

MODEL 9-250

ILLUSTRATED PARTS BREAKDOWN

FOR REFERENCE ONLY

MODEL 9-250
IPB Notice and Revision History

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The nature of the GTAW process creates some POTENTIAL HAZARDS. In accordance with international safety regulations the EXCLAMATION SYMBOL indicates that this equipment is considered HAZARDOUS. The LIGHTNING FLASH SYMBOL indicates that there are potential electrical hazards. The display of these symbols makes it the OPERATOR'S RESPONSIBILITY TO ENSURE THAT THEY HAVE BEEN MADE AWARE OF and shall observe the hazardous conditions.

	<p>WARNING: AMI factory training is essential for all Maintenance Technicians who operate AMI equipment. Do not operate or service this equipment without proper AMI approved training.</p>
	<p>WARNING: Keep hands and fingers clear from moving parts such as fans, gears, rotors, Wire Feed, Weld Head Travel, i.e. Oscillation (OSC) and Arc Voltage Control (AVC) mechanisms</p> <p>Weld Head AVC and Oscillator Slide Assemblies develop high forces and it is possible, by their nature of operation, to harm any object or body part that may get into these areas. USE EXTREME CAUTION!</p>
	<p>Electrical Shock Hazard: Always disconnect weld heads when servicing internal components or opening housing covers for access.</p>

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REV	ECO #	CHANGE DESCRIPTION	DATE	BY	APR
A	4779	Added rev D of 750015	26 May 2008	SO	BF
B	5579	Added rev F 750015 and wiring diagram	18 Jan 2010	CB	DC
C	5328	Updated Table of Contents, 0901110, 0905187, & 090816 to reflect current production part numbers	29 Dec 2011	MH	DC
D	6530	UPDATED IPB 0901110, CHANGED P/N OF ITEM 27 TO 52 4PL.	04/10/2013	LK	BL

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TABLE OF CONTENTS

DATE EFFECTIVE: 19-Aug-93
DATE REVISED: 29-Dec-11

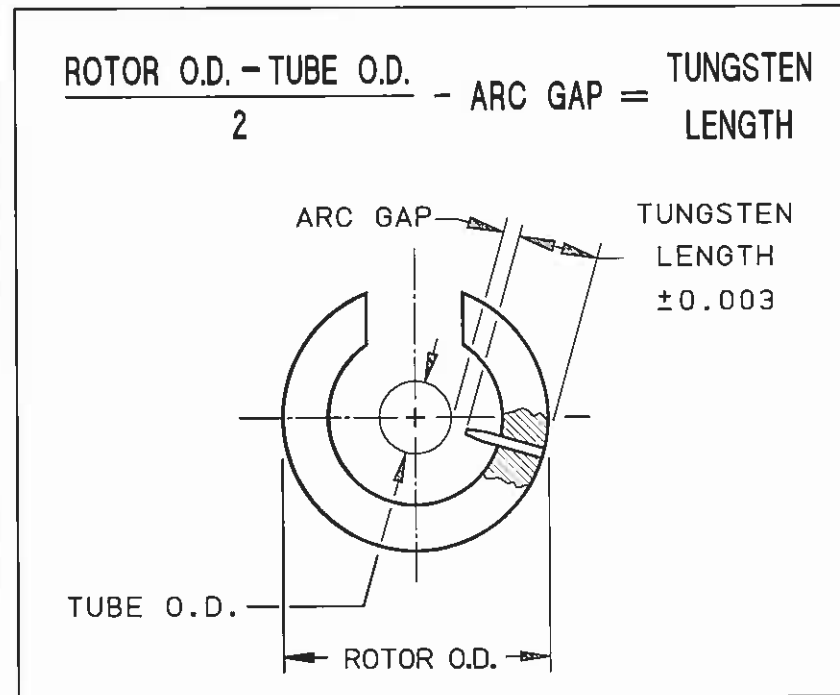
PRODUCT MODEL: 9-250
MANUAL NUMBER: 730077

IPB NUMBER	DESCRIPTION
750015	MODEL 9 ELECTRODE DIMENSIONS
090005	WELD HEAD ASSEMBLY
0901110	WELD HEAD BASIC ASSEMBLY
0905187	STANDARD CLAMP ASSEMBLY
090816	CABLE ASSEMBLY
175144-06	MODEL 9-250 WELD HEAD WIRING DIAGRAM

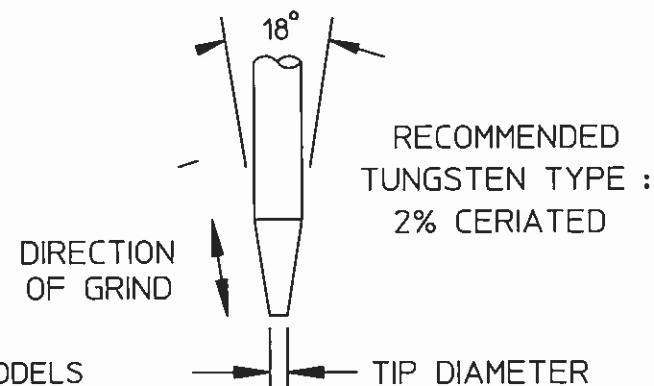
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ELECTRODE DIMENSIONS

ROTOR DIAMETER	
MODEL NO.	ROTOR O.D.
9-250	0.802
9-500/4-500	1.388
9-675	1.715
9M-750	1.312
9-750	2.000
9-1500	3.187
9AF-1500	2.252
9E-1500	2.687
8-2000	3.450
9-2500	4.380
9AF-2500	3.156
9E-2500	4.280
* 9-3500	5.380
9E-3500	5.310
8-4000	5.310
* 9-4500	6.875
9ER-4500	5.776
8-6625	8.094
* 9-7500	10.440
9E-7500	9.375
* FOR HEADS USING OPTIONAL TUNGSTEN EXTENDER, SEE PAGE 2.	



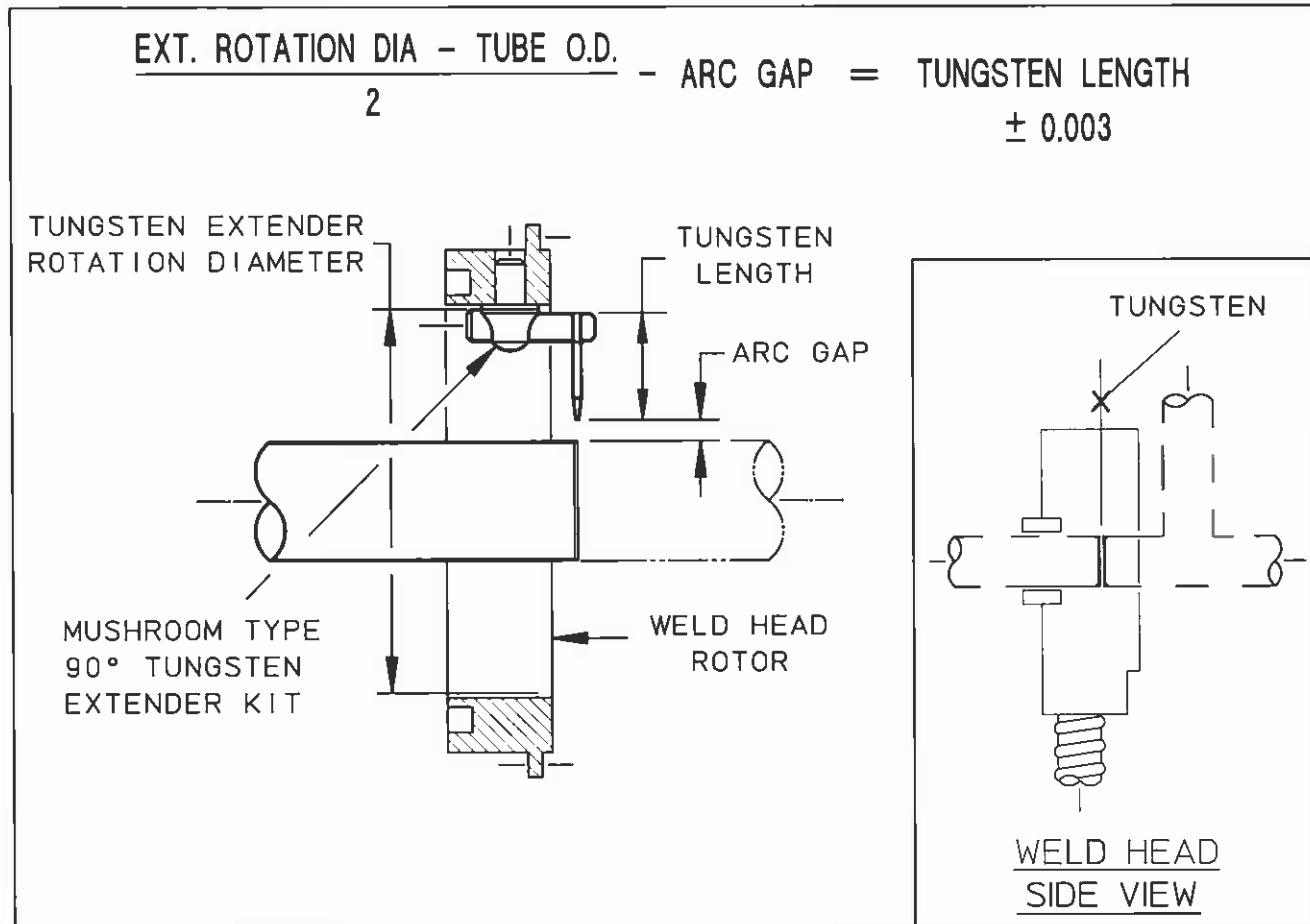
TUBE/PIPE WALL THICKNESS	RECOMMENDED ARC GAP	RECOMMENDED TIP DIA.
0.020/0.035	0.030	0.020
0.049/0.085	0.050	0.030
0.091/0.154	0.070	0.040



- NOTES:
1. RECOMMENDED ARC GAP FOR MODELS 4-500, 9-250 & 9-500 IS 0.045 MAXIMUM.
 2. IN INSTANCES WHERE OUT-OF-ROUNDNESS ON THIN-WALLED TUBING OCCURS (NORMALLY 2.500 O.D. OR LARGER), A 0.070 ARC GAP IS RECOMMENDED.
 3. DIMENSIONS ARE IN INCHES.

FOR REFERENCE ONLY

TUNGSTEN LENGTH CALCULATION FOR TUNGSTEN EXTENDERS



WELD HEAD MODEL NO.	KIT WITH 1/16 TUNGSTEN HOLDER PART NO.	KIT WITH 3/32 TUNGSTEN HOLDER PART NO.	TUNGSTEN EXTENDER ROTATION DIA.
9-1500	13090796-01	13090796-02	2.031
9-2500	13090796-05	13090796-06	3.156
9-3500	13090796-05	13090796-06	4.031
9-4500	13090796-03	13090796-04	4.920
9-7500	13090796-05	13090796-06	8.280

NOTES:

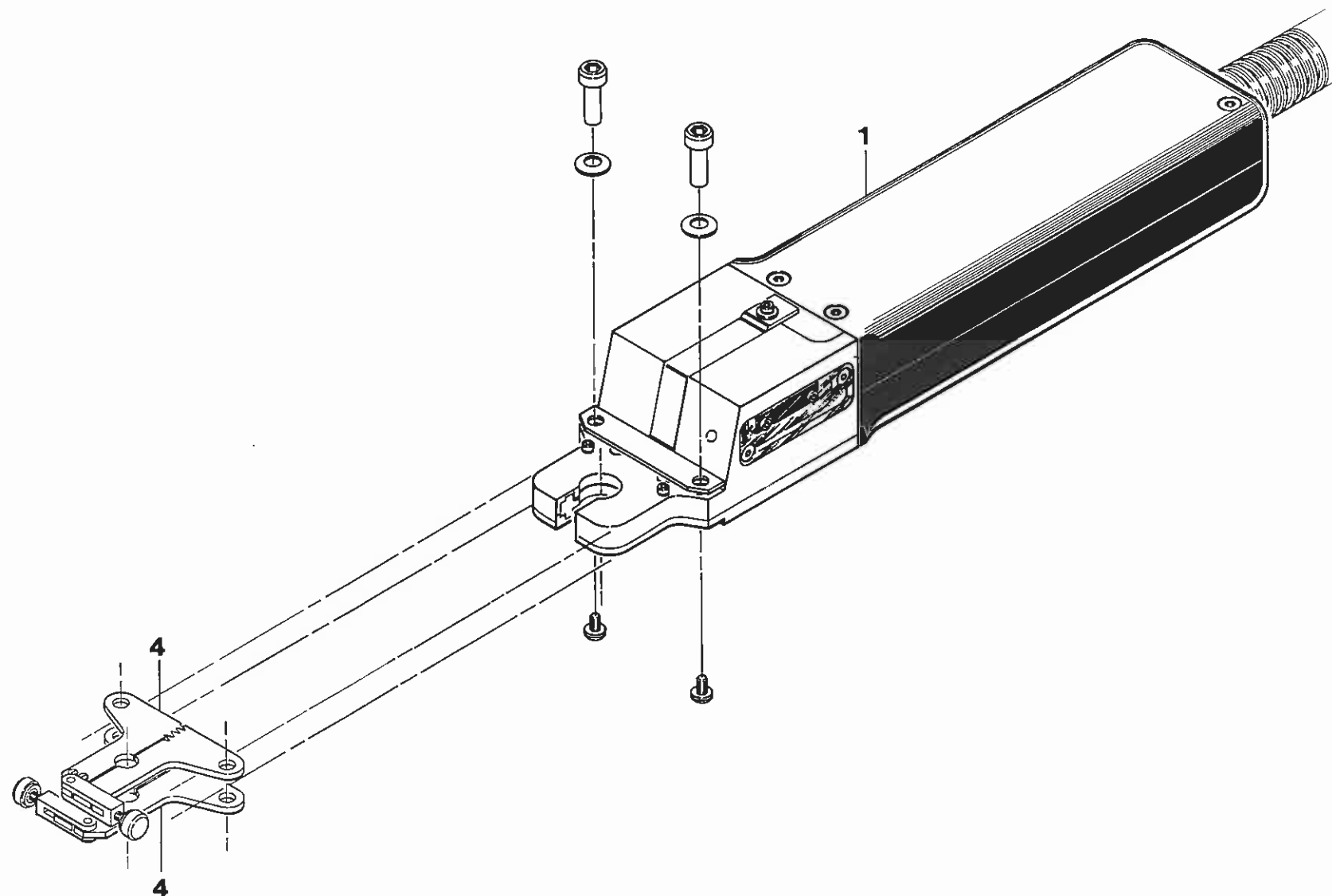
1. PART NUMBERS SHOWN ARE FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE.
2. CONTACT AMI SALES OR SERVICES FOR SPECIFIC PART NUMBER.

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ISSUED: 19 AUGUST 1993
REVISED: 18 OCTOBER 1993



MODEL 9-250
IPB 090005
WELD HEAD ASSEMBLY

FOR REFERENCE ONLY

IPB NUMBER: 090005
DATE EFFECTIVE: 19 Aug 1993
DATE REVISED: 27 Mar 1996

TO ORDER
USE PART NUMBER
DO NOT USE IPB
ITEM NUMBER

ARC MACHINES, INC.
PRODUCT MODEL: 9-250
DESCRIPTION: WELD HEAD ASSEMBLY
MANUAL NUMBER: 730077
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
1	1	EA	130901110-01	WELD HEAD ASSY BASIC M9-250
2	0	-	-	-----
3	0	-	-	-----
4	2	EA	130905187-01	PLATE CLAMP .125 OD M9-250
4A	2	EA	130905187-02	PLATE CLAMP .250 OD M9-250

PRICE, PART NUMBER AND
DESCRIPTION SUBJECT TO
CHANGE WITHOUT NOTICE

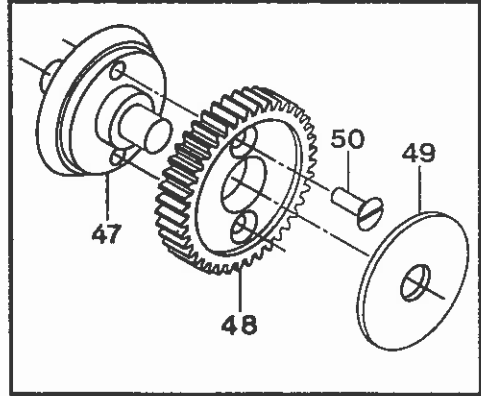
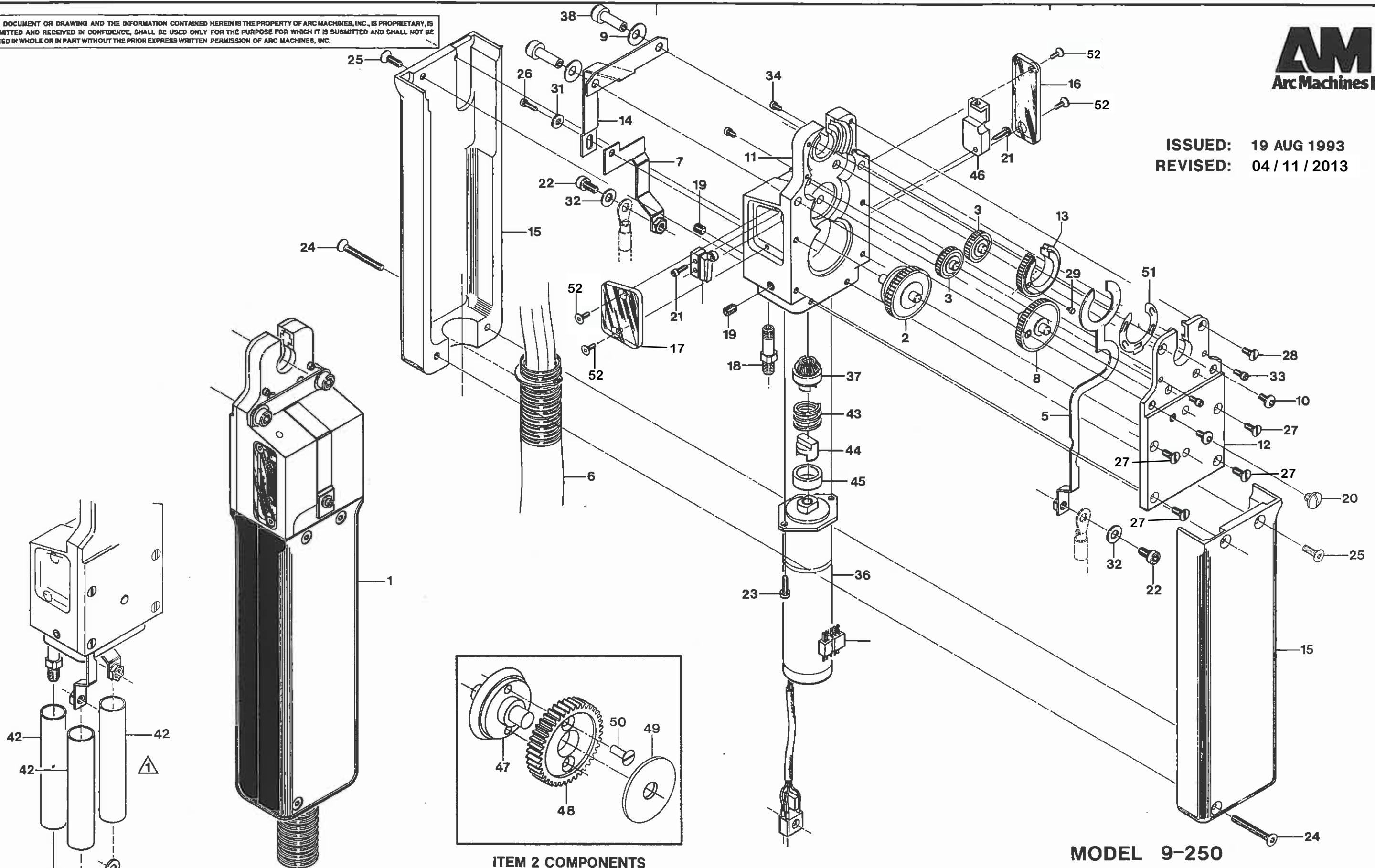
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ISSUED: 19 AUG 1993
REVISED: 04/11/2013



ITEM 2 COMPONENTS

FOR REFERENCE ONLY

MODEL 9-250
IPB 0901110
WELD HEAD BASIC ASSEMBLY

NOTE: INSULATE CABLE CONNECTIONS WITH SHRINK TUBING (ITEM 42, 3 PL.)

IPB NUMBER: 0901110

DATE EFFECTIVE: 26-Jun-95

DATE REVISED: 11-Apr-13

TO ORDER
USE PART NUMBER
DO NOT USE IPB ITEM NUMBER

Arc Machines, Inc.

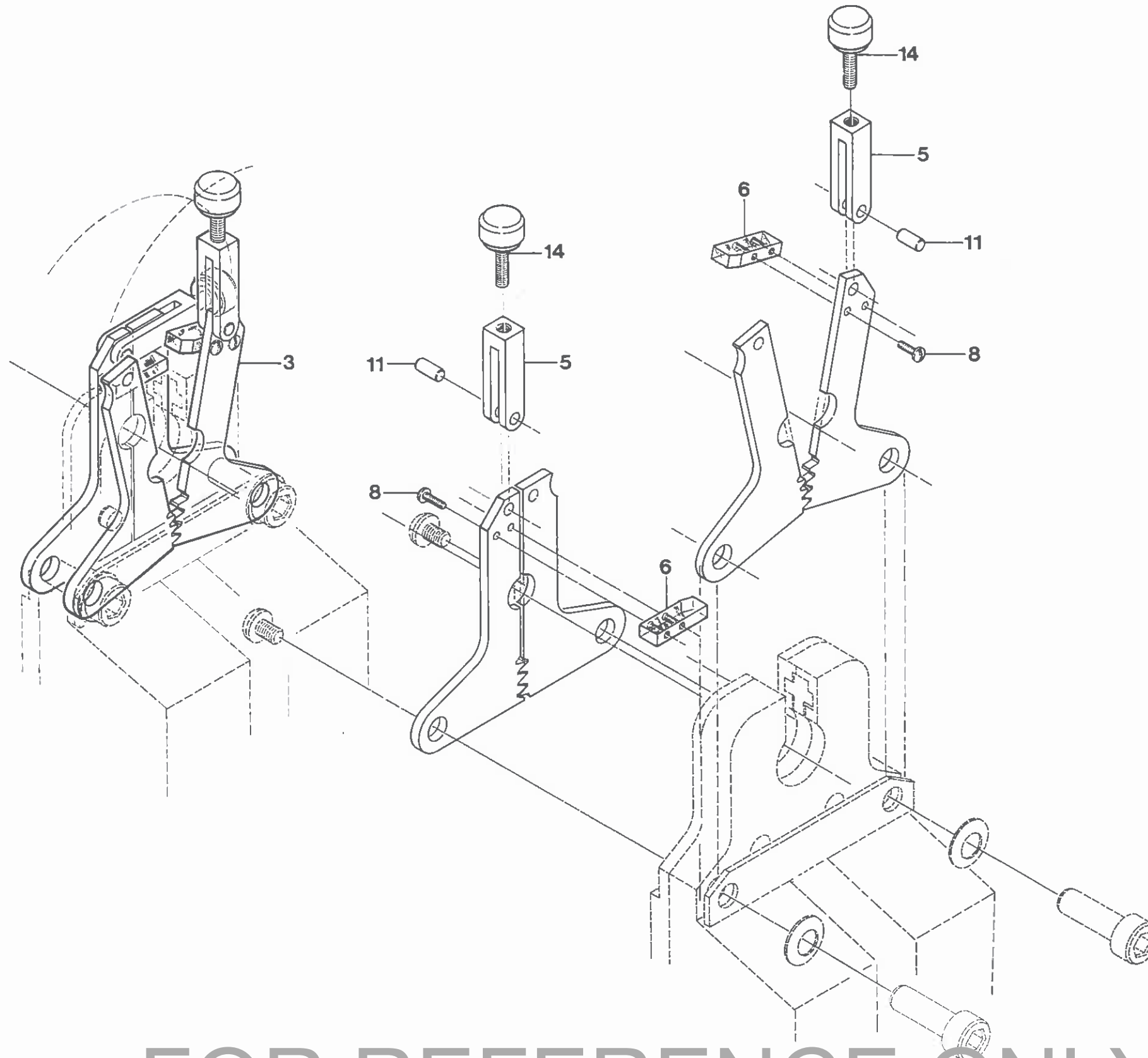
PRODUCT MODEL: 9-250
DESCRIPTION: WELD HEAD BASIC ASSEMBLY
MANUAL NUMBER: 730077

IPB ITEM NUMBER	QTY	UOM	PART NUMBER	DESCRIPTION
1	1	EA	130901110-01	BASIC ASSY, M9-250 WELD HEAD
2	1	EA	13090656-01	GEAR DRIVE ASSY M9-250 REPAIRABLE
3	2	EA	42090659-01	GEAR IDLER M9-250
5	1	EA	130907104-02	CONDUCTOR SHOE BRAZED ASSY M9-250
6	1	EA	13090816-01	CABLE M9-500 CONTROL
7	1	EA	130905136-01	GROUND STRAP CONN-BRZD 9-500
8	1	EA	13090649-02	GEAR ASSY MAIN IDLER M9-250
9	2	EA	420905314-03	WASHER WAVE SPRING (5806-53-1)
10	2	EA	SBS06-32-0,18NP	SCREW BTH SKT 6-32 3/16L
11	1	EA	420901122-01	HOUSING, MAIN M9-250
12	1	EA	420901123-01	COVER HOUSING M9-250
13	1	EA	42090651-01	ROTOR GEAR M9-250 NI PLATED
14	1	EA	420907196-01	GROUND STRAP UPPER M9-250
15	2	EA	420901101-01	HANDLE M9-500
16	1	EA	420901124-01	COVER TRIM POT M9-250
17	1	EA	420901124-02	COVER LIMIT SW M9-250
18	1	EA	420901102-01	NIPPLE GAS
19	2	EA	SSS10-32-18NPCU	SCREW SET SKT 10-32 3/16L CUPT
20	1	EA	SIL08-32-0,12NY	SCREW BDH SLT 8-32 1/8L NYL
21	3	EA	SCS02-56-0,31NP	SCREW CAP SKT 2-56 5/16L
22	2	EA	SCS08-32-0,25SS	SCREW CAP SKT 8-32 1/4L SST
23	2	EA	SCS04-40-0,31NP	SCREW CAP SKT 4-40 5/16L
24	2	EA	SFS04-40-1,00NP	SCREW FLH SKT 4-40 1.00L
25	4	EA	SFS04-40-0,37NP	SCREW FLH SKT 4-40 3/8L
26	1	EA	SPL02-56-0,25NP	SCREW PNH SLT 2-56 1/4L
27	4	EA	SFL02-56-0,25NP	SCREW FLH SLT 2-56 1/4L
28	2	EA	SFL02-56-0,25NY	SCREW FLH SLT 2-56 1/4L NYL
29	3	EA	SFIL-00-80-0,12NP	SCREW FIL SLT 0-80 1/8L
30	1	EA	7051	CONN, 5PIN MALE SUB-MINIATURE BLK W/ GOLD PINS
31	1	EA	W02SS-FL	WASHER FL #2 SST
32	2	EA	W08SS-FL	WASHER FL .18/.37/.030 T SST
33	2	EA	SCS02-56-0,18NP	SCREW CAP SKT 2-56 3/16L
34	2	EA	SCS02-56-0,12NP	SCREW CAP SKT 2-56 1/8L
35	1	EA	MMGGD1W2C	SWITCH LIMIT LEAF ROLLER
36	1	EA	13090651-01	MOTOR DRIVE 20 RPM ROTR
37	1	EA	13090652-01	GEAR PINION ASSY COUPLING TYPE
38	2	EA	420905314-01	SCREW HINGE (44D21)
42	6	IN	M23053/5-107-0	TBG SHRINK 3/8 ID BLK
43	1	EA	OO-86	SPRING CPRSN .48D .37L .035W
44	1	EA	42090654-02	COUPLING INSULATING M9
45	1	EA	42090654-03	SPACER SPRING .39ID .49D .2OLG
46	1	EA	130901121-02	TRIM POT ASSY M9-250
47	1	EA	13090655-01	GEAR AND SHAFT ASSY
48	1	EA	42090662-01	GEAR DRIVE M9-250
49	1	EA	5610-103-40	WASHER NYLON .75 OD .199 ID .040 THK.
50	2	EA	SFL02-56-0,25SS	SCREW FLH SLT 2-56 1/4L
51	1	EA	420907195-02	SPRING, LEAF CONDUCTOR SHOE M9-250
52	4	EA	SFL02-56-0,18NP	SCREW FLH SLT 2-56 3/16L

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ISSUED: 19 AUGUST 1993
REVISED: 29 DECEMBER 2011



FOR REFERENCE ONLY

MODEL: 9-250
IPB: 0905187
STANDARD CLAMP ASSEMBLY
PAGE 1 OF 2

IPB NUMBER: 0905187
DATE EFFECTIVE: 19-Aug-93
DATE REVISED: 29-Dec-11

TO ORDER
USE PART NUMBER
DO NOT USE IPB ITEM NUMBER

Arc Machines, Inc.

PRODUCT MODEL: 9-250
DESCRIPTION: STANDARD CLAMP ASSEMBLY
MANUAL NUMBER: 730077
NOTES:

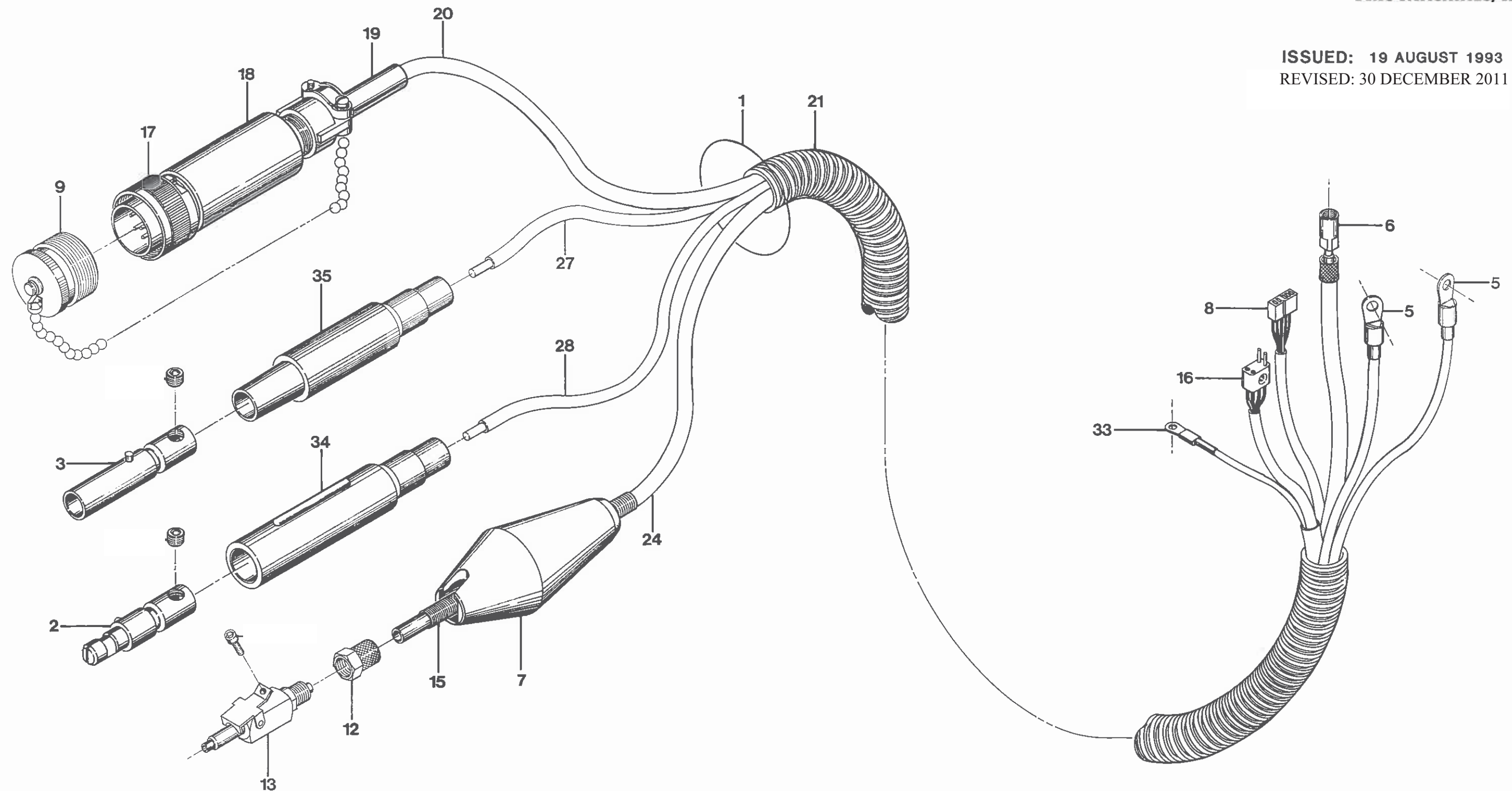
IPB ITEM NUMBER	QTY	UOM	PART NUMBER	DESCRIPTION
3	2	EA	130905187-01	PLATE CLAMP .125 OD M9-250
3A	2	EA	130905187-02	PLATE CLAMP .250 OD M9-250
5	1	EA	420905315-01	CLEVIS LATCH
6	1	EA	420905315-02	WINDOW CLOSURE
8	2	EA	SBL00-80-0,18NP	SCREW BTH SLT 0-80 3/16L
11	1	EA	PR09-0,18NP	PIN ROLL 3/32D 3/16L
14	1	EA	130905188-01	SCREW THUMB

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ISSUED: 19 AUGUST 1993
REVISED: 30 DECEMBER 2011



FOR REFERENCE ONLY

MODEL: 9-250
IPB: 090816
CABLE ASSEMBLY
PAGE 1 OF 2

IPB NUMBER: 090816
 DATE EFFECTIVE: 19-Aug-93
 DATE REVISED: 30-Dec-11

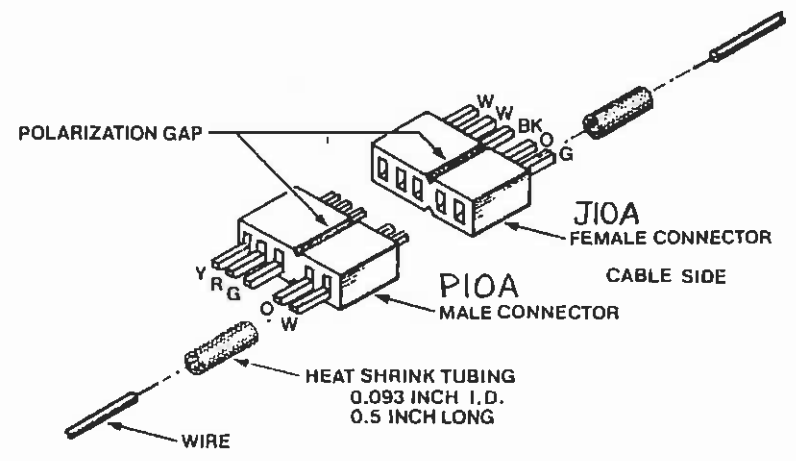
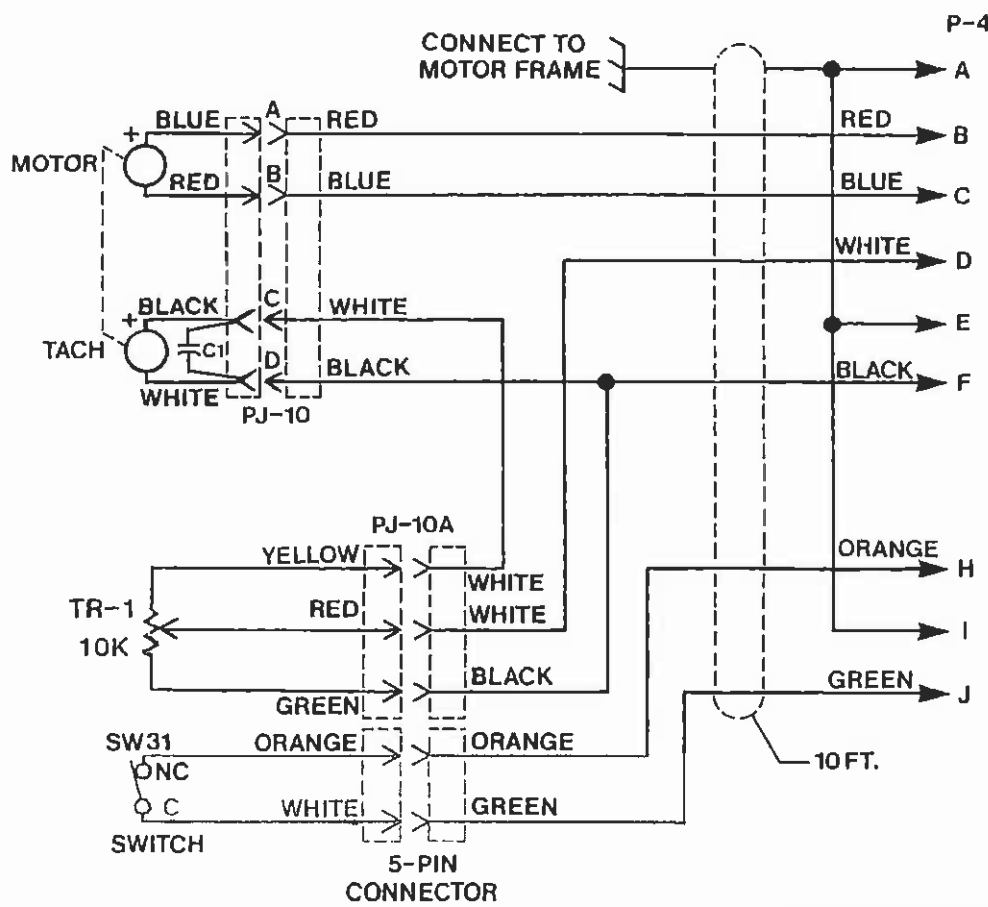
TO ORDER
 USE PART NUMBER
 DO NOT USE IPB ITEM NUMBER

Arc Machines, Inc.

PRODUCT MODEL: 9-250
 DESCRIPTION: CABLE ASSEMBLY
 MANUAL NUMBER: 730077
 NOTES:

IPB ITEM NUMBER	QTY	UOM	PART NUMBER	DESCRIPTION
1	1	EA	13090816-01	CABLE M9-500 CONTROL
2	1	EA	A100864-1	CONN CAM-LOK CONTACT MALE PLUG NO8-NO4 600V 150A
3	1	EA	A100865-1	CONN CAM-LOK CONTACT FEMALE PLUG NO8-NO4 600V 150A
5	2	EA	B3407H	TERM RING #10 16-12AWG
6	1	EA	2PF1	FTG 1/4-28 FEMALE
7	1	EA	42060805-04	BOOT MALE GAS CLIP TYP Q/D
8	1	EA	7052	CONN 5 PIN FEMALE SUB-MINIATURE BLK W/ GOLD PINS
9	1	EA	1350110-04	DUST CAP ASSY W/CHAIN(MALE18D)
12	1	EA	261-PG-04	NUT/SLEEVE SPRING 1/4 TUBE
13	1	EA	1351109-01	COUPLING Q/D ASSY MALE GAS FOR 1/4 TUBING
15	1	EA	AS200718	SPRING GUARD .34 OD 18.00 LG
16	1	EA	JF2P2SCD	CONN 4 PIN PLUG MINIATURE (GRY) (A,B-SKTS C,D-PINS)
17	1	EA	MS3106E18-1PF42	CONN 10 PIN STRAIGHT PLUG W/OUT ENDBELL
18	1	EA	G1501N186A3A	CONN BACKSHELL
19	1	EA	MS39056-3	CONN TELESCOPING BUSHING 5/16 DIA CABLE
20	21	FT	710023-01	CABLE, 09/22GA 0.270OD SHLD HYT WHT-POLYUR JKT 4TP+1
21	19	FT	RC-150-2-BLK	CONDUIT FLEX .60 ID .79 OD BLK
24	21	FT	44-P-YELLOW	TBG POLYETHYLENE YELLOW POLY-FLO 1/4 OD .040 WALL
27	20	FT	AS105-4-BLK	CABLE WELD 10AWG SILICONE GND
28	20	FT	AS105-4-RED	CABLE WELD 10AWG SILICONE ELEC
33	1	EA	34119	TERM RING 16-14 #4
34	1	EA	A100869-7	CONN CAM-LOK INSUL MALE PLUG BLK NO8- NO4 600V 150A
35	1	EA	A100868-7	CONN CAM-LOK INSUL FEMALE PLUG BLK NO8- NO4 600V 150A

LTR	DCO	REVISIONS	DATE	BY	APPR
A	1438	REMOVE OLD MOTOR DIAGRAM	5-10-91	JRM	GPE
B	1716	C & D ON PJ-10 REVISED	11-24-92	MH	CH
C		ADD M9-250 TO USED ON LIST	10-5-93	LEC	GPE
D	2947	ADDED PIOA & JIOA. REMOVED PN'S FOR PIDA, JIDA, P4	12-4-97	ML	GPE



ITEM	QTY	IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MFR	PART NO
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PARTS LIST

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<p>UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS DECIMALS ANGLES ± 1/16" ± 0.005" ± 0.01" ± 0.1°</p> <p>ALL MACHINING SURFACES TO BE FINISHED</p>		<p>THIRD ANGLE PROJECTION</p>		<p>FOR BAYLED STANDARDS SET DOL-STD-100</p>		<p>ARC MACHINES INC.</p>	
<p>9-250</p> <p>9-500</p> <p>988-1250</p>		<p>APPROVALS</p> <p>J. B. L. E.</p>		<p>DATE</p> <p>0-16-87</p>		<p>DESCRIPTION</p> <p>MODEL 9 WELD HEAD WIRING DIAGRAM</p>	
<p>NEXT ASSY USED ON</p>		<p>MATERIAL</p>		<p>J. McDonald 6-18-87</p> <p>GPE 6-18-87</p>		<p>SIZE MODEL NO DRWG NO</p> <p>A 175144 - 06</p>	
<p>APPLICATION</p>		<p>QUOTATION</p>		<p>SCALE</p>		<p>DO NOT SCALE DRAWING SHEET 1 OF 1</p>	

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