

TORP motor

Cover Replacement

Step-by-step guide to removing and refitting the pulley-side and encoder-side covers on TORP motors, including surface preparation, sealing, threadlocker and torque specifications.

BEFORE YOU START

Opening and replacing the motor cover is done at your own responsibility.

We will do our best to guide you through the process and help you make sure everything is done correctly.

Tools and materials

Item	Used for
Metal rod and hammer	Gently tapping the cover loose from underneath the motor mount
Flat bar or similar lever	Applying gentle leverage around the cover once it starts to separate
M5 hex key and torque wrench	Removing and refitting the M5 bolts at 2.5 Nm
Flat screwdriver	Lifting the encoder cover if it is sealed
Angle grinder or file	Slightly grinding down the cable lugs (pulley side only)
DOWSIL™ 7091 Adhesive Sealant	Sealing the cover to the heatsink
Blue Loctite, medium strength	Securing all M5 bolts
Cleaning supplies	Removing old silicone from the heatsink surface

MOTOR COVER REPLACEMENT

Pulley side

Removing the pulley-side cover

Step 1 · Unscrew the cable glands

Unscrew all three cable glands.

Step 2 · Grind down the cable lugs

Grind down the cable lug on each side slightly so the glands can be removed. Be careful not to grind too much.

Step 3 · Remove the M5 bolts

Unscrew all the M5 bolts.

Step 4 · Tap the cover loose

Take a metal rod (or something similar) and a hammer. Rest one end of the rod on the surfaces underneath the motor mount and tap the other end of the rod with the hammer, alternating sides gradually. The cover should slowly start to separate.

Step 5 · Lever the cover off

Once the cover begins to separate, the bearing may still be holding it in place, keeping the cover and the rotor together. Insert a lever, such as a flat bar, between the heatsink and the separated cover, then carefully work your way around, applying gentle leverage from all sides, until the motor comes apart.

Make sure the bearing stays on the rotor, not on the cover.

If the bearing stays stuck on the cover, it is very difficult to remove, because the magnetic forces make extraction hard.

With the cover off, continue with "Refitting the cover" on page 4. The cleaning, sealing and torque procedure is the same for both sides.

MOTOR COVER REPLACEMENT

Encoder side

Removing the encoder-side cover

Step 1 · Remove the encoder cover

Remove the encoder cover first. If the cover is sealed, use a screwdriver to lift it off after removing the bolts.

Do not lose the bolts or the 4 black O-rings under the cover (1 large and 3 small). If you do, let us know so we can send replacements. These O-rings are important to prevent water ingress.

Step 2 · Disconnect the temperature sensors

Above the encoder PCB, unplug the smaller connector. This is the temperature sensor. Next to it there is also a small spare temperature sensor glued in place. Unglue this spare sensor and pull both sensors out through the cable gland area.

Step 3 · Remove the M5 bolts

Unscrew all the M5 bolts.

Step 4 · Tap the cover loose

Take a metal rod (or something similar) and a hammer. Rest one end of the rod on the surfaces underneath the motor mount and tap the other end of the rod with the hammer, alternating sides gradually. The cover should slowly start to separate.

Step 5 · Lever the cover off

Once the cover begins to separate, the bearing may still be holding it in place, keeping the cover and the rotor together. Insert a lever, such as a flat bar, between the heatsink and the separated cover, then carefully work your way around, applying gentle leverage from all sides, until the motor comes apart.

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MOTOR COVER REPLACEMENT

Refitting the cover

Applies to both the pulley side and the encoder side

Preparing the surface

Clean off any remaining old silicone from the heatsink to prepare the surface for applying new sealant. Apply the new sealant to the cleaned sealing surface before fitting the cover.

Recommended sealant: DOWSIL™ 7091 Adhesive Sealant. This product has been tested and proven to work well.

A similar product may be used, but we cannot guarantee it will perform as well. Check the specifications on the DOWSIL website and compare them if you need an alternative due to availability.

Fastening the cover

Before tightening the M5 bolts to fasten the cover, apply blue Loctite (medium strength) to all of them and tighten them to 2.5 Nm.

Setting	Value
Bolt torque	2.5 Nm on all M5 bolts
Threadlocker	Blue Loctite, medium strength, on all M5 bolts
Sealant	DOWSIL™ 7091 Adhesive Sealant, on a cleaned heatsink surface

Resealing the encoder cover

Encoder side replacement only. Refit the encoder cover with all of its bolts and all 4 black O-rings in place, then reseal it as shown in this short video:

[youtube.com/shorts/BdGOC81DGok](https://www.youtube.com/shorts/BdGOC81DGok)

Care Guide

Keeping your motor reliable and performing at its best

The motor and controller are the core of your bike. Here is how to take care of your motor so it stays reliable and performs at its best.

Always remove the battery from the bike before inspecting the motor.

✗ DO NOT USE A PRESSURE WASHER OR RIDE IN WATER

Never use high-pressure water on your motor. High-pressure water can pass through the seals and internally damage the motor.

Do not wash the motor or ride in water when the motor is hot.

Do not ride through streams, rivers, flooded trails or any water that submerges the motor. Clean gently with a damp cloth.

Check the bolts and wiring

Keep connectors and wiring clean and dry, especially after wet, sandy or muddy rides. If the connectors are disconnected, they should be checked and cleaned of dirt or debris before reconnecting. Make sure the rubber seals are still inside and properly positioned.

High vibrations can make bolts loosen over time. Every few rides, check that all bolts are tight: motor bearings, motor case, encoder cover, pulley nut and so on. Use a threadlocker such as blue Loctite if needed. In case of removing the encoder cover, make sure all seals remain in place: 1 large O-ring and 3 small ones.

Use a strong belt drive

We recommend switching to an aftermarket belt, such as GATES, for durability. These belts are made for high torque and require less maintenance than chains.

Ensure the belt is properly adjusted and tightened to prevent premature belt wear. Before each ride, check the belt condition and tension to ensure proper operation.

Chain drive = high maintenance

A chain needs to be checked and tightened before every ride. It wears out faster than a belt and must be lubricated regularly, otherwise it gets noisy and can snap.

If too tight, it can damage motor parts; if too loose, it can skip or fall off, damaging the motor. Chains create more noise and vibration, and require careful manual cleaning.

TORP motors are designed for belt drive. Using a chain voids the warranty on the motor. Chains add stress to the motor shaft and bearings, causing faster wear, extra heat and internal noise.

Chains also have a connection point that must be properly installed to avoid failure. Overall, chains require more maintenance and pose a higher risk if not regularly checked.