PROPELLER SHAFT

4

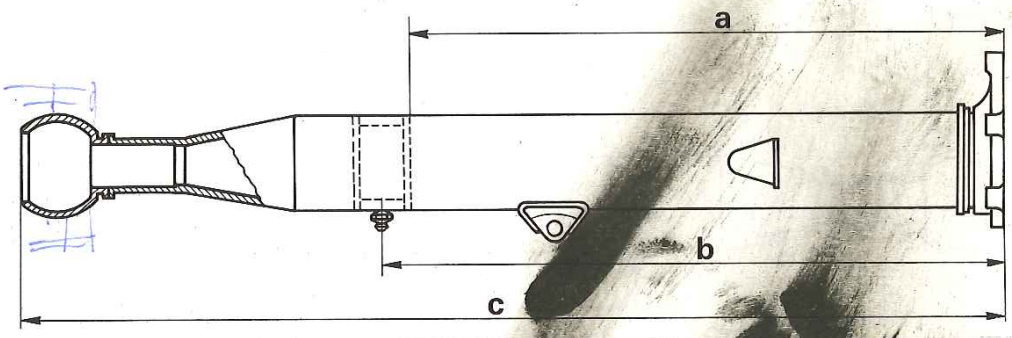
Page

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS

TORQUE TUBE

404 Saloons, Convertibles and Coupés



Different fittings	Measurements in mm		
	a	b	c
1 - Up to n° : **404** : 4 135 627 **404 J** : 4 504 833 For differential of 95.25 mm between centres (centre to centre distance) with 31 mm diameter propeller shaft P.N. : 2820.36	859	885.5	1,751.5
2 - **404** from n° 4 135 628 to n° 5 045 497 **404 J** from n° 4 504 834 to n° 4 529 909 **404 KF**, **404 C**, **404 C.KF** from beginning of series n° 4 551 335 / n° 4 495 819 / n° 4 590 865 **404/8** n° 6 900 001 (beginning of series) Grease nipple position changed due to the fitting of a 37 mm diameter propeller shaft P.N. : 2820.39	894.5	925.5	1,751.5
3 - As from numbers : **404 (TW)** : 5 045 498 **404 (TH)** : 5 100 001 **404 J** : 4 529 910 **404 KF** : 4 551 336 / 8 200 001 **404 D** : 4 600 001 **404 C** : 4 495 820 **404 C.KF** : 4 590 866 **404 ZF** : 8 250 001 Length decreased by 4 mm due to the fitting of a differential of 101.6 mm between centres in place of 95.25 mm P.N. : 2820.45 or 2820.51	890.5	921.5	1,747.5

INTERCHANGEABILITY :

The torque tubes of the 3 fittings are not interchangeable.

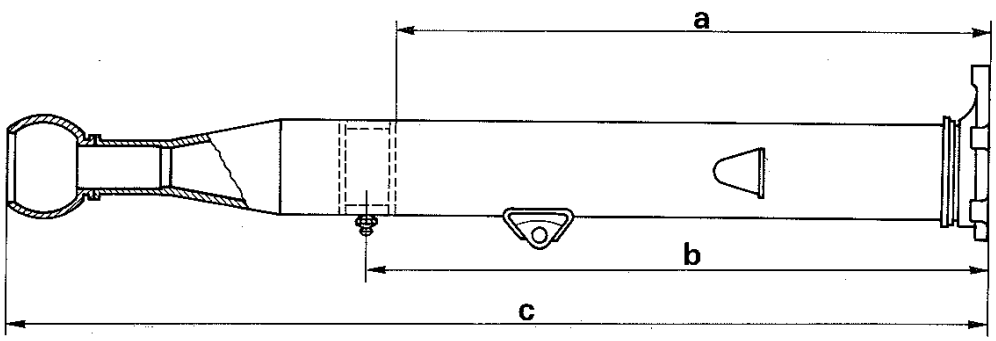
PEUGEOT

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS

TORQUE TUBE

404 Family Cars, Breaks and Station Wagons



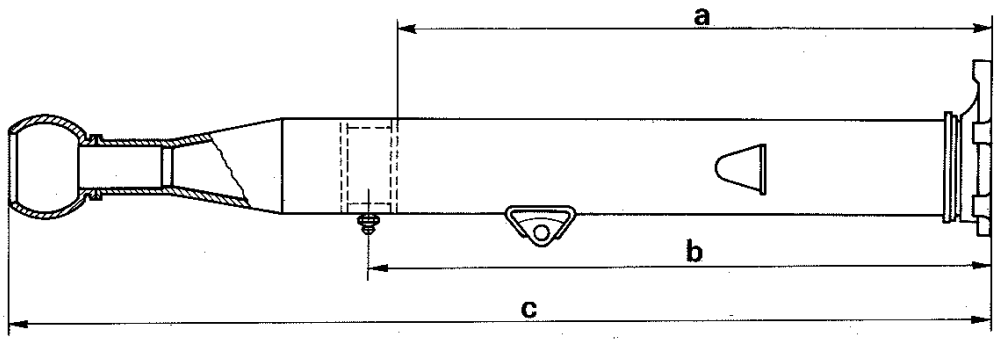
Different fittings	Measurements in mm		
	a	b	c
1 - Up to n° : 404 L (TW) : 4 898 217 404 L (TH) / 404 L Break : 4 879 370 404 LD : 4 983 681 404 U6 : 4 761 054 404 U6A (TW) : 1 930 490 404 U6A (TH) : 1 927 784 404 U6D : 4 914 068 For worm and wheel axle with oil thrower bush. P.N. : 2820.46	988	1,019	1,937
2 - As from n° : 404 L (TW) : 4 898 401 404 L (TH) / 404 L Break : 4 879 401 404 LD : 4 983 801 404 U6 : 4 761 301 404 U6A (TW) : 1 930 601 404 U6A (TH) : 1 927 901 404 U6D : 4 914 201 Tube of modified length and shape, due to the fitting of a hypoid axle and the removal of the oil thrower bush. P.N. : 2820.48	933	964	1,827

INTERCHANGEABILITY :

The torque tubes of the 2 fittings are not interchangeable.

TORQUE TUBE

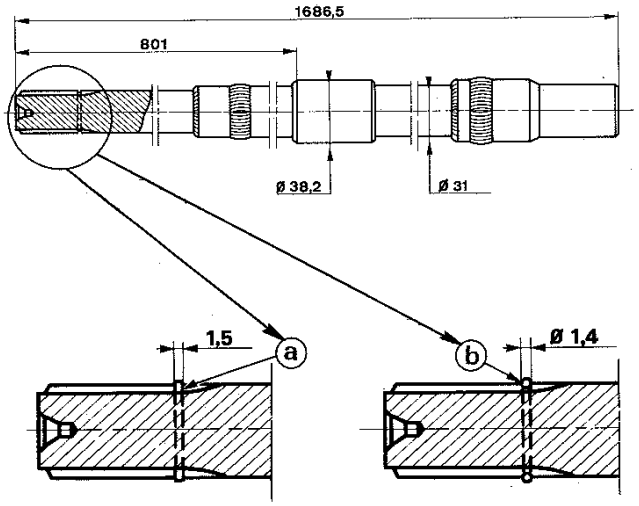
404 Light Lorry and Cab-platform



Fitting	Measurements in mm		
	a	b	c
From beginning of series : **404 U8** **404 U10** **404 U8D** **404 U10D** The tube for the hypoid axle differs mainly from that of the 404 L and U6 in : - The overall length - The position of the triangle arm support. P.N. : 2820.52			

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS



P.N. 2801.34

PROPELLER SHAFT

404 Saloons, Convertibles and Coupés

Up to n° :

404 - 4 135 627
404 J - 4 504 833

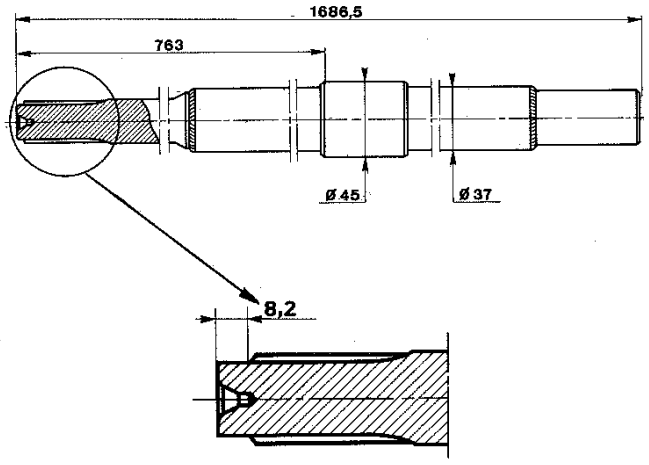
Shaft of 31 mm diameter with central bearing carrier of 38.2 mm diameter

Including :

- up to n° :

404 - 4 055 689
404 J - 4 502 026

- A spring clip of rectangular section **a.**
- **404** from n° 4 055 690 to n° 4 135 627
- **404 J** from n° 4 502 027 to n° 4 504 833
- A spring clip of circular section **b.**



P.N. 2801.36

As from n° :

404	- 4 135 628
404 J	- 4 504 834
404 KF, **404 D**, **404 C**, **404 C.KF**, **404 ZF**, **404/8**	beginning of series

- Shaft of 37 mm diameter with central bearing carrier of 45 mm diameter.
- Without spring clip and a smooth section of 8.2 mm at the front end.

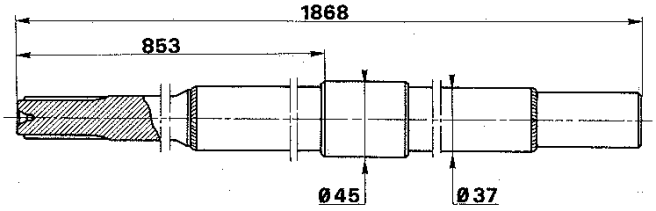
This shaft must be fitted with a universal joint fitted with a spring clip in the rear yoke.

INTERCHANGEABILITY :

The two types of propeller shaft are not interchangeable.

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS



P.N. 2801.40

PROPELLER SHAFT

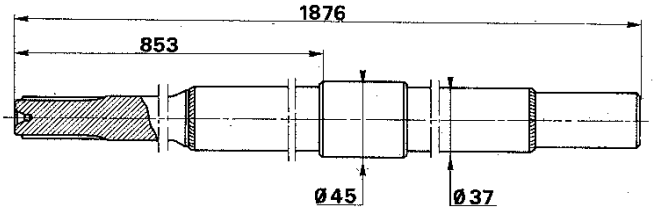
404 Family Cars, Breaks and Station Wagons 1st fitting

404 Associated vehicles with 4 × 19 worm and wheel axle.

Up to serial n° :

404 L (TW)	- 4 898 217	**404 U6**	- 4 761 054
404 L (TH)	4 879 370	**404 U6A (TW)**	- 1 930 490
404 L Break		**404 U6A (TH)**	- 1 927 784
404 LD	- 4 979 008	**404 U6D**	- 4 909 454

- Shaft of 1,868 mm length.



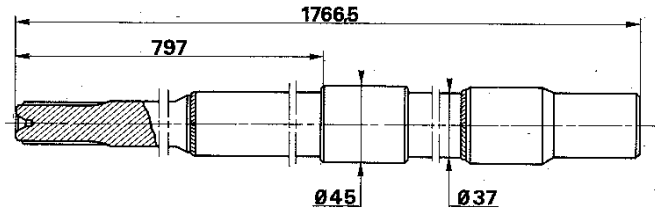
P.N. 2801.44

2nd fitting

404 Diesel Associated vehicles with 5 × 21 worm and wheel axle.

404 LD from n° 4 980 001 to n° 4 983 681
404 U6D from n° 4 909 501 to n° 4 914 068

- Shaft of 1,876 mm length.



P.N. 2801.45

3rd fitting

404 Associated vehicles with hypoid axle

As from n° :

404 L (TW)	- 4 898 401	**404 U6**	- 4 761 301
404 L (TH)	4 879 401	**404 U6A (TW)**	- 1 930 601
404 L Break		**404 U6A (TH)**	- 1 927 901
404 LD	- 4 983 801	**404 U6D**	- 4 914 201

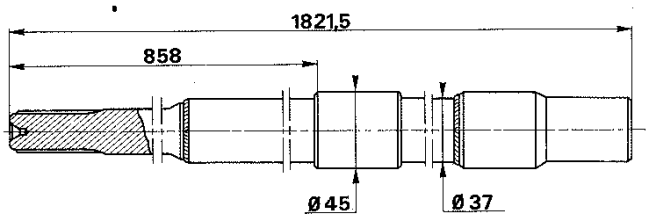
- Shaft of 1,766.5 mm length

INTERCHANGEABILITY

The propeller shafts of the three fittings are not interchangeable.

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS



P.N. 2801.46

PROPELLER SHAFT

404 Light lorries and Cab-platforms

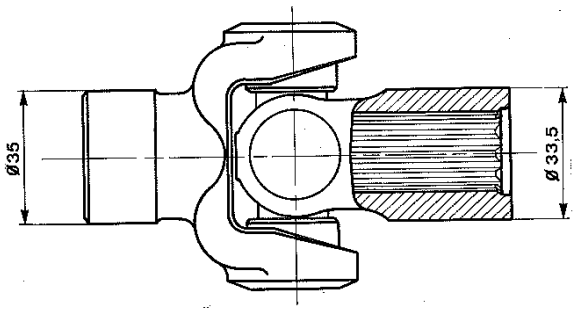
From beginning of series :

404 U8
404 U8D
404 U10
404 U10D

- Shaft of 1821,5 mm length

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS



P.N. 2619.11

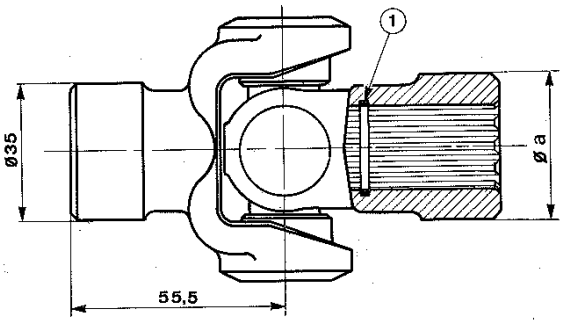
UNIVERSAL JOINT

All 404 models with C3 gearbox

Up to n° :

404 - 4 135 627
404 J - 4 504 833

Must be fitted with a propeller shaft equipped with a spring clip.



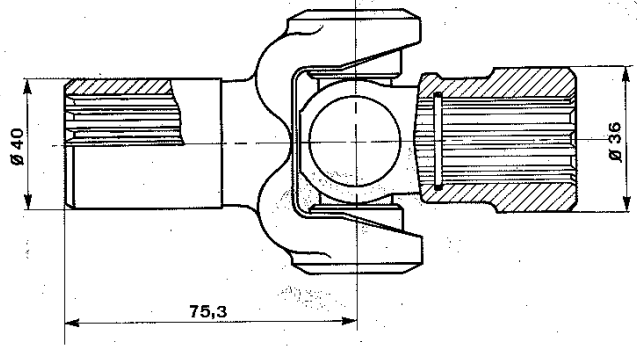
As from n° :
404 - 4 135 628 **404 J** - 4 504 834

From beginning of series :
404 KF **404/8**
404 D **404 L, LD**
404 C-C.KF **404 U6, U6A, U6D**

- Universal joint with spring clip 1 in the rear yoke.

diameter a	P.N.
33,5 mm	2619.12
36 mm	2619.14

The Spare Parts Department only deliver the universal joint P.N. 2619.14 which is interchangeable with joint P.N. 2619.12.



P.N. 2919.16

All 404 models with BA7 gearbox

From beginning of series :
404/8
404 U8 and U8D
404 U10 and U10D

As from n° :

404 TW	- 5 085 001	**404 L (TW)**	- 4 941 601
404 TH	- 5 415 001	**404 L (TH)**	- 6 826 001
404 C	- 4 670 201	**404 LD**	- 4 986 701
404 D	- 4 629 001	**404 U6**	- 4 774 001
404 KF	- 8 243 001	**404 U6A**	- 1 932 301
404 C.KF	- 6 801 501	**404 U6D**	- 4 917 501

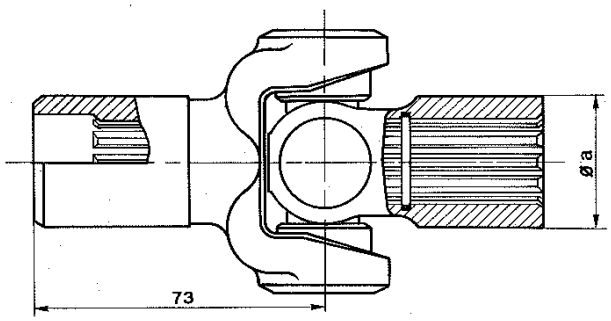
INTERCHANGEABILITY -

The three types of universal joint are not interchangeable.

PEUGEOT

PROPELLER SHAFT

IDENTIFICATION - CHARACTERISTICS



UNIVERSAL JOINT

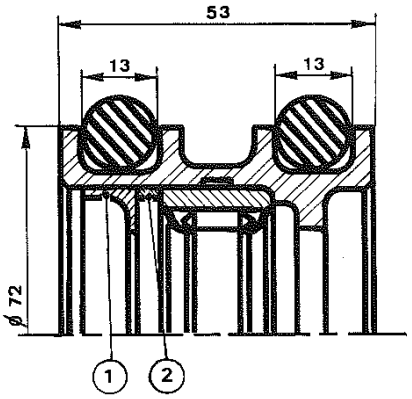
404 Saloons with ZF gearbox

Particularities in comparison with C3 gearbox universal joint.

Shape of the front yoke different (length of 73 mm in place of 55.5 mm).

	diameter a	P.N.
Up to n° : **404 ZF** - 8 251 022	33.5 mm	2619.13
As from n° **404 ZF** - 8 251 023	36 mm	2619.15

- The two types of universal joint are interchangeable.



P.N. 2806.02

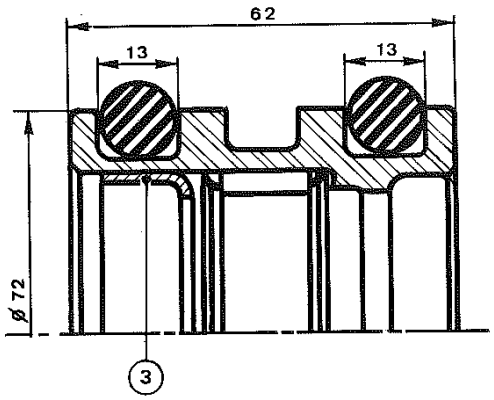
CENTRAL PROPELLER SHAFT BEARING

1: - 404 Saloons - Convertibles - Coupés

Up to n° :

404 : 4 135 627
404 J : 4 504 833

- For 31 mm diameter shaft.
- With Nadella 38.2 × 52 × 18 bearing retained by a cup **1** and spacer **2.**

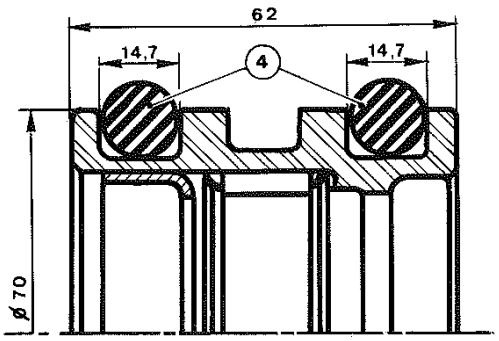


P.N. 2806.06

As from n° :

404 : 4 135 628
404 J . 4 504 834
404 KF
404 C and C.KF
404 D
404 ZF
404/8
} beginning of series

- For 37 mm diameter shaft.
- With 45 × 52 × 16 needle roller bearing retained by a cup **3** and a spacer.



P.N. 2806.07

II. - 404 Associated vehicles

404 L and LD
404 U6 and U6D
404 U8 and U8D
404 U10 and U10D
} beginning of series

- For 37 mm diameter shaft.
- Identical to that of the 404 Saloons except for the outer diameter and the rubber lining housings **4.**

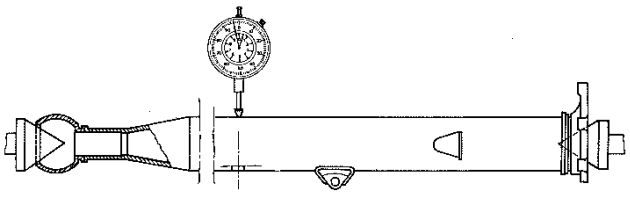
INTERCHANGEABILITY :

The central bearings of the three fittings are not interchangeable.

PROPELLER SHAFT

REMOVAL - REFITTING

4 0201



REMOVAL

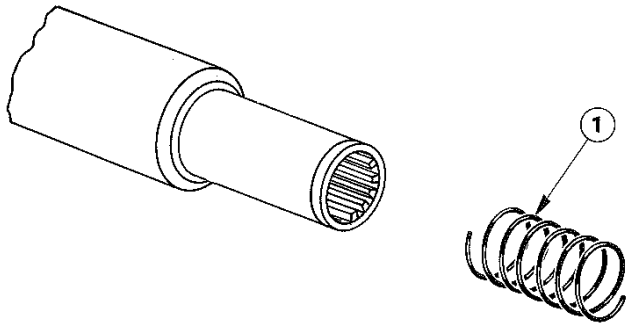
- Remove the torque tube and the propeller shaft by moving the rear axle backwards (see class 5, page 02 02).

Checking

- Place the torque tube or the propeller shaft between two points.
- Check the out of true with a dial indicator to the right of the tube grease nipple, and on the shaft central bearing housing.

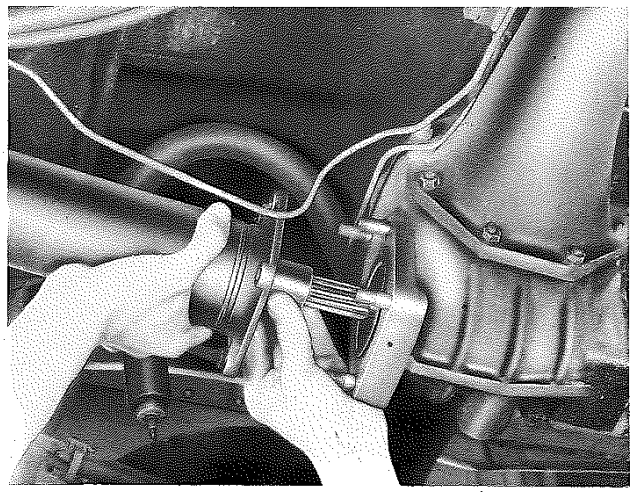
Maximum out of true :

- torque tube : **2 mm**
- propeller shaft : **0.2 mm**



REFITTING

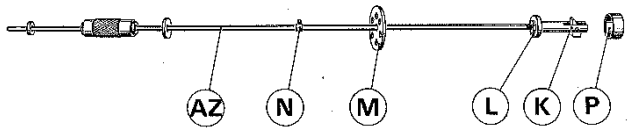
- Grease the splines and central bearing surface of the propeller shaft.
- Place the spring **1** in the rear part of the shaft and fit this to the worm gear or drive pinion of the rear axle.
- Coat the bearing face of the torque tube with Hermetite.
- Fit the tube to the rear axle.
- Tighten the bolts :
  - 10 mm diameter, to **25 ft.lbs (3.5 m.kg)**
  - 12 mm diameter, to **40 ft.lbs (5.5 m.kg)**
- Refit the triangle arms to the torque tube.
- Grease the thrust sphere.
- Assemble the two parts of the cover and the oil seal on the thrust sphere.
- Refit the rear axle in the reverse order of removal (see class 5, page 02 03)
- Grease the central bearing of the torque tube and the thrust sphere.



PEUGEOT

PROPELLER SHAFT

REMOVAL - REFITTING OF THE CENTRAL BEARING



TOOLS TO BE USED

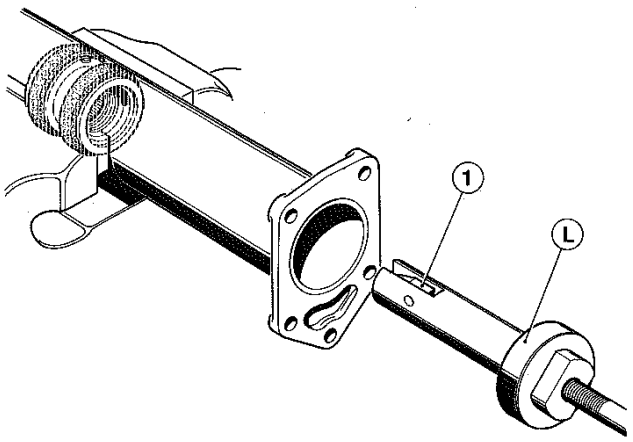
8.0403 U

- Apparatus for removal and refitting of the torque tube central bearing including :

AZ - Impact puller
K - Extractor in position
L - Refitting thrust plate
M - Plate
N - Sliding adjuster ring
P - Guide bush.

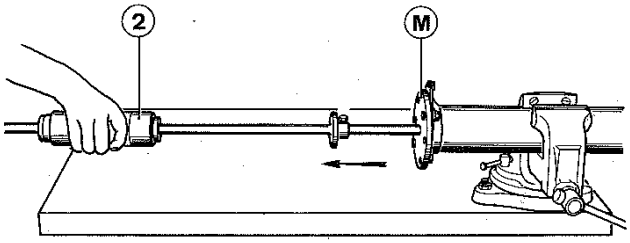
PROPELLER SHAFT

REMOVAL OF THE CENTRAL BEARING



- Clamp the torque tube in a vice.
- Remove the grease nipple.
- Insert the apparatus **8.0403 U** into the tube (holding it in such a way that the extractor 1 remains horizontal) until the thrust plate **L** is in contact with the bearing.
- Secure the plate **M** to the tube.
- Tap with the heavy «handle» to advance the bearing a few centimetres to release it.

N.B. *- This «releasing» operation is very important as, due to the small contact surface of the extractor on the bearing cage, there is a risk of breaking the cage whilst extracting it.*

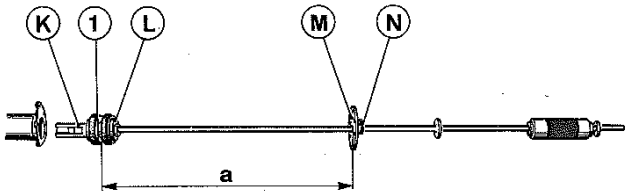


- Rotate the apparatus half a turn to bring the extractor into the vertical position.
- Withdraw the bearing using the «handle» 2 until the cage is in contact with the plate **M.**
- Remove the plate and withdraw the bearing.
- Clean, examine and replace any parts which are defective.

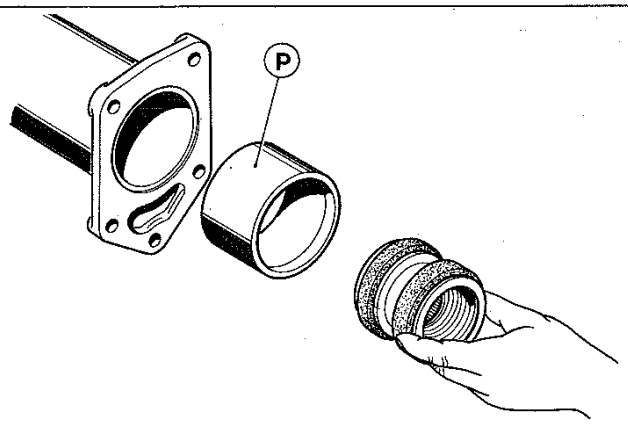
PROPELLER SHAFT

REFITTING THE CENTRAL BEARING

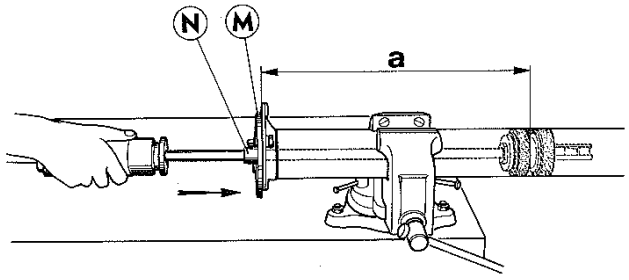
4 0303



- Clamp the torque tube in a vice.
- Prepare the apparatus **8.0403 U** :
  - Screw in the extractor **K** until the threaded rod is in contact with the thick part of the extractor arm thereby locking it.
- Tighten the thrust plate **L** firmly against the extractor.
- Place the bearing **1** on the extractor **K.**
- Measure the distance between the grease nipple and the securing flange on the torque tube.
- Find the same distance **a** between the lubrication groove on the bearing **1** and the thrust plate **M.**
- Bring the adjuster ring **N** against the plate **M** and tighten the locking screw.



- Grease the interior of the torque tube with engine oil.
- Immerse the bearing in engine oil and then insert the bearing into the tube using the guide bush **P** and, if necessary, a mallet.



- Engage the apparatus in the bearing.
- Secure the plate **M** to the torque tube.
- Tap the apparatus, using the «handle» until adjuster ring **N** is in contact with the plate **M.**
- Check, through the grease nipple hole that the bearing is in the correct position.
- Refit the grease nipple.

PEUGEOT

REAR AXLE

5

PEUGEOT

GEAR SETS
404 Saloons, Convertibles and Coupés
WORM AND WHEEL REAR AXLE

TYPES	Gear Set	Identification according to the Serial N° written on the part		Gear Set Part N°
		Worm	Crown wheel	
404 up to serial N° : 4 071 371 **404 J** up to serial N° : 4 502 735	5 × 21	841.006	841.003(1)	3242.24(1)
404 from N° : 4 071 372 to N° : 5 045 497 **404 J** from N° : 4 502 736 to N° : 4 529 909 **404 SL** up to serial N° : 4 414 913 **404 KF** up to serial N° : 4 551 335 **404 C** up to serial N° : 4 495 819 **404 C.KF** up to serial N° : 4 590 865	5 × 25	841.006	841.051(2)	3242.18
404 (TW) from N° : 5 045 498 to N° : 5 069 812 **404 (TH)** from N° : 5 100 001 to N° : 5 306 431 **404 SL** from N° : 4 414 914 to N° : 5 136 029 **404 J** from N° : 4 529 910 to end of series **404 J.SL** up to serial N° : 4 535 278 **404 KF** from N° : 4 551 336 to N° : 4 570 000 **404 D** up to serial N° : 4 605 178 **404 C** from N° : 4 495 820 to N° : 4 498 352 **404 C.KF** from N° : 4 590 866 to N° : 4 594 000 **All 404 DA's**	5 × 21(3)	841.074	841.078	3242.31
404 SL from N° : 5 136 030 to N° : 5 140 409 **404 J.SL** from N° : 4 535 279 to N° : 4 535 458 **404 KF** from N° : 4 570 001 to N° : 4 578 362 **404 D** from N° : 4 605 179 to N° : 4 608 776 **404 C** from N° : 4 498 353 to N° : 4 498 414 **404 C.KF** from N° : 4 594 001 to N° : 4 595 522	5 × 21	841.074	841.097(4)	3242.29
404 (TW) as from serial N° : 5 069 813 **404 (TH)** as from serial N° : 5 306 432 **404 SL** as from serial N° : 5 140 410 **404 J.SL** as from serial N° : 4 535 459 **404 KF** as from serial N° : 4 578 363 **404 ZF** as from serial N° : 8 250 001 **404 D** as from serial N° : 4 608 777 **404 C** as from serial N° : 4 498 415 **404 C.KF** as from serial N° : 4 595 523	5 × 21	841.074	841.097	3242.41(5)

1 - Wheel of 36 mm width bolts of 10 mm diameter (Our Spare Parts Department supply as a replacement part, a wheel of 39 mm width with bolts of 10 mm diameter).

2 - Wheel of 39 mm width with bolts of 11 mm diameter.

3 - Gear Set of 5 × 21 with a wide centre to centre distance (101.6 mm in place of 95.25 mm) with bolts of 12 mm diameter and of 62 mm long.

4 - Wheel of 43 mm width further to the installation of the differential as on Associated Vehicles.

5 - Gear Set with bolts of 12 mm diameter, 70 mm long in place of 62 mm, further to the installation of ribbed differential shells, 4 mm thicker.

REAR AXLE

IDENTIFICATION - CHARACTERISTICS

GEAR SETS
404 Associated Vehicles
WORM AND WHEEL REAR AXLE

TYPES	Gear Set	Identification according to the Serial N° written on the part.		Gear Set Part N° :
		Worm	Wheel	
404 L (TW) up to serial N° : 4 854 646 **404 L (TH)** up to serial N° : 4 857 892 **404 L Break** up to serial N° : 4 857 979 **404 U6** up to serial N° : 4 745 143 **404 U6A** up to serial N° : 1 924 027 **404 LD** up to serial N° : 4 980 000 **404 U6D** up to serial N° : 4 909 443	4 × 19	841.024	841.019	3242.28
404 L (TW) from N° 4 854 647 to N° 4 898 217 **404 L (TH)** from N° 4 857 893 **404 L Break** from N° 4 857 980 } to N° 4 879 370 **404 U6** from N° 4 745 144 to N° 4 761 054 **404 U6A(TW)** from N° 1 924 028 to N° 1 925 000 from N° 1 930 001 to N° 1 930 490 **404 U6A(TH)** from N° 1 925 001 to N° 1 927 784 **404 U6D** from N° 4 909 444 to N° 4 909 500	4 × 19	841.024	841.019	3242.42(1)
404 LD from N° 4 980 001 to N° 4 980 786	5 × 21(2)	841.074	841.097	3242.39
404 LD from N° 4 980 787 to N° 4 983 681 **404 U6D** from N° 4 909 501 to N° 4 914 068	5 × 21(2)	841.074	841.097	3242.41(1)

1 - Gear Set with bolts of 12 mm diameter, 70 mm length, in place of 62 mm, further to the installation of ribbed differential shells 4 mm thicker.
2 - Gear Set of 5 × 21 in place of 4 × 19 on Diesel Station Wagons and Family Saloons further to the installation of the XD 88 engine.

HYPOID REAR AXLE

TYPES	Gear Set	Identification according to the serial N° written on the part		Gear Set Part N° :
		Drive pinion	Crown wheel	
404 L (TW) as from serial N° : 4 898 401 **404 L (TH)** } as from serial N° : 4 879 401 **404 L Break** } **404 U6** as from serial N° : 4 761 301 **404 U6A(TW)** as from serial N° : 1 930 601 **404 U6A(TH)** as from serial N° : 1 927 901	8 × 37	841.107	841.209	3242.43
404 LD as from serial N° : 4 983 801 **404 U6D** as from serial N° : 4 914 201	9 × 38	841.147	841.147	3242.44
404 U8 as from serial N° : 7 010 001 **404 U8D** as from serial N° : 7 040 001 **404 U10** as from serial N° : 7 060 001 **404 U10D** as from serial N° : 7 080 001	8 × 39	841.255	841.254	3242.46

REAR AXLE

IDENTIFICATION - CHARACTERISTICS

SPEED IN 4 th GEAR PER 1.000 r.p.m.
WORM AND WHEEL AXLE

TYPES	Gear Set	Speedometer Drive Gear Set	Tyre Size	Speed per 1.000 r.p.m.
404 404 KF 404 C and KF 404 D	5 × 21	8 × 17 8 × 16(1) 10 × 21(2)	165 × 380	28.450
404 { Family Saloon / Break } 404 U6 404 U6A 404 LD 404 U6D	4 × 19	8 × 19 8 × 18(3)	165 × 380	25.200
404 LD 404 U6D	5 × 21(4)	8 × 17	165 × 380	28.450

1 - Speedometer drive gear set of 8 × 16 in place of 8 × 17 on convertibles manufactured between the following serial numbers :
404 C from N° : 4 495 013 to N° : 4 495 279
404 C.KF from N° : 4 590 001 to N° : 4 590 051

2 - Speedometer drive gear set of 10 × 21 on cars equipped with the BA 7 Gearbox.

3 - Speedometer drive gear set of 8 × 18 in place of 8 × 19 on cars equipped with tyres of 185 × 380.

4 - Gear Set of 5 × 21 in place of 4 × 19 and speedometer drive gear set of 8 × 17 in place of 8 × 19 further to the installation of the XD 88 Engine.

HYPOID REAR AXLE

TYPES	Gear Set	Speedometer Drive Gear Set	Tyre Size	Speed per 1.000 r.p.m.
404 L { Family Saloon / Break } 404 U6 404 U6A	8 × 37	8 × 18 10 × 23(5)	165 × 380	25.895
404 LD 404 U6D	9 × 38	8 × 17 10 × 21	165 × 380	28.410
404 U8 404 U8D 404 U10 404 U10D	8 × 39	10 × 23	17 × 380	25.800

5 - Speedometer drive gear set of 10 × 23 in place of 8 × 18 further to the installation of the BA 7 Gearbox.

6 - Speedometer drive gear set of 10 × 21 in place of 8 × 17 further to the installation of the BA 7 Gearbox.

PEUGEOT

REAR AXLE

IDENTIFICATION - CHARACTERISTICS

CAPACITY OF WORM AND WHEEL TYPE REAR AXLE

404 Saloons, Convertibles and Coupés

TYPE OF VEHICLE	TYPE OF REAR AXLE	CAPACITY
- 404 Saloons, Convertibles and Coupés with Carburettor and Fuel Injection Engine. Up to serial N° : **404** - 5 045 497 **404 J** - 4 529 909 **404 SL** - 4 414 913 **404 KF** - 4 551 335 **404 C** - 4 495 819 **404 C.KF** - 4 590 865	Worm and Wheel rear axle with closed housing in light alloy (without ribs) - with a centre to centre distance of 95.25 mm	2.45 Pints (1.400 l.) Esso Gear Oil V.T.
- 404 Saloons, Convertibles and Coupés **404 (TW)** from N° 5 045 498 to N° 5 069 812 **404 (TH)** from N° 5 100 001 to N° 5 306 431 **404 SL** from N° 4 414 914 to N° 5 136 029 **404 J** from N° 4 529 to end of series **404 J.SL** from N° 4 529 910 to N° 4 535 278 **404 KF** from N° 4 551 336 to N° 4 570 000 **404 C** from N° 4 495 820 to N° 4 498 352 **404 C.KF** from N° 4 590 866 to N° 4 594 000 **404 D** up to N° 4 605 178 **404 DA** up to N° 3 060 687 (end of series)	Worm and Wheel rear axle with closed housing in light alloy (without ribs) - with a wide centre to centre distance of 101.6 mm	3.12 Pints (1.700 l) Esso Gear Oil V.T.
- 404 Saloons, Convertibles and Coupés As from serial N° : **404 (TW)** - 5 069 813 **404 (TH)** - 5 306 432 **404 SL** - 5 136 030 **404 J.SL** - 4 535 279 **404 ZF** - 8 250 001 **404 KF** - 4 570 001 **404 C** - 4 498 353 **404 C.KF** - 4 594 001 **404 D** - 4 605 179	Worm and Wheel rear axle with ribbed, closed housing. - with a wide centre to centre distance of 101.6 mm - differential as on Associated Vehicles.	2.45 Pints (1.400 l.) Esso Gear Oil V.T.

CAPACITY OF THE WORM AND WHEEL TYPE AXLE

404 Associated Vehicles

I – WORM AND WHEEL TYPE AXLE

TYPE OF VEHICLE	TYPE OF REAR AXLE	CAPACITY
404 Family Saloons and Station Wagons Up to serial N° : **404 L** - 4 855 312 **404 L Break** - 4 855 131 **404 U6** - 4 742 040 **404 U6A** - 1 923 771 **404 LD** - 4 979 999 **404 U6D** - 4 909 026	Worm and Wheel rear axle with closed housing in light alloy (without ribs) - Gear Set 4 × 19	2.80 Pints (1.600 l.) Esso Gear Oil V.T.
404 Family Saloons and Station Wagons **404 L (TW)** from N° 4 854 055 to N° 4 898 217 **404 L (TH)** from N° 4 855 313 to N° 4 879 370 **404 L Break** from N° 4 855 132 to N° 4 879 370 **404 U6** from N° 4 742 041 to N° 4 761 054 **404 U6A(TW)** from N° 1 923 772 to N° 1 925 000 and from N° 1 930 001 to N° 1 930 490 **404 U6A(TH)** from N° 1 925 001 to N° 1 927 784 **404 U6D** from N° 4 909 027 to N° 4 909 500	Rear Axle with worm and wheel unit with closed, ribbed housing Gear Set 4 × 19	2.45 Pints (1.400 l.) Esso Gear Oil V.T.
404 Diesel Family Saloons and Station Wagons **404 LD** from N° 4 980 001 to N° 4 983 681 **404 U6D** from N° 4 909 501 to N° 4 914 068	Rear Axle with worm and wheel unit with closed, ribbed housing. Gear Set 5 × 21	2.45 Pints (1.400 l.) Esso Gear Oil V.T.

HYPOID REAR AXLE

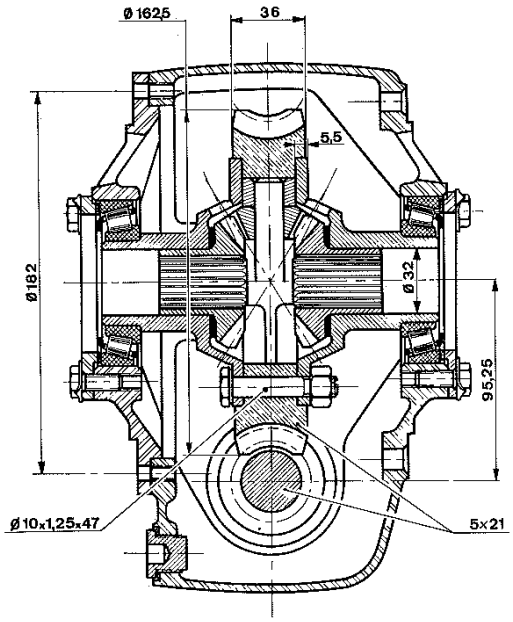
TYPE OF VEHICLE	TYPE OF REAR AXLE	CAPACITY
404 Petrol Engine Family Saloons and Station Wagons As from serial N° : **404 L(TW)** - 4 898 401 **404 L(TH)** } - 4 879 401 **404 L Break** } **404 U6** - 4 761 301 **404 U6A(TW)** - 1 930 601 **404 U6A(TH)** - 1 927 901	Hypoid Rear Axle Gear Set 8 × 37	2.45 Pints (1.400 l.) Esso Gear Oil G.P. 90
404 Diesel Engine Family Saloons and Station Wagons As from Serial N° : **404 LD** - 4 983 801 **404 U6D** - 4 914 201	Hypoid Rear Axle Gear Set 9 × 38	2.45 Pints (1.400 l.) Esso Gear Oil G.P. 90
404 Diesel and Petrol Engine Light Lorries and Cab Platforms. As from serial N° : **404 U8** - 7 010 001 **404 U8D** - 7 040 001 **404 U10** - 7 060 001 **404 U10D** - 7 080 001	Hypoid Rear Axle Gear Set 8 × 39	2.45 Pints (1.400 l.) Esso Gear Oil G.P. 90

REAR AXLE

IDENTIFICATION - CHARACTERISTICS

REAR AXLE HOUSINGS ASSEMBLY - 95.25 mm CENTRE TO CENTRE DISTANCE

404 Saloons, Convertibles and Coupés



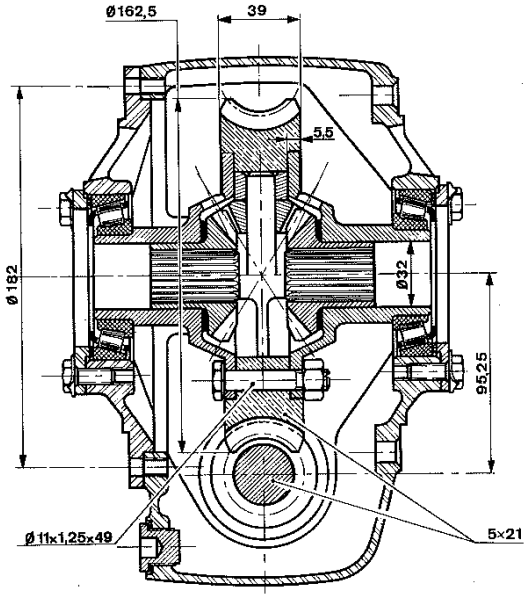
Up to serial N° :

404 - 4 071 371
404 J - 4 502 735

- Housing and cover with drilling holes for the rear axle right hand tube securing studs, of 182 mm diameter.
- Gear Set 5 × 21 with 95.25 mm centre to centre distance with :
  - Wheel of 162.5 mm diameter and 36 mm in width
  - Bolts of 10 × 125 × 47
- Differential as that fitted on the 403 Saloons.
  - shells drilled with 10.25 diameter holes.

***NOTE** - This housing assembly is no longer supplied by the Spare Parts Depatment.*

The Spare Parts Department deliver for this type of rear axle a wheel (39 mm in width) equipped with assembling bolts of 10 mm diameter.



404 from N° 4 071 373 to N° 5 045 497
404 J from N° 4 502 736 to N° 4 529 909
404 SL up to Serial N° 4 414 913

Up to Serial N° :

404 KF - 4 551 335
404 C - 4 495 819
404 C.KF - 4 590 865
404/8 - 6 900 001 beginning of series.

Similar to the former model but with :
- Wheel of 39 mm width
- Bolts of 11 × 125 × 49

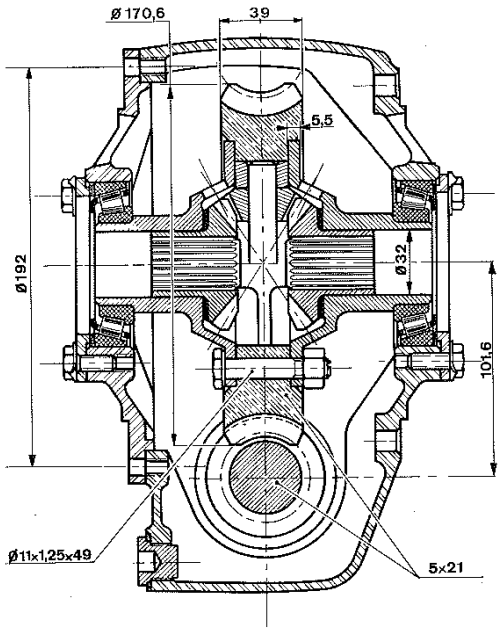
404/8 : Bolts of 11 × 125 × 52 unlocked.
- differential shells drilled, with 11.25 mm diameter holes.

INTERCHANGEABILITY

- This housing assembly can be installed to replace the one of the first fitting.
  Consequently the housing assembly part number has not been altered.
- However the wheels, differential shells, and assembly bolts of both fittings, are not separately interchangeable.

REAR AXLE HOUSING ASSEMBLY - 101.6 mm CENTRE TO CENTRE DISTANCE

404 Saloons, Convertibles and Coupés

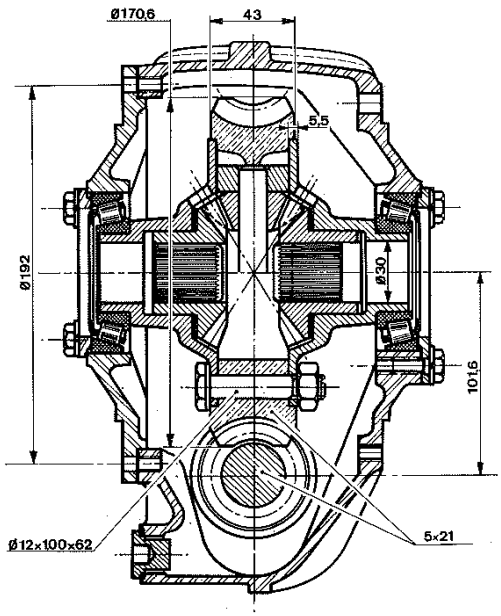


404 (TW)	from N° 5 045 498 to N° 5 069 812
404 (TH)	from N° 5 100 001 to N° 5 306 431
404 SL	from N° 4 414 914 to N° 5 136 029
404 J	from N° 4 529 910 to end of series
404 J.SL	from N° 4 529 910 to N° 4 535 278
404 KF	from N° 4 551 336 to N° 4 570 000
404 C	from N° 4 495 820 to N° 4 498 352
404 C.KF	from N° 4 590 866 to N° 4 594 000
404 D	up to Serial N° 4 605 178
404 DA	up to Serial N° 3 060 687 (end of serie

- Housing and cover with rear axle right hand tube stud drilling diameter of 192 mm.
- Gear Set 5 × 21, wide centre to centre distance (101.6 mm) with a wheel of 170.6 mm diameter and 39 mm width.
- Bolts of 11 × 125 × 49
- 403 Saloons differential.

INTERCHANGEABILITY

This housing assembly may be fitted to replace the former housing on condition that the rear axle right hand tube and torque tube are replaced.



404 SL	from N° 5 136 030	to N° 5 140 409
404 USA	from N° 5 133 860	
404 J.SL	from N° 4 535 279	to N° 4 535 458
404 KF	from N° 4 570 001	to N° 4 578 362
404 D	from N° 4 605 179	to N° 4 608 776
404 C	from N° 4 498 353	to N° 4 498 414
404 C.KF	from N° 4 594 001	to N° 4 595 522

- Ribbed cover and housing
- Gear Set 5 × 21 wide centre to centre distance (101.6 mm) with a wheel of 170.6 mm diameter and 43 mm width.
- Bolts of 12 × 100 × 62
- Complete differential of the 404 Associated Vehicles necessitating the fitting of axle shafts of a greater diameter.

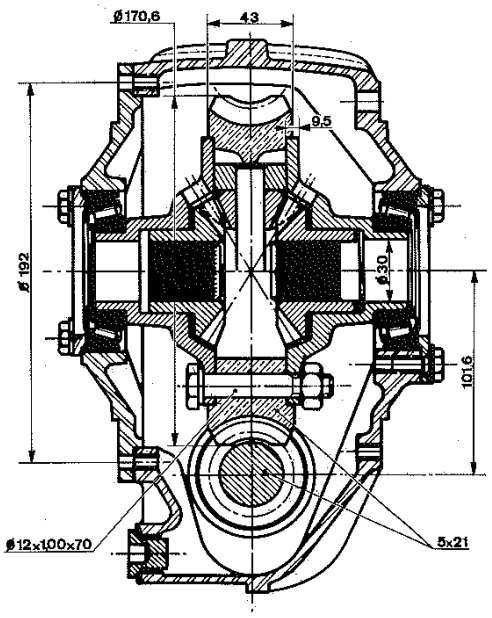
***NOTE** - This housing is common to that fitted on the 404 Diesel Engine Family Saloons included within the following serial numbers :*
***404 LD** from N° 4 980 001 to N° 4 980 786*

INTERCHANGEABILITY

This housing assembly may be fitted on vehicles equipped with a rear axle having a wide centre to centre distance providing the axle shafts are replaced.

REAR AXLE

IDENTIFICATION - CHARACTERISTICS



As from Serial Numbers :

404 (TW)	- 5 069 813
404 (TH)	- 5 306 432
404 SL	- 5 140 410
404 J.SL	- 4 535 459
404 ZF	- 8 250 001
404 KF	- 4 578 363
404 D	- 4 608 777
404 C	- 4 498 415
404 C.KF	- 4 595 523

Identical to the former model but with :

- differential shells 4 mm thicker
- unlocked differential bolts : diameter 12 and a length of 70 mm in place of 62 mm.

NOTE - *This housing assembly is identical to that fitted on the 404 Diesel Engine Family Saloons and Station Wagons included between the following Serial Numbers :*

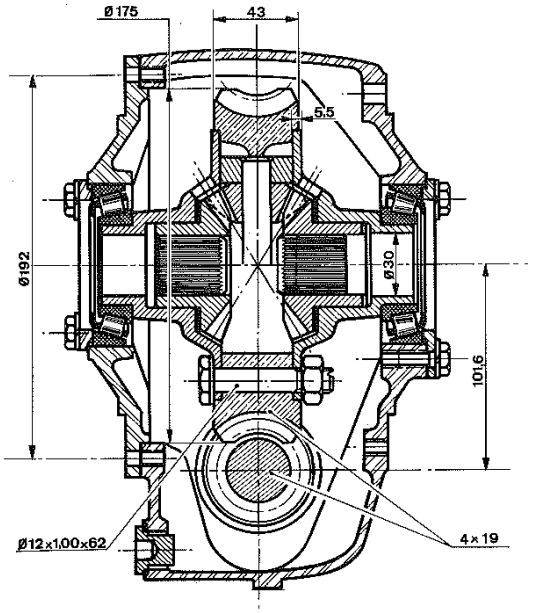
404 LD	from N° 4 980 787 to N° 4 983 681
404 U6D	from N° 4 909 501 to N° 4 914 068

INTERCHANGEABILITY.

- The housing assembly is interchangeable under the same conditions as for the former housing.
- The differential shells and the assembling bolts are not separately interchangeable.

REAR AXLE HOUSING ASSEMBLY - 101.6 mm CENTRE TO CENTRE DISTANCE

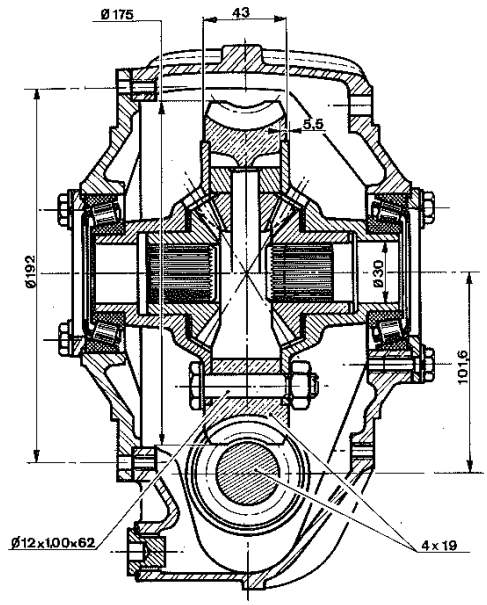
404 Associated Vehicles with Gear Set 4 × 19



Up to Serial Numbers :

404 L	- 4 855 312
404 LD	- 4 980 000
404 U6	- 4 742 040
404 U6D	- 4 909 026
404 U6A	- 1 923 771

- Unribbed housing and cover.
- Gear Set 4 × 19 with 101.6 mm centre to centre distance with :
  - wheel of 175 diameter and 43 mm width.
  - worm of 252.5 mm length.
  - bolts of 12 × 100 × 62.
- Complete differential common to that fitted on the 403 Associated Vehicles with closed housing.



404 L (TW)	from N° 4 854 055 to N° 4 854 646
404 L (TH)	from N° 4 855 313 to N° 4 857 892
404 L Break	up to Serial N° 4 857 979
404 U6	from N° 4 742 041 to N° 4 745 143
404 U6A	from N° 1 923 772 to N° 1 924 027
404 U6D	from N° 4 909 027 to N° 4 909 443

- Identical to the former model but with ribbed cover and housing.

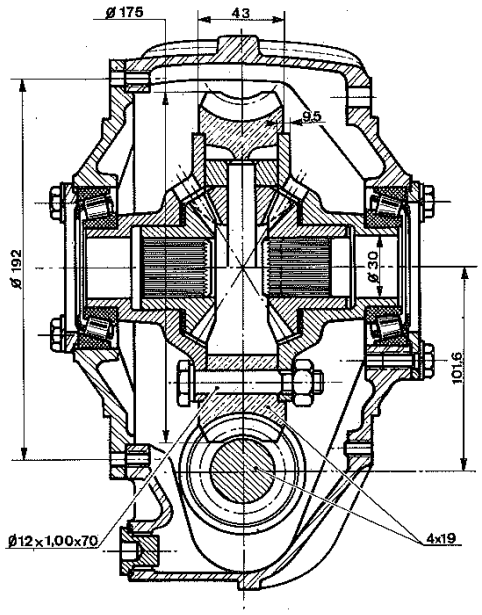
INTERCHANGEABILITY

The ribbed housing and cover may be fitted on all PEUGEOT models equipped with a differential with wide centre to centre distance of 101.6 mm.

PEUGEOT

REAR AXLE

IDENTIFICATION - CHARACTERISTICS



404 L (TW)	from N° 4 854 647	to N° 4 855 000
	from N° 4 895 001	to N° 4 898 217
404 L (TH)	from N° 4 857 893	to N° 4 879 370
404 L Break	from N° 4 857 980	to N° 4 879 370
404 U6	from N° 4 745 144	to N° 4 761 054
404 U6A (TW)	from N° 1 924 028	to N° 1 925 000
	from N° 1 930 001	to N° 1 930 490
404 U6A (TH)	from N° 1 925 001	to N° 1 927 784
404 U6D	from N° 4 909 444	to N° 4 909 500

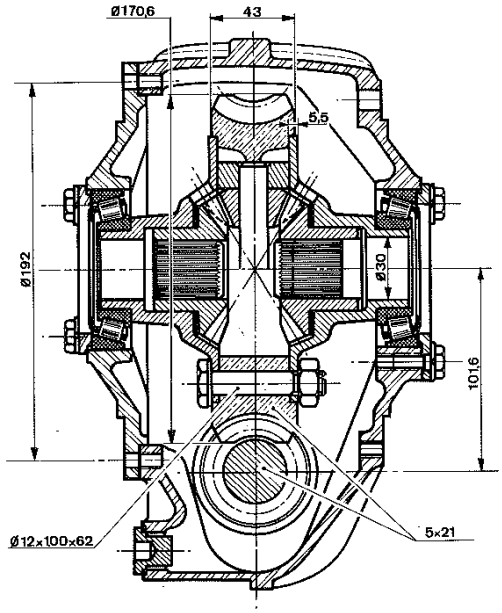
- Identical to the former model but with :
  - differential shells 4 mm thicker.
  - unlocked differential bolts 12 mm in diameter and 70 mm long, in place of 62 mm.

INTERCHANGEABILITY

This housing assembly, incorporating thicker differential shells, may be fitted on 404 Associated Vehicles of all types equipped with a gear set of 4 × 19.

REAR AXLE HOUSING ASSEMBLY - 101.6 mm CENTRE TO CENTRE DISTANCE

404 Associated Vehicles with Gear Set of 5 × 21



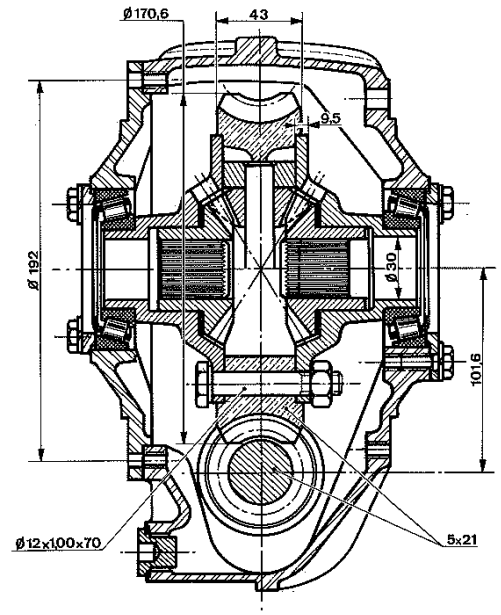
404 LD from N° 4 980 001 to N° 4 980 786

- Ribbed housing and cover.
- Gear Set of 5 × 21, wide centre to centre distance, (101.6 mm) with :
  - Wheel of 170.6 mm diameter and 43 mm width
  - Worm of 244.5 mm length necessitating the fitting of a propellor shaft 1 876 mm long, in place of 1 868 mm.
  - bolts of 12 × 100 and 62 mm long.
  - Complete differential common to that fitted on the 402 Associated Vehicles with closed housing.

***NOTE** - This housing assembly is common to that of the **404; 404 SL; 404 D; 404 C;** (see class 5 page 01 07)*

INTERCHANGEABILITY

It is not advisable to fit the gear set equipping the **404 LD** fitted with an XD 88 engine, on the 404 Associated Vehicles fitted with an XD 85 engine in view of the low starting torque which would result from such a fitting.



404 LD from N° 4 980 787 to N° 4 983 681
404 U6D from N° 4 909 501 to N° 4 914 068

Identical to the former model but with :

- differential shells 4 mm thicker
- unlocked differential bolts of 12 × 100 and 70 mm long in place of 62 mm.

***NOTE** - This housing assembly is common to that fitted on the **404 Saloons** and **404 C**.*

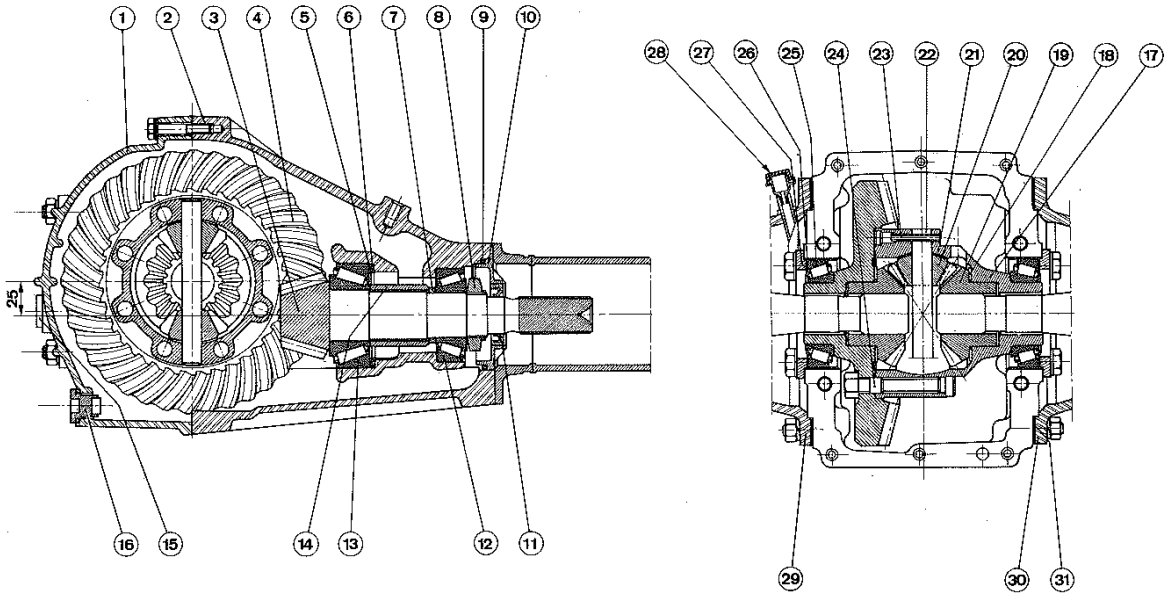
INTERCHANGEABILITY

This housing assembly may be fitted to replace the former model but cannot be installed on **404 LD** and **404 U6D** models equipped with an XD 85 engine.

PEUGEOT

HYPOID REAR AXLE

IDENTIFICATION - CHARACTERISTICS



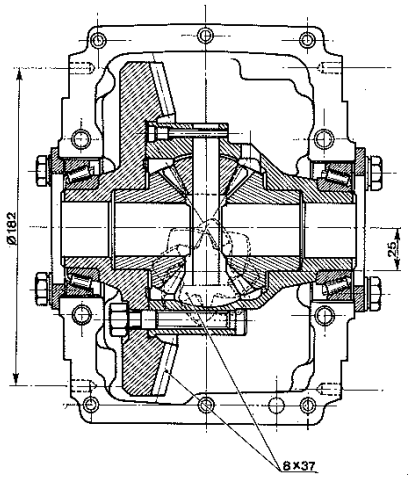
1 and 2 - Rear Axle Cover and housing
3 and 4 - Gearset (drive pinion and crown wheel)
5 - Meshing distance adjusting shims 62 mm diameter - thickness 75.8 mm and from 0.05 mm to 0.5 mm increments
6 - Drive pinion, rear bearing thrust washer, thickness 1.5 ± 0.05 mm
7 - Washers for the drive pinion bearings pre-load setting, thickness from 3/100 ths to 3/100 ths and from 6.04 to 7.33 mm
8 - Tightening nut
9 - «0» Seal ring
10 - Seal ring support
11 - Seal ring of 28 × 45 × 8 mm
12 - Pinion front bearing
13 - Pinion rear bearing
14 - Spacer
15 - Filler plug
16 - Drain plug
17 - Differential case
18 - Sun gear friction washer (dimpled)
19 - Sun gear 16 teeth
20 - Planet pinion 10 teeth
21 - Planet pinion friction washer
22 - Planet shaft
23 - «Mecanindus» pin diameter 5 × 35 mm
24 - Differential bolt, diameter 11 mm, 72 mm long with nut
25 - Differential bearings
26 - Differential adjusting shims diameter 67 × 77.6 mm thickness from 0.05 to 1 mm.
27 - Differential bearing thrust plate
28 - Pressure relief hole protection
29 - Rear Axle left tube { 404 Associated Vehicles with TH brakes / 404 Associated Vehicles with Twinplex brakes
30 - Rear Axle right tube
31 - Rear Axle tube gaskets (Left hand side and right hand side).

REAR AXLE

IDENTIFICATION - CHARACTERISTICS

REAR AXLE ASSEMBLIES - 25 mm CENTRE TO CENTRE DISTANCE

404 Associated Vehicles with hypoid rear axle

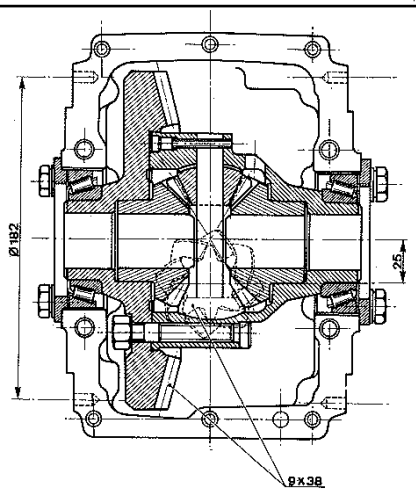


Petrol Engine Family Saloons and Station Wagons

As from Serial numbers :

404 L (TW) - 4 898 401
404 L (TH) - 4 879 401
404 L Break - 4 879 401
404 U6 - 4 761 301
404 U6A (TW) - 1 930 601
404 U6A (TH) - 1 927 901

Gear Set 8 × 37

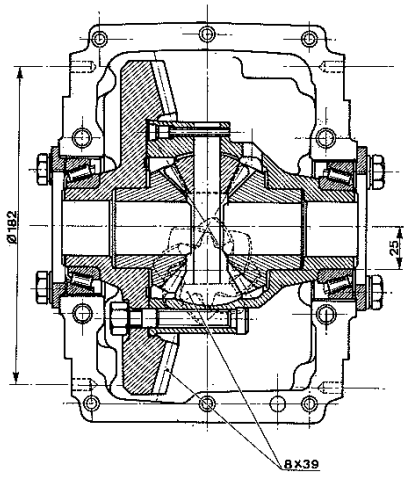


Diesel Engine Family Saloons and Station Wagons

As from Serial numbers :

404 LD - 4 983 801
404 U6D - 4 914 201

Gear Set 9 × 38

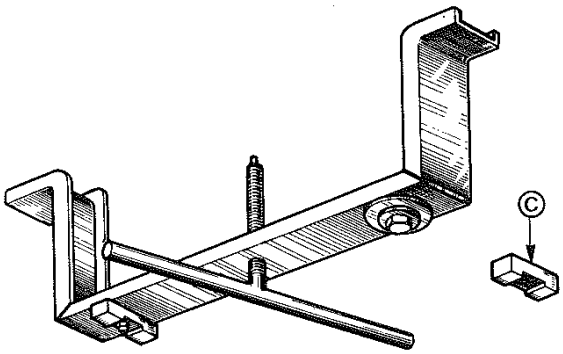


Petrol and Diesel Engines Light Lorries and Cab platforms

As from Serial numbers :

404 U8 - 7 010 001
404 U8D - 7 040 001
404 U10 - 7 060 001
404 U10D - 7 080 001

Gear Set 8 × 39

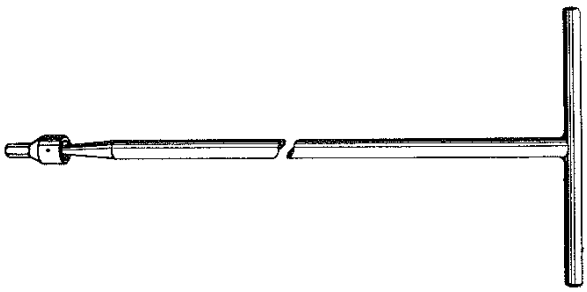


TOOLS TO BE USED

8.0103 Z

Engine/Gearbox support base.

C - Block for backing under the housing.



8.0406

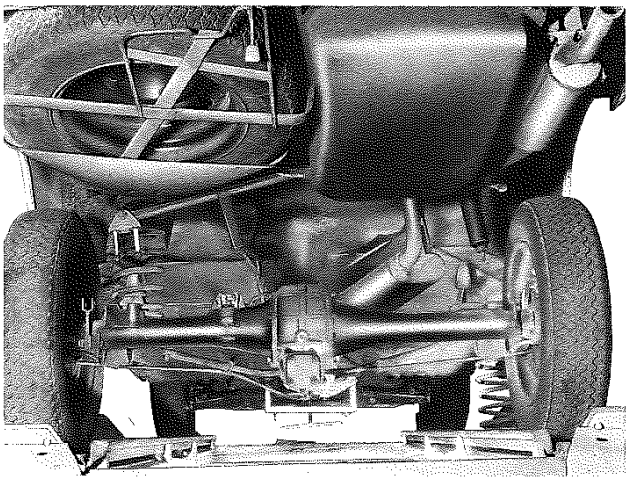
Torque tube, ball joint nut spanner

8.0801

Brake shoe adjusting spanner

REAR AXLE

REMOVAL and REFITTING



REMOVAL

- Separate the following from the rear axle :
  - the shock absorbers
  - the stabilizing rod from the rear axle left hand tube

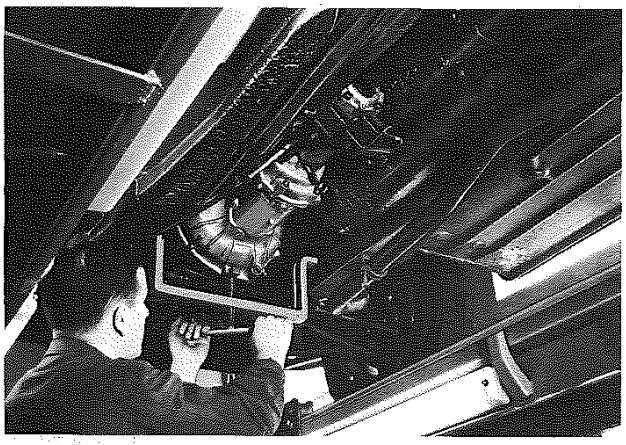
404 Thermostable Brakes

- Remove the compensator spring from the stabilizing rod

IMPORTANT

The nut securing the nipple to the spring rod must never be slackened in order not to alter the spring tension.

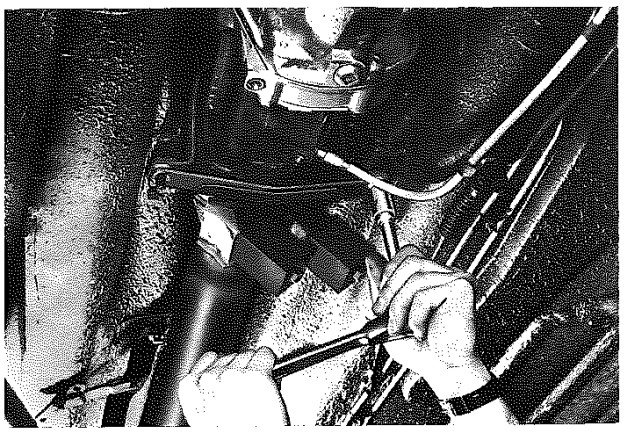
- Separate the rear anti-roll bar from the connecting links (as from the 1967 models)
- Disconnect :
  - the hand brake cables from the floor
  - the flexible hose (plug the end of the brake line, master cylinder side)
  - Disconnect the rear brake control lever, the rear brake cables, the control cable and disengage the lever towards the rear
- Raise the body from the rear in order to remove the helical springs.



- Remove

  - the exhaust pipe to manifold clamp securing nuts.
  - the collar bolt on the gearbox rear housing

Position the engine support base **8.0103 Z** with block **C** backing against the clutch housing.



- Unscrew

  - the engine upper rear support securing screw
  - the two lower nuts

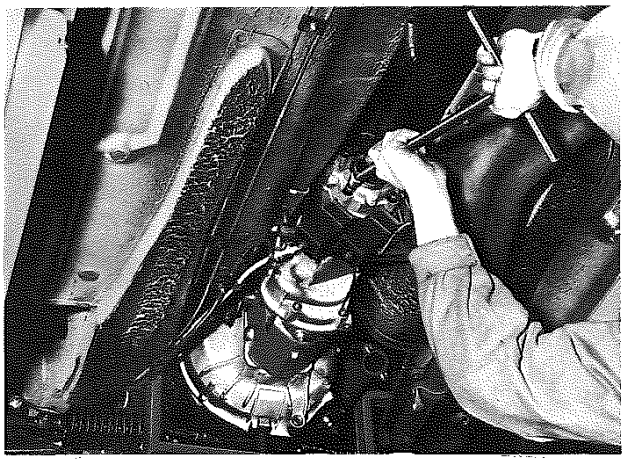
- Disengage the engine rear support by progressively unscrewing the support base screw, to lower the rear of the gearbox by about 45mm.

IMPORTANT

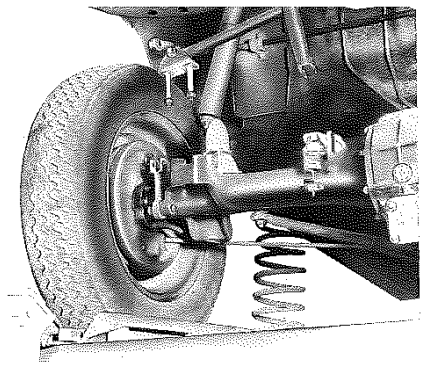
Ensure that the lower sump does not rest against the steering gear housing.

REAR AXLE

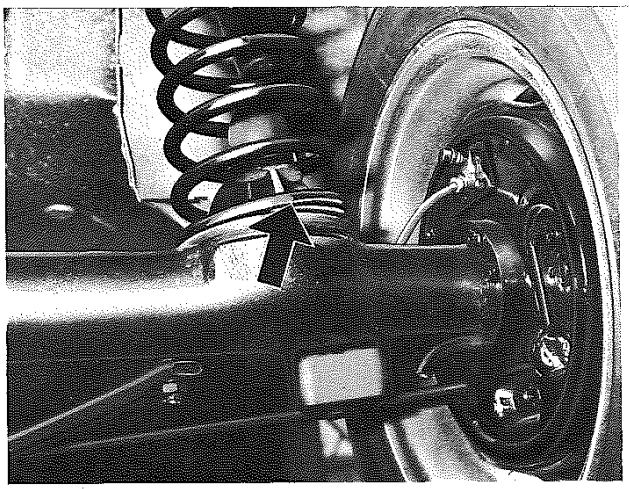
REMOVAL and REFITTING



- Remove the 4 assembling screws of the torque tube ball joint cover using spanner **8.0406**



- Holding the torque tube end pull the rear axle rearwards and recover the engine rear support
- Raise the rear of the body enough to allow for removal of the rear axle and the wheel assembly
- Disengage the rear axle.



REFITTING

Refitting is a reversal of the removal procedure
- Bleed and adjust the brakes
- Ensure that the piping system has no leaks
- Fill the rear axle using Esso Gear Oil V.T.
  - Capacity (see class 5, page 01 04 and 01 05)
  - drain at 600 miles (1.000 km) and then at the regular service intervals.

Particular Precautions

- The rear engine support should be free from grease, oil and paint, the presence of which would affect its service life.
- Never use trichlorethylene to clean it
- When refitting coat each side with «Hermetite»
- When installing the helical springs the end of the bottom coil should be facing the rear.
- Replace the Nylstop nuts securing the rear shock absorbers.

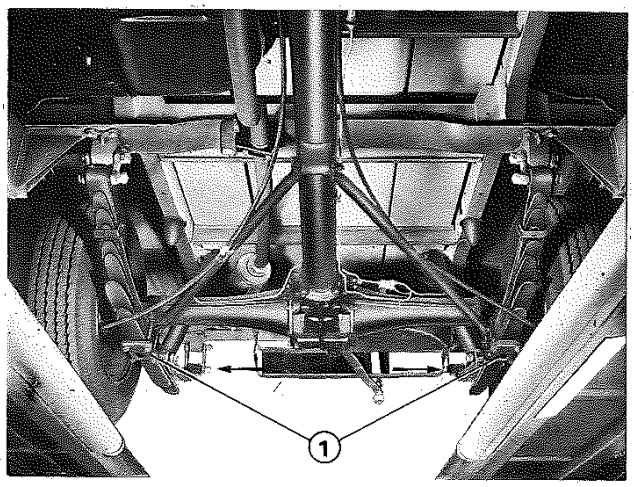
***NOTE** - Wheel nuts tightening torque :*

43 ft.lbs (6 m.kg) for the Saloon Cars
58 ft.lbs (8 m.kg) for Associated Vehicles.

PEUGEOT

REAR AXLE

REMOVAL and REFITTING

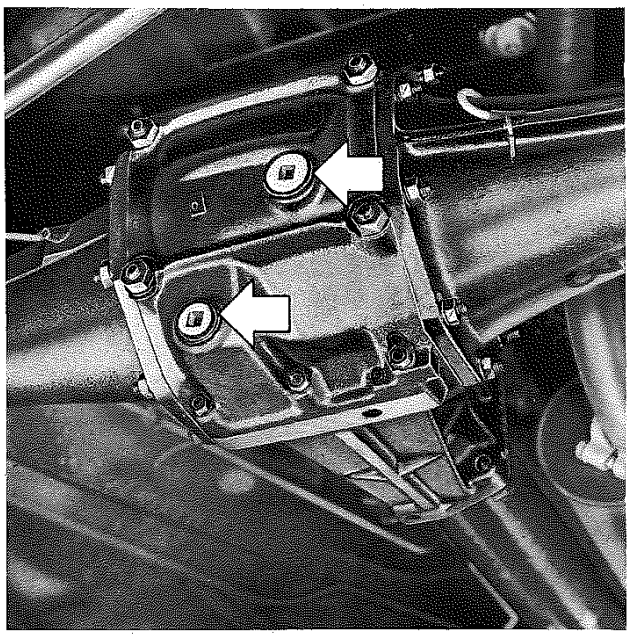


404 Light Lorries

Particularities

- Hold the body using a hoist chain
- Remove the spring clamps **1**
- Slacken the front shackle bolts
- Remove the rear shackle lower bolts

Refitting is a reversal of the removal procedure.



HYPOID AXLE

- Fill using Esso Gear Oil GP 90
- Capacity : (see page 01 05)
- Drain :
  at 600 miles (1.000 km) and then at the regular service intervals.

Brake - pads Front

Head Light Lens

Padel pad.

Rad. Cap

Tyming Gear oil seal.

Plan of accident

BMW 1979

320

CHas No: WBA 31620004295795

Eng No 4295795

TOWAGE — ASK DRIVER TO TOW DIRECT TO
EAST IVANHOE MOTOR CARS

LOAN CARS AVAILABLE.

If you have an accident, here's what you do...

If anyone is injured ring:

POLICE — Contact local police listed in State Government section or 662 0911.

AMBULANCE — 662 2533

If no one is injured:

* It is not necessary to call police.
* Exchange name(s) and/or registered owner(s) name(s) and address(s) with other driver(s).
* Remove cars from roadway as quickly as possible .
* Notify Police ONLY if you damage property, or a parked car, and the owner is not present.
* For your insurance claim, note location and time of accident, positions of cars and weather conditions.
* DON'T admit liability, or make any statement without prior legal counsel.
* If your vehicle is driveable, check steering, brakes & water before driving away.

Accident Details.

OTHER DRIVER/OWNER .....

ADDRESS .....

.....

LICENSE NO. ..... REG. NO. .....

WITNESS'S NAME .....

ADDRESS .....

.....

ACCIDENT LOCATION .....

.....

.....

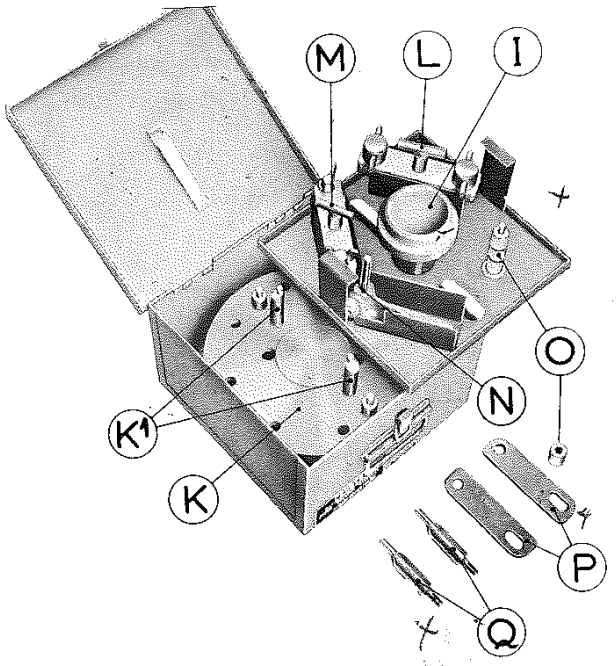
TIME .....

WEATHER .....

Draw plan of accident overleaf.

WORM AND WHEEL REAR AXLE

DISMANTLING-RE-ASSEMBLY AND ADJUSTMENTS



TOOLS TO BE USED

8.0505 Z

Tools kit, closed housing type rear axle

I - Bearing outer race installing drift

K - Base, Crown wheel position adjusting, equipped with **K1** adjusting feelers

K1 - Adjusting feelers

L - Base locking clamp

M - Bearing backing clamp

N - Depth gauge

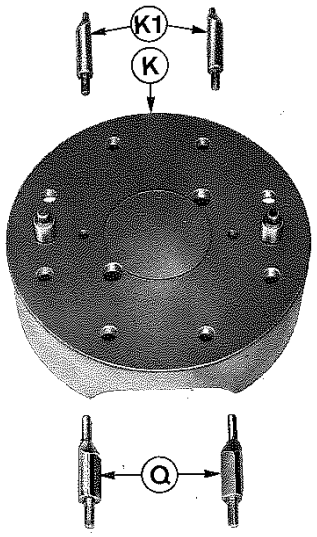
O - Spacers (4)

P - Front stop holding plates (2)

Q - Adjusting shims

RECOMMENDED TOOLS

Description	Make
Puller	Facom U 53



USE OF THE BASE AND ADJUSTING PINS

REAR AXLE 95.25 centre to centre distance
Gear Set 5 × 21

REAR AXLE 101.6 centre to centre distance
Gear Set 5 × 21 and 4 × 19
Smooth housing
Crown wheel of 36 mm in width
Crown wheel of 39 mm in width

Use :
- base **8.0505 K**
- adjusting feelers **K1**

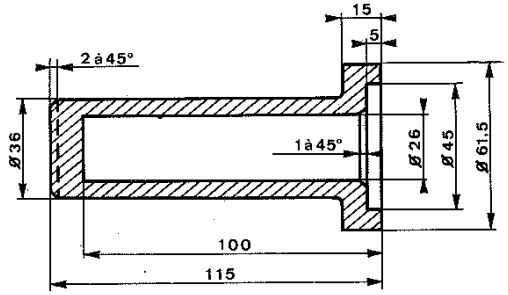
REAR AXLE 101.6 centre to centre distance
Gear Set 5 × 21 and 4 × 19
Smooth housing
Ribbed housing
Crown wheel of 43 mm width

Use :
- base **8.0505 K**
- adjusting pins **Q.**

PEUGEOT

WORM AND WHEEL REAR AXLE

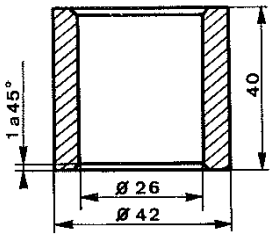
DISMANTLING-RE-ASSEMBLY AND ADJUSTMENT



These tools will have to be made in the workshop

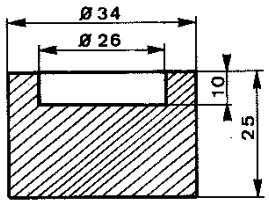
0.0504 A

Rear Axle worm removing tool



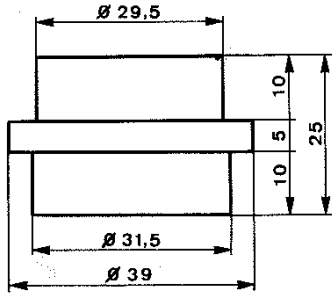
0.0504 B

Rear Axle worm bearing installing bush



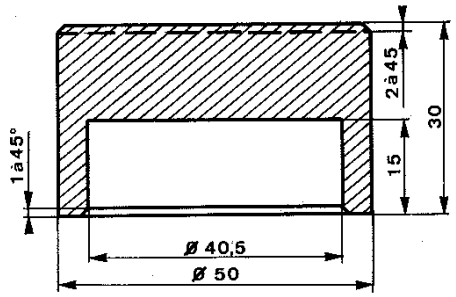
0.0504 C

Worm rear bearing installing drift (in rear axle)



0.0504 D

End pad for installing the differential bearings

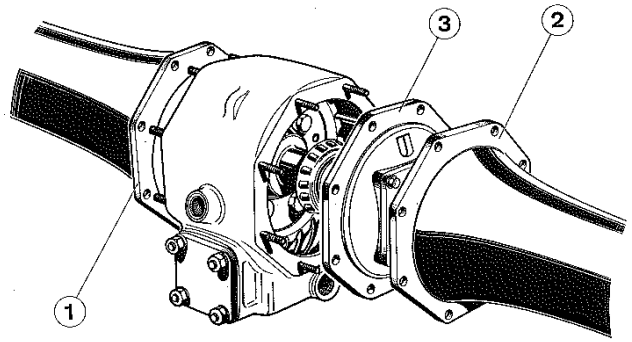


0.0504 E

Drift for installing the differential bearings.

WORM AND WHEEL REAR AXLE

DISMANTLING

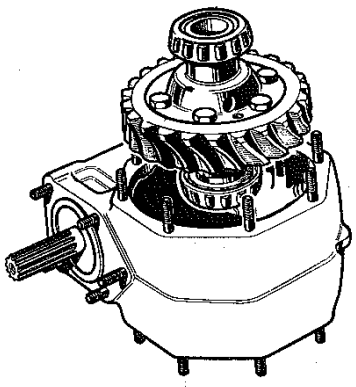


PRELIMINARY OPERATIONS

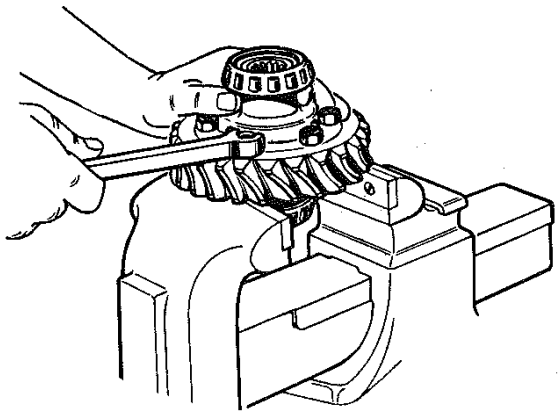
- Drain the rear axle
- Clean the rear axle assembly
- Remove :
  - the torque tube
  - the propeller shaft
  - the rear axle shafts (see class 5, page 05 03)
  - the brake plates

DISMANTLING

- To remove the rear axle left hand tube 1 pull it out whilst tapping gently with a mallet
- Remove the right hand tube 2 using the same procedure
- Remove the rear axle cover 3



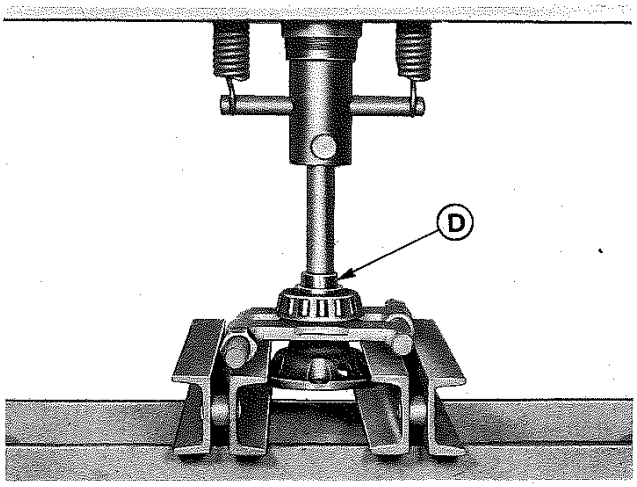
- Place the housing on its left face and remove the differential
- Remove the bearing holding plates as well as the adjusting shims from the housing and the cover.



- Slacken the nuts and pull the differential apart.

WORM AND WHEEL REAR AXLE

DISMANTLING

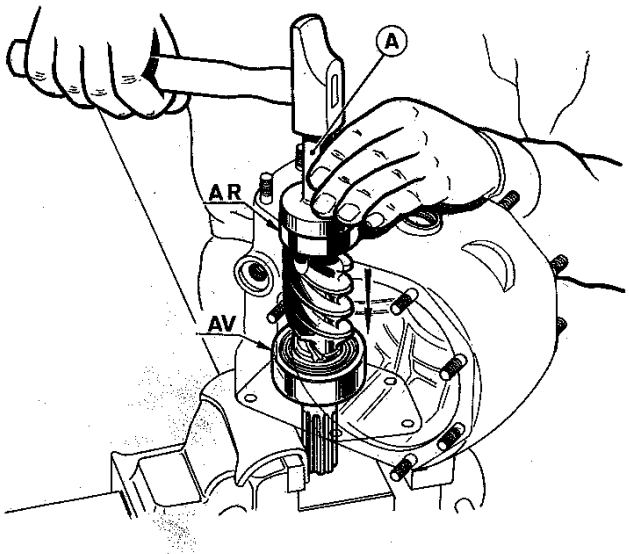


- Remove the differential bearings from the shells using either :
  - an end pad **0.0504 D**
  - a universal puller

or :

  - an end pad **D**
  - a puller (Facom U 53)
  - a press

NOTE *- Ensure that pressure is only exerted on the bearing inner races.*



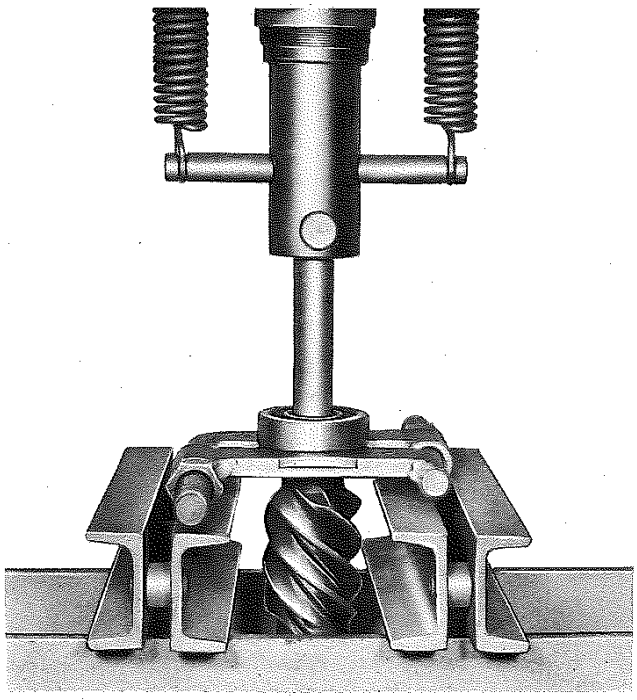
- Remove
  - the front safety device of the worm (front thrust and «AD» seal)
  - the worm rear plug

- Remove the rear axle worm according to the following procedure :
  - **Dip the housing and the cover in boiling water**
  - When adequately heated hold the housing in a vice fitted with lead jaws and sufficiently open to allow for removal of the worm front bearing
  - Tap on the worm rear end using drift **0.0504 A**
  - Remove the worm and its bearing

- Using drift **1**, remove the differential bearing outer races from the housing and from the cover after having marked their position if the bearings are already installed.

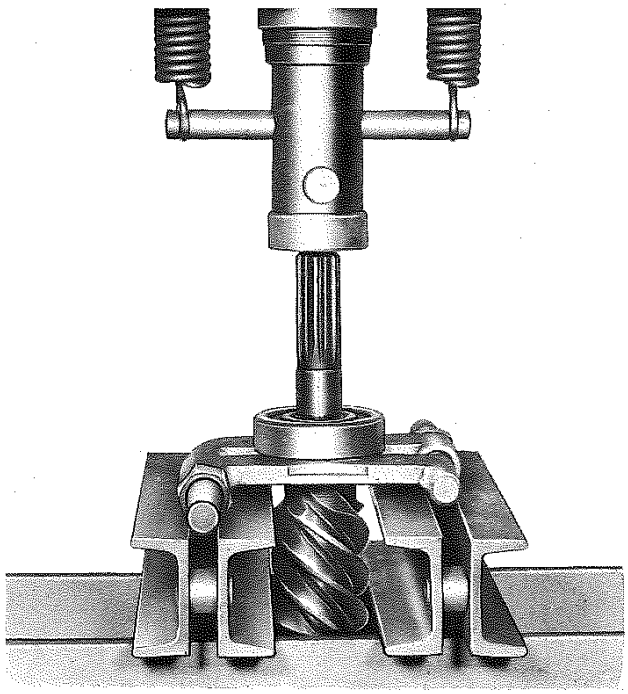
WORM AND WHEEL REAR AXLE

DISMANTLING



- Remove the worm rear bearing by exerting pressure on the bearing inner race

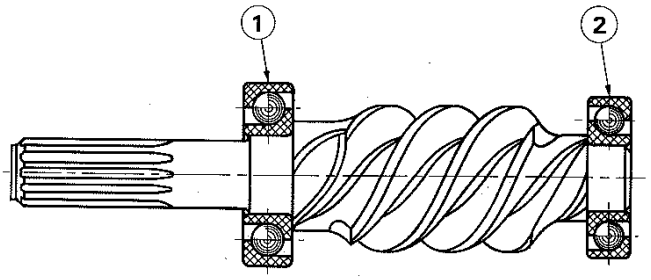
- Use :
  - puller (Facom U 53)
  - a press



Use the same procedure to remove the front bearing.

WORM AND WHEEL REAR AXLE

RE-ASSEMBLY - ADJUSTMENT

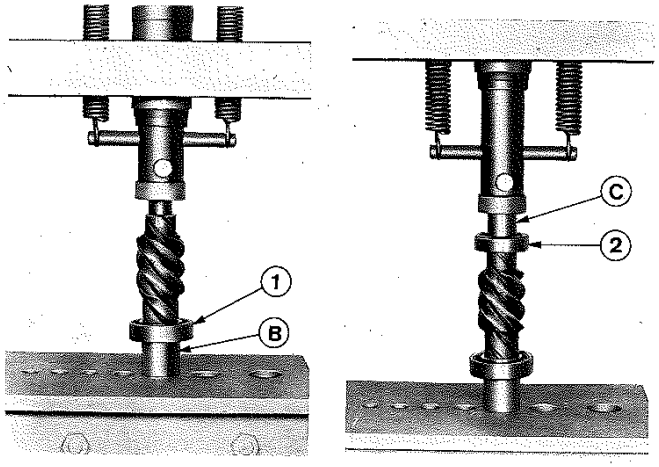


PRELIMINARY CONDITIONS

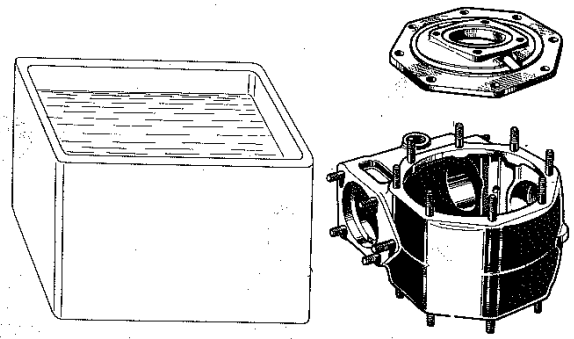
All parts should be perfectly clean and dry

Preparation of the worm

- Coat the worm bearing surface with Molykote
- At the front; fit roller bearing **1** 30 × 72 × 19 observing the correct direction of fitment (refer to the drawing opposite)
- At the rear, fit roller bearing **2** 25 × 62 × 17 observing the correct direction of fitment.



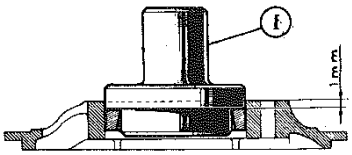
***NOTE** - These operations should be carried out using the press and as a last resort the bearings can be removed by tapping on them. Whatever the removal method adopted pressure should only be applied on the inner race through the intermediary of tube **0.0504 B** for the front bearing 1 and drift **0.0504 C** for the rear bearing 2.*



- Dip the housing and the cover in boiling water until the temperature reaches 90° C approximately.

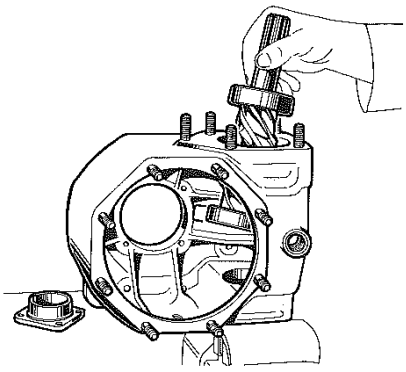
WORM AND WHEEL REAR AXLE

RE-ASSEMBLY - ADJUSTMENT

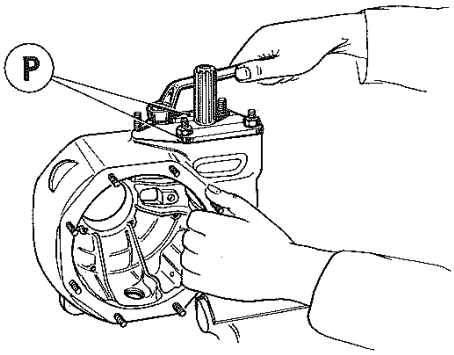


- Fit the differential bearing outer races in the housing and the cover at 1 mm from the outer face using drift **1**.

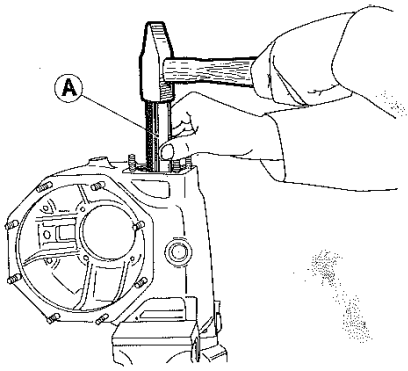
***NOTE** - At installation observe the marking of the outer races which should be refitted with the original roller cages.*



- Hold the housing vertically in a vice fitted with lead jaws.
- Fit the worm into the housing through the front.



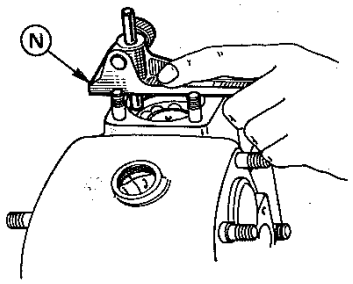
- Hold the worm in its recess
- Install the front thrust without its rubber ring and hold it in place using holding plates **P**



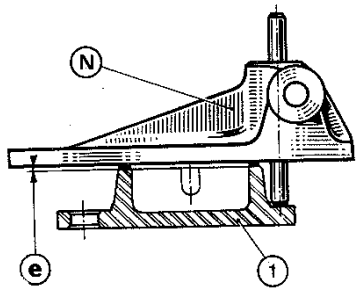
- Turn the housing upside down and gently tap the bearing outer race using drift **0.0504 A** to ensure correct positioning towards the front.
- Allow the housing to cool down and make sure the worm rotates freely without any play.

WORM AND WHEEL REAR AXLE

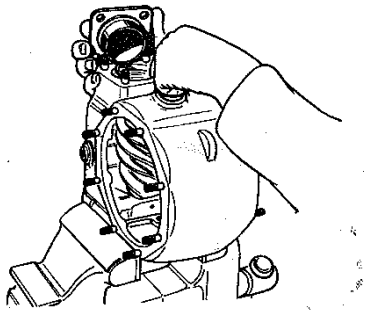
RE-ASSEMBLY - ADJUSTMENT



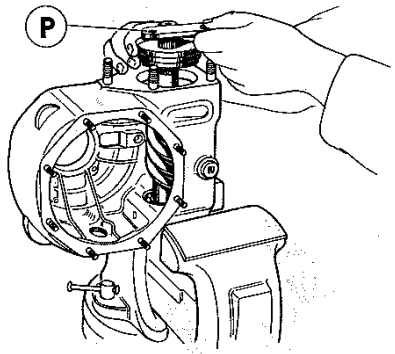
- Using depth gauge **N**, determine the thickness of the shims to be installed.
- Place the gauge across the rear axle rear machined surface and insert the feeler so that it comes into contact with the bearing outer race. Lock the feeler.



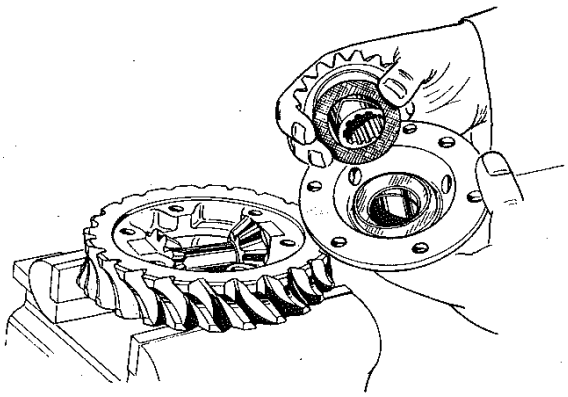
- Apply gauge **N** on the rear cap **1** of the worm, to determine, with accuracy the thickness of shims **C**
- Add a shim of 0.05 or one of 0.075 mm to obtain a worm bearing pre-loading of 0.04 to 0.08 mm.



- Install the shims
- Smear the bearing surface with Hermetite and fit the rear cover (do not use a gasket) with the notch facing the right.
- A slight resistance should be felt when rotating the worm.

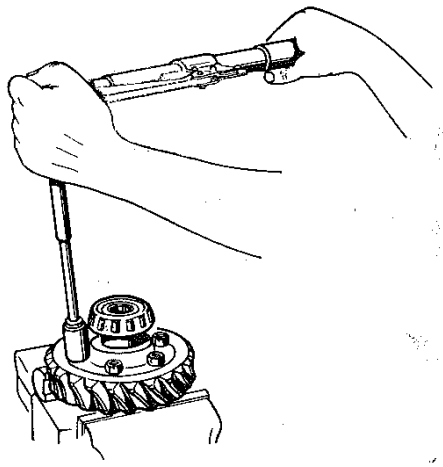


- Turn the housing upside down in the vice (drawing opposite) and remove holding plates **P** and the thrust.
- Install a new AD seal
- Install a new oil seal on the thrust and fit the latter at the front of the worm with the notch positioned horizontally to the left.



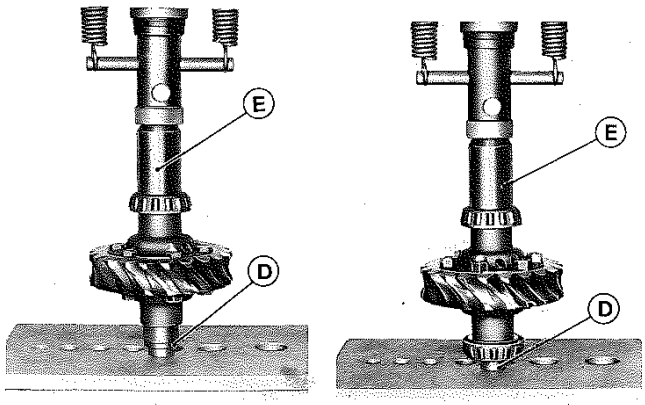
ASSEMBLY OF THE DIFFERENTIAL

- Install the sun gears in the shells and insert the «Celoron» washers
- Replace the washers if they show any signs of wear
- Place a shell into the crown wheel **and align the 8 mm holes with the bushing face.**
- Install the planet gears with the bushings and the shaft.
- Fit the second shell using the same procedure as for the first one.



- Hold this assembly together using **6 new bolts**
- **The bolt heads should face the marking on the crown wheel**
- Tighten using a torque wrench
  tightening torques to be applied :
  10 mm diameter bolts **42 ft.lbs (5.75 m.kg)**
  14 mm diameter bolts **51 ft.lbs (7 m.kg)**
  12 mm diameter bolts **62 ft.lbs (8.5 m.kg)**
- Having tightened the bolts the differential should rotate freely.

***NOTE** - Punching of the bolts should only take place on the bolts where allowed for.*

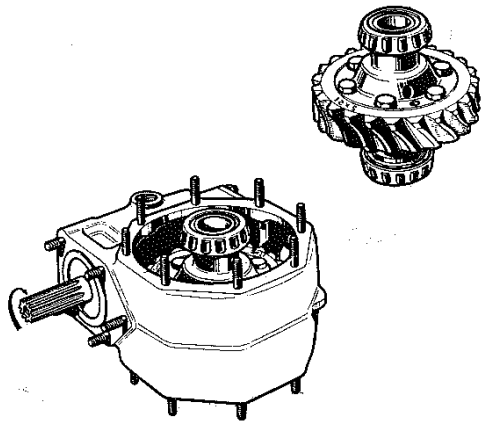


BEARINGS FITTINGS

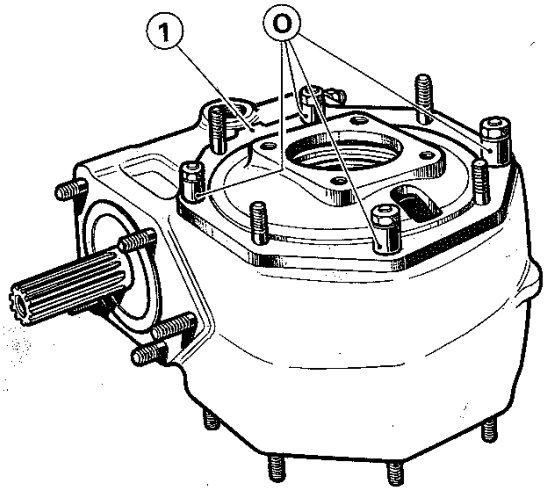
- The bearings should be installed using a press and the following tools :
  - a drift **0.0504 E**
  - an end pad **0.0504 D**
- Ensure that the bearings are properly matched with their outer ring.

WORM AND WHEEL REAR AXLE

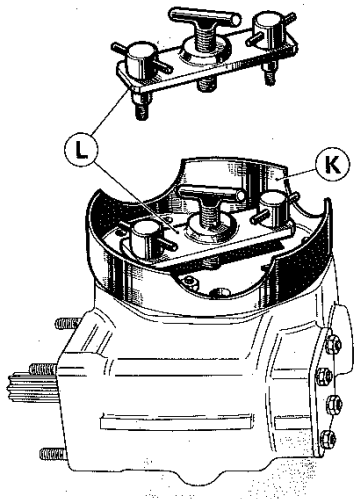
RE-ASSEMBLY - ADJUSTMENT



- Place the differential into the housing with the marked face of the crown wheel pointing to the right (cover side)
- Ensure correct positioning of the crown wheel by rotating it through the intermediary of the worm.



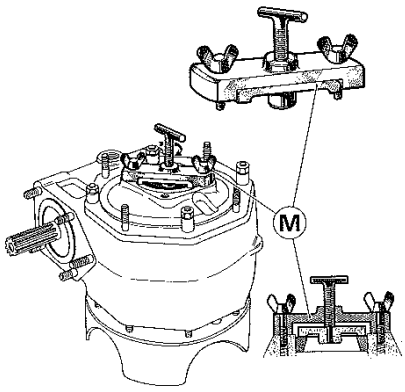
- Install the cover with the paper gasket smeared with Hermetite.
- Place the oil passage holes vertically with emboss **1** facing the draining plug.
- Install spacers **O** to obtain a correct tightening.



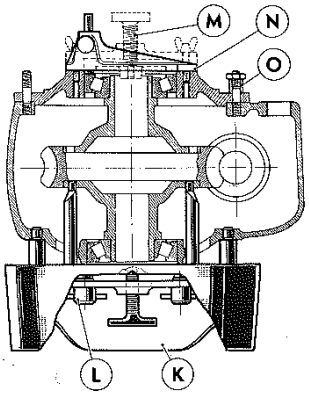
- Turn the assembly upside down
- Align both differential shell holes with the housing holes
- Position hole **K** with the feelers corresponding to the type of rear axle used (see page 03 01)
- Ensure that the feelers come into contact with the crown wheel
- Securing this assembly on the housing using clamp **L**

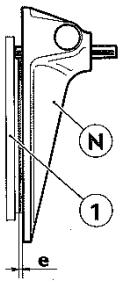
WORM AND WHEEL REAR AXLE

RE-ASSEMBLY - ADJUSTMENT

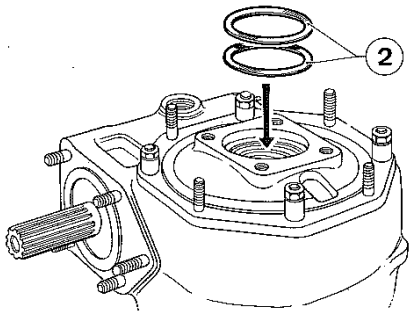


- Turn assembly over using tool **K** as a support
- Install clamp **M** **without applying too much pressure** on the outer race of the differential bearing.
- The crown wheel is now in place

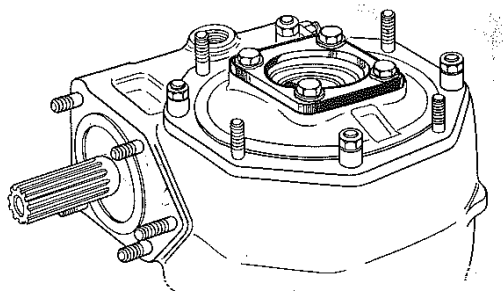




- Install gauge **N** and bring the feeler into contact with the outer race of the bearing.
- Using gauge **N** and thrust plate **1** determine the thickness of shims **e**
- Add a shim of 0.1 mm to the value obtained.



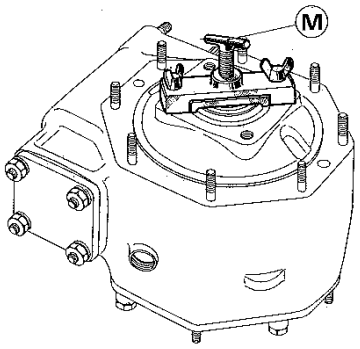
- Remove clamp **M** and install adjusting shims **2** previously determined



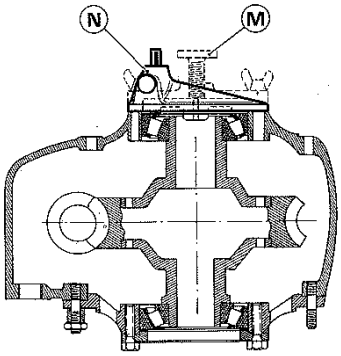
- Install thrust plate
- Tighten the nuts equipped with onduflex washers to 9 ft.lbs (1.25 m.kg)

WORM AND WHEEL REAR AXLE

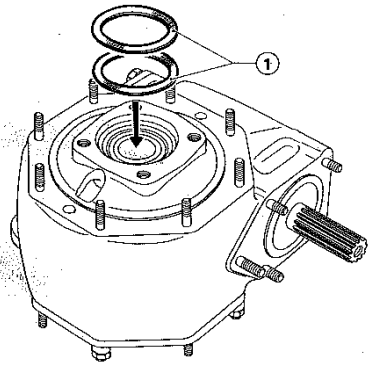
RE-ASSEMBLY - ADJUSTMENT



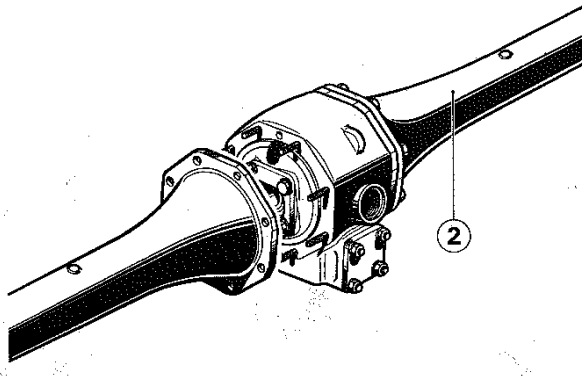
- Turn the assembly upside down so that it rests on the cover
- Remove clamp **L** and tool **K**
- Install clamp **M** **without applying too much pressure**



- Position gauge **N** according to the drawing opposite and bring the feeler into contact with the outer race of the bearing
- The thickness of the shims to be installed should be determined in the same way as for the right hand side.
- Add 0.2 mm shims for the differential bearing pre-loading.



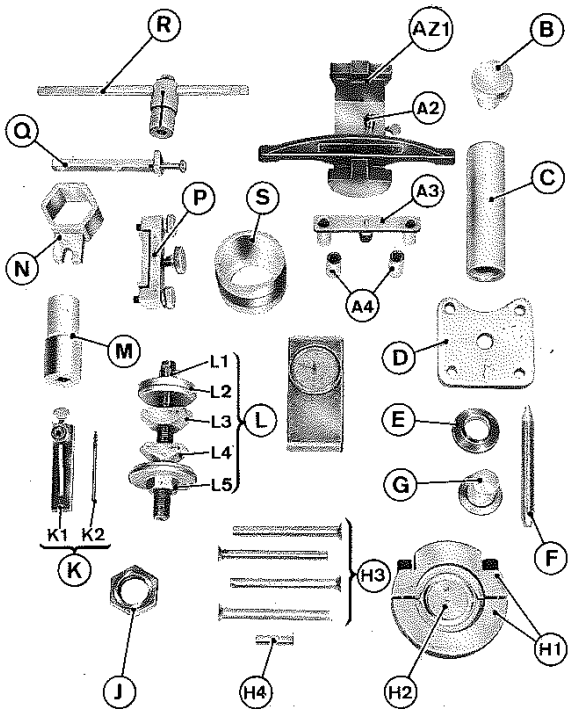
- Remove clamp **M** and install adjusting shims **1** previously determined.



- Install thrust plate using the same procedure as for the right hand side.
- Tighten the bolts to **9 ft.lbs** (1.25 m.kg)

Having carried out the rear axle adjustment proceed as follows :

- Install the rear axle right hand tube **2** after having removed spacers **0.**
- Install a gasket and tighten the nuts to **13 ft.lbs (1.75 m.kg)**
- Proceed with the final re-assembly of the rear axle in the reverse order to dismantling.



TOOLS TO BE USED

8.0520 Z

Tool chest for adjusting the differential.

AZ - Apparatus for measuring the meshing distance, including :
- **AZ1** - bridge
- **A2** - feeler
- **A3** - bridge clamp
- **A4** - spacers

B - Differential bearing fitting tool.

C - Drive pinion rear bearing fitting tool.

D - Support plate

E - Drive pinion oil seal protector sleeve.

F - Punch

G - Drive pinion oil seal fitting tool.

H - Differential bearing extractor consisting of :
- **H1** - Extractor clamps
- **H2** - Press pad
- **H3** - Extractor support rods
- **H4** - Adaptor for tightening clamp screws

J - Measuring nut

K - Micrometer consisting of :
- **K1** - Dial indicator holder
- **K2** - Dial indicator extension rod

L - Apparatus for removing and refitting the drive pinion bearing outer races including :
- **L1** - bolt
- **L2** - thrust plate, front
- **L3** - extractor, front
- **L4** - extractor, rear
- **L5** - thrust plate, rear

M - Drive pinion holding socket

N - Drive pinion nut box spanner

P - Differential bearing thrust clamp

Q - Dial indicator mounting including :

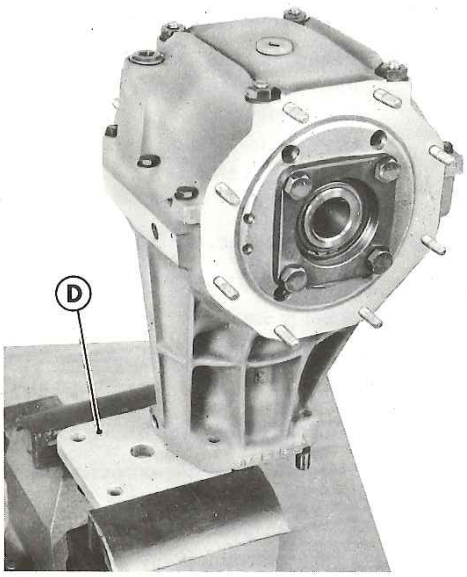
R - Backlash measuring tool

S - Drive pinion rear bearing extractor clamps - Dial indicator

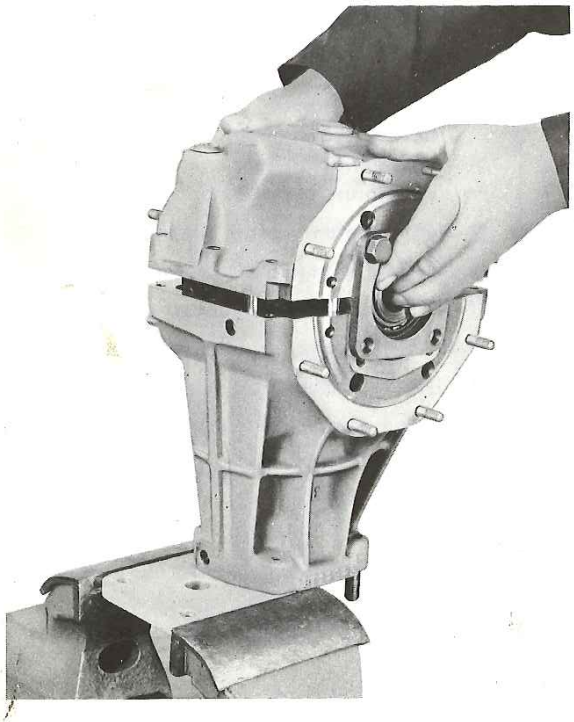
N.B. *- The dial indicator is not delivered with this tool chest, but a space is provided for storing it and it can be ordered separately.*

HYPOID REAR AXLE

DISMANTLING



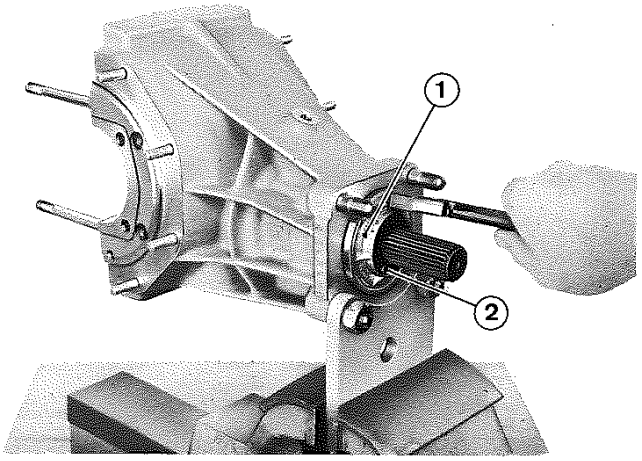
- Remove rear axle assembly from vehicle.
- Drain rear axle oil.
- Clean assembly.
- Remove torque tube and propeller shaft.
- Remove both rear axle tubes.
- Install support plate **D** on front housing by means of the 2 lower attachment studs of the connecting torque tube using 2 nuts.
- Fit clamp assembly vertically in vice fitted with lead jaws.



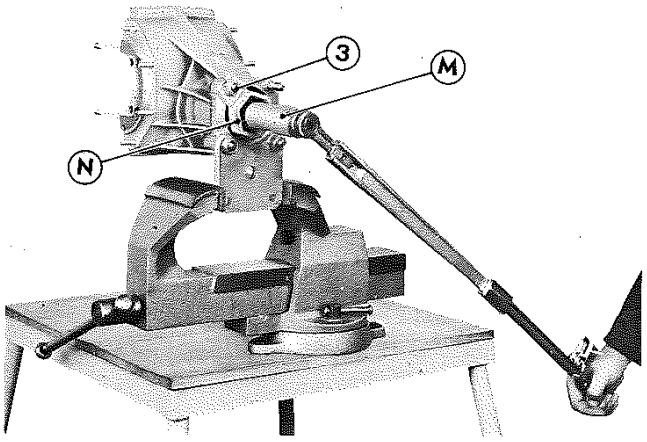
- Slacken all bolts and assembling nuts of the 2 half housings.
- Remove :
  - the front attachment screws of the differential bearing side plates.
  - the 6 assembling screws of the half housings
  - the 4 nuts of the rear housing
- Remove the rear housing differential assembly and place same, reverse side up, on the work bench. (Should the need arise, use a mallet to separate both half housings).

HYPOID REAR AXLE

DISMANTLING

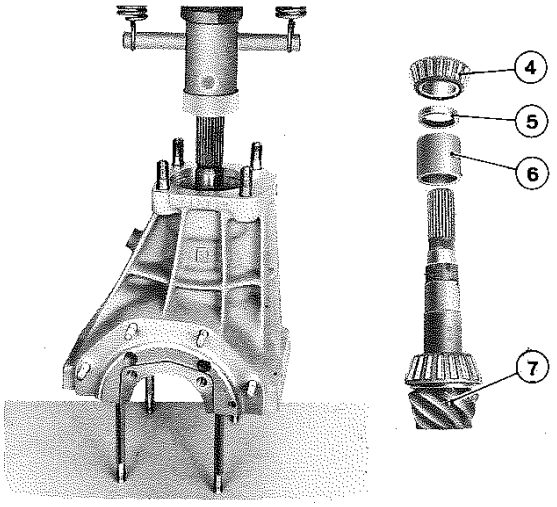


- Clamp front housing horizontally in vice.
- Remove the rear axle closing cap **1** using a pair of universal pliers.
- Remove the «O» seal ring and the oil seal **2.**



- Install pinion nut socket **N** on drive pinion nut and secure end of socket on stud **3** by means of a nut.
- Using drive pinion holding tool **M** slacken nut without unlocking same.

  (Turn wrench clockwise).

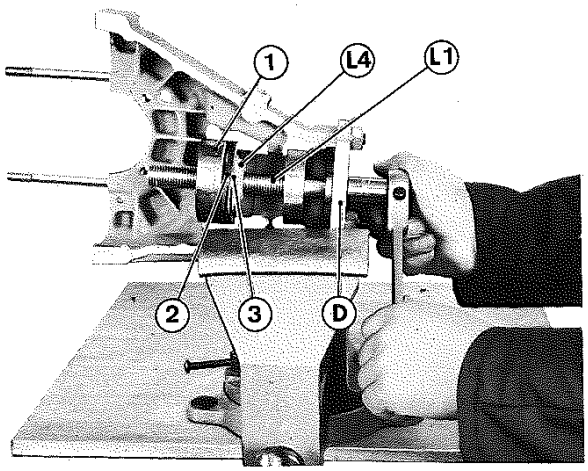


- Remove :
  - drive pinion holding tool **M** and pinion nut socket **N.**
  - drive pinion nut.
  - support plate **D.**
- Drive the drive pinion out through the interior of the housing using a press if necessary.

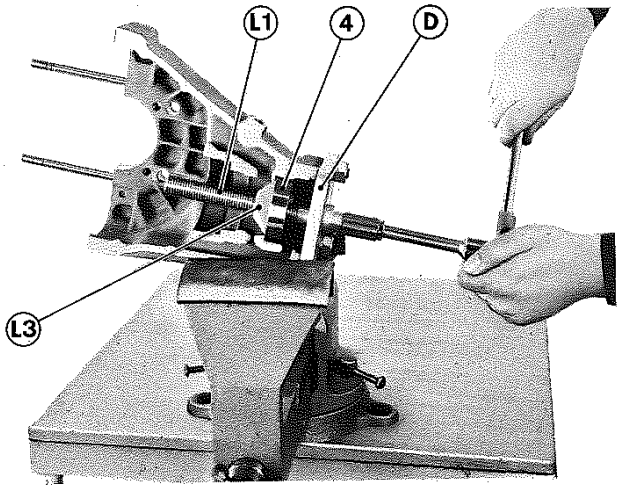
  (Do not hammer)
- Recover :
  - the front bearing **4**
  - the adjusting spacer **5**
  - long spacer **6**
  - drive pinion and rear bearing **7.**

HYPOID REAR AXLE

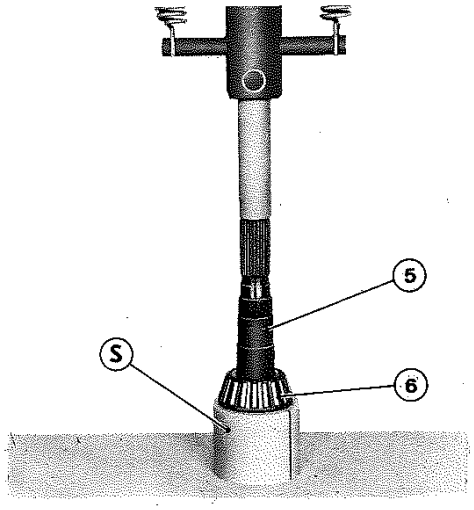
DISMANTLING



- Remove drive pinion bearing rear outer race **1** using :
  - Screw **L1**
  - Extractor **L4**
  - Support plate **D**
- Turn screw anti-clockwise to remove race.
- Recover :
  - adjustment shims **2**
  - thrust washer **3**



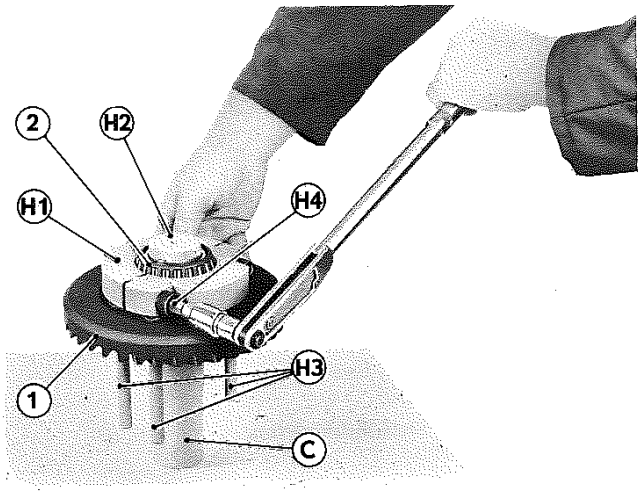
- Remove drive pinion front bearing outer race **4** using :
  - Screw **L1**
  - Extractor **L3**
  - Support plate **D**
- Turn screw clockwise to remove race



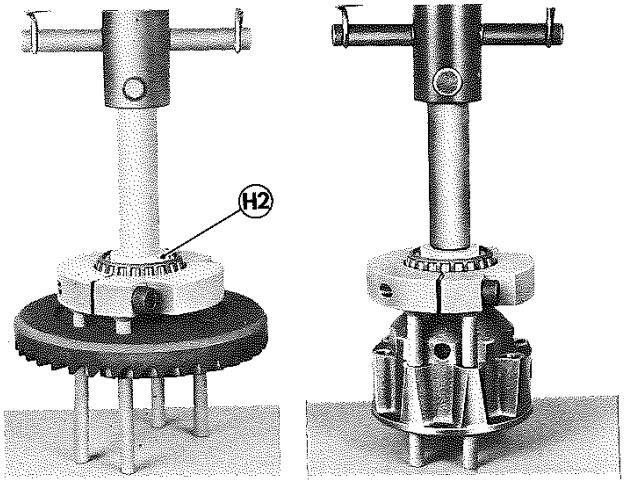
- Remove rear bearing **6** of drive pinion **5** using :
  - Two half shells **S**
  - A press.

HYPOID REAR AXLE

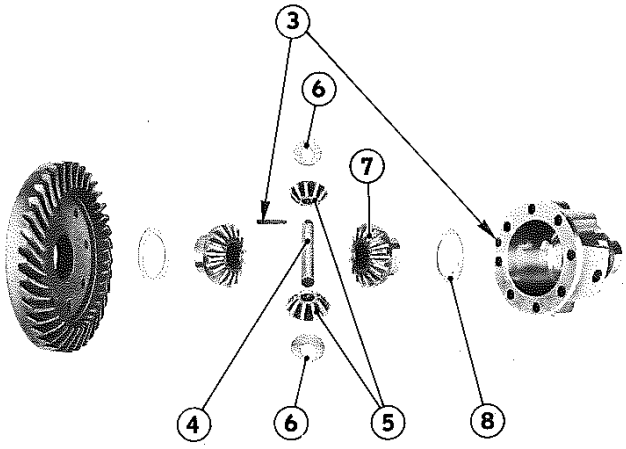
DISMANTLING



- Remove the 8 assembling bolts of the differential.
- Remove the differential from the crown wheel **1**
- Recover the left hand side sun gear and its thrust washer.
- Place crown wheel on tool **C**
- Insert the 4 extractor clamp support rods **H3** into four diametrically opposed holes of the crown wheel.
- Fit the extractor clamps **H1** around the bearing **2.**
- Tighten the «Allen» screws to **14.5 ft.lbs** (2 m.kg) using socket **H4.**



- Place press pad **H2** on the crown wheel in the centre of the bearing.
- Using a press, remove the crown wheel.
- Use the same procedure to remove right hand side bearing of the differential case.

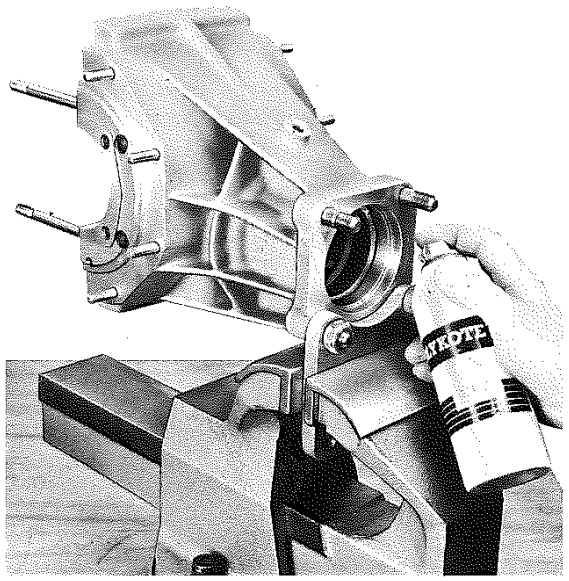


- Remove planet gear shaft lock pin **3** using a drift of 5 mm.
- Then remove :
  - planet gear shaft **4**
  - planet gears **5**
  - spherical washers **6**
  - Sun gear right hand side **7**
  - thrust washer **8**

PEUGEOT

HYPOID REAR AXLE

RE-ASSEMBLY - ADJUSTMENT



PREPARATION

- Clean and blow dry all parts of the rear axle assembly mechanism.

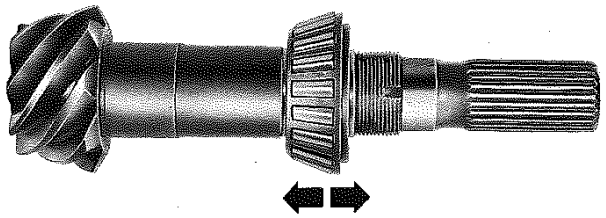
UNDER NO CIRCUMSTANCES SHOULD EMERY CLOTH OR SHARP TOOLS BE USED TO CLEAN THE HOUSINGS.

- Spray Molycote 321 into the housings of the drive pinion bearings.

- **Do not heat the housing.**

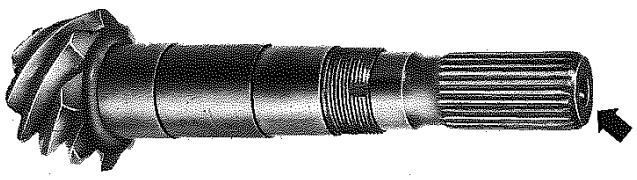
Every time the gear set (crown wheel and drive pinion) is replaced it is mandatory that the following parts are also renewed.

- differential bearings
- drive pinion bearings
- Onduflex washers
- drive pinion nut
- differential assembling bolts
- drive pinion oil seal
- "O" rings and oil seals of the differential bearing thrust plates.
- rear axle tubes paper gaskets



- Ensure that the front bearing is installed without exerting undue pressure on the rear end of the drive pinion shaft.

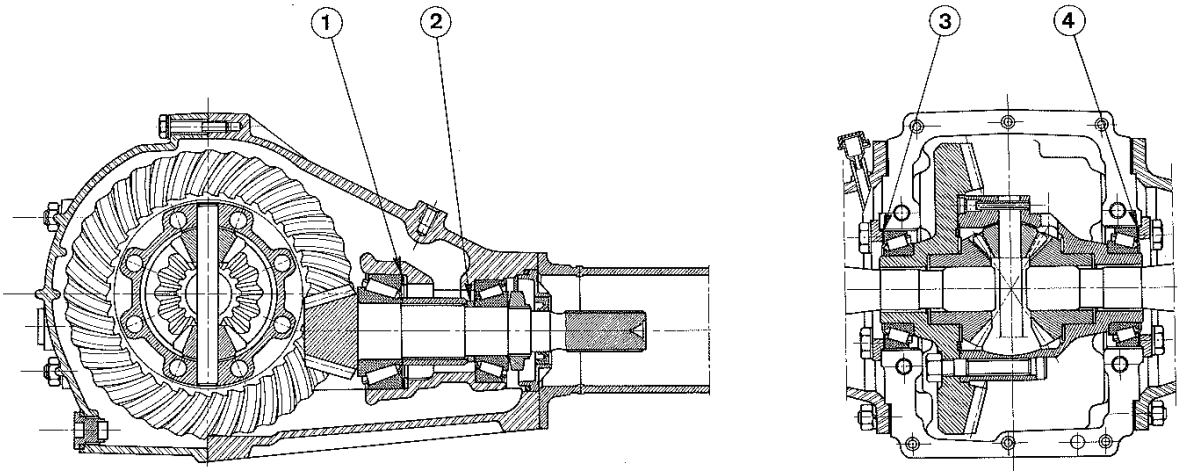
- In case difficulties are experienced in fitting the bearing onto the drive pinion, polish the shaft bearing surface using a fine abrasive until the bearing just slides as a free fit onto the shaft.



- Smooth out front end of pinion with a fine stone in order to remove any existing burrs.

The front end of the pinion will serve as contact point during the various adjustments to be carried out.

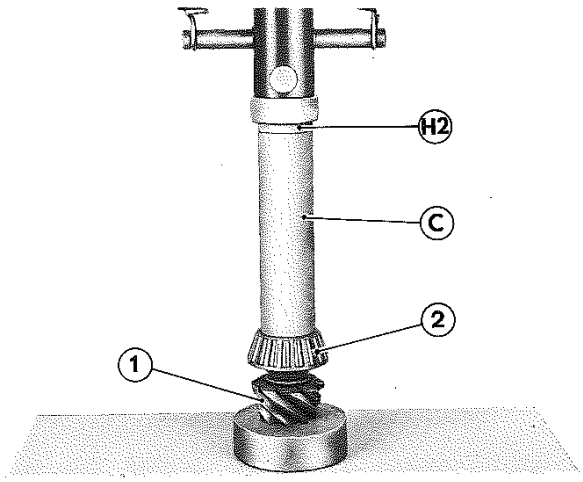
DIFFERENT ADJUSTMENTS TO BE CARRIED OUT



1 - Meshing distance adjustment (Class 5, page 03 58 to 62)
2 - Drive pinion bearings pre-load adjustment (Class 5, page 03 58 to 63)
3 - Backlash adjustment (Class 5, page 03 67 to 69)
4 - Differential bearings pre-load adjustment (Class 5, page 03 70 to 72)

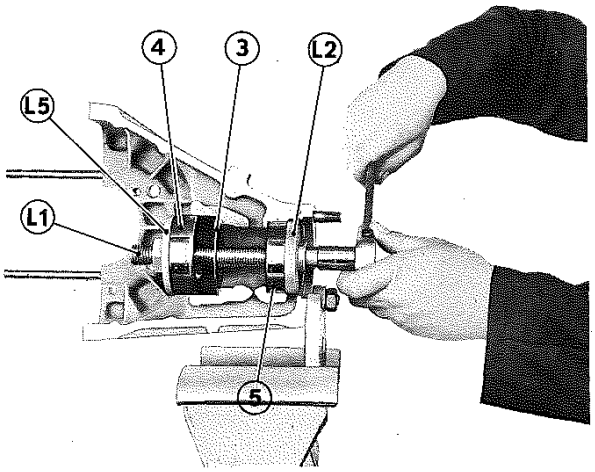
HYPOID REAR AXLE

RE-ASSEMBLY - ADJUSTMENT



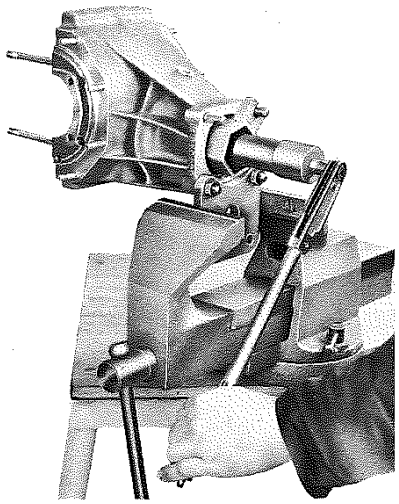
Mounting of the rear bearing

- Assemble the following parts on the press bench as follows :
  - drive pinion **1**
  - Rear bearing **2**
  - drive pinion bearing fitting tool **C**
  - end pad **H2**
- Using the press, drive bearing down until it abuts.



- Clamp differential housing in the vice
- Install thrust washer **3** in the housing.
- Install the outer bearing races **4** and **5** back to back into the housing using the bolt **L1**, thrust plate **L2** and the nut **L5.**
- Tighten and apply firmly the prescribed torque.

  Tightening torque 101.5 ft.lbs (14 m.kg)
- Oil the bearings with ESSO EXTRA MOTOR OIL 20 W 30/40 with the exclusion of any other lubricant.



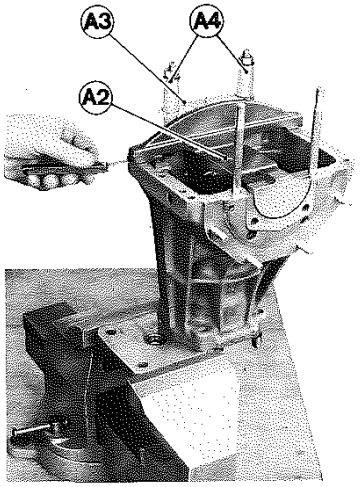
ADJUSTMENT OF THE DRIVE PINION

- MESHING DISTANCE
- BEARINGS PRE-LOAD
- Install drive pinion fitted with the following into the housing :
  - Rear bearing
  - Long spacer
  - Front bearing (hand fitting)
  - Nut **J**

  Tightening torque 7.25 ft.lbs (1 m.kg)
- Rotate drive pinion ten turns in both directions.
- Repeat operation until nut **J** can no longer be tightened under **7.25 ft.lbs** (1 m.kg).

DIFFERENTIAL

RE-ASSEMBLY - ADJUSTMENT

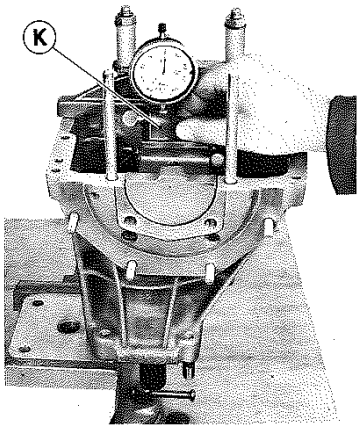


- Install apparatus **AZ** for measuring meshing distance into the housing and hold the same in position by means of bridge clamp **A3**, spacers **A4** and two nuts.

  Tightening torque 7.25 ft.lbs (1 m.kg)

- Equalize play between bridge pads and housing face, on both sides, using feeler gauges.

- Free feeler **A2** and ensure that it is in contact with the rear face of the drive pinion.

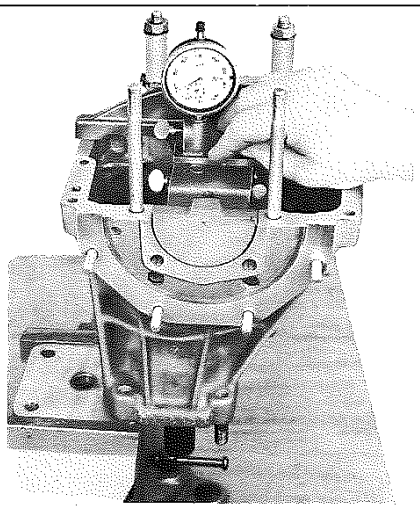


- Place dial indicator in holder **K.**

- Position the latter so that dial indicator feeler guide rests on upper surface of feeler **A2.**

- Adjust height of dial indicator in the holder so that the small hand is set to «3», for example.

- Turn dial face to bring «0» in front of the big hand.

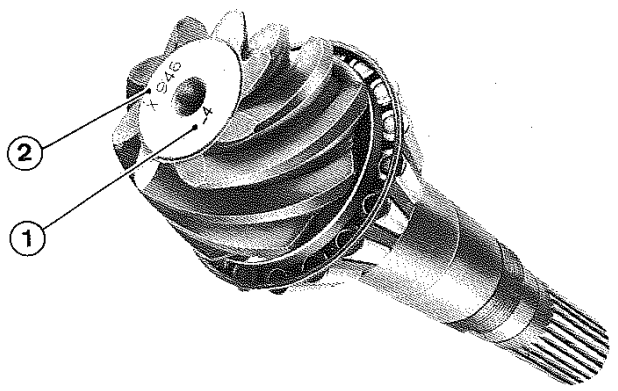


- Slide support **K** to bring dial indicator feeler into contact with the machined surface of the apparatus **AZ.**

- The displacement as shown by dial indicator hands indicates the depth of feeler **A2.** Write down the value obtained.

HYPOID REAR AXLE

REASSEMBLY AND ADJUSTMENT



Two reference marks are to be found on the drive pinion rear face.

The first one indicates the MESHING DISTANCE **(1)** and comprises :

A number from 0 to 20 and, up to 10, this number can bear the sign - (minus).

The other reference mark to be found on the pinion is for the MESH SET **(2)**.

This number is preceded by a letter and the same reference mark also appears on the crown wheel.

ADJUSTMENT TABLE
WITH TOOL 8.0520 A

Reference marked on pinion	Corresponding guide N°.
- 10	20
- 9	21
- 8	22
- 7	23
- 6	24
- 5	25
- 4	**26**
- 3	27
- 2	28
- 1	29
0	30
1	31
2	32
3	33
4	34
5	35
6	36
7	37
8	38
9	39
10	40
11	41
12	42
13	43
14	44
15	45
16	46
17	47
18	48
19	49
20	50

- Write down reference marked on drive pinion.
- Refer to table opposite to find the corresponding guide number.
- Compare dial indicator reading with guide number.
- The difference represents in hundredths of millimeters brought to the nearest figure of 0.05, the thickness of the shim to be installed between the rear bearing outer cup and the thrust washer (1st adjustment).

i.e. :

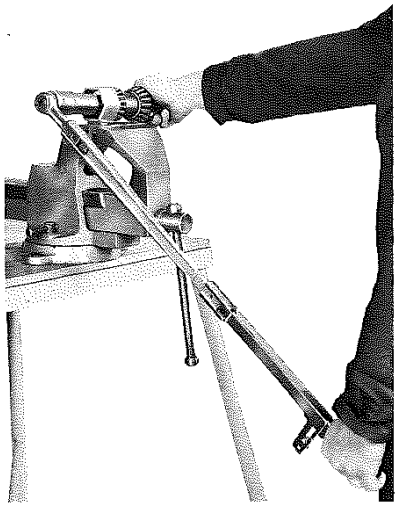
- Dial indicator figure obtained	67
- Reference mark on pinion - **4** :	
- Corresponding guide number **26**	- 26
	41

In this instance the thickness of the shim to be fitted is **0.40 mm.**

- Remove device **AZ** and pinion.

HYPOID REAR AXLE

REASSEMBLY AND ADJUSTMENT



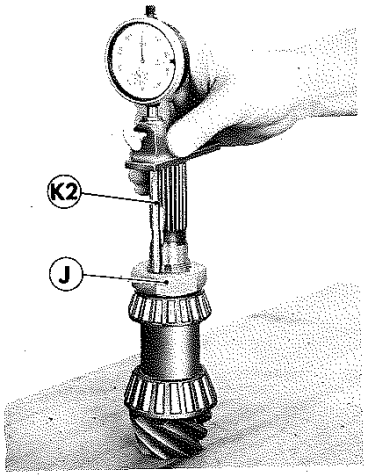
- Place drive pinion vertically on the work bench,

- Draw a coloured mark on all the length of one spline of the drive pinion.

- Install the following on drive pinion :

  - the long spacer,
  - the front bearing fitted reverse side,
  - nut **J.**

Tightening torque 28 m.kg (203 ft.lbs)

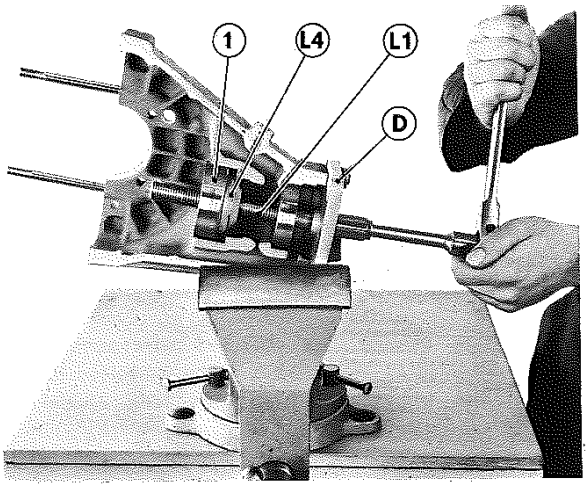


- Screw dial indicator end on extension **K2** which in turn should be secured to dial indicator.

- Place micrometer **K** on front face of drive pinion **and make sure that extension tool K2 faces the marked spline** and that the extension rests on the machined face of nut **J.**

- Move dial indicator into its support to bring small hand needle to «1» and main hand needle to «0», for example.

- Remove micrometer and to avoid change of reading keep micrometer in a safe place.



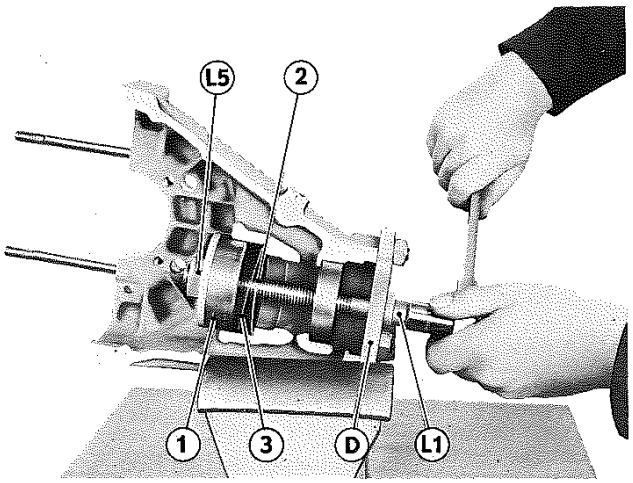
- Remove rear bearing outer race, **1** using :

  - bolt **L1,**
  - Extractor **L4**
  - Support plate **D**

PEUGEOT

HYPOID REAR AXLE

RE-ASSEMBLY - ADJUSTMENT

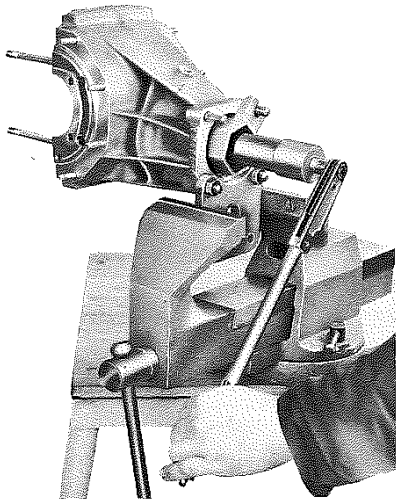


- Install the following in bottom of bearing housing :
  - thrust washer **2**
  - adjustment shims **3** previously selected (1st adjustment, page 03 60).

- Re-install the outer bearing race **1** using :
  - bolt **L1**
  - thrust plate **L5**,
  - support plate **D**

- Apply final torque firmly.

Tightening torque 101.5 ft.lbs (14 m.kg).



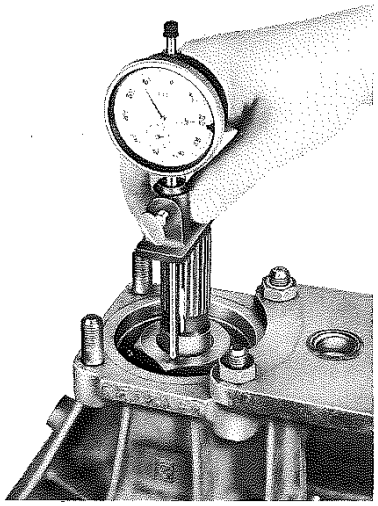
- Remove nut **J** and the front bearing.

- Re-install drive pinion in the housing, with :
  - long spacer,
  - front bearing,
  - nut **J**

Tightening torque 7.25 ft.lbs (1 m.kg)

- Rotate drive pinion ten turns in both directions.

- Repeat above operation until nut can no longer be tightened **under 7.25 ft.lbs** (1 m.kg).



- With the same spline **(coloured mark) as reference mark** take another reading between end of shaft and nut **J** using the micrometer previously set to 1 and 0 (class 5 page 03 61).

- Note the reading on the dial indicator.

- Find the difference between both figures.

- Substract 0.06 mm.

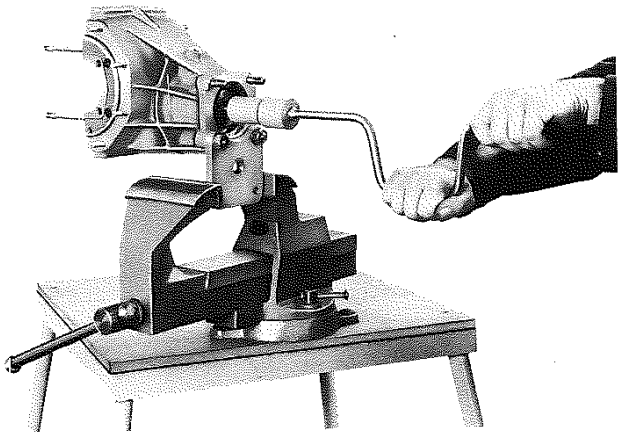
- The number thus obtained corresponds to the thickness of the shim to be installed between the front bearing and the long spacer (2nd adjustment).

Thickness			
6.04	6.37	6.70	7.03
6.07	6.40	6.73	7.06
6.10	6.43	6.76	7.09
6.13	6.46	7.79	7.12
6.16	6.49	6.82	7.15
6.19	6.52	6.85	7.18
6.22	6.55	6.88	7.21
6.25	6.58	6.91	7.24
6.28	6.61	6.94	7.27
6.31	6.64	6.97	7.30
6.34	6.67	7.00	7.33

- Take from the shims available (from 0.03 to 0.03 mm increments), the one of which the thickness is nearest to the thickness obtained by the measurements.
  i.e. :
  - Measurement taken outside the housing : 1.0
  - Measurement taken inside the housing : 7.86
  - Difference : 6.86
    - 0.06
    6.80 mm

- The shim to be installed in this instance must have a thickness of 6.80 mm.

- As a shim of this thickness is not available use the 6.79 one.

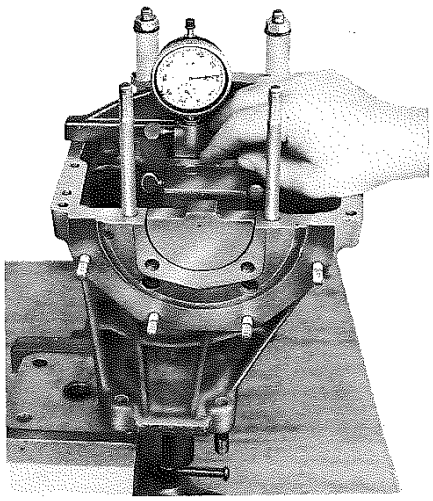


- Install pinion into the housing (final installation), using :
  - The long spacer,
  - The adjustment spacer previously obtained,
  - A new nut.

Tightening torque 28 m.kg (203 ft.lbs)

- Using a hand crank turn pinion fast to ensure proper settlement of bearings.

(From now on it is difficult to turn the pinion by hand).



CHECK :

- Place differential housing vertically in vice.

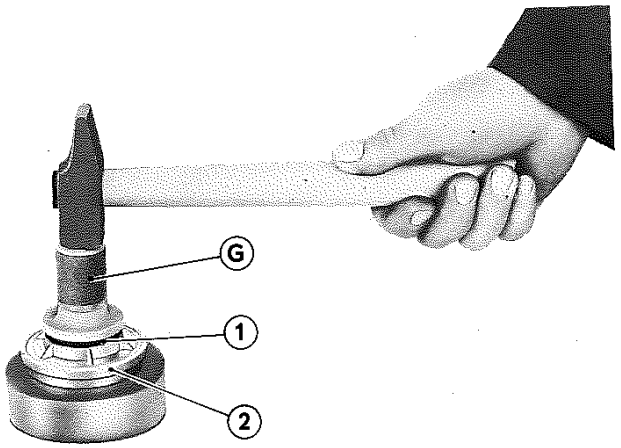
- Install tool **A** as indicated, page (13).

- Using micrometer as indicated page (13), measure the travel of feeler pin **(A2)**. This travel should correspond to the guide number.

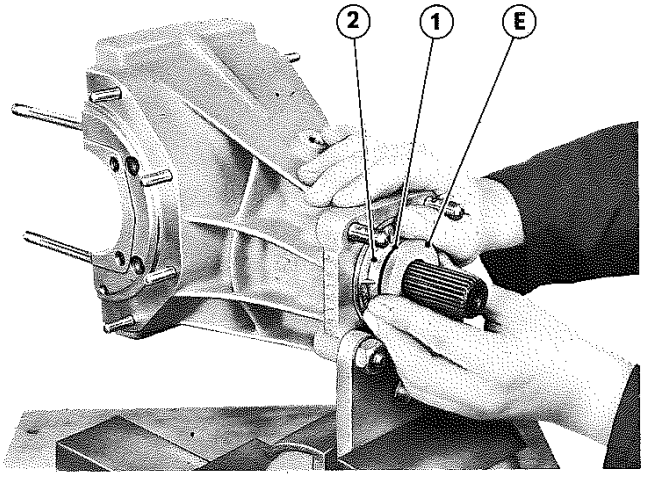
Tolerance $^{+\ 0.05}_{-\ 0.03}$ **mm**

HYPOID REAR AXLE

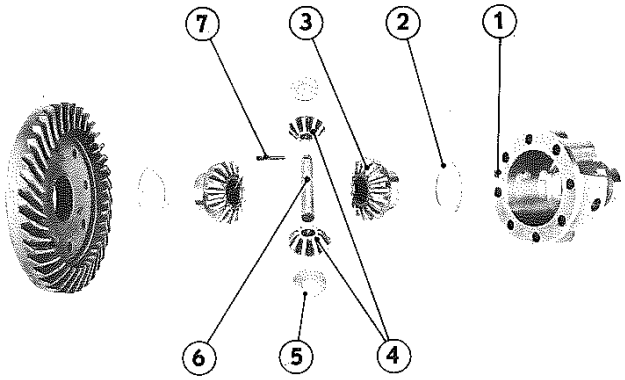
REASSEMBLY AND ADJUSTMENT



- Remove the apparatus **AZ.**
- Using tool **F** lock the pinion nut in the 4 notches provided.
- Install oil seal ring **1** in cover **2** by means of oil seal fitting tool **G.** Tap carefully until oil seal abuts.
- Install «0» ring on cover **2.**
- Apply tallow to oil seal and «0» ring.



- Fit protecting ring **E** into recess of oil seal **1.**
- Fit cover **2.**
- Free protecting ring by turning it while holding the cover **2** in position.



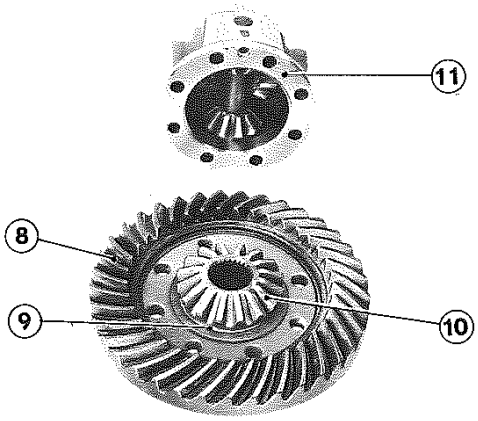
DIFFERENTIAL ASSEMBLY

- Apply oil to all parts before installation.

- Install in the differential planetary gear housing **1** a new dimpled washer **2. The dimples should be directed towards the sun gear 3.**

- Install right hand side sun gear **3.**

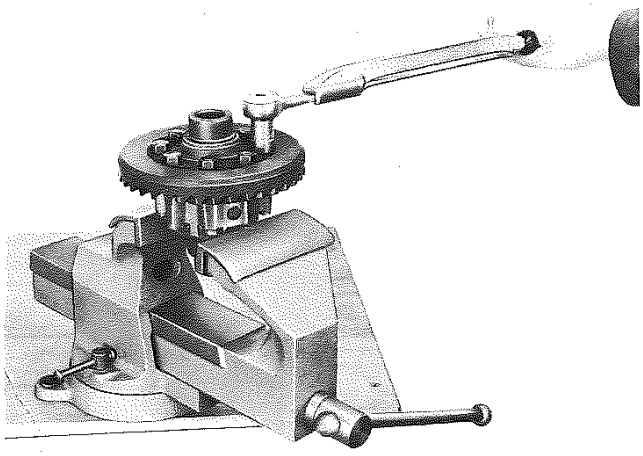
- Install :
  - planet gears **4** with their spherical dimpled washers **5.**
  - planet gear shaft **6** with pin holes aligned.
  - fit a new Mecanindus pin **7** flush with surface of differential gear housing.



- Lay crown wheel **8** flat on the work bench.

- Install in the following order :
  - the dimpled washer **9,**
  - the sun gear **10** and the differential planetery gear housing assembled **11,**
  - the 8 assembling bolts,
  - install the nuts and hand tighten same.

N.B. Do not use washers



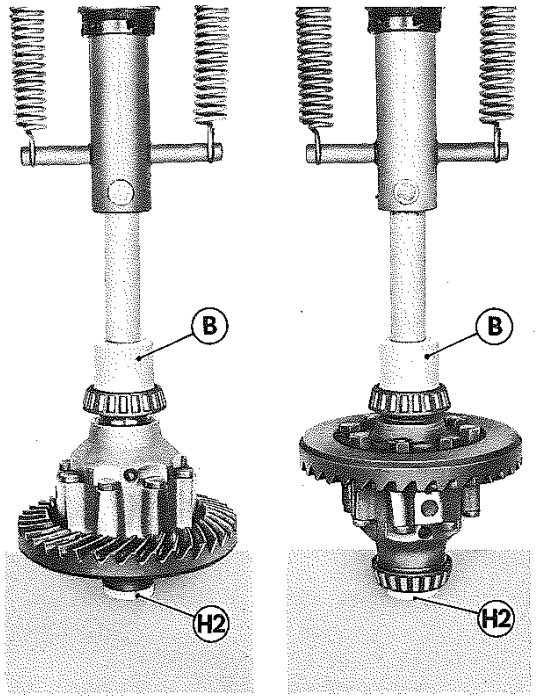
- Clamp differential gear assembly in vice fitted with lead jaws.

- Cross tighten all 8 nuts.

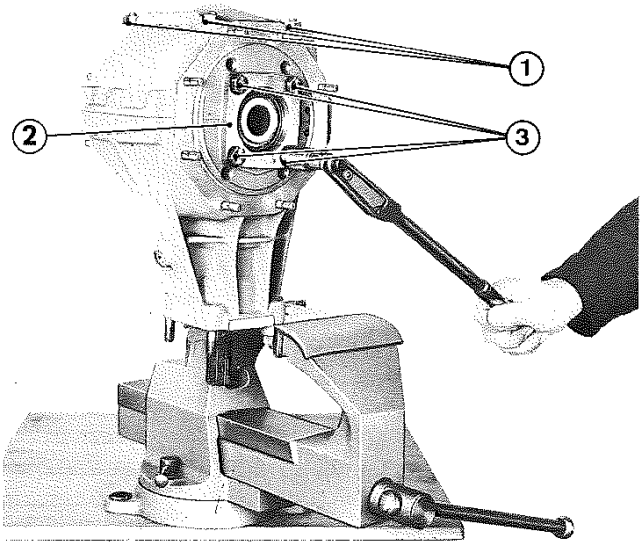
Tightening torque 51 ft.lbs (7 m.kg)

HYPOID REAR AXLE

REASSEMBLY AND ADJUSTMENT



- Remove grease from new bearings and install same, using :
  - a press,
  - fitting tool **B**,
  - end pad **H2**,
- Oil bearings with plenty of **Esso Extra Motor Oil** 20W/30/40. No other lubricant should be used.

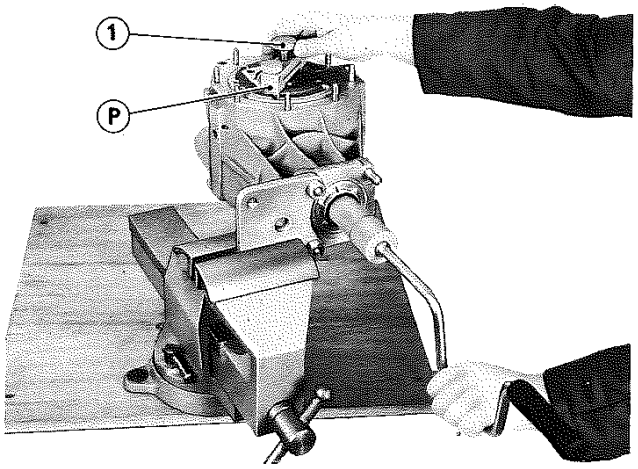


ASSEMBLING THE REAR AXLE MECHANISM

- Clamp housing vertically in vice.
- Apply «Perfect Seal» to machined surface of housing.
- Apply oil to housing bearing recesses.
- Install crown wheel differential assembly.
- Install rear cover by means of 4 nuts 1 equipped with new Onduflex washers and **tighten to 0.8 m.kg. (5.8 ft.lbs).**
- Install bearing side plate **2** left hand side without shims. Fit the 4 bolts with new onduflex washers **3.**

Tightening torque 0.8 m.kg. (5.8 ft.lbs)

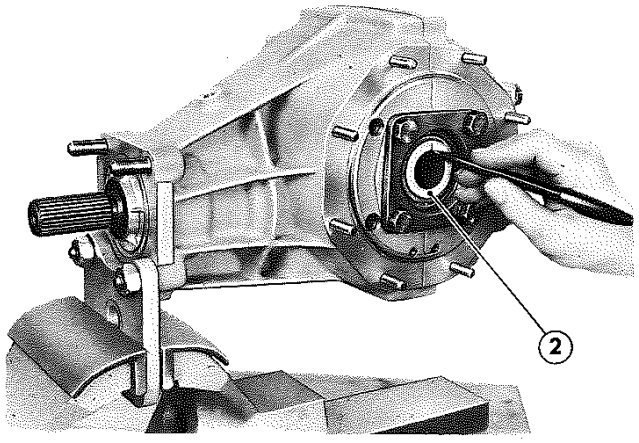
- Slacken nuts 1 and hand tighten them.



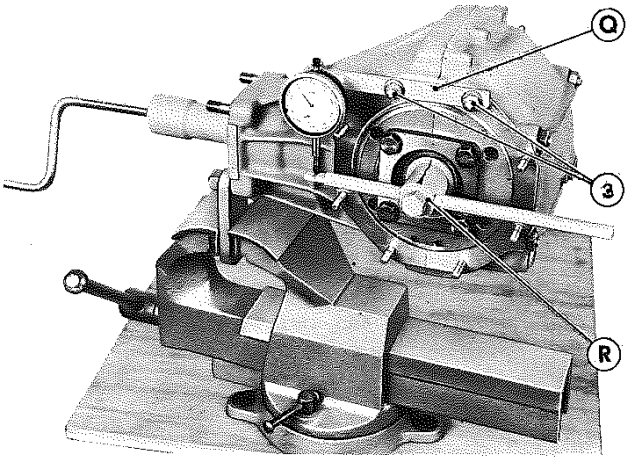
BACKLASH ADJUSTMENT

- Clamp housing **horizontally** in vice with right hand side facing upwards.
- Install clamp **P**.
- Tighten clamp **P** by means of control screw 1 to bring the differential as far down as possible, **hand tighten. (Do not use an auxiliary tool and do not apply too much force).**
- Rotate differential five turns in both directions.
- Tap on housing with a mallet for proper settlement of assembly.
- Re-check tightness of clamp **P**.
- Tighten rear cover nuts.

Tightening torque 5.8 ft.lbs (0.8 m.kg)



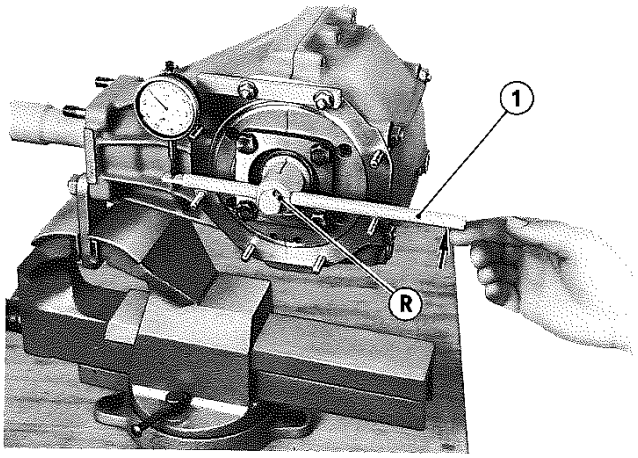
- Refit assembly in vice as shown per drawing opposite.
- Clean end **2** of crown wheel plate by means of a cloth dipped in trichlorethylene.
- Draw a radial mark on end **2**.



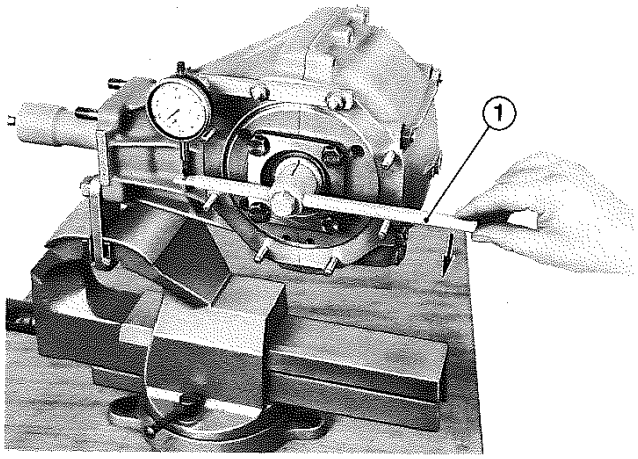
- Install backlash measuring tool **R** horizontally making sure that reference mark is in line with position «↑» of the device.
- Lock central screw.
- Install support **Q** equipped with dial indicator.
- Adjust dial indicator support by means of the positioning holes so as dial indicator feeler rests between the two marks that can be found on the left hand arm of the tool.
- Tighten both nuts **4**.

HYPOID REAR AXLE

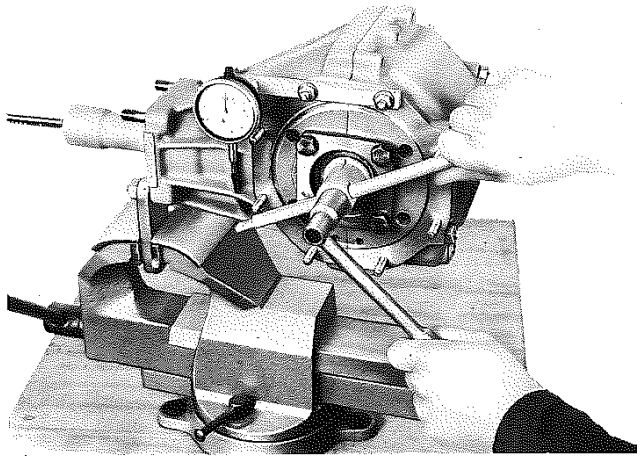
RE-ASSEMBLY - ADJUSTMENT



- Turn drive pinion with care, anticlockwise, to set dial indicator small hand needle to «5».
- Adjust dial indicator face to «0» holding the knurled arm 1 upwards.



- Press down lever 1 gently just enough to make it abut clockwise.
- In this position the dial indicator indicates the backlash between drive pinion and crown wheel.
- Note this reading.



- Repeat this operation at three different points, using the other three gaps in the tool **R** lined up with the groove in the crown wheel used for the first reading.
- Note each reading, making sure that each time dial indicator has been set to "5" and "0".
- Turn tool **R** anti-clockwise for each adjustment position.

BACKLASH READINGS	
Positions	Readings
1	
2	
3	
4	

- WRITE DOWN THE TWO EXTREME READINGS OBTAINED.

- IF THE DIFFERENCE BETWEEN MAXIMUM AND MINIMUM READING EXCEEDS 0.10 mm CHECK FOR DIRT OR BURRS ON TEETH, which may be the cause of the faulty assembly.

- ELIMINATE THE FAULT and recheck the measurements.

DIFFERENTIAL ADJUSTMENT SHIMS

Thicknesses available :

0.05 mm
0.10 mm
0.20 mm
0.40 mm
0.50 mm
1. mm

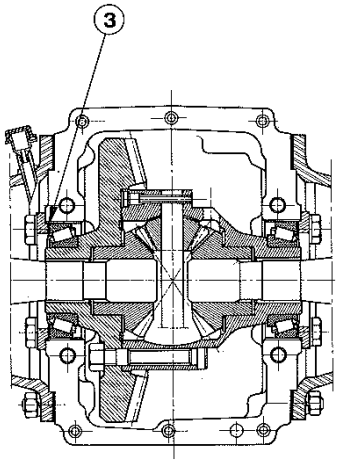
DETERMINATION OF ADJUSTMENT SHIMS

- Subtract **0.10 mm** from a minimum backlash reading.

- THE NUMBER OBTAINED SHOULD BE ROUNDED TO THE NEAREST 0.05 mm AND THIS NUMBER CORRESPONDS TO THE THICKNESS OF THE SHIMS TO BE INSTALLED ON THE LEFT HAND SIDE (3rd adjustment).

i.e. :

MINIMUM BACKLASH : 0.97 mm
THICKNESS OF SHIM TO BE USED : 0.97 mm
- 0.10 mm
= 0.87 mm
Which gives : 0.85 mm of shim



- Remove backlash measuring tool R, dial indicator and left hand side plate.

- Slacken central screw of tool **P.**

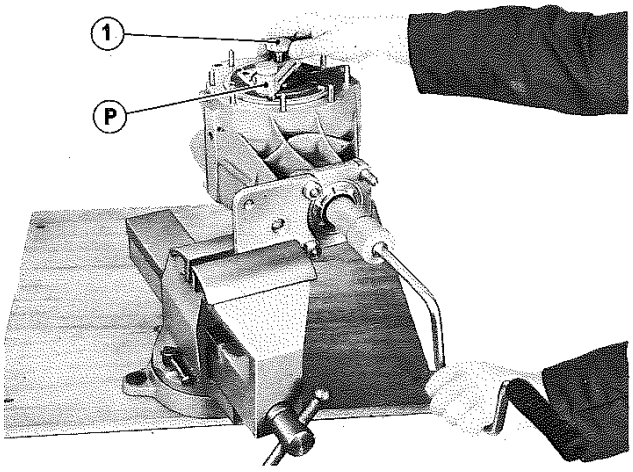
- Check thickness of shims with micrometer and then install them.

- Re-install left hand side plate by means of 4 screws fitted with new onduflex washers.

Tightening torque 0.8 m.kg. (5.8 ft.lbs)

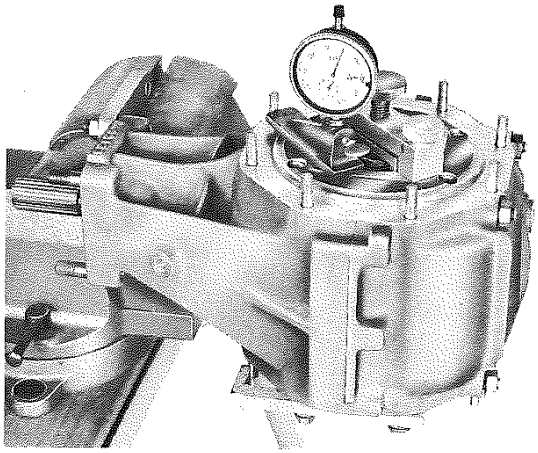
HYPOID REAR AXLE

REASSEMBLY AND ADJUSTMENT

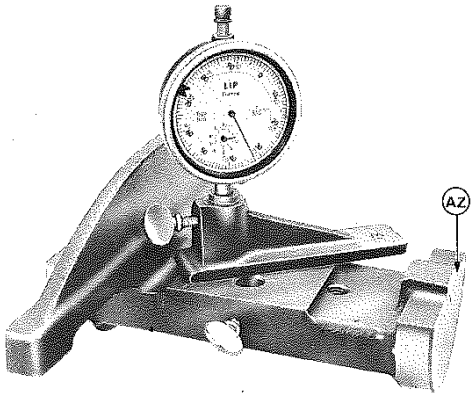


BEARINGS PRE-LOAD ADJUSTMENT

- Re-install **housing horizontally** in vice (as per drawing opposite).
- HAND TIGHTEN firmly central screw (1) of clamp **P** while turning drive pinion.



- Place micrometer **KZ** on a flat surface of front differential housing (right-hand side) with dial indicator long feeler **K3** resting on outer bearing race.
- Make sure that micrometer does not rest on both housings (Only on the front or the rear).
- Adjust dial indicator setting so as to obtain «1» and «0», for example.



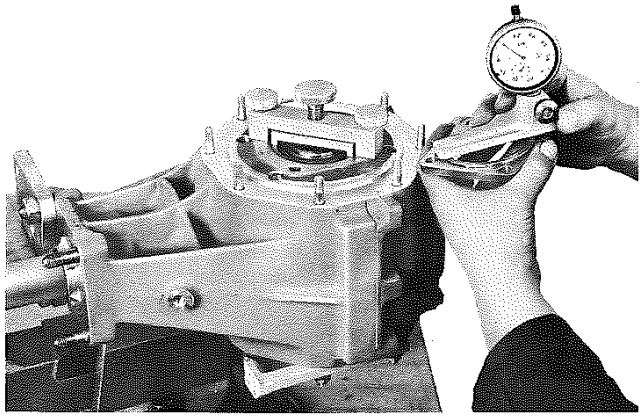
- Place micrometer on machined surface of tool **AZ** used as measuring surface.
- The displacement of the dial indicator needles represents the depth of the bearing in the housing and 0.25 mm should be added.
- Write down the number obtained.

Ex. : Measurement in the housing 1.00
Measurement on machined surface 2.32
Difference 1.32
+ 0.25

Number to remember : 1.57 mm

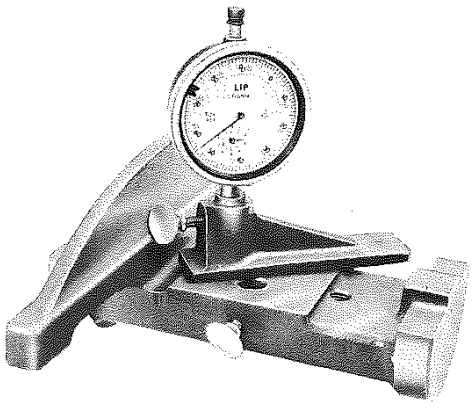
HYPOID REAR AXLE

RE-ASSEMBLY - ADJUSTMENT



- Place micrometer on right-hand side plate with dial indicator feeler on outside machined surface of plate.

- Adjust dial indicator height so as to obtain a reading of «1» and «0» for example.

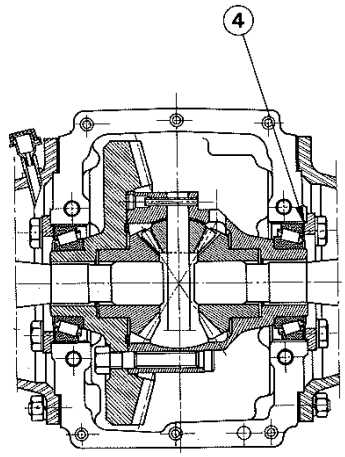


- Place micrometer on machined surface of tool **AZ** used as a measuring surface.

- The displacement of the dial indicator needles represents the height of the collar on plate.

i.e. : Measurement on plate 1.00
Measurement on measuring surface 2.54

Height of collar : 1.54 mm



- Compare :

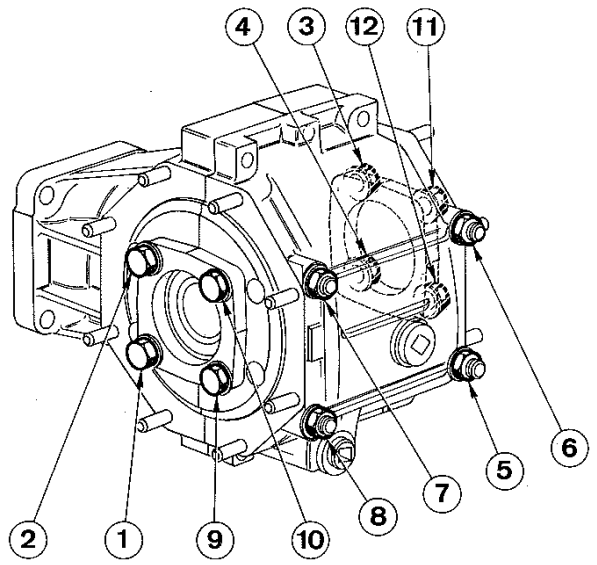
- Number obtained when measurement on housing was carried out.
- the height of the collar.
- THE DIFFERENCE ROUNDED TO THE NEAREST 0.05 mm REPRESENTS THE THICKNESS OF THE SHIMS TO BE INSTALLED BETWEEN BEARING AND SIDE PLATE (4th adjustment).

i.e. : Number obtained with first measurement **1.57**
Height of collar **1.54**
Thickness of shims to be used **0.03**
which means **0.05 mm**

PEUGEOT

HYPOID REAR AXLE

REASSEMBLY AND ADJUSTMENT



- Install the right-hand side plate and install previously selected shims and hold plate in position by means of 4 screws fitted with Onduflex washers. Tightening torque : **5.8 ft.lbs (0.8 m.kg).**

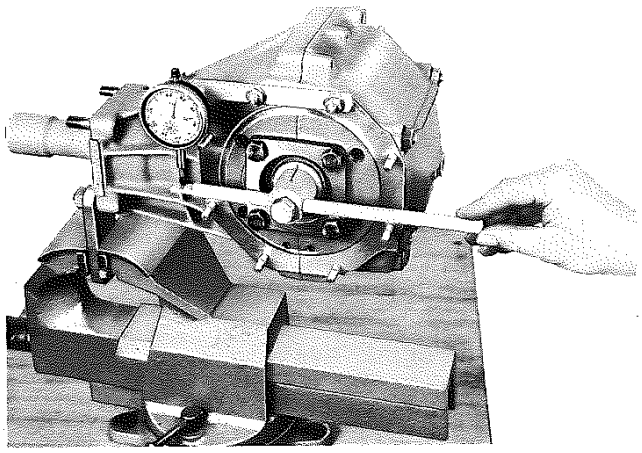
- Proceed to final tightening of the 8 screws and 4 assembling nuts in the sequence indicated below. Tightening torque : **25 ft.lbs (3.5 m.kg).**

- Slacken the four assembling nuts.

- Tap with a mallet on cover until the latter flushes on housing (check on the faces of rear axle tubes left on right-hand side).

- Re-tighten the 4 assembling nuts in the same sequence as before. Tightening torque : **25 ft.lbs (3.5 m.kg).**

- Rotate drive pinion several times in both directions.



BACKLASH CHECKING

Check the 4 positions according to procedure indicated on page 22. The value of the backlash should be equal to **0.20** $^{+\ 0.05\ mm}_{-\ 0.02\ mm}$

IMPORTANT

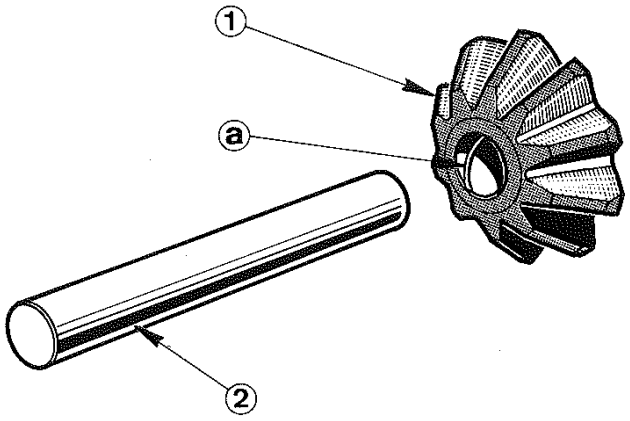
In no case should the minimum value be less than 0.18 mm.

- Install the 6 assembling bolts equipped with new Onduflex washers.
  Tightening torque : **7.25 ft.lbs (1 m.kg).**

- Refit the rear axle tubes with paper gasket and attachment nuts.
  Tightening torque : **13.5 ft.lbs (1.8 m.kg).**

- Install the propeller shaft and torque tube with attachment nuts.
  Tightening torque : **40 ft.lbs (5.5 m.kg).**

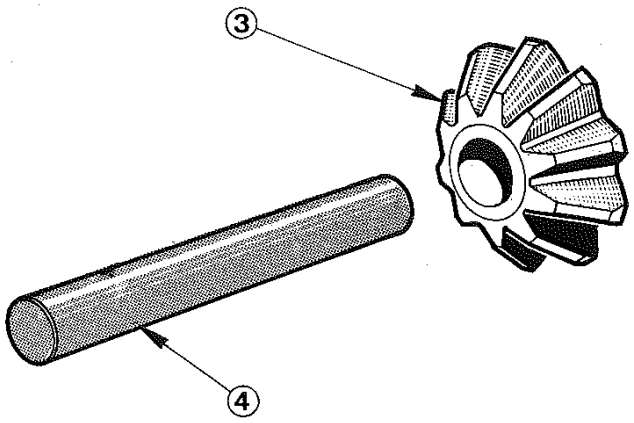
- Refit the other rear axle parts and reinstall the assembly on car (see class 5, page 02 01 to 02 04).



PLANET GEARS AND SPINDLES

1st Fitting

- Planet gear 1 with lubrication groove a.
- Planet gear spindle 2 non «parkolubricated».

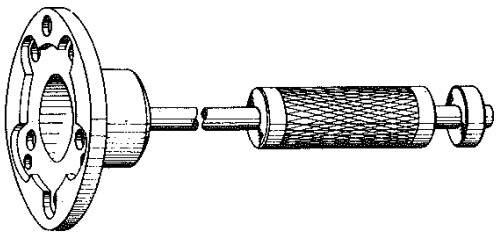


2nd Fitting

- Planet gear 3 without lubrication groove.
- Planet gear spindle 4 «parkolubricated» of a brown colour.

INTERCHANGEABILITY

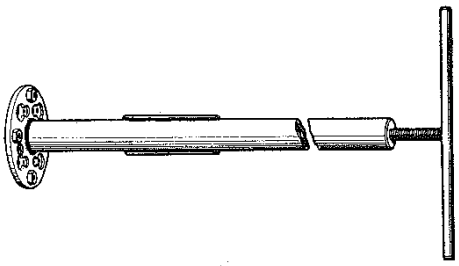
- The planet gears of the 2nd fitting should not be fitted with a spindle of the 1st fitting, due to the risk of seizure.
- However the «parkolubricated» spindle of the 2nd fitting may be installed to replace that of the 1st fitting.



TOOLS TO BE USED

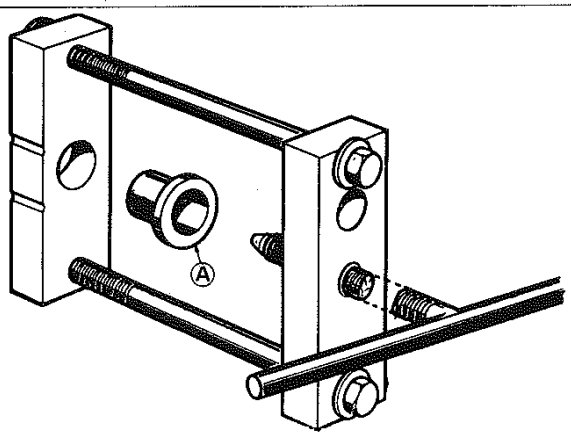
8.0601

Wheel shaft puller.



8.0507 Z

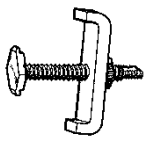
Puller for outer wheel shaft bearing and hoop ring.



8.0517 Z

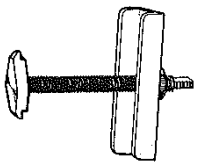
Apparatus for installing the wheel shaft bearing hoop.

A - Bush



8.0513

Puller, wheel shaft, oil thrower bush for Saloon cars.

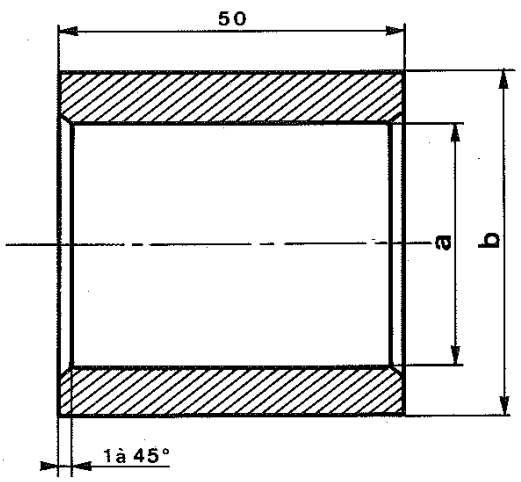


8.0514

Puller, wheel shaft, oil thrower bush for Associated vehicles.

REAR AXLE

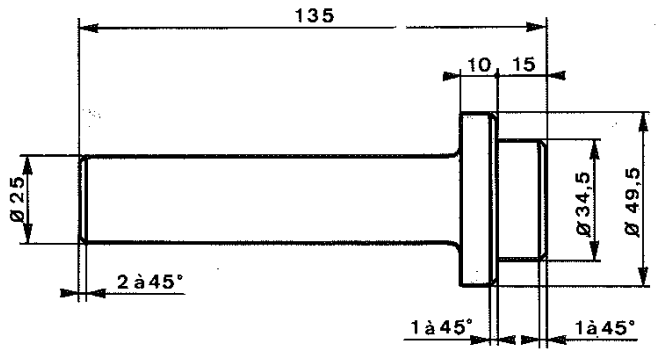
REAR AXLE SHAFTS AND TUBES



These tools must be made in the workshop

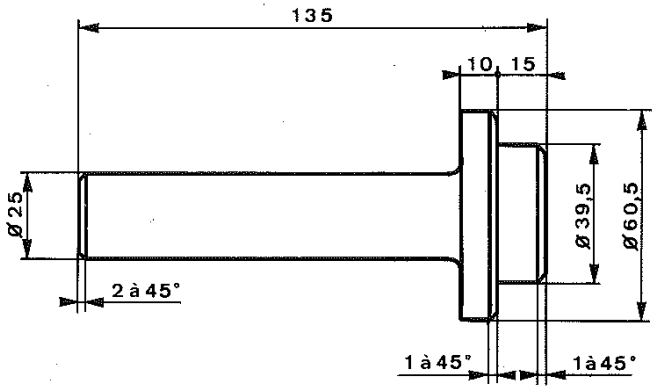
TYPES	dimensions in mm		Tool n°
	a	b	
Saloons	35.5	50	**0.0503 A**
Associated vehicles	40.5	55	**0.0503 B**

Bearing, installing ring, or axle shafts hoop installing bush



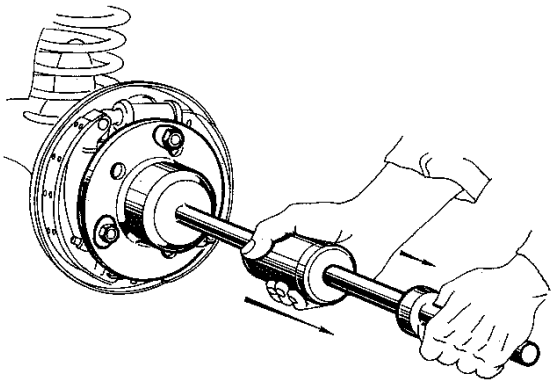
0.0507 A

Drift for installing the oil thrower bush into axle tubes of the Saloon cars.



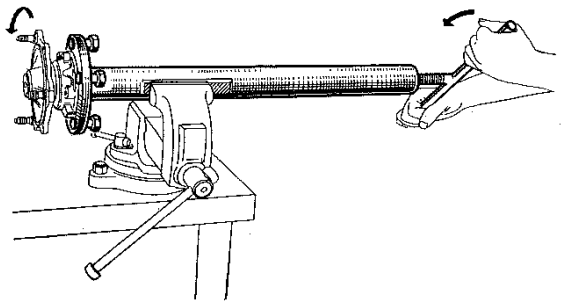
0.0507 B

Drift for installing the oil thrower bushes into the axle tubes of the Associated vehicles.



REMOVAL

- Raise the car from the rear and chock under the axle tubes.
- Remove the wheel.
- Remove the brake drum.
- Disconnect the bearing attachment clamp from the axle tube.
- Remove the axle shaft using puller **8.0601.**



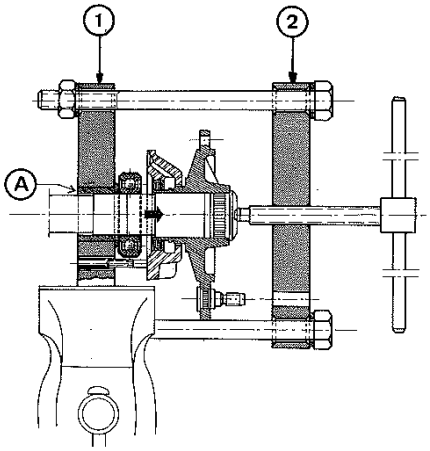
DISMANTLING

- Apply pressure on the hoop bush and cut with a chisel until it rotates on the shaft.
- Remove it by hand.
- Secure puller **8.0507 Z** on the bearing clamp and bring puller screw into contact with the axle shaft centering.
- Hold the assembly in a vice on the reinforcements provided.
- Withdraw the clamp, the seal ring and the bearing.

N.B. *- In order to avoid damaging the puller bolt, the wheel shaft should rotate at the same time as the bolt.*

REAR AXLE

REAR AXLE SHAFTS AND TUBES



REFITTING

- Check the correct surface of the bearing clamp.
- The oil seal must be replaced at each dismantling.
- The bearing and the hoop ring are installed separately, either using tool **8.0517 Z** or a press.

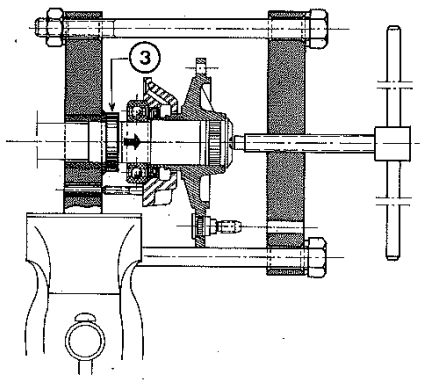
WITH TOOL 8.0517 Z

Installing the bearing

- Install the clamp equipped with the seal ring on the axle shaft.
- Lubricate and engage the bearing onto the axle shaft.
- Position tool **8.0517 Z** equipped with bush **A** for the Saloons.

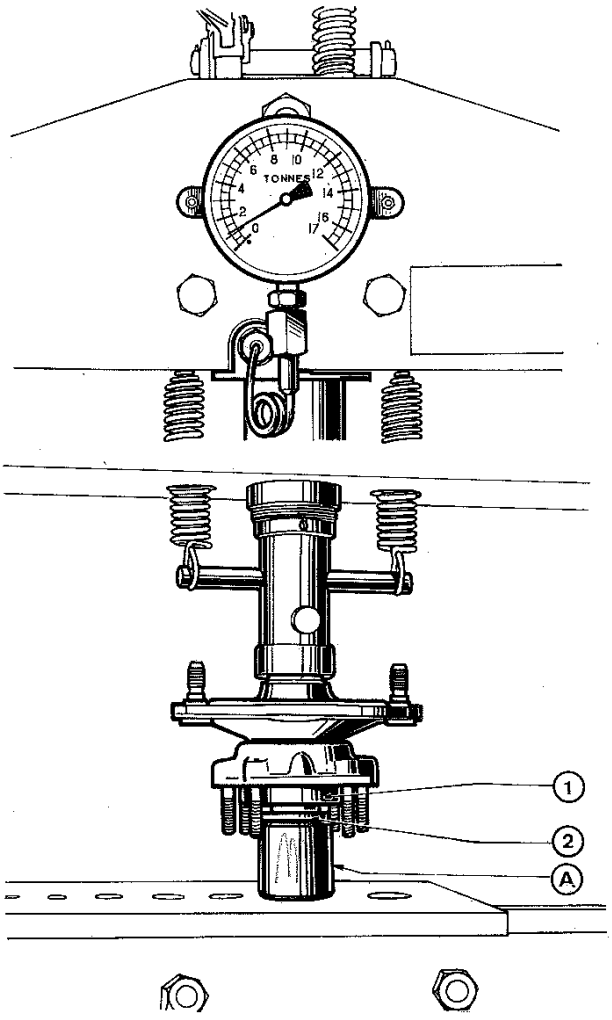
IMPORTANT

- Clamps **1** and **2** should be absolutely parallel.
- Progressively tighten until the bearing abuts on the rear hub.
- Remove the apparatus.



Installing the hoop bush

- Engage the hoop bush **3** on the axle shaft with the machined face pointing towards the bearing.
- Install the apparatus taking the same precautions as before.
- Progressively tighten to make the bush abut on the bearing outer face.

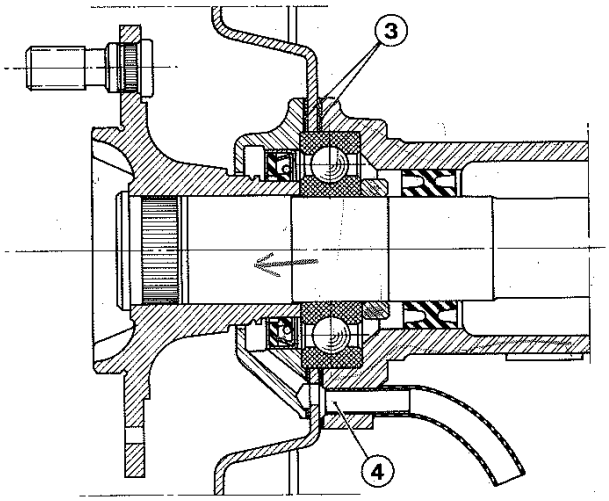


ON THE PRESS

- The bearing and the bush must be fitted separately.
- Use the ring **0.0503 A** for Saloons and **0.0503 B** for Associated vehicles, to fit :
  - the bearing
  - the hoop bush.
- Fit the hoop bush with the machined face towards the bearing.
- Force to be applied when fitting the hoop bush : 700 to 3.000 kg.

N.B. *- Reject all bushes which can be fitted at a pressure of less than 700 kg.*

- *Ensure that the bush is well down on the bearing.*

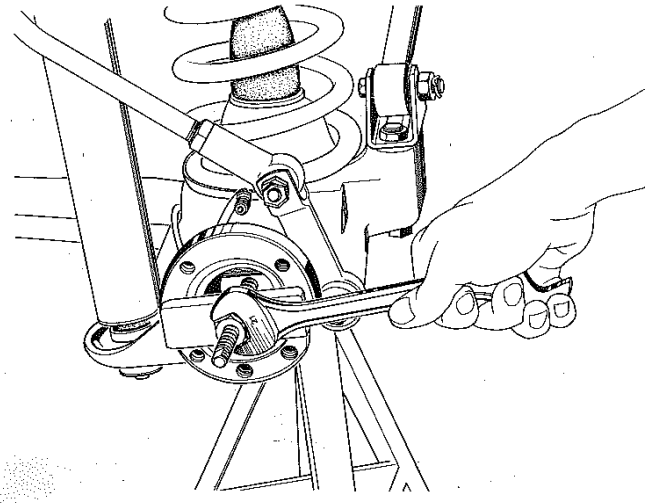


REFITTING

- In all cases fit a new paper gasket 3 smeared with Hermetite, on both sides of the brake plate.
- Position the oil drain hole in the flange in line with the hole 4 in the axle tube.
- Then proceed in the reverse of removal.

REAR AXLE

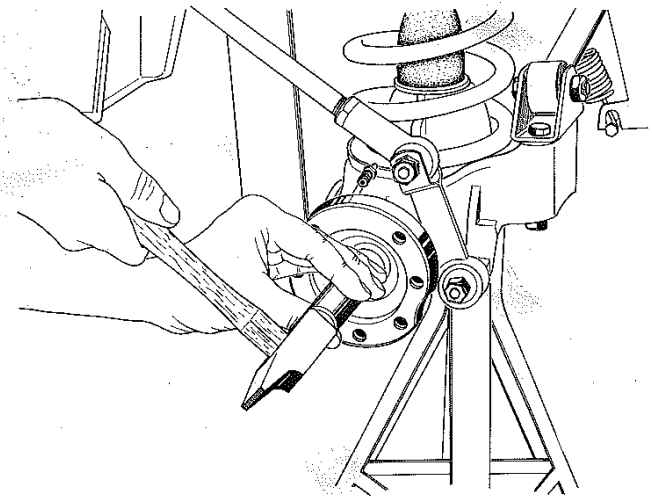
REAR AXLE SHAFTS AND TUBES



AXLE TUBES

- Withdraw the oil thrower bushes using the puller :

  8.0513 for Saloons
  8.0514 for Associated vehicles

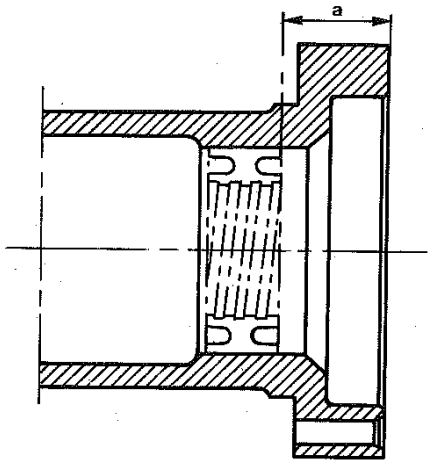


- Refit the oil thrower bushes using the drift :

  0.0507 A for Saloons
  0.0507 B for Associated vehicles

- The position of the bush, when in place, in relation to the tube machined face, distance **a** is :

  a = 35 mm for Saloons
  b = 32 mm for Associated vehicles



IMPORTANT

- The bush, marked with spherical notch or a hole on the outer face (left hand thread) is fitted in the left hand tube.

- The bush without any marking (right hand thread) is fitted in the right hand tube.

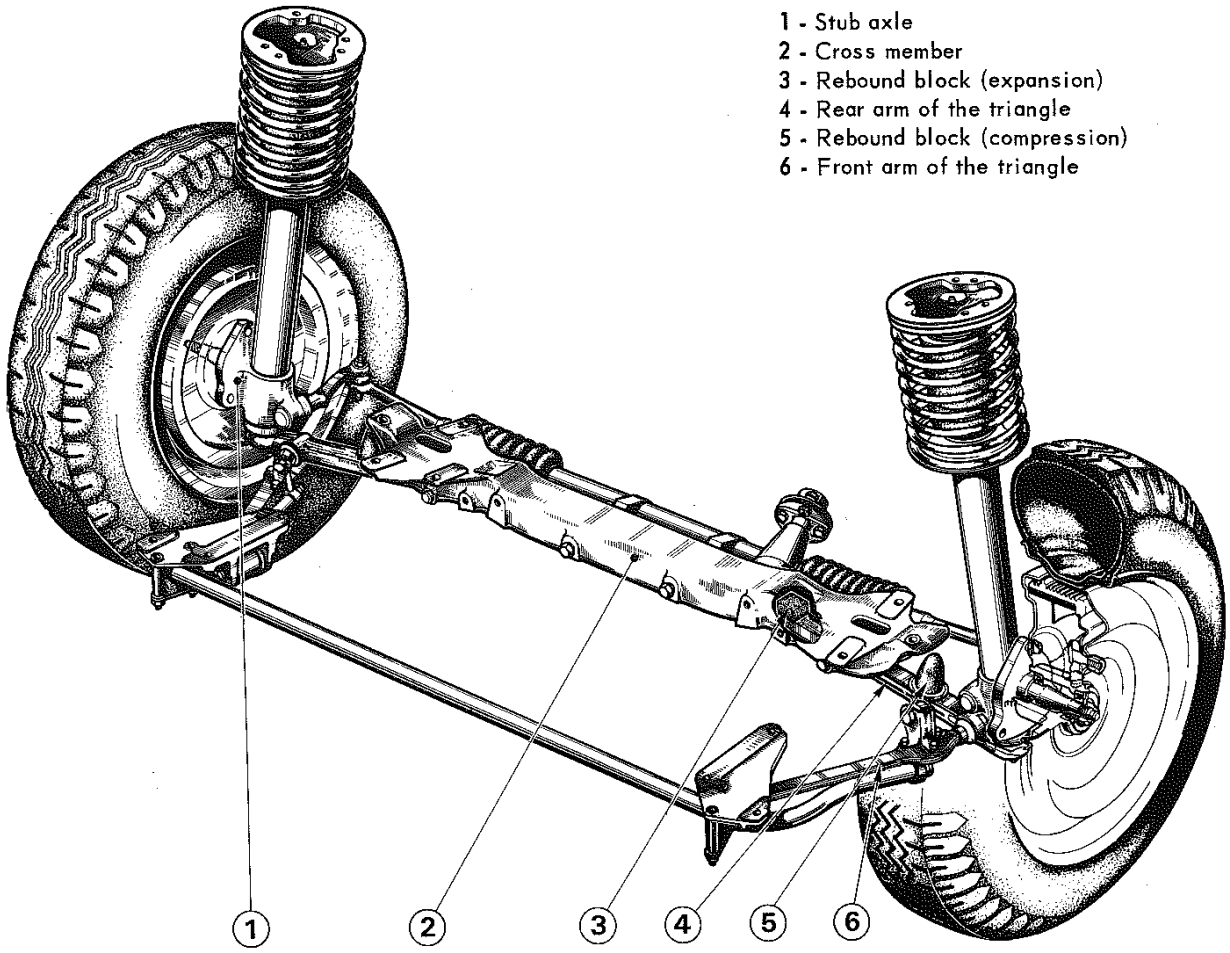
FRONT AXLE

6

PEUGEOT

FRONT AXLE

IDENTIFICATION - CHARACTERISTICS

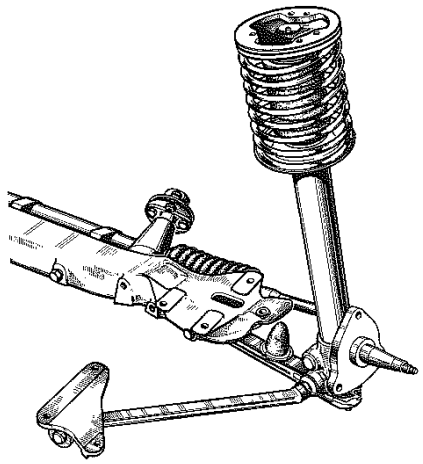


CHARACTERISTICS - 404 ALL MODELS

Toe-in	2 ± 1 mm	
Castor angle	2° ± 30'	
Camber angle	0°30' ± 45'	
Swivel pin inclination	9°50' ± 30'	
	404 - 404 C	**UNDER LOAD - 404 L-404 U**
Theorical inner steering angle	43°30'	42°
Theorical outer steering angle	34°	33°30'
	Inner wheel	**Outer wheel**
Checking the steering angles	20°	18°30'
	21°30'	20°

FRONT AXLE

IDENTIFICATION - CHARACTERISTICS



NORMAL SUSPENSION

404 Saloons

Up to serial numbers :
- **404** - 4 234 333
- **404 J** - 4 506 712

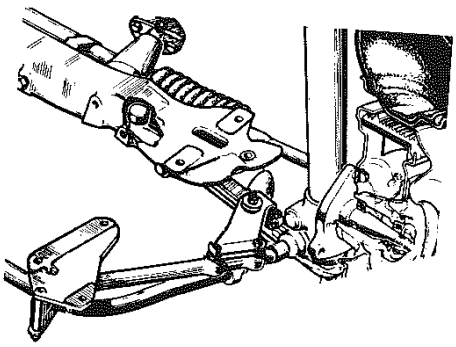
From beginning of series :
- **404/8** - 6 900 001

404 Station Wagons

From beginning of series :
- **404 U6** - 4 700 001
- **404 U6D** - 4 900 001

404 Light lorries

From beginning of series :
- **404 U8** - 7 010 001
- **404 U8D** - 7 040 001
- **404 U10** - 7 060 001
- **404 U10D** - 7 080 001

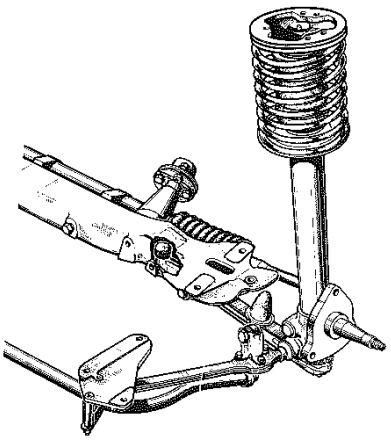


HIGH FLEXIBILITY SUSPENSION

1st fitting

Convertibles

Up to serial numbers :
- **404 C** - 4 495 418
- **404 C.KF** - 4 590 110

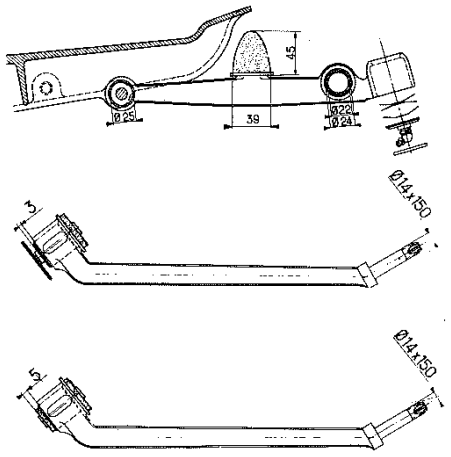


2nd fitting

All L.H.D. 404 models, except 404/8, Station Wagons and Light lorries

As from serial numbers :
- **404** - 4 260 001
- **404 J** - 4 525 001
- **404 KF** - 4 550 052
- **404 C** - 4 495 419
- **404 C.KF** - 4 590 111
- **404 D** - 4 600 001
- **404 L** - 4 825 001
- **404 LD** - 4 975 001
- **404 U6A** - 1 928 001

CONVENTIONAL SUSPENSION



TRIANGLE ARMS AND FRONT CROSS MEMBER

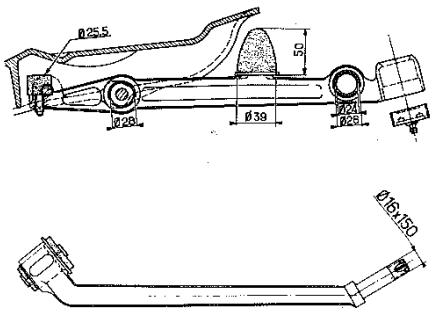
1st Fitting

Up to serial numbers :
404 - 4 211 714
404 J - 4 506 349

Cross member : without facing for rebound stop
Rear arm : without rebound stop (expansion)
Front arm :

Up to serial numbers :
404 - 4 145 984
404 J - 4 505 086
with silentbloc protruding 3 mm and rubber washer.

Up to serial numbers :
404 - 4 211 714
404 J - 4 506 349
with silentbloc protruding 5 mm.



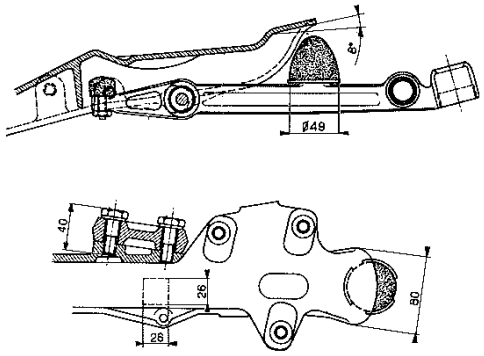
2nd Fitting

404	from n° 4 211 715 to n° 4 234 333
404 J	from n° 4 506 350 to n° 4 506 712
404 U6	from n° 4 700 001 to n° 4 704 137
404 U6D	from n° 4 900 001 to n° 4 900 806

Cross member :
with facing for rebound stop

Rear arm :
with cylindrical rebound stop (expansion)

Front arm :
reinforced (16 mm diameter extremity)



3rd Fitting

As from serial numbers :
404 U6 - 4 704 138
404 U6D - 4 900 807
From beginning of series :
404/8 - 6 900 001
404 U8 - 7 010 001
404 U8D - 7 040 001
404 U10 - 7 060 001
404 U10D - 7 080 001

Cross member :
enlarged extremities : 80 mm in place of 70 mm.

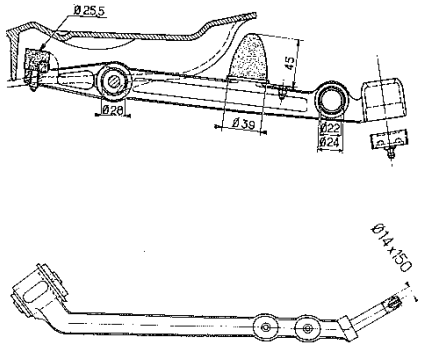
Rear arm :
Square rebound stop (expansion)
Reinforced rebound stop (compression)

Front arm :
Identical to that of the 2nd fitting.
Front engine support mounting bolt shortened by 5 mm.

FRONT AXLE

IDENTIFICATION - CHARACTERISTICS

HIGH FLEXIBILITY SUSPENSION



TRIANGLE REAR ARMS AND FRONT CROSS MEMBER

1st Fitting

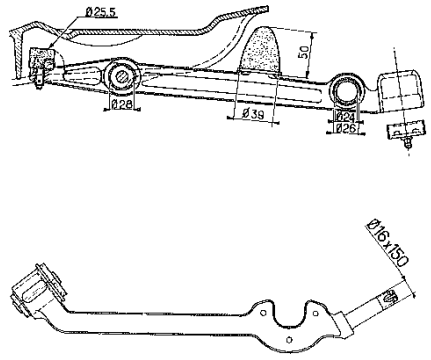
Up to serial numbers :

404 C - 4 495 418
404 C.KF - 4 590 110

Cross member :
with facing for rebound stop.

Rear arm :
with threaded hole for anti-roll bar link fitting.

Front arm :
with two threaded holes for anti-roll bar link fitting.



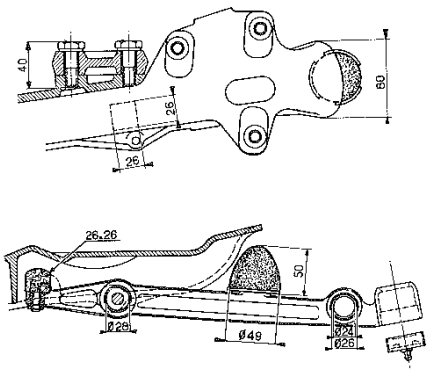
2nd Fitting

404	from n° 4 260 001 to n° 4 299 190
404 J	from n° 4 525 001 to n° 4 525 563
404 KF	from n° 4 550 052 to n° 4 550 832
404 C	from n° 4 495 419 to n° 4 495 777
404 C.KF	from n° 4 590 111 to n° 4 590 776
404 L	from n° 4 825 001 to n° 4 826 697
404 LD	from n° 4 975 001 to n° 4 975 272

Cross member :
Identical to that of the first fitting.

Rear arm :
Threaded hole removed : Articone reinforced.

Front arm :
Reinforced, with mounting for the anti-roll bar link fitting.



3rd Fitting

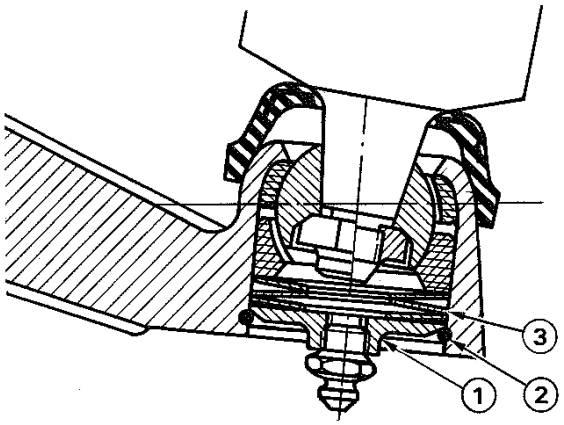
As from serial numbers :

404	- 4 299 191	**404 C.KF**	- 4 590 777
404 J	- 4 525 564	**404 D**	- 4 600 001
404 KF	- 4 550 833	**404 L**	- 4 826 698
404 C	- 4 495 778	**404 LD**	- 4 975 273

Cross member :
Extremities enlarged : 80 mm in place of 70 mm.

Rear arm :
Square rebound stop (expansion)
Reinforced rebound stop (compression)

Front arm :
Identical to that of the second fitting
Front engine mounting shorter by 5 mm.

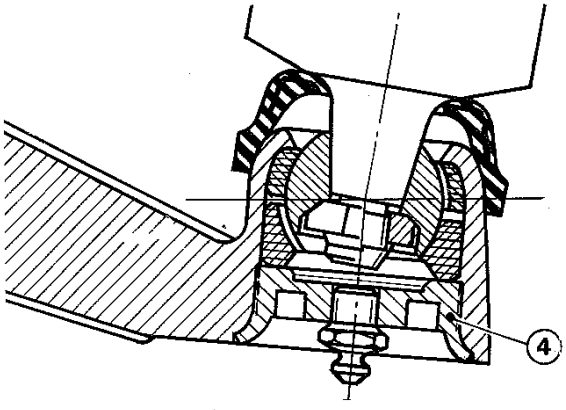


CLOSING OF THE LOWER BALL JOINT SOCKET

1st Fitting

Sealing washer 1 retained by the spring clip 2.

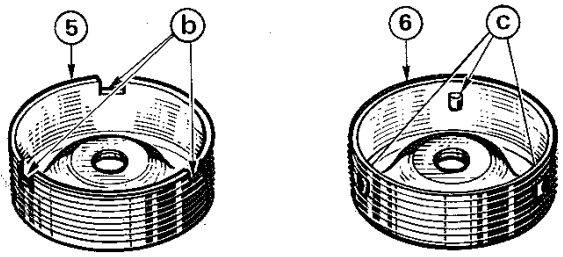
The Belleville washers 3 ensuring the adjustment of the ball joint.



2nd Fitting

Sealing with a cutaway nut 4 ensuring the adjustment of the ball joint.

1st model : holes (a) of 5 mm diameter
2nd model : holes (a) of 7.5 mm diameter.



3rd Fitting

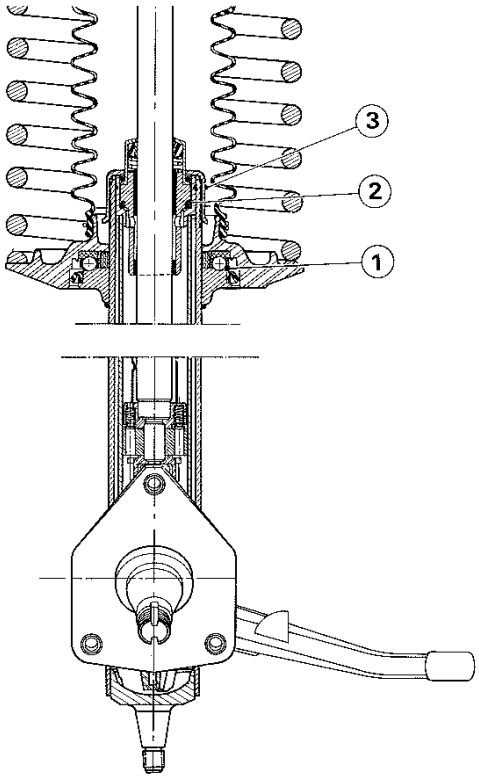
Sealing with a nut ensuring the adjustment of the ball joint.

1st model : 5 with three notches b
2nd model : 6 with three inner shoulders c.

- The 4 types of nut are interchangeable.

FRONT AXLE

IDENTIFICATION - CHARACTERISTICS



STEERING SWIVELS

1st Fitting

Up to serial numbers :

404	- 5 047 268	**404 D**	- 4 605 479
404 J	- 4 529 915	**404 L**	- 4 851 758
404 KF	- 4 570 595	**404 LD**	- 4 979 999
404 C	- 4 497 653	**404 U6**	- 4 737 899
404 C.KF	- 4 594 004	**404 U6D**	- 4 908 257

1 - Ball-bearing
2 - Shock absorber with swivel bearing
3 - Sealing or closing nut, P.N. 5346.09 with collar having 4 notches.

2nd Fitting

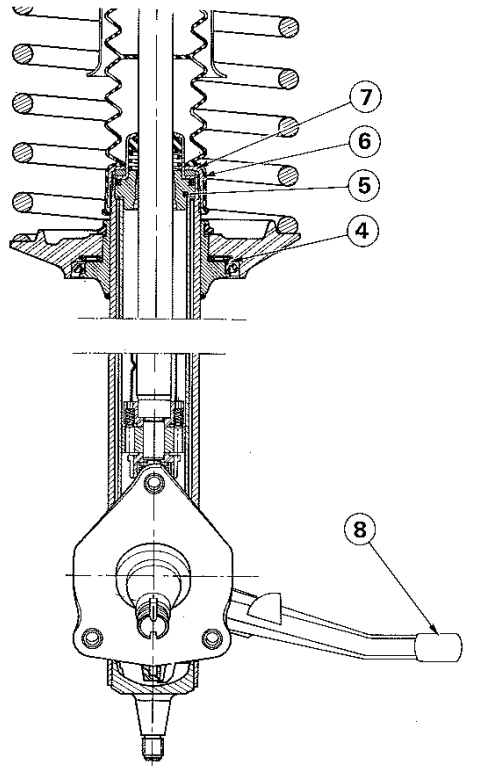
As from serial numbers :

404	- 5 047 269	**404 D**	- 4 605 480
404 J	- 4 529 916	**404 L**	- 4 851 759
404 KF	- 4 570 596	**404 U6**	- 4 737 900
404 C	- 4 497 654	**404 LD**	- 4 980 001
404 C.KF	- 4 594 005	**404 U6D**	- 4 908 258

From beginning of series :

404/8	- 6 900 001	**404 U10**	- 7 060 001
404 U8	- 7 010 001	**404 U10D**	- 7 080 001
404 U8D	- 7 040 001		

4 - Needle roller bearing
5 - Shock absorber with rigid bearing
6 - Simplified rod protector
7 - Sealing or closing nut, P.N. 5346.10, with 2 upper notches.

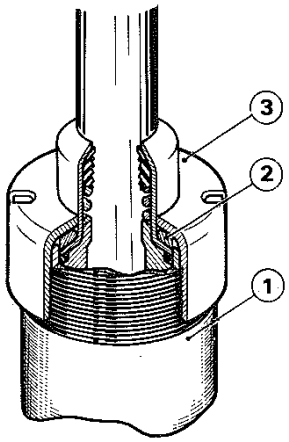


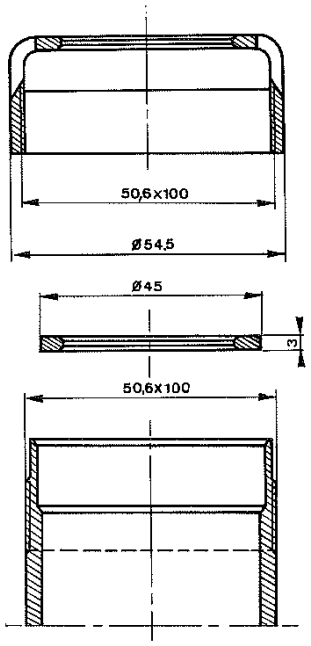
3rd Fitting

As from serial numbers :

404 (TW)	- 5 064 972	**404 L (TW)**	- 4 897 516
404 (TH)	- 5 251 287	**404 L (TH)**	- 4 873 222
404 J	- 5 536 897	**404 L Break**	- 4 873 113
404 KF	- 8 211 210	**404 LD**	- 4 982 799
404 C	- 4 499 033	**404 U6**	- 4 756 704
404 C.KF	- 4 598 057	**404 U6A**	- 1 927 086
404 D	- 4 615 905	**404 U6D**	- 4 912 739

8 - Track arm raised by 5 mm.





THREADING OF THE FRONT SHOCK ABSORBER SEALING NUT

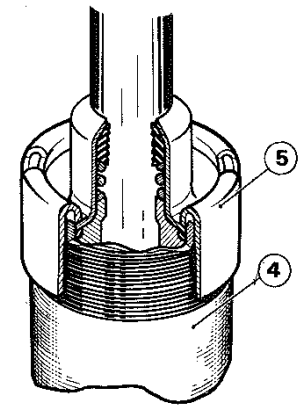
1st Fitting

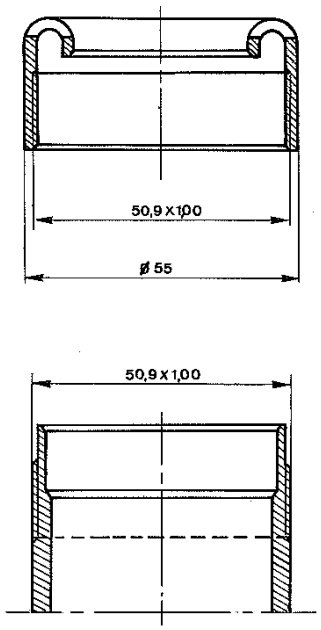
Up to serial numbers :

404 (TW)	- 5 075 000	**404 L (TW)**	- 4 940 000
404 (TH)	- 5 311 000	**404 L (TH)**	- 4 884 001
404 ZF	- 8 251 300	**404 L Break**	- 4 884 000
404 KF	- 8 224 862	**404 U6**	- 4 763 174
404 C	- 4 499 500	**404 U6A**	- 1 928 100
404 C.KF	- 4 599 271	**404 LD**	- 4 984 114
404 D	- 4 619 852	**404 U6D**	- 4 914 547

1 - Steering swivel
2 - Thrust washer
3 - Sealing nut, P.N. 5346.10

- Diameter of the threading of the sealing nut : **50.6 mm.**





2nd Fitting

As from serial numbers :

404 (TW)	- 5 075 001	**404 L (TW)**	- 4 940 001
404 (TH)	- 5 311 001	**404 L (TH)**	- 4 884 002
404 ZF	- 8 251 301	**404 L Break**	- 4 884 001
404 KF	- 8 224 863	**404 U6**	- 4 763 175
404 C	- 4 499 501	**404 U6A**	- 1 928 101
404 C.KF	- 4 599 272	**404 LD**	- 4 984 115
404 D	- 4 619 853	**404 U6D**	- 4 914 548

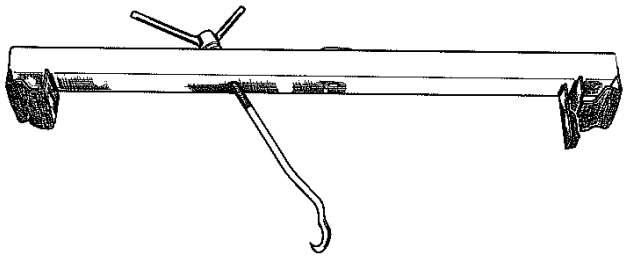
4 - Steering swivel
5 - Sealing nut, P.N. 5046.13.

- Diameter of the threading of the sealing nut : **50.9 mm.**
- the sealing nuts of the two fittings are not interchangeable.

PEUGEOT

FRONT AXLE

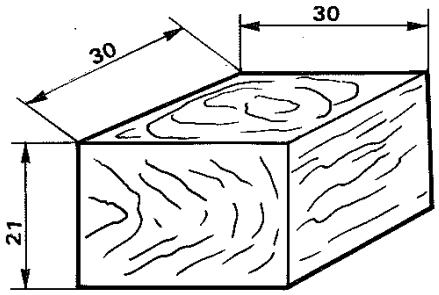
REMOVAL AND REFITTING OF THE FRONT CROSS MEMBER



TOOLS TO BE USED

8.0116 Y

Engine support crossbar.



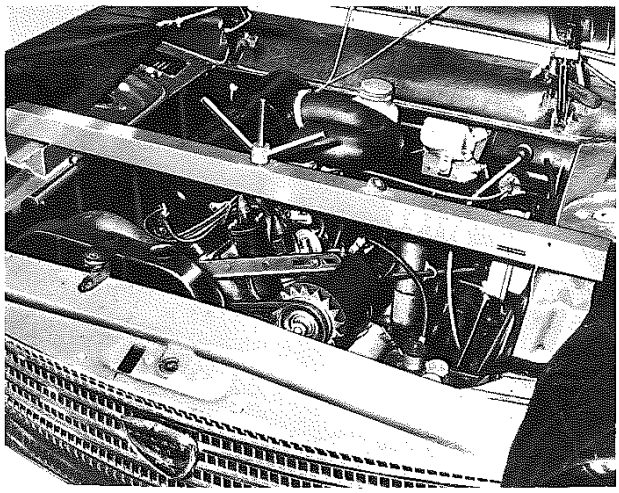
These tools must be produced in the workshop.

0.0604

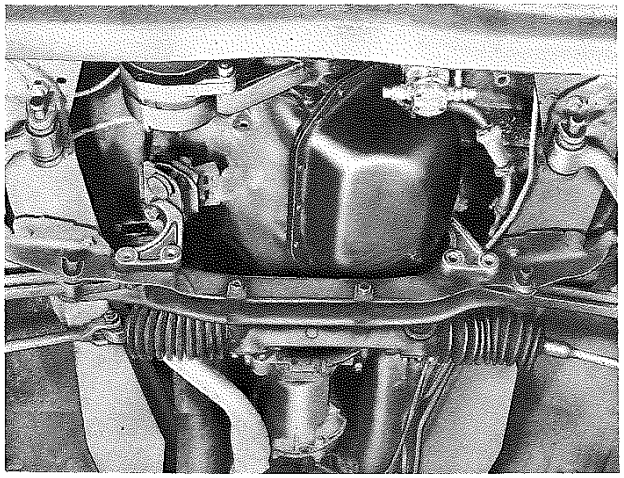
2 wooden spacers to interpose between the rebound block and the face on the crossmember.

FRONT AXLE

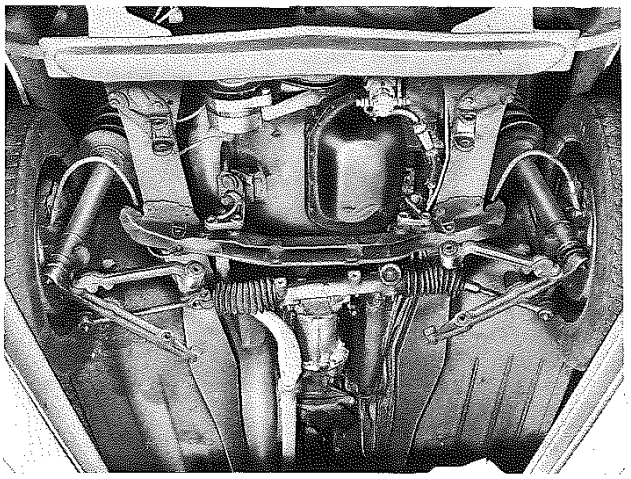
FRONT CROSS MEMBER - REMOVAL



- Position the vehicle over a pit or on a car lift.
- Disconnect the battery.
- Place the engine support crossbar **8.0116 Y**, equipped with its rod, in position.
- Insert the hook in the cylinder block suspension eye, under the coil, and tighten the wing nut, until the engine is supported.



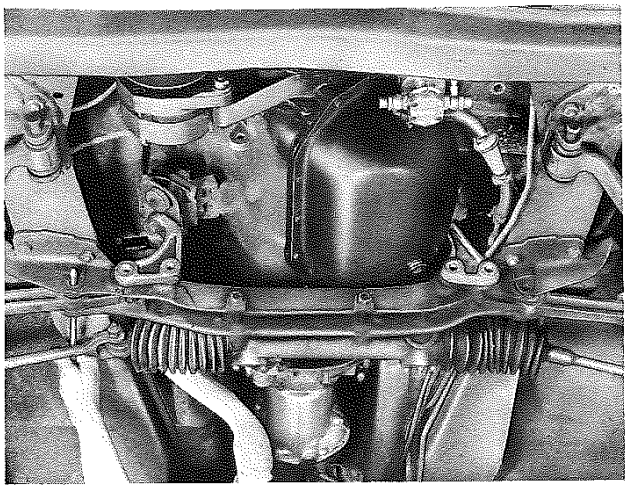
- Remove the engine securing bolts from the front supports.
- Remove the anti-roll bar.
- Remove the nuts from the front and rear suspension and pivots.
- Drift out the pivots until they are flush with the flanches.
- Using a chain hoist, maintain the front of the vehicle in position.
- Remove completely the pivots using a drift.



- Raise the vehicle until the front wheels are clear and chock the vehicle.
- Disengage the front and rear arms from the flanges and the cross member.
- Raise the engine slightly by tightening the support crossbar wing nut.
- Remove :
  - the two bolts securing the steering box to the cross member.
  - the bolts securing the brake hose.
  - the six bolts securing the cross member to the sidemembers.
- Remove the cross member.

FRONT AXLE

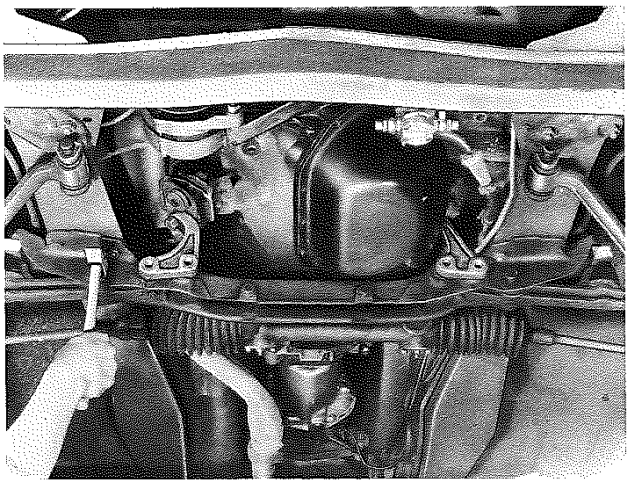
FRONT CROSS MEMBER - REFITTING



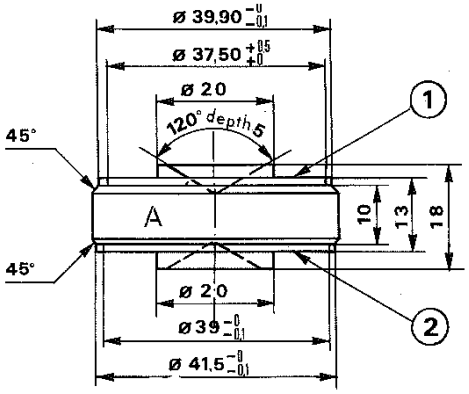
- Position the cross member; tighten the bolts to **40 ft.lbs (5.5 m.kg).**
- Secure the brake hose.
- Secure the steering box; tighten the bolts to **29 ft.lbs (4 m.kg).**

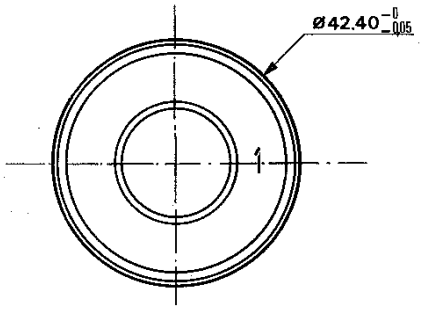
IMPORTANT

- Fit the front and rear arms of the triangles using **new pivots** (with the heads facing the front of the vehicle).
- To effect this operation :
  - place the front and rear arms of the triangles in position.
  - insert the pivots of the front arms, up to the splines.
  - using a rod, centre the rear arm flexible bushes, whilst lowering the car onto its wheels.
  - insert the pivots of the rear arms, up to the splines.



- Before completely engaging the pivots, place the spacers **0.0604** of 21 mm between the rebound blocks and the cross member faces.
- Push down on the front of the vehicle until the spacers **0.0604** are clamped between the rebound blocks and the cross member. The flexible bushes are in the **neutral position** at this moment.
- Drift the pivots in using a hammer.
- Tighten the nuts :
  - front arm, on the yoke : **58 ft.lbs (8 m.kg).**
  - rear arm, on the cross member : **62 ft.lbs (8.5 m.kg).**
- Pin the pivots.
- Lower the engine and secure the front supports, tighten the bolts to **40 ft.lbs (5.5 m.kg).**
- Refit the anti-roll bar;
  tighten :
  - the link to the yoke : **33 ft.lbs (4.5 m.kg)**
  - **the bearing** securing bolts : **9 ft.lbs (1.25 m.kg)**
- Thread a Pal lock nut onto the pivot of the yoke.
- Remove the engine support crossbar and refit the accessories.





TOOLS TO BE USED

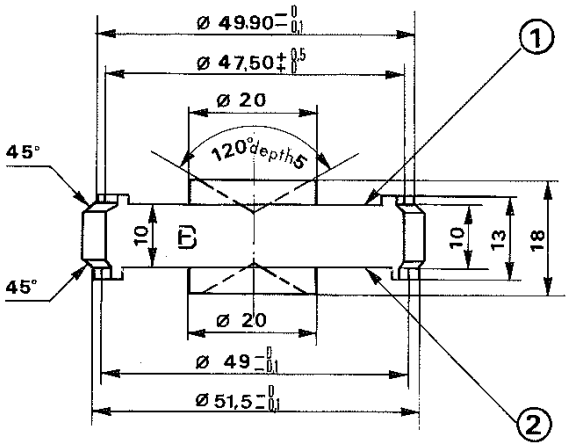
These tools must be produced in the workshop.

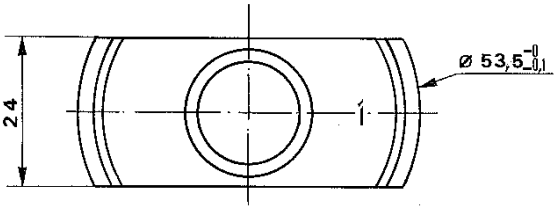
0.0601 A

Plate for removing the outer wheel bearing outer race.

1 - Face to be used for the 1st fitting outer race.

2 - Face to be used for the 2nd fitting outer race.





0.0601 B

Plate for removing the inner wheel bearing outer race.

1 - Face to be used for the 1st fitting outer race.

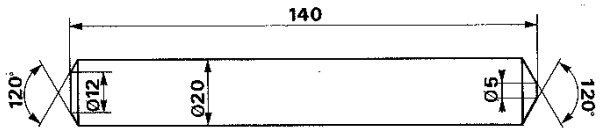
2 - Face to be used for the 2nd fitting outer race.

N.B. - The figures 1 and 2 should be marked on the corresponding faces.

PEUGEOT

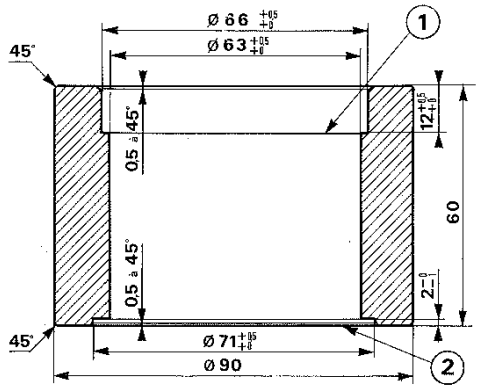
FRONT AXLE

HUBS



0.0601 C

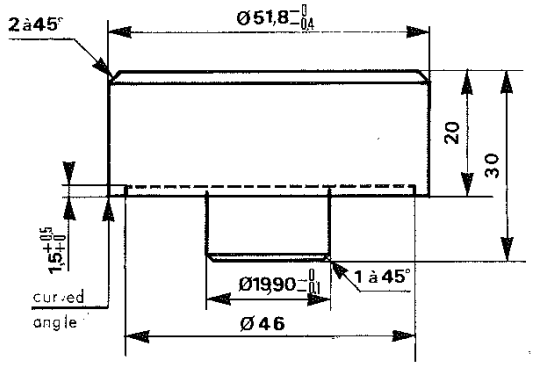
Drift for use with the outer bearing race extractor plates.



0.0601 D

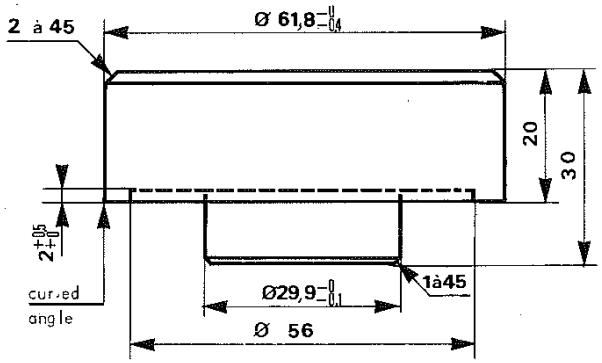
Hub thrust anvil.

1 - Face for the outside of the hub.
2 - Face for the inside of the hub.



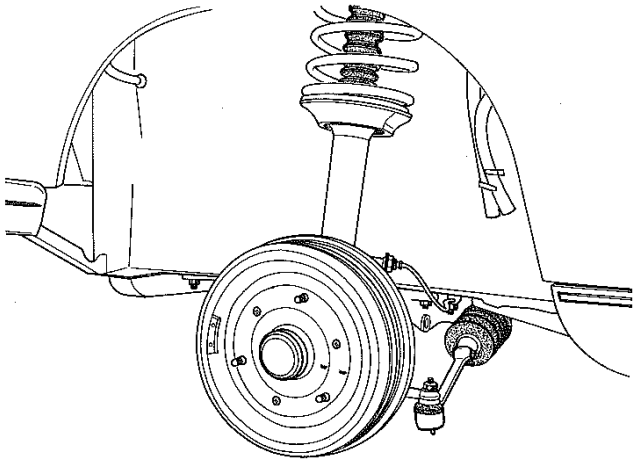
0.0601 E

Drift for refitting the outer bearing.



0.0601 F

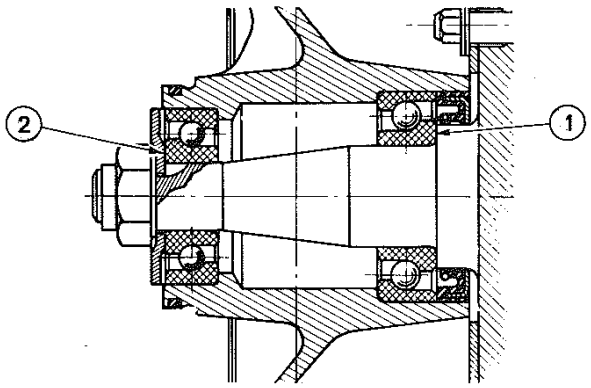
Drift for refitting the inner bearing.



I - DRUM BRAKES

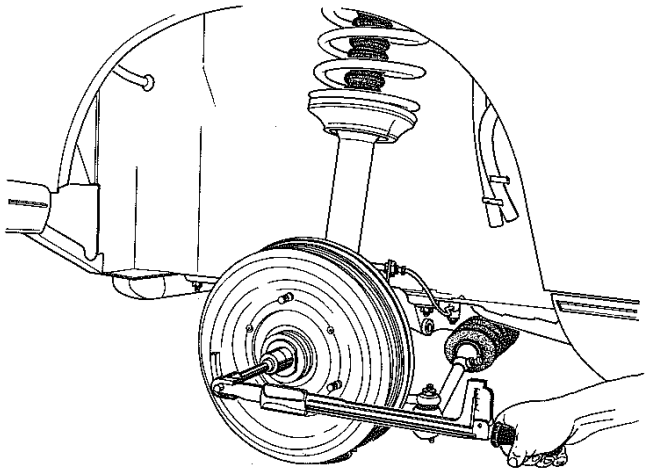
REMOVAL

- Raise the front of the vehicle.
- Chock the car under the cross member.
- Remove the wheel and the drum after marking their relative position.
- Remove the hub.



REFITTING

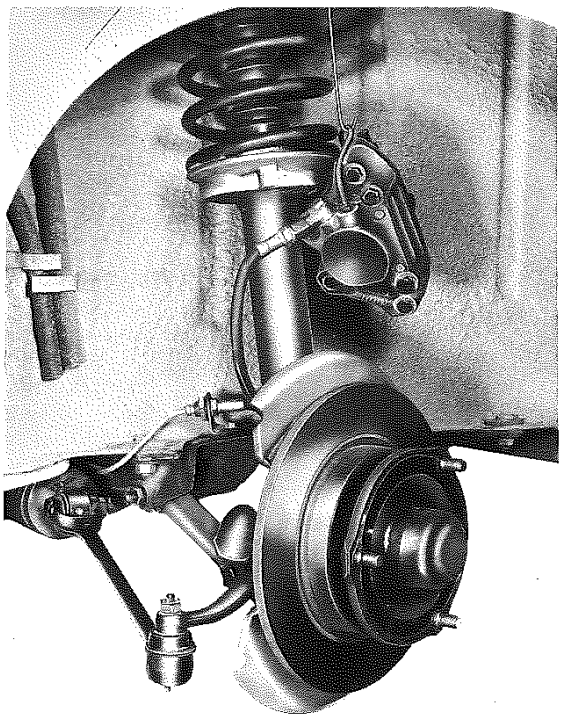
- Position the hub on the stub axle, with the inner bearing **1** well down on the shoulder on stub axle.
- Fit the washer with the shoulder **2** against the bearing inner race.
- Fit a **new** nut, pre-tighten to **22 ft.lbs (3 m.kg)** and then loosen it.



- Tighten the nut finally to **7.25 ft.lbs (1 m.kg)**
- Lock the nut carefully in the two notches provided.
- Fit the wheel bearing cap, packed with Esso Multipurpose Grease H.
- Fit the brake drum and the wheel following the marks made during removal.
- Tighten the wheel nuts with a torque wranch :
  Saloons : 43.5 ft.lbs (6 m.kg)
  Associated vehicles : 58 ft.lbs (8 m.kg).

FRONT AXLE

HUBS

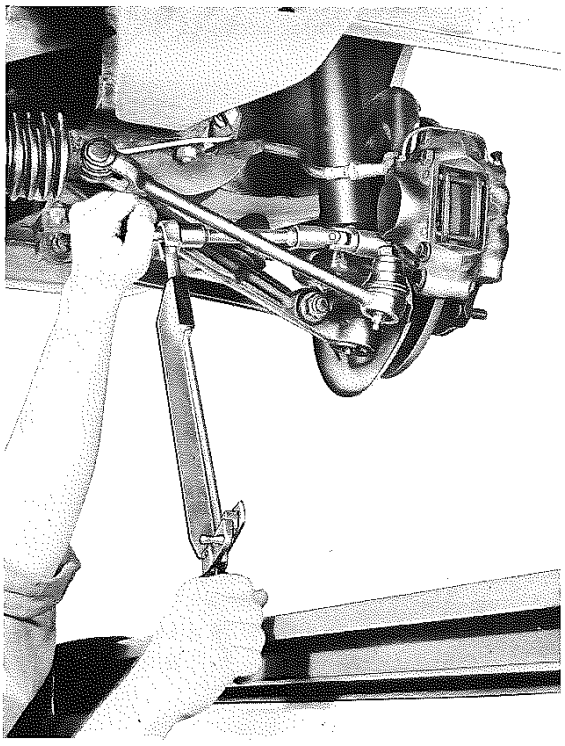


II - DISC BRAKES

REMOVAL

- Raise the front of the vehicle.
- Chock the vehicle under the cross member.
- Remove the wheel after marking its position.
- Remove the bolts securing the caliper and hang this from the suspension spring using a hook, without disconnecting the brake hose.
- Remove the hub.

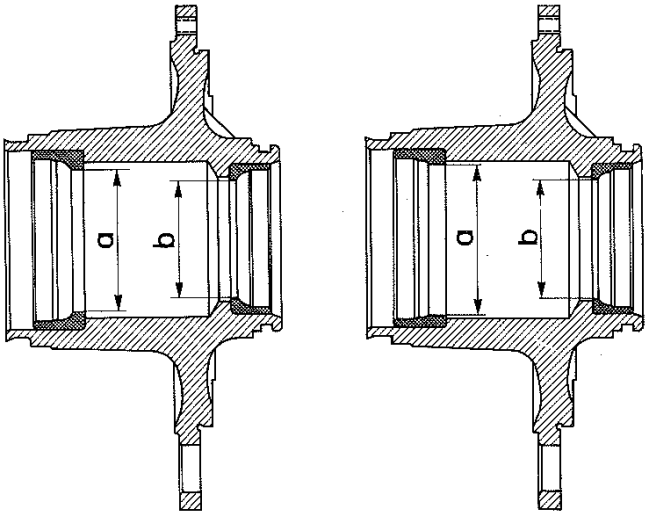
N.B. - It is not necessary to remove the disc to replace the bearings.



REFITTING

- Reposition the hub on the stub axle.
- Clean the brake disc (if necessary, remove the grease with a cloth soaked in trichlorethylene).
- Refit the brake caliper.
- Tighten the bolts to **51 ft.lbs (7 m.kg).**

N.B. - Replace the bearings in the same manner as for 404 fitted with drum brakes.

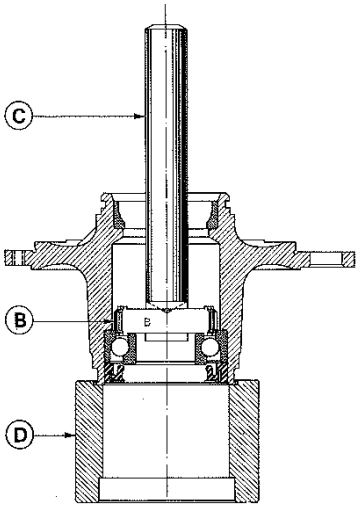


DISMANTLING

In order to use the plates **0.0601 A** and **B** it is necessary to identify the outer races of the bearings.

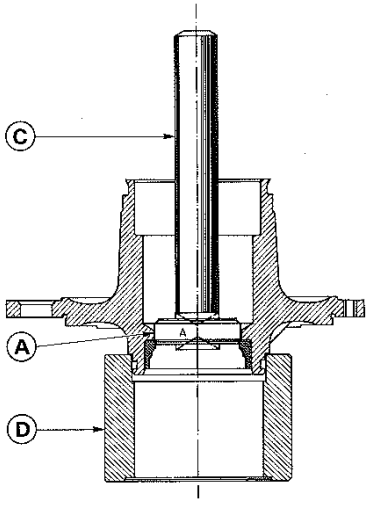
	Inner bearing	Outer bearing
1st fitting	a = 50.3	b = 40
2nd fitting	a = 51.7	b = 41.6

N.B. *- The 2nd fitting bearings are fitted to vehicles as from April 1962.*



Inner bearing

- Remove excess grease from the hub.
- Insert the plate **B** in the hub with the face 1 or 2 against the outer race depending on the fitting.
- Place the hub on the thrust anvil **D** on the larger diameter side.
- Remove the bearing and its oil seal, using the drift **C,** on the press.

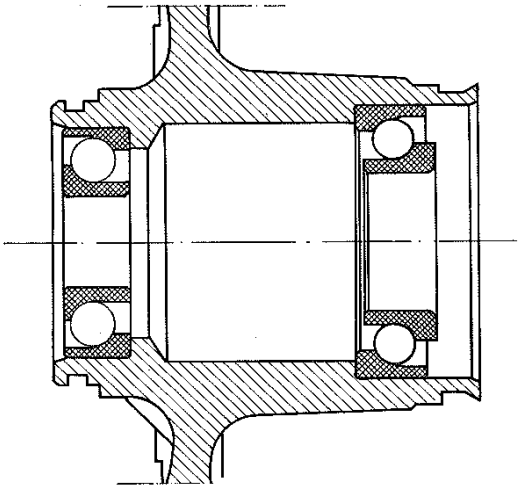


Outer bearing

- Insert the plate **A** in the hub with the face 1 or 2 against the outer race, depending on the fitting.
- Turn the anvil **D** over.
- Place the hub on the anvil.
- Remove the bearing, using the drift **C,** on the press.

FRONT AXLE

HUBS

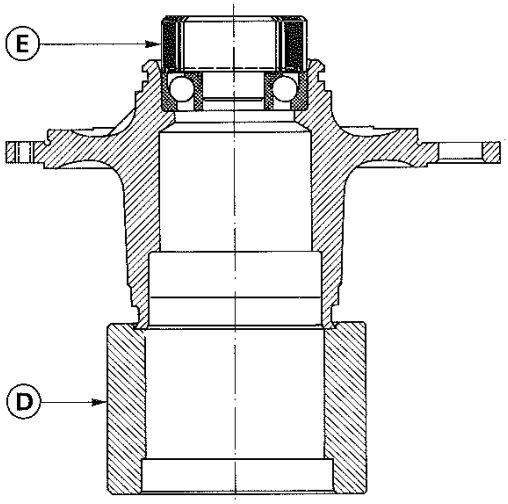


RE-ASSEMBLY

- Clean and wipe dry the components.
- Check the surface of the balls on the bearing races.
- New bearings should be fitted without degreasing.
- Pack the hubs and bearings with Esso Multipurpose Grease H (100 g).
- Check the bearing races are correctly fitted (see diagram opposite).

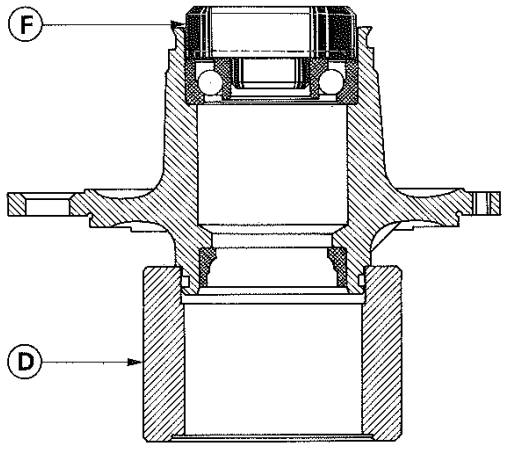
IMPORTANT

- The inner races, outer races and ball bearing cages are paired. This pairing must not be altered.



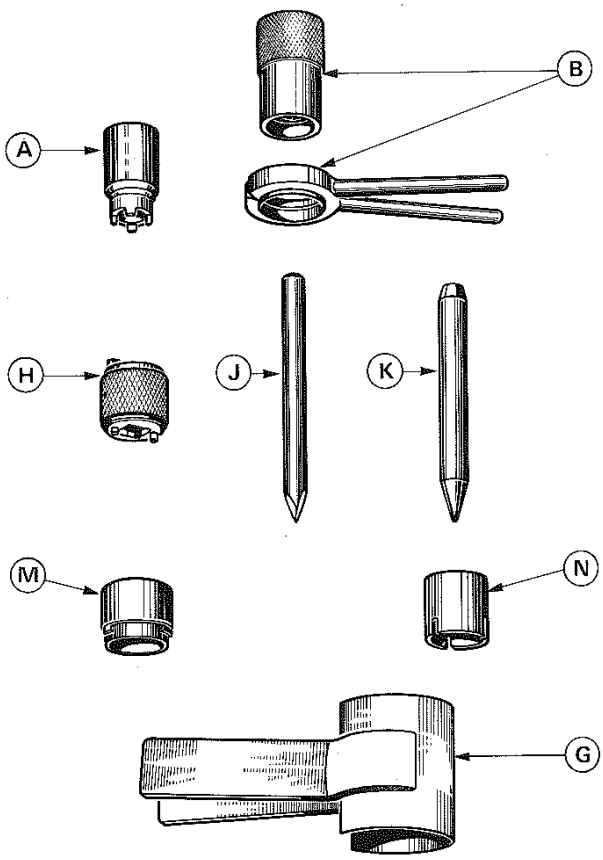
Outer bearing

- Fit the complete bearing in the hub using :
  - the anvil **D**
  - the drift **E**
  - the press
- Remove the inner race.



Inner bearing

- Fit the complete bearing using the drift **F** in the same manner as previously.
- Check that the races are well down in their housings.
- Fit the oil seal flush with the hub.
- Fit the inner race of the outer bearing.
- Fit the hub on the vehicle.



TOOLS TO BE USED

Tool Chest 8.0902 V

A - Castled socket for lower ball joint securing nut.

B - Lower ball joint housing snap ring fitting apparatus (1st fitting).

H - Pin socket for lower ball joint securing nut.

J - Unstaking tool.

K - Staking tool.

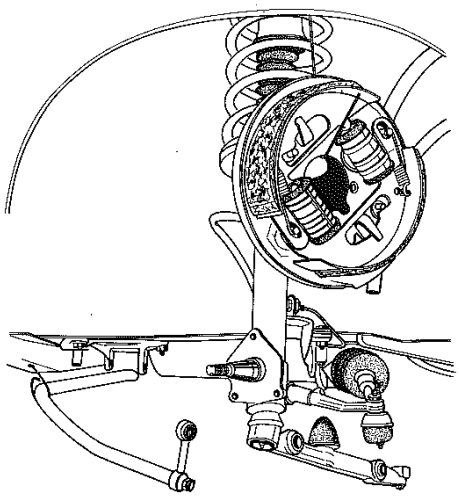
M - Lower ball joint housing nut socket with 3 shoulders.

N - Lower ball joint housing nut socket with 3 notches.

G - Support clamp.

FRONT AXLE

TRIANGLE ARMS



REMOVAL

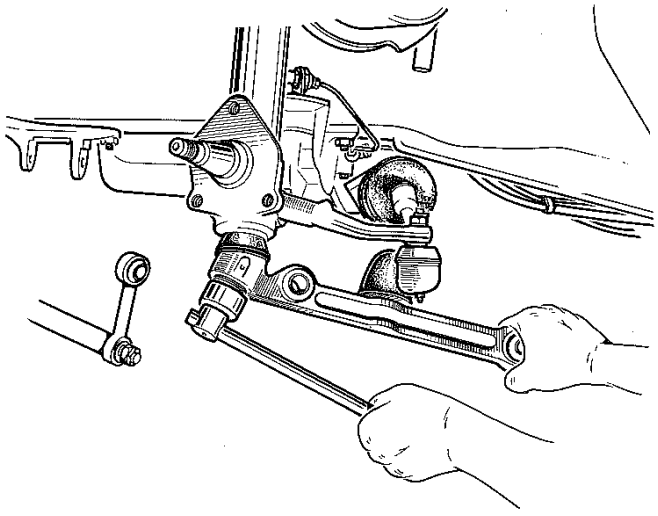
- Position the car over a pit or on a car lift.
- Disconnect the anti-roll bar link, if fitted, and remove the bush.
- Remove the front and rear arm pivots (see class 6, page 02 02).
- Disconnect the front and rear arms.
- Raise and chock the car.
- Remove the front wheel, marking its position on the hub.

Drum brakes

- Remove the hub/drum assembly.
- Remove the 3 Allen screws securing the brake plate.
- Release the brake plate

Disc brakes

- Also remove the brake caliper from its support



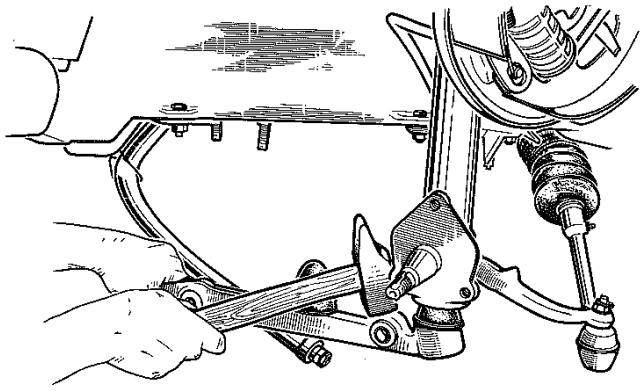
1st Fitting

- Remove the snap ring using a pin punch in the hole provided.
- Recover the sealing washer and the Belleville washers.

2nd Fitting

- Unlock the nut using the tool **J.**
- Remove the nut using the corresponding socket :

H - Pin socket for cutaway nut.
M - Socket with 3 shoulders.
N - Socket with 3 notches.



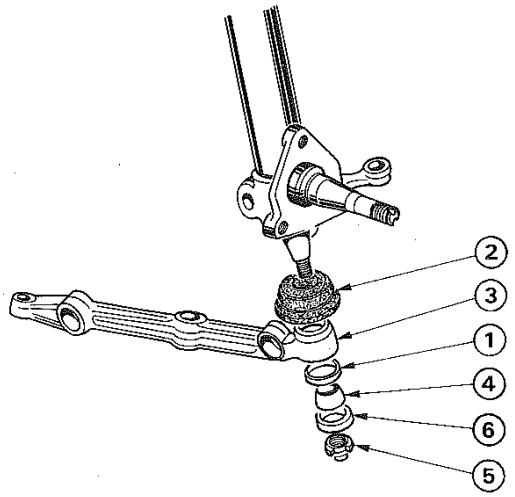
- Remove the nut on the ball joint using the spanner **8.0902 A.**

- Hold the rear arm and give it a sharp blow, as close as possible to the ball joint housing, to disengage the ball joint from its cone.

- Recover the lower half-bearing, the ball head and the upper half-bearing.

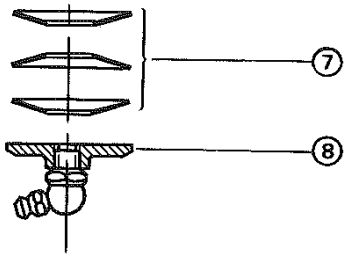
- Withdraw the rubber protector from the stub axle.

- Replace the flexible bushings if necessary.



REFITTING

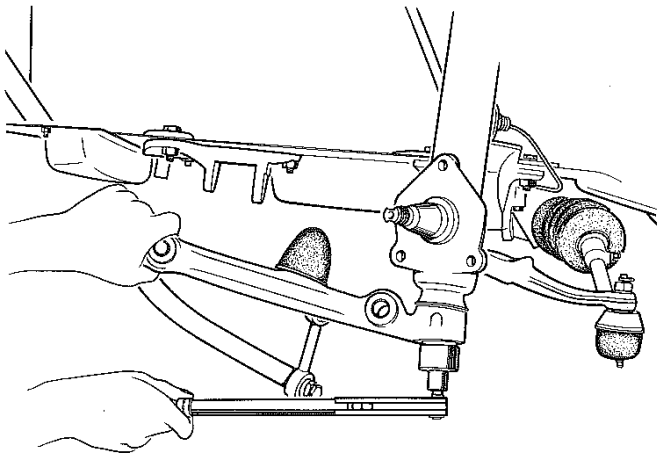
- Clean the components.
- Check the thread on the end of the cone on the shock absorber body.
- Replace all worn parts.
- Position the green upper half-bearing **1** (8 mm thick) in the triangle arm.
- Fit, in order, on the ball joint cone :
  - the rubber protector **2**
  - the ball head **4**
  - a **new** nut **5** and tighten this to **33 ft.lbs (4.5 m.kg)**. Lock it carefully in the notches provided.
  - the white lower half-bearing **6** (10 mm thick).



1st Fitting

- Then fit 3 **new** Belleville washers **7** in the correct direction of fitment.
- Fit the sealing washer **8** and a new snap ring using the apparatus **8.0902 B.**
- Grease the ball joint housing.

N.B. - To facilitate removal of the snap ring, position one of the ends opposite the hole provided in the triangle arm.

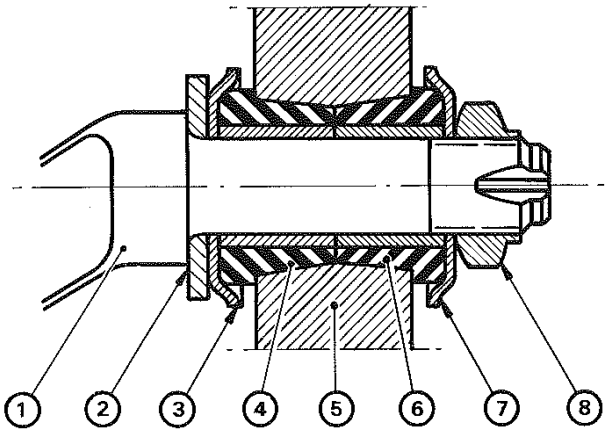


2nd Fitting

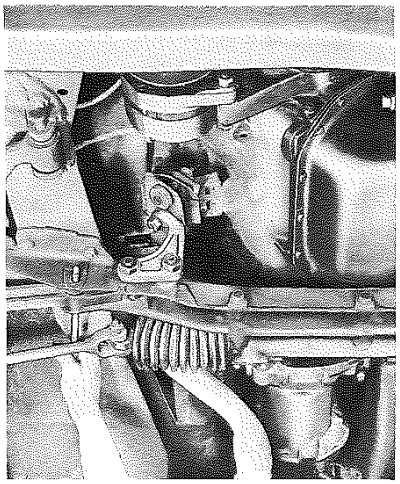
- Fit a **new** nut, using the corresponding socket **H, M** or **N.**
- Hold, the arm so that the ball joint housing is on the axis of the shock absorber and tighten the nut to **5.5 ft.lbs (0.75 m.kg).**
- Lock the nut, using the tool **K,** in the grooves provided.
- Fit the grease nipple and grease the ball joint.

FRONT AXLE

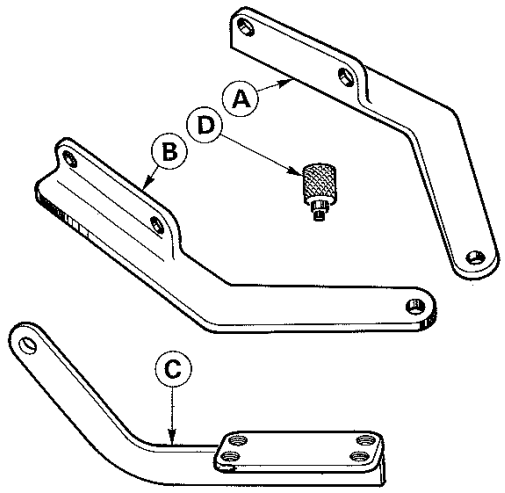
TRIANGLE ARMS



- Fit, in order, on the front arm **1** :
  - the thrust washer **2**
  - the cup **3**
  - the half-bush **4**
- Insert this assembly in the rear arm **5.**
- Fit, in order, on the cylindrical part of the front arm **1** :
  - the second half-bush **6**
  - the rear cup **7**
  - a **new** nut **3** and hand tighten this temporarily.



- Refit the brake plate or the brake caliper support and tighten the Allen screws to **43.5 ft.lbs (6 m.kg).**
- Lock the screws by flattening the threads.
- Refit the hub/drum or hub/disc assembly (see class 6, page 04 03).
- Refit the brake caliper where necessary and tighten the bolts to **51 ft.lbs (7 m.kg).**
- Refit the wheel respecting the reference marks.
- Refit the front and rear arms using new pivots (see class 6, page 02 03).
- Tighten the bush nut to **25 ft.lbs (3.5 m.kg)** and lock it in the grooves provided.



TOOLS TO BE USED

8.0605 Z

STUB AXLES FIRST FITTING

A - Checking gauge for track arm on right hand stub axle.

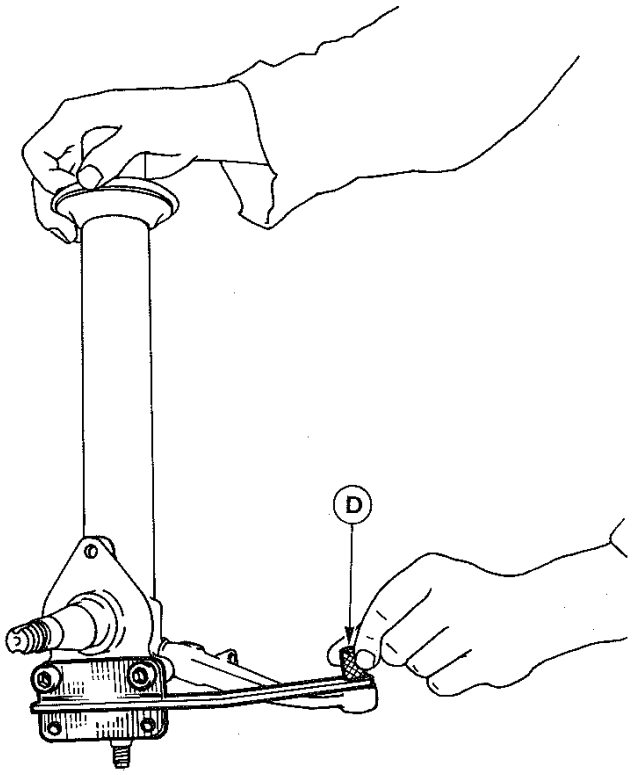
B - Checking gauge for track arm on left hand stub axle.

STUB AXLES SECOND FITTING

(with track arm raised by 5 mm : see class 6, page 01 06).

C - Checking gauge for left and right hand track arms.

D - Eccentric knurled pin.



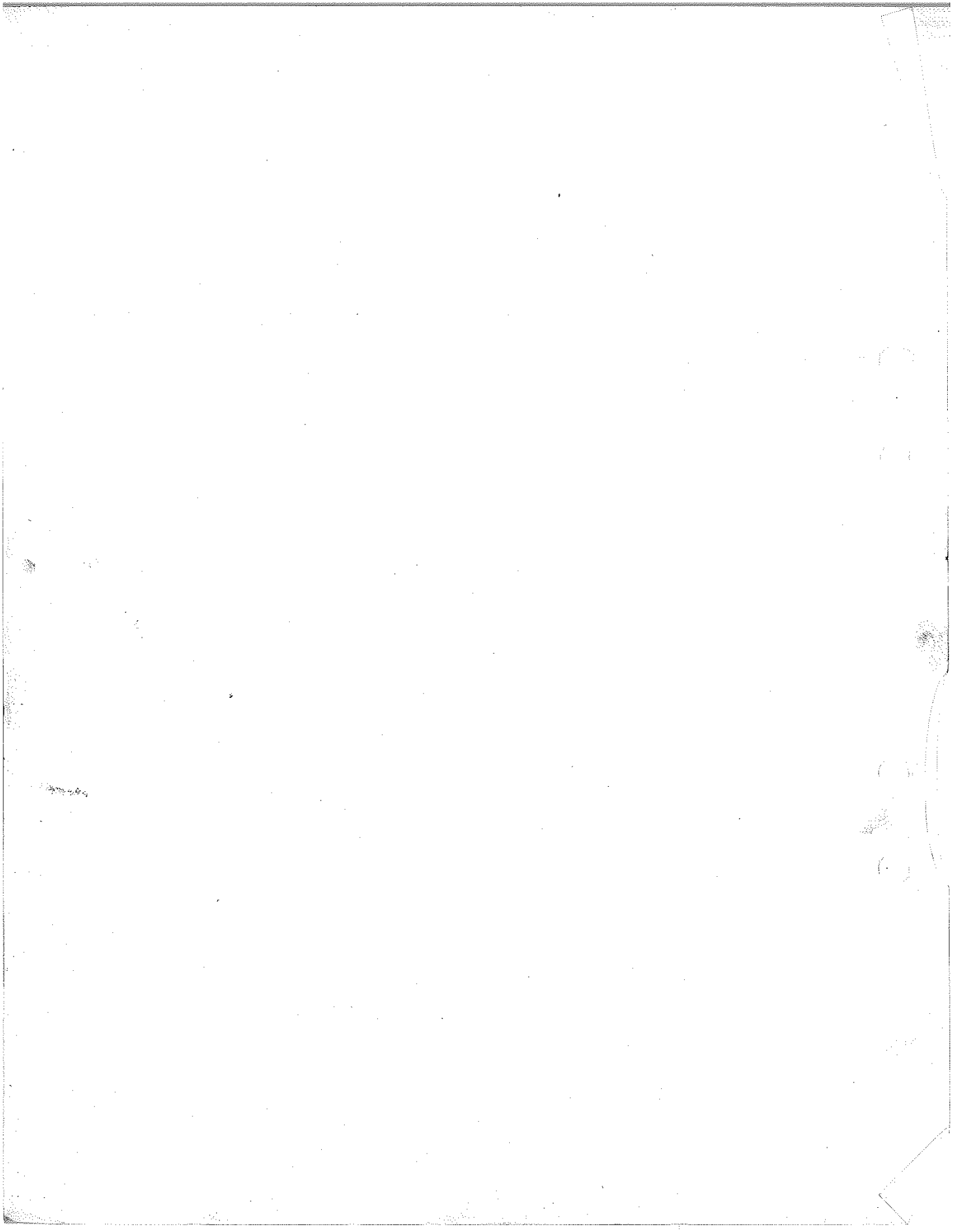
CHECKING THE TRACK ARMS

- Secure the checking gauge to the corresponding stub axle.
- Check the horizontal parallelism of the checking gauge and the eye of the track arm.
- Insert the eccentric pin **D** in the gauge.
- Rotate the pin to engage the lower part in the conical hole in the track arm.

N.B. *- Replace all stub axles which do not meet the above mentioned requirements.*

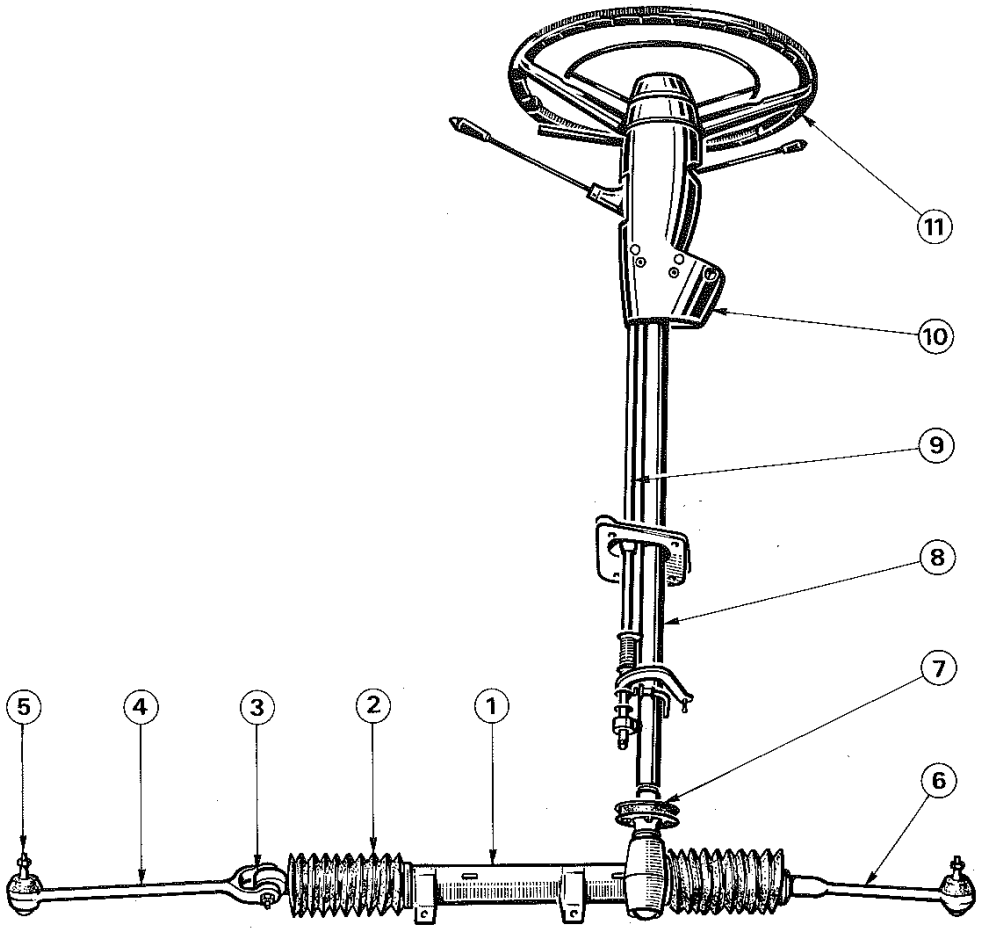
- For dismantling and reassembly of the stub axle (see class 9).

PEUGEOT



STEERING GEAR

7

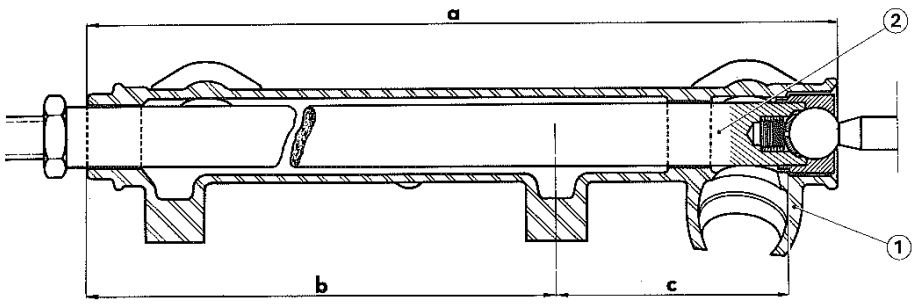


1 - Steering gear housing or steering box.
2 - Rack rubber boots.
3 - Rack eye.
4 - Right hand track rod.
5 - Ball joint.
6 - Left hand track rod.
7 - Flector.
8 - Steering Column.
9 - Gear change control rod.
10 - Shells.
11 - Steering wheel.

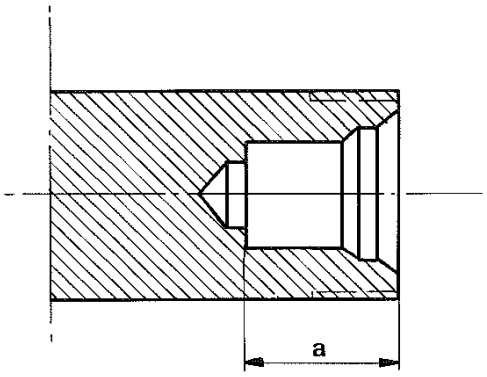
STEERING GEAR

IDENTIFICATION - CHARACTERISTICS

STEERING GEAR BOX ASSEMBLY



	1st FITTING	2nd FITTING	3rd FITTING
Vehicle Types	Up to serial N° : **404** 4 025 422 **404 J** 4 501 172	**404** from N° 4 025 423 to N° 4 304 274 **404 J** from N° 4 501 173 to N° 4 525 630 Up to serial N° **404 KF** 4 551 030 **404 C** 4 495 795 **404 C.KF** 4 590 829	As from serial N° **404** 4 304 275 **404 J** 4 525 631 **404 KF** 4 551 031 **404 C** 4 495 796 **404 C.KF** 4 590 830 **404 D** 4 600 001 **404/8** : beginning of the series and all types of 404. Associated Vehicles as from the beginning of the series.
1 - Housing			
a	352 mm		355 mm
b	220 mm		223 mm
c	109 mm		112 mm
2 - Rack	25 teeth	30 teeth	
Pinion	6 teeth	8 teeth	
Ratio	1 to 20	1 to 18.6	
Number of steering wheel turns from lock to lock.	4	3.75	
Turning radius	4.82 mm		4.92 mm
Maximum turning angle.			
- Inner wheel	44° 20'		43° 30'
- Outer wheel.	35°		34°



DRILLING OF THE RACK

Up to serial N°

404 4 019 542
404 J 4 500 792

a = 22.5 mm

- Install
  - 1 set of «Belleville» washers and one adjusting shim if any P.N. 3839.02.

As from serial N°

404 4 019 543
404 J 4 500 793

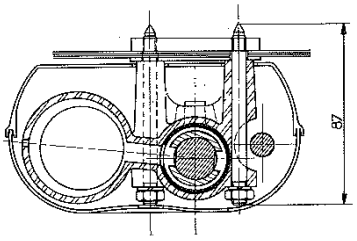
404 all models and 404 Associated Vehicles since the beginning of the series,

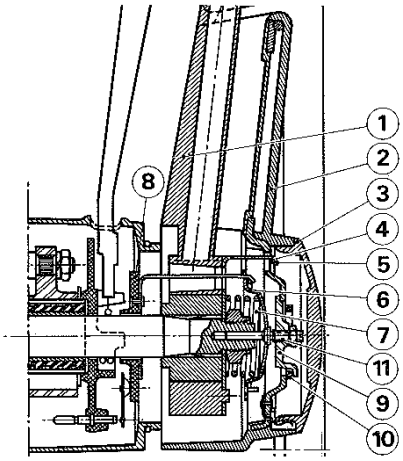
a = 23 mm

- Install
  - One adjustment washer **e** = 0.5 mm P.N. 3837.05.
  - One set of «Belleville» washers and one adjusting shim if any P.N. 3839.02.

STEERING GEAR

IDENTIFICATION - CHARACTERISTICS





STEERING COLUMN

1st Fitting

Up to serial n°

404 4 262 348
404 SL 4 262 020
404 J 4 525 037

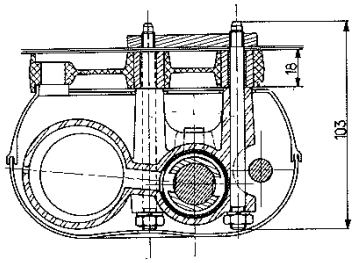
Without a spacer between the dashboard and the steering column.

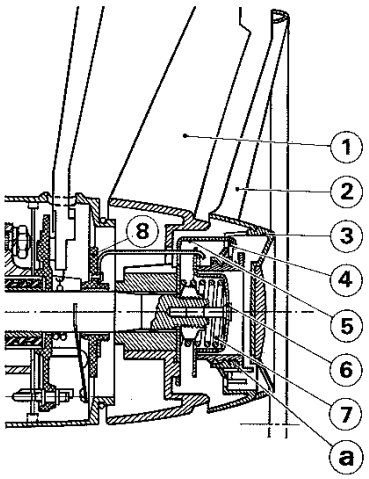
Gear change control rod.

L : 100 mm

Description

1 - Steering wheel.
2 - Horn Push.
3 - Horn Push trim.
4 - Horn push retaining ring.
5 - Assembling plate.
6 - Cup with guide.
7 - Return spring.
8 - Plunger plate with a caliper.
9 - Adjusting screw support.
10 - Support retaining ring.
11 - Horn Adjusting screw.





2nd Fitting

As from serial N°

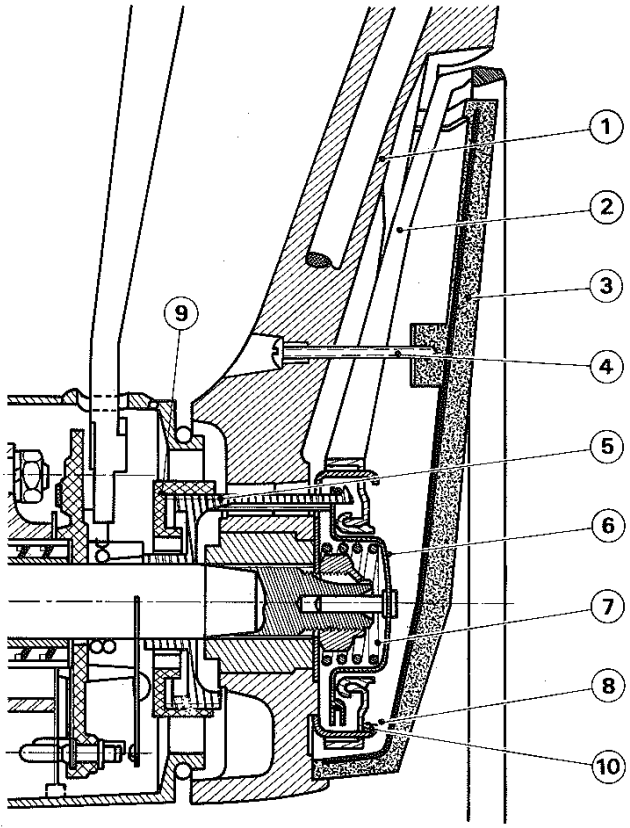
404 4 262 349
404 SL 4 262 021
404 J 4 525 038
404 KF 4 550 052
Associated Vehicles, all models

Spacer of 18 mm between the dashboard and the steering column necessitating the replacement of the gear change control rod.

Gear change control rod : L : 105 mm

Description

1 - Steering wheel.
2 - Horn push with rilsan adjusting ring **a**.
3 - Horn push trim.
4 - Horn push retaining ring.
5 - Assembling plate.
6 - Cup with guide.
7 - Return spring.
8 - Plunger plate with a caliper.



3rd FITTING

As from serial N°

404 (TW)	5 085 001
404 (TH)	5 415 001
404 KF	8 243 001
404 C	4 670 201
404 C.KF	6 801 501
404 ZF	8 256 601
404 D	4 629 001
404 L (TW)	4 941 601
404 L (TH)	6 826 001
404 LD	4 986 701

Spacer of 23 mm between the dashboard and the steering column.

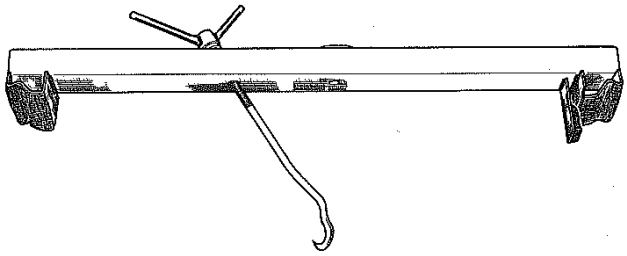
Unadjustable gear change control rod.

Description

1 - Steering wheel.
2 - Horn push.
3 - Moulded padding.
4 - Padding securing screw.
5 - Coupler with adjusting screw.
6 - Cup with guide.
7 - Spring.
8 - Assembling plate.
9 - Adjusting nut.
10 - Cup retaining ring.

STEERING GEAR

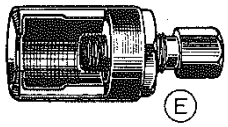
REMOVAL - REFITTING



TOOLS TO BE USED

8.0116 Y

Engine support apparatus



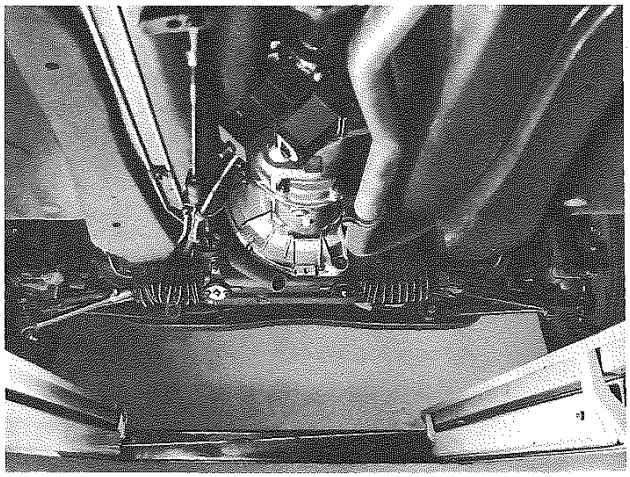
8.0703 X

Steering gear tool chest

E - Ball joint puller

RECOMMENDED TOOLS

Description	Make
Front axle checking apparatus.	- Muller BEM 665 F or C - V.L.C. Optoflex

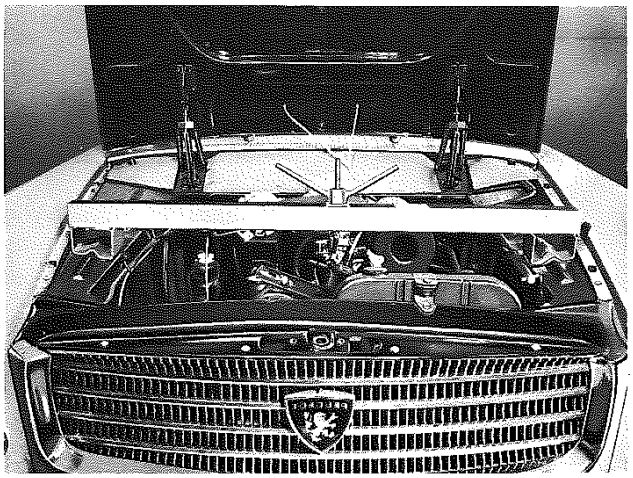


REMOVAL

- Place the car over a pit or on a car lift.
- Disconnect the battery
- Separate :
  - the steering column from the flector by removing the upper collar securing bolt.
  - the track rods using ball joint extractor **E.**
- Slacken both housing securing bolts.
- Remove the steering gear assembly.

STEERING GEAR

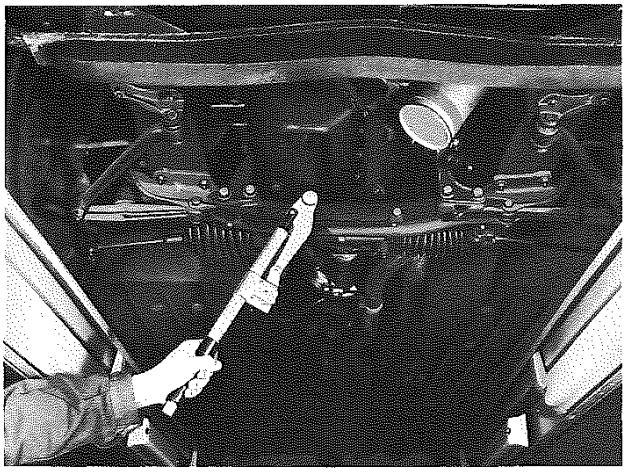
REMOVAL - REFITTING



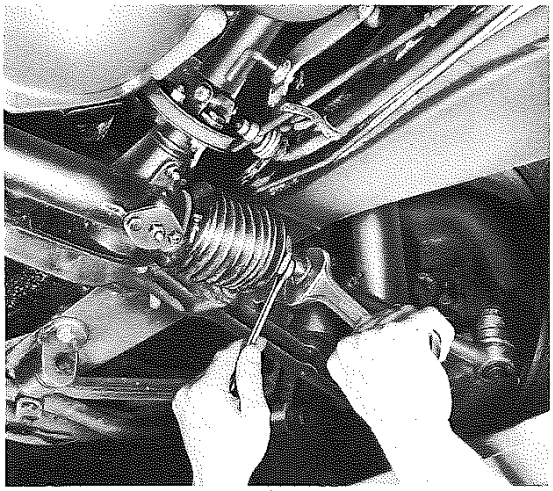
REFITTING

- Disconnect engine front mountings.
- Using the support apparatus, raise the engine to allow for the passage of the torque wrench.

***NOTE** : This operation can be avoided if a Facom torque wrench 5213, with a fork wrench, is used.*



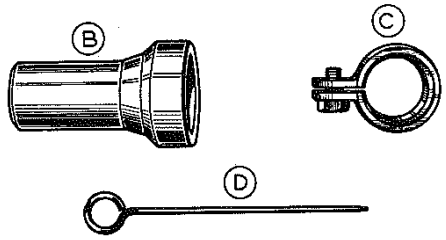
- Install the steering box and tighten the bolts to **29 ft.lbs (4 m.kg)**
- Secure the engine front mountings and tighten the nuts to **29 ft.lbs (4 m.kg)**
- Connect the steering column and the flector collar **using a new bolt and washer,** tightening torque **7.25 ft.lbs** (1 m.kg). Lock by spreading the protruding end of the bolt.
- Connect the track rods to the track arms. Ensure that the pin hole is perpendicular to the track rod axis. Tighten the ball joint nuts to **31 ft.lbs** (4.25 m.kg) and fit the pin.
- Correctly position the right hand track rod yoke and tighten the eye lock nut.



- Tighten the right hand rod yoke shaft to **40 ft.lbs** (5.5 m.kg) and fit the pin.
- Adjust front wheel toe-in to 2 mm ± 1 through the left hand track rod ball joint (1 ball joint rotation = 3 mm at the wheel rim). Tighten the lock nut on the rod.
- Secure the rubber boots onto the rack.
- Ensure that the tyres do not touch the side members by turning the steering wheel lock to lock.
- Lubricate the steering gear assembly.
- Road test the car to check the alignment of the steering wheel. The alignment can be corrected by removing the steering wheel. (see class 7, page 08 01).

STEERING GEAR

DISMANTLING - RE-ASSEMBLY

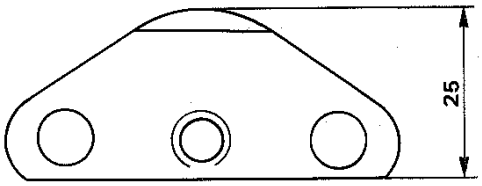


TOOLS TO BE USED

8.0703 X

Steering gear tool chest

B - Ball joint socket.
C - Ball joint adjustment clamp.
D - Ball joint cap centering rod.



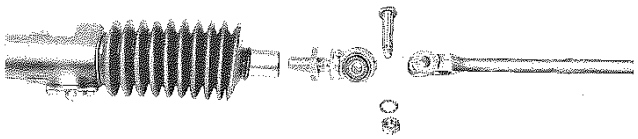
This tool is to be made in the workshop

0.0702

Rack plunger adjusting plate
(plate P.N. 4064.04 altered).

STEERING GEAR

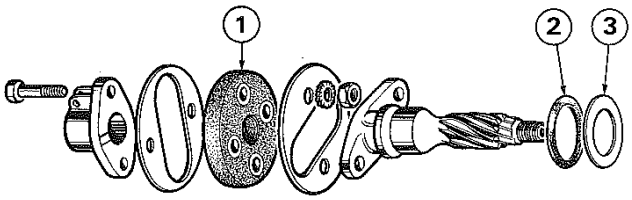
DISMANTLING



Remove :
- right hand track rod after having unscrewed and withdrawn its shaft.
- the rubber boot clamps

Slacken the lock nuts and remove the following :
- the rack eye
- the left hand track rod

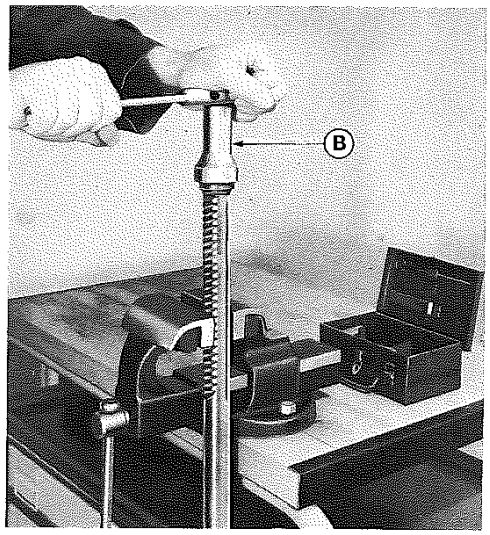
Remove :
- the rubber boots
- the steering box closing cup
- the pinion securing nut
- both rack plungers and recover the thrust spacer and the adjusting shims through the pinion side.
- the rack control pinion.



- Remove the rack

- Remove the following from the pinion :
  - flector **1.**
  - rubber thrust, if any.
  - seal ring **2.**
  - shimming washer **3.**

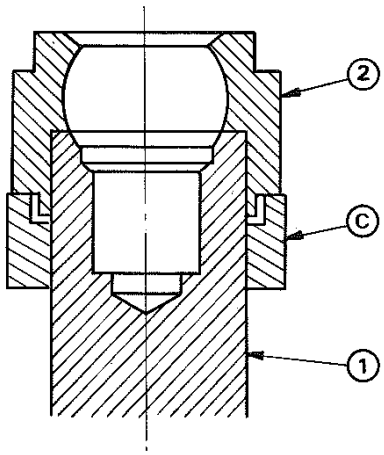
- Remove from the housing :
  - the circlip.
  - the bearing.



- Hold the rack in a vice fitted with lead jaws.

- Unscrew the ball joint housing using socket **B.**

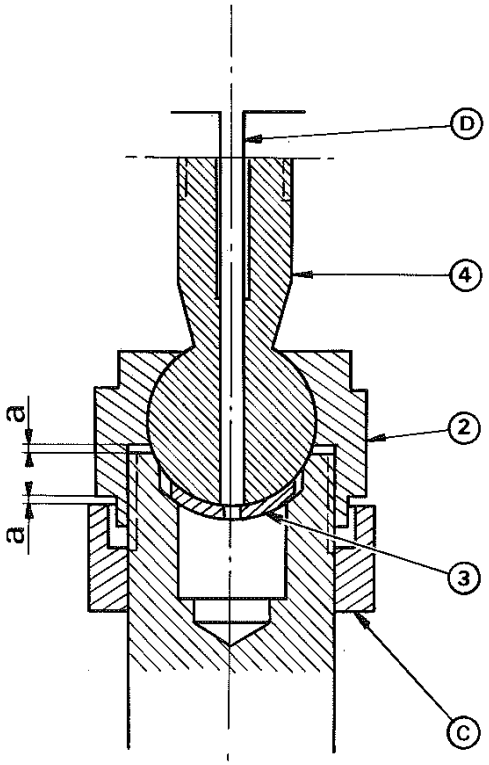
- Remove :
  - the ball joint
  - the cap
  - the « Belleville » washers or the spring which will have to be replaced at refitting by « Belleville » washers.



- Use clean and faultless parts (free from defects or impact).
- Lubricate the parts as they are installed using Esso Multipurpose Grease H.

ADJUSTMENT OF THE RACK BALL JOINT

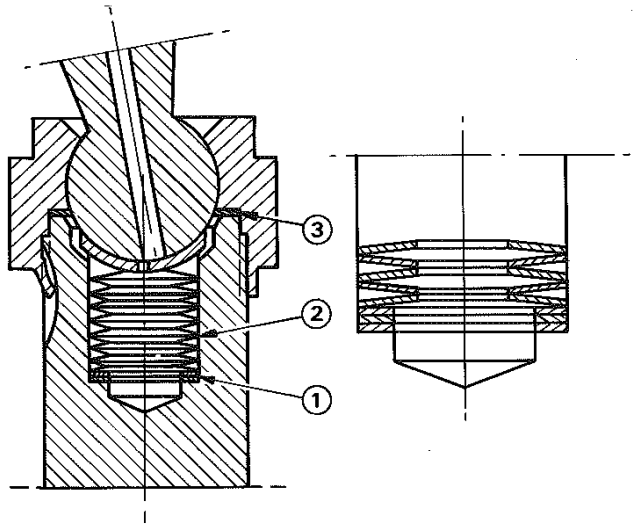
- Install adjusting clamp **C** on the rack **1.**
- Engage the **new** ball joint housing **2** and tighten it to **33 ft.lbs** (4.5 m.kg) using socket **B.**
- Hold the housing with clamp **C** and tighten the latter.



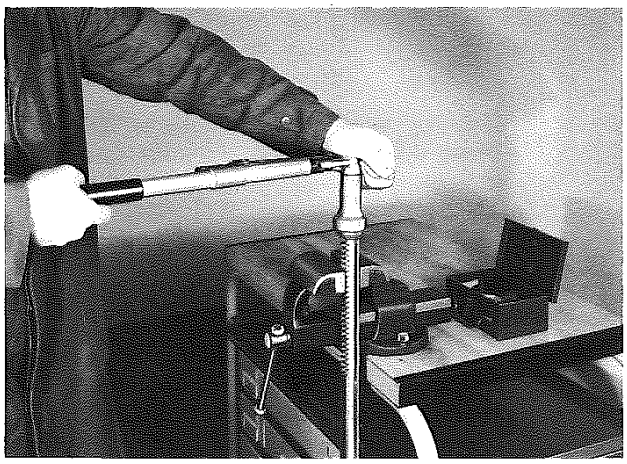
- Remove the ball head housing but do not move the clamp which indicates the maximum tightening position.
- Install ball head cap **3** into the rack.
- Fit ball head cap **4,** inserting rod **D** in its recess to ensure proper centering of the cap.
- Engage housing **2,** remove rod **D** and continue tightening until the ball head can no longer move into its recess.
- Using a set of shims, determine distance **a** between housing **2** and adjusting clamp **C.**
- Add 0.05 mm to the reading obtained in order to determine the thickness of the adjusting shim to be installed between the rack and the bottom of the housing to obtain an axial play of 0.05 mm ± 0.02 mm.
- Thickness of the adjusting shims : 0.10 - 0.15 - 0.20 - 0.50 mm.
- Slacken the housing, remove the ball head, the cap and adjusting clamp **C.**

STEERING GEAR

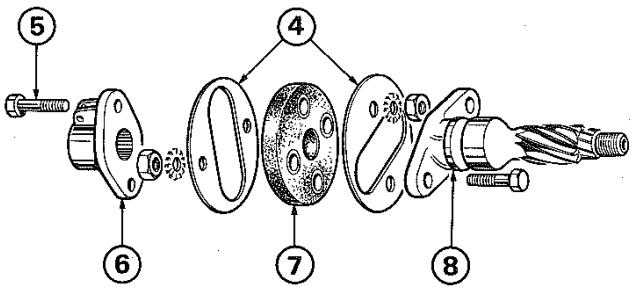
RE-ASSEMBLY - ADJUSTMENT



- Check the drilling depth in the rack and fit the following :
  - 0.5 mm adjusting shim if the drilling measures 23 mm.
  - adjustment washers **1** if available in the bag.
  - «Belleville» washers **2** as indicated on drawing opposite.
- Install adjusting washer **3** previously determined.
- Install the ball head and the cap centered by rod **D.**



- Engage the **new** ball head housing used for adjustment and tighten it to 33 ft.lbs (4.5 m.kg) using socket **B** and lock the housing.

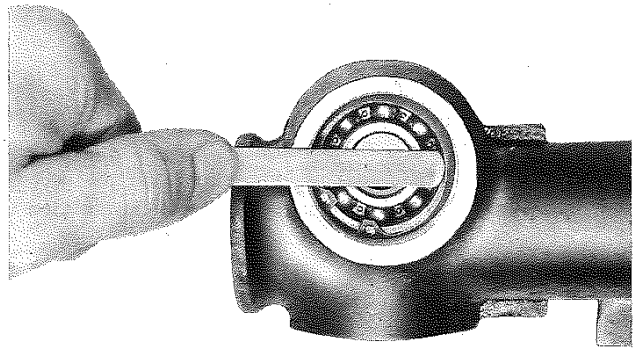


FLECTOR REPLACEMENT

- Align the side plate holes **4** perpendicularly with regard to each other and on either side of the flector **7.**
- The bearing surfaces of pinion clamp **8** and flector clamp **6** will be in contact with the flector through the side plate holes.
- Use four bolts **5,** new washers and nuts with the bolt heads facing the pinion and collar clamps.
- Tighten the nuts to 11 ft.lbs (1.5 m.kg)
- Lock the bolts by spreading the threads using a cold chisel.

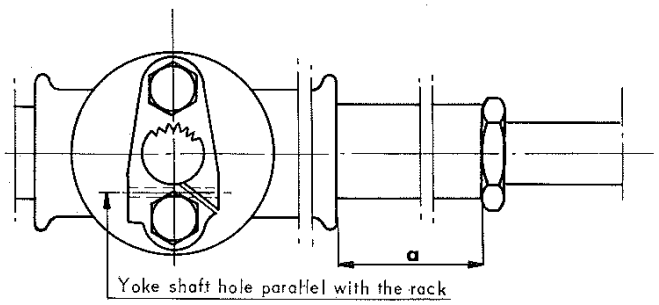
STEERING GEAR

RE-ASSEMBLY - ADJUSTMENT

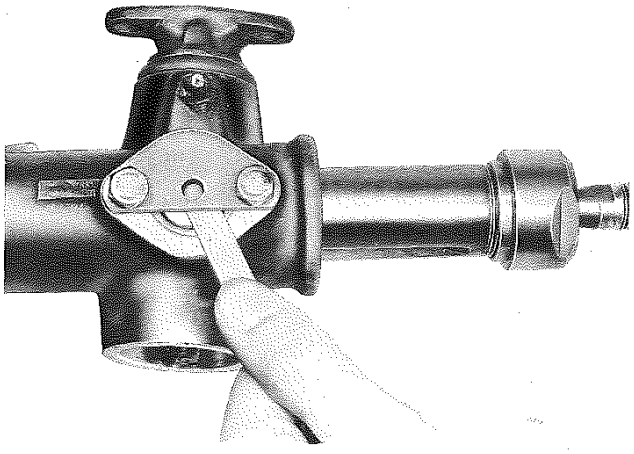


- Install the following in the steering gear box :
  - the pinion bearing
  - the **new** circlip

Ensure that the bearing axial play is nil.



- Engage the rack into the housing and position it on the pinion side according to the type of housing used (see class 7, page 01 01).
  a = 98 mm 1st and 2nd fitting
  a = 95 mm 3rd fitting.
- Engage the pinion fitted with its «0» seal ring and the anti-squeal spacer so that once in place the yoke shaft hole is parallel with the rack, slot facing downwards.
- Tighten the pinion **new** nut to **18 ft.lbs** (2.5 m.kg) and lock the nut.
- Install a **new** housing closing cup coated with grease.

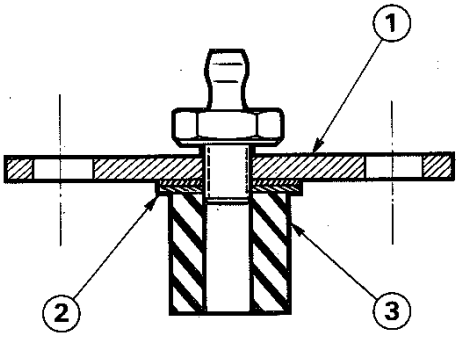


PLUNGER PLAY ADJUSTMENT

- Hold the housing in a vice in such a way that the plunger recess faces upwards.
- Insert the plunger and its nylon spacer in the recess, without the spring.
- The control clamp 0.0702 should be installed for adjustment of the plunger.
- Determine the minimum play between the spacer and the control clamp using a set of shims.
- This check should be carried out on the total travel of the rack.
- Remove the control clamp, the plunger and the spacer.

STEERING GEAR

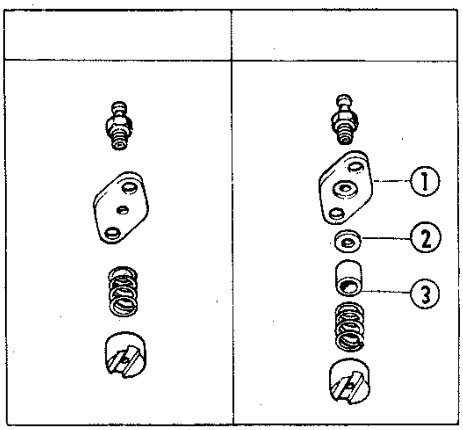
RE-ASSEMBLY - ADJUSTMENT



- The thickness of the shims **2** to be installed between spacer **3** and clamp **1** will be equal to the minimum play previously determined, less 0.1 mm.
  Thickness of the adjusting shims :
  0.10 - 0.20 - 0.50 mm

- On clamp **1** fit the adjusting shims **2** previously determined and centre them on the grease nipple threaded part protruding from the clamp.

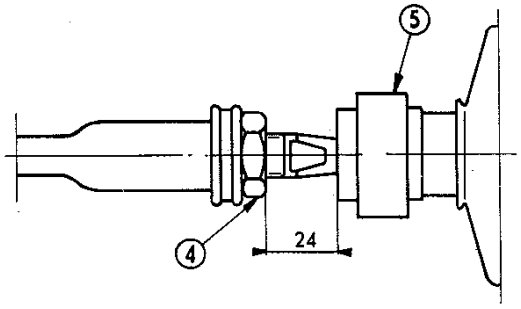
- Engage, on this part of the nipple, nylon spacer **3** which will hold the spacers.



- Install the rack plungers according to the drawing opposite and tighten the clamp screws.

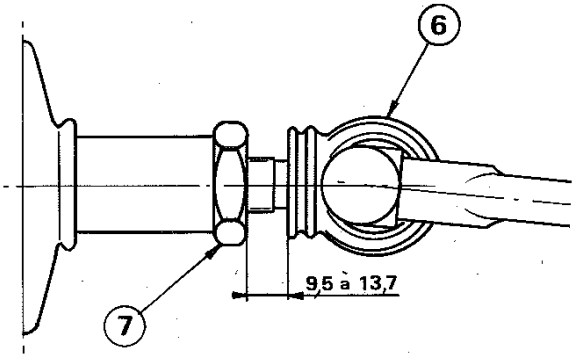
- Turn the steering wheel in both directions from lock to lock and ensure that there is no hard spot.

- Secure the rubber boots onto the housing and replace them if necessary.



- On the ball joint end; tighten lock nut **4** and the left hand track rod to obtain a distance of 24 mm between the housing of the ball head **5** and the lock nut, the track rod being in the axis of the rack.

  Do not tighten the lock nut at this time.



- Tighten the rack eye **6** to obtain a thread protrusion of 9.5 to 13.7 mm, the lock nut **7** being backed against the rack.

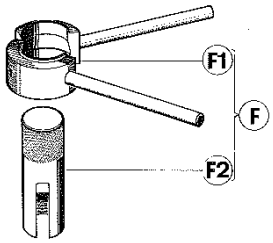
- Do not tighten the lock nut.

- Install the right hand track rod, the ball head cone facing upwards.

- Do not tighten the shaft.

STEERING GEAR

TRACK ROD BALL JOINTS

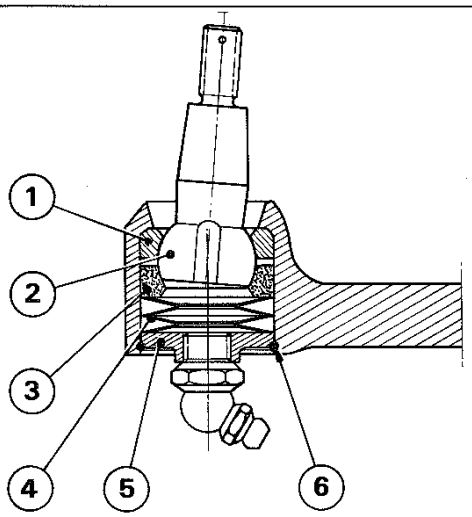


TOOLS TO BE USED

8.0703 X

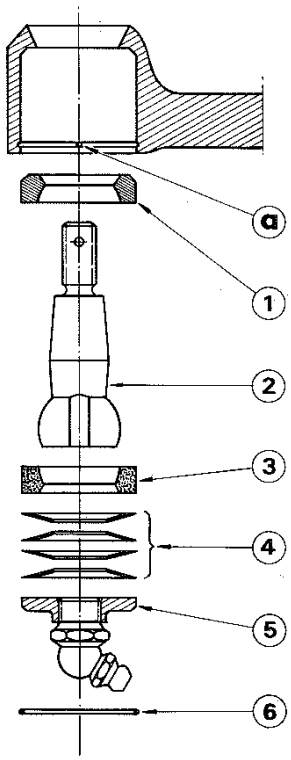
Steering Gear Tool Chest

F - Tool for positioning the track rod ball joint.



DISMANTLING

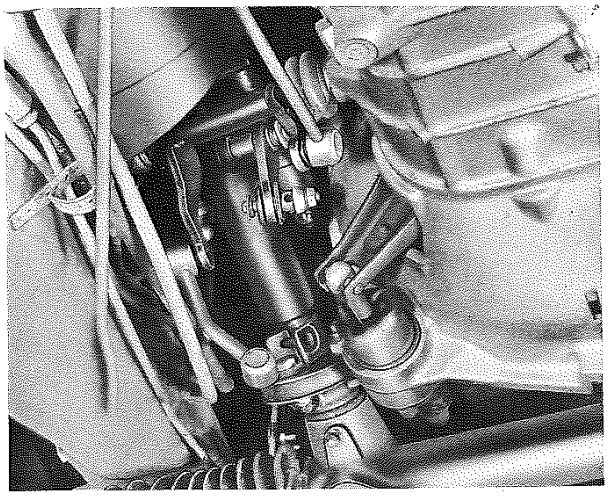
- Hold the track rod in a vice.
- Remove the retaining ring **6** from the ball joint cover through hole **a** using a punch.
- Remove :
  - the ball joint cover **5.**
  - the «Belleville» washers **4.**
  - the lower nylon half cup **3.**
  - the ball joint **2.**
  - the upper steel half cup **1.**



RE-ASSEMBLY

- Place the steel half cup **1** into the bottom of the housing.
- Install the following :
  - the ball head **2** with lubrication flat
  - the nylon half cup
  - the four new «Belleville» washers **4** observing the correct direction of fitment.
  - the ball joint cover **5**
- Apply pressure on the «Belleville» washers and install **new** retaining ring **6** using tool **F.**
- Correctly position the ball head (the pin hole axis should be perpendicular to the track rod shaft).
- Lubricate the ball joint housing.

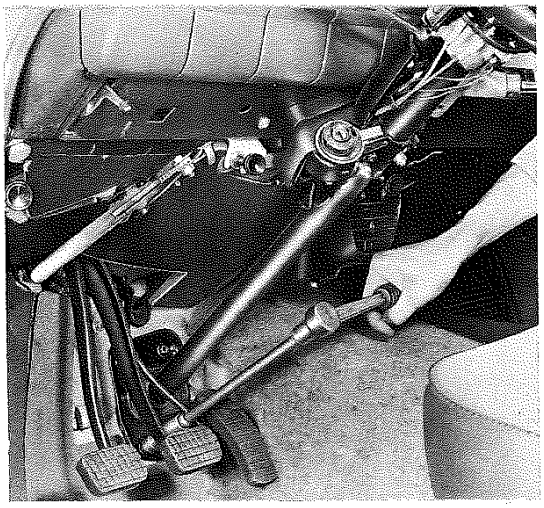
PEUGEOT



REMOVAL

- Disconnect the battery.

- Uncouple :
  - the steering column from the flector clamp
  - the gear change control rod
  - the speed selector control rod

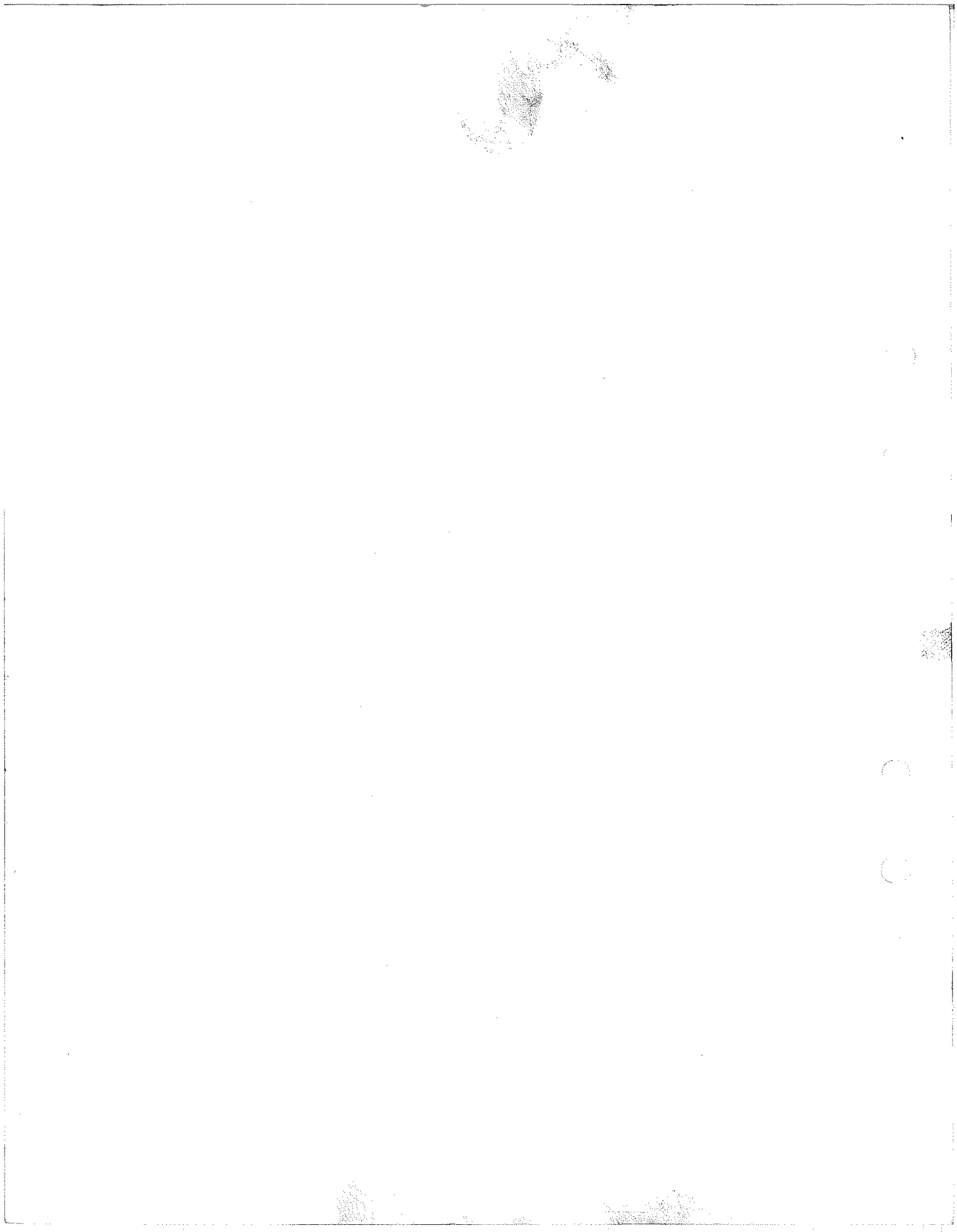


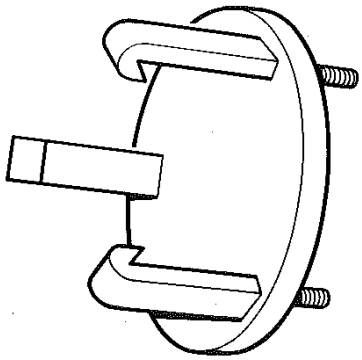
- Unfasten the left hand mat.
- Remove the sound proof cardboard which surrounds the steering column tube.
- Remove the screws securing the steering column tube gasket holding plate.
- Remove the lower shell
- Disconnect :
  - the ignition starting switch or anti-theft lock leads
  - the horn and direction indicator switch
  - the lighting switch
- Remove the bearing nuts
- Remove the steering column.

- In the event of replacing the bushings in the steering column tube, the upper bushing should be fitted flat with the tube.
- The lower bushing should be inserted 20 mm inside the tube.

REFITTING

- Refitting is a reversal of the removal procedure.
- Replace the bolt and the assembling washer column/flector.
- Tighten the nut to 7.25 ft.lbs (1 m.kg) and lock it by spreading the protruding end of the bolt.
- The clearance between the shells and the steering wheel should be of 4 mm.
- Check the adjustment of the horn push and the gear change control rods.



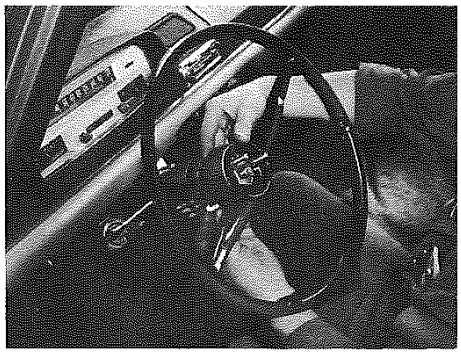


TOOLS TO BE USED

8.0703 X

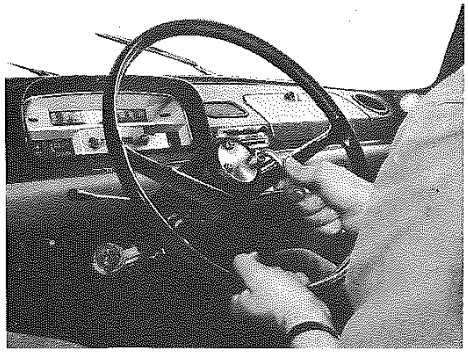
Steering Gear Tool Chest

AZ - Steering wheel puller



REMOVAL

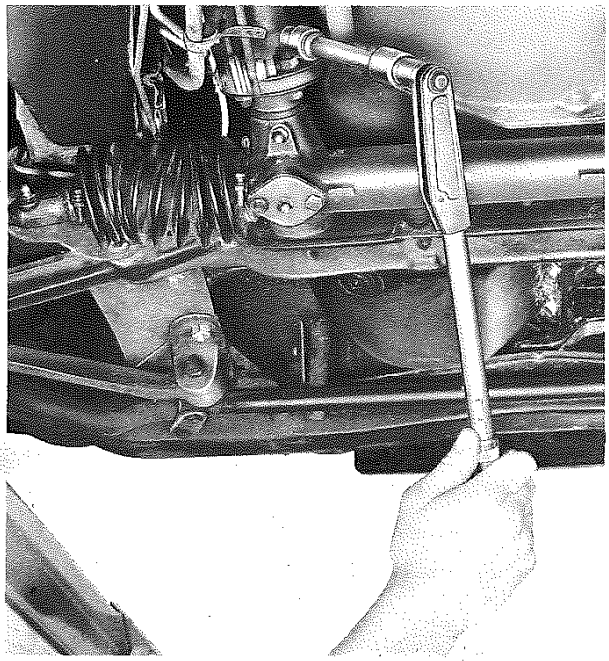
- Disconnect the battery
- Separate the steering column from the flector clamp.
- Remove :
  - the horn control unit
  - the steering wheel securing nut
  - the horn push assembling plate
  - the steering column lower shell and raise the steering wheel 5 - 6 cm.
- Disengage the horn push plate by a rotating movement in order to free the steering wheel hub passage holes.
- Engage the three arms of the puller AZ below the steering wheel.



- Install the puller plate **AZ,** plate backing perpendicularly against the steering column end.
- Progressively tighten the spoke securing nuts until the steering wheel becomes loose.
- Remove the steering wheel and the puller.

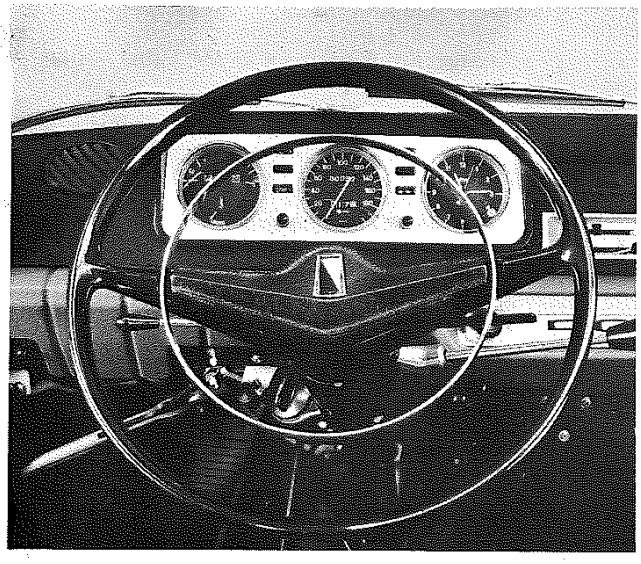
STEERING GEAR

STEERING WHEEL



REFFITTING

- Connect the steering column to the flector clamp.
- Install a new bolt and a new washer.
- Tighten the nut to **7.25 ft.lbs** (1 m.kg) and lock by spreading the protruding end of the bolt.
- Align the front wheels using the BEM Muller apparatus.



- Install the horn push plate on the steering column.
- Install the steering wheel with the spokes on a horizontal plane.
- Fit the horn push assembling plate
- Engage a **new** nut to secure the steering wheel, tighten it to 33 ft.lbs (4.5 m.kg) and then lock.
- Refit the horn control unit.
- Check and adjust the horn push control if necessary.
- Re-install the steering column lower shell as well as the shells retaining ring.

PEUGEOT

File this document in the binder :

404 Workshop Manual

	W.M.	W.F.	W.F.	W.S.	W.S.	Rec.	Rec.	S.S.	Parts
Date									
Sign.									

8

144

December 1978

SERVICE BULLETIN

8 - BRAKES

404 U10 and UXD brake linings.

As from serial numbers :

404 UXD - 9 846 285
404 U10 - 9 525 647

the 404 U10 et UXD are equipped with FERODO 4Z brake linings inplace of TEXTAR linings as fitted to vehicles in the following blocks of serial numbers :

404 UXD
- from 8 593 692 to 8 594 068
- from 8 594 791 to 9 845 420
- from 9 845 861 to 9 846 284

404 U10
- from 9 449 725 to 9 450 226
- from 9 451 678 to 9 523 415
- from 9 524 541 to 9 525 602
- from 9 525 623 to 9 525 646

Interchangeability

Parts Dept. will supply FERODO 4Z linings only.

When changing brake linings on vehicles in the above blocks of serial numbers it is necessary to replace the TEXTAR linings with 8 FERODO 4Z linings.

Part numbers of FERODO 4Z LININGS

POSITION	LININGS	SHOES WITH LININGS
FRONT	4 245.26(1)	4 235.27
REAR Leading	4 239.38	4 237.01
REAR Trailing	4 240.29	4 236.52

(1) Set of 4 linings plus rivets.

Printed in France

BRAKES
SUMMARY

8

PEUGEOT

REMINDER OF THE DIFFERENT FITTINGS OF TWINPLEX BRAKES

I - 404 Saloons, Convertibles and Coupés

Types	Master Cylinder dia. in mm.	Wheel cylinder diameter		Diameter and width of drums		Serial Numbers
		Front	Rear	Front	Rear	
404 404 J	22	1"1/8	1"	255×50	255×35	From beginning of series
404 404 J	22	1"1/4 1"1/8	1"	255×50	255×35	As from serial numbers : **404** - 4 012 424 **404 J** - 4 500 313
404 404 J 404 DA	22	30	1"	255×60	255×35	As from serial numbers : **404** - 4 108 665 **404 J** - 4 504 086 **404 DA** - 3 060 001
404 J, DA, D, KF, C,	22	1"1/8	1"	280×65	255×35	As from serial numbers : **404** - 4 388 566 **404 KF** - 4 550 001 **404 J** - 4 526 884 **404 C** - 4 495 001 **404 DA** - 3 060 543 **404 C.KF** - 4 590 001 **404 D** - 4 600 001
404 J, D, 404/8 (R.H.D)	22	30 (1)	1" (1)	280×65	255×45	As from serial numbers : **404** - 5 057 594 **404 D** - 4 609 343 **404 J** - 4 530 002 **404/8 (R.H.D)** : (beginning of series).

II - 404 Associated Vehicles

404 L, LD, U6, U6D, U6A	1"	30	1"1/8	280×65	280×50	From beginning of series
404 L, LD, U6, U6D, U8, U8D, U10, U10D U6A	1"	30 (1)	1"1/8 (1)	280×65	280×50	As from serial numbers : **404 L** - 4 854 910 **404 U8** **404 LD** - 4 981 020 **404 U8D** **404 U6** - 4 745 999 **404 U10** **404 U6D** - 4 909 573 **404 U10D** **404 U6A** - 1 925 001 beginning of series
404 U6A(2)	1"	30	1"1/8	280×65	280×50	As from serial numbers : **404 U6A** - 1 932 385 **404 U6A.ZF** - 7 100 101

(1) - Wheel cylinders for « ARMCO » brake lines of 3.34 mm × 4.76 mm in place of 4.85 mm × 6.35 mm.
(2) - Twin system brakes with tandem master cylinder on 404 U6A - USA.

BRAKES

IDENTIFICATION - CHARACTERISTICS

REMINDER TABLE OF THE DIFFERENT FITTINGS OF THERMOSTABLE AND DISC BRAKES

A - THERMOSTABLE BRAKES

I - 404 Saloons, Convertibles and Coupés

Types	Master cylinder diameter	Wheel cylinder diameter		Diameter and width of drums		Serial Numbers
		Front	Rear	Front	Rear	
404 J.KF C. C.KF	1"1/4	1"3/8	16	280×65	255×45	As from serial numbers : **404** - 5 100 001 **404 C** - 4 498 001(1) **404 J** - 4 535 001 **404 C.KF** - 4 594 001(1) **404 KF** - 4 570 001 **404 ZF** - 8 250 001
404 J, KF, ZF	1"1/4	1"3/8	19 (2)	280×65	255×45	As from serial numbers : **404** - 5 265 262 **404 KF** - 8 211 872 **404 SL** - 5 260 846 **404 ZF** - 8 250 127 **404 J** - 4 537 045

II - 404 Associated Vehicles

404 L Break	1"1/4	1"3/8	17.5	280×65	280×50	As from serial number : **404 L** - 4 855 001
404 L Break	1"1/4	1"3/8	20.6(2)	280×65	280×50	As from serial number : **404 L** - 4 879 401

(1) - Addition of a brake limiter on the rear wheels
As from serial numbers : 404 C - 4 498 433
404 C.KF - 4 595 631

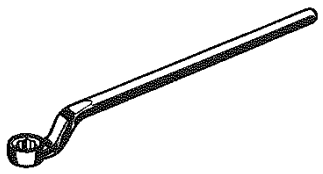
(2) - Addition of an automatic load actuated braking compensator for rear wheels.

B - DISC BRAKES

404/8 Saloons and 404 USA. models

Types	Master cylinder dia. in mm.	Wheel cylinder diameter		Disc diameter in mm front	Drum and width in mm. rear	Serial Number
		Front	Rear			
404/8	19	2 of 34 1 of 48	20.6	277	255×45	As from serial number : **404/8** - 6 900 001 (beginning of series)
404 USA (3)	19	2 of 34 1 of 48	20.6	277	255×45	As from serial numbers : **404 USA** - 8 325 001 **404 ZF(USA)** - 8 327 501

(3) - Twin-system brakes with tandem master cylinder on 404 USA models.



TOOLS TO BE USED

8.0801

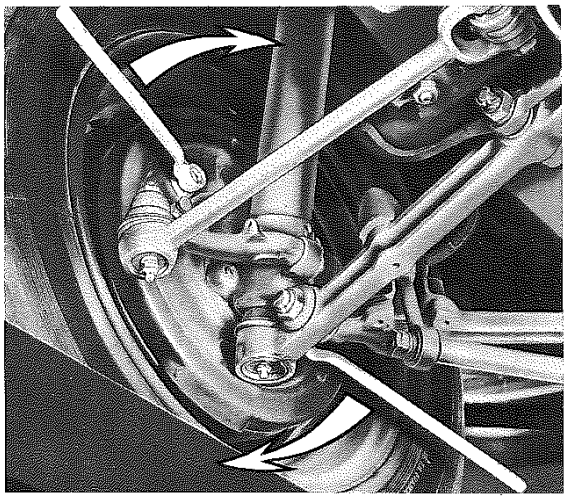
Brake shoe adjusting spanner

RECOMMENDED TOOLS

Description	Make
ARC 50 Checking apparatus	SALZER and Co
M2 ARC 50 Testometre or Testarc 50	SALZER and Co

BRAKES

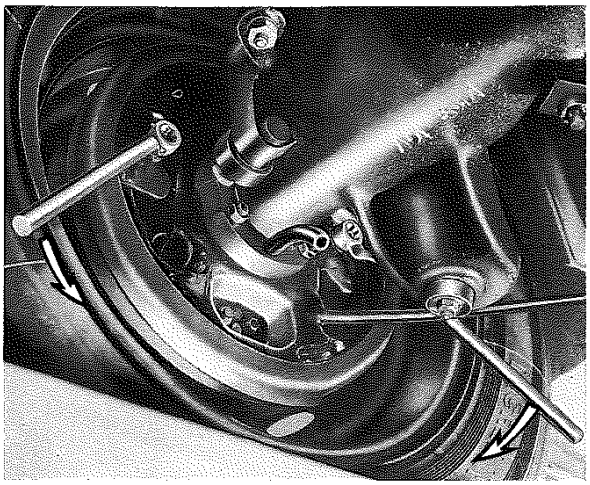
ADJUSTING



ADJUSTING DRUM BRAKE SHOES

Front Brakes

- Raise the car until the front wheels turn freely.
- Always turn the wheels in the direction of forward movement of the car whilst adjusting.
- Using the spanner **8.0801** turn one of adjusting squares, in the direction of forward movement of the wheels, until it locks.
- Then turn the square back slowly until there is no longer friction between the drum and the shoe.
- Carry out the same operation on the other adjusting square on the same brake plate.
- Proceed in the same manner for the other front wheel.

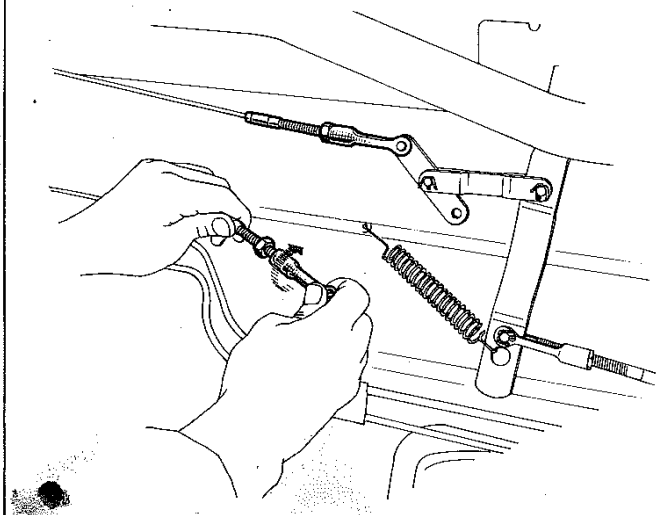


Rear Brakes

Turn the front adjusting square on the brake plate in the direction of forward movement of the wheel and the rear adjusting square in the opposite direction, taking the same precautions as for the front.

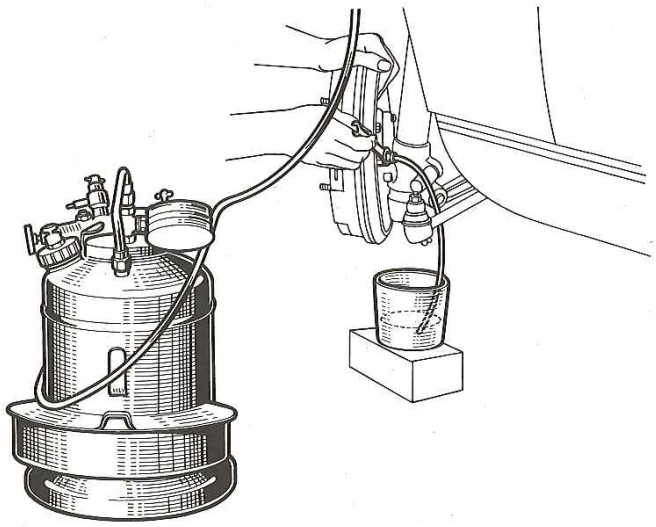
Master Cylinder Control

Never alter the setting of the control, which is effected by the manufacturer.



Adjusting the Hand Brake

- Raise the rear of the car
- Slacken the lock nuts on the yokes and withdraw the pivots.
- Screw the yokes onto each threaded cable end one or two turns.
- Refit the yoke pivots without the split pins.
- Check that the shoes do not rub on the drums.
- Fit the split pins and tighten the lock nuts.



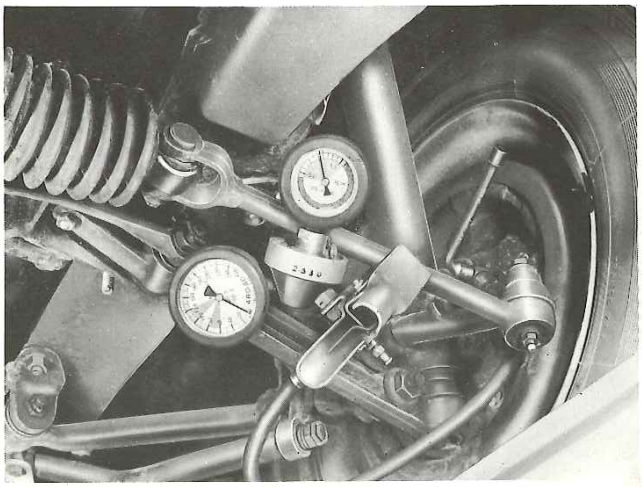
- Drain the brake system every 12.000 miles (20.000 km) or every year.

- Only use **Lockheed 55 brake fluid.**

Bleeding the brake system.

- Bleed the brakes using, where possible, the ARC 50 apparatus, until all the air trapped in the brake lines is released (set the release valve at 31.2 lbs sq. ins (2.2 kg cm2).

***NOTE** : On 404 models equipped with a braking compensator, the bleeding must not be carried out with the rear wheels suspended (car raised by bodywork) as in this position the flow of fluid to the rear brakes might be blocked.*



Checking the operation and sealing of the brake system

- Connect the union of the Testometre M2 or Testarc in place of the bleed screw.

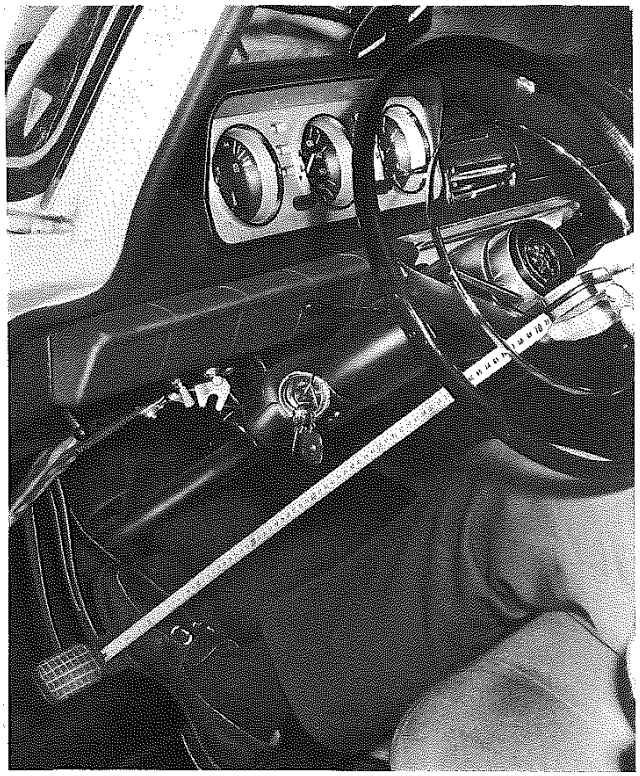
- Check :
  - the residual pressure which must be between 7.1 and 21.3 lbs.sq.ins (0.5 and 1.5 kg cm2). This pressure enables the checking of operation of the master cylinder or the slave cylinder on 404 models with Thermostable brakes.
  - the sealing of the rigid lines; hoses and unions under a pressure of 853.2 to 1137.6 lbs.sq.ins (60 to 80 kg cm2) (run the engine at idling speed for cars with assisted brakes). Use a pedal press or an assistant to operate the brake pedal.

***NOTE** : The wheel cylinders on disc brakes are not subject to residual pressure.*

IMPORTANT : After each intervention on the brake system the vehicle must be road tested.

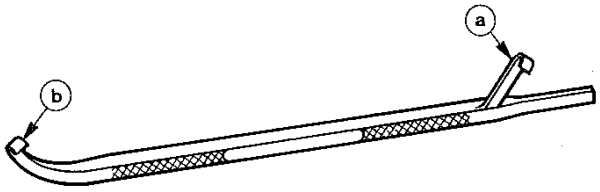
BRAKES

CHECKING



Checking the brake pedal travel on 404 models with Thermostable brakes

- The brake pedal travel must be checked every 6.000 miles (10.000 km) using the following method :
  - start the engine
  - accelerate a number of times to obtain maximum vacuum in the Hydrovac, and leave the engine idling.
  - measure the position of the pedal at rest.
  - press progressively on the pedal until saturation point of the Hydrovac, this requires a greater pressure on the pedal app : 176 lbs (80 kg) in place of 44 lbs (20 kg).
  - hold the brake pedal in this position and measure its height from the floor.
  - check in this manner the brake pedal travel, which must not exceed 60 mm.
  - if the travel exceeds 60 mm adjust the brakes; if after adjustment the travel still exceeds 60 mm, bleed the system using the ARC 50 apparatus.



TOOLS TO BE USED

8.0802

Hook for Thermostable brake return springs

RECOMMENDED TOOLS

Description	Make
Tools for brakes	Ferodo

BRAKES
RE CONDITIONING

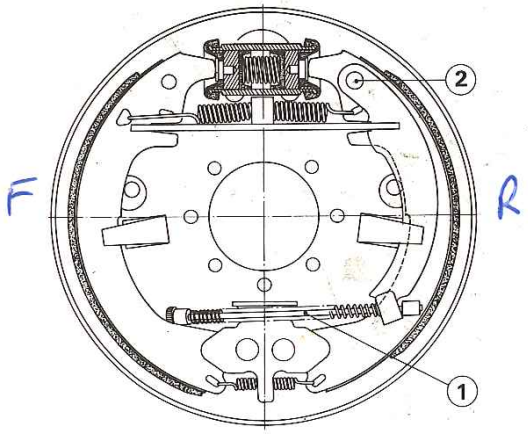
PARTICULAR PRECAUTIONS

When replacing the brake shoes or pads for any reason whatsoever, the operation should be effected on both wheels on the same axle.

Any modification of original parts is forbidden; in particular the removal of the linings from the shoes or pads.

At each re-conditioning :

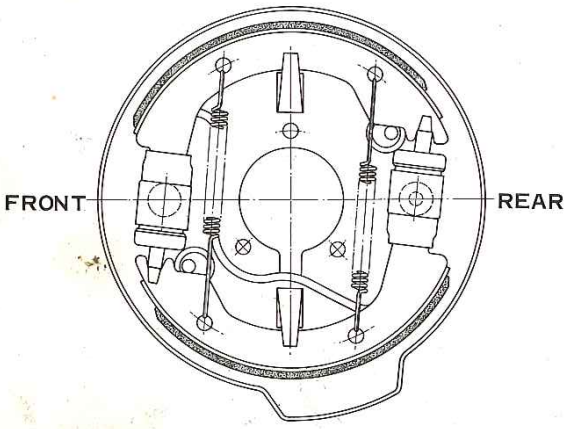
- **Check the wheel cylinders, master cylinder and the hydraulic fluid lines systematically** : replace if necessary.
- Tighten the wheel cylinder securing bolts to 11 ft.lbs (1.5 m.kg). Cleaning of the cylinders, pistons and cups must be effected with alcohol or clean brake fluid.



REPLACING BRAKE SHOES

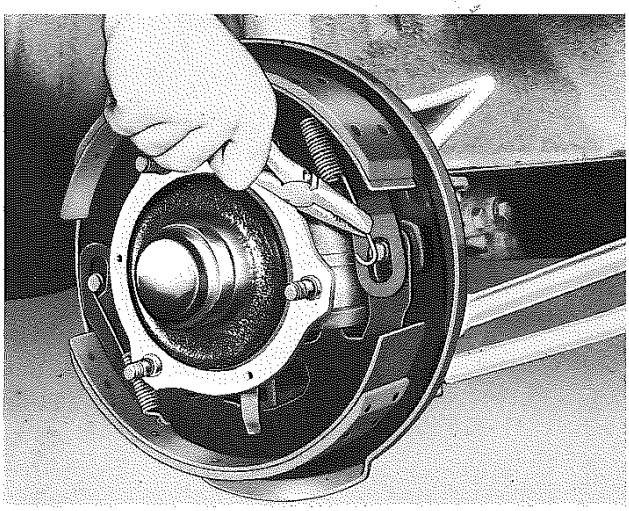
REAR BRAKES : «H.C.S.F.»

- Remove the wheels and drums after marking them.
- The removal and refitting of the brake shoes is easily effected with special Ferodo pliers.
- Check and if necessary grease the hand brake cables **1** as well as the lever pivots **2** of the secondary brake shoe.
- Clean the brake plates and drums and reassemble in the reverse order to removal.



FRONT BRAKES TWINPLEX

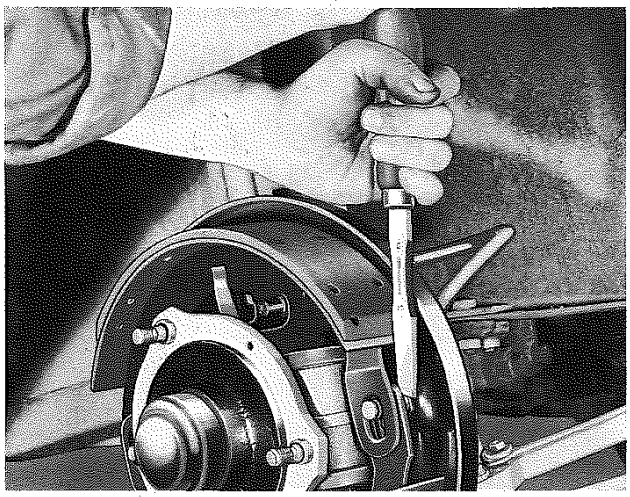
- Remove the wheels and the drums after marking them.
- Use the special Ferodo pliers to remove and refit the brake shoe return springs.
- Clean the plates and drums and refit in the reverse order to removal.



FRONT BRAKES THERMOSTABLE

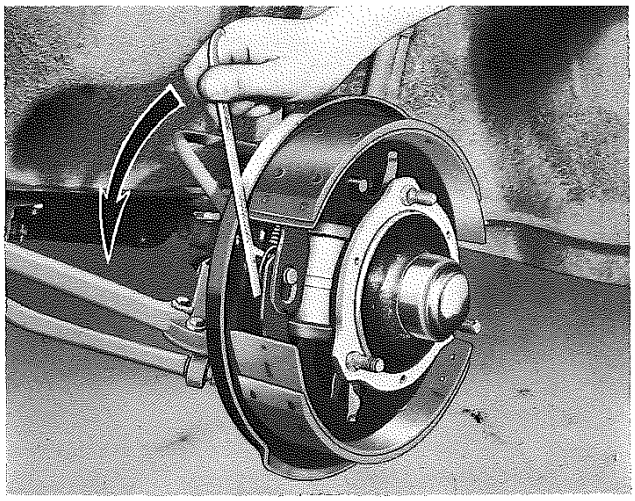
REMOVING THE BRAKE SHOES

- Remove the front wheels and drums, after marking them.
- Remove the outer springs using a pair of pliers.



Right Hand Front Brake

- Remove the two inner springs using a screw-driver; place the blade on the lip of the spring hook and tap the handle of the screw-driver.
- Remove the lateral springs and the brake shoes.



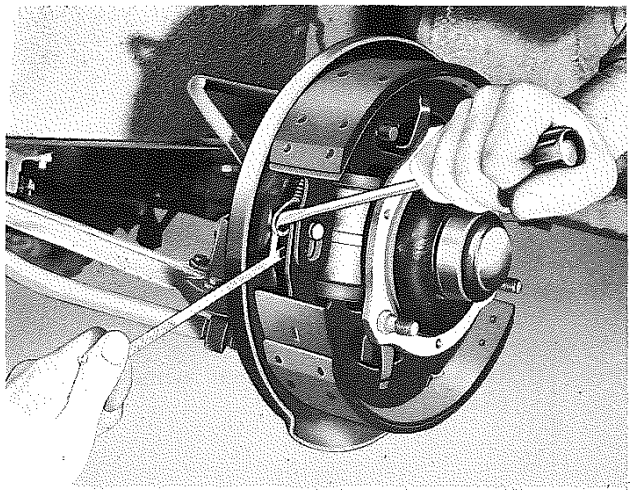
Left Hand Front Brake

Remove the two inner springs using the tool **8.0802** proceeding as follows :

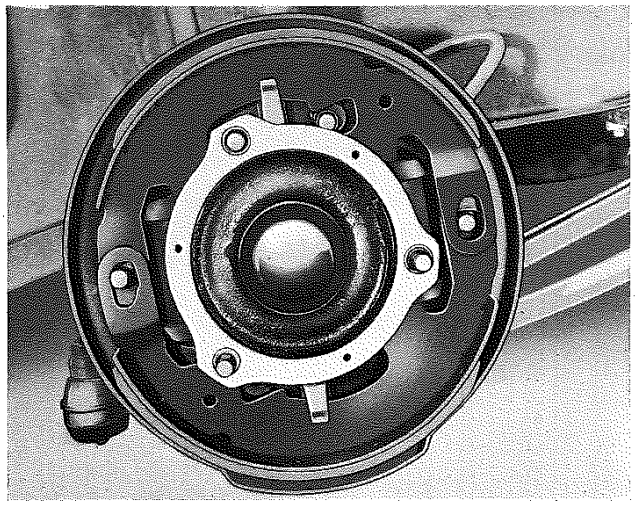
- Pass the hook a of the tool under the spring wire.
- Push the tool in the direction indicated by the arrow, without forcing it.

BRAKES

RE CONDITIONING



- Spring hook then disengages from fixed point.
- Hold tool in the above position.
- Insert a screwdriver between spring hook and fixed point, and remove spring.
- Remove lateral springs and brake shoes.

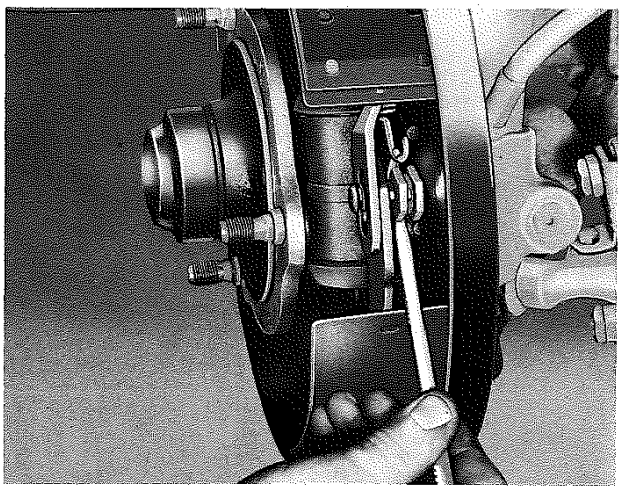


REFITTING THE BRAKE SHOES.

- Position both brake shoes against brake plate and secure with lateral springs.

The offset end of the brake shoe should be located outside the brake plate and turned as follows :

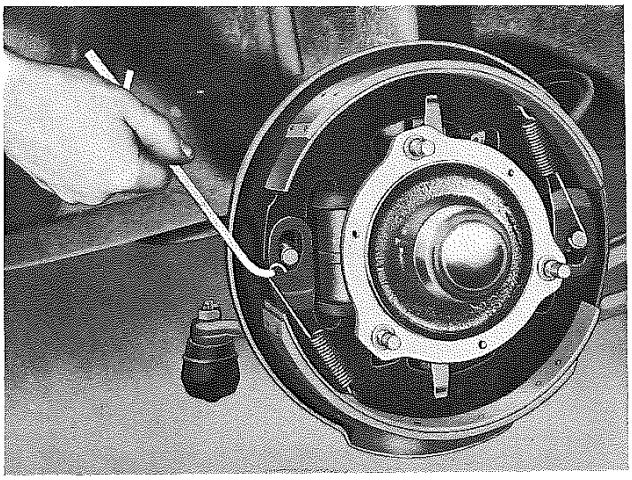
- Towards the front for the upper brake shoe.
- Towards the rear for the lower brake shoe.



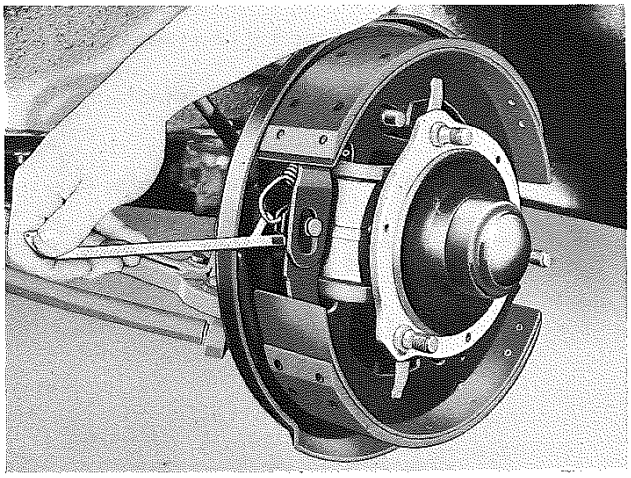
RH Front brake

- Install both inner springs; use tool **8.0802** and proceed as follows :
- Position springs between brake shoes and brake plate and engage the small hook of each spring in the corresponding holes of the brake shoes, or on the hooking point.
- Engage tool hook b under the fixed point and catch the spring hook with the hook of the tool.
- Rotate tool around fixed point while pulling to secure spring.
- Remove tool.

- The larger hooks of the inner springs may be closed slightly if necessary.

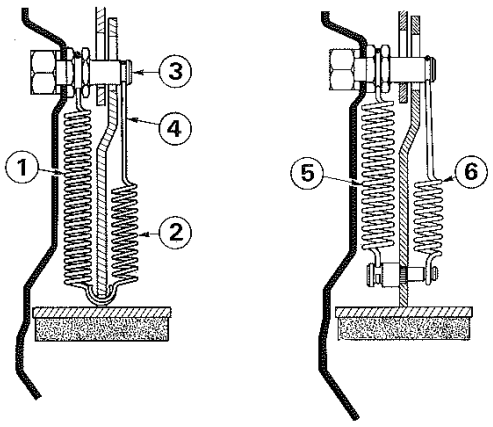


- Position the outer springs using the tool **8.0802** by pulling; the hook **b** being placed in the spring hook.



Left Hand Front Brake

- Position the inner springs using the tool **8.0802** proceeding as follows :
- Engage the springs between the brake shoes and plate and hook the small spring hook in the hole provided in the brake shoe or on the hooking point.
- Pass the hook **a** through the spring hook and turn the tool round the fixed point to hook on the spring.
- Remove the tool
- Close the large hooks of the inner springs slightly, if necessary.
- Position the outer springs using the tool **8.0802** in the same manner as for the right hand side.



BRAKE SHOE RETURN SPRINGS

1st Fitting

- All the inner springs **1** are identical.
- The Left hand and Right hand outer springs **2** are different, due to the positioning of the spring hook on the fixed point, **3.**

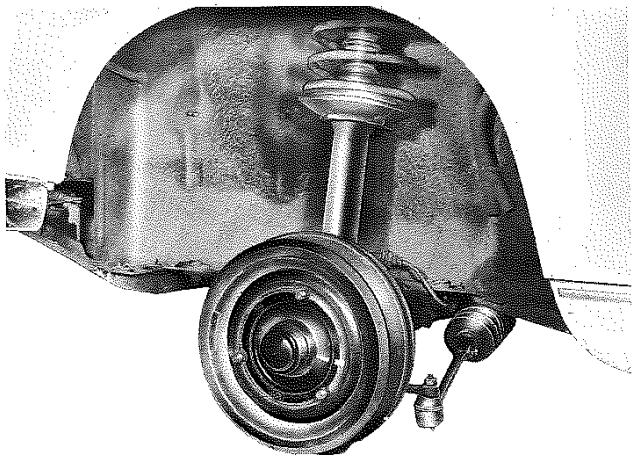
This fitting enables the avoiding of contact of the stem **4** of the spring with the cap of the wheel cylinder.

2nd Fitting

- All the springs differ from those of the 1st fitting.
- The inner springs **5** are identical.
- The outer springs **6** are also identical.

BRAKES

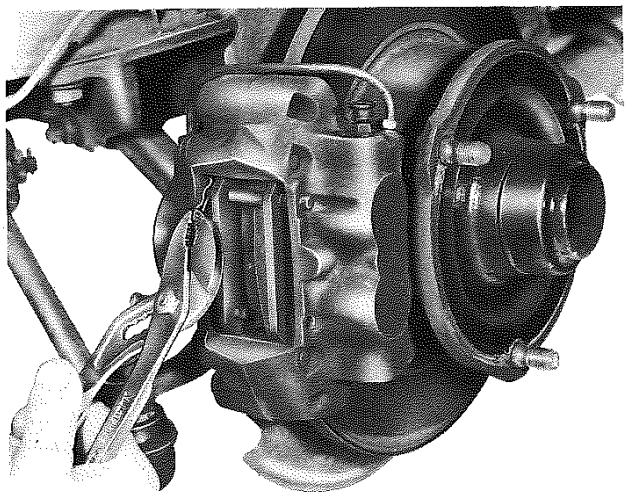
RE CONDITIONING



DUSTING OF THE BRAKE DRUMS

(every 6.000 miles - 10.000 km)

- Remove the wheels after marking their position on the hubs.
- Mark and remove the brake drums
- Dust out the plates and drums with compressed air.
- Check the sealing of the wheel cylinder by turning the rubber caps to ensure that there is no trace of seepage.
- Replace the cylinders if necessary.
- Refit the drums and the wheels following the marks made whilst removing.
- Tighten the wheel nuts to **43.5 ft.lbs** (6 m.kg).



GIRLING DISC BRAKES, FRONT

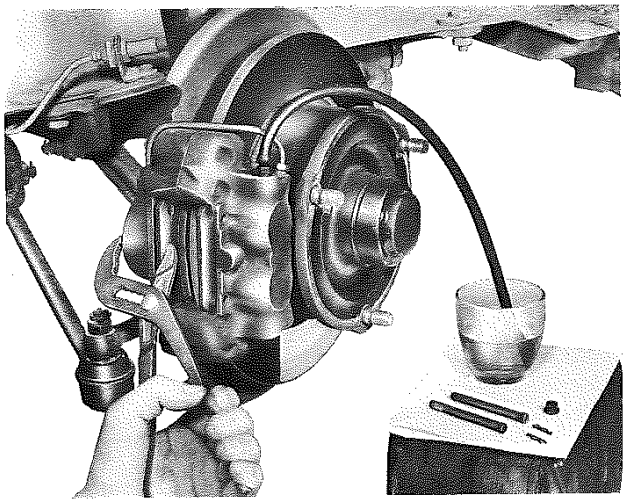
Replacing the brake pads

The front brake pads **must** be replaced when the thickness of the linings reaches 2 mm.

The brake pads are delivered in sets of four by the Spare Parts Department.

- Dry clean the brake calipers carefully, taking care not to damage or move the rubber piston protectors.

- Remove the brake pad retaining rod split pins and withdraw the rods towards the inside of the calipers.



- Connect a tube to the bleed screw on the caliper with the end of the tube in a transparant container with a small quantity of brake fluid in it.

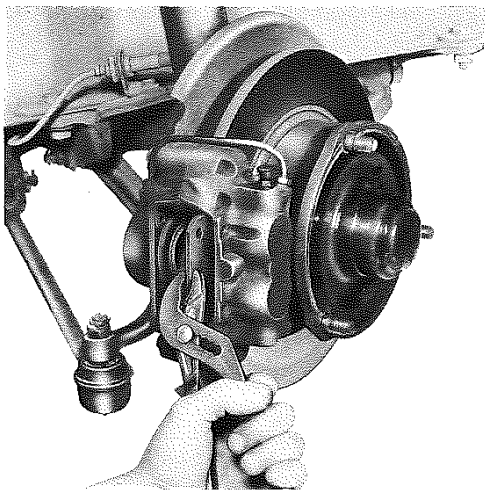
- Slacken the bleed screw one turn.

- Using a pair of pliers, pressing on the edge of the caliper and the worn pad, push the inner piston into its housing.

- In the same manner, push the two outer pistons into their housing.

A certain amount of fluid will be pumped out of the system by the displacement of the pistons.

- Tighten the bleed screw and remove the tube.



- Remove the worn brake pads.

- Check that the wheel cylinders do not leak

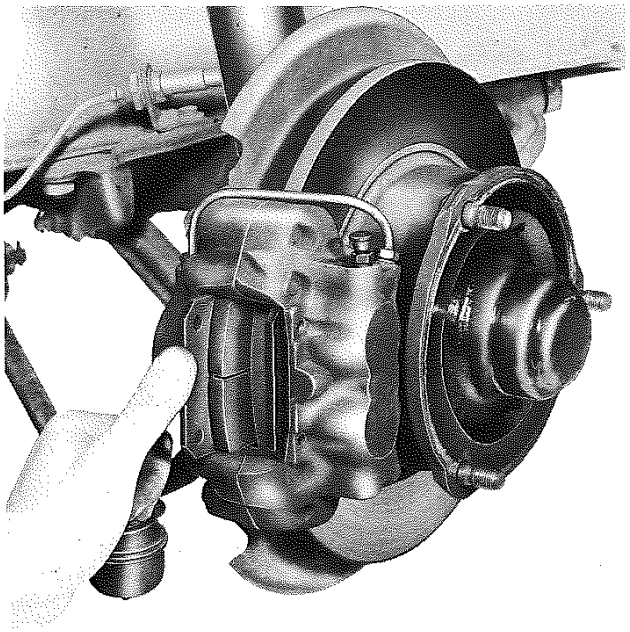
- Check the condition of the disc; which should not have any deep score marks as this would cause premature wear of the new brake pads.

- Check also the warp of the disc which must, under no circumstances, exceed 0.07 mm as this will provoke excessive judder when the brakes are applied.

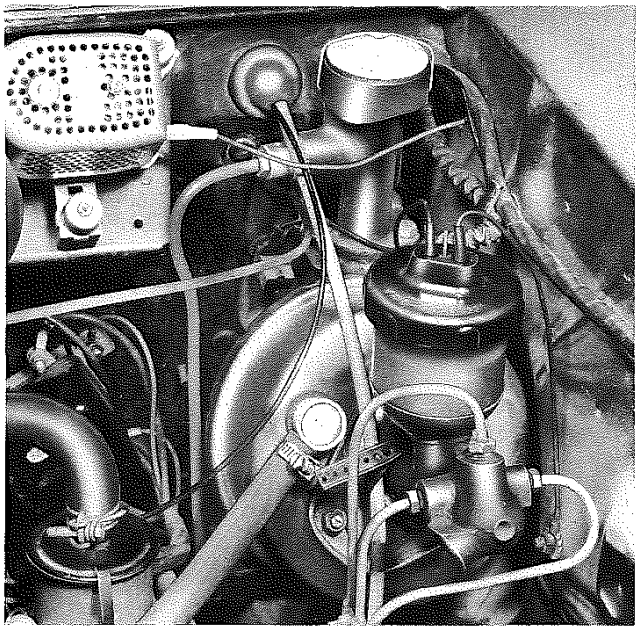
- Clean the disc (if necessary remove all traces of grease using a cloth dipped in trichlorethylene).

BRAKES

RE CONDITIONING



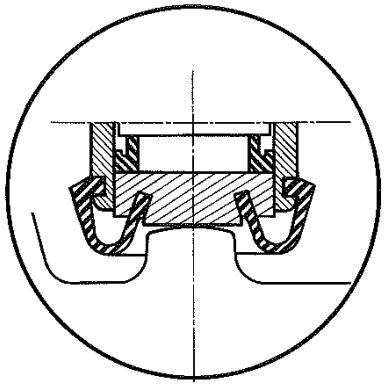
- Install the new brake pads, on both sides of the disc.
- Insert the pad retaining rods, from the inside of the caliper towards the outside.
- Insert the split pins, taking care not to pierce the rubber protector on the inner piston. When inserting the split pin, its straight side, which goes through the rod, must slide across the rubber protector and the side which «grips» should be above the rod.
- Proceed in the same manner for the brake pads of the other front caliper.



- After installing the four pads, check that the bleed screws are tight.
- Operate the brake pedal a number of times, until a strong resistance is felt. This indicates that the pistons are bearing correctly on the pads and the pads on the disc.
- Top up the master cylinder fluid level if necessary, using **Lockheed 55 fluid.**

IMPORTANT

- After each intervention on the braking system, the vehicle must be road tested.
- After fitting new parts (brake shoes, drums, pads or discs) it is essential, and the customer must be thus advised, to «bed down» the brakes for 1.800 miles (3.000 km) approx, because immediate intense use of the brakes might cause braking instability at a later date.



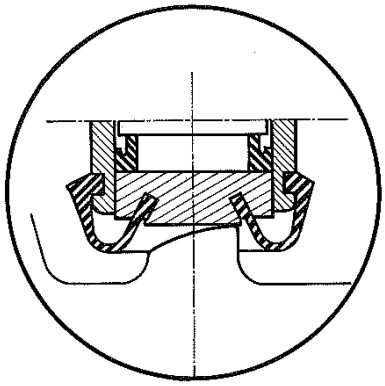
THERMOSTABLE BRAKE SHOES - FRONT

1st Fitting

Up to serial numbers :

404	- 5 125 643	404 C.KF	- 4 595 061
404 SL	- 5 124 753	404 L	- 4 856 166
404 J	- 4 535 204	404 L Break	- 4 855 830
404 KF	- 4 575 240	404 U6A	- beginning of series
404 C	- 4 498 307		

- Brake shoes with rounded thrust tongues.

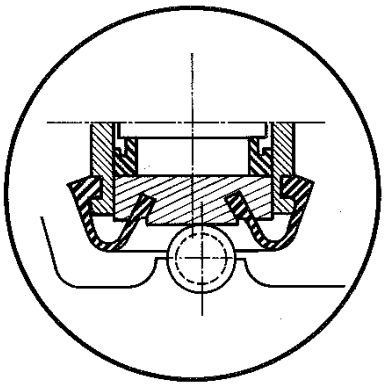


2nd Fitting

Up to serial numbers :

404	- 5 247 918	404 C.KF	- 4 597 974
404 SL	- 5 246 673	404 L	- 4 872 767
404 J	- 4 536 857	404 L Break	- 4 872 505
404 KF	- 8 210 395	404 U6A	- 1 927 009
404 C	- 4 499 019		

- Brake shoes with modified thrust tongues improving the progressiveness of braking in reverse gear.



3rd Fitting

As from serial numbers :

404	- 5 247 919	404 C.KF	- 4 597 975
404 SL	- 5 246 674	404 L	- 4 872 768
404 J	- 4 536 858	404 L Break	- 4 872 506
404 KF	- 8 210 396	404 U6A	- 1 927 010
404 C	- 4 499 020	404 ZF	- beginning of series

- Brake shoes with removable rollers on the thrust tongues, to diminish the friction thus avoiding an increase in brake pedal travel after braking when moving backwards.

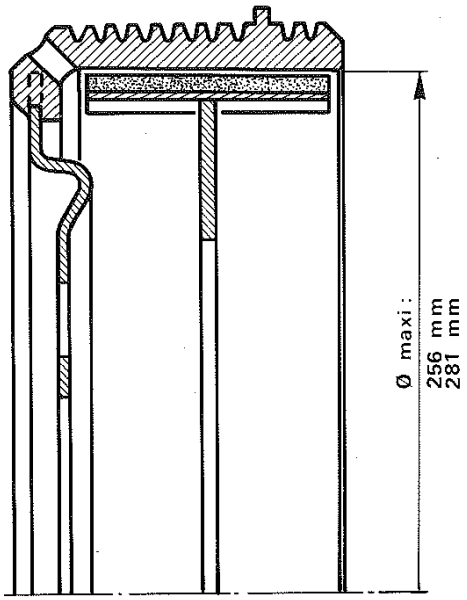
Also, the thrust face of the pistons is hardened by high frequency tempering.

INTERCHANGEABILITY :

- The three types of brake shoes are interchangeable, **on condition that both front brakes are fitted with four shoes of the same type.**

- The fitting of different brake shoes on the same car, which could lead to brake drag, must be avoided.

PEUGEOT



MACHINING OF THE DRUMS

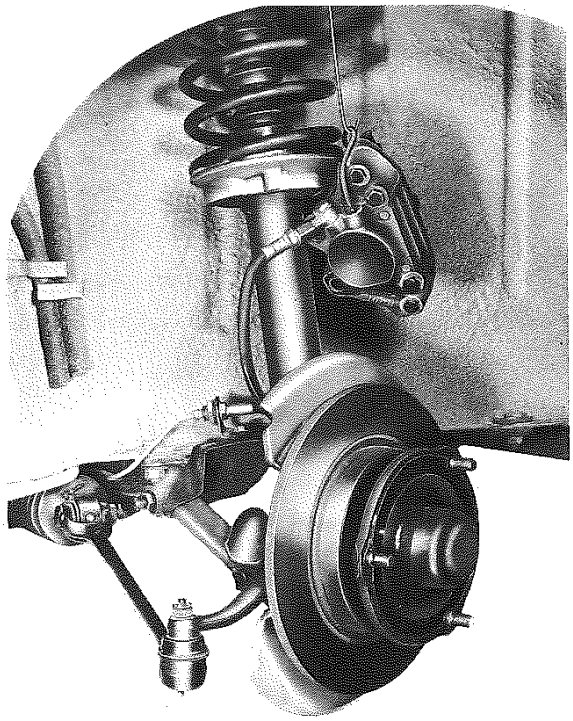
- The maximum diameter of the drums after machining should be :
  - 256 mm for drums of 255 mm original diameter
  - 281 mm for drums of 280 mm original diameter
  - That is 1 mm More than the original diameter
- Maximum out of true = 0.15 mm
- Maximum taper = 0.20 mm

***NOTE** : The surface condition of the braking track also influences the life of the linings.*

Consequently, the final machining should be effected with a stone; to obtain the smoothest possible surface.

BRAKES

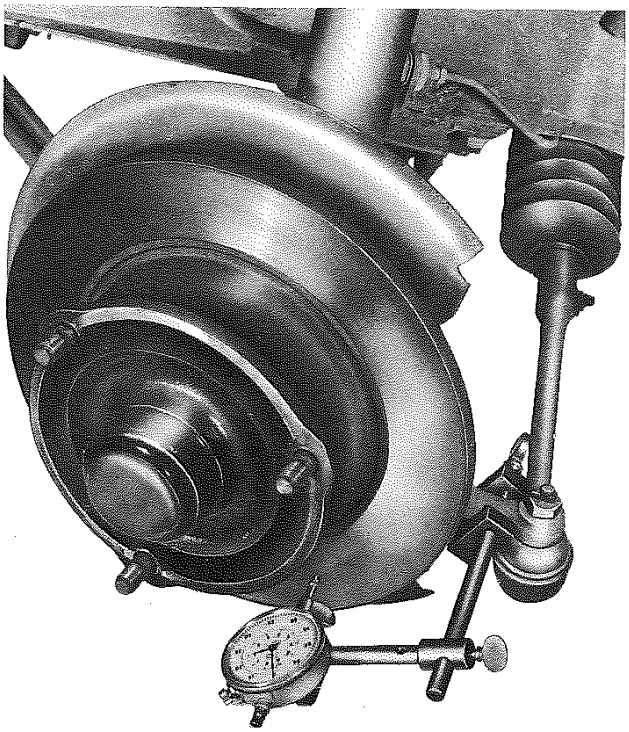
DRUMS - DISCS



REPLACING A DISC

REMOVAL

- Raise the front of the car.
- Chock it under the cross member
- Remove the wheel after marking its position
- Remove the caliper securing bolts and hang the caliper, using a hook, from the suspension spring, without disconnecting the flexible brake hose.
- Remove the hub/disc assembly
- Remove the three bolts securing the disc to the hub and separate the two parts.

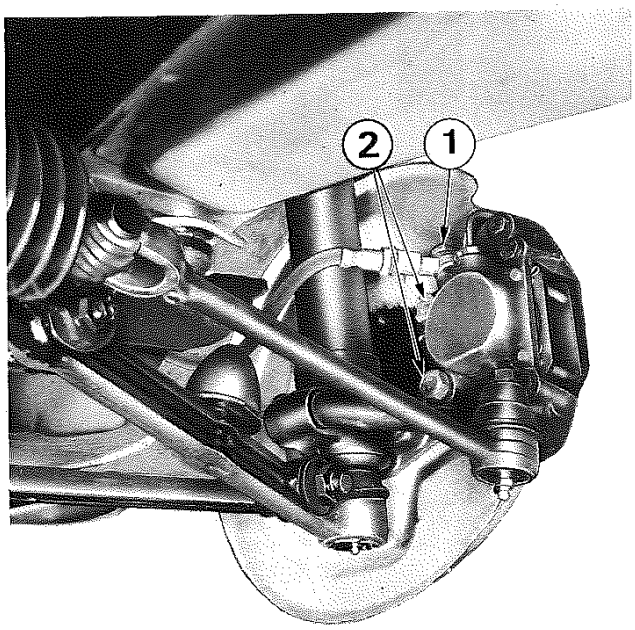


REFITTING

- Assemble the disc and the hub
- Use new Blocfor washers and tighten the tree bolts to **40 ft.lbs** (5.5 m.kg).
- Place the hub/disc assembly on the stub axle
- Check the warp of the disc with a dial indicator secure its support to the connecting track arm so that the feeler is approximately 23 mm from the outer edge of the disc.
- The warp of the disc under these conditions must not exceed 0.07 mm; if it does, remove the disc and turn it through 1/3 of a turn in relation to the hub.
- Clean the brake disc (if necessary remove the grease with a cloth soaked in trichlorethylene).
- Refit the caliper
- Use new washers and tighten the caliper bolts to **51 ft.lbs** (7 m.kg)
- Refit the wheel.

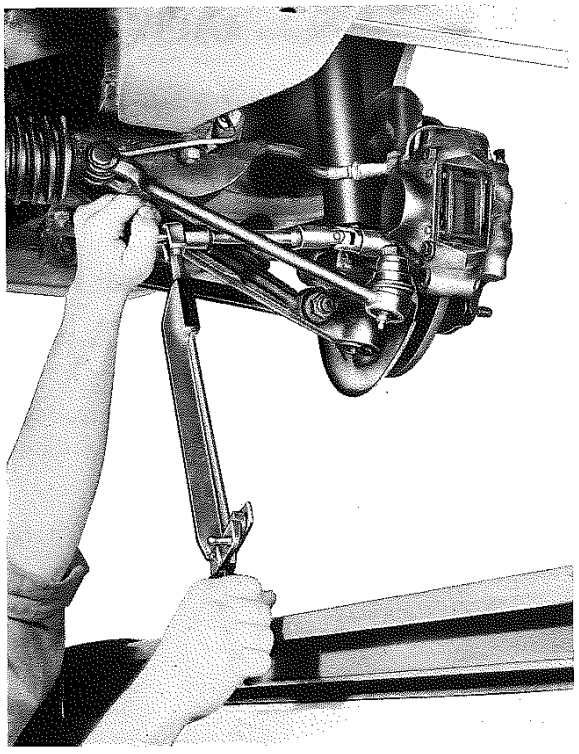
BRAKES

3 PISTON GIRLING CALIPER



REMOVAL

- Raise the front of the car.
- Chock it under the cross member.
- Remove the wheel after marking its position.
- Disconnect the union 1 of the brake hose on the caliper.
- Remove the two securing bolts 2 of the caliper.



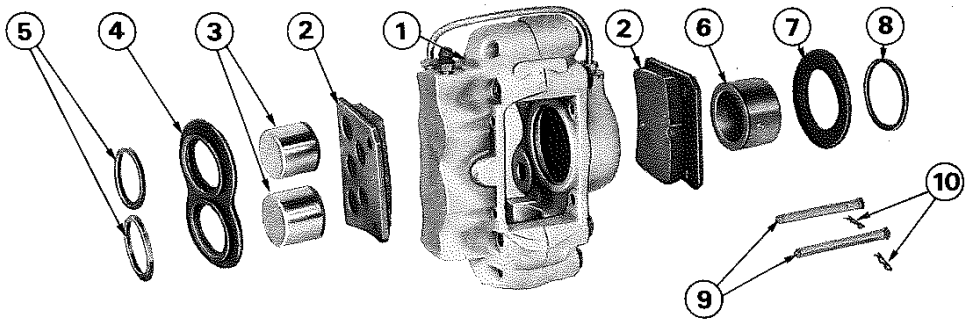
REFITTING

- Refit the brake caliper
- Fit two new washers and tighten the caliper bolts to **51 ft.lbs** (7 m.kg)
- Reconnect the brake hose to the caliper after fitting new copper seals on both sides of the adjustable union.
- Position the union so that its axis is at 45° in relation to the axis of the car.
- Tighten the union bolt to 16 ft.lbs (2.25 m.kg)
- Bleed the system
- Refit the wheel

PEUGEOT

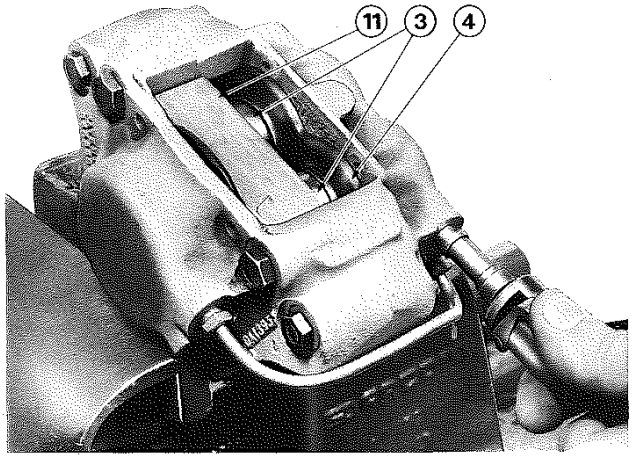
BRAKES

3 PISTON GIRLING CALIPER



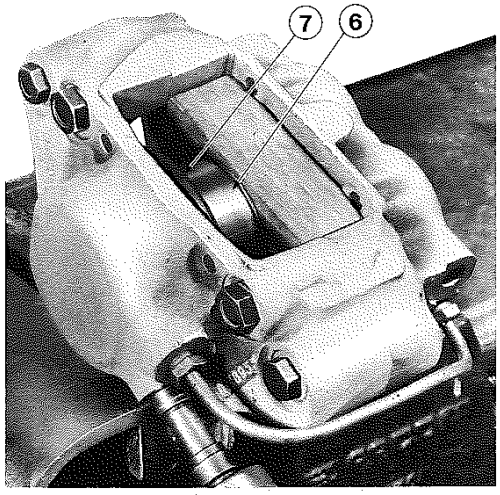
1 - Caliper in two pieces
2 - Pads with ABEX NS 414 type linings
3 - 34 mm diameter pistons, outer side
4 - Piston protector
5 - Piston sealing rings
6 - 48 mm diameter piston, inner side
7 - Piston protector
8 - Piston sealing ring
9 - Retaining rods
10 - Split pins

IMPORTANT : The two pieces of the caliper must never be separated

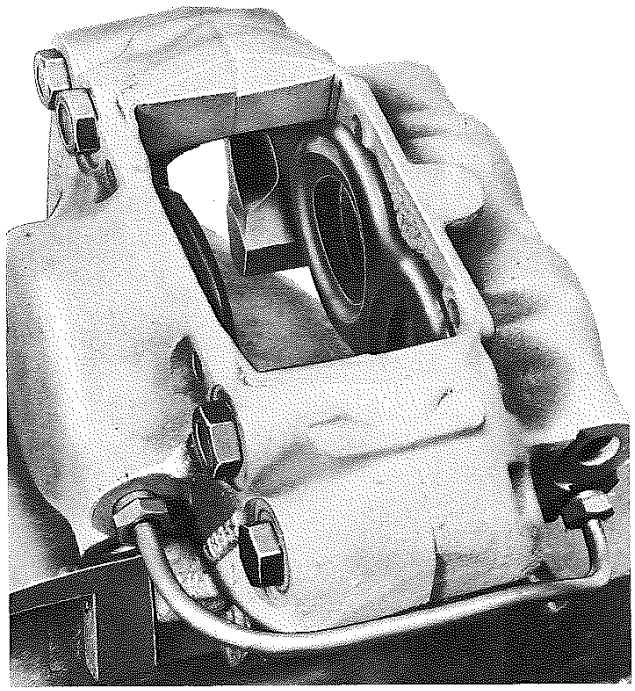


DISMANTLING

- Clamp the caliper in a vice fitted with lead jaws
- Remove :
  - the split pins
  - the retaining rods
  - the pads
  - the bleed screw
- Place between the pistons, a wooden block **11** of 60 × 78 mm, 25 mm thick.
- Disengage the pistons **3** from their cylinders by blowing compressed air through the bleed screw hole.
- Remove the pistons **3** and the protector **4**.



- Disengage the piston **6** from its cylinder by blowing compressed air through the fluid feed hole.
- Remove the piston **6** and the protector **7**.
- Remove the piston sealing rings.



RE-ASSEMBLY

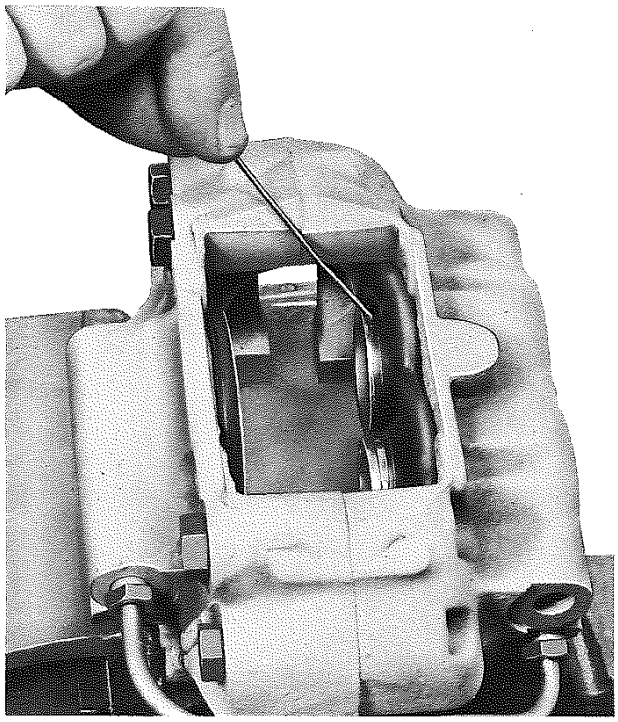
IMPORTANT

The cylinders and pistons must have no score marks likely to cause leakage.

The caliper must be carefully cleaned with alcohol or clean brake fluid with the exclusion of all other products.

Before re-assembly dip the pistons and the sealing rings in **Lockheed 55** fluid.

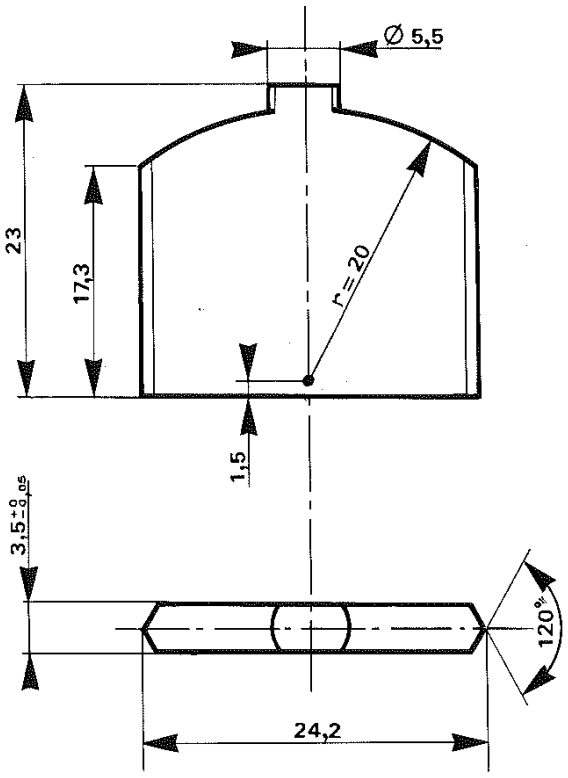
- Place a **new** sealing ring in the grooves provided in the cylinders.
- Engage the lower lip of the piston protector in the upper groove on the cylinders.
- Place in the cylinders the two pistons of 34 mm diameter and the piston of 48 mm diameter, taking care not to «pinch» the protectors.



- Insert the upper lip of the protectors in the groove on the piston using a hook if necessary.
- Refit :
  - the linings*
  - the retaining rods with their heads on the inner side.
  - the spring clips, taking care not to puncture the protectors (when inserting the split pins, their straight sides which go through the rods, must slide across the protectors and the side which «grips» should be above the rod.
  - the bleed screw

* **IMPORTANT**

The brake pads **must** be replaced when their thickness reaches **2 mm.**



TOOLS TO BE USED

This tool must be made in the workshop 0.0804

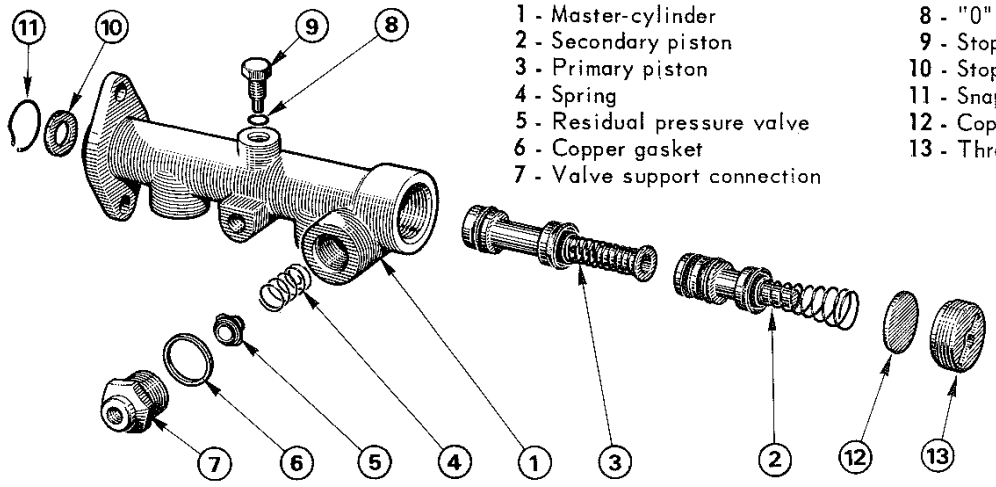
Flat key for cylinder plug

Tool Steel
Hardened at 830° C. in oil
Stress relieved at 200° C

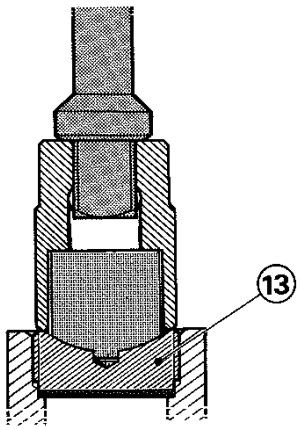
PEUGEOT

BRAKES

TANDEM MASTER-CYLINDER-EXPORT VEHICLES

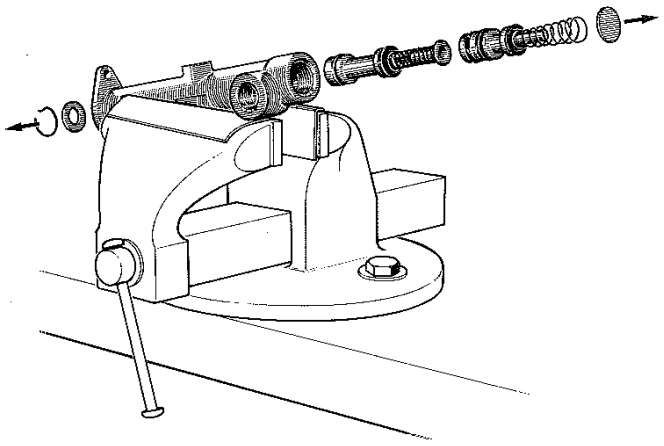


1 - Master-cylinder
2 - Secondary piston
3 - Primary piston
4 - Spring
5 - Residual pressure valve
6 - Copper gasket
7 - Valve support connection
8 - "0" ring
9 - Stop screw
10 - Stop washer
11 - Snap ring
12 - Copper gasket
13 - Threaded plug

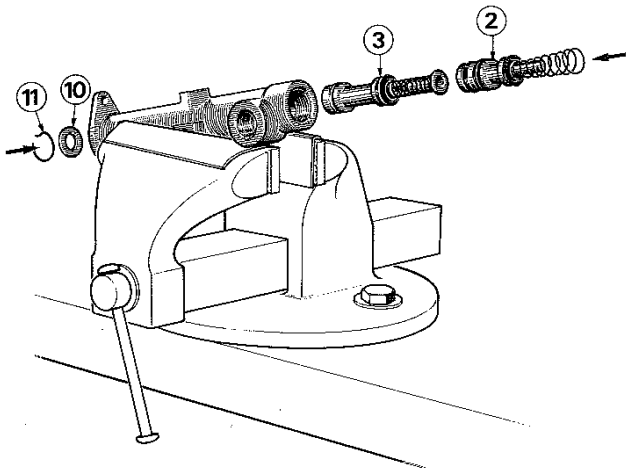


REMOVAL

- Remove the stop screw and fasten the master-cylinder vertically in a vice fitted with protective jaws.
- Insert the special flat key **0.0804** in the slot of the threaded plug **13**. Use a socket of 21 mm (12 sided).
- Make sure that the edge of the key is in good contact with the master-cylinder plug and the upper section of the key resting against the bottom of the socket (if needed, insert flat washers).
- Unlock and remove the threaded plug.



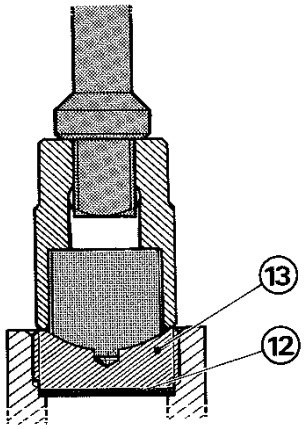
- Remove the copper gasket.
- Remove the secondary piston with spring.
- Remove the primary piston by pushing it with a wooden mandrel.
- Remove the snap ring and the stop washer of the primary piston.
- Remove the valve support connection and the residual pressure valve.



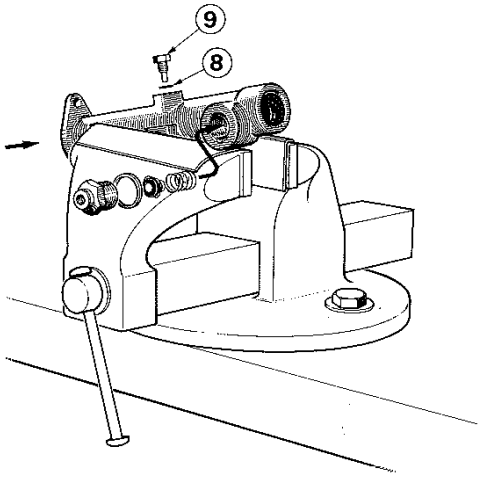
REASSEMBLY

Important :

- The cylinder, carefully cleaned with alcohol, must not have any scratches, nor traces of oxidation.
- Properly position stop washer **10** and snap ring **11.**
- Lubricate the inside of the cylinder and the repair kit parts with brake fluid.
- Insert the primary piston **3** and then the secondary piston **2** with the usual precautions. Orientate the springs towards the front of the cylinder.



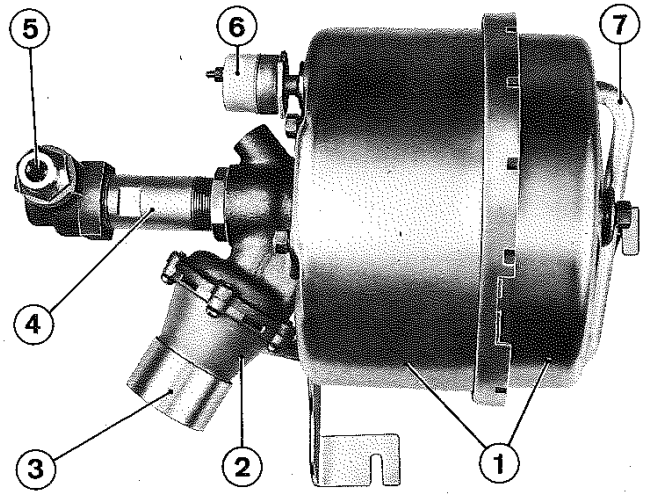
- Fit the new copper gasket **12.**
- Re-screw the threaded plug **13** of the cylinder with the aid of the special key and the 21 mm socket.
- When tightening, take the same precautions as for removal.
- Tightening torque **72.5 ft. lbs (10 m.kg)**



- Position the 2 pistons app. 5 mm inside the cylinder.
- Insert the stop screw **8** with new «0» ring **9** and tighten
- Tightening torque **7.25 ft.lbs (1 m.kg)**
- Place the residual pressure valve in the valve support connection, the rubber facing the connection seat.
  - place the spring on the valve, with open end facing the valve.
  - refit this assembly with new "0" ring into main body.
- Tightening torque **22 ft.lbs (3 m.kg)**

BRAKES

ASSISTANCE.



1 - Vacuum cylinder
2 - Control valve
3 - Air intake filter
4 - Hydraulic slave cylinder
5 - Residual pressure valve support
6 - Vacuum oil pressure switch
7 - Transfer tube.

HYDROVAC

Fitted to 404 models with Thermostable brakes as from serial numbers :

404	- 5 100 001	**404 C.KF**	- 4 594 001
404 KF	- 4 570 001	**404 J**	- 4 535 001
404 C	- 4 498 001	**404 ZF**	- 8 250 001

- Practical assistance ratio : 7/1

Main modified parts

- Brake plates, wheel cylinders and brake shoes front and rear.
- Drums and wheels
- Master cylinder and its push rod
- Brake lines
- Housing support, pedals
- Inlet manifold
- Hand brake cable
- Instrument panel

Maintenance

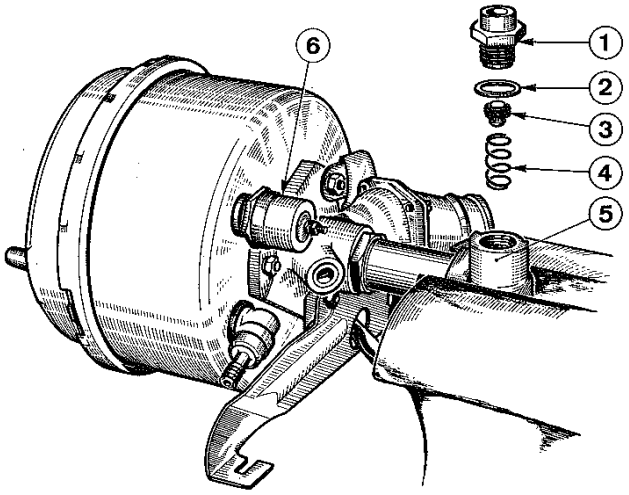
This apparatus requires no particular maintenance apart from the replacement of the air intake filter 3 which must be effected every 9.000 miles (15.000 km) or more frequently if the vehicle is used in very dusty areas.

Checking

See class 8 page 10 04.

BRAKES

ASSISTANCE



HYDROVAC

Replacing a residual pressure valve

REMOVAL

- Remove the vacuum tank
- Remove the Hydrovac
- Clamp the end piece 5 in a vice fitted with lead jaws
- Unscrew union 1
- Withdraw the valve assembly 3 and the spring 4
- Clean the union 1 with alcohol and dry with an air line.

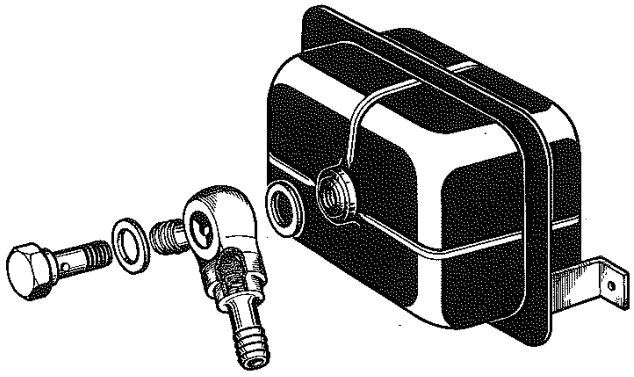
REFITTING

- Obtain the new parts required P.N. 4543.06
- Position :
  - the spring 4
  - the valve assembly 3 (rubber part facing upwards)
  - the seal 2
- Screw in the union 1 and tighten to **94.5 ft.lbs** (13 m.kg)
- Refit the Hydrovac and its accessories
- Bleed and adjust the brakes
- Check the residual pressure using the Testometre ARC 50.M2 (from 7.1 to 21.3 lbs.sq.in. 0.5 to 1.5 kg cm2).

Replacing the vacuum oil pressure switch 6

PARTICULAR PRECAUTIONS

- When refitting, coat the threads with a sealing compound of Plastex type.
- Tightening torque : 14.5 ft.lbs (2 m.kg)



VACUUM TANK

Non-return valve

To avoid the risks of the valve seizing in very cold weather, the use of **Silicone SI 200 Fluid of 50 Cts viscosity** is recommended.

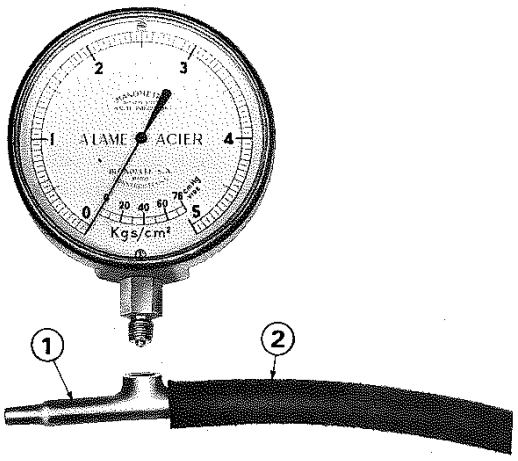
Method

- Remove the non-return valve holder.
- Raise the valve using a blunt object to free it from its seat.
- Pour 2 or 3 drops of SI 200 fluid onto the valve and release it.
- Refit the valve-holder using new gaskets.

Do not spill the fluid onto the rubber hoses as they will soften and become easily detachable.

BRAKES

ASSISTANCE



CHECKING THE HYDROVAC ON THE CAR

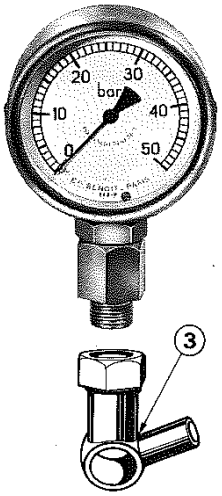
TOOLS TO BE USED

Vacuum gauge

Minimum measuring capacity :
- from 0 to 70 cm Hg of Vacuum.

1 - union to be made in the workshop depending on the type of gauge.

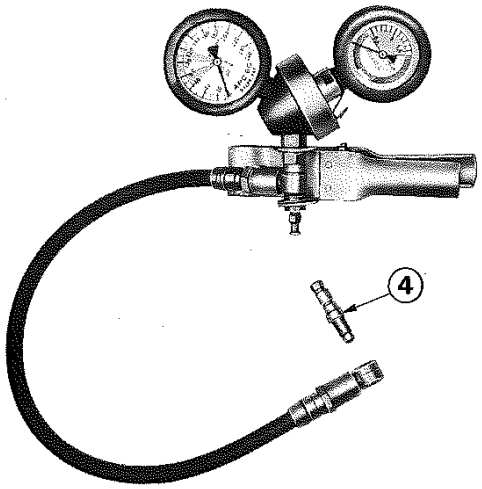
2 - rubber vacuum hose.



Hydraulic pressure gauge

Minimum graduated capacity :
- from 0 to 355.5 lbs.sq.in (0 to 25 kg/cm2).

3 - union P.N. 4609.06 to be modified according to the type of gauge.

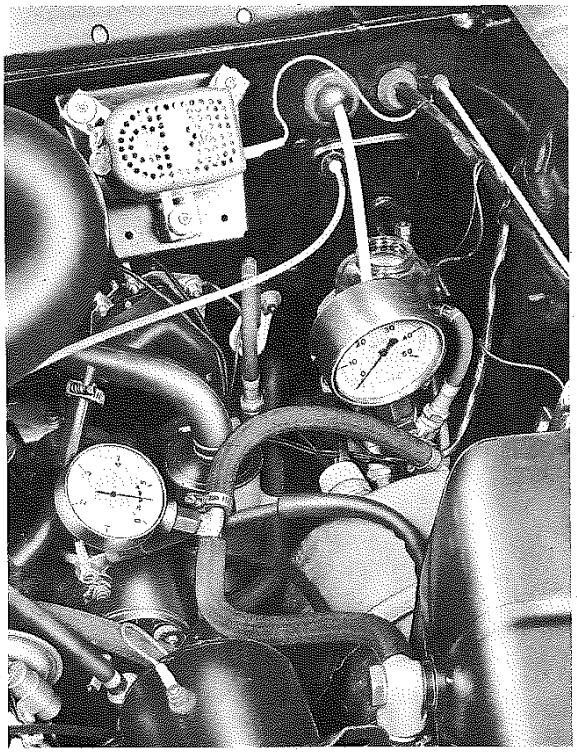


Arc Testometre or Testarc

Factory fitted to the ARC 50 of C2C or C3C type tester.

Sold separately by Salzer and Co.

4 - ARC 50 union bolt : N°. 8.



CHECKING THE HYDROVAC ON THE CAR

1 - Checking the vacuum system

- Connect the vacuum gauge between the vacuum tank and the Hydrovac.
- Start the engine to obtain a vacuum of more than 500 mm Hg.
- Bring the vacuum reading down to 500 mm Hg by operating the brake pedal lightly a few times.
- Stop the engine
- The drop in vacuum must not exceed 25 mm Hg after 30 seconds; if it does, check for leakage at the non-return valve, at the various hoses and at the unions on the Hydrovac.

2 - Checking the residual pressure

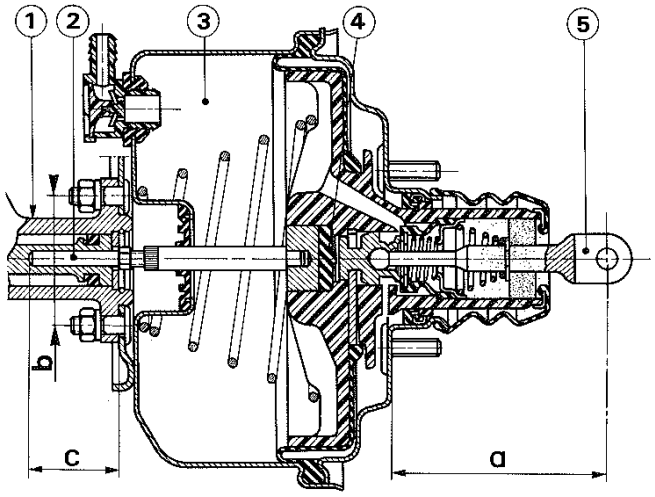
- Connect the Testometre M2 or Testarc union to one of the front wheel cylinders, depress the brake pedal then release it.
- The pressure should be stable and between 7.1 and 21.3 lbs.sq.in. (0.5 and 1.5 kg/cm2).
- If leakage is apparent, replace the residual pressure valve.

3 - Checking the pressure emitted by the Hydrovac.

- Remove the vacuum tank securing nuts and move the tank forwards.
- Connect the hydraulic pressure gauge to the master cylinder outlet using the special union.
- Obtain a vacuum of 500 mm Hg.
- For a given pressure at the Hydrovac outlet, an input pressure at the gauge, corresponding to those given below, should be obtained.

INPUT PRESSURE	OUTLET PRESSURE
78.2 to 106.6 lbs.sq.in (5.5 to 7.5 kg/cm2)	568.8 lbs.sq.in (40 kg/cm2)
142 to 184.8 lb.sq.in. (10 to 13 kg/cm2)	1.123.4 lbs.sq.in (79 kg/cm2)

Input and outlet pressures must be within the limits given in the table, other-wise the Hydrovac must be replaced.



1 - Master cylinder
2 - Push rod
3 - Mastervac
4 - Reaction disc
5 - Control rod

MASTERVAC

Fitted to 404/8 and 404 USA models equipped with disc brakes at the front, as from serial numbers :

404/8	- 6 900 001
404 USA	- 8 325 001
404 USA/ZF	- 8 327 501

- Practical assistance ratio : 1.8/1

Identification

- Protrusion of the control rod **a**
- Master cylinder mounting between centre distance **b**

	Distance a	Distance b
204	i84 mm ± 1.5	50 mm
404/8	126.5 mm ± 1.5	50 mm
404 USA	130.5 mm ± 1.5	60 mm

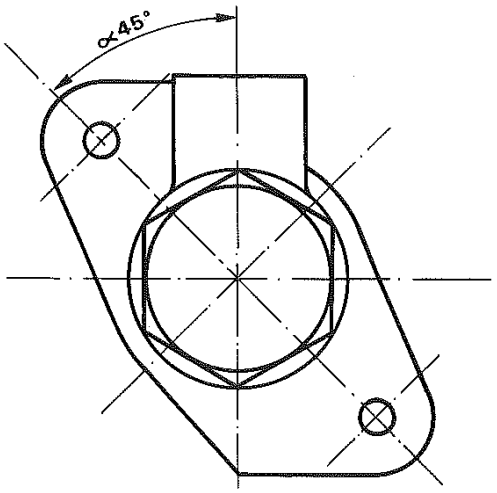
Maintenance

This apparatus requires no particular maintenance.

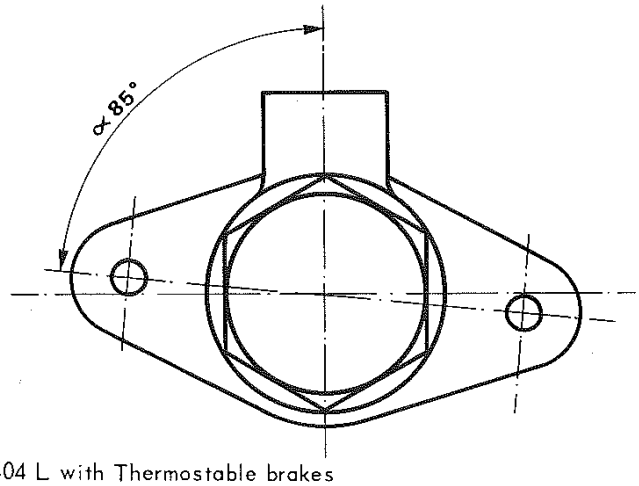
IMPORTANT

- The Mastervac is delivered by the Spare Parts Department with the master cylinder push rod 2 pre-set at the factory, to a protrusion distance of **c. This setting must never be altered.**

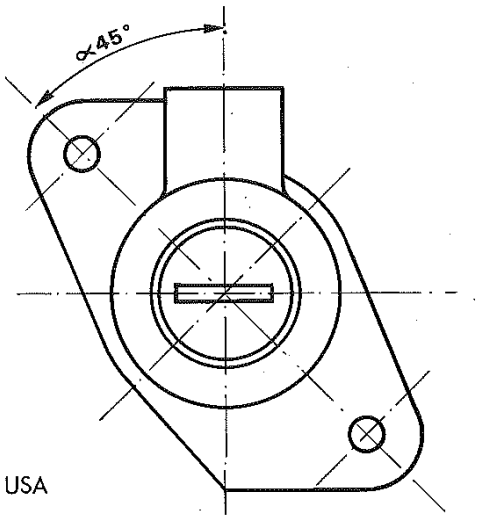
- **Never pull** the rod 2, in order not to disengage it from the reaction disc 4 which could fall into the Mastervac cylinder from where it could not be replaced in its original position.



404 Saloons with Thermostable brakes



404 L with Thermostable brakes



404/8 and USA

BRAKING COMPENSATOR

Fitted to Saloons; Family cars and Breaks, as from serial numbers :

404	- 5 265 262	**404 L**	- 4 879 401
404 SL	- 5 265 846	**404 U6A**	- 1 927 901
404 J	- 4 537 045	**404/8**	- beginning of series
404 KF	- 8 211 872		
404 SL.KF	- 8 212 062	**404 USA**	- 8 325 001
404 ZF	- 8 250 127	**404 ZF(USA)**	- 8 327 501

Identification

1 - 404 Saloons with Thermostable Brakes
- with hexagonal sealing plug, and adjusting shims.
- angle $\alpha = 45°$

2 - 404 Family Cars and Breaks with Thermostable brakes
- with hexagonal sealing plug and adjusting shims
- angle $\alpha = 85°$

3 - 404/8 and USA with disc brakes
- with hexagonal sealing plug and adjusting shims
- angle $\alpha = 45°$

Maintenance

The compensator requires no maintenance.

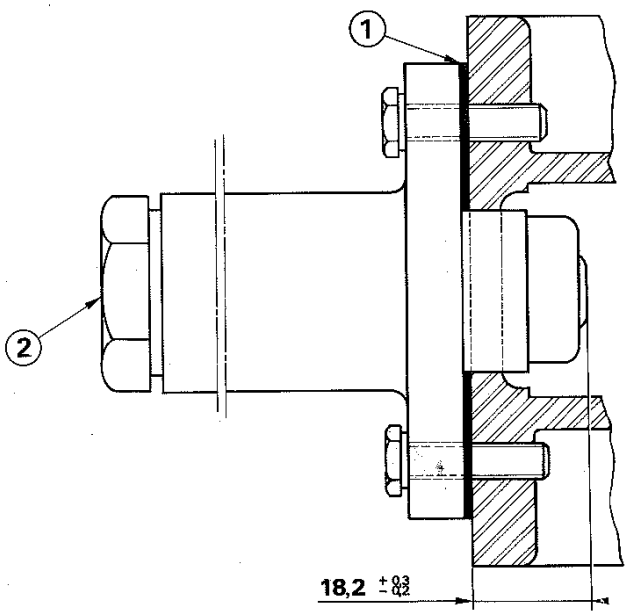
Particular precautions for bleeding the Hydraulic system.

Bleeding of the rear system must not be effected with the rear wheels «hanging» (car raised by the bodywork) as in this position the flow of fluid in the rear system may be obstructed.

PEUGEOT

BRAKES

COMPENSATOR



Adjusting the Compensator

404 Saloons, Family Cars and Breaks with Thermostable Brakes

To obtain efficient operation of the compensator, it is imperative that the protrusion of the piston is between 18 and 18.5 mm when the rear brake system valve is seated.

For reasons of tolerances in machining this setting is obtained by positioning shims **1** between the compensator flange and its support.

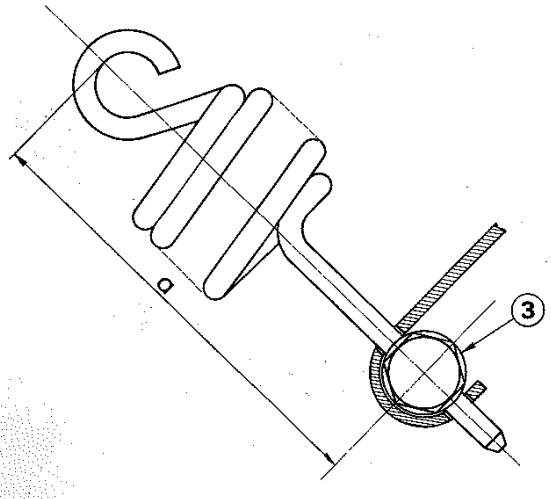
This protrusion of the piston not being measurable during repair, the thickness of shims required is indicated in tenths of a mm on the sealing plug **2.**

These shims exist on 2 thicknesses :
- 0.5 mm P.N. 4875.01
- 1 mm P.N. 4875.02

Consequently, when replacing the compensator one or more shims should be fitted depending on the number marked on the new compensator.

Number marked on the plug	0	5	10	15	20
Thickness of shims to be fitted (in mm)	none	0.5	1	1.5	2

***NOTE** : The 404/8 and USA with disc brakes are equipped with compensator pre-set with a special rear plug. Consequently, when replacing the compensator no adjustment is required.*



Adjusting the tension of the control spring

The position of the spring securing nipple **3** is set at the factory to obtain a length of :

- 107.5 mm under a calibration of 8 kg for Saloons
- 95.5 mm under a calibration of 8 kg for Family Cars and Breaks.

This setting being unobtainable when repairing, **the nipple securing nut on the spring stem must never be slackened.**

Consequently, the Spare Parts Department only deliver the spring with the nipple pre-set under Ref : P.N. 4877.04 and the parts of the assembly are not available separately.