

Version 4.6

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Overview

Version 4.6 contains new model year 2020 coverage for Nissan, as well as Special Test coverage for model year 2020 Ford and Toyota vehicles.

Corrected Wi-Fi connectivity with Comcast Routers.

QuickScan expanded to include GM and Nissan UDS protocols, expanded CAN and Keyword 2000 for Honda.

Over 1700 new special tests, 370 new systems, and 1000 vehicle to ECU combinations are included in this 4.6 update including software enhancements and other bug fixes.

Software and coverage feature details provided throughout these release notes.

New Coverage Highlights (Coverage details start on Page 2)

- **Ford** - New Special Test Actuation and Adjustment coverage for all 2020MY vehicles and systems
 - Added coverage for 84 new Adjustment type & 399 new Actuation type tests
- **Toyota** - New Special Test Actuation and Adjustment coverage for all 2020MY vehicles and systems
 - Added coverage for 220 new Adjustment type & 673 new Actuation type tests
- **Nissan** - New coverage for all 2020MY vehicles and systems
 - Includes 726 new vehicle & ECU combinations with 102 new systems
 - Added coverage for 220 new Adjustment type & 673 new Actuation type tests
 - Pre/Post Scan DTC support, Live Data, and Special Tests

New Coverage – USA Domestic

Chrysler/Jeep Coverage

- Added coverage for 186 new systems
- Added coverage for 278 new vehicle-ecu combinations

2 new Adjustment type special tests including:

- **ADAS/Driver Assist** - Camera and Radar Calibration, Camera Calibration

Ford Coverage

- Coverage for 2020MY Actuation and Adjustment type tests
- Added coverage for 6 new vehicle-ecu combinations

84 new Adjustment type special tests including:

- **Engine/PCM** - Air Fuel Ratio Correction Value, Clear E-VTC Op Learned Angle (Exh), Clear LPG Air-fuel Ratio Learning, Clear Transmission Adaptive KAM Tables, Clear Transmission Adaptive Tables, CO Adjustment, Do Not Use The Transmission Adaptive KAM Tables, DPF Parameter Reset, Engine Oil Life Reset, Fuel Mass Observer Reset, Initialize Adaptive KAM Tables, Misfire Monitor Neutral Profile Correction, Particulate Filter Static Regeneration, Read All Injector Quantity Adjustment Coding, Relearn Vehicle Data, Reset Automatic Regeneration Control Tracking Information, Reset Diesel Oxidation Catalyst (DOC) Parameters, Reset EGR (Exhaust Gas Recirculation) Throttle Parameters, Reset Exhaust Gas Recirculation (EGR) Valve Parameters, Reset Fuel System High Pressure Side Parameters, Reset Fuel System Low Pressure Side Parameters, Reset KAM, Reset MAF (Mass Air Flow) Sensor Parameters, Reset Min Fuel Mass Adaptations tests, Reset Min. Fuel Mass Adaptation - All Cylinders, Reset NOx Sensor 1 Learnt Values, Reset NOx Sensor 2 Learnt Values, Reset Oil Service Counters, Reset Oxygen Sensor Learnt Values, Reset Particulate Filter Differential Pressure Sensor, Reset Particulate Filter Upstream Gauge Pressure Sensor, Reset Particulate Matter Sensor Learnt Values, Reset SCR Inducement Fault Chain, Reset Selective Catalyst Reductant (SCR) Parameters, Reset Turbocharger A Compressor Coking Protection Strategy, Reset Turbocharger B Compressor Coking Protection Strategy, Reset Water In Fuel Counters, SCR Emptying, SCR System Refill Activation, SCR Visual Leak Check, Solenoid VTC Operation Start Duty Learning, Stop Trans-Adaptive Learning And Measure Slip Time
- **Brakes/ABS** - ABS Service Bleed, Accelerometer Calibration, Anti-Lock Brake System (ABS) Calibration, Brake Master Cylinder Pressure Transducer Calibration, Calibrate Longitudinal Acceleration Sensor, Electronic Integrated Park Brake, Multi-Calibration Routine, Valve Calibration
- **Safety/Airbag** - Occupant Classification System Module (OCSM) Reset, Passenger System Reset/OCS Reset, Passenger Zero Seat Weight Test
- **Suspension** - Ride Height Calibration
- **Steering** - Pull Drift Compensation Reset, Reset the Power Steering Control Module (PSCM) Learned Values, Steering Motor Angle Trim, Steering Toe Adjustment, Steering Wheel Position Sensor Calibration
- **Body Control** - BCM Crash Status Reset, Disable/Enable Keyless Entry, Remote Keyless Entry (RKE) Frequency Selection, Reset The Body Control Module (BCM), TPMS Sensor Training Mode
- **ADAS/Driver Assist** - Front Camera Calibration for 2019 Expedition, Ranger and Navigator

399 new Actuation type special tests including:

- Engine/PCM** – Active Grill Air Shutter B Position, Active Grill Air Shutter B Position (%), Active Grille Air Shutter -A- Position Commanded, Active Grille Air Shutter -B- Position Commanded, Actuator Supply Voltage -B- Control State, Advanced Homogeneous Direct Injection Angle, Advanced Stratified Direct Injection Angle, A-F Ratio Cntrl Stop & Stratified Chrg Cmb Trnsfr, Air Conditioning Compressor Command State, Air Conditioning Compressor Commanded State, Air Pump Relay, All Injectors Disabled, Charge Air Cooler Cooling Fan Speed, CNG Cylinder Shutoff Valve, CNG Engine Shutoff Valve, Commanded Current Shift Solenoid F, Commanded Equivalence Ratio Air To Fuel Mixture Bank 1, Commanded Equivalence Ratio Air To Fuel Mixture Bank 2, Converter Pressure Control, Coolant Pump A Is Commanded On, Coolant Pump -A- is Commanded On, C-VTC Target Angle, Desired Engine Cooling Fan Speed, Desired Fuel Rail Pressure, Desired Generator Voltage, Desired Idle Speed (RPM), Desired Line Pressure Control, DIG Power Balance tests, EGR Cooler Bypass Valve, Electric Transmission Fluid Pump Control Duty Cycle - Commanded, Engine Coolant Bypass Valve Control Output, Engine Idle Shutdown Extended, Engine Revolutions Per Minute, Engine Running Fuel Injector Control State, Engine Running Fuel Pressure Test, EVAP Canister Vent Valve, EVAP Leak Detection Pump, EVAP Leak Detection Pump to Vent Solenoid Valve Leak Test, EVAP Leak Test, EVAP Purge/Vent Control, EVAP Vapor Blocking Valve, Evaporative Emission Canister Purge Valve Duty Cycle, E-VTC Target Angle (Exhaust), Fan control high speed, Fan control low speed, Fan On Off Test, Firm Shift, Fuel Fill Door Unlock Control Output is Commanded To Enable, Fuel Injector tests, Fuel Pump, Fuel Pump - Duty Cycle, Fuel Pump Relay, Fuel System Test - Low Pressure, Fuel Volume Control Valve, Grill Shutter A Position - Commanded, Heater Control For HO2S 11 And HO2S 21, Heater Control For HO2S 12 And HO2S 22, High Pressure Fuel System Test, High Speed Engine Cooling Fan Control, Injection Pressure Regulator, Injector Disable tests, KOEO, KOER, KOER Glow Plug Test, Low Pressure Fuel Leakdown Test, Low Speed Engine Cooling Fan Control, LPG Air Fuel Ratio Revision Value, LPG Shutoff Valve Relay, Mode 1 DIG Power Balance tests, Output State Control Of Torque Converter, Power Balance, Pressure Control Solenoid A, Radiator Fan Relay Test, Reductant Injector Duty Cycle, Reductant Line Heater Control, Reductant Tank Heater Control, Relative Compression, SCR Dosing Quantity Measurement Test, Service Tool Fuel Multiplier tests, Shift Solenoid F Commanded Current, Shift Solenoid Pressure Control A, Shift Solenoid Pressure Control B, Shift Solenoid Pressure Control C, Shift Solenoid Pressure Control D, Shift Solenoid Pressure Control E, Spark Advance, Spark Advance - Control State, Stepper Motor EGR Position - Control State, Stratified Direct Injection Timing Angle, Stratified EGR Position, Target EGR Position, TCV Power System Test, Third O2/S Diagnosis, Total Fuel Mass To Be Delivered, Turbocharger Bypass Valve 1, Turbocharger Wastegate Control, Variable Camshaft Timing Exhaust Angle Desired, Variable Camshaft Timing Intake Desired Angle, Variable Duct Solenoid Output, Variable Fan Duty Cycle, Vehicle Mode, VVL Int & Exh Solenoid Simultaneous Drive, Water Temperature
- Brakes/ABS** - Hydraulic Pump Motor, Left Front Dump, Left Front Isolation Valve, Left Front/Right Rear Traction Control Supply 1, Left Front/Right Rear Traction Control Valve 1, Left Rear Dump, Left Rear Isolation Valve, On Demand Test, Rear Stop Lamp, Right Front Dump, Right Front Isolation Valve, Right Front/Left Rear Traction Control Supply 2, Right Front/Left Rear Traction Control Valve 2, Right Rear Dump, Right Rear Isolation Valve
- Instrument Cluster** - Lamp tests, Gauge tests, Segment tests, Button tests, Dimming Control, On Demand Test
- Climate (HVAC)** - (A/C) Recirculating Servo Position Status, Air mode actuator, Blower Motor Speed, Driver Heated Seat, ECO Mode, Front Blower Relay, Left Blend Door Position, Max Defrost, On Demand Test, Passenger Heated Seat, Rear Defrost Heated Backlight, Right Blend Door Position, Stop-Start

- **Body Control** - Lamp and Buzzer/Warning tests, Door Lock tests, On Demand Test, Wiper tests, Turn Signal tests, Headlight tests
- **Others** - Tests for AUDIO FRONT CONTROL MODULE, DRIVER MULTI-CONTOUR SEAT, PASSENGER MULTI-CONTOUR SEAT, FRONT CONTROLS INTERFACE MODULE, FRONT CONTROLS INTERFACE B, STEERING COLUMN CONTROL MODULE, SEAT CONTROL MODULE G, SEAT CONTROL MODULE H, DRIVER DOOR MODULE, PASSENGER DOOR MODULE, DIGITAL SIGNAL PROCESSING, TRAILER MODULE

General Motors Coverage

8 new Adjustment type special tests including:

- **Engine/PCM** - Air Bleed
- **ADAS/Driver Assist** - Cancel Camera Learn, Clear Disable History Data, Vehicle Direction Camera Learn

New Coverage – USA Asian

Mazda Coverage

- Added coverage for 8 new vehicle-ecu combinations

8 new Adjustment type special tests including:

- **Engine/PCM** - Change Engine Oil Maintenance Monitor Setting, Engine Oil Life Reset
- **ABS/Brakes** - Brake Fluid Pressure Sensor Initialization, Lateral Acceleration Sensor Initialization, Longitudinal Acceleration Sensor Initialization, Yaw Rate Sensor Initialization

ADAS/Driver Assist - Forward Sensing Camera Calibration – Dynamic for 2020 models

Nissan/Infiniti Coverage

- New coverage for all 2020MY vehicles and systems
- Added coverage for 102 new systems
- Added coverage for 726 new vehicle-ecu combinations

81 new Adjustment type special tests including:

- **Engine/PCM** - Air Fuel Ratio Correction Value, Clear E-VTC Op Learned Angle (Exh), Clear LPG Air-fuel Ratio Learning, CO Adjustment, DPF Regeneration, Electric Intake Valve Timing Control Learning, G Sensor Calibration, Programmed Values, Solenoid VTC Operation Start Duty Learning, Target Idle RPM Adjustment, Valve Timing Adjustment, Valve Timing Offset Data Clear, Waste Gate Actuator Position Learning Value Clear
- **Transmission** - Air bleeding, Auto Park Inhibition, Auxiliary Gearbox Clutch Point Learning, Clutch Point Learning, Clutch Touchpoint Adjustment, Computer Programming, Conform CVTF Deterioration, ECO Mode Reset Function, Electric O.P Air Bleeding, Electric Oil.Pump Air Bleeding, Engine Brake Adjustment, Erase Calibration Data, Erase Learning Value, Erase Memory Data, Erase Statistic Memory, FWD Clutch Point Learning, G Sensor Calibration, Launch Control Counter Reset, Maximum Clutch STRK Measurement, Programming Selections/Engaging Zones, Reset Adaptation Values for Shift Operation, Save Computer Data, Shift Drum Reference Position, Teach-in Of Selection Range Sensor, TM ACTR Self Adjustment, Upshifts, VIN Registration, Write Saved Data

- **ABS/Brakes** - Brake Operation, Brake Release, Decel G Sensor Calibration, Finish Brake Pad Replacement, Initialization Position Adjustment, Start Brake Pad Replacement, Steering Angle Sensor Adjustment, System Mode Change, Valve Calibration, Valve Check, Valve Flushing

223 new Actuation type special tests including:

- **Engine/PCM** - Advanced Homogeneous Direct Injection Angle, Advanced Stratified Direct Injection Angle, A-F Ratio Cntrl Stop & Stratified Chrg Cmb Trnsfr, AIR CONDITIONING COMPRESSOR RELAY CONTROL, Air Pump Relay, Alternator Duty, Alternator Voltage, Camshaft Dephaser: Solenoid Valve Slide Movement, CANISTER BLEED SOL/V, Canister Bleed Solenoid Valve, Catalyst Exhaust Gas Downstream O2 Resistance Heater PWM, Catalyst Exhaust Gas Upstream O2 Resistance Heater PWM, Check Intake Camshaft Solenoid, CNG Cylinder Shutoff Valve, CNG Engine Shutoff Valve, Coolant Circulation Switching S/V, C-VTC Target Angle, DEF Dosing Unit Override Test, DEF Line Heater Test, DEF System Leak Test, DEF Tank Heater Test, DIG Power tests, DOWNSTREAM OXYGEN SENSOR HEATING, EGR Cont (Mode 1), EGR Cont (Mode 3), EGR Control Valve, EGR Vol Cont/V, EGRC Solenoid Valve, Electric Water Pump, ENG COOLANT TEMP, Engine Oil Pressure Control Solenoid Valve, Engine Piloted Oil Pump, E-VTC Target Angle (Exhaust), Exhaust Valve Timing Assign Angle, FAN UNIT HIGH SPEED, FAN UNIT HIGH SPEED RLY, FAN UNIT LOW SPEED, Fan Unit Low Speed Relay, FAN UNIT LOW SPEED RLY, Flex-Fuel Additional Pump, Flex-Fuel Additional Solenoid Valve, FLYWHEEL TARGET PROGRAMMING, Fuel Injection, Fuel Pump Control Module, Fuel Pump Relay tests, Fuel Return Valve, Fuel System Leakage Test, FUEL/T TEMP SEN, Gas Pump Command State, Heater Valve Flow, HEATING RESISTOR RELAY tests, IACV-AAC/V Opening, Ignition Timing, Injection Pressure Regulator, INJECTOR tests, Int V/T Assign Angle, Intake Duct S/V, Intake Fuel Temperature Sensor, LPG Air Fuel Ratio Revision Value, LPG Shutoff Valve Relay, MAP/Baro SW/V, Mode 1 DIG Power Balance tests, MOTORISED THROTTLE, P/REG CONT SOL/V, Power Balance, PRES Regulator, PROGRAMMING THROTTLE LIMITS, Radiator Fan Relay Test, RTCV Hysteresis Test, SCB/V Cont SOL/V, SCR Performance, Stratified Direct Injection Timing Angle, Stratified EGR Position, Super Charger Clutch Relay, SWIRL CONT SOL VALVE, Swirl Control Valve, Target EGR Position, Target Fan RPM, TC Bypass Valve, TCV Power System Test, Third O2/S Diagnosis, Throttle Valve Position Setpoint, Tumble Control Valve, Turbocharging Solenoid Valve, UPSTREAM O2 SENSOR HEATING, V/T Assign Angle, Valve Timing Sol, Variable Duct Solenoid Output, VC/V Bypass/V, Vent Control Valve, VIAS S/V-1, VVL Int & Exh Solenoid Simultaneous Drive, Water Temperature
- **Transmission** - CLUTCH OPRATION TEST, GEAR ENGAGE TEST, Programming CI Touch Point, Reverse Gear Reset Values Of Shift Operations, Speed Sensor Function, Stop Current Command
- **ABS/Brakes** - ABS MOTOR, FR LH ABS SOLENOID(ACT), FR LH SOL, FR RH ABS SOLENOID(ACT), FR RH SOL, PPS Solenoid, RR LH ABS SOLENOID(ACT), RR LH SOL, RR RH ABS SOLENOID(ACT), RR RH SOL, Solenoid Actuator Driving RR 2 Wheels, STOP LAMP ON RELAY, Stop light System Indicator Light, Stroke Simulator Cut Valve Pattern, Tire Pressure Indicator, TRAC Solenoid (SPFL), TRAC Solenoid (SPFR), VSC/TRC Solenoid (SPFL), VSC/TRC Solenoid (SPFR)
- **Climate (HVAC)** - HVAC Test
- **Body Control** - Activate the Starter Cut Relay, Answer Back With I-Key Unlock, Anti Key Lock In Function, As Fr Window, As Rr Window, Back Door/Trunk Lock Relay, Back Door/Trunk Unlock, Back Dr Open Warn, Battery Saver, Boot/Trunk Open, Door Lock, Door Lock Indicator, Door Warning Test, Dr Fr Window, Dr Rr Window, Fog lamp override, Fuel Lid Open Indicate, Head Lamp High, Head Lamp Washer, High Beam Lamp Test, Hydraulic Motor, ID REGIST WARNING, IGN KEY WARN ALM, Ignition Accessory Battery Saver, Indicator, Inside ANT Diagnosis, Inside Buzzer, Interior Lamp, Key Reminder Warn, LIGHT WARN ALM, Parcel Shelf, PBD, Power Slide Door, Power Sliding Door, PSD PBD Open Test, PTC Heater Relay 1, PTC Heater Relay 2, PTC Heater Relay 3, Rear Defogger, Rear Defogger Indicator, Retractable Mirror, Roof, Run Flat/T Warn Buzzer, Seat Belt Warn Test,

Short Cranking Output, Siren, Step Lamp Test, Theft Indicator, Trunk, Trunk/Back Door, Trunk/Glass Hatch, Valve, Vehicle Security Horn, Warning Lamp

Subaru Coverage

6 new Adjustment type special tests including:

- **Transmission** - Inspection Mode After ATF,T/M Exchange
- **ABS/Brake** - Clutch Engagement Point Adaptation
- **Climate (HVAC)** - Set Temperature Shift

11 new Actuation type special tests including:

- **Engine/PCM** - Control The VVT Linear (Bank1), Control The VVT Linear (Bank2), Control VVT Exhaust Linear (Bank1), Control VVT Exhaust Linear (Bank2)
- **Transmission** - Activate DS2 Solenoid
- **Climate (HVAC)** - Airmix Dr Act Trgt Open Angle (Pass), Auto Switch, Blower Fan Level Setting, In-Vehicle Air Temperature Setting

Toyota/Lexus Coverage

- Coverage for 2020MY Actuation and Adjustment type tests

220 new Adjustment type special tests including:

- **Engine/PCM** - Activate The EGR Valve Close Bank 1, Activate The VN Turbo Open Bank 1, Activate The VSV For Air Bleed Control, Air Bleed, Height Offset Rear Wheels, Injection Timing, Injection Timing Value, Pilot Injection Volume, Pilot Injection Volume Select Cylinder, Pilot Injection Volume Value
- **Hybrid** - Body Control with Torque Demand, EV Mode Cruising Range Reset
- **ABS/Brakes** - DSC Sensor Initialization, Electric Parking Brake System: Test Mode Procedure, Zero Point Calibration
- **Suspension** - Height Offset Rear Wheels
- **Cluster** – Lamp/Indicator tests, Ambient Temperature Adjustment, Lane Change Flashing Times Adjust, Traffic Sign Recognition Animation Function
- **Climate (HVAC)** - Compressor Mode, Compressor/Air Inlet DEF operation, DEF(PSW/Lock) Mode Setting, Foot/DEF Auto Mode, Foot/DEF Automatic Blow Up Function, Set Temperature Shift
- **Body Control** - 6MT Setting, Auto A/C, Auto Lock Time, Delay of Monitoring, Destination Setting, Detection of Vehicle, Double Lock, DRL Function, Factory Mode, Follow Me Home Lighting Time, Grill Shutter Control Mode Switching, Grill Shutter Initialization, Halogen Lamp/HID, I/L ON W/Door Key Unlock, I/L when ACC OFF, Interior Light Control, Light Auto OFF Delay, Lighting Time, MT/AT Setting, Panic Function, Prevention of Key Left in Vehicle, Provision of When Door is Half Open, Room Light when Aprchd, Security System, Sedan/Wagon Setting, Sensitivity, Sudden Braking Notification Function, Total Warm-up Time Setting, Trunk Lid Operation, Unlock 2 Operation, Unlock Key Twice, Warm-up Time Setting, Warning Time, Wireless Auto Lock, Wireless Buzzer Resp, Wireless Buzzer Vol, Wireless Control
- **Others** - Tests for SEAT systems, SMART KEY, RAIN SENSOR, CLEARANCE WARNING, HEAD UP DISPLAY

673 new Actuation type special tests including:

- **Engine/PCM** - A/C Idle Up VSV, Activate DPF Rejuvenate (PM), Activate DPF Rejuvenate (S), Activate DS2 Solenoid , Activate ST Solenoid , Activate The Emergency Solenoid Valve, Activate the Engine Oil Pressure Control Valve, Activate The LPG Solenoid Valve, Activate The Pre-Stroke Control

Valve, Activate The Return Solenoid Valve, Activate The Slip Control System, Activate The Solenoid (SLC), Activate The Solenoid (SLG), Activate The Solenoid(Sc), Activate The Solenoid(Slp), Activate The VALVEMATIC After Warm Up, Activate The VALVEMATIC Before Warm Up, Activate The VN Turbo Cleaning, Activate The VSV For Swirl Control Valve, Auto Oil Supply System, Brake Ejector VSV, Check The Imbalance Cylinder, Control the ACIS VSV Motor Duty Ratio, Control The All Cylinders Fuel Cut, Control The All Cylinders Fuel Cut(CNG), Control The EGR Step Position Bank 1, Control The ETCS Open/Close Fast Speed, Control The ETCS Open/Close Slow Speed , Control The Injection Mode, Control The Injection Volume(CNG), Control The ISC Step Position, Control the Select Cylinder Fuel Cut, Control the Shift Area (CVT), Control the Target Fuel Pressure Offset, Control The VVT Linear (Bank1), Control The VVT Linear (Bank2), Control the Wastegate Valve Duty Ratio, Control VVT Exhaust Linear (Bank1), Control VVT Exhaust Linear (Bank2), Cylinder Compression Check, D-4S (A/F Control), D-4S (Fuel Cut), D-4S (Injection Volume), Delivery Heater, Diesel Throttle Target Angle Bank 1, DSU Solenoid , Electric Water Pump, Fuel Injector Timing, Fuel Pump - Duty Cycle, HCAC VSV Check, HICM System Check, Injection Timing Select Cylinder, Injector Compensation, Intercooler Water Pump Relay, O/D Cut Signal, Reductant Discharge, Reductant Filling (Pressure Keep), Reductant Injection Valve, Reductant Pipe Heater, Reductant Pump Check (Backward), Reductant Purge, Reductant Tank Heater, Regulator Shut Valve, SCV Duty Ratio, SLC Solenoid , Slip Control System, SLS Pressure, Solenoid (SB), Solenoid(ST), Test The Turbo Charger Step Motor, Test the Turbo Charger Step Motor #2, Test The Turbo Charger Step Motor Bank 1, Turbo Charger Step Motor, VN Turbo Open, VVT Exhaust Linear (Bank 2), VVT-iE Linear (Bank 2) Control, VVTL System (Bank 1)

- **Hybrid/Electric** - Accumulator Drive, Activate the Oil Pump(1000rpm), Activate the Oil Pump(500rpm), Activate the solenoid (Line Pressure), Activate the Water Heater, Cell Monitor Control, Compression Test, Control the Motor/Generator Cooling Oil Pump, Control The Shift Position, Control the Transmission Oil Pump, Cooling fan No.1+2 operation, Cranking Request, Electromagnetic Oil Pump, EV System Wakeup Control, FC Air Compressor, FC Stack Negative Relay, FC Stack Positive Relay, FC Water Pump, Forcible Stop of Inverter Drive, High Voltage Fuse Accumulated Load History Reset, Hybrid Battery Charge, Hydrogen Pump, Inspection Mode, Line Pressure Solenoid, Oil Pump, PFAN, Pinion Gear Plunger (Hood Close), PWM Output Test, Quick Charge Relay -, Quick Charge Relay +, Radiator Rotary Valve, Regenerative Solenoid RLY Operation, Regenerative Solenoid SOLF Operation, Regenerative Solenoid SOLL Operation, Regenerative Solenoid SOLP Operation, Regenerative Solenoid SOLR Operation, Starter (Hood Close), Starter Motor Drive Magnet Switch (Hood Close), Stop & Start Permit Cond (A/C), Stop & Start Permit Cond (ABS), Stop & Start Permit Cond (Engine), Stop & Start Precondition2 (Control), Temporary Vehicle Start Up
- **Transmission** - Activate DS2 Solenoid , Activate ST Solenoid , Activate the Clutch Stroke, Activate The Emergency Solenoid Valve, Valve, Activate the HPU Motor, Activate The Lock Up, Activate The LPG Solenoid Valve, Activate The Pre-Stroke Control Valve, Activate The Return Solenoid Valve, Activate The Slip Control System, Activate The VALVEMATIC After Warm Up, Activate The VALVEMATIC Before Warm Up, Control the Shift Area (CVT), Control the Shift Position 5 Speed, DSU Solenoid, DSU Solenoid , O/D Cut Signal, Reduced Accumulator Pressure, Release the Gear Stuck, Return Solenoid Valve, SCV Duty Ratio, SLC Solenoid , Slip Control System, SLS Pressure, Solenoid (SB), Solenoid(SB), Solenoid(ST), Target Clutch Control (Stroke Value), Target Shift Stroke Control
- **ABS/Brakes** - Cancel Communication Function Pausing, CDCM Firmware Update, ECB Main Relay, ECB Solenoid (SLA), ECB Solenoid (SLR), Emergency Call Cancellation, Motor Relay, PKB Full Release Control, PKB Lock Control, PPS Solenoid, Solenoid Relay, Stop light System Indicator Light, Stroke Simulator Cut Valve Pattern, Tire Pressure Indicator, TRAC Solenoid (SMC1), TRAC Solenoid (SMC2), TRAC Solenoid (SPFL), TRAC Solenoid (SPFR), TRAC Solenoid (SS), VSC/TRC Solenoid (SPFL), VSC/TRC Solenoid (SPFR)

- **Safety/Airbag** - Seat Belt Motor tests
 - **Instrument Cluster** - Lamp tests, Buzzer tests, Fuel Gauge Operation tests, HV System Indicator tests, HV/EV System Indicator tests, Meter Display tests, Oil Pressure Meter Operation tests, SOC Gauge tests, Speedometer Operation tests, Sub Fuel Gauge Operation tests, Tachometer Operation tests, Volt Meter Operation tests, Water Temperature Meter Operation tests
 - **Climate (HVAC)** - A/O Servo Pulse(Rr P), Battery Magnetic Valve, Dehumidification Magnetic Valve, Diffuse Pulse(R), Electric Water Heater, Emission Pulse(R), Evaporator Magnetic Valve, Heat Exchange Shut Valve, Heating Three-way Valve, High Pressure Magnetic Valve, Low Pressure Magnetic Valve, Magnetic Valve Operation, Oxygen Drive, Viscous Heater
 - **Suspension** - Four-Wheel Damping Force Full Hard, Four-Wheel Damping Force Full Soft, Front Gate Solenoid, Front Leveling Solenoid, Rear Gate Solenoid, Rear Leveling Solenoid
 - **Body Control** - Lamp and Buzzer/Warning tests, Fuel Lid Opener, Mirror Fold, Power Running Board Forced Retracting, Grill Shutter tests
 - **Others** – Tests for SMART KEY, THEFT DETERRENT MODULE, ADAPTIVE FRONT LIGHTING SYSTEM, HEADLIGHT AUTO LEVELING
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