



# CLUTCHTECH



## TSB-CP02

### Hydraulic Clutch Release Mechanism Adjustment and Maintenance

There is a common misconception that all hydraulic clutch release mechanisms are self-adjusting or non-adjustable and do not require any adjustment when a new clutch is fitted. Many garages and vehicle owners do not refer to the vehicle workshop repair manual when fitting a new clutch, and assume that the hydraulic release mechanism is non-adjustable when no visible means of adjustment can be seen on the clutch slave cylinder.

However, in most vehicles the clutch master cylinder and pedal mechanism is adjustable and hydraulic release mechanism adjustment should be carried out in strict accordance with the procedure in the vehicle workshop repair manual in order to ensure that the clutch operates properly. The master cylinder and pedal adjustment points are usually situated under the dashboard of the vehicle.

Before adjusting the hydraulic release mechanism make sure there are no leaks or worn parts in the master cylinder, hydraulic pipes and hoses, slave cylinder and other release mechanism components. Drain the old hydraulic fluid from the system, clean the system thoroughly and refill with new hydraulic fluid. Finally, bleed the system to ensure that there are no air bubbles present.

Hydraulic release mechanisms generally have similar methods of adjustment, and the general procedure is described as follows:

1. Use the pedal stopper bolt under the dashboard to adjust the clutch pedal height to the correct specification as given in the vehicle workshop repair manual.
2. Adjust the master cylinder free play clearance under the dashboard by loosening the push rod locking nut. Adjust the push rod to obtain the correct clearance specified in the vehicle workshop repair manual, and lock the adjusting nut. Note that the master cylinder free play clearance should be adjusted after adjusting the pedal height, and not before. If the slave cylinder is adjustable, adjust the slave cylinder free play clearance by loosening the adjusting nut and pushing the end of the push rod against the release fork. Back the push rod off to obtain the correct clearance specified
3. In the vehicle workshop repair manual and carefully lock the adjusting nut. Replace the release fork return spring if this has been removed. Note that slave cylinder over-adjustment will result in insufficient release bearing free play clearance and rapid release bearing and cover assembly diaphragm finger wear, as well as clutch slipping.

Correct hydraulic release mechanism adjustment is critical in order to ensure that the clutch operates properly, and incorrect adjustment could cause the following clutch problems:

1. Non-release due to insufficient release mechanism travel.
2. Slipping due to over-adjustment.
3. Rapid release bearing and cover assembly diaphragm finger wear due to insufficient clearance between the release bearing and diaphragm fingers.  
The lever or diaphragm could come into contact with the clutch disc due to over adjustment

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