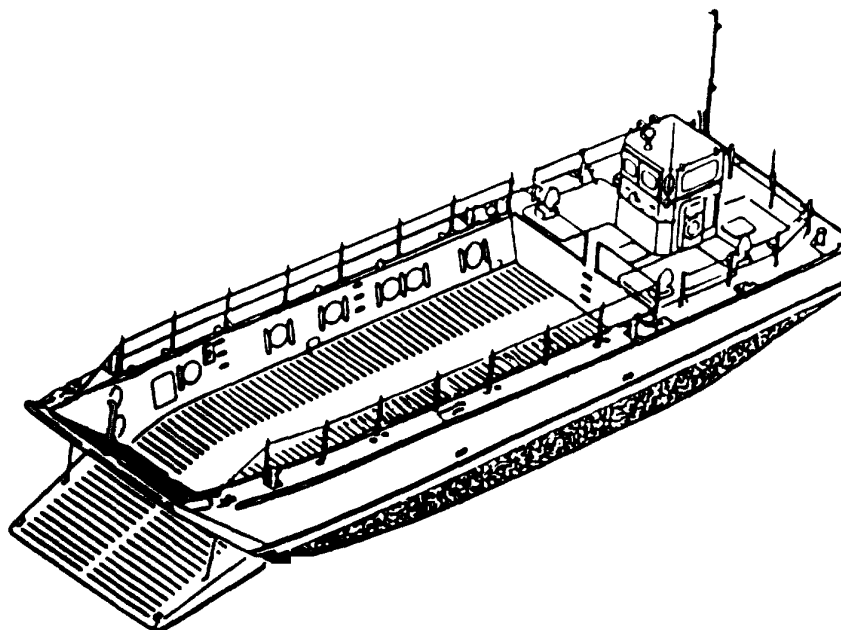


**TECHNICAL MANUAL
OPERATOR, UNIT AND INTERMEDIATE
(DIRECT AND GENERAL SUPPORT)
MAINTENANCE MANUAL**

**LANDING CRAFT, MECHANIZED
STEEL, DED, OVERALL LENGTH 74 FEET,**

MOD 1, MARK VIII, NAVY DESIGN LCM-8

**HULL NUMBERS 8500 THROUGH 8519 (MARINETTE MARINE CORP.)
NSN 190-0169-0938.**



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APPENDIXES

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HEADQUARTERS, DEPARTMENT OF THE ARMY

30 June 1989

TECHNICAL MANUAL

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 June 1989**OPERATOR, UNIT AND INTERMEDIATE
(DIRECT AND GENERAL SUPPORT)
MAINTENANCE MANUAL****LANDING CRAFT, MECHANIZED:
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NSN 1905-01-169-0938**

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

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 these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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6-29. CYLINDER BLOCK - MAINTENANCE INSTRUCTIONS.

a. The cylinder block serves as the main structural part of the engine. Transverse webs provide rigidity and strength and ensure alignment of the block bores and bearings under load.

b. The block is bored to receive replaceable cylinder liners. The cylinder block is designed to provide water cooling below the air inlet port belt. An air box between the cylinder banks and extending around the cylinders at the air inlet port belt conducts the air from the blower to the cylinders. Air box openings on each side of the block permit inspection of the pistons and compression rings. Through the air inlet ports in the cylinder liners. The air box openings in the cylinder block assembly are about 1-7/8 inch x 3-1/8 inch (4.76 cm x 7.94 cm) and are covered with cast covers. The camshaft bores are located on the inner side of each cylinder bank near the top of the block.

c. The upper halves of the main bearing supports are cast integral with the block. The main bearing bores are line-bored with the bearing caps in place to ensure longitudinal alignment. Drilled passages in the block carry the lubricating oil to all moving parts of the engine.

d. The top surface of each cylinder bank is grooved to accommodate a block-to-head oil seal ring. Each water or oil hole is counterbored to provide for individual seal rings.

e. Each cylinder liner is retained in the block by a flange at its upper end. The liner flange rests on an insert located in the counterbore in the block bore. An individual compression gasket is used at each cylinder. When the cylinder heads are installed, the gaskets and seal rings compress to form a tight metal-to-metal contact between the heads and the block.

f. Cylinder block assemblies include the main bearing caps and bolts, dowels and the necessary plugs. Since the cylinder block is the main structural part of the engine, the various subassemblies must be removed from the cylinder block when an engine is overhauled.

6-29. CYLINDER BLOCK - MAINTENANCE INSTRUCTIONS (Continued).

This task covers:

- a. Inspection
- b. Repair

- c. Cleaning
- d. Pressure Test

- e. Inspect
-

INITIAL SETUP**Test Equipment**

Feeler gage
 Straight edge
 Depth gage
 Master ring gage J5580-1
 Cylinder bore gage J5347

References

NONE

Equipment**Condition**

Paragraph

Condition Description

6-22

Power Unit Removal

Special Tools

Drift 3/4 inch
 Hammer 1 pound
 Hone
 120 grit hones
 Torque wrench

Tools

General Mechanic's Tool Kit
 NSN 5180-00-629-9783

Material/Parts

Gasket kit P/N 5193115
 Pickling Acid
 Alkaline Solution
 (heavy duty)
 Permatex #1
 International Compound #2
 or equivalent
 Rust preventive

Special Environmental Conditions

NONE

Personnel Required

2

General Safety Instructions

Observe all WARNINGS in this
 procedure.

6-29. CYLINDER BLOCK - MAINTENANCE INSTRUCTIONS (Continued).

LOCATION/ITEM	ACTION	REMARKS
INSPECTION		
1. Engine	a. Inspect cylinder block for cracks, and signs of damage.	Replace.
	b. Inspect air box covers for leaking gaskets.	Replace.
	c. Inspect air box drains for bent or broken tubes.	Replace.
	d. Inspect water holes for leaking gaskets.	Replace.
	e. Inspect pipe plugs for leaking.	Replace.
	f. Inspect end plate gaskets for leaking gaskets.	Replace.
REPAIR		
2. Cylinder Block	a. Remove air box drain tube (1), and elbow (2).	If damaged.
	b. Remove air box cover bolt (3), flatwasher (4), copper gasket (5), cover (6), and gasket (7).	If gasket is leaking.
	c. Remove water hole cover bolt assemblies (8), cover (9), and gasket (10).	If gasket is leaking.
	d. Replace pipe plugs (11 through 16).	If damaged.
	e. Replace special plug (17).	If damaged.
	f. Replace plug caps (18 through 20).	If damaged.
	g. Replace expansion plugs (21 and 22).	If gasket is leaking.

6-29. CYLINDER BLOCK - MAINTENANCE INSTRUCTIONS (Continued).

LOCATION/ITEM	ACTION	REMARKS
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REPAIR (Cont)

h. Remove dowel pins (23 and 24) if damaged.

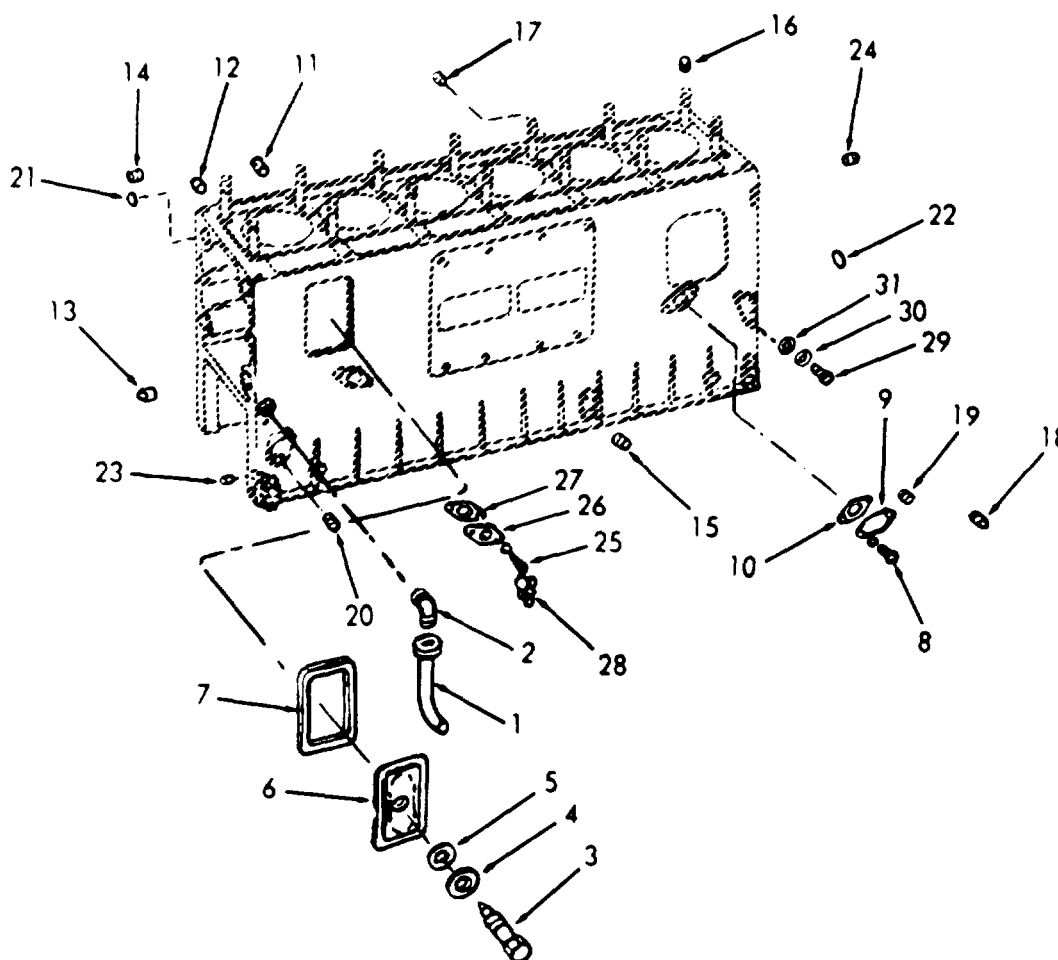
The dowels must extend 5/8 inch from block.

i. Remove water hole cover bolt assemblies (25), cover (26), gasket (27), and drain cock (28).

If gasket or drain cock is leaking or defective.

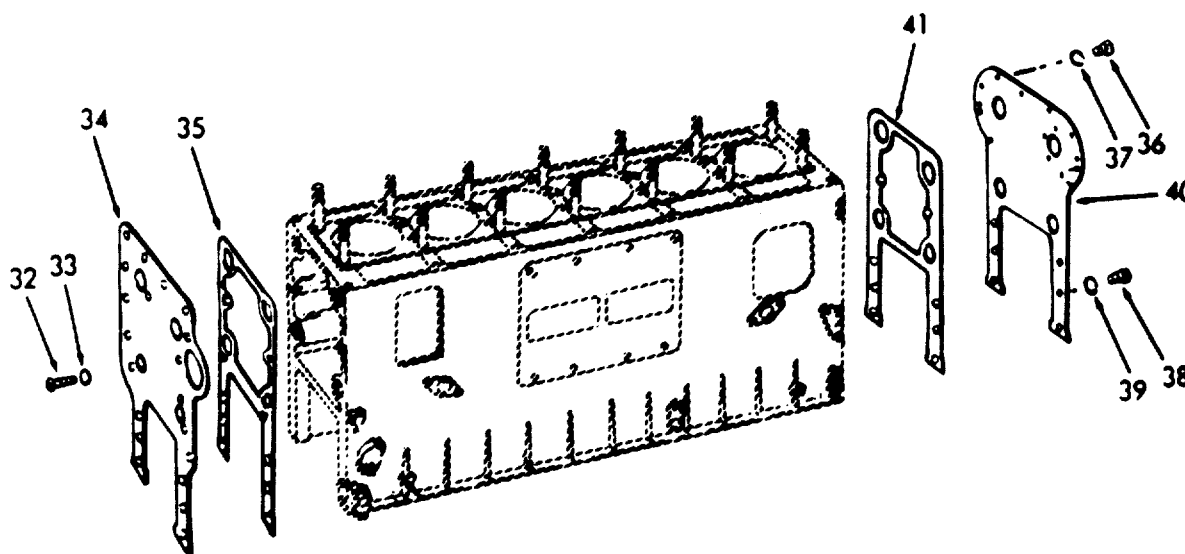
j. Remove hole filler screw (29), lockwasher (30), and flatwasher (31).

If leaking.



6-29. CYLINDER BLOCK - MAINTENANCE INSTRUCTIONS (Continued).

LOCATION/ITEM	ACTION	REMARKS
REPAIR (Cont)		
3. Cylinder Block End Rear Plate	a. Remove six screws (32) and lockwashers (33).	If necessary
	b. Remove rear plate (34) and gasket (35).	If necessary
4. Cylinder Block Front End Plate	a. Remove six screws (36) and lockwashers (37).	If necessary
	b. Remove two screws (38) and lockwashers (39).	If necessary.
	c. Remove front end plate (40) and gasket (41).	If necessary



6-29. CYLINDER BLOCK - MAINTENANCE INSTRUCTIONS (Continued).

LOCATION/ITEM	ACTION	REMARKS
CLEANING		
5. Cylinder Block	a. Scrape all gasket material from the cylinder block. Then remove all oil gallery plugs and core hole plugs (except cup plugs) to allow the cleaning solution to contact the inside of the oil and water passages. This permits more efficient cleaning and eliminates the possibility of the cleaning solution attacking the aluminum core hole plug gaskets (if used). b. If a core hole plug is difficult to remove, hold a 3/4 inch drift against the plug and give it a few sharp blows with a one pound hammer. With a 1/2 inch flexible handle and a short extension placed in the countersunk hole in the plug, turn the plug slightly in the direction of tightening. Then turn it in the opposite direction and back the plug out. c. Clean the cylinder block as follows: (1) Remove the grease by agitating the cylinder block in a hot bath of commercial heavy-duty alkaline solution. (2) Wash the block in hot water or steam clean it to remove the alkaline solution.	