The Bosch LH 2.4 Jetronic System is used on the 89-93 models (and later non-turbo/non-ODBII models)

1-1-1 No faults.

1-1-2 Control unit fault.

1-1-3 Fuel injectors - Injector cable break or blocked injector; 1994- Heated Oxygen sensor - max. enrichment sensed

1-1-5 Injector #1.

1-2-1 No signal to or from air mass meter. Engine runs in limp-home mode.

1-2-2 Air temp sensor signal.

1-2-3 No signal from coolant temperature sensor, or short to ground. Engine behaves as thought hot.

1-2-5 Injector #2.

1-3-1 Ignition system RPM signal missing.

1-3-2 Battery voltage to low or high.

1-3-3 Throttle switch idle position incorrectly adjusted or shorted to ground.

1-3-5 Injector #3.

1-4-2 Control unit fault. Engine running in limp-home mode with safety-retarded ignition (10°)

1-4-3 Knock sensor signal missing or defective. Engine running in limp-home mode with safety-retarded ignition (10°)

1-4-4 Fuel system load signal is absent or defective (air mass meter). Unit selects full-load timing and runs in limp-home mode.

1-4-5 Injector #4.

1-5-3 Rear heated Oxygen sensor signal.

1-5-4 EGR system-leakage or excessive flow.

1-5-5 Injector #5.

2-1-2 Oxygen sensor (Lambdasond) signal missing (front sensor on 1994 and later models).

2-1-3 Throttle switch in full load position, shorted to ground.

2-1-4 Ignition RPM signal erratic (sensor faulty).

2-2-1 Adaptive Lambda control, lean, part load; also heated Oxygen Sensor (Lambdasond), rich mixture / part load.

2-2-2 Main relay.

2-2-3 No signal to or from idle control valve.

2-2-4 Coolant temperature sensor faulty. Engine behaves as thought hot and runs in limp-home mode.

2-2-5 A/C pressure sensor signal.

2-3-1 Adaptive Lambda control, lean or rich / part load.

2-3-1 Adaptive Lambda control, lean or rich, part load; 1994- Heated Oxygen sesnor(lean mixture/part throttle).

2-3-2 Adaptive Lambda control, lean or rich / idle; 1994- Adaptive heated Oxygen sensor control

2-3-3 Idle control valve, closed or leaking.

2-3-4 Throttle switch (idling) signal missing. Engine running with safety-retarded ignition (10°)

2-4-1 Exhaust gas recirculation (EGR) malfunction. Not applicable to B234F

2-4-5 Idle air control valve-closing signal.

3-1-1 No signal from speedometer.

3-1-2 No knock enrichment signal from ignition system.

3-1-4 Camshaft position signal missing or defective.

3-1-5 EVAP emission control system.

3-2-1 Cold start valve-signal missing.

3-2-2 Air mass meter platinum wire burn-off function defective.

3-2-4 Camshaft position siganl erratic.

3-2-5 ECU memory failure.

3-3-5 TCM request for MIL.

4-1-1 Throttle switch signal faulty or missing.

4-1-3 EGR temperature sensor signal incorrect or missing. Not applicable to B234F

4-1-4 Turbo boost regulation.

4-1-6 Turbo boost reduction from TCM.

4-2-5 Temp warning level #1.

4-3-1 EGR temp sensor faulty or missing.

4-3-2 High temp warning inside ECU.

4-3-3 No rear knock sensor signal.

4-3-5 Front heated oxygen sensor - slow response.

4-3-6 Rear heated oxygen sensor compensation.

4-4-3 Catalytic converter efficiency.

4-4-4 Acceleration sensor signal.

4-5-1 Misfire - #1 cylinder.

4-5-2 Misfire - #2 cylinder.

4-5-3 Misfire - #3 cylinder.

4-5-4 Misfire - #4 cylinder.

4-5-5 Misfire - #5 cylinder.

5-1-1 Adaptive oxygen sensor control-lean mixture at idle.

5-1-2 Oxygen integrator at max lean running limit.

5-1-3 High temp warning inside ECU.

5-1-4 Engine cooling fan-low speed signal faulty.

5-2-1 Oxygen sensor preheating-front.

5-2-2 Oxygen sensor preheating- rear.

5-3-1 Power stage-group A.

5-3-2 Power stage-group B.

5-3-3 Power stage- group C.

5-3-4 Power stage- group C.

5-3-5 TC control valve signal.

5-4-1 EVAP valve signal.

5-4-2 Misfire - more than one cylinder.

5-4-3 Misfire - at least one cylinder.

5-4-4 Misfire - more than one cylinder/catalytic converter damage.

5-4-5 Misfire - at least one cylinder/catalytic converter damage.

5-5-1 Misfire - #1 cylinder/catalytic converter damage.

5-5-2 Misfire - #2 cylinder/catalytic converter damage.

5-5-3 Misfire - #3 cylinder/catalytic converter damage.

5-5-4 Misfire - #4 cylinder/catalytic converter damage.

5-5-5 Misfire - #5 cylinder/catalytic converter damage.

The FENIX 5.2 System is used on the 10 valve non turbo 850

1-1-1 No faults

1-1-2 ECU faulty

1-1-3 Fuel injectors; From 1994 and later, Heated oxygen sensor – max. enrichment sensed short term fuel mixture too weak

1-1-5 Injector no. 1 cylinder faulty signal

1-2-1 Manifold Absolute Pressure (MAP) signal absent or faulty

1-2-2 Air Temperature sensor signal absent or faulty

1-2-3 Coolant temperature sensor signal absent or faulty

1-2-5 Injector no. 2 cylinder faulty signal

1-3-1 Ignition System RPM signal

1-3-2 Battery voltage too low/high

1-3-3 Throttle switch signal (idle)

1-3-5 Injector no. 3 falty signal

1-4-2 ECU faulty

1-4-3 Front knock sensor signal missing or sensor defective

1-4-4 Fuel system load signal (missing or defective)

1-4-5 Injector no. 4 cylinder faulty signal

1-5-2 Air pump valve signal absent or faulty (only on some emission controlled vehicles)

1-5-3 Rear heated oxygen sensor signal

1-5-4 EGR system – leakage or excessive flow

1-5-5 Injector no. 5 cylinder faulty signal

2-1-2 Heated Oxygen sensor signal (front sensor on 1994 and later models) absent or faulty

2-1-3 Throttle switch signal (wide-open)

2-1-4 Ignition rpm sensor signal erratic, absent or faulty

2-2-1 Lambda Operation; Also heated Oxygen sensor (rich mixture/part throttle) / long term fuel mixture too weak in part load

2-2-2 Main relay signal absent or faulty

2-2-3 Idle air control valve signal absent or faulty

2-2-4 Coolant temperature sensor signal

2-2-5 A/C pressure sensor signal absent or faulty

2-3-1 Lambda adjustment; Also heated Oxygen sensor (lean mixture / part throttle) / long term fuel mixture too rich in part load

2-3-2 Lambda adjustment; 1994- adaptive heated oxygen sensor control / long term fuel mixture too weak at idle

2-3-3 Idle valve – closed or intake air leak / long term idle air trim outside control range

2-3-4 Throttle switch signal missing

2-4-1 EGR malfunction

2-4-5 Idle air control valve – closing signal

3-1-1 Speedometer signal

3-1-2 Knock/Fuel enrichment signal missing

3-1-4 Camshft position sensor signal missing or defective

3-1-5 EVAP emission control system

3-2-1 Cold start valve – signal missing

3-2-2 Airflow meter hot wire

3-2-4 Camshaft position sensor signal erratic

3-2-5 ECU memory failure

3-3-5 TCM request for MIL (CHECK ENGINE light)

4-1-1 Throttle switch signal faulty or missing

4-1-3 EGR temperature sensor signal incorrect or missing

4-1-4 Turbo boost regulation

4-1-6 Turbo boost reduction from TCM

4-2-5 Temperature warning level no. 1

4-3-1 EGR temperature sensor faulty or missing

4-3-2 High temperature warning inside ECU

4-3-3 No rear knock sensor signal

4-3-5 Front heated oxygen sensor - slow response

4-3-6 Rear heated oxygen sensor compensation

4-4-3 Catalytic converter efficiency

4-4-4 Acceleration sensor signal

4-5-1 Misfire cylinder no. 1

4-5-2 Misfire cylinder no. 2

4-5-3 Misfire cylinder no. 3

4-5-4 Misfire cylinder no. 4

4-5-5 Misfire cylinder no. 5

5-1-1 Adaptive oxygen sensor control, provides leaner mixture at idle

5-1-2 Oxygen intergrator at maximum lean running limit

5-1-3 High temperature warning inside ECU

5-1-4 Engine cooling fan - low speed signal faulty

5-2-1 Oxygen sensor preheating front

5-2-2 Oxygen sensor preheating rear

5-3-1 Power stage - group A

5-3-2 Power stage - group B

5-3-3 Power stage - group C

5-3-4 Power stage - group D

5-3-5 TC control valve signal

5-4-1 EVAP valve signal

5-4-2 Misfire on more than one cylinder

5-4-3 Misfire on at least one cylinder

5-4-4 Misfire on more than one cylinder, catalyic converter damage

5-4-5 Misfire on at least one cylinder, catalyic converter damage

5-5-1 Misfire on cylinder no. 1, catalyic converter damage

5-5-2 Misfire on cylinder no. 2, catalyic converter damage

5-5-3 Misfire on cylinder no. 3, catalyic converter damage

5-5-4 Misfire on cylinder no. 4, catalyic converter damage

5-5-5 Misfire on cylinder no. 5, catalyic converter damage

The Motronic 4.3 System is used on the 20 valve turbocharged and some non-turbo 20 valve B5254S engines

1-1-2 ECU faulty

1-1-5 Injector no. 1 cylinder faulty signal

1-2-1 MAF signal absent or faulty

1-2-3 Coolant temperature sensor signal absent or faulty

1-2-5 Injector no. 2 cylinder faulty signal

1-3-1 Ignition System RPM signal absent or faulty

1-3-2 Battery voltage too low/high

1-3-5 Injector no. 3 faulty signal

1-4-3 Front knock sensor signal missing or sensor defective

1-4-4 Fuel system load signal (missing or defective)

1-4-5 Injector no. 4 cylinder faulty signal

1-5-2 Air pump valve signal absent or faulty (on certain engines)

1-5-4 EGR system - leakage or excessive flow (on certain engines)

1-5-5 Injector no. 5 cylinder faulty signal

2-1-2 Heated oxygen Sensor Signal absent or faulty

2-1-4 Ignition rpm sensor signal intermittently absent

2-2-3 Idle air control valve signal absent or faulty

2-2-5 A/C pressure sensor signal absent or faulty

2-3-1 Long term fuel mixture too lean or rich in part load stage

2-3-2 Long term fuel mixture too lean or rich at idle

2-3-3 Long term idle air trim outside control range

2-3-5 EGR controller signal absent/faulty (on certain engines)

2-4-1 EGR flow fault (on certain engines)

2-4-3 Throttle position sensor signal voltage incorrect (out of range)

2-4-4 Knock control at limit

2-4-5 Idle air control valve closing signal faulty/absent

3-1-1 Speedo signal missing

3-1-3 EVAP valve signal absent/faulty (on certain engines)

3-1-4 Camshft position sensor signal missing or defective

3-1-5 EVAP emission control system fault (on certain engines)

3-2-3 Malfunction indicator lamp signal faulty

3-2-5 ECU memory failure

3-3-5 Request for Malfunction indicator lamp signal from auto transmission ECU

3-4-2 Airconditioning relay control signal fault

3-4-3 fuel pump relay control signal fault

4-1-1 Throttle position sensor signal not within correct voltage

4-1-3 EGR temperature sensor signal incorrect or missing (on certain engines)

4-1-4 Turbo boost pressure too high

4-1-6 Turbo boost reduction from auto transmission ECU(/TCM)

4-3-2 High temperature warning inside ECU

4-3-3 Rear knock sensor signal absent/faulty

4-3-5 Heated oxygen sensor - slow response

4-4-2 Air pump relay signal absent/faulty (on certain engines)

5-1-1 Long term fuel mix too rich @ idle

5-1-2 Short term fuel mix too rich @ idle

5-1-3 High temperature warning inside ECU

5-1-4 Engine cooling fan at low speed faulty

5-1-5 Engine cooling fan at high speed faulty

5-2-1 Oxygen sensor heating fault

5-2-3 Signal to ECU module box cooling fan shorted to 12 volts

5-2-4 Fault in transmission torque control signal

5-3-5 Turbo regulator valve fault

5-4-1 EVAP valve signal fault (on certain engines)

The Bosch LH 3.2 Jetronic system is used on the 20 valve non-turbocharged except some B5254S engines using Motronic.

1-1-1 No faults

1-1-2 ECU faulty

1-1-3 Short term fuel mixture too weak

1-2-1 MAF signal absent or faulty

1-2-3 Coolant temperature sensor signal absent or faulty

1-3-1 Ignition System RPM signal absent or faulty

1-3-2 Battery voltage too low/high

2-1-2 Heated oxygen Sensor Signal absent or faulty

2-2-1 Long term fuel mixture too weak in part load stage

2-2-3 Idle air control valve signal absent or faulty

2-3-1 Long term fuel mixture too lean or rich in part load stage

2-3-2 Long term fuel mixture too lean, idle

3-1-1 Speedometer signal missing

4-1-1 Throttle position sensor signal absent

5-1-1 Long term fuel mix too rich, idle

5-1-2 Short term fuel mix too rich