PORTABLE GUARDIAN

BODYMAKER OVER TRAVEL GAUGE

USER'S MANUAL

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1. Introduction to Equipment and Safety

1.1 INTRODUCTION TO USER'S MANUAL

The purpose of this manual is to provide initial set-up, operational, part identification, and maintenance information for Pride's Portable Guardian Over Travel Monitoring and Control System. Pride Engineering, LLC, Minneapolis, Minnesota +1 (763) 427-6250 should be consulted prior to major field repairs.

READ MANUAL THOROUGHLY BEFORE INSTALLING OR OPERATING EQUIPMENT

The User's Manual is intended to help familiarize the user with the safe and effective operation of Pride's Portable Guardian Monitoring System. Following the instructions in the manual will reduce safety risks while facilitating the effective use of the equipment.

1.1.1 SAFETY RELATED SYMBOLS DEFINITIONS

Signifies read manual

Signifies general warning, indicating danger to life and limb or extensive machine damage

Signifies mandatory action

Signifies electrical hazard

Signifies important information

1.2 TECHNICAL CHARACTERISTICS

1.2.1 INTENDED USE

The Pride Engineering Portable Guardian is intended to be used to measure and report bodymaker over travel amounts.

1.2.2 MODIFICATION OF EQUIPMENT

Do not modify the equipment. Modification of the equipment may defeat measures taken to ensure safe operation of the equipment.

1.2.3 TECHNICAL CHARACTERISTICS

- Weight: 14.4 lbs. (7 kg)
- Height: 6.7 inches (17 cm)
- Length: 16.5 inches (42 cm)
- Width: 13.0 inches (33 cm)
- Operating Conditions:
- Air Temperature: 60 F – 120 F (15 C – 50 C)
- Relative Humidity: 35 – 85 % Non-condensating
- Altitude: 0 – 10,000 feet (0 – 3,000 m)
- Ingress Protection Level: IP20
- Equipment requires a source of 115 – 230 VAC power, 5 amps.

1.3 SAFETY

1.3.1 PROPER USE FOR INTENDED PURPOSE

1.3.1.1

This equipment is intended for use in conjunction with Pride Engineering's bottom former when used in can bodymaking equipment in an indoor environment.

1.3.1.2

You can contact Pride Engineering, LLC for technical assistance at:

Pride Engineering, LLC
9401 73rd Avenue North
Minneapolis, MN 55428 USA
+1 763-427-6250

1.3.2 IMPROPER USE

1.3.2.1

The following are improper, prohibited uses of the equipment:

- Using the equipment with the name plate or warning labels removed or illegible.
- Connecting the equipment to a power source that does not meet the specifications for the equipment.
- Using the equipment while wired differently than as directed.
- Using the equipment with any sensor other than the sensor specified by Pride Engineering for the equipment.
- Working on or trying to mount the sensor while the bodymaker is operating.

1.3.3 USER SAFETY

Operators of the equipment should ensure they are following the safety procedures for the environment for which the equipment is installed. Operator's and maintenance personnel should read the user's manual prior to installation and use of the equipment.

1.3.4 NOISE MEASUREMENT

Noise produced by this equipment is less than 70 db(A). However, this equipment is usually installed in an environment that requires hearing protection. Follow the requirements for the facility where the equipment is installed.

2. Installation and Preparation for Use

The safety of any system incorporating the Portable Guardian product is the responsibility of the assembler of the system.

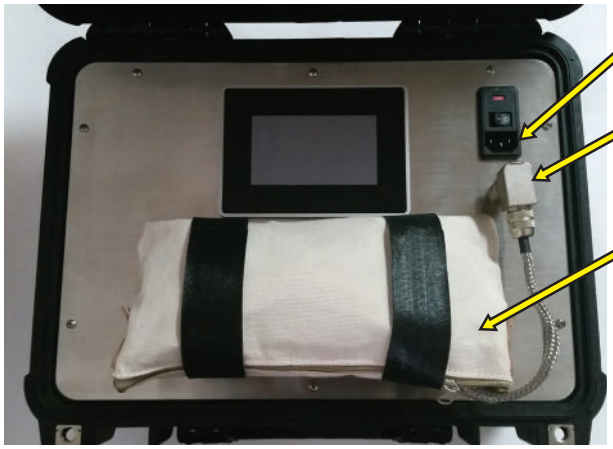
Make sure bodymaker is stopped before installing sensor on the bottom former.

The power cord for the Portable Guardian must be plugged into an outlet that provides the appropriate grounding connection.

1

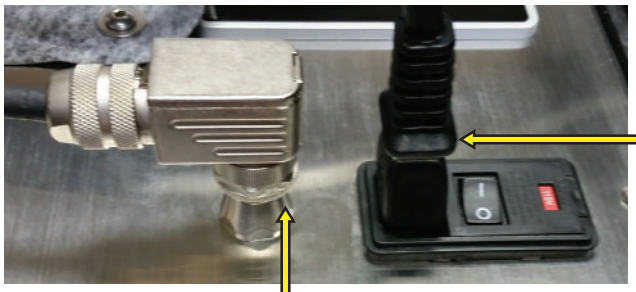
Remove the contents from the canvas bag:

- Sensor and Cable
- Power Cord
- 0.025 inch shim stock
- T-Handle allen wrench



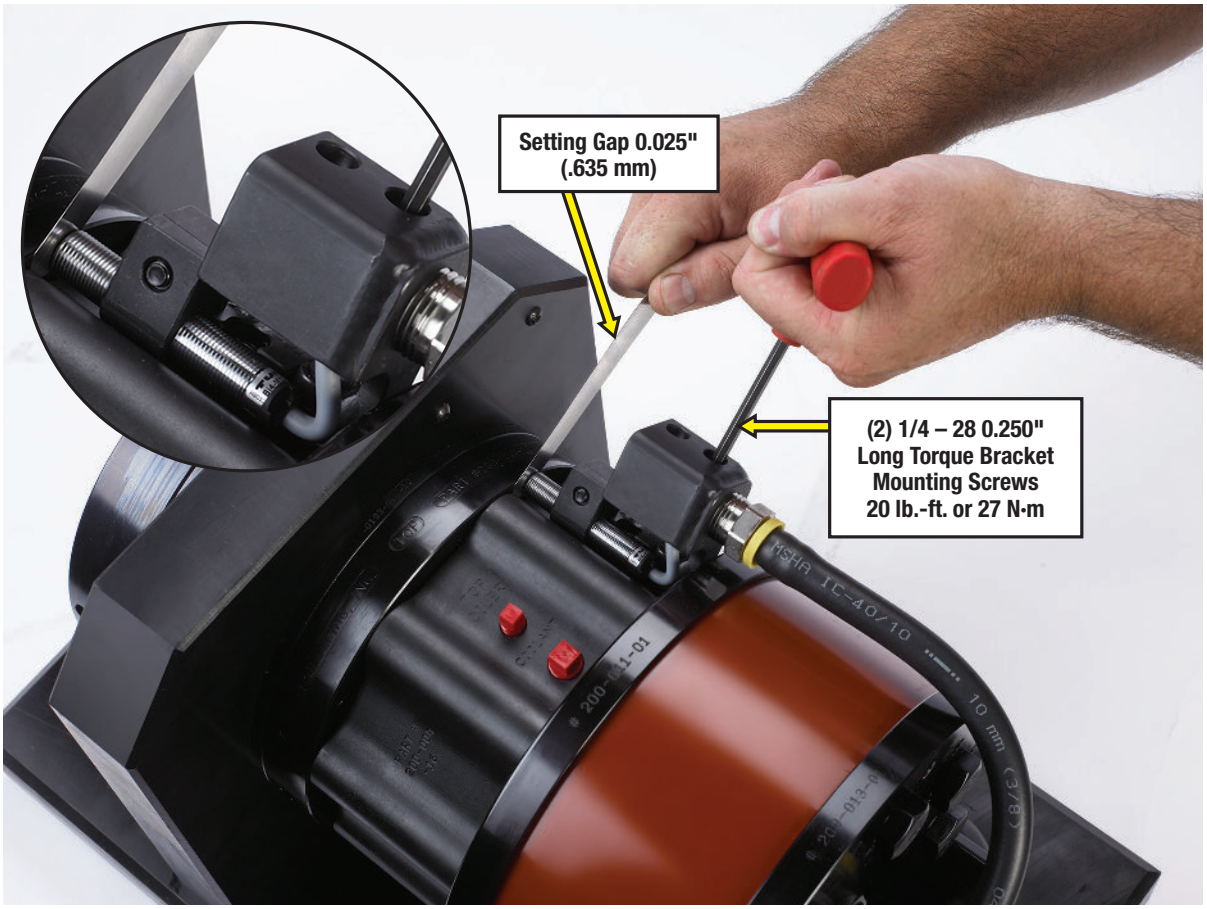
2

Connect the power cord and sensor to Portable Guardian



*Note: You can leave the sensor connected and store the sensor and cable in the canvas bag.

4 Install the sensor bracket, with Sensor and wire attached, to the bottom former with two ¼ –28 screws, 0.250” long. Do not torque them yet because they must be loose to set the sensor gap in the next step below.



5 Set the distance between the sensor and the Outer Housing flange. Use a 0.025” (0.635 mm) thick feeler gauge to set the gap as accurately as possible. The size of the gap is very important because the gap directly effects the strength of the signal from the sensor. The Guardian interprets the strength of the signal to determine value of the over travel.

6 Once the gap is set, torque both screws to 20 lb.-ft or 27 N·m. Re-check the gap to be certain that the sensor did not move while the screws were being tightened. The 0.025” (0.635 mm) gap should be maintained.

3. Operating Instructions

1

Select UNITS to set the unit of measure to either mm or inches.

2

Select ZERO to set the over travel sensor to zero.

Bodymaker must be stopped before setting zero.

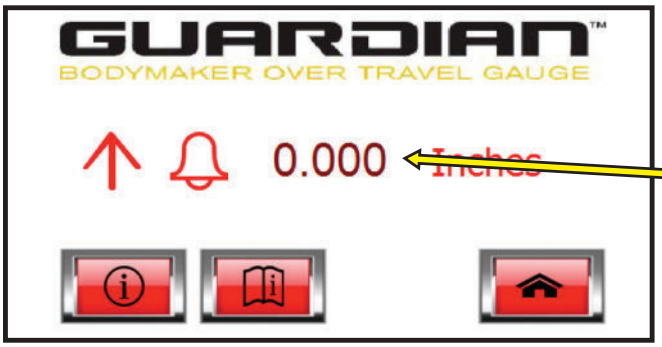
3

Press ZERO to set the over travel sensor to zero.

4

Select menu to set the Upper Limit alarm.

5



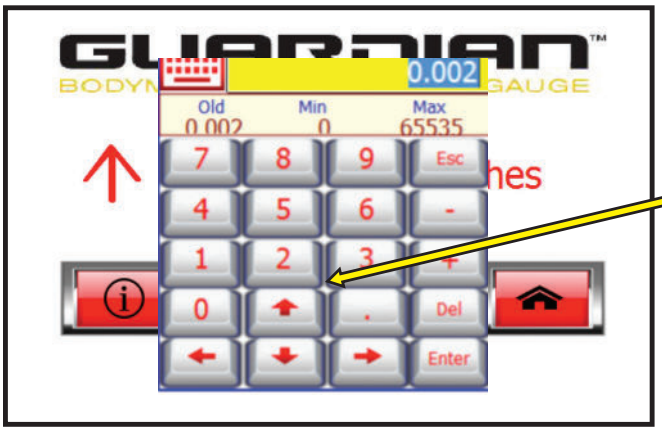
Touch screen over the limit number to make changes to the Upper Limit.

UPPER LIMIT: Most can makers set the upper limit parameter so that a double can will trigger the Portable Guardian to issue an upper limit error alarm.

HOW THE PORTABLE GUARDIAN WORKS

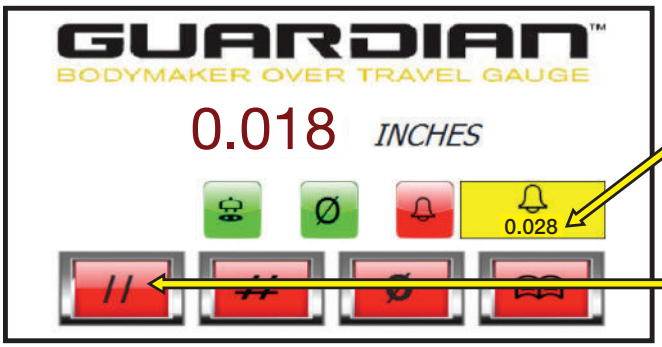
The Portable Guardian senses each over travel cycle and compares the reading against the upper limit alarm setting. The reading on the main screen displays the average of the previous sixteen bodymaker strokes. The alarm symbol on the main screen will turn red if an individual reading exceeds the limit. The reading for the overtravel stroke that exceeded the limit will show in the yellow box.

6



Use key pad on screen to enter values.

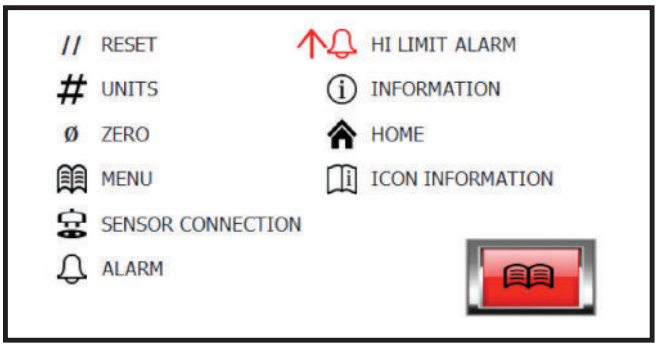
7



Actual over travel value that caused the limit error.

Select the RESET button to clear limit errors.

TOUCH THE  **BUTTON TO ACCESS THE SYMBOL DESCRIPTIONS.**

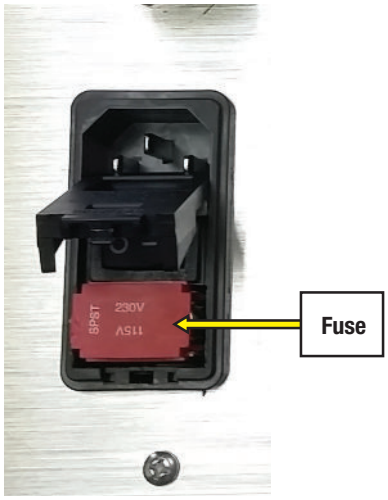


4. Maintenance

No periodic maintenance of the equipment is required. Investigation of any issues with the performance of the equipment needs to be performed in a safe manner.

Make sure bodymaker is stopped before installing sensor on the bottom former.

The Pride Portable Guardian is equipped with a fuse that can be found integrated into the power supply connection on the unit.



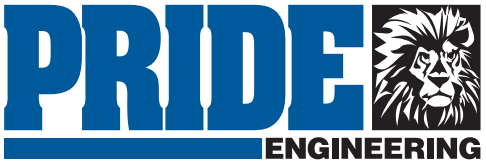
Item	Tag	Voltage	Amperage	Description	SC I/R	Type
1	DS02	250	5	5 Amp MDA Series Fuse	200A	MDA

Do not replace the detachable power supply cord with any cord other than the type provided. Contact Pride Engineering, LLC for the proper replacement cord.

Clean the unit only with a dry cloth. Using liquids to clean the unit could cause an electrical hazard.

5. Part Identification

Sensor, Bracket and Cable Assembly: P/N 200-77-68



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