


To adjust

- Assemble Fig. I the dial gauge assembly 8.0504 ZZ comprising :
 - A1 - support rod,
 - A2 - support,
 - A3 - clamp.
- By pushing in each direction () Fig. I, on the threaded rod B1, check the end float : 0.025 to 0.10 mm.

If necessary, adjust the end float :

INCREASING the shim thickness	→	INCREASES the end flot
DECREASING the shim thickness	→	DECREASES the end flot
(shims (4) Fig. II and IV).		

Shims available : 1,000 - 1,025 - 1,050 - 1,075 - 1,10 - 1,20 - 1,30 - 1,40 - 1,50 - 1,60 - 1,70 - 1,80
1,90 - 2,10 - 2,20 - 2,30 - 2,40 mm.

- Remove the tools and the components.

To assemble

- Lubricate and place in position Fig. III the inner bearing assembly (2) and the new oil seal (1).
- Place the stub axle with these parts on the hub (7) Fig. III and use the tube 0.0607 to drive the inner bearing (2) on the hub until it butts.
- Position centrally on the hub Fig. IV :
 - a shim (4) as previously determined,
 - the spacer (3),
 - the second adjusting shim (4).
- Lubricate the inner bearing assembly (5), place it in position and drive it on the hub using tube 0.0607 Fig. IV.
- Lubricate and fit a new oil seal (6).

Pages

A - COMPLETE UNIT

Identification - data

Front suspension identification - data

A1.001 to 003

Checks - adjustments

Front suspension checks - adjustments

A2.001 to 005

Removing - refitting

Removing - refitting a half-suspension unit

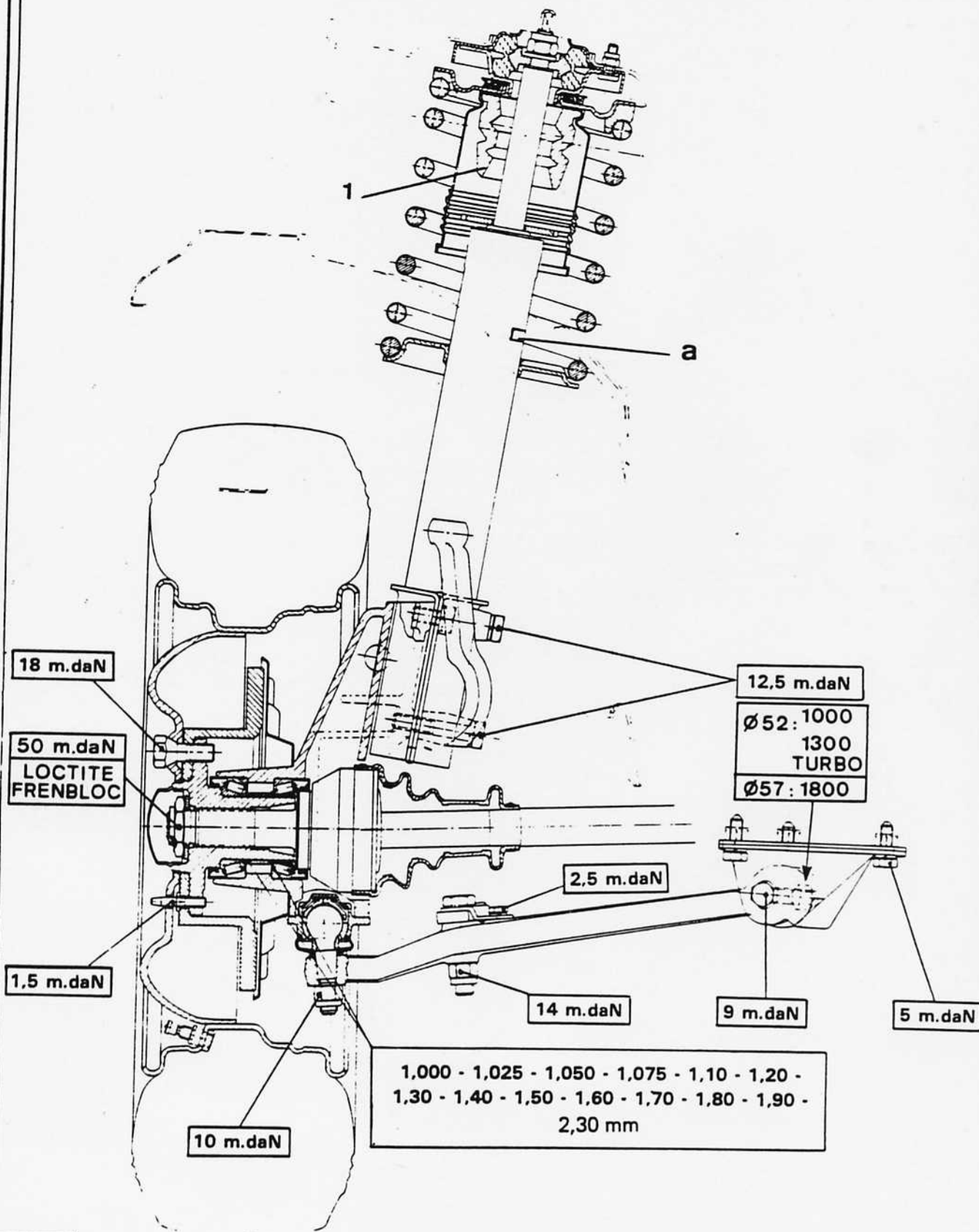
A4.001 to 003

C - FRONT HUBS

Overhaul

Overhauling a front hub

C5.001(1) to 007



REQUIREMENTS FOR CHECKING THE FRONT SUSPENSION SPECIFICATIONS

The front suspension specifications are checked with the vehicle at kerb weight, that is, unloaded, with tools, water oil and full fuel tank.

1 - WHEEL ALIGNMENT (TOE-IN)

TO CHECK

The wheel alignment must be :

J5 all models : Toe-in $0,5 \pm 1$ mm

TO ADJUST

1 - Centre the steering (essential when adjusting the toe-in so as to preserve equal turning (Ackermann) angles.

- Release the gaiter collars on the steering rack at each side and pull the gaiters outward.
- The steering is centred when the rack protrusion left-hand (x) and right-hand (y) fig. I and II are :
 $x = y = 76$ mm

In this position { the front wheels
the steering wheel } must be straight ahead, Fig. III. Adjust if they are not

2 - TO ADJUST THE TOE-IN

- The adjustment is made by loosening the track rod lock nuts (1) Fig. IV and turning the left and right hand track rods.

Setting :

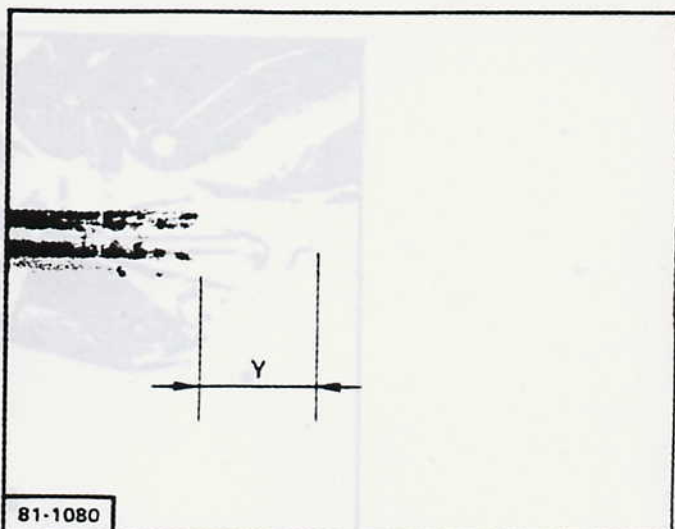
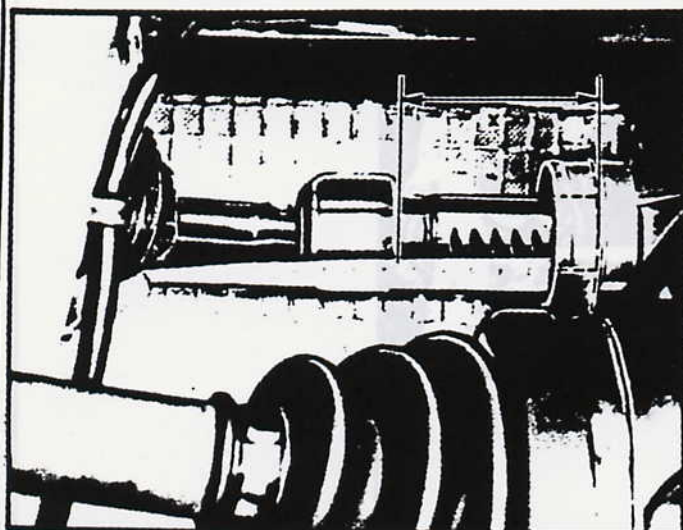
J5 all models :

Toe-in $0,5 \pm 1$ mm

1 turn of the track rod = 3 mm total toe-in change.

After adjustment, the visible thread length on the left and right hand sides must be approximately equal.

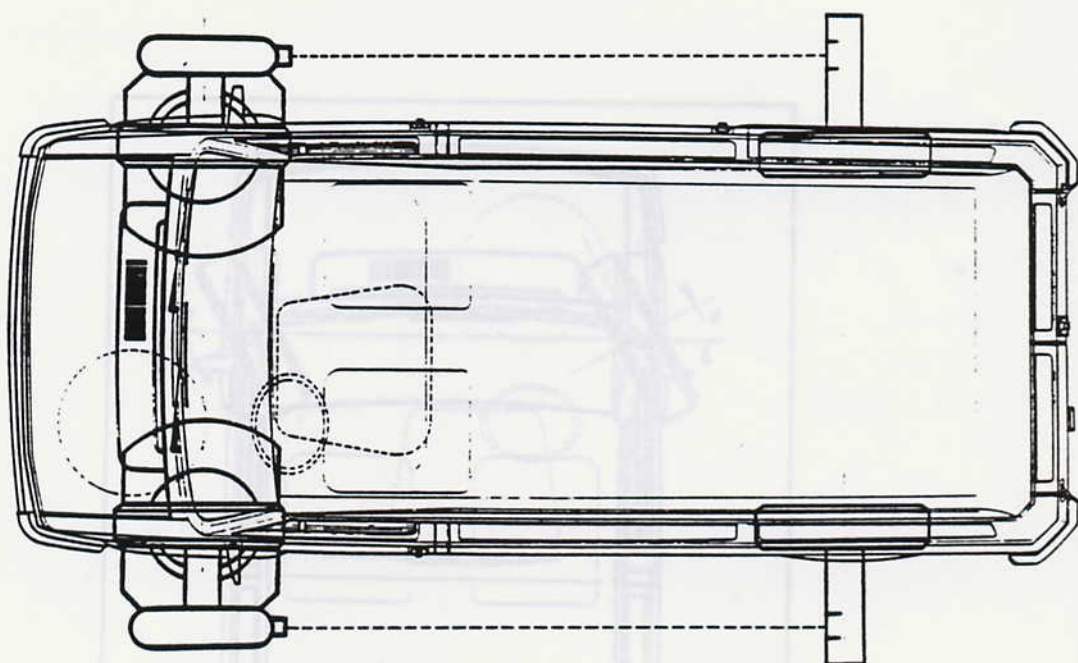
- Tighten the lock nuts (1) to 6 m.daN (44 lbf ft) (prevent the ball joints from turning).
- Hold the ball joints horizontal.
- Tightening torque for steering wheel nut ; 5 m.daN (37 lbf ft).



81-1080

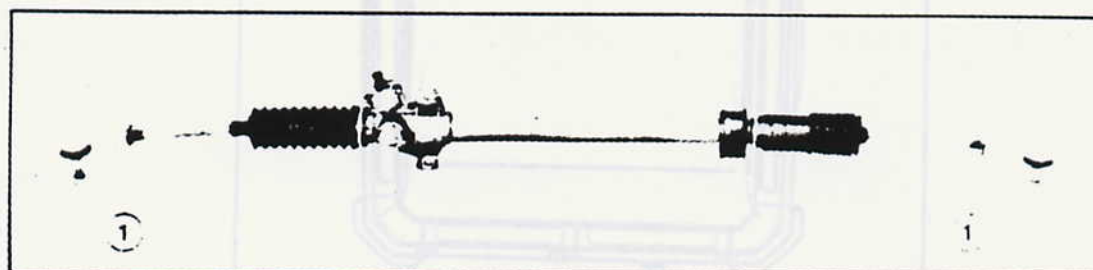
I

II



26-5-82-4A

III

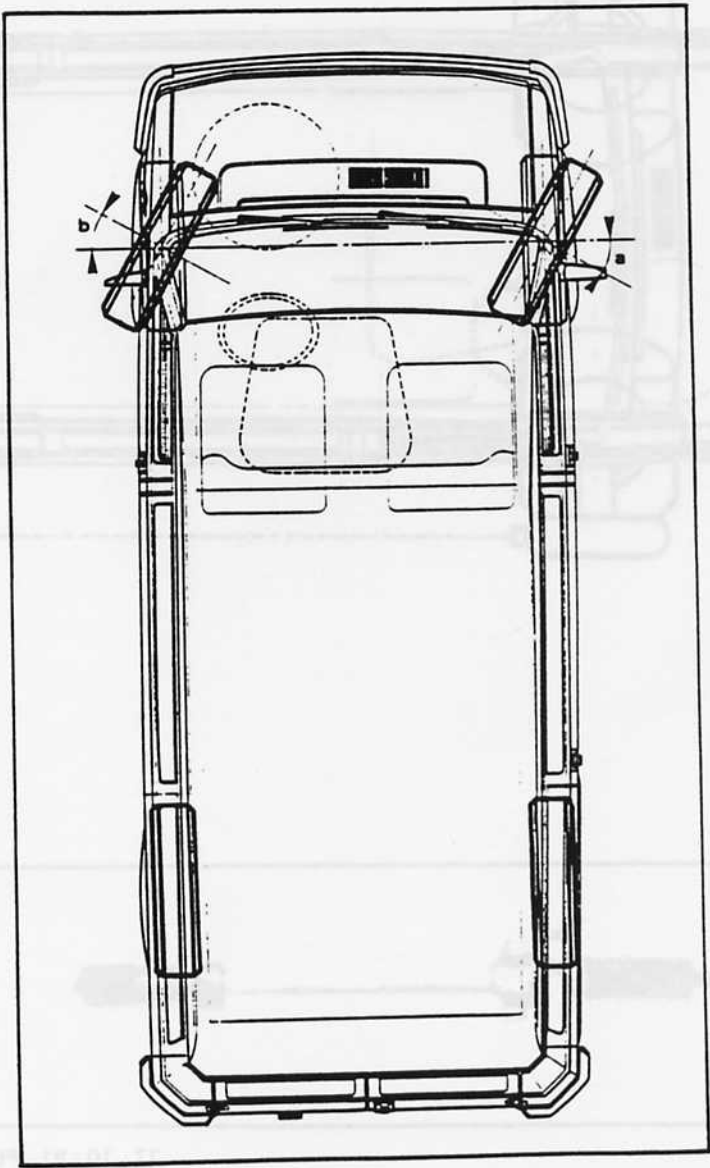


IV

27-10-81-P6-R-A



28 - 10 - 81 - P11 - R - A



26 - 5 - 82 - 5A

II - CASTER

- Check the castor angle with appropriate equipment (see the brochure listing recommended garage tooling and equipment)

J5 all models : 0° to 1°

- If it is outside the tolerance, remove the brake re-action rod and fit (a) requisite number of washers.

One washer thickness only : 2,5 mm

Tightening torques :

- | | |
|---|-----------------------|
| - nut, torque re-action rod to suspension arm | 12 m.daN (88 lbf ft) |
| - bolt, re-action rod anchor to frame | 2,5 m.daN (18 lbf ft) |
| - nut, re-action rod to anchor | 10 m.daN (74 lbf ft). |

Important : If the caster angle is altered, check the toe-in.

III - TURNING (ACKERMANN) ANGLES Fig. II

- Place the vehicle on turntables at the front and blocks of the same height at the rear.
- Turn the wheels to one side, then the other ; the readings should be :

inner wheel (example : a)
 $40^{\circ} 10'$

outer wheel (example : b)
 $35^{\circ} 15'$

- If these readings are not obtained :

- ensure there is equal thread protusion of the track rods ; if not centre the steering and adjust the toe-in (see previous pages).
- check the steering arms.

FRONT SUSPENSION COMPLETE UNIT REMOVING - REFITTING

If a suspension arm has been replaced, the pin that secures the arm to its support must be tightened with the vehicle loaded.

TIGHTENING TORQUES

Essential tightening torque (torque spanner)	m.daN	lbf ft
Securing nut, drive shaft to hub	50	370
Recommended tightening torques :		
Top securing nuts, suspension unit	1,5	11
Suspension arm bracket to frame	5	37
Steering arm securing bolts	12,5	92
Torque re-action rod to bracket	10	74

REMOVING AND REFITTING A HALF-SUSPENSION UNIT

If the hub cap is to be re-used, it is necessary to remove the wheel so that the FACOM U 53 T2 (see the section "work on the rear hub" for removing and fitting this cap.

REMOVING

Fig. I

- Remove the hub cap from the nut (1).
- Release and remove the drive shaft nut (1).
- Raise and place a stand under the side of the vehicle to be worked on.
- Remove the wheel.

Fig. II

- Disconnect the brake pipes (2).
- Remove :
 - the steering lever bolts (3),
 - the nut (4) from the brake re-action rod.
- Retrieve the spacers,
- the securing bolts (5) suspension arm support,
- the three nut (6) : Fig. III.

Do not interfere with the centre nut (7).

Withdraw the drive shaft.

Remove the half-suspension unit.

REFITTING

Fig. III

- Fit the suspension unit in position.
- Fit and tighten the securing nuts (6) to 1.5 m.daN (11 lbf ft).
- Engage the drive shaft.

Fit : Fig. II

- the bolts (5) securing the suspension arm support and tighten them to 5 m.daN then to 5 m.daN (37 lbf ft),
- fit the spacers to the re-action rod, refit and tighten the nut to 10 m.daN (74 lbf ft).
- the bolts (3) securing the steering arms and tighten them to 12,5 m.daN (92 lbf ft).

Reconnect the brake pipes and bleed the system (see the appropriate section).

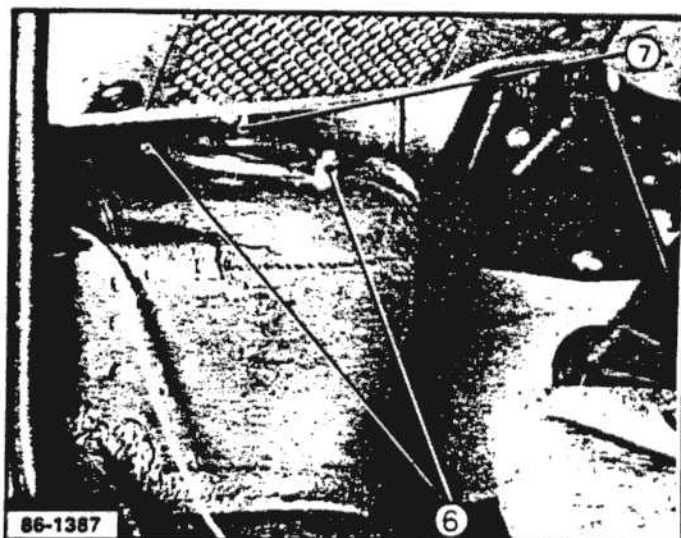
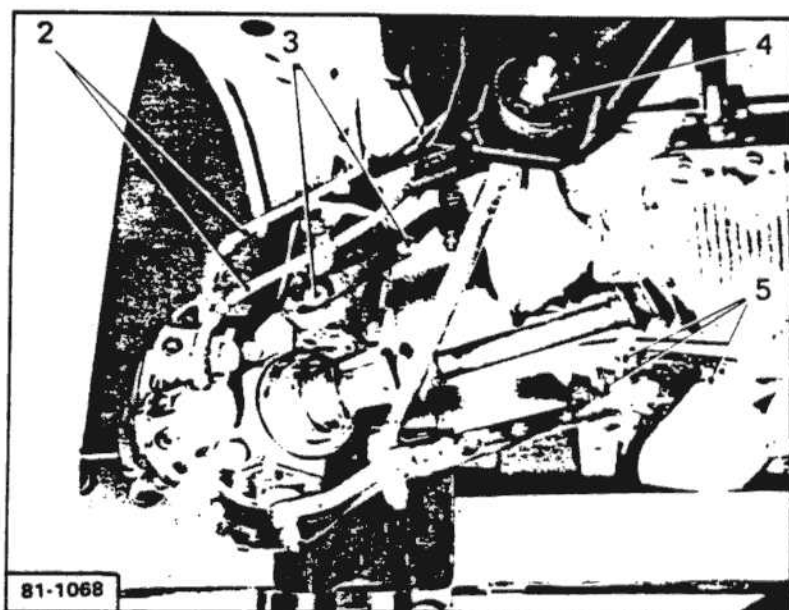
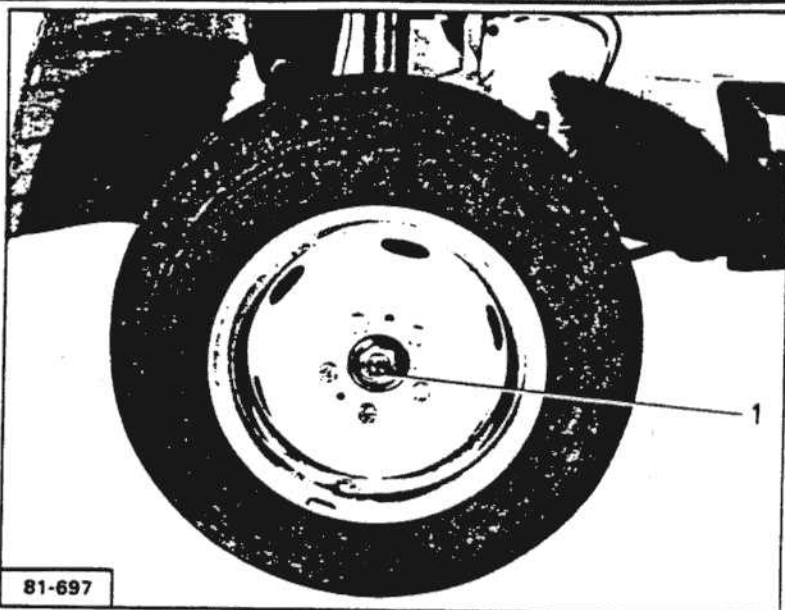
Fit the wheel, tightening the bolts to 16 m.daN (118 lbf ft).

Lower the vehicle on to its wheels.

Fig. I

With the face and threads lubricated, tighten the drive shaft nut (1) to 50 m.daN (370 lbf ft) and stake it at two points.

Use drift 8.0531 B to fit the hub protector to the nut.



FRONT SUSPENSION
HUBS
OVERHAUL

TOOLS TO BE USED

A - From front and rear hub tool kit
8.0531 :

A1 - Adaptor

A2 - Adaptor

A3 - Mandrel

B1 - Threaded rod

B2 - Ring.

Tools recommended :

B - From tool kit 8.0520 for hypoid final drive :

H2 - Adaptor.

E - Extractor assembly, comprising :

- extractor U53 T2

- bridge U53 S2.

C - Dial gauge 8.1504

TOOLS TO BE MADE

F - Tube for fitting the bearings into the stub
axle.

0.0607

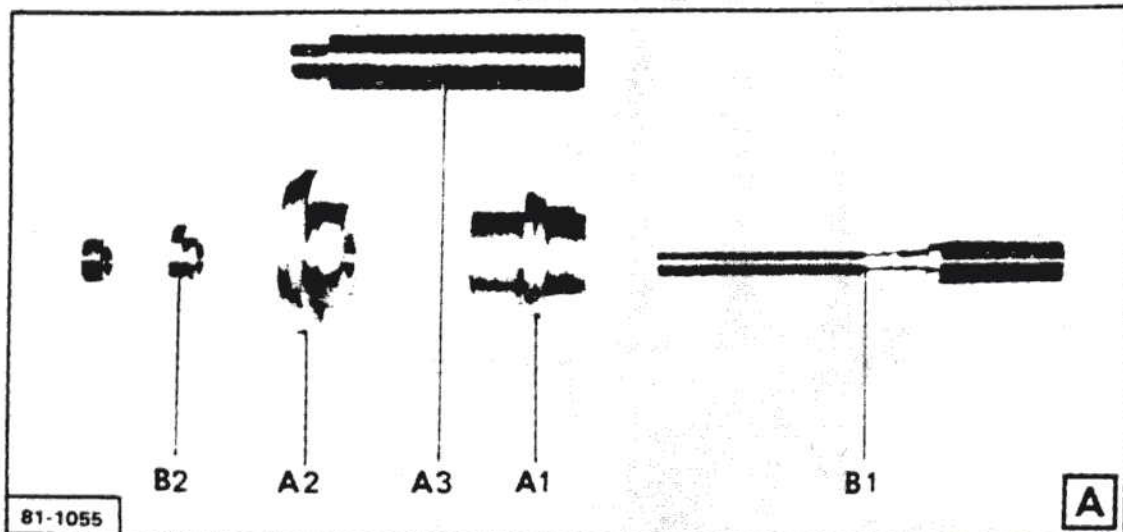
D - Dial gauge support

(see illustration in section 15)

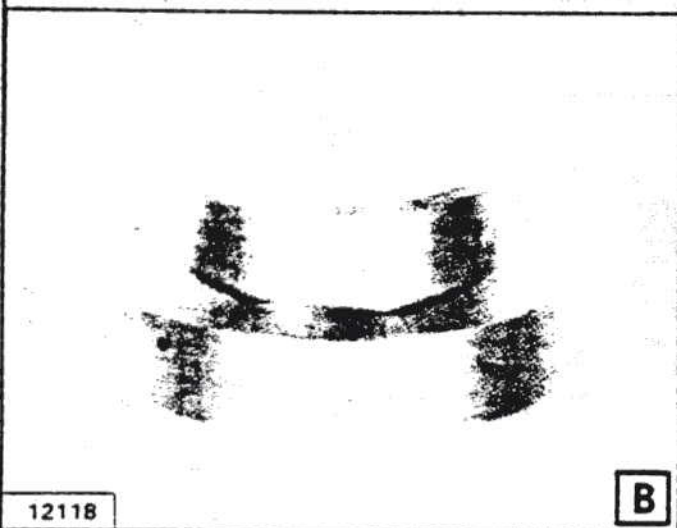
8.0504 ZZ - A1 - Support rod

A2 - Support

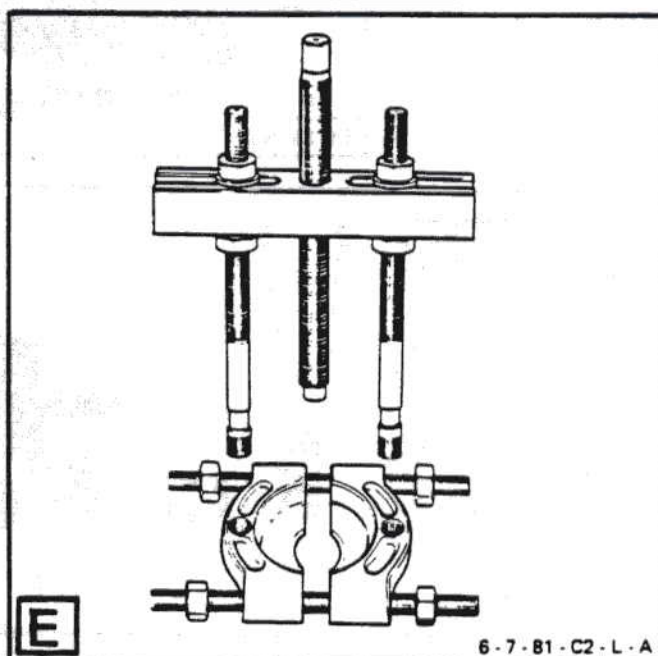
A3 - Clamp



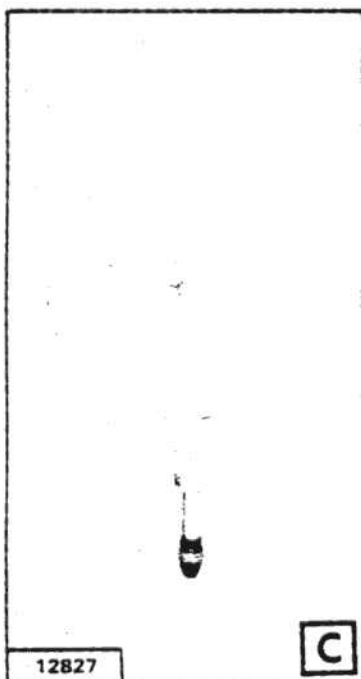
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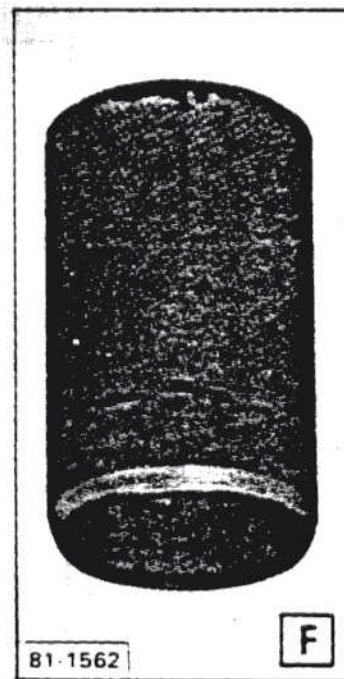
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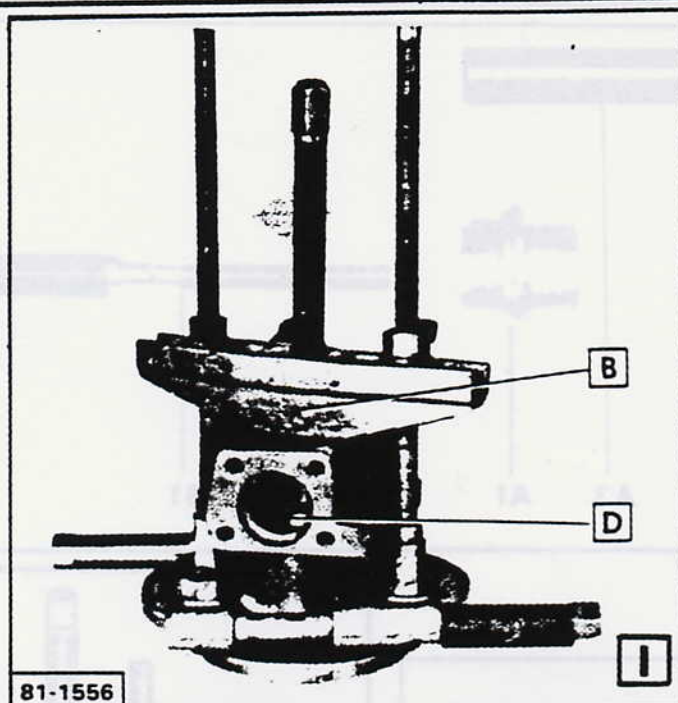
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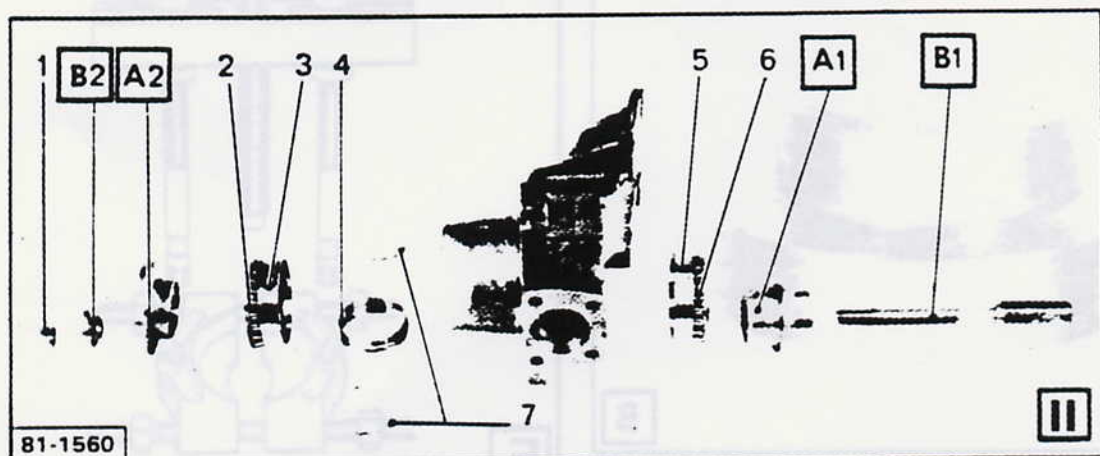
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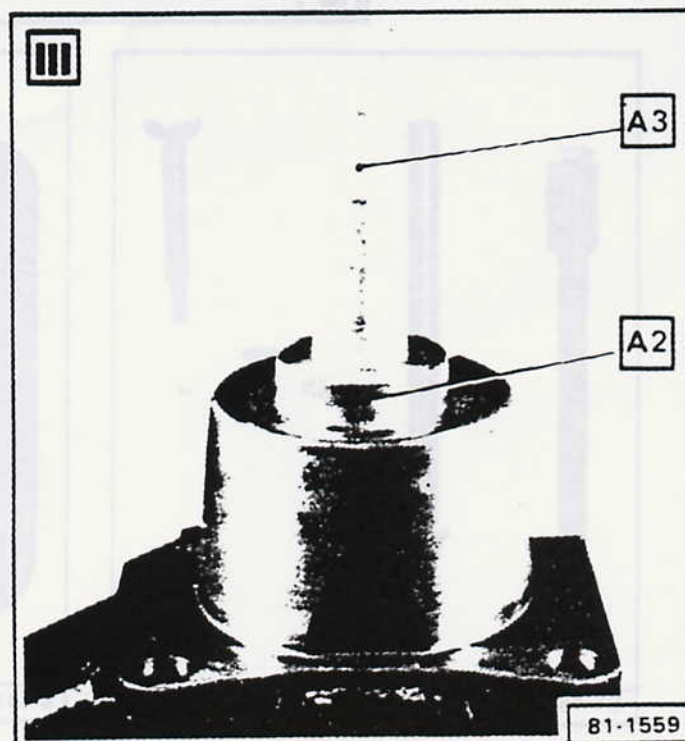
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81-1556



81-1560



81-1559

REMOVING THE BEARINGS

- Separate Fig. I the hub from the stub axle :
 - extractor FACOM U53 T2,
 - bridge FACOM U53 S2,
 - adaptor 8.0520 H2.
- Remove Fig. II, the bearings (3) and (5). The oil seals will be removed at the same time. Whenever the bearings are removed it is essential to renew the bearings and the seals.
- Retrieve the spacer (4) and the adjusting shims (7).
- Clean all the parts.

REFITTING THE BEARINGS

- Fit the outer bearing tracks (3) and (5) Fig. II and III into the stub axle.

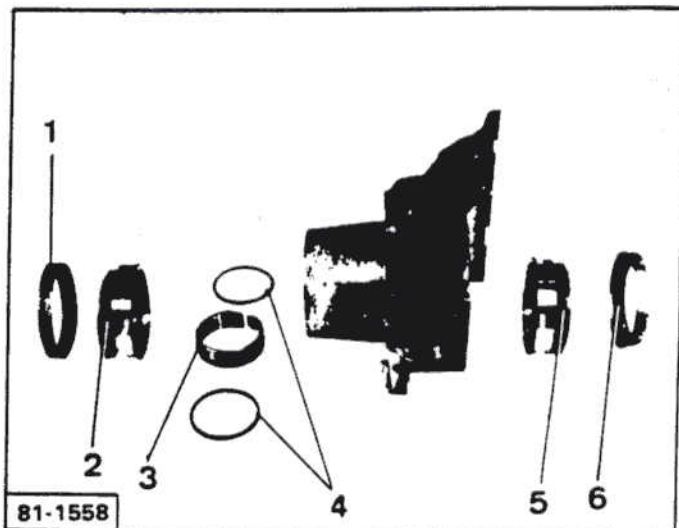
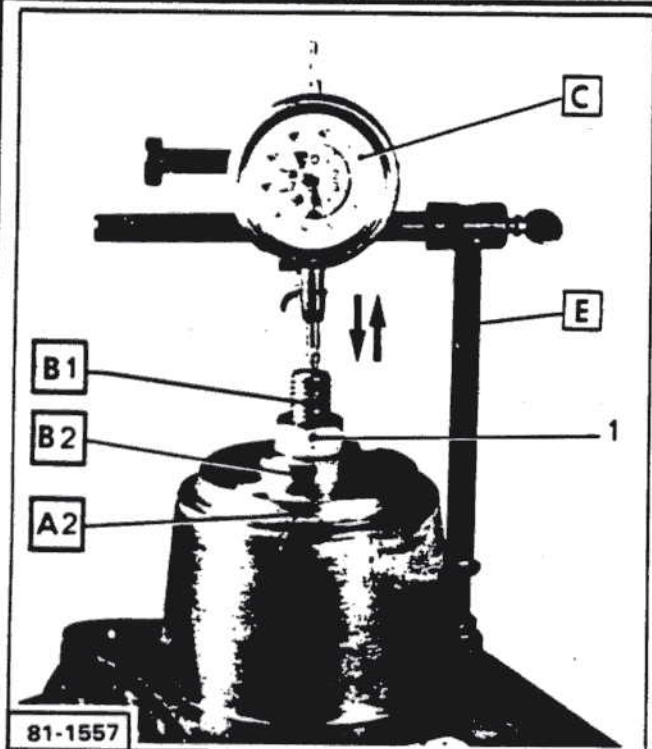
Use the adaptor 8.0531 A2 and the mandrel A3 Fig. III

ADJUSTING THE END FLOAT

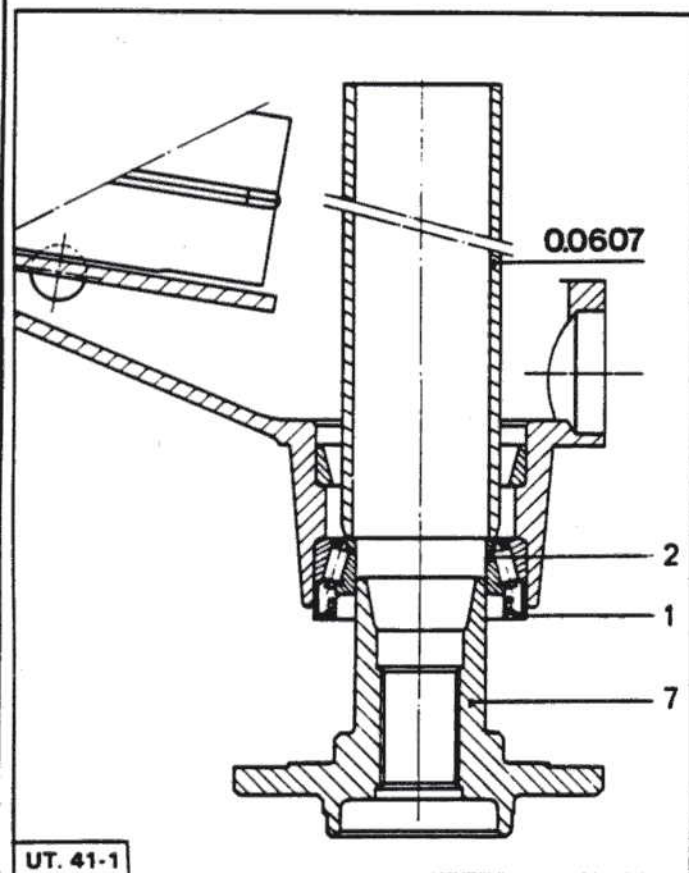
The bearing end float must be 0,025 to 0,10 mm
Incorrect end float will quickly destroy the bearings.

Preparation

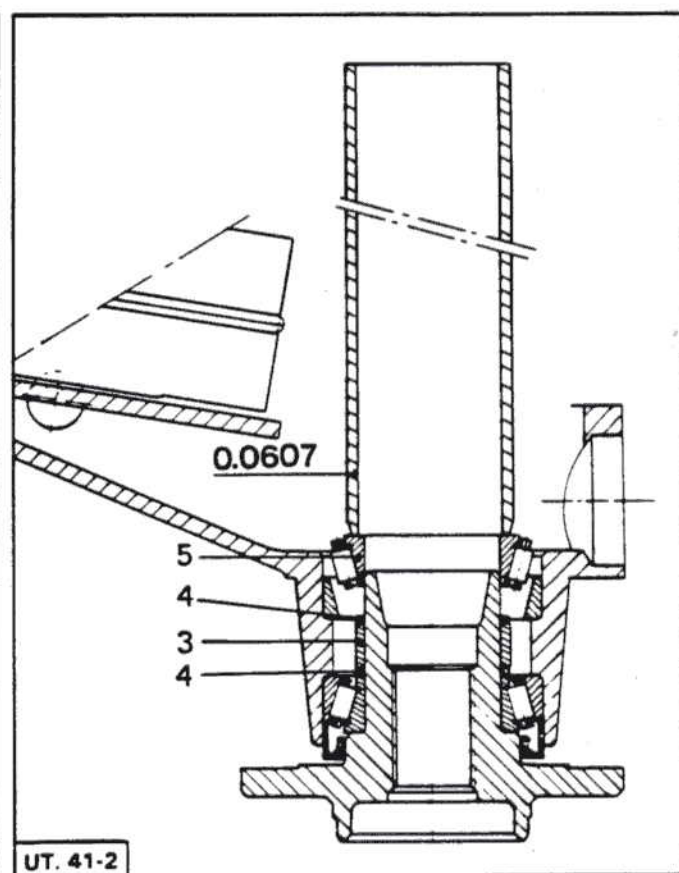
- Place in the inner end of the stub axle :
 - the inner bearing assembly (6),
 - the adaptor 8.0531 A1 and the threaded rod B1.
- Place in the outer end :
 - the spacer (4) between the shims (7) centred by the adaptor 8.0531 A1,
 - the inner bearing assembly (2),
 - the adaptor 8.0531 A2 and the ring B2.
- Tighten the nut (1) to 1 m.daN (7 lbf ft).
- Rotate the assembly to settle the bearings.



II



III



IV