



Preliminary Information

PIT5365D Diagnostic Tips Ambient Temperature Display / Information (Topology)

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Cadillac	Escalade Models	2015 - 2020	All	All	All	All
Chevrolet	Silverado 1500	2014	All	All	All	All
Chevrolet	Silverado	2015 - 2018	All	All	All	All
Chevrolet	Silverado LD	2019	All	All	All	All
Chevrolet	Silverado 2500/3500	2019	All	All	All	All
Chevrolet	Suburban	2015 - 2020	All	All	All	All
Chevrolet	Tahoe	2015 - 2020	All	All	All	All
GMC	Sierra 1500	2014	All	All	All	All
GMC	Sierra	2015 - 2018	All	All	All	All
GMC	Sierra Limited	2019	All	All	All	All
GMC	Sierra 2500/3500	2019	All	All	All	All
GMC	Yukon Models	2015 - 2020	All	All	All	All

Supersession Statement

This PI was superseded to update model years, Condition/Concern. Please discard PIT5365C

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition / Concern

There has been some confusion on how the temperature reading that is displayed on the radio, gets from the ambient temperature sensor to the actual radio display. Depending on the model, engine and/or radio option, it may vary. The block diagrams below should help clarify any confusion.

-1500 Trucks and All SUV's With IO3/IOB Radio (all engines)

Ambient Air Temperature Sensor >>> (hard wired circuits 636 and 61) >>> ECM >>> (High Speed Lan)>>> BCM >>>(Low Speed Lan) >>> Radio tuner >>> (VDS Cable) >>> Radio Display

-1500 Trucks and All SUV's With IO4, IO5, or IO6 (all engines)

Ambient Air Temperature Sensor >>> (hard wired circuits 636 and 61) >>> ECM >>> (High Speed Lan)>>> BCM >>>(Low Speed Lan) >>> Radio tuner >>> (MOST BUS) >>> HMI >>> (VDS Cable) >>> Radio Display

-2500/3500 Trucks With IOB Radio (L5P Diesel Engine only)

Ambient Air Temperature Sensor >>> (hard wired circuits 636 and 61) >>> ECM >>> (High Speed Lan)>>> BCM >>>(LowSpeed Lan) >>> Radio tuner >>> (VDS Cable) >>> Radio Display

Note: Trucks equipped with the L5P Diesel engine do have a grille mounted ambient air temperature sensor, but it is not used and is only installed so there is not an open connector.

-2500/3500 Trucks with IO5 or IO6 (L5P Diesel Engines only)

Ambient Air Temperature Sensor >>> (hard wired circuits 636 and 61) >>> ECM >>> (High Speed Lan)>>> BCM >>>(LowSpeed Lan) >>> Radio tuner >>> (MOST BUS) >>> HMI >>> (LVDS Cable) >>> Radio Display

Note: Trucks equipped with the L5P Diesel engine do have a grille mounted ambient air temperature sensor, but it is not used and is only installed so there is not an open connector.

-2500/3500 Trucks With IO3/IOB Radio (Gas or LML Diesel Engines)

Ambient Air Temperature Sensor >>> (hard wired circuits 636 and 61) >>> IPC >>> (Low Speed Lan) >>> Radio tuner >>> (LVDS Cable) >>> Radio Display

-2500/3500 Trucks with IO4, IO5, or IO6 (Gas or LML Diesel Engines)

Ambient Air Temperature Sensor >>> (hard wired circuits 636 and 61) >>> IPC >>> (Low Speed Lan) >>> Radio tuner>>> (MOST BUS) >>> HMI >>> (LVDS Cable) >>> Radio Display

IMPORTANT INFO FOR 2015 HD TRUCKS ONLY: Midway through the 2015 model year, the Full Size HD Pickup trucks were updated. These updated trucks are now known as 2015i trucks, and they can be easily identified as having the "AF" RPO code. Any 2015i truck that is equipped with diesel engine (RPO LML) will now have an ambient air temperature sensor that is located in the passenger mirror which is used for powertrain requirements. The 2015 6.6L diesel trucks (engine RPO LML) built PRIOR to the mid year change 2015i (no RPO AF) do not have a physical ambient air temperature sensor in the passenger outside mirror for the powertrain requirements. The outside temperature for powertrain requirements is calculated by the ECM on these models.

Some early built 2015i trucks equipped with the 6.6L diesel engine (RPO LML) built before 12/14/14 use the ambient air temperature sensor located in the passenger mirror for the temperature displayed on the radio, as well as HVAC and powertrain requirements. If the BCM and IPC are reprogrammed with the latest calibrations in TIS2WEB, this will change the operation of the radio and HVAC topology to what is shown above. The grille mounted ambient air temperature sensor will now be used for the radio and HVAC requirements, and the passenger mirror sensor will now only be used for powertrain requirements. The radio outside temperature display will show "- -" if only one of the modules (BCM or IPC) is programmed with the latest calibrations. The other module will need to be programmed with the latest calibration to correct the issue.

Note: For all configurations listed above, after the IPC or BCM sends the ambient air temperature out on the Low Speed LAN buss, the HVAC control module will use this information for HVAC related requirements.

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

Additional SI Keywords

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