**TIMKEN 470989**

# Timken 470989 Seal User Manual

Model: 470989 | Brand: TIMKEN

## Introduction

This manual provides essential information for the proper handling, installation, and maintenance of your Timken 470989 Seal. Adhering to these guidelines will help ensure optimal performance and longevity of the product.

## Safety Information

Always prioritize safety when working with mechanical components. Wear appropriate personal protective equipment (PPE) such as gloves and eye protection. Ensure the work area is clean and well-lit. Consult a qualified professional if you are unsure about any installation or maintenance procedures.

## Product Overview

The Timken 470989 Seal is a precision-engineered component designed to prevent leaks and maintain pressure within mechanical systems. Seals are critical for protecting bearings and other sensitive parts from contaminants while retaining lubricants.


**Figure 1:** Timken Brand Logo. This image displays the official logo for the Timken brand, manufacturer of the 470989 Seal.

## Specifications

| Attribute | Value |
|---|---|
| Manufacturer | Timken |
| Brand | TIMKEN |
| Item Weight | 3.52 ounces |
| Package Dimensions | 9.5 x 5.46 x 2.68 inches |
| Item Model Number | 470989 |
| Manufacturer Part Number | 470989 |
| ASIN | B00460BWK2 |
| Date First Available | October 31, 2010 |

## Installation Guidelines

Proper installation is crucial for the effective performance of the seal. While specific procedures vary by application, general guidelines include:

1. **Preparation:** Ensure the housing bore and shaft surface are clean, smooth, and free from burrs, nicks, or scratches. Any imperfections can compromise the seal's integrity.

2. **Lubrication:** Lightly lubricate the seal lips and the shaft with the system's operating fluid or a compatible lubricant before installation. This reduces friction and prevents damage during assembly.
3. **Installation Tool:** Use a proper seal installation tool or a soft-faced hammer with a flat, blunt object to press the seal squarely into its bore. Avoid using sharp tools or excessive force, which can deform or damage the seal.
4. **Alignment:** Ensure the seal is installed squarely and to the correct depth. Misalignment can lead to premature wear and leakage.
5. **Inspection:** After installation, visually inspect the seal for any signs of damage, crimping, or improper seating.

*Note: Always refer to the specific equipment manufacturer's service manual for detailed installation instructions relevant to your application.*

## Function and Application

The Timken 470989 Seal is designed to create a barrier between two environments, typically to prevent the escape of fluid (like oil or grease) and the ingress of contaminants (like dirt, dust, or water). It is commonly used in rotating or reciprocating applications, such as:

- Automotive wheel hubs
- Industrial gearboxes
- Agricultural machinery
- Various other mechanical systems requiring fluid retention and contaminant exclusion.

## Maintenance

Seals are wear components and require periodic inspection and replacement. Key maintenance considerations include:

- **Regular Inspection:** Periodically check for signs of leakage around the seal area. Early detection of leaks can prevent more significant damage to the system.
- **Contaminant Check:** Inspect for signs of external contaminants entering the system, which may indicate a compromised seal.
- **Replacement Schedule:** Follow the equipment manufacturer's recommended replacement intervals. Even without visible leaks, seals can harden or lose elasticity over time, reducing their effectiveness.
- **Proper Lubrication:** Ensure that the system maintains adequate and appropriate lubrication, as this directly impacts seal life.

## Troubleshooting

If you experience issues related to the seal, consider the following:

| Problem | Possible Cause | Solution |
|---|---|---|
| Fluid Leakage | Damaged seal during installation, worn seal, improper seal material, shaft or bore imperfections, excessive pressure/temperature. | Inspect and replace seal, ensure proper installation, check shaft/bore for damage, verify operating conditions are within seal limits. |
| Premature Seal Wear | Lack of lubrication, abrasive contaminants, excessive shaft runout, improper seal material for application, high operating temperature. | Verify lubrication, check for contaminant ingress, inspect shaft and bearings, ensure correct seal specification, manage operating temperature. |

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| Seal Extrusion | Excessive pressure, incorrect gland design, too large a clearance gap. | Reduce pressure, redesign gland, reduce clearance gap, consider a harder seal material. |

## Warranty and Support

For specific warranty information regarding the Timken 470989 Seal, please refer to the official Timken website or contact Timken customer support directly. Keep your purchase receipt as proof of purchase.
**Timken Official Website:** www.timken.com



### Related Documents - 470989

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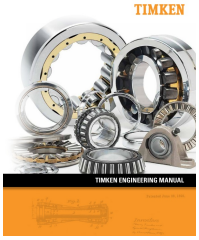
|---|---|
|  | Timken® SAF Split-Block Mounted Spherical Roller Bearing Catalog<br>Comprehensive catalog detailing Timken® SAF Split-Block Mounted Spherical Roller Bearings, including engineering specifications, mounting instructions, lubrication guidelines, and product dimensions for various series and applications. |
|  | Timken Bearing Specification Guide: Comprehensive Catalog for Automotive & Industrial Applications<br>The official Timken Bearing Specification Guide provides detailed information on a wide range of bearings, seals, and hub assemblies. Essential for identifying and selecting the correct components for automotive and industrial applications. |
|  | Timken SAF Split-Block Housed Units Catalog and Technical Guide<br>Explore the Timken SAF Split-Block Housed Units Catalog, featuring detailed specifications, engineering data, mounting instructions, and lubrication guides for high-capacity spherical roller bearings. Essential for industrial applications. |
|  | Timken Engineering Manual: Comprehensive Guide to Bearing Selection and Application<br>This Timken Engineering Manual provides in-depth information on bearing types, selection processes, fitting practices, operating conditions, lubrication, and storage. Essential resource for engineers and professionals in mechanical power transmission. |

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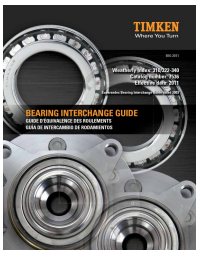
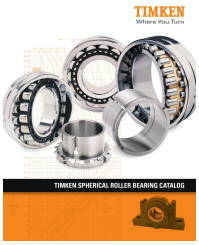
|  | [Timken Bearing Interchange Guide]<br>Comprehensive guide from Timken providing bearing interchange information, including manufacturer part numbers and corresponding Timken part numbers. Available in English, French, and Spanish. |
|  | [Timken Spherical Roller Bearing Catalog]<br>Comprehensive catalog detailing Timken's range of spherical roller bearings, offering detailed technical specifications, engineering data, mounting practices, and lubrication guidelines for industrial applications. |