

TECHNICAL SUPPORT

CONVERTING AN M-12 TO AN M-16

How to Convert an M-12 to an M-16

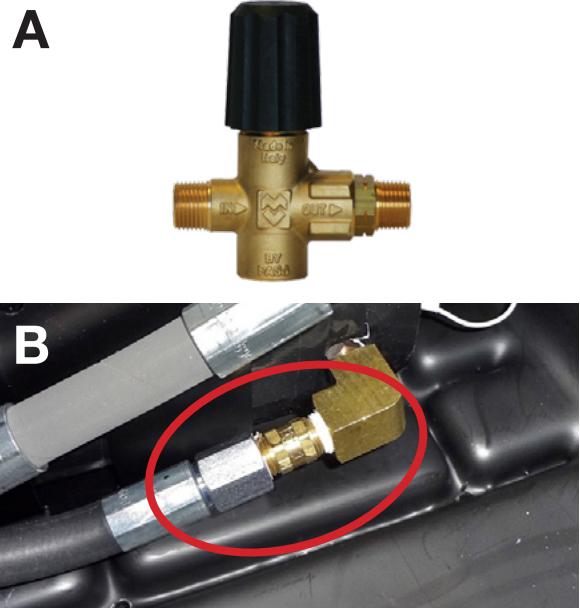
Labor hours allowed: 2

Step 1: Uninstall low pressure pump and heater from M-12 machine. Refer to the parts labeled **12**, **58**, and **61** on the M-12 Exploded View on page 3.

Step 2: Plumb in high pressure pump. Follow the ports marked “in,” “out,” and “bypass” on the unloader valve in **Figure A**.

Step 3: Remove all check valves from the system (check valve indicated in **Figure B**).

Step 4: Remove wires from the “carpet” side of the rocker switch on the switch panel.

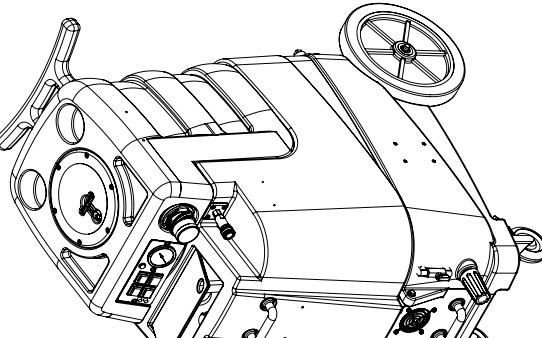


There will be leftover plumbing and fittings from the old low pressure system. This is normal.

See attached exploded views for more details on M-12 and M-16 models.

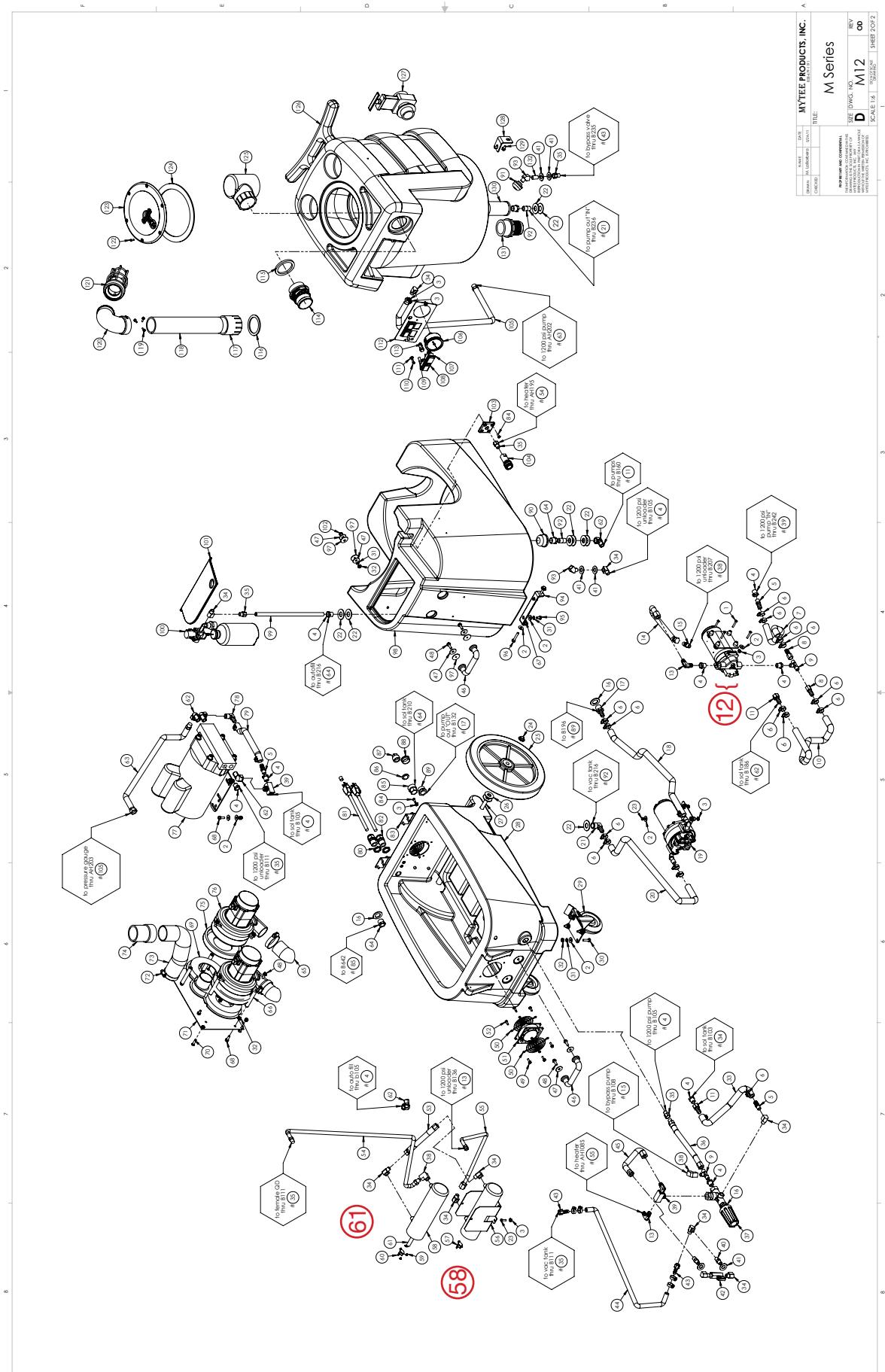
M-12 Parts List

ITEM NO.	PART NO.	DESCRIPTION	QTY.	MSRP	ITEM NO.	PART NO.	DESCRIPTION	QTY.	MSRP
M-12 230									
1	H155	screw, 10-32 x 1/4", phillips head, black oxide	4	\$1.49 ea	72	H217	clipped, holes: 2 x 1/4" dia	3	\$1.49 ea
2	H120	washer, 1/4" flat, 1/16" thick	28	\$1.49 ea	73	H162B-21	wire, 1/4" dia, 1/2" long	1	\$1.49 ea
3	H273	nut, lock, #10-32 zinc	20	\$1.49 ea	74	H544	cuff hose, 2 x 1/4", wire reinforced	1	\$1.49 ea
4	B105	bushing, brass, 1/8" (mpn: K-14")	8	\$3.19 ea	75	G204	gasket, vacuum motor	2	\$1.49 ea
5	B644	adapter, brass, 1/8" barbs x 1/4"	3	\$2.49 ea	76	C310	vac. motor, 2-hp, 1/3.3 GPM, 1/10 HP, 230V	1	\$3.19 ea
F	H347	clipped, holes: 1/2" dia x 1/2" long	28	\$1.49 ea	77	C320	pump, oil, 2.5-oz, 1/2" dia, 1/2" long	1	\$3.19 ea
		clipped, holes: 1/2" dia x 1/2" long	28	\$1.49 ea	78	E220	heating coil, 1000W, 230V	2	\$1.49 ea
6	H347	clipped, holes: 1/2" dia x 1/2" long	28	\$1.49 ea	79	C318	ton, cooling, 230V	1	\$3.19 ea
7	B105	screw, 10-32 x 1/2", 100 pcs	1	\$1.49 ea	80	H172	yellow, brass, 90 deg, 1/2" dia, 3/8" inlet	1	\$1.49 ea
8	B123	adapter, brass, 1/2" barbs x 1/4" (mpn: H21)	2	\$4.19 ea	81	H161SA-10	bottom hole, block, low pressure, 1/2"	1	\$1.49 ea
9	B125	tees, brass, 1/4" high	2	\$1.49 ea	82	E550	nut, lock, 1/2" steel	2	\$1.49 ea
10	F161-25	valve, l.m., 1/2", 100 pc	1	\$3.19 ea	83	H221	power cord, digital, 50' L, 1/3.3, block	2	\$1.49 ea
11	B140	adapter, brass, 1/2" barbs x 1/4" low, barb end	1	\$1.49 ea	84	H486	lifing, thin wire, 1/2", 1/2" block	2	\$1.49 ea
12	C322	parts, 200psi, demand, 15V	1	\$1.49 ea	85	H230	lifing, front, breeze	2	\$1.49 ea
13	B136	elbow, brass, 3/8" dia, 1/4" mpn: F-1	3	\$1.49 ea	86	H544	screen, 10-32 x 1/2", 1/2" port, head, 5/8"	18	\$1.49 ea
14	AH134	holder, 3/8" x 1-1/2", OAL, F	1	\$27.99 ea	87	E220	swivel, brass, 3/4" (mpn: F-17) tp1	1	\$1.49 ea
15	B108	valve, brass, 1/4" check	1	\$1.49 ea	88	E440	filter, 10mm, garden hose	1	\$1.49 ea
16	H191	valve, brass, 1/2", 847-078	3	\$1.49 ea	89	E221	DIN, brass, 3/4", garden hose	1	\$1.49 ea
E	H152	adapter, brass, 1/2" barbs x 1/2" (mpn: H21)	1	\$1.49 ea	90	B123	tees, brass, 3/4", garden hose	1	\$1.49 ea
		adapter, brass, 1/2" barbs x 1/2" (mpn: H21)	1	\$1.49 ea	91	H178	filter, brass, 3/4" (mpn: F-17) tp1	1	\$1.49 ea
18	H161-25	valve, l.m., 1/2", 100 pc	1	\$1.49 ea	92	B119A	filter, strainer, 1/2"	1	\$1.49 ea
19	C381	valve, outlet, 1/2"	1	\$1.49 ea	93	B119	filter, strainer, 1/2"	1	\$1.49 ea
20	H161-35	valve, l.m., 1/2", 100 pc	1	\$1.49 ea	94	B216	filter, brass, 3/4", 1/4" male, NPT	2	\$1.49 ea
21	B236	elbow, brass, 3/8" dia, 1/2" check x 3/8" tp1	1	\$1.49 ea	95	H226	45-degree elbow, brass, 3/4", 1/4" close	1	\$1.49 ea
22	H229	washer, 1/16" dia x 1-1/2" x 0.075, 45	6	\$1.49 ea	96	H378	bracket, front flange, split	1	\$1.49 ea
23	H226	screw, 10-32 x 3/4", 1/2" port, head, zinc	6	\$1.49 ea	97	H201	bolt, 1/4-20 x 1/2", hex head, zinc	2	\$1.49 ea
24	H219	cap, one, 1/2"	2	\$1.49 ea	98	H116	bolt, 1/4-10 x 1/2", hex head, zinc	2	\$1.49 ea
25	H281	wheel, 10"	1	\$1.49 ea	99	H052	washer, bound, 1/8" dia x 3/16" id	6	\$1.49 ea
26	H254	washer, valve, cut, 1/2" id	4	\$1.49 ea	100	H708	solvent, tank, 1/2" x 1/2"	1	\$1.49 ea
27	H252	cone, 1/2", 1/2", 30°	1	\$1.49 ea	101	B115	nipple, 3/8" x 1/4", m/f	1	\$1.49 ea
28	P707	brass, m series, 1/2", 1/2", 30°	1	\$1.49 ea	102	G212	cover, sol tank (m-sizes)	1	\$1.49 ea
O	H1648	holder, 4" x block hub, 1/2" port, head	2	\$1.49 ea	103	H484	plate, mounting, 3/20	1	\$1.49 ea
		holder, 4" x block hub, 1/2" port, head	2	\$1.49 ea	104	H072	coil, brass, 1/4" f	1	\$1.49 ea
30	H342	valve, 1/4" flat, 1/2" port, head, ss	8	\$1.49 ea	105	H080	holder, brass, 1/4" f	1	\$1.49 ea
31	H213	washer, 1/4" lock, ss	12	\$1.49 ea	106	E151	switch, pocket, 3-position	3	\$1.49 ea
32	H215	nut, hex, 1/4" dia, 100 pc	16	\$1.49 ea	107	H389	screw, 10-32 x 1/2", hex, clear	3	\$1.49 ea
33	H155	elbow, brass, 3/8" dia, 1/4" mpn: F-100	1	\$1.49 ea	108	H033	holder, 8, light regular	3	\$1.49 ea
34	B103	elbow, brass, 3/8" dia, 1/4" mpn: F-100	10	\$1.49 ea	109	A0203	holder, brass, 1/4" f	1	\$1.49 ea
35	B111	adapter, brass, endeller, 1/4" nut x 1/4" f, hex	4	\$1.49 ea	110	E547	holder, brass, 1/4" f	1	\$1.49 ea
36	AH104	holder, 4" x block hub, 1/2" port, head	1	\$1.49 ea	111	E516	holder, pocket, 3-position	1	\$1.49 ea
37	H308	valve, 1/4" flat, 1/2" port, head, ss	1	\$1.49 ea	112	H175	light, 1/2" dia x 2", m/f	1	\$1.49 ea
38	H207	elbow, brass, 3/8" dia, 1/4" f, tp1	2	\$1.49 ea	113	G085	holder, 2 in fl	1	\$1.49 ea
39	B242	tees, brass, 3/8" dia x 3/8" mpn: F-100	2	\$1.49 ea	114	G002	holder, com, lighting, 200V, 1.907 W	1	\$1.49 ea
40	B107	nipples, brass, 1/4"mpn: F-100	2	\$1.49 ea	115	H184	holder, pvc, 1/2", ins, fintmt	1	\$1.49 ea
41	H211	washer, 21/16" dia, 1/4" f, hex	6	\$1.49 ea	116	P482	holder, pvc, 2"	1	\$1.49 ea
42	B156	coil, valve, 1/4"	1	\$1.49 ea	117	H337	holder, 1/2" hex head, zinc	3	\$1.49 ea
43	B235	adapter, brass, 3/8" dia x 1/4" f, hex	4	\$1.49 ea	118	P726	holder, 2 flat fl	1	\$1.49 ea
44	P171-25	valve, 1/4" flat, 1/2" port, head, ss	2	\$1.49 ea	119	H272	holder, 2 flat fl, hex	1	\$1.49 ea
45	AH103	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	120	P726	holder, 2 flat fl, hex	1	\$1.49 ea
46	H445	holder, 1/4" flat, 1/2" port, head, ss	2	\$1.49 ea	121	H050	holder, 2 flat fl, hex	6	\$1.49 ea
47	H111	washer, 21/16" dia, 1/4" f, hex	8	\$1.49 ea	122	G070	holder, 2 flat fl, hex	1	\$1.49 ea
48	H758	coil, 1/4-20 x 3/4", black, need, zinc	10	\$1.49 ea	123	G191	holder, 2 flat fl, hex	1	\$1.49 ea
49	H226	screen, 10-32 x 1/2", hex head, zinc	4	\$1.49 ea	124	G126	holder, 2 flat fl, hex	1	\$1.49 ea
50	H226	screen, 10-32 x 1/2", hex head, zinc	3	\$1.49 ea	125	H175	holder, 2 flat fl, hex	1	\$1.49 ea
51	C317	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	126	H333	holder, 2 flat fl, hex	1	\$1.49 ea
52	H043	holder, 10" dia, KMT, 5/8"	8	\$1.49 ea	127	H177	holder, 2 flat fl, hex	1	\$1.49 ea
53	AH116	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	128	P485	holder, tank, m series	1	\$1.49 ea
54	AH175	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	129	P482	holder, tank, m series	1	\$1.49 ea
55	AH108	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	130	P726	holder, tank, m series	1	\$1.49 ea
56	H226	bracket, heater mounting, dual	1	\$1.49 ea	131	H272	holder, tank, m series	1	\$1.49 ea
57	E575	thermost, 200°, Auto, 1/4"	2	\$1.49 ea	132	H300A	holder, tank, m series	1	\$1.49 ea
58	H050A	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	133	H333	holder, tank, m series	1	\$1.49 ea
59	H274	screen, #60x16, 1/2" (mpn: K-14")	2	\$1.49 ea	134	H177	holder, tank, m series	1	\$1.49 ea
60	E574	thermost, 100°, comp, 1/4" port, head, 1/4"	2	\$1.49 ea	135	P485	holder, tank, m series	1	\$1.49 ea
61	E519	thermost, 100°, comp, 1/4" port, head, 1/4"	2	\$1.49 ea	136	B108	holder, tank, m series	1	\$1.49 ea
62	B126	elbow, brass, 3/8" dia x 1/4" f, 3/8" mpn: F-100	5	\$1.49 ea	137	A1202	holder, tank, m series	1	\$1.49 ea
63	B110	bushing, brass, 3/8" dia x 1/4" f, hex	3	\$1.49 ea	138	G059	holder, tank, m series	1	\$1.49 ea
64	B210	bushing, brass, 3/8" dia x 1/4" f, hex	2	\$1.49 ea	139	G059	holder, tank, m series	1	\$1.49 ea
65	G059	exterior boot, plastic	2	\$1.49 ea	140	G059	holder, tank, m series	1	\$1.49 ea
66	H500	vac. cup, 1/2" stage, 3/4"	6	\$1.49 ea	141	G059	holder, tank, m series	1	\$1.49 ea
67	H216	nut, lock, 1/4-20 x 1/2", hex head	1	\$1.49 ea	142	G059	holder, tank, m series	1	\$1.49 ea
68	B102	holder, 10" dia, KMT, 5/8"	1	\$1.49 ea	143	G059	holder, tank, m series	1	\$1.49 ea
69	B750	manifold, oil vec, corrugated	1	\$1.49 ea	144	G059	holder, tank, m series	1	\$1.49 ea
70	H168	screen, 1/4-20 x 1/2", ball flit	3	\$1.49 ea	145	E544	holder, tank, m series	1	\$1.49 ea
71	H601	holder, manif, ported	1	\$1.49 ea	146	H246	holder, tank, m series	1	\$1.49 ea

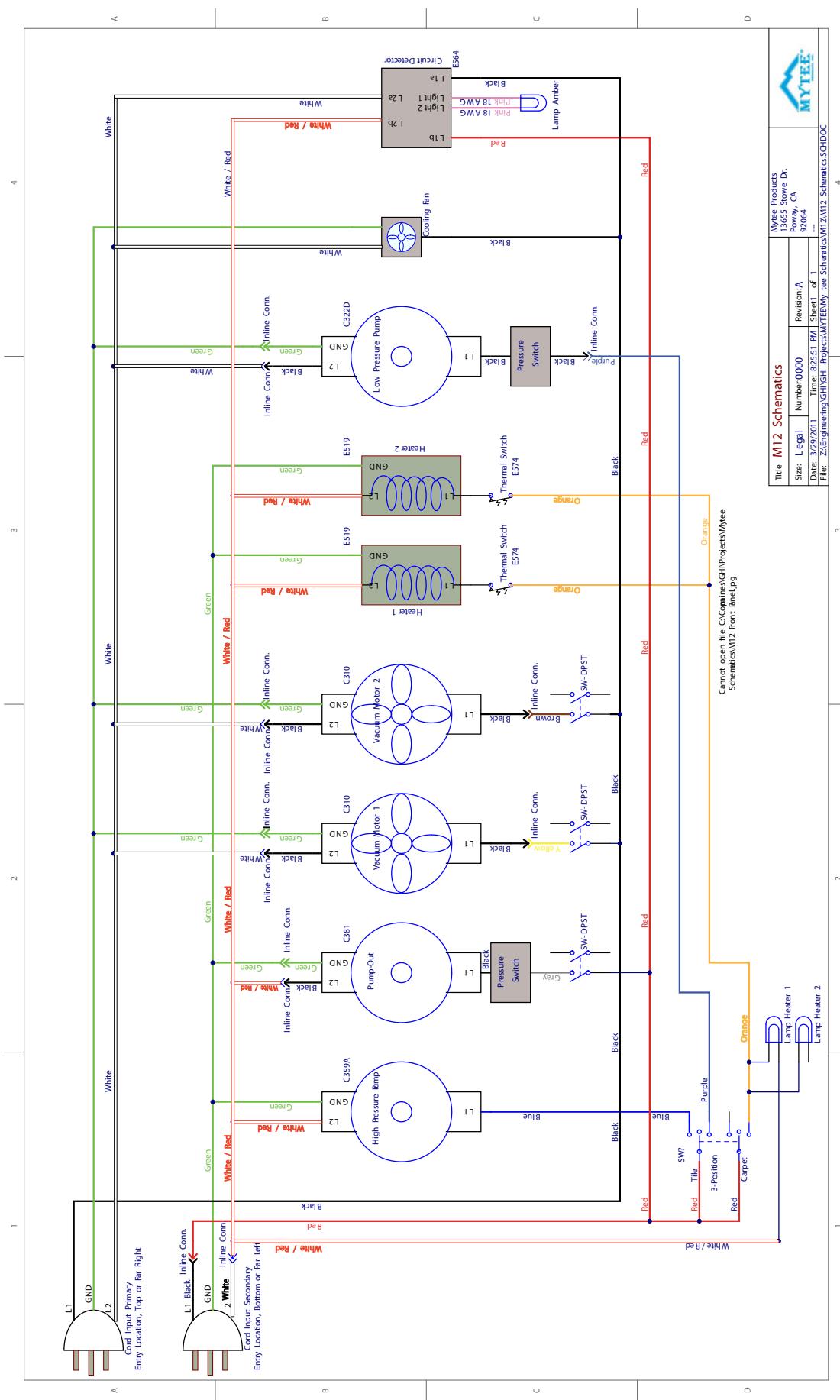


Part No.	Description	Qty.	MSRP
ACCESSORIES			
AD-CUFL-TWN	cufl/tvn instruction guide	1	\$1.49 ea
AD127	stop sign, regular your product	1	\$1.49 ea
E575	power cord, ext. 50' (1/2" block)	1	\$1.49 ea
H140	cufl/tvn, x female, cufl/tvn	1	\$1.49 ea
H141	cufl/tvn, x female, cufl/tvn	1	\$1.49 ea
H226	screen, 10-32 x 1/2", 1/2" port, head, head	4	\$1.49 ea
H272	holder, wire formed, rose	1	\$1.49 ea
H300	holder, wire formed, rose	1	\$1.49 ea
H333	holder, wire formed, rose	1	\$1.49 ea
H177	holder, wire formed, rose	1	\$1.49 ea
H175	holder, wire formed, rose	1	\$1.49 ea
H172	holder, wire formed, rose	1	\$1.49 ea
H171	holder, wire formed, rose	1	\$1.49 ea
H170	holder, wire formed, rose	1	\$1.49 ea
H169	holder, wire formed, rose	1	\$1.49 ea
H168	holder, wire formed, rose	1	\$1.49 ea
H167	holder, wire formed, rose	1	\$1.49 ea
H166	holder, wire formed, rose	1	\$1.49 ea
H165	holder, wire formed, rose	1	\$1.49 ea
H164	holder, wire formed, rose	1	\$1.49 ea
H163	holder, wire formed, rose	1	\$1.49 ea
H162	holder, wire formed, rose	1	\$1.49 ea
H161	holder, wire formed, rose	1	\$1.49 ea
H160	holder, wire formed, rose	1	\$1.49 ea
H159	holder, wire formed, rose	1	\$1.49 ea
H158	holder, wire formed, rose	1	\$1.49 ea
H157	holder, wire formed, rose	1	\$1.49 ea
H156	holder, wire formed, rose	1	\$1.49 ea
H155	holder, wire formed, rose	1	\$1.49 ea
H154	holder, wire formed, rose	1	\$1.49 ea
H153	holder, wire formed, rose	1	\$1.49 ea
H152	holder, wire formed, rose	1	\$1.49 ea
H151	holder, wire formed, rose	1	\$1.49 ea
H150	holder, wire formed, rose	1	\$1.49 ea
H149	holder, wire formed, rose	1	\$1.49 ea
H148	holder, wire formed, rose	1	\$1.49 ea
H147	holder, wire formed, rose	1	\$1.49 ea
H146	holder, wire formed, rose	1	\$1.49 ea
H145	holder, wire formed, rose	1	\$1.49 ea
H144	holder, wire formed, rose	1	\$1.49 ea
H143	holder, wire formed, rose	1	\$1.49 ea
H142	holder, wire formed, rose	1	\$1.49 ea
H141	holder, wire formed, rose	1	\$1.49 ea
H140	holder, wire formed, rose	1	\$1.49 ea
H139	holder, wire formed, rose	1	\$1.49 ea
H138	holder, wire formed, rose	1	\$1.49 ea
H137	holder, wire formed, rose	1	\$1.49 ea
H136	holder, wire formed, rose	1	\$1.49 ea
H135	holder, wire formed, rose	1	\$1.49 ea
H134	holder, wire formed, rose	1	\$1.49 ea
H133	holder, wire formed, rose	1	\$1.49 ea
H132	holder, wire formed, rose	1	\$1.49 ea
H131	holder, wire formed, rose	1	\$1.49 ea
H130	holder, wire formed, rose	1	\$1.49 ea
H129	holder, wire formed, rose	1	\$1.49 ea
H128	holder, wire formed, rose	1	\$1.49 ea
H127	holder, wire formed, rose	1	\$1.49 ea
H126	holder, wire formed, rose	1	\$1.49 ea
H125	holder, wire formed, rose	1	\$1.49 ea
H124	holder, wire formed, rose	1	\$1.49 ea
H123	holder, wire formed, rose	1	\$1.49 ea
H122	holder, wire formed, rose	1	\$1.49 ea
H121	holder, wire formed, rose	1	\$1.49 ea
H1			

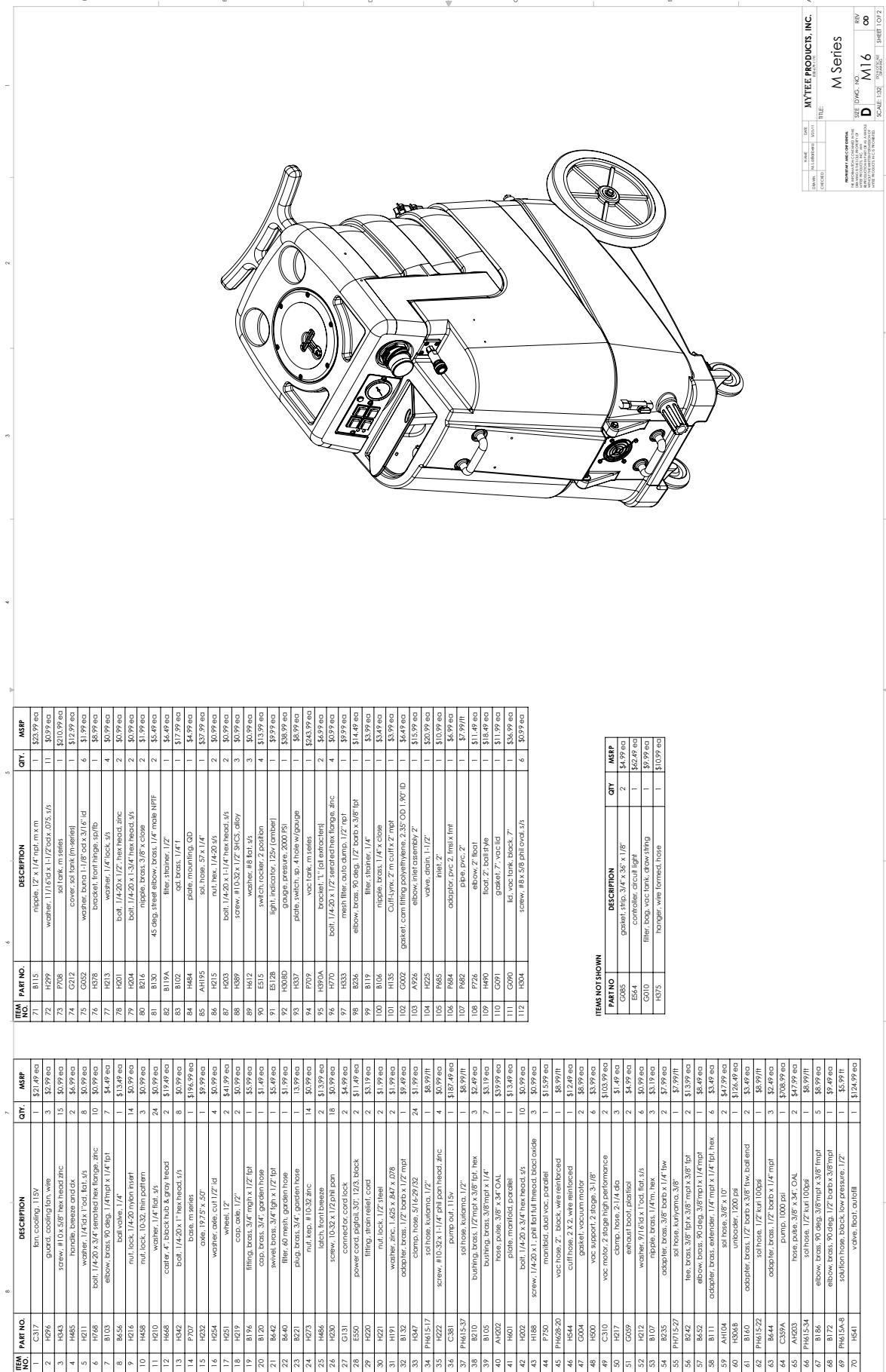
M-12 Exploded View



M-12 Wiring Diagram



M-16 Parts List



M-16 Exploded View

