

Locking “Straight-Type”

Review of Stud Locking Procedures

Although all current APV Gaulin machines are furnished with "shoulder-type" **FRONT** cylinder cap studs, all other studs (including front cylinder cap studs on older machines) are "straight-type" studs, which require locking in place through the use of "Loctite" anaerobic adhesive.

A shoulder-type, front cylinder cap stud can be readily identified, because the threaded end (which is turned into the cylinder) is of smaller diameter than the cap nut end. Shoulder-type studs need only be torqued according to the procedure outlined in the standard APV Gaulin operation manual.

Straight-type studs are those having both ends threaded to the same diameter. These require locking by means of Loctite (The Loctite Corp., 115 N. Mountain Street, Newington, Connecticut). For studs up to one-inch in diameter "Loctite 271" can be used. For studs over one inch in diameter use "Loctite 277".

Removal of Straight-Type Studs Pre-Locked at the Factory

1. Install two nuts, faces together, on the stud.
2. Torque the nuts firmly against each other.
3. Apply a wrench to the bottom nut and unscrew the stud.

Note: Normally, removal may be accomplished using ordinary wrenches. If holding power is too great, the parts can be heated to 450-500°F. to soften the adhesive. Bonding material completely decomposes at 650°. The use of solvents to loosen studs is not possible.

Installation of New Straight-Type Stud

1. Background Information:
 - a. Anaerobic adhesives, which remain liquid while exposed to air, cure without heat or catalysts when confined between closely fitted metal parts. Metal accelerates the curing process.

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- b. Contamination with metal particles will harden these adhesives in the bottle. Do not dip metal parts or brushes into the bottle or return contaminated compound to the bottle after using.

Do not mix primers with the compound, as this will cause hardening.

- c. The shelf life of "Loctite" compounds is guaranteed for one year.
- d. "Loctite" compounds are non-toxic.

2. Application Technique:

- a. Cleaning

Parts to be joined should be solvent-cleaned and air blown dry to remove grease films. Use of solvents containing chlorides, fluorides or halides should not be used. A recommended solvent is "Loctite Safety Solvent 5559". Other ethyl alcohol. All solvents used should be new or redistilled technical grade.

- b. Coating

Stud and hole threads should be thoroughly coated with "Loctite 271" or "Loctite 277", as applicable.

- c. Installation

The stud should be run into the hole to about one extra turn, then backed out to the dimension indicated on the applicable assembly drawing.

- d. Cure

"Loctite 271" will cure in one to two hours. "Loctite 277" will cure in 24 hours.

3. Clean-Up Procedure:

Uncured material should be cleaned immediately. Wipe off excess Loctite, using a clean cloth. Use solvents, as previously recommended, for a final cleaning.

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