Unloading Auger

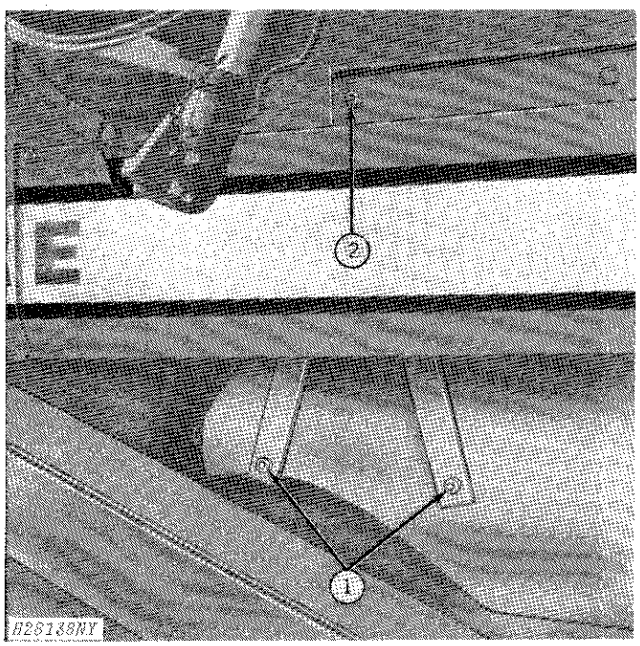


Fig. 15-Removing Shipping Braces

1. Remove and discard the two 5/16 x 3/4-inch cap screws, lock washers, and nuts attaching the two shipping braces to the unloading auger (Fig. 15).

2. Remove and discard the 5/16 x 1/2-inch cap screw, lock washer, and nut in the combine style line (Fig. 15). Discard the two shipping braces and insert a 5/16 x 1/2-inch self-tapping screw in the style line.

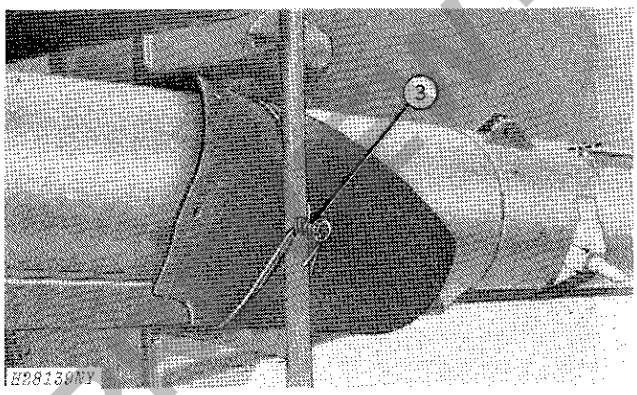


Fig. 16-Removing Unloading Auger from Under Combine

3. Cut shipping wire securing unloading auger to the separator ladder (Fig. 16). Slide auger and rubber spout out from under combine.

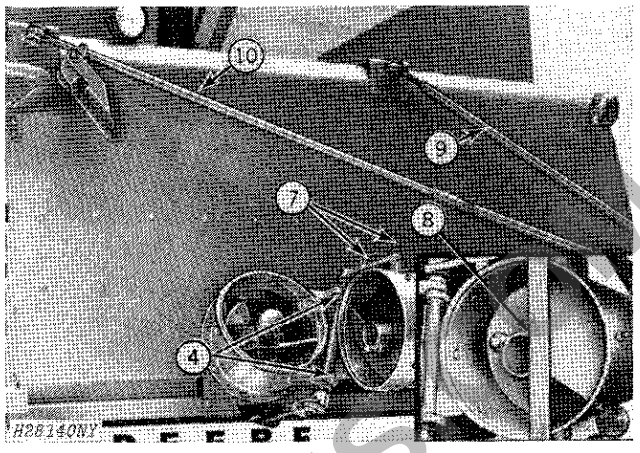


Fig. 17-Installing Unloading Auger

4. Position outer hinge inside inner hinge (Fig. 17).

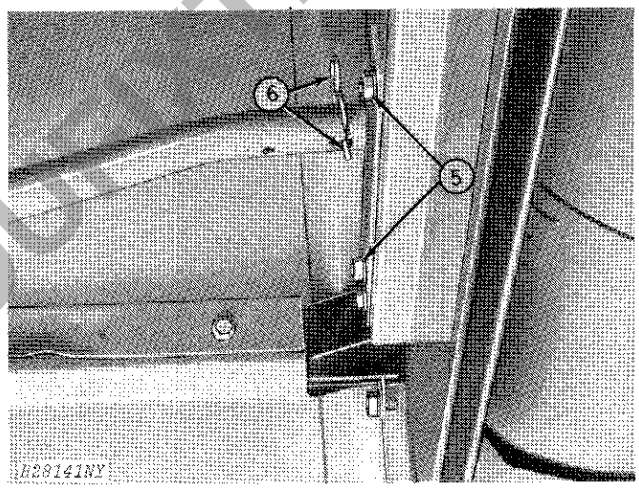


Fig. 18-Adjusting Transport Tube Support

5. Loosen the two nuts on support (Fig. 18).

6. Position auger back against grain tank and insert spring pin through locking stud (Fig. 18). Tighten the two nuts on the support.

7. Loosen two cap screws and insert hinge pin through hinges (Fig. 17). With pin holes aligned, slide hinge pin into swing arm and install a 3/16 x 1-3/4-inch spring pin. Tighten cap screws.

8. Place a straight edge ruler across open end of housing (Fig. 17). Auger tube must be flush with housing. Add or remove 49/64 x 1-1/2 x .134-inch flat washers between bearing and end of auger for correct adjustment.

9. Attach auger support rod (Fig. 17). Adjust rod until locking stud fits freely in transport support.

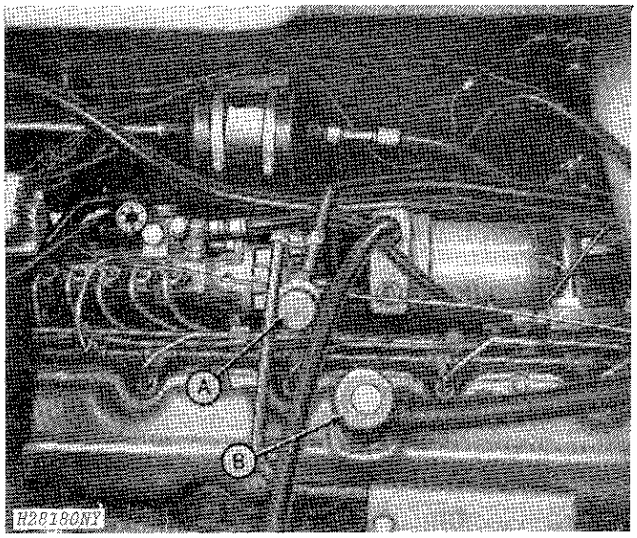
10. Attach upper end of the telescoping auger braces with a drilled pivot pin and a 3/16 x 1-1/2-inch spring pin (Fig. 17). Attach the lower end of the braces with a 1/2 x 2-1/4-inch drilled pin and a 3/16 x 1-inch cotter pin.

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10-HOUR OR DAILY LUBRICATION

Crankcase Oil Level



A—Bayonet Gauge **B—Oil Fill Cap**

Fig. 6-Bayonet Gauge and Fill Cap

Check crankcase oil level with bayonet gauge (Fig. 6). Do not add oil until level is down to bottom mark on bayonet gauge. Do not operate engine with oil level below the bottom mark. If necessary, add oil until oil level is to top mark. Check oil level 10 minutes after stopping engine.

To add oil to engine crankcase, remove oil fill cap located on top of rocker arm cover (Fig. 6).

Variable Speed Cylinder Sheaves

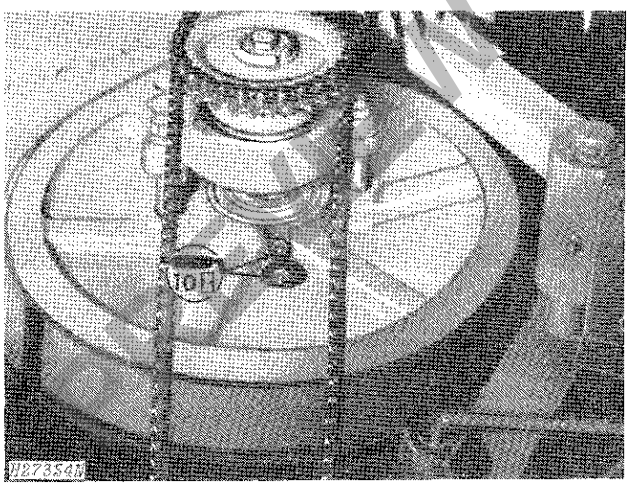


Fig. 7-Inner and Outer Variable Speed Cylinder Sheaves

Lubricate both inner and outer sheave grease fittings every 10 hours or daily (Fig. 7).

NOTE: Grease fittings may be 180° apart instead of aligned as shown in illustration.

Float Springs

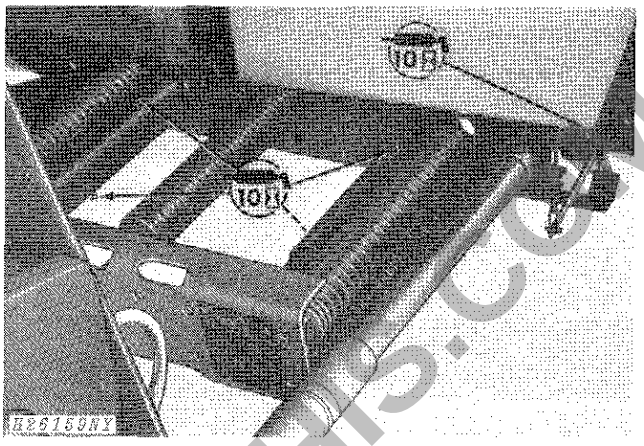


Fig. 8-Float Springs

Crawler Tracks

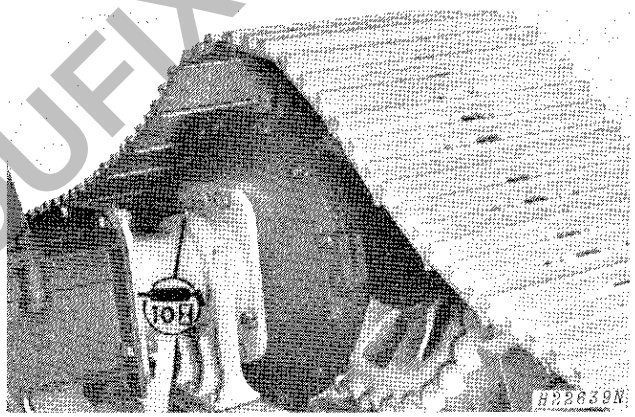


Fig. 9-Inner Support

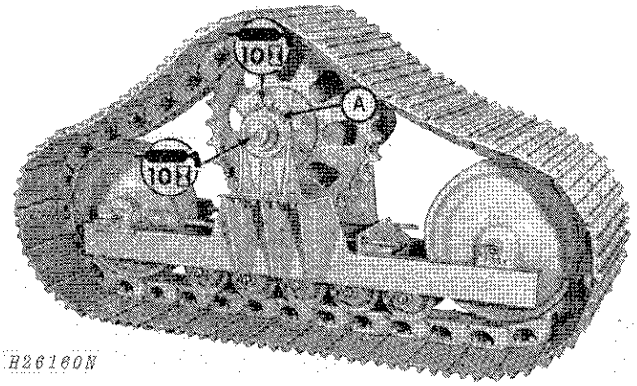


Fig. 10-Outer Support

Lubricate outer support until grease appears at point "A" (Fig. 10).

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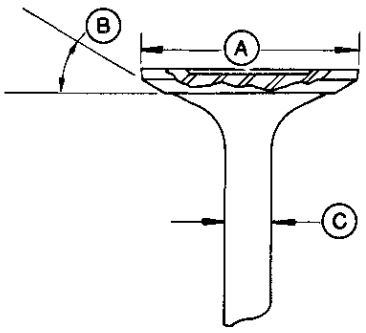
Inspection and Repair—Continued

Cleaning Valves

1. Hold each valve firmly against a wire wheel on a bench grinder.
2. Make sure all carbon is removed from the valve head, face and stem.

IMPORTANT: Any carbon left on the stem will affect alignment in valve refacer if valves need to be refaced.

3. Polish the valve stems with steel wool or fine emery cloth to remove any scratch marks left by the wire brush.

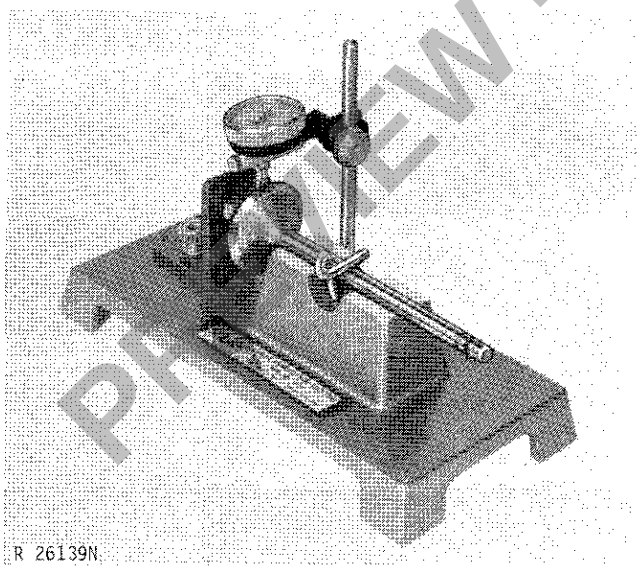


R 24202N

A—Valve Head O.D.
B—Valve Face Angle
C—Valve Stem O.D.

Fig. 18-Valve Specifications

4. Compare valve stem O.D. (C, Fig. 18) with valve guide I.D. to determine stem-to-guide clearance.

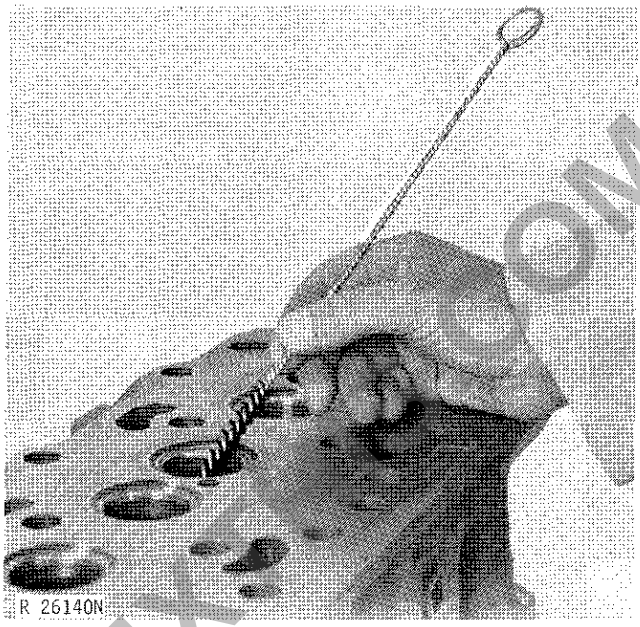


R 26139N

Fig. 19-Inspecting Valves

5. Use D-05058ST Valve Inspection Center (Fig. 19) to determine if valves are out of round, bent or warped.

Valve Guides

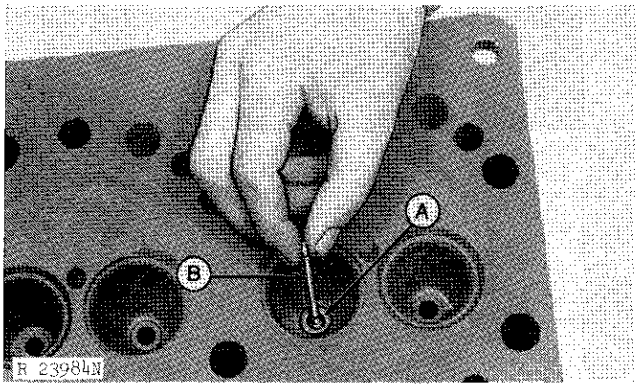


R 26140N

Fig. 20-Cleaning Valve Guides

1. Use a valve guide cleaning brush (Fig. 20) to clean valve guides before inspection or repair. See Special Tools.

NOTE: A few drops of light oil or kerosene will help to fully clean the guide.



R 23984N

A—Valve Guide
B—Telescope Gauge

Fig. 21-Checking Valve Guide

2. Measure valve guides for wear (Fig. 21).

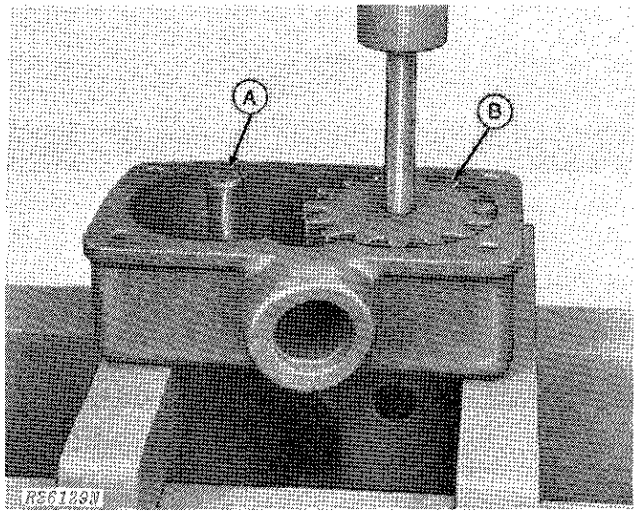
Valve Guide Specifications

I.D. of guide in a new head	0.375 to 0.376 in. (9.51 to 9.53 mm)
New guide-to-valve stem clearance	0.002 to 0.004 in. (0.05 to 0.10 mm)

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Oil Pump Gears



A—Idler Shaft **B—Driven Gear**

Fig. 11-Driven Gear Removal

1. Remove idler gear by sliding from idler shaft (A) (Fig. 11).

2. To remove driven gear (B), press shaft from gear (Fig. 11).

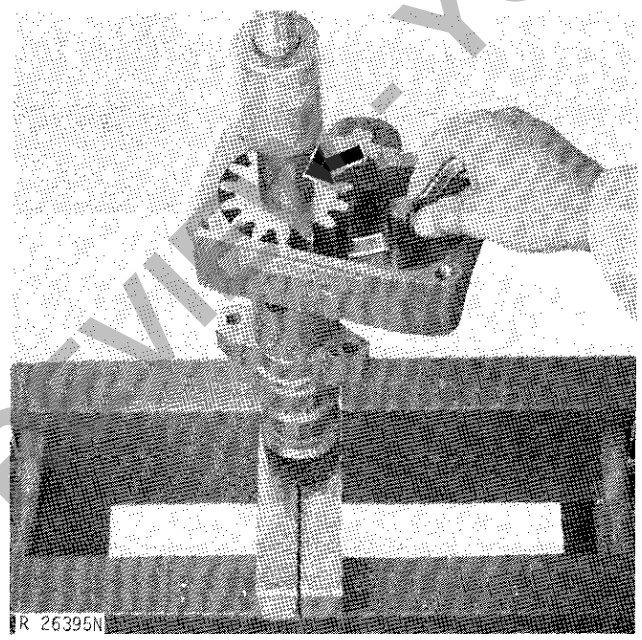


Fig. 12-Installing Driven Gear

3. Support pump housing as shown in Fig. 12.

4. Use a press adapter that has a bore with an I.D. larger than the pump shaft O.D. (Fig. 12) to install gear.

NOTE: Adapter bore must be deeper than 1.02 in. (25.9 mm).

5. Carefully start gear onto shaft.

6. Use a feeler gauge when pressing on gear to obtain a clearance of 0.001 to 0.007 in. (0.03 to 0.18 mm) between gear and bottom of housing.

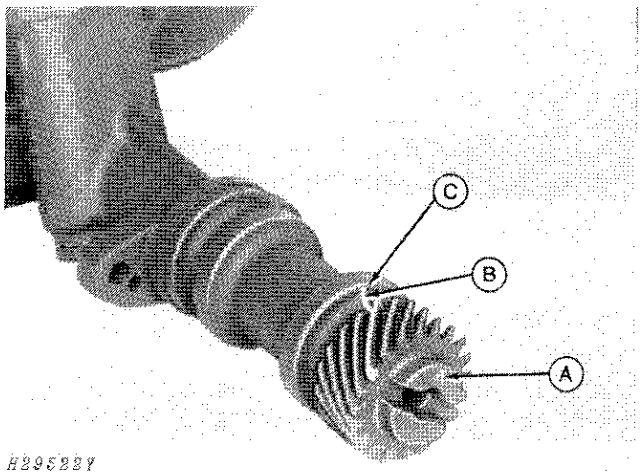
On gasoline engines, check oil filter and filter relief valve assemblies for damage. The valve spring should compress to 1-3/16-in. @ 18-20 lbs. (30 mm) @ (8-9 kg).

INSTALLATION

Install gasoline engine oil pump as follows:

1. If engine timing position has been changed, reset No. 1 piston at "TDC" on compression stroke.

2. Remove tach-hour meter drive housing and drive gear.



A—Timing Mark **C—Small Oil Hole**
B—Cast Mark

Fig. 13-Guide to Oil Pump Timing

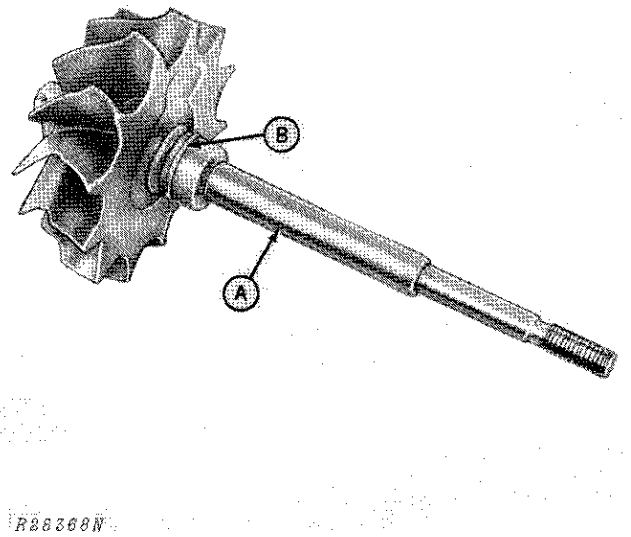
3. Set "V" timing mark "A" on drive gear (Fig. 13). The bottom of the gear tooth that is directly in line with the drive slot must line up with the small cast mark "B" next to the small oil hole "C" on the pump housing.

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SCHWITZER 3LM TURBOCHARGER—Continued

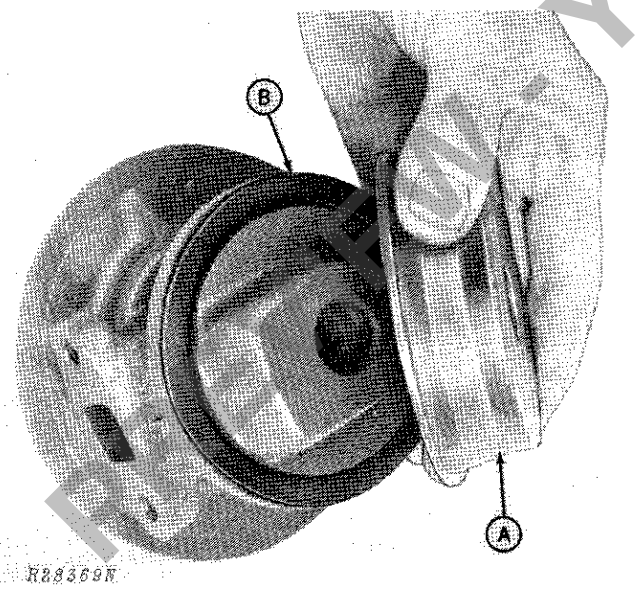


A—Shaft Assembly **B—Piston Ring**

Fig. 29-Turbine Shaft Piston Ring

c. Remove the lock nut, and withdraw the turbine wheel and shaft assembly (A) (Fig. 29) from the bearing housing (14) (Fig. 27). Discard lock nut.
d. Remove and discard piston ring (B) from shaft.

3. Remove Bearing (Figs. 30 and 31)



A—Backplate **B—Gasket**

Fig. 30-Removing Backplate and Gasket

a. Lift off backplate (A). Remove and discard gasket (B).
b. Withdraw bearing from bearing housing.

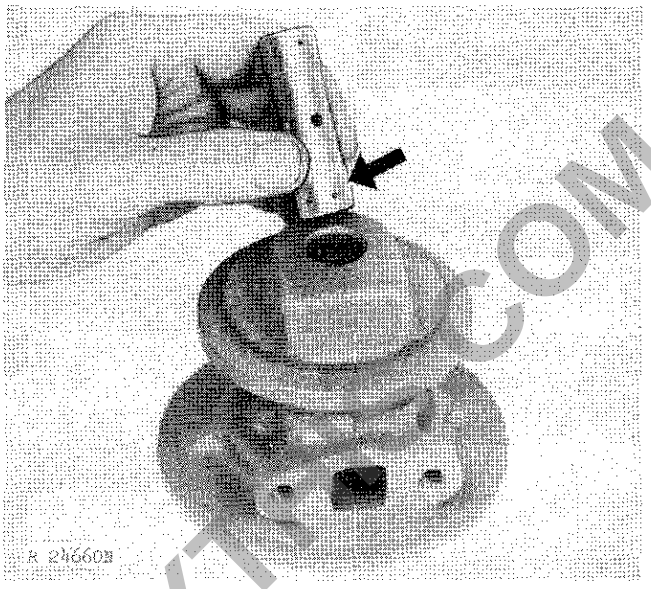
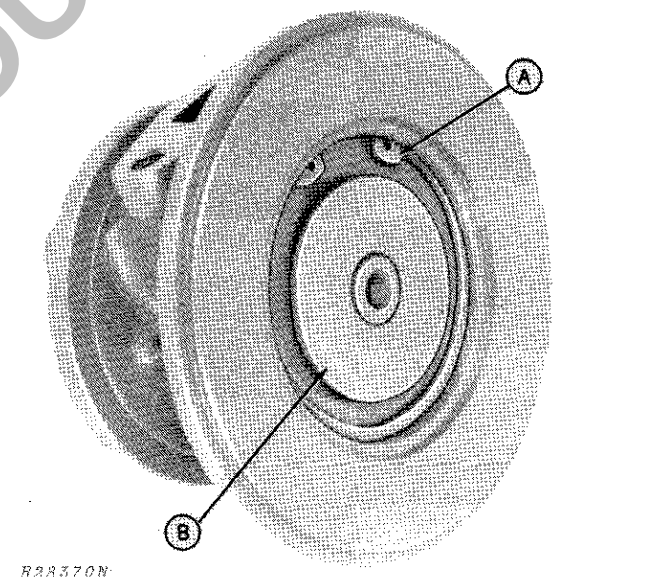


Fig. 31-Removing Bearing

4. Remove Compressor Insert and Remaining Parts From Bearing Housing (Figs. 32 and 33)



A—Snap Ring **B—Insert**

Fig. 32-Insert Removal

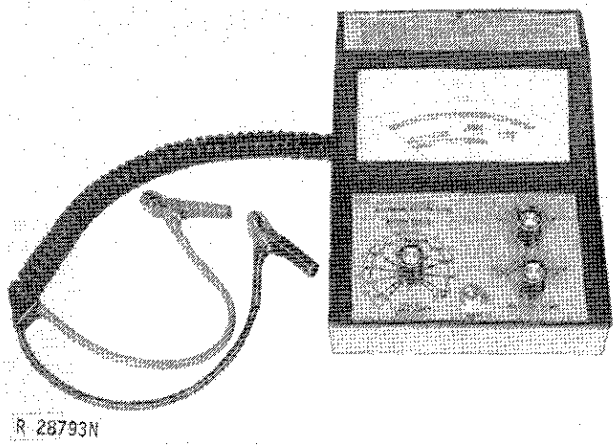
a. Lay bearing housing assembly on a clean flat surface with compressor side up. Use Truarc No. 050 pliers to remove large snap ring (A) which retains compressor insert (B) (Fig. 32).

⚠ CAUTION: To prevent personal injury or loss of snap ring, place hand over snap ring while it is being compressed.

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DIAGNOSTIC EQUIPMENT

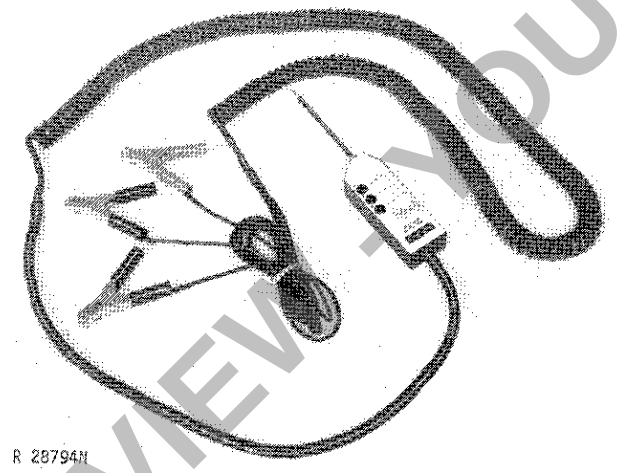
The following electrical diagnostic equipment is recommended.



R28793N

Fig. 8-D-24001MO Battery Tester

1. D-24001MO Battery Tester (Fig. 8) quickly indicates battery condition. Battery testing instructions are on page 40-5-3, and an operator's manual is included with the tester.

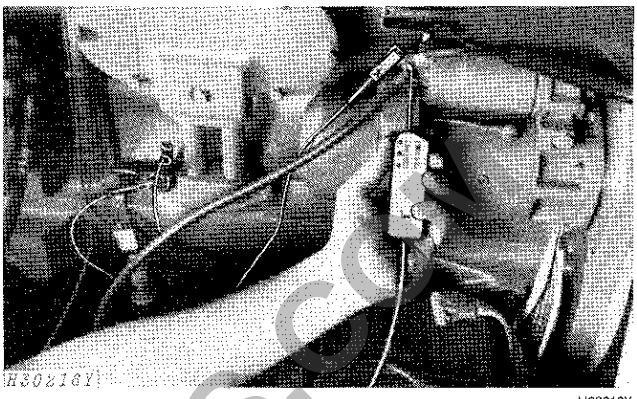


T28794N

Fig. 9-D-05136ST Voltage Detector

2. D-05136ST Voltage Detector (Fig. 9) aids in checking all wiring circuits. (A) light indicates battery voltage at the component being tested. (C) light indicates a good ground. No light indicates an open circuit or excessive voltage drop. ((B) light is not used when testing combines.)

An operator's manual is included with the voltage detector.

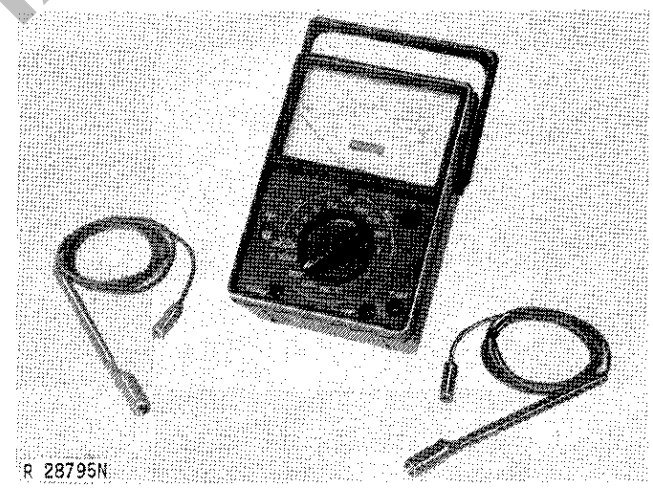


H30216Y

A—Known Source of Battery Voltage ("A" Clip)
B—Suitable Ground ("B" and "C" Clips)

Fig. 10-Voltage Detector Connections

Connect (A) (Fig. 10) clip to a known source of battery voltage. The large terminal where the battery cable attaches to the starter is a convenient location. Connect both (B) and (C) clips to a good ground.



R28795N

Fig. 11-D-19001TT Volt-Ohm-Amp Meter

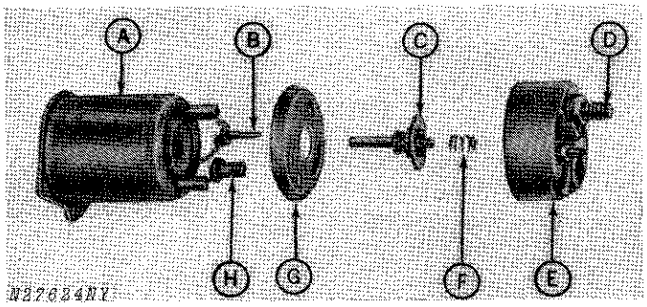
3. D-19001TT Volt-Ohm-Amp Meter (Fig. 11) is used for testing alternator and for whatever other jobs require measuring voltage, resistance, or current flow.

An operator's manual is included with the meter.

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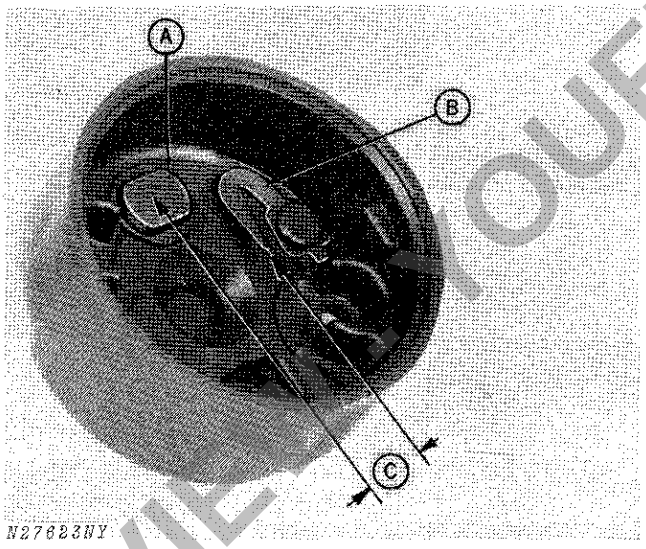
Solenoid Switch



A—Windings
B—"S" Terminal
C—Contact Assembly
D—Battery Terminal
E—Cover
F—Spring
G—Gasket
H—Motor Terminal

Fig. 9-Solenoid

Replacement "S" terminal stud (B) (Fig. 9) and motor terminal studs (H) are soldered to winding leads. Use new sealing washers when assembling to solenoid.



A—Main Contact
B—Contact Finger
C—1/16 to 3/32 in. (1.59 to 2.38 mm)

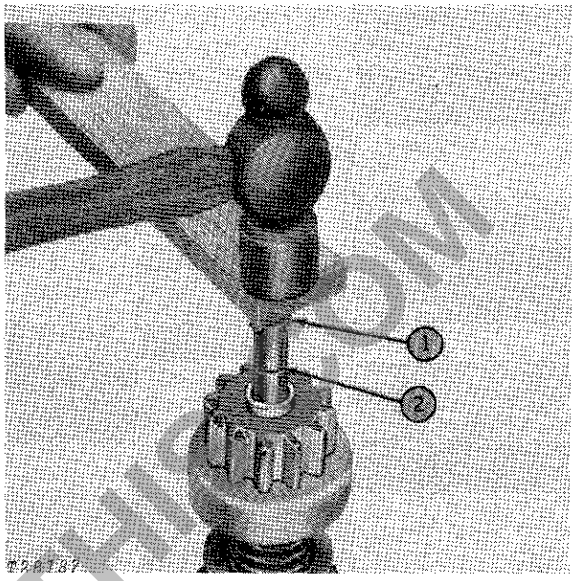
Fig. 10-Solenoid Cover

The "R" terminal contact finger (B) (Fig. 10) should be 1/16 to 3/32 inch (1.59 to 2.38 mm) above the surface of the main contact (Fig. 8). Bend finger to adjust height.

Assembly

1. To assemble the starter, reverse the disassembly procedure. Refer to Fig. 7 for relationship of parts.

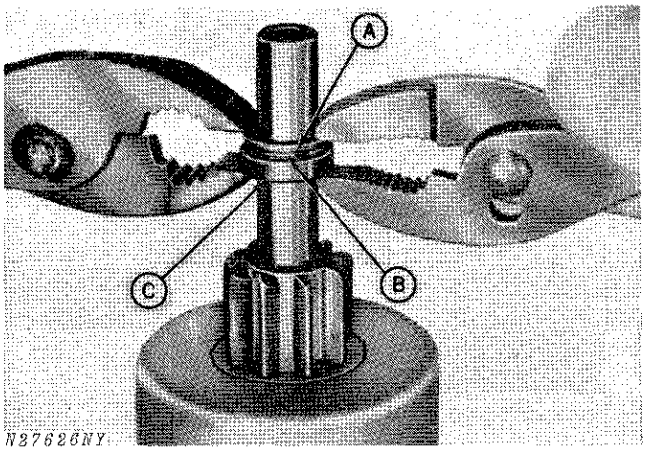
2. Lubricate splines and drive end of armature shaft with SAE 10 oil. Heavier oil may cause failure to mesh at low temperature. Lubricate bearing surfaces of center bearing, drive end frame, and commutator end frame with Delco-Remy Lubricant No. 1960954.



1—Retaining Ring **2—Groove**

Fig. 11-Forcing Retaining Ring Over Shaft

3. With the pinion stop placed over the shaft (cupped surface facing the end of the shaft), force the retaining ring over the shaft with a light hammer blow and slide ring into the groove (Fig. 11).



A—Thrust Collar **B—Snap Ring** **C—Pinion Stop**

Fig. 12-Forcing Pinion Stop Over Snap Ring

4. To force the pinion stop (C) (Fig. 12) over the ring (B), place thrust collar (A) over the shaft and squeeze with pliers.

5. Use Permatex No. 2 sealing compound between solenoid flange and starting motor field frame. (Not illustrated).

6. Carefully install field frame (22) (Fig. 7) so that brush holders are not broken. Align brushes with commutator and tighten brushes.

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Turn Signals and Warning Lights

Operation

When light switch is in the "W" or "H" position, power feeds through flasher to both warning lights.

When turn signal is used, the light on one side flashes and the light on other side glows steadily.

Turn Signal Flasher

Terminal usage is indicated in following chart. For access to turn signal unit, see page 40-35-5.

TERMINAL	WIRE COLOR	USE
1	Pink/Light Green	Power in from light switch for warning light operation.
2	Gray	Power in from circuit breaker for turn signal operation.
3	Gray/Red	To amber left turn light.
4	Light Blue/Red	To amber right turn light.
5	Black	To right turn indicator light.
6	Black	Connector wire between terminals 5 and 6.

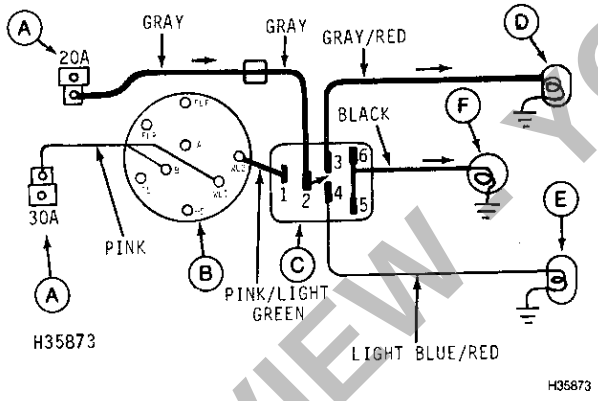


Fig. 12-Signaling Left Turn

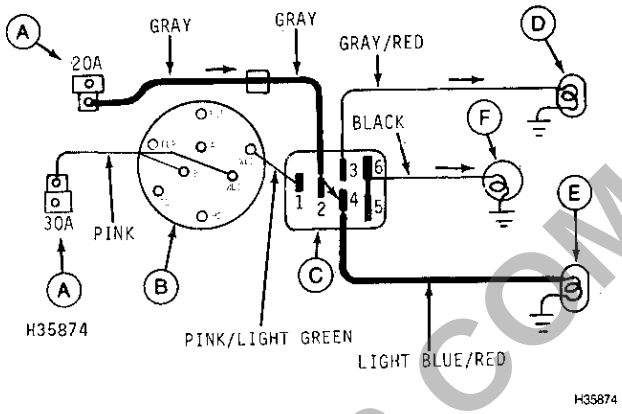
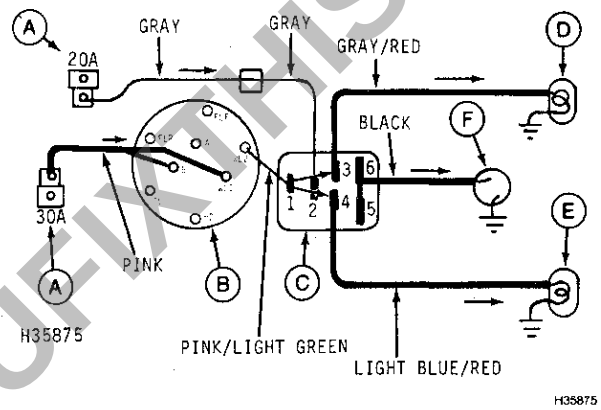


Fig. 13-Signaling Right Turn



A—Circuit Breakers
B—Light Switch
C—Turn Signal Flasher
D—L.H. Warning Light
E—R.H. Warning Light
F—Turn Indicator Light

Fig. 14-Warning Light Operation

To test flasher, use an ohmmeter or test light to test for continuity as shown in the following chart.

Switch Position	Terminals in Continuity with Terminal No. 1
Off	3, 4 (Through flasher)
Left	3, 6 (Through flasher)
	2, 4 (Not through flasher)
Right	4, 5 (Through flasher)
	2, 3 (Not through flasher)

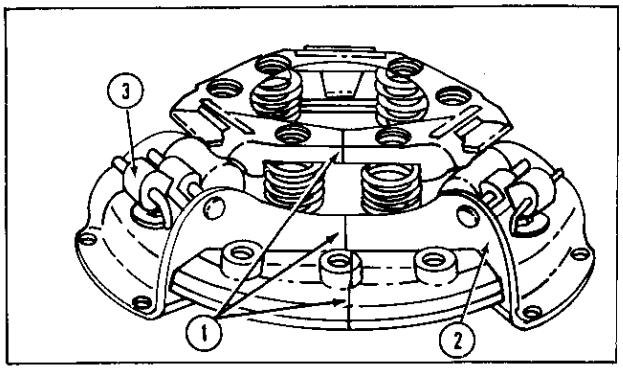
Overtightening the turn signal lever attaching screw may cause the turn signal flasher to bind, making it difficult to move the lever. If this happens, loosen the screw four or five turns and gently drive the screw inward to reposition the threaded insert in the flasher.

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Posi-Torq Combines

Disassembly



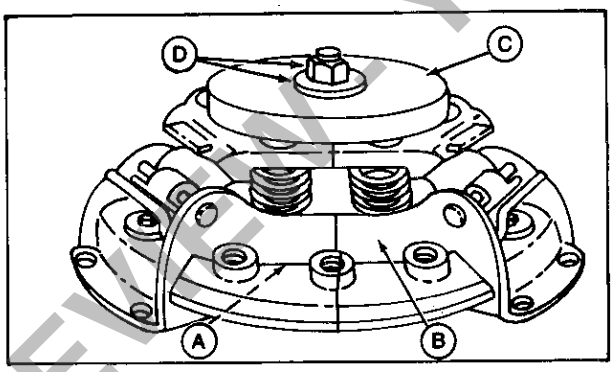
H36598

Fig. 6-Removing Return Clips

1. Scribe a line across the spring ring and clutch, to insure correct position during reassembly (Fig. 6).

2. Remove mounting bolts by loosening each bolt a few turns at a time, to avoid bending or distorting bracket (Fig. 6).

3. Use two screwdrivers to force each return clip down and then slide it away from each adjusting screw (Fig. 6).



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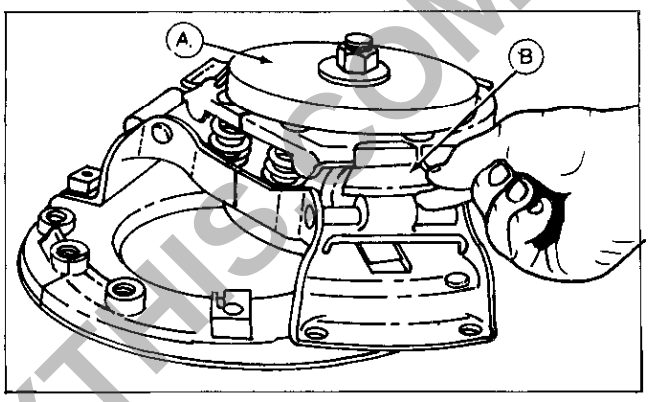
A—Disc **C—Disc**
B—Bracket **D—Flat Washer and Nut**

Fig. 7-Removing Pressure Plate

4. Place a 6-inch (152 mm) diameter steel disc (A) under bracket (B) (Fig. 7). Insert a 5/8 x 5-inch cap screw through disc. Place another 6-inch (152 mm) diameter steel disc (C) over cap screw and on spring ring. Install flat washer and nut (D) on cap screw.

5. Tighten nut (D) until levers are loose enough to allow removal of the three adjusting screws (Fig. 7).

6. Remove pressure plate (Fig. 7).



H36600

A—Spring Ring **B—Link**

Fig. 8-Removing Links

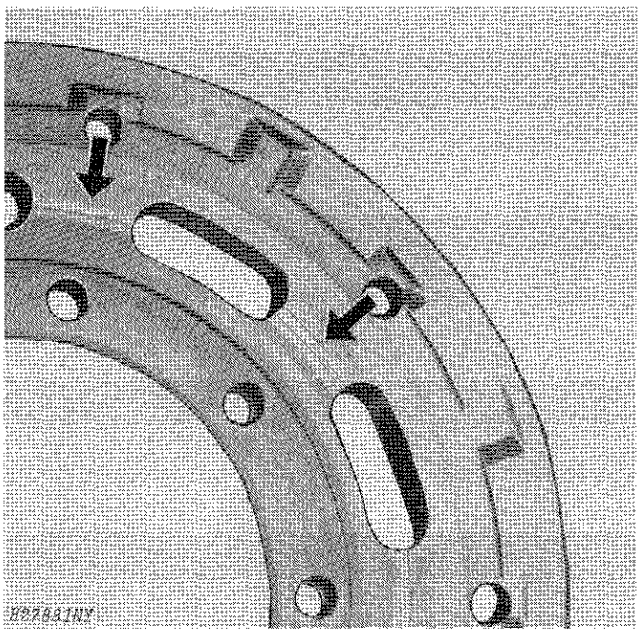
7. Carefully release pressure on spring ring (A) just enough to remove the three links (B) (Fig. 8).

NOTE: Do not remove the three levers (8) or pivot pins (7) (Fig. 9) if excessive wear is found, because bracket (9), levers, and pivot pins are available only as a complete service assembly.

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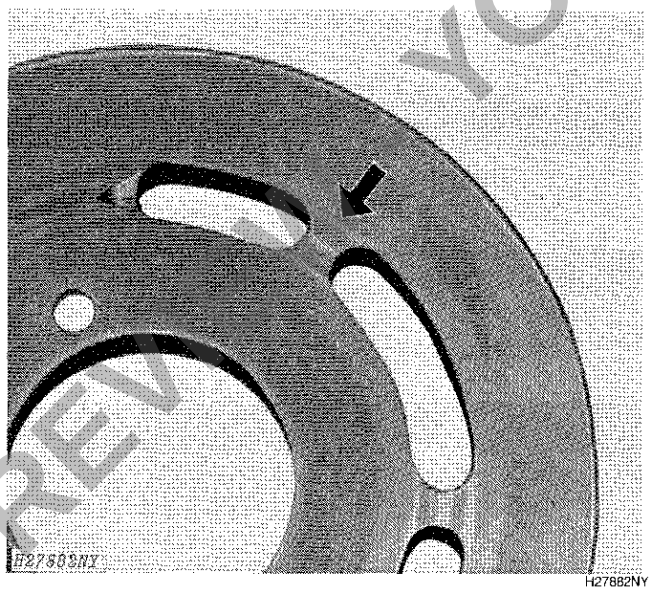
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H27881NY

Fig. 27-Example of Deeply Scored Bearing Plate

This bearing plate (Fig. 27) shows deep scoring only through the area on the balance land between the kidneys. This deep scoring indicates solid particles of contamination within the system.

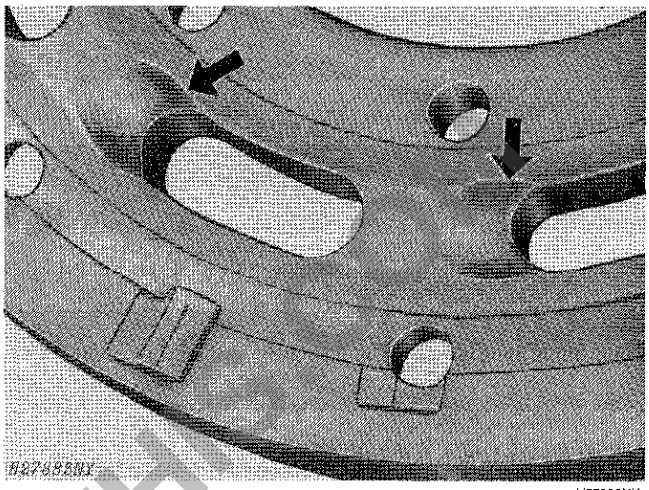


H27882NY

Fig. 28-Example of Scored Valve Plate

This valve plate (Fig. 28) shows scoring between valve plate kidney, indicating solid particle contamination within the system, such as brass particles.

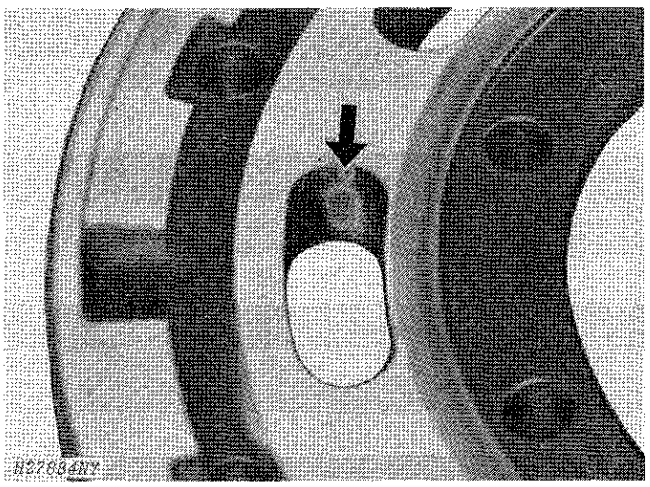
Examples of Eroded Bearing Plates



H27883NY

Fig. 29-Example of Eroded Areas on a Bearing Plate

This bearing plate (Fig. 29) shows eroded areas on the balance land. This erosion is characteristic of cavitation. Cavitation is usually caused by air in the system. This can be caused by loose hose or line connections or by a hole in the suction hose. See Fig. 30 for another example.



H27884NY

Fig. 30-Example of Eroded Area in Bearing Plate Kidney

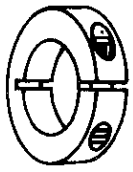
This bearing plate (Fig. 30) shows erosion in the bearing plate kidney. This erosion is characteristic of cavitation. See Fig. 29 for another example.

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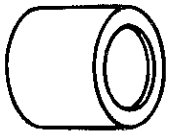
SPECIAL TOOLS—Continued

Hydrostatic Unit—Continued



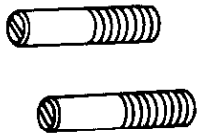
H36471

Fig. 15-JDG-111 Shaft Clamp



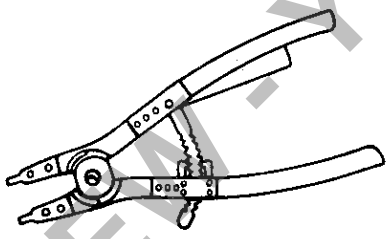
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Fig. 16-JDG-112 Retainer Sleeve



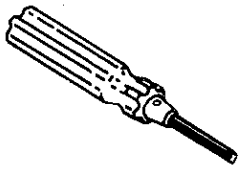
H36473

Fig. 17-JDG-113 Guide Pins



H36474

Fig. 18-JDG-114 Snap Ring Pliers



H36475

Fig. 19-JD-333 Tool Set

Number	Use
*JDG-111 Shaft Clamp (Formerly MTD-H14)	Used with JDG-112 retainer sleeve to hold motor components together when removing motor from center section.
*JDG-112 Retainer Sleeve (Formerly MTD-H15)	Used with JDG-111 shaft clamp.
*JDG-113 Guide Pin (Formerly MTD-H18)	Used to install the motor to the center section. Two are required, but are sold individually.
* JDG-114 Snap Ring Pliers (Formerly MTD-H19)	Used to remove and install snap ring or pump and motor shafts.
*JDG-116 Special Cap Screws (Formerly MTD-H10)	Used with D-01207AA, JDM-68 or an equivalent puller to remove drive sheave from hydrostatic unit.
*JD-333 Tool Set	To remove and install servo sleeve pipe plugs.

Order from: Service Tools, Box 314, Owatonna MN 55060

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OIL SPECIFICATIONS

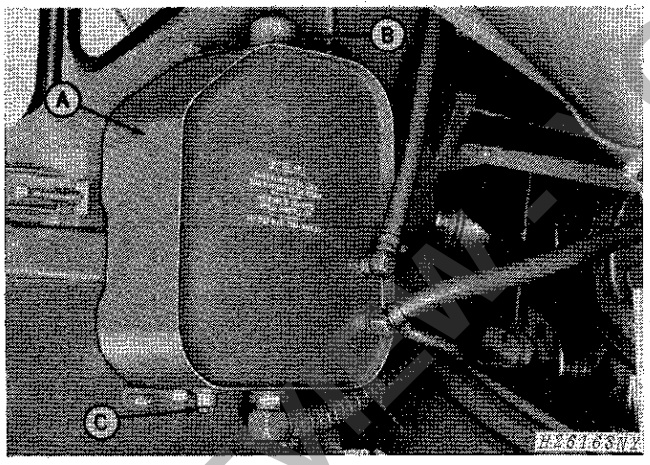
Use John Deere Torq-Gard Supreme engine oil or an equivalent engine oil meeting specifications API Service SC or SD. John Deere All Weather Hydrostatic Fluid or Texaco Type "F" Automotive Automatic Transmission Fluid also may be used.

Depending on the expected prevailing temperature for the fill period, use engine oil of viscosity as shown in the following chart.

Air Temperature	John Deere Torq-Gard Supreme Oil	Other Oils: Single Viscosity Oil	Other Oils: Multi-Viscosity Oil
Above 32°F (0°C)	SAE 10W-20	SAE 20	SAE 10W-30
Below 32°F (0°C)	SAE 10W-20	SAE 10W	SAE 10W-30

NOTE: When checking oil level or adding oil in the hydraulic system, be certain header is lowered to ground.

DRAINING AND REFILLING SYSTEM



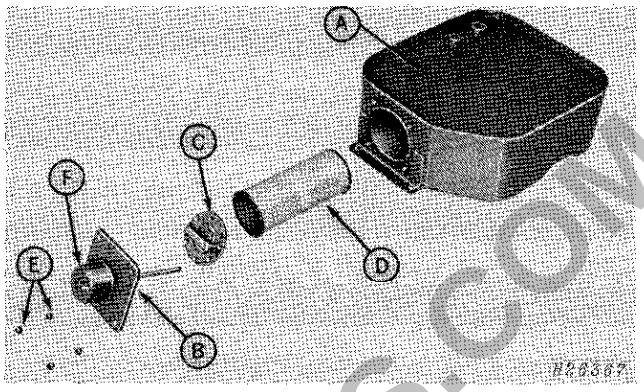
A—Hydraulic Oil Reservoir
B—Breather Cap with Dipstick
C—Drain Plug

Fig. 1-Hydraulic Reservoir

Every 500 hours of operation, or every season, whichever occurs first, remove drain plug (C) and drain oil from reservoir (A) (Fig. 1).

IMPORTANT: The header must be lowered to the ground before draining oil.

Replacing Oil Filter



A—Reservoir
B—Reservoir Top
C—Filter Cap
D—Filter
E—Nuts
F—Dipstick

Fig. 2-Replacing Oil Filter

After oil has drained from reservoir (A) remove the reservoir top (B) (Fig. 2). Disassemble filter unit by unscrewing the filter cap (C). Remove and discard the oil filter (D). Install new filter. Replace filter cap and tighten. Fasten reservoir top in place with the four nuts (E).

Filling Reservoir

With header on the ground, fill reservoir to "FULL" mark on dipstick (F) attached to oil reservoir cap. Use correct oil as specified.

IMPORTANT: Use only clean oil as specified; never use drainings of any type.

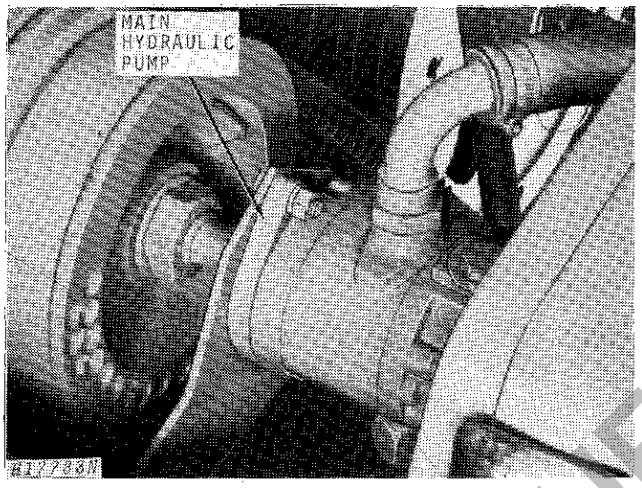
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Group 20
HYDRAULIC PUMPS

MAIN SYSTEM PUMPS

General Information



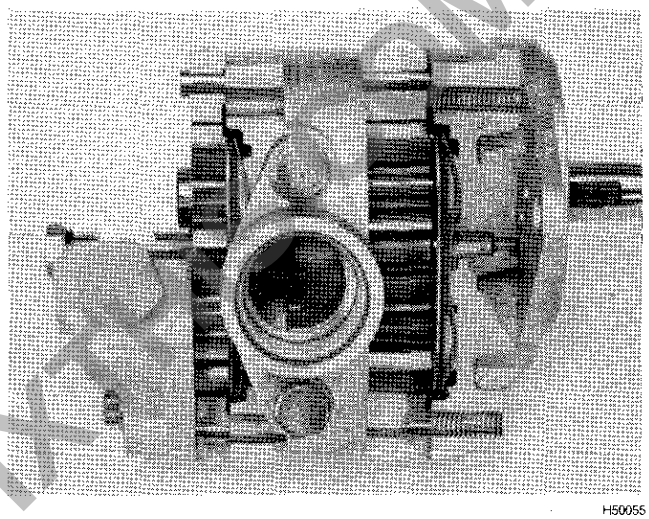
H17783N

Fig. 1-Location of Main Hydraulic System Pump

The pump is located under the operator's seat (Fig. 1). It is driven from the end of the engine powershaft. It's function is to supply hydraulic oil to the main hydraulic system, steering system, SideHill leveling system, and optional automatic header height control system. Refer to Section 140 for information on the SideHill leveling and automatic header height control systems. Refer to Section 60 for information on the steering system.

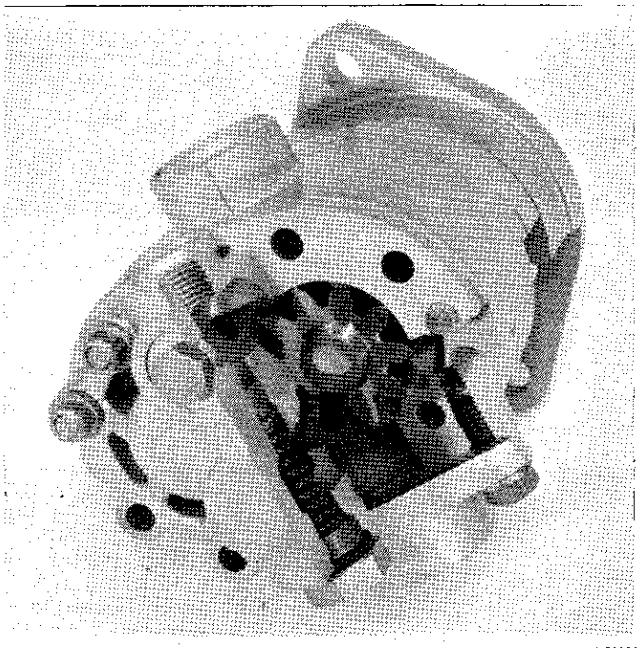
Refer to the chart on the next page to determine the correct model of Cessna pump for a particular combine. The basic differences in these pumps are their gallons per minute delivery and their pressure ratings.

Those 6600 Combines (-206200) with the single gear type pump have a flow divider built into the pump. This pump draws oil from the reservoir to the flow divider valve which then directs the flow to the main hydraulic control valve and to the steering system control valve.



H50055

Fig. 2-Cutaway View of Dual Gear Type Pump



H50056

Fig. 3-Cutaway End View of Dual Gear Type Pump

All other 6600, SideHill 6600 and 7700 Combines are equipped with dual gear type pumps (Fig. 2). One set of gears pump oil for the main system and the second set of gears pump oil for the steering system. These pumps do not have a flow divider. Hydraulic oil is drawn from the reservoir to the pump where it is divided by two sets of gears and is directed to the main control valve and to the steering control valve.

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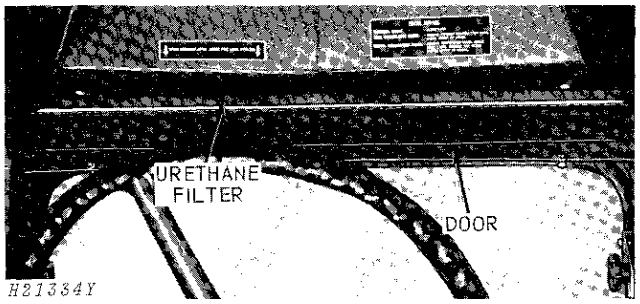


Fig. 7-Maximum Air Recirculator

The urethane foam filters are located in the air recirculators of all air conditioned cabs (Fig. 7).

Clean filter by one of the following methods:

Water Washing

1. Soak 15 minutes in warm water (not over 100°F) with R36757 John Deere Dry Filter Element Cleaner or its equivalent (non-sudsing detergent). (Fig. 8).

2. Rinse until clean with water from hose having a maximum pressure of 40 psi (3 bar).

3. Shake excessive water from the filter and allow the element to dry. Do not use compressed air to dry filter as this will rupture the wet element.

4. Reinstall filter.

IMPORTANT: Do not install wet filters in the air recirculators.



Fig. 8-Water Washing the Filter

Tapping

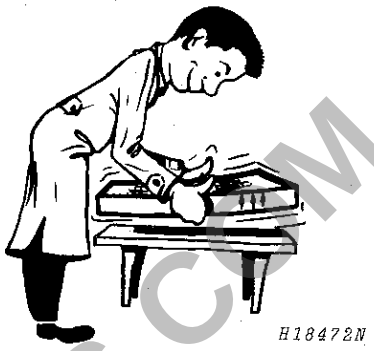


Fig. 9-Cleaning the Filter by Tapping

Tap gently on flat surface; dirty side down. Do not tap on a tire (Fig. 9).

Compressed Air

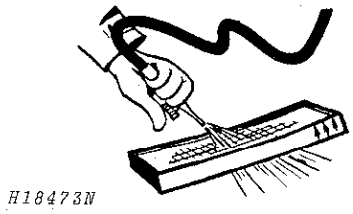


Fig. 10-Cleaning the Filter with Compressed Air

Direct compressed air (30 psi [2 bar] maximum) through filter in opposite direction of arrows (Fig. 10).

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Removal—Continued

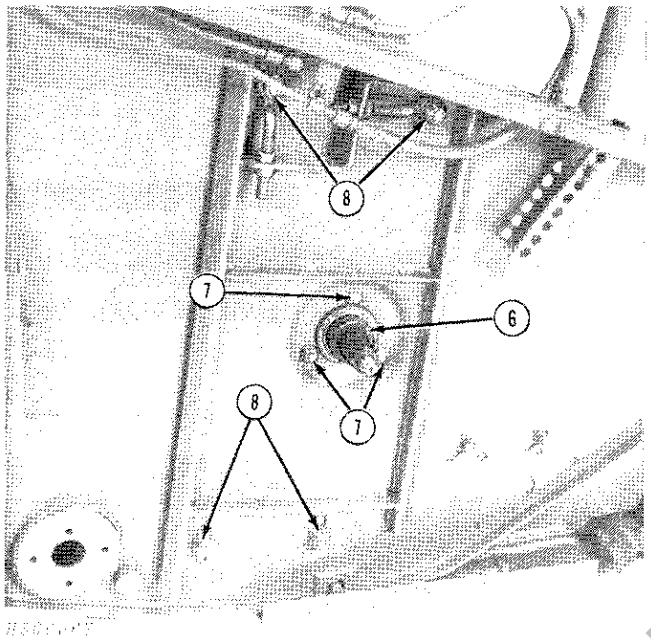


Fig. 3-Removing Auger Support Plate

6. Support auger with a wood block under flighting. Loosen set screw and remove locking collar (Fig. 3).

7. Loosen, but do not remove, the three round head bolts in the bearing retainers (Fig. 3).

8. Remove four round head bolts and pull plate, with eyebolts and bearing attached, off shaft (Fig. 3).

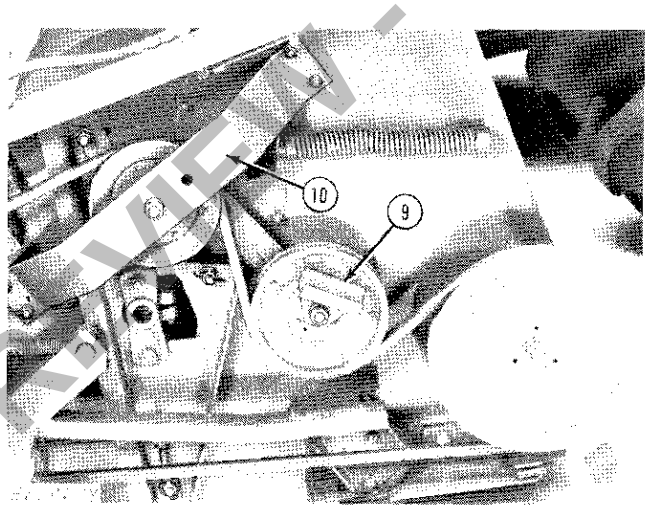


Fig. 4-Removing Belt and Fixed Idler Support

9. Pull up on tightener and remove belt from sheaves (Fig. 4).

10. Remove four round head bolts and remove sheave with support (Fig. 4).

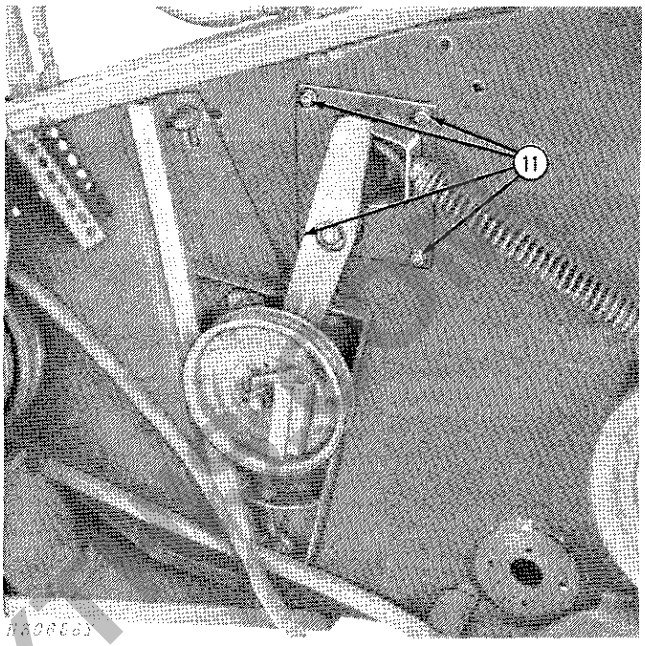


Fig. 5-Removing Tightener

11. Remove four round head bolts and remove tightener assembly with spring and mounting plate (Fig. 5).

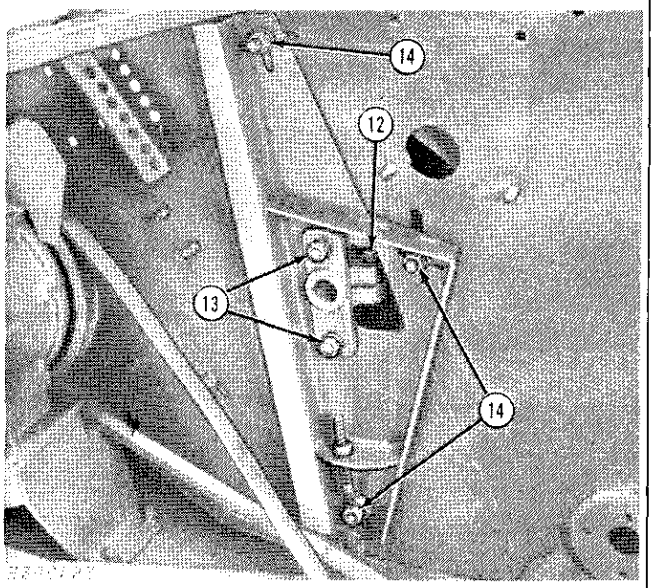


Fig. 6-Removing Support and Plate

12. Loosen clamping cap screw in auger support (Fig. 6).

13. Support auger with a wood block under auger flighting. Remove two round head bolts and pull auger support from shaft (Fig. 6).

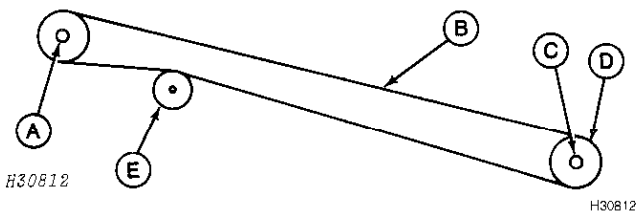
14. Remove three round head bolts and remove plate with eyebolt (Fig. 6).

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Group 5
FEEDER CONVEYOR CHAIN

GENERAL INFORMATION

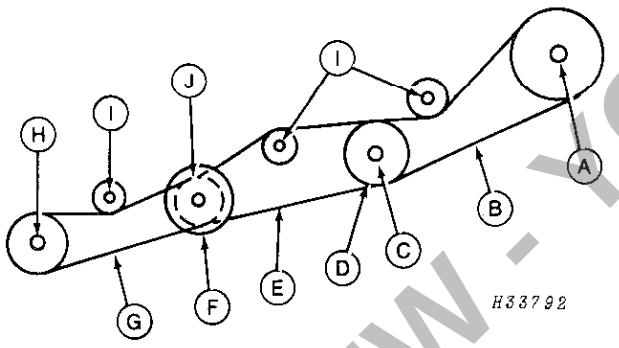


A—Upper Feeder House Shaft
B—Feeder Conveyor Drive Chain
C—Header Drive Shaft
D—Sprocket
E—Tightener

Fig. 1-Feeder Conveyor Chain Drive

Power is transmitted from the upper feeder house shaft (A) by feeder conveyor drive chain (B) to the header drive shaft (C) (Fig. 1).

Variable Speed Feeder House Drive

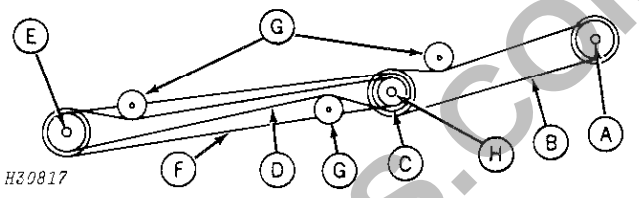


A—Primary Countershaft
B—Header and Feeder House Upper Drive Belt
C—Upper Feeder House Shaft
D—Upper Variable Sheave
E—Upper Variable Drive Belt
F—Lower Variable Sheave
G—Lower Variable Drive Belt
H—Header Drive Shaft
I—Tightener
J—Lower Variable Drive Belt Sheave

Fig. 2-Variable Speed Feeder House Drive

Power is transmitted from the primary countershaft (A) by belt (B) to the upper shaft (C) (Fig. 2). The upper shaft (C) drives the upper variable sheave (D) and the upper variable drive belt (E). Lower variable sheave (F) is then driven along with the lower variable drive belt sheave (J) which drives lower variable drive belt (G) and header drive shaft.

Spring Loaded Belt Drive Feeder House

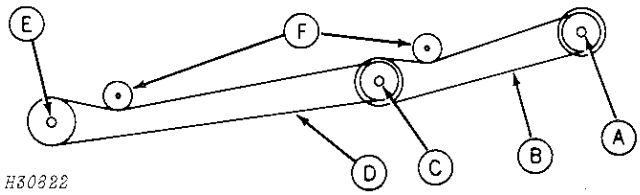


A—Primary Countershaft
B—Header and Feeder House Upper Drive Belt
C—Upper Feeder House Shaft Sheave
D—Header Drive Belt (Outer Belt)
E—Header Drive Shaft
F—Feeder Conveyor Drive Belt
G—Tighteners
H—Upper Feeder House Shaft

Fig. 3-Spring Loaded Belt Drive

Power is transmitted from the primary countershaft (A) by belt (B) to the upper feeder house shaft sheave (C) which drives the header drive belt (D) and the header drive shaft (E) (Fig. 3). The power then goes by the feeder conveyor drive belt (F) to the upper feeder house shaft (H).

Long Belt Drive Feeder House



A—Primary Countershaft
B—Header and Feeder House Upper Drive Belt
C—Upper Feeder House Shaft
D—Feeder House Drive Belt
E—Header Drive Shaft
F—Tighteners

Fig. 4-Long Belt Drive

Power is transmitted from the primary countershaft (A) by belt (B) to the upper feeder house shaft (C) which in turn drives belt (D) and header drive shaft (E) (Fig. 4).

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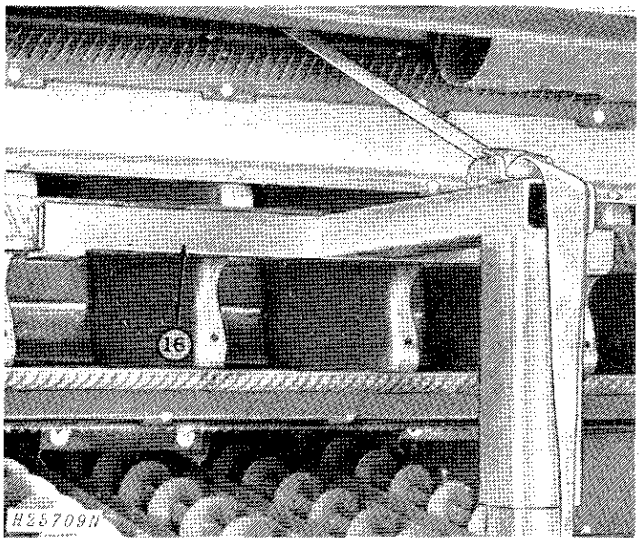


Fig. 11-Positioning Service Jack for Cylinder Removal

16. Attach mast D-05071ST to D-05070ST service jack. Slip threshing cylinder adapter D-05078ST on mast. See SPECIAL TOOLS. Position adapter under rasp-bar and raise cylinder enough to relieve weight on shaft (Fig. 11).

NOTE: The service jack can also be used for removal of the spike-tooth cylinder.

If a jack is unavailable for cylinder removal, be certain that the cylinder is securely blocked.

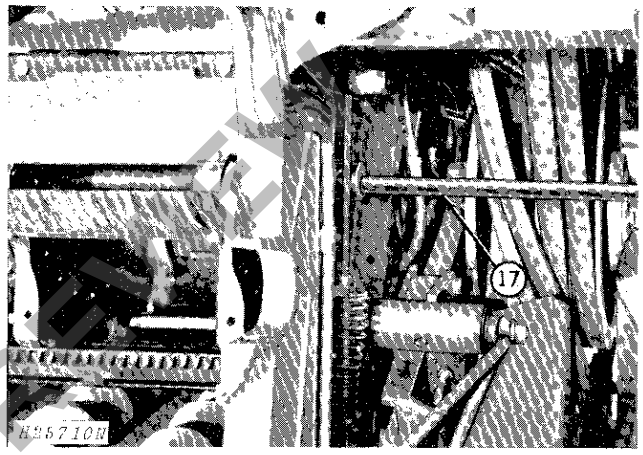


Fig. 12-Drive Out Cylinder Shaft

17. Use a suitable driver and drive cylinder shaft out the right-hand side of the combine (Fig. 12). Remove keys from the hubs as the shaft is being driven out.

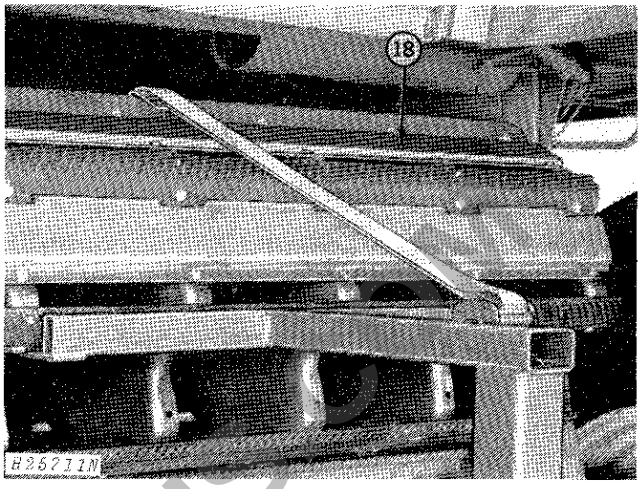


Fig. 13-Removing Cylinder with Jack

18. If jack is being used, pull cylinder (Fig. 13) out of combine.

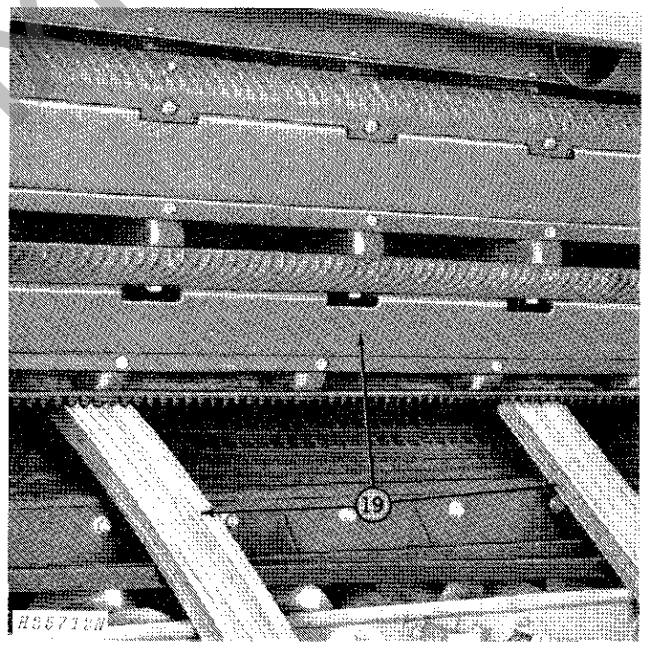


Fig. 14-Removing Cylinder Without Jack

19. If a jack is not available, place two 2 x 4's under cylinder (Fig. 14) and roll cylinder out of combine.

CAUTION: Because the cylinder is extremely heavy and awkward to handle, it must be removed from the combine by two people.

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Group 5
GRAIN TANK AUXILIARY UNLOADING AUGERS AND DRIVE

GENERAL INFORMATION

The grain tank unloading system consists of the auxiliary augers, in the bottom of the grain tank, which move the grain to the inner unloading auger. The inner unloading auger then moves the grain to the side of the grain tank, where the outer unloading auger moves the grain to the truck or wagon.

The unloading system augers are driven from a countershaft, which is driven from the engine power-shaft.

AUGER DRIVE

Removal

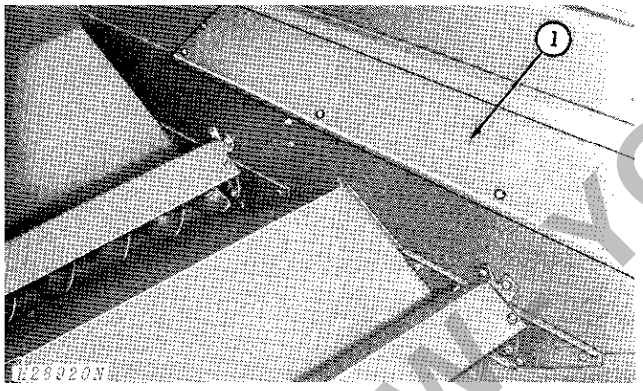
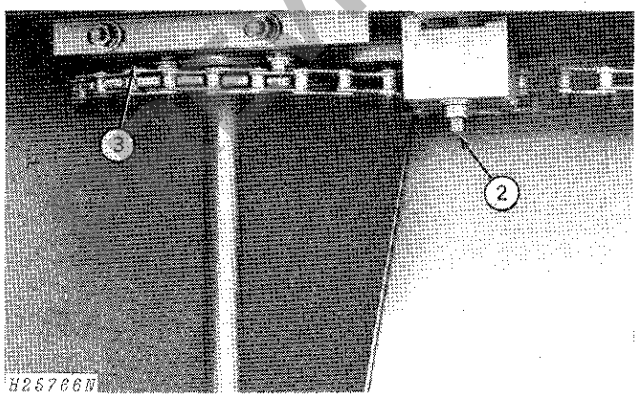


Fig. 1-Removing Cover Plate

1. Remove cover plate at rear of grain tank (Fig. 1).



A—Nut B—Tightener Block

Fig. 2-Removing Drive Chain

2. Loosen nut (Fig. 2) and pull tightener block down. Slip chain off sprocket.
3. Remove the four round head bolts attaching sprocket bracket to grain tank side (Fig. 2).

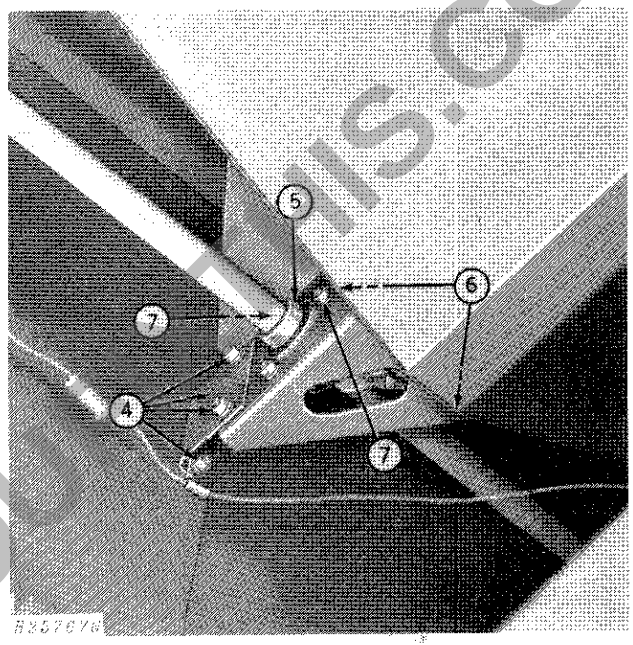


Fig. 3-Removing Bearing Supports

4. Remove the four round head bolts from each support (Fig. 3), and remove supports.
5. Loosen the set screws in all locking collars (Fig. 3).
6. Remove the two round head bolts attaching each bearing bracket to the grain tank (Fig. 3).
7. Remove the three round head bolts attaching each pair of bearing retainers to the brackets (Fig. 3).

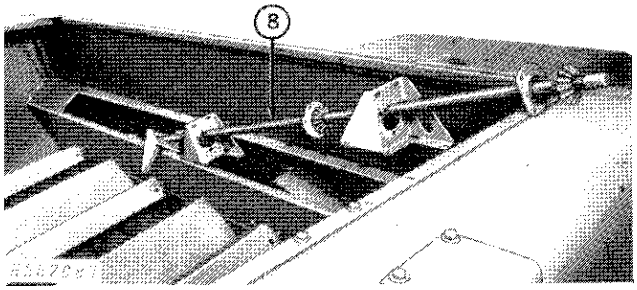


Fig. 4-Removing Auxiliary Unloading Augers Drive Shaft

8. Remove the drive shaft, by pulling it up and through the opening at the rear of the grain tank (Fig. 4).

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REMOVAL—Continued

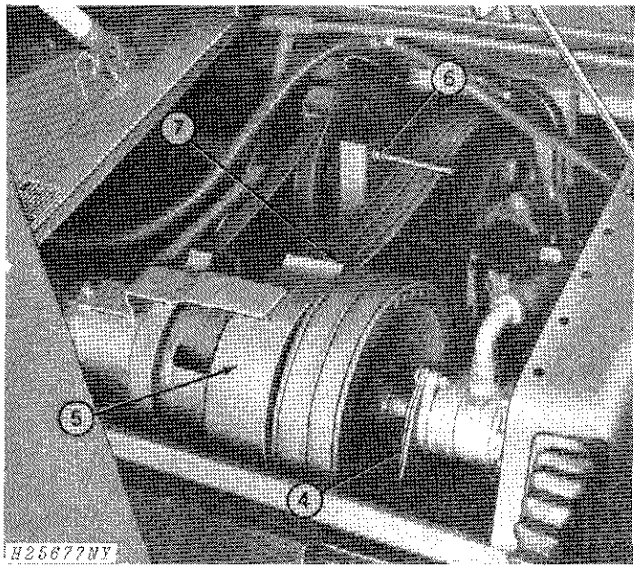


Fig. 3-Removing Belt Guides

4. Remove cap screw from main hydraulic pump torque arm (Fig. 3) and position pump away from powershaft sheave.

⚠ CAUTION: Do not disconnect hydraulic hoses from main hydraulic pump.

5. Remove front separator drive belt guide (Fig. 3).

6. Remove middle separator drive belt guide (Fig. 3).

7. Remove cap screws from mounting and remove declutching idler (Fig. 3).

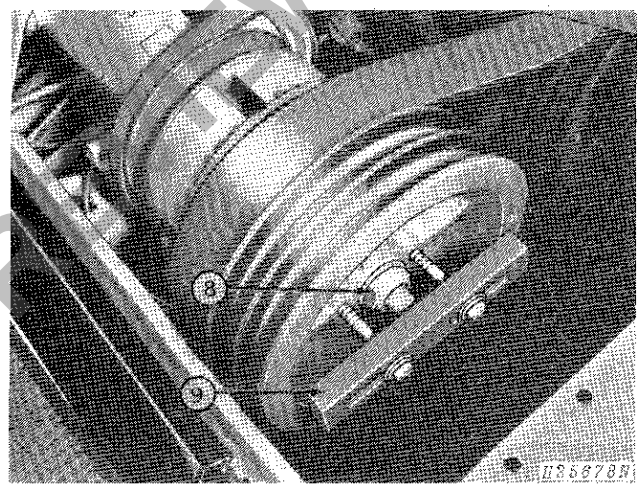


Fig. 4-Removing Powershaft Sheave

8. Wedge powershaft sheave securely. Use a 1-7/8-inch wrench or socket to turn lock nut on end of powershaft (Fig. 4).

IMPORTANT: Do not remove lock nut from powershaft at this time.

9. Attach a suitable puller to powershaft sheave (Fig. 4). Back off lock nut and tighten puller evenly to pull sheave off powershaft.

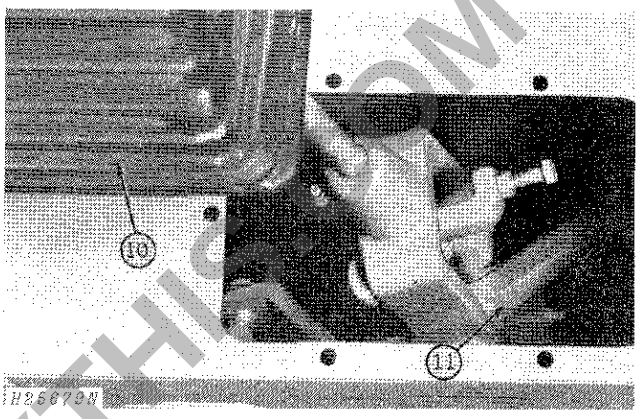


Fig. 5-Gearshift Linkage Mounting

10. Remove clips from boot retainer and slide gearshift lever boot up on gearshift lever (Fig. 5).

11. Reach inside console and remove the three cap screws securing the gearshift linkage mounting to the powershaft housing (Fig. 5). Remove foam seal from around powershaft housing.

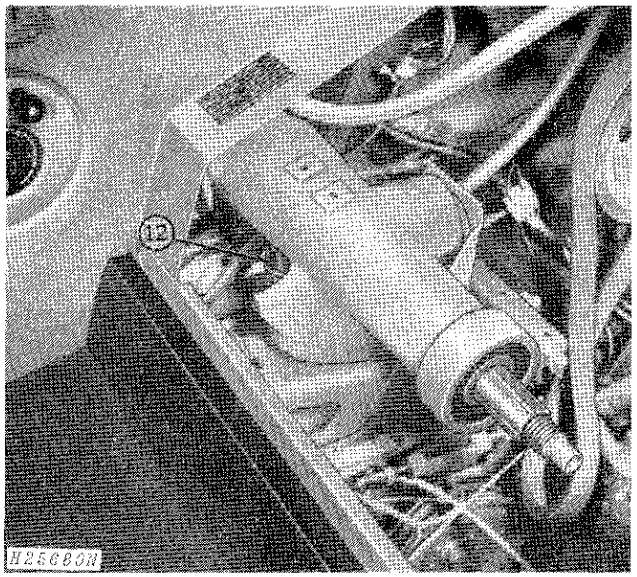


Fig. 6-Raising Powershaft Housing

12. Place a suitable hydraulic jack under powershaft housing (Fig. 6).

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ELECTRICAL MALFUNCTIONS

Combine Will Level Manually but Not Automatically to the Right

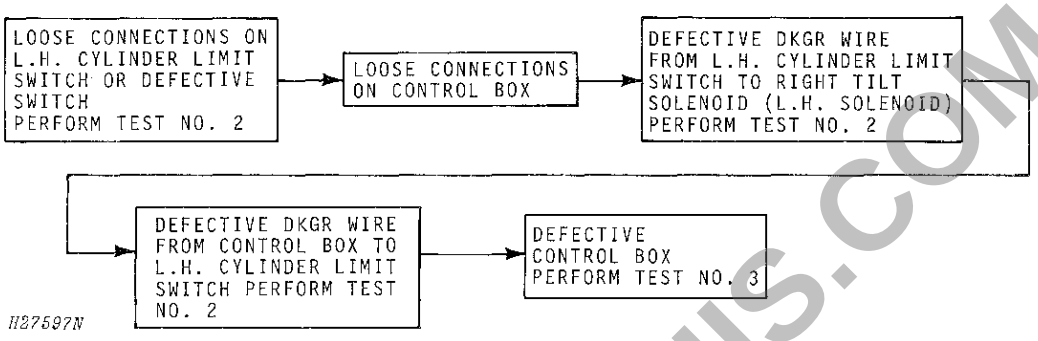


Fig. 3-Combine Will Level Manually but Not Automatically to the Right

Combine Will Level Manually but Not Automatically to the Left

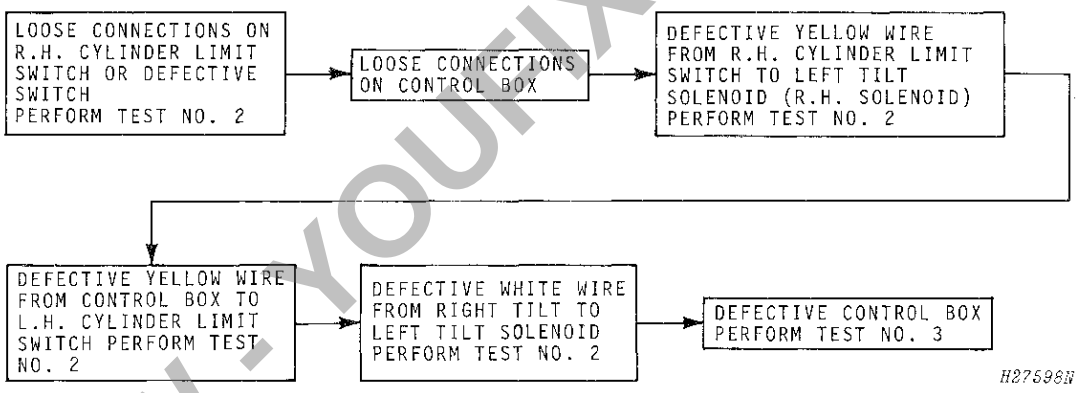


Fig. 4-Combine Will Level Manually but Not Automatically to the Left

Combine Will Level Manually but Not Automatically in Either Direction

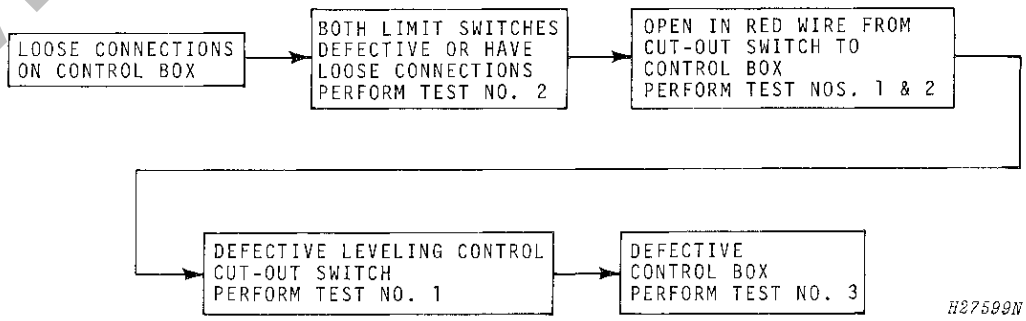


Fig. 5-Combine Will Level Manually but Not Automatically in Either Direction

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GENERAL INFORMATION—Continued

Control Switch

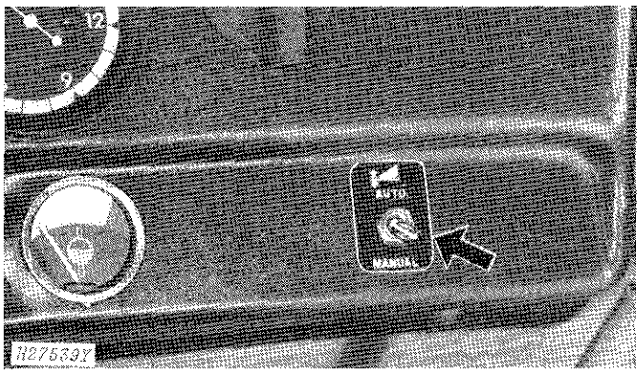


Fig. 2-Control Switch

The control switch for automatic header height control is mounted on the instrument panel (Fig. 2). The operator can choose to turn on the automatic header height control system or turn it off and use the range indicator.

Range Indicator

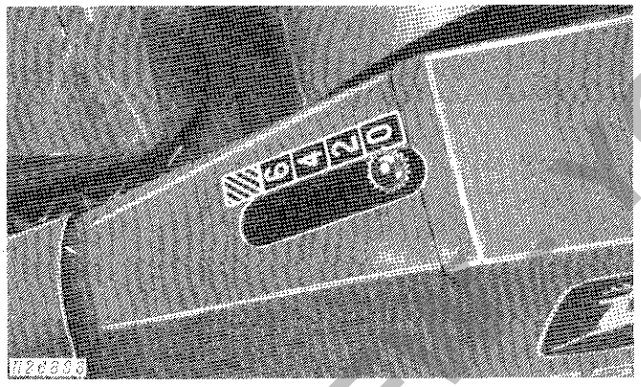


Fig. 3-Range Indicator for 50 Series Row-Crop Head

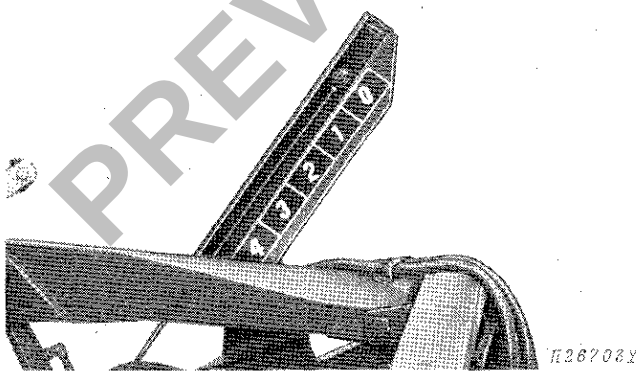
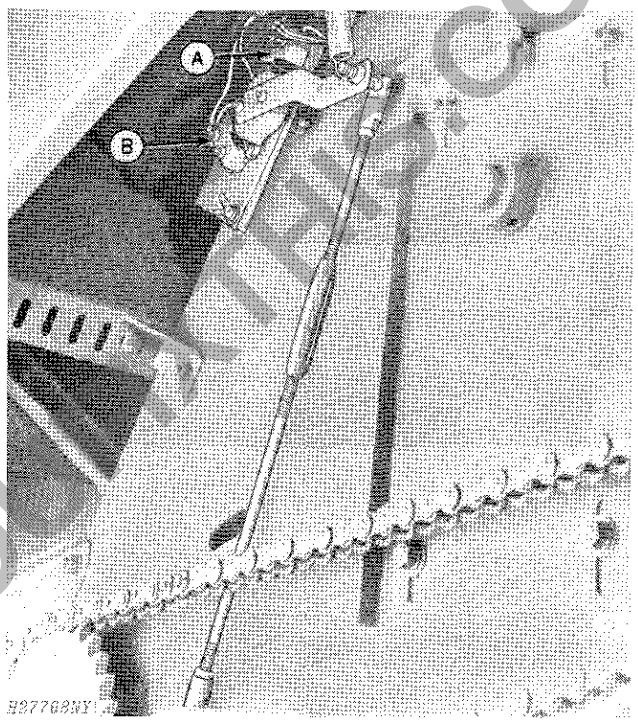


Fig. 4-Range Indicator for 200 Series Platform

The range indicator (Fig. 3 and 4) tells the operator where the row unit or flexible cutterbar is within its range. The operator can then manually raise and lower the platform to keep the row unit or flexible cutterbar within its float range.

Raise and Lower Switches



A—Raise Switch **B—Lower Switch**

Fig. 5-Raise and Lower Switches for 50 Series Row-Crop Head

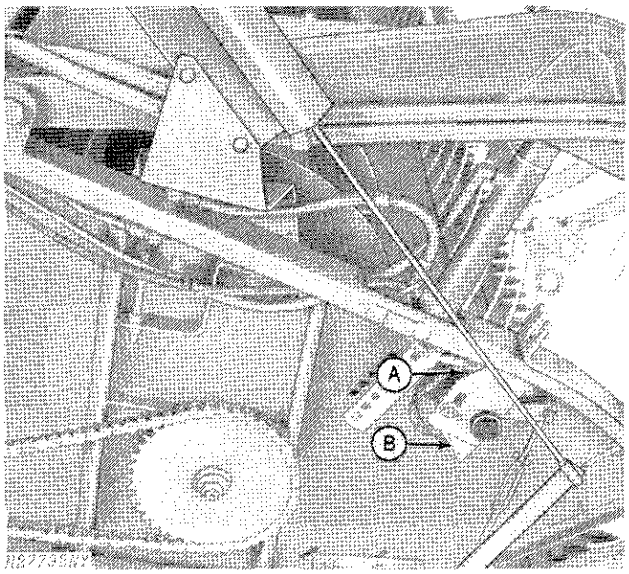
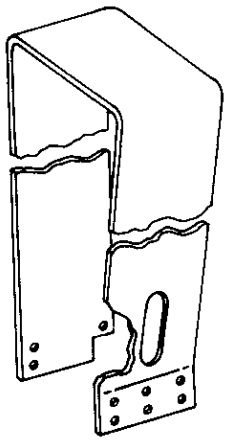


Fig. 6-Raise and Lower Switches for 200 Series Platform

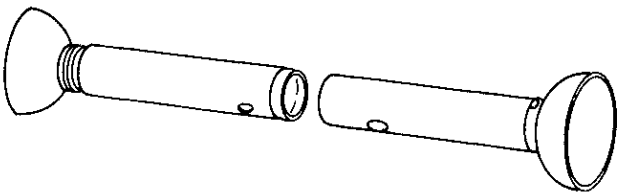
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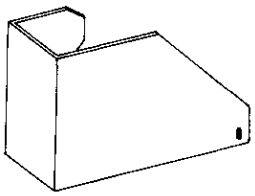
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Fig. 9-SideHill 6600 Leveling Cylinder



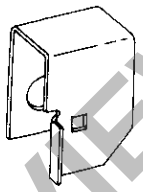
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Fig. 10-SideHill 6600 Header Drive Shaft



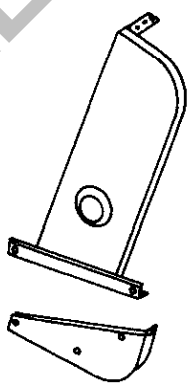
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Fig. 11-Engine Fan Drive Countershaft (Early Combines)



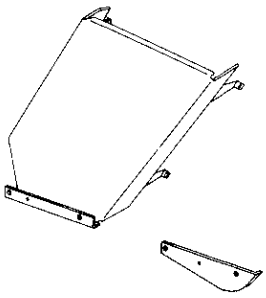
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Fig. 12-Engine Fan Drive Countershaft Tightener (Early Combines)



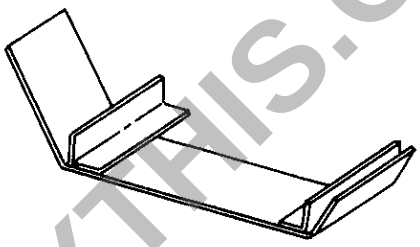
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Fig. 13-Hydrostatic Drive Charge Pump



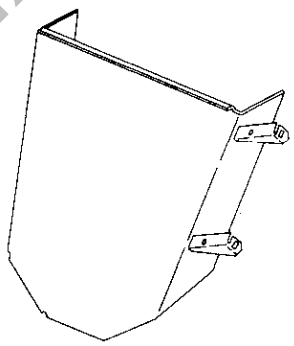
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Fig. 14-Hydrostatic Drive Charge Pump (Rice Crawler)



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Fig. 15-Lower Ground Belt Drive - Without Fenders



H36820

Fig. 16-Upper Ground Drive - Regular Belt Drive and Hydrostatic Drive (Early Combines)

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Bulbs—Continued	John Deere Part Number	Trade Number
Field and Warning Lights		
All Field Lights		
6600 and SideHill 6600 (-206200)	AR21059	4406
7700 (-213300)	AR21059	4406
Field Lights		
6600 and SideHill 6600 (206201-)		
7700 (213301-)		
18 Watt (Field)	AM31282	4414
35 Watt (Grain Tank and Unloading Auger)	AR42591	4422
60 Watt (Header)	AE31263	4466
80 Watt (Dual Beam-Road)	AR48723	4460
Spotlight (Attachment)	AH91124	7400
Amber Warning Light	AD2062R	1073
Tail Light	AB2599R	67

GROUP 10 - Motorola Charging Circuit

Alternator output ..... 55 amp (without air cond.) 72 amp (with air cond.)
Voltage ..... 12 volts
Ground ..... Negative
Brushes ..... 1/4-in. (6.4 mm) minimum beyond holder
Belt Tension ..... 3/4-in. (19 mm) flex with 25 lbs. (111 N) pull at center of belt
Pulley nut ..... 45 ft-lbs (60 N·m) (6 kgm)
Through bolts ..... 30 ft-lbs (40 N·m) (4 kgm)

GROUP 15 - Delcotron Charging Circuit

Alternator output ..... 55 amp (without air cond.) 72 amp (with air cond.)
Voltage ..... 12 volts
Ground ..... negative
Brushes ..... 1/4-in. (6.4 mm) minimum beyond holder
Belt tension ..... 3/4-In. (19 mm) flex with 25 lbs. (111 N) pull at center of belt
Pulley nut ..... 50 ft-lbs (70 N·m) (7 kgm)
Through bolts ..... 30 ft-lbs (40 N·m) (4 kgm)

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