

## »» Service Letter

Technical Aspects are FAA Approved

**Number: L03-05 C**  
**Replaces L03-05B**

**Date:** 3/27/2013

**Subject:** Installation Instructions for Superior SL Prefix Connecting Rod Bolts and Nuts

### Connecting Rod Applications:

Connecting Rod Fasteners	Connecting Rod Assembly Applications
SL74644, Bolt (torque type)	Lycoming P/N 74502
SL75060, Bolt (stretch type)	Superior P/N SL77450 or Lycoming P/N 77450
SL75061, Bolt (torque type) or SL75060, when used as a torque type bolt	Superior P/N SL11750 or Lycoming P/N's LW-11750 and LW-13865
SL78027, Bolt (torque type)	Superior P/N SL78030 or Lycoming P/N's 78029 and 78030
SL12596, Bolt (stretch type)	Superior P/N's SL13422, SL13937 and SL19332 or Lycoming P/N's LW-13422, LW-13937 and LW-19332
SL12186, Nut	All Connecting Rod Assemblies

### Compliance:

At any time Superior SL connecting rod bolts and nuts are assembled with connecting rod.

### General Installation Instructions:

There are two types of connecting rod bolts in service, **torque type** and **stretch type**. All use the same nut. Prior to assembly, all bolts and nuts must be clean and dry. Verify threaded areas are free of dirt or irregularities, which could affect torque. The bolt threads must be lubricated. A mixture of SAE 50 mineral oil and STP is recommended. In no case should they ever be assembled dry. Assure that the connecting rod bearing inserts are properly aligned and the bearing lubricated in accordance with the applicable installation data.

The connecting rod nut, Part Number SL12186, must be assembled with the raised lip away from the connecting rod. Refer to Figure 1 for proper installation. The connecting rod nuts are to be tightened to

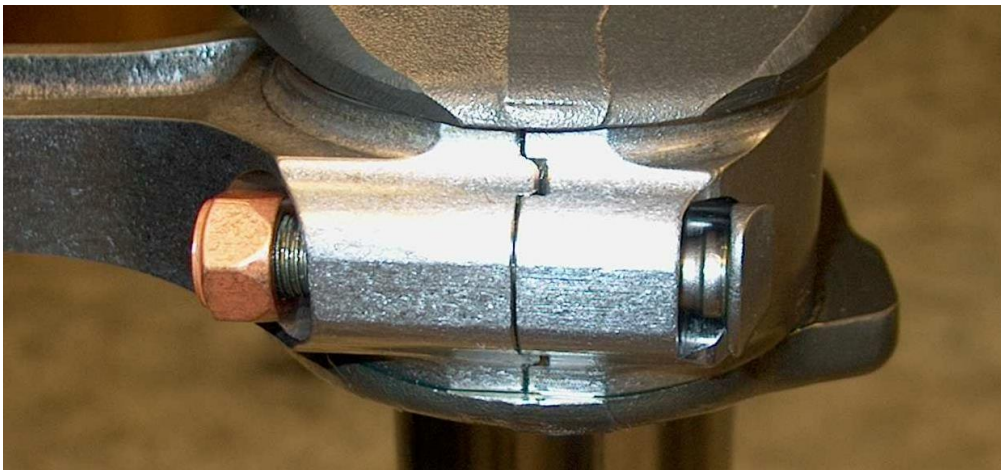
the final torque using a calibrated torque wrench with a minimum torque range of 25 to 60 ft-lbs. (300 to 720 in-lbs.). Failure to comply exactly with the length and/or torque limits prescribed below will result in connecting rod failure.

**Torque Type Bolt Installation:**

Torque type bolts are identified in the table above. These bolts are to be lubricated as described above before starting the nut onto the bolt (ref. Figure 1). Tighten each nut to a torque of 40 ft-lbs. (480 in-lbs.). If the bolt begins to yield before a torque of 40 ft-lbs. is reached, (i.e. it reaches a torque below 40 ft.-lbs. and continues to turn without the torque increasing) the bolt must be replaced.

**Stretch Type Bolt Installation:**

Stretch type bolts are identified in the table above. These bolts are to be lubricated as described above before starting the nut onto the bolt (ref. Figure 1). Tighten each nut to a torque of 38 ft-lbs. (456 in-lbs.). Measure the length using a calibrated 2-3 inch standard flat anvil micrometer. If the length is between 2.255 and 2.256 inches, no further tightening is necessary. If the bolt length exceeds 2.256 inches, the bolt must be replaced. If the bolt is less than 2.255 inches in length, tighten using additional torque, but not more than 55 ft-lbs. (660 in-lbs.), until the length is between 2.255 and 2.256 inches.



**FIGURE 1**  
**Typical Connecting Rod Nut and Bolt Installation - See Note Below**

*NOTE: The installation depicted in Figure 1 reflects the application where the rod bolt is installed through the cap, then into the rod. There are other applications (not depicted) where the rod bolt is installed through the rod and then into the cap. New connecting rod bolts are to be installed in accordance with and compliant to the OEM service data.*