ROADLOK

Mounting Bolts: Thread Pitch, Thread Depth and Torque

Which bolt thread fits which bike, the bolt checks at installation, and moving a lock to a different bike.

ROADLOK mounting bolts come in thread pitches that look almost the same. Thread pitch is the distance from one thread to the next. A bolt with the wrong pitch strips the threads in the fork leg. The complete installation is in the **XRA Installation Manual**.

THREAD PITCH

Make	Lock	Bolt thread
BMW	XRA-100, BMW and Harley-Davidson version	M10 x 1.5 (coarse)
Harley-Davidson	XRA-100, BMW and Harley-Davidson version	M10 x 1.5 (coarse)
All other makes	XRA-100, XRA-108 and XRA-C100R	M10 x 1.25 (fine)
BMW	XRA-80	M8 x 1.25 (coarse)
All other makes	XRA-80	M8 x 1.0 (fine)

ROADLOK M10 mounting bolts are grade 12.9 high-tensile steel. Do not replace them with other bolts.

IDENTIFYING THREAD PITCH

WARNING

Do not screw a bolt into the fork leg to find out its pitch. One turn of the wrong pitch can strip the threads. Identify the bolts off the bike.

Any of these checks identifies the pitch.

- The order confirmation. An XRA-100 BMW and Harley-Davidson kit has M10 x 1.5 bolts. Standard XRA-100, XRA-108 and XRA-C100R kits have M10 x 1.25 bolts. XRA-80 kits have M8 x 1.0 bolts, or M8 x 1.25 bolts for BMW.
- Lay one of the supplied mounting bolts beside an original caliper bolt from the bike the lock is going on, parallel, with the threads touching, in good light. When the thread pitch matches, the ridges of the two threads line up along the whole length of the shorter thread.
- A thread pitch gauge. M10 bolts read 1.5 mm or 1.25 mm. M8 bolts read 1.25 mm or 1.0 mm.

If none of these settles it, email support@roadlok.com with your order details and your bike, or have a workshop check the bolts.

THREAD DEPTH

The mounting bolt must reach at least as far into the fork leg as the original caliper bolt did. Fitting Step 1 of the **XRA Installation Manual** measures the original caliper bolt (measurement 1) and Fitting Step 5 measures each mounting bolt (measurement 2, Figure 1). Measurement 2 must be equal to or greater than measurement 1 on both bolts. If it is less, fit the longest bolts in the kit and measure again. If measurement 2 is still less with the longest bolts, do not torque the bolts. Email support@roadlok.com with both measurements and your bike's make, model and year, and continue only if support approves the setup for your bike.

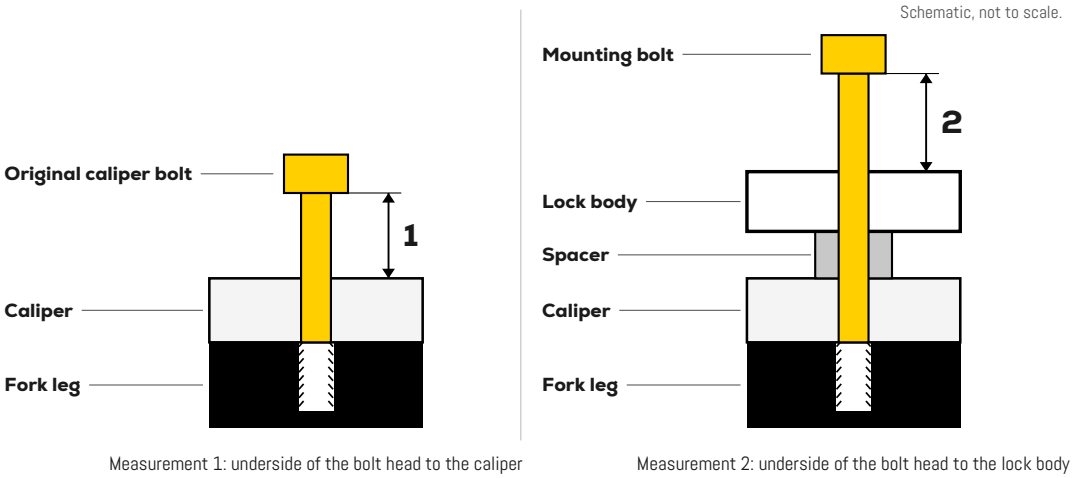


Figure 1. Thread depth. Rest each bolt tip in the mouth of the threaded hole without screwing it in.

5 mm shims go under the head of a mounting bolt, never between the lock body and the caliper. They shorten how far the bolt reaches into the fork leg. A 5 mm shim under a 90 mm bolt gives an effective bolt length of 85 mm. Use them only when a bolt reaches the bottom of its threaded hole before its head is tight, as found in the thread depth check. Use only the mounting bolts and shims supplied by ROADLOK.

WARNING

A bolt that reaches the bottom of its threaded hole can reach full torque while the lock body and caliper are still loose. A loose front caliper can cause total loss of front braking, serious injury or death. Do not torque the bolts until the thread depth check passes on both bolts or ROADLOK support has approved the setup for your bike.

THREADLOCKER AND TORQUE

Fitting Step 6 of the **XRA Installation Manual** applies threadlocker and torques the bolts. Do the same whenever a mounting bolt has been removed and refitted.

Remove the upper mounting bolt, keeping its spacer, and its 1 mm shim if one is fitted, in place between the lock body and the caliper. Apply a medium-strength threadlocker such as Loctite 243 to the bolt threads and refit the bolt through the lock body, spacer and caliper, with its 5 mm shim if one is fitted. Repeat with the lower bolt.

Torque both mounting bolts to the motorcycle manufacturer's figure for the front caliper mounting bolts. As a guide, most figures fall between 25 and 40 N·m (about 18 to 30 ft-lb), and most BMW models specify 38 N·m (about 28 ft-lb). Always confirm the figure for your bike in its owner's manual or workshop manual.

WARNING

Do not use torque figures from forums, other owners or similar models. Over-tightening can break the bolt or strip the fork leg threads. Under-tightening leaves the caliper loose. Either can cause loss of front braking, serious injury or death. Use a calibrated torque wrench.

After torquing, confirm by hand that the lock body does not move.

BOLTS AND SPACERS SUPPLIED WITH EACH LOCK

Lock	Mounting bolts	Spacers (one pair of each)
XRA-100 and XRA-108, standard	2 x M10 x 1.25 x 80 mm 2 x M10 x 1.25 x 90 mm 2 x 5 mm shims	A, B, C, D, E, G, J
XRA-100, BMW and Harley-Davidson	2 x M10 x 1.5 x 90 mm 2 x 5 mm shims	B, C, E, K
XRA-C100R (Honda)	2 x M10 x 1.25 x 80 mm 2 x M10 x 1.25 x 90 mm 2 x 5 mm shims	H, J, K
XRA-80	2 x M8 x 1.0 x 80 mm (M8 x 1.25 x 80 mm for BMW) 2 x 5 mm shims	15.0, 16.5 and 18.0 mm (not lettered)

Every new lock comes with the mounting bolts, spacers and shims for the bike it was ordered for. A separate mounting kit is needed only when the lock moves to a bike that takes a different bolt thread. Every kit also contains one pair of 1 mm stainless steel shims. M10 x 1.25 x 80 mm means a bolt 10 mm in diameter, with a thread pitch of 1.25 mm, 80 mm long. All ROADLOK documents are at roadlok.com/documentation.

MOVING A LOCK TO A DIFFERENT BIKE

1. Check that the new bike takes the same lock model: the same caliper type, bolt spacing and side. The document **Is My Caliper Radial or Axial?** covers these checks.
2. Find the thread pitch of the bike the lock is coming off, from the table at the top of this document.
3. Find the thread pitch of the bike the lock is going on, from the same table.
4. If the two pitches differ, order the mounting kit for the new bike before fitting.
5. If the two pitches match, the bolt thread is correct for the new bike. Fit the lock to the new bike as described in the **XRA Installation Manual**, including the spacer test and the thread depth check.

WARNING

Screwing a bolt of the wrong pitch into a fork leg strips the threads and destroys the caliper mounting. A caliper that works loose while riding causes loss of front braking, serious injury or death. Do not screw a bolt into a fork leg until its thread pitch is confirmed.

If you bought the lock secondhand, order the mounting kit for your bike from the ROADLOK store, choosing the BMW and Harley-Davidson version of the XRA-100 kit where it applies.

REPLACEMENT MOUNTING KITS

A replacement mounting kit contains the bolts and the full spacer set for the lock model. Replacement mounting kits are sold in the ROADLOK store.

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