



PM-279299A

2020-09

Processes



MIG (GMAW) Welding
Pulsed MIG (GMAW-P)

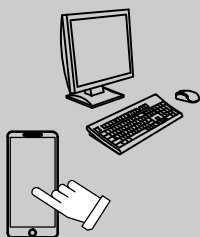
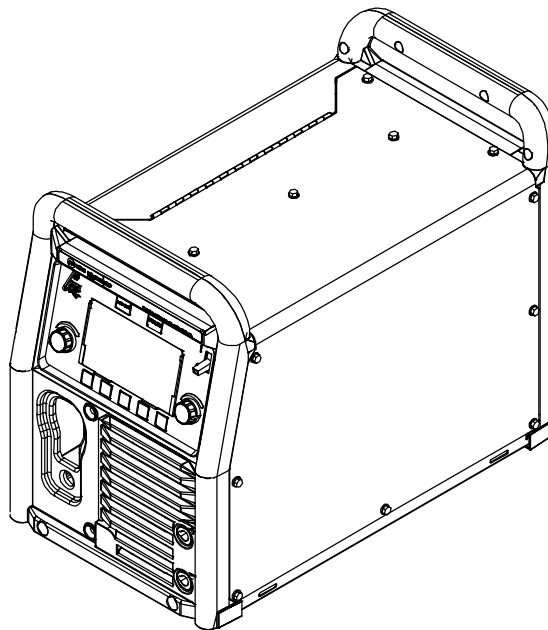
Description



Arc Welding Power Source
Wire Feeder

Millermatic[®] 255

Eff. w/Serial No. MJ368639N



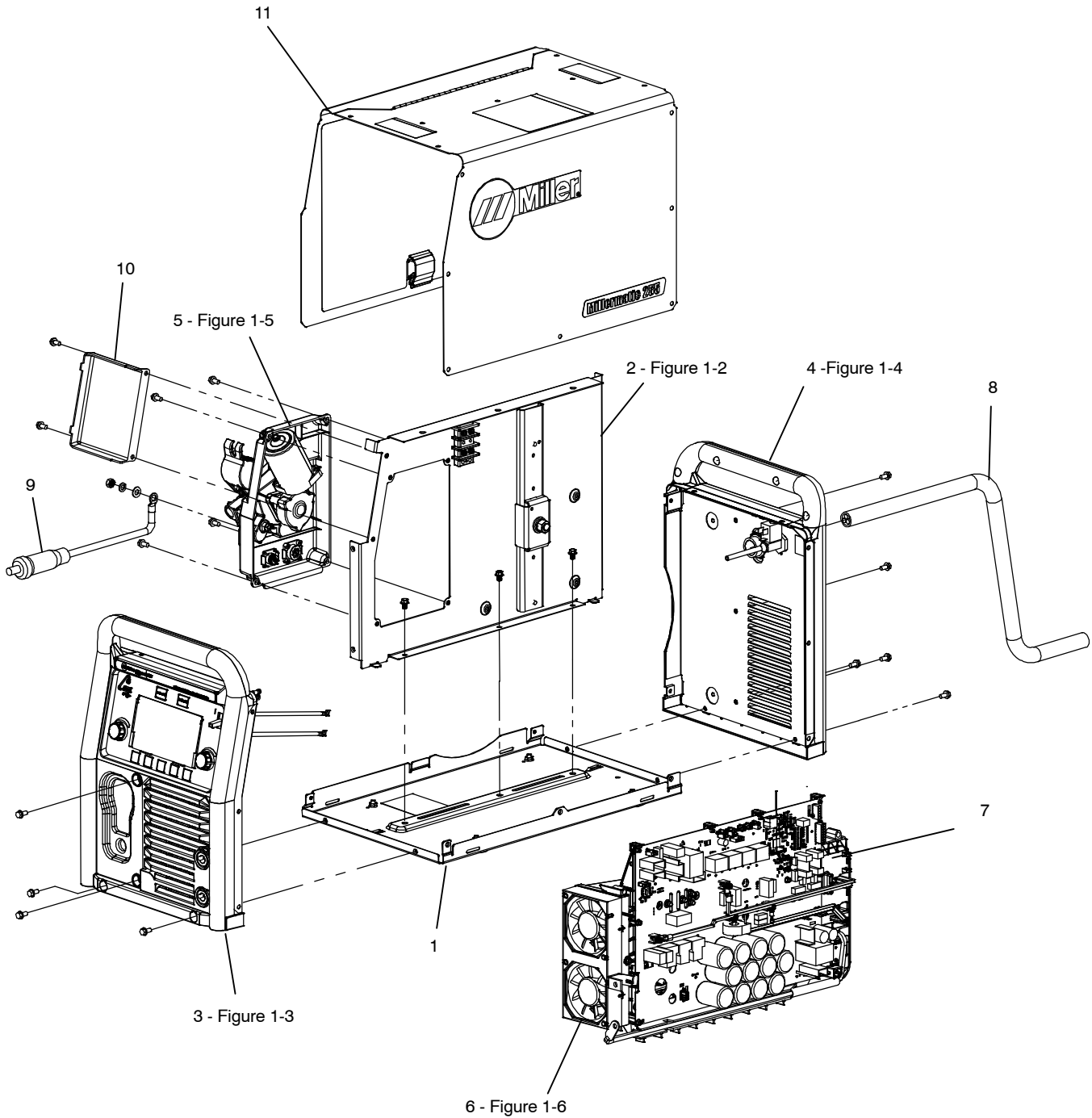
For product information,
Owner's Manual translations,
and more, visit

www.MillerWelds.com

PARTS MANUAL

SECTION 1 – PARTS LIST

 Hardware is common and not available unless listed.



907734

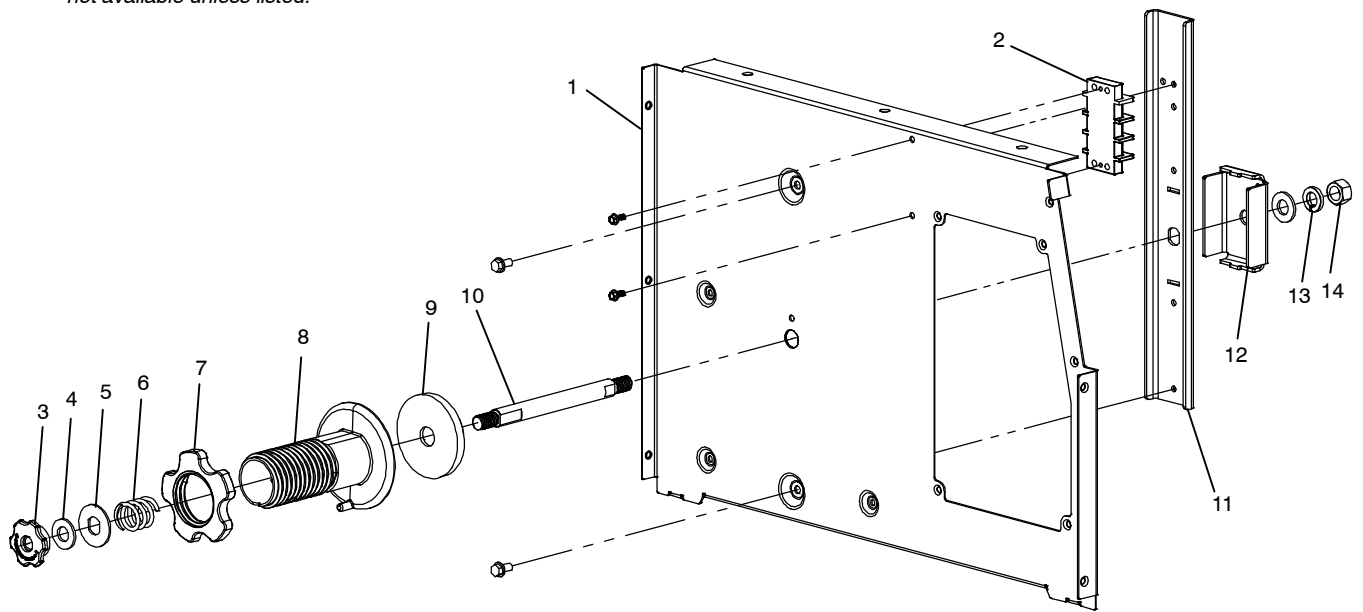
Figure 1-1. Main Assembly

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 1-1. Main Assembly				
... 1		277329	.. Base	1
		229325	.. Foot, Mtg Unit	4
... 2		277330	.. Baffle Assy, Center (See Figure 1-2)	1
... 3		279048	.. Panel Assy, Front (See Figure 1-3)	1
... 4		279049	.. Panel Assy, Rear (See Figure 1-4)	1
... 5		277769	.. Drive Assy, Wire (See Figure 1-5)	1
... 6		279039	.. Windtunnel, W/Components (See Figure 1-6)	1
... 7		283917	.. Kit, Millermatic 255 Control Bd W/IGBT Replacement	1
... 8		280209	.. Cord Set, 250V 6-50p 8ga 3/C 12ft St Jkt	1
... 9		278556	.. Lead Assy, Drive Polarity	1
... 10		277905	.. Enclosure, Electronics	1
... 11		284007	.. Kit, Wrapper W/Labels (Includes)	1
		277356	 Wrapper Assy	1
		230363	 Latch, Slide Flush Mtg Hole 1.750 Wide X 1.500 Lg	1
		275316	 Label, Warning Falling Equipment (En/Fr/Sp)	1
		282495	 Label, Parameter/Polarity	1
		231983	 Label, Warning General Precautionary (En/Fr/Sp)	1
... PLG4		279040	.. Plug Assy, Elect	1
		281222	.. Harness, Wrg Unit Main	1

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

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277330

Figure 1-2. Center Baffle Assembly (Figure 1-1 Item 2)

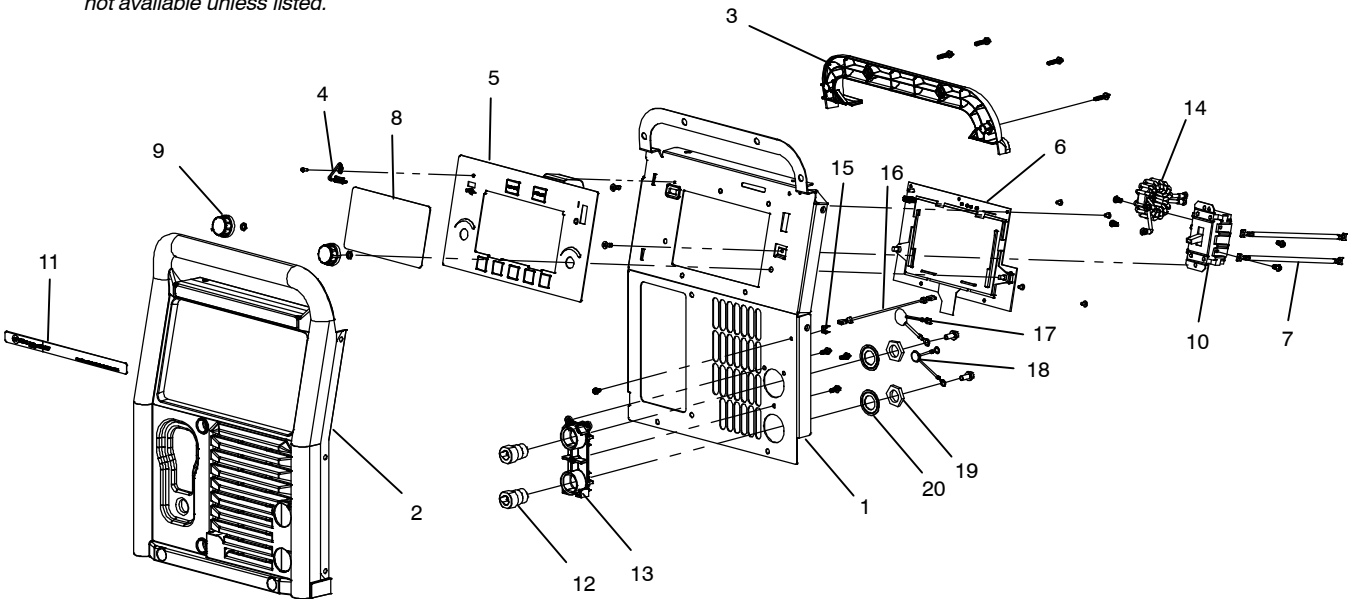
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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Figure 1-2. Center Baffle Assembly

...	1	277359	.. Battle, Center	1
...	2	282391	.. Terminal Block, 3 Pole 6T 60A 600V	1
...	3	279504	.. Knob, Tensioner 1/2-13 Thread	1
...	4	602247	.. Washer, Flat .531Idx1.062Odx.095T Stl Pld Ansi .500	2
...	5	231211	.. Washer, Anti-Turn	1
...	6	172918	.. Spring	1
...	7	280091	.. Nut, Hub	1
...	8	279587	.. Hub, Spool 12 Inch	1
...	9	287119	.. Washer, Brake Plastic	1
...	10	271415	.. Shaft, Support Spool	1
...	11	274304	.. Channel, Support Spool Hub	1
...	12	274305	.. Brace, Support Spool Shaft	1
...	13	602216	.. Washer, Lock .502Idx0.879Odx.151T Stl Pld Split .500	1
...	14	601879	.. Nut, 500-13 .75 Hex .44H Stl Pld	1

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279048

Figure 1-3. Front Panel Assembly (Figure 1-1 Item 3)

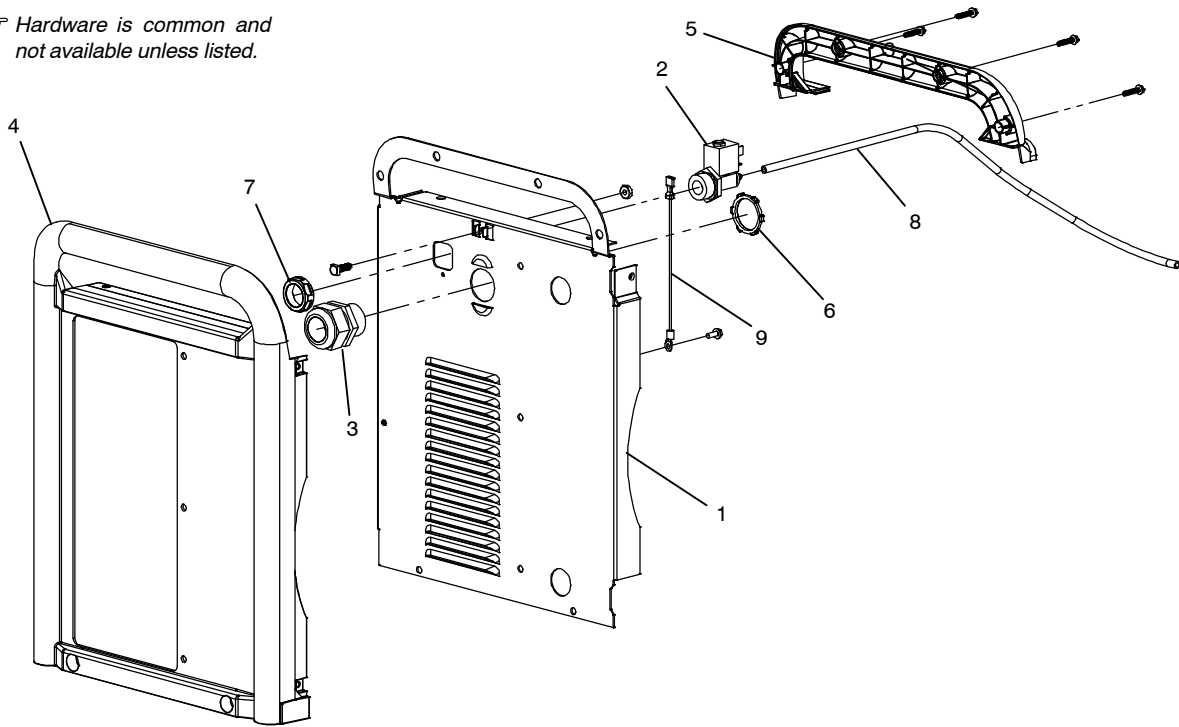
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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Figure 1-3. Front Panel Assembly

...	1	283119	.. Panel Assy, Front W/Pems	1
...	2	279060	.. Bezel, Front	1
...	3	277653	.. Handle, Half	1
...	4	278541	.. Cover, Dust Usb W/Tether	1
...		600760	.. Term, Frict 250x032 Uninsul Male .130 Stud Mtg 1pr	1
...		236343	.. Screw, 008-15x .37 Hexwhd W/Gndrng Stl Pld Slf Tpg	1
...	5	279061	.. Membrane, Switch Control	1
...	6	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	277977	.. Lead List, Large (Switch)	1
...	8	277663	.. Lens Cover, Replaceable	1
...	9	266591	.. Knob, Encoder 1.250 Dia X 6mm Id Push On W/Spring	2
...	10	278971	.. Switch, Tgl Dpst 40A 600VAC Scr Term Narrow Tgl	1
...	11		.. Label, Nameplate (Order by Model and Serial Number)	1
...	12	279111	.. Receptacle, Twist Lock Brass Fem Panel Mtg (Dinse)	2
...	13	277690	.. Insulator, Bulkhead 50mm	1
...	14	282112	.. Choke, Common Mode	1
...	15	600760	.. Term, Frict 250X032 Uninsul Male .130 Stud Mtg 1Pr	1
...	16	277973	.. Lead List, Small (Gnd)	1
...	17	138695	.. Capacitor, Cer Disc .01 uF 1000 VDC W/Terms	1
...	18	048420	.. Capacitor, Cer Disc .01 uF 1000 VDC W/Terms	1
...	19	185717	.. Nut, M20-1.5 1.00hex .19h Brs Locking	2
...	20	229338	.. Washer, Domed Load .812 Id X 1.450 Od X .070 Thk	2

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279049

Figure 1-4. Rear Panel Assembly (Figure 1-1 Item 4)

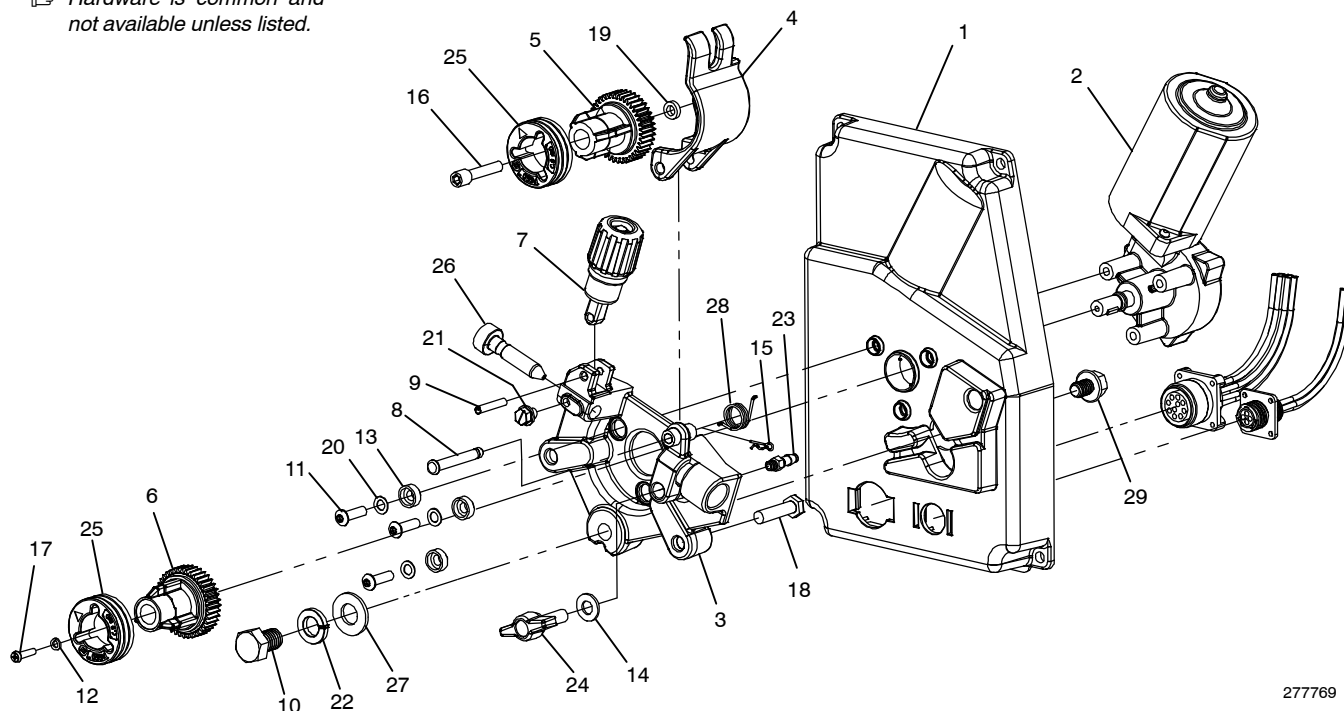
Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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Figure 1-4. Rear Panel Assembly

...	1	279064	.. Panel, Rear	1
...	2	262572	.. Valve, 24VDC 1Way .750-14 Thd 2Mm Orf 100Psi	1
...	3	215980	.. Bushing, Strain Relief .709/.984 Id X1.375 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 1.312 Hex .413H Nyl	1
...	8	250864	.. Hose, Gas 27in	1
...	9	285812	.. Lead List, Small (Rear Panel Gnd)	1

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277769

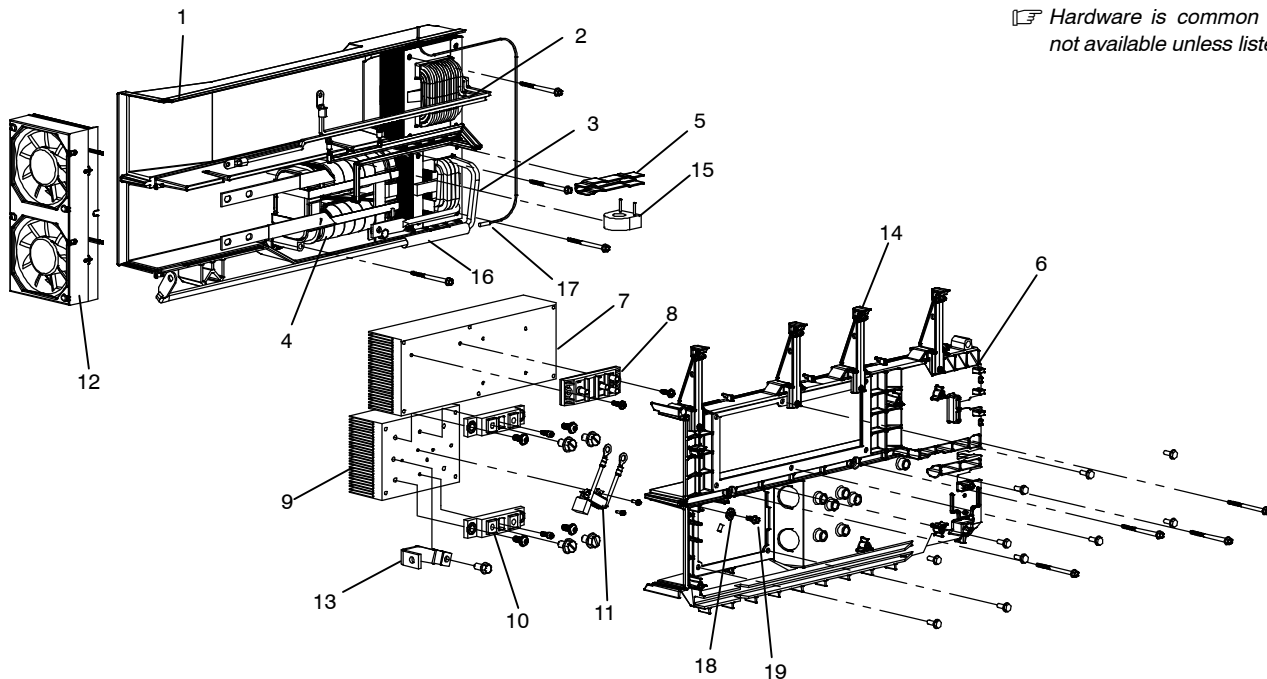
Figure 1-5. Wire Feed Drive Assembly (Figure 1-1 Item 5)

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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Figure 1-5. Wire Feed Drive Assembly

...	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/Cmpnts 24 Pitch	1
...	6	173619	Carrier, Drive Roll W/Cmpnts 24 Pitch 10mm Shaft	1
...	7	221976	Knob, Tension Adjust Assy	1
...	8	273112	Pin, Clevis .250 Od X 1.751 Lg W/Groove & Cham	1
...	9	010224	Pin, Spring Cs .187 X 1.000	1
...	10	282942	Screw, 500-13x .75 Hex Hd-Phl Stl Pld Slf Tpg Ab	1
...	11	174610	Screw, M 6-1.0x 20 Soc Hd-Hex Button Cap Blk	3
...	12	602200	Washer, Lock .168idx0.293odx.040t Stl Pld Split #8	1
...	13	173620	Bushing, Mtg Motor	3
...	14	604538	Washer, Flat .344idx0.688odx.065t Stl Pld Ansi.312	1
...	15	151828	Pin, Cotter Hair .042 X .750	1
...	16	602009	Screw, 250-20x1.25 Soc Hd-Hex Gr8 Pln	1
...	17	209079	Screw, M 4- .7x 16 Pan Hd-Phl Pld Din 7985	1
...	18	604534	Screw, 312-18x1.25 Hex Hd-Pln Gr5 Pld	1
...	19	166072	Spacer, Gear	1
...	20	192029	Washer, Flat .250idx0.437odx.020t Stl Pln	3
...	21	233030	Screw, 250-20x .25 Hexwhd Machine Stl Pld	1
...	22	602216	Washer, Lock .502idx0.879odx.151t Stl Pld Split.500	1
...	23	263411	Fitting, Barbed Gas	1
...	24	222035	Knob, T 1.562 Bar W/.312-18 Stud 1.000 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 .531idx1.062odx.095t 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

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.



279039-B

Figure 1-6. Windtunnel Assembly (Figure 1-1 Item 6)

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
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Figure 1-6. Windtunnel Assembly

279050	..	Assembly, Magnetics Windtunnel (Includes)	1
1	..	Windtunnel, Lh	1
2	L1	Inductor, Input	1
3	L2	Inductor, Output	1
4	T1	Xfmr, Main	1
5	..	Channel, Wire Plastic	1
279052	..	Assembly, Heat Sink Windtunnel (Includes)	1
6	..	Windtunnel, Rh	1
7	..	Heat Sink, Boost Inverter/Input Rectifier	1
8	..	Rectifier, Integ Bridge 90. Amp 1600V 1ph	1
D1, D2	..	Assembly, Output Rectifier Heat Sink (Includes)	1
9	..	Heat Sink, Output Rectifier	1
10	..	Diode, Ultra-Fast 164Ns 400A 600V Dual To-244	2
11	..	Resistor/Capacitor Assy	1
..	..	Thermistor, NTC 30K Ohm @ 35 Deg C 30in Lead	1
12	..	Assembly, Fan (Includes)	1
..	..	Holder, Plastic Front Fan	1
FM1, FM2	..	Fan, Muffin 24VDC 8000 Rpm 175 Cfm 3.248 Mtg Holes	2
..	..	Rivet, Plastic .163 Hole X .295-.335 Grip Push	4
13	..	Bus Bar, Positive Output	1
14	..	Bracket, Mtg Circuit Card Assy	4
15	CT1	Xfmr, Current Sensing 200/1 Encapsulated W/6in Lds	1
..	..	Grommet, Rubber	2
16	..	Tubing, Htshnk Clear Mfp .500/.250 Dia X 4.000	1
17	RT	Thermistor, Ntc 30k Ohm @ 25 Deg C 22.00in Lead	1
18	..	Washer, Lock Stl Intl/Ext Tooth No 10 Zc Pld Sftmtl	1
19	..	Screw, K50X 12 Hexwhd Stl Pld Blk Pt Thread Forming	1

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Figure 1-7. MDX-250 MIG Gun Consumables And Recommended Spare Parts

See OM-282976 (shipped with this product) for information on replacement consumables for the MDX welding gun.

Figure 1-8. 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-Knurled rolls for hard shelled cored wires.
- 5 Drive roll types may be mixed to suit particular requirements (example: V-Knurled roll in combination with U-Grooved).

Wire Diameter			Kit No.	Drive Roll		Inlet Wire Guide
Fraction	Decimal	Metric		Part No.	Type	
0.023/0.025 in.	0.023/0.025 in.	0.6 mm	087131	087130	V-Grooved	056192
0.030/0.035 in.	0.030/0.035 in.	0.8/0.9 mm	204579	203526	V-Grooved	056192
0.030 in.	0.030 in.	0.8 mm	079594	053695	V-Grooved	056192
0.035 in.	0.035 in.	0.9 mm	079595	053700	V-Grooved	056192
0.045 in.	0.045 in.	1.2 mm	079596	053697	V-Grooved	056193

Notes

Notes

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