



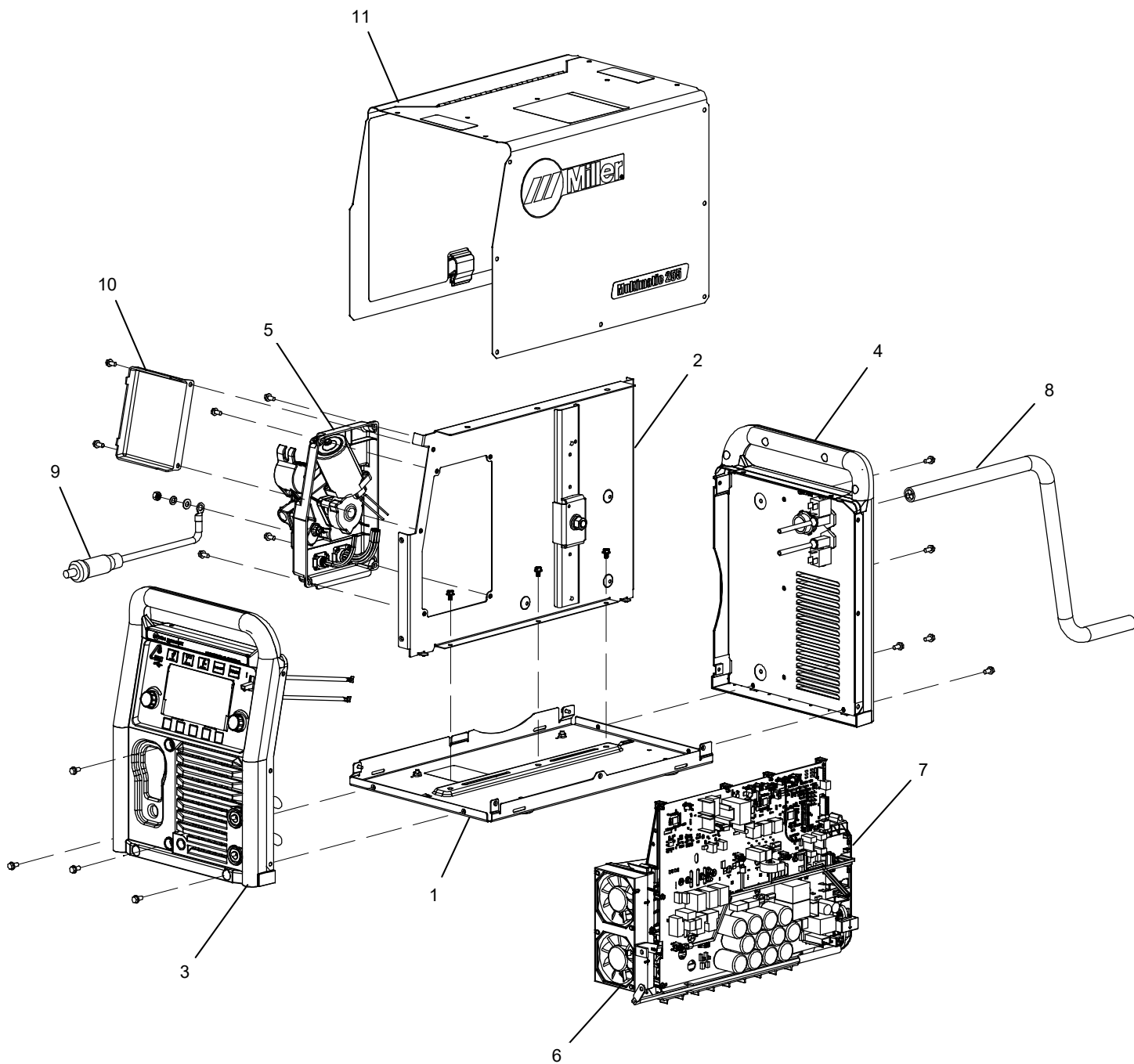
PM- 278174 B

Multimatic 255

Effective with Serial Number
MJ509225N - ZZ222222R



PARTS MANUAL



Main Assembly

Main Assembly

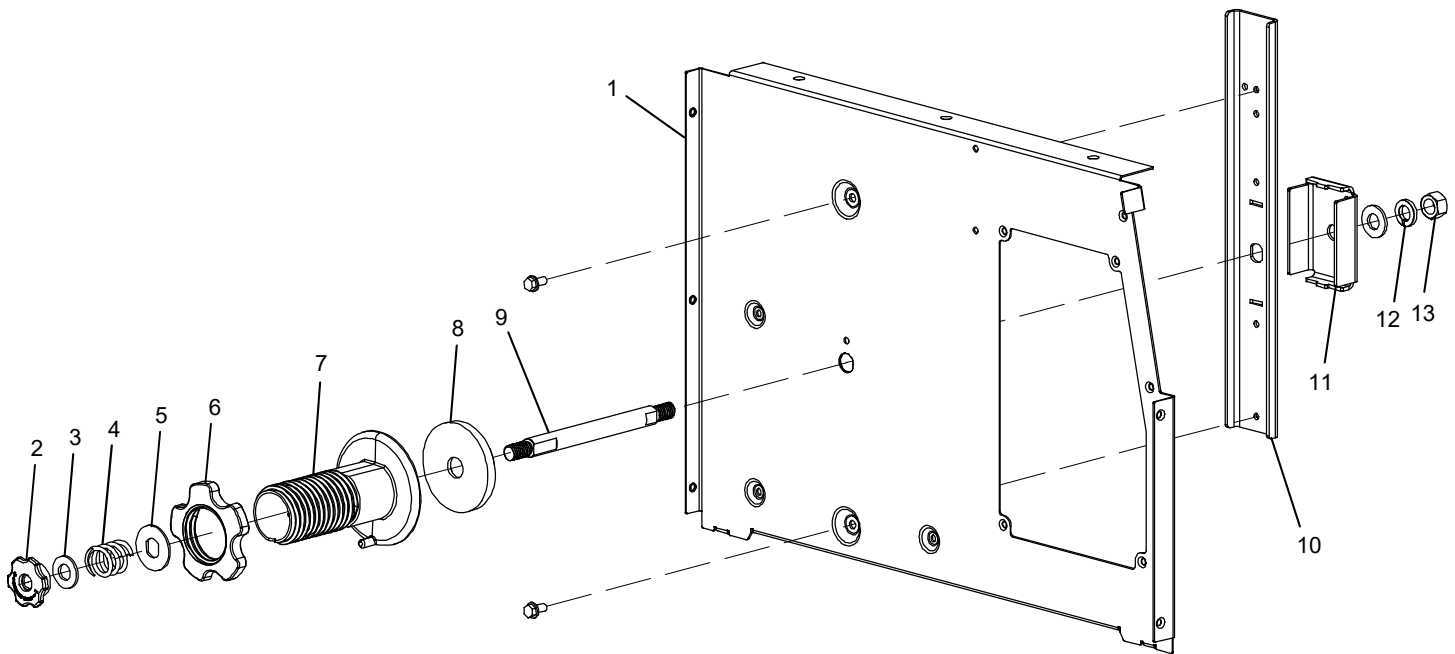
Item No.	Dia. Mkgs.	Part No.	Description	Qty
1		277329	Base	1
/		229325	Foot, Mtg Unit	4
2		Center Baffle Assembly	(See following for subassembly information)	1
3		Front Panel Assembly	(See following for subassembly information)	1
4		Rear Panel Assembly	(See following for subassembly information)	1
5		Wire Feed Drive Assembly	(See following for subassembly information)	1
6		Windtunnel Assembly	(See following for subassembly information)	1
7		286024	Circuit Card Assy, Control w/IGBT Modules Mp	1
8		273869	Cord Set, 600V T Tng 10ga 3/C 12ft St Jkt	1
9		278556	Lead Assy, Drive Polarity	1
10		277905	Enclosure, Electronics	1
11		285532	Kit, Wrapper w/Labels	1
/		277356	Wrapper Assy	1
/		230363	Latch, Slide Flush Mtg Hole 1.750 Wide x 1.500 Lg	1
/		278114	Label, Parameter/Polarity	1
/		231983	Label, Warning General Precautionary (En/Sp)	1
/		283727	Label, Warning Falling Equipment (En/Fr/Sp)	2
/		277984	Plug Assy, Elect (Gas Valves)	1
/		281222	Harness, Wrg Unit Main	1
/	PLG15	117865	Conn, Rect Mini 045 14skt 2row Plug Cable Lkg	1
/	RC53	189238	Conn, Circ Ms/Cpc 10skt Size 18 Rcpt Panel Pushin	1
/	RC54	081560	Conn, Circ Cpc 4skt Size 11 Rcpt Panel Pushin	1
/	PLG9	130693	Conn,Rect Mini 045 5skt 1row Plug Cable Lkg	1
/		231985	Label, Warning Electric Shock	1

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.



Center Baffle Assembly

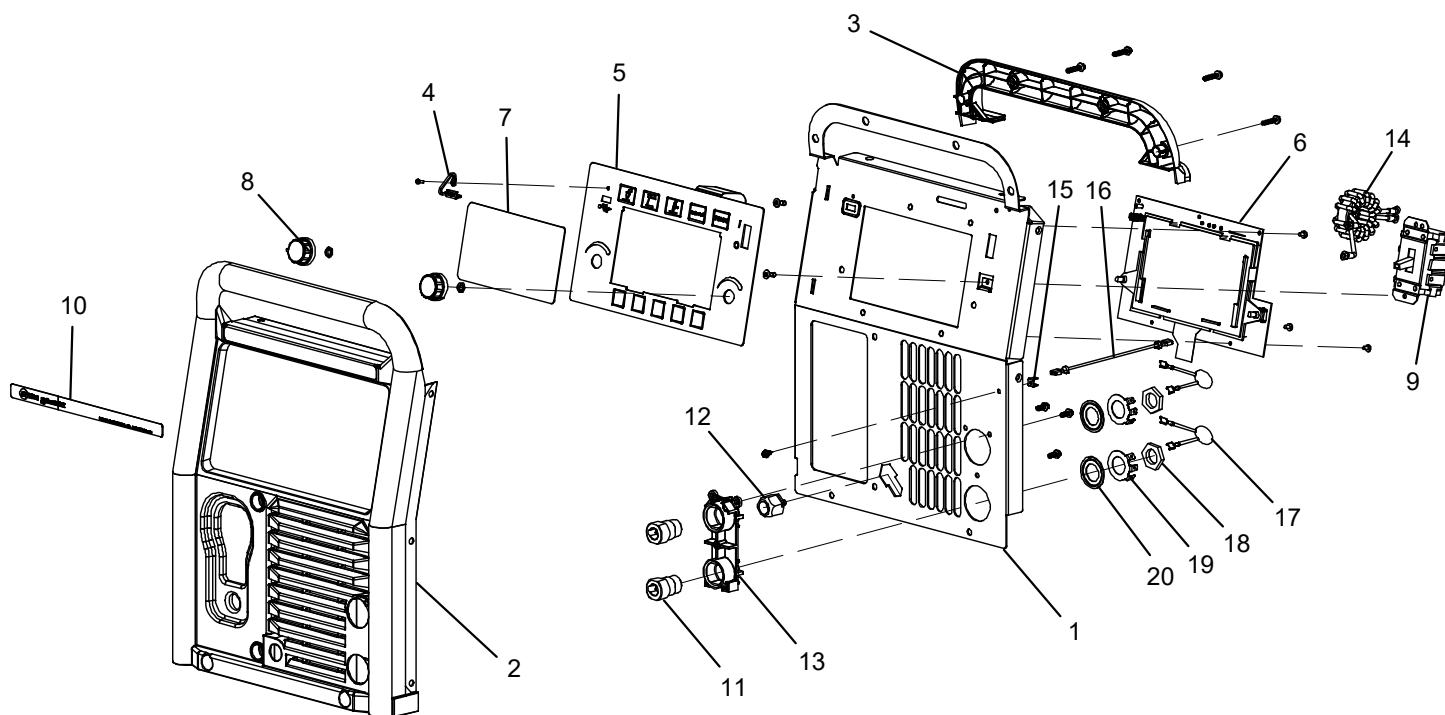
Item No.	Dia. Mkgs.	Part No.	Description	Qty
1		277359	Baffle, Center	1
2		279504	Knob, Tensioner 1/2-13 Thread	1
3		602247	Washer, Flat .531 Id x 1.062 Od x 0.95T Stl Pld Ansi .500	2
4		186437	Spring, Cprsn .845 Od x .110 Wire x 1.500	1
5		231211	Washer, Anti-Turn	1
6		280091	Nut, Hub	1
7		279587	Hub, Spool 12 Inch	1
8		287119	Washer, Brake Plastic	1
9		271415	Shaft, Support Spool	1
10		274304	Channel, Support Spool Hub	1
11		274305	Brace, Support Spool Shaft	1
12		602216	Washer, Lock .502 Id x 0.879 Od x .151T Stl Pld Split .500	1
13		601879	Nut, .500-12 .75 Hex .44H Stl Pld	1

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.



Front Panel Assembly

Front Panel Assembly

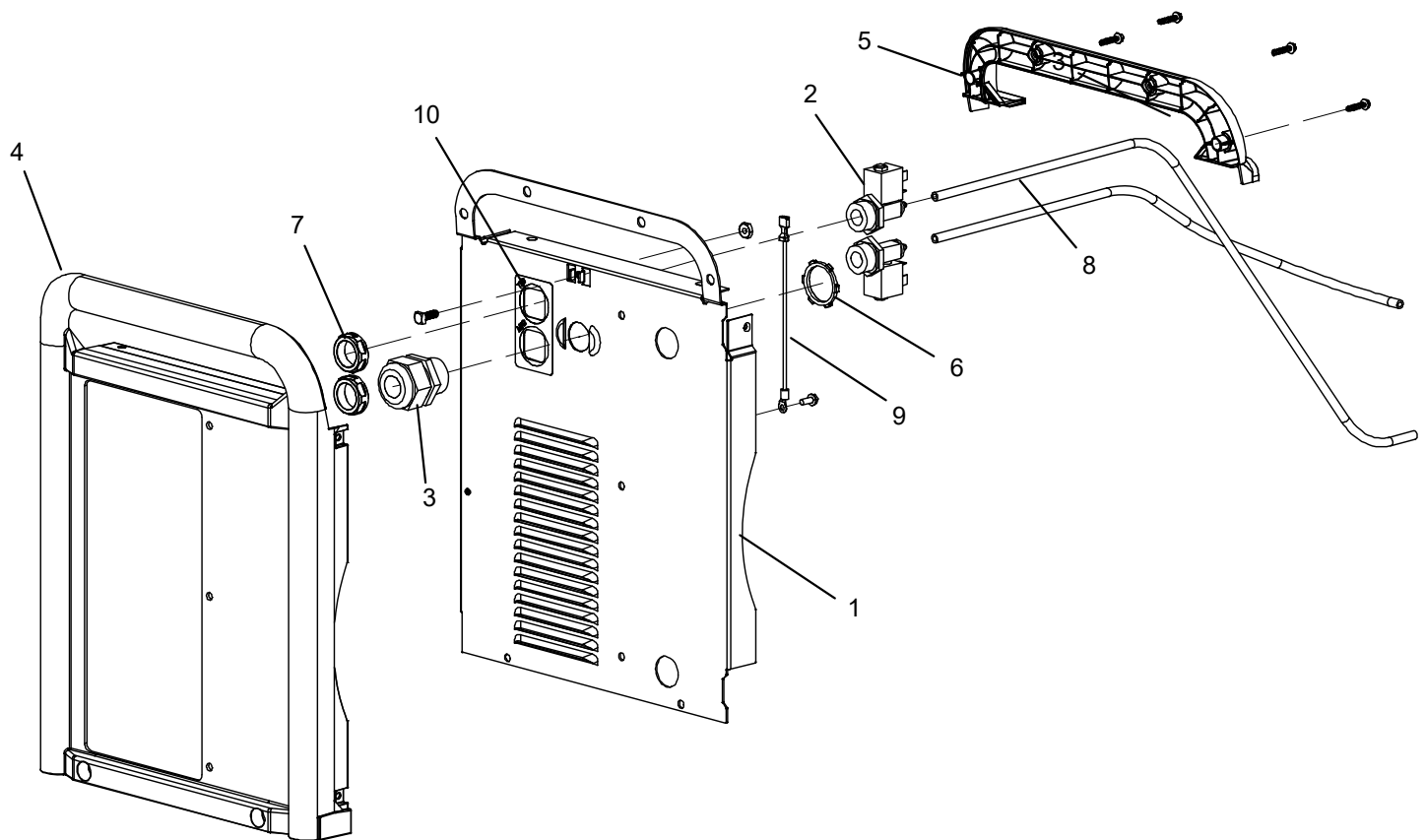
Item No.	Dia. Mkgs.	Part No.	Description	Qty
1		282075	Panel Assy, Front w/Pems	1
2		277362	Bezel, Front	1
3		277653	Handle, Half	1
4		278541	Cover, Dust Usb w/Tether	1
/		236343	Screw, 008-15 x .37 Hexwhd w/Gndrng Stl Pld Sif Tpg	1
5		277656	Membrane, Switch Control	1
6	PC2	276813	Circuit Card Assy, Interface Lcd Display	1
/		276416	Cable, Ethernet Cat5E Utp Rj45 24.000 In Lg (Blue)	1
/		249747	Core, Ferrite Round Cable .201 Id Clamp-On Emi Supp	1
7		277663	Lens Cover, Replaceable	1
8		266591	Knob, Encoder 1.250 Dia x 6mm Id Push On w/Spring	2
9		278971	Switch, Tgl Dpst 40A 600 Vac Scr Term Narrow Tgl	1
10			Label, Nameplate (Order by Model and Serial No.)	1
11		279111	Receptacle, Twist Lock Brass Fem Panel Mtg (Dinse)	2
12		277691	Fitting, Gas	1
13		277690	Insulator, Bulkhead 50mm	1
14		291522	Choke, Common Mode 8 Turns 10Ga	1
15		600760	Term, Frict .250 x .032 Uninsul Male .130 Stud Mtg 1pr	1
16		277973	Lead List, Small (Gnd)	1
17		284861	Capacitor, Cer Disc .01 uF 1000 Vdc	2
18		185717	Nut, M20-1.5 1.00Hex .19H Brs Locking	2
19		278163	Terminal, Connector Friction Three Position	2
20		229338	Washer, Domed Load .812 Id x 1.450 Od x .070 Thk	2

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.



Rear Panel Assembly

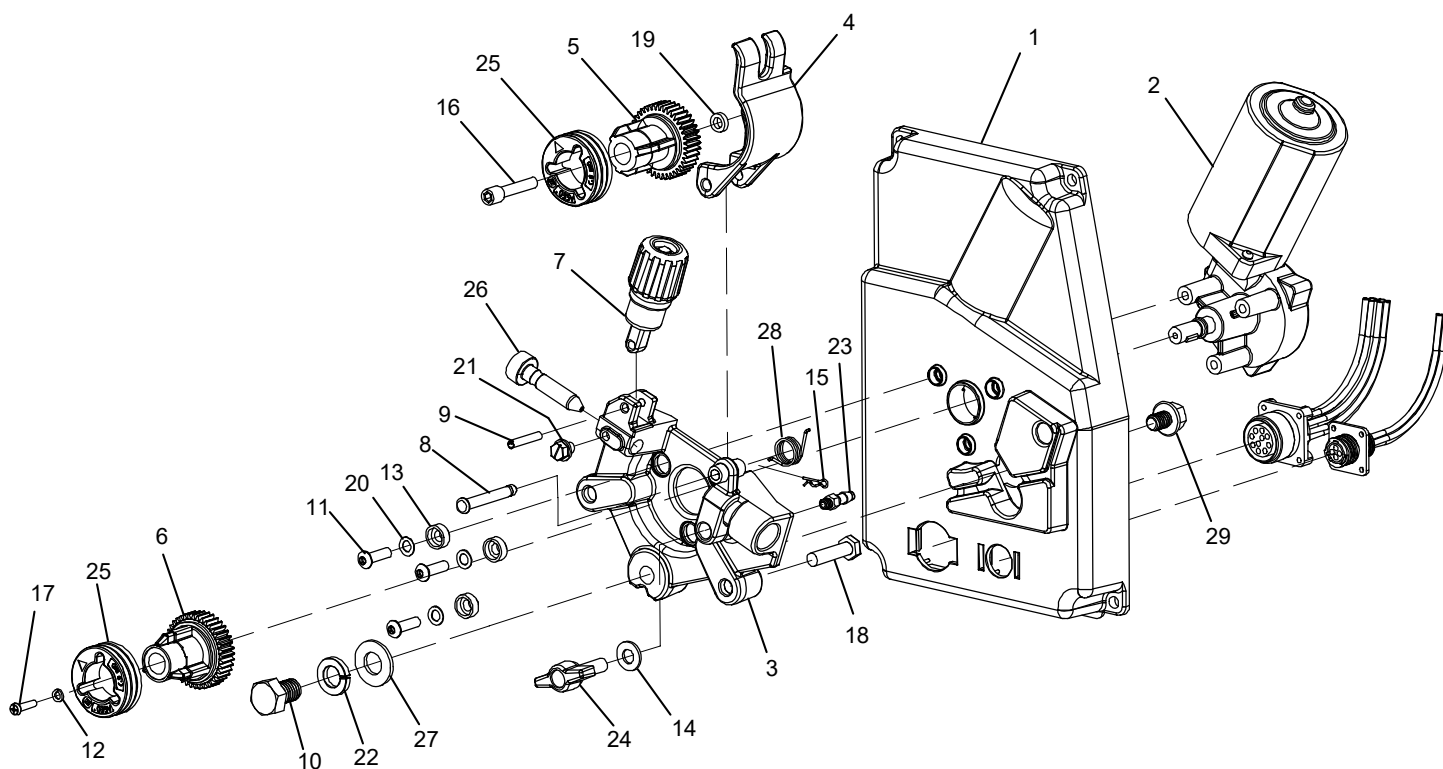
Item No.	Dia. Mkgs.	Part No.	Description	Qty
1		277949	Panel, Rear	1
2		262572	Valve, 24 Vdc 1Way 750-14 Thd 2mm Orf 100Psi	2
3		282261	Bushing, Strain Relief .709/.984 Id x 1.375 Mtg Hole	1
4		277950	Bezel, Rear	1
5		277653	Handle, Half	1
6		182445	Nut, Conduit 1.000 Npt Pld 1.688 Od x .200 Thk	1
7		272186	Nut, .750-14 Nps 1.312Hex .413H Nyl	2
8		250864	Hose, Gas 27 In (MIG)	2
9		285815	Kit, Gas Valve Assy	1
10		278406	Label, Gas Valve MIG/TIG	1

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.



Wire Feed Drive Assembly

Wire Feed Drive Assembly

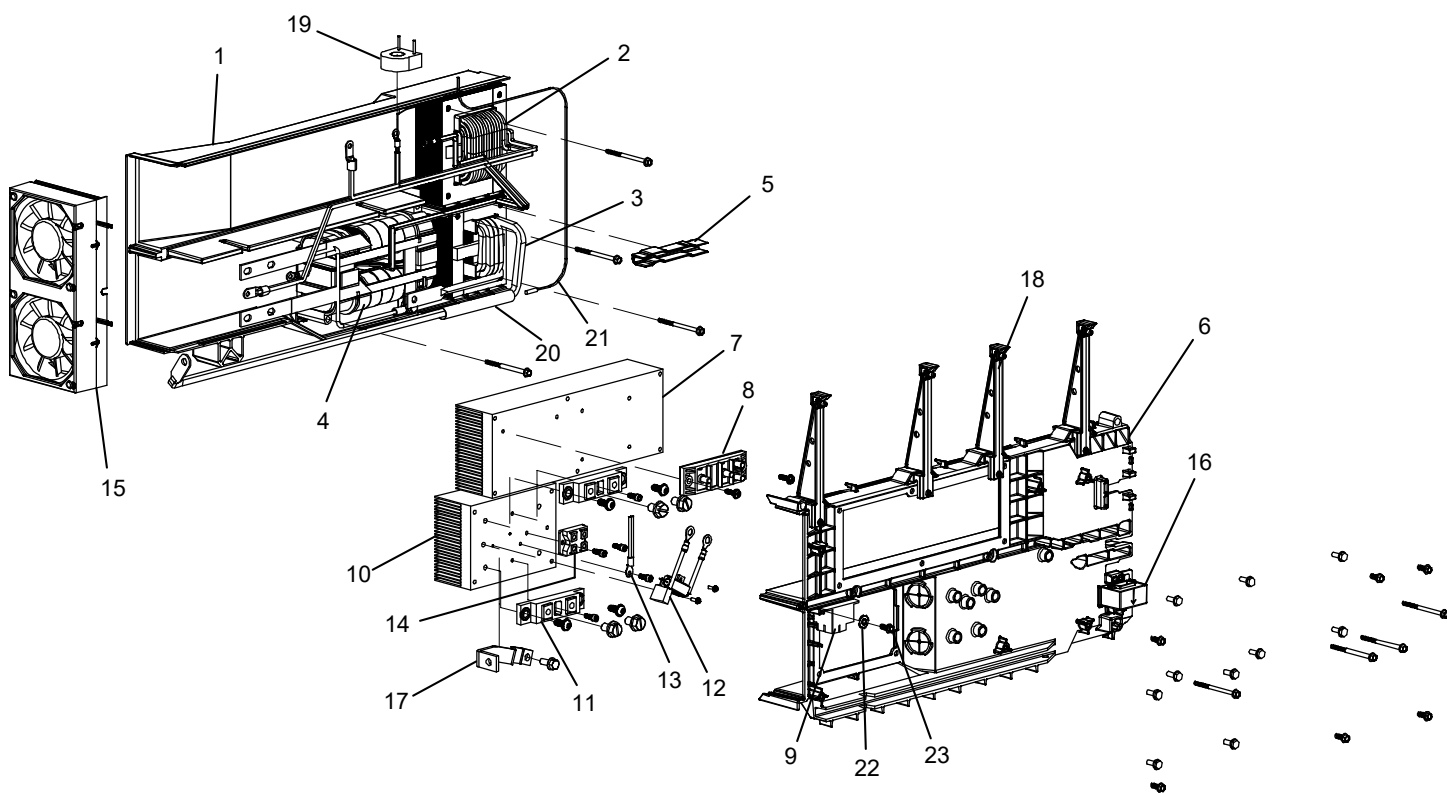
Item No.	Dia. Mkgs.	Part No.	Description	Qty
1		277437	Insulator	1
2		281378	Motor, Wire Drive w/Lead Assemblies	1
3		277657	Housing, Drive (Machined)	1
4		277795	Lever, Pressure Roll (Machined)	1
5		172075	Carrier, Drive Roll w/Components 24 Pitch	1
6		173619	Carrier, Drive Roll w/Components 24 Pitch 10mm Shaft	1
7		221976	Knob, Tension Adjust Assy	1
8		273112	Pin, Clevis .250 Od x 1.751 Lg w/Groove and Cham	1
9		010224	Pin, Spring CS .187 x 1.000	1
10		282942	Screw, 500-13 x .75 Hex Hd-Plt Stl Pld Sif Tpg Ab	1
11		174610	Screw, M 6 - 1.0 x 20 Soc Hd Button Cap Blk	3
12		602200	Washer, Lock .168 Id x 0.293 Od x .040T Stl Pld Split #8	1
13		173620	Bushing, Motor Mtg	3
14		604538	Washer, Flat .344 Id x 0.688 Od x .065T Stl Pld Ansi .312	1
15		151828	Pin, Cotter Hair .042 x .750	1
16		602009	Screw, .250-20 x 1.25 Soc Hd-Hex Gr8 Pln	1
17		209079	Screw M4 x 0.7 x 16	1
18		604534	Screw, .312-18 x 1.25 Hex Hd-Pln Gr5 Pld	1
19		166072	Spacer, Gear	1
20		192029	Washer, Flat .250 Id x 0.437 Od x .015T Stl Pln	3
21		233030	Screw, .250-20 x .25 Hexwhd Machine Stl Pld	1
22		602216	Washer, Lock .502 Id x 0.879 Od x .151T Stl Pld Split .500	1
23		263411	Fitting, Barbed Gas	1
24		222035	Knob, T 1562 Bar w/312-18 Stud 1000 Lg Plstc	1
25		189285	Roll, Drive V Groove .035-.045 Wire	2
26		221912	Guide, Wire Inlet Nylon .023 - .052	1
27		602247	Washer, Flat .531 Id x 1.062 Od x 0.95T Stl Pld Ansi .500	1
28		230801	Spring, Torsion	1
29		280210	Bolt, Hex Head Flange Stl .375-16 x .500 Gr8 Pld Zc	1

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.



Windtunnel Assembly

Windtunnel Assembly

Item No.	Dia. Mkgs.	Part No.	Description	Qty
/		278704	Assembly, Magnetics Windtunnel	1
1		277435	Windtunnel, Lh	1
2	L1	277108	Inductor, Input	1
3	L2	277336	Inductor, Output	1
4	T1	277859	Xfmr, Multi-Process Main	1
5		278705	Channel, Wire Plastic	1
/		278707	Assembly, Heat Sink Windtunnel	1
6		277436	Windtunnel, Rh	1
7		277439	Heat Sink, Boost Inverter/Input Rectifier	1
8		275288	Rectifier, Integ Bridge 90. Amp 1600V 1ph	1
9		206258	Relay, Encl 24 Vdc Spst 30S/24 Vdc 4-Pin Flange Mtg	1
/	D1,D2	281796	Assembly, Output Rectifer Heat Sink	1
10		281797	Heat Sink, Output Rectifier	1
11		290137	Diode, Ultra-Fast 164Ns 400A 600V Dual To-244	2
12		280976	Resistor/Capacitor Assy	1
13	RT1	278442	Thermistor, NTC 30K Ohm @ 35 Deg C 30in Lead	1
14		199952	Diode Power Module 55 Amp 600V 1PH Fast Recovery	1
15		278711	Assembly, Fan	1
/		277505	Holder, Plastic Front Fan	1
/	FM1,FM2	278710	Fan, Muffin 24 Vdc 8000 Rpm 175 Cfm 3.248 Mtg Holes	2
16	CT1	277506	Transducer, Current 300A Module Supply V +/- 15v	1
/		277676	Cable, Lem 23 In	1
17		278726	Bus Bar, Positive Output	1
18		279057	Bracket, Mtg Circuit Card Assy	4
19		277697	Xfmr, Current Sensing 200/1 Encapsulated w/6in Lds	1
/		278885	Grommet, Rubber	2
20		281133	Tubing, Htshnk Clear Mfp .500/.250 Dia x 4.000	1
21	RT2	277948	Thermistor, NTC 30k Ohm @ 25 Deg C 22.00in Lead	1
22		282223	Washer, Lock Stl Intl/Ext Tooth No 10 Zc Pld Sftmtl	1
23		265408	Screw, K50 x 12 Hexwhd Stl Pld Blk Pt Thread Forming	6

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.

Drive Roll And Wire Guide Kits

Base selection of drive rolls upon the following recommended usages:

- 1 V-Grooved rolls for hard wire.
- 2 U-Grooved rolls for soft and soft shelled cored wires.
- 3 U-Cogged rolls for extremely soft shelled wires (usually hard surfacing types).
- 4 V-Knurlled rolls for hard shelled cored wires.
- 5 Drive roll types may be mixed to suit particular requirements (example: V-Knurlled roll in combination with U-Grooved).

Wire Diameter			Kit No.	Drive Roll		Inlet Wire Guide
Fraction	Decimal	Metric		Part No.	Type	
.023/.025 in.	.023/.025 in.	0.6 mm	087131	087130	V-Grooved	056192
.030/.035 in.	.030/.035 in.	0.8/0.9 mm	204579	203526	V-Grooved	056192
.030 in.	.030 in.	0.8 mm	079594	053695	V-Grooved	056192
.035 in.	.035 in.	0.9 mm	079595	053700	V-Grooved	056192
.045 in.	.045 in.	1.2 mm	079596	053697	V-Grooved	056193

Ref. S-0026-B/7-91

Drive Roll And Wire Guide Kits

Item No.	Dia. Mkgs.	Part No.	Description	Qty
/		087131	Drive Roll And Wire Guide Kits	
/		087130	Drive Roll	V-Grooved
/		056192	Inlet Wire Guide	
/		204579	Drive Roll And Wire Guide Kits	
/		203526	Drive Roll	V-Grooved
/		079594	Drive Roll And Wire Guide Kits	
/		053695	Drive Roll	V-Grooved
/		079595	Drive Roll And Wire Guide Kits	
/		053700	Drive Roll	V-Grooved
/		079596	Drive Roll And Wire Guide Kits	
/		053697	Drive Roll	V-Grooved
/		056193	Guide, Wire Inlet	

*Recommended Spare Parts ~ Optional ↓ Item includes other parts. → Item is part of a subassembly.

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

Hardware is common and not available unless listed.

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.