

# MODEL 8-6625

ILLUSTRATED PARTS BREAKDOWN MANUAL

**MODEL 8-6625**  
**IPB Notice and Revision History**


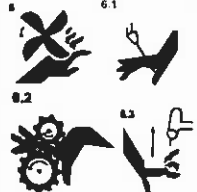

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**WARNING**



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	4779	Added 750015 rev D	28 May 2008	SO	BF
B	5011	In IPB 080803, changed Item 3 to SCS02-56-0,25NP was SBS02-56-0,25NP	26 Jun 2008	SO	BF
C	5032	In IPB 080116, added Item 9 P/N SSRI-6632LLRA3P25LY[ with a Qty. of 7	10 Jul 2008	SO	BF
D	5467	In IPB 080118 added Item 26 P/N 13080733-01	9 Dec 2009	LK	WO
E	5579	Added rev F of 750015 and Wiring Diagram	18 Jan 2010	CB	DC

**TABLE OF CONTENTS**

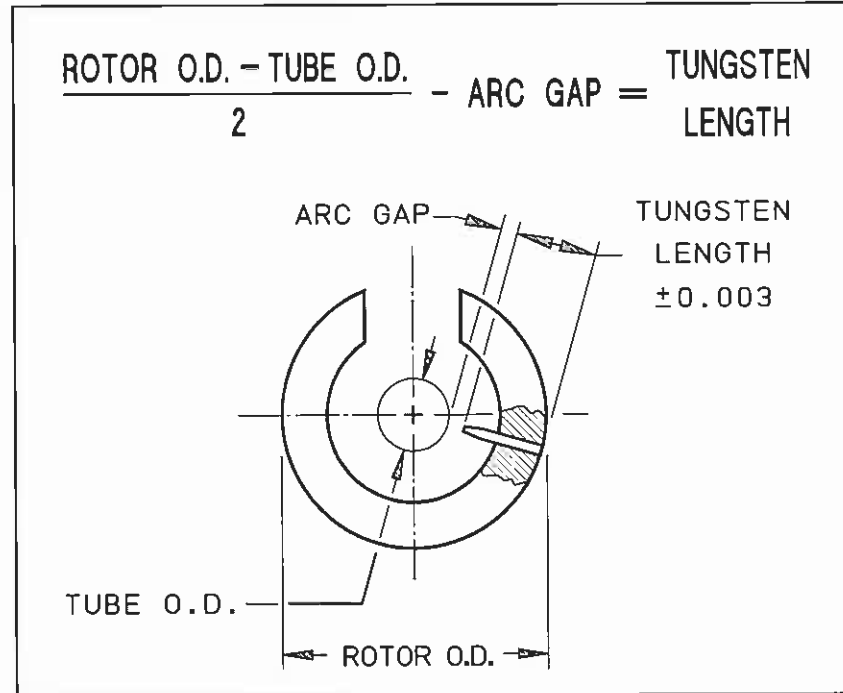
DATE EFFECTIVE: 23 OCT 2002

PRODUCT MODEL: 8-6625  
MANUAL NUMBER: 730112

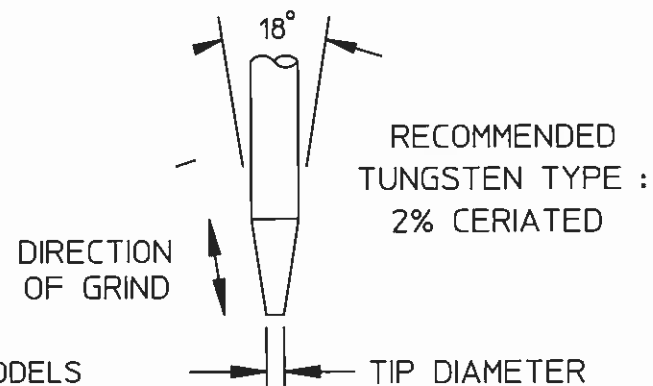
<b>IPB NUMBER</b>	<b>DESCRIPTION</b>
750015	ELECTRODE DIMENSIONS
080119	WELD HEAD TOP ASSEMBLY
080114_P1	WELD HEAD ASSEMBLY
080114_P2	WELD HEAD ASSEMBLY
080118	HOUSING HOUSING SIDE ASSEMBLY
080116	HOUSING COVER SIDE ASSEMBLY
080718	ROTOR ASSEMBLY
080601	MOTOR DRIVE ASSEMBLY
080803	LIMIT SWITCH-TRIM POT ASSEMBLY
080800	CABLE ASSEMBLY
47081701	MODEL 8-6625 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.	

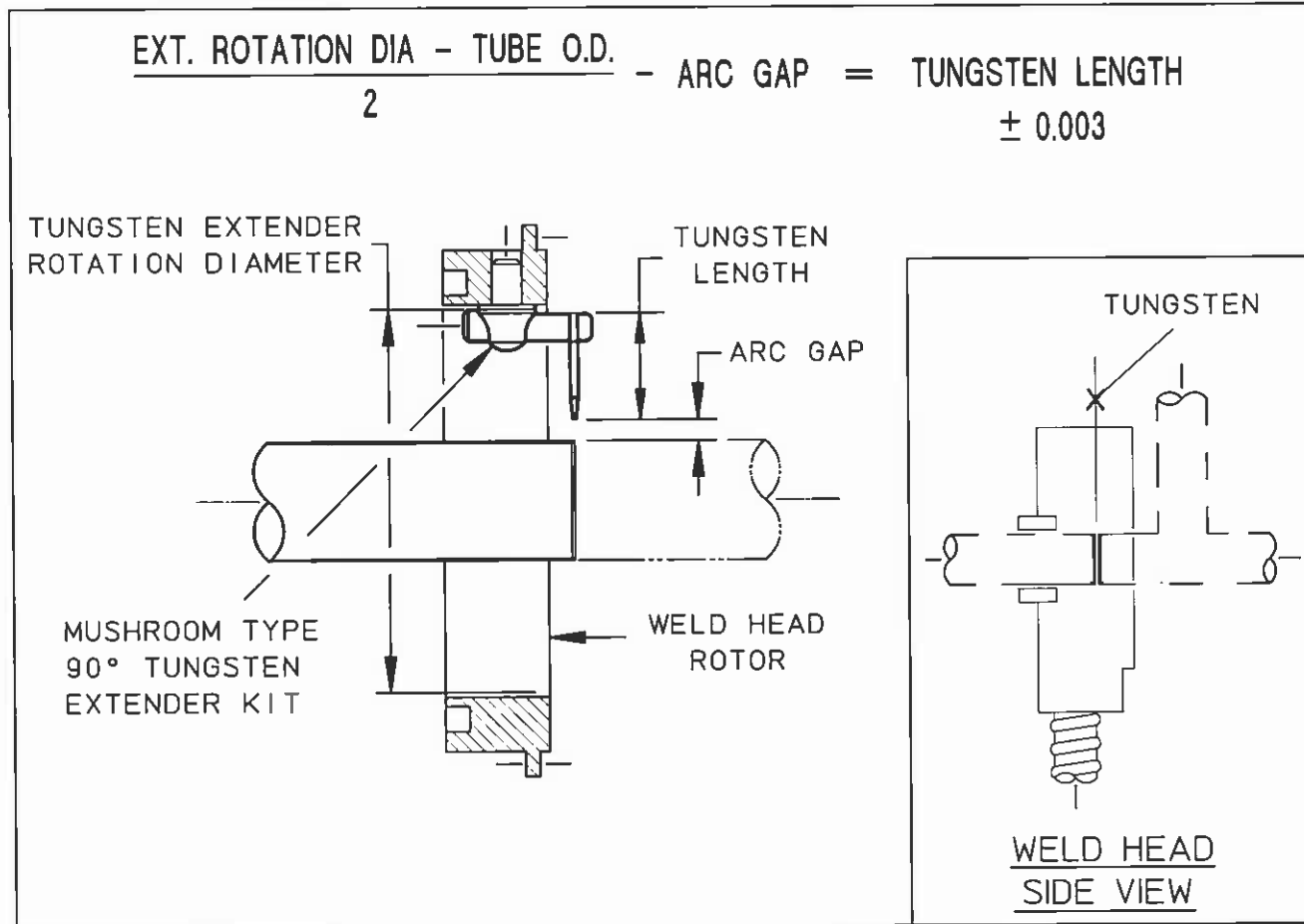


TUBE/PIPE WALL THICKNESS	RECOMMENDED ARC GAP	RECOMMENDED TIP DIA.
0.020/0.035	0.030	0.020
0.049/0.085	0.050	0.030
0.091/0.154	0.070	0.040



- 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.

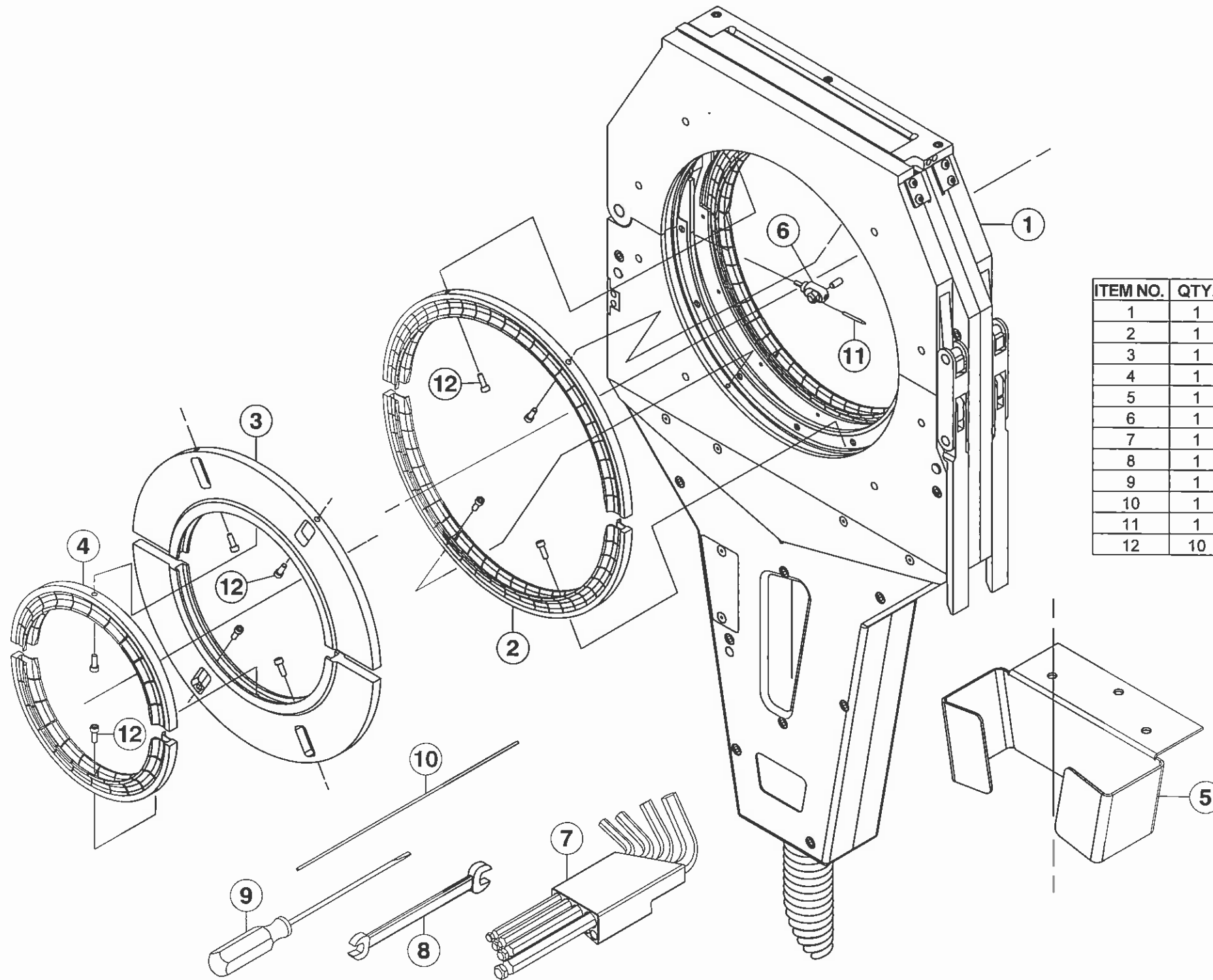
## TUNGSTEN LENGTH CALCULATION FOR TUNGSTEN EXTENDERS



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.



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	13080114-01	WELD HEAD BASIC ASSY
2	1	14080122-01	LIST SELECT CLAMP INSERT M8-6625
3	1	42080572-01	ADAPTER RING 8-6625 TO 8-4000 INSERTS (OPTION)
4	1	14080506-01	LIST SELECT INSERT M8-4000
5	1	42080107-01	BRACKET/BENCH MOUNT (OPTION)
6	1	13080725-01	TUNGSTEN EXTENDER ASSY (OPTION)
7	1	BLX-12	WRENCH L HEX BALL DRIVE SET 12 PIECE
8	1	21004	WRENCH OPEN-END 1/4 X 5/16
9	1	R3324	SCREWDRIVER SLOTTED 3/32 X 4IN LONG
10	1	TC06	TUNG 2% CERIA .062 DIA 7.00L
11	1	TUNGSTEN	REF.
12	10	SCS04-40-0.31NP	SCREW CAP SKT 4-40 5/16 L

**MODEL 8-6625**  
**IPB 080119**  
**WELD HEAD TOP ASSEMBLY**

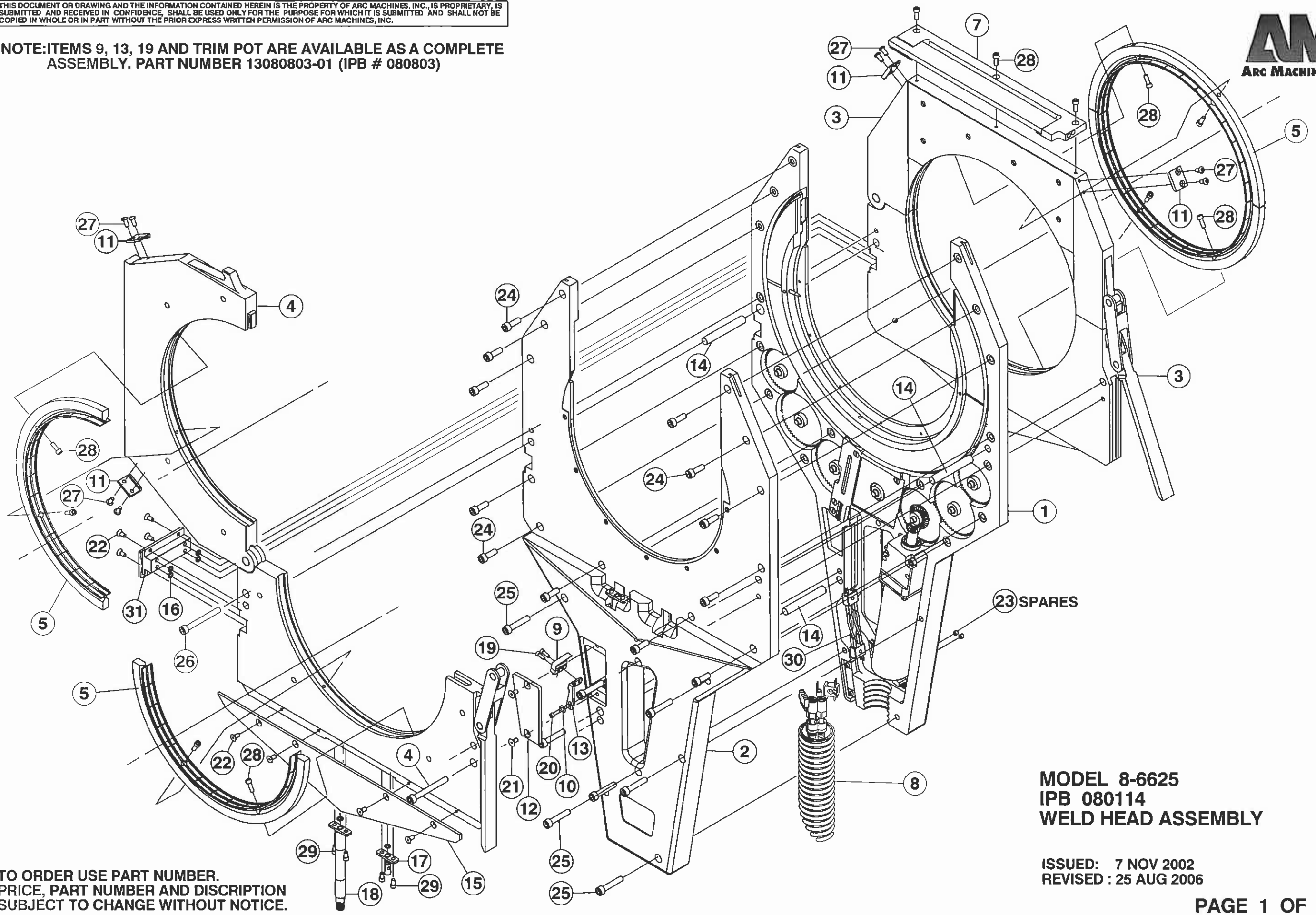
ISSUED: 7 NOV 2002  
REVISED: 4 AUG 2006

TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
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NOTE: ITEMS 9, 13, 19 AND TRIM POT ARE AVAILABLE AS A COMPLETE ASSEMBLY. PART NUMBER 13080803-01 (IPB # 080803)

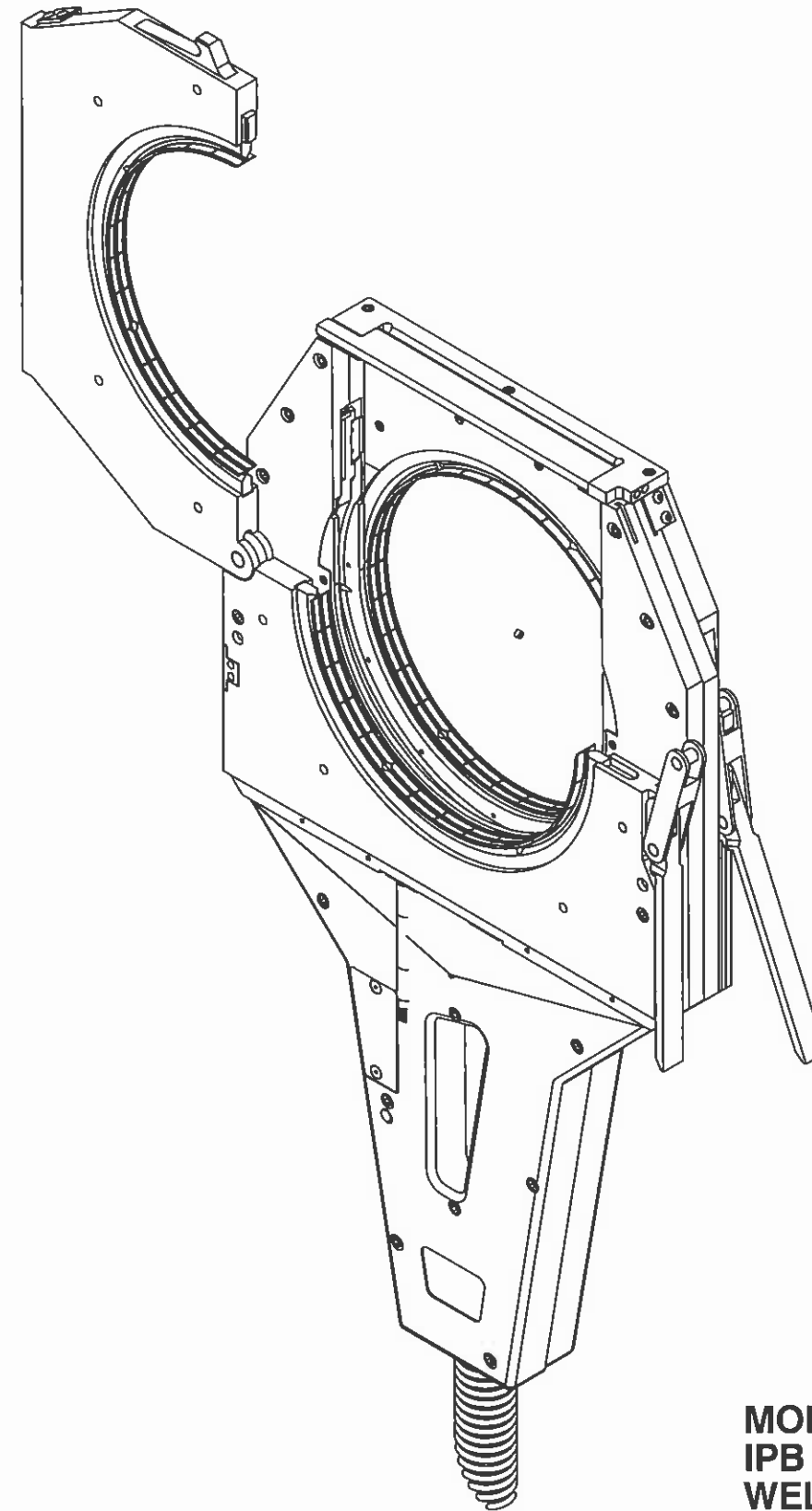


TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DISCRPTION  
SUBJECT TO CHANGE WITHOUT NOTICE.

MODEL 8-6625  
IPB 080114  
WELD HEAD ASSEMBLY

ISSUED: 7 NOV 2002  
REVISED : 25 AUG 2006

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	13080118-01	HOUSING HSG SIDE ASSY
2	1	13080116-01	HOUSING COVER SIDE ASSY
3	1	13080565-01	CLAMP HOUSING HSG SIDE ASSY
4	1	13080562-01	CLAMP HSG COVER SIDE ASSY
5	4	14080122-01	CLAMP INSERT SELECT LIST
6	1	13080515-01	BRACKET COOLING
7	1	13080551-01	WINDOW ASSY
8	1	13080800-01	CABLE ASSY
9	1	MMGGD1L2C	SWITCH LIMIT LEAF LOW MOTION
10	1	B0250-013-S	SPRING BELLEVILLE .12ID .25D
11	4	42080605-09	CLIP
12	1	42080606-02	COVER LIMIT SWITCH
13	1	42081102-01	BRACKET LIMIT SWITCH
14	3	42090164-02	PIN .25OD 1.72L
15	1	42080570-01	COVER CLAMP HOUSING
16	6	R00109-040-40SL	O RING
17	1	13080717-01	CONDUCTOR RING ASSY (REF.)
18	1	13080722-01	WATER LINE ASSY
19	2	SCS02-56-0.25NP	SCREW CAP SKT 2-56 1/4 L
20	1	SCS04-40-0.25NP	SCREW CAP SKT 4-40 1/4 L
21	2	SFS04-40-0.25NP	SCREW FLH SKT 6-32 3/8 L
22	8	SFS04-40-0.25NP	SCREW FLH SKT 4-40 1/4 L
23	2	SSS06-32-12NPCU	SCREW SET SKT 6-32 1/8L CUPT
24	12	SCS08-32-0.50NY	SCREW CAP SKT 8-32 1/2L NYL
25	8	SCS08-32-0.87NP	SCREW CAP SKT 8-32 7/8 L
26	2	SCS08-32-1.50NP	SCREW CAP SKT 8-32 1/2 L
27	8	SBS04-40-0.25NP	SCREW BTH SKT 4-40 1/4 L
28	11	SCS04-40-0.31NP	SCREW CAP SKT 4-40 5/16 L
29	6	SCS04-40-0.18NP	SCREW CAP SKT 4-40 3/16 L
30	1	13080804-01	JUMPER ASSY REV. MTR ROTATION
31	1	13080515-01	BRACKET COOLING ASSY



**MODEL 8-6625**  
**IPB 080114**  
**WELD HEAD ASSEMBLY**

ISSUED: 7 NOV 2002  
REVISED: 8 NOV 2006

TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
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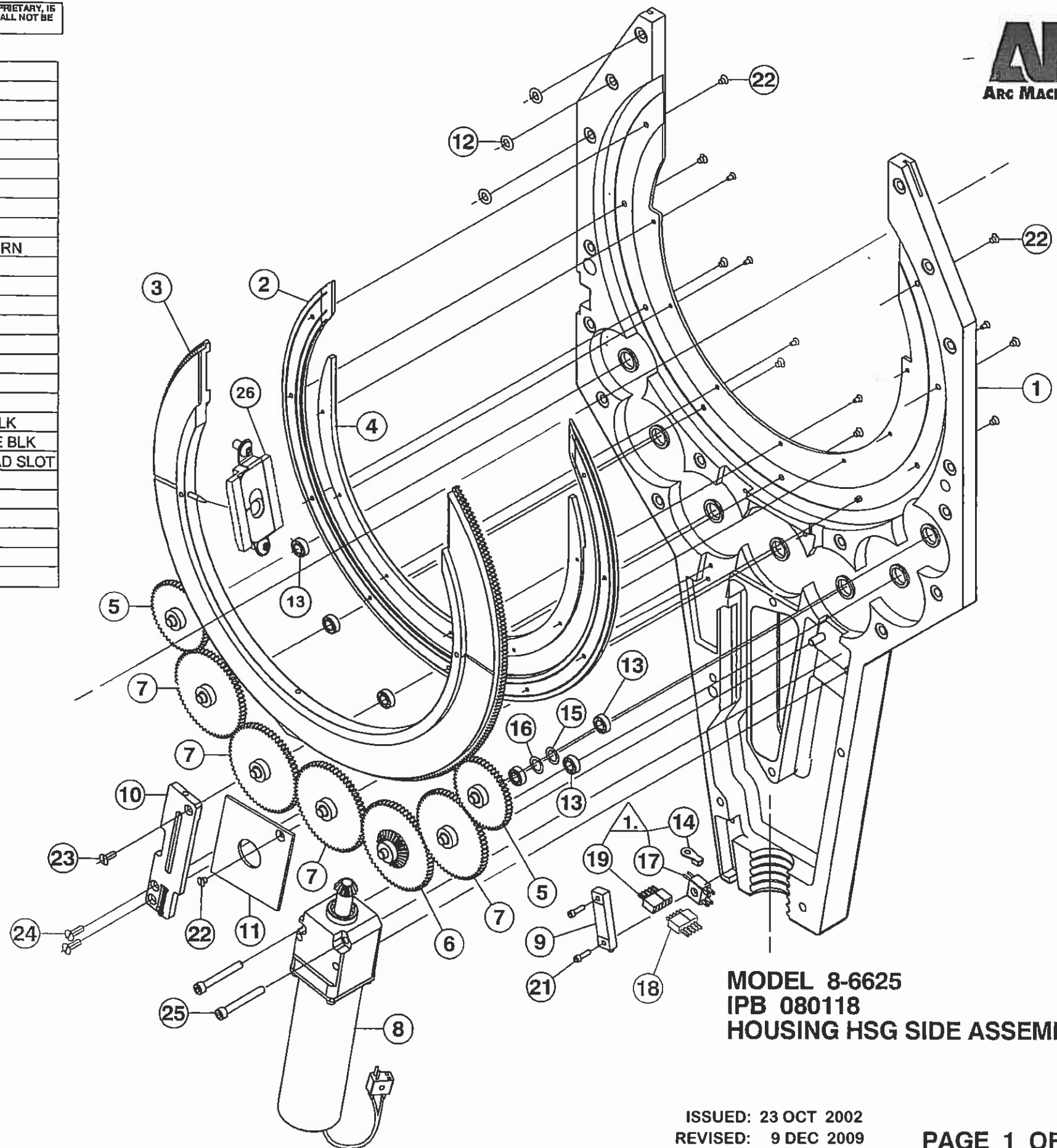


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ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	13080117-01	HSG HSG SIDE ASSY
2	1	42080719-01	GUIDE RING
3	1	13080718-01	ROTOR ASSY
4	1	42080723-01	HEAT SHIELD
5	2	13080604-01	GEAR 48 TEETH ASSY
6	1	13080600-01	GEAR SPUR BEVEL ASSY
7	4	13080600-02	GEAR DRIVE 60 TEETH ASSY
8	1	13080601-01	MOTOR DRIVE ASSY
9	1	3057L-1-202	POT TRIM 2K 1-1/4 IN RECT MULTI TURN
10	1	13081104-01	ACTUATOR ASSY
11	1	42080606-01	COVER
12	16	2-008-S604-70	O RING .176 ID .070 W SIL
13	7	SSR16632LLRA3P25LY	BEARING BALL .18 .37 [15]
14	1	34119	TERM RING 16-14 #4
15	1	DB8D4	SPACER SHAFT .25ID .37D .010T
16	1	DD61	SPRING WAVE WASHER .26ID .36D
17	1	JF2S2PCD	CONN 4 PIN JACK MINIATURE (GRY)
18	1	7051	CONN 5 PIN MALE SUB-MINIATURE BLK
19	1	7052	CONN 5 PIN FEMALE SUB-MINIATURE BLK
20	7	D237-448-29	SCREW TEFLON 2-56 X .156 FLAT HEAD SLOT
21	2	SCS02-56-0,31NP	SCREW CAP SKT 2-56 5/16L
22	10	SFL04-40-0,12NY	SCREW FLH SLT 4-40 1/8 L NYL
23	1	SFL04-40-0,31NY	SCREW FLH SLT 4-40 5/16 L NYL
24	2	SFL04-40-0,37NP	SCREW FLH SLT 4-40 3/8 L
25	2	SCS06-32-1,12NP	ACREW CAP SKT 6-32 1-1/8 L
26	2	13080733-01	KIT HEAT SHIELD M8-6625

1. THESE ITEMS ARE PART OF 13080800-01 CABLE ASSY.

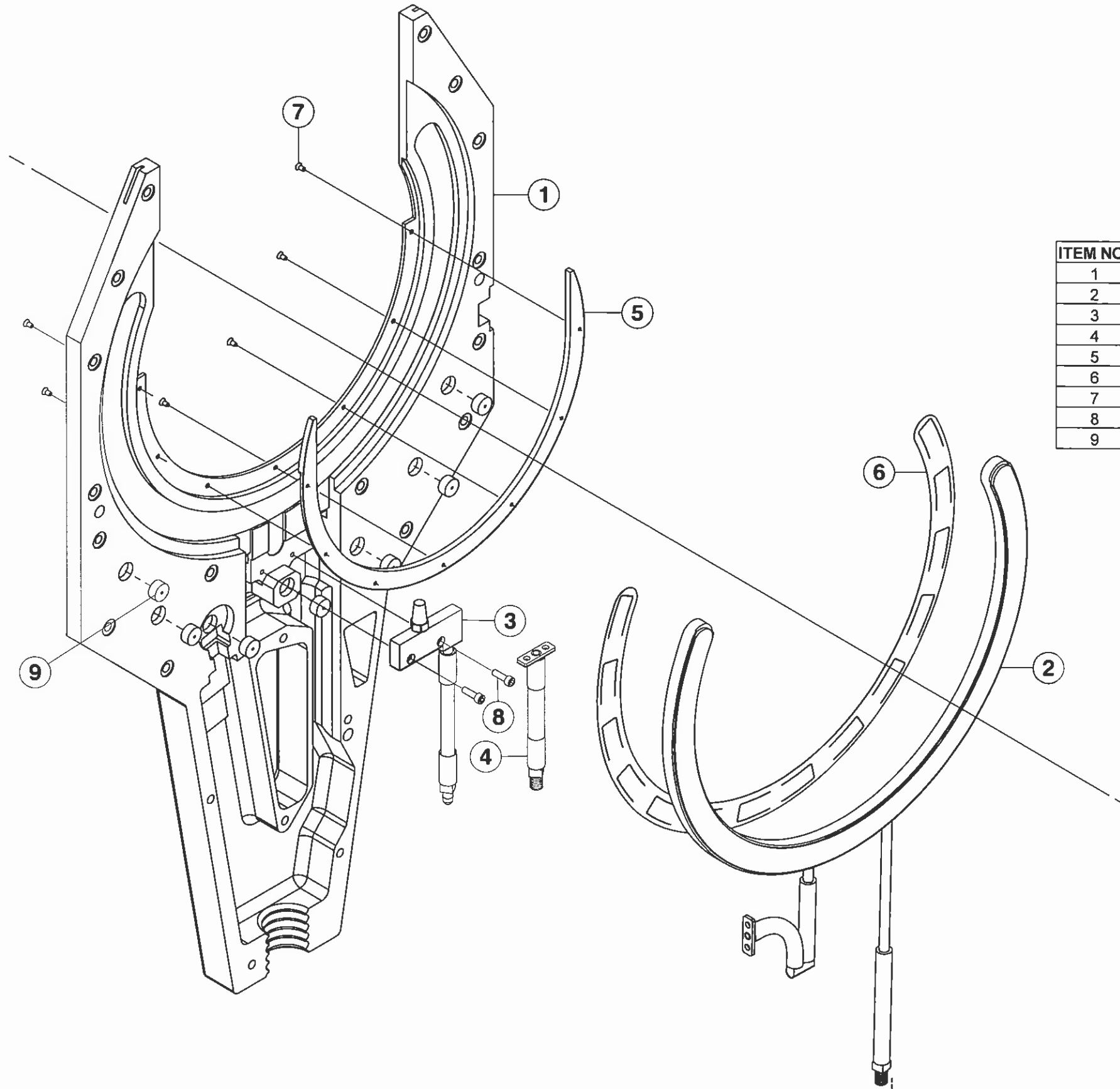


MODEL 8-6625  
IPB 080118  
HOUSING HSG SIDE ASSEMBLY

TO ORDER USE PART NUMBER.  
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ISSUED: 23 OCT 2002  
REVISED: 9 DEC 2009

PAGE 1 OF 1

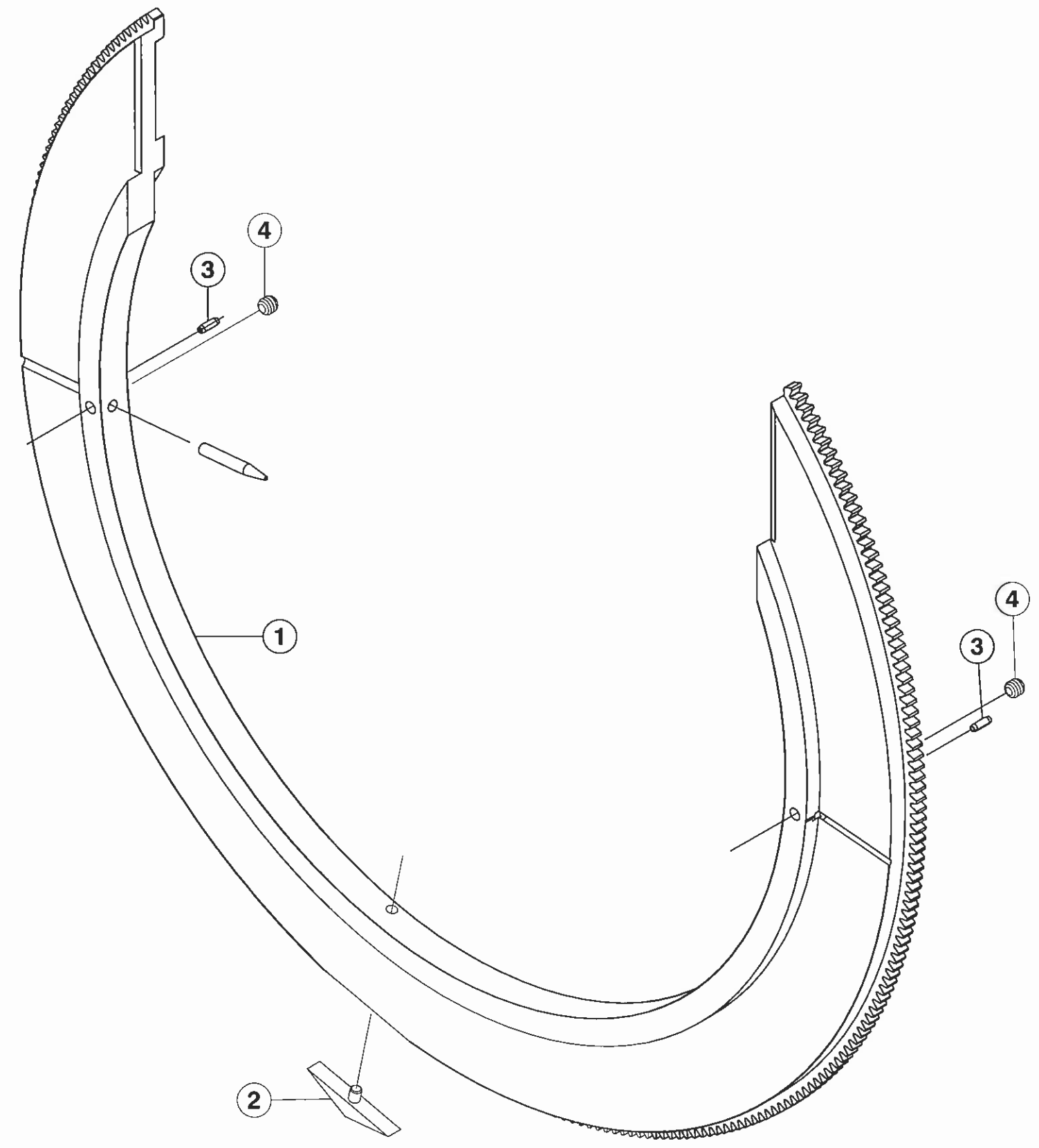


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	13080115-01	HOUSING COVER SIDE ASSY
2	1	13080717-01	CONDUCTOR RING ASSY
3	1	13080720-01	GAS LINE ASSY
4	1	13080722-01	WATER LINE ASSY
5	1	42080723-01	HEAT SHIELD
6	1	42080724-01	BACKING PLATE
7	7	D237-448-29	SCREW TEFLON 2-56 X .156 FLAT HEAD SLOT
8	2	SCS04-40-0.37NP	SCREW CAP SKT 4-40 3/8 NY
9	7	SSRI-6632LLRA3P25LYT	BEARING BLL .18 .37 (15)

**MODEL 8-6625**  
**IPB 080116**  
**HOUSING COVER SIDE ASSEMBLY**

TO ORDER USE PART NUMBER.  
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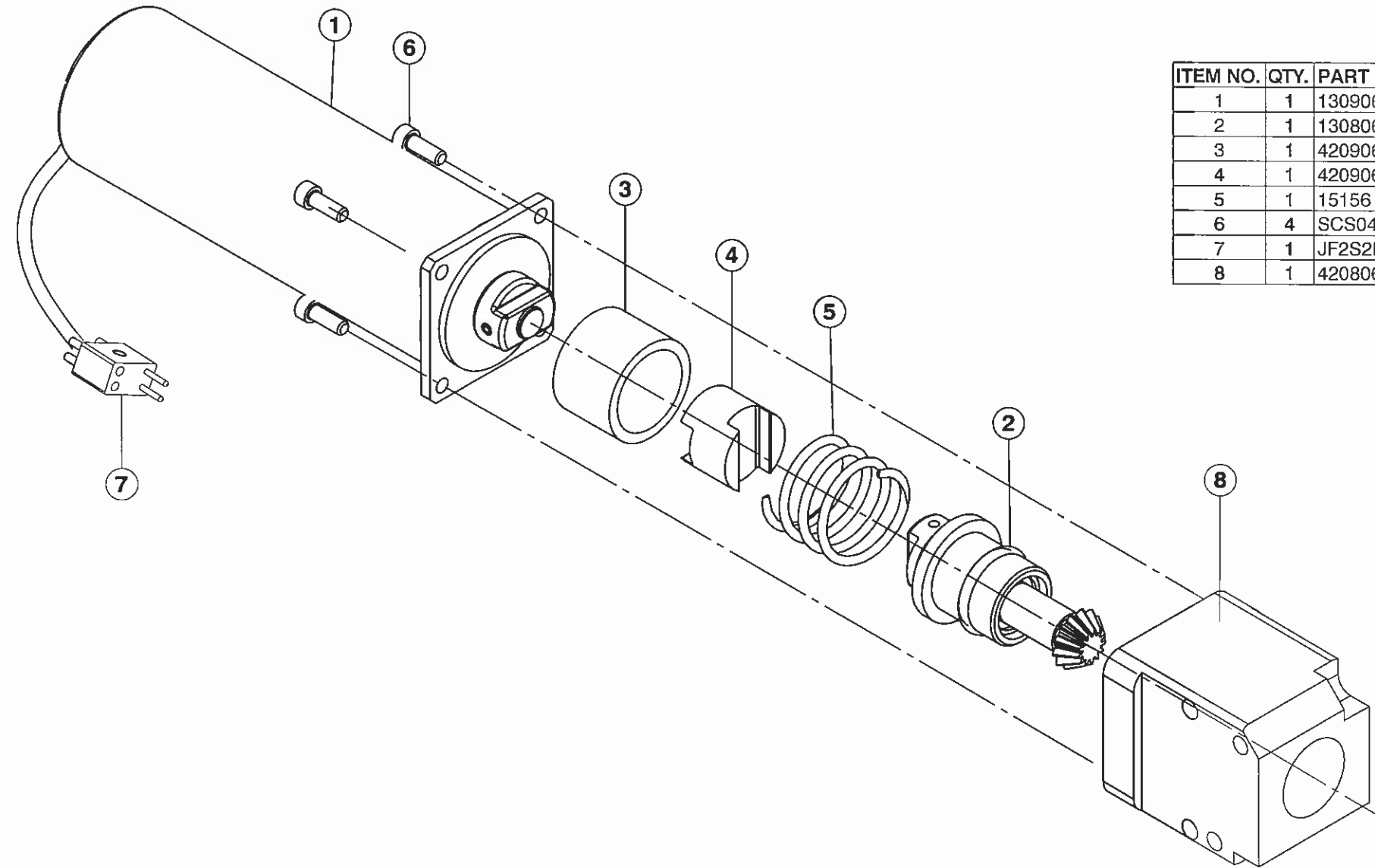


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42080725-01	ROTOR
2	1	42080607-03	RAMP
3	2	SPS 0.0625x0.188	PIN ROLL 1/16D 3/16L
4	2	SSS06-32-12NPCU	SCREW SET SKT 6-32 1/8L CUPT
5	1	TUNGSTEN	REF.

**MODEL 8-6625  
IPB 080718  
ROTOR ASSEMBLY**

ISSUED: 24 JUN 2003  
REVISED: 8 NOV 2006

TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
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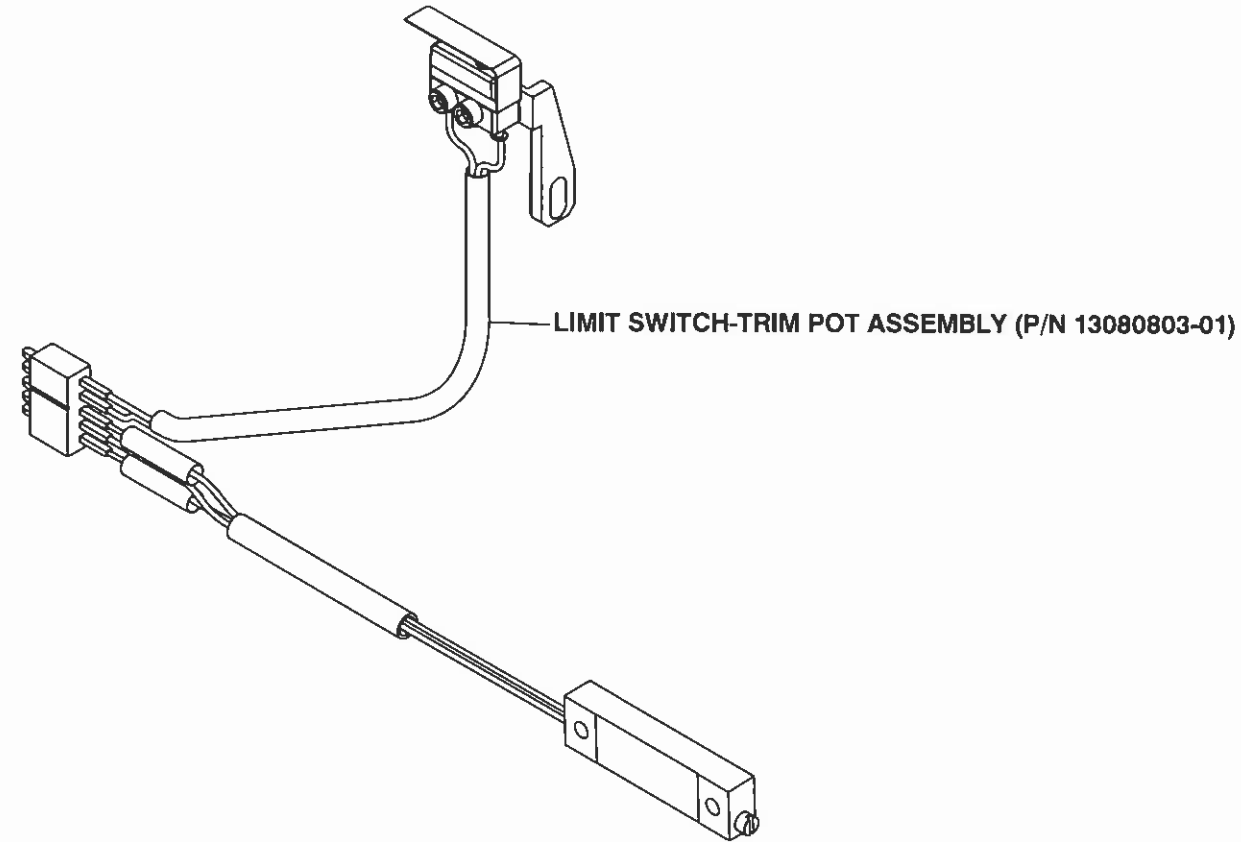


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	13090602-03	MOTOR DRIVE ASSY
2	1	13080602-01	DRIVE PINION ASSY
3	1	42090602-04	SPACER SPRING
4	1	42090602-03	COUPLING INSULATING DELRIN
5	1	15156	SPRING CPRSN .81D .70L .067W
6	4	SCS04-40-0,31NP	SCREW CAP SKT 4-40 5/16 L
7	1	JF2S2PCD	CONN 4 PIN JACK MINIATURE (GRY)
8	1	42080600-01	BLOCK MOTOR (NEW)

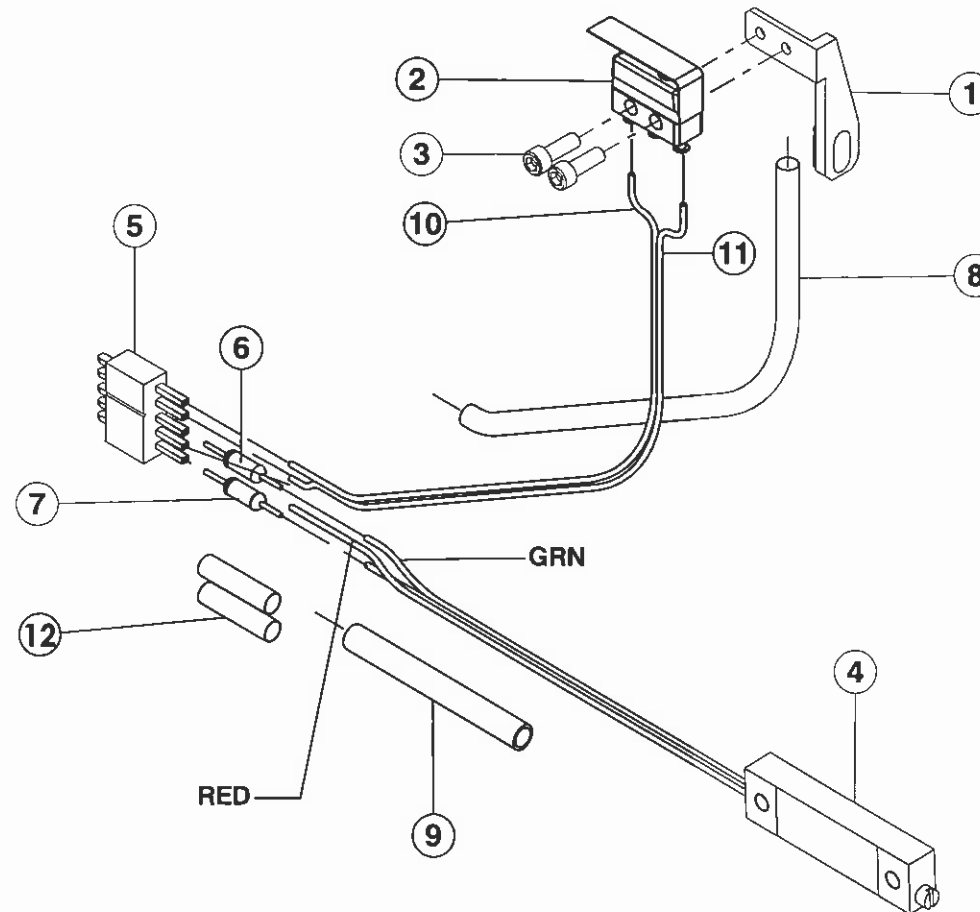
**MODEL 8**  
**IPB 080601**  
**MOTOR DRIVE ASSEMBLY**  
**(M8-2000, M8-4000 AND M8-6625)**

ISSUED: 16 OCT 1996  
REVISED: 25 JUL 2006

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



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42081102-01	BRACKET LIMIT SWITCH
2	1	MMGGD1L2C	LIMIT SWITCH LEAF
3	2	SCS02-56-0,25NP	SCREW CAP SKT 2-56 1/4 L
4	1	3057L-1-202	POT TRIM 2K 1-1/4 MULTI TURN
5	1	7051	CONN 5 PIN MALE
6	1	RN55D7871F	RES 7.87K
7	1	RN55D1300F	RES 130 OHMS 1/4W
8	1	M23053-5-102-0	TBG SHRINK 1/16 ID BLK
9	1	M23053-5-102-0	TBG SHRINK 1/16 ID BLK
10	1	EXE-24-19-36-9	WIRE 24 AWG 19 STRD WHITE TEFLON INSUL
11	1	EXE-24-19-36-3	WIRE 24 AWG 19 STRD ORANGE TEFLON INSUL
12	2	M23053_5-104-0	TBG SHRINK 1/8 ID BLK

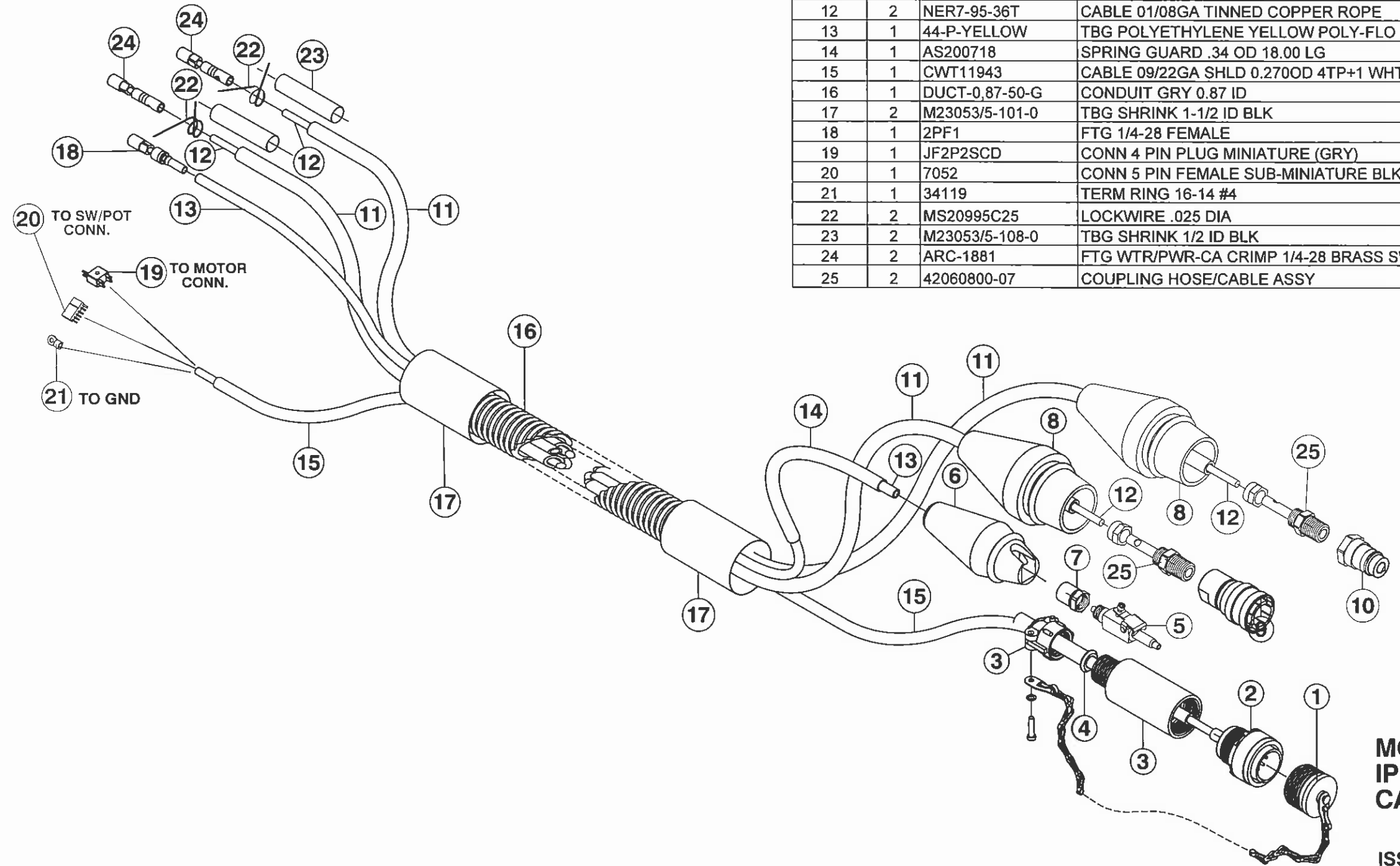


**MODEL 8  
IPB 080803  
LIMIT SWITCH-TRIM POT ASSEMBLY  
(M8-2000, M8-4000 AND M8-6625)**

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ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	13500110-04	DUST CAP ASSY
2	1	MS3106E18-1PF42	CONN 10 PIN STRAIGHT PLUG W/OUT ENDBELL
3	1	G1501N186A3A	CONN BACKSHELL
4	1	MS39056-3	CONN TELESCOPIC BUSHING
5	1	1351109-01	COUPLING Q/D ASSY MALE GAS FOR 1/4 TUBING
6	1	42060805-04	BOOT MALE GAS CLIP TYP Q/D
7	1	261-PG-05	NUT/SLEEVE SPRING 5/16 TBG
8	2	42060804-01	BOOT MALE POWER/GROUND
9	1	42060800-02	COUPLING Q/D 1/4 WATER FEMALE MOD (SM-251B)
10	1	SM-252B	COUPLING Q/D 1/4PT MALE BRASS WATER/POWER
11	2	42090806-01	TBG POLYU BRAIDED ETHER BASE (WATER USE) 1/4 ID 3/8 OD
12	2	NER7-95-36T	CABLE 01/08GA TINNED COPPER ROPE
13	1	44-P-YELLOW	TBG POLYETHYLENE YELLOW POLY-FLO 1/4 OD .040 WALL
14	1	AS200718	SPRING GUARD .34 OD 18.00 LG
15	1	CWT11943	CABLE 09/22GA SHLD 0.270OD 4TP+1 WHT
16	1	DUCT-0,87-50-G	CONDUIT GRY 0.87 ID
17	2	M23053/5-101-0	TBG SHRINK 1-1/2 ID BLK
18	1	2PF1	FTG 1/4-28 FEMALE
19	1	JF2P2SCD	CONN 4 PIN PLUG MINIATURE (GRY)
20	1	7052	CONN 5 PIN FEMALE SUB-MINIATURE BLK W/GOLD PINS
21	1	34119	TERM RING 16-14 #4
22	2	MS20995C25	LOCKWIRE .025 DIA
23	2	M23053/5-108-0	TBG SHRINK 1/2 ID BLK
24	2	ARC-1881	FTG WTR/PWR-CA CRIMP 1/4-28 BRASS SWIVEL NUT (FEM)
25	2	42060800-07	COUPLING HOSE/CABLE ASSY



**MODEL 8-4000 & 8-6625  
IPB 080800  
CABLE ASSEMBLY**

ISSUED: 7 JUL 2003  
REVISED: 4 AUG 2006

TO ORDER USE PART NUMBER.  
PRICE, PART NUMBER AND DESCRIPTION  
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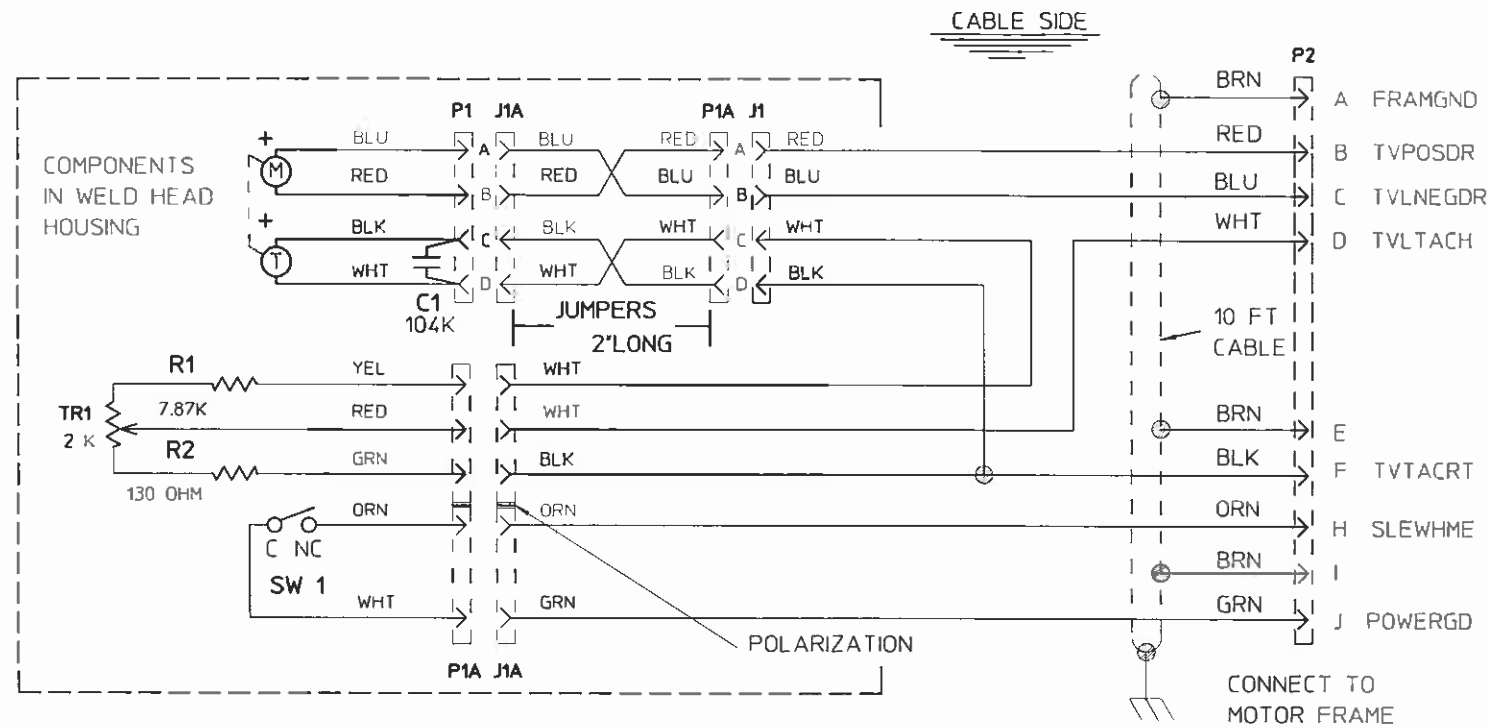
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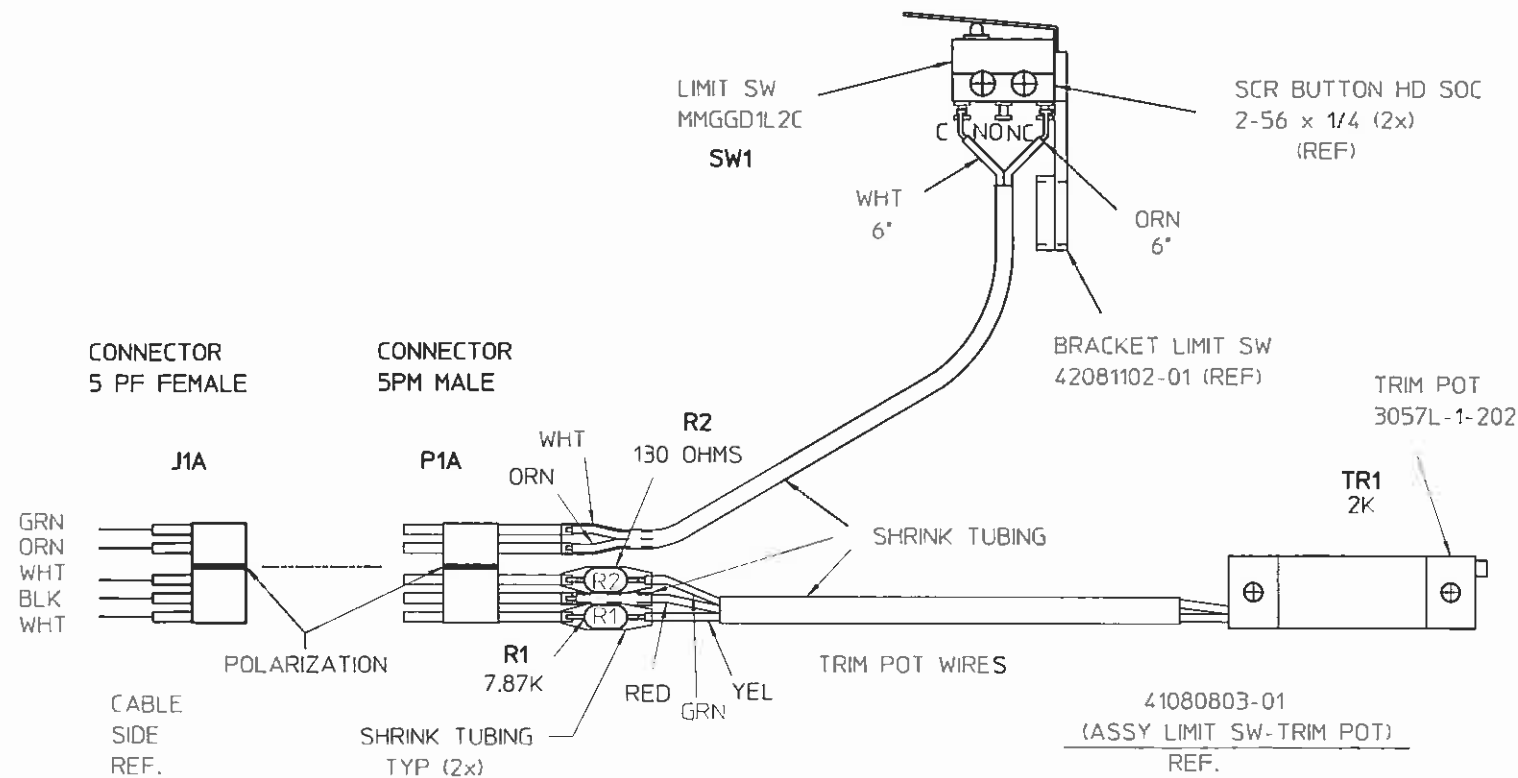
NOTES:

- 1. JUMPER J1A-P1A ADDED SO THAT M8-4000 CABLE CAN BE USED WITH M9-7500 MOTOR IN THE M8-6625.

ZONE	LTR	DCD	REVISIONS	DATE	BY	APPR
A		3806	ADDED ASSY LIMIT SW/TRIM POT.	13MAR01	JKV	
B		4067	ADDED JUMPERS FOR CLOCKWISE ROTATION AS MOD 9	27NOV02	JKV	



-01



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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 1/16 .XX ± .010 XXX ± .005		THIRD ANGLE PROJECTION	FOR IMPLIED STANDARDS SEE DDD-STD-100	<b>ARC MACHINES, INC.</b>	
APPROVALS		DATE	DESCRIPTION		
DRAWN: JONAS VYNIS		11JAN2001	MODEL 8-6625 WELD HEAD WIRING DIAGRAM		
ALL MACHINED SURFACES TO BE CHECKED: <input checked="" type="checkbox"/>		APPR: LEC II	12/3/02	SIZE D	MODEL NO 8-6625
MATERIAL		DRWG. NO. 47081701		REV. B	
APPLICATION	NEXT ASSY	USED ON	SCALE NONE	DO NOT SCALE DRAWING	SHEET 1 OF 1

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