



thompson
COUPLINGS Limited

TCAE-L



Product Installation Guide

General Information

Thompson Couplings Limited is proud of its products and employs the latest manufacturing techniques to ensure that a premium product is delivered to its customers. Thompson Couplings Limited believes in a high level of quality control to provide only the best products, advice and service.

The fundamental function of a coupling is to transmit power from drive to driven device in a regular action. The TCAE product range is designed to operate at angles, sending torque through the shaft inside the coupling whilst ensuring operation is smooth and efficient.

Owner Responsibility

It is the responsibility of the purchaser to ensure that the product is kept clean, inspected regularly and maintenance is performed as advised

Customer Relations

For any enquiries or assistance please contact:

Thompson Couplings Limited

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Safety Precautions

To prevent injury to yourself and /or damage to the equipment:

- *Read carefully all owners' manuals, service manuals, and/or other instructions.*
- *Always follow proper procedures and use proper tools and safety equipment.*
- *Be sure to receive proper training, installation and maintenance work should be performed by qualified personnel.*
- *Never work alone while under a vehicle or while repairing or maintaining equipment.*
- *Always use proper components in applications for which they are approved.*
- *Be sure to assemble components properly.*
- *Never use worn-out or damaged components.*
- *Always store and handle coupling safely*
- *Use blocks or adequate racking to prevent coupling moving or rolling away and ensure points are not adversely loaded during storage*



- *Rotating auxiliary coupling is dangerous. You can snag clothes, skin, hair, hands, etc. This can cause serious injury or death.*
- *Do not work on or around the coupling when the engine/motor is running.*
- *Keep hands away from the joint as danger of crushing may occur.*
- *Do not work on or near an exposed coupling when engine/motor is running.*
- *Exposed rotating coupling must be guarded.*



WARNING: THIS SYMBOL WARNS OF POSSIBLE PERSONAL INJURY



WARNING: ROTATING DEVICE

Installation of TCAE coupling

1. Unpacking & inspection, Lifting & Installation

- Minimum **2 persons** lift for TCAE-3 to TCAE-8 products (product weight will vary according to the length of the coupling).



- Ensure no visual external damage has occurred to the shipping box. If it has, please contact the shipper and Thompson Couplings Limited for details.
- Ensure all components have been supplied in the packaging:
 - (x1)TCAE Coupling
 - (x2)TCAE Quick Release flange (if supplied by TCL)
 - (x2)TCAE Taper lock bush (if supplied by TCL)
 - (x12)TCAE Coupling to flange fasteners (if supplied by TCL)
- Models (may be supplied with or without centre driveshaft)
TCAE-L-1, TCAE-L-2, TCAE-L-3, TCAE-L-4, TCAE-L-5, TCAE-L-6, TCAE-L-7, TCAE-L-8



2. Start-up inspection (for coupling with centre driveshaft)

- If necessary, move the drive / driven device to the correct “end-to-end” shaft distance, in order to fit the TCAE coupling in between.
- Attach the 2 adaptor plates to the existing shaft flanges using socket head cap screws. Ensure the mating surfaces are clean and free of dirt and debris .
- Tighten the screws to a torque of 50-70Nm
- Before sliding the TCAE coupling between the shafts, make sure that all flanges are clean, dry and free of grease or debris.
- Locate the driveshaft assembly and attach the end flanges to the adaptor flanges using bolts.
- Tighten the bolts to the recommended torque.

3. Assembly Instructions (if no driveshaft supplied)

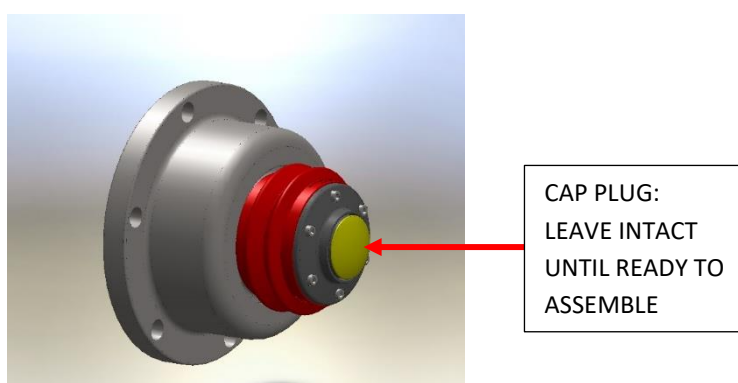
The L-Series products are supplied with a weld stub shaft for subsequent welding to a connecting driveshaft tube by the user.

Procedure:

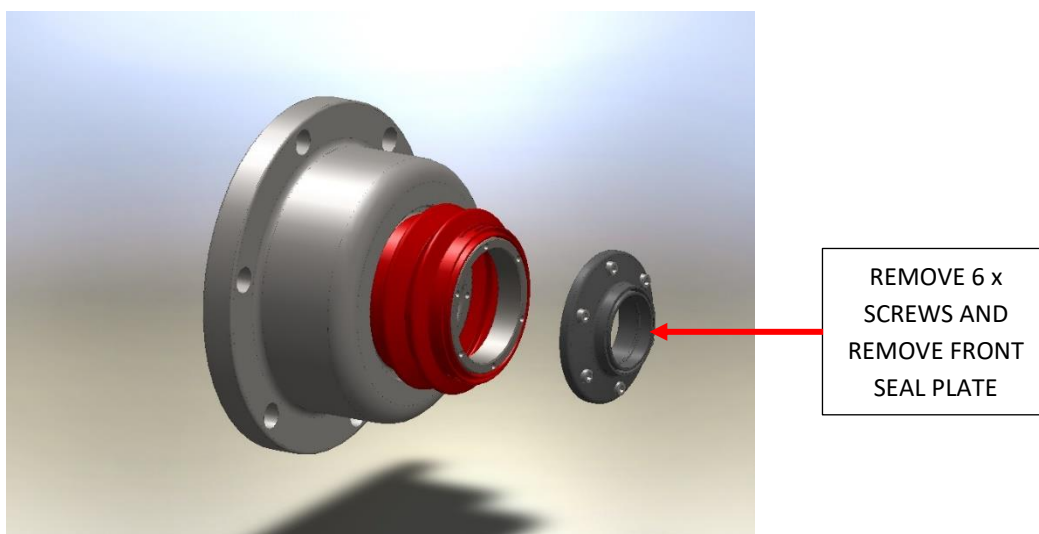
1. Prepare the mating drive tube and weld using standard practices the weld stub to each end of the tubing. Ensure the weld penetration is adequate and the size of weld also suitable.
2. At completion clean the weld and inspect for any defects.
3. Assemble the completed drive tube to the couplings as follows:

CAUTION: Ensure the work environment is clean and free of dust and contaminants.

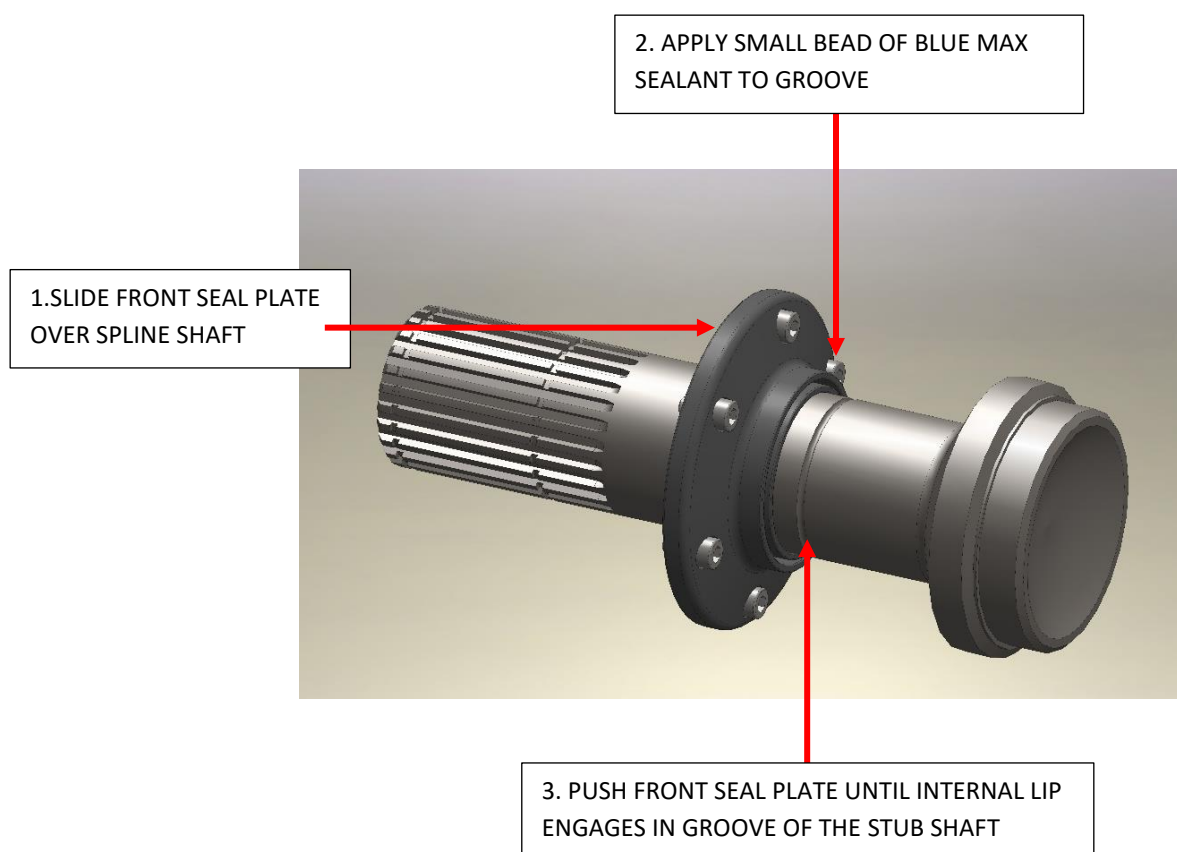
The coupling is pre-shipped greased and sealed with a cap plug at the front of the coupling. The spline stub shafts and circlips are packaged separately in the container.



1. Remove cap plug and remove the front seal plate with 6 x screws.

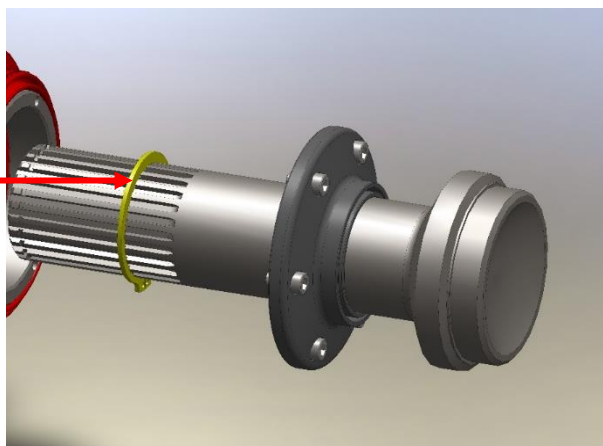


2. Slide the splined stub shaft end through the front seal plate. You may use a warm air gun to soften the plastic plate slightly to ease it over the spline shaft. Using the tube of Loctite BLUE MAX sealant supplied, apply a thin bead around the groove of the stub shaft. Continue sliding until the internal lipped edge of the seal plate contacts with the groove in the stub shaft.



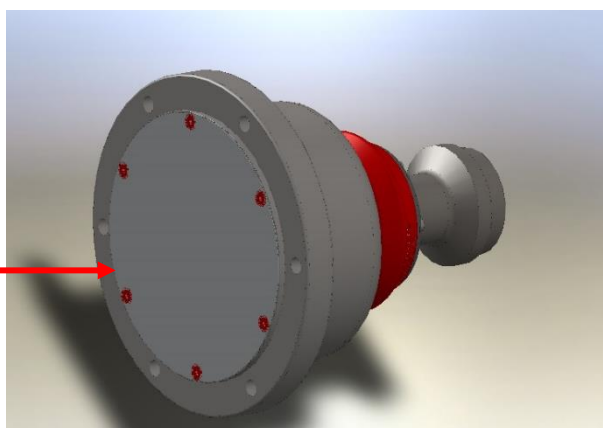
3. Fit one of the circlips supplied to the first groove in the spline shaft as shown:

FIT CIRCLIP TO THE FIRST GROOVE IN THE SPLINE SHAFT



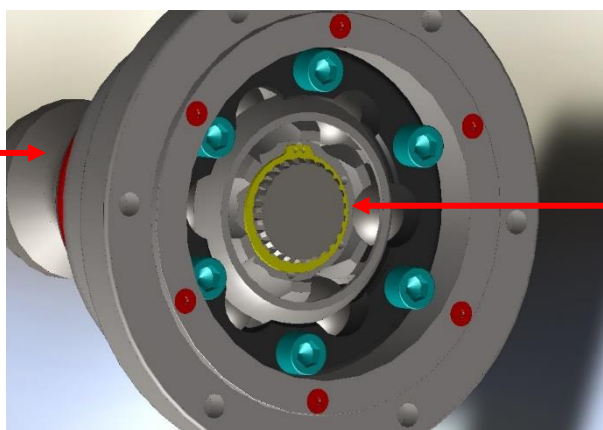
4. Next remove the back cover plate from the rear of the coupling using the 6 screws.

REMOVE BACK COVER USING 6 X SCREWS



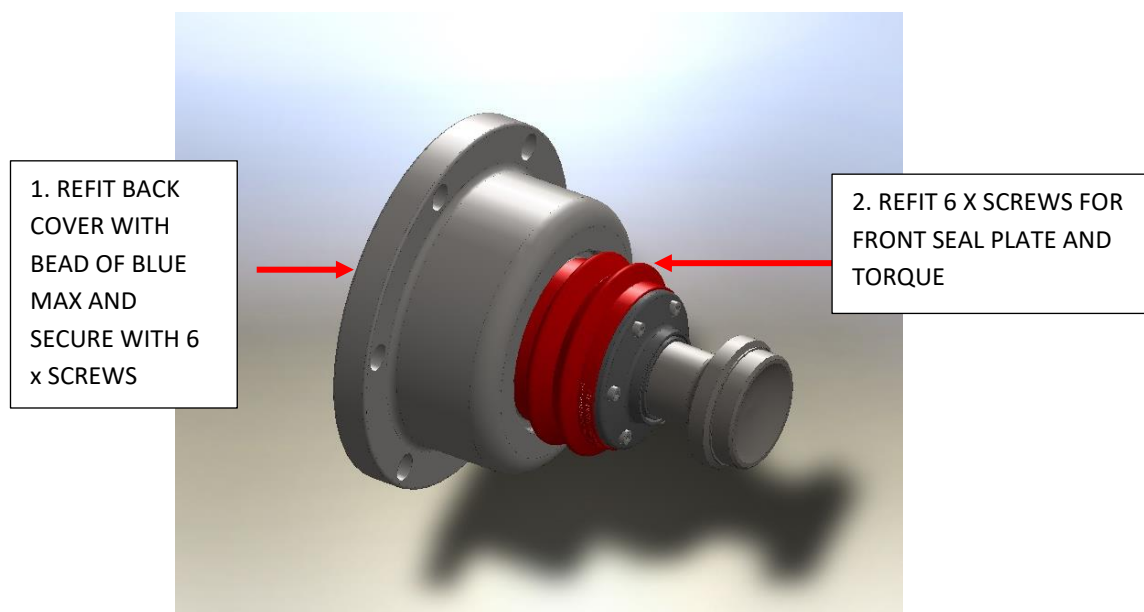
5. Carefully slide the stub shaft through the inner coupling until it protrudes as shown and fit the second circlip in place.

1. SLIDE SPLINE SHAFT THROUGH THE COUPLING INNER RACE



2. FIT SECOND CIRCLIP TO GROOVE IN SPLINE SHAFT

6. Apply a bead of Loctite BLUE MAX sealant around the outer edge of the back cover (approx. 6mm wide).
7. Reapply the back cover using the 6 x screws and torque gently.
8. On the front of the coupling insert the 6 x screws to resecure the front seal plate and torque gently



9. Wipe any residue of sealant and prepare to install the completed driveshaft assembly.
10. Recommended screw torques:

COMPONENT	SCREW SIZE	TORQUE
FRONT SEAL PLATE	SIZE M6: SOCKET CAP SCREWS	8-10 Nm
BACK COVER	SIZE M5: SOCKET CAP SCREWS	3-5 Nm (TCAE-L-3) (TCAE-L-4) (TCAE-L-5) 5-7 Nm (TCAE-L-6) (TCAE-L-7) (TCAE-L-8)

Start-up Inspection.

- Prior to powering up the new coupling ensure all safety precautions have been observed.
- Ensure all the flange mounting fasteners have been installed and are pre-tensioned to the value specified.
- Make sure the angular or parallel misalignment is not exceeded as per the TCAE product specification sheet. An internal stroke limiting device is incorporated into the coupling and noise (clicking sound) will be heard if misalignment is exceeded.
- Prior to motor start up, ensure the shaft rotates by hand without any jerky sound, noise or friction and all tools have been removed.
- Energise the motor drive (if possible, at jog or low speed) and observe the rotation of the coupling components to ensure all faces are running concentric and true.
- Increase the motor speed to observe any noticeable vibrations or alignment issues. Correct if needed.
- Refit safety cover guards and operate in production mode as required.