

SOIL MACHINE DYNAMICS LIMITED



MBARI

TIBURON II

LIST OF RECOMMENDED SPARES

18th December 2007

Issue: 1

Issue Date: 2nd Feb 2008

SMDH HYDROVISION Doc. Ref. : C903-24-01

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The purpose of this report is to provide a draft list of recommended spares to be supplied in addition to the Quantum ROV, Tiburon II. It is intended to provide a basis for establishing and procuring an initial spares holding for contract C903.

The practical basis of the list takes account of the following;

- Anticipated component performance and reliability
- The installation of the systems on a common vessel
- The use of common components across the systems
- The lead time of components critical to the availability of the systems

Please note the price applied to items 12-19 does not equal the sum of the individual items within the kit as a discount has been applied for buying the kit as a whole. If preferred these items are available for purchase individually at the price quoted next to the specific description.

Price Quoted in Dollars is calculated assuming £1 = \$2.05 and is valid for 30 days from issue of quotation.

<u>Item No.</u>	<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (£)</u>	<u>Price (\$)</u>
1	EV 4002-SP	1 PINT COMP SPARES KIT		1	56.70	116.24
2	EV 4013-11	2.75L COMP LINEAR SENSOR KIT 24V	Mk 2	1	589.13	1207.72
3	EV 4003-SP	2.75L COMP SPARES KIT		1	78.28	160.47
4	EV 4016-4	6.3L COMP LINEAR SENSOR KIT 24V	Mk 2	1	589.13	1207.72
5	EV 4006-SP	6.3L COMP SPARES KIT (RESERVOIR)		1	85.05	174.35
6	KT 4198	SEAL KIT POWERPACK		1	17.75	36.39
7	KT 3034-1	SHAFT SEAL TOOL KIT		1	441.00	904.05
8	KT 3001-2	SEAL KIT THRUSTER		1	58.43	119.78
9	OV 3142	PROPELLER HTE380 THRUSTER		2	593.25	1216.16
10	HTE 380BA-45	HTE 380 THRUSTER & 45CC BENT AXIS MOTOR	380MM	2	4809.01	9858.47
11	AB4081	ROV HPU 75HP 3300V c/w pump		1	21770.36	44629.24
12	AB9239	KIT CONNECTORS & HARNESSSES		1	40614.98	83260.71
13	AB9240	KIT PCB'S		1	9072.99	18599.64
14	AB9241	KIT COMPUTERS		1	14116.62	28939.07
15	AB9242	KIT TRANSFORMER		1	9116.82	18689.48
16	AB9243	KIT SEALS & O-RINGS		1	3911.75	8019.08
17	AB9244	KIT FILTERS		1	975.20	1999.15
18	AB9245	MISC ELECTRICAL		1	7218.61	14798.16
19	AB9246	VALVES AND BEARINGS		1	5436.04	11143.89
Total					119551.10	245079.76



Item 12 - Kit Connector and Harnesses

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (£)(Each)</u>	<u>Price (\$)</u>	<u>Price (£)</u>	<u>Price (\$)</u>
AB6857	HARNESS GYROCOMPASS - MBARI		1	210.30	431.11	210.30	431.11
AB6861	HARNESS HDTV POWER - MBARI		1	1032.81	2117.26	1032.81	2117.26
AB6439	HARNESS HDTV FIBRE - MBARI		1	13652.60	27987.82	13652.60	27987.82
AB6437	HARNESS RESERVOIR MOISTURE - MBARI		1	154.55	316.82	154.55	316.82
AB6859	HARNESS COMPS - MBARI		5	145.87	299.04	729.36	1495.19
AB6312	HARNESS POD POWER - MBARI		1	1644.21	3370.62	1644.21	3370.62
AB6306	HARNESS JB POWER - MBARI		2	878.23	1800.37	1756.45	3600.73
AB6307	HARNESS JB 1 SIGNALS 52-WAY-MBARI		1	1900.60	3896.23	1900.60	3896.23
AB6308	HARNESS JB 2 SIGNALS 52-WAY-MBARI		1	2123.55	4353.28	2123.55	4353.28
AB6309	HARNESS TOOL SLED INTERFACE-MBARI		1	1435.36	2942.49	1435.36	2942.49
AB6313	HARNESS LAMP DIMMER-MBARI		1	1431.04	2933.64	1431.04	2933.64
AB6858	HARNESS AUX JB - MBARI		1	1263.66	2590.50	1263.66	2590.50
AB6310	HARNESS POWER/SIG TCU/HCU - MBARI		1	936.50	1919.83	936.50	1919.83
AB6961	CONNECTOR - PIGTAILS FOR JB POWER	MINK-10-FCR-P	2	699.74	1434.47	1399.48	2868.93
AB6960	CONNECTOR - PIGTAILS ADDED FOR POD POWER	MINO-44-FCR-P	1	1159.30	2376.57	1159.30	2376.57
AB8191	CONNECTOR - PIGTAILS FOR JB2 SIG	MINO-52-FCR-P	1	1375.14	2819.04	1375.14	2819.04
AB8192	CONNECTOR - PIGTAILS FOR LAMP DIMMER	MINO-52-FCR-P	1	968.11	1984.63	968.11	1984.63
AB6594	CONNECTOR - PIGTAILS FOR TOOL SLED	MINM-26-FCR-P	1	968.11	1984.63	968.11	1984.63
AB8192	CONNECTOR - PIGTAILS FOR LAMP DIMMER	MINO-26-FCR-P	1	968.11	1984.63	968.11	1984.63
AB6958	CONNECTOR	MINM-12-FCR-P	1	754.93	1547.61	754.93	1547.61
AB6959	CONNECTOR - PIGTAILS ADDED FOR VT	MING-10-FCR-P	2	659.59	1352.16	1319.18	2704.33
AB7293	CONNECTOR - FIBRE BULKHEAD	MINF-BCRL-SS	2	2074.19	4252.09	4148.38	8504.18
AA0260	CONNECTOR MCBH-4-MP SS		1	40.14	82.29	40.14	82.29
AA0409	CONNECTOR MCBH-2-MP SS	IMPULSE	1	38.23	78.38	38.23	78.38
AB6311	CONNECTOR - PIGTAILS FOR JB1 SIG	MINO-52-FCR-P	1	1375.14	2819.04	1375.14	2819.04
AB6860	HARNESS MOTOR TEMP/MOIST - MBARI		1	160.14	328.28	160.14	328.28
PJ6580	CONNECTOR IMPULSE MCBH-3-MP		5	41.23	84.53	206.17	422.64
					Total	43151.57	88460.72



Item 13 - Kit PCB's

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (£)(Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
AA0439	PCB MULTI-FUNCTION VALVE CONTROLLER		2	1216.35	2493.52	2432.70	4987.04
AA1467	PCB LAMP DIMMING 6 CHANNEL		1	1094.40	2243.52	1094.40	2243.52
AA0795	PCB MULTIFUNCTION TCU CONTROLLER		2	1008.00	2066.40	2016.00	4132.80
AA9979	PCB WATER INGRESS SENSOR		6	2.38	4.87	14.26	29.22
AB0854	CIRCUIT PCB RESPONDER TRIGGER INTERFACE		1	51.03	104.61	51.03	104.61
AB0868	CIRCUIT PCB BOARD PSU 24 - +12/-12,5		2	195.08	399.90	390.15	799.81
AB7542	ASSEMBLY SIGNALS ISOLATION		1	1418.40	2907.72	1418.40	2907.72
					Total	7416.94	15204.72

Item 14 - Kit Computers

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (£)(Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
AA0515	COMPUTER 2U RACK MOUNT NO HD	2UPC1/SMD/NH D 128MB RAM CDROM FLOPPY	3	1300.32	2665.66	3900.96	7996.97
AA0542	COMPUTER TRACKBALL CABLE ASS, DS48943		2	16.20	33.21	32.40	66.42
AA5281	COMPUTER TOUCHSCREEN 10.4" LCD 128MB RAM	24VDC, 512MB DOC	2	2609.28	5349.02	5218.56	10698.05
AA6487	COMPUTER SERIAL	BD 4 PORT RS232 PCI	2	381.60	782.28	763.20	1564.56
AB5541	COMPUTER HARD DISK 3.5" 40pin IDOC 1GB	QNX PRE INSTALLED	3	131.58	269.74	394.74	809.22
PB7081	COMPUTER COMPACT	19" KEYBOARD FEC 1077846	3	71.63	146.85	214.90	440.55
PJ4833	COMPUTER SWITCH EIS8-100T 8 PORT	INDUS ENET 10/100	1	234.09	479.88	234.09	479.88
PJ8318	COMPUTER TRACKBALL PANEL 3-BUTTON		2	110.91	227.36	221.82	454.73
PK3650	COMPUTER SERIAL BD 4 PORT RS485 PCI		6	345.60	708.48	2073.60	4250.88
					Total	13054.27	26761.26



Item 15 - Transformers

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
AA0586	TRANSFORMER CURRENT 40A	FEC715-4860	2	48.60	99.63	97.20	199.26
AA0658	TRANSFORMER CT 50/5A		1	48.28	98.97	48.28	98.97
AA5727	TRANSFORMER VT 4000/100 1PH		2	276.85	567.54	553.70	1135.09
AB0983	TRANSFORMER CT 50A / 0-10V	RS446-0484	2	145.50	298.28	291.01	596.56
AB6613	TRANSFORMER 3kV - MBARI ROV	DIA 320 X 120 - WT 43KG	1	972.00	1992.60	972.00	1992.60
AB6616	TRANSFORMER ROV MOTOR - MBARI		1	6098.40	12501.72	6098.40	12501.72
AB6617	TRANSFORMER ROV 15kVA POD - MBARI		1	1368.00	2804.40	1368.00	2804.40
PD5308	TRANSFORMER CURRENT	5/1 3.6kV INSULATION CLASS 1	1	57.27	117.40	57.27	117.40
PJ4208	TRANSFORMER CURRENT 400/5A		4	21.79	44.67	87.16	178.67
AA0808	METER AMMETER 0-5 / 0-50 243		2	19.36	39.69	38.72	79.37
AA4365	METER 0-100V SCALED 0-4000		2	27.54	56.46	55.08	112.91
PD4000	METER RANGE 0-1A SCALED 0-5A (72 x 72)		1	22.68	46.49	22.68	46.49
					Total	9689.48	19863.44

Item 16 - Kit Seals & O-Rings

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
AA8215	O RING	28.3 x 1.78	10	0.18	0.37	1.80	3.69
AA8219	O RING	11.6 X 2.4	10	0.38	0.78	3.80	7.79
AA8220	SEAL O RING 18.64 x 3.53		10	0.10	0.20	0.99	2.03
OR 1016	O RING BS014		5	0.42	0.86	2.10	4.31
OR 1040	O RING CORD 3mm		10	2.10	4.31	21.00	43.05
OR 1044	O RING 378		5	3.58	7.35	17.92	36.73
OR 1045	O RING 354		5	0.79	1.62	3.95	8.10
OR 1050	O RING BS247 (117 x 3.53)		5	1.58	3.25	7.92	16.24
OR 1065	O RING BS268 (NBR70)		5	0.99	2.03	4.95	10.15
OR 1211	O RING	BS 009 (5.28 x 1.78)	30	0.16	0.33	4.80	9.84
OR150125	O RING BS125 (33.00 x 2.62)		5	0.24	0.49	1.19	2.44



OR150225	O RING 50-225 NITRILE PB 80		5	0.20	0.41	0.99	2.03
OR152431	SEAL O-RING 132.0 x 7.0		10	1.98	4.06	19.80	40.59
OV 3023	O RING SEAL HT 300 NITRILE	82mm	10	0.85	1.74	8.50	17.43
OV 3024	O RING HT 300/380 NITRILE	60mm	10	0.30	0.61	2.97	6.09
AA2259	Buccanneer IP68 seal cap kit	RS489-419	5	2.79	5.72	13.96	28.62
AA5130	SEAL ANTI- EXTRUSION	JW 150-020 FOR BS020 O-RING	5	0.99	2.03	4.95	10.15
AA8230	SEAL ANTI- EXTRUSION RING (252-638-1670)		5	1.54	3.16	7.70	15.79
AB6873	SEAL O-RING BS124 (31.42 x 2.62)		5	0.08	0.16	0.40	0.81
AB8269	SEAL O-RING 365 x 4.0 NBR70		5	6.25	12.82	31.27	64.10
OV 3006-2	Shaft Seal Ring HT 300/380	HT 300/380	10	126.00	258.30	1260.00	2583.00
OV 3008	Seal Retainer HT 300/380		10	56.70	116.24	567.00	1162.35
OV 3036	LIP SEAL, HT 300/380		10	9.98	20.46	99.80	204.59
OV 3037	PTFE SEAL HT 300/380		10	47.25	96.86	472.50	968.63
OW 1006	BONDED SEAL, 3/8" BSP SS		5	1.29	2.64	6.44	13.19
OW 1028	BONDED SEAL, 1/8"BSPP		5	0.20	0.41	0.99	2.03
PA9812	SEAL O-RING BS009 NBR90 (MINI 4)	(5.28 X 1.78)	100	0.06	0.12	5.94	12.18
PB2184	SEAL O-RING BS222 NBR90 1-1/4"SAE	(37.69 X 3.53)	5	0.14	0.28	0.69	1.42
PB4335	SEAL O-RING 1- 1/2"SAE		5	0.50	1.01	2.48	5.07
PB5189	SEAL O-RING BS028 HRS308 PISTON	(34.65 X 1.78)	5	0.20	0.41	0.99	2.03
PB5194	SEAL O-RING BS020 (21.95 X 1.78)	HRS306 PISTON	5	0.08	0.16	0.40	0.81
PB5322	SEAL O-RING BS232 NBR90 2-1/2"SAE	(69.44 X 3.53)	5	0.87	1.78	4.35	8.92
PB7256	SEAL BONDED SS 3/4"BSP		10	2.06	4.22	20.57	42.18
PB9936	SEAL O-RING BS019 (20.35 X 1.78)		30	0.12	0.24	3.56	7.31
PC2212	SEAL O-RING BS014 NBR90 9/16"UNF	(12.42 x 1.78)	5	0.08	0.16	0.40	0.81
PC2384	SEAL O-RING 54.5 X 3.0		5	0.50	1.01	2.48	5.07
PC4025	SEAL O-RING BS018 (18.77 X 1.78)		10	0.10	0.20	0.99	2.03
PC4027	SEAL O-RING	BS022 (25.12 x 1.78)	5	0.18	0.37	0.89	1.83
PC6170	SEAL O-RING	259.30 X 5.7	5	3.60	7.39	18.02	36.94
PC6171	SEAL O-RING	279.3 x 5.7	5	3.84	7.87	19.21	39.37
PC6172	SEAL ANTI- EXTRUSION RING 259.3 x 5.7		5	15.80	32.38	78.98	161.90
PC8773	SEAL O-RING 4.0 x 1.5 GERMAN METRIC	206-004	5	1.68	3.45	8.42	17.25



PC9509	SEAL O-RING BS119 (23.47 x 2.62)		5	0.10	0.20	0.50	1.01
PD9044	SEAL O-RING BS916 (29.74 x 2.95)	1-5/16"UNF	10	0.20	0.41	1.98	4.06
PF1113	SEAL O-RING BS920	1-5/8"UNF	5	0.20	0.41	0.99	2.03
PK0496	SEAL O-RING	BS123 NBR80 (29.82 X 2.62)	5	3.86	7.92	19.31	39.58
WA0932	SEAL O-RING BS904 (8.92 x 1.83)		30	0.12	0.24	3.56	7.31
WA1076	SEAL BONDED SS 1/8"BSP		10	1.23	2.52	12.28	25.17
WA1077	SEAL BONDED SS 1/4"BSP		5	1.19	2.44	5.94	12.18
WA1078	SEAL BONDED SS 3/8"BSP		10	1.29	2.64	12.87	26.38
WA1079	SEAL BONDED SS 1/2"BSP		10	1.92	3.94	19.21	39.37
WA3125	SEAL O-RING BS910 (19.18 x 2.46)		5	0.51	1.06	2.57	5.28
WA3126	SEAL O-RING BS912 (23.47 X 2.95)	1-1/16"unf	5	0.08	0.16	0.40	0.81
WA3139	SEAL BONDED SS M14		5	2.61	5.36	13.07	26.79
AA8231	SPIRAL PTFE ANTI - EXTRUSION RING	(DOWTY - 252- 210-1670)	6	1.39	2.85	8.34	17.10
AA8228	ROV-0186-103-08	COMPRESSION SPRING	2	24.30	49.82	48.60	99.63
AA8233	TORSION SPRING	(ASSOCIATED SPRINGS - T085- 180-641R)	4	9.90	20.30	39.60	81.18
AA8235	SLYDRING	(SHAMBAN - S- 57165-0254-47-A)	2	15.35	31.47	30.70	62.94
HRS1761317	'O'-RING 200-236- 4470		4	0.55	1.14	2.22	4.55
HRS731111	'O'-RING REF.224 NITRILE 200-224- 4470		1	0.24	0.49	0.24	0.49
					Total	2958.38	6064.68

Item 17 – Filters

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
AA0278	FILTER ELEMENT 7 MICRON - 8" LENGTH		2	116.94	239.72	233.88	479.45
AA0306	FILTER SUCTION STRAINER	2"BSP 225LPM	1	86.09	176.48	86.09	176.48
AB8232	HOSE ASSY PRESSURE PUMP - FILTER		1	313.05	641.76	313.05	641.76
AB8233	HOSE ASSY RETURN FILTER - RESERVOIR		1	407.91	836.22	407.91	836.22
					Total	1040.93	2133.90

Item 18 – Misc Electrical

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
PK3718	CAPACITOR 47000uF 40V		3	30.96	63.46	92.87	190.39
AB6838	CAPACITOR 4700uF 250V		2	46.49	95.31	92.99	190.63
PG6991	CIRCUIT BREAKER AUX CONTACT 29450		2	14.66	30.06	29.32	60.11
PC9052	CIRCUIT BREAKER MERLIN GERIN C60HD202	2P 2A TYPE 4 MCB	6	40.99	84.03	245.93	504.16
PB6867	CIRCUIT BREAKER MERLIN GERIN C60HD263		1	41.88	Total	41.88	Total
AB0900	CIRCUIT BREAKER TERMINAL SHIELD 29321		1	22.08	45.27	22.08	45.27
AA1618	CIRCUIT BREAKER MG 31790 3-POLE	NS250H STR22SE	1	561.25	1150.56	561.25	1150.56
PC7599	CIRCUIT BREAKER MG C60HD204		2	41.15	84.35	82.30	168.71
PG7844	CIRCUIT BREAKER MG C60HD302 3P 2A TYPE4		2	62.05	127.19	124.09	254.39
AA0817	CIRCUIT LIM 110V	IR145Y-421	2	501.84	1028.77	1003.68	2057.54
PC9677	CIRCUIT LINE INSULATION MONITOR	IRD1007MY- 6/913586	2	933.06	1912.78	1866.12	3825.56
AB1036	CONTACTOR TELEMECANIQUE COIL 110V	LX1 FH1102	1	64.10	131.41	64.10	131.41
PH7267	CONTACTOR TELEMECANIQUE	LC1-F265	1	487.63	999.63	487.63	999.63
AA5018	DC/DC SIGNAL CONDITIONER		1	200.81	411.67	200.81	411.67



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PG9591	INDICATOR HEAD GREEN TELEMEC ZB4BV033		3	2.89	5.93	8.67	17.78
PG9583	INDICATOR TELEMEC BODY RED ZB4-BVB4	FEC 3054743	2	7.52	15.42	15.05	30.85
PG9606	INDICATOR TELEMEC HEAD RED ZB4-BV043	FEC 3054895	2	2.89	5.93	5.78	11.85
PG9584	INDICATOR TELEMECANIQUE GREEN ZB4 BVB3		3	6.16	12.62	18.47	37.86
AA8215	O RING	28.3 x 1.78	2	0.18	0.37	0.36	0.74
AA0848	PSU 24V 1A		1	72.90	149.45	72.90	149.45
AA0872	PSU 24V DC to DC 400W		1	277.77	569.43	277.77	569.43
AB6840	PSU 48V DC to DC 300W		2	163.71	335.61	327.42	671.21
AA6400	PSU 5V 15W SIEMANS	RS 463-0986	1	100.44	205.90	100.44	205.90
AB6258	PSU DC-DC CONVERTOR 5V 40W		2	77.44	158.74	154.87	317.49
PB6170	PSU LASCAR PSU203		1	57.32	117.50	57.32	117.50
PK3715	PSU SIEMENS 12V 20W COMPACT	6EP13211SH02	1	93.96	192.62	93.96	192.62
PD7102	PSU SIEMENS 24V 5A	6EP1333-2BA01	2	148.23	303.86	296.45	607.73
AA1803	PT100 ELEMENT	10mm LONG (RS290-5070)	1	6.55	13.44	6.55	13.44
PB9176	RECTIFIER BRIDGE	25A 400V GBPC2504 (FEC 954-9390)	1	7.96	16.32	7.96	16.32
PJ2017	RECTIFIER BRIDGE 50A 200V		2	12.18	24.97	24.36	49.95
PE3800	RELAY 24VDC 4PCO+TEST+LED+DIODE	5534-9024-0094 FINDER	20	7.61	15.61	152.28	312.17
PG3465	RELAY 24VDC DPCO FINDER 4462 7024 4000		26	4.24	8.70	110.35	226.23
PJ9050	RELAY VOLTAGE	MONITORING 440V RM4-TR32 RS407-2302	1	107.42	220.22	107.42	220.22
PE3801	RELAY BASE FINDER 9474 BLUE 14 PIN		12	4.21	8.63	50.54	103.62
PK3575	RELAY DC SOLID STATE DC INPUT		6	32.37	66.37	194.25	398.21
PE2558	RELAY MOTOR PROTECTION		1	270.47	554.47	270.47	554.47
AB8753	RELAY SOCKET BLUE HOUSING + METAL CLIP	FINDER 95.65 & 095.71	26	4.00	8.20	104.04	213.27
PG3670	RELAY TIMER OM1 SPDT 8-FUNCTION		2	71.93	147.45	143.86	294.90
PG3847	RELAY TIMER TELECON 2PCO		1	64.54	132.31	64.54	132.31
AB7847	RELAY UNDER/OVER VOLTAGE 120V		1	155.22	318.20	155.22	318.20
AA1716	SEMICONDUCTOR 24V TO 5V REG 1A		2	1.39	2.84	2.77	5.68
AA8146	SEMICONDUCTOR 24V TO 12V REG 1A		3	0.93	1.91	2.79	5.72



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AB6957	SENSOR HUMIDITY		1	31.59	64.76	31.59	64.76
PK4444	SENSOR PRESS 0-400 BAR 4-20mA H/DUTY	2 WIRE	3	110.21	225.92	330.62	677.77
AA3503	SENSOR PRESSURE 15- PSI SCX15AN		1	65.46	134.19	65.46	134.19
AA1318	SWITCH LOCKABLE		1	19.73	40.45	19.73	40.45
AA1319	SWITCH LOCKABLE - AUX CONTACT		1	11.64	23.87	11.64	23.87
AA3410	SWITCH ROCKER SPST BK/RD RS320-225		2	1.94	3.98	3.88	7.95
					Total	8204.86	15788.82

Item 19 – Valves & Bearings

<u>Part</u>	<u>Description</u>	<u>Size</u>	<u>Qty</u>	<u>Price (Each)</u>	<u>Price (\$)</u>	<u>Price</u>	<u>Price (\$)</u>
AA1236	VALVE SUN	CVCV-XCN	1	42.18	86.48	42.18	86.48
AA5059	VALVE DIR MINI 3 24V FLYING LEADS		2	197.17	404.20	394.34	808.40
AA5061	VALVE PROPORTIONAL DIRECTIONAL NG3-MINI	c/w FLYING LEADS	1	287.91	590.22	440.50	903.03
AA5063	VALVE P/O CHECK & THERMAL RELIEF	MINI 3 210BAR	2	350.39	718.29	700.77	1436.58
AB0664	VALVE PROP PRESSURE RELIEF	CARTRIDGE c/w FLYING LEADS 65mA 80 Ohm	1	257.45	527.78	257.45	527.78
AB3743	VALVE SERVO 57 LPM	COILS 4-WAY MS CONNECTOR	2	1480.32	3034.66	2960.64	6069.31
AB6842	VALVE PROP PRESSURE REDUCING	T-11A	1	42.53	87.18	42.53	87.18
AB6843	VALVE DIRECTIONAL SOLENOID	T-9A 3-WAY	1	75.18	154.13	75.18	154.13
AB7618	VALVE SUN PILOT STAGE RELIEF		1	90.04	184.58	90.04	184.58
AB7696	VALVE PRESS REDUCING	T-2A 80LPM	1	55.91	114.61	55.91	114.61
AB7710	VALVE SUN FLOW CONTROL (38LPM)	PRESSURE COMPENSATE D	1	49.56	101.59	49.56	101.59
AB8250	FLOW CONTROL/FREE- FLOW CHECK VALVE	1/4" NPT SS	2	92.68	189.99	185.36	379.99
PB2373	VALVE CXHA-XAN/V CHECK		1	42.75	87.64	42.75	87.64
PD8370	VALVE RELIEF 15psi (1/4"NPT)		2	47.79	97.97	95.58	195.94
PF7556	VALVE RELIEF RPGC- LWN/V		1	48.20	98.80	48.20	98.80
PJ9452	VALVE RELIEF	SWAGELOK SS-4CP21	1	28.32	58.05	28.32	58.05
AA4251	SOLENOID SUN	24V FLYING LEADS	1	19.27	39.49	19.27	39.49



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OV 3015	Thrust Needle Bearing HT 300/380	35 x 52 x 32	7	60.22	123.45	421.54	864.16
OV 3016	Needle Bearing HT 300/380	40 x 52 x 20	7	32.36	66.34	226.52	464.37
DV 3823	SHAFT ASSEMBLY HTE 380 / 300		1	461.28	945.62	461.28	945.62
OV 3116	Thrust/Needle Bearing 300/380-23/32Rex		7	84.20	172.61	589.40	1208.27
AB6866	SOLENOID 24V TWIN LEAD		1	19.50	39.98	19.50	39.98
					Total	5528.57	14855.98

