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LISTE DES OPERATIONS FIGURANT AU CHAPITRE :
BOITES DE VITESSES - TRANSMISSIONS

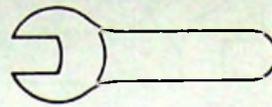
VEHICULE CONCERNE
TYPE MOTEUR

1

NUMERO DE L'OPERATION	DESIGNATION	GAMME		20	22	25	25	25	25	25	25	25	Break 20	Break 25	Break 25	Break 25	Ambulance			
		TEXTES △	SYMBLES ○	Essence	Essence	Essence Injection	Prestige	Essence Turbo	Prestige Turbo	Diesel	Diesel Turbo	Limousine Diesel Turbo	Essence + Familiale	Essence Injection	Diesel + Familiale	Diesel Turbo				
				825 A 5	J6T A 500	25/659	25/659	25/662	25/662	25/660	25/648	25/648	829 A 5	25/659	25/660	25/648	829 A 5 ou 25/660			
MA 330/1	Outillage		○	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MA 330.00/1	Caractéristiques et points particuliers des boîtes à 4 vitesses		○	X						X							X			
MA 330.00/2	Caractéristiques et points particuliers des boîtes à 5 vitesses		○	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MA 350.00/3	Caractéristiques et points particuliers des boîtes automatiques		○			X	X							X						
MA 372.00/1	Caractéristiques et points particuliers des transmissions		○	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MA 372.1/1	Dépose et pose des transmissions	△		X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MA 372.3/1	Remise en état des transmissions		○	X	X	X	X	X	X	X	X	X	X	X	X	X	X			



5



MA
330/1

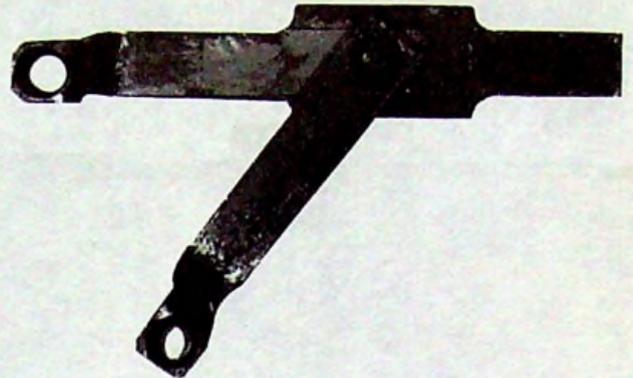
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3312 T



79.959

OUT 20 6310 T



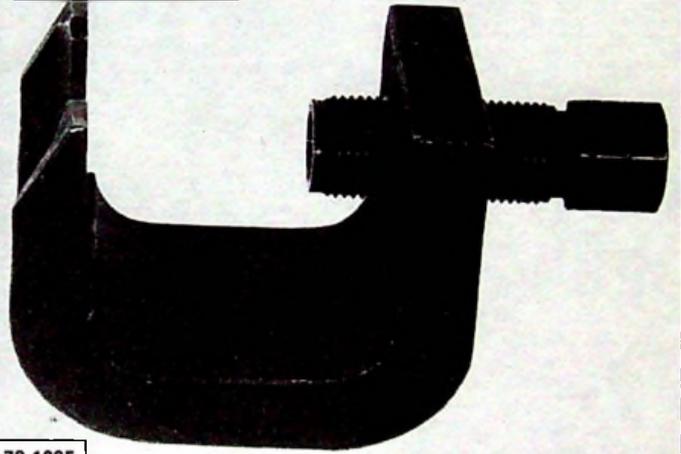
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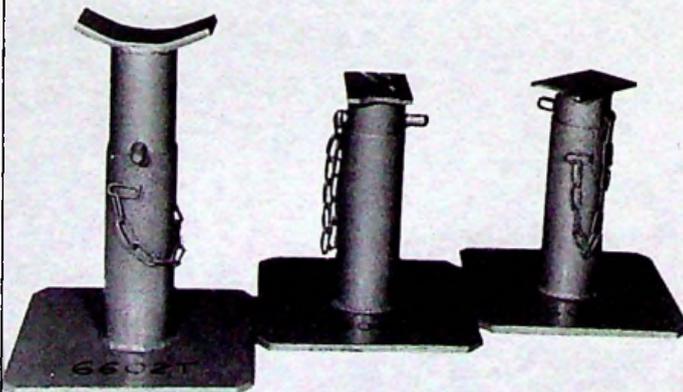
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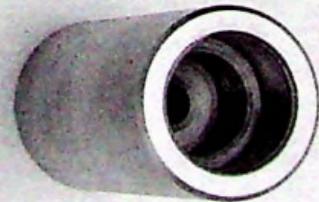
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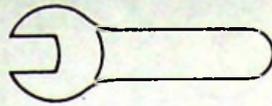


13.815

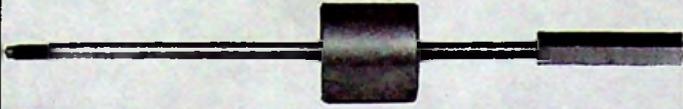
OUT 30 4083 T



84.795



1671 T



13.551

2405 T



12.429

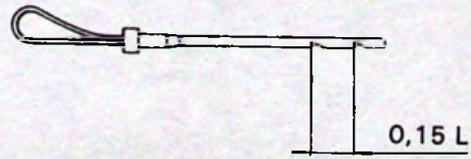
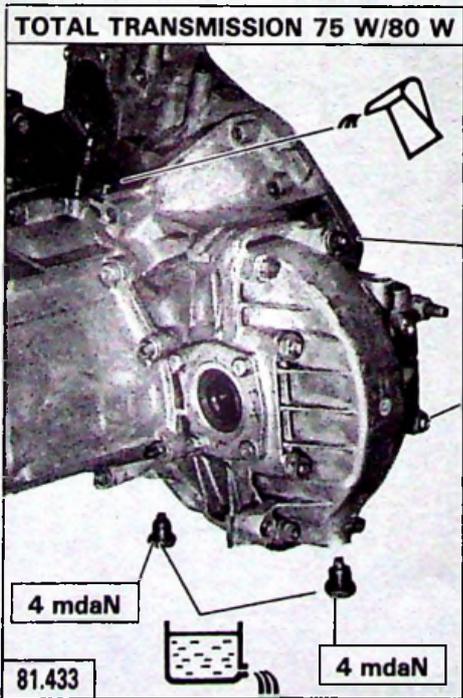
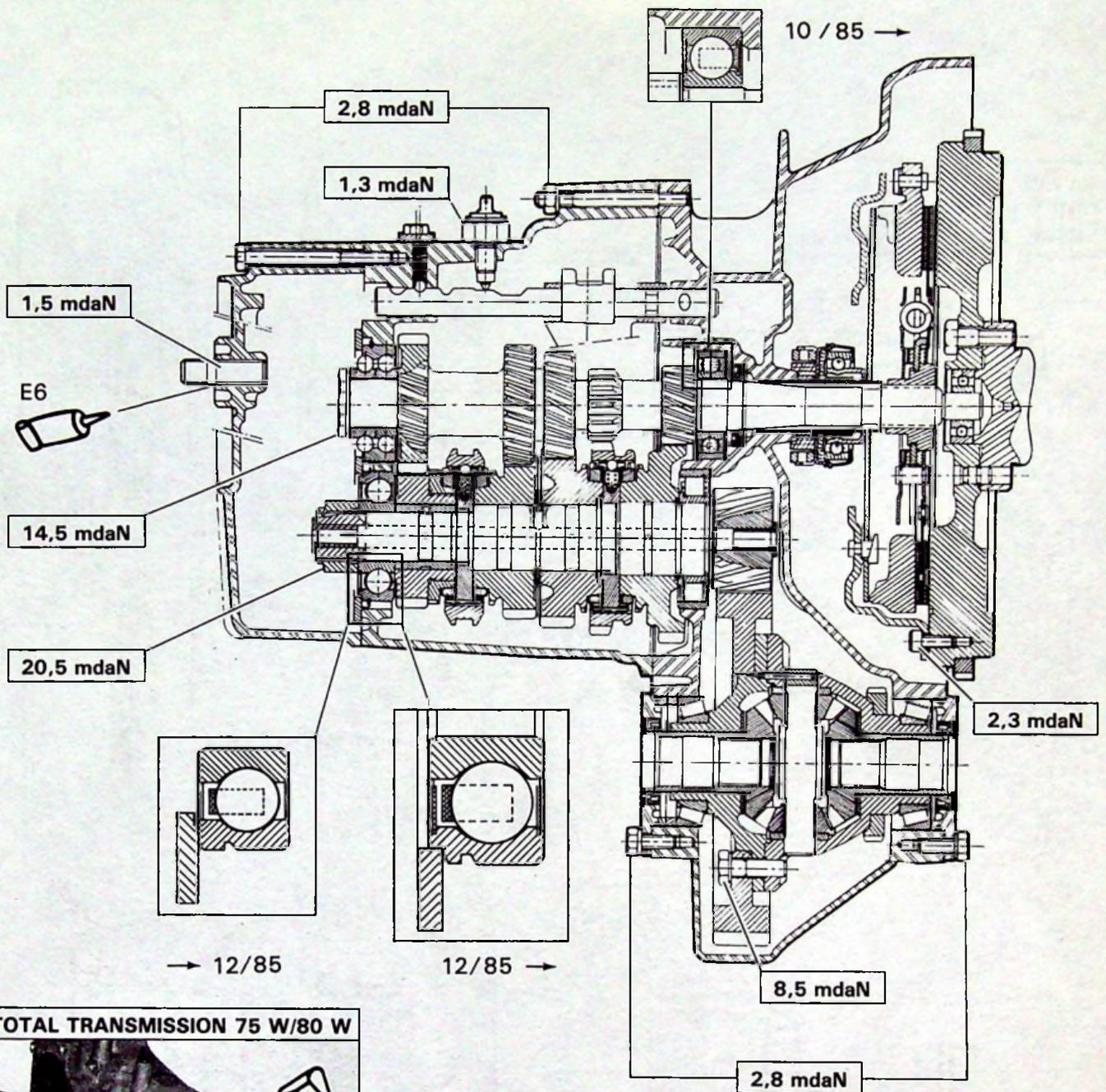


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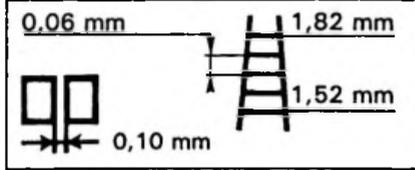
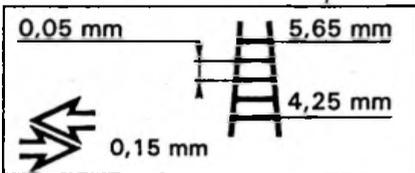
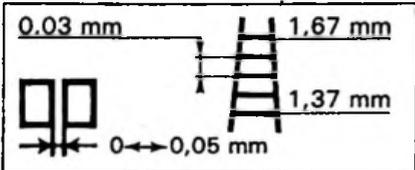
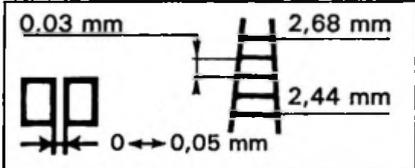
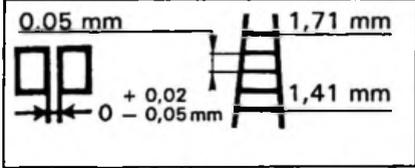
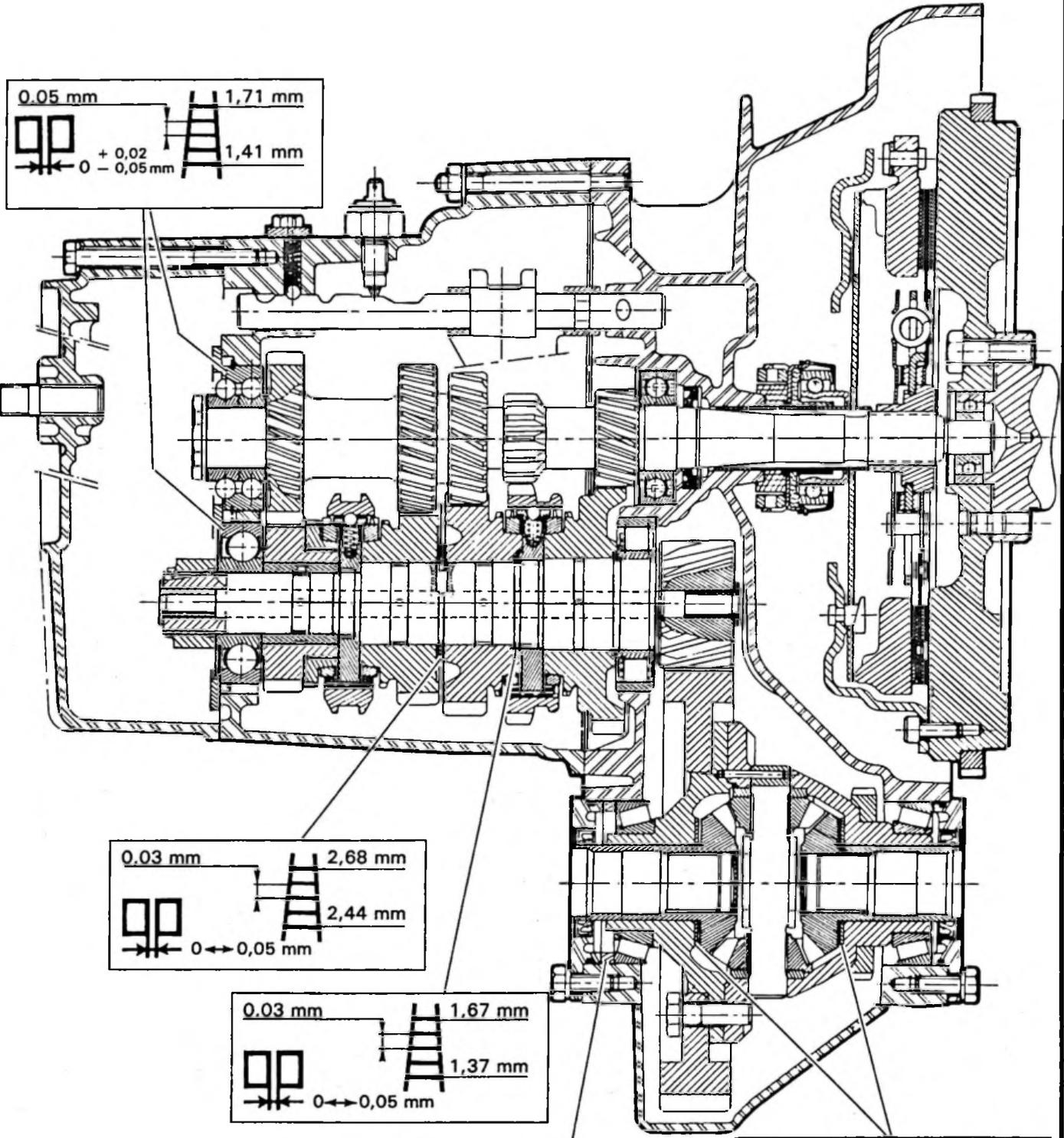


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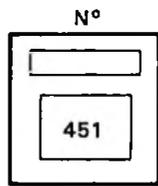


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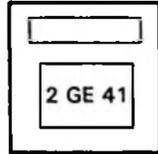


MA
330.00/1

3



→ CX 20



→ CX 25 D

→ 7/84

1	12/38	13/59	0,0695	8,21
2	18/33		0,1201	14,19
3	30/34		0,1944	22,97
4	35/28		0,2754	32,55
R	13/41		0,0698	8,25



10/20



CX 20 : MICHELIN 185 HR 14 XVS

CX 25 D : MICHELIN 185 SR 14 XZX

= 1,970 mètre

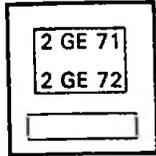


N°



→ CX 20

7/84 ⇌



→ CX 25 D

			x	KM/h 1000/min
1	12/38	14/61	0,0726	8,39
2	18/33		0,1253	14,49
3	30/34		0,2024	23,44
4	35/28		0,2875	33,21
R	13/41		0,0729	8,42



15/29



MICHELIN
195/70 R14 MXL
= 1,930 mètre

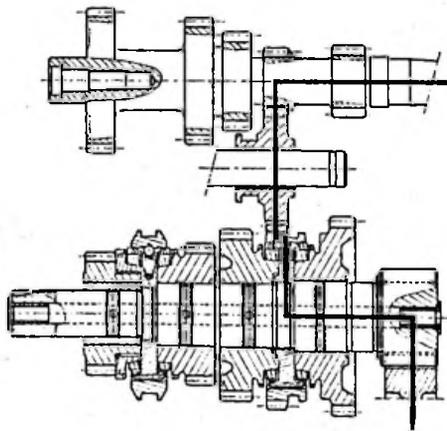
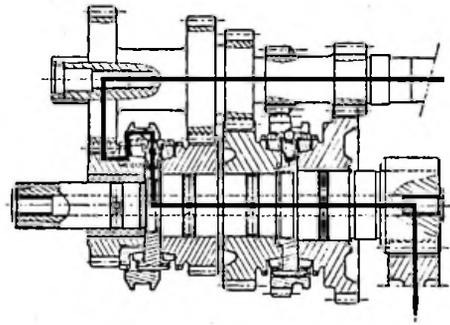
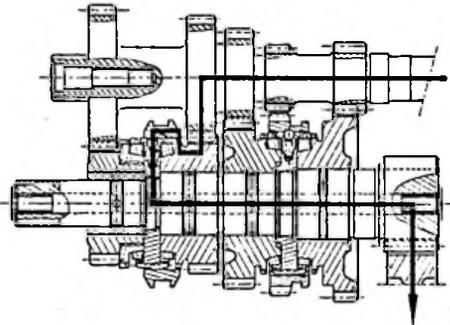
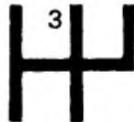
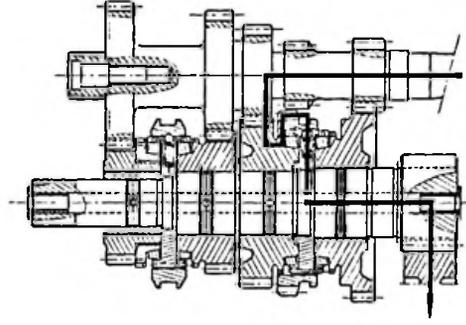
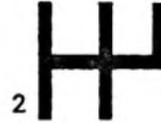
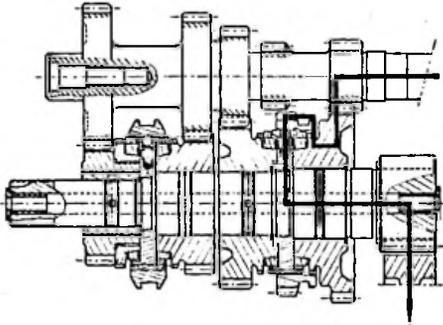


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MA
330.00/1

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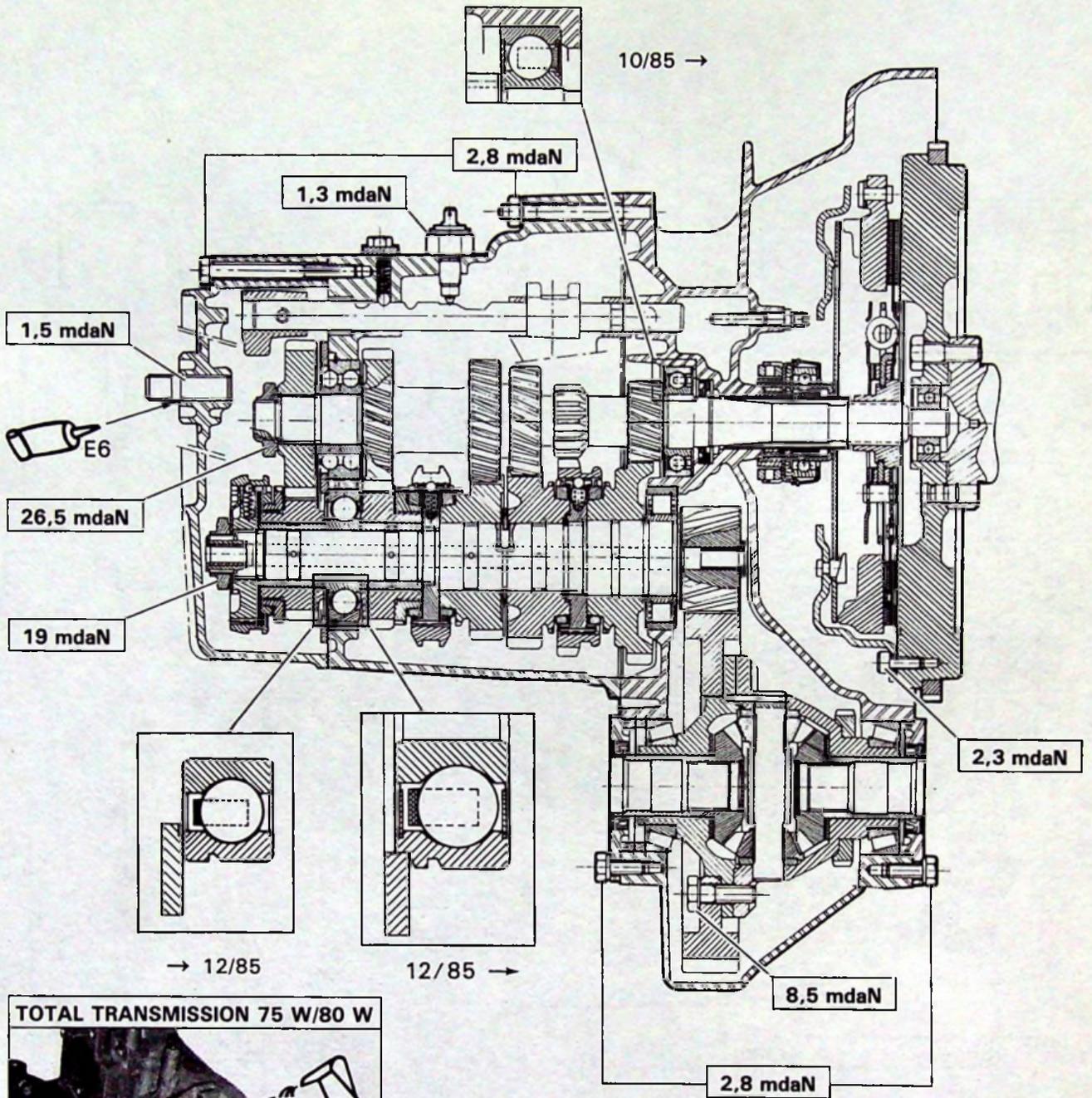


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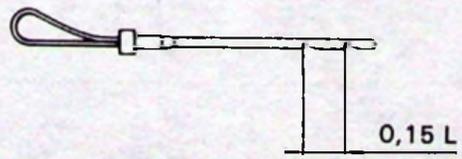
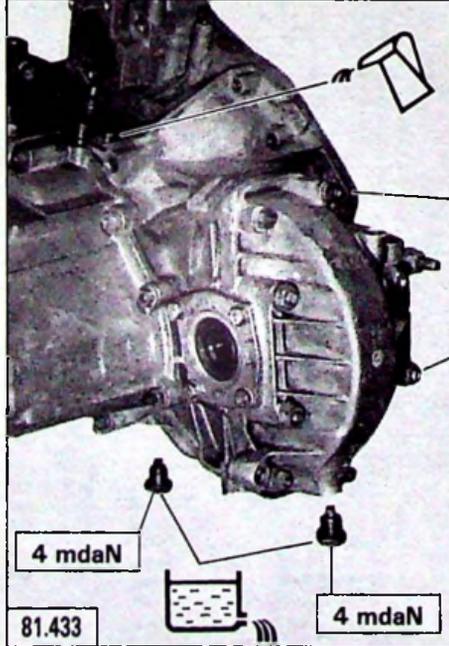


MA
330.00/2

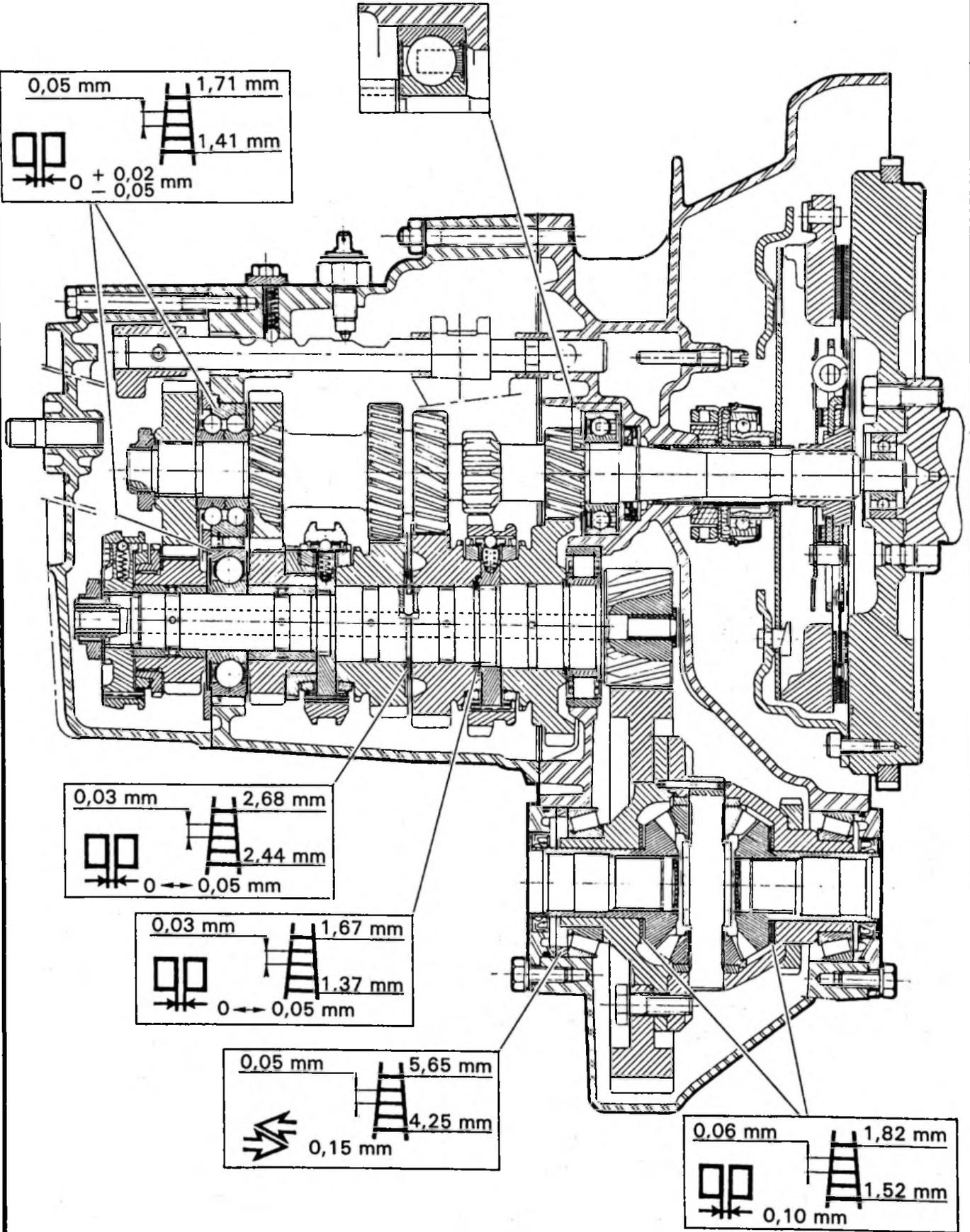
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TOTAL TRANSMISSION 75 W/80 W



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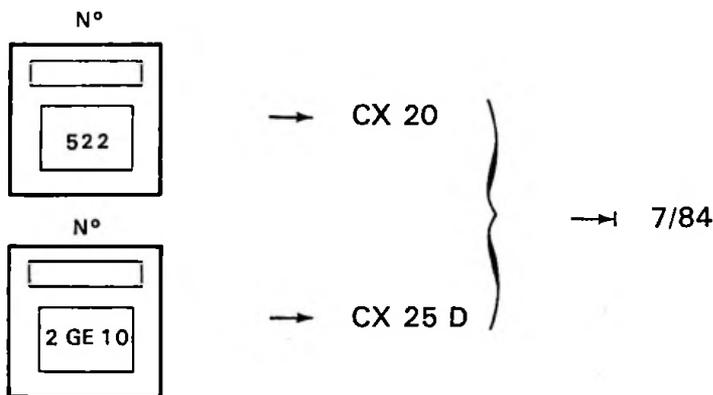


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MA
330.00/2

3



				Km/h
1	12/38	13/59	0,0695	8,21
2	18/33		0,1201	14,19
3	28/35		0,1762	20,82
4	33/31		0,2345	27,71
5	45/33		0,3004	35,50
R	13/41		0,0698	8,25

10/20



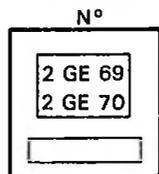
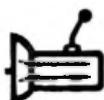
CX 20 : MICHELIN 185 HR 14 XVS

CX 25 D : MICHELIN 185 SR 14 XZX

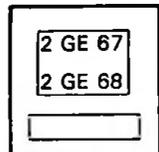
= 1,970 mètre

4

MA
330.00/2

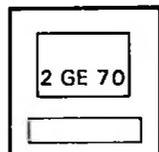


→ CX 20



→ CX 25 D

} 7/84 ⇨



→ CX 22 TRS

} 7/85 ⇨

1	12/38	14/61	0,0786	8,3
2	18/33		0,1253	14,49
3	28/35		0,1840	21,26
4	33/31		0,2438	28,29
5	45/33		0,3128	36,23
R	13/41		0,0729	8,42



15/29



MICHELIN
195/70 R14 MXL
= 1,930 mètre



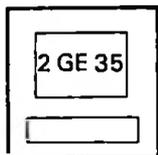
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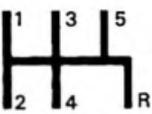
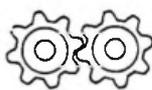
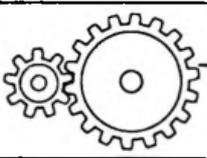
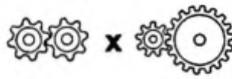
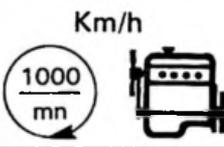
MA
330.00/2

5

N°

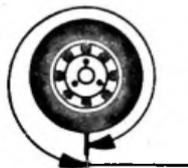


→ CX Limousine TURBO → 7/84

				
1	12/38	16/61	0,0822	9,8
2	18/33		0,143	16,9
3	29/35		0,2158	25,7
4	33/31		0,2756	35,1
5	46/31		0,3848	46
R	13/41		0,0824	9,8

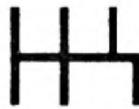


10/20



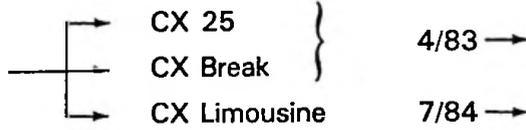
MICHELIN
185/70 SR 14 XZX
= 1,97 mètre

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MA
330.00/2

DIESEL TURBO

N°



4/83 → 7/84

7/84 →

CX 25

CX Break

CX25

CX Break

CX Limousine

				Km/h	
1	12/38	16/61	0,0822	9,49	9,59
2	18/33		0,143	16,40	16,56
3	29/35		0,2158	24,91	25,16
4	34/30		0,2938	34,07	34,42
5	46/31		0,3848	44,60	45,06
R	13/41		0,0824	9,52	9,62



15/29



MICHELIN
190/65 HR 390 TRX

= 1,91 mètre

4/83 → 7/84

{ CX 25
{ CX BREAK



MICHELIN
190/66 HR 390 TRX

= 1,93 mètre

7/84 → CX Break



MICHELIN
195/70 HR 14 MXV

= 1,93 mètre

7/84 → { CX 25
{ CX Limousine



5



MA
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7

N°

2 GE 53
2 GE 54

CX 25 GTI 7/83 →
 → CX 25 RI 7/84 →

7/83 → 7/84	7/84 →
CX 25 GTI	CX 25 GTI CX 25 RI

				Km/h	
1	12/38	14/59	0,0727	8,6	8,67
2	18/33		0,1265	14,8	14,98
3	28/35		0,184	21,75	21,98
4	33/31		0,2438	28,95	29,24
5	45/33		0,3128	37,1	37,46
R	13/41		0,0729	8,61	8,71



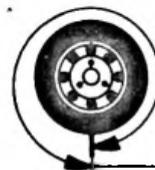
15/29



MICHELIN
190/65 HR 390 TRX

= 1,91 mètre

7/83 → 7/84 CX 25 GTI



MICHELIN
195/70 HR 14 MXV

= 1,93 mètre

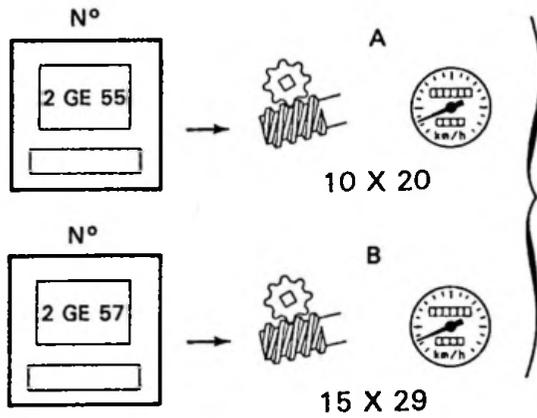
7/84 → CX 25 RI



MICHELIN
190/65 HR 390 TRX

= 1,93 mètre

7/84 → CX 25 GTI



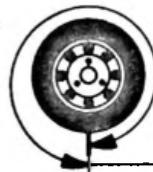
CX 25 Pallas IE
 CX 25 Prestige
 CX 25 Break TRI
 → 7/84

XVS	TRX
A	B

				Km/h	
1	12/38	15/61	0,0758	9,2	8,9
2	18/33		0,132	15,9	15,4
3	28/35		0,192	23,3	22,5
4	33/31		0,2544	30,9	30,
5	45/33		0,3264	39,6	38,4
R	13/41		0,0760	9,2	8,9



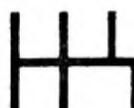
MICHELIN
 185 HR 14 XVS
 = 1,97 mètre



MICHELIN
 190/65 HR 390 TRX
 = 1,97 mètre

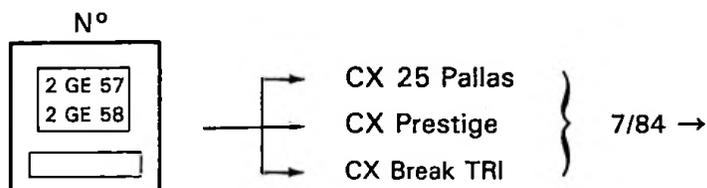


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MA
330.00/2

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1	12/38	15/61	0,0758	8,99
2	18/33		0,132	15,53
3	28/35		0,192	22,78
4	33/31		0,2544	30,30
5	45/33		0,3264	38,83
R	13/41		0,0760	9,02

15/29



MICHELIN
190/65 HR 390 TRX
= 1,93 mètre



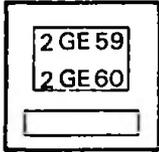
MICHELIN
195/70 HR 14 MXV
= 1,93 mètre

10

MA
330.00/2



N°



→ CX GTI TURBO
9/84 →

1	12/38	14/59	0,0749	8,63
2	18/33		0,1294	14,90
3	29/35		0,1866	22,64
4	34/30		0,2689	30,98
5	46/31		0,3521	40,55
R	13/41		0,0752	8,66



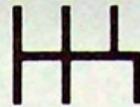
15/29



MICHELIN
210/55 VR 390 TRX
= 1,92 mètre

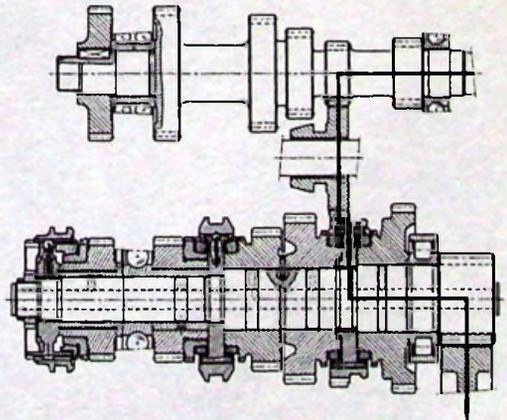
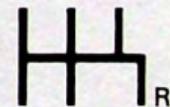
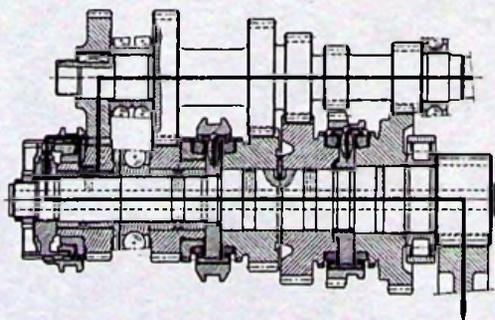
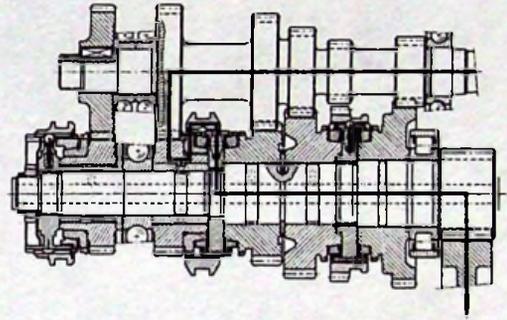
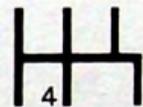
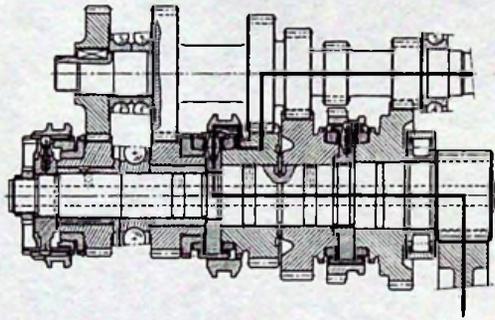
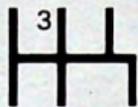
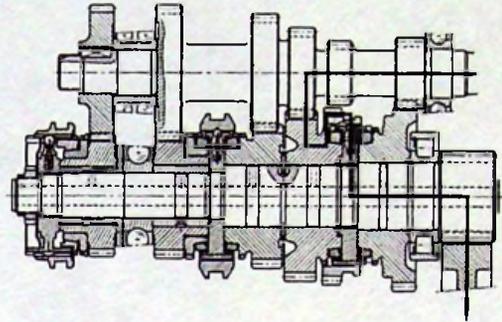
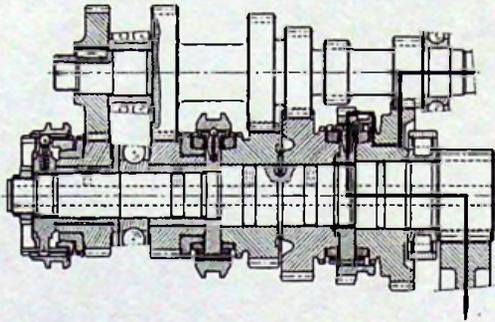


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MA
330.00/2

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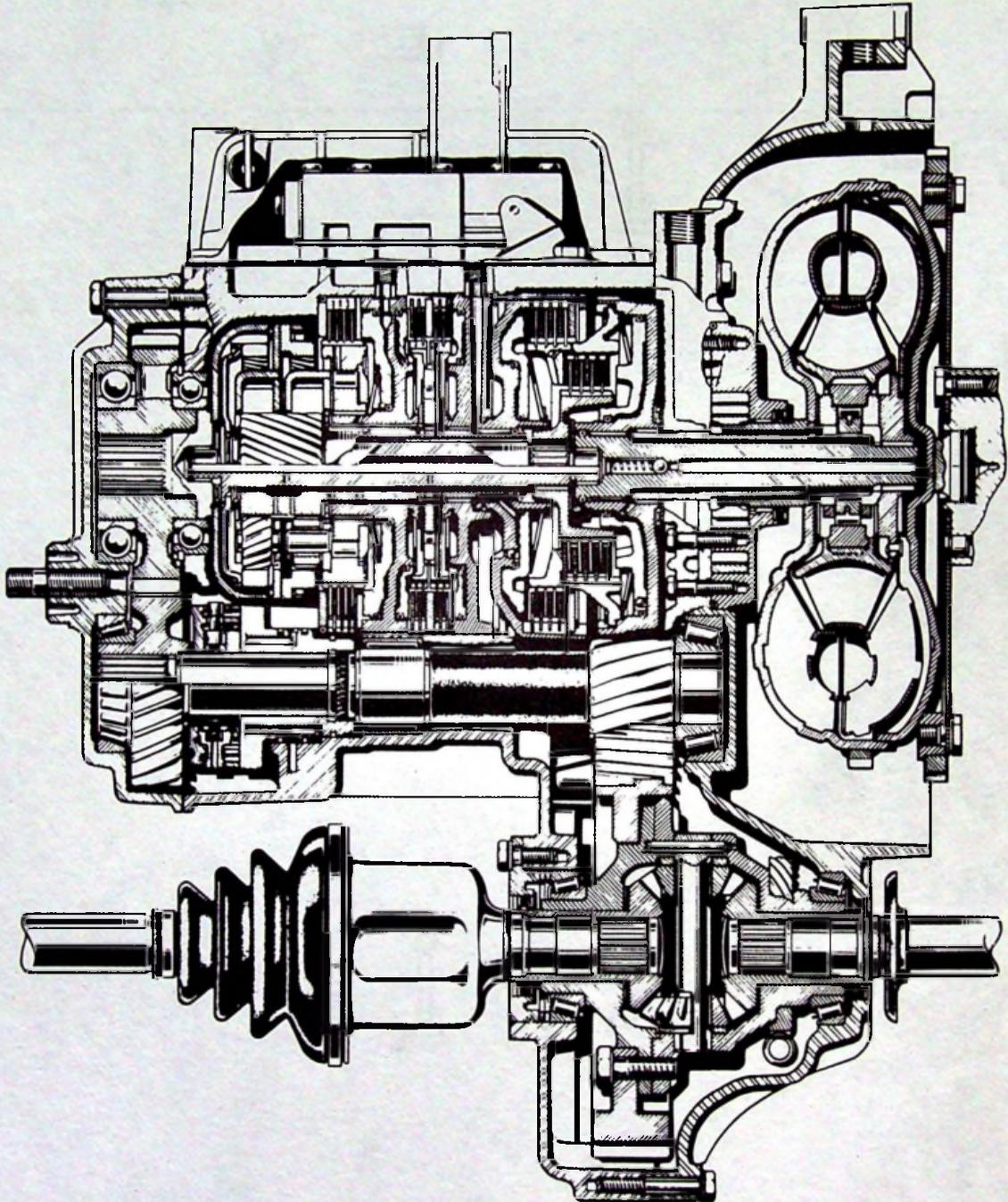
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ZF 3HP 22

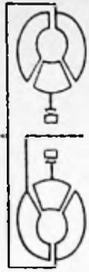
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350.00/1

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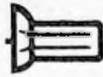




TOTAL DEXTRON D20-356



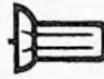
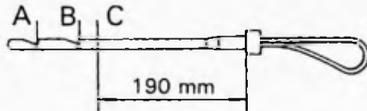
+



=



6,5 L



A ↔ B = 0,5 L



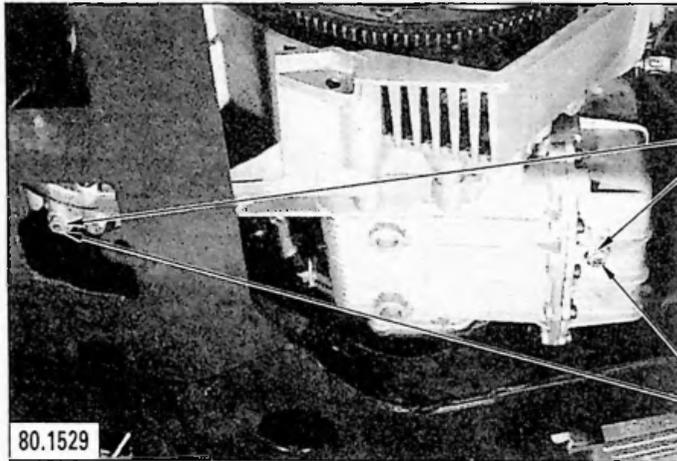
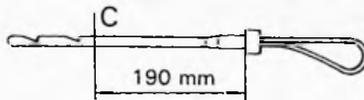
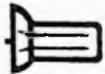
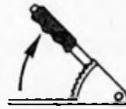
= C



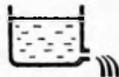
800
min



P



1°

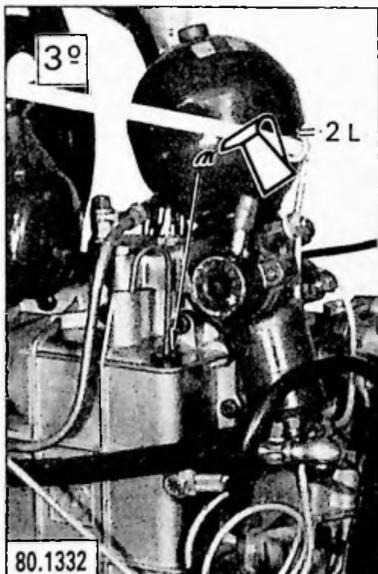


≈ 2,5 L

2°



4 mdaN



3°

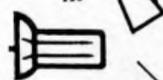
≈ 2 L



800
min



P





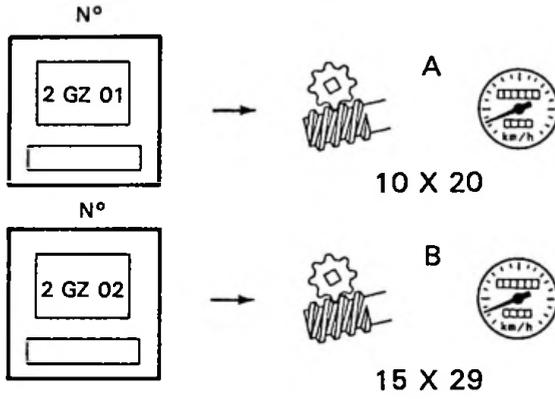
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ZF 3 HP 22

MA
350.00/1

3

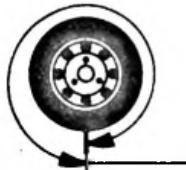


CX 25 Pallas IE
 CX 25 Prestige
 CX 25 Break TRI

→ 7/84

XVS	TRX
A	B

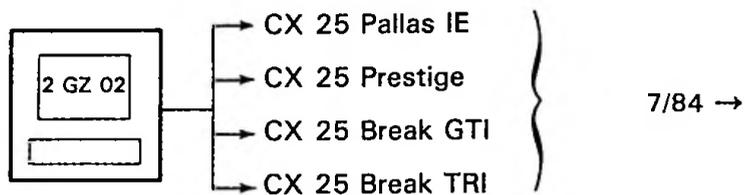
Automatic				Km/h	
1	$\frac{1 \times 42}{2,478 \times 29}$	13/62	0,1169	14,5	14
2	$\frac{1 \times 42}{1,478 \times 29}$			24,3	23,5
3	$\frac{1 \times 42}{1 \times 29}$			35,9	34,8
R	$\frac{1 \times 42}{2,085 \times 29}$			17,2	16,7



MICHELIN
 185 HR 14 XVS
 = 1,97 mètre



MICHELIN
 190/65 HR 390 TRX
 = 1,91 mètre



Automatic				Km/h
1	$\frac{1 \times 42}{2,478 \times 29}$	13/62	0,1169	14,18
2	$\frac{1 \times 42}{1,478 \times 29}$		0,1960	23,76
3	$\frac{1 \times 42}{1 \times 29}$		0,2897	36,16
R	$\frac{1 \times 42}{2,085 \times 29}$		0,1389	16,85



15/29



MICHELIN
190/65 HR 390 TRX
= 1,93 mètre



MICHELIN
195/70 HR 14 MVX
= 1,93 mètre



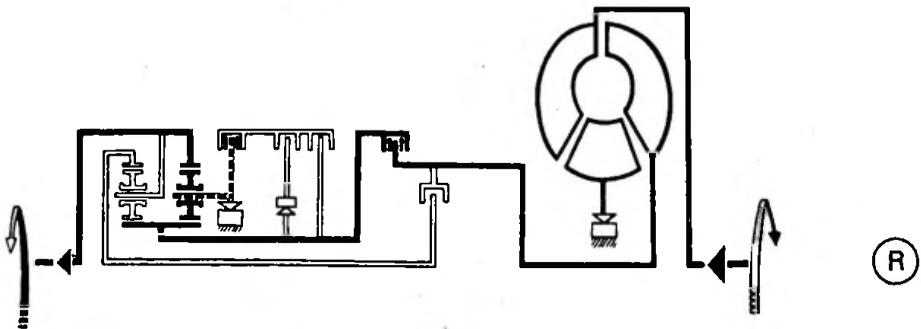
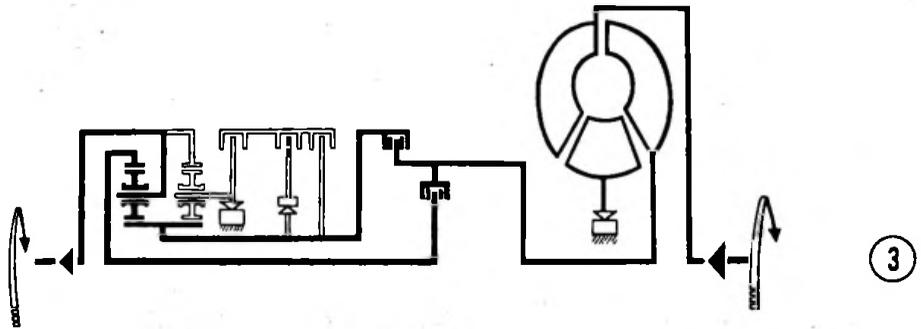
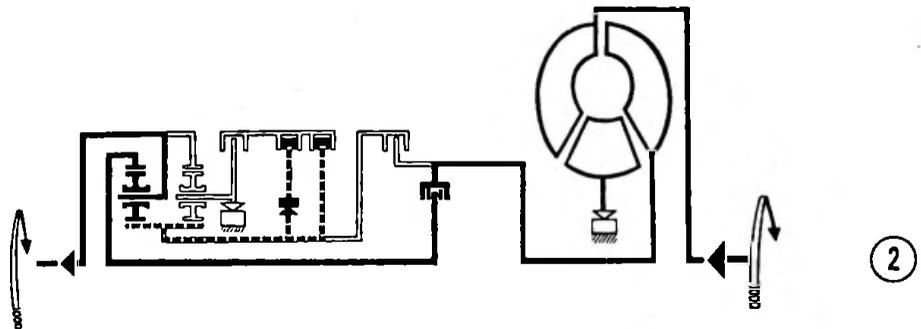
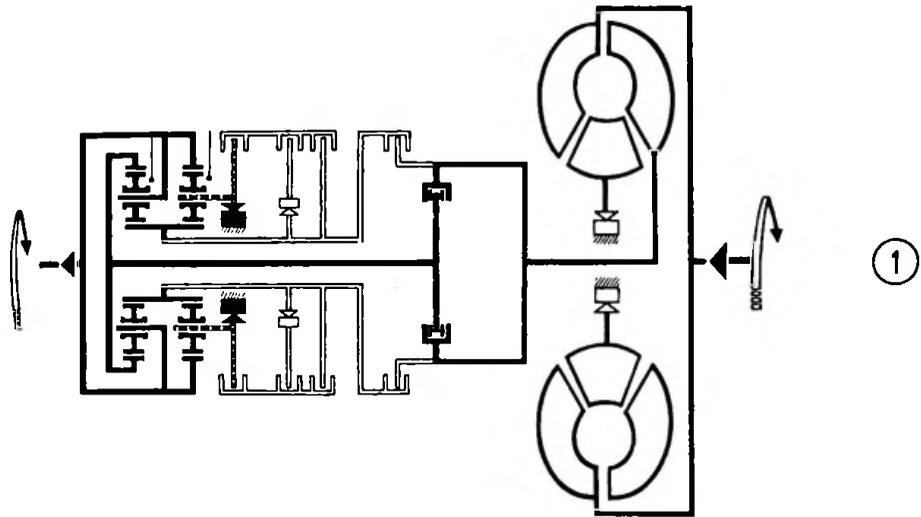
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ZF 3 HP 22

MA
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5



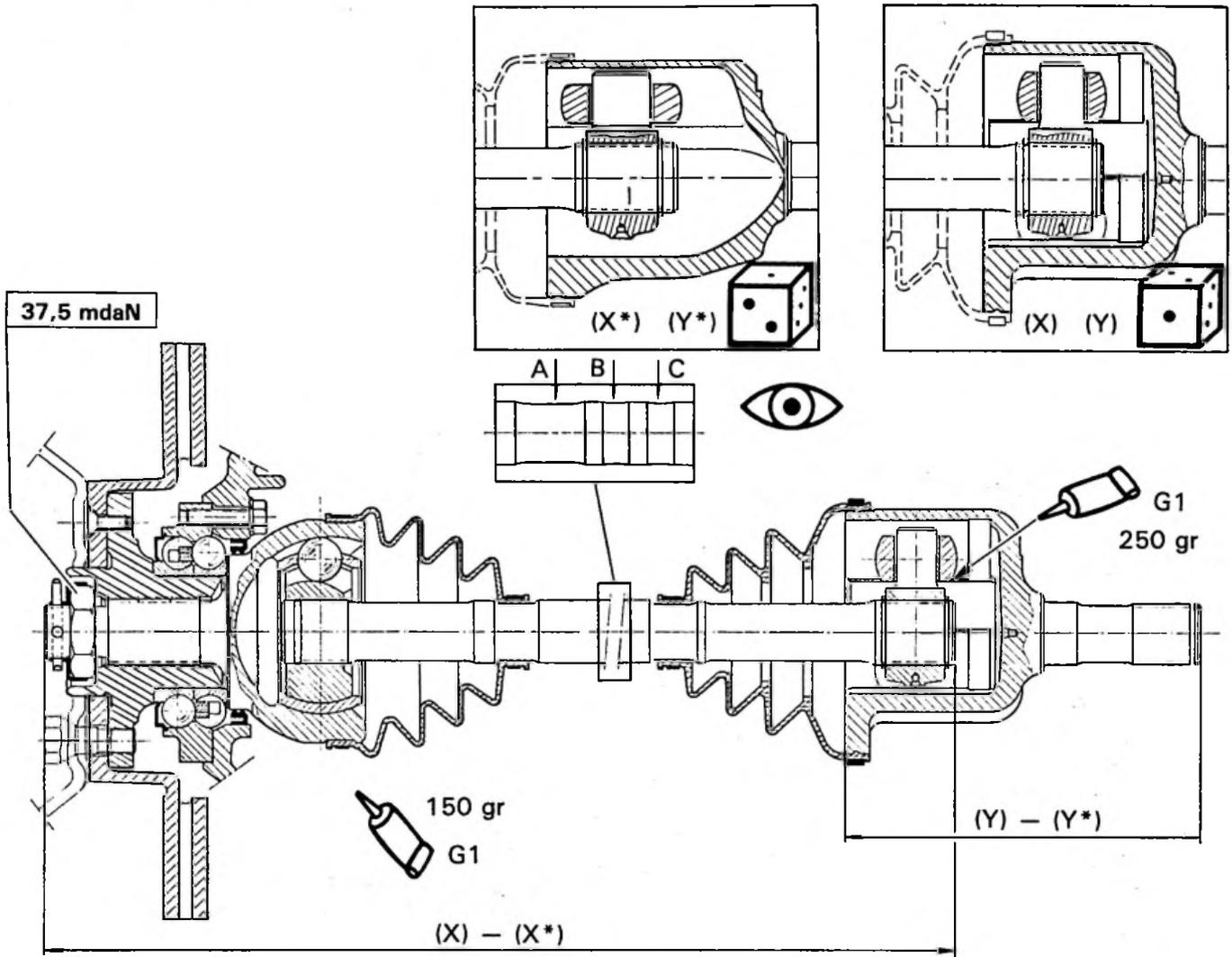


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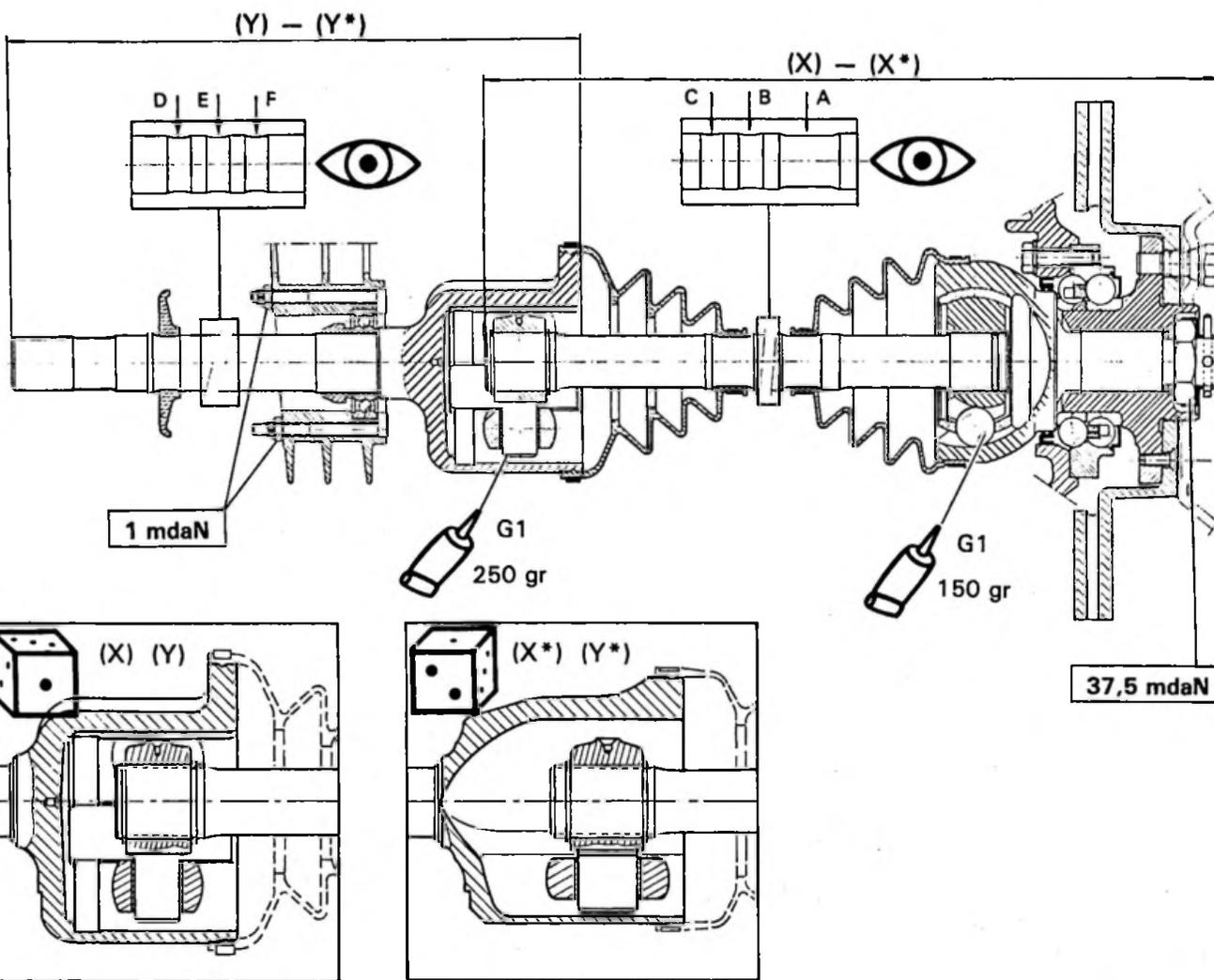


MA
372.00/1

1



		X	X*	$\begin{matrix} X \\ X^* \end{matrix}$	Y	Y*
4. V → 6/84 829 A5	516 mm	508 mm	A	161,5 mm	174 mm	
4. V 7/84 → 829 A5 5 V	551 mm	543 mm	AB			
Automatique	527 mm	519 mm	ABC			
M 25/662		543 mm	AB		174 mm	



	Y	Y*	Y Y*	X	X*	X X*
 4. V → 6/84 829 A5	525,5 mm	538 mm	D			
4. V 7/84 → 829 A5 5 V	490,5 mm	503 mm	DE	516 mm	508 mm	A
Automatique	516 mm	528,5 mm	DEF			
M 25/662		503 mm	DE		508 mm	A



5

BOITE DE VITESSES TRANSMISSIONS

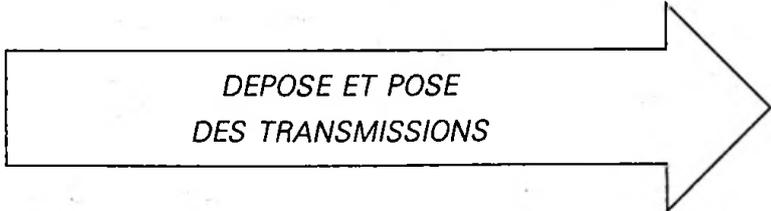
MA
372.1/1

1

OUTILLAGE PRECONISE

- 3312-T** Extracteur de rotule de bras inférieur
 avec bossages.
 ou
- 6323-T** Extracteur de rotule de bras inférieur
 avec ou sans bossages.
- 6310-T** Appareil d'immobilisation de moyeu.
- 6320-T** Extracteur de biellette de barre anti-dévers.
- 6602-T** Jeu de trois chandelles
 — Clé dynamométrique (40 mdaN)
 — Douille de 35 mm sur plat

*DEPOSE ET POSE
DES TRANSMISSIONS*



**DEPOSE**

Caler l'avant du véhicule (chandelles **6602-T**)

Faire chuter la pression du circuit hydraulique.
Placer la commande de hauteur à la position « basse ».

Déposer :

- la roue,
- la goupille et le frein d'écrou,
- l'écrou (35 mm sur plat). Immobiliser le moyeu avec l'outil **6310-T Fig. I**

Déposer : Fig. II

- la goupille (1) de maintien de l'articulation de cylindre de suspension,
- l'écrou (2) de la biellette de barre anti-devers.

Désaccoupler la rotule (3) de la biellette anti-devers. **Fig. III** à l'aide de l'extracteur **6320-T** : (Visser l'écrou sur la queue de rotule, poser l'étrier et l'axe).

Déconnecter le faisceau témoin d'usure des plaquettes de frein.

Déposer les vis de fixation de la tôle de refroidissement du disque de frein.

Déposer l'écrou de la rotule inférieure de pivot.

Désaccoupler la rotule inférieure de pivot à l'aide de l'extracteur **3312-T** ou **6323-T** (*ne pas blesser le caoutchouc de la rotule*).

Déposer la transmission gauche

Ecarter l'entraîneur (5) de transmission gauche **Fig. V** à l'aide d'un burin (6), en prenant appui sur l'une des têtes de vis de la sortie de boîte de vitesses.

Important : Si quelques coups de marteau ne suffisent pas pour écarter l'entraîneur (5), le jonc d'arrêt est bloqué à l'intérieur du planétaire. Dans ce cas, déposer le collier (4) et déposer la transmission sans l'entraîneur (*récupérer les galets*).

Braquer la direction à gauche.

Suspendre le pivot.

Dégager la transmission gauche du moyeu et la déposer.

Déposer la transmission droite

Desserrer les écrous (7) du relais de transmission **Fig. VI**

Faire pivoter, d'un demi-tour, les tirants (8), afin de dégager la cage extérieure du roulement.

Dégager l'entraîneur (9) du planétaire (déposer de l'arbre, le joint, la bague et le pare-poussière).

Braquer la direction à droite.

Suspendre le pivot.

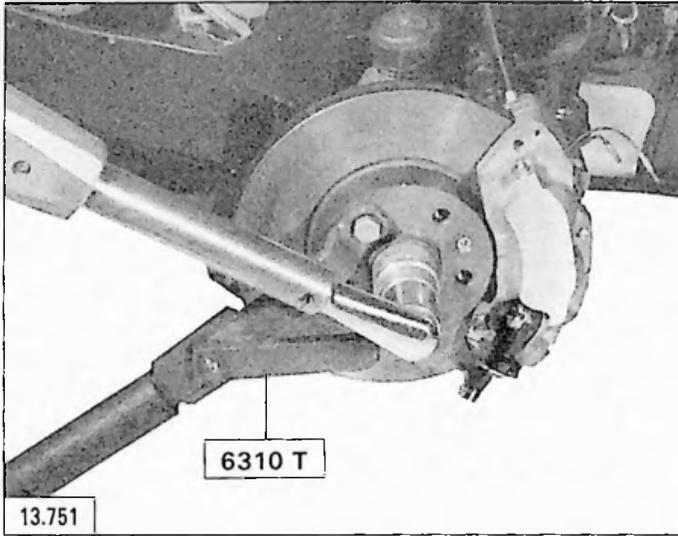
Dégager la transmission droite du moyeu et la déposer.



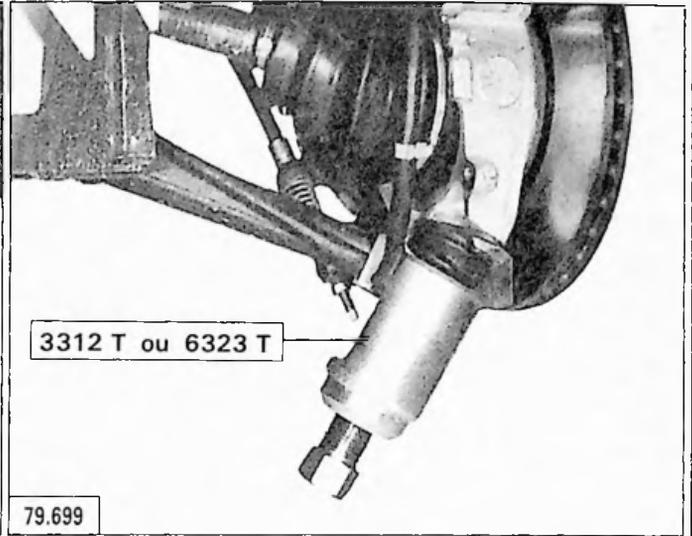
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3



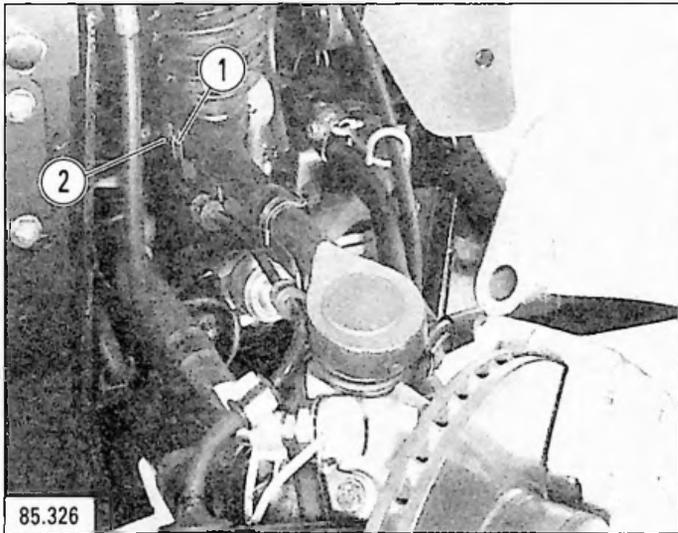
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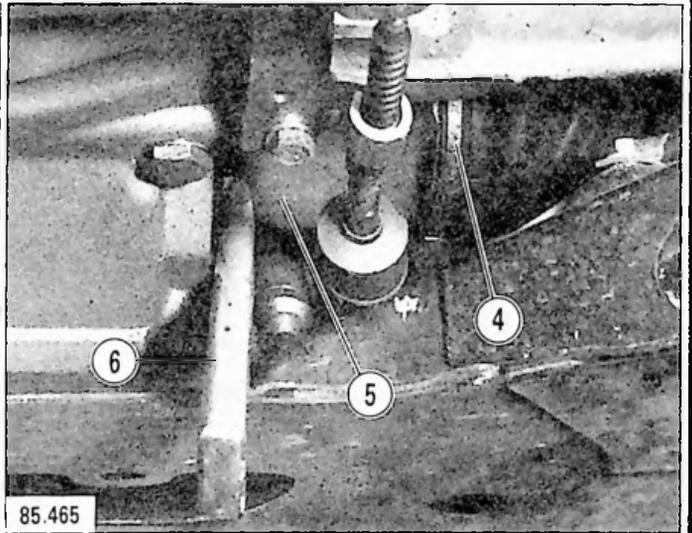
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I

IV



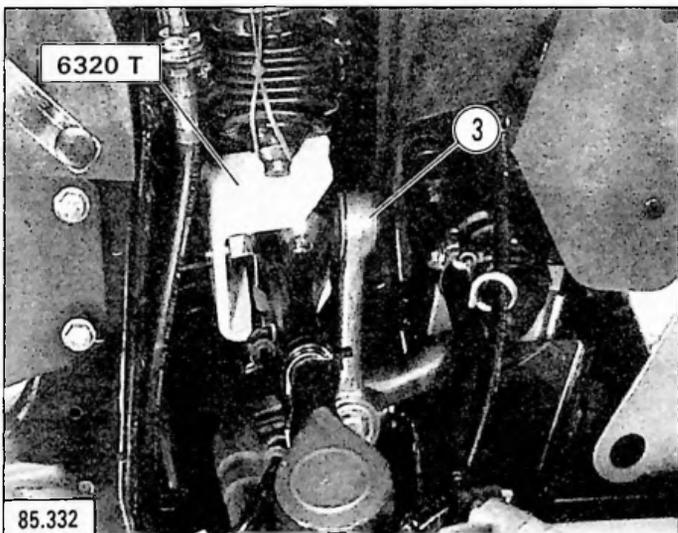
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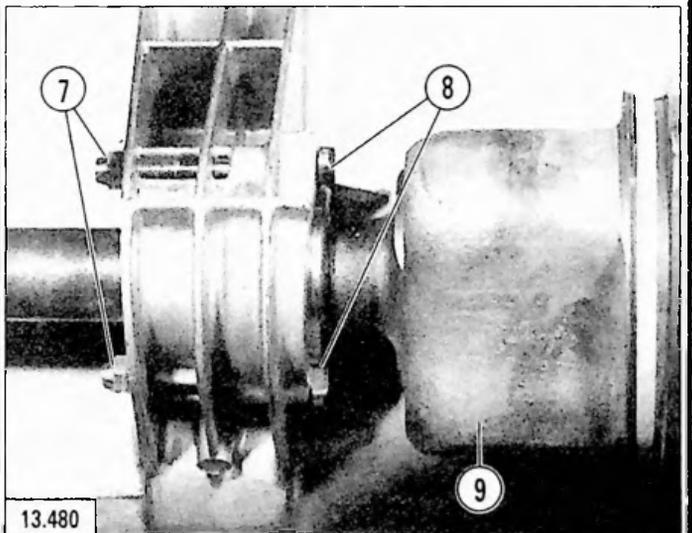
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II

V



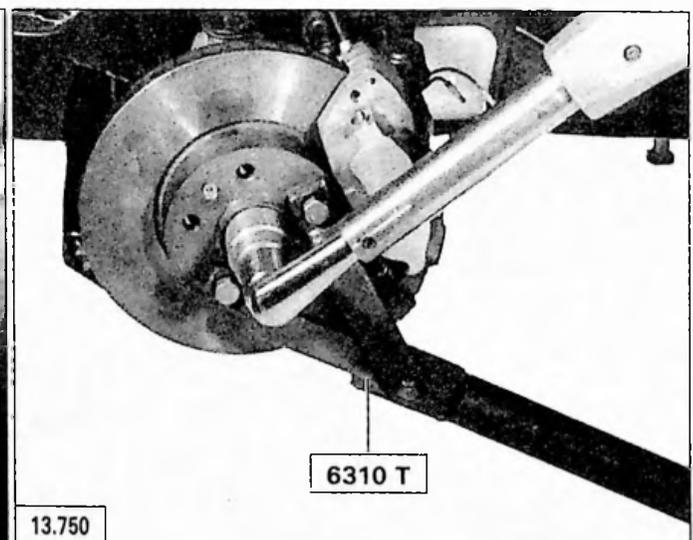
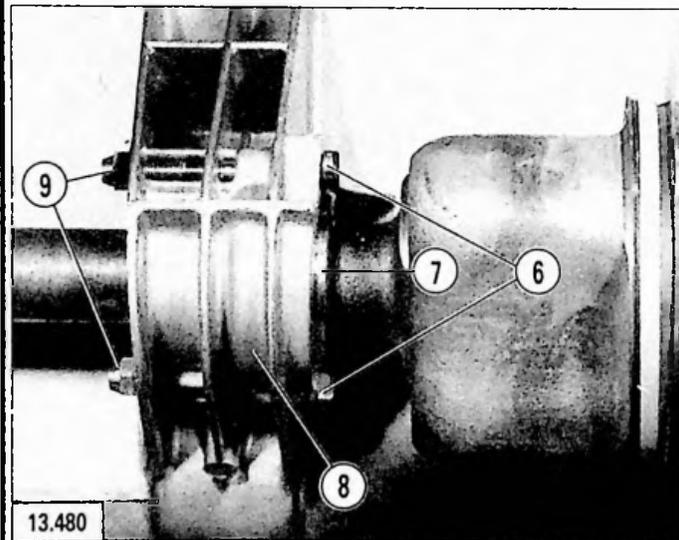
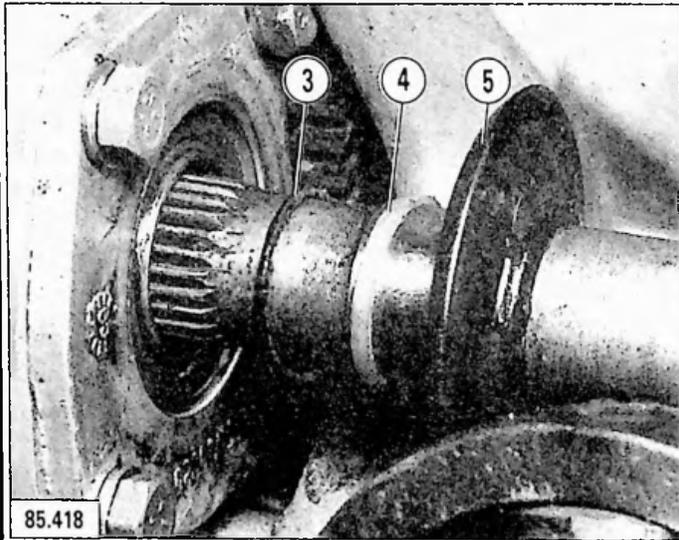
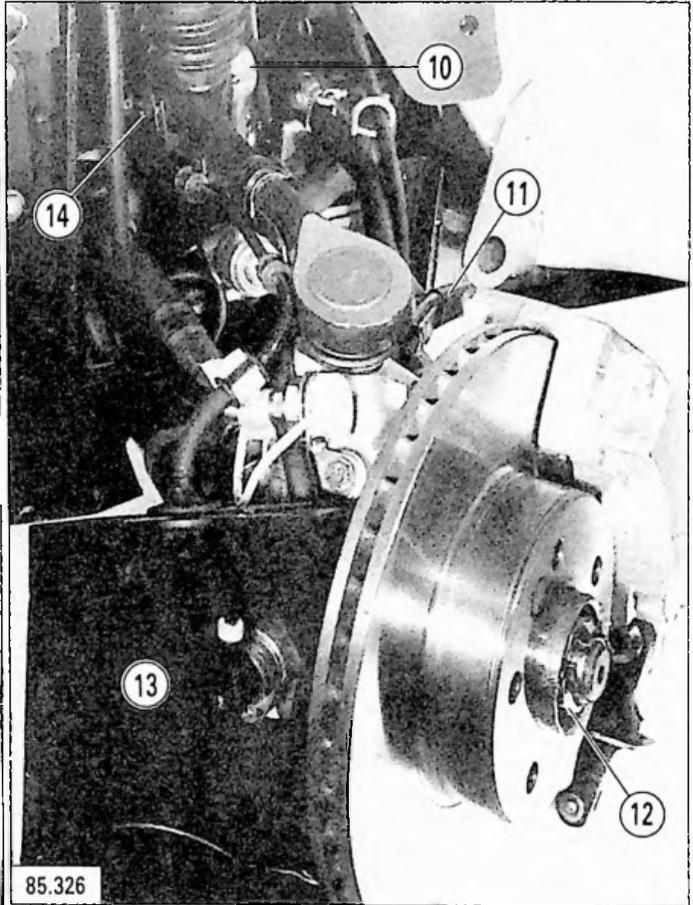
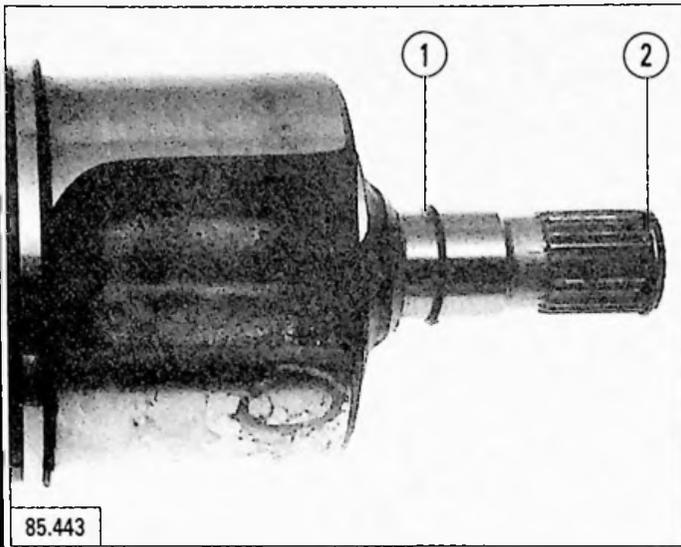
85.332



13.480

III

VI



III

IV

V



5

DEPOSE ET POSE
DES TRANSMISSIONS

MA
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5

POSE

Graisser les lèvres du joint d'étanchéité du moyeu.

Poser la transmission gauche

Monter sur l'entraîneur : **Fig. I**

- un jonc (2) NEUF
- le joint torique (1)

Braquer la direction côté gauche.

Engager les cannelures de l'entraîneur à fond dans le planétaire

S'assurer par une traction, que le jonc est bien engagé dans le planétaire.

Engager la transmission dans le moyeu

Poser la transmission droite

Braquer la direction à droite

Engager l'entraîneur dans le palier (3)

Monter sur l'arbre entraîneur : **Fig. II**

- le pare-poussière (5),
- la bague (4),
- le joint torique (3).

Graisser légèrement la bague extérieure du roulement (7) avant de l'engager dans le palier (8) **Fig. III**.

Engager la transmission dans le moyeu.

Faire pivoter les tirants (6) d'un demi-tour pour venir serrer la bague extérieure du roulement.

Serrer les écrous (9) à : **1 mdaN**.

Accoupler la rotule inférieure (*essuyer le cône de la rotule, ne pas utiliser de solvant*).

Serrer à **6 mdaN** (NYLSTOP NEUF).

Accoupler la biellette (10) de barre anti-devers (*Essuyer le cône de la rotule, ne pas utiliser de solvant*).

Serrer à : **4,7 mdaN** (NYLSTOP NEUF).

Poser l'articulation du cylindre de suspension et la goupille (14).

Connecter le faisceau témoin d'usure de plaquettes de frein (11).

Monter la tôle de refroidissement (13) du disque de frein.

Poser l'écrou de transmission (*faces et filets graissés*).

Immobiliser le moyeu à l'aide de l'outil **6310-T**.

Serrage : **37,5 mdaN**.

Poser :

- le frein d'écrou (12),
- la goupille,
- la roue.

Mettre le véhicule au sol

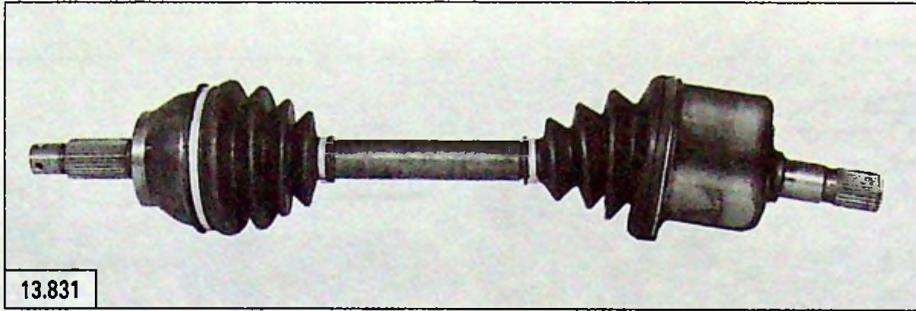


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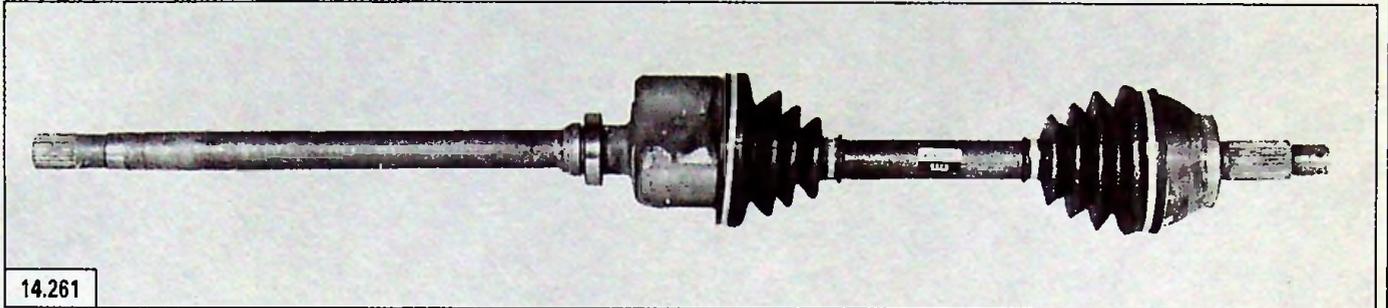


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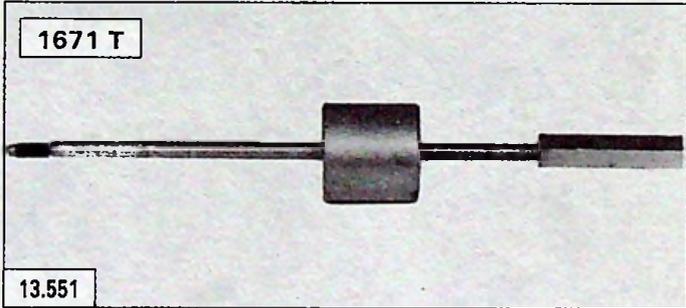
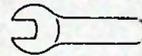
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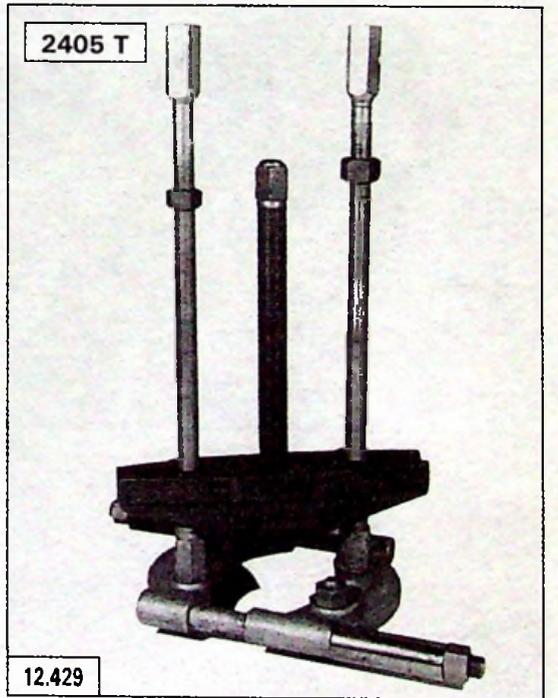


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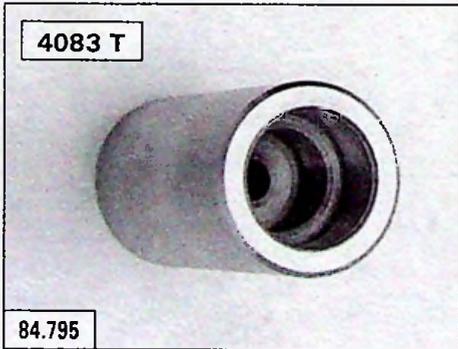
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13.551



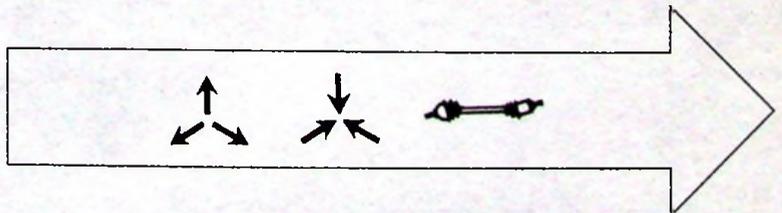
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12.429



4083 T

84.795



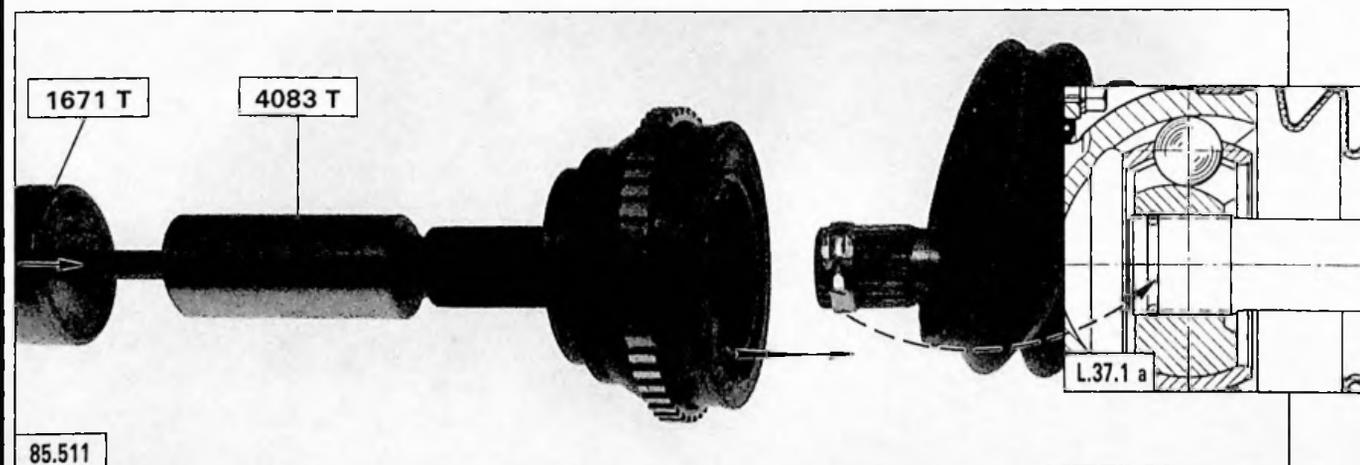
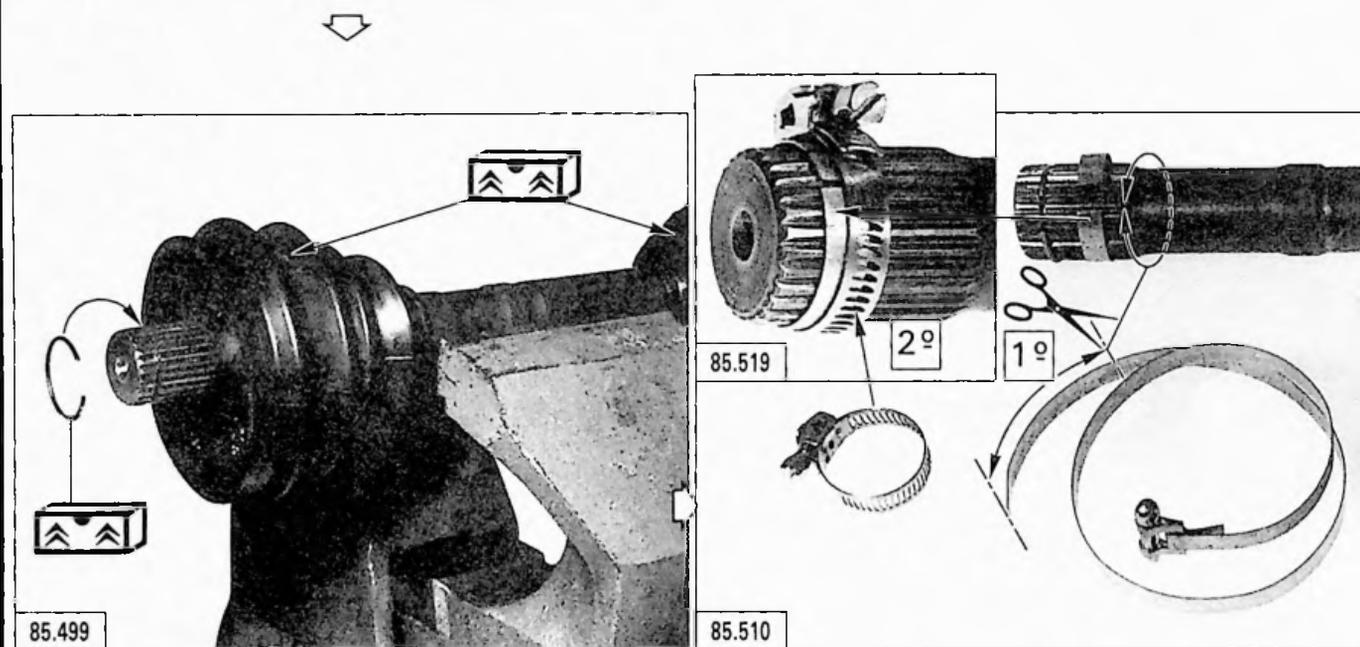
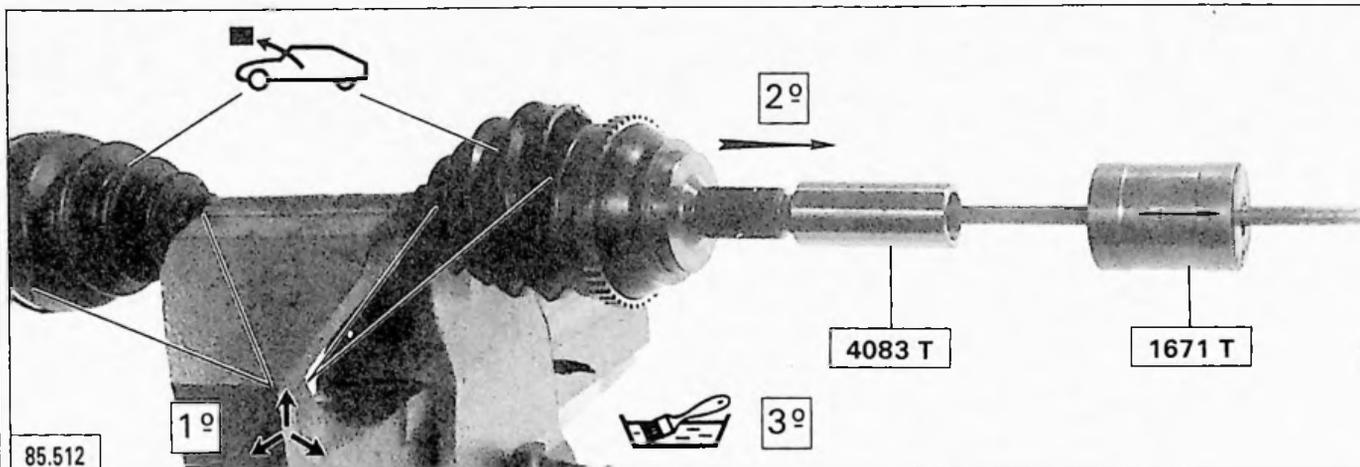
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2

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5





5



MA
372.3/1

3

