

# Adjusting for Free Neutral

## Telling You the Trick in Accomplishing an Important Adjustment

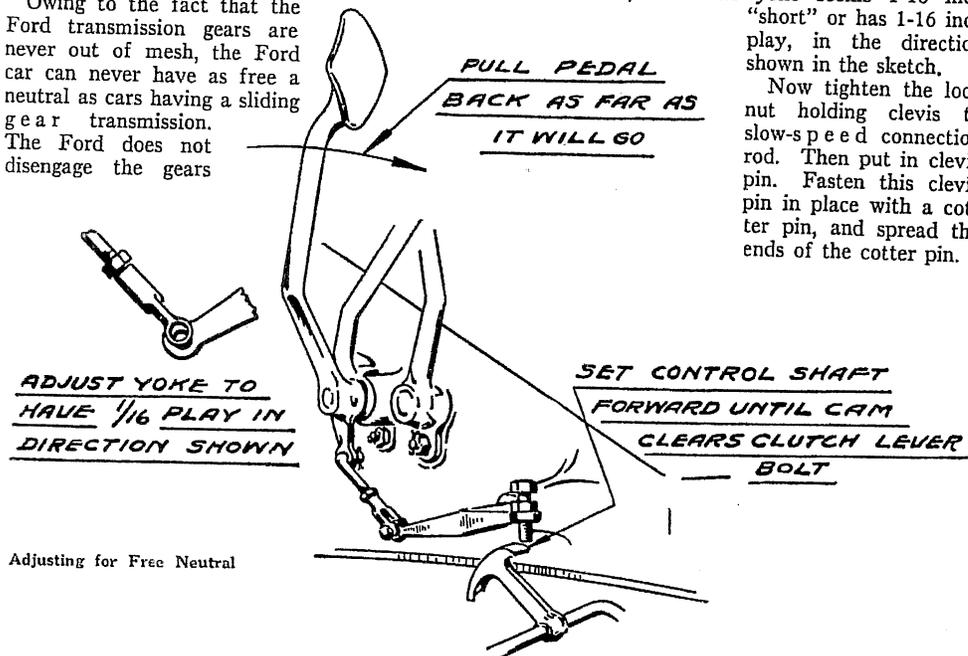
**A**DJUSTING to secure a reasonably free neutral is a trick that causes most owners and even many repairmen much trouble. This adjustment is important as it means an easier starting engine, a car that coasts more freely and smoothly, and better performance in both low and reverse gears, by keeping the high speed from working against them.

Owing to the fact that the Ford transmission gears are never out of mesh, the Ford car can never have as free a neutral as cars having a sliding gear transmission. The Ford does not disengage the gears

We are now ready to push forward the emergency brake lever, so that the cam on the clutch control shaft clears the clutch lever bolt. Now take out the cotter pin, and remove the clevis levis.

Pull back on the clutch pedal, and, after loosening the nut holding clevis yoke, turn the yoke on the rod, until the yoke seems 1-16 inch "short" or has 1-16 inch play, in the direction shown in the sketch.

Now tighten the lock nut holding clevis to slow-speed connection rod. Then put in clevis pin. Fasten this clevis pin in place with a cotter pin, and spread the ends of the cotter pin.



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the discs of the high-speed clutch are simply allowed to slip past each other.

It is first necessary to adjust the slow-speed adjusting screw, so that the slow-speed band will be fully engaged a couple of inches before the pedal reaches the floor boards. It is important to have this slow-speed band reasonably tight for, if it is too loose and goes "over center" when the clutch pedal is depressed (by which we mean if the slow-speed connection clevis goes over center), this will lock the "lock" the slow speed in engagement. Then the Ford will run determinedly through everything, until the clutch pedal is jerked back by hand.

We are now ready to adjust the clutch lever bolt. Should the car have an inclination to "creep" forward when in neutral, this may be an indication that the end of the clutch lever bolt is worn. It may be necessary to turn down the bolt an extra turn or so to compensate for wear.

Of course, when the rear hub brakes are not applied, all Ford cars have some tendency to creep forward when the engine is running and the transmission in neutral—due to the drag between the discs of the high-speed clutch.

When the clutch is released, by pulling back the hand brake lever, the clutch pedal should

move forward a distance of  $1\frac{3}{4}$  inches in passing from the high speed to the neutral position.

The Ford engine should now be fairly easy to crank, without undue drag in the transmission when the hand lever is pulled back. The car should coast freely when the clutch pedal is moved to the neutral position, or when the hand brake lever is pulled back to the neutral position. Now if the car coasts fairly free, without much apparent drag when the engine is stopped, a good free neutral adjustment has been obtained.

Another test for free neutral adjustment is to notice whether the Ford car can be shoved across the garage floor with one hand, when the hand brake lever is pulled back to the neutral position.

The high-speed clutch lever screws should be adjusted as loosely as possible, without causing the high speed clutch to slip. If the clutch discs are badly worn, it may be necessary to install an additional pair of discs, or replace the entire set of old discs, before a good free neutral adjustment can be secured.

Too heavy an oil, or one that congeals in cold weather, will make it impossible to secure a satisfactory neutral adjustment. Remember that there are 25 closely packed discs in the high-speed clutch. Consequently, if the oil is at all stiff or gummy, the oil will cause a lot of drag between the adjacent clutch discs, which do not separate more than one-hundredth of an inch, when the clutch is disengaged.