The following live data paramete  012-545-62-32  LH-SFI (Fuel Injection) Personality Key S-20  D2 Sensor Voltage (mV) Self Adaptation CTP Idle - (kg/h) Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	Paragraph of the state of the s		015-545-13-32  DM (Diagnostic Module) Personality Key S-20  Engine Speed (RPM) Absolute Intake Manifold Pressure Intake Air Temperature (°C or °F)	ASR = 013-545-39-32  011-545-97-32  BM (Basic Module)  Personality Key S-34  Circuit 30 F2 (ok)  Circuit 30 F3 (ok)
O12-545-62-32  LH-SFI (Fuel Injection) Personality Key S-20 D2 Sensor Voltage (mV) Self Adaptation CTP Idle - (kg/h) Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	124-545-45-32  EA/CC/ISC (E-GAS) Personality Key S-21  Engine Speed (RPM)  LF Speed (MPH or KPH)  LR Speed (MPH or KPH)  Cruise Control Sw. S40 'D' (On/Off)  Cruise Control Switch S40 'A' (On/Off)	O15-545-61-32  DI (EZL / Digital Ignition) Personality Key S-21  Engine Speed (RPM) Engine Coolant Temp (°C or °F) Intake Air Temperature (°C or °F) Barometric Pressure (mbar)	DM (Diagnostic Module) Personality Key S-20 Engine Speed (RPM) Absolute Intake Manifold Pressure	BM (Basic Module) Personality Key S-34 Circuit 30 F2 (ok)
CH-SFI (Fuel Injection) Personality Key S-20 D2 Sensor Voltage (mV) Self Adaptation CTP Idle - (kg/h) Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	EA/CC/ISC (E-GAS)  Personality Key S-21  Engine Speed (RPM)  LF Speed (MPH or KPH)  LR Speed (MPH or KPH)  Cruise Control Sw. S40 'D' (On/Off)  Cruise Control Switch S40 'A' (On/Off)	DI (EZL / Digital Ignition) Personality Key S-21  Engine Speed (RPM) Engine Coolant Temp (°C or °F) Intake Air Temperature (°C or °F) Barometric Pressure (mbar)	DM (Diagnostic Module) Personality Key S-20 Engine Speed (RPM) Absolute Intake Manifold Pressure	BM (Basic Module) Personality Key S-34 Circuit 30 F2 (ok)
Personality Key S-20 D2 Sensor Voltage (mV) Self Adaptation CTP Idle - (kg/h) Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	Personality Key S-21 Engine Speed (RPM) LF Speed (MPH or KPH) LR Speed (MPH or KPH) Cruise Control Sw. S40 'D' (On/Off) Cruise Control Switch S40 'A' (On/Off)	Personality Key S-21  Engine Speed (RPM)  Engine Coolant Temp (°C or °F)  Intake Air Temperature (°C or °F)  Barometric Pressure (mbar)	Personality Key S-20 Engine Speed (RPM) Absolute Intake Manifold Pressure	Personality Key S-34 Circuit 30 F2 (ok)
D2 Sensor Voltage (mV) Self Adaptation CTP Idle - (kg/h) Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	Engine Speed (RPM) LF Speed (MPH or KPH) LR Speed (MPH or KPH) Cruise Control Sw. S40 'D' (On/Off) Cruise Control Switch S40 'A' (On/Off)	Engine Speed (RPM) Engine Coolant Temp (°C or °F) Intake Air Temperature (°C or °F) Barometric Pressure (mbar)	Engine Speed (RPM) Absolute Intake Manifold Pressure	Circuit 30 F2 (ok)
Self Adaptation CTP Idle - (kg/h) Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	LF Speed (MPH or KPH) LR Speed (MPH or KPH) Cruise Control Sw. S40 'D' (On/Off) Cruise Control Switch S40 'A' (On/Off)	Engine Coolant Temp (°C or °F) Intake Air Temperature (°C or °F) Barometric Pressure (mbar)	Absolute Intake Manifold Pressure	
Self Adaptation Lower Partial Load Self Adaptation Upper Partial Load D2 Sensor (Lambda) Control (%) Battery Voltage (V) Engine Speed (RPM) Basic Injection Duration (ms)	LR Speed (MPH or KPH) Cruise Control Sw. S40 'D' (On/Off) Cruise Control Switch S40 'A' (On/Off)	Intake Air Temperature (°C or °F) Barometric Pressure (mbar)		Circuit 30 F3 (ok)
telf Adaptation Upper Partial Load 22 Sensor (Lambda) Control (%) 4 tattery Voltage (V) 4 ingine Speed (RPM) 4 tasic Injection Duration (ms)	Cruise Control Sw. S40 'D' (On/Off) Cruise Control Switch S40 'A' (On/Off)	Barometric Pressure (mbar)	Intake Air Temperature (°C or °F)	
2 Sensor (Lambda) Control (%) attery Voltage (V) ngine Speed (RPM) asic Injection Duration (ms)	Cruise Control Switch S40 'A' (On/Off)			Circuit 30 F4 (ok)
lattery Voltage (V) Ingine Speed (RPM) Lasic Injection Duration (ms)		Manifold Air Proceure Differential (mbar)	Engine Coolant Temp (°C or °F)	Circuit 30 LH1-SFI Unfused (ok)
ngine Speed (RPM) asic Injection Duration (ms)	Cruise Control Switch S40 'R' (On/Off)		Vehicle Speed (MPH or KPH)	Kickdown Switch Voltage
asic Injection Duration (ms)		Ignition Angle (°)		Circuit 15 Voltage
	Cruise Control Switch S40 'O' (On/Off)	Catalyst Selected		Engine Speed (RPM)
jection Duration Correction (ms)	C.C. Switch S40 Safety Contact (On/Off)	Reference Resistor		Vehicle Speed (MPH or KPH)
	Potentiometer M16 / 1R2 (V)	Transmission Overload Protection Switch		Module Box Blower M2/2 (on/off)
	Reference Potentiometer M16 / 1R1 (V)	Battery Voltage (V)		A/C Compressor Signal (on/off)
	CTP (Idle) Switch S29/3 (On/Off)	Knock Control Act.		Electromagnetic Clutch A9K1 (on/off)
	Idle Speed Safety Switch M16 / 1S2 (On/Off)	Knock Ignition Angle Cylinder 1		Idle Speed Increase (on/off)
	Safety Contact Switch M16 / 1S1 (On/Off)	Knock Ignition Angle Cylinder 2		
	Safety Fuel Shut-Off (On/Off)	Knock Ignition Angle Cylinder 3		
	A/C Compressor (On/Off)	Knock Ignition Angle Cylinder 4		
eceleration Shutoff (Y/N)	CTP (Idle) Increase (On/Off)	Knock Ignition Angle Cylinder 5		
ir Pump (On/Off)	Stop Lamp Switch N.O. Contact (On/Off)	Knock Ignition Angle Cylinder 6		Basic Module Actuator Tests:
amshaft timing (On/Off)	Stop Lamp Switch N.C. Contact (On/Off)	Knock Ignition Angle Cylinder 7		Module Box Blower Motor
	Trans. Range Selector Switch (P,R,N,D,S,L)	Knock Ignition Angle Cylinder 8		
	CAN Transmission from EA/CC/ISC (ok)	Ignition Voltage Cylinder 1		
hrottle Valve Angle (°)	CAN Reception from ASR (ok)	Ignition Voltage Cylinder 2		
VOT (Full Load) Recognition (On/Off)	CAN Reception from LH-SFI (ok)	Ignition Voltage Cylinder 3		
GR (On/Off)	CAN Reception from DI (ok)	Ignition Voltage Cylinder 4		
uel Pump (On/Off)	` ,	Ignition Voltage Cylinder 5		LH Injection Actuator Tests:
Canister Purge Duty Cycle (%)		Ignition Voltage Cylinder 6		Seconday Air Injection
ehicle Speed (MPH or KPH)		Ignition Voltage Cylinder 7		EGR
vlinder Shut-Off 1 (Y/N)		Ignition Voltage Cylinder 8		Adjustable Camshaft Timing 1
ylinder Shut-Off 2 (Y/N)		Combustion Time Cylinder 1		Adjustable Camshaft Timing 2
ylinder Shut-Off 3 (Y/N)		Combustion Time Cylinder 2		Injector #1
ylinder Shut-Off 4 (Y/N)		Combustion Time Cylinder 3		Injector #2
ylinder Shut-Off 5 (Y/N)		Combustion Time Cylinder 4		Injector #3
ylinder Shut-Off 6 (Y/N)		Combustion Time Cylinder 5		Injector #4
ylinder Shut-Off 7 (Y/N)		Combustion Time Cylinder 6		Injector #5
ylinder Shut-Off 8 (Y/N)		Combustion Time Cylinder 7		Injector #6
H-SFI Reference Resistor		Combustion Time Cylinder 8		Injector #7
ircuit 50 (On/Off)		CAN Transmission from DI (ok)		Injector #8
afety Fuel Shut-Off (On/Off)		CAN Reception from LH-SFI (ok)		Purging
AN Reception from DI (ok)		CAN Reception from ASR (ok)		Upshift Delay
AN Reception from EA/CC/ISC (ok)		CAN Reception from EA/CC/ISC (ok)		Burnoff Control
AN Transmission from LH-SFI (ok)		OAN RECEPTION FOR EA/CO/ISC (OK)		- Danion Control

Years & models:					
1993-1995 124.028, .032, .052, .066	, .092 with 2.8L or 3.2L engine (all ha	ve HFM-SFI injection)			
1994-1996 W202 with 2.8L engine a					
1996 W210 with 3.2L engine and HF					
The following live data parameters are available from vehicles with M104.9xx inline 6-cylinder					
engines with HFM fuel injection:					
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HFM-SFI (Fuel Injection)	DM (Diagnostic Module)	EA/CC/ISC (E-GAS)
O2 Sensor 1 Voltage (mV)	Engine Speed (RPM)	No communication
O2 Sensor (Lambda) Control (%)	Absolute Intake Manifold Pressure	Snap-On software error - requires custom
Self Adaptation Factor Lower Partial Load	Intake Air Temperature (°C or °F)	wiring to communicate, scanner is looking
Self Adaptation Factor Upper Partial Load	Engine Coolant Temp (°C or °F)	at the wrong signal line from the adapter.
Air Mass (kg/h)	Vehicle Speed (MPH or KPH)	With the modified wiring it will work fine.
After Start Enrichment (On/Off)		
Engine Coolant Temp (°C or °F)		
Air Pump (On/Off)		
Engine Speed (RPM)		
Nominal Engine Speed (RPM)		
Intake Manifold Switchover Valve (on/off)		
Throttle Valve Angle (°)		
CTP (Idle) Contact (On/Off)		
WOT (Full Load) Contact (On/Off)		
Deceleration Shutoff (On/Off)		
Intake Air Temperature (°C or °F)		HFM Actuator Tests:
Injection Duration (ms)		Camshaft
Camshaft Solenoid (On/Off)		EGR
Self-Adaptation Idle Speed Air (kg/h)		Air Pump
Ignition Angle (°)		Injector Cylinder #1
AC Compressor (On/Off)		Injector Cylinder #2
Reference Resistor		Injector Cylinder #3
Starter Signal Circuit 50 (On/Off)		Injector Cylinder #4
Selector Lever Position (P, R, N, D, S, L)		Injector Cylinder #5
Vehicle Speed (MPH or KPH)		Injector Cylinder #6
Warm-Up		Purging