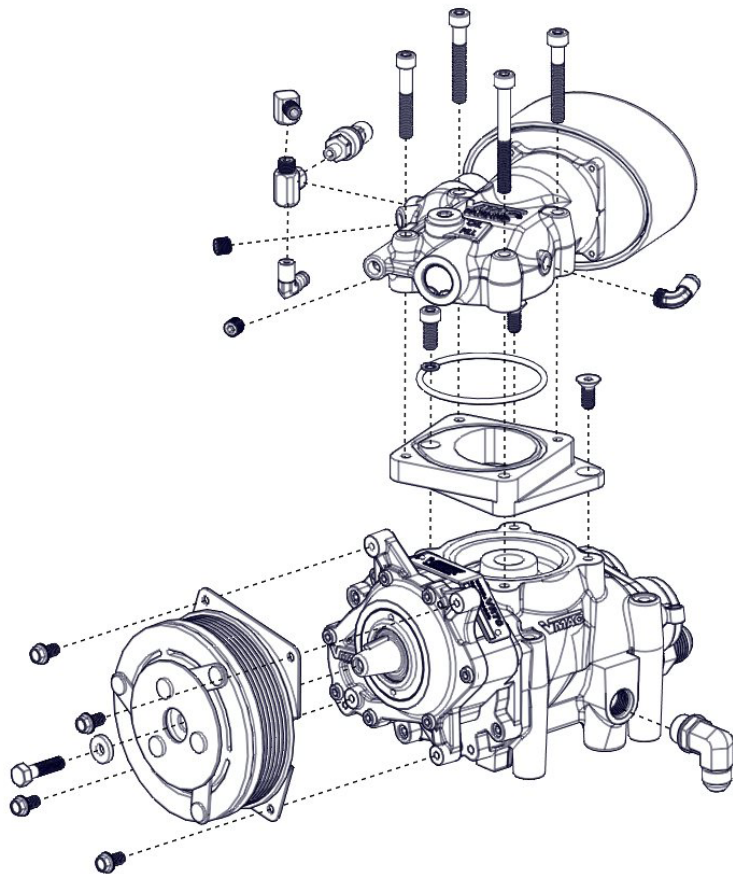


# ***UNDERHOOD***™ **40** AIR COMPRESSORS



## **Illustrated Parts List for VMAC System**

**V400013**

2019 – 2022 Mercedes Sprinter  
2019 – 2022 Freightliner Sprinter  
3.0 L BlueTec V6 Diesel

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# Illustrated Parts List for VMAC System V40013

2019 - 2022 Mercedes Sprinter  
2019 - 2022 Freightliner Sprinter  
3.0L BlueTec V6 Diesel

1. Kit Pack List .....	2
2. Fastener Pack, 3801254.....	4
3. Compressor Assembly, P130012 .....	7
4. Main Bracket Assembly, 4800685 .....	8
5. WHASP Tank Assembly, 9230074 .....	10
6. Air Filter Assembly, 4800691 .....	12
7. Air Filter Assembly, 4800686 .....	13
8. Electrical Pack, Control, 3810112.....	14
9. Electrical Pack, MCON Pedal, 3810114.....	15
10. Accessory Products .....	16

NOTE: Drawings are not to scale.

Document 1930405

## Changes and Revisions

Revision	Revision Details	Revised by	Checked by				Implemented
			Eng.		Tech.	Qual.	
			Mech.	Elec.			
A	ECN-19-175: ENGINEERING RELEASE	ASE	KRM	AJH	BDJ	LEE H	29OCT2019
B	ECN-19-207: ELEC PACK	ASE	N/A	SRD	BDJ	LEE H	27NOV2019
C	ECN 22-060: FITTING UPDATE	TIK	GJM	N/A	RB	LEH	11AUG2022
D	ECN-22-225: INTERLOCKS UPDATE	ASE	KRM	CAB	RB	LPH	5 Dec. 2022

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## 1. Kit Pack List

Item #	Part #	Qty	Description
1	P130012	1	COMP, VR40, FRT INLET, HORZ DISCH
2	4800685	1	ASSY, BRACKET, SPRINTER 3.0L
3	9230074	1	ASSY, MAIN, WHASP TANK
4	1610361	1	BELT, K060461
5	1800231	1	PULLEY, CRANK, VR LITE, SPRINTER, 3.0L
6	4800691	1	AIR FILTER, ASSEMBLY, V300003
7	4800684	1	INTAKE ASSEMBLY
8	4800709	1	ASSEMBLY, REMOTE MUFFLER
9	1201012	1	GUARD, CLUTCH, VR40
10	3560263	1	VR, DTC U40 SPRINTER 3.0L 2019+
11	3550986	1	INTERFACE PANEL, VR40
12	3550987	1	CONTROL MODULE, VR40
13	3810114	1	ELEC PACK, U40, MCON PEDAL, INTRLCK
14	3810112	1	ELEC PACK, U40, CONTROL, INTERLOCK
15	4800790	1	SYS ID & OP INSTR, V400003/13
16	3801254	1	FASTENER PACK, V400003/V400013
17	1770118	1	HOSE, CRIMPED, 3/4" X 118"
18	1810118	1	HOSE, CRIMPED, 3/8" X 118"
19	1772022	1	HOSE, CRIMPED, 3/4" X 22"
20	1812030	1	HOSE, CRIMPED, 3/8" X 30"
21	A700094	1	OIL, VR, 4L, HIGH PERFORMANCE
22	1930335	1	MANUAL, OWNERS, VR40
23	1930404	1	MANUAL, INSTALLATION, V400013
24	1930405	1	ILLUSTRATED PARTS LIST, V400013
25	3551129	1	CAN CONVERTER, SPRINTER

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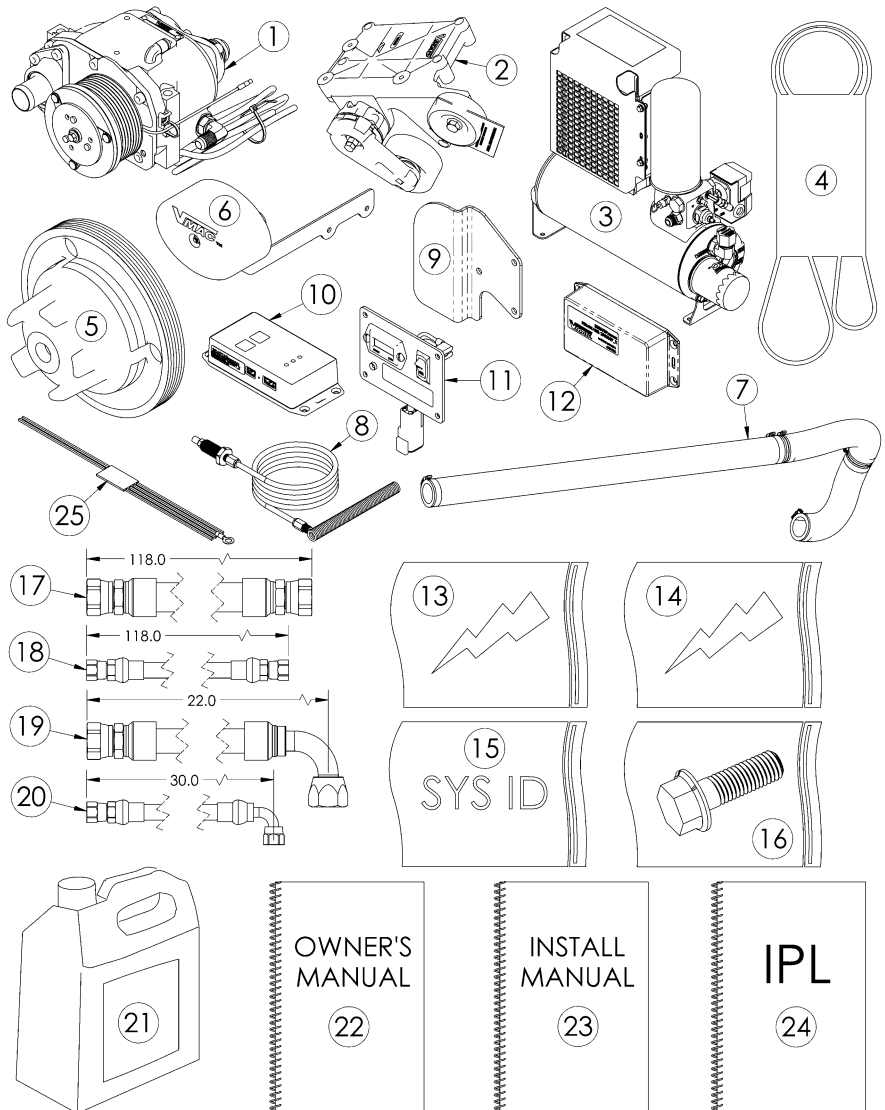


Figure 1 - Kit Pack List

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## 2. Fastener Pack, 3801254

Item #	Part #	Qty	Description
1	3801255	1	FAST PACK, MAIN BKT, V400003/13
1.1	1540495	2	BOLT, SHCS, M8 X 1.25 X 100, G12.9
1.2	1540248	1	BOLT, SHCS, M8 X 1.25 X 35
1.3	1540530	2	BOLT,SHCS,M8 X 1.25 X 55, G12.9 PLT
1.4	1540550	2	BOLT,SHCS,M8 X 1.25 X 50, G12.9 PLT
1.5	1540204	1	BOLT, SHCS, M8 X 1.25 X 25
1.6	1400388	1	SPACER
1.7	1500689	3	SCREW,BHSC,PL,M6X1X8MM
2	3801031	1	FASTENER PACK, HOSE ROUTING
2.1	2200147	6	CLAMP, C.R.I., 2"
2.2	1540495	1	BOLT, SHCS, M8 X 1.25 X 100, G12.9
2.3	1560407	1	NUT, NYLOCK, M8
2.4	1400387	1	SPACER
2.5	1570305	1	WASHER, FLAT G5, 5/16
2.6	1560516	3	NUT, M6 X 1.0 FL PL
2.7	1520642	3	BOLT, HHCS, M6 X 1.0 X 16MM FL
2.8	4900209	1	CONN, STEEL, #6 MJIC, BULKHEAD
2.9	4900170	1	CONN, STEEL, #12JIC - #12JIC BULKHEAD
2.10	5000178	1	CONNECTOR, BRASS BULKHEAD, 1/8
2.11	5000012	2	CONNECTOR, BRASS NPT-POLY, 1/8-1/4
2.12	4900117	1	JIC 90 DEG STEEL, SWIVEL, 3/8 – 3/8
3	3801033	1	FASTENER PACK, AIR FILTER BRACKET
3.1	1540549	2	BOLT,SHCS,M6 X 1 X 18,PLATED,G12.9
3.2	1560438	2	NUT, NYLOCK, M6
3.3	1570491	4	WASHER, FLAT, M6, PLATED
4	3801036	1	FASTENER PACK, TEFLON HOSE
4.1	1700570	25.0	TUBE, TEFLON, PTFE, 1/4"OD
4.2	1700570	140.0	TUBE, TEFLON, PTFE, 1/4"OD
4.3	2200039	10	TIE, NYLON MD, 7"
4.4	1700581	150.0	LOOM, SPLIT PLASTIC, 1/4, HIGH TEMP
4.5	1700613	30.0	SPIRAL WRAP, 1/2" ID, BLACK
4.6	1700584	30.0	SPIRAL WRAP, 1" OD, BLACK

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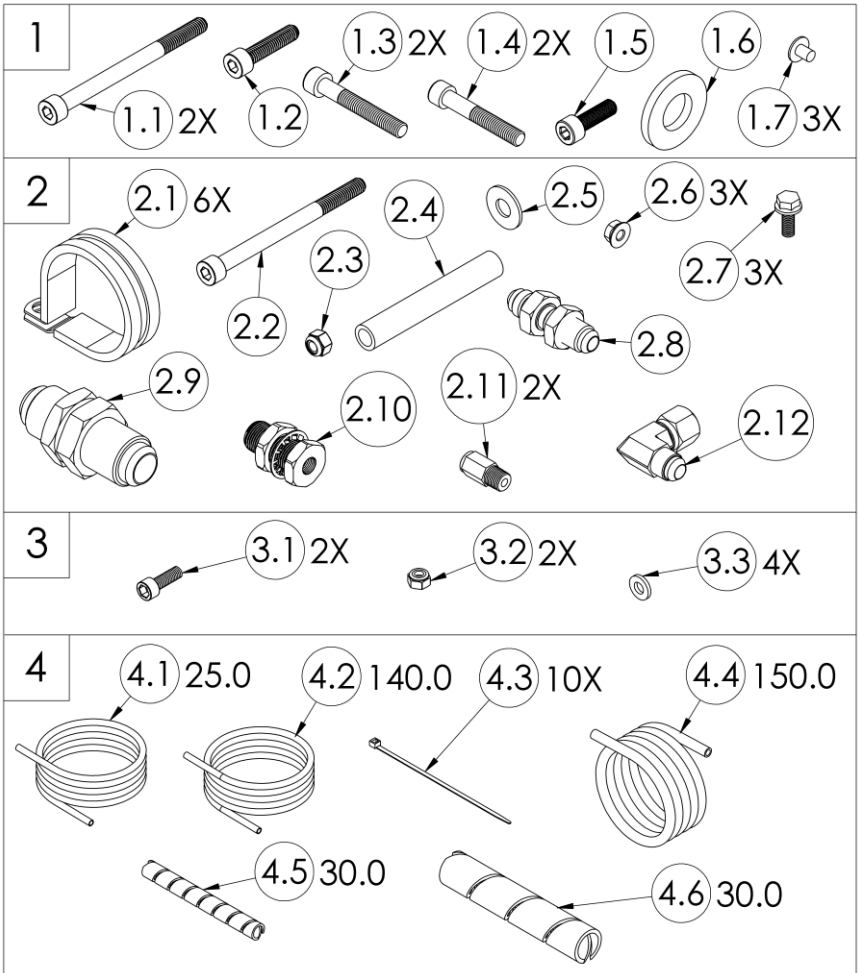


Figure 2 - Fastener Pack

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**Fastener Pack, 3801254 (Cont'd)**

Item #	Part #	Qty	Description
5	3801467	1	FASTENER PACK, CLUTCH INTERLOCK
5.1	4800867	1	ASSY, SWITCH, PRESSURE
5.2	1700570	24.0	TUBE, TEFLON, PTFE, 1/4"OD
5.3	1700581	20.0	LOOM, SPLIT PLASTIC, 1/4, HIGH TEMP
5.4	5000218	1	FITTING, UNION TEE, 1/4" POLY
5.5	2200178	1	CLAMP, 5/8, CUSHION
5.6	1520590	1	BOLT, HHCS, M6 X 1.0 X 14 FL PL
5.7	1560537	1	NUT, NYLOCK, M6 X 1.0, FL PL
5.8	1201201	1	BRACKET, FOOT MOUNT, VR40

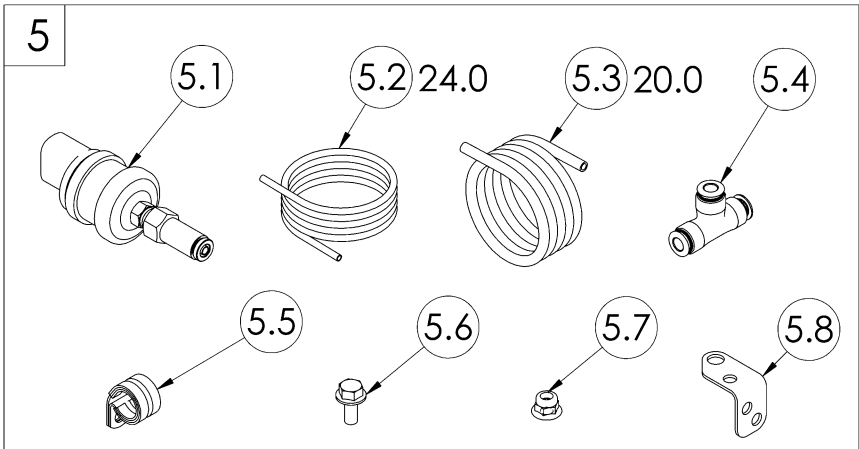


Figure 3 - Fastener Pack (Cont'd)

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### 3. Compressor Assembly, P130012

Assembly sub-components listed below

Item #	Part #	Qty	Description
1	4900226	1	CONN, STEEL, #12 MJIC X #8 MORB
2	P200048	1	CLUTCH, COMPLETE, 8 GROOVE, 3.35
3	9230071	1	SPACER, INPUT SHAFT, VR40
4	3200520	1	PIN, FIELD COIL
5	2200250	1	TIE MOUNT, HEAT STABILIZED NYLON
6	1500623	1	SCREW,PT HD,PL F-THRD 6-32 X 1/4"
7	4900045	1	PLUG, STEEL HEX SAE/O-RING PORT
8	4900176	1	CONN, STEEL, 90, #6 JIC - #6 ORB
9	3550682	1	PROBE, ASSY, THERMISTOR, SHORT
10	5000020	1	ELBOW, BRASS NPT-POLY, 1/8-1/4
11	2200164	1	TIE, NYLON, BLACK, 8"

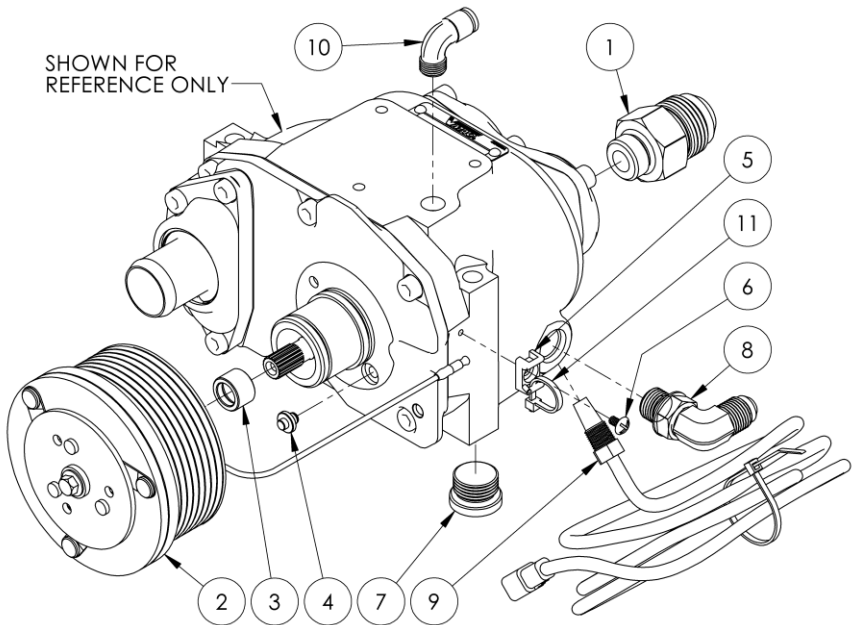


Figure 4 - Compressor Assembly

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#### 4. Main Bracket Assembly, 4800685

Assembly sub-components listed below

Item #	Part #	Qty	Description
1	1100209	1	BRACKET, MAIN, MB SPRINTER
2	1520538	1	BOLT, HHCS, FLHD, M10 X 1.50 X 35
3	1400309	1	SPACER, IDLER, 10 MM BOLT
4	1300040	1	IDLER, SERP, 6-RIB BACK, 76MM
5	3300036	1	TENSIONER 7C3Z-6B209-D

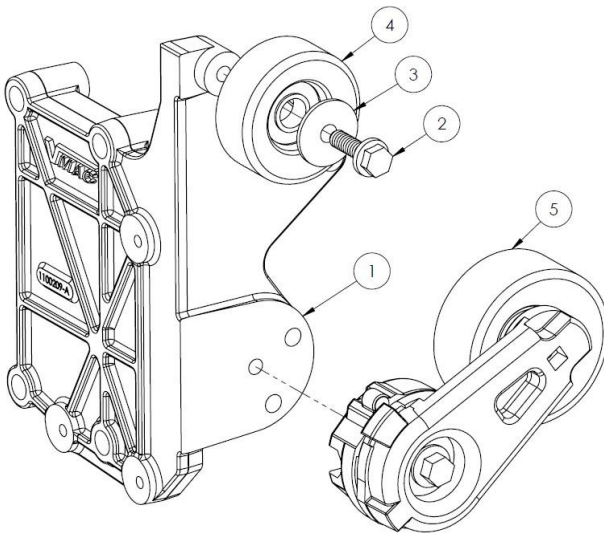


Figure 5 - Main Bracket Assembly

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## 5. WHASP Tank Assembly, 9230074

Assembly sub-components listed below

Item #	Part #	Qty	Description
1	9230072	1	ASSY, SHROUD AND DECAL
2	3600079	1	OIL SEPARATOR, SPIN-ON
3	9200039	1	OIL FILTER, VR 3.250 SHORT
4	4900164	1	CAP, STEEL, #12JIC
5	3501294	1	SWITCH, PRESSURE, 50-175PSI
6	4300039	1	PIPE FTG, PLUG SKT HEAD, 3/8
7	4500104	1	MUFFLER, SINTERED EXHAUST, 1/8"
8	3600171	1	VALVE, MODIFIED (3600167)
9	4900106	1	PLUG, STEEL, #5 ORB, HEX (VITON-O)
10	3600054	1	VALVE, SAFETY 200 PSI
11	A700061	1	PYREX WINDOW KIT
12	4900175	1	CONN, STEEL, #6 JIC - #8 ORB
13	1200852	1	PLATE, MOUNT, FILTER END
14	1200847	1	PLATE, MOUNT, BOLT ON
15	1520601	4	BOLT, HHCS FL PL, M8 X 1.25 X 12
16	6000719	1	SHROUD, FAN, WHASP TANK
17	3501290	1	FAN, PULLER, 7.5"
18	4900128	1	FITTING, 12ORB -12JIC, STEEL
19	5000140	1	ELBOW, BRASS,FORGED, 90DEG,1/8 PIPE
20	3600123	1	VALVE, CHECK, 1/8 NPT
21	5000212	1	CONNECTOR,BRASS, FNPT-POLY, 1/8-1/4
22	1520590	8	BOLT, HHCS, M6 X 1.0 X 14 FL PL
23	1560516	4	NUT, M6 X 1.0 FL PL
24	4900260	1	FTG, 90, #12MORB-#12MJIC, VITON
25	4900046	1	CONN, STL,3/4-16 O-RING TO 1/2 TUBE

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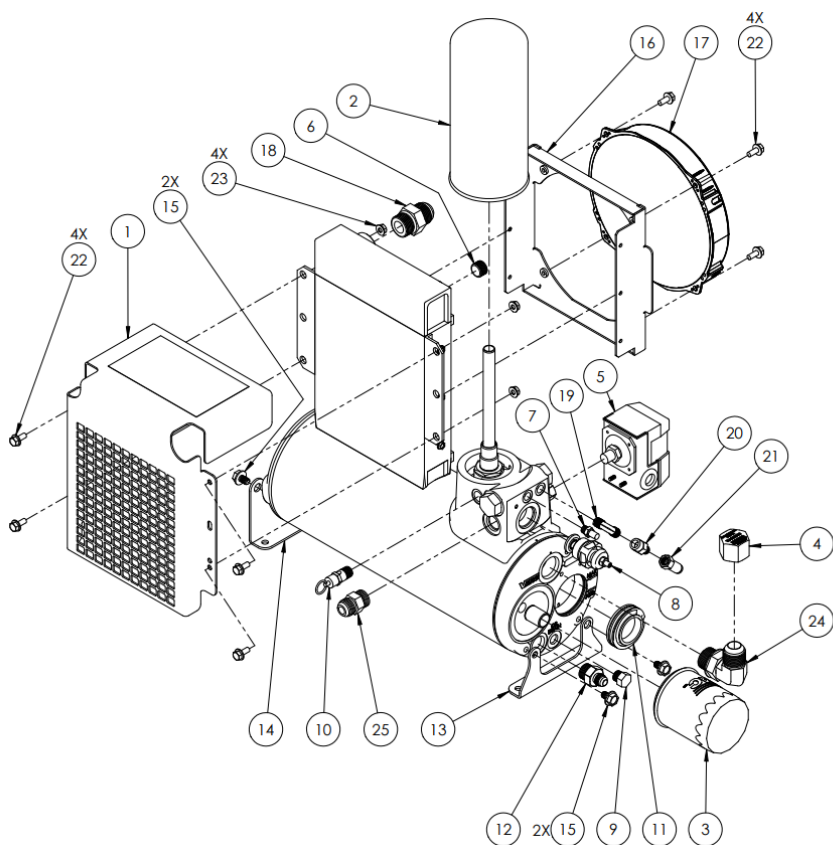


Figure 6 - WHASP Tank Assembly

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## 6. Air Filter Assembly, 4800691

Assembly sub-components listed below

Item #	Part #	Qty	Description
1	1200829	1	BRACKET, AIR FILTER
2	1540538	2	BOLT, SHCS, PL, M6 X 1.0 X 14
3	1570491	2	WASHER, FLAT, M6, PLATED
4	4800686	1	ASSEMBLY, AIR FILTER

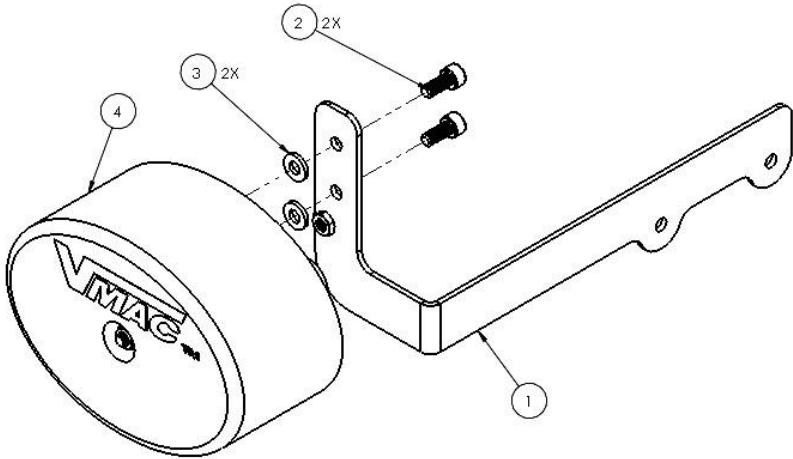


Figure 7 – Air Filter Assembly

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## 7. Air Filter Assembly, 4800686

Assembly sub-components listed below

Item #	Part #	Qty	Description
1	3600066	1	COVER, AIR FILTER, PLASTIC
2	3600037	1	FILTER ELEMENT, PAPER
3	9230016	1	WELDMENT, REMOTE AIR FILTER
4	1500584	1	STUD, FULL THREAD, PL, M6 X 1.0 X 65
5	1560523	1	NUT, JAM, PL, M6X 1.0
6	1560438	1	NUT, NYLOCK, M6
7	1570038	1	WASHER, FLAT SAE, 1/4

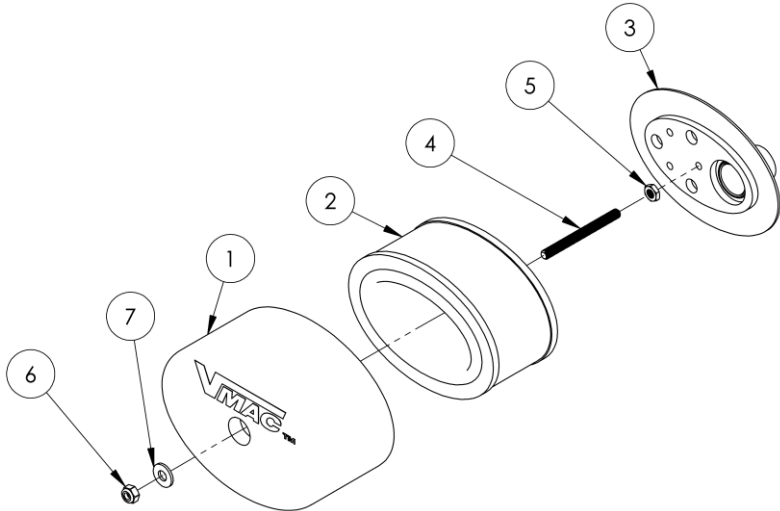


Figure 8 – Air Filter Assembly

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## 8. Electrical Pack, Control, 3810112

Item #	Part #	Qty	Description
1	3550985	1	HARNESS, VR40 CONTROL
2	3551088	1	HARNESS, VR40 RELAY POWER
3	3551089	1	HARNESS, VR40 PRESSURE
4	3550990	1	HARNESS, VR40 TEMPERATURE

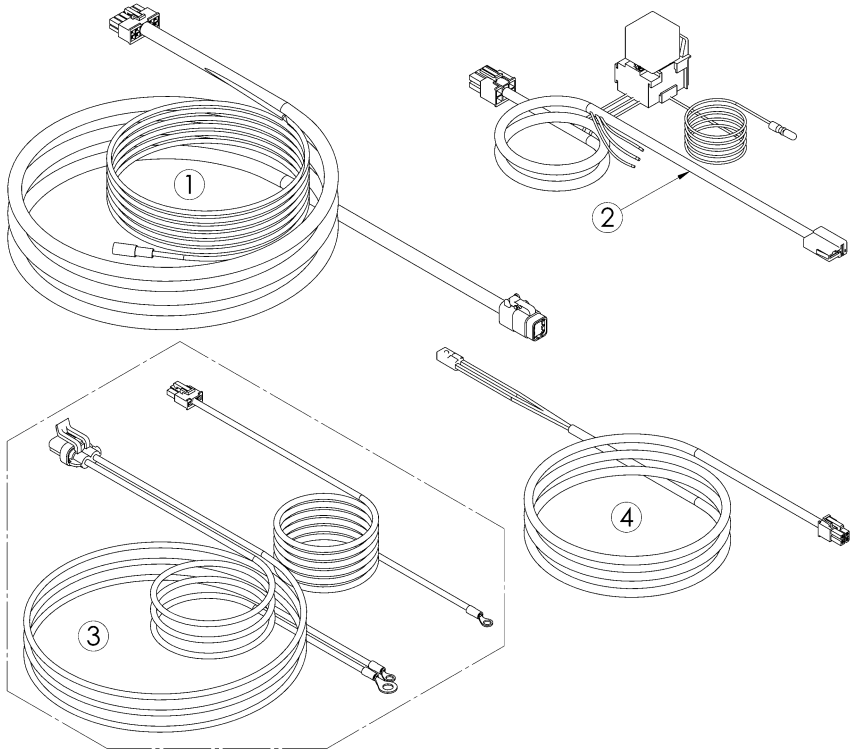


Figure 9 – Electrical Pack

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## 9. Electrical Pack, MCON Pedal, 3810114

Item #	Part #	Qty	Description
1	3530811	1	CABLE SET, DTC, FOOT PEDAL, MCON
2	3530839	1	CABLE SET, DTC, MAIN WITH PBRAKE
3	3530805	1	CABLE SET, DTC, OBD2
4	2200164	5	TIE, NYLON, BLACK, 8"
5	1700581	120.0	LOOM, SPLIT PLASTIC, ¼", HIGH TEMP

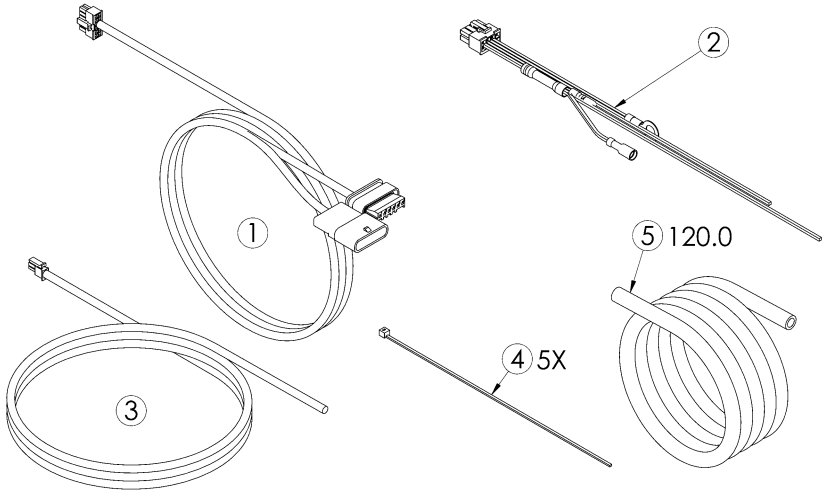


Figure 10 – Electrical Pack

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## 10. Accessory Products

Parts listed below are not included with kit - Order through your VMAC dealer

Part #	Description
<b>REGULAR SERVICE KITS</b>	
A700263	200 HOUR SERVICE KIT - VR40 <i>Oil, air and oil filters, next service decal</i>
A700264	400 HOUR SERVICE KIT - VR40 <i>200 hour kit components + coalescing filter, safety valve, blowdown muffler</i>
<b>INSTALLATION HELPER AND REPAIR KITS</b>	
3801095	FASTENER PACK, BULKHEAD FTGS <i>Fittings to route #6 &amp; #12 hoses and 1/4" PTFE tubes through bulkheads or floors</i>
A700224	ACCESSORY PACK, REMOTE MUFFLER <i>Tubing and fittings to relocate WHASP blowdown muffler through bulkheads or floors</i>
A700268	KIT, PTFE TUBE, SCAVENGE <i>Generic parts kit for scavenge tube replacement</i>
A700265	INTERFACE EXTENSION, VR40, 10' <i>Electrical extension harness for user interface panel</i>
<b>INDIVIDUAL FITTINGS</b>	
5000158	ELBOW, BRASS 45 DEG NPT-POLY 1/8-1/4 <i>45° 1/8 MNPT – 1/4" push connect fitting</i>
5000020	ELBOW, BRASS NPT-POLY, 1/8-1/4 <i>90° 1/8 MNPT – 1/4" push connect fitting</i>
5000012	CONNECTOR, BRASS NPT-POLY, 1/8-1/4 <i>Straight 1/8 MNPT – 1/4" push connect fitting</i>
4900117	JIC 90 DEG STEEL, SWIVEL, 3/8 -3/8 <i>90° #6 MJIC - #6 FJIC swivel fitting</i>
4900043	ELBOW, STEEL JIC/JIC SWIVEL, 3/4 <i>90° #12 MJIC - #12 FJIC swivel fitting</i>
<b>AIR HANDLING AND STORAGE</b>	
A700007	HOSE REEL, DRESSED, 1/2 X 50 <i>Auto-retract, 1/2" ID x 50' long hose, 1/2 NPT connections</i>
A800070	AFTERCOOLER, ELIMINATOR70, 70CFM <i>Cools and dries discharge air, 12V fan, 3/4 NPT connections</i>
A700151	FILTER-REGULATOR-LUBRICATOR <i>Conditions discharge air, 3/4 NPT connections, tool oil not included</i>
A300045	TANK, AIR RECEIVER 6 GAL C/W FTGS <i>6 gal wing tank, includes fittings, safety + drain valves, 3/4 NPT ports</i>
A300047	TANK, AIR RECEIVER 10 GAL C/W FTG <i>10 gal surface mount tank, includes fittings, gauge, safety + drain valves, 3/4 NPT ports</i>
A300010	TANK, WING 35 GAL C/W FTG <i>35 gal wing tank, includes fittings, gauge, safety + drain valves, 1 1/2 NPT ports</i>

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