



# Ferndale

Safety

Toll-Free: 855-326-1243  
<https://www.ferndalesafety.com>

**APPLIES TO MODELS:  
FB, FBB, FA, AND FAB**

**MILLING MACHINE SAFETY GUARD**

**INSTALLATION GUIDE.**



Thank you for your purchase of our milling machine safety guard. You now have the highest quality safety guard available. Ferndale Safety designed this guard to be easy to install and provide years of trouble-free service. The polycarbonate shield protects flying objects just like chips and coolants and prevents access to rotating parts.

## Mounting and Installation

Tools required for installation (Not Included):

- Drill
- #7 or 13/64" drill bit
- 1/4-20 tap, tap wrench, and hex bolts
- Set of metric and SAE hex keys

For an electrical connection, you may need one or more of the following (Not Included).

- Wire strippers
- Utility knife
- Screwdrivers
- Hole saw or step drill
- Cable glands
- Cable connectors

Would you please make sure that you have everything included with your shipment? Remove all packing material from the arm assembly and shield.

1x Arm assembly (Varies with model)

1x Aluminum cast mounting bracket (Pre-assembled with arm assembly)

1x Polycarbonate screen assembly (Varies with model)

The mounting bracket is pre-installed on the arm assembly. Remove the bracket for easier installation by loosening the two set screws located on the arm assembly.

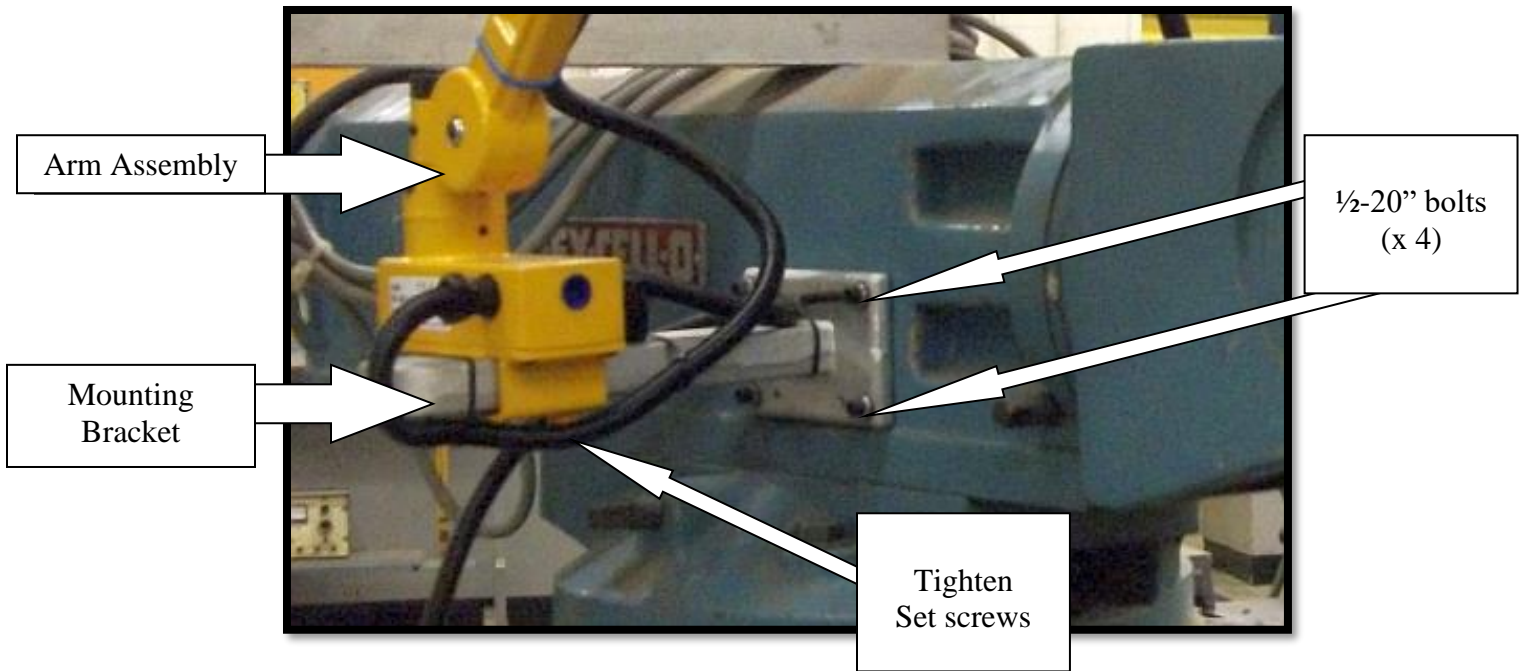


Figure 1

### Step 1

With one hand, place the mounting bracket flush and level on the machine. The bracket should be 20" to 30" behind the spindle and on the ram. The exact positioning is unnecessary as the safety guard will be later adjusted—Mark the four mounting holes with a marker and punch. Drill and tap the four holes using a #7 drill bit and 1/4-20" tap. Mount the bracket by inserting four 1/4-20" bolts through the holes provided in the mounting bracket. Use bolts long enough to enter the machine casing at least 1/2". Use the four long set screws provided on the mounting bracket to level it horizontally and perpendicular to the machine.

### Step 2

Install the arm assembly by sliding it on the mounting bracket. Position the arm and tighten the two set screws underneath the arm to set it in place. Adjust the arm by using the adjustment points to position the arm more or less like the photo in figure 2. Mount the polycarbonate screen by sliding the mounting rings over the silver arm mounting shaft. The shields have four or more set screws to set the shield to the silver shaft. NOTE: Before permanently tightening the set screws, ensure that you have turned the shaft fully clockwise and performed all final adjustments.

### Step 3

Using the adjustments points (See figure 2), position the safety shield between the point of operation and the operator. Ensure that the safety guard is clear of any automatic table movements or control levers and switches.



Figure 2 (Arrows above show adjustment points)

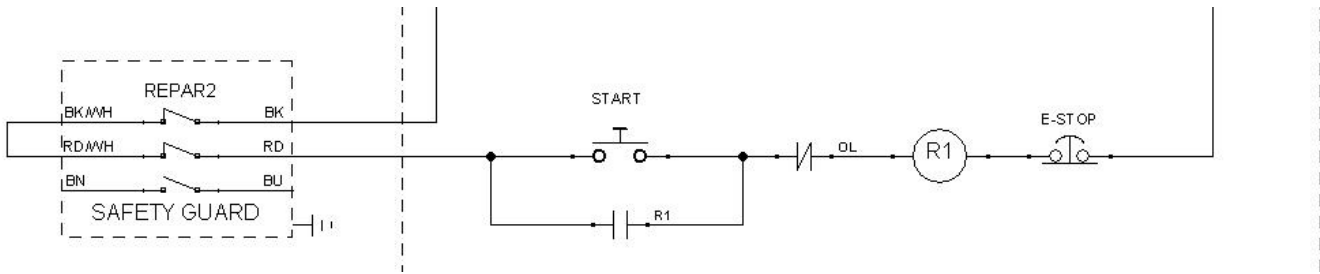
# Electrical Connection

## Technical specifications:

- Manufacturer: Telemecanique
- Metal enclosure switch, IP65 rated degree of protection conforming to IEC 60529
- Operational characteristics: 3A @ 240VAC, 0.1A @ 240VDC
- Two switches (model FB, FA, BF, AF) or three switches (model FBB, FAB, BBF, BAF) wired in series
- Seven wire system (2x NC and 1x NO electrical contacts plus one ground wire)
- Mechanical durability: 100000 operating cycles
- Ambient air temperature conditions: -25 .... +70 °C

Wire color chart

Black	Black/White stripe	Contact Normally Closed #1
Red	Red/Red stripe	Contact Normally Closed #2
Brown	Blue	Contact Normally Open
Green		Ground

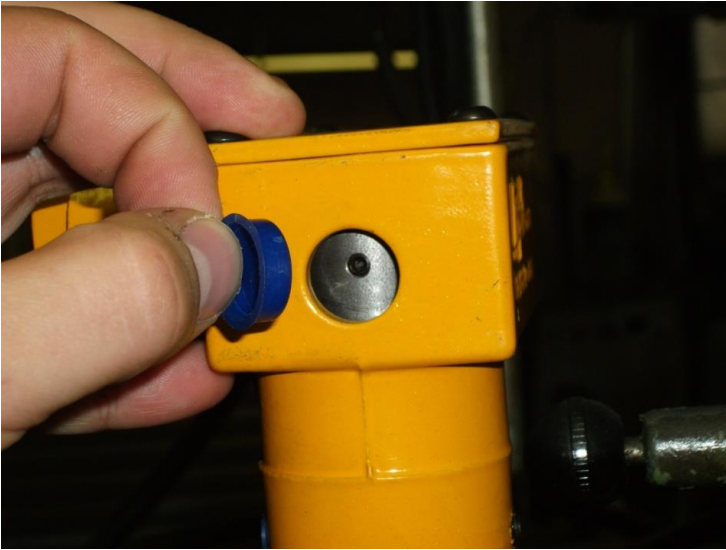


The above diagram gives an example of an electrical connection to the machine. The dotted square box indicates internal switches inside your Repar2 milling machine safety guard. The area between the two dotted lines represents the internal wiring inside your machine, which may differ.

## **Danger! High Voltage**

**Voltages of up to 600 volts are present. When any machine panel is open, there is a risk of injury, electrocution, and death. A qualified technician must make electrical connections.**





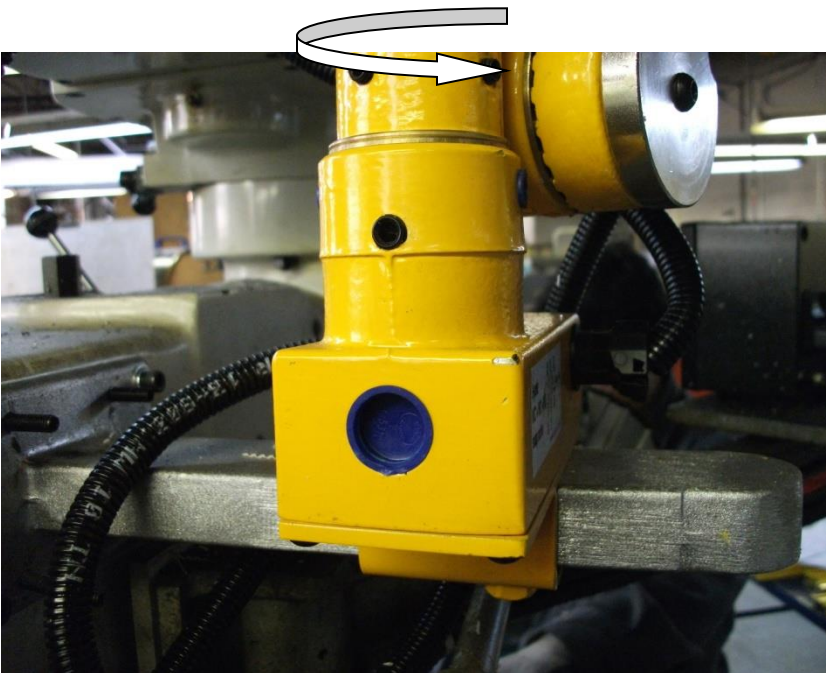
## Mounting position change instructions

The arms for the following safety guards are set up during the manufacturing phase for right mounting on milling machines.

**FB, FBB, FA, FAB, BF, BBF, AF, BAF**

To change the safety guard from right to left-hand mounting (or vice-versa):

There are cam assemblies that have to be modified slightly inside two switch enclosures. Note that the aluminum mounting bracket can be removed and switched to the other side by loosening two setscrews under the switch enclosure.



### Step 1

Locate the round blue cap located on the back of the switch enclosure nearest the aluminum mounting bracket.

### Step 2:

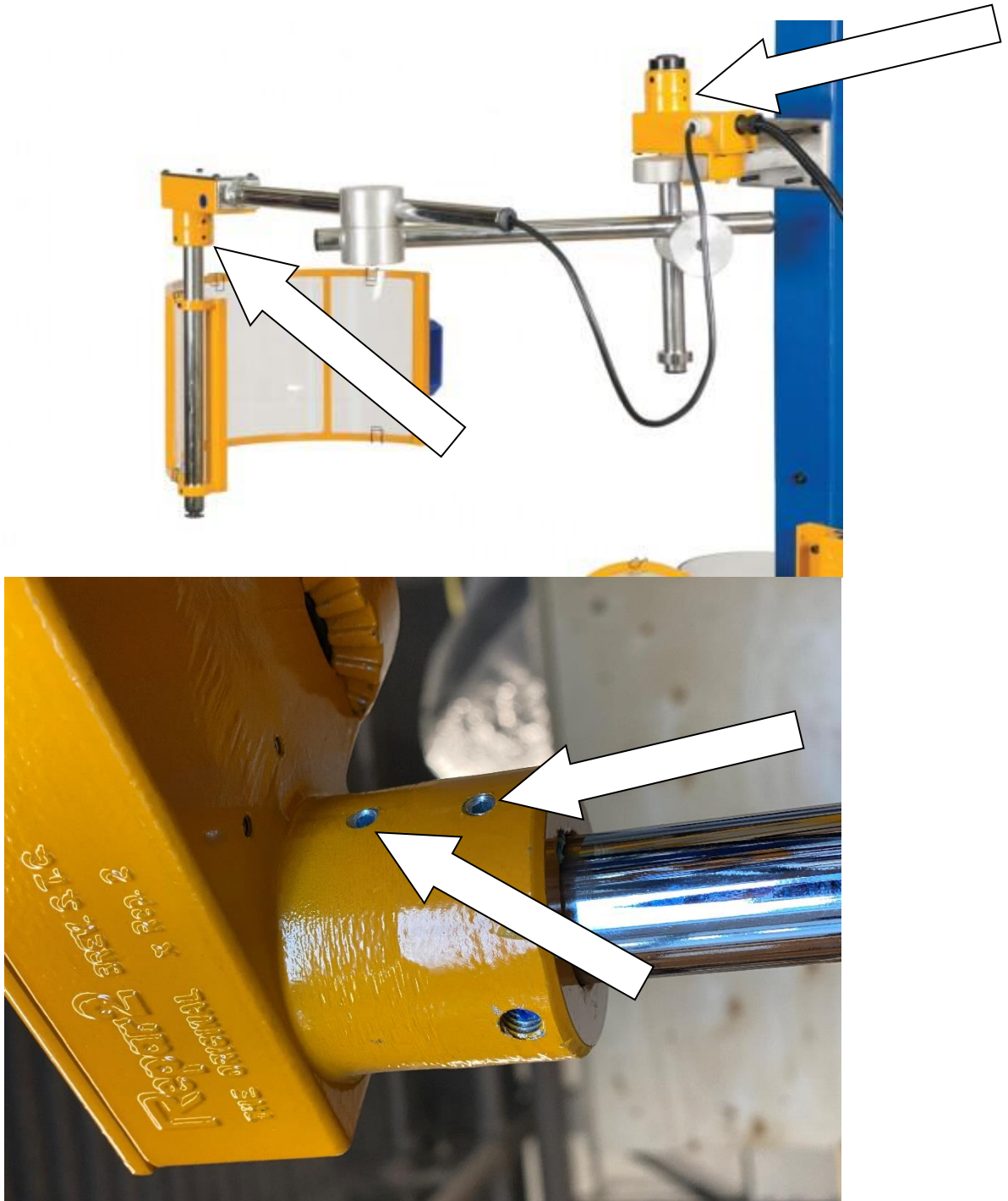
Remove the plastic cap. Turn the arm while holding the switch enclosure until you see a small set screw and can no longer turn the arm. Using a metric hex key, loosen the set screw, then rotate the arm in the other direction until you can go no further. Do not allow the cam/set screw to rotate with the arm. Keep the hex key in the set screw during rotation. Finally, tighten the set screw and replace the cap.

### Step 3:

Do the same procedure for the switch enclosure located on the shield side of the arm.

# Tightening Rotation Points

Rotation points can be stiffened or loosened by adjusting two set screws near the rotation point on the stationary base. The set screws put pressure on a felt pad to tighten the rotation of the shaft. Tightening the set-screws is useful to prevent the screen from opening by itself due to vibration caused by the machine. The two set screws should be adjusted equally. Make small adjustments between testing rotation so as not to over-tighten adjustment screws. See the below photo to locate the two points of adjustment.



# Operation

Block any flying debris, chips, or coolant when the shield is properly adjusted and maintained.

You can swing the shield or the whole arm assembly away when doing the setup. The spindle motor is disabled if the guard is wired correctly.

# Maintenance

All non-polycarbonate portions of this safety guard may be wiped or washed clean with soap and water.

The polycarbonate shield has been selected for its ability to resist direct impact and flying debris. Do not clean or contact the polycarbonate shield with brake cleaner or any carbon-based oil or cleaning products. This will void the warranty and deteriorate the polycarbonate material.

In addition to the above indications,

- Remove chips regularly
- Wash with mild soap and water using a clean cloth
- A paste wax may be used to erase minor scratches and to help with cleaning.

# Spare parts

Spare polycarbonate shields, electrical components, hardware, and other parts can be obtained by calling our toll-free line at 1-855-326-1243. Please have the model number of the safety guard when you call.

Spare parts available:

- Polycarbonate shield
- Frame for polycarbonate shield
- Electrical switches
- Plastic hole plugs
- Set screws and bolts
- Felt pads for the rotation brake