

Version 4.14

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Overview

Version 4.14 update includes updates to model year 2021 vehicles as well as function additions to previous model year vehicles, and more ADAS functions.

Expanded Global OBDII for 2021+ Ford.

1065 new special tests and 3746 new system applications are included in this update.

Software and coverage feature details provided throughout these release notes.

New Coverage Highlights (Coverage details start on Page 2)

- **BMW/Mini** – Additional new coverage for some 2021MY vehicles and systems
- **Chrysler/Jeep/Ram** – Additional new coverage for some 2021MY vehicles and systems
- **Ford/Lincoln** – Additional new coverage for some 2021MY vehicles and systems
- **GM** – Additional new coverage for some 2021MY vehicles and systems
- **Honda/Acura** – Additional new coverage for some 2021MY vehicles and systems
- **Jaguar** – Additional new coverage for some 2021MY vehicles and systems
- **Land Rover** – Additional new coverage for some 2021MY vehicles and systems
- **Nissan/Infiniti** – Additional new coverage for some 2021MY vehicles and systems
- **Volvo** – Additional new coverage for some 2021MY vehicles and systems
- **Special Test Additions** – multiple brands
- **ADAS Coverage:**
 - **MY2022 Mitsubishi Eclipse Cross** – Blind Spot & Surround View
 - **Additional MY2021 Coverage:**
 - **BMW** – Front Camera
 - **GM** – Front Camera & Front Radar
 - **Ford** – Front Camera, Front Radar, Surround View, & Blind Spot
 - **Nissan/Infiniti** – Front Camera, Front Radar, & Surround View
 - **Ram** – Front Camera & Front Radar
 - **Volvo** – Front Camera, Front Radar, & Surround View

New Coverage – USA Domestic

Chrysler/Jeep/Ram Coverage

- Added coverage for 146 new system applications

11 new Adjustment type special tests including:

Caliper EPB substitution, Control Unit Reprogramming, Enable Brake Pedal, Enable/Disable The Roll Bench Mode, Front Brake Disc Substitution, Production State, Reset Angle Offset, Settling Group Caliper and Brake Pads, Reset Adaptive Data, Continuous Tone Test

1 new Actuation type special test:

Fuel Metering Unit

Ford/Lincoln Coverage

- Added coverage for 1245 new system applications

2 new Adjustment type special tests including:

TCM Adaptive Learning, 360 Degree / Pro Trailer Assist Camera Alignment

2 new Actuation type special tests including:

ICP Sensor Test, VCR System

General Motors Coverage

- Added coverage for 206 new system applications

1 new Adjustment type special test:

Cylinder Deactivation Exhaust Flow Valve Learn

4 new Actuation type special tests including:

Cylinder 1 Deactivation Solenoid, Cylinder 4 Deactivation Solenoid, Cylinder 6 Deactivation Solenoid, Cylinder 7 Deactivation Solenoid

New Coverage – USA Asian

Honda/Acura Coverage

- Added coverage for 152 new system applications

Hyundai Coverage

3 new Adjustment type special tests including:

Brake Pad Change Mode, TPMS Reception Rate Measuring Mode, TPMS Test

20 new Actuation type special tests including:

Interior Antenna #1 Output (Power and GND), Assist Mirror Position Down, Assist Mirror Position Left, Assist Mirror Position Right, Assist Mirror Position Up, Assist Power Window Down (Option), Assist Power Window Up (Option), Child Lock Relay Output, Child Unlock Relay Output, DRV/AST Power Window Enable Output, Rear Left Power Window Down (Option), Rear Left Power Window Up

(Option), Rear Power Window Enable Output (Option), Rear Right Power Window Down (Option), Rear Right Power Window Up (Option), Static Bending LH Output (Option), Static Bending RH Output (Option), Sunroof Enable Output, Static Bending LH Output (Option), Static Bending RH Output (Option)

Kia Coverage

20 new Actuation type special tests including:

Interior Antenna #1 Output (Power and GND), Assist Mirror Position Down, Assist Mirror Position Left, Assist Mirror Position Right, Assist Mirror Position Up, Assist Power Window Down (Option), Assist Power Window Up (Option), Child Lock Relay Output, Child Unlock Relay Output, DRV/AST Power Window Enable Output, Rear Left Power Window Down (Option), Rear Left Power Window Up (Option), Rear Power Window Enable Output (Option), Rear Right Power Window Down (Option), Rear Right Power Window Up (Option), Static Bending LH Output (Option), Static Bending RH Output (Option), Sunroof Enable Output, Static Bending LH Output (Option), Static Bending RH Output (Option)

Mitsubishi Coverage

2 new Adjustment type special tests including:

BSM Radar Recognition Angle Inspection, Multi-Around Camera Calibration

Nissan/Infiniti Coverage

- Added coverage for 1393 new system applications

1 new Adjustment type special test:

AVM Camera Aiming

155 new Actuation type special tests including:

Lock Operation, Slow Mode, Auto Mode, Cruise Control/PCS/LKA Buzzer, ECB Solenoid (SGH), ECB Solenoid (SLAFL), ECB Solenoid (SLAFL2), ECB Solenoid (SLAFR), ECB Solenoid (SLAFR2), ECB Solenoid (SLARL2), ECB Solenoid (SLARR), ECB Solenoid (SLARR2), ECB Solenoid (SLRFL), ECB Solenoid (SLRFL2), ECB Solenoid (SLRFR), ECB Solenoid (SLRFR2), ECB Solenoid (SLRRL2), ECB Solenoid (SLRRR), ECB Solenoid (SLRRR2), ECB Solenoid (SSA), VSC OFF Indicator Light, Voltage Pattern Output Levelizer Test, LOW BEAM TEST LEFT, LOW BEAM TEST RIGHT, Clutch, LOOK RELEASE, Step Working Request, SEAT LIFTER FR, SEAT LIFTER RR, SEAT LIFTER, Seat Reclining, SEAT SLIDE, TELESCO MOTOR, AS Seat Lamp Test, HORN LAMP, Horn-IPDM-E, Activate Demo Mode Of Exterior Lamp, AS Seat Lamp Test, HORN LAMP, Horn-IPDM-E, 5TH BOW SYSTEM, HYDRAULIC PRESSURE RELEASE, POWER WINDOW (LH/RH), ROOF STATE OUTPUT(AUDIO), ROOF SYSTEM, VCR System, A/F Sensor Heater, Air Inlet Control Flap On Front End Panel, Air Inlet Flap, Causes Of Engine Stop Prevention, CBV Position Override, Check Engine And AC With Integrated Control Fan Motor, Check Intake Port Shutoff Actuator Motor, Cylinder Cutout Test, Electric Fan Override Test, Electronic Throttle Control, Engine Fan Override Test, EVAP Canister Purge Control Solenoid Valve, Exhaust Camshaft Dephaser Solenoid Valve, Exhaust Camshaft Set Point, Exhaust Fuel Injector, Exhaust Gas Recirculation Cooler Bypass Valve, Exhaust Valve Timing Control Solenoid Valve, Fuel Flow Actuator, Fuel Flow Solenoid Valve, Fuel Heater Relay, Fuel Heater, Fuel Pressure Solenoid Valve, Fuel Rail Pressure Control Valve, High Pressure Circuit Leak Test, HPCR Fuel Act Override, Ignition Cylinder 1, Ignition Cylinder 2, Ignition Cylinder 3, Ignition Cylinder 4, Ignition Timing (Mode 1), Ignition Timing (Mode 3), Injector Cylinder 1, Injector Cylinder 2, Injector Cylinder 3, Injector Cylinder 4, Intake Valve Timing Control Solenoid Valve, Low Pressure Fuel Pump, Malfunction Status Of Stop/Start System, Sub Fuel Cont Sol /V, Supercharger Clutch Relay, TANK FUEL TEMPERATURE SENSOR, TARGET EGR ANGLE, Target Electric Throttle Control Angle, Thermostat Heater

Control Solenoid Valve, Turbocharger Boost Control Actuator, Turbocharger Boost Control Solenoid Valve, Battery Cooling, Battery Heater, 12V BATTERY CHARGE W/L, CHARGE STAT INDICATOR 1, CHARGE STAT INDICATOR 2, CHARGE STAT INDICATOR 3, DC/DC Conv Duty, EV SYSTEM W/L, F/S CHG RLY, Quick Charge Permit Signal Circuit, Quick Charge Relay -, REVERSE LAMP RLY, Voltage Control, Active Curve Illumination Actuator Motor, Active Curve Illumination Position Sensor, Active Curve Illumination, Hv Battery Cooling Fan, Engine Cranking, Inspection Mode 1, Inspection Mode 2, Inspection Mode 3, Inspection Mode 5, Voltage Control, All Shock Absorber, Command St Whl Forc, FL Shock Absorber, FR Shock Absorber, RL Shock Absorber, RR Shock Absorber, Stop Lamp ON Relay Active, (TBD)BSI FAIL Lamp, (TBD)EAP FAIL IND, (TBD)Epkb Request, (TBD)EPS Reaction Force Request, (TBD)Hand Free Warning, (TBD)Hazard Lamp, (TBD)LDP L STEP, (TBD)TD/MRM Buzzer Drive, (TBD)TD/MRM Display, (TBD)Turn Lamp L, (TBD)Turn Lamp R, BSW Indicator LH, BSW Warning Lamp, Cause of Auto Cancel 1, LDP Warning Lamp, LDW Warning Lamp, Speaker Mute Signal, Switch Lamp~Switch Lamp, YAW STEP L, YAW STEP R, SHIFTLOCK SORENOID TEST, RUN FLAT-T WARN BUZZER, Start Up Sound Speaker, VSP Off Indicator, VSP SPEAKER LH, VSP SPEAKER RH, VSP Speaker

Subaru Coverage

6 new Actuation type special tests including:

CRAWL Indicator Light, HA-CTRL Buzzer, Hill Start Assist Indicator, TRACK Mode Indicator Light, Sudden Braking Notification Signal, Power Window Tests

Toyota/Lexus Coverage

17 new Adjustment type special tests including:

Air Inlet Damper Targ Pulse, Air Outlet Servo Pulse (P), Back Door Power Window Down, Back Door Power Window Up, Illumination Module A1, Illumination Module A2, Illumination Module A3, Illumination Module A4, Illumination Module B1, Illumination Module B2, Illumination Module B3, Illumination Module B4, Rear Curtain Close Relay, Rear Curtain Open Relay, Rear Wiper INT Operation, Off-Road Guidance Indicator, Power Steering ECU Initial Setting

276 new Actuation type special tests including:

ABS Solenoid (SFRH), ABS Solenoid (SFRR), Auto Mode, BH Standby Light, CRAWL Indicator Light, Cruise Control/PCS/LKA Buzzer, ECB Solenoid (SGH), ECB Solenoid (SLAFL), ECB Solenoid (SLAFL2), ECB Solenoid (SLAFR), ECB Solenoid (SLAFR2), ECB Solenoid (SLARL2), ECB Solenoid (SLARR), ECB Solenoid (SLARR2), ECB Solenoid (SLRFL), ECB Solenoid (SLRFL2), ECB Solenoid (SLRFR), ECB Solenoid (SLRFR2), ECB Solenoid (SLRRL2), ECB Solenoid (SLRRR), ECB Solenoid (SLRRR2), ECB Solenoid (SSA), ECB Warning Light, HA-CTRL Buzzer, Hill Start Assist Indicator, Power Supply Air Bleeding Pattern2, RL Wheel Air Bleeding Pattern, RR Wheel Air Bleeding Pattern, Tire Pressure Light, TRACK Mode Indicator Light, TRC(TRAC) Motor Relay, TRC(TRAC) OFF Indicator Light, VSC OFF Indicator Light, VSC/TRAC Solenoid (SMF), VSC/TRAC Solenoid (SMR), VSC/TRAC Solenoid (SPFL), VSC/TRAC Solenoid (SPFR), VSC/TRAC Solenoid (SRCF), VSC/TRAC Solenoid (SRCR), VSC/TRAC Solenoid (SRMF), VSC/TRAC Solenoid (SRMR), VSC/TRC(TRAC) Solenoid, Damper Step FL (Electric Current), Damper Step FR (Electric Current), Damper Step RL (Electric Current), Damper Step RR (Electric Current), Auto High Beam Control Indicator, Cornering Light, Cornering Light/Front Side Illuminate Light, High Beam LH, High Beam RH, Left Turn Signal Light, Right Turn Signal Light, Cornering Light/Front Side Illuminate Light, A/C Driving Demand, Cooling Electric Expansion Valve, Front Air Mix Damper Control Servo Motor, Front Air Outlet Damper Control Servo Motor, Front Evaporator Magnetic Valve, Heater Valve, Heating Electric Expansion Valve, PTC Heater, Rear Air Mix Damper Control Servo Motor, Rear Left Seat Heater, Rear Right Seat Heater, Water Pump, A/C Driving Demand, A/O Servo Pulse(Rr P)~A/O Servo Pulse(Rr P), Air Inlet Damper

(Rear), Air Inlet Damper Targ Pulse~Air Inlet Damper Targ Pulse, Air Inlet, Air Mix Damper (Driver Side), Air Mix Damper (Passenger Side), Air Outlet (Front), Air Outlet (Rear), Air Outlet Damper (Driver Side), Air Outlet Damper (Passenger Side), Air Outlet Damper (Rear), Air Outlet DEF, Air Outlet DEF~Air Outlet DEF, Air Outlet Rear FOOT (Driver Side), Air Outlet Rear FOOT (Driver Side)~Air Outlet Rear FOOT (Driver, Air Outlet Rear FOOT (Passenger Side), Air Outlet Rear FOOT (Passenger Side)~Air Outlet Rear FOOT (Pas, Air Outlet Servo Pulse (P)~Air Outlet Servo Pulse (P), Blower Motor~Blower Motor, Cool Air Bypass Damper (Driver Side), Cool Air Bypass Damper (Passenger Side), Cooling Electric Expansion Valve, Electric Heater2, Electric Heater3, Front Air Mix Damper Control Servo Motor, Front Air Outlet Damper Control Servo Motor, Front Evaporator Magnetic Valve, Front Right Seat Blower, Heater Valve, Heating Electric Expansion Valve, High Voltage Electric Heater, Lower Air Mix (Driver Side), Lower Air Mix (Passenger Side), Middle Pressure Magnetic Valve, Mirror Heater Relay, PTC Heater, Rear A/C Mag Valve, Rear Air Mix Damper Control Servo Motor, Rear Left Seat Blower, Rear Left Seat Heater, Rear Right Seat Blower, Rear Right Seat Heater, Upper Air Mix (Driver Side), Upper Air Mix (Passenger Side), Water Pump, Damper Step FL (Electric Current), Damper Step FR (Electric Current), Damper Step RL (Electric Current), Damper Step RR (Electric Current), Activate The FHL, Enforced Driving FHL Warning Trigger, Access to Rear Seat Signal, Rear Side Buckle Light, Sudden Braking Notification Signal, Head Light Cleaner, Horn Relay Operation, Rear Defogger Operation, Washer Motor Operation, Wiper Deicer, BSM OFF Indicator, RCD OFF Indicator, Easy Access Buckle, Headrest Front/Rear, Lift Up Buckle, Lower Back, Lower Cushion, Lumbar Bottom, Lumbar Middle, Lumbar Upper, Refresh B1, Refresh B2, Refresh B3, Refresh B4, Refresh B5, Refresh C1, Refresh C2, Refresh C3, Refresh C4, Shoulder, Side Back Support, Side Cushion Support, Auto Mode, Lock Faulty Display, Activate HCAC VSV, Activate The Brake Ejector VSV, Activate The DPF Rejuvenate (PM), Activate The DPF Rejuvenate (S), Activate The Fuel Pressure Switching Valve, Activate The Fuel Route Switching Valve Relay, Activate The Intank Fuel Pump Relay, Activate The Lock Up, Activate The Solenoid (DS1), Activate The Solenoid (DS2), Activate The Solenoid (DSL), Activate The Solenoid (DSU), Activate The Solenoid (S1), Activate The Solenoid (S2), Activate The Solenoid (S3), Activate The Solenoid (S4), Activate The Solenoid (SB), Activate The Solenoid (SL), Activate The Solenoid (SL1), Activate The Solenoid (SL2), Activate The Solenoid (SL3), Activate The Solenoid (SL4), Activate The Solenoid (SL5), Activate The Solenoid (SLS), Activate The Solenoid (SLT), Activate The Solenoid (SLU), Activate The Solenoid (SR), Activate The Solenoid (ST), Activate The VALVEMATIC(ENG OFF), Activate The VALVEMATIC(ENG ON), Activate The VN Turbo Open, Activate The VSV For EGR Cooler Bypass, Activate The VSV For EGR Cut, Activate The VSV For Exhaust Gas Control, Activate The VSV For Exhaust Shutter, Activate The VSV For Exhaust Switching Valve, Activate The VSV For HCAC System, Activate The VSV For Intake Air Control, Activate The VSV For Turbo Boost Control, Activate The VSV For Turbo Pressure, Activate The VSV For Variable Intake Control, Activate The VSV2 For Intake Control, Brake Ejector VSV Inspection, Check The Cylinder Compression, Control The ACM Inhibit, Control The Auto Oil Supply System, Control The Delivery Shut Valve, Control The EGR Step Position 2, Control The Exhaust Exterior Valve Angle, Control The Fuel Pump Duty, Control The Injection Timing 1, Control The Injection Timing 2, Control The Injection Timing 3, Control The Injection Timing 4, Control The Injection Timing 5, Control The Injection Timing 6, Control The Injection Timing 7, Control The Injection Timing 8, Control The Injection Volume For A/F Sensor(CNG), Control The Injection Volume, Control The Injection Way, Control The O/D Cut, Control The Purge Dilution Valve Duty Bank1, Control The Purge Dilution Valve Duty Bank2, Control The Regulator Shut Valve, Control The SCV Duty Ratio, Control The Select Cylinder Fuel Cut(CNG), Control The Shift Ratio (CVT), Control The SLS Pressure, Control The Stratified Charge Combustion, Control The Target Fuel Pressure, Control The Voltage Of Alternator, Control The VVT Exhaust Linear (Bank1), Control The VVT Exhaust Linear (Bank2), Control The VVT-iE Linear (Bank1), Control The VVT-le Linear (Bank2), Control The VVTL System (Bank1), Control The VVTL System (Bank2), Diesel Throttle Target Angle 2, Fuel Cooler VSV, Test The Fuel Leak, Test The Turbo Charger Step Motor 2, Control The EGR

Step Position 2, Control The Exhaust Exterior Valve Angle, Control The Injection Timing 1, Control The Injection Timing 2, Control The Injection Timing 3, Control The Injection Timing 4

New Coverage – USA European

Alpha Romeo Coverage

9 new Adjustment type special test:

Caliper EPB substitution, Control Unit Reprogramming, Enable Brake Pedal, Enable/Disable The Roll Bench Mode, Front Brake Disc Substitution, Production State, Reset Angle Offset, Settling Group Caliper and Brake Pads, Reset Adaptive Data

BMW/Mini Coverage

- Added coverage for 55 new system applications

42 new special tests including:

Start Up High Voltage Battery, Pressure Sensor Front Axle, Dynamic-Pressure Flap at 0%, Dynamic-Pressure Flap at 100%, Footwell Flap, Front Left, at 0%, Footwell Flap, Front Left, at 100%, Footwell Flap, Front Right, at 0%, Footwell Flap, Front Right, at 100%, Fresh Air and Recirculated Air Flap at 100%, Heated Rear Window ON and OFF, Stratification Flap, Front Left, at 0%, Stratification Flap, Front Left, at 100%, Stratification Flap, Front Right, at 0%, Stratification Flap, Front Right, at 100%, Ventilation Flap, Left, at 0%, Ventilation Flap, Left, at 100%, Ventilation Flap, Right, at 0%, Ventilation Flap, Right, at 100%, Test communication, Rear Module Emergency Release, Oil Change QMVH, Active Seat Solenoid Valve, Driver Seat Normalization, Shock Absorber Setting, Start-up lane change warning sensors, Control Valve In A/C Compressor, Cornering Light, Switch ON / OFF Night Vision Camera Lens Heater, Switch ON / Switch OFF Person Recognition, Log Off SBDH, Log On SBDH, Log On Snap In Adapter, Log On Mobile Phone, Burn Off Catalytic Converter, Service Range Extender, Rear Passenger Side Power Window Regulator Initialisation, Activate Radio Module, Driver Seat Normalization, Ventilation Procedure Out, After Work On Hydraulics, Before Work On Hydraulics, Wiper Installation Position, Air Suspension Sensor Initialization

Fiat Coverage

9 new Adjustment type special test:

Caliper EPB substitution, Control Unit Reprogramming, Enable Brake Pedal, Enable/Disable The Roll Bench Mode, Front Brake Disc Substitution, Production State, Reset Angle Offset, Settling Group Caliper and Brake Pads, Reset Adaptive Data

Jaguar Coverage

- Added coverage for 15 new system applications

201 new special tests including:

0 Outputs -Secondary Lug Comp Lid Rel Sup, 0 Outputs -Steering Col Adj Mot -Reach Pot, 0 Outputs -Steering Col Adj Mot -Tilt Pot, Digital Outputs -5 Volt External Supply, Digital Outputs -Accessory Socket

1 Control, Digital Outputs -Accessory Socket 2 Control, Digital Outputs -Active Exhaust Relay Control, Digital Outputs -Adaptive Front Lighting Height Sensor Supply, Digital Outputs -Air Suspension Wakeup, Digital Outputs -Comfort Supply Relay Control, Digital Outputs -Daytime Running Lamps Control, Digital Outputs -Deployable Rear Spoiler Supply Control, Digital Outputs -Disable Rear Wiper, Digital Outputs -ECO Switch Telltale High, Digital Outputs -ECO Switch Telltale Low, Digital Outputs -Electric Steering Column Lock Supply, Digital Outputs -Engine Control Module Wake-Up Signal, Digital Outputs -Engine Junction Box Ignition Relay Control, Digital Outputs -Engine Running Control, Digital Outputs -Extended Ignition Control 1, Digital Outputs -Extended Ignition Control 2, Digital Outputs -Front Fog Lamp Supply, Digital Outputs -Front Right Side Lamp, Digital Outputs -Front Washer Pump Control High, Digital Outputs -Front Washer Pump Control Low, Digital Outputs -Front Wiper Fast Relay Control, Digital Outputs -Fuel Flap Lock Supply, Digital Outputs -Fuel Flap Unlock Supply, Digital Outputs -Fuel Pump Relay Control B, Digital Outputs -Fuel Pump Relay Control, Digital Outputs -Heated Rear Screen Relay Control, Digital Outputs -Heated Steering Wheel Control, Digital Outputs -Heated Washer Jet Relay Control, Digital Outputs -Heated Windscreen Relay Control, Digital Outputs -Horn Relay Control, Digital Outputs -Ignition Supply 1, Digital Outputs -Ignition Supply 2, Digital Outputs -Ignition Supply 3, Digital Outputs -Ignition Supply 4, Digital Outputs -Ignition Supply 5, Digital Outputs -Ignition Supply 6, Digital Outputs -Ignition Supply 7, Digital Outputs -Ignition Supply 8, Digital Outputs -Ignition Supply 9, Digital Outputs -Left Headlamp Electronics Supply, Digital Outputs -Left Headlamp Washer Relay Control, Digital Outputs -Lower Glovebox Release, Digital Outputs -Luggage Compartment Lamp, Digital Outputs -Luggage Compartment Lid Release Supply, Digital Outputs -Parking Aid Control Module, Digital Outputs -Passive Alarm Sounder Supply, Digital Outputs -Rear Left Fog Lamp Supply, Digital Outputs -Rear Right Fog Lamp Supply, Digital Outputs -Rear Washer Pump Control High, Digital Outputs -Rear Washer Pump Control Low, Digital Outputs -Rear Wiper Relay Control, Digital Outputs -Restraint Ignition 1, Digital Outputs -Restraint Ignition 2, Digital Outputs -Reverse Gear Inhibit, Digital Outputs -Right Headlamp Electronics Supply, Digital Outputs -Right Headlamp Washer Relay Control, Digital Outputs -Soft Close Luggage Compartment Lid -Close, Digital Outputs -Soft Close Luggage Compartment Lid -Reverse, Digital Outputs -Starter Motor Crank Request Signal, Digital Outputs -Trailer Fog Lamps Supply, Digital Outputs -Trailer Left Side Lamp, Digital Outputs -Trailer Left Turn Signal Supply, Digital Outputs -Trailer Reverse Lamps, Digital Outputs -Trailer Right Side Lamp, Digital Outputs -Trailer Right Turn Signal Supply, Digital Outputs -Trailer Stop Lamp Supply, Digital Outputs -Upper Glovebox Release, Digital Outputs -Washer Fluid Transfer Pump Relay, PWM -Output 1 -Rear Right Fog Lamp, PWM -Output -Ambience Lighting -Blue, PWM -Output -Ambience Lighting -Red, PWM -Output -Automat Temp Ctrl Mod Switchpa III, PWM -Output -Frequency Speed Signal, PWM -Output -Front Left Side Lamp, PWM -Output -Front Left Turn Signal Indicator, PWM -Output -Front Right Side Lamp, PWM -Output -Front Rt Turn Sig Ind, PWM -Output -Hazard Warn Lamp SW Illum, PWM -Output -Headlamp Motor, PWM -Output -Heater Control, PWM -Output -High Mounted Stop Lamp Supply, PWM -Output -Interior Lamps, PWM -Output -Left Cornering Lamp, PWM -Output -Left Daytime Run Lamp Sup, PWM -Output -Left Headlamp High Beam Supply, PWM -Output -Left Headlamp Low Beam Supply, PWM -Output -License Plate Lamps, PWM -Output -Rear Left Side Lamp, PWM -Output -Rear Left Turn Signal Indicator, PWM -Output -Rear Right Turn Signal Indicator, PWM -Output -Right Cornering Lamp, PWM -Output -Right Daytime Run Lamp Sup, PWM -Output -Right Headlamp High Beam Supply, PWM -Output -Right Headlamp Low Beam Supply, PWM -Output -Stop Lamp Left Hand

Supply, PWM -Output -Switch Illumination, Electronic Parking Brake Mode., Door Power Distribution - Door Power Output 1, Exterior Door Handle -Handle Deploy Output, Exterior Door Handle -Handle Retract Output, Lighting Status -Exterior Door Handle LED, Seat Digital Port Input Values - Digital Input - B1 -Switch 2, Seat Digital Port Input Values - Digital Input -B2 -Switch 1, Seat Digital Port Input Values - Digital Input -B2 -Switch 2, Seat Digital Port Input Values - Digital Input -B2 -Switch 3, Seat Digital Port Input Values - Digital Input -B2 -Switch 4, Seat Digital Port Input Values - Digital Input -B2 -Switch 5, Seat Digital Port Input Values - Digital Input -B2 -Switch 6, Seat Digital Port Input Values - Digital Input - B2 -Switch 7, Seat Digital Port Input Values - Digital Input -B2 -Switch 8, Seat Motor Outputs - Bank A - Motor 1 -Output 1, Seat Motor Outputs - Bank A -Motor 2 -Output 0, Seat Motor Outputs - Bank A - Motor 2 -Output 1, Seat Motor Outputs - Bank A -Motor 3 -Output 0, Seat Motor Outputs - Bank A - Motor 3 -Output 1, Seat Motor Outputs - Bank A -Motor 4 -Output 0, Seat Motor Outputs - Bank A - Motor 4 -Output 1, Seat Motor Outputs - Bank B -Motor 1 -Output 0, Seat Motor Outputs - Bank B - Motor 1 -Output 1, Seat Motor Outputs - Bank B -Motor 2 -Output 0, Seat Motor Outputs - Bank B - Motor 2 -Output 1, Seat Status -Cushion Extend Switch -Forward, Seat Status -Cushion Extend Switch - Rearward, Seat Status -Head Restraint Down Switch, Seat Status -Head Restraint Up Switch, Seat Switch Status -Front Row Head Restraint Forward Switch, Seat Switch Status -Front Row Head Restraint Rearward Switch, Seat Switch Status -Front Row Upper Backrest Incline Switch, Seat Switch Status - Front Row Upper Backrest Recline Switch, Door Blind Signal Status -Door Blind Down Output, Door Blind Signal Status -Door Blind Up Output, Door Power Distribution -Door Power Output 1, Door Power Distribution -Door Power Output 2, Exterior Door Handle -Handle Deploy Output, Exterior Door Handle -Handle Retract Output, Lighting Status -Exterior Door Handle LED, Auxiliary Engine Coolant Pump - Commanded, Boost Pressure Actuator -Bank 1 -Desired Position, Charge Air Cooler Electric Coolant Pump Duty Cycle -Commanded, Commanded Boost Actuator Control -Bank 1, Commanded Throttle Actuator Control, Des Rev Per Min Idle Spd Ctrl -High Resolution, Electric Thermostat Heater -Control Duty Cycle, Engine Cooling Fan Speed -Desired, Engine Input/Output Parameters -Active Engine Mount Control, Engine Input/Output Parameters -Brake Switch 2, Engine Input/Output Parameters -Brake Switch, Engine Input/Output Parameters -Cranking State, Engine Input/Output Parameters -Fuel Lift Pump Control, Engine Input/Output Parameters -Fuel Lift Pump, Engine Input/Output Parameters - Glow Lamp, Engine Input/Output Parameters -Kickdown, Engine Input/Output Parameters -Low Oil Pressure (Switch), Engine Input/Output Parameters -Malfunction Indicator Lamp, Engine Input/Output Parameters -Oil Pressure Lamp, Engine Input/Output Parameters -Park/Neutral Switch, Engine Input/Output Parameters -Starter Enable High Side, Engine Input/Output Parameters -Starter Enable Low Side, Exhaust Gas Recirculation -Bank 1 -Commanded, Exhaust Gas Recirculation Cooler Bypass Valve Duty Cycle, Exhaust Gas Recirculation Cooler Bypass Valve Position

Land Rover Coverage

- Added coverage for 96 new system applications

249 new special tests including:

0 Outputs -Secondary Lug Comp Lid Rel Sup, 0 Outputs -Steering Col Adj Mot -Reach Pot, 0 Outputs - Steering Col Adj Mot -Tilt Pot, Digital Outputs 2 -Rear Fog Lamp, Digital Outputs 3 -Front Right Position Lamp, Digital Outputs -5 Volt External Supply, Digital Outputs -Accessory Socket 1 Control, Digital Outputs -Accessory Socket 2 Control, Digital Outputs -Active Exhaust Relay Control, Digital Outputs -

Adaptive Front Lighting Height Sensor Supply, Digital Outputs -Air Suspension Wakeup, Digital Outputs -Comfort Supply Relay Control, Digital Outputs -Daytime Running Lamps Control, Digital Outputs -Deployable Rear Spoiler Supply Control, Digital Outputs -Disable Rear Wiper, Digital Outputs -ECO Switch Telltale High, Digital Outputs -ECO Switch Telltale Low, Digital Outputs -Electric Steering Column Lock Supply, Digital Outputs -Engine Control Module Wake-Up Signal, Digital Outputs -Engine Junction Box Ignition Relay Control, Digital Outputs -Engine Running Control, Digital Outputs -Extended Ignition Control 1, Digital Outputs -Extended Ignition Control 2, Digital Outputs -Front Fog Lamp Supply, Digital Outputs -Front Right Side Lamp, Digital Outputs -Front Washer Pump Control High, Digital Outputs -Front Washer Pump Control Low, Digital Outputs -Front Wiper Fast Relay Control, Digital Outputs -Fuel Flap Lock Supply, Digital Outputs -Fuel Flap Unlock Supply, Digital Outputs -Fuel Pump Relay Control B, Digital Outputs -Fuel Pump Relay Control, Digital Outputs -Heated Rear Screen Relay Control, Digital Outputs -Heated Steering Wheel Control, Digital Outputs -Heated Washer Jet Relay Control, Digital Outputs -Heated Windscreen Relay Control, Digital Outputs -Horn Relay Control, Digital Outputs -Ignition Supply 1, Digital Outputs -Ignition Supply 2, Digital Outputs -Ignition Supply 3, Digital Outputs -Ignition Supply 4, Digital Outputs -Ignition Supply 5, Digital Outputs -Ignition Supply 6, Digital Outputs -Ignition Supply 7, Digital Outputs -Ignition Supply 8, Digital Outputs -Ignition Supply 9, Digital Outputs -Left Headlamp Electronics Supply, Digital Outputs -Left Headlamp Washer Relay Control, Digital Outputs -Lower Glovebox Release, Digital Outputs -Luggage Compartment Lamp, Digital Outputs -Luggage Compartment Lid Release Supply, Digital Outputs -Parking Aid Control Module, Digital Outputs -Passive Alarm Sounder Supply, Digital Outputs -Rear Left Fog Lamp Supply, Digital Outputs -Rear Right Fog Lamp Supply, Digital Outputs -Rear Washer Pump Control High, Digital Outputs -Rear Washer Pump Control Low, Digital Outputs -Rear Wiper Relay Control, Digital Outputs -Restraint Ignition 1, Digital Outputs -Restraint Ignition 2, Digital Outputs -Reverse Gear Inhibit, Digital Outputs -Right Headlamp Electronics Supply, Digital Outputs -Right Headlamp Washer Relay Control, Digital Outputs -Soft Close Luggage Compartment Lid -Close, Digital Outputs -Soft Close Luggage Compartment Lid -Reverse, Digital Outputs -Starter Motor Crank Request Signal, Digital Outputs -Trailer Fog Lamps Supply, Digital Outputs -Trailer Left Side Lamp, Digital Outputs -Trailer Left Turn Signal Supply, Digital Outputs -Trailer Reverse Lamps, Digital Outputs -Trailer Right Side Lamp, Digital Outputs -Trailer Right Turn Signal Supply, Digital Outputs -Trailer Stop Lamp Supply, Digital Outputs -Upper Glovebox Release, Digital Outputs -Washer Fluid Transfer Pump Relay, PWM -Output 1 -Rear Right Fog Lamp, PWM -Output -Ambience Lighting -Blue, PWM -Output -Ambience Lighting -Red, PWM -Output -Automat Temp Ctrl Mod Switchpa III, PWM -Output -Frequency Speed Signal, PWM -Output -Front Left Side Lamp, PWM -Output -Front Left Turn Signal Indicator, PWM -Output -Front Right Side Lamp, PWM -Output -Front Rt Turn Sig Ind, PWM -Output -Hazard Warn Lamp SW Illum, PWM -Output -Headlamp Motor, PWM -Output -Heater Control, PWM -Output -High Mounted Stop Lamp Supply, PWM -Output -Interior Lamps, PWM -Output -Left Cornering Lamp, PWM -Output -Left Daytime Run Lamp Sup, PWM -Output -Left Headlamp High Beam Supply, PWM -Output -Left Headlamp Low Beam Supply, PWM -Output -License Plate Lamps, PWM -Output -Rear Left Side Lamp, PWM -Output -Rear Left Turn Signal Indicator, PWM -Output -Rear Right Turn Signal Indicator, PWM -Output -Right Cornering Lamp, PWM -Output -Right Daytime Run Lamp Sup, PWM -Output -Right Headlamp High Beam Supply, PWM -Output -Right Headlamp Low Beam Supply, PWM -Output -Stop Lamp Left Hand Supply, PWM -Output -Switch Illumination, Front Axle Piston -Pressure Regulating Valve -Demand Current, Front Axle Piston -

Pressure Regulating Valve -Demand Pressure, Front Axle Rod -Pressure Regulating Valve -Demand Current, Front Axle Rod -Pressure Regulating Valve -Demand Pressure, Rear Axle Piston -Pressure Regulating Valve -Demand Current, Rear Axle Piston -Pressure Regulating Valve -Demand Pressure, Rear Axle Rod -Pressure Regulating Valve -Demand Current, Rear Axle Rod -Pressure Regulating Valve -Demand Pressure, Safety Control Valve -Demand Current, Air suspension LED's - access LED, Air suspension LED's - lower LED, Air suspension LED's - raise LED, Electronic Parking Brake Mode., Door Power Distribution -Door Power Output 1, Exterior Door Handle -Handle Deploy Output, Exterior Door Handle -Handle Retract Output, Lighting Status -Exterior Door Handle LED, Seat Digital Port Input Values - Digital Input -B1 -Switch 2, Seat Digital Port Input Values - Digital Input -B2 -Switch 1, Seat Digital Port Input Values - Digital Input -B2 -Switch 10, Seat Digital Port Input Values - Digital Input -B2 -Switch 2, Seat Digital Port Input Values - Digital Input -B2 -Switch 3, Seat Digital Port Input Values - Digital Input -B2 -Switch 4, Seat Digital Port Input Values - Digital Input -B2 -Switch 5, Seat Digital Port Input Values - Digital Input -B2 -Switch 6, Seat Digital Port Input Values - Digital Input -B2 -Switch 7, Seat Digital Port Input Values - Digital Input -B2 -Switch 8, Seat Digital Port Input Values - Digital Input -B2 -Switch 9, Seat Motor Outputs - Bank A -Motor 1 -Output 1, Seat Motor Outputs - Bank A -Motor 2 -Output 0, Seat Motor Outputs - Bank A -Motor 2 -Output 1, Seat Motor Outputs - Bank A -Motor 3 -Output 0, Seat Motor Outputs - Bank A -Motor 3 -Output 1, Seat Motor Outputs - Bank A -Motor 4 -Output 0, Seat Motor Outputs - Bank A -Motor 4 -Output 1, Seat Motor Outputs - Bank B -Motor 1 -Output 0, Seat Motor Outputs - Bank B -Motor 1 -Output 1, Seat Motor Outputs - Bank B -Motor 2 -Output 0, Seat Motor Outputs - Bank B -Motor 2 -Output 1, Seat Motor Outputs - Bank B -Motor 3 -Output 0, Seat Motor Outputs - Bank B -Motor 3 -Output 1, Seat Motor Outputs - Bank B -Motor 4 -Output 0, Seat Motor Outputs - Bank B -Motor 4 -Output 1, Seat Motor Outputs - Bank C -Motor 1 -Output 0, Seat Motor Outputs - Bank C -Motor 1 -Output 1, Seat Motor Outputs - Bank C -Motor 2 -Output 0, Seat Motor Outputs - Bank C -Motor 2 -Output 1, Seat Motor Outputs - Bank D -Motor 1 -Output 0, Seat Motor Outputs - Bank D -Motor 1 -Output 1, Seat Motor Outputs - Bank D -Motor 2 -Output 0, Seat Motor Outputs - Bank D -Motor 2 -Output 1, Seat Status -Cushion Extend Switch - Forward, Seat Status -Cushion Extend Switch -Rearward, Seat Status -Head Restraint Down Switch, Seat Status -Head Restraint Up Switch, Seat Status -Lumbar Down Switch, Seat Status -Lumbar In Switch, Seat Status -Lumbar Out Switch, Seat Status -Lumbar Up Switch, Seat Status -Seat Bolster Deflate Switch, Seat Status -Seat Bolster Inflate Switch, Seat Switch Status - Multi-Axes Passenger Seat Away Switch, Seat Switch Status -Front Row Head Restraint Forward Switch, Seat Switch Status -Front Row Head Restraint Rearward Switch, Seat Switch Status -Front Row Upper Backrest

Volvo Coverage

- Added coverage for 338 new system applications

28 new special tests including:

Airbag Warning Light, Fresh/Recirculated-Air Flap 100%, Function */FAV Button, Function: Air Recirculat. Button, Button Illumination 1, Electric Fuel Pump Relay 2, Open Glove Box, Rear Lid Power Latchg.Sys./Unlock, Running Board Light, Socket Relay, Washer Jet / Mirror Heater, Actuation EFP 0%, Actuation EFP 50%, Actuation: VTG 0%, Actuation: VTG 100%, Air Conditioner Compressor Relay, EVAP Actuation: 0%, EVAP Actuation: 100%, Injector Cylinder 1, Injector Cylinder 2, Injector Cylinder 3,

Injector Cylinder 4, Radiator Fan Control 0%, Radiator Fan Control 100%, Radiator Fan Control 50%,
Tank Leakage Diagn. Check Valve, Self-Test, TC Lock-Up Clutch Solen. Valve

