

Installation Instructions



Allen-Bradley

by ROCKWELL AUTOMATION

Original Instructions

Shaft Seal Kits for Kinetix TLP Servo Motors

Catalog Numbers TLP-SSN-F046, TLP-SSN-F070, TLP-SSN-F090, TLP-SSN-F100, TLP-SSN-F115, TLP-SSN-F145, TLP-SSN-F200, TLP-SSN-F235

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Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes. Translated versions are not always available for each revision.

Topic	Page
Added TLP servo motor catalog numbers to the table entitled Kinetix TLP Low Inertia Motors.	6

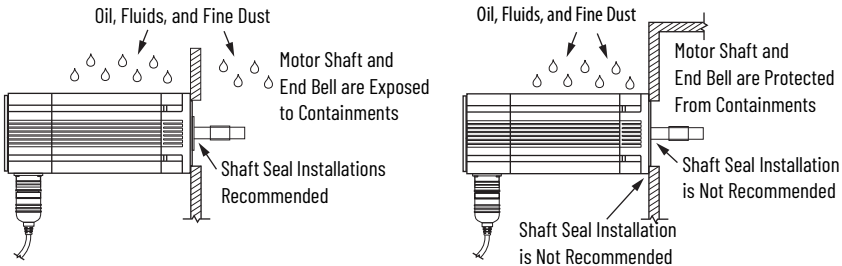
About Shaft Seals

A shaft seal is recommended if the motor shaft and end bell are exposed to significant amounts of contaminants, such as oil, fluids, or fine dust. Use a shaft seal in these environments to prolong the life of the motor. A shaft seal and Bulletin 2090 cables with environmentally sealed connectors are required for an IP65 rating or greater.

See Kinetix® Motion Accessories Specifications Technical Data, publication [KNX-TD004](#), to find Bulletin 2090 cables with environmentally sealed connectors for your motor.

IMPORTANT

The shaft seal is not required in applications where the motor shaft and end bell are free of oil, fluids, or fine dust, and a lower IP rating is sufficient. Shaft seals are subject to wear and require periodic inspection and replacement. Replacement is recommended every 3 months, not to exceed 12 months, depending on use. If you paint the motor, do not get paint on the shaft seal area or the shaft, as paint can decrease the life of the shaft seal.



Required Tools

Use these tools to install a shaft seal:

- Insulated, small, flat-head screw driver
- Rubber/wooden mallet or a metal hammer and wooden work piece
- Socket, pipe, or tube (various sizes)
- Abrasive cloth to remove any nicks or burrs from the motor shaft

Required Supplies

Lubricant - Grease, industrial grade, suitable for applications with speeds up to 6000 RPM, and -10...+80 °C (14...176 °F) temperature range.

Remove the Shaft Seal



ATTENTION: To avoid injury or damage to the equipment, remove power from the motor before removing the shaft seal.

Follow these steps to remove the shaft seal.

1. Remove power to the motor before removing the shaft seal.
2. Remove the shaft key (if present) from the motor shaft.
3. Remove old seal.

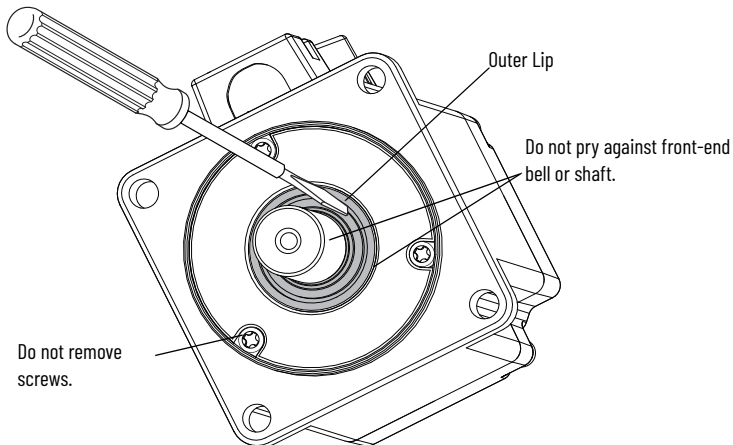
Place the insulated screw driver on the inside diameter of the shaft seal outer lip as shown. Carefully lift the seal, work your way around the seal lift a little at a time. When you can grasp the seal, slightly rotate it while pulling it out of the front-end bell.



ATTENTION: Avoid damage to the motor. Do not pry against front-end bell or shaft.



ATTENTION: Do not hammer the shaft or body of the motor when changing the shaft seal.



4. Inspect and clean the shaft and seal surfaces as necessary.

Use an abrasive cloth to remove any nicks or burrs from the motor shaft.

Replace the Shaft Seal

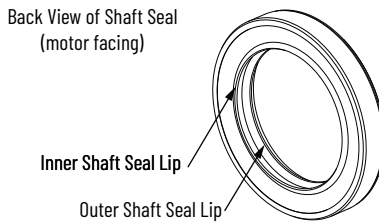
Follow these steps to replace the shaft seal.

1. Apply tape to the keyway so the edges do not damage the seal lip.

IMPORTANT Cover the sharp edges of the keyway with tape to protect the shaft seal lip from damage.

2. Lubricate the motor shaft and the inner and outer lip of the shaft seal.

IMPORTANT Shaft seals require a lubricant to reduce wear. Lubricate only the inner and outer lip of the shaft seal. Do not lubricate the motor bore or outside diameter of the seal.



3. Center the shaft seal on the mounting surface of the motor and slide the shaft seal evenly onto the motor shaft.

See [Shaft Seal Installation Clearances](#) on [page 5](#) for the correct installation clearance of the shaft seal you are installing.

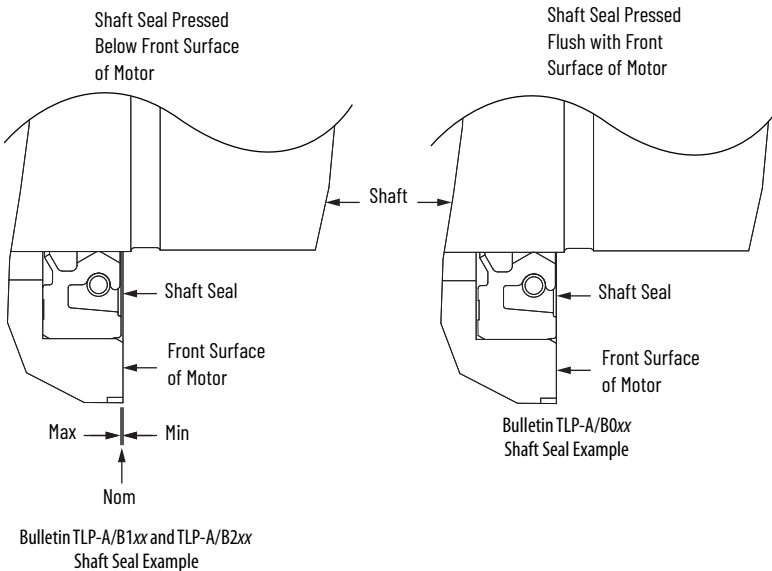
4. Press the shaft seal into the seal bore by applying one of the [Shaft Seal Installation Methods](#) on [page 6](#).
5. Visually inspect for irregularities in the shaft seal or an uneven alignment where the shaft seal contacts the motor.

Verify that the outer and inner circumference of the shaft seal is fully seated into position.

6. Verify that the shaft seal is installed to the correct installation clearance.
 - If the shaft seal is installed too deep, it can become subject to excessive wear and require frequent replacement.
 - If the shaft seal is installed too shallow, it can reduce the effectiveness of the protective seal.
7. Replace the shaft key.

Applies to motors that include a keyed shaft.

Shaft Seal Installation Clearances

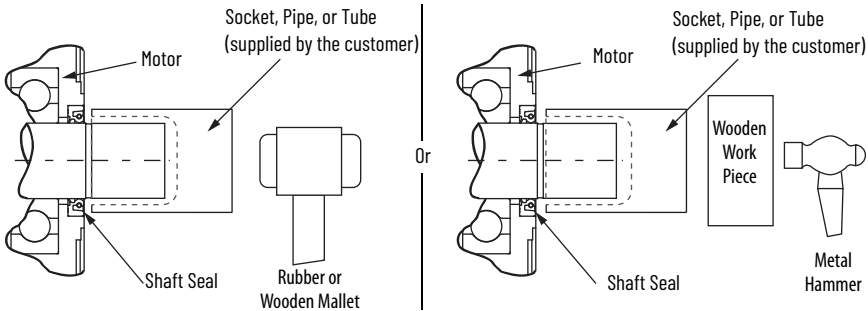


Motor Cat. No.	Shaft Seal Installation Clearance		
	Min, mm (in.)	Nom, mm (in.)	Max, mm (in.)
TLP-A/B0xx	Press the shaft seal so that the seal is flush with the front surface of the motor.		
TLP-A/B1xx and TLP-A/B2xx	0.00 (0.00)	0.10 (0.004)	0.20 (0.008)

Shaft Seal Installation Methods



ATTENTION: Do not hammer directly on the shaft seal. Gently tap the socket, pipe, or tube evenly around the outer edge of the shaft seal until the shaft seal is pressed into place. Make sure the socket, pipe, or tube you use does not contact the shaft seal lip. Permanent damage to the shaft seal can occur.



Shaft Seal Kit Catalog Numbers

IMPORTANT Third-party shaft seals are not approved for use with these motors. The use of third-party shaft seals voids any implied or expressed warranties.

Kinetix TLP Low Inertia Motors

Motor Cat. No.	Shaft Seal Kit Cat. No.
TLP-A046-005, TLP-A046-010	TLP-SSN-F046
TLP-A070-020, TLP-A/B070-040	TLP-SSN-F070
TLP-A/B090-075	TLP-SSN-F090
TLP-A100-100,	TLP-SSN-F100
TLP-A/B115-100, TLP-A/B115-200	TLP-SSN-F115
TLP-A/B145-050, TLP-A145-090, TLP-A/B145-100, TLP-A/B145-150, TLP-B145-200, TLP-A/B145-250	TLP-SSN-F145
TLP-A200-200, TLP-A/B200-300, TLP-A200-350, TLP-A/B200-450, TLP-A/B200-550, TLP-A/B200-750	TLP-SSN-F200
TLP-A/B235-11K, TLP-A235-15K, TLP-B235-14K	TLP-SSN-F235

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Kinetix Rotary Motion Specifications Technical Data, publication KNX-TD001	Product specifications for Kinetix VPL, VPC, VPF, VPH, and VPS motors, Kinetix MPL, MPM, MPF, and MPS motors, Kinetix TL and TLY motors, and Kinetix TLP rotary motors.
Kinetix Motion Accessories Specifications Technical Data, publication KNX-TD004	Product specifications for 2090-Series motor and interface cables, low-profile connector kits, drive power components, and other servo drive accessory items.
Kinetix Motion Control Selection Guide, publication KNX-SG001	Overview of Kinetix servo drives, motors, actuators, and motion accessories that are designed to help make initial decisions for the motion control products best suited for your system requirements.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications a [rok.auto/literature](#).

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Waste Electrical and Electronic Equipment (WEEE)







At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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