

# Maintenance and Adjustment for Floating Disc Clutch



MAXITORQ  
STANDARD FLOATING  
DISC CLUTCH

Maxitorq Multiple Disc Clutches have been factory adjusted and should not require attention for some time if properly operated and kept reasonably clean and free of grease. When adjustments are needed, however, the following information will help to explain the operation of the clutch and illustrate how to make the necessary adjustments quickly and easily.

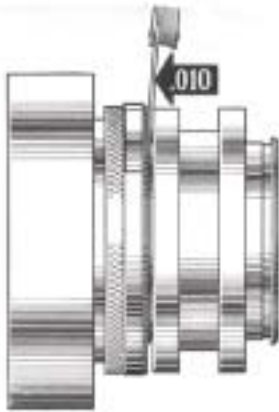


FIG. 1 FULLY ENGAGED (DRIVING)

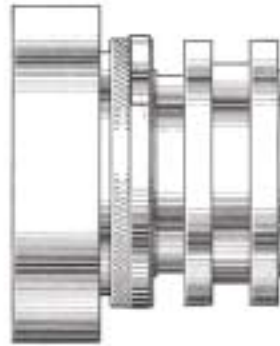


FIG. 2 DISENGAGED (NEUTRAL)

## Sleeve Location

The inner and outer discs are arranged so that the outer discs are keyed to the cup, inner discs are keyed to the clutch body. The clutch body, in turn, is keyed to the drive shaft. (see fig. 1). When the clutch is engaged, the discs are squeezed together for driving the machine but when disengaged, (see fig. 2), the outer discs and cup rotate free of the inner discs.



NO. 105-1  
ADJUSTING RING



## Adjustment Instructions

Adjustment of the clutch is controlled by a knurled adjusting ring (part #105-1) so that an operator can take up the wear on the clutch discs. First wash out clutch with commercial solvent, squirting it on top of clutch at disc end with an oil can or by other means. This will free a sticking clutch.

When properly adjusted, the sliding shifter sleeve requires a distinct pressure or snap for engagement. If *under-adjusted*, the sliding shifter sleeve (part No. 104) will shift into full engagement with little or no axial pressure and the clutch is apt to slip when fully engaged (or loaded) causing excessive heat.

If *over-adjusted* the clutch will not completely engage except by applying excessive pressure on the sliding shifter sleeve. *Do not over-adjust the clutch.*

## To Adjust the Clutch

First disengage the clutch, then loosen the cap screw (Fig. 3). Rotate the split type adjusting ring (No. 105-1) no more than 10 degrees at a time (Fig. 4) making sure to tighten the cap screw after each adjustment.



FIG. 3



FIG. 4

# Adjustment by Shifting Force for Floating Disc Clutches with Standard Levers

Maxitorq Clutches offer both the split type adjusting ring as well as the notched incremental style. These clutches can be engaged at a known axial force level which in turn creates a known torque level. The chart below indicates the axial shifting sleeve force required to obtain the catalog torque rating of Maxitorq Clutches with standard levers.

## Standard Lever



Torque Rating Chart For Clutches Using Standard Levers	
Clutch Catalog Number	Shifting Force Lbs.
20	15
21	20
22	30
23	30
24	40
25	60
26	80
27	105
28	150

Adjustment by shifting force using standard levers

The above adjustment procedure is only applicable for clutches with standard levers. Carlyle Johnson also offers a non-locking lever and a locking style lever.

## Non-Locking Lever



The non-locking shifting lever is designed to exert the force needed to attain the clutch engagement desired. Rapid clutching and braking is proportional to the shifter level force as required, for example, in knitting machinery applications. In a brake application the action is proportional to the shifter force. The shifter sleeve never locks itself.

## Locking-Style Lever



Locking levers are often used in machinery that is subjected to exceptional levels of vibration. The disengagement force is approximately twice that of the standard. The engagement force is unaltered.

