

# Bosch ADS Software Update – May 2025

## Ver 6.8

<https://www.boschdiagnostics.com/diagnostic-systems>

**Version 6.8** software includes new model year **2025** vehicle coverage for BMW, Chevy, GMC, Hyundai and more, including **ADAS** calibrations.

Over 3.2K new special tests and new system applications included in this update.

Software and coverage feature details provided in these release notes.



ADS X

ADS

## Coverage Highlights (More Details start on Page 2)

### 2025 Coverage added – DTC, Data support and Bi-Directional functions

- **BMW** – 228 xDrive Gran Coupe (F74), 230i (G42), 230i xDrive (G42), 330i (G20), 330i xDrive (G20), 430i (G22/G23), 430i Gran Coupe (G26), 430i xDrive (G22/G23), 430i xDrive Gran Coupe (G26), 530i (G60), 530i xDrive (G60), 540i xDrive (G60), 550e xDrive (G60), 740i (G70), 750e xDrive (G70), 760i xDrive (G70), 840i (G14/G15), 840i Gran Coupe (G16), 840i xDrive (G14/G15), 840i xDrive Gran Coupe (G16), Alpina B8 Gran Coupe (G16), Alpina XB7 (G07), i4 (G26), i5 (G60), i7 (G70), iX (I20), M2 (G87), M240i (G42), M240i xDrive (G42), M3 (G80), M340i (G20), M340i xDrive (G20), M4 (G82), M4 (G82/G83), M440i (G22), M440i Gran Coupe (G26), M440i xDrive (G22), M440i xDrive Gran Coupe (G26), M5 (G90), M5 Touring (G99), M8 (F91/F92), M8 Gran Coupe (F93), M850i xDrive (G14/G15), M850i xDrive Gran Coupe (G16), X1 (U11), X2 (U10), X3 (G45), X4 (F98), X5 (F95), X5 (G05), X6 (F96), X6 (G06), X7 (G07), XM (G09), Z4 (G29)
- **Chevrolet** – Equinox
- **GMC** – Terrain
- **Hyundai** – Elantra, Elantra N, Ioniq 5/5 N/6, Kona & Electric, Nexo, Palisade, Santa Cruz, Santa Fe, Sonata, Tucson, Venue
- **Kia** – Carnival, EV6, EV9, K4, K5, Niro, Niro EV, Seltos, Sorento, Soul, Sportage, Telluride
- **Mini** – Cooper (F65/F66), Countryman (U25)

### ADAS\*\* – New ADAS calibration coverage:

- **2025 Coverage:**
  - **BMW** – 228 xDrive Gran Coupe (F74), 230i (G42), 230i xDrive (G42), 330i (G20), 330i xDrive (G20), 430i (G22/G23), 430i Gran Coupe (G26), 430i xDrive (G22/G23), 430i xDrive Gran Coupe (G26), 530i (G60), 530i xDrive (G60), 540i xDrive (G60), 550e xDrive (G60), 740i (G70), 750e xDrive (G70), 760i xDrive (G70), 840i (G14/G15), 840i Gran Coupe (G16), 840i xDrive (G14/G15), 840i xDrive Gran Coupe (G16), Alpina B8 Gran Coupe (G16), Alpina XB7 (G07), i4 (G26), i5 (G60), i7 (G70), iX (I20), M2 (G87), M240i (G42), M240i xDrive (G42), M3 (G80), M340i (G20), M340i xDrive (G20), M4 (G82), M4 (G82/G83), M440i (G22), M440i Gran Coupe (G26), M440i xDrive (G22), M440i xDrive Gran Coupe (G26), M5 (G90), M5 Touring (G99), M8 (F91/F92), M8 Gran Coupe (F93), M850i xDrive (G14/G15), M850i xDrive Gran Coupe (G16), X1 (U11), X2 (U10), X3 (G45), X4 (F98), X4 (G02), X5 (F95), X5 (G05), X6 (F96), X6 (G06), X7 (G07), XM (G09), Z4 (G29)
  - **Chevrolet** – Equinox
  - **Ford** – E-350 Super Duty, E-450 Super Duty, E-Transit, F-250 Super Duty, F-350 Super Duty, Ranger
  - **Hyundai** – Elantra, Elantra N, Ioniq 6, Kona, Kona Electric, Nexo, Palisade, Sante Fe, Sonata, Venue
  - **Kia** – Carnival, EV6, EV9, K5, Seltos, Soul, Sportage, Telluride
  - **Mini** – Cooper (F65/F66), Countryman (U25)
  - **Subaru** – Solterra
  - **Toyota** – bZ4X

ADS 525X/625X only for bi-directional functions for Hyn/Kia/Gen, Nissan AutoAuth and DoIP system coverage

\*\*All Dynamic ADAS calibrations are included in standard ADS Tool Subscription. Static calibrations that require ADAS targets and fixtures require additional ADAS Subscription used with ADS 625/625X.

## New Coverage Details – USA Domestic

### New Chrysler, Dodge, Jeep, RAM Coverage

#### 207 new Adjustment type special tests:

ABS Bleed Brakes, ABS Initialization, ABSO Initialization, Active Grill Shutter Replaced, Actuator Calibration, AFLS Calibration, Auto Door Lock, Auto High Beam Demo Mode Test, Automated Bleed, Automatic Addressing, Back Lighting, Bleed Brake Procedure, Bleed Brakes, Brake Pedal

#### 2467 new Actuation type special tests:

EOBD (Electronic On Board Diagnostic) failure indication, 1st Gear Clutch Test (62TE), 1st Gear Clutch Test (Non-RFE), 1st Gear Clutch Test (RFE), 1st Row Ceiling Light, 2/4 Clutch Volume Index Check, 2-3 Skip Shift Solenoid Control State, 2-4 Solenoid, 2-4 Solenoid State, 2C Or 2-4

### New Ford/Lincoln Coverage

#### 1 new Actuation type special tests:

Piston Cooling Oil Control Duty Cycle - Commanded

### New GM Coverage

- Added coverage for 44 new system applications

#### 36 new Adjustment type special tests:

14 Volt Power Module 2 - Rail Overvoltage Exposure Reset, Automated Brake Bleed, Backup Battery Timer Reset, Battery Charger Control Module 2 - Rail Overvoltage Exposure Reset, Brake Pedal Travel Sensor Learn, Brake Pressure Sensor Calibration, Brake System Plunger Motor Position Sensor Learn, Brake System Plunger Pressure Rise Starting Point Learn, Charge Port Temperature Rate Of Charge Too High - Level 2 Reset, Clear Manufacturer Enable Counter, Clear Short Range Radar Sensor Vehicle Position, Configuration/Reset Functions, DC/AC Converter - Rail Overvoltage Exposure Reset, Drive Motor Position Sensor Offset Reset, Front Axle Brake Pad Life Monitoring Reset, Hybrid/Electric Vehicle Coolant Heater 2 - Rail Overvoltage Exposure Reset, Park Brake Calibration, Power Steering Active Pull/Drift Compensation Learn, Power Steering Torque Sensor Learn, Powertrain Compartment Cover Cycle Counts Reset, Powertrain Compartment Cover Drive Unit Learn, Powertrain Compartment Cover Hold Open Counter Reset, Powertrain Compartment Cover Obstacle Counter Reset, Powertrain Compartment Cover Zone Counter Reset, Rear Axle Brake Pad Life Monitoring Reset, Remote Vehicle Speed Limiting Reset, Reset Event Records, Reset High Voltage Disable Request After Crash Event Detected, Reset Teen Driver Key PIN, RVS Disable History Reset, Steering Wheel Angle Sensor Offset Calibration, Transmission Adaptive Pressure Reset, Transmission Overtemperature Counter Reset, Transmission Service Fast Learn, Vehicle Dynamic Sensor Offset Calibration, WLAN Password Reset

#### 107 new Actuation type special tests:

Accessory Circuit 1 Command, Accessory Circuit 2 Command, Accessory Circuit 3 Command, Accessory Circuit 4 Command, Activate Rear Park Brake Service Position, Auxiliary Transmission Fluid Pump, Brake Hydraulics Test, Brake System Hydraulics Corner Test, Center High Mounted Stop Lamp, Clear Advanced Parking Assist Disable History Data, Clear Parking Assist Disable History Data, Control Functions, Cylinder 7 Injector Flow Identifier, Cylinder 8 Injector Flow Identifier, Deactivate Brake Boost System, Deactivate Rear Park Brake Service Position, Drive Unit Fluid Pump Speed Command, Drive Unit Park Control Actuator Command, Driver Seat Cushion

Left Front Haptic Movement, Driver Seat Cushion Right Front Haptic Movement, Equalize All Air Spring Pressures, Equalize Front Axle Spring Pressures, Equalize Rear Axle Spring Pressures, Erase Valet Mode Code, Exit Four Corner Air Suspension Service Control Mode, Green Indicator, High Side Driver 1, High Side Driver 2, Hybrid/Electric Vehicle Battery Pack Coolant Pump Speed, Hybrid/Electric Vehicle Coolant Heater System Test Request, Hybrid/Electric Vehicle Propulsion System Coolant Control Valve 2 Command, Hybrid/Electric Vehicle Propulsion System Coolant Control Valve Command, Hybrid/Electric Vehicle Propulsion System Coolant Control Valves Service Position, Hybrid/Electric Vehicle Propulsion System Main Coolant Control Valve Command, Hybrid/EV Battery Pack Active Isolation Test, Info Display Test, Left Daytime Running Lamp, Left Front Air Spring Deflate, Left Front Air Spring Inflate, Left Front Corner, Left Front Suspension Position Sensor Trim Height, Left Front Turn Signal Lamp, Left High Beam, Left Low Beam, Left Rear Air Spring Deflate, Left Rear Air Spring Inflate, Left Rear Corner, Left Rear Suspension Position Sensor Trim Height (mm), Left Rear Turn Signal Lamp, Left Stop Lamp, Level Vehicle to Target Height, License Plate Lamps, Liftgate Open/Close, Passenger Air Bag Off Indicator, Passenger Air Bag On Indicator, Passenger Seat Belt Reminder Indicator, Phone Call Test, Pneumatic Connection Pressure Test, Rearview Camera Display, Red Indicator, Right Daytime Running Lamp, Right Front Air Spring Deflate, Right Front Air Spring Inflate, Right Front Corner, Right Front Suspension Position Sensor Trim Height, Right Front Turn Signal Lamp, Right High Beam, Right Low Beam, Right Rear Air Spring Deflate, Right Rear Air Spring Inflate, Right Rear Corner, Right Rear Suspension Position Sensor Trim Height (mm), Right Rear Turn Signal Lamp, Right Side Marker Lamp Command, Right Stop Lamp, Seat Back Horizontal Movement, Seat Cushion Front Vertical Movement, Seat Cushion Rear Vertical Movement, Seat Horizontal Movement, Shift Transmission Gear, Side Marker Lamps, Steering Column Adjustment, TCC Pressure Control Solenoid Valve, Test Compressor Pneumatic Operation, Torque Converter Clutch, Trailer Brake Duty Cycle, Transmission Accumulator Solenoid Valve, Transmission Control Solenoid Valve 1 Current, Transmission Control Solenoid Valve 1, Transmission Control Solenoid Valve 10, Transmission Control Solenoid Valve 2 Current, Transmission Control Solenoid Valve 2, Transmission Control Solenoid Valve 3 Current, Transmission Control Solenoid Valve 3, Transmission Control Solenoid Valve 4 Current, Transmission Control Solenoid Valve 4, Transmission Control Solenoid Valve 5 Current, Transmission Control Solenoid Valve 5, Transmission Control Solenoid Valve 6 Current, Transmission Control Solenoid Valve 6, Transmission Control Solenoid Valve 7 Current, Transmission Control Solenoid Valve 7, Transmission Control Solenoid Valve 8 Current, Transmission Control Solenoid Valve 8, Transmission Control Solenoid Valve 9, Vehicle Health Data Upload, Windshield Wiper Relay

## New Coverage Details – USA Asian

### New Honda/Acura Coverage

#### 5 new Adjustment type special tests:

Charge Port Temperature Rate Of Charge Too High - Level 2 Reset, Configuration/Reset Functions, Drive Motor Position Sensor Offset Reset, Power Steering Active Pull/Drift Compensation Learn, Reset Event Records

#### 5 new Actuation type special tests:

Clear Parking Assist Disable History Data, Hybrid/Electric Vehicle Battery Pack Coolant Pump Speed, Hybrid/Electric Vehicle Coolant Heater System Test Request, Hybrid/Electric Vehicle Propulsion System Main Coolant Control Valve Command, Hybrid/EV Battery Pack Active Isolation Test

## New Hyundai/Genesis Coverage

- Added coverage for 658 new system applications

### 34 new Adjustment type special tests:

12V Battery SOC Calibration, Adaptive Value Backup Input (ECU Transfer Assy replacement at once), Adaptive Value BackUp Input (ECU replacement), Air Bleeding Mode, Assembly Check(ECU Replacement), Auto Detected Configuration (ESC Only), Auto Detected Configuration Reset, Auto Variant Coding, Brake Pad Change Mode, CLU Variant Coding, Clutch Learning Reset, ESC Variant Coding, HCU Air Bleeding Mode, iMEB Actuator Initialization, Longitudinal G Sensor Calibration(HAC/DBC Only), Multiplicative Injection Time Correction for All Cylinders, Multiplicative Injection Time Correction for Cylinder1, Multiplicative Injection Time Correction for Cylinder2, Multiplicative Injection Time Correction for Cylinder3, Multiplicative Injection Time Correction for Cylinder4, Multiplicative Injection Time Correction for Group(B) All Cylin, Multiplicative Injection Time Correction for Group(B) Cylinder2, Multiplicative Injection Time Correction for Group(B) Cylinder3, Purge Solenoid Valve Opening Additive Correction, Reset of Injector Q-stat Adaptation, Resetting Adaptive Values, Resetting Auto Trans Adaptive Values, Resetting E-CVVT Values, TPMS Reception Rate Measuring Mode, TPMS Test, Variant Coding (Backup Input), WCT Reprogram, Wheel Sensor ID Writing, Write VIN

### 884 new Actuation type special tests:

(LED) DRL Lamp LH, (LED) DRL Lamp RH, 12V Latch Relay OFF, 12V Latch Relay ON, 12V Relay OFF, 12V Relay ON, 1st Gear Lamp, 2nd Gear Lamp, 3D View, 3LH SBR Left Indicator, 3rd Gear Lamp, 3rd Row Center SBR Center Indicator, 3rd Row SBR Center Indicator(Optional), 3rd Row SBR Left Indicator(Optional), 3rd Row SBR Right Indicator(Optional), 3RH SBR Center Indicator, 4th Gear Lamp, 4th Row SBR Center Indicator(Optional), 4th Row SBR Left Indicator(Optional), 4th Row SBR Right Indicator(Optional), 5th Gear Lamp, 6th Gear Lamp, A/C Compressor Relay, A/C Compressor Test (ECV Type), AAF Control - Close, AAF Control - Open, AAF Forced Operation - Auto, AAF Forced Operation - Close, AAF Forced Operation - Open, AAF Relay, A-C Compressor Relay, Activation Switch LED, Actuator Control - Apply, Actuator Control - Release, ACV Open-Close Control, AEWP Control - PWM Type, After Blower USM Set Off, After Blower USM Set On, All Door Lock Signal Output(to PTGM), All LEDs, All Mood Lamp Blue LED Test, All Mood Lamp Green LED Test, All Mood Lamp Red LED Test, All Mood Lamp White LED Test, All Tank Valve Open, Alternator Control, Alternator Test, Alt'L Signal Out, APC Open-Close Control, Assist BSD Indicator, Assist Door Courtesy Lamp Output, Assist Door Lock Indicator, Assist Mirror Position Down (Option), Assist Mirror Position Down, Assist Mirror Position Left (Option), Assist Mirror Position Left, Assist Mirror Position Right (Option), Assist Mirror Position Right, Assist Mirror Position Up (Option), Assist Mirror Position Up, Assist Outside Mirror Down, Assist Outside Mirror Left, Assist Outside Mirror Right, Assist Outside Mirror Up, Assist Power Window Down (Option), Assist Power Window Up (Option), Assist Seat Belt Indicator (Option), Assist Seat Belt Indicator, Assist Side Window Auto Down, Assist Side Window Auto Up, Assist Side Window Down, Assist Side Window Up, Assistant Side Outside Handle Antenna Output (Power and GND), ATM Solenoid, Auto Cut Relay, Auto Defog Mode Door - Close, Auto Defog Mode Door - Open, Auto Light Power, Auxiliary Fuel Injector for Flexible fuel, Auxiliary Fuel Pump for Flexible fuel, AV Tail, AVM + FrontLeft + FrontRight View, AVM + RearLeft + RearRight View, Back Up Lamp Output, Back Up Lamp, Battery Cool EXV(Electric expansion valve), Battery Cool Valve(Evaporator), Battery Coolant Valve Operation Mode1 (Combined Mode) ON, Battery Coolant Valve Operation Mode1 (Seperated Mode) ON, Battery EWP Operation Mode for Degassing and Circulation, Battery Warning Lamp, BCM Buzzer Output (Internal/External), BCM Internal Buzzer Output, Bifunction Headlamp High LH Solenoid IPS Output, Bifunction Headlamp High RH Solenoid IPS Output, BSD Indicator, Burglar Horn Relay, Canister Purge Valve, Canister Shut Off Valve (OBD-2

Only), Canister Shut Off Valve Clocked(OBD-2 Only), Canister Shut Off Valve Toggling(OBD-2 Only), Canister Shut Off Valve(Leak Test), Canister Shut Off Valve(OBD-2 Only), CBV Open-Close Control, CDA Control Solenoid Valve - EX, B1, CDA Control Solenoid Valve - EX, B2, CDA Control Solenoid Valve - IN, B1, CDA Control Solenoid Valve - IN, B2, Central Door Lock Indicator, Central Door Lock Relay, Central Door Lock Switch Indicator Output, Central Door Lock Switch Output, Central Door Unlock Relay Output, Central Door Unlock Relay, Chageover Valve, Changeover Valve, Charge Inlet Lock Relay, Charge Inlet Unock Relay, Charging Status LED (Green) On, Charging Status LED (Yellow) On, Child Lock Relay Output, Child Unlock Relay Output, Clamp Status ACC(Amber) LED Color illumination, Clamp Status IGN(Blue) LED Color illumination, Clamp Status Off(Red) LED Color illumination, Clutch Actuator Position Control, Clutch Actuator Voltage Control, CNG Bi-Fuel Fuel Change, CNG Shut sol valve in Fuel Tank, COD N-O Relay 1 Control, Compressor Off, Compressor On, Console Mode Door - BI-Level, Console Mode Door - Floor, Console Mode Door - Vent, Console Off Door, Console On Door, Console Temperature Air Mix Door 0%, Console Temperature Air Mix Door 100%, Console Temperature Air Mix Door 50%, Control All the LEDs, Control Solenoid Valve (VFS) A, Coolant 3Way Valve, COOLANT VALVE - 3WAY (HTR) - Close, COOLANT VALVE - 3WAY (HTR) - Open, Cooler step 3 operation, Cooling Fan PWM, Cornering Lamp Left Relay Output (Option), Cornering Lamp LH Output, Cornering Lamp RH Output, Cornering Lamp Right Relay Output (Option), Courtesy Lamp RL Output, Courtesy Lamp RR Output, CPP(Canister Puge Pump) Control, Cruise Control Main Lamp(Auto CruiseType Only), Cruise Control Main Lamp(Option), Cruise Control Set Lamp(Auto Cruise Type Only), Cruise Control SET Lamp(Option), CTV Open-Close Control, CVVD Intake, CVVT Exhaust, CVVT Intake, D Target Position, D\_DRL Relay, Dead Lock Relay, Dedicated DRL Left Output, Dedicated DRL Output (Option), Dedicated DRL Right Output, Def Door - Close, Def Door - Open, Defogger - Deicer Relay, Defogger / Deicer Relay, Defogger Indicator, DEHUM VALVE - EXV (DEHUMI) Valve Close, DEHUM VALVE - EXV (DEHUMI) Valve Open, Differential Pressure Valve, Door Lock Relay, Door Unlock Relay, Door Unlock Signal, Drive Side Puddle Lamp, Driver Air Mix Door-0%, Driver Air Mix Door-100%, Driver Air Mix Door-50%, Driver Courtesy Lamp, Driver Door Courtesy Lamp Output, Driver Door Lock, Driver Door Unlock Relay (Option), Driver Door Unlock Relay, Driver Door Unlock, Driver Heater Control, Driver Mode Door-DEF, Driver Mode Door-DEF., Driver Mode Door-Floor, Driver Mode Door-Vent, Driver Power Window Switch Autol Up Output, Driver Rear Door Courtesy Light, Driver Seat Belt Indicator, Driver Seat Heat Mode to the High, Driver Seat Vent Mode to the High, Driver Side Outside Handle Antenna Output (Power and GND), Driver Side Repeater, DRL Relay(Canada), DRV/AST Power Window Enable Output, DRV-AST Power Window Enable Output, DRVM (Driving Rear View Monitor), EGR Valve, ELCM Change Over Value(COV) Control, ELCM Pump Control, Electric Oil Pump (for HEV), Electric Oil Pump Run, Electric Oil Pump, Electric Shuttle Valve-Left Front, Electric Shuttle Valve-Right Front, Electric water pump control., Electrically Controlled Water Pump (Option), Electrically Controlled Water Pump, Electronic Expansion Valve (Battery Chiller) - Close, Electronic Expansion Valve (Battery Chiller) - Open, Electronic Expansion Valve (Heat Pump) - Close, Electronic Expansion Valve (Heat Pump) - Open, Electronic Expansion Valve (Recever Drier) - Close, Electronic Expansion Valve (Recever Drier) - Open, Electronic Waste Gate Valve (Turbo Only), Electronically Controlled Water Pump(CWP), EMS Wakeup Output, End Cell HTR Relay Control, Engine Check Lamp [MIL], Engine Check Lamp(MIL), Engine Clutch Control Solenoid (for HEV), Engine Coolant Filling Mode, EPB Apply RH and LH, EPB Release RH and LH, ESS control, ESS Lamp, ETC Motor, Europe Cornering Lamp Left Relay Output, Europe Cornering Lamp Right Relay Output, EV Charge Door Open Lamp Output, EV Charge Door Open Relay, EVAP Leak Test, EVAP Leakage Test, Event Indicate LED On-Off, EVP, EWP Max RPM Operation, Exhaust Flap(EF), Exhaust Gas Recirculation Valve, Exhaust Gas Recirculation, Exterior Tail Lamp Front Left Output, Exterior Tail Lamp Front Right Output, Exterior Tail Lamp Left(Front and Rear) Output, Exterior Tail Lamp Left(FrontandRear) Output, Exterior Tail Lamp Rear Left Output, Exterior Tail Lamp Rear Right

Output, Exterior Tail Lamp Right(Front and Rear) Output, Exterior Tail Lamp Right(FrontandRear) Output, External Buzzer Output, Fan 1st, Fan 2nd, Fan 3rd, Fan 4th, Fan 5th, Fan 6th, Fan 7th, Fan 8th, Fan 9th, Fan Motor Control-High Speed, Fan Motor Control-Low Speed, FAN ON, Fan PWM, Fan Stop, Fan1 1st, Fan1 2nd, Fan1 3rd, Fan1 4th, Fan1 5th, Fan1 6th, Fan1 7th, Fan1 8th, Fan1 9th, Fan1 Stop, FBV Open-Close Control, FDV Heater Relay Control, FDV Open-Close Control, Flasher Sound Relay(Optional), Flow Stop Valve, Folding Mirror Relay, Foot Lamp Output(Optional), Foot Lamp Output, FPCM pressure control, FPS Open Mode, FPV Heater Relay Control, FPV Open-Close Control, Front Air Flow Door - 0%, Front Air Flow Door - 100%, Front Air Flow Door - 50%, Front BLDC Blower Motor 0RPM, Front BLDC Blower Motor 1000RPM, Front BLDC Blower Motor 1500RPM, Front BLDC Blower Motor 2000RPM, Front BLDC Blower Motor 2500RPM, Front BLDC Blower Motor 500RPM, Front BLDC Blower Motor MAX RPM, Front Blower Fan Motor-1Step, Front Blower Fan Motor-2Step, Front Blower Fan Motor-3Step, Front Blower Fan Motor-4Step, Front Blower Fan Motor-5Step, Front Blower Fan Motor-6Step, Front Blower Fan Motor-7Step, Front Blower Fan Motor-8Step, Front Blower Fan Motor-Off, Front Bumper Antenna Output (Power and GND), Front Charge Door Lamp Output, Front Deicer Relay, Front Fog and Cornering Lamp Left Output, Front Fog and Cornering Lamp Right Output, Front Fog Lamp Indicator, Front Fog Lamp Left Output, Front Fog Lamp Output, Front Fog Lamp Relay, Front Fog Lamp Right Output, Front Glass Heated Relay Output, Front Glass Heated Switch Indicator Output, Front Heated Glass Relay, Front Indicate LED On-Off, Front Left Side Window Auto Down, Front Left Side Window Auto Up, Front Left Side Window Down, Front Left Side Window Up, Front Left Turn Signal Output, Front Right Side Window Auto Down, Front Right Side Window Auto Up, Front Right Side Window Down, Front Right Side Window Up, Front Right Turn Signal Output, Front Seat Heat Mode to the High, Front Seat Vent Mode to the High, Front Tank Valve Open, Front Top-AVM View, Front Top-SVM View, Front Turn Signal Lamp Activation LH Output, Front Turn Signal Lamp Activation RH Output, Front Washer Motor Output, Front-AVM View, Front-Full View, Front-SVM View, Frunk Lamp Output, FSV Open-Close Control, Fuel Door Lock Solenoid Output (PHEV Only), Fuel Door Open Solenoid Output (PHEV Only), Fuel Door Open Solenoid Output, Fuel Door Open, Fuel Open Loop, Fuel Pressure Indicator Lamp(LPI), Fuel Pressure Indicator Lamp, Fuel Pressure Ragulator (GDI Only), Fuel Pressure Regulator (GDI Only), Fuel Pump Control(1st stage), Fuel Pump Control(2nd stage), Fuel Pump Control, Fuel Pump Relay Control for LPG, Fuel Pump Relay for LPG, Fuel Pump Relay(1st stage), Fuel Pump Relay(2nd stage), Fuel Pump Relay, Fuel Tank Isolation Valve Relay Open, Fuel Tank Isolation Valve, Gasoline Lamp (Bi-Fuel), Gauge ON, Glove Box Lamp Output, HAC Brake Lamp Actuator, Haptic Steering Wheel Motor Output, Haptic Steering Wheel Output, Hat Shelf Antenna Output (Power and GND), Hazard Indicator, Hazard Mode State for Turn Signal Lamp Sequential Mode, Hazard Relay, Head Lamp High Indicator, Head Lamp High Left Output, Head Lamp High Output, Head Lamp High Relay, Head Lamp High Right Output, Head Lamp Leveling Min(Low) Position, Head Lamp Low Indicator, Head Lamp Low Left Output, Head Lamp Low Output, Head Lamp Low Right Output, Head Lamp Low Signal, Head Lamp Washer Relay, Head Lamp Welcome Command, Heated Handle Indicator(Optional), Heated Handle Indicator, Heated Handle Output(Optional), Heated Handle Output, Heated Washer Nozzle Output, Heated Washer Nozzle Relay, Heater step 3 operation, HICM Activate Diagnostics, HICM Relay, High Mounted Stop Lamp Output, High Pressure Fuel Pump Control, High Pressure Fuel Pump Control2, High Voltage Battery Heater Relay ON, HLL(Head Lamp Leveling) Max(High) Position, HLL(Head Lamp Leveling) Middle(Center) Position, HLL(Head Lamp Leveling) Min(Low) Position, HMI Mirror Alert Left LED Blinking, HMI Mirror Alert Left LED ON, HMI Mirror Alert Right LED Blinking, HMI Mirror Alert Right LED ON, HMI Switch LED, Horn Relay(NA), Horn Relay, HV PTC OFF, HV PTC ON(Min.), Idle Speed Actuator, Ignition 3 Relay, Ignition Coil 1, Ignition Coil 2, Ignition Coil 3, Ignition Coil 4, Ignition Coil Enable-Disable-#1, Ignition Coil Enable-Disable-#2, Ignition Coil Enable-Disable-#3, Ignition Coil Enable-Disable-#4, Ignition Coil Enable-Disable-#5, Ignition Coil Enable-Disable-#6,

Ignition Coil Enable-Disable-#7, Ignition Coil Enable-Disable-#8, Illumination, iMEB Valve Control-Line Split Valve, iMEB Valve Control-Low Press Traction Control Valve, iMEB Valve Control-Low Press Wheel Split Valve, iMEB Valve Control-MCV(#2), iMEB Valve Control-MCV(#5), iMEB Valve Control-MCV(#6), iMEB Valve Control-Pedal Simulator Valve, iMEB Valve Control-Release Control Valve, iMEB Valve Control-Traction Control Valve, iMEB Valve Control-Wheel Split Valve, Immobilizer Lamp(Optional), Indicator ALL OFF, Indicator ALL ON, Indirect Vent door, Injector Disable-Cylinder 1, Injector Disable-Cylinder 2, Injector Disable-Cylinder 3, Injector Disable-Cylinder 4, Injector Disable-Cylinder 5, Injector Disable-Cylinder 6, Injector Disable-Cylinder 7, Injector Disable-Cylinder 8, Injector(DI) Disable-Cylinder 1, Injector(DI) Disable-Cylinder 2, Injector(DI) Disable-Cylinder 3, Injector(DI) Disable-Cylinder 4, Injector(MPI) Disable-Cylinder 1, Injector(MPI) Disable-Cylinder 2, Injector(MPI) Disable-Cylinder 3, Injector(MPI) Disable-Cylinder 4, Inlet Valve-Front Left Control, Inlet Valve-Front Right Control, Inlet Valve-Left Front, Inlet Valve-Left Rear, Inlet Valve-Rear Left Control, Inlet Valve-Rear Right Control, Inlet Valve-Right Front, Inlet Valve-Right Rear, Intake Door - Fresh, Intake Door - Recirc, Interior Antenna #1 Output (Power and GND), Interior Antenna #2 Output (Power and GND), Interior Antenna #3 (Trunk Antenna : Sedan Type) Output (Power, Interior Lamp Autocut Relay Output(Optional), Interior Mood Lamp Output (Option), Interior Mood Lamp Output, Internal Buzzer, IOD Relay, IR Emitter Communication, ISG Lamp, ISG Test(Optional), ITM Valve, Key Hole Illumination (Manual Key Type), Key Hole Illumination, Key Interlock Solenoid(Manual Key Type), Lamp Control - EPB Status Lamp, Lamp Control - EPB Warning Lamp, Lamp Control, Lamp Load Power Relay, LampLoad AutoCut IPS Output, LED Out, LongTermLoad Cut Relay Output, LPG Cut Valve for Fuel Rail, LPG Cut Valve for Fuel Tank, LPG Fuel Pump PWM, LPG Lamp, Luggage Lamp Relay, Luggage Lamp, Main Relay (+) ON, Main Relay Control (-), Main Relay Control (+), Main Relay(-) ON, Main Relay(-)(+), Precharge Relay OFF simultaneous, Main Relay(-), Main Relay(+) ON Normal Sequence, Main Relay(-), Precharge Relay ON simultaneous, Main Relay(-), Precharge Relay, Simultaneously ON (Precharge se, Main Relay, Maintenance mode - EPB/MOC disengaging, Manual HLLD Signal Output, Map Lamp Output, MAP Lamp, Mid Tank Valve Open, Mirror Folding Operation (Option), Mirror LED Left, Mirror LED Right, Mirror Select Left indicator, Mirror Select Right indicator, Mirror Unfolding Operation (Option), Mood Lamp 1 Output, Mood Lamp 2 Output, Mood Lamp 3 Output, Mood Lamp Output, Motor, Motor1, Folding, Motor2, Unfolding, Move ASSIST OUTSIDE MIRROR to the highest Position, Move ASSIST OUTSIDE MIRROR to the lowest Position, Move ASSIST OUTSIDE MIRROR to the most left Position, Move ASSIST OUTSIDE MIRROR to the most right Position, Move Assist Outside Mirror To The Highest Position, Move Assist Outside Mirror To The Lowest Position, Move Assist Outside Mirror To The Most Left Position, Move Assist Outside Mirror To The Most Right Position, Move DRIVE OUTSIDE MIRROR to the highest position, Move DRIVE OUTSIDE MIRROR to the lowest position, Move DRIVE OUTSIDE MIRROR to the most left position, Move DRIVE OUTSIDE MIRROR to the most right position, Move P/Seat to the Foremost Position (Height), Move P/Seat to the Foremost Position (Recline), Move P/Seat to the Foremost Position (Slide), Move P/Seat to the Last Position (Tilt), Move P/Seat to the Lowest Position (FR Height), Move P-Seat to the Foremost Position (Cushion Extension), Move P-Seat to the Foremost Position (Head Rest Slide), Move P-Seat to the Foremost Position (Recline), Move P-Seat to the Foremost Position (Shoulder), Move P-Seat To The Foremost Position (Slide), Move P-Seat to the Highest Position (FR Height), Move P-Seat to the Highest Position (Headrest), Move P-Seat to the Highest Position (RR Height), Move P-Seat to the Last Position (Cushion Extension), Move P-Seat to the Last Position (HeadRest Slide), Move P-Seat to the Last Position (Recline), Move P-Seat to the Last Position (Shoulder), Move P-Seat To The Last Position (Slide), Move P-Seat to the Lowest Position (FR Height), Move P-Seat to the Lowest Position (Headrest), Move P-Seat to the Lowest Position (RR Height), Move Steering Column At The Longest Position (Tele), Move Steering Column To The Lowest Position (Tilt), Multimedia Load Power Relay, N Target Position, Navi Wakeup Signal Output, Norminal Idle Speed

Offset, O2 Heater Front (B1/S1), O2 Heater Front (B1-S1), O2 Heater Front (B2-S1), O2 Heater Front, O2 Heater Rear (B1-S2), O2 Heater Rear (B2-S2), O2 Heater Rear, OBC Relay(-) ON, OBC Relay(+) ON, OBC Relay(+)/(-) ON Simultaneous, OBC Wake up Output, Oil Change Warning Lamp(Optional), Oil Change Warning Lamp, Oil Control Valve - Exhaust Bank 1(Optional), Oil Control Valve - Exhaust Bank 1, Oil Control Valve - Exhaust Bank2, Oil Control Valve - Intake Bank 1, Oil Control Valve - Intake Bank1, Oil Control Valve - Intake Bank2, Oil Pressure Warning Lamp, On/Off Solenoid A (SS-A), Openbed Box Lamp Output, Openbed Cargo Lamp Output, Openbed Lamp Switch Indicator Output, Operate Assist Side Fold, Operate Assist Side Unfold, Operate DRIVE SIDE FOLD, Operate DRIVE SIDE UNFOLD, Operate DRIVE SIDE WINDOW AUTO DOWN, Operate DRIVE SIDE WINDOW AUTO UP, Operate DRIVE SIDE WINDOW DOWN, Operate DRIVE SIDE WINDOW UP, Optional Rear Seat Warmer - Left, Optional Rear Seat Warmer - Right, Outlet Valve-Front Left Control, Outlet Valve-Front Right Control, Outlet Valve-Left Front, Outlet Valve-Left Rear, Outlet Valve-Rear Left Control, Outlet Valve-Rear Right Control, Outlet Valve-Right Front, Outlet Valve-Right Rear, Over speed indicator(Optional), Over Speed Warning Indicator, P Target Position, Parasitic Current Auto-Block IPS, Parking Brake Indicator, PAS Buzzer Output (RPAS Buzzer Output), PAS Indicator (RPAS Off Indicator), PAS Indicator/RPAS OFF Indicator, PAS/RPAS Buzzer Output, Passenger Air Mix Door-0%, Passenger Air Mix Door-100%, Passenger Air Mix Door-50%, Passenger Mode Door - Defog, Passenger Mode Door - Floor, Passenger Mode Door - Vent, Passenger Seat Heat Mode to the High, Passenger Seat Vent Mode to the High, Perform CPU (Video Recording and Display Output) On-Off, Perform Erase All Video File, Perform Event Recording, Pocket Light Output (Option), Pocket Light Output(Optional), Power Supply to the ACC Relay of Main MCU, Power Supply to the IGN1 Relay of Main MCU, Power Supply to the IGN1/IGN2 Relay of Main MCU, Power Supply to the IGN1/STARTER Relay of Main MCU, Power Supply to the IGN1-IGN2 Relay of Main MCU, Power Supply to the IGN1-STARTER Relay of Main MCU, Power Window Relay (with Safety P-WDW Enable), Power Window Relay, Precharge Relay ON, Precharge Relay ON, Main Relay (-), (+) ON (Normal sequence), Pressure Control Solenoid (LP), Pressure Control Solenoid Valve A(Line Pressure), Pressure Control Solenoid Valve(VFS) A, Pressure Control Solenoid Valve(VFS) 'A', Puddle Lamp Output, Puddle Pocket Lamp Output, Quick Charge Relay (+),(-), Main Relay (-), (+) ON (Normal Char, Quick Charger Relay(-) ON, Quick Charger Relay(-)(+) ON simultaneous, Quick Charger Relay(+) ON, R Target Position, RAD FAN Operation, Radiator Cooling Fan PWM, Radiator Fan Forced Operation, Radiator shutter 1 - Auto test, Radiator shutter 1 - Close test, Radiator shutter 1 - Open test, Read VIN, Rear Air Flow Door - 0%, Rear Air Flow Door - 100%, Rear Air Flow Door - 50%, Rear Air Mix Door-0%, Rear Air Mix Door-100%, Rear Air Mix Door-50%, Rear Air Mix(A) Door-0%, Rear Air Mix(A) Door-100%, Rear Air Mix(A) Door-50%, Rear Assist Power Window Down Relay, Rear Assist Power Window Up Relay, Rear Assist Side Door Curtain Down(Only Windows Close Status), Rear Assist Side Door Curtain Up(Only Windows Close Status), Rear Assist Side Window Auto Up, Rear Assist Window Auto Down, Rear Assist Window Down, Rear Blower Fan Motor-1Step, Rear Blower Fan Motor-2Step, Rear Blower Fan Motor-3Step, Rear Blower Fan Motor-4Step, Rear Blower Fan Motor-5Step, Rear Blower Fan Motor-6Step, Rear Blower Fan Motor-7Step, Rear Blower Fan Motor-8Step, Rear Blower Fan Motor-Off, Rear Bumper Antenna Output (Power and GND), Rear Charge Door Lamp Output, Rear Curtain DN Output, Rear Curtain Down Output [Rear Curtain Hall Sensor Power Output, Rear Curtain Down Output, Rear Curtain Up Output [Rear Curtain Hall Sensor Power Output(O, Rear Curtain Up Output, Rear Defogger Relay, Rear Driver B-PILLAR Door - 0%, Rear Driver B-PILLAR Door - 100%, Rear Driver Power Window Down Relay, Rear Driver Power Window Up Relay, Rear Driver Side Door Curtain Down(Only Windows Close Status), Rear Driver Side Door Curtain Up(Only Windows Close Status), Rear Driver Side Window Auto Up, Rear Driver Window Auto Down, Rear Driver Window Down, Rear Driver Window Up, Rear Fog Lamp (Option), Rear Fog Lamp Indicator, Rear Fog Lamp Left Output, Rear Fog Lamp Relay (Option), Rear Fog Lamp Relay, Rear Fog Lamp Right Output, Rear illumination, Rear Left

Door Lock Indicator Output, Rear Left Power Window Down (Option), Rear Left Power Window Up (Option), Rear Left Side Courtesy Lamp, Rear Left Side Door Curtain Down (Only Windows Close Status), Rear Left Side Door Curtain Up (Only Windows Close Status), Rear Left Side Window Auto Down (Option:Curtain Bottom Status), Rear Left Side Window Auto Up (Option:Curtain Bottom Status), Rear Left Side Window Down (Option:Curtain Bottom Status), Rear Left Side Window Up (Option:Curtain Bottom Status), Rear Left Turn Signal Output, Rear LH Seat Heat Mode to the High, Rear LH Seat Vent Mode to the High, Rear mode door - B-L, Rear mode door - Floor, Rear mode door - Vent, Rear Mood Lamp (Both Left and Right), Rear Mood Lamp(Both Left and Right), Rear Passenger B-PILLAR Door - 0%, Rear Passenger B-PILLAR Door - 100%, Rear Pocket Lamp (Both Left and Right), Rear Pocket Lamp(Both Left and Right), Rear Power Window Enable Output (Option), Rear Power Window LH Up Relay, Rear RH Seat Heat Mode to the High, Rear RH Seat Vent Mode to the High, Rear Right Door Lock Indicator Output, Rear Right Power Window Down (Option), Rear Right Power Window Up (Option), Rear Right Side Courtesy Lamp, Rear Right Side Door Curtain Down (Only Windows Close Status), Rear Right Side Door Curtain Up (Only Windows Close Status), Rear Right Side Window Auto Down (Option:Curtain Bottom Status), Rear Right Side Window Auto Up (Option:Curtain Bottom Status), Rear Right Side Window Down (Option:Curtain Bottom Status), Rear Right Side Window Up (Option:Curtain Bottom Status), Rear Right Turn Signal Output, Rear Room Lamp Output, Rear SBR Symbol Indicator Output(Option), Rear Seat Belt Center Indicator (Option), Rear Seat Belt Center Indicator, Rear Seat Belt Left Indicator (Option), Rear Seat Belt Left Indicator, Rear Seat Belt Right Indicator (Option), Rear Seat Belt Right Indicator, Rear Seat Heat Mode to the High, Rear Seat Vent Mode to the High, Rear Seat Warmer Left(Option), Rear Seat Warmer Right(Option), Rear Tank Valve Open, Rear Temp Cool Door - 0%, Rear Temp Cool Door - 100%, Rear Temp Cool Door - 50%, Rear Temp Warm Door - 0%, Rear Temp Warm Door - 100%, Rear Temp Warm Door - 50%, Rear Top-AVM View, Rear Top-SVM View, Rear View Switch Indicator Output, Rear Washer Motor Output, Rear Washer Motor, Rear Wiper Relay (Option), Rear Wiper Relay, Rear-AVM View, Rear-SVM View, Refrigerant 2Way Valve - #1 OFF, Refrigerant 2Way Valve - #1 ON, Refrigerant 2Way Valve - #2 OFF, Refrigerant 2Way Valve - #2 ON, Refrigerant 3Way Valve - #1 OFF, Refrigerant 3Way Valve - #1 ON, Refrigerant 3Way Valve - #2 OFF, Refrigerant 3Way Valve - #2 ON, RKE Tailgate Signal Output(to PTGM), RL Door Lock Relay, RL Door Unlock Relay, Room Lamp Output, RPAS Switch Indicator (Option), RPAS Switch Indicator(Option), RVM Swich Indicator Output, Safety ECU Enable Output (High), Safety Power Window Enable, Safety Power Window Sunroof Enable, SBL Function Test SBL LH ON, Security Indicator (Option), Security LED Output, Security LED, Selection Injector Group(A) of Engine Idle state for Dual Injec, Shift Control Solenoid Valve (28/B), Shift Control Solenoid Valve (37R/C), Shift Control Solenoid Valve (46/C), Shift Control Solenoid Valve (UD/C), Shift Control Solenoid Valve A (Primary Pulley), Shift Control Solenoid Valve A(UD/B), Shift Control Solenoid Valve B (Secondary Pulley), Shift Control Solenoid Valve B(2-6/B), Shift Control Solenoid Valve C (Clutch), Shift Control Solenoid Valve C(35R/C), Shift Control Solenoid Valve D(OD/C), Shift Control Solenoid Valve E(SS-A), Shift Solenoid A (Primary), Shift Solenoid B (Secondary), Shift Solenoid C (Clutch), ShortTermLoad Cut Relay/IPS Output, ShortTermLoad Cut Relay-IPS Output, Solenoid Thermal Expansion Valve - Close, Solenoid Thermal Expansion Valve - Open, SSB illumination Output (Power and GND), Start Inhibit Relay (Option), Start Inhibit Relay, Start Relay, Static Bending LH Output (Option), Static Bending LH Output, Static Bending RH Output (Option), Static Bending RH Output, Steering Warmer Output, Steering Warmer Switch Indicator Output, Stop Lamp Left, Stop Lamp Left/Right/HMSL Output (Option), Stop Lamp Left-Right-HMSL Output (Option), Stop Lamp Right, Stop Lamp, Storage Bos Lid Release Relay Output, Sunroof Enable Output, Sunroof Power Relay control(Option), SunRoof Power Relay control, SVM + DRVM(Driving Rear View Monitor), SVM + FrontLeft + FrontRight View, SVM + RearLeft + RearRight View, System Identification, Tail Interior Lamp, Tail Lamp Indicator, Tail Lamp Output, Tail Lamp Relay, Tailgate/Trunk Release Relay, Tailgate-Trunk Release

Relay, TCI Bypass Valve (Turbo Only), TCI Bypass Valve(Turbo Only), TCS Valve-Left Front, TCS Valve-Right Front, Torque Converter Clutch Solenoid Valve, Turbo dump(ReCirculation) Valve (RCV), Turbo waste gate(WGT) valve, Turn LH Output, Turn RH Output, Turn Signal Lamp Front Left Output, Turn Signal Lamp Front Right Output, Turn Signal Lamp Rear Left Output, Turn Signal Lamp Rear Right Output, Turn Signal Sound Output, Turn Signal Sound Relay Output, Unfold Mirrors, Vacuum Pump (ELCM), Variable Exhaust Flap, Variable Force Solinoid Valve - Exhaust Bank1 test, Variable Force Solinoid Valve - Intake Bank1 test, Variable Intake Manifold 1 (Option), Variable Intake Solenoid(Option), Variable Oil Pump Solenoid, VCM Motor (Option), VCM Motor(Option), VESS Sound Play (5 Sec), VESS Sound Play (Until Stop Command), VVL Control Solenoid Valve - EX, B1, VVL Control Solenoid Valve - EX, B2, VVL Control Solenoid Valve - IN, B1, VVL Control Solenoid Valve - IN, B2, Warm Bypass door, Waste Gate Valve (Turbo Only), Window Lock Indicator, Window Lock to Driver Door Module, Wiper High Relay, Wiper High-Speed Relay [Wiper High RLY With Wiper Power RLY], Wiper Low Relay, Wiper Low-Speed Relay [Wiper Low RLY With Wiper Power RLY], Wiper Power Relay, Wiper Relay (for INT)[Wiper RLY With Wiper Power RLY], Wiper Relay

## New Kia Coverage

- Added coverage for 519 new system applications

### 31 new Adjustment type special tests:

12V Battery SOC Calibration, Adaptive Value Backup Input (ECU Transfer Assy replacement at once), Adaptive Value BackUp Input (ECU replacement), Air Bleeding Mode, Auto Detected Configuration (ESC Only), Auto Detected Configuration Reset, Brake Pad Change Mode, HCU Air Bleeding Mode, Longitudinal G Sensor Calibration(HAC/DBC Only), Multiplicative Injection Time Correction for All Cylinders, Multiplicative Injection Time Correction for Cylinder1, Multiplicative Injection Time Correction for Cylinder2, Multiplicative Injection Time Correction for Cylinder3, Multiplicative Injection Time Correction for Cylinder4, Multiplicative Injection Time Correction for Group(B) All Cylin, Multiplicative Injection Time Correction for Group(B) Cylinder2, Multiplicative Injection Time Correction for Group(B) Cylinder3, Pedal Travel Sensor (PTS) Calibration, Pressure Sensor Calibration, Purge Solenoid Valve Opening Additive Correction, Reset Adaptive Values, Reset of Injector Q-stat Adaptation, Resetting Adaptive Values, Resetting Auto Trans Adaptive Values, Resetting E-CVVT Values, SAHLS Sensor Origin Point Setting, Seat Limit Position Setting, TPMS Reception Rate Measuring Mode, TPMS Test, WCT Reprogram, Write VIN

### 755 new Actuation type special tests:

(LED) DRL Lamp LH, (LED) DRL Lamp RH, 12V Latch Relay OFF, 12V Latch Relay ON, 1st Gear Lamp, 2nd Gear Lamp, 3D View, 3rd Gear Lamp, 3rd Row Center SBR Center Indicator, 3rd Row SBR Center Indicator(Option), 3rd Row SBR Left Indicator(Option), 3rd Row SBR Right Indicator(Option), 4th Gear Lamp, 4th Row SBR Center Indicator(Option), 4th Row SBR Left Indicator(Option), 4th Row SBR Right Indicator(Option), 5th Gear Lamp, 6th Gear Lamp, A/C Compressor Relay, A/C Compressor Test (ECV Type), AAF Control - Close, AAF Control - Open, AAF Forced Operation - Auto, AAF Forced Operation - Close, AAF Forced Operation - Open, AAF Relay, A-C Compressor Relay, Activation Switch LED, Actuator Control - Apply, Actuator Control - Release, AEWP Control - PWM Type, After Blower USM Set Off, After Blower USM Set On, All Door Lock Signal Output(to PTGM), All LEDs, All Mood Lamp Blue LED Test, All Mood Lamp Green LED Test, All Mood Lamp Red LED Test, All Mood Lamp White LED Test, Alternator Control, Alternator Test, Alt'L Signal Out, Assist BSD Indicator, Assist Door Courtesy Lamp Output, Assist Door Lock Indicator, Assist Mirror Position Down (Option), Assist Mirror Position Left (Option), Assist Mirror Position Right (Option), Assist Mirror Position Up (Option), Assist Outside Mirror Down, Assist Outside Mirror Left, Assist Outside Mirror Right, Assist Outside Mirror Up, Assist

Power Window Down (Option), Assist Power Window Up (Option), Assist Seat Belt Indicator (Option), Assist Seat Belt Indicator, Assist Side Window Auto Down, Assist Side Window Auto Up, Assist Side Window Down, Assist Side Window Up, Assistant Side Outside Handle Antenna Output (Power and GND), ATM Solenoid, Auto Cut Relay, Auto Defog Mode Door - Close, Auto Defog Mode Door - Open, Auto Light Power, Auxiliary Fuel Injector for Flexible fuel, Auxiliary Fuel Pump for Flexible fuel, AV Tail, AVM + FrontLeft + FrontRight View, AVM + RearLeft + RearRight View, Back Up Lamp Output, Back Up Lamp, Battery Coolant Valve Operation Mode1 (Combined Mode) ON, Battery Coolant Valve Operation Mode1 (Separated Mode) ON, Battery EWP Operation Mode for Degassing and Circulation, Battery Warning Lamp, BCM Buzzer Output (Internal/External), Bifunction Headlamp High LH Solenoid IPS Output, Bifunction Headlamp High RH Solenoid IPS Output, BSD Indicator, Burglar Horn Relay, Canister Purge Valve, Canister Shut Off Valve (OBD-2 Only), Canister Shut Off Valve Clocked(OBD-2 Only), Canister Shut Off Valve Toggling(OBD-2 Only), Canister Shut Off Valve(Leak Test), Canister Shut Off Valve(OBD-2 Only), CDA Control Solenoid Valve - EX, B1, CDA Control Solenoid Valve - EX, B2, CDA Control Solenoid Valve - IN, B1, CDA Control Solenoid Valve - IN, B2, Central Door Lock Indicator, Central Door Lock Relay, Central Door Lock Switch Indicator Output, Central Door Lock Switch Output, Central Door Unlock Relay Output, Central Door Unlock Relay, Chageover Valve, Charge Inlet Lock Relay, Charge Inlet Unock Relay, Charging Status LED (Green) On, Charging Status LED (Yellow) On, Child Lock Relay Output, Child Unlock Relay Output, Clamp Status ACC(Amber) LED Color illumination, Clamp Status IGN(Blue) LED Color illumination, Clamp Status Off(Red) LED Color illumination, CNG Bi-Fuel Fuel Change, CNG Shut sol valve in Fuel Tank, Compressor Off, Compressor On, Console Mode Door - Floor, Console Mode Door - Vent, Console Off Door, Console On Door, Console Temperature Air Mix Door 0%, Console Temperature Air Mix Door 100%, Console Temperature Air Mix Door 50%, Control Solenoid Valve (VFS) A, Coolant 3Way Valve, COOLANT VALVE - 3WAY (HTR) - Close, COOLANT VALVE - 3WAY (HTR) - Open, Cooler step 3 operation, Cooling Fan PWM, Cornering Lamp Left Relay Output (Option), Cornering Lamp LH Output, Cornering Lamp RH Output, Cornering Lamp Right Relay Output (Option), Courtesy Lamp RL Output, Courtesy Lamp RR Output, CPP(Canister Puge Pump) Control, Cruise Control Main Lamp(Auto CruiseType Only), Cruise Control Main Lamp(Option), Cruise Control Set Lamp(Auto Cruise Type Only), Cruise Control SET Lamp(Option), CVVD Intake, CVVT Exhaust, CVVT Intake, D Target Position, D\_DRL Relay, Dead Lock Relay, Dedicated DRL Left Output, Dedicated DRL Output (Option), Dedicated DRL Right Output, Def Door - Close, Def Door - Open, Defogger - Deicer Relay, Defogger Indicator, DEHUM VALVE - EXV (DEHUMI) Valve Close, DEHUM VALVE - EXV (DEHUMI) Valve Open, Differential Pressure Valve, Door Lock Indicator, Door Lock Relay, Door Unlock Relay, Drive Side Puddle Lamp, Driver Air Mix Door-0%, Driver Air Mix Door-100%, Driver Air Mix Door-50%, Driver Courtesy Lamp, Driver Door Courtesy Lamp Output, Driver Door Lock, Driver Door Unlock Relay (Option), Driver Door Unlock Relay, Driver Door Unlock, Driver Heater Control, Driver Mode Door-DEF, Driver Mode Door-DEF., Driver Mode Door-Floor, Driver Mode Door-Vent, Driver Power Window Switch Autol Up Output, Driver Seat Belt Indicator, Driver Seat Heat Mode to the High, Driver Seat Vent Mode to the High, Driver Side Outside Handle Antenna Output (Power and GND), Driver Side Repeater, DRL Relay(Canada), DRV/AST Power Window Enable Output, DRV-AST Power Window Enable Output, EGR Valve, ELCM Change Over Value(COV) Control, ELCM Pump Control, Electric Oil Pump (for HEV), Electric Oil Pump, Electric Shuttle Valve-Left Front, Electric Shuttle Valve-Right Front, Electric water pump control., Electrically Controlled Water Pump (Option), Electrically Controlled Water Pump, Electronic Expansion Valve (Battery Chiller) - Close, Electronic Expansion Valve (Battery Chiller) - Open, Electronic Expansion Valve (Heat Pump) - Close, Electronic Expansion Valve (Heat Pump) - Open, Electronic Expansion Valve (Recever Drier) - Close, Electronic Expansion Valve (Recever Drier) - Open, Electronic Waste Gate Valve (Turbo Only), Electronically Controlled Water Pump(CWP), EMS Wakeup Output, Engine Check Lamp [MIL], Engine Check Lamp(MIL), Engine Clutch Control

Solenoid (for HEV), Engine Coolant Filling Mode, EPB Apply RH and LH, EPB Release RH and LH, ESS Lamp, ETC Motor, EV Charge Door Open Lamp Output, EV Charge Door Open Relay, EVAP Leakage Test, EVP, EWP Max RPM Operation, Exhaust Flap(EF), Exhaust Gas Recirculation Valve, Exhaust Gas Recirculation, Exterior Tail Lamp Front Left Output, Exterior Tail Lamp Front Right Output, Exterior Tail Lamp Left(Front and Rear) Output, Exterior Tail Lamp Rear Left Output, Exterior Tail Lamp Rear Right Output, Exterior Tail Lamp Right(Front and Rear) Output, External Buzzer Output, Fan Motor Control-High Speed, Fan Motor Control-Low Speed, FAN ON, Fan PWM, Fan1 1st, Fan1 2nd, Fan1 3rd, Fan1 4th, Fan1 5th, Fan1 6th, Fan1 7th, Fan1 8th, Fan1 9th, Fan1 Stop, Flasher Sound Relay(Optional), Flow Stop Valve, Folding Actuator Signal Output, Foot Lamp Output(Optional), FPCM pressure control, Front Air Flow Door - 0%, Front Air Flow Door - 100%, Front Air Flow Door - 50%, Front BLDC Blower Motor 0RPM, Front BLDC Blower Motor 1000RPM, Front BLDC Blower Motor 2000RPM, Front BLDC Blower Motor 2500RPM, Front BLDC Blower Motor 500RPM, Front BLDC Blower Motor MAX RPM, Front Blower Fan Motor-1Step, Front Blower Fan Motor-2Step, Front Blower Fan Motor-3Step, Front Blower Fan Motor-4Step, Front Blower Fan Motor-5Step, Front Blower Fan Motor-6Step, Front Blower Fan Motor-7Step, Front Blower Fan Motor-8Step, Front Blower Fan Motor-Off, Front Bumper Antenna Output (Power and GND), Front Charge Door Lamp Output, Front Deicer Relay, Front Fog and Cornering Lamp Left Output, Front Fog and Cornering Lamp Right Output, Front Fog Lamp Indicator, Front Fog Lamp Left Output, Front Fog Lamp Output, Front Fog Lamp Relay, Front Fog Lamp Right Output, Front Glass Heated Relay Output, Front Glass Heated Switch Indicator Output, Front Left Side Window Auto Down, Front Left Side Window Auto Up, Front Left Side Window Down, Front Left Side Window Up, Front Left Turn Signal Output, Front Right Side Window Auto Down, Front Right Side Window Auto Up, Front Right Side Window Down, Front Right Side Window Up, Front Right Turn Signal Output, Front Seat Heat Mode to the High, Front Seat Vent Mode to the High, Front Top-AVM View, Front Top-SVM View, Front Turn Signal Lamp Activation LH Output, Front Turn Signal Lamp Activation RH Output, Front Washer Motor Output, Front-Full View, Front-SVM View, Frunk Lamp Output, Fuel Door Lock Solenoid Output (PHEV Only), Fuel Door Open Solenoid Output (PHEV Only), Fuel Door Open Solenoid Output, Fuel Open Loop, Fuel Pressure Indicator Lamp(LPI), Fuel Pressure Indicator Lamp, Fuel Pressure Ragulator (GDI Only), Fuel Pressure Regulator (GDI Only), Fuel Pump Control(1st stage), Fuel Pump Control(2nd stage), Fuel Pump Control, Fuel Pump Relay Control for LPG, Fuel Pump Relay for LPG, Fuel Pump Relay(1st stage), Fuel Pump Relay(2nd stage), Fuel Pump Relay, Fuel Tank Isolation Valve Relay Open, Fuel Tank Isolation Valve, Gasoline Lamp (Bi-Fuel), Gauge ON, Glove Box Lamp Output, HAC Brake Lamp Actuator, Haptic Steering Wheel Motor Output, Haptic Steering Wheel Output, Hat Shelf Antenna Output (Power and GND), Hazard Indicator, Hazard Mode State for Turn Signal Lamp Sequential Mode, Hazard Relay, Head Lamp High Indicator, Head Lamp High Left Output, Head Lamp High Output, Head Lamp High Relay, Head Lamp High Right Output, Head Lamp Leveling Min(Low) Position, Head Lamp Low Indicator, Head Lamp Low Left Output, Head Lamp Low Output, Head Lamp Low Right Output, Head Lamp Low Signal, Head Lamp Washer Relay, Head Lamp Welcome Command, Heated Handle Indicator(Optional), Heated Handle Output(Optional), Heated Washer Nozzle Output, Heated Washer Nozzle Relay, Heater step 3 operation, HICM Activate Diagnostics, HICM Relay, High Mounted Stop Lamp Output, High Pressure Fuel Pump Control, High Pressure Fuel Pump Control2, Horn Relay(NA), Horn Relay, HV PTC OFF, HV PTC ON(Min.), Idle Speed Actuator, Ignition 3 Relay, Ignition Coil 1, Ignition Coil 2, Ignition Coil 3, Ignition Coil 4, Ignition Coil Enable-Disable-#1, Ignition Coil Enable-Disable-#2, Ignition Coil Enable-Disable-#3, Ignition Coil Enable-Disable-#4, Ignition Coil Enable-Disable-#5, Ignition Coil Enable-Disable-#6, Ignition Coil Enable-Disable-#7, Ignition Coil Enable-Disable-#8, Illumination, Immobilizer Lamp(Optional), Indicator ALL OFF, Indicator ALL ON, Indirect Vent door, Injector Disable-Cylinder 1, Injector Disable-Cylinder 2, Injector Disable-Cylinder 3, Injector Disable-Cylinder 4, Injector Disable-Cylinder 5, Injector Disable-Cylinder 6, Injector Disable

Cylinder 7, Injector Disable-Cylinder 8, Inlet Valve-Front Left Control, Inlet Valve-Front Right Control, Inlet Valve-Left Front, Inlet Valve-Left Rear, Inlet Valve-Rear Left Control, Inlet Valve-Rear Right Control, Inlet Valve-Right Front, Inlet Valve-Right Rear, Intake Door - Fresh, Intake Door - Recirc, Interior Antenna #1 Output (Power and GND), Interior Antenna #2 Output (Power and GND), Interior Antenna #3 (Trunk Antenna : Sedan Type) Output (Power, Interior Lamp Autocut Relay Output(Optional), Interior Mood Lamp Output (Option), Interior Mood Lamp Output, Internal Buzzer, IOD Relay, ISG Lamp, ISG Test(Optional), ITM Valve, Key Hole Illumination (Manual Key Type), Key Interlock Solenoid(Manual Key Type), Lamp Control - EPB Status Lamp, Lamp Control - EPB Warning Lamp, Lamp Control, Lamp Load Power Relay, LampLoad AutoCut IPS Output, LED Out, LongTermLoad Cut Relay Output, LPG Cut Valve for Fuel Rail, LPG Cut Valve for Fuel Tank, LPG Fuel Pump PWM, LPG Lamp, Luggage Lamp Relay, Luggage Lamp, Main Relay (+) ON, Main Relay(-) ON, Main Relay(-), Precharge Relay, Simultaneously ON (Precharge se, Main Relay, Maintenance mode - EPB/MOC disengaging, Manual HLLD Signal Output, Map Lamp Output, Mirror Folding Operation (Option), Mirror LED Left, Mirror LED Right, Mirror Select Left indicator, Mirror Select Right indicator, Mirror Unfolding Operation (Option), Mood Lamp 1 Output, Mood Lamp 2 Output, Mood Lamp 3 Output, Mood Lamp Output, Motor, Motor1, Folding, Motor2, Unfolding, Move Assist Outside Mirror To The Highest Position, Move Assist Outside Mirror To The Lowest Position, Move Assist Outside Mirror To The Most Left Position, Move Assist Outside Mirror To The Most Right Position, Move DRIVE OUTSIDE MIRROR to the highest position, Move DRIVE OUTSIDE MIRROR to the lowest position, Move DRIVE OUTSIDE MIRROR to the most left position, Move DRIVE OUTSIDE MIRROR to the most right position, Move P/Seat to the Foremost Position (Height), Move P/Seat to the Foremost Position (Recline), Move P/Seat to the Foremost Position (Slide), Move P/Seat to the Last Position (Tilt), Move P/Seat to the Lowest Position (FR Height), Move P-Seat to the Foremost Position (Cushion Extension), Move P-Seat to the Foremost Position (Head Rest Slide), Move P-Seat to the Foremost Position (Recline), Move P-Seat to the Foremost Position (Shoulder), Move P-Seat To The Foremost Position (Slide), Move P-Seat to the Highest Position (FR Height), Move P-Seat to the Highest Position (Headrest), Move P-Seat to the Highest Position (RR Height), Move P-Seat to the Last Position (Cushion Extension), Move P-Seat to the Last Position (HeadRest Slide), Move P-Seat to the Last Position (Recline), Move P-Seat to the Last Position (Shoulder), Move P-Seat To The Last Position (Slide), Move P-Seat to the Lowest Position (FR Height), Move P-Seat to the Lowest Position (Headrest), Move P-Seat to the Lowest Position (RR Height), Move Steering Column At The Longest Position (Tele), Move Steering Column To The Lowest Position (Tilt), Multimedia Load Power Relay, N Target Position, Navi Wakeup Signal Output, Norminal Idle Speed Offset, O2 Heater Front (B1/S1), O2 Heater Front (B1-S1), O2 Heater Front (B2-S1), O2 Heater Front, O2 Heater Rear (B1-S2), O2 Heater Rear (B2-S2), O2 Heater Rear, OBC Relay(-) ON, OBC Relay(+) ON, OBC Relay(+)/(-) ON Simultaneous, OBC Wake up Output, Oil Change Warning Lamp(Optional), Oil Change Warning Lamp, Oil Control Valve - Exhaust Bank 1(Optional), Oil Control Valve - Exhaust Bank 1, Oil Control Valve - Exhaust Bank2, Oil Control Valve - Intake Bank 1, Oil Control Valve - Intake Bank1, Oil Control Valve - Intake Bank2, Oil Pressure Warning Lamp, On/Off Solenoid A (SS-A), Openbed Box Lamp Output, Openbed Cargo Lamp Output, Openbed Lamp Switch Indicator Output, Operate Assist Side Fold, Operate Assist Side Unfold, Operate DRIVE SIDE FOLD, Operate DRIVE SIDE UNFOLD, Operate DRIVE SIDE WINDOW AUTO DOWN, Operate DRIVE SIDE WINDOW AUTO UP, Operate DRIVE SIDE WINDOW DOWN, Operate DRIVE SIDE WINDOW UP, Outlet Valve-Front Left Control, Outlet Valve-Front Right Control, Outlet Valve-Left Front, Outlet Valve-Left Rear, Outlet Valve-Rear Left Control, Outlet Valve-Rear Right Control, Outlet Valve-Right Front, Outlet Valve-Right Rear, Over speed indicator(Optional), Over Speed Warning Indicator, P Target Position, Parasitic Current Auto-Block IPS, Parking Brake Indicator, PAS Buzzer Output (RPAS Buzzer Output), PAS Indicator (RPAS Off Indicator), Passenger Air Mix Door-0%, Passenger Air Mix Door-100%, Passenger Air Mix Door-50%, Passenger Mode Door -Defog, Passenger Mode Door -

Floor, Passenger Mode Door - Vent, Passenger Seat Heat Mode to the High, Passenger Seat Vent Mode to the High, Perform Erase All Video File, Perform Event Recording, Pocket Light Output (Option), Pocket Light Output(Option), Power Operation Request LH, Power Supply to the ACC Relay of Main MCU, Power Supply to the IGN1 Relay of Main MCU, Power Supply to the IGN1/IGN2 Relay of Main MCU, Power Supply to the IGN1/STARTER Relay of Main MCU, Power Supply to the IGN1-IGN2 Relay of Main MCU, Power Supply to the IGN1-STARTER Relay of Main MCU, Power Window Relay (with Safety P-WDW Enable), Power Window Relay, Precharge Relay ON, Precharge Relay ON, Main Relay (-), (+) ON (Normal sequence), Pressure Control Solenoid (LP), Pressure Control Solenoid Valve A(Line Pressure), Pressure Control Solenoid Valve(VFS) 'A', Puddle Lamp Output, Puddle Pocket Lamp Output, Quick Charge Relay (+),(-), Main Relay (-), (+) ON (Normal Char, Quick Charger Relay(-) ON, Quick Charger Relay(-)(+) ON simultaneous, Quick Charger Relay(+) ON, R Target Position, Radiator Cooling Fan PWM, Radiator Fan Forced Operation, Radiator shutter 1 - Auto test, Radiator shutter 1 - Close test, Radiator shutter 1 - Open test, Read VIN, Rear Air Flow Door - 0%, Rear Air Flow Door - 100%, Rear Air Flow Door - 50%, Rear Air Mix Door-0%, Rear Air Mix Door-100%, Rear Air Mix Door-50%, Rear Air Mix(A) Door-0%, Rear Air Mix(A) Door-100%, Rear Air Mix(A) Door-50%, Rear Assist Power Window Down Relay, Rear Assist Power Window Up Relay, Rear Assist Side Window Auto Up, Rear Assist Window Auto Down, Rear Assist Window Down, Rear Blower Fan Motor-1Step, Rear Blower Fan Motor-2Step, Rear Blower Fan Motor-3Step, Rear Blower Fan Motor-4Step, Rear Blower Fan Motor-5Step, Rear Blower Fan Motor-6Step, Rear Blower Fan Motor-7Step, Rear Blower Fan Motor-8Step, Rear Blower Fan Motor-Off, Rear Bumper Antenna Output (Power and GND), Rear Charge Door Lamp Output, Rear Curtain Down Output [Rear Curtain Hall Sensor Power Output, Rear Curtain Down Output, Rear Curtain Up Output [Rear Curtain Hall Sensor Power Output(O, Rear Curtain Up Output, Rear Defogger Relay, Rear Driver B-PILLAR Door - 0%, Rear Driver B-PILLAR Door - 100%, Rear Driver Power Window Down Relay, Rear Driver Power Window Up Relay, Rear Driver Side Window Auto Up, Rear Driver Window Auto Down, Rear Driver Window Down, Rear Driver Window Up, Rear Fog Lamp (Option), Rear Fog Lamp Indicator, Rear Fog Lamp Left Output, Rear Fog Lamp Relay (Option), Rear Fog Lamp Right Output, Rear illumination, Rear Left Door Lock Indicator Output, Rear Left Power Window Down (Option), Rear Left Power Window Up (Option), Rear Left Side Courtesy Lamp, Rear Left Side Door Curtain Down (Only Windows Close Status), Rear Left Side Door Curtain Up (Only Windows Close Status), Rear Left Side Window Auto Down (Option:Curtain Bottom Status), Rear Left Side Window Auto Up (Option:Curtain Bottom Status), Rear Left Side Window Down (Option:Curtain Bottom Status), Rear Left Side Window Up (Option:Curtain Bottom Status), Rear Left Turn Signal Output, Rear LH Seat Heat Mode to the High, Rear LH Seat Vent Mode to the High, Rear mode door - B-L, Rear mode door - Floor, Rear mode door - Vent, Rear Mood Lamp (Both Left and Right), Rear Passenger B-PILLAR Door - 0%, Rear Passenger B-PILLAR Door - 100%, Rear Pocket Lamp (Both Left and Right), Rear Power Window Enable Output (Option), Rear Power Window LH Up Relay, Rear RH Seat Heat Mode to the High, Rear RH Seat Vent Mode to the High, Rear Right Door Lock Indicator Output, Rear Right Power Window Down (Option), Rear Right Power Window Up (Option), Rear Right Side Courtesy Lamp, Rear Right Side Door Curtain Down (Only Windows Close Status), Rear Right Side Door Curtain Up (Only Windows Close Status), Rear Right Side Window Auto Down (Option:Curtain Bottom Status), Rear Right Side Window Auto Up (Option:Curtain Bottom Status), Rear Right Side Window Down (Option:Curtain Bottom Status), Rear Right Side Window Up (Option:Curtain Bottom Status), Rear Right Turn Signal Output, Rear Room Lamp Output, Rear SBR Symbol Indicator Output(Option), Rear Seat Belt Center Indicator (Option), Rear Seat Belt Left Indicator (Option), Rear Seat Belt Right Indicator (Option), Rear Seat Heat Mode to the High, Rear Seat Vent Mode to the High, Rear Seat Warmer Left(Option), Rear Seat Warmer Right(Option), Rear Temp Cool Door - 0%, Rear Temp Cool Door - 100%, Rear Temp Cool Door - 50%, Rear Temp Warm Door - 0%, Rear Temp Warm Door - 100%, Rear Temp Warm Door - 50%, Rear Top-AVM

View, Rear Top-SVM View, Rear View Switch Indicator Output, Rear Washer Motor Output, Rear Wiper Relay (Option), Rear Wiper Relay, Rear-SVM View, Refrigerant 2Way Valve - #1 OFF, Refrigerant 2Way Valve - #1 ON, Refrigerant 2Way Valve - #2 OFF, Refrigerant 2Way Valve - #2 ON, Refrigerant 3Way Valve - #1 OFF, Refrigerant 3Way Valve - #1 ON, Refrigerant 3Way Valve - #2 OFF, Refrigerant 3Way Valve - #2 ON, RKE Tailgate Signal Output(to PTGM), RL Door Lock Relay, RL Door Unlock Relay, Room Lamp Output, RPAS Switch Indicator(Option), RVM Switch Indicator Output, Safety ECU Enable Output (High), Safety Power Window Enable, Safety Power Window Sunroof Enable, SAHLS Actuator 20%, SAHLS Actuator 80%, SBL Function Test SBL LH ON, Security Indicator (Option), Security LED Output, Security LED, Selection Injector Group(A) of Engine Idle state for Dual Injec, Shift Control Solenoid Valve (28/B), Shift Control Solenoid Valve (37R/C), Shift Control Solenoid Valve (46/C), Shift Control Solenoid Valve (UD/C), Shift Control Solenoid Valve A(UD/B), Shift Control Solenoid Valve A(UD-B), Shift Control Solenoid Valve B(2-6/B), Shift Control Solenoid Valve B(2-6-B), Shift Control Solenoid Valve C(35R/C), Shift Control Solenoid Valve C(35R-C), Shift Control Solenoid Valve D(OD/C), Shift Control Solenoid Valve D(OD-C), Shift Control Solenoid Valve E(SS-A), ShortTermLoad Cut Relay/IPS Output, ShortTermLoad Cut Relay-IPS Output, Solenoid Thermal Expansion Valve - Close, Solenoid Thermal Expansion Valve - Open, SSB illumination Output (Power and GND), Start Inhibit Relay (Option), Start Inhibit Relay, Start Relay, Static Bending LH Output (Option), Static Bending RH Output (Option), Steering Warmer Output, Steering Warmer Switch Indicator Output, Stop Lamp Left, Stop Lamp Left/Right/HMSL Output (Option), Stop Lamp Left-Right-HMSL Output (Option), Stop Lamp Right, Stop Lamp, Storage Bos Lid Release Relay Output, Sunroof Enable Output, Sunroof Power Relay control(Option), SVM + FrontLeft + FrontRight View, SVM + RearLeft + RearRight View, System Identification, Tail Interior Lamp, Tail Lamp Indicator, Tail Lamp Output, Tail Lamp Relay, Tailgate/Trunk Release Relay, Tailgate-Trunk Release Relay, TCI Bypass Valve (Turbo Only), TCI Bypass Valve(Turbo Only), TCS Valve-Left Front, TCS Valve-Right Front, Torque Converter Clutch Solenoid Valve, Turbo dump(ReCirculation) Valve (RCV), Turbo waste gate(WGT) valve, Turn LH Output, Turn RH Output, Turn Signal Lamp Front Left Output, Turn Signal Lamp Front Right Output, Turn Signal Lamp Rear Left Output, Turn Signal Lamp Rear Right Output, Turn Signal Sound Output, Turn Signal Sound Relay Output, Vacuum Pump (ELCM), Variable Exhaust Flap, Variable Force Solinoid Valve - Exhaust Bank1 test, Variable Force Solinoid Valve - Intake Bank1 test, Variable Intake Manifold 1 (Option), Variable Intake Solenoid(Option), Variable Oil Pump Solenoid, VCM Motor (Option), VCM Motor(Option), VESS Sound Play (5 Sec), VESS Sound Play (Until Stop Command), VVL Control Solenoid Valve - EX, B1, VVL Control Solenoid Valve - EX, B2, VVL Control Solenoid Valve - IN, B1, VVL Control Solenoid Valve - IN, B2, Warm Bypass door, Waste Gate Valve (Turbo Only), Window Lock Indicator, Window Lock to Driver Door Module, Wiper High-Speed Relay [Wiper High RLY With Wiper Power RLY], Wiper Low-Speed Relay [Wiper Low RLY With Wiper Power RLY], Wiper Power Relay, Wiper Relay (for INT)[Wiper RLY With Wiper Power RLY]

## New Toyota/Lexus Coverage

### 3 new Adjustment type special tests:

Transmission Adaptive Pressure Reset, Transmission Overtemperature Counter Reset, Transmission Service Fast Learn

### 24 new Actuation type special tests:

Auxiliary Transmission Fluid Pump, High Side Driver 1, High Side Driver 2, Shift Transmission Gear, TCC Pressure Control Solenoid Valve, Transmission Accumulator Solenoid Valve, Transmission Control Solenoid Valve 1 Current, Transmission Control Solenoid Valve 1, Transmission Control Solenoid Valve 10, Transmission Control Solenoid Valve 2 Current, Transmission Control Solenoid Valve 2, Transmission Control Solenoid Valve 3 Current,

Transmission Control Solenoid Valve 3, Transmission Control Solenoid Valve 4 Current, Transmission Control Solenoid Valve 4, Transmission Control Solenoid Valve 5 Current, Transmission Control Solenoid Valve 5, Transmission Control Solenoid Valve 6 Current, Transmission Control Solenoid Valve 6, Transmission Control Solenoid Valve 7 Current, Transmission Control Solenoid Valve 7, Transmission Control Solenoid Valve 8 Current, Transmission Control Solenoid Valve 8, Transmission Control Solenoid Valve 9

## New Coverage Details – USA European

### New Alfa Romeo Coverage

#### 105 new Adjustment type special tests:

ABS Unit Bleed, Active Grill Shutter Replaced, Actuator Calibration, Back Lighting, Brake Fluid Replacement/Brake Fluid Reservoir Substitution, Calibrate Tandem Master Cylinder Sensor, Caliper EPB substitution, CAM Crank Relearn Routine, Clear Engine Auto Restart Crank Counter, Clear Learning Value, Clear Misfire TLC, Clear Stored Accumulated Fuel Mass, Clear TPM Sensor Rolls Test Results, Clear TPM Sensor Warnings, Clear Variable Line Pressure Counters, Close Door Calibration, Clutch Pedal Learn, Coolant Three Way Valve Replaced, Downstream Lambda Sensor Heater Self-learning Reset, DTCM Replacement, EGR System Test, Electric Park Brake Management, Enable Brake Pedal, Enable/Disable The Roll Bench Mode, Engine Idle Shutdown Feature Enable/Disable, EPB Assembly Check, Exhaust Phaser 1 Cleaning, Exhaust Phaser 2 Cleaning, Exit Logistic Mode, Exit Shipping Mode, Fire Protection System Activate, Front Axle Nominal Tire Pressure, Front Brake Disc Substitution, Front Caliper Substitution, GSE Injector Adaptation, Heated Seat NTC Validation, HVAC Actuator Calibration Test, HVAC FGA Self Learning Motors Test, Initialize EPS, Intake Lambda sensor adaptive parameters reset, Intake Phaser 1 Cleaning, Intake Phaser 2 Cleaning, Learn ETC, Longitudinal And Lateral Sensor Calibration, Modify Volumetric Sensors Sensitivity, New Engine Installed, Oil Change, Oil Service Reset, Open Door Calibration, Original VIN Lock, Overboost counter reset, Phonic Wheel Ttooth Learning Reset, Power Take - Off Unit Replacement, Pressure Sensor Calibration, Production State, Proxi Configuration Alignment, Proxi Configuration, Purge fuel circuit reset, Quick Learn, Quicklearn 62TE, Quicklearn Non RFE, Quicklearn RFE, RDU Replacement, Rear Axle Nominal Tire Pressure, Rear Brake Disc Substitution(Continental), Reset Adaptive After Oil Change, Reset Adaptive Data, Reset Adaptive Memory, Reset Adaptive Values, Reset Adaptives After Block Change, Reset Air-Fuel Adaptives, Reset Angle Offset, Reset Camshaft Adaptive, Reset Camshaft Adaptives, Reset ECU, Reset Enhanced Automatic Oil Change Indicator, Reset Fuel Rail Bleed Procedure, Reset Memory, Reset of VCM Bad Programming Snapshot, Reset oil life monitoring parameter, Reset Parameters to Default, Reset Service Information, Reset VCM Adaptives, Reset VVA Freeze Incorrect Request, Seat Belts Alarm Enable, Seat Belts Alarm Exclusion, Settling Group Caliper and Brake Pads, Steering Angle Calibration, TCC Break In, Throttle Body Self-Learn Activation, Tire Pressure Sensor Registration, TPM Pressure Update to Placard Value, TPMS Calibration, Trailer Hook Presence Disabling, Trailer Hook Presence Enabling, Turbocharger adaptive parameters reset, Update Front and Rear Axle Nominal Tire Pressure Values, Valve Body Solenoid Learn, Valve Variator Actuator (VVA) freeze wrong request reset, VCM Adaptive Parameter Reset After Block Change, VCM Adaptive Parameter Reset After Oil Change, VIN Lock, VVL Cam Crank Relearn, Write Pinion Factor, Write VIN

#### 1134 new Actuation type special tests:

"EOBD" (Electronic On Board Diagnostic) failure indication, 1st Gear Clutch Test (62TE), 1st Gear Clutch Test (Non-RFE), 1st Gear Clutch Test (RFE), 1st Row Ceiling Light, 2/4 Clutch Volume

Index Check, 2-4 Solenoid State, 2-4 Solenoid, 2C Or 2-4 Solenoid, 2nd Gear Clutch Test (62TE), 2nd Gear Clutch Test (Non-RFE), 2nd Gear Clutch Test (RFE), 2nd Row Ceiling Light, 2WD Rolls Mode, 3rd Gear Clutch Test (62TE), 3rd Gear Clutch Test (Non-RFE), 3rd Gear Clutch Test (RFE), 3rd Row Ceiling Light, 4C Solenoid State, 4C Solenoid, 4th Gear Clutch Test (62TE), 4th Row Ceiling Light, A/C Compressor Clutch Relay Control State, A/C Relay, A/C Request, ABS (Anti-lock Brake System) safety indication, ABS Lamp, ABS Safety indication, ABS Safety lamp, A-C Compressor Clutch Relay Control State, A-C Request, Active Exhaust Valve 1, Active Exhaust Valve 2, Active Grill Shutter Test, Actuate All Heaters, Actuator Test Injector, Actuator Test Inverse Pump, Actuator Test Pump, Actuator Test Tank Heater, Actuator Test Tube Heater, Air Conditioner Relay Command, Air Defrost Motor Distribution (Left side), Air Defrost Motor Distribution (Right side), Air Distribution Motor Command (Mode), Air Mix Motor, AIR Mixing Motor Command (Left SIDE), AIR Mixing Motor Command (Right Side), Air Mode Motor, Air Rear Motor Distribution, Air Recirculation Motor Command, Air Vent - Floor Motor Distribution (Left side), Air Vent - Floor Motor Distribution (Right side), Airbag failure indication, Alarm/Doors Status Led, Alarm/Doors Status/Deterrence LED, Alarm-Doors Status-Deterrence LED, All Lights Front Command, All Lights Rear Command, All Stop Lights (EMEA 949), All Stop Lights (EMEA 952), All Stop Lights (NAFTA 949), All Stop Lights (NAFTA 952), ALL Stop Lights Command, All Stop Lights W-Combined Rear Lighting, All Stop Lights W-O Combined Rear Lighting, All Stop Lights, All Turn Lights Command, Alternator Field Control State, Alternator Field Duty Cycle, Alternator Field Duty-Cycle, Ambient dimming command, Ambient Dimming, Ambient Illumination; Interior, Ambient Light Control, Ambient Light, Ambient Lighting Command, AMP Output Short Test, AMP Output Tone Test, Antenna Power, Antilock brake (ABS) failure indication, Anti-lock Brake System (ABS) safety indication, ASR Button lamp, ASR-ESP Safety indication, ASR-ESP Safety Lamp, Assist Call Button Green LED, Assist Call Button Red LED, Assist Call Green Day PWM, Assist Call Green Night PWM, Assist Call Red Day PWM, Assist Call Red Night PWM, Audio Measure AC and DC, Audio Routing, Audio Test For Subwoofer Specific, Audio Video Signal Detection, Audio Volume ( Current Source), Audio Volume (current source), Audio Volume (ENT), Audio Volume (INFO 1), Audio Volume (INFO 2), Audio Volume (SIG), Auto high beam activation, Auto Shutdown Relay Control State, Autocheck, Automated Driver Door Ajar Signal, Automated Driver Door Open, Automatic Functions Activation, Automatic High Beam, Auxiliary Coolant Pump, Background LED Illumination Level, Backlight 1 Level, Backlight 2 Level, Backlight 3 Level, Backlight 4 Level, Backlight 5 Level, Backlight 6 Level, Backlight 7 Level, Backlight 8 Level, Backlight Command (Day Night Internal Light), Backlight LEDS Activation, Backlight Leds Control, Backlighting Dimming Command, Backlighting LEDs, Backlighting, Backup Light, Backup Lights, Balance Level Settings, Balance Settings, Bargraph, Bass Level Settings, Bass Settings, Battery-Alternator FAIL-Charge, Blow By Heater Relay Command, Blow-by Heater command, BLOWER Motor Brushed, BLOWER Motor Brushless, Blower Motor Command, Blower Motor Speed, Blower Motor, Blue Lights, Brake Sys Fail Ind,Elec PK Brk Indication And EPB Fail Indicati, Brake Sys Fail Indication, Electronic Parking Brake Indication, Brake System Fail Indicator, EPB Indicator, Brake System Failure [EMEA Only], Brake System Failure [US Only], Brk Sys fail Ind (EBD Included) - Man Park Brk Ind, Brk Sys fail Indication, Elec Park Brk Ind, Brk Sys fail Indication,Elect Park Brk Ind and EPB fail Ind, Button LEDs, Button symbol Back-Light PWM Duty, Buzzer Control, Buzzer, Cabin AIR Temperature Sensor Blower, Calibration Sensor, Camshaft Valve Control Position inlet command, Camshaft Valve Control Position outlet command, CEGR H-Bridge Valve Duty Cycle, Ceiling Light Front Command, Ceiling Light Front, Ceiling Light Rear Left or Central, Ceiling Light Rear Left, Ceiling Light Rear Right, Ceiling Light, Central high mounted Stop Light (CHMSL), Central high mounted Stop Light, Central Lock, Central Stop Lamp, Central Unlock, Channel 1, Channel 10, Channel 11, Channel 12, Channel 2, Channel 3, Channel 4, Channel 5, Channel 6, Channel 7, Channel 8, Channel 9, Charge Air Cooler Coolant Pump, Check PCM Odometer, CHSML and Stop/Turn Lights, Clearance Identification Lights Relay, CNG Injector Relay, CNG

Shut Off Relay, CNG/Gasoline Forced Fuel Type, Comfort Closing And Opening, Comfort ClosingOpening, Comfort ENABLE Command, Comfort Enable, Command By-Pass Valve, Command Key Unlock, Command Shift Lock, Control chime, Coolant High Temperature Auxiliary Electric Pump, Coolant Three Way Valve Test, Cooled EGR H-Bridge Valve System Test, Cooling Fan, Cruise control lamp command, Cylinder 1 Deactivation Solenoid Control State, Cylinder 1 UniAir valve command, Cylinder 2 UniAir valve command, Cylinder 3 UniAir valve command, Cylinder 4 Deactivation Solenoid Control State, Cylinder 4 Deactivation Solenoid, Cylinder 4 UniAir valve command, Cylinder 6 Deactivation Solenoid Control State, Cylinder 7 Deactivation Solenoid Control State, D+ Repetition Relay Command, Damper Front Left Command, Damper Front Right Command, Damper Rear Left Command, Damper Rear Right Command, Dasm Safety Indication Adaptive Cruise Control, Dasm Safety Indication Normal Cruise Control, Day Lights Left - Right, Day Lights Left -Right, Day Lights Left, Day Lights Right, Day Lights, Day Run Light (DRL) Parking Light Left (Halogen), Day Run Light (DRL) Parking Light Left (Xeno), Day Run Light (DRL) Parking Light Left LED, Day Run Light (DRL) Parking Light Left, Day Run Light (DRL) Parking Light Right (Halogen), Day Run Light (DRL) Parking Light Right (Xeno), Day Run Light (DRL) Parking Light Right LED, Day Run Light (DRL) Parking Light Right, Day Run Light (DRL) Parking Turn Light Left, Day Run Light (DRL) Parking Turn Light Right, Daylights and Position Left, Daylights and Position Right, Daylights Halogen Left, Daylights Halogen Right, Daylights Xenon Left, Daylights Xenon Right, DC Clutch Volume Index Check, Deactivation Parking Sensor LED, Deactivation Parking Sensor, Dead Lock Relay, DeadLock Relay, DeadLock Relay-Independent Driver Door Unlock, Defeat Engine ON, Diagnosis Module for Tank Leakage (DMTL) command, Diesel Particulate Filter Lamp Command, Dimming display, Dimming Graphics, Direct Injection Valve 1 Command, Direct Injection Valve 2 Command, Direct Injection Valve 3 Command, Direct Injection Valve 4 Command, Direct Injection Valve 5 Command, Direct Injection Valve 6 Command, Display Dimming, DNA Status LED 3, Door Ajar Signal To Front Ceiling Dome, Door Ajar, Door Handle Power Control, Door Handle Power, Door Handle Verification Test, Door Locks, Door Status LED Command, Door Status Led, Doors Status - Deterrence LED Driver Door, Doors Status - Deterrence LED Passenger Door, Doors status - deterrence LED, Double Start Override Relay, Downstream lambda probe heater command, DR Solenoid, Drive Style 2 LED Command, Drive style 2 LED, Drive Style 3 LED Command, Drive style 3 LED, Driver Door Ajar Signal To Manual Transmission Automated, Driver Door Ajar Signal To MTA (Manual Transmission Automated), Driver Door Ajar Signal To MTA, Driver Door Handle And Puddle Light LED Command, Driver Door Lock Status LED Command, Driver Door Unlock, Driver Doors Status - Deterrence LED, Driver Heated Seat, Driver Seat Backrest Command, Driver Seat Lift Command, Driver Seat Slide Command, Driver Seat Tilt Command, Drivers Window Control, DRL - Front Park Lights, DRL Left, DRL Parking Light Left Command, DRL Parking Light Right Command, DRL Right, DSU LED Command 1, DSU LED Command 2, DSU LED Command 3, DTI FUEL TRANSFER RLY, DTI LTR CLNT PMP, DTI SPRCHRGR BPV MOTOR, Dual Speed Fuel Pump Relay, Dual Speed Oil Pump, Dump valve command, Duty Cycle Purge Solenoid, EBD (Electronic Brake Distribution) safety indication, EBD Safety Lamp, E-Call Button Backlight LED, E-Call Button Green LED, E-Call Button Red LED, E-Call Green Day PWM, E-Call Green Night PWM, E-Call Red Day PWM, E-Call Red Night PWM, ECO Led Command, ECO LED, ECO-LPG-SS-E-Costing LED Command, EGR cooler bypass command, EGR high pressure cooler bypass command, EGR Valve Command, EGR Valve Solenoid Duty Cycle, Elec Stabil Ctrl (ESC) Sys Intrvntn - fail Ind HILL HOLDER Sys, Electric Park Brake, Electric Pump Drive Unit Command, Electric seat movement Relay, Electric Seat Movimentation Relay, Electric Thermostat Heater Solenoid Duty Cycle, Electric Thermostat Heater Solenoid, Electric Vacuum Pump, Electric Wastegate Valve, electromagnetic brake for engine stop command, Electronic Brake Distribution (EBD) safety indication, Electronic Parking Brake (EPB) Failure Indication [US Only], Electronic Parking Brake (EPB) failure indication, Electronic Power Steering Fail, Electronic Stability Control (ESC) Fail, Electronic Stability Control (ESC) Indicator,

Electronic Stability Control (ESC) OFF lamp indication, Electronic Stability Control (ESC) Off, Electronic Stability Control (ESC) system deactivation, Electropump motor command, Electrovalve Clutch Command (K2), Electrovalve Odd Gear Command (K1), EMCC VLP Solenoid, Enable sunroof unit, Engagement electrovalve PPV1 command (3rd/2nd/Reverse), Engagement electrovalve PPV1 command (6th-7th-R-5th), Engagement Electrovalve PPV2 Command (1st/4th/5th/6th), Engagement electrovalve PPV2 command (2nd-3rd-4th-1st), Engine After Run Coolant Pump, Engine Oil Pressure Lamp Command, Engine Running Injector Kill Test, Engine Speed Cluster, Engine Water Over Temperature Lamp Command, Engine Water Over Temperature, EOBD (Electronic On Board Diagnostic) Failure Indicator, EOBD And Engine System Fault Lamp, EPB (Electric park brake) Button Led, EPB (Electric park brake) Red lamp, EPB (Electric park brake) Yellow lamp, EPB Failure Lamp, EPB Function Lamp, EPB Indicator And EPB Fail Indicator, EPB switch lamp, EPB Warning Light, EPS Adaptive Data Control, ESC - HILL HOLDER Sys Fail Indicator, ESC (Electronic Stability Control) Safety lamp, ESC (Electronic Stability Control) System Deactivation, ESC / Hill Holder Failure Lamp, ESC Button Lamp, ESC Safety Lamp, ESIM Forced Monitor Test, ETC Throttle Follower Test, Evaporative System Integrity Monitor (ESIM) solenoid command, Even Gear Clutch (K2) Control|Solenoid Valve Command, Even gear clutch K2 control solenoid valve command, Exhaust bypass valve command, External Control Variable Displacement (ECVD), External Mirror Fold, External Mirror Unfold, Externalcrown Light Rear Left LED, Externalcrown Light Rear Right LED, Externally Controlled Variable Displacement (ECVD) Command (DC), Fade Settings, Fader Level Settings, Fader Settings, Fan Climate Relay, FCW Indication Forward Collision Warning, First Start Power Limitation, FL Command Electrovalve, Flasher - Rear backup Left Light, Flasher - Rear backup Right Light, Flasher Front Left, Flasher Front Right, Flasher Rear - Lateral Left, Flasher Rear - Lateral Right, Flex Fuel reserve indication, Fog Front Light Left, Fog Front Light Right, Fog Front Lights Left Right, Fog Lamps, Fog Light Led, Fog Lights, Fog Rear Light Left -T2 (952), Fog Rear Light Or Second Backup Light, Fog Rear Light Right -T2 (952), Fog Rear Lights -T2 (949), Forward Collision Warning Fail, Forward Collision Warning OFF, FR Command Electrovalve, Frequency Step Selection Tuner AM-FM, Frequency Step Selection Tuner FM2, Frequency Step Selection, Front Ceiling Light - Inadvertent Lights, Front Ceiling Light + Inadvertent Lights, Front Ceiling Light Command Enable, Front Ceiling Light, Front Driver Window Lifter Command Down, Front Driver Window Lifter Command Up, Front DRL Light Xenon, Front Fog Light Left, Front Fog Light Right, Front Fog Lights Halogen, Front Fog Lights, Front Foglights, Front Jet Wiper, Front Lateral Left Turn Lights, Front Lateral Right Turn Lights, Front Left Flasher, Front Left Heat Seat Request, Front Left Parking Light, Front Lock doors command, Front Mode Door Actuator Position, Front Parking Light, Front Passenger Window Lifter Command Down, Front Passenger Window Lifter Command Up, Front Position Light Xenon, Front Position-DRL Light Halogen, Front Right Flasher, Front Right Heat Seat Request, Front Right Parking Light, Front Shut-Off Valve Request, Front SIDE Marker Command, Front Side Marker, Front Unlock, Front Wash, Front Wiper Test, Front Wiper, Fuel Filter Heater, Fuel Filter Heating, Fuel Injector 1 Control State, Fuel Injector 1, Fuel Injector 2 Control State, Fuel Injector 2, Fuel injector 3 Control State, Fuel Injector 3, Fuel Injector 4 Control State, Fuel Injector 4, Fuel Injector 5 Control State, Fuel Injector 5, Fuel Injector 6 Control State, Fuel Injector 6, Fuel Injector 7 Control State, Fuel Injector 7, Fuel Injector 8 Control State, Fuel Injector 8, Fuel Injector Balance, Fuel Level low, Fuel Pump Relay Command, Fuel Pump Relay Control State, Fuel Pump Relay, Fuel Type, Functional Leds Control, Gas Injector Relay, Gear Lever Position Display Test, Gearbox oil pump command, General Stop For All Actuators, Glow lamp command, Glow Plug / Cold Inhibit Lamp, Glow plug indication - Cold Start inhibition, Half engine mode valve command, Hazard Command LED, Hazard LED Command, Hazard LED, Head Lamp Wash Relay Command, Head Lamp Wash, Head Lamp Washer Relay, Headlamp DRL Parking Light Left Signal, Headlamp DRL Parking Light Right Signal, Headlamp Washer, Headlamps move in highest position, Headlamps move in left position, Headlamps move

in lowest position, Headlamps move in middle (vertical) position, Headlamps move in right position, Headlamps move in the straight ahead position, Headlamps moving in the central vertical position, Headlamps moving in the highest position, Headlamps moving in the left limit position, Headlamps moving in the lowest position, Headlamps moving in the right limit position, Headlamps moving in the straight ahead position, Heated Rear Window Led Command, Heated Rear Window Relay Command, Heated Rear Window Relay, Heated Rear Window, Heated Seat Left Request, Heated Seat Right Request, Heated Steering Wheel Request, Heated Windows Command, Heater Rear Mirror, Heater Rear Window, Heating Driver Command, Heating Passenger Command, Heating Steering Wheel Command, HEV Belt-Driven Coolant Pump Clutch Relay, HEV Engine Aux Heater LIN Coolant Pump, HEV Engine Belt-Driven Coolant Pump Clutch Relay, HEV Fuel Tank Isolation Valve Solenoid, HEV TPIM Inverter LIN Coolant Pump, High Beam Enabled, High beam headlamp indication, High Beam Indicator, High BEAM Left Command, High Beam Left, High Beam Light Left, High Beam Light Right, High Beam Lights, High BEAM Right Command, High Beam Right, High Beam Xenon with shutter, High Beams Lights Halogen, High Beams Lights, High Beams, High Side For Diesel Filter Heater Relay Command, High Speed Fan Relay, High Speed Fan, Hill Hold Indicator, Hill-Holder Safety indication, Hill-Holder Safety Lamp, Hill-Holder Safety Lamp-Message, Horn relay command, Horn Relay, Horn, Ice Led, Idle RPM Test, Ignition Coil 1, Ignition Coil 2, Ignition Coil 3, Ignition Coil 4, Immobilizer Antenna, In Motion Menu Control, Indicator Lamp Airbag, Indicator LED Illumination Level, Indicator Leds Control, Injector 1 coil command, Injector 1 command, Injector 2 coil command, Injector 2 command, Injector 3 coil command, Injector 3 command, Injector 4 coil command, Injector 4 command, Injector 5 coil command, Injector 6 coil command, Inlet valve FL activation, Inlet Valve FL, Inlet valve FR activation, Inlet Valve FR, Inlet valve front left activation, Inlet Valve Front Left, Inlet valve front right activation, Inlet Valve Front Right, Inlet valve rear left activation, Inlet Valve Rear Left, Inlet valve rear right activation, Inlet Valve Rear Right, Inlet valve RL activation, Inlet valve RL, Inlet valve RR activation, Inlet valve RR, In-Plant Mode Activation, Instrument Panel Dimming, Instrument Panel Dimming, Intake lambda probe heater command, Intake Manifold Short Runner Valve (SRV) Solenoid Control State, Intake Manifold Short Runner Valve Solenoid, Intake Manifold Tuning Valve (MTV) Solenoid Control State, Intake Manifold Tuning Valve Solenoid, Internal Led Night Lights, Internal Night Lights, Internalcrown Light Rear Left LED, Internalcrown Light Rear Right LED, Inverter Enable Command (949), Inverter Enable Command (952), Inverter Enable Command, Inverter Enable, Inverter Switch, Inverter, IP dimming command, Key LED PWM Duty, Key LED, Key lock command, Key Symbol Back-Light PWM Duty, Knob LED control, Lamp Control, Lane Dep Warn (LDW) on Nt Armed- on Armed- on Warn, Lane Departure Warning (LDW) Left Side, Lane Departure Warning (LDW) On Not Armed- On Armed- On Warning, Lane Departure Warning (LDW) Right Side, Lane Departure Warning (LDW) user disabled (OFF), Latch Cinch Test, Lateral Anti Tilt Sensor, Lateral Anti-tilt X Sensor, LC Clutch Volume Index Check, LC Solenoid, LCD Back-Light PWM Duty, LCD Symbols, LDW (Lane Departure Warning), LDW on not armed- on armed- on warning, LED Lock Inhibition Rear Widows Lifter, LED, Led1a Rear Left Heater (Switchled 1A CMD), Led1b Rear Left Heater (Switchled 1B CMD), Led1c Rear Left Heater (Switchled 1C CMD), Led4a Rear Right Heater (Switchled 4A CMD), Led4b Rear Right Heater (Switchled 4B CMD), Led4c Rear Right Heater (Switchled 4C CMD), LEDS Position Activation, Left (Front/Central/Rear) Turn Lights, Left (Front-Central-Rear) Turn Lights, Left (Front-Rear) Parking Lights, Left Air Distribution Motor, Left Air Mix Motor, Left Air Mix Servo Motor Target Position, Left DRL, Left Front Park Lamp, Left Parking Lights, Left Rear Stop Light (Fixed), Left Rear Tail Light + Side Marker, Left Rear Tail Light, Left Rear Turn Lights (EMEA), Left Rear Turn-Stop (NAFTA), Left Rear Turn-Stop Light (Fixed), Left SBL Command, Left Turn Indicator, Left Turn Light Front-Lateral, Left Turn Light indicator, Left Turn Light, Left Turn Lights, Left Turn Signal Indicator, Left turn signal lamp indication, Left Turn Signal Lamp, Licence PLATE LED Lights Command, License Plate Lamp, License Plate Light, License Plate Lights Command, License Plate Lights, Liftgate Additional Parking Light Left And

Right Command, Liftgate Parking Light Left And Right Command, Light sensor, LIN Anti Tilt Sensor Check, LIN Line Request Check, LIN Siren Check, LIN Ultrasonic Sensors Check, Locate Learned Keys, Lock - Unlock Steering Wheel, Lock Doors Command, Lock Inhibition Rear Widows Lifter LED, Lock Rear Doors Relay, Lock Unlock Doors LED, Longitudinal Anti Tilt Sensor, Loud Speaker Test, LOW BEAM Left Command, Low Beam Left, Low Beam Light Left, Low Beam Light Right, Low Beam Lights Halogen, Low Beam Lights Left Right, Low Beam Lights, LOW BEAM Right Command, Low Beam Right, Low Beam Xenon, Low Beams, Low Fuel Lamp, Low Reverse Solenoid, Low Speed Fan Relay, Low Temp Passive Pump 2, Low-Reverse Solenoid, LPG Failure - Reserve, LPG Led Command, LR Clutch Volume Index Check, Main-Left Temp. Door Position, Microphone Test, Mid Range Settings, Mid-Range Audio Level Settings, Mid-Range Settings, Mirror Heater, Mirror LED, Mode Selection, Module Self Test, Motorized throttle command, MProp Command (High Pressure), MS Solenoid, Multiair VVA Solenoid 1, Multiair VVA Solenoid 2, Multiair VVA Solenoid 3, Multiair VVA Solenoid 4, Neutral Gate Test (62TE), Neutral Gate Test (RFE), Night lighting command, Night lights, O2 1/1 Heater Duty-Cycle, O2 1/2 Heater Duty-Cycle, O2 Heater Test, O2 Sensor and Catalyst Test, O2 Sensor Heater Bank1 Sensor1, O2 Sensor Heater Bank1 Sensor2, O2 Sensor Heater Bank2 Sensor1, O2 Sensor Heater Bank2 Sensor2, OBD Vent Valve Command, OD Clutch Volume Index Check, Odd gear clutch (K1) control|solenoid valve command, Odd gear clutch K1 control solenoid valve command, On-Demand Self-Test, Outlet valve FL activation, Outlet Valve FL, Outlet valve FR activation, Outlet valve FR, Outlet valve front left activation, Outlet valve front right activation, Outlet Valve Left Front, Outlet valve rear left activation, Outlet Valve Rear Left, Outlet valve rear right activation, Outlet Valve Rear Right, Outlet Valve Right Front, Outlet valve RL activation, Outlet valve RL, Outlet valve RR activation, Outlet valve RR, Over Drive Solenoid, Over-Drive Solenoid, Overdrive Switch Test (Non-RFE), OverDrive Switch Test (RFE), Overdrive Switch Test, Oxygen Sensor 1/1 Heater Duty Cycle, Oxygen Sensor 1/2 Heater Duty Cycle, Oxygen Sensor 1-1 Heater Duty-Cycle, Oxygen Sensor 1-2 Heater Duty-Cycle, Oxygen Sensor 2-1 Heater Duty Cycle, Oxygen Sensor 2-1 Heater Duty-Cycle, Oxygen Sensor 2-2 Heater Duty Cycle, Oxygen Sensor 2-2 Heater Duty-Cycle, Parking Assistant LED, Passenger and Rear Doors Unlock, Passenger Door Handle And Puddle Light LED Command, Passenger Door Lock Status LED Command, Passenger Door Power Window, Passenger Door Unlock, Passenger Doors Status - Deterrence LED, Passenger Heated Seat Relay, Passenger seat Air-bag manual deactivation indication, Passenger Seat Movement Relay Command, PEPS Ignition Switch LED Command, Pilot 1 (USV1-Normally Open), Pilot 2 (USV2-Normally Open), Pilot valve 1 activation, Pilot Valve 1, Pilot valve 2 activation, Pilot Valve 2, Port Injection Valve 1 Command, Port Injection Valve 2 Command, Port Injection Valve 3 Command, Port Injection Valve 4 Command, Port Injection Valve 5 Command, Port Injection Valve 6 Command, Position lamp indication, Position Lamp Indicator, Position Light Relay, Power Down, Power limitation function, Power Steering Failure Indication, Power Steering Failure Indicator, PPV1 Electro-Valve, PPV-K2 Clutch Electro-Valve, PPVS Electro-Valve, Pressure Control Solenoid Valve, Priming 1 (HSV1-Normally Closed), Priming 2 (HSV2-Normally Closed), Priming valve 1 activation, Priming Valve 1, Priming valve 2 activation, Priming Valve 2, Proportional Purge Solenoid, Proportional Surge Solenoid, PTC Control (Relay), PTC Control, PTC High Power (Relay), PTC Low Power (Relay), Puddle Light Command Driver Side, Puddle Light Command Passenger Side, Puddle light Driver (Door handle and door panel), Puddle light Driver side, Puddle Light Driver, Puddle light Passenger (Door handle and door panel), Puddle light Passenger side, Puddle Light Passenger, Puddle Light Rear Driver(Door Handle And Door Panel), Puddle light Rear Left (Door handle and door panel), Puddle Light Rear Passenger(Door Handle And Door Panel), Puddle light Rear Right (Door handle and door panel), Puddle Light, Puddle Rear Light Left, Puddle Rear Light Right, Purge canister valve command, Purge Solenoid Duty Cycle, Purge Valve Duty-Cycle, Purge Vapors Test, QPV K1 Clutch Electro-Valve, QVPM Enable Command, Radiator Cooling Fan PWM Cntrl State, Radiator Cooling Fan PWM Control State, Radiator Cooling Fan PWM D-Cycle, Radiator Cooling Fan PWM

Duty-Cycle, Radiator Cooling Fan Relay 1 Control State, Radiator Cooling Fan Relay 2 Control State, Radiator-Condenser Cooling Fan Relay 1 Control State, Radiator-Condenser Cooling Fan Relay 2 Control State, Radio Volume, Rain and Automatic Lights Sensors Check, Range Selection Electrovalve Command (PPVS), Range selection electrovalve command, Read VIN, Rear Ceiling Light - Inadvertent Lights, Rear Ceiling Light + Inadvertent Lights, Rear Ceiling Light 1st Row, Rear Ceiling Light 2nd Row, Rear Ceiling Light, Rear Ceiling Lights, Rear Defrost, Rear Department, Rear Door Status LED, Rear Fog Light / Side Marker Lights, Rear Fog Light or Second Backup Light - Side Marker Lights, Rear Fog Light or Second Backup Light, Rear Fog Light, Rear Fog Lights Left T2 Movable, Rear Fog Lights Right T2 Movable, Rear Fog Lights, Rear Fog T2 (Movable), Rear Heated Window, Rear HVAC Blower Motor, Rear Left Handle And Puddle Light LED Command, Rear Left Heating Command, Rear Left Parking Light, Rear Left Position Light, Rear Left Turn Light, Rear Left window lifter command, Rear Load Compartment Status LED Command, Rear Parking Light - Side Markers, Rear Parking Light / Side Markers, Rear Parking Lights Command LED, Rear Parking Lights Command, Rear Reverse Light (Movable), Rear Reverse Light Left -T2 (952), Rear Reverse Light Right -T2 (952), Rear Reverse Lights -T2 (949), Rear Right And Left Tail T2 (Movable), Rear Right Handle And Puddle Light LED Command, Rear Right Heating Command, Rear Right Parking Light, Rear Right Position Light, Rear Right Turn Light, Rear Right window lifter command, Rear Shut-Off Valve Request, Rear Stop Lights (Movable), Rear Trunk light, Rear Turn Lights Left EMEA, Rear Turn Lights Right EMEA, Rear Wash, Rear WINDOW Washer Command, Rear Window Washer, Rear Window Wiper (949), Rear WINDOW Wiper Command, Rear Window Wiper, Rear Wiper, Rec Motor, Recirc. Door Actuator Position, Recirculation Motor, Recirculation pump activation, Recirculation Pump, Red LED Activation, Redundant Ignition RUN/START Feed Output Control, Redundant Ignition RUN-START Feed Output, Repetition Driver Door Open For MTA (NCR), Repetition driver door open for MTA (Robotic Gear), Reverse Gear Clutch Test (62TE), Reverse Gear Clutch Test (Non-RFE), Reverse Gear Clutch Test (RFE), Reverse Gear Light, Reverse Gear Lights And Electrochromic Mirror Command, Reverse Gear Lights, Reverse Lamp, Right (Front/Central/Rear) Turn Lights, Right (Front-Central-Rear) Turn Lights, Right (Front-Rear) Parking Lights, Right Air Mix Motor, Right Air Mixing Motor, Right DRL, Right Front Park Lamp, Right Front Turn Light-Lateral, Right Parking Lights, Right Rear Tail Light (Fixed), Right Rear Tail Light, Right Rear Turn Lights (EMEA), Right Rear Turn-Stop (NAFTA), Right SBL Command, Right Temp. Door Actuator Position, Right Turn Indicator, Right Turn Light, Right Turn Lights, Right turn signal lamp indication, Right Turn Signal Lamp Indicator, Right Turn Signal Lamp, RL Command Electrovalve, RR Command Electrovalve, Safety Indication Adaptive Cruise Control, Safety Indication Forward Collision Warning, Safety Indication Normal And Adaptive Cruise Control, Safety Indication Normal Cruise Control, Safety indication, Satellite digital audio receiver (SDAR) station selection, SBMT (Supply Battery Monitoring Time), SBMT 0, SBMT -Supply Battery Monitoring Time, SBMT, SBMT2 (Supply Battery Monitoring Time), Screen Test Pattern, SDAR Station Selection, SDC Status Red LED, SDC Status White LED, Seat Belt Lamp, Seat belt unfastened Lamp, Seat belt unfastened Warning cycle, Seat Belt Warning Chime, Secondary Air Pump, Secondary Air Solenoid, Seek Status Tuner AM-FM, Seek Status Tuner DAB, Seek Status Tuner Digital Audio Broadcasting (DAB), Seek Status, Set All Backlight Leds At PWM Value, Set All Functional Leds At PWM Value, Set Engine RPM Test, Set Engine RPM, SET PWM Display (Brightness), Set Transercase Clutch Torque, Setting Dimming Levels (DISPLAY), Shift Lever Position Test (62TE), Shift Lever Position Test (Non-RFE), Shift Lever Position Test (RFE), Shift Lock Coil Command, Shift Lock Command, Shift Solenoid 1, Shift Solenoid 2, Shift Solenoid 3, Shift Solenoid 4, Shift Solenoid 5, Shift Solenoid 6, ShiftLock, Side Marker Front, Side Marker Lamps, Side Marker Lights Rear -T1 (952), Side Markers Command, Side markers, Siren Test, Small Leak Verification Test, Speaker Quadrant Selection, Sport Led, SS Command LED, SS LED command, SSB BACKLIGHT Control, Start Stop activation, Station Selection, Step Light, Stop Position Turn Left Light 1, Stop Position Turn Left Light 2, Stop

Position - Turn Right Light 1, Stop - Position - Turn Right Light 2, Stop - Position Left Light 1, Stop - Position Left Light 2, Stop - Position Right Light 1, Stop - Position Right Light 2, Stop Start LED, Stop All Actuators, Stop And Start Led, Stop Lamp, Stop Light Left, Stop Light Right, Stop Light, Stop Parking Lights Left, Stop Parking Lights Right, Stop Parking Turn Lights Left 1, Stop Parking Turn Lights Left 2, Stop Parking Turn Lights Right 1, Stop Parking Turn Lights Right 2, StopStart LED Command, StopStart LED, Street Bending Light (SBL) Left, Street Bending Light (SBL) Right, Sunroof Abilitation, Surge Solenoid Control State, Surge Valve Solenoid, Tail LAMP Parking Light Left Command, Tail LAMP Parking Light Right Command, Tail LAMP Stop Light Left Command, Tail LAMP Stop Light Right Command, Tail Or Tail Side Marker Rear Left -T1 (949), Tail Or Tail Side Marker Rear Right -T1 (949), Tail Rear Right And Left -T2 (949), Tail Stop Or Tail Stop Turn Rear Left -T1 (952), Tail Stop Or Tail Stop Turn Rear Right -T1 (952), Tail Stop Rear Left -T2 (952), Tail Stop Rear Right -T2 (952), TCC Pressure Control Solenoid, TCM VIN Verification, Test Pattern Display, Thermistor Test, Thermostat activation command, Throttle Valve Test, Tire Pressure Module ( TPMS), Tire Pressure Module (TPMS) not available-not programmed, Tire Pressure Module (TPMS), Tire Pressure Warning Lamp, Tone Test, Tow Bar Activation, TPM Sensor Rolls Test, TPMS Failure Lamp, TPMS Generic Failure Monitoring Lamp, TPMS Not Available - Not Programmed, TPMS Warning Light, Transmission Verification Test, Treble Level Settings, Treble Settings, Trunk Lamp, Trunk Latch Command relay, Trunk Light + Inadvertent Lights, Trunk Light Command, Trunk Light, Trunk Opening Relay Command, Trunk Opening Relay, Trunk Release Relay Command, Trunk Release Relay, Tumble Generator Valve, Turbo oil supply valve command (half engine mode) command, Turbocharger Pressure Actuator Command, Turn - Rear backup Left Light, Turn - Rear backup Right Light, Turn Front Lateral Lights Left, Turn Front Lateral Lights Right, Turn Front Light Left, Turn Front Light Right, Turn Light Front - Lateral Left, Turn Light Front - Lateral Right, TURN Light Front Left Command, Turn Light Front Left, TURN Light Front Right Command, Turn Light Front Right, TURN Light Lateral Left Command, TURN Light Lateral Right Command, Turn Light Rear - Lateral Left, Turn Light Rear - Lateral Right, Turn Rear Backup Left Light, Turn Rear Backup Right Light, Turn Rear Lateral Lights Left, Turn Rear Lateral Lights Right, Turn Rear Light Left -T1 (EMEA), Turn Rear Light Right -T1 (EMEA), Turn Stop Rear Left Light -T1 (NAFTA), Turn Stop Rear Right Light -T1 (NAFTA), Tyre Pressure Module ( TPMS), UD Clutch Volume Index Check, UGDO (Universal Garage Door Open) enable command, Under Inflation Lamp, Under Inflation Monitoring Lamp, Underdrive Solenoid, Under-Drive Solenoid, Universal Garage Door Open, Unlock doors command, Unlock Doors, Upstream lambda probe heater bank1 command, Upstream Lambda Probe Heater Bank2 Command, Upstream lambda probe heater command, USB1 CMD, USB1 LED CMD, USB2 CMD, USB2 LED CMD, User Interface Test, Vacuum Pump Relay, Valve multiair system activation cyl.1, Valve multiair system activation cyl.2, Valve multiair system activation cyl.3, Valve multiair system activation cyl.4, Variable coolant pump command, Variable displacement oil pump command, Variable swirl actuator closing command, Vehicle Speed Cluster, Video Input Settings, VLP Solenoid, Volume Knob Illumination Power, VSO Regeneration Command, VVA Cylinder #1, VVA Cylinder #2, VVA Cylinder #3, VVA Cylinder #4, VVA Solenoids Pre-Energization, VVT Exhaust Phaser 1 Actuator, VVT Exhaust Phaser 2 Actuator, VVT Intake Phaser 1 Actuator, VVT Intake Phaser 2 Actuator, Waste gate valve command, Wastegate Solenoid Control State, Wastegate Solenoid Duty Cycle, Water In Fuel Filter Lamp Command, Welcome Lights Command, Wheel Speed Sensor Functional Test, Window Heater Led, Window Lifter Switch Enable, Windshield heater, Windshield Heating, Windshield Washer Command, Windshield Washer Relay, Windshield Washer, Windshield Wiper Relay, Windshield wiper, Wiper Status

## New Audi Coverage

### 21 new Adjustment type special tests:

ABS Bleed Brakes, ABS Initialization, ABSO Initialization, Active Grill Shutter Replaced, Actuator Calibration, AFLS Calibration, Auto Door Lock, Auto High Beam Demo Mode Test, Automated Bleed, Automatic Addressing, Back Lighting, Bleed Brake Procedure, Bleed Brakes, Brake Pedal Actuate Vehicle Front Left Control Value Onoff, Actuate Vehicle Front Right Control Value Onoff, Actuate Vehicle Rear Left Control Value, Actuate Vehicle Rear Right Control Value Onoff, Air Spr Additional Vol Vlv 1 Actuation Tst Ctrl Val Onoff, Air Spr Additional Vol Vlv 2 Actuation Tst Ctrl Val Onoff, Air Spr Additional Vol Vlv 3 Actuation Tst Ctrl Val Onoff, Air Spr Additional Vol Vlv 4 Actuation Tst Ctrl Val Onoff, Damper Valve Current Front Left Control Value Current, Damper Valve Current Front Right Control Value Current, Damper Valve Current Rear Left Control Value Current, Damper Valve Current Rear Right Control Value Current, Lower Vehicle Front Left Control Value Onoff, Lower Vehicle Front Right Control Value Onoff, Lower Vehicle Rear Left Control Value, Lower Vehicle Rear Right Control Value Onoff, Pressure Test, System Check For Boosting Function Control Value Onoff, System function test, System Identification, Test Accumulator And Compressor Control Value Onoff

### 62 new Actuation type special tests:

Accumulator bleeding, Accumulator charging, Activate shipping mode, Air Spring Strut Bleeding, Front Axle, Air Spring Strut Bleeding, Rear Axle, Air Spring Strut Bleeding, Rear Left, Air Spring Strut Bleeding, Rear Right, Air Spring Strut Charging, Front Axle, Air Spring Strut Charging, Rear Axle, Air Spring Strut Charging, Rear Left, Air Spring Strut Charging, Rear Right, Body Height Wheelhouse Edge Front Left, Body Height Wheelhouse Edge Front Right, Body Height Wheelhouse Edge Rear Left, Body Height Wheelhouse Edge Rear Right, Calibration Height Values, Changeover To Normal Ride Control Operation, Clear Counter And Runtime Of Compressor, Clear Counter Of Valve Activation, Clear Duration Mode And Control Activities, Coding Container Part Number, Coding Container Version, Constant Damper Current Front Left, Constant Damper Current Front Right, Constant Damper Current Rear Left, Constant Damper Current Rear Right, Control Of Warning Light, Deactivate shipping mode, Delete Error Memory Dev, Development Function Deactivation, Directional Stability Correction Offset Value, Go To High Level And Deactivate Self-Levelling, Go To High Level, Go To Normal Level And Deactivate Self Levelling, Go To Normal Level With Narrow Control Tolerance, Go To Normal Level, Go To Preliminary Stage For Calibration In Production, Go To Preliminary Stage For Calibration In Service, Go to production reference level, Mounting Position Calibration, Reset of Adjustment/Calibration Values, Reset Of All Adaptions, Reset Of Central Signal Processing Adaption Values, Reset Of Qsp Torque Display Adaption Values, Reset Of Raw Values Of Level Sensors In Rebounded Position, Roller Test Stand Mode, Self Leveling Suspension Calibration to Determine Axle Load, Self-Levelling Suspension Activation, Self-Levelling Suspension Calibration Reset, Self-Levelling Suspension Deactivation Permanent, Self-Levelling Suspension Deactivation, Speed Value For Testing Mode, Steer To Center Position, Swap Function Activate, SWaP Function Crypt Data ID, SWaP Function Transfer Crypt Data, Transfer Configuration, Unlock Actuator System, Vehicle Equipment Code And Production Number Combination, Vehicle Identification Number Programming, Volume Of Fuel Tank, Write Configuration

## New BMW Coverage

- Added coverage for 618 new system applications

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### 720 new Adjustment type special tests:

Activate Auto P, Activate parking brake after pad replacement, Adaptation thermostat map, Adaption of cameras, Airbag control unit: Restart, Auto-hold button LED, Camshaft timing control: Resetting, Cylinder 6 shutoff, Display: F. act.n. ready to warn, DS door trim heater, Electric power steering adaptation, Engine control unit: Resetting after replacement of the component <Engine>, ESP hydraulic-system bleeding, ESP sensor unit adaptation, Front left door control unit: Restart, Front left seat heating: Stage 2, Front radar sensor static setting, Head-up display: Activation, Head-up display: Blue test pattern, Hold mode indicator lamp, Instrument cluster: Restart, Left exterior mirror to left, Lower rear DS window sun shade, Lower rear PS window sun shade, Rear left parking light, Rear left seat heating: Stage 3, Rear left turn signal indicator, Rear left window lifter: Opening, Rear right seat heating: Stage 3, Rear right window lifter: Close, Reset fuel minimum quantity adaption, Retract spoiler, Selector lever control unit reset, Selector lever search lighting, Side marker lamps, Steering basic setting, Steering column adjustment downwards, Steering column adjustment to rear, Sun roof adaptation, Throttle valve basic setting, Triggering of front wiper, speed 1, Turn signal indicator, Unlock filler neck compartm. lid, Wastegate solenoid: Test, Window heating: Camera range, Activate electric fuel pump, Actuation/open power window, Audio frequency 100 Hz, Boost pressure control reset, Calibrate acceleration sensor, Continuous turn signal, Coolant thermostat: Adapting, Cylinder 5 shutoff, Direction indicator: Continuous lighting status, Driver door window lifter adaptation, Electric drive control: Restart, ESP control unit: Restart, Fold in exterior mirror, Front driver assist. cam. dynamic adaptation, Front left short-range radar sensor: Dynamic adaptation, Front left turn signal indicator, Front right seat heating: Stage 1, Front right turn signal indicator, Front short-range radar sensor: Resetting, Fuel high-pressure system reset, Head-up display: Green test pattern, Head-up display: White test pattern, Instrument cluster lamps: Yellow, Left cornering light, Left exterior mirror short-range camera: Test pattern, Left exterior mirror up, Lower sun roof, Park Distance Control control unit: Restart, Parking light, Passenger door window lifter adaptation, Raise rear DS window sun shade, Rear short-range radar sensors: Resetting, Rear wiper: Actuation, Red test pattern, Refrigerant circuit: Service mode activation/deactivation, Reset VVT minimum lift adaptation, Right exterior mirror down, Right rear lights control unit: Restart, Sensor unit zero position compensation, Set frequency 88.9 MHz, Side marker light, Steering wheel heating, System self-test, Wiper blade heating, Activate antenna 1, Activate antenna 3, Activate Kleer module, Activate WLAN, Adaptation of idle speed, Air conditioner control motors: Adapt positions to the system <Air-conditioning system>, Airbag: Read configuration, Alarm horn, Battery replacement, register aux.batt, Default setting of all volume values, Electric drive control (Rotor position sensor): Read calibration offset angle, Electric power steering: Restart, Extend spoiler, Front left short-range radar sensor: Restart, Front right seat heating: Stage 3, Front right short-range radar sensor: Restart, Fuel evaporation regeneration valve, Fuel tank pressure sensor calibration, Generator / electric motor: Deactivate assembly mode, Headlamp: System self-test, Instrument cluster display: Test pattern, Instrument cluster lamps: Red, Luggage compartment roller blind: Unit upwards, Muting, Parking brake operating unit LED, Rain/light sensor: Adapting, Rear left seat heating: Stage 2, Rear left short-range radar sensor: Dynamic adaptation, Rear left short-range radar sensor: Restart, Rear lid bottom part: Opening, Rear lid: Unlock, Rear right seat heating: Stage 1, Rear right turn signal indicator, Rear seat backrest remote unlocking ri., Reduce traffic news volume, Refrigerant shut-off valve, Right dipped beam, Right exterior mirror to right, Right headlight range control, Right main beam, Right reversing light, Roof operating unit control unit: Restart, Sun roof: Opening, Throttle valve control unit adaptation, Tire pressure monitoring: Deactivating the production mode, Transmission control unit: Restart, Transmission position P adaptation, Airbag configuration, Ambient light: Automatic addressing, Audio frequency 1000 Hz, Auto-Hold indicator lamp, Camera functional test, Close power windows DS rear, CM monitor tilt up, Control target temperature 16 Å°C, Databus signals sw.mod. deact., Deactivate transportation mode, Disassembly position of window lifters, Emblem camera, Enable Bluetooth interface, ESP sensor ring test, Front axle air spring struts test, Fuel

pressure control valve, Function MEDIA - button, Heated rear window relay, HV battery charge, Increase traffic news volume, Int.mirror auto.det.displ. dimmed, Left dipped beam, Left rear lights control unit: Restart, Left thermo cup holder: Heating function, Manual trailer coupling Initialisation, Manual-selector-gate lock, Muting of external noises activ., Operating unit, Parking light actuation on one side, PS armrest heater element, Rear center sun blind, Rear left display: Brightness, Rear left turn signal indicator: Actuation, Rear lid basic setting, Rear right parking light, Rear right sun shade, Reset transmission oil service life, Reversing camera: Test pattern, Air-conditioning system: Reset the locking of the system <Engine coolant circuit>, Alternator: Resetting, Autom. transm. adaptation values adapt., Autom. transm. adaptation values reset, Automatic transmission control unit reset, Automatic transmission oil level check, Average consumption display correction, Battery (12V): Resetting, Battery management control unit (48V): Restart, Close power windows DS front, Cornering light functional test, Delete personal data, Display on/off, Display: F.act. and ready to warn, Electric coolant pump, Engine start/stop button (switch illumination): Output, Exhaust gas differential pressure sensor: Resetting, Exterior mirror heating: Actuation, Fold out exterior mirror, Front camera heating, Front right seat heating: Stage 2, Front right side light lamp, Green test pattern, Hazard warning button illum. actuat., Headlight range control functional test, Head-up display: Image settings configuration, Head-up display: Switch off test pattern, Indic. lamps. le/ri faulty flash, Inductive charging station: Deactivate NFC interface, Infotainment/multimedia control unit: Restart, Keyless entry: Deactivate/activate, Lane change assistant warning lamp,<BR>outside mirror, Lane change warning function, Learn rotor position, Learning of valve lift control end stops, Left reversing light, Lift sunroof, Muting entertainment electronics, Open electric sliding headliner, Radio station search Up, Rear right seat heating: Stage 2, Actuation Wastegate valve 2, Air supply solen. valve Massage 2, Airbag control unit (Airbag igniter circuits): Read resistance values, All Lamps, Automatic parking lock: Deactivate, Battery (48V): Adapting, Battery (48V): Charge level, Battery management control unit (48V): Activate/deactivate removal of voltage, Button LEDs, Central locking motor actuation<BR>Lock, Central locking motor actuation<BR>Unlock, Close power windows PS rear, Close window, Daytime driving light, Dynamic flashing, Eject CD, Electr. vacuum pump (brake), Front blower motor, Front left seat heating: Stage 1, Front left seat heating: Stage 3, Front right door control unit: Restart, Head restraint adjustment: Down, Horn relay, Injector cylinder 5: Deactivation, Injector quantity adjustment, Key adaptation, Left active seat air cushion, Left exterior mirror down, Left main beam, Left side marker lamps, Left turning light, Long-range radar sensor (LRR): Restart, Lumbar support adjustment To rear, Main beam assistant system self-test, Mixture correction reset, Neutral position sensor adapting, Online service button, Open load compartment cover, Open power windows DS front, Open power windows DS rear, Open power windows PS front, Pump motor, Radiator blind: Test, Radiator fan test, Read out fuel quality counter, Rear air conditioner: Set the specified temperature to 16 Â°C, A/C air distribution flap test, A/C compressor adaptation, Acoustic trans. elec. rear lid, Active stabiliser control unit HA: Restart, Air supply solen. valve Massage 4, Airbag control unit (Airbag igniter circuits): Read status, Audio system self test, Bluetooth interface activation/deactivation, Dipped beam, Disable Bluetooth interface, Driver side mirror adjustment, DS 2nd row door trim heater, DS door armrest heating, Electrochromic mirror dimming, ESP test, Extend trailer coupling, Frequency range switching FM, Front augmented reality camera: Dynamic adaptation, Front fog light, Front left air spring strut test, Front right air spring strut test, Function OPTION button, Green function lamp, Hands-free rear lid opening, Head restraint adjustm. to front, Increase temperature on right, Instrument cluster system self-test, Left and right turning light, Left exterior mirror to right, Left lane change assistant warning lamp, Left thermo cup holder (LED blue), Air conditioner control motors: Adapting, Airbag indicator light OFF, Audio frequency 10000 Hz, Black test pattern, Brake light, Button illumination, Central driver assistance control unit: Restart, Close power windows PS front, Commissioning electric parking brake, Cruise control display SET, Driving sensor control unit: Restart, Electric fuel pre-supply pump: Actuation, Electric

fuel pump, Engine glow plugs: Resetting, ESP interchange test, Exhaust flap adaption, Ext.mirror lane change ass.indic., Fan actuation, Front right short-range radar sensor: Dynamic adaptation, Front short-range camera: Test pattern, Gasoline particulate filter: Evaporate condensate, Gasoline particulate filter: Resetting, Headlamp fan actuation, Head-up display: Switching off, HV battery charging module: Restart, Inductive charging station: Activate function, Infotainment/multimedia display: Test pattern, no signal, Injector cylinder 4: Deactivation, Instrument cluster lamps: Green, Left headlight range control, Luggage compartment roller blind: Unit downwards, Move to exhaust flap installation position, Open rear sun blind, PS door trim heater, Raise rear PS window sun shade, Rear lid bottom part: Close, Rear-lid motor closing function, Resistances of airbag igniter circuits, Right exterior mirror LED test, Right lane change assistant warning lamp, Right parking light, Right trailer indicator, Seat fore-and-aft adjtm. To front, Self-test, Switch on RDS, Switch West, Test CD/DVD ejection, Warning tone generator (Rear lid), A/C compressor run-in protection, Acoustic test signal, Anti-theft alarm system: Alarm triggering, Auto. setting air damper control motors, Battery (48V): Cell evaluation, Close rear sun blind, CM footrest tilt downward, Deactivate WLAN, Display: Test, DVD emergency eject, Engine control unit: Restart, Exterior mirror test, Fill/empty pressure accumulator, Head restraint adjustment: Up, Rear left seat heating: Stage 1, Rear PS armrest heater element, Rear right door control unit: Restart, Rear window wiper relay, Rear-lid motor opening function, Reduce temperature on right, Reset auxiliary heater start inhibit, Reset control unit, Reset sound settings, Reversing lamp, Right side marker lamps, Right thermo cup holder: Heating function, Right turn signal indicator, Seat height adjustment: Down, Seatback head adjustment forwards, Seatback width adj. narrower, Selector drum control motor: Adapting, Steering wh.vibr.(lane cha. ass.), Stop lamps, Strongest-station autom. search, Supplementary heater: Reset starter interlock, Test pattern 2, Test screen, Trailer reversing light, Turning light, Windshield wiper park position, Deactivate parking brake for pad replacement, Display test, Rear right short-range radar sensor: Dynamic adaptation, Rear right window lifter: Opening, Ref. run headlight range control, Reset rotor position, Right exterior mirror short-range camera: Test pattern, Selector lever module: Restart, Start station search, Starter generator (48V): Restart, Sun roof initialization, Sun roof: Close, Triggering of front wiper, speed 2, Activate alarm system (3 sec.), Activate roller dynamometer mode, Air flap control motor actuation, Air intake system: Resetting, Air spring struts installation/removal, Assembly position of window lifters, Backrest adjustment to rear, Blue test pattern, Close load compartment cover, CM footrest tilt upward, Display test white/orange, DS window-lifter motor: Close, Engine fan control, Front windscreen washer pump, Hazard warning system, Head restraint adjustment to rear, Headlamp control unit: Restart, Heated rear window, Heating valve, Left daytime driving light, Left trailer side light lamp, Light function: Coming Home function, Loudspeaker test, Loudspeaker: Default setting for all volume values, Actuation Wastegate valve, Adaptive brake light (ABL): Flashing function, Alarm system LED, Automatic transmission control unit: Reset adaptation values, Brake light: Actuation, Check control message, Deactivate RDS, Front driver assistance camera: Restart, Fuel level indicator 50 %, Inductive charging station control unit: Restart, Inductive charging station: Activate NFC interface, Injector cylinder 2: Deactivation, Injector cylinder 3: Deactivation, Instrument cluster: Date/time configuration, Left rear fog light, Left short-range camera: Test pattern, Microphone sensitivity adjustment, Parking aid button: Button illumination, Position lighting, Radiator fan: Actuation, Raise sun roof, Rear right short-range radar sensor: Restart, Reset adaptation parameters, Lens heating actuation, Main beam, Muting Active Sound Design ext., Muting external E-Sound, Muting internal E-Sound, NAV button function, RADIO button function, Rear air conditioner: Set the specified temperature to 28 °C, Rear right window lifter adaptation, Registration starter exchange, Reset knock control adaptation, Running gear control unit: Restart, Seat ext. adj. backward, SOS - loudspeaker - test, Steering column adjustment to front, Switch off TP, Tank leak unit solenoid valve, TPMS system initialisation reset, Transfer case: Specified torque, Upper lordosis air cushion, Wiper: Stage 2, Air supply solen.valve Massage 3, Ambient

lighting adaptation, Back massage, Back massage + upper-body mobil., Bleed, Electric vacuum pump statistical data reset, Left headlight range control motor: Actuation, Luggage compartment roller blind storage compartment flap: Close, Passenger compartment lighting, Rain sensor control lamp, Rear left sun blind, Rear left window lifter adaptation, Reversing camera control unit: Restart, Right short-range camera: Test pattern, Seat ext. adj. forward, Seatback width adjustment wider, Sel. lever module fct. indicator, Sky sun roof: Close, Test pattern 1, Trailer brake light, Transmission oil pump: Reset adaptation values, Rev counter, Right exterior mirror to left, Right exterior mirror up, Right headlight range control motor: Actuation, Steering column adjustment adaptation, Steering wheel vibration, Stop lamp: Coming Home function, Surround view (360°) control unit: Restart, Tank electronics: Restart, Variable camshaft timing adaptation, Activate power steering, Activate/deactivate start/stop function, Air-conditioning system control unit reset, Automatic A/C display, Battery replacement, Coolant thermostat, Function TEL button, Headlight fan, Headlight washer pump, Indic. lamps. le/ri normal flash, Initializing the electric machine, Injector cylinder 1: Deactivation, Injector reset, Laser headlamp: System self-test, Left exterior mirror LED test, Luggage compartment roller blind storage compartment flap: Opening, Lumbar massage, Mid-range radar sensor (MRR): Restart, Mirror heating, Neck-level heating left level 3, Neutral position detection, Pelvic support adjustment, Read airbag igniter circuits status, Rear blower motor, Rear lid: Close, Rear right turn signal indicator: Actuation, Rear-axle differential lock wear data reset, Reduce temperature on left, Replace refrigerant, Reset start/stop counter, Seat angle adjustment, up, Selector lever position illumination, Shoulder massage, Switch on display, Trailer rear fog light, Gateway: Restart, Head-up display: Test pattern, Luggage compartment cover adaptation, Pulse-wheel test, Rear lid adaptation, Reset transfer case oil wear data, Reversing camera heating, Right turning light, Speed indicator, Suppress mirror glare, Triggering of rear-window defogger, Ultrasonic sensor, Variable valve lift control: Resetting, Veh. ele. sys. (48V) volt. manag. CU: Restart, Vertical headlamp servomotor, Window lifter closing actuation, Air conditioner control motors: Service position activation, Double clutch transmission control unit.: Adapting, Driver monitoring camera: Restart, Front left side light lamp, Hill Hold Control button LED, Inductive charging station: Deactivate function, Rear left window lifter: Close, Rear lid: Opening, Lower lordosis air cushion, Neck-level heating left level 1, Neck-level heating right level 2, Passenger side mirror adjustment, PS window-lifter motor: Close, Rear left door control unit: Restart, Rear right display: Brightness, Rear seat backrest remote unlocking left, Rear side light, Reset camera calibration, Reset sum of alarm triggers, Reset uneven running segment times, Right trailer side light lamp, Seat heating: Stage 3, Side light, Steering column adjustment initialisation, Steering column height adjustment, Steering wheel heating indicator lamp, Switch North, Throttle valve: Actuation 100 %, Transfer case oil change, Transmission control: Read adaptation values, Variable valve lift control: Adapting, Wheel set programming, Windshield blower motor, Wiper: Stage 1, Workout, Ambient lighting, Reset mixture adaption, Right cornering light, Right daytime driving light, Steering column adjustment upwards, Switch on TP, TV signal, Central electronics control unit reset, Central locking Deadlock release, CM monitor tilt downward, Driver seat left armrest heating, Emission warning lamp (MIL), Exhaust flap solenoid valve, Function BACK button, Increase temperature on left, Injector cylinder 6: Deactivation, Left turn signal indicator, MENU button function, Muting Active Sound Design int., Operating unit button illuminat., Window lifter motors: Adapting, Backrest adjustment to front, Component <Cooling circuit control valve> of the system <HV battery coolant circuit>: Operating status, Coolant circuit valve, DS window-lifter motor: Opening, Initialization of all window lifters, LED (steady white), Lumbar adjustment, up, Rear-axle diff. lock motor wear data reset, Seat ventilation: Stage 3, Selector lever lock, Shut-off injector 10, Test DWA sensors, Trailer coupling initialisation, Whole-body mobilisation, Battery (high-voltage): Clear fault memory after detected rupture of the component <HV system cooling circuit water cooler>, Left parking light, Left thermo cup holder: Cooling function, Left trailer indicator, Lock (central locking), Lumbar support adjustment To front, Move to

fitting position, Neck-level heating left level 2, Rear left air spring strut test, Rear window washer pump, Rear-axle centre position setting, Search illumination, Seat height adjustment: Up, Seat ventilation: Stage 2, Store vehicle reference level, Switch off display, Turn signal lamps, Air mix flap initialization, Air supply solen. valve Massage 1, Air suspension compressor, Battery (high-voltage): Diagnosing state, Function \*/FAV button, LED (steady blue), Left thermo cup holder (LED green), Open charge connection flap, Open power windows PS rear, Function NAV/MAP button, Function PUSH button, Mirror fold-in/fold-out, Pedestrian detection, Right thermo cup holder (LED red), Seat fore-and-aft adjust. To rear, Air supply solen.valve Massage 5, Center console control panel: Restart, Control target temperature 28 Â°C, External noise actuator, Rear fog light, Left thermo cup holder (LED red), Lumber adjustment, down, Radiator blind: Position, PS 2nd row door trim heater, PS window-lifter motor: Opening, Read configuration, Rear axle air spring struts test, Rear DS armrest heater element, Rear right air spring strut test, Retract trailer coupling, Right thermo cup holder (LED blue), Right thermo cup holder: Cooling function, Seat control unit initialization, Seat heating: Stage 1, Seat ventilation: Stage 1, Seatback head ajd. rearwards, Trailer tail light, Actuation of indicator lamps, Back massage + whole-body mobil., Deactivate Kleer module, Touchpad: Deactivation, HV batt.charger connector locking, HV battery charge/discharge current, HV battery coolant pump speed, HV charg. conn. connector flap light.: AC connection, Inverter water pump actuation, Reversing mirror adjustment, Seat angle adjustment, down, Seat heating: Stage 2, Shut-off Injector 8, Status: Charging flap locking 2, Neck-level heating right level 1, Neck-level heating right level 3, Shut-off injector 11, Close charge connection flap, Activate antenna 2, Active stabiliser control unit VA: Restart, HV battery cooling system valve, Switch South, Turbocharger adjustment, Upper-body mobilisation, Audio/telematics system reset, Battery (high-voltage): Restart, HV battery isolation test, LED (flashing orange), LED (flashing red), Exterior mirror: System self-test, HV charg. conn. connector flap light.: DC connection, Right thermo cup holder (LED green), Status: Charging flap 1 locking, Switch East, Touchpad: Activation, LED (off), LED (steady green), LED (flashing blue), Electrical fan, HV battery cell evaluation, Red function lamp, Right active seat air cushion, Shut-off injector 12, Shut-off Injector 7, Shut-off injector 9, Battery (high-voltage): Reading out the current capacity, SOH (State of Health), Charge connection door lock, Lateral left short-range radar: Restart, Lateral left short-range radar: Dynamic adaptation, LIDAR control unit: Restart, Lateral right short-range radar: Dynamic adaptation, Lateral right short-range radar: Restart, Inverter phase current evaluation

## New Volkswagen Coverage

### 52 new Actuation type special tests:

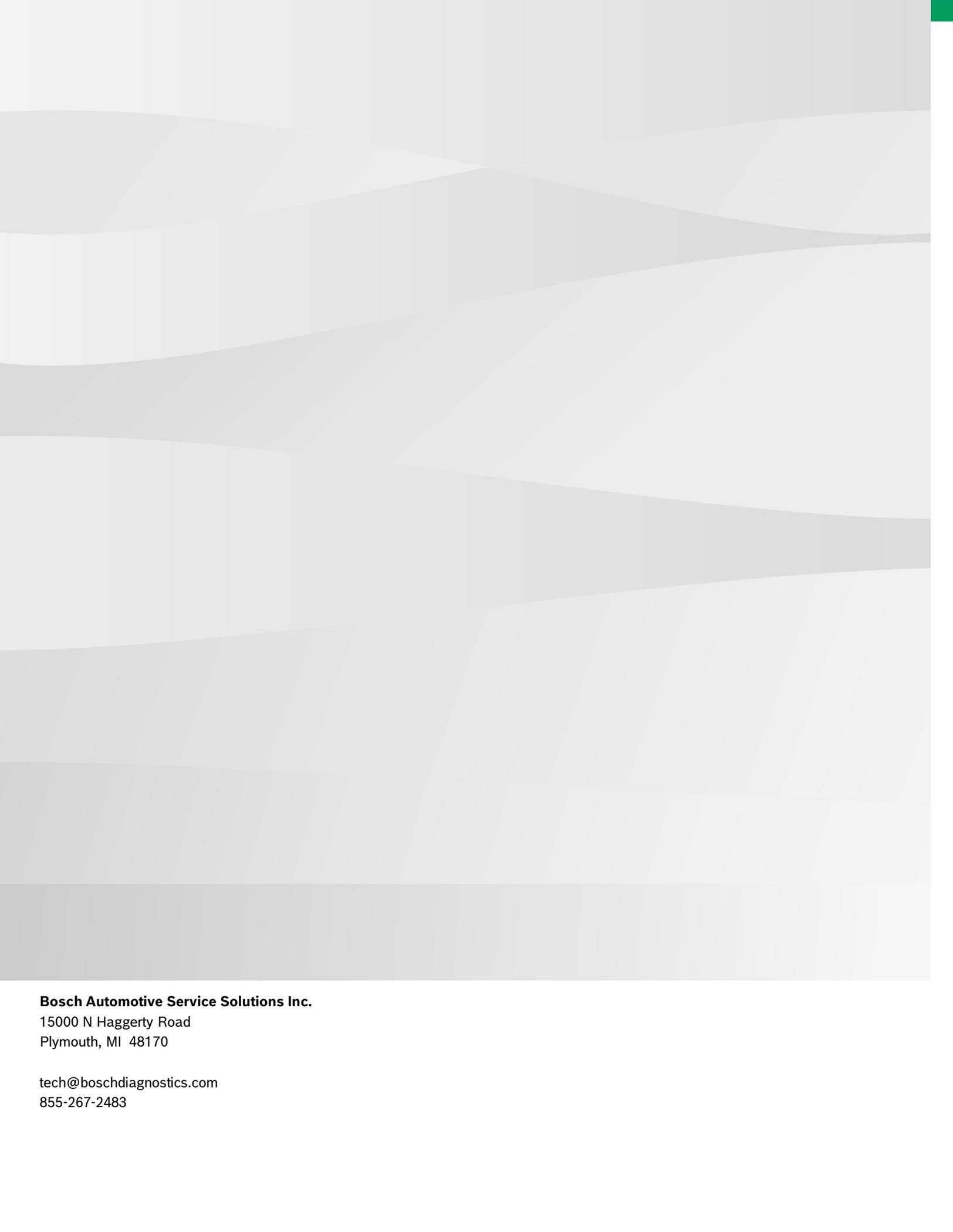
Accumulator bleeding, Accumulator charging, Activate shipping mode, Air Spring Strut Bleeding, Front Axle, Air Spring Strut Bleeding, Rear Axle, Air Spring Strut Bleeding, Rear Left, Air Spring Strut Bleeding, Rear Right, Air Spring Strut Charging, Front Axle, Air Spring Strut Charging, Rear Axle, Air Spring Strut Charging, Rear Left, Air Spring Strut Charging, Rear Right, Body Height Wheelhouse Edge Front Left, Body Height Wheelhouse Edge Front Right, Body Height Wheelhouse Edge Rear Left, Body Height Wheelhouse Edge Rear Right, Calibration Height Values, Changeover To Normal Ride Control Operation, Clear Counter And Runtime Of Compressor, Clear Counter Of Valve Activation, Clear Duration Mode And Control Activities, Constant Damper Current Front Left, Constant Damper Current Front Right, Constant Damper Current Rear Left, Constant Damper Current Rear Right, Deactivate shipping mode, Development Function Deactivation, Go To High Level And Deactivate Self-Levelling, Go To High Level, Go To Normal Level And Deactivate Self Levelling, Go To Normal Level With Narrow Control Tolerance, Go To Normal Level, Go To Preliminary Stage For Calibration In Production, Go To Preliminary Stage For Calibration In Service, Go to production reference level, Mounting Position Calibration, Reset of Adjustment/Calibration Values, Reset Of Central Signal Processing Adaption Values,

Reset Of Qsp Torque Display Adaption Values, Reset Of Raw Values Of Level Sensors In Rebounded Position, Self Leveling Suspension Calibration to Determine Axle Load, Self-Levelling Suspension Activation, Self-Levelling Suspension Calibration Reset, Self-Levelling Suspension Deactivation Permanent, Self-Levelling Suspension Deactivation, Speed Value For Testing Mode, Swap Function Activate, SWaP Function Crypt Data ID, SWaP Function Transfer Crypt Data, Transfer Configuration, Unlock Actuator System, Volume Of Fuel Tank, Write Configuration

## **21 new Actuation type special tests:**

Actuate Vehicle Front Left Control Value Onoff, Actuate Vehicle Front Right Control Value Onoff, Actuate Vehicle Rear Left Control Value, Actuate Vehicle Rear Right Control Value Onoff, Air Spr Additional Vol Vlv 1 Actuation Tst Ctrl Val Onoff, Air Spr Additional Vol Vlv 2 Actuation Tst Ctrl Val Onoff, Air Spr Additional Vol Vlv 3 Actuation Tst Ctrl Val Onoff, Air Spr Additional Vol Vlv 4 Actuation Tst Ctrl Val Onoff, Damper Valve Current Front Left Control Value Current, Damper Valve Current Front Right Control Value Current, Damper Valve Current Rear Left Control Value Current, Damper Valve Current Rear Right Control Value Current, Lower Vehicle Front Left Control Value Onoff, Lower Vehicle Front Right Control Value Onoff, Lower Vehicle Rear Left Control Value, Lower Vehicle Rear Right Control Value Onoff, Pressure Test, System Check For Boosting Function Control Value Onoff, System function test, System Identification, Test Accumulator And Compressor Control Value Onoff

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