

INSTRUCTIONS AND PARTS MANUAL

SIDE BEAM SYSTEM

Please record your equipment identification information below for future reference. This information can be found on your machine nameplate.

Model Number _____

Serial Number _____

Date of Purchase _____

Whenever you request replacement parts or information on this equipment, always supply the information you have recorded above.

LIT-SBC-4555-IPM-0218

Bug-O Systems is guided by honesty, integrity and ethics in service to our customers and in all we do.



BUG-O SYSTEMS

A DIVISION OF WELD TOOLING CORPORATION



280 TECHNOLOGY DRIVE CANONSBURG, PENNSYLVANIA 15317-9564 USA
PHONE: 412-331-1776 <http://www.bugo.com> FAX: 412-331-0383

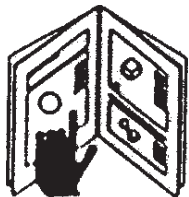
SAFETY

PROTECT YOURSELF AND OTHERS FROM SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.



ELECTRIC SHOCK can kill.

- 1) The equipment is not waterproof. Using the unit in a wet environment may result in serious injury. Do not touch equipment when wet or standing in a wet location.
- 2) The unused connectors have power on them. Always keep the unused connectors covered with the supplied protective panels. Operation of the machine without the protective panels may result in injury.
- 3) Never open the equipment without first unplugging the power cord or serious injury may result.
- 4) Verify the customer-supplied power connections are made in accordance with all applicable local and national electrical safety codes. If none exist, use International Electric Code (IEC) 950.
- 5) Never remove or bypass the equipment power cord ground. Verify the equipment is grounded in accordance with all applicable local and national electrical safety codes. If none exist, use International Electric Code (IEC) 950.



READ INSTRUCTIONS.

Read the instruction manual before installing and using the equipment.



EQUIPMENT DAMAGE POSSIBLE.

- 1) Do not plug in the power cord without first verifying the equipment is OFF and the cord input voltage is the same as required by the machine or serious damage may result.
- 2) Always verify both the pinion and wheels are fully engaged before applying power or equipment damage may occur.
- 3) Do not leave the equipment unattended.
- 4) Remove from the work site and store in a safe location when not in use.



FALLING EQUIPMENT can cause serious personal injury and equipment damage.

Faulty or careless user installation is possible. As a result, never stand or walk underneath equipment.



MOVING PARTS can cause serious injury.

- 1) Never try to stop the pinion from moving except by removing power or by using the STOP control.
- 2) Do not remove any protective panels, covers or guards and operate equipment.

HIGH FREQUENCY WARNINGS

SPECIAL PRECAUTIONS ARE REQUIRED WHEN USING PLASMA, TIG OR ANY WELDING PROCESS THAT USES HIGH FREQUENCY TO STRIKE AN ARC.



WARNING: HIGH FREQUENCY CAN EFFECT MACHINE OPERATION AND THEREFORE, WELD QUALITY.

Read the precautions below before installing and using the equipment.

PRECAUTIONS:

- 1) Some plasma or welding cables are strong sources of high frequency interference. NEVER lay a plasma or welding cable across the controls of the machine.
- 2) Always physically separate the plasma or welding cable leads from the machine cables. For example, the plasma or welding cable leads should NEVER be bundled with a pendant cable or the machine power cord. Maximize the separation between any machine cables and the plasma or welding cables.
- 3) Strictly follow the grounding procedures specified for the plasma or welding unit. NOTE: Some plasma and welding units produce exceptionally large amounts of high frequency noise. They may require a grounding rod be driven into the earth within six feet (2 meters) of the plasma or welding unit to become compatible with an automatic cutting or welding process.
- 4) If the high frequency is produced using a spark gap, adjust the points so the gap is as small as possible. The larger the gap, the higher the voltage and the higher the interference.
- 5) Some plasma or welding units will inject high frequency interference into the AC power line. Use separate power line branches whenever possible to power the plasma or welding source and the machine. Do not plug them into the same outlet box.
- 6) High frequency noise may enter the machine through the plasma or welding supply remote contactor leads. Some plasma and welding sources can produce noise spikes of up to several thousand volts. These sources are not compatible with automated cutting and welding equipment. It is recommended that the remote contactor leads on these plasma or welding sources not be connected to the machine. An alternate solution is to purchase a separate remote contactor isolation box.

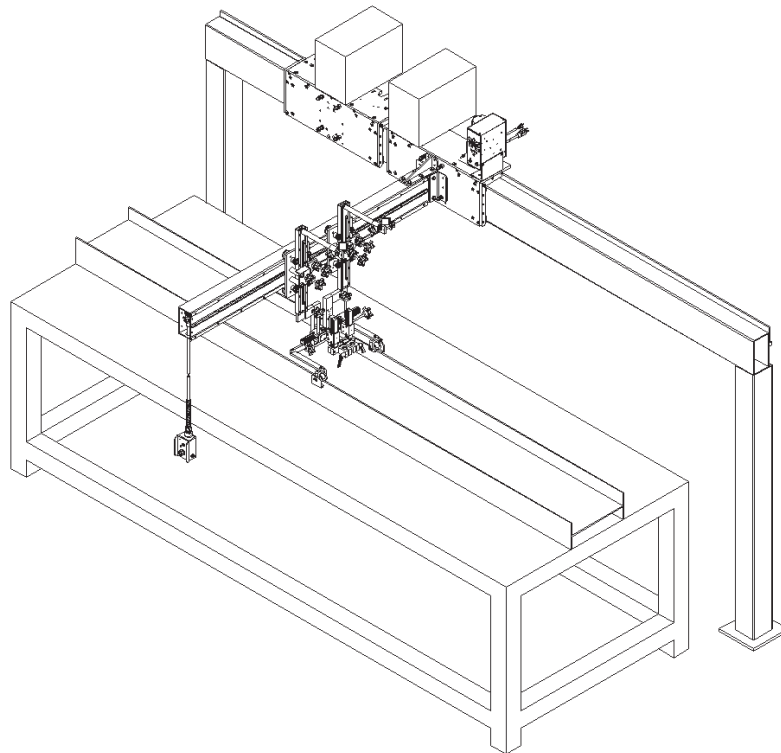
SIDE BEAM SYSTEM

INSTRUCTIONS AND PARTS MANUAL

TABLE OF CONTENTS

PAGE

- 5.....Introduction / Mounting
- 6.....SBC-4555 Motorized Carriage / Exploded View
- 7.....SBC-4555 Motorized Carriage / Parts List
- 8.....CWO-3918-MH Carriage Assembly Motorized Horizontal / Exploded View
- 9.....CWO-3918-MH Carriage Assembly Motorized Horizontal / Parts List
- 10.....SBC-1065 Floating Car w/ Follower / Exploded View / Parts List
- 11.....SBC-1020-DS Dual Side ABR 62"
- 12.....MUG-1145 Carriage Spotter Sub Assy. / Exploded View / Parts List
- 13.....MUG-1145 Carriage Spotter Sub Assy. / Exploded View / Parts List
- 14.....CWO-1690 Large Horizontal Racker / Exploded View / Parts List
- 15.....SBC-6110 M-14 Rotational Control / Wiring Diagram
- 16.....SBC-5997 Bodine Motor w/ Connector / Wiring Diagram
- 16.....SBC-1635-10-2 Remote Weld Starter (Two Guns) / Wiring Diagram
- 17.....Warranty



INTRODUCTION

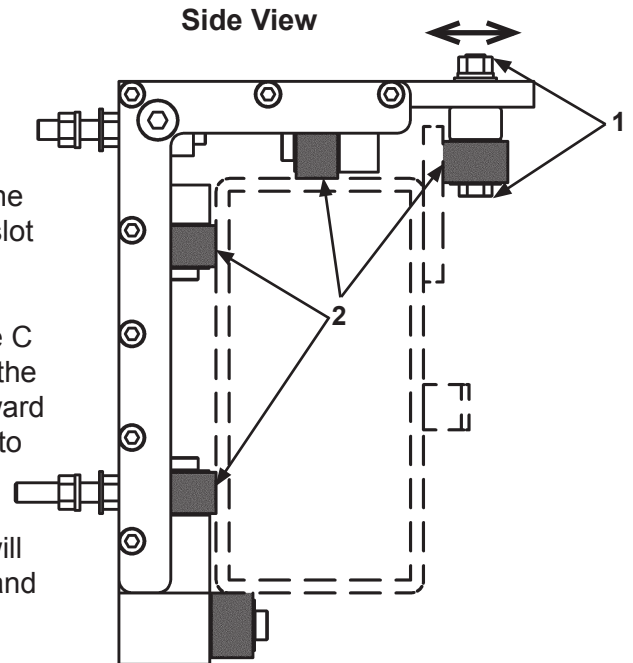
Bug-O Side Beam Systems are custom designed assemblies that are used in a variety of applications such as automated seam welding, beam and stiffener fabrication as well as cutting applications such as stripping and edge preparation. A wide range of gantry and side beam carriage designs are available and can be used to suite a specific application. Systems are available in programmable or manually operated versions. Consult your Bug-O distributor for more information.

MOUNTING

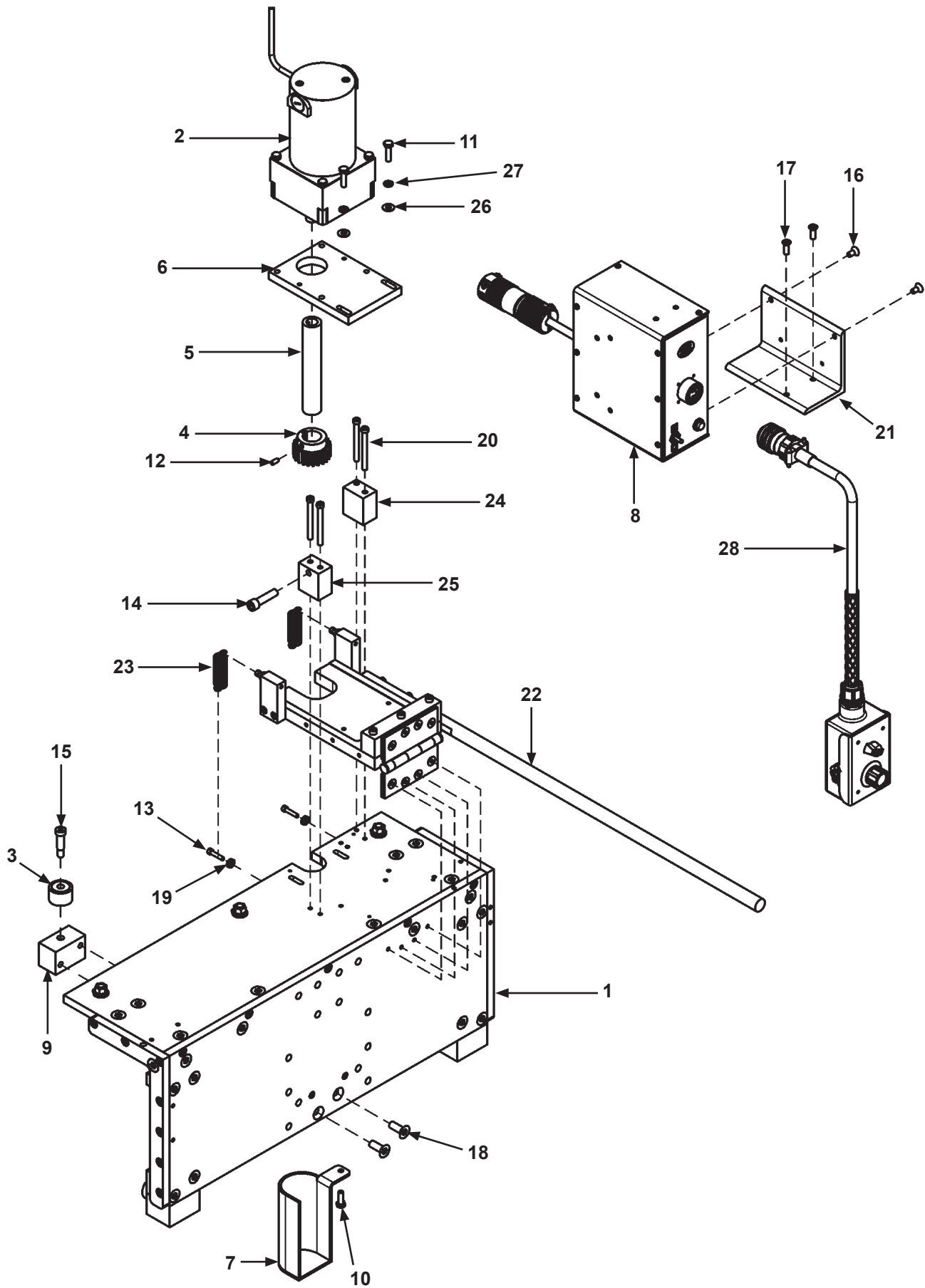
You will need the following:

- Standard allen keys
- Standard wrench set
- Large C clamps 8-10 inch range

- 1) Loosen bolts (1). There are two bolts per carriage. The slide bolts to the back of the carriage towards the U slot of the motor mount.
- 2) Install the carriage onto the monorail. Using the large C clamps, tighten the carriage to the monorail. Tighten the C clamps which will bring the face of the carriage toward the monorail, this will bring the face of the carriage into place. These wheels are (2) on the drawing.
- 3) Bring the bolts (1) to the monorail and tighten. This will secure the carriage to the monorail. Loosen clamps and slide carriage. This should move easily on the beam. Repeat process for the second carriage.



SBC-4555 MOTORIZED CARRIAGE / EXPLODED VIEW

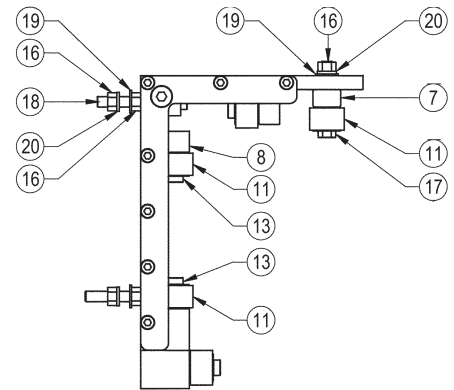
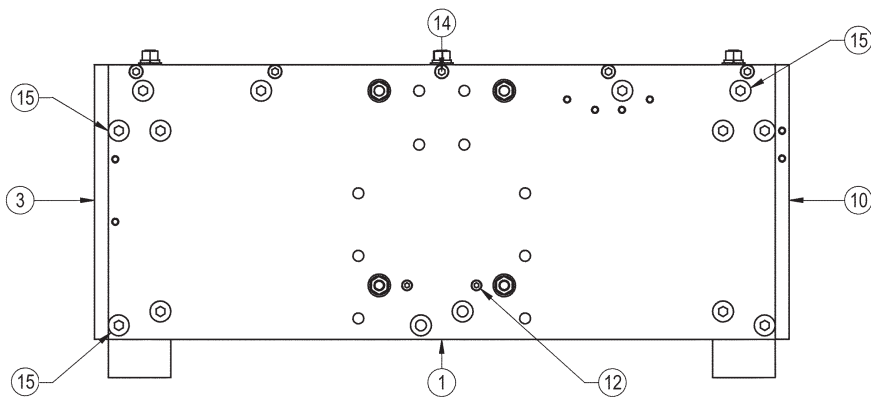
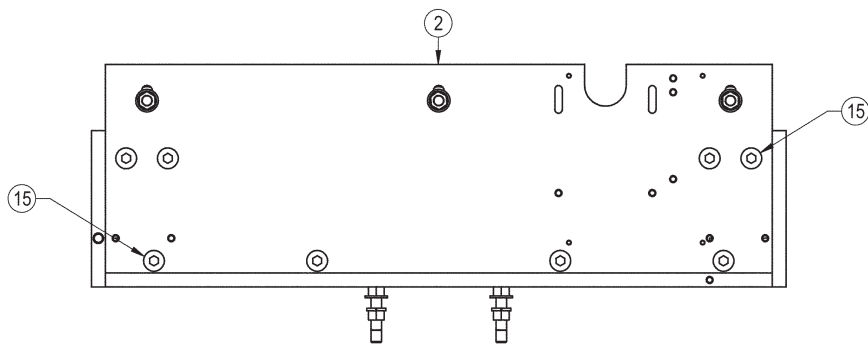
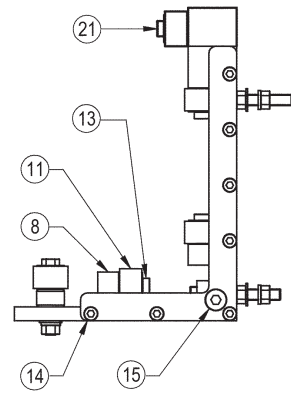
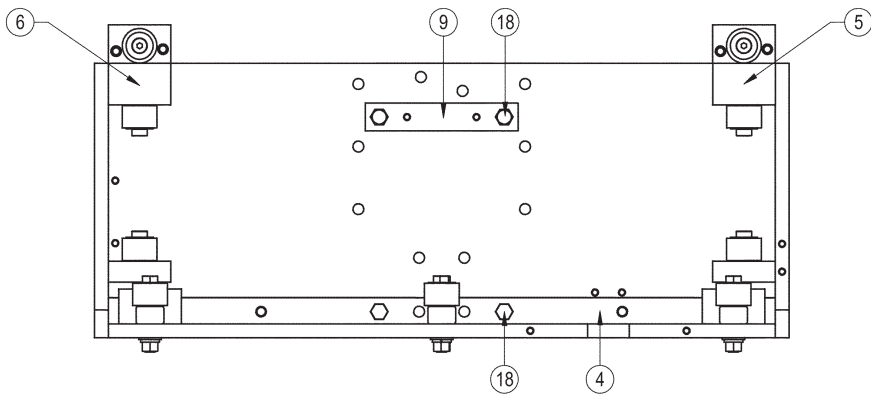


SBC-4555 MOTORIZED CARRIAGE / PARTS LIST

<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	CWO-3918-MH	Carriage Assy. Motorized Horiz.
2	1	CWO-5997	Bodine Motor 156 w/connector
3	1	CWO-4884	McGill Cyr 1/45
4	1	CWO-5768	Pinion Gear w/ Key
5	1	SBC-4551	Shaft Extender
6	1	CWO-5802	Motor Mount Plate
7	1	CWO-5804	Guard
8*	1	SBC-6110	Rotation Control Modified
9	1	CWO-9006	Wheel & Clamp Mount (left)
10	1	FAS-0357	Hex Hd Cap Scr 1/4-20 x 3/4"
11	2	FAS-0359	Hex Hd Cap Scr 1/4-20 x 1"
12	1	FAS-0455	Set Scr 1/4-20 x 1/2" Cup Point
13	2	FAS-0558	Soc Hd Cap Scr 1/4-20 x 7/8
14	1	FAS-0593	Soc Hd Cap Scr 3/8-16 x 1-1/2
15	1	FAS-0679	Soc Hd Shr 3/8" x 1" x 5/16-18
16	2	FAS-0955	Flt Hd Soc Scr 1/4-20 x 1/2"
17	2	FAS-0957	Flt Hd Soc Scr 1/4-20 x 3/4"
18	2	FAS-0999	Flt Hd Soc Scr 3/8-16 x 1"
19	2	FAS-1350	Hex Jam Nut 1/4-20
20	4	FAS-2556	Soc Hd Cap Scr 1/4-20 x 2-1/2
21	1	SBC-1014	Control Mount Angle
22	1	SBC-4540	Side Beam Clutch Assembly
23	2	SBC-4547	Cot Extension Spring
24	1	SBC-4548	Stabilizer Block
25	1	SBC-4549	Stabilizer / Stop Block
26	2	WAS-0240	1/4" SAE Washer
27	2	WAS-0243	1/4" Split Lockwasher
28	1	SBC-1635-10-2	Pendant Control (2 guns) (Part of SBC-6110)

* 240 VAC requires SBC-6110-240 Rotation Control

CWO-3918-MH CARRIAGE ASSEMBLY MOTORIZED HORIZONTAL / EXPLODED VIEW

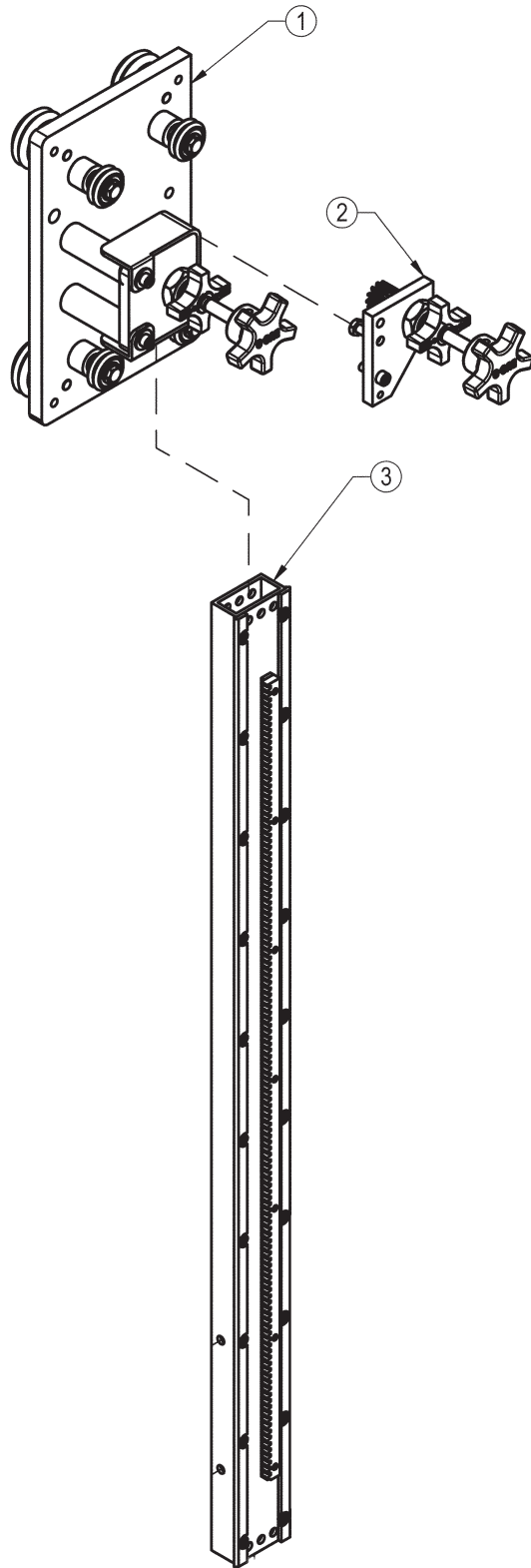


CWO-3918-MH CARRIAGE ASSEMBLY MOTORIZED HORIZONTAL / PARTS LIST

<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	CWO-9001	Carriage Front Plate
2	1	CWO-9002-MT	Carriage Top Plate Motorized
3	1	CWO-9003	Carriage End Plate (L.H.)
4	1	CWO-9004	Carriage Reinforcement Bar
5	1	CWO-9005	Wheel & Clamp Mounting Block, Right
6	1	CWO-9006	Wheel & Clamp Mounting Block, Left
7	3	CWO-9007	Cam Roller Spacer
8	4	CWO-9008	Wheel Mount Block
9	1	CWO-9011	Carriage Back-up Bar
10	1	CWO-9194	Carriage End Plate (R.H.)
11	9	CWO-4884	Cam Roller Spacer
12	2	FAS-0557	Soc Hd Cap Scr 1/4-20 x 3/4"
13	6	FAS-0679	Soc Hd Cap Scr 3/8 x 1 x 5/16-18
14	19	FAS-0959	Flt Hd Soc Scr 1/4-20 x 1"
15	22	FAS-0999	Flt Hd Soc Scr 3/8-16 x 1"
16	11	FAS-1390	Hex Nut 3/8-16
17	3	FAS-2397	Hex Hd Cap Scr 3/8-16 x 2-1/2"
18	4	FAS-2399-FT	Hex Hd Cap Scr 3/8-16 x 3-1/2" Full Thread
19	7	WAS-0260	3/8" Washer
20	7	WAS-0262	3/8" Split Lockwasher
21	2	CWO-9490	Lower Cam Roller Assembly
*	2	CWO-9492	Metric Spacer Plate

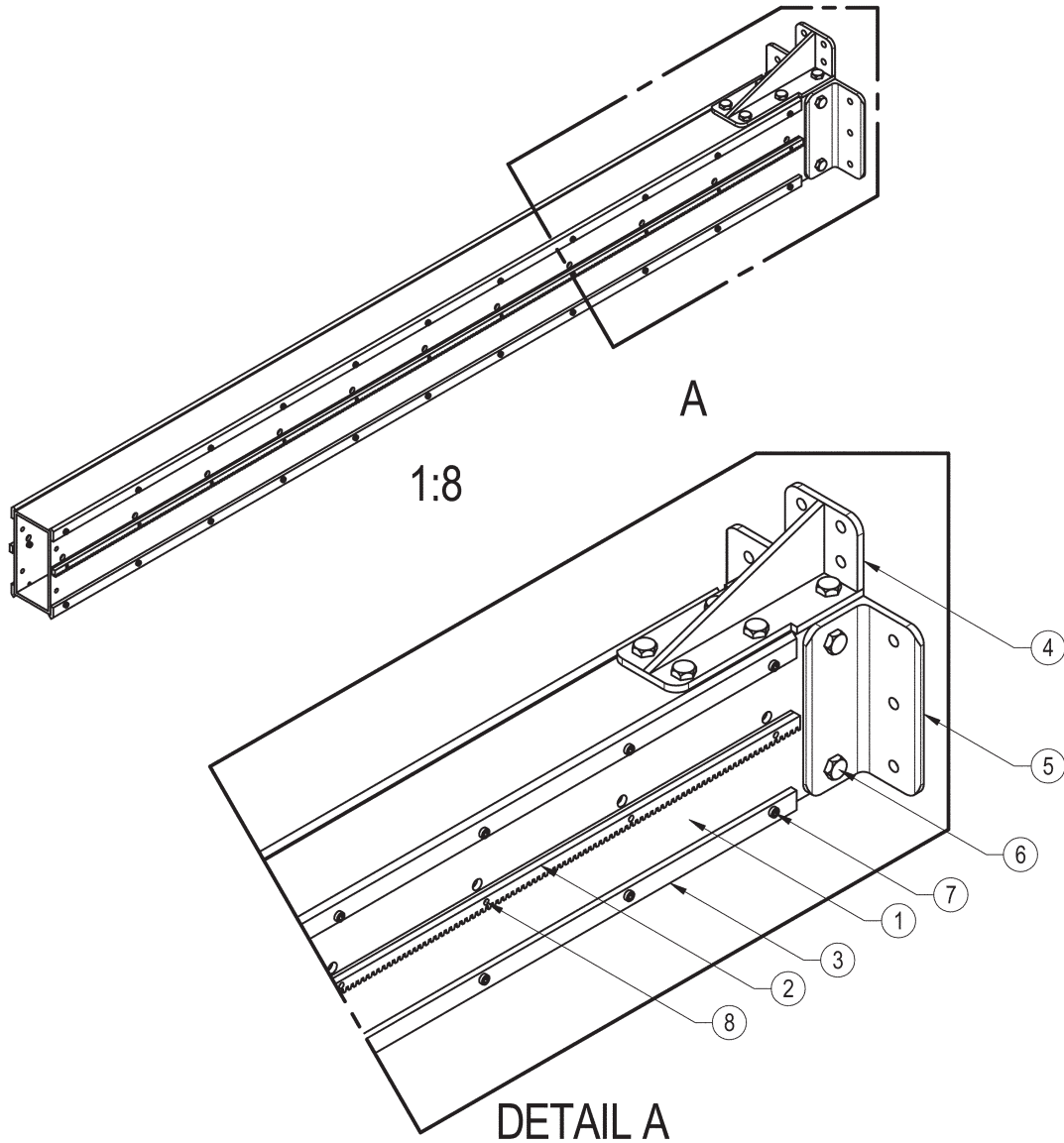
* Not Shown

SBC-1065 FLOATING CAR W/ FOLLOWER / EXPLODED VIEW / PARTS LIST



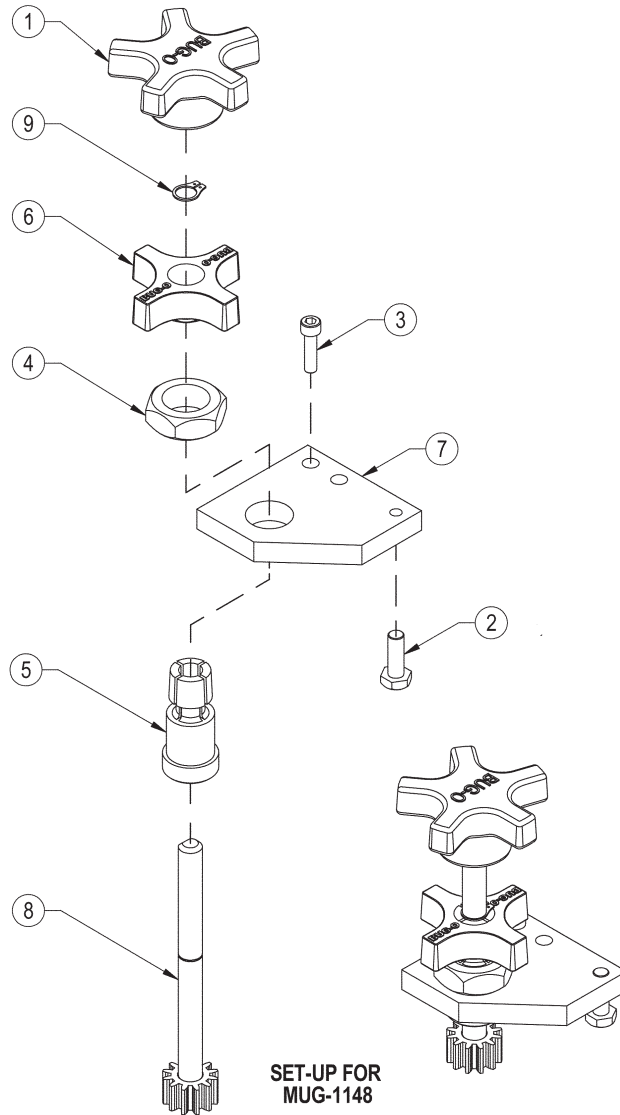
<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	CWO-1690	Large Horizontal Racker
2	1	MUG-1145	Carriage Spotter Sub-Assy
3	1	ABR-1060	V-Guide Ways 33"

SBC-1020-DS DUAL SIDE ABR 62"



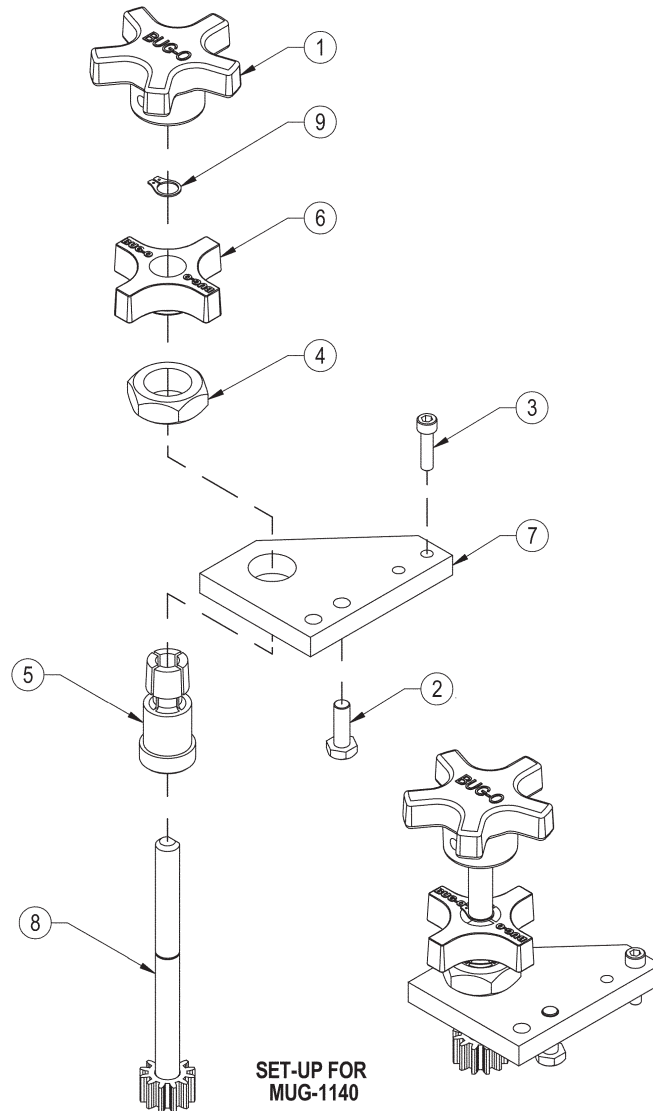
<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	SBC-1021-DS	Dual Side Abr Box 65"
2	2	SBC-1022	Rack 62"
2	2	SBC-1023	Spacer 62"
3	4	SBC-1024	T-3 Guide Way 62"
4	1	SBC-1025	Gusset Assembly
5	2	SBC-1029	Mtg. Angle
6	10	FAS-0399-SS	Hex Hd Cap Scr 3/8-16 x 1"
6	10	WAS-0260-SS	3/8 Washer
7	44	FAS-0535-SS	Soc Hd Cap Scr #10-24 x 1/2"
8	22	FAS-0545-SS	Soc Hd Cap Scr #10-32 x 1/2"
8	22	WAS-0232-SS	#10 Split Lock Washer

MUG-1145 CARRIAGE SPOTTER SUB ASSY. / EXPLODED VIEW / PARTS LIST



<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	BUG-2032	Knob, Black w/ Set Scr 1/4-20 x 3/8" (FAS-0454)
2	1	FAS-0357	Hex Hd Cap Scr 1/4-20 x 3/4"
3	1	FAS-0557	Soc Hd Cap Scr 1/4-20 x 3/4"
4	1	FAS-1307	Hex Jam Nut 3/4-16
5	1	MUG-1141	Bearing, Collet
6	1	MUG-1142	Knob, Locking
7	1	MUG-1143	Positioning Plate
8	1	MUG-1502	Gear Assembly
9	1	MUG-1579	Retaining Ring For 3/4" Shaft

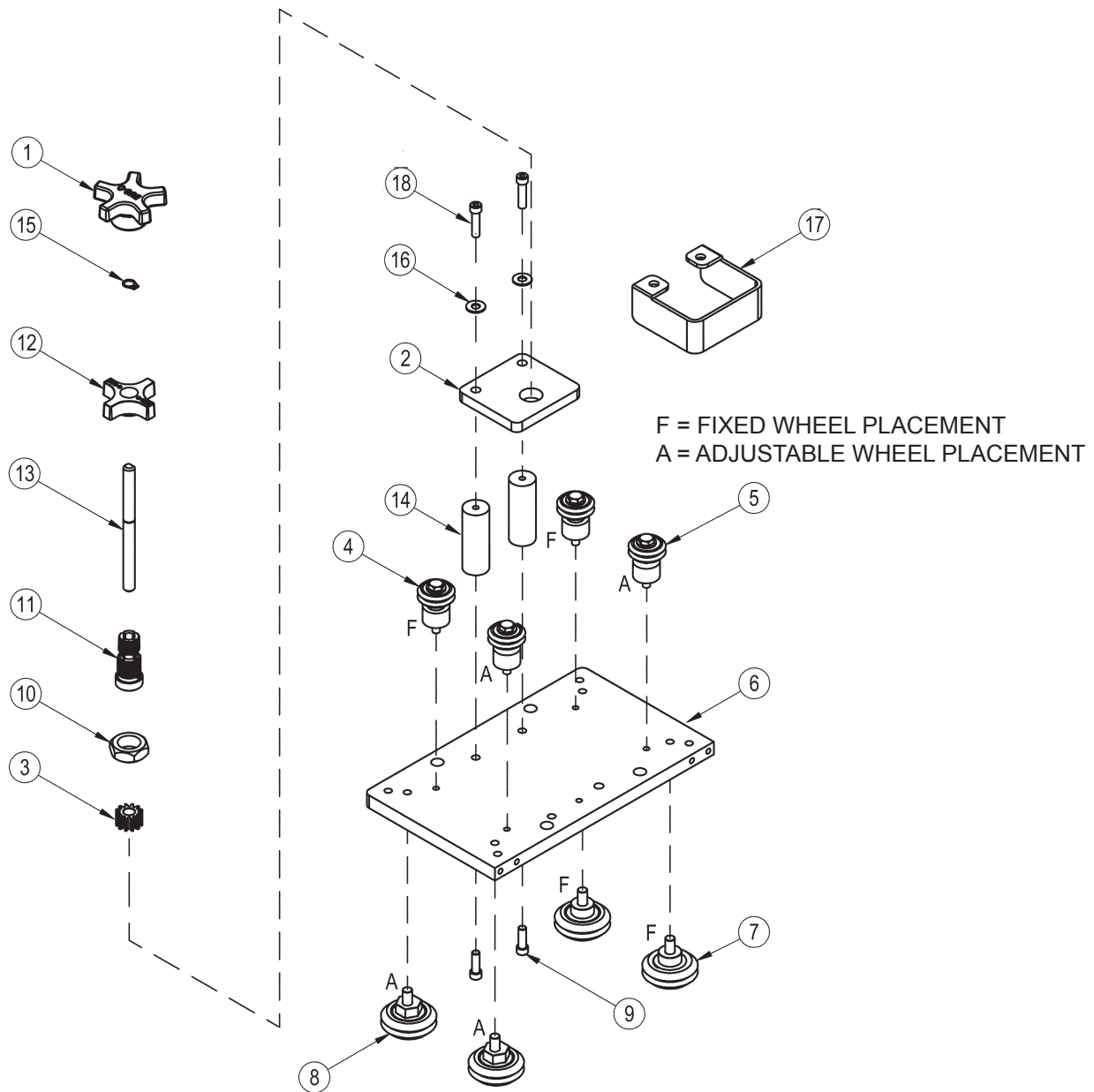
MUG-1145 CARRIAGE SPOTTER SUB ASSY. / EXPLODED VIEW / PARTS LIST



NOTE: WHEN USED FOR MUG-1148 (TORCH SPOTTER), CUT MUG-1143 (POSITIONING PLATE) TO 2.5" LONG AND INVERT IN ASSEMBLY AS SHOWN.

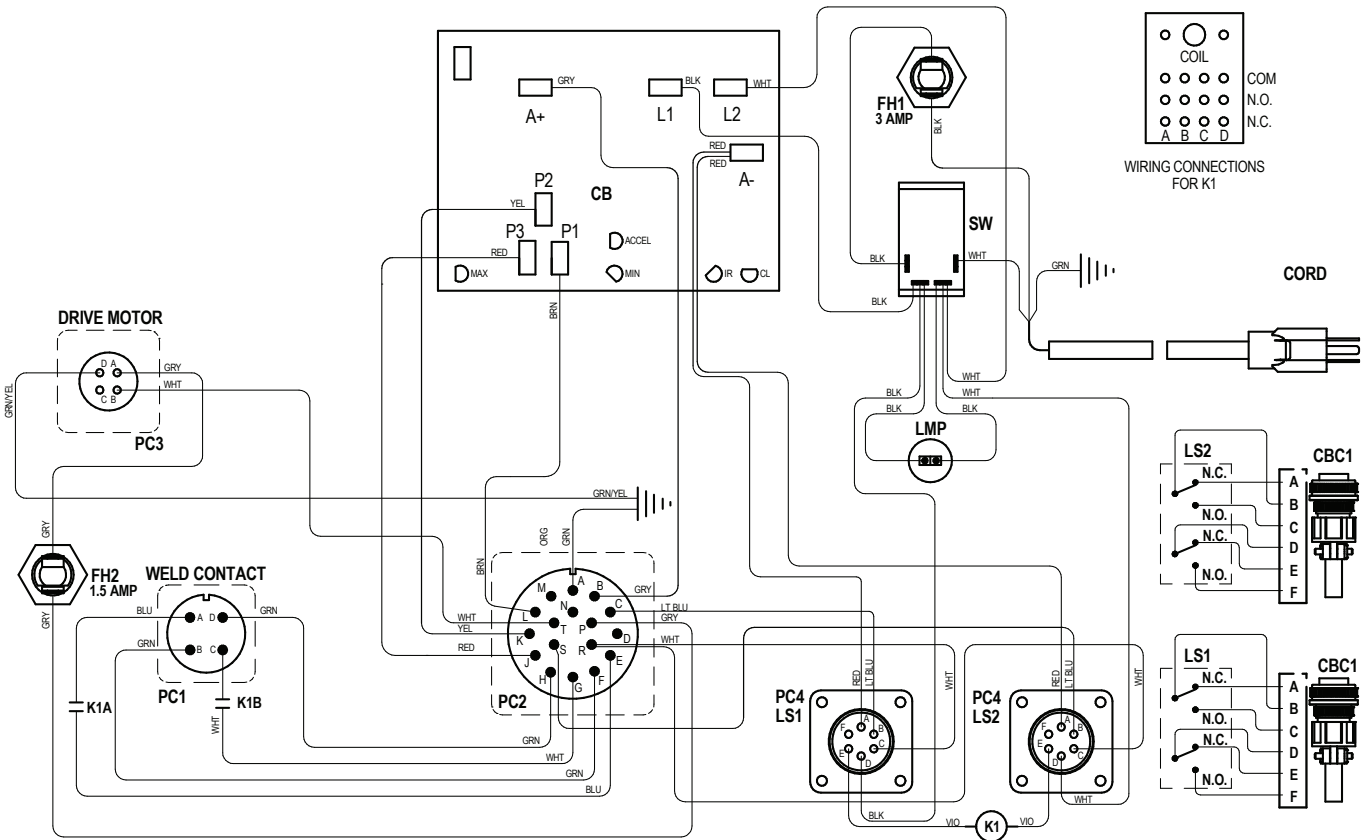
<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	BUG-2032	Knob, Black w/ Set Scr 1/4-20 x 3/8" (FAS-0454)
2	1	FAS-0357	Hex Hd Cap Scr 1/4-20 x 3/4"
3	1	FAS-0557	Soc Hd Cap Scr 1/4-20 x 3/4"
4	1	FAS-1307	Hex Jam Nut 3/4-16
5	1	MUG-1141	Bearing, Collet
6	1	MUG-1142	Knob, Locking
7	1	MUG-1143	Positioning Plate
8	1	MUG-1502	Gear Assembly
9	1	MUG-1579	Retaining Ring For 3/4" Shaft

CWO-1690 LARGE HORIZONTAL RACKER / EXPLODED VIEW / PARTS LIST



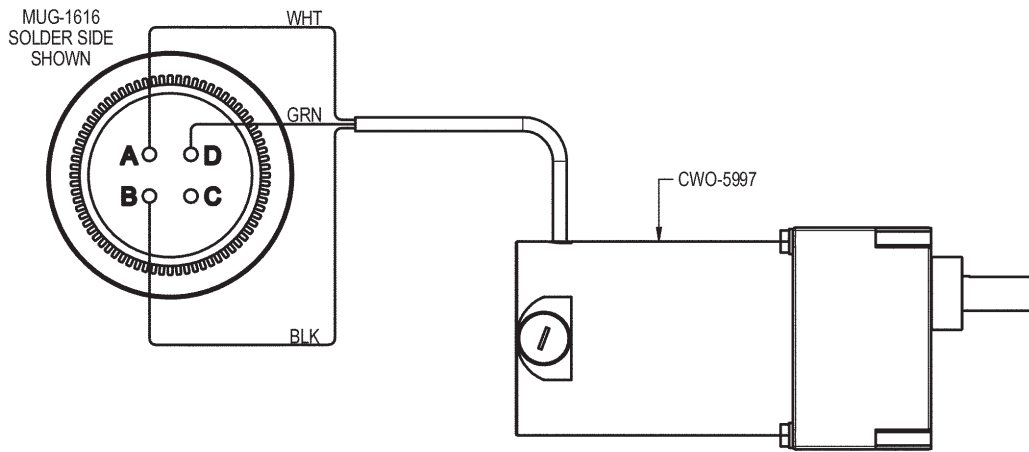
<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	BUG-2032	Knob, black w/ Set Scr 1/4-20 x 3/8" (FAS-0454)
2	1	CWO-1678	Racker Plate
3	1	CWO-1679	Pinion 11T
4	2	CWO-1680	W2 Fixed Leg & Wheel Assembly
5	2	CWO-1681	W2 Adj. Leg & Wheel Assembly
6	1	CWO-1687	Mount Plate (Large Racker)
7	2	CWO-4326	Fixed Leg & Wheel Assembly
8	2	CWO-4327	Adj. Leg & Wheel Assembly
9	2	FAS-0557	Soc Hd Cap Scr 1/4-20 x 3/4"
10	1	FAS-1307	Hex Jam Nut 3/4-16
11	1	MUG-1141	Bearing Collet
12	1	MUG-1142	Knob, Locking
13	1	MUG-1144	Shaft
14	2	MUG-1453	Stand-off
15	1	MUG-1579	Retaining Ring
16	3	WAS-0240	1/4" SAE Washer
17	1	CWO-1671	Racker Shield
18	2	FAS-0559	Soc Hd Cap Scr 1/4-20 x 1"

SBC-6110 M-14 ROTATIONAL CONTROL / WIRING DIAGRAM



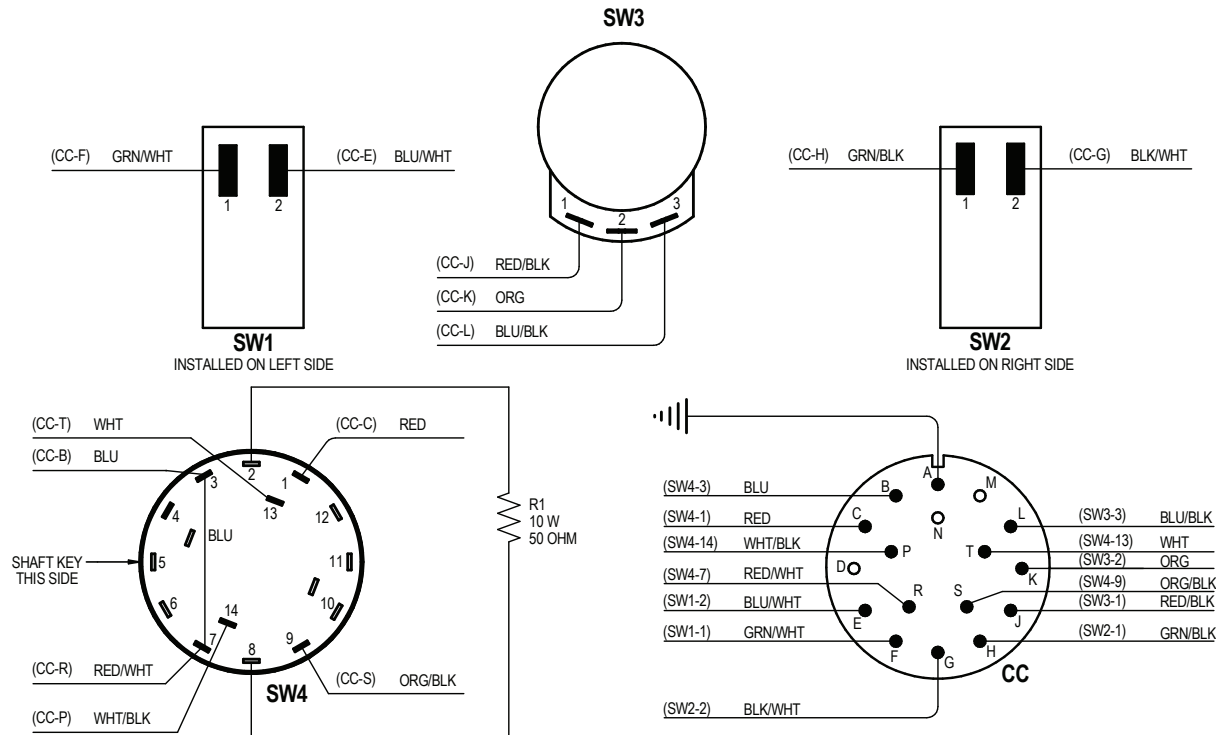
ITEM	PART NO.	DESCRIPTION	120V	240V
CB	CWO-6525	0-90Dc Speed Control W/Reset	1	1
CORD	BUG-9445	Power Cord 16/3 Type, So, 10 Amp	1	
	GOF-3115	Line Cord 240Vac		1
FH1	FHO-0188	Fuse Holder	1	1
	FUS-0257	3 Amp	1	1
FH2	FHO-0188	Fuse Holder	1	1
	FUS WTE 0190	1.5 Amp	1	1
LMP	CWO-6206	Red Neon Lamp 125V	1	
	BUG-1428	Pilot Light 240V		1
PC1	BUG-1034	Panel Connector 4-T, M	1	1
PC2	BUG-5527	Panel Connector 17-T, F	1	1
PC3	MUG-1156	Panel Connector 4-T, F	1	1
PC4	BUG-9902	Panel Connector 6-T, F	2	2
CBC1	BUG-9906	Cable Connector 6-T, M	2	2
SW	ARM-2279	Toggle Switch	1	1
K1	BUG-1383	Relay, 4Pdt, 3A 120V Plug In	1	1
LS1	BUG-9274	Micro Switch in Housing	1	1
LS1	BUG-9274	Micro Switch in Housing	1	1

SBC-5997 BODINE MOTOR W/ CONNECTOR / WIRING DIAGRAM



<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	MUG-1616	Cable Connector 4-T, M

SBC-1635-10-2 REMOTE WELD STARTER (TWO GUNS) / WIRING DIAGRAM



<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
CC	1	BUG-5552	Cable Connector 17-T, M
SW1	1	ABP-1069	Toggle Switch, ON-NONE-ON
SW2	1	ABP-1069	Toggle Switch, ON-NONE-ON
SW3	1	CWO-6525	0-90 VDC Speed Control w/ Reset, Pot Only
SW4	1	MUG-1258-1	Rotary Switch Assembly
R1	1	CWO-6213	50 OHMS, 10W, 5% Wire Wound

WARRANTY

Limited 3-Year Warranty

MODEL _____
SERIAL NO. _____
DATE PURCHASED: _____
WHERE PURCHASED: _____

For a period ending one (1) year from the date of invoice, Manufacturer warrants that any new machine or part is free from defects in materials and workmanship and Manufacturer agrees to repair or replace at its option, any defective part or machine. HOWEVER, if the invoiced customer registers the Product Warranty by returning the Warranty Registration Card supplied with the product within 90 days of the invoice date, or by registering on-line at www.bugo.com, Manufacturer will extend the warranty period an additional two (2) years which will provide three (3) total years from the date of original invoice to customer. This warranty does not apply to machines which, after Manufacture's inspection are determined by Manufacturer to have been damaged due to neglect, abuse, overloading, accident or improper usage. All shipping and handling charges will be paid by the customer.

The foregoing express warranty is exclusive and Manufacturer makes no representation or warranty (either express or implied) other than as set forth expressly in the preceding sentence. Specifically, Manufacturer makes no express or implied warranty of merchantability or fitness for any particular purpose with respect to any goods. Manufacturer shall not be subject to any other obligations or liabilities whatsoever with respect to machines or parts furnished by Manufacturer.

Manufacturer shall not in any event be liable to Distributor or any customer for any loss of profits, incidental or consequential damages or special damages of any kind. Distributor's or customer's sole and exclusive remedy against Manufacturer for any breach of warranty, negligence, strict liability or any other claim relating to goods delivered pursuant hereto shall be for repair or replacement (at Manufacturer's option) of the machines or parts affected by such breach.

Distributor's Warranty:

In no event shall Manufacturer be liable to Distributor or to any customer thereof for any warranties, representations or promises, express or implied, extended by Distributor without the advance written consent of Manufacturer, including but not limited to any and all warranties of merchantability or fitness for a particular purpose and all warranties, representations or promises which exceed or are different from the express limited warranty set forth above. Distributor agrees to indemnify and hold Manufacturer harmless from any claim by a customer based upon any express or implied warranty by Distributor which exceeds or differs from Manufacturer's express limited warranty set forth above.

HOW TO OBTAIN SERVICE:

IF YOU THINK THIS MACHINE IS NOT OPERATING PROPERLY, RE-READ THE INSTRUCTION MANUAL CAREFULLY, THEN CALL YOUR AUTHORIZED BUG-O DEALER/DISTRIBUTOR. IF THEY CANNOT GIVE YOU THE NECESSARY SERVICE, WRITE OR PHONE US TO TELL US EXACTLY WHAT DIFFICULTY YOU HAVE EXPERIENCED. BE SURE TO MENTION THE MODEL AND SERIAL NUMBERS.