

1 06 13-16



## Service Information Bulletin

SUBJECT	DATE
SPN 1590 (CPC) (GHG17)	June 2016

### Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0193	GHG17 Medium Duty	SPN 1590/FMI 9 - GHG17	New DD5 and DD8 diagnostic procedures.
		SPN 1590/FMI 19 - GHG17	
DDC-SVC-MAN-0191	GHG17 DD Platform	SPN 1590/FMI 9 - GHG17	Removed GHG14 reference and added new steps.
		SPN 1590/FMI 19 - GHG17	

DiagnosticLink users: Please update the troubleshooting guides in DiagnosticLink with this newest version. To update the tool troubleshooting guide, open DiagnosticLink and from the Help – Troubleshooting Guides menu, select the appropriate troubleshooting manual, then click Update.



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## 2 SPN 1590/FMI 9 - GHG17

Adaptive Cruise Control Message Not Received

**Table 1.**

SPN 1590/FMI 9	
Description	Adaptive Cruise Control Message Not Received
Monitored Parameter	PGR043 Adaptive Cruise Control Enable
Typical Enabling Conditions	Key On, CPC Online, CAN Network Online, Adaptive Cruise Control System Equipped, 10 Seconds After the Engine Has Been Cranked
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	Two seconds
Dash Lamps	None
Engine Reaction	None
Verification	Engine Running For One Minute



### WARNING: ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

1. Connect DiagnosticLink<sup>®</sup>.
2. Turn the ignition ON (key ON, engine OFF).
3. Verify that the vehicle is equipped with an Adaptive Cruise Control system. Is the vehicle equipped with Adaptive Cruise?
  - a. Yes; Go to step 5.
  - b. No; Go to step 4.
4. Verify that the " Adaptive Cruise Control Enable" parameter PGR043 is disabled; refer to the Application and Installation (A&I) manual. Is parameter PGR043 disabled?
  - a. Yes; replace the Common Powertrain Controller (CPC). Verify repair.
  - b. No; change the "Adaptive Cruise Control Enable" parameter PGR043 to disabled. Verify repair.
5. Is the vehicle equipped with Detroit Assurance?
  - a. Yes; Go to step 6.
  - b. No; Go to step 7.
6. For vehicles equipped with Detroit Assurance, parameter PGR043 should be set to 0 (zero) disable. Is parameter PGR043 set to disable?
  - a. Yes; replace the CPC. Verify repair.
  - b. No; change parameter PGR043 to disable. Verify repair.

Parameters Engine: DDEC13-DD15 Transmission: DT12-DT12 DA DiagnosticLink

Green House Gas Emissions Group Coding Strings Idle and PTO Shutdown Inputs and Outputs Optimized Idle Progressive Shift PTO Speed Limiter Transfer Accumulators

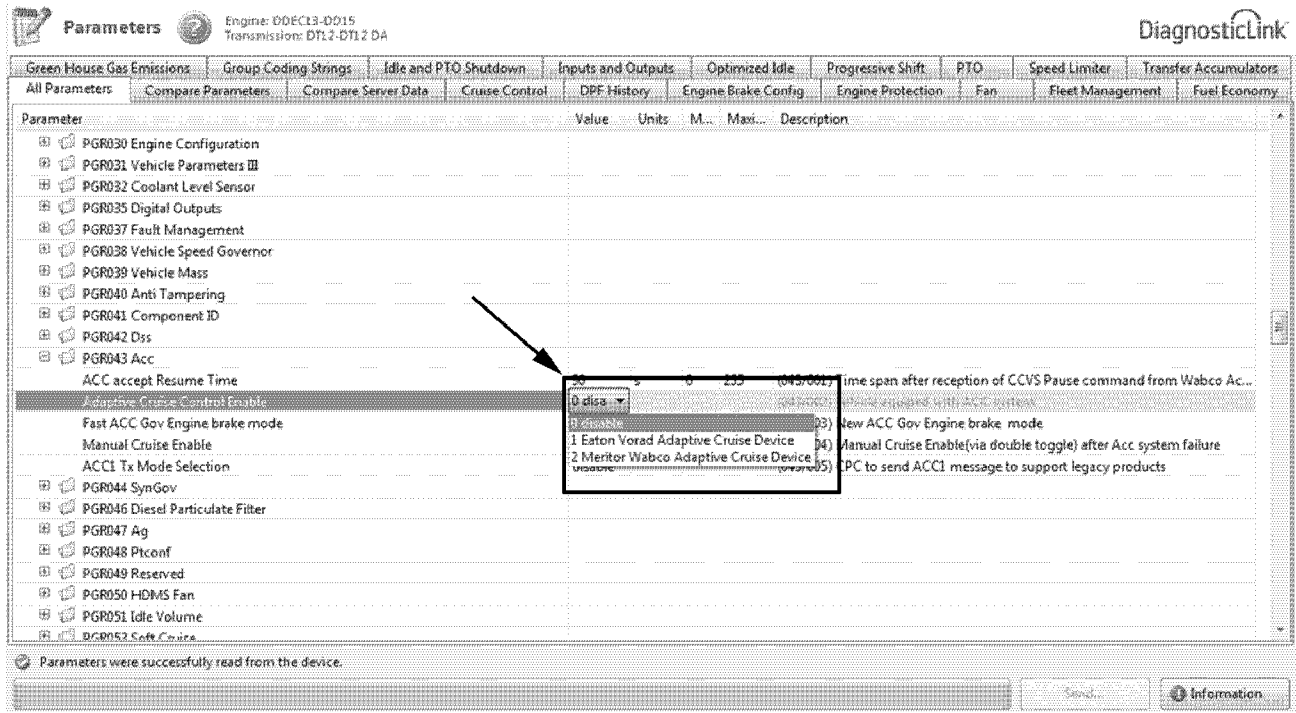
All Parameters Compare Parameters Compare Server Data Cruise Control DPF History Engine Brake Config Engine Protection Fan Fleet Management Fuel Economy

Parameter	Value	Units	Min.	Max.	Description
PGR030 Engine Configuration					
PGR031 Vehicle Parameters III					
PGR032 Coolant Level Sensor					
PGR035 Digital Outputs					
PGR037 Fault Management					
PGR038 Vehicle Speed Governor					
PGR039 Vehicle Mass					
PGR040 Anti Tampering					
PGR041 Component ID					
PGR042 Dss					
PGR043 Acc					
ACC accept Resume Time	30	s	0	255	(043/001) Time span after reception of CCVS Pause command from Wabco Ac...
Adaptive Cruise Control Enable	disable				(043/002) Vehicle equipped with ACC system
Fast ACC Gov Engine brake mode	none				(043/003) New ACC Gov Engine brake mode
Manual Cruise Enable	enable				(043/004) Manual Cruise Enable(via double toggle) after Acc system failure
ACC1 Tx Mode Selection	disable				(043/005) CPC to send ACC1 message to support legacy products
PGR044 SynGov					
PGR046 Diesel Particulate Filter					
PGR047 Ag					
PGR048 Ptconf					
PGR049 Reserved					
PGR050 HDMS Fan					
PGR051 Idle Volume					
PGR052 Safe Cruise					

Parameters were successfully read from the device. Send Information

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Figure 1. Adaptive Cruise Control



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**Figure 2. Adaptive Cruise Control Options**

7. Does the display on the Adaptive Cruise Control module illuminate when the ignition is in the ON position?
  - a. Yes; refer to the Adaptive Cruise Control maintenance manual and Original Equipment Manufacturer (OEM) for further diagnostic information.
  - b. No; verify power and ground to the Adaptive Cruise Control module. Refer to Original Equipment Manufacturer (OEM) for wiring information.

### 3 SPN 1590/FMI 19 - GHG17

Adaptive Cruise Control - General Error

**Table 2.**

SPN 1590/FMI 19	
Description	Adaptive Cruise Control Message not Received or Signal Error
Monitored Parameter	Adaptive Cruise Control
Typical Enabling Conditions	Always On
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	Two Seconds
Dash Lamps	None
Engine Reaction	None
Verification	Key Cycle - Ignition ON

Check as follows:



**WARNING: ENGINE EXHAUST**

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

**NOTE:** This fault code may set if driver does not wait for gauge sweep after turning the ignition on.

1. Check for multiple codes. Is Common Powertrain Controller (CPC) SPN 168/FMI 0/14/18 (battery voltage) also present?
  - a. Yes; troubleshoot those faults first.
  - b. No; Go to step 2.
2. Verify that the vehicle is equipped with an Adaptive Cruise Control system. Is the vehicle equipped with Adaptive Cruise?
  - a. Yes; Go to step 4.
  - b. No; Go to step 3.
3. Verify that the "Adaptive Cruise Control Enable" parameter PGR043 is disabled; refer to the Application and Installation (A&I) manual. Is parameter PGR043 disabled?
  - a. Yes; replace the CPC. Verify repair.
  - b. No; change the "Adaptive Cruise Control Enable" parameter PGR043 to disabled. Verify repair.
4. Is the vehicle equipped with Detroit Assurance?
  - a. Yes; Go to step 5.
  - b. No; Go to step 6.
5. For vehicles equipped with Detroit Assurance, parameter PGR043 should be set to 0 (zero) disable. Is parameter PGR043 set to disable?
  - a. Yes; replace the CPC. Verify repair.
  - b. No; change parameter PGR043 to disable. Verify repair.

Engine: DDEC13-DD15  
Transmission: DT12-DT12 DA

Green House Gas Emissions | Group Coding Strings | Idle and PTO Shutdown | Inputs and Outputs | Optimized Idle | Progressive Shift | PTO | Speed Limiter | Transfer Accumulators

All Parameters | Compare Parameters | Compare Server Data | Cruise Control | DPF History | Engine Brake Config | Engine Protection | Fan | Fleet Management | Fuel Economy

Parameter	Value	Units	Min.	Max.	Description
PGR030 Engine Configuration					
PGR031 Vehicle Parameters III					
PGR032 Coolant Level Sensor					
PGR035 Digital Outputs					
PGR037 Fault Management					
PGR038 Vehicle Speed Governor					
PGR039 Vehicle Mass					
PGR040 Anti Tampering					
PGR041 Component ID					
PGR042 Dss					
PGR043 Acc					
ACC accept Resume Time	30	s	0	255	(043/001) Time span after reception of CCVS Pause command from Wabco Ac...
Adaptive Cruise Control Enable	disable				(043/002) Vehicle equipped with ACC system
Fast ACC Gov Engine brake mode	none				(043/003) New ACC Gov Engine brake mode
Manual Cruise Enable	enable				(043/004) Manual Cruise Enable(via double toggle) after Acc system failure
ACC1 Tx Mode Selection	disable				(043/005) CPC to send ACC1 message to support legacy products
PGR044 SynGov					
PGR046 Diesel Particulate Filter					
PGR047 Ag					
PGR048 Ptconf					
PGR049 Reserved					
PGR050 HDMS Fan					
PGR051 Idle Volume					
PGR052 Safe Cruise					

Parameters were successfully read from the device.

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Figure 3. Adaptive Cruise Control

Parameters Engine: D0EC13-D015 Transmission: D112-D112 DA DiagnosticLink

Parameter	Value	Units	M...	Max...	Description
PGR030 Engine Configuration					
PGR031 Vehicle Parameters III					
PGR032 Coolant Level Sensor					
PGR035 Digital Outputs					
PGR037 Fault Management					
PGR038 Vehicle Speed Governor					
PGR039 Vehicle Mass					
PGR040 Anti Tampering					
PGR041 Component ID					
PGR042 Oss					
PGR043 Acc					
ACC accept Resume Time	50	s	0	255	(015/001) Time span after reception of CCVS Pause command from Wabco Ac...
Adaptive Cruise Control Enable	0	disc			
Fast ACC Gov Engine brake mode	0	disc			(03) New ACC Gov Engine brake mode
Manual Cruise Enable	1	disc			(04) Manual Cruise Enable(via double toggle) after Acc system failure
ACC1 Tx Mode Selection	2	disc			(05) PC to send ACC1 message to support legacy products
PGR044 SynGov					
PGR046 Diesel Particulate Filter					
PGR047 Ag					
PGR048 Ptconf					
PGR049 Reserved					
PGR050 HDMS Fan					
PGR051 Idle Volume					
PGR052 Soft Cruise					

Parameters were successfully read from the device.

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**Figure 4. Adaptive Cruise Control Options**

6. Does the display on the Adaptive Cruise Control module illuminate when the ignition is in the ON position?
  - a. Yes; refer to the Adaptive Cruise Control maintenance manual and Original Equipment Manufacturer (OEM) for further diagnostic information.
  - b. No; verify power and ground to the Adaptive Cruise Control module. Refer to Original Equipment Manufacturer (OEM) for wiring information.

## 4 SPN 1590/FMI 9 - GHG17

Adaptive Cruise Control Message Not Received

**Table 3.**

SPN 1590/FMI 9	
Description	Adaptive Cruise Control Message Not Received
Monitored Parameter	PGR043 Adaptive Cruise Control Enable
Typical Enabling Conditions	Key On, CPC Online, CAN Network Online, Adaptive Cruise Control System Equipped, 10 Seconds After the Engine Has Been Cranked
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	Two seconds
Dash Lamps	None
Engine Reaction	None
Verification	Engine Running For One Minute



### WARNING: ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

1. Connect DiagnosticLink<sup>®</sup>.
2. Turn the ignition ON (key ON, engine OFF).
3. Verify that the vehicle is equipped with an Adaptive Cruise Control system. Is the vehicle equipped with Adaptive Cruise?
  - a. Yes; Go to step 5.
  - b. No; Go to step 4.
4. Verify that the " Adaptive Cruise Control Enable" parameter PGR043 is disabled; refer to the Application and Installation (A&I) manual. Is parameter PGR043 disabled?
  - a. Yes; replace the Common Powertrain Controller (CPC). Verify repair.
  - b. No; change the "Adaptive Cruise Control Enable" parameter PGR043 to disabled. Verify repair.
5. Is the vehicle equipped with Detroit Assurance?
  - a. Yes; Go to step 6.
  - b. No; Go to step 7.
6. For vehicles equipped with Detroit Assurance, parameter PGR043 should be set to 0 (zero) disable. Is parameter PGR043 set to disable?
  - a. Yes; replace the CPC. Verify repair.
  - b. No; change parameter PGR043 to disable. Verify repair.



Parameters Engine: DDEC13-DD15 Transmission: DT12-DT12 DA DiagnosticLink

Green House Gas Emissions Group Coding Strings Idle and PTO Shutdown Inputs and Outputs Optimized Idle Progressive Shift PTO Speed Limiter Transfer Accumulators

All Parameters Compare Parameters Compare Server Data Cruise Control DPF History Engine Brake Config Engine Protection Fan Fleet Management Fuel Economy

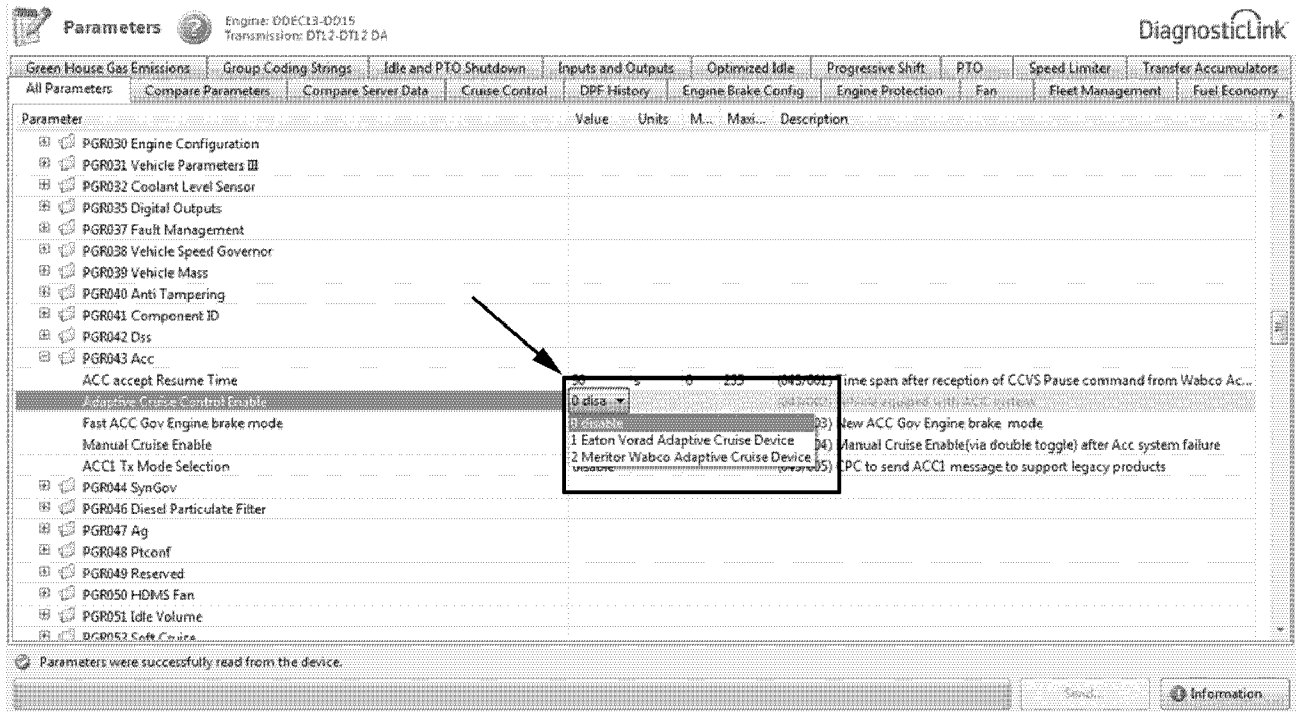
Parameter	Value	Units	Min.	Max.	Description
PGR030 Engine Configuration					
PGR031 Vehicle Parameters III					
PGR032 Coolant Level Sensor					
PGR035 Digital Outputs					
PGR037 Fault Management					
PGR038 Vehicle Speed Governor					
PGR039 Vehicle Mass					
PGR040 Anti Tampering					
PGR041 Component ID					
PGR042 Dss					
PGR043 Acc					
ACC accept Resume Time	30	s	0	255	(043/001) Time span after reception of CCVS Pause command from Wabco Ac...
Adaptive Cruise Control Enable	disable				(043/002) Vehicle equipped with ACC system
Fast ACC Gov Engine brake mode	none				(043/003) New ACC Gov Engine brake mode
Manual Cruise Enable	enable				(043/004) Manual Cruise Enable(via double toggle) after Acc system failure
ACC1 Tx Mode Selection	disable				(043/005) CPC to send ACC1 message to support legacy products
PGR044 SynGov					
PGR046 Diesel Particulate Filter					
PGR047 Ag					
PGR048 Ptconf					
PGR049 Reserved					
PGR050 HDMS Fan					
PGR051 Idle Volume					
PGR052 Safe Cruise					

Parameters were successfully read from the device.

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Figure 5. Adaptive Cruise Control



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**Figure 6. Adaptive Cruise Control Options**

7. Does the display on the Adaptive Cruise Control module illuminate when the ignition is in the ON position?
  - a. Yes; refer to the Adaptive Cruise Control maintenance manual and Original Equipment Manufacturer (OEM) for further diagnostic information.
  - b. No; verify power and ground to the Adaptive Cruise Control module. Refer to Original Equipment Manufacturer (OEM) for wiring information.

## 5 SPN 1590/FMI 19 - GHG17

Adaptive Cruise Control - General Error

**Table 4.**

SPN 1590/FMI 19	
Description	Adaptive Cruise Control Message not Received or Signal Error
Monitored Parameter	Adaptive Cruise Control
Typical Enabling Conditions	Always On
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	Two Seconds
Dash Lamps	None
Engine Reaction	None
Verification	Key Cycle - Ignition ON

Check as follows:



**WARNING: ENGINE EXHAUST**

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

**NOTE:** This fault code may set if driver does not wait for gauge sweep after turning the ignition on.

1. Check for multiple codes. Is Common Powertrain Controller (CPC) SPN 168/FMI 0/14/18 (battery voltage) also present?
  - a. Yes; troubleshoot those faults first.
  - b. No; Go to step 2.
2. Verify that the vehicle is equipped with an Adaptive Cruise Control system. Is the vehicle equipped with Adaptive Cruise?
  - a. Yes; Go to step 4.
  - b. No; Go to step 3.
3. Verify that the "Adaptive Cruise Control Enable" parameter PGR043 is disabled; refer to the Application and Installation (A&I) manual. Is parameter PGR043 disabled?
  - a. Yes; replace the CPC. Verify repair.
  - b. No; change the "Adaptive Cruise Control Enable" parameter PGR043 to disabled. Verify repair.
4. Is the vehicle equipped with Detroit Assurance?
  - a. Yes; Go to step 5.
  - b. No; Go to step 6.
5. For vehicles equipped with Detroit Assurance, parameter PGR043 should be set to 0 (zero) disable. Is parameter PGR043 set to disable?
  - a. Yes; replace the CPC. Verify repair.
  - b. No; change parameter PGR043 to disable. Verify repair.

Parameters Engine: DDEC13-DD15 Transmission: DT12-DT12 DA DiagnosticLink

Green House Gas Emissions | Group Coding Strings | Idle and PTO Shutdown | Inputs and Outputs | Optimized Idle | Progressive Shift | PTO | Speed Limiter | Transfer Accumulators

All Parameters | Compare Parameters | Compare Server Data | Cruise Control | DPF History | Engine Brake Config | Engine Protection | Fan | Fleet Management | Fuel Economy

Parameter	Value	Units	Min.	Max.	Description
PGR030 Engine Configuration					
PGR031 Vehicle Parameters III					
PGR032 Coolant Level Sensor					
PGR035 Digital Outputs					
PGR037 Fault Management					
PGR038 Vehicle Speed Governor					
PGR039 Vehicle Mass					
PGR040 Anti Tampering					
PGR041 Component ID					
PGR042 Dss					
PGR043 Acc					
ACC accept Resume Time	30	s	0	255	(043/001) Time span after reception of CCVS Pause command from Wabco Ac...
Adaptive Cruise Control Enable	disable				(043/002) Vehicle equipped with ACC system
Fast ACC Gov Engine brake mode	none				(043/003) New ACC Gov Engine brake mode
Manual Cruise Enable	enable				(043/004) Manual Cruise Enable(via double toggle) after Acc system failure
ACC1 Tx Mode Selection	disable				(043/005) CPC to send ACC1 message to support legacy products
PGR044 SynGov					
PGR046 Diesel Particulate Filter					
PGR047 Ag					
PGR048 Ptconf					
PGR049 Reserved					
PGR050 HDMS Fan					
PGR051 Idle Volume					
PGR052 Safe Cruise					

Parameters were successfully read from the device.

Send... Information

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Figure 7. Adaptive Cruise Control

Parameters Engine: D0EC13-D015 Transmission: D112-D112 DA DiagnosticLink

Green House Gas Emissions Group Coding Strings Idle and PTO Shutdown Inputs and Outputs Optimized Idle Progressive Shift PTO Speed Limiter Transfer Accumulators

All Parameters Compare Parameters Compare Server Data Cruise Control DPF History Engine Brake Config Engine Protection Fan Fleet Management Fuel Economy

Parameter	Value	Units	M...	Max...	Description
PGR030 Engine Configuration					
PGR031 Vehicle Parameters III					
PGR032 Coolant Level Sensor					
PGR035 Digital Outputs					
PGR037 Fault Management					
PGR038 Vehicle Speed Governor					
PGR039 Vehicle Mass					
PGR040 Anti Tampering					
PGR041 Component ID					
PGR042 Oss					
PGR043 Acc					
ACC accept Resume Time	50	s	0	255	(015/001) Time span after reception of CCVS Pause command from Wabco Ac...
Adaptive Cruise Control Enable	0	disc			
Fast ACC Gov Engine brake mode	0	disc			(03) New ACC Gov Engine brake mode
Manual Cruise Enable	1	disc			(04) Manual Cruise Enable(via double toggle) after Acc system failure
ACC1 Tx Mode Selection	2	disc			(05) PC to send ACC1 message to support legacy products
PGR044 SynGov					
PGR046 Diesel Particulate Filter					
PGR047 Ag					
PGR048 Ptconf					
PGR049 Reserved					
PGR050 HDMS Fan					
PGR051 Idle Volume					
PGR052 Soft Cruise					

Parameters were successfully read from the device.

Information

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**Figure 8. Adaptive Cruise Control Options**

6. Does the display on the Adaptive Cruise Control module illuminate when the ignition is in the ON position?
  - a. Yes; refer to the Adaptive Cruise Control maintenance manual and Original Equipment Manufacturer (OEM) for further diagnostic information.
  - b. No; verify power and ground to the Adaptive Cruise Control module. Refer to Original Equipment Manufacturer (OEM) for wiring information.