GRIPNAIL
665
GLIDER
OPERATOR'S MANUAL

 Revised: 5-9-08

Serial No. 0501002 - .

TABLE OF CONTENTS

INTRODUCTION

The Gripnail 665 glider was designed to require minimum maintenance. The 665 is PLC controlled , which simplifies trouble shooting. All hose connections between valves and cylinders use push-fit type fittings. These fittings save maintenance time if lubrication or replacement is required on any item.

OPERATOR SAFETY

Proper safety precautions must be observed with any piece of equipment. This section contains several guidelines designed to ensure operator safety. Follow these directions at all times.

REMEMBER—SAFETY FIRST!

FIVE SAFETY RULES

1. DO NOT OPERATE this machine without all covers and guards in place.

2. DISCONNECT all electrical power and compressed air sources before servicing. Follow OSHA standard 1910.147 “CONTROL of HAZARDOUS ENERGY (LOCKOUT/TAGOUT)”

3. TROUBLESHOOTING should be done by qualified personnel only.

4. THE OPERATOR should always wear the personal protective equipment as outlined by his/her employer, such as eye and ear protection, to avoid injury.

5. MAINTAIN the equipment in good operating condition.

SYSTEM REQUIREMENTS

ELECTRICAL: 120 VAC/ 60 HZ/ 10 AMPS

PNEUMATIC: 80 PSI @ 1 CFM

INSTALLATION INSTRUCTIONS

1. Place machine on a hard, flat, level surface. If the surface is irregular and shimming is required, use steel (sheet metal) to make shims. Normal vibratory parts feeder operation requires the machine to be stable and solidly supported. **DO NOT USE** cardboard, plywood, particle board, other composite wood products or soft materials as shim stock.

1. Place bowl feeder on machine into spaces provided, noting location of bowl exit. Plug the bowl feeder into the socket near the bowl support.

3. Ensure a 1/8 inch clearance gap exists between the feeder bowl exit and the entrance to the track assembly.

4. Connect air and electricity. Safety Note: Quick disconnect air fittings are recommended. ALWAYS install the *free flowing* MALE connector onto the machine. This will permit immediate exhausting of air from the machine when disconnected from the shop supply.

5. Four Electro-magnets are positioned generically near the Anvil to force the sheet metal against the Anvil to reduce and/or eliminate any witness mark on the back side from the fastener. Depending on where the “oil canning” of your sheet metal occurs, the Electro-magnets should be moved to a more effective location.

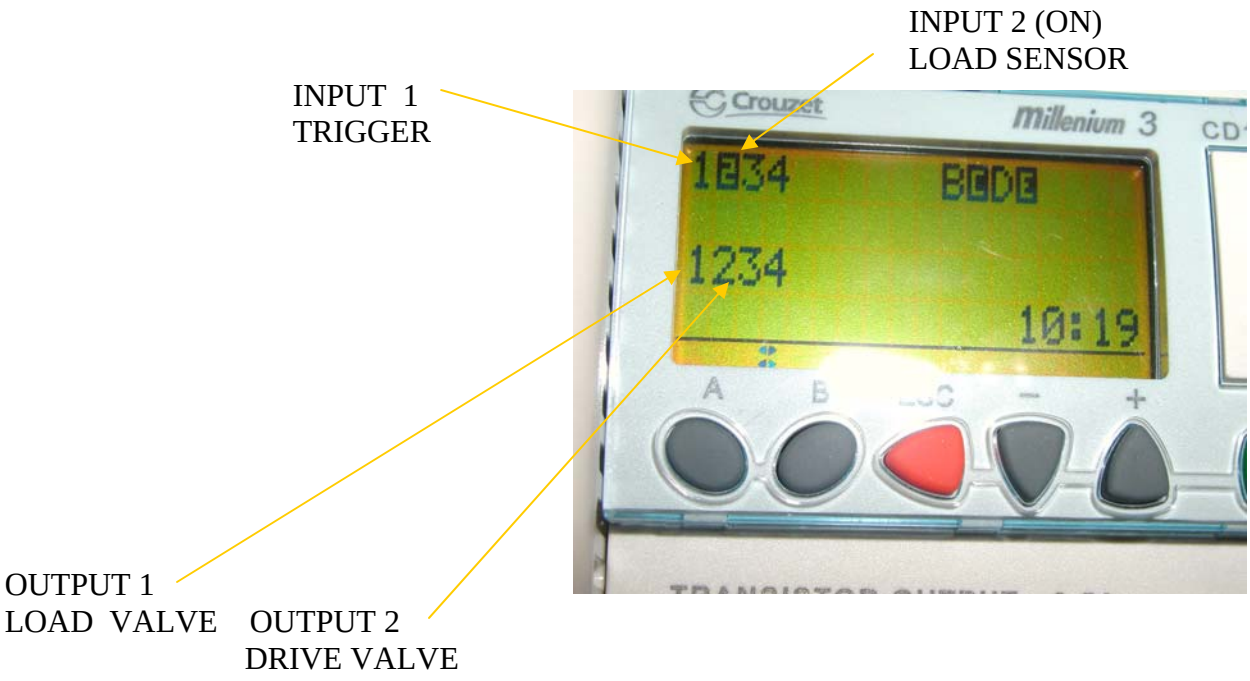
MAINTENANCE

1. DRAIN water from filter/regulator assembly DAILY.

2. REMOVE accumulated fiberglass and adhesive buildup from the magnetic driver and track daily or as required.

3. Check for loose hardware and tighten as required.

PLC
INPUTS & OUTPUTS



SEQUENCE OF OPERATION

1. Input 2 (Load Sensor) MUST be on.
2. Input 1 (Foot or Trigger) is activated momentarily or continuously held.
3. Output 2 (Drive) turns on.
4. Output 2 (Drive) turns off.
5. Output 1 (Load) turns on.
6. Input 2 (Load Sensor) turns off.
7. Output 1 (Load) turns off.
8. Input 2 (Load Sensor) turns on.
9. Input 1 (Foot or Trigger) must be off after Step 9 to restart the sequence

TROUBLESHOOTING

A. Drive head doesn't operate after foot pedal is depressed.

1. Check AC electrical power cord connection and ON switch. Page 11.

2. Is air connection and/or shop supply valve open?

3. Is the load sensor indicator lights ON? Page 9.
   a. If it is not ON, check sensor position.
   b. If it is not ON, check 24 Volt DC power supply in control box. Page 10.

4. Check drive valve fuse #3.

5. Check internal connections in foot pedal and external cable condition. Page 13.

B. New fasteners do not load onto drive head.

1. Check the drive cylinder and magnetic driver. If either is discovered loose, readjust and tighten. See page 7.

2. Check load valve fuse #4.

3. Turn OFF all power and air, then manually check load cylinder for binding.

C. Vibratory feeder bowl doesn't operate.

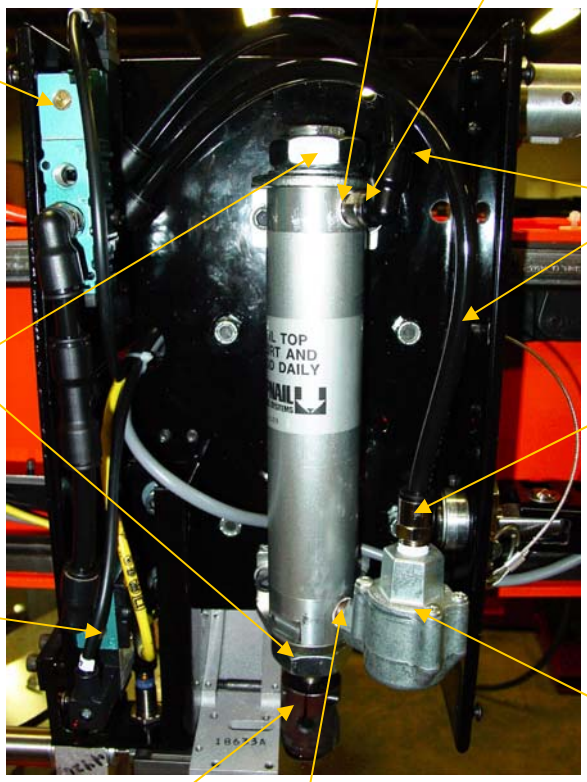
1. Check the power cord connection.

2. Check the position of the speed control setting.

3. Check the sensor on track.

4. Check the feeder bowl control fuse (3 amp). Page 10

DRIVE HEAD ASSEMBLY



DRIVE CYLINDER
P/N 44267
CYLINDER FOOT
BRACKET
P/N 40222

ELBOW
P/N 46211

DRIVE VALVE
P/N 44240
CORD SET
P/N 51227

3/8” TUBING
P/N 48036

1-14 HEX JAM
NUT P/N 62112
1 LOCKWASHER
P/N 61304

MALE CONNECTOR
P/N 46217

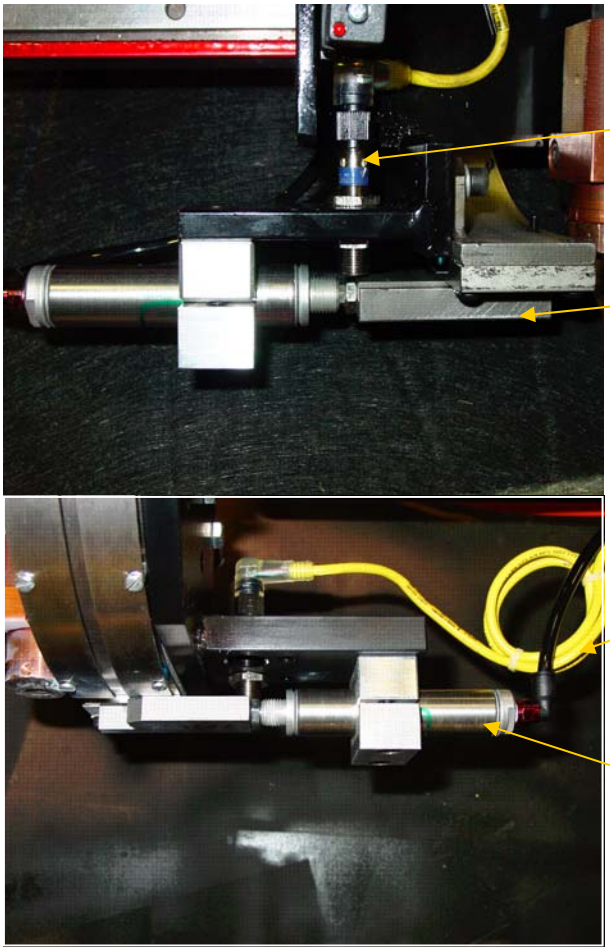
LOAD VALVE
P/N 44251
CORD SET
P/N 51227

EXHAUST VALVE
P/N44112

MAGNETIC DRIVER
P/N 30295
SUPPLIED WITH
(2) 10-32x.63 SHCS
P/N 60106

HEX NIPPLE
P/N 46129

LOAD CYLINDER ASSEMBLY



PROXIMITY SENSOR
P/N 51268

TRANSFER BLOCK
P/N 20441

PROXIMITY SENSOR
CABLE
P/N 51269

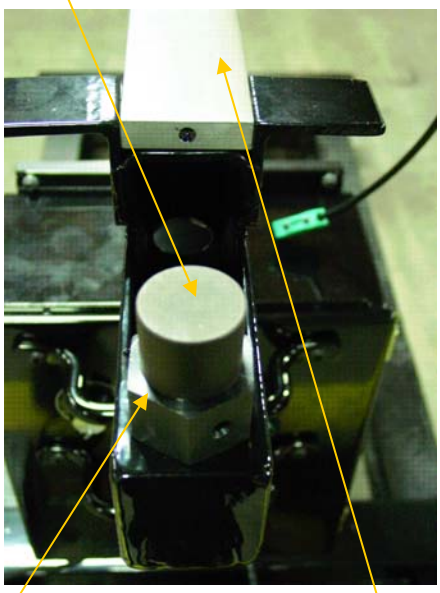
LOAD CYLINDER
P/N 44257

Position the Transfer Block so this point intrudes on the Pin path by approximately 1/32”.

Rotate the Transfer Block to horizontal, to assure the top key section equally engages the bottom of the Track .

PROXIMITY SENSOR

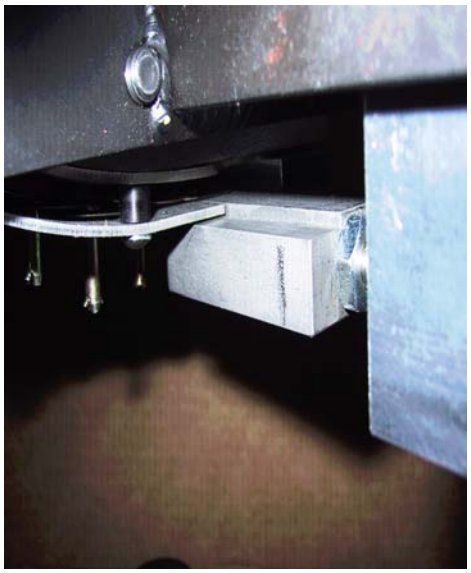
ANVIL 1-1/4” DIAMETER
P/N 30588

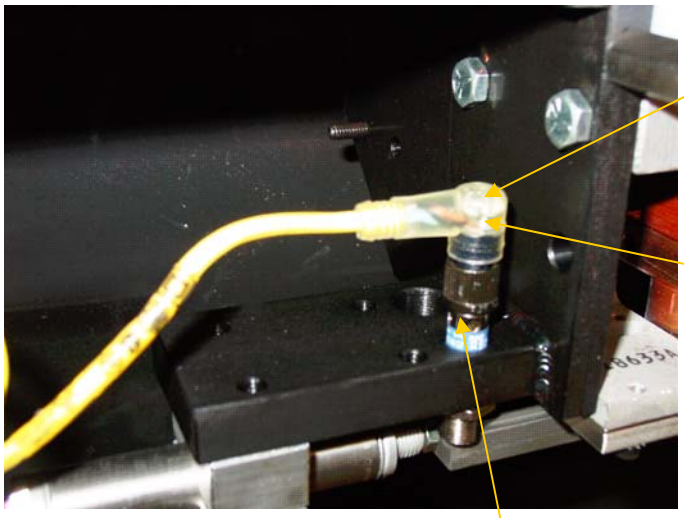


ANVIL RAIL
P/N 31307

ANVIL MOUNT
P/N 31064

The transfer block fits into the track for easy alignment.





GREEN LED

YELLOW LED

LOAD RETURN SENSOR

ELECTRICAL ASSEMBLY

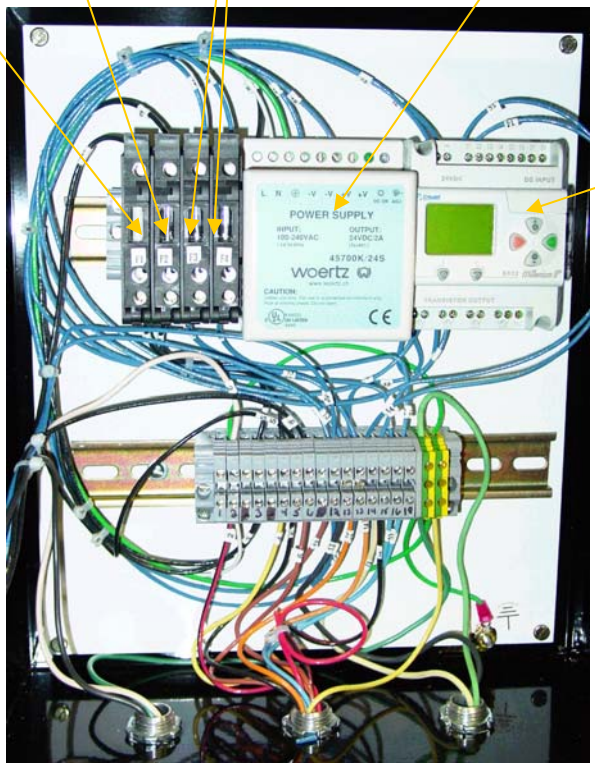
FUSE HOLDER
P/N 51240 (4)

10 AMP FUSE
P/N 51275

3 AMP FUSE
P/N 51274

1 AMP FUSE
P/N 51273

24VDC POWER SUP-
PLY
P/N 51272



CONTROLLER
P/N 51270

CONTROL ENCLOSURE

Pictured below are the machine's electrical controls.

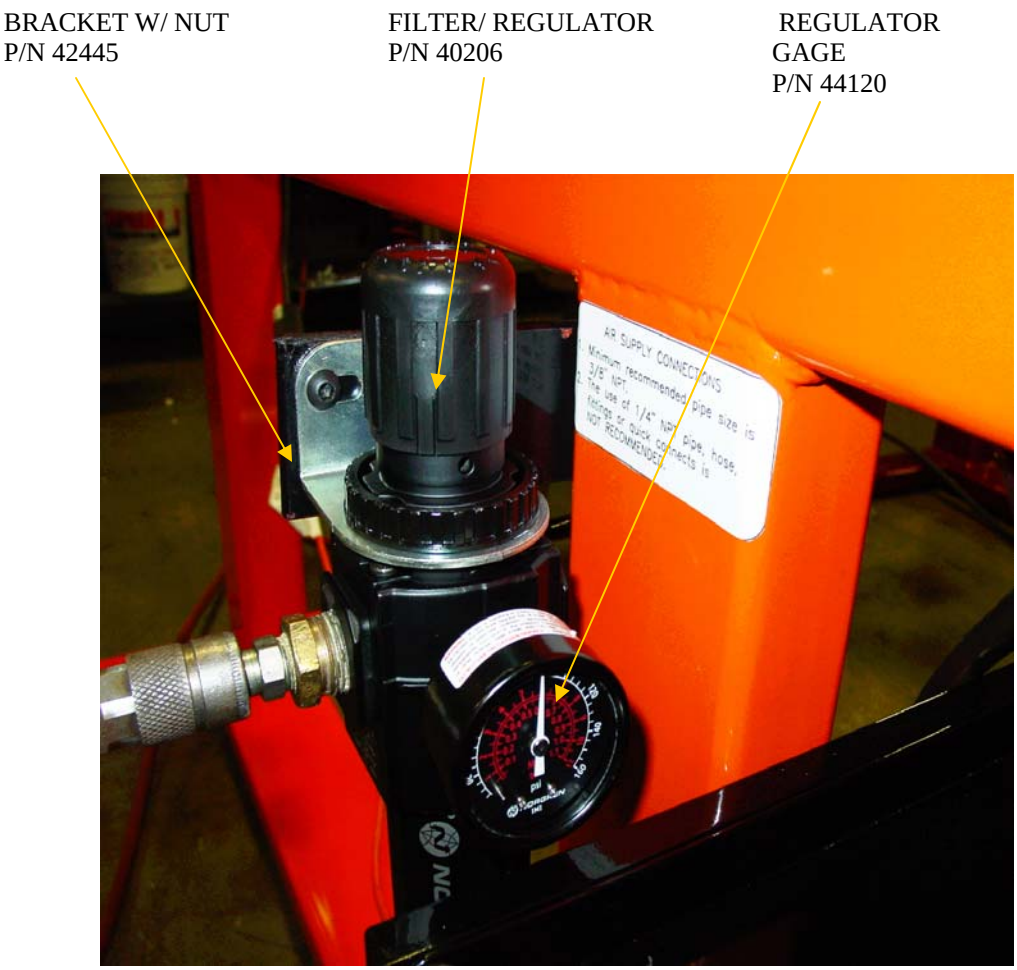
The ON/OFF switch utilizes an illuminated selector knob. The power cord plugs into a standard 115 volt AC, 15 amp outlet.

The feeder base controller knob is used to increase or decrease the bowl speed.

VIBRATORY FEEDER
SPEED CONTROL
51282-1

POWER SWITCH
P/N 51226

PRESSURE REGULATOR



PRESSURE REGULATOR SETTING

The Pressure Regulator should be set between 40-80 PSI, depending on sheet gauge, insulation and Gripnail size. Start with a pressure of 40 PSI. Drive and test several Gripnails. Increase the pressure by 5 PSI and repeat testing until optimum hold is achieved. The Load Cylinder flow control may need readjusting once the pressure is set.

Evidence of an under driven Gripnail will leave light opposing horseshoe marks on the sheet meet and the jaws of the Gripnail would not have closed. Evidence of an over driven Gripnail will close the jaws of the Gripnail to the point that a hole is left in the sheet metal when the Gripnail is pulled away from the sheet metal.

It may be helpful to create a chart for the operator, as a starting point, with pressure settings for the different combinations of sheet metal, insulation and Gripnails.

FOOT PEDAL

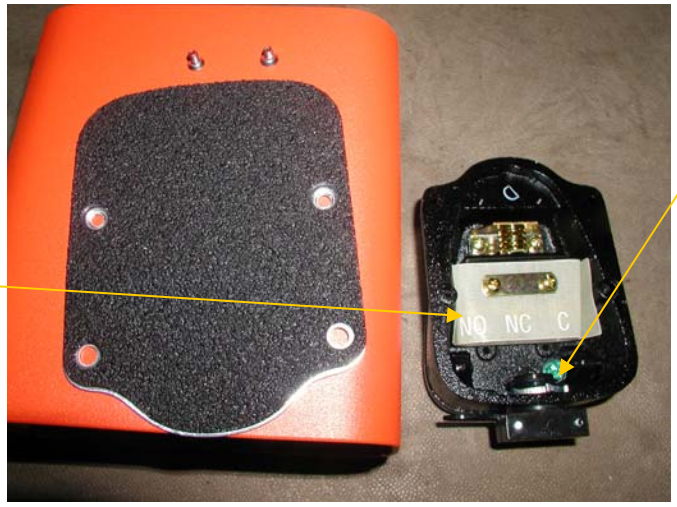
NOTE: RELEASE pedal completely after each cycle. Both air and electrical power must be on to operate foot pedal.

FOOT PEDAL
P/N 51264

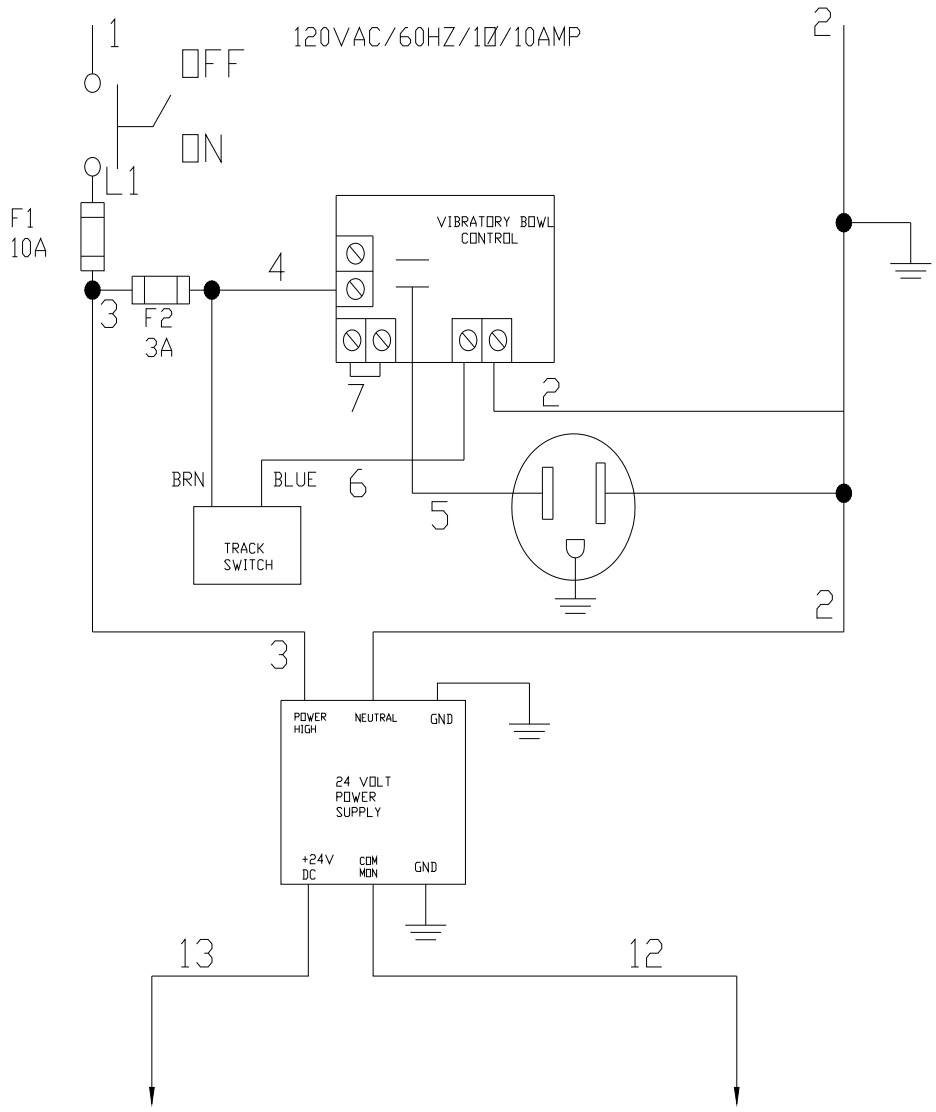
FOOT PEDAL INTERNAL CONNECTIONS
USE NORMALLY OPEN TERMINALS

GROUND
WIRE

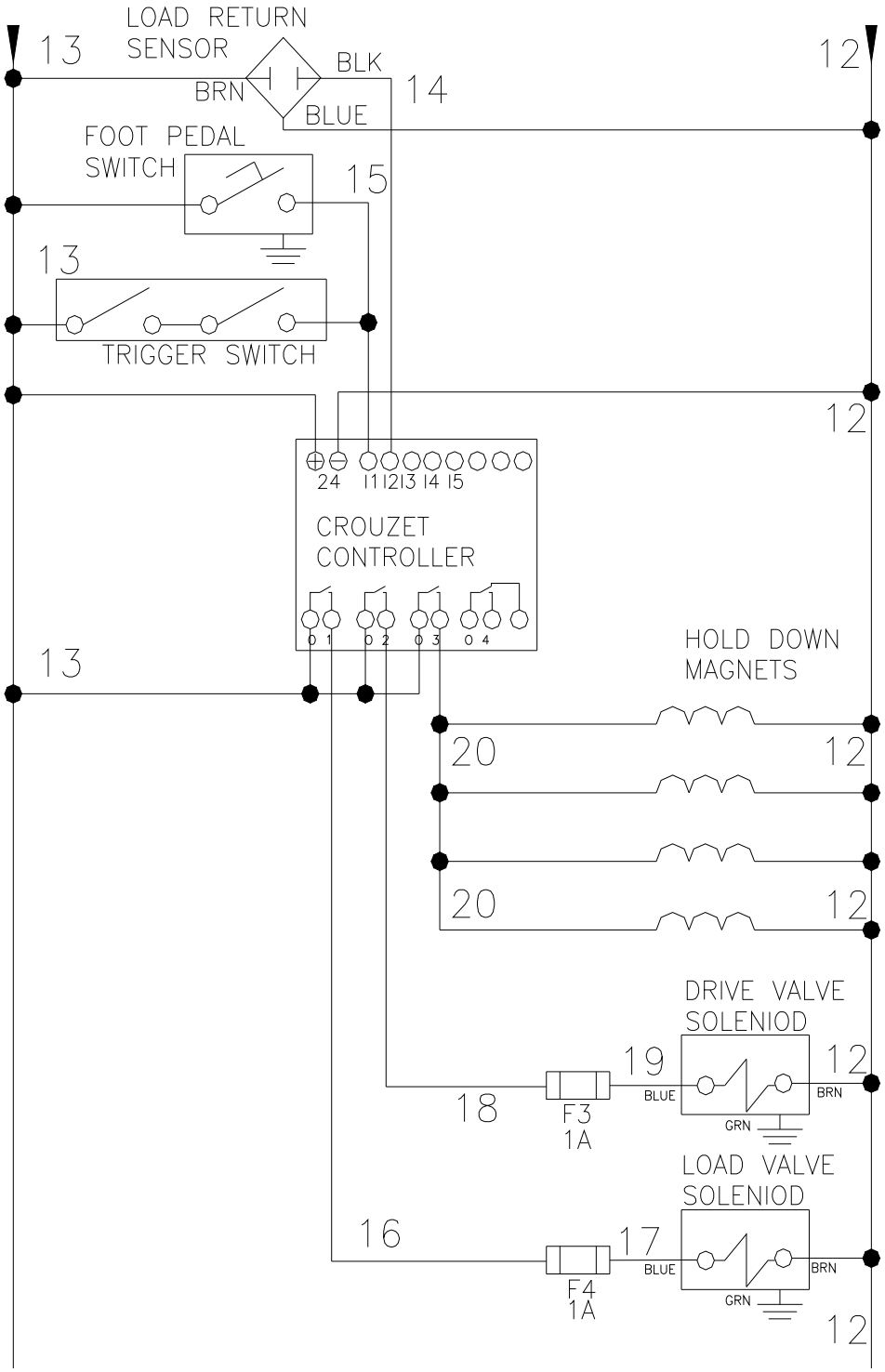
TERMINAL
CONNECTIONS



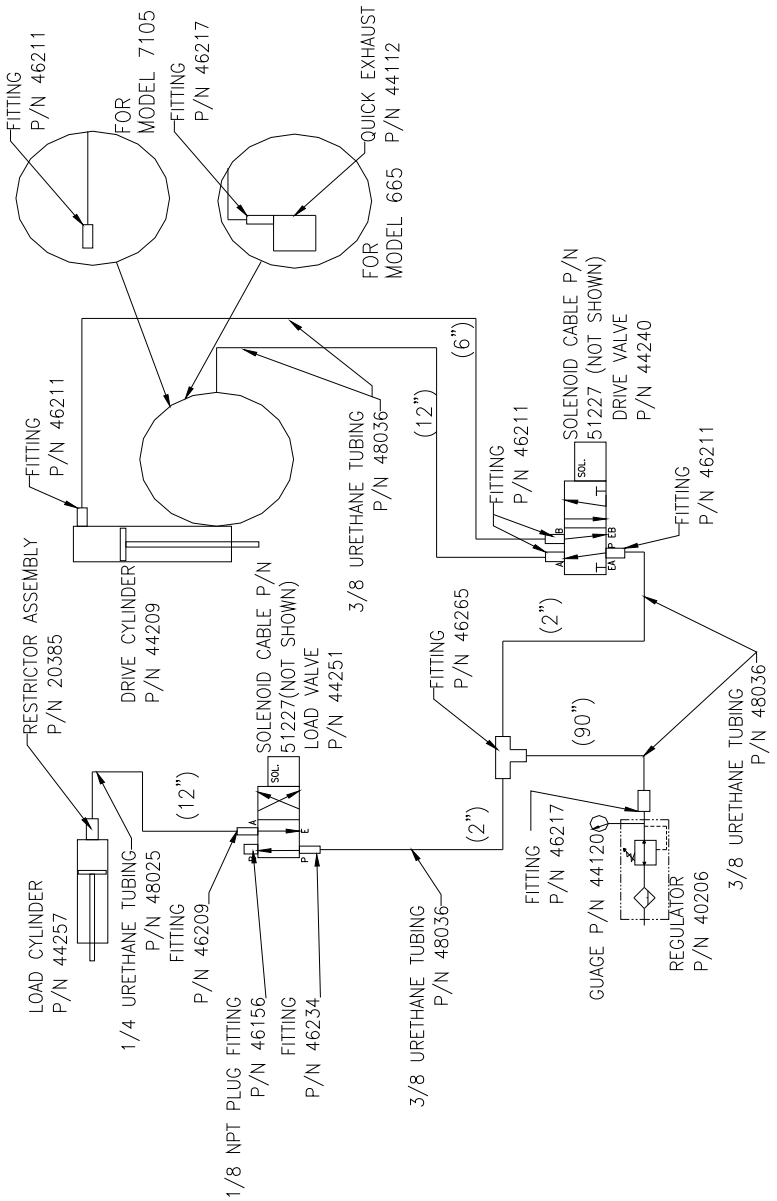
ELECTRICAL SCHEMATIC
115 VOLT AC



ELECTRICAL SCHEMATIC
24 VOLT DC



PNEUMATIC DIAGRAM



REPLACEMENT PARTS LIST

ITEM #	PART #	DESCRIPTION	QTY (EA OR FT)
1	31307	**Anvil Rail**	**1**
2	51262	Track Sensor	1
3	51302	Trigger Assembly	1
4	30688	Anvil	1
5	31064	Anvil Mount	1
6	30295	Magnetic Driver	1
7	48025	Tubing, 1/4” Black	2
8	48036	Tubing, 3/8” Black	20
9	20412	Upper Track Assembly	1
10	20411	Lower Track Assembly	1
11	44267	Drive Cylinder	1
12	44257	Load Cylinder	1
13	20441	Transfer Block	1
14	46211	Elbow. 1/4” NPT x 3/8” Tube	5
15	20277	Feeder Base Assembly	1
16	42361-4	Feeder Base 60 HZ	1
17	42361-9	Feeder base 50 HZ	1
18	40206	Filter/Regulator 1/2” NPT	1
19	44120	Gage, 1/4” NPT, 0-160 PSI	1
20	42515	Deadbolt Latch	1
21	42455	Bracket, Wall Mount with Nut	1
22	46209	Elbow, 1/8” NPT x 1/4” Tube	1
23	44251	Load Valve	1
24	44240	Drive Valve	1
25	51227	Valve Cord Set	2
26	51264	Foot Pedal	1
27	51268	Load Sensor	1
28	51269	Load Sensor Cable	1
29	51270	Crouzet Controller	1
30	51272	Power Supply	1
31	51282-1	Feeder Base Control	1
32	51273	Fuse 1A	2
33	51275	Fuse 10A	1
34	51274	Fuse 3A	1
35	50103	Cord 16/3 SJO	7
36	44112	Exhaust Valve	1
37	50339	Electro-Magnet	2

SERVICE POLICY

Proper operation of your machine is a top priority with the Gripnail Corporation. We will assist you to the best of our abilities to see it is kept in peak operating condition.

In many cases, service needs can be made simply by calling Gripnail Customer Service Department. If it becomes necessary for a service technician to visit your plant, we can make the arrangements.

All Gripnail machines are covered under a one year New Machine Warranty (see Warranty next page). Replacement parts covered by the warranty are supplied free of charge, provided the original parts are returned to Gripnail and do not shown signs of abuse.

At the end of the new machine warranty period, the buyer has the option of purchasing a Limited Extended Parts Warranty. This warranty covers specified machine parts only. Call Gripnail for full details.

All warranties on Gripnail machines are good only if Gripnail fasteners are used. If it is determined that fasteners other than those manufactured by Gripnail have been used, the warranty is voided. At Gripnail, we believe in servicing what we sell for the lifetime of the equipment. If you are having difficulty with your machine or if you have any questions regarding service and warranty policy, please call, fax, or write:

Gripnail Customer Service Department
Gripnail Corporation
97 Dexter Road
East Providence, Rhode Island 02914
Phone: (800) 474-7624
(401) 431-1791
Fax (401) 438-8520
Email: gripnail@gripnail.com
Website: www.gripnail.com

WARRANTY

All Gripnail Fastening Equipment is thoroughly inspected and tested before leaving the factory. Gripnail Corporation warranties its equipment to be free from defects in workmanship and materials under normal and proper use for a period of one (1) year from date of sale to original end purchaser.

The warranty does not apply when repairs or attempted repairs have been made by persons other than Gripnail Corporation's authorized service personnel, or where it is determined by our service personnel that the equipment has been subjected to misuse, negligence or accident. If it is determined that any fasteners other than those manufactured by Gripnail have been used in this machine or tool, the warranty is terminated.

This warranty is not effective unless equipment is properly registered with the factory through the use of warranty information card prior to use. Gripnail Corporation shall not be liable for contingent damages or delays caused by defective materials or any other means beyond our control.

Gripnail Customer Service Department
Gripnail Corporation
97 Dexter Road
East Providence, Rhode Island 02914
Phone: (800) 474-7624
(401) 431-1791
Fax: (401) 438-8520
Email: gripnail@gripnail.com
Website: www.gripnail.com