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Subject: 2010 Hyundai Genesis 2.0T Automatic Transmission

Installation Difficulty



Testing Conditions

Test took place on a mild and dry December day. Temperatures were in the 46-51 °F range.

Apparatus

For hardware Mishimoto chose to use PLX sensor modules driven by the Kiwi WiFi plus iMFD. This is a wireless system from the sensor modules to the iPad or laptop computer. The software used was the Palmer Performance Scan XL pro, which has full data logging capabilities.



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Fluid temperatures were taken from both the inlet and outlet of the 19-row oil cooler using a Mishimoto oil sandwich plate with PLX fluid temperature sensors. Oil pressure was also tested to ensure no dramatic pressure drop occurs when installing the large oil cooler.

Note: The temperature sensors are on the side of the sandwich plate, and the oil pressure sensors are in line with the AN fittings.

A thermocouple was used to measure ambient air temperature for the test. The location chosen was in the front grill with no obstructions.

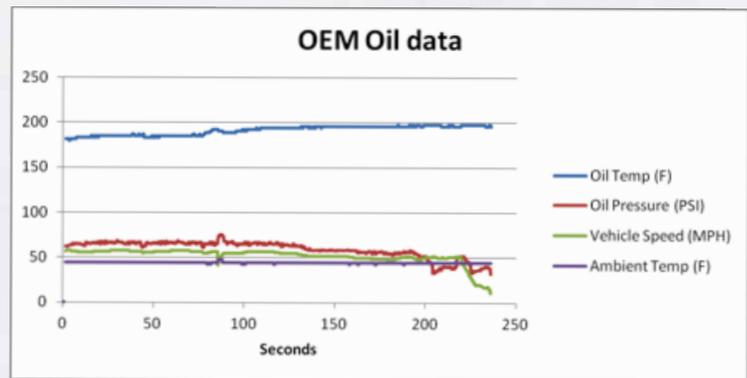


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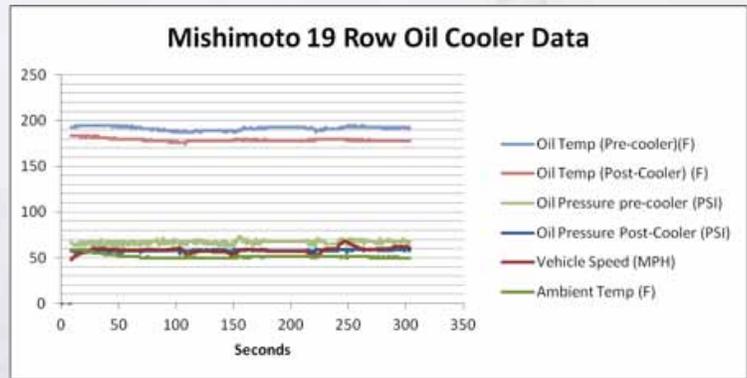
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Experiment

The test compares the OEM oil temperature with the Mishimoto 19-row direct fit oil cooler. To conduct the test we drove the Hyundai on a highway at approximately 55mph (2400 rpm in 5th gear) and cruised for approximately five miles. Special attention was given to the space between the Genesis and the car in front of it to ensure that fresh air was flowing into the Oil Cooler.



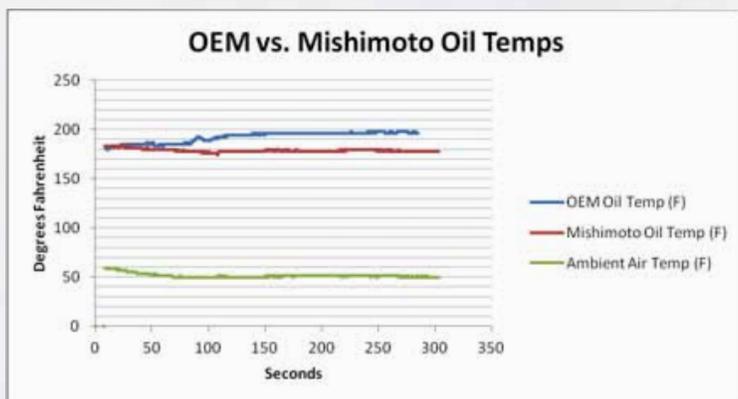
From the graph on the left, the average oil temperature for the stock Genesis cruising at 55mph is about 198°F when the air temperature is 48°F.



The graph on the left shows that the average temperature drop of the oil after passing through the cooler is about 14°F when the air temperature is 50°F.



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The graph on the left shows that Mishimoto oil temperatures are reduced compared with stock temperatures when using a Mishimoto oil cooler for the 2010 Hyundai Genesis. The average oil temperature drop was about 20°F.

Conclusion:

This oil cooler kit is a 100% bolt-on kit that is easy to install and requires no modifications to the vehicle. Mishimoto was able to reduce oil temperatures on the stock Genesis by an average of 20°F in cruising highway conditions. Under harsh driving or track use you can expect larger temperature drops after installing this kit.

Engineer's Comments:

I really enjoy working on and testing the new Genesis coupes. They are an awesome value for these features - RWD 2.0 liter turbo, with good suspension and optional Brembo brakes. The Genesis is a great car right from the factory, but it also has a great platform to build a weekend track car. I am anxious to see what people will build out of these cars over the next five to 10 years.

Kevin McCardle
Product Engineer, Mishimoto Automotive