

JWT C.S.C. L3507-CSC00 INSTALLATION PROCEDURE:



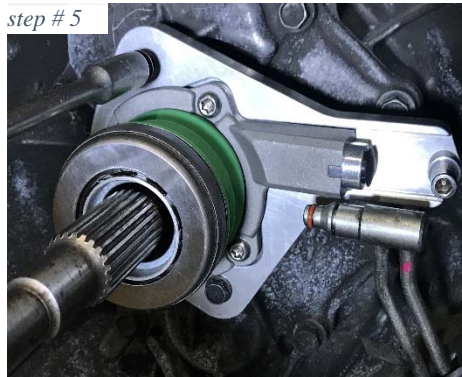
NOTE: If the fluid is not clear in the system, it is likely that clutch dust has entered the system from the old concentric slave cylinder (C.S.C.) which will quickly fail your new C.S.C. It is recommended that a new master cylinder be installed and all fluid lines be cleaned and blown dry before installing your new JWT C.S.C. Failure due to contaminated fluid is not warrantable.

1. With the transmission removed, loosen both bolts on the hydraulic tube mounting bracket on the outside of the bell housing.
2. Remove the wire clip holding the hydraulic tube into the original C.S.C. and pull the hyd. tube out of the C.S.C.



3. Replace the original O-ring on the end of the hydraulic tube with the provided new O-ring.
4. Remove the 2 bolts attaching the C.S.C. to the transmission and discard the original C.S.C. (you will reuse the mounting bolts)

5. Install the new JWT C.S.C. using the original 2 C.S.C. mounting bolts.
6. Remove the hydraulic tube retaining bolt and spacer (if attached) and the black plastic protector from the hydraulic port.



7. Install the hydraulic tube end with new O-ring into the C.S.C. hydraulic port, insuring it is fully seated in the C.S.C.
8. Using Loctite, install the hydraulic tube retaining bolt and spacer with the spacer smaller diameter up to lock the hydraulic tube in place in the new C.S.C.



9. Tighten the hydraulic tube mounting bracket on the outside of the bell housing. The bracket can be bent slightly if needed to avoid any binding of the hydraulic tube.
10. Ensure that there is proper pedal free play adjustment, using the clutch pedal stop & master cylinder shaft adjusters. If this is not done, bleeding the system will be impossible leading to unpredictable clutch operation.
11. Bleed the system as per the factory service manual.

Why did your 350Z, 370Z, G Concentric Slave Cylinder fail?



First, a little background on this part. In 2007 Nissan had decided to upgrade the clutch release system from the antiquated and noisy external slave cylinder release system to a more modern single part quieter Concentric Slave Cylinder (C.S.C.) release system. This would have made perfect sense in that it was a proven way to reduce the part count as well as a reduction of N.V.H. (noise, vibration, harshness). However, soon after the introduction, it became apparent that there was an inherent issue with the design. Oddly after multiple changes to the part (4 new part numbers), this design flaw was unchanged and the failures continued.

As a manufacturer of performance clutches for Nissan vehicles, JWT had requested a large collection of failed cylinders from customers and dealership technicians that were also concerned.



Original C.S.C.

Consistent among all of the failed samples was a large ingestion of clutch dust into the cylinder's inner sealing sleeve and ultimately passing through the hydraulic seal itself. In most cases the seal had not been damaged, but had been contaminated by large amounts of clutch dust which would eventually lift the seal off of the sleeve allowing fluid to escape to the exterior of the cylinder. On many of the failed cylinders this condition was expedited by distortion of the plastic piston / seal support used as a substitute for a more appropriate metal piston / seal support as a cost saving measure.



Axial slots directly exposing the seal to clutch dust.



Clutch dust built up along the 12 axial slots.

It was glaringly obvious that 12 axial grooves on the inside diameter of the plastic piston were allowing clutch dust to migrate from the front of the cylinder to the seal at the back end of the piston and ultimately across the seal resulting in the pattern failure seen on the sample cylinders. This design of 12 axial grooves in the sliding surface correctly decreased the sliding friction as intended but myopically failed to mitigate the propagation of clutch dust into the seal itself!



JWT has designed a new direct fit C.S.C. that addresses both issues with the O.E. cylinder by incorporating an all-aluminum piston / seal support featuring 2 full radial PTFE sleeve wipers dramatically reducing friction and clutch dust migration to the seal. The JWT C.S.C. is a direct fit replacement for the original C.S.C. using all of the original factory hydraulic lines and fittings with no modifications or additional hoses, simply install the same as a stock C.S.C.



JWT # L3507-CSC00