

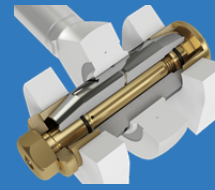
Please go to this link to find the latest version <https://www.nord-lock.com/services/manuals/expander/straight-pin-through-bolt/>

# INSTALLATION INSTRUCTIONS

## Straight Pin, Through Bolt

v4-2

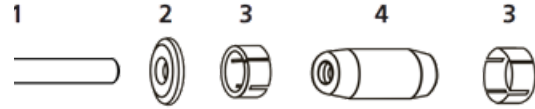
ENGLISH (ENGLISH)



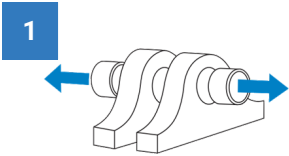
Following these instructions will ensure that the Expander System is installed correctly and the pivot life is prolonged.

**Congratulations!** You have purchased a custom engineered solution to the pivot wear problem on your machine. Contact your dealer or Expander before proceeding if you have any questions.

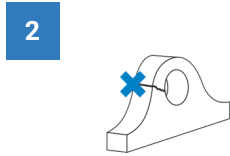
**1 Bolt. 2 Washer. 3 Sleeve. 4 Axle (Pin). 5 Expander flat headed nut for internal hexagon.**



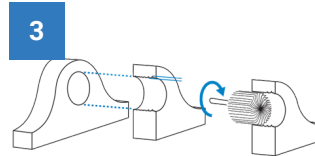
### PREPARATION



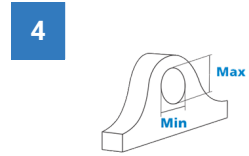
Remove any bushings to eliminate future wear between the bushing and the mounting lug.



Repair any structural damage i.e. cracks or bent lug ears before installation.



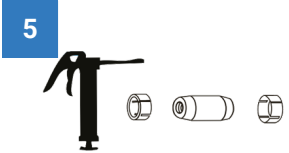
Smooth out irregularities in the bore surfaces.



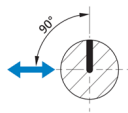
The difference between min and max diameter in the worn lugs must be within .06" (1.5 mm) for the sleeves to fit correctly.

**ATTENTION!** If the worn lugs diameter at any point is 2 mm (.080") or more over original lug diameter contact your dealer or Expander System. You will need oversized sleeves.

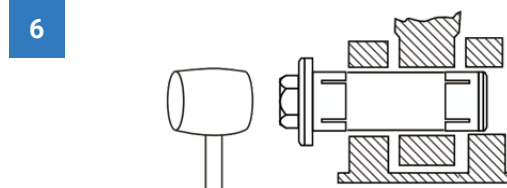
### INSTALLATION



Grease the sleeves and axle with grease available, preferably graphite grease. Do not grease the threads!



**NOTE!** If applicable: position greasing outlet 90 degrees to force direction to minimize stress concentration at outlet.



Install the Expander System assembled. Position it in the bores and tighten the fastener. Hold the washer with a plier to prevent the axle from turning. Torque as specified.

## TORQUE RECOMMENDATIONS

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### Hex Bolts

Torques M12-M24 ± 10%, M30... +30/-0%

	M12	M14	M16	M20	M24	M30	M36	M42
Nm	70	115	175	350	500	600	700	900
lb-ft	52	85	129	258	369	443	516	664

### Hex Nuts: Standard Height

Torques M12-M24 ± 10%, M30... +30/-0%



	M12	M14	M16	M20	M24	M30	M36	M42
Nm	65	115	175	250	350	500	600	700
lb-ft	48	85	129	184	258	369	443	516

### Hex Nuts: Low Height

All Torques ± 10%



	M12	M14	M16	M20	M24	M30	M36	M42
Nm	60		125	200	275	350		
lb-ft	44		92	148	203	258		

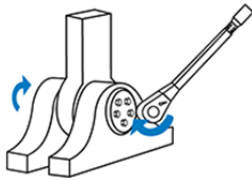
### Spanner Nuts

All Torques ± 10%



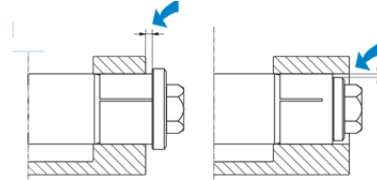
	M17	M25	M35	M45	M55	M65	M75	M85
Nm	50	120	250	500	600	700	800	900
lb-ft	37	89	184	369	443	516	590	664

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After initial torque move machine through full range of motion several times and recheck torque. Check the torque after 10 hours, 40 hours and at regular service intervals to ensure proper seating of the sleeves.

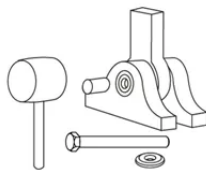
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Ensure that there is a minimum distance of 0,5 mm (.02") between the washer and the lug. **ATTENTION!** If the washer is in contact with the lug contact your dealer or Expander System.

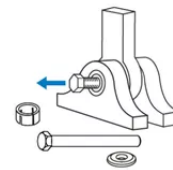
## DISMOUNTING

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Dismount bolt and washer. Tap the axle until the tension on the sleeves is released (use a piece of pipe between the axle and the mallet/hammer not to damage the threads). Remove the sleeve with a plier.

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Mount a short bolt and remove the axle using a sliding hammer, puller or similar. Bolt is normally fine pitch and sold by your dealer.