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NTN H307X

NTN H307X Adapter Sleeve Instruction Manual

Model: H307X

1. INTRODUCTION

This manual provides essential instructions for the proper installation, operation, and maintenance of the NTN H307X Adapter Sleeve. Adhering to these guidelines will ensure optimal performance and longevity of the product. Please read this manual thoroughly before proceeding with any installation or maintenance procedures.

2. PRODUCT OVERVIEW

The NTN H307X is an adapter sleeve designed for mounting bearings with a tapered bore onto cylindrical shafts. It facilitates easy installation and removal of bearings, providing a secure fit and proper alignment. This particular model is specified for a 30 mm shaft diameter.



Figure 2.1: NTN H307X Adapter Sleeve. This image displays the metallic adapter sleeve with a tapered inner surface and a threaded outer surface, accompanied by a lock nut and lock washer, which are typically used for securing the bearing onto the shaft.

3. SETUP AND INSTALLATION

Proper installation is crucial for the reliable operation of the bearing assembly. Always follow safety procedures and consult relevant engineering standards.

1. **Preparation:** Ensure the shaft and bearing bore are clean and free from burrs or damage. Apply a thin layer of light oil to the shaft and the tapered bore of the adapter sleeve to aid installation.
2. **Mounting the Adapter Sleeve:** Slide the adapter sleeve onto the shaft.
3. **Mounting the Bearing:** Carefully slide the bearing with the tapered bore onto the adapter sleeve.
4. **Securing the Bearing:** Thread the lock nut onto the adapter sleeve. Use a hook spanner or appropriate tool to tighten the lock nut. Tighten until the bearing is firmly seated and the internal clearance is reduced to the specified value (refer to bearing manufacturer's specifications for clearance reduction).
5. **Locking:** Once the desired tightening is achieved, bend one of the tabs of the lock washer into a slot on the lock nut to prevent it from loosening.
6. **Verification:** After installation, manually rotate the bearing to ensure smooth operation and check for any abnormal resistance.

Warning: Overtightening can damage the bearing or reduce its lifespan. Undertightening can lead to bearing creep or premature failure. Always refer to the bearing manufacturer's specifications for precise tightening values.

4. OPERATION

The NTN H307X Adapter Sleeve functions as a critical component in securing a bearing with a tapered bore onto a cylindrical shaft. Once properly installed, it provides a rigid and concentric fit, allowing the bearing to operate as intended within its specified parameters. The adapter sleeve itself is a static component and does not have moving parts during operation. Its primary role is to maintain the correct bearing fit and alignment under operational loads.

5. MAINTENANCE

Regular inspection and maintenance of the bearing assembly, including the adapter sleeve, are essential for extending service life and preventing unexpected failures.

- **Visual Inspection:** Periodically inspect the adapter sleeve and surrounding bearing components for signs of corrosion, wear, or damage. Ensure the lock washer tab remains securely engaged with the lock nut.
- **Lubrication:** While the adapter sleeve itself does not require lubrication, the bearing it supports does. Ensure the bearing is lubricated according to the bearing manufacturer's recommendations. The compatible lubricant for the bearing type is typically grease.
- **Retightening Check:** In applications with high vibration or dynamic loads, periodically check the tightness of the lock nut to ensure the bearing remains securely mounted.
- **Cleaning:** Keep the area around the bearing assembly clean to prevent contaminants from entering the bearing.

6. TROUBLESHOOTING

This section addresses common issues that may arise with adapter sleeve installations.

Problem	Possible Cause	Solution
Bearing Loosening on Shaft	Insufficient tightening of lock nut; lock washer not engaged; excessive vibration.	Retighten lock nut to specifications, ensuring lock washer is properly engaged. Investigate and mitigate sources of excessive vibration.
Bearing Overheating / Premature Failure	Overtightening of lock nut, leading to excessive reduction of internal bearing clearance.	Disassemble, inspect bearing for damage, and reinstall with correct tightening torque/clearance reduction.
Difficulty Mounting Bearing	Shaft or sleeve surface imperfections; incorrect sleeve size; lack of lubrication.	Inspect surfaces for burrs, clean thoroughly, apply light oil. Verify correct adapter sleeve and bearing dimensions.

7. SPECIFICATIONS

Key specifications for the NTN H307X Adapter Sleeve:

- **Brand:** NTN
- **Model Number:** H307X
- **Shaft Diameter:** 30 mm (as per product description)
- **Bearing Type Compatibility:** Tapered bore ball bearings (general for adapter sleeves)
- **Compatible Lubricant (for associated bearing):** Grease
- **ASIN:** B073DL3ML6
- **Manufacturer:** NTN
- **Date First Available:** June 27, 2017

8. WARRANTY AND SUPPORT

For specific warranty information regarding the NTN H307X Adapter Sleeve, please refer to the documentation provided at the time of purchase or contact your authorized NTN distributor or seller. Support for technical inquiries can typically be obtained through the official NTN website or their customer service channels.