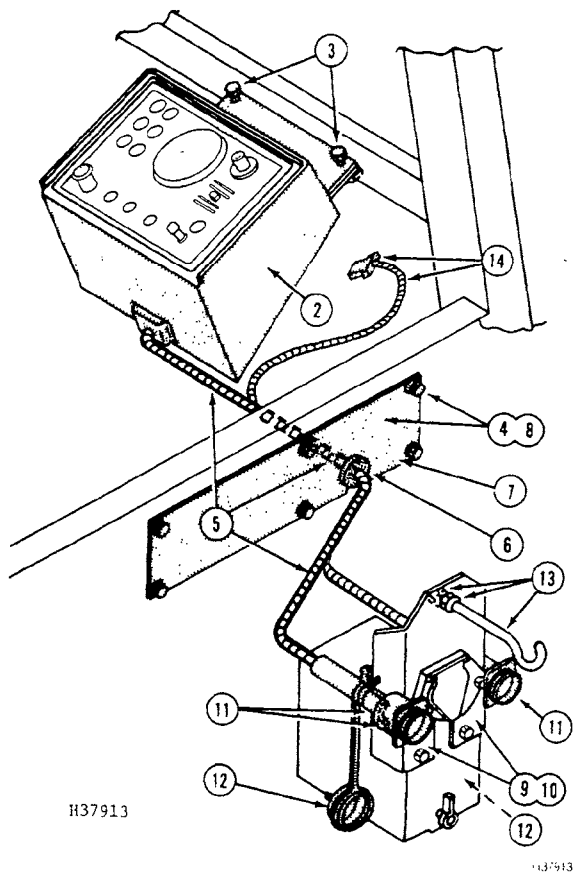
E—4 Inches (102 mm)  
F—2-19/64 Inches (58 mm)  
G—3 Inches (76 mm)  
H—1-1/2 Inches (38 mm)

*Continued on next page.*

14. Remove four cap screws and discard the two straps.
15. Attach harness mounting bracket with the four cap screws removed in step 14.
16. Secure harness connector to bracket with a 5/16 x 1/2-inch self tapping screw and a coated clamp.
17. Attach dust cap to harness.
18. Attach harness support rod to bracket with two 3/8-inch nuts.



## INSTALLING CONTROL BOX IN ROW-CROP TRACTORS WITH SOUND GARD® CABS (1972- )

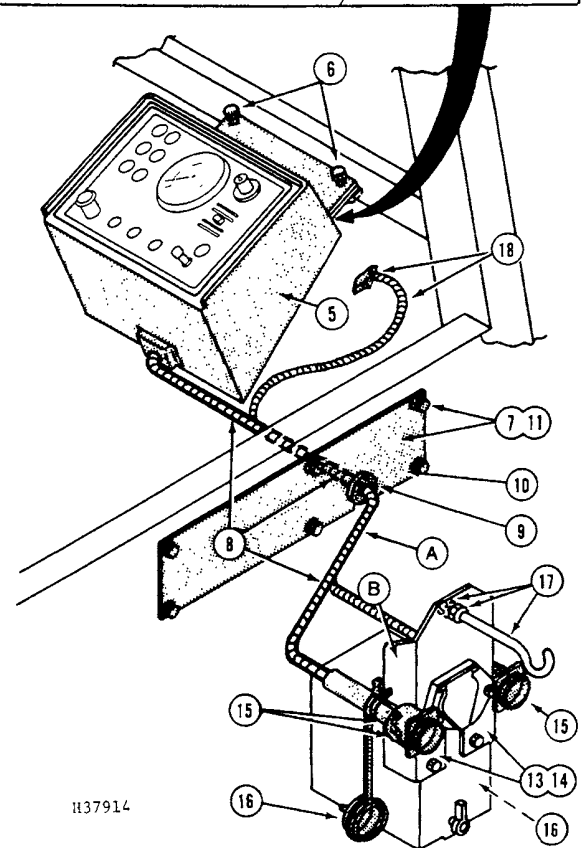
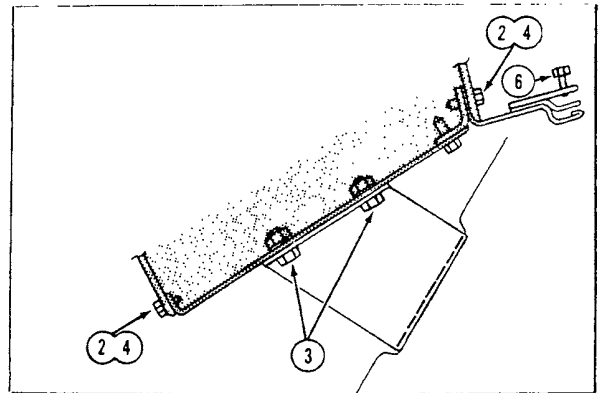


**IMPORTANT:** This combine must be used with tractors having a minimum of 125 (93 kW) PTO horsepower and be equipped with 1000 RPM PTO.

1. (Not Illustrated) Install seven pin connector following the instructions provided with it.
2. Position control box to allow for full movement of the hydraulic control levers.
3. Install and tighten two 1/4-20 x 3/4-in. cap screws to secure control box to window frame.
4. Remove six self tapping screws, cover, and gasket on rear of cab. Save screws, cover and gasket. Cover can be used when tractor is not used with combine.
5. Route harness from control box under cab foam.
6. Slip grommet over harness and press grommet into new cover provided.
7. Align cover with gasket.
8. Reinstall cover and gasket with the six screws removed in step 4.
9. Remove four cap screws and discard the two straps.
10. Attach harness mounting bracket with the four cap screws removed in step 9.
11. Secure both harness connectors to bracket with 5/16 x 1/2-in. self tapping screws and coated clamps.
12. Attach both dust caps to harnesses.
13. Attach harness support rod to bracket with two 3/8-in. nuts.
14. Plug in HARVESTRAK connector if equipped. If not equipped with HARVESTRAK place harness under foam cover.

## INSTALLING CONTROL BOX IN JOHN DEERE 8430, 8440, 8450, 8630, 8640 AND 8650 FOUR WHEEL DRIVE TRACTORS

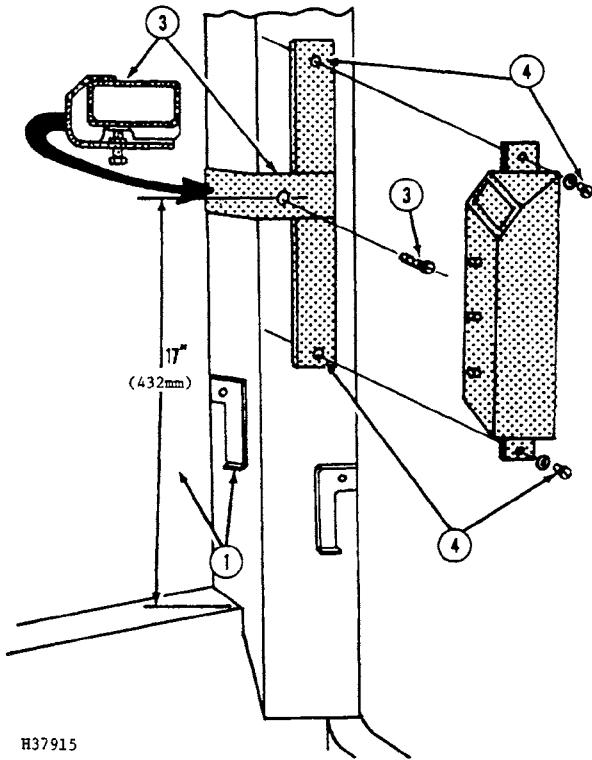
1. (Not Illustrated) Install seven pin connector following the instruction provided with it.
2. Remove two 1/4-20 x 5/8-in. and two 1/4 x 5/8-in. screws and remove base on back of control box.
3. Attach plate to mounting bracket with four 1/4 x 1/2-in. cap screws, lock washers, and nuts.
4. Attach control box to base with the four screws removed in step 2.
5. Position control box to allow for full movement of the hydraulic control levers.
6. Install and tighten two 1/4-20 x 3/4-in. cap screws to secure control box to window frame.
7. Remove six self tapping screws, cover, and gasket on rear of cab. Save screws, cover and gasket. Cover can be used when tractor is not used with combine.
8. Route harness from control box under cab foam.
9. Slip grommet over harness and press grommet into new cover provided.
10. Align cover with gasket.
11. Reinstall cover and gasket with the six screws removed in step 7.
12. Install BH77003 wiring harness extension between harness (A) and bracket (B).
13. Remove four cap screws and discard the two straps.
14. Attach harness mounting bracket with the four screws removed in step 13.
15. Secure both harness connectors to bracket with 5/16 x 1/2-in. self tapping screws and coated clamps.
16. Attach dust caps to both harnesses.
17. Attach harness support rod to bracket with two 3/8-in. nuts.
18. Plug in HARVESTRAK connector if equipped. If not equipped with HARVESTRAK, place harness under foam cover.



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I137914

## INSTALLING HARVESTRAK CONTROL BOX IN JOHN DEERE ROW-CROP TRACTORS WITH SOUND GARD CABS (1972- ) AND JOHN DEERE 8430, 8440, 8450, 8630, 8640 AND 8650 FOUR WHEEL DRIVE TRACTORS



1. Open right hand tractor window.
2. Locate center of mounting bracket about 17-in. up on post.
3. Hook HARVESTRAK mounting bracket around post and tighten 1/4 x 1-3/8-in. pan head screw. Plug must be between screw and post.
4. Secure control panel to mounting bracket with two #10 x 3/8-in. black pan head screws and 9/32 x 1 x .060-in. washers. These plated washers must be painted black to match control panel.
5. (Not illustrated) Connect harness to control box.

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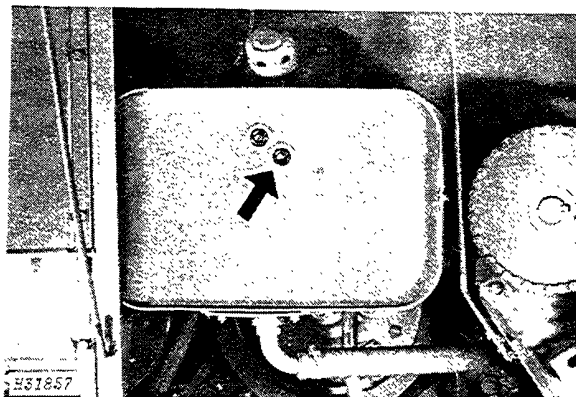
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## Preparing the Combine

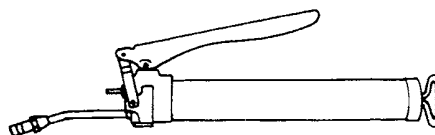
Before starting to combine for the first time each day:

1. Check hydraulic oil level. Oil level must be above lower sight glass and below top of upper sight glass. Add oil as needed.



H-31657

2. Perform all daily lubrication and maintenance.



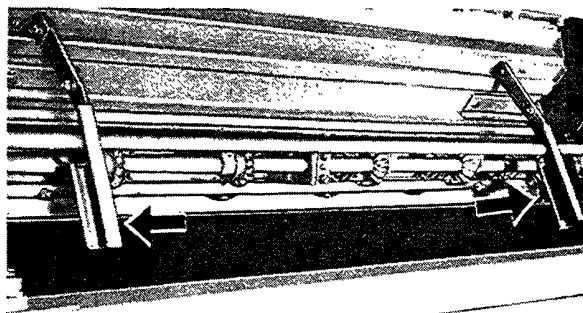
1858

H-31658

3. Clean out stone traps.

**⚠ CAUTION:** Always lower the hydraulic cylinder safety stop and remove key when working under the header or feeder house.

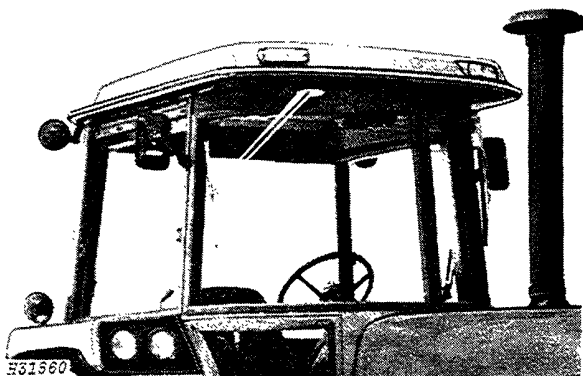
To dump stone trap, pull levers up. Close by pushing levers down. Empty stone traps frequently.



H-31659

H-31659

4. Clean tractor cab glass.



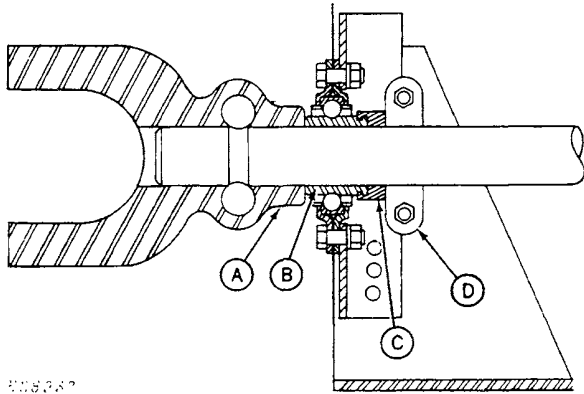
H-31660

-G1860



# Attaching and Detaching the Combine

## ATTACHING COMBINE TO TRACTOR



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### Combine to Tractor Hookup

**IMPORTANT:** Locking clamp must not be moved unless it is necessary to replace parts.

- A—Yoke
- B—Bearing
- C—Locking Collar
- D—Locking Clamp

If the combine is to be hooked up to a different model John Deere tractor than originally equipped for, the following parts must be ordered and installed:

If combine is to be used with a 40 or 50 series tractors, install two AR93819 couplers, AR93820 coupler and two R28006 dust caps. Two AR98201 adapters can also be used.

#### 4430 Tractors

BH76512 10-inch (254 mm) Drawbar Extension.  
Support braces for the extension are included.

*NOTE: If tractor is equipped with AR46810 wide swinging drawbar kit, also order AR33911 drawbar support and two R49106 bolts.*

BH76535 1-3/8-inch (10 mm) PTO Shaft  
BH76472 Drawbar Attaching Parts

#### 4440, 4450, 4520, 4630, and 5020 Tractors

BH76513 10-inch (254 mm) Drawbar Extension  
BH76535 1-3/8-inch (10 mm) PTO Shaft  
BH76473 Drawbar Attaching Parts

#### 4640, 4650, 4840, 4850 and 6030 Tractors

BH76511 6-inch (152 mm) Drawbar Extension  
BH76534 1-3/4-inch (44 mm) PTO Shaft  
BH76473 Drawbar Attaching Parts

#### 8430, 8440, 8450, 8630, 8640 and 8650

BH76511 6-inch (152 mm) Drawbar Extension  
BH76534 1-3/4-inch (44 mm) PTO Shaft  
BH76473 Drawbar Attaching Parts  
BH71110 Wiring Harness Extension

1. Lower hitch beam support stand (A) and separator support stand (B).

**CAUTION:** If the header and feeder house are removed, the separator support stand must contact the ground so hitch beam will not fly upward.

2. Lock tractor drawbar so it is aligned with tractor PTO shaft. (See Hookup Adjustments on John Deere Tractors.)
3. Loosen eight drawbar retaining bolts before tractor drawbar is moved into drawbar extension.
4. Move tractor drawbar into drawbar extension and lock with hitch pin, spring locking pin, and bolts. Eight bolts must be tightened evenly and locked with lock nuts.

**IMPORTANT:** Do not detach tractor from combine by unbolting drawbar extension from combine hitch tube.

**IMPORTANT:** Operate the 7721 Combine at 1000 rpm PTO speed only. Operating the combine at any other PTO speed can result in poor machine function or machine damage.

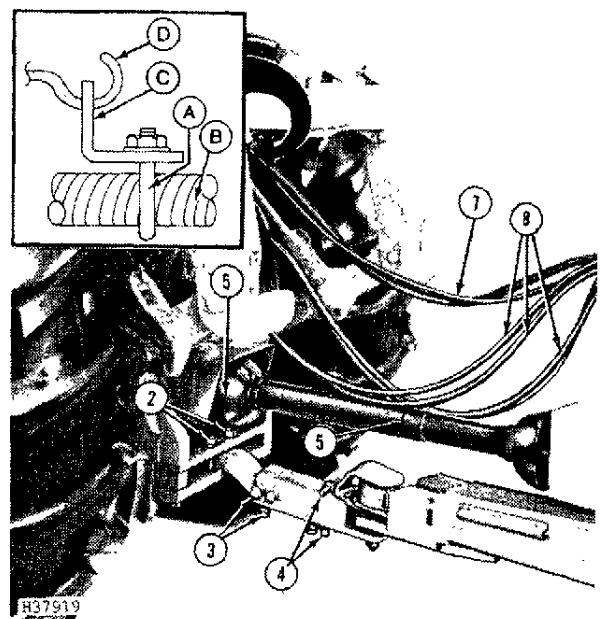
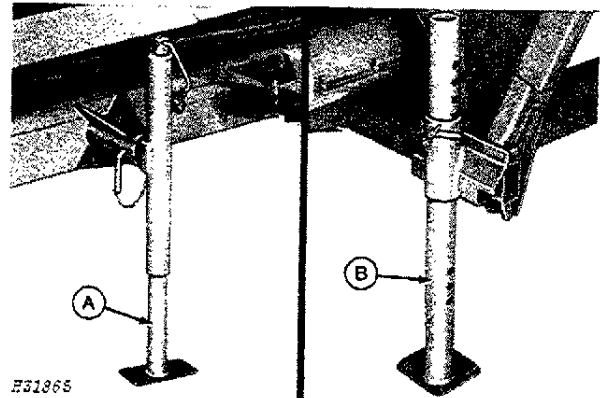
5. Secure front joint to tractor PTO shaft.

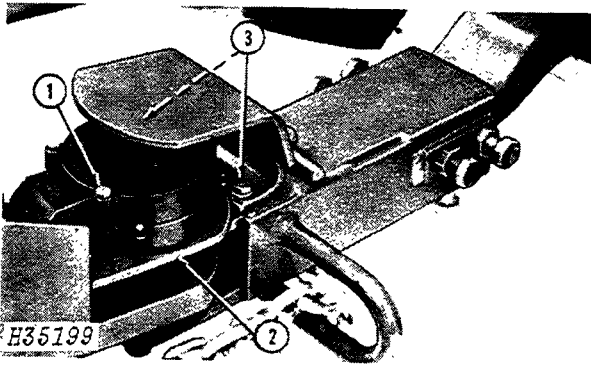
**IMPORTANT:** When sliding yoke onto tractor splined PTO shaft locking pin must be free to lock into shaft. Keep pin free by lubricating with penetrating oil if necessary.

Line on PTO shaft decal must be directly over hitch pin.

6. Place U-bolt (A) around harness (B) and secure to hanger (C) with two flange nuts. Hook hanger over support rod (D).
7. Connect two combine electrical connectors to the mating connectors on tractor.
8. Couple hydraulic hoses to tractor.

**NOTE:** For header lift, adapt the tractor remote hydraulic cylinder valve housing for single-action cylinder operation. See tractor operator's manual. Couple hydraulic hose to tractor No. 1 hydraulic circuit break-away coupler.



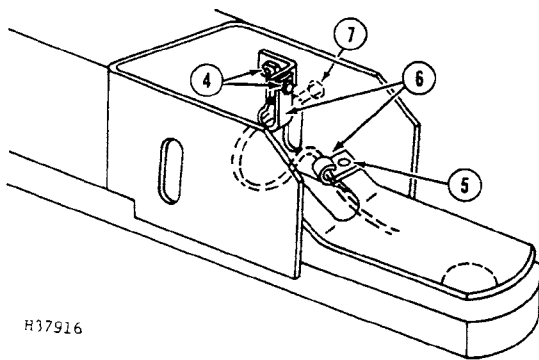


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### Short Turn Warning Switch

1. Install short turn warning switch to base plate with three 1/4 x 2-1/4-in. flat head screws (installed from bottom up).
2. Secure short turn warning switch to hitch beam extension with 1 x 5-1/4-in. cap screw, cup washer (cup down), spacer, and nut. Do not tighten at this time.
3. Secure switch shield to hitch beam extension with two 3/8 x 1-in. cap screws and lock washers. Secure bolt from Step 4.

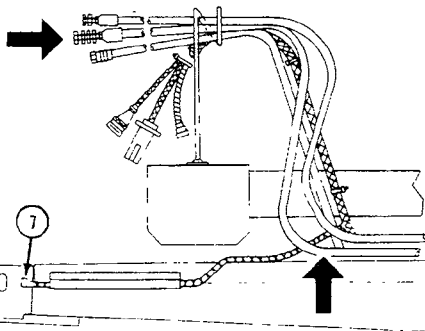
**IMPORTANT: Switch arm must be through hole in switch shield.**



H37916

H37916

4. Install bracket and J-clamp with two 5/16 x 3/4-in. cap screws, lock washers, and nuts.
5. Install J-clamp with 1/4 x 3/4-in. flat head screw, lock washer and nut.
6. Secure harness with J-clamps.



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H37917

7. Connect harness connectors. *NOTE: The short turn warning switch is non-adjustable.*



**Suggest:**

**If the above button click is invalid.**

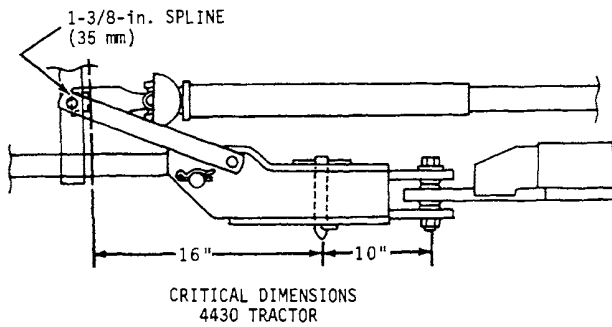
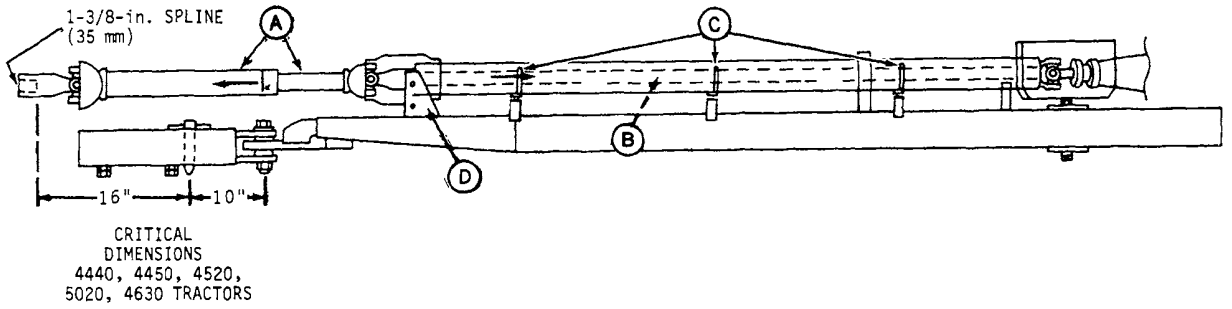
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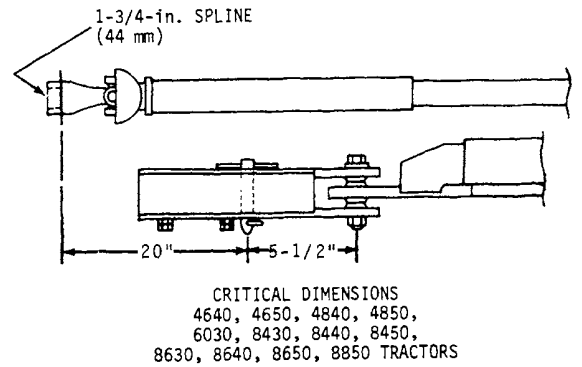
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**Thank you so much for reading**

### Hookup Adjustments on John Deere Tractors



H38486



**IMPORTANT:** Line on PTO shaft decal must be directly over hitch pin.

- A—Telescoping Shaft
- B—Powershaft
- C—Brackets
- D—Hitch Bracket

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