1 System Overview

The DED Manual Actuation Tools are designed to help you maintain and troubleshoot your Progress Rail Dragging Equipment Detector. Ensuring that the main shaft rotates smoothly is key to its operation. Periodically checking the rotation and switch operation is the best way to monitor if your DED is working as intended. Failing to do so could mean a greater number of False Stops.

1.1 Mounting Block Assembly

1.1.1 Allows you to mount either the Manual Actuation Lever or the Jack Screw Assembly to the DED.

1.2 Manual Actuation Lever

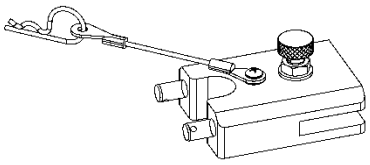
1.2.1 Allows you to easily check the rotation and switch the function of the DED.

1.2.2 With this tool, you will no longer have to use your foot to actuate the DED.

1.3 Jack Screw Assembly

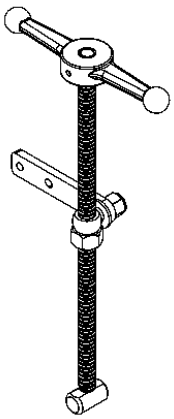
1.3.1 Allows you to rotate and hold the DED's Main Shaft at the angle specified for adjusting the switch.

1.3.2 With this tool, one person can safely and precisely dial in the angle at which the DED's switch activates.



"MOUNTING BLOCK ASSEMBLY"
180101-001

"MANUAL ACTUATION LEVER"
065296-001



"JACK SCREW ASSEMBLY"
180102-001

Note: Always be sure to wear proper Personal Protective Equipment when using these tools.

Note: Avoid pinch points by gripping the tools only where specified.

WARNING

Do Not use Manual Actuation Tools if they show signs of damage or degredation. Inspect prior to each use. If the tools are showing signs of metal fatigue (especially the mounting holes or mounting pins), discard tools and replace with new ones.
Do not use these tools for anything other than their intended purpose.

2 Instructions

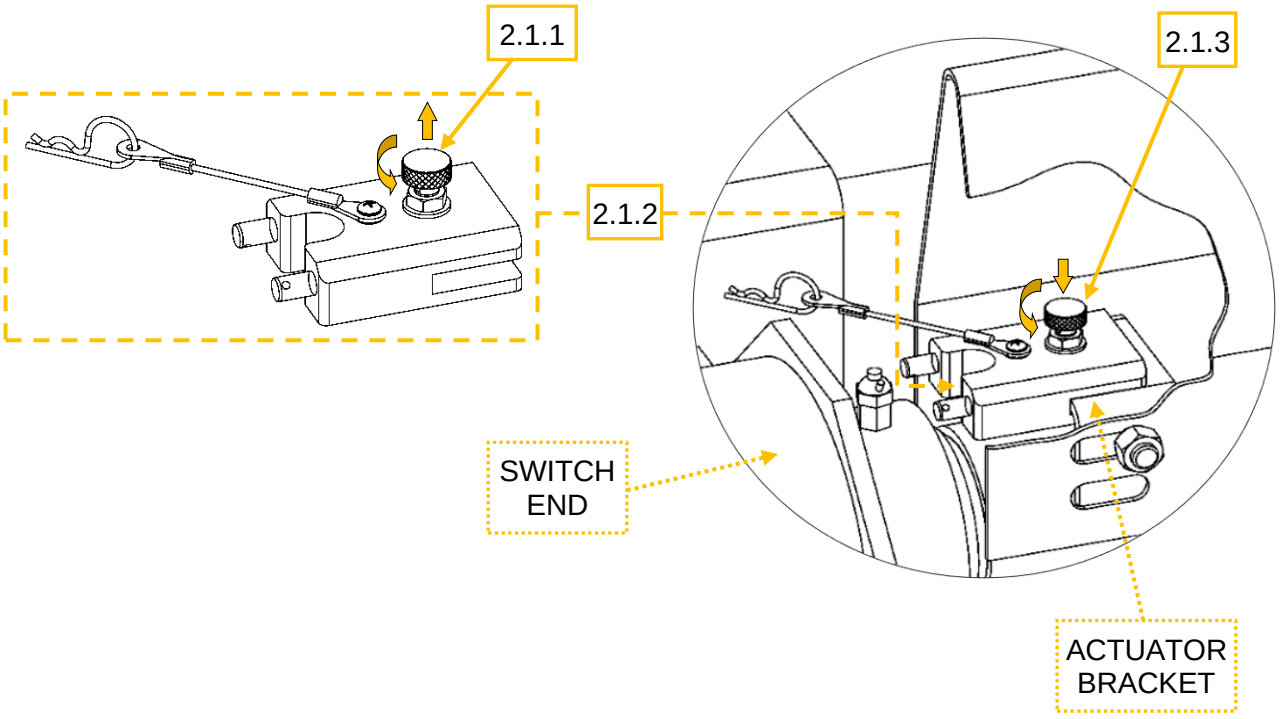
2.1 Mounting Block Assembly Installation

2.1.1 Start by pulling the Plunger Knob on the **Mounting Block Assembly** upwards and turning it 90 degrees. This will lock the Plunger in the released position.

2.1.2 Next, insert the Mounting Block Assembly onto the Actuator Bracket closest to the Switch End. If you try to install it on the other end of the DED, it will not fit.

2.1.3 Once fully inserted onto the Bracket, twist the Plunger Knob until the spring pulls the Plunger downward. You'll hear a "snap" and see the Plunger Knob move downward.

2.1.4 Pull the Mounting Block Assembly to test that it's locked onto the Bracket. This is an important step, as you don't want the Mounting Block to come loose during operation.



Note: To uninstall the Mounting Block Assembly, perform step 2.1.1 thru 2.1.3 in reverse order.

2.2 Manual Actuation Lever Instructions

Manual Actuation Lever to never be used in an unintended manner, failure to do so may result in injury. (Max load 550lbs/f)

2.2.1 Identify the two holes in the bottom of the **Manual Actuation Lever**. Insert the two pins protruding from the mounting block into the two holes in the Lever.

2.2.2 Once the Lever is fully pressed against the Mounting Block, insert the Retaining Pin into the hole at the end of either of the Mounting Blocks' Studs.

Note: Failing to insert the pin could cause the Lever to slip off the studs and cause bodily harm to the user.

2.2.3 Once the Lever is secure and ready to be used, grip the upper part of the Lever, and widen your footing.

2.2.4 Pull the Lever towards you about 15 degrees.

Note: It is very important to always pull the Lever towards you – never push it. If your hands slip off the lever while pushing, the Lever may spring back toward you and cause injury.

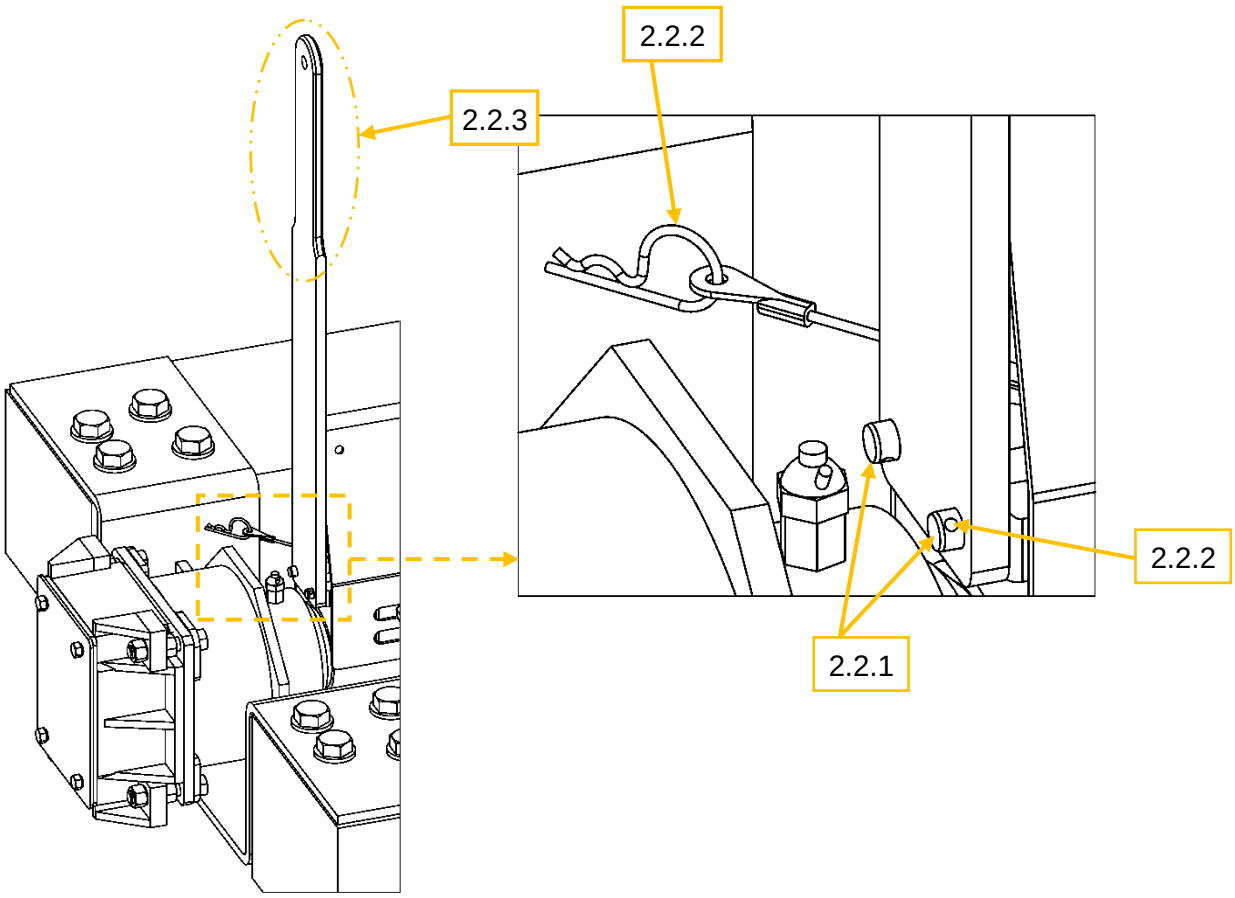
2.2.5 Repeat Step 2.2.4 several times and make note if the rotation feels smooth or rough. If the there is any binding throughout the stroke, the rotation feels rough, or the Main Shaft is slow to return to center, this indicates that you may have a worn Cam or Bearing Races.

If any of the above issues arise, use the Progress Rail DED Installation and Service Manual "Trouble Shooting" section to determine the best course of action to restore your DED to the proper working condition.

2.2.6 Next, move to the opposite side of the Lever, and repeat Steps 2.2.4 and 2.2.5.

2.2.7 Once you are finished using the Lever tool, remove it from the Mounting Block by uninstalling the Retaining Pin and removing the Lever from the Mounting Block Assembly. **Failure to remove the Manual Actuation Lever can cause damage to the next passing train, and the DED Equipment.**

2.2.8 Follow your company's policies for safe storage of the Manual Actuation Lever.



2.3 Jack Screw Assembly Instructions

Jack screw actuation tool can output large amounts of force on DED if installed improperly or if DED is seized. If jack screw is turned after installed and DED fails to activate, immediately stop, loosen the screw, and troubleshoot areas of cam/bearings for bindings. Failure to do so may result in damage to the tool and/or damage to DED equipment and/or injury.

2.3.1 To use the **Jack Screw Assembly**, first decide which direction you wish to rotate the DED. To rotate the DED clockwise, point the Foot of the Jack Screw Assembly toward the Left corner of the U-Tie Bracket and the Arm of the Jack Screw toward the right. For counterclockwise, point the Foot toward the right and the Arm toward the left.

2.3.2 Insert the two holes of the Jack Screw Assembly's Arm onto the Studs until it is fully pressed against the Mounting Block.

2.3.3 Insert the Retaining Pin into the hole at the end of either of the Mounting Block's Studs.

Note: Failing to insert the pin could cause the Lever to slip off the studs and cause bodily harm to the user.

2.3.4 Turn the handle of the Jack Screw Assembly clockwise until its Foot is firmly pressed against the corner of the U-Tie Bracket. If the DED begins to rotate, turn the handle in the opposite direction just slightly.

2.3.5 Ensure that the Jack Screws Assembly's Foot is firmly in place without rotating the DED.

2.3.6 Place your Magnetic Digital Angle Gauge onto the closest Actuator and hold the "Set to Zero" button on the Gauge until the digits read zero.

2.3.7 Turn the handle on the Jack Screw Assembly clockwise to rotate the DED. Continue to turn until the display on the Gauge reads the desired angle.

2.3.8 Use the procedures in the Dragging Equipment Detector's Installation and Service Manual to make any necessary Switch Adjustments.

2.3.9 Once you're done adjusting the switch, remove the Jack Screw Assembly by turning the Handle counterclockwise such that the DED returns to the vertical position.

2.3.10 Once the DED is in the vertical position and the Jack Screw Assembly is no longer in compression, remove the Retaining Pin from the Mounting Block's Studs and remove the Jack Screw Assembly from the Mounting Block. **Failing to remove the Jack Screw Assembly can cause damage to the next passing train, and the DED Equipment.**

2.3.11 Follow your company's policies for safe storage of the Jack Screw Assembly.