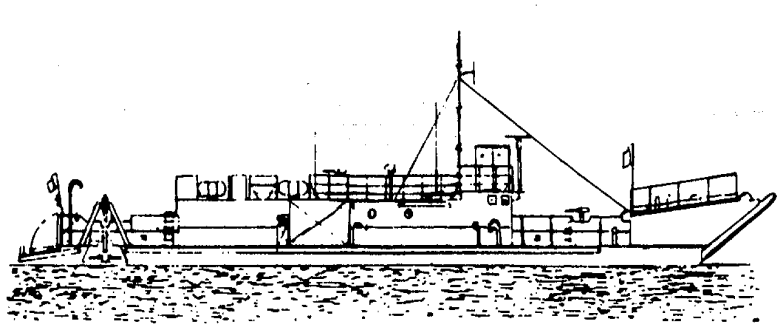
TM 55-1905-220-14-3

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

LANDING CRAFT UTILITY
LCU 1671-1679
(1905-01-009-1056)



CHAPTER 3
OPERATOR MAINTENANCE INSTRUCTIONS

TROUBLESHOOTING

H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

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NO. 55-1905-220-14-3

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., ***8 August 1983***

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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, US Army Troop Support and Aviation Materiel Readiness Command, ATTN: DRSTS-MPSD, 4300 Goodfellow.Blvd., St. Louis, MO 63120. A reply will be furnished directly to you.

TABLE OF CONTENTS

			PAGE
CHAPTER 3		OPERATOR MAINTENANCE INSTRUCTIONS	
	Section I	Repair Parts, Special Tools, TMDE and Support Equipment	3-1
	Section II	Service Upon Receipt	3-1
	Section III	Lubrication	3-4
	Section IV	Troubleshooting Symptom Index	3-5
INDEX			Index-1

* This manual supersedes TM 55-1905-220-14-3, 31 July 1980.

LIST OF TABLES

TABLE NUMBER		PAGE NUMBER
3-1	Propulsion Engine Exhaust Smoke Analysis Troubleshooting.	3-16
3-2	Propulsion Engine Hard Starting Troubleshooting.	3-22
3-3	Propulsion Engine Abnormal Engine Operation Troubleshooting.	3-27
3-4	Propulsion Engine No Fuel or Insufficient Fuel Troubleshooting.	3-38
3-5	Propulsion Engine High Lubricating Oil Consumption Troubleshooting.	3-44
3-6	Propulsion Engine Excessive Crankcase Pressure Troubleshooting.	3-47
3-7	Propulsion Engine Low Oil Pressure Troubleshooting.	3-49
3-8	Propulsion Engine Abnormal Engine Coolant Operating Temperature Troubleshooting.	3-53
3-9	Propulsion Engine Low or High Exhaust Valve Opening Pressure Troubleshooting.	3-54
3-10	Marine Gear Troubleshooting.	3-56
3-11	Hydrostarter Low or No Accumulator Pressure Troubleshooting.	3-60
3-12	Hydrostarter Cranking Speed Too Low Troubleshooting.	3-65
3-13	Hydrostarter Loss of Fluid From Reservoir Troubleshooting.	3-66
3-14	Hydrostarter Loss of Fluid Pressure When Engine Is Not Running Troubleshooting.	3-66
3-15	Hydrostarter Hand Pump Fails to Discharge Fluid Troubleshooting.	3-68
3-16	Hydrostarter Starter Turns But Engine Does Not Troubleshooting.	3-70
3-17	Hydrostarter Loss of Accumulator Precharge (Nitrogen) Troubleshooting.	3-70
3-18	Hydrostarter High Pressure in System (3500 psi or Above) Troubleshooting.	3-72
3-19	Hydrostarter Fluid Emerges from the Reservoir Filler Cap When Starter is Used Troubleshooting.	3-73
3-20	Hydrostarter Fluid Emerges Around Rubber Boot of Hand Pump Troubleshooting.	3-73
3-21	Hydrostarter Cranking Cycle Too Short Troubleshooting	3-74
3-22	Generator Engine Exhaust Smoke Analysis Trouble-shooting.	3-75
3-23	Generator Engine Hard Starting Troubleshooting.	3-80
3-24	Generator Engine Abnormal Engine Operation Troubleshooting.	3-84
3-25	Generator Engine No Fuel or Insufficient Fuel Troubleshooting.	3-96
3-26	Generator Engine High Lubricating Oil Consumption Troubleshooting.	3-101

LIST OF TABLES (CONT)

TABLE NUMBER		PAGE NUMBER
3-27	Generator Engine Excessive Crankcase Pressure Troubleshooting.	3-102
3-28	Generator Engine Low Oil Pressure Troubleshooting	3-105
3-29	Generator Engine Abnormal Engine Coolant Operating Temperature Troubleshooting.	3-108
3-30	Generator Engine Low or High Exhaust Valve Opening Pressure Troubleshooting.	3-110
3-31	Hydrostarter Low or No Accumulator Pressure Troubleshooting.	3-112
3-32	Hydrostarter Cranking Speed Too Low Troubleshooting	3-115
3-33	Hydrostarter Loss of Fluid From Reservoir Trouble-shooting.	3-116
3-34	Hydrostarter Loss of Fluid Pressure When Engine Is Not Running Troubleshooting.	3-117
3-35	Hydrostarter Hand Pump Fails to Discharge Fluid Troubleshooting.	3-118
3-36	Hydrostarter Starter Turns But Engine Does Not Troubleshooting.	3-120
3-37	Hydrostarter Loss of Accumulator Precharge (Nitrogen) Troubleshooting.	3-120
3-38	Hydrostarter High Pressure in System (3500 psi or Above) Troubleshooting.	3-122
3-39	Hydrostarter Fluid Emerges' From the Reservoir Filler Cap When Starter Is Used Troubleshooting.	3-122
3-40	Hydrostarter Fluid Emerges Aaound Rubber Boot of Hand Pump Troubleshooting.	3-123
3-41	Hydrostarter Cranking Cycle Too Short Troubleshooting.	3-123
3-42	Generator Troubleshooting.	3-125
3-43	Switchboard Troubleshooting.	3-127
3-44	24VDC Rectifier Troubleshooting.	3-133
3-45	Bow Ramp Winch Troubleshooting.	3-135
3-46	Bow Ramp Winch Brake Troubleshooting.	3-138
3-47	Bow Ramp Winch Motor Troubleshooting.	3-140
3-48	Anchor Winch Winch Troubleshooting.	3-143
3-49	Anchor Winch Slack Puller Troubleshooting.	3-146
3-50	Anchor Winch Disconnect Clutch Troubleshooting.	3-148
3-51	Anchor Winch Torque Converter Troubleshooting.	3-149
3-52	Anchor Winch Hydraulic Tank Balanced Piston Relief Valves Troubleshooting.	3-158
3-53	Anchor Winch Hydraulic Tank Check Valves Troubleshooting.	3-160
3-54	Anchor Winch Hydraulic Tank Pressure Control Valves Troubleshooting.	3-161
3-55	Anchor Winch Hydraulic Tank Pressure Reducing Valves Troubleshooting.	3-162

LIST OF TABLES (CONT)

TABLE NUMBER		PAGE NUMBER
3-56	Anchor Winch Hydraulic Tank Directional Control Valve Troubleshooting.	3-164
3-57	Anchor Winch Hydraulic Tank Troubleshooting.	3-165
3-58	Anchor Winch Hydraulic Pump Troubleshooting.	3-167
3-59	Anchor Winch Engine Exhaust Smoke-Analysis Troubleshooting.	3-168
3-60	Anchor Winch Engine Hard Starting Troubleshooting.	3-174
3-61	Anchor Winch Engine Abnormal Engine Operation Troubleshooting.	3-178
3-62	Anchor Winch Engine No Fuel or Insufficient Fuel Troubleshooting.	3-189
3-63	Anchor Winch Engine High Lubricating Oil Consumption Troubleshooting,	3-194
3-64	Anchor Winch Engine Excessive Crankcase Pressure Troubleshooting.	3-196
3-65	Anchor Winch Engine Low Oil Pressure Troubleshooting	3-199
3-66	Anchor Winch Engine Abnormal Engine Coolant Operating Temperature Troubleshooting.	3-203
3-67	Anchor Winch Engine Low or High Exhaust Valve Opening Pressure Troubleshooting.	3-205
3-68	Anchor Winch Engine Low or No Accumulator Pressure Troubleshooting.	3-206
3-69	Anchor Winch Engine Hydrostarter Cranking Speed Too Low Troubleshooting.	3-210
3-70	Anchor Winch Engine Hydrostarter Loss of Fluid From Reservoir Troubleshooting.	3-211
3-71	Anchor Winch Engine Hydrostarter Loss of Fluid Pressure When Engine Is Not Running Troubleshooting.	3-211
3-72	Anchor Winch Engine Hydrostarter Hand Pump Fails To Discharge Fluid Troubleshooting.	3-213
3-73	Anchor Winch Engine Hydrostarter Starter Turns But Engine Does Not Troubleshooting.	3-215
3-74	Anchor Winch Engine Hydrostarter Loss of Accumulator Precharge (Nitrogen) Troubleshooting.	3-215
3-75	Anchor Winch Engine Hydrostarter High Pressure In System (3500 psi or Above) Troubleshooting.	3-217
3-76	Anchor Winch Engine Hydrostarter Fluid Emerges From the Reservoir Filler Cap When Starter Is Used Troubleshooting.	3-217
3-77	Anchor Winch Engine Hydrostarter Fluid Emerges Around Rubber Boot of Hand Pump Troubleshooting.	3-218
3-78	Hydrostarter Cranking Cycle Too Short Troubleshooting	3-218
3-79	Centralized Hydraulic System Hydraulic Power Unit Troubleshooting.	3-219
3-80	Centralized Hydraulic System Controller Troubleshooting.	3-222

LIST OF TABLES (CONT)

TABLE NUMBER		PAGE NUMBER
3-81	Stern Gate Hydraulic System Troubleshooting.	3-224
3-82	Mast Hydraulic System Troubleshooting.	3-225
3-83	"A" Frame Hydraulic Winch Troubleshooting.	3-228
3-84	Steering Controller Troubleshooting.	3-231
3-85	Steering Cub Hydraulic Pump Troubleshooting.	3-233
3-86	Steering System Hydraulic Directional Control Valve Troubleshooting.	3-236
3-87	Hydraulic Steering Cylinder and Adjustable Links Troubleshooting.	3-237
3-88	Rudder Angle Indicator and Repeatback Transmitter Troubleshooting.	3-238
3-89	Heading Selector Troubleshooting.	3-239
3-90	Steering Control Panel Troubleshooting.	3-240
3-91	Remote Magnetic Heading System Troubleshooting.	3-242
3-92	Ship's Course Indicator Troubleshooting.	3-244

CHAPTER 3

OPERATOR MAINTENANCE INSTRUCTIONS

OVERVIEW.

The operator maintenance instructions in this chapter apply to the following:

DESCRIPTION	PARAGRAPH
Propulsion System	3-6
Electric Power and Distribution	3-58
Bow Ramp and Winch	3-115
Stern Gate	3-123
Anchor/Handling System	3-127
Central Hydraulic System	3-183
Steering System	3-200

Chapter 4 contains the maintenance instructions for all auxiliary equipment.

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SECTION I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

3-1. GENERAL REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

Repair parts, special tools, test, maintenance, diagnostic equipment, (TMDE),and support equipment are listed and illustrated in TM55-1905-220-20P. All fabricated tools are listed in Appendix H.

SECTION II. SERVICE UPON RECEIPT

3-2. PRELIMINARY SERVICING OF EQUIPMENT.

a. General. When a landing craft is received, inspect all items for damage that may have occurred during shipping or setting-up operations. Particular attention should be directed toward loose or missing nuts, bolts, screws, drainplugs, draincocks, oil plugs, assemblies, subassemblies, or components that may be easily lost or broken in transit. All other onboard equipment listed in basic issue items list, or packing lists, on new or used equipment should be similarly inspected and all discrepancies carefully noted.

b. Batteries. Batteries may be shipped separately, or installed for convenience with the electrolyte shipped separately.

(1) If batteries are not installed, uncrate and install.

(2) If batteries are installed, remove filler caps and carefully fill each cell with electrolyte until level is 3/8 inch (9.53 mm) above plates. Replace filler caps.

WARNING

Handle electrolyte with care. It is capable of inflicting severe burns. Solution contacting body must be washed off with fresh water immediately. Do not smoke or use open flame while servicing batteries. Batteries generate a hydrogen gas which is highly explosive.

(3) For testing of batteries, refer to PMCS Table 2-4.

c. Inspection. The following areas will be carefully inspected for proper component attachment, or damaged components.

(1) Marine Drive. In the forward and aft engine rooms:

(a) Check all tube and hose connections for tightness.
(b) Inspect for proper connection of marine shaft to propeller shaft.
(c) Inspect for evidence of oil leakage in marine gear.
(d) Inspect for loose components, broken castings and bolt tightness.
(e) Check that shaft seal tank is full of clean water.
(f) Inspect for cracked, dented, or broken parts.

(2) Propulsion Engine. Inspect propulsion engine for loose or broken components. Pay particular attention to heat exchanger and engine. Check air cleaner and emergency stop lever. Check engine and transmission controls for proper connection and adjustment.

(a) Check engine and transmission oil level and level of coolant in heat exchanger.
(b) Inspect floor and bilge area around engine for oil drippings that may indicate a leaky seal, or loose oil or fuel drainplug.
(c) Inspect exhaust system connections and ensure that end tube and end cap is free to operate.
(d) Check all hoses for cracks or leaks.
(e) Check tension for all drive belts.
(f) Check accumulator oil reservoir for the proper amount of oil.

(3) Central Hydraulic System, Lines and Fittings.

(a) Inspect all areas of hydraulic system for evidence of oil leakage including the following: Main mast, anchor winch, "A" frame and stern gate.

(b) Check that hydraulic reservoir is filled to proper level.

(4) Steering. Check that all steering arms, rods, hydraulic cylinders, hydraulic cub pump, and connections are secure and in good condition.

(5) Tanks, Ballast, Fresh Water, Fuel Oil, and Lubricating Oil.

(a) Check manholes for signs of leakage.

(b) Check all piping for damage.

(c) Check all valves for leakage.

(6) Miscellaneous. Visually inspect and check the following items:

(a) Ensure that all bilge pump inlet screens are free of debris.

(b) Inspect all exposed electrical terminals for security of attachment and freedom from corrosion.

(c) Check that all shut off valves are closed.

(d) Check that all strainers in the sea chests are free of debris.

(e) Inspect generator switch panel for loose or broken wires or damaged components. Make sure all switches are in the shore power position.

(f) Check all wye strainers in the fire stations.

(g) Inspect basic issue items for presence of all items listed, and for serviceability.

d. Servicing and Equipment. When a landing craft is received, perform all preventive maintenance checks and services. Before filling fuel tanks, cooling system, hydraulic reservoir, engine crankcase, transmission oil reservoir, or oil reservoir of any component, ensure that associated draincocks are closed, and all barrier material has been removed.

(1) Filters. Hydraulic filters are susceptible to easy contamination on new equipment. Check frequently and change elements after first 50 hours of operation.

(2) Hydraulic Reservoir. The central hydraulic oil reservoir must be filled to the level indicated on the sight gage. When all systems have been actuated, the level must be rechecked under the following conditions: Raised mast, lower anchor, and lower stern gate.

CAUTION

Maintain proper oil level at all times to prevent damage to various hydraulic components and to assure proper unit component operation.

(3) Engine. Check engine oil level. Refer to lubrication order for type oil to add when dipstick indicates level is low. Check gasket in oil filler cap for damage or deterioration. Check engine oil filters for oil leaks. Drain a small amount of oil from filters to check condition. Drain, replace filter element, and refill when dirty. Check and ensure that belt tension of all accessory drives are properly adjusted. Inspect and clean air cleaner filter element if necessary. Check hose for breaks, cracks, and proper clamp fastening.

(4) Heat Exchanger. Check heat exchanger hose for cracks, breaks, or leaks and clamps for tightness. Add coolant when necessary.

(5) Fuel System. Moisture accumulates in fuel tanks and filters from condensation. Drain filters. Drain at least one pint of fuel from each tank, or until all water has been drained from system. Fill fuel tanks. Check fuel lines, connections and tank vents for leaks. Place crossover line valves in open position.

(6) Marine Gear Check and fill transmission with oil in accordance with current lubrication order. Ensure that drive shafts, and controls are mounted securely. Check all hoses and tubing connections for tightness.

3-3. INSTALLATION OF SEPARATELY PACKED COMPONENTS.

Normally, there are no components packed separately. Loose items of equipment subject to loss, damage, or pilferage, may be boxed and secured on the landing craft. Such items should be unpacked and properly stowed during inspection and servicing of equipment on receipt.

SECTION III. LUBRICATION

3-4. GENERAL LUBRICATION.

Refer to Lubrication Order LO-55-1905-220 for lubrication instructions.

SECTION IV. TROUBLESHOOTING SYMPTOM INDEX

3-5. GENERAL TROUBLESHOOTING SYMPTOM INDEX.

a. This table lists the common malfunctions which you may find during the operation and maintenance of the following components:

- Anchor Handling
- Bow Ramp and Winch
- Centralized Hydraulic System
- Electric Power and Distribution
- Propulsion System
- Stern Gate
- Steering System

b You should perform the tests/inspections and corrective actions in the order listed.

c. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

d. Refer to Chapter 4 for the maintenance procedures for auxiliary machinery.

SYMPTOM INDEX

NOTE

M in table number indicates Malfunction item number.

EQUIPMENT	MALFUNCTION	TABLE
"A" FRAME HYDRAULIC WINCH		3-83
	Motor runs but drum does not turn	3-83-M3
	Inoperative	3-83-M1
	Sluggish operation	3-83-M2
ANCHOR WINCH		
	Disconnect Clutch	
	Clutch binding	3-50-M2
	Clutch slipping	3-50-M1
Hydraulic Pump		3-58
	Lack of pressure	3-58-M2
	Loss of fluid from pump	3-58-M1
Hydraulic Tank		
	Balanced Piston Relief Valves	3-52
	Erratic pressure	3-52-M1
	Excessive noise or chatter	3-52-M3
	Low pressure or no pressure	3-52-M2
Check Valves		3-53
	Erratic pressure	3-53-M1
	Excessive noise or chatter	3-53-M2
Directional Control Valve		3-56
	Erratic pressure	3-56-M1
	Excessive noise or chatter	3-56-M3
	Low pressure or no pressure	3-56-M2
Hydraulic Tank		3-57
	Loss of fluid from hydraulic tank assembly	3-57-M1
	Poor performance	3-57-M2
Pressure Control Valves		3-54
	Erratic Pressure	3-54-M1
	Excessive noise or chatter	3-54-M3
	Low pressure or no pressure	3-54-M2
Pressure Reducing Valves		3-55
	Erratic pressure	3-55-M1
	Excessive noise or chatter	3-55-M2

EQUIPMENT	MALFUNCTION	TABLE
	Slack Puller	3-49
	Inoperative	3-49-M3
	Leaking grease or oil	3-49-M2
	Noise	3-49-M1
	Torque Converter	3-51
	Excessive pressure	3-51-M4
	Loss of fluid from converter	3-51-M1
	Low output horsepower	3-51-M3
	Poor performance and overheating of converter	3-51-M2
	Winch	3-48
	Drive brake-slipping	3-48-M2
	Drive gear	3-48-M3
	Level wind assembly-noise	3-48-M4
	Universal joint assembly-noise	3-48-M1
ANCHOR WINCH ENGINE		
	Abnormal Engine Coolant Operating Temperature	3-66
	Above normal	3-66-M1
	Below normal	3-66-M2
	Abnormal Engine Operation	3-61
	Detonation	3-61-M3
	Lack of power	3-61-M2
	Uneven running or frequent stalling	3-61-M1
	Excessive Crankcase Pressure	3-64
	Air from blower or air box	3-64-M3
	Breather restriction	3-64-M2
	Cylinder blow-by	3-64-M1
	Excessive exhaust back pressure	3-64-M4
	Exhaust Smoke Analysis	3-59
	Black or gray smoke	3-59-M1
	Blue smoke	3-59-M2
	White smoke	3-59-M3
	Hard Starting	3-60
	Engine will not rotate	3-60-M1
	Inoperative starting aid at low ambient temperature	3-60-M5
	Low compression	3-60-M4
	Low cranking speed	3-60-M2
	No fuel	3-60-M3

EQUIPMENT	MALFUNCTION	TABLE
	High Lubricating Oil Consumption	3-63
	External leaks	3-63-M1
	Internal leaks	3-63-M2
	Oil control at cylinder	3-64-M3
	Hydrostarter	
	Cranking Speed Too Low	3-69
	Fluid Emerges Around Rubber Boot of Hand Pump	3-77
	Fluid Emerges from the Reservoir Filler Cap When	
	Starter Is Used	3-76
	Hand Pump Fails to Discharge Fluid	3-72
	High Pressure in System (3500 Psi or above (24,133 kPa)	3-75
	Loss of Accumulator Precharge (Nitrogen)	3-75
	Loss of Fluid Pressure when Engine is not Running	3-71
	Loss of Fluid from Reservoir	3-70
	Starter Turns but Engine Does Not	3-73
	Low or High Exhaust Valve Opening Pressure	3-67
	High valve opening pressure	3-67-M2
	Low exhaust valve opening pressure	3-67-M1
	Low or No Accumulator Pressure	3-68
	Engine driven pump fails to raise pressure	3-68-M1
	Low Oil Pressure	3-65
	Lubricating oil	3-65-M1
	Oil pump	3-65-M4
	Poor circulation	3-65-M2
	Pressure gage	3-65-M3
	No Fuel or Insufficient Fuel	3-62
	Air leaks	3-62-M1
	Faulty fuel pump	3-62-M3
	Faulty installation	3-62-M4
	Flow obstruction	3-62-M2

EQUIPMENT	MALFUNCTION	TABLE
BOW RAMP WINCH		
Brake		3-46
	Brake chatters or hums	3-46-M3
	Brake does not release	3-46-M1
	Brake does not stop	3-46-M2
	Manual release does not work	3-46-M4
BOW WINCH		
Bow Winch Motor		3-47
	Motor does not start	3-47-M1
	Motor runs hot	3-47-M3
	Motor starts but does not come up to speed	3-47-M2
	Noisy (mechanically)	3-47-M4
Bow Winch		3-45
	Motor does not start	3-45-M1
	Motor runs shaft does not turn	3-45-M2
CENTRALIZED HYDRAULIC SYSTEM		
Controller		3-80
	Controller does not reset	3-80-M3
	Device does not start	3-80-M1
	Device does not stop	3-80-M2
Hydraulic Power Unit		3-79
	Erratic performance	3-79-M8
	Loss of fluid from pump	3-79-M2
	Loss of fluid from tank	3-79-M1
	Motor does not run	3-79-M4
	Motor runs hot	3-79-M5
	Motor runs slow	3-79-M6
	Motor runs too fast	3-79-M7
	Poor performance	3-79-M3
	Pressure gage does not indicate pressure	3-79-M9
GENERATOR		3-42
	Generator noise	3-42-M2
	Generator overheats	3-42-M1
	No output	3-42-M3
GENERATOR ENGINE		
Abnormal Engine Coolant Operating Temperature		3-29
	Above normal	3-29-M1
	Below normal	3-29-M2

EQUIPMENT	MALFUNCTION	TABLE
	Abnormal Engine Operation	3-24
	Detonation	3-24-M3
	Lack of power	3-24-M2
	Uneven running or frequent stalling	3-24-M1
	Excessive Crankcase Pressure	3-27
	Air from blower or air box	3-27-M3
	Breather restriction	3-27-M2
	Cylinder blow-by	3-27-M1
	Excessive exhaust back pressure	3-27-M4
	Exhaust Smoke Analysis	3-22
	Black or gray smoke	3-22-M1
	Blue smoke	3-22-M2
	White smoke	3-22-M3
	Hard Starting	3-23
	Engine will not rotate	3-23-M1
	Inoperative starting aid at low ambient temperature	3-23-M5
	Low compression	3-23-M4
	Low cranking speed	3-23-M2
	No fuel	3-23-M3
	High Lubricating Oil Consumption	3-26
	External leaks	3-26-M1
	Internal leaks	3-26-M2
	Oil control at cylinder	3-26-M3
HYDROSTARTER		
	Cranking Speed Too Low	3-32
	Fluid Emerges Around Rubber Boot of Hand Pump	3-40
	Fluid Emerges from Ends of Starter Control Valve when Starter is Operated	3-41
	Fluid Emerges from the Reservoir Filler Cap when Starter is Used	3-39
	Hand Pump Fails to Discharge Fluid	3-35
	High Pressure in System (3500 psi or above (24,133 kPa)	3-38

EQUIPMENT	MALFUNCTION	TABLE
	Loss of Accumulator Precharge (Nitrogen)	3-37
	Loss of Fluid Pressure when Engine is not Running	3-34
	Loss of Fluid from Reservoir	3-33
	Loss or No Accumulator Pressure	3-31
	Starter Turns but Engine Does Not	3-36
	Low or High Exhaust Valve Opening Pressure	3-30
	High valve opening pressure	3-30-M2
	Low exhaust valve opening pressure	3-30-M1
	Low Oil Pressure	3-28
	Lubricating oil	3-28-M1
	Oil pump	3-50-M4
	Poor circulation	3-28-M2
	Pressure gage and alarm switch	3-28-M3
	No Fuel or Insufficient Fuel	3-25
	Air leaks	2-25-M1
	Faulty fuel pump	3-25-M3
	Faulty installation	3-25-M4
	Flow obstruction	3-25-M2
HEADING SELECTOR		3-89
	Dimmer lights inoperative	3-89-M1
	Selector inoperative or erratic	3-89-M2
HYDRAULIC STEERING CYLINDER AND ADJUSTABLE LINKS		3-87
	Adjustable links loose	3-87-M3
	Cylinder leaking	3-87-M2
	Cylinder loose	3-87-M1
	Rudders not at the same position	3-87-M4

EQUIPMENT	MALFUNCTION	TABLE
MARINE GEAR		3-10
	Excessive noise	3-10-M6
	Harsh engagement	3-10-M8
	High oil pressure	3-10-M3
	Low oil pressure	3-10-M1
	No neutral	3-10-M7
	No oil pressure	3-10-M2
	Overheating	3-10-M4
	Reduced oil pressure	3-10-M5
MAST HYDRAULIC SYSTEM		3-82
	Inoperative	3-82-M1
	Sluggish operation	3-82-M2
PROPULSION ENGINE		
Abnormal Engine Coolant Operating Temperature		3-8
	Above normal	3-8-M1
	Below normal	3-8-M2
Abnormal Engine Operation		3-3
	Detonation	3-3-M3
	Lack of power	3-3-M2
	Uneven running or frequent stalling	3-3-M1
Excessive Crankcase Pressure		3-6
	Air from blower or air box	3-6-M3
	Breather restriction	3-6-M2
	Cylinder blow-by	3-6-M1
	Excessive exhaust back pressure	3-6-M4
Exhaust Smoke Analysis		3-1
	Black or gray smoke	3-1-M1
	Blue smoke	3-1-M2
	White smoke	3-1-M3
Hard Starting		3-2
	Engine will not rotate	3-2-M1
	Inoperative starting aid at low ambient temperature	3-2-M5
	Low compression	3-2-M4
	Low cranking speed	3-2-M2
	No fuel	3-2-M3

EQUIPMENT	MALFUNCTION	TABLE
	High Lubricating Oil Consumption	3-5
	External leaks	3-5-M1
	Internal leaks	3-5-M2
	Oil control at cylinder	3-5-M3
HYDROSTARTER		
	Cranking Speed Too Low	3-12
	Fluid Emerges Around Rubber Boot of Hand Pump	3-20
	Fluid Emerges from Ends of Starter Control Valve when Starter is Operated	3-21
	Fluid Emerges from the Reservoir Filler Cap when Starter is Used	3-19
	Hand Pump Fails to Discharge Fluid	3-15
	High Pressure in System (3500 psi or above (24,133 kPa)	3-18
	Loss of Accumulator Precharge (Nitrogen)	3-17
	Loss of Fluid Pressure when Engine is not Running	3-14
	Loss of Fluid from Reservoir	3-13
	Loss or No Accumulator Pressure	3-11
	Starter Turns but Engine Does Not	3-16
	Low or High Exhaust Valve Opening Pressure	3-9
	High valve opening pressure	3-9-M2
	Low exhaust valve opening pressure	3-9-M1
	Low Oil Pressure	3-7
	Lubricating oil	3-7-M1
	Oil pump	3-7-M4
	Poor circulation	3-7-M2
	Pressure gage	3-7-M3
	No Fuel or Insufficient Fuel	3-4
	Air leaks	3-4-M1
	Faulty fuel pump	3-4-M3
	Faulty installation	3-4-M4
	Flow obstruction	3-4-M2

EQUIPMENT	MALFUNCTION	TABLE
24 VDC RECTIFIER		3-44
	Ammeter	3-44-M2
	Batteries not charged	3-44-M1
REMOTE MAGNETIC HEADING SYSTEM		3-91
	Dial lights inoperative	3-91-M3
	Heading selector binding	3-91-M4
	Incorrect heading	3-91-M2
	Inoperative (D.C. Distribution Box CP24-1)	3-91-M1
RUDDER ANGLE INDICATOR AND REPEATBACK TRANSMITTER		3-88
	Angle shown on indicator and actual rudder angle differ	3-88-M3
	Indicator dimmer lights inoperative	3-88-M2
	Inoperative no incoming power	3-88-M1
SHIP'S COURSE INDICATOR		3-92
	Dial moves sluggishly	3-92-M6
	Dial response is meaningless; lamps are lit	3-92-M2
	Dial travels slowly in one direction only	3-92-M5
	Dial of indicator moves alternately fast and slow; may lock occasionally	3-92-M7
	Dial of two-speed unit rotates continuously in an increasing direction	3-92-M4
	Incorrect course	3-92-M10
	Indicator does not move freely in gimbols	3-92-M8
	Indicator glass dial	3-92-M9
	Indicator inoperative (dial does not respond; diesel lamps out)	3-92-M1
	No response	3-92-M3
STEERING CONTROLLER		3-84
	Hydraulic pump inoperative	3-84-M1
	Hydraulic pump operating Gyropilot in the pilot house inoperative	3-84-M3
	Hydraulic pump operating RUN light on steering console in pilothouse not lit	3-84-M2