

NOTES:

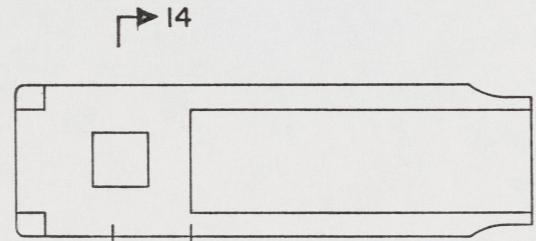
- THIS DRAWING HAS BEEN DEVELOPED FROM SHIPCHECK INFORMATION FOR ACCOMPLISHING THE INSTALLATION OF SALT WATER PIPING TO LCM-B, MOD-1.
- WELDING AND BRAZING REQUIREMENTS SHALL BE IN ACCORDANCE WITH NAVSEA STD ITEM NO. C09-12.
- EQUIPMENT AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH USCG AND ABS REGULATIONS.
- REPAIR ALL PAINT DAMAGED BY THIS INSTALLATION AND PAINT ALL NEW STEEL IN ACCORDANCE WITH U.S. ARMY TECHNICAL BULLETIN TB43-0144.
- MATERIAL ORDERED ON THIS DRAWING IS NOT INTENDED TO BE RESTRICTIVE. SUBSTITUTION OF EQUAL QUALITY MATERIAL MAY BE MADE.
- SLIGHT DEVIATIONS FROM DIMENSIONS SHOWN ARE PERMISSIBLE TO SUIT ACTUAL CONDITIONS FOUND ABOARD THE VESSEL.
- COMPONENTS SHOWN BY SOLID, HEAVY LINES ARE NEW AND ARE TO BE INSTALLED IN ACCORDANCE WITH THIS DRAWING. PHANTOM LINES INDICATE EXISTING COMPONENTS INSTALLED BY DRAWINGS REFERENCED AS NOTED.
- RAW WATER PUMP FURNISHED WITH ENGINE, REF NO. 3.
- PIPING SHALL BE SUITABLY SECURED BY PIPE HANGERS TO PREVENT VIBRATION AND PROTECT AGAINST DAMAGE IN ACCORDANCE WITH NAVSEA 804-1385781.
- PIPING SYSTEMS SHALL BE THOROUGHLY CLEANED BY FLUSHING WITH THE MEDIUM FOR WHICH THE SYSTEM IS INTENDED.
- ALL THREADED PIPE JOINTS SHALL BE ASSEMBLED USING ANTISEIZE TAPE, FIND NO. M-14. PIPING SHALL BE TESTED HYDROSTATICALLY WITH WATER AND ALL JOINTS INSPECTED FOR TIGHTNESS IN ACCORDANCE WITH LCM-B INSTALLATION INSTRUCTIONS; 55-1905-217-1.
- IDENTIFY PIPING SYSTEM IN ACCORDANCE WITH TB-43-0144.
- PIPES OR HOSES OBSCURED BY FLOOR PLATING OR ENGINE ROOM EQUIPMENT SHALL BE IDENTIFIED BY (COPPER, BRASS, CRES) TAGS IN ACCORDANCE WITH MIL-STD-130. TERMINATIONS AND USE SHALL BE CLEAR.

REFERENCE DRAWINGS APPLICABLE TO HULL NUMBERS 8540 THRU 8560 AND 8580 THRU 8618		
NO.	DRAWING NO.	TITLE
1	245-4510946	LCM-B, MOD 1, SALT WATER PIPING
2	13226E9456	LCM-B, MOD 1, MOD TO BILGE PIPING SYSTEM
3	13226E9448	LCM-B, MOD 1, ENGINE FOUNDATIONS
4	13226E9470	LCM-B, MOD 1, FUEL SYSTEM MODIFICATION

REFERENCE DRAWINGS APPLICABLE TO HULL NUMBERS 8520 THRU 8539		
NO.	DRAWING NO.	TITLE
1	245-2534209	LCM-B, MOD 1, SALT WATER PIPING
2	13229E2253	LCM-B, MOD 1, MOD TO BILGE PIPING SYSTEM
3	13226E9448	LCM-B, MOD 1, ENGINE FOUNDATIONS
4	13226E9470	LCM-B, MOD 1, FUEL SYSTEM MODIFICATION

SHEETS				STATUS OF REVISIONS			
NO.	DATE	BY	APP'D	NO.	DESCRIPTION	DATE	APP'D
1				A	SEE ECP NO. 90HE3102 AND 90HE3103	10 MAR 84	[Signature]
2				B	SEE ECP NO. 90HE3309 AND 90HE3310	18 JUN 84	[Signature]

YARD	FIND NO.	FSCM	DWG SIZE	PART OR IDENTIFYING NO.	QTY REQD	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL
YARD V-2	90664			FIG. 237P	2	GLOBE VALVE, 1/2" IPS (WALWORTH)	COML	BRONZE
YARD V-1	90664			FIG. 245PWS	2	GLOBE VALVE, 1" IPS (WALWORTH)	COML	BRONZE
YARD M-16	72582			5136348	2	COOLER, FUEL (DETROIT DIESEL) SEE NOTE 14		
YARD M-15				MS35842-13	40	HOSE CLAMP, LOW PRESSURE, 1 13/16"-2 3/4" RANGE		CRES
YARD M-14				SIZE II	AR	TAPE, ANTISEIZE (SEE NOTE 11)	MIL-T-27730	
YARD M-13				UNS C36000	4	BAR, 1/2" X 2" X 2 1/2"	ASTM B16	BRASS
YARD M-12	24161			NO. 35W	6	HOSE, 1 5/8" ID X 2.09" OD X 6" L (GATES)	COML	RBR
YARD M-11	24161			NO. 76W	AR	HOSE, 7/8" ID X 1.4" OD X L A/R (GATES)	COML	RBR
YARD M-10				MS16995-66	8	SCREW, CAP, SOC HD-HEX, CRES, 5/16"-18 UNC-3A X 1" L		
YARD M-9	80996			FIG. 138	2	CLAMP, 2" PIPE SIZE, PIPE THREADED (GRINNELL)	COML	M.1
YARD M-8				MS35649-2314	4	NUT, HEX, PLAIN, CRES, 5/16"-18 UNC-2B		
YARD M-7				MS35338-140	12	WASHER, LOCK-SPRING, REG, CRES, 5/16" NOM ID		
YARD M-6				MS35307-334	4	SCREW, CAP, HEX-ND, CRES, PSVT, 5/16"-18 UNC-2A X 1" L		
YARD M-5				MIBC510	AR	1/16" THK SHEET	ASTM D2000	RUBBER
YARD M-4					2	PLATE, 1/4" X 2" X 4"	ASTM A36	STL
YARD M-3	24161			NO. 35W	4	HOSE, 2" ID X 2.54" OD X 6" L (GATES)	COML	RBR
YARD M-2	24161			NO. 35W	2	HOSE, 1 5/16" ID X 1.78" OD X 6" L (GATES)	COML	RBR
YARD M-1				MS35842-12	24	HOSE CLAMP, LOW PRESSURE, 1 1/16"-2" RANGE		CRES
YARD F-17	72423			FIG. 5102-398	2	ELBOW, 90°, REDUCING, FF X FEM, 2" X 1 1/4" IPS (FLAGG)	COML	BRONZE
YARD F-16	72423			FIG. 5301-100	2	UNION, FEMALE, 1/2" IPS, W/SB RING (FLAGG)	COML	BRONZE
YARD F-15	72423			FIG. 4121-248	2	TEE, REDUCING, 1 1/4" X 1 1/4" X 3/4" IPS (FLAGG)	COML	BRONZE
YARD F-14					4	BUSHING, HEX, 3/4" X 1/2" IPS	ANSI B16.15	BRONZE
YARD F-13					2	ADAPTER, C X M, 1" X 1 1/4" IPS	ANSI B16.1B	CU ALY
YARD F-12					2	ELBOW, 90°, 1/2" IPS, CLASS 125	ANSI B16.15	BRONZE
YARD F-11					4	ELBOW, 90°, 1", C X C	ANSI B16.1B	CU ALY
YARD F-10	72423			FIG. 5108-100	2	STREET ELBOW, 90°, 1/2" IPS, W/SB RING (FLAGG)	COML	BRONZE
YARD F-9	72423			FIG. 5150-299	4	COUPLING, REDUCING, 1 1/2" X 1 1/4" IPS, W/SB RING (FLAGG)	COML	BRONZE
YARD F-8					2	ELBOW, REDUCING, 90°, C X F, 1" X 1 1/4"	ANSI B16.1B	CU ALY
YARD F-7				M1183/5-06A	8	ELBOW, 90°, 1 1/4" IPS, W/SB RING	MIL-F-1183/5	BRONZE
YARD F-6				M1183/5-26A	2	ELBOW, 45°, 1 1/4" IPS, W/SB RING	MIL-F-1183/5	BRONZE
YARD F-5				M1183/9-441A	2	TEE, REDUCING, 1 1/4" X 1 1/4" X 1" IPS, W/SB RING	MIL-F-1183/9	BRONZE
YARD F-4	72423			FIG. 5121-152	2	TEE, REDUCING, 3/4" X 3/4" X 1 1/4" IPS, W/SB RING (FLAGG)	COML	BRONZE
YARD F-3				M1183/5-04A	4	ELBOW, 90°, 3/4" IPS, W/SB RING	MIL-F-1183/5	BRONZE
YARD F-2				M1183/11-34A3	4	UNION ELBOW, 90°, 3/4" IPS, W/SB RING	MIL-F-1183/11	BRONZE
YARD F-1				M1183/5-05A	6	ELBOW, 90°, 1" IPS, W/SB RING	MIL-F-1183/5	BRONZE
YARD P-9				UNS C12000	AR	THREADLESS COPPER PIPE, 2" IPS X .065 WALL	ASTM B302	CU ALY
YARD P-8				UNS C12000-050	AR	SEAMLESS COPPER WATER TUBE, 3/4" STD TUBE SIZE X .065 WALL	ASTM B88	CU ALY
YARD P-7				UNS C12000	4	THREADLESS COPPER PIPE, 1 1/2" IPS X .065 WALL X 3" L	ASTM B302	CU ALY
YARD P-6				UNS C12000-050	AR	SEAMLESS COPPER WATER TUBE, 1" STD TUBE SIZE X .065 WALL	ASTM B88	CU ALY
YARD P-5				COPPER NO. OPTL	AR	SEAMLESS COPPER PIPE, 1/2" IPS, SCHED 40	ASTM B42	CU ALY
YARD P-4					AR	SEAMLESS PIPE, BLACK, 1/4" IPS, SCHED 40	ASTM A53	STL
YARD P-3				COPPER NO. OPTL	AR	SEAMLESS COPPER PIPE, 1 1/4" IPS, SCHED 40	ASTM B42	CU ALY
YARD P-2				COPPER NO. OPTL	AR	SEAMLESS COPPER PIPE, 3/4" IPS, SCHED 40	ASTM B42	CU ALY
YARD P-1				COPPER NO. OPTL	AR	SEAMLESS COPPER PIPE, 1" IPS, SCHED 40	ASTM B42	CU ALY



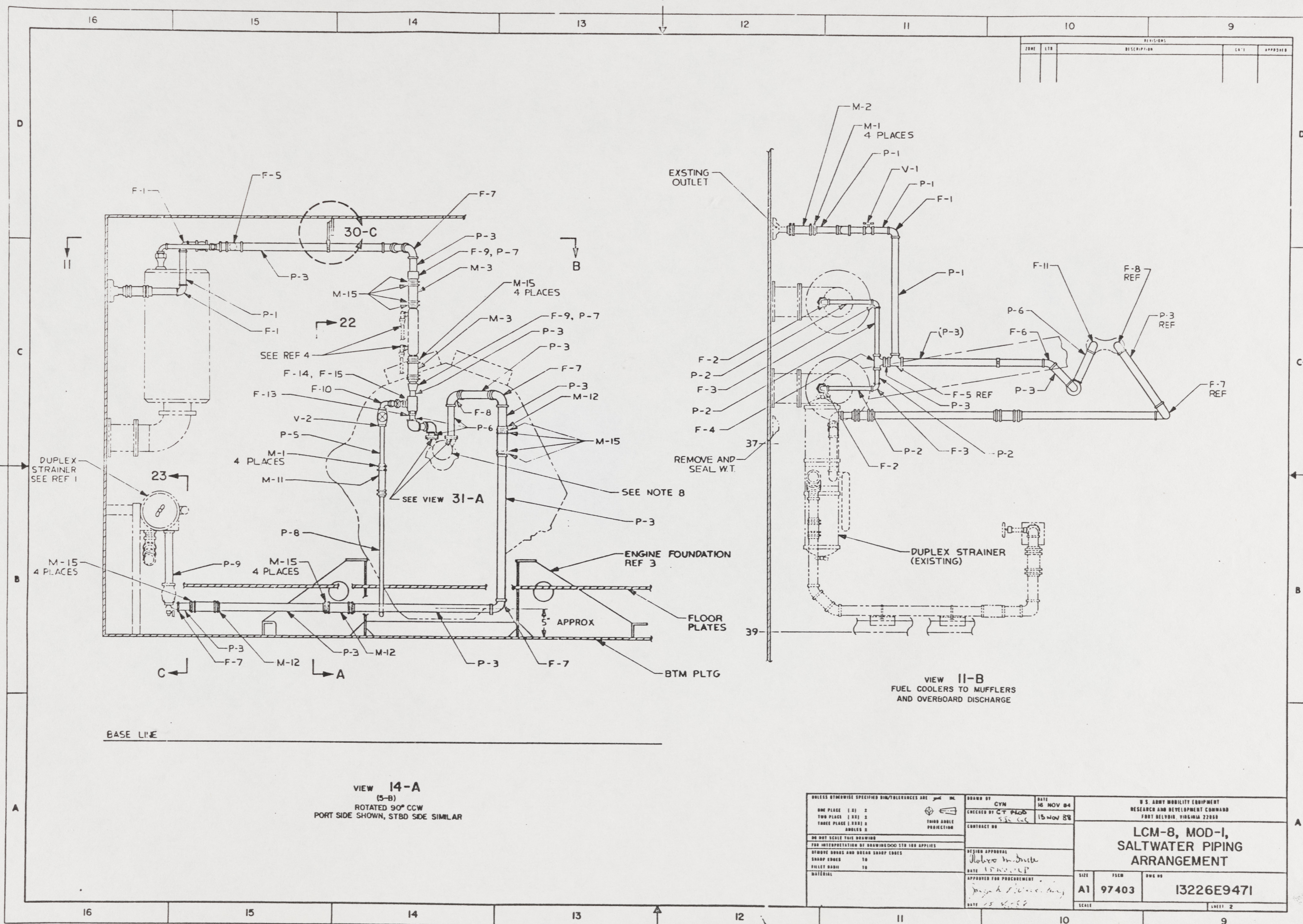
KEY VIEW 5-B
SCALE NONE

THIS DRAWING APPLIES TO HULL NUMBERS 8520 THROUGH 8560 AND 8580 THROUGH 8618 ONLY

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: \pm .001 IN.		DRAWN BY: CYN	DATE: 16 NOV 84
ONE PLACE (.)	± .001	CHECKED BY: G.T. PAW	DATE: 15 NOV 84
TWO PLACE (.)	± .0005	CONTRACT NO.	
THREE PLACE (.)	± .0002	DESIGN APPROVAL: [Signature]	
ANGLES	± .001	DATE: 15 NOV 84	
DO NOT SCALE THIS DRAWING FOR INTERPRETATION BY DRAWING DDD-STD-100 APPLIES		APPROVED FOR PROCUREMENT: [Signature]	
REMOVE BORDS AND BREAK SHARP EDGES		DATE: 15 NOV 84	
SHARP EDGES	± .001	SIZE: A1	
FILLET RADIUS	± .001	FSCM: 97403	
MATERIAL:		DWG NO: 13226E9471	
		SCALE: NONE	
		SHEET 1 OF 4	

LCM-8, MOD-1,
SALT WATER PIPING
ARRANGEMENT

82



ZONE	LINE	DESCRIPTION	DATE	APPROVAL

VIEW 14-A
(5-B)
ROTATED 90° CCW
PORT SIDE SHOWN, STBD SIDE SIMILAR

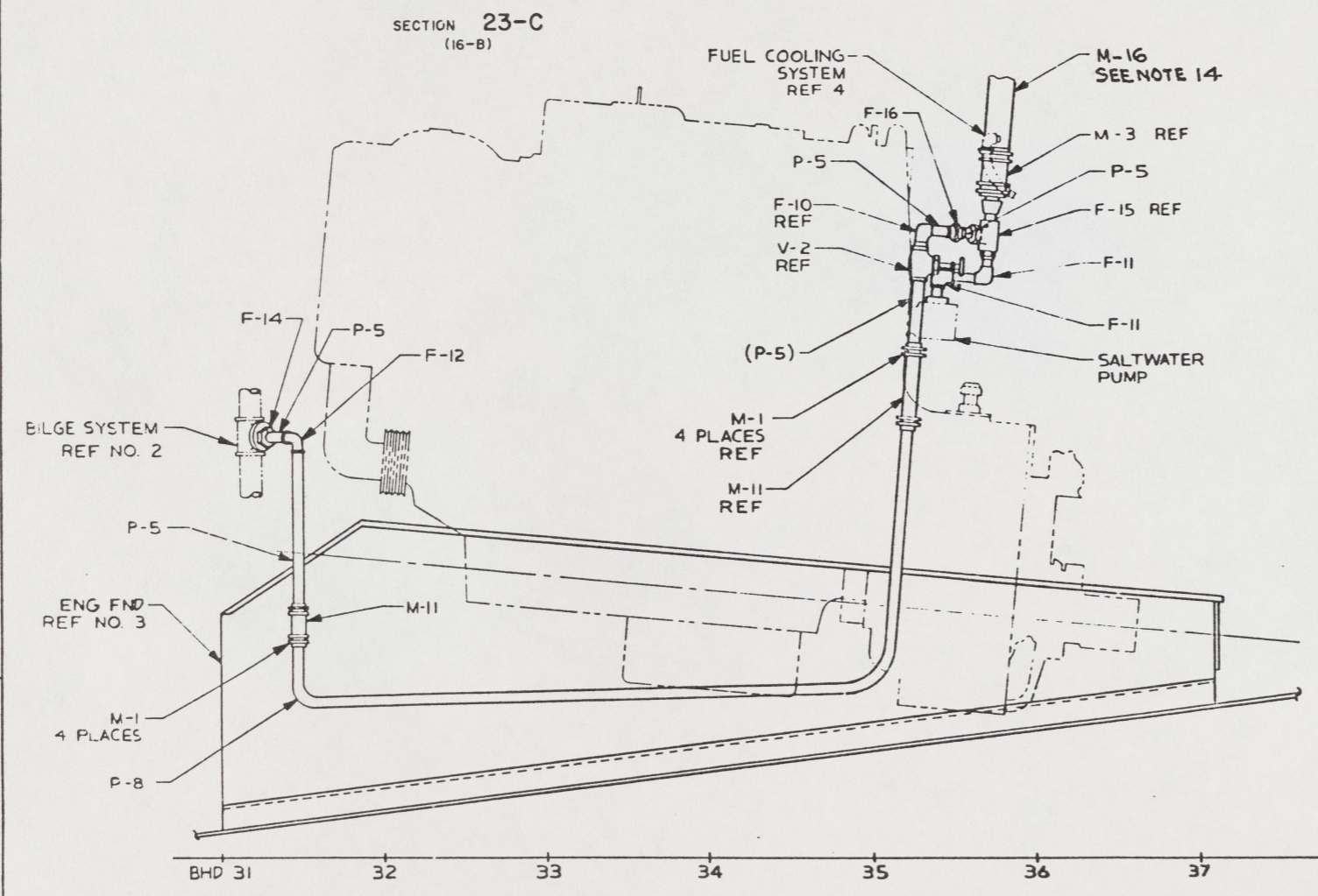
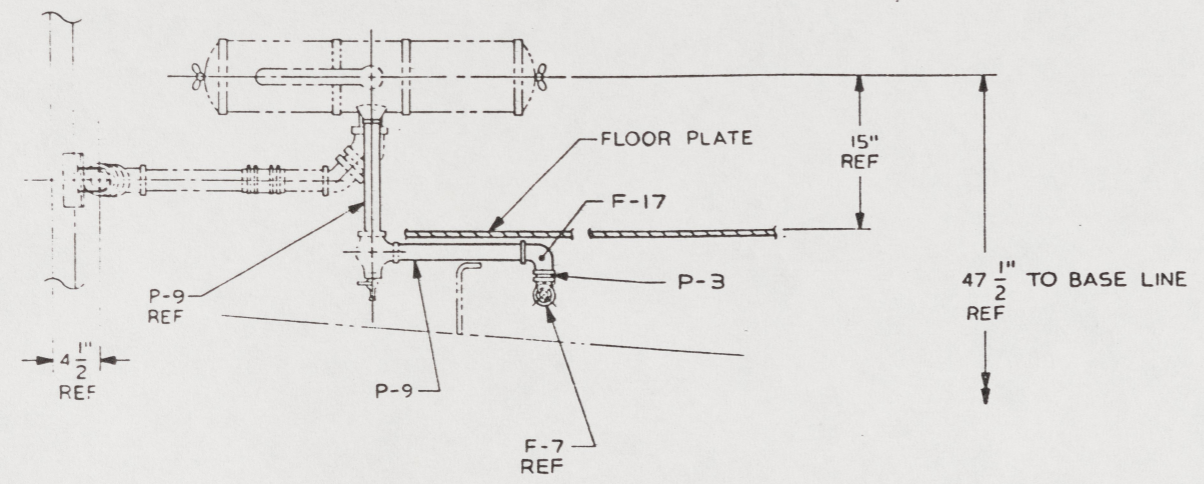
VIEW 11-B
FUEL COOLERS TO MUFFLERS
AND OVERBOARD DISCHARGE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY CYN	DATE 16 NOV 84	U.S. ARMY MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND FORT BELVOIR, VIRGINIA 22060	
ONE PLACE (1/2) 2	TWO PLACE (1/32) 3	CHECKED BY CT PLG	DATE 15 NOV 84	LCM-8, MOD-1, SALTWATER PIPING ARRANGEMENT	
THREE PLACE (1/64) 3	FOUR PLACE 3	DATE 15 NOV 84	SCALE A1 97403		
DO NOT SCALE THIS DRAWING	FOR INTERPRETATION OF DIMENSIONS SEE 100 APPLIES	DESIGN APPROVAL <i>Robert M. Smith</i>	DATE 15 NOV 84	APPROVED FOR PROCUREMENT <i>James H. [Signature]</i>	SHEET 2
REMOVE EDGES AND BREAK SHARP EDGES	SHARP EDGES 10	MATERIAL			

83

24 23 22 21 20 19 18 17

ZONE	LTB	DESCRIPTION	DATE	APPROVED
B		SEE ECP NO. 90HE3309 AND 90HE3310	18 JUN 50	8 W S



VIEW 22-A
(14-C)
PRIME LINES FROM SW PUMP DISCHARGE
TO BILGE PUMPS
PORT SIDE SHOWN, STBD SIDE OPP HD

84

24 23 22 21 20 19 18 17

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: $\frac{1}{16}$ IN		DRAWN BY CYM	DATE 16 NOV 54	U.S. ARMY MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND FORT BELVOIR, VIRGINIA 22060
ONE PLACE (1.0) 2	TWO PLACE (0.01) 2	CHECKED BY CJ PLOD SIC CC	DATE 15 NOV 58	
THREE PLACE (0.001) 2	FOUR PLACE (0.0001) 2	CONTRACT NO.		LCM-8, MOD-1, SALTWATER PIPING ARRANGEMENT
DO NOT SCALE THIS DRAWING				
FOR INTERPRETATION OF DIMENSIONS SEE 100 APPLIES				DESIGN APPROVAL <i>Robert H. Smith</i>
REMOVE DIMS AND BREAK SHARP CORNERS				
SHARP CORNERS TO				DATE 15 NOV 58
FILLET RADIUS TO				
MATERIAL				APPROVED FOR PRODUCTION <i>James H. [unclear]</i>
		DATE 29 NOV 58	DATE	SIZE A1
				FILE NO. 97403
				QWA NO. 13226E9471
				SCALE SHEET 3

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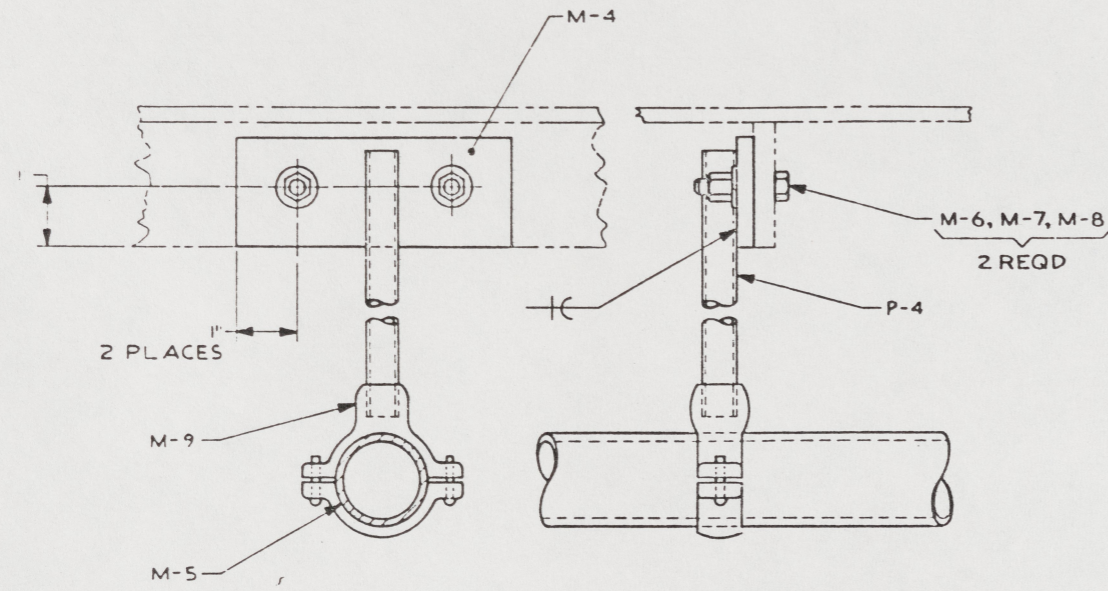
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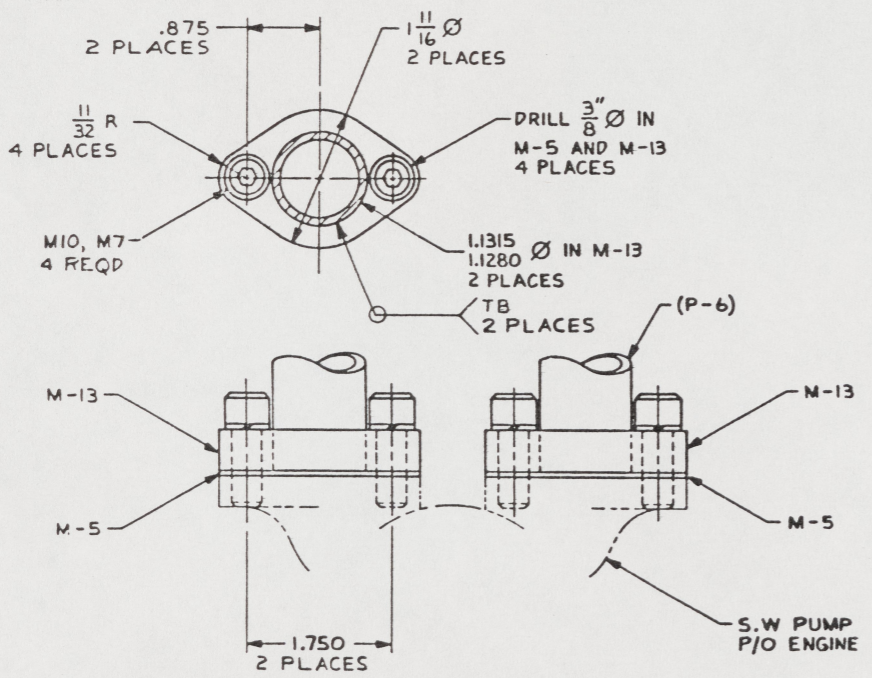
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REVISIONS				
ZONE	LEN	DESCRIPTION	DATE	APPROVED



VIEW 30-C
(14-D)
SCALE NONE



VIEW 31-A
SCALE 1/1

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: $\pm .005$ IN. ONE PLACE (.01) 2 TWO PLACE (.00) 2 THREE PLACE (.000) 2 ANGLES 2 DO NOT SCALE THIS DRAWING FOR INTERPRETATION OF DIMENSIONS SEE 1100 APPLIES REMOVE BURRS AND BREAK SHARP EDGES SHARP EDGES TO FILED EDGES TO MATERIAL	DRAWN BY CVM CHECKED BY C.T. PLADD S.S.C. GC CONTRACT NO.	DATE 16 NOV 84 15 NOV 85	U.S. ARMY MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND FORT BELVOIR, VIRGINIA 22060
	DESIGN APPROVAL <i>Robert D. Dutt</i> DATE 11/15/85 APPROVED FOR PROCUREMENT <i>John H. Williams</i> DATE	SIZE A1	FCN 97403
SCALE SHEET 4			SHEET 4

85

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