

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL
OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL
TRUCK, LIFT, FORK, POWER SHIFT G.E.D.,
6,000 LB
CAPACITY, SRT. 180 IN. LIFT
(ALLIS CHALMERS MODEL F60-24PS-180)
(ARMY MODEL MHE 212)
FSN 3930-489-0263

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CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope

a. The instructions in this manual are for the use of personnel to whom the F60-24PS-180 Forklift Truck is issued. They provide procedures for Operator and Organizational levels of maintenance for the equipment and its accessories.

b. Instructions for destruction of material to prevent enemy use will be in accordance with TM 750-244-3 (Procedures for Destruction of Equipment to Prevent Enemy use).

c. Preparation, care and removal of equipment in administrative storage will be in accordance with applicable requirements of TM 740-90-1 (Administrative Storage of Equipment).

1-2. Forms and Records

DA Forms and Records used for equipment maintenance will be those prescribed in TM 38-750.

1-3. Equipment Serviceability Criteria

Not applicable to this equipment.

1-4. Reporting of Errors

Reporting of errors, omissions, and recommendations for improving this publication by the individual users is encouraged. Reports should be submitted on DA Form 2028, (Recommended Changes to Publications), and forwarded directly to Commanding General U.S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

Section II. DESCRIPTION AND DATA

1-5. Description

a. General. The Model F60-24PS-180 forklift truck (fig. 1-1 and 1-2) is built by the Allis-Chalmers Manufacturing Co. It is powered by gasoline engine, Model 6MB-230 and has a lifting capacity of 6000 pounds.

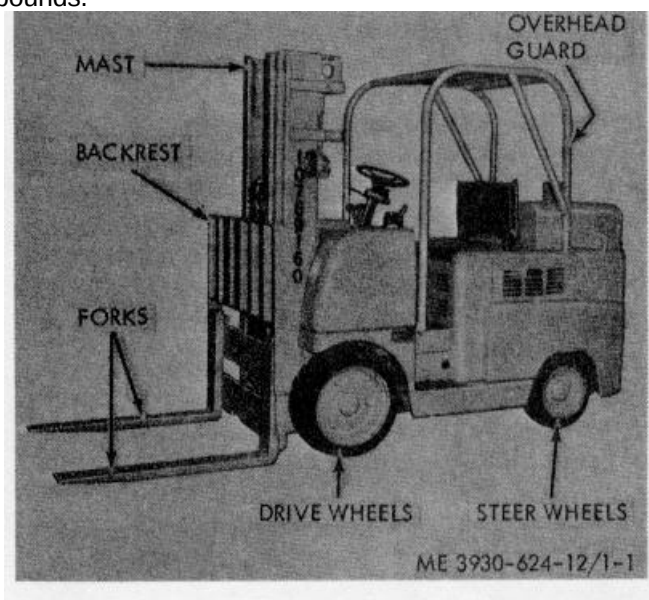


Figure 1-1. Truck, forklift, left front, three quarter view.

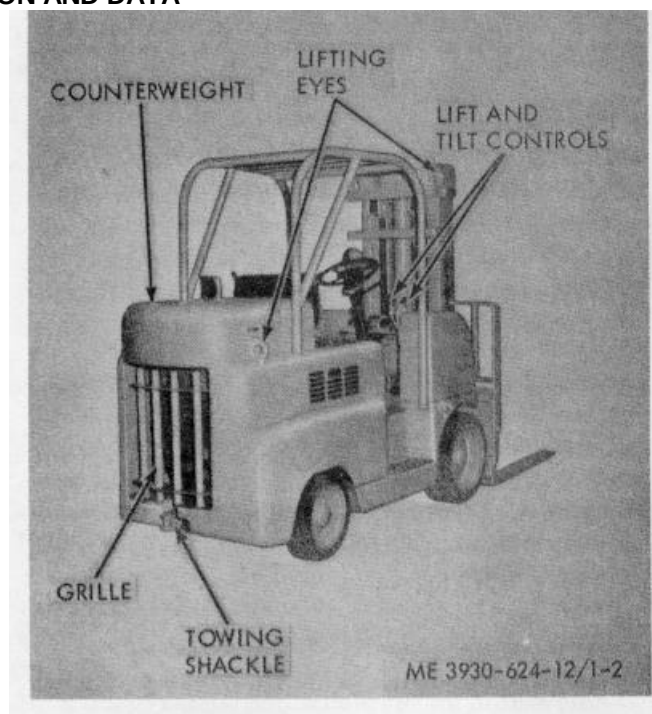


Figure 1-2. Truck, forklift, right rear, three quarter view.

b. *Engine.* The engine is of the four-stroke cycle design incorporating an over head valve arrangement. Engine cooling is accomplished by a belt-driven centrifugal pump forcing coolant through the head, block, and large tubular fin-type radiator. The engine is pressure lubricated to the rocker arms, main bearings, and connecting rods by a gear type oil pump driven by the camshaft. The oil is cleaned by a replaceable oil filter. Crankcase emission is eliminated via valve cover-to-intake manifold and block-to-air cleaner systems.

c. *Transmission.* The power-shift transmission consists of three major components: a constant-mesh transmission, a hydraulically actuated clutch pack, and a torque converter. A single lever shift control is mounted on the right of the steering column and controls the direction of travel through a control valve mounted on the transmission housing.

d. *Drive Unit.* The drive unit incorporates a double-reduction gear train. I parts of the unit are bearing-mounted. The first reduction is through a heavy duty spiral bevel ring gear and pinion drive gear. The final reduction is obtained through a pinion (axle shaft) and internal tooth gear (bull gear).

e. *Service Brakes.* The hydraulic self-adjusting brakes are located in each drive wheel. They have a large braking area and give smooth braking and positive control under all operating conditions.

f. *Parking Brake.* The parking brake is mounted on the differential case, and the brake drum is mounted on the differential-drive pinion flange. The parking brake handle is located within easy reach of the operator's left hand.

g. *Steering.* Steering of the lift truck is accomplished with full hydraulic power from a hydraulic cylinder. Rotation of the steering wheel operates a hydraulic valve, sending hydraulic pressure to the steering cylinder. Hydraulic oil pressure is supplied by the hydraulic pump mounted below the radiator. The pump also provides hydraulic oil pressure to operate the lift and tilt cylinders. Refer to figure 1-4 for schematic drawing of the hydraulic system.

h. *Mast.* The mast assembly consists of special rolled steel channel sections and is of all-welded construction. Two independent lift chains are utilized for safety, and each chain has sufficient strength to handle a full load safely. A seat at the bottom of the mast permits self-alignment of the lift cylinder within the mast channels, thus reducing off center stresses.

i. *Fork Carriage.* The fork carriage is a heavy-duty structure of welded steel built to provide the ultimate in strength and visibility with a minimum of overhang from the center of the drive wheels to the face of the forks.

The forks are mounted on the fork carriage supports at the top and bottom by fork anchors. The top carriage support is notched for positioning the forks, with a locking device in the top fork anchor to prevent shifting. The forks are identical to eliminate the necessity of a right and left fork.

j. *Hydraulic System.* Hydraulic pressure used to actuate the cylinders or accessory equipment is supplied by a positive-displacement gear pump coupled directly to the engine crankshaft. A control valve with handles conveniently located to the right of the operator actuates the lift and tilt cylinders or attachments. The hydraulic oil reservoir has more than ample capacity for normal displacement needs.

k. *Instrument Panel.* The instrument panel, located directly in front of the driver, has a complete set of electrical gages. These include an oil pressure gage, fuel gage, engine coolant temperature gage, ammeter, and a direct reading engine hour meter. The ignition starting switch and choke control are also located on the panel.

l. *Electrical System.* The truck utilizes a 12 volt electrical system which consists of a 12 volt battery, heavy duty alternator, voltage regulator, starting motor, solenoid switch, and horn. The electrical gages are protected by fuses in the circuit. Gage fuses and horn fuse are located at the right underside of the instrument panel.

1-6.Identification and Tabulated Data

a. *Identification.* The fork lift truck has five major identification plates.

- (1) The truck model and serial number plate is located near the center of the instrument panel.
- (2) The engine model and serial number plate is located on the left side of the cylinder block.
- (3) The battery caution plate is located on the right hand seat angle.
- (4) The shipping plate is located in the driver's compartment on the inside of the right hand cowl.
- (5) The air cleaner service plate is located on the left hand seat angle, near the air cleaner.

b. *Tabulated Data.*

(1) *Capacities.*

Cooling System.....	16 quarts
Engine crankcase (with filter)	7 quarts
Drive Axle	5 pints
Fuel tank.....	8.3 gallons
Air cleaner.....	1/2 pint
Hydraulic system.....	9 gallons
Transmission (with filter)	11 quarts
Brake system	3/4 pint