



GRIPSAFE®ST (GSST) INSTALLATION CHECKLIST

This GripSafe ST installation checklist must be reviewed every time before using the plug for any pressure testing. All steps below are critical to the proper installation of the GripSafe ST isolation plug, all check boxes must be confirmed before installation of the plug. This checklist is a summary based on the GripSafe ST Operating Manual. If more information is required, please reference the full operating manual found at <https://usaindustries.com/piping-isolation-testing-products/gripsafe-st/>

PREPARING GRIPSAFE PLUG FOR INSTALLATION

NAME PLATE VALIDATION (ALL ITEMS SHOULD BE LASER PRINTED ON NAME PLATE)

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

SETTING THE PLUG TO "READY TO INSTALL" POSITION (GSST ORB & DBB - 4" TO 12" SIZES)

- Tighten the *Compression Hex Nut(s)* to the point where the *Spring Plate Hub* is compressed onto the *Wedge Cone*
- Do not over tighten the *Compression Hex Nut(s)*, as 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

- Ensure each *Wedge Gripper Assembly* is clean of debris, fouling, and contaminants
- Each *Wedge Gripper Assembly* should slide freely up and down with no resistance
- Inspect *Wedge GritLock®* surface for clogged, flaking, cracking, or excessive wear

INSPECTING THE TRI-PLY SEAL

- NO visible delaminating, cracking, crumbling, or excessive wear should be observed
- In the retracted state (not compressed), *Seal* should generally be flush with OD of the top and bottom *Compression Plates*

PREPARING PIPE ID SURFACE FOR INSTALLATION

- Ensure 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, but it is not as critical as the wedge area
- If pipe has a weld seam, inspect the height of the weld to ensure proper pressure sealing

INSTALLING THE LIFTING DEVICE ON THE GRIPSAFE (FOR 10" AND ABOVE GRIPSAFE SIZES)

The *Name Plate* will have the 2 locations for both *Lifting Standoffs* to screw into the plug. Hand tighten each *Lifting Standoff*.

HORIZONTAL PIPE INSTALLATION

- There are 3-5 lifting points on the *Lifting Device*. Use one or two of the points to orient the plug horizontally
- The plug must balance with the center of gravity. If not, use a cheater bar inserted into 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 on the plug to balance with the center of gravity

INSTALLATION OF THE GRIPSAFE PLUG INTO THE PIPE

- Expect a 0.375" diameter 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 with insertion. Ensure position the top of *Spring Plate Halo and Hub* is at least flush with the end of the pipe
- If pipe has a weld seam, ensure that the weld seam is positioned between the *Wedge Assembly*

VALIDATING GRIPSAFE INSTALLED CORRECTLY IN THE PIPE

Maximum clearance between the top of the plug and pipe ID (NPS plugs 6" and above = 0.375)

VALIDATING IF THE GRIPSAFE IS CENTERED IN THE PIPE

- Visually inspect that the *Spring Plate Halo and Hub* is centered within the pipe and appears perpendicular to the pipe ID
- Visually inspect each *Wedge Gripper Nut* of each *Wedge Assembly*; all nuts expansion gap should be the same between nut and *Spring Plate*, and should not be sitting on the *Spring Plate* itself
- If the plug is noticeably not in the center of the pipe, test pressures will not be achieved while in maximum compression torque; a short push of the plug will reset the *Wedge Grippers* to a new center position

EXPANDING THE GRIPSAFE SEAL

- Use a star pattern to turn each *Compression Hex Nut* a maximum of 3 revolutions before moving to the next nut
- Repeat in 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 completing the star pattern at 100% of the target torque, use a circular pattern to confirm all nuts are torqued correctly
- A slight tap on top of each *Acorn Nut* will help to pre-load the wedges and ensure engagement of the wedge grit into the pipe ID surface



GRIPSAFE® ST (GSST) INSTALLATION CHECKLIST

