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International Cub Cadet Tractors Models 582, 582 Special, 682,782 and 982 Chassis & IH Equipment

Service Manual

GSS-1497

Reprinted

CASE IH

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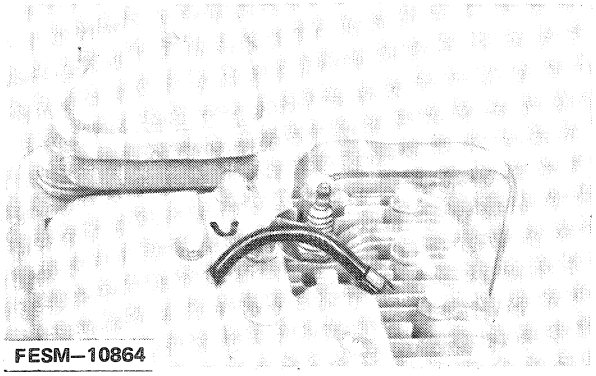
3 IH EQUIPMENT

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WORK SAFELY – FOLLOW THESE RULES

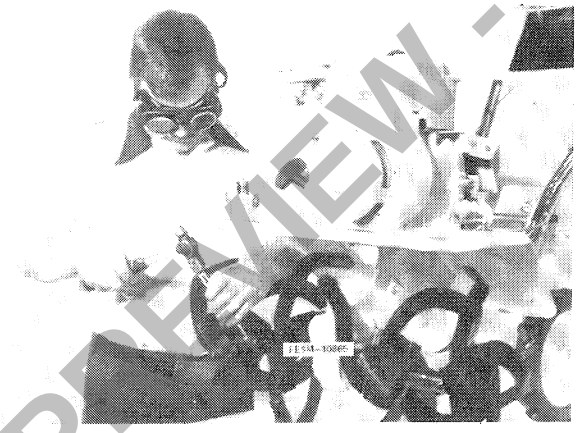
This symbol is used to call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.


FESM–10864

1. To prevent accidental starting, always pull the high tension wire(s) off of the spark plug(s) before servicing and/or adjusting the machine.

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

3. Do not wear rings, wrist watches or loose fitting clothing when working on machinery, they could catch on moving parts causing serious injury. Wear sturdy, rough-soled work shoes. Never adjust and/or service a machine in bare feet, sandals or sneakers.



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

5. Be sure to reinstall safety devices, guards or shields after adjusting and/or servicing the machine.

6. When operating a power washer to clean a machine before servicing, be careful at all times to avoid injury. Maintain proper footing and balance at all times. Never direct the spray at people or animals, as high pressure spray can cause serious injury.

7. If a portable heater is used to heat the service area the following precautions must be observed:

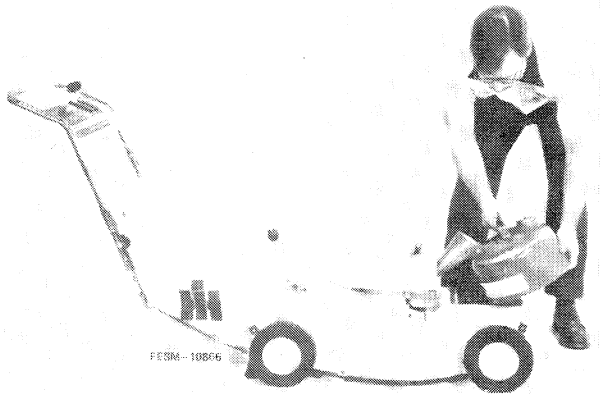
(a) Do not use portable heaters in presence of volatile materials such as gasoline or paint, as fire or explosion may result.

(b) To avoid being burned, do not touch the heater during operation.

(c) Portable heaters consume oxygen and combustion fumes can be hazardous. Heater should be used only in a well ventilated area. Keep a window or door partially open to provide ventilation.

(d) Keep the heater at least four (4) feet from combustible materials.

(e) Never use gasoline as fuel.


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8. Handle gasoline with care - it is highly flammable:

(a) Use approved gasoline container.

(b) Never remove the fuel tank cap or fill the fuel tank when the engine is running, is hot, or indoors. Also, do not smoke when working around flammable fuel.

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Section 2

CHASSIS

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STANDARD TORQUE DATA FOR NUTS AND BOLTS— FOOT POUNDS

Recommended torque for all Standard Application Nuts and Bolts, provided:

A. All thread surfaces are clean and lubricated with SAE-30 engine oil. (See NOTE.)

B. Joints are rigid, that is, no gaskets or compressible materials are used.

C. When reusing nuts or bolts use minimum torque values.

NOTE: Multiply the standard torque by:

.65 when finished jam nuts are used.
.70 when Molykote, white lead or similar mixtures are used as lubricants.
.75 when parkerized bolts or nuts are used.
.85 when cadmium plated bolts or nuts and zinc bolts w/waxed zinc nuts are used.
.90 when hardened surfaces are used under the nut or bolt head.

1 FOOT POUND = 1.355 NEWTON METERS

Bolt or Stud Diameter		Type 1 Studs Only		Type 1 Bolts 6" length or less		Type 1 Bolts longer than 6"		Type 5 (all lengths)		Type 8 (all lengths)			
										Only when used† in cast (gray) iron		All other applications	
Inches	MM	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	6.4	5	6	5	6	3	3	9	10	11	13	12	14
5/16	8.0	12	13	12	13	6	7	19	21	24	27	27	30
3/8	9.5	21	24	21	24	11	13	33	37	43	47	45	50
7/16	11.1	35	38	35	38	19	21	53	60	69	76	75	85
1/2	12.7	52	58	52	58	29	32	80	90	104	117	115	130
9/16	14.3	70	80	70	80	41	46	115	130	150	170	165	185
5/8	15.9	98	110	98	110	57	63	160	180	210	230	220	250
3/4	19.0	174	195	174	195	100	112	290	320	350	390	400	450
7/8	22.2	300	330	162	181	162	181	420	470	570	630	650	730
1	25.4	420	470	250	270	250	270	630	710	850	950	970	1090
1-1/8	28.6	600	660	350	380	350	380	850	950	1200	1350	1380	1550
1-1/4	31.8	840	940	490	540	490	540	1200	1350	1700	1900	1940	2180
1-3/8	34.9	1100	1230	640	710	640	710	1570	1760	2300	2500	2600	2800
1-1/2	38.1	1470	1640	850	940	850	940	2000	2300	3000	3300	3300	3700
1-3/4	44.5	2350	2450	1330	1490	1330	1490	3300	3700	4700	5200	5300	6000
2	50.8	3500	3900	2000	2200	2000	2200	5000	5500	7000	7800	8000	9000

†When bolt penetration is 1-1/2 times the diameter of the bolt.

BOLT TYPE IDENTIFICATION CHART

IH TYPE	S.A.E. GRADE	DESCRIPTION	BOLT HEAD MARKING *
1	1 or 2 (Equivalent)	WILL HAVE A IH STANDARD MONOGRAM IN THE CENTER OF THE HEAD Low or Medium Carbon Steel Not Heat Treated	
5	5	WILL HAVE A IH AND 3 RADIAL LINES Quenched and Tempered Medium Carbon Steel	
8	8	WILL HAVE A IH AND 6 RADIAL LINES Quenched and Tempered Special Carbon or Alloy Steel	

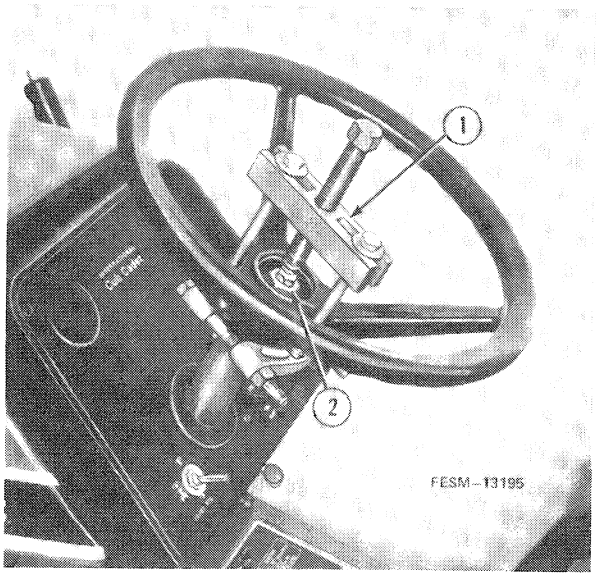
*The center marking identifies the bolt manufacturer. The IH monogram is currently used. Some bolts may still have an IH or a raised dot which previously identified IH bolts.

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STEERING ASSEMBLY

Model 582, 582 Special, 682 & 782



1. Puller assembly
2. 3/8 inch bolt

Removal

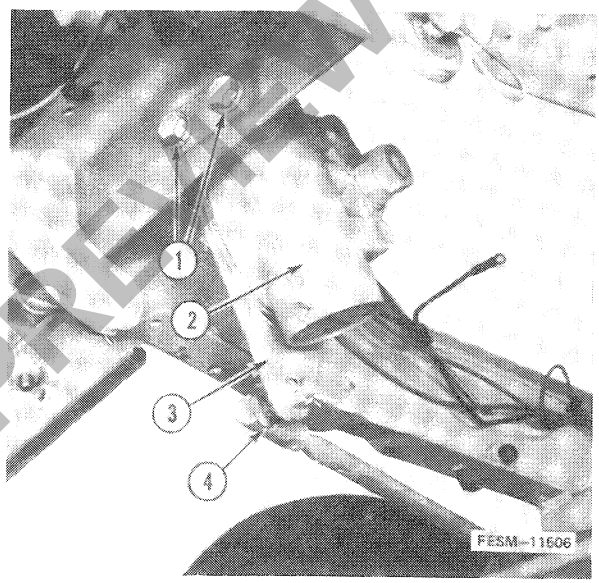
1. Remove the steering wheel cover.

2. Remove the nut securing the wheel to the column.

3. Place a 3/8 inch bolt into the column to protect the column end from damage. Remove the steering wheel using a puller as shown.

For Model 782:

Disconnect the hydraulic lines (from the transmission) at the control valve. Remove the connecting link(s) from the control valve spools. Remove the control valve from the mounting plate. Scribe a line on the steering column just above and below the control valve mounting plate and remove the mounting plate.



4. Disconnect the drag link rear ball joint from the steering lever.

5. Remove the mounting bolts securing the unit. Remove the steering assembly by lowering it thru the control panel.

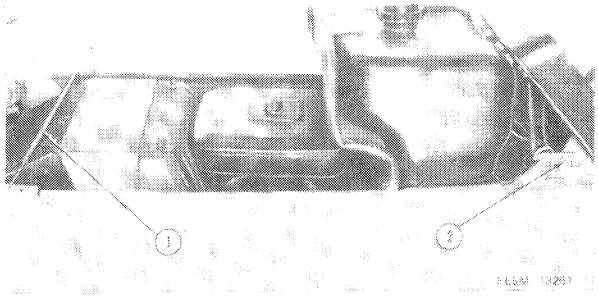
1. Mounting bolts
2. Steering unit
3. Steering lever
4. Drag link rear ball joint

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ENGINE

Model 582 and 582 Special



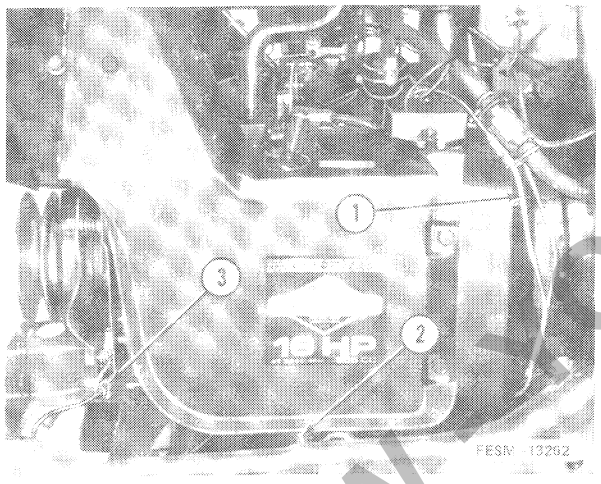
1. Spring
2. Wing nut

Removal

1. Disconnect the battery ground cable.

2. Raise the hood and remove the engine side panels secured by wing nuts and a spring.

3. Disconnect the headlight wiring and remove the hood and grille as an assembly.

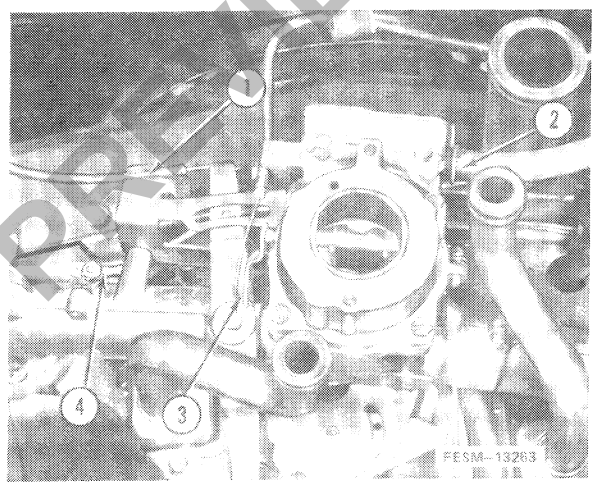


4. Disconnect the alternator - regulator wire.

5. Disconnect the starter wire and the PTO clutch wire.

6. Remove the air cleaner assembly.

1. Alternator regulator wire
2. Starter wire
3. PTO clutch wire



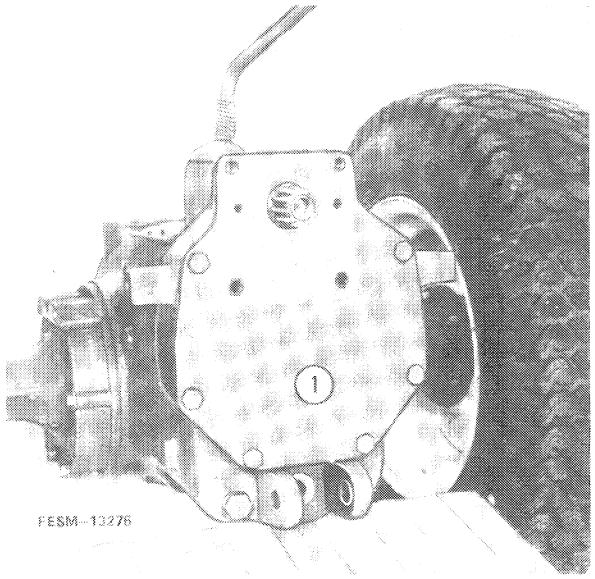
7. Disconnect the choke and throttle cables. Disconnect the engine shut-off wire.

8. Shut off the fuel and disconnect the fuel line at the carburetor. Be sure to plug the line.

1. Throttle cable
2. Fuel line
3. Choke cable
4. Engine shut-off wire

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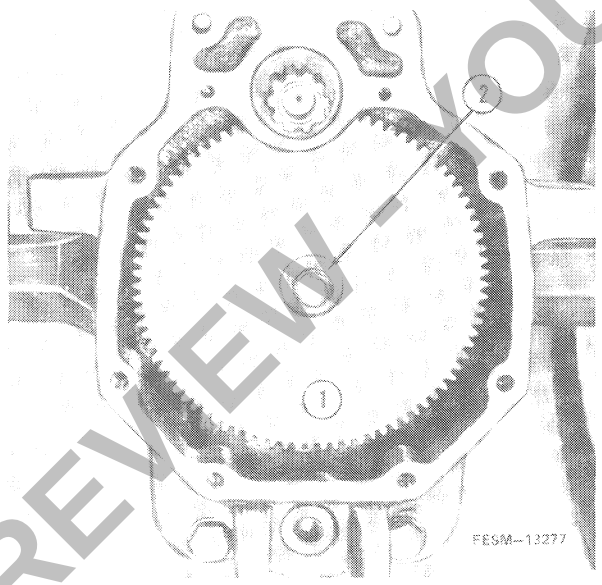
1. Reduction housing cover plate

Removal and Disassembly

1. Split the tractor.

2. Remove the transmission drain plug and allow the lubricant to drain completely; then replace the plug.

3. Drain and remove the creeper assembly (if unit is so equipped).



1. Reduction driven gear
2. Driven gear retainer

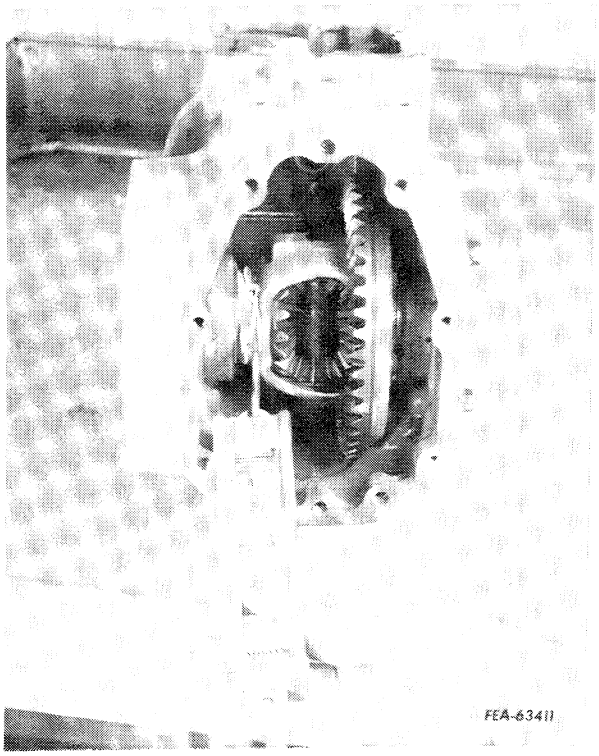
4. Remove the brake adjusting screw, pivot pin, brake lever and push rod.

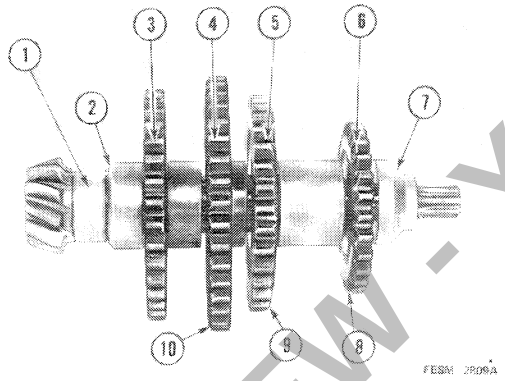
5. Remove the reduction housing cover plate.

6. Remove the reduction driven gear by removing the capscrew, lock washer and driven gear retainer.

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1. Bearing
2. Bevel to bearing
3. Reverse gear
4. 1st gear
5. 2nd gear
6. 3rd gear
7. Bevel to bearing
8. Rounded edge to rear
9. Rounded edge to front
10. Rounded edge to rear

Reassembly

Reassembly is basically the reverse of disassembly; however, particular attention should be given to the following steps.

1. Be sure all bearings are thoroughly lubricated.

2. The transmission mainshaft needle bearing must be installed with its oil hole aligned with the oil hole in the housing.

3. Assemble the differential, carrier bearings, cages and shims. Check bearing preload and adjust as necessary before replacing the transmission countershaft. Install or remove shims as necessary. Preload is correct when a steady pull of one to eight pounds is necessary to rotate the differential assembly.

4. Remove the differential assembly, keep the shims with the cages then install the transmission countershaft, bearings, gears, spacers, front bearing retainer, shims and nut. Tighten the nut to 115 N·m (85 ft. lbs.). Tighten retainer capscrews to 27 N·m (20 ft. lbs.).

5. Install the differential assembly, keeping the preload shim pack as previously established. Drive gear must be on the right with teeth facing left.

6. Check the backlash between the drive gear and bevel pinion and the gear teeth bearing pattern as follows.

7. Apply a thin coat of red lead or prussian blue to the bevel pinion teeth faces, then rotate the gears by hand and observe the bearing pattern.

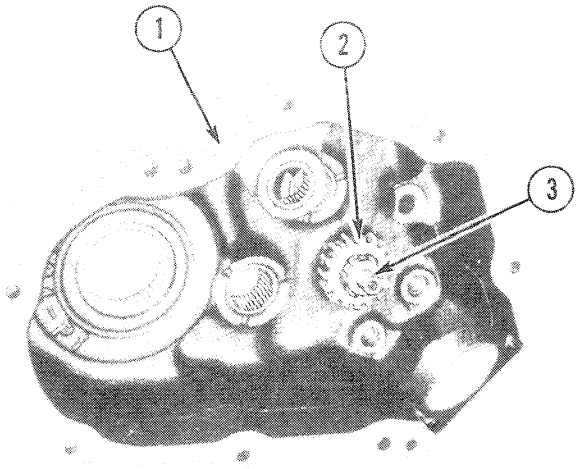
Some deflection will occur under load. Allowance is made in gear design to prevent concentration of load on tooth edges.

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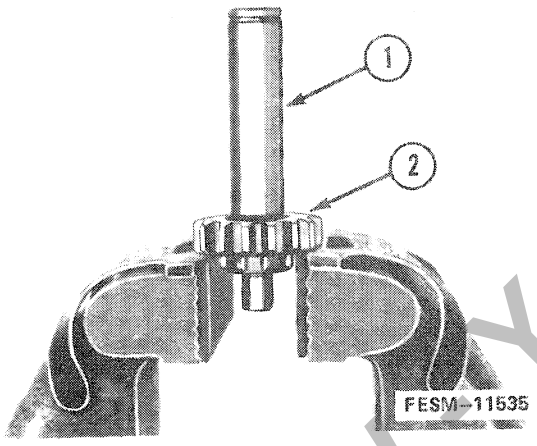
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24. Remove the input shaft with spur gear by tapping with a brass hammer.

1. Case
2. Spur gear
3. Input shaft



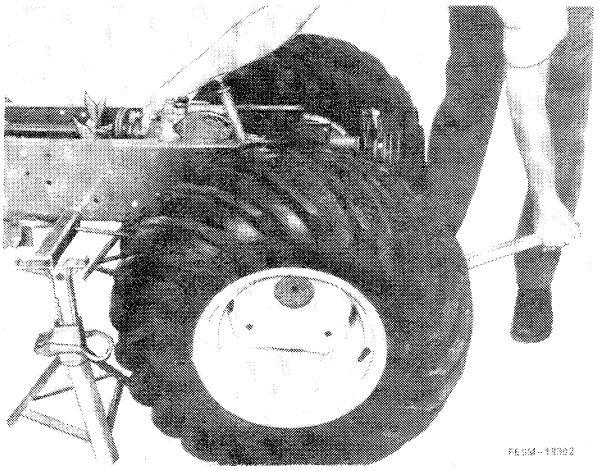
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25. If necessary, separate the spur gear from the input shaft by supporting the assembly in a vise with protectors. Using a brass hammer, tap the shaft from the gear.

1. Input shaft
2. Spur gear

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11. Support the frame of the tractor, remove the frame mounting bolts and roll the rear end out of the frame as illustrated.

Recoupling the Tractor

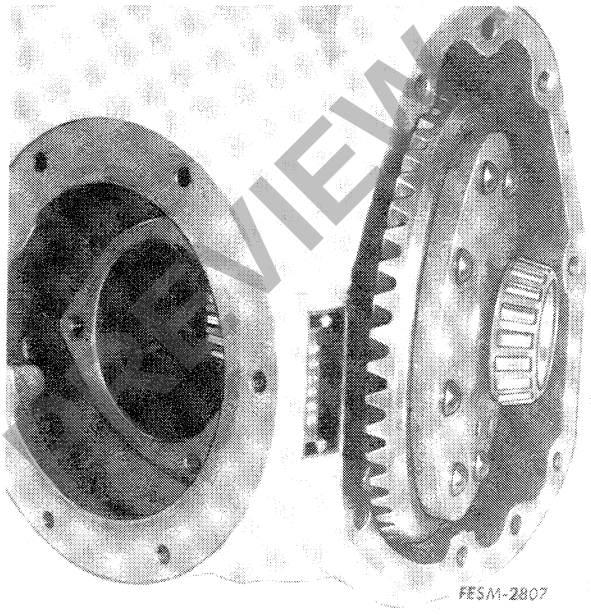
1. Recouple the tractor by reversing the splitting procedure.

2. Fill the rear frame to the proper level with Hy-Tran.

3. Adjust the cam bracket. Refer to Cam Bracket Adjustment.

Differential

Removal and Disassembly



1. Drain the lubricant.

2. Split the tractor.

3. Remove the rear axles and their carriers.

4. Remove the differential carrier bearing cage and shims from each side. Keep the shims with each cage and identified for each side.

5. Turn the differential into the position shown and remove it from the transmission case. If the assembly will not clear the side of the transmission case, it will be necessary to remove one of the differential carrier bearings.

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