

M. Electronic idle speed control (ELR)

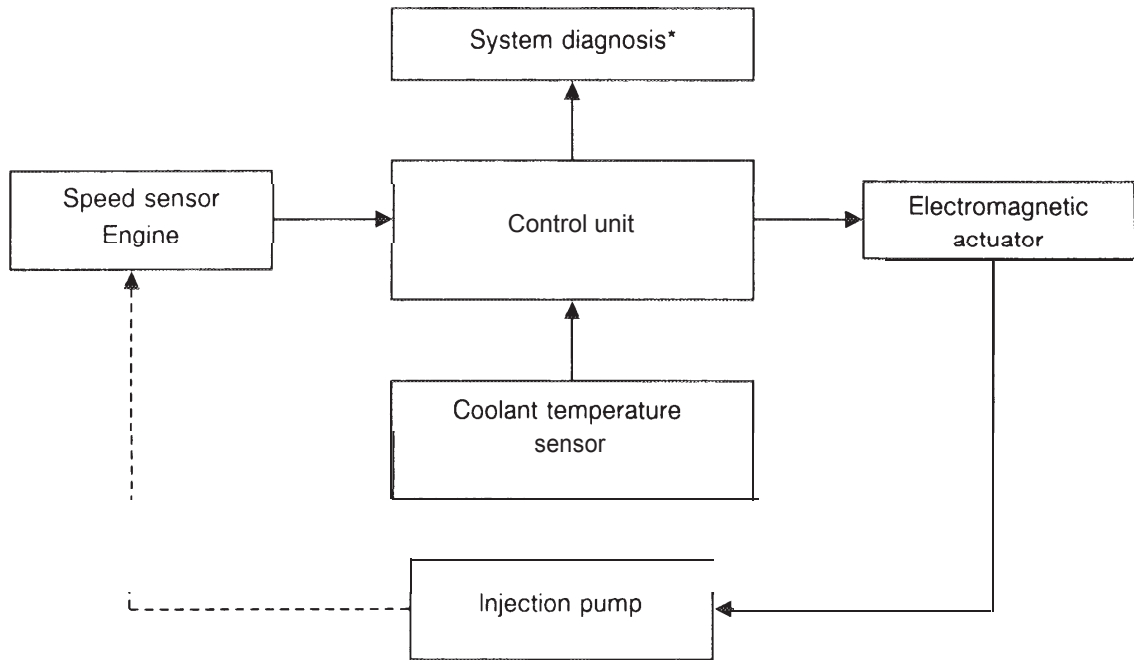
In addition to the mechanical governor an electronic idle speed governor is installed in engine 602 with air conditioner and automatic transmission.

The speed sensor (L 3) registers the engine speed (144 impulses/revolution) passing it on to the control unit (N8 or N8/1) in form of an AC voltage.

The control unit processes the speed signal and compares set value with actual value. The idle speed is kept constant by the electromagnetic actuator (Y22) independent of the load on the engine.

initiated by the temperature sensor (B 1 1/1), with coolant temperatures $< 60^{\circ}\text{C}$ the idle speed set value is increased according to a predetermined characteristic.

Block diagram idle speed control



System diagnosis (as of approx. June 1988)*

With the self-testing program integrated in the control unit it is possible to test the ELR system.

A signal can be called up by way of the test coupling (X92) giving specific information on faults of a component.

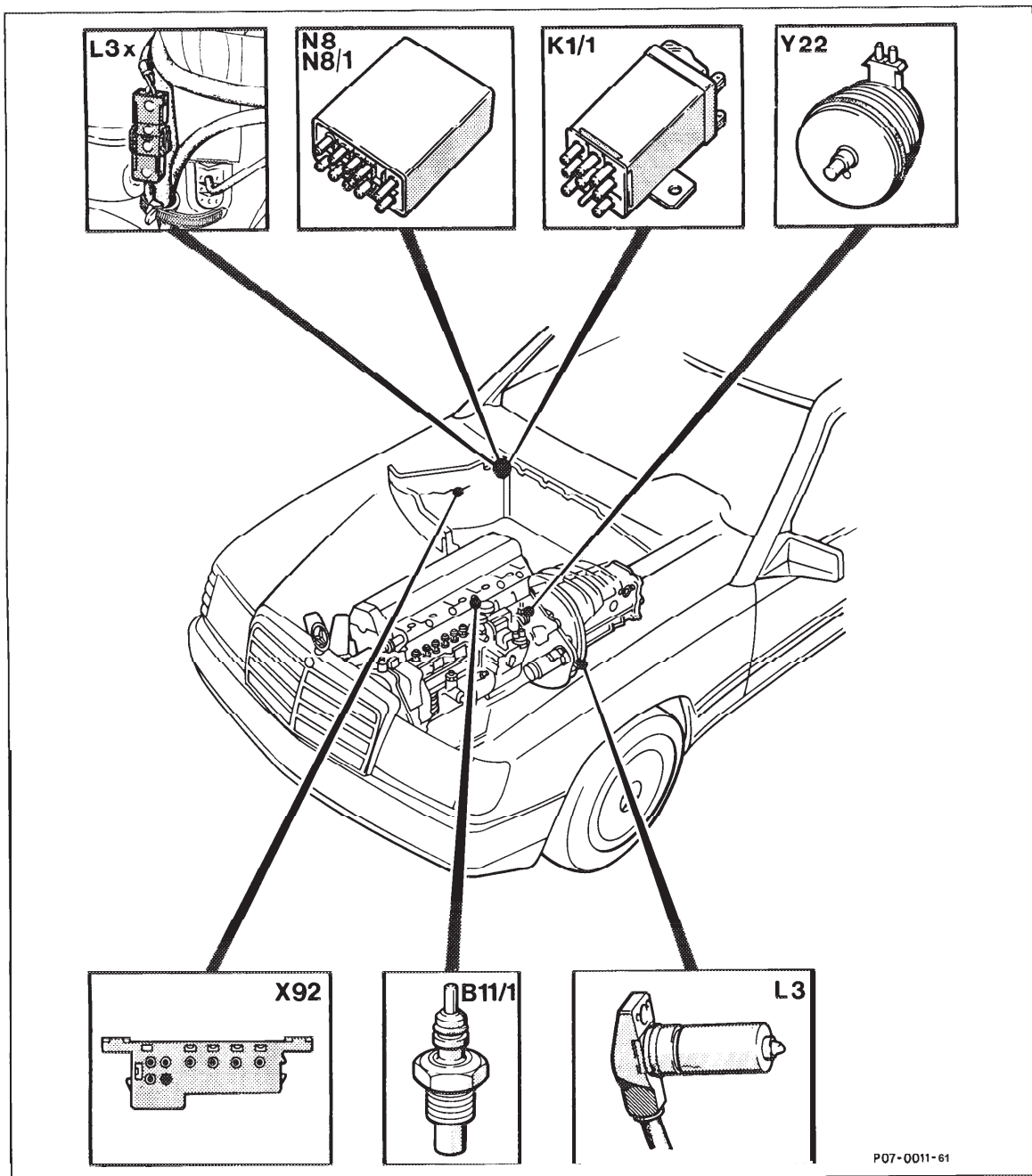
However, only permanent faults can be indicated. Faults of a temporary nature cannot be registered and indicated by the control unit.

The number of signals shows which component is faulty, or whether components in the control circuit are defective.

Impulse display	Component/Control circuit
1	All functions "in order"
2	Speed signal "fault"
3	Coolant temperature "fault"
6	Control circuit ELR "fault"

Arrangement of components

Electrical components



B11/1 Coolant temperature sensor
K1/1 Overvoltage protection relay
L3 Speed sensor
L3x Connector speed sensor starter ring gear

N8 or N8/1 Control unit **ELR**
x92 Test coupling
Y22 ELR electromagnetic actuator