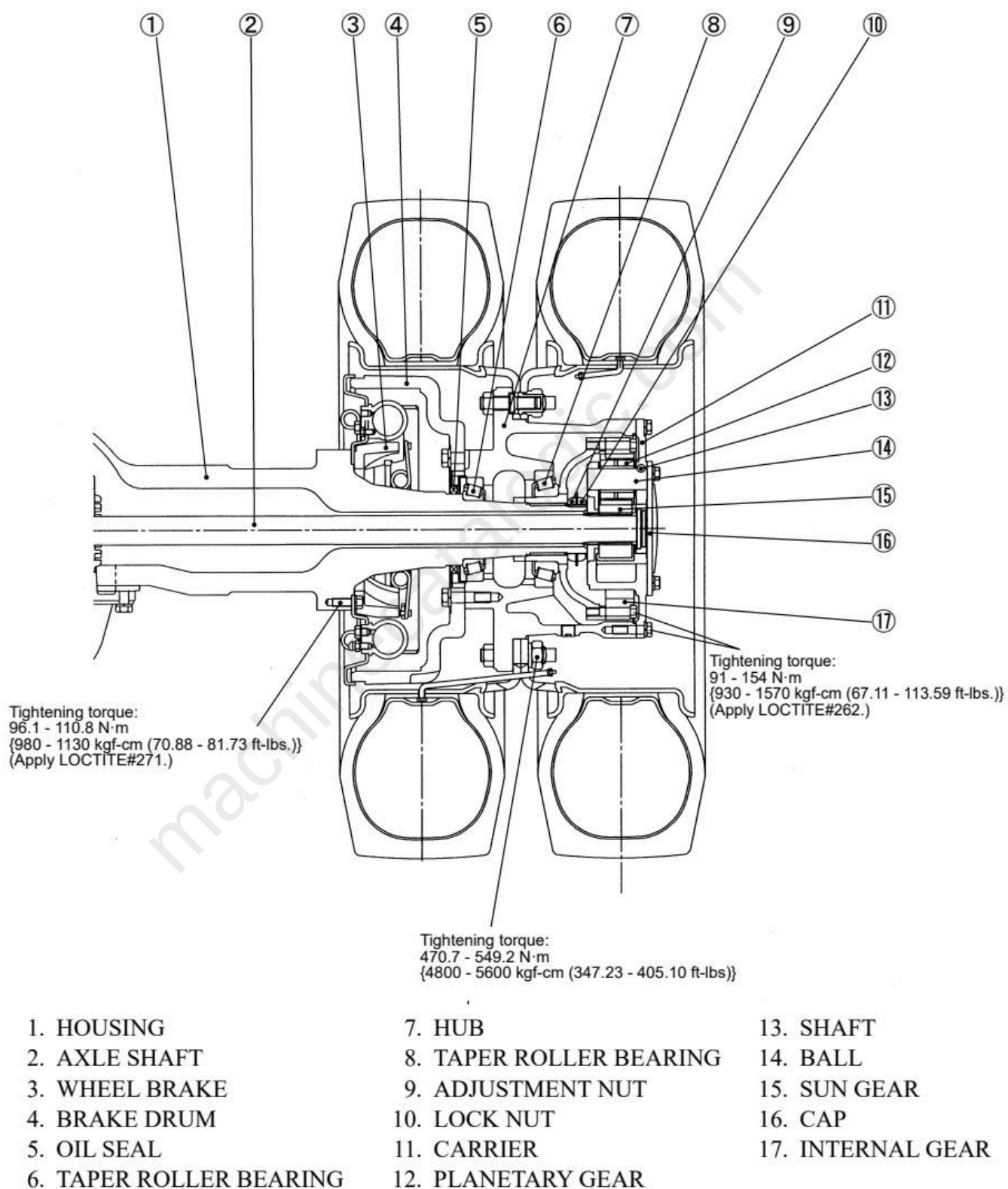




# Service Manual

## Chassis & Mast

|                |                        |
|----------------|------------------------|
| <b>DP70NH</b>  | <b>30E-00001-09999</b> |
| <b>DP80NH</b>  | <b>30F-00001-09999</b> |
| <b>DP100NH</b> | <b>30G-00001-09999</b> |



**Fig. 3.2** Drive Axle (8 ton, 10 ton)

## 5.2 MAINTENANCE

### 5.2.1 DISASSEMBLING STEERING GEAR BOX

- (1) Hold the steering gear box in a vise.

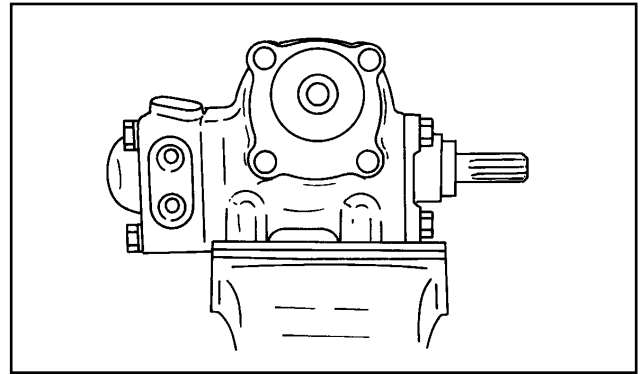


Fig. 5.10

- (2) Remove the box nut and packing from the adjustment screw. Remove the side cover mounting bolts and turn the adjustment screw clockwise. This causes the side cover to come off.

**Note: Exercise care not to lose the "O"-ring fitted to the side cover.**

Remove the adjustment screw and shims fitted to the sector shaft.

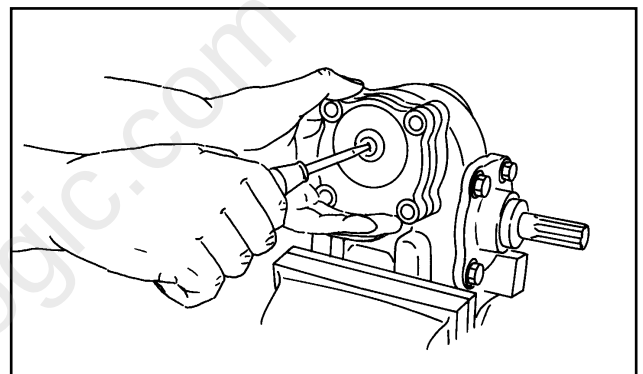


Fig. 5.11

- (3) Rotate the worm shaft so that the sector shaft teeth are positioned as shown in Figure 5.12. Lightly tapping the sector shaft serration by hand, remove the sector shaft.

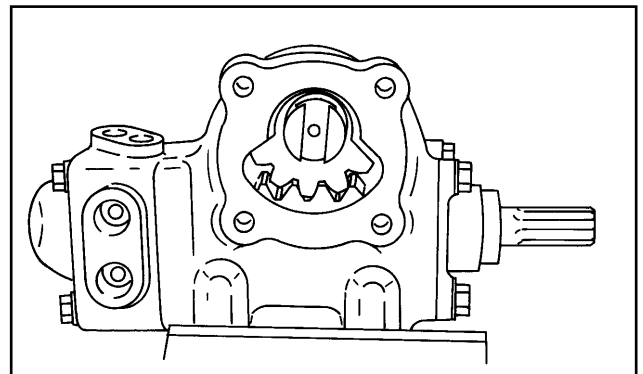


Fig. 5.12

- (4) Remove the bolts securing the end cover and detach the end cover, using caution not to lose the "O"-ring.

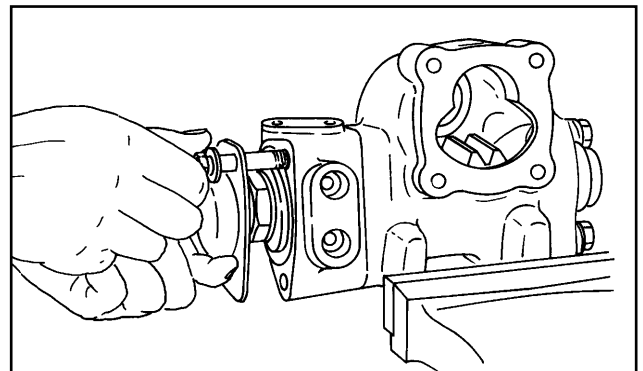


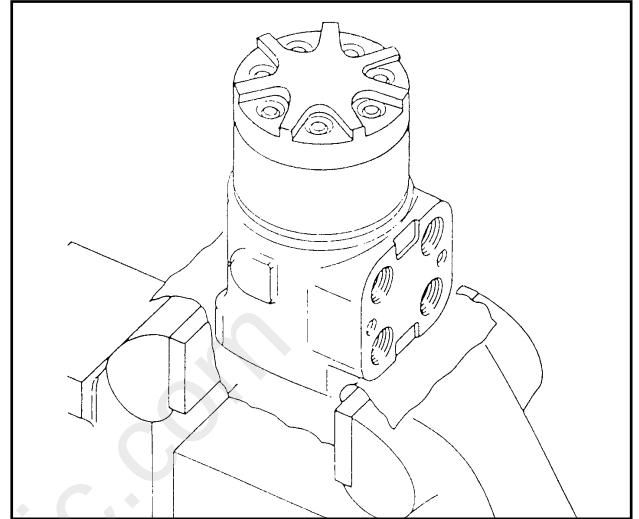
Fig. 5.13

## 8.2 PREVENTIVE MAINTENANCE

### 8.2.1 DISASSEMBLY AND MAINTENANCE OF ORBITROL

Prior to attempting to disassemble the orbitrol, clean the exterior of the unit and select a clean working place.

- (1) Lightly hold the flange of the orbitrol in a vise equipped with a soft jaws (copper or other inserts) with the end cap upward. Do not hold it strongly.

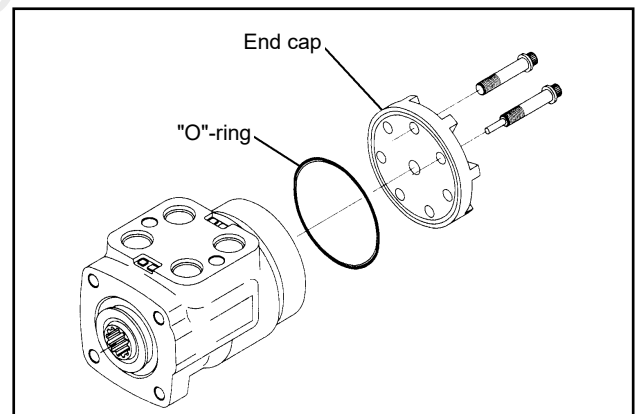


**Fig. 8.9**

- (2) Remove the fitting bolts from the end cap and remove the end cap.

**Note:** One of the seven bolts has a different shape from the others. Mark the housing to insure correct reassembly.

Remove the "O"-ring from the end cap.

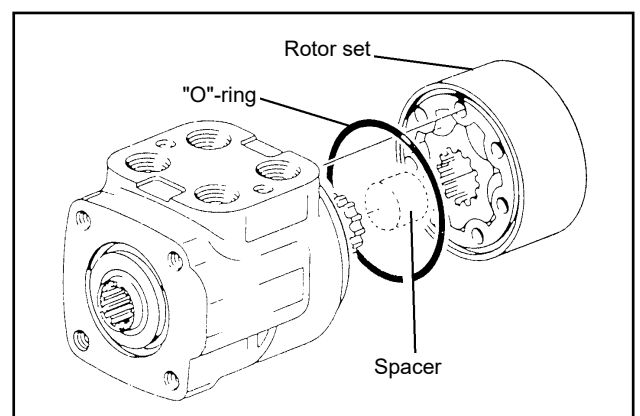


**Fig. 8.10**

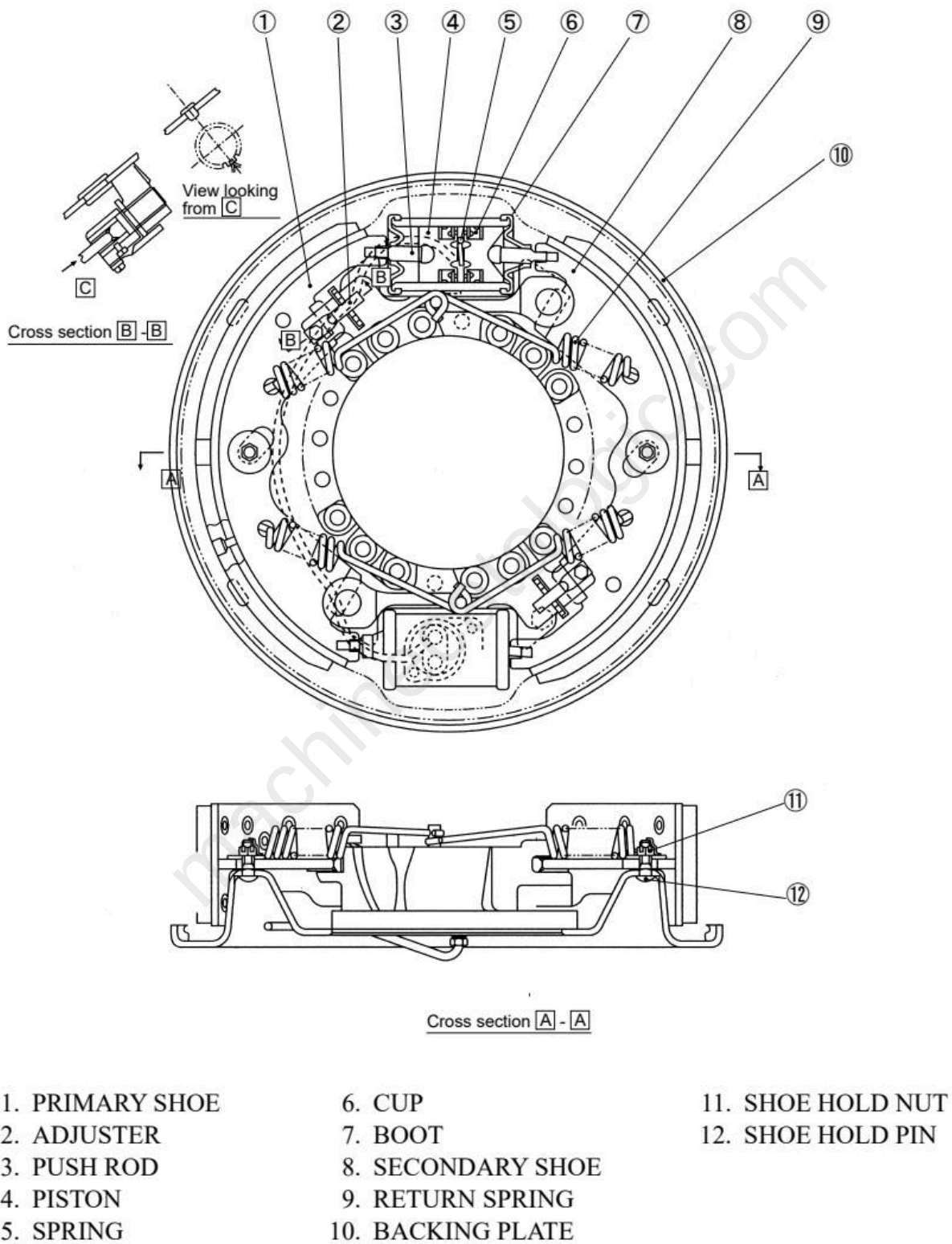
- (3) Remove the spacer from the spline section of the rotor set and remove the rotor set.

**Note:** Use caution not to lose the rotor set star.

Remove the "O"-ring from the rotor set.



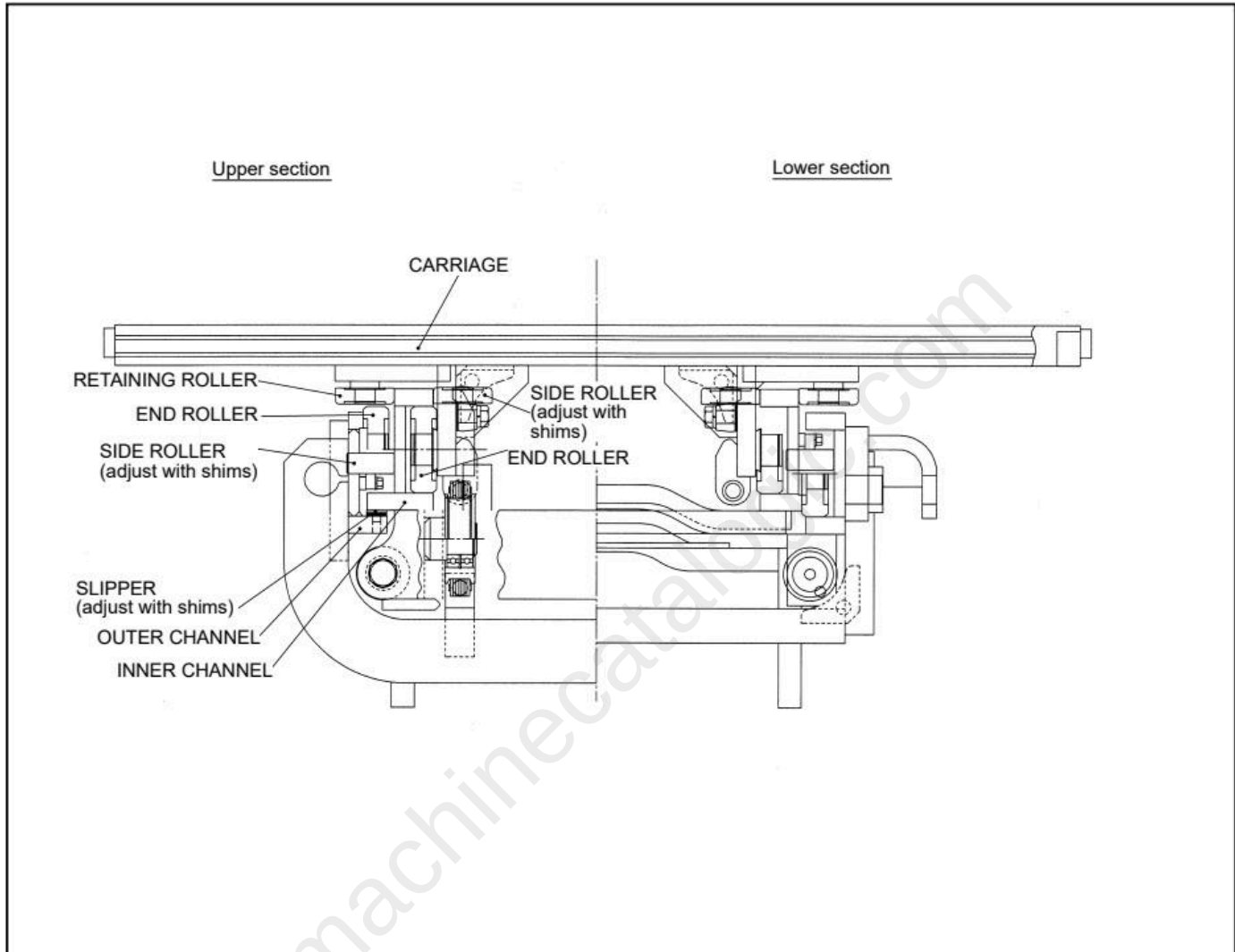
**Fig. 8.11**



**Fig. 4.12** Wheel Brake (8 ton, 10 ton trucks)

### 7.1.3 LOCATIONS OF ROLLERS

The end, side and retaining rollers are installed on the outer channel, inner channel and carriage respectively. The end rollers support longitudinal load and the side rollers support lateral load so that the inner channels and carriage are raised and lowered smoothly.



**Fig. 7.7** Location of Rollers (VM-30C)

### 2.1.4 ATM CONTROLLER

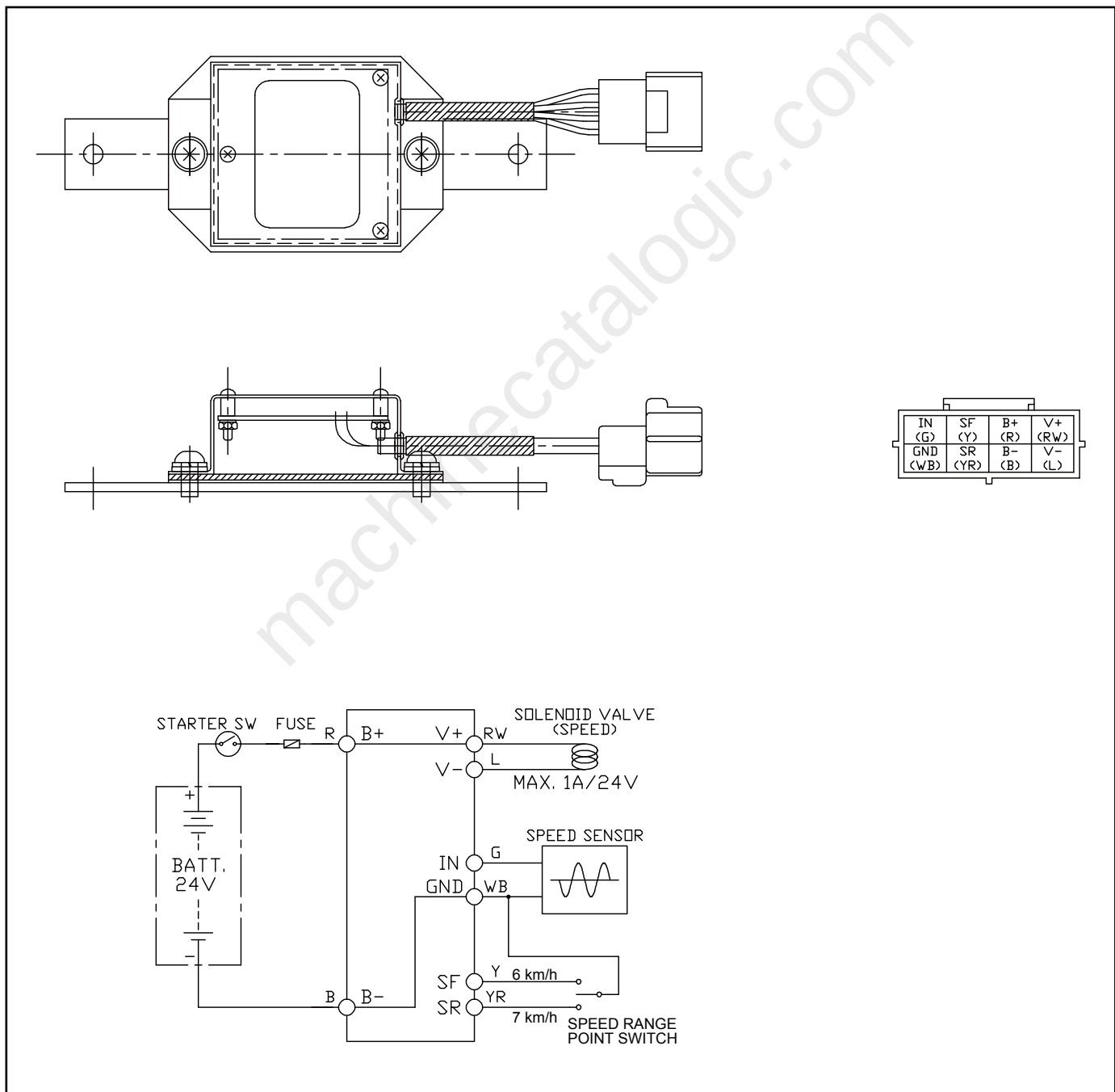
The ATM controller is a device which automatically changes over the transmission speed ranges from 1st to 2nd speed or vice versa, according to the truck travelling speed. Its overview is shown in Figure 2.11.

The travelling speed is detected by the sensor installed on the transmission. When the sensor detects a speed of 6 km/h (3.7 mph), the ATM controller turns ON the speed control solenoid valve in the transmission control valve to change the gears to 2nd speed. When the travelling speed drops to 3 km/h (1.9 mph) or less, the ATM controller turns OFF the solenoid valve to change the gears to 1st.

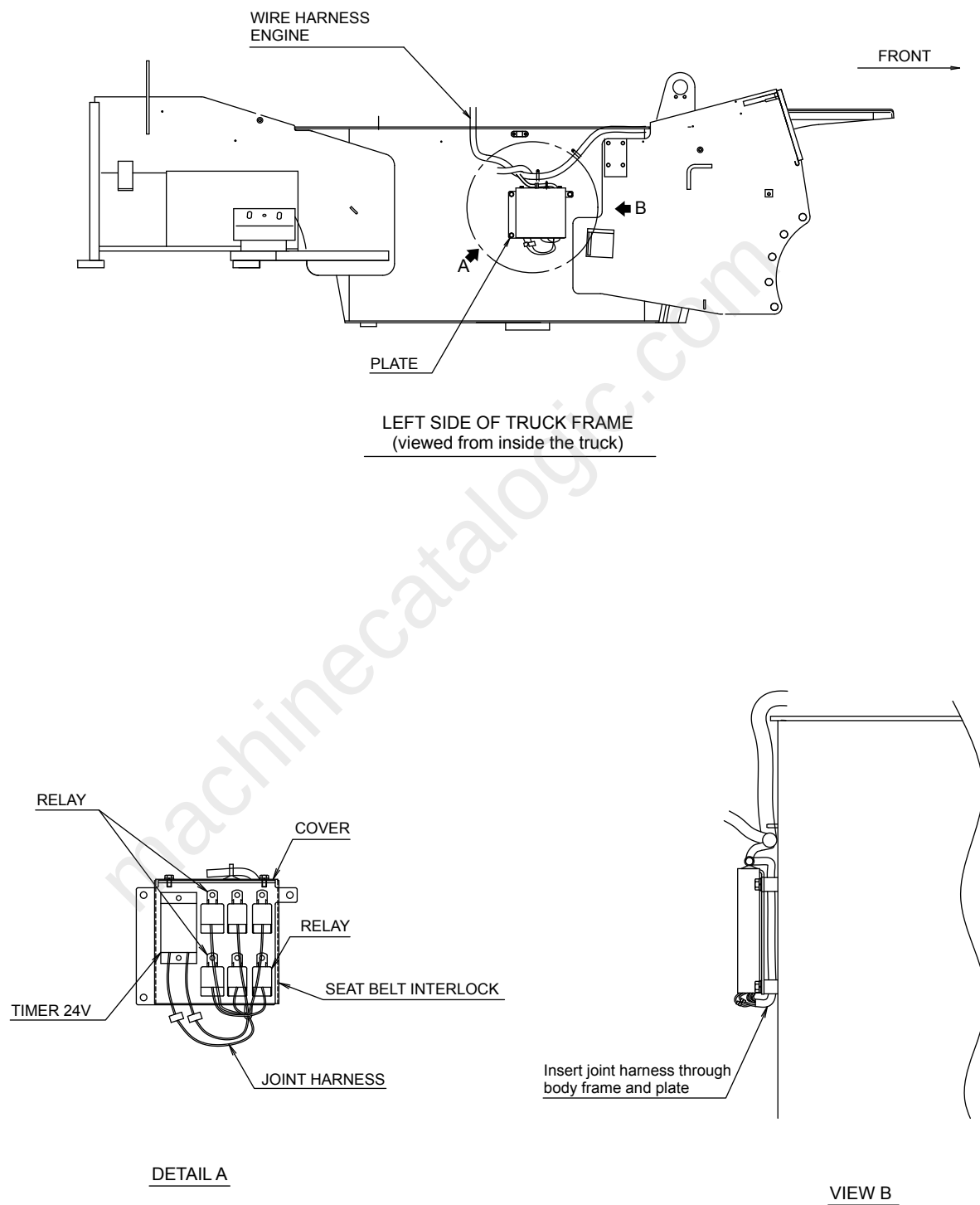
Note: The gearshift points can be changed with the switch as follows:

2nd speed: 7 km/h (4.3 mph) or more

1st speed: 4 km/h (2.5 mph) or less



**Fig. 2.11** ATM Controller

**Fig. 9.3** Locations of Electrical Parts, Seat Belt Interlock



## Full Version Available

### Caterpillar DP70NH Forklift Service Manual (99709-41100)

Caterpillar DP70NH forklift service manual, covers mast, hydraulics, power train, wiring, and engine service. Downloadable PDF format.

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