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SECTION 10 - ENGINE

BOOK 1

Chapter 2 - Fuel Systems

CONTENT

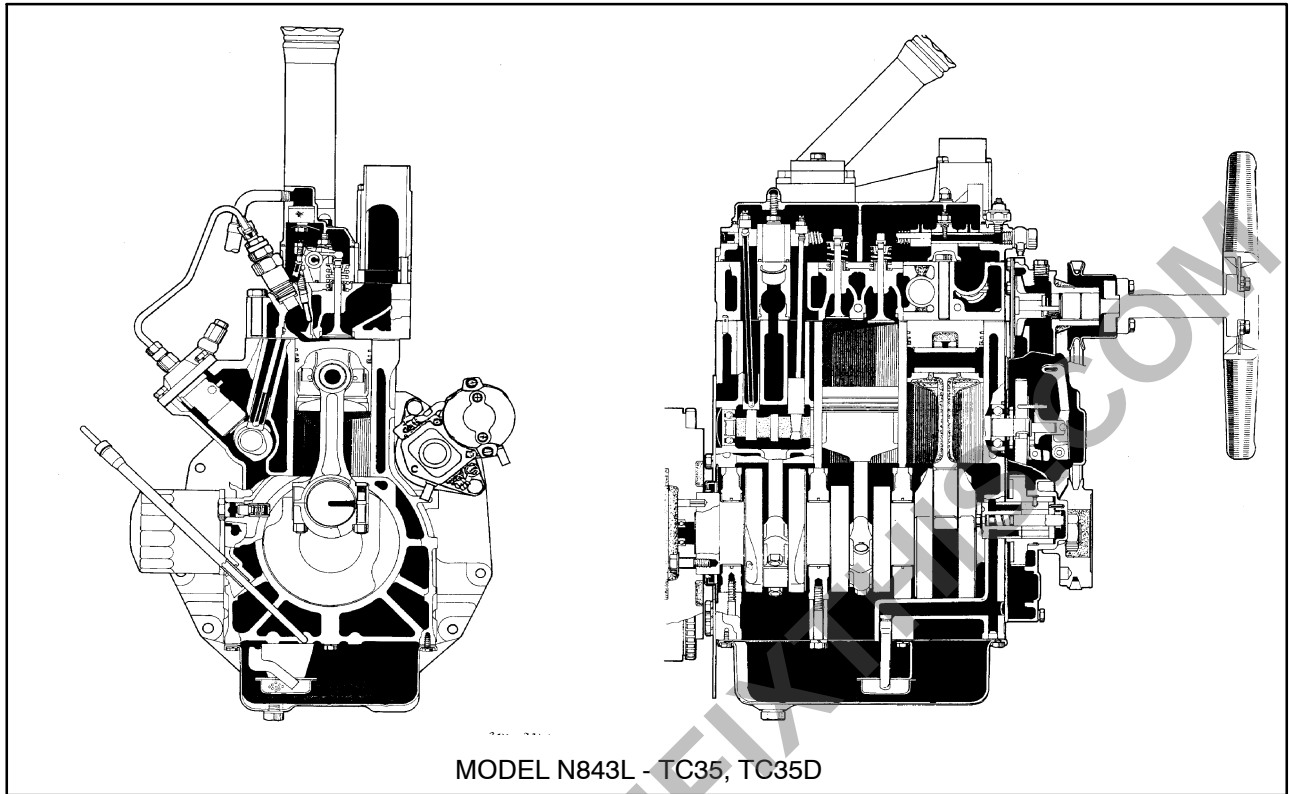
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	TC35	TC40	TC45
(7)—WIDTH:			
Rear Axle—			
Outside to Outside:			
<u>Turf Tires—</u>			
Dished In	1825 mm (71.8")	1825 mm (71.8")	1825 mm (71.8")
Dished Out	1846 mm (72.7")	1846 mm (72.7")	1846 mm (72.7")
<u>Ag. Tires— (Large)</u>			
Dished In	1693 mm (66.6")	1693 mm (66.6")	1693 mm (66.6")
Dished Out	2103 mm (82.8")	2103 mm (82.8")	2103 mm (82.8")
<u>R4 Tires—</u>			
Dished In	1736 mm (68.3")	1736 mm (68.3")	1736 mm (68.3")
Dished Out	2146 mm (84.5")	2146 mm (84.5")	2146 mm (84.5")

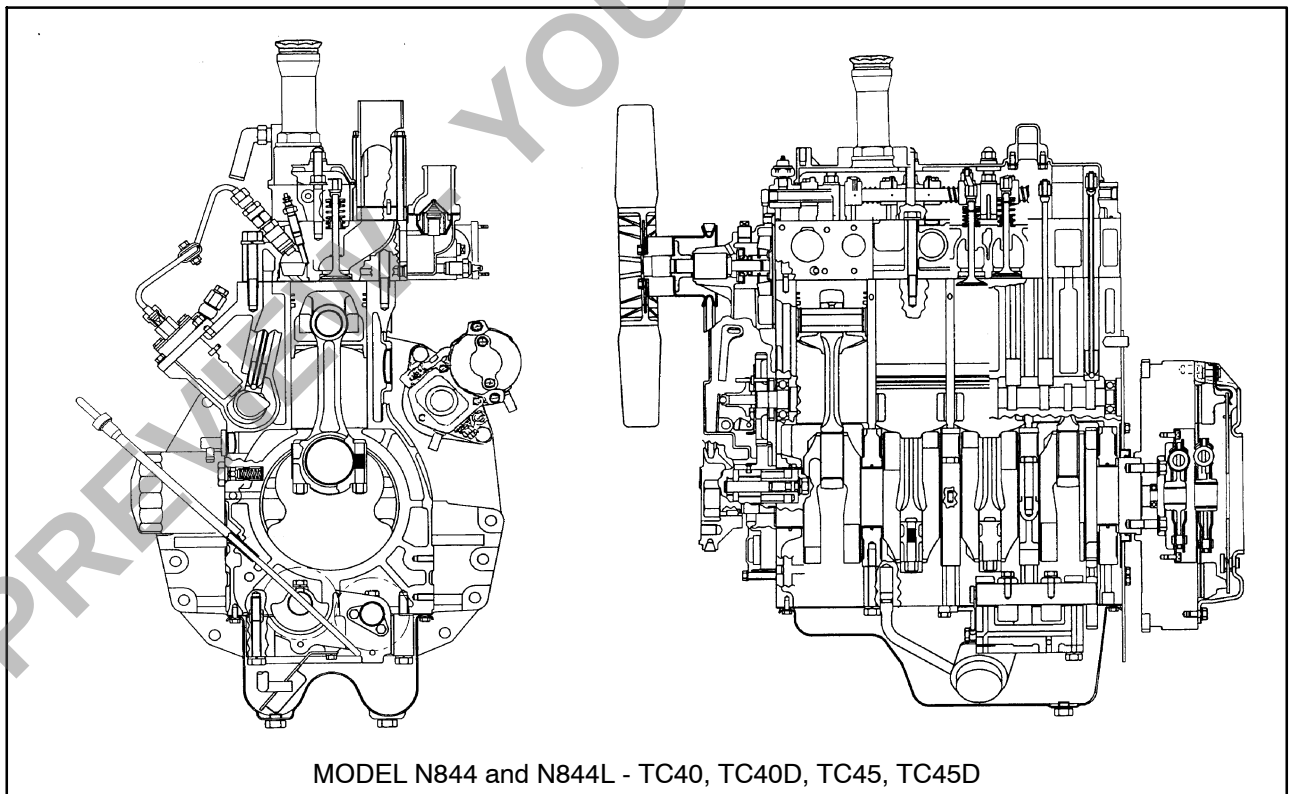
(8)—MINIMUM GROUND CLEARANCE:

sm AG TIRES			
(D.) - Minimum Centerline	13 (330)	13 (330)	13 (330)
Clearance			
(E.) - Frt Axle Crop Clear. -	15.5 (394)	15.5 (394)	15.5 (394)
15" from CL			
(F.) - Rr Axle Crop Clear. -	17.5 (445)	17.5 (445)	17.5 (445)
15" from CL			
lg AG TIRES			
(D.) - Minimum Centerline	14 (356)	14 (356)	14 (356)
Clearance			
(E.) - Frt Axle Crop Clear. -	15.5 (394)	15.5 (394)	15.5 (394)
15" from CL			
(F.) - Rr Axle Crop Clear. -	18 (457)	18 (457)	18 (457)
15" from CL			
R4 TIRES			
(D.) - Minimum Centerline	14 (356)	14 (356)	14 (356)
Clearance			
(E.) - Frt Axle Crop Clear. -	15.5 (394)	15.5 (394)	15.5 (394)
15" from CL			
(F.) - Rr Axle Crop Clear. -	17.5 (444)	17.5 (444)	17.5 (444)
15" from CL			
TURF TIRES			
(D.) - Minimum Centerline	11.5 (292)	11.5 (292)	11.5 (292)
Clearance			
(E.) - Frt Axle Crop Clear. -	13 (330)	13 (330)	13 (330)
15" from CL			
(F.) - Rr Axle Crop Clear. -	15 (381)	15 (381)	15 (381)
15" from CL			

CL - Center Line of Tractor



4



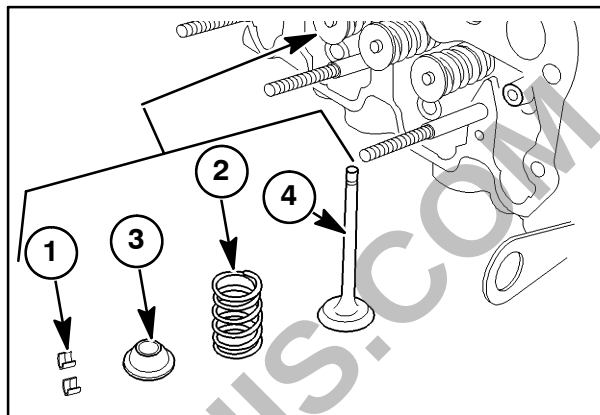
5

DISASSEMBLY, INSPECTION, FITS, CLEARANCES, AND ASSEMBLY OF COMPONENT ASSEMBLIES

Op. 10 101

CYLINDER HEAD DISASSEMBLY

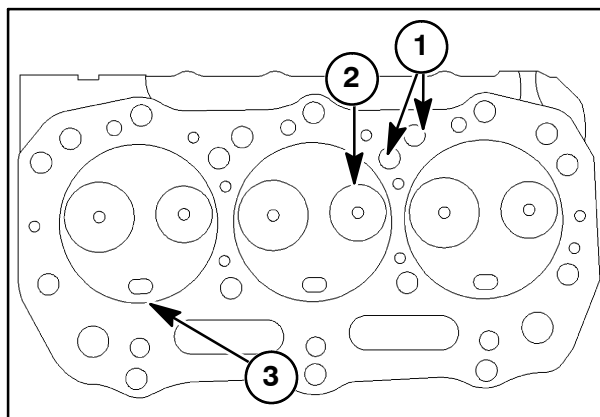
1. Clean the cylinder head and remove any carbon deposits from around the valve heads.
2. Use a valve spring compressor and remove the valve spring retainer locks, 1, spring, 2, and spring retainer, 3, from each valve, 4.
3. Remove the valves and place the valve components together in separately marked containers for reassembly in their original position.



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CYLINDER HEAD INSPECTION AND REPAIR

1. Clean all carbon deposits from the combustion chamber and valve ports using a wire brush and scraper.
2. Clean all dirt and residue from the gasket surface using care not to scratch or nick the machined surface.
3. Clean the cylinder head in solvent and air dry.
4. Inspect the head for cracks or damage in the following areas:
 - Valve ports
 - Valve seats, 2
 - Prechamber, 3
 - External cracks in the water jackets, 1
5. Inspect the gasket surfaces for scratches or nicks, which could cause leakage.
6. Examine the core hole plugs for rust or signs of leakage. If a plug shows signs of damaging rust or leakage, replace all plugs in the head.
7. Inspect the prechamber for carbon deposits and looseness. Remove any carbon deposits found. If prechamber is found to be loose, cylinder head may be warped.



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MAINTENANCE

The cooling system operates under pressure which is controlled by the radiator cap. It is dangerous to remove the cap from a hot engine or while the engine is running. Always shut the engine off and allow it to cool before removing the radiator cap. When removing the cap, use a thick cloth to cover the cap and slowly turn the cap to the first stop to allow pressure to escape before removing the cap completely.

Clean the cooling system to remove rust, sludge, and other foreign material by using a coolant system cleaning solvent. In severe cases, pressure flushing may be required. A pulsating or reverse flow flushing will more effectively loosen and remove foreign material than a steady flushing in normal direction of coolant flow. If pressure flushing is to be used, always remove the thermostat and make sure the head bolts are tightened properly.

COOLANT

The coolant is a permanent type ethylene-glycol base antifreeze and should be used all year.

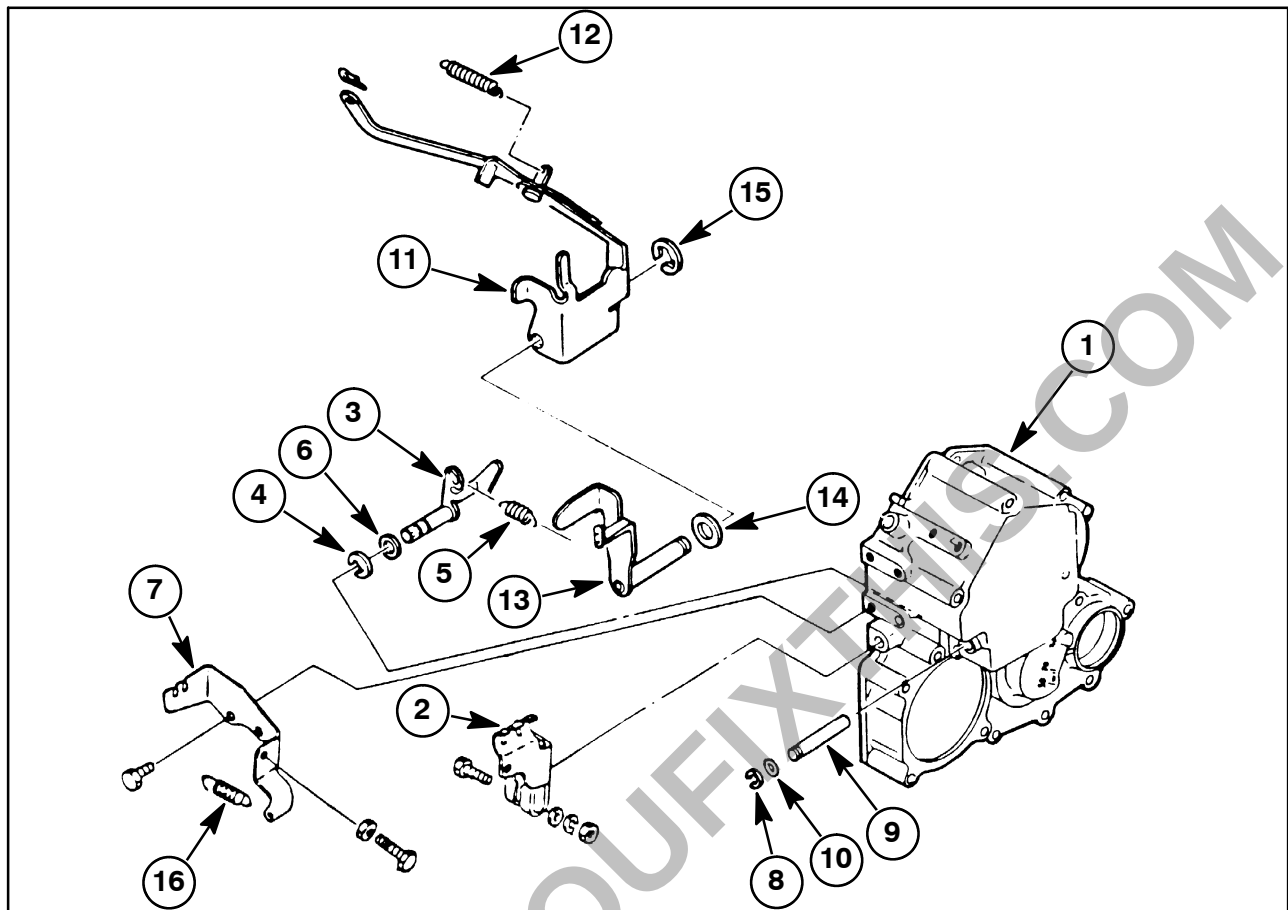
Drain and flush the cooling system every twelve months and replace the coolant with fresh antifreeze and pure water.

After the coolant has been drained from the radiator and block, flush the system by placing a water hose in the radiator filler neck. With the drain open and the system full of water, start the engine and run it until the water flowing from the drain is clear. Stop the engine and allow the system to drain, then replace the coolant with new 50/50 mixture antifreeze and pure water.

RADIATOR CAP

The radiator cap acts to pressurize the cooling system, as a pressure relief valve and also acts as a vent valve. The pressure valve permits a limited pressure buildup in the cooling system as the coolant heats up. This increased pressure increases the boiling point of the coolant. If excess pressure builds up in the system, the pressure relief valve will open until the pressure returns to the proper level, 0.9 bar (13 psi).

When the engine is shut off and the coolant cools, a vacuum condition is created in the system. A vent valve in the radiator cap opens to permit outside air pressure to enter the system when this condition exists.



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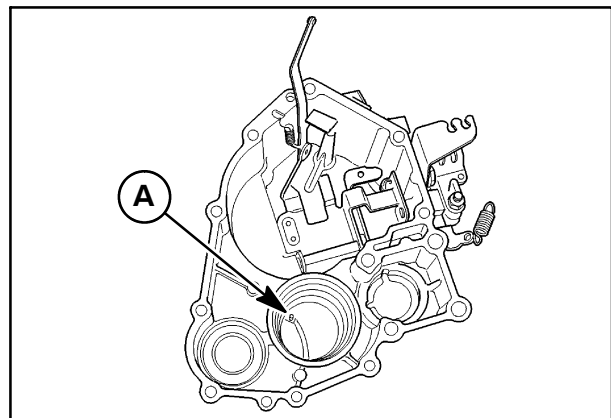
- | | | |
|----------------------|--------------------------|-----------------------|
| 1. Timing Gear Cover | 7. Throttle Cable Stay | 13. Spring Holder Arm |
| 2. Throttle Lever | 8. E Ring | 14. Washer |
| 3. Throttle Arm | 9. Pivot Shaft | 15. E Ring |
| 4. E Ring | 10. O Ring | 16. Spring |
| 5. Governor Spring | 11. Linkage Arm Assembly | |
| 6. O Ring | 12. Dampener Spring | |

GOVERNOR ASSEMBLY

NOTE: Align pin, "A", with oil pump cover when the case is assembled onto the engine.

1. Install governor spring, 5, onto linkage arm assembly, 3.

NOTE: Spring is installed onto front spring holder arm with spring inserted from the inside of the arm.



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The transmission case consists of three compartments. The forward compartment, 1, contains the forward and reverse shuttle transmission gears. The shuttle gears are designed for synchronized shifting and are controlled by a column mounted shift lever.

The center compartment, 2, contains the main transmission gears consisting of four gear speeds. These gears are designed for synchronized shifting and are controlled by a column mounted shift lever.

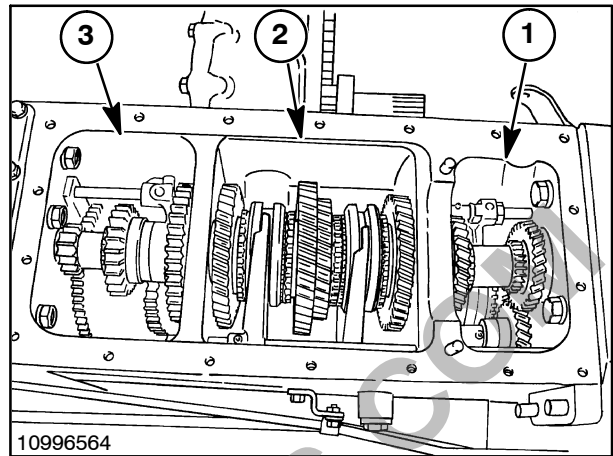
The rear compartment, 3, contains the range gears which provide three speed ratios for each of the main transmission speeds for a total of 12 forward and 12 reverse speeds. The range gears are not synchronized and are controlled by a lever located on the floor, by the left side of the operator's seat.

The shuttle gears and main transmission gears are in constant mesh. Shifting is accomplished by engaging and disengaging three synchronizer assemblies located in the front and center transmission compartments.

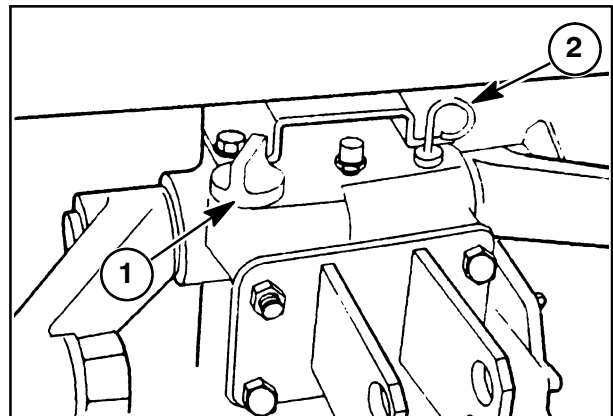
The range gears are not synchronized. Shifting is accomplished by engaging sliding gears located in the rear transmission compartment.

The transmission housing serves as a common fluid reservoir for the final drive assembly, the transmission, and the hydraulic system. The fluid used is NH 134.

The fluid fill plug, 1, and the fluid level dipstick, 2, are located on the top of the hydraulic lift cover.



3



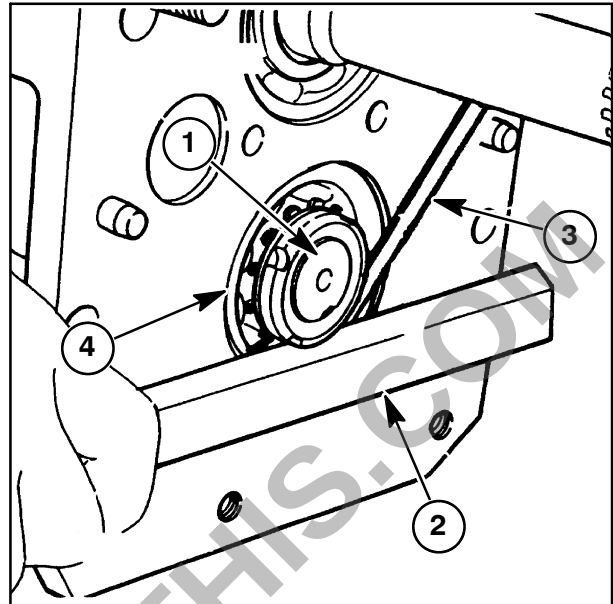
4

Op. 21 148 63**Main Countershaft End Float**

Before installing the retainer housing, the main countershaft end float must be measured and adjusted. To determine the amount of end float, perform the following steps:

1. Push the main countershaft, 1, towards the rear of the transmission housing
2. Make certain that the face of the transmission housing is clean and free from any nicks or sealant material.
3. Place a straightedge, 2, across the housing face and the main countershaft, 1.
4. Insert a feeler gauge, 3, between the front bearing, 4, and the straightedge, 2, to determine the amount of end float.
5. Use shims between the retainer housing and the front bearing to achieve zero end float (end play).

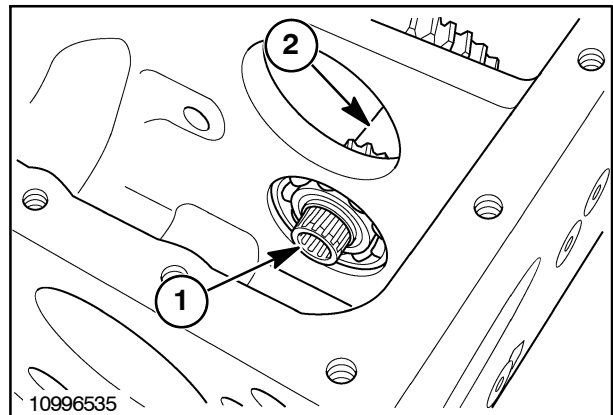
NOTE: Shims are available in the following thickness: 0.1 mm (0.004"), 0.2 mm (0.008"), 0.5 mm (0.020").



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Op. 21 148 63**Range Gear Countershaft**

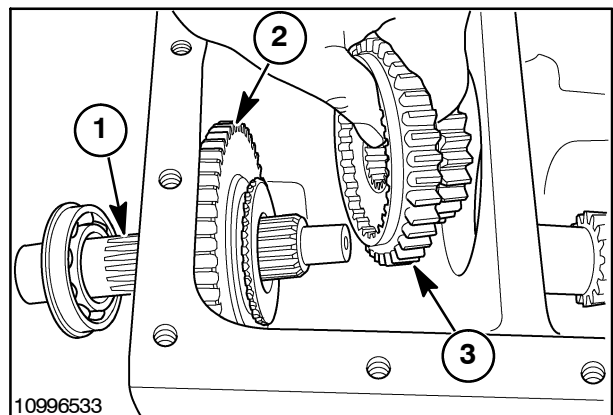
1. Install the needle bearing, 1, into the end of the main countershaft, 2.



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2. Position the sliding gears, 3, and the large counter gear, 2, in the transmission housing.
3. Slide the range gear countershaft and bearing, 1, through the rear of the transmission housing, and through the large counter gear, 2.

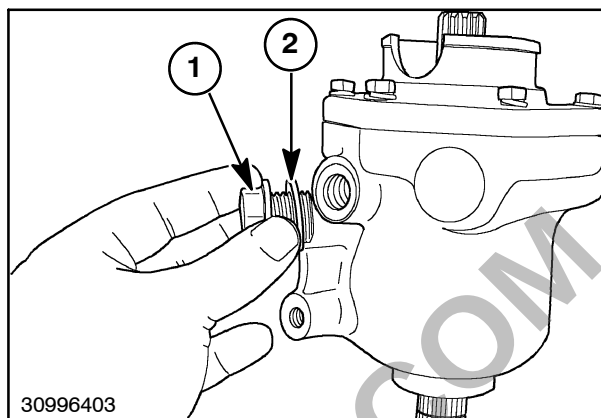


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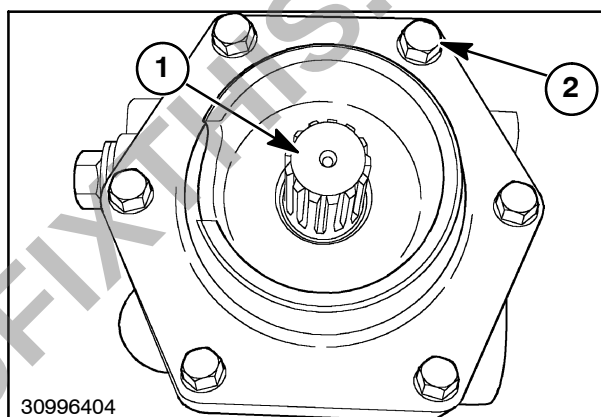
SENSITRACK DISASSEMBLY

1. Remove the drain plug, 1, and seal washer, 2, and drain the oil into a suitable container.



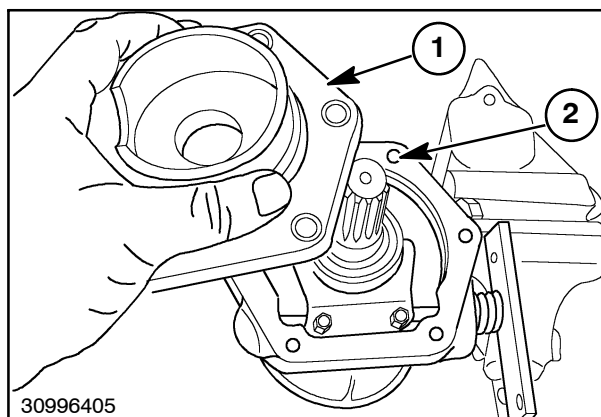
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2. Place the assembly in a vise with the input shaft, 1, facing up. Loosen and remove the cover bolts, 2.



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3. Remove the cover, 1, from the case, 2.

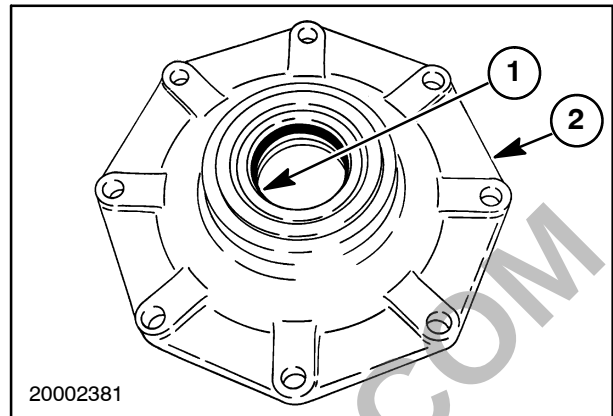


24

Op. 25 108

GEAR REDUCTION BOX ASSEMBLY

IMPORTANT: The oil seal, 1, is a cassette type seal and must be installed in the hub cover, 2, using the proper tools. If the proper tools are not used the seal may fail prematurely.



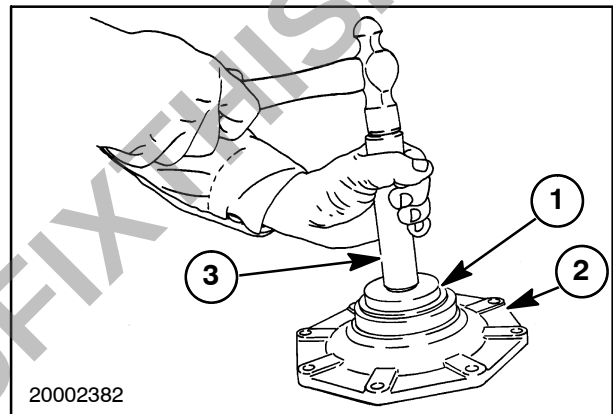
24

1. Lightly lubricate a new seal, 1, and install into the hub cover, 2, using the special tool, 3, No. NH00293.

NOTE: Seal driver set No. NH00293 includes different sizes of drive plates. For this application use the following:

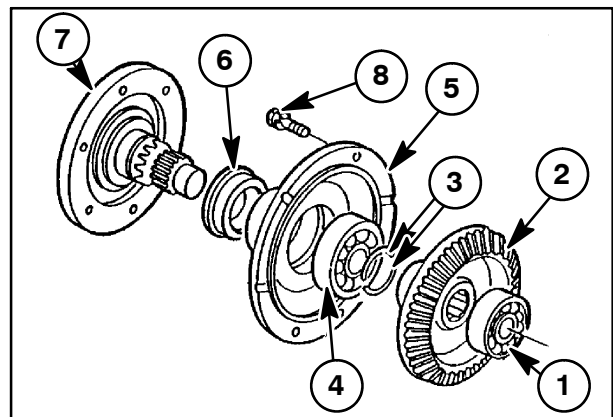
- NH27515 Drive Plate
- NH27530 Drive Plate
- NH27488 Handle

This procedure is the same for the Supersteer as well as the standard 4 WD axle.



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2. Position the wheel shaft outer bearing, 4, in the cover, 5.
3. Install the seal, 6, and the hub and shaft assembly, 7, in the cover, 5.
4. Position the two-piece locking ring, 3, in the shaft groove.
5. Install the bevel gear, 2, on the shaft, making certain that the bevel gear counterbore hub fits down fully over the locking ring, 3.
6. Install the inner bearing, 1, on the shaft.



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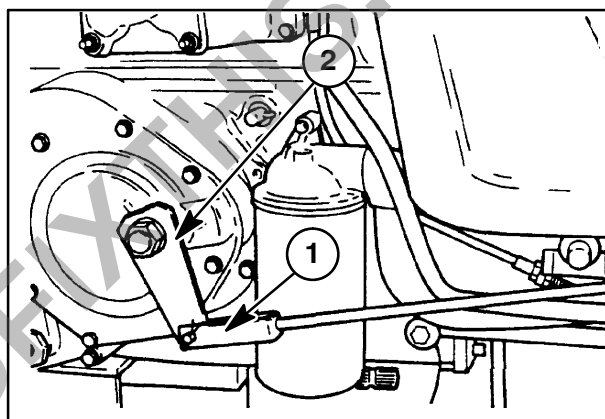
Op. 27 106

DIFFERENTIAL OVERHAUL

Removal

To remove the differential from the housing, the hydraulic PTO clutch, and shafts, must be removed first. To accomplish this the differential housing must be separated from the transmission, see Section 21 for separating the 12x12 transmission, and see Section 29 for separating the HST transmission. For removal of the PTO clutch and shafts, see "PTO", Section 31.

1. Remove the lower lift links from the rear axles.
2. Disconnect the brake control rods, 1, from the brake control levers, 2.



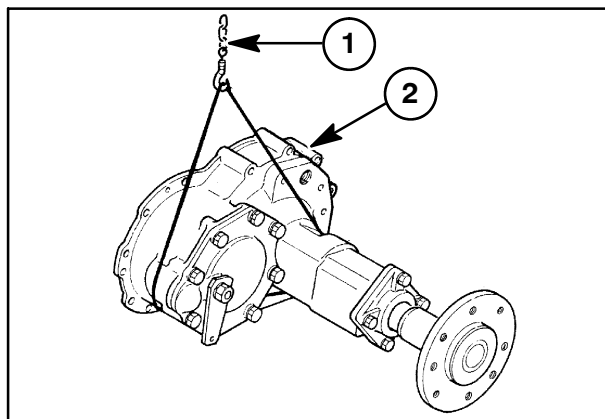
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3. Attach a suitable overhead lifting device, 1, to the rear axle assembly, 2, and remove the axle housing retaining bolts.

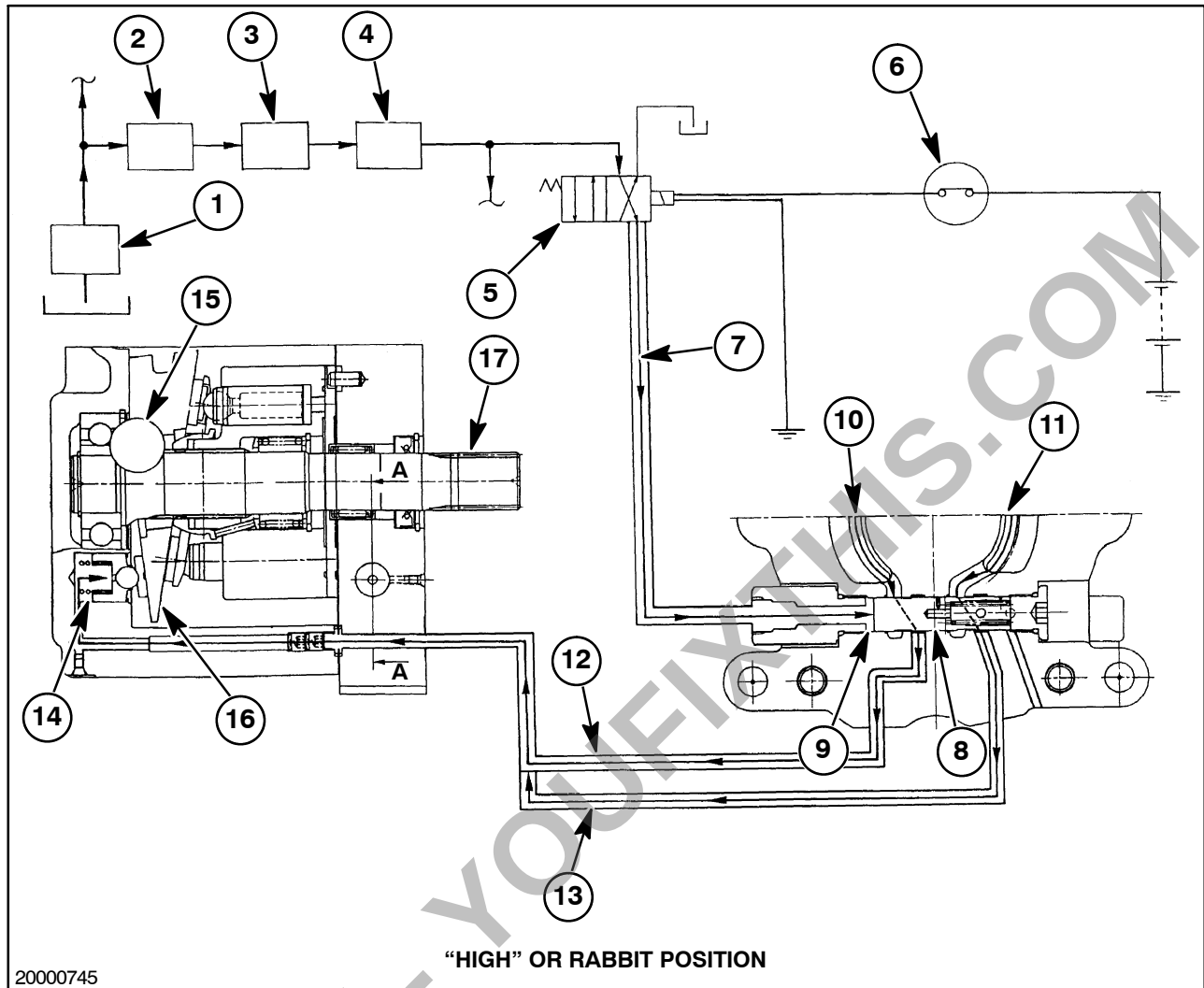
! WARNING !

The axle housing is difficult to balance. Use caution during removal to avoid personal injury.

1. Separate the axle assembly from the differential housing and use the lifting device to move the axle assembly out and away from the differential housing.
2. Repeat steps 6, 7, and 8 for the opposite side of the tractor.
3. Remove the hydraulic lift cover from the differential housing, see "Hydraulics", Section 8.



6



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- | | |
|--------------------------------|------------------------|
| 1. Hydraulic suction filter | 10. High pressure port |
| 2. HST charge pump | 11. High pressure port |
| 3. Oil cooler | 12. Cylinder passage |
| 4. HST oil filter | 13. Cylinder passage |
| 5. Solenoid valve | 14. Piston |
| 6. Hi/Low switch | 15. Steel pivot ball |
| 7. Charge pressure oil passage | 16. Swash plate |
| 8. Hi/Low spool | 17. Motor output shaft |
| 9. Spool port | |

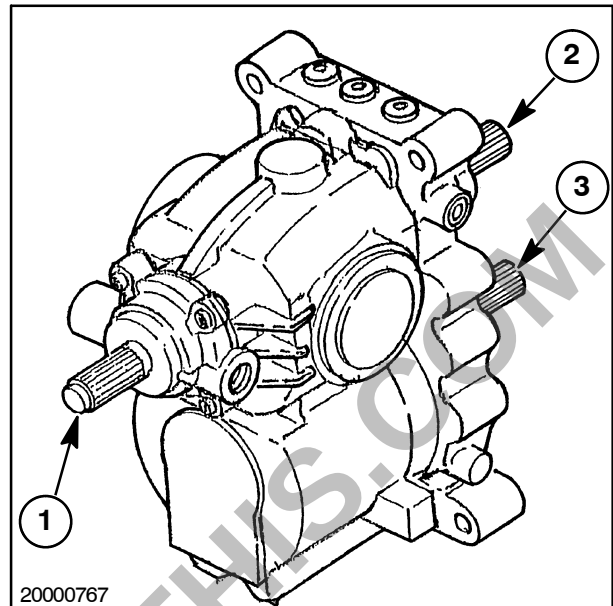
When the Hi/Low switch, 6, is moved to the high or rabbit position, electrical current is supplied to the solenoid valve, 5. With current supplied, the solenoid valve, 5, moves to the open position, routing the pressurized charge pump oil to the Hi/Low spool, 8.

The pressurized charge pump oil shifts the Hi/Low spool against the spool return spring, as the spool shifts, high pressure passages, 10 and 11 are connected to the cylinder passages, 12 and 13 allowing HST high pressure oil to be routed to the swash plate pistons, 14. The pistons exert pressure onto the backside of the swash plate, 16, and using the steel pivot balls, 15 as fulcrum the swash plate changes its angle of operation from 15° to 9° for high speed operation of motor output shaft, 17.

Op. 29 300

HYDROSTATIC TRANSMISSION GEARBOX**DESCRIPTION AND OPERATION**

The hydrostatic transmission unit used on the tractors has two output shafts, 2 and 3, to the transmission gearbox. One output shaft, 3, provides power to the transmission gearbox and drives the rear axle drive pinion. The other output shaft, 2, provides power to the transmission gearbox for PTO drive.



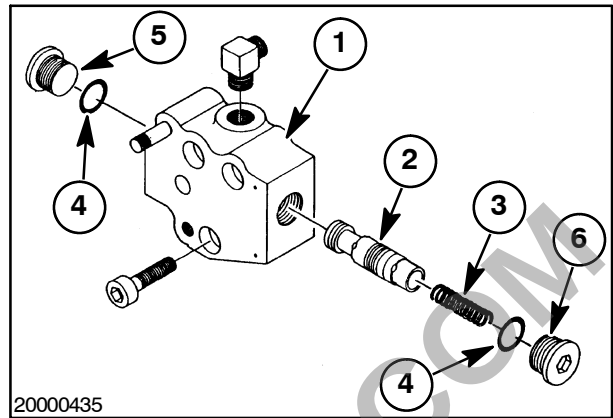
106

1. Input Shaft
2. Output Shaft for PTO
3. Output Shaft for rear axle drive pinion

2. Remove the diverter valve plugs, 5 and 6, with the O rings, 4.
3. Remove the diverter spool, 2, and spring, 3, from the valve body, 1.

Inspection

1. Clean and inspect the diverter valve spool and valve body bore for excess wear or score marks.
2. Inspect the spring for wear or damage.
3. Replace the PTO diverter valve as an assembly if found to be damaged.

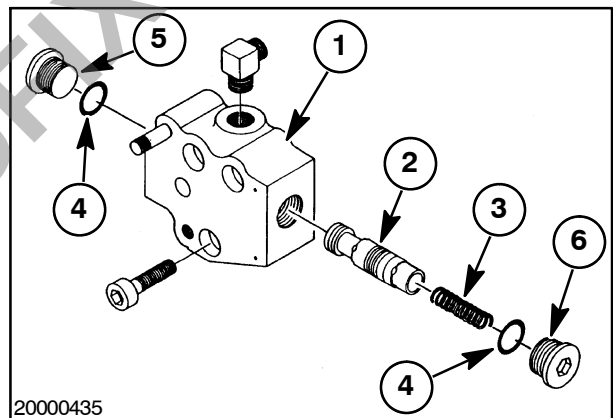


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1. PTO Diverter Valve Body
2. Valve Spool
3. Spring
4. O ring
5. Plug
6. Plug

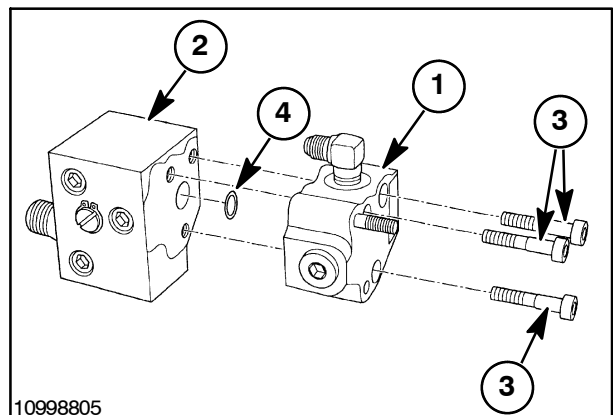
Assembly

1. Using a new O ring, 4, install plug, 5, in one end of the valve body, 1.
2. Install the spool, 2, and spring, 3, into the valve body.
3. Using a new O ring, 4, install plug, 6, into the open end of the diverter valve.



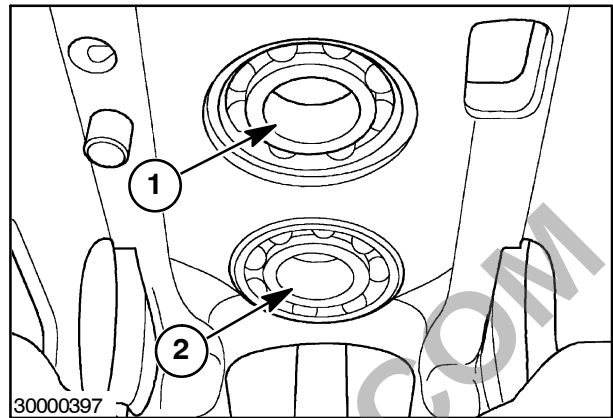
17

4. Using a new O ring, 4, between the PTO diverter valve body, 1, and the diverter/relief valve body, 2, secure the valves together using the three bolts, 3.



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6. Install the front PTO counter shaft bearing, 1, and the front PTO shaft bearing, 2, into the differential housing.



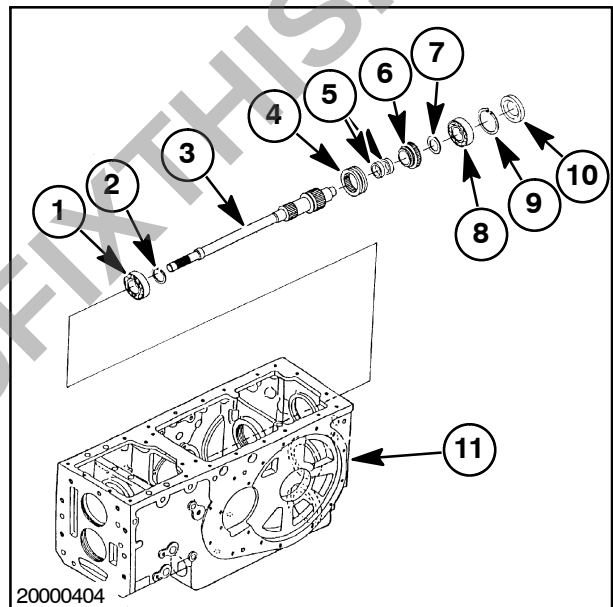
113

NOTE: When assembling the PTO countershaft, 3, the 21-tooth gear, 6, is installed onto the shaft so the small engaging teeth face forward when the shaft is installed into the differential housing.

7. Install the needle bearings, 5, onto the PTO countershaft, 3.
8. Install the 21-tooth gear, 6, onto the PTO countershaft, 3.

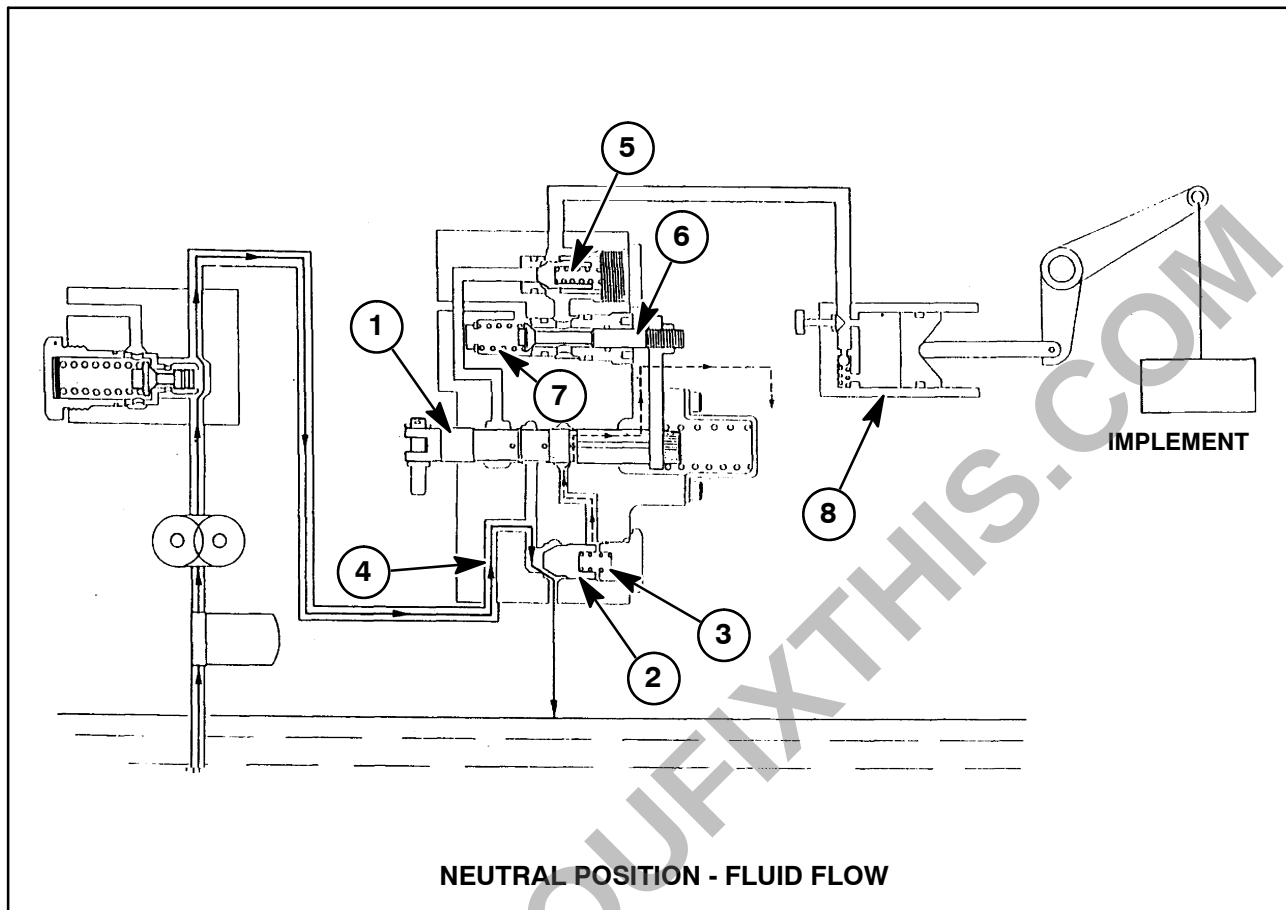
NOTE: When installing the thrust washer, be sure that the grooves in the washer are facing towards the 21-tooth gear.

9. Install the thrust washer, 7, onto the countershaft, 3.
10. Install the rear bearing, 8, onto the countershaft, 3.



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1. Front Bearing
2. Snap Ring
3. PTO Countershaft
4. Gear Coupler
5. Needle Bearing
6. 21-Tooth Gear
7. Thrust Washer
8. Rear Bearing
9. Snap Ring
10. Bearing Seal
11. Differential Housing



11

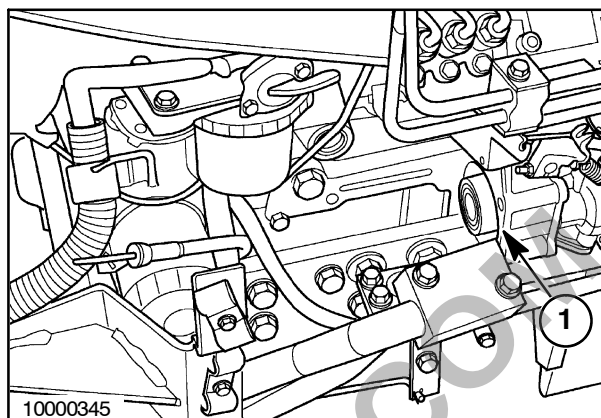
Op. 35 210**NEUTRAL POSITION - FLUID FLOW**

In the neutral position, the control valve spool, 1, is centered in the valve body. As fluid from the hydraulic pump is directed to the valve body, the fluid pressure moves the unload valve, 2, and compresses the spring, 3. This opens the passages, 4, to the sump. Fluid then flows from the pump to these passages and returns to the sump.

Fluid trapped in the lift cylinder, 8, under weight caused by the implement on the lift arms, exerts pressure on the cylinder side of the check valve, 5. This holds it in a closed position. The lowering valve spool, 6, positioned by the spring, 7, retains the fluid in the lift cylinder and maintains the implement in a fixed position.

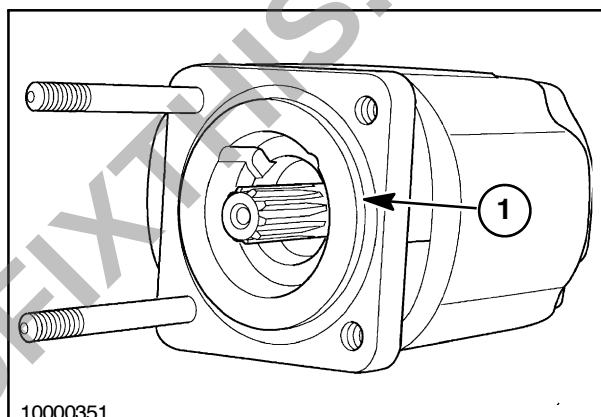
Installation

1. Scrape any remaining O ring sealant material from the pump mounting flange, 1. Apply a small amount of silicone sealer to the pump mounting flange.



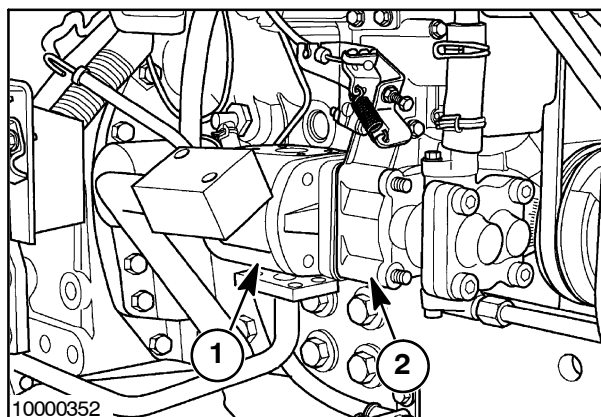
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2. Install a new O ring, 1, on the front cover of the hydraulic pump.

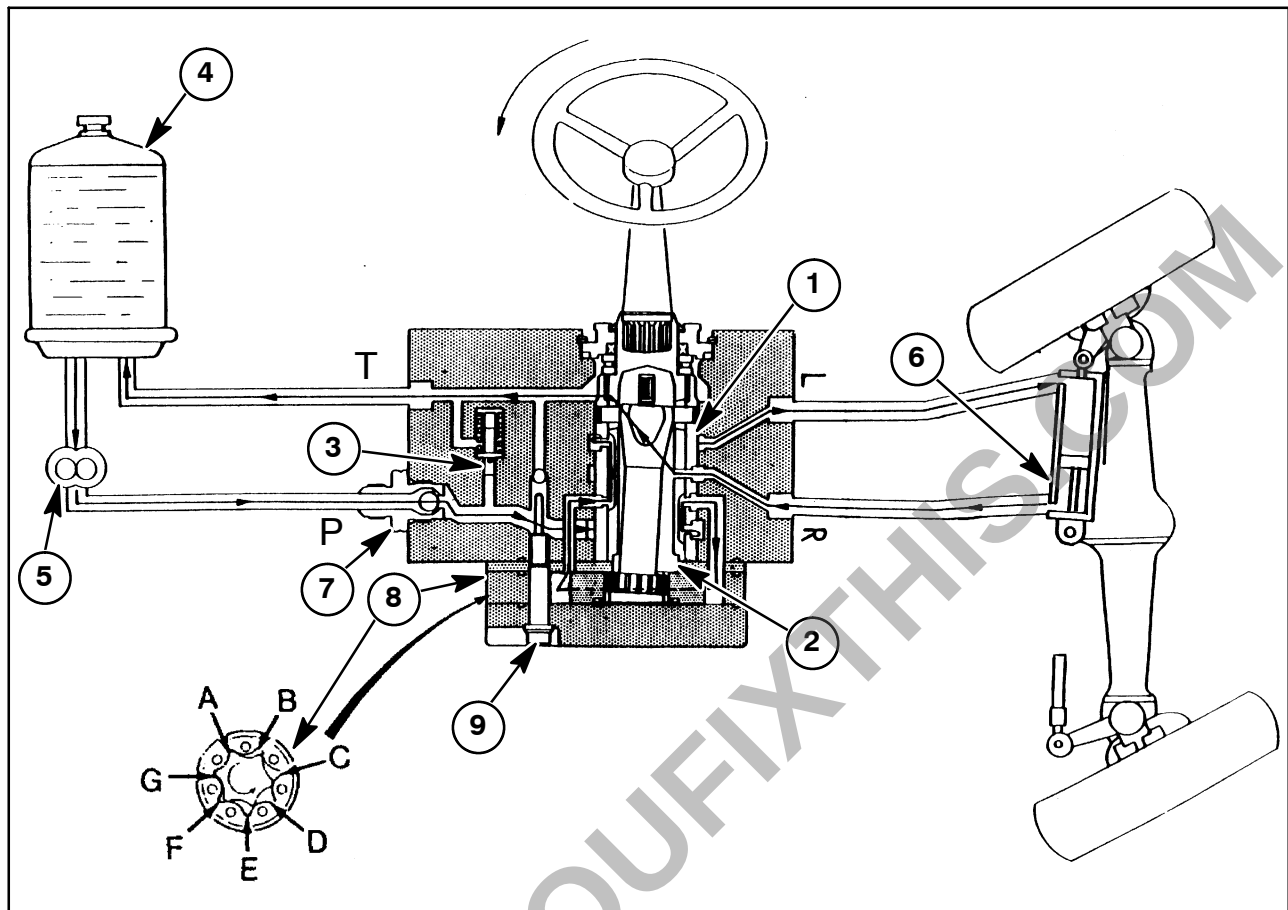


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3. Carefully install the pump, 1, onto the pump mounting flange, 2, and secure it with the four nuts and bolts.



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15

1. Sleeve
2. Spool
3. Relief Valve Assembly
4. Reservoir
5. P/S Pump

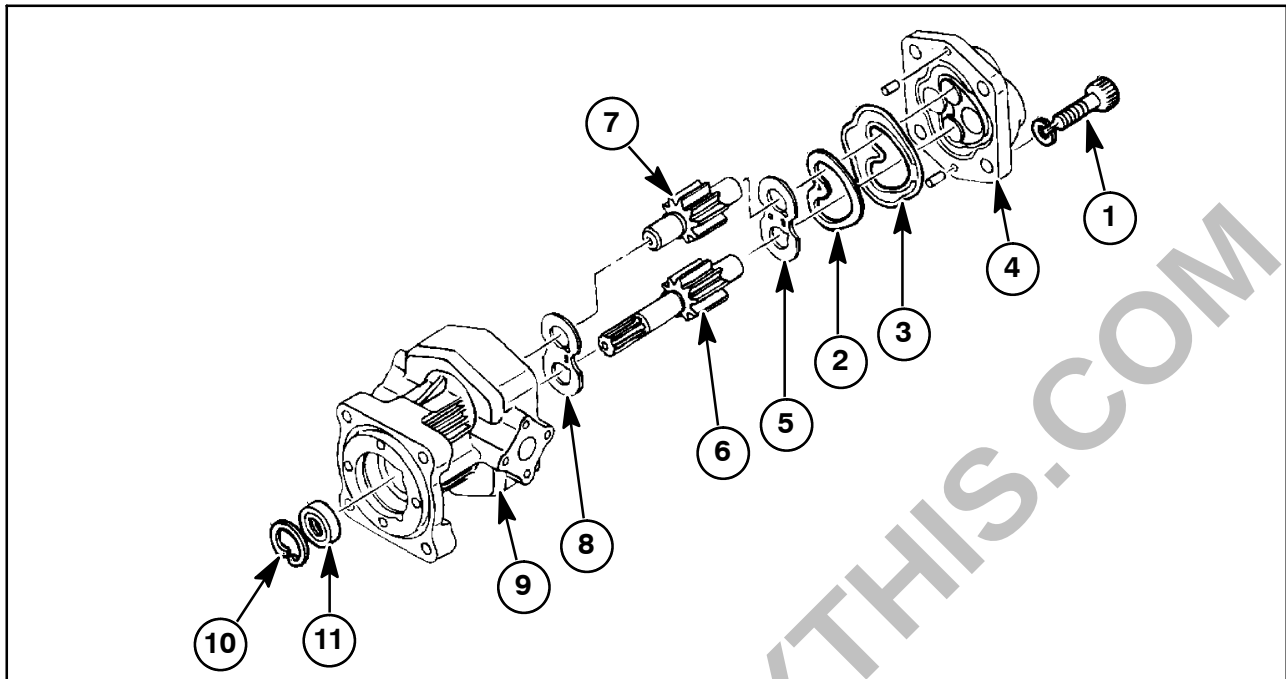
6. Cylinder
7. Check Valve Assembly
8. Gerotor Gear Pump
9. Kick Back Check Valve

Op. 41 200**FLUID FLOW-LEFT TURN**

Turning the steering wheel to the left rotates the valve spool and indexes grooves in the spool with holes in the sleeve allowing fluid flow to enter passages "F," "E," and "D" in the control valve gear pump. Because the gear pump is turning counterclockwise, the fluid

flows through passages "C," "B," and "A," to port "L" and to the power steering cylinder.

Fluid enters the cylinder barrel end of the cylinder and causes the front wheels to turn left. Fluid contained in the cylinder rod side returns to the control valve through port "R" and is directed back to the reservoir through port "T".



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DISASSEMBLY

1. Place the pump in a soft jawed vise with the drive shaft facing downward.
2. Scribe a line on the pump body for ease of orientation during assembly
3. Remove the four bolts, 1, securing the cover to the pump, and remove the cover, 4.
4. Remove the seal ring, 3, the back-up ring, 2, and the outer, wear plate, 5.
5. Remove the drive gear, 6, and the driven gear, 7, from the pump housing, 9.
6. Remove the inner, wear plate, 8, from the pump housing, 9.
7. Remove the snap ring, 10, and the shaft seal, 11, from the pump housing, 9.

INSPECTION AND REPAIR

1. Wash all parts in a clean solvent and air dry.
2. Discard all used O rings and seals, and use new during assembly.
3. Inspect all parts for damage or wear. If damaged or worn, replace the entire pump assembly.

ASSEMBLY

NOTE: Use the scribe marks made during disassembly to assemble the pump in its original orientation.

1. Install a new shaft seal, 11, and a new snap ring, 10, in the pump housing, 9.
2. Install a new inner, wear plate, 8, into the pump housing, 9.
3. Install the drive gear, 6, and the driven gear, 7, into the pump housing, 9.
4. Install a new back-up ring, 2, a new seal ring, 3, and a new outer, wear plate, 5.
5. Install the pump cover, 4, and secure with the four bolts, 1. Tighten and torque the bolts, 1, to 21 – 27 N·m (16 – 20 ft.-lb.).

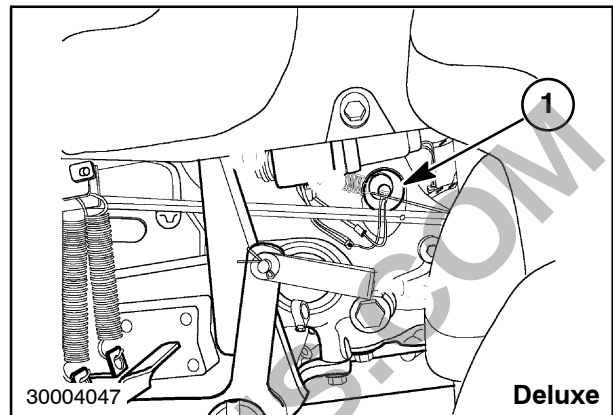
Op. 55 408

TRANSMISSION RANGE SAFETY SWITCH

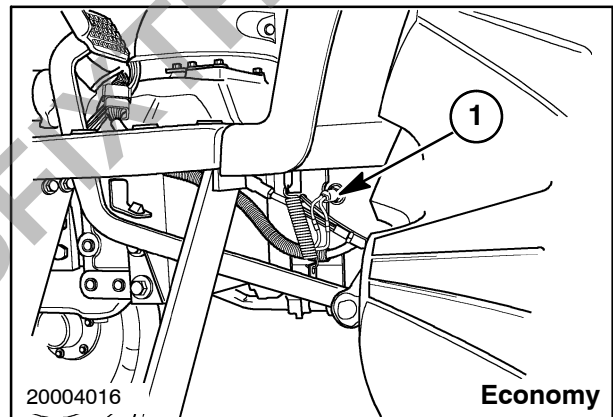
Description (Deluxe & Economy)

The transmission range safety switch, 1, is a single-pole, push-button type switch located underneath the left side operator's platform. When the transmission is in high or low range, the contacts in the switch are open, not allowing the tractor to start. When the transmission is in the neutral range position, the contacts in the switch are closed completing the circuit. This allows the tractor to start.

NOTE: The transmission range safety switch may be tested for continuity without removing the switch from the tractor, but it is recommended that the switch be removed for testing. Follow the same test procedure outline when the switch is removed from the tractor.



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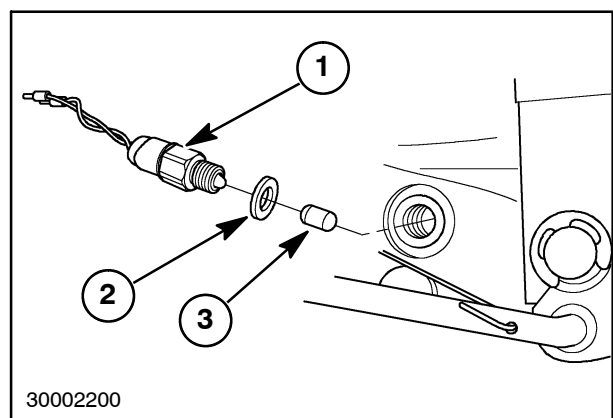
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Removal (Deluxe & Economy)

1. Raise the tractor engine cover.
2. Disconnect the negative (-) battery cable from the negative (-) battery terminal.
3. Disconnect the transmission range safety switch leads from the wiring harness.
4. Remove the transmission range safety switch, 1, with the rubber washer, 2, from the transmission case.

NOTE: The HST range shift rail, (Deluxe) and the 12 x 12 shuttle shift rail, (Economy), operate the transmission range safety switch. Grooves in the shift rails accept the balk pin, extending the plunger in the safety switch, when the range or shuttle control levers are in neutral. This completes the circuit, allowing the tractor to start.

5. Use a pencil magnet to remove the balk pin, 3, from the transmission range safety switch hole in the transmission case. Inspect the balk pin, 3, for damage.



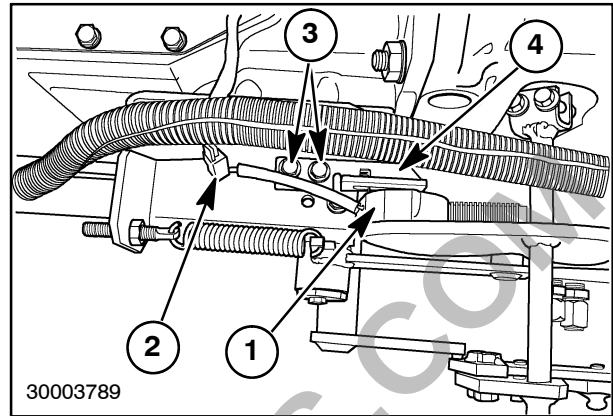
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CRUISE CONTROL MAGNET (DELUXE)**Description and Location**

The cruise control magnet, 1, is located under the right tractor fender and is attached to the hydrostatic transmission (HST) linkage. The cruise control magnet is a simple electromagnet. When the cruise control switch is activated, current is supplied to the cruise control magnet and the magnet locks the HST control linkage in place. This maintains a constant transmission speed, which translates to a constant tractor ground speed, forward or reverse.

Removal

1. Disconnect the negative (-) battery cable from the battery.
2. Disconnect the main wiring harness connector, 2, from the cruise control magnet, 1.
3. Remove the two bolts, 3, which secure the cruise control magnet mounting bracket, 4, to the transmission. Remove the magnet from the tractor.



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ENGINE GLOW PLUG CIRCUIT**DELUXE MODELS**

1. When the key switch is turned from the "OFF" position to the "ACC/RUN/HEAT" position, current flows from the positive (+) battery terminal, through the battery cable to the starter motor. Current then flows from the starter to the 40-amp main fuse.
2. Current is directed to a wire splice from the main fuse. The wire splice sends current to the "D" and "C" terminals of the key switch and to terminal 30 of the glow plug power relay.
 - Current will not flow through the "D" terminal of the key switch when the switch is in the "ACC/RUN/HEAT" position.
 - Current will flow through the "C" and "B" terminals of the key switch to the tractor bus bar. Current flows through the 7.5-amp fuse that protects the glow plug heat control circuit and to the 7.5 amp fuse that protects the instrument panel. Current flows to terminal

86 of the glow plug power relay and terminal 4 of the glow plug timer relay from the glow plug fuse. The glow plug timer relay will then energize, completing the ground circuit to energize the glow plug power relay. The glow plug timer relay will remain energized for approximately 4 seconds before cutting the ground to the glow plug power relay.

3. When the glow plug power relay is energized, current flows from terminal 30 through the power relay, and out through terminal 87. Current is sent to the glow plug bus bar from terminal 87, and then to the glow plugs. Current is also sent to terminal 1 of the glow plug indicator light relay. When current is supplied to terminal 1, the coil circuit of the glow plug indicator light relay is energized and the relay latches. This causes the glow plug indicator light to illuminate, as the circuit from the 7.5 amp instrument panel fuse to the indicator lamp and then to the ground terminal at the starter bolt is complete. When the glow plug timer relay stops supplying the ground to the glow plug power relay, the lamp goes out.

FUEL LEVEL CIRCUIT**DELUXE AND ECONOMY MODELS**

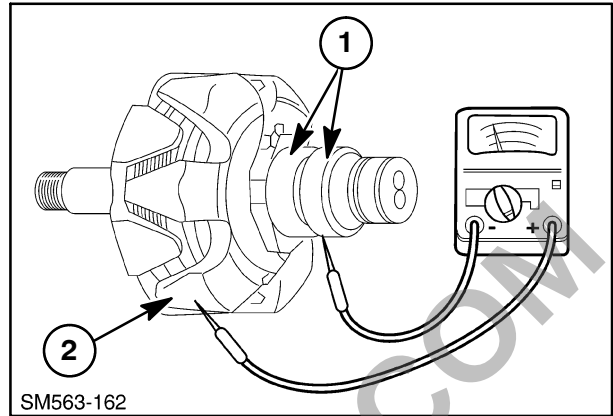
1. Current leaves the positive (+) terminal of the battery and flows to the battery (B) terminal of the starter. Current is directed from the battery terminal of the starter to the 40-amp main fuse. Current flows through the main fuse to a wiring splice. Current flows from the wiring splice to terminals "C" and "D" on the key switch. Current that is sent to the "D" terminal of the key switch is not utilized when the key switch is in the "ACC/RUN" position.
2. When the key switch is turned to the "ACC/RUN" position, current flows through the key switch from terminal "C" to terminal "B". From terminal "B", current flows to the 7.5-amp fuse that protects the instrument panel and lighting circuit.

Current is then directed to terminal 21 on the instrument panel and then to the positive (+) terminal of the fuel gauge. The ground path for the gauge exits the instrument panel at terminal 24 and is then directed to the ground terminal at the starter bolt.

3. The fuel level gauge is controlled by variable resistance to ground. The ground path exits the gauge and then out of the instrument panel through terminal 14. The ground path then goes to the fuel level sending unit. At the sending unit, the resistance to ground changes as the engine is consuming fuel or fuel is added to the fuel tank. The fuel gauge translates this resistance into movement of the gauge needle. The ground path then is directed out of the fuel sending unit to the ground terminal on the left side of the HPL housing.

NOTE: When testing the resistance between the brush contacts and rotor poles, be sure that the ohmmeter test probe touching the rotor pole is not insulated by paint.

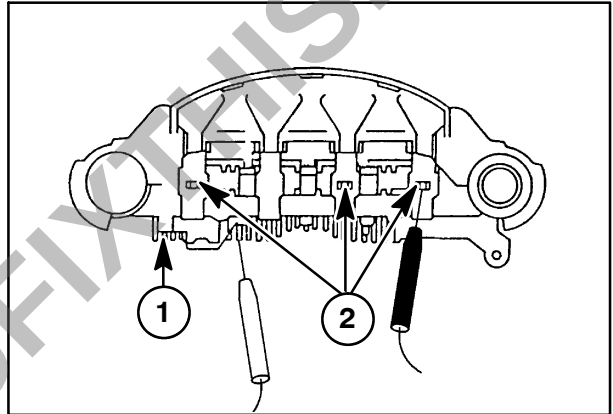
1. Using an ohmmeter, touch one ohmmeter test probe to one of the rotor brush contacts, 1, and the other test probe to one of the rotor poles, 2.
2. Observe the ohmmeter. Resistance should be high, indicating no continuity between the rotor poles and brush contacts. If there is continuity, the rotor is defective and needs replaced.



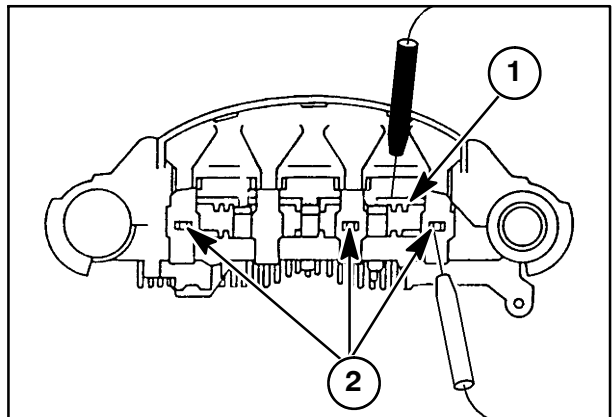
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Rectifier Assembly

1. Using an ohmmeter, touch the positive (+) test probe to the positive (+) portion of the diode plate, 1, and the negative (-) test probe to the other test probe to a stator coil lead connection terminals, 2.
2. Observe the ohmmeter for continuity.
3. Now switch the positions of the test probes and observe the ohmmeter for continuity. The ohmmeter should indicate continuity in one direction only. If there is continuity in both directions or no continuity at all, the rectifier assembly is defective and needs replaced.
4. Using the same procedure described in the three previous steps, test the diodes between the negative (-) portion of the diode plate, 1, and the stator lead connections, 2. Again, replace the rectifier assembly if the diodes test defective.



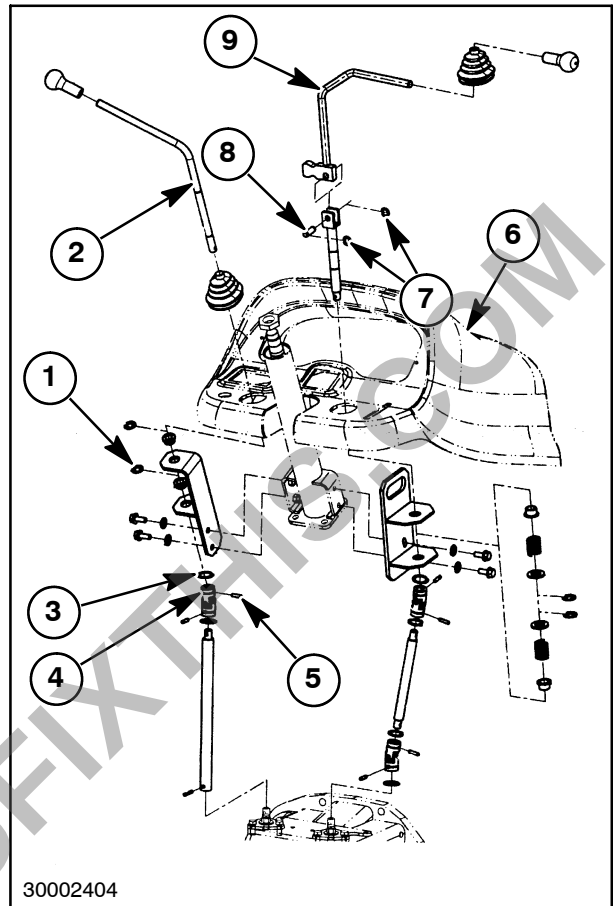
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NOTE: Step 7 applies to the TC35, TC40, and TC45 tractors equipped with the 12x12 transmission only.

7. Remove the E-clip, 1, from the shuttle gear lever, 2. Remove the retaining ring, 3, from the knuckle, 4. Drive the pin, 5, from the knuckle, 4. Remove the shuttle gear lever, 2, from the dash console, 6. Remove the E-clips, 7, from the clevis pin, 8, on the main gear lever, 9. Remove the clevis pin, 8, and pull the main gear lever, 9, out of the dash console, 6.
8. Loosen and remove the six retaining bolts securing the dash console to the firewall.
9. Remove the dash console.



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Installation

1. Position the dash console on the firewall, aligning the mounting holes.
2. Install the six retaining bolts through the firewall and into the dash console. Install the fuse panel and secure with two nuts.
3. Tighten the six retaining bolts.

NOTE: Step 4 applies to the TC35, TC40, and TC45 tractors equipped with the 12x12 transmission only.

4. Install the main gear lever, 9, through the dash console, 6, and connect to the main shift shaft. Secure the main gear lever to the main shift shaft with the clevis pin, 8, and the E-clips, 7. Install the shuttle gear lever, 2, through the dash console, 6, and connect to the knuckle, 4, on the shuttle shift shaft. Drive the pin, 5, through the knuckle, 4, and the shuttle gear lever, 2.

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