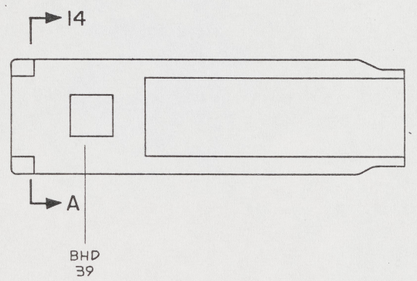
SHEETS 3	SHEETS 2	ZONE	LTR	STATUS OF REVISIONS DESCRIPTION	DATE	APPROVED
—	—		A	SEE ECP NO. 90HE3102	2 MAY 91	AMS

NOTES:

1. THIS DRAWING HAS BEEN DEVELOPED FROM SHIPCHECK INFORMATION FOR ACCOMPLISHING THE INSTALLATION OF ENGINE EXHAUST PIPING ON LCM-8,MOD-1.
2. ALL FABRICATION WELDING AND INSPECTION TO BE IN ACCORDANCE WITH NAVSEA 0900-LP-014-5010,WELD SIZES BASED ON USE OF AWS A5.4,CLASS E3086 ELECTRODES FOR CRES STEEL TO CRES STEEL.
3. EQUIPMENT AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH USCG AND ABS REGULATIONS.
4. REPAIR ALL PAINT DAMAGED BY THIS INSTALLATION AND PAINT ALL NEW STEEL IN ACCORDANCE WITH U.S. ARMY TECHNICAL BULLETIN TB43-0144.
5. MATERIAL ORDERED ON THIS DRAWING IS NOT INTENDED TO BE RESTRICTIVE. SUBSTITUTION OF EQUAL QUALITY MATERIAL MAY BE MADE EXCEPT FOR ITEMS MARKED GFE.
6. SLIGHT DEVIATIONS FROM DIMENSIONS SHOWN ARE PERMISSIBLE TO SUIT ACTUAL CONDITIONS FOUND ABOARD THE VESSEL.
7. ENGINE EXHAUST PIPING TO BE INSULATED IN ACCORDANCE WITH MIL-STD-769. INSULATION ON EXHAUST PIPE SHALL BE 1 INCH THICK CONFORMING TO MIL-I-16411, TYPE III. INSULATION OVER FLANGES SHALL BE REMOVABLE.
8. 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.
9. LENGTH OF FIND NO. P-1, P-4 AND P-5 TO BE DETERMINED AT ASSEMBLY.
10. REMOVE EXISTING FLANGES,4 PLACES,WELDED TO OUTER SHELL AND REPLACE WITH FIND NO. M-21. SECURE WELDS SHALL BE WATERTIGHT.
11. ENSURE EXHAUST PIPING (AND INSULATION) CLEARS THROTTLE CONTROL CABLE BY A MINIMUM OF 1/2 INCH.

REFERENCE DRAWINGS		
NO.	DRAWING NO.	TITLE
1	205-4510947	LCM-8 MOD 1 PIPING ENGINE EXHAUST
2	200-5103216	MACHINERY ARRANGEMENT
3	259-5103236	LCM-8 MK 5,ENGINE EXHAUST PIPING ARRANGEMENT
4	13226E9451	LCM-8,MOD-1,ENGINE CONTROL ARRGT



KEY PLAN 5-B
SCALE NONE

SUPPLIER	FIND NO.	FSCM	DWG SIZE	PART OR IDENTIFYING NO.	QTY REQD	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL
YARD	M-23			UNS S31600	4	PLATE,1/4" THICK X 8 1/2" DIA	ASTM A240	CRES
YARD	M-22			MS35307-484	32	SCREW,HEX HD,3/4"-10 UNC-2A X 1 3/8" L		CRES
YARD	M-21				4	PLATE,3/4" THICK X 10" DIA	ASTM A131	STEEL
YARD	M-20			UNS S31600	4	PLATE,1/4" THICK X 10" DIA	ASTM A240	CRES
YARD	M-19				8	GASKET,7 1/2" OD X 5 1/2" ID X 1/8" THK	MIL-G-14243	METALLIC ASB
YARD	M-18			MS51971-8	32	NUT,HEX,3/4"-10 UNC-2B		CRES
YARD	M-17			MS35338-146	64	WASHER,LOCK SPRING,HELICAL,3/4" NOM SIZE		CRES
YARD	M-16			MS35307-487	32	SCREW,HEX HD,3/4"-10 UNC-2A X 2" L		CRES
YARD	M-15				4	GASKET,8 1/2" OD X 4 3/4" ID X 1/8" THK W/8 HOLES, 5/8" DIA ON 7" BC EQ SPACED	MIL-G-14243	METALLIC ASB
GFE	M-14	87738		E30MCSVSF	4	EXHAUST EXPANSION JOINT CONNECTOR 5" SIZE (FLEX-WELD)	COML	CRES
YARD	M-13			MS35338-141	2	WASHER,LOCK,SPRING,HELICAL,3/8" NOM SIZE		CRES
YARD	M-12			MS51971-3	2	NUT,HEX,3/8"-16 UNC-2B		CRES
YARD	M-11			MS35307-362	2	SCREW,HEX HD,3/8"-16 UNC-2A X 1 1/4" L		CRES
YARD	M-10				2	ANGLE,1/4" X 2 1/2" X 2 1/2"	ASTM A36	STEEL
YARD	M-9			UNS S31600	2	F.B.,1/4" X 2" X 4 3/8"	ASTM A276	CRES
YARD	M-8			MS35307-414	64	SCREW,HEX HD,1/2"-13 UNC-2A X 1 3/4" L		CRES
YARD	M-7				12	GASKET,8" OD X 4 1/4" ID X 1/8" THK W/8 HOLES,5/8" DIA ON 6 1/2" BC EQ SPACED	MIL-G-14243	METALLIC ASB
YARD	M-6			UNS S31600	12	PLATE,1/4" THK	ASTM A240	CRES
GFE	M-5	22165		4 X 21ST-SS	4	FLEXIBLE CONNECTION,4 INCH SIZE W/FLANGE,8" OD X 1/4" THK,W/8 HOLES,5/8" DIA ON 6 1/2" BC X 21" L (HARCO MFG)	COML	CRES
YARD	M-4			MS51971-5	128	NUT,HEX,1/2"-13 UNC-2B		CRES
YARD	M-3			MS35338-143	128	WASHER,LOCK,SPRING,HELICAL,1/2" NOM SIZE		CRES
YARD	M-2			MS15795-819	128	WASHER,FLAT,.562 ID X 1.375 X .109 THK		CRES
YARD	M-1			MS35307-413	64	SCREW,HEX HD,1/2"-13 UNC-2A X 1 1/2" L		CRES
YARD	F-3	34646		21010	4	ELBOW,WELDING,5" IPS,SCHED 10S,SR,90° TYPE 304 L (LADISH)	COML	CRES
YARD	F-2	34646		20010	4	ELBOW,WELDING,4" IPS,SCHED 10S,LR 90° TYPE 304 L (LADISH)	COML	CRES
YARD	F-1	80120		TYPE 304/316	4	ELBOW,90° THD,4" IPS,CLASS 150 LB (SCHNITZER)	COML	CRES
YARD	P-5			GR TP304H/316H	4	PIPE,5" IPS,SCHED 10 S	ASTM A312	CRES
YARD	P-4			GR TP304H/316H	4	PIPE,5" IPS,SCHED 10 S	ASTM A312	CRES
YARD	P-3			GR TP304H/316H	4	PIPE,4" IPS,SCHED 40 S	ASTM A312	CRES
YARD	P-2	06164		GR 304/316	4	NIPPLE,CLOSE,4" IPS,SCHED 40 (ALL STAINLESS INC)	COML	CRES
YARD	P-1			GR TP304H/316H	AR	PIPE,4" IPS,SCHED 5 S	ASTM A312	CRES

PARTS LIST

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

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: ONE PLACE (X) ±, TWO PLACE (.XX) ±, THREE PLACE (.XXX) ±, ANGLES ±. THIRD ANGLE PROJECTION
DO NOT SCALE THIS DRAWING
FOR INTERPRETATION OF DRAWING DOD-STD-100 APPLIES
REMOVE BURRS AND BREAK SHARP EDGES: SHARP EDGES — TO —, FILLET RADII — TO —
MATERIAL

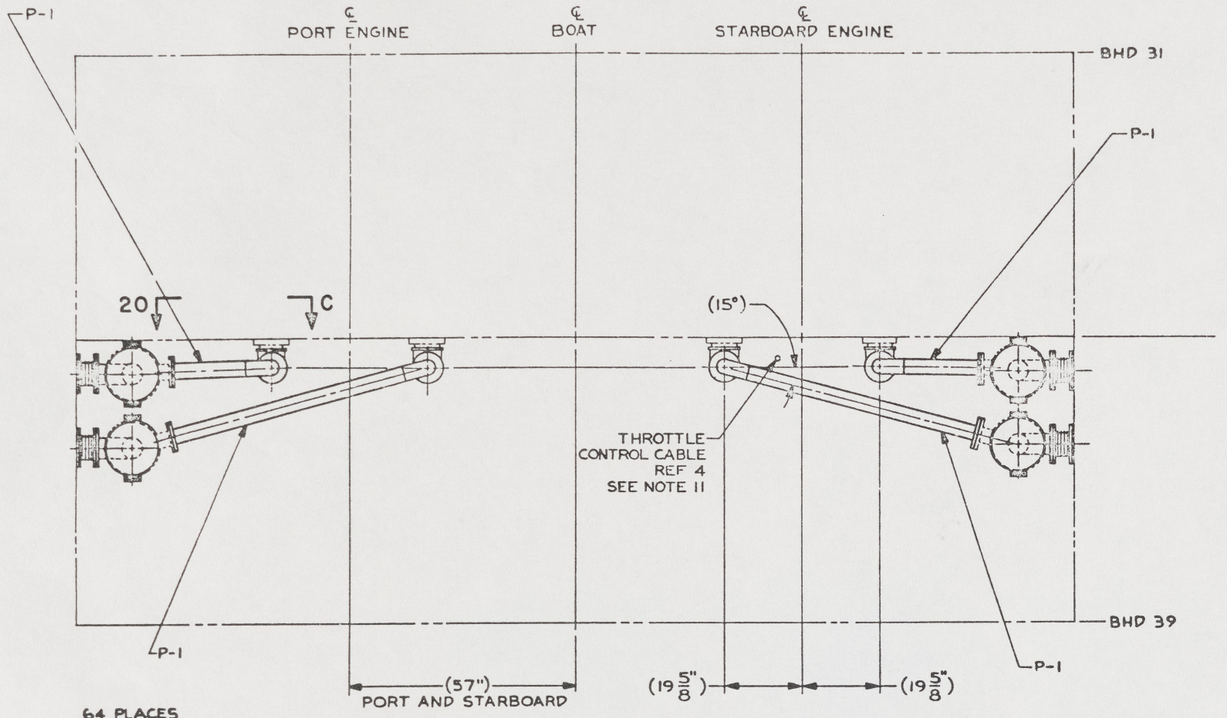
DRAWN BY EJR, DATE 21 AUG 84
CHECKED BY GT PRDD SJC CJC, DATE 15 NOV 88
CONTRACT NO
DESIGN APPROVAL Gloria M. Smith, DATE 15 NOV 88
APPROVED FOR PROCUREMENT, DATE

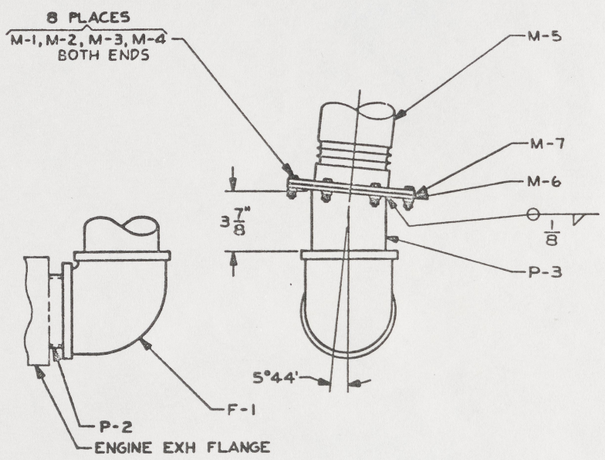
U.S. ARMY MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND
FORT BELVOIR, VIRGINIA 22060

LCM-8, MOD-1, ENGINE EXHAUST PIPING

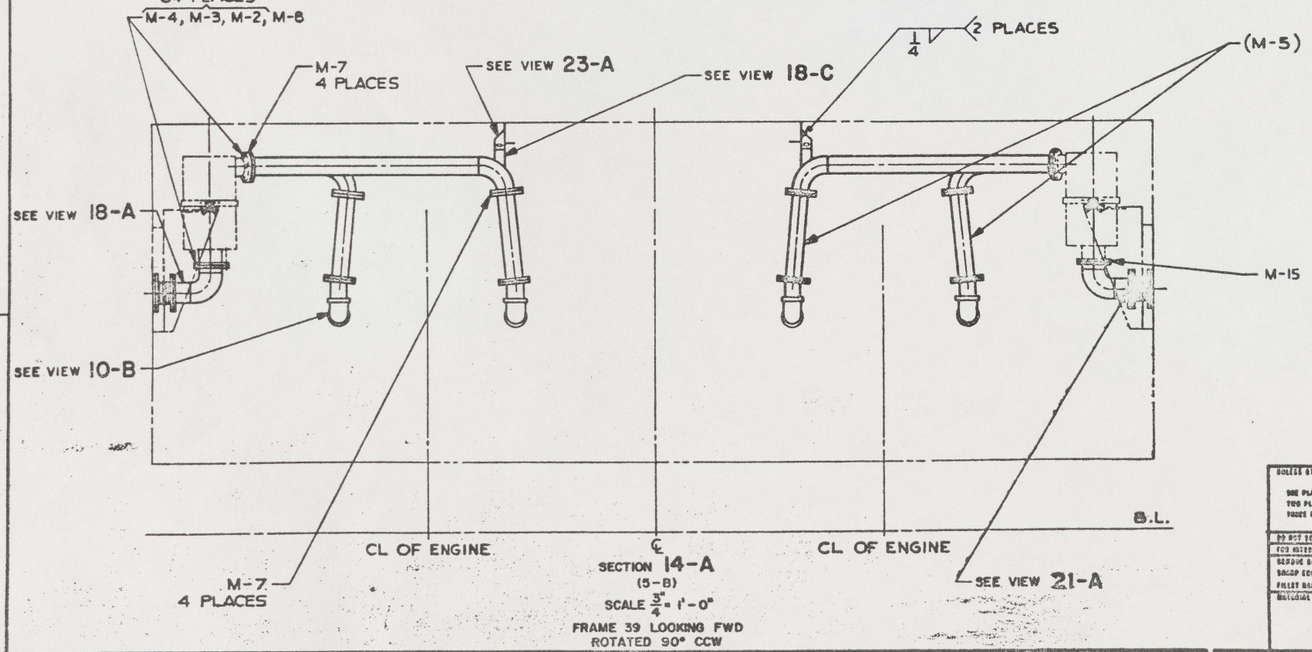
SIZE	FSCM	DWG NO.
A1	97403	13226E9449

SCALE 3"=1' SHEET 1 OF 3





VIEW 10-B
EXHAUST OUTLET
4 PLACES



℄ SECTION 14-A
(5-B)
SCALE 3/4" = 1'-0"
FRAME 39 LOCKING FWD
ROTATED 90° CCW

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES ARE: per MIL
ONE PLACE (.X) ±
TWO PLACE (.XX) ±
THREE PLACE (.XXX) ±
ANGLES ±
THIRD ANGLE PROJECTION
DO NOT SCALE THIS DRAWING
FOR INTERPRETATION OF DRAWING DOD-STD-100 APPLIES
REMOVE BURRS AND BREAK SHARP EDGES
SHARP EDGES TO
FILLET RADII TO
MATERIAL

DRAWN BY EJR — DATE 23 AUG 84
CHECKED BY [illegible] — DATE 15 NOV 84
CONTRACT NO
DESIGN APPROVAL [illegible] DATE 15 NOV 84
APPROVED FOR PROCUREMENT [illegible] DATE 15 NOV 84

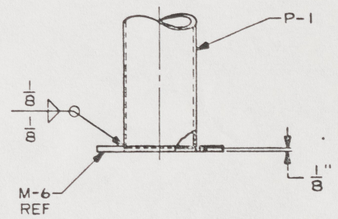
U.S. ARMY MOBILITY EQUIPMENT
RESEARCH AND DEVELOPMENT COMMAND
FORT BELVOIR, VIRGINIA 22060

LCM-8, MOD-1, ENGINE EXHAUST PIPING

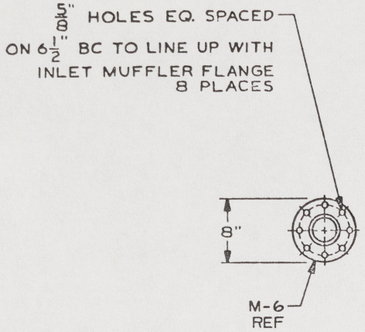
SIZE A1 | FSCM 97403 | DWG NO. 13226E9449
SCALE | SHEET 2

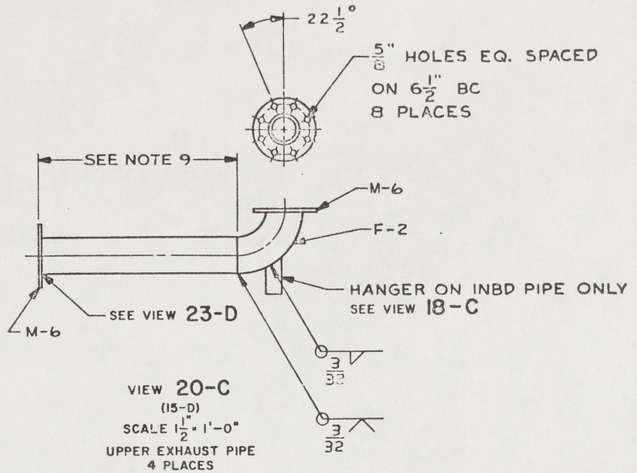
6

ZONE	LTR	DESCRIPTION	DATE	APPROVED

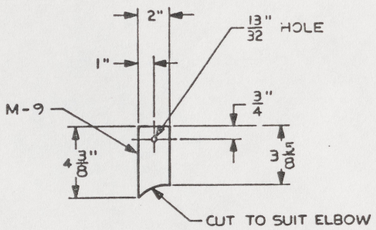


VIEW 23-D
TYPICAL WELD OF PIPE TO FLANGE

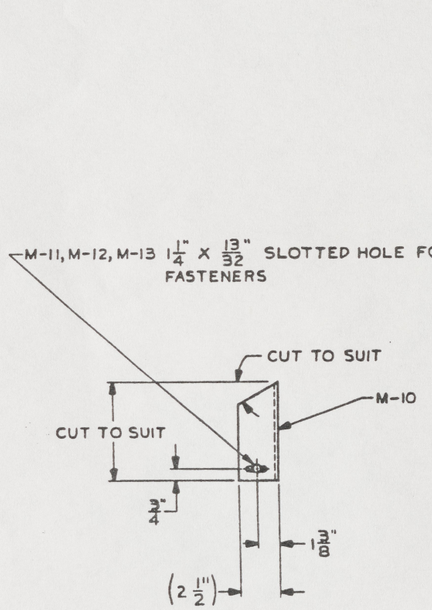




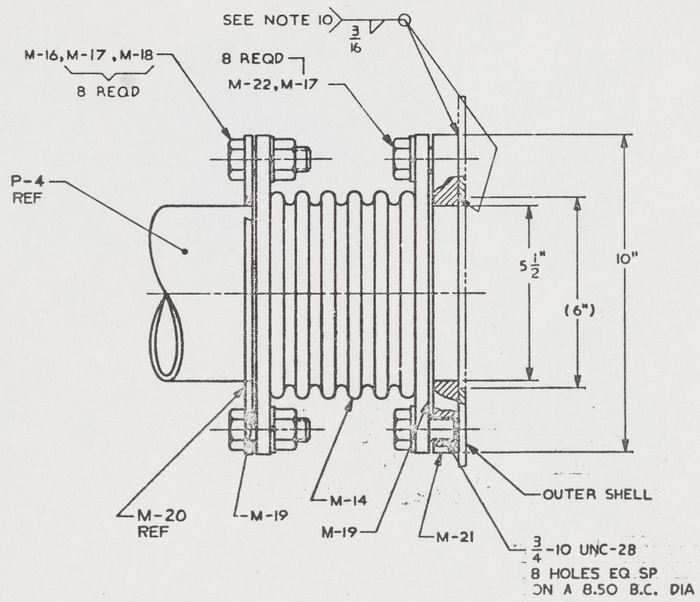
VIEW 20-C
(15-D)
SCALE 1 1/2" = 1'-0"
UPPER EXHAUST PIPE
4 PLACES



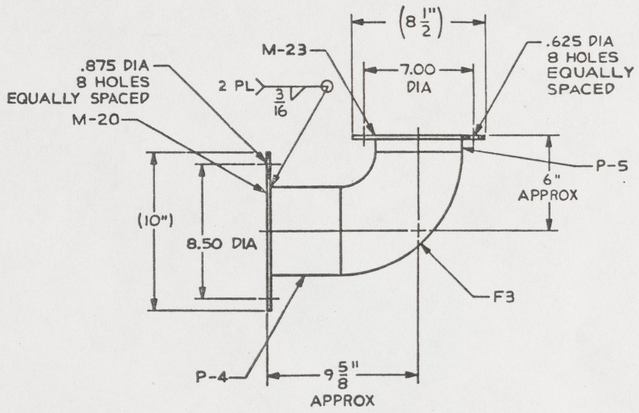
VIEW 18-C
(13-B)
EXHAUST ELBOW HANGER
2 PLACES



VIEW 23-A
(14-B)
SUPPORT FOR EXHAUST ELBOW HANGER
2 REQD-1 AS SHOWN, 1 OPPOSITE



VIEW 21-A
(12-A)
SCALE 6" = 1'-0"
4 PLACES



VIEW 18-A
(16-B)
SCALE 3" = 1'-0"
4 PLACES
SEE NOTE 9

UNLESS OTHERWISE SPECIFIED DIM/TOLERANCES AR. - per inc.
ONE PLACE (.X) ±
TWO PLACE (.XX) ±
THREE PLACE (.XXX) ±
ANGLES ±
THIRD ANGLE PROJECTION
DO NOT SCALE THIS DRAWING
FOR INTERPRETATION OF DRAWING DOD STD 100 APPLIES
REMOVE BURRS AND BREAK SHARP EDGES
SHARP EDGES TO
FILLET RADII TO
MATERIAL

DRAWN BY	EJR	DATE 27 AUG 84
CHECKED BY	GT PROD STC QC	15 NOV 88
CONTRACT NO		
DESIGN APPROVAL	Robert M Smith	DATE 17 NOV 88
APPROVED FOR PROCUREMENT	Joseph R Wrenching	DATE 15 Nov 88

U.S. ARMY MOBILITY EQUIPMENT
RESEARCH AND DEVELOPMENT COMMAND
FORT BELVOIR, VIRGINIA 22060

LCM-8, MOD-1, ENGINE EXHAUST PIPING

SIZE	FSCM	DRAWING
A1	97403	13226E9449

SCALE — SHEET 3

7