TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS INFORMATION AND SUPPLEMENTAL OPERATING, MAINTENANCE AND REPAIR PARTS INSTRUCTIONS)

FOR

TRUCK, FORK LIFT, GASOLINE ENGINE DRIVEN, PNEUMATIC RUBBER TIRES, 6,000 LB CAPACITY, 180 INCH LIFT HEIGHT ARMY MODEL MHE 233, ALLIS-CHALMERS MODEL ACP-60-PS NSN 3930-01-052-5050

HEADQUARTERS, DEPARTMENT OF THE ARMY

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OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS INFORMATION AND SUPPLEMENTAL OPERATING, MAINTENANCE AND REPAIR PARTS INSTRUCTIONS) FOR TRUCK, FORK LIFT, GASOLINE ENGINE DRIVEN, PNEUMATIC RUBBER TIRES, 6,000 LB CAPACITY, 180 INCH LIFT HEIGHT ARMY MODEL MHE 233, ALLIS-CHALMERS MODEL ACP-60-PS NSN 3930-01-052-5050

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual, direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

CHAPTER II-Continued

CHAPTER III-Continued

CHAPTER III-Continued

This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. The technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

OPERATING INSTRUCTIONS

STANDARD VALUES						
	POUNDS FOOT					
	GRADE 2		GRADE 5		GRADE 8	
CAPSCREW SIZE	NC	NF	NC	NF	NC	NF
1/4"	5-7	6-8	9-11	11-13	12-14	14-16
5/16"	11-13	13-15	18-20	21-23	25-27	28-30
3/8"	18-21	19-22	28-33	30-35	41-46	43-48
7/16"	30-33	32-35	44-49	50-55	69-74	72-77
1/2"	45-50	45-50	68-73	68-73	95-105	95-105
9/16"	60-65	60-65	95-105	95-105	130-140	130-140
5/8"	75-85	75-85	125-135	125-135	170-190	170-190
3/4"	125-135	125-135	210-230	210-230	290-310	290-310
7/8"	105-115	105-115	290-310	290-310	450-500	450-500
1"	140-150	450-475	380-410	600-630		

SPECIAL VALUES		
DESCRIPTION	THREAD SIZE	TORQUE LBS. FT.
Cylinder Head Mounting	1/2 - 13	110-120
Cylinder Head Mounting	1/2 - 13	110-120
Cylinder Head Lifting	1/2 - 20	110-120
Thermostat Housing and Cylinder Head	1/2 - 13	110-120
Water Outlet	3/8 - 16	18-21
Manifold, Intake and Exhaust	7/16 - 20	32-35
Main Bearing Mounting	9/16 - 12	120-130
Connecting Rod	3/8 - 24	45-50
Crankshaft Pulley Retaining	1 - 16	240-260
Oil Pressure Regulating Screw	3/4 - 16	125-135
Lube Oil Filter Mounting	1/2 - 13	45-50
Spark Plugs	14 MM	25-30

FOREWORD

Allis-Chalmers Lift Trucks are designed, operator-engineered and manufactured to rigid specifications so that your company can achieve the most production for its investment. Correct operation and regular preventive maintenance, coupled with authorized Allis-Chalmers service and parts will ensure long operational life and continued top performance of your lift truck. This Operator's Manual is your guide to proper operation and service intervals By using this manual, veteran operators can gain additional information on techniques, while operators with little or no experience can learn proper operation in less time and with less chance of an accident.

SAFETY

After the operator has thoroughly read and understands this manual, with a few hours of practice he should be able to effectively operate a lift truck. The GOOD operator not only understands and follows the procedures written in this manual but is one who is SAFETY conscious. Several safety tips and procedures are Incorporated throughout this manual. Though these tips and procedures are Illustrated through a cartoon media, they are not to be taken lightly. The cartoons have their Intent and purpose for the manual. That is, to help make a GOOD operator.

If you have any questions regarding the operation, specifications, maintenance or service of your lift truck, contact your local Allis-Chalmers dealer.

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TOPIC 1. GENERAL DESCRIPTION

Allis-Chalmers Lift Trucks are designed to function in a variety of heavy-duty industrial applications. Power requirements are met by a gasoline, 4- or 6- cylinder, 4-stroke cycle, naturally aspirated engine. Engine cooling is accomplished by a belt-driven centrifugal pump that forces coolant through the head, block and fin-type radiator. The engines are 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. An oil filler cap is located on a filler tube assembly on the side of the cylinder block or on the valve cover. Oil level is easily checked by a conveniently located dipstick.

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 on the right side of the steering column controls the direction of travel through a control valve mounted on the transmission housing.

The drive unit incorporates a double-reduction gear train using the latest advancements in gear design. All parts of the unit are bearing mounted for the greatest possible efficiency and quietness. The first reduction is through a heavy-duty spiral bevel ring gear and pinion drive gear. Final reduction is obtained through a pinion (jackshaft) and internal tooth gear (bull gear). This method greatly reduces torque stress on the axle shaft.

The truck is equipped with hydraulic brakes designed for long life and minimum maintenance. They have a large braking area and give smooth braking and positive control under all operating conditions. Brakes are located in each drive wheel. 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.

A power steering control unit located at the lower end of the steering column diverts hydraulic oil, under pressure, to the appropriate power steering port. Hydraulic oil lines connect the steering unit to the power steering cylinder to give the lift truck a full power steering system. The power steering system provides maximum control of the lift truck with minimum steering effort.

The lift assembly utilizes special rolled steel channel sections, and/or "I" beams, and cross braces, all welded to form a rigid permanent structure. Due to construction features of the inner mast and carriage rollers, sliding friction is virtually eliminated. Two independent lift chains are used for safety; each has sufficient strength to safely handle a full load. A special seat at the bottom of the mast permits self-alignment of the lift cylinder within the mast channels, thus reducing off center stresses.

The heavy-duty welded steel fork carriage provides the ultimate in strength and visibility. The forks are identical and interchangeable. Notches spaced along the upper edge of the carriage act in conjunction with latches on the forks to position and secure them to the carriage.

Hydraulic pressure, used to actuate the cylinders or accessory equipment, is supplied by a positive-displacement gear pump coupled

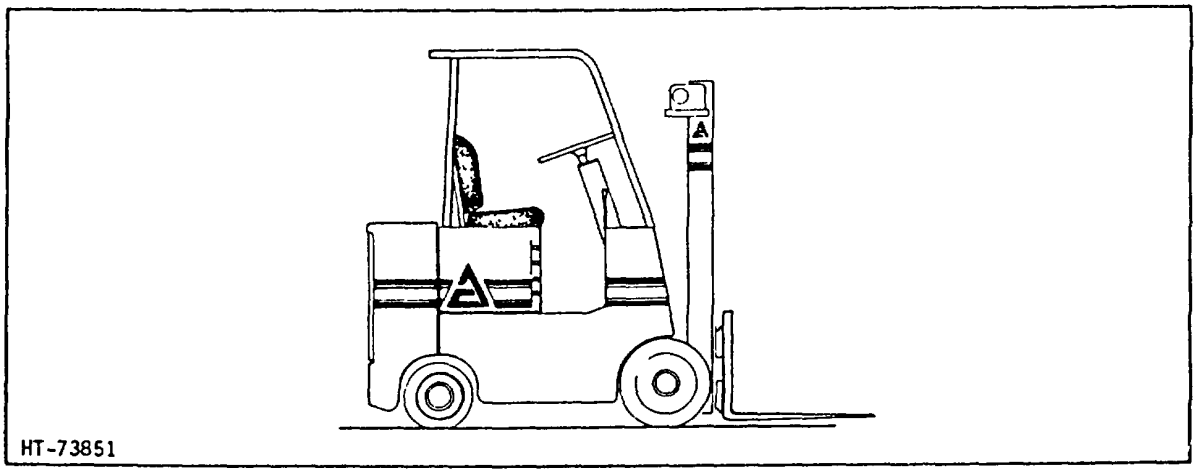

Figure 1-1. Lift Truck - Typical

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.

Current advancements in stress analysis and design have made possible a lift truck frame that is lighter and less bulky, yet stronger than the conventional box-type frame. Counterweights, cowls, and fenders are easily removed, thereby reducing downtime for parts removal, service, and overhaul.

The instrument panel, located directly in front of the driver, has a complete set of electrical gauges including a gas gauge, oil pressure gauge, engine coolant temperature gauge, ammeter, and a direct-reading engine hourmeter. The ignition starting switch and choke control are also located on the panel.

All models have a 12 volt electrical system consisting of one 12 volt battery. A heavy duty alternator, voltage regulator, starting motor, solenoid switch, and horn are the other major components of the electrical system. The electrical gauges and horn are protected by fuses located on the right underside of the instrument panel.

The light switch is located on the right side of the instrument panel. Pull out on the light switch to turn on lights. Push in on light switch to turn off lights.