Modifying water pump from packed gland to mechanical seal

Translated from French workshop manual 427-54, Operation 114, paragraph 25

Dismantle the water pump (with packed gland seal) (see pl. 10)

a). Remove the fan, the pulley (hold it by hand and strike the end of the shaft using a mallet, release the key. Remove the castellated nut (26), for loosening / tightening the bearing, (use the 1976-T spanner, see fig 2), release the shaft halfway using a press or a mallet, remove the half-rings (27) from the bearing (28) Pull out the shaft completely.

b). Remove the packing nut (29), the support sleeve (30), the packing (31). Remove the bronze sleeve (32) using a shouldered mandrel.

Note: Spanner 1976-T is nice to have, but with a bit of ingenuity it is NOT essential to use it.

Modify the water pump (assembly of the AD seal instead of the sealing gasket) (see pl. 13)

The ring fitting (bush) with the AD trim is in porous bronze. Before fitting, soak this ring in an engine oil bath for about 24 hours, so that the bronze is well impregnated.

Under no circumstances should the ring be re-drilled (which would destroy its permeability) or pierced.

1. Remove around 5.5mm on the pump body, at the location of the ring support (see fig. 2)
2. Modify, in turn, the sleeve (32) previously removed (see fig 3). *(Looks like a new sleeve sold by CAS can be fitted, to save machining the old one. See below).*
3. Fit the ring (5) by pressing into the modified sleeve (32). Position the assembly in the pump body, using a press.
4. Place the seal (4) on the water pump shaft (see pl. 12 for orientation). Oil the shaft and engage it in the ring. *(Use some tape or other means of preventing damage to the seal when sliding it over the keyway).*
5. Place the bearing snap rings (3) on the shaft, sticking them with grease and the ring retaining plate (7).
6. Coat the bearing (8) with grease (special bearing grease) and fit it. Tighten the castellated nut to 3 m-kg (use the 1976-T wrench, see pl. 10, fig 2).
7. Mount the pulley, tighten the nut to 4 m-kg and pin it. (17 mm spanner)
8. Mount the fan with the concave part of the blades facing the pump body. Insert the spacers between the fan and the pulley. Tighten the fixing screws to 1.5 m-kg, fold down the tabs of the retainer on one side of the screws. *(Recommend using a new retainer plate – tabs weaken with repeated bending).*
9. Mount the angle fitting (57). Install the oil lubricator. This oil lubricator must be vertical, achieve this condition by placing one more seals (washers) between the angled connection and the pump body.

Tools: Open end spanners 12 & 14

AD seal

History

CYCLAM is a brand known enough by users to become almost a common name.
But the real Cyclam seal is only made by the factory Cyclam of Amiens.

Established in 1942 under the brand AD, Cyclam is still one of the world leaders in design, manufacturing and marketing of mechanical seals for the water pumps of vehicles and for the industrial applications (pumps, varied rotating machines).

The first patent of monoblock seal with side friction was deposited by one of the founders of the company in 1941. This revolutionary product made obsolete the traditional gland and was very fast adopted by the French car manufacturers whose sole supplier became Cyclam, in particular for the CITROËN “Traction Avant”, the PEUGEOT 202, the RENAULT 4 HP, the SIMCA 8.Cyclam was acquired by AVOCarbon 2019.

Spanner 1976-T

CTA sell this 2-part spanner. Looks like the outer part can be used for the slotted nut on the water pump.

STEERING HOUSE ADJ.SPANNER

CTA’s Product number: 6860135, Price **€47,29** (€39,08 excl.VAT)

Model Citroen	11CV/15CV
OE Citroën	1976-T

Bearing bush water pump shaft

Selling price:
~~€5,87~~ incl. VAT.
Webshop price:
€5,58 incl. VAT. (€4,61 excl. VAT.)
In stock

- 1 + ADD TO CART

♡ Zet op verlanglijst

SKU: 3293-S

Category: WATERPUMP & VENTILATOR

SIZE	Ø15x19x32mm
NUMBER PER CAR	1
PAGENUMBER IN MANUAL	148
CAR GROUP	7/11CV

Bush waterpumpshaft -9/50, new type

Selling price:
~~€16,21~~ incl. VAT.
Webshop price:
€15,40 incl. VAT. (€12,73 excl. VAT.)
In stock

- 1 + ADD TO CART

♡ Zet op verlanglijst

SKU: 451405A

Category: WATERPUMP & VENTILATOR

SIZE	MODIFIED 28,2x31,5
NUMBER PER CAR	1
PAGENUMBER IN MANUAL	146
CAR GROUP	7/11CV

Waterpump seal 11/15CV, HY

Selling price:
~~€14,34~~ incl. VAT.
Webshop price:
€13,62 incl. VAT. (€11,26 excl. VAT.)
In stock

- 1 + ADD TO CART

♡ Zet op verlanglijst

SKU: 456399

Category: WATERPUMP & VENTILATOR

SIZE	15x35x12mm
NUMBER PER CAR	1
PAGENUMBER IN MANUAL	148
CAR GROUP	7/11CV, 15CV

Adjust shim waterpump seal

Selling price:
~~€0,91~~ incl. VAT.
Webshop price:
€0,86 incl. VAT. (€0,71 excl. VAT.)
In stock

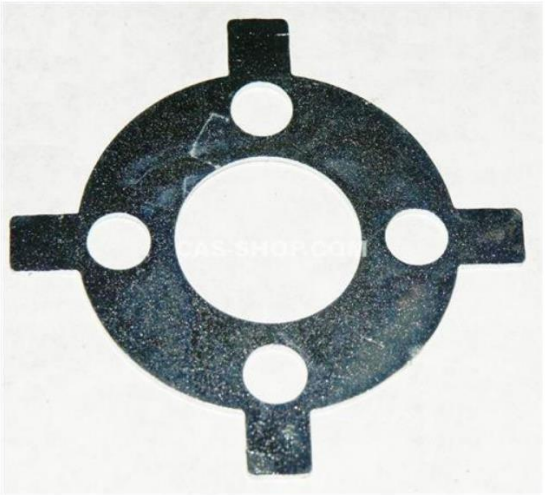
- 1 + ADD TO CART

♡ Zet op verlanglijst

SKU: 456399SA

Category: WATERPUMP & VENTILATOR

SIZE	15x21x0.3mm
NUMBER PER CAR	3.4
PAGENUMBER IN MANUAL	148
CAR GROUP	7/11CV, 15CV



Lockwasher for fanbolts

Selling price:
~~€3,87~~ incl. VAT.
Webshop price:
€3,68 incl. VAT. (€3,04 excl. VAT.)
In stock

- 1 + ADD TO CART

Zet op verlanglijst

SKU: 461837

Category: WATERPUMP & VENTILATOR

SIZE	-
NUMBER PER CAR	1
PAGENUMBER IN MANUAL	147
CAR GROUP	7/11CV

Water pump overhaul post 52 (From Aussie Frogs)

Need to replace water pump shaft on an 11B. Shafts are available without impeller but I cannot see how to remove impeller off old shaft. No split pin etc. Is it just pushed on or is it screwed on?

Shaft can be pushed out with a small press or by pounding the shaft with a drift and a heavy hammer.
Make sure to support the brass impeller with a proper piece of steel with a hole for the shaft.
Lay it up on a vice and pound away...

Make sure that you soak the new bearing bush in oil to prime the sintered phosphor-bronze. I put oil in a pot on the stove and warm it before placing the new bronze bearing in, and let it soak for at least an hour. Do not under any circumstances ream the bush once fitted. Also when fitting make up a mandrel from the old shaft and a piece of tubing that fits the old shaft very well. All this to prevent distorting the bronze when pressing in.

POMPE A EAU

A GARNITURE D'ETANCHEITE

Fig. 1 _ COUPE

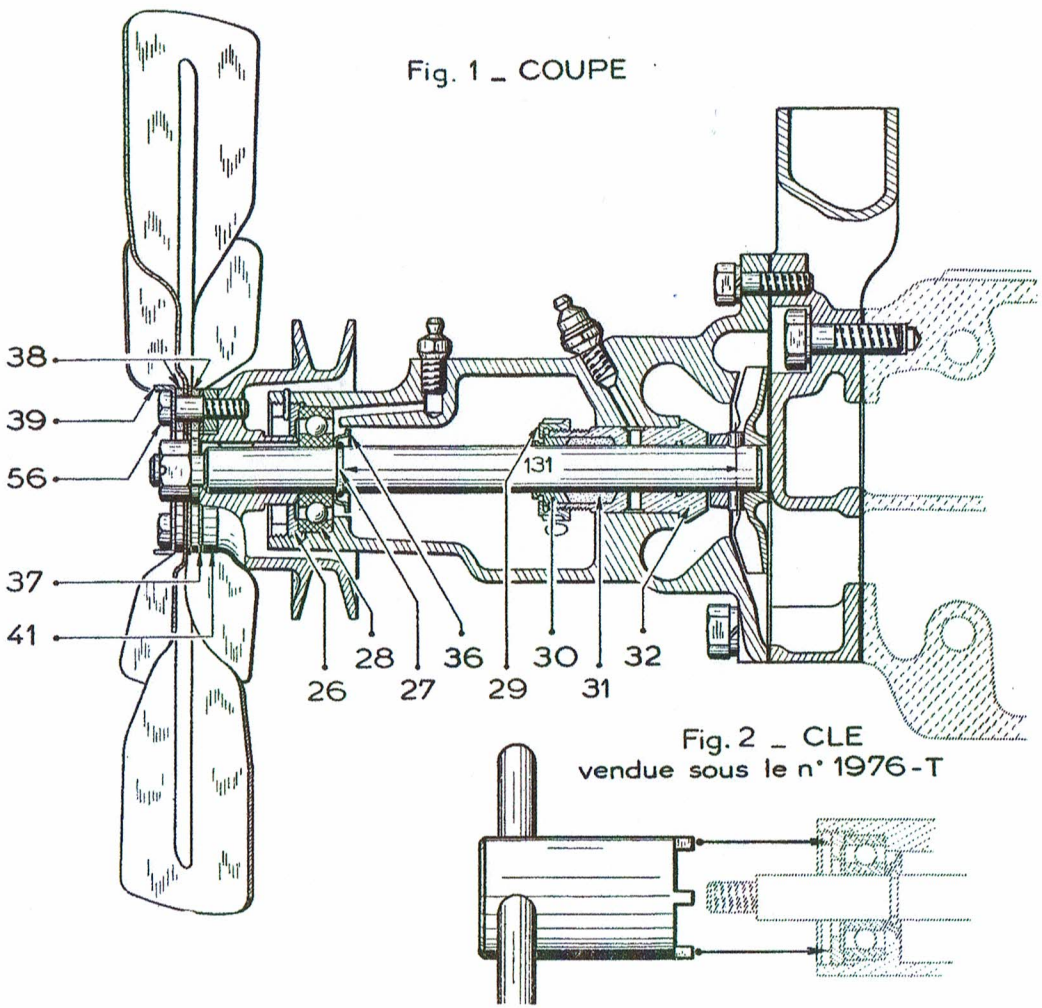


Fig. 2 _ CLE
vendue sous le n° 1976-T

Fig. 3 _ MONTAGE
DU VENTILATEUR (2ème MODELE)

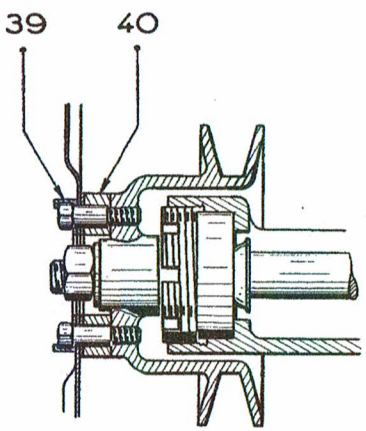
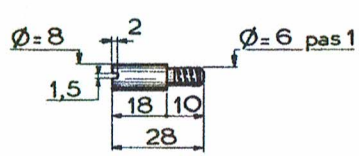


Fig. 4 _ GOUJONS MR- 3400
non vendus



MODIFICATION DE LA POMPE A EAU

Fig. 1 _ ENSEMBLE DE LA POMPE

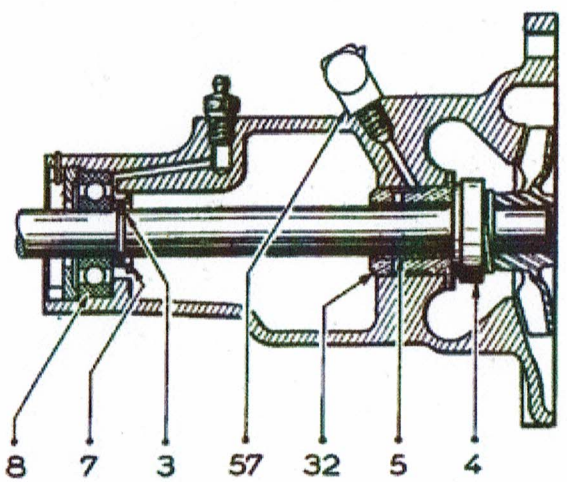


Fig. 2 _ MODIFICATION DU CORPS

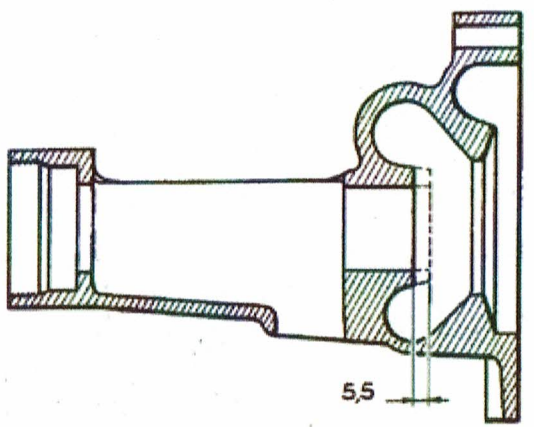


Fig. 3 _ MODIFICATION DE LA DOUILLE