



PM-266621B

2023-02

Processes



Stick (SMAW) Welding



TIG (GTAW) Welding

Description

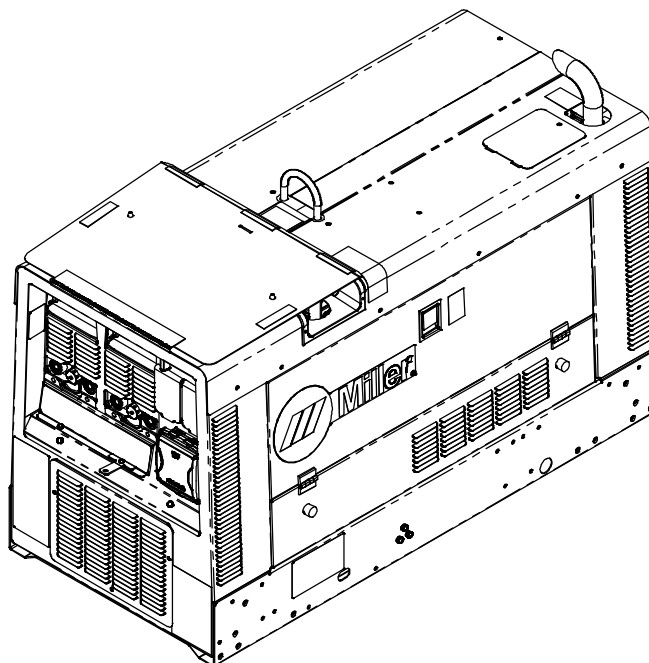


Engine Driven Welder/Generator

Big Blue[®] 450 Duo CST

Eff w/Serial No. ME140214E And Following

See TM-222929 for information on servicing the CST inverter modules. Reference the serial number on the CST inverter modules when servicing these units.



PARTS MANUAL



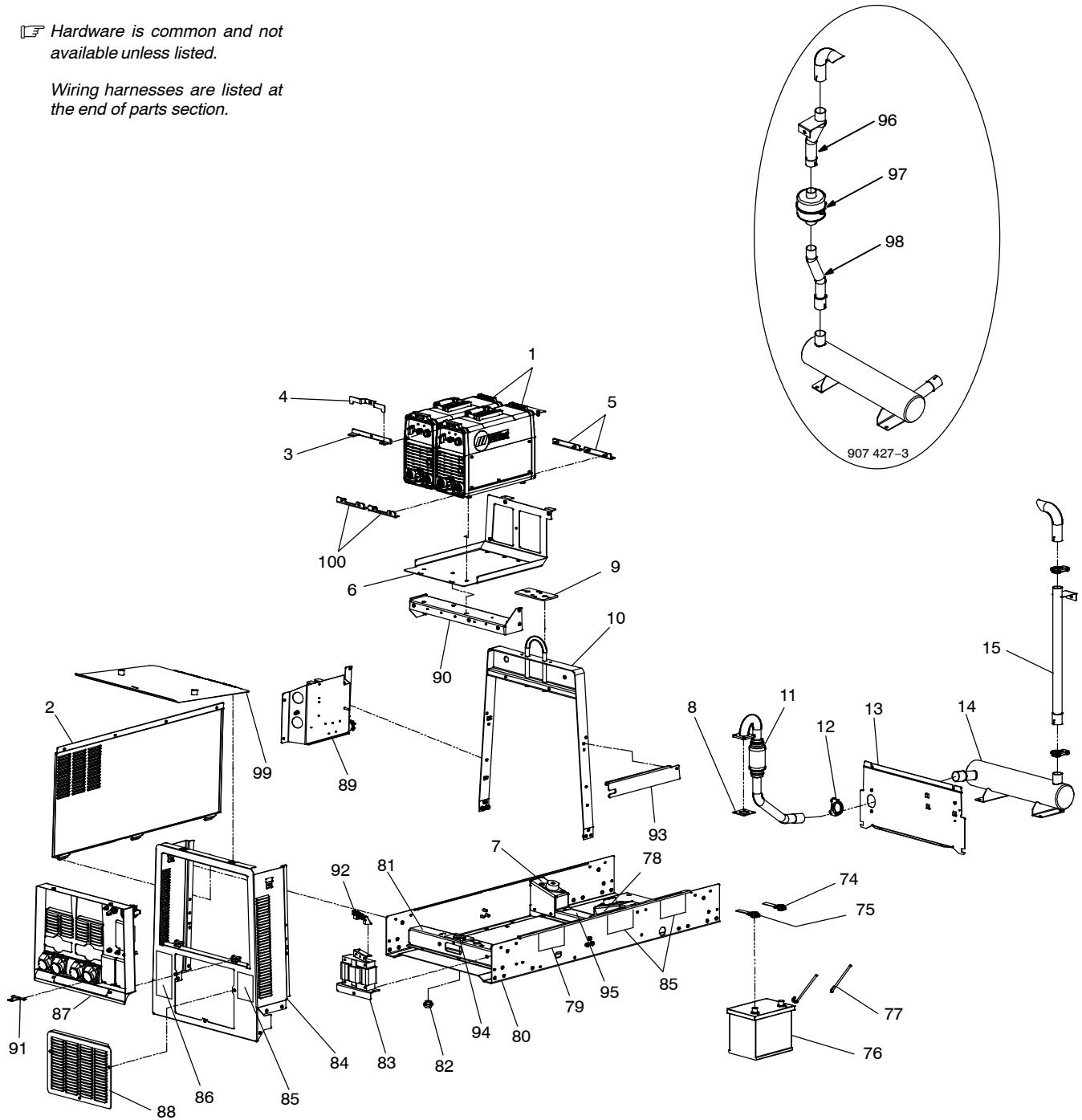
For product information,
Owner's Manual translations,
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SECTION 1 – PARTS LIST EFF W/SERIAL NO. ME140214E AND FOLLOWING

 Hardware is common and not available unless listed.

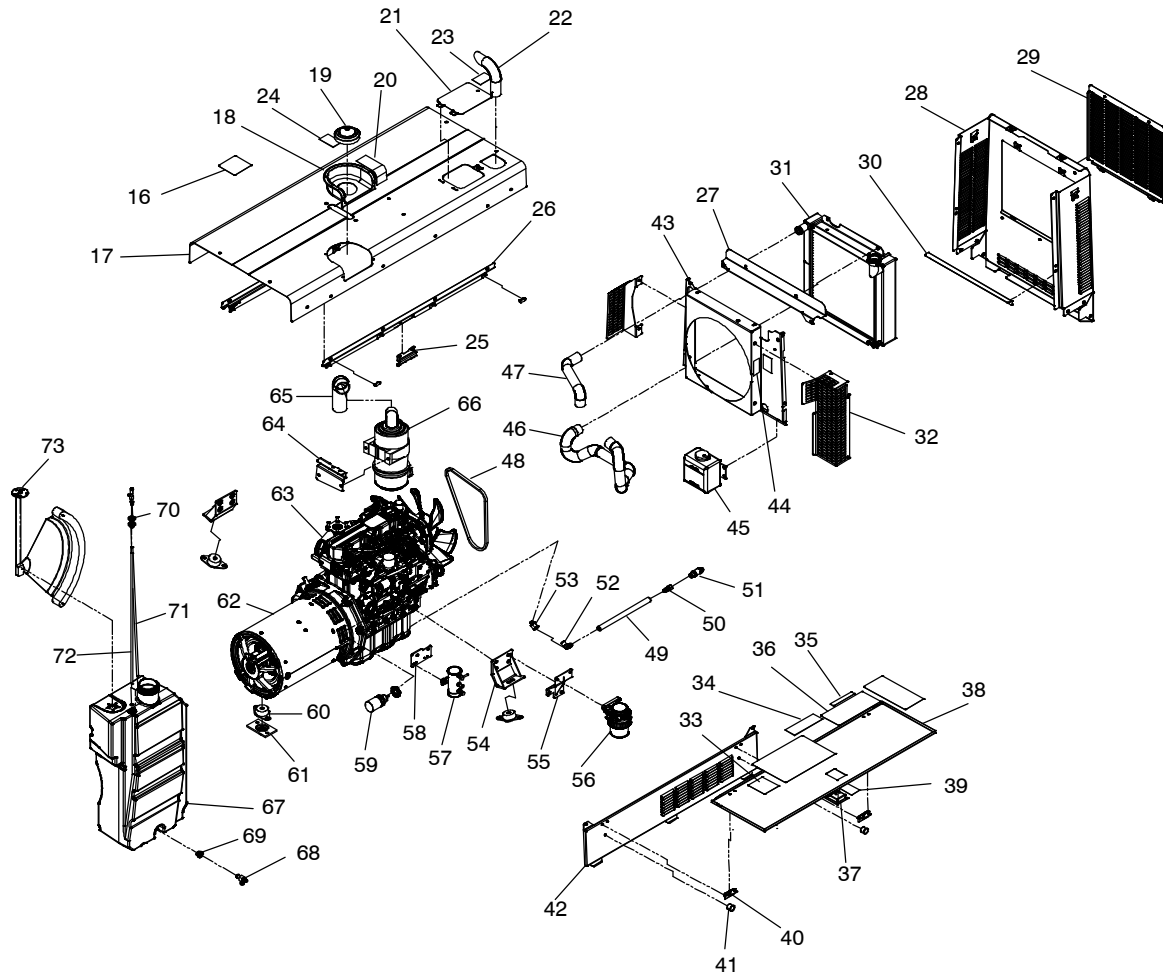
Wiring harnesses are listed at the end of parts section.



Ref: 907 473-4B

Figure 1-1. Main Assembly

Eff w/Serial No. ME140214E And Following



907 473-10A

Eff w/Serial No. ME140214E And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-1. Main Assembly				
...	1	907251	CST-280, 208-230/400-460 Dinse Style Connectors	2
...	1	◆907251011	CST-280 208-230/400-460 Tweco Style Connectors	2
...	1	◆907251012	CST-280 VRD 208-230/400-460, Dinse Style Conn	2
...	2	+243709	Panel, Engine Side	1
...	3	247762	Bracket, Mtg Cst	2
...	4	247760	Bracket, Mtg Cst Retainer	2
...	5	207502	Bracket, Mtg Rear	2
...	6	247871	Tray, Mtg Cst Assy	1
...	7	213485	Support, Engine Lh	1
...	8	245752	Gasket, Exhaust Outlet	1
...	9	189464	Seal, Weather Lift Eye	1
...	10	259211	Upright, Center Assy	1
...	11	241264	Pipe, Exhaust Flexible Inlet	1
...	12	209057	Clamp, Muffler 1.625 Dia U Pld	3
...	13	212604	Baffle, Air Lower Radiator	1
...	14	201528	Muffler, Exhaust Engine	1
...	15	212605	Pipe, Exhaust	1
...	16	233088	Label, Danger Using A Generator Indoors Can Kill You In Minutes (Prior to MF520019E)	1
...	16	272340	Label, Danger Using Generator Indoor (En/Fr/Sp-Sym) (Eff w/MF520019E)	1
...	17	+249656	Cover, Top	1
...		049525	Nut, 312-18 U-nut Multi-thread	8
...	18	189052	Grommet, Plastic Neck Filler Fuel	1
...	19	190198	Cap, Tank Screw-on 3.500 In W/Vent W/Lanyard 8"	1
...	20	222513	Label, Warning Falling Equipment Can Cause Serious (Prior to MF520019E)	1
...	20	272339	Label, Warning Falling Equipment (En/Fr-Sym) (Eff w/MF520019E)	1
...	21	201851	Cover, Radiator Access	1
...	22	214604	Pipe, Exhaust Elbow	1
...	23	224265	Label, Warning Hot Exhaust Parts Do Not Touch (Prior to MF020105E)	1
...	23	269515	Label, Warning Hot Parts (Eff w/MF020105E thru MF520019E)	1
...	23	272333	Label, Warning Hot Parts (En/Fr-Sym) (Eff w/MF520019E)	1
...	24	192041	Label, Use Diesel Fuel Only (Prior to MF520019E)	1
...	24	272338	Label, Use Diesel Fuel Only (En/Fr-Sym) (Eff w/MF520019E thru MH060317R)	1
...	24	227728	Label, Warning Use Diesel Fuel Only (Trilingual) (Eff w/MH060318R)	1
...	25	213472	Keeper, Latch Engine Access	1
...	26	213471	Bracket, Cover Top	2
...	27	212603	Baffle, Air Upper Radiator	1
...	28	+243710	Upright, Rear	1
...	29	243711	Panel, Rear Access	1
...	30	220295	Bracket, Stiffener	1
...	31	243698	Radiator, W/14# Cap 1 Row Core 1.250 Inlet/Outlet	1
...		187120	Cap, Radiator Pressure 14 Lb	1
...	32	241266	Guard, Fan	1
...		222652	Bracket, Mtg Hose	1
...	33	217698	Label, Help Codes	1
...	34	168385	Label, Warning Battery Explosion Can Blind (Prior to MF520019E)	1
...	34	272341	Label, Warning Battery Explosion (En/Fr-Sym) (Eff w/MF520019E)	1
...	35	203260	Label, Caution Do Not Use Ether (Prior to MF520019E)	1
...	35	272332	Label, Notice Do Not Use Ether (En/Fr-Sym) (Eff w/MF520019E thru MH060317R)	1
...	35	227731	Label, Caution Do Not Use Ether (Trilingual) (Eff w/MH060318R)	1
...	36	239396	Label, Diesel Engine Maintenance Mitsubishi S4L2	1
...	37	245362	Latch, Paddle Series 20 (Black)	1
...	38	+213487	Door, Engine Access	1

Eff w/Serial No. ME140214E And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-1. Main Assembly (Continued)				
39		225120	Label, Warning Moving Parts Can Cause Injury (Prior to MF520019E)	4
39		272334	Label, Warning Moving Parts (En/Fr-Sym) (Eff w/MF520019E)	4
		191626	Bumper, Door Engine Access	3
40		189975	Hinge, Door Access 180 Deg	2
41		254634	Bumper, Door 1.000 Od X .750 High Rbr 50 Duro W/O	2
42		243708	Panel, Rocker	1
43		+241176	Shroud, Radiator	1
44		225120	Label, Warning Moving Parts Can Cause Injury (Prior to MF520019E)	2
44		272334	Label, Warning Moving Parts (En/Fr-Sym) (Eff w/MF520019E)	2
45		190190	Tank, Coolant Recovery	1
46		241286	Hose, Radiator Lower	1
47		241256	Hose, Radiator Upper	1
48		242883	Belt, Alternator	1
		199505	Hose Assy, Oil Drain 32.000 Lg (Includes)	1
49		113854	Hose, Sae .500 Id X .780 Od Xcoil	2.6 Ft.
50		176529	Ftg, Hose Brs Barbed Fem 1/2 Tbg X 3/8 Npt	1
51		165271	Valve, Oil Drain 3/8-18 Nptf	1
52		197448	Ftg, Hose Brs Barbed Elbow M 1/2 Tbg X 3/8 Npt	1
53		236978	Ftg, Adapter Oil Drain Mitsubishi	1
54		244218	Bracket, Mtg Engine	2
55		243950	Bracket, Mtg Fuel Filter	1
56		*252781	Filter, Fuel Spin-on	1
57		241265	Pump, Fuel	1
58		241255	Bracket, Mtg Fuel Pump	1
59		242538	Actuator, Linear (Prior to MK190444R)	1
		243763	Nut, M30x1.5 Hex	1
60		213266	Mount, Engine/Generator Flange Mtg	3
61		213461	Bracket, Mtg Generator	1
62		Figure 1-5	Generator Assembly	1
63		263184	Engine, Mitsubishi Dsl Elec S4l2 (T4f) (Prior to MK190444R)	1
63		283215	Engine, Mitsubishi Dsl Elec S4l2 (T4f) (Eff w/MK190444R)	1
		*213858	Filter, Fuel In-line 5/16x5/16 Mic 125 -175	1
		*242882	Filter, Lube Oil	1
		244039	Switch, Coolant Temp N.O. 111c	1
		244040	Switch, Lubricating Oil Pressure N.c.	1
		♦245836	Heater, Block Engine 115V 400W	1
64		249550	Bracket, Mtg Air Intake	1
65		241272	Hose, Air Intake (Prior to MK190444R)	1
65		283882	Hose, Air Intake (Eff w/MK190444R)	1
66		249657	Air Cleaner, Intake 5.250 In (Includes)	1
		241268	Bracket, Mtg Air Cleaner	1
		249661	Dust Ejector, Air Cleaner	1
		*197676	Element, Air Cleaner	1
		*♦197679	Element, Air Cleaner Safety	1
		249659	Cover Assy, Air Cleaner	1
		249658	Body, Air Cleaner	1
		249664	Latch, Air Cleaner	1
67		227643	Tank, Fuel (Includes Fuel Cap And Items Below)	1
68		189908	Valve, Drain Fuel 180 Deg Zinc Pld	1
69		181572	Bushing, Tank Fuel	1
70		124253	Bushing, Tank Fuel	1
71		212611	Hose, Fuel Stand Pipe W/3/16 In Ftg (Return)	1
72		212610	Hose, Fuel Stand Pipe W/5/16 In Ftg (Supply)	1
73	SENDER	235191	Sender, Fuel Gauge	1
		173348	Extrusion, Rubber W/Adhesive .370 X .750 X 1 Ft	2
74		190207	Cable, Bat Pos 45 In Lg No 1 Awg W/Clamp & .406 Rng	1
75		190206	Cable, Bat Neg 42 In Lg 2 Awg W/Clamp & .375 Rng	1

Eff w/Serial No. ME140214E And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-1. Main Assembly (Continued)				
... 76 ...	BATT		Battery, Stor 12v 570 Crk 100 Rsv Gp 35 Maint Free	1
		261792	Bracket, Battery Holddown (Not Shown)	1
		261784	Bracket, Battery Locator (In Base – Not Shown)	1
... 77 ...		213465	Bolt, J Stl .312–18 X 7.250 Pld	2
... 78 ...		213483	Support, Engine Rh	1
... 79 ...		224266	Label, Warning Do Not Weld On Base (Prior to MF520019E)	2
... 79 ...		272342	Label, Warning Do Not Weld On Base (En/Fr-Sym) (Eff w/MF520019E)	2
... 80 ...		213458	Base	1
... 81 ...		213460	Crossmember, Generator	1
... 82 ...		213463	Spacer/Stubber, Generator Mtg	1
... 83 ...		257763	Xfmr, Control	1
... 84 ...		+226104	Upright, Front	1
... 85 ...		233953	Label, Warning General Precautionary CSA (Domestic) (Prior to MF520019E)	1
... 85 ...		272343	Label, Warning General Precautionary (En/Fr-Sym) (Eff w/MF520019E)	2
... 86 ...			Label, Rating (Order By Model And Serial No.)	1
... 87 ...	Figure 1-2, Figure 1-3		Front Panel Assembly	1
... 88 ...		220955	Panel, Front Access	1
... 89 ...	Figure 1-4		Control Box	1
... 90 ...		247609	Brkt, Beam Support	1
... 91 ...		254039	Tab, Lockout	1
... 92 ...	TE1	172661	Block, Stud Connection 6 Position	1
		173734	Link, Jumper	3
... 93 ...		214753	Bracket, Holddown Fuel Tank	1
... 94 ...		213462	Pad, Mtg Generator	1
... 95 ...		213459	Crossmember, Engine	1
... 96 ...		♦244508	Pipe, Exhaust Spark Arrestor	1
... 97 ...		♦088528	Spark Arrestor, Exhaust	1
... 98 ...		♦244507	Pipe, Exhaust	1
... 99 ...		257178	Door, Assembly	1
... 100 ...		207504	Bracket Assy, Mtg Front	2
		283131	Bracket, Mtg Sensor (Eff w/MK190444R)	1
		255205	Label, Notice Keep Door Open (Prior to MF520019E)	1
		272336	Label, Notice Keep Door Open (Eff w/MF520019E)	1
		252807	Label, Notice Do Not Spray Water (Prior to MF520019E)	2
		273581	Label, Notice Do Not Spray Water (Eff w/MF520019E)	2
		213668	Bracket, Mtg Unit	4
		238650	Label, Hour/Fuel Meter Usage	1
		213506	Bracket, Hold-Down Fuel Tank (Not Shown)	1
		254016	Label Group (Includes Safety And Informational Labels) (Domestic) (Prior to MF520019E)	1
		*252782	Filter Kit, Mitsubishi (S4I2)	1

+ When ordering a component originally displaying a precautionary label, the label should also be ordered.

* Recommended Spare Parts.

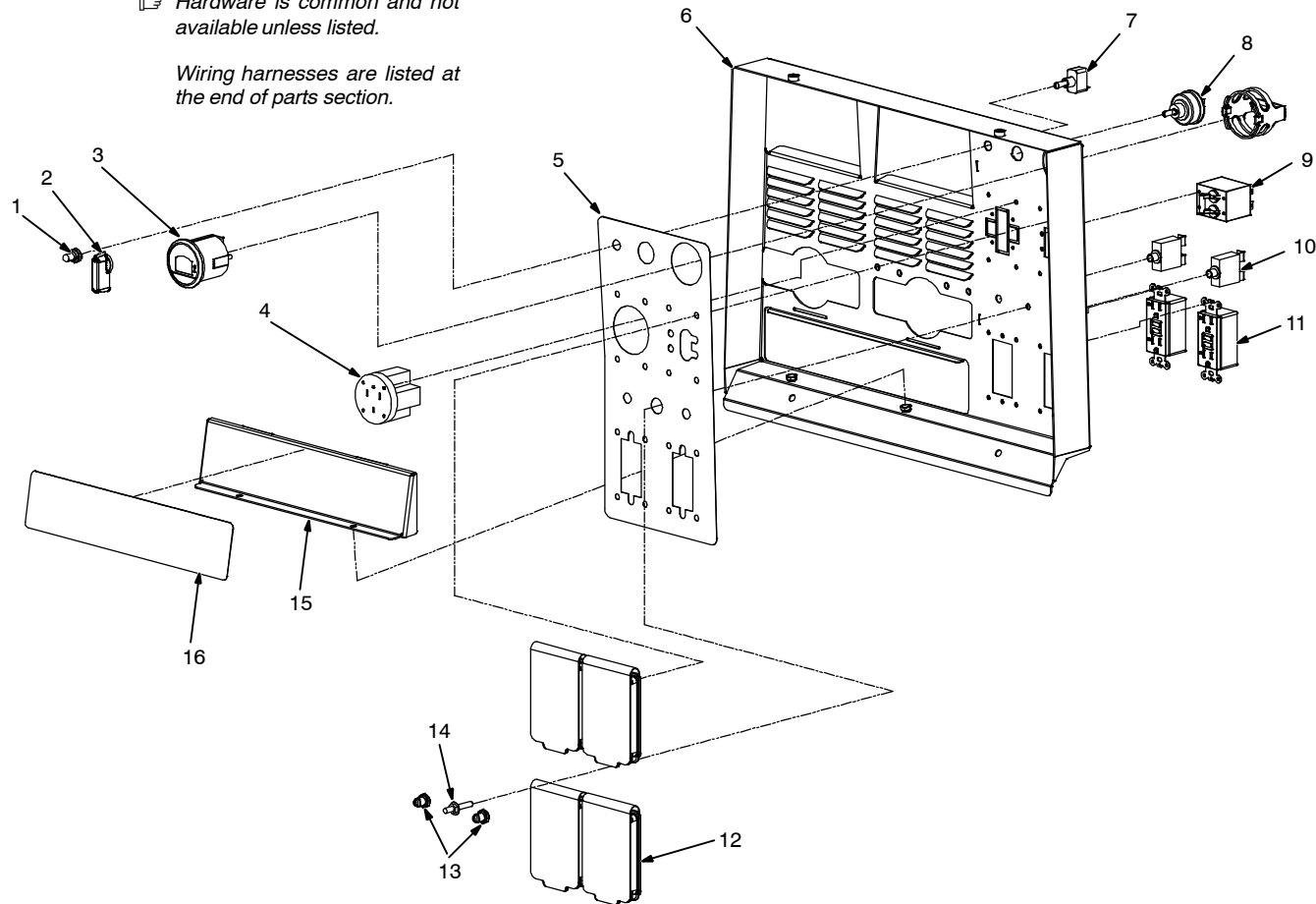
♦ Optional

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

Eff w/Serial No. ME140214E And Following

Hardware is common and not available unless listed.

Wiring harnesses are listed at the end of parts section.



907 473-8B

Figure 1-2. Panel, Front w/Components Prior To Serial No. MF020105E

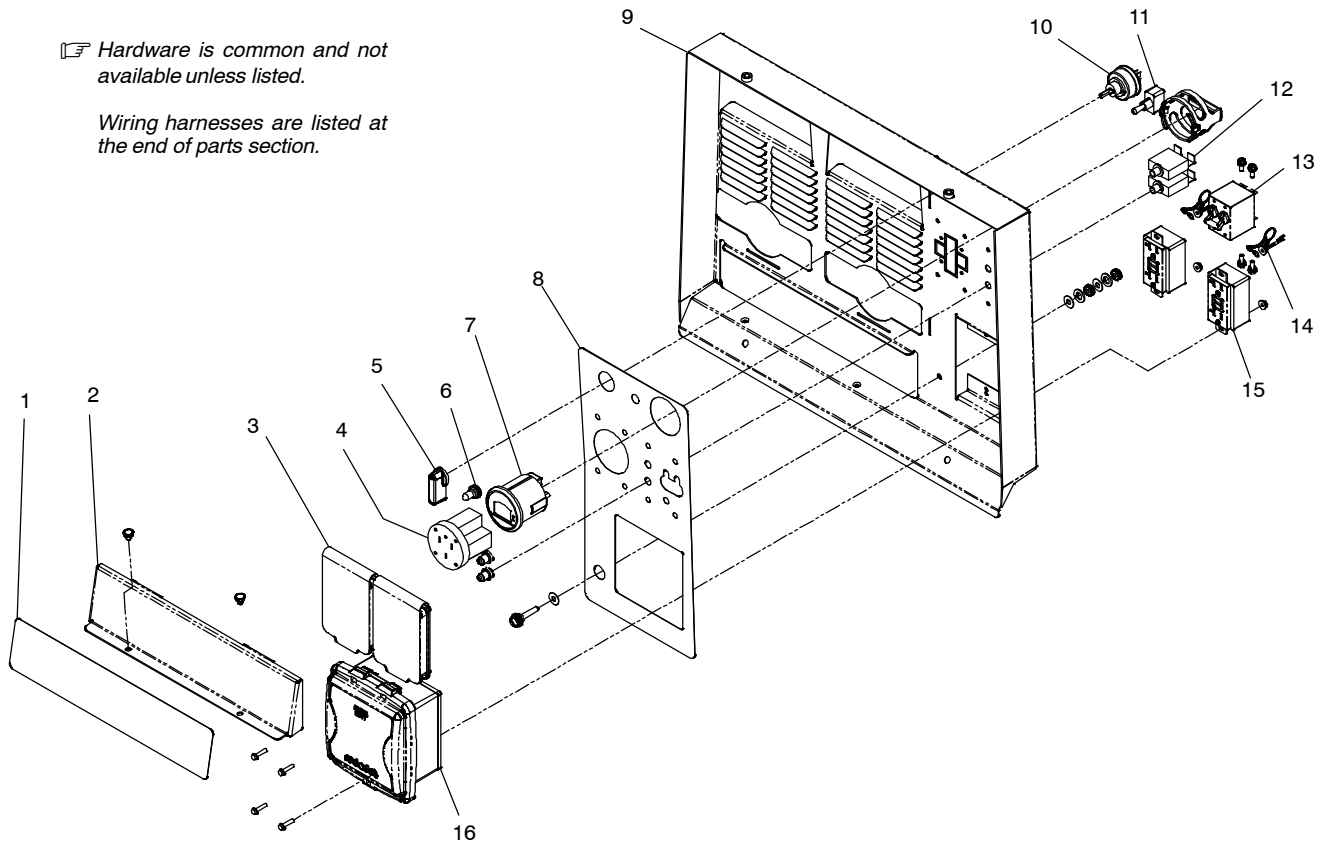
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-2. Panel, Front w/Components Prior To Serial No. MF020105E (Figure 1-1 Item 87)				
1		021385	Boot, Toggle Switch Lever	1
2		207073	Lever, Ignition Switch	1
		201244	Washer, Tooth.728idx1.166odx.050t Stl Pld Int.688	1
3	FUEL/HM	246181	Gauge, Fuel Elec/Hour Meter	1
4	RC11	182954	Rcpt, Str 3p4w 50A 125/250V Flush Mtg *14-50	1
5			Nameplate, Control (Order By Model & Serial No.)	1
6		254026	Panel, Front Engine/Weld Control	1
7	S4	021467	Switch, Tgl Spst 3A 250V Off-none-(On) Spd Term	1
8	S1	217680	Switch, Ignition 4 Position W/Out Handle	1
9	CB6	203026	Supplementary Protector, Man Reset 2p 50A 240VAC	1
10	CB4, CB5	093996	Supplementary Pro, Man Reset 1p 20A 250VAC Frict	2
11	GFCI1, 2	246865	Rcpt, Str Dx Grd 2p3w 20A 125V *5-20r Gfi	2
12		209056	Cover, Receptacle W/Gasket	4
13		190323	Boot, Circuit Breaker Clear Hex Nut	2
14	GRD	197203	Grounding Stud Assy, Brass	1
		083030	Stud, Brs .250-20 X 1.750 W/Hex Collar	1
		010915	Washer, Flat .257idx0.640odx.031t Brs	4
		601836	Nut, 250-20 .50hex .19h Brs	3
15		254040	Panel, Access Front	1
16			Nameplate, Control (Order By Model & Serial No.)	1

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

Eff w/Serial No. ME140214E And Following

☞ Hardware is common and not available unless listed.

Wiring harnesses are listed at the end of parts section.



264 787

Figure 1-3. Panel, Front w/Components Eff w/Serial No. MF020105E

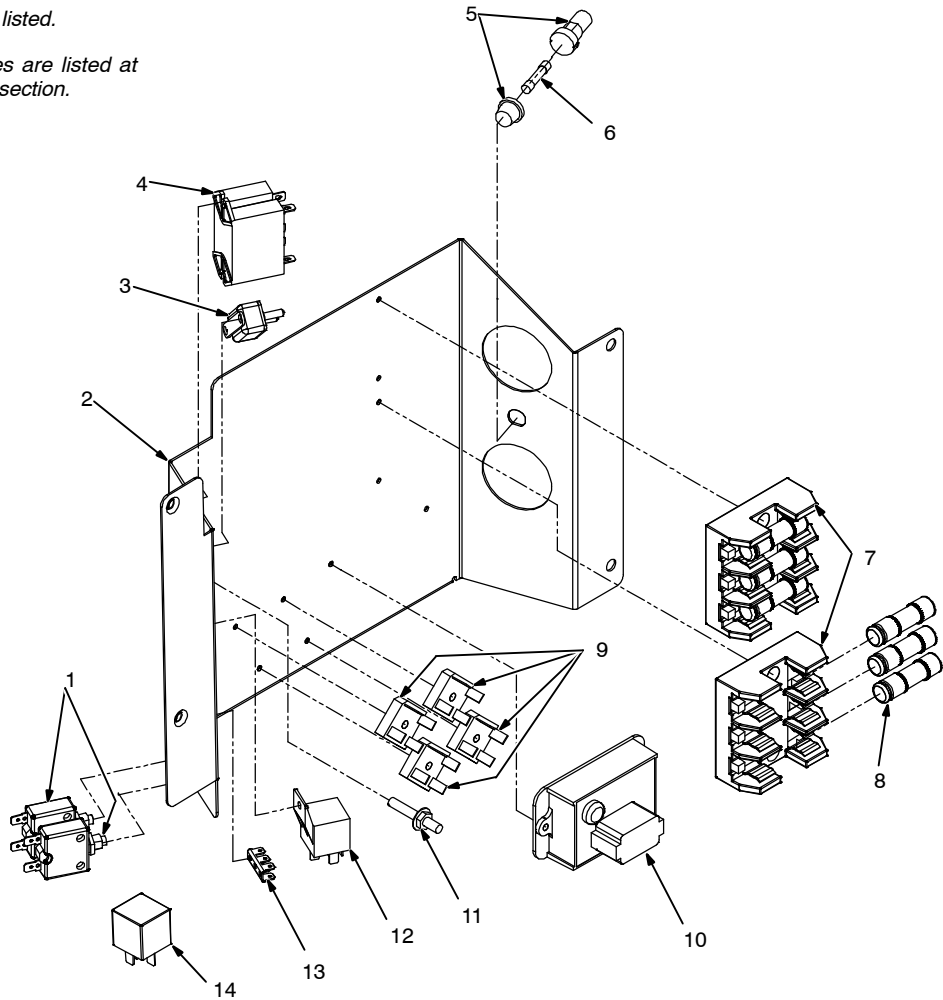
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-3. Panel, Front w/Components Eff w/Serial No. MF020105E (Figure 1-1 Item 87)				
1			Nameplate, Control (Order By Model & Serial No.)	1
2		254040	Panel, Access Front	1
3		209056	Cover, Receptacle W/Gasket	2
4	RC11	182954	Rcpt, Str 3p4w 50A 125/250V Flush Mtg *14-50	1
5		207073	Lever, Ignition Switch	1
		201244	Washer, Tooth.728idx1.166odx.050t Stl Pld Int.688	1
6		021385	Boot, Toggle Switch Lever	1
7	FUEL/HM	246181	Gauge, Fuel Elec/Hour Meter	1
8			Nameplate, Control (Order By Model & Serial No.)	1
9		264785	Panel, Front Engine/Weld Control	1
10	S1	217680	Switch, Ignition 4 Position W/Out Handle	1
11	S4	021467	Switch, Tgl Spst 3A 250V Off-none-(On) Spd Term	1
12	CB4, CB5	093996	Supplementary Pro, Man Reset 1p 20A 250VAC Frict	2
		190323	Boot, Circuit Breaker Clear Hex Nut	2
13	CB6	203026	Supplementary Protector, Man Reset 2p 50A 240VAC	1
14	C11, C12	217054	Capacitor, Cer Disc .0047 uF 3000 VDC W/Terms	2
15	GFCI1, 2	280236	Receptacle, GFCI 15/20A	2
16	GRD	197203	Grounding Stud Assy, Brass	1
		083030	Stud, Brs .250-20 X 1.750 W/Hex Collar	1
		010915	Washer, Flat .257idx0.640odx.031t Brs	4
		601836	Nut, 250-20 .50hex .19h Brs	3
17		263905	Cover, Receptacle Weatherproof Duplex Dual	1
		270453	Label, Warning Read Owner's Manual Wordless (Eff w/MF520019E)	1

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

Eff w/Serial No. ME140214E And Following

Hardware is common and not available unless listed.

Wiring harnesses are listed at the end of parts section.



907 473-5

Figure 1-4. Control Panel

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-4. Control Panel (Figure 1-1 Item 89)				
1	CB2, CB3	083432	Supplementary Pro, Man Reset 1p 10A 250VAC Frict	2
2		247608	Bracket, Mtg Components	1
3	CB1	190374	Circuit Breaker, Auto Reset 12VDC 40 Amp	1
4	CR1	223710	Relay, Encl 12VDC Dpst-no 25A 6pin Flange	1
5		256852	Holder, Fuse Mintr w/10A Slo-Blo Fuse	1
6	F1	*085874	Fuse, Mintr Cer Slo-blo 10. Amp 250 Volt	1
7		247870	Holder, Fuse	2
8	F2 Thru F7	247869	Fuse, Slo-blo 30 Amp 250 Volt	6
9	SR1,2,4,5	035704	Rectifier, Integ Bridge 1ph 35. Amp	4
10		266622	Module, Control Governor (Programed) (Prior to MK190444R)	1
11		197203	Grounding Stud Assy, Brass	1
12	CR3	197325	Relay, Encl 12VDC Spst 70A 4pin Flange Mtg	1
13		129524	Term, Frict 250x032 Uninsul Male .130 Stud Mtg 3pr	1
14	CR2	252053	Relay, Encl 12VDC Spst 35A/14VDC 5 Pin (in Wiring Harness)	1
		190323	Boot, Circuit Breaker Clear Hex Nut	2
		285552	Label, Notice Time Delay Fuse	1

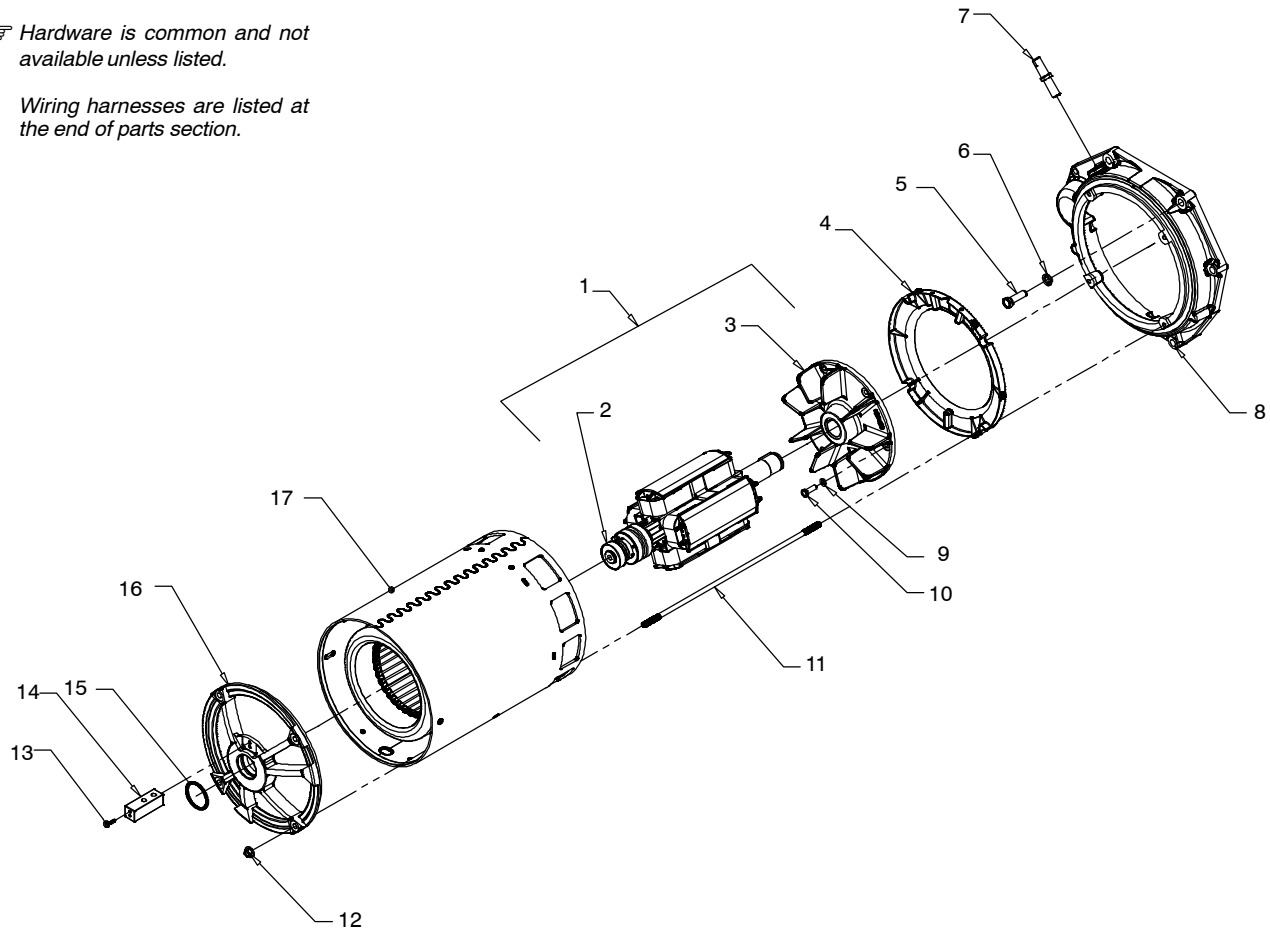
* Recommended Spare Parts.

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

Eff w/Serial No. ME140214E And Following

 Hardware is common and not available unless listed.

Wiring harnesses are listed at the end of parts section.



907 427-13

Figure 1-5. Generator

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-5. Generator (Figure 1-1 Item 62)				
1	ROTOR	273688	Rotor, Generator 4 Pole (Includes)	1
2		181143	Bearing, Ball Rdl Sgl Row .984 X 2.047 X .591	1
3		192600	Fan, Generator	1
4		159918	Baffle, Fan	1
5		243986	Screw, M12-1.25x 40 Hex Hd-pld Blk Grd 5	7
6		602216	Washer, Lock .502idx0.879odx.151t Stl Pld Split.500	7
7		242537	Pickup, Magnetic (Prior to MK190444R)	1
8		241075	Adapter, Engine Machined Mitsubishi S4I2 (Prior to MK190444R)	1
8		276895	Adapter, Engine Machined Mitsubishi S4I2 (Eff w/MK190444R)	1
9		602211	Washer, Lock .318idx0.586odx.078t Stl Pld Split.312	6
10		192686	Screw, M 8-1.25x 25 Hex Hd-pln 8.8 Pld Din933	6
11		212641	Stud, Stl .375-16 1.625x 19.000	4
12		167788	Nut, 375-16 .56hex .34h Stl Pld Sem Cone Wshr.88d	5
13		136343	Screw, K50x 20 Pan Hd-phl Stl Pld Pt Thread Forming	2
14		*244290	Brushholder Assy, Generator W/Leads	1
15		183419	O-ring, 1.984 Id X .139 Cs 70 Duro Viton	1
16		183336	Endbell	1
17	STATOR	247975	Stator, Generator 4 Pole	1

* Recommended Spare Parts.

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

Eff w/Serial No. ME140214E And Following

 Some wiring harness components (switches, relays, supplementary protectors) are also referenced elsewhere in this parts list. Purchase components separately or as part of the associated wiring harness.

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Wiring Harnesses				
.....		252431 ..	Harness, Receptacle Auxiliary Power (Prior to MF020105E) (Includes)	1
.....		265960 ..	Harness, Auxiliary Power Domestic (Eff w/MF020105E) (Includes) ..	1
.....	GFCI1, 2 ..	280236 ..	Receptacle, GFCI 15/20A	2
.....	C11-C12 ..	217054 ..	Capacitor, Cer Disc .0047 uF 3000 VDC W/Terms	2
.....	CB4, 5 ..	093996 ..	Supplementary Pro, Man Reset 1p 20A 250VAC Frict	2
.....		247748 ..	Harness, Engine (Prior to MK190444R) (Includes)	1
.....		177859 ..	Conn, Body 5 Terminal	1
.....	PLG1	214932 ..	Conn, Rect Univ 039 8p/S 2row Plug Cable Lkg Seal	1
.....		214933 ..	Seal, Wire Univ 039	12
.....	S4	021467 ..	Switch, Tgl Spst 3A 250V Off-None-(On) Spd Term	1
.....		247722 ..	Harness, Governor Control	1
.....	PLG12 ..	215261	Conn, Deutsch 12p 2row Female Plug	1
.....		215265	Conn, Deutsch Wedge Lock 12 Position	1
.....		147711	Splice, Closed End 22-10 Wire Insulated White	1
.....		215343	Seal, Plug Deutsch 12-16 Size	5
.....		242581	Cable, Lem	1
.....		214708	Cable, Shld No 18ga 2/C Pltc 300V 105c Pvc Jkt	1.833
.....		047994	Term, Frict 250x032 Ultrfast Feml 22-18ga 135od	2
.....		207354	Conn, Pushin Skt 14-18 Ga	1
.....		032455	Term, Frict 250x032 Uninsul Comb 18-14ga 170od	1
.....		204702	Core, Toroidal .187 Id X .375 Od X .125 Thk	1
.....		285599 ..	Harness, Engine (Eff w/MK190444R) (Includes)	1
.....		177859 ..	Conn, Body 5 Terminal	1
.....	PLG1	214932 ..	Conn, Rect Univ 039 8p/S 2row Plug Cable Lkg Seal	1
.....		214933 ..	Seal, Wire Univ 039	12
.....	S4	021467 ..	Switch, Tgl Spst 3a 250v Off-None-(On) Spd Term	1
.....		285603 ..	Harness, Governor Control (Includes)	1
.....	PLG12 ..	215261	Conn, Deutsch 12p 2row Female Plug	1
.....		215265	Conn, Deutsch Wedge Lock 12 Position	1
.....		204702	Core, Toroidal .187 Id X .375 Od X .125 Thk	5
.....		215343	Seal, Plug Deutsch 12-16 Size	5
.....		283869	Cable, Speed Sensor (Includes)	1
.....		214708	Cable, Shld No 18ga 2/C Pltc 300v 105c Pvc Jkt	1.833
.....	PLG14 ..	283866	Conn, Female 2 Pos Swp-Type (Yazaki)	1
.....		283867	Term, Female Swp-Type (Yazaki)	2
.....		283868	Seal, Conn 1 Pos (Yazaki)	2
.....		207354	Conn, Pushin Skt 14-18 Ga	1
.....		071851	Term, Ring Tng 250stud Pidg 22-16ga 140od	1
.....		204702	Core, Toroidal .187 Id X .375 Od X .125 Thk	1
.....		284613	Seal, Conn 2 Pos (Yazaki)	1
.....	PLG13 ..	283703	Conn, Molex 1.2mm 1x3 Recpt Sealed Assy Cable Seal	1
.....		283943	Seal, Single Wire	3
.....		147711	Splice, Closed End 22-10 Wire Insulated White	2
.....		246562 ..	Boot, Switch	2

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