

GRIPSAFE® ST (GSST) INSTALLATION CHECKLIST



All checkboxes must be verified before each use. Full manual at usaindustries.com/gripsafe-st

1 PREPARING GRIPSAFE PLUG FOR INSTALLATION

NAME PLATE VALIDATION — ALL ITEMS SHOULD BE LASER PRINTED ON NAME PLATE

- Plug size/schedule on the Name Plate matches the pipe size/schedule being tested.
- Maximum plug back pressure rating confirmed. If not on Name Plate, reference the operating manual.
- Torque specs confirmed. If not on Name Plate, reference the operating manual.

SETTING PLUG TO "READY TO INSTALL" POSITION — GSST ORB & DBB, 4" TO 12" SIZES

- Tighten the Compression Hex Nut(s) until the Spring Plate Hub is compressed onto the Wedge Cone. **Do not over-tighten** — this will expand the seal.
- Each Wedge Gripper Assembly should be expanded larger than the plug OD and in the active position.

INSPECTING THE WEDGE GRIPPER ASSEMBLY

- Each Wedge Gripper Assembly is clean of debris, fouling, and contaminants.
- Each Wedge Gripper Assembly slides freely up and down with no resistance.
- Wedge GritLock® surface shows no clogging, flaking, cracking, or excessive wear.

INSPECTING THE TRI-PLY SEAL

- No visible delamination, cracking, crumbling, or excessive wear.
- In the retracted (uncompressed) state, the seal is generally flush with the OD of the top and bottom Compression Plates.

2 PREPARING PIPE ID SURFACE FOR INSTALLATION

- Pipe ID is clean of debris, pipe scaling, or rust layer.
- The Wedge GritLock area must be in direct contact with the pipe's smooth, bare metal surface.**
- The seal area should also be clean, though it is less critical than the wedge area.
- If the pipe has a weld seam, inspect the weld height at the seal location to ensure proper pressure sealing.

3 INSTALLING THE LIFTING DEVICE — 10" AND ABOVE

- Both Lifting Standoffs hand-tightened into the two Name Plate–indicated locations on the plug.

HORIZONTAL PIPE INSTALLATION

- Use one or two of the five Lifting Device points to orient the plug horizontally.
- The plug must balance at center of gravity. If not, use a cheater bar in the long square tube to assist.

VERTICAL PIPE INSTALLATION

- Use the Lifting Eyebolts and Lifting Standoffs screwed into the plug.
- Both Lifting Eyebolts are required to balance at center of gravity.

4 INSTALLING THE GRIPSAFE PLUG INTO THE PIPE

- Expect a 0.375"–0.500" diametrical clearance between the plug and pipe ID during installation.
- When the Wedge Grippers meet the pipe ID, evenly push the GripSafe ST plug into the pipe.
- The Wedge Grippers will retract and contact the pipe ID during insertion. Use a slight rocking motion to assist.
- Ensure the top of the Spring Plate is at least flush with the end of the pipe.**
- If the pipe has a weld seam, ensure it is positioned between the Wedge Gripper Assemblies.

5 VALIDATING GRIPSAFE IS INSTALLED CORRECTLY

- Maximum clearance between top of plug and pipe ID: **0.375"** for NPS 6"–8" · **0.500"** for NPS 10" and above.

VALIDATING THE GRIPSAFE IS CENTERED IN THE PIPE

- Spring Plate appears visually centered within the pipe and perpendicular to the pipe ID.
- All Wedge Gripper Nut expansion gaps are equal between each nut and the Spring Plate. **No nut should be resting on the Spring Plate.**
- If plug is off-center, test pressure will not be achieved at maximum torque. **A short push resets the Wedge Grippers to a new center position.**

6 EXPANDING THE GRIPSAFE SEAL

- Using a **star pattern**, turn each Compression Hex Nut a maximum of **3 revolutions** before moving to the next nut.
- Continue star pattern until **50% target torque** is achieved on all Compression Nuts.
- Increase to **100% target installation torque** and continue in a star pattern.
- After reaching 100% in the star pattern, switch to a **circular pattern** to confirm all nuts are torqued correctly.
- Apply a slight tap on top of each Acorn Nut to pre-load the wedges and ensure GritLock® engagement with the pipe ID.