

OBD II Pro Plus

Enhanced BMW Module List

[Sensors](#) [Commands](#)

Supported Systems

| | | |
|------------------------------------|------------------------------------|------------------------------------|
| ABS (MK20) | ABS (MK60) | ABS (MKIV) |
| ABS ASC 5 | ABS DSC III | ABS/ASC 5.7 |
| ABS/DSC 5.7 | Airbag (MRSII) | Airbag (SRS) |
| Airbag MRS III | Airbag MRS IV | Basic Interface Telephone (BIT) |
| Central Body (ZKE) | Central Body III (ZKE) | CruiseControl II (GR) |
| Engine M3.3 M60 (DME) | Engine M44 (DME) | Engine M62 (DME) |
| Engine ME 7.2 M62TU (DME) | Engine MS4.2 M52TU (DME) | Engine MS41.1 M52 (DME) |
| Engine MS41.2 M52-B32 (DME) | Engine MS43 M43 (DME) | Engine MS43-M54 (DME) |
| Engine MS46-M46 (DME) | Engine MS521 M62 | Engine S52-S54-S62 (DME) |
| Heater/Air Conditioning (IHKA E36) | Heater/Air Conditioning (IHKA E38) | Heater/Air Conditioning (IHKA E39) |
| Heater/Air Conditioning (IHKA) | Immobilizer (EWS) | Immobilizer II (EWS) |
| Immobilizer III (EWS) | Instrument Cluster (IKE/IKI/KOM) | Light Switching Center (LCM/LZM) |
| Lighting System | MINI CVT Transmission | MINI Cruise Control |
| MINI Engine R50 | MINI Heater/Air Conditioning | MINI Immobilizer |
| Mirror Memory Driver Side | Mirror Memory Passenger Side | Multifunction Steering Wheel (MFL) |
| Navigation (NAV) | OnBoard Module (BM) | Parking Distance Control (PDC) |
| Radio (RAD) | Seat Memory | Seat Memory (E39) |
| Seat Steering Column Memory | Side Lights | Sliding Tilting/Roof (SHD) |
| Steering Angle System (LEW) | Switching Center Console (SZM) | Transmission 860.2 (EGS) |
| Transmission 860.4 (EGS) | Transmission 9.22 (EGS) | Transmission GS20 (EGS) |
| Transmission GS834 (EGS) | Transmission SMG II (EGS) | |

ABS (MK20) Sensors

| | | |
|--------------------------|---------------------------|-------------------------|
| DSC Button | Brake Pedal Status | Brake Pressure - Front |
| Brake Pressure - Rear | Brake Fluid | Hand / Parking Brake |
| Lateral Acceleration | Rotating Speed | Steering Angle |
| Wheel Speed - Front Left | Wheel Speed - Front Right | Wheel Speed - Rear Left |
| Wheel Speed - Rear Right | | |

ABS (MK60) Sensors

| | | |
|---------------------------|--------------------------|--------------------------|
| ASC / DSC Button | Brake Circuit Pressure 1 | Brake Circuit Pressure 2 |
| Brake Fluid | Brake Light Switch | Rotating Speed |
| Steering Angle | Transversal Acceleration | Wheel Speed - Front Left |
| Wheel Speed - Front Right | Wheel Speed - Rear Left | Wheel Speed - Rear Right |

ABS (MKIV) Sensors

| | | |
|--------------------------|---------------------------|--------------------------|
| Brake Light Switch | Power Supply | Solenoid Valves Feedback |
| Wheel Speed - Front Left | Wheel Speed - Front Right | Wheel Speed - Rear Left |
| Wheel Speed - Rear Right | | |

ABS ASC 5 Sensors

| | | |
|-------------------------|--------------------------|---------------------------|
| ABS Valve Relay | ASC Button | Brake Pedal Status |
| Engine Speed | Hand / Parking Brake | Return Pump |
| Throttle Opening | Wheel Speed - Front Left | Wheel Speed - Front Right |
| Wheel Speed - Rear Left | Wheel Speed - Rear Right | |

ABS DSC III Sensors

| | | |
|---|--|------------------------------|
| ABS Valve Relay | Accelerator Pedal | ASC / DSC |
| Brake Priming Pressure | Changeover Valve - Front Axle | Changeover Valve - Rear Axle |
| Changeover Valve (Hi Pressure) - Front Axle | Changeover Valve (Hi Pressure) - Rear Axle | Engine Speed |
| Foot Brake | Hand Brake | Inlet Valve - Front Left |
| Inlet Valve - Front Right | Inlet Valve - Rear Left | Inlet Valve - Rear Right |
| Outlet Valve - Front Left | Outlet Valve - Front Right | Outlet Valve - Rear Left |
| Outlet Valve - Rear Right | Battery Voltage | Recharging Pump |

| | | |
|--------------------------|--------------------------|---------------------------|
| Rotation Rate | Steering Angle | Throttle Opening |
| Transversal Acceleration | Wheel Speed - Front Left | Wheel Speed - Front Right |
| Wheel Speed - Rear Left | Wheel Speed - Rear Right | |

ABS/ASC 5.7 Sensors

| | | |
|-------------------------------------|------------------------|-----------------------------------|
| ASC Button | ASC Valve Relay | Brake Light Switch |
| Engine Speed | Hand Brake | Injection Volume (ASC Controlled) |
| Injection Volume (ASC Uncontrolled) | Return Pump | Wheel Speed: Front Left |
| Wheel Speed: Front Right | Wheel Speed: Rear Left | Wheel Speed: Rear Right |

ABS/DSC 5.7 Sensors

| | | |
|---|--|------------------------------|
| ABS Valve Relay | Accelerator Pedal | ASC / DSC |
| Supply Voltage | Brake Priming Pressure | Brake Reservoir Fluid Level |
| Brake Switch (CAN from ECM) | Changeover Valve - Front Axle | Changeover Valve - Rear Axle |
| Changeover Valve (Hi Pressure) - Front Axle | Changeover Valve (Hi Pressure) - Rear Axle | Engine Speed |
| Engine Throttle Opening | Foot Brake | Hand Brake |
| Inlet Valve - Front Left | Inlet Valve - Front Right | Inlet Valve - Rear Left |
| Inlet Valve - Rear Right | Outlet Valve - Front Left | Outlet Valve - Front Right |
| Outlet Valve - Rear Left | Outlet Valve - Rear Right | Precharging Pump |
| Rotation Rate | Steering Angle | Transversal Acceleration |
| Wheel Speed - Front Left | Wheel Speed - Front Right | Wheel Speed - Rear Left |
| Wheel Speed - Rear Right | | |

Airbag (MRSII) Sensors

| | |
|-------------------------|----------------------------|
| Driver Seat Belt Buckle | Passenger Seat Belt Buckle |
|-------------------------|----------------------------|

Airbag MRS III Sensors

| | | |
|-------------------------|----------------------------|-------------------------|
| Driver Seat Belt Buckle | Passenger Seat Belt Buckle | Passenger Seat Occupied |
|-------------------------|----------------------------|-------------------------|

Airbag MRS IV Sensors

| | |
|-------------------------|----------------------------|
| Driver Seat Belt Buckle | Passenger Seat Belt Buckle |
|-------------------------|----------------------------|

Basic Interface Telephone (BIT) Sensors

| | | |
|-------------------------------|--------------|--------------------------------|
| Handset Software | Radio Muting | Shift Signal Eject Box - Front |
| Shift Signal Eject Box - Rear | Terminal R | WDCT Switch |

Central Body (ZKE) Sensors

| | | |
|--|---|---|
| Anti-Trapping Strip - Drivers Side Door | Anti-Trapping Strip - Drivers Side Rear Door | Anti-Trapping Strip - Passenger Side Door |
| Anti-Trapping Strip - Passenger Side Rear Door | Burglar Alarm System Status | Central Locking Button |
| Central Power Window Switch (E46) | Central Power Window Switch (E52) | Central Power Window Switch (E85) |
| Child Safety Circuit | Convertible Top Compartment Lid Button | Convertible Top Compartment Lid Motor |
| Convertible Top Compartment Lid Switch | Convertible Top Compartment Lid Switch - Drivers Side | Convertible Top Compartment Lid Switch - Passenger Side |
| Door Contact - Drivers Side | Door Contact - Drivers Side Rear | Door Contact - Passenger Side |
| Door Contact - Passenger Side Rear | Door Lock - Drivers Side | Door Lock - Passenger Side |
| Front Drivers Side Door Switch | Front Drivers Side Rear Switch | Front Passenger Side Door Switch |
| Front Passenger Side Rear Switch | Glove Box Lock (E46) | Glove Box Lock (E52) |
| Hood Contact | Interior Lights | Intermittent Wiper State |
| Key In Ignition Lock | Load Cutoff | Rear Window Button |
| Rear Window Contact | Tailgate Button | Tailgate Contact |
| Tailgate Lock | Tank Flap Button | Terminal 30 (Central Locking) |
| Terminal 30 (Front Power Windows) | Terminal 30 (Interior Light) | Terminal 30 (Load) |
| Terminal 30 (Tailgate) | Terminal 30 (Washer Pump) | Terminal R |
| Vehicle Speed | Washer Switch | Wiper Switch |

Central Body III (ZKE) Sensors

| | | |
|--------------------------------------|---|---|
| Boot Lid - Contact | Boot Lid - Opening Button Inside | Boot Lid - Opening Button Lock Cylinder |
| Boot Lid | Central Locking System Button | Hood State |
| Interior Light Switch | Lock State Drivers Side | Lock State Passenger Side |
| Lock State Rear Lid | Lock Striker State | Locking Switch Drivers Side |
| Locking Switch Passenger Side | Mirror - Adjust Switch | Mirror - Driver Side Horizontal |
| Mirror - Driver Side Vertical | Mirror - Horizontal Switch Left | Mirror - Horizontal Switch Right |
| Mirror - Passenger Side Horizontal | Mirror - Passenger Side Vertical | Mirror - Vertical Switch Bottom |
| Mirror - Vertical Switch Top | Outside Temperature | Servo Valve |
| Speedo Output Signal at Module | Road Speed via K Bus | Door - Driver Side Front |
| Door - Driver Side Rear | Door - Passenger Side Front | Door - Passenger Side Rear |
| Safety Switch | Sidelights | Terminal 15 |
| Terminal 30 | Terminal R | Window - Drivers Side Open Switch |
| Window - Drivers Side Close Switch | Window - Drivers Side Rear Close Switch | Window - Drivers Side Rear Open Switch |
| Window - Passenger Side Close Switch | Window - Passenger Side Open Switch | Wiper - Stalk Position |
| Wiper - Switch | | |

CruiseControl II (GR) Sensors

| | | |
|-------------------|-------------|---------------|
| Accelerate Button | Brake Pedal | Clutch Pedal |
| Decelerate Button | Off Button | Resume Button |

Engine M3.3 M60 (DME) Sensors

| | | |
|---------------------|------------------------|---------------------------------------|
| A/C Compressor | A/C Compressor Cutoff | A/C Switch |
| ASC Switch | CAN Reception from EGS | Coolant Temperature |
| Driving Position | Engine Speed | Idle Speed Air Adaption |
| Ignition Angle | Injection Signal | Intake Air Temperature |
| Knock Control | Load Signal | Long Term Fuel Trim (Additive) Bank 1 |
| Long Term Fuel Trim | Mass Air Flow | MSR Switch |

| | | |
|--|--|----------------|
| (Additive) Bank 2 | | |
| O2 Sensor Bank 1 Integrator | O2 Sensor Bank 2 Integrator | Overrun Cutoff |
| Short Term Fuel Trim (Multiplicative) Bank 1 | Short Term Fuel Trim (Multiplicative) Bank 2 | Start Signal |
| Tank Ventilation | Throttle Position Sensor | Vehicle Speed |

Engine M44 (DME) Sensors

| | | |
|--------------------------|--|---|
| A/C Compressor | A/C Compressor Request | A/C Switch |
| Acceleration Enrichment | Battery Voltage | Coolant Temperature |
| Engine Speed | Engine Speed Specified by DME Control Module | Fuel Pump |
| Idle-Air Integrator | Ignition Timing | Intake-Air Temperature |
| Load Signal | MIL Fault Lamp (US Vehicle Only) | Multiplicative Mixture Adaption (Part Load) |
| Overrun Cutoff | Tank Reserve Check | Tank Ventilation |
| Throttle -Valve Position | Throttle Valve Potentiometer | Vehicle Speed |

Engine M62 (DME) Sensors

| | | |
|--|--|---|
| AC Compressor | AC Compressor Requested | AC Switch |
| Acceleration Enrichment | Air Intake Temperature | Coolant Temperature (Engine Outlet) |
| Driving Lights | Engine Speed | Engine Speed Requested |
| Fuel Pump | Idle Air Integrator | Ignition Lock Position 2 |
| Ignition Lock Position 3 | Ignition Timing | Inertia Fuel Shutoff |
| Knock Control | Mass Air Flow Sensor | MIL Lamp |
| Main Relay | Mixture Adaption Additive (Idling) Bank 1 | Mixture Adaption Additive (Idling) Bank 2 |
| Mixture Adaption Multiplicative (Part Load) Bank 1 | Mixture Adaption Multiplicative (Part Load) Bank 2 | Oxygen Sensor Before Cat. Bank 1 |
| Power Supply | Road Speed | Tank Reserve Check |
| Tank Ventilation | Tank Venting Valve Duty Factor | Throttle Valve Adaption |
| Throttle Valve Position | Throttle Valve Potentiometer | Throttle Valve Potentiometer Adaption |

Engine ME 7.2 M62TU (DME) Sensors

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|---|--|--|
| A/C Compressor | A/C Compressor Request | Additive Mixutre Adaption (Idle) Bank 1 |
| Additive Mixutre Adaption (Idle) Bank 2 | Automatic Starting | Average Rough Running - Cylinder 1 |
| Average Rough Running - Cylinder 2 | Average Rough Running - Cylinder 3 | Average Rough Running - Cylinder 4 |
| Average Rough Running - Cylinder 5 | Average Rough Running - Cylinder 6 | Average Rough Running - Cylinder 7 |
| Average Rough Running - Cylinder 8 | Battery Voltage | Brake Light Switch |
| Camshaft Position - Bank 1 | Camshaft Position - Bank 2 | Clutch Switch |
| Coolant Temperature (Engine Outlet) | Coolant Temperature (Radiator Outlet) | Crankshaft Sensor Gear Adaption Angle 1 Bank 1 |
| Crankshaft Sensor Gear Adaption Angle 2 Bank 1 | Crankshaft Sensor Gear Adaption Angle 3 Bank 1 | Crankshaft Sensor Gear Adaption Angle 4 Bank 1 |
| Crankshaft Sensor Gear Adaption Angle 5 Bank 2 | Crankshaft Sensor Gear Adaption Angle 6 Bank 2 | Crankshaft Sensor Gear Adaption Angle 7 Bank 2 |
| Crankshaft Sensor Gear Adaption Angle 8 Bank 2 | Electrical Fan Duty Cycle | Engine Idling |
| Engine Speed | Engine Speed Specified by DME Control Unit | Engine Torque |
| EWS OK | Fan in Control Unit Activation | Fuel Pump |
| Full Load | Idle-Speed Increase Due to Air Conditioning | Idle-Speed Increase Due to Low Battery |
| Ignition Lock Position 2 | Ignition Lock Position 3 | Ignition Timing |
| Inertia Fuel Shutoff | Injection Signal | Intake-Air Temperature |
| Map Cooling | Mass Air Flow | Mass Air Flow Sensor |
| Multiplicative Mixture Adaption (Part Load) Bank 1 | Multiplicative Mixture Adaption (Part Load) Bank 2 | O2 Sensor After Cat. Bank 1 Normalized Output |
| O2 Sensor After Cat. Bank 1 Ready Operation | O2 Sensor After Cat. Bank 2 Normalized Output | O2 Sensor After Cat. Bank 2 Ready Operation |
| O2 Sensor Before Cat. Bank 1 Normalized Heat Output | O2 Sensor Before Cat. Bank 1 Period of Duration | O2 Sensor Before Cat. Bank 1 Ready Operation |
| O2 Sensor Before Cat. Bank 2 Normalized Heat Output | O2 Sensor Before Cat. Bank 2 Period of Duration | O2 Sensor Before Cat. Bank 2 Ready Operation |
| O2 Sensor Control - Bank 1 | O2 Sensor Control - Bank 2 | O2 Sensor Controller 1 |

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| O2 Sensor Controller 2 | O2 Sensor Heater Afer Cat. Bank 1 Output Stage | O2 Sensor Heater Afer Cat. Bank 2 Output Stage |
| O2 Sensor Heater Before Cat. Bank 1 Activation Pause | O2 Sensor Heater Before Cat. Bank 1 Output Stage | O2 Sensor Heater Before Cat. Bank 2 Activation Pause |
| O2 Sensor Heater Before Cat. Bank 2 Output Stage | O2 Sensor Voltage After Cat. - Bank 1 | O2 Sensor Voltage After Cat. - Bank 2 |
| O2 Sensor Voltage Before Cat. - Bank 1 | O2 Sensor Voltage Before Cat. - Bank 2 | Pedal-Travel Sensor Potentiometer 1 |
| Pedal-Travel Sensor Potentiometer 2 | Secondary Air Pump | Secondary Air Valve |
| Tank Leak Diagnosis Pump | Tank Leak Diagnosis Pump (Reed Contact) | Tank Ventilation During High Load |
| Tank Venting Valve Duty Cycle | Temperature Sensor Voltage (Engine Outlet) | Temperature Sensor Voltage (Radiator Outlet) |
| Throttle Potentiometer 1 | Throttle Potentiometer 2 | Throttle Valve Position |
| Transmission Range | VANOS Bank 1 Duty Cycle | VANOS Bank 2 Duty Cycle |
| Vehicle Speed | | |

Engine MS4.2 M52TU (DME) Sensors

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|------------------------------------|--|--|
| A/C Compressor | A/C Compressor Relay | A/C Switch |
| ASC Intervention | Battery Voltage | Brake Light Switch |
| Brake Light Test Switch | CAN Status | Catalytic Heating |
| Close Loop Control 1 | Close Loop Control 2 | Clutch Switch |
| Coolant Temperature | Cruise Control - Accelerate | Cruise Control - Delay |
| Cruise Control - Off | Cruise Control - Readiness | Cruise Control - Reset |
| Cruise Control - Resumption | Cruise Control - Tip Down | Cruise Control - Tip Up |
| DISA Relay | Drive Position | EGS Intervention |
| EML Error Lamp | Engine Speed | Fuel Pump Relay |
| Fuel Tank Vent Valve | Idle Speed Control | Idle Speed Control Duty Cycle |
| Injection Time | Intake Air Temperature | Knock Sensor 1 |
| Knock Sensor 2 | LDP Ready Switch | Leak Diagnostics Function |
| Mass Air Sensor | MIL Active | Mixture Adaption Additive - Bank 1 |
| Mixture Adaption Additive - Bank 2 | Mixture Adaption Multiplicative - Bank 1 | Mixture Adaption Multiplicative - Bank 2 |
| O2 Sensor Heater - Bank 1 | O2 Sensor Heater - Bank 1 | O2 Sensor Heater - Bank 2 |

| | | |
|---------------------------------------|--------------------------------------|--------------------------------------|
| Sensor 1 | Sensor 2 | Sensor 1 |
| O2 Sensor Heater - Bank 2 Sensor 2 | Oil Temperature | Overrun |
| Overrun Cutoff | Oxygen Sensor Adaptation - Bank 1 | Oxygen Sensor Adaptation - Bank 2 |
| Pedal Position | Pedal Position 1 | Pedal Position 2 |
| Pedal Position Sensor 1 | Secondary Air Pump | Secondary Air Valve |
| Shut Off Valve Suction Pump | Throttle Position | Throttle Position 1 |
| Throttle Position 2 | VANOS - Current Time Intake | VANOS - Current Time Outlet |
| VANOS - Edge Adaptation Exhaust | VANOS - Edge Adaptation Intake | VANOS - Exhaust Actual Position |
| VANOS - Exhaust Reference Position | VANOS - Exhaust Target Position | VANOS - Intake Actual Position |
| VANOS - Intake Reference Position | VANOS - Intake Target Position | VANOS - Magnet Valve Temperature |
| Vehicle Speed | Water Outlet Temperature | |

Engine MS41.1 M52 (DME) Sensors

| | | |
|--|---|---|
| AC Compressor Relay | AC Switch | Acceleration Enrichment |
| ASC Switch | Battery Voltage | Camshaft Position |
| Coolant Temperature | Engine Speed | Exhaust Flap |
| Idle Air Adaption | Ignition Angle | Ignition Timing Intervention |
| Inertia Cutoff | Injector Signal | Intake Air Temperature |
| Long Term Fuel Trim (Additive) Bank 1 | Long Term Fuel Trim (Additive) Bank 2 | Mass Air Flow Sensor |
| Mass Air Flow Sensor Signal | MSR Switch | Oxygen Sensor Heater 1 |
| Oxygen Sensor Heater 2 | Oxygen Sensor Heater 3 | Oxygen Sensor Heater 4 |
| Oxygen Sensor Voltage 1 | Oxygen Sensor Voltage 2 | Oxygen Sensor Voltage 3 |
| Oxygen Sensor Voltage 4 | Purge Valve | Secondary Air Pump |
| Secondary Air Valve | Short Term Fuel Trim (Multiplicative) Bank 1 | Short Term Fuel Trim (Multiplicative) Bank 2 |
| Start Signal | Throttle Position | Throttle Position Sensor |
| Transmission Range | Valve Running Losses | VANOS |
| Vehicle Speed | | |

Engine MS41.2 M52-B32 (DME) Sensors

| | | |
|--|--|---------------------------------------|
| A/C Compressor | A/C Switch | Acceleration Enrichment |
| ASC Switch | Battery Voltage | Camshaft Position |
| Coolant Temperature | Engine Speed | Idle Air Adaption |
| Ignition Angle | Ignition Timing Intervention | Inertia Fuel Cutoff |
| Injector Signal | Intake Air Temperature | Long Term Fuel Trim (Additive) Bank 1 |
| Long Term Fuel Trim (Additive) Bank 2 | Mass Air Flow Sensor | Mass Air Flow Sensor Signal |
| MSR Switch | Oxygen Sensor - Sensor 1 | Oxygen Sensor - Sensor 2 |
| Oxygen Sensor - Sensor 3 | Oxygen Sensor - Sensor 4 | Oxygen Sensor Voltage 1 |
| Oxygen Sensor Voltage 2 | Oxygen Sensor Voltage 3 | Oxygen Sensor Voltage 4 |
| Purge Valve | Secondary Air Pump | Secondary Air Valve |
| Short Term Fuel Trim (Multiplicative) Bank 1 | Short Term Fuel Trim (Multiplicative) Bank 2 | Start Signal |
| Throttle Position | Throttle Position Sensor | Transmission Range |
| Valve Running Losses | VANOS Status | Vehicle Speed |

Engine MS43 M43 (DME) Sensors

| | | |
|--------------------------------|-----------------------------------|-------------------------------|
| A/C Equipped | A/C Relay | AC Compressor |
| Acceleration Enrichment | Additive Adaption | Air Intake Temperature |
| Anti-Theft System Equipped | ASC Equipped | ASC Intervention |
| Average Spark Advance Angle | Battery Voltage | Closed Loop Control |
| Closed Loop Control Factor | Coolant Temperature | EGS Equipped |
| EGS Intervention | Electric Fan Equipped | Engine Speed |
| Idle Speed Actuator Adaptation | Inertia Fuel CutOff | Injector Signal |
| Intake-Pipe Length | Knock Control | Load Signal |
| Mass Air Flow | Multiplicative Adaption | Oxygen Sensor Equipped |
| Oxygen Sensor Heater | Oxygen Sensor Status | Oxygen Sensor Voltage |
| Start Signal | Tank Ventilation | Tank Venting Valve Duty Cycle |
| Throttle Position Sensor | Throttle Position Sensor Position | Throttle Valve |
| Vehicle Speed | | |

Engine MS43-M54 (DME) Sensors

| | | |
|--|---|--|
| A/C Compressor (Activation) | A/C Compressor Request | A/C System Switch |
| Air Adaptation With A/C Compressor | Air Adaptation With Driving Position | Air Adaptation Without Driving Position |
| Air Mass | Air-Mass Flow Sensor | Ambient Pressure |
| ASC Intervention | Battery Voltage | Brake-Light Switch |
| Brake-Test Switch | CAN Bus | Clutch |
| Coolant Temperature (Engine) | Coolant Temperature (Radiator Outlet) | Cruise Control - Acceleration |
| Cruise Control - Deceleration | Cruise Control - Hard Off (By Brake Fault Or Similar) | Cruise Control - IO |
| Cruise Control - Rest | Cruise Control - Resumption | Cruise Control - Tip-Down |
| Cruise Control - Tip-Up | Engine Full Load | Engine Idle |
| Engine Part Load | Engine Speed | Engine Throttle 1 |
| Engine Throttle 2 | Engine Throttle Adaptation 1 | Engine Throttle Adaptation 2 |
| Fuel Pump Relay | Idle Speed Integrator | Idle-Speed Control Valve |
| Ignition Timing | Injection Duration | Intake Air Temperature |
| Knock Control Adaptation | Knock Sensor (Mean Value) 1 | Knock Sensor (Mean Value) 2 |
| Knock Sensor 1 | Knock Sensor 2 | Load Signal |
| Mixture Adaptation (Additive) - Bank 1 | Mixture Adaptation (Additive) - Bank 2 | Mixture Adaptation (Multiplicative) - Bank 1 |
| Mixture Adaptation (Multiplicative) - Bank 2 | Off (By Switch Accelerator Pedal) | Oil Temperature (Engine) |
| Over Temperature Status For Instrument Cluster | Overrun | Overrun Cutoff |
| Oxygen Sensor - Bank 1 - After Cat. | Oxygen Sensor - Bank 1 - Before Cat. | Oxygen Sensor - Bank 2 - After Cat. |
| Oxygen Sensor - Bank 2 - Before Cat. | Oxygen Sensor Control - Bank 1 | Oxygen Sensor Control - Bank 2 |
| Oxygen-Sensor Heater After Cat. - Bank 1 | Oxygen-Sensor Heater After Cat. - Bank 2 | Oxygen-Sensor Heater Before Cat. - Bank 1 |
| Oxygen-Sensor Heater Before Cat. - Bank 2 | Pedal-Travel Sensor 1 | Pedal-Travel Sensor 2 |
| Pedal-Travel-Sensor Angle | Secondary Air Solenoid | Secondary-Air Pump |

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|------------------------------------|----------------------------------|------------------------------------|
| | Valve | |
| Selector-Level Setting | Sensor Gear Adaptation | Solenoid Valve (Exhaust-Gas Flap) |
| Solenoid Valve (Intake Manifold) | Throttle Angle | Transmission Intervention |
| VANOS Exhaust (Actual Position) | VANOS Exhaust (Flank Adaptation) | VANOS Exhaust (Reference Position) |
| VANOS Exhaust (Specified Position) | VANOS Inlet (Actual Position) | VANOS Inlet (Flank Adaptation) |
| VANOS Inlet (Reference Position) | VANOS Inlet (Specified Position) | Vehicle Speed |

Engine MS46-M46 (DME) Sensors

| | | |
|--|---|--|
| A/C Compressor Activation | A/C Compressor Request | A/C Detected |
| A/C System Status | ASC Fitted | ASC Intervention |
| Battery Voltage | Catalytic Converter Fitted | Control Module without EWS Original Code |
| Coolant Temperature (Engine) | Coolant Temperature (Radiator Outlet) | Dew Point Exceeded After Cat. |
| Dew Point Exceeded Before Cat. | Duration of Injection | EGS Fitted |
| Electric Fan | Engine Full Load | Engine Idle |
| Engine Part Load | Engine Speed | EWS OK |
| Fuel Pump Relay | Idle Air Adaption | Idle Controller Specified Speed |
| Idle Speed Control Valve | Idle Speed Control Valve Specified Air Mass | Idle Speed Integrator |
| Ignition Position 2 | Ignition Timing | Intake Air Temperature |
| Knock Control | Load Signal | MAP Cooling |
| Mass Air Flow | Mass Air Sensor Voltage | Mass Air Sensor Voltage (Reference) |
| Mixture Adaption Additive | Multiplicative Adaption | Overrun CutOff |
| Oxygen Sensor Control | Oxygen Sensor Controller | Oxygen Sensor Heating Downstream of Cat. |
| Oxygen Sensor Heating Upstream of Cat. | Secondary Air Pump Relay | Secondary Air Solenoid Valve |
| Selector Lever Setting | Smooth Running Valve - Cylinder 1 | Smooth Running Valve - Cylinder 2 |

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|-----------------------------------|-----------------------------------|----------------------------------|
| Smooth Running Valve - Cylinder 3 | Smooth Running Valve - Cylinder 4 | Solenoid Valve - Intake Manifold |
| Solenoid Valve - Suction Jet Pump | Tank Ventilation | Tank Ventilation Solenoid Valve |
| Terminal 15 Voltage | Throttle Reference Potentiometer | Throttle Valve Position Adaption |
| Throttle Valve Voltage | Vehicle Speed | |

Engine MS521 M62 Sensors

| | | |
|--|---|--|
| A/C Compressor | A/C Compressor Requested | A/C Switch |
| Acceleration Enrichment | Air Intake Temperature | Battery Voltage |
| Coolant Temperature (Engine Outlet) | Crank Shaft Sensor Gear 1 | Crank Shaft Sensor Gear 2 |
| Crank Shaft Sensor Gear 3 | Crank Shaft Sensor Gear 4 | Driving Lights |
| Engine Idling | Engine Speed | Engine Speed Requested |
| Engine Outlet Temperature Sensor | Idle Speed Increased Due to A/C | Idle Speed Increased Due to Low Battery V |
| Idle Air Integrator | Ignition Lock Position 2 | Ignition Lock Position 3 |
| Ignition Timing | Inertia Fuel Shutoff | Knock Control |
| Mass Air Flow Sensor | Mass Air Flow Sensor Voltage | Main Relay |
| Mixture Adaption Additive (Idling) Bank 1 | Mixture Adaption Additive (Idling) Bank 2 | Mixture Adaption Multiplicative (Part Load) Bank 1 |
| Mixture Adaption Multiplicative (Part Load) Bank 2 | Tank Ventilation | Tank Venting Valve Duty Factor |
| Throttle Valve Adaption Potentiometer | Throttle Valve Position | Throttle Valve Potentiometer |
| Vehicle Speed | | |

Engine S52-S54-S62 (DME) Sensors

| | | |
|---|--------------------------------------|---|
| A/C Compressor Request | Adaptation - Pot. At Servomotor | Adaptation - Pot. At Servomotor - Zero Stop |
| Adaptation - Pot. At Throttle - Zero Stop | Adaptation - Rise - Pot. At Throttle | Additive Mixture Adaptation (Idle) Bank 1 |
| Additive Mixture Adaptation | Air Mass | Air-Conditioning System |

| | | |
|---|--|--|
| (Idle) Bank 2 | | |
| Air-Mass Flow Sensor | Air-Mass Flow Sensor (Left) | Ambient Pressure (Sensor In CM) |
| Ambient Temperature | Battery Voltage | Brake-Light Switch |
| Controller Activation | Controller Deactivation | Coolant Temperature - Engine Outlet |
| Coolant Temperature - Radiator Outlet | Cylinder Driving Cycle 1 | Cylinder Driving Cycle 2 |
| Cylinder Driving Cycle 3 | Cylinder Driving Cycle 4 | Cylinder Driving Cycle 5 |
| Cylinder Driving Cycle 6 | Cylinder Driving Cycle 7 | Cylinder Driving Cycle 8 |
| Cylinder Duration Of Injection 1 | Cylinder Duration Of Injection 2 | Cylinder Duration Of Injection 3 |
| Cylinder Duration Of Injection 4 | Cylinder Duration Of Injection 5 | Cylinder Duration Of Injection 6 |
| Cylinder Duration Of Injection 7 | Cylinder Duration Of Injection 8 | Cylinder Ignition Angle 1 |
| Cylinder Ignition Angle 2 | Cylinder Ignition Angle 3 | Cylinder Ignition Angle 4 |
| Cylinder Ignition Angle 5 | Cylinder Ignition Angle 6 | Cylinder Ignition Angle 7 |
| Cylinder Ignition Angle 8 | Cylinder Smooth Running (Raw Data) 1 | Cylinder Smooth Running (Raw Data) 2 |
| Cylinder Smooth Running (Raw Data) 3 | Cylinder Smooth Running (Raw Data) 4 | Cylinder Smooth Running (Raw Data) 5 |
| Cylinder Smooth Running (Raw Data) 6 | Cylinder Smooth Running (Raw Data) 7 | Cylinder Smooth Running (Raw Data) 8 |
| Detection - Adhesion (Gear Engaged - Clutch Not Actuated) | DME Enabling By EWS Follows | EDK Specification By DME |
| Enable Signal For A/C Compressor | Engine Load | Engine Oil Temperature |
| Engine Operating State | Engine Outlet Temperature Sensor | Engine Speed |
| Exhaust Temperature | Exhaust VANOS - Actual Value | Exhaust VANOS - Pilot Control By DME |
| Fuel Pump | Idle Controller | Idle Controller (A/C On) Adaptation |
| Idle Controller Adaptation | Idle Cylinder Synchronization Adaptation 1 | Idle Cylinder Synchronization Adaptation 2 |
| Idle Cylinder | Idle Cylinder Synchronization | Idle Cylinder |

| | | |
|---|--|--|
| Synchronization Adaptation 3 | Adaptation 4 | Synchronization Adaptation 5 |
| Idle Cylinder Synchronization Adaptation 6 | Idle Cylinder Synchronization Adaptation 7 | Idle Cylinder Synchronization Adaptation 8 |
| Idle Speed Control Valve - Duty Factor | Ignition-Lock Position 2 | Ignition-Lock Position 3 |
| Increased EDK Duty Factor | Intake Air Temperature | Intake Air Temperature Sensor |
| Intake VANOS - Actual Value | Intake VANOS - Pilot Control By DME | Knock Adaptation - Cylinder 1 |
| Knock Adaptation - Cylinder 2 | Knock Adaptation - Cylinder 3 | Knock Adaptation - Cylinder 4 |
| Knock Adaptation - Cylinder 5 | Knock Adaptation - Cylinder 6 | Knock Adaptation - Cylinder 7 |
| Knock Adaptation - Cylinder 8 | Max. Deviation of Specified And Actual Values Of Throttle Position | Max. DME Temperature |
| Multiplicative Mixture Adaptation (Partial Load) - Bank 1 | Multiplicative Mixture Adaptation (Partial Load) - Bank 2 | No. Of Deactivated Cylinders |
| No. Of Deactivated Cylinders DME Spec. | Oxygen-Sensor Controller - Control Factor - Bank 1 | Oxygen-Sensor Controller - Control Factor - Bank 2 |
| Oxygen-Sensor Control - Bank 1 | Oxygen-Sensor Control - Bank 2 | Oxygen-Sensor Voltage After Cat. - Bank 1 |
| Oxygen-Sensor Voltage After Cat. - Bank 2 | Oxygen-Sensor Voltage Before Cat. - Bank 1 | Oxygen-Sensor Voltage Before Cat. - Bank 2 |
| Pedal-Travel Sensor 1 | Pedal-Travel Sensor 2 | Pedal-Travel Sensor Adaptation (Zero Position) 1 |
| Pedal-Travel Sensor Adaptation (Zero Position) 2 | Pedal-Travel-Sensor Potentiometer 1 | Pedal-Travel-Sensor Potentiometer 2 |
| Potentiometer At Servomotor | Potentiometer At Throttle | Radiator Outlet Temperature Sensor |
| Relative Opening Cross-Section From Throttle And Idle Opening | Road Speed | Secondary-Air Pump |
| Secondary-Air Valve | Sensor Gear - Crankshaft Adaptation 1 | Sensor Gear - Crankshaft Adaptation 2 |
| Sensor Gear - Crankshaft | Sensor Gear - Crankshaft | Sensor Gear - Crankshaft |

| | | |
|--|---|---|
| Adaptation 3 | Adaptation 4 | Adaptation 5 |
| Sensor Gear - Crankshaft Adaptation 6 | Sensor Gear - Crankshaft Adaptation 7 | Sensor Gear - Crankshaft Adaptation 8 |
| Sensor Gear - Crankshaft Adaption | Servomotor Position (Potentiometer) | Shunt Voltage - Oxygen-Sensor Heater - After Cat. - Bank 1 |
| Shunt Voltage - Oxygen-Sensor Heater - After Cat. - Bank 2 | Shunt Voltage - Oxygen-Sensor Heater - Before Cat. - Bank 1 | Shunt Voltage - Oxygen-Sensor Heater - Before Cat. - Bank 2 |
| Specified Idle Speed | Switch - Air-Conditioning | Tank-Venting Valve Duty Factor |
| Tank-Ventilation Adaptation - Bank 1 | Tank-Ventilation Adaptation - Bank 2 | Throttle Position (Potentiometer) |
| Vehicle Speed Via CAN | Weighting Factor - Diagnosis Fuel System - Bank 1 | Weighting Factor - Diagnosis Fuel System - Bank 2 |

Heater/Air Conditioning (IHKA E36) Sensors

| | | |
|---|--|----------------------------------|
| Above | AC Switch | Air Circulation |
| Air Circulation Flap | AUC | AUC Sensor |
| Auto | Below | Blower |
| Blower Down | Blower Up | Center |
| Clamp 15 | Clamp 30 | Clamp 58g |
| Corrected Set Value - Left | Corrected Set Value - Right | Defrost |
| Defrost Flap | DME - AC Signal | DME - KO Signal |
| Engine Speed | Evaporative Sensor | Footwell Flap |
| Fresh Air Flap | Guided Control - Left | Guided Control - Right |
| Heat Exchanger Rated Temperature - Left | Heat Exchanger Rated Temperature - Right | Heat Exchanger Sensor - Left |
| Heat Exchanger Sensor - Right | Heat Exchanger Set Value - Left | Heat Exchanger Set Value - Right |
| Inner Temperature | OnBoard Computer Park Ventilation | Outside Temperature Sensor |
| Parking Heating Wake Up Line | Rear Defogger Relay | Rear Window Defogger |
| Temperature Set - Left | Temperature Set - Right | Temperature Set Down - Left |
| Temperature Set Down - Right | Temperature Set Up - Left | Temperature Set Up - Right |

| | | |
|---------------------|------------------|--------------------|
| Vehicle Speed | Ventilation Flap | Water Valve - Left |
| Water Valve - Right | | |

Heater/Air Conditioning (IHKA E38) Sensors

| | | |
|--------------------------------------|---------------------------------------|--|
| AUC Sensor | Blower Control Voltage | Clamp 30 |
| Engine Temperature | Evaporative Temperature | Heat Exchanger Sensor - Left |
| Heat Exchanger Sensor - Right | Inner Temperature | Outside Temperature Sensor |
| Phototransistor | Rear Compartment Switch | Sensor Blower |
| Stratification Potentiometer - Front | Stratification Potentiometer - Rear | Temperature Control - Left |
| Temperature Control - Right | Ventilation Temperature Sensor - Left | Ventilation Temperature Sensor - Right |

Heater/Air Conditioning (IHKA E39) Sensors

| | | |
|-----------------------------------|---------------------------------|------------------------------------|
| A/C Button | A/C Function | A/C LED |
| Air Distribution - Automatic | Air Distribution - Footwell | Air Distribution - Ventilation |
| Air Distribution - Windshield | Auto Button | Automatic Blower |
| Blower Setting | Cabin Temperature Down Button | Cabin Temperature Up Button |
| Circulated Air | Fan Down Button | Fan Supply Voltage Down |
| Fan Supply Voltage Up | Fan Up Button | Footwell Button |
| Heated Rear Window | LED Air Distribution - Footwell | LED Air Distribution - Ventilation |
| LED Air Distribution - Windshield | LED Auto | LED Heated Rear Window |
| LED Recirculated Air | Off Button | Recirculated Air Button |
| Solar Sensor | Temperature - Heat Exchanger | Temperature - Cabin |
| Temperature Mixing Flap Position | Temperature Set Point Value | Ventilation Button |
| Windshield Button | | |

Heater/Air Conditioning (IHKA) Sensors

| | | |
|------------------------|-----------------------|----------------|
| AUC Button | AUC Sensor Signal | Auto Button |
| Auxiliary Heater | Blower Control | Blower Stage |
| Climate Control Button | Correcting Variable Y | Defrost Button |

| | | |
|--|---------------------------|---|
| Defrosting | Defrosting Flap Motor | Evaporator Temperature |
| Footwell Button | Footwell Flap Motor | Fresh Air/Circulating-Air Flap Motor - Left |
| Fresh Air/Circulating-Air Flap Motor - Right | Heated Rear Window Button | Heated Rear Window Relay |
| Heat-Exchanger Temperature | Interior Temperature | Outside Temperature |
| Pressure Sensor | PWM Blower Control | Recirculating Air Button |
| Solar Sensor | Temperature Setpoint | Ventilation Button |
| Ventilation Flap Motor | Water Valve Opening Time | |

Immobilizer (EWS) Sensors

| | | |
|--------------------------------------|--|----------------------------------|
| Central Locking Status | Current Key Number | DME Wire Status |
| Key Disabled | Key Identification | Key Password |
| Key Random Code | Key Transmits | Onboard Computer Code |
| Selector Lever / Clutch Switch | Started Enabled | Starter Motor Blocked |
| Starter Motor Blocked Due to BC Code | Starter Motor Blocked Due to Double-Lock | Starter Motor Blocked Due to P/N |
| Terminal R | | |

Immobilizer II (EWS) Sensors

| | | |
|--|------------------------------|--|
| Key Data | Key Status | Starter Motor Disabled Due To Engine Speed |
| Starter Interlock by Selector-Lever Switch | Selector Lever Clutch/Switch | Automatic Switch Actuated P/N |
| Centrally Double-Locked Signal from DWA | EWS Control Unit | Terminal R |
| DME Line | | |

Immobilizer III (EWS) Sensors

| | | |
|--------------------------------|------------------------------|-----------------------|
| Central Locking Status | Current Key Number | DME/DDE Line Status |
| Key Disabled | Key Identification | Key Password |
| Key Random Code | Key Transmits | Onboard Computer Code |
| Selector Lever / Clutch Switch | Started Enabled | Starter Motor Blocked |
| Starter Motor Blocked Due | Starter Motor Blocked Due to | Starter Motor Blocked |

| | | |
|------------|-------------|------------|
| to BC Code | Double-Lock | Due to P/N |
| Terminal R | | |

Light Switching Center (LCM/LZM) Sensors

| | | |
|----------------------------------|--------------------------------|---------------------------------|
| Brake Light - Center | Brake Light - Left | Brake Light - Right |
| Brake Light Switch | Fog Light Switch | Fog Lights - Left |
| Fog Lights - Right | Hazard Flasher | High Beam Headlights - Left |
| High Beam Headlights - Right | License Plate Light - Left | License Plate Light - Right |
| Light Switch | Low Beam Headlights - Left | Low Beam Headlights - Right |
| Rear Fog Light Switch | Rear Fog Lights - Left | Rear Fog Lights - Right |
| Rear Inside Light | Reversing Light | Terminal 15 |
| Turn Signal Left | Turn Signal Right | Turn Signal Status - Front Left |
| Turn Signal Status - Front Right | Turn Signal Status - Rear Left | Turn Signal Status - Rear Right |

Lighting System Sensors

| | | |
|--|--------------------------------|-----------------------------|
| Brake Light | Fog Lights | Hazard-Warning System |
| Headlight Range Adjuster Potentiometer | Loading Sensor - Front | Main Beam/Headlight Flasher |
| Rear Fog Light | Trailer Brake Lights | Trailer Rear Fog Light |
| Trailer Reversing Light | Trailer Sidelight - Left | Trailer Sidelight - Right |
| Trailer Turn Indicator - Left | Trailer Turn Indicator - Right | Turn Indicators |

MINI CVT Transmission Sensors

| | | |
|---|--|--|
| Control Motor Position | CVT Fault - Gear Reduction Not Plausible | CVT Fault - Transmission Oil Temperature |
| CVT Fault - Wheel Speed | CVT Gear Change | CVT Gear Oil Temperature |
| CVT Transmission Oil Temperature Signal | Engine Speed (Specified Value) | GIB Fault - EEPROM Checksum |
| GIB Fault Activation | P N Switch | Selector Lever Switch - - |
| Selector Lever Switch - + | Selector Lever Switch - D | Selector Lever Switch - M |
| Selector Lever Switch - N | Selector Lever Switch - P | Selector Lever Switch - R |
| Steering Wheel Stalk - | Steering Wheel Stalk + | Transmission Limp Home |

| | | |
|---------------------------|---------------|---------|
| | | Program |
| Transmission Output Speed | Vehicle Speed | |

MINI Cruise Control Sensors

| | | |
|--|--|--|
| Clutch Switch | Cruise Control Active | Cruise Control Enabled |
| Cruise Control Operation Down | Cruise Control Operation Up | Cruise Control Resume |
| Deactivation 1 - ASC Active | Deactivation 1 - Brake Pedal | Deactivation 1 - Clutch Pedal |
| Deactivation 1 - Engine Speed Outside of Range | Deactivation 1 - IO Button Pressed | Deactivation 1 - PND Engaged |
| Deactivation 1 - Speed Below 70% of Target | Deactivation 1 - Speed Outside Range | Deactivation 2 - ASC Active |
| Deactivation 2 - Brake Pedal | Deactivation 2 - Clutch Pedal | Deactivation 2 - Engine Speed Outside of Range |
| Deactivation 2 - IO Button Pressed | Deactivation 2 - PND Engaged | Deactivation 2 - Speed Below 70% of Target |
| Deactivation 2 - Speed Outside Range | Deactivation 3 - ASC Active | Deactivation 3 - Brake Pedal |
| Deactivation 3 - Clutch Pedal | Deactivation 3 - Engine Speed Outside of Range | Deactivation 3 - IO Button Pressed |
| Deactivation 3 - PND Engaged | Deactivation 3 - Speed Below 70% of Target | Deactivation 3 - Speed Outside Range |
| Deactivation 4 - ASC Active | Deactivation 4 - Brake Pedal | Deactivation 4 - Clutch Pedal |
| Deactivation 4 - Engine Speed Outside of Range | Deactivation 4 - IO Button Pressed | Deactivation 4 - PND Engaged |
| Deactivation 4 - Speed Below 70% of Target | Deactivation 4 - Speed Outside Range | Deactivation 5 - ASC Active |
| Deactivation 5 - Brake Pedal | Deactivation 5 - Clutch Pedal | Deactivation 5 - Engine Speed Outside of Range |
| Deactivation 5 - IO Button Pressed | Deactivation 5 - PND Engaged | Deactivation 5 - Speed Below 70% of Target |
| Deactivation 5 - Speed Outside Range | Tempomat Lamp | |

MINI Engine R50 Sensors

| | | |
|------------------------------|---------------|---------------------|
| ASC Request Torque Reduction | ASC Requested | ASC Torque Decrease |
|------------------------------|---------------|---------------------|

| | | |
|--|---|---|
| ASC Torque Increase | Battery Voltage | Catalytic Converter |
| Complete System | Coolant Temperature | Coolant Temperature Voltage |
| Duration of Injection | Engine Full Load | Engine Full Part |
| Engine Load | Engine Off | Engine Running |
| Engine Speed | Engine Synchronized | EVAP Test 1 |
| EVAP Test 2 | EVAP Test 3 | EVAP Test 4 |
| Fault - A/C Pressure Sensor | Fault - ABS | Fault - Camshaft Sensor |
| Fault - Coolant Temperature Sensor | Fault - Crankshaft Sensor | Fault - EGS |
| Fault - Fuel Injector 1 | Fault - Fuel Injector 2 | Fault - Fuel Injector 3 |
| Fault - Fuel Injector 4 | Fault - Fuel Pump Relay | Fault - Instrument Cluster Data |
| Fault - Intake Air Temperature Sensor | Fault - Intake Manifold Pressure Sensor | Fault - Intake Manifold Pressure Sensor Before Compressor |
| Fault - Pedal Travel Sensor 1 | Fault - Pedal Travel Sensor 2 | Fault - Tank Venting Valve |
| Fault - Throttle | Fault - Throttle Control | Fault - Throttle Position 1 |
| Fault - Throttle Position 2 | Fault -CAN Bus | Fuel Level |
| Fuel Pump Relay | Idle (Specified Value) | Idle Speed |
| Intake Air Pressure | Intake Air Pressure Voltage | Intake Air Pressure (Specified Value) |
| Intake Air Pressure Before Compressor | Intake Air Pressure Before Compressor (Specified Value) | Intake Air Pressure Before Compressor Voltage |
| Intake Air Temperature | Intake Air Temperature Voltage | Knock Control Adaption |
| Knock Sensor Voltage | Knock Start Angle | Knock Value |
| Knock Window Duration | Knock Window Energy | Limp Home Operation - Camshaft Sensor |
| Limp Home Operation - Crankshaft Sensor | Limp Home Operation - Intake Manifold Pressure Sensor | Limp Home Operation - Throttle Position |
| Limp Mode Operating Mode Pot. 1 (Adaption) | Limp Mode Operating Mode Pot. 2 (Adaption) | Long-Term Correction |
| Long-Term Correction (Average) | Lower Electric Stop Pot. 1 (Adaption) | Lower Electric Stop Pot. 2 (Adaption) |
| Lower Mechanical Stop Adaption 1 | Lower Mechanical Stop Adaption 2 | Main Relay |

| | | |
|--|--|--|
| Mass Air Flow Sensor | Misfire Value over 200 RPM - Cylinder 1 | Misfire Value over 200 RPM - Cylinder 2 |
| Misfire Value over 200 RPM - Cylinder 3 | Misfire Value over 200 RPM - Cylinder 4 | Misfiring (Stage A) |
| Misfiring (Stage B1) | Misfiring (Stage B4) | Mixture Adaption (Additive) |
| Mixture Adaption (Multiplicative) | MSR Request Torque Increase | MSR Requested |
| Oxygen Sensor 1 Before Cat. | Oxygen Sensor 1 Post Cat. | Oxygen Sensor Control |
| Oxygen Sensor Downstream of Cat. (Raw Value) | Oxygen Sensor Downstream of Cat. Readiness | Oxygen Sensor Heating Downstream of Cat. |
| Oxygen Sensor Heating Upstream of Cat. | Oxygen Sensor Signal Downstream of Cat. | Oxygen Sensor Upstream of Cat. |
| Oxygen Sensor Upstream of Cat. - Rich | Oxygen Sensor Upstream of Cat. (Raw Value) | Oxygen Sensor Upstream of Cat. Readiness |
| Oxygen Sensor Voltage (Upstream) | Pedal Travel Sensor | Pedal Travel Sensor 1 |
| Pedal Travel Sensor 1 Angle | Pedal Travel Sensor 1 Voltage | Pedal Travel Sensor 2 |
| Pedal Travel Sensor 2 Angle | Pedal Travel Sensor 2 Voltage | Pedal Travel Sensor Angle |
| Short-Term Correction | Short-Term Correction (Average) | Smooth Running Value - Cylinder 1 |
| Smooth Running Value - Cylinder 2 | Smooth Running Value - Cylinder 3 | Smooth Running Value - Cylinder 4 |
| Spark Advance Angle - Cylinder 1 | Spark Advance Angle - Cylinder 2 | Spark Advance Angle - Cylinder 3 |
| Spark Advance Angle - Cylinder 4 | Spark Advance Angle (Specified Value) | Tank Ventilation Solenoid Valve |
| Terminal 15 | Throttle (Specified Value) | Throttle Adaption |
| Throttle Closed | Throttle Valve Position | Throttle Voltage 1 |
| Throttle Voltage 2 | Vehicle Speed | |

MINI Heater/Air Conditioning Sensors

| | | |
|-----------------------|-----------------------------|-------------------------|
| A/C Compressor Status | A/C Request | A/C System Status |
| Compressor Relay | Electric Fan | Evaporative Temperature |
| Refrigerant Pressure | Refrigerant Pressure Signal | |

MINI Immobilizer Sensors

| | | |
|------------------------------------|---------------------------|----------------------------------|
| Engine Disabled Counter | Ignition On Counter | Immobilizer Communications Fault |
| Immobilizer Status | Incorrect Answer Received | Incorrect Message Received |
| No Successful Communication | No Answer | Random Code Initialized |
| Unsuccessful Communication Counter | | |

Mirror Memory Driver Side Sensors

| | | |
|---------------------------|------------------------|----------------------|
| Driver / Passenger Switch | Fold-In Button | Fold-In Lock |
| Horizontal Potentiometer | Mirror Switch | Supply Potentiometer |
| Terminal 30 | Vertical Potentiometer | |

Mirror Memory Passenger Side Sensors

| | | |
|---------------------------|----------------------|--------------|
| Driver / Passenger Switch | Fold-In Button | Fold-In Lock |
| Horizontal Potentiometer | Supply Potentiometer | Terminal 30 |
| Vertical Potentiometer | | |

Multifunction Steering Wheel (MFL) Sensors

| | | |
|-------------------------|----------------------------|----------------------------|
| Air Circulation Button | Cruise Acceleration Button | Cruise Deceleration Button |
| IO Button | Radio Telephone Button | Reference Voltage |
| Resume Speed Button | Station Search Down | Station Search Up |
| Steering Heating Button | Talk Button | Volume Decrease |
| Volume Increase | | |

Navigation (NAV) Sensors

| | |
|-----------------|------|
| CD Eject Button | Gyro |
|-----------------|------|

Parking Distance Control (PDC) Sensors

| | | |
|---|--|---|
| Front Distance Transducer - Center Left | Front Distance Transducer - Center Right | Front Distance Transducer - Left |
| Front Distance Transducer - Right | Park Distance Control | Parking Aid Status |
| PDC Button | Rear Distance Transducer - Center Left | Rear Distance Transducer - Center Right |
| Rear Distance Transducer - | Rear Distance Transducer - | Reverse Gear |

| | | |
|------------|-------------|----------------|
| Left | Right | |
| Road Speed | Terminal 15 | Trailer Towing |

Radio (RAD) Sensors

| | | |
|--------------|---------------------------------------|---|
| DSP | GAL Curve Set | Numeric Figure of Traffic Announcement Volume |
| Radio Status | Strength Threshold For Station Search | Telephone Mute Active |

Seat Memory (E39) Sensors

| | | |
|-------------------------------|-----------------------------------|--------------------------------------|
| Backrest Angle Position | Memory Button | Position 1 Button |
| Position 2 Button | Position 3 Button | Seat Angle Position |
| Seat Backrest Switch | Seat Carriage Backwards Switch | Seat Carriage Forwards Switch |
| Seat Height Off Switch | Seat Height On Switch | Seat Height Position |
| Seat Sled Position | Steering Column Axial Switch Back | Steering Column Axial Switch Forward |
| Steering Column Radial Switch | Terminal 30 | Tilt Switch |

Seat Steering Column Memory Sensors

| | | |
|-------------------------|---------------------|----------------------|
| Backrest Angle Position | Backrest Switch | Entrance Aid Switch |
| Memory Button | Position 1 Button | Position 2 Button |
| Position 3 Button | Seat Angle Position | Seat Carriage Switch |
| Seat Height Position | Seat Height Switch | Seat Sled Position |
| Seat Tilt Switch | Terminal 30 | |

Side Lights Sensors

Side Lights / Dipped Beam

Sliding Tilting/Roof (SHD) Sensors

Switch Position

Steering Angle System (LEW) Sensors

Steering Angle

Switching Center Console (SZM) Sensors

| | | |
|---------------------------|----------------------------|---------------------------------|
| Heated Seat Button (Left) | Heated Seat Button (Right) | Heat Output (Left) |
| Heat Output (Right) | Indoor Sound Button | Indoor Sound LED |
| Indoor Sound Status | Roller Sun Blind Button | Roller Sun Button Motor Current |
| Sensor Temperature (Left) | Sensor Temperature (Right) | Stage (Left) |
| Stage (Right) | Terminal 15 | Terminal R |
| Battery Voltage | | |

Transmission 860.2 (EGS) Sensors

| | | |
|----------------------------|---------------------------|--------------------------|
| Accelerator Pedal Position | ASC / DSC Controlling | ASC/ DSC Button |
| ATF Temperature | Brake Pedal | Cornering |
| Engine Speed | Engine Temperature | Gear / Speed Recognition |
| Kickdown | Manual Gate | Output Speed |
| Pressure Actuator 1 | Pressure Actuator 2 | Pressure Actuator 3 |
| Pressure Actuator 4 | Pressure Actuator 5 | Selector Lever Setting |
| Selector Lever L1 | Selector Lever L2 | Selector Lever L3 |
| Selector Lever L4 | Shiftlock | Solenoid Valve 1 |
| Solenoid Valve 2 | Solenoid Valve 3 | Stepped Downshift |
| Stepped Upshift | Stepper Shift System | Turbo Charger Speed |
| Wheel Speed - Front Left | Wheel Speed - Front Right | Wheel Speed - Rear Left |
| Wheel Speed - Rear Right | | |

Transmission 860.4 (EGS) Sensors

| | | |
|----------------------------|---------------------------|--------------------------|
| Accelerator Pedal Position | ASC / DSC Controlling | ASC/ DSC Button |
| ATF Temperature | Brake Pedal | Cornering |
| Engine Speed | Engine Temperature | Gear / Speed Recognition |
| Kickdown | Manual Gate | Output Speed |
| Pressure Actuator 1 | Pressure Actuator 2 | Pressure Actuator 3 |
| Pressure Actuator 4 | Pressure Actuator 5 | Selector Lever Setting |
| Selector Lever L1 | Selector Lever L2 | Selector Lever L3 |
| Selector Lever L4 | Shiftlock | Solenoid Valve 1 |
| Solenoid Valve 2 | Solenoid Valve 3 | Stepped Downshift |
| Stepped Upshift | Stepper Shift System | Turbo Charger Speed |
| Wheel Speed - Front Left | Wheel Speed - Front Right | Wheel Speed - Rear Left |
| Wheel Speed - Rear Right | | |

Transmission 9.22 (EGS) Sensors

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| ABS Valve Relay | ASC Button | ATF Temperature |
| Battery Voltage | Brake Light Switch | Driving Position |
| Driving Position L1 | Driving Position L2 | Driving Position L3 |
| Driving Position L4 | Engine Speed | Fault Indication |
| Gear Ratio | Gear Ratio Shift Solenoid 1 | Gear Ratio Shift Solenoid 2 |
| Gear Ratio Shift Solenoid 3 | Gearbox Program | Kickdown Switch |
| Load Signal | Lockup Clutch | Main Pressure |
| Output Speed | Pressure Actuator 1 | Pressure Actuator 2 |
| Pressure Actuator 3 | Pressure Actuator 4 | Pressure Actuator 5 |
| Program Switch (A Switch) | Program Switch (S/M Switch) | Shift Lock |
| Throttle Switch | Turbocharger Speed | Wheel Speed: Front Left |
| Wheel Speed: Front Right | Wheel Speed: Rear Left | Wheel Speed: Rear Right |

Transmission GS20 (EGS) Sensors

| | | |
|-------------------------|---|------------------------------|
| ASC Button | ASC Control | Battery Voltage |
| Brake Signal | Converter Lockup Clutch | Cornering |
| Cruise Control | Current Shift Program | Downshift |
| Pressure Actuator 1 | Pressure Actuator 4 Converter Lock-Up Clutch) | Emergency Program |
| Engine Speed | Engine Temperature | Gearshift In Progress |
| Kickdown | Level to L1 Pin | Level to L3 Pin |
| Level to L4 Pin | Level to L5 Pin | One-Touch Down |
| One-Touch Up | Output Speed | Select Gear/Speed |
| Selector Lever Setting | Shiftlock | Solenoid Valve 1 |
| Solenoid Valve 2 | Solenoid Valve 3 | Steptronic |
| Steptronic Gate | Torque Converter Turbine Speed | Transmission Oil Temperature |
| Upshift | Wheel Speed - Front Left | Wheel Speed - Front Right |
| Wheel Speed - Rear Left | Wheel Speed - Rear Right | |

Transmission GS834 (EGS) Sensors

| | | |
|-----------------|-----------------|------------|
| ATF Temperature | Battery Voltage | Brake Band |
|-----------------|-----------------|------------|

| | | |
|-----------------------------|---------------------------|-------------------------------|
| Brake Light Switch | Driving Position | Driving Position L1 |
| Driving Position L2 | Driving Position L3 | Driving Position L4 |
| Engine Speed | Fault Indication | Gear Ratio |
| Kickdown Switch | Load Signal | Lockup Clutch |
| Main Pressure | Output Speed | Program Switch |
| Program Switch (E-A Switch) | Program Switch (M Switch) | Program Switch (S Switch) |
| Shift Lock | Solenoid Vales (2-3) | Solenoid Valves (1-2 and 3-4) |
| Throttle Switch | Wheel Speed: Front Left | Wheel Speed: Front Right |
| Wheel Speed: Rear Left | Wheel Speed: Rear Right | |

Transmission SMG II (EGS) Sensors

| | | |
|--------------------------------|------------------------------|------------------------------|
| Brake Pedal | Clutch Valve Current | Clutch Valve Selection Angle |
| Clutch Valve Shift Travel Down | Clutch Valve Shift Travel Up | Engine Speed |
| Gear Selected | Hand Brake | Hood Contact 1 |
| Hood Contact 2 | Paddle Shift - Down | Paddle Shift - Up |
| Wheel Speed - Front Left | Wheel Speed - Front Right | Wheel Speed - Rear Left |
| Wheel Speed - Rear Right | | |

ABS (MK20) Active Commands

| | | |
|-----------------------------|----------------------------|-----------------------------|
| Distribution Valve 1 | Distribution Valve 2 | Electric ChangeOver Valve 1 |
| Electric ChangeOver Valve 2 | Exhaust Valve - Front Left | Intake Valve - Front Left |
| Intake Valve - Front Right | Pre-Charge Pump | Return Pump |

ABS (MK60) Active Commands

| | | |
|----------------------------|--------------------------|---------------------------|
| ChangeOver Valve 1 | ChangeOver Valve 2 | Distribution Valve 1 |
| Distribution Valve 2 | Inlet Valve - Front Left | Inlet Valve - Front Right |
| Inlet Valve - Rear Left | Inlet Valve - Rear Right | Outlet Valve - Front Left |
| Outlet Valve - Front Right | Outlet Valve - Rear Left | Outlet Valve - Rear Right |
| Outlet Valve Return Pump | | |

ABS ASC 5 Active Commands



ABS/DSC 5.7 Active Commands



Basic Interface Telephone (BIT) Active Commands

| | | |
|-----------------------|------------------|-----------------|
| Log Off All Receivers | Register Headset | Reset CKPH Code |
|-----------------------|------------------|-----------------|

Central Body (ZKE) Active Commands

| | | |
|---|--------------------------------------|--|
| Double Lock All | Driver Side (Lock) | Interior Lights |
| LED Burglar System | Lock All | Power Window Driver Side (Close) |
| Power Window Driver Side (Open) | Power Window Passenger Side (Close) | Power Window Passenger Side (Open) |
| Power Window Rear Driver Side (Close) | Power Window Rear Driver Side (Open) | Power Window Rear Passenger Side (Close) |
| Power Window Rear Passenger Side (Open) | Pump for Headlight Cleaning | Siren Alarm Hum |
| Unlock All | Unlock Tailgate / Trunk | Washer Pump |
| Windshield Wipers | Wiper Motor Speed 1 | Wiper Motor Speed 2 |

Central Body III (ZKE) Active Commands

| | | |
|--|---|--------------------------------------|
| Deactivate All | Double-Lock Rear Door | Emergency Siren |
| Interior Lights (30 Secs) | Lock Driver Side | Lock Passenger Side |
| Lock Rear Door | Mirror Driver Side - Down | Mirror Driver Side - Left |
| Mirror Driver Side - Right | Mirror Driver Side - Up | Mirror Driver Side Fold In |
| Mirror Driver Side Fold Out | Mirror Driver Side Heating | Mirror Passenger Side - Down |
| Mirror Passenger Side - Left | Mirror Passenger Side - Right | Mirror Passenger Side - Up |
| Mirror Passenger Side Fold In | Mirror Passenger Side Fold Out | Mirror Passenger Side Heating |
| Power Window Driver Side (Close) | Power Window Driver Side (Open) | Power Window Passenger Side (Close) |
| Power Window Passenger Side (Open) | Power Window Rear Driver Side (Close) | Power Window Rear Driver Side (Open) |
| Power Window Rear Passenger Side (Close) | Power Window Rear Passenger Side (Open) | Status LED (30 Secs) |
| Unlock Boot Lid | Unlock Driver Side | Unlock Passenger Side |

| | | |
|-------------------------|------------------|-------------------------|
| Unlock Rear Door | Wiper Fluid Pump | Wiper Motor (Setting 1) |
| Wiper Motor (Setting 2) | | |

CruiseControl II (GR) Active Commands

| | | |
|------------------------------------|--------------------------------------|-----------------------------------|
| Activate Engine Output Stage Minus | Activate Engine Output Stage Passive | Activate Engine Output Stage Plus |
| Switch Output Clutch Active | Switch Output Clutch Passive | |

Engine M3.3 M60 (DME) Active Commands

| | | |
|------------------------|---------------------------------|-----------------------|
| Fuel Injector 1 Off | Fuel Injector 2 Off | Fuel Injector 3 Off |
| Fuel Injector 4 Off | Fuel Injector 5 Off | Fuel Injector 6 Off |
| Fuel Injector 7 Off | Fuel Injector 8 Off | Idle Speed Actuator |
| O2 Sensor Heater Relay | Tank Ventilation Solenoid Valve | Reset Adaption Values |

Engine M44 (DME) Active Commands

| | | |
|---------------------------|--------------|--------------------------|
| Carbon Cannister Shut-Off | Electric Fan | Fuel Circuit Change Over |
| Idle Speed Valve | Injector 1 | Injector 2 |
| Injector 3 | Injector 4 | Reset Adaption Values |
| Secondary Air Pump | | |

Engine M62 (DME) Active Commands

| | | |
|---------------------|--------------------|-----------------------|
| AC Compressor Relay | Fuel Pump Relay | Idle Speed Valve |
| Injector 1 | Injector 2 | Injector 3 |
| Injector 4 | Injector 5 | Injector 6 |
| Injector 7 | Injector 8 | MAP Thermostat |
| Secondary Air Valve | Tank Venting Valve | Reset Adaption Values |

Engine ME 7.2 M62TU (DME) Active Commands

| | | |
|------------------|--|---|
| A/C Compressor | Electric Fan 30% | Electric Fan 60% |
| Electric Fan Off | Fan In Control Module Box | Fuel Injector 1 |
| Fuel Injector 2 | Fuel Injector 3 | Fuel Injector 4 |
| Fuel Injector 5 | Fuel Injector 6 | Fuel Injector 7 |
| Fuel Injector 8 | Fuel Pump Relay | Idle Speed Valve (1000 RPM) |
| MAP Thermostat | O2 Heater Bank 1 After Catalytic Convertor | O2 Heater Bank 1 Before Catalytic Convertor |

| | | |
|--|---|--------------------|
| O2 Heater Bank 2 After Catalytic Convertor | O2 Heater Bank 2 Before Catalytic Convertor | Secondary Air Pump |
| Secondary Air Valve | Tank Leak Diagnosis | Tank Venting Valve |
| Reset Adaption Values | | |

Engine MS41.1 M52 (DME) Active Commands

| | | |
|---------------------------------|--------------------------------|------------------------------------|
| A/C Compressor Relay | Carbon Canister Shut-Off Valve | Exhaust Flap Solenoid Valve |
| Fuel Pump Relay | Idle Speed Actuator | Injector 1 |
| Injector 2 | Injector 3 | Injector 4 |
| Injector 5 | Injector 6 | Check Engine Light |
| Running Losses Changeover Valve | Secondary Air Pump | Secondary Air Changeover Valve |
| Tank Venting Valve | VANOS Setting | Reset O2 Adaptions |
| Reset Idle Air Adaptions | Reset Knock Control Adaptions | Reset Throttle Postition Adaptions |
| Reset All Adaptions | | |

Engine MS41.2 M52-B32 (DME) Active Commands

| | | |
|---------------------------------|--------------------------------|-----------------------|
| A/C Compressor Relay | Carbon Canister Shut-Off Valve | Fuel Pump Relay |
| Idle Speed Actuator | Injector 1 | Injector 2 |
| Injector 3 | Injector 4 | Injector 5 |
| Injector 6 | Check Engine Light | Reset Adaption Values |
| Running Losses Changeover Valve | Secondary Air Changeover Valve | Secondary Pump |
| Tank Venting Valve | VANOS Setting | |

Engine MS43 M43 (DME) Active Commands

| | | |
|---------------------------------|---------------------|---------------------------|
| A/C Compressor Relay | DISA | Electric Fan (Not Z3 M54) |
| Fuel Injector 1 Off | Fuel Injector 2 Off | Fuel Injector 3 Off |
| Fuel Injector 4 Off | Idle Speed Actuator | O2 Sensor Heater Relay |
| Tank Ventilation Solenoid Valve | | |

Engine MS43-M54 (DME) Active Commands

| | | |
|----------------------|-----------------------|-----------------------|
| A/C Compressor Relay | Clock Fuel Injector 1 | Clock Fuel Injector 2 |
|----------------------|-----------------------|-----------------------|

| | | |
|---|--|--|
| Clock Fuel Injector 3 | Clock Fuel Injector 4 | Clock Fuel Injector 5 |
| Clock Fuel Injector 6 | Electric Fan (Not Z3 M54) | Fuel Injector 1 Off |
| Fuel Injector 2 Off | Fuel Injector 3 Off | Fuel Injector 4 Off |
| Fuel Injector 5 Off | Fuel Injector 6 Off | Fuel Pump Relay |
| Idle Actuator 30% | Idle Actuator 80% | Idle Speed (Speed Specification 1500 RPM) |
| Intake Manifold Solenoid Valve (DISA) Low Speed | Intake Manifold Solenoid Valve (DISA) High Speed | Reset Adaption Values |
| Secondary Air Solenoid Valve (US/Special EUR) | Secondary-Air Pump Relay | Tank Leak (Valve Of Diagnostic Module) Open DMTL |
| Tank Leak (Valve Of Diagnostic Module) Close DMTL | Tank Leak (Motor Of Diagnostic Module) Activate | Tank Leak (Motor Of Diagnostic Module) Dectivate |
| Tank Ventilation Solenoid Valve | | |

Engine MS46-M46 (DME) Active Commands

| |
|-----------------------|
| Reset Adaption Values |
|-----------------------|

Engine MS521 M62 Active Commands

| | | |
|-----------------------|-----------------------|-----------------------|
| A/C Compressor Relay | Clock Fuel Injector 1 | Clock Fuel Injector 2 |
| Clock Fuel Injector 3 | Clock Fuel Injector 4 | Clock Fuel Injector 5 |
| Clock Fuel Injector 6 | Clock Fuel Injector 7 | Clock Fuel Injector 8 |
| Fuel Injector 1 Off | Fuel Injector 2 Off | Fuel Injector 3 Off |
| Fuel Injector 4 Off | Fuel Injector 5 Off | Fuel Injector 6 Off |
| Fuel Injector 7 Off | Fuel Injector 8 Off | Fuel Pump Relay |
| Idle Speed Valve | MAP Thermostat | Tank Venting Valve |
| Reset Adaption Values | | |

Engine S52-S54-S62 (DME) Active Commands

| | | |
|-------------------------|-------------------------|----------------------------|
| Fuel Injector 1 | Fuel Injector 2 | Fuel Injector 3 |
| Fuel Injector 4 | Fuel Injector 5 | Fuel Injector 6 |
| Fuel Injector 7 | Fuel Injector 8 | Fuel Pump (M5 Only) |
| Electric Fan | Electrical Box Fan | Idle Speed Control 500 RPM |
| Idle Speed Control 1000 | Idle Speed Control 1500 | Idle Speed Control Valve |

| | | |
|--|---|--|
| RPM | RPM | 20% |
| Idle Speed Control Valve 40% | Ignition Coil 1 | Ignition Coil 2 |
| Ignition Coil 3 | Ignition Coil 4 | Ignition Coil 5 |
| Ignition Coil 6 | Ignition Coil 7 | Ignition Coil 8 |
| Oil Circuit ChangeOver Valve Left (M5 Only) | Oil Circuit ChangeOver Valve Right (M5 Only) | Oxygen-Sensor Heater, Bank 1, Before Cat. |
| Oxygen-Sensor Heater, Bank 2, After Cat. | Oxygen-Sensor Heater, Bank 2, Before Cat. | A/C Compressor Relay |
| Secondary-Air Pump (M5 Only) | Secondary-Air Pump Relay | Suction Jet Pump |
| Tank Venting Valve | VANOS Inlet Advance Valve | VANOS Inlet Retard Valve |
| VANOS Outlet Advance Valve | VANOS Outlet Retard Valve | Reset Adaption Values |
| Transport Mode | Deactivate All | |

Heater/Air Conditioning (IHKA E39) Active Commands

| | | |
|--|---|---|
| Air Conditioning Compressor | Blower 50% | Heated Rear Window Relay |
| Washer Nozzle heating | Water Valve 20% - Left | Water Valve 20% - Right |
| Check Valve for Independent Heating | Changeover Valve for Latent Heat Accumulator | Shut Off Valve For Latent Heat Accumulator |
| Auxiliary Water Pump | Deactivate All | |

Instrument Cluster (IKE/IKI/KOM) Active Commands

| | | |
|------------------------|--|------------------------------------|
| Gong Output | Acoustic Generator | Acoustic Transmitter |
| Coolant Temperature | Fuel Consumption | Fuel Gauge |
| Reset Oil Service | Reset Service Inspection (Distance) | Reset Service Inspection (Time) |
| RPM Gauge | Self Test | Speedometer |
| Speedometer Output | Terminate All Actuators | |

MINI Engine R50 Active Commands

| | | |
|-----------------------|------------------------|---|
| Clock Fuel Injector 1 | Clock Fuel Injector 2 | Clock Fuel Injector 3 |
| Clock Fuel Injector 4 | Electric Fan - Stage I | Electric Fan - Stage II |
| Fuel Pump Relay | GIB Self-Test | Idle Correction Value (Adjust Idle CO -) |

| | | |
|--|---|---|
| Idle Correction Value (Adjust Idle CO +) | Idle Correction Value (ST Correction -) | Idle Correction Value (ST Correction +) |
| Main Relay | O2 Sensor Heater After Cat. | O2 Sensor Heater Before Cat. |
| ShiftLock | Tank Leak Diagnosis | Tank Ventilation Solenoid Valve |
| Throttle Position | | |

Mirror Memory Driver Side Active Commands

| | | |
|----------------|-----------------|-------------|
| Fold In Mirror | Fold Out Mirror | Mirror Down |
| Mirror Left | Mirror Right | Mirror Up |

Mirror Memory Passenger Side Active Commands

| | | |
|----------------|-----------------|-------------|
| Fold In Mirror | Fold Out Mirror | Mirror Down |
| Mirror Left | Mirror Right | Mirror Up |

OnBoard Module (BM) Active Commands

| |
|-----------|
| Self-Test |
|-----------|

Parking Distance Control (PDC) Active Commands

| | | |
|--------------------------------|----------------------------------|---------------------------------|
| Acoustic Buzz Generator | Acoustic Generator (30s) - Front | Acoustic Generator (30s) - Rear |
| Parking Distance Control (30s) | | |

Radio (RAD) Active Commands

| | | |
|-------------------------------------|-------------------------------------|--------------------------|
| Audio Button | Balance / Fader Default Setting | Channel Front Left |
| Channel Front Right | Channel Rear Left | Channel Rear Right |
| Decrement GAL Value | Decrement Min. Traffic Announcement | Increment GAL Value |
| Increment Min. Traffic Announcement | Turn On Radio | Station Search Downwards |
| Station Search Upwards | Tune Radio Frequency (100 Mhz) | Volume Decrease |
| Volume Increase | | |

Seat Memory (E39) Active Commands

| | | |
|-------------------------|-------------------------|---------------------------|
| Backrest Angle Forwards | Backrest Angle Up | Backrest Backwards |
| Backrest Forwards | Headrest Down | Headrest Up |
| Seat Height Angle Down | Seat Height Down | Seat Height Up |
| Seat Sled Backwards | Seat Sled Forwards | Steering Column Backwards |
| Steering Column Down | Steering Column Forward | Steering Column Up |
| Thigh Support Backwards | Thigh Support Forwards | |

Seat Steering Column Memory Active Commands

| | | |
|--------------------------|---------------------------|--------------------------|
| Backrest Angle Backwards | Backrest Angle Forwards | Head Restraint Down |
| Head Restraint Up | Memory LED | Seat Angle Down |
| Seat Angle Up | Seat Height Down | Seat Height Up |
| Seat Sled Backwards | Seat Sled Forwards | Steering Column Down |
| Steering Column Up | Steering Column Backwards | Steering Column Forwards |
| Deactivate All | | |

Switching Center Console (SZM) Active Commands

| | | |
|------------------------|----------------------|-----------------------|
| Seat Heating - Left | Seat Heating - Right | Active Seating - Left |
| Active Seating - Right | Roller Blind | Deactivate All |

Transmission 860.2 (EGS) Active Commands

| | | |
|--------------------------------|--------------------------------|--------------------------------|
| Pressure Actuator 1 150mA | Pressure Actuator 1 750mA | Pressure Actuator 2 150mA |
| Pressure Actuator 2 750mA | Pressure Actuator 3 150mA | Pressure Actuator 3 750mA |
| Pressure Actuator 4 150mA | Pressure Actuator 4 750mA | Pressure Actuator 5 150mA |
| Pressure Actuator 5 750mA | Reset Adaption Values | Shiftlock 150mA |
| Shiftlock 750mA | Solenoid Valve 1 (Grounded) | Solenoid Valve 1 (Open) |
| Solenoid Valve 2 (Grounded) | Solenoid Valve 2 (Open) | Solenoid Valve 3 (Grounded) |
| Solenoid Valve 3 (Open) | | |

Transmission 860.4 (EGS) Active Commands

| | | |
|----------------------------------|-------------------------------|----------------------------------|
| 4 Selector Lever Illumination | 5 Selector Lever Illumination | 3 Selector Lever Illumination |
| 2 Selector Lever Illumination | 1 Selector Lever Illumination | D Selector Lever Illumination |
| N Selector Lever | P Selector Lever | R Selector Lever |

| | | |
|-------------------------------|-------------------------------|-------------------------------|
| Illumination | Illumination | Illumination |
| E Selector Lever Illumination | M Selector Lever Illumination | S Selector Lever Illumination |
| Pressure Actuator 1 | Pressure Actuator 2 | Pressure Actuator 3 |
| Pressure Actuator 4 | Reset Adaption Values | Shiftlock |
| Solenoid Valve 1 | Solenoid Valve 2 | Solenoid Valve 3 |
| Warning Light Illumination | | |

Transmission 9.22 (EGS) Active Commands

| | | |
|------------------------------|-----------------------------------|---------------------------------------|
| Pressure Actuator 1 150mA | Pressure Actuator 1 750mA | Pressure Actuator 2 150mA |
| Pressure Actuator 2 750mA | Pressure Actuator 3 150mA | Pressure Actuator 3 750mA |
| Pressure Actuator 4 150mA | Pressure Actuator 4 750mA | Pressure Actuator 5 150mA |
| Pressure Actuator 5 750mA | Reset Adaption Values | Shiftlock 150mA |
| Shiftlock 750mA | Solenoid Valve 1 (Grounded) | Solenoid Valve 1 (Open) |
| Solenoid Valve 2 (Grounded) | Solenoid Valve 2 (Open) | Solenoid Valve 3 (Grounded) |
| Solenoid Valve 3 (Open) | Park Neutral Lock Solenoid (Open) | Park Neutral Lock Solenoid (Grounded) |
| Disturbance Indicator Output | | |

Transmission GS20 (EGS) Active Commands

| | | |
|-------------------------------|--|--|
| 1 Selector Lever Illumination | 2 Selector Lever Illumination | 3 Selector Lever Illumination |
| 4 Selector Lever Illumination | 5 Selector Lever Illumination | A Selector Lever Illumination (E46 Only) |
| D Selector Lever Illumination | E Selector Lever Illumination (E46 Only) | M Selector Lever Illumination (E46 Only) |
| N Selector Lever Illumination | P Selector Lever Illumination | R Selector Lever Illumination |
| S Selector Lever Illumination | Engine Intervention | Pressure Actuator 1 |
| Pressure Actuator 2 | Pressure Actuator 3 | Pressure Actuator 4 |
| Shiftlock | Solenoid Valve 1 | Solenoid Valve 2 |

| | | |
|------------------|----------------------------|-----------------------|
| Solenoid Valve 3 | Warning Light Illumination | Reset Adaption Values |
|------------------|----------------------------|-----------------------|

Transmission GS834 (EGS) Active Commands

| | | |
|-----------------------------------|---------------------------------------|--------------------------------|
| 1-2 3-4 Gear Shift (Open) | 1-2 3-4 Gear Shift (Grounded) | 2-3 Gear Shift (Open) |
| 2-3 Gear Shift (Grounded) | Brake Band Solenoid (Open) | Brake Band Solenoid (Grounded) |
| Disturbance Indicator Output | Lockup Clutch (Grounded) | Lockup Clutch (Open) |
| Park Neutral Lock Solenoid (Open) | Park Neutral Lock Solenoid (Grounded) | Pressure Regulator 150mA |
| Pressure Regulator 750mA | Reset Adaption Values | |

Transmission SMG II (EGS) Active Commands

| | | |
|---------------------------------|-------------------|----------------------------|
| Comfort Index 1 | Comfort Index 3 | Comfort Index 6 |
| Engage 1 Gear | Engage 2 Gear | Engage 3 Gear |
| Engage 4 Gear | Engage 5 Gear | Engage 6 Gear |
| Engage N Gear | Engage R Gear | Gear Indication 1 |
| Gear Indication 3 | Gear Indication 6 | Gear Indication A |
| Gear Indication N | Gear Indication R | Hydraulic Pump |
| Instrument Cluster Display Dark | Open Clutch | Reset Clutch Curve |
| ShiftLock | Stop All | Warning Light Illumination |