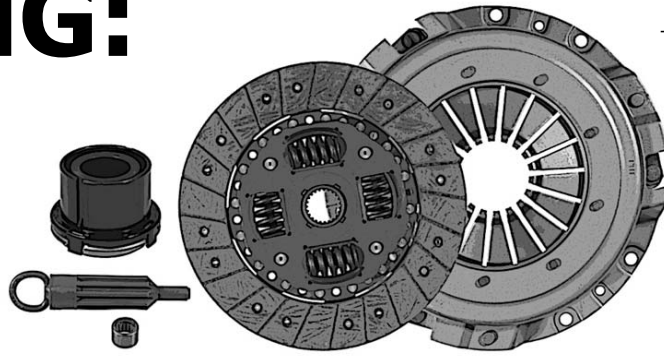


WARNING:

FORD

THIS PAMPHLET CONTAINS



IB150

Tech Tips

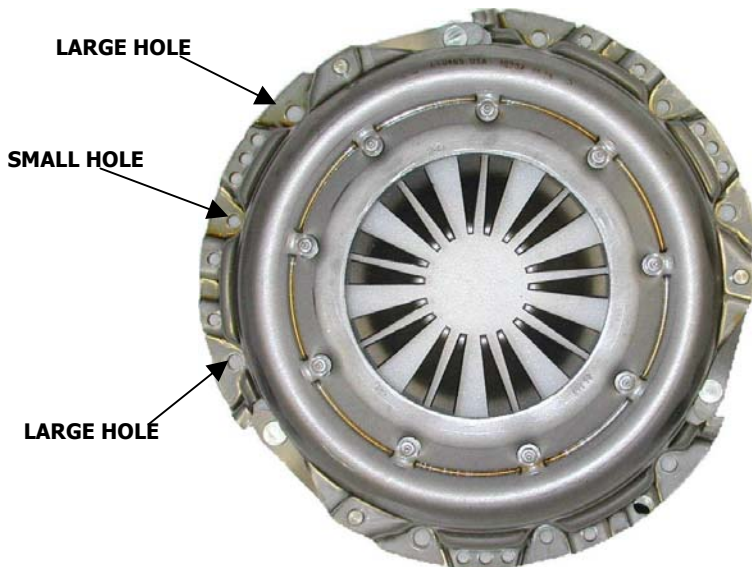
FOR APPLICATIONS SHOWN BELOW

1963-77 Ford Passenger Car & P/U Trucks	IB132
1990 Ford Escort	IB144
1983-94 Ford Ranger - 2.8L and 3.0L	IB124 & 125
1991-94 Ford Explorer 4.0L	IB124 & 125
1982-Up Ford Pick-up Trucks	IB143
1982-Up Ford Mustang	IB130
1985-87 Ford Ranger / Bronco II	IB103
1991-94 Ford Bronco II - 2.9L	IB124 & 125
1989-90 Ford Taurus SHO	IB145
1993-97 Ford Explorer, F150-350, Ranger	IB124 & 125
1987-Up Ford Super Duty	IB139 & 127
1986-95 Ford Aerostar	IB124 & 125
1988-95 Ford F250-350	IB104
1988-95 Ford Escort, Tempo, Topaz, Taurus	IB115

***PLEASE READ THOROUGHLY BEFORE INSTALLATION OF
THE COMPONENTS IN THIS SET!***

For Technical Assistance Call 1-800-258-8312

1963-77 Ford Passenger Car & Trucks



This diaphragm cover assembly is designed to replace the original lever style. The original had six bolt holes whereas this one has nine. The correct holes for mounting are one small hole and one larger hole in each group of three.

The diaphragm type cover assembly should require less pedal effort, however the vehicle may be equipped with release-assist springs on the fork and the clutch pedal. These springs are no longer needed when using the diaphragm style cover assembly and can be removed from the vehicle.

1982-94 Ford Mustang

Release Cable Fatigue



These vehicles use a "self-adjusting" cable release linkage system. This type of automatic adjusting system contains a plastic pawl and quadrant. As the clutch wears the pawl and quadrant ratchets automatically to keep the clutch pedal in proper position. The plastic pieces are extremely vulnerable to bending, binding and stretching, which can cause problems with clutch release.

Ask your distributor about our Manually Adjustable Cable and Quadrant Assembly kit.

THESE ARE AVAILABLE IN THREE DIFFERENT MODELS

> **ADJUST @ FORK**

> **ADJUST @ FIREWALL**

> **ADJUST EITHER PLACE OR BOTH**

IMPORTANT NOTICE

Ford offers a cable isolator damper assembly P/N F4ZZ-7C530A to correct a high speed noise problem on 1994 model stock cables.



1987-98 Ford Super Duty / Power Stroke
7.3L Diesel Eng. Pick-up Trucks

CHECKING the DUAL MASS FLYWHEEL

This vehicle uses a Dual Mass Flywheel (DMF) primarily designed to protect the transmission during high torque spikes created by the 7.3L diesel engine. If you are not replacing the DMF at the time of the time of this clutch replacement, you should be aware that it is not recommended to resurface the DMF. The DMF uses a damper spring cage, just like a clutch disc, and is often the primary reason for clutch slippage. Please check it thoroughly for rattle, hot spots, or heat cracks. The plastic spring retainers on each end of the damper springs will sometimes begin to melt under excessive heat. Ensure that they are intact.

Ask your distributor about our special KEVLAR® pilot bushing or at the very least, replace it with a stock needle bearing type.

For the "mechanically inclined" there is a way to check the DMF for torque holding capacity. You will need to make a special tool you can attach to the center hub of the DMF. Use some type of drive pin that will fit in the mounting holes so the DMF can actually be bolted to the tool. There must also be a way to attach a torque wrench to your tool.

First, bolt the friction surface of the DMF to a bench (something very stationary) using the pressure plate mounting holes. Then using the torque wrench, try to rotate the DMF until it slips or you reach the torque ratings shown below:

FORD TRUCKS with 11" Clutch - 370 ft. lb.

FORD TRUCKS with 12" Clutch - 425 ft. lb.

If the flywheel slips before these ratings are reached, the ***DMF MUST BE REPLACED.***

KEVLAR® is a registered trademark of E.I. du Pont de Nemours and Company.

Clutch does not release - Leaking clutch slave cylinder

Some of these vehicles were equipped with a weak Hydraulic release system which requires replacement of the components listed below:

Clutch Slave Cylinder - P/N E3TZ-7A564-A and *Clutch Master Cylinder* - P/N F2TZ-7A543-D

Tube Kit - Ford P/N F5TZ-7A512-A and *Pedal Pivot Shaft Lever* - E7TZ-7A554-A

For more info - refer to Ford Service Bulletin # 95-4-9

NOTICE:

We do not recommend the use of "Solid Flywheel option" replacements for any of these vehicles. The DMF was designed specially to protect the transmission and without the extra dampening capabilities, the "ZF" transmission is prone to premature failure and cracking of the case around the bellhousing area.

1990 Ford Escort

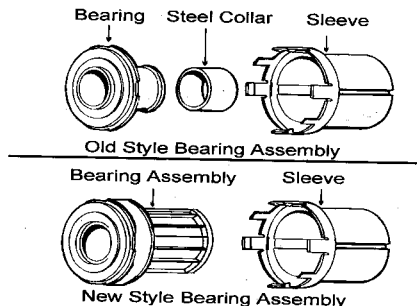
HARD CLUTCH PEDAL

The release bearing cross shaft is supported by two plastic bushings located in the transaxle housing. These bushings are prone to premature wear and will cause the cross shaft to bind, thus having an adverse effect to the feel of the clutch pedal. This also causes the clutch cable to exert undo stress at the point where it goes through the firewall, and in some cases, the firewall will flex or even crack.

It is important to replace these bushings and thoroughly check any and all release system attachment points for damage.

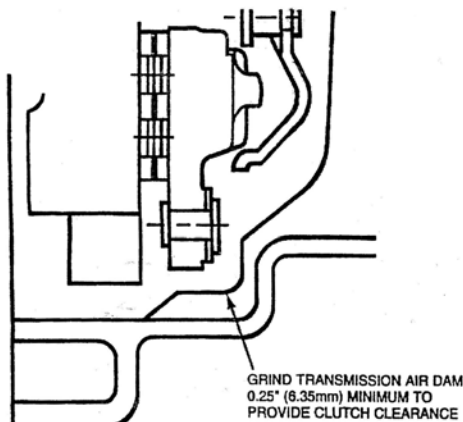
IB103

1985-87 Ford Ranger / Bronco II



Please check to be sure the piston hub spacer has been removed when replacing an old style two-piece release bearing. If it has not, then remove and discard. If it is not removed, it will cause the clutch diaphragm fingers to "overstroke", resulting in slippage and noise.

1988-95 Ford F250 / F350



Some of these vehicles may have a "ZF" factory re-man Transmission Assy., identified by a Tag # "F2TA" prefix. These units have a thicker casting in the bellhousing area than originally supplied from the factory. You may need to grind the inside of the housing approx. 1/4 of an inch for clearance. **Do not grind the pressure plate.** The area of interference is around the seven o'clock position on the bellhousing. This may actually be done by simply removing the dust cover from the housing.

IB104

1983-94 Ford Ranger - 2.8L and 3.0L

1991-94 Ford Explorer - 4.0L

1991-94 Ford Bronco II - 2.9L

1993-97 Ford Explorer - F150-350 - Ranger

1986-95 Ford Aerostar

IB124

No Release / Air trapped in Hydraulic Release System

These applications require special procedures to bleed the hydraulic system properly. The mounting position of the master cylinder on the firewall traps air in the rear portion of the cylinder. Before bleeding the system, remove the master cylinder from the firewall and position it so the reservoir end is higher than the push rod end. This will enable air to escape from the rear position of the cylinders. Use only approved hydraulic fluid recommended by the manufacturer.

We highly recommend the use of a Phoenix™ injection-bleeding tool, which is available through your distributor or by contacting us directly.

For additional information, refer to Ford bulletin #93-12-19

Hard pedal/release problems may result from leaks in the internal seal of the slave cylinder.

Replace the slave cylinder to prevent leakage.

For additional information, refer to Ford bulletin #97-22-17

IB125

**1982-Up Ford
Pick-Up Trucks**

Inadequate Slave Cylinder Travel and Dash Panel Flex

IB143

Numerous clutch release problems have occurred with these vehicles. Here are a few tips that may save you some headaches.

- > Ford offers an adjustable Master Cylinder Push Rod P/N E3TZ-7641B. It may be needed on some vehicles to obtain minimum extension of the Slave Cylinder and Clutch Fork.
- > Always check for unusually thick carpet or bulging floor mats beneath clutch pedal.
- > Loose cross-shaft attachments
- > Flywheels machined excessively.
- > Ford offers a Dash Panel Reinforcement Kit to prevent the firewall from flexing where the Master Cylinder is mounted.
- > Ford recommends slightly greasing the input retainer during every oil change, thus preventing the need to replace it. A worn retainer must be replaced with new one.

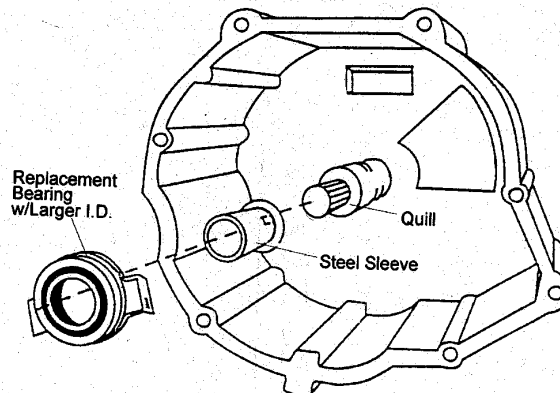
1988-95 Ford

IB115

Escort, Tempo, Taurus and Topaz

Please inspect the release bearing retainer or quill in this vehicle for excessive wear or ridges caused by the release bearing you are replacing. These ridges will cause the bearing to hang up and not slide freely, thus creating release problems.

There is an updated larger I.D. release bearing available from your distributor which includes a retainer repair sleeve to place over the worn area.



Minor wear ridges can be removed with emery paper, but a severely worn quill can only be fixed by replacing the clutch housing, as it is a machined cast part and not removable.

Ask your distributor about our clutch sets which include a retainer repair sleeve and larger I.D. release bearing.

IB145

1989-90 Ford Taurus SHO

These vehicles were originally equipped with a 9-1/4" stamped steel clutch. Most of the cars were re-called to the Dealerships so the clutch could be replaced with a 9-3/4" cast iron clutch. The original flywheel was replaced at the same time. The replacement flywheel will not accept the clutch in this kit. If you discovered the flywheel has previously been changed in the vehicle you are working on, you may need to order the cast iron clutch listed for the 1991 - 95 Models.