

Stepp motors for idle control for Opel vehicles

si 0054 **GB**

MSI-PG 05.01

| Vehicle: Opel | | Product: Stepp motor | |
|----------------|------------------------|----------------------|--|
| Type | Engine code | Pierburg-No. | O.E.-No. *) |
| Corsa / Kadett | | 4.07501.50.0 | 17 112023 / 8 17 253 |
| Astra / Vectra | Assignment see reverse | 4.07501.51.0 | 17 112031 / 8 17 255 17 112027 / 8 17 254 |

For the above vehicles, the product range has been extended by the addition of stepp motors, Fig. 1.

Please note different names are used for stepp motors in practice, e.g. idle control, idle fuel governor, idle control valve, valve for idle stabilisation, stepp motor, etc.

Via the stepp motor, the idle speed is kept virtually constant under all loads with the engine at temperature. Depending on the load condition and coolant temperature, the air flow necessary for warm-up and maintaining the idle speed (idle fuel governor). The stepp motor is seated in an air duct as a bypass to the throttle valve directly at the injection unit, Fig. 2.

Scope of supply

According to Fig. 1, including O-ring (arrow).

Complaints

The following complaints can indicate a faulty stepp motor:

- Idle too high or too low
- Irregular or unstable idling
- Engine stops after cold start or thrust phase

In case of complaint, the fault memory must be read out. In the event of malfunctions of the stepp motor or deviation from the required idle speed, the **Fault code 35** is indicated.

Testing and installation information

See reverse

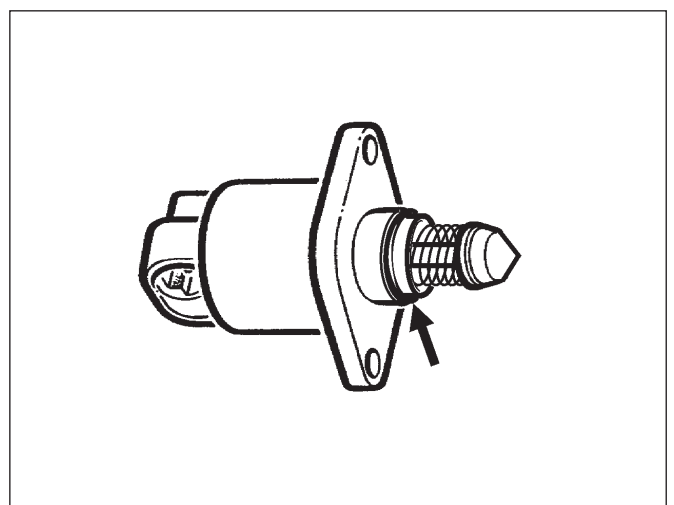


Fig. 1 Stepp motor with O-ring (arrow)

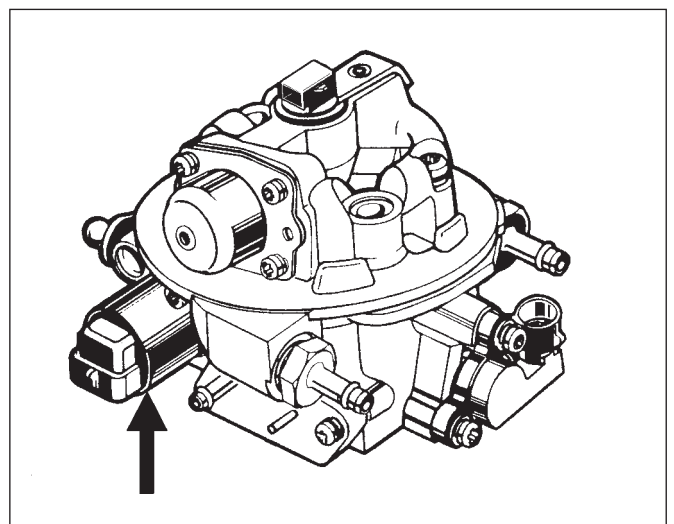


Fig. 2 Injection unit with stepp motor (arrow)

*) The listed reference numbers should be listed for comparison only. They may not be used on invoices sent to final users.

Subject to change of illustrations and text.

For changes with regard to respective matching and replacements, refer to the catalogs, TECDOC-CD or systems basing on TECDOC-data, which are currently in effect.

Testing

If the fault code 35 is indicated, the fault can be due to the stepp motor or respective cable harness.

Notes: The adjusting cone (arrow), Fig. 3 of the stepp motor must not be removed from the housing or threaded rod due to a risk of damage.

Testing functions

- Switch off ignition.
- Unscrew stepp motor and carefully remove.
- Connect connector to stepp motor.
- Apply light axial pressure to the end of the adjusting cone with the thumb (arrow), Fig. 3 and subsequently switch on the ignition.

Required value, depending on engine type:

The adjusting cone retracts and extends

e.g.: C 12 NZ, C 13 N,

C 16 NZ, E 16 NZ

or

The adjusting cone extends

e.g.: C 16 LZ

If the stepp motor does not react as described,

Measure the coil resistance.

Measuring coil resistance

– Measure resistance of both stepp motor coils as shown in Fig. 4.

Required value: 45 to 60 Ω respectively

If the required value is not reached, renew the stepp motor. If the stepp motor is o.k., the cable connections should be tested for open-circuit and short-circuit to ground or positive.

Installation information

- Prior to installation, the seat in the air duct must be cleaned.
- Ensure correct seating of O-ring (arrow), Fig. 1.
- Disconnect ground cable of battery for minimum 10 seconds to delete existing fault codes and learning values for idling and mixture correction.
- Following installation of the stepp motors, an unstable or high idle can occur. During a test drive, a stable value is readjusted.

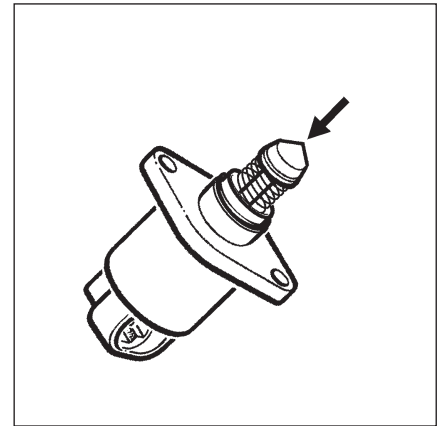


Fig. 3 Stepp motor

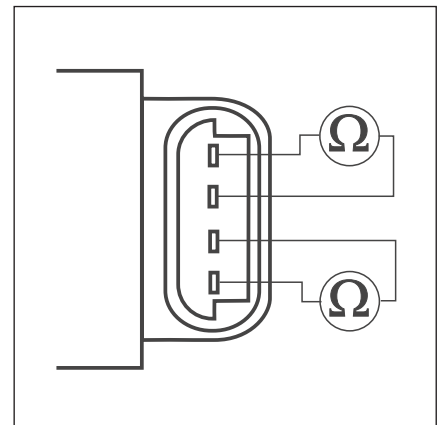


Fig.. 4 Resistance measurement on stepp motor

Stepp motor assignment

| Stepp motor | Vehicle | Engine-Code |
|--------------|----------------------|---|
| 4.07501.50.0 | ASTRA F | C 14 NZ / C 16 NZ / C 16 SZ / X16 SZ / X 16 SZR / C 18 NZ |
| | ASTRA G | X 16 SZR |
| | CORSA B | C 14 NZ / C 14 SZ / X 14 SZ |
| | KADETT E | C 16 LZ / C 16 NZ / E 16 NZ / C 18 NZ |
| | VECTRA A VECTRA B | C 16 NZ / E 16 NZ / X 16 SZ / X 16 SZR X 16 SZR |
| 4.07501.51.0 | CORSA A | C 12 NZ / C 13 N / C 14 NZ |
| | CORSA B | C 12 NZ / X 12 SZ |
| | KADETT E | C 14 NZ |