

SAFETY GAG INSTALLATION PROCEDURE:

REFER TO TABLE 1 FOR A LIST OF OPERATING PROCEDURES SUITABLE FOR USE WITH SAFETY GAGS

1. Install Safety Gag pipe/tube clamp onto the pipe/tube being tested. If pipe/tube OD is running heavy and the nut/chain cannot be installed onto the bolt, relocate the chain to between the two (2) clamp halves as shown above. This is an acceptable method of assembly as long as the chain does not interfere with the gag clamping on the pipe/tube OD. Safety Gags are to be installed with some slack in the chain so that movement of the shaft is not prohibited as pressure increases during testing.

WARNING! GRIPTIGHT & GRIPTIGHT MAX TEST PLUG SEALS AND GRIPPERS ARE ENERGIZED BY TEST PRESSURE. DURING PRESSURIZATION, THE SHAFT(S) MAY MOVE SLIGHTLY WHICH IS NORMAL AND EXPECTED. A SMALL AMOUNT OF SLACK IN THE SAFETY CHAIN(S) IS REQUIRED FOR THIS MOVEMENT AND ENERGIZATION TO OCCUR. INSTALLING THE SAFETY GAG WITH A TIGHT CHAIN MAY LIMIT OR PREVENT THE SMALL MOVEMENT OF THE SHAFT AS PRESSURE IS INCREASING.

2. Tighten bolts to ensure slippage will not occur.
3. Insert test plug into pipe/tube. Follow appropriate operating procedures for the plugs being utilized and install plugs per recommended torque values using a calibrated torque wrench.
4. Prior to pressurizing the system, slip the link over the shaft end. 8" to 24" are equipped with two chain and link assemblies. The links are stamped with the shaft sizes they can accommodate. Each link can do two (2) sizes of shafts. Ensure you have the appropriate link set-up. Unscrew the chain connector and switch the link around if necessary.

WARNING! THE AMOUNT OF SLACK IN THE CHAIN AS WELL AS THE POSITION OF THE INSTALLED PLUG SHOULD BE OBSERVED FROM A SAFE DISTANCE TO ENSURE NO APPRECIABLE MOVEMENT OF THE PLUG HAS OCCURRED. SHOULD MOVEMENT BE NOTED, THE TEST SHOULD BE STOPPED AND ALL PRESSURE RELEASED IMMEDIATELY.

5. Continue per the appropriate operating procedures.

Questions? Contact EST Group Customer Service at any of the following locations.

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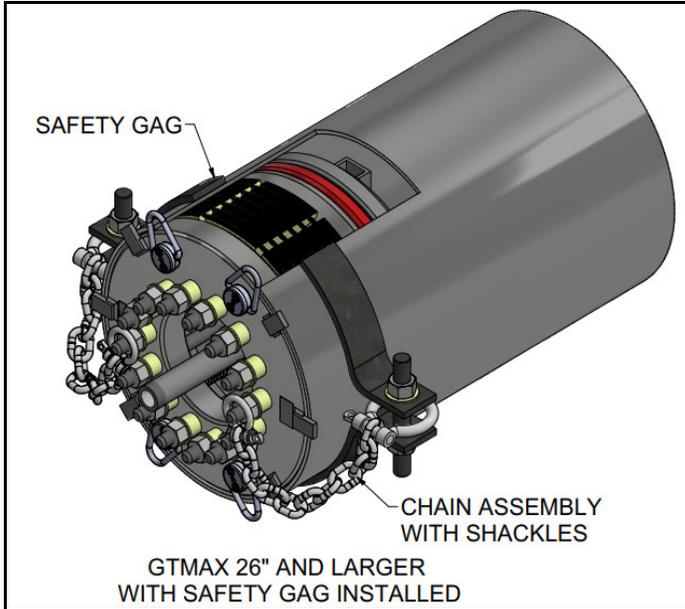
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**Table 1. Operating Procedures for
Various Plug Types**

PLUG TYPE	OPERATING PROCEDURES
GRIP TIGHT® HIGH PRESSURE TEST PLUG 1" THRU 8"	DC2510
GRIP TIGHT® HIGH PRESSURE TEST PLUG 10" & LARGER	DC2520
GRIP TIGHT® ELBOW HIGH PRESSURE TEST PLUG 2" SCH 160 THRU 10" SCH 120	DC2545
GRIP TIGHT® ELBOW HIGH PRESSURE TEST PLUG 5" THRU 24"	DC2561
GRIP TIGHT MAX® HIGH PRESSURE TEST PLUG 3/8" THRU 10P120	DC2504
GRIP TIGHT MAX® HIGH PRESSURE TEST PLUG 10" THRU 24"	DC2562
GRIP TIGHT MAX® HIGH PRESSURE TEST PLUG 26" THRU 48"	DC2570

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2. Tighten bolts to ensure slippage will not occur.
3. Insert test plug into pipe/tube. Follow appropriate operating procedures for the plugs being utilized and install plugs per recommended torque values using a calibrated torque wrench.
4. Prior to pressurizing the system, if chain and link/shackle assemblies are present, slip the small shackle over the shaft ends on (2) opposing shafts. 26" and larger are equipped with two chain and link/shackle assemblies. If shafts are too short, a comp tube can be removed from (2) opposite shafts (approximately 180° apart) to allow small shackle to slip over the shaft securely.

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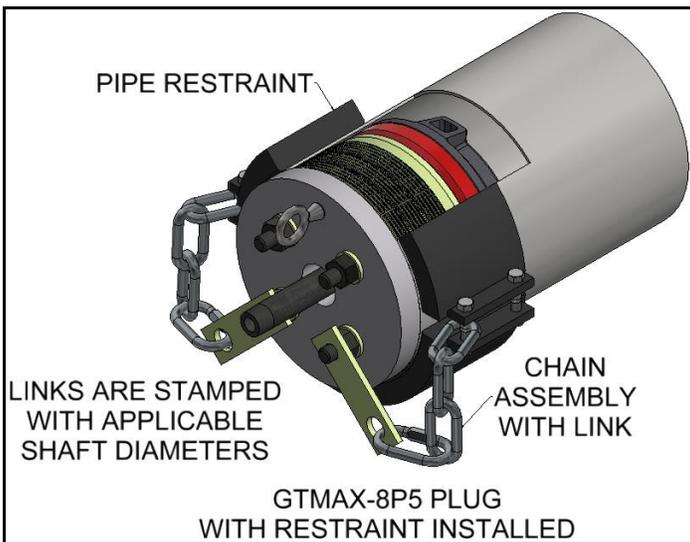
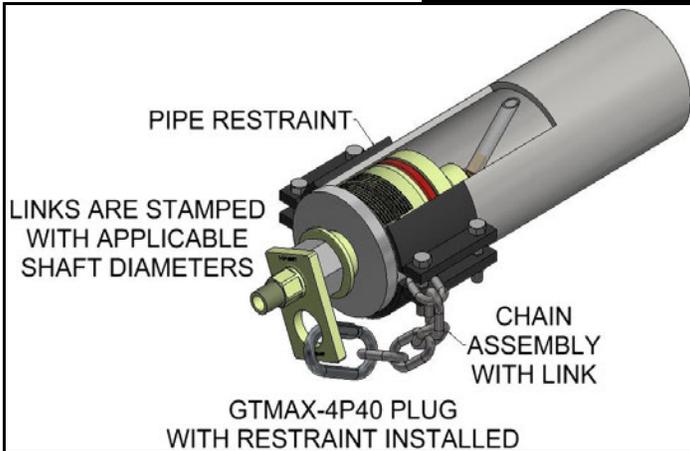
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PIPE/TUBE RESTRAINT INSTALLATION PROCEDURE:

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1. Install pipe/tube restraint onto the pipe/tube being tested. If pipe/tube OD is running heavy and the nut/chain cannot be installed onto the bolt, relocate the chain to between the two (2) restraint halves as shown above. This is an acceptable method of assembly as long as the chain does not interfere with the restraint clamping on the pipe/tube OD. The pipe/tube restraint should be installed over the seal and gripper area of the plug to prevent pipe/tube expansion.

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2. Tighten bolts, if present, to ensure slippage will not occur.

Note: Slip-on collar type pipe/tube restraints do not have bolts or chain assemblies.

3. Insert test plug into pipe/tube. Follow appropriate operating procedures for the plugs being utilized and install plugs per recommended torque values using a calibrated torque wrench.
4. Prior to pressurizing the system, if chain and link/shackle assemblies are present, slip the link over the shaft end. 8" to 24" are equipped with two chain and link/shackle assemblies. The links are stamped with the shaft sizes they can accommodate. Each link can do two (2) sizes of shafts. Ensure you have the appropriate link set-up. Unscrew the chain connector and switch the link around if necessary.

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