



TECH TIMES

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2018 KIA SKILL NATIONAL CUP

Fifteen service technicians from Kia dealerships across the United States competed in Kia Motors America's (KMA) 2018 Kia Skill National Cup at the company's headquarters in Irvine, California on Wednesday, March 21, 2018.

They were assessed on their ability to diagnose and repair five areas: Electrical, Body Network, Drivability, Engine Mechanical, and Transmission. The competition tested the technicians' ability to identify concerns, develop a diagnostic strategy and use their technical skills and expertise to resolve issues.

Here are the rankings by each KMA Region:

Western Region

1. Tim Carlson, Martin Swanty Kia, Kingman, Arizona
2. Jason Jackson, Jerry Seiner Kia, Salt Lake City, Utah
3. Rick Byrd, Earnhardt Liberty Kia, Prescott Valley, Arizona

Southwest Region

1. Phillip Cole, Midtown Kia, Tulsa, Oklahoma
2. Jim Grannemann, Midtown Kia in Tulsa, Oklahoma
3. Tom Lindquist, Classic Kia of Carrollton, Carrollton, Texas

Central Region

1. Max Umbs, Dick Brantmeier Kia, Sheboygan, Wisconsin
2. Kyle Bliss, Fox Kia, Grand Rapids, Michigan
3. Greg Greene, Jeff Wyler Kia, Batavia, Ohio

Eastern Region

1. Shane Johnson, Sansone Jr.'s 66 Kia, Neptune, New Jersey
2. Alan Carmody, Balise Kia, West Springfield, Massachusetts
3. David Cutting, Cape & Islands Kia, South Yarmouth, MA



Southern Region

1. Corey Sloan, Rusty Wallace Kia of Knoxville, Knoxville, TN
2. Matt Peachey, Sunset Kia of Sarasota, Sarasota, Florida
3. Tommy La Tulipe, Parkside Kia, Knoxville, Tennessee

Congratulations to the top four finalists who will compete in the 2018 Kia Skill World Cup hosted by Kia Motors Corporation in Korea April 23-27:

1. Shane Johnson, Sansone Jr.'s 66 Kia
2. Tim Carlson, Martin Swanty Kia
3. Corey Sloan, Rusty Wallace Kia of Knoxville
4. Jason Jackson, Jerry Seiner Kia



L-R: Jason Jackson, Corey Sloan, Tim Carlson, Shane Johnson

TECHLINE FAQs

Q How do I view the E-Reports?

A Once eReport data from the KDS/GDS device is transferred via wi-fi, it will be available on the eReport Case List page. With the KDS connected to wi-fi, push the eReport button on the bottom right of the home screen: a new window will open displaying the latest VDN information that has been transferred.

Q How do I take a video of oil consumption for SC147?

A You can and must attach a video of the VIN plate and pan to the engine or exhaust to justify replacement. If it is not smoking, show the spark plugs which should be coated with white ash from burning oil. If it is confirmed to be consuming oil, try letting the engine idle for 20 minutes, then snap the throttle a few times; it should also start to smoke out the tail pipe. This video documentation is required.

Q I am new to Kia and don't know how to open a techline case. Can you help me?

A Go to KGIS homepage and click on "Kia techline" it will take you to the log in screen (K- Support). Click on the small "help" link in the upper right corner of the screen. Follow the directions given and you should have no problem creating a case.

Q I have a CVVT camshaft position over advanced code or a crankshaft/camshaft correlation code, how do I properly test CVVT system?

A Review Tech Times Volume 20, Issue 1 article on page 17 on CVVT testing / performance & operation.

Q I have a wheel speed sensor code, how do I test them?

A Review Tech Times article Volume 17, Issue 6 article on page 9 on how to diagnose a failed wheel speed sensor with the VMI.

LATEST TECHNICAL SERVICE BULLETINS, SERVICE ACTIONS AND CAMPAIGNS

PI 1801	Fuel Tank Strap Replacement (05-07MY KM)
SC 153r3	3.3L Lambda Engine Inspection / Replacement (17MY UMa)
SC 147r7	Theta II Engine Inspection and/or Replacement (11-14MY QF/TF, XMa & 11-13MY SL)
ENG 177Cr3	Service Action: 2.4L Engine Start Logic Improvement (SA316Cr3) (18MY UMa)
BOD 182r3	Service Action: Floor Console Inner Panel Inspection & Correction/Replacement (SA328) (18MY JFa)
TRA 059r3	HCU/TCU Upgrade - For 100 Mesh Solenoid Equipped Hybrid Transmissions (11-16MY TFHEV)
ENG 175r3	Service Action: E-CVVT Cover Inspection and Motor Plug Replacement (SA305) (16-17MY JF, JFa, UMa & 17MY QL)
ELE 145	Head Unit Mismatch With Microphone (14-15MY XMa, YD)

CAUTION

Vehicle servicing performed by untrained persons could result in damage to the vehicle.

WARNING

- Vehicle servicing performed by untrained persons could result in injury to those persons or to others.
- Always take proper and necessary safety precautions when performing any type of service on a vehicle.
- The Kia technician newsletter (Tech Times) is intended for use by professional Kia automotive technicians only. It is written to inform technicians of conditions that may occur on some vehicles. Trained Kia technicians have the equipment, tools, safety instructions, publications and expertise to help perform the job correctly.

NOTICE

The topics covered in this newsletter are designed to assist you with the diagnosis and repair of specific vehicle conditions. Just because a condition is described in this newsletter, do not assume that it applies to your vehicle, or that your vehicle will have that condition. In all cases, the procedures in the applicable Service Manual and/or Electrical Troubleshooting Manual or on KGIS should be performed first.

The information and specifications provided in this document were accurate at the time of development. Kia reserves the right to discontinue or change specifications or design at any time without notice and without incurring any obligation.

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NEW KGIS ENHANCEMENTS

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In order to provide additional information with quick access to Kia service technicians, Kia University is pleased to announce new enhancements to KGIS. These enhancements include the addition of Emergency Response Guide (ERG) Manuals on the Top Navigation panel that will store all current and future EV, HEV and PHEV ERGs. Kia Service Support Contacts has been added to Quick Links section along with Technician Videos added to Quick Links and Enhanced Search section. Also, single engine auto populate feature that will automatically select engine for vehicles equipped with one engine. Stay on the look out as more features will be added during the course of the year.

The screenshot displays the Kia Global Information System (KGIS) interface. At the top, there are navigation tabs for Service Materials, Publication, Diagnostic Tools, and Tools & Equipment. Below these, a search bar is visible with the text 'Enter Complete VIN' and a 'Go' button. The main content area is divided into several sections: 'Quick Links' on the left, 'Enhanced Search' in the center, and 'News Center' and 'New Items' on the right. The 'Quick Links' section includes options like 'Kia Service Support Contacts', 'KDS & GDS Information', 'Maintenance Schedule', 'Owner's Manuals', 'UVO & Bluetooth', 'Limit Conversion Tool', and 'Tech Videos'. The 'Enhanced Search' section has a dropdown menu for the year (2018) and a search button. The 'News Center' and 'New Items' sections list various updates and service actions, such as 'KDS Internet Update Version M-N-K-01-00-0101' and 'Service Action: Rattle Noise From Tailgate (SA322A)'.

TECHNICIAN SATISFACTION SURVEY RAFFLE - 2018 1ST QTR

Greetings Kia Technicians!

The results of the Q4-2017 and Q1-2018 Technician Satisfaction Survey Raffle were once again very positive. Kia Techline continues to perform very well in Q4! We received 5840 survey responses for Q4 2017 and 4960 responses for Q1 2018. The overall results for Techline were very positive with the overall satisfaction rating for Techline at 91.4% using a 5 point scoring system. Selecting 'Very Dissatisfied' (bottom) is a rating of 1 where 'Very Satisfied' (top) is a rating of 5. As you know, anything less than 'Very Satisfied' is viewed as a failure on our part. We reviewed all of your responses and gained valuable feedback on your Techline experiences and use this data to drive improvement. We will continue to use your feedback to see how we were doing and how we can correct any issues that may be occurring in our ongoing efforts to improve the level of service we provide to all our dealers. Thank you to all who participated in the survey. We greatly appreciate all of your valuable feedback!

The 3 winners of the Q4-2017 raffle were...

Billy Brantley - MS015 Dean McCrary Kia
Ethan Walker - VA013 Dulles Kia
Brandon Gosnell - SC033 Kia of Greenville

The 3 winners of the Q1-2018 raffle are...

Jason Haney - GA008 Kia of Augusta
David Comer - MO029 Cable Dahmer Kia, Lee's Summit
Jacob Cloy - LA001 Kia of Baton Rouge

Congratulations to all the winners!

The Techline Technician Satisfaction Survey will continue every quarter of 2018, so please continue to submit your feedback by completing the survey when you close your cases and get your chance at winning 1 of 3 \$500 MasterCard gift cards!

In closing, Techline continuously works hard to provide industry leading technical support to all Kia dealers in an efficient manner. Here are the latest performance metrics for Kia Techline.

Web case response time 2018 YTD avg: 14 min.

Phone response time avg: <13 secs.

New Case Count for 2017 (includes PWA cases): 115,318 YTD. That's a 12% increase over last year while maintaining our service levels.

Overall Satisfaction Survey Score: 91.6%. (If you feel you cannot choose 'Very Satisfied' then please add a comment on how we can improve.)

Thank you all for your continued support! Go Kia!

Regards,

David Brisky
Techline Communications Manager,
Kia Motors America

MASS AIR FLOW VS. SPEED DENSITY SYSTEMS ON KIA ENGINES

Depending on the model year and variant, Kia uses either a Speed Density or a Mass Air Flow system to calculate an engine's amount of incoming air. In this first of two articles, we will discuss the Speed Density System and also a few recently-implemented 3.3 Liter V6 Lambda II engine changes regarding diagnosis.

In a large portion of Kia models, the Engine Control Module (ECM) uses the Speed Density system to calculate the amount of air used by the engine based mostly on pressure level in the intake manifold and the temperature... and therefore the density of the air. To calculate this, it primarily relies on three sensors: the Manifold Absolute Pressure (MAP) sensor and a combined Barometric Pressure Sensor (BPS) and Intake Air Temperature (IAT) sensor.

The 3.3L Lambda II GDI engine was first applied to 2014 Cadenza (YG) / Sorento (XM) and also fitted to the 2015 Sedona (YP) and 2016 Sorento (UMa) models, uses a MAP Sensor and a combined BPS and IAT sensor to measure and calculate air density and determine the engine's air mass flow rate. All 3 sensors operate using a single 5 Volt supply-feed and a single sensor-ground wire from the ECM/PCM (see Fig. 1 MAP/BARO Power and MAP/ECTS/BARO Ground ECM terminals).

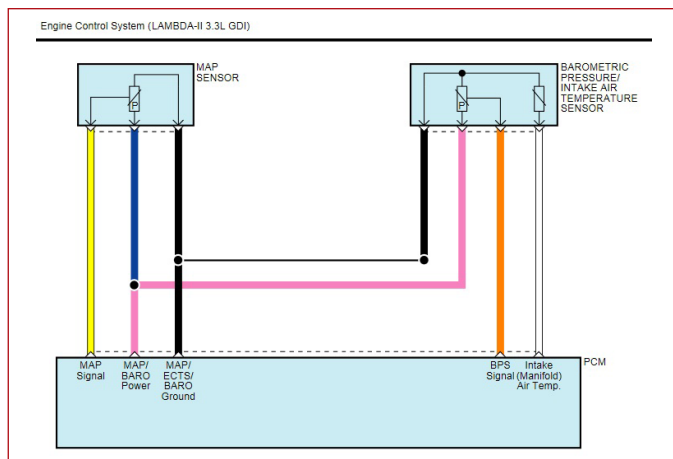


Fig. 1: 2014-2016 3.3 Liter V6 Lambda Engine IAT/BPS/MAP Electrical Schematic

The 2017 Cadenza (YG) 3.3 Liter V6 and the 2018 Stinger (CK) 3.3. Liter V6 Twin Turbo models are the first two Kia vehicles to have the IAT combined with the MAP Sensor. But the biggest change is with the Barometric Pressure (BPS) Sensor which is now located inside the ECM/PCM.

The MAP and IAT sensors operate using a single 5 Volt Power-feed and a single ground wire from the ECM/PCM (see Fig. 1 MAP Power and Ground ECM terminals).

Since the BPS is now internal to the ECM/PCM, there are no voltage or ground pins to check during diagnosis. In addition, there are no engine management control electrical

schematics showing the Barometric Pressure Sensor (BPS) location.

Nonetheless, BPS related sensor parameters such as Barometric Sensor pressure (shown in PSI, InHg, kPa), can be monitored using KDS Data Analysis tool.

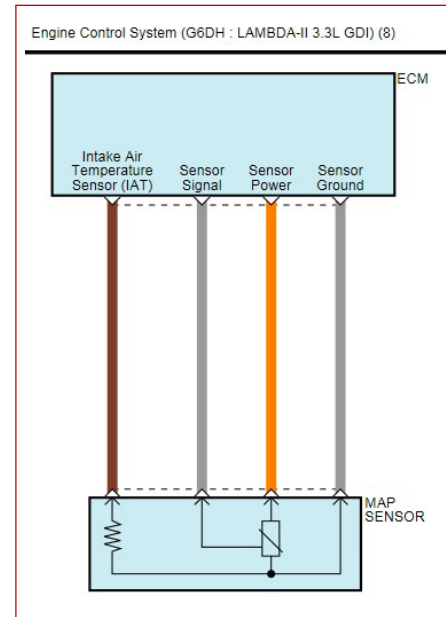


Fig. 2: 2017 3.3 Liter V6 Cadenza and Stinger Lambda Engine MAP and IAT Electrical Diagram

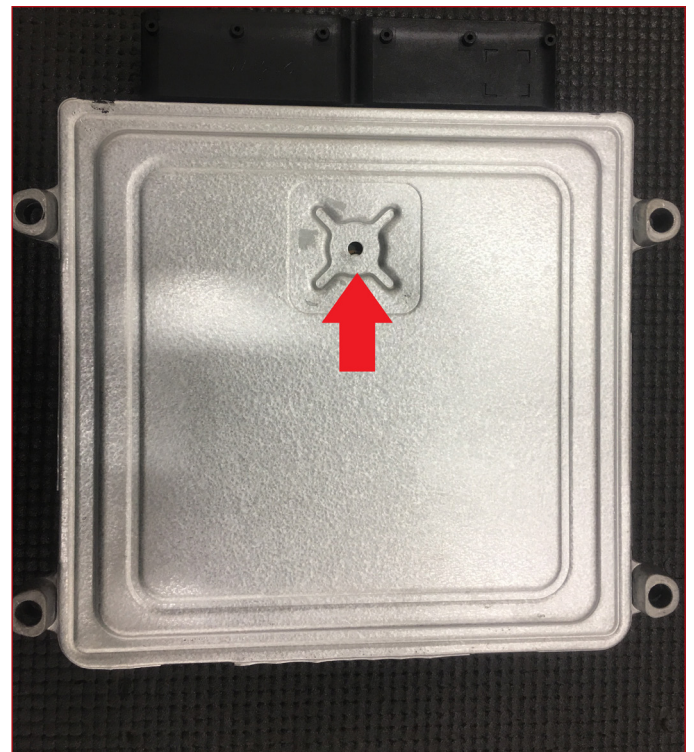


Fig. 3: 2017 3.3 Liter V6 Cadenza and 2018 Stinger back of ECM showing Barometric Pressure Sensor (BPS) reference port

JOE'S CORNER DIAGNOSTIC REASONING: NOT ALL DTCs ARE CREATED EQUAL!

Know the circuit you are working on. In this ongoing series of articles, I will show you some Tips & Tricks of the Trade. Let's start with the basics.

2-Wire Input Circuits: The DTC will usually indicate what circuit or component it references.

Pull-Up or Pull-Down Switch Circuit (Fig 1, this page)

- KOEO or KOER
- Measure voltage across the switch terminals

Condition	Normal Voltage	Abnormal Voltage
Switch OPEN	Circuit Voltage	< Circuit Voltage
Switch CLOSED	< 0.10 Vdc	< 0.50 Vdc

DC voltage Temperature Type Sensor Circuit (Fig 2, next page)

- Install T-Connector between the sensor and vehicle wiring harness connector (refer to TSB: ELE 064R1)
- **KEY OFF** Measure sensor resistance across both terminals
- **KOEO/KOER** Measure DC voltage across both terminals

Condition	KEY OFF Resistance	KOEO/KOER Voltage
Temperature Sensor Resistance	Slightly < Normal (k Ω)	N/A
Temperature Sensor Voltage	N/A	> 0.50 - < 3.50 Vdc
Temperature Sensor Open	Much > Normal (k Ω)	\approx 5.0 Vdc
Temperature Sensor Shorted	Much < Normal (k Ω)	\approx 0.0 Vdc

AC voltage Magnetic Inductive (CKP) Type Sensor Circuit (Fig 2, next page)

- Install T-Connector between the sensor and vehicle wiring harness connector
- **KEY OFF** Measure sensor resistance across both terminals
- **KOEO/KOER** Measure voltage across both terminals

Condition	KEY OFF	KOEO	KOER
Sensor Resistance	Slightly < Normal (Ω)	N/A	N/A
Sensor Open	Much > Normal (Ω)	\approx Vdc at both terminals	0.00 Vdc
Sensor Shorted	Much < Normal (Ω)	\approx Vdc at both terminals	0.00 Vdc
Sensor Bias Voltage	N/A	\approx Vdc at both terminals	N/A
Sensor Voltage	N/A	0.00 Vdc	> 1.0 Vac

AC voltage piezoelectric Knock Sensor (Fig 2, see next page)

- Install T-Connector between the sensor and vehicle wiring harness connector
- **KEY OFF** Measure sensor resistance across both terminals
- **KOEO**
 - Measure **DC voltage** at each terminal & ground
 - Measure **AC voltage** across both terminals when tapping block with hammer

Condition	KEY OFF	KOEO	Tapping
Sensor Resistance	Slightly < Normal (Ω)	N/A	N/A
Sensor Open	Much > Normal (Ω)	\approx Vdc at both terminals	0.00 Vdc
Sensor Shorted	Much < Normal (Ω)	\approx Vdc at both terminals	0.00 Vdc
Sensor Bias Voltage	N/A	\approx Vdc at both terminals	N/A
Sensor Voltage	N/A	0.00 Vdc	> 1.0 Vac

Legend	
Vdc DC Voltage	\approx Approximately equal to
Vac AC Voltage	< Less than
Ω Ohms	> Greater than
kΩ Kilohms	KOEO Key On Engine Off
	KOER Key On Engine Running

See next page for Fig 2.

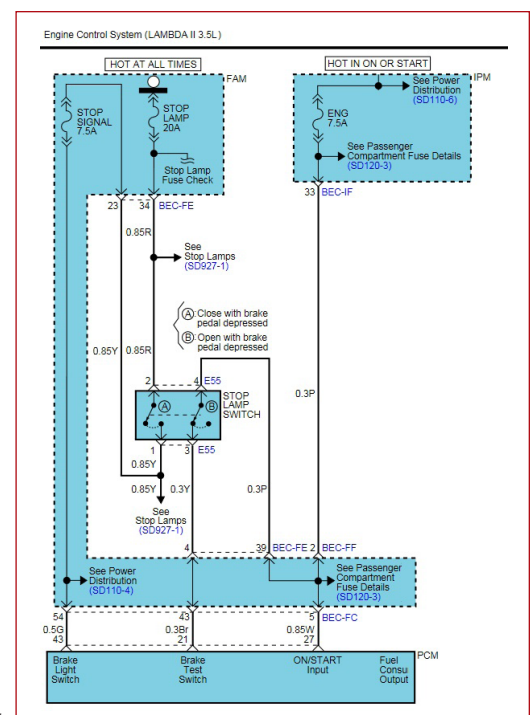


Fig. 1: Pull-Up or Pull-Down Switch Circuit

JOE'S CORNER DIAGNOSTIC REASONING (CONTINUED)

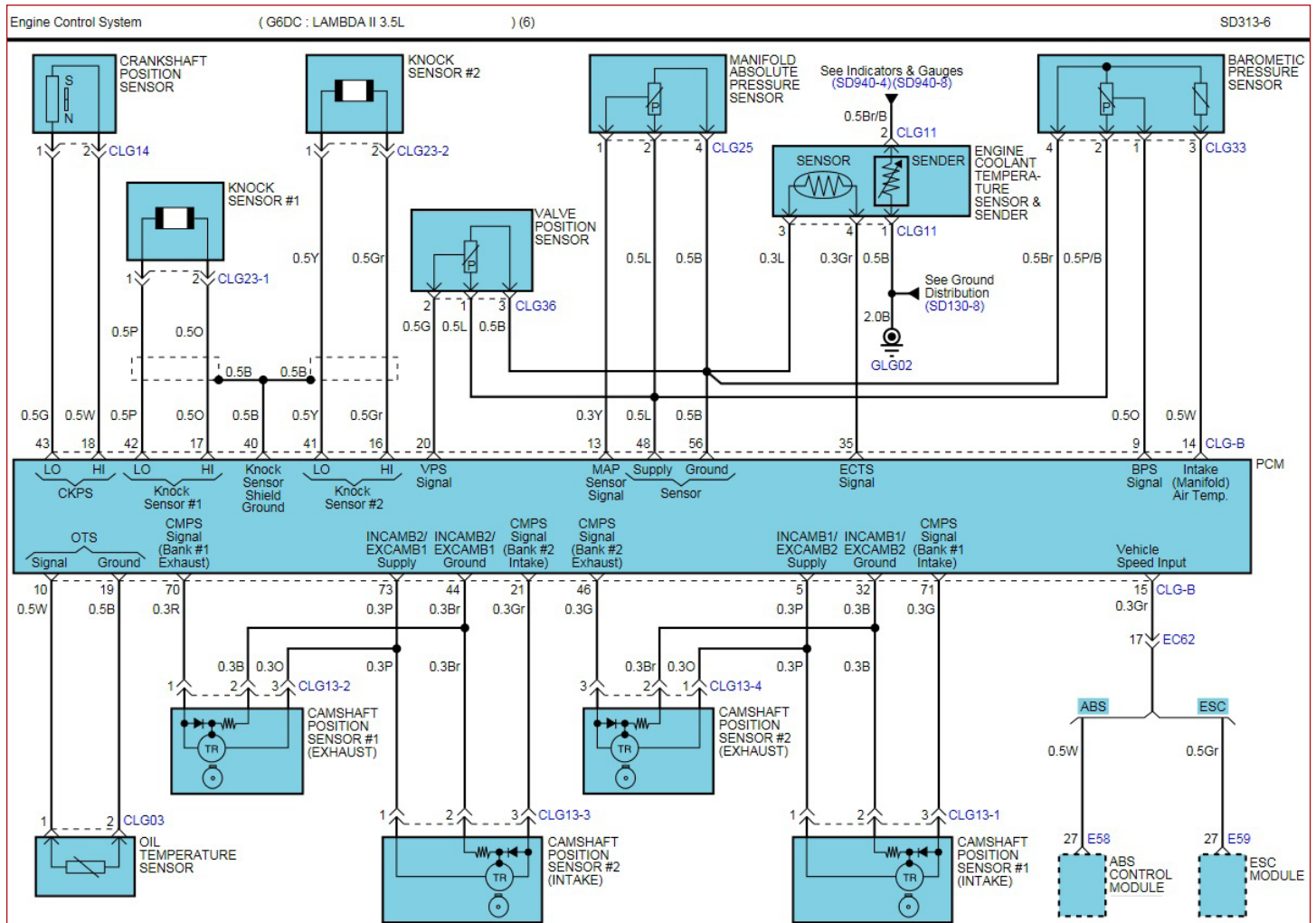


Fig. 2: Temperature-Type Sensor

Stay Tuned for More Tips & Tricks of the Trade in the next Issue.

USE KVID APPLICATION ON EXISTING KDS TABLETS

In July, 2017, KVID kits were distributed which included a PDI Interface Module (PIM) and Samsung Galaxy Tab S2 tablet with the KVID Application pre-installed on the tablet. To keep up with PDI process demand and warranty related photo/data submission, the PIM and KVID Application can also be used with existing KDS Samsung Tablets (Note 10.1 2014 Edition and Galaxy Tab S2 Tablets). All that is required is the purchase of a PIM and installation of the KVID Application. For KVID Application installation instructions, please reference TSB: SST058.

Ordering Additional PIMs: Additional PIMs can be ordered through Snap-on Business Solutions for use with existing KDS tablets. To order, please visit www.KiaSpecialTools.com or call Snap-on Business Solutions at (888) 542-1011.

Part Name	Part Number	Dealer Price
Pre-Delivery Interface Module	GIT1QKDMN002	\$169.00*

* Price subject to change without notice.



TEST YOUR TECH TIMES KNOWLEDGE WORDSEARCH

Test your knowledge of the articles in this issue of Tech Times!

Fill the blanks below, then locate those 31 words from this Word Search: across, backwards, up/down and diagonal. (2-word and multiple word searches may be in separate locations).

T	E	C	H	N	I	C	I	A	N	S	C	C	F	C	E	Y	P	N	M
I	D	F	E	S	J	E	Y	B	T	O	I	P	H	E	R	S	O	C	A
U	A	E	N	I	T	G	E	C	M	R	A	A	C	M	U	I	O	A	L
C	O	A	G	P	Q	N	A	P	T	R	R	A	O	Y	T	Z	I	L	F
R	L	T	I	N	F	T	E	E	A	A	F	N	L	P	A	C	E	C	U
I	N	U	N	V	N	T	M	M	C	R	I	S	M	Z	R	R	V	U	N
C	W	R	E	O	I	O	E	T	E	T	T	U	T	I	E	D	I	L	C
E	O	E	C	T	R	T	E	T	O	C	S	Y	I	S	P	A	T	A	T
B	D	S	I	A	E	R	N	R	V	N	N	G	R	A	M	C	C	T	I
K	O	O	B	R	I	I	E	C	O	D	F	A	N	C	E	I	U	E	O
I	N	T	S	S	P	D	J	C	H	B	M	U	H	I	T	T	D	D	N
C	I	R	T	C	E	L	E	O	Z	E	I	P	G	N	M	S	N	R	L
X	D	I	R	L	H	C	R	A	E	S	D	R	O	W	E	O	I	P	A
E	C	N	P	T	E	M	A	S	T	E	R	C	A	R	D	N	C	A	E
S	G	F	N	I	A	N	A	L	Y	S	I	S	G	Z	J	G	U	N	E
U	N	E	M	E	R	G	E	N	C	Y	V	T	Y	J	H	A	M	T	I
N	Y	T	I	S	N	E	D	C	M	E	E	T	A	R	B	I	L	A	C
C	I	T	E	N	G	A	M	B	K	H	Y	B	R	I	D	D	P	O	G
E	L	G	G	O	T	I	M	B	T	S	X	N	V	B	J	J	A	N	E
T	M	L	V	S	F	O	V	Y	I	J	H	H	C	V	R	X	G	R	O

- You can use GDS to _____ certain systems. (p1)
- There are new _____ to KGIS. (p3)
- Air _____ is partly determined by _____. (p4)
- AC voltage _____ Knock Sensor. (p5)
- You're doing this right now! _____. (p7)
- Charging _____ of _____ vehicles. (p8)
- GDS provides a Kia _____ tool. (p1)
- Oil _____ must be documented. (p2)
- Master _____ will compete in Korea. (p1)
- One sensor measures _____ pressure. (p4)
- Survey winners receive a _____ gift card. (p3)
- AC voltage _____ sensor. (p5)
- An _____'s _____ air is _____. (p4)
- Pre-Delivery _____ Module. (p6)
- The manual describes an _____ release cable. (p8)
- The GDS tool can help prevent _____. (p1)
- Call history does not _____. (p9)
- Kia Service Support _____ have been added. (p3)
- Seats may require diagnosis for a _____. (p10)
- The Skills _____ takes place in Irvine. (p1)
- _____ can be _____ using KDS Data _____ tool. (p4)
- More _____ will be added during the year. (p3)
- Most Kia models use a _____ switch. (p11)
- Know the _____ you're working on. (p5)

Answers are on page 11.

CHARACTERISTICS AND CAUTIONS OF A PLUG-IN HYBRID ELECTRIC VEHICLE

This article provides information regarding the charging characteristics of the Kia Optima Plug-In Hybrid and Niro Plug-In Hybrid vehicles. **Note:** When the charging cable is plugged in, it “wakes up” some of the vehicle systems. What systems are awake, how they are powered, and where high voltage is present should be noted when servicing a PHEV.

Vehicle system states while cable charging

When charging, multiple control modules are powered, including the PRA, High Voltage (HV) battery, Low Voltage DC/DC Converter (LDC) contained in the Hybrid Power Control Unit (HPCU), charge port and High Voltage (HV) orange cables, even though the dash does not indicate the car is in such a state. At the end of charging the control units shut down. See the table below for a list of systems that the KDS can communicate with on the Optima and Niro PHEV both with ignition “OFF” and while charging. KDS will communicate with 5-7 modules while the vehicle is completely “OFF”, and with 5-8 additional modules while charging.

MODULE COMMUNICATION		
VEHICLE OFF	VEHICLE CHARGING	
SMK	ENG	SMK
CLU	MCU	CLU
IBU-BCM	HCULDC	IBU-BCM
IBU-TPMS	BMS	IBU-TPMS
IGPM / SJB	TCM	IGPM / SJB
DDM	ESC / AHB	PMS
ADM	OBC	WPC
<i>Niro: Blue Only / Optima: Blue & White</i>		ADM

12 Volt (auxiliary) battery charging while cable charging

When a charge cable is plugged in and charging begins, multiple systems power up. The LDC will be turned on and charges the 12V (auxiliary) battery exactly as if the vehicle was in “READY” mode (ON). Once charging finishes and the systems in the car shut down, the 12V battery is no longer being charged and eventually enters a state of low parasitic draw like any other Kia vehicle.

Vehicle with ignition ON while cable charging

While plugged in and charging, the vehicle ignition can be turned to the “ON” state, but not in “READY” mode (ON) by having a Smart-key fob in the vehicle and pressing the Start Stop Button (SSB).

During this condition; most systems are powered “ON”, but operation of the drive motor, HSG, and air conditioning are inhibited.

When High Voltage charging has completed and the vehicle has been turned “ON”, the control modules shut “OFF” but the 12V systems remain “ON”, draining the battery. This is similar to leaving the ignition “ON” with the engine OFF on a conventional vehicle.

Emergency charge door release

The owner’s manual describes an emergency release cable. It appears as an black (Niro) or orange (Optima) handle on the driver’s side of the engine compartment. The handle is the end of a small cable that can be pulled. If the vehicle has a dead 12V battery the handle can be pulled to release a locked charge door. Additionally, if the 12V battery dies while a charge cable is plugged in, the handle can be pulled to unlock and release the charge cable.

Charging with a fully discharged 12V battery not possible

If a charge cable is plugged in to a vehicle with a dead 12V battery, the vehicle will not charge. The cable will not power up the 12V vehicle systems, the 12V battery must be charged before charging can start. On Niro PHEV, use the battery charge button on the left side of dash first to ensure battery is not fully discharged.

Charging vehicle with completely discharged 12V battery

To charge the vehicle with a completely discharged 12V battery; apply a jumper box to the 12V battery, plug in the level 1 or 2 charge connector and wait for charging to begin (Niro / Optima - illuminates Green), then disconnect the jumper box.

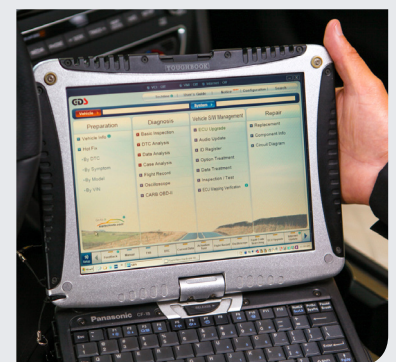
GDS REMAINS A VALUABLE TOOL

With the widespread use of KDS, it is important to remember that GDS remains a valuable diagnostic tool. All GDS functions continue to work as designed for 1994-2017MY vehicles, including the use of the TPMS module and VMI oscilloscope. Note that some 2000-2012MY vehicles equipped with ABS, ACU, EPS, A/C and RKE need GDS to relearn these systems. Additionally, you can use GDS to calibrate SCC, AEB, SVM, and other systems, and reprogram previously released control modules and immobilizer systems.

GDS provides a Kia diagnostic tool that can be utilized by every technician in the dealership, helping prevent bottlenecks when the KDS tablets and components are in use. Therefore, we recommend keeping GDS and the VCI I in good working order to avoid any downtime.

GIT America will continue to support GDS scan tool hardware, including Toughbook laptops, VCI I, and accessories.

For repair assistance, contact GDS/KDS Support at (888) 542-4371.



BLUETOOTH AND APPLE CARPLAY CONCERNS WITH iOS 11.X VERSIONS

This article provides information and the recommended procedure relating to possible Bluetooth and Apple CarPlay connectivity concerns when using an iPhone with iOS 11.X (iOS 11, 11.1, 11.1.1, 11.1.2, 11.2, 11.2.1, 11.2.2, 11.2.5, etc.) on all 2017–2018MY vehicles equipped with Bluetooth head units.

The concerns may include:

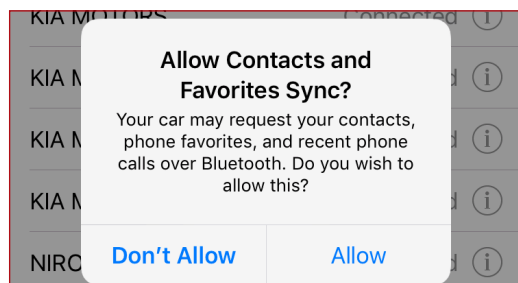
- Bluetooth won't connect
- Bluetooth disconnecting/reconnecting
- Bluetooth connection drops frequently
- Difficult to pair iPhone X
- Ringtone and Bluetooth/Carplay Volume Concerns
- Contacts fail to download
- Call history does not download
- Apple CarPlay black screen
- Apple CarPlay disconnects
- Interruptions in functionality when using Siri

Note: Apple continues to release bug fixes in iOS versions (the latest available version at the time of this publication is iOS 11.2.6 released on February 19, 2018).

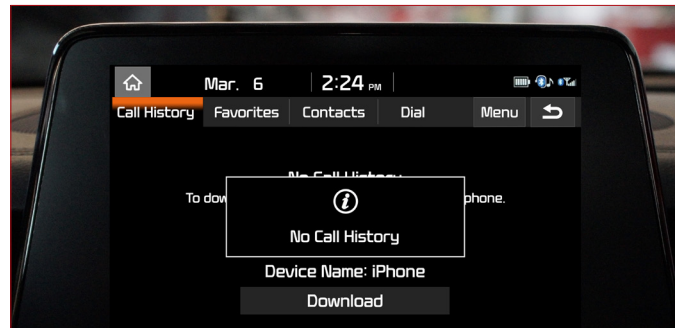
The following suggestions may help to improve some of the above concerns:

- Customers should continue to update to the latest version of the iOS 11 operating system for possible improvements rolled out by Apple.
- Reboot the customer's phone (turn the phone off and back on). Advising the customer to turn the phone off and back on 2–3 times a week might help to reduce connectivity concerns.
- Delete the phone from the head unit and the head unit from the phone. Then perform a new pairing of the phone and the head unit.
- Additional troubleshooting specific to Apple CarPlay concerns include: disconnect then reconnect the Apple certified cable, move to an area with better carrier coverage, test with a different Apple certified cable.

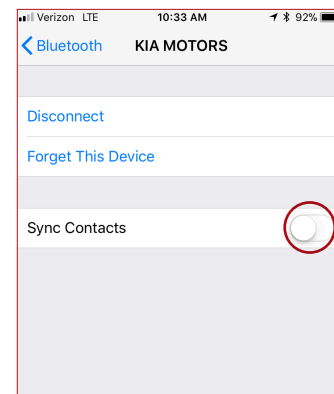
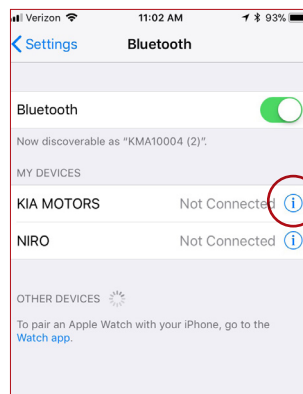
During the pairing process, ensure the request to "Allow Contacts and Favorites Sync?" is allowed on the phone (this was implemented as a part of the Apple iOS 11 roll out):



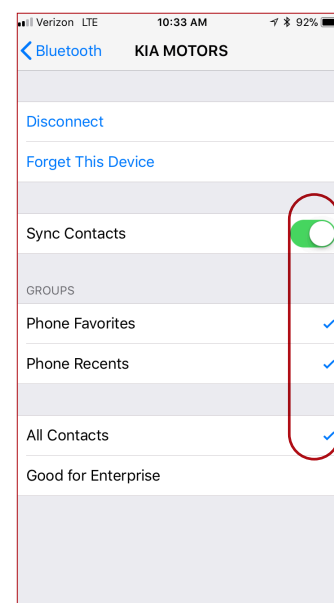
If the contacts do not download because the customer does not allow the contacts to sync (see example message below), it is necessary to change the settings on the phone and to then manually download the contacts on the radio (exact steps vary by head unit and software version):



1. On the phone, select Settings, then Bluetooth
2. Click the **i** next to the vehicle name (see below) and enable Sync Contacts ensuring that Phone Favorites, Phone Recent, and All Contacts are selected. Ensure that contact lists on other apps and other contacts are not selected.



3. Press the Call button from the steering wheel or the Phone button on the head unit to access the Phone screen and select the Contacts or Call History tab to manually download the contacts. This can also be accomplished by starting with a new Bluetooth pairing (deleting the devices and re-pairing).



Please refer to PitStop: PS535

SEAT CLIMATE CONTROL SYSTEM DIAGNOSIS

Kia vehicles equipped with heated and/or ventilated seats may occasionally require diagnosis for a malfunction.

Simply connect the KDS and pull the Diagnostic Trouble Codes (DTC).

Wait, What?...no data?

If you have connected KDS, searched for DTC, Active Tests or CAN signal, you likely found a dead end.

That is because the seat heater and cooler are part of the seat module which is independent of all other vehicle systems. KDS won't connect, diagnosis is internal and is performed as follows.

To activate seat diagnosis:

1. Turn the ignition on
2. Press and hold the heater switch more than 3 seconds
3. Release the switch for less than 3 seconds
4. Press the switch again for between 1.5 to 3 seconds
5. Release the switch for less than 3 seconds
6. Press the switch for 3 seconds

All three LED indicators should blink once and then begin diagnostics.

The combination of lights will indicate the malfunction (refer to charts below).

Once the fault is identified and the component repaired or replaced, you must delete the codes.

To delete codes:

1. Enter the diagnostic mode (following the steps above)
2. Hold the heat switch more than 3 seconds
3. The indicator lights will blink twice

So, the next time a seat climate control system malfunctions, keep your cool and let the seat tell you what to do.

B+ Power Fault



Low	Mid	High
Blinking	OFF	ON

IGN Power Fault



Low	Mid	High
OFF	Blinking	ON

LED Blinking Control (★: Blinking ●: On)

Low or High Voltage



Low	Mid	High
Blinking	Blinking	ON

Open Circuit in NTC / Heat Wiring



Low	Mid	High
OFF	ON	Blinking

Short Circuit in NTC / Heat Wiring



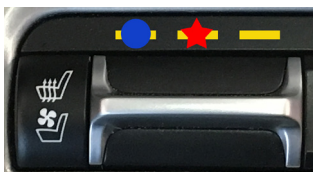
Low	Mid	High
Blinking	ON	OFF

Target Temperature Not Reached



Low	Mid	High
Blinking	ON	Blinking

Open Circuit in Blower Motor Power



Low	Mid	High
ON	Blinking	OFF

Short Circuit in Blower Motor Power



Low	Mid	High
ON	OFF	Blinking

Open Circuit in Blower Motor Signal Wire



Low	Mid	High
ON	Blinking	Blinking

Short Circuit in Blower Motor Signal Wire



Low	Mid	High
Blinking	Blinking	OFF

***Deleting Fault Codes:** After entering self-diagnosis mode, push and hold seat heater switch for more than 3 seconds. All the indicators will blink twice.

2018MY RIO TRANSPORTATION POWER SAVER FUSE

All Kia models are equipped with a power saver fuse that reduces parasitic draw on the 12 volt battery during transportation and storage of the vehicle. This switch is located on the lower driver's side of the crash pad, integrated into the In-Panel Junction Box Assembly. However, the 2018MY Rio has a different design than the rest of the Kia lineup.

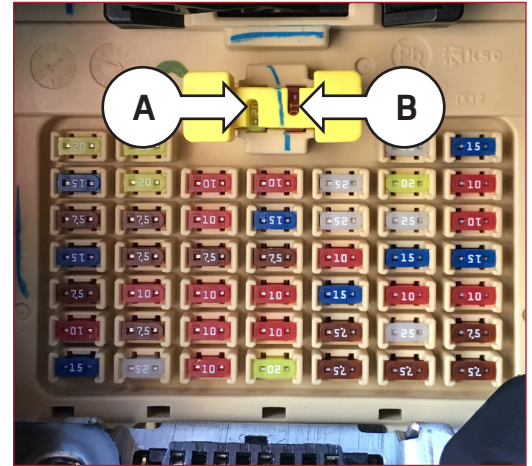
While most Kia models use a toggle switch to control the power saver functionality, the Rio uses a fuse holder similar to the setup of many previous-generation Kia models. Unlike other models, the Rio is also not equipped with a "FUSE ON" reminder message in the instrument cluster when the transport fuse is in the "OFF" position.

The transportation fuse on the Rio consists of the ROOM and AUDIO fuses. Pulling the transportation fuse to the OFF position will disconnect power from everything that is on these circuits. This consists of: Audio Head Unit, I/P Junction Box Room Lamp Relay, Glove Box Lamp, A/C Control Module, SLM/BCM, TPMS Module, Instrument Cluster Memory, DLC power, Room Lamp, and Trunk Lamp.

Some concerns related to the transportation fuse may include: TPMS Lamp ON, Trunk Open Lamp ON, Master Warning lamp ON, Hard/Delayed Start, No communication with the vehicle through the DLC, Audio System Inoperative, Instrument cluster needles not returning to the home position with key off, and/or Courtesy Lamps Inoperative.

Should any of these concerns be reproducible, Kia advises verifying that the transportation fuse is "ON" by ensuring that the yellow fuse holder is fully pushed in, so that the fuse holder is flush above and below with the I/P Junction Box, and ensuring that neither the AUDIO nor ROOM fuses are

blown. It is also important to verify that the transportation fuse is fully seated during PDI and/or delivery of the vehicle, to ensure that the customer will not experience any of the concerns listed above.



20A AUDIO Fuse (A)

10A ROOM Fuse (B)

Refer to PitStop PS529 for additional information.



Above: Type A cluster

Below: Type B cluster



WORDSEARCH SOLUTION

Here is the solution to the Wordsearch puzzle on page 7. The arrows indicate the direction of hidden words.

- 1. CELEBRATE
- 2. ENHANCEMENTS
- 3. DENSITY, TEMPERATURE
- 4. PIEZOELECTRIC
- 5. WORDSEARCH
- 6. CHARACTERISTICS, HYBRID
- 7. DIAGNOSTIC
- 8. CONSUMPTION
- 9. TECHNICIAN
- 10. BAROMETRIC
- 11. MASTERCARD
- 12. MAGNETIC, INDUCTIVE
- 13. ENGINE, INCOMING,
- 14. INTERFACE
- 15. EMERGENCY
- 16. BOTTLENECKS
- 17. DOWNLOAD
- 18. CONTACTS
- 19. MALFUNCTION
- 20. COMPETITION
- 21. PARAMETERS, MONITORED,
- 22. ANALYSIS
- 23. FEATURES
- 24. CIRCUIT

