SECTION



SERVICING THE

FRONT AXLE

Rac. Form 9-77811

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INTRODUCTION

Three separate front axle assemblies are used on the compact tractors and the utility transporter.

The same system is in use on all utility transporters. The systems used on the compact tractors are easily distinguished by the engine horsepower rating. One front axle assembly is used on the ten horsepower tractor and the other on the twelve horsepower tractor.

Before performing any service operations, determine which instructions apply to your tractor and refer to the appropriate page within this section.



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FRONT AXLE Ten H.P. Tractor Removal and Disassembly

- Remove cotter pin (10), clevis pin (24), nut (22), washer (21) and lift out the drag linkage. If necessary, remove the ball joint (20) counting the number of turns or marking the rod to facilitate assembly.
- 2. Block up the tractor.
- 3. Remove the dust cover (13), cotter pin (14), seal (15), outer bearing (16) and pull off the front wheels (18).
- 4. Remove seal (11) and inner bearing (12)

With the axle completely removed and disassembled, the component parts can easily be cleaned and inspected for wear, cracks or burrs. All parts that are worn or damaged must be replaced. from the wheels (18).

- 5. Remove cotter pins (6), clevis pins (5) and lift off the tie rod (7).
- 6. Remove cotter pins (1), washers (2) and pull the spindles (4) out of the front axle (3).
- Remove bolt lockwasher and plain washer
 (8) and tap out the axle pivot pin (9). Lower the front axle from the frame.

Inspection

The wheel bushings must be inspected for cracks and excessive wear. Insert the spindle in the wheel and check for excessive side clearance. Check the fit of the king pins in the front axle, Replace all worn parts,



Assembly and Installation

- 1. Position the axle (3) and install the axle pivot pin (9) securing it with the plain washer, lock washer and bolt (8).
- 2. Position the spindles (4), washers (2) and secure with cotter pins (1).
- 3. Install the tie rod (7) with clevis pins (5) and cotter pins (6).
- 4. If the drag linkage ball joint (20) was removed, turn it back onto the rod the same number of turns required to remove it or if a mark was made, turn it up to the mark.

Secure the drag linkage using nut (22) with washer (21) and clevis pin (24) with cotter pin (10).

5. Install inner bearings (12), seals (11), bushings (17), outer bearings (16), seals (15) and place the wheels (18) on the spindles (4) securing them with cotter pins (14).

6. Install dust covers (13).



FRONT AXLE Twelve H.P. Tractor Removal and Disassembly

- 1. Remove cotter pin (25), clevis pin (24), nut (22), washer (21) and lift out the drag linkage (23). If necessary, remove the ball joint (20) counting the number of turns or marking the rod to facilitate accurate assembly,
- 2. Block up the tractor.
- 3. Remove the dust cover (18), cotter pin (14), seal (13) outer bearing (15) and pull off the front wheels (17).
- 4. Remove seal (11), inner bearing (12), and

bushing (16).

- 5. Remove nuts (6) with washers (7) and lift off the tie rod (8). If necessary, remove the ball joints (5) counting the number of turns or marking the rod to facilitate accurate assembly.
- 6. Remove cotter pins (1) washers (2) and pull out the spindles (4).
- 7. Remove securing bolt and washers (9) and tap out the axle pivot pin (10). Lower the axle front.



With the axle completely removed and disassembled, the component parts can easily be cleaned and inspected for wear, cracks or burrs. All parts that are worn or damaged must be replaced.

Assembly and Installation

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- 1. Position the axle (3) and insert the axle pivot pin (10) securing it with bolt and washers (9).
- 2. Insert the spindles (4) and secure with washer (2) and cotter pin (1).
- 3. If the tie rod (8) was disassembled, assemble and install it using nuts (6) with lockwashers (7).
- 4. Install inner bearing (12), seal (11), bush-

The wheel bushings must be inspected for cracks and excessive wear. Insert the spindle in the wheel and check for excessive side clearance. Check the fit of the king pins in the front axle. Replace all worn parts.

- ing (16), outer bearing (15), seal (13) and position cotter pin (14) and cover with dust cap (18).
- 5. If the drag link (23) was disassembled, assemble and install using lockwasher (21), nut (22), clevis pin (24) and cotter pin (25). Refer to Page OO-8 for toe-in adjustments.
- Refer to operator's manual for lubrication instructions.

FRONT AXLE Utility Transporter Removal and Disassembly

(Refer to Figure 00-3)

- 1. Remove cotter pin (22), clevis pin (23) ball joint securing nut (19), and lift out the drag linkage. If necessary, disassemble the linkage, counting the number of turns or marking the linkage to facilitate assembly.
- 2. Block up the front of the tractor.
- 3. Remove screws' (1 and 2) from the front fenders and lift off the fenders (3).
- 4. Remove dust covers (17), cotter pins (18) and pull off the front wheels (13).
- 5. Remove seals (16), bearings (15), bush-

ings (14), bearings (12), seals (11) and where the from the from the from the last (10) from the la

- 6. Remove nuts and washers (8) and lift off the tie rod (5). If necessary, remove ball joints (7) and locking nuts (6) counting the number of turns or marking the rod to facilitate accurate assembly.
- 7. Remove bolts (26), cotter pins (27), spindle braces (25) and pull out front spindles (4 & 9).
- 8. Remove bolt, lockwasher and plain washer (29) and tap out the pivot pin (28). Lower the front axle.

Inspection

With the axle completely removed and disassembled, the component parts can easily be cleaned and inspected for wear, cracks or burrs. All parts that are worn or damaged must be replaced. Inspect the wheel bushings for cracks or excessive wear. Insert the spindle in the wheel and check for excessive side clearance. Check the fit of the king pin in the front axle. Replace all worn parts.

Assembly and Installation

- 1. Position the front axle (24) and install the axle pivot pin (28) with bolt and washers (29).
- 2. Position the front spindles (4 and 9), spindle braces (25) and insert cotter pins (27) thru spindles.
- If drag link rod was disassembled, assemble and secure with clevis pin (23), cotter pin (22) and ball joint assembly (19).
- If the tie rod (5) was disassembled, assemble and secure with nuts and washers (8).
- 5. Install bearings (12), seals (11), bushings (14), bearings (15) seals (16) and position the wheels on the spindles (4 and 9). Secure the wheels with cotter pins (18) and cover with dust covers (17). Refer to operator's manual for lubrication instructions.
- 6. Position the fenders (3) and secure with screws (1 and 2).
- 7. Refer to Page OO-8 of this section for toein instructions and adjustments.





Figure OO-3 Front Axle - Utility Transporter



FRONT WHEEL TOE-IN

Measuring Toe-In

- 1. Locate the tractor on a hard level surface preferably concrete. Place the front wheels in a straight ahead position.
- 2. Make sure the front tire pressures are equal.
- 3. Starting at the front or leading edge of the front wheels, place a chalk mark on each tire center line in line with the spindle. Do the same at the rear or trailing edge of each front wheel.
- 4. Measure the distance between the tire center lines at the chalk marks.

THE DISTANCE BETWEEN MEASUREMENT "A" MUST BE 1/8 TO 3/8 INCH LESS THAN MEASUREMENT "B". BOTH MEASUREMENTS - FRONT AND REAR MUST BE TAKEN FROM THE SAME HEIGHT ABOVE THE FLOOR.



Figure OO-4

Toe-In Adjustment

- 1. Loosen both tie rod ball joints.
- 2. Turn both ball joints on or off the tie rod an equal amount. Retighten the ball joints when correct toe-in is obtained. Turning the ball joints on the tie rod increases the toe-in. Turning the ball joints off the tie rod decreases the toe in.

NOTE The J I Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

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