



INDUSTRIAL TRUCK SCHEDULED MAINTENANCE INSPECTIONS

1. SCOPE:

"Industrial Vehicle" as referred to in this standard includes all vehicles referenced in the Powered Material Handling Vehicles (PMHV) Operator's Manual/Handbook. Specifically: Lift Trucks, Stand-up Riding Trucks & Walking Trucks, Tow Tractors, and Order Pickers. Personnel Carriers, Burden Carriers, Floor Cleaning Equipment (Indoor/Outdoor), Personnel Lifts, Mobil Cranes, Construction Equipment and other miscellaneous industrial equipment such as Automated Guided Vehicles (AGV), should use the Manufacturers maintenance schedule/menu or local/Governmental regulations.

Any unit which is a rental unit must be serviced by the rental personnel. Repairs on rental units are the responsibility of the rental agency. Ford personnel are NOT to repair rental vehicles.

2. REQUIREMENTS:

Fill out the heading on the Scheduled Maintenance Inspection Form #3384a for engine powered equipment or Form #3384b for electrically powered equipment, as applicable. Perform the required inspections and servicing indicated for an "A", "B", or "C" Inspection.

Each applicable item contained on the inspection check sheets is to be checked and condition recorded by inserting the code for: O.K., repairs required, or repairs made as applicable opposite each item.

Each inspection or service item shall be performed in accordance with the applicable inspection procedure.

3. INSPECTION PROCEDURES - ENGINE POWERED EQUIPMENT:

3.1 "A" INSPECTION - ENGINE POWERED EQUIPMENT - EACH 200 OPERATING HOURS:

- 3.1.1 OPERATING HOUR METER: Check operation of engine hour meter and record reading on inspection form. If meter is inoperative, replace and record the fact that the meter has been replaced and the number of operating hours which are indicated on the replaced meter.
- 3.1.2 CLEAN VEHICLE: Clean vehicle according to manufacturer's recommendations.
- 3.1.3 ENGINE OPERATION: Start engine and check operation. If engine misses and does not run smooth, perform the "B" inspection outlined in 3.2.3.



3.1.4

AIR CLEANER:

OIL BATH TYPE

- a. Remove, disassemble and wash cleaner assembly using a suitable solvent.
- b. Refill with specified lubricating oil and reinstall.
- c. Check connecting clamps, gaskets, hose and hose connection parts; replace defective components.

DRY TYPE

- a. Remove and disassemble cleaner assembly and precleaner, if applicable.
- b. Clean metal air cleaner body and dust cup, if applicable.
- c. Clean filter element by tapping against a hard surface. If this process does not adequately clean element or if element is damaged, replace.

CAUTION: Do not tap hard enough to deform the element. Do not immerse element in cleaning solvent nor blow out with compressed air.
- d. Check connecting clamps, gaskets, hose and hose connection parts; replace defective components.

3.1.5

ENGINE OIL AND FILTER:

- a. Remove the plug and drain the oil from the crankcase with engine at operating temperature.
- b. Examine drain plug threads and gasket and reinstall; replace if damaged.
- c. Remove and replace oil filter.
- d. Fill crankcase with the proper amount of specified engine oil.
- e. Check oil level.
- f. Start engine and check for leaks.



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- 3.1.6 ENGINE OIL PRESSURE:
- Check the idle and maximum oil pressure to the manufacturer's specification with engine at normal operating temperature.
 - If pressure is not normal, check operation of gages or warning lights and related parts; replace defective gages and related parts.
 - If pressure is not normal and gages or related parts are not defective, contact supervisor.
- 3.1.7 CRANKCASE VENTILATION:
- Check PCV system for damage or obstruction.
 - Remove breather filter and PCV valve, clean or replace.
- 3.1.8 FUEL SYSTEM: Check the entire fuel system for leaks. Repair or replace all leaking units.
- GASOLINE/DIESEL: Check to be sure fuel tank safety filler cap is in proper condition and protective screen is in place; repair or replace as required.
- PROPANE: Check LPG hose for proper location and mounting to avoid chafing. Check tank, operation of shutoff valve, guards, locating pin and other safety devices. Replace defective parts as required.
- 3.1.9 GOVERNOR:
- Check idle and maximum engine rpm with a tachometer.
 - Adjust maximum rpm to agree with manufacturer's specification to obtain the maximum travel speed of eight (8) mph.
 - Replace the seal if broken or missing.
- 3.1.10 STARTING BATTERY:
- Clean battery and neutralize corrosion by washing with a solution of Bicarbonate of Soda.
 - Check terminals and connectors.
 - Check battery case for cracks; if case is cracked, replace battery.



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- d. Check cell voltage with voltmeter and specific gravity with hydrometer. If voltage or gravity is below specification, charge or replace battery.

NOTE: Be sure to observe polarity when replacing a battery.

- e. Fill cells with distilled water.
- f. Check battery cables and replace as required.
- g. Tighten mounting bolts and brackets, if required.
- h. Coat terminals and retainment bolts with petrolatum.

CAUTION: Do not use battery additives.

3.1.18 LIFT ASSEMBLY:

- a. Inspect and adjust or replace as required.
 - 1. Forks (Refer to Z2A1-1)
 - 2. Uprights
 - 3. Lift Carriage
 - 4. Load Backrest
 - 5. Rollers
 - 6. Bearings
 - 7. Mounting Bolts
 - 8. Support Brackets
 - 9. Chains
 - 10. Attachments (side shift and rotators, etc.)
- b. Examine stressed members for cracks or other evidence of impending failure; replace as required.

NOTE: Modification or repair of structural, load bearing members, or safety related components is strictly prohibited, without the manufacturer's written approval.



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3.1.19 LUBRICATE (To meet manufacturer's specifications):

a. ENGINE ACCESSORIES:

CARBURETOR: Lubricate throttle linkage.

GOVERNOR: Lubricate linkage and joints.

b. TRANSMISSION:

MANUAL: Check level and fill housing as required with specified lubricant. Check and clean housing breather vent.

AUTOMATIC: Check level of transmission fluid and fill as required.

c. DRIVE AXLE: Check lubricant level and fill as required. Clean and check breather vent.

d. STEERING GEAR: Check lubricant level and fill as required.

e. POWER STEERING RESERVOIR: Check fluid level and fill as required.

f. HYDRAULIC SYSTEMS: Check level and fill as required.

g. CLUTCH RELEASE AND PILOT BEARING: Lubricate with grease.

h. MAST ASSEMBLY:

INNER SLIDES: Lubricate with grease.

BEARINGS: Lubricate with grease.

CHAIN: Lubricate with engine oil.

i. CHASSIS:

Clean grease fittings and surfaces, replace damaged or missing fittings. Lubricate all pressure gun grease points indicated on the manufacturer's lubrication chart.



3.1.20 TIRES:

SOLID, CUSHION AND FILLED:

- a. Check for uneven wear, bad cuts and rim separation.
- b. Remove all foreign matter which could damage the tire.
- c. Contact supervisor for decision on replacement of defective tires and applicable warranty disposition.

PNEUMATIC:

- a. Check tires for uneven wear and cuts or cracks.
- b. Remove all foreign matter which could damage the tire.
- c. Check tire air pressure and fill to specified pressure.
- d. If specified air pressure cannot be maintained, check valve, valve core; tighten or replace valve core.
- e. If pressure still cannot be maintained, repair or replace tire.
- f. Replace all missing valve caps.
- g. Contact Supervisor for decision on replacement of defective tires and applicable warranty disposition.

3.1.21 BRAKES:

HYDRAULIC:

- a. Drive truck to test brakes for a smooth even stop.
- b. Check pedal for excessive travel, sponginess, or loss of pressure.
 1. Correct excessive pedal travel by adjusting brakes.
 2. Correct pedal sponginess by bleeding air from lines, adding brake fluid and adjusting brakes.



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3. Correct loss of pressure by replacing leaking wheel cylinders or repairing leaking lines or connections. If leaks are not detected in these components, replace the master cylinder. Check the master cylinder linkage for specified amount of free play, with the brake pedal in the release position; adjust if required.

- c. Maintain brake fluid to manufacturer's recommended level.

MECHANICAL:

- a. Drive truck to test brakes for smooth even stop.
- b. Adjust brakes as required by tightening shoe adjustments until linings are tight to drums and loosen adjusting nut until wheels turn free. Note: Not required for units with self adjusting brakes.
- c. Check pedal spring tension, if pedal does not return to normal position, adjust or replace defective parts.

PARK:

- a. Check controls to insure that the brakes can be set securely; adjust or repair as required.
- b. Check cables and rods and repair as required.
- c. Drive truck to test brakes; repair and adjust brakes to hold as required.
- d. Be sure wheels turn freely after adjustments are made.

3.1.26 CLUTCH:

- a. Check pedal travel, and adjust as required.
- b. Drive truck to test for proper operation. If adjustment does not correct problem, inspect clutch assembly and repair or replace parts as necessary.

3.1.34 LIMIT SWITCHES: Test for correct operation and replace as required.

3.1.35 LIGHTS: Inspect lamp assemblies, switches and wiring and repair or replace defective parts as required.

3.1.36 HORN: Test for proper operation, repair or replace as required.



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3.1.37 SPECIAL EQUIPMENT: Trucks or devices designed and approved for hazardous area operation shall be maintained to insure that the original approved safe operating features function properly.

3.1.38 GENERAL INSPECTION:

- a. Examine frame, counterweight mounting and overhead guard for cracks and bent or fatigued parts.
- b. Determine that all nameplates and markings are in place and are in legible condition.

CAUTION: Any unit found to be in unsafe operating condition shall be removed IMMEDIATELY from service.

3.1.39 LEAKS:

- a. Make final inspection for water, oil, fuel, vacuum, air, or exhaust leaks.
- b. Tighten, repair, or replace any defective parts.

3.2 "B" INSPECTION - ENGINE POWERED EQUIPMENT - ALTERNATE 600 OPERATING HOURS:

3.2.1 OPERATING HOUR METER: Same as "A".

3.2.2 CLEAN VEHICLE: Same as "A".

3.2.3 ENGINE OPERATION:

SPARK PLUGS: Remove and replace with new spark plugs per manufacturer's specifications.

IGNITION SYSTEM:

- a. Remove distributor cap, inspect cap, rotor and other ignition components; clean and replace as required.
- b. Replace points and condenser as required.



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- c. Test operation - check and adjust dwell using a dwell meter, timing using a timing light or other components with equipment specified by the manufacturer.

FUEL DELIVERY SYSTEM: Includes - carburetor, fuel pump, LPG system vaporizer, injectors, fuel filters, etc.

Perform inspection and repair service according to the manufacturer's specifications. Do not start engine with air cleaner removed.

- 3.2.4 AIR CLEANER: Same as "A".
- 3.2.5 ENGINE OIL AND FILTER: Same as "A".
- 3.2.6 ENGINE OIL PRESSURE: Same as "A".
- 3.2.7 CRANKCASE VENTILATION: Same as "A".
- 3.2.8 FUEL SYSTEM: Same as "A".
- 3.2.9 GOVERNOR: Same as "A".
- 3.2.10 STARTING BATTERY: Same as "A".
- 3.2.15 ENGINE COOLING SYSTEM:

WATER:

- a. Check the following for defects or leaks:
- 1. Clamps
 - 2. Connections
 - 3. Gaskets
 - 4. Fans
 - 5. Water Pump
 - 6. Engine Water Jacket
 - 7. Radiator Cap and Coolant Type and Level
 - 8. Overflow Reservoir