

Expansion Joint Systems

Strip Seal Removal/ Replacement

Responsibility

It is the responsibility of installer to understand all the requirements of this document before attempting to install DSB strip seals.

- Failure to perform any of the steps outlined in this document will result in underperformance or failure of the product.
- Failure to perform any of the steps outlined in this document shall void any warranties, either expressed or implied, regarding DSB strip seals.

It is the responsibility of The D.S. Brown Company to provide written instructions regarding the proper installation and handling of DSB strip seals.

It is the responsibility of The D.S. Brown Company to provide technical support, training, and quality control testing as requested by the installer, contractor, or owner of the project.

- 1.3.1 Technical support, training, and quality control testing is available for a fee.

Safety

Please review each component's SDS before installation to fully understand the safety concerns related to this system. Failure to do so could result in serious injury or death.

All jobsite safety rules and regulations as specified by the owner or project management are to be followed and are not superseded by any statement in this document.

Recommended Safety PPE:

- Safety glasses w/ side shields
- Steel toe shoes
- Leather gloves
- Chemical splash goggles
- Respirator
- Hard hat (when overhead work is present)
- Class 3, Level 2 High Visibility Vest (when traffic is present, includes construction traffic)

- Ear plugs/earmuffs/ear caps (when noise exposure exceeds allowable limits)

Material Storage

Store DSB 1520 Lubricant adhesive away from sources of heat.

- For best results material should be above 45°F at time of use.
- Open containers of material cannot be returned.

Equipment Needed

- DSB Strip Seals can be installed by hand or using installation tools available from The D.S. Brown Company.
 - Installation by hand is only recommended for very small jobs.
 - Installation and removal tools available include the Strip Seal Removal Kit and the Strip Sealer installation tool.
- Air compressor
- Sandblaster
- Strip Seal Removal Kit (optional)
- Strip Sealer installation tool (optional)
- Paint brushes
- DSB 1520 Lubricant Adhesive
- Crow bars and/or modified screwdrivers
- Latex gloves
- Tape measure
- Duct tape
- Strip seal

Removal Procedure

Step 1. Use the Oscillating Tool (in removal kit), knife, or hand saw to cut the existing strip seal down the middle of the joint where the seal is being replaced. This will cut the "V" shape of the seal in half along the valley of the "V".

Step 2. Use the Oscillating Tool to cut approximately 1'-2' of existing seal inside of the rail cavity. The procedure should cut the portion of the seal that is lodged inside of the rail cavity (the seal head or lug), in half. This relieves the pressure of the seal head inside of the rail cavity.

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Step 3. In the area where you performed Step 2, Fold one half of the seal up above the roadway surface

- Using the Grabber Tool (in removal kit). Latch onto as much of the seal rolled above the roadway surface as possible. Pull the Grabber from the rail at a 45° angle using a chain and skid steer, truck, or other available equipment.
- If the seal head comes out of the rail, reset the Grabber so that it hooks on to the head of the seal. If the seal head does not come out, use screwdrivers and a pry bar to get the head of the seal out of the rail then latch onto the head of the seal.
- Depending on the condition of the seal the Grabber may need to be reset every few feet. If the seal tears, try resetting the Grabber more frequently, adjusting the angle in which the Grabber pulls, and/or getting more of the seal head in the Grabber.
- Repeat Steps 2 and 3, as needed, on both sides of the joint rail until the majority of the seal has been removed from the rail cavity.

Step 4. Assemble the Clean Out Tool (in removal kit).

- Slide the Clean Out Tool Head onto the Clean Out Tool Bar, aligning the slot in the head with the pin on the bar. Use the provided lock nut to fasten the Clean Out Tool Head to the bar.
- Connect the Clean Out Tool Bar to the air hammer (in removal kit). Connect the air hammer to the air compressor (use 90-110 PSI).
- Insert the top portion of the Clean Out Tool Head into the top portion of the rail cavity first. Then, snap the bottom of the head into the bottom portion of the rail. Depending on the size of the rail, this may take some light force.
- The Clean Out Tool is used to remove any leftover small pieces of seal and adhesive. Run it up and down the rail cavity using the Air Hammer. Tilt the bar as needed, to clean the top and bottom portion of the rail cavity. Once complete, inspect the rail cavity for any remaining debris. If the debris cannot be removed with the Clean Out Tool, sandblasting of the rail is required.
- Repeat Step 4 on both sides of the joint.

Joint Preparation

The first thing is to ensure the rail channel is clean and free of all debris

- Dirt, small stones, rubber, glue, excess galvanization, or weld spikes will all prevent the seal from seating in the channel properly and in turn, hamper its performance.

Measure: The preferred joint opening dimension for installation of most strip seals is approximately 2.0 inches (51mm). However, the preferred joint opening dimension for A2R-O and L2R-O seals is approximately 3.0 inches (76mm).

- If the joint is less than the recommended opening, then the seal cannot be installed.

Temperature and weather: Pavement and ambient temperatures are recommended to be 45°F and above. Seal can be installed in cooler weather however extra steps must be taken. If it becomes necessary to install strip seal below 45°F, please call The D.S. Brown Company and speak to a technical representative. It is not recommended to install seal when excessive moisture is present.

Tape the top of the rails with duct tape to prevent adhesive from getting on the rails.

Installation

Lay the seal alongside the joint with the side marked "TOP" facing up.

Determine from which side installation will be started. Always try to work in one direction. Always start on the deck with miters then tackle the upturns.

DSB 1520 Lubricant Adhesive product should be mixed or shaken for 30 seconds prior to use. Liberally coat the inside channels of the joint on both sides with lubricant adhesive. Coat only 3 to 4 feet preceding the installation. Place the strip seal in the joint so the bottom of each lug is in contact with the lower recess of each rail. Brush a small amount of lubricant adhesive onto the top of the lugs.

Using crowbars or modified screwdrivers push the top of the lug into the channel. Once you have the first few inches of the seal in the channel the seal should stay in place. You can then use the Strip Sealer installation tool to complete the run of seal to the end of the seal or to the next miter or upturn.

When using the Strip Sealer installation tool, put the seal in on one side, installing no more than a few feet. Switch sides and install a few feet in order to keep it even. This prevents twisting or skewing of the seal.

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Ideally, one person should be applying glue to the channels and top of the lugs, while two other people are folding the seal into the joint and installing it from each side.

Miters

Always install miters first and work out from the miter towards upturns, decks, and sidewalk areas. Install a few inches of the seal close to the miter to hold it in place then install the miter.

If there is going to be more than one miter it's highly recommended that before installing seal up to the second miter that the seal be laid out to determine if it lines-up with the next miter spot. If this is the case, install the second miter and then install the rest of the seal.

Miters and upturns are normally done by hand with crow bars or modified screwdrivers.

Clean Up

DSB 1520 Lubricant Adhesive is best removed by a solvent based cleaner like mineral spirits or toluene.

Remove excess adhesive from the top of the seal.

Remove all duct tape from the rails.