PHOENIX 10

Installation & Operator's Guide

Phoenix 10

RAVEN

PRECISION Solutions

Overview

The Raven Phoenix 10 Speed Sensor compact unit provides speed output to your Raven controller. Setup is fast and easy and in most cases will have you in the field within a half hour. This manual assists with the installing of the Phoenix 10 Speed Sensor.

This speed sensor unit simulates Radar output by using GPS Satellites. It is a line of sight system, which means in order for the speed sensor to track the satellites there must be an unobstructed path directly from the speed sensor to the satellites. When mounting the antenna/speed sensor, find a place where the antenna will have an unobstructed view of the sky.

Common Obstructions or Sources of Interference:

- buildings
- trees
- machinery
- electrical motors
- generators
- alternators
- radio transmitters
- radar
- transmitting antennas

Power

The Phoenix 10 speed sensor needs DC power between 9 and 16 Volts. DC power is usually provided by the battery. Verify that the vehicle has a negative ground system before connecting.

Installation

Start by selecting a tentative location for each of the various parts of the system. Until setup is complete and you have confirmed the speed sensor is working properly, do not route the cables or permanently mount the Phoenix 10.

Initial Power Up

This initial startup is only necessary the first time the speed sensor is used. Once the broadcast is found the speed sensor will power up and start outputting signals after about 20 seconds.

1. Turn off all the equipment on the machine to avoid interference with the speed sensor setup.

2. Apply power to the speed sensor by connecting the black wire to a clean ground and the red wire to a clean switched power source.

3. If using a Raven console, set the speed type to SP2/Radar and use an initial SPEED CAL of 785.

Note: If using a non-Raven console, refer to the manufacture's manual to verify SPEED CAL.

4. Once the power is connected to the speed sensor, the Phoenix 10 will begin searching for satellites.

Note: During the initial startup, it may take 15 minutes to obtain a valid speed signal. Test the initialization status by moving the vehicle every few minutes and check the console for a speed response.

5. At this point, the speed sensor will began tracking satellites and generating good Radar output. Start turning on the other equipment on the machine one at a time. Wait about 30 seconds after each device is turned on to see if the speed sensor stops outputting when the vehicle is in motion.

6. If after turning something on, a problem is found, try moving the antenna further away from that device. Check that the device is functioning properly and also check its power connections.

7. After all the other equipment is turned on and functioning properly, watch your speed and again look for any problems.

8. Once the speed sensor is working properly with everything that may cause interference. Shut everything off, permanently mount the speed sensor, and route the cables.

9. Finally, repeat the power up steps to ensure installation is complete.

Speed Sensor Specification	
Size	2.1 x 5.09
Weight	18 ounces
Operating Temperature	-40° to +70° C
Operating Humidity	5% to 95% R.H. Non-condensing at 60° C
Power Consumption	2-3 Watts Typical
Voltage	9-16 VDC
Radar Out	45 Hz/ mph
Radar Update Rate	4 Hz
Minimum Speed Output	.5 mph
Minimum Recommended Operating Speed	2 mph
Storage Temperature	-40° to 80° C
Storage Humidity	100% Condensing
Mounting	Magnetic

4-Pin Con-X-All	
Pin Number	**Signal Name**
1	+12 VDC
2	Signal Ground
3	Ground
4	Radar

Kit Contents	
Phoenix 10 Installation & Operator's Manual	016-0171-215
Speed Sensor	063-0172-988
15' Cable Interface	115-0171-817

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