

TOOL AND MACHINERY GUIDE

Title: EMD SLIP RING BRUSH STUD PULLER KIT	Issued By: Wulf's Custom Welding	
	Prepared By: Best Practices - System Standardization Team	
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SUBJECT: EMD SLIP RING BRUSH STUD PULLER KIT

Capacity: This kit is used to remove and install EMD Slip Ring Brush Studs. It does not require a rated capacity.



FIGURE 1



FIGURE 2

TECHNICAL SPECIFICATIONS:

Available Through:

Wulf's Custom Welding
19102 So. 156th Street
Springfield, NE 68059
Tel: 402-253-2772
Fax: 402-253-9092
Website: wcwrail.com
Reference Part Number

Reference Part Number: 6071
 Fixture Weight: Components Have Various Weights
 Base Construction Material: 4140 Tool Steel For Machined Parts

DESCRIPTION:

This kit is used to remove or install EMD Slip Ring Brush Studs either manually or hydraulically. It has no other intended uses.

INSTRUCTIONS FOR USE:

EMD Slip Ring Brush Stud Puller Kit - Manual Method:

WARNING: Ensure Blue Flag protection is set in accordance with GSR 1300 before fouling any track or performing any type of repair work.

WARNING: Ensure locomotive(s) is/are properly secured with hand brakes before attempting to perform Slip Ring Stud Replacement.

1. Inspect all of the kit components prior to use. Replace any components that are missing or damaged, A Bill Of Material for the kit components is included at the end of this guide. (Figure 1).
2. Place the 1/4" Drill Guide over the damaged slip ring stud to be removed. Equally tighten the three guide retaining thumb screws. Install the 1/4" drill bit into any air, electric or cordless drill. Insert the 1/4" drill bit in the guide, and drill into the stud to a depth of approximately 1-1/2" (Figure 2).
3. Remove the 1/4" Drill Guide and discard the metal shavings in a proper manner. Install the 7/16" Drill Guide over the stud. Drill the 7/16" bit into the stud to a depth of approximately 1-1/2" (Figure 2).
4. Remove the Drill Guide and discard the metal shavings in a proper manner. Use the 1/2"-13NC Tap and Tap Handle to cut threads the entire length of the drilled hole. Make sure you follow standard procedures for tapping holes to prevent tap damage and/or breakage (Figure 3).
5. Place the Stud Removal Tube over the stud. Make sure the thrust bearing moves freely and is well lubricated (Figure 4).
6. Thread the Pulling Rod into the Pulling Handle. Place the Pulling Rod through the Stud Removal Tube and thread the Rod into the slip ring stud as far as it will go. Only use hand pressure to tighten the Pulling Rod (Figure 4).



FIGURE 3



FIGURE 4

7. Apply clockwise pressure to the Pulling Handle. Continue applying pressure until the stud is removed from the housing. Hold on to the Pulling Handle and tube to make sure they do not drop when the stud releases from the housing (Figure 4).
8. Place the new stud into the housing. Tap the stud into place to make sure it is seated correctly in the hole. Use a hammer to drive the new stud into place. Do not use the insulator driver for stud installation. Always wear proper eye protection when driving the new stud with a hammer.
9. Place a new insulator on the stud and tap it in place with a rubber or similar surfaced hammer to get it started correctly. Place the Insulator Installation Tool over the insulator, and use the rubber hammer to drive the new insulator into position on the stud (Figure 5).

EMD Slip Ring Brush Stud Puller Kit - Hydraulic Method:

1. Follow the procedures for drilling and tapping the old stud as outlined in steps 1 through 5. Instead of using the Pulling Handle, Place the Pulling Rod through the threaded center hole in the Hydraulic Cylinder (Figure 6). This hydraulic system high pressure (10,000 P.S.I.). Make sure you use the included hydraulic components, or hydraulic components that are rated for a 10,000 P.S.I. working pressure.



FIGURE 5



FIGURE 6

2. Thread the Pulling Rod into the stud until it is fully seated (Figure 6).
3. Connect the Hydraulic Hose to the Pulling Cylinder and Hand Pump. Please note that the quick disconnects for the pump and cylinder are different styles. Make sure to connect the fittings correctly.
4. Using the hand pump, begin applying hydraulic pressure to the Pulling Cylinder. Continue applying pressure until the stud comes out of the housing. Hold on to the Cylinder and Pulling Tube to make sure they do not drop when the stud releases from the housing (Figure 6).
5. Install the new stud and insulator.
6. When repairs have been completed, place all of the components back into the storage case and place the case in its proper place of storage.

SAFETY PRECAUTIONS:

WARNINGS: Noncompliance could cause injury to employees.

CAUTIONS: Noncompliance could cause damage to equipment

NOTES: Pertinent information

1. WARNING: Wear personal protective equipment in accordance with Safety and General Conduct Rule 1040 as required.
2. WARNING: Never place any portion of your body directly under the Puller during stud removal or installation.
3. CAUTION: Never use this tool for any purpose other than removing or installing EMD Slip Ring Studs.
4. CAUTION: Make sure the Pulling Rod is fully seated in the stud before attempting stud removal or installation. Never tighten the Pulling Rod more than hand tight.

KIT COMPONENT BILL OF MATERIAL

Item No.	Part No.	Description
1	0371-1	Hardigg Heavy-Duty Storm Case With Foam Inserts
2	0371-2	1/4" High-Speed Jobbers Drill
3	0371-3	7/16" High-Speed Jobbers Drill
4	0371-4	1/2"-13NC Four-Flute Tap
5	0371-5	Standard Tap Handle For 1/2" Tap
6	0371-6	1/4" Pre-fit Drill Guide
7	0371-7	7/16" Pre-fit Drill Guide
8	0371-8	Insulator Installation Tool
9	0371-9	Stud Pulling Tube With Bearing
10	0371-10	Manual Pulling Nut With Handles
11	0371-11	Pulling Rod With Installation Knob
12	0371-12	Hydraulic High-Pressure Pulling Cylinder
13	0371-13	6' Long High-Pressure Hydraulic Hose
14	0371-14	Hydraulic Two-Speed High-Pressure Hand Pump
15	0371-15	Hydraulic Quick-Disconnect High-Pressure Coupling
16	0371-16	Pre-Cut Rigid Foam Tool Control System