TECHNICAL NOTE
Edition Anglaise

JANUARY 1998
77 11 198 074

2929A
Service 0422

	Type	S/Section
Twingo	X06 X	19
Mégane	XA0 X	19
Laguna	X56 X	19

This note cancels and replaces Technical Note 2864A, Part No. 77 11 196 535

19 DEVELOPMENTS IN FUEL TANKS AND VENTING SYSTEMS

- Engine : **XXX**
- Gearbox : **XXX**

Basic manual : **M.R. 305/307/312**

This note covers changes made to:

- the tanks,
- fuel tank breather assemblies and
- venting systems

on **TWINGO**, **MEGANE** and **LAGUNA** vehicles.

PETROL AND DIESEL

- **1st development**

The lip seal for the fuel tank breather assembly has been replaced by an 'O' ring. This must be replaced whenever it is removed.

The nut to be used with the 'O' ring is different to the one used for the lip seal.

The two nuts are identical on the outside. The difference relates to the number of threads.

- **2nd development**

The diameter of the breather assembly has changed from 121 mm to 116 mm. The 116 mm diameter breather assembly has grooves which relate to the fitting position. The nut for the new breather assembly has an arrow on the moulding. The nut is correctly tightened when the arrow on the fuel tank is aligned with the arrow on the nut. On the new breather assembly, only fuel pipes equipped with the new snap fastening may be fitted; these can be removed without using a tool. They are supplied with a push button to activate in order to open the fuel circuit.

Warning : On the new breather assembly, the male end pieces for the fuel pipe delivery and return are equipped with a flange. Never fit the new type breather assembly to a vehicle equipped with the old type snap fastening. This would make it impossible to dismantle as the flange would prevent fitting of removal tool **Mot. 1265** or **Mot. 1265-01**.

DIESEL

- **3rd development**

The vacuum pressure safety valve on the fuel filler neck has been discontinued. It has been replaced by a safety valve which is fitted to the fuel tank. An anti-fuel leakage valve should the vehicle overturn has been fitted to the head of the filler neck. The fuel tank air vent is also at the head of the fuel filler neck.

PETROL

- **3rd development**

The fuel vapour breather no longer passes through the filler neck, but passes directly from the fuel tank to the canister.
At the same point on the fuel tank the following valves are fitted :
- over-fill prevention valve ,
- fuel anti-leakage valve if the vehicle overturns,
- venting valve.

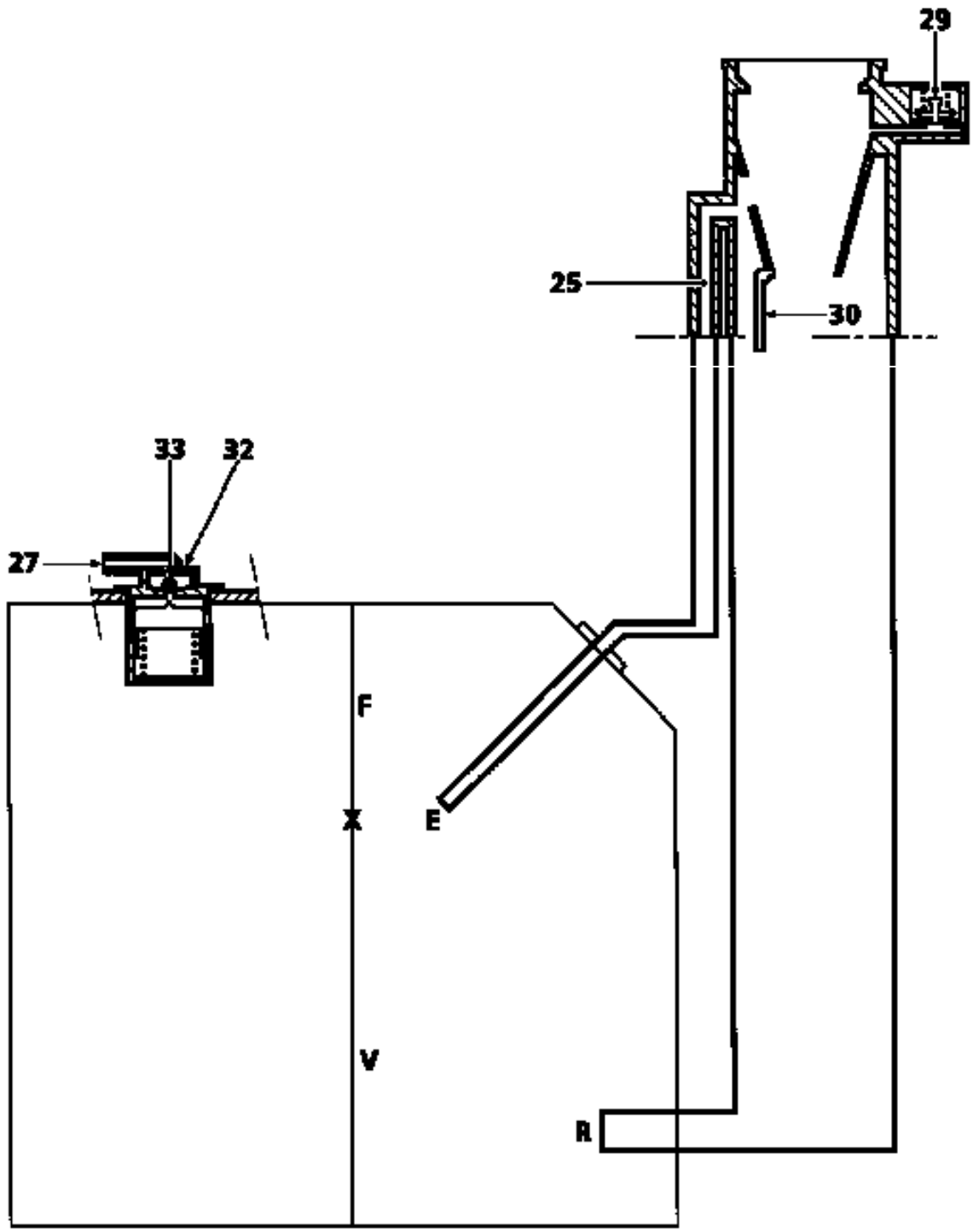
The fuel filler neck is connected to earth.

ATTENTION
For petrol versions, the Parts Department does not supply all types of fuel tank. If a new generation fuel tank (fuel vapour breather passing direct from the fuel tank to the canister) is fitted to an older generation vehicle (fuel vapour breather passing via the fuel filler neck), the pipe connecting the canister to the fuel filler neck must be replaced with a pipe connecting the canister to the fuel tank. On the fuel filler neck, the fuel delivery and return pipes for the fuel vapour breather are no longer used. Consequently, after changing a fuel tank, these pipes remain open. It is necessary to simply secure these pipes to the fuel filler neck using a plastic collar clip.

For diesel versions, the Parts Department does not supply all types of fuel tank. If a new generation fuel tank is fitted to an older generation vehicle, it is not necessary to connect valve (35) to the head of the fuel filler neck (see page 19-3).

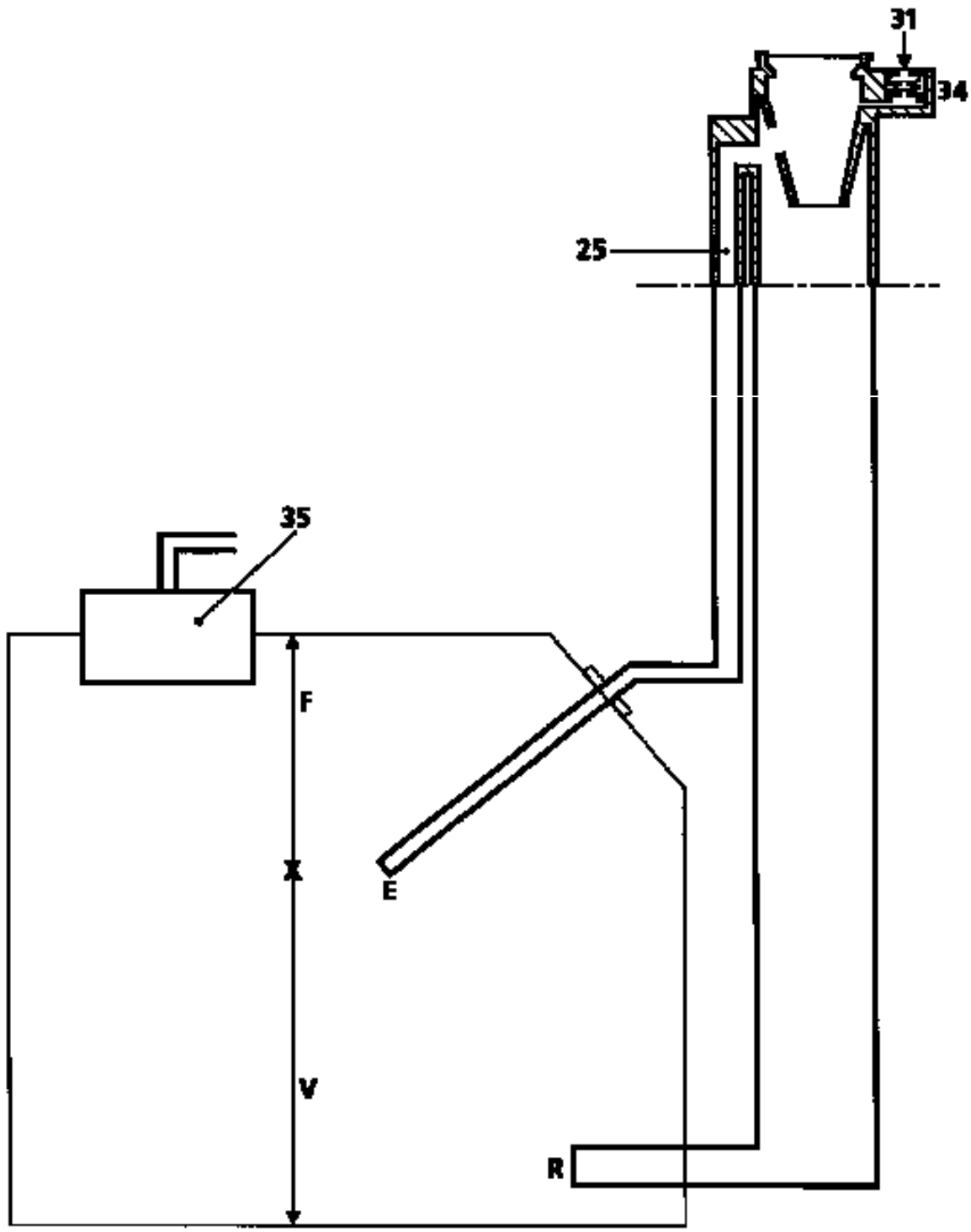
NOTE : The exterior pipe on the filler neck which used to vent the fuel tank on petrol and diesel engines remains in the same position after this third development phase. However, although the pipe is in place, it is no longer used.

Latest generation petrol tank



13036R

Latest generation diesel fuel tank



13035-1R1

PETROL

- **1st development**

The fuel vapour breather no longer passes through the filler neck, but passes directly from the fuel tank to the canister.
At the same point on the fuel tank the following valves are fitted :
- over-fill prevention valve ,
- fuel anti-leakage valve if the vehicle overturns,
- venting valve.

DIESEL

- **1st development**

The vacuum pressure safety valve on the fuel filler neck has been discontinued. It has been replaced by a valve which integrates the following functions:
- vacuum safety,
- leakage prevention if the vehicle overturns,
- fuel tank venting

PETROL AND DIESEL

- **2nd development**

The lip seal for the fuel tank breather assembly has been replaced by an 'O' ring. This must be replaced whenever it is removed.

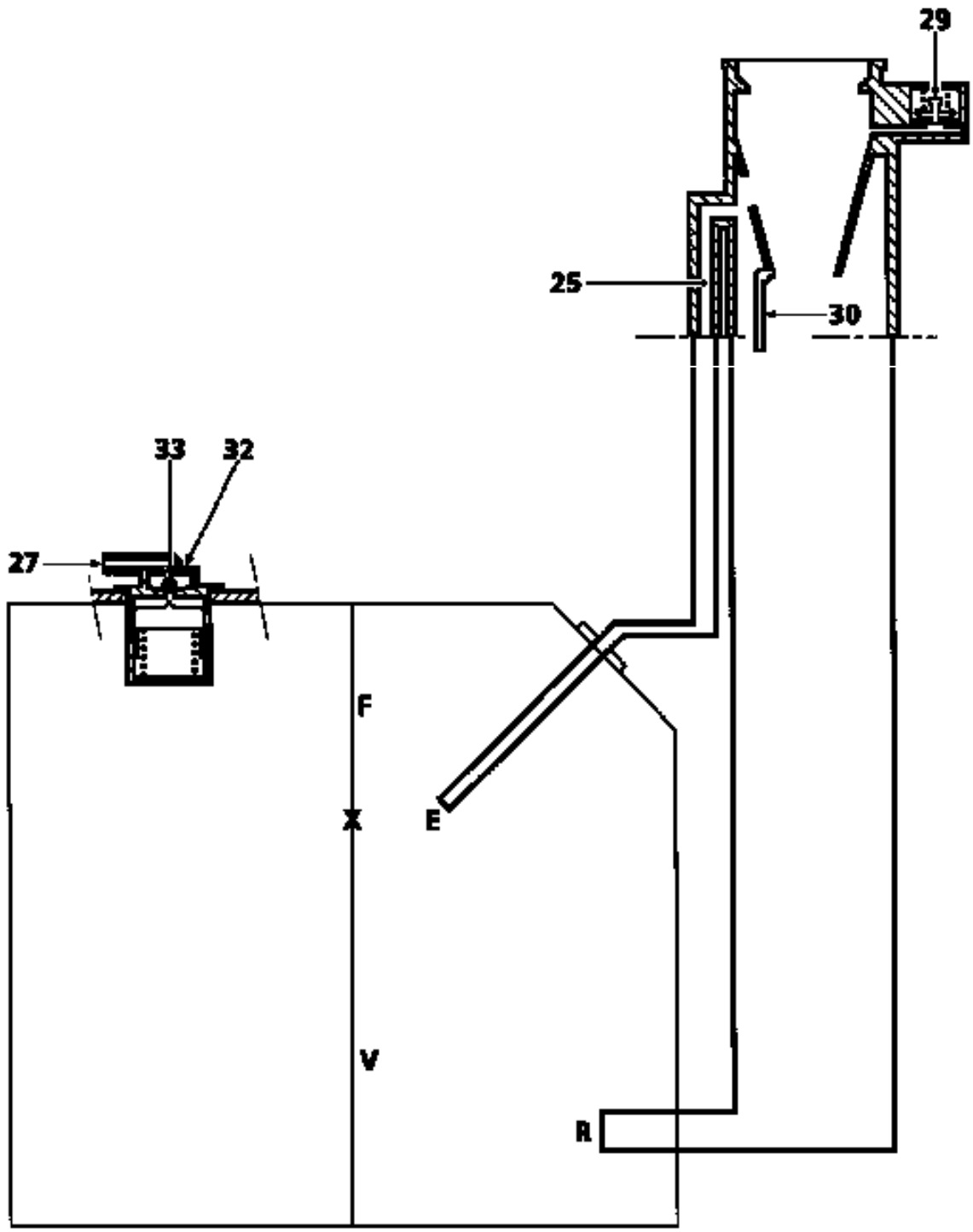
The nut to be used with the 'O' ring is different to the one used for the lip seal.

The two nuts are identical on the outside. The difference relates to the number of threads.

The diameter of the breather assembly has changed from 121 mm to 116 mm. The 116 mm diameter breather assembly has grooves which relate to the fitting position. The nut for the new breather assembly has an arrow on the moulding. The nut is correctly tightened when the arrow on the fuel tank is aligned with the arrow on the nut. On the new breather assembly, only fuel pipes equipped with the new snap fastening may be fitted; these can be removed without using a tool. They are supplied with a push button to activate in order to open the fuel circuit.

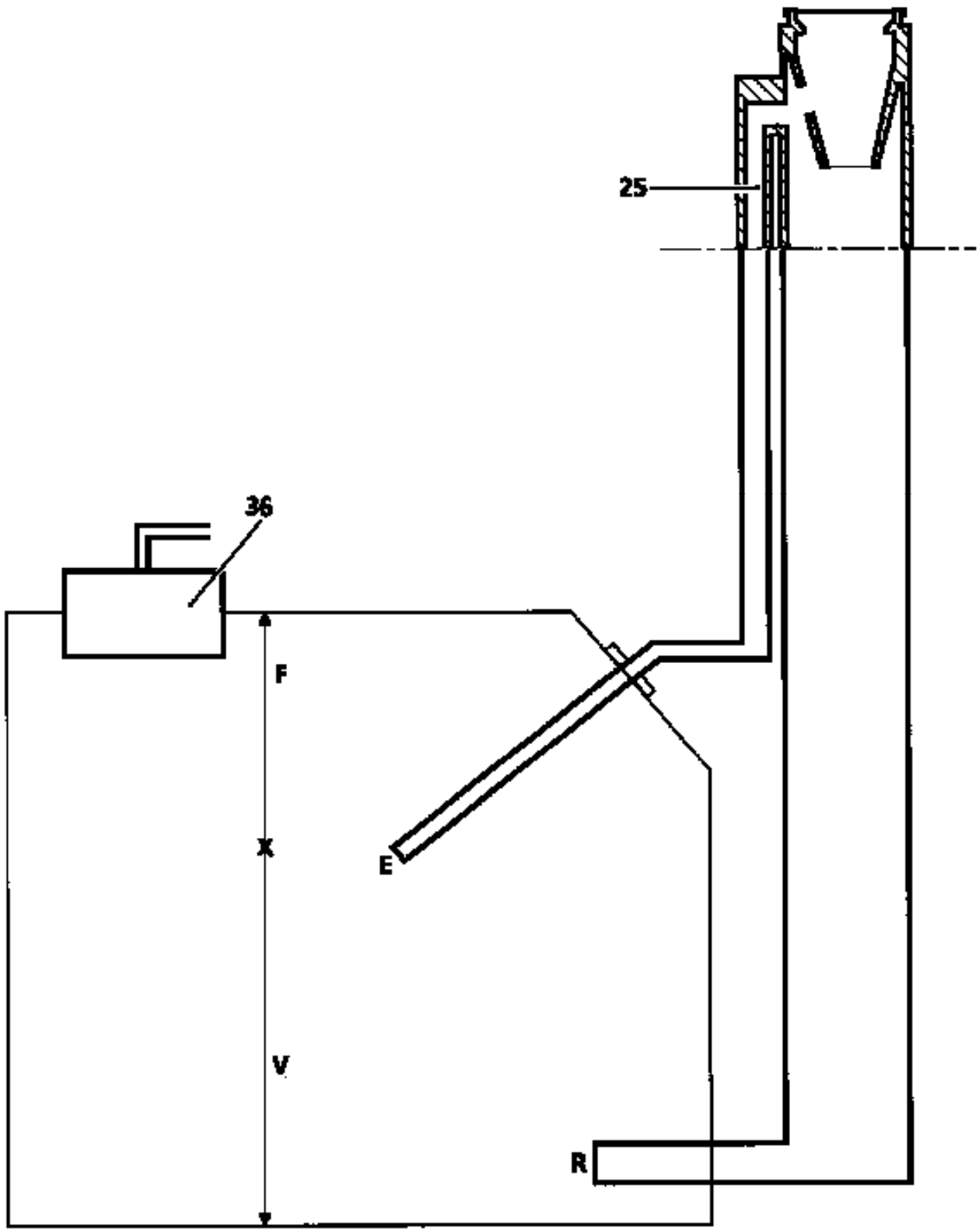
Warning : On the new breather assembly, the male end pieces for the fuel pipe delivery and return are equipped with a flange. Never fit the new type breather assembly to a vehicle equipped with the old type snap fastening. This would make it impossible to dismantle as the flange would prevent fitting of removal tool **Mot. 1265** or **Mot. 1265-01**.

Latest generation petrol tank



13036R

Latest generation diesel tank



13035-2R

DEVELOPMENT OF THE BREATHER SYSTEM ON THE TWINGO

The lip seal for the fuel tank breather assembly has been replaced by an 'O' ring. This must be replaced whenever it is removed.

The nut to be used with the 'O' ring is different to the one used for the lip seal.

The two nuts are identical on the outside. The difference relates to the number of threads.

The diameter of the breather assembly has changed from 121 mm to 116 mm. The 116 mm diameter breather assembly has grooves which relate to the fitting position. The nut for the new breather assembly has an arrow on the moulding. The nut is correctly tightened when the arrow on the fuel tank is aligned with the arrow on the nut. On the new breather assembly, only fuel pipes equipped with the new snap fastening may be fitted; these can be removed without using a tool. They are supplied with a push button to activate in order to open the fuel circuit.

Warning : On the new breather assembly, the male end pieces for the fuel pipe delivery and return are equipped with a flange. Never fit the new type breather assembly to a vehicle equipped with the old type snap fastening. This would make it impossible to dismantle as the flange would prevent fitting of removal tool **Mot. 1265** or **Mot. 1265-01**.

ROLE OF THE VALVES

25 Non-return pipe

27 Towards canister

29 Vacuum pressure safety valve

If the petrol fuel vapour recirculation circuit should become blocked, this valve prevents the build up of pressure in the fuel tank (the fuel tank expands) or prevents the creation of a vacuum (as the fuel is used up, the fuel tank contracts).

30 Restriction valve

This valve prevents the fuel tank being filled with leaded petrol.

31 Fuel anti-leakage valve if the vehicle overturns

If the vehicle overturns, this valve prevents the fuel tank from emptying via the air breather pipe (Diesel).

32 Valve prohibiting overfilling and fuel anti-leakage valve if the vehicle overturns

The valve prohibiting overfilling with fuel operates by means of a ball bearing (33).

When the vehicle is stationary, during the refilling operation, the ball bearing is in contact with its seat, thus trapping a volume of air in the fuel tank.

When the vehicle is moving, the ball bearing (33) is released from its seat, thus providing a connection between the fuel tank and the canister.

When the fuel tank is full, it is essential that a volume of air remains in the fuel tank to enable the petrol contained in the tank to expand, and so prevent the fuel tank from exploding.

The anti-leakage valve prevents fuel escaping via the vent pipe in the event of the vehicle overturning.

34 Fuel tank venting

35 Vacuum safety valve

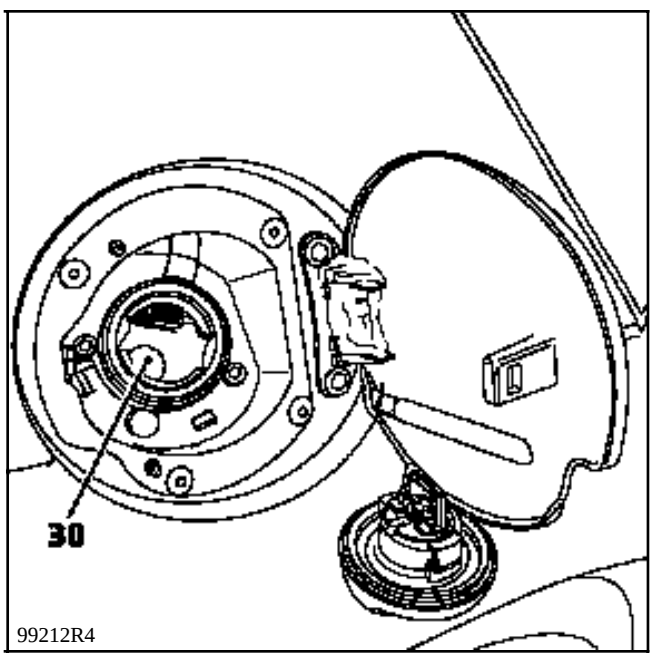
Prevents vacuum in the fuel tank once the valve (34) has closed.

36 Valves
- vacuum safety valve,
- for preventing leakage or if vehicle overturns,
- for venting.

NOTE : The fuel tank has a sealed cap.

The fuel filler neck for unleaded fuel has a much smaller diameter filler hole which is incompatible with a conventional fuel pump filler nozzle (leaded petrol will damage the depollution system: oxygen sensor and catalytic converter).

The filler nozzle for leaded petrol cannot open the valve (30).



E Hole for air to escape during filling
F Space allowing fuel to expand
R Opening for filling with fuel equipped with a non-return valve
V Useful volume of fuel