



Service Bulletin

INFORMATION

Subject: Wireless Charging Module Diagnosis

This Bulletin replaces PIC6049F. Please discard PIC6049F.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick Cadillac Chevrolet GMC	All GM Passenger Cars and Trucks	2015	2018			All	All

Involved Region or Country	North America and N.A. Export Regions
Additional Options	Equipped with Dealer Installed Cellphone Wireless Charging or Inductive Portable Wireless Device Charger (RPO K4C)

Correction

The following procedure REQUIRES the use of EL 51755-A 'Inductive Charging Test Tool' which is an essential tool shipped to every GM store earlier this year. Refer to Use of EL 51755-A 'Inductive Charging Test Tool' below.

The diagnostic process follows the following outline:

1. Validate applicability of the device to be charged
2. Understand "Normal" charger/device interaction
3. Validate the function of the Wireless Device Charger with EL 51755-A tool and EL-51755-UPD Sleeve

Validate applicability of the device to be charged

Not all wireless devices are prepared to accept a charge from the built-in wireless charger.

First determine what device the owner is attempting to charge and validate this device is compatible with the GM Wireless Charger.

The following table is regularly updated and posted at: www.gmtotalconnect.com.

https://my.chevrolet.com/content/dam/gmownercenter/gmna/static/pagelimages/learnAbout/articles/documents/GM_Wireless_Charging_Compatible_Device.pdf

In Canada, visit www.gmtotalconnect.ca/wireless-charging (English) or www.connexiontotalegm.ca/wireless-charging/ (French).

Phone Manufacturer	Phone Model	Built-In Wireless Charging	Recommended Case / Back Cover
Apple	iPhone 4/4s		VITAHULT (IKEA): Wireless charging cover i4

			Energizer Model: IC-IP4G
Apple	iPhone 5/5s		Aircharge MFi Qi iPhone 5S / 5 Wireless Charging Case AIR0191
			VITAHULT (IKEA): Wireless charging cover i5/5S
			Duracell/Powermat REC000078
			CHOETECH Qi Standard Wireless Charger Receiver Case for iPhone 5/5s
Apple	iPhone 6/6s & iPhone 7/7s		BEZALEL Latitude [Qi + PMA] Dual-Mode Universal Wireless Charging Receiver Case
			VITAHULT (IKEA): Wireless charging cover i6 (not compatible with Cadillac CT6)
			Aircharge MFi Qi iPhone 6S / 6 Wireless Charging Case
HTC	Incredible2		HTC6350-WLDR
LG	G2	X	N/A
LG	Nexus 4	X	N/A
LG	Nexus 5	X	Built-in / Not Required
LG	Spectrum 2	X	Built-in / Not Required
Motorola	Droid 4		Motorola Model: MOTDRD4-WLDR
Motorola	Droid Bionic		Motorola Model: MOTBIO-WLDR
Motorola	Droid Maxx	X	Built-in / Not Required
Motorola	Droid Mini	X	Built-in / Not Required
Motorola	Moto X		Incipio model: MT231
Nokia	Lumia 920	X	Built-in / Not Required
Nokia	Lumia 928	X	Built-in / Not Required
Nokia	Lumia 830 / 930	X	Built-in / Not Required
Nokia	Lumia 950 / 950 XL	X	Built-in / Not Required

Samsung	Galaxy S3		VITAHULT (IKEA): Wireless charging cover S3
			Duracell/Powermat: REC000072
Samsung	Galaxy S4		VITAHULT (IKEA): Wireless charging cover S4
			Samsung Model: EP-CI950IWK
			Incipio Model: SA-069-SLV; SA-069-BLK
Samsung	Galaxy S5		VITAHULT (IKEA): Wireless charging cover S5
			Samsung model: EP-VG900BBU
			Samsung model: EP-CG900IBA
Samsung	Galaxy S6	X	Built-in / Not Required
Samsung	Galaxy S6 Edge	X	Built-in / Not Required
Samsung	Galaxy S8	X	Built-in / Not Required
Notes:	<ul style="list-style-type: none"> • If phone does not charge, remove it from the charger for 3 seconds and rotate phone 180 degrees. • Not all phones fit into all vehicle integrations. • Cases used on phones with built-in wireless charging capability may have reduced performance. • Do not use the wireless charging system with objects between the charger and the phone. • Phones that are longer than 150 mm (approx 6 inches) may have reduced or no performance. • Phones that are not listed have not been evaluated for compatibility. 		
Incompatible Phones:	<ul style="list-style-type: none"> • Apple iPhone 6 Plus, 7 Plus • Samsung Galaxy S6 Active, S6 Edge Plus • Samsung Galaxy S7, S7 Edge, S7 Active • Samsung Galaxy S8 Plus • Samsung Note 5, Note 7 		

The inductive system in GM Vehicles is not intended to accommodate all devices that feature inductive charging.

Tablets and larger cell phone have dimensions beyond the design-targeted dimensions.

The following table shows the dimensions GM targeted for compatibility.

Any device or device/case combination that is outside these dimensions may not work or may work only intermittently.

This is NOT reason to replace parts and is not a warrantable event.

(mm)	Min	Max
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Height	120	144
Width	60	73

Protective cases used on phones with built-in wireless charging capability may have reduced or no charging performance.

If the owner's device is not listed on the above compatibility matrix or is outside the dimensions listed in the above table, advise the owner their device is not compatible with the GM design and take no further action.

Recommendation/Instructions

Understand “Normal” charger/device interaction

The following guidance is applicable to both a compatible device and the EL 51755-A testing tool used in addition with the new EL-51755-UPD Sleeve.

Review the owner's manual or September 28, 2016 TechLink for charger operation for the specific model being serviced. In general care must be taken to assure:

1. Verify the device is properly equipped for wireless charging.
2. Turn on the vehicle or use Retained Accessory Power.
3. Remove all objects from the charging pocket or pad before attempting to charge the phone. Make sure there are not any coins, keys, cards, etc., trapped between the phone and the charging surface.
4. On a charging pad, align the back of the phone (screen facing up) against the flat surface of the charging pad. For a charging pocket, insert the phone (screen facing rearward) into the pocket so the phone screen faces the rubber bumps within the pocket. Proper positioning is critical; the charging coils of the charging surface and the device must line up in order for charging to take place.
5. When the phone is properly aligned, the phone charging icon (lightning bolt) will appear on the infotainment screen and, a few seconds later, the phone's battery will start charging. If the phone does not charge, remove it from the pocket/pad, rotate it 180 degrees, wait for 3 seconds, and reposition it correctly.

Tip: The Colorado and Canyon do not display the phone charging icon on the infotainment screen. An LED indicator on the console is green when the phone is charging. If the LED is yellow, the phone is not charging and it should be repositioned correctly on the charging pad.

For vehicles with charging pads, rough roads and vehicle dynamics may result in the phone shifting out of position and charging to stop. If this happens, lift the phone for 3 seconds and place again on the pad with the correct alignment to re-establish charging.

If customers have any questions about wireless charging, direct them to the Owner Center websites for their respective brand.

Validate the function of the Wireless Device Charger with EL 51755-A

Note: in December 2016 an updated “Sleeve” for the EL 51755-A was shipped to all dealers. Assure your tool up updated with this sleeve to assure proper positioning of the tool in all inductive charging applications. More information available in the January Emerging Issues show is available on the training web site This story is included. 10217.01V. For Canadian dealers, the related training video on this topic is included in the December 2016 TAC TALK presentation (52016.12D-OD). The training video is available within GM Centre of Learning and can be viewed by selecting Centre of Learning from the Global Connect Home Page.



The EL-51755-A Inductive Charging Test Tool can be used to verify charging system operation in a vehicle.

There is no need to remove the rubber sleeve from the pocket or pad for testing.

To verify the operation of the charging system, simply position the tool on the charging pad or in the charging pocket.

If the tool's wireless charging indicator is on, the charging system is operating properly and any charging concern may be caused by an incompatible or defective mobile device.

If the charging indicator is off, continue diagnosis using the appropriate Service Information.

To complete the test successfully, the procedure may need to be repeated 5 times.

Between each attempt, remove the tool and wait at least 3 seconds to reset charger module from failure mode.

Tip: For any Mobile Device Wireless Charging System concerns, refer to circuit/system verification and testing in the appropriate Service Information. A scan tool cannot be used since the system is not connected to any control module. No DTCs or data parameters are available.

Note: To locate information in Service Information for Mobile Device Wireless Charger Malfunction, or Module Replacement please refer to the following path:
Power and Signal Distribution | Power Outlets | Wireless Charging (K4C)

Version	1
Modified	

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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