

XD-27527



TORQ-MASTERS
INDUSTRIES

Aussie Locker XD-27527 Installation Supplement

Toyota IFS Differentials

Thank you for your purchase of the XD-27527 Aussie Locker for Toyota IFS 7.5"

Toyota IFS assemblies vary in the details of their design and complexity. Some have axle tubes, some have open axles, some have vacuum actuators and wires, etc. It is important for the installer to be familiar with his particular design and modify this procedure accordingly. The instruction manual that is supplied with the locker applies to its installation once the differential case is accessible, but it does not cover all of the de-tailed shop manual procedures for getting there.

This addendum supplements the specific steps outlined in the appropriate shop manual. Read and understand them carefully and fully before proceeding. If they are not clear, check with the factory or enlist the assistance of a differential specialist. Also refer to the shop manual for detailed information on the particular front end assembly in which the locker is being installed. Note that the steps in this guide may vary from those for your exact configuration.

Differential Housing Assembly Removal

1. Remove the splash pans from the underside.
2. Drain the gear oil.
3. Disconnect the front drive shaft from the drive flange.
4. Disconnect any control wires and/or hoses from the axle housing (applies to front disconnect axle assemblies only). Be sure that they are marked for correct replacement.
5. Disconnect the left and right axle shafts (with brackets).
6. Remove the axle drive flange studs if needed for additional clearance for the removal of the differential assembly. They can be tapped out with a brass mallet, as they are only a snug fit.
7. Remove the differential housing assembly by removing the chassis mounting bolts and lowering it down and out of the vehicle.

Note: For vehicles fitted with a front disconnecting axle—it must be detached from the housing. Some vehicles with a fixed axle tube will need to have it unbolted to remove the axle shaft. This particular operation requires a "Torx" bit.

8. Place the assembly on a suitable workbench. Remove the cover plate, being careful about the remaining oil.
9. Remove the stub axles. If they are fitted with removable retaining clips -- remove the clips and pull them out. If they are fitted with snap rings -- remove the shafts using a sharp blow with a brass mallet on the inside edge of the flanges.

Aussie Locker Installation

Most of the following instructions are covered in the main installation manual but are repeated here for your use and along with the addition of some shortcut information for this type of differential design (threaded bearing adjusters with caps and lock).

1. If the gear ratio is high such that the ring gear is thin, check to see if the pinion shaft can be pulled out past the teeth. If so, do not remove the differential case from the carrier but simply remove the lock pin or bolt and pull out the shaft. Refer to the installation manual and install the locker components.
2. If the gear ratio is low such that the ring gear is too thick to enable the removal of the pinion shaft, the differential case must be removed from the carrier and the ring gear removed from the case to allow the installation of the locker components. As a precaution, be sure to measure the ring gear backlash before doing so. These steps are:
 - a) Hold the pinion flange steady and rock the ring gear in both directions. Measure the amount of rotation with a dial indicator. Typical numbers would be in the range of from .006 - .008; see the shop manual for the exact measurement.
 - b) Repeat this operation 4 times at 90° apart.
 - c) The amount of backlash should be about the same in all 4 positions.
3. Mark the rotational position and left or right side of the bearing adjusters for removal and replacement on the same side and in the same rotational position.
4. At this point, do not remove the caps or locks. The entire assembly (differential case, bearings, cones, adjusters, caps and locks) can be pulled out as a single assembly—simply remove the cap bolts and jerk it out. There may be a slight “pop” as the pre-load is released.
5. Remove the ring gear from the differential case. Install the locker according to the instructions in the manual included with the kit and replace the ring gear.
6. If the differential case has been removed from the carrier, it can be re-installed leaving one differential bearing, retainer, cap and lock as is (same side and marked rotational position). The other adjuster will need to be in position under the cap with the bolts snug but not tight and turned back in to its original (marked) rotational position to set the original bearing pre-load and ring gear backlash. Check the backlash; it should be the same as in the beginning. If so, the bearing pre-load will automatically be correct as well. Remember to re-install the second lock and re-torque the cap bolts.
7. Reassemble the remainder of the unit in reverse order.

Notes:

1. Be careful with seals and bearings. Avoid tearing the seal lip, and keep dirt away from the bearings. If cleaning the bearings, do not spin them up with an air stream.
2. If leakage is a concern, have RTV silicone and/or a seal kit available.
3. Replace the oil with that which is recommended by the manufacturer.
4. Torque values and other general information may be obtained from the shop manual.

If your measurements fall outside of these ranges, contact us at CustomerService@AussieLocker.com and send pictures or call us anytime at 585-723-1489. Calls after normal business hours calls will be directed to our answering service and then emailed to our technical support team.

Aussie lockers are 100% made in the USA.

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