

MT27 / MT30

Operation and Maintenance Manual

MX159053

Serial Number 353001 thru 353867

February 1, 1994

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This documentation may include attachments and optional equipment not available in your machine's package. Please call your distributor for additional items that you may require.

Illustrations used throughout this manual are used only as a representation of the actual piece of equipment, and may vary from the actual item.

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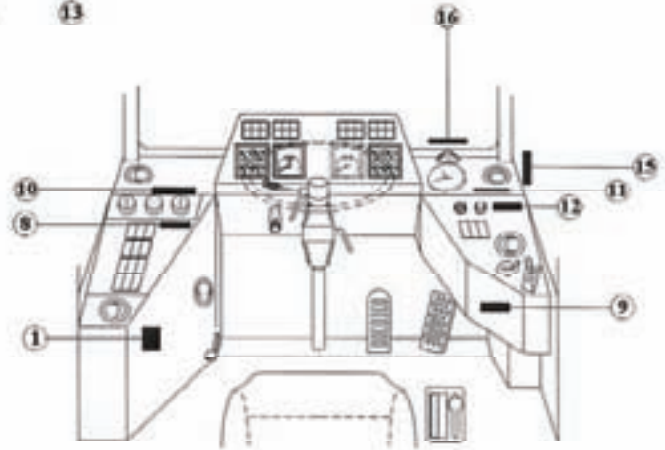
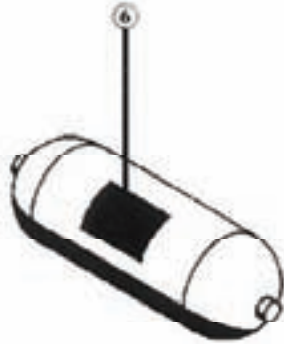
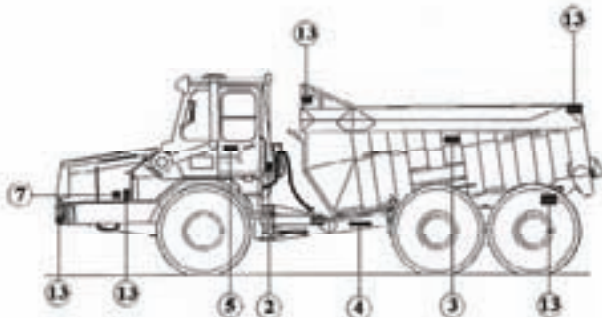
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19. SAFETY LABELS.

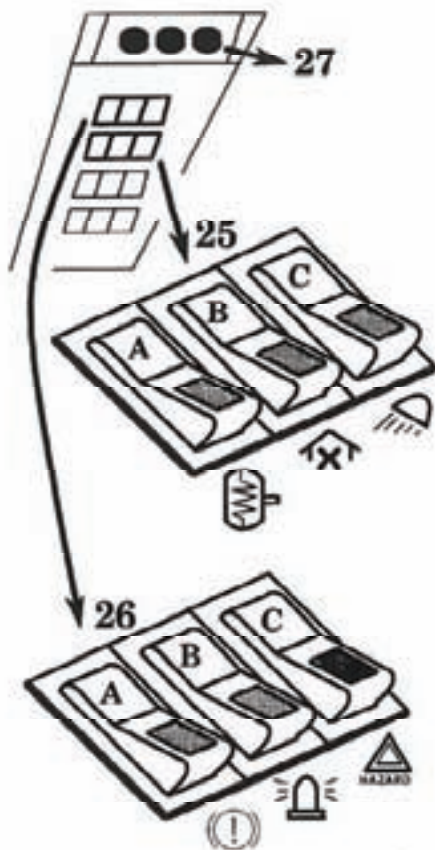
The following labels are related to safety should always be present and easy readable:

Cab certification.

The cab has been approved to current ROPS/FOPS standards. Structural damage, an overturn, modification, alteration or unpermitted repair can affect the cab strength and thereby voiding the certification. Consult your Moxy dealer to determine this structure's limitations without voiding it's certification.



3. OPERATING CONTROLS



25A. Mirror heater switch, optional.

Push switch to heat the external mirrors for ice and dew removal. The indicator light 7E will illuminate when engaged. Built-in light. *Engage only when necessary!*

25B. Roof fan switch, optional.

Push to engage the one-speed fan in the roof. Built-in light.

25C. Work light switch.

Push switch to light the work light on the roof. An indicator light (7C) lights up when engaged. Built-in light.

26A. Test switch for brake warning light.

Push the switch and check that the warning light for brake fluid circuit failure (2E) lights up. Automatic return.

26B. Rotating beacon switch, optional.

Push switch to engage the rotating beacon at the roof. An indicator light (7B) lights up when engaged. Built-in light.

26C. Hazard light switch.

Push switch to engage the hazard light (all directional lights flash at the same time). An indicator light on central panel (3C) flash correspondingly. Built-in indicator light.

27. Fan switch.

See Cab ventilation controls for utilization.

2. OPERATING THE MACHINE.

2.1 Driving off.

When the engine is running properly and the air pressures are within operating range:

- Check that gauges and warning lights do not indicate any abnormalities.
- Confirm low idle speed.
- Depress the brake pedal.
- Release the parking brake and confirm that the indicator light goes off.
- Select a suitable gear position at low idle (see 2.3 *Gearshifting* below).
- Increase the engine speed by pressing the accelerator pedal downwards.

2.2. Warming up period.

When driving off with a cold machine, operate the machine gently with reduced engine load rpm to warm up until all gauges indicate operating range. This is important to avoid reduction of the machine's performance potential.

- Engine coolant temperature: min. 70°C
- Transmission oil temperature: min. 60°C

2.3 Gear shifting.

The transmission has automatic gear shift to match the travel speed. The shifting is electronically controlled and an automatic lock-up clutch is fitted in the transmission to increase the efficiency in all gears. Connection/disconnection depends on the engine speed and shifting mode.

Gear positions 1, 2 and 3.

Manual selection of 1st, 2nd and 3rd gear. Select a manual gear position to avoid repeated up and down shifting when driving at heavy conditions (f.ex steep hills, slippery or soft ground), more details on next page.

Gear position D.

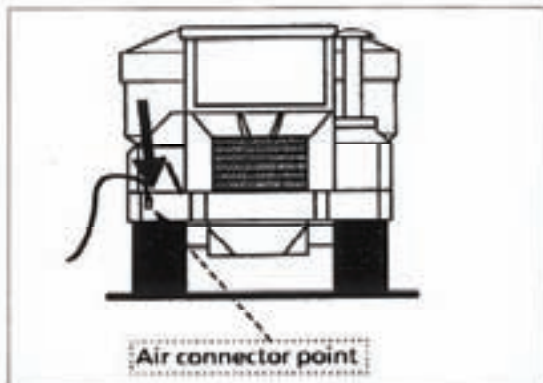
The transmission automatically shifts between 1st-6th gear, depending on both engine as well as truck speed. The gear shift is also controlled by the throttle pedal position. Shifting at low rpm happens when the pedal is partially depressed (*part load mode*). When the throttle pedal is more than half depressed, the gear shifting will take place at high rpm (*full load mode*). With the throttle pedal fully depressed (*kick-down mode*), the gear shifting will either be prevented or close to the maximum engine rpm. With the engine brake engaged, the gear shifting will be according to the full load mode.

Operating hints.

Different types of terrain require different operating techniques. Use the position D for normal travel. For advanced driving, select pos. 3 when driving off with unloaded truck in light conditions to avoid the shifting from 1st. to 3rd gear. Shift to pos. D for automatic gear shifting. When the intention is to stop the truck, pos. 3 can be selected to avoid the automatic down shifting from 3rd to 1st gear.

In terrain, before uphill/downhill driving, manually select a suitable position for the estimated speed in the area, avoid repeated up and down shifting and gear shifting in hills

- * *When selecting a gear from the neutral position and when switching between forward and reverse gears:*
 - *Stop the truck and release the throttle pedal completely.*
 - *Select the desired gear and wait until the gear is connected before increasing the engine speed.*
- * *Always drive allowing the lock-up clutch to connect (indicator light)!*
- * *Neutral position must not be selected when driving.*



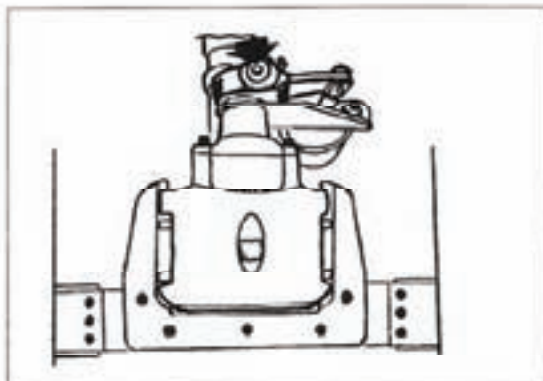
11. EXTERNAL AIR FILLING.

Filling of the air system can be done with external air through the air connector fitted into right side front fender. In the tool kit there is a hose for this purpose. The parking brake must be applied, or wheel chocks put under the wheels.

- Remove the protection cap.
- Connect the hose nipple to the connector.
- Start filling and check the pressure at the cabin gauges.

The machine can now be moved if the parking brake can be released.

NOTE! *The pressure will gradually drop when braking. Pay attention to the braking effect!*



12. MANUAL RELEASE OF PARKING BRAKE.

If the parking brake can not be disengaged by the parking brake lever (air pressure is lost), a manual releasing can be done:

- Put brake blocks under the wheels.
- Screw the parking brake caliper adjusting screw inwards until the brake is released.

CAUTION! *All braking systems are now out of function. Extreme care must be taken to avoid spontaneous rolling.*



13. TYRE FILLING POINT.

The air filling connector (see above) can also be used for filling air into the tyres. Use the hose in the tool kit.

- Connect the hose to the connector and fill air.
- Check the air pressure with a separate gauge.
- For basic tyre inflation, see: chapt. 8. Technical Data.

CAUTION! *Be sure to use a self-locking nipple and do not stay in front of the tyre during filling!*

MAINTENANCE TABLE

8 HOURS / DAILY SERVICE

1. General	Walk around check	50
	check driver seat	50
2. Engine	Check oil level	50
	check coolant level	50
	check air dryer	50
	drain air tanks	51
3. Transmission	Check oil level	51
4. Hydraulic system	Check oil level	51
	check filter indicator	51
5. Brake system	Check fluid levels	52
6. Lubrication:		
a) Artic. turning ring	5 lubricators	52
b) Tip hinges	2 — " —	52
c) Tailgate	9 — " —	52
d) Tandem bearings	2 — " —	52
7. Tyres	Check condition/inflation	53
8. Parking brake	Check function	53
9. Main brakes	Check function	53
10. Engine brake	Check function	53
11. Steering	Check function	53

40 HOURS / WEEKLY SERVICE

1. Driver seat	Check function	54
2. Engine	Check/clean prefilter	54
	check batteries	54
3. Electrical system	Check wiring	54
4. Lubrication:		
a) Artic. bearings	2 lubricators	55
b) Steering cyl. bearings	4 — " —	55
c) Tip cyl. bearings	4 — " —	55

250 HOURS SERVICE

1. Engine	Change oil	56
	clean centr. cleaner	56
	replace turbo filter	58
	check fan belts	58
2. Fuel tank	Drain cond. water	58
3. Exhaust system	Safety check	58
4. Cab ventilation	Check filter	59
5. a) Front differential	Check oil level	59
b) Rear differential	Check oil level	59
c) Tandem housings	Check oil level	59
d) Front reduct. gears	Check oil level	59
6. Hydraulic tank	Drain cond. water	59
7. Wheels	Check nuts torque	60
8. Lubrication		
a) Rear axle prop. shaft	2 lubricators	60
b) Artic. prop. shaft	2 — " —	60
c) Converter prop. shaft	2 — " —	60

500 HOURS SERVICE

1. Engine	General check	61
2. Transmission	General check	61
3. Drive line	General check	61
4. Fuel and hydr. tanks	General check	61
5. Brake system	Check linings	62
6. Hydraulic system	Replace breather	62
	replace filter	63
7. Lubrication:		
a) Fr. axle prop. shafts	4 lubricators	63
b) Doors and fenders	8 — " —	63
c) Body safety bar	1 — " —	63

1000 HOURS SERVICE

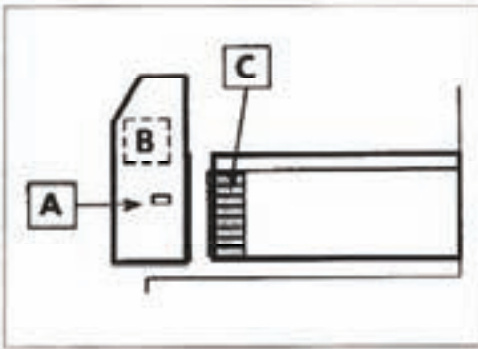
1. Driver seat	Safety check	64
2. Engine	Check/adjust valves	64
	replace fuel filters	65
	replace coolant filter	65
	check coolant	66
	check batteries	67
3. Transmission	Change oil	67
	replace filter	67
4. Front differential	Change oil	68
5. Rear differential	Change oil	68
6. Tandem housings	Change oil	68
7. Front reduction gears	Change oil	69
8. Lubrication:		
Suspension legs	4 lubricators	69

2000 HOURS SERVICE

1. Engine	Check injectors	70
	check cooling system	70
	replace air dryer filter	70
2. Hydraulic system	Change oil	70
	inspect hoses	70
	clean strainers	70
3. Brake system	Inspect lines	71
	change fluid	71

SERVICE WHEN REQUIRED

1. Engine	Clean/replace air filter	72
	clean cooling system	72
	check air dryer	73
2. Tailgate	Check function	73
3. Parking brake	Check breather	73

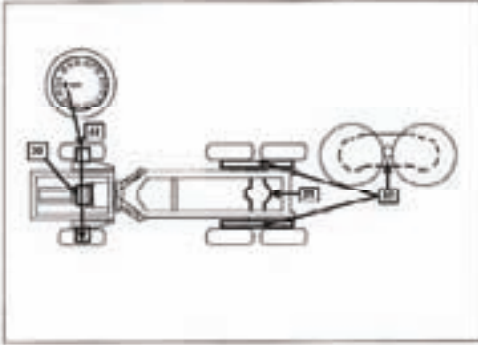


4. CAB VENTILATION.

Check filter element condition.

- Open 2 clamps (A) and remove inlet cover (B).
- Check if the element is clogged/damaged.
* Replace if necessary.

Adjust the check interval if another requirement is experienced.



5. DRIVE LINE.

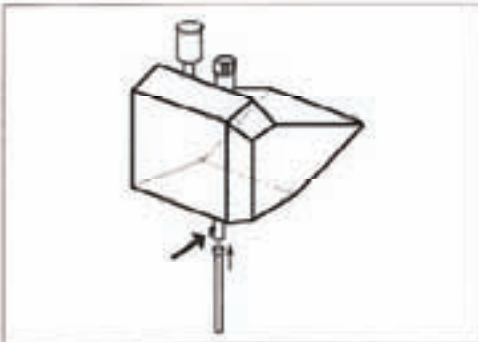
Check oil levels.

Measurements must be done when machine is parked on a horizontal ground. Check that oil level is near the bottom edge of the plugs. Refill with oil if level is too low. If the machine (or tandem housing) is angled, the reading can be incorrect.

NOTE!

Be aware of possible internal pressure when the oil is hot!

- (30) Front differential (key in tool kit). Unscrew the upper (filling/level) plug.
 - (31) Rear differential. Unscrew the filling/level plug at the rear of housing.
 - (32) Tandem housings. Unscrew the level plugs on the outside of the housings.
 - (33) Front reduction gears. Turn the housings until level indicator is horizontal. Unscrew the plugs.
- * Plug torque: 80 Nm.



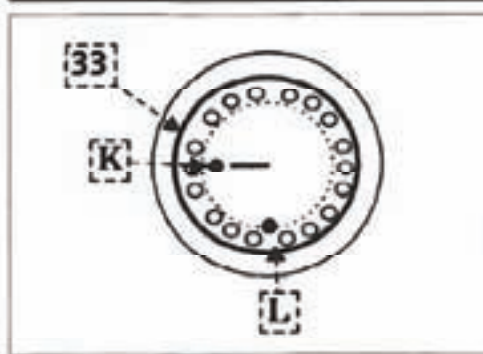
6. HYDRAULIC TANK.

(40) Drain condensated water.

- Open left foot step hatch.
- Place a suitable container to catch spillage.
- Remove the blanking plug from drainer.
- Install draining hose with nipple (tool kit).
- Open the drainer cock.
- Drain until water/sediment free oil comes out.
- Remove hose and reinstall the blanking plug.
- Check for leakage.
- Refill with clean oil to correct level if necessary.

NOTE! *If larger amount of dirt and contamination is collected into the tank:*

- Drain all oil.
- Remove the hose flanges in engine compartment and thoroughly clean inside of the tank.



NOTE!
Running in: perform after
the first 500 hours.

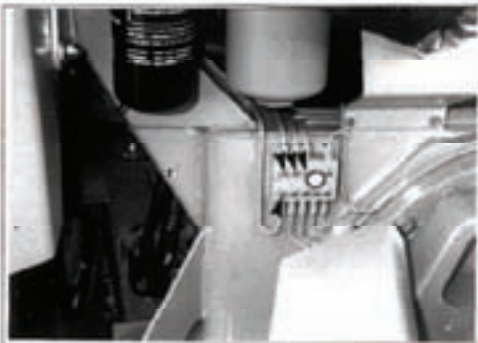
7. FRONT REDUCTION GEARS.

(33) Change oil (change at least once a year).

- The machine must be horizontal.
- Turn the housing, so that the plug shows downwards.
- Unscrew the plug and drain the oil into a suitable container.

*Be aware of possible internal pressure when the oil is hot!
Oil can spurt out when opening a plug!*

- Turn the housing 90°, so that the level indicator is horizontal.
- Fill new oil to correct level through level/filling plug.
- Clean plug, replace seal if necessary and reinstall.
* Tightening torque: 80 Nm.
- Recheck oil level after test driving.



8. LUBRICATION.

Grease following lubrication points:

(63) Suspension legs (4 lubricators).

The lubricators are located on the distribution block (fitted on rear, left side of the front frame).

11. Continue with all items in 500 hours service.

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