



# Installation Instructions

## Lovejoy®/Sier-Bath® Interference Fit Hubs

### Introduction

**Carefully follow these instructions for optimum performance and trouble free service.**

These instructions apply to interference fit type hubs. This type of installation is for straight shafts, with the exception that the hubs must be heated before they are installed on the shaft.

### Component Preparation

Clean the exposed surfaces of all components, hubs, sub-assemblies, spacers, etc., to remove any protective coating applied at the factory. All parts must be clean and free of any foreign materials before attempting installation or assembly, use a clean cloth dampened with a nonflammable solvent.

Check Hub Bores, Keyways and Shafts for any raised metal, nicks, burrs, dents, gouges, etc., dress if necessary.



**Warning!**

**Before beginning coupling installation make sure the machinery is made safe. Discount all power.**

### Straight Bore Interference Fit

It is important when mounting inference hubs to make sure that clearance exists over the top of keys: otherwise, when the hub cools, it will rest on the key and produce high stresses in the hub that could cause it to fail.

Expand the hub bore with a uniform heat source, Oil, Oven or Induction.

**Oil bath heating** is usually limited to approximately 350°F (177°C), or less than the flash point of the oil used. Special handling devices are required such as tongs, threaded rods placed in puller holes in the hub, etc.



**Warning!**

**If an oil bath is used, the oil must have a flash point of 350°F (177°C) or greater. Do not rest hubs on the bottom of the container.**

**Oven heating** offers some advantages over oil. Parts can be heated to higher temperatures, usually not exceeding 600°F (315°C) and the parts can be handled with heat-resistant gloves. Do not rest hubs on oven; place them on a rack.



**Warning!**

**Do not use an open flame in a combustible atmosphere or near combustible materials.**

**An Induction heater** can be used as long as the temperature rise is controlled.

**Open Flame Heating is not recommended.** If an oxy-acetylene or blow torch is used, use an excess acetylene mixture. Mark the hub body at the top, center and bottom of their length in several places with heat sensitive crayons, one 350°F (177°C) and one 450°F (232°C) melt temperature.

Elevate the hub with refractory bricks to allow the flame to flow through the hub. With a "Blue flame" or "Rose bud torch" direct the flame towards the hub bore using constant motion to avoid overheating an area. Once the heat sensitive crayons melt the hub is ready for mounting.

**Caution!**

**Do Not Spot Heat the Hub or Distortion May Occur.**

Regardless of method used, heat **MUST** be applied evenly to avoid distortion. This is especially important when using open flame heating. In any event, extreme care must be exercised when handling heated hubs to avoid injury to personnel.

**Caution!**

**Do Not Exceed 600°F (315°C) During the Heating of the Hub. Excessive Heat may soften the Hub, Reducing the Strength of the Steel and may affect the Performance Characteristics of the Hub.**

**Consult all applicable Federal, State and local laws and regulations covering the safe operation and maintenance of equipment, including, without limitation, the USDOL-OSHA "Lockout / Tagout" procedure set forth in 29 CFR 1910.147.**