

NOTES:

1. INSTALLATION INSTRUCTIONS FOR THIS KIT, 13226E9460, ARE SHOWN IN SHIPYARD SPECIFICATION 55-1905-217-1.
2. THIS KIT APPLIES TO:  
LCM, MOD-1, NSN 1905-00-935-6057,  
HULLS 8540-8560 AND 8580-8618
3. THE TWO PROPULSION ENGINES SHALL BE DETROIT DIESEL ALLISON DIVISION, GENERAL MOTORS CORPORATION, HULL HEAT EXCHANGER COOLED, 12V71, MODEL 7122-7000 DIESEL ENGINES, EACH WITH A SALT WATER PUMP JABSCO NO. 17050, DDAD PART NO. 5145578 FOR FUEL OIL COOLING, EXHAUST COOLING AND BILGE PUMP PRIMING. THE ENGINE SHALL HAVE A MINIMUM RATING OF 400 SHP AT 2100 RPM. THE ENGINES SHALL BE EQUIPPED WITH THE FOLLOWING ACCESSORIES:
  - (I) COOLERS
    - (1) OIL COOLER CORE
    - (2) HEAT EXCHANGER EXPANSION TANK WITHOUT CORE
  - (II) FILTERS
    - (1) LUBRICATING OIL
    - (2) FUEL SECONDARY
    - (3) REVERSE GEAR OIL
  - (III) HYDRAULIC ACTUATED TWIN DISC MARINE REVERSE-REDUCTION GEAR WITH SHAFT COUPLING AND TOP SIDE POWER TAKE OFF ASSEMBLY NO. XA7297C, MODEL MG-514 (2:1 REDUCTION RATIO). AS VIEWED FROM THE TRANSON LOOKING FORWARD, THE PORT REDUCTION GEAR SHALL PROVIDE COUNTERCLOCKWISE ROTATION OF THE PORT PROPELLER AND THE STARBOARD REDUCTION GEAR SHALL PROVIDE CLOCKWISE ROTATION OF THE STARBOARD PROPELLER.
  - (IV) VARIABLE SPEED GOVERNOR WITH SINGLE WEIGHT.
  - (V) OIL PAN (SHALLOW)
  - (VI) AIR INTAKE HOUSING WITH MANUAL EMERGENCY SHUT OFF VALVE.
  - (VII) FLEXIBLE HOSE FOR ENGINE AND TRANSMISSION LUBRICATING OIL SERVICE SHALL BE STAINLESS BRAID REINFORCEMENT OVER TEFLON INNER TUBE CONSTRUCTION. THE FITTINGS SHALL BE OF THE REUSEABLE TYPE. THE HOSE SHALL HAVE A STAINLESS STEEL SUPPORT OF THE FLAT COIL TYPE. TEFLON HOSE SHALL BE AERQUIP 2807 OR 2808 AS REQUIRED.
  - (VIII) THE PROPELLER SHAFT COUPLING SHALL BE MADE OF NODULAR IRON OR STEEL. ADDITIONALLY, THE BORE OF THE PROPELLER SHAFT HALF OF THE COUPLING WILL BE 1.500 INCHES WITH NO TAPER. FINAL MACHINING TO BE ACCOMPLISHED BY INSTALLING ACTIVITY, SEE 13226E9472.
  - (IX) N60 INJECTORS
  - (X) POWER STEERING PUMP ADAPTER AND DRIVE.
  - (XI) LUBE OIL PRESSURE SWITCH WITH CONTACTS INSULATED FROM GROUND AND SET TO CLOSE AND ENERGIZE ALARM WHEN THE OIL PRESSURE DROPS BELOW THE MINIMUM RECOMMENDED BY THE ENGINE MANUFACTURER.
  - (XII) TEMPERATURE SWITCH WITH CONTACTS INSULATED FROM GROUND AND SET TO CLOSE AND ENERGIZE ALARM AT THE ENGINE COOLANT TEMPERATURE RECOMMENDED BY THE ENGINE MANUFACTURER.
  - (XIII) INSTRUMENT PANEL KIT, INCLUDING CAPILLARY TUBE FOR WATER PRESSURE AND TACH DRIVE.
4. FLUSH HATCH ITEM 17, SHALL HAVE STAINLESS STEEL DOGS AND SPINDLES TO ALLOW IT TO BE USED EXTERNALLY ON THE CRAFT. BRACE PAD AND DISC (PC NO. 9 AND 10 ON DWG 803-1624095) TO BE LOCATED AS SHOWN ON DWG 13226E9459.
5. SEE DRAWING 13226E9463 FOR DESCRIPTION AND PART NUMBERS OF CONTROL HEAD AND KITS, REF ITEM 16.
6. LIGHTS, ITEM 37 AND 42 SHALL BE BOUGHT WITH LOCKING RING, NO. 8-3514-011.

STATUS OF REVISIONS					
SH	ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		A	SEE ECP NO. 90HE3102	22 MAR 80	RMS
B		B	SEE ECP NO. 90HE3207	13 MAR 80	RMS
C		C	SEE ECP NO. 90HE3309	18 JUN 80	RMS

ITEM	VENDOR FSCM AND PART NO.	QTY	NOMENCLATURE OR DESCRIPTION	BRDEC DWG NO.	FIND NO.
1	72582/8A11647A00	2	ENGINE, DIESEL, SEE NOTE 3	13226E9448	36
2	86376/1586-1582	4	CONNECTING ROD KIT (PANISH)	13226E9451	9
3	86376/C1332-T	1	SHUTDOWN CABLE, 10 FT L (PANISH)	13226E9451	11
4	86376/B2260	1	CLUTCH CABLE, STBD, 12 FT L (PANISH)	13226E9451	21
5	82271/314L-6-24	2	VALVE, SOLENOID, 2-WAY, 3/4" NPTF (WATERMAN)	13226E9455	V-5
6	96259/1A32-F4-60S	1	VALVE RELIEF, 1/2" NPTF, SET AT 3400 PSI (FLUID CONTROLS)	13226E9455	V-6
7	76528/CODE NATION	2	CUTLESS BEARING, 2 1/2" ID X 3 3/8" OD X 10" L (MOFFITT)	13226E9472	10
8	01843/ACB-30B-7110B	2	ACCUMULATOR (AM BOSCH)	13226E9455	M-1
9	01843/BK200740	4	ACCUMULATOR BRACKET (AM BOSCH)	13226E9455	M-2
10	01843/GG200656	2	GAUGE, 0 TO 5000 PSI (AM BOSCH)	13226E9455	M-3
11	76122/SERIES 200, NO. 27805	2	STRAIGHT CENTRIFUGAL PUMP, HYD MOTOR DRIVEN, 2 1/2" INLET X 2" L.H. OUTLET (MP PUMPS INC), BRZ HOUSING, MONEL SHAFT	13226E9465	M-1
12	/MOD 10, TY II	1	MARINE SANITATION DEVICE, 24VDC (HUMPHREY MARINE)	13226E9468	M-10
13	79577/1550-C	1	HEAD, MARINE (WILCOX-CRITTENDEN)	13226E9468	M-9
14		1	BATTERY BOX W/COVER	13226E9454	11
15	02249/FSP 107-1ED1A	1	FILTER, HYD W/GA65, 3/4" NPT PORTS, ELEMENT K-22001 (GRESEN)	13226E9461	M-9
16	SEE NOTE 5	1	TWIN ENGINE, SINGLE LEVER CONTROL HEAD WITH KITS (KOBELT)	13226E9463	8
17	97537/803-1624095 ASSY 3, SEE NOTE 4	1	30" X 36" WT FLUSH HATCH, 6 DOGS INDIVIDUAL, 5 PSI, HINGE LONG SIDE AND FWD, WITH LOCKING DEVICE (JUNIPER)	13226E9459	9
18	29771/S250-S1	4	VALVE, GLOBE, 1/4" (DELTROL)	13226E9455	V-1
19	29771/S350-S1	1	VALVE, GLOBE, 3/8" (DELTROL)	13226E9455	V-2
20	29771/S450-S1	2	VALVE, GLOBE, 1/2" (DELTROL)	13226E9455	V-3
21	29771/S650-S1	4	VALVE, GLOBE, 3/4" (DELTROL)	13226E9455	V-4
22	12168/S-121	2	GATE VALVE, 125 LB SWP, 2" C X C, RS (NIBCO)	13226E9456	V-1
23	12168/S-121	2	GATE VALVE, 125 SWP, 2 1/2" C X C, RS (NIBCO)	13226E9456	V-2
24	55752/MODEL 1000 FG	2	FUEL/FILTER/WATER SEPARATOR, 3.16 GPM W/30 MICRON FLTR (RACOR)	13226E9470	M-14
25	12168/S-413-B	1	SWING CHECK VALVE, 125 LB SWP, 3" C X C (NIBCO)	13226E9456	V-4
26	01843/CMD2A111	1	CRANKING MOTOR, CW ROTATION (AM BOSCH)	13226E9455	M-43
27	01843/FRH300116	2	FILTER, HIGH PRESSURE, 40 MICRON (AM BOSCH)	13226E9455	M-44
28	62983/VTM42-40-15 -15-ME-RI-14	2	PUMP, POWER STEERING (VICKER)	13226E9461	M-1
29	98991/1 1/2" - D446YBSEV1	2	DIRECTIONAL BALL VALVE, 1 1/2" (WORCESTER)	13226E9465	V-2
30	96259/2FA86-R 12T-12T-12T 25 S	2	BYPASS FLOW REGULATOR, PRESET RELIEF AT 1500 PSI, REGULATOR FLOW AT 10 GPM (FLUID CONTROLS)	13226E9465	V-1
31	04034/MINI-TYPE 2	2	LIQUID LEVEL INDICATOR, 1/2" NPT CONN, 13" OF INDICATION (GEMS)	13226E9467	4
32	12168/T-413-B	2	SWING CHECK VALVE, 125 LB SWP, 1" IPS (NIBCO)	13226E9469	V-2
33	12168/S-413-B	2	SWING CHECK VALVE, 125 LB SWP, 3" C X C (NIBCO)	13226E9469	V-1
34	87738/E30MCSVSF	4	EXHAUST EXPANSION JOINT CONNECTOR, 5" SIZE (FLEX-WELD)	13226E9449	M-14
35	22165/4X21ST-SS	4	FLEXIBLE CONNECTION, 4 INCH SIZE W/FLANGE, 8" OD X 1 1/4" THK, W/8 HOLES, 5/8 DIA ON 6 1/2" BC X 21" L (HARCO MFG)	13226E9449	M-5
36		4	PROPELLER SHAFT, 2 1/2" DIA, 10'-1 1/16" L, W/HARDWARE	13226E9472	1 THRU 9

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THIS DRAWING APPLIES TO HULL NUMBERS 8540 THROUGH 8560 AND 8580 THROUGH 8618 ONLY

FIND NO.	FSCM	DWG SIZE	PART OR IDENTIFYING NO.	QTY REQD	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL
PARTS LIST							
UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: .001" IN.				DRAWN BY	DATE	U.S. ARMY	
ONE PLACE (.X) ±				SZ/WHL	7 FEB 87	BELVOIR RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER	
TWO PLACE (.XX) ±				CHECKED BY	15 NOV 88	FORT BELVOIR, VIRGINIA 22060-3608	
THREE PLACE (.XXX) ±						LCM-8, MOD-1, SERVICE LIFE EXTENSION PROGRAM COMPONENTS KIT	
ANGLES ±							
DO NOT SCALE THIS DRAWING				CONTRACT NO.			
FOR INTERPRETATION OF DRAWING DOD-STD-100 APPLIES				DESIGN APPROVAL			
REMOVE BURRS AND BREAK SHARP EDGES	SHARP EDGES	TO		DATE 13 MAR 88			
	FILLET RADI	TO		APPROVED FOR PROCUREMENT			
MATERIAL				DATE 25 MAR 88			
SIZE		FSCM	DWG NO.		SCALE NONE		
A1		97403	13226E9460		SHEET 1 OF 2		

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REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REDRAWN WITH CHANGE, SEE ECP NO. 90HE3102	20MAR 90	<i>[Signature]</i>
	B	SEE ECP NO. 90HE3207	23MAR 90	<i>[Signature]</i>
	C	SEE ECP NO. 90HE3309	18JUN 90	<i>[Signature]</i>

ITEM	VENDOR FSCM AND PART NO.	QTY	NOMENCLATURE OR DESCRIPTION	BRDEC DWG NO.	FIND NO.
37	61204/33506-233	4	LIGHT, 360°, RED WITH 24V BULB (AQUA SIGNAL) SEE NOTE 6	13226E9458	5
38	61204/33501-003	1	MASTHEAD LIGHT WITH 24V BULB (AQUA SIGNAL)	13226E9458	4
39	61204/33504-203	1	PORT LIGHT WITH 24V BULB (AQUA SIGNAL)	13226E9458	3
40	61204/33502-003	1	STERN LIGHT WITH 24V BULB (AQUA SIGNAL)	13226E9458	2
41	61204/33505-103	1	STARBOARD LIGHT WITH 24V BULB (AQUA SIGNAL)	13226E9458	1
42	61204/33506-033	1	LIGHT, 360°, WHITE WITH 24V BULB (AQUA SIGNAL) SEE NOTE 6	13226E9458	8
43	37919/MODEL 150 520-012 AND 530-025	1 EA	RUDDER ANGLE INDICATOR, W/WATERPROOF HOUSING KIT AND RUDDER FOLLOW-UP (WAGNER)	13226E9476	42
44		2	RAMP HINGE, W/WASHER, NUT AND SCREW	13226E9457	M1 THRU M4
45	82654/75000664	2	BUMPER, DOCK, 1 3/8" X 2 3/8" X 25 FT L (STANPRO)	13226E9457	M-8
46	37919/530-072	1	UNIVERSAL RUDDER CLAMP (WAGNER)	13226E9464	42
47	97403/13226E9477	1	STEERING HYDRAULIC RESERVOIR	13226E9461	M-7
48	M552149-1	2	BATTERY, STORAGE, LEAD-ACID, 12V, TYPE 6TL	13226E9476	11
49	55752/1606B	2	VACUUM GAGE KIT (RACOR)	13226E9470	F-12
50	53711/804-5184210	3	LOCKER, .50 CALIBER AMMUNITION (NAVSEA)	13226E9474	1
51	97403/13226E9479	1	LOCKER, INDIVIDUAL ARMS, VERTICAL CABINET, M16A1/M203	13226E9474	4
52	97403/13226E9480	1	LOCKER, CREW SERVED WEAPONS, .50 CAL MG	13226E9474	5
53	10001/2663138	2	GUN MOUNT, MK26, MOD 17 (NAVORD)	13226E9474	6
54					
55					
56	73168/872450	3	DISCHARGE HEAD (KIDDE)	13226E9481	32
57	73168/251821	3	FLEX LOOP, 3/4" NPT (KIDDE)	13226E9481	34
58	73168/8560	2	3 CYLINDER OAK FRONT (KIDDE)	13226E9481	35
59	73168/8558	2	3 CYLINDER OAK BACK (KIDDE)	13226E9481	31
60	73168/486536	1	PRESSURE OPERATED SWITCH (KIDDE)	13226E9481	20
61	73168/871071	1	DISCHARGE DELAY SWITCH (KIDDE)	13226E9481	10
62	73168/981574	2	PRESSURE OPERATED SIREN (KIDDE)	13226E9481	1
63	73168/803367	2	MULTIJET NOZZLE, CODE NO. 3.5 (KIDDE)	13226E9481	39
64	73168/871403	1	PULL BOX, BREAK GLASS (KIDDE)	13226E9481	6
65	73168/803808	4	CORNER PULLEY (WT) (KIDDE)	13226E9481	4
66	73168/872335	1	PNEUMATIC CONTROL HEAD (KIDDE)	13226E9481	30
67	73168/841241	3	PNEUMATIC HEAT DETECTOR (KIDDE)	13226E9481	11
68	73274/RBWT	3	ROTATING LIGHT, W/AMBER LENS, BOX MOUNT, 24V (HOSE MCCANN)	13226E9481	15
69	73168/803381	1	MULTIJET NOZZLE, CODE NO. 2 (KIDDE)	13226E9481	29
70	73168/803369	2	MULTIJET NOZZLE, CODE NO. 4.5 (KIDDE)	13226E9481	23
71	73168/206561	3	WARNING LABEL	13226E9481	19

BELOW IS A LISTING OF THE ONBOARD SPARE PARTS REQUIRED FOR CERTAIN KIT ITEMS

ITEM	VENDOR FSCM AND PART NO.	QTY	NOMENCLATURE OR DESCRIPTION	REQUIRED ON BRDEC DWG NO.	FIND NO.
100	55752/2020SM-30-OR	4	FILTER ELEMENT, 30 MICRON (RACOR)	13226E9470	M-14
101	24161/A-41	2 PR	VEE BELTS, MATCHED PAIR, 1/2" WIDTH X 42.3 OUTSIDE LENGTH (GATES)	13226E9464	29
102	61204/904-00006	2	BULB, INCANDESCENT, 24 V/10W (AQUA SIGNAL)	13226E9458	2 AND 8
103	61204/904-00003	7	BULB, INCANDESCENT, 24 V/25W (AQUA SIGNAL)	13226E9458	1, 3, 4 AND 5
104	02249/K22001	4	FILTER ELEMENT (GRESEN)	13226E9461	M-9
105	79577/W1539	1	HEAD, M.S.D. "SKIPPER" REPAIR KIT (WILCOX-CRITTENDEN)	13226E9468	M-9
106	53084/HTH	1	CALCIUM HYPOCHLORITE TABLETS, 6 LB, IN PLASTIC CONTAINER (OLIN)	13226E9468	M-10
107	/NO. 3		FILTER BAG (HUMPHREY MARINE)	13226E9468	M-10
108	/94559	1	PUMP SERVICE KIT (HUMPHREY MARINE)	13226E9468	M-10
109	/ NO. 35	1	FLOAT SWITCH (HUMPHREY MARINE)	13226E9468	M-10
110	/ACT 32 OZ	1	ACTIVATOR, 32 OZ BOTTLE (HUMPHREY MARINE)	13226E9468	M-10
111	61928/TP624	6	FUEL FILTER ELEMENT, 10 MICRON (GMC, AC-DELCO DIV)	13226E9448	36
112	61928/PF911	12	LUBE OIL FILTER ELEMENT (GMC, AC-DELCO DIV)	13226E9448	36
113	72582/5193602	6	IMPELLER, RAW WATER PUMP (DETROIT DIESEL)	13226E9448	36
114	61208/M2725	4	LUBE OIL FILTER ELEMENT (TWIN DISC)	13226E9448	36

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FIND NO.	CAGE	DWG SIZE	PART OR IDENTIFYING NO.	QTY	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL
PARTS LIST							
UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: mm IN.				DRAWN BY: RLW/AMF DATE: 15 MAR 90			
ONE PLACE (.X) ±				CHECKED BY: G.T.P. DATE: 20 MAR 90			
TWO PLACE (.XX) ±				THIRD ANGLE PROJECTION			
THREE PLACE (.XXX) ±				CONTRACT NO.			
ANGLES ±				DESIGN APPROVAL: <i>[Signature]</i> DATE: 23 MAR 90			
DO NOT SCALE THIS DRAWING				APPROVED FOR PROCUREMENT: <i>[Signature]</i> DATE: 23 MAR 90			
FOR INTERPRETATION OF DRAWING 000-STD-100 APPLIES				SIZE: A1 CAGE: 97403 DWG NO.: 13226E9460			
REMOVE BURRS AND SHARP EDGES TO				SCALE: SHEET 2			
BREAK SHARP EDGES FILLET RADI TO							