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MANUAL PREVIEW

Allis Chalmers

Operator's Manual

M100B

Motor Grader

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AC-O-M100B MG

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**M100B
MOTOR GRADER**

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WHEEL BRAKES

Number of Brakes	4
Type (Hydraulic)	Duo-Servo
Controls	Power
Lining Area per Brake	143 sq. in.

MOLDBOARD

Length	12 ft.
Number of End Bits	2
Side Shift (Maximum from Center Position with Moldboard on Ground, Lift and Side Shift Links at Minimum Length and Moldboard Shifted on Moldboard Arms)	49 in. R.H. 43 in. L.H.

Reach Outside Rear Wheels:

(Maximum with moldboard on ground and at 90° to centerline of grader, lift links at maximum length, side shift link adjusted to minimum length and attached to drawbar cross member on left S.S. ball for R.H. reach. Opposite linkage setup for L.H. reach)

	92 in. R.H.
	86 in. L.H.
Number of Pitch Positions	9
Lateral Shift of Moldboard	21 in. L.H. 27 in. R.H.
Maximum Lift Above Ground	17-1/2 in.
Ground Penetration (Maximum)	28 in.
Bank Cutting Angle	90°

CIRCLE TURN

Diameter	
Maximum Outside	69 in.
Vertical Length	63 in.
Rotation	360°
Throat Clearance (Distance Between Top of Moldboard and Bottom of Circle with Moldboard in Normal Position)	5-3/8 in.

LIFT CASES

Type	Enclosed Worm and Gears
Crank Rotation	308°
Lift Link Connection	Ball and Socket
Lift Link Take-Up	Shims

SIDE SHIFT CASE

Type	Enclosed Worm and Gears
Crank Rotation	204°
Side Shift Link Connection	Ball and Socket
Side Shift Link Take-Up	Shims

FRONT AXLE

Axle Tilt Each Way	20°
Wheel Lean Each Way	20°

TANDEM CASES

Drive	Roller Chains
Pitch of Chain	2 in.

STEERING GEAR

Type	Hydraulic Power
Ratio	14 to 1

CAPACITIES (APPROXIMATE) (U.S. STANDARD MEASURE)

Fuel Tank	55 gals.
Cooling System	8-3/4 gals.
Engine Crankcase (with Filters & Clutch)	4 gals.
Transmission (Including Filter)	4 gals.
Rear Axle Housing Center Compartment	5-1/4 gals.
End Compartments (each)	1-1/4 gals.
Tandem Drive Cases (each)	8 gals.
Hydraulic System and Filter	10-1/2 gals.
Power Control Worm and Gear	
Drive Housing	1 qt.
Power Control Box	1-3/4 gal.
Side Shift Gear Housing	
Large Compartment	1 gal.
Small Compartment	1/4 gal.
Moldboard Lift Gear Housing	
Large Compartment	1 gal.
Small Compartment	1/4 gal.
Circle Turn Gear Housing	5 lbs.
Front Wheel Lean Gear Housing	4-1/2 lbs.
Brake Master Cylinder	2-1/4 pts.

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200-HOUR SERVICES

NOTE

Also perform 10 and 100-Hour Services.

CHECK

MOLDBOARD LIFT GEAR HOUSINGS - OIL LEVEL - 2 housings (large and small) on each side (Fig. 21 and Fig. 24). Check oil level and add oil if necessary to raise oil level to oil level plugs.

SIDE SHIFT GEAR HOUSINGS - OIL LEVEL - 2 housings (large and small) in center (Fig. 23 and Fig. 24). Check oil level and add oil if necessary to raise oil level to oil level plugs.

CIRCLE TURN GEAR HOUSING - Check - (Fig. 18). Must be packed with "O" consistency truck wheel lubricant.

TRANSMISSION - OIL LEVEL - Check oil level and add oil through oil filler pipe (Figs. 21 and 6) if necessary to raise oil level even with oil level plug (Fig. 22).



Fig. 22
(T-37825)

REAR AXLE HOUSING - OIL LEVEL - Center compartment and 2 end compartments - Check oil level and add oil if necessary to raise oil level even with oil level plugs (Fig. 19).

MOLDBOARD LIFT GEAR BRAKES (S/N 1702-Up) - Remove pipe plug from brake housing and add 10-20 drops of SAE 30 oil. Install plug and tighten securely.

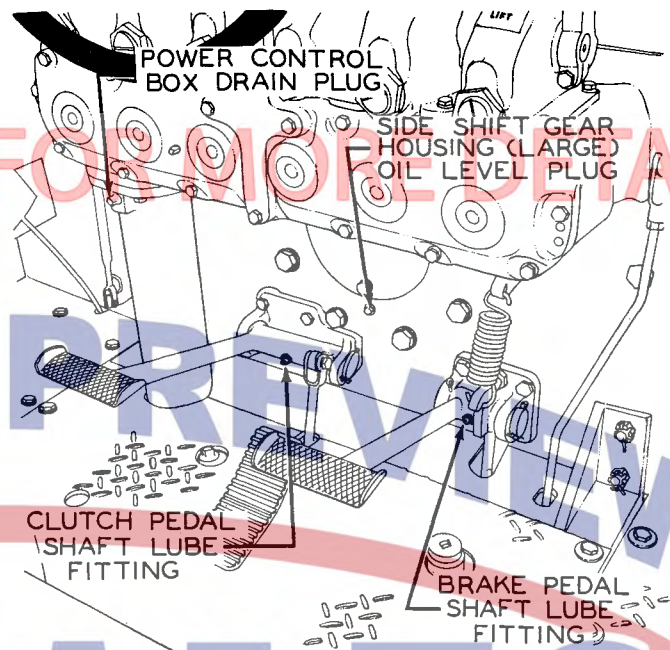


Fig. 23
(T-73739)

TANDEM DRIVE CASES - OIL LEVEL - 1 Level plug each tandem case. Check oil level and add oil if necessary to raise oil level even with oil level plug[®] (Fig. 25).

POWER CONTROL BOX - OIL LEVEL - Check oil level (Fig. 21), and add oil if necessary to raise oil level even with oil level plug.

POWER CONTROL WORM AND GEAR DRIVE HOUSING - OIL LEVEL - Check oil level (Fig. 26), and add oil (Fig. 6) if necessary to raise oil level even with oil level plug.

CAUTION

Do not over fill.

TIRES - INFLATION PRESSURE - Check all tires for specified inflation pressure. Inflate to specified pressure. Refer to "TIRES AND RIMS" for detailed information.

fuel filter and fuel transfer pump is collected by second stage fuel filter and prevented from entering fuel injection pump. Drain cock is provided in bottom of each filter shell for draining any water or sediment collected.

2. SERVICE

Open drain cock in bottom of each fuel filter shell daily, before start of day's operation in warm weather or shortly after end of day's operation in freezing weather, and allow any water or sediment to drain. Close drain cocks as soon as clean fuel runs out. Remove and discard filter element in each filter and install new elements after every 200 hours of operation (more often if conditions warrant), or when fuel filters become clogged and pressure of less than 8 psi is indicated by fuel pressure gauge. Clogged filter elements are usually indicated by irregular engine performance.

3. REPLACEMENT OF FIRST STAGE FUEL FILTER ELEMENT (Fig. 49).

NOTE

First stage fuel filter does not contain an element when grader is equipped with Heavy-Duty Fuel Filter (Special Equipment).

- Close fuel tank shut-off valve. Clean all dirt from around filter head and shell. Loosen vent screw in top of shell retaining nut and drain cock in bottom of filter shell and allow filter to drain.
- Loosen shell retaining nut in filter head until it is free from shell center-bolt and remove filter shell from filter head.
- Remove and discard filter element and shell gasket. Wash and dry interior of filter shell.
- Install new filter element and push it down firmly so up-turned edge of seatplate, attached to bottom of shell center-bolt, is firmly impressed into bottom of filter element.
- Install new shell gasket in position in lip of shell. Hold filter shell in position under filter head and engage threads of shell retaining nut with shell center-bolt and tighten retaining nut securely.
- Close filter drain cock. Open fuel tank shut-off valve and allow filter to fill with fuel by gravity. Tighten filter vent screw when fuel (free of bubbles) flows from around vent screw.

4. REPLACEMENT OF SECOND STAGE FUEL FILTER ELEMENT (Fig. 49)

- Clean fuel filter head and surrounding area. Loosen vent screw in shell retaining nut and

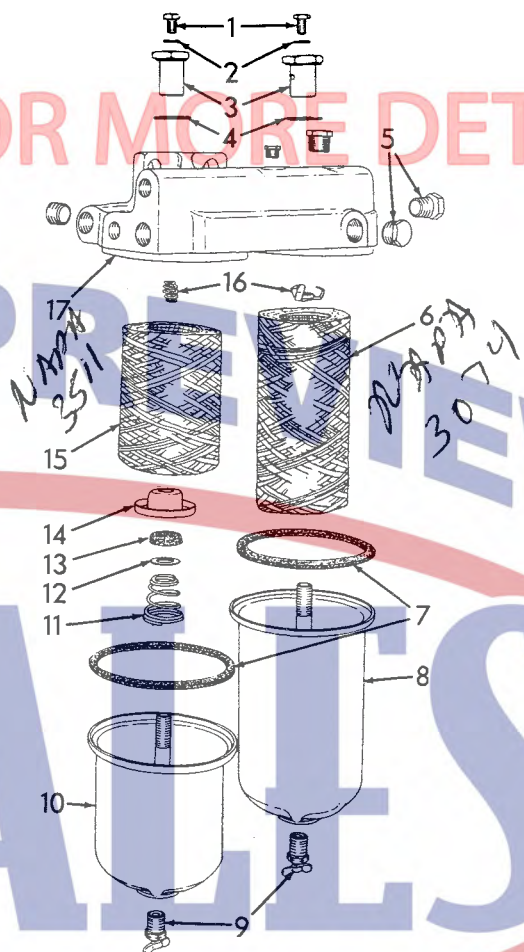


Fig. 49 First and Second Stage Fuel Filter Details
(Prior to S/N 1209)
(T-22578)

1. Screws, vent
2. Washers, copper
3. Nuts, shell retaining
4. Gaskets
5. Plugs
6. Element, first stage
7. Gaskets, shell
8. Shell, first stage filter
9. Cocks, drain
10. Shell, second stage filter
11. Spring, element
12. Washer, metal
13. Gasket, element seating plate
14. Plate, element seating
15. Element, second stage
16. Guides, element centering
17. Head, filter

drain cock in bottom of filter shell and allow filter to drain.

- Loosen shell retaining nut in filter head until it is free from shell center-bolt and remove filter shell (with its components) from filter head.