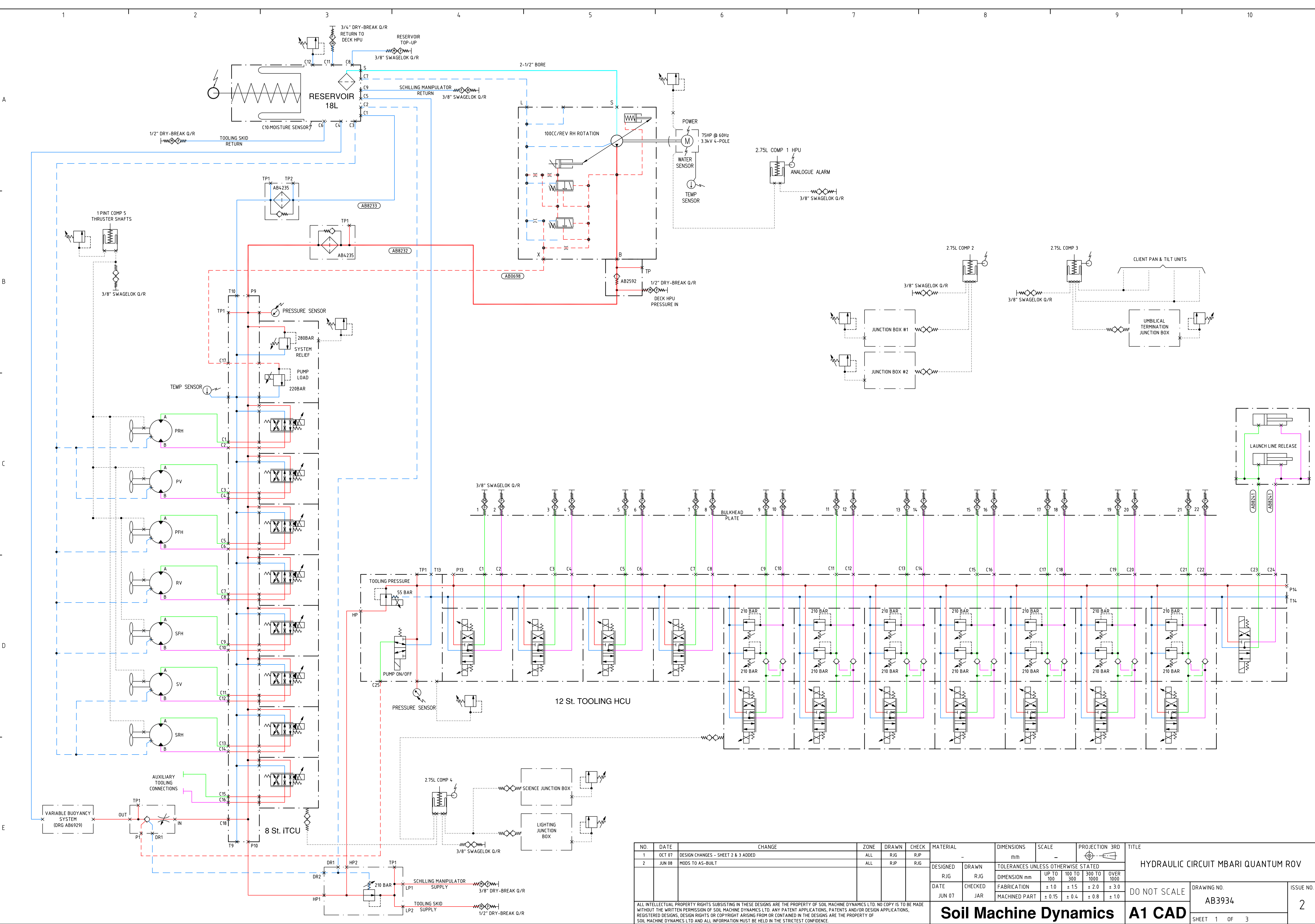
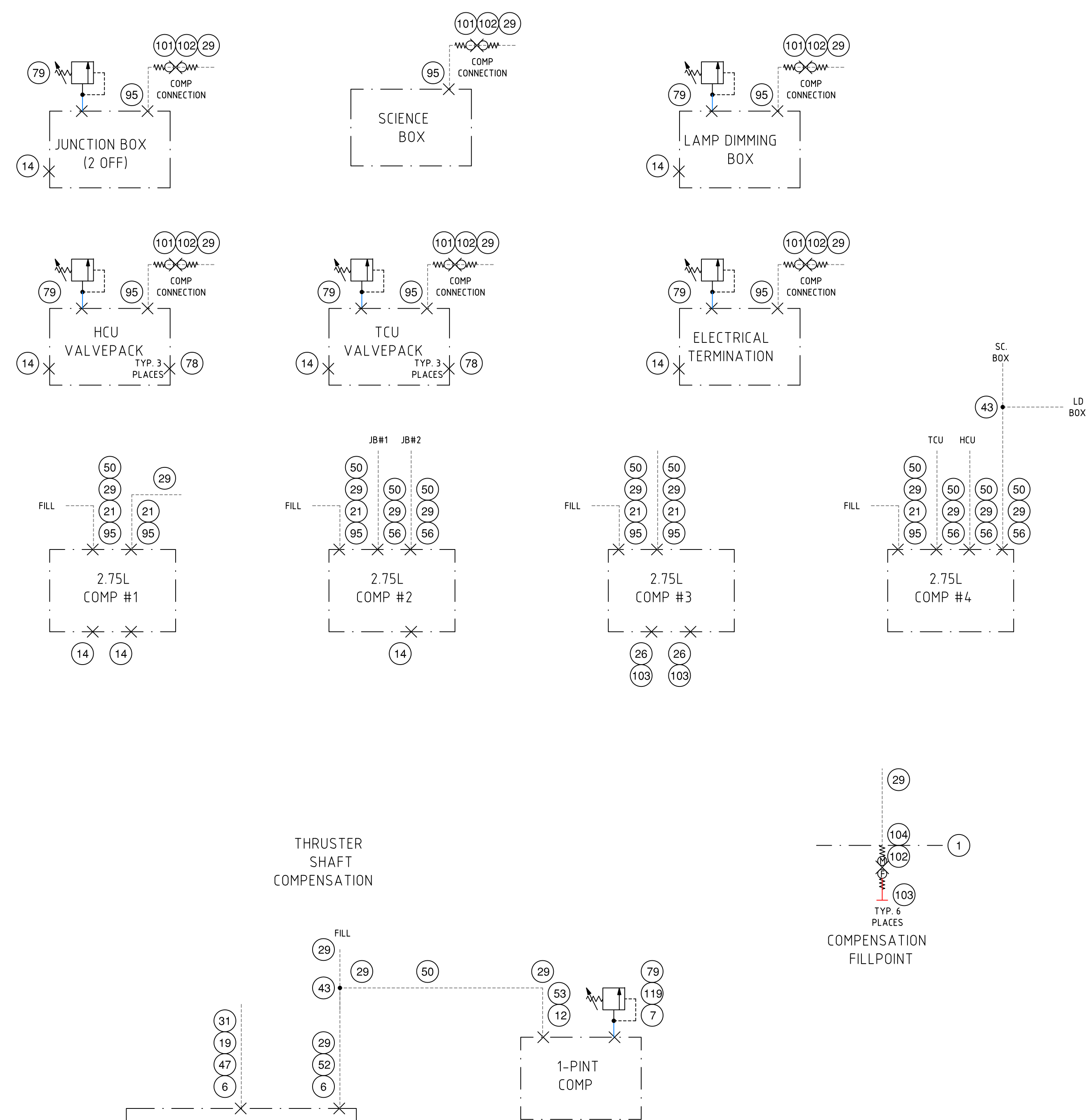




NO.	DATE	CHANGE	ZONE	DRAWN	CHECK	MATERIAL	DIMENSIONS	SCALE	PROJECTION 3RD	TITLE			
											DO NOT SCALE	DRAWING NO.	ISSUE NO.
1	OCT 07	DESIGN CHANGES - SHEET 2 & 3 ADDED	ALL	R/JG	R/JP	-	m/m	-		HYDRAULIC CIRCUIT MBARI QUANTUM ROV		AB3934	2
2	JUN 08	MODS TO AS-BUILT	ALL	R/JP	R/JG								
						DESIGNED	DRAWN	TOLERANCES UNLESS OTHERWISE STATED					
						R/JG	R/JG	DIMENSION mm					
						DATE	CHECKED	FABRICATION					
						JUN 07	JAR	MACHINED PART					
								UP TO 100	100 TO 300	300 TO 1000	OVER 1000		
								± 1.0	± 1.5	± 2.0	± 3.0		
								± 0.15	± 0.4	± 0.8	± 1.0		
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Soil Machine Dynamics											A1 CAD		
											SHEET 1 OF 3		



P/No.	DESCRIPTION
WA0932	SEAL O-RING BS904 (8.92 X 1.83) 7/16" UNF
PC2411	SEAL O-RING BS906 (11.88 X 1.98) 9/16" UNF
PC2413	SEAL O-RING BS908 (16.36 X 2.21) 3/4" UNF
WA3125	SEAL O-RING BS910 (19.18 X 2.46) 7/8" UNF
WA3126	SEAL O-RING BS912 (23.47 X 2.95) 1-1/16" UNF
PD904.4	SEAL O-RING BS916 (29.74 X 2.95) 1-5/16" UNF
PF1113	SEAL O-RING BS920 (37.46 X 3.00) 1-5/8" UNF

NO.	DATE	CHANGE	ZONE	DRAWN	CHECK	MATERIAL	DIMENSIONS	SCALE	PROJECTION 3RD	TITLE						
1	OCT 07	DESIGN CHANGES, SHEET 2 & 3 ADDED	ALL	R/JG	R/P	-	mm	-		HYDRAULIC CIRCUIT MBARI QUANTUM ROV						
2	JUN 08	MODS TO AS-BUILT	ALL	R/P	R/JG	DESIGNED	DRAWN	TOLERANCES UNLESS OTHERWISE STATED								
						R/JG	R/JG	DIMENSION mm	UP TO 100					100 TO 300	300 TO 1000	OVER 1000
						DATE	CHECKED	FABRICATION	± 1.0					± 1.5	± 2.0	± 3.0
						JUN 07	JAR	MACHINED PART	± 0.15	± 0.4	± 0.8	± 1.0	DO NOT SCALE	DRAWING NO. AB3934	ISSUE NO. 2	
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									SHEET 2 OF 3							

A	No.	Part	Description / Size	Qty
	1	AB8264	PLATE COMP FILL BULKHEAD	1
	3	PD3852	TEST POINT SS 1/4" BSP SMK2004/4PCSS / STAUFF	3
	4	PD5431	FITTING MMA / M12(15) X 1/4"BSP CONE SS	2
	5	AB8241	HOSE ASSY LAUNCH BLOCK	2
	6	WA0932	SEAL O-RING BS904 (8.92 x 1.83) 7/16"UNF	33
	7	WA1077	SEAL BONDED SS 1/4"BSP	1
	8	WA1079	SEAL BONDED SS 1/2"BSP	6
	9	PF1113	SEAL O-RING BS920 (37.46 x 3.00) / 1-5/8"UNF	2
	10	PB7256	SEAL BONDED SS 3/4"BSP	14
B	11	WA1076	SEAL BONDED SS 1/8"BSP	7
	12	WA1078	SEAL BONDED SS 3/8"BSP	10
	13	AA0388	FITTING PLUG 1-5/16"UNF HEX SS	1
	14	AA0406	FITTING PLUG 9/16"UNF SS	7
	15	AA3132	ELBOW POSITIONAL 3/4"BSP x 3/4" TUBE SS / SWAGELOK SS-1210-2-12PR	8
	16	AA3155	CONNECTOR MALE 3/4" BSPP 3/4" TUBE / SWAGELOK SS-1210-1-12RS	6
	17	OF 4108	CONNECTOR MALE 3/4"UNF x 1/2" TUBE / SWAGELOK SS-810-1-8ST	4
	18	AA4865	CONNECTOR MALE 1/8" BSP 1/4" TUBE SS / SWAGELOK SS-400-1-2RS	4
	19	AA7697	FITTING ADAPTOR 1/4" STANDPIPE / 1/4" PUSH-LOK SS	18
	20	AA3153	ADAPTOR MALE 3/8" BSPP 3/8" STANDPIPE / SWAGELOK SS-6-TA-1-6RS	8
C	21	AA3189	UNION ELBOW 3/8" / SWAGELOK SS-600-9	14
	22	AA3252	ADAPTOR MALE 1/8" BSPP 1/4" STANDPIPE / SWAGELOK SS-4-TA-1-2RS	2
	23	OF 3037	ELBOW 1/4" UNION SS A4	7
	24	AA3890	CONNECTOR MALE 3/4"UNF - 3/4" TUBE SS / SWAGELOK SS-1210-1-8ST	18
	25	AA3151	CONNECTOR MALE 1/2" BSPP 1/2" TUBE / SWAGELOK SS-810-1-8RS	2
	26	AA4484	CONNECTOR MALE 9/16" UNF x 3/8" TUBE / SS-600-1-6ST	8
	27	AA3164	CONNECTOR MALE 3/8" TUBE 3/4" 16 UNF / SWAGELOK SS-600-1-8ST	1
	28	AA3160	REDUCER 1/4" STANDPIPE 3/8" TUBE / SWAGELOK SS-600-R-4	1
	29	AA3113	FITTING ADAPTOR 3/8" STANDPIPE / 3/8" PUSH-LOK SS - PARKER 33482-6-6C	46
	30	AA3114	FITTING ADAPTOR 1/2" STANDPIPE / 1/2" PUSH-LOK SS - PARKER 33482-8-8C	4
D	31	AA7696	PUSH-LOK HOSE 1/4" / 831-4 (BLUE)	6
	32	AA3095	PUSH-LOK HOSE 3/8" / 831-6 (BLACK)	6
	33	AA3096	PUSH-LOK HOSE 1/2" / 831-8 (BLACK)	4
	35	AB8239	ASSEMBLY DECKPACK CONNECTION RETURN / NON-BSP	1
	1	WA3125	SEAL O-RING BS910 (19.18 x 2.46) 7/8"UNF	1
	2	AB8259	ADAPTOR MALE 7/8"UNF x 5/8" STANDPIPE / SWAGELOK SS-10-TA-1-10ST	1
	3	AB8260	UNION ELBOW 5/8" / SWAGELOK SS-1010-9	1
	4	AA3155	CONNECTOR MALE 3/4" BSPP 3/4" TUBE / SWAGELOK SS-1210-1-12RS	1
	5	AB8441	REDUCER 5/8" TUBE x 3/4" STANDPIPE / SWAGELOK SS-1010-R-12	1
	6	AB8442	PORT CONNECTOR 5/8" / SWAGELOK SS-1011-PC	1
E	7	PB7256	SEAL BONDED SS 3/4"BSP	2
	8	AB8474	COUPLING Q/R CARRIER 3/4" FASTER / 2FFIQCF12SS	1
	9	AB8475	COUPLING Q/R PROBE 3/4" FASTER / 2FFIQPF12SS	1
	10	PJ7404	FITTING MMA 1-1/16" JIC x 3/4" BSP SS	1
	11	AB8228	FITTING CAP 1-1/16"JIC SS	1
	36	AB8223	FITTING ELBOW / POSITIONAL 1-5/8"UNF x 1-5/8"JIC SS	1
	37	AA0886	FITTING MMA / 1-5/16"UNF x 1-5/16"JIC SS	1
	38	AB8222	FITTING MMA / 1-5/8"UNF x 1-5/16"JIC SS	1
	39	AA2239	FITTING ELBOW / 1-5/16"JIC MFS SS	1
	40	AB8220	FITTING MFS 1-5/16"UNF x 1-5/16"JIC SS	1
	41	PH9935	ASSEMBLY 1-1/2" SAE 3000 SPLIT CLAMPS SS	1
	1	PA0024	WASHER M12 SPRING SS	4
	2	PB4335	SEAL O-RING 1-1/2"SAE	1
	3	PB4759	BOLT M12 x 35 SHCS SS A4 - 80	4
	4	PH7944	CLAMP SPLIT FLANGE SS 1-1/2"SAE 3000 / (PAIR)	1
	43	AA3171	UNION TEE 3/8" TUBE / SWAGELOK SS-600-3	5
	44	AA3089	TUBE 3/4" x 0.083wt SEAMLESS SS / (6mtr LENGTH)	4
	45	AA3087	TUBE 3/8" x 0.049WT SEAMLESS SS / (6mtr LENGTH)	2
	46	AA3088	TUBE 1/2" x 0.065WT SEAMLESS SS / (6mtr LENGTH)	2
	47	AA6606	CONNECTOR MALE 7/16" UNF - 1/4" TUBE / SWAGELOK SS-400-1-4ST	7
	48	AB7153	HOSE THRUSTER LINK	10
	49	AB8224	FITTING MFA M27(2.0) x 3/4"UNF SS / (CAPTIVE SEAL)	1
	50	AA3094	PUSH-LOK HOSE 3/8" / 831-6 (GREEN)	10
	52	AA3165	CONNECTOR MALE 3/8" TUBE 7/16" 20 UNF / SWAGELOK SS-600-1-4ST	27
	53	AA3194	CONNECTOR MALE 3/8"BSP - 3/8" TUBE / SWAGELOK SS-600-1-6RS	4
	56	AA8950	ELBOW POSITIONAL 9/16"UNF / 3/8" TUBE SWAGELOK SS-600-2-6ST	6
	57	PK2611	FITTING MMA 7/16" UNF x 7/16" JIC SS	2
	58	AA0405	FITTING MMA 7/16"UNF x 9/16"JIC SS	2
	59	PC7877	FITTING MMA / 9/16"JIC x 3/8"BSP CONE SS	2
	61	AA3148	CONNECTOR MALE 1/4" NPT 3/8" TUBE / SWAGELOK SS-600-1-4	0
	62	PJ8683	ASSEMBLY 1-1/4" SAE 6000 1/2 CLAMPS SS	2
	1	PH5506	CLAMP SPLIT FLANGE SS 1-1/4"SAE 6000 / (PAIR)	2
	2	PB2184	SEAL O-RING BS222 NBR90 1-1/4"SAE / (37.69 X 3.53)	2
	3	PC1991	BOLT M14 x 45 SHCS SS A4-80	8
	4	PB7302	WASHER M14 SPRING SS	8
	63	PJ4360	FITTING MMA M14(15) X 7/16" JIC SS	0
	64	PE9676	FITTING MMA / 3/4"UNF x 1/2"BSP CONE SS	1
	65	PF4731	FITTING MMA / 9/16"UNF X 3/8 BSP CONE SS	1
	66	AB7097	COUPLING Q/R PROBE 1/2" FASTER / 2FFIQPF08SS	4
	67	AB7096	COUPLING Q/R CARRIER 1/2" FASTER / 2FFIQCF08SS	4
	68	AB8437	COUPLING Q/R PROBE 3/8" FASTER / 2FFIQPF06SS	2
	69	AB8438	COUPLING Q/R CARRIER 3/8" FASTER / 2FFIQCF06SS	2
	70	AB8230	FITTING MFA 1-5/16"UNF x 3/4"UNF SS	1
	71	AB5415	CONNECTOR MALE 1/2"BSP x 3/4" TUBE / SWAGELOK SS-1210-1-8RS	2
	72	PC7330	FITTING MMA 3/4"JIC x 1/2"BSP CONE SS	2
	73	AB7172	3/4" UNION / [SS-1210-6]	10
	74	AB3710	ADAPTOR MALE 9/16"UNF x 1/2" STANDPIPE / SS SWAGELOK SS-8-TA-1-6ST	1
	75	AA3179	REDUCER 1/2" STANDPIPE x 3/8" TUBE / SWAGELOK SS-600-R-8	1
	76	OF 8105	1/2" SW CROSS / SS-810-4	1
	78	PB5944	FITTING PLUG 1/4"NPT HEX SS	6
	79	PD8370	VALVE RELIEF 15psi (1/4"NPT)	9
	80	PJ8992	ASSEMBLY 2-1/2" SAE 3000 SPLIT CLAMPS SS	2
	1	PA0024	WASHER M12 SPRING SS	8
	2	PA4777	BOLT M12 x 40 SHCS SS A4 - 80	8
	3	PB5322	SEAL O-RING BS232 NBR90 2-1/2"SAE / (69.44 X 3.53)	2
	4	PJ6102	CLAMP SPLIT FLANGE SS 2-1/2"SAE 3000 / (PAIR)	2
	81	AB8238	ASSEMBLY DECK CONNECTION PRESSURE / NON-BSP	1
	1	WA3125	SEAL O-RING BS910 (19.18 x 2.46) 7/8"UNF	1
	2	AB8259	ADAPTOR MALE 7/8"UNF x 5/8" STANDPIPE / SWAGELOK SS-10-TA-1-10ST	1
	3	AB8260	UNION ELBOW 5/8" / SWAGELOK SS-1010-9	1
	4	AB8440	REDUCER 1/2" TUBE x 5/8" STANDPIPE / SWAGELOK SS-810-R-10	1
	5	AA3236	ADAPTOR MALE 1/2" BSPP 1/2" STANDPIPE / SWAGELOK SS-8-TA-1-8RS	1
	6	AB7096	COUPLING Q/R CARRIER 1/2" FASTER / 2FFIQCF08SS	1
	7	AB7097	COUPLING Q/R PROBE 1/2" FASTER / 2FFIQPF08SS	1
	8	PC7330	FITTING MMA 3/4"JIC x 1/2"BSP CONE SS	1
	9	WA1079	SEAL BONDED SS 1/2"BSP	2
	10	AA2179	FITTING CAP 3/4"JIC SS	1
	82	AB2592	ASSEMBLY PUMP OUTLET MANIFOLD	1
	1	AB2632	MANIFOLD PUMP OUTLET	1
	2	PB2373	VALVE CXHA-XAN/V CHECK	1
	3	PB2184	SEAL O-RING BS222 NBR90 1-1/4"SAE / (37.69 X 3.53)	1
	4	PC1217	TEST POINT 1/8" SS BSP STAUFF / SMK20G1/8PCSS	1
	5	AA6802	BOLT M14 x 90 SHCS SS A4	4
	6	PB7302	WASHER M14 SPRING SS	4
	7	AA1124	LABEL VEHICLE PRESSURE	1
	83	WA3139	SEAL BONDED SS M14	0
	84	PD9044	SEAL O-RING BS916 (29.74 x 2.95) / 1-5/16"UNF	5
	86	AB8227	ADAPTOR MALE 1/2" STANDPIPE x 3/4"UNF / SWAGELOK SS-8-TA-1-8ST	2
	87	AA3188	UNION ELBOW 1/2" / SWAGELOK SS-810-9	2
	88	AB8232	HOSE ASSY PRESSURE PUMP - FILTER	1
	89	AB8233	HOSE ASSY RETURN FILTER - RESERVOIR	1
	90	AB8234	ADAPTOR 1-1/4"SAE 6000 x 1-5/16"UNF SS	1
	91	AB0698	HOSE ASSY MAIN PUMP CONTROL	1
	93	AB7074	ASSEMBLY SUCTION FOR 140CC PUMP	1
	1	AB7161	SUCTION HOSE INSERT 140CC PUMP / 2-1/2" SAE 3K	1
	2	AB7286	SUCTION HOSE INSERT 2-1/2" SAE 3K	1
	3	AB7357	HOSE AUSTRALIA 3	