QUANTITY REQUIRED FOR ONE VESSEL

EXHAUST PIPING

MARK	QUANTITY	SIZE	FITTING	TYPE	MATERIAL	NAVY SPECS	REMARKS
X1	1	4" I.P.S.	NIPPLE	WELDED	BLACK IRON	COM'L	SEE DRG LCVP 8945
X2	1	4" I.P.S.	ELL	45°	MALL. IRON	"	
X3	0'-0"	4" I.P.S.	PIPE		WRO. IRON	"	
X4	2	4" I.P.S.	BHD FLANGE		MALL. I. GALV.	"	SEE DRG. LCVP 8945
X5	4	1/4" x 1 3/4" LONG	MACH. SCREW	R.H.	STEEL GALV	"	WITH NUTS & WASHERS FOR X4
X6	2	4 1/2" I.D. X 8" LG.	FLEX. HOSE	5 PLY	RUBBER	ZZ-H-541	
X7	4	5" I.P.S.	HOSE CLAMP	HY. DUTY	STEEL GALV.	COM'L	FOR X6
X8	1	4" I.P.S.	COMBINATION VALVE		CAST STEEL	"	ZURN OR EQUAL
X9	1	4" I.P.S.	TRANSOM FLANGE		MALL. I. GALV.	"	SEE DRG. LCVP 8945
X10	6	#14 X 1/4 LG	WOOD SCREW	F.H.	STEEL GALV	"	FOR X9
X11	1	4 1/2 I.D. X 7" O.D.	TRANSOM WASHER	1/8" THK.	BRASS	"	
X12	1	UNDER WATER	EXHAUST DUCT CASTING		RED BRASS	"	SEE DRG. LCVP 8945
X13	4	5/16" X 1 1/2 LG.	CAP SCREW NUT & WASHER	S.A.E.	GALV. I.	"	FOR X12
X14	1	4" I.P.S.	ADAPTER COUPLING		RED BRASS	COMM'L	SEE DRG LCVP 8945
X15	4	5/16" X 1" LG	CAP SCREW & LOCK WASHER	S.A.E.	GALV. I.	"	FOR X12
X16	1	4" I.P.S.	TRU HULL FITTING		RED BRASS	"	SEE DRG. LCVP 8945
X17	2	4 1/2 I.D. X 7" O.D.	GASKET	1/16" THK	FIBER	"	VELLUNOID OR EQUAL
X18		4" I.P.S.	EXHAUST COVER		BRASS	"	SEE DRG LCVP 8945
X19	1		DEFLECTING FIN		"	"	" " " "
X20	9	3/16" D X 2 1/4" LG	MACH. SCREW WITH NUT	F.H.	"	"	FOR X18
X21	1	1/2" D X 4'-6" LG.	EXT. ROD		STEEL H.R.	"	FOR X8
X22	1	2 1/2 FT	ASBESTOS		No 195	"	
X23	25	No 10 F.H.	WOOD SCREW		STEEL GALV.	"	FOR X19, X18 & X16
X24	1		LABEL PLATE		PLASTIC	"	BLACK AND WHITE LCVP 8933
X25	2	5/16" X 1/2" LG	SET SCREW DRILLED HEAD		GALV. STEEL	"	FOR X8
X26	1	No 14 BARE	WIRE 8" LONG		COPPER	"	" " "
X27	1	1/8" X 1 1/2	COTTER PIN		GALV. STEEL	"	" "
X28	4	No 6 1 1/2 LG	WOOD SCREW	R.H.	GALV.	"	FOR X24

COOLING PIPING SYSTEM

MARK	QUANTITY	SIZE	FITTING	TYPE	MATERIAL	NAVY SPECS	REMARKS
C1	1	2" I.P.S.	STRAINER GRASS		BRONZE	COM'L	(GROSS OR EQUAL)
C2	1	1 1/2" I.P.S.	INTAKE SCOOP		BRASS	"	(FIG 65 PERKO OR EQUAL)
C3	1	1 1/2" I.P.S.	GATE VALVE	SCR	"	"	
C4	1	1 1/2" I.P.S.	CHECK VALVE	SWING	"	"	HORIZONTAL
C5	1	1 1/2" I.P.S.	PIPE PLUG	I.P.S.	"	"	
C6	1	1 1/2" I.P.S.	STRAIGHT TEE	I.P.S.	MALL. I. GALV.	"	
C7	5	1 1/2" I.P.S.	ELL	45°	" " "	"	
C8	1	1 1/2" I.P.S.	ELL	90°	" " "	"	
C9	7'-0"	1 1/2" I.P.S.	PIPE	STAND.	WRO. I. GALV.	"	AND NIPPLES
C10	2	1 7/8" I.D.	FLEX. HOSE	5 PLY	RUBBER	ZZ-H-541	6" LONG
C11	4	2" I.D.	HOSE CLAMP		STEEL GALV.	COM'L	FOR C10
C12	2	2" X 1 1/2"	RED BUSHING		WRO. I. GALV.	"	
C13	2	1/4" I.P.S.	DRAIN COCK		BRASS	"	
C14	4	#10 X 1" LONG	WOOD SCREW	F.H.	"	"	FOR C2

BILGE PUMP PIPING SYSTEMS

MARK	QUANTITY	SIZE	FITTING	TYPE	MATERIAL	NAVY SPECS	REMARKS
B1	1	150 GAL. P.M.	BILGE PUMP	ENGINE DRIVEN			FURNISHED WITH ENGINE
B2	2	1 1/4" I.P.S.	NIPPLE	STAND.	WRO. IRON GALV.	"	2" LONG
B3	2	2" I.P.S.	"	"	" " "	"	3 1/2" LONG
B4	1	2" I.P.S.	"	"	" " "	"	2 1/2" LONG
B5	1	2" I.P.S.	SHOULDER NIPPLE	"	" " "	"	
B6	3'-0"	2" I.P.S.	PIPE	"	" " "	"	
B7	14'-0"	1 1/2" I.P.S.	"	"	" " "	"	AND FOR NIPPLES
B8	14'-0"	1 1/2" I.P.S.	"	"	" " "	"	" " "
B9	1	2" I.P.S.	3 WAY COCK	SCR	BRASS	"	WITH 2 WAY 90° PLUG
B10	2	1 1/2" I.P.S.	CHECK VALVE	SWING	"	"	VERTICAL
B11	1	2" I.P.S.	STREET ELL	90°	MALL. I. GALV.	"	
B12	3	2" I.P.S.	ELL	45°	" " "	"	
B13	2	2" X 1 1/2	RED BUSHING		" " "	"	
B14	3	1 1/2" I.P.S.	ELL	45°	" " "	"	
B15	3	1 1/4"	ELL	90°	" " "	"	
B16							
B17	2	1 1/4" I.P.S.	HAND BILGE PUMP		BRASS	"	WILLIS P1483 OR EQUAL
B18	1	2 3/8" I.D.	FLEX. HOSE	5 PLY	RUBBER	ZZ-H-541	4" LONG FOR PC-B6
B19	2	3 1/4" I.D.	HOSE CLAMP		STEEL GALV.		FOR B18
B20	6	1 7/8" I.D.	FLEX. HOSE	5 PLY	RUBBER	ZZ-H-541	6" LONG FOR PC-B7
B21	12	2 1/4" I.D.	HOSE CLAMP		STEEL GALV.		FOR B20
B22	2	1 5/8" I.D.	FLEX. HOSE	3 PLY	RUBBER	ZZ-H-541	6" LONG FOR PC-B8
B23	4	2" I.D.	HOSE CLAMP		STEEL GALV.		FOR B22
B24	2	1/2" I.D.	FLEX. HOSE	3 PLY	RUBBER	ZZ-H-541	3" LONG FOR PC-B2
B25	4	3/4" I.D.	HOSE CLAMP		STEEL GALV.		FOR B24
B26	5'-0"	3/4" O.D. X 0.035" THK	TUBING		COPPER	COM'L	
B27	3	1 1/2" I.P.S.	THRU HULL CONN.		BRONZE	"	NO. P1890 WILLIS OR EQUAL
B28							
B29	3	1" P.S.	DRAIN COCK	SCR	BRASS	"	SLUICE DRAINS
B30	3	1/2"	EXTENSION ROD		STEEL	"	SEE DETAIL ON REF 2
B31	1	1/2	ROD SUPPORT		"	"	" " " " "
B32	5	3/8" DIA.	STAND. WASHER			"	
B33	3	1" I.P.S.	NIPPLE	STAND.	WRO. I. GALV.	"	2 1/4" LONG
B34	3	1" I.P.S.	PIPE LOCK NUT		MALL. I. GALV.	"	
B35	1	1 1/2" I.P.S.	STUFFING BOX		BRASS	"	SEE DETAIL ON REF 2
B36	1	1 1/4" I.P.S.	" "		"	"	" " " " "
B37	2	1 1/2" I.P.S.	STRAINER BILGE		BRONZE	SIMILAR TO "	NO. P1449 WILLIS
B38	2	1 1/4" I.P.S.	" "		"	"	" " " OR EQUAL.
B39	1		VEE BELT			"	SUPPLIED WITH ENGINE
B40	2	#12	R.H. WOOD SCREWS		BRASS	"	FOR B31
B41	8	3/8" X 1 1/2"	HEX BOLTS & NUTS		"	"	FOR B35 & B36
B42	3	1/8" DIA.	COTTER PIN		"	"	FOR B30
B43	2	1/4" I.P.S.	DRAIN COCK		"	"	

FUEL PIPING SYSTEM

MARK	QUANTITY	SIZE	FITTING	TYPE	MATERIAL	NAVY SPEC.	REMARKS
F1	1 E.H. 1 L.H.		FUEL TANK		TERNE PL.	SEE BU PLAN NO LCVP 8513 PC	
F2	2		TANK FLANGE		BRASS	" " " " " "	10
F3							
F4	4	2 1/2" I.P.S.	FUEL PIPE		STEEL	8" LONG	
F5	2	2 1/2" I.P.S.	DECK PLATE		BRONZE	WILCOX CRITTENDEN 114-3360 (OR EQUAL)	
F6	8	#12	F.H. WOOD SCREW		BRASS	1 3/4" LONG	
F7	4	3/8" I.P.S.	OUTLET FLANGE		"	SEE BU PLAN NO LCVP 8513 PC 18	
F8	2	1/4" I.P.S.	RETURN FLANGE		"	" " " " " "	19
F9	2	3/8" I.P.S.	PIPE PLUG		"	" " " " " "	20
F10	3	3/8" I.P.S.	NIPPLE	STAND.	"	COM'L	1 = 1 1/2 LG. 2 - 1" LG.
F11	4	1/4" I.P.S.	"	"	"	"	1" LONG
F12	2	3/8" I.P.S.	VALVE	GLOBE	"	"	
F13	2	1/4" I.P.S.	"	GLOBE	"	"	
F14	1	3/8" X 1/4" X 3/8"	TEE	REDUC.	"	"	
F15	1	1/4" X 1/8" X 1/4"	TEE	REDUC.	"	"	
F16	1	1/4" I.P.S.	CHECK VALVE	SWING	"	"	HORIZONTAL
F17	2	1/8" PE X 1/2" FTE	ELL		"	S.A.E.	LUNKENHEIMER OR EQUAL
F18	2	1/2" F.T.	NUT		"	"	" " "
F19	5	1/4" PE. X 3/8" F.T.E.	MALE ADAPTER		"	"	" " "
F20	5	3/8" F.T.	NUT		"	"	" " "
F21	2	1/4" PE. X 5/16" FTE.	ELL		"	"	" " "
F22	5	5/16" F.T.	NUT		"	"	" " "
F23	1	5/16" F.T.	TEE		BRASS	S.A.E.	" " "
F24	1	1/8" PE. X 1/4" F.T.E.	MALE ADAPTER		"	"	" " "
F25	1	1/4" F.T.	NUT		"	"	" " "
F26	3'-0"	1/2" O.D. X 0.035"	TUBING		COPPER	COM'L	
F27	8'-0"	3/8" O.D. X 0.035"	"		"	"	
F28	14'-0"	5/16" O.D. X 0.035"	"		"	"	
F29	10'-0"	1/4" O.D. X 0.035"	"		"	"	
F30	5'-0"	3/16" O.D. X 0.035	"		"	"	
F31	1		FUEL OIL FILTER		BRASS	"	PUROLATOR OR EQUAL FUR ON ENGINE
F32	2	3/8" DIA	EXTENSION ROD		STEEL	"	SEE DETAIL ON REF 2
F33	2	3/8" DIA	" "		"	"	" " " " " "
F34	4	3" DIA	HAND WHEEL		"	"	" " " "
F35	1		FUEL PRIMER PUMP			"	FURNISHED WITH ENGINE
F36	2	1/4" I.P.S.	ELBOW	STREET	BRASS	"	
F37	4	1/4"	HEX. NUT	STAND.	BRASS	"	" " " "
F38	4	1/16"	COTTER PIN	STAND.	"	"	" " " "
F39	2	6" X 4"	LABEL PLATE		PLASTIC	"	FUEL SUPPLY, SEE DETAIL ON REF. 2.
F40	2	6" X 4"	LABEL PLATE		PLASTIC	"	" " " " " " "
F41	1	1/8" I.P.S.	NIPPLE	STAND.	BRASS	"	1" LONG
F42	2	2 7/8" I.D.	FLEX. HOSE COUPLING	3 PLY	RUBBER	"	6" LONG
F43	4	3 3/8" I.D.	HOSE CLAMP		GALV. IRON	"	FOR F42
F44	2	1/4" I.P.S.	UNION		GALV.	"	FOR VENT
F45	T.O.	1/4" I.P.S.	PIPE		BLACK I.	"	" "
F46	2	1/4" I.P.S.	ELL		GALV.	"	" "
F47	2	1/4" I.P.S.	PIPE CLAMP		STEEL	"	" "

CLUTCH & THROTTLE CONTROL (SEE PL. NO. LCVP 8526)

MARK	QUANTITY	SIZE	FITTINGS	TYPE	MATERIAL	NAVY SPEC.	REMARKS
166	1		CONTROL HANDLE ASSEMBLY			COML	
167A	2		ADJUSTABLE CLEVIS		COMP. MN-C	4983	
167B	2	5/16" - 24-NF3 X 1 1/2"	CAP SCREW		STEEL	4255	WITH NUT & LOCK WASHER GALV.
167C	2	7/16" X 1 3/8"	CLEVIS PIN		GR. "M" STEEL	46-S-1	WITH COTTER PIN
168A	2		STANDARD CLEVIS		COMP. MN-C	4983	
168B	2	7/16" X 1 3/8"	CLEVIS PIN		GR. "M" STEEL	46-S-1	WITH COTTER PIN
169	3'-8"	3/4" I.P.S.	VERTICAL ROD	EX. HY.	STEEL GALV.	COM'L	
170	4'-0"	3/4" I.P.S.	HORIZONTAL ROD	" "	" "	"	
171A	1	1 1/4" DIA.	JACKSHAFT		GR. "M" STEEL	46-S-1	22 3/8" LONG
171B	2	NO. 27	WOODRUFF KEY		STEEL	COML	
171C	1	5/32" D. X 1 1/2"	COTTER PIN		STEEL GALV	"	
172A	1	1 1/4" DIA.	SHAFT BEARING		COMP. MN-C	4983	
172B	2	3/8" D. X 5"	CARRIAGE BOLT		STEEL GALV.	COM'L	NUT & LOCK WASHER
172C	1	1 1/4" I.D.	WASHER PLATE		BRASS	MIL-B-895	
173A	1	1 1/4" DIA.	SHAFT BEARING		COMP. MN-C	4983	
173B	2	3/8" D. X 2 1/2"	CARRIAGE BOLT		STEEL GALV.	COM'L	NUT & LOCK WASHER & FLAT WASHER
174A	1	1 1/4" I.D. X 1/2"	SHAFT COLLAR		GR. "M" STEEL	46-S-1	FOR PC. 171A
174B	1	3/8" X 1/2"	SET SCREW		STEEL	COML	FOR PC 174A
174C	1'-0"	#14 BARE	WIRE		COPPER	"	
175A	2		SINGLE CRANK		COMP. MN-C	4983	
175B	2	3/8" - 24-NF-3	CAP SCREW		STEEL GALV.	COM'L	1 1/2" LONG WITH LOCK WASHER
176A	1	1/8" X 1 1/2" X 3 1/2"	STRIKER PLATE		STEEL GALV	"	
176B	2	#10 X 3/4"	WOOD SCREW	F.H.	BRASS	"	
176C	2	#8 X 1"	WOOD SCREW	F.H.	"	"	
177A	1	3/16" X 1 1/4" X 1 1/4"	∠ BRACKET		GR. "M" STEEL	46-S-1	GALV.
177B	1	3/8" DIA.	STUD		GR. "A" STEEL	46-S-17	CADMIUM PLATED
177C	2	3/8" - 24-NF-3	LOCKNUT		STEEL	COML	" "
178A	1		BELL CRANK		BRASS	4681	
178B	1		SWIVEL PIN		"	MIL-B-895	
178C	1	1/8" X 1/2"	COTTER PIN		"	COM'L	
179A	2	5/16"	STUD		COMP. NR	4686	(ROD)
179B	2	5/16" - 18-NC-3	HEX. NUT		" "		(STANDARD)
180A	2		STOP COLLAR		BRASS	COM'L	
180B	2	1/4" - 20-NC-3	SET SCREW		STEEL GALV	"	3/8" LONG
181A	2		BALL JOINT		" "	"	
181B	2	5/16" - 24NF-3	HEX. NUT		"	"	WITH LOCK WASHER
182	1	5/16" D. X 9" LG.	THROTTLE ROD		GR. "M" STEEL	46-S-1	
183	1	5/16" D. X 2'-6" LG.	" "		"		

ALTERATIONS

MARK	DATE	DESCRIPTION	APPROVED
1	8/17/44	PC 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, X9, X10, X20, X21, X22, X23, X24, X25, X26, X27, X28, F3, F10, F11, F12, F22, F31, F32, F33, F34, F41, F42, F43, F44, F45, F46, F47, B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B17, B18, B19, B20, B21, B22, B23, B24, B25, B27, B29, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B42, B43 ADDED REF PLANS INDEX	RR
2	9/22/44	CONCRETE B7, B30, B31, B22, B23 & B27 DELETED FIG & B28	RR
3	2/10/45	FUEL TANK FILLER LOCK NUTS PC F3 DELETED	RR
4	7/22/46	SCHEDULE OF MATERIAL SPEC. COL. CHANGED TO CONFORM WITH LATEST REVISIONS APPEARING IN INDEX OF SPECS. DATED 1 JULY 1950. PC. F17 QUANTITY CHGD FROM 1 TO 2.	

REFERENCES

NUMBER	TITLE	BUREAU NUMBER
1	MACHINERY, & PIPING ARRGT PLANS, SECTIONS	LCVP 8932
2	" " " ELEVATION & DETAILS	LCVP 8933
3	REVERSE & THROTTLE CONTROL ASSEMBLY & DETAILS	LCVP 8526
4	FUEL TANK DETAILS	LCVP 8513
5	EXHAUST SYSTEM & DETAILS	LCVP 8945

DRAWN BY: LB
TRACED BY: MC
EXAMINED BY: [illegible]
IN CHARGE: [illegible]
PRINCIPAL ENGINEER
DATE: 5/6/44

36 FT. LANDING CRAFT
LCVP

MACHINERY & PIPING ARRANGEMENT

MATERIAL LIST

NAVY DEPARTMENT
BUREAU OF SHIPS
WASHINGTON, D.C. MAY 6, 1944

FOR CHIEF OF BUREAU

BUREAU OF SHIPS NUMBER

LCVP — 8934 ALT. 4