



# WILLSEAL® HORIZONTAL EXPANSION JOINT SOLUTIONS – MAINTENANCE

For Pre-Compressed and Closed Cell Foam

## Recommended Maintenance Procedures

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### APPLICABLE PRODUCTS

These maintenance procedures cover all current Willseal® Horizontal Expansion Joints, including each of the following:

- Willseal 250
- Willseal 250-R
- Willseal 250-B
- Willseal FR-H
- Willseal Seismic-HS
- Willseal Coreseal
- Willseal Color Coreseal-H

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### GENERAL

Upon the completion of expansion joint system installation, a complete review and inspection of the joint should be performed.

- Visual review of joints
- Confirm proper installation
  - Foam material properly recessed 1/4" to 3/8" from surface of slab
  - Weatherproof side bead
  - Butt joint (properly adhered)
  - Joint sidewall adhesive
    - Coverage
    - 1/4" recessed

A semi-annual maintenance program is recommended for Willseal Horizontal Expansion Joint products. This will ensure that the expansion joint system will continue to provide the service for which it was intended long-term.

Maintenance procedures should include:

- Semi-annual visual inspections
- Cleaning
- Snow removal and ice control (where/when applicable)
- Repairs to expansion joint system
- Repairs to structure
- Repairs to butt joints
- Repairs to joint sidewall adhesion
- Repairs to silicone topcoat and weatherproofing beads

In addition to these general maintenance and cleaning procedures, it should be noted that spills of petroleum distillates, hydrocarbon type solvents, lighter fluid, oil, gas, and alcohols should be cleaned up as soon as possible to avoid damage to the expansion joint.

**Willseal requires that any possible removal and reinstallation job be reviewed and approved by a Tremco or Willseal Technical Representative prior to installation.**

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### INSPECTIONS

All expansion joints run the possibility of being subjected to abrasive conditions as well as physical damage from general use, vandalism, pests, and damage resulting from structural problems. Semi-annual inspections will provide a basis for the proper maintenance work to assure a long-life of the expansion joint system.

A thorough physical inspection of all expansion joints should occur **semi-annually**. Such inspections should include (but are not limited to) the following:

- Physical inspection to determine if there any areas of excessive wear or physical damage to the expansion joint, paying close attention to the condition of the following:

- Sidewall adhesion
- Butt joints
- Weatherproofing beads
- Silicone coating on foam
- The foam itself
- Inspect to see if there is a buildup of debris on the surface of the expansion joint.
- Inspect the surface of the expansion joint for the application of non-authorized coating, paint, etc.
- Inspect the expansion joints for abrasion, punctures, tears, holes, vandalism, and pest infiltration on and in the expansion joint surface and foam.
- Inspect the underside of the joints for evidence of leaks where possible.
- Inspect drains or scuppers to assure there is nothing clogging or blocking them to avoid ponding water on the deck.
- Inspect the surface of the slab adjacent to the expansion joint to determine if there are any substantial structural cracks leading into the joint which could cause leaks.
- Inspect the entire structure from the underside for cracks which show evidence of a difference in the plane of the materials on each side of the crack.

Any issues noted should be rectified.

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## CLEANING

The use and location of the installation will cause the cleaning frequency to vary, in general:

- Sweep or vacuum deck to remove all loose debris and dirt **weekly**.
- Thoroughly clean deck to remove dirt and debris **monthly**.
- Avoid the use of strong acids, bases, and solvents. Contact Willseal Technical Services prior to using any chemicals or detergents to ensure compatibility.

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## SNOW REMOVAL & ICE CONTROL

Piled snow can significantly load the expansion joint beyond its design load capacity, resulting in significant structural cracks and/or more serious structural damage. Immediate removal of piled snow and ice is recommended.

- Avoid the use of metal blades to prevent physical damage to the coating system.
- Snow brooms are recommended as opposed to heavy snow removal equipment.
- Do not use sand, aggregate, or rock salt to remove ice.

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## REPAIRS TO STRUCTURE

All structural damage repairs should be at the direction of a Structural Engineer. Contact Tremco or Willseal Technical Services with any questions.

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## REPAIRS TO FOAM EXPANSION JOINT SYSTEM

Minor repairs may be made by owner's maintenance people, however, it is suggested that to protect the manufacturer's warranty, major repairs should be accompanied by the original approved applicator.

Recommendations for various situations involving minor physical damage to the expansion joint system:

- Torn or flapping silicone to the silicone coating of the foam:
  - Cut away any loose or torn silicone sealant.
  - Clean silicone surface including the surrounding area and newly exposed foam with isopropyl alcohol utilizing the two-rag method to remove surface contaminants. Allow IPA to dry.
  - Apply a thin 1/8" bead of approved silicone sealant to the damaged area and carry to the surrounding silicone surface feathering out to the edges of the patched area.

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- Slit or puncture to the silicone coating:
  - Clean silicone surface including the surrounding area and newly exposed foam with isopropyl alcohol utilizing the two-rag method to remove surface contaminants. Allow the IPA to thoroughly evaporate.
  - Using an approved silicone sealant, gently insert the nozzle into the puncture or slit just below the surface of the silicone coating and squeeze a generous amount of sealant into the opening until the opening is covered with sealant.
  - Tool sealant over the damaged area in either direction feathering out to the edges of the patched area.
- Damaged weather seal bead; if sealant is performing properly, but aesthetically not tooled properly or completely, or slightly damaged on the surface:
  - Clean surface of silicone sealant with isopropyl alcohol in order to remove any surface contaminants utilizing the two-rag wipe method. Allow IPA to dry.
  - Protect adjacent substrate by taping.
  - Apply a thin bead of fresh sealant over the cleaned cured bead. Dry tool the sealant.
  - Remove masking tape.
- Sealant is damaged and needs to be removed and replaced:
  - Remove the damaged area by cutting out sealant. Take great care to not cut into the silicone coating on the expansion joint.
  - If sealant is still well adhered to substrate, it is acceptable to allow existing sealant to remain in joint and simply remove the damaged portion utilizing a v-cut. Follow instructions above to install additional sealant in joint.
  - If adhesion to substrate is unacceptable, mechanically remove existing sealant cleanly from joint.
  - Clean as deemed appropriate. Protect adjacent substrate by taping.
  - Apply a thin bead of fresh sealant over the cleaned cured bead. Dry tool the sealant.
  - Remove masking tape.
  - Check adhesion after sealant has cured (cure depends on temperature and humidity; a minimum of 14 days is acceptable). Allow the repaired area to cure for 24 hours minimum before opening area to vehicular traffic.
- Joint sidewall repair; for area where the sealant and foam have separated from the wall of the joint. This may be an indication that there is too much movement, or the joint was improperly sized and not a suitable application. Contact your local Willseal or Tremco Technical Sales Representative or Technical Services for assistance.

If the damaged system includes Willseal 250-R, additional inspection should take place to check the status of the reinforcing member within the expansion joint. If any deformity or damage is observed, that section should be removed and replaced with a 3 to 4 inch margin on either side.

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