

Bosch ADS Software Update – Dec 2020

Ver 4.7

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

Version 4.7 introduces **2021** model year coverage across many brands and much more including more content for 2019 and 2020 brands as well.

Unlocking of Special Tests for controllers requiring Ford Security.

Thousands of new tests and functions have been added along with software enhancements and bug fixes.

Software and coverage feature details provided throughout these release notes.



ADS X



ADS

Coverage Highlights (Coverage details start on Page 3)

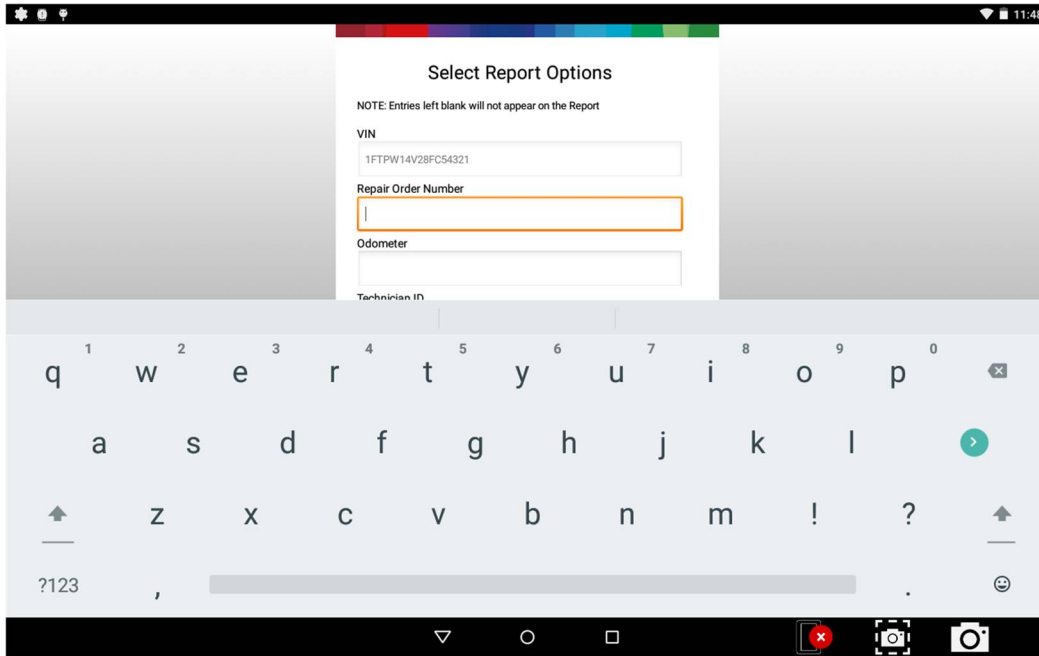
- **2021 Coverage for many vehicles under these Brands**
 - GM
 - Chrysler/Jeep
 - Fiat
 - Toyota
 - Honda
 - Hyundai/Kia
 - Alfa Romeo
 - Ford

- **2020 and 2019 Coverage**
 - BMW
 - Audi
 - Mercedes Benz
 - Volkswagen
 - Jaguar
 - Land Rover
 - Volvo

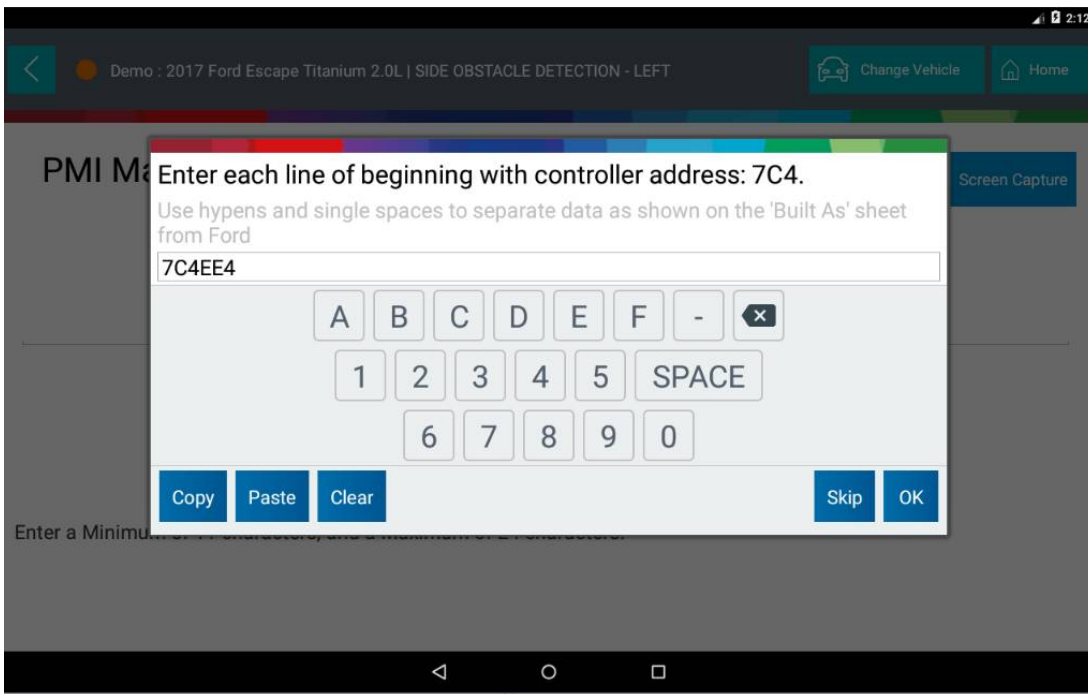
- **Updated Diagnostic Information for the following:**
 - Code-Assist Library confirmed fixes
 - SymptomAssist
 - Battery Disconnect procedures and reference information
 - Key Programming procedures and reference information

Software Enhancements

- DTC / Pre-Post Scan Reports – now add more detail to your reports using full keyboard edit the Repair Order Number and Technician Id fields



- Ford Special Tests - Enhanced data entry windows for certain Ford special tests



New Coverage Details – USA Domestic

New Chrysler/Jeep Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 212 new systems
- Added coverage for 595 new vehicle-ecu combinations

2 new Adjustment type special tests including:

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

52 new Actuation type special tests including:

- **Instrument Cluster** - Check Engine / MIL, Stop / Start System Active
- **Body Control** - Acc/Run/Start Relay, Ambient Light, Back Up Trailer Relay Ctrl, Back-Up Lamps, Central Lock Relay, Central Stop Lamp, Courtesy/Convenient/Ambient Function, Dedicated Left DRL, Dedicated Right DRL, Diesel Fuel Heater, Driver Door Unlock Relay, Front Dome Reading Light, Front Fog Lights, Front Left Turn Lamp, Front Right Turn Lamp, Headlamp Washer, Headlamps, Heated Rear Window Relay, Highbeams, Horn LS Driver, Inverter Enable, Left Rear Turn Lamp, Left Stop Lamps, Left Stop/Turn Trailer, License Plate Lamp, Park/Tail Lamps, Passenger And Rear Door Unlock Relay, Rear Dome Dimming Light, Rear Fog Or Backup Lamp For Chile, Rear Right Stop Lamps, Rear Right Turn Lights, Rear Washer Relay, Rear Wiper Motor, Right Back-Up/Turn Lamp -Pillar, Right Rear Park Lamps, Right Stop/Turn Trailer, Run Relay, Run/Acc Relay, Stop Trailer Lamp, Stop/Start Relay, Thatcham Lock Relay, Thatcham Unlock Relay, Trailer Tow Park Lamp, Trunk Lamp, Trunk Release Relay, UGDO Theft Deterrent, VTA Indicator LED, Wiper Heater Control

New Ford Coverage

- New coverage for many 2021MY vehicles and systems - Aviator, Corsair, EcoSport, Escape, Explorer, F250, F350, Ranger, Transit Connect, Transit-150, Transit-250, Transit-350, Transit-350HD
- Added coverage for 272 new systems
- Added coverage for 344 new vehicle-ecu combinations

15 new Adjustment type special tests including:

- **Engine/PCM** - Reset CKP Wheel & Sensor Adaptation Values
- **Brakes/ABS** - Anti-Lock Brake System (ABS) Module Bleed Configuration, Calibrate Longitudinal Acceleration Sensor, IVD Initialization Sequence
- **Steering** - SASM Module Reset
- **Body Control** - Factory Keyless Entry Code, LIN New Module Initialization, Power Window Initialization tests
- **ADAS/Driver Assist** - Front Camera Calibration, LIN New Module Initialization - IPMB

20 new Actuation type special tests including:

- **Engine/PCM** – (EGR) Valve Position Desired, Engine Running Fuel Pressure Test, High Pressure Fuel System Test, Low Pressure Fuel Leakdown Test, Commanded Equivalence Ratio Air To Fuel Mixture Bank 1, Commanded Equivalence Ratio Air To Fuel Mixture Bank 2, Desired Camshaft Angle For All Banks, EVAP Canister Vent Valve, EVAP Vapor Blocking Valve, Fuel Rail Pressure Desired, Generator Voltage Set Point
- **Climate (HVAC)** - (A/C) Recirculating Servo Position Status

- **Others** - Tests for SEAT CONTROL MODULE E

Other fixes/improvements:

- 2019 F-150 3.0L PCM – added coverage for 3.0L Diesel

New GM Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 1,491 new systems
- Added coverage for 1,990 new vehicle-ecu combinations

3 new Adjustment type special tests including:

- **Tire Pressure Monitor/RCDLR** - Learn Sensor Location, TPM Learn Sensor Location
- **ADAS/Driver Assist** - Vehicle Direction Camera Learn

Other fixes/improvements:

- Added support for 26 character Injector Coding functions

New Coverage Details – USA Asian

New Honda/Acura Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 59 new systems
- Added coverage for 447 new vehicle-ecu combinations

New Hyundai Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 182 new systems
- Added coverage for 303 new vehicle-ecu combinations

18 new Adjustment type special tests including:

- **Engine/PCM** - Auto Detected Configuration Reset, Reset Adaptive Values, Resetting Adaptive Values, Resetting E-CVVT Values, Write VIN
- **Transmission** – Reset Auto T/A Values, Resetting Auto Trans Adaptive Values,
- **ABS/Brakes** - Auto Detected Configuration Reset, Auto Detected Configuration Reset (ESP/ESC Only), Longitudinal G Sensor Calibration(HAC/DBC Only), Pedal Travel Sensor (PTS) Calibration, Pressure Sensor Calibration, SAS CALIBRATION(CAN-ESP Only), Steering Angle Sensor (SAS) Calibration

4 new Actuation type special tests including:

- **Engine/PCM** - EVAP Leakage Test, Read VIN
- **ABS/Brakes** - HCU Air Bleeding Mode

New Kia Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 127 new systems
- Added coverage for 186 new vehicle-ecu combinations

11 new Adjustment type special tests including:

- **Engine/PCM** - Auto Detected Configuration Reset, Reset Adaptive Values, Resetting Adaptive Values, Resetting E-CVVT Values, Write VIN
- **Transmission** – Reset Auto T/A Values, Resetting Auto Trans Adaptive Values,
- **ABS/Brakes** - Auto Detected Configuration Reset (ESP/ESC Only), Longitudinal G Sensor Calibration(HAC/DBC Only), Pressure Sensor Calibration, SAS CALIBRATION(CAN-ESP Only)
- **ADAS/Driver Assist** - Reference Point Calibration - Dynamic

4 new Actuation type special tests including:

- **Engine/PCM** - EVAP Leakage Test, Read VIN
- **ABS/Brakes** - HCU Air Bleeding Mode

New Mazda Coverage**2 new Adjustment type special tests including:**

- **Safety/Airbag** - Calibration For Passenger Seat Sensor
- **Body** - Factory Keyless Entry Code
- **ADAS/Driver Assist** - Forward Sensing Camera Calibration – Dynamic

New Nissan/Infiniti Coverage**65 new Adjustment type special tests including:**

- **Engine/PCM** - A/F Initial Learning, A/F Sensor Response Diagnosis Status B1, A/F Sensor Response Diagnosis Status B2, Active Control Engine Mounting A, Active Control Engine Mounting B, AP Position Learn Clear, Battery Discharge Current Integration Clear, Check Fuel Lines, Clear E-VTC Op Learned Deviation Angle (Exh), CLSD THL POS Learn, CML Battery Discharge Current Integration Clear, CO Adjustment, Cumulative Sub-Battery Discharge Current Clear, Dual battery relay voltage drop count data clear, EGR Control Valve Closed Position Learning, Electric Intake Valve Timing Control Learning, Engine basis parts value 1 and 2 clear, EVAP System Close, Fuel Pressure Release, G Sensor Calibration, Idle Air Vol Learn, M/T Neutral Pos Learn, Misfire Count (past), Misfire count (real-time), Save/Write Data for CPU Replace, Sc Magnetic Clutch Engage Count Clear, Self-Learning Cont, Starter Operation Count Clear, Stop/Start engine restart cause data recorder, Stop/Start engine stall cause data recorder, Stop/Start prohibit cause data recorder, Sub-Starter & Generator Oper Count Clear, Supercharger Magnet Clutch Engagement Count Clear, Target Idle RPM Adjustment, Target IGN TIM ADJ, Target Ignition Timing Hold, V/T Control Learn, Valve Timing Adjustment, Valve Timing Offset Data Clear, Valve Timing Offset Data Writing, VCR Base Position Learning, VIN Registration, Waste Gate Actuator Position Learning Value Clear, Write Fuel Learn Value, Write Starter Operation Count
- **Body Control** - Diagnosis for Remote Engine Starter, VIN Registration

24 new Actuation type special tests including:

- **Engine/PCM** - Cooling Fan, ENG COOLANT TEMP, Engine Coolant Bypass
- **Body Control** - Door Lock, FR Fog lamp, Horn, IGN KEY WARN ALM, Ill Dim Signal, Indicator, Inside ANT Diagnosis, INT LAMP, LIGHT WARN ALM, Rear Defogger, RR Wiper, Seat Belt Warn Test, Stop Lamp 1, Stop Lamp 2, THEFT IND, Trunk/Back Door, Trunk/Luggage Lamp Test, Vehicle Security Horn

New Toyota/Lexus Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 129 new systems
- Added coverage for 1,104 new vehicle-ecu combinations

2 new Actuation type special tests including:

- **ABS** - EPB Control Switch, Stop Lamp Relay

New Coverage Details – USA European

New Alfa Romeo Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 29 new systems
- Added coverage for 56 new vehicle-ecu combinations

New Audi Coverage

- New coverage for 2019-2020MY vehicles and systems
- Added coverage for 340 new systems
- Added coverage for 5,312 new vehicle-ecu combinations

1,221 new Adjustment type special tests including:

- **Engine/PCM** - Adaptation tests for:
 - Camshaft-Position Sensor, Cylinder Pressure Sensors Adaptation Reset, Diesel Particulate Filter, Idle Speed, Clutch Slip Points, Crankshaft Sensor Tolerance, Differential Pressure Sensor Low Pressure EGR, Exhaust Gas Flap, Low Pressure EGR Exhaust Flap Actuator, Low Pressure EGR Valve, Oxygen Sensor Bank 1 Sensor 1, Radiator Shutter Control, Speed Limitation, Turbo Charger, Water Mixing Actuator Charge Air Cooling, Differential Pressure Sensor, Engine Management Adaptation Values Reset, Exhaust Flap, Fuel Pump, Neutral Position Sensor, New DPF Reset Adaptation Values, Oxidation Catalytic Converter, Reset Adaptation Parameters, Throttle Valve
- Basic Setting tests for:
 - Boost Pressure, Charge Air Flow Flap, Exhaust-Gas Recirculation, Compressor Control Flap, Coolant Bypass Valve, EGR Valve, Engine Temperature Management, Radiator Blind, Swirl Flap, Throttle Valve
- Other tests for:
 - Bleed Cooling System, Bleed Fuel System, Bleed System/adblue Circuit Leak Test, Calibration of Clutch Valves, Calibration Of Gear Selector Movement Sensors, Calibration of Main Pressure Valve, Inlet and Exhaust Camshaft Phasing tests, Chain Elongation Reset After Chain Replacement, Chain Elongation Correction After Other Repairs, CNG Quality Set Value, Combustion Chamber Pressure Sensors: Resetting, DeNOx Service Regeneration During Drive, Diesel Particulate Filter Regeneration Run, Differ. Pressure Sensor Adjustment, Drain Fuel System, Drain Fuel Tank, Exhaust Gas Turbocharger Reset, Fuel High-Pressure System Reset, Fuel Metering Unit Adjustment, Fuel Pressure Control Valve Adjustment, Fuel Quantity Control Valve Adjustment, Idle Speed Adjustment, Injector Adjustment tests, Injector Buzz Test, Injector Reset, Injector

Zero Quantity Calibration Reset, Lambda Sensor tests, Manual Regeneration Of Diesel Particulate Filter, Metered Quantity Measurement/large Quantity, Particulate Filter Regeneration, Many Quickstart tests, Reset AdBlue System Data, Reset Injector Adaptation Values, Resetting Misfire Adaptations, Scr System Reset, Service position, Start Particle Desulfurization, Transfer Configuration, Write Configuration, Write Injector Codes

- **Transmission** - Automatic Transmission Fluid Level Check, Automatic Transmission Fluid Pump Function Test, Basic Adjustment Clutch, Basic Adjustment Clutch Conventional, Basic Adjustment Electrical Fluid Pump Transmission, Basic Adjustment Transmission, Calibration Of Synchron Points, Clearing The Shutdown And Reset Data, EEPROM Writing Of Basic Adjustment Data, Fastadaption Twin Clutch, Gear Positioner Neutral Position, Gear Positioner Removal Position, Mileage Data Adjustment, Reset Adaptation Parameters, Reset After Replace Pressure Supply Init Adapt Electric Motor, Reset CAN Information, Reset Clutch 0 Logging Dates, Reset Clutch 1 Logging Dates, Reset Clutch 2 Logging Dates, Reset Clutch Characteristic, Reset Clutch Characteristic Clutch 0, Reset Clutch Control Travel Pressure Characteristic, Reset Clutch Values, Reset Clutch Values For Transient Friction, Reset Drivingsparts Per Shift Position, Reset frequency counter, Reset Gear Positioner Values, Reset Gearbox Mileage, Reset Kiss Point Adaption Fault Statistics 1, Reset Mileage And Adaption Counter, Reset Mileage Of Rough Road Detection, Reset of Adaption Values, Reset Pressure Reduction Logging Dates, Reset Start/stop Counter, Reset Temperature Model, Roller Test Stand Mode, Set Clutch Mileage To Zero, Set Gearbox Mileage To Vehicle Mileage, Set Of Clutch Mileage To Value, Single Gear Indicator Adjustment, Start Automatic Trans Fluid Pressure Accumulator Discharge, Start Automatic Transmission Fluid Pressure Accumulator Charge, Transfer Configuration, Transmission Rapid Adaption
- **ABS/Brakes** - Activate/deactivate Roller Dynamometer Mode, Basic Setting Brake Bleeding, Basic Setting Brake Pedal Position Sensor, Basic Setting Brake Pressure Sensor, Basic Setting Integrated Parking Brake, Basic Setting Tire Pressure Monitoring System, Bleed, Brake Pad Replacement Step 1, Brake Pad Replacement Step 2, Calibrate Parking Brake, Calibration Of Tyre Pressures, Complete Brake Pad Replacement Mode, Developer Function 4, Electronic Brake Booster Bleeding, Esp Steering Wheel Angle Sensor Adaptation, Evac And Fill Byte, Force Auto Adjust, Leakage Test, Nominal Voltage Dimming, Parking Brake Initialisation, Reset frequency counter, Reset Highest Appeared Brake Temperature, Reset of Adaption Values, Reset Of All Adaptions, Reset Temperature Model, Reset To Factory Setting, Rka Reset Dynamic Data, RKA Simulation Mode, RLE Simulation Mode, Roller Test Stand Mode, Sensor Unit Zero Position Compensation, Start Brake Pad Replacement Mode, Torque Test, Transfer Configuration, Vehicle Mileage Challenge Adaptation, Vent ESP Hydraulic System
- **AWD/Transfer Case** – Reset of Adaption Values, Transfer Configuration
- **Safety/Airbag** - Airbag Control Unit: Reset Counter (roll-Over Protection Trigger), Airbag Control Unit: Roll-Over Protection Test, Transfer Configuration
- **Instrument Cluster** - Average Consumption Display Correction, Bluetooth Audio Codec, Component Update Confirmation, Country Version Encoding, Emergency Call 1, Emergency Call 1 Roaming, Fixed Service Interval Adjustment, Flexible Service Interval Adjustment, Interval Display Service: Resetting, Manufactor Specific Connect App Screening, Media Country Code, Media Country Code HMI, Operating And Display Unit 1 Proximity Sensor Basic Adaptation, P Damping Display, P HMI Display, Reset Adaption To Factory Setting, Roller Test Stand Mode, SDARS Preactivated Subscription, Set Number For Info Call, Set Number For Service Call, Set Number Roaming For Info Call, Set Number Roaming For Service Call, Startup Screen Sticker HMI, Transfer Configuration, Write Configuration
- **Suspension** - Activate/deactivate Roller Dynamometer Mode, Adjustment Of Vehicle Level Sensors, Pressure Accumulator Preload Pressure, Pressure Reduction, Transfer Configuration

- **Climate/HVAC** - Activation Time Of Basic Adjustment Air Conditioner Compressor , Adaptation - Auxiliary Heating Retrofit Without CAN , Adaptation - Basic Setting Running Time For Compressor Break-In, Air Conditioner Compressor Inlet Time, Air Conditioner Compressor Run In, Automatic Start, Air Quality Sensor Adjustment, Analysis 13, Aux. Heating Continued Heating Time Setting, Auxiliary Heating Configuration Without CAN, Auxiliary Heating Run On Time, Basic Setting, Calibration Of Stop Positions, Coding Container Part Number, Coding Container Version, Compressor Run-In, Compressor Run-In Time Adaption, Fr. Left Seat Heating Memory Function Setting, Fr.right Seat Heating Memory Function Setting, MMI Display Time For Quadrologic Functions, Overshoot Time Additional Heating, Parameter Climatic Comfort For Start / Stop Function, Parameter Defogging For Start / Stop Function, Production Routine Blower Voltage, Production Routine Nominal Temperature Inside, Production Routine Rear Blower Voltage, Remote Start Nominal Temperature, Remote Start Temperature Seat Heating, Remote Start Temperature Seat Ventilation, Remote Start Window Heating Temperature, Reset All Counters, Reset frequency counter, Reset Of All Adaptions, Reset To Factory Setting, Roller Test Stand Mode, Speed Shutoff Threshold Compressor Run In, Time For Neck Heating Power Reduction Level 2 To Level 1, Time For Neck Heating Power Reduction Level 3 To Level 2, Time For Seat Heating Power Reduction In Highest Level, Time For Seat Heating Power Reduction Level 2 To Level 1, Time For Seat Heating Power Reduction Level 3 To Level 2, Tolerance Band Of Basic Adjustment Flap End Stops, Tolerance Band Of Flap End Stops, Tolerance Compressor Speed In Compressor Inlet, Tolerance Range For Flap End Stops, Transfer Configuration, Transmission Ratio Engine Air Conditioner Compressor, Vehicle Equipment Code And Production Number Combination, Window Condensation Parameter For Start/Stop Function, Write Configuration
- **Steering** - Basic Setting Steering Angle Sender, Coding Container Part Number, Coding Container Version, El. Power St. St. Wheel Angle Sens. Adapt., Electric Power Steering: Configuring, Electric Power Steering: Encoding, Reset of Adaption Values, Transfer Configuration, Vehicle Equipment Code And Production Number Combination
- **Body Control** - Headlight tests, Seat tests, Interior Monitoring Sensitivity, Load Compartment Cover Basic Setting, Passenger Detection Multi Contour Seat, Rain/light Sensor: Adapting, Transfer Configuration, Wiper tests
- **Others** – tests for SEAT ADJUST DRIVER, LIGHT CONTROL, HEADLIGHT REGULATION, BATTERY CHARGER C/M, TELEPHONE, AUXILIARY PARKING HEATER, many more

1,970 new Actuation type special tests including:

- **Engine/PCM** - A/C Compressor Magnetic Coupling, Acc. Ped. Press. Point Generation, Accelerator Ped Mod Actuator Functional Chk VW Com Ctrl State, Activated Charcoal Filter Shutoff Valve VW Common Control State, Actuator 1 For Engine Sound Generation VW Common Control State, Actuator For Camshaft Adjustment Actuator, Actuator For Camshaft Adjustment Position, Actuator For Structure-Borne Sound VW Common Control State, Actuator For Valve Lift Adjustment Inlet VW Common Ctrl State, Actuator For Vlv Lift Adjustment Inlet Bank 2 VW Com Ctrl State, Adblue Circuit Leak Test, Adblue Delivery Pump, Adblue Dosing Valve, Adblue Pump/pipe Heating, Adblue Tank Heating, Addit. Cooling Medium Pump Relay, Air Condit. Compressor Actuation, Air Condition Compressor Activation VW Common Control State, Air Filter Flap Bank 2 VW Common Control State, Air Filter Flap VW Common Control State, Air Valve Secondary, All Radiator Cooling Fans VW Common Control State, Alternator Shut Off VW Common Control State, Ancillary Coolant Pump, Aux Pump, Aux.coolant Pump High-Temp. Circ., Aux.coolant Pump Low-Temp.circuit, Auxiliary Coolant Pump For Turbocharger VW Common Control State, Auxiliary Coolant Pump Relay, Boost Pressure Actuator, Boost Pressure Actuator 1, Boost Pressure Actuator 2, Brake Booster Relay Vacuum Pump VW Common Control State, Bypass Valve Electric Machine VW Common Control State,

Bypass Valve For Electric Supercharger VW Common Control State, Camshaft Position Actuator Exhaust 1 VW Common Control State, Camshaft Position Actuator Exhaust 2 VW Common Control State, Camshaft Position Actuator Intake 1 VW Common Control State, Camshaft Position Actuator Intake 2 VW Common Control State, Charge Air Cooler Flap VW Common Control State, Charge Motion Valve 1 VW Common Control State, Charge Motion Valve 2 VW Common Control State, Charge Motion Valve VW Common Control State, Charge-Air Cooler Clnt. Mix.valve, CNG Tank Shutoff Valve 1 VW Common Control State, CNG Tank Shutoff Valve 2 VW Common Control State, CNG Tank Shutoff Valve 3 VW Common Control State, CNG Tank Shutoff Valve 4 VW Common Control State, CNG Tank Shutoff Valve VW Common Control State 3, Cold Start Injector VW Common Control State, Compression Test, Compressor Air Recirculation Valve VW Common Control State, Compressor Circulation Bypass Valve VW Common Control State, Control Valve Coolant Pump VW Common Control State, Coolant Circuit Switching Valve, Coolant Circulation Pump 2, Coolant Circulation Pump 3, Coolant Circulation Pump 3 VW Common Control State, Coolant Circulation Pump 4 Actuator, Coolant Circulation Pump 4 Position, Coolant Pump Switching Valve, Coolant Pump, Charge Air Cooler, Coolant Rotary Valve VW Common Control State, Coolant Shut-Off Valve, Coolant Shut-Off Valve VW Common Control State, Coolant Valve Battery VW Common Control State, Coolant Valve For Cylinder Head VW Common Control State, Coolant Valve For Gearbox VW Common Control State, Coolant Valve Radiator VW Common Control State, Cooler Fan Control, Cooling Circuit Control Valve, Crankcase Breather Control Valve, Crankcase Breather Heater 1, Crankcase Ventilation Heater 1 VW Common Control State, Crankcase Ventilation Heater 2 VW Common Control State, Crankcase Ventilation Heater 3 VW Common Control State, Crankcase Ventilation Valve VW Common Control State, Cylinder Deactivation Actuator 1 VW Common Control State, Cylinder Deactivation Actuator 2 VW Common Control State, Cylinder Deactivation Actuator 3 VW Common Control State, Cylinder Deactivation Actuator 4 VW Common Control State, Cylinder Head Coolant Valve, Diesel Particulate Filter Indicator Lamp VW Common Ctrl State, Disengagement Clutch Actuator Test VW Common Control State, Drive Programm Indicator Light VW Common Control State, ECM/PCM Power Relay VW Common Control State, Egr Bypass Solenoid Valve, Egr Cooler Bypass Valve, Egr Cooler Coolant Pump, Egr Cooling Coolant Pump, Egr Cooling Switching Valve, Egr Cooling Switching Valve 2, EGR Valve Cooler Bypass Valve VW Common Control State, Elec Water Pump For EGR Lo Temp Cooling VW Common Ctrl State, Electr. Vacuum Pump (brake), Electric Aux. Fuel Pump Relay, Electric Coolant Pump, Electric Coolant Pump 2 VW Common Control State, Electric Coolant Pump VW Common Control State, Electric Fuel Pump, Electric Fuel Pump Control Unit, Electric Fuel Pump Relay, Electric Machine Bypass Valve, Electrical Catalyst Heater Actuator Test VW Common Ctrl State, Electrical Fuel Pump, Electrical Fuel Pump 2 VW Common Control State, Electrical Fuel Pump VW Common Control State, Electrical High Temperature Coolant Pump VW Common Ctrl State, Electrical Low Temperature Coolant Pump VW Common Control State, Electrical Thermostat, Emission Warning Lamp (mil), Engine Compartment Fan 2 Control VW Common Control State, Engine Compartment Fan Control VW Common Control State, Engine Component Current Supply Relay 2 VW Common Control State, Engine Component Relay, Engine Cool Pump 2 For Charged Air Cooling VW Common Ctrl State, Engine Cool Pump For Charged Air Cooling VW Common Ctrl State, Engine Cutoff Speed VW Common Control State, Engine Mount 1 VW Common Control State, Engine Mount 2 VW Common Control State, Engine Mount VW Common Control State, Engine Mount. Sol. Valve, Left, Engine Mount. Sol. Valve, Right, Engine Mounting, Engine Mounting Control, Engine Mounting Control 1, Engine Mounting Control 2, Engine Oil Cooler Valve VW Common Control State, Engine Oil Pump, Bypass Sol.valve, Engine Temp. Regulation Actuator, Engine Temperature Regulation Actuator VW Common Control State, EOL Charge Motion Valves VW Common Control State, EOL Exhaust

Gas Turbochargers VW Common Control State, EOL Throttle Valves VW Common Control State, Evap Actuation, Evap Purge Valve 2 VW Common Control State, Evap.emission Control Regen.valve, Evaporative Emission System Leak Det Pump VW Common Ctrl State, Evaporative Emission System Leak Det Valve VW Common Ctrl State, Ex Gas Recirculation Cooler Bypass Valve 2 VW Common Ctrl State, Exhaust Gas Flap VW Common Control State, Exhaust Gas Turbocharger 1 VW Common Control State, Exhaust Gas Turbocharger 2 VW Common Control State, Exh. Gas Treatment Scr Heating 2, Exh. Gas Treatment Scr Heating 3, Exh. Supercharger Recirc. Valve, Exhaust Camsh.control Sol. Valve, Exhaust Camsh.timing Control(b1), Exhaust Camsh.timing Control(b2), Exhaust Flap Actuator, Exhaust Flap Control Motor, Exhaust Gas Flap 2 VW Common Control State, Exhaust Gas Flap 3 VW Common Control State, Exhaust Gas Recirculation Valve 1 VW Common Control State, Exhaust Gas Recirculation Valve 2 VW Common Control State, Exhaust Gas Recirculation Valve 3 VW Common Control State, Exhaust Gas Treatm. Scr Injector, Exhaust Gas Treatment Scr Heating, Exhaust Turbocharger Cntrl. Valve, Exhaust-Gas Recirculat. Actuator, Exhaust-Gas Recirculat.actuator 1, Exhaust-Gas Recirculat.actuator 2, Exhaust-Gas Recirculation Valve, Exhaust-Gas Turbocharger Ecu 1, Fan After Run Relay VW Common Control State, Fan Control 1 VW Common Control State, Fan Control 2 VW Common Control State, Fan Control Relay Level 1 VW Common Control State, Fan Control Relay Level 2 VW Common Control State, Force FB Accelerator Pedal Low Version VW Common Ctrl State, Force Feedback Accelerator Pedal Control Value Function, Force Feedback Accelerator Pedal Control Value Position, Force Feedback Accelerator Pedal VW Common Control State 3, Fuel Evap. Shutoff Valve, Fuel Evaporation Shutoff Valve, Fuel Evaporation/regeneration Valve, Fuel Metering Unit VW Common Control State, Fuel Metering Valve, Fuel Pressure Control Valve, Fuel Pressure Reduction, Fuel Pressure Regulation, Fuel Pressure Regulator 2 VW Common Control State, Fuel Pressure Regulator Diesel VW Common Control State, Fuel Pressure Regulator VW Common Control State, Fuel Pump, Fuel Pump Relay VW Common Control State, Fuel Quantity Control Valve, Fuel Quantity Solenoid Valve, Fuel Tank Breather Valve: Actuation, Fuel Tank Isolation Valve VW Common Control State, Fuel Tank Vent Valve VW Common Control State, Gear Oil Coolant Pump VW Common Control State, Gear Oil Cooling Valve Open VW Common Control State, Glow Control Unit 1, Glow Control Unit 2, Glow Plug Control Module 1 VW Common Control State, Glow Plug Control Module 2 VW Common Control State, Heating Support Pump VW Common Control State, High-Pressure Inj. Valve (cyl. 1), High-Pressure Inj. Valve (cyl. 2), High-Pressure Inj. Valve (cyl. 3), High-Pressure Inj. Valve (cyl. 4), High-Pressure Inj. Valve (cyl. 5), High-Pressure Inj. Valve (cyl. 6), Hv Battery Coolant Pump, Hv System: Auxiliary Coolant Pump, Idle Speed Adjustment VW Common Control State, In-Cylinder Flow Flap, Indicator Light For Glow Control VW Common Control State, Injection Valve Cylinder 1, Injection Valve Cylinder 2, Injection Valve Cylinder 3, Injection Valve Cylinder 4, Injection Valve Cylinder 5, Injection Valve Cylinder 6, Injector Valve 1 VW Common Control State, Injector Valve 10 VW Common Control State, Injector Valve 10B Actuator, Injector Valve 10B Position, Injector Valve 11 VW Common Control State, Injector Valve 11B Actuator, Injector Valve 11B Position, Injector Valve 12 VW Common Control State, Injector Valve 12B Actuator, Injector Valve 12B Position, Injector Valve 13 Actuator, Injector Valve 13 Position, Injector Valve 13B Actuator, Injector Valve 13B Position, Injector Valve 14 Actuator, Injector Valve 14 Position, Injector Valve 14B Actuator, Injector Valve 14B Position, Injector Valve 15 Actuator, Injector Valve 15 Position, Injector Valve 15B Actuator, Injector Valve 15B Position, Injector Valve 16 Actuator, Injector Valve 16 Position, Injector Valve 16B Actuator, Injector Valve 16B Position, Injector Valve 1B Actuator, Injector Valve 1B Position, Injector Valve 2 VW Common Control State, Injector Valve 2B Actuator, Injector Valve 2B Position, Injector Valve 3 VW Common Control State, Injector Valve 3B Actuator, Injector Valve 3B Position, Injector Valve 4 VW Common Control State, Injector Valve 4B Actuator, Injector Valve 4B Position, Injector Valve 5

VW Common Control State, Injector Valve 5B Actuator, Injector Valve 5B Position, Injector Valve 6 VW Common Control State, Injector Valve 6B Actuator, Injector Valve 6B Position, Injector Valve 7 VW Common Control State, Injector Valve 7B Actuator, Injector Valve 7B Position, Injector Valve 8 VW Common Control State, Injector Valve 8B Actuator, Injector Valve 8B Position, Injector Valve 9 VW Common Control State, Injector Valve 9B Actuator, Injector Valve 9B Position, Injector Valve MPI 1 VW Common Control State, Injector Valve MPI 10 VW Common Control State, Injector Valve MPI 2 VW Common Control State, Injector Valve MPI 3 VW Common Control State, Injector Valve MPI 4 VW Common Control State, Injector Valve MPI 5 VW Common Control State, Injector Valve MPI 6 VW Common Control State, Injector Valve MPI 7 VW Common Control State, Injector Valve MPI 8 VW Common Control State, Injector Valve MPI 9 VW Common Control State, Inlet Camsh. Timing Control (b1), Inlet Camsh. Timing Control (b2), Inlet Camsh.control Solen. Valve, Inline Fuel Pump Relais VW Common Control State, Intake Air Control Valve, Intake Man./in-Cyl. Flow Flap 2, Intake Manifold Flap, Intake Manifold Runner Flap VW Common Control State, Intake-Man./in-Cylinder Flow Flap, Icontrol Particle Filter Regen Pump VW Common Ctrl State, Left Valve For Engine Bearing, Low Pressure EGR Exhaust Flap Actuator VW Common Control State, Mag Clutch For Supercharger Air Gap Test VW Common Ctrl State, Magnetic Clutch For Supercharger VW Common Control State, Main Relay, Malfunction Indicator Lamp VW Common Control State, Map Controlled Eng Cooling Sys Thermostat VW Common Ctrl State, Mass Control Valve Relay VW Common Control State, Oil Pressure Control Valve, Oil Pressure Valve VW Common Control State, Parking Lock Solenoid Activation VW Common Control State, Particulate Filter Fault Lamp, Particulate Filter Indicator Lamp, Piston Cooling Jet Control Valve VW Common Control State, Piston Cooling Jet Solenoid Valve, Preheating Indicator Lamp, PTC Heating Element 1 VW Common Control State, PTC Heating Element 2 VW Common Control State, PTC Heating Element 3 VW Common Control State, Radiator Blind, Radiator Fan, Radiator Fan 1, Radiator Fan 2, Radiator Fan Actuation, Radiator Fan Actuation 1, Radiator Fan Actuation 2, Radiator Fan Relay 1, Radiator Roller Blind Control VW Common Control State, Radiator Shutter Control 2 VW Common Control State, Radiator Shutter Control 3 VW Common Control State, Radiator Shutter Control 4 VW Common Control State, Radiator Shutter Control VW Common Control State, Rail Pressure Reduction, Rear Exhaust Gas Flap, Recirculation Valve VW Common Control State, Reductant Pump VW Common Control State, Refrigerant Compressor, Relay Cooler Fan 1, Relay Electric Coolant Pump VW Common Control State, Relay For High Heating Output, Relay For Low Heating Output, Relay For Prefeed Pump, Relay For Pump, Fuel Cooling VW Common Control State, Relay Secondary Air Pump, Right Valve For Engine Bearing, SCR Heating Devices 2 VW Common Control State, SCR Heating Devices 3 VW Common Control State, SCR Heating Devices VW Common Control State, SCR Metering Valve 2 VW Common Control State, SCR Metering Valve VW Common Control State, SCR Reverse Valve VW Common Control State, SCR Transfer Pump VW Common Control State, Secondary Air Control Val. (bank2), Secondary Air Control Valve, Secondary Air Injection Relay 2 VW Common Control State, Secondary Air Injection Relay VW Common Control State, Secondary Air Injection Valve 2 VW Common Control State, Secondary Air Relay, Shift Drum Motor Position Shift Position, Solenoid Valve Boost-Press. Control, Solenoid Valve Exhaust Recirclatn 2, Solenoid Valve Exhaust-Gas Recirc., Solenoid Valve/exhaust Flap 1, Solenoid Valve/exhaust Flap 2, Spindle Actuator Of Engine Decoupler VW Common Control State, Supplem. Heating Pump Actuation, Swirl Flap, Swirl Flap Actuator, Swirl Flap Positioner 1, Swirl Flap Positioner 2, Switchable Water Pump, Switchable Waterpump VW Common Control State, System Identification, Tank Leak Unit Solenoid Valve, Tank Leakage Diagnosis Pump, Throttle Actuator, Throttle Valve, Throttle Valve 1 VW Common Control State, Throttle Valve 2 VW Common Control State, Throttle Valve Control Module, Throttle Valve Control Unit, Transm. Oil Cooler Bypass Valve, Transmission Coolant Valve,

Transmission Mount 1 VW Common Control State, Transmission Mount 2 VW Common Control State, Transmission Oil Pump Activation VW Common Control State, Turbine Sol. Valve Turbocharger2, Turboch. Recirc.-Air Sol. Valve, Turbocharger 1, Turbocharger Bypass Valve, Turbocharger Bypass Valve 2 VW Common Control State, Turbocharger Bypass Valve VW Common Control State, Turbocharger Control Unit 2, Turbocharger Control Valve 2 VW Common Control State, Turbocharger Control Valve VW Common Control State, Turbocharger Turbine Inlet Valve VW Common Control State, Valve For Engine Mounting 1, Valve For Engine Mounting 2, Valve For Transmission Mounting 1, Valve For Transmission Mounting 2, Variable Intake Manifold VW Common Control State, Variable Intake System, Volume Control Valve 1 VW Common Control State, Volume Control Valve 2 VW Common Control State, Wastegate Solenoid Valve, Wastegate VW Common Control State, Water Cooling Bypass Vlv Charge Air Cooling VW Com Ctrl State, Water Mixing Actuator Charge Air Cooling VW Common Ctrl State, Water Mixing Actuator VW Common Control State

- **Hybrid** - Actuate Charging Connection 1, Actuate Charging Connection 2, Charge Indicator Lamp 1, Charge Indicator Lamp 2, Control Lamp Button Load Profile, Hv Batt.immediate Charging Button, Hv Charging Cable Indicator Lamp, Reset Hv Charge Cable Mating Cyc., System Identification, Coolant Pump Control HV Batterie Pump Duty, Cooling Valve 1 Hi Voltage Battery Cooling Valve1 Tar Position, Hv Batt.: Sv 1 Coolg.sys.opening, Hv Batt.: Sv 2 Coolg.sys.opening, Hv Batt.:sv 1 Cooling Sys.closing, Hv Batt.:sv 2 Cooling Sys.closing, HV Battery Charge/discharge Current, Hv Battery: Fan Actuation, Hv Battery: Vent Flap 1, Hv Battery: Vent Flap 2, Radiator Fan Actuation 1, Radiator Fan Actuation 2, Reserved VW Common Control State, Cool Pump For Lo Temp Circuit Actuator Test VW Com Ctrl State
- **AWD/Transfer Case** - Front Axle Torque Request, System Identification
- **ABS/Brakes** - Abs Motor, ABS Return Flow Pump Control Value On OFF, Actuatoric Test Control Value Actuationtime, Actuatoric Test Control Value Delaytime, Apply Brake Pads Control State, Apply Brake Pads Control Value On Off, Apply Brakes Control State, Apply Brakes Control Value On Off, Approach Brake Pads Control State, Approach Brake Pads Control Value On Off, Brake Indicator Lamp, Brake Light, Brake Light By Ecd Control State, Brake Light By ECD Control Value On OFF, Brake Light By ECD IO Control Option Brake Light By ECD, Brake Pedal Appliance Control Value Brake Light Activation, Brake Pedal Appliance Control Value PAR Control, Complete Test Of ECU Valves And Pump Motor Control Value On OFF, Control Wheel Pressure Wheel, Control Wheel Pressure Wheel Pressure, Display Test, Text, Drv Dynamics Reg Hi Pres Switch Valve 1 Ctrl Value On OFF, Drv Dynamics Reg Hi Pres Switch Valve 2 Ctrl Value On OFF, Dynamic Test Control Value 1actuatorvalue, Dynamic Test Control Value 1ID Actuator, Dynamic Test Control Value 2actuatorvalue, Dynamic Test Control Value 2idactuator, Dynamic Test Control Value 3actuatorvalue, Dynamic Test Control Value 3idactuator, Dynamic Test Control Value 4actuatorvalue, Dynamic Test Control Value 4idactuator, Dynamic Test Control Value Actuationtime, Dynamic Test Control Value Waitingtime, Emergency Brake Signal Control State, Emergency Brake Signal Control Value On OFF, Entwicklerstellglied 01 IO Control Option OBD Status Lamp, Esp Test, Front Left ABS Inlet Valve Control Value On OFF, Front Left ABS Outlet Valve Control Value On OFF, Front Left Abs Solenoid Valve, Front Right ABS Inlet Valve Control Value On OFF, Front Right ABS Outlet Valve Control Value On OFF, Front Right Abs Solenoid Valve, Function Lmp For Autohold Btn IO Ctrl Opt Fun Lmp For Autohold , Function Lmp PK Brk Button IO Ctrl Opt Fun Lmp PK Brk Button, Green Function Lamp Control State, Green Indicator Lamp Control Value On Off, Hill Hold Control Button Led, Hill Hold Control Indicator Lamp, Ind Lamp In Electronic Parking Brake Button Ctrl Value On Off, Indicator Lamp For Hold Assist Control Value On OFF, Indicator Lamp Park Brake Button Control State, Inlet Valves IO Control Option Front Left ABS Inlet Valve, Inlet Valves IO Control Option Front Right ABS Inlet Valve, Inlet Valves IO Control Option Rear Left ABS Inlet Valve, Inlet Valves IO Control Option Rear Right ABS Inlet Valve, Parking

Brake Button Led, Parking Brake Indicator Lamp, Parking Brake Warning Lamp, Parking Brk Mot Lt Closing Stepwise IO Ctrl Opt PK Brk Mot Lt C, Parking Brk Mot Rt Closing Stepwise IO Ctrl Opt PK Brk Mot Rt C, Parking Brk Motors Closing Stepwise IO Ctrl Opt PK Brk Motors C, Pulse-Wheel Test, Rear Left ABS Inlet Valve Control Value On OFF, Rear Left ABS Outlet Valve Control Value On OFF, Rear Left Abs Solenoid Valve, Rear Right ABS Inlet Valve Control Value On OFF, Rear Right ABS Outlet Valve Control Value On OFF, Rear Right Abs Solenoid Valve, Red Function Lamp Control State, Red Indicator Lamp Control Value On Off, Red Warning Lamp Control State, Red Warning Lamp Control Value On Off, Release Both Brakes Control State, Release Both Brakes Control Value On Off, Release Left Brake Control State, Release Left Brake Control Value On Off, Release Right Brake Control State, Release Right Brake Control Value On Off, Self Test Ground Cabling Control Value Currentsource, Short Brake Apply Left Control State, Short Brake Apply Left Control Value On Off, Short Brake Apply Right Control State, Short Brake Apply Right Control Value On Off, Sounder Control Value On Off, Static Test, System Identification, Vehicle Stabilization Program Switch Valve 1 Ctrl Value On OFF, Vehicle Stabilization Program Switch Valve 2 Ctrl Value On OFF, Warning Tone Generator, Wheel Speed Sensors Index Error Test Control Value Axle, Yellow Warning Lamp Control State, Yellow Warning Lamp Control Value On Off

- **Airbag/Safety** – Airbag Crash Signal Rest Of World, Airbag Indicator Light Off, Crash Signal, Ds Belt Buckle Illumination, Error Lamp, Error Text Output, Front-Passenger Airbag Indicator Lamp (off), Ps Belt Buckle Illumination, Rear Centre Belt Catch Lighting, Rear Left Belt Catch Lighting, Rear Right Belt Catch Lighting, System Identification, Vehicle Conditioning, Warning Message
- **Suspension** - Air Suspension Compressor Relay, Button Lighting, Fr.left Damper Adj.val.curr. Hard, Fr.left Damper Adj.val.curr. Soft, Fr.rght.damper Adj.val.curr. Hard, Fr.rght.damper Adj.val.curr. Soft, Front Left Air Spring Valve, Front Right Air Spring Valve, Pressure Test, Rear Left Air Spring Valve, Rear Left Damp.adj.val.curr. Hard, Rear Left Damp.adj.val.curr. Soft, Rear Rght.damp.adj.val.curr. Hard, Rear Rght.damp.adj.val.curr. Soft, Rear Right Air Spring Valve, System Identification
- **Instrument Cluster** - Belt Indicator Lamp, Brake Indicator Lamp, Brake Wear Indicator Lamp, Coolant Temperature Gauge, Engine Overheating Warning Lamp, Fuel Level Display, Gong, Oil Level Warning Lamp, Oil-Pressure Indicator Lamp, Preheating Indicator Lamp, Reserve Fuel Lamp, Segment Test, Speed Indicator, System Identification, Tachometer, Test Screen, Turn Signal Lamp Acoustic Signal, Warning Buzzer, Washer Fluid Level Indicator Lamp, Yellow Lane Keep.ass. Indic. Lamp, Anti-Theft Device, Cd/dvd Ejection, Display 1, Display Test 1 Control Value Display, Display Test 1 Display, Display Test 2 Control Value Display, Display Test 3 Control Value Display, Display Test Ctrl Unit Dash Panel Insert Control Value Display, Fan Control, Internal Blower Control Control Value Fan Level, Loudspeaker Test, Loudspeaker Test Acoustic Loudspeaker Test Channel Selection, Loudspeaker Test Acoustic Test Frequency, Loudspeaker Test Acs Ctrl Val Loudspeaker Test Chn Selection, Mechanical System Display Unit 1, Remote Freq Selection DAB Band III Ctrl Value Freq DAB Band 3, Remote Frequency Selection FM Control Value Frequency FM, Remote Set AF Control Value State, Remote Set DAB Announcement Control Value Alarm, Remote Set DAB Announcement Control Value Area Weather Flash, Remote Set DAB Announcement Control Value Event Announcement, Remote Set DAB Announcement Control Value Financial Report, Remote Set DAB Announcement Control Value News Flash, Remote Set DAB Announcement Control Value Programs Info, Remote Set DAB Announcement Control Value Road Traffic Flash, Remote Set DAB Announcement Control Value Special Event, Remote Set DAB Announcement Control Value Sport Report, Remote Set DAB Announcement Control Value Transport Flash, Remote Set DAB Announcement Control Value Warning Service, Remote Set DAB Linking Control Value Mode, Remote Set DAB Mute Control Value DAB Mute, Remote Set Hidden Tune Control

Value Hidden Tune, Remote Set TP Control Value State, Remote Source Selection Control Value Source Selection, Remote Voice Control Control Value Speech Dialog State, Tweeter Speaker Motor Fr Right Ctrl Value Retractable Speaker, Tweeter Speaker Motor Front Left Ctrl Value Retractable Speaker

- **HVAC/Climate Control** - Ac/heat Output Test, Additional Air Heating Input Output Control Parameter, Additional Air Heating VW Common Control State, Additional Heater Activation Test Control Value, Additional Heater Activation Test Input Output Ctrl Parameter, Adopt.of Unfiltered Ambient Temp., Air Condit. Compressor Actuation, Air Condition Compressor Activation Input Output Ctrl Parameter, Air Condition Compressor Activation VW Common Control State, Air Conditioner Performance Test Input Output Control Parameter, Air Conditioner Performance Test VW Common Control State, Air Dist Flap Front Ctrl Motor Input Output Control Parameter, Air Distribution Flap Front Control Motor Sollwert, Air Flap Actuator, Air Flow Flap, Air Recirculation Flap Control Motor, Air Supplementary Heating, Blower Activation Input Output Control Parameter, Central Flap Control Motor, Cool Pmp For Lo Temp Circuit Act Tst Inp O/P Ctrl Parameter, Cool Pump For Lo Temp Circuit Actuator Test Ctrl Value On Off, Coolant Circulation Pump 2 Test Control Value On Off, Coolant Circulation Pump 2 Test Input Output Control Parameter, Coolant Circulation Pump 3 Control Value On Off, Coolant Circulation Pump 3 Input Output Control Parameter, Coolant Circulation Pump Control Value On Off, Coolant Circulation Pump Input Output Control Parameter, Cutoff Valve 1 Refrigerant Test Input Output Control Parameter, Cutoff Valve 1 Refrigerant Test VW Common Control State, Cutoff Valve 2 Refrigerant Test Input Output Control Parameter, Cutoff Valve 2 Refrigerant Test VW Common Control State, Defrost Flap Control Motor, Defroster Flap Control Motor Input Output Control Parameter, Elec Air Conditioner Compressor Test Inp Output Ctrl Parameter, Electrical Air Conditioner Compressor Test Control Value On Off, EMC Mode Flap Control Motors Test VW Common Control State, EMC Mode Flap Ctrl Motors Test Input Output Control Parameter, Emc Test Mode, Fan Control 1 Control Value On Off, Fan Control 1 Input Output Control Parameter, Fan Control 2 Control Value On Off, Fan Control 2 Input Output Control Parameter, Fresh Air Blower, Fresh/circulating Air Flap, Front Air Distr. Flap Ctrl. Motor, Front Fresh Air Blower, Frs Air / Air Recirculation / Air Flow Flap Ctrl Mot Inp O/P Co, Function Test All Valves Control Value On Off, Function Test All Valves Input Output Control Parameter, Heated Wiper Rack Test Control Value, Heated Wiper Rack Test Input Output Control Parameter, High Voltage Heater Test Control Value On Off, High Voltage Heater Test Input Output Control Parameter, Hyb EV Bat Pack Cool Ctrl Vlv B Tst Inp O/P Control Parameter, Hyb EV Battery Pack Cool Ctrl Valve B Test Control Value On Off, Illumination Operating And Disp Unit Test VW Common Ctrl State, Ionisator Front Ionisator Aus/An, Ionisator Rear Ionisator Aus/An, Left Temperature Flap Ctrl Motor Input Output Control Parameter, LIN Heck-PTC Kanal A Control State, LIN Heck-PTC Kanal B Control State, Magnetic Clutch For Air Condition Input Output Ctrl Parameter, Magnetic Clutch For Air Condition VW Common Control State, Mmi Display Temp. Setting Actuat., Operating Unit Illumination, Pass Actual Ambient Temp Value Input Output Ctrl Parameter, Pump 1 Refrigerant Circulation Test Input Output Ctrl Parameter, Pump 2 Refrigerant Circulation Test Input Output Ctrl Parameter, Radiator Shutter Control Control Value On Off, Radiator Shutter Control Input Output Control Parameter, Re. Temp. Door Positioning Motor, Rear Blower Activation Control Value On Off, Rear Blower Activation Input Output Control Parameter, Refrigerant Compressor, Refrigerant Expansion Valve 1 Test Control Value On Off, Refrigerant Expansion Valve 1 Test Input Output Ctrl Parameter, Refrigerant Expansion Valve 2 Test Control Value On Off, Refrigerant Expansion Valve 2 Test Input Output Ctrl Parameter, Refrigerant Expansion Valve 3 Test Control Value On Off, Refrigerant Expansion Valve 3 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valve 3 Test Control Value On Off, Refrigerant Shut Off Valve 3 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valve 4 Test Control Value On Off, Refrigerant Shut Off Valve 4 Test Input Output Ctrl Parameter, Refrigerant Shut

Off Valve 5 Test Control Value On Off, Refrigerant Shut Off Valve 5 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valves Dynmc Test Inp O/P Ctrl Parameter, Refrigerant Shut Off Valves Dynmc Tst Compressor Pow Limitation, Right Temperature Flap Control Motor Sollwert, Right Temperature Flap Ctrl Mot Input Output Control Parameter, Seat Backrest Heating Left Test Control Value, Seat Backrest Heating Left Test Input Output Control Parameter, Seat Backrest Heating Right Test Control Value, Seat Backrest Heating Right Test Input Output Control Parameter, Seat Cushion Heating Left Test Control Value, Seat Cushion Heating Left Test Input Output Control Parameter, Seat Cushion Heating Right Test Control Value, Seat Cushion Heating Right Test Input Output Control Parameter, Seat Heating Entire Test Control Value, Seat Heating Entire Test Input Output Control Parameter, Seat Heating Rear Left Input Output Control Parameter, Seat Heating Rear Left VW Common Control State, Seat Heating Rear Right Input Output Control Parameter, Seat Heating Rear Right VW Common Control State, Seat Ventilation Entire Test Control Value, Segment Test, Segment Test VW Common Control State, SIH Rear Left Control Value, SIH Rear Left Control Value 1, SIH Rear Right Control Value, SIH Rear Right Control Value 1, SIL Rear Left (LLR LS1 Li) Control Value, SIL Rear Left(LLR LL1 Li) Control Value, SIL Rear Right (LLR RL1 Re) Control Value, SIL Rear Right (LLR RS1 Re) Control Value, Supplementary Heater, Surface Heating Entire Test Control Value, System Identification, Temperature Flap Control Motor, Temperature Flap Rear Ctrl Motor Input Output Control Parameter, Temperature Flap Servomotor: Left, Temperature Flap Servomotor: Right, Test Mode, Washer Jet Heating Test Control Value, Washer Jet Heating Test Input Output Control Parameter, Windscreen Heating Control Value, Windscreen Heating Input Output Control Parameter

- o **Body** – Alarm Horn, Ambient Light Door Driver Side Front: Contour Lighting, Ambient Light Door Driver Side Rear: Contour Lighting, Ambient Light Door Passenger Side Front: Contour Lighting, Ambient Light Door Passenger Side Rear: Contour Lighting, Ambient Lighting: Channel 1, Asr/esp Control Lamp, Auto-Hold Indicator Lamp, Blinkers, Brake Light Test Control Value, Compressor (driver Side Multi-Contour Seat), Compressor (passenger Side Multi-Contour Seat), Cup Holder Ambient Light, Dipped Beam, Direction Indicator Left, Direction Indicator Right, Driver Side Multi-Contour Seat: Functional Test, Example Input Output Identifier Controlstate, Exterior Lighting, Fog Light, Left, Fog Light, Right, Front Centre Console Ambient Light 1, Front Ds Door Trim Ambient Light., Front Footwell Lighting, Front Left Turn Signal Indicator Lamp 2, Rear Left Indicator La, Front Parking Aid Warning Buzzer, Front Ps Door Trim Ambient Light., Front Right Turn Signal Indicator Lamp 2, Rear Right Indicator , Hazard Warnng. System Indic. Lamp, Hdc Indicator Lamp, Headlight Washer System, High-Beam Headlight, Left, High-Beam Headlight, Right, Instrument Cluster: Contour Lighting, Interior And Function Lighting, Le. Dayt.driv./side Light Led Power Mod., Left Cornering Light: Dimming, Left Daytime Driving Light, Left Daytime Driving Light Bulb 2, Left Daytime Driving/side Light, Left Head Area Heating, Left Main Beam Screen, Left Side Light/dayt. Driv. Light Bulb 2, Left Side Light: 1, Left Side Light: 2, Move Left Headlamp Horizontally, Move Left Headlamp Vertically, Move Right Headlamp Horizontally, Move Right Headlamp Vertically, Multimedia Operating Unit: Contour Lighting, Parking Aid Button, (control Lamp): Actuation, Parking Aid, Loudspeaker, Parking Aid: Activation, Parking Assistant Indicator Lamp, Parking Steering Ass. Indic. Lamp, Passenger Side Multi-Contour Seat: Functional Test, Reading Lights, Rear Ds Door Trim Ambient Light., Rear Footwell Lights, Rear Ps Door Trim Ambient Light., Rear Window Washer Pump, Rear Wiper, Ri. Dayt.driv./side Light Led Power Mod., Right Cornering Light: Dimming, Right Daytime Driving Light, Right Daytime Driving Light Bulb 2, Right Daytime Driving/side Light, Right Head Area Heating, Right Main Beam Screen, Right Sd Light/dayt. Driv. Light Bulb 2, Right Side Light: 1, Right Side Light: 2, Roof Marker Light, Seat Heating, Seat Ventilation, Side-Marker Lamp, Left Front, Side-Marker Lamp, Right Front, Start/stop Indicator Lamp, Steering Column Adjust. Downwards, Steering Column Adjustm. To Front, Steering Column Adjustm. To Rear,

Steering Column Adjustm. Upwards, Suppress Mirror Glare, System Identification, Window Wiper Front Position Test Control Value, Windscreen Wiper: Position, Windshield Washer Pump, Windshield Wiper, Windshield Wiper Heater Element, Washer Jet Heater

- **Others** – tests for CENTRAL COMFORT SYS, MULTIFUNCTION MODULE, SUNROOF CONTROL MODULE, SEAT ADJUST DRIVER, DECK LID CONTROL UNIT, HEADLIGHT REGULATION, LIGHT CONTROL systems, BATTERY CHARGER C/M, DOOR ELEC systems, ANTENNA CONTROL MODULE, TELEMATICS COMMUNICATION

New BMW/Mini Coverage

- New coverage for 2019-2020MY vehicles and systems
- Added coverage for 376 new systems
- Added coverage for 4,092 new vehicle-ecu combinations

10 new Adjustment type special tests including:

- **Hybrid** - Composition of High-volt Battery Unit: Read_Out Serial Number, Heating and AC Functions: Drain/Fill the Refrigerant Circuit, High-voltage Battery:Read-Out History of Last Chrg Procedure, Transportability High-voltage Battery Unit: Electric Assessment
- **ADAS/Driver Assist** - KAFAS Camera Calibration, Rain Light Sensor Initialization
- **Body** – Battery Reset Control Unit, Reset Tone Setting

New Fiat Coverage

- New coverage for 2021MY vehicles and systems
- Added coverage for 22 new systems
- Added coverage for 22 new vehicle-ecu combinations

New Jaguar Coverage

- New coverage for 2019-2020MY vehicles and systems
- Added coverage for 718 new systems
- Added coverage for 1,085 new vehicle-ecu combinations

1 new Adjustment type special tests including:

- **ADAS/Driver Assist** - Camera Calibration

New Land Rover Coverage

- New coverage for 2019-2020MY vehicles and systems
- Added coverage for 1,076 new systems
- Added coverage for 1,575 new vehicle-ecu combinations

1 new Adjustment type special tests including:

- **ADAS/Driver Assist** - Camera Calibration

New Mercedes Coverage

- New coverage for all 2020MY vehicles and systems

New Volkswagen Coverage

- New coverage for 2019-2020MY vehicles and systems

- Added coverage for 187 new systems
- Added coverage for 1,285 new vehicle-ecu combinations

1,221 new Adjustment type special tests including:

- **Engine/PCM** - Adaptation tests for:
 - Camshaft-Position Sensor, Cylinder Pressure Sensors Adaptation Reset, Diesel Particulate Filter, Idle Speed, Clutch Slip Points, Crankshaft Sensor Tolerance, Differential Pressure Sensor Low Pressure EGR, Exhaust Gas Flap, Low Pressure EGR Exhaust Flap Actuator, Low Pressure EGR Valve, Oxygen Sensor Bank 1 Sensor 1, Radiator Shutter Control, Speed Limitation, Turbo Charger, Water Mixing Actuator Charge Air Cooling, Differential Pressure Sensor, Engine Management Adaptation Values Reset, Exhaust Flap, Fuel Pump, Neutral Position Sensor, New DPF Reset Adaptation Values, Oxidation Catalytic Converter, Reset Adaptation Parameters, Throttle Valve
- Basic Setting tests for:
 - Boost Pressure, Charge Air Flow Flap, Exhaust-Gas Recirculation, Compressor Control Flap, Coolant Bypass Valve, EGR Valve, Engine Temperature Management, Radiator Blind, Swirl Flap, Throttle Valve
- Other tests for:
 - Bleed Cooling System, Bleed Fuel System, Bleed System/adblue Circuit Leak Test, Calibration of Clutch Valves, Calibration Of Gear Selector Movement Sensors, Calibration of Main Pressure Valve, Inlet and Exhaust Camshaft Phasing tests, Chain Elongation Reset After Chain Replacement, Chain Elongation Correction After Other Repairs, CNG Quality Set Value, Combustion Chamber Pressure Sensors: Resetting, DeNOx Service Regeneration During Drive, Diesel Particulate Filter Regeneration Run, Differ. Pressure Sensor Adjustment, Drain Fuel System, Drain Fuel Tank, Exhaust Gas Turbocharger Reset, Fuel High-Pressure System Reset, Fuel Metering Unit Adjustment, Fuel Pressure Control Valve Adjustment, Fuel Quantity Control Valve Adjustment, Idle Speed Adjustment, Injector Adjustment tests, Injector Buzz Test, Injector Reset, Injector Zero Quantity Calibration Reset, Lambda Sensor tests, Manual Regeneration Of Diesel Particulate Filter, Metered Quantity Measurement/large Quantity, Particulate Filter Regeneration, Many Quickstart tests, Reset AdBlue System Data, Reset Injector Adaptation Values, Resetting Misfire Adaptations, Scr System Reset, Service position, Start Particle Desulfurization, Transfer Configuration, Write Configuration, Write Injector Codes
- **Transmission** - Automatic Transmission Fluid Level Check, Automatic Transmission Fluid Pump Function Test, Basic Adjustment Clutch, Basic Adjustment Clutch Conventional, Basic Adjustment Electrical Fluid Pump Transmission, Basic Adjustment Transmission, Calibration Of Synchron Points, Clearing The Shutdown And Reset Data, EEPROM Writing Of Basic Adjustment Data, Fastadaption Twin Clutch, Gear Positioner Neutral Position, Gear Positioner Removal Position, Mileage Data Adjustment, Reset Adaptation Parameters, Reset After Replace Pressure Supply Init Adapt Electric Motor, Reset CAN Information, Reset Clutch 0 Logging Dates, Reset Clutch 1 Logging Dates, Reset Clutch 2 Logging Dates, Reset Clutch Characteristic, Reset Clutch Characteristic Clutch 0, Reset Clutch Control Travel Pressure Characteristic, Reset Clutch Values, Reset Clutch Values For Transient Friction, Reset Drivingparts Per Shift Position, Reset frequency counter, Reset Gear Positioner Values, Reset Gearbox Mileage, Reset Kiss Point Adaption Fault Statistics 1, Reset Mileage And Adaption Counter, Reset Mileage Of Rough Road Detection, Reset of Adaption Values, Reset Pressure Reduction Logging Dates, Reset Start/stop Counter, Reset Temperature Model, Roller Test Stand Mode, Set Clutch Mileage To Zero, Set Gearbox Mileage To Vehicle Mileage, Set Of

- Clutch Mileage To Value, Single Gear Indicator Adjustment, Start Automatic Trans Fluid Pressure Accumulator Discharge, Start Automatic Transmission Fluid Pressure Accumulator Charge, Transfer Configuration, Transmission Rapid Adaption
- **ABS/Brakes** - Activate/deactivate Roller Dynamometer Mode, Basic Setting Brake Bleeding, Basic Setting Brake Pedal Position Sensor, Basic Setting Brake Pressure Sensor, Basic Setting Integrated Parking Brake, Basic Setting Tire Pressure Monitoring System, Bleed, Brake Pad Replacement Step 1, Brake Pad Replacement Step 2, Calibrate Parking Brake, Calibration Of Tyre Pressures, Complete Brake Pad Replacement Mode, Developer Function 4, Electronic Brake Booster Bleeding, Esp Steering Wheel Angle Sensor Adaptation, Evac And Fill Byte, Force Auto Adjust, Leakage Test, Nominal Voltage Dimming, Parking Brake Initialisation, Reset frequency counter, Reset Highest Appeared Brake Temperature, Reset of Adaption Values, Reset Of All Adaptions, Reset Temperature Model, Reset To Factory Setting, Rka Reset Dynamic Data, RKA Simulation Mode, RLE Simulation Mode, Roller Test Stand Mode, Sensor Unit Zero Position Compensation, Start Brake Pad Replacement Mode, Torque Test, Transfer Configuration, Vehicle Mileage Challenge Adaptation, Vent ESP Hydraulic System
 - **AWD/Transfer Case** – Reset of Adaption Values, Transfer Configuration
 - **Safety/Airbag** - Airbag Control Unit: Reset Counter (roll-Over Protection Trigger), Airbag Control Unit: Roll-Over Protection Test, Transfer Configuration
 - **Instrument Cluster** - Average Consumption Display Correction, Bluetooth Audio Codec, Component Update Confirmation, Country Version Encoding, Emergency Call 1, Emergency Call 1 Roaming, Fixed Service Interval Adjustment, Flexible Service Interval Adjustment, Interval Display Service: Resetting, Manufactor Specific Connect App Screening, Media Country Code, Media Country Code HMI, Operating And Display Unit 1 Proximity Sensor Basic Adaptation, P Damping Display, P HMI Display, Reset Adaption To Factory Setting, Roller Test Stand Mode, SDARS Preactivated Subscription, Set Number For Info Call, Set Number For Service Call, Set Number Roaming For Info Call, Set Number Roaming For Service Call, Startup Screen Sticker HMI, Transfer Configuration, Write Configuration
 - **Suspension** - Activate/deactivate Roller Dynamometer Mode, Adjustment Of Vehicle Level Sensors, Pressure Accumulator Preload Pressure, Pressure Reduction, Transfer Configuration
 - **Climate/HVAC** - Activation Time Of Basic Adjustment Air Conditioner Compressor , Adaptation - Auxiliary Heating Retrofit Without CAN , Adaptation - Basic Setting Running Time For Compressor Break-In, Air Conditioner Compressor Inlet Time, Air Conditioner Compressor Run In, Automatic Start, Air Quality Sensor Adjustment, Analysis 13, Aux. Heating Continued Heating Time Setting, Auxiliary Heating Configuration Without CAN, Auxiliary Heating Run On Time, Basic Setting, Calibration Of Stop Positions, Coding Container Part Number, Coding Container Version, Compressor Run-In, Compressor Run-In Time Adaption, Fr. Left Seat Heating Memory Function Setting, Fr.right Seat Heating Memory Function Setting, MMI Display Time For Quadrologic Functions, Overshoot Time Additional Heating, Parameter Climatic Comfort For Start / Stop Function, Parameter Defogging For Start / Stop Function, Production Routine Blower Voltage, Production Routine Nominal Temperature Inside, Production Routine Rear Blower Voltage, Remote Start Nominal Temperature, Remote Start Temperature Seat Heating, Remote Start Temperature Seat Ventilation, Remote Start Window Heating Temperature, Reset All Counters, Reset frequency counter, Reset Of All Adaptions, Reset To Factory Setting, Roller Test Stand Mode, Speed Shutoff Threshold Compressor Run In, Time For Neck Heating Power Reduction Level 2 To Level 1, Time For Neck Heating Power Reduction Level 3 To Level 2, Time For Seat Heating Power Reduction In Highest Level, Time For Seat Heating Power Reduction Level 2 To Level 1, Time For Seat Heating Power Reduction Level 3 To Level 2, Tolerance Band Of Basic Adjustment Flap End Stops, Tolerance Band Of Flap End Stops, Tolerance Compressor Speed In Compressor Inlet, Tolerance Range For Flap End Stops, Transfer Configuration, Transmission Ratio Engine Air Conditioner Compressor,

Vehicle Equipment Code And Production Number Combination, Window Condensation Parameter For Start/Stop Function, Write Configuration

- **Steering** - Basic Setting Steering Angle Sender, Coding Container Part Number, Coding Container Version, El. Power St. St. Wheel Angle Sens. Adapt., Electric Power Steering: Configuring, Electric Power Steering: Encoding, Reset of Adaption Values, Transfer Configuration, Vehicle Equipment Code And Production Number Combination
- **Body Control** - Headlight tests, Seat tests, Interior Monitoring Sensitivity, Load Compartment Cover Basic Setting, Passenger Detection Multi Contour Seat, Rain/light Sensor: Adapting, Transfer Configuration, Wiper tests
- **Others** – tests for SEAT ADJUST DRIVER, LIGHT CONTROL, HEADLIGHT REGULATION, BATTERY CHARGER C/M, TELEPHONE, AUXILIARY PARKING HEATER, many more

1,970 new Actuation type special tests including:

- **Engine/PCM** - A/C Compressor Magnetic Coupling, Acc. Ped. Press. Point Generation, Accelerator Ped Mod Actuator Functional Chk VW Com Ctrl State, Activated Charcoal Filter Shutoff Valve VW Common Control State, Actuator 1 For Engine Sound Generation VW Common Control State, Actuator For Camshaft Adjustment Actuator, Actuator For Camshaft Adjustment Position, Actuator For Structure-Borne Sound VW Common Control State, Actuator For Valve Lift Adjustment Inlet VW Common Ctrl State, Actuator For Vlv Lift Adjustment Inlet Bank 2 VW Com Ctrl State, Adblue Circuit Leak Test, Adblue Delivery Pump, Adblue Dosing Valve, Adblue Pump/pipe Heating, Adblue Tank Heating, Addit. Cooling Medium Pump Relay, Air Condit. Compressor Actuation, Air Condition Compressor Activation VW Common Control State, Air Filter Flap Bank 2 VW Common Control State, Air Filter Flap VW Common Control State, Air Valve Secondary, All Radiator Cooling Fans VW Common Control State, Alternator Shut Off VW Common Control State, Ancillary Coolant Pump, Aux Pump, Aux.coolant Pump High-Temp. Circ., Aux.coolant Pump Low-Temp.circuit, Auxiliary Coolant Pump For Turbocharger VW Common Control State, Auxiliary Coolant Pump Relay, Boost Pressure Actuator, Boost Pressure Actuator 1, Boost Pressure Actuator 2, Brake Booster Relay Vacuum Pump VW Common Control State, Bypass Valve Electric Machine VW Common Control State, Bypass Valve For Electric Supercharger VW Common Control State, Camshaft Position Actuator Exhaust 1 VW Common Control State, Camshaft Position Actuator Exhaust 2 VW Common Control State, Camshaft Position Actuator Intake 1 VW Common Control State, Camshaft Position Actuator Intake 2 VW Common Control State, Charge Air Cooler Flap VW Common Control State, Charge Motion Valve 1 VW Common Control State, Charge Motion Valve 2 VW Common Control State, Charge Motion Valve VW Common Control State, Charge-Air Cooler Clnt. Mix.valve, CNG Tank Shutoff Valve 1 VW Common Control State, CNG Tank Shutoff Valve 2 VW Common Control State, CNG Tank Shutoff Valve 3 VW Common Control State, CNG Tank Shutoff Valve 4 VW Common Control State, CNG Tank Shutoff Valve VW Common Control State 3, Cold Start Injector VW Common Control State, Compression Test, Compressor Air Recirculation Valve VW Common Control State, Compressor Circulation Bypass Valve VW Common Control State, Control Valve Coolant Pump VW Common Control State, Coolant Circuit Switching Valve, Coolant Circulation Pump 2, Coolant Circulation Pump 3, Coolant Circulation Pump 3 VW Common Control State, Coolant Circulation Pump 4 Actuator, Coolant Circulation Pump 4 Position, Coolant Pump Switching Valve, Coolant Pump, Charge Air Cooler, Coolant Rotary Valve VW Common Control State, Coolant Shut-Off Valve, Coolant Shut-Off Valve VW Common Control State, Coolant Valve Battery VW Common Control State, Coolant Valve For Cylinder Head VW Common Control State, Coolant Valve For Gearbox VW Common Control State, Coolant Valve Radiator VW Common Control State, Cooler Fan Control, Cooling Circuit Control Valve, Crankcase Breather Control Valve, Crankcase Breather Heater 1, Crankcase Ventilation Heater 1 VW Common Control State,

Crankcase Ventilation Heater 2 VW Common Control State, Crankcase Ventilation Heater 3 VW Common Control State, Crankcase Ventilation Valve VW Common Control State, Cylinder Deactivation Actuator 1 VW Common Control State, Cylinder Deactivation Actuator 2 VW Common Control State, Cylinder Deactivation Actuator 3 VW Common Control State, Cylinder Deactivation Actuator 4 VW Common Control State, Cylinder Head Coolant Valve, Diesel Particulate Filter Indicator Lamp VW Common Ctrl State, Disengagement Clutch Actuator Test VW Common Control State, Drive Programm Indicator Light VW Common Control State, ECM/PCM Power Relay VW Common Control State, Egr Bypass Solenoid Valve, Egr Cooler Bypass Valve, Egr Cooler Coolant Pump, Egr Cooling Coolant Pump, Egr Cooling Switching Valve, Egr Cooling Switching Valve 2, EGR Valve Cooler Bypass Valve VW Common Control State, Elec Water Pump For EGR Lo Temp Cooling VW Common Ctrl State, Electr. Vacuum Pump (brake), Electric Aux. Fuel Pump Relay, Electric Coolant Pump, Electric Coolant Pump 2 VW Common Control State, Electric Coolant Pump VW Common Control State, Electric Fuel Pump, Electric Fuel Pump Control Unit, Electric Fuel Pump Relay, Electric Machine Bypass Valve, Electrical Catalyst Heater Actuator Test VW Common Ctrl State, Electrical Fuel Pump, Electrical Fuel Pump 2 VW Common Control State, Electrical Fuel Pump VW Common Control State, Electrical High Temperature Coolant Pump VW Common Ctrl State, Electrical Low Temperature Coolant Pump VW Common Control State, Electrical Thermostat, Emission Warning Lamp (mil), Engine Compartment Fan 2 Control VW Common Control State, Engine Compartment Fan Control VW Common Control State, Engine Component Current Supply Relay 2 VW Common Control State, Engine Component Relay, Engine Cool Pump 2 For Charged Air Cooling VW Common Ctrl State, Engine Cool Pump For Charged Air Cooling VW Common Ctrl State, Engine Cutoff Speed VW Common Control State, Engine Mount 1 VW Common Control State, Engine Mount 2 VW Common Control State, Engine Mount VW Common Control State, Engine Mount. Sol. Valve, Left, Engine Mount. Sol. Valve, Right, Engine Mounting, Engine Mounting Control, Engine Mounting Control 1, Engine Mounting Control 2, Engine Oil Cooler Valve VW Common Control State, Engine Oil Pump, Bypass Sol.valve, Engine Temp. Regulation Actuator, Engine Temperature Regulation Actuator VW Common Control State, EOL Charge Motion Valves VW Common Control State, EOL Exhaust Gas Turbochargers VW Common Control State, EOL Throttle Valves VW Common Control State, Evap Actuation, Evap Purge Valve 2 VW Common Control State, Evap.emission Control Regen.valve, Evaporative Emission System Leak Det Pump VW Common Ctrl State, Evaporative Emission System Leak Det Valve VW Common Ctrl State, Ex Gas Recirculation Cooler Bypass Valve 2 VW Common Ctrl State, Exhaust Gas Flap VW Common Control State, Exhaust Gas Turbocharger 1 VW Common Control State, Exhaust Gas Turbocharger 2 VW Common Control State, Exh. Gas Treatment Scr Heating 2, Exh. Gas Treatment Scr Heating 3, Exh. Supercharger Recirc. Valve, Exhaust Camsh.control Sol. Valve, Exhaust Camsh.timing Control(b1), Exhaust Camsh.timing Control(b2), Exhaust Flap Actuator, Exhaust Flap Control Motor, Exhaust Gas Flap 2 VW Common Control State, Exhaust Gas Flap 3 VW Common Control State, Exhaust Gas Recirculation Valve 1 VW Common Control State, Exhaust Gas Recirculation Valve 2 VW Common Control State, Exhaust Gas Recirculation Valve 3 VW Common Control State, Exhaust Gas Treatm. Scr Injector, Exhaust Gas Treatment Scr Heating, Exhaust Turbocharger Cntrl. Valve, Exhaust-Gas Recirculat. Actuator, Exhaust-Gas Recirculat.actuator 1, Exhaust-Gas Recirculat.actuator 2, Exhaust-Gas Recirculation Valve, Exhaust-Gas Turbocharger Ecu 1, Fan After Run Relay VW Common Control State, Fan Control 1 VW Common Control State, Fan Control 2 VW Common Control State, Fan Control Relay Level 1 VW Common Control State, Fan Control Relay Level 2 VW Common Control State, Force FB Accelerator Pedal Low Version VW Common Ctrl State, Force Feedback Accelerator Pedal Control Value Function, Force Feedback Accelerator Pedal Control Value Position, Force Feedback Accelerator Pedal VW Common Control State 3, Fuel Evap. Shutoff

Valve, Fuel Evaporation Shutoff Valve, Fuel Evaporation/regeneration Valve, Fuel Metering Unit VW Common Control State, Fuel Metering Valve, Fuel Pressure Control Valve, Fuel Pressure Reduction, Fuel Pressure Regulation, Fuel Pressure Regulator 2 VW Common Control State, Fuel Pressure Regulator Diesel VW Common Control State, Fuel Pressure Regulator VW Common Control State, Fuel Pump, Fuel Pump Relay VW Common Control State, Fuel Quantity Control Valve, Fuel Quantity Solenoid Valve, Fuel Tank Breather Valve: Actuation, Fuel Tank Isolation Valve VW Common Control State, Fuel Tank Vent Valve VW Common Control State, Gear Oil Coolant Pump VW Common Control State, Gear Oil Cooling Valve Open VW Common Control State, Glow Control Unit 1, Glow Control Unit 2, Glow Plug Control Module 1 VW Common Control State, Glow Plug Control Module 2 VW Common Control State, Heating Support Pump VW Common Control State, High-Pressure Inj. Valve (cyl. 1), High-Pressure Inj. Valve (cyl. 2), High-Pressure Inj. Valve (cyl. 3), High-Pressure Inj. Valve (cyl. 4), High-Pressure Inj. Valve (cyl. 5), High-Pressure Inj. Valve (cyl. 6), Hv Battery Coolant Pump, Hv System: Auxiliary Coolant Pump, Idle Speed Adjustment VW Common Control State, In-Cylinder Flow Flap, Indicator Light For Glow Control VW Common Control State, Injection Valve Cylinder 1, Injection Valve Cylinder 2, Injection Valve Cylinder 3, Injection Valve Cylinder 4, Injection Valve Cylinder 5, Injection Valve Cylinder 6, Injector Valve 1 VW Common Control State, Injector Valve 10 VW Common Control State, Injector Valve 10B Actuator, Injector Valve 10B Position, Injector Valve 11 VW Common Control State, Injector Valve 11B Actuator, Injector Valve 11B Position, Injector Valve 12 VW Common Control State, Injector Valve 12B Actuator, Injector Valve 12B Position, Injector Valve 13 Actuator, Injector Valve 13 Position, Injector Valve 13B Actuator, Injector Valve 13B Position, Injector Valve 14 Actuator, Injector Valve 14 Position, Injector Valve 14B Actuator, Injector Valve 14B Position, Injector Valve 15 Actuator, Injector Valve 15 Position, Injector Valve 15B Actuator, Injector Valve 15B Position, Injector Valve 16 Actuator, Injector Valve 16 Position, Injector Valve 16B Actuator, Injector Valve 16B Position, Injector Valve 1B Actuator, Injector Valve 1B Position, Injector Valve 2 VW Common Control State, Injector Valve 2B Actuator, Injector Valve 2B Position, Injector Valve 3 VW Common Control State, Injector Valve 3B Actuator, Injector Valve 3B Position, Injector Valve 4 VW Common Control State, Injector Valve 4B Actuator, Injector Valve 4B Position, Injector Valve 5 VW Common Control State, Injector Valve 5B Actuator, Injector Valve 5B Position, Injector Valve 6 VW Common Control State, Injector Valve 6B Actuator, Injector Valve 6B Position, Injector Valve 7 VW Common Control State, Injector Valve 7B Actuator, Injector Valve 7B Position, Injector Valve 8 VW Common Control State, Injector Valve 8B Actuator, Injector Valve 8B Position, Injector Valve 9 VW Common Control State, Injector Valve 9B Actuator, Injector Valve 9B Position, Injector Valve MPI 1 VW Common Control State, Injector Valve MPI 10 VW Common Control State, Injector Valve MPI 2 VW Common Control State, Injector Valve MPI 3 VW Common Control State, Injector Valve MPI 4 VW Common Control State, Injector Valve MPI 5 VW Common Control State, Injector Valve MPI 6 VW Common Control State, Injector Valve MPI 7 VW Common Control State, Injector Valve MPI 8 VW Common Control State, Injector Valve MPI 9 VW Common Control State, Inlet Camsh. Timing Control (b1), Inlet Camsh. Timing Control (b2), Inlet Camsh.control Solen. Valve, Inline Fuel Pump Relais VW Common Control State, Intake Air Control Valve, Intake Man./in-Cyl. Flow Flap 2, Intake Manifold Flap, Intake Manifold Runner Flap VW Common Control State, Intake-Man./in-Cylinder Flow Flap, Iocontrol Particle Filter Regen Pump VW Common Ctrl State, Left Valve For Engine Bearing, Low Pressure EGR Exhaust Flap Actuator VW Common Control State, Mag Clutch For Supercharger Air Gap Test VW Common Ctrl State, Magnetic Clutch For Supercharger VW Common Control State, Main Relay, Malfunction Indicator Lamp VW Common Control State, Map Controlled Eng Cooling Sys Thermostat VW Common Ctrl State, Mass Control Valve Relay VW Common Control State, Oil Pressure Control Valve, Oil Pressure Valve VW Common Control State, Parking Lock Solenoid Activation VW Common Control

State, Particulate Filter Fault Lamp, Particulate Filter Indicator Lamp, Piston Cooling Jet Control Valve VW Common Control State, Piston Cooling Jet Solenoid Valve, Preheating Indicator Lamp, PTC Heating Element 1 VW Common Control State, PTC Heating Element 2 VW Common Control State, PTC Heating Element 3 VW Common Control State, Radiator Blind, Radiator Fan, Radiator Fan 1, Radiator Fan 2, Radiator Fan Actuation, Radiator Fan Actuation 1, Radiator Fan Actuation 2, Radiator Fan Relay 1, Radiator Roller Blind Control VW Common Control State, Radiator Shutter Control 2 VW Common Control State, Radiator Shutter Control 3 VW Common Control State, Radiator Shutter Control 4 VW Common Control State, Radiator Shutter Control VW Common Control State, Rail Pressure Reduction, Rear Exhaust Gas Flap, Recirculation Valve VW Common Control State, Reductant Pump VW Common Control State, Refrigerant Compressor, Relay Cooler Fan 1, Relay Electric Coolant Pump VW Common Control State, Relay For High Heating Output, Relay For Low Heating Output, Relay For Prefeed Pump, Relay For Pump, Fuel Cooling VW Common Control State, Relay Secondary Air Pump, Right Valve For Engine Bearing, SCR Heating Devices 2 VW Common Control State, SCR Heating Devices 3 VW Common Control State, SCR Heating Devices VW Common Control State, SCR Metering Valve 2 VW Common Control State, SCR Metering Valve VW Common Control State, SCR Reverse Valve VW Common Control State, SCR Transfer Pump VW Common Control State, Secondary Air Control Val. (bank2), Secondary Air Control Valve, Secondary Air Injection Relay 2 VW Common Control State, Secondary Air Injection Relay VW Common Control State, Secondary Air Injection Valve 2 VW Common Control State, Secondary Air Relay, Shift Drum Motor Position Shift Position, Solenoid Valve Boost-Press. Control, Solenoid Valve Exhaust Recirculation 2, Solenoid Valve Exhaust-Gas Recirc., Solenoid Valve/exhaust Flap 1, Solenoid Valve/exhaust Flap 2, Spindle Actuator Of Engine Decoupler VW Common Control State, Supplem. Heating Pump Actuation, Swirl Flap, Swirl Flap Actuator, Swirl Flap Positioner 1, Swirl Flap Positioner 2, Switchable Water Pump, Switchable Waterpump VW Common Control State, System Identification, Tank Leak Unit Solenoid Valve, Tank Leakage Diagnosis Pump, Throttle Actuator, Throttle Valve, Throttle Valve 1 VW Common Control State, Throttle Valve 2 VW Common Control State, Throttle Valve Control Module, Throttle Valve Control Unit, Transm. Oil Cooler Bypass Valve, Transmission Coolant Valve, Transmission Mount 1 VW Common Control State, Transmission Mount 2 VW Common Control State, Transmission Oil Pump Activation VW Common Control State, Turbine Sol. Valve Turbocharger2, Turboch. Recirc.-Air Sol. Valve, Turbocharger 1, Turbocharger Bypass Valve, Turbocharger Bypass Valve 2 VW Common Control State, Turbocharger Bypass Valve VW Common Control State, Turbocharger Control Unit 2, Turbocharger Control Valve 2 VW Common Control State, Turbocharger Control Valve VW Common Control State, Turbocharger Turbine Inlet Valve VW Common Control State, Valve For Engine Mounting 1, Valve For Engine Mounting 2, Valve For Transmission Mounting 1, Valve For Transmission Mounting 2, Variable Intake Manifold VW Common Control State, Variable Intake System, Volume Control Valve 1 VW Common Control State, Volume Control Valve 2 VW Common Control State, Wastegate Solenoid Valve, Wastegate VW Common Control State, Water Cooling Bypass Vlv Charge Air Cooling VW Com Ctrl State, Water Mixing Actuator Charge Air Cooling VW Common Ctrl State, Water Mixing Actuator VW Common Control State

- o **Hybrid** - Actuate Charging Connection 1, Actuate Charging Connection 2, Charge Indicator Lamp 1, Charge Indicator Lamp 2, Control Lamp Button Load Profile, Hv Batt.immediate Charging Button, Hv Charging Cable Indicator Lamp, Reset Hv Charge Cable Mating Cyc., System Identification, Coolant Pump Control HV Batterie Pump Duty, Cooling Valve 1 Hi Voltage Battery Cooling Valve1 Tar Position, Hv Batt.: Sv 1 Coolg.sys.opening, Hv Batt.: Sv 2 Coolg.sys.opening, Hv Batt.:sv 1 Cooling Sys.closing, Hv Batt.:sv 2 Cooling Sys.closing, HV Battery Charge/discharge Current, Hv Battery: Fan Actuation, Hv Battery: Vent Flap 1, Hv

- Battery: Vent Flap 2, Radiator Fan Actuation 1, Radiator Fan Actuation 2, Reserved VW Common Control State, Cool Pump For Lo Temp Circuit Actuator Test VW Com Ctrl State
- **AWD/Transfer Case** - Front Axle Torque Request, System Identification
 - **ABS/Brakes** - Abs Motor, ABS Return Flow Pump Control Value On OFF, Actuatoric Test Control Value Actuationtime, Actuatoric Test Control Value Delaytime, Apply Brake Pads Control State, Apply Brake Pads Control Value On Off, Apply Brakes Control State, Apply Brakes Control Value On Off, Approach Brake Pads Control State, Approach Brake Pads Control Value On Off, Brake Indicator Lamp, Brake Light, Brake Light By Ecd Control State, Brake Light By ECD Control Value On OFF, Brake Light By ECD IO Control Option Brake Light By ECD, Brake Pedal Appliance Control Value Brake Light Activation, Brake Pedal Appliance Control Value PAR Control, Complete Test Of ECU Valves And Pump Motor Control Value On OFF, Control Wheel Pressure Wheel, Control Wheel Pressure Wheel Pressure, Display Test, Text, Drv Dynamics Reg Hi Pres Switch Valve 1 Ctrl Value On OFF, Drv Dynamics Reg Hi Pres Switch Valve 2 Ctrl Value On OFF, Dynamic Test Control Value 1actuatorvalue, Dynamic Test Control Value 1ID Actuator, Dynamic Test Control Value 2actuatorvalue, Dynamic Test Control Value 2idactuator, Dynamic Test Control Value 3actuatorvalue, Dynamic Test Control Value 3idactuator, Dynamic Test Control Value 4actuatorvalue, Dynamic Test Control Value 4idactuator, Dynamic Test Control Value Actuationtime, Dynamic Test Control Value Waitingtime, Emergency Brake Signal Control State, Emergency Brake Signal Control Value On OFF, Entwicklerstellglied 01 IO Control Option OBD Status Lamp, Esp Test, Front Left ABS Inlet Valve Control Value On OFF, Front Left ABS Outlet Valve Control Value On OFF, Front Left Abs Solenoid Valve, Front Right ABS Inlet Valve Control Value On OFF, Front Right ABS Outlet Valve Control Value On OFF, Front Right Abs Solenoid Valve, Function Lmp For Autohold Btn IO Ctrl Opt Fun Lmp For Autohold , Function Lmp PK Brk Button IO Ctrl Opt Fun Lmp PK Brk Button, Green Function Lamp Control State, Green Indicator Lamp Control Value On Off, Hill Hold Control Button Led, Hill Hold Control Indicator Lamp, Ind Lamp In Electronic Parking Brake Button Ctrl Value On Off, Indicator Lamp For Hold Assist Control Value On OFF, Indicator Lamp Park Brake Button Control State, Inlet Valves IO Control Option Front Left ABS Inlet Valve, Inlet Valves IO Control Option Front Right ABS Inlet Valve, Inlet Valves IO Control Option Rear Left ABS Inlet Valve, Inlet Valves IO Control Option Rear Right ABS Inlet Valve, Parking Brake Button Led, Parking Brake Indicator Lamp, Parking Brake Warning Lamp, Parking Brk Mot Lt Closing Stepwise IO Ctrl Opt PK Brk Mot Lt C, Parking Brk Mot Rt Closing Stepwise IO Ctrl Opt PK Brk Mot Rt C, Parking Brk Motors Closing Stepwise IO Ctrl Opt PK Brk Motors C, Pulse-Wheel Test, Rear Left ABS Inlet Valve Control Value On OFF, Rear Left ABS Outlet Valve Control Value On OFF, Rear Left Abs Solenoid Valve, Rear Right ABS Inlet Valve Control Value On OFF, Rear Right ABS Outlet Valve Control Value On OFF, Rear Right Abs Solenoid Valve, Red Function Lamp Control State, Red Indicator Lamp Control Value On Off, Red Warning Lamp Control State, Red Warning Lamp Control Value On Off, Release Both Brakes Control State, Release Both Brakes Control Value On Off, Release Left Brake Control State, Release Left Brake Control Value On Off, Release Right Brake Control State, Release Right Brake Control Value On Off, Self Test Ground Cabling Control Value Currentsource, Short Brake Apply Left Control State, Short Brake Apply Left Control Value On Off, Short Brake Apply Right Control State, Short Brake Apply Right Control Value On Off, Sounder Control Value On Off, Static Test, System Identification, Vehicle Stabilization Program Switch Valve 1 Ctrl Value On OFF, Vehicle Stabilization Program Switch Valve 2 Ctrl Value On OFF, Warning Tone Generator, Wheel Speed Sensors Index Error Test Control Value Axle, Yellow Warning Lamp Control State, Yellow Warning Lamp Control Value On Off
 - **Airbag/Safety** – Airbag Crash Signal Rest Of World, Airbag Indicator Light Off, Crash Signal, Ds Belt Buckle Illumination, Error Lamp, Error Text Output, Front-Passenger Airbag Indicator Lamp (off), Ps Belt Buckle Illumination, Rear Centre Belt Catch Lighting, Rear Left Belt Catch

Lighting, Rear Right Belt Catch Lighting, System Identification, Vehicle Conditioning, Warning Message

- **Suspension** - Air Suspension Compressor Relay, Button Lighting, Fr.left Damper Adj.val.curr. Hard, Fr.left Damper Adj.val.curr. Soft, Fr.rght.damper Adj.val.curr. Hard, Fr.rght.damper Adj.val.curr. Soft, Front Left Air Spring Valve, Front Right Air Spring Valve, Pressure Test, Rear Left Air Spring Valve, Rear Left Damp.adj.val.curr. Hard, Rear Left Damp.adj.val.curr. Soft, Rear Rght.damp.adj.val.curr. Hard, Rear Rght.damp.adj.val.curr. Soft, Rear Right Air Spring Valve, System Identification
- **Instrument Cluster** - Belt Indicator Lamp, Brake Indicator Lamp, Brake Wear Indicator Lamp, Coolant Temperature Gauge, Engine Overheating Warning Lamp, Fuel Level Display, Gong, Oil Level Warning Lamp, Oil-Pressure Indicator Lamp, Preheating Indicator Lamp, Reserve Fuel Lamp, Segment Test, Speed Indicator, System Identification, Tachometer, Test Screen, Turn Signal Lamp Acoustic Signal, Warning Buzzer, Washer Fluid Level Indicator Lamp, Yellow Lane Keep.ass. Indic. Lamp, Anti-Theft Device, Cd/dvd Ejection, Display 1, Display Test 1 Control Value Display, Display Test 1 Display, Display Test 2 Control Value Display, Display Test 3 Control Value Display, Display Test Ctrl Unit Dash Panel Insert Control Value Display, Fan Control, Internal Blower Control Control Value Fan Level, Loudspeaker Test, Loudspeaker Test Acoustic Loudspeaker Test Channel Selection, Loudspeaker Test Acoustic Test Frequency, Loudspeaker Test Acs Ctrl Val Loudspeaker Test Chn Selection, Mechanical System Display Unit 1, Remote Freq Selection DAB Band III Ctrl Value Freq DAB Band 3, Remote Frequency Selection FM Control Value Frequency FM, Remote Set AF Control Value State, Remote Set DAB Announcement Control Value Alarm, Remote Set DAB Announcement Control Value Area Weather Flash, Remote Set DAB Announcement Control Value Event Announcement, Remote Set DAB Announcement Control Value Financial Report, Remote Set DAB Announcement Control Value News Flash, Remote Set DAB Announcement Control Value Programs Info, Remote Set DAB Announcement Control Value Road Traffic Flash, Remote Set DAB Announcement Control Value Special Event, Remote Set DAB Announcement Control Value Sport Report, Remote Set DAB Announcement Control Value Transport Flash, Remote Set DAB Announcement Control Value Warning Service, Remote Set DAB Linking Control Value Mode, Remote Set DAB Mute Control Value DAB Mute, Remote Set Hidden Tune Control Value Hidden Tune, Remote Set TP Control Value State, Remote Source Selection Control Value Source Selection, Remote Voice Control Control Value Speech Dialog State, Tweeter Speaker Motor Fr Right Ctrl Value Retractable Speaker, Tweeter Speaker Motor Front Left Ctrl Value Retractable Speaker
- **HVAC/Climate Control** - Ac/heat Output Test, Additional Air Heating Input Output Control Parameter, Additional Air Heating VW Common Control State, Additional Heater Activation Test Control Value, Additional Heater Activation Test Input Output Ctrl Parameter, Adopt.of Unfiltered Ambient Temp., Air Condit. Compressor Actuation, Air Condition Compressor Activation Input Output Ctrl Parameter, Air Condition Compressor Activation VW Common Control State, Air Conditioner Performance Test Input Output Control Parameter, Air Conditioner Performance Test VW Common Control State, Air Dist Flap Front Ctrl Motor Input Output Control Parameter, Air Distribution Flap Front Control Motor Sollwert, Air Flap Actuator, Air Flow Flap, Air Recirculation Flap Control Motor, Air Supplementary Heating, Blower Activation Input Output Control Parameter, Central Flap Control Motor, Cool Pmp For Lo Temp Circuit Act Tst Inp O/P Ctrl Parameter, Cool Pump For Lo Temp Circuit Actuator Test Ctrl Value On Off, Coolant Circulation Pump 2 Test Control Value On Off, Coolant Circulation Pump 2 Test Input Output Control Parameter, Coolant Circulation Pump 3 Control Value On Off, Coolant Circulation Pump 3 Input Output Control Parameter, Coolant Circulation Pump Control Value On Off, Coolant Circulation Pump Input Output Control Parameter, Cutoff Valve 1 Refrigerant Test Input Output Control Parameter, Cutoff Valve 1 Refrigerant Test VW Common Control State, Cutoff Valve 2

Refrigerant Test Input Output Control Parameter, Cutoff Valve 2 Refrigerant Test VW Common Control State, Defrost Flap Control Motor, Defroster Flap Control Motor Input Output Control Parameter, Elec Air Conditioner Compressor Test Inp Output Ctrl Parameter, Electrical Air Conditioner Compressor Test Control Value On Off, EMC Mode Flap Control Motors Test VW Common Control State, EMC Mode Flap Ctrl Motors Test Input Output Control Parameter, Emc Test Mode, Fan Control 1 Control Value On Off, Fan Control 1 Input Output Control Parameter, Fan Control 2 Control Value On Off, Fan Control 2 Input Output Control Parameter, Fresh Air Blower, Fresh/circulating Air Flap, Front Air Distr. Flap Ctrl. Motor, Front Fresh Air Blower, Frs Air / Air Recirculation / Air Flow Flap Ctrl Mot Inp O/P Co, Function Test All Valves Control Value On Off, Function Test All Valves Input Output Control Parameter, Heated Wiper Rack Test Control Value, Heated Wiper Rack Test Input Output Control Parameter, High Voltage Heater Test Control Value On Off, High Voltage Heater Test Input Output Control Parameter, Hyb EV Bat Pack Cool Ctrl Vlv B Tst Inp O/P Control Parameter, Hyb EV Battery Pack Cool Ctrl Valve B Test Control Value On Off, Illumination Operating And Disp Unit Test VW Common Ctrl State, Ionisator Front Ionisator Aus/An, Ionisator Rear Ionisator Aus/An, Left Temperature Flap Ctrl Motor Input Output Control Parameter, LIN Heck-PTC Kanal A Control State, LIN Heck-PTC Kanal B Control State, Magnetic Clutch For Air Condition Input Output Ctrl Parameter, Magnetic Clutch For Air Condition VW Common Control State, Mmi Display Temp. Setting Actuat., Operating Unit Illumination, Pass Actual Ambient Temp Value Input Output Ctrl Parameter, Pump 1 Refrigerant Circulation Test Input Output Ctrl Parameter, Pump 2 Refrigerant Circulation Test Input Output Ctrl Parameter, Radiator Shutter Control Control Value On Off, Radiator Shutter Control Input Output Control Parameter, Re. Temp. Door Positioning Motor, Rear Blower Activation Control Value On Off, Rear Blower Activation Input Output Control Parameter, Refrigerant Compressor, Refrigerant Expansion Valve 1 Test Control Value On Off, Refrigerant Expansion Valve 1 Test Input Output Ctrl Parameter, Refrigerant Expansion Valve 2 Test Control Value On Off, Refrigerant Expansion Valve 2 Test Input Output Ctrl Parameter, Refrigerant Expansion Valve 3 Test Control Value On Off, Refrigerant Expansion Valve 3 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valve 3 Test Control Value On Off, Refrigerant Shut Off Valve 3 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valve 4 Test Control Value On Off, Refrigerant Shut Off Valve 4 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valve 5 Test Control Value On Off, Refrigerant Shut Off Valve 5 Test Input Output Ctrl Parameter, Refrigerant Shut Off Valves Dynmc Test Inp O/P Ctrl Parameter, Refrigerant Shut Off Valves Dynmc Tst Compressor Pow Limitation, Right Temperature Flap Control Motor Sollwert, Right Temperature Flap Ctrl Mot Input Output Control Parameter, Seat Backrest Heating Left Test Control Value, Seat Backrest Heating Left Test Input Output Control Parameter, Seat Backrest Heating Right Test Control Value, Seat Backrest Heating Right Test Input Output Control Parameter, Seat Cushion Heating Left Test Control Value, Seat Cushion Heating Left Test Input Output Control Parameter, Seat Cushion Heating Right Test Control Value, Seat Cushion Heating Right Test Input Output Control Parameter, Seat Heating Entire Test Control Value, Seat Heating Entire Test Input Output Control Parameter, Seat Heating Rear Left Input Output Control Parameter, Seat Heating Rear Left VW Common Control State, Seat Heating Rear Right Input Output Control Parameter, Seat Heating Rear Right VW Common Control State, Seat Ventilation Entire Test Control Value, Segment Test, Segment Test VW Common Control State, SIH Rear Left Control Value, SIH Rear Left Control Value 1, SIH Rear Right Control Value, SIH Rear Right Control Value 1, SIL Rear Left (LLR LS1 Li) Control Value, SIL Rear Left(LLR LL1 Li) Control Value, SIL Rear Right (LLR RL1 Re) Control Value, SIL Rear Right (LLR RS1 Re) Control Value, Supplementary Heater, Surface Heating Entire Test Control Value, System Identification, Temperature Flap Control Motor, Temperature Flap Rear Ctrl Motor Input Output Control Parameter, Temperature Flap Servomotor: Left, Temperature Flap Servomotor: Right, Test Mode, Washer Jet Heating Test Control Value,

Washer Jet Heating Test Input Output Control Parameter, Windscreen Heating Control Value, Windscreen Heating Input Output Control Parameter

- **Body** – Alarm Horn, Ambient Light Door Driver Side Front: Contour Lighting, Ambient Light Door Driver Side Rear: Contour Lighting, Ambient Light Door Passenger Side Front: Contour Lighting, Ambient Light Door Passenger Side Rear: Contour Lighting, Ambient Lighting: Channel 1, Asr/esp Control Lamp, Auto-Hold Indicator Lamp, Blinkers, Brake Light Test Control Value, Compressor (driver Side Multi-Contour Seat), Compressor (passenger Side Multi-Contour Seat), Cup Holder Ambient Light, Dipped Beam, Direction Indicator Left, Direction Indicator Right, Driver Side Multi-Contour Seat: Functional Test, Example Input Output Identifier Controlstate, Exterior Lighting, Fog Light, Left, Fog Light, Right, Front Centre Console Ambient Light 1, Front Ds Door Trim Ambient Light., Front Footwell Lighting, Front Left Turn Signal Indicator Lamp 2, Rear Left Indicator La, Front Parking Aid Warning Buzzer, Front Ps Door Trim Ambient Light., Front Right Turn Signal Indicator Lamp 2, Rear Right Indicator , Hazard Warnng. System Indic. Lamp, Hdc Indicator Lamp, Headlight Washer System, High-Beam Headlight, Left, High-Beam Headlight, Right, Instrument Cluster: Contour Lighting, Interior And Function Lighting, Le. Dayt.driv./side Light Led Power Mod., Left Cornering Light: Dimming, Left Daytime Driving Light, Left Daytime Driving Light Bulb 2, Left Daytime Driving/side Light, Left Head Area Heating, Left Main Beam Screen, Left Side Light/dayt. Driv. Light Bulb 2, Left Side Light: 1, Left Side Light: 2, Move Left Headlamp Horizontally, Move Left Headlamp Vertically, Move Right Headlamp Horizontally, Move Right Headlamp Vertically, Multimedia Operating Unit: Contour Lighting, Parking Aid Button, (control Lamp): Actuation, Parking Aid, Loudspeaker, Parking Aid: Activation, Parking Assistant Indicator Lamp, Parking Steering Ass. Indic. Lamp, Passenger Side Multi-Contour Seat: Functional Test, Reading Lights, Rear Ds Door Trim Ambient Light., Rear Footwell Lights, Rear Ps Door Trim Ambient Light., Rear Window Washer Pump, Rear Wiper, Ri. Dayt.driv./side Light Led Power Mod., Right Cornering Light: Dimming, Right Daytime Driving Light, Right Daytime Driving Light Bulb 2, Right Daytime Driving/side Light, Right Head Area Heating, Right Main Beam Screen, Right Sd Light/dayt. Driv. Light Bulb 2, Right Side Light: 1, Right Side Light: 2, Roof Marker Light, Seat Heating, Seat Ventilation, Side-Marker Lamp, Left Front, Side-Marker Lamp, Right Front, Start/stop Indicator Lamp, Steering Column Adjust. Downwards, Steering Column Adjustm. To Front, Steering Column Adjustm. To Rear, Steering Column Adjustm. Upwards, Suppress Mirror Glare, System Identification, Window Wiper Front Position Test Control Value, Windscreen Wiper: Position, Windshield Washer Pump, Windshield Wiper, Windshield Wiper Heater Element, Washer Jet Heater
- **Others** – tests for CENTRAL COMFORT SYS, MULTIFUNCTION MODULE, SUNROOF CONTROL MODULE, SEAT ADJUST DRIVER, DECK LID CONTROL UNIT, HEADLIGHT REGULATION, LIGHT CONTROL systems, BATTERY CHARGER C/M, DOOR ELEC systems, ANTENNA CONTROL MODULE, TELEMATICS COMMUNICATION

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