

TECHNICAL INFORMATION n°11/2006b

RESTORATION OF THE AXIAL RETARDER SHAFT SEALING (AC-AD-AE)

Cergy, September 2007

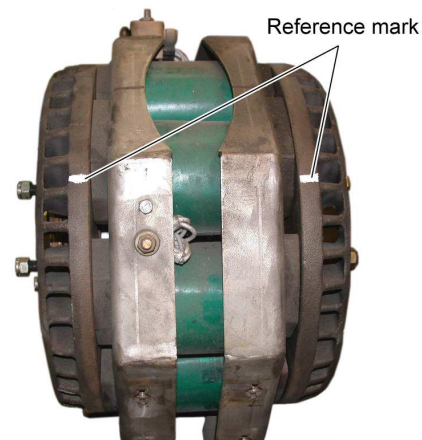
PRECAUTIONS

- Do a entire wash of the retarder before its disassembly.
Do this operation on a cold retarder.
The use of a high pressure washer is permissible whenever the jet is not directly oriented on the stator (25 bars max).
- Do the overhaul in a clean working room.
- Store every action requisite parts in their original packing until they are used.
- You must replace the 2 lip seals and the 2 seal tracks during this operation.
- During disassembly, always put parts from axle side and from gearbox side separately.

Kit composition



Before removal of rotors, draw a reference mark on each rotor external edge in order to find its initial orientation during the re-assembly.



1. REMOVAL OF ROTOR AND LIP SEAL ON GEARBOX SIDE (connecting block side)

1-A

- Remove the tab washer (caution : in order to avoid the springiness, suppress the stress in the tab by tapping on one side and by removing on the other).



1-B

- Remove the end shaft screws (use 17 or 19 mm sockets, according to the retarder size).



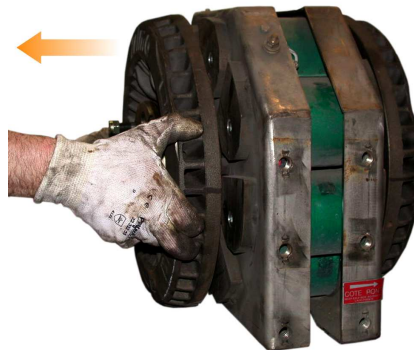
1-C

- Remove the end shaft plate.



1-D

- Remove the rotor with its coupling flange.



1-E

- Remove the dust cover.



1-F

- Remove and wash the air gap adjustment shims, and note down their total thickness.



1-G

- Remove the snap ring on gearbox side.



1-H

- Remove the seal track on gearbox side.



1-I

- Remove the seal on gearbox side while taking care not to damage its housing in the hub.



1-J

- Remove any soiling and old grease traces located in the hub at the seal location.



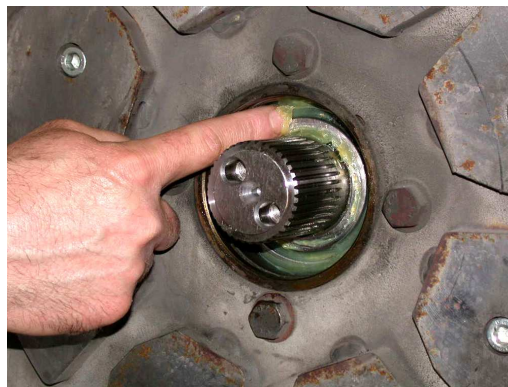
2. REMOVAL OF THE ROTOR AND OF THE LIP SEAL ON AXLE SIDE

- Do the same steps from 1-A to 1-J on axle side.

3. POSITIONING THE LIP SEAL AND ASSEMBLY OF THE ROTOR ON THE GEARBOX SIDE (connecting block side)

3-A

- Put a "SUPERTELMAMCO III" or TELMA specified grease layer (See § 8) between the barrels of each bearing. **Spread the grease.**



3-B

- Grease the new lip seal included in the kit with "SUPERTELMAMCO III".



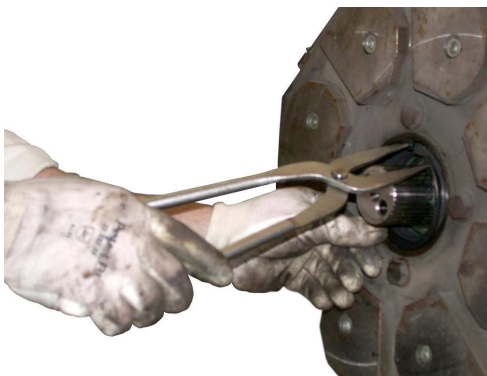
3-C

- Put the greased seal on the lip seal driver (see § 6 : Specification of the lip seal driver).



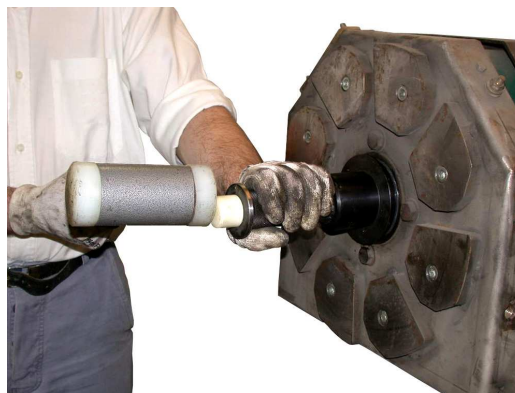
3-E

- Install the new snap ring in the chamfer of the hub with the circlips pliers (ex : FACOM n°179-23).



3-D

- Using the lip seal driver mount the seal in the hub.



3-F

- Install the new seal track included in the kit (limit stop on the bearing).



Caution: If the seal track has a large chamfer on its inner diameter, position it on the bearing side.

- Prepare a set of degreased new shims, integrating one of the 2 black shims of the kit, having the same thickness as rated in 1-F.

3-G

- Install on the shaft the black shim of the prepared set.



3-H

- Install the air gap shims of the prepared set.



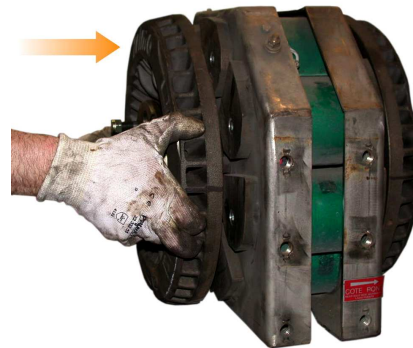
3-I

- Install the dust cover after washing it.



3-J

- Install the set rotor coupling. The "clockwise" rotor is installed on the gearbox side.



3-K

- Install the end plate.



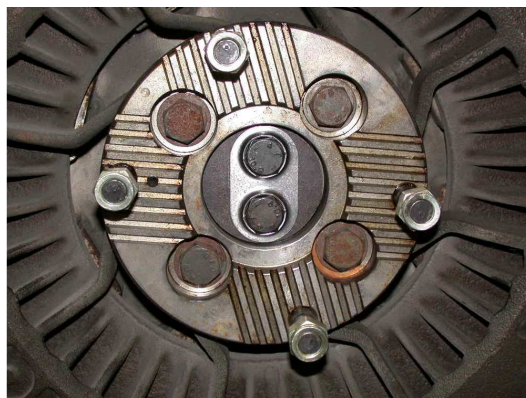
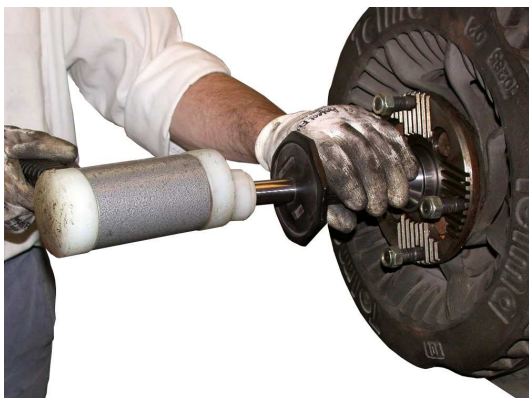
3-L

- Install and tighten at the right torque (refer to the table in Technical Information N°04/2006) the new screws of the kit.



3-M

- Install the new tab washers of the kit with the help of the specific tool as described in sheet IT 07/2006 ("AXIAL" air gap adjustment).



4. INSTALLATION OF THE LIP SEAL AND ASSEMBLY OF THE ROTOR ON AXLE SIDE

- Do the same steps as on gearbox side from 3-A to 3-M taking care during the installation of the "anti-clockwise" rotor to make sure that the previous marks are perfectly lined up.

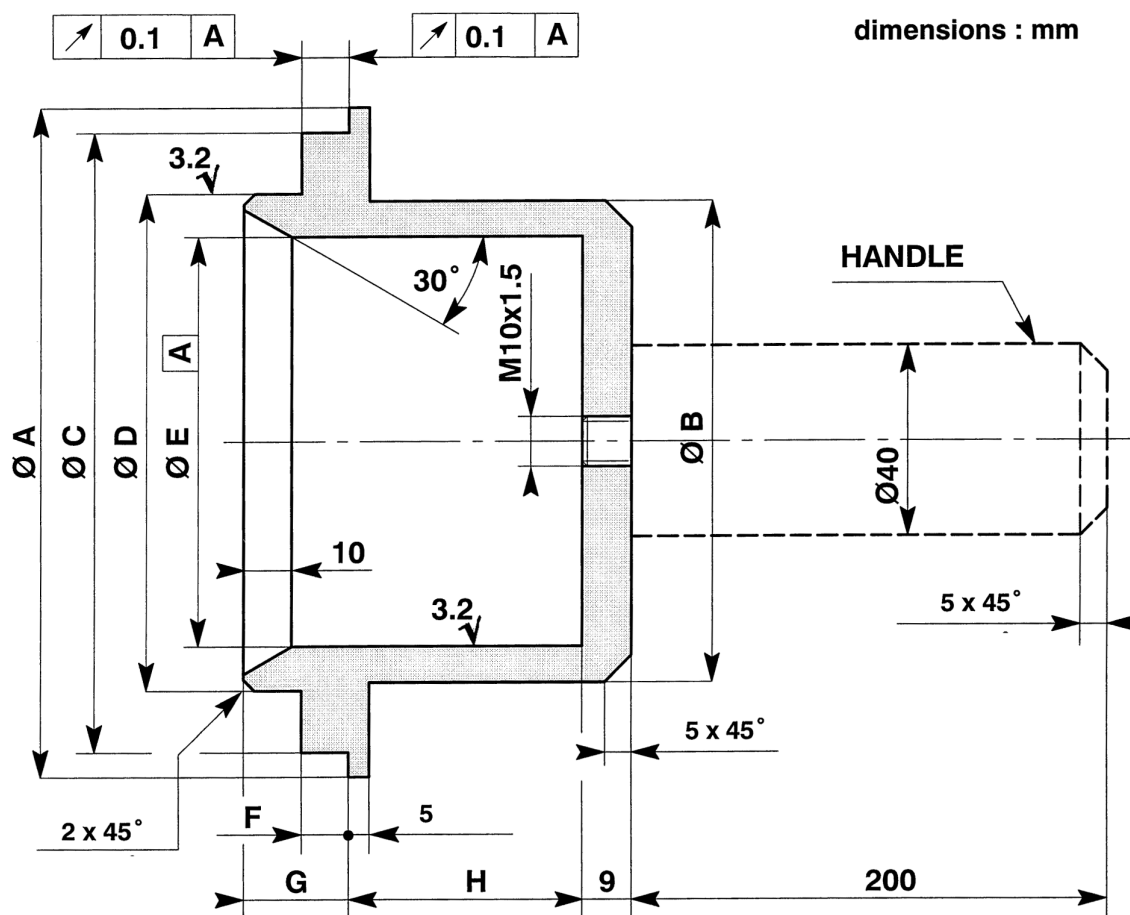
5. AIR GAP MEASUREMENT

- Refer to Technical Information N°05/2006.

6. KIT BOARD

Retarder model	Kit reference
Up to serial number 394333 (28/03/2005): AC81-80, AC82-45, AC82-70, AC83-00, AC83-31	VB 107 905
Up to serial number 394333 (28/03/2005): AC72-00 AD72-00, AD72-60	VB 107 942
From the serial number 394334 (29/03/2005): AC81-80, AC82-45, AC82-70, AC83-00, AC83-31 AC72-00 AD72-00, AD72-45, AD72-60	VB 107 906
AC61-25, AC61-35, AC61-60 AD61-30, AD61-55	VB 107 907
AC50-65, AC50-80, AC51-00	VB 107 908
AC50-55 AD50-55, AD50-60, AD50-90	VB 107 909
AE30-32, AE30-35	VB 107 917

7. LIP SEAL DRIVER TECHNICAL SPECIFICATIONS



RETARDER	Ø A	Ø B	Ø C ± 0.5	Ø D ± 0.1	Ø E ± 0.1	F ± 0.1	G ± 0.1	H
AC5	100	62	89	70.5	50	8	17	50
AC6/AD6	130	67	119	95.5	54.8	7.4	19	60
AC7/AD7	125	87	114	95.5	74.8	7.4	19	60
AC8>09/2005	140	87	129	100.5	74.8	7.4	19	60
AD5	100	62	89	70.5	50	9.4	18	50

Material: XC 48F (Rm = 630 N/mm² min) (HB 230 to 280)

Protection: oil burnishing

General surface working: $\sqrt{6.3}$ except $\sqrt{3.2}$

General tolerance: ± 1

Break the sharp angles with a chamfer of 1 mm x 45°

8. TELMA SPECIFIED GREASES CHART

Use the SUPERTELMACO grease (reference VJ 200 340) or refer to the specified greases in the chart hereunder.

Marque Brand Marke	Désignation Designation Benennung	n° d'homologation Approval number Freigabe Nummer	Homologuée depuis Approved since freigegeben seit
TELMA	SUPERTELMACO 3		
AMSOIL	GLC MULTIPURPOSE	886	04 / 1990
COFRAN	ARE 100	885	05 / 1990
CONDAT	AKRONEX HT	1104	02 / 1994
ELF	MULTI HT2	1053	03 / 1992
ESSO	UNIREX N2	824	07 / 1988
ESSO	G 359 / AG 205	842	01 / 1989
HAFA	EUROPA GREASE	975	07 / 1991
KALOR	TRITON 4205/B CA9251	999	02 / 1992
RENAULT	SHR	825	07 / 1988
SHELL	ALBIDA R2	1082	10 / 1993
VOLVO	1161344	1157	10 / 1994

WARNING: to benefit from the TELMA guarantee, grease only with TELMA specified greases.