

Lokka Installation – Toyota 'C' Clip

Read the instructions completely before starting this part of the procedure.

Remove the cover plate from the rear of the rear differential.

Remove the cross shaft bolt by rotating the carrier so the head of the cross shaft bolt is next to the carrier bearing retainer bolt head. There is just enough clearance to remove this long thin bolt. Undo and remove the bolt.

Remove the cross shaft and thrust block. Examine the shaft. If there is any sign of wear, particularly where the pinion gears spin then replace the shaft. It is essential for the correct operation of the locker that this shaft is in perfect condition. Wear of only 0.002" is unacceptable. Sub standard replacement cross shafts are characterised by soft case hardening and are therefore not suitable for this application.

Spin the side gears so that the pinion gears and cup washers can be removed. Remove both gears and washers.

Push the axles inward and remove the C clips. Remove the side gears. Remove the thrust washers from the base of the side gears. Examine condition.

Grease the base of the axle gear and fit thrust washers.

Fit the axle gears into the carrier, spin to make sure they have settled. Fit the spacers onto the axle gears, with the flat surface against the cross shaft. Temporarily push the cross shaft in. With a feeler gauge measure the gap between the cross shaft and the spacers on both sides. This gap should be between 0.006 and 0.020".

Note: SHORT CUT

Remove the cross shaft and spacers. Fit the cam gears in place temporarily and measure the gap between the cam gears. This gap should be between 0.145 to 0.165".

If the gaps are not within tolerance, then replace or machine the thrust washers equally to satisfy the above clearances. The inter-cam gear clearance has the priority. The cam gears must sit symmetrically about the cross shaft for optimum vehicle performance.

If the clearances are within tolerance, then simply proceed with the fitment.

Grease the cam gear teeth and small holes.

Fit a small pin into each of the slotted holes in each cam gear, (2 per gear) with the stepped end of the pin toward the base of the slot. Use a little grease to hold the pin in place.

Push the axle in from the ring gear side (LHS) and fit the C clip. Pull the axle out to seat the C clip against the axle gear. Seat the cam gear on this axle gear. The grease will hold the teeth meshed. Fit the spacer over the end of the axle.

Now position the other slotted cam gear onto the axle gear with the slot orientated so the C clip can be slid onto the end of the axle. Have the spacer sitting inside the cam gear as it is offered into place, but slightly withdrawn (to the cross-shaft side). Push the axle in and C clip on through the slot in the cam gear, then pull the axle out to seat the C clip. Slide the spacer over the end of the axle – access through the cam groove.

Align the 2 cam gears and with a small scribe or screw driver to push the pins into the opposite cam.

Feed a spring into each slot in turn, ascertaining the end of the spring seats over the stepped end or nipple of the pin. Each spring will keep a small amount of pressure on each pin.

When the 4 spring sets are fitted, rotate the locker assembly so that the distance between the 2 cam gears can be measured. Use a feeler gauge. The measurement should be from 0.145 to 0.165 inches. If not, then both thrust washers will need to be equally changed or machined to compensate.

Rotate the locker assembly so the cross shaft can be slid into position and fit shaft. Do not fit the thrust block

Fit the cross-shaft locating bolt.