BMW

SI B12 31 18
Engine Electrical Systems

December 2018
Technical Service

ACTRON ACCUMULATED MISFIRE COUNTER

MODEL

All vehicles equipped with OBDII systems

SITUATION

In certain rare situations, intermittent drivability issues may not be severe enough to induce faults and require a very specific conditions to be observed.

CAUSE

Limitations if the diagnostic systems

CORRECTION

To aid in these situations, the accumulated misfire function is now available as an expanded capability for the Actron Scan tool. The Actron Scan tool (CP9670) was initially distributed through the automatic tool shipment program (SI B04 18 15) and is now available in the aftermarket. This supplemental diagnostic tool may be utilized in instances when no faults are stored and specific dynamic driving conditions are needed to reproduce the complaint. The Accumulated Misfire function will provide a live aggregate count of misfires detected in each cylinder. The misfire counter is incremented when the crankshaft speed fluctuates thus may occur when the engine speed changes. The misfire counts will reset to zero after the key is cycled and the engine is started.
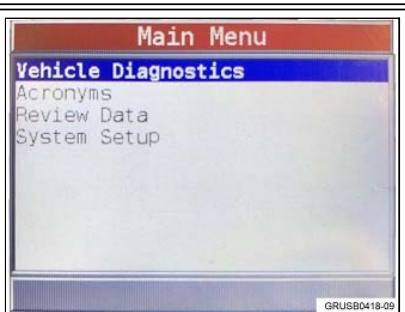
☞ Note: Misfire counts may be present in normal engine operation and do not necessarily indicate a
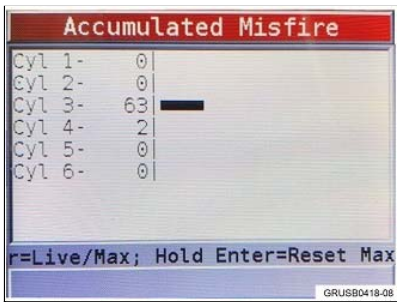
fault. Further analysis and diagnostics will be needed to determine if the observed counts are caused by an underlying issue.

PROCEDURE

1. Update the Actron scan tool with the procedure outlined in **"Actron Misfire Detection Update Procedure.pdf".**

2. Start the Accumulated Misfire function as described in the table below:

	• Connect to the vehicle

Initial I/M Monitors — Not all supported I/M Monitor tests are complete. Press ENTER↵ to continue (GRUSB0418-04)	
Read Codes — No codes found. Press ENTER↵ to continue [Rd\Er] (GRUSB0418-05)	• Complete the error code readout and emission system monitor readout
Main Menu — **Vehicle Diagnostics**, Acronyms, Review Data, System Setup (GRUSB0418-09)	• Select **Vehicle Diagnostics** from the Main Menu
Diagnostic Menu — Read Codes, Erase Codes, MIL Status, State OBD Check, View Data, Record Data, View Freeze Data, Drive Cycle Monitor, **Accumulated Misfire** ⇧ [Rd\Er] ⇩ (GRUSB0418-06)	• Select **Accumulated Misfire** from the Diagnostic Menu
	• Observe that some misfire counts may already be stored.

Note: This does not indicate a fault and is caused by changes in |

crankshaft speed during normal engine operation.

- As the Misfire counts accrue, a bar graph will appear as a visual aid.

Note: Depicted left, the most likely cause of the drivability complaint only affects cylinder three.

3. Test drive the vehicle in a manor to induce the complaint

4. Evaluate the results and continue diagnostics

WARRANTY INFORMATION

Further information about the Actron Scan tool can be found in SI B04 18 15

ATTACHMENTS
View PDF attachment **Actron Misfire Detection Update Procedure**.

ACCUMULATED MISFIRE UPDATE PROCEDURE
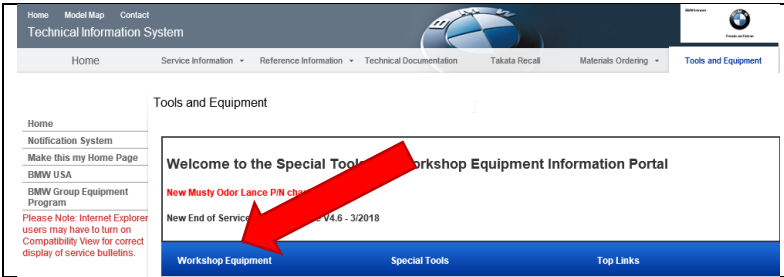
1. Download the Actron Scanning Suite from TIS by following the path below.

   TIS/ Tools and Equipment / Workshop Equipment column / Actron Accumulated Misfire Update

2. Once installed, run the application and select **Tool Update**

3. Connect the Actron scan tool to the computer via USB.

4. Select **Automatic** detection mode

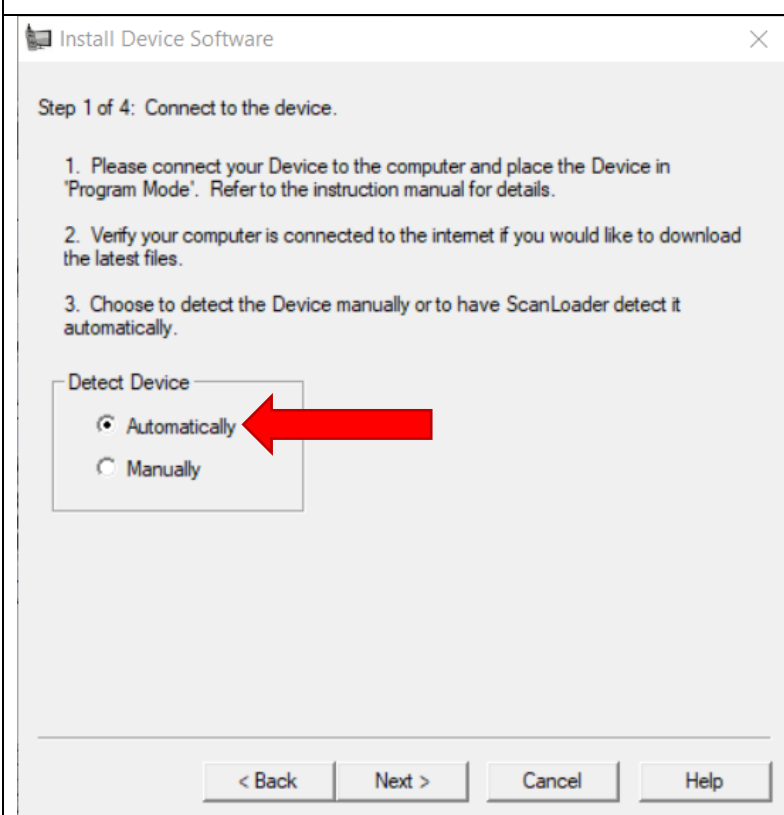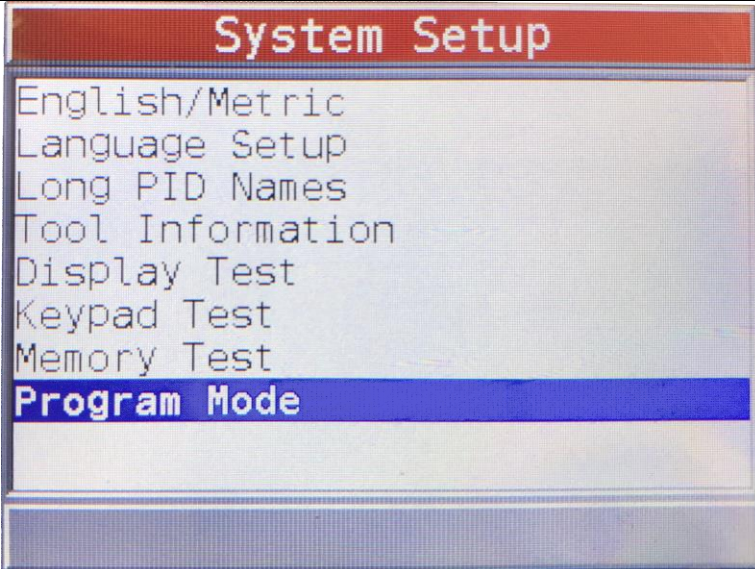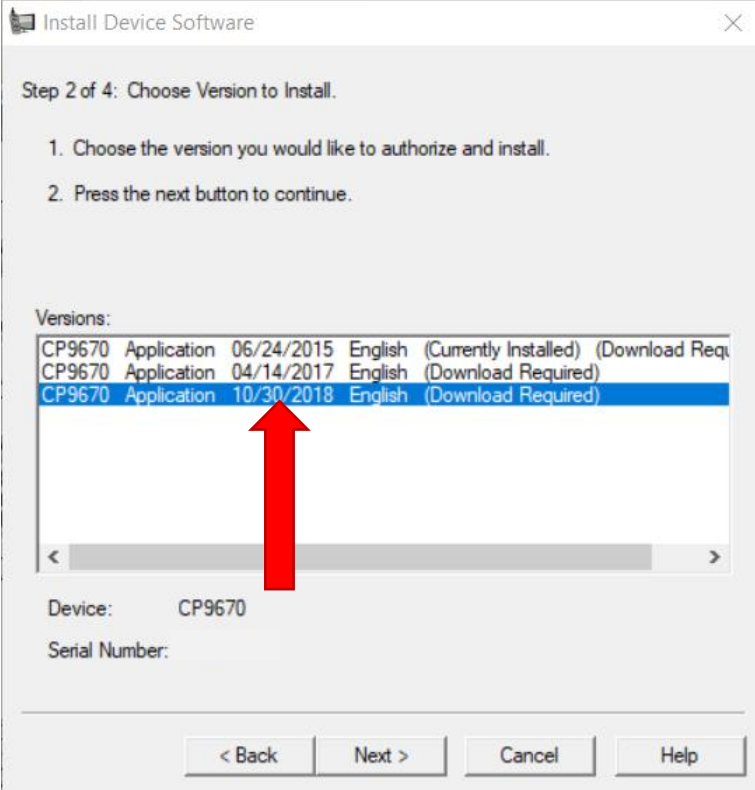|	

System Setup
English/Metric
Language Setup
Long PID Names
Tool Information
Display Test
Keypad Test
Memory Test
Program Mode
	5. Set the Actron scanner to Program Mode.
	    a. From the **Main Menu**
	    b. Select **System Setup**
	    c. Next select **Program Mode**
	6. Select **Next** from the Scanning Suite installation window

Install Device Software ✕
 	
Step 2 of 4: Choose Version to Install.
 	
  1. Choose the version you would like to authorize and install.
 	
  2. Press the next button to continue.
 	
Versions:
CP9670 Application 06/24/2015 English (Currently Installed) (Download Requ
CP9670 Application 04/14/2017 English (Download Required)
CP9670 Application 10/30/2018 English (Download Required)
 	
Device: CP9670
Serial Number:
 	
< Back   Next >   Cancel   Help
	7. Select the **10/30/2018** Application
	8. Press **Next**
	
	Note: This application may need to be run outside network as firewalls can interfere with the update process
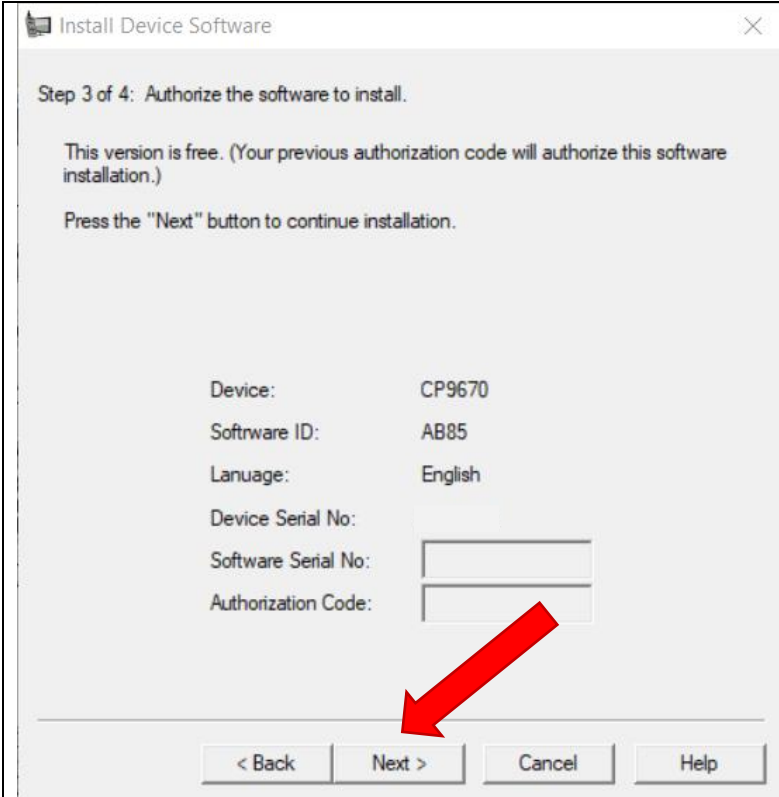
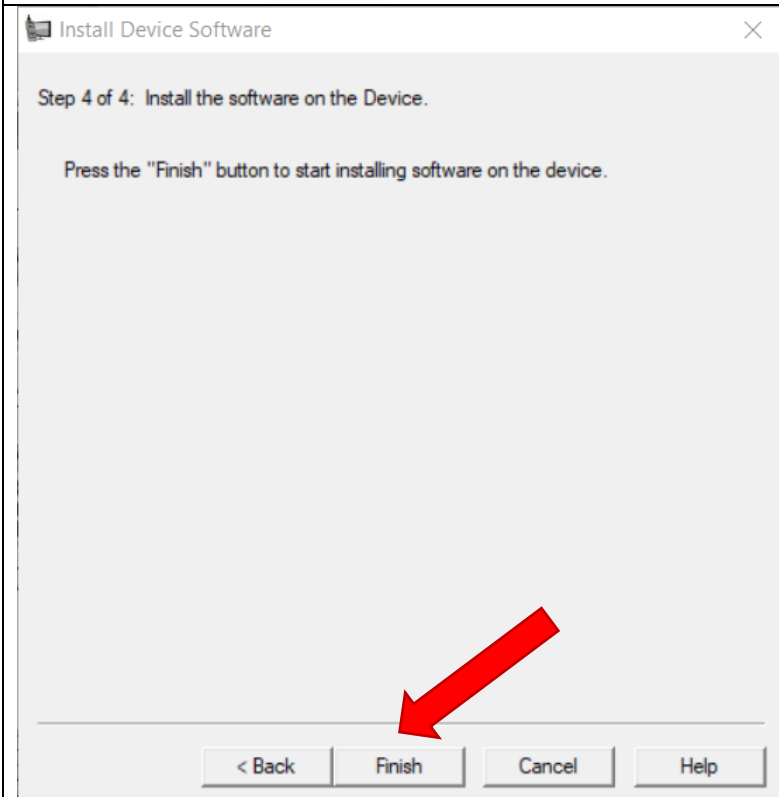|	
Install Device Software ✕ Step 3 of 4: Authorize the software to install. This version is free. (Your previous authorization code will authorize this software installation.) Press the "Next" button to continue installation. Device: CP9670 Softrware ID: AB85 Lanuage: English Device Serial No: Software Serial No: [ ] Authorization Code: [ ] [< Back] [Next >] [Cancel] [Help]	9. Once the software download is complete, select **Next**
Install Device Software ✕ Step 4 of 4: Install the software on the Device. Press the "Finish" button to start installing software on the device. [< Back] [Finish] [Cancel] [Help]	10. Select **Finish** and the software will be loaded into the Actron Scanner. **Important**: Do not disconnect or interrupt this process or the scanner may be damaged