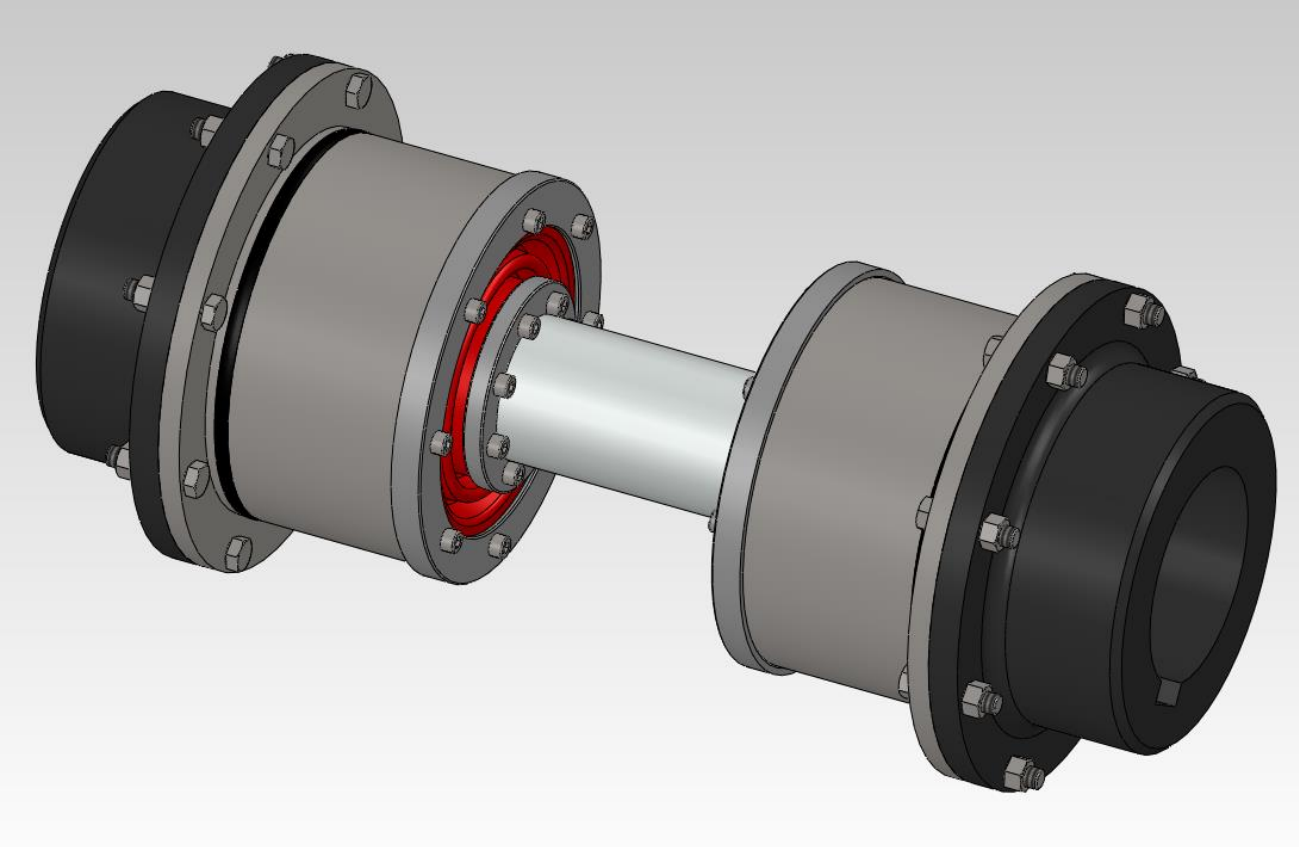
TCAE – ‘E’ SERIES (MODEL E-6 to E-14) RECOMMENDED INSTALLATION PROCEDURE



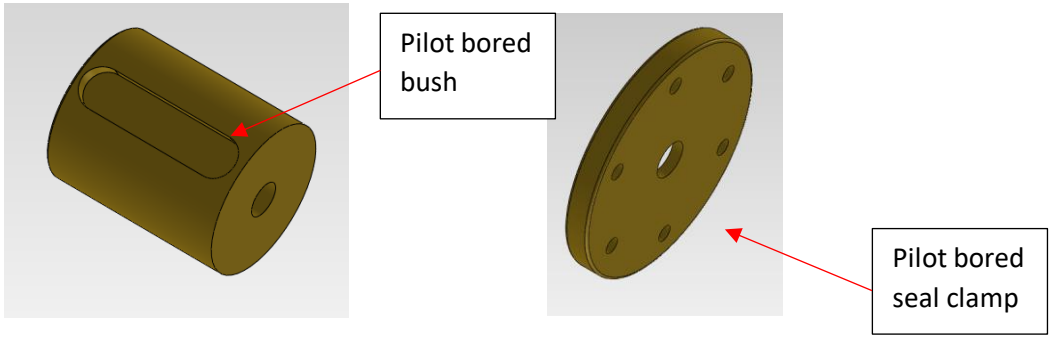
The TCAE-E series coupling is produced to allow fitment with a range of shaft sizes (for each series) with customer applicable length requirements

The following table details the appropriate shaft diameters for each coupling series::

TCAE-E Model	TABLE SHOWING STANDARD BORE SIZES FOR MATING SHAFT:
E-6	60 mm
E-7	65 mm
E-8	85 mm
E-9	100 mm
E-10	125 mm
E-11	130 mm
E-12	150 mm
E-13	170 mm
E-14	200 mm

FITMENT OF SHAFT PROCEDURE

1. The E series couplings are supplied packaged together as a pair of individual couplings – with or without flange hubs as required.
2. Check for any damage to the outer box. Report issues to Thompson Couplings Ltd accordingly.
3. Remove the Pilot Bored bushes and seal clamps from the packaging.
4. The pilot bored bush MAYBE used if needed for fitting a shaft of a smaller size then the standard bore of the coupling (refer table above for standard bores)

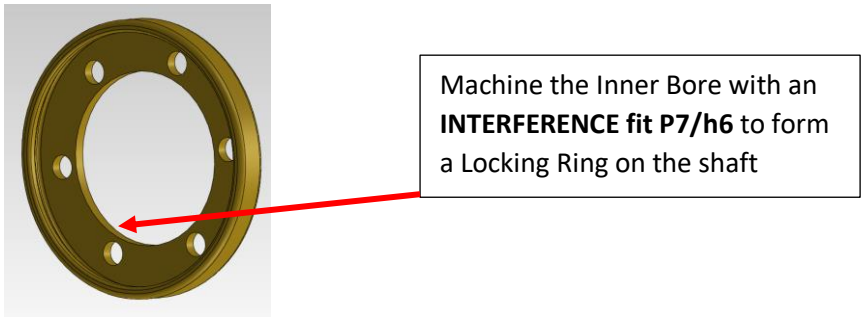


IF Using the Pilot Bored bush for fitting a smaller diameter shaft size then:

5. Measure the mating shaft diameter and machine the pilot bored bushes and the seal clamps with appropriate surface finish and tolerance. **The recommended tolerance of the pilot bored bush is an interference fit with the shaft such as P7/h6**
6. Broach internal keyway as required to fit key.

Pilot Bored Seal Clamp

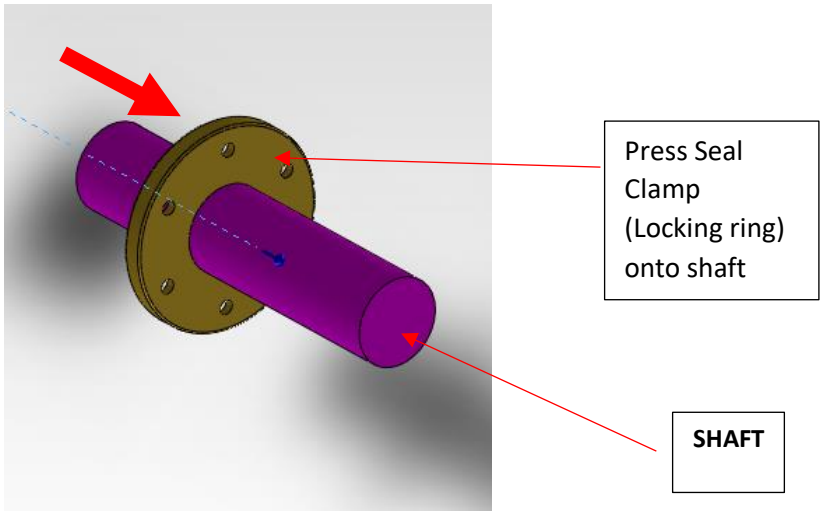
7. Machine the inner bore of the seal clamp to the required shaft diameter with an appropriate INTERFERENCE Fit such as P7/h6 as shown below:



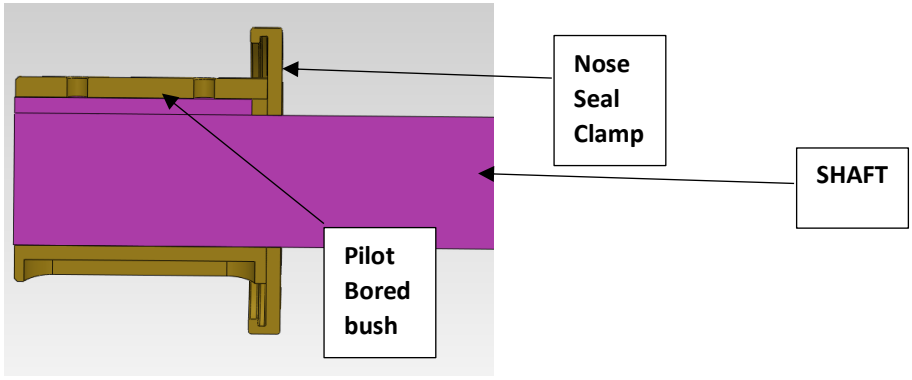
8. Determine the length of connecting shaft requried and cut to length.
9. When using shaft diameters **EQUAL** to the standard coupling bore sizes then machine appropriate keyslots in each end of the shaft with sizes according to the table below for Bristish Std metric rectangular keys BS4235 – 1972.

MODEL TCAE-E	SHAFT DIA.	Key size mm	Slot width (N9)	Slot depth +0.2/0	Length
E-6	65mm	18 x 11	18 +0/-0.043	7	80 mm
E-7	65 mm	18 x 11	18 +0/-0.043	7	100 mm
E-8	85 mm	22 x 14	22 +0/-0.052	9	140 mm
E-9	100 mm	28 x 16	28 +0/-0.052	10	160 mm
E-10	125 mm	32 x 18	32 +0/-0.062	11	180 mm
E-11	130 mm	32 x 18	32 +0/-0.062	11	190 mm
E-12	150 mm	36 x 20	36 +0/-0.062	12	220 mm
E-13	170 mm	40 x 22	40 +0/-0.062	13	230 mm
E-14	200 mm	45 x 25	45 +0/-0.062	15	240 mm

10. If using shaft diameters **SMALLER** than the standard coupling bore sizes in conjunction with the pilot bored bush as above then the size of the keyslot in the shaft needs to be determined from suitbale key size tables.
11. Press the machined Seal Clamp (Locking Ring) from section 7 above onto the shaft using an appropriate tool.

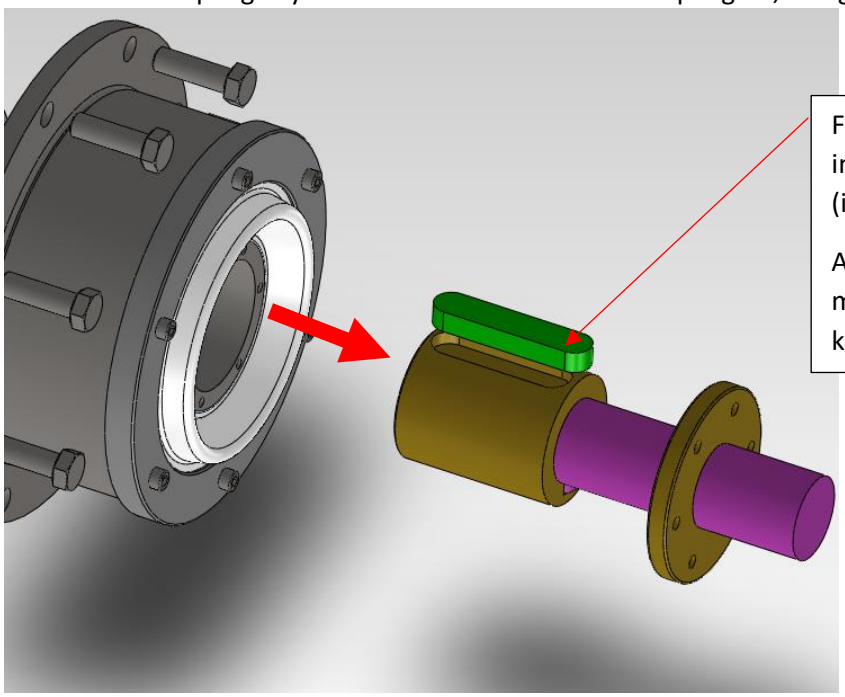


12. FIT the newly machined pilot bore bush (if required) onto the shaft with an appropriate key

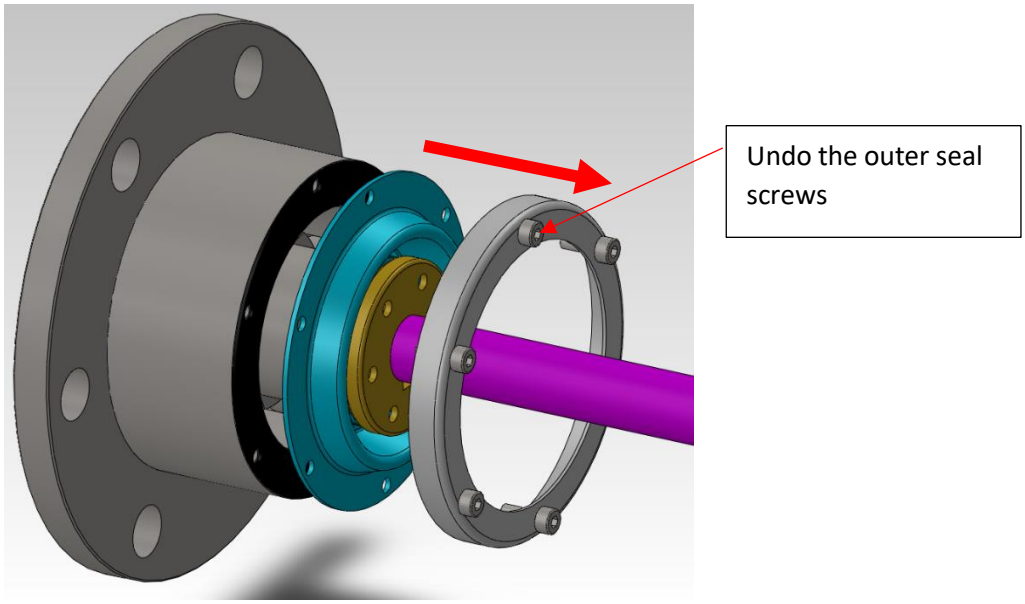


!!!KEEP IT CLEAN !!!

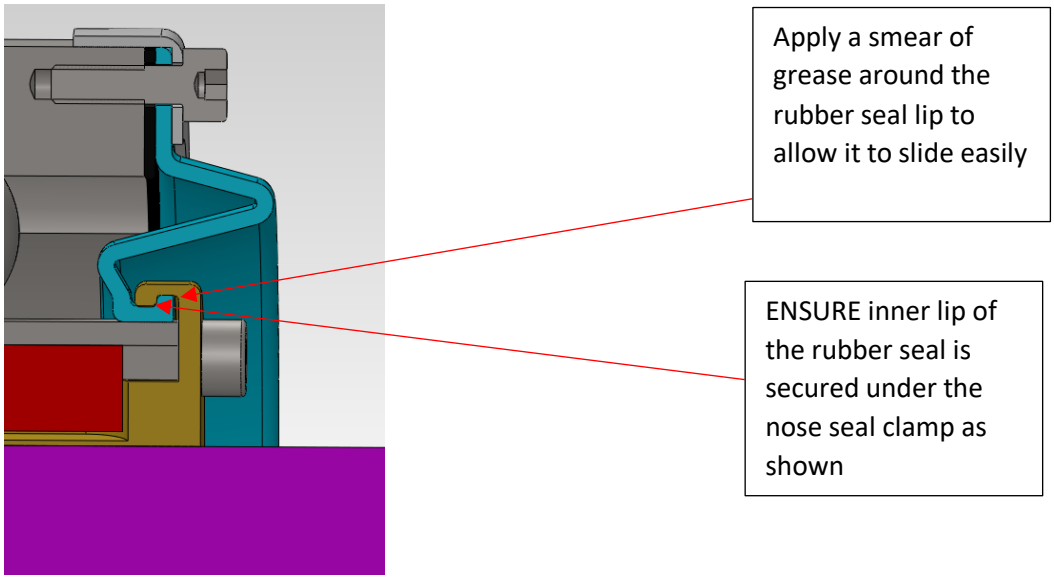
13. Fit the main coupling key into the bush and slide the coupling on, lining up the key with the keyway.



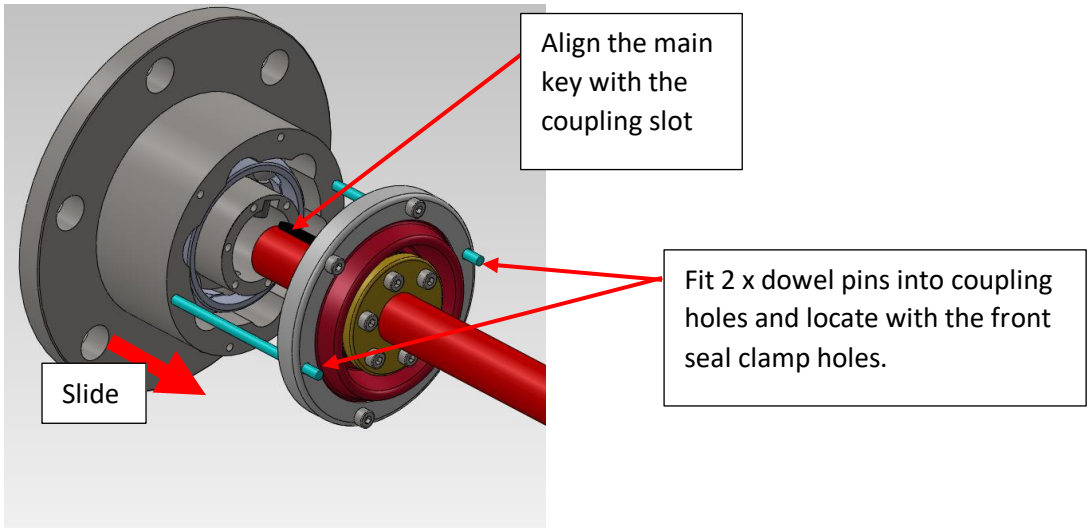
14. Undo the outer seal screws and slide the rubber seal forward to clip the seal inner lip under the nose seal clamp.



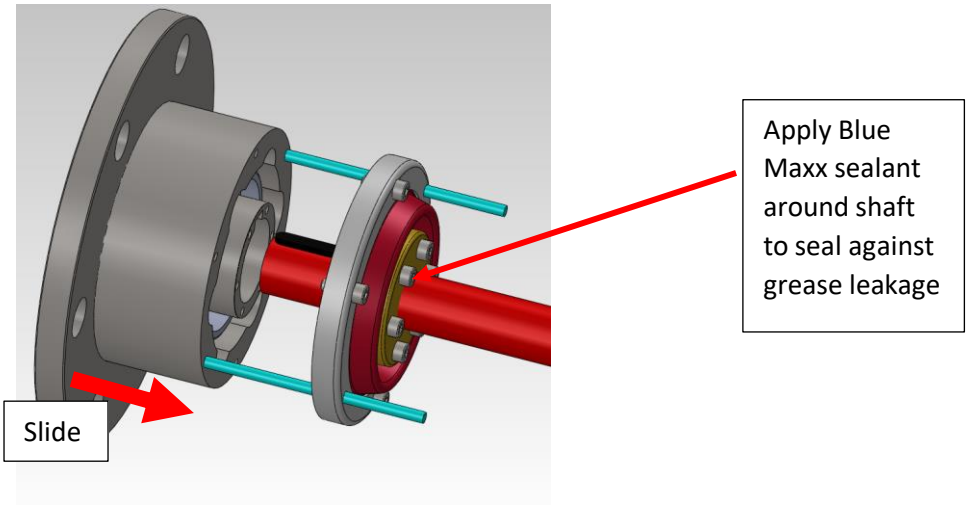
15. Apply a smear of grease around the rubber lip and then ensure to clip the inner lip under the seal boss (Locking Ring)



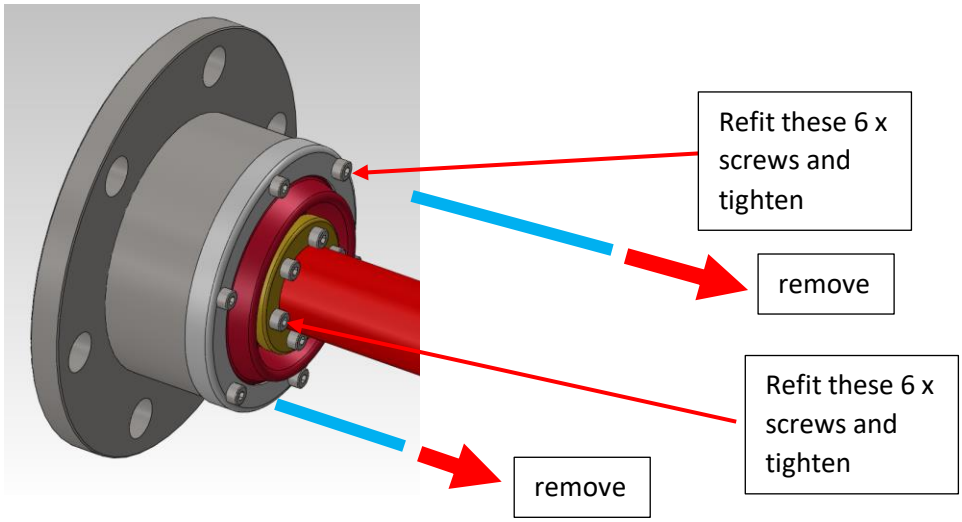
16. Next slide the coupling half on, lining up the key with the keyway. Also fit 2x dowel pins or similar into 2 of the holes in the coupling outer ring and line up with the holes in the front seal clamp assembly



17. Also apply a smear of BLUE MAXX sealant around the shaft here to seal against grease leakage



18. Finally remove the 2 x dowel pins and refit the outer seal screws to the coupling housing and inner screws to the nose seal clamp and tighten to the torques shown below



19. Fit the rear cover to the groove in the coupling half ensuring its fitting neatly and squarely.
20. Fit the required flange hub with appropriate hex bolts and nuts.
21. Torque all screws & bolts to the specified rating for the coupling as listed below:

MODEL TCAE-E	HEX BOLT SIZE	Torque Nm (lb.ft)	Inner and Outer Seal screws	Torque Nm (lb.ft)
E-6	8 x M12 grade 8.8	80 (60)	INNER – 6 x M6 SHCS OUTER –6 x M6 SHCS	6 (4)
E-7	8 x M14 grade 8.8	120 (90)	INNER – 6 x M6 SHCS, OUTER –6 x M6 SHCS	10 (7)
E-8	8 x M14 grade 8.8	120 (90)	INNER – 8 x M8 SHCS, OUTER –8 x M8 SHCS	20 (14)
E-9	8 x M16 grade 8.8	190 (140)	INNER – 8 x M8 SHCS, OUTER –8 x M8 SHCS	20 (14)
E-10	8 x M18 grade 8.8	270 (200)	INNER – 8 x M10 SHCS, OUTER –8 x M10 SHCS	40 (30)
E-11	8 x M20 grade 8.8	350 (260)	INNER – 8 x M10 SHCS, OUTER –8 x M10 SHCS	40 (30)
E-12	8 x M22 grade 8.8	500 (370)	INNER – 10 x M12 SHCS, OUTER –10 x M14 SHCS	80 (60)
E-13	8 x M24 grade 8.8	600 (450)	INNER – 10 x M14 SHCS, OUTER –10 x M14 SHCS	120 (90)
E-14	8 x M30 grade 8.8	1200 (900)	INNER – 10 x M14 SHCS, OUTER –10 x M14 SHCS	120 (90)

22. Repeat above procedure with the second coupling for the opposite end of the driveshaft.