DISASSEMBLY PROCEDURE
STYLE I

(Reference - Figure 2-8)

PREPARATION BEFORE DISASSEMBLY

Drain the gear assembly. Thoroughly clean off all dirt around the fittings before disconnecting the hoses. (Plug the port holes immediately after disconnecting the hoses and before removing the assembly from the bale wagon.) Finish cleaning and drying the assembly before placing it on the workbench.

CLEAN WORK CONDITIONS

If it is necessary to disassemble any of the component parts, make sure that a clean workbench or table is used (a piece of clean wrapping paper makes an excellent disposable top).

All internal parts should be cleaned in clear/clean solvent and blown dry with clean air. Keep each part separate to avoid nicks and/or burrs.

IMPORTANT: Never steam clean hydraulic steering assemblies. Do not force or abuse closely fitted parts, as damage will usually result.

DISASSEMBLING THE MAJOR SUBASSEMBLIES

1. Rotate worm shaft (23) so that the index mark on the end of sector shaft (51) is perpendicular to the center line of the steering gear (straight ahead position).
2. Remove four bolts (42) from side cover (43).
3. Tap lightly with a soft-faced hammer on the end of sector shaft (51) to disengage seal ring (43A) and let drain.
4. Remove the side cover (43) and sector shaft (51) as a unit.
5. Remove trunnion cover (59) by removing four screws (60).
6. Remove four bolts (17) from adaptor (18).
7. Remove as a subassembly, upper cover (7), valve assembly (15), adaptor (18), worm shaft (23) and rack piston (39) from housing (55).

DISASSEMBLING THE SIDE COVER AND SECTOR SHAFT ASSEMBLY

1. Remove nut (40) from adjusting screw (50). Disengage side cover (43) from sector shaft (51) by turning adjusting screw (50) clockwise.
2. Remove seal (48), backup washer (47), and backup washer (46) from side cover (43). Check vent plug (41); it should be flush with the face of side cover (43).

REMOVING OF WORM SHAFT FROM RACK PISTON

1. Disassemble poppet seats (30) and remove poppets (31), spring (32), and rod (33), from rack piston (39). Position rack piston (39) with ball return guides (35) up and disassemble screws (38) and lock washers (37). Remove clip (36) and ball return guides (35) and tilt assembly to allow balls to fall out. Turn worm shaft (23) to empty assembly of balls. When empty, discard all balls and replace with a new matched set. Remove worm shaft (23) from rack piston (39).
2. Inspect helical grooves in rack piston (39) and on worm shaft (23) for excessive wear or brinelling. Inspect rack piston teeth for pits, wear or scoring. Inspect piston OD and piston ring for scoring or grooving. Inspect inside ends of ball return guides (35) for wear or damage.
3. Carefully clamp worm shaft (23) in padded vise jaws.
4. Cut seal (25) and seal cup (26) and remove.
5. Remove retaining ring (29), retaining washer (28), backup washer (27), and washer (24).

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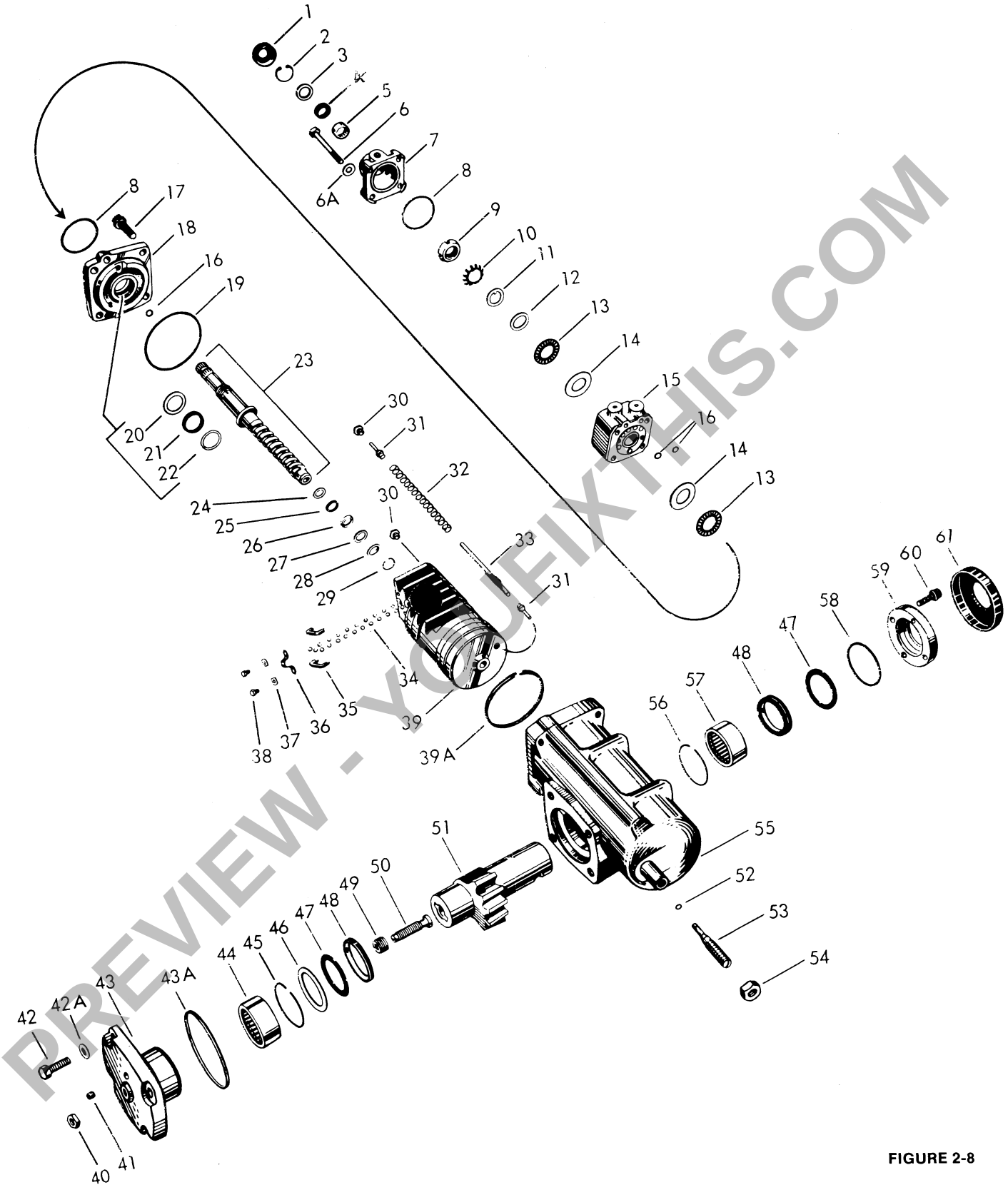


FIGURE 2-8

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AIR-CONDITIONER 1-1
POWER STEERING GEAR 2-1
STEERING LINKAGE AND
FRONT AXLE SPECIFICATIONS 3-1
BRAKES 4-1
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PRECAUTIONARY STATEMENTS

PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements ("CAUTION", "WARNING", and "DANGER") followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.



CAUTION: THE WORD "CAUTION" IS USED WHERE A SAFE BEHAVIORAL PRACTICE ACCORDING TO OPERATING AND MAINTENANCE INSTRUCTIONS AND COMMON SAFETY PRACTICES WILL PROTECT THE OPERATOR AND OTHERS FROM ACCIDENT INVOLVEMENT.



WARNING: THE WORD "WARNING" DENOTES A POTENTIAL OR HIDDEN HAZARD WHICH HAS A POTENTIAL FOR SERIOUS INJURY. IT IS USED TO WARN OPERATORS AND OTHERS TO EXERCISE EVERY APPROPRIATE MEANS TO AVOID A SURPRISE INVOLVEMENT WITH MACHINERY.



DANGER: THE WORD "DANGER" DENOTES A FORBIDDEN PRACTICE IN CONNECTION WITH A SERIOUS HAZARD.

FAILURE TO FOLLOW THE "CAUTION", "WARNING", AND "DANGER" INSTRUCTIONS MAY RESULT IN SERIOUS BODILY INJURY OR DEATH.

MACHINE SAFETY

Additional precautionary statements ("ATTENTION" and "IMPORTANT") are followed by specific instructions. These statements are intended for machine safety.

ATTENTION: The word "ATTENTION" is used to warn the operator of potential machine damage if a certain procedure is not followed.

IMPORTANT: The word "IMPORTANT" is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.

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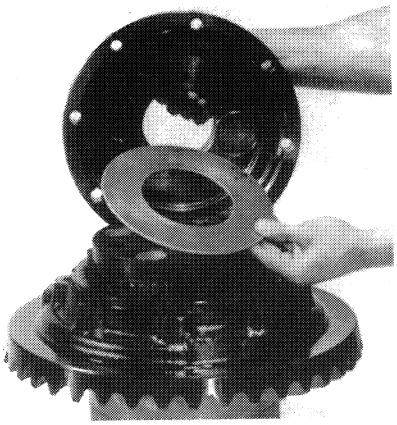


FIGURE 7-25

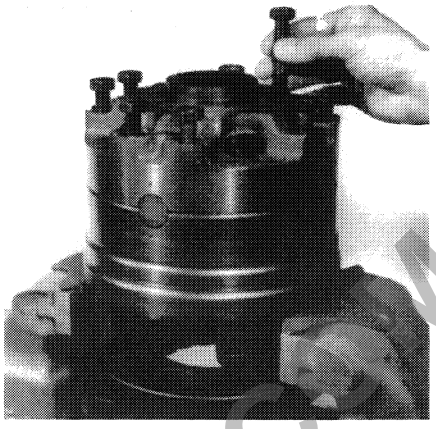


FIGURE 7-29

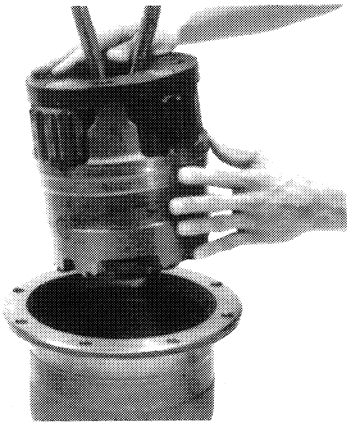


FIGURE 7-26

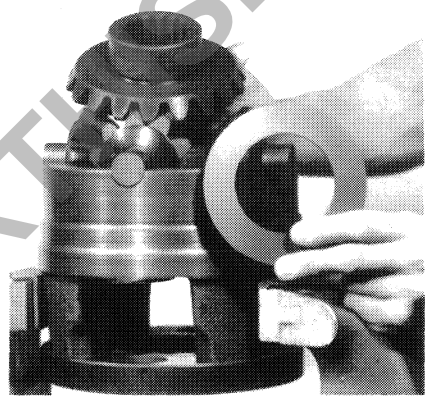


FIGURE 7-30

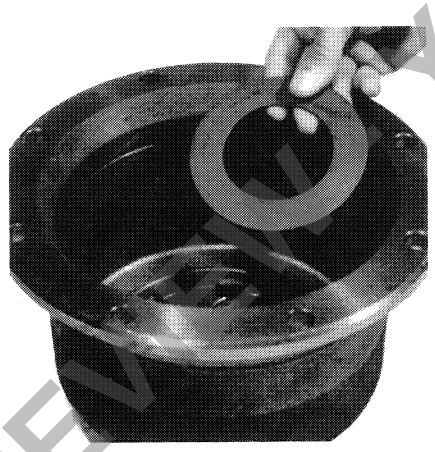


FIGURE 7-27

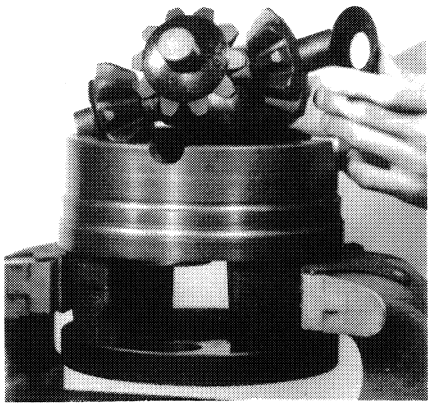


FIGURE 7-31

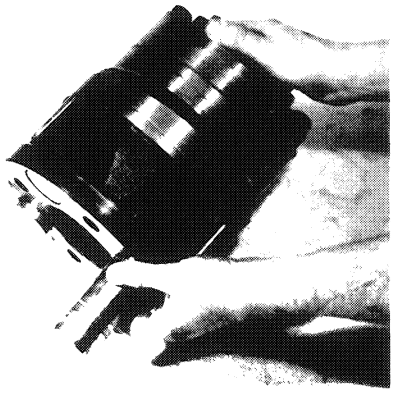


FIGURE 7-28

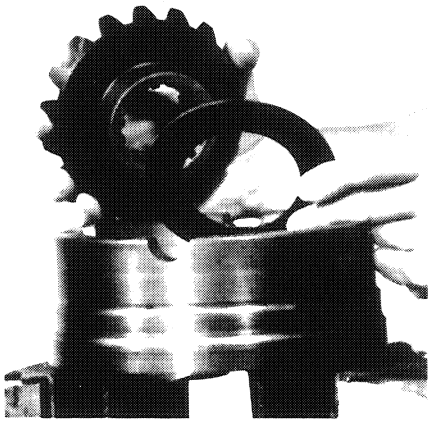


FIGURE 7-32

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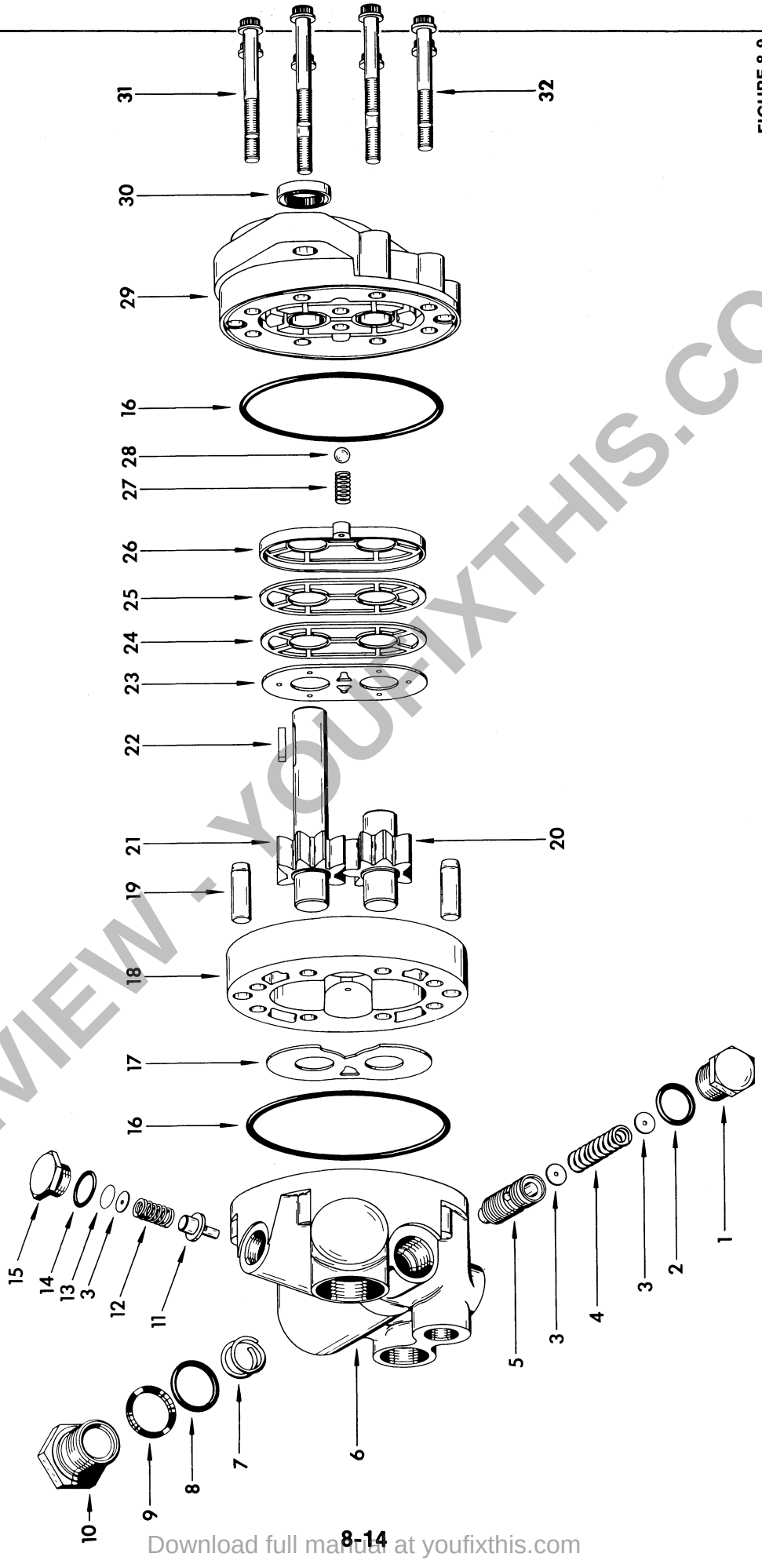


FIGURE 8-9

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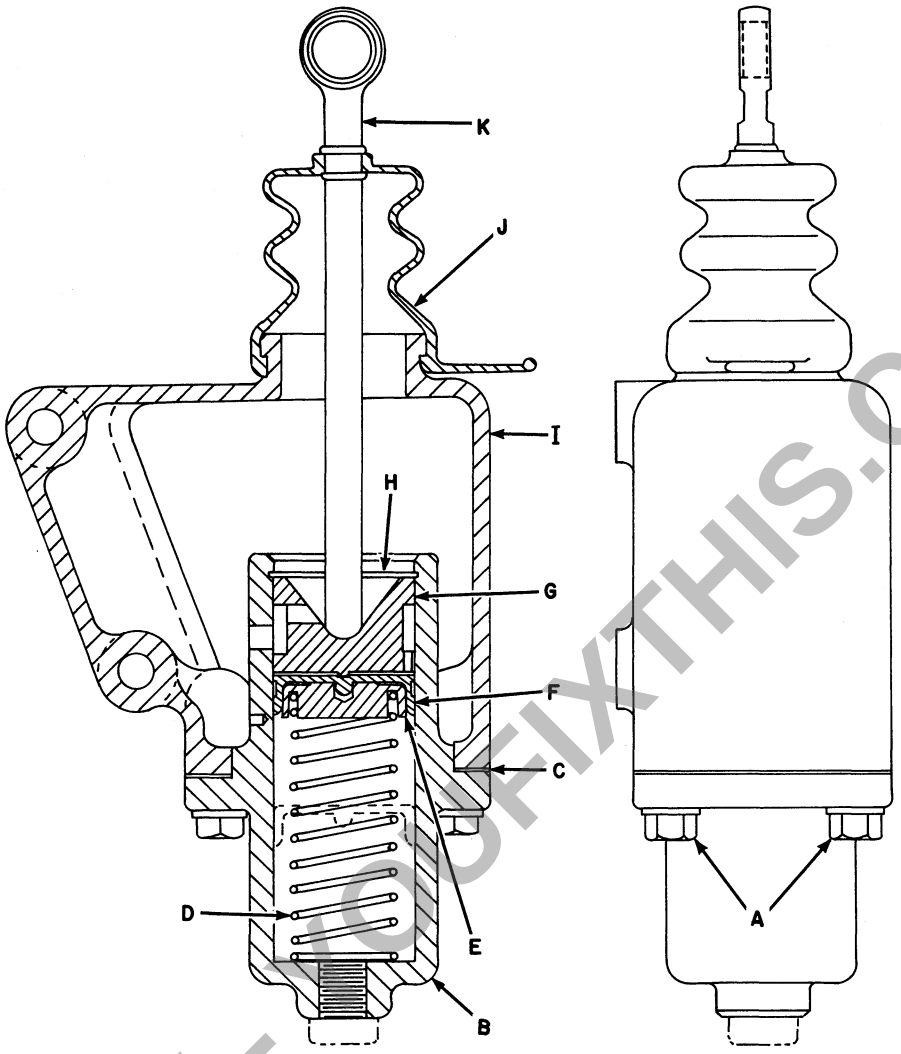


FIGURE 4-2

DISASSEMBLY

Before disassembling the cab master cylinder, clean the external areas with a clean cloth and denatured alcohol.

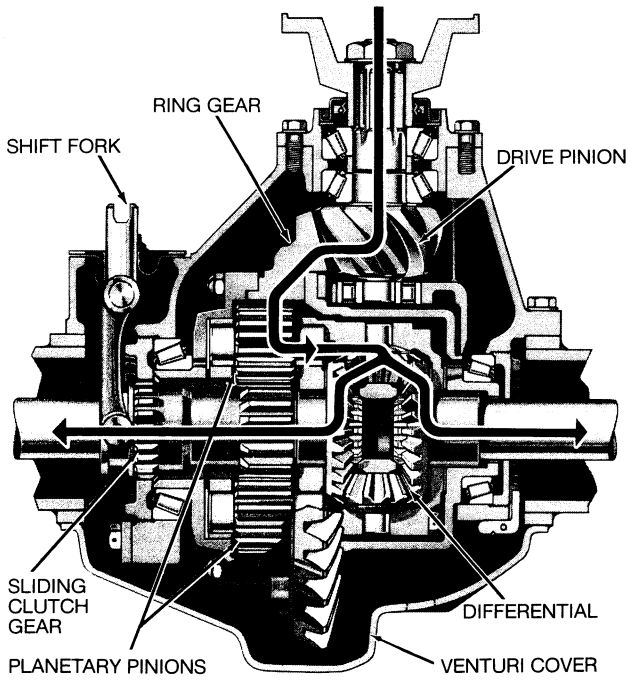
NOTE: Before handling or cleaning the internal parts of the master cylinder, wash your hands with soap and water. Your hands must be clean. Do not use gasoline or petroleum-base fluid to clean the components.

Remove the four 5/16" x 1" cap screws, A, and the cylinder head, B, Figure 4-2. Then, in sequence, completely remove the gasket, C; spring, D; cup filler, E; piston cup, F; main piston, G; and locking ring, H, from the piston rod. At this point, the rod, K, and the rubber boot, J, Figure 4-2, can be removed from the housing, I. Wash all parts in clean denatured alcohol. Do not allow any petroleum-base fluid, such as kerosene or gasoline, to come in contact with any of the internal brake parts. After cleaning these parts, allow them to air dry.

Visually inspect the cylinder bore of the housing, I, and the piston, G, for corrosion, scratches, and burrs. Inspect all seals and O rings for damage or swelling, and remove any foreign material from the housing, ports, and passages. Prior to reassembly, coat all parts with an approved clean brake fluid. Careful reassembly of the master cylinder is necessary to avoid damaging any of the components.

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Power Flow in Low Range.

FIGURE 7-2

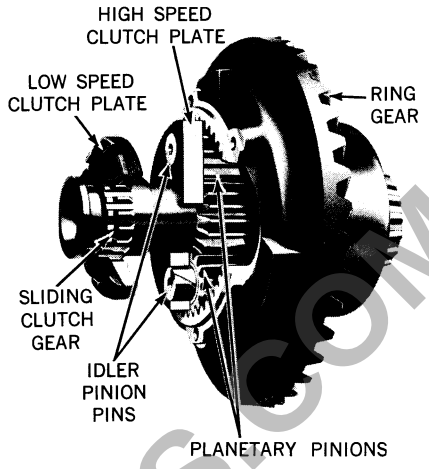


FIGURE 7-3

LOW RANGE

Figures 7-2 and 7-3

The sliding clutch is shifted into engagement with the low-speed clutch plate (an integral part of the left-hand bearing adjuster). The sliding clutch is held stationary and the planetary gears are forced to rotate around it. Power flow is now through the drive pinion, ring gear, planetary gears, differential unit and axle shafts. The axle uses two reductions to multiply torque. The planetary unit adds approximately 36% more reduction to the primary gear set. Torque is multiplied on an equivalent basis.

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FIGURE 7-85

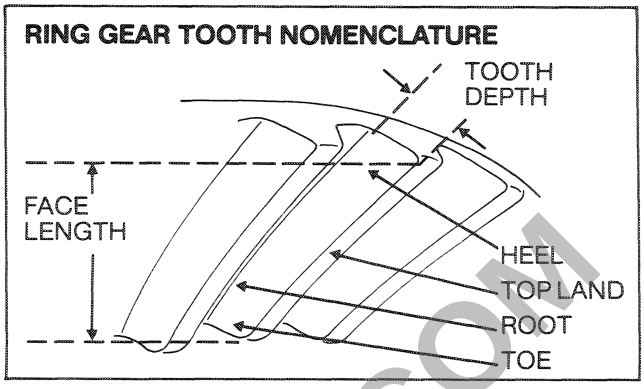


FIGURE 7-86

If necessary, adjust the ring gear backlash to specifications before proceeding with the adjustments.

To add backlash: Loosen the adjuster on the back-face side, D, of the ring gear one notch at a time. Tighten the opposite adjuster until it contacts the bearing cup. Continue to tighten the same adjuster two or three notches. Recheck the backlash.

To remove backlash: Loosen the bearing adjuster on the teeth-side of the ring gear one notch at a time. Tighten the opposite adjuster until it contacts the bearing cup. Continue to tighten the same adjuster two or three notches. Recheck the backlash.

CHECK THE RING GEAR TOOTH CONTACT

Paint the ring gear teeth and check the tooth contact pattern. Correct tooth patterns are shown in Figures 7-87 and 7-88.

1. Check Tooth Contact Pattern (new gear - Figures 7-85 through 7-87)

   Paint twelve ring gear teeth with marking compound and roll the gear to obtain a contact pattern. The correct pattern is well-centered on the ring gear tooth with lengthwise contact clear of the toe. The length of the pattern in an unloaded condition is approximately one-half to two-thirds of the ring gear tooth.

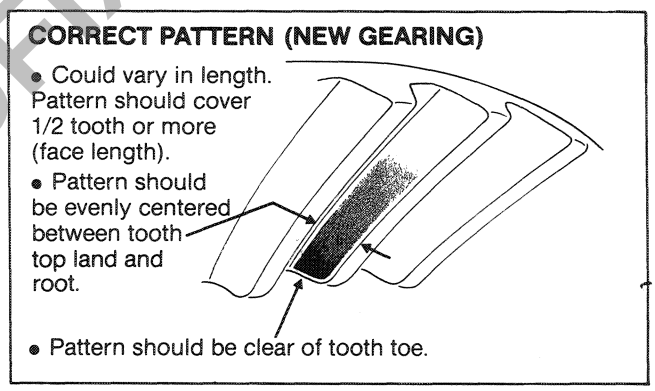


FIGURE 7-87

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