Quality Specialty Components - Clutches & Flywheels
CLUTCH INSTALLATION & WARRANTY GUIDE

Failure to follow these instructions when fitting your QSC Clutch / Flywheel will void any warranty.

I. GETTING STARTED

1. Diagnose the cause of clutch malfunction before clutch replacement. For example, check hydraulic system , oil leakage, and any signs of red dust when old clutch is being removed. Any or all of these problems must be corrected before installing a new clutch.
2. Confirm clutch supplied is correct for the application. Contact QSC customer support if needed. Fitting the clutch on incorrect application will void the warranty.
3. **Flywheel must be replaced or machined to factory spec or warranty will be void.** Check spigot bearing or the pilot bush and replace if necessary. Make sure that the pressure plate is perfectly flat and free of heat scoring and that the friction surface is perfectly clean. Check the clutch is free of any shipping damage.
4. Clean the gear box main drive shaft splines, then check that clutch disc slides freely on the shaft. Lightly grease the shaft splines with high melting point grease. Always ensure bell housing is degreased and clean. Lack of lubrication will cause failure to disengage gears and also cause clutch drag. Excess lubricate / grease on the spline of the clutch disc will splatter during engine operation and may cause the clutch to slip.
5. Check clutch release fork and clutch cable for any signs of damage. Check the release bearing guide tube for any wear. Always lightly grease the outside diameter of the tube. This will allow smooth sliding of the bearing carrier.

II. INSTALLATION

6. Make sure the flywheel and pressure plate surface is clean. Place the clutch cover pressure plate assembly over the clutch disc, after checking that the disc is the right way around and the hub section of the disc is not in contact with the casting of the clutch cover assembly or the flywheel. Use a clutch alignment tool to correctly align the friction disc.
7. Assemble cover to flywheel. Ensure that the cover matches with locating dowels. Tighten cover bolts opposite each other and evenly, one turn at a time. Torque to spec.
8. Install transmission into place using the guide bolts. Input shaft should slide smoothly and easily through hub into pilot bearing. DO NOT FORCE or use the tightening of the bell housing bolts to draw the transmission to the engine block. Rotate input shaft if necessary to align splines. Never allow the transmission to hang without the support of a transmission jack during.
9. Refit gear box. Check all bell housing dowels are in correct position and tighten bell housing bolts. Ensure there is no dirt or foreign material between the mating surfaces of the engine and the bell housing. Never hang the gear box off the clutch disc or use any force to align gear box shaft.
10. Perform any clutch adjustments to vehicle manufacturer's specifications and always reset the clutch master cylinder push rod to obtain comfortable pedal release position
11. Always check the clutch cable if you are unable to obtain disengagement when a new clutch is installed. Start off your checking process by replacing the cable. If it is a hydraulic clutch start by checking the clutch master cylinder and the clutch slave cylinder. Make sure there is no air in the system.
12. Road test vehicle and never abuse a newly fitted clutch. Allow 500 mi break in
13. **WARNING:** Do not abuse clutches in any situation where engine RPM's may exceed manufacturer's specifications. This may cause serious damage to the vehicle and injuries to vehicle occupants and bystanders

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III. TROUBLESHOOTING

a. Possible Causes to Common Problems

Problem	Possible Causes
Slippage	• Worn facings • Cover bolts loose • Oil on facing • Improper linkage adjustment • Weak or broken diaphragm • Glazed facings
Chatter	• Glazed facings • Oil on facings • Worn facings • Bad motor mounts • Improper linkage adjustment • Worn throwout bearings • Worn fork • Warped pressure plate • Broken pressure plate
Grabbing	• Oil on facings • Worn facings • Warped pressure plate
Clutch drag	• Improper linkage adjustment • Hub binding on input shaft • Broken pressure plate • Warped disc
Noise	• Pilot bearing worn out or dry • Throwout bearing worn out • Transmission input shaft bearing worn out • Fork pivot worn or dry

b. Misalignment

1. Check if bell housing is warped
2. Examine dowel pins for damage during fitting of bell housing. Check if there is any missing dowel pins
3. Examine gearbox quill/gearbox main drive nose cone/bearing slide.
4. Ensure proper mating of bell housing to motor, and crankshaft to flywheel. Debris, grease or other parts may cause incorrect mating.
5. Examine all bearings/bushings for excessive wear.

c. Clutch Release Bearing Noises

Depress the clutch pedal for about 2". The bearing is now in contact with the diaphragm. The clutch release bearing is most likely at fault if the bearing rumble or squeal.

d. Pilot Bearing or Bush Noises

a. Depress the clutch fully while engine is running.
b. Select first gear and then release the clutch B

If the squeal is heard at the point of the clutch taking up, then the pilot bearing is most likely faulty. Also Check for proper greasing / lubrication for the bearing.