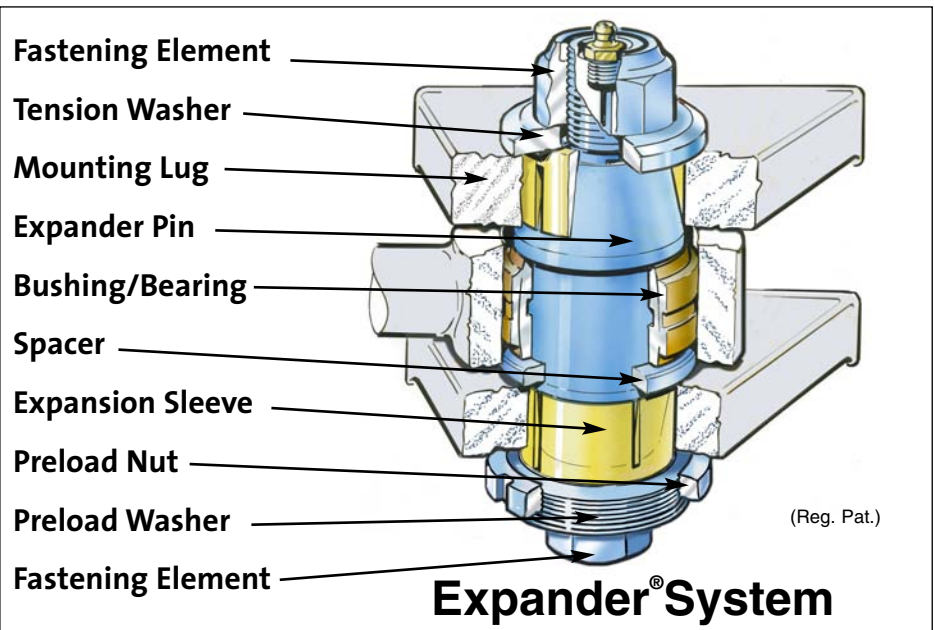


# Installation and Maintenance Instructions

KLLA  
751-5

Following the procedures detailed herein will ensure that the Expander System is installed correctly. It will also ensure that the assembly will be removable for access to the bushings/bearings or when other service is required on the pivot.

**IMPORTANT:** Do not install your Expander System until you have read and understood the information contained in these instructions.



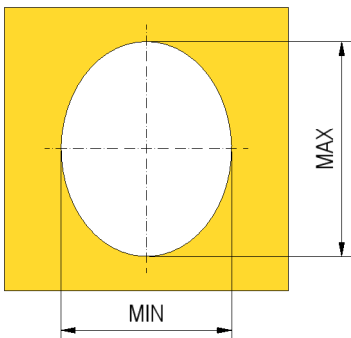
FOR QUESTIONS CALL YOUR LOCAL DEALER.

## Section 1 - Preparation

**1.1 CAUTION:** Prior to installation, ensure there are no existing structural damages (i.e. cracks, severely bent lug ears etc.) that would affect the alignment of the pivot lugs. If damage exists, it may result in the Expander System not functioning properly. Repair structural damages **BEFORE** proceeding with installation.

Double check the minimum and maximum wear points of the lug holes to ensure that you have purchased the correct size expansion sleeve for each side of the pin. Each expansion sleeve expands to a maximum of 2.0 mm (0.08 inch). If the maximum wear diameter of the lug hole is more than 2.0 mm (0.08 inch) larger than the diameter of the sleeve, contact your local dealer to order the appropriate oversize expansion sleeve.

MAX - MIN < 1.5 mm (0.06 inch)



**IF YOU ATTEMPT TO INSTALL THE EXPANDER SYSTEM WITH IMPROPERLY SIZED EXPANSION SLEEVES, THE INSTALLATION WILL NOT BE SUCCESSFUL.**

**1.2** Visually inspect the bore surface of the mounting lugs. Remove any ridges or other irregularities.

If the lug hole has more than 1.5 mm (0.06 inch) difference between the minimum and maximum wear, the hole must be bored or ground out to a difference that is less than 1.5 mm (0.06 inch).

**FOR UNUSUAL WEAR CONDITIONS, CONTACT YOUR LOCAL DEALER FOR GUIDELINES.**

**1.3** If there are manufacturer installed steel bushings in the mounting lugs, it is recommended that they be removed and the appropriate oversize expansion sleeves should be used instead. This will eliminate any possible future wear between the bushing and mounting lug.

# Section 2 - Torque and Maintenance Intervals

## Torque Recommendation (Table 1)

### Bultar



| ENHET  | M12 | M14 | M16 | M20 | M24 | M30 | M36 | M42 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| (Nm)   | 70  | 115 | 175 | 350 | 500 | 600 | 700 | 900 |
| (Lbft) | 52  | 85  | 129 | 258 | 369 | 443 | 516 | 664 |

### Muttrar: Standard Höjd



| ENHET  | M12 | M14 | M16 | M20 | M24 | M30 | M36 | M42 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| (Nm)   | 65  | 115 | 175 | 250 | 350 | 500 | 600 | 700 |
| (Lbft) | 48  | 85  | 129 | 184 | 258 | 369 | 443 | 516 |

### Muttrar: Låg Höjd



| ENHET  | M12 |  | M16 | M20 | M24 | M30 |  |  |
|--------|-----|--|-----|-----|-----|-----|--|--|
| (Nm)   | 60  |  | 125 | 200 | 275 | 350 |  |  |
| (Lbft) | 44  |  | 92  | 148 | 203 | 258 |  |  |

**2.1 IMPORTANT: RE-TORQUE IS AN INTRICATE PART OF THE INSTALLATION AND CRUCIAL TO THE SUCCESS OF THE REPAIR.** Make sure to follow the torque schedule in **Table 2**.

**2.2 IMPORTANT: CHECK THE TORQUE AT REGULAR SERVICE INTERVALS.**

Apply appropriate torque according to **Table 1**. Tighten until the torque wrench "clicks out" on setting.

**2.3 IMPORTANT:** Proper greasing of your machine pivots are crucial for the functioning and durability of the Expander System. We strongly recommend using grease with 3-5% molybdenum disulfide, which allows much less wear and gives increased load carrying capability.

## Torque Schedule (Table 2)

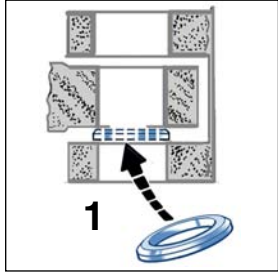
|                            |   |
|----------------------------|---|
| <b>Hours of Operation</b>  | <p>* When you re-torque and the wrench "clicks out" on setting without adding additional torque, you have successfully seated the expansion sleeves.</p> <p>If the expansion sleeves have not seated within one week of operation, call your local dealer for instructions.</p> |
| After 1 hour               |   |
| After 3 hours              |   |
| After 10 hours or 1 day *  |   |
| After 40 hours or 4 days * |   |

# Section 3 - Installation/Removal Tools

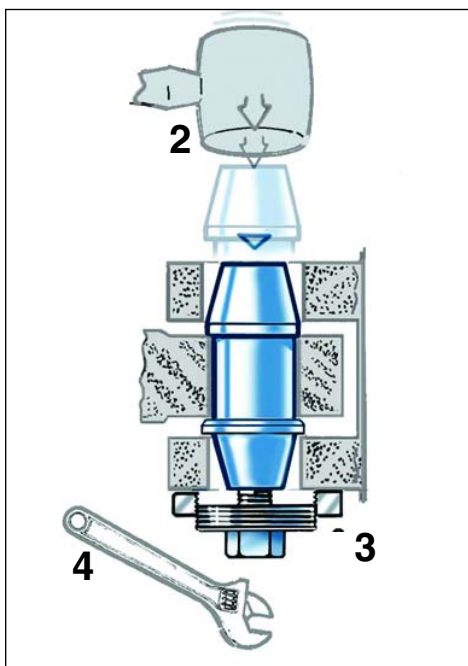
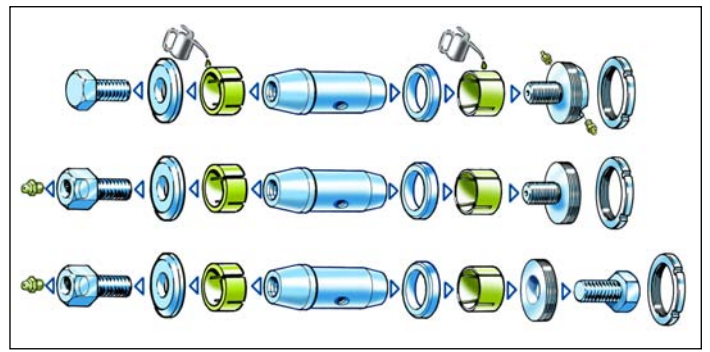
**3.1** Most Expander System assemblies require no special tools for installation or removal. Assemblies designed for limited clearance applications are supplied with the tools needed. Removing the Expander System is required when replacing the OEM pivot bushing/bearing. In situations with limited access for removal according to **5.2**, we recommend the use of Expander Installation/Removal Tools (sold separately). **CALL YOUR LOCAL DEALER FOR PRICING.**

# Section 4 - Installation

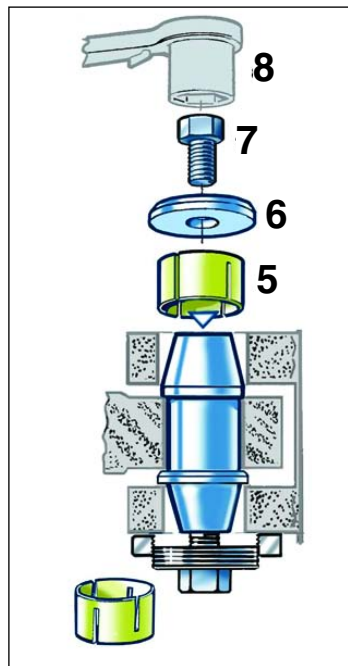
4.1 Lubricate the Expander pin and the expansion sleeves with bearing grease for easy insertion.



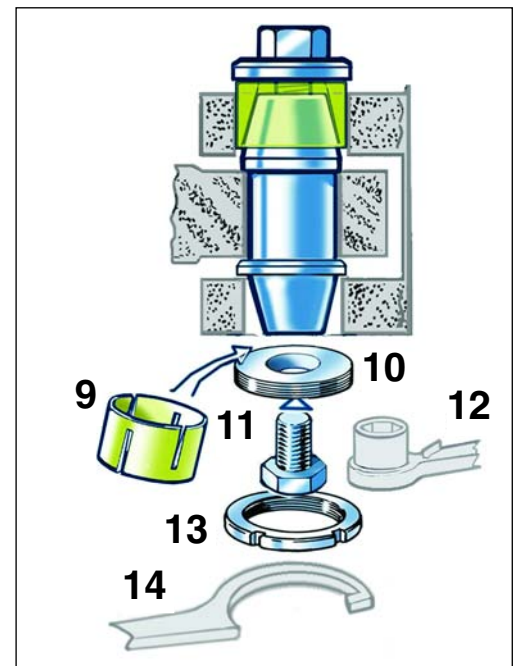
4.2 If the pivot already has a spacer, leave it in its position. If the assembly includes a spacer, place it between the inner sphere of the bearing and the lug ear (1), with the bevel facing the bearing. The spacer is always positioned on the opposite side of the stepped part of the Expander pin.



4.3 Insert the Expander pin into the bore (2). Be sure not to damage the thread or the tapered ends of the Expander pin. Do not install the expansion sleeves at this point. The inner sphere of the bearing is now to be locked between the stepped part of the pin and the spacer. To preload the bearing, set the preload washer and nut with a 0.14 – 0.24 inch (3-5 mm) distance between the end of the Expander pin and the preload washer (3). Thereafter tighten the fastener to eliminate axial play (4).

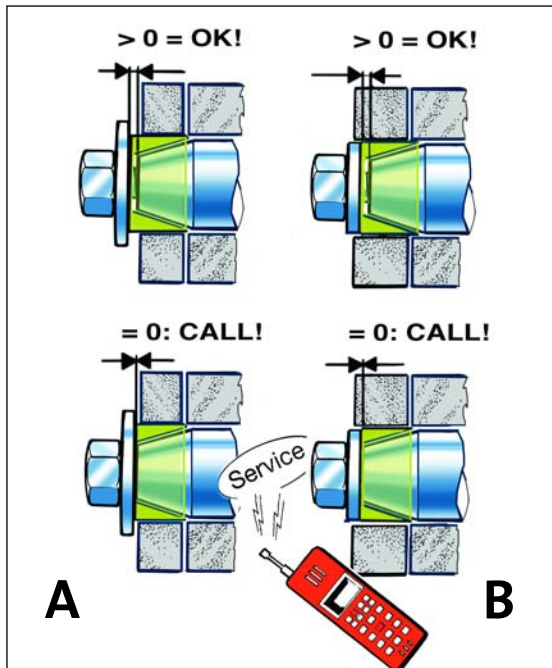


4.4 Install expansion sleeve (5), tension washer (6) and fastening element (7) on the stepped side of the assembly. Before tightening the System, find the appropriate torque value by looking up the corresponding fastening element in **Table 1**. Measure or refer to the Packing List for the size of the fastening elements. Keep the Packing List for future reference. Tighten until the torque wrench "clicks out" on setting (8).



4.5 Remove the preload nut, washer and fastener on the opposite side of the stepped part of the Expander pin. Then install the expansion sleeve (9), preload washer (10) and tighten the fastening element (11) to the correct torque. Tighten until the torque wrench "clicks out" on setting (12). Thereafter lock the System with the preload nut (13,14). **IMPORTANT! MAX TORQUE 50 LBFT (NM).**

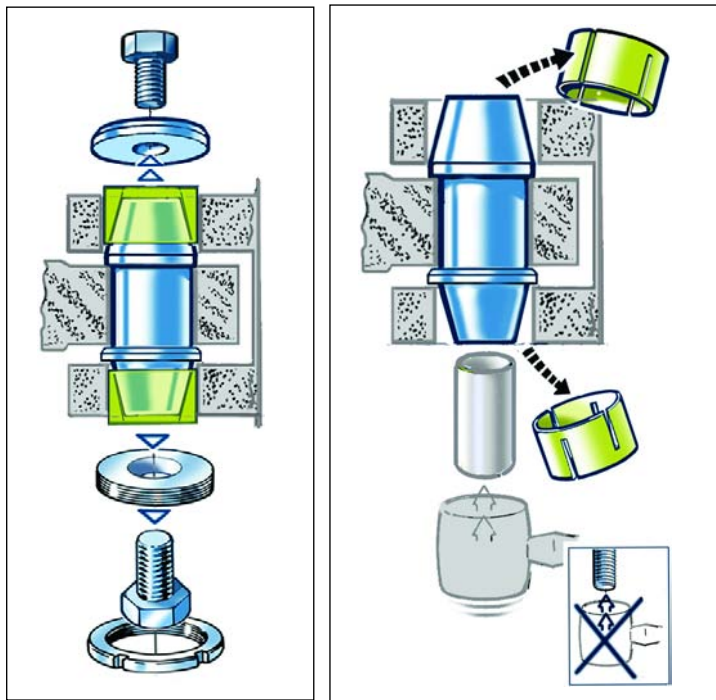
4.6 Lubricate the pivot using grease with 3-5% molybdenum disulfide before operating the machine. Proper lubrication maintenance will greatly extend the life of the Expander System.



**4.7 IMPORTANT:** The tension washer located between the fastening element and the end of the expander pin should **NEVER** come in contact with the pivot lug. If this occurs on only one side of the pin, go back to **Section 4.2**. If either tension washer comes in contact with the lug **(A)** or the end of the Expander pin **(B)**, the expansion sleeve is incorrectly specified. The System then needs to be fitted with a larger oversize expansion sleeve.

**4.8** Once the initial torque regiment and pivot lubrication have been completed, start the machine and move the unit back and forth. Loosen the preload nut **(13)** and tighten the fasteners **(7,11)** until the torque wrench “clicks out” on setting. This procedure ensures that the expansion sleeves have properly seated. Tighten until the torque wrench “clicks out” on setting **(12)**. Thereafter lock the System with the preload nut **(13,14)**. **IMPORTANT! MAX TORQUE 50 LBFT (NM).**

## Section 5 - Removal Instructions



**5.1** Unscrew the fastening elements on both sides of the assembly and remove the washers.

**5.2** Tap the Expander pin body, first on the opposite side of the stepped part of the pin, then alternately on both sides until the expansion sleeves come loose. Use a piece of plumbing pipe between the Expander pin and the mallet/hammer in order **NOT TO DAMAGE THE THREADS**. Make sure that the pipe does not come in contact with the expansion sleeve.

**5.3** Remove the expansion sleeves with channel lock pliers or a similar tool, then remove the Expander pin.



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