



PARTS MANUAL

MODEL EMP 255ic & EMP 320ic



Valid for: serial nos. 730-xxx-xxxx, 735-xxx-xxxx

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This PARTS MANUAL is written for the ESAB Welder models EMP 255ic and EMP 320ic. The Part # for each of these welders is given here. Individual Parts/Assemblies are given in this manual.

Part #	Product Name
0700 300 992	EMP 255ic
0700 300 991	EMP 320ic

Spare parts are to be ordered through the nearest ESAB agency. Indicate type of unit, serial number, product name, and part numbers according to a spare parts list.

WARNING

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

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HOUSING PARTS

SECTION 1

HOUSING PARTS

1.1 HOUSING PARTS

Table 1-1. Housing Parts

Item	Part #	Description	Qty
1	0558 102 537	Hinge	1
2	0558 102 538	Door pull & latch	1
3	0464 651 880	Side door, spool side (EMP 255ic)	1
	0464 651 881	Side door, spool side (EMP 320ic)	1
4	0558 102 544	Side frame, spool side	1
5	0558 102 399	Handle	4
6	0558 102 545	Foot (With 2× M6x20 screw)	2
7	0558 102 546	Side frame, power side	1
8	0558 102 547	Side door, power side	1

HOUSING PARTS

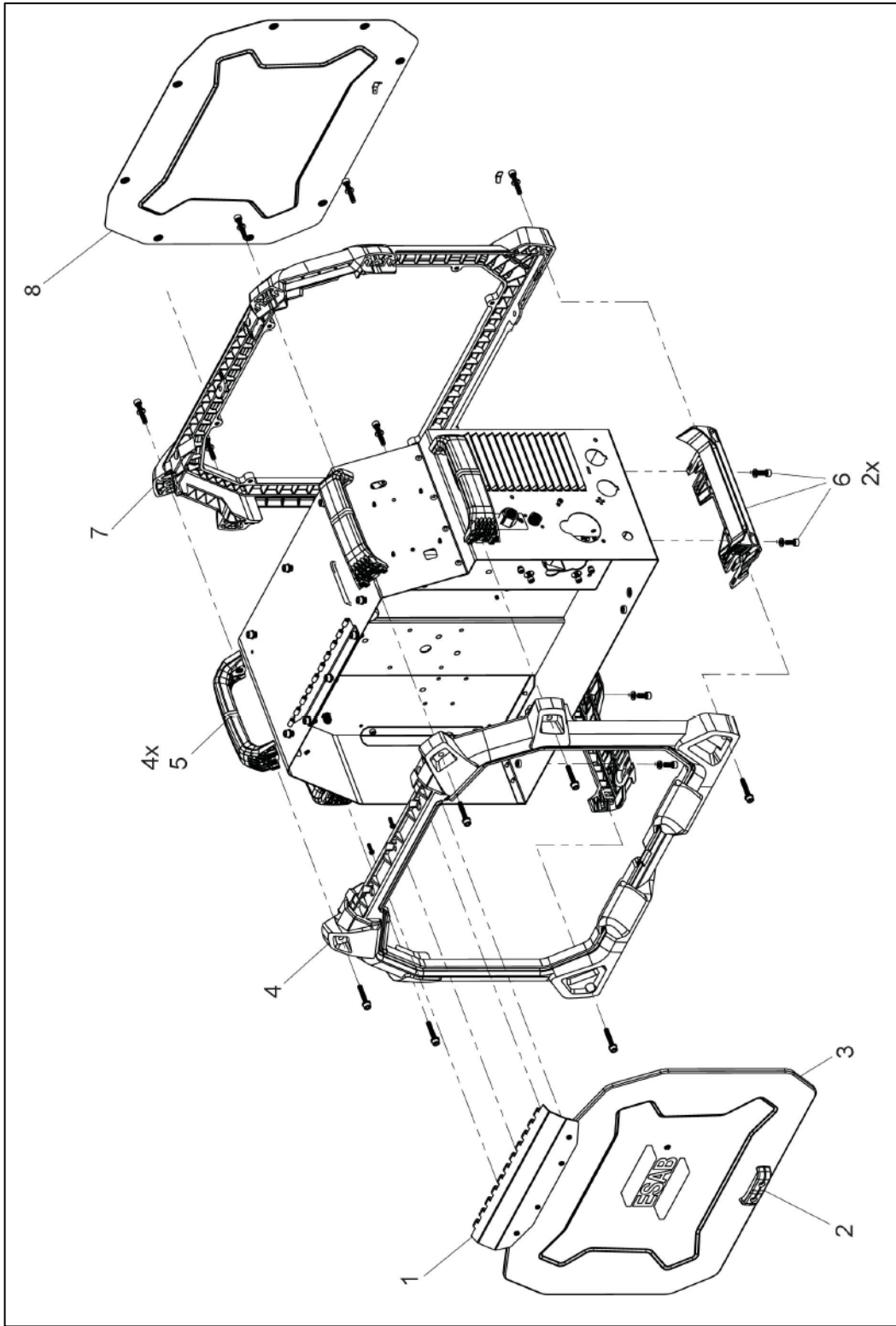


Figure 1-1. Housing

CONNECTION PARTS

SECTION 2

CONNECTION PARTS

2.1 CONNECTION PARTS

Table 2-1. Connection Parts

Item	Part #	Description	Qty
1	0558 102 521	Brake hub kit	1
2	0464 620 880	MIG gas solenoid system	1
3	0464 621 880	TIG/Spool gun gas solenoid system	1
4	0558 102 525	Bracket, gas solenoid mounting	1
5	0464 622 880	Gas inlet/outlet, bulkhead fitting – Quick Connect	2
6	0464 646 880	Power switch	1
7	0464 639 880	Fan Bracket assembly	1
8	0558 102 527	Female OKC connector	2
9	0558 102 593	Polarity change cable & male OKC connector	1
10	0464 640 880	Wire drive assembly, Euro connector	1
11	0558 102 530	8 pin female remote receptacle and harness	1
12	0464 637 880	Gas inlet/outlet, bulkhead fitting – BSP	1

CONNECTION PARTS

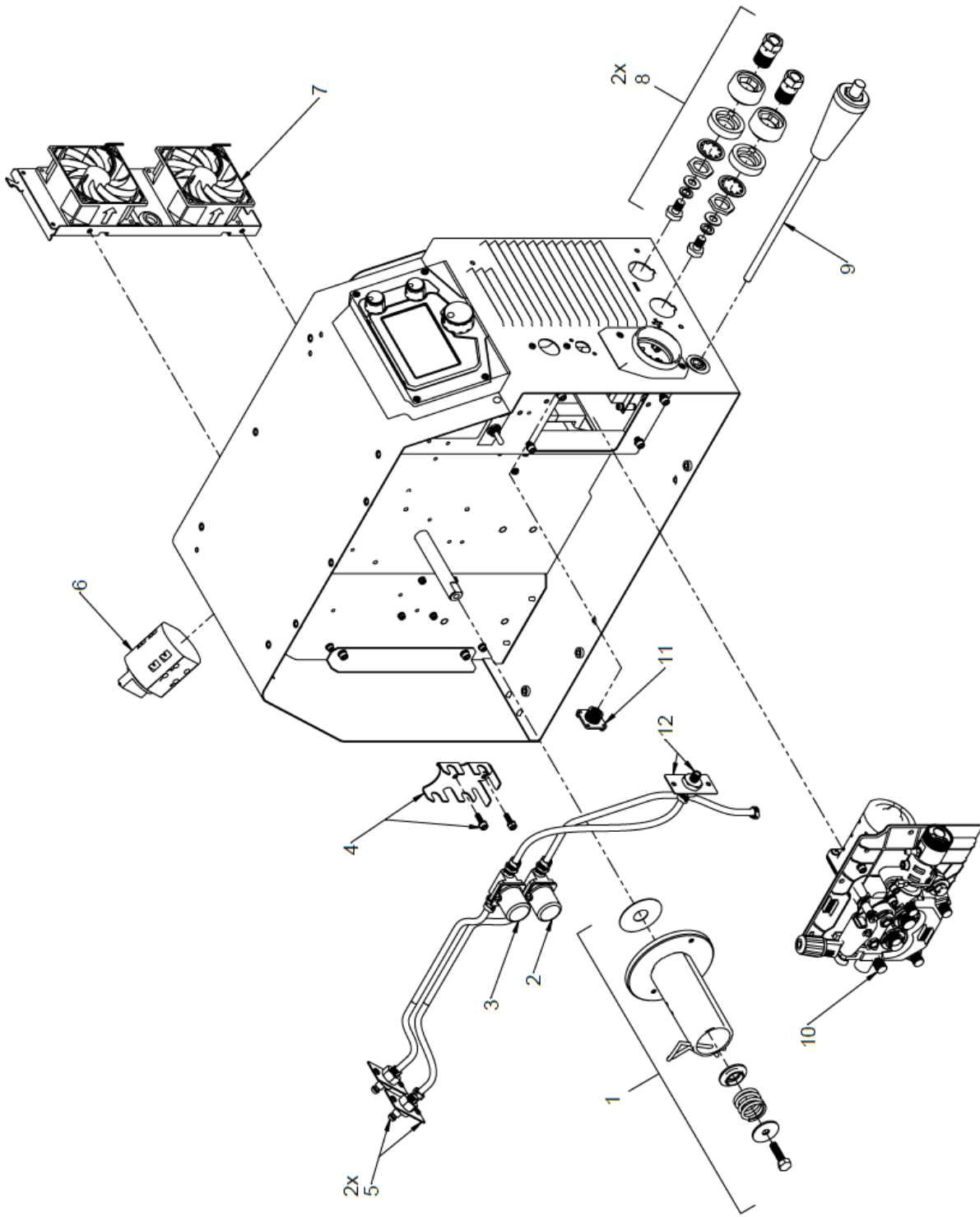


Figure 2-1. Connections

USER-INTERFACE PARTS

SECTION 3

USER-INTERFACE PARTS

3.1 USER-INTERFACE PARTS

Table 3-1. User-Interface Parts

EMP 255ic

Item	Part #	Description	Qty
1	0464 649 880	User interface complete	1
2	0558 102 438	Replaceable display lens	1
3	0558 102 423	Encoder for small knob	2
4	0558 102 424	Encoder for large knob	1
5	0558 102 440	Knob, small	2
6	0558 102 441	Knob, large	1
7	0464 647 880	Lens assembly kit	1

EMP 320ic

Item	Part #	Description	Qty
1	0464 650 880	User interface complete	1
2	0558 102 438	Replaceable display lens	1
3	0558 102 423	Encoder for small knob	2
4	0558 102 424	Encoder for large knob	1
5	0558 102 440	Knob, small	2
6	0558 102 441	Knob, large	1
7	0646 648 880	Lens assembly kit	1

USER-INTERFACE PARTS

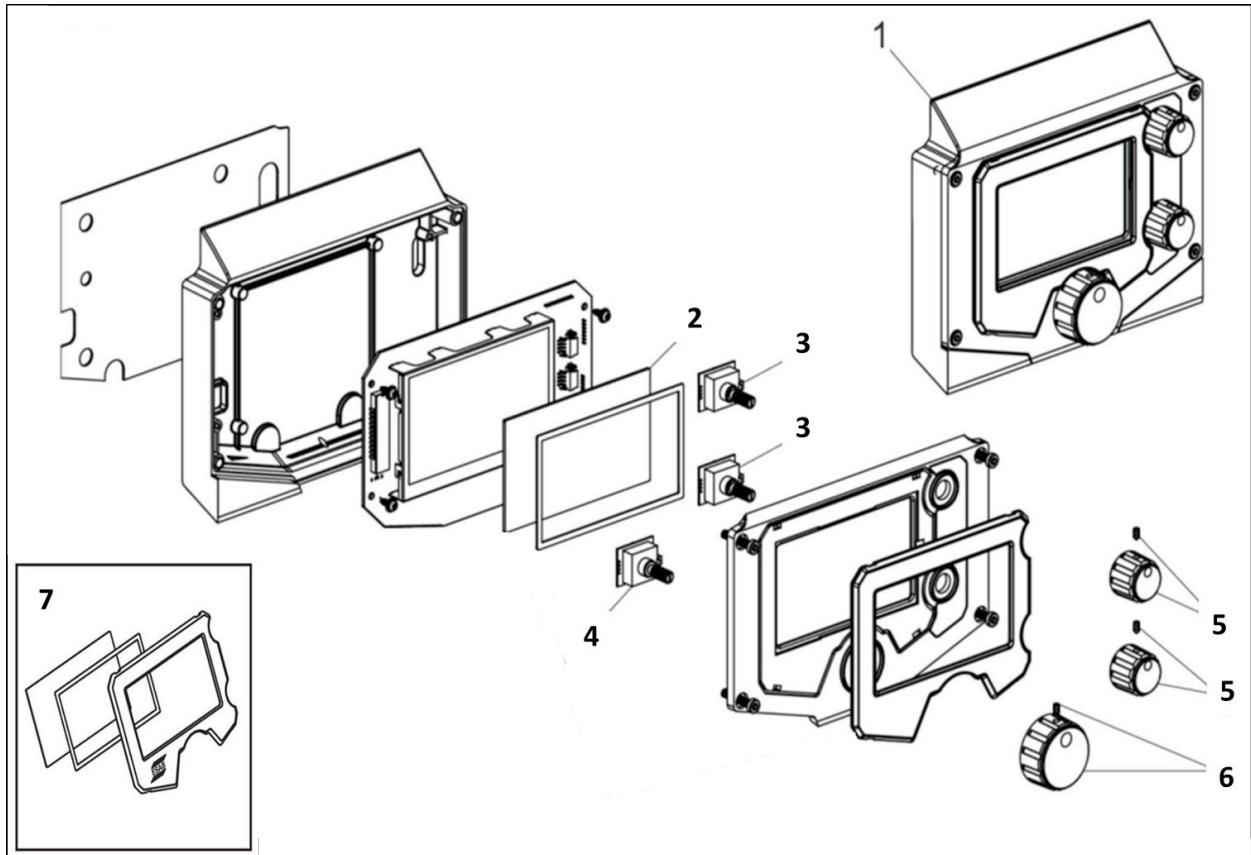


Figure 3-1. User-Interface

CONTROL/POWER-MODULE PARTS

SECTION 4

CONTROL/POWER MODULE PARTS

4.1 CONTROL/POWER MODULES PARTS

Table 4-1. Control/Power Modules Parts

Item	Part #	Description	Qty
1	0558 102 607	Control PCB	1
2	0464 643 880	Main Power Board Assembly	1
3	0558 102 595	Output Inductor	1
4	0558 102 596	Output Diode Assembly	1
5	0464 644 880	Main Transformer	1
6	0464 642 880	IPS Board Assembly	1
7	0558 102 438	Strain relief, mains cable	1
8	0464 645 880	Mains Cable	1
9	0464 641 880	EMI Filter Board Assembly	1

CONTROL/POWER-MODULE PARTS

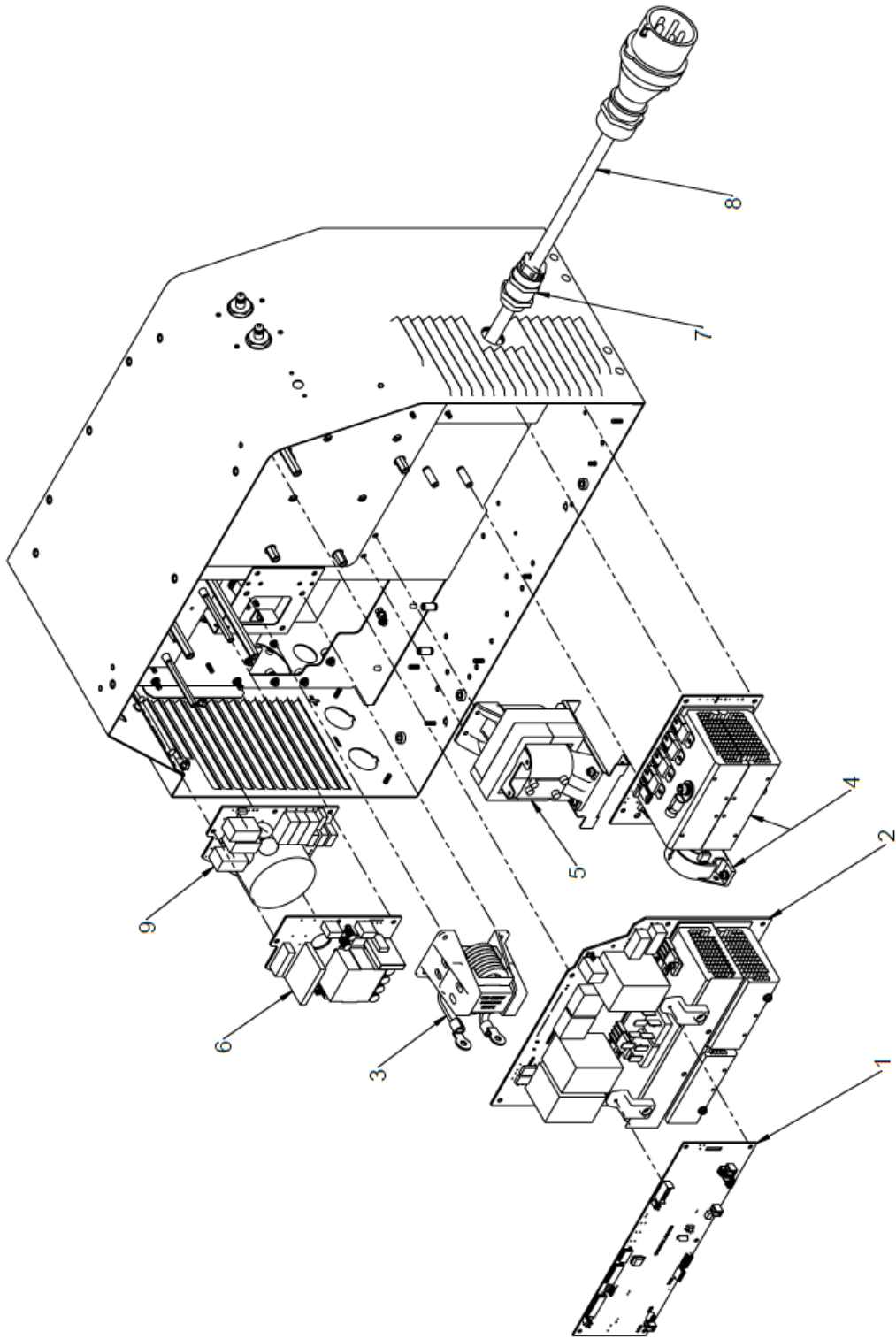


Figure 4-1. Control Modules

WIRE-FEED ASSEMBLY PARTS

SECTION 5

WIRE-FEED ASSEMBLY PARTS

5.1 WIRE-FEED ASSEMBLY PARTS

Table 5-1. Wire-Feed Assembly Parts

Item	Part #	DESCRIPTION	Qty
1	0558102591	PRESSURE ROLLER ASSEMBLY	1
2	0558102592	TENSION ADJUSTMENT ASSEMBLY	1
3	0558102608	CENTER WIRE-GUIDE TUBE	1
4	(SEE TABLE 5-3 BELOW)	OUTPUT WIRE-GUIDE TUBE	1
5	0558102609	MOTOR-GEAR SHAFT WOODRUFF KEY	1
6	0558102597	INLET QUAD WF	1
7	0558102605	DRIVEN GEAR ASSEMBLY	2
8	0558102606	DRIVE GEAR ASSEMBLY	1
9	(SEE TABLE 5-2 BELOW)	WIRE-FEED ROLLERS	2
10	0558102600	WASHER FLAT M4 LARGE OD	3
11	0558102601	THUMB SCREW M4 X 10 X 8 KNURLED	2
12	0558102602	THUMB SCREW M4 X 10 X 5 KNURLED	1
13	0558102603	QUAD WF COVER	1
14	0558102604	THUMB SCREW M5 X 14 KNURLED	5

Table 5-2. Wire-Feed Rollers: Available Sizes for Models 255ic or 320ic

ITEM #	PART #	DESCRIPTION (Values = Wire Diameter)	COMMENT
FEED ROLLERS FOR ALL WIRES EXCEPT ALUMINUM			
1	0369557003	ROLLER, .040 (1.0) - .045 (1.2), V-SOLID	DEFAULT*
2	0369557002	ROLLER, .030 (.8) - .040 (1.0), V-SOLID	ACCESSORY**
3	0369557001	ROLLER, .024 (.6) - .030 (.8), V-SOLID	OPTIONAL FOR PURCHASE
4	0369557013	ROLLER, .052 (1.4) - .062 (1.6), V-SOLID	OPTIONAL FOR PURCHASE
FEED ROLLERS FOR ALUMINUM WIRE			
5	0369557006	ROLLER, .040 (1.0) - .045 (1.2), ALUM (U-GROOVE)	OPTIONAL FOR PURCHASE
6	0369557011	ROLLER, .030 (0.8) - .040 (1.0), ALUM (U-GROOVE)	OPTIONAL FOR PURCHASE
* DEFAULT (size included in package)			
** ACCESSORY (included with each model 255 or 320 unit.)			

WIRE-FEED ASSEMBLY PARTS

Table 5-3. Output & Center Wire-Guide Tube: Available Sizes for Models 255ic or 320ic

ITEM #	PART #	DESCRIPTION (Values = Inner Diameter (ID) of Tubes)	COMMENT
OUTPUT WIRE-GUIDE TUBES EXCEPT FOR ALUMINUM WIRE			
1	0464652880	TUBE, WIRE GUIDE .040 (1.0) - .045 (1.2), V-SOLID	DEFAULT*
2	0464653880	TUBE, WIRE GUIDE .030 (.8) - .040 (1.0), V-SOLID	ACCESSORY**
3	0464657880	TUBE, WIRE GUIDE .024 (.6), V-SOLID	OPTIONAL FOR PURCHASE
4	0464658880	TUBE, WIRE GUIDE .052 (1.4) - .062 (1.6), V-SOLID	OPTIONAL FOR PURCHASE
OUTPUT WIRE-GUIDE TUBES FOR ALUMINUM WIRE			
5	0464659880	TUBE, WIRE GUIDE .040 (1.0), ALUM	OPTIONAL FOR PURCHASE
6	0464660880	TUBE, WIRE GUIDE .045 (1.2), ALUM	OPTIONAL FOR PURCHASE
7	0464661880	TUBE, WIRE GUIDE .052 (1.4) - .062 (1.6), ALUM	OPTIONAL FOR PURCHASE
* DEFAULT (size included in package)			
** ACCESSORY (optional size included with each model 255 or 320 unit)			

WIRE-FEED ASSEMBLY PARTS

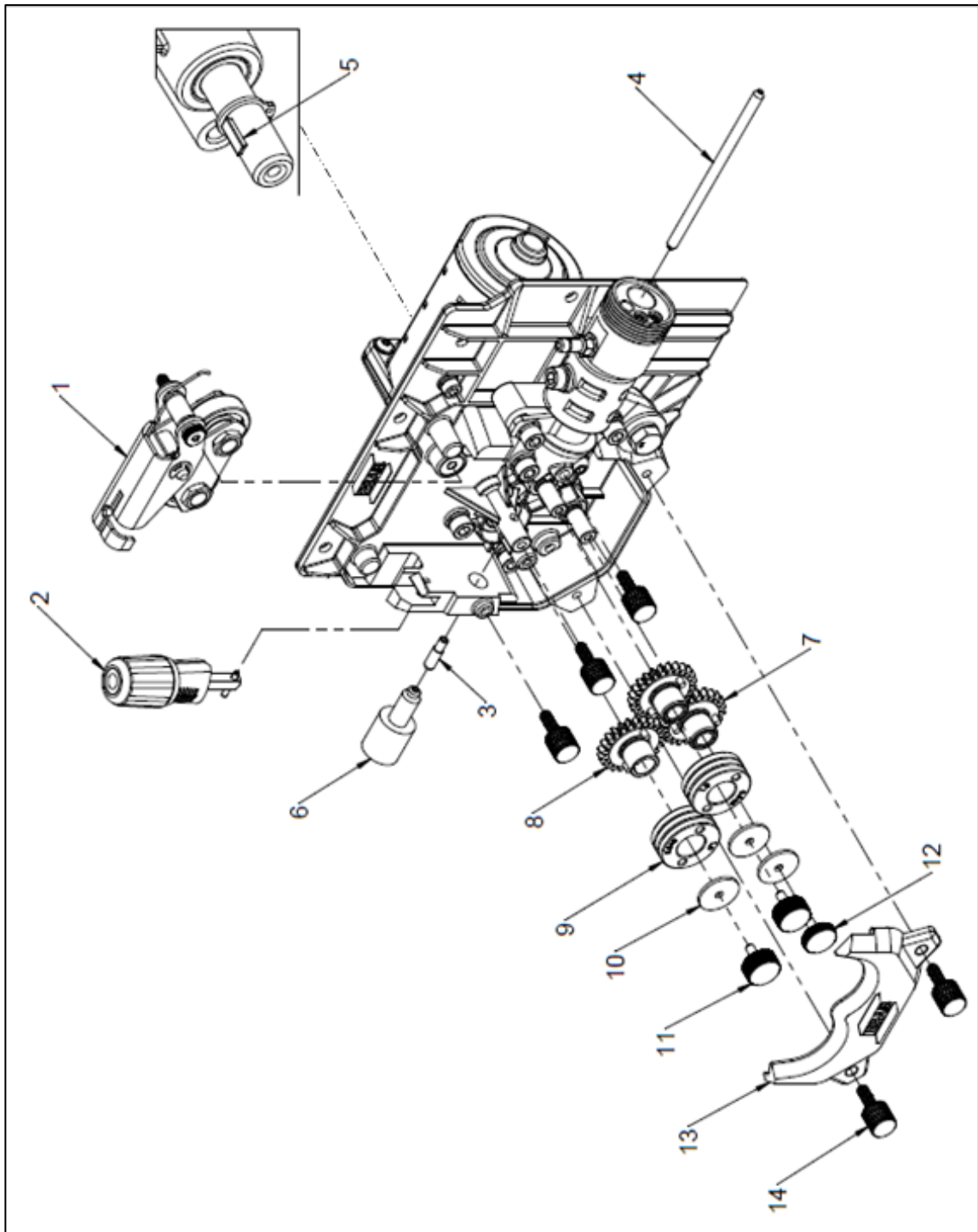


Figure 5-1. Wire-Feed Assembly

WIRE-FEED ASSEMBLY PARTS

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