



Run Smart™

108SD AND 114SD MAINTENANCE MANUAL

**Models: 108SD
114SD**

Page Description

For an example of a 108SD and 114SD Maintenance Manual page, see Fig. 1.

A
B
C

Transmission

26

26-01 Transmission Fluid Level Check

NOTICE

Operating a transmission with the fluid level higher or lower than recommended can result in transmission damage. Do not overfill the transmission.

Do not mix types and brands of fluid, because of possible incompatibility. Do not use fluid additives, friction modifiers, extreme-pressure gear fluids, or multiviscosity lubricants.

Eaton Fuller

NOTE: Check the transmission fluid level with the transmission at operating temperature.

1. Park the vehicle on a level surface, apply the parking brakes, and chock the tires.
2. Clean the area around the fill plug, then remove the plug from the side of the gear case.
3. Using your gloved finger or a bent pipe cleaner, check if the fluid is level with the fill opening. See Fig. 1.

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A. Full B. Low

Fig. 1. Checking Transmission Fluid Level

4. If the fluid level is low, check the transmission for leaks, and correct as needed.
5. If needed, add Eaton-approved fluid until it is level with the lower edge of the fill opening. Eaton-approved fluid, such as the Roadranger SAE 50 product, meets the requirements of the PS-164 Rev. 7 lubricant specification. For more information about Eaton lubricant specifications and suppliers, call 1-800-826-4357 or see www.roadranger.com.

6. Clean the fill plug, then install it. Tighten the plug as follows:
 - 25 to 35 lbf-ft (34 to 48 N-m) for transmissions with 3/4-inch pipe threads.
 - 60 to 75 lbf-ft (81 to 102 N-m) for transmissions with 3/4-inch pipe threads.

Allison

NOTE: For Allison transmissions equipped with an oil level sensor, the transmission fluid level can be checked electronically. For more information, refer to the Allison Transmission website, www.allisontransmission.com.

Cold Check

Clean all dirt from around the end of the fluid fill tube before removing the dipstick. Do not allow foreign matter to enter the transmission. Dirt or foreign matter in the hydraulic system may cause undue wear of transmission parts, make valves stick, and clog passages.

It is important to check the fluid level cold to determine if the transmission has a sufficient amount of fluid to be safely operated until a hot check can be performed.

1. Park the vehicle on a level surface, apply the parking brakes, and chock the tires.
2. Run the engine for at least one minute.
3. Shift from DRIVE to NEUTRAL, and then shift to REVERSE to fill the hydraulic system.
4. Shift to NEUTRAL and allow the engine to idle at 500 to 800 rpm.
5. With the engine running at idle, remove the dipstick from the tube and wipe it clean.
6. Insert the dipstick into the tube, then remove it.
7. Check the fluid level reading, then repeat the check procedure to verify the reading.

If the fluid level is within the COLD RUN band, the transmission may be operated until the fluid is hot enough to perform a hot check.

If the fluid level is not within the COLD RUN band, add or drain fluid as needed to adjust the fluid level to the middle of the COLD RUN band. See Fig. 2.

D
E
F

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A. Maintenance Operation Number consists of the Group Number followed by the Sequence Number
 B. Group Title
 C. Group Number
 D. Vehicle Name
 E. Release Date
 F. Group Number/Page Number

Fig. 1, Example of a 108SD and 114SD Maintenance Manual Page

Group No.	Group Title
00	General Information
01	Engine
09	Air Intake
13	Air Compressor
15	Alternators and Starters
20	Engine Cooling/Radiator
25	Clutch
26	Transmission
31	Frame and Frame Components
32	Suspension
33	Front Axle
35	Rear Axle
40	Wheels and Tires
41	Driveline
42	Brakes
46	Steering
47	Fuel
49	Exhaust
60	Cab
72	Doors
83	Heater and Air Conditioner
88	Hood, Grille, and Cab Fenders

Title of Maintenance Operation (MOP)	MOP Number
00-01 Determining Scheduled Maintenance Intervals	00-01
00-02 Initial Maintenance (IM) Operations.	00-02
00-03 M1 Maintenance Interval Operations.	00-03
00-04 M2 Maintenance Interval Operations.	00-04
00-05 M3 Maintenance Interval Operations.	00-05
00-06 M4 Maintenance Interval Operations.	00-06
00-07 M5 Maintenance Interval Operations.	00-07
00-08 Maintenance Sequence and Log	00-08
00-09 Noise Emission Controls	00-09
00-10 Verification of Inspections Log	00-10
00-11 Metric/U.S. Customary Conversion Tables.	00-11
00-12 Torque Specifications.	00-12

00–01 Determining Scheduled Maintenance Intervals

Determining Scheduled Maintenance Intervals

Performing regular maintenance will help ensure that your vehicle delivers safe, reliable service and optimum performance. A proper maintenance program will also help to minimize downtime and safeguard warranties.

To determine the correct maintenance intervals for your vehicle, you must first determine the type of service or conditions the vehicle will be operating in. Most vehicles operate in conditions that fall within one of two schedules. Before placing your vehicle in service, determine which schedule applies to your vehicle.

Schedules

Schedule I (severe service) applies to vehicles that travel up to 6000 miles (10 000 kilometers) annually or that operate under severe conditions. Examples of Schedule I usage are:

- operation on extremely poor roads or where there is heavy dust accumulation
- constant exposure to extreme hot, cold, salt air, or other extreme climates
- frequent short-distance travel
- construction-site operation
- city operation such as fire truck and garbage truck.

- farm operation

Schedule II (short-haul transport) applies to vehicles that travel 6000 miles (10 000 kilometers) or more annually and operate under normal conditions. Examples of Schedule II usage are:

- operation primarily in cities and densely populated areas
- local transport with infrequent freeway travel
- high percentage of stop-and-go travel

Maintenance Intervals

After determining the schedule appropriate to your vehicle, refer to **Table 1** to determine when to perform the Initial Maintenance (IM) and the frequency of performing subsequent maintenance intervals for each schedule.

Maintenance Operations

This manual has an index at the beginning of each Group that lists the title and number of each maintenance operation (MOP) for that Group. Follow the instructions under the MOP number to perform the required maintenance.

In addition to the maintenance operations required for the maintenance interval, perform all daily, weekly, and monthly maintenance operations listed in Chapter 21, "Pretrip and Post-Trip Inspections and Maintenance", of the *108SD and 114SD Driver's Manual*.

Maintenance Schedules					
Schedule	Maintenance Intervals				
	Maintenance Interval	Frequency	Mileage	km	Hours
Schedule I* (severe service) for vehicles that travel up to 6000 miles (10 000 km) annually	Initial Maintenance (IM)	first	1000	1600	100
	Maintenance 1 (M1)	every	1000	1600	100
	Maintenance 2 (M2)	every	4000	6400	400
	Maintenance 3 (M3)	every	8000	12 800	800
	Maintenance 4 (M4)	every	16,000	25 600	1600
	Maintenance 5 (M5)	every	32,000	51 200	3200

00–01 Determining Scheduled Maintenance Intervals

Maintenance Schedules					
Schedule	Maintenance Intervals				
	Maintenance Interval	Frequency	Mileage	km	Hours
Schedule II (short-haul transport) for vehicles that travel 6000 miles (10 000 km) or more annually	Initial Maintenance (IM)	first	8000	12 000	—
	Maintenance 1 (M1)	every	8000	12 000	
	Maintenance 2 (M2)	every	16,000	24 000	
	Maintenance 3 (M3)	every	32,000	48 000	
	Maintenance 4 (M4)	every	64,000	96 000	
	Maintenance 5 (M5)	every	128,000	192 000	

* For Schedule I vehicles equipped with an hourmeter, use maintenance intervals based on hours of operation rather than mileage.

Table 1, Maintenance Schedules

Thanks for your reading.

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