

Regrousering Instructions

Precautions

Proper Temperature

- > Cold metals should not be welded. Grouser bars and track shoes should be a uniform temperature and be at least 65° C (150° F) before welding.
- > Preheating can reduce cooling rates and residual stress required for weld deposit. Trimming grouser shoes provides preheat for the pad.
- > Preheating can also be achieved by first running a 1/4 to 3/8" weld pass. This is called a heat pass where the weld will heat up both the grouser and the shoe. In cold welding conditions the hot pass should be closely followed by the fill or final weld pass.
- > Cracking can occur, if the current is too high, if the current travels too fast, if the voltage is too high, or if the grouser bar is welded on when it is too cold.
- > In order to retain the hardness of the grouser bar it is recommended that an effort be made to keep the maximum temperature reached in welding as low as possible.



Clean Surface

The track shoe must be clean and free from dirt and contaminants before any welding can take place. Rust and dirt can be a source of hydrogen and cause a weld to crack. Often the surface can be cleaned with a metal brush or metal conditioning disk.

Weld Depth

Use a full penetration weld to make get the maximum strength hold.

Proper Electrode or Wire Welding Rod

Proper Electrode is critical to the success and strength of the weld. Both the track shoes and the grouser bars are made of hardened materials which require appropriate weld strength. Consult your welding supplier for recommendations on welding hardened steel. The steel you will be welding is approximately a BHN of 443 to 543.

Preparation

Mechanized Welding (Shoes removed) Preparation

Follow the directions given by the manufacturer.

In the Field Welding (Shoes on Link Assembly) Preparation

Most welding done in the field is done manually with a stick welder. Usually, the grouser is not trimmed. During the field fabrication, the worn grouser bar should be cleaned and a pre-formed bar should be welded to it. With manual welding you will need to leave a 1/16" in gap for expansion and contraction of metals and penetration.



Welding Procedure

Position grouser bar. Place new grouser bar vertically over worn surface. Be sure to tack each end of the grouser bar to hold it in position of the weld. You will want to bead each corner of the bar to help hold it in position and avoid distortion.

The Weld

To begin welding, place the bar in a horizontal position. Start the weld in the middle and move to the outside edge. Then go to the other edge and move towards the center. This will help to reduce the overall heating. Turn the bar over and repeat this process on the opposite side.

Clean off the weld slag and finish the welding job. It may take several passes over the stringer beads. The weld should completely fill the groove between the grouser bar and the shoe, particularly near the ends. Be sure to fill all weld craters. Repeat this process on both sides of the bar.

Sources:

- 1) Undercarriage Reconditioning Bulletin, Bulletin No. MP-20, 1991 Caterpillar Inc.
- 2) Allied Construction Products web site, http://www.alliedcp.com/support/faq_griplug2.asp
- 3) Dura-Tuff® welders