



T-EPE-0004-E Assembly Instructions Unit Pack

This process demonstrates the Dismantling/Assembly Directions for the Replacing of Unit Pack Assemblies

Redigido por: Casey Hoover



INTRODUÇÃO

Technical Information:

- **No.:** T-EPE-0004-00-02 **Replaces No.:** A-EPE-2205-04-98
- **Distribution:** KL / EP / EPE / EPS / EPT / QS / FL / FM / VTK / VTA / IL / IP / IK

1. Aim

These instructions describe the fitting and dismantling of unit packs (ZKRV) from the propshaft series 587 / 687

2. Area of application

These working instructions are valid for all unit pack assemblies in the series 587 / 687

3. Explanation of terms

UP = Unit Pack assembly, complete

4. Responsibilities

All service departments that are concerned with the dismantling and assembly or the replacement of complete unit packs are responsible for the activities being carried out as described in paragraph 5

5. Description

See steps below.

6. Notes and comments:

None.

7. Documentation:

The documentation of assembly instructions is held in the department described under item 4.

8. Distribution:

For distribution see cover sheet.

9. Similarly valid documents:

none

10. Appendices:

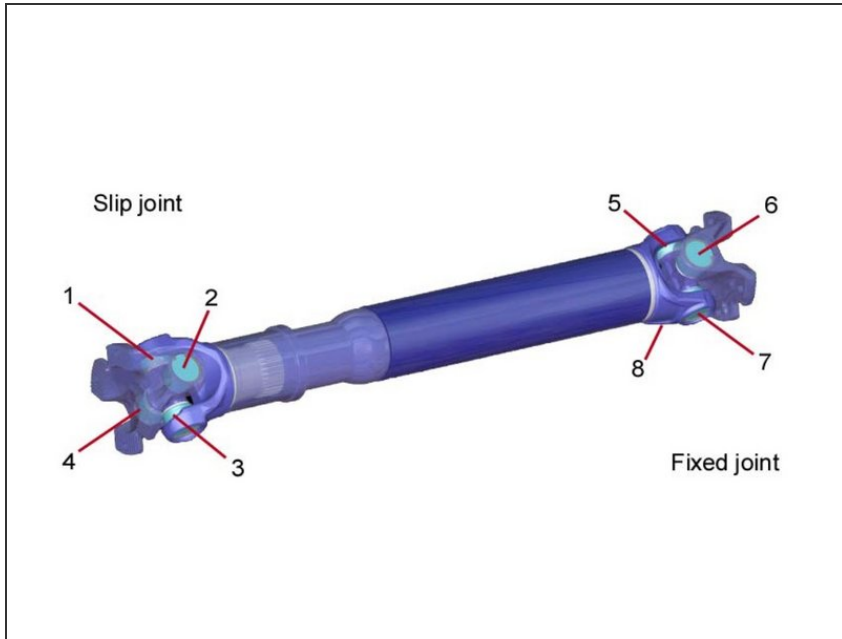
none

Passo 1 — General Advice



- The fitting of a new UP in propshafts generally leads to an improvement in the state of balance.
- Any wear that has begun to show on the joint will be eliminated by the use of new UPs.
- Whether in individual cases the quality of balance G16 is reached again greatly depends on the state of wear of the splines in the length extension.
- A re-balancing of the propshaft after the exchange of the UPs can only be avoided when the following conditions are fulfilled:
 - The vehicle propshaft is a genuine Spicer GWB product.
 - The propshaft was balanced in its original state or later to a minimum level of G16.
 - The circlips from the previous UP>s which have been matched for thickness must be re-used in the same positions.
 - If the following dismantling/assembly conditions are fulfilled on exchanging the UP>s

Passo 2 — Preparation and Carrying-out of the Dismantling



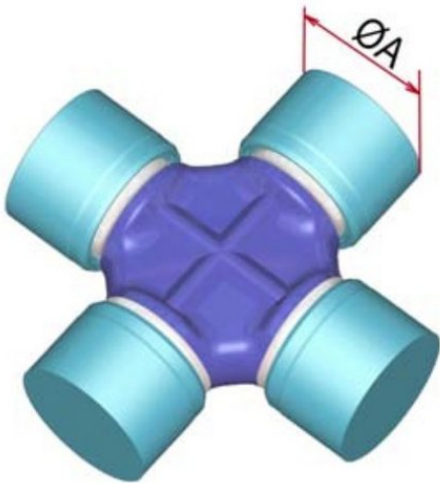
- Before the beginning of the dismantling:
 - Neither high pressure or steam water nor aggressive chemicals may be used for this.
 - Continuous numbering of the individual propshaft bearing faces on the relevant yokes with the numbers 1 to 8 as per the sketch
 - The circlips serve to maintain the fixing and axial movement of the UPs. They are adjusted for thickness and may on no account be swop over.
 - Therefore the marking of each individual circlip is important immediately after its dismantling. For the marking strips of adhesive tape may be used, which may be marked and attached to the circlips.
 - The circlips should receive the same number as the relevant bearing. vlf the circlips are mixed up this leads to high out-of-balance values. The Joint adjustment has to be inspected, see also Point 5.3.6

Passo 3 — Table 1 : UP Dimensions

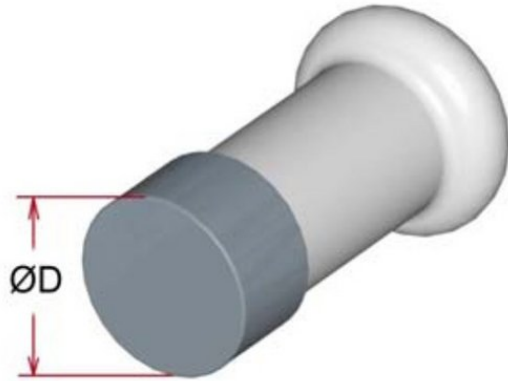
Propshaft Series / Sizes	Ø A [mm]	Mandrel Ø D [mm]	Max. permissible press power [kN]
687.15	27.0	26.0	15.0
687.20	30.2	29.0	17.0
687.25 / 687.30	34.9	34.0	20.0
587.15 / 687.35	42.0	41.0	25.0
687.40	47.6	46.0	25.0
587.20	48.0	47.0	25.0
687.50	49.2	47.0	25.0
587.30 / 687.45	52.0	51.0	30.0
587.35 / 587.36 587.42 / 687.55	57.0	56.0	35.0
687.60	59.0	58.0	35.0
587.48 / 687.65	65.0	64.0	40.0
587.50	72.0	71.0	50.0

● Insert wisdom here.

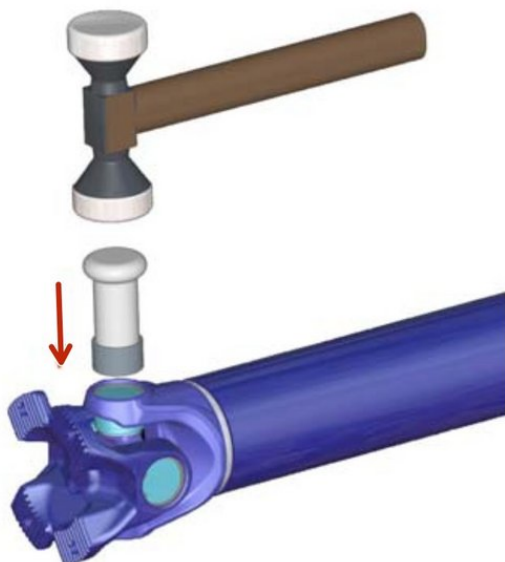
Passo 4 — Figure 1: UP-diameter



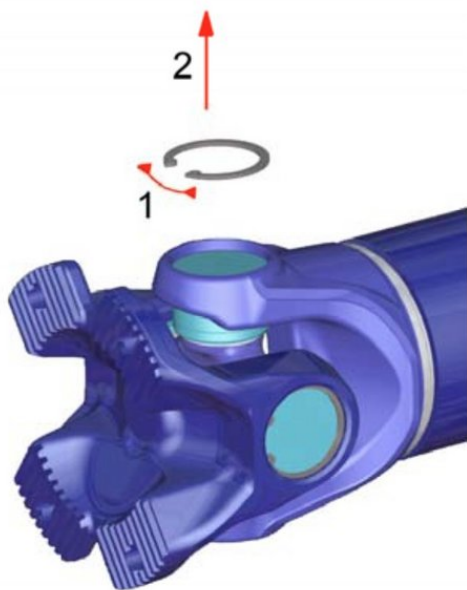
● Insert wisdom here.

Passo 5 — Figure 2: Assembly mandrel

- Insert wisdom here.

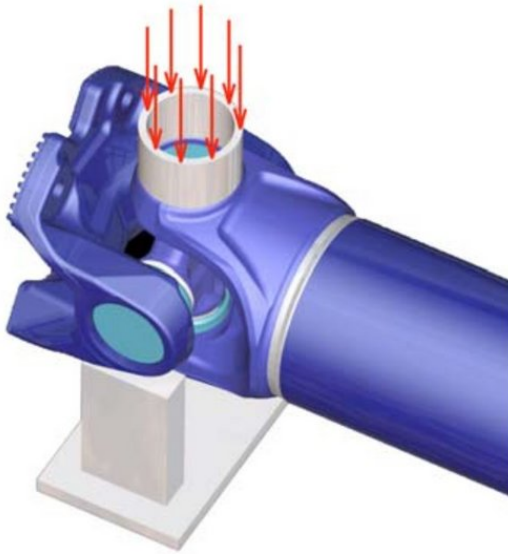
Passo 6 — Dismantling (Fixed joint) Pt. 1

- Place joint on work bench, put mandrel (see Fig. 2) into the lug hole and make the bearing cup “sit” by use of a heavy blow with a hammer. For mandrel dimensions see Table 1.

Passo 7 — Dismantling (Fixed joint) Pt. 2

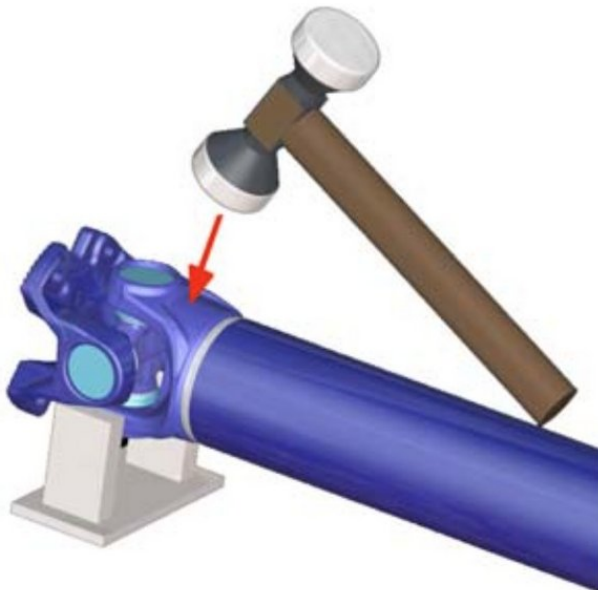
- Remove circlip with dismantling pliers. Turn joint and remove the remaining circlips as described.

Passo 8 — Dismantling (Fixed joint) Pt. 3



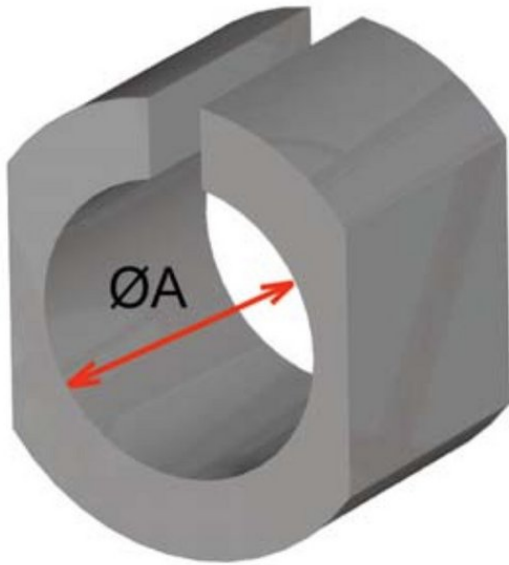
- Force the bearing cup out of the tube yoke with a press.
- Additionally, support the flange yoke and force the tube yoke downwards, so that the bearing cup comes out at the top of the tube yoke.
- Then turn the propshaft 180° and force out the other bearing cup. In doing this attention should be paid that the tube yoke does not come into contact with the bearing cross.

Passo 9 — Dismantling (Fixed joint) Pt. 4



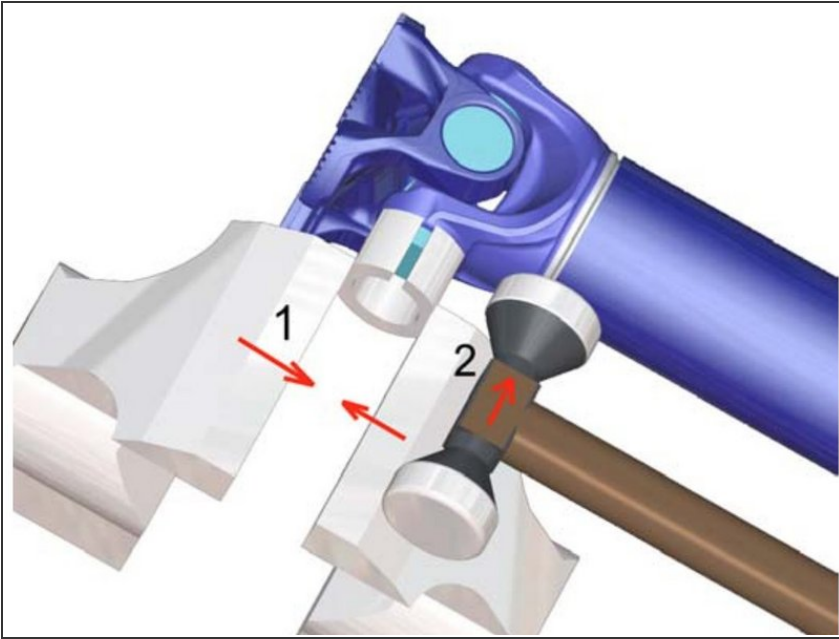
i Alternative

- In cases where no press is available the bearing cups may also be driven out by means of hammer blows (soft metal).
- Oiling of the bearing cups eases the driving out. Use a vice as support.

Passo 10 — Dismantling (Fixed joint) Pt. 5

- The bearing cups should be dismantled with the fixture shown on the right (clamping sleeve) while fixed in a vice.
- $\varnothing A$ = Bearing cup- $\varnothing$

Passo 11 — Dismantling (Fixed joint) Pt. 6



- The bearing cups should be taken out of the tube yoke.
- In addition the bearing cups should be held in the vice and driven out by light blows to the yoke ears.
- The flange yoke with the fitted journal cross should be removed.
- The bearing cups should be removed from the flange yoke in the same manner. For this the bearing cups should be held with the fixture clamping sleeve in the vice and pulled out through light hammer blows on the flange yoke ears.
- Take the journal cross out of the flange yoke ear. The fixed joint is now disassembled.
- **The dismantling of the slip joint takes place in the same manner as the dismantling of the fixed joint.**

Passo 12 — Assembly of the new Unit Pack assembly

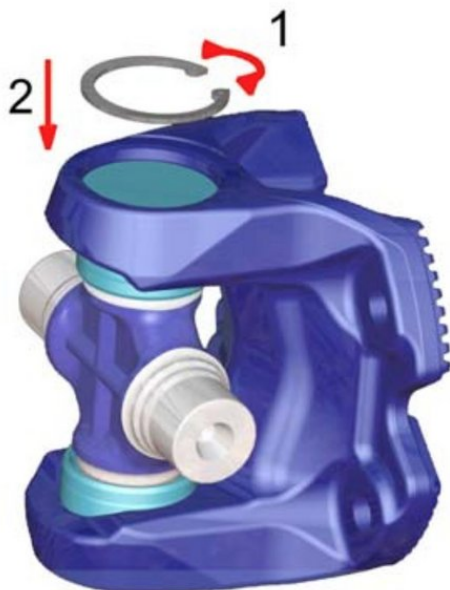


- The assembly of the UP is described in the following steps.

Passo 13 — Re-greasable UP Pt. 1



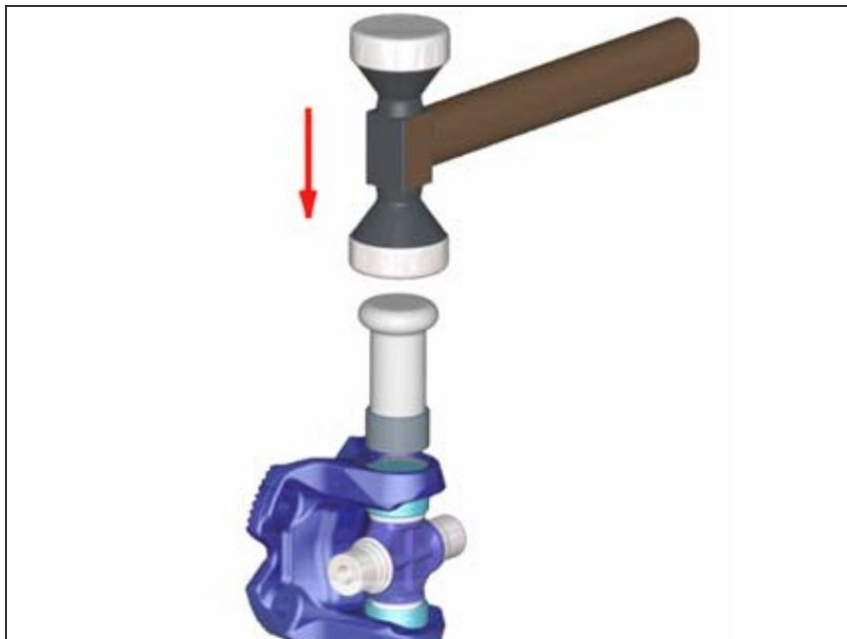
- Fit bearing cup and press in until it is visible on the inner side of the yoke ear (see arrow).
- The journal cross should be laid in the flange yoke.
- The assembly pressure to be used to press home the bearing cup should be taken from table1.

Passo 14 — Re-greasable UP Pt. 2

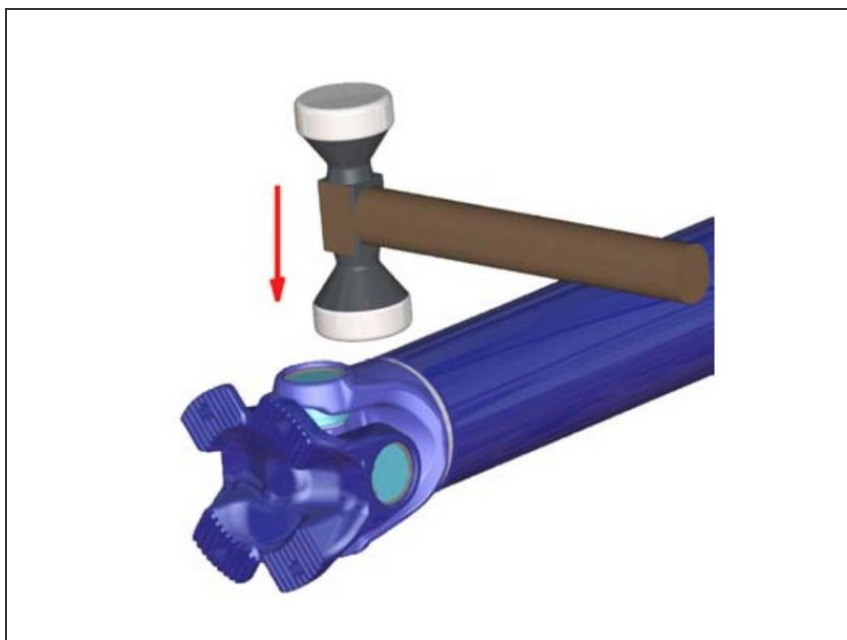
- Insert circlip.
- Here it is most important to retain the correct order of circlips to the lug holes.

Passo 15 — Re-greasable UP Pt. 3

- Press the bearing cup with the journal cross and the opposing bearing cup against the circlip.
- The bearing cups are fitted with plastic thrust washers.
- So that the thrust washers are not crushed in the assembly of journal crosses into yoke ears, the maximum pressure force values (according to table 1) may not be exceeded.

Passo 16 — Re-greasable UP Pt. 4

- Insert the 2nd circlip. So that the ring fits exactly into the groove.
- We recommend to give a hammer blow onto a mandrel that is laid onto the circlip (mandrel dimensions see table 1).

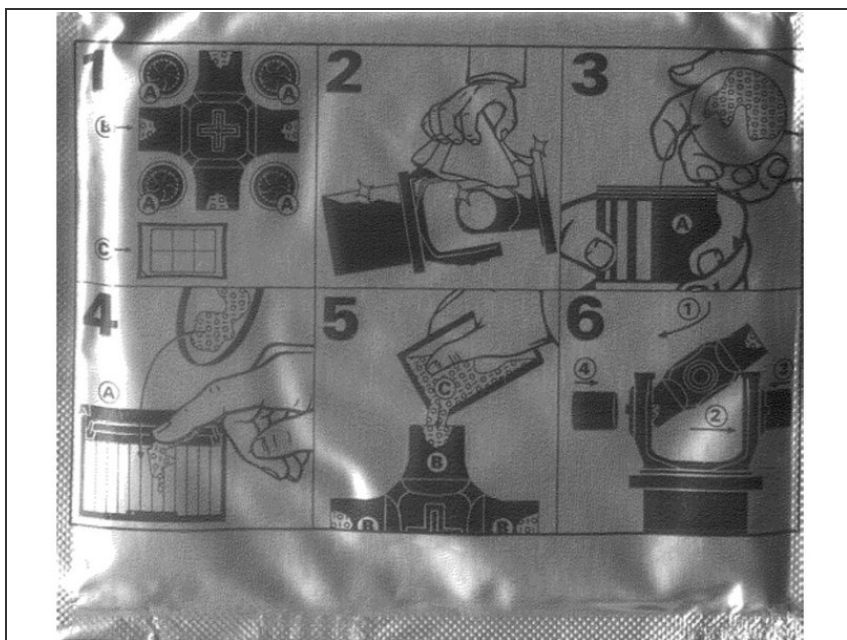
Passo 17 — Re-greasable UP Pt. 5

- The journal cross with the already fitted flange yoke should be inserted into the ears of the tube yoke.
- The remaining process is as per the assembly of the flange yoke journal cross.
- “Ease” joints (through hammer blows on the yoke ears).

Passo 18 — Re-greasable UP Pt. 6



- After completion of the assembly, the joints should be checked for ease of movement.
- Their setting is correct if the flange yokes can be moved by hand in both planes and they do not pulled down by their own weight when the propshaft is in a horizontal position.
- Should the play be too great or too little, the setting of the joint play can be adjusted through use of the next thinnest or thickest circlip. **Then a new balancing of the propshaft is necessary!**
- **The assembly of the sliding joint is carried out in the same manner to that of the fixed joint.**

Passo 19 — Service-free UPs

- The unit pack assembly and the grease cushion should be taken out of the packaging.
- The four bearing cups should be removed from the journal cross. The yokes which are to be assembled should be cleaned.
- The grease reservoirs in the journal crosses should be filled from the grease cushions provided.
- The assembly of the UPs can then be carried out as under Item 5.3 re-greasable UPs.