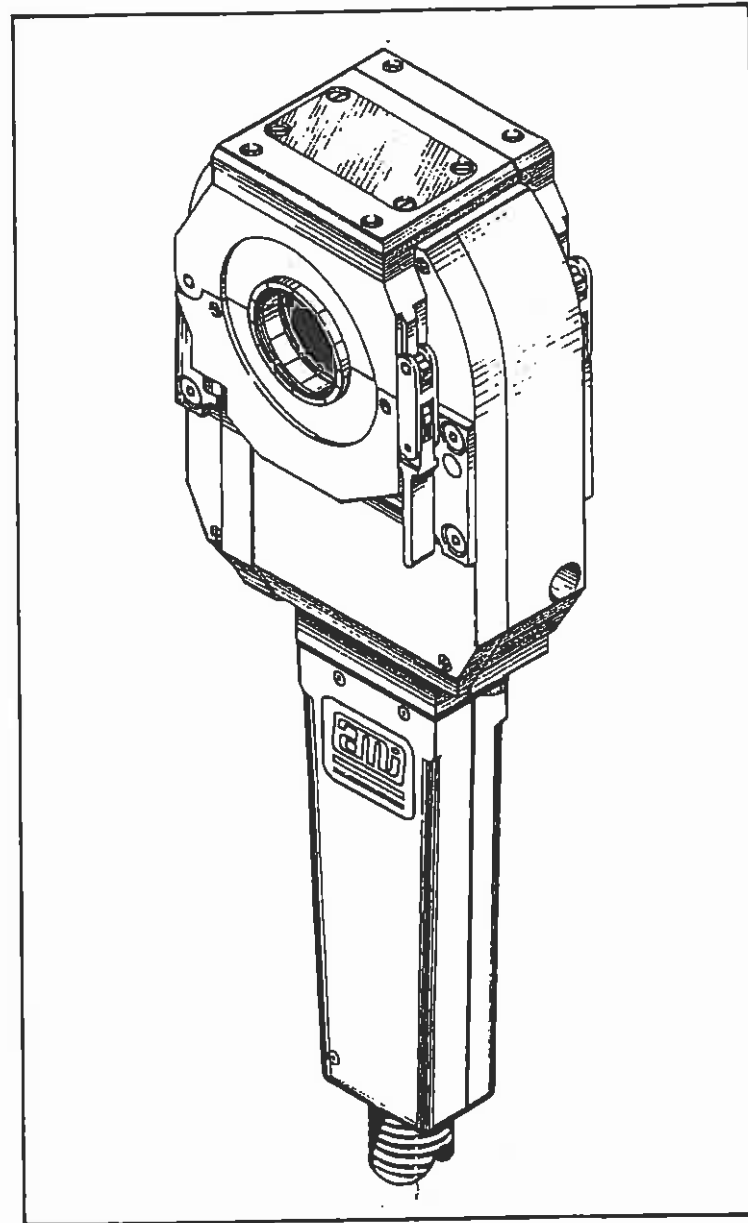




ARC MACHINES INC.



## **MODEL 9-2500**

**ILLUSTRATED PARTS BREAKDOWN**

**MODEL 9-2500**  
**IPB Notice and Revision History**


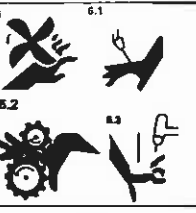

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**WARNING**



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.

	<b>WARNING:</b> 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.
	<b>WARNING:</b> 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  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. <b>USE EXTREME CAUTION!</b>
	<b>Electrical Shock Hazard:</b> Always disconnect weld heads when servicing internal components or opening housing covers for access.

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REV	ECO #	CHANGE DESCRIPTION	DATE	BY	APR
A	4678	On 090114 Change Item 6 & 23	3/7/08	SO	BF
B	4784	On IPB 090114, changed Item 129 to 13090124-02 was 42090174-11	5/21/08	SO	BF
C	4779	Added rev D of 750015	5/26/08	SO	BF
D	5579	Added rev F of 750015 and Wiring Diagram	1/13/10	CB	DC
E	5753	Added IPBs 090206-02 & -03, 0907128, 0907136 & 090800; Deleted IPB 090811, pg 4 of 090114 and removed cable parts	10/6/10	GB	DC

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DATE EFFECTIVE: 13 Jun 1994

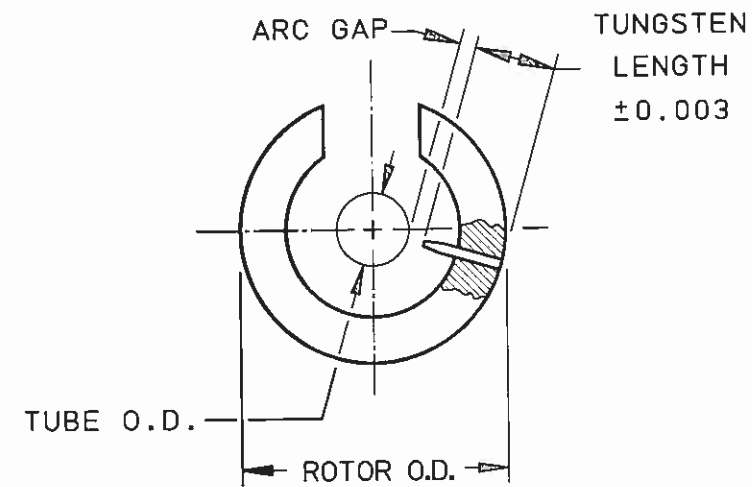
PRODUCT MODEL: 9-2500  
MANUAL NUMBER: 730018

<b>IPB NUMBER</b>	<b>DESCRIPTION</b>
750015	MODEL 9 ELECTRODE DIMENSIONS
090114	MAIN ASSEMBLY
090169	M9AF-2500 WELD HEAD ASSEMBLY
090514	LOCATING ARM KIT
090103	MODEL 9E CONFIGURATION
750031	MODEL 9 CONVERSION TO MODEL 9E
0901116	MODEL 9EDL-2500 WELD HEAD ASSEMBLY
090611	MODEL 9EDL-2500 DRIVE UNIT ASSEMBLY
090206	MODEL 9EDL-2500 HOUSING UPPER ASSEMBLY
090206-02	MODEL 9-2500 (BOEING) HOUSING UPPER ASSEMBLY
0907128	MODEL 9-2500 (BOEING) ROTOR, 360 DEG SOLID ASSY
090206-03	MODEL 9-2500 (BOEING) HOUSING UPPER ASSEMBLY
0907136	MODEL 9-2500 (BOEING) ROTOR ASSY, 360 DEG (TUBIFLEX)
090800	MODEL 9 CABLE ASSEMBLY 10 FT
175144-04	MODEL 9 WELD HEAD WIRING DIAGRAM

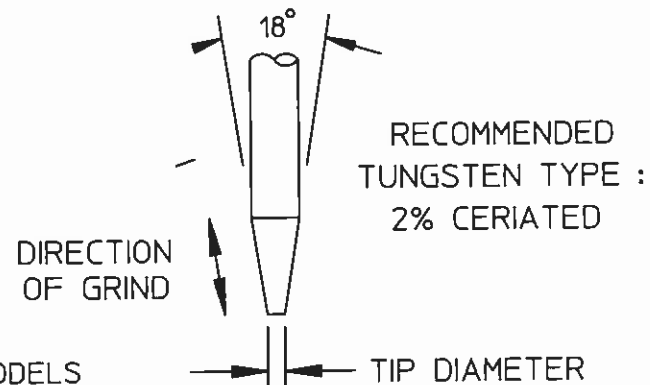
## ELECTRODE DIMENSIONS

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.	

$$\frac{\text{ROTOR O.D.} - \text{TUBE O.D.}}{2} - \text{ARC GAP} = \text{TUNGSTEN LENGTH}$$



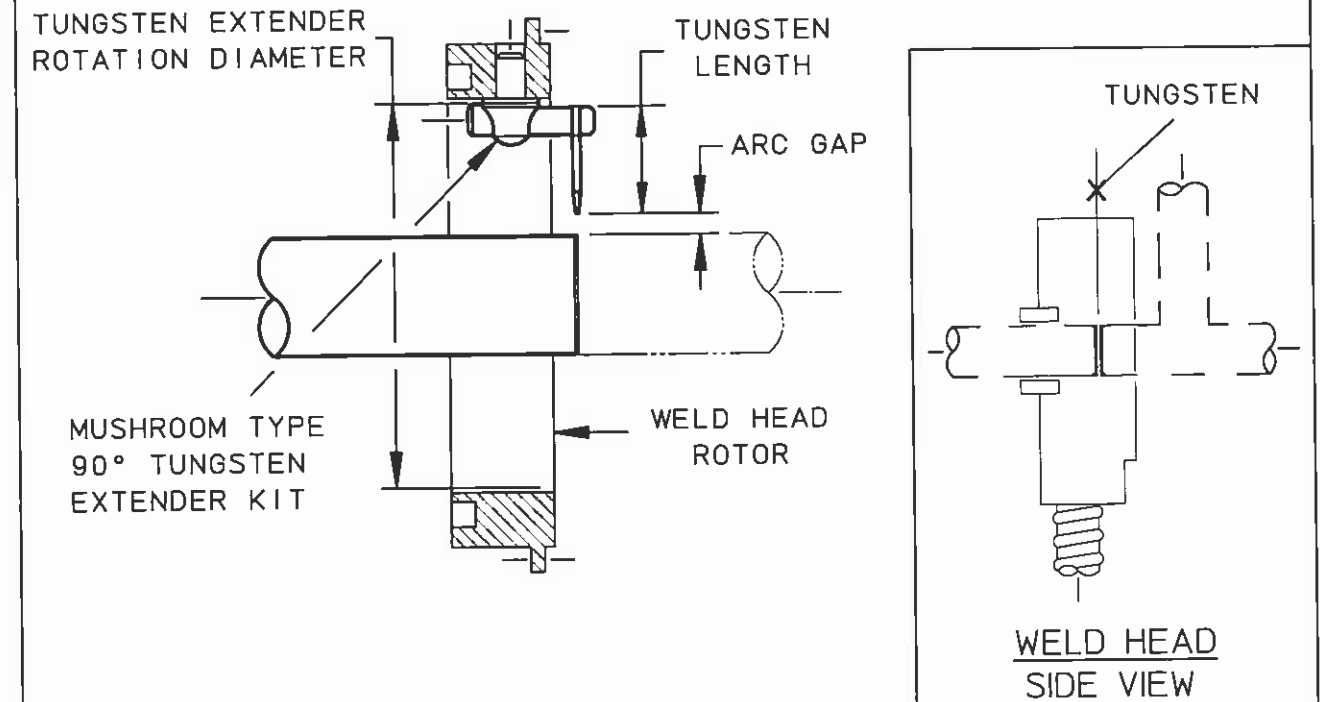
TUBE/PIPE WALL THICKNESS	RECOMMENDED ARC GAP	RECOMMENDED TIP DIA.
0.020/0.035	0.030	0.020
0.049/0.085	0.050	0.030
0.091/0.154	0.070	0.040



- 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.

## TUNGSTEN LENGTH CALCULATION FOR TUNGSTEN EXTENDERS

$$\frac{\text{EXT. ROTATION DIA} - \text{TUBE O.D.}}{2} - \text{ARC GAP} = \text{TUNGSTEN LENGTH} \pm 0.003$$

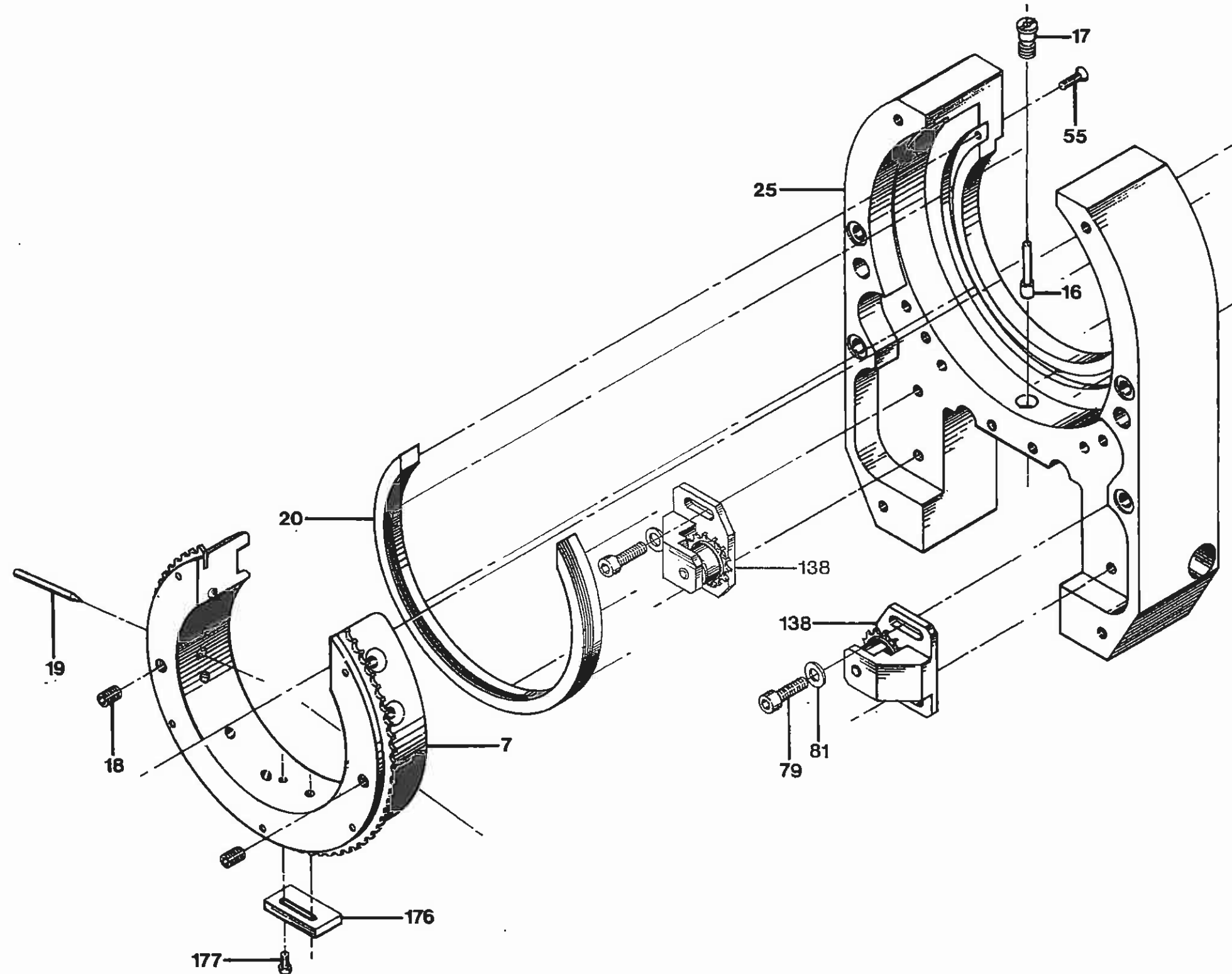


WELD HEAD MODEL NO.	KIT WITH 1/16 TUNGSTEN HOLDER PART NO.	KIT WITH 3/32 TUNGSTEN HOLDER PART NO.	TUNGSTEN EXTENDER ROTATION DIA.
9-1500	13090796-01	13090796-02	2.031
9-2500	13090796-05	13090796-06	3.156
9-3500	13090796-05	13090796-06	4.031
9-4500	13090796-03	13090796-04	4.920
9-7500	13090796-05	13090796-06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

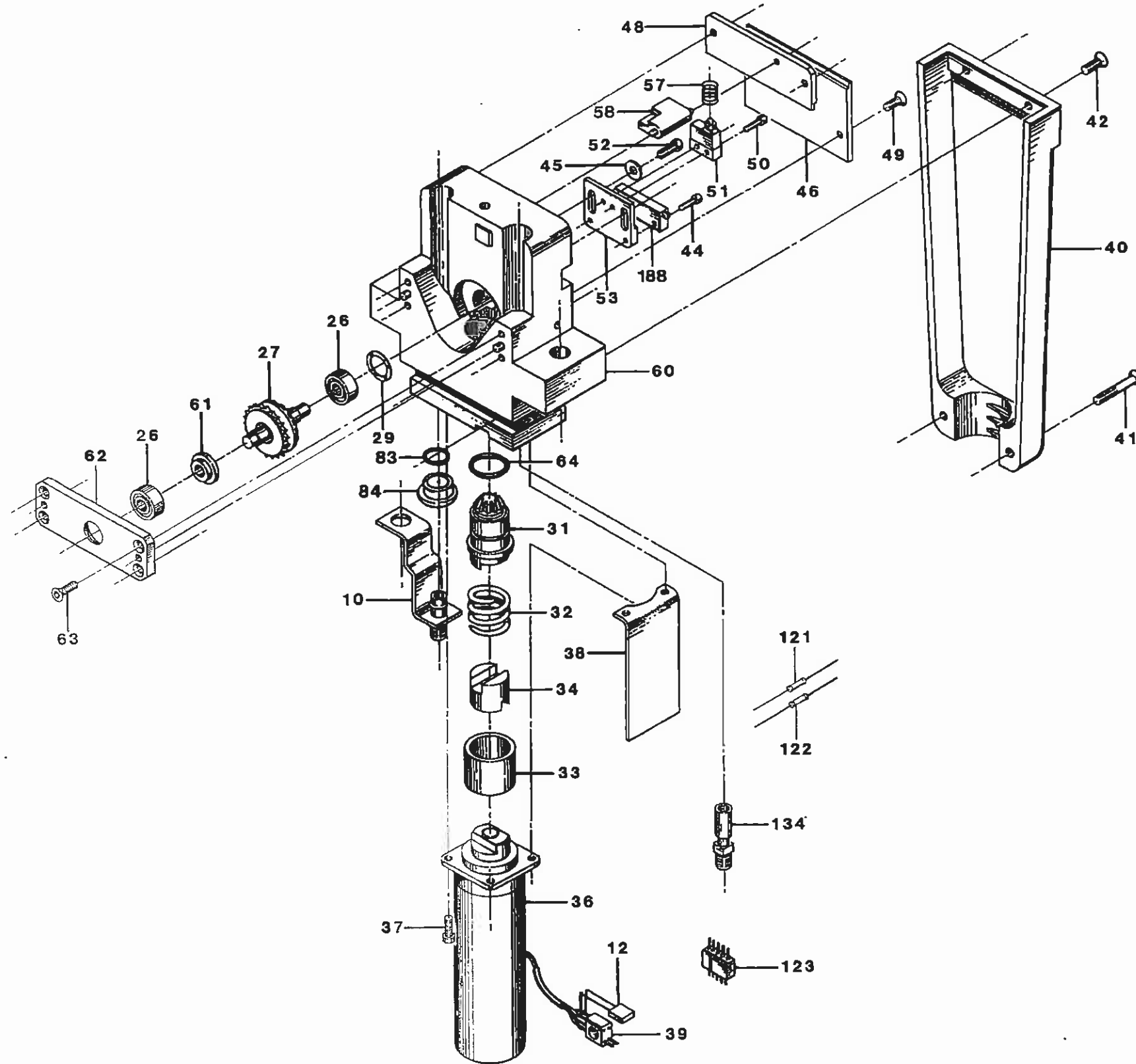
### NOTES:

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





MODEL 9-2500  
IPB 090114  
HOUSING ASSEMBLY



MODEL 9-2500  
IPB 090114  
DRIVE ASSEMBLY

IPB NUMBER: 090114

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.  
PRODUCT MODEL: M9-2500  
DESCRIPTION: MAIN ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION	
1	2	EA	SCS31-18-1.25NP	SCREW CAP SKT 5/16-18 1-1/4 L	
2	0	-	-	-----	
3	4	EA	SCS08-32-0.87NP	SCREW CAP SKT 8-32 7/8 L	
4	0	-	-	-----	TUBE CLAMP INSERT-ORD BY SIZE
5	4	EA	SCS06-32-0.37NP	SCREW CAP SKT 6-32 3/8 L	
6	1	EA	130905271-01	CLAMP HSG COVER SIDE	ITEMS 24, 59 & 180 INCLUDED
7	1	EA	13090774-01	ROTOR 9-2500	ITEMS 18, 176 AND 177 INCLUDED
8	0	-	-	-----	
10	1	EA	13090723-01	GROUND STRAP	
11	2	EA	SCS25-20-0.62SP	SCREW CAP SKT 1/4-20 5/8 L SP	
12	1	EA	CK06BX104K	CAP 0.1MF 100V 10%	
13	1	EA	42090152-01	COVER	
14A	0.5	FT	029173	TBG SILICONE 1/8ID 1/4OD RED	
14B	0.08	FT	FP-301-0.25	TBG SHRINK	
14C	18	IN	MS20995C25	LOCKWIRE 1LB SPOOL .025D 304SS	
15	2	EA	W25NP-FL	WASHER FL 1/4	
16	1	EA	42091109-04	PIN ACT 9-2500	
17	1	EA	42091110-01	BUSHING ACTUATOR	
18	3	EA	SSS06-32-18NPCU	SCREW SET SKT 6-32 3/16 L CUPT	
19	0	-	-	-----	TUNGSTEN
20	1	EA	42090758-01	GUIDE RING	
21	4	EA	SCS08-32-0.75NP	SCREW CAP SKT 8-32 3/4 L	
22	0	EA	-	-----	
23	1	EA	130905270-01	CLAMP HSG HSG SIDE	ITEMS 180 & 24 INCLUDED
24	2	EA	PD12-0.31SS	PIN DOWEL 1/8D 5/16L SST	
25	1	EA	42090153-01	HOUSING UPPER	ITEMS 16,17,60 & 172 INCLUDED
26	2	EA	SSR-3LLRA3P2 [	BEARING BALL .18 .50 [5LY-101]	
27	1	EA	13090613-01	GEAR BEVEL	
28	0	-	-	-----	
29	1	EA	SV-8	SPRING WAVE WASHER .351D .44	
30	0	-	-	-----	
31	1	EA	13090602-07	GEAR PINION DRIVE	
32	1	EA	15156	SPRING CPRSN .81D .70L .067W	
33	1	EA	42090602-04	SPACER SPRING	
34	1	EA	42090602-03	COUPLING INSULATING DELRIN	
35	1	EA	13090800-01	CABLE M9 10 FT	
36	1	EA	13090602-03	MOTOR DRIVE PINION 81 RPM	ITEMS 12 AND 39 INCLUDED

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE



IPB NUMBER: 090114

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: M9-2500  
DESCRIPTION: MAIN ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
37	4	EA	SCS04-40-0.31NP	SCREW CAP SKT 4-40 5/16 L
38	1	EA	42091102-04	INSULATOR SKIRT
39	1	EA	JF2P2SCD	CONN 4 PIN PLUG MINIATURE
40	2	EA	42090104-01	HANDLE
41	2	EA	SFS04-40-1.00NP	SCREW FLH SKT 4-40 1.00 L
42	4	EA	SFS04-40-0.37NP	SCREW FLH SKT 4-40 3/8 L
43	0	-	-	-----
44	2	EA	SCS02-56-0.25NP	SCREW CAP SKT 2-56 1/4 L
45	1	EA	W04-FL	WASHER FLAT #4
46	1	EA	42090619-02	COVER PLATE BOT LIMIT SW
47	0	-	-	-----
48	1	EA	42090619-01	COVER PLATE TOP LIMIT SW
49	4	EA	SFS04-40-0.31NP	SCREW FLH SKT 4-40 5/16 L
50	2	EA	SCS02-56-0.25NP	SCREW CAP SKT 2-56 1/4 L
51	1	EA	MMGGD1DOC	SWITCH LIMIT PLUNGER
52	2	EA	SCS04-40-0.25NP	SCREW CAP SKT 4-40 1/4 L
53	1	EA	42090616-05	PLATE LIMIT SWITCH
54	0	-	-	-----
55	7	EA	SFL06-32-0.50NY	SCREW FLH SLT 6-32 1/2 L NYL
56	1	EA	42090501-02	CLOSURE END
57	1	EA	L-14	SPRING CPRSN .25D .43L .020W
58	1	EA	42091108-03	LEVER LIMIT SW ACTR
59	1	EA	650	PLUG 1/4 DIA HOLE
60	1	EA	42090146-01	HOUSING DRIVE
61	1	EA	42090617-02	SPACER BEVEL GEAR
62	1	EA	42090548-02	RETAINER PLATE
63	4	EA	SFS04-40-0.37NP	SCREW FLH SKT 4-40 3/8 L
64	1	EA	2-014	O RING .489 ID .070 W
65	1	EA	JF2S2PGD	CONN 4 SOCKET RECEPTACLE MINTR
66	0	-	-	-----
67	0	-	-	-----
77	2	EA	13090622-01	BRACKET DRIVE SPROCKET
78	1	EA	13090623-01	TENSIONER CENTER
79	6	EA	SCS08-32-0.37NP	SCREW CAP SKT 8-32 3/8 L
80	2	EA	SCS08-32-0.75NP	SCREW CAP SKT 8-32 3/4 L
81	6	EA	W08NP-FL	WASHER FLAT #8
82	1	EA	RC14SS-117	OBS USE P/N 47SS-117

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

IPB NUMBER: 090114

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: M9-2500  
DESCRIPTION: MAIN ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
83	1	EA	2-010-S604-70	O RING .238 ID .070 W SILICONE
84	1	EA	420901126-02	GROMMET
87	2	EA	42090164-03	PIN .312D 2.45L 9-2500
88	0	-	-	-----
89	0	-	-	-----
91	2	EA	W31SS-FL	WASHER FL 5/16 SIZE SST
<del>92</del>	<del>1</del>	<del>EA</del>	<del>42060000 02</del>	<del>COUPLING Q/D CONN (SM-251B)</del>
<del>93</del>	<del>1</del>	<del>EA</del>	<del>SM252B</del>	<del>COUPLING</del>
<del>94</del>	<del>1</del>	<del>EA</del>	<del>294 PMB 04</del>	<del>DO NOT BELL USE. 1351109 01</del>
<del>95</del>	<del>1</del>	<del>EA</del>	<del>M8310GB18 1P</del>	<del>CONN 18 PIN PLUG</del>
<del>96</del>	<del>1</del>	<del>EA</del>	<del>G1501N186A3A</del>	<del>CONN BACKSHELL</del>
97	4	EA	2-106-S604-70	O RING .174 ID .103 W SILICONE
98	0	-	-	-----
<del>99</del>	<del>1</del>	<del>EA</del>	<del>MS39056 3</del>	<del>CONN TELESCOPIC BUSHING</del>
105	0	-	-	-----
106	0	-	-	-----
107	0	-	-	-----
121	1	EA	RN55D1300F	RES 130 OHMS 1/4W
122	1	EA	RN55D7871F	RES 7.87K
123	1	EA	5PM	OBS USE 7051
<del>124</del>	<del>1</del>	<del>EA</del>	<del>5PF</del>	<del>OBS USE 7052</del>
125	0	-	-	-----
<del>126</del>	<del>1</del>	<del>EA</del>	<del>2PF1</del>	<del>FTG 1/4 20 FEMALE</del>
<del>127</del>	<del>2</del>	<del>EA</del>	<del>42060000 01</del>	<del>OBS (USE ARC-1001)</del>
128	2	EA	420907159-02	HEAT SHIELD 9-2500
129	4	EA	13090124-02	SCREW INSULATED
130	4	EA	SCS04-40-0.50NP	SCREW CAP SKT 4-40 1/2 L
131	4	EA	SFL06-32-0.37NY	SCREW FLH SLT 6-32 3/8 L NYL
132	1	EA	42090501-03	WINDOW
134	1	EA	13090803-01	TUBE FTG GAS
<del>135</del>	<del>1</del>	<del>EA</del>	<del>R61002GSB</del>	<del>TERM 16-14 AWG #6</del>
136	0	-	-	-----
138	2	EA	13090623-02	TENSIONER SIDE
139	0	-	-	-----
140	0	-	-	-----
<del>144</del>	<del>1</del>	<del>EA</del>	<del>42060005 04</del>	<del>BOOT MALE GAS</del>
<del>145</del>	<del>2</del>	<del>EA</del>	<del>42060004 01</del>	<del>BOOT MALE POWER/GROUND</del>

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

IPB NUMBER: 090114

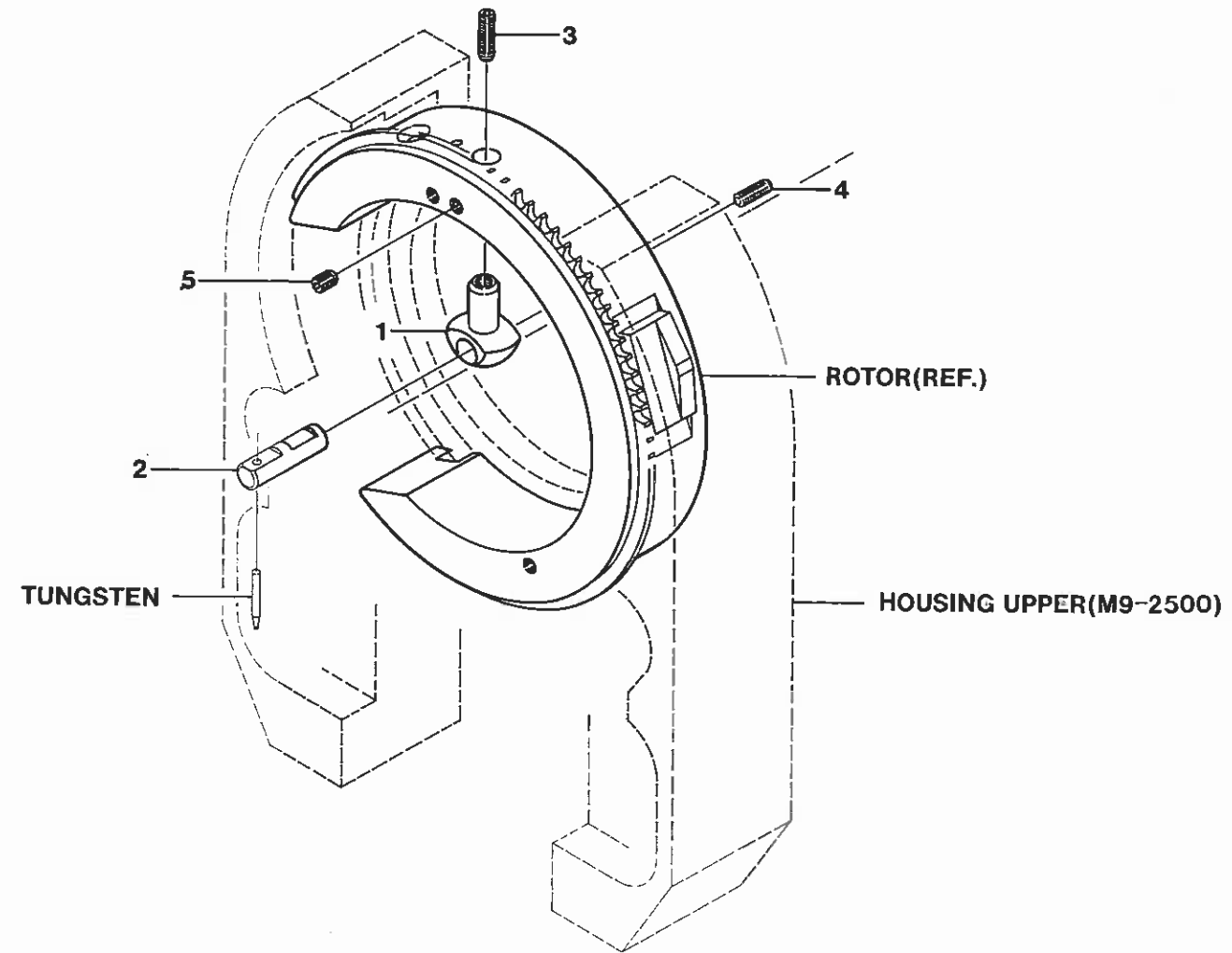
TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: M9-2500  
DESCRIPTION: MAIN ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
<del>146</del>	<del>2</del>	<del>EA</del>	<del>42060800-07</del>	<del>PTG COUPLING HOSE/CABLE</del>
147	0	-	-	-----
148	0	-	-	-----
171	1	EA	42090749-01	CONDUCTOR GND STRAP
172	1	EA	SPL25-20-0.50NY	SCREW PNH SLT 1/4-20 1/2 L NYL
173	0	-	-	-----
<del>174</del>	<del>1</del>	<del>EA</del>	<del>261 PG 04</del>	<del>PTG NUT/SLEEVE SPRING 1/4 TUBE</del>
<del>175</del>	<del>1</del>	<del>EA</del>	<del>AS200718</del>	<del>SPRING GUARD .34 OD 18.00 LG</del>
176	1	EA	42090548-05	CAM SWITCH
177	2	EA	SCS04-40-0.31NP	SCREW CAP SKT 4-40 5/16 L
178	0	-	-	-----
180	2	EA	13090565-01	LATCH ASSY M9-1500, 2500, 3500
<del>185</del>	<del>1</del>	<del>EA</del>	<del>1350110-04</del>	<del>DUST CAP ASSY W/CHAIN(MALE10D)</del>
186	1	EA	13090769-01	CONDUCTOR RING 9-2500
187	0	-	-	-----
188	1	EA	3057L-1-202	POT TRIM 2K OHM 5%
189	1	EA	130905214-02	CLOSURE FLIP-TOP 9-2500
190	1	EA	420907214-01	PLATE BACKING M9-2500
<del>200</del>	<del>9</del>	<del>FT</del>	<del>DUCT 0.87 50 W</del>	<del>CONDUIT WHIT 0.87 ID</del>
<del>201</del>	<del>6</del>	<del>IN</del>	<del>M23053/5-111-0</del>	<del>TBC SHRINK 1 1/3 ID BLK</del>

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE



NOTE: USE STANDARD M9-2500 IPB  
FOR ALL OTHER PARTS

MODEL 9AF-2500  
IPB 090169  
WELD HEAD ASSEMBLY

IPB NUMBER: 090169

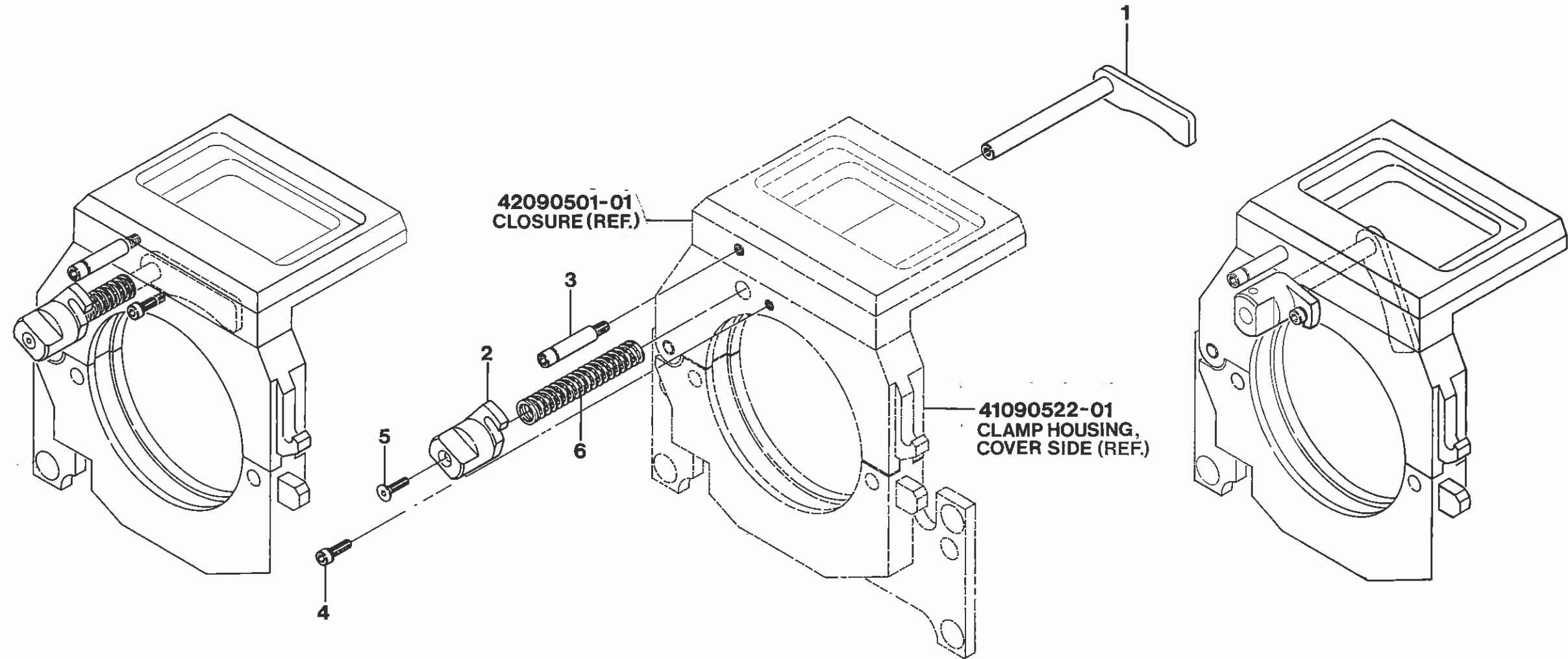
TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: 9-2500  
DESCRIPTION: WELD HEAD ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
1	1	EA	420907155-01	HOUSING TUNGSTEN HOLDER STD
2	1	EA	420907155-04	HOLDER TUNG .062 DIA
2A	1	EA	420907155-05	HOLDER TUNG .093 DIA
3	1	EA	420907144-13	SCREW SET SKT 6-32 1/2 L FLPT
4	1	EA	420907144-12	SCREW SET SKT 6-32 3/8 L FLPT
5	1	EA	420907144-09	SCREW SET SKT 6-32 3/16 L FLPT

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE



MODEL 9-2500  
IPB 090514  
ARM LOCATING KIT

IPB NUMBER: 090514

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: 9-2500  
DESCRIPTION: LOCATING ARM KIT  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
1	1	EA	130905123-01	ARM LOCATING BRAZED
2	1	EA	130905108-01	KNOB ASSY 1500 2500 3500 4500
3	1	EA	420905277-04	STOP (44D22)
4	1	EA	SCS04-40-0.37NP	SCREW CAP SKT 4-40 3/8 L
5	1	EA	SFS02-56-0.31NP	SCREW FLH SKT 2-56 5/16 L
6	1	EA	S-910	SPRING CPRSN .31D 2.00L .024W

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

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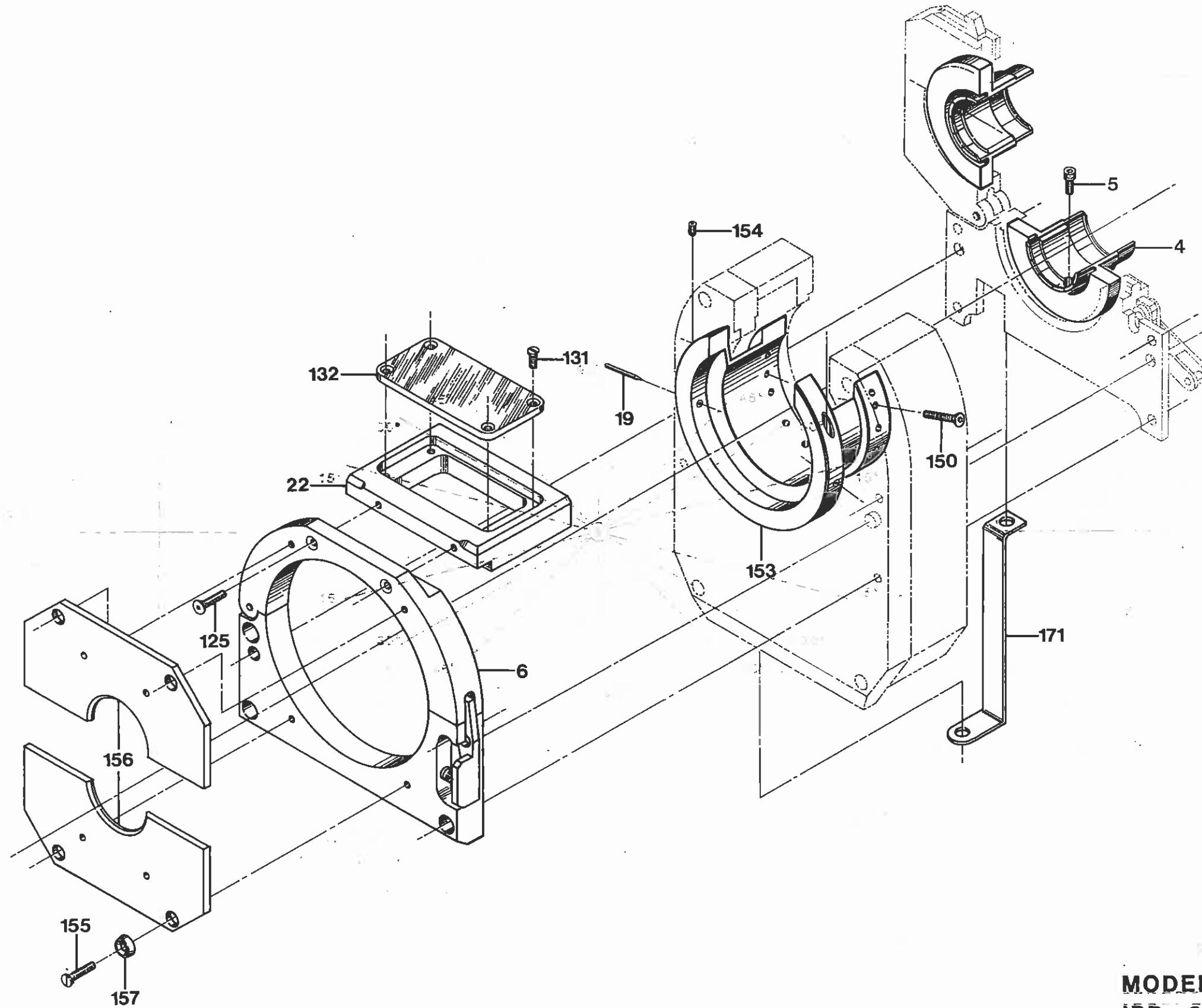
BASIC USE 10 POINT  
HELVETICA REGULAR



ARC MACHINES INC.

ART No. \_\_\_\_\_  
USE 10 POINT HELVETICA REGULAR ONLY

USE 10 POINT  
HELVETICA REGULAR ONLY



USE 10 POINT  
HELVETICA MEDIUM ONLY

MODEL 9E-2500  
IPB 090103  
MODEL 9E CONFIGURATION

DESCRIPTION

PAGE 1 OF 2



IPB NUMBER: 090103

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: 9-2500  
DESCRIPTION: MODEL 9E CONFIGURATION  
MANUAL NUMBER: 730018  
NOTES:

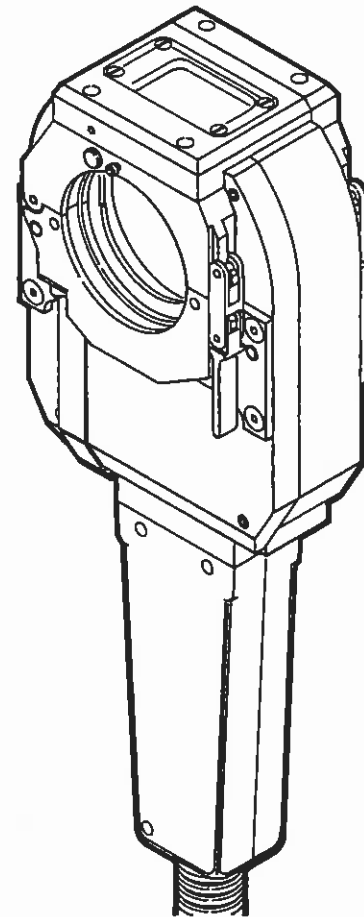
IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION	
1	0	-	-	-----	
4	0	-	-	-----	
5	2	EA	SCS06-32-0.37NP	SCREW CAP SKT 6-32 3/8 L	WIDE CLAMP INSERT-ORD BY SIZE
6	1	EA	13090551-01	HOUSING GAS SEAL 9E-2500	
7	0	-	-	-----	
19	0	-	-	-----	
22	1	EA	420905177-01	CLOSURE 9E-2500	ITEMS 131 AND 132 INCLUDED
23	0	-	-	-----	
125	2	EA	SFS08-32-0.62NP	SCREW FLH SKT 8-32 5/8 L	
126	0	-	-	-----	
131	4	EA	SFL06-32-0.31NY	SCREW FLH SLT 6-32 5/16 L NYL	
132	1	EA	42090501-03	WINDOW	
133	0	-	-	-----	
150	2	EA	SFS06-32-0.75NP	SCREW FLH SKT 6-32 3/4 L	
151	0	-	-	-----	
153	1	EA	13090738-01	ROTOR EXTENSION 9E-2500	
154	2	EA	420907144-12	SCREW SET SKT 6-32 3/8 L FLPT	
155	4	EA	SFL08-32-0.50NY	SCREW FLH SLT 8-32 1/2 L NYL	
156	0	-	-	-----	GAS SEAL-ORD BY SIZE
157	4	EA	11SFW0008	WASHER NYLON FINISHING #8	
158	0	-	-	-----	
171	1	EA	42090749-04	GROUND STRAP	
172	0	-	-	-----	
180	1	EA	13090158-02	KIT CVRSN M9-2500 TO M9E-2500	

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

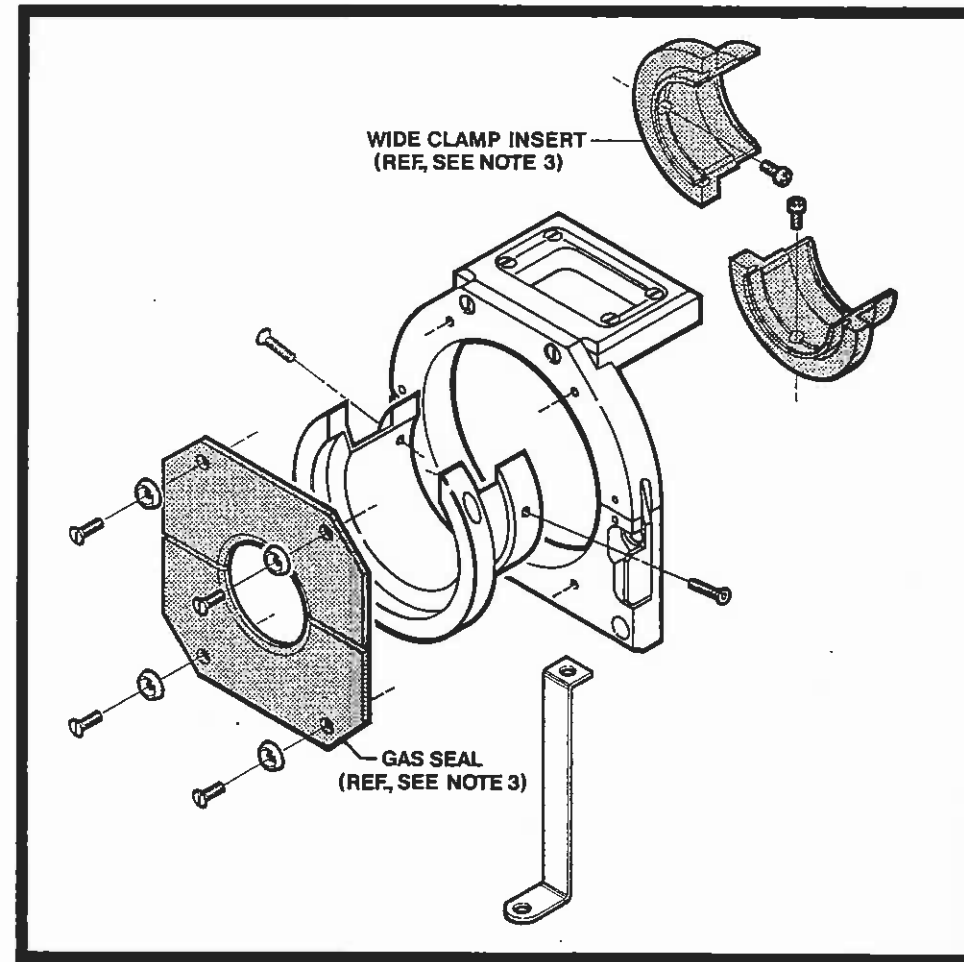
# MODEL 9 CONVERSION TO MODEL 9E INSTRUCTIONS

P/N 750031

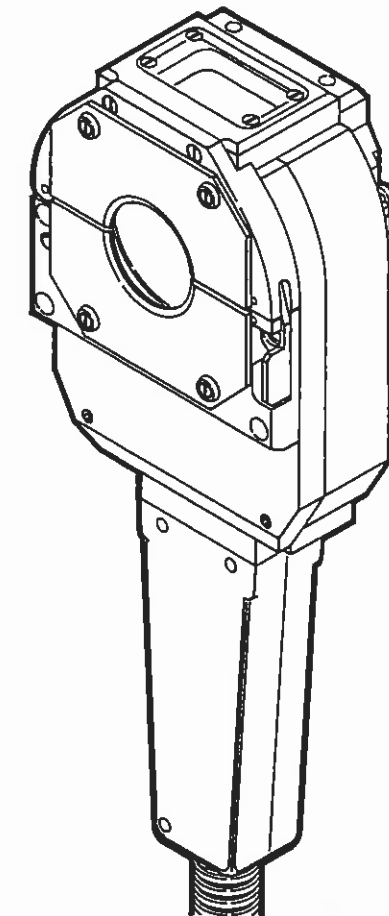
(MODELS 9-1500, 9-2500, 9-3500, 9-4500 AND 9-7500)



MODEL 9

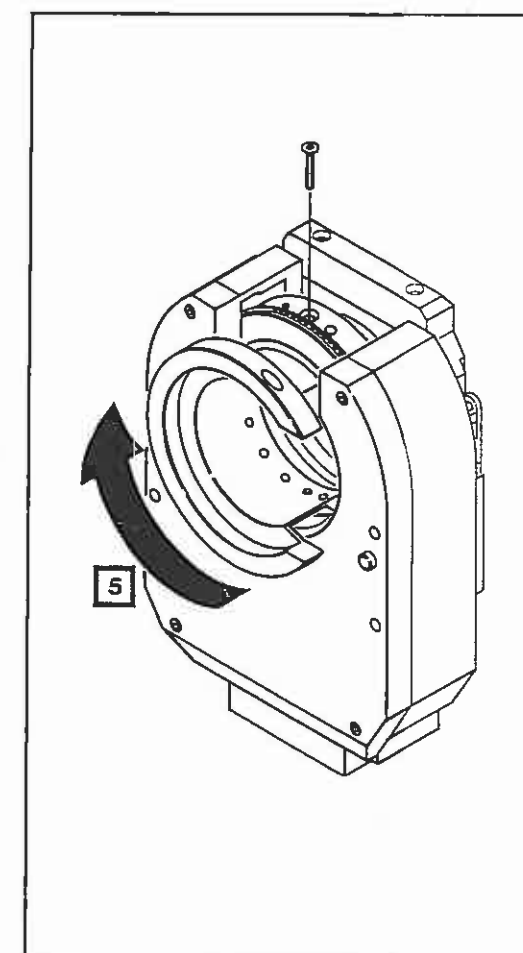
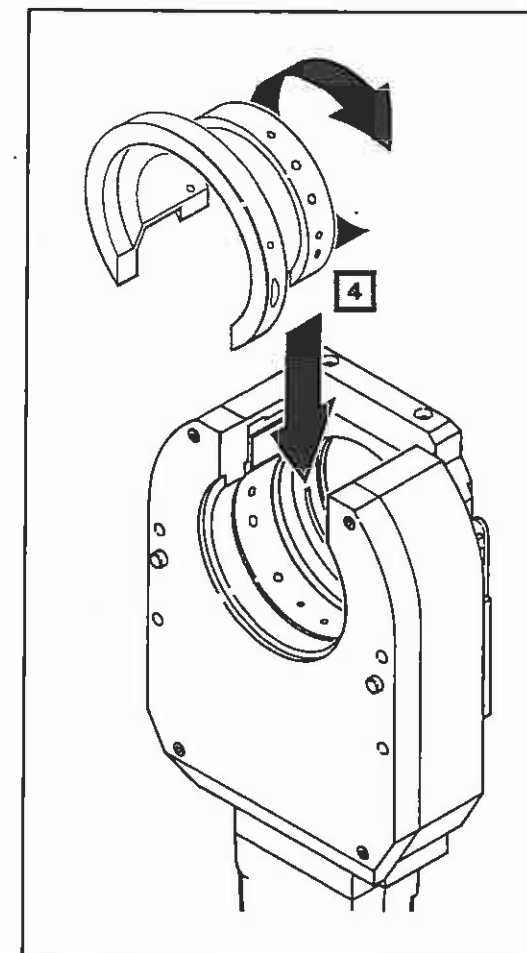
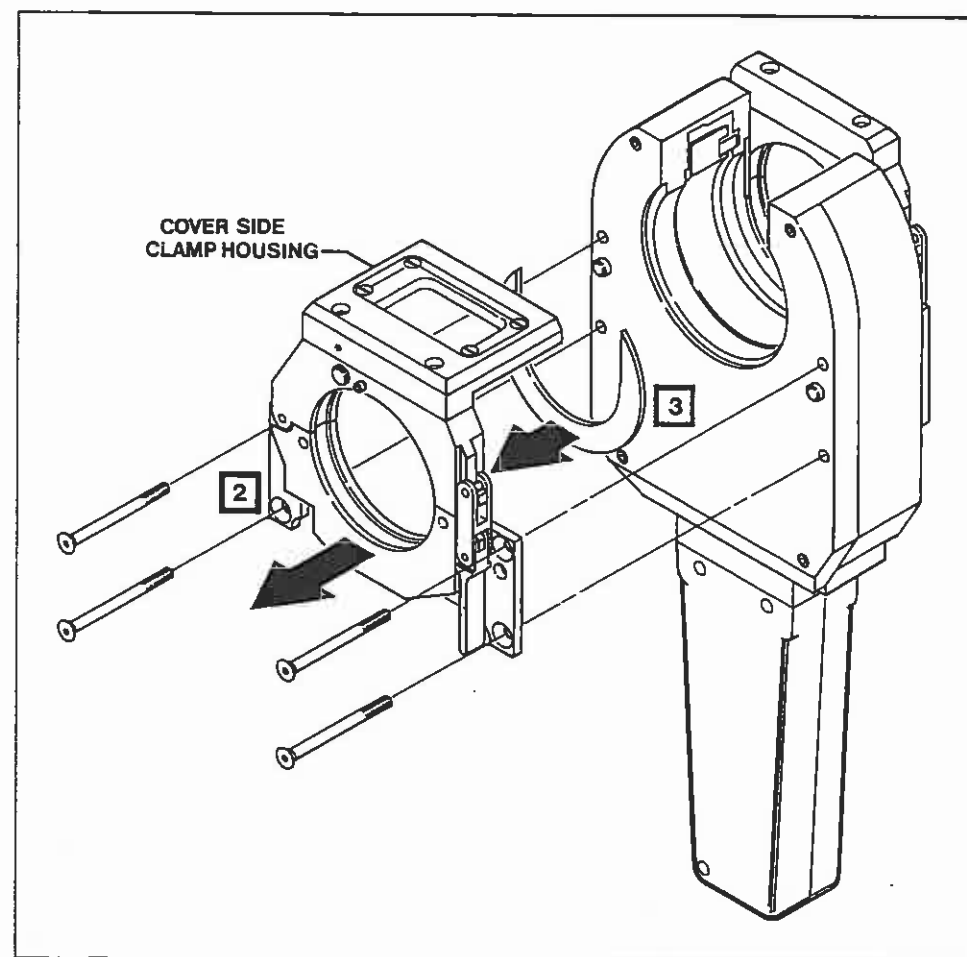
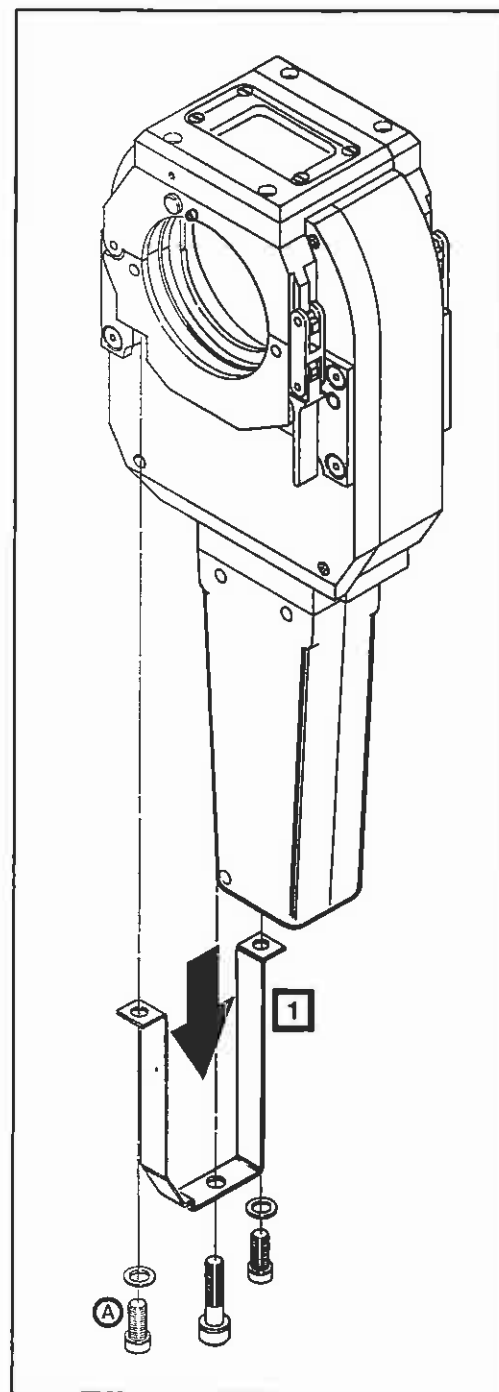


MODEL 9E KIT  
( OPTION )

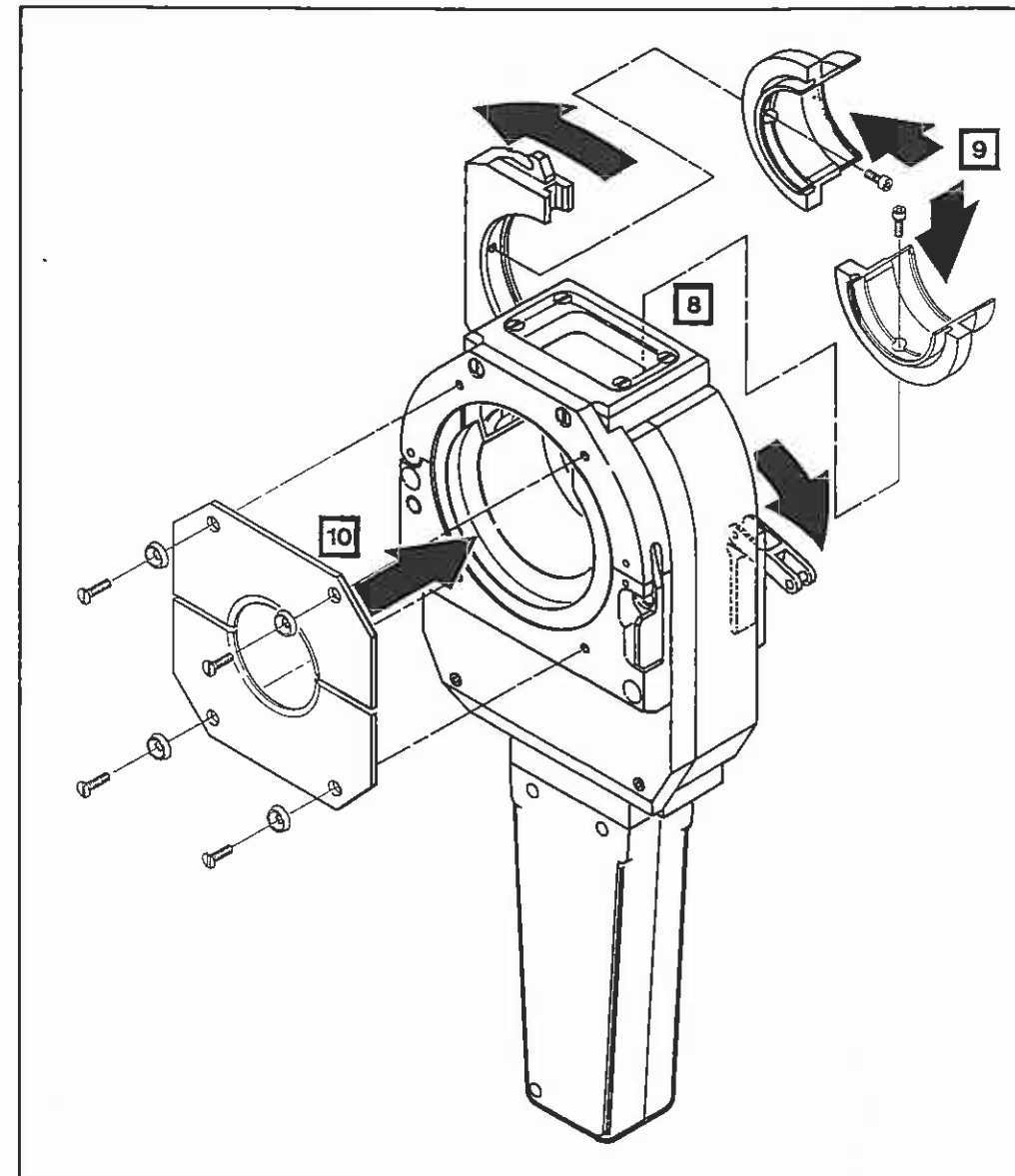
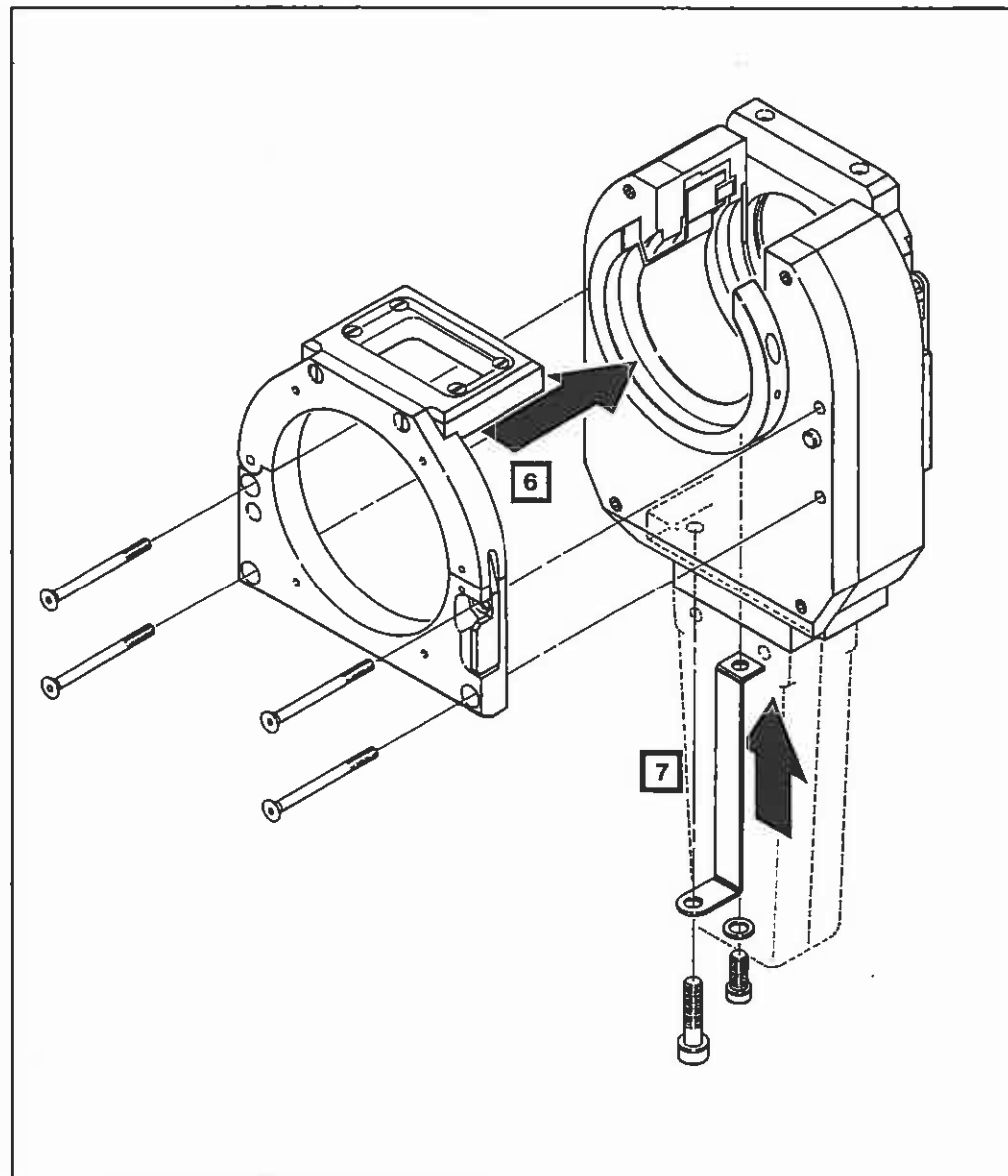


MODEL 9E

- NOTES :**
1. TO ORDER MODEL 9E KIT SPECIFY WELD HEAD MODEL NUMBER.
  2. MODEL 9-2500 USED FOR ILLUSTRATION.
  3. WIDE CLAMP INSERT AND GAS SEAL ARE NOT INCLUDED IN KIT.  
TO ORDER WIDE CLAMP INSERT AND GAS SEAL SPECIFY TUBE SIZE ( O.D. ).

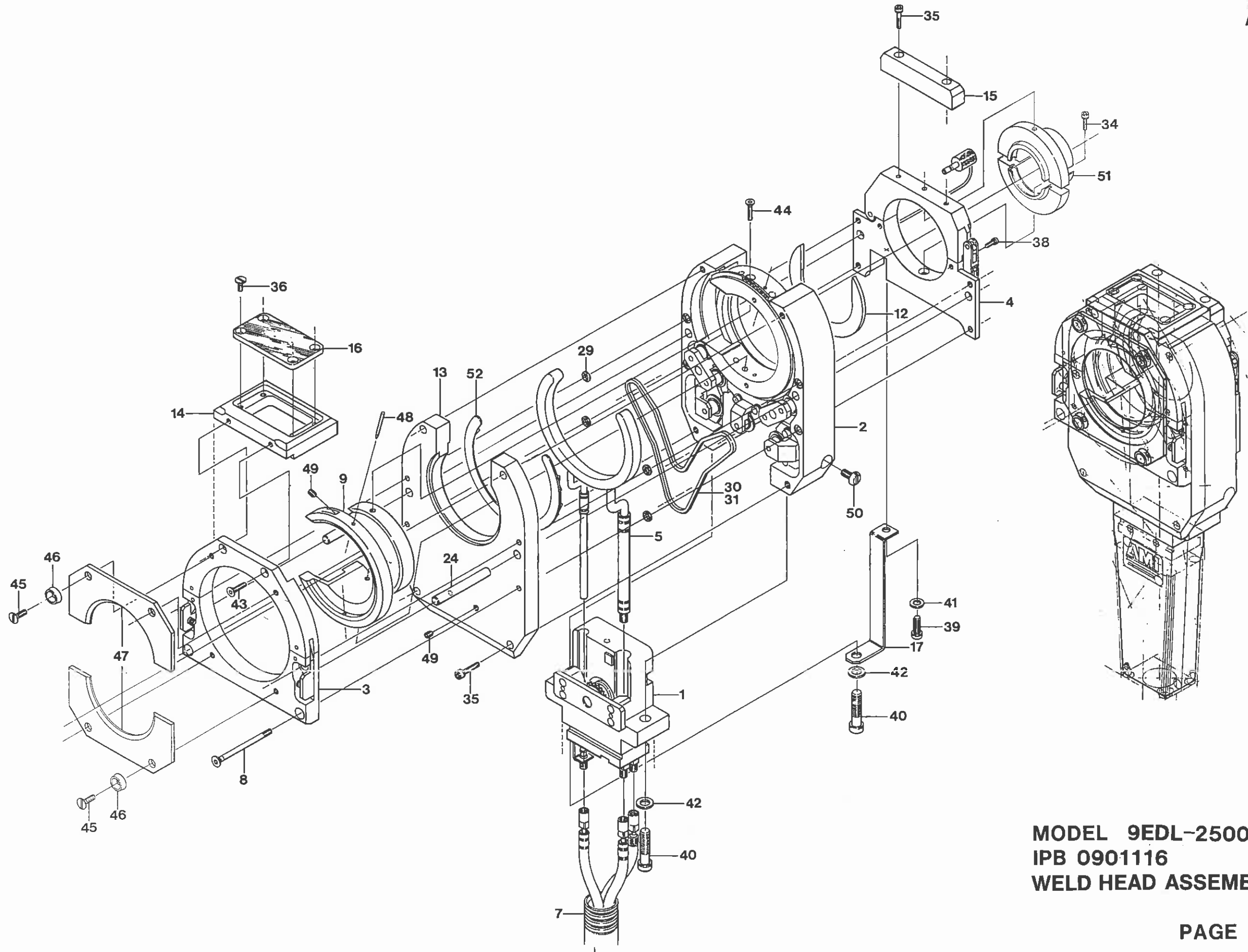


- 1** REMOVE ORIGINAL GROUND STRAP EXCEPT ON MODEL 9-1500 REMOVE SCREW **A** ONLY ( ORIGINAL GROUND STRAP IS USED ).
- 2** REMOVE COVER SIDE CLAMP HOUSING.
- 3** REMOVE HEAT SHIELD.
- 4** INSTALL ROTOR EXTENSION FROM THE KIT.
- 5** CONNECT WELD HEAD TO POWER SUPPLY AND JOG ROTOR UNTIL ROTOR EXTENSION MOUNTING SCREW HOLE IS ACCESSIBLE. INSTALL MOUNTING SCREWS ( 2 TO 4 EACH DEPENDING ON MODEL # ) AND TIGHTEN.



- 6** MOUNT THE GAS SEAL HOUSING ASSEMBLY FROM THE KIT TO THE WELD HEAD USING ORIGINAL SCREWS.
- 7** INSTALL GROUND STRAP FROM THE KIT USING ORIGINAL SCREWS, EXCEPT FOR MODEL 9-1500 USE ORIGINAL GROUND STRAP AND SCREWS.
- 8** OPEN HOUSING SIDE CLAMP.
- 9** INSTALL WIDE CLAMP INSERT ASSEMBLY (NOT PROVIDED IN CONVERSION KIT).
- 10** INSTALL GAS SEAL ASSEMBLY (NOT PROVIDED IN CONVERSION KIT).

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**MODEL 9EDL-2500**  
**IPB 0901116**  
**WELD HEAD ASSEMBLY**

ACCORDANCE WITH ISO 45001

IPB NUMBER: 0901116

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: M9-2500  
DESCRIPTION: MAIN ASSEMBLY MODEL 9EDL  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION	
1	1	EA	13090611-01	DRIVE ASSY M9-2500 -3500 -4500	
2	1	EA	13090206-01	HOUSING UPPER 9-2500	
3	1	EA	130905208-01	HOUSING GAS SEAL M9EDL-2500	
4	1	EA	130905206-01	CLAMP HSG ASSY M9EDL-2500	
5	1	EA	13090769-01	CONDUCTOR RING 9-2500	
7	1	EA	13090800-01	CABLE M9 10 FT	
8	4	EA	13090124-02	SCREW INSULATED	
9	1	EA	13090738-01	ROTOR EXTENSION 9E-2500	
10	-	-	-	-----	
12	1	EA	420907159-02	HEAT SHIELD 9-2500	
13	1	EA	42090152-01	COVER	
14	1	EA	420905177-01	CLOSURE 9E-2500	
15	1	EA	42090501-02	CLOSURE END	
16	1	EA	42090501-03	WINDOW	
17	1	EA	42090749-04	GROUND STRAP	
18	-	-	-	-----	
24	2	EA	42090164-03	PIN .312D 2.45L 9-2500	
25	-	-	-	-----	
29	4	EA	2-106-S604-70	O RING .174 ID .103 W SILICONE	
30	1	EA	RC14SS-117	CHAIN .1475 PITCH 117 LINK	
31	1	EA	RC14SS-CL	CHAIN CONNECTOR	
34	1	SET	SCS06-32-0.31NP	SCREW CAP SKT 6-32 5/16 L	(SET OF 2)
35	1	SET	SCS08-32-0.75NP	SCREW CAP SKT 8-32 3/4 L	(SET OF 2)
36	1	SET	SFL06-32-0.37NY	SCREW FLH SLT 6-32 3/8 L NYL	(SET OF 2)
37	-	-	-	-----	
38	1	SET	SCS04-40-0.50NP	SCREW CAP SKT 4-40 1/2 L	(SET OF 2)
39	1	EA	SCS25-20-0.50SP	SCREW CAP SKT 1/4-20 1/2 L SIL	
40	1	SET	SCS31-18-1.00NP	SCREW CAP SKT 5/16-18 1.00 L	(SET OF 2)
41	1	EA	W25NP-FL	WASHER FL 1/4	
42	2	EA	W31ZP-FL	WASHER FL 5/16	
43	1	SET	SFS08-32-0.62NP	SCREW FLH SKT 8-32 5/8 L	(SET OF 2)
44	1	SET	SFS06-32-0.75NP	SCREW FLH SKT 6-32 3/4 L	(SET OF 2)
45	1	SET	SFL08-32-0.50NY	SCREW FLH SLT 8-32 1/2 L NYL	(SET OF 4)
46	4	EA	11SFW0008	WASHER NYLON FINISHING #8	
47	-	-	-	-----	
48	-	-	-	-----	GAS SEAL-ORD BY SIZE TUNGSTEN
49	1	SET	SSS06-32-18NPCU	SCREW SET SKT 6-32 3/16 L CUPT	(SET OF 4)

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

IPB NUMBER: 0901116

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

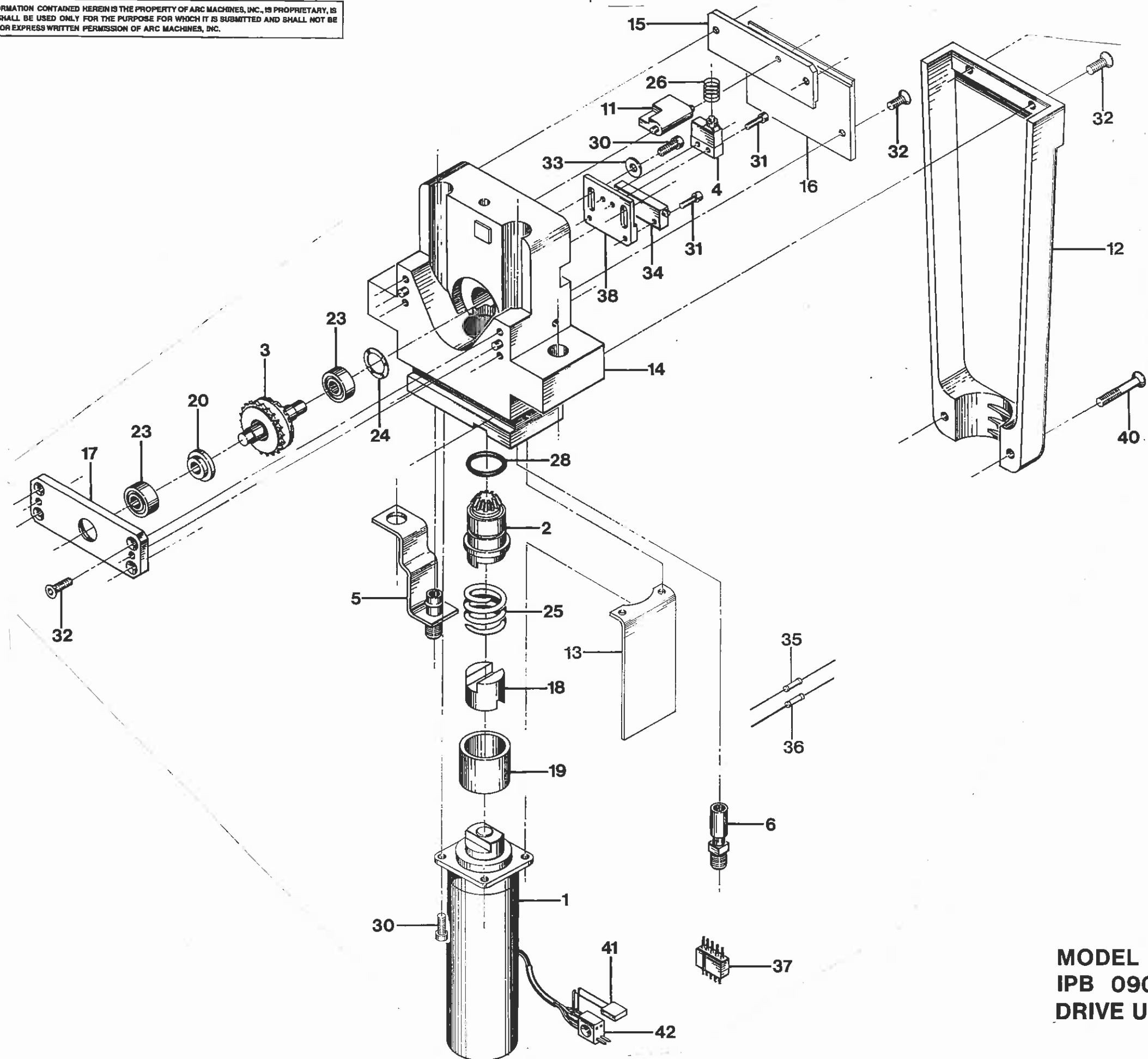
ARC MACHINES, INC.

PRODUCT MODEL: M9-2500  
DESCRIPTION: MAIN ASSEMBLY MODEL 9EDL  
MANUAL NUMBER: 730018  
NOTES:

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION	
50	1	EA	SPL25-20-0.50NY	SCREW PNH SLT 1/4-20 1/2 L NYL	
51		-	-	-----	WIDE CLAMP INSERT-ORD BY SIZE
52	1	EA	420907214-01	PLATE BACKING M9-2500	

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

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MODEL 9EDL-2500  
IPB 090611  
DRIVE UNIT ASSEMBLY



IPB NUMBER: 090611

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

ARC MACHINES, INC.

PRODUCT MODEL: 9-2500  
DESCRIPTION: DRIVE UNIT ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES: 9EDL-2500

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION	
1	1	EA	13090602-03	MOTOR DRIVE PINION 81 RPM	(ITEMS 41 & 42 INCLUDED)
2	1	EA	13090602-07	GEAR PINION DRIVE	
3	1	EA	13090613-01	GEAR BEVEL	
4	1	EA	13090613-02	SWITCH LIMIT	
5	1	EA	13090723-01	GROUND STRAP	
6	1	EA	13090803-01	TUBE FTG GAS	
7	-	-	-	-----	
11	1	EA	42091108-03	LEVER LIMIT SW ACTR	
12	2	EA	42090104-01	HANDLE	
13	1	EA	42091102-04	INSULATOR SKIRT	
14	1	EA	42090146-01	HOUSING DRIVE	
15	1	EA	42090619-01	COVER PLATE TOP LIMIT SW	
16	1	EA	42090619-02	COVER PLATE BOT LIMIT SW	
17	1	EA	42090548-02	RETAINER PLATE	
18	1	EA	42090602-03	COUPLING INSULATING DELRIN	
19	1	EA	42090602-04	SPACER SPRING	
20	1	EA	42090617-02	SPACER BEVEL GEAR	
21	-	-	-	-----	
23	2	EA	SSR-3LLRA3P25 [	BEARING BALL .18 .50 [LY13]	
24	1	EA	SV-8	SPRING WAVE WASHER .351D .44	
25	1	EA	15156	SPRING CPRSN .81D .70L .067W	
26	1	EA	L-14	SPRING CPRSN .25D .43L .020W	
27	-	-	-	-----	
28	1	EA	2-014-V747-75	O RING .489 ID .070 W VITON	
29	-	-	-	-----	
30	1	SET	SCS04-40-0.31NP	SCREW CAP SKT 4-40 5/16 L	(SET OF 6)
31	1	SET	SCS02-56-0.25NP	SCREW CAP SKT 2-56 1/4 L	(SET OF 4)
32	1	SET	SFS04-40-0.37NP	SCREW FLH SKT 4-40 3/8 L	(SET OF 12)
33	2	EA	W04ZP-FL	WASHER FLAT #4	
34	1	EA	3057L-1-202	POT TRIM 2K OHM 5%	
35	1	EA	RN55D7871F	RES 7.87K	
36	1	EA	RN55D1300F	RES 130 OHMS 1/4W	
37	1	EA	5PM	CONN 5 PIN MALE	
38	1	EA	42090616-05	PLATE LIMIT SWITCH	
39	-	-	-	-----	
40	1	SET	SFS04-40-1.00NP	SCREW FLH SKT 4-40 1.00 L	(SET OF 2)
41	1	EA	CK06BX104K	CAP 0.1MF 100V 10%	

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

IPB NUMBER: 090611

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

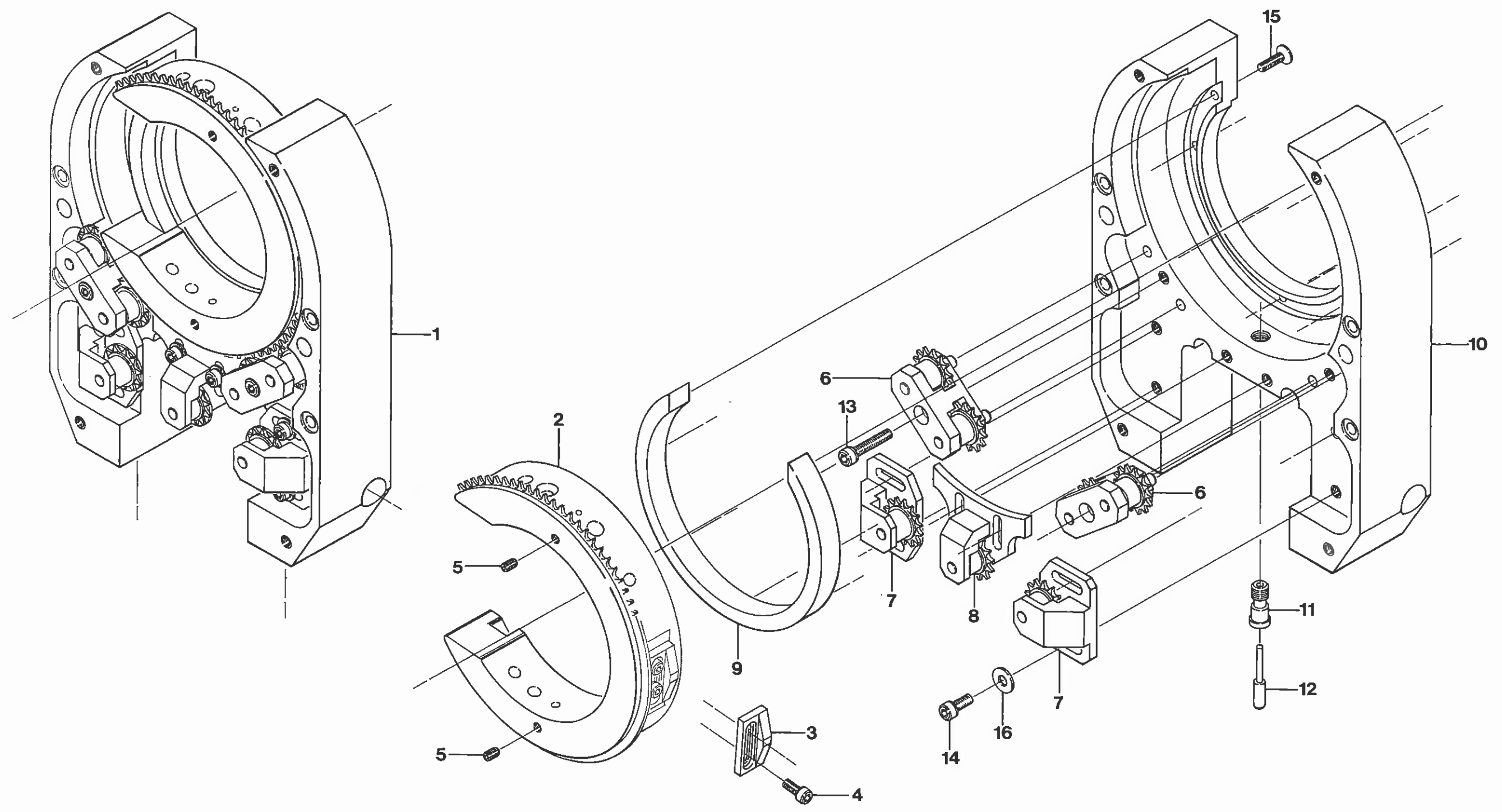
ARC MACHINES, INC.

PRODUCT MODEL: 9-2500  
DESCRIPTION: DRIVE UNIT ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES: 9EDL-2500

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION
42	1	EA	JF2P2SCD	CONN 4 PIN PLUG MINIATURE

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

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MODEL 9EDL-2500  
IPB 090206  
HOUSING UPPER ASSEMBLY

IPB NUMBER: 090206

TO ORDER  
USE PART NUMBER  
DO NOT USE IPB  
ITEM NUMBER

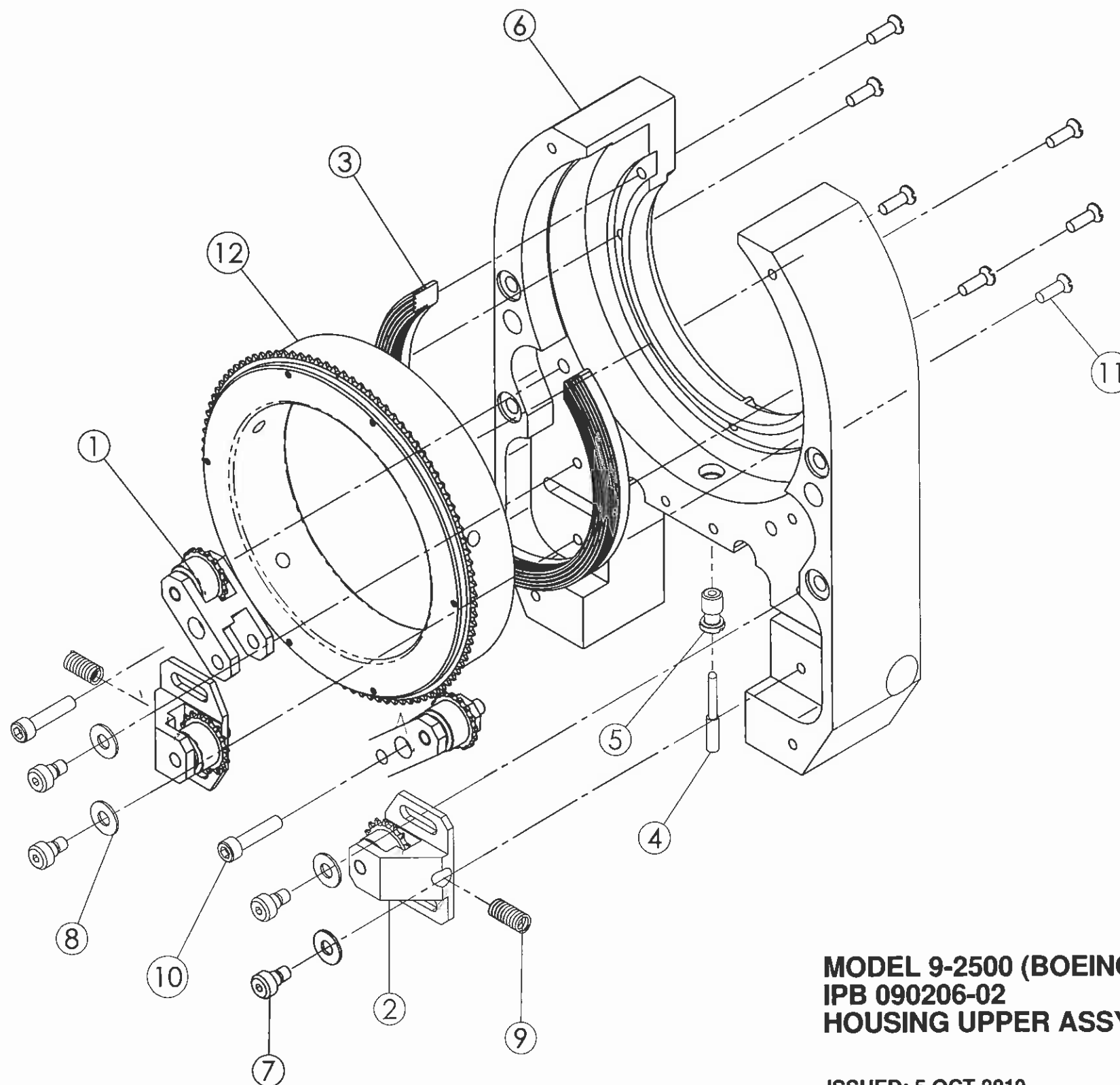
ARC MACHINES, INC.

PRODUCT MODEL: 9-2500  
DESCRIPTION: HOUSING UPPER ASSEMBLY  
MANUAL NUMBER: 730018  
NOTES: 9EDL-2500

IPB ITEM NUMBER	QTY	U/M	PART NUMBER	DESCRIPTION	
1	1	EA	13090206-01	HOUSING UPPER 9-2500	
2	1	EA	13090774-01	ROTOR 9-2500	(ITEMS 3,4 & 5 INCLUDED)
3	1	EA	42090548-05	CAM SWITCH	
4	1	SET	SCS04-40-0.31NP	SCREW CAP SKT 4-40 5/16 L	(SET OF 2)
5	1	SET	SSS06-32-18NPCU	SCREW SET SKT 6-32 3/16 L CUPT	(SET OF 2)
6	2	EA	13090622-01	BRACKET DRIVE SPROCKET	
7	2	EA	13090623-02	TENSIONER SIDE	
8	1	EA	13090623-01	TENSIONER CENTER	
9	1	EA	42090758-01	GUIDE RING	
10	1	EA	42090153-01	HOUSING UPPER	
11	1	EA	42091110-01	BUSHING ACTUATOR	
12	1	EA	42091109-04	PIN ACT 9-2500	
13	1	SET	SCS08-32-0.75NP	SCREW CAP SKT 8-32 3/4 L	(SET OF 2)
14	1	SET	SCS08-32-0.37NP	SCREW CAP SKT 8-32 3/8 L	(SET OF 6)
15	1	SET	SFL06-32-0.50NY	SCREW FLH SLT 6-32 1/2 L NYL	(SET OF 7)
16	6	EA	W08ZP-FL	WASHER FL # 8 .30 THK	

PRICE, PART NUMBER AND  
DESCRIPTION SUBJECT TO  
CHANGE WITHOUT NOTICE

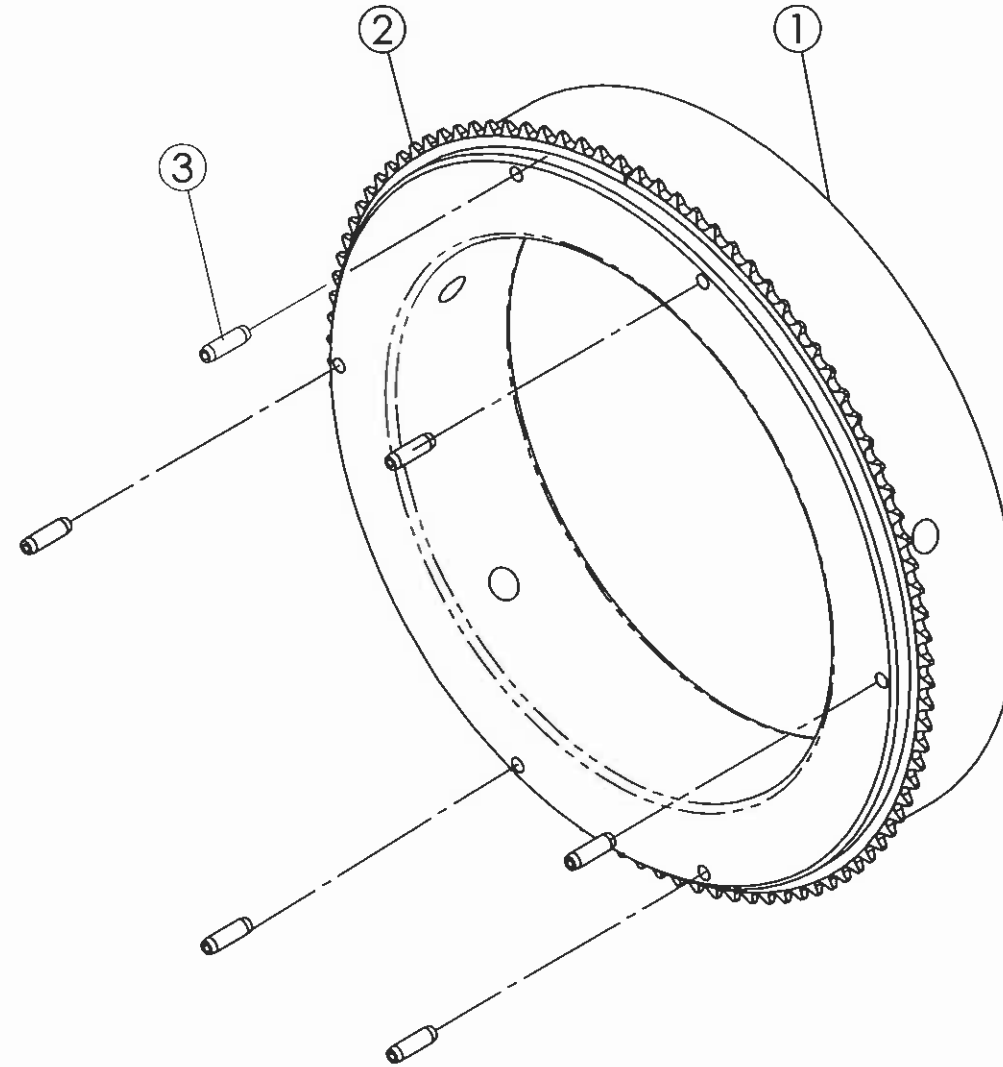
ITEM NO	QTY	PART NO.	DESCRIPTION
1	2	13090622-02	BRACKET DRIVE SPROCKET
2	2	13090623-03	TENSIONER SIDE
3	1	42090758-01	GUIDE RING
4	1	42091109-04	PIN ACTUATOR 9-2500
5	1	42091110-01	BUSHING ACTUATOR
6	1	220901149-01	HOUSING UPPER M9-2500 MODIF
7	4	44D15	SCREW SHLDR 8-32 3/16D .12L
8	4	5720-17-32	WASHER .19 ID .44 D .032 T
9	2	O-112	SPRING CPRSN .37D .50L .055W
10	2	SCS08-32-0,75NP	SCREW CAP SKT 8-32 3/4 L
11	7	SFL06-32-0,50NY	SCREW FLH SLT 6-32 1/2L NYL
12	1	130907128-01	ROTOR, 360 DEG SOLID ASSY



**MODEL 9-2500 (BOEING)  
IPB 090206-02  
HOUSING UPPER ASSY**

ISSUED: 5 OCT 2010  
REVISED:

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	420907245-01	HUB, ROTOR 360 DEG BOEING SPEC. M9-2500
2	1	420907245-02	SPROCKET M9-2500 360 DEG
3	6	PR09-0,31NP	PIN ROLL 3/32D 5/16L

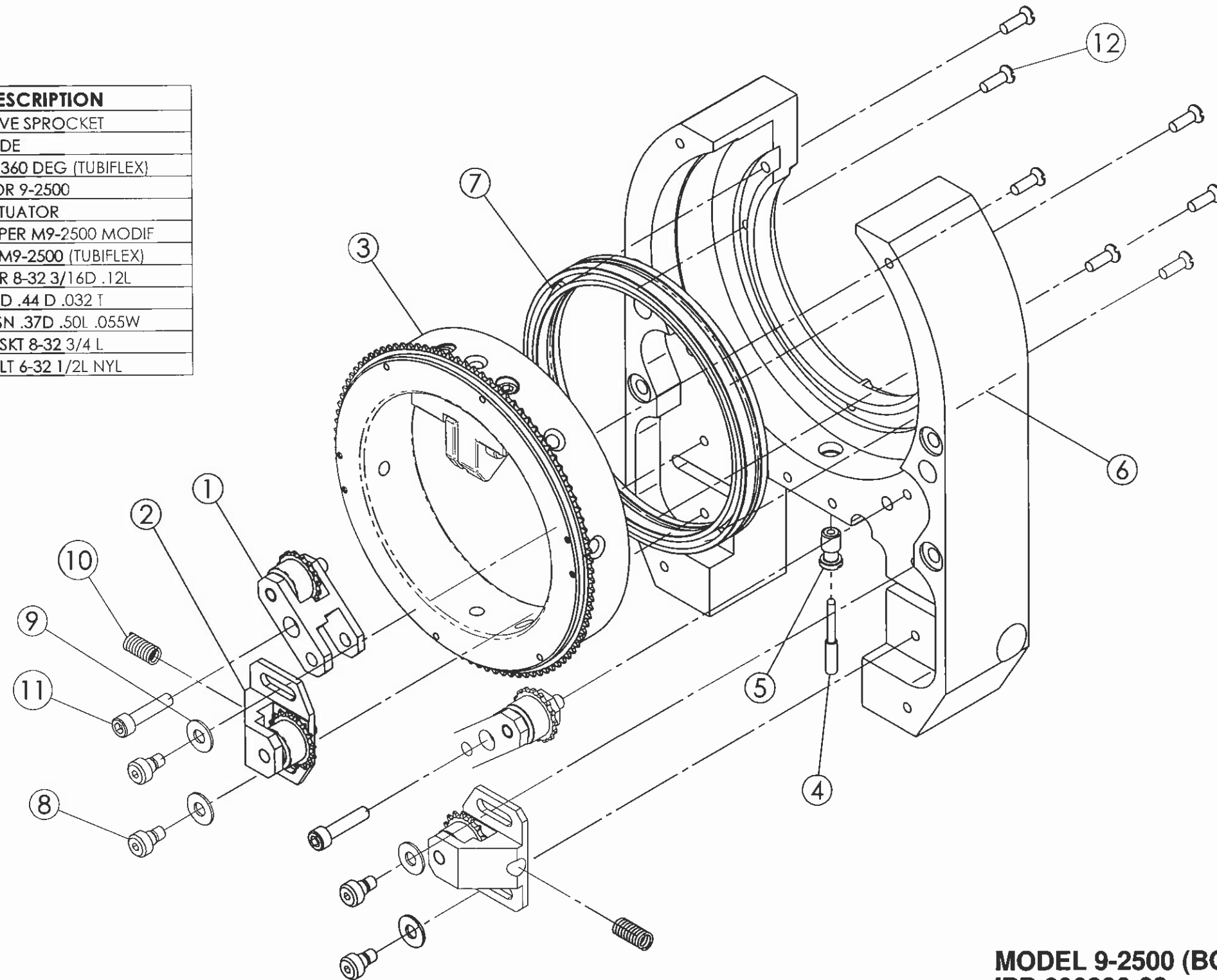


**MODEL 9-2500 (BOEING)**  
**IPB 0907128**  
**ROTOR, 360 DEG SOLID ASSY**

ISSUED: 27 SEPT 2010  
REVISED:

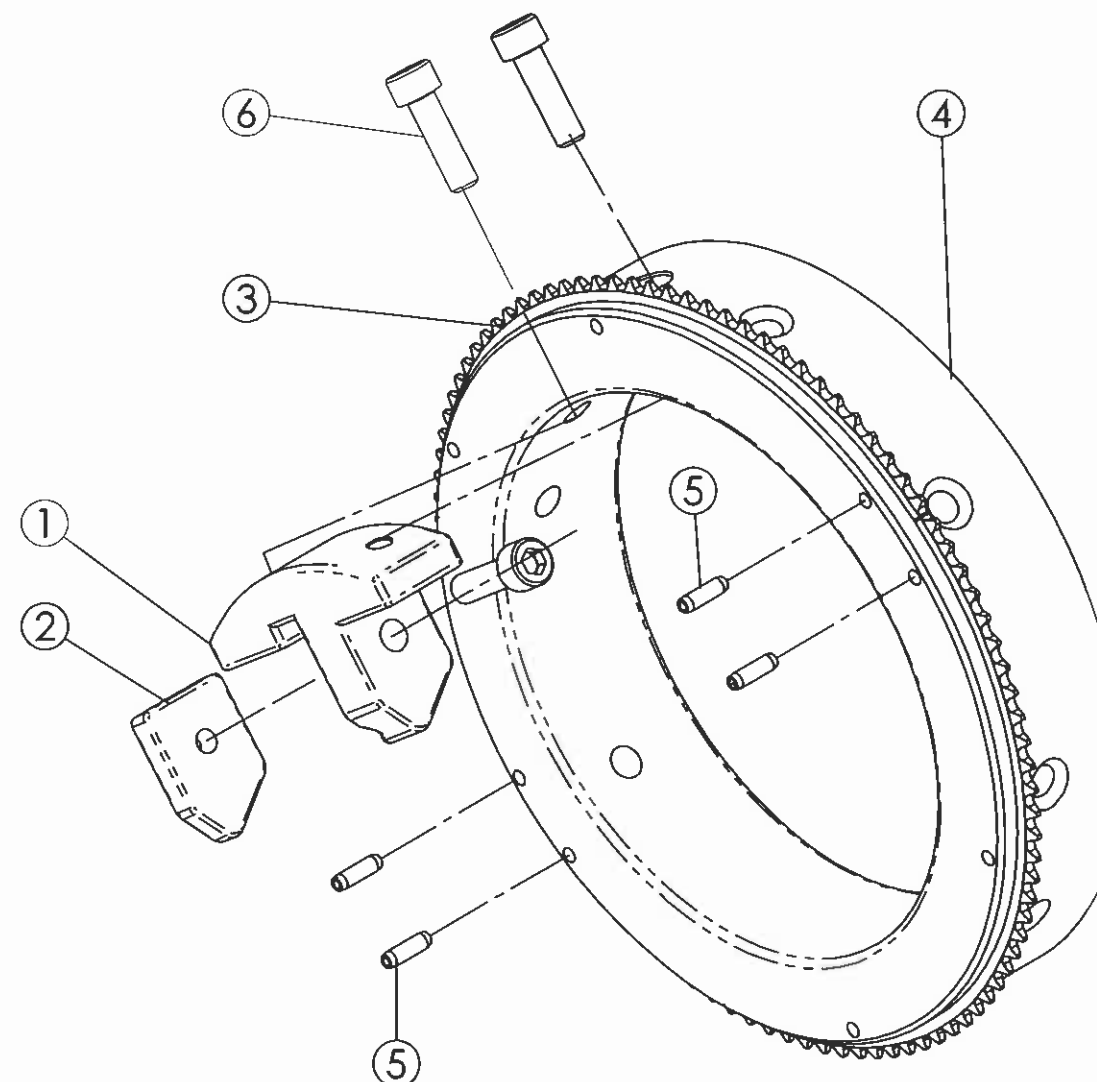
TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
SUBJECT TO CHANGE WITHOUT NOTICE.

ITEM NO	QTY	PART NO.	DESCRIPTION
1	2	13090622-02	BRACKET DRIVE SPROCKET
2	2	13090623-03	TENSIONER SIDE
3	1	130907136-01	ROTOR ASSY 360 DEG (TUBIFLEX)
4	1	42091109-04	PIN ACTUATOR 9-2500
5	1	42091110-01	BUSHING ACTUATOR
6	1	220901149-01	HOUSING UPPER M9-2500 MODIF
7	1	220907261-01	GUIDE RING M9-2500 (TUBIFLEX)
8	4	44D15	SCREW SHLDR 8-32 3/16D .12L
9	4	5720-17-32	WASHER .19 ID .44 D .032 T
10	2	O-112	SPRING CPRSN .37D .50L .055W
11	2	SCS08-32-0.75NP	SCREW CAP SKT 8-32 3/4 L
12	7	SFL06-32-0.50NY	SCREW FLH SLT 6-32 1/2L NYL



MODEL 9-2500 (BOEING)  
IPB 090206-03  
HOUSING UPPER ASSY

ISSUED: 5 OCT 2010  
REVISED:



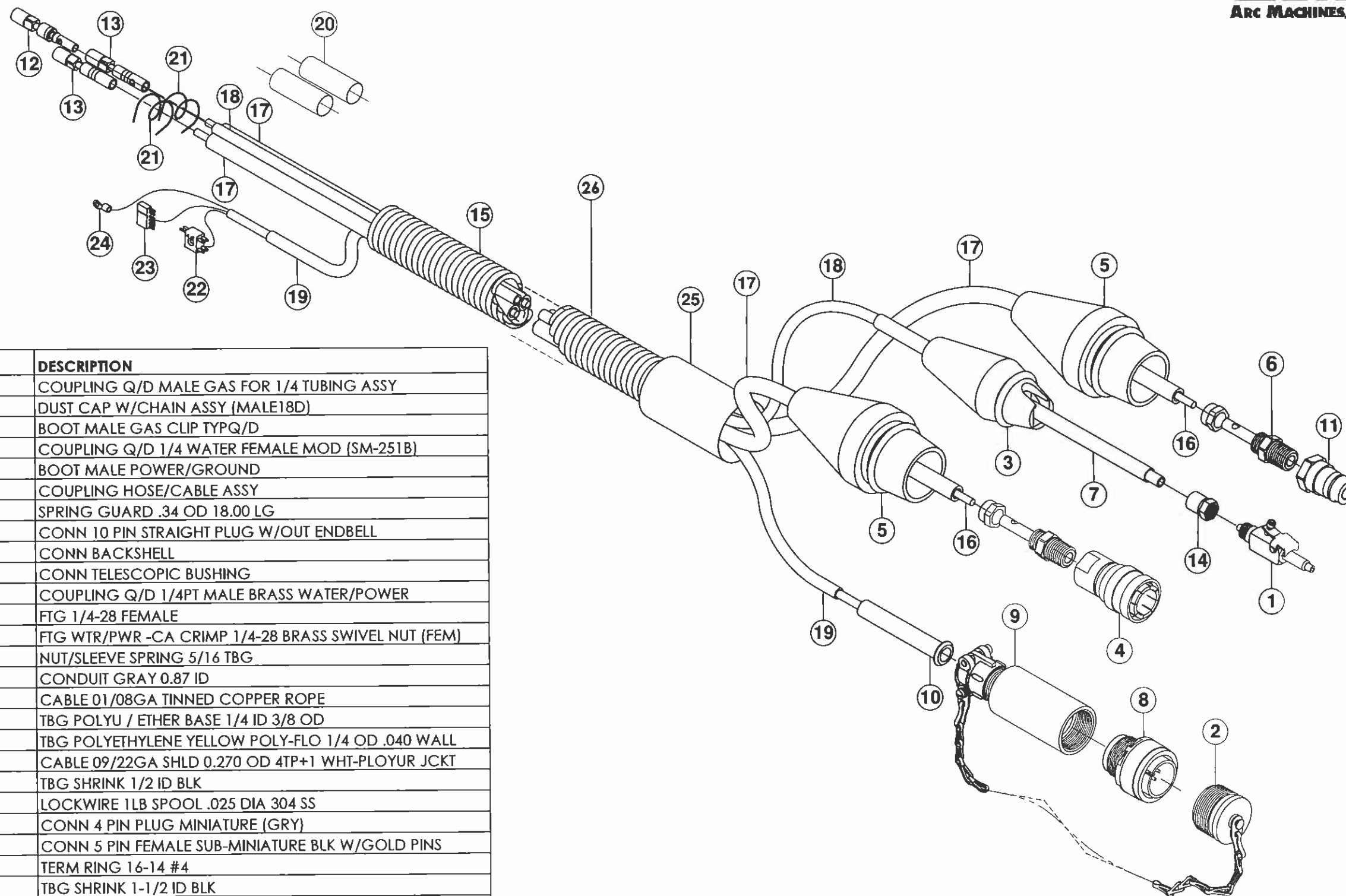
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	220907265-01	BRACKET ELECTRODE HOLDER (TUBIFLEX)
2	1	220907266-01	CLAMP ELECTRODE HOLDER
3	1	420907245-02	SPROCKET M9-2500 360 DEG
4	1	220907260-01	ROTOR 360 DEG M9-2500
5	4	PR09-0,31NP	PIN ROLL 3/32D 5/16L
6	3	SCS08-32-0,56NP	SCREW CAP SKT 8-32 9/16 L

**MODEL 9-2500 (BOEING)**  
**IPB 0907136**  
**ROTOR ASSY 360 DEG (TUBIFLEX)**

ISSUED: 5 OCT 2010  
REVISED:

TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
SUBJECT TO CHANGE WITHOUT NOTICE.





ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	1351109-01	COUPLING Q/D MALE GAS FOR 1/4 TUBING ASSY
2	1	1350110-04	DUST CAP W/CHAIN ASSY (MALE18D)
3	1	42060805-04	BOOT MALE GAS CLIP TYPQ/D
4	1	42060800-02	COUPLING Q/D 1/4 WATER FEMALE MOD (SM-251B)
5	2	42060804-01	BOOT MALE POWER/GROUND
6	2	42060800-07	COUPLING HOSE/CABLE ASSY
7	1	AS200718	SPRING GUARD .34 OD 18.00 LG
8	1	MS3106E18-1PF42	CONN 10 PIN STRAIGHT PLUG W/OUT ENDBELL
9	1	G1501N186A3A	CONN BACKSHELL
10	1	MS39056-3	CONN TELESCOPIC BUSHING
11	1	SM-252B	COUPLING Q/D 1/4PT MALE BRASS WATER/POWER
12	1	2PF1	FTG 1/4-28 FEMALE
13	2	ARC-1881	FTG WTR/PWR -CA CRIMP 1/4-28 BRASS SWIVEL NUT (FEM)
14	1	261-PG-04	NUT/SLEEVE SPRING 5/16 TBG
15	1	DUCT-0,87-50-G	CONDUIT GRAY 0.87 ID
16	2	NER7-95-36T	CABLE 01/08GA TINNED COPPER ROPE
17	2	42090806-01	TBG POLYU / ETHER BASE 1/4 ID 3/8 OD
18	1	44-P-YELLOW	TBG POLYETHYLENE YELLOW POLY-FLO 1/4 OD .040 WALL
19	1	CWT11943	CABLE 09/22GA SHLD 0.270 OD 4TP+1 WHT-PLOYUR JCKT
20	2	M23053/5-108-0	TBG SHRINK 1/2 ID BLK
21	2	MS20995C25	LOCKWIRE 1LB SPOOL .025 DIA 304 SS
22	1	JF2P2SCD	CONN 4 PIN PLUG MINIATURE (GRY)
23	1	7052	CONN 5 PIN FEMALE SUB-MINIATURE BLK W/GOLD PINS
24	1	34119	TERM RING 16-14 #4
25	1	M23053/5-111-0	TBG SHRINK 1-1/2 ID BLK
26	-	13090800-01	CABLE ASSEMBLY 10 FT M9 GENERIC

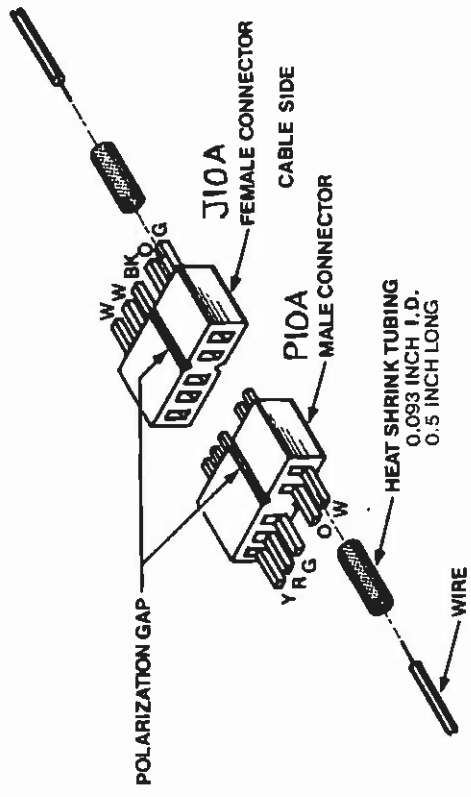
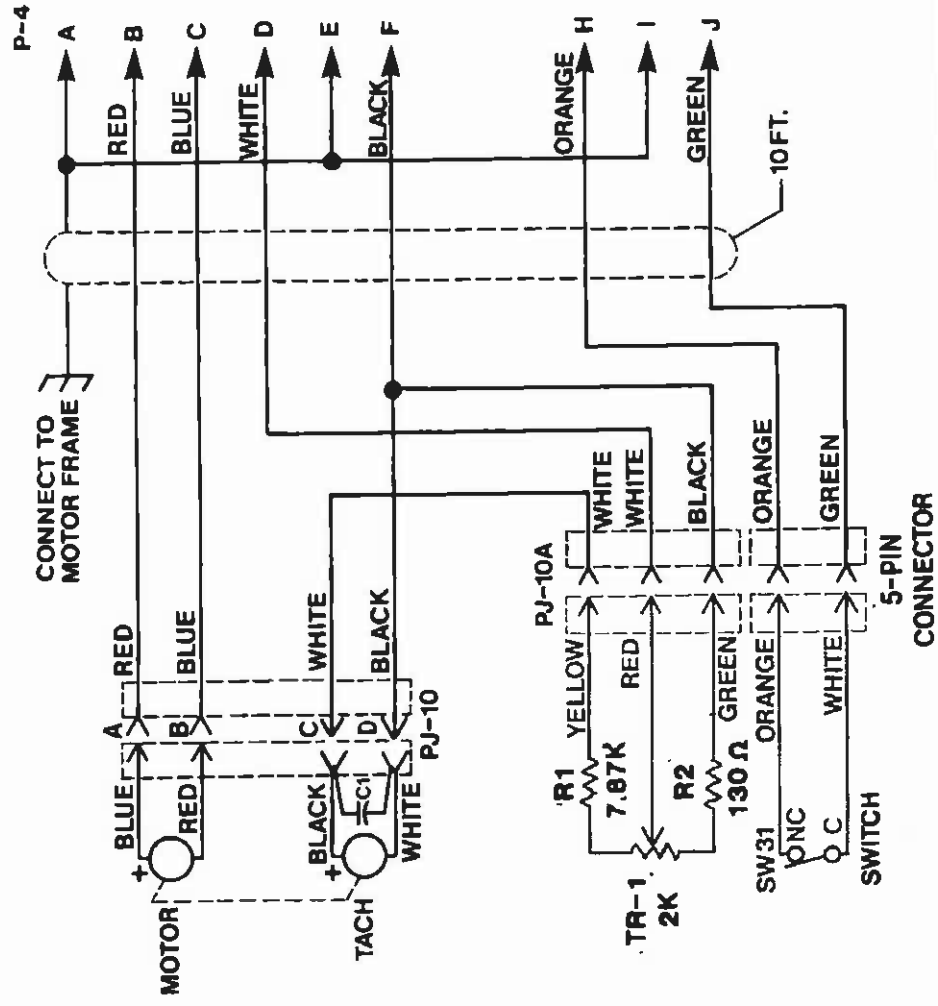
**MODEL 9  
IPB 090800  
CABLE ASSEMBLY**

ISSUED: 3 JAN 2005  
REVISED: 5 OCT 2010

TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
SUBJECT TO CHANGE WITHOUT NOTICE.

**THIS IPB SUPERSEDES ALL OTHER IPB'S  
REFERENCING 13090800-01 CABLE ASSEMBLY**

LTR	DCO	REVISIONS	DATE	BY	APPR
A	1716	C E D ON PJ-10 REVISED	11-27-92	MH	
B	2947	ADDED P10A & J10A. REMOVED PN'S FOR P10A, J10A, P4	12-4-97	MC	GAC



ITEM	QTY	IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MFR.	PART NO
PARTS LIST					
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<small>UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE FRACTIONS DECIMALS ANGLES ± 1/16 ± .010 ± ± .005 ± .010 ± .005 ALL UNFINISHED SURFACES TO BE MATERIAL</small>					
			FOR APPLIED STANDARDS SEE DOD-STD-100	DATE	DESCRIPTION
			THIRD ANGLE PROJECTION	10-14-85	MODEL 9 WELD HEAD WIRING DIAGRAM
			APPROVALS	10-76-85	SIZE MODEL NO. DRWG NO
			R. BILEK		A 175144-04
			(MR)		REV. B
					SCALE
					DO NOT SCALE DRAWING
					SHEET 1 OF 1
					APPLICATION

**ARC MACHINES INC.**  
**MODEL 9 WELD HEAD WIRING DIAGRAM**