



## Instructions for Button Clutch Assembly & Disc Pack

We here at Ace extend our thanks for purchasing the Ace Racing Clutch. All of our Ace Racing Circle Track Clutches utilize a one piece forged cover. This design provides superior structural integrity, lower moment of inertia and cleaner running. The following instructions will help in your installation of our quality racing clutch.

### **At regular intervals:**

**A.** Inspect the flywheel, ring gear and all clutch parts for cracks.

**B.** Ace Racing clutches will perform optimally with up to .035" total wear in the disk pack. The discs measure new .103" (racing).

Replace the drive discs when friction area thickness is less than:

Single Disc Assembly-.090"

Double Disc Assembly-.085"

Triple Disc Assembly-.091"

Check the drive discs for flatness with a straight edge and a feeler gauge. Any disc which is out of flat by more than .005" needs replacement.

**C.** Check for signs of excessive heat. This is indicated by discoloration in the pressure plate, floater discs and the diaphragm spring retainer plate. If the diaphragm springs remain flat or loose when the clutch is removed, it has been overheated.

**D.** Check the pressure plate and floater plate for flatness. Replace any part which is more than .005".

**E.** Examine the diaphragm spring for excessive wear at the contact surface of the release bearing.

**F.** Inspect the clutch release bearing and replace if needed.

**G.** Clean all clutch components (using brake cleaner or acetone) and blow out dust from the cover assembly with compressed air prior to reassembly.

**H.** You should have a minimum of .100" clearance between the release bearing and the clutch fingers. Install a return spring on the clutch linkage. This will keep the release bearing from riding on the clutch fingers. You should also install a positive stop on the clutch pedal to limit clutch pedal travel. Overtravelling the diaphragm spring will shorten the life of the clutch and also lead to premature failure of the engine thrust bearing.

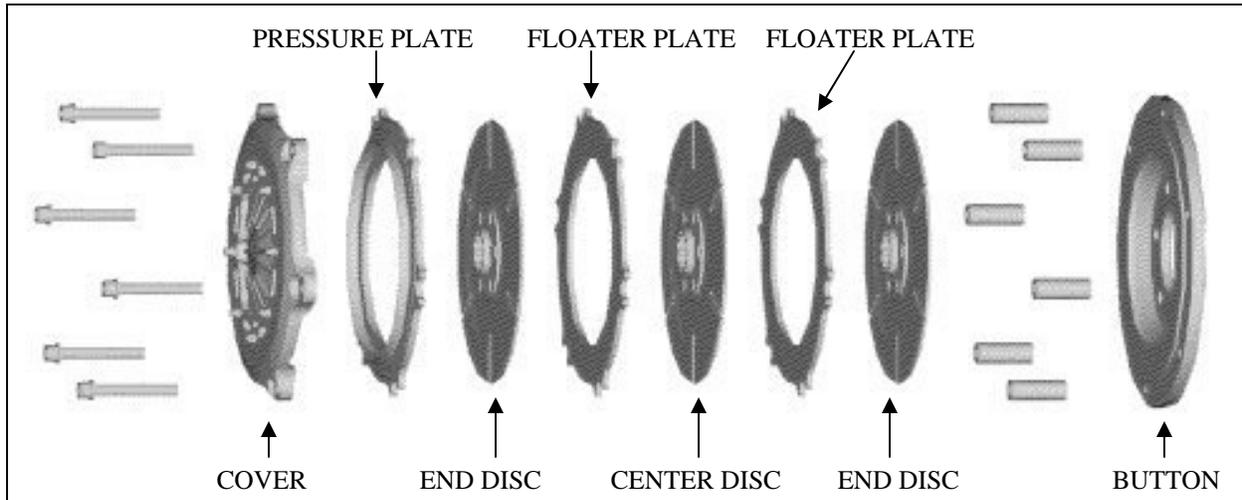
*Ace Racing Series Clutches are designed to be used with a heavy duty radius face release bearing. Do NOT use a flat face release bearing!*

**I.** General maintenance of your Ace Racing Series Clutch will last you for many seasons to come.

*For any problems or questions, please contact your nearest Ace Racing distributor.*



## RACING SERIES INSTALLATION INSTRUCTIONS



### CLUTCH INSTALLATION

Install the cover and assembly as shown above. Check to make sure that the bolts fit freely into the clutch cover. Severe damage to the clutch will occur if these bolts bind in any way!

### ACE RACING 3 DISC CLUTCH

We here at Ace extend our thanks for purchasing the Ace Racing Clutch. All of our circle track clutches utilize a one piece forged cover. This design provides superior structural integrity, lower moment of inertia and cleaner running. The following instructions will help in your installation of our clutch.

### INSPECTION OF PILOT BEARING

Make sure a new pilot bearing is installed.

### INSPECTION OF BELLHOUSING ALIGNMENT

1. Check that the transmission face of the bellhousing is square to the crankshaft face within .002" total indicated runout. If the measurement is not within this specification, have the bellhousing machined flat to bring the mounting surfaces parallel.
2. The transmission receiver hole of the bellhousing should be concentric to the crankshaft within .006" total indicated runout. If the measurement is not within this specification, you will need to relocate the dowel pins in the engine block.
3. Checking these things will help prevent spline wear on the input shaft, clutch disc hub and other types of serious clutch damage that could occur.

### INSPECTION OF THE INPUT SHAFT

Inspect the input shaft of your transmission for any possible signs of bending or twisting. Make sure that the clutch disc or discs slide the entire way onto the input shaft without binding. Make sure not to use any type of lubricants on the splines of the input shaft, including anti-sieze lubricants.

### FLYWHEEL INSTALLATION

Bolt the flywheel to the crankshaft and torque it as required. The use of medium strength thread locking compound is recommended. Do NOT use star washers!



## **Clutch Pack and Floater Plate Installations**

### **One Disc Clutches**

Install the clutch disc against the flywheel with the rivet heads facing the engine.

### **Two Disc Clutches**

The end clutch disc has a hub which protrudes from only one side of the disc.

Install the Clutch Pack and Floater Plate in this order:

1. Install either one of the clutch discs against the flywheel with the rivet heads facing you.
2. Install the floater plate (either direction).
3. Install the second clutch disc with the rivet heads facing the engine.

### **Three Disc Clutches**

Examine the clutch discs carefully. Two of the clutch discs are identical, they are referred to as end discs. The other clutch disc is called a center disc. It has a hub that is flat on both sides.

Install the Clutch Pack and Floater Plates in the following order:

1. Install a clutch disc against the flywheel with the rivet heads facing the transmission.
2. Install a floater plate (either direction).
3. Install the center disc (either direction).
4. Install the other floater plate (either direction).
5. Install the other end clutch disc with the rivet heads facing the engine.

### **Pressure Plate and Clutch Cover Installation**

With the clutch and floater plate or plates in position, install the pressure plate into the housing with the flat side against the clutch disc. Align the clutch discs with a good input shaft and torque the nuts or bolts to 20ft./lbs for 7.25 and 5.5.

### **Release Bearing**

Our Racing Series clutches are designed to be used with heavy-duty radius face release bearings. NEVER use a flat face release bearing in this application. You should have a minimum of .100" clearance between the release bearing and the clutch fingers. Install a return spring on the clutch linkage. This will keep the release bearing from riding on the clutch fingers. Also install a positive stop on the clutch pedal to limit clutch pedal travel. Overtraveling the diaphragm spring or clutch fingers will shorten the life of the clutch and also lead to premature failure of the engine thrust bearing.

PLEASE VISIT OUR WEBSITE AT: [www.ace-mfg.com](http://www.ace-mfg.com)