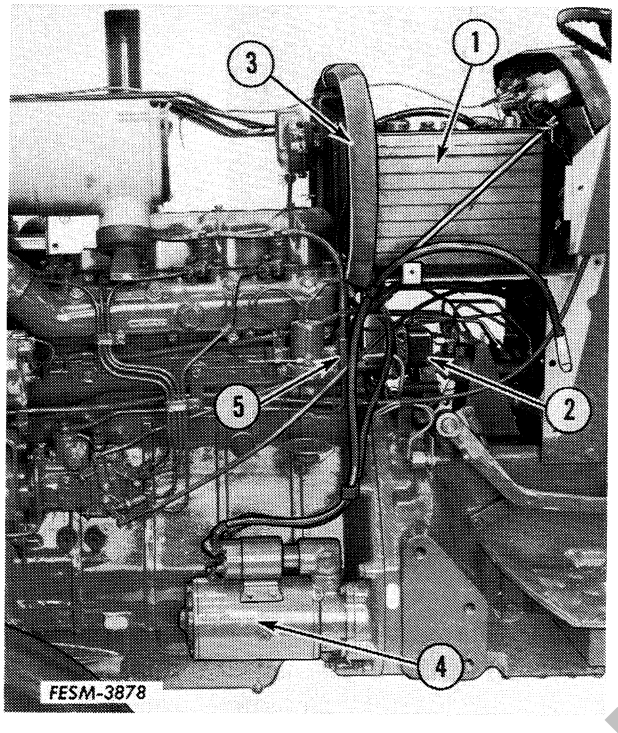
FRONT SECTION SPLIT



1. Battery
2. Voltage regulator (if equipped)
3. Firewall
4. Cranking motor
5. Fuel "T"

NOTE: 54, 64 and 74 Series tractors equipped with a loader and/or ROPS, remove them first.

NOTE: 84 Series tractors equipped with a loader and/or ROPS, remove the loader.

1. Shut off the fuel supply at the fuel tank.

2. Remove the muffler (vertical) or disconnect at the exhaust manifold (underslung). Remove the hood assembly and the rear side panels.

3. Disconnect and remove the battery.

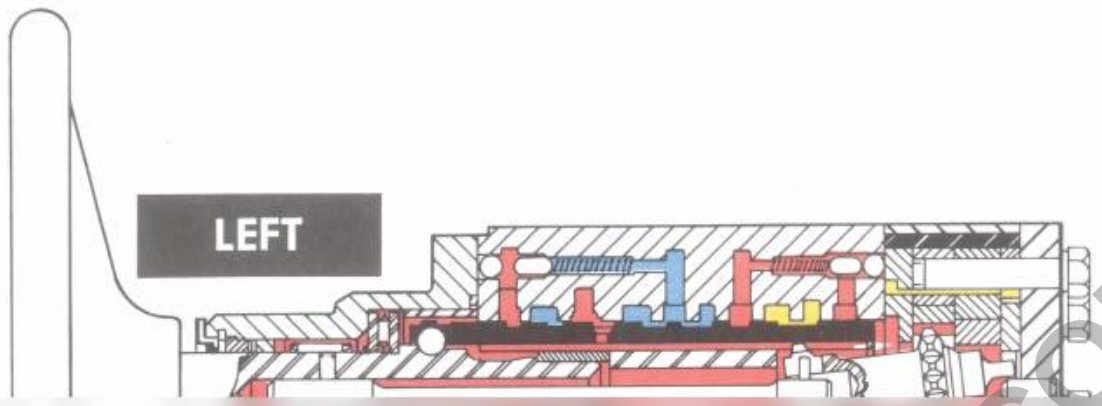
4. Disconnect the tachometer cable from the tachometer and move it forward.

5. Diesel Only: Disconnect the fuel inlet line at the fuel filter. Disconnect the fuel return line at the "T" located at the rear LH side of the crankcase. Plug and cap the lines. Disconnect the fuel shut off cable at the injection pump.

Gas Only: Disconnect the fuel line at the fuel pump on the left side of the engine.

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11	REAR AXLE, HOUSING, AND WHEELS
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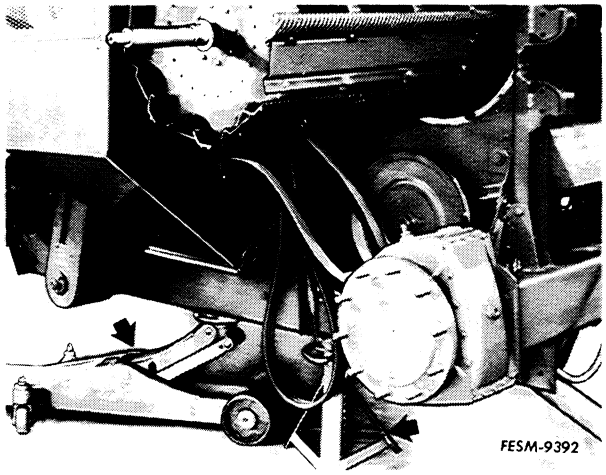
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WORK SAFELY – FOLLOW THESE RULES

This symbol is used to call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.

1. To prevent injury, do not allow children or by-standers around the machine while it is being adjusted and/or serviced.


FESM-9392

2. Always use safety stands in conjunction with hydraulic jacks or hoists. Do not rely on the jack or hoist to carry the load, they could fail.

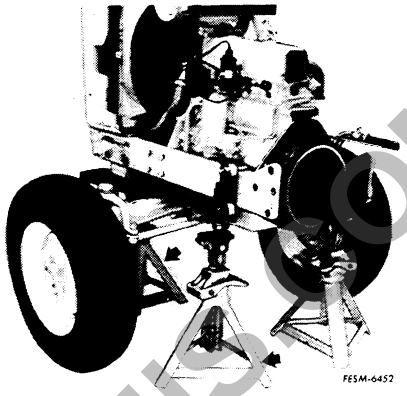
3. Articulated Tractors – Always use the frame lock pin when servicing the tractor in the area of the hinged or pivot point of the frame. The lock pin must be in place when making adjustments with the engine running. The lock pin prevents accidental pivoting of the frame. Always remove the lock pin and store correctly before attempting to steer the tractor.

4. Always wear safety glasses when using a hammer, chisel or other tools that may cause chips to fly.

5. Keep work area organized and clean. Wipe up oil or spills of any kind. Keep tools and parts off of the floor. Eliminate the possibility of a fall which could result in a serious injury.

6. Be sure to reinstall safety devices, guards or shields after adjusting and/or servicing the machine. Also, replace missing or damaged safety and/or instruction decals.

7. After servicing, be sure all tools, parts, or servicing equipment are removed from the machine.


FESM-6452

8. When splitting tractors, or disassembling machines, be sure to use safety stands and adequate supports to prevent tipping or rollover.


FESM-9718

9. Use a safety catch on all hoist hooks. Do not take a chance, the load could slip off of the hook.

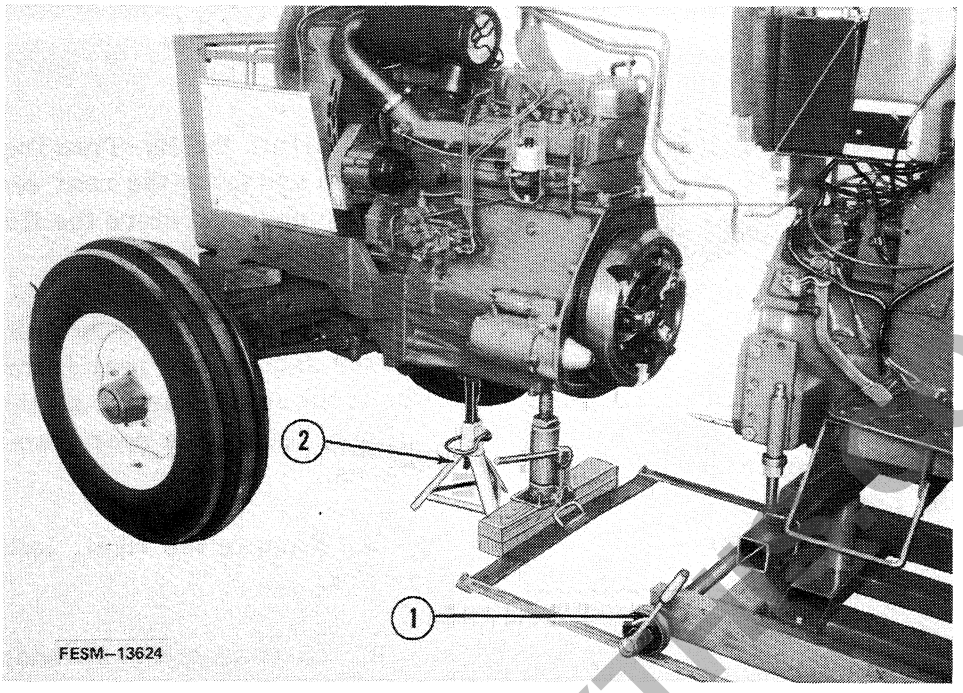


FESM-9719

10. When using an acetylene torch always wear welding goggles and gloves. Keep a "charged" fire extinguisher within reach. Be sure the acetylene and oxygen tanks are separated by a metal shield and are chained to the cart. Do not weld or heat areas near fuel tanks or fuel lines and utilize proper shielding around hydraulic lines.

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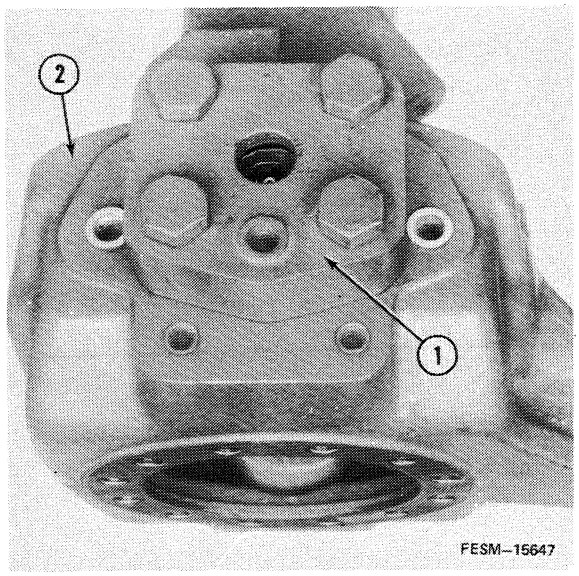
1. 1/2 inch ratchet wrench
2. Safety stand

16. Remove the remaining capscrews attaching the engine to the center section housing. Using a 1/2 inch ratchet wrench roll the rear section away from the front section.

17. Position a safety stand under the engine assembly.

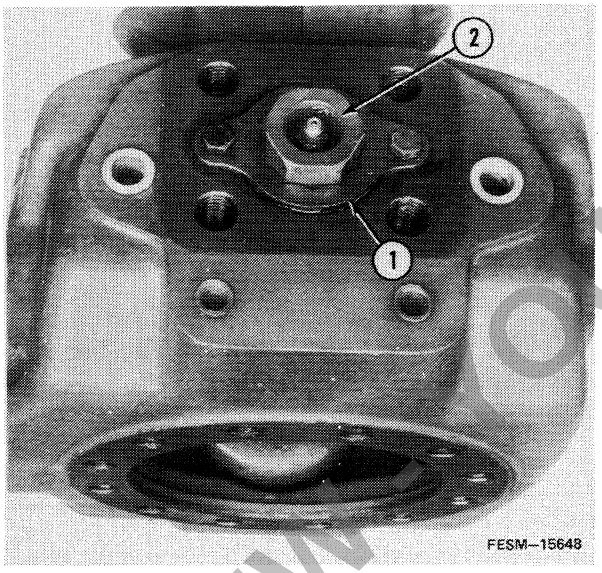
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8. Remove the king pin caps.

1. Upper king pin cap
2. Axle knuckle

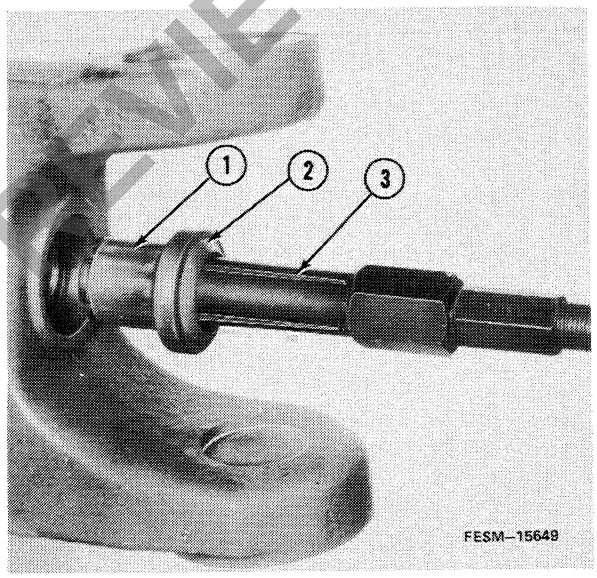


9. Remove the king pin lock plates and king pins.

1. Upper king pin lock plates
2. Upper king pin

10. Lift out the dust seal, O-ring and bearings from the axle knuckle.

11. Remove the axle knuckle.

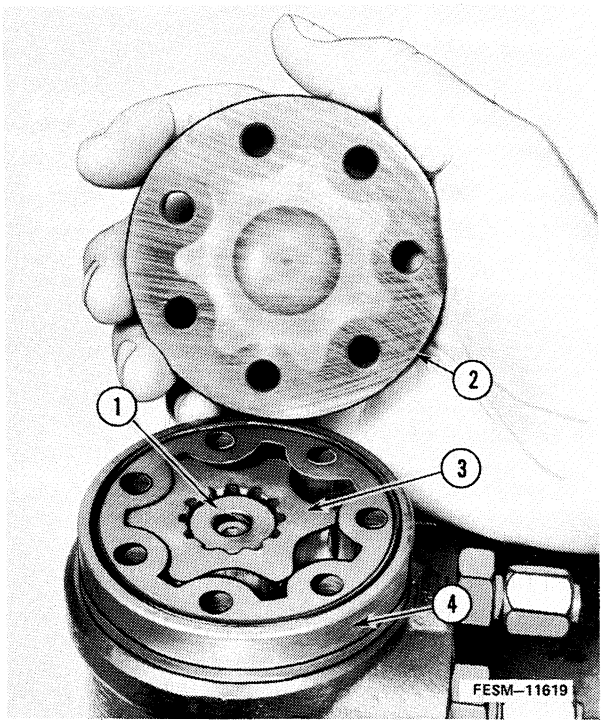


12. Remove the axle bushing and oil seal using 02-583-5 Blind Hole Puller.

1. Bushing
2. Oil seal
3. 02-583-5 Blind Hole Puller

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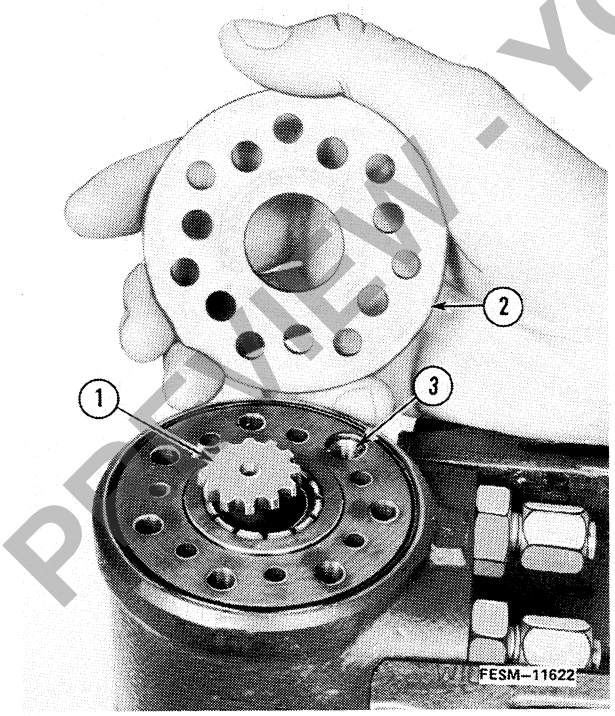
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1. Wear washer
2. End plate
3. Rotor
4. Rotor plate

2. Remove the end plate, wear washer, rotor plate and rotor.

NOTE: The wear washer and rotor may adhere to the end plate by a film of oil. Avoid scratching or nicking the finished surface of the end plate.



3. Remove the distributor plate and drive shaft.

4. Remove the check ball retaining screw from the pump housing and remove the check ball.

1. Drive shaft
2. Distributor plate
3. Threaded bushing

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Section 6

ELECTRICAL

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Complete Overhaul and Testing information is covered in GSS-1052-C.

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Cleaning, Inspection and Repair

Servo Cylinder

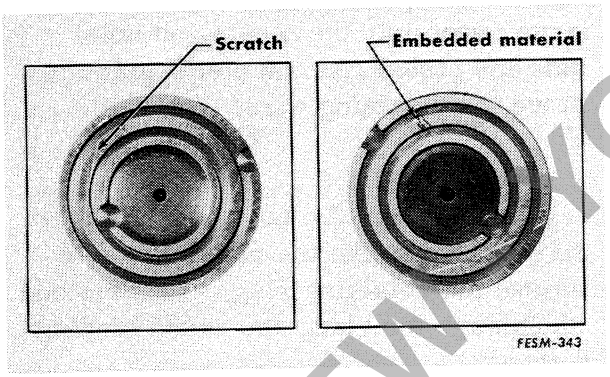
Wash all parts in clean diesel fuel and oil liberally with Hy-Tran.

1. Check the cylinder bore for scoring.

2. Check the teflon seals for wear and deep scratches and replace as necessary.

Pump and Motor

Careful handling and cleanliness of the various components of the hydrostatic transmission is very important. Components such as slippers, thrust plates, cylinder block surfaces, center section surfaces and the valve and bearing plates must all be free of all scratches, nicks and foreign material.



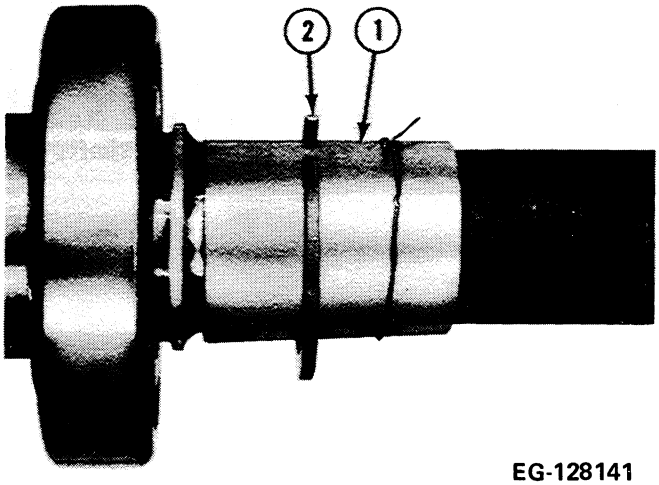
These surfaces also seal and hold high pressure by merely having two highly finished surfaces held together by high pressure. These surfaces also operate on a film of oil and the pressure being developed furnishes high pressure lubrication.

1. Carefully inspect each piston for scoring, wear or scratches. The condition shown does not affect the operation of the hydrostatic transmission.

2. Check the slippers for severe scratches or embedded material.

NOTE: If the slippers are severely scratched or have material embedded in them, they may be lapped. If lapping does not clean them up, replace the pistons. Also replace any piston with slippers having end play.

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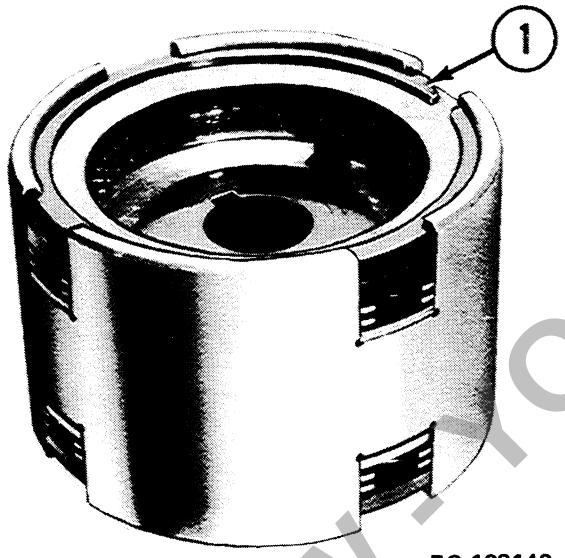


EG-128141

Illust. 9-55

4. If it is necessary to remove the drive shaft bearing snap ring, protect the sealing rings and grooves with .005 inch shim stock so as not to damage the rings or grooves.

1. Shim stock 2. Snap ring	



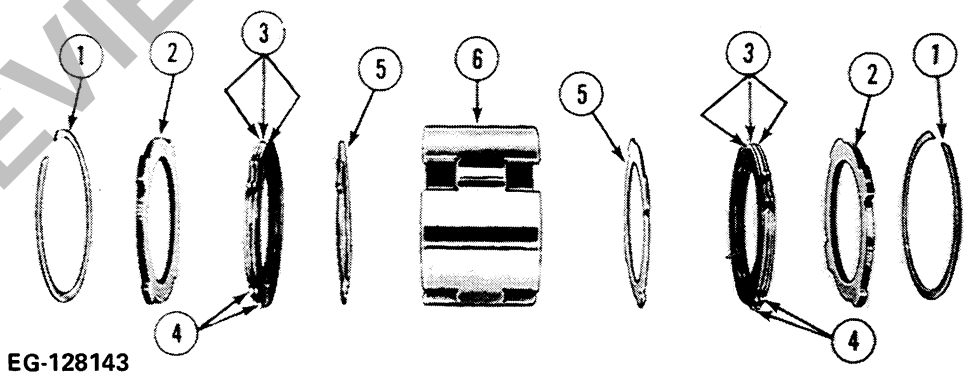
EG-128142

Illust. 9-56

5. Remove the internal snap ring at each end of the clutch cup assembly. Remove the backing plates, driven discs, driven plates and piston return plate from each side of the clutch cup.

1. Snap ring	

6. Remove the bolts and nuts securing the clutch pistons to the clutch cup assembly. Remove both pistons with sealing rings and spacers. Refer to the Illust. 9-59.



EG-128143

Illust. 9-57

1. Snap ring	4. Clutch driven plate (6)
2. Clutch backing plate	5. Piston return plate
3. Clutch driven disc (8)	6. Clutch drive assembly

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FOLDOUT 6 Lowering Circuit

FOLDOUT 12 POWER TRAIN-HYDRAULIC REVERSER EARLY PRODUCTION

FOLDOUT 13 POWER TRAIN-HYDRUALIC REVERSER LATE PRODUCTION

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1. Thrust washer
2. Spacer
3. Planet gear
4. Needle bearing
5. Planetary housing
6. Shim
7. Snap ring
8. Locknuts
9. Ring carrier
10. Ring gear
11. Snap ring
12. Lock plate
13. Sun gear
14. Stop plug
15. Pinion shaft
16. Snap ring
17. Dust plug
18. Bearing
19. Retainer
20. Oil seal
21. Wheel hub
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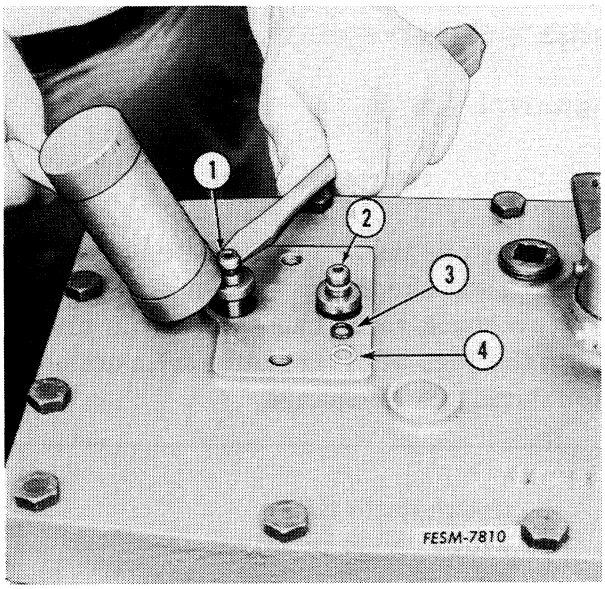
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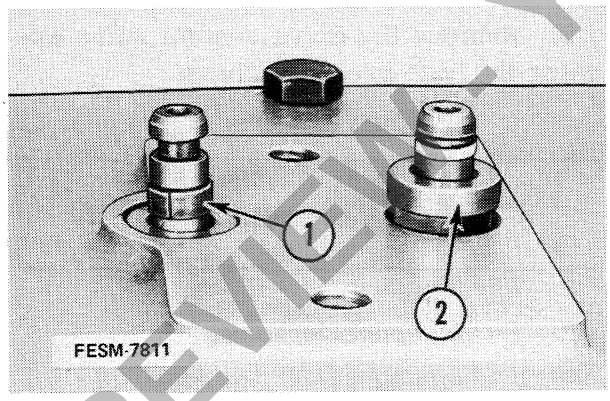
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1. Reverse high pressure line
2. Forward high pressure line
3. O-ring
4. Back up ring

3. Remove the teflon back-up rings and the O-rings from the high pressure lines. Support the high pressure line with a screwdriver and tap down the tube locks so they can be freed for removal.



1. Tube locks
2. Tube lock retainers

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a. If servo pressure is now satisfactory, check the original valve for dirt on the seat which may be holding the valve open.

b. If pressure is still low remove the test relief valve and fit the original. Proceed to Test 2.

Test 2

Check charge flow. Refer to page 9-**125**.

1. If the flow is correct to specifications, proceed to Test 3.

2. If the flow is low check the following:

a. The oil level with the engine running at 1600 rpm after 3 minutes.

b. The suction filter, by-pass valve, and filter check valve.

c. Remove the top cover and examine the teflon ring in the charge pump body. If faulty replace and retest.

d. Charge pump for wear or damage.

e. For leaks around O-rings and gaskets on the suction line.

Test 3

Remove the top cover and examine the servo pipes for leakage. If satisfactory dismantle the pump and motor servos and examine the piston seals for signs of leakage.

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CLEAN–UP PROCEDURE AFTER MAJOR OVERHAUL

Power Train and Hydraulic System

General Information

Tractors which have had failures resulting from the transmission (gear or hydrostatic), final drives, TA and IPTO should be suspected of having contamination throughout the system. It is essential that the rear frame, clutch housing and/or hydraulic system be thoroughly cleaned to insure proper operation and longer life.

Rear Frame and Clutch Housing

The following procedure should be done when the tractor is torn down for repairs:

1. All internal areas of the rear frame, clutch housing and drive train should be scrubbed and flushed with clean solvent if the rear frame is completely stripped down.

2. If the unit is only partially disassembled the inside of the rear frame and clutch housing must be steam cleaned.

3. On tractors equipped with TA where extreme contamination is present, the sprag clutch should be disassembled and washed in clean solvent.



CAUTION! When removing the excess solvent from the components with compressed air, eye protectors should be worn.

Hydrostatic Transmission

If there has been a failure of the hydrostatic transmission the following additional steps are required to remove the contamination from the entire system.

1. Remove the multiple control valve (MCV), center section and multi-valve. Then disassemble and thoroughly clean all components.

2. Disconnect the supply tube from the brake control valve and the MCV. Then depress the pedals to flush out the orifice.

3. Using compressed air clean out the supply tube.

4. Remove the oil cooler and back flush the cooler with solvent and compressed air. Shake the cooler during the cleaning procedure.

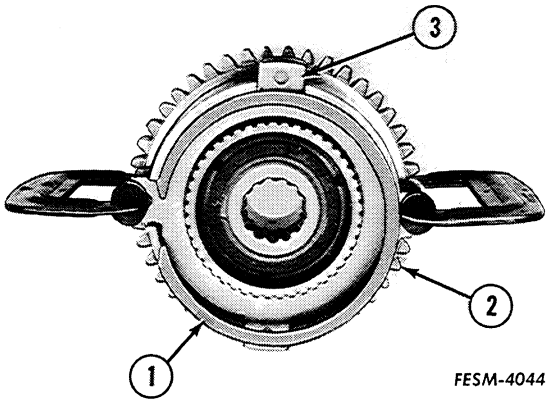
5. Flush the oil cooler lines by reversing them at the multi-valve to back flush the cooler during the hydraulic system clean-up procedure.

6. Remove and clean the screen in the recirculating line in the bottom of the drive housing.

7. After the tractor has been reassembled, the hydraulic system should then be filled with new Hy-Tran fluid and a new hydraulic filter installed.

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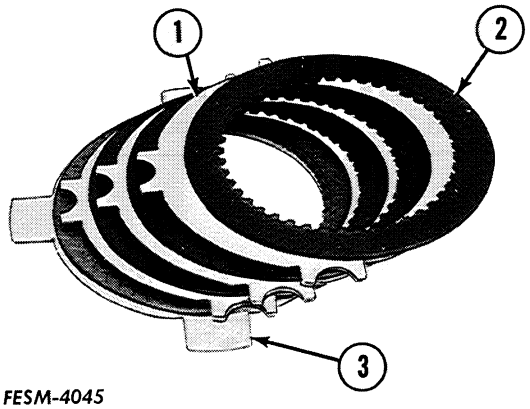
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FESM-4044

6. Using a pair of "C" clamps compress the four piston return springs, and remove snap ring from the clutch cup gear, along with clutch backing plate assembly, with piston return springs.

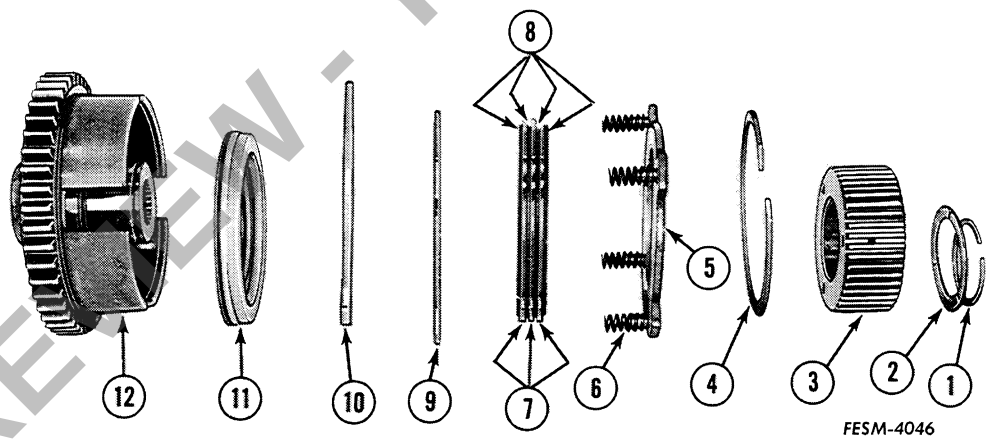
1. Snap ring
2. Clutch cup gear
3. Backing plate



FESM-4045

7. Remove the clutch discs and clutch driven plates. (There are two clutch driven plates between each clutch driven disc). Remove the piston return plate and brake ring.

1. Driven plate
2. Clutch disc
3. Piston return plate

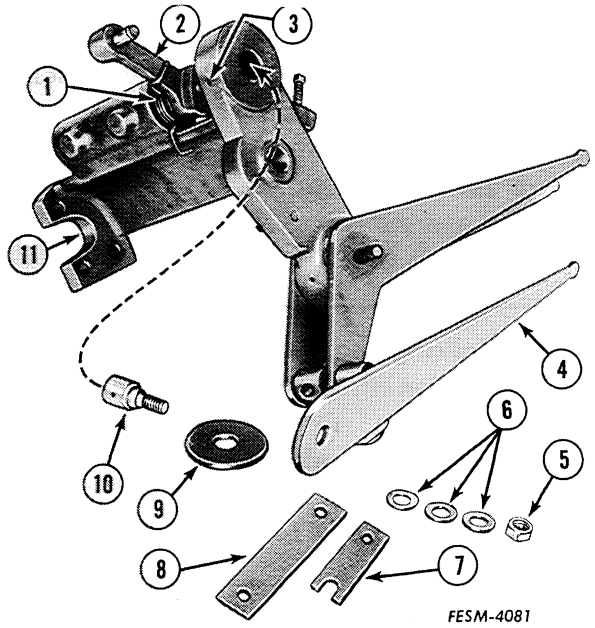


FESM-4046

Tractor serial number below U100001

1. Snap ring
2. Thrust washer
3. Hub assembly
4. Snap ring
5. Backing plate assembly
6. Return springs (4)
7. Driven plates (6)
8. Clutch disc (4)
9. Piston return plate
10. Brake ring
11. Piston with ID & OD sealing rings
12. Clutch cup gear

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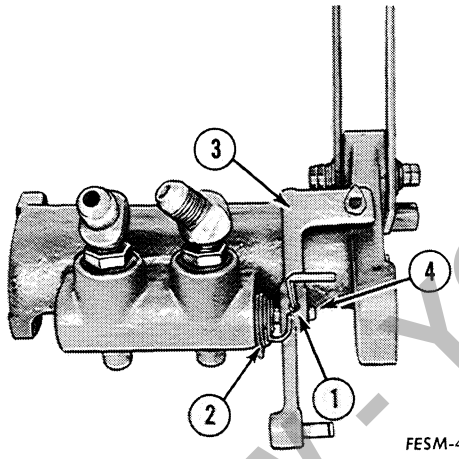


FESM-4081

(e) Remove the flow control adjusting lever assembly and friction disc.

(f) Remove the roll pin and pivot bolt from the support assembly.

1. Return spring
2. Flow control arm assembly
3. Roll pin hole
4. Flow control adjusting lever assembly
5. Nut
6. Belleville washers
7. Inner retaining plate
8. Outer retaining plate
9. Friction disc
10. Flow control pivot bolt
11. Support assembly

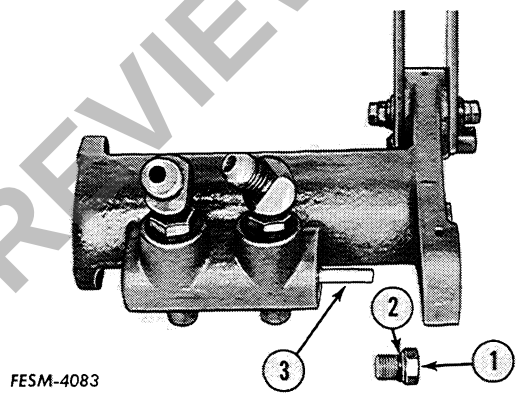


FESM-4082

(g) Remove the allen set screw securing the flow control arm assembly to the spool with return spring.

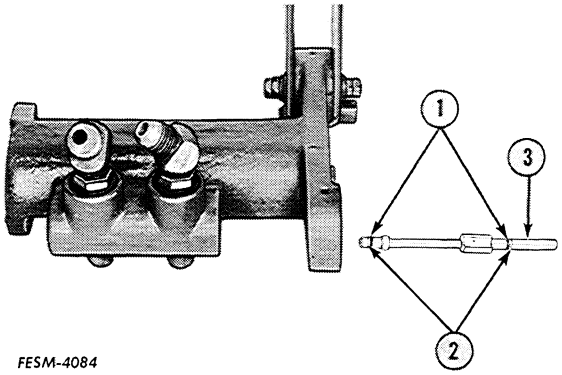
1. Allen set screw
2. Return spring
3. Flow control arm assembly
4. Spool

(h) Remove the variable flow control valve plug with O-ring from the spool. Remove the spool with O-rings and back-up washers.



FESM-4083

1. Variable flow control valve plug
2. O-ring
3. Spool



FESM-4084

1. O-rings
2. Back-up washers
3. Spool

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