

# **Himax**

## **Brushless Outrunner Motor**

### **Himax Outrunner Shaft Service**

Himax Outrunner motors have been designed to allow easy service of the shaft by the user. The motor can be reconfigured for reverse mounting and the shaft is easily replaced. Shafts are readily available as replacement parts.

HC28xx series motors use a .050" hex key for the setscrew.

### **Replacing the shaft**

Remove the setscrew in the rotating bell. This setscrew locks the shaft to the bell on a flat on the shaft. The setscrew must be backed out enough to clear the shaft if it is not removed completely. The bell is removed by pulling straight out. If the fit is tight, place the motor on a block with a clearance hole for the shaft. Use a press or vise and a pin to push on the shaft and push it through the bell, and motor bearings. Tapping on the shaft is not recommended as it presents a shock load to the components, which can loosen parts and damaged bearings. Be careful that the magnets in the rotating bell do not pick up stray magnetic "dirt". When reinstalling the shaft be sure to allow some endplay to prevent excessive load on the bearings. Apply temporary thread locker to the setscrew if needed.

### **Reverse mounting**

The motor can be mounted on the front of a firewall with the supplied components. The shaft must be pushed through the motor to mount the prop. The shaft has a circlip near the front bearing to retain it. The circlip is moved to the groove at the end of the shaft. Be sure to slide the washer near the circlip. Now, the setscrew is removed and the shaft can be pushed through the motor and rotating bell. If the shaft is tight use a press as mentioned above to push it through. Be sure to allow some endplay to prevent overloading the bearings. Install the cross-shaped mount to the motor using the flat head screws. The mount is then mounted to the firewall as necessary.

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