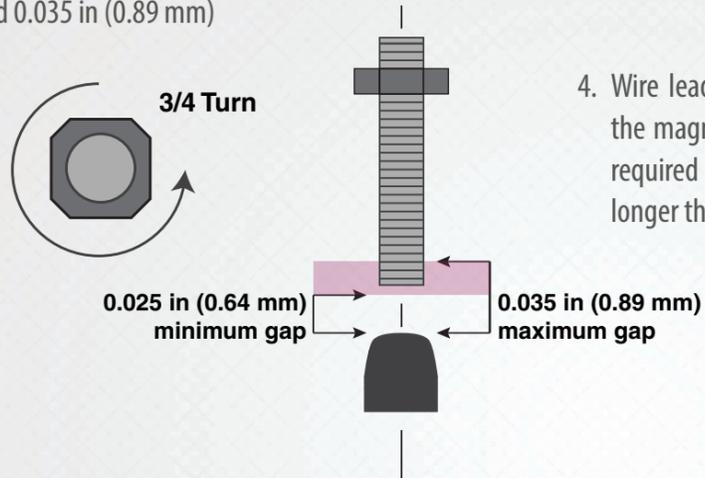
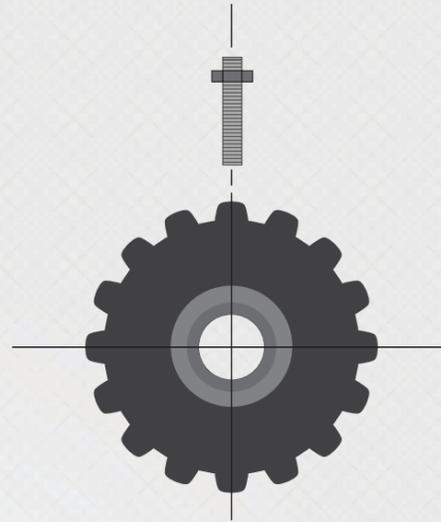


## INSTALLATION

### Magnetic Speed Pickup Installation:

1. If no mounting location is available, then drill and tap a hole in the flywheel housing. The threaded hole should be perpendicular to the center line of the crankshaft and centered over the ring gear teeth. Spot face the hole to provide a flat surface on which to anchor the locknut. (Refer to the charts on the inner page for the thread size of the Magnetic Speed Pickup)
2. Insert the magnetic speed pickup into the hole and turn it until the magnetic speed pickup makes contact with the face of the gear.
3. Back out the magnetic pickup by turning it counter clockwise. (About a 3/4 turn) The gap between the pickup and gear should be no smaller than 0.025 in (0.64 mm) and 0.035 in (0.89 mm)



4. Wire leads should be twisted for their entire length from the magnetic speed sensor to the control unit. Shielding is required if external interference is present or the leads are longer than 10 ft (3 m).



## Magnetic Speed Pickups

### MSP SERIES

GAC's Magnetic Speed Sensors are a rugged and economic solution for detecting engine speed. Sturdier than plastic sensors and outperforming semiconductor-type devices at high temperatures, GAC's epoxy encapsulated sensors are unaffected by dust and dirt. Multiple sizes and customizable configurations are available.



## FEATURES

- Produces Electrical Frequency
- Requires No Energizing Circuit From Control
- Used On All GAC's Electronic Speed Controllers
- -65°F to +225°F (-55°C to +105°C) Operating Temperature
- Available For Hazardous Location Installation (Not Certified)

## OPTIONS

### TSE050

#### A New Tool For Your Toolkit!



The TSE050 simulates a running engine when connected to the magnetic pickup input on a speed control. An on-board potentiometer allows the signal to be adjusted between 750 to 10,000 Hz and is compatible with all GAC speed controls using a magnetic pickup.

## SPECIFICATIONS

### Power Input

|   |  |
|---|--|
| Dimensions                                | See Chart on Inside Pages  |
| Proximity to Gear Teeth                   | 0.025 - 0.035 in. (0.64 - 0.89 mm)   |
| Temperature Range                         | -65 °F to +225 °F (-55 °C to +105 °C)  |
| Output                                    | 0.5 - 30 Volts RMS Is Recommended For Input To Control Units<br>(1 V RMS When Cranking Engine) |
| Resistance (Varies From Sensor to Sensor) | 160 - 1200 ohms  |

## CONNECTORS



Automotive



Military



Packard



Dual Packard



Stud Terminals

Contact Your Local Dealer:

Governors America Corp.  
720 Silver Street Agawam, MA 01001  
Phone: 413.786.5600 Fax: 413.789.7736  
[www.governors-america.com](http://www.governors-america.com)  
[info@governors-america.com](mailto:info@governors-america.com)



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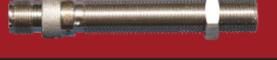
# SELECTION CHART

| 5/8 - 18 UNF Threaded |   |  | BODY LENGTH | THREAD LENGTH | CABLE LENGTH | CONNECTOR TYPE | DRILL SIZE |
|-----------------------|---|--|-------------|---------------|--------------|----------------|------------|
| MSP674                |    | 3" Without Mating Half Connector / High Output         | 3.125 (79)  | 2.75 (70)     | 2.50 (64)    | WIRE LEADS     | 37/64      |
| MSP675                |    | 3" With 7" Leads                                       | 3.125 (79)  | 2.75 (70)     | 7.00 (178)   | WIRE LEADS     | 37/64      |
| MSP676                |    | 5" With 12" Leads                                      | 5.0 (127)   | 4.625 (118)   | 12.00 (305)  | WIRE LEADS     | 37/64      |
| MSP677                |    | 3" Without Mating Half Connector                       | 3.125 (79)  | 2.75 (70)     | n/a          | MILITARY       | 37/64      |
| MSP678                |    | 5" Without Mating Half Connector                       | 5.00 (127)  | 4.75 (121)    | n/a          | MILITARY       | 37/64      |
| MSP679                |    | 3" Mating Half Connector / Weather Boot                | 3.125 (79)  | 2.75 (70)     | n/a          | MILITARY       | 37/64      |
| MSP6710               |    | 5" Mating Half Connector / Weather Boot                | 5.00 (127)  | 4.75 (121)    | n/a          | MILITARY       | 37/64      |
| MSP6719               |    | 2.375" With 12" Leads                                  | 2.375 (60)  | 2.00 (51)     | 6.00 (152)   | WIRE LEADS     | 37/64      |
| MSP6720               |    | 4" With 6" Leads                                       | 3.875 (98)  | 3.50 (59)     | 4.500 (114)  | WIRE LEADS     | 37/64      |
| MSP6721               |   | 3" With 3" Leads                                       | 3.125 (79)  | 2.75 (70)     | 2.50 (64)    | AUTOMOTIVE     | 37/64      |
| MSP6721C              |  | 3" With 3" Leads / Mating Half Connector               | 3.125 (79)  | 2.75 (70)     | 2.50 (64)    | AUTOMOTIVE     | 37/64      |
| MSP6728               |  | 3" With 10" Leads                                      | 3.125 (79)  | 2.75 (70)     | 6.5 (165)    | PACKARD        | 37/64      |
| MSP6728C              |  | 3" With 10" Leads / Mating Half Connector              | 3.125 (79)  | 2.75 (70)     | 6.5 (165)    | PACKARD        | 37/64      |
| MSP6732               |  | 3" With 4" Leads / Dual Output                         | 3.125 (79)  | 2.75 (70)     | 3.0 (76)     | DUAL PACKARD   | 37/64      |
| MSP6732C              |  | 3" With 4" Leads / Dual Output / Mating Half Connector | 3.125 (79)  | 2.75 (70)     | 3.0 (76)     | DUAL PACKARD   | 37/64      |
| MSP6743               |  | 3.75" With 8/32 Stud Terminals                         | 4.38 (111)  | 3.55 (90)     | n/a          | STUD           | 37/64      |

| M18 x 1.5 Threaded |   |                     | BODY LENGTH | THREAD LENGTH | CABLE LENGTH | CONNECTOR TYPE | DRILL SIZE |
|--------------------|---|---------------------|-------------|---------------|--------------|----------------|------------|
| MSP6741            |  | 3.25" With 9" Leads | 3.20 (81)   | 2.30 (58)     | 9.0 (229)    | PACKARD        | 21/32      |

| 3/8 - 24 UNF-2A Threaded |   |                             | BODY LENGTH | THREAD LENGTH | CABLE LENGTH | CONNECTOR TYPE | DRILL SIZE |
|--------------------------|---|-----------------------------|-------------|---------------|--------------|----------------|------------|
| MSP6729                  |  | 2.5" With 6' Shielded Cable | 2.7 (69)    | 2.25 (57)     | 72.00 (1829) | WIRE LEADS     | 0.332      |
| MSP6730                  |  | 1.5" With 6' Shielded Cable | 1.7 (43)    | 1.25 (32)     | 72.00 (1829) | WIRE LEADS     | 0.332      |
| MSP6731                  |  | 4.0" With 6' Shielded Cable | 4.0 (102)   | 3.55 (90)     | 72.00 (1829) | WIRE LEADS     | 0.332      |
| MSP6740                  |  | 1.7" With 6' Shielded Cable | 1.7 (43)    | 1.25 (32)     | 72.00 (1829) | PACKARD        | 0.332      |

| 3/4 - 16 UNF Threaded |   |   | BODY LENGTH | THREAD LENGTH | CABLE LENGTH | CONNECTOR TYPE | DRILL SIZE |
|-----------------------|---|---|-------------|---------------|--------------|----------------|------------|
| MSP6724               |    | 3.5" With 3" Leads                              | 4.00 (102)  | 3.375 (86)    | 2.50 (64)    | AUTOMOTIVE     | 11/16      |
| MSP6724C              |    | 3.5" With 3" Leads / With Mating Half Connector | 4.00 (102)  | 3.375 (86)    | 2.50 (64)    | AUTOMOTIVE     | 11/16      |
| MSP6734               |   | 3.5" With 4" Leads                              | 4.00 (102)  | 3.375 (86)    | 4.25         | WIRE LEADS     | 11/16      |
| MSP6735               |  | 3.5" With 3" Leads                              | 4.00 (102)  | 3.375 (86)    | 2.50 (64)    | PACKARD        | 11/16      |
| MSP6744               |  | 2.29" With 8/32 Stud Term                       | 3.50 (90)   | 2.29 (58)     | n/a          | STUD           | 11/16      |

| M16 x 1.5 Threaded |   |   | BODY LENGTH | THREAD LENGTH | CABLE LENGTH | CONNECTOR TYPE | DRILL SIZE |
|--------------------|---|---|-------------|---------------|--------------|----------------|------------|
| MSP6714            |  | 3" Without Mating Half Connector              | 3.125 (79)  | 2.875 (73)    | n/a          | MILITARY       | 14mm       |
| MSP6715            |  | 3" With Mating Half Connector / Weather Boot  | 3.125 (79)  | 2.875 (73)    | n/a          | MILITARY       | 14mm       |
| MSP6723            |  | 3" With 3" Leads                              | 3.125 (79)  | 2.75 (70)     | 2.50 (64)    | AUTOMOTIVE     | 14mm       |
| MSP6723C           |  | 3" With 3" Leads / With Mating Half Connector | 3.125 (79)  | 2.75 (70)     | 2.50 (64)    | AUTOMOTIVE     | 14mm       |

NOTE: For the most up-to-date list of magnetic speed pickups, go to [governors-america.com](http://governors-america.com). GAC is continuously adding new solutions for engine speed sensing.