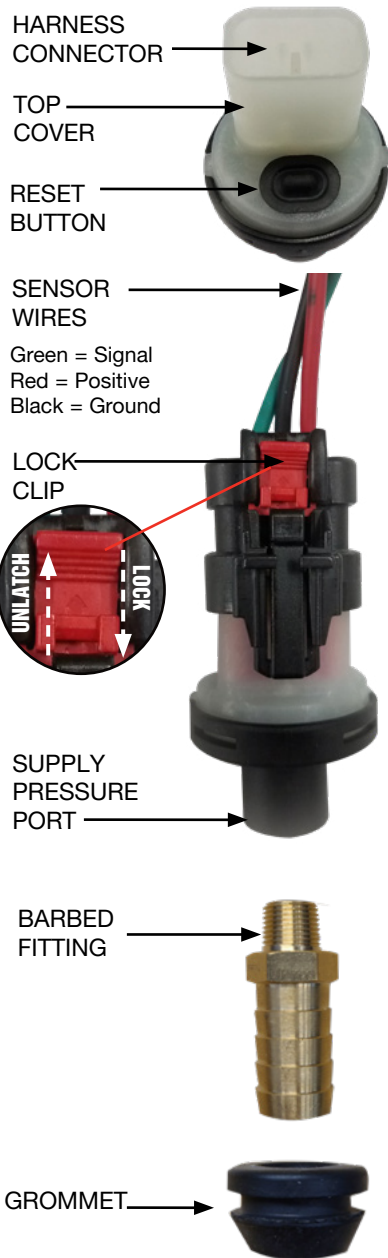


Overview

The LED Air Restriction Sensor is an electro-pneumatic light-indicating sensor that is installed on the air intake filter housing in order to accurately detect air filter conditions. The GREEN, YELLOW, and RED lights indicate whether the filter is clean, partially loaded, or needs servicing.



Basic Functions:

Utilizing the provided hardware allows for the sensor to be installed universally on any air filter housing.

- The black reset button is provided to reset the sensor at each filter change when pushed.
- The sensor changes colors based on filter loading restrictions.

Specifications

Parameter	Rating/Feature
Supply Voltage:	5.00-14.00 Vdc @ ± 5% (regulated); 150mA Max supply current
Output Voltage:	5.00-12.00 Vdc (for 4.75V to 5.25V) Ratiometric
Output Impedance:	Minimum load resistance: 5/.04 mA =125 Kohms 250 Ω max
Output Current:	0.040 mA max
Overvoltage of 40V:	45 V momentary contact
Reverse Polarity of 36V:	36 V momentary contact
Electrical Connection:	AMPSEAL 16 (3-way)
Pressure Connection Port:	1/8 - NPT (F)
Operating/Storage Temperature Range	-35 to 85C
Vacuum Range:	0-40" H ₂ O (0-10 kPa)

⚠ CAUTION: These instructions are for use by professional mechanics who are trained in the proper use of power and hand tools, using appropriate safety precautions (including eye protection).

Sensor Installation

1. Select a location on the clean side of the air filter housing which would allow for sufficient clearance for surrounding components inside & outside of the air box and mark the location. (See Figures 1 and 2.)

Note: The sensor can be mounted horizontally or vertically.

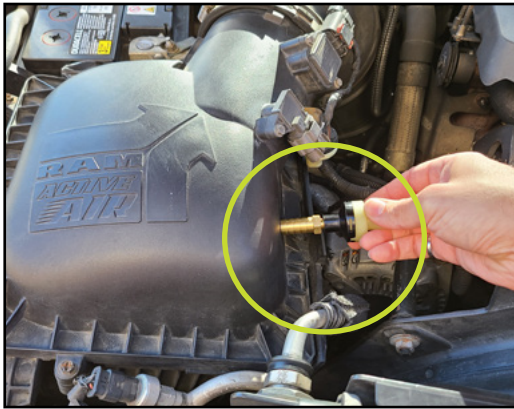


Figure 1: Selecting the installation area



Figure 2: Marking the drill location

2. Open the air filter housing or fully remove if necessary and drill an 11/16" hole in the marked location. (Using a step drill bit is recommended.) (See Figures 3 and 4.)

⚠ CAUTION: Please ensure that proper precautions are taken to capture the shavings to prevent them from entering the intake manifold.

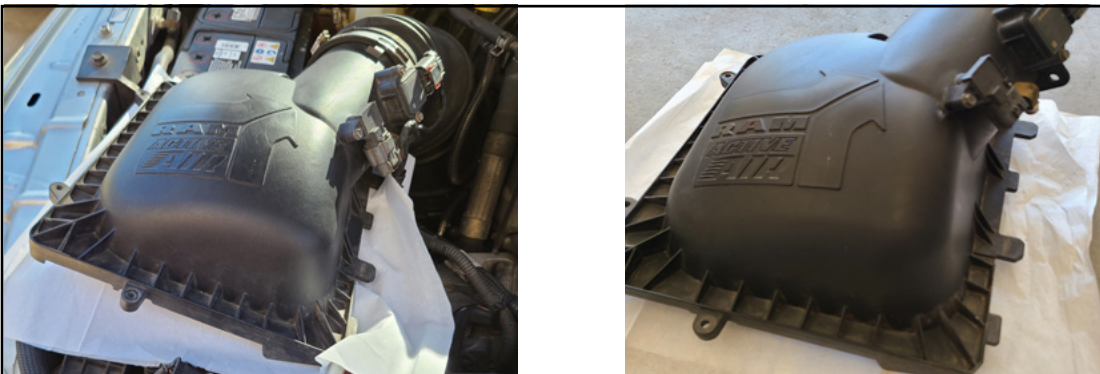


Figure 3: Removing the Air Housing

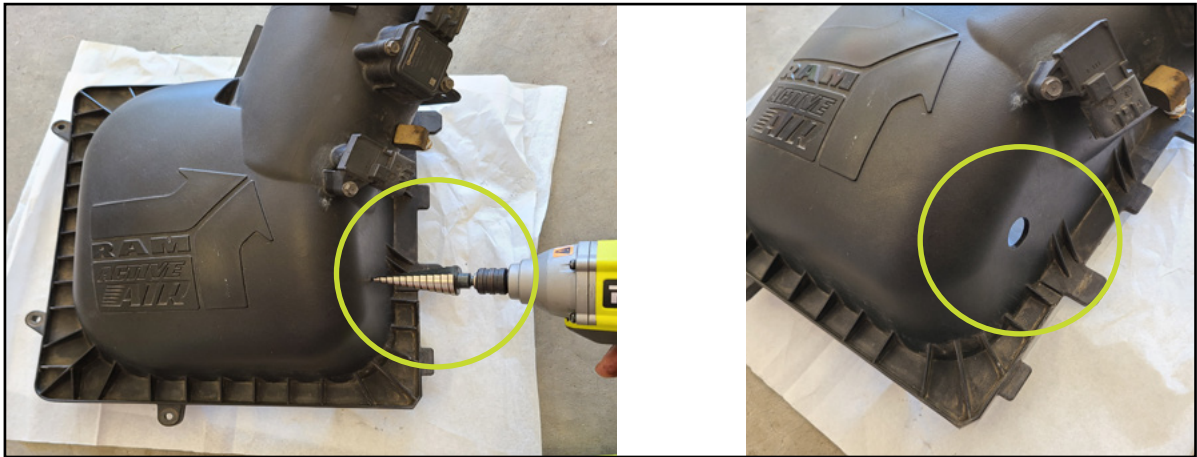


Figure 4: Drilling for the grommet location

3. Insert the grommet into the hole. (See Figure 5.)
4. Insert the barbed fitting without the sensor installed to avoid damage to the sensor.
5. Reinstall the air box and insert the barbed fitting into the grommet. (See Figure 6.)

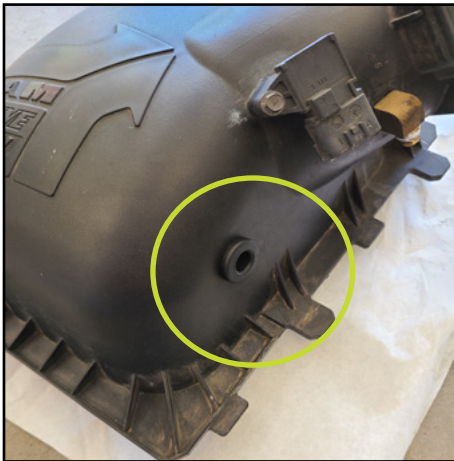


Figure 5: Inserting the grommet into the drill hole



Figure 6: Reinstallation of the air housing and insertion of the barbed fitting

6. Install the sensor onto the fitting and hand tighten until snug. Be sure not to overtighten. (See Figure 7.)

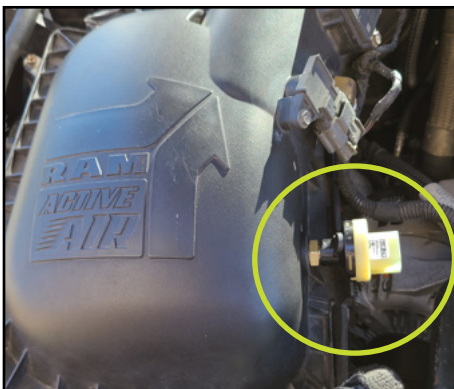


Figure 7: Installing the sensor onto the fitting

Wiring Installation

Wiring diagrams are different across applications, so the information in this section is intended to serve as a general guide. For further information on how to wire the pigtail harness watch the [FleetguardFIT Air LED Sensor Installation video](#).

1. Locate the ignition/key switch fuse from the drawing on the fuse box cover to provide auxillary power.
2. With a piggy back fuse holder, connect the power cable of the connector to the ignition ignition/key switch power.
3. Connect the ground/black cable to the chassis ground of the vehicle.
4. Upon completion of the Sensor Installation and proper wiring Installation, connect the connector to the sensor.

Note: While the engine is running, you should see the LED sensor display one of the three colors.

5. Secure the loose harness up to a nearby robust location using a ziptie or something similar.
6. Press the black button on the sensor to reset the sensor after each filter change.

⚠ CAUTION: Do not connect wiring to the vehicle battery directly, as it may cause the battery to drain and subject the sensor to severe power transients.

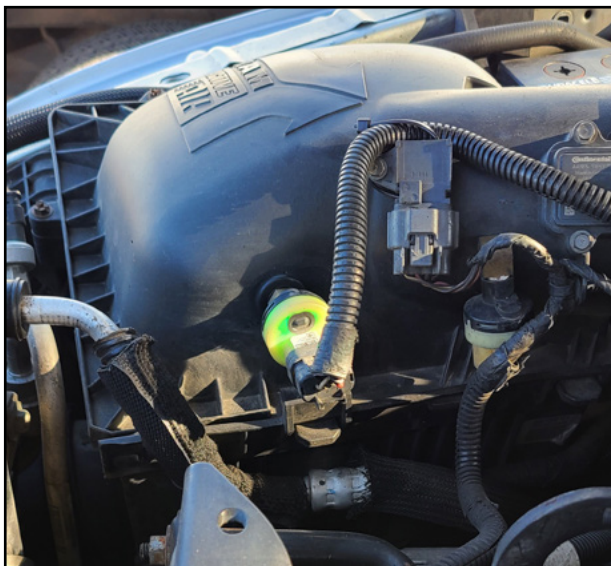


Figure 8: Engine Installation

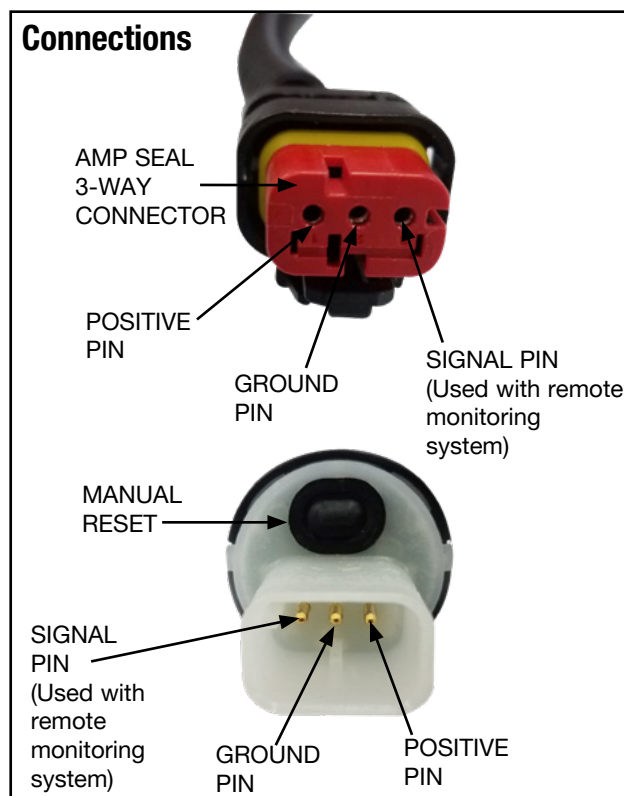


Figure 9: Connection Views

LED Color Indications



Figure 10: LED Color Indications

LED Color Indication Schemas			
COLOR INDICATION	PART # SK15967 This Includes a grommet and a barbed fitting for a universal installation or when no threaded port is available.	PART # SK15959 Replace your current 25" threaded mechanical Restriction Indicator.	PART # SK15960 Replace your current 21" threaded mechanical Restriction Indicator.
SOLID GREEN (with 5 sec delay)	0-13" H ₂ O	0-16" H ₂ O	0-13" H ₂ O
SOLID YELLOW (with 5 sec delay)	13-17" H ₂ O	16-20" H ₂ O	13-17" H ₂ O
BLINKING YELLOW (with 5 sec delay)	17-21" H ₂ O	20-25" H ₂ O	17-21" H ₂ O
SOLID RED (with 5 sec delay)	Above 21" H ₂ O	Above 25" H ₂ O	Above 21" H ₂ O
BLINKING RED (with 5 sec delay)	Miswiring/Sensor Failure	Miswiring/Sensor Failure	Miswiring/Sensor Failure
RESET (with 5 sec delay)	Time R-Y-G	Time R-Y-G	Time R-Y-G

Figure 11: LED Color Schemas

Color Latch

The LED color is to latch at the maximum restriction observed with the delay timer logic. The automatic color change is only to happen in ascending restriction order. For latch release, the manual reset is to be used. (See Figure 12.)

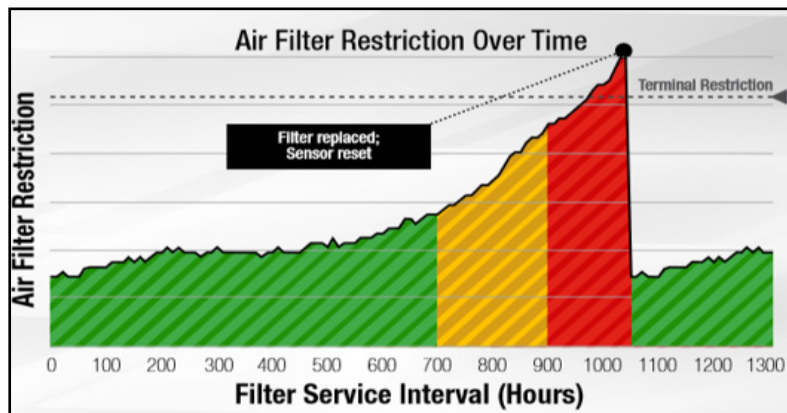


Figure 4: Restriction Over Time vs Filter Service Hours



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