

# MERCEDES BENZ

## MERCEDES BENZ AUTOBUSES 3.0

**Serie 900 y serie 4000 (2005 al 2012).**

**SISTEMAS: PLD/MR2 (MOTOR) Y ADM.**

Requiere Modulo #9554, adaptador de 14 pines y #9194.

### **SISTEMA PLD/MR2**

- Lectura y borrado de Códigos de Falla.
- Información de ECU.
- Valores Análogos [*Analog values*].
- Valores Binarios [*Binary values*].
- Actuadores.
- Voltímetro [*Voltimeter*].
- Lectura Balance de Cilindros.
- Corte de Cilindros [*Cylinder cut off*].
- Prueba de Comprensión [*Compression check*].
- Horas en funcionamiento motor (*Engine Hours*).
- Capacidad para crear y cargar plantillas de un PLD/MR2.
- Lectura/Escritura de Parámetros.\*

### **SISTEMA ADM.**

- Lectura y borrado de Códigos de Falla.
- Información de ECU.
- Valores Análogos [*Analog values*].
- Valores Binarios [*Binary values*].
- Actuadores.
- Ajuste de Pedal [*Acc. Pedal Adjust*].
- Capacidad para crear plantillas de un ADM.
- Lectura/Escritura de Parámetros\*.

\*Con esta opción es posible limitar la velocidad del vehículo o activar el paro en ralentí, entre otras más configuraciones soportadas por la computadora o unidad de control.

# INFORMACIÓN EXTENDIDA

## INFORMACIÓN DE ECU.

- ACODE,
- ID.DIAGNOSIS,
- FECHA,
- ENGINE NUMBER(ONLY PLD),

## ADM VALORES ANALOGOS

- "ANALOG ACCELERATOR PEDAL (AFPS)"
- "SUPPLY ANALOG ACC.PEDAL (AFP+)"
- "ANALOG REMOTE PEDAL (HFGS)"
- "SUPPLY ANALOG REMOTE PEDAL (HFG+)"
- "SELECTED PEDAL VALUE"
- "CALCULATED PEDAL TORQUE"
- "ACTUAL ENGINE SPEED"
- "ACTUAL TORQUE"
- "FRICTION TORQUE"
- "GOVERNOR TYPE"
- "DEMAND ENGINE SPEED"
- "DEMAND ENGINE TORQUE"
- "MINIMUM ENGINE SPEED"
- "MAXIMUM ENGINE SPEED"
- "ROAD SPEED"
- "SET SPEED CRUISE CTRL"
- "VOLTAGE COOLANT LEVEL SENSOR"
- "STATUS COOLANT LEVEL"
- "VOLTAGE AIR FILTER SENSOR"
- "PRESSURE AIR FILTER SENSOR"
- "COOLANT TEMP"
- "OIL PRESSURE"
- "OIL TEMP"
- "VOLTAGE TERMINAL 15"
- "VOLTAGE TERMINAL 30"
- "C3-SIGNAL FREQUENCY"
- "C3-SIGNAL DIAGNOSESPANUNG"
- "SAE J1939 CURRENT ACTIVE TSC1 SENDER"
- "SAE J1939 DEMAND ENGINE SPEED"
- "SAE J1939 DEMAND TORQUE"
- "SAE J1939 MAXIMUM ENGINE SPEED"
- "SAE J1939 MAXIMUM TORQUE"
- "PWM PEDAL SIGNAL GAS1"
- "PWM PEDAL SIGNAL GAS2"
- "STATUS GRID HEATER"
- "BOOST TEMPERATURE"
- "IWA OUTPUT"
- "SOFTWARE VERSION"

## ADM VALORES BINARIOS

- "TERMINAL 15 PIN21/02"
- "SERVICE BRAKE PIN21/15"
- "PARK BRAKE PIN 21/16"
- "CLUTCH PIN 18/02"
- "TEMPOMAT CC PIN 18/04"

- "CRUISE CTRL SW CC+ PIN18/05"
- "CRUISE CTRL SW CC\_EIN PIN18/06"
- "THROTTLE SELECT SW FG\_WAHL PIN18/07"
- "ENGINE BRAKE LOW MBR\_L PIN 18/08"
- "ENGINE BRAKE HIGH MBR\_H PIN18/09"
- "PTO CTRL SET SW PIN 18/10"
- "LIMITER0 SET SW PIN 18/11"
- "LIMITER1 SET SW PIN18/12"
- "SHUTDOWN OVERRIDE MABSCH\_SP PIN 18/13"
- "LIMITER KLIMA SET SW PIN 18/14"
- "FAN PIN 18/15"
- "ACCELERATOR PEDAL LOCKOUT PIN 18/16"
- "TRANSMISSION NEUTRAL NE PIN 15/01"
- "REAR AXLE HA PIN 15/02"
- "ABS SAE J1939"
- "GAS 2(ANALOG THROTTLE) PIN21/13 IDLE SW1"
- "GAS 1(ANALOG THROTTLE) PIN21/12 IDLE SW2"
- "ENGINE BRAKE(S) OFF SHUTDOWN VIA SAE J1939"
- "KICKDOWN THROTTLE PEDAL"
- "ZERO INJECTION ENG STOP DEMAND ON PLD VIA SOFT CAN"
- "ZERO INJ ENG STOP VIA CAN SAE J1939 PGN 61184"
- "STARTER SIGNAL (KL.50) PIN 12/01"
- "DSF0 PIN12/10 CONFIGURABLE INPUT DSF0"
- "DSF1 PIN12/09 CONFIGURABLE INPUT DSF1"
- "MBR-BK PIN 15/06"
- "MBR-KD PIN 15/10"
- "RELAY 1 PIN15/12"
- "RELAY 2 PIN15/09"
- "RELAY 3 PIN15/11"
- "RELAY 4 PIN18/01"
- "ENGINE HOOD(BUS) PIN 12/08"
- "VEHICLE SPD FROM FR(FMR)FROM V/C3 SIGNAL"
- "COOLANT TEMPERATURE COMPARE MW 13"
- "FUEL TEMPERATURE COMPARE MW 13"
- "OIL LEVEL "
- "OIL TEMPERATURE COMPARE MW 13"
- "BOOST TEMPERATURE"
- "BOOST PRESSURE NONREPECTITIVE VALUE"
- "AMBIENT PRESSURE "
- "OIL PRESSURE"
- "SUPPLY VOLTAGE TERMINAL 30"
- "GOVERNOR TYPE"
- "ENGINE STATUS"
- "FUEL PRESSURE"
- "SCAVENGING GRADIENT(P2S-P3)"
- "FAN SPEED"
- "BOOSTER SPEED 1"
- "BOOSTER SPEED 2"
- "CHARGE-AIR TEMP 2"
- "TEMP AFTER EGR COOLER"

## PLD VALORES BINARIOS

- "CONFIGURATION ENGINE BRAKE"
- "FREE"
- "FREE"
- "FREE"
- "WARNING BUZZER"
- "STOP LAMP"
- "CAN STATUS (LOW LINE)"
- "CAN STATUS (HIGH LINE)"
- "TERMINAL 15 MR(PLD)"
- "TERMINAL 15 CAN"
- "TERMINAL 50 MR(PLD)"
- "TERMINAL 50 CAN"
- "STARTING TIP SW(ENGINE)"
- "STOP TIP SW (ENGINE)"
- "STARTER OUTPUT MR (PLD)"
- "STARTER LOCK MR(PLD)"
- "ANALOG VALVE 1"
- "ANALOG VALVE 2"
- "ANALOG VALVE 3"
- "ANALOG VALVE 4"
- "ENGINE EXHAUST FLAP"
- "DECOMPRESSION VALVE"
- "FREE"
- "FREE"
- "ENGINE PROTECTION"
- "MAXIMUM LOAD MODE"
- "MAX. SPEED LIMITATION MODE"
- "SMOKE LIMITER"
- "ANALOG VALVE 5"
- "ANALOG VALVE 6"

## PLD VOLTIMETRO

- "BOOST PRESSURE SENSOR"
- "AMBIENT PRESSURE SENSOR"
- "OIL PRESSURE SENSOR/AIR CHARGE TEMP2"
- "FUEL PRESSURE SENSOR"

## PLD VALORES ANALOGOS

- "ENGINE TORQUE DEMAND"
- "MAX MOMENTARY TORQUE BY ENGINE STOP"
- "ACTUAL ENGINE TORQUE(PLD)"
- "INJECTION TIME (AVERAGE)"
- "ACTUAL SPEED DEMAND"
- "ACTUAL SPEED LIMIT"
- "DEMAND SPEED FROM FR(FMR)"
- "AUX SPEED TERMINAL W FROM GENERATOR"
- "ACTUAL ENGINE SPEED NONREPECTITIVE VALUE"
- "ENGINE SPD GRADIENT LIMITER(FROM FR)FMR"

- "OIL LEVEL SENSOR"
- "BOOST TEMP SENSOR"
- "COOLANT TEMPERATURE SENSOR"
- "FUEL TEMP SENSOR"
- "OIL TEMP SENSOR"
- "DESIRE TORQUE WITHOUT CAN"
- "SUPPLY VOLTAGE"
- "OIL PRESSURE(GAUGE)"
- "SCANVENGING GRADIENT(P2S-P3)"
- PARAMETROS

#### GRUPOS ADM

- "CAN CONFIGURATION"
- "VEHICLE PARAMETERS"
- "COMMON LIMITERS"
- "ANTIRUCKELDAMPER PLD-MR"
- "LIMITERS LIMO/1"
- "LIMITERS KLIMA"
- "PTO CTRL ON PTO AND CCON"
- "VSS SENSOR"
- "ANALOG OUTPUT"
- "ENGINE BRAKE"
- "ACCELERATOR PEDAL"
- "CONFIGURATION INPUTS"
- "CONFIG. RELAY 3/4"
- "CONFIG. CRUISE CONTROL"
- "RELAY 1/STARTER LOCKOUT"
- "CONFIG. IDLE/PTO SHUTDOWN"
- "ENGINE PROTECTION SHUTDOWN"
- "AUTOMATIC FAN ACTIVATION"
- "REMOTE ACCELERATOR PEDAL"
- "DROOP CONTROL MODE"
- "CONFIG. VSS"
- 27 "FLEETMANAGEMENT"

#### GRUPOS PLD

- "ENGINE IDENTIFICATION"
- "CAN CONFIGURATION"
- "PROPORTIONAL VALVES"
- "FANS"
- "OIL"
- 8 "OTHERS FACTORS"

#### GRUPO 1 ADM

- "ENGINE CAN ONE WIRE CAPABILITY"
- "SAE J1939 3.SOURCE ADDRESS TSC1"
- "SAE J1939 SOURCE ADDRESS MOTOR"
- "SAE J1939 SOURCE ADDRESS ENGINE BRAKE"
- "SAE J1939 SOURCE ADDRESS TRANSMISSION"
- "SAE J1939 SOURCE ADDRESS ABS"
- "SAE J1939 SOURCE TRANSMISSION RETARDER"

#### GRUPO 2 ADM

- "DESIRED IDLE SPEED SINGLE INC/DEC"
- "DESIRED IDLE RAMP RATE INC/DEC"
- "MAXIMUM ADJUSTED IDLE SPEED"
- "MAX. ROAD SPEED FOR IDLE INC/DEC"
- "TRANSMISSION TYPE"
- "ABS/ATC TYPE"
- "CONFIGURATION RELAY2"
- "BATTERY VOLTAGE 12/24V"
- "ENGINE CAN LIMP HOME MODE"
- "ENGINE SPEED LIMIT WHILE VEHICLE STOP"
- "RAMP SMOKE LIMITER"
- "CONFIGURATION OUTPUT FP+"
- "ENGINE BRAKE OUTPUTS"
- "TEMP CORRECTION BLOCKHEATER"
- "SEND FREE RUNNING TELEGRAM ON L KINE"

#### GRUPO 3 ADM

- "MINIMUM ENGINE SPEED"
- "MAXIMUM ENGINE SPEED"
- "MAXIMUM ROAD SPEED(LEGAL)"
- "MAXIMUM ENGINE TORQUE"
- "ROAD SPEED LIMITER SPECIAL PARAMETER"
- "ROAD SPEED LIMITER P-FACTOR"
- "ROAD SPEED LIMITER SPECIAL PARAMETER"
- "ROAD SPEED LIMITER SPECIAL PARAMETER"
- "MOMENTBAND SCHUBRUEKELN"
- "FACTOR SCHUBRUEKELN"

#### GRUPO 4 ADM

- "FUNCTION AKTIVIEREN"
- "VERSTARKUNG"
- "GRENAFREQUENA"
- "MAX FFG FUR ANTIRUCKELDAMPFER"
- "MAX DREHZAHL FUR"
- "+J26MAX. MOMENT FUR ANTIRUCKELD"

#### GRUPO 5 ADM

- "MINIMUM ENGINE SPEED LIMO ENABLED"
- "MAXIMUM ENGINE SPEED LIMO ENABLED"
- "MAXIMUM ROAD SPEED LIMO ENABLED"
- "MAXIMUM ENGINE TORQUE LIMO ENABLED"
- "MINIMUM ENGINE SPEED LIM1 ENABLED"
- "MAXIMUM ENGINE SPEED LIM1 ENABLED"
- "MAXIMUM ROAD SPEED LIM1 ENABLED"
- "MAXIMUM ENGINE TORQUE LIM1 ENABLED"

#### GRUPO 6 ADM

- "MINIMUM ENGINE SPEED KLIMA ENABLED"
- "MAXIMUM ENGINE SPEED KLIMA ENABLED"
- "MAXIMUM ROAD SPEED KLIMA ENABLED"
- "MAXIMUM ENGINE TORQUE KLIMA ENABLED"

#### GRUPO 7 ADM

- "CONFIGURATION PTO SPEED CONTROL"
- "MAXIMUM PTO SPEED WITH CC+ SWITCH"
- "MINIMUM PTO SPEED WITH CC- SWITCH"
- "PTO THROTTLE OVERRIDE ENABLE"
- "MAX ENGINE SPEED FOR THROTTLE OVERRIDE"
- "PTO DROPOUT ON SERVICE BREAK/PARK BRAKE ENABLED"
- "PTO DROPOUT ON CLUTCH ENABLED"
- "MAXIMUM ROAD SPEED IN PTO MODE"
- "PTO SET SPEED WITH CC-SWITCH"
- "PTO GOVERNOR TYPE WITH CC- SWITCH"
- "MAX PTO TORQUE WITH CC-SWITCH"
- "PTO SET SPEED WITH CC+ SWITCH"
- "PTO GOVERNOR TYPE WITH CC+ SWITCH"
- "MAX PTO TORQUE WITH CC+ SWITCH"
- "PTO RAMP RATE"
- "NUMBER OF SPEEDS VIA REMOTE (PIN 18/1)"
- "PTO SPEED #1"
- "PTO SPEED #1 GOVERNOR TYPE"
- "PTO SPEED #1 MAXIMUM ENGINE TORQUE"
- "PTO SPEED #2"
- "PTO SPEED #2 GOVERNOR TYPE"
- "PTO SPEED #2 MAXIMUM ENGINE TORQUE"
- "PTO SPEED #3"
- "PTO SPEED #3 GOVERNOR TYPE"
- "PTO SPEED #3 MAXIMUM ENGINE TORQUE"

#### GRUPO 8 ADM

- "VEHICLE SPEED SENSOR"

#### GRUPO 9 ADM

- "CONFIGURATION ANALOG OUTPUT(IWA)"
- "ENGINE SPEED DISPLAY N\_MOT"
- "OIL PRESSURE DISPLAY P\_OEL"

- "COOLANT TEMPERATURE DISPLAY T\_MOT"

#### GRUPO 10 ADM

- "MINIMUM ENGINE SPEED FOR ENGINE BRAKES"
- "MAXIMUM THROTTLE POSITION FOR ENGINE BRAKES"
- "ENABLE ENGINE BRAKES ON SERVICE BRAKE"
- "MINIMUM ROAD SPEED FOR ENGINE BRAKE OPERATION"
- "ENABLE ENGINE BRAKES ON CRUISE CONTROL"
- "CC ENG.BRAKE1 ON MAX. CRUISE CTRL OVER SPEED"
- "CC ENG.BRAKE1 OFF MIN. CRUISE CTRL OVER SPEED"
- "CC ENG.BRAKE2 ON MAX. CRUISE CTRL OVER-SPEED"
- "CC ENG.BRAKE2 OFF MIN. CRUISE CTRL OVER SPEED"
- "ROAD SPEED LIMIT FOR AUTOMATIC ENGINE BRAKE"
- "J1939 ENGINE RETARDER CONFIGURATION"
- "STEPS ENGINE BRAKE"
- "REFERENCE BRAKE TORQUE"
- "ENGINE SPEED 1"
- "ENGINE BRAKE TORQUE 1"
- "ENGINE SPEED 2"
- "ENGINE BRAKE TORQUE 2"
- "ENGINE SPEED 3"
- "ENGINE BRAKE TORQUE 3"
- "ENGINE SPEED 4"
- "ENGINE BRAKE TORQUE 4"
- "CC ENG BRAKE 3 ON"
- "CC ENG BRAKE 3 OFF"
- "ENGINE BRAKE CONFIGURATION"
- "ENGINE BRAKE STAGE 1 MASK"
- "ENGINE BRAKE STAGE 1 FACTOR"
- "ENGINE BRAKE STAGE 2 MASK"
- "ENGINE BRAKE STAGE 2 FACTOR"
- "ENGINE BRAKE STAGE 3 MASK"
- "ENGINE BRAKE STAGE 3 FACTOR"
- "ENGINE BRAKE TRANSMISSION MASK"
- "ENGINE BRAKE TRANSMISSION FACTOR"

#### GRUPO 11 ADM

- "ACCELERATOR PEDAL TYPE"
- "ANALOG PEDAL KICKDOWN THRESHOLD"
- "IDLE VALIDATION SWITCH LIMP HOME ENGINE SPEED"
- "LIMP HOME RAMP UP ON IDLE VALIDATION SWITCH"
- "ACCEL POS RAMP UP RATE IF FAULT CLEARS"
- "ACCEL POS RAMP DOWN RATE IF FAULT CLEARS"
- "PWM PEDAL KICKDOWN SWITCH ON THRESHOLD"

- "PWM PEDAL KICKDOWN SW OFF THRESHOLD"
- "ACC PEDAL CHARACTERISTIC X1"
- "ACC PEDAL CHARACTERISTIC Y1"
- "ACC PEDAL CHARACTERISTIC X2"
- "ACC PEDAL CHARACTERISTIC Y2"
- "ACC PEDAL CHARACTERISTIC X3"
- "ACC PEDAL CHARACTERISTIC Y3"
- "ACC PEDAL CHARACTERISTIC X4"
- "ACC PEDAL CHARACTERISTIC Y4"
- "PEDAL FILTER TAU LARGE SIGNAL RANGE"
- "PEDAL FILTER TAU SMALL SIGNAL RANGE"
- "PEDAL FILTER SMALL SIGNAL RANGE"
- "ACC PEDAL RAMP UP"
- "ACC. PEDAL RAMP DOWN"

#### GRUPO 13 ADM

- "ENABLE COOLANT LEVEL SENSOR INPUT(KW\_SE)"
- "ENABLE AIR FILTER SENSOR INPUT"
- "ENABLE SERVICE BRAKE INPUT (BRE)"
- "ENABLE TRANSMISSION NEUTRAL INPUT(NE)"
- "ENABLE PARK BRAKE INPUT (FSBE)"
- "CONFIGURATION VARIABLE INPUT DSF0"
- "CONFIGURATION VARIABLE INPUT DSF1"
- "SWITCHABLE TORQUE DEMAND VIA DSF0"
- "SWITCHABLE TORQUE DEMAND VIA DSF1"

#### GRUPO 14 ADM

- "CONFIG. COMPARATOR(IWK3)FOR RELAY3"
- "IWK3 TORQUE"
- "IWK3 HYSTERESIS TORQUE"
- "IWK3 ROAD SPEED"
- "IWK3 HYSTERESIS ROAD SPEED"
- "IWK3 ENGINE SPEED"
- "IWK3 HYSTERESIS ENGINE SPEED"
- "IWK3 TEMP"
- "IWK3 HYSTERESIS TEMP"
- "CONFIGURATION COMPARATOR (IWK4) FOR RELAY 4"
- "IWK4 TORQUE"
- "IWK4 HYSTERESIS TORQUE"
- "IWK4 ROAD SPEED"
- "IWK4 HYSTERESIS ROAD SPEED"
- "IWK4 ENGINE SPEED"
- "IWK4 HYSTERESIS ENGINE SPEED"
- "IWK4 TEMP"

- "IWK4 HYSTERESIS TEMP"

#### GRUPO 15 ADM

- "MINIMUM ROAD SPEED FOR CRUISE CONTROL"
- "MAXIMUM SET SPEED FOR CRUISE CONTROL"
- "CRUISE SET SPEED INCREMENT"
- "CRUISE SET SPEED DECREMENT"
- "CRUISE SET SPEED RAMP UP"
- "CRUISE SET SPEED RAMP DOWN"
- "ENABLE CRUISE AUTO RESUME"

#### GRUPO 16 ADM

- "OUTPUT RELAY 1/STARTER LOCKOUT"
- "MAXIMUM STARTER CRANK TIME"
- "MINIMUM ENGINE SPEED FOR OVER-CRANK DETECTION"
- "MINIMUM LOCKOUT TIME AFTER OVER-CRANK"

#### GRUPO 17 ADM

- "ENABLE IDLE SHUTDOWN"
- "IDLE SHUTDOWN TIME"
- "ENABLE PTO SHUTDOWN TIME"
- "PTO SHUTDOWN TIME"
- "MAXIMUM ENGINE LOAD FOR PTO SHUTDOWN"
- "TIME FOR CEL BEFORE IDLE/PTO SHUTDOWN"
- "TIME FOR SEL BEFORE IDLE/PTO SHUTDOWN"
- "MINIMUM COOLANT TEMP"
- "ENABLE IDLE/PTO SHUTDOWN OVERRIDE"

#### GRUPO 18 ADM

- "ENG PROTECT SHUTDOWN ON ECT"
- "ENG PROTECT SHUTDOWN ON COOLANT LEVEL"
- "ENG PROTECT SHUTDOWN ON OIL PRESSURE"
- "ENG PROTECT SHUTDOWN ON OIL LEVEL"
- "ENG PROTECT SHUTDOWN TIME"
- "ENG PROTECT SHUTDOWN TIME ON OIL"
- "COUNTER OF ENG PROTECT SHUTDOWN OVERRIDES"
- "TIME FOR CEL BEFORE ENG PROTECT"
- "TIME FOR CEL BEFORE ENG PROTECT SHUTDOWN"

#### GRUPO 19 ADM

- "ENABLE AUTOMATIC FAN ACTIVAT. ON ENG BRAKE"
- "ENABLE AUTOMATIC FAN ACTIVAT. ON AIR COND."
- "ENABLE AUTOMATIC FAN ACTIVATION ON PTO"
- "COOL TEMP AT 0% FAN"
- "COOL TEMP AT 100% FAN"
- "FAN ON DSF0"
- "FAN ON DSF1"
- "HOLD TIME FAN"
- "RAMP FAN"
- "FAN ON FAN INPUT"

#### GRUPO 20 ADM

- "ENABLE REMOTE ACCELERATOR PEDAL INPUT"
- "DELAY TIME FOR REM ACC.PEDAL WIDE OPEN CALIBRATION"
- "MAXIMUM CHARGE OF REMOTE ACC PEDAL WIDE OPEN"
- "REMOTE ACCELERATOR PEDAL SIGNAL FILTER COEFFICIENT"
- "REMOTE ACCELERATOR PEDAL IDLE POSITION"
- "REMOTE ACCELERATOR PEDAL WIDE OPEN POSITION"

#### GRUPO 21 ADM

- "DROOP CONTROL MODE"
- "DROOP CTRL GOVERNOR TYPE"
- "DROOP MAXIMUM ENGINE TORQUE"

#### GRUPO 22 ADM

- "AXLE RATIO"
- "NUMBER OF OUTPUT SHAFT TEETH"

- "TIRE REVOLUTIONS PER KILOMETER"
- "TOP GEAR RATIO"
- "TWO SPEED AXLE-SECOND AXLE RATIO"
- "OPEN CIRCUIT DETECTION"
- "NO MONITORING OF VEHICLE SPEED SENSOR VSP"

#### GRUPO 27 ADM

- "FLEET MANAGEMENT"
- "INCIDENT DATA"
- "SERVICE INTERVAL DATA ENABLE"
- "MONTHLY TRIP DATA"
- "DETAILED ALERT DATA"
- "ENGINE USAGE DATA TOLERANCE"

#### GRUPO 1 PLD

- "MANUAL/AUTOMATIC TRANSMISSION"
- "STARTER TYPE (CONTROL OVER PLD OR EXTERNALLY)"
- "BOOST-PRESSURE SENSOR CHARACTERISTIC LINE"
- "CHARGE AIR TEMPERATURE SENSOR AFTER COMPRESSOR"

#### GRUPO 2 PLD

- "ENGINE CONTROL VIA CAN"
- "CAN ONE WIRE CAPABILITY"

#### GRUPO 3 PLD

- "PROPORTIONAL VALVE 1(PV1) CONTROL"
- "PROPORTIONAL VALVE 2(PV2) CONTROL"

- "PROPORTIONAL VALVE 3(PV3) CONTROL"
- "PROPORTIONAL VALVE 4(PV4) CONTROL"
- "PROPORTIONAL VALVE 5(PV5) CONTROL"
- "PROPORTIONAL VALVE 6(PV6) CONTROL"

#### GRUPO 4 PLD

- "FAN TYPE 0...9"
- "SWITCH ON THRESHOLD ON ECT.SPEED1"
- "SWITCH ON THRESHOLD ON IAT.SPEED1"
- "SWITCH ON THRESHOLD ON ECT.SPEED2"
- "SWITCH ON THRESHOLD ON IAT.SPEED2"
- "DIFF.THRESHOLD FAN 1"
- "FAN SPD1/ENG.BRAKE SW ON THRESHOLD ON IAT SPD1"
- "FAN SPD2/ENG.BRAKE SW ON THRESHOLD ON IAT SPD2"
- "DIFF.AIR TEMP/E.BRAKE"

#### GRUPO 6 PLD

- "OIL TEMPERATURE SENSOR"
- "OIL LEVEL MEASUREMENT"
- "SELECT OIL PAN TYPE"
- "OIL PRESSURE SENSOR TYPE"
- "OIL PRESSURE SWITCH OR SENSOR"

#### GRUPO 8 PLD

- "TORQUE TEMP.COMPENSATION"