



FJ

**MPI Engine Management
for the
Audi Coupe Quattro
and
Audi 90 Quattro 20-Valve**

**Service Training
Self-Study Information**

**Service Training
Self-Study Information**

Overview	2
Engine Components	7
Fuel Supply	8
Fuel Injectors	9
Fuel Injector Series Resistance	10
Ignition System	11
Idle Stabilization	14
Fuel Tank Ventilation.....	16
Crankcase Ventilation	17
Exhaust Gas Recirculation	18
Electrical System	20
Self-Diagnosis	22
Inputs And Outputs	24
 Components	
Control Unit.....	26
Air Mass Sensor	27
Coolant Temperature Sensor	28
Engine Speed And Reference Sender.....	29
Hall Sender	30
Diagram Of Control Signals.....	31
Throttle Body	32
Throttle Potentiometer And Idle Switch	33
Knock Sensor I And II	34
Oxygen Sensor	35
EGR Temperature Sensor.....	36
Fuel Injectors	37
Ignition Coil With Power Stage	38
Idle Stabilizer	39
Carbon Canister Frequency Valve	40
Carbon Canister Shut-off Valve	41
EGR Frequency Valve	42
Fuel Pump Relay	43
California OBD Warning Light.....	43
Control Unit Inputs And Outputs	44
 ECU Self-Diagnosis	
Self-Diagnosis With V.A.G 1551	48
Self-Diagnosis With V.A.G 1551	49
V.A.G 1598	55
Wiring Diagram	56

Table of contents

Components	
Control Unit.....	26
Air Mass Sensor.....	27
Coolant Temperature Sensor.....	28
Engine Speed And Reference Sender.....	29
Hall Sender.....	30
Diagram Of Control Signals.....	31
Throttle Body.....	32
Throttle Potentiometer And Idle Switch.....	33
Knock Sensor I And II.....	34
Oxygen Sensor.....	35
EGR Temperature Sensor.....	36
Fuel Injectors.....	37
Ignition Coil with Power Stage.....	38
Idle Stabilizer.....	39
Carbon Canister Frequency Valve.....	40
Carbon Canister Shut-off Valve.....	41
EGR Frequency Valve.....	42
Fuel Pump Relay.....	43
California OBD Warning Light.....	43
Control Unit Inputs And Outputs.....	44
ECU Self-Diagnosis.....	48
Self-Diagnosis With V.A.G 1551.....	49
V.A.G 1598.....	55
Wiring Diagram.....	56

Overview

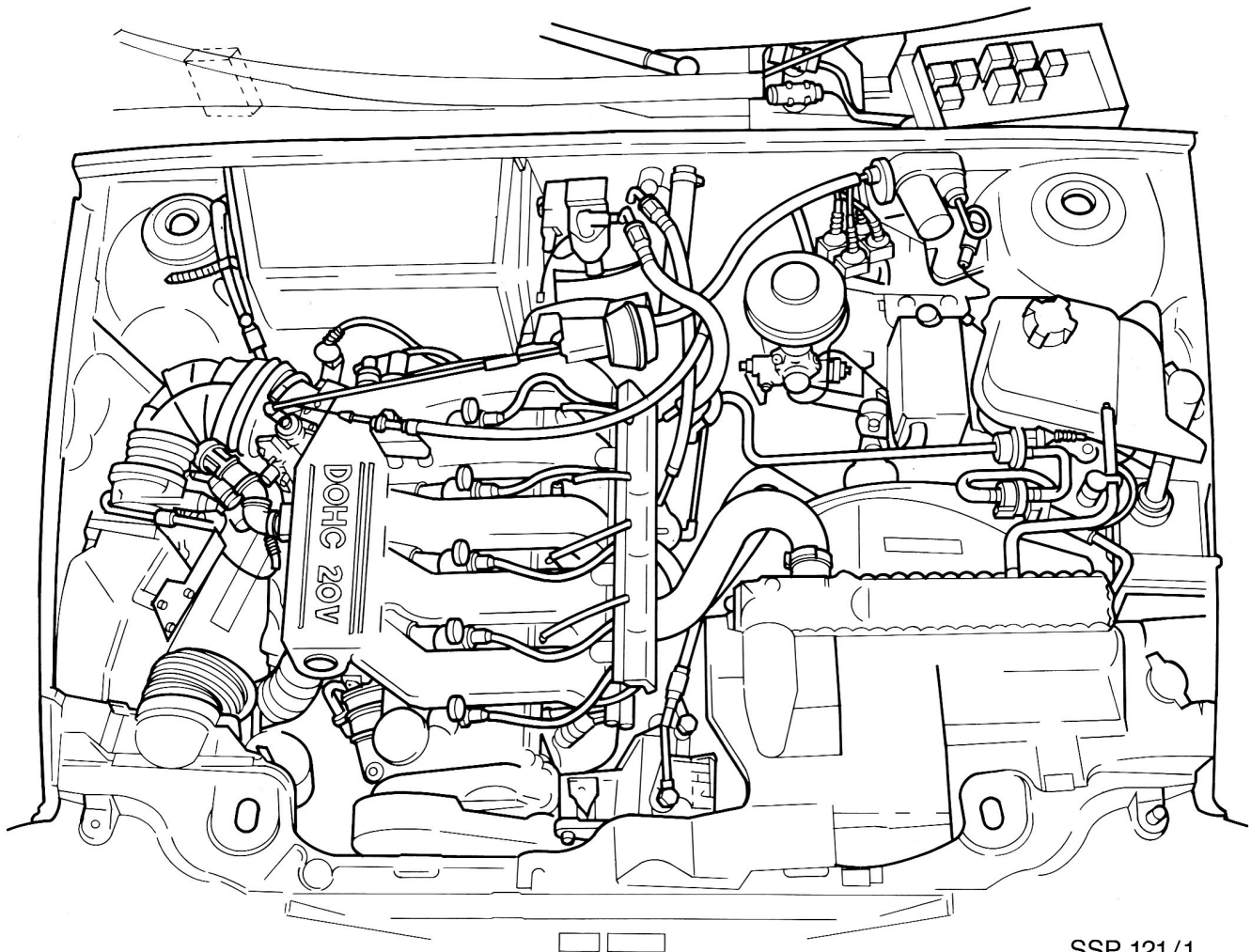
The 2.3 liter 20-valve engine that is installed in the Coupe Quattro and the Audi 90 Quattro has been updated during the 1990 model year. The MPI Engine Management System has been significantly revised and models sold in California now have Exhaust Gas Recirculation.

This revised engine can be identified by its new cast exhaust manifold and a new idle stabilizer valve.

Engine data

Construction: 5 cylinder in-line with 4 valves per cylinder
Displacement: 2309 cc
Bore: 82.5 mm
Stroke: 86.4 mm
Compression ratio: 10.3:1
Output: 164 HP @ 6000 RPM
158 ft.lb. @ 4500 RPM

AFTER 3 OF 90
7-A ENG

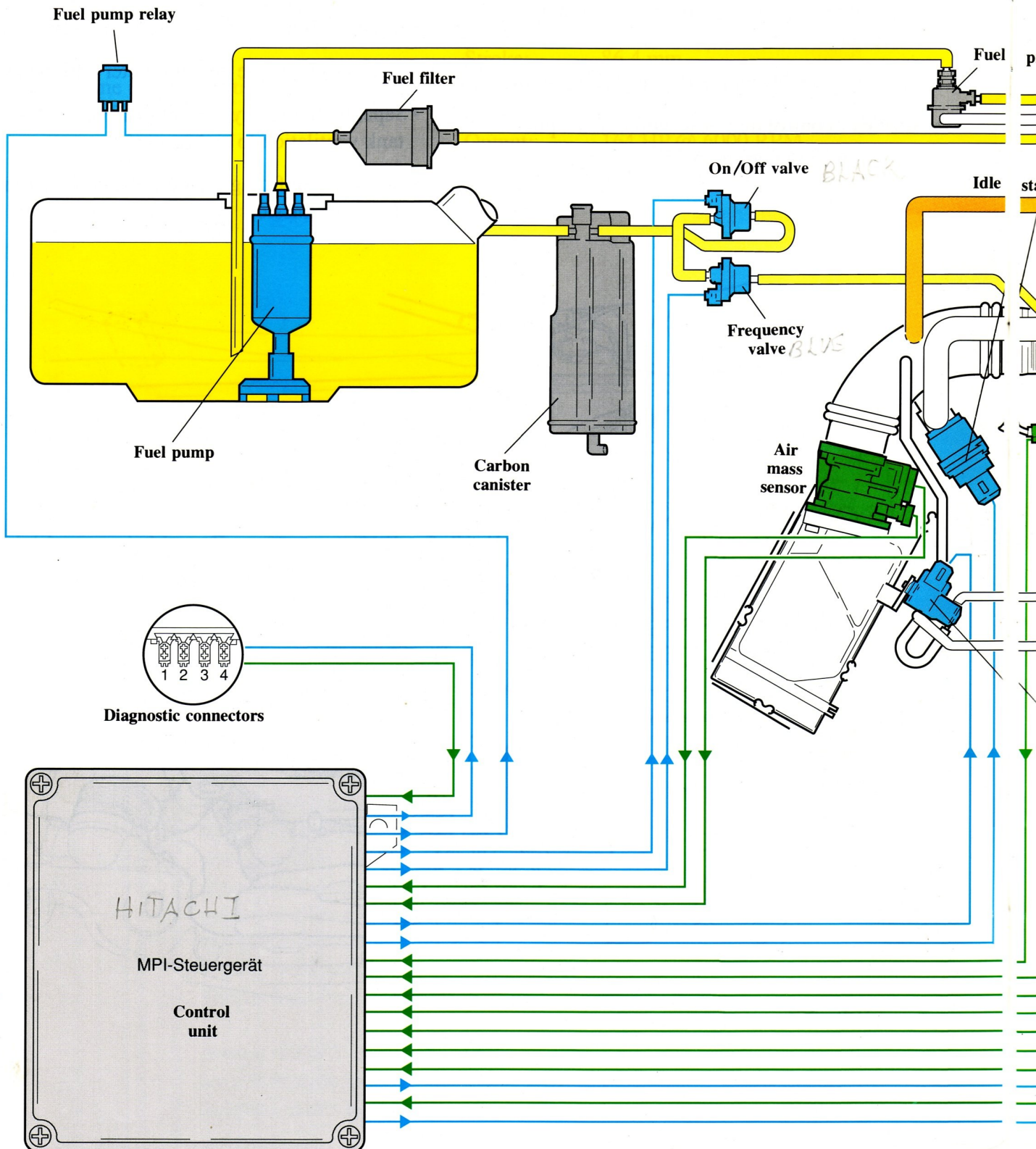


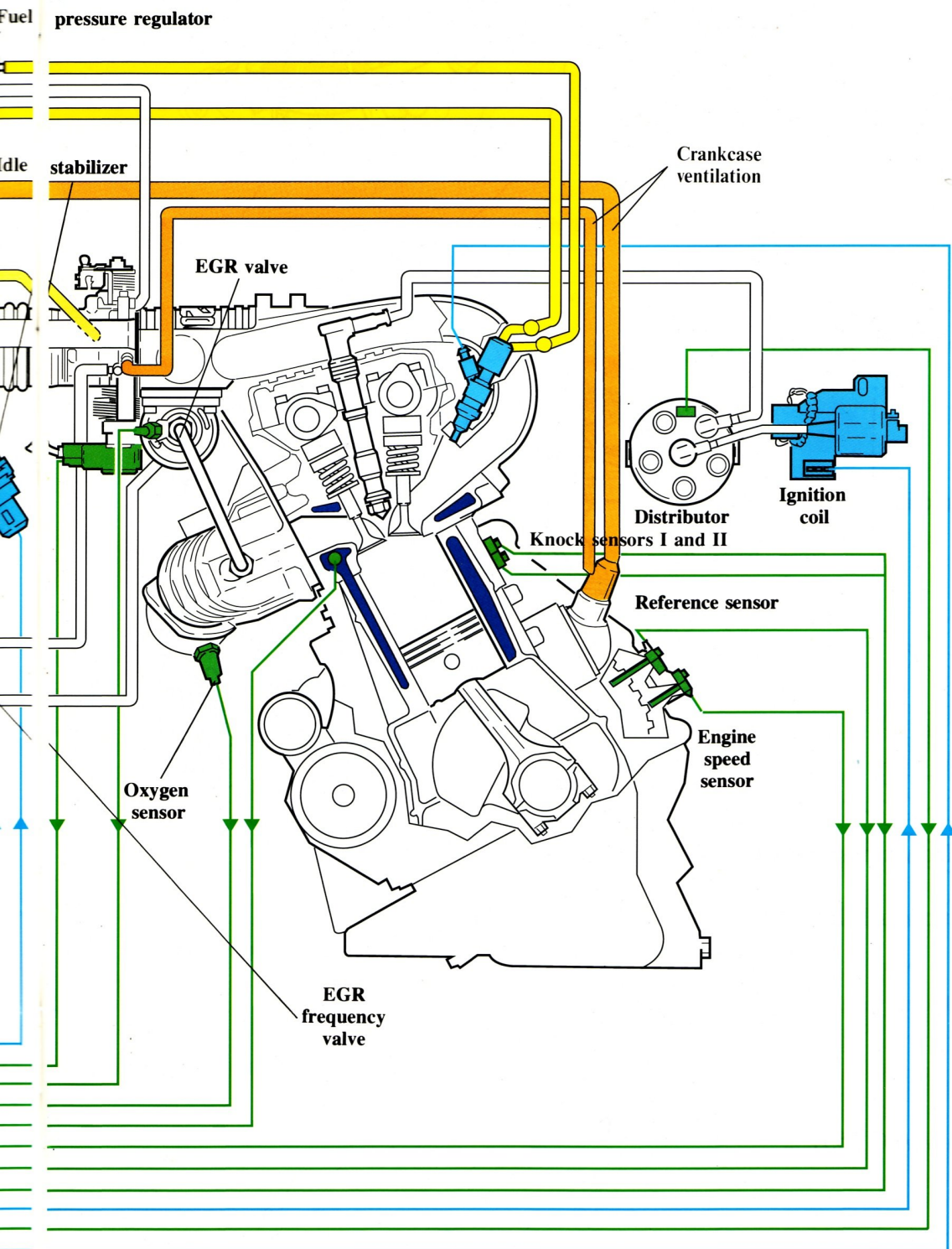
SSP 121/1

The revised 20-valve engine for the Audi Coupe Quattro and the Audi 90 Quattro has the following new features and changes:

- New cast iron exhaust manifold with a triple pipe “three-into-one” down pipe and new catalytic converter
- California models with Exhaust Gas Recirculation
- New MPI control unit now with 4 multi-pin connectors and gold-plated terminals
- New idle stabilizer valve
- Adaptive learning capability for idle speed control
- New throttle valve potentiometer with idle switch
- Separate frequency and shut-off valves for the fuel tank ventilation to carbon canister
- Expanded self-diagnosis capabilities with rapid data transmission

Overview





KNOCK SEN I GREEN
G66 2 BLUE
TIMING SEN BLACK
SPEED SEN GREY
ON OFF BLACK
FREQ VALVE BLUE

SSP121/3