

# INSTALLATION INSTRUCTIONS

## INPUT SHAFT RPM SENSOR

(Magnet and Cable)

### FOR USE WITH ULTRA-LITE PRO SYSTEM



## Installation

### Input Shaft RPM - Lenco, Liberty, G-Force Transmission

A predrilled and tapped candlestick is available from your transmission manufacturer.

1. With the transmission in the car, remove the inspection cover on the bell housing.
2. Fully engage the clutch and measure the distance between the back of the throw-out bearing and the candlestick base. This distance needs to allow the installation of the rpm sensor on the candlestick without contacting the throw-out bearing.
3. It is recommended that the sensor be mounted on the candlestick's beveled edge as close to the base (see Figure 1) as possible. Mount the sensor between the spring tab and mounting hole. The sensor you will be installing measures  $\frac{5}{16}$ " in diameter.
4. Once the location of the sensor has been determined, the candlestick can be machined (Bridgeport type vertical mill is recommended). Use a letter "I" (.272) drill to machine the tap hole.
5. After drilling, tap sensor hole with  $\frac{5}{16}$ "-24 thread tap.
6. After tapping the sensor hole drill a  $\frac{5}{16}$ " hole in the bell housing for the sensor cable.

7. The input shaft magnet is installed next. Insert the input shaft in the candlestick to its operating depth. Use a marker in the sensor hole to mark the magnet mounting location on the shaft. Because of the hardness of the input shaft a special carbide drill bit ( $\frac{1}{4}$ " ) must be used to drill the magnet hole. Drill the hole so the bottom of the magnet sits approximately  $\frac{7}{32}$ " (.219") below the surface of the shaft. This will put the edges of the magnet just below the surface of the shaft (Figure 2).
8. Fill the hole with 5 minute epoxy. Install the magnet taking care that it is not pushed out by excess epoxy in the hole before the epoxy cures.
9. If the nylon jam nut cannot be used, coat the threads on the sensor with blue Loctite®, then install the sensor into the candlestick. Trial fit the candlestick to transmission. Adjust the depth of the sensor to allow an air gap of .050" to .100". (1 to 2 turns back) Turn sensor in until it touches the shaft. Back out 1 - 2 turns leaving a gap between the sensor and input shaft. Let the epoxy harden before use.
10. As the transmission is installed in the bell housing, route the sensor cable out the  $\frac{5}{16}$ " hole drilled in the housing taking care to keep it clear of the clutch assembly.

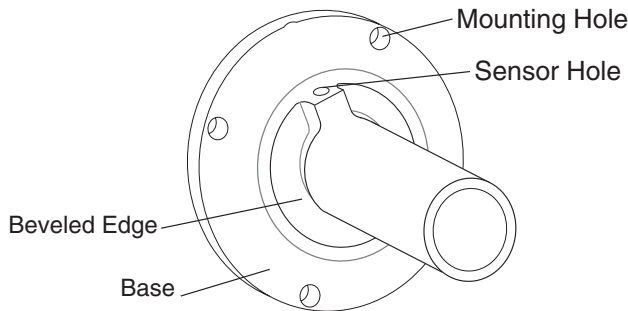


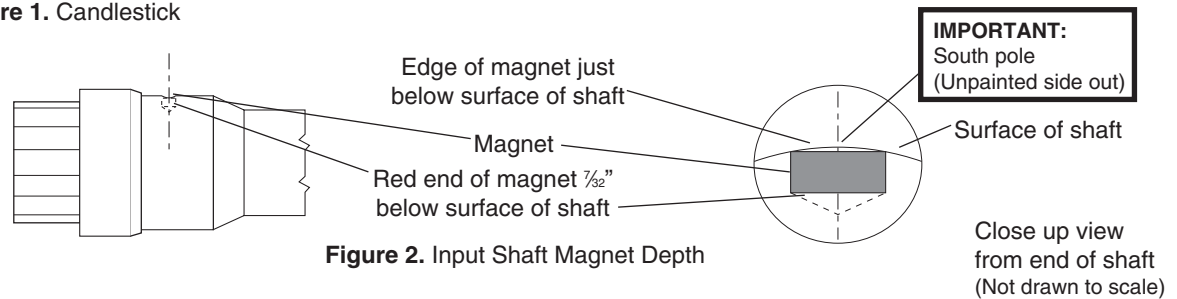
Figure 1. Candlestick

## Specifications

### Machining the Candlestick and Input Shaft

**Sensor Hole:** Use a letter "I" (.272) drill and a  $\frac{5}{16}$ " - 24 thread tap size.

**Hole in Input Shaft:**  $\frac{1}{4}$ " carbide drill, drill the hole so the bottom of the magnet sits approximately  $\frac{7}{32}$ " (.219") below the surface of the shaft. This will put the edges of the magnet just below the surface of the shaft.



## SERVICE

For service send your product to Auto Meter in a well packed shipping carton. Please include a note explaining what the problem is along with your phone number. Please specify when you need the product back. If you need it back immediately mark the outside of the box "RUSH REPAIR," and Auto Meter will service product within two days after receiving it. (\$10.00 charge will be added to the cost of "RUSH REPAIR.") If you are sending product back for Warranty adjustment, you must include a copy (or original) of your sales receipt from the place of purchase.

FOR SERVICE SEND TO: **AUTO METER PRODUCTS, INC.** 413 W. Elm St., Sycamore, IL 60178 USA (866) 248-6356

Email us at [datalogger@autometer.com](mailto:datalogger@autometer.com)