

# Mac Tools Heavy Duty Truck Software Update – Q1 2019

## Ver 2019/1

Mac Tools software release version 2019/1 is full of valuable and timesaving coverage features that you don't want to miss. Included are the details on new coverage additions.

In addition, the new Off-Highway Software package is now available, which gives users the ability to diagnose construction and agricultural vehicles.

Update your Mac Tools Diagnostic Scan Tool to software version 2019/1 today to maximize the power of your Mac Tools Diagnostic Scan Tool.



## Newly Available Software Feature

### Off-Highway Software

- Off-Highway coverage was first available with the last revision (2018/3)
- Includes diagnostic coverage for construction, agricultural, stationary engines, street sweepers, and more
- NOTE – these features are only available if you have purchased the Mac Tool ET8200-HD or upgraded your ET8100-HD with the OHW upgrade kit. Learn more about Mac Tools Off-Highway Software at <https://www.mactools.com/en-us/Diagnostics-and-Testing/Scan-Tools-and-Accessories/0da71bd5-4fca-4436-8aba-a8b9012dbb08/Heavy-Duty-Scan-Tool/ET8200-HD/Expert-Heavy-Duty-Tablet-Scan-Tool-with-Off-Highway-Coverage>

## **Added Coverage - Summary**

### Heavy –Duty Truck Additional Coverage

New content added for the following Heavy Duty Brands:

- Allison
- Bendix
- Caterpillar
- Cummins
- Detroit Diesel / MBE
- Eaton
- Freightliner
- Haldex
- PACCAR
- Power Solutions International (PSI)
- Mack
- Mercedes-Benz
- Meritor Wabco
- Navistar
- Volvo

### Light and Medium –Duty Truck Additional Coverage

- Ford
- GMC/Chevrolet
- Hino
- Isuzu
- Mercedes Benz
- Mitsubishi-Fuso USA

### Off-Highway: Stationary Engines Additional Coverage

- Caterpillar
- Deutz
- John Deere
- Mercedes Benz
- Perkins
- Volvo Penta



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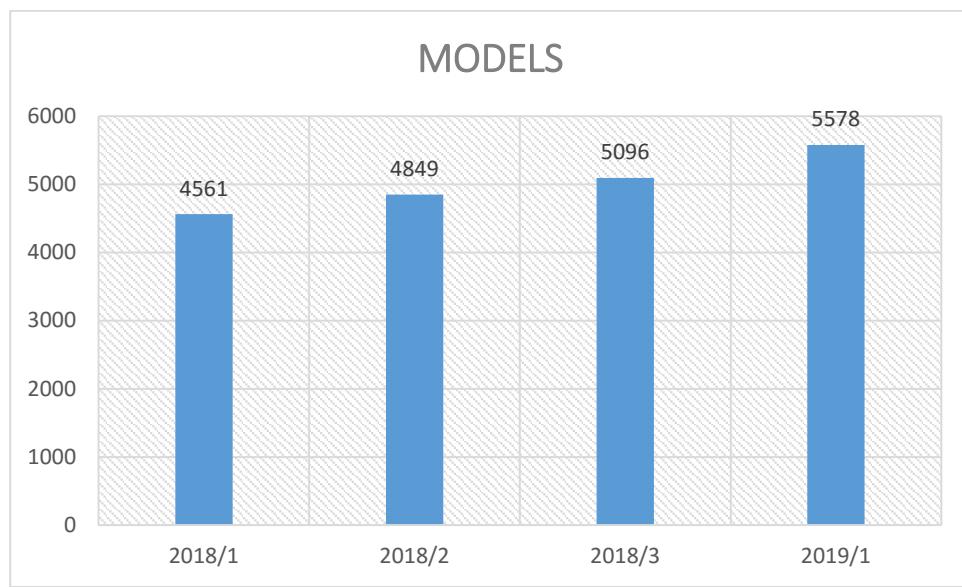
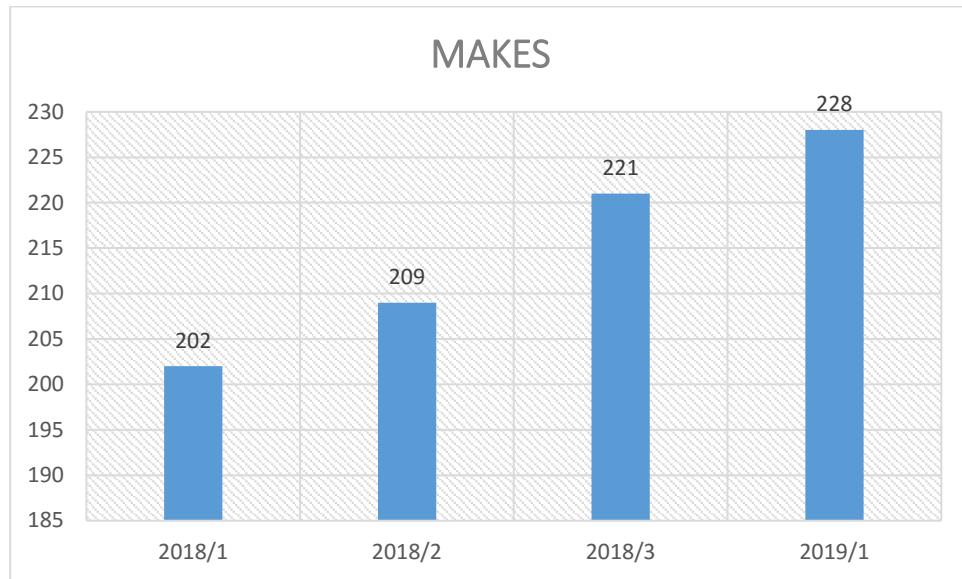


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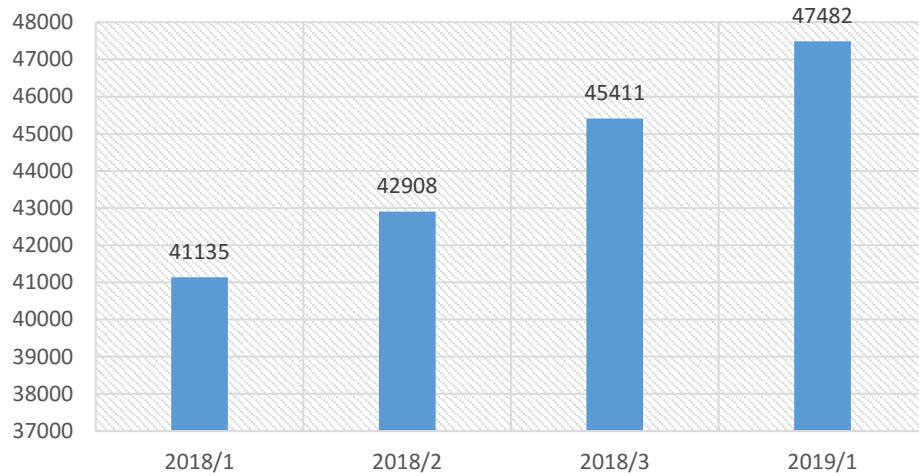
## Coverage metrics 2019/1

### 1.1 Figures

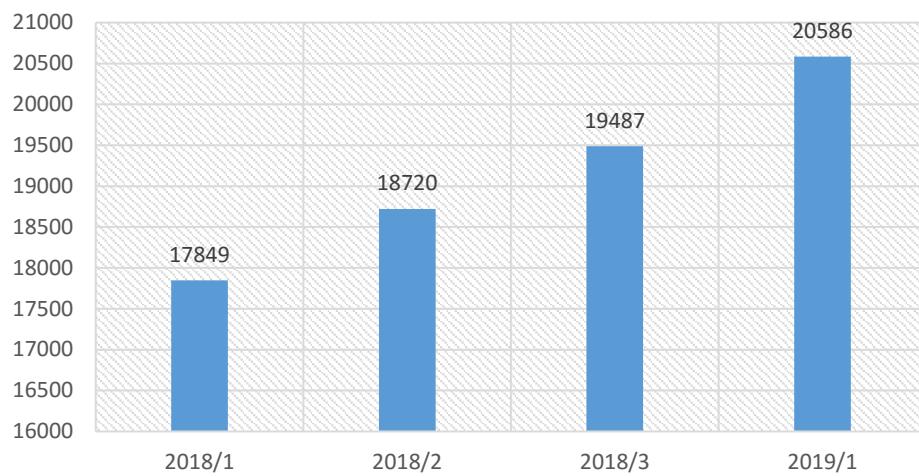
Note: These metrics include all type of vehicles/modules/licenses (Truck, OHW...)



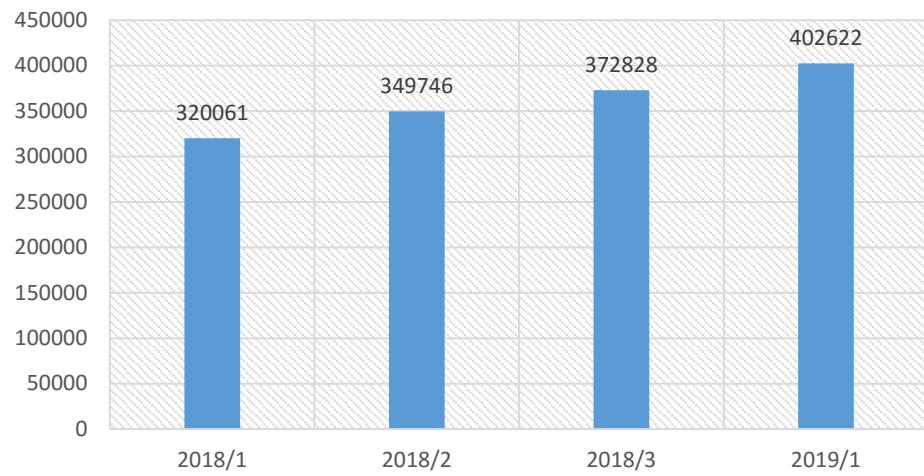
## ELECTRONIC CONTROL SYSTEMS



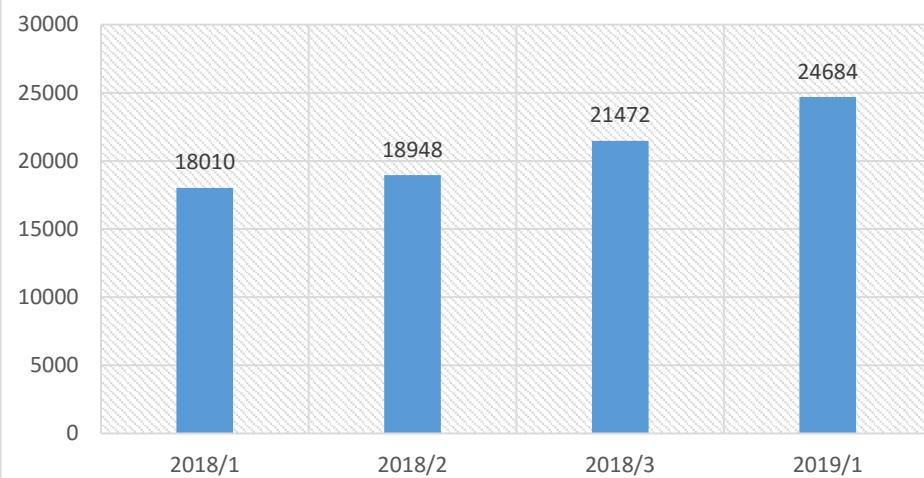
## WIRING DIAGRAMS



## FAULT CODES



## TROUBLESHOOTING BY FAULT CODES



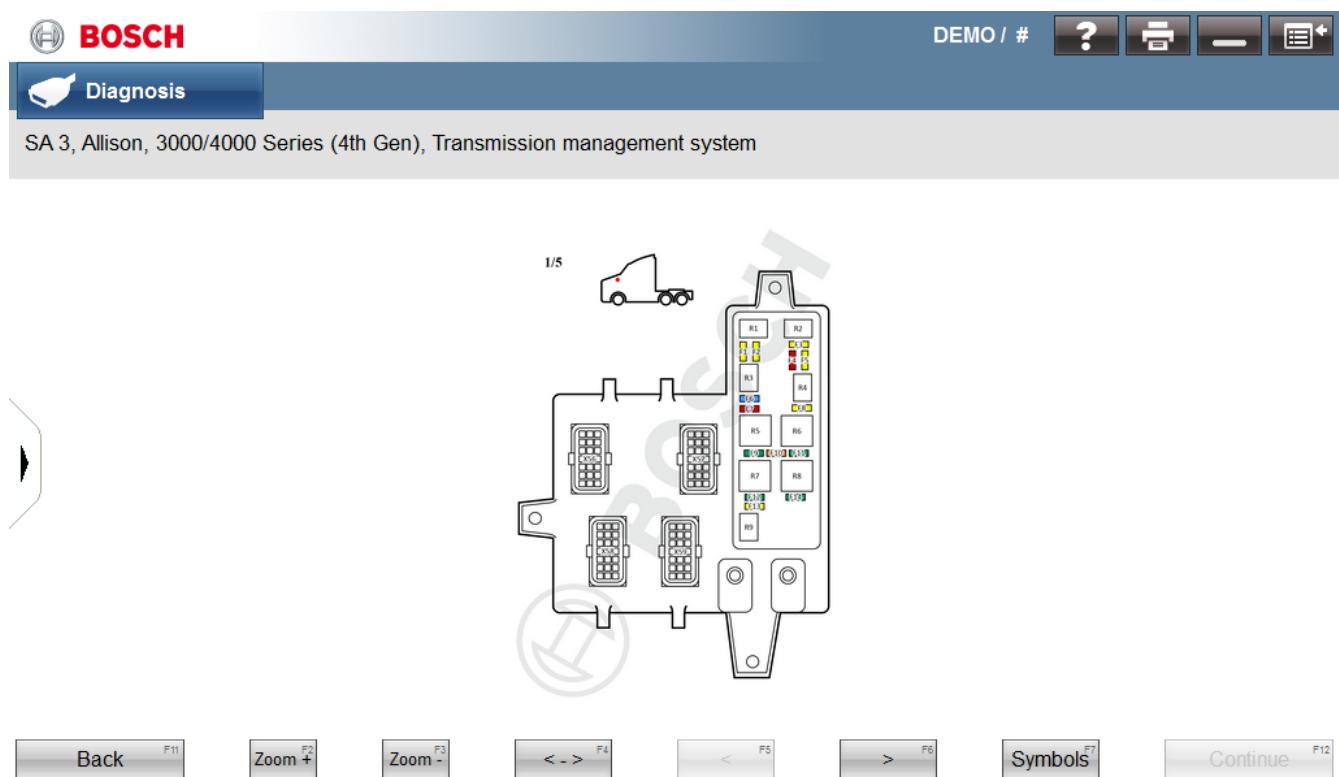
## • 2 •

# Software Innovations

## 2.1 Fuses and relays boxes

Technical information available in Model Info > Fuse and relay diagram.

Internet is not required.



## 2.2 Maintenance schedules (Service info) is shown alphabetically

 **BOSCH** DEMO / #    

 Diagnosis ISX 11.9/12/15 CM2250 EPA10

**Complete service**

Daily	▼
A - 25,000 miles (40,000 km) / 800 hours / 6 months	▼
B - 50,000 miles (80,000 km) / 1500 hours / 12 months	▼
C - 125,000 miles (200,000 km) / 3000 hours / 2 years	▼
D - 150,000 miles (241,000 km) / 4500 hours	▼
E - 200,000 miles (320,000 km) / 4500 hours	▼
F - 250,000 miles (400,000 km) / 6000 hours / 2 years	▼
<b>G - 500,000 miles (800,000 km) / 10000 hours / 5 years</b>	▼

Back F11 Save F2 Continue F12

## 2.3 Online Repair Information Off-Highway modules

Promotional period in Off-Highway modules until end of 2019.

The screenshot shows the BOSCH Diagnosis software interface. At the top, there is a toolbar with the BOSCH logo, a 'DEMO / #' field, and several icons for help, print, and system control. Below the toolbar, a message says 'Switch on ignition.' A navigation bar at the bottom includes 'Systems' (selected), 'Common Tests', and a back arrow icon.

**Select system group:**

- ALL
- Auxiliary brakes
- Electronic module
- Engine
- Instrumentation
- Mainframe
- Steering
- Suspension
- Transmission

**Select system:**

Body Computer	BCU
Basic Informatior	RIF

**INFORMATION:**

This information module is available as a free demo version until end of 2019. Starting 2020 this module will be chargeable.

OK    ESC

Below the information box, there is a note: "Powertrain (Level 12 - Tier 2 / Stage II) Pump (Level 3 - Tier 2 / Stage II) Quad-Plus/AutoQuad & Plus".

At the bottom of the screen, there are five buttons: 'System Info' (F2), 'Model Info' (F3), 'System overview' (F4), 'DTC Lookup' (F5), and 'Continue' (F12).

## . 3 .

# Main new functionalities by brand – HEAVY DUTY

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## 3.1 ALLISON

### **1000/2000 3rd gen**

- Freeze frame data for diagnostic codes

### **1000/2000 4th gen**

- Freeze frame data for diagnostic codes

### **Hybrid H 40/50 EP**

- Manual diagnosis

## 3.2 BENDIX

### **All Systems**

- Manual diagnosis



**BOSCH**

Wingman ACB / Advanced, Radar Front End (anti-collision system)

**Information**

**IMPORTANT**

Only the errors present in the system will appear, meaning the errors that are active.

- Option 1
  - The errors are displayed on screen and are made up of codes: SPN and FMI.- To see the rest of the errors press the buttons "UP" or "DOWN".

The format of the error code that must be entered is as follows:  
SPN

- Example Code : 1069

Enter the fault code in the manual diagnosis section of the

Fault code  Search F5

Back F11 Troubleshooting F2 Continue F12

**Pictures**

### 3.3 CATERPILLAR

#### Transmissions CX28/CX31/CX35

- Manual diagnosis

#### 3406, C-12, 3126, 3176

- Vehicle speed signal parameters



DEMO / #



DRIVING SPEED SIGNAL - C-12 SAE J1708, Engine management system, unit injector

**Information**

CURRENT VALUE:

Name	ACTUAL VALUE	MIN VALUE	MAX VALUE
VEHICLE SPEED SIG., CALIBRATION VALUE	31200 ppm (Pulses per Mile)	0	384000

CHANGE

Cancel

Info



Continue

**All Systems**

- Manual diagnosis





DEMO / #



C-12 SAE J1708, Engine management system, unit injector

**Information**

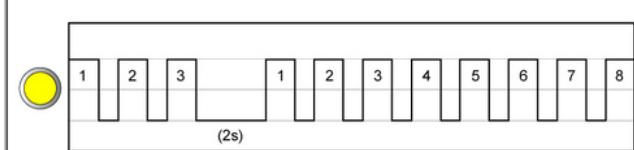
Visualization of blink codes sequence is only possible with the vehicle turned on and stopped.

Only the errors present in the system will appear, meaning the errors that are active.

In order to carry out the reading of the blinking codes the following steps must be followed:

1. Turn the ignition key.
2. Deactivate speed control system ("OFF").
3. "SET/RESUME" Tempomat switch . Press and hold the switch in any position until the malfunction indication lamp starts flashing.

Error codes will be displayed with the format shown in the next image. ( See figure. 1. )

**Pictures**Fault code Search F5Back F11Troubleshooting F2Continue F12

## 3.4 CUMMINS

### All Systems

- Manual diagnosis

### L9 CM2350

- Aftertreatment data record
- VGT calibration
- VGT compatibility test





DEMO / #



COMPATIBILITY OF THE VGT ACTUATOR (VARIABLE GEOMETRY TURBINE) - L9 CM2350, Extra-high pressure injection, common rail

#### Information

This action shows a list of compatible actuators for calibration of the variable geometry turbine (VGT). A series of measurements read from the currently installed actuator is also shown.

The user must check that the ID of the installed actuator is shown in the list of compatible actuators.

Before performing the installation or replacement of the VGT (variable geometry turbine) actuator, the user must check the compatibility of the VGT actuator to be installed.

Cancel

F11

Continue

F12

- Time and data setting (PC and manual)
- Time and date synchronization with the tacograph
- PM sensor regeneration

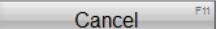
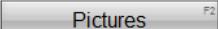


 Diagnosis

REGENERATION OF THE SOOT PARTICLES SENSOR - L9 CM2350, Extra-high pressure injection, common rail

**Information**

This test allows to clean the soot sensor of the aftertreatment system. Once the operation starts, a heater located inside the soot sensor will be activated.

**Image** Cancel Pictures Continue

- Particulate filter status
- Parameters:
  - Engine brake
  - Vehicle speed signal
  - Auxiliary power take-off
  - Fan control

**B4.5/6.7 CM2350**

- Time and data setting (PC and manual)
- Aftertreatment data record
- DPF regeneration
- Parameters:
  - Engine brake
  - Vehicle speed signal
  - Auxiliary power take-off
  - Fan control

**ISB 6.7 CM2350**

- Aftertreatment data record
- Time and data setting (PC and manual)
- Parameters:
  - Engine brake
  - Vehicle speed signal

### **ISBe4 CM850 (ECS-DC4)**

- Time and data setting (PC and manual)
- Time and date synchronization with the tacograph
- Parameters:
  - o Power take-off
  - o Auxiliary power take-off

### **X15 CM2350**

- Aftertreatment data record
- Parameters:
  - o Engine brake
  - o Vehicle speed signal
  - o Fan control

### **ISBe (4 & 6 cylinders) CM800 & ECS-DC3**

- Trip data
- Parameters:
  - o VIN
  - o Power take-off
  - o Auxiliary power take-off

### **ISL 8.9/9.5 CM2150 Euro 5**

- Time and data setting (PC and manual)
- VGT calibration

### **ISBe 4.5/6.7 – ISDe 4.5/6.7 CM2150 Euro 5**

- Time and data setting (PC and manual)
- Parameters:
  - o Engine brake
  - o Vehicle speed signal

### **ISB 6.7 CM2250**

- Aftertreatment data record
- Parameters:
  - o Engine brake
  - o Vehicle speed signal

### **ISX CM2350**

- Aftertreatment data record
- VGT compatibility test
- SCR regeneration
- Parameters:
  - o Engine brake



### **ISC 8.3 CM2250**

- Aftertreatment data record
- Parameters:
  - o Engine brake

### **QSB 4.5/6.7 CM2250**

- VGT installation and calibration
- VGT activation
- Fuel system leaks checking
- EFC activation

### **QSB 4.5/6.7 CM2350**

- VGT installation and calibration
- Parameters:
  - o Maximum vehicle speed
  - o Cruise control
- Passwords management

### **QSM11 CM570**

- Parameters:
  - o Engine protection
  - o VIN

### **QSX15 CM570**

- Cylinder cutout

## **3.5 DETROIT-DIESEL / MBE**

### **All Systems**

- Manual diagnosis

### **CPC3 Evo New Cascadia**

- New! Parameters configuration: Maximum Vehicle Speed, VIN, ESN, Power Curve Rating

### **CPC Systems**

- New! Engine brake parameters for GHG14/GHG17 vehicles
- New! Vehicle speed signal, tire size parameters for EPA07/EPA10/GHG14/GHG7 vehicles
- Low Temperature ATD Regeneration for GHG14 vehicles





DEMO / #



ENGINE BRAKE - DDEC 13 CPC4, Common power train controller

**Information**

DO YOU WISH TO CHANGE THE PARAMETER?

**ACTUAL VALUES:**

Name	ACTUAL VALUE	MIN VALUE	MAX VALUE
CONFIGURATION OF THE ENGINE BRAKE	NOT INSTALLED	n/a	n/a
ENGINE BRAKE ACTIVATION, VEHICLE SPEED (MINIMUM VALUE)	0 mph	0	100
ENGINE BRAKE ACTIVATION, MINIMUM ENGINE RPM (RETARDER DRIVELINE)	800 rpm	800	4000
ENGINE BRAKE ACTIVATION, MINIMUM ENGINE RPM	1100 rpm	1000	4000
ENGINE BRAKE ACTIVATION, DELAY TIME	0 s	0	5

Cancel F11

Info F2



Continue F12

**DDEC IV/DDEC V**

- New! Vehicle speed signal, tire size parameters

**DDEC V**

- New! Engine brake parameters

**DDEC 16 DD5**

- Vehicle Technical data
- Service data



Detroit Series DD5/8/13/15/16, engine: DDEC 16 GHG17 5.1 210 (DD5 GHG17)

**Tightening torques**

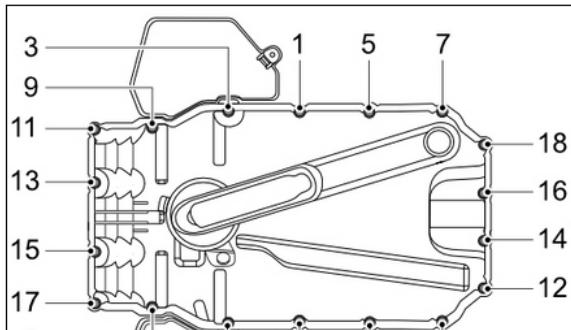
Search F8

- Crankshaft
- Cylinder head
- Cylinder head cover
- Engine flywheel
- Engine lubrication
- Exhaust manifold
- Fuel system
- General
- Intake manifold
- Rocker arm
- Sump**
- Vibration damper

**Tightening torques (Sump)**

Sump: 18 lb-ft (25 Nm)

Tighten the bolts in numerical order



Back F11

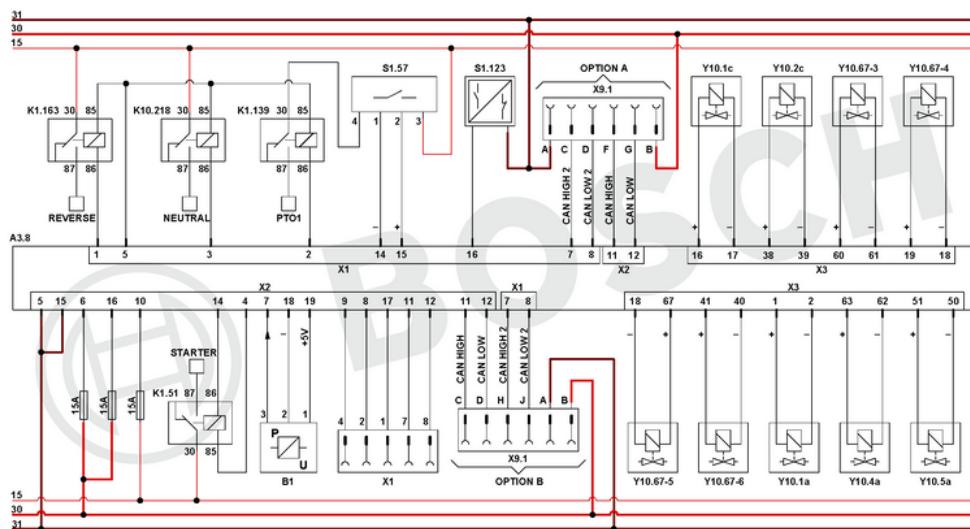
## 3.6 EATON

**All Systems**

- Manual diagnosis

**Eaton Endurant**

- New System! Fault codes reading, live data, technical data, wiring diagram



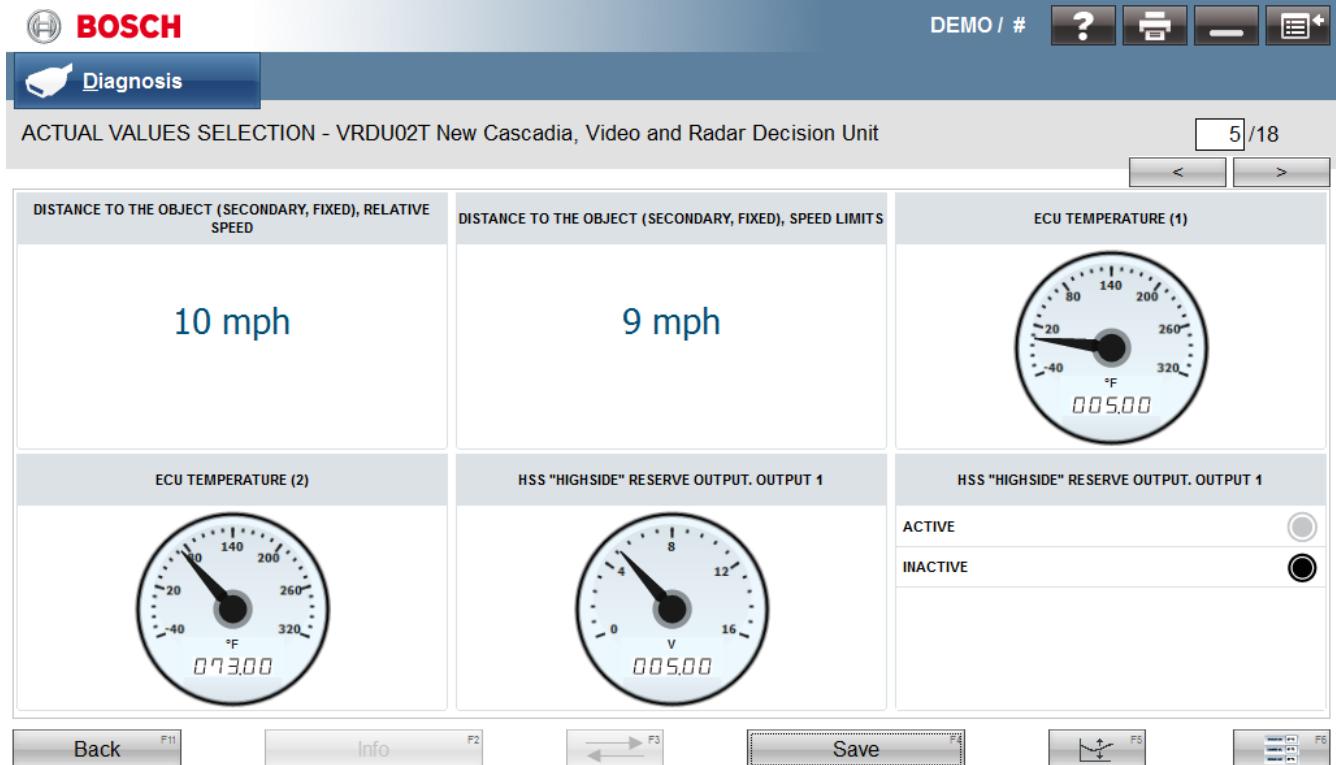
## 3.7 FREIGHTLINER

### IPPC01T for New Cascadia

- Live data monitoring

### VRDU02T for New Cascadia

- Live data monitoring



## 3.8 HALDEX

### HalDEX PLC/PLC Plus

- Manual diagnosis

## 3.9 PACCAR

### All Systems

- Manual diagnosis

### Paccar Cab Electronic Control Unit 3 CECU 3 (K Line)

- New system checks for P30-1030-006, P30-1008-103 and 08.31.2015.15.30.32 variants

### Paccar PMCI-2

- Service data

### PCI DAF/PACCAR KWP2000

- Service data



## 3.10 PSI

### 8.8 LPG engine

- Technical data

## 3.11 MACK

### All Systems

- Manual diagnosis

### EMS V3

- VGT calibration

### TECU V3

- Clutch disc replacement calibration

## 3.12 MERCEDES-BENZ

### All Systems

- Manual diagnosis

### MBE900/4000 EPA07

- Trip data and reset
- Multiple Cylinder Cut-out
- Vehicle speed signal (tire size) parameters
- Absolute maximum vehicle speed parameter



The screenshot shows the BOSCH Diagnosis software interface. At the top, there's a red header bar with a yellow section on the left. Below it is a grey toolbar with icons for DEMO / #, Help (?), Print (P), Minimize (-), Maximize (X), and a menu icon. The main window has a blue header bar with the BOSCH logo and a 'Diagnosis' button. The title bar reads 'TRIP DATA - Detroit Diesel MBE CPC (EPA07), Common power train controller'. A section titled 'Information' contains the heading 'PARTIAL DATA:'. Below this is a table with the following data:

Name	ACTUAL VALUE	MIN VALUE	MAX VALUE
MILEAGE (TRIP)	275037.5 mi	n/a	n/a
FUEL CONSUMPTION (TRIP)	35266.51 gal	n/a	n/a
AVERAGE FUEL CONSUMPTION	7.8 mpg	n/a	n/a
ENGINE LOAD, AVERAGE	49 %	n/a	n/a
AVERAGE SPEED, VEHICLE	35.3 mph	n/a	n/a

At the bottom are four buttons: 'Cancel' (F11), 'Info' (F2), 'Back/Forward' (F3), and 'Continue' (F12).

## 3.13 MERITOR WABCO

### All Systems

- Manual diagnosis

## 3.14 NAVISTAR

### Navistar N9 EPA13 (2014-2018)

- New! Parameters modification: engine brake.
- Vehicle technical data

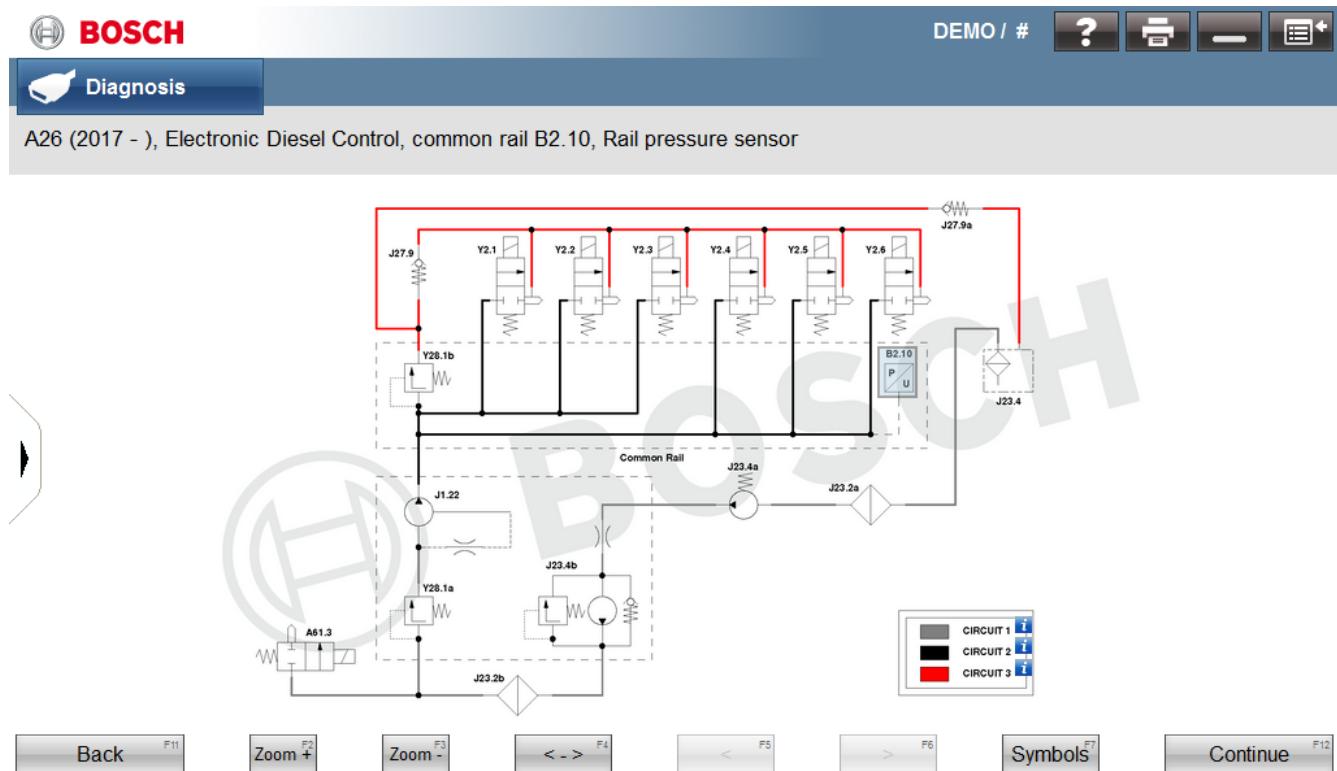
### Navistar N13 EPA13 (2013-2014) & (2015 – 2017)



- New! Maintenance resets: Fuel relief valve, SCR fault reset, low coolant level, CMP/CKP learning, PTO
- Customer password programming
- Parameters modification: engine protection, engine brake
- Vehicle technical data

## Navistar A26

- Fuel system operating diagram
- System Display



## MaxxForce 11/13 (2010-2012)

- New! Parameters modification: geardown protection, idle shutdown timer
- New! Maintenance resets: Fuel relief valve,



DEMO / #



PRESSURE RELIEF VALVE - MaxxForce 11/13 (2010 - 2012), Electronic Diesel Control, common rail

**Information**

THE CURRENT VALUES ARE DISPLAYED NEXT.

DO YOU WISH TO RESET?

Name	ACTUAL VALUE	MIN VALUE	MAX VALUE
TIMES OPEN OF THE PRESSURE RELIEF VALVE	5165	0	10000
OPEN DURATION OF THE PRESSURE RELIEF VALVE	6721 min	0	10000

RESET F10Cancel F11Info F12Continue F12**MaxxForce 13 (2013)**

- New! Parameters modification: vehicle speed signals, engine brake
- Maintenance resets: Fuel Relief Valve

**MaxxForce DT (2007-2009)**

- New! Parameters modification: engine brake, PTO

**MaxxForce DT (2010-2012) / (2013)**

- New! Parameters modification: Geardown Protection, vehicle speed signal, engine brake, temperature fan activation/deactivation





DEMO / #



FAN CONTROL - MaxxForce DT/9/10 (2010 - 2012), Electro-hydraulic injection system (HEUI)

**Information**

THEN ENTER AND/OR SELECT THE VALUES OF THE PARAMETERS YOU WANT TO CONFIGURE

IF YOU DO NOT WISH TO CONTINUE, PLEASE CANCEL THE PROCESS...

Name	ACTUAL VALUE	MIN VALUE	MAX VALUE	NEW VALUE
FAN CONTROL, MODE	ON/OFF - TEMPERATURE CONTROL (COOLANT)	n/a	n/a	ON/OFF - TEMPERATU  ▾
FAN ACTIVATION TEMPERATURE	212 °F	204	302	212
DEACTIVATION TEMPERATURE OF THE FAN	204 °F	-40	212	204

Cancel F11

Info F2



Continue F12

**MaxxForce 7 (2010 – 2012)**

- New! Parameters modification: engine brake, engine protection
- Service data





KTS Truck / #



MaxxForce 7 EPA10

**Vehicles with an average range between 7.0 - 11.0 mpg (2,98 - 4,68 km/L) or average fuel consumption between 21,4 - 33,6 L/100km** Check engine fault codes Make sure the engine is not emitting any strange noises**Lubrication system****Remarks/Comments** Check the engine oil level Check for oil leaks in the joints and tubes of the lubrication system

A - 11,000 mi (18.000 km) / 500 hours / 6 months

**Fuel system****Remarks/Comments** Drain the water from the fuel/water separator**Intake air system****Remarks/Comments** Check condition, integrity, damage, corrosion and wear in the intake and exhaust system**Cooling system**

Back F11

Save F2

Continue F12

**DLC Engines**

- New! Parameters modification: PTO, engine protection, engine brake
- Manual diagnosis

**3.15 VOLVO****All Systems**

- Manual diagnosis

**EMS V3**

- VGT calibration

**TECU V3**

- Clutch disc replacement calibration



## • 4 •

# Main new functionalities by brand – LIGHT & MEDIUM DUTY

## 4.1 FORD

Engines: 3.2/6.7 Powerstroke and 6.2/6.8 L Gas:

- New ODR Data. Operation Times, Distance, Adblue/DEF Data, Counts and emission data.

The screenshot shows the Bosch Diagnostic software interface. At the top, there is a header with the Bosch logo, a demo mode indicator, and several icons for help, print, and system settings. Below the header, a blue bar contains a wrench icon and the word "Diagnosis". The main area displays vehicle operating data under the heading "PCM/TCM UDS - Distance traveled operating data". A table titled "ROUTE" provides specific data points:

	VALUE
MILEAGE	79847 mi
DISTANCE TRAVELED WITH ACTIVATED FAULT LA...	74350 mi
DISTANCE TRAVELED SINCE FAULTS CLEARED	42846 mi

At the bottom of the screen, there are four buttons: "Cancel" (F11), "Info" (F2), a navigation arrow button (F3), and "Continue" (F12).

F-250/550 6.7 Powerstroke:

- Speed limit. 2015 – 2016.



DEMO / #



PCM/TCM UDS, Electronic Engine Control

**Adjustments / settings**

## PARAMETER

INJECTOR CODE

SHUTDOWN AT IDLE

## SPEED LIMIT

CHANGE PARAMETERS

DISPLAY PARAMETERS

## SERVICE

## CALIBRATION

Back F11



Continue F12

- SCR Injector Cleaning Procedure
- Reset EGR Valve.





DEMO / #



PCM/TCM UDS, Electronic Engine Control

**Adjustments / settings**

- PARTICULATE FILTER RESET
- REFILLING OF THE ADBLUE/DEF TANK
- △ REINITIALIZATION OF THE ADAPTION VALUES
  - AIR VOLUME SENSOR
  - AIR-CONDITIONING SYSTEM ACTIVATION REQUEST
  - CRANKSHAFT SENSOR
  - DOC (DIESEL OXIDATION CATALYST)
  - EGR (EXHAUST GAS RECIRCULATION) SYSTEM RESET
  - EGR VALVE
  - ENGINE OIL SERVICE
  - EXHAUST GAS PRESSURE SENSOR IN FRONT OF THE PARTICULATE FILTER
  - ▷ FUEL PRESSURE REGULATION
  - MISFIRE MONITORING
  - NITROGEN OXIDE NOX SENSOR BEHIND THE SCR CATALYTIC CONVERTER

Back F11



Continue F12

- Reset Turbo System.



DEMO / #



PCM/TCM UDS, Electronic Engine Control

**Adjustments / settings**

- MISFIRE MONITORING
- NITROGEN OXIDE NOX SENSOR BEHIND THE SCR CATALYTIC CONVERTER
- NITROGEN OXIDE NOX SENSOR IN FRONT OF THE SCR CATALYTIC CONVERTER
- NON-ERASABLE INTERNAL MEMORY (KAM)
- OXYGEN CONCENTRATION AT THE NOX SENSOR
- PARTICULATE FILTER CONTROL SENSOR (PM - PARTICULATE MATTER)
- PARTICULATE FILTER PRESSURE DIFFERENTIAL SENSOR
- PROTECTION MODE "A" AGAINST TURBOCHARGER HEATING
- PROTECTION MODE "B" AGAINST TURBOCHARGER HEATING
- SCR (SELECTIVE CATALYTIC REDUCTION)
- SCR SYSTEM FAULT MEMORY
- VARIABLE GEOMETRY TURBOCHARGER (VGT)
- WATER IN THE FUEL DETECTION COUNTER

## △ CALIBRATION

Back F11



Continue F12



## TorqShift Transmission in 6.0L Powerstroke. Component Activations:

- Control Pressure Valve.
- Shift Valves: SSA / SSB / SSC / SSD / SSE.
- Torque Converter Valve.

The screenshot shows the Bosch TCM HSCAN software interface. At the top, there is a header with the Bosch logo, a demo number input field, and several icons for help, print, and system controls. Below the header, a blue bar indicates the current selection: "Diagnosis". The main area displays the "TCM HSCAN, Transmission" screen. A section titled "Actuators" lists various solenoid valves: CLUTCH A SOLENOID VALVE, CLUTCH B SOLENOID VALVE, CLUTCH C SOLENOID VALVE, CLUTCH D SOLENOID VALVE, CLUTCH E SOLENOID VALVE, PRESSURE CONTROL SOLENOID VALVE (which is highlighted in blue), and TORQUE CONVERTER CLUTCH SOLENOID VALVE. At the bottom of the screen are navigation buttons: "Back" (F11), a central arrow key labeled "F2", and "Continue" (F12).

## Transit T-Series 3.2L Powerstroke:

- System Checkings: Adblue/DEF Metering Test

## DCU (Dosing Control Unit) component activations:

- Reductant Pump
- Reductant Tank Heater
- Reductant line Heater Control
- Reductant Injector Heater
- Reductant Reverting Valve
- SCR Maintenance Reset.





DEMO / #



DCU UDS, Exhaust gas treatment system

**Adjustments / settings**

ADBBLUE/DEF SYSTEM PURGE

REFILLING OF THE ADBLUE/DEF TANK

SCR (SELECTIVE CATALYTIC REDUCTION)

Back

F11



Continue

F12

**New Wiring Diagrams:**

- Ford UDS BCM (Body Control Module). F-250/550; F-650/750; Transit T-Series.
- Ford UDS ABS (Anti-Lock Brake System). Transii T-Series. 3.2L 3.5L 3.7L
- Ford UDS DCU (Dosing Control Unit), Transit T-Series. 3.2L 3.5L 3.7L
- HSCAN PCM (Powertrain Control Module) 5.4L.
- HSCAN PCM (Powertrain Control Module), esquema eléctrico F-250/550. 5.4L (2007 - 2005).

**New Troubleshooting Guides:**

- F-650/750 6.7L Diesel Powerstroke.
- F-250/550 6.8L Gas.
- F-650/750 6.8L Gas.



The screenshot shows the Bosch Diagnosis software interface. At the top left is the Bosch logo. To the right are buttons for 'DEMO / #', '?', 'Print', and window control buttons. The main title 'Diagnosis' is at the top left. Below it, the error code 'CODE:P06A6\_3 Reference voltage. Sensor A. Functional fault.' is displayed. A navigation bar below the title includes 'Troubleshooting' with a globe icon and 'Fault Info'. The 'Fault Info' tab is selected, showing 'General troubleshooting information' and a note: 'It is suggested to perform the troubleshooting in the sequence mentioned below.' A vertical scroll bar is on the right. The troubleshooting steps are listed as follows:

- ▼ Step 1: Disconnect the component.
- Step 2: Check the wiring and the connections (damaged contacts, dirt, corrosion etc.) as well as the line voltage and resistances.
- ▼ Step 2.1: 5 V supply voltage.
- ▼ Step 3: Check wiring and connections.
- ▼ Step 4: Check the air intake pressure sensor.
- ▼ Step 5: Check the performance of the EGR valve.
- ▼ Step 6: Check the pressure sensor for the exhaust gases.
- ▼ Step 7: Check the crankshaft sensor.
- ▼ Step 8: Check the actuator of the intake air throttle

At the bottom are buttons for 'Back' (F1), 'Print' (F2), and 'Technical documents' (F3).

## 4.2 GMC/CHEVROLET

## **Sierra / Silverado / Cheyenne / Express / Savana**

## **Engine Code L5P:**

## Component activations:

- Fuel transfer pump.
  - Intake air flow valve motor.
  - Intake air flow valve position.
  - Engine oil pressure control solenoid valve.
  - Cooling fan.
  - A/C relay.
  - A/C compressor clutch relay.
  - Fuel heater relay.
  - Malfunction indicator lamp.

## System Checkings:

- Generator.
  - Cylinder Cutout.

- Fuel Pressure Regulator.
- Engine Speed.
- Exhaust Aftertreatment Fuel Injector Flow Test.

#### System Maintenances:

- DPF Regeneration.
- Enable DPF Automatic Regeneration.
- DOC (Diesel Oxidation Catalyst) Reset.
- DPF / SCR Catalytic Converter Reset
- Oil Life.
- Fuel Filter.
- DPF Differential Pressure Sensor Reset.

The screenshot shows the Bosch Diagnosis software interface. At the top, there is a blue header bar with the Bosch logo and a 'DEMOK / #' field. To the right of the field are several icons: a question mark, a printer, a minus sign, and a document with a plus sign. Below the header is a navigation bar with a wrench icon and the word 'Diagnosis'. The main content area displays the following text:

ECM Duramax L5P (6.6 l - V8) HSCAN, Electronic Diesel Control, common rail

**Adjustments / settings**

ACTIVATE AUTOMATIC DPF REGENERATION  
DOC (DIESEL OXIDATION CATALYST) MAINTENANCE  
FUEL FILTER  
OIL SERVICE LIFE  
PARTICULATE FILTER PRESSURE DIFFERENTIAL SENSOR  
PARTICULATE FILTER REGENERATION  
**RESET OF THE DPF/SCR CATALYTIC CONVERTER ASSEMBLY**

At the bottom of the screen are three buttons: 'Back' (F11), a central navigation button with left and right arrows, and 'Continue' (F12).

#### New Wiring Diagrams:

- GM HSCAN - (Engine Code: L20) 4.8L V8
- GM HSCAN - SASM (Steering Wheel Angle Sensor Module)
- GM HSCAN - Trailer Brake Control Module (RP1210)
- GM HSCAN - Power Take-Off Module (RP1210)



## 4.3 HINO

### Aisin A465 Transmission\_Hino

- System display.

### EDC Hino, J08E (K Line)

- Common-Rail pressure injection procedure
- New activations and live data

### EDC J08E (CAN)

- New wiring diagrams configurations
- Troubleshooting guide by fault codes
- Common-Rail pressure injection procedure
- Air purgue procedure in the fuel filter

### EDC Hino, J05E (CAN)

- New wiring diagrams configurations
- Troubleshooting guide by fault codes
- Procedures to inspect the health status of the turbocharger, DPF filter and MAF sensor.

### EDC Hino, J05D

- Operation data
- Troubleshooting guide by fault codes

### BCU (Burner Control Unit) Hino

- System display.

### Meter Hino

- Technical data

### ABS Hino

- New wiring diagrams configurations
- Troubleshooting guide by fault codes
- System display.

### AdBlue Denox 2.2 Hino DCU (Urea SCR)

- System display.
- AdBlue/DEF liquid inspection procedure



## 4.4 ISUZU

### Modelo Reach

- Maintenance resets

### Mimamori

- Troubleshooting guides step by step

### 4HE1-TC & 4HE1-XS/XN (K Line)

- Troubleshooting guides step by step

### 4HK1-TC USA (CAN)

- Wiring diagram for 2016 and newer vehicles

### Isuzu HSCAN SA 7E0 – (LY6/L96) 6.0L V8

- Wiring diagram configuration (2005 – 2007).
- Guías de reparación a errores del sistema.

### Isuzu GM transmisión 6L90

- Wiring diagrams configurations
- Troubleshooting guide by fault codes

### Aisin A465 Transmission\_Isuzu

- Wiring diagrams configurations
- Troubleshooting guide by fault codes

### Isuzu Hydraulic ABS/ASR (K Line)

- Wiring diagrams configurations
- Troubleshooting guide by fault codes

## 4.5 MERCEDES BENZ

### Mercedes Sprinter with Engine OM651 (2013 - ...)

- Intake Air System procedure
- Fuel Filter Heater
- Amount of recirculated exhaust gases

### Mercedes Sprinter with Engine OM642 (2010 – 2012)



- SCR System Reset
- Temperature sensor before SCR Catalyst

The screenshot shows the BOSCH Diagnosis software interface. At the top, there's a toolbar with icons for DEMO / #, Help (?), Print (P), Minimize (-), and Maximize (+). Below the toolbar, the text 'CDI6, Electronic Diesel Control, common rail' is displayed. The main window has a tree view under 'Adjustments / settings'. The 'LAMBDA SENSOR' option is highlighted with a blue selection bar. Other visible options include 'PARAMETER' (with 'INJECTOR CODE'), 'SERVICE' (with 'EXHAUST GAS TREATMENT SYSTEM' expanded to show 'DIESEL PART. FILTER', 'EXHAUST GAS RECIRCULATION ACTUATOR', and 'PARTICULATE FILTER PRESSURE DIFFERENTIAL SENSOR'), 'FUEL SYSTEM', 'INTAKE AIR SYSTEM', and 'PARTICULATE FILTER REGENERATION'. At the bottom, there are buttons for 'Back' (F11), 'Continue' (F12), and a central navigation button with arrows.

#### New Model: Mercedes Benz Metris:

- Engine System M274: MED40. Reading Fault + Live Data.
- Electronic Ignition Lock
- EGS/VGS4NAG2
- Automatic Cab Climate
- SAM Signal Actuation Module
- Electric Power Steering
- Steering Control module
- ESP 9 LEI diagnostic system
- Instrument Cluster
- Battery Sensor
- DBE Overhead control panel
- ISM Intelligent Servo Module
- MFL Module
- OBF Module
- FSCU (Fuel Sensing control Unit)
- Radio





DEMO / #



Switch on ignition.



## Select system group

- ALL
- Air conditioning
- Anti-theft protection
- Audio system
- Brakes
- Electronic module
- Engine
- Instrumentation
- Mainframe
- Steering
- Tire pressure monitoring
- Transmission

## Select system

Overhead control panel	DBE
Automatic transmission	EGS/VGS4NAG2
Steering system control unit	EPS
Electronic stability program	ESP 9
Ignition and start electronic switch	EZS
Fuel system	FSCU4
Battery management control unit	IBS
Instrumentation	IC
Vehicle Intelligence Center	ISM
Air Conditioning	KLA
Engine management (Gasoline)	ME40

Search F6

System Info F2

Model Info F3

System overview F4

DTC Lookup F5

Continue F12

## 4.6 MITSUBISHI-FUSO USA

### Fuso\_EDC 7 C4-6-6 (MR 4M4 / 4M50 CAN)

- DPF regeneration





DEMO / #



PARTICULATE FILTER REGENERATION - EDC 4M4 / 4M50 (CAN), Electronic Diesel Control, common rail



PROCESSING...

Name	ACTUAL VALUE	MIN VALUE	MAX VALUE
TEST STATUS	ON	n/a	n/a
ENGINE SPEED	1132 rpm	0	4000
EXHAUST GAS TEMPERATURE DOWNSTREAM OF THE PARTICULATE FILTER (DPF)	123.8 °F	32	1832
EXHAUST GAS TEMPERATURE UPSTREAM OF THE PARTICULATE FILTER (DPF)	977 °F	32	1832

Cancel F11

Info F2



Continue F12

### Fuso\_TCM – DUONIC Control Unit

- Learning shifting process



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## Main new functionalities by brand – Off-Highway

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See [www.boschdiagnostics.com](http://www.boschdiagnostics.com) for new coverage details.

### Bosch Automotive Service Solutions Inc.

28635 Mound Road  
Warren, MI 48092  
USA

[tech@boschdiagnostics.com](mailto:tech@boschdiagnostics.com)  
855-267-2483

