

## Title (en)

Membrane pump for the fuel supply of a vehicle engine.

## Title (de)

Membranpumpe für die Brennstoffzufuhr eines Kraftfahrzeugmotors.

## Title (fr)

Pompe à membrane pour l'alimentation en essence d'un moteur de véhicule automobile.

## Publication

**EP 0147330 A1 19850703 (FR)**

## Application

**EP 84402717 A 19841226**

## Priority

FR 8320928 A 19831228

## Abstract (en)

1. Diaphragm pump for supplying petrol to a motor vehicle engine, of the type comprising : a first cylindrical body 12 closed at one end by a base which has an induction orifice (42) and a delivery orifice (44), the said body being divided internally by a cylindrical partition (30) attached to the said base and defining within it an induction chamber (32) and outside it a delivery chamber (34) into which the said induction and delivery orifices open respectively a second body (14) in the form of a cup, the said bodies (12, 14) being provided at their open ends with seating flanges (22, 24) ; a circular, deformable diaphragm (16) ; a circular valve-holder (18) which is provided with an induction valve (38) and a delivery valve (40) and which has a projecting tubular portion ; and an elastic collar (20) which clamps the said flanges (22, 24) onto the peripheral edges of the diaphragm and of the valve-holder, the said projecting tubular portion of the valve-holder making a sealed fit within the said cylindrical partition, characterised in that the said cylindrical partition (30) comprises a first cylindrical portion adjacent to the base of the first body and the wall of which blends with the cylindrical wall of the said first body without forming an extra thickness at their common tangent, and the said cylindrical portion being extended by a second coaxial cylindrical portion, with an internal diameter greater than that of the first cylindrical portion, in that the projecting tubular portion of the valve-holder penetrates the said second cylindrical portion of the partition to define with the inside wall of the latter an annular gap in which is fitted an O-ring (36) of such dimensions that it occupies only a fraction of the height of the second cylindrical portion of the partition and of the tubular portion of the valve-holder, in that the said first body is formed in one piece by moulding a thermoplastic material and in that the induction (42) and delivery (44) orifices are provided with nipples (46, 48) welded to the said orifices.

## Abstract (fr)

L'invention concerne une pompe à membrane pour l'alimentation en essence d'un moteur de véhicule automobile et son procédé d'assemblage. La pompe comprend un corps supérieur (12) et un corps inférieur (14) sensiblement cylindriques, ouverts à une extrémité et dont les bords libres sont appliqués l'un sur l'autre en pinçant le bord périphérique d'une membrane déformable (16) dont la partie centrale peut être déplacée d'un mouvement alternatif selon l'axe de la pompe, de sorte que l'essence est alternativement aspirée dans le corps supérieur à travers un orifice d'aspiration (42) puis refoulée vers le carburateur à travers un orifice de refoulement (44). Lesdits corps sont assemblés au moyen d'une collerette (20) sertie sur des brides (22, 24) formée sur les bords des corps, les orifices d'admission (42) et de refoulement (44) étant munis de tubulures rapportées orientables (46, 48).

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