

**WERKSTATTHANDBUCH  
WORKSHOP MANUAL  
MANUEL D'ATELIER  
MANUAL DE TALLER**

**Getriebe  
Power Train  
Transmission  
Transmisión**

**D 2506-D 5506  
D 5206, D 6206  
Intrac 2002, 2003**

**2911883 4/77**

Klöckner-Humboldt-Deutz AG





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| 6. Abdeckblech            | 6. Cover plate       |
| 7. Rillenkugellager       | 7. Ball bearing      |
| 8. Lagergehäuse           | 8. Bearing housing   |
| 9. Radial-Wellendichtring | 9. Radial shaft seal |
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| 11. Sechskantschraube     | 11. Hex. bolt        |
| 12. Bremstrommel          | 12. Brake drum       |
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- 
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# Zur Beachtung

Das vorliegende Werkstatthandbuch gibt dem Fachmann typbedingte Hinweise zur Instandsetzung unserer Erzeugnisse. Handelsübliche Werkzeuge und allgemeines Gerät, das zur Ausrüstung einer Werkstatt gehört, wird dabei vorausgesetzt. Spezialwerkzeuge sind auf das notwendige Maß beschränkt; sie sind jeweils an der Einsatzstelle mit im Bild angegebener Werkzeug-Nr. und in einer Zusammenfassung gezeigt.

Die Werkstatthandbücher unterliegen keinem Änderungsdienst! Bis zur nächsten Neuauflage, in die alle zwischenzeitlichen Änderungen aufgenommen werden, bitten wir Sie eventuelle Änderungen den technischen Rundschreiben zu entnehmen.

Von den Werkstätten sind zusätzlich die Unterlagen über Wartungsarbeiten und technischen Daten zu beachten.

Im Werkstatthandbuch sind rechts neben die Bilder Bildzeichen gesetzt. Die Hinweise in den Abbildungen (z.B. DW 55, F9) sind Angaben über empfohlene Werkstoffe bzw. Dichtungsmittel. Zum Verständnis dieser Zeichen ist es erforderlich, sich mit deren Bedeutung vertraut zu machen (siehe Bildzeichenerklärung und Aufstellung über Fette und Dichtungsmittel).

Die Bildzeichen ersetzen weitgehend den Text und ermöglichen im Zusammenwirken mit der Bildaussage ein schnelles Auffassen des jeweiligen Arbeitsganges.

Die Bildfolge beginnt mit dem Ausbau bzw. dem Zerlegen der Baugruppe, wobei nur kurze Hinweise gegeben werden. Der Einbau bzw. Zusammenbau wird ausführlich unter Berücksichtigung sämtlicher Maßnahmen behandelt, die zu einem störungsfreien Betrieb unbedingt erforderlich sind. Das Reinigen und Prüfen sämtlicher Einzelteile wird dabei ebenso vorausgesetzt wie eine fachgerechte Arbeitsausführung.

Einstell- sowie Meß- und Prüfvorgänge werden im Zuge des Ein- bzw. Zusammenbaus behandelt. Umfangreiche Einstellarbeiten sind in selbständigen Kapiteln der jeweiligen Baugruppen zugeordnet.

Soweit erforderlich, werden Baugruppen durch eine Explosionsdarstellung ergänzt. Die Positionsnummern in den Abbildungen sind mit denen der Explosionsdarstellungen identisch. Das jeweilige Bildzeichen bezieht sich auf das angesprochene Teil. Pflege- und Wartungsarbeiten sowie Ölqualitäten sind jeweils aus der Bedienungsanleitung zu entnehmen.

Sind Teile auszuwechseln, so dürfen nur Original-Ersatzteile verwendet werden!

Konstruktionsänderungen, im Sinne der technischen Weiterentwicklung, behalten wir uns vor.

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Hinterachse  
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Pont AR  
Puente trasero

Zapfwelle  
PTO-shaft  
Prise de force  
Toma de fuerza

Getriebe  
Power Train  
Transmission  
Transmisión

TW 25.2, 35.1, 35.2

Getriebe  
Power Train  
Transmission  
Transmisión

TW 35.3, 35.4, 50, 50.1, 50.2, 50.3, 50.4

Ausgleichgetriebe  
Diff. gear  
Différentiel  
Diferencial

Schaltdeckel  
Gear shift cover  
Couvercle de changement de vitesses  
Tapa de cambio de velocidades

Kriechgänge  
Creep gears  
Vitesses rampantes  
Marchas ultralentas

Vorderradantrieb  
Front-wheel drive  
Pont moto-directeur  
Eje delantero motriz

Riemenscheibe  
Belt pulley  
Poulie à courroie  
Polea

Spezialwerkzeuge  
Special tools  
Outilage spécial  
Herramientas especiales

# Bildzeichenerklärung

	Abbauen - Ausbauen behindernder Teile.		Bedingt wiederverwendbar bei Bedarf auswechseln.
	Zerlegen von Baugruppen.		Bei jeder Montage auswechseln.
	Zusammenbauen zu einer Baugruppe.		Einölen
	Einbauen - Anbauen aller Teile, die beim Zerlegen hinderlich waren.		Einfetten
	Markieren  Vor Demontage. Beim Zusammenbauen Markierung beachten.		Ölschmierung
	Unterbauen - Abstützen - Afangen.		Auge, kontrollieren, prüfen
	Einfüllen - Auffüllen - Nachfüllen  einer Flüssigkeit (z.B. Öl, Kühlwasser...).		Spezialwerkzeug
	Ablassen  einer Flüssigkeit (z.B. Öl, Kühlwasser...).		Materialschaden verhüten (Teilbeschädigung).
	Entsichern - Sichern (mechanisch) z.B. Splint, Sicherungsblech usw.		Einbaurichtung beachten
	Sichern - Kleben - Dichtmittel (flüssig)		Entlüften
	Wuchten  Unwuchten beseitigen.		Lösen  (z.B. Lockern einer Spanneinrichtung.).
	Personenschaden verhüten  Hinweis auf eine Gefahrenstelle.		Spannen  (z.B. Anziehen einer Spanneinrichtung.).
	Spanabhebende Bearbeitung		Prüfen - Einstellen  (z.B. Drehmomente, Maße, Drücke usw.).

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Werkstoffangabe auf Zeichnungen	Benennung Zusammensetzung und Aufbau	Kennzeichnende Eigenschaften	Temperaturbeständigkeit in °C	Richtlinien für die Verwendung	Bemerkungen und Verwendungsbereich
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### FETTE

Deutz F 2	Silikon-Paste synthetisch		+ 180°C	Elektroisolierpaste für Steckverbindungen in Zündsystemen	Entspricht Silikon-Paste P4 der Fa. Westinghouse, Motoren- u. Aggregatebau
Deutz F 5	Mehrzweckfett nach DIN 51 825, enthält Mineral- u. synthetische Öle unter Zusatz von Lithiumseifen u. Korrosionsschutzstoffen	gute Kälte- und Wärmebeständigkeit, soll nicht in Wasser löslich sein, nicht ausbluten und nicht ranzig werden.	- 30°C bis + 120°C	Mehrzweckfett für Gleit- und Wälzlagern	Entspricht HFL 300 W der Firma DOG. Farbe natur transparent
Deutz F 9	Hochleistungsfett nach DIN 51 825 Lithiumseife und Molybdän-disulfid	soll korrosionshemmend, wasser- und wärmebeständig sein und nicht ranzig werden.	min. -30°C bis min. +120°C	Für hohe Lagerdrücke und Temperaturen, oder Dauerschmierung mit Notlauf-eigenschaften	Entspricht: DR 2 der Firma Molykote AG, München. Das verwendete Molybdän-disulfid muß Mil-M 7866 A entsprechen
Deutz F 10	Hochleistungsfett enthält: Seifen, Mineralöl, Silikon, Festschmierstoffe	soll wasser- und kältebeständig sein, vor Korrosion schützen und darf nicht ausbluten	- 10°C bis + 180°C kurz + 200°C	Wird für Langzeitschmierung von Gleit- und Wälzlagern bei mittleren und höheren Lagerdrücken und hohen Temperaturen gebraucht,	Entspricht: Spezialfett V der Fa. DOG. Das verwendete Molybdän-disulfid muß Mil-M 7866 A entsprechen
Deutz F 11	Heißlagerfett mit kleinen Teilen Molybdän-disulfid (Mo S <sub>2</sub> )	soll bei sehr hohen Temperaturen und höheren Lagerdrücken verschleißminimierend wirken	- 10°C bis + 200°C	Anwendung bei Wälz- und Gleitlagern mit höheren Lagerdrücken u. andauernden Lagertemperaturen	entspr. Heißlagerfett der Fa. DOG
Deutz F 12	Heißlagerfett enthält Sonderzusätze und Silikonöl, sowie Schmierstoffkombination	völlig homogen, ausreichend kälte- und wasserbeständig, korrosionsschützend	- 10°C bis + 250°C kurz + 300°C	Anwendung bei Langzeitschmierung von Gleit- u. Wälzlagern mit mittleren Lagerdrücken u. sehr hoher thermischer Belastung	Das verwendete Molybdän-disulfid muß Mil-M 7866 A entsprechen
Deutz F 14	Korrosionsschutzfett 100 % hochwertiges und ausgesprochenes Korrosionsschutzfett, frei von Säuren	Korrosionsschutz bei dicker Schicht über Jahre gewährleistet		Langzeitkorrosionsschutz für Bohrungen, Pölflächen und alle blanken Flächen	Farbe: transparent, leicht gelb gefärbt

### DICHTUNGSWERKSTOFFE

Deutz DW48	Dichtmasse	zähfeste Silikon-Vulkansil	- 73° bis + 230°	Abdichten von Zwischenräumen (zähelast., Fugenverschlüsse)	Entspr. Silostik 732 RTV der Fa. Dow Corning Intern, Brüssel
Deutz DW49		nach Behandlungsvorschrift 8025-03-9805	- 30° bis + 130°	Abdichten von Kernlochstopfen	Entspr. Abdichtmasse 54 der Fa. Sonderhoff, KölN
Deutz DW50		flüssige Dichtung	+110° in HD-Schmieröl und Dieselfraktion	Abdichten von Pumpengehäusen	Entspr. Curil bzw. Teroson-Fluid
Deutz DW51		flüssige Dichtung	+ 150° in HD-Schmieröl		Entspr. Sigma der Firma Sonderhoff, KölN
Deutz DW53		gefüllte, hochpolym-Kunststoffmischung	+ 150° in Benzin u. HD-Schmieröl	Fugenabdichtung	Entspr. Abdichtmasse G der Fa. Stankiewicz
Deutz DW55	Sicherungsmittel	dünnlüssig, sehr fest		Schraubensicherungen bis M 16	Entspr. Loctite Typ 601 (bisher Loctite-Flügelteile)
Deutz DW56		dickflüssig sehr fest			Entspr. Loctite Typ AVX (bisher Loct. Rohrdichtg. extra stark)
Deutz DW57		dünnlüssig, leicht lösbar	- 60° bis + 150° bei geringer Belastung auch bis + 200°	Sichern leicht lösbarer Schrauben bis M 14	Entspr. Loctite Typ 221 (bisher Loct. Schraubensicherg. schwach)
Deutz DW58				DEUTZ DW 58 wird ersetzt	durch DEUTZ DW 55
Deutz DW59		mittelviskos, sehr fest		Schraubensicherungen, Gew. - u. Flächenabdichtungen	Entspr. Loctite Type 270 (bisher Loctite-Hydrauliksicherung)
Deutz DW60		dickflüssig, mittelfest		alle Schraubensicherungen	Entspr. Loctite Type CV X (bisher Loct. Rohrdichtung stark)
Deutz DW61		Aktivator	Viskosität bei 25°	Der Aktivator beschleunigt die Aushärtung	Entspr. Loquic Typ T

Triebwerk	Power train	TW 25.2	TW 35.1	TW 35.2	TW 50	TW 50.1
				TW 35.2 x		TW 50.2
				TW 35.4		TW 50.3
						TW 50.4
<u>Füllmenge in Liter</u>	<u>Capacities (litres)</u>					
Triebwerk	Power train	16	16	18 <sup>x</sup>	18	
Vorderradantrieb	Front-wheel drive					
a. Erstfüllung	- initial fill			1,8		
b. Regelfüllung	- refill			1,3		
Riemenscheibe	Belt pulley			0,75		
/						
<u>Anziehvorschriften in Nm (kpm)</u>	<u>Tightening torques in Nm (kpm)</u>					
Fußhebel der Differentialsperre	Diff. lock pedal	100 - 115 (10 - 11,5)				
Sechskantschraube in der Zwischenwelle	Intermediate shaft hex. bolt			135		
Ausgleichgetriebeschrauben	Diff. gear bolts			(13,5)		
<u>Axialspiel in mm</u>	<u>Axial clearance in mm</u>					
Antriebswelle der Duo-Zapf-welle	Drive shaft of PTO-shaft			0,1 - 0,3		
Antriebshohlwelle	Drive quill shaft	0,25 - 1,3		0,3 - 0,55		
<u>Rollwiderstand in Nm (kpcm)</u>	<u>Rolling resistance in Nm (kpcm)</u>					
Kegelrollenlager	Tapered roller bearing	2 - 3		(20 - 30)		
<u>Zahnflankenspiel in mm</u>	<u>Backlash in mm</u>					
Kegeltrieb	Bevel drive			0,1 - 0,2		
<u>Zapfwelle</u>	<u>PTO-shaft</u>					
Durchmesser x Länge (DIN 9611)	Diameter x length			1 3/8 " x 75 mm		
Drehrichtung	Direction of rotation			rechts	clockwise	
<u>Zapfwellenleistung in kW (in PS)</u>	PTO performance in kW (in HP)	15,5 (21,12)	21,2 (28,8)	24,7 (33,6)	31,8 (43,2)	36,7 (49,9)
<u>max. Drehmoment in Nm (in kpm)</u>	max. torque in Nm (kpm)	480 (48)	750 (75)		1500 (150)	
<u>Riemenscheibe</u>	<u>Belt pulley</u>					
Anordnung	Location					
Drehrichtung	Direction of rotation			rechts	clockwise	
Durchmesser x Breite mm	Diameter x width	245x100	245x100	und	320x140	
Riemenscheibenleistung in kW (in PS)	Belt pulley performance in kW (HP)	14,9 20,24	20,3 27,6	23,7 32,2	32,5 44,2	35,2 47,8
<u>Möhantrieb</u>	<u>Mower drive</u>					
Drehrichtung	Direction of rotation			rechts	clockwise	
Drehzahl ohne Vorgelege 1/min	Speed w/o reduction 1/min	1160	1270	1185	1230	
mit Vorgelege 1/min	Speed with reduction 1/min	1135	1245	1160	1210	
1 kpm = 9,81 Nm	1 Nm = 0,102 kpm					
1 PS = 0,74 kW (HP)	1 kW = 1,36 PS (HP)					

Indication of material on drawings	Designation and composition	Characteristics	Temperature resistance in °C	Guidelines for use	Remarks
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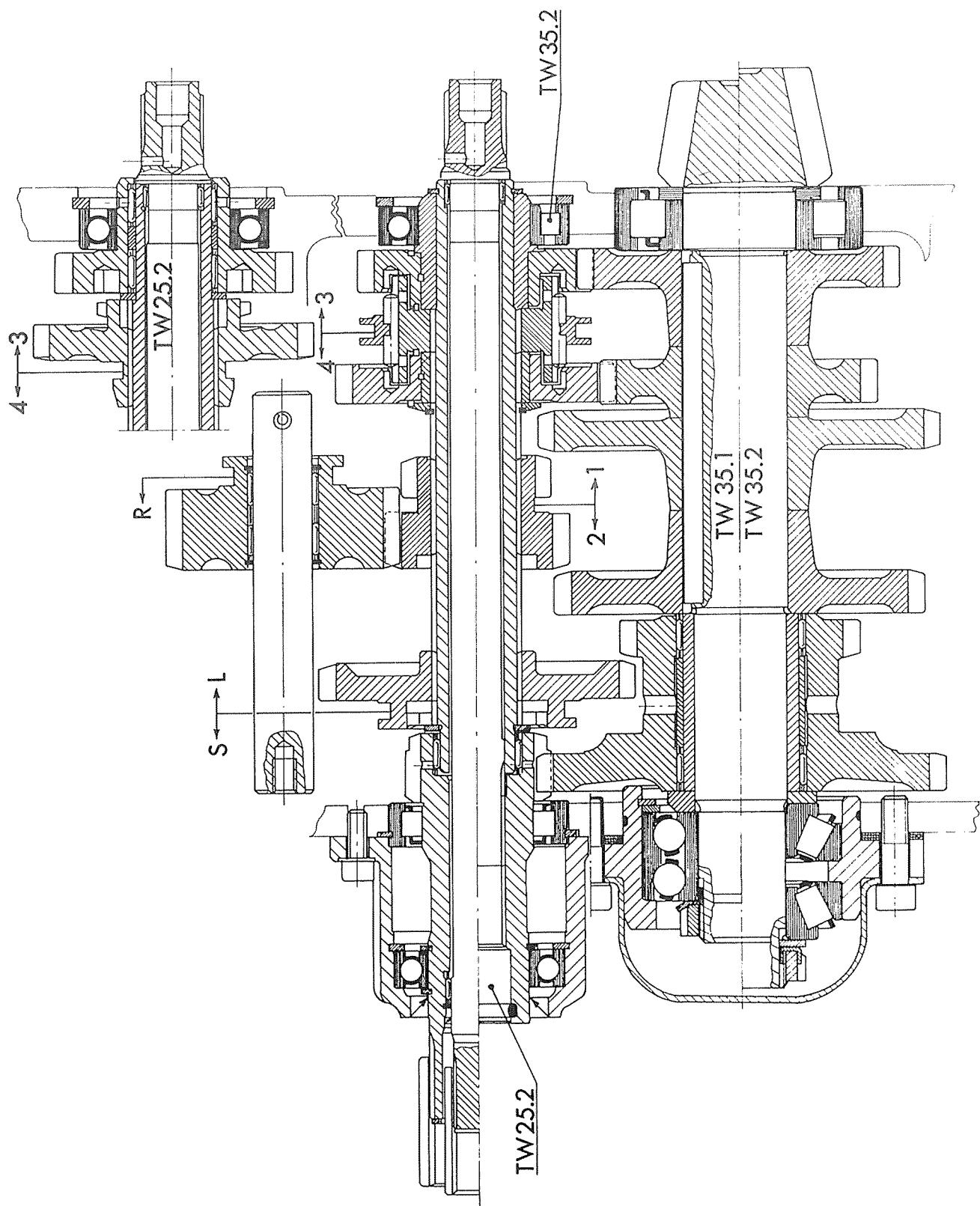
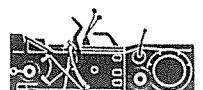
## GREASES

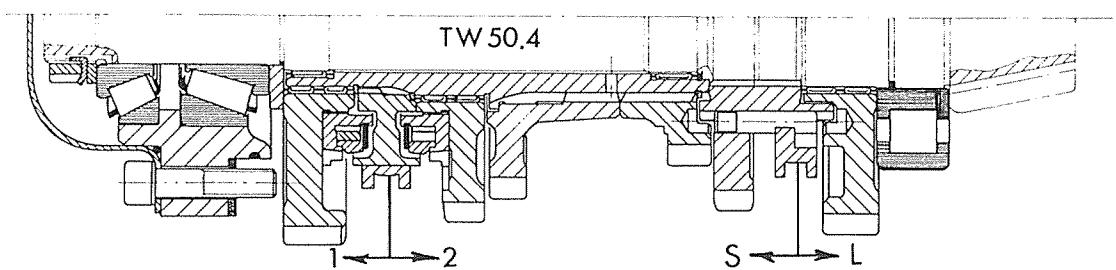
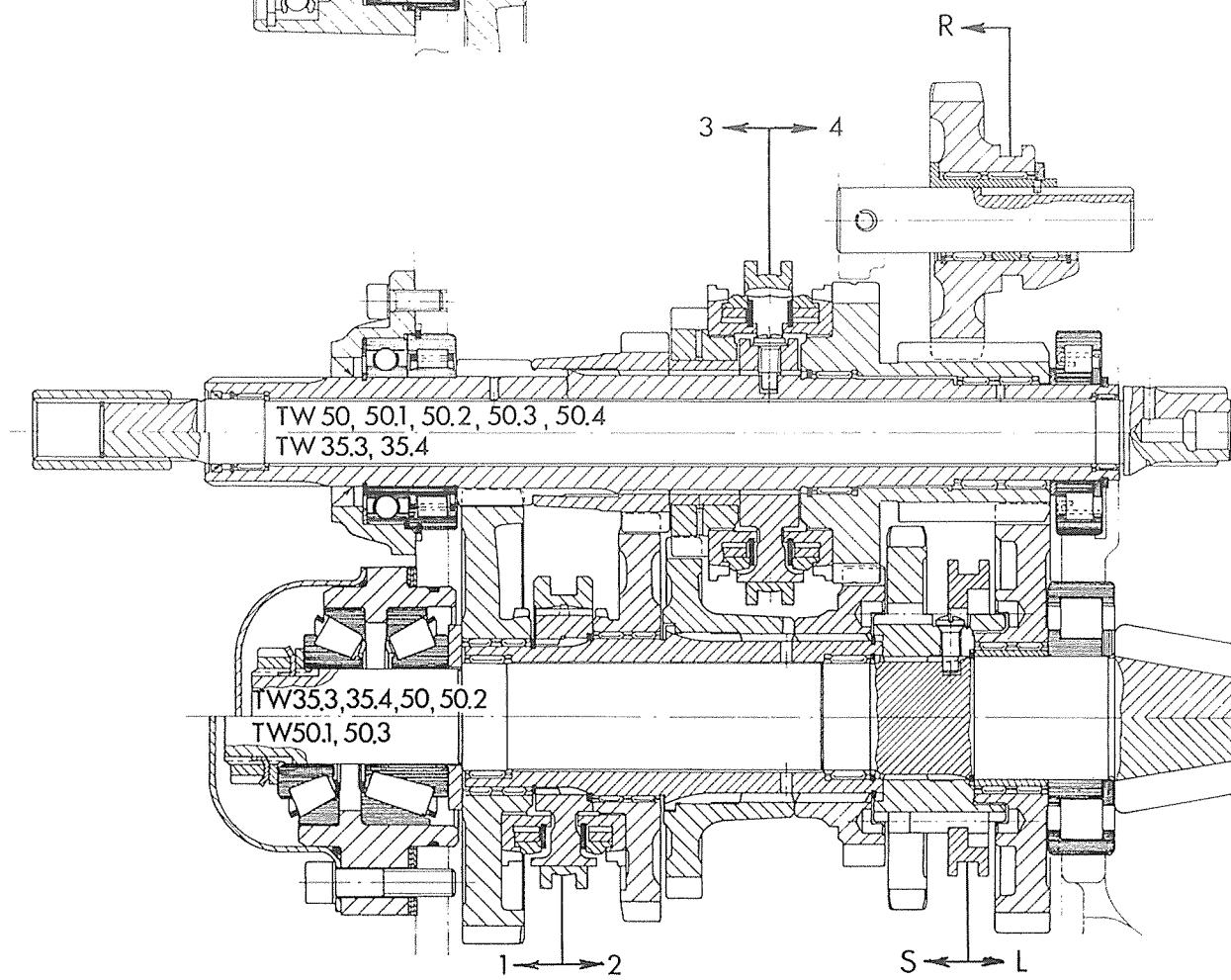
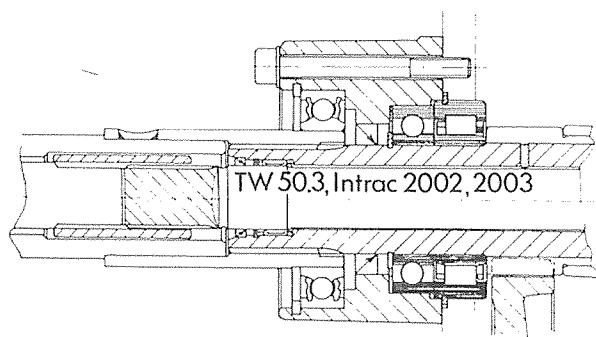
Deutz F 2	Silicone paste		+ 180°C	Isolation paste for plug socket connections in ignition systems	Correspd. to SILIKONE PASTE P4 of Messrs. Westinghouse
Deutz F 5	Multi-purpose grease to DIN 51 825, composed of mineral and synthetic oils w. additives of lithium soaps a. corrosion inhibitors.	Good cold and heat resisting properties, insoluble in water, not becoming oily and rancid.	- 30°C up to + 120°C	Multi-purpose grease for friction and anti-friction bearings.	Correspd. to HFL 300 W of Messrs. DOG. Natural colour, transparent.
Deutz F 9	HD grease to DIN 51 825 lithium saponified and molybdenum disulphide.	Corrosion inhibiting, water- and heat-resistant, not becoming rancid.	min. - 30°C up to max. + 120°C	Suitable for high bearing pressures and temperatures on permanent lubrication protecting also in case of lubricating film breakage.	Correspd. to DR 2 of Messrs. Molykote AG, München. Molybdenum disulphide used acc. to MIL-M 7866 A.
Deutz F 10	HD grease composed of soaps, mineral oil, silicone solid lubricants.	Water- and cold-resistant, anti-corrosive, not becoming oily.	- 10°C up to + 180°C temp. + 200°C	Suitable for long-term lubrication of friction and anti-friction bearings under medium and high bearing pressures and high temperatures.	Correspd. to special grease V of Messrs. DOG. Molybdenum disulphide used acc. to MIL-M 7866 A.
Deutz F 11	Hot bearing lubricant containing small portion of molybdenum disulphide (Mo S <sub>2</sub> ).	Wear reducing under high temperatures and high bearing pressures.	- 10°C up to + 200°C	Suitable for friction and anti-friction bearings under high bearing pressures and permanent high bearing temperatures.	Correspd. to hot bearing lubricant of Messrs. DOG.
Deutz F 12	Hot bearing lubricant containing special additives and silicone oil as well as lubricant combination.	Fully homogenous with adequate cold and water resisting properties, anti-corrosive.	- 10°C up to + 250°C temp. + 300°C	Suitable for long-term lubrication of friction and anti-friction bearings under medium bearing pressures and extremely high terminal load.	Molybdenum disulphide used acc. to MIL-M 7866 A.
Deutz F 14	Non-corrosive grease 100 % anti-corrosive, free from acids.	Ensuring long-lasting corrosion protection when generously applied.		Long-term corrosion, protection for holes, locating and all bright metal surfaces.	Colour: transparent, light yellow

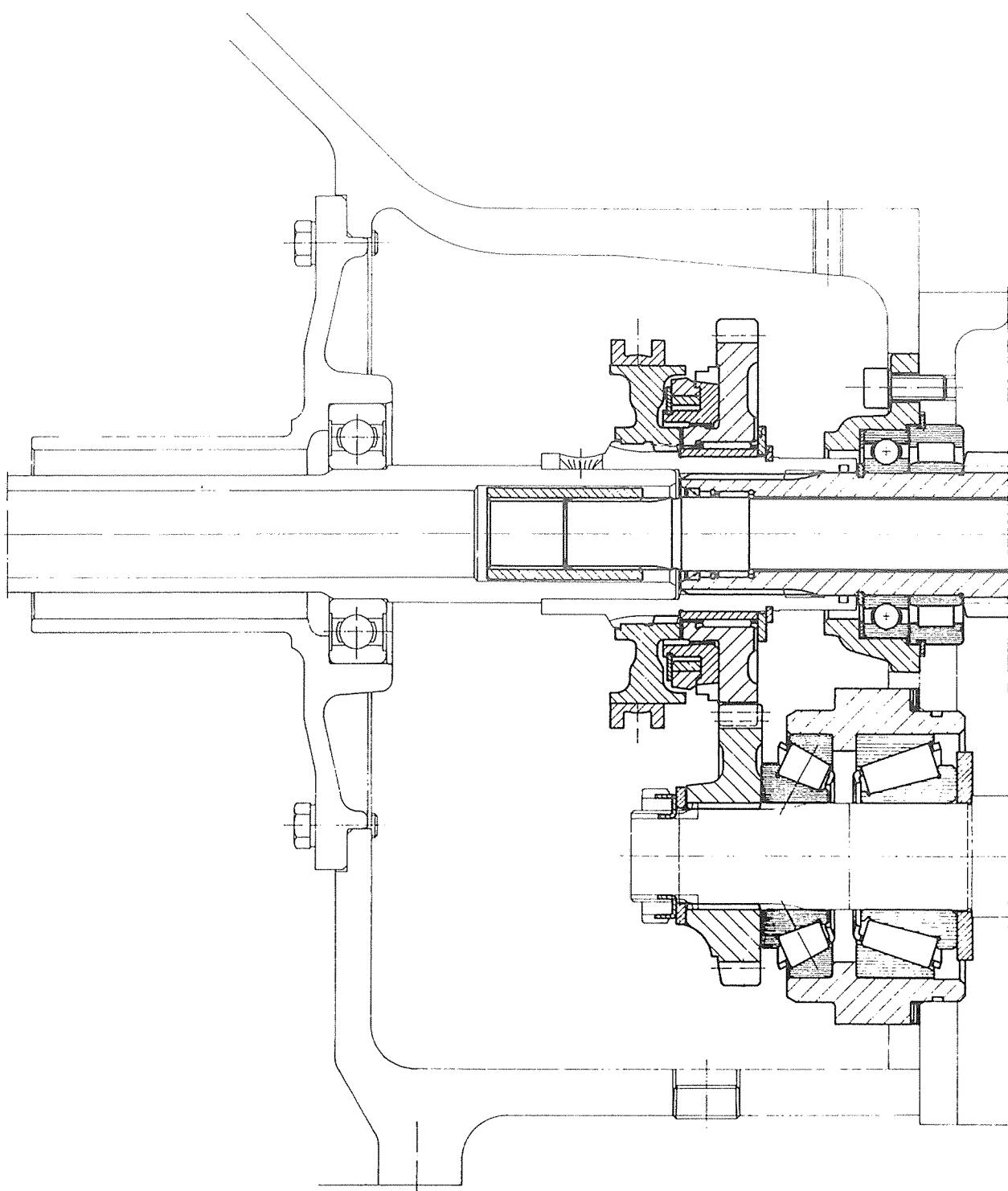
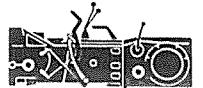
## SEALING MATERIALS

Deutz DW48	<u>Sealing compound</u>	Viscous silicone vulcanisat	- 73°C up to + 230°C	Sealing of intermediate spaces (viscous gap closures).	Correspd. to SILASTIK 732 RTV of Messrs. Dow Corning International Brüssel
Deutz DW49		Acc. to treatment specification 8025-03-9805	- 30°C up to + 130°C	Sealing of core hole plugs	Correspd. to sealing compound of Messrs. Sonderhoff, Cologne
Deutz DW50		Liquid seal	+ 110°C in HD lube oil and diesel fuel	Sealing of pump housings	Correspd. to CURIL and TEROSON FLUID
Deutz DW51		Liquid seal	+ 150°C in HD lube oil		Correspd. to SIGMA of Messrs. Sonderhoff, Cologne
Deutz DW53		Highly synthetic polymeric mixture	+ 150°C in petrol and HD lube oil	Sealing of gops	Corresp. to sealing compound G of Messrs. Stankiewicz
Deutz DW55	<u>Securing media</u> Liquid single-component plastic with hardens with the exclusion of air and simultaneous contact with metals.	Highly fluid, highly solid	- 60° up to + 150°C and, under low load, up to + 200°	Securing of bolts up to M 16	Correspd. to Loctite type 601
Deutz DW56		Semi-fluid, highly solid			Correspd. to Loctite type AVX (formerly Loctite pipe sealing, extra strong).
Deutz DW57		Highly fluid, easily soluble		Securing of easily loosening bolts to M 14	Correspd. to Loctite type 221 (formerly Loct. se-curing of bolts, weak)
Deutz DW58				Deutz DW 58 to be replaced by	Deutz DW 55
Deutz DW59		Semi-viscous, highly solid		Securing of bolts, sealing of threads and interfaces	Correspd. to Loctite type 270 (formerly Loct. for hydraulic installations).
Deutz DW60		Semi-fluid, semi-solid		Securing of any bolts	Correspd. to Loctite type CV X (formerly Loct. pipe sealing strong).
Deutz DW61		Activator			Correspd. to Locquic type T

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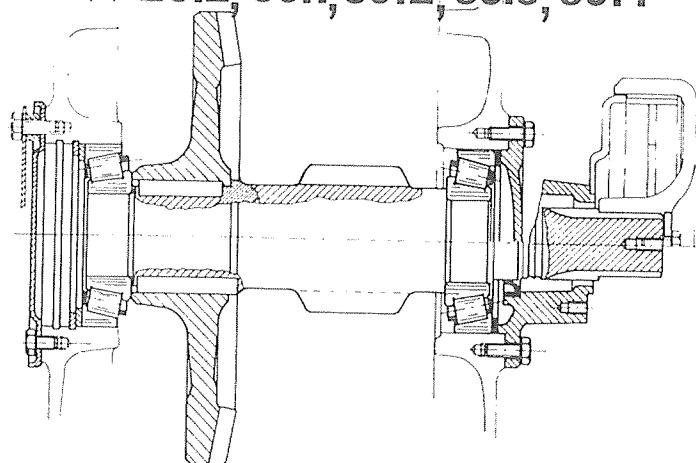




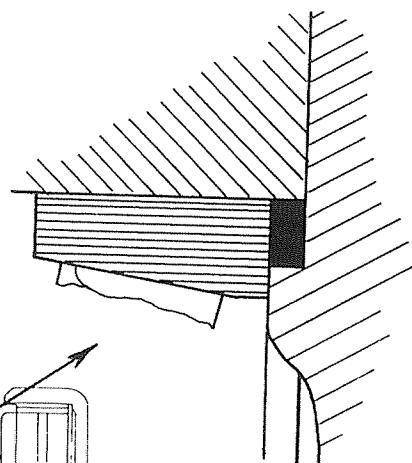
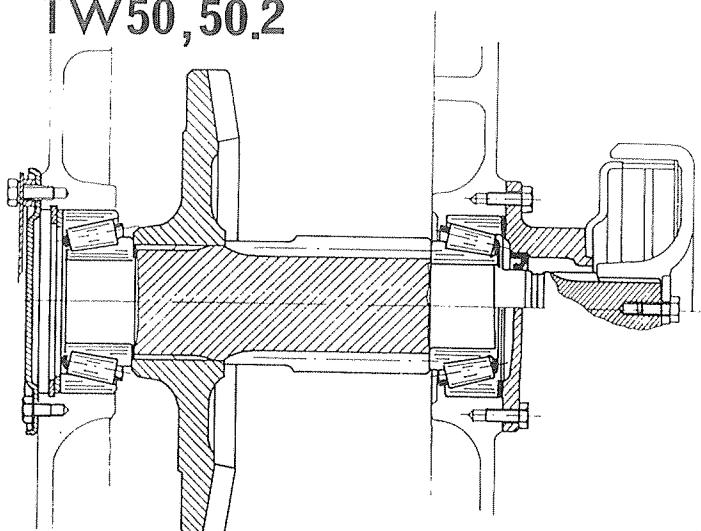




**TW 25.2, 35.1, 35.2, 35.3, 35.4**

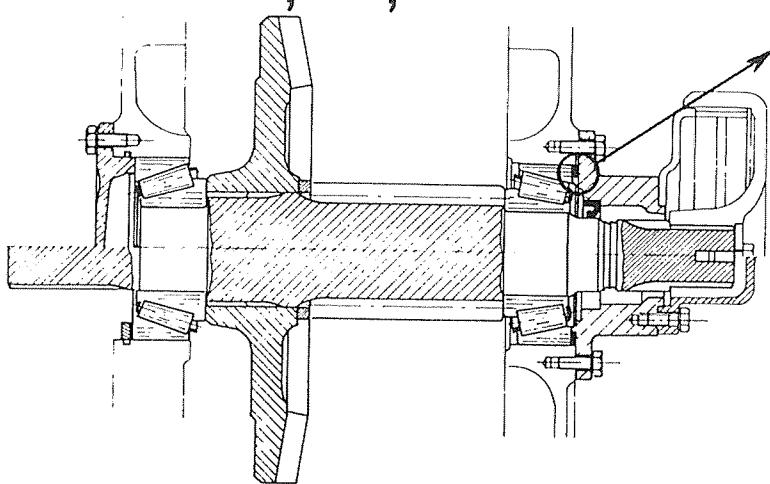
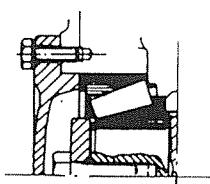


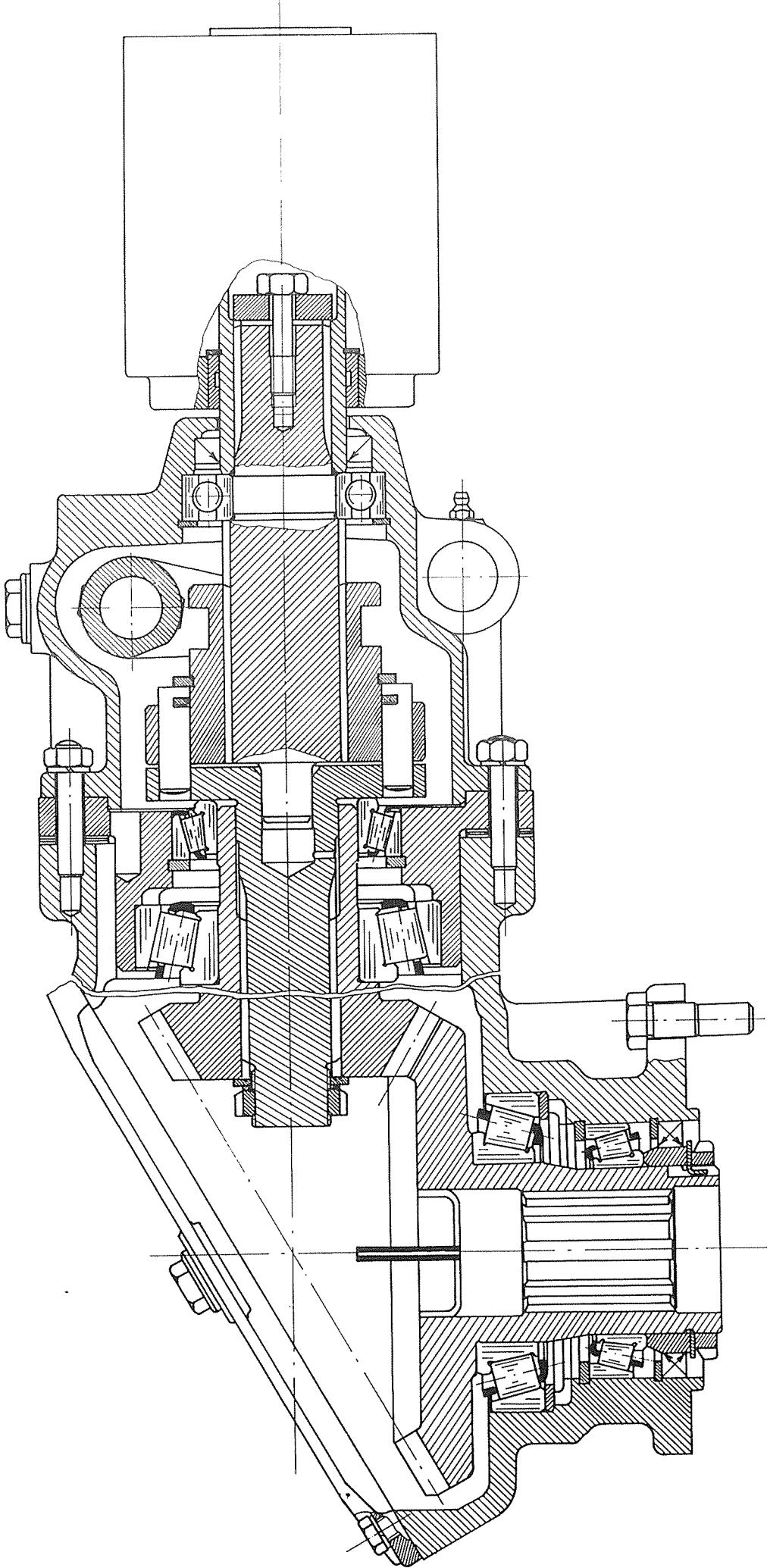
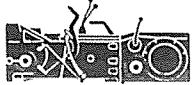
**TW 50, 50.2**

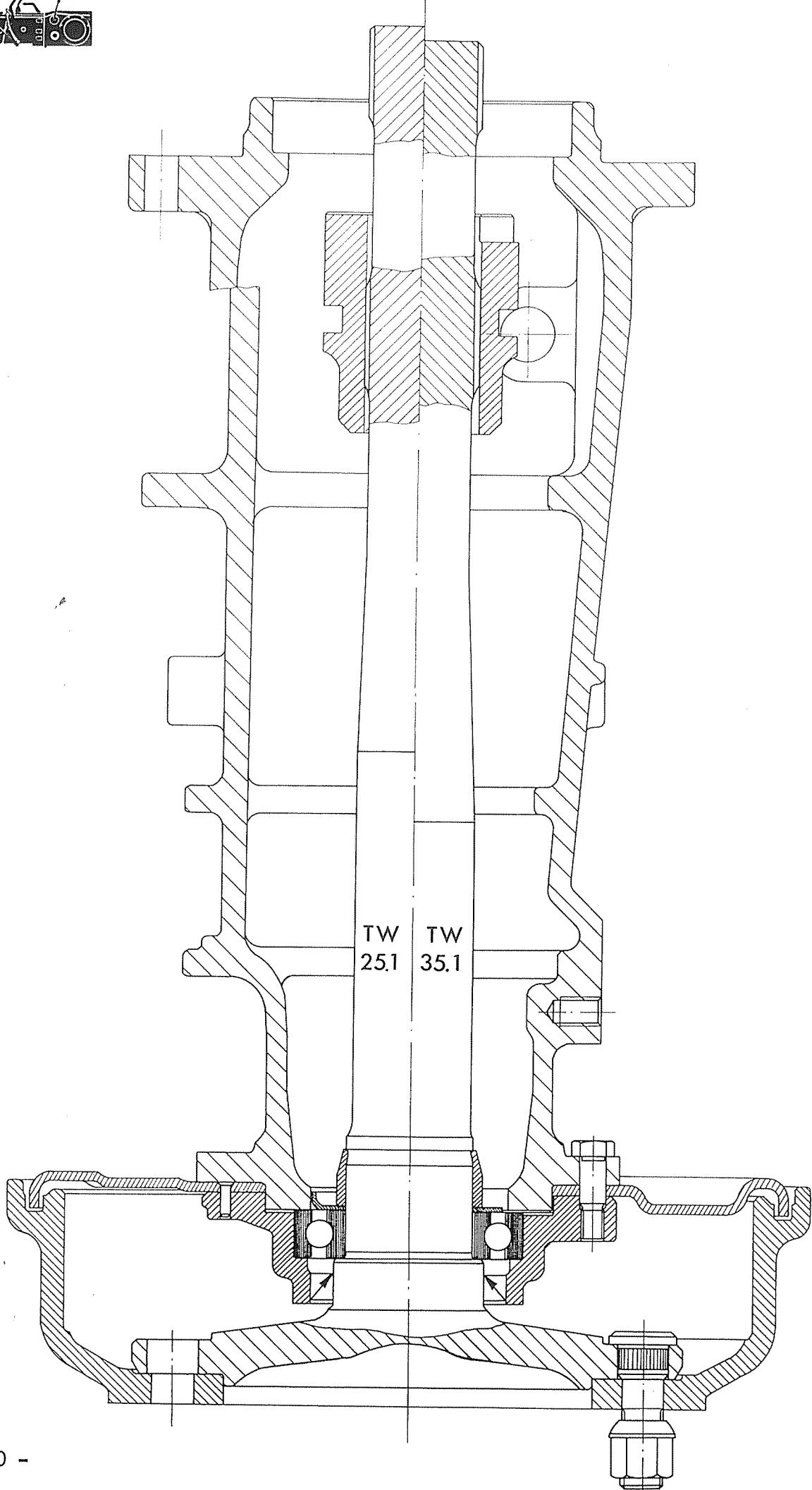
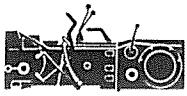


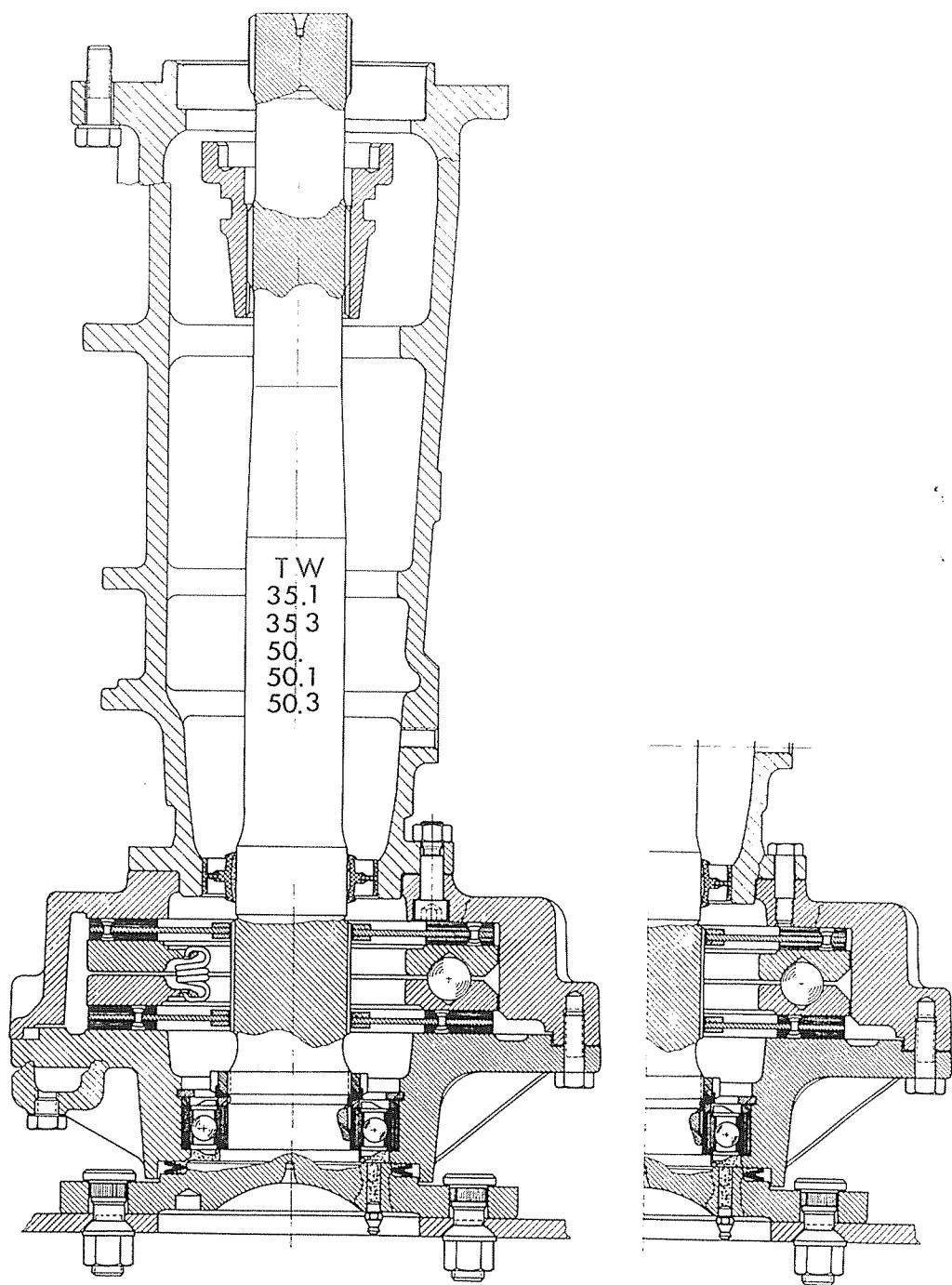
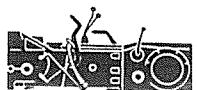
**TW 50.1, 50.3, 50.4**

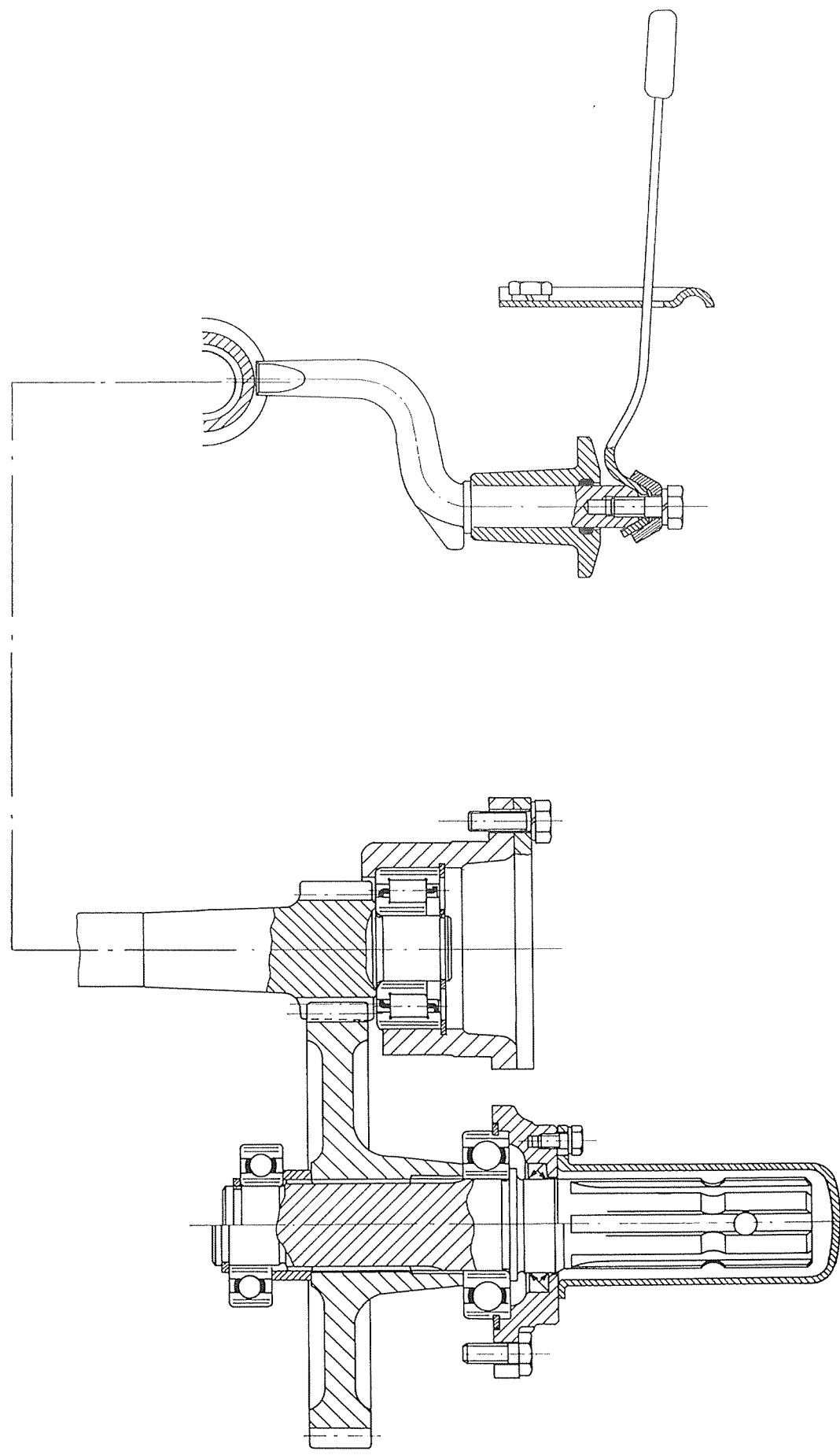
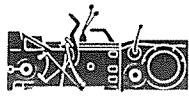
**TW 50.3**

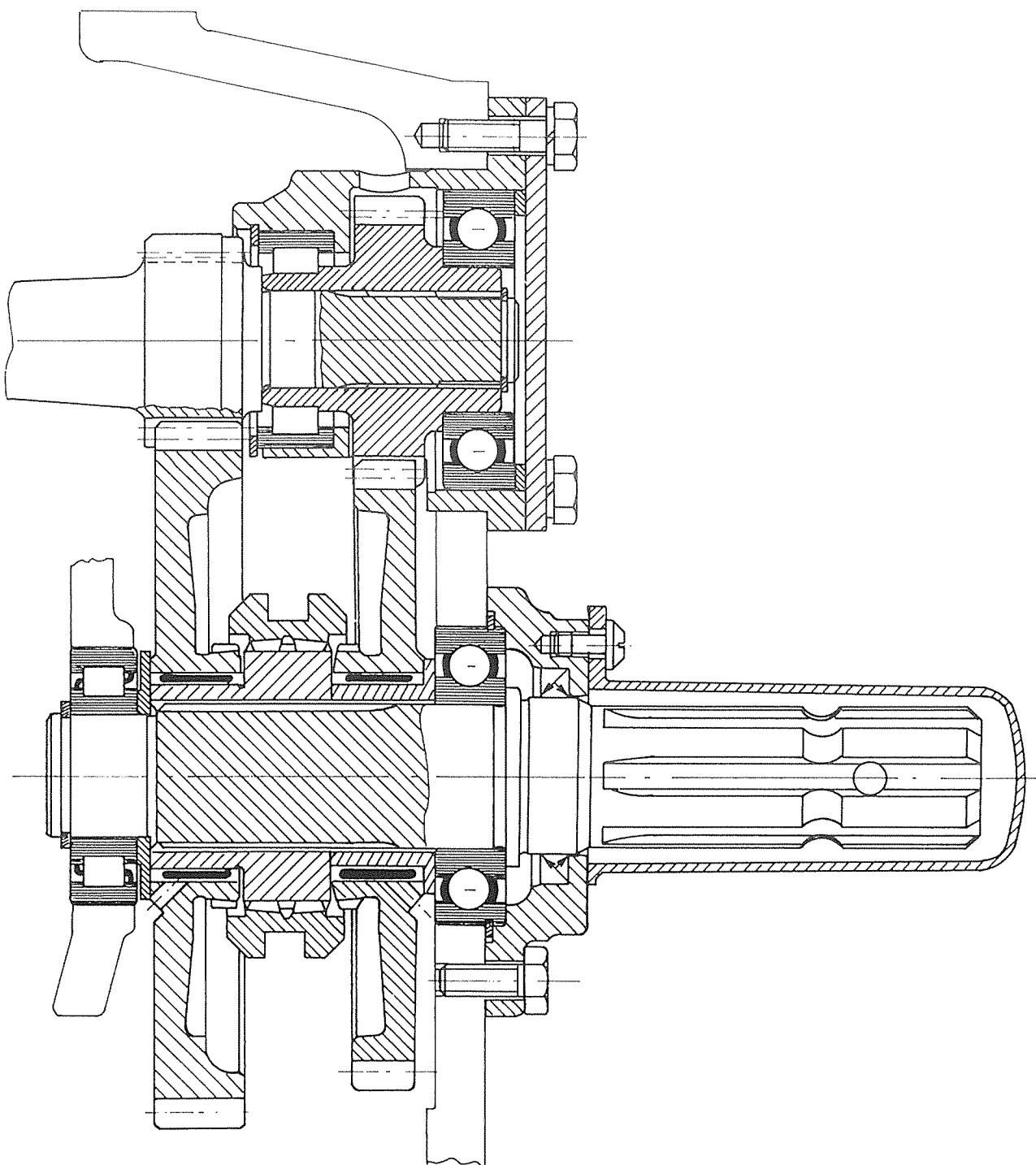
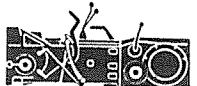


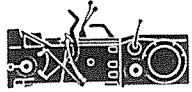




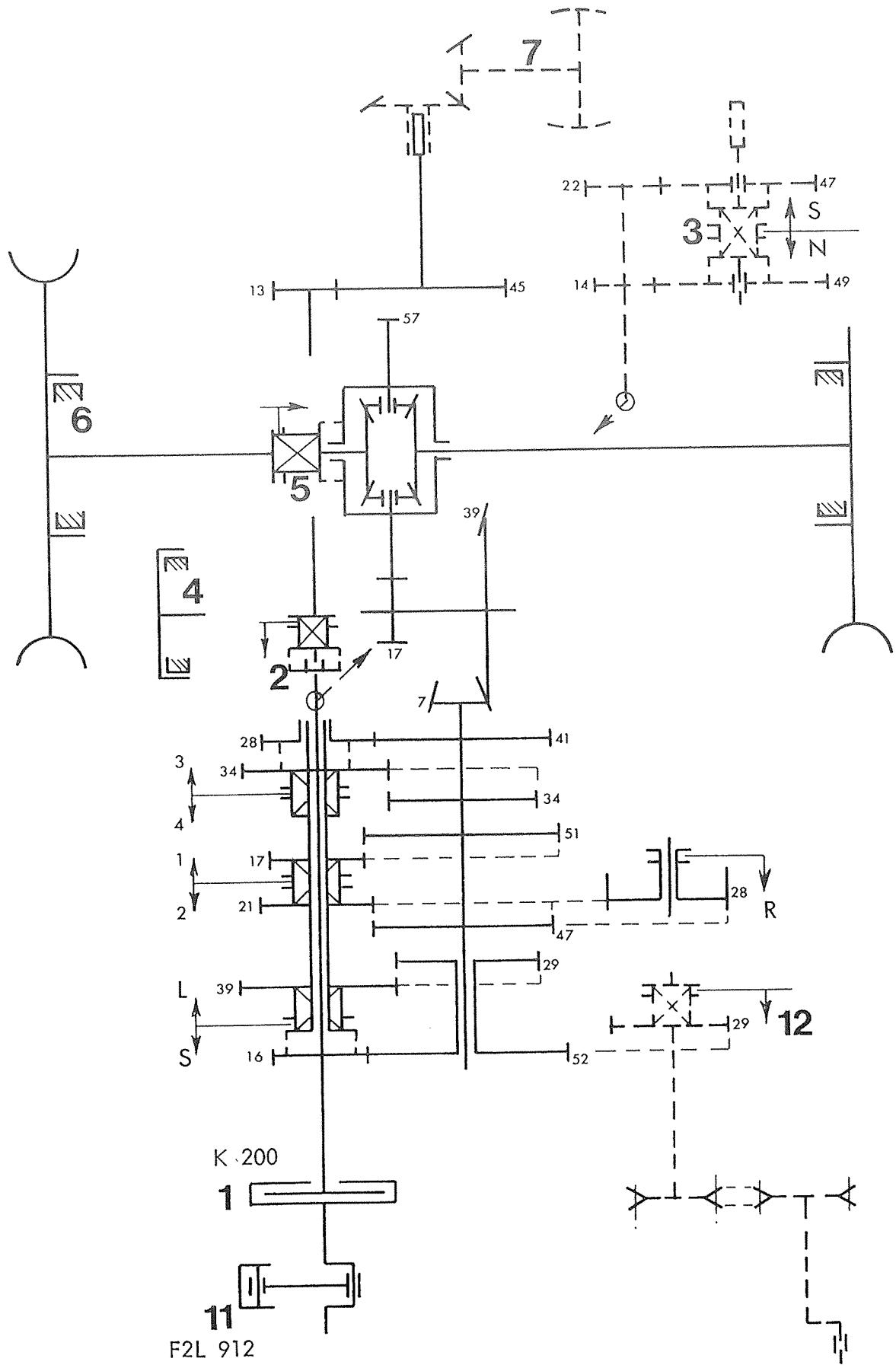






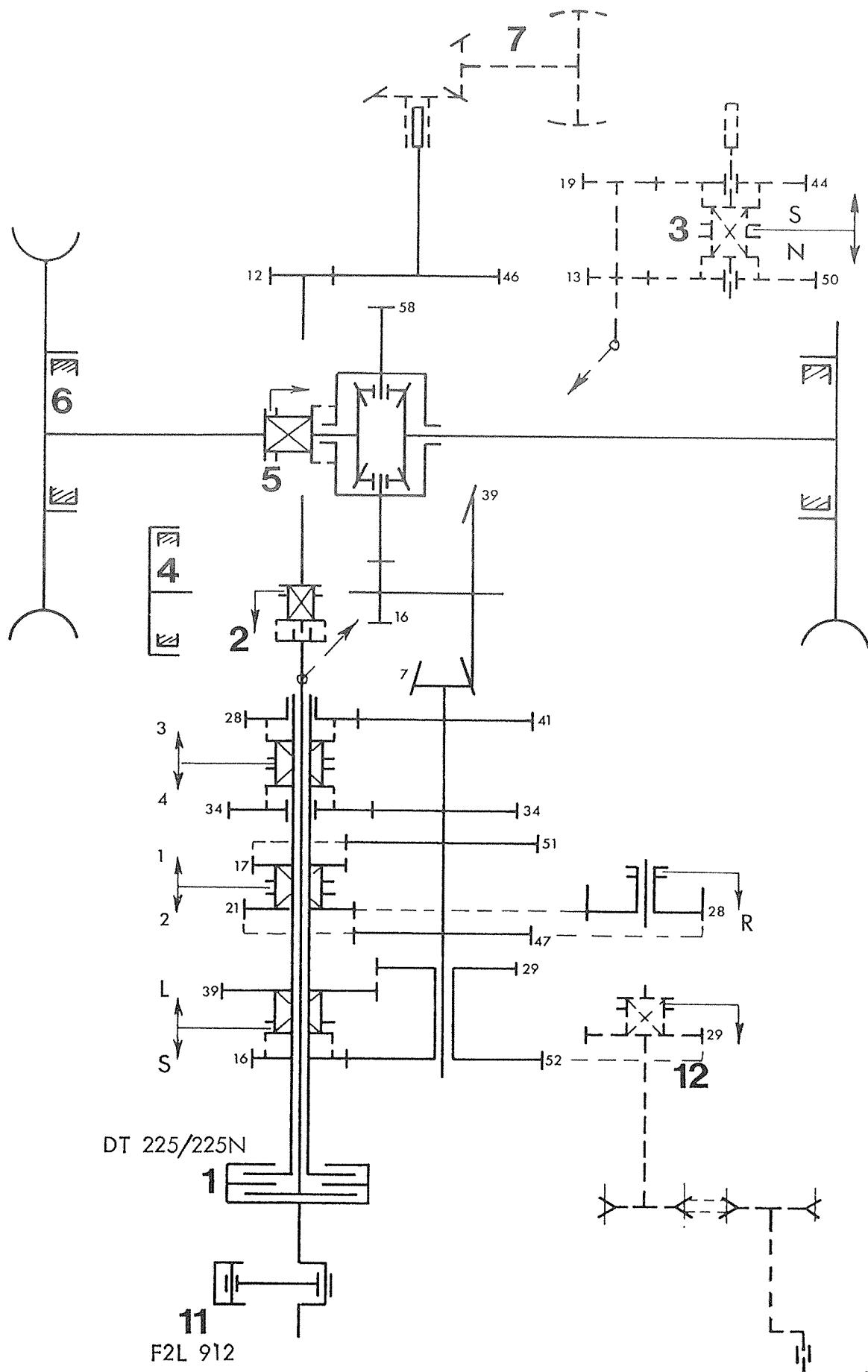


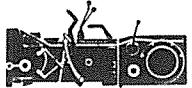
D 25 06 (TW 25.2)





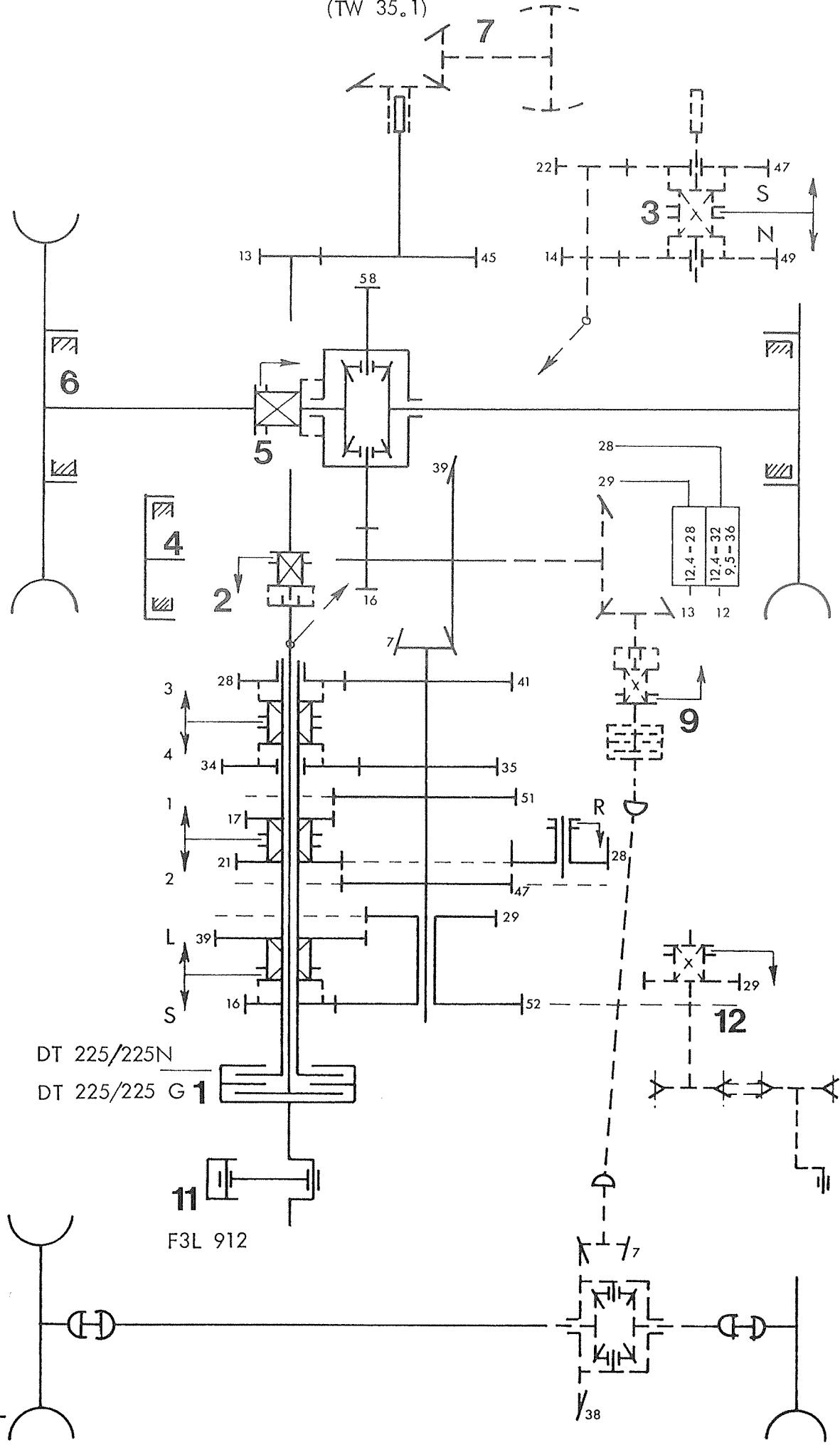
D 30 06 (TW 35.1)



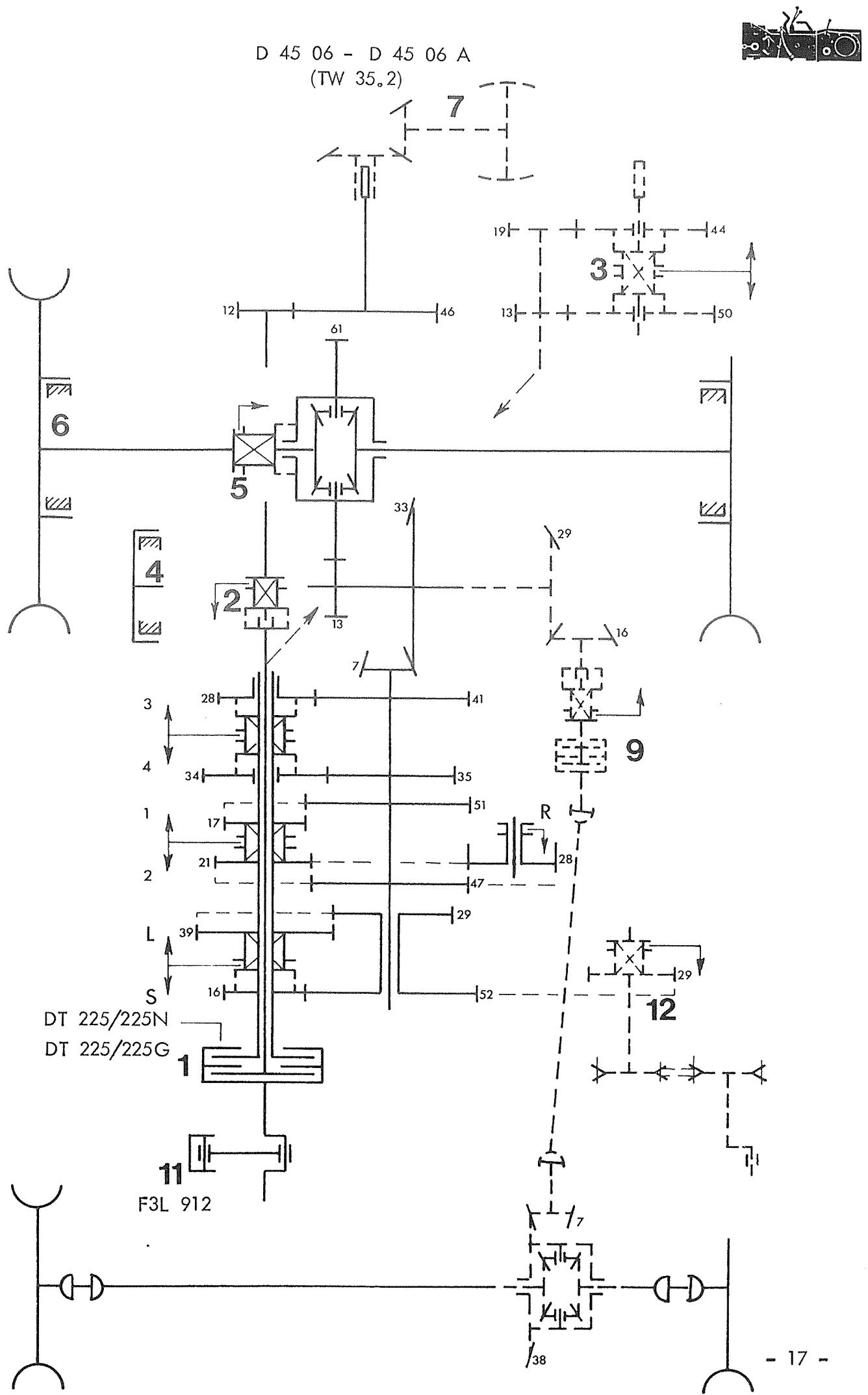


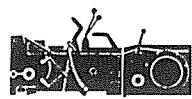
D 40 06 - D 40 06 A

(TW 35.1)

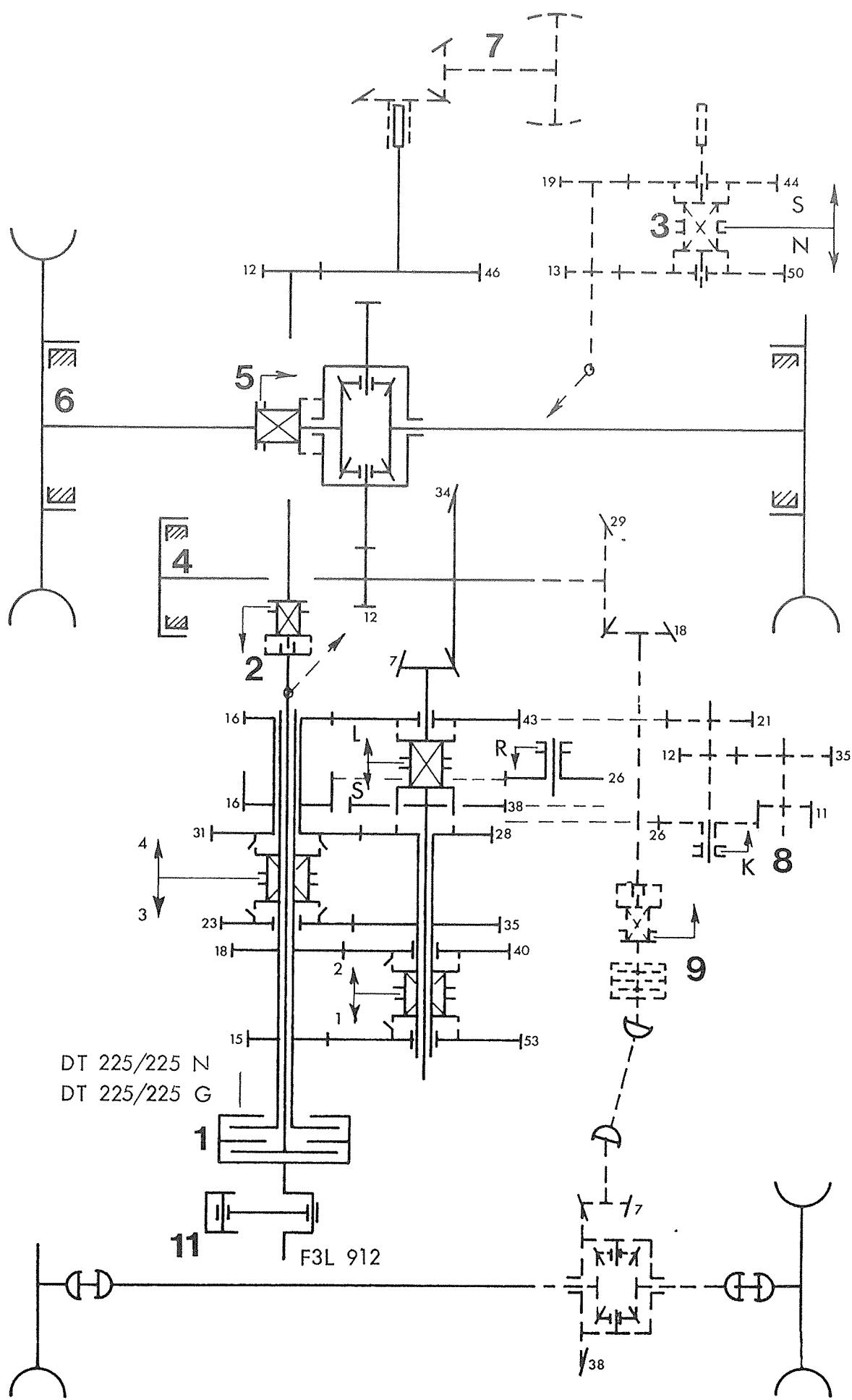


D 45 06 - D 45 06 A  
(TW 35.2)



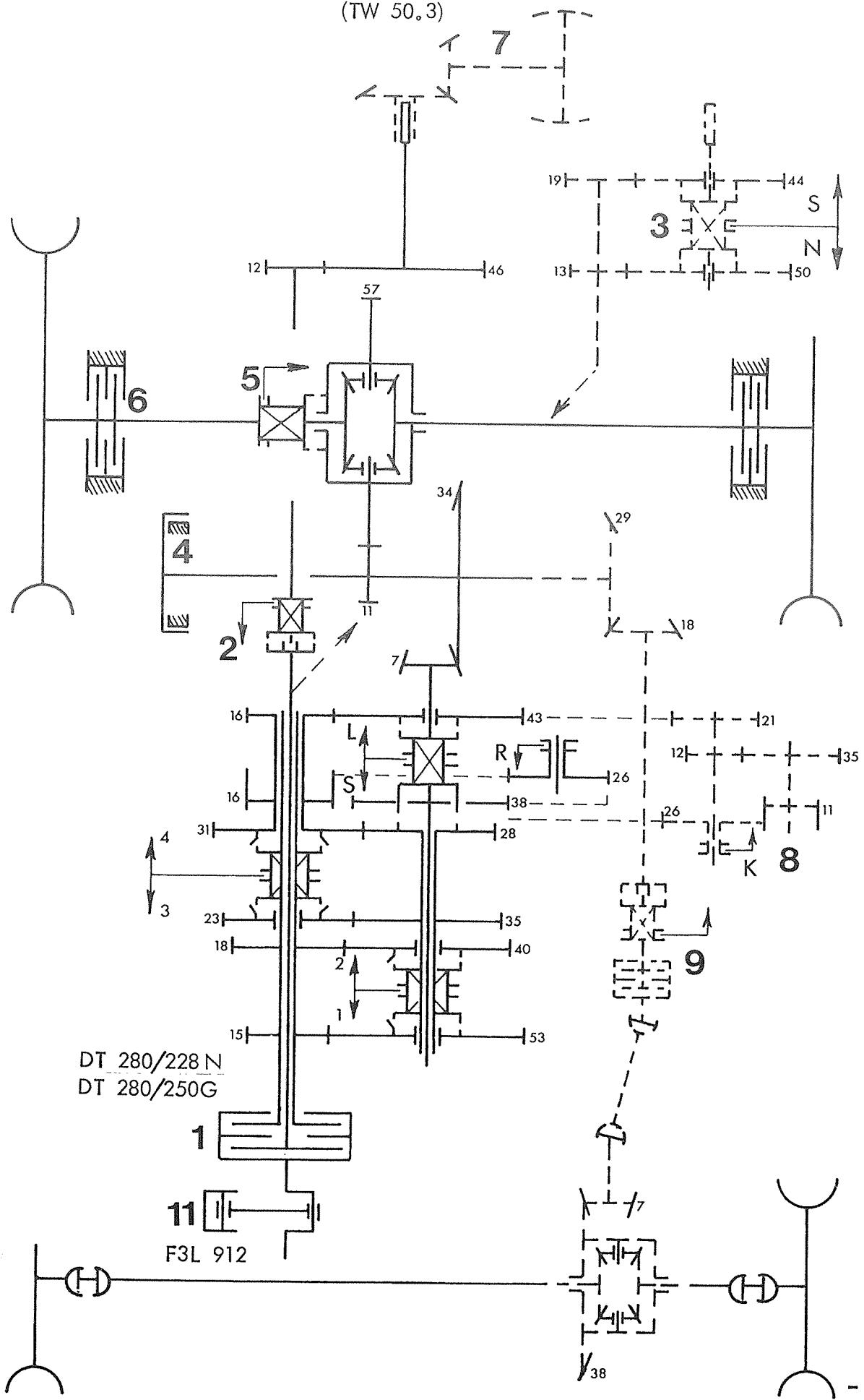


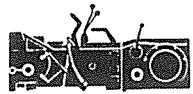
D 45 06 - D 45 06 A  
(TW 35.4)



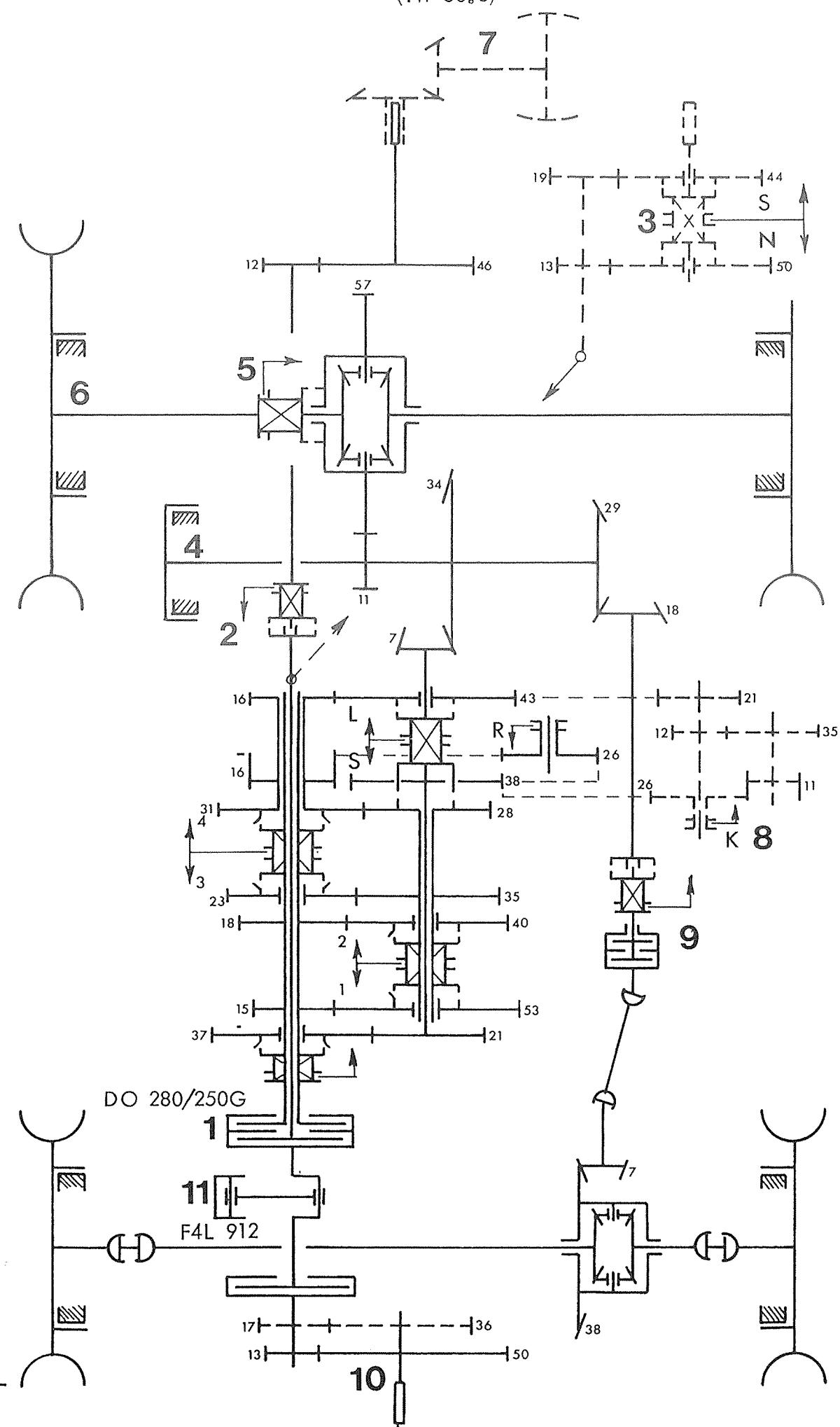


D 52 06 - D 52 06 A  
(TW 50.3)



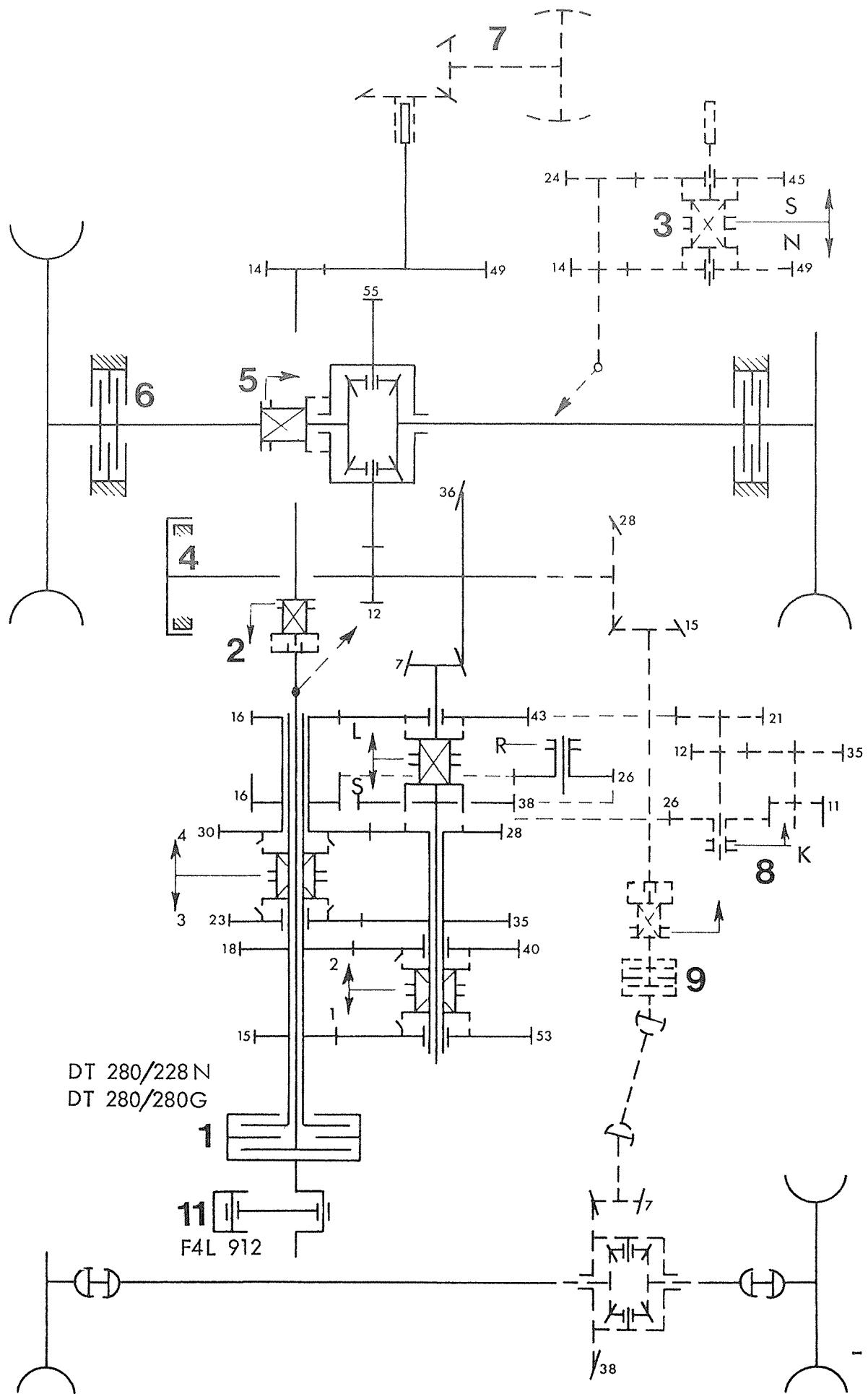


Intrac 2003 A-T  
(TW 50,3)

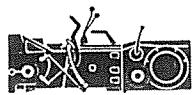




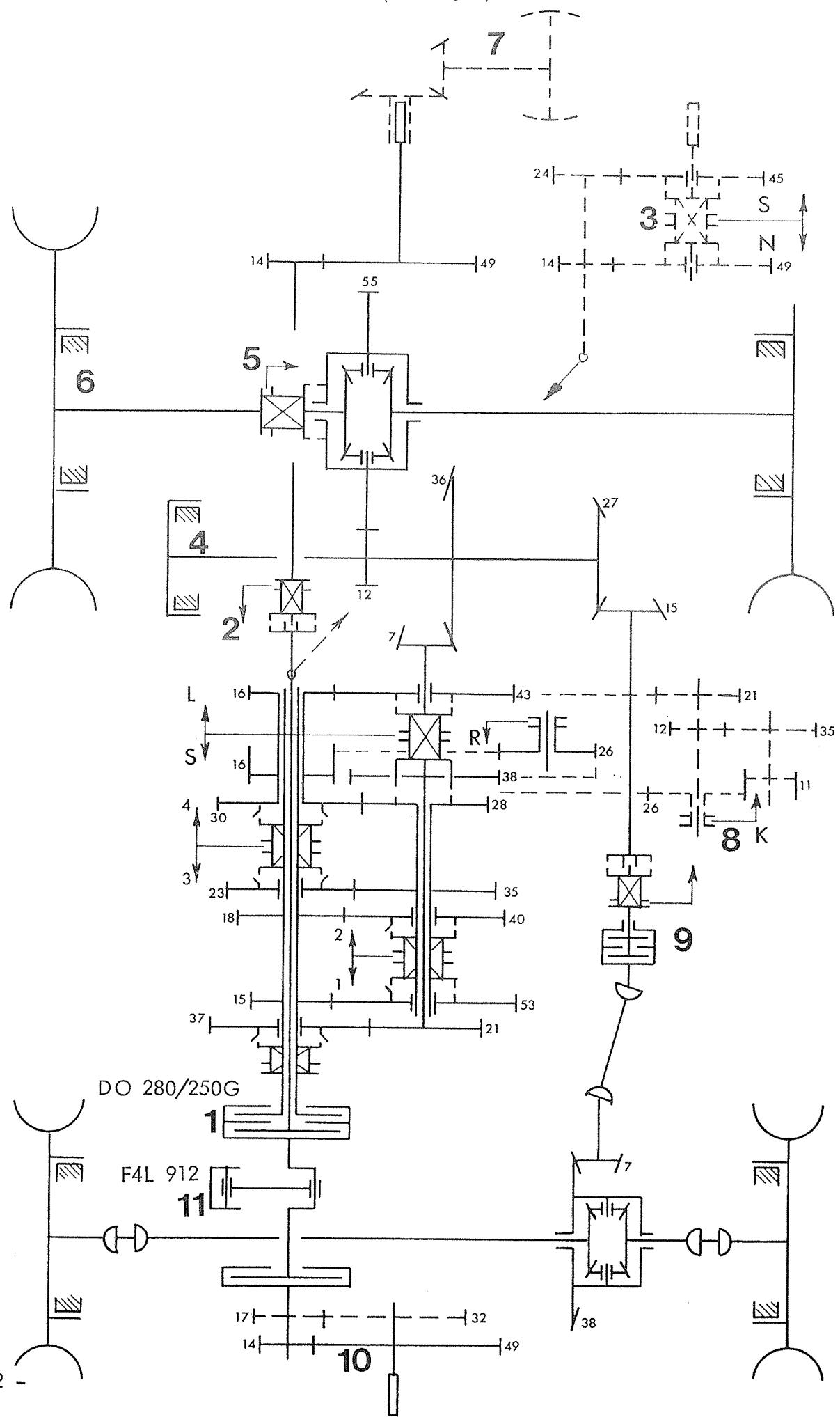
D 62 06 - D 62 06 A  
(TW 50.4)



DT 280/228 N  
DT 280/280G



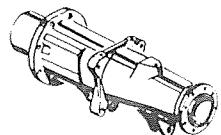
Intrac 2003 A-T  
(TW 50.04)





- |                        |                        |
|------------------------|------------------------|
| 1. Kupplung            | 1. Clutch              |
| 2. Einfach-Zapfwelle   | 2. Standard PTO-shaft  |
| 3. Duo-Zapfwelle       | 3. Two-speed PTO-shaft |
| 4. Handbremse          | 4. Hand brake          |
| 5. Differentialsperrre | 5. Diff. lock          |
| 6. Betriebsbremse      | 6. Foot brake          |
| 7. Riemenscheibe       | 7. Belt pulley         |
| 8. Kriechgang          | 8. Creep gear          |
| 9. Vorderradantrieb    | 9. Front wheel drive   |
| 10. Frontzapfwelle     | 10. Front PTO-shaft    |
| 11. Motor              | 11. Engine             |
| 12. Mähantrieb         | 12. Mower drive        |

- |                                  |                               |
|----------------------------------|-------------------------------|
| 1. Embrayage                     | 1. Embrague                   |
| 2. Prise de force simple         | 2. Toma de fuerza standard    |
| 3. Prise de force à deux régimes | 3. Toma de fuerza duo         |
| 4. Frein à main                  | 4. Freno manual               |
| 5. Blocage du différentiel       | 5. Bloqueo de diferencial     |
| 6. Frein de route                | 6. Freno de rodadura          |
| 7. Poulie à courroie             | 7. Polea de correa            |
| 8. Vitesse rampante              | 8. Marchas ultralentas        |
| 9. Pont moto-directeur           | 9. Eje delantero motriz       |
| 10. Prise de force frontale      | 10. Toma de fuerza frontal    |
| 11. Moteur                       | 11. Motor                     |
| 12. Commande de barre de coupe   | 12. Accionamiento de segadora |



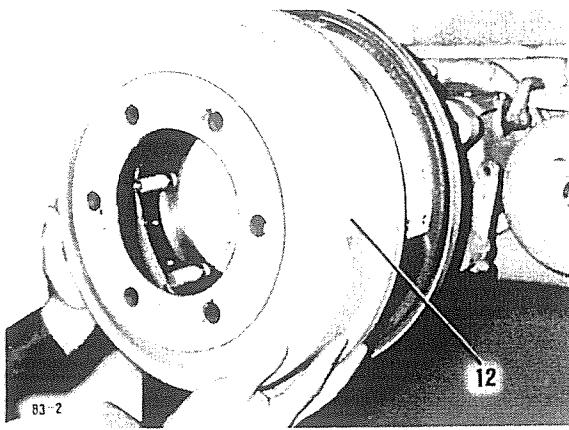
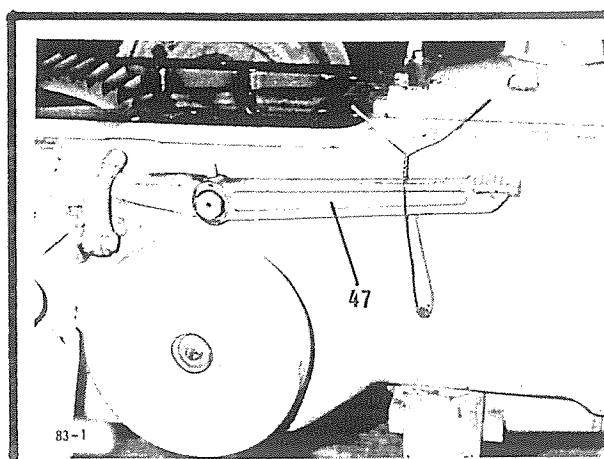
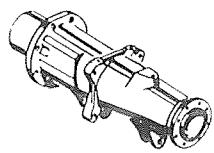
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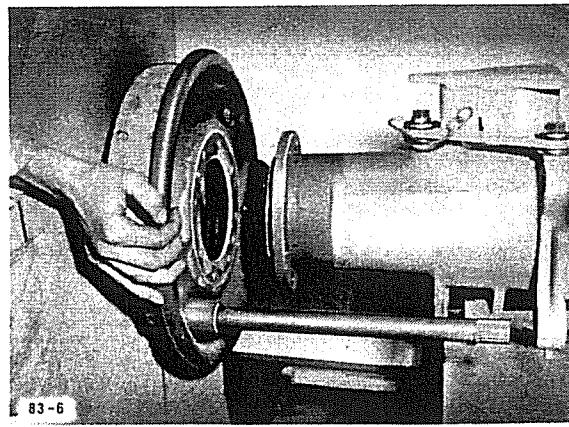
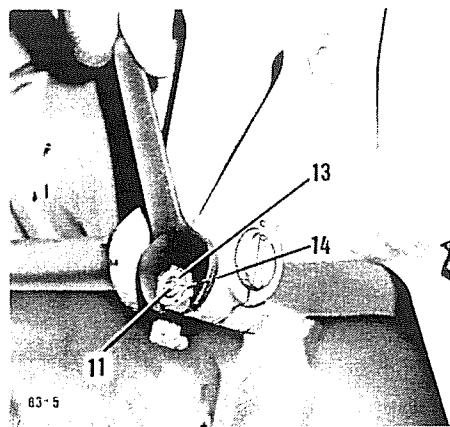
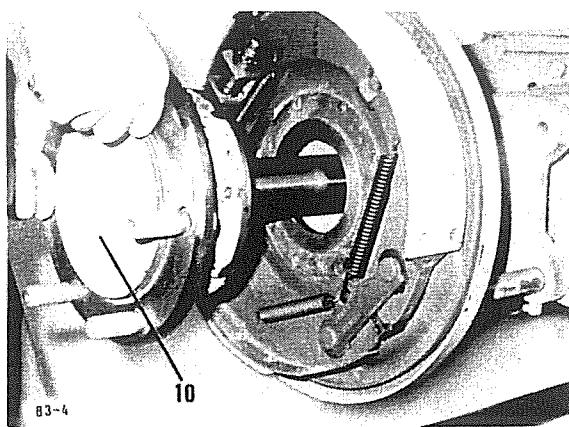
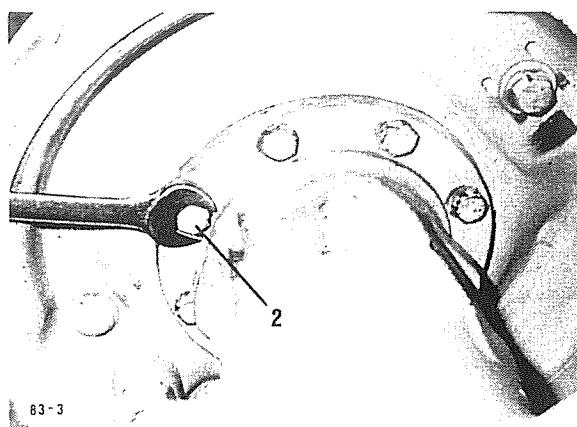
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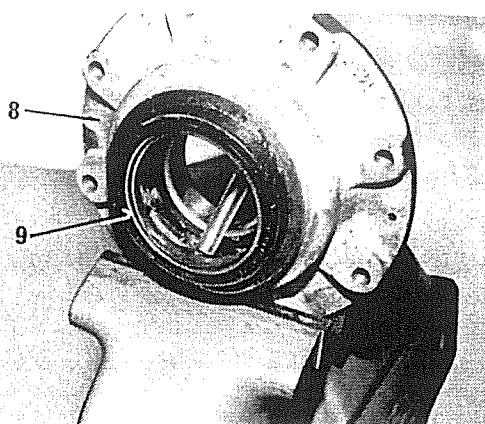
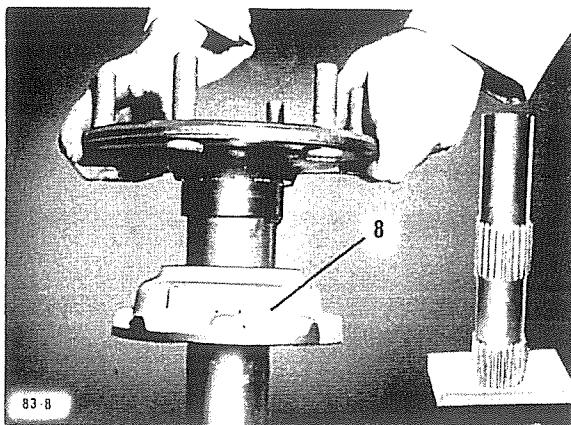
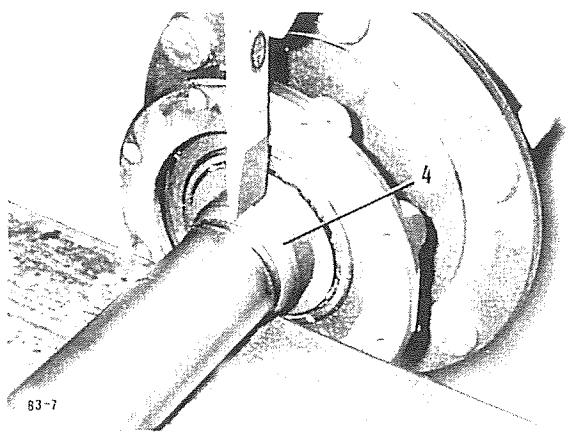
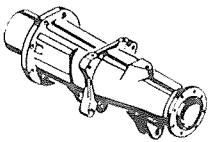
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TEILDEMONTAGE DER HINTERACHSHÄLFT (TROMMELBREMSE)  
 PARTIALLY DISMANTLING THE REAR HALF-AXLE (DRUM BRAKE)  
 DEPOSE PARTIELLE DU DEMI-ESSIEU AR (FREIN A TAMBOUR)  
 DESMONTAJE PARCIAL DEL SEMIEJE TRASERO (FRENO DE TAMBOR)

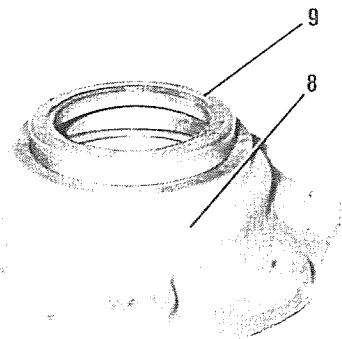
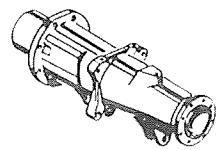


Hinterachshälfte rechts  
 Half-axle RH  
 Demi-essieu AR, côté droit  
 Semieje trasero, derecha





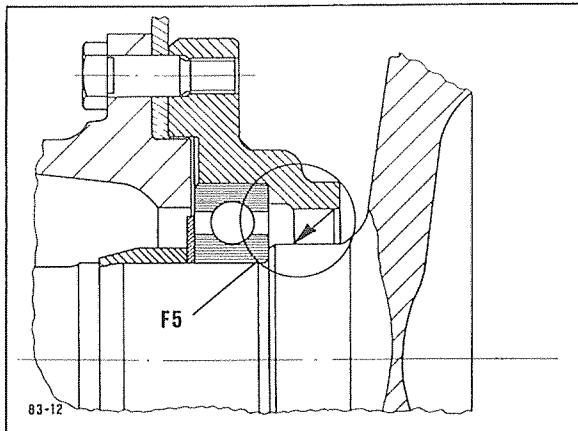
HINTERACHSHÄLFTE ZUSAMMENBAUEN  
 REASSEMBLING REAR HALF-AXLE  
 REASSEMBLAGE DU DEMI-ESSIEU AR  
 REARMAR EL SEMIEJE TRASERO



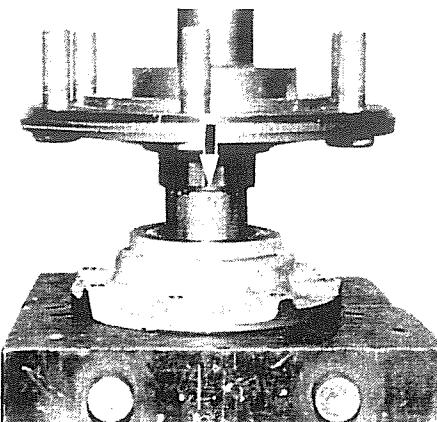
83-10



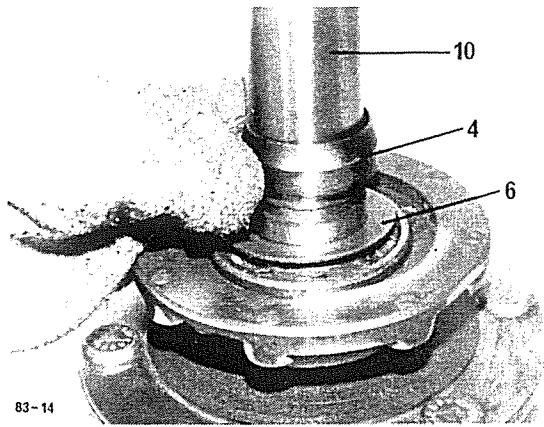
83-11



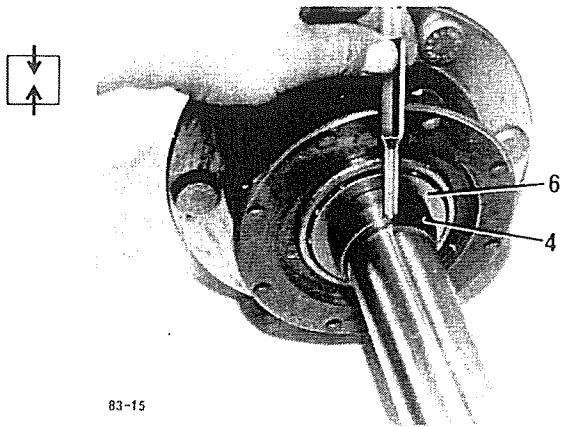
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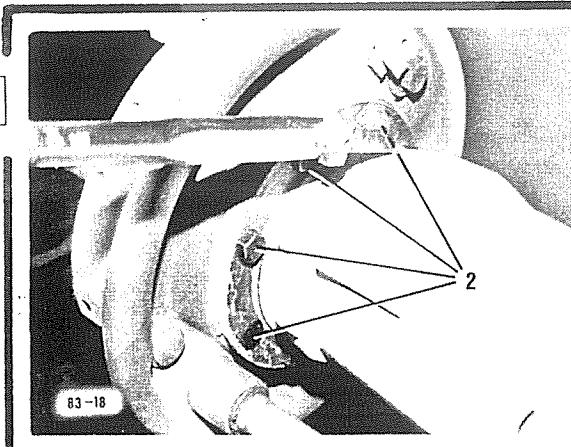
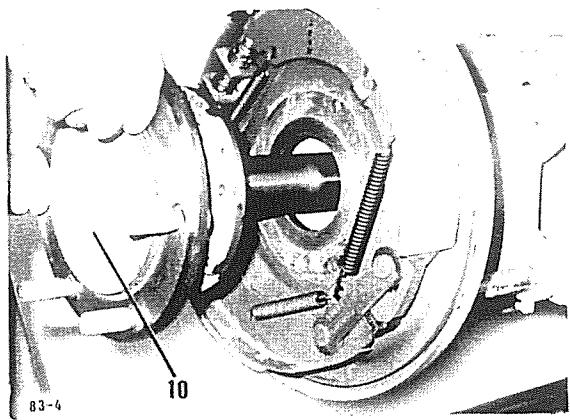
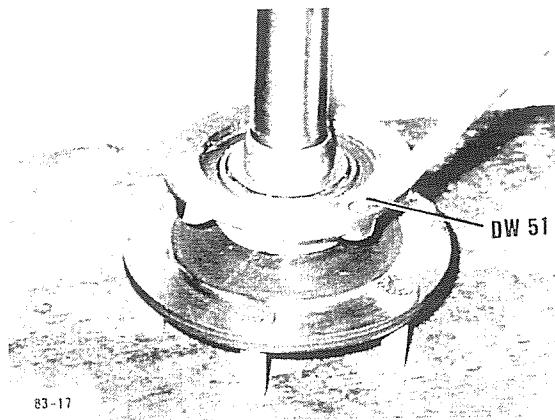
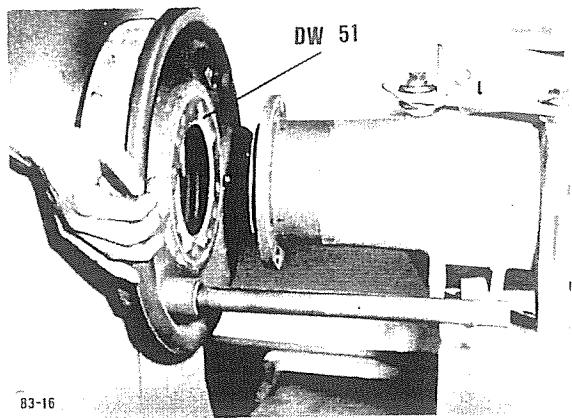
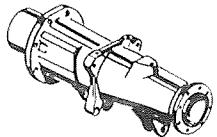
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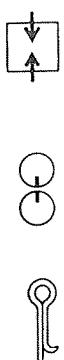
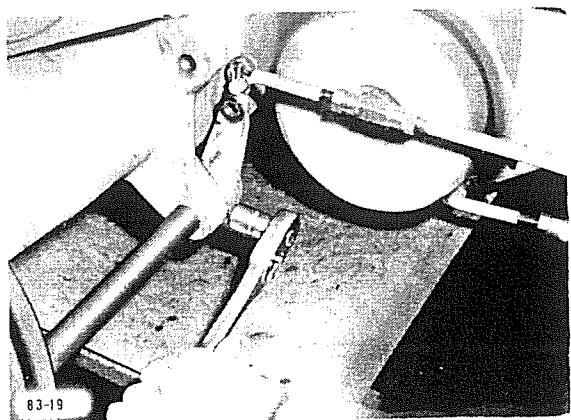
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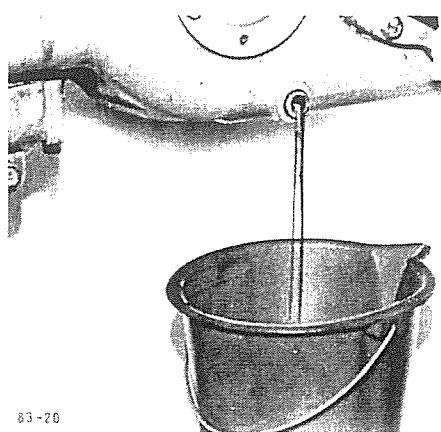
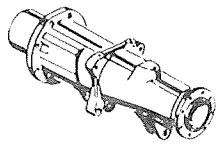
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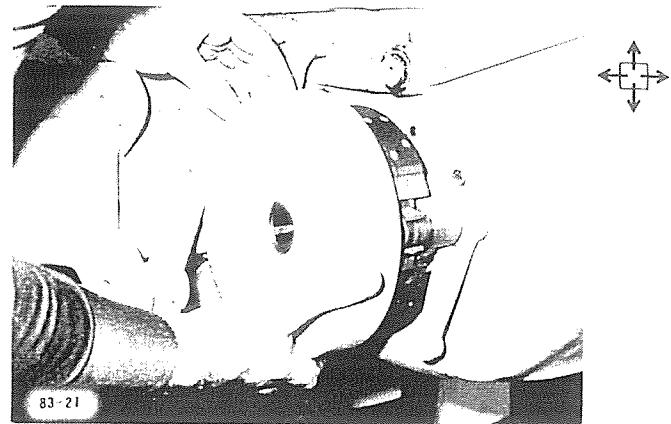
69 Nm (6,9 kpm)



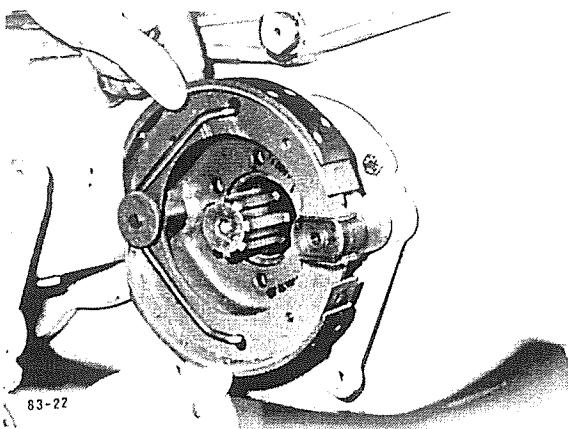
KOMPLETTDEMONTAGE DER HINTERACHSHÄLFT  
 COMPLETELY DISMANTLING REAR HALF-AXLE  
 DEPOSE COMPLET DU DEMI-ESSIEU AR  
 DESMONTAJE COMPLETO DEL SEMIEJE TRASERO



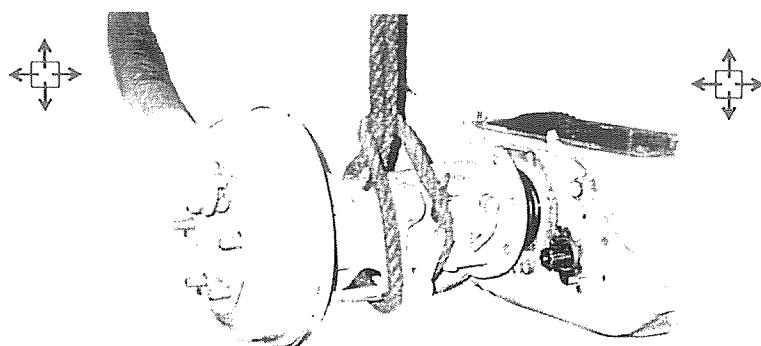
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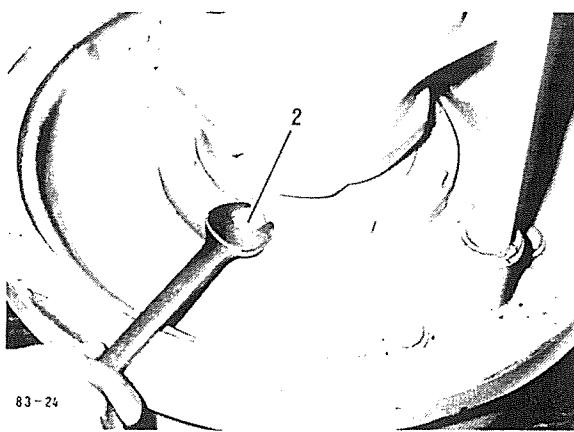
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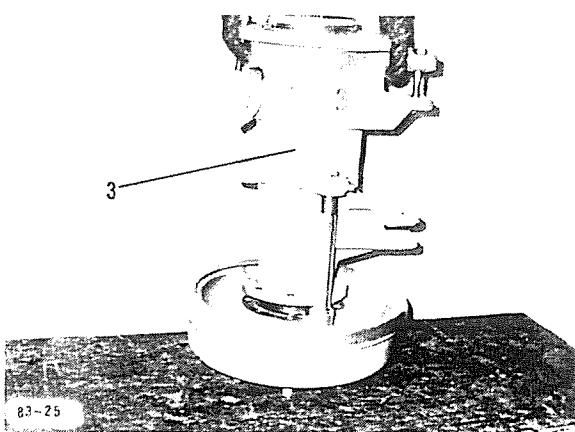
83-22



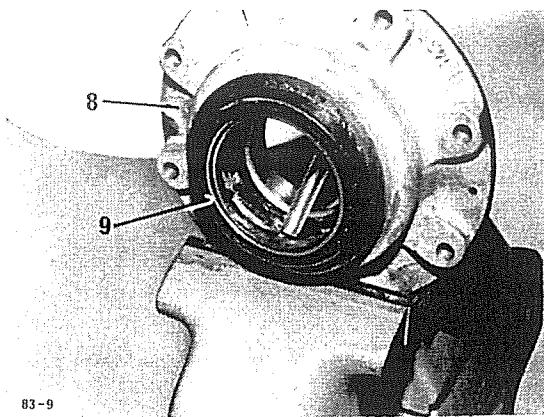
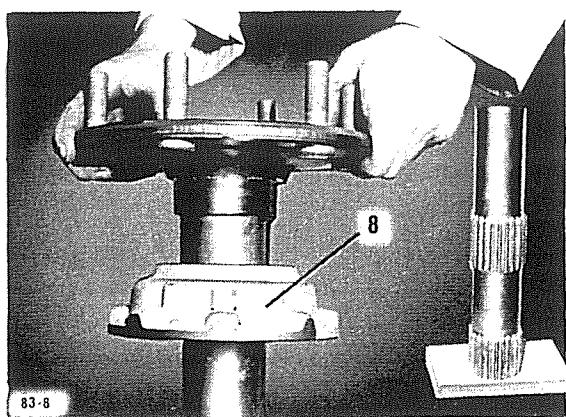
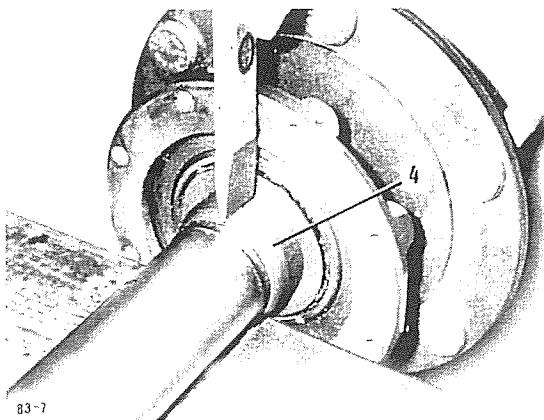
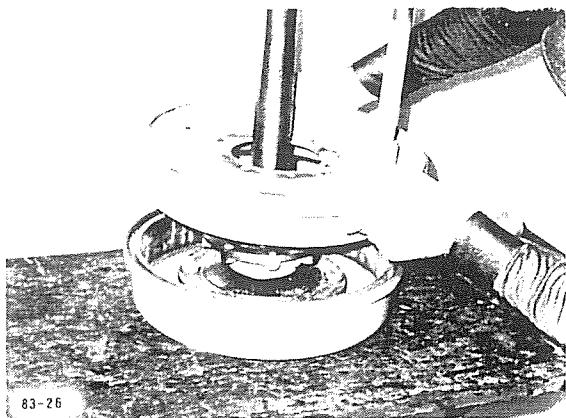
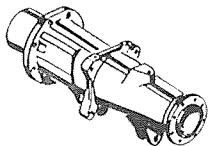
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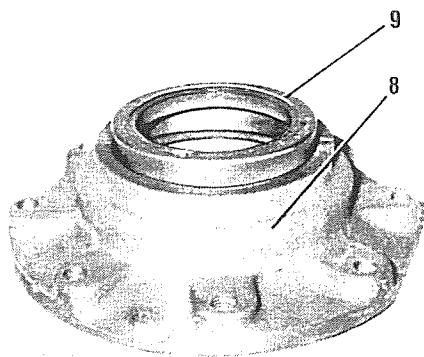
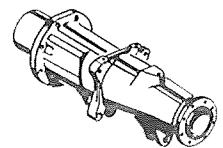
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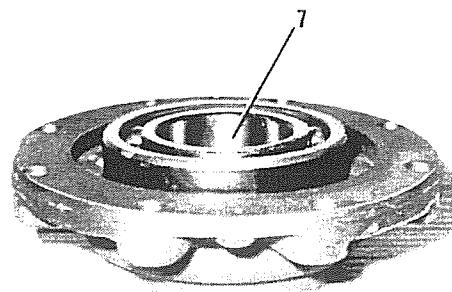
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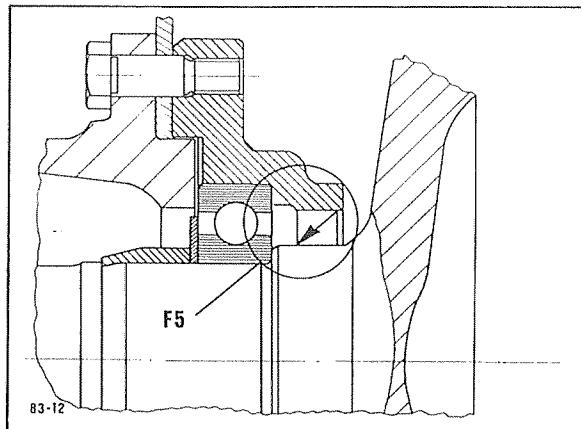
TRAGROHR ZUSAMMENBAUEN  
REASSEMBLING THE AXLE TUBE  
REASSEMBLAGE DE LA TROMPTE  
REARMAR LA TROMPETA DE EJE



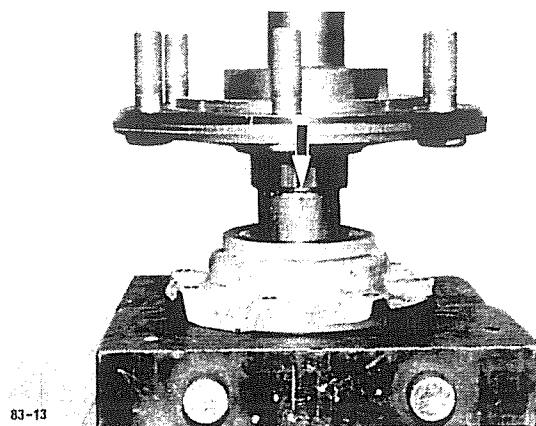
83-10



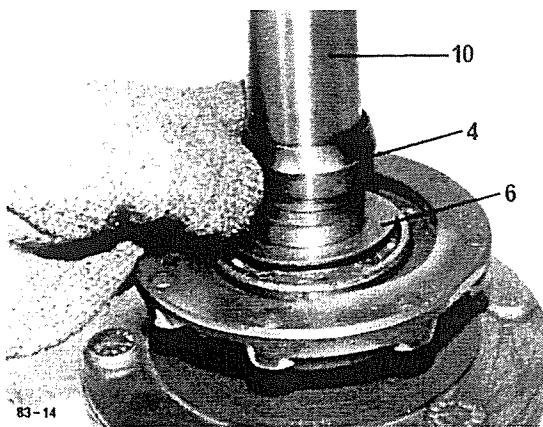
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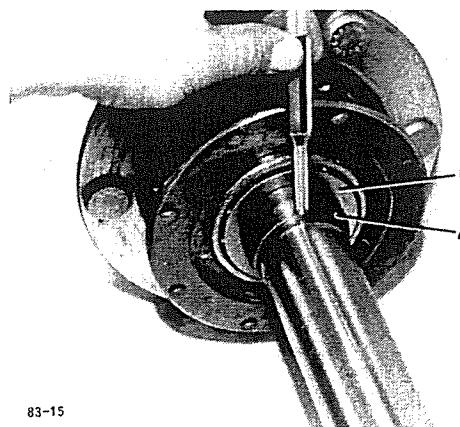
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83-13

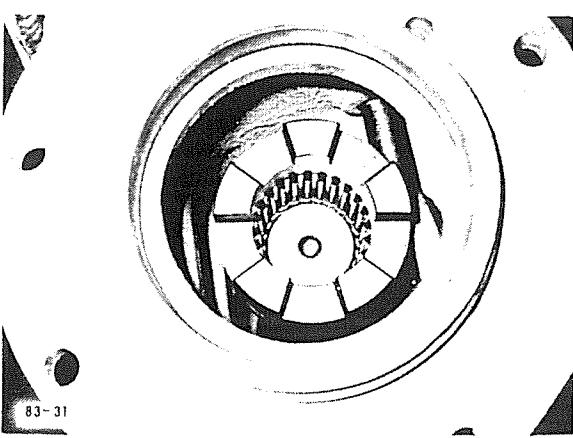
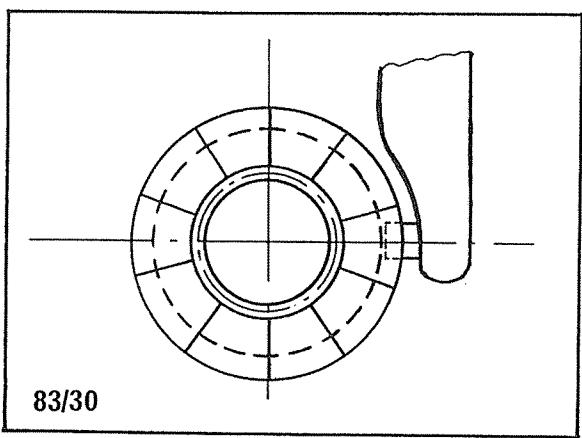
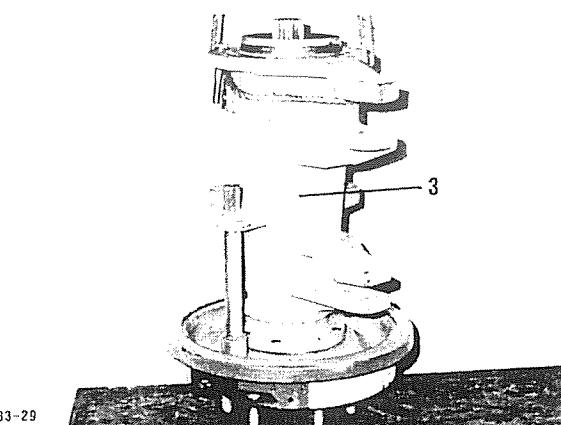
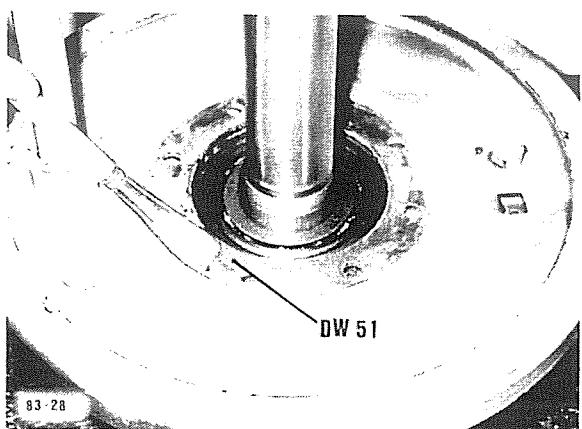
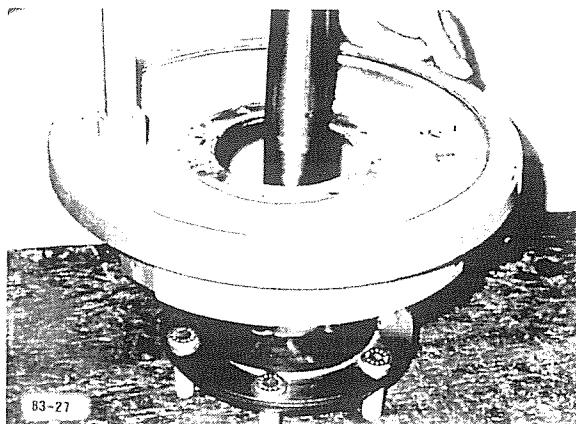
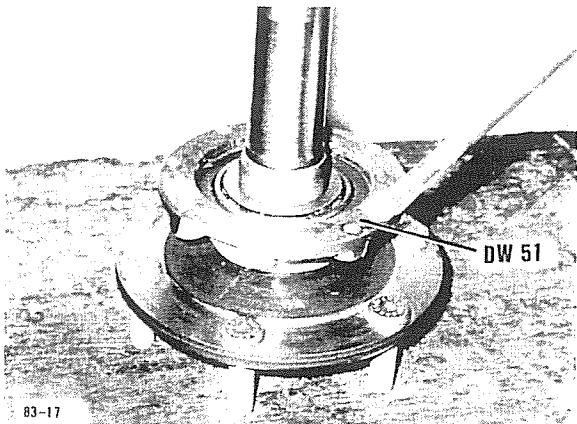
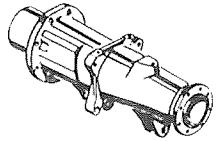


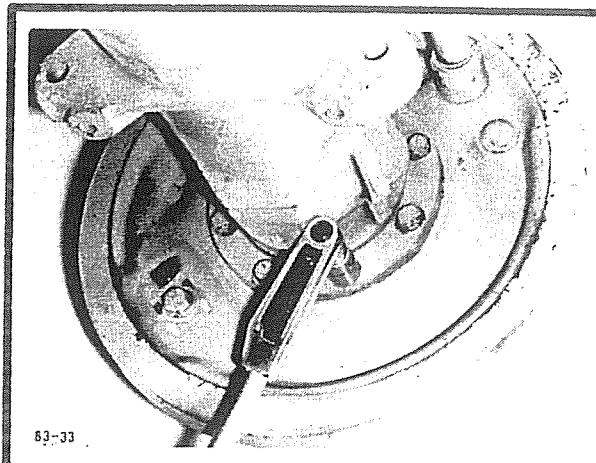
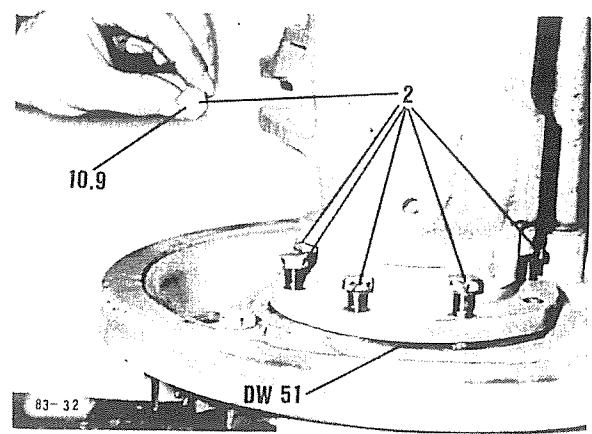
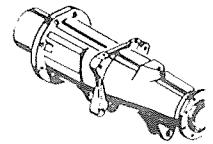
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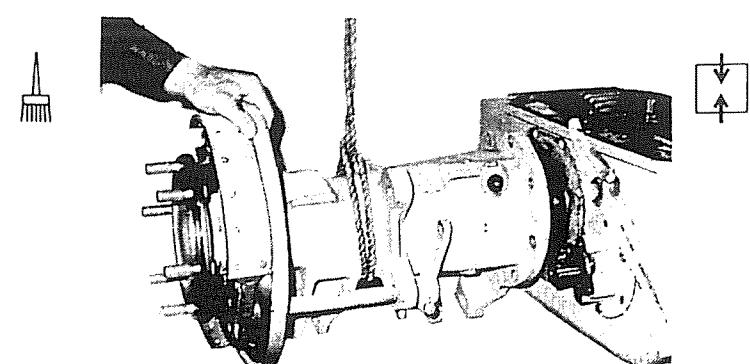
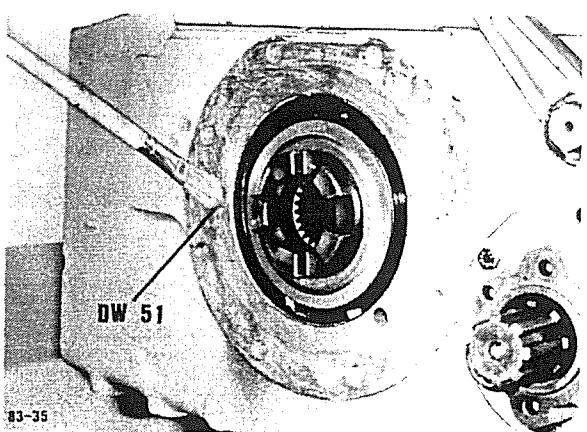
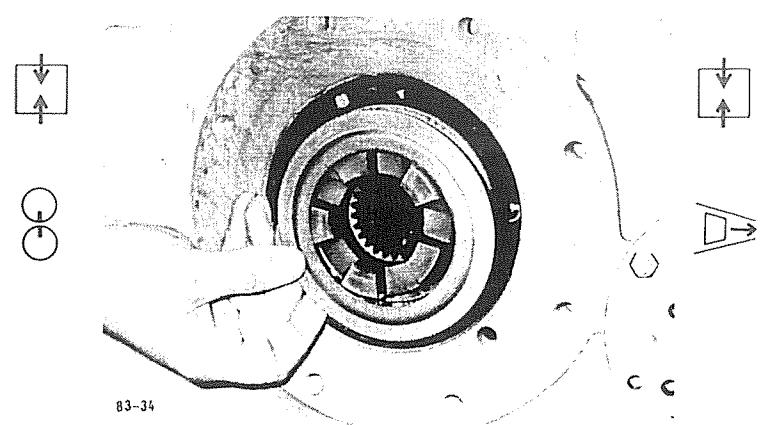
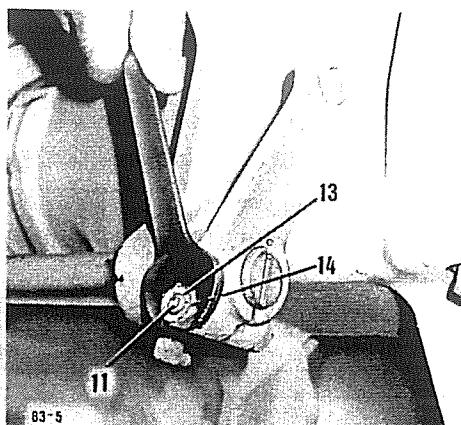
83-15

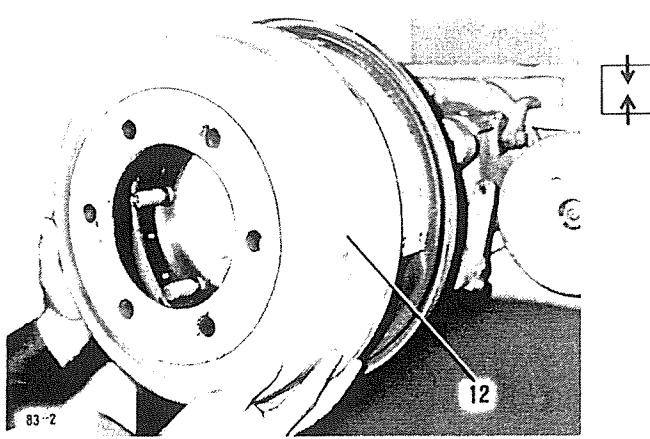
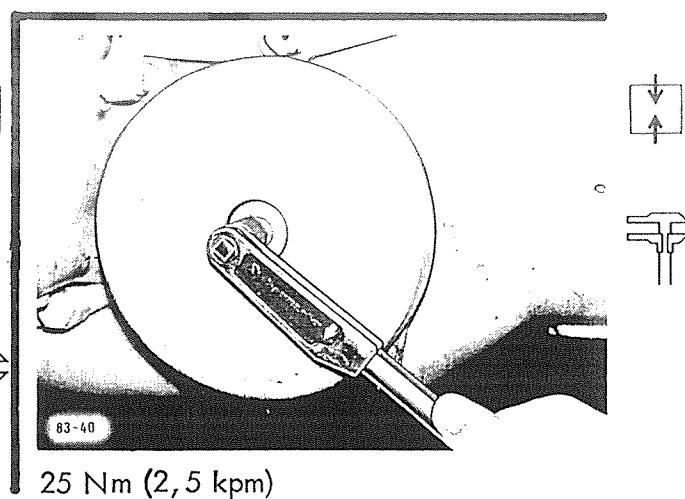
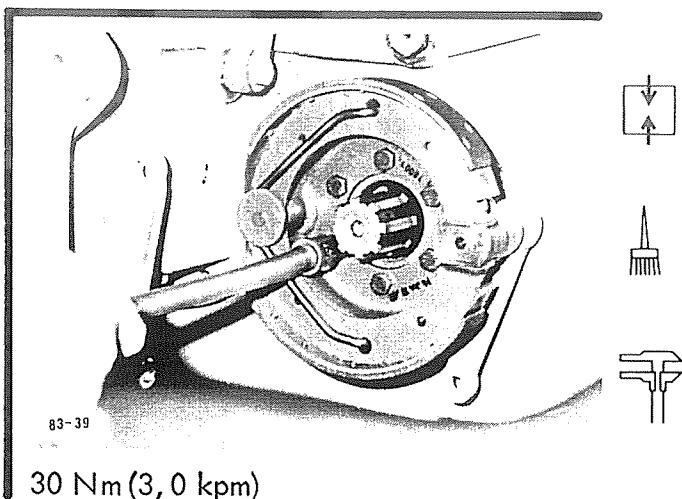
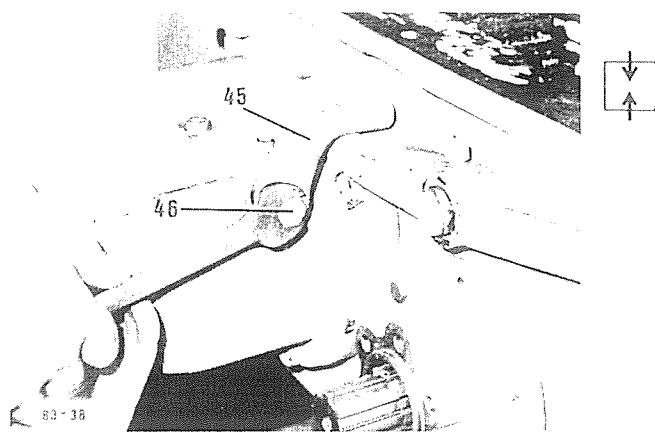
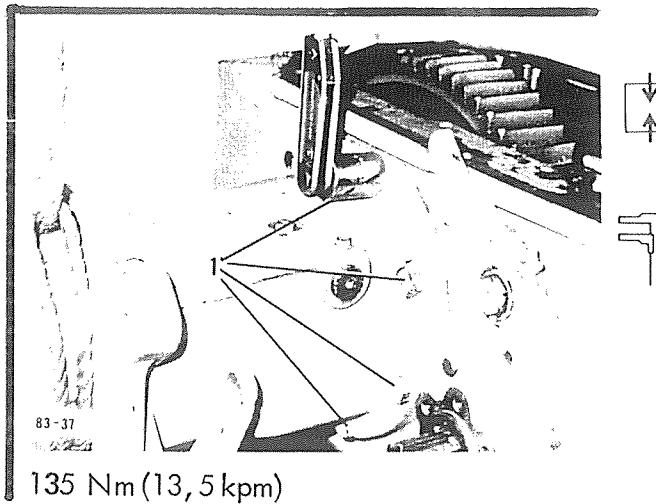
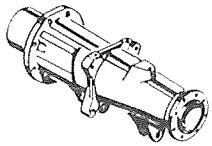


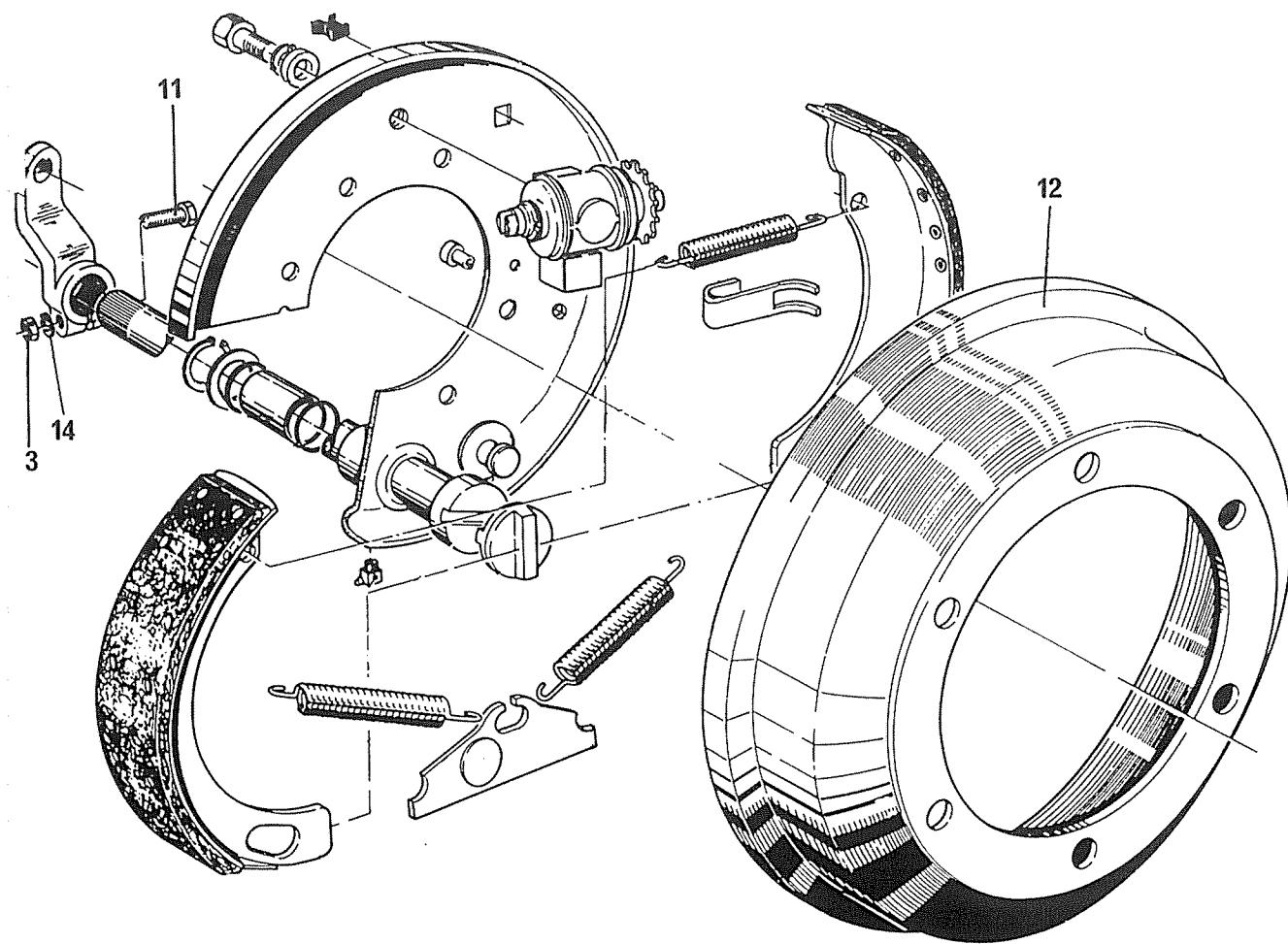
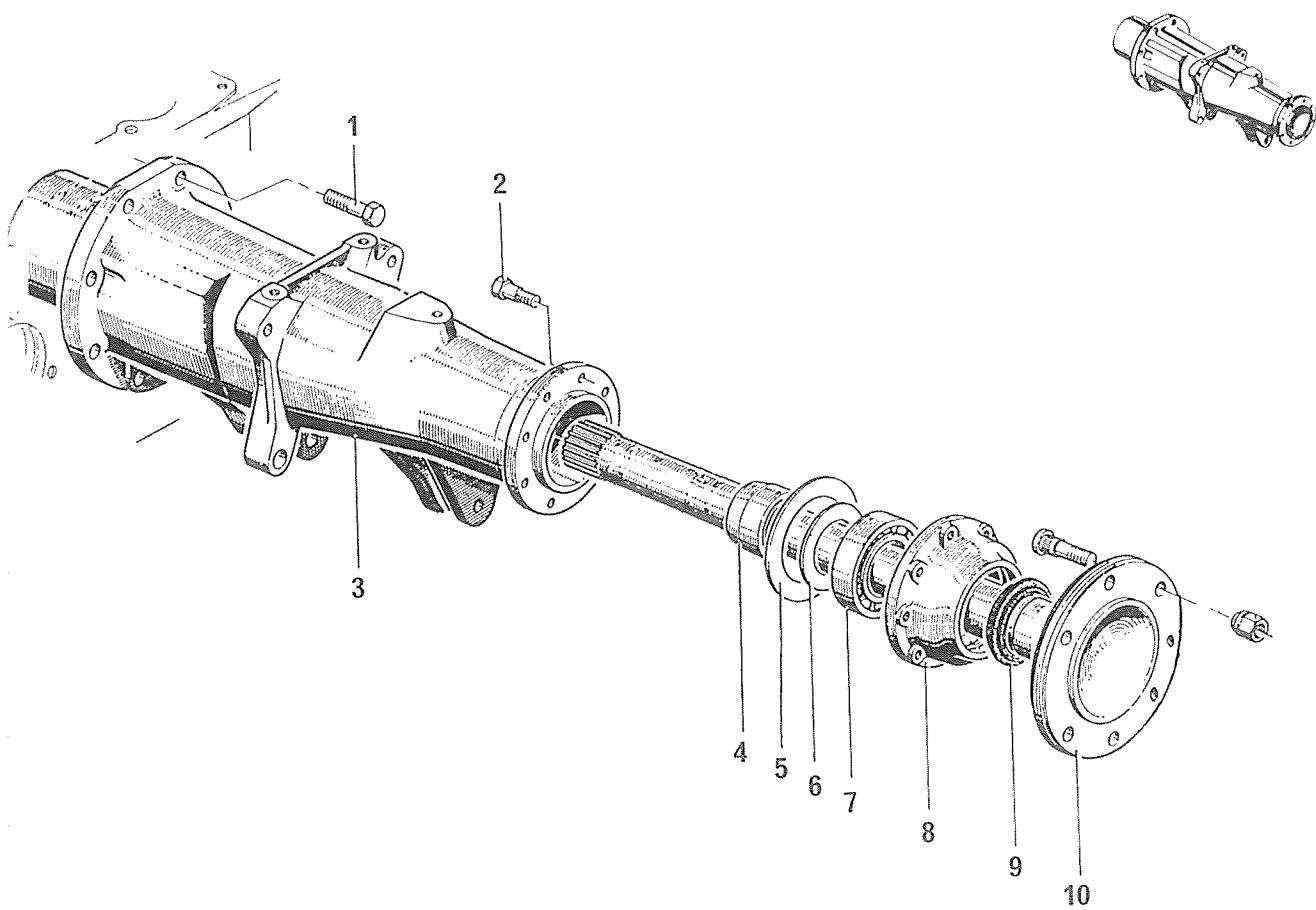




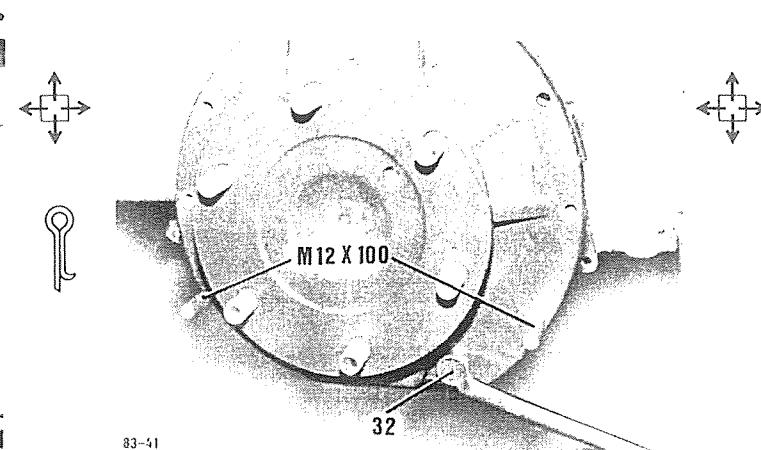
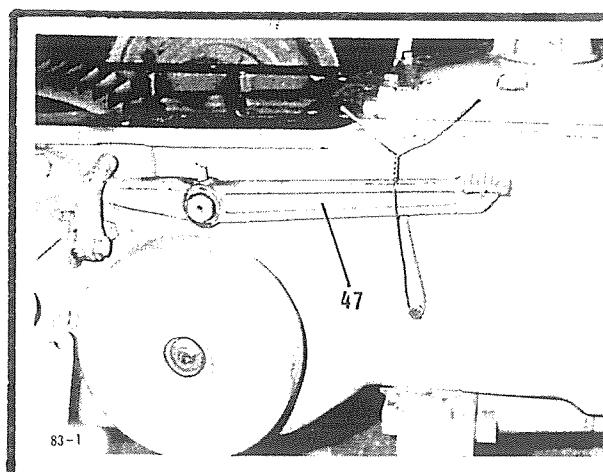
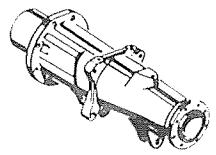
69 Nm (6,9 kpm)



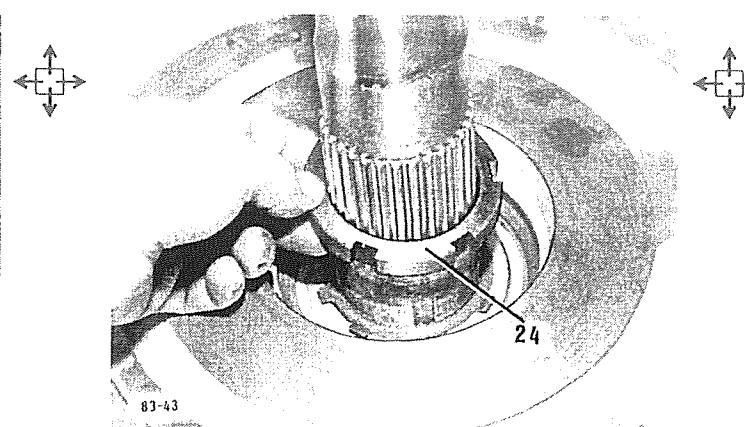
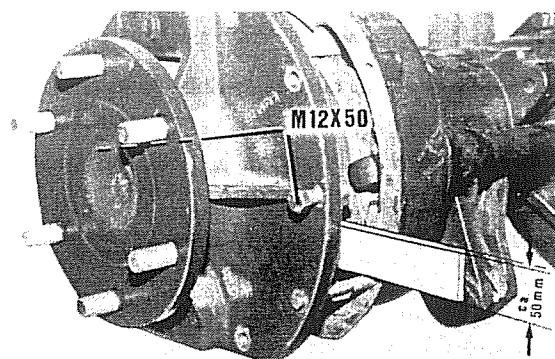




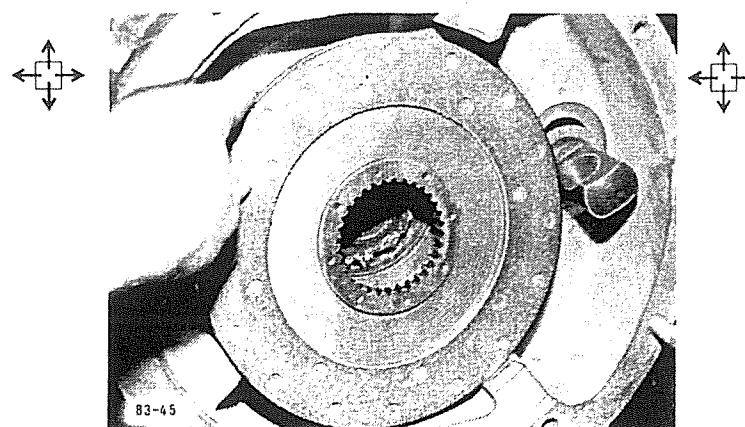
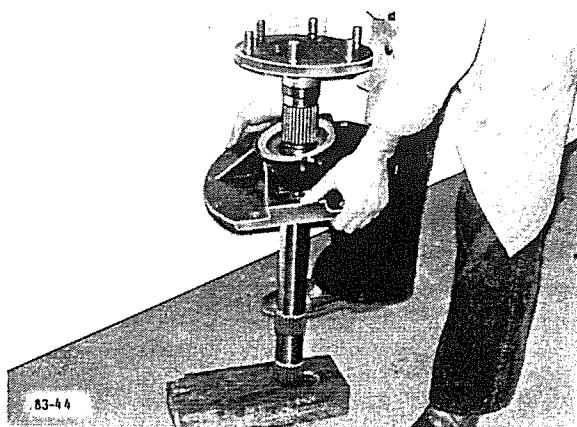
TEILDEMONTAGE DER HINTERACHSHÄLFTE (SCHEIBENBREMSE)  
 PARTIALLY DISMANTLING THE REAR HALF-AXLE (DISC BRAKE)  
 DEPOSE PARTIELLE DU DEMI-ESSIEU AR (FREIN A DISQUES)  
 DESMONTAJE PARCIAL DE SEMIEJE TRASERO (FRENO DE DISCOS)

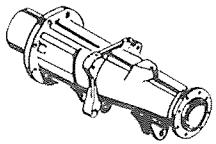


Hinterachshälfte rechts  
 Half-axle RH  
 Demi-essieu AR, côté droit  
 Semieje trasero, derecha

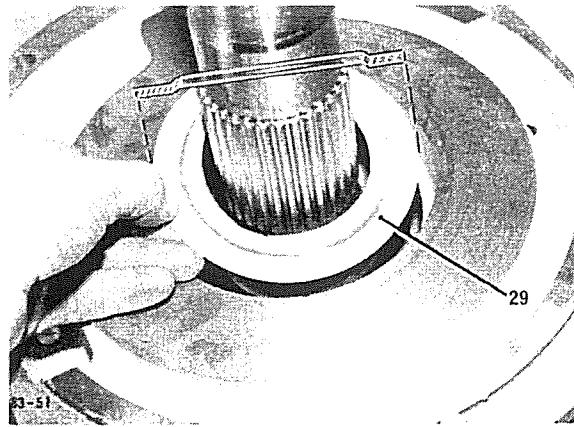
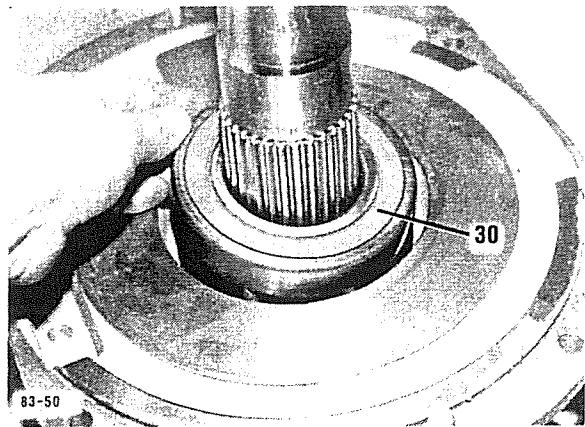
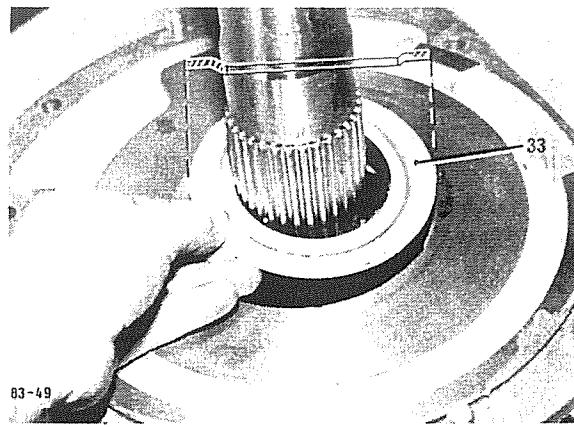
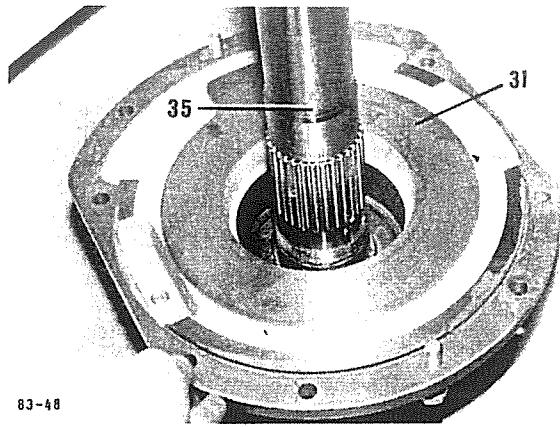
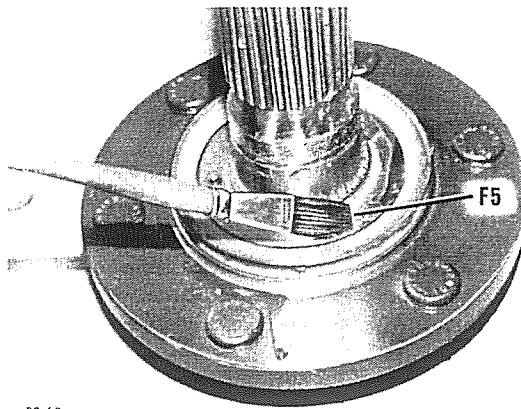
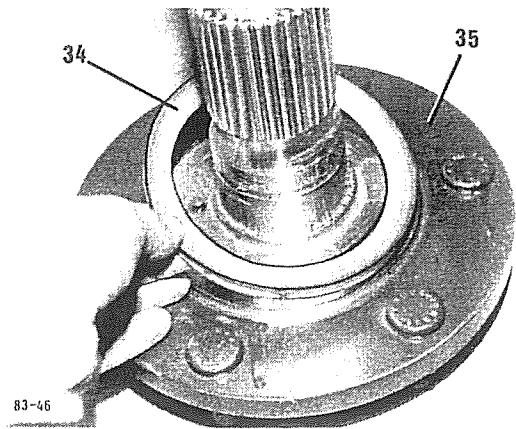


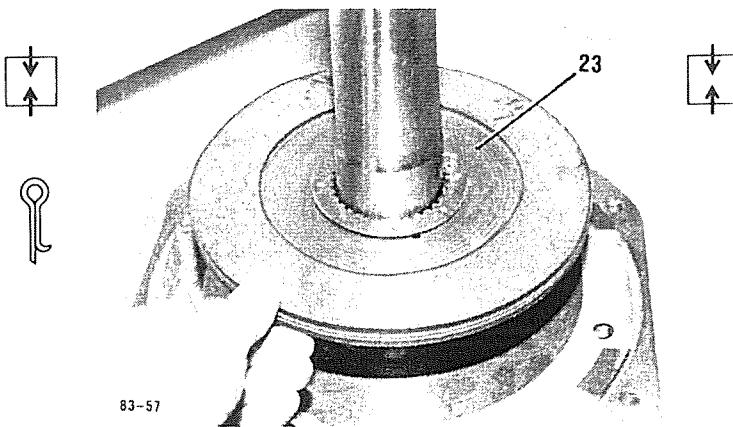
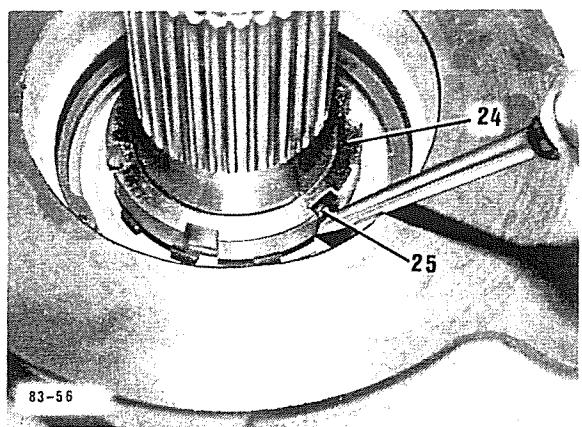
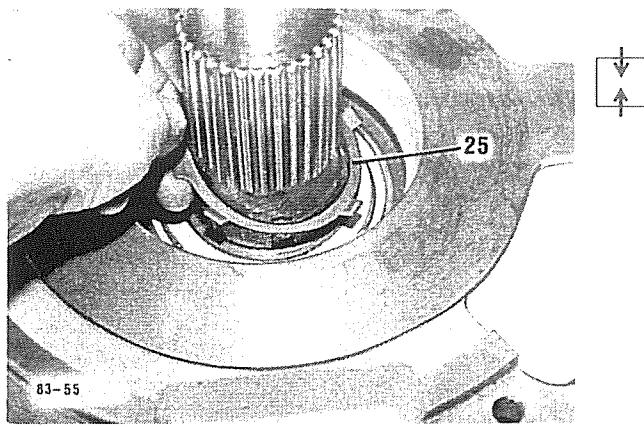
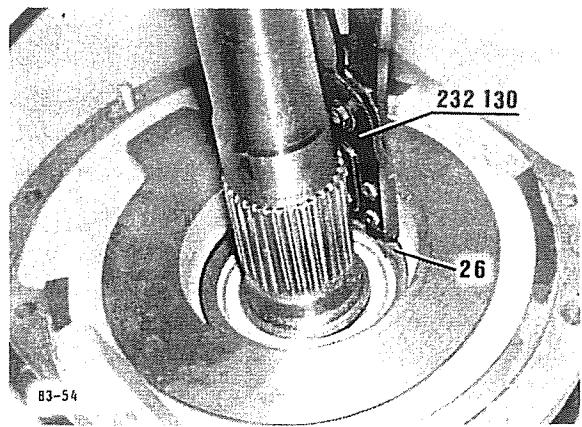
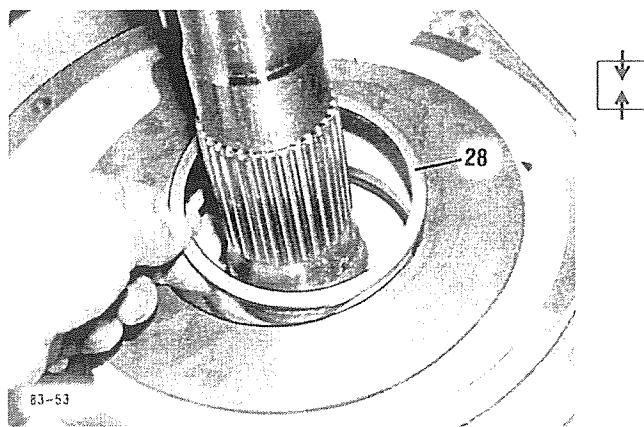
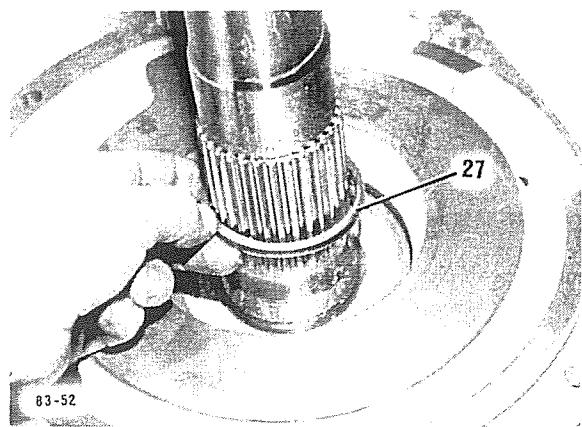
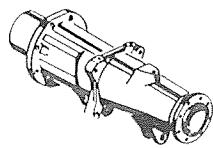
83-42



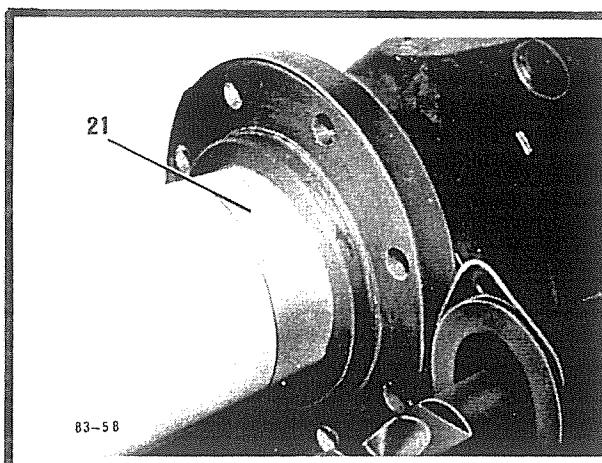
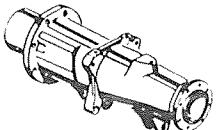


HINTERACHSHÄLFTE ZUSAMMENBAUEN (SCHEIBENBREMSE)  
REASSEMBLING REAR HALF-AXLE (DISC BRAKE)  
DEMI-ESSIEU AR: REASSEMBLAGE (FREIN A DISQUES)  
REARMAR EL SEMIEJE TRASERO (FRENO DE DISCOS)

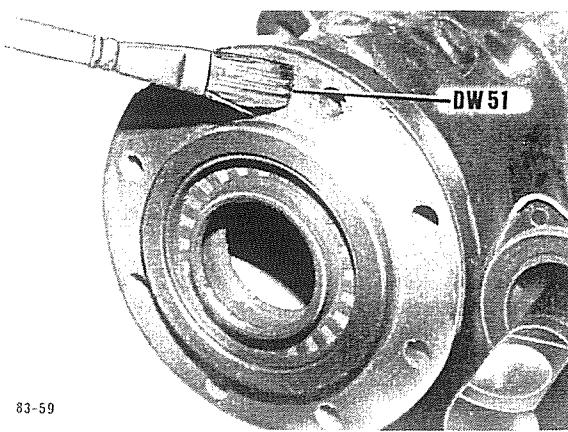




Pos. 24 festziehen  
Tighten item 24  
Serrer énergiquement pos. 24  
Apretar Pos. 24



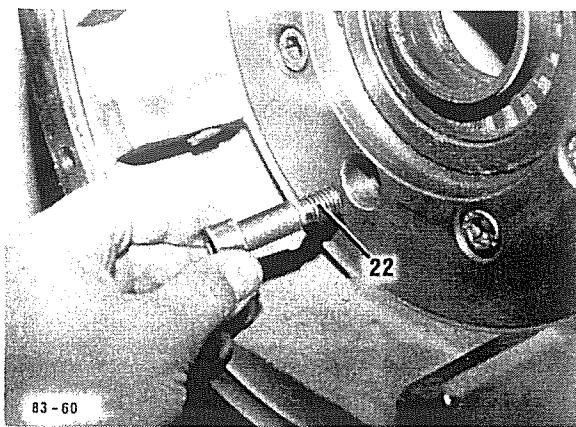
83-58



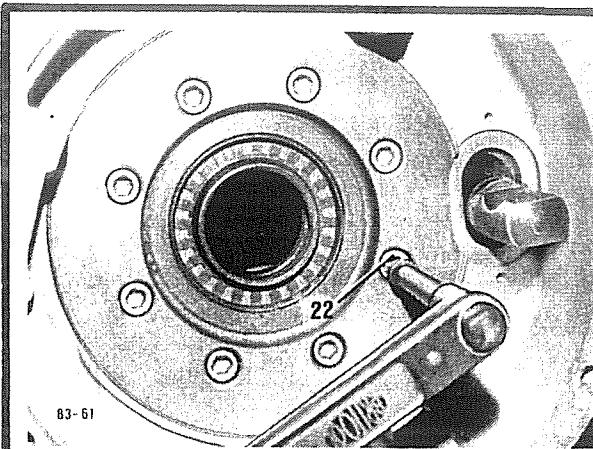
83-59



geeignetes Hilfsmittel  
suitable means  
moyen auxiliaire convenable  
medio auxiliar apropiado



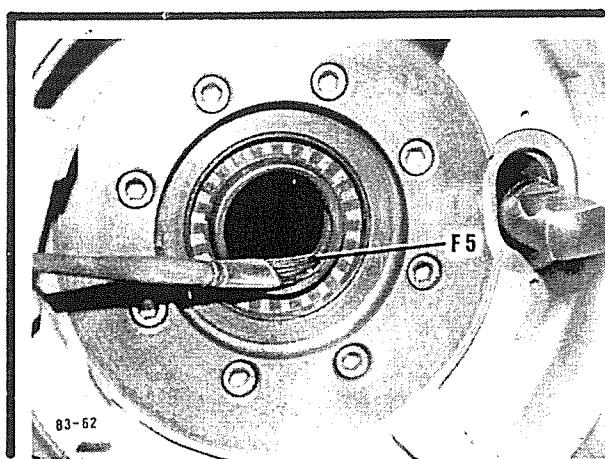
83-60



83-61

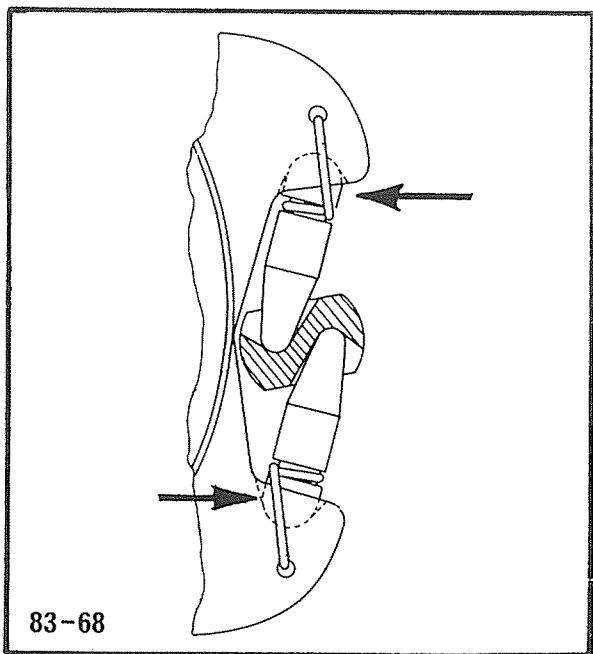
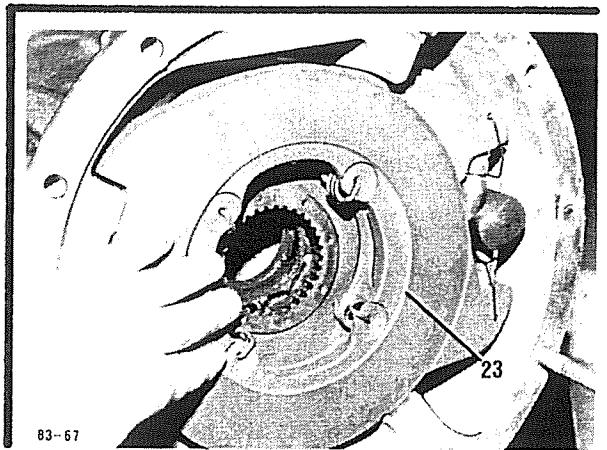
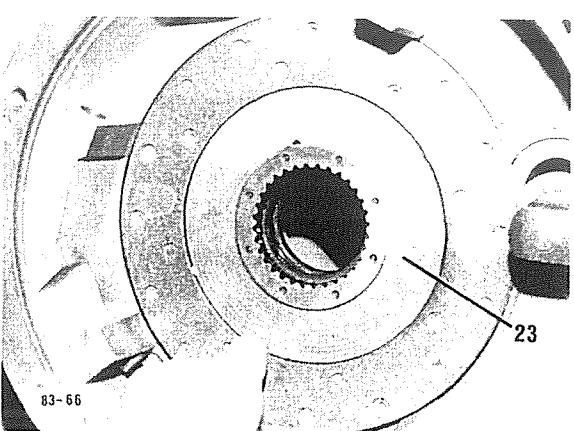
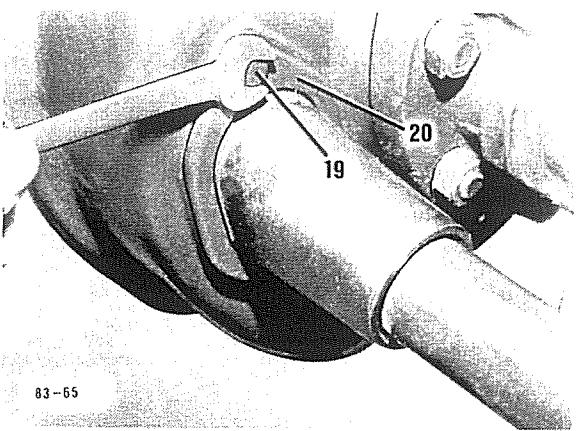
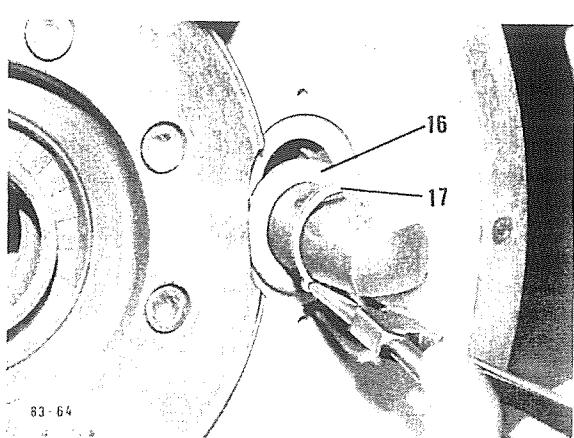
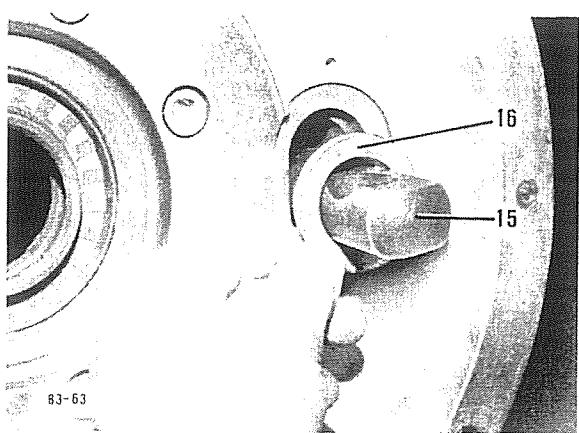
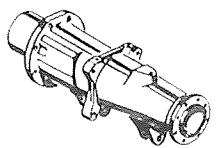


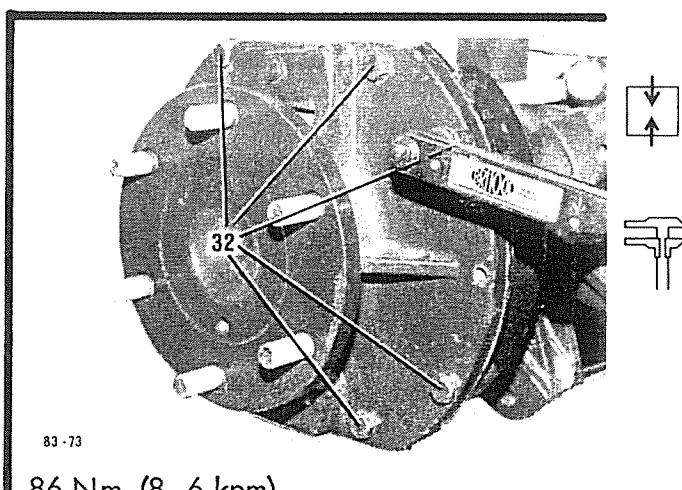
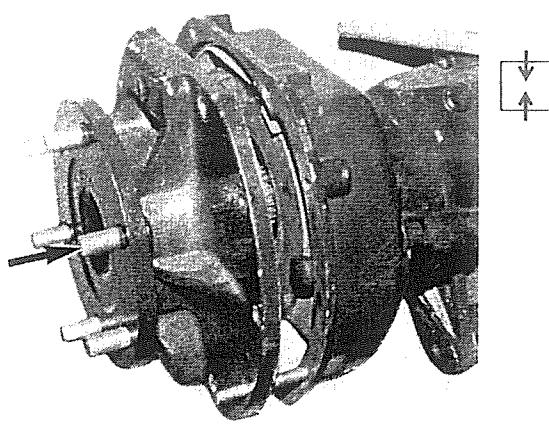
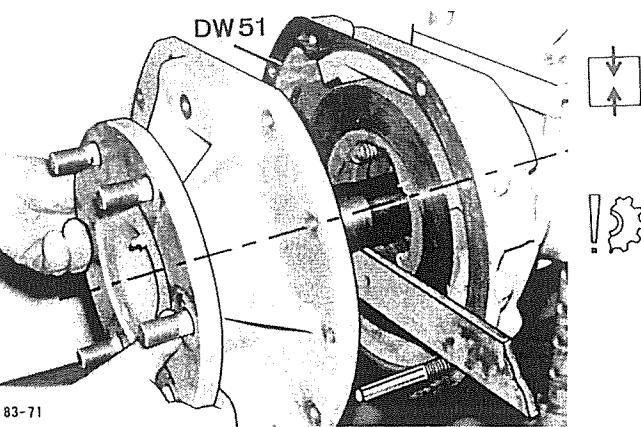
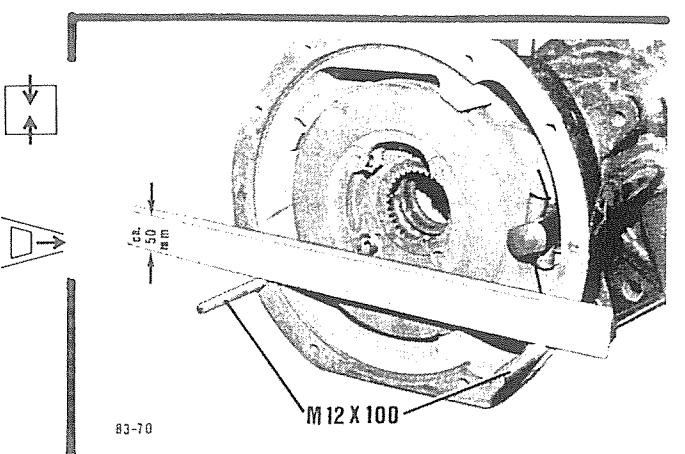
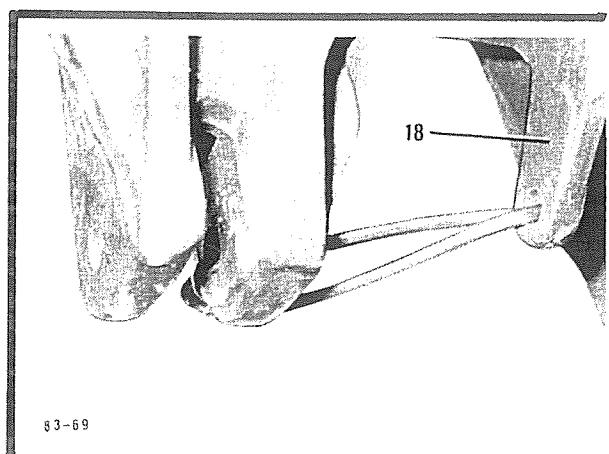
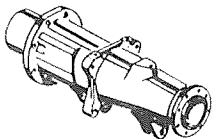
86 Nm (8,6 kpm)



83-62



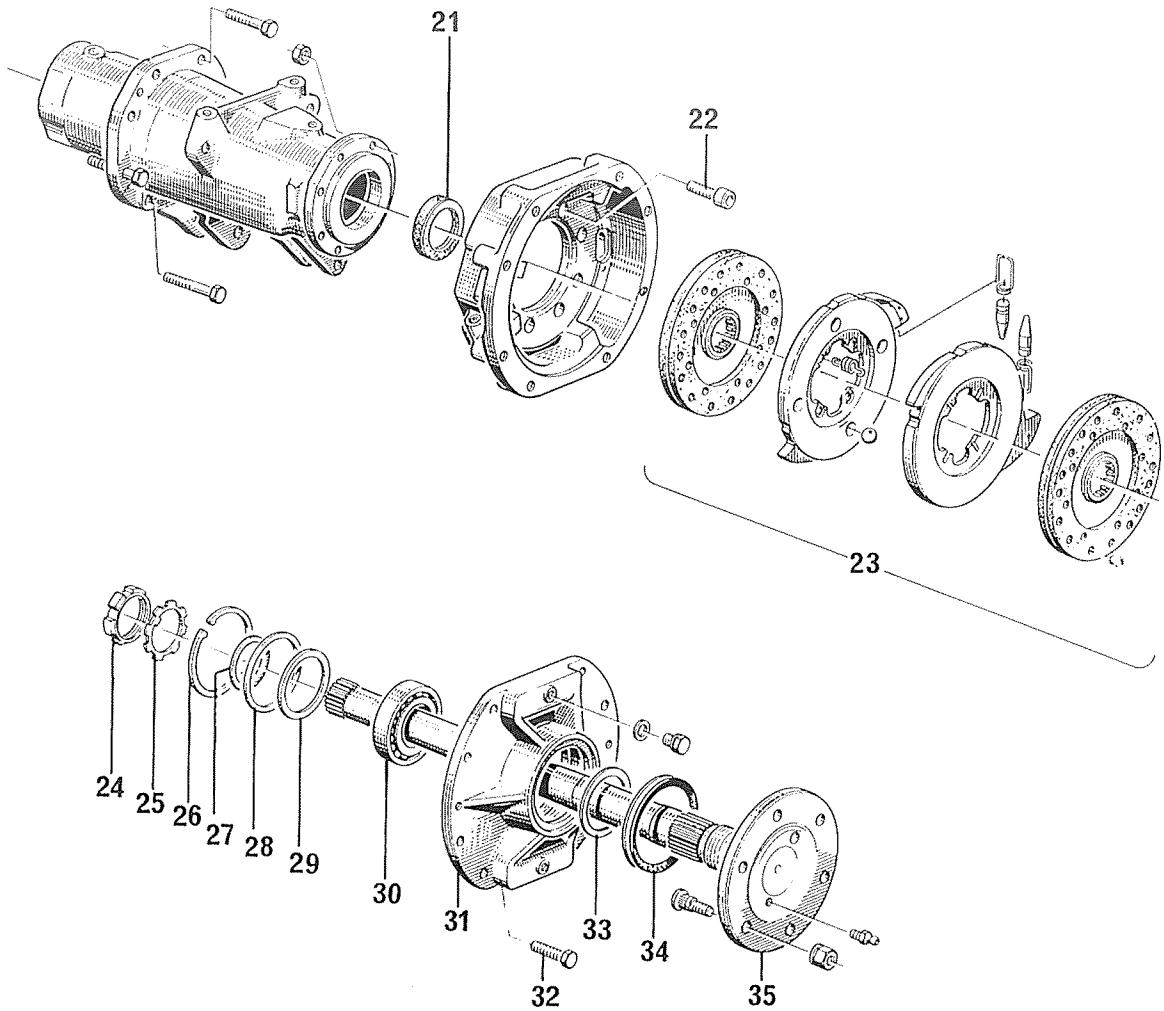
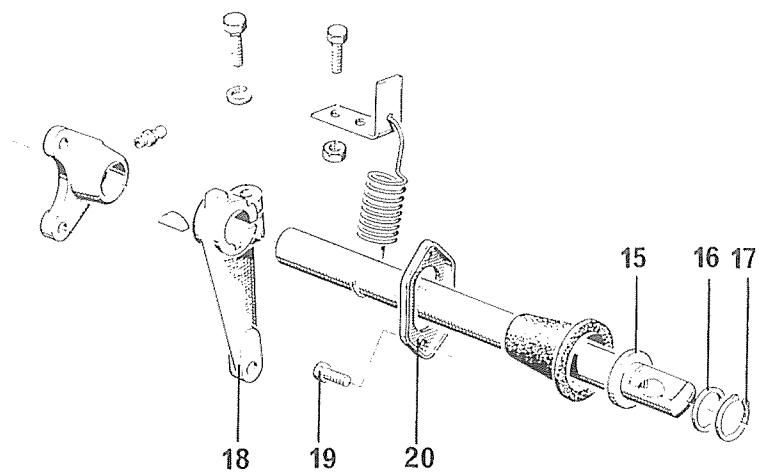
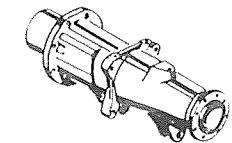




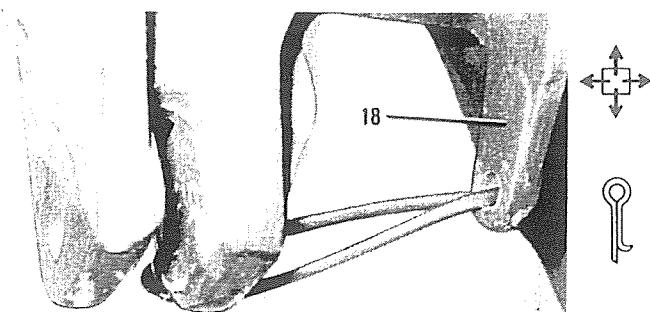
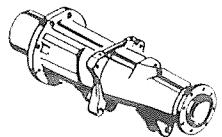
86 Nm (8,6 kpm)

- |                            |                       |
|----------------------------|-----------------------|
| 15. Welle                  | 15. Shaft             |
| 16. Scheibe                | 16. Washer            |
| 17. Sicherungsring         | 17. Circlip           |
| 18. Hebel                  | 18. Lever             |
| 19. Sechskantschraube      | 19. Hex. bolt         |
| 20. Flansch                | 20. Flange            |
| 21. Radial-wellendichtring | 21. Radial shaft seal |
| 22. Zylinderschraube       | 22. Cheese-head screw |
| 23. Bremse                 | 23. Brake             |
| 24. Nutmutter              | 24. Grooved nut       |
| 25. Sicherungsblech        | 25. Locking plate     |
| 26. Sicherungsring         | 26. Circlip           |
| 27. Abstandring            | 27. Spacer            |
| 28. Scheibe                | 28. Washer            |
| 29. Dichtring              | 29. Washer            |
| 30. Rillenkugellager       | 30. Ball bearing      |
| 31. Deckel                 | 31. Cover             |
| 32. Sechskantschraube      | 32. Hex. bolt         |
| 33. Dichtring              | 33. Washer            |
| 34. Ring                   | 34. Ring              |
| 35. Steckwelle             | 35. Half-shaft        |

- |                            |                                      |
|----------------------------|--------------------------------------|
| 15. Arbre                  | 15. Eje                              |
| 16. Rondelle               | 16. Arandela                         |
| 17. Circlip                | 17. Circlip                          |
| 18. Levier                 | 18. Palanca                          |
| 19. Vis 6 pans             | 19. Tornillo hexagonal               |
| 20. Bride                  | 20. Brida                            |
| 21. Joint d'arbre radial   | 21. Anillo de hermetiz.de eje radial |
| 22. Vis à tête cylindrique | 22. Tornillo de vaso hexagonal       |
| 23. Frein                  | 23. Freno                            |
| 24. Ecrou à chapeau        | 24. Tuerca ranurada                  |
| 25. Tôle d'arrêt           | 25. Chapa de seguridad               |
| 26. Circlips               | 26. Circlip                          |
| 27. Bague d'entretoise     | 27. Anillo distanciario              |
| 28. Rondelle               | 28. Arandela                         |
| 29. Bague-joint            | 29. Anillo de junta                  |
| 30. Roul rainure bille     | 30. Cojinete de bolas fijo           |
| 31. Couvercle              | 31. Tapa                             |
| 32. Vis 6 pans             | 32. Tornillo hexagonal               |
| 33. Bague-joint            | 33. Anillo de junta                  |
| 34. Bague                  | 34. Anillo                           |
| 35. Demi-essieu            | 35. Semieje                          |

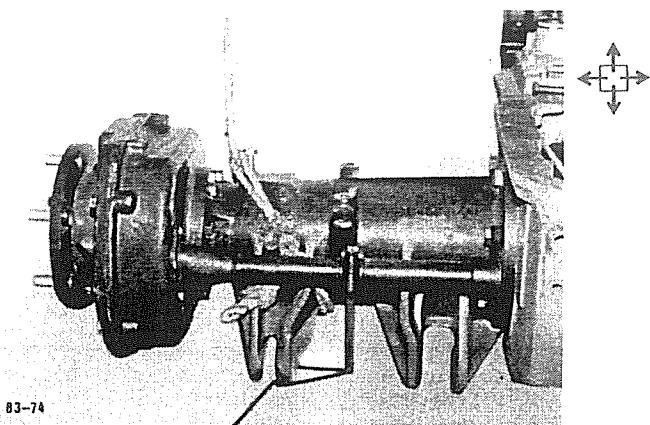


**TRAGROHR ABBAUEN**  
**REMOVING THE AXLE TUBE**  
**TROMPETTE: DEPOSER**  
**DESMONTAR LA TROMPETA DE EJE**

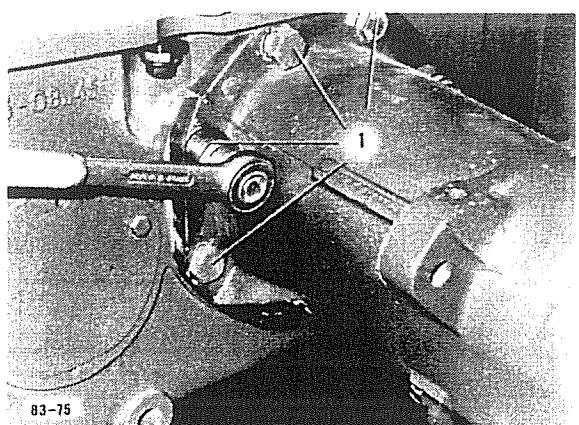


83-69

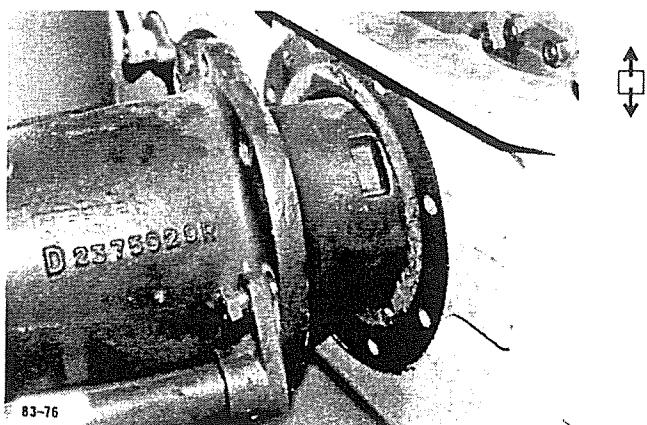
bei Ausführung Scheibenbremse  
 with disc brake  
 sur exécution frein à disques  
 en la ejecución con freno de discos



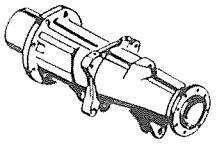
83-74



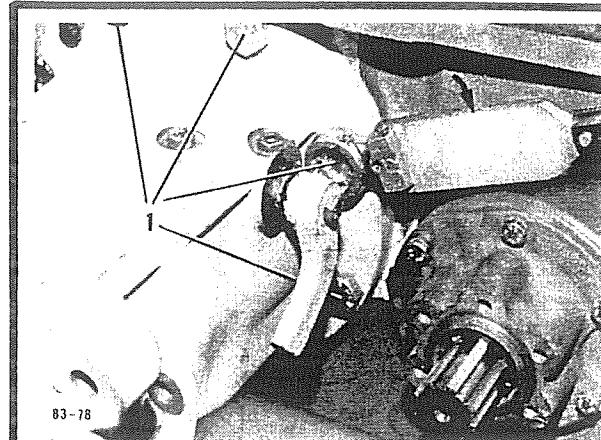
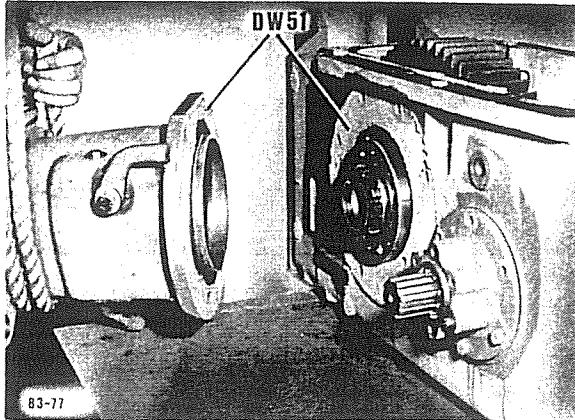
83-75



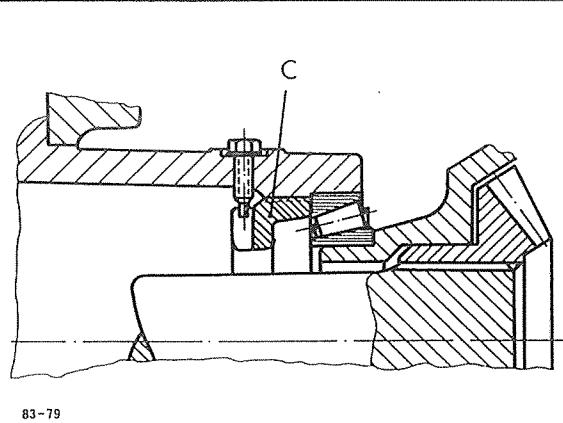
83-76



TRAGROHR ANBAUEN  
REFITTING THE AXLE TUBE  
TROMPETTE: REMONTER  
REMONTAR LA TROMPETA DE EJE



135 Nm (13,5kpm)



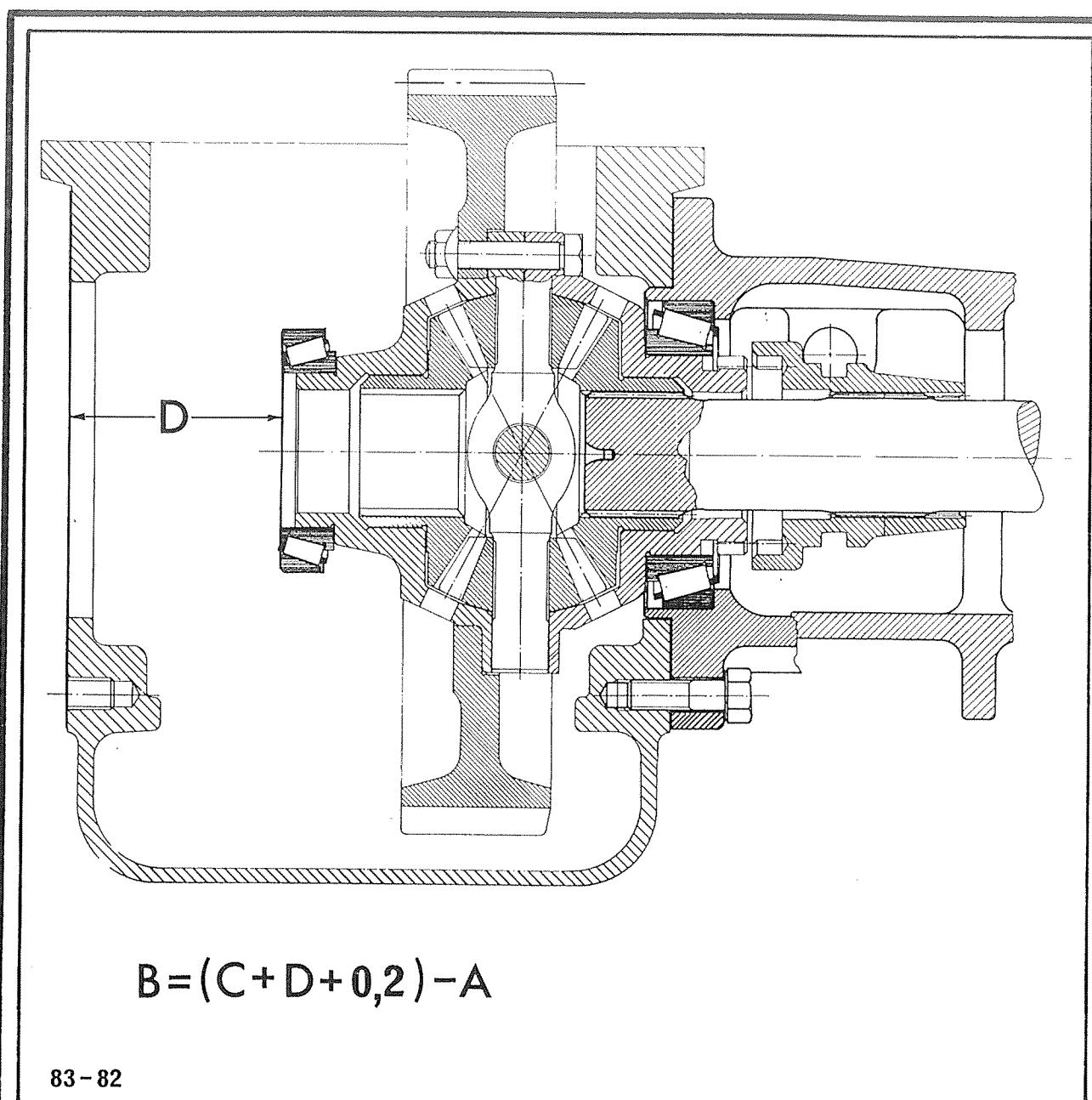
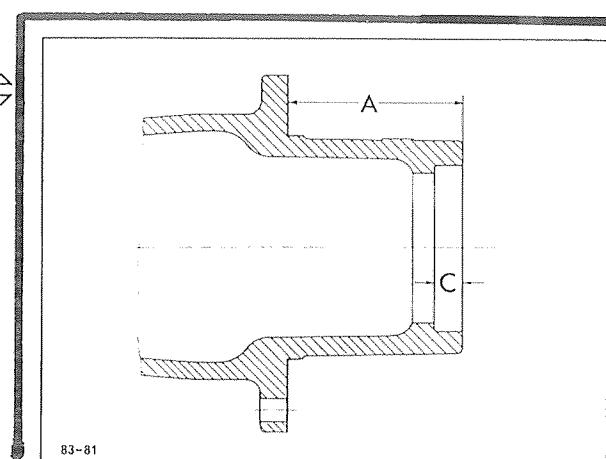
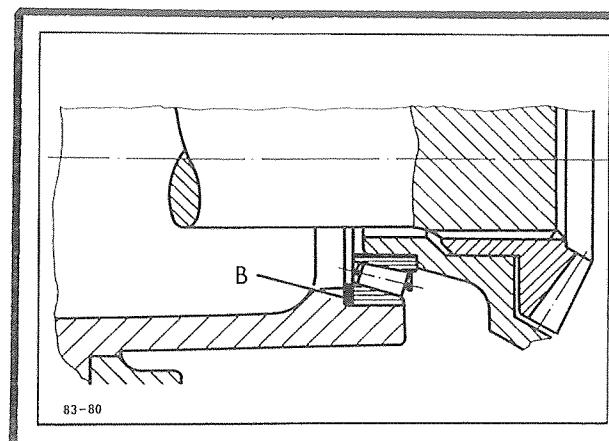
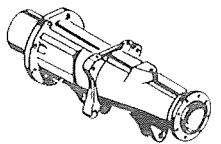
Lager mit Stellring C spielfrei einstellen, Einstellring 1 Sicherungsöffnung weiterdrehen und sichern

Set bearing free from clearance by ring C, turn ring farther through one cutout and secure

Régler le palier à l'aide de la bague de réglage de manière qu'il n'ait pas de jeu; tourner la bague de réglage de 1 (une) ouverture d'arrêt plus loin et la bloquer finalement

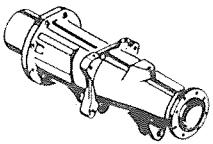
Graduar el cojinete, con el anillo de graduación C, para que quede sin juego; seguir girando el anillo de graduación por un taladro de afianzamiento más y afianzar el anillo



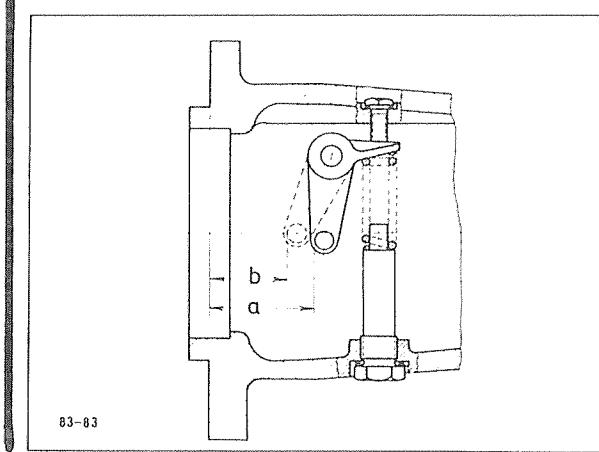


$$B = (C + D + 0,2) - A$$

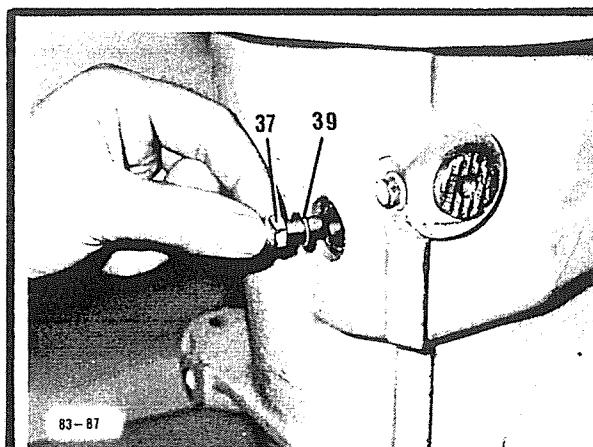
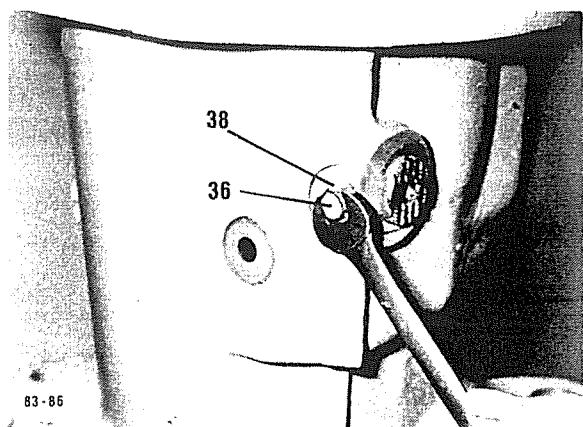
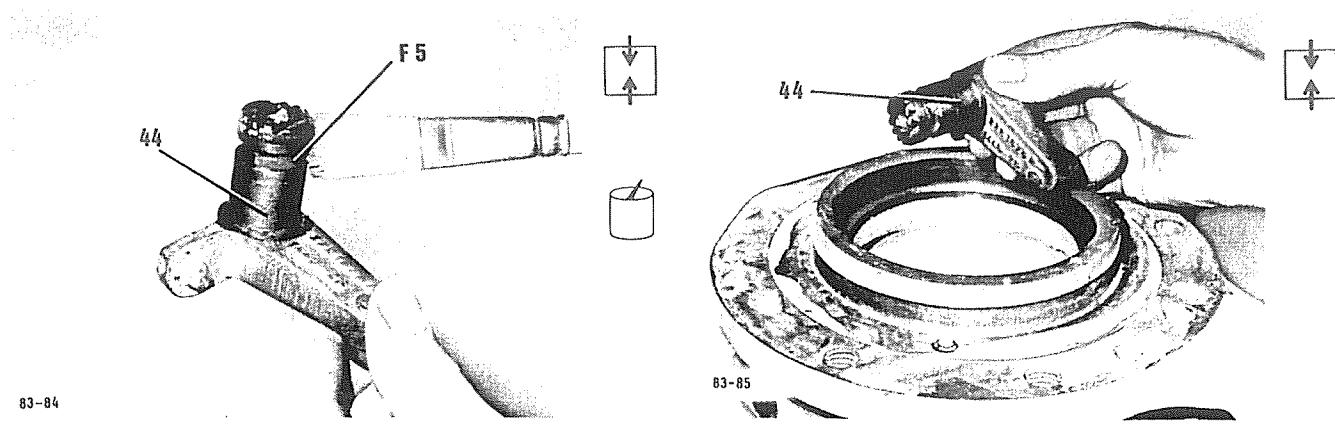
83-82



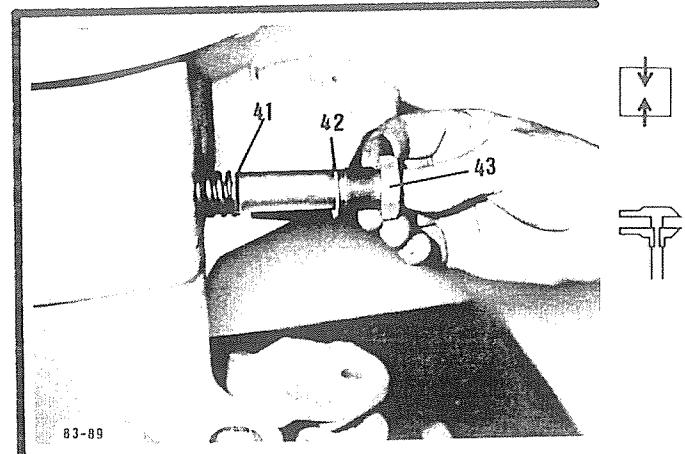
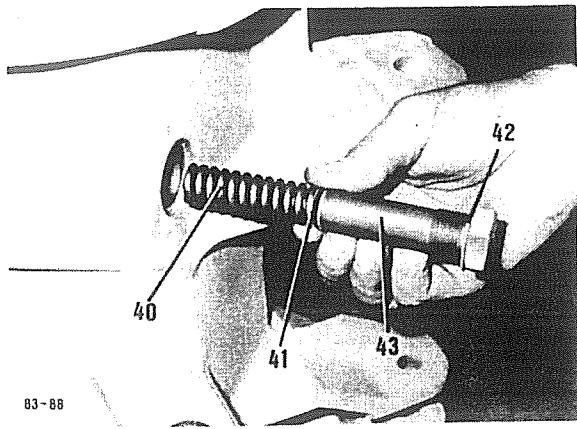
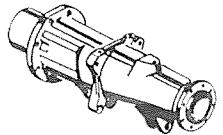
DIFFERENTIALHEBELTEILE EINBAUEN  
INSTALLING DIFF. LEVER PARTS  
MONTER LE MECANISME A LEVIER DU DIFFERENTIEL  
REMONTAR PIEZAS DE PALANCA DE DIFERENCIAL



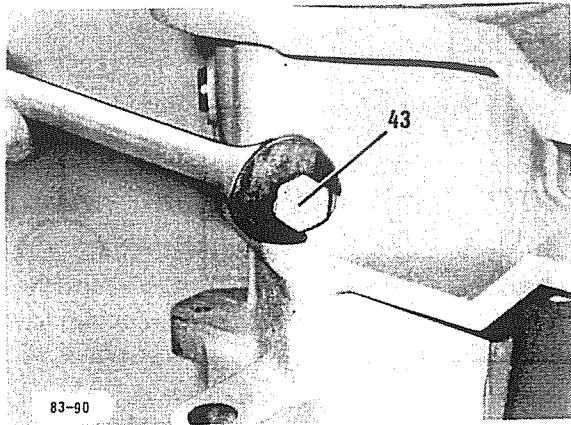
	TW 25.2 TW 35.1 TW 35.2 TW 35.4	TW 50 TW 50.1 TW 50.2 TW 50.3 TW 50.4
a	65 mm	65 mm
b	51 mm	49 mm



Maß "a" mit Pos. 37 + 39 einstellen  
Set "a" with item 37 + 39  
Régler la cote "a" moyennant le poste 37 + 39  
Graduar la medida "a" con pos. 37 + 39

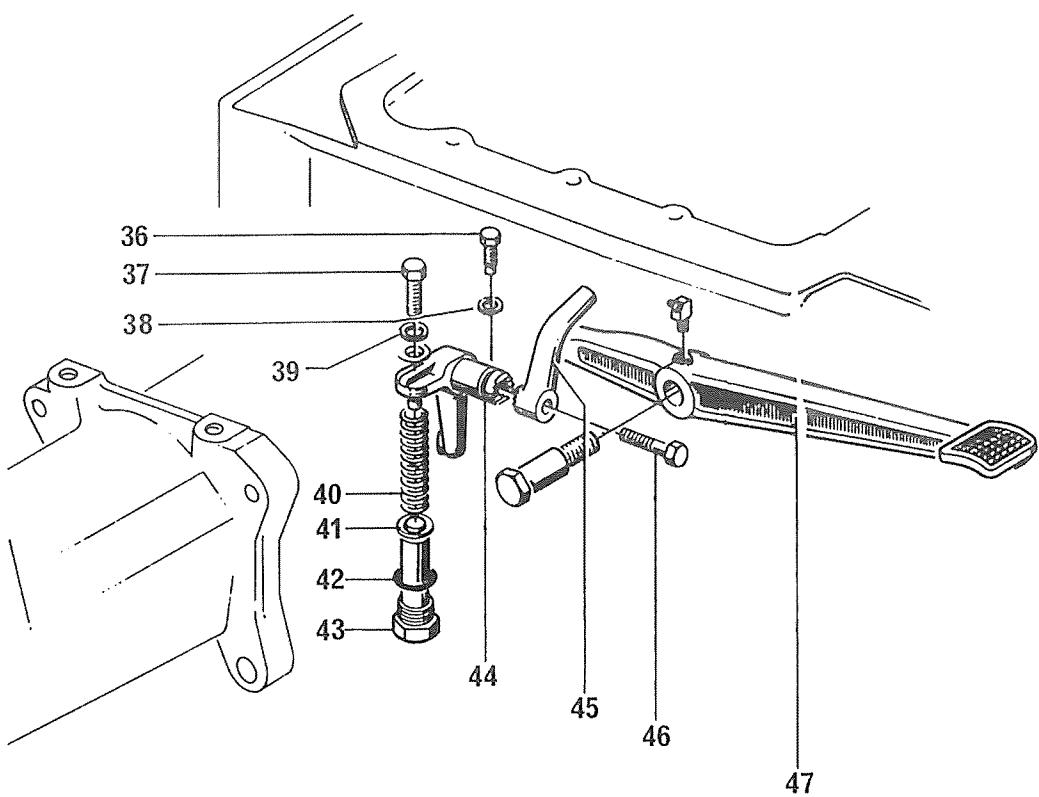
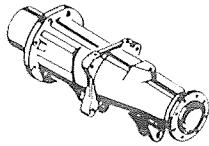


Maß "b" mit Pos. 41 + 42 einstellen  
Set "b" with item 41 + 41  
Régler la cote "b" moyennant le poste 41 + 42  
Graduar la medida "b" con pos. 41 + 42



36.	Sechskantschraube	36.	Hex. bolt
37.	Sechskantschraube	37.	Hex. bolt
38.	Dichtring	38.	Washer
39.	Dichtring	39.	Washer
40.	Schraubenfeder	40.	Spring
41.	Scheibe	41.	Washer
42.	Dichtring	42.	Washer
43.	Sechskantschraube	43.	Hex. bolt
44.	Hebel	44.	Lever
45.	Umlenkhebel	45.	Reversing lever
46.	Sechskantschraube	46.	Hex. bolt
47.	Hebel	47.	Lever

36.	Vis 6 pans	36.	Tornillo hexagonal
37.	Vis 6 pans	37.	Tornillo hexagonal
38.	Bague-joint	38.	Anillo de junta
39.	Bague joint	39.	Anillo de junta
40.	Ressort à boudin	40.	Resorte helicoidal
41.	Rondelle	41.	Arandela
42.	Bague-joint	42.	Anillo de junta
43.	Vis 6 pans	43.	Tornillo hexagonal
44.	Levier	44.	Palanca
45.	Levier de renvoi	45.	Palanca de inversión
46.	Vis 6 pans	46.	Tornillo hexagonal
47.	Levier	47.	Palanca





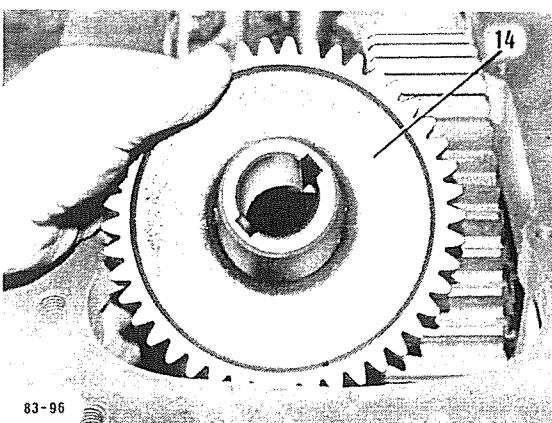
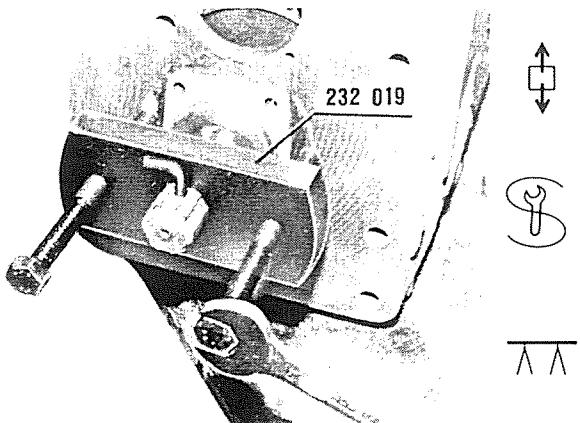
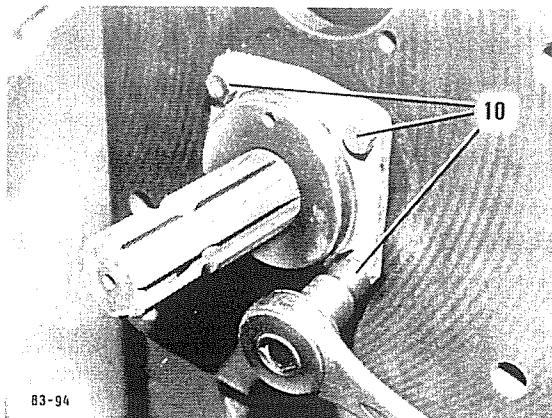
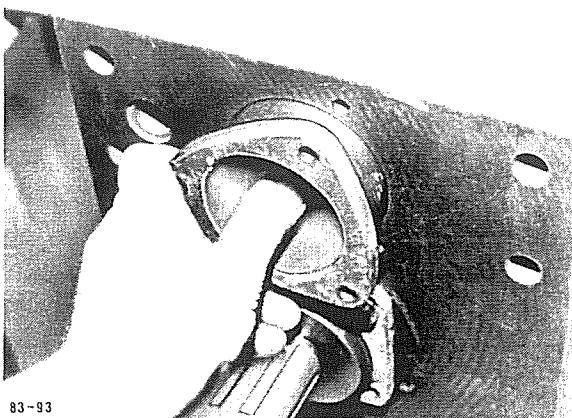
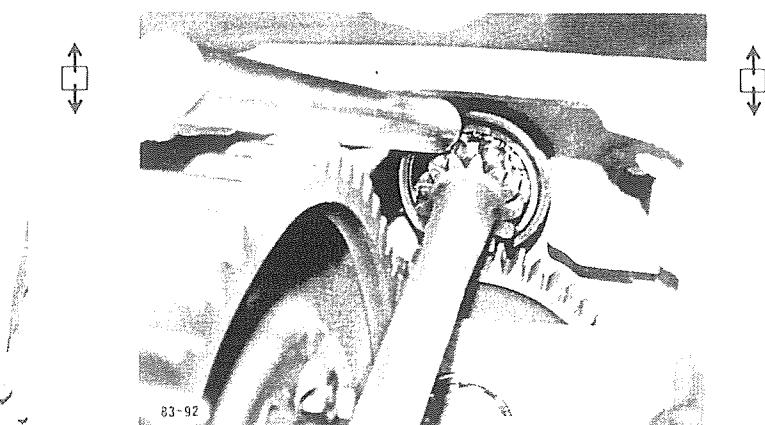
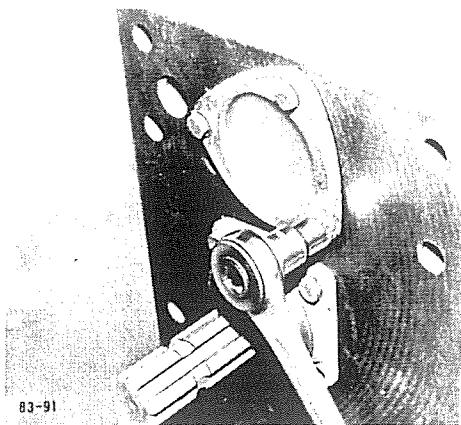
## INHALTSVERZEICHNIS

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Zapfwelle ausbauen (Duo)	8
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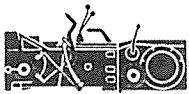
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ZAPFWELLE AUSBAUEN (Standard)  
 REMOVING THE PTO-SHAFT (standard)  
 PRISE DE FORCE: DEPOSER (standard)  
 DESMONTAR EL EJE TOMA DE FUERZA (standard)

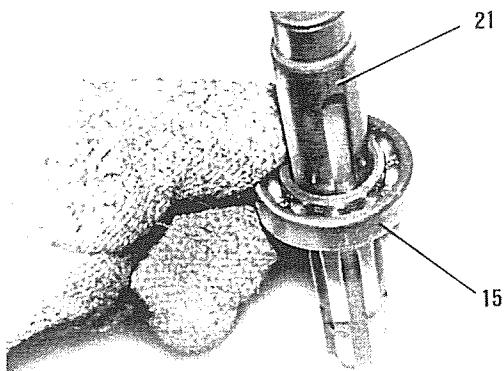


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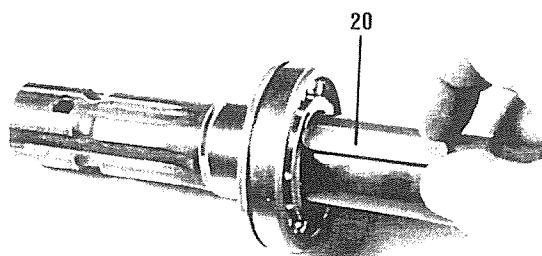
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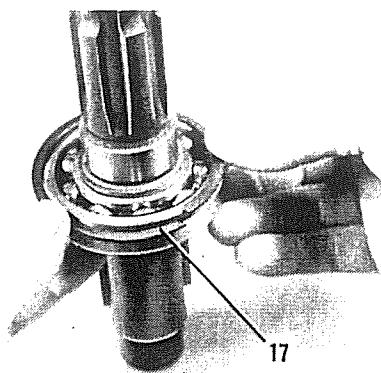
ZAPFWELLE EINBAUEN  
REFITTING THE PTO-SHAFT  
PRISE DE FORCE: REMONTER  
REMONTAR EL EJE TOMA DE FUERZA



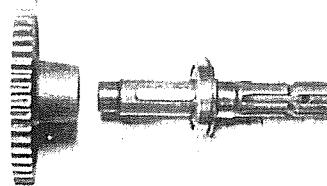
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83-98



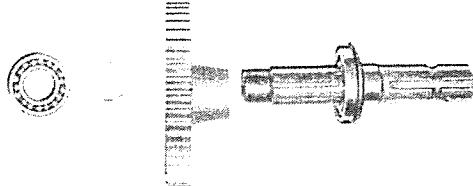
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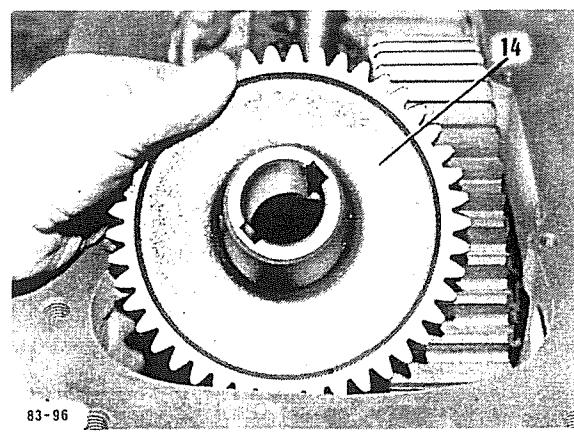
A

83-100

Ausführung A  
Type A  
Version A  
Ejecución A



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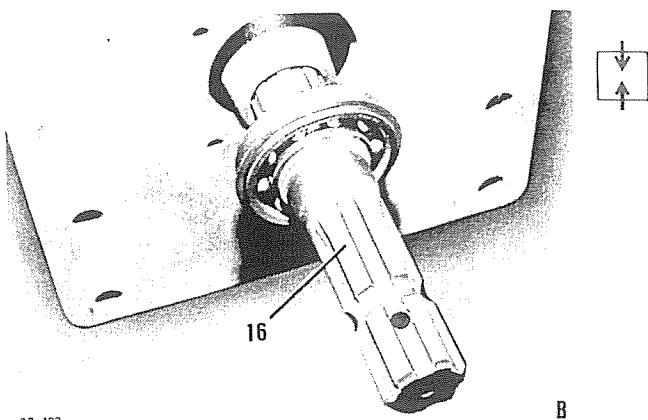
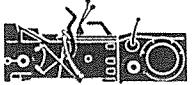
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B

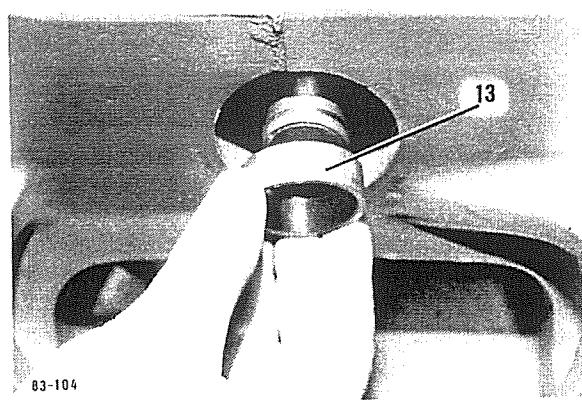
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Type B  
Version B  
Ejecución B

4

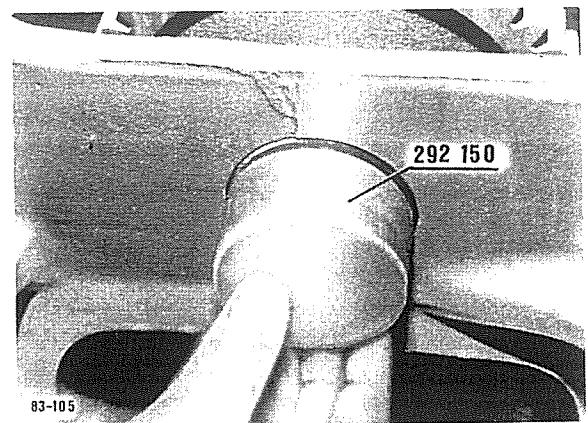


B

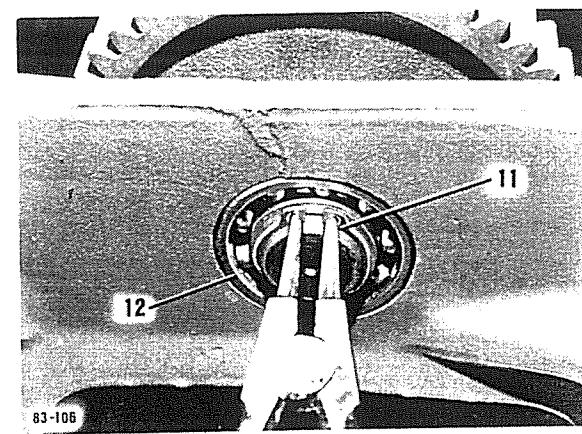
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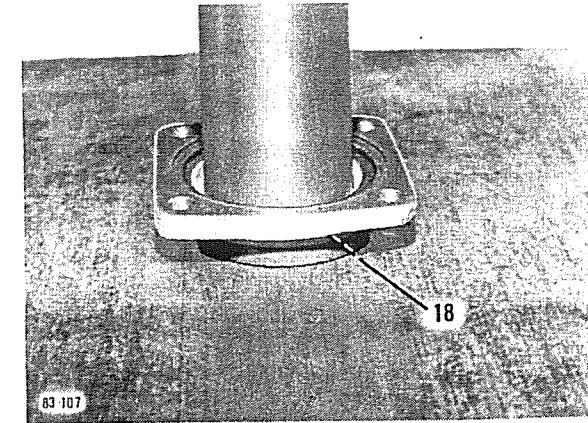
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83-105

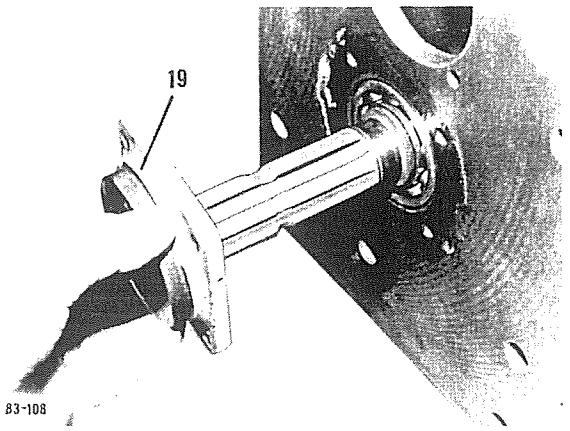
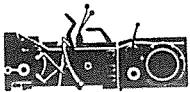


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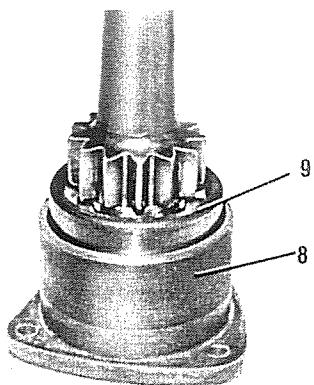
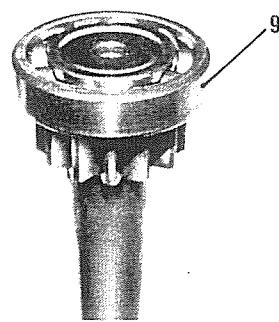




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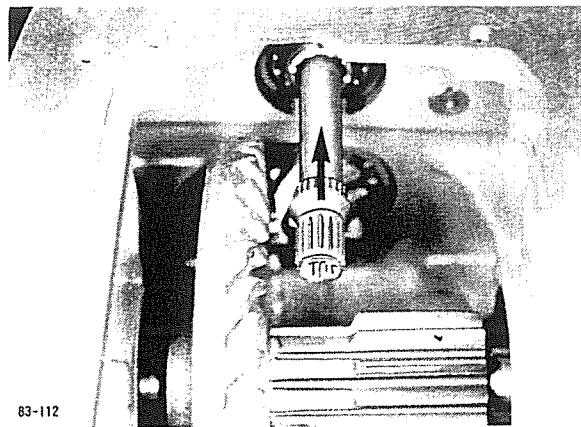
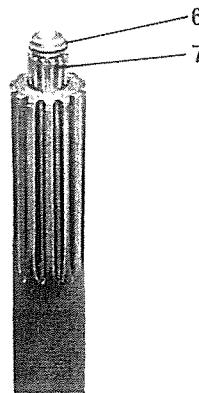
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83-110



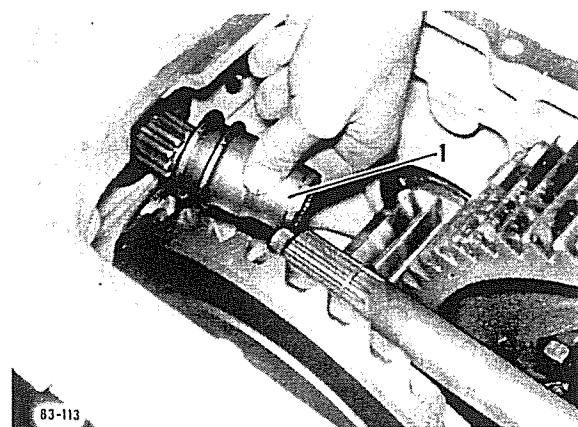
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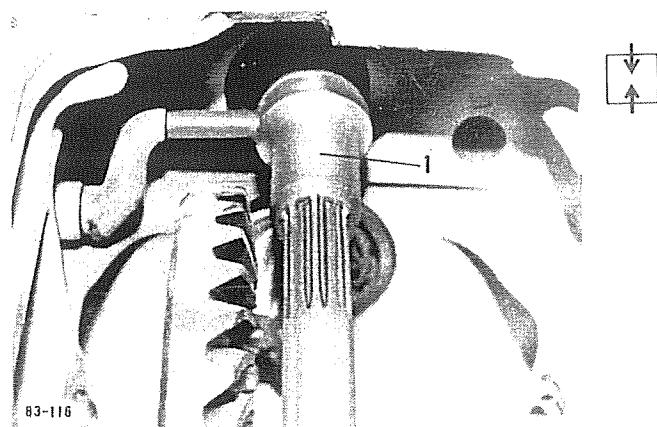
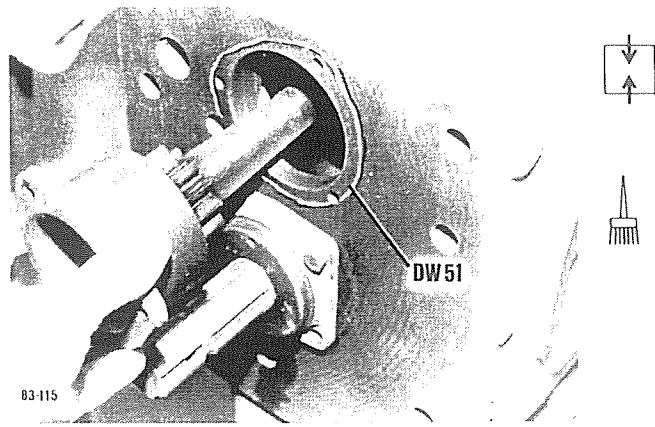
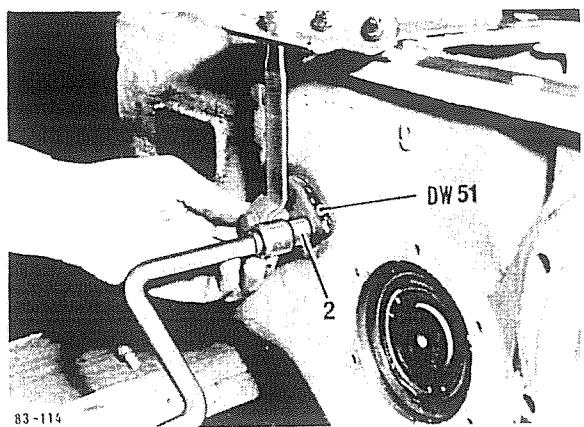
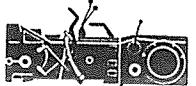


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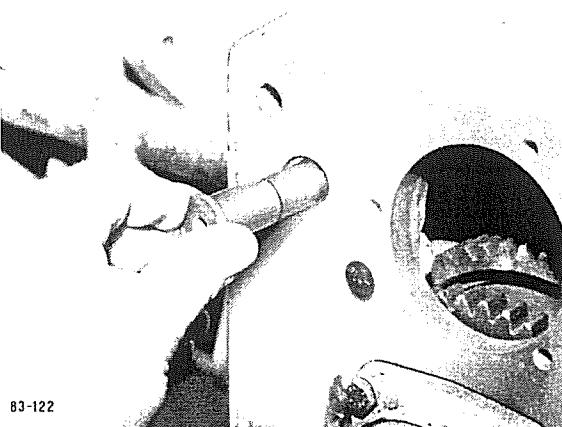
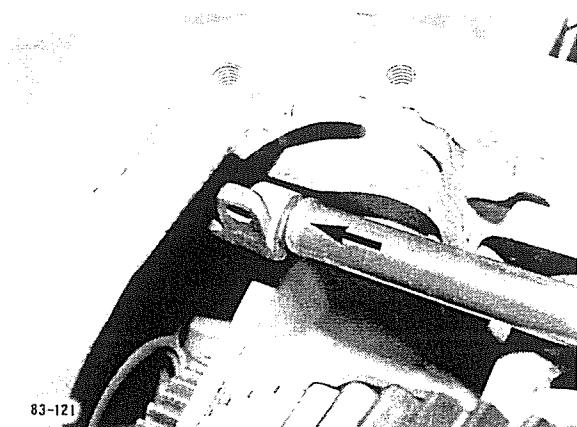
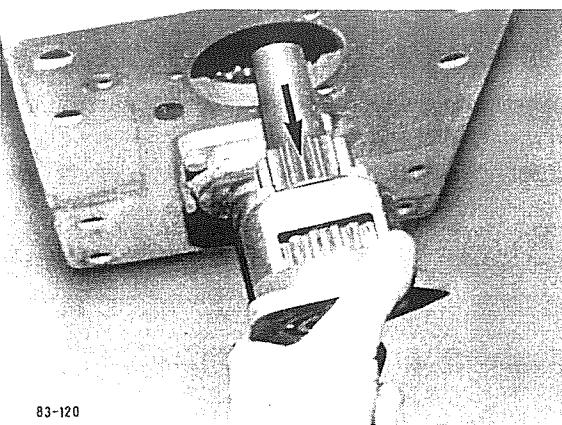
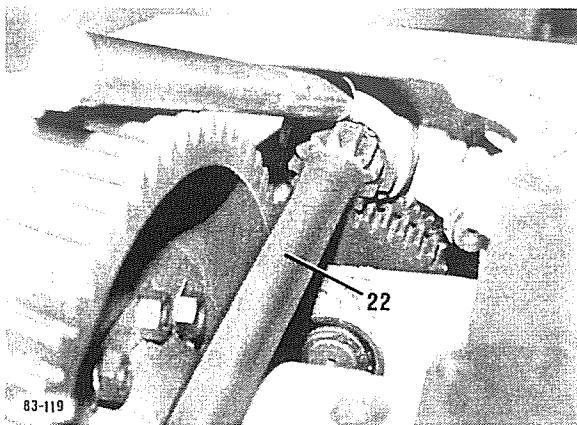
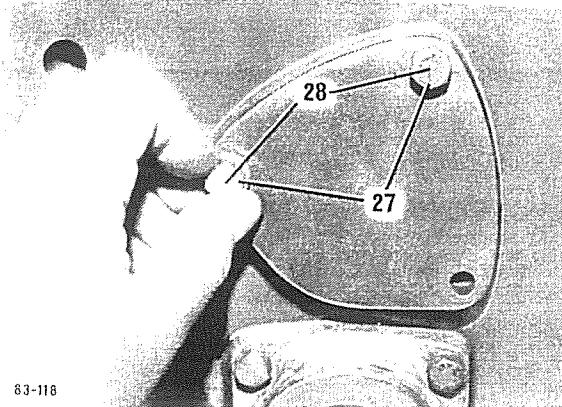
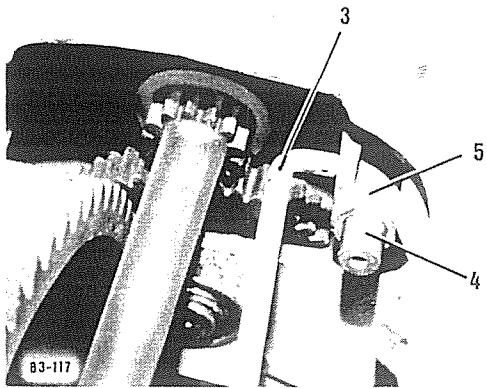
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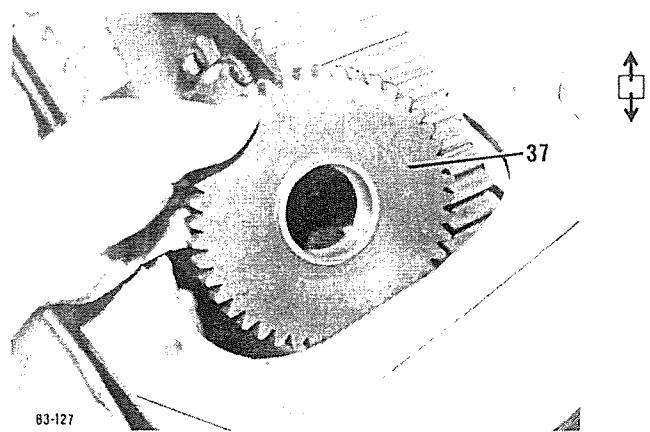
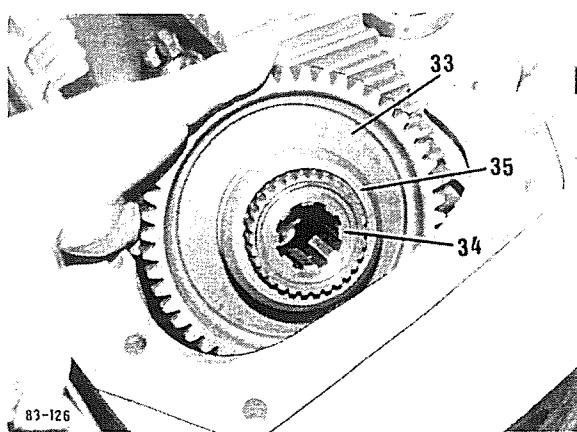
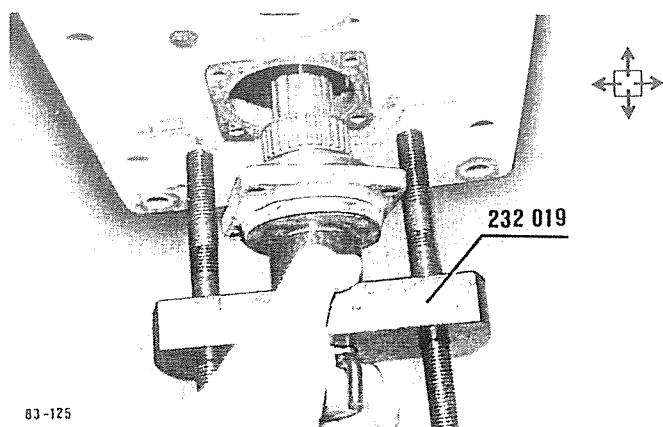
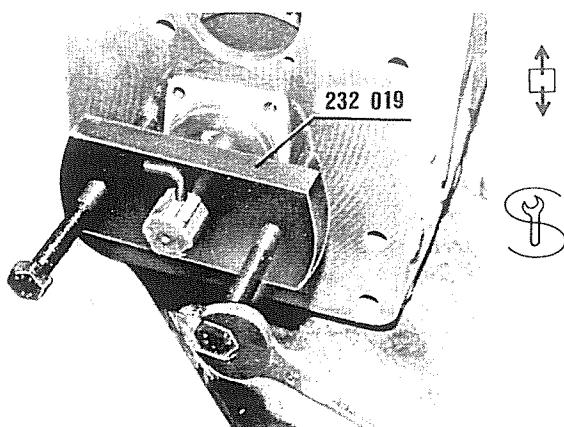
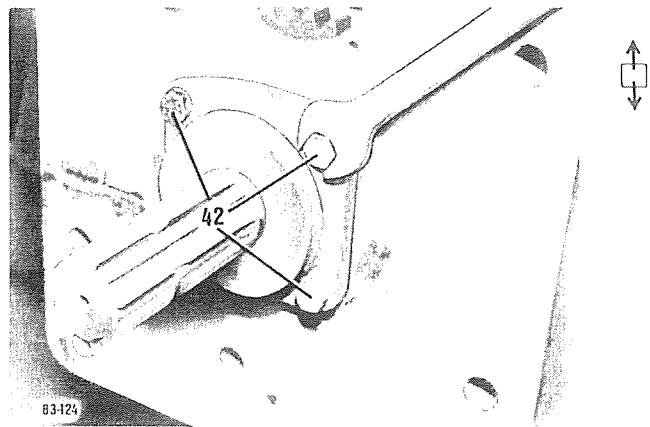
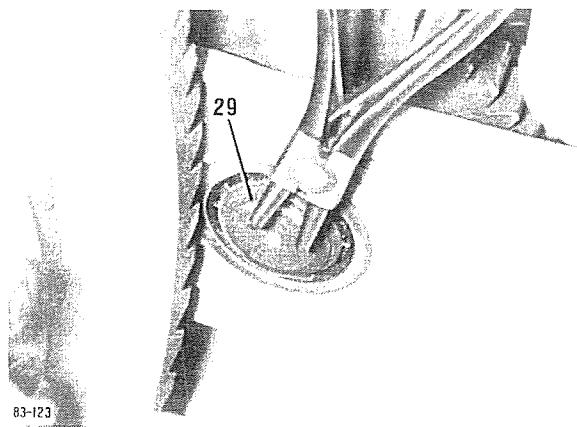
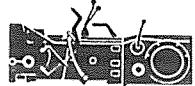


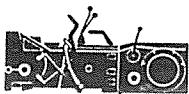




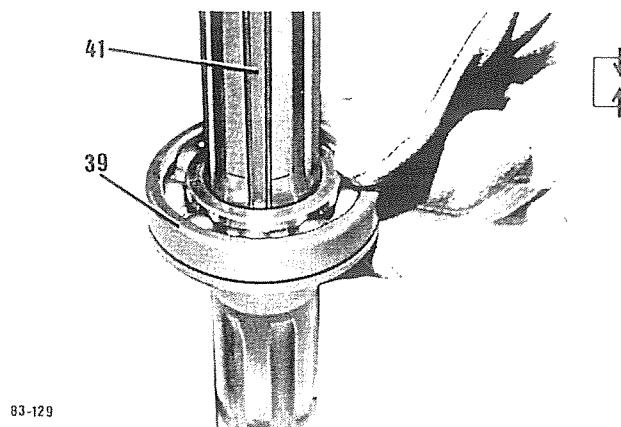
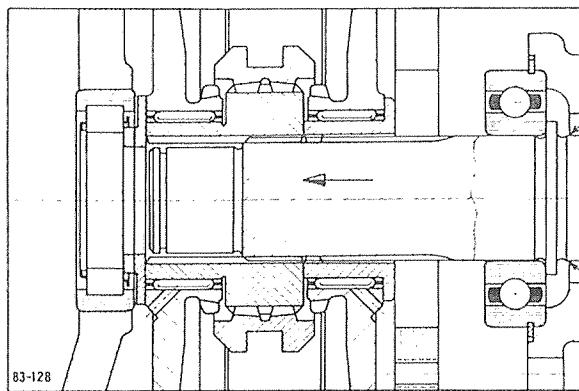
ZAPFWELLE AUSBAUEN (DUO)  
REMOVING THE TWO-SPEED PTO-SHAFT  
PRISE DE FORCE: DEPOSER (A DEUX REGIMES)  
DESMONTAR EL EJE TOMA DE FUERZA (duo)



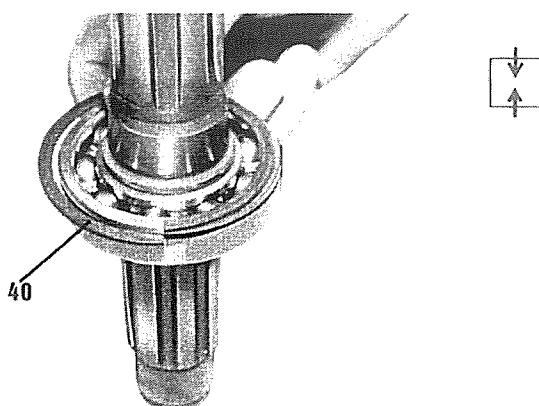




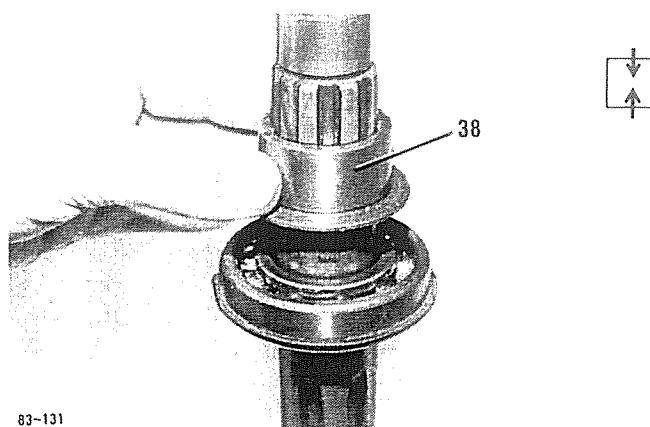
DUO-ZAPFWELLE EINBAUEN  
REFITTING THE TWO-SPEED PTO-SHAFT  
PRISE DE FORCE A DEUX REGIMES: REMONTER  
REMONTAR EL EJE TOMA DE FUERZA (duo)



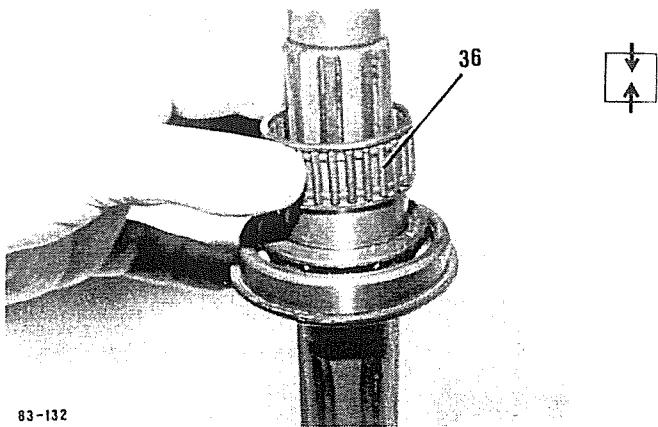
83-129



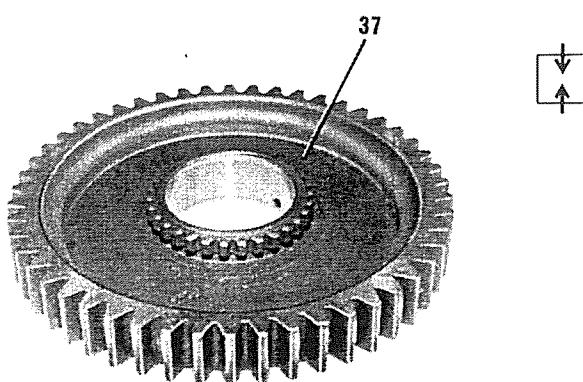
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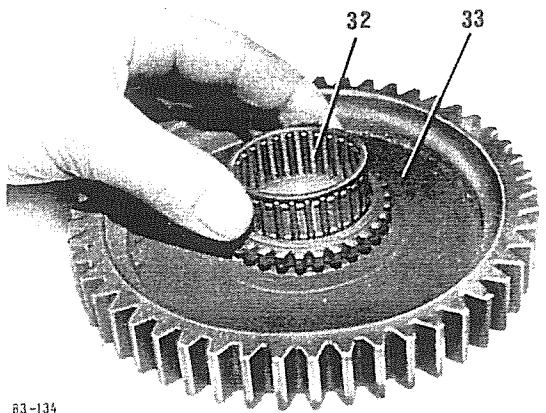
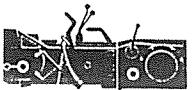


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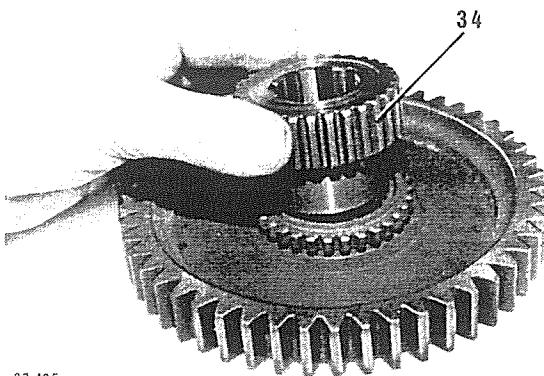


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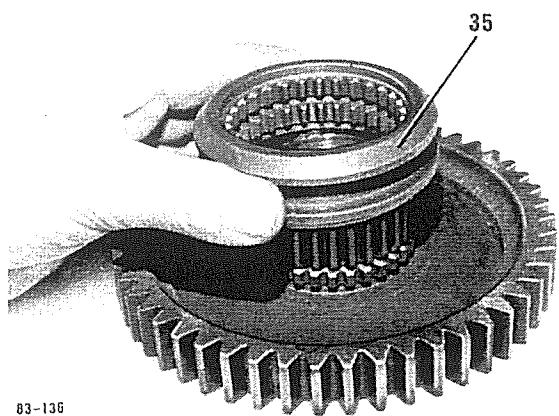




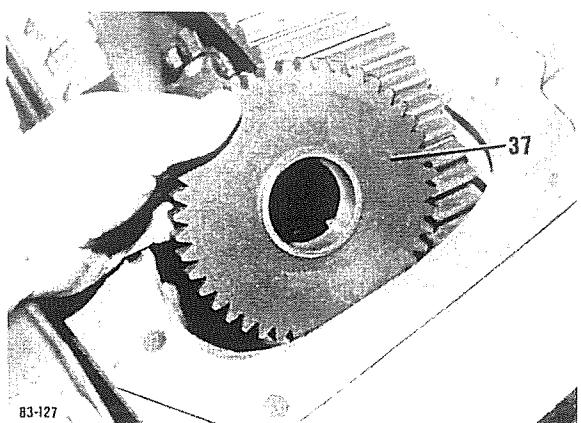
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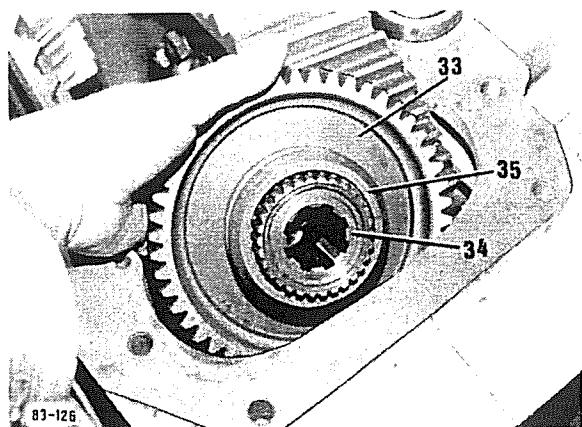
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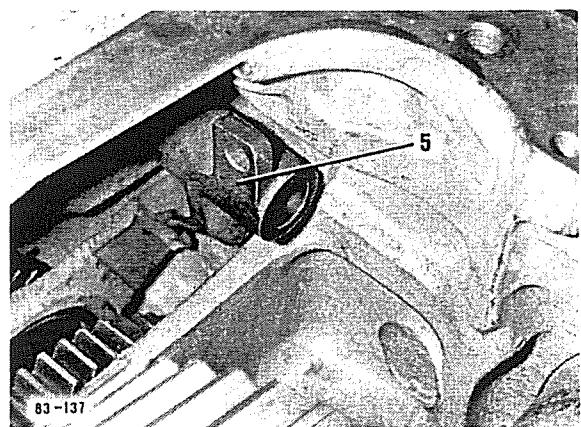
83-136



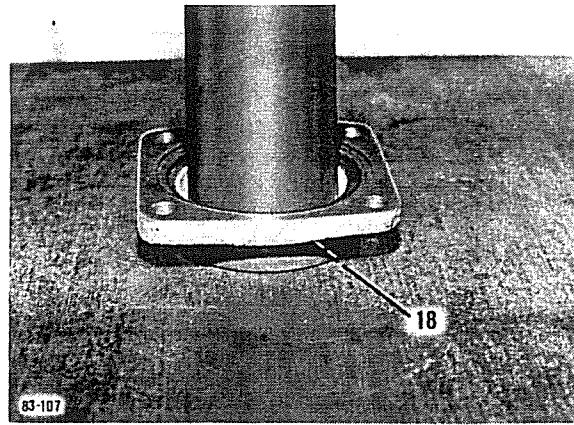
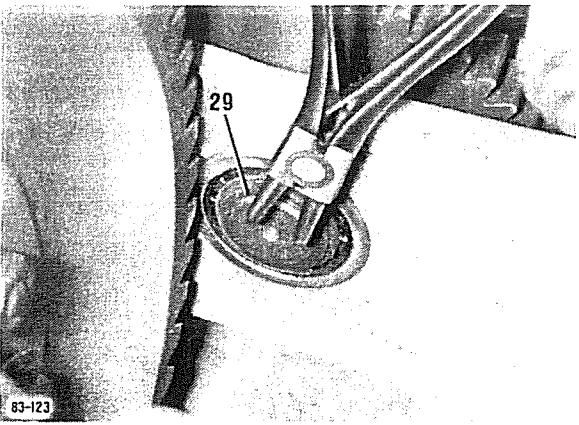
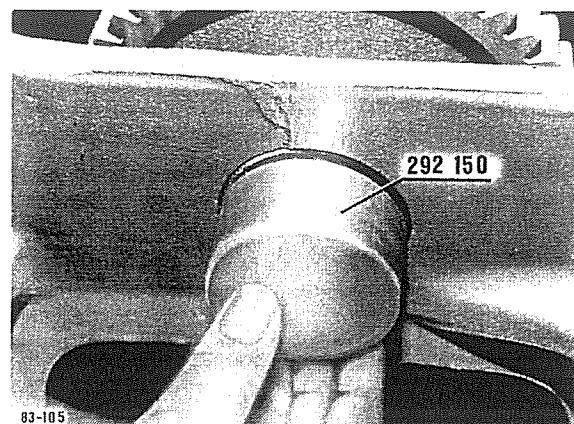
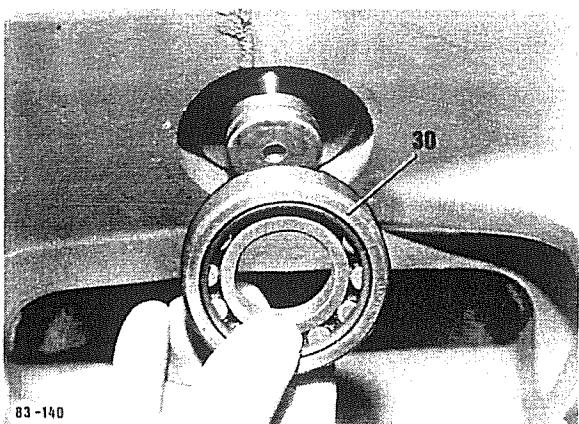
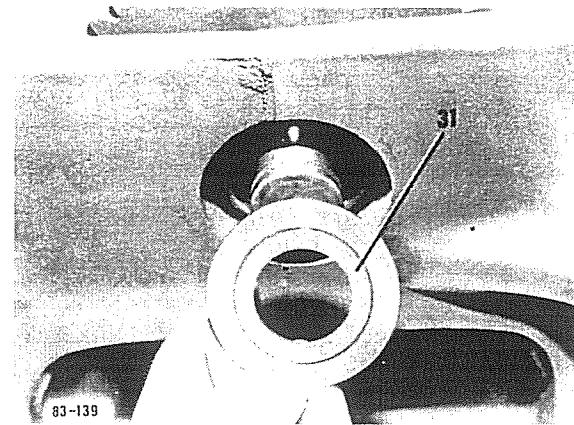
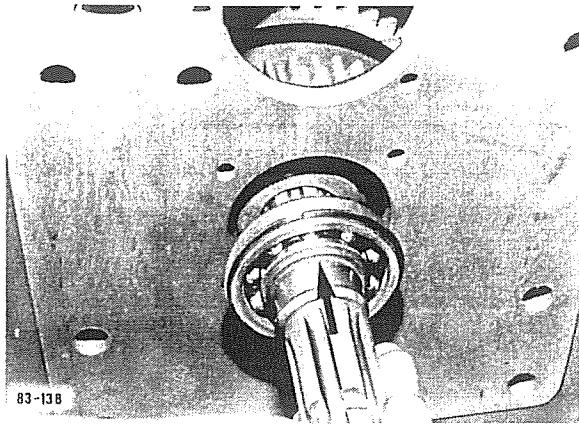
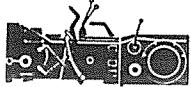
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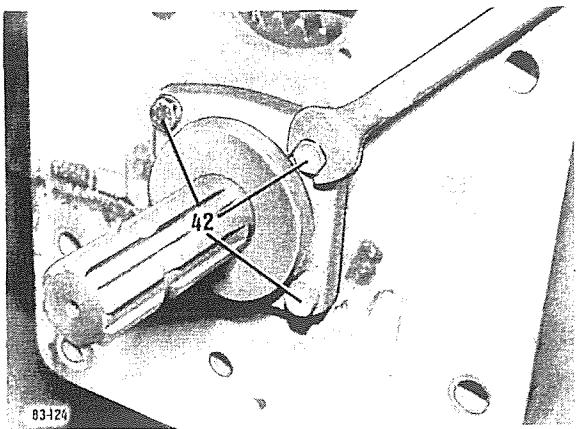
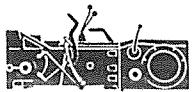


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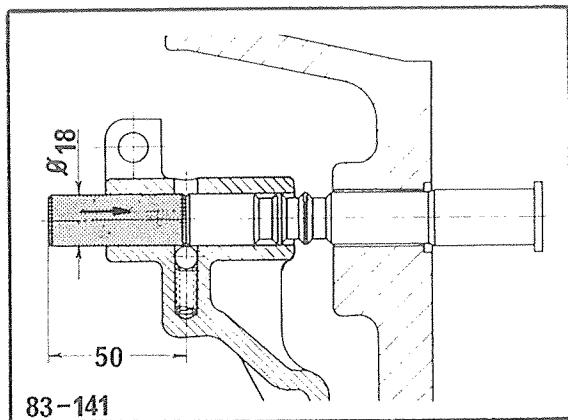


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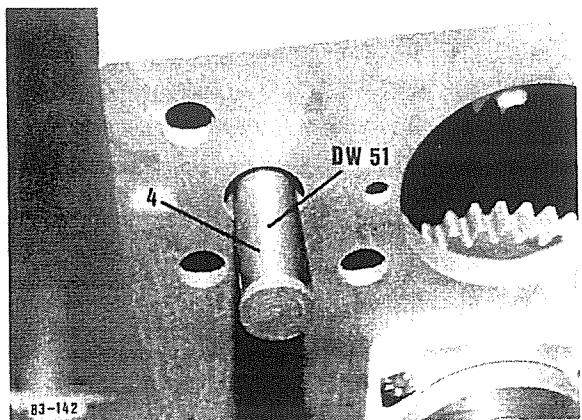




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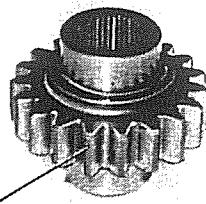
Hilfswerkzeug  
Auxiliary tool  
Outil auxiliaire  
Herramienta auxiliar



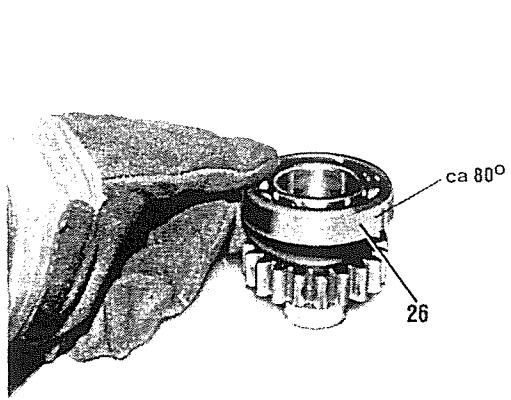
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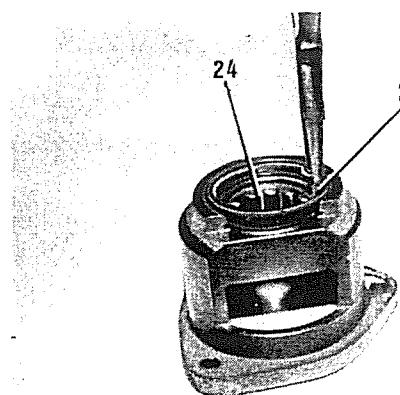
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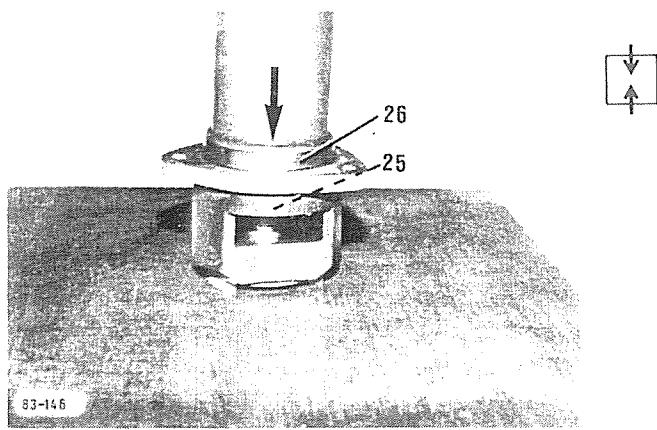
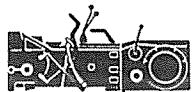


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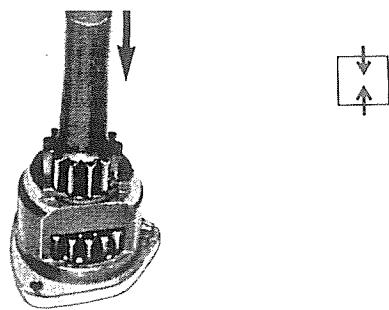


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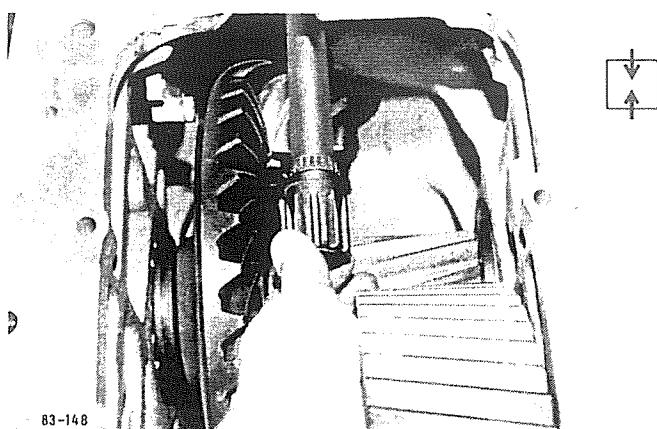




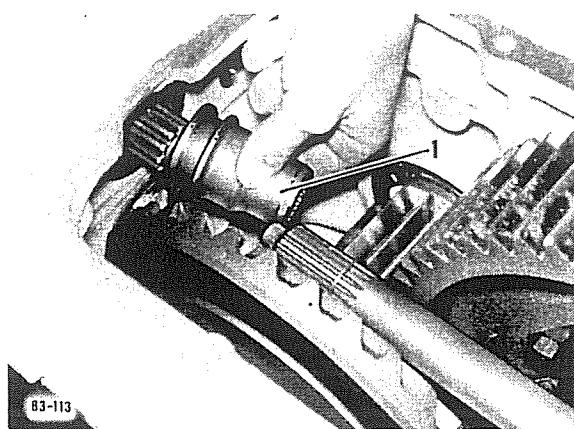
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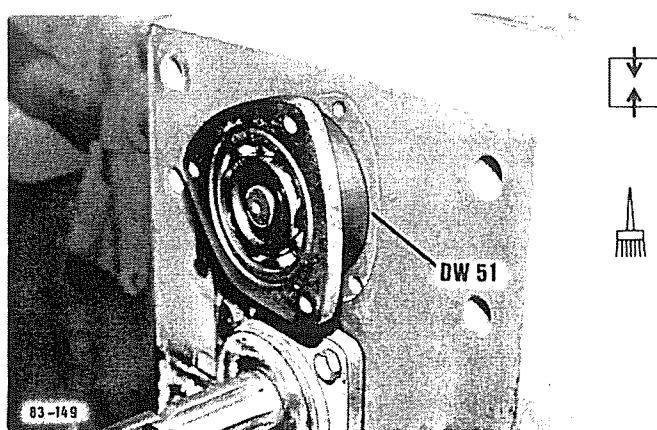
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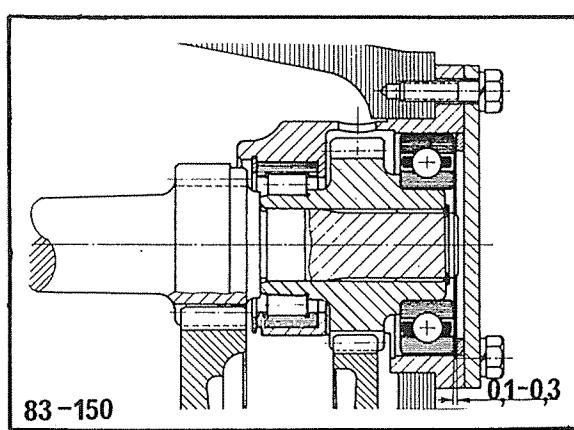
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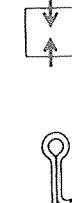
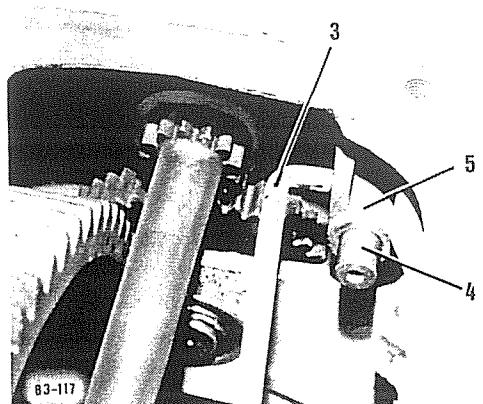
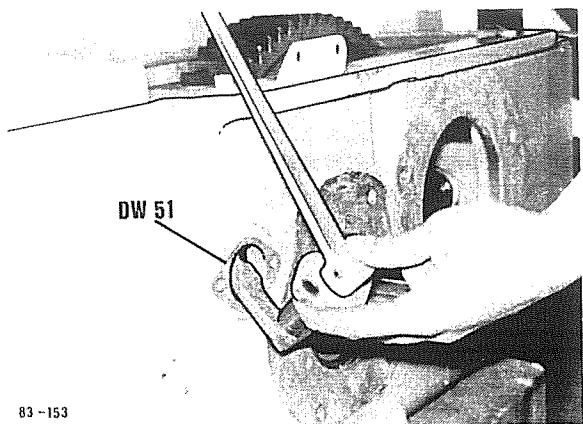
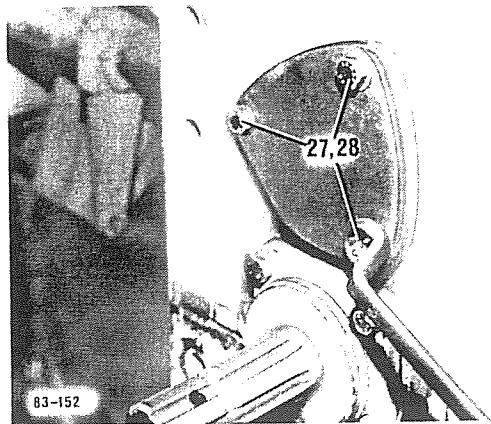
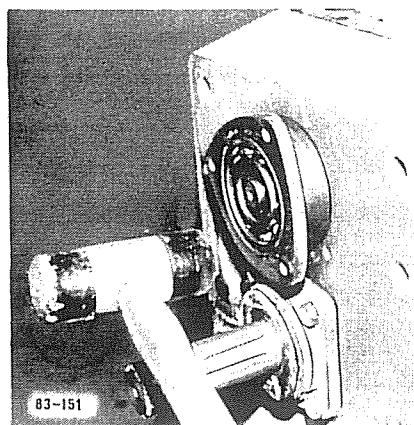
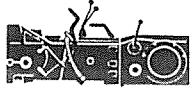
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83-150

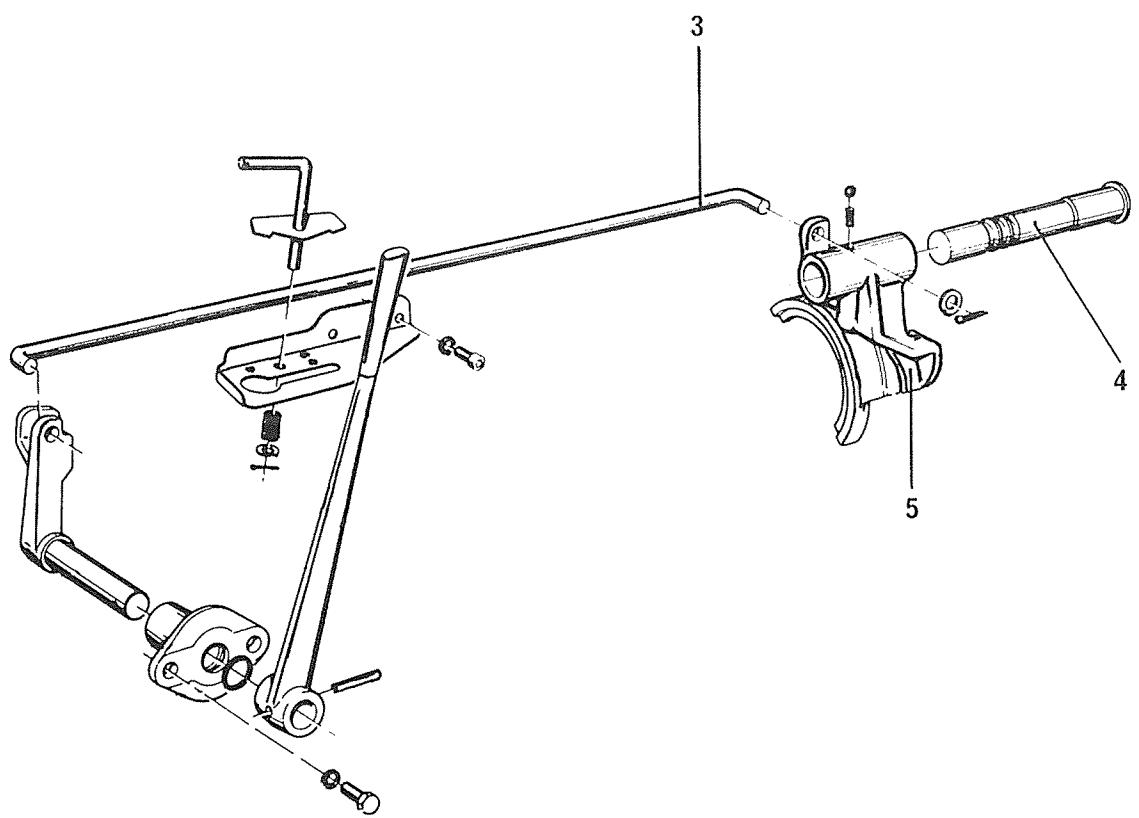
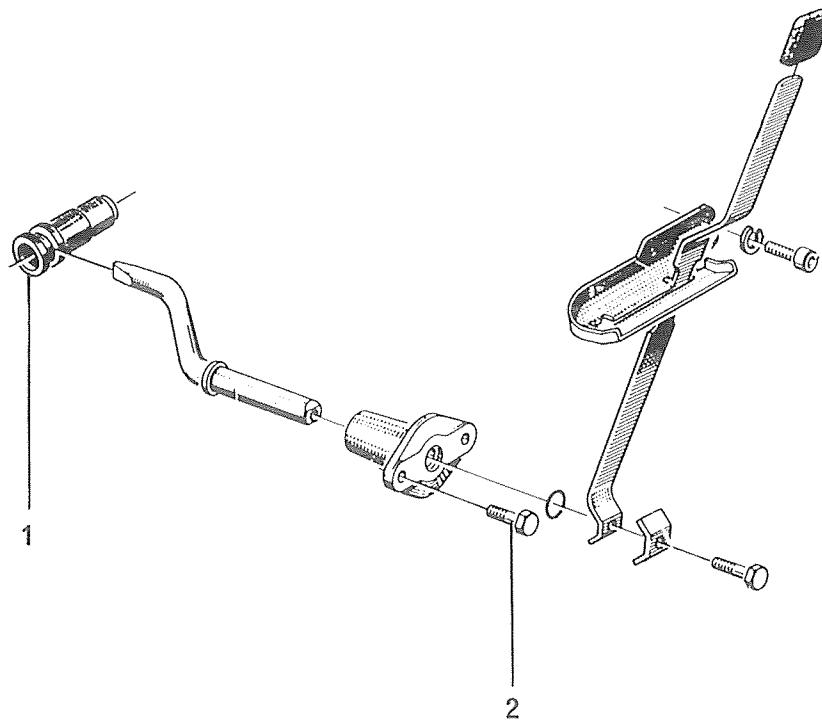
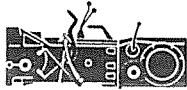
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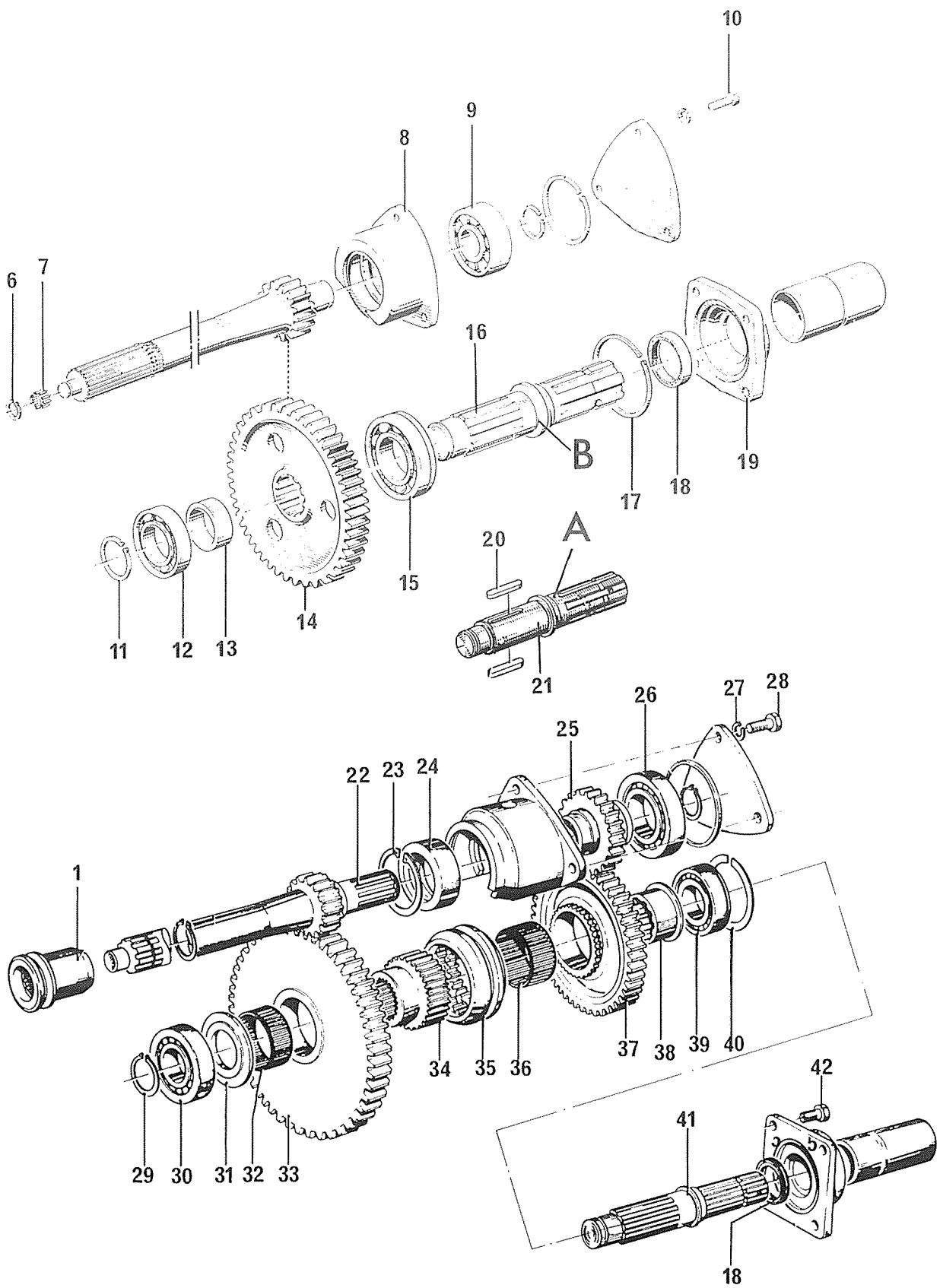
- |                      |                 |
|----------------------|-----------------|
| 1. Schaltmuffe       | 1. Shift sleeve |
| 2. Sechskantschraube | 2. Hex. bolt    |
| 3. Schaltstange      | 3. Shift rod    |
| 4. Bolzen            | 4. Pin          |
| 5. Schaltgabel       | 5. Shift fork   |

- |                                   |                          |
|-----------------------------------|--------------------------|
| 1. Manchon de commande            | 1. Manguito de conexión  |
| 2. Vis 6 pans                     | 2. Tornillo hexagonal    |
| 3. Tige de fourchette de commande | 3. Barra de conexión     |
| 4. Boulon                         | 4. Bulón                 |
| 5. Fourchette de commande         | 5. Horquilla de conexión |





- |                            |                    |
|----------------------------|--------------------|
| 6. Sicherungsring          | 6. Circlip         |
| 7. Nadelkäfig              | 7. Needle cage     |
| 8. Lagerdeckel             | 8. Cap             |
| 9. Zylinderrollenlager     | 9. Roller bearing  |
| 10. Sechskantschraube      | 10. Bolt           |
| 11. Sicherungsring         | 11. Circlip        |
| 12. Rillenkugellager       | 12. Ball bearing   |
| 13. Abstandsrohr           | 13. Spacer         |
| 14. Zahnrad                | 14. Gear           |
| 15. Rillenkugellager       | 15. Ball bearing   |
| 16. Welle, Ausführung B    | 16. Shaft, type B  |
| 17. Sicherungsring         | 17. Circlip        |
| 18. Radial-Wellerdichtring | 18. Radial seal    |
| 19. Lagerdeckel            | 19. Cap            |
| 20. Paßfeder               | 20. Key            |
| 21. Welle, Ausführung A    | 21. Shaft, type A  |
| 22. Antriebswelle          | 22. Drive shaft    |
| 23. Sicherungsring         | 23. Circlip        |
| 24. Außenring              | 24. Outer race     |
| 25. Zahnrad                | 25. Gear           |
| 26. Rillenkugellager       | 26. Ball bearing   |
| 27. Federring              | 27. Lockwasher     |
| 28. Sechskantschraube      | 28. Bolt           |
| 29. Sicherungsring         | 29. Circlip        |
| 30. Zylinderrollenlager    | 30. Roller bearing |
| 31. Anlaufscheibe          | 31. Stop washer    |
| 32. Nadelkäfig             | 32. Needle cage    |
| 33. Zahnrad                | 33. Gear           |
| 34. Mitnehmer              | 34. Driver         |
| 35. Schaltmuffe            | 35. Shift sleeve   |
| 36. Nadelkäfig             | 36. Needle cage    |
| 37. Zahnrad                | 37. Gear           |
| 38. Buchse                 | 38. Bush           |
| 39. Rillenkugellager       | 39. Ball bearing   |
| 40. Sicherungsring         | 40. Circlip        |
| 41. Welle                  | 41. Shaft          |
| 42. Sechskantschraube      | 42. Bolt           |



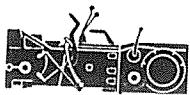


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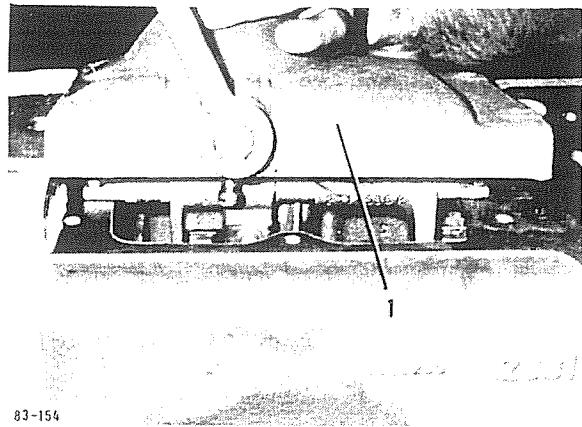
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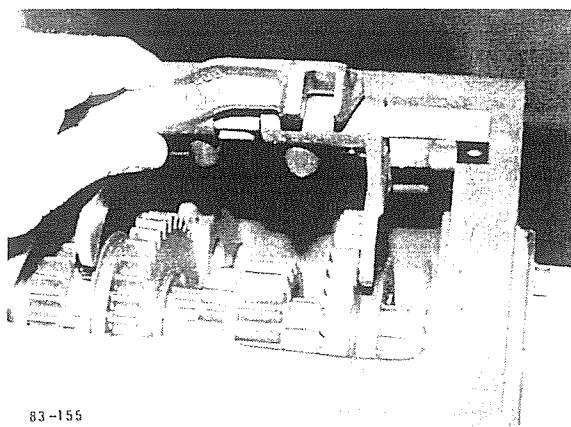
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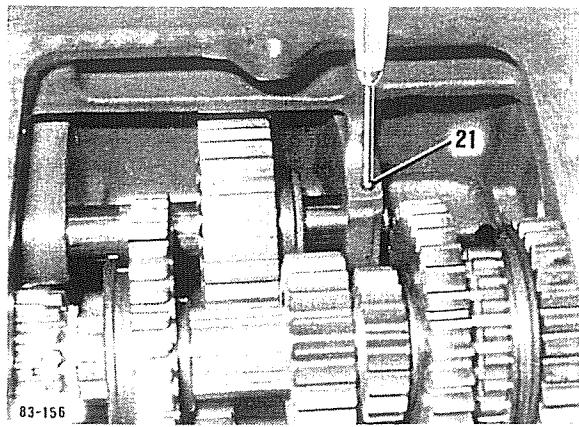
RÜCKWÄRTSGANG EIN- UND AUSBAUEN  
 REMOVING AND REFITTING THE REVERSE GEAR  
 MARCHE AR: DEMONTER ET REMONTER  
 DESMONTAR Y REMONTAR LA MARCHA ATRAS



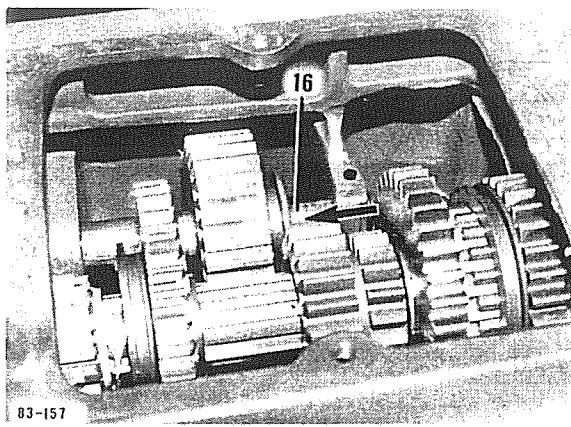
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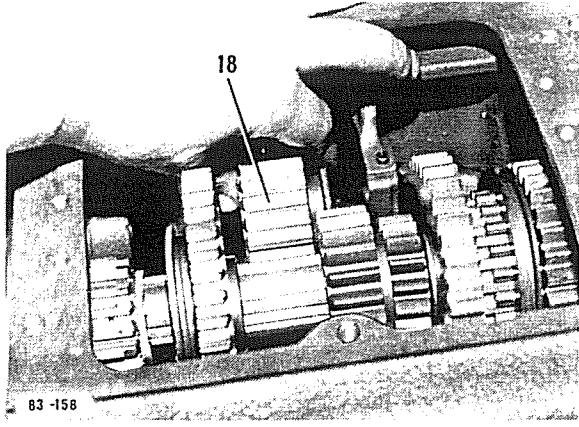
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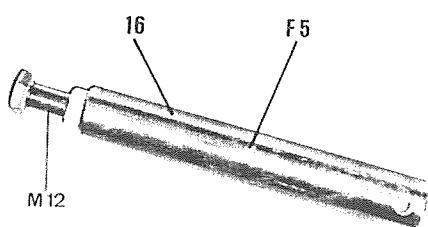
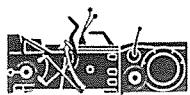


83-157

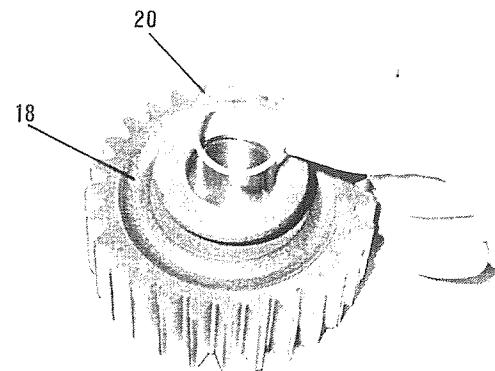


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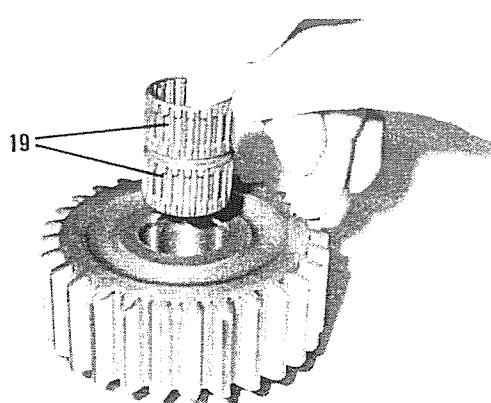




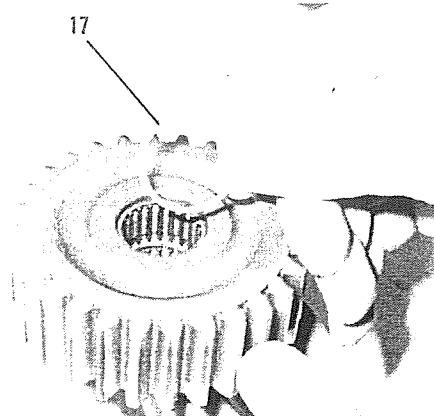
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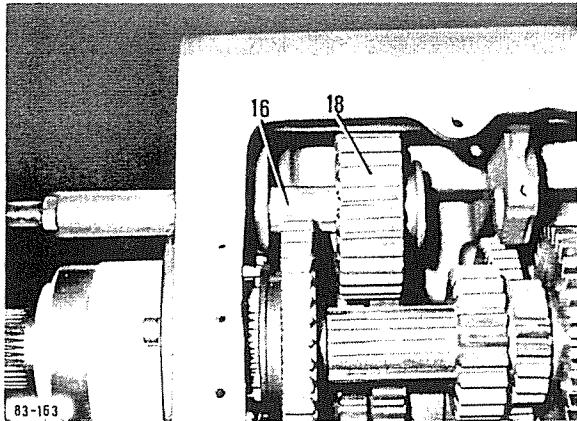
83-160



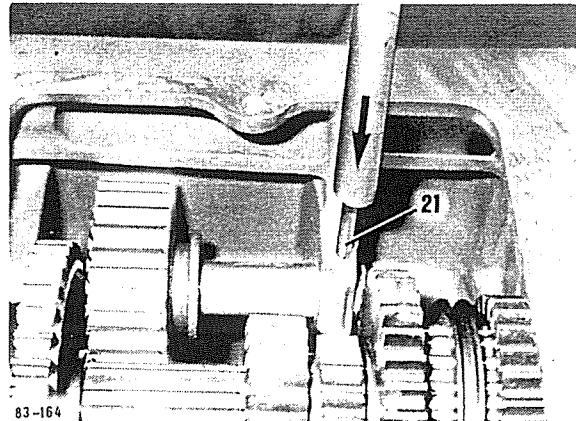
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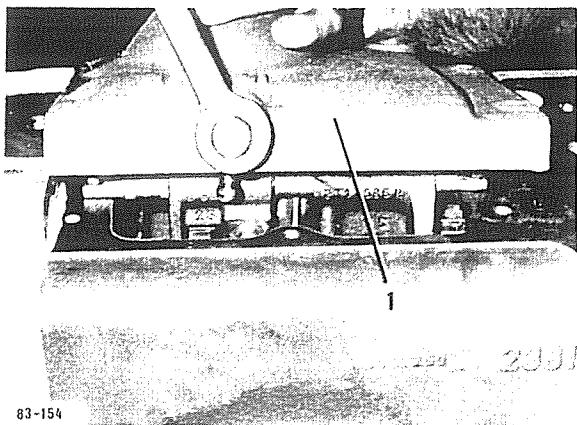


- 4 -

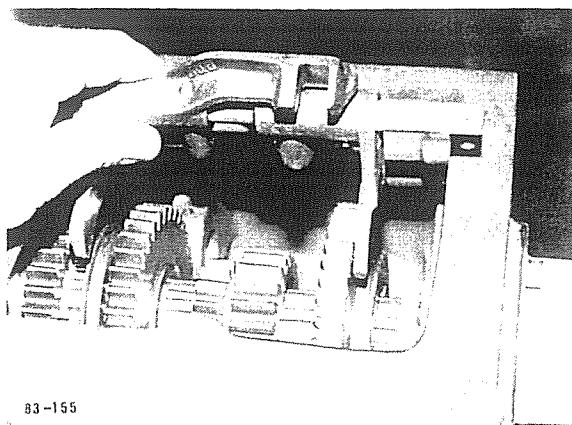


4

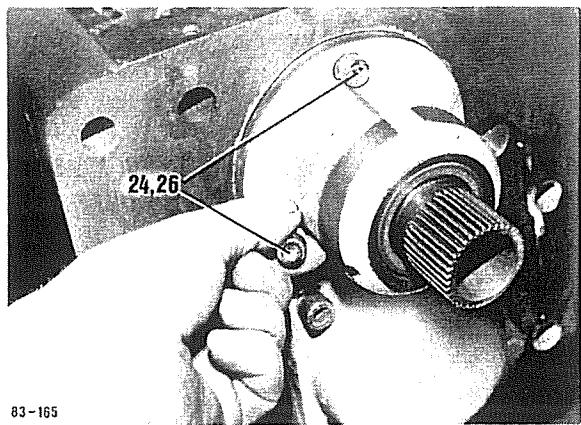
**ANTRIEBSHOHLWELLE AUSBAUEN**  
**REMOVING THE DRIVE QUILL**  
**ARBRE CREUX DE COMMANDE: DEMONTER**  
**DESMONTAR EL EJE HUECO DE ACCIONAMIENTO**



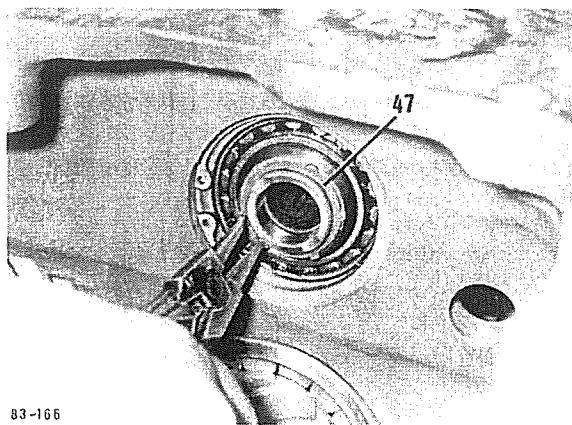
83-154



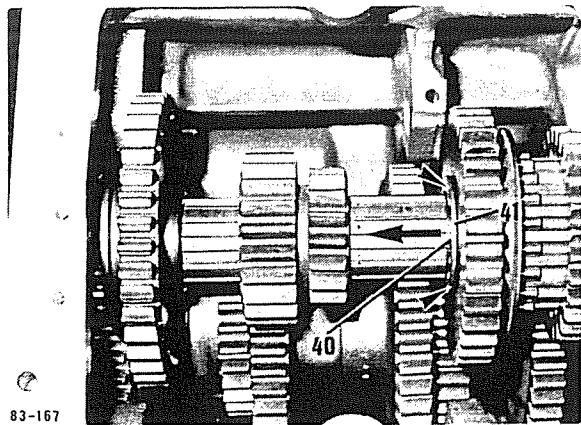
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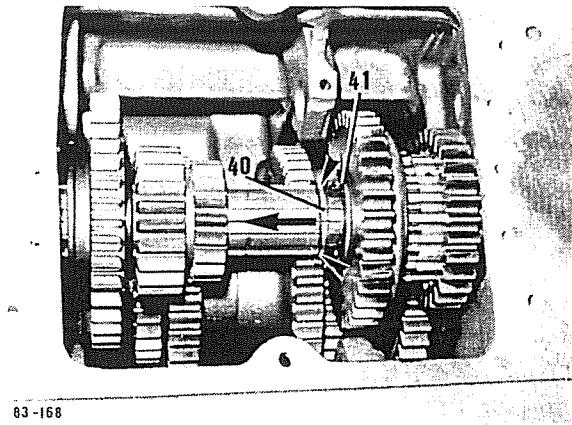
83-165



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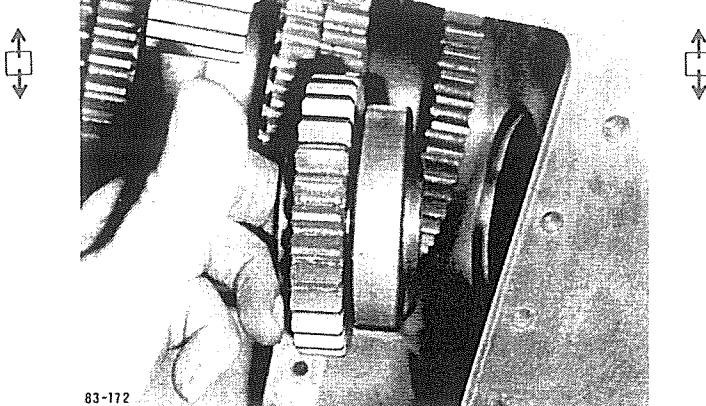
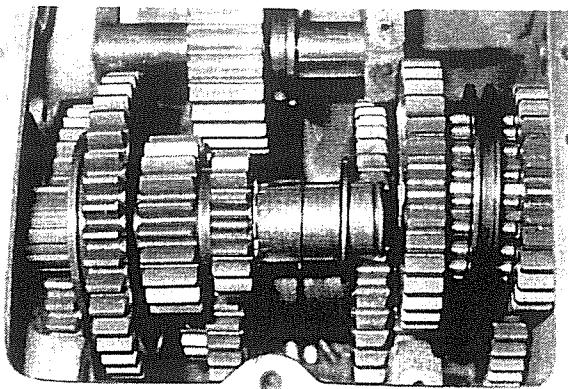
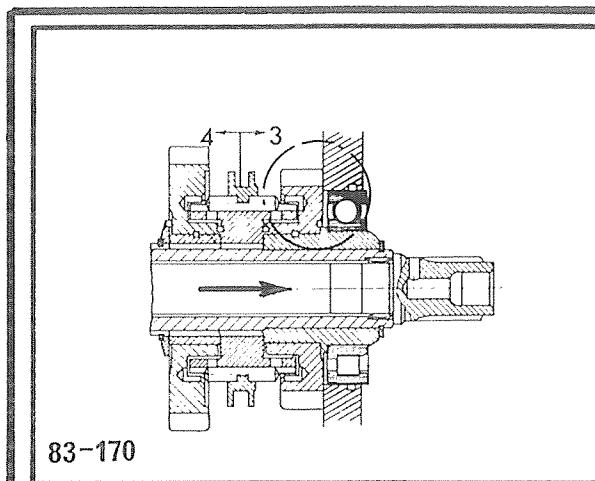
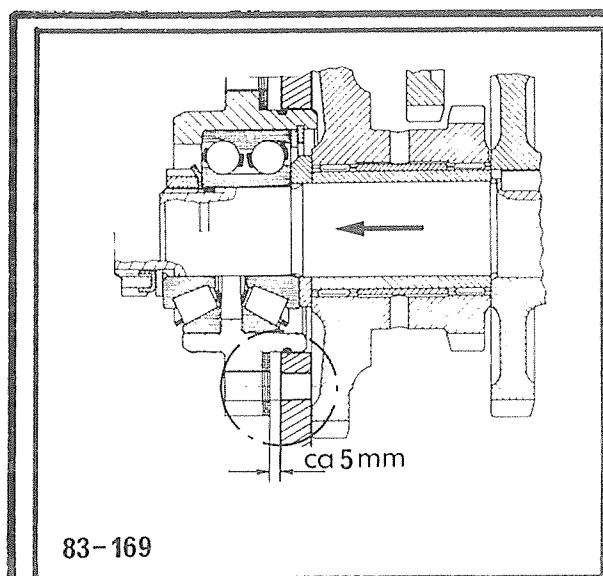
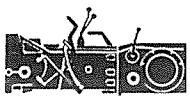


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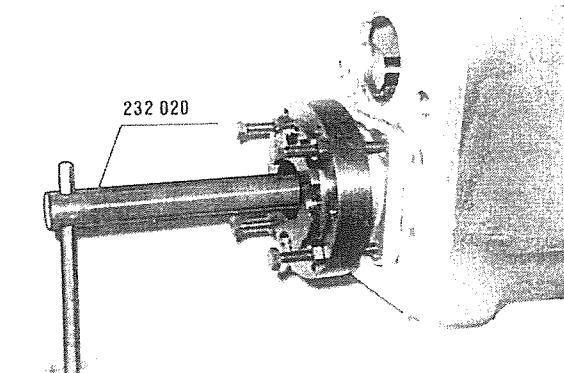


83-168

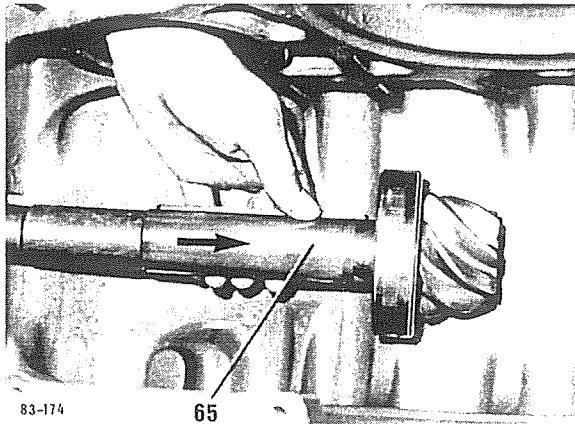




**KEGELRADWELLE AUSBAUEN**  
**REMOVING THE BEVEL GEAR SHAFT**  
**ARBRE DE PIGNON CONIQUE: DEMONTER**  
**DESMONTAR EL EJE DE RUEDA CONICA**



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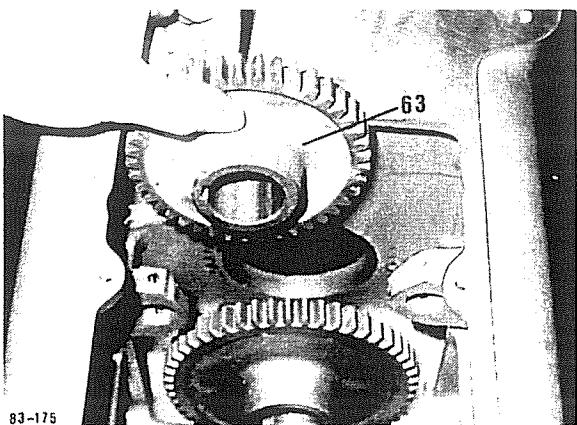


Zwischenwelle ist ausgebaut

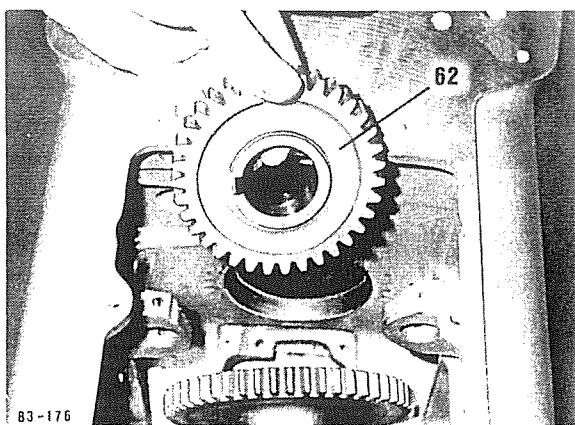
Intermediate shaft is removed

Arbre intermédiaire est démonté

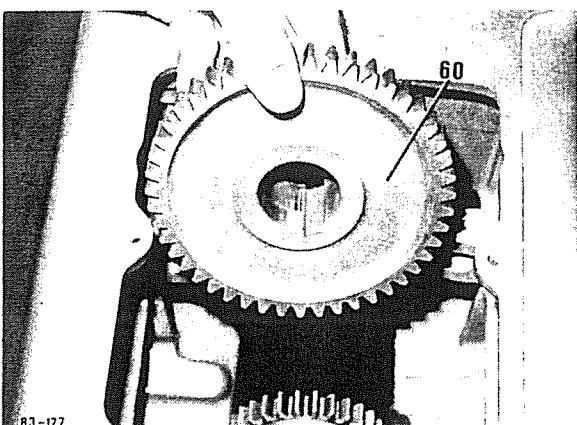
Queda desmontado el eje intermedio



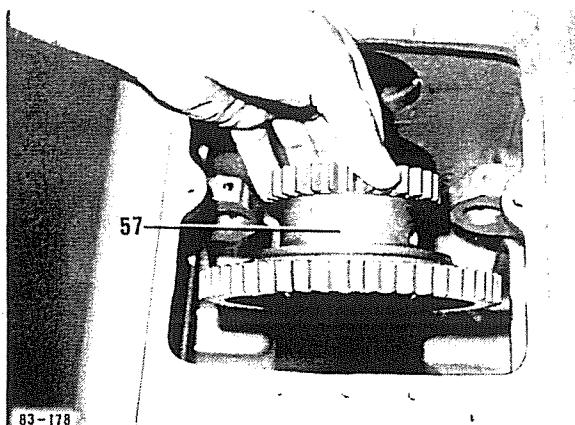
83-175



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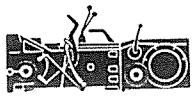


83-177

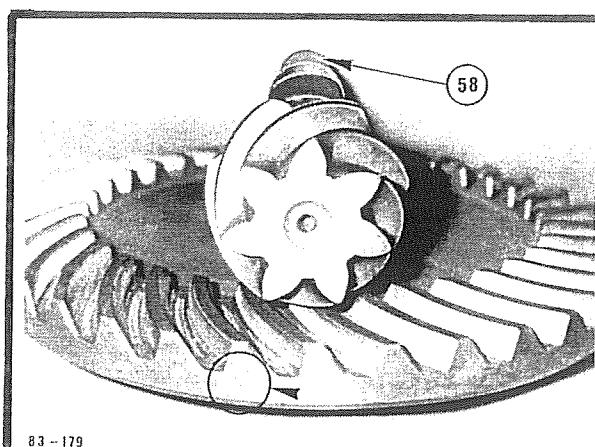


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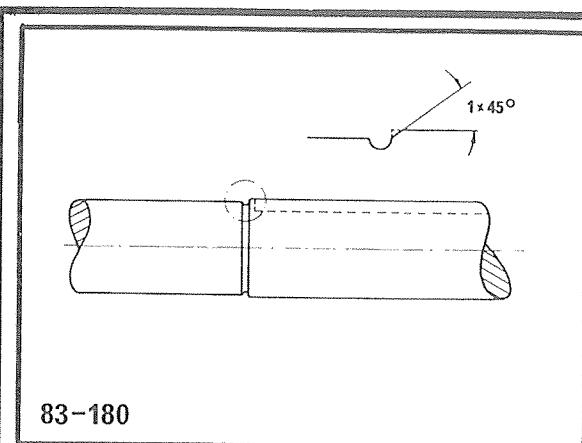




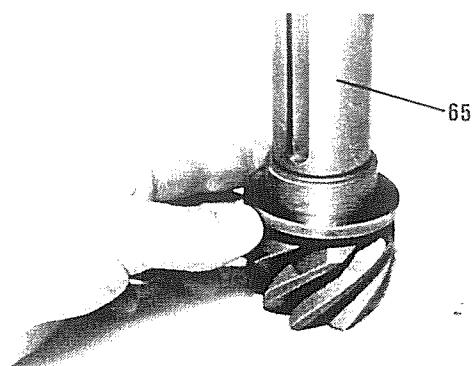
KEGELRADWELLE EINBAUEN  
REFITTING THE BEVEL GEAR SHAFT  
ARBRE DE PIGNON CONIQUE: REMONTER  
REMONTAR EL EJE DE RUEDA CONICA



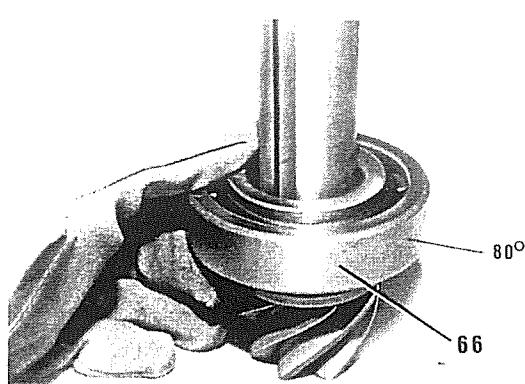
83-179



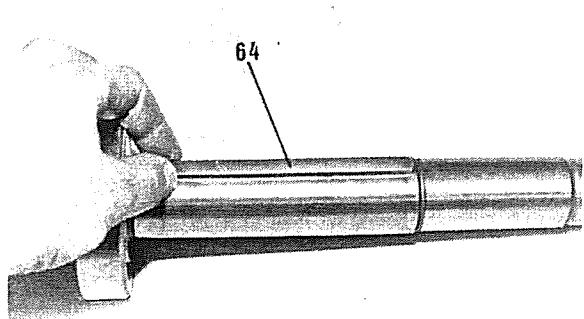
83-180



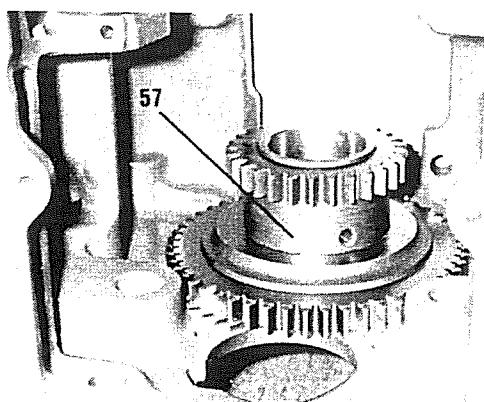
83-181



83-182

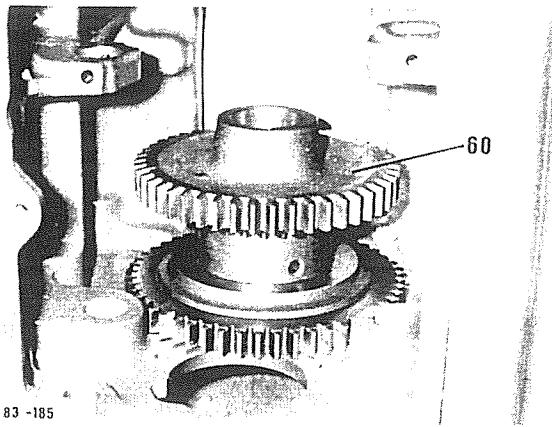
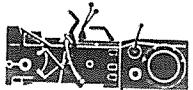


83-183

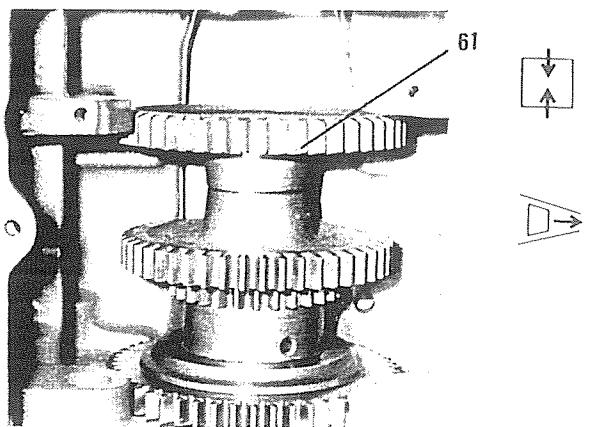


83-184

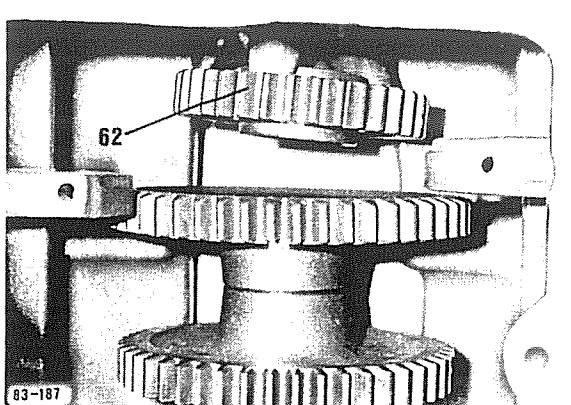




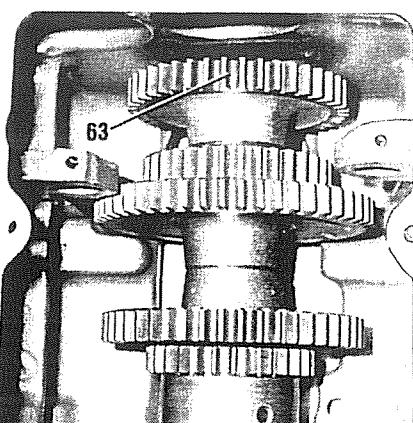
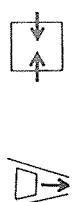
83-185



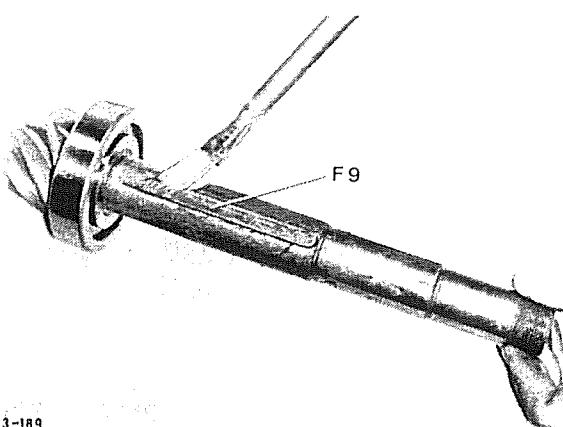
83-186



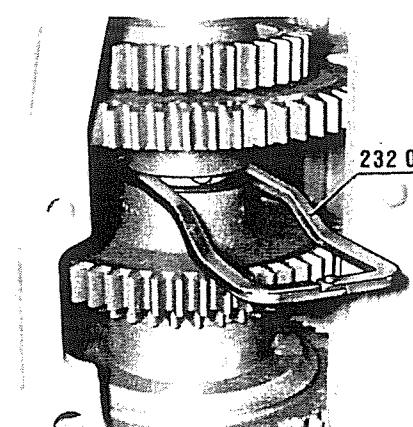
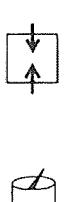
83-187



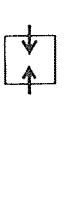
83-188

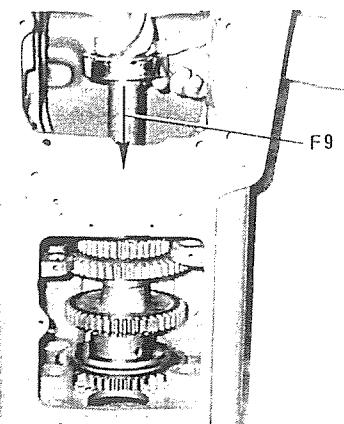
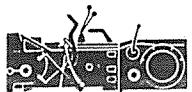


83-189



83-190

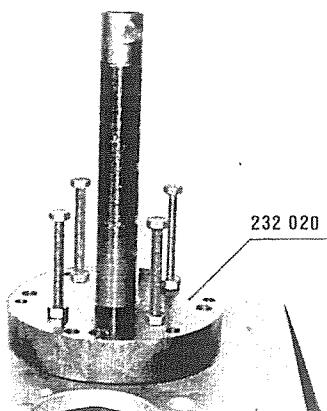




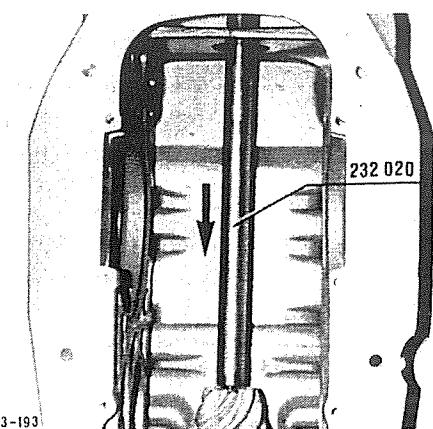
83-191



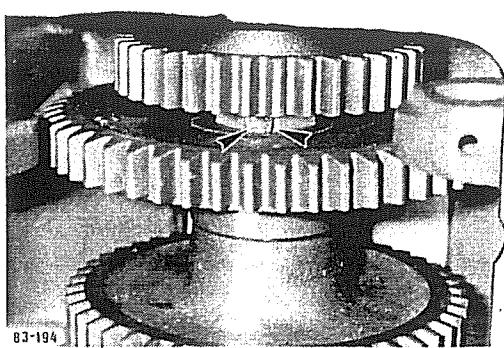
83-192



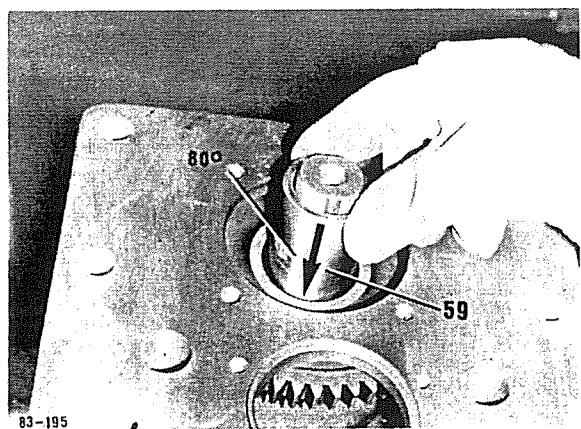
232 020



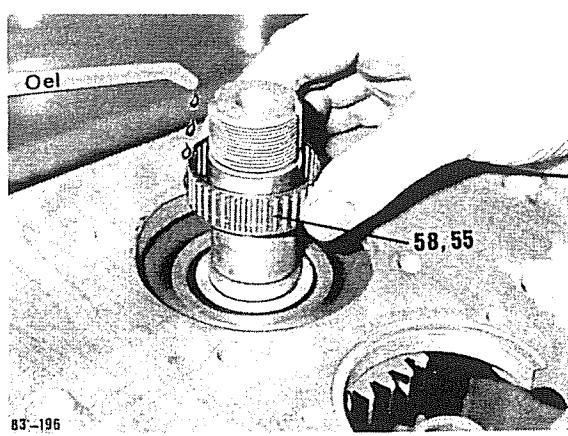
83-193



83-194

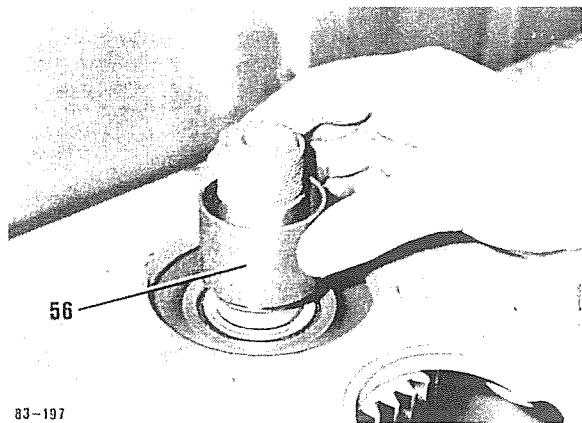


83-195



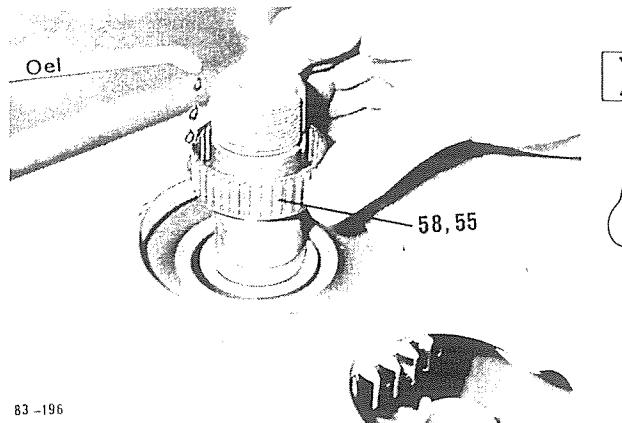
83-196



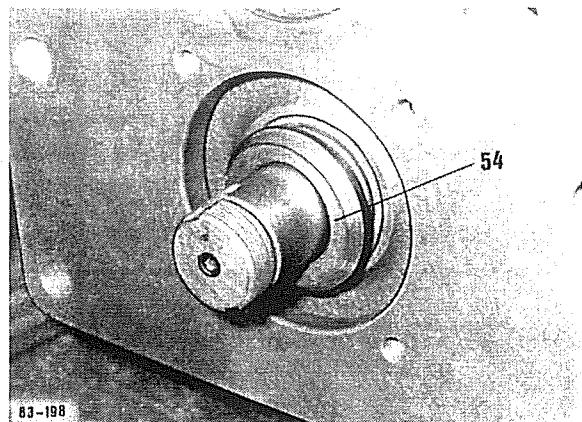


83-197

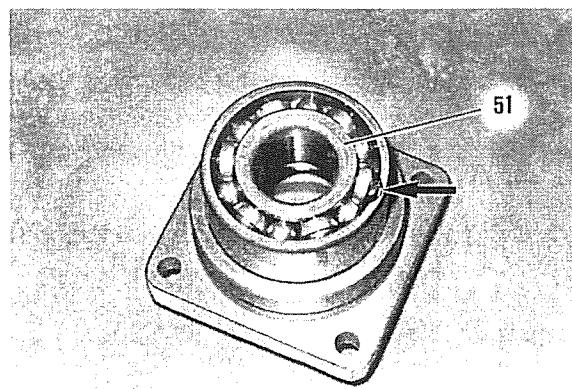
Nur TW 25.2/TW 35.1  
Only TW 25.2/TW 35.1  
Seulement TW 25.2/TW 35.1  
Sólo TW 25.2/TW 35.1



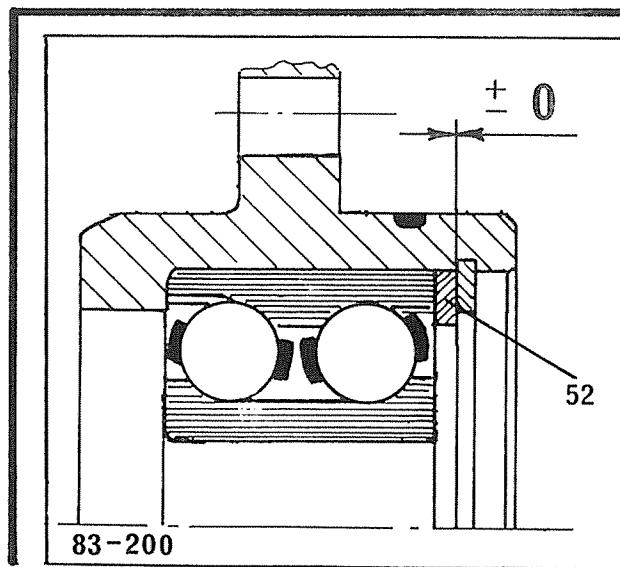
83-196



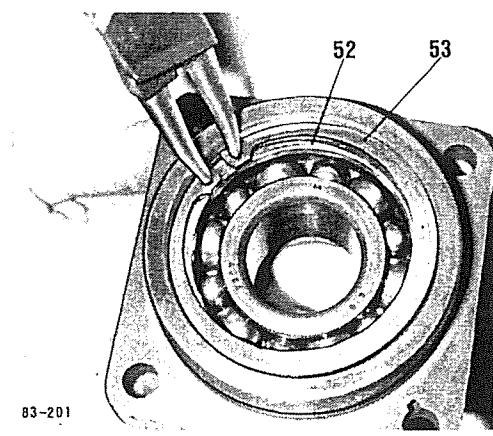
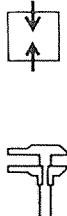
83-198



83-199



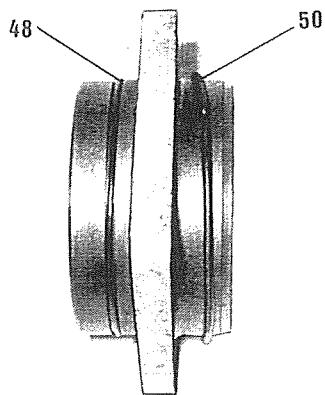
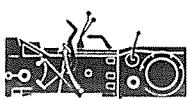
83-200



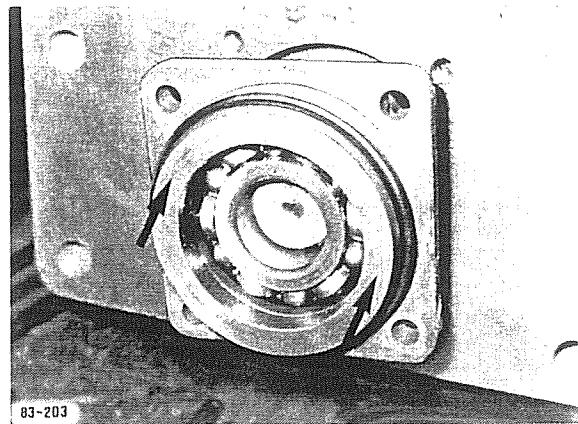
83-201



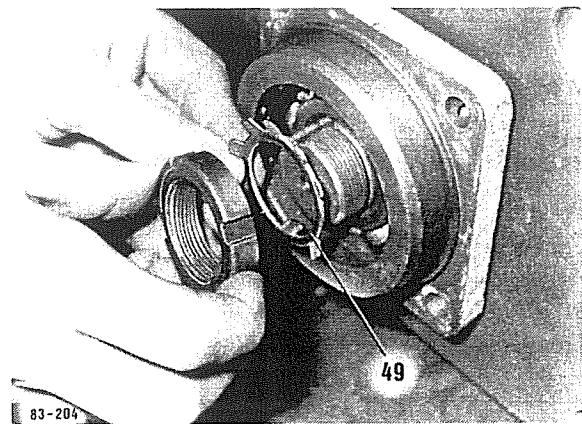
spielfrei  
no clearance  
sans jeu  
sin juego



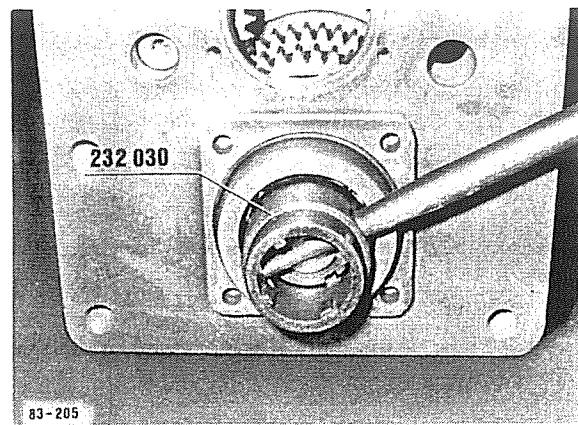
83-202



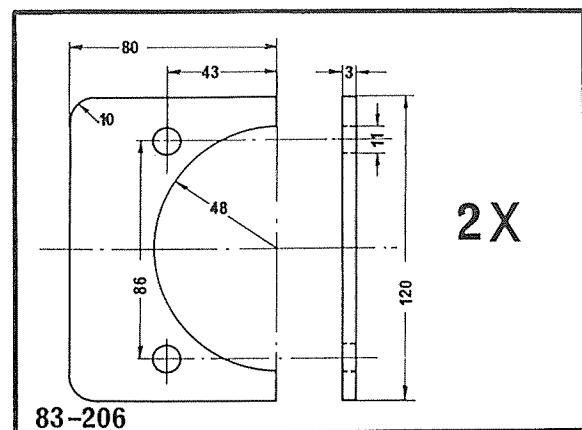
83-203



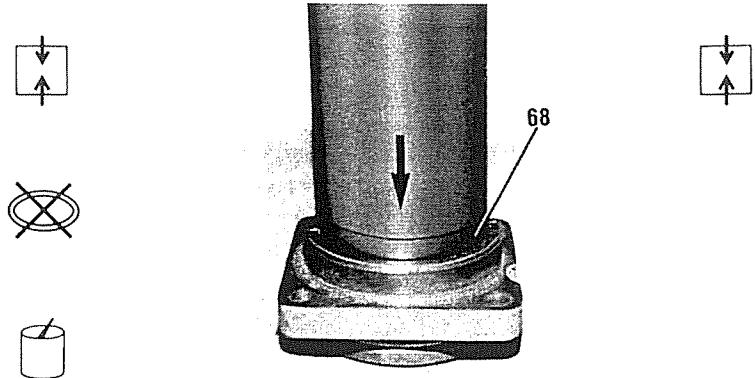
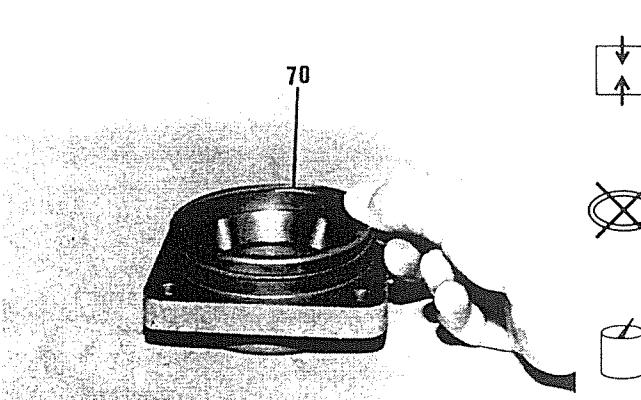
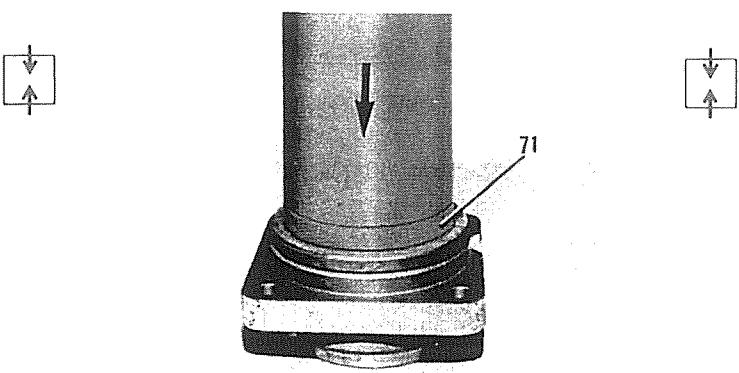
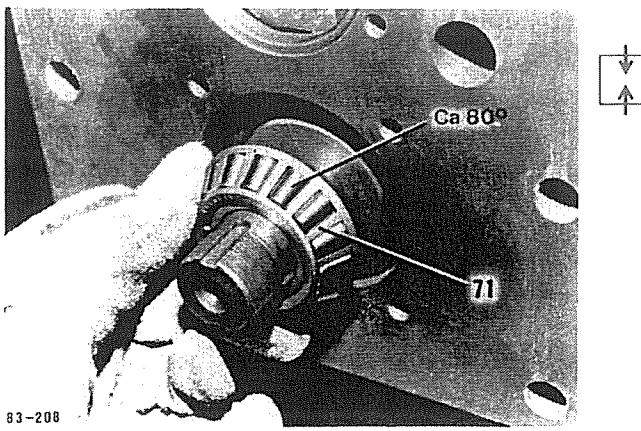
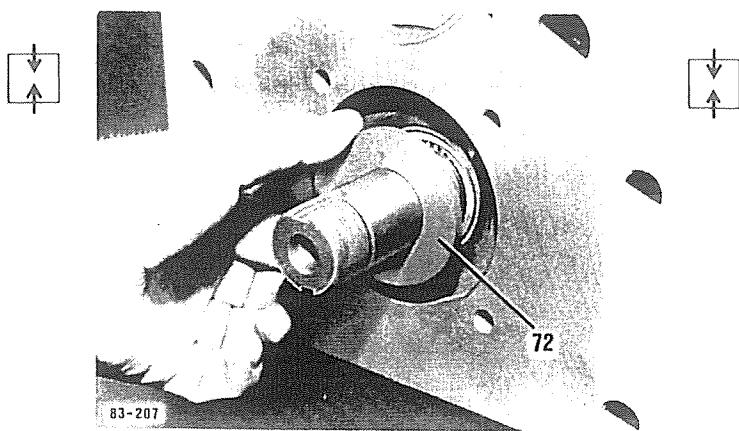
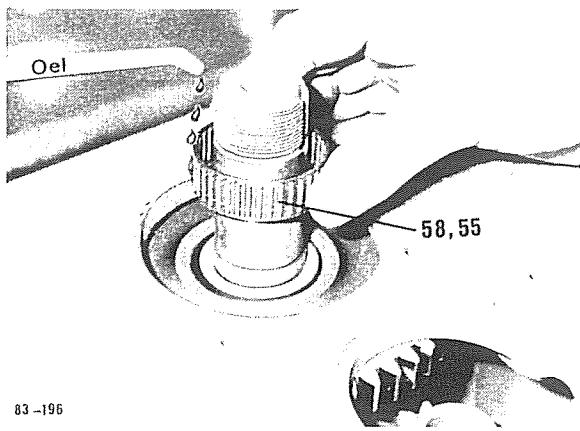
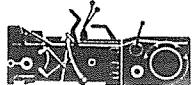
83-204

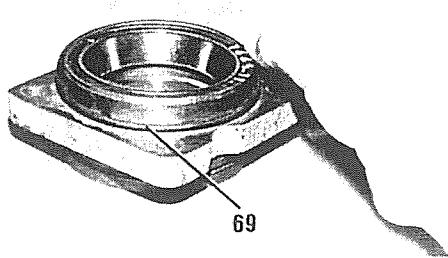
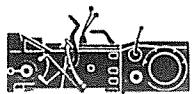


83-205

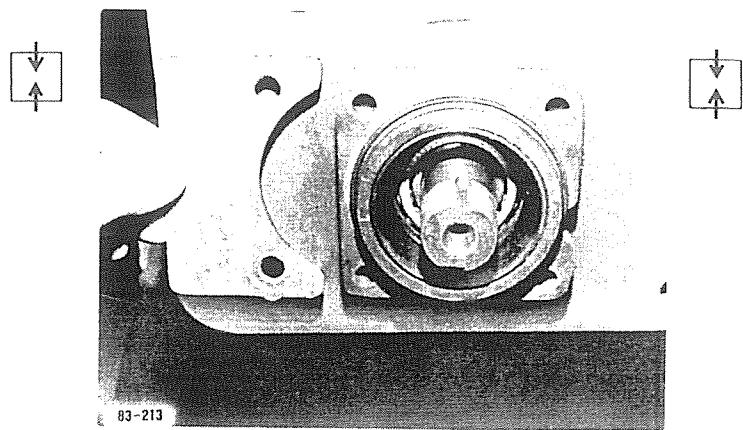


Nur TW 35.2  
Only TW 35.2  
Seulement TW 35.2  
Sólo TW 35.2

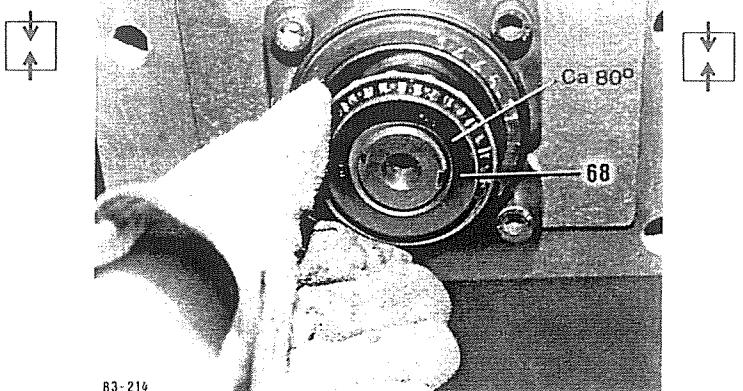
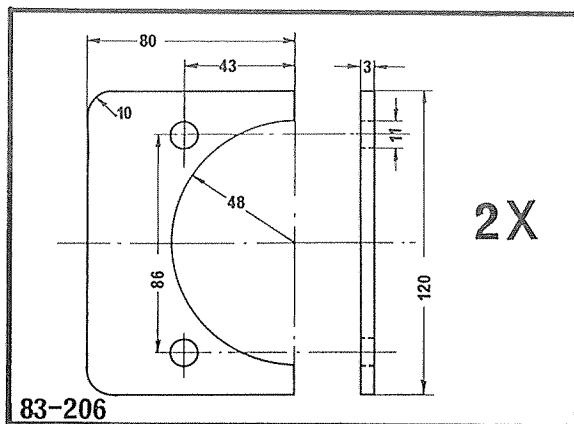




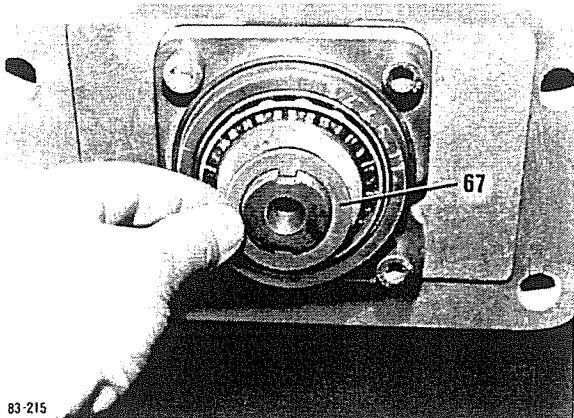
83-212



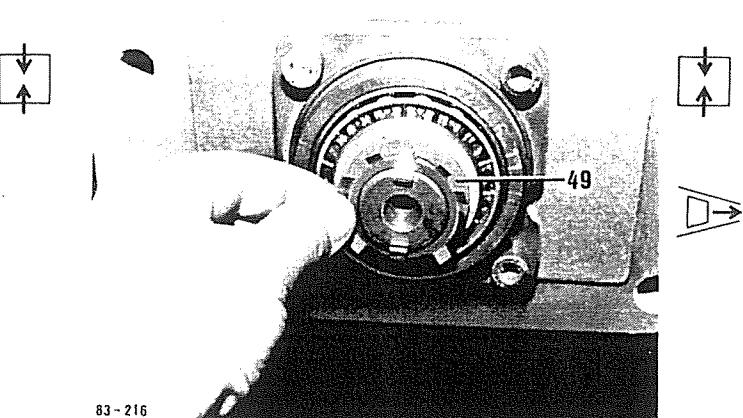
83-213



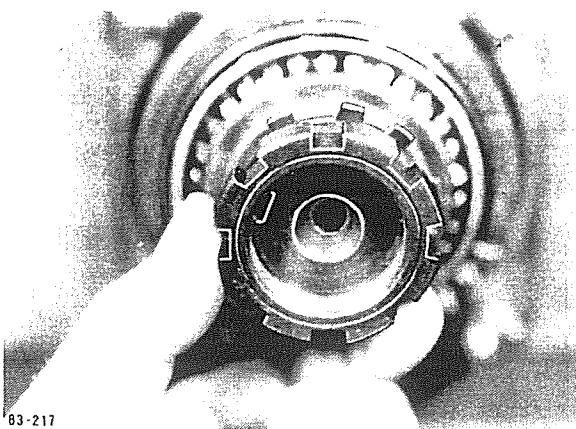
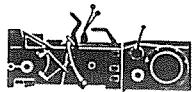
83-214



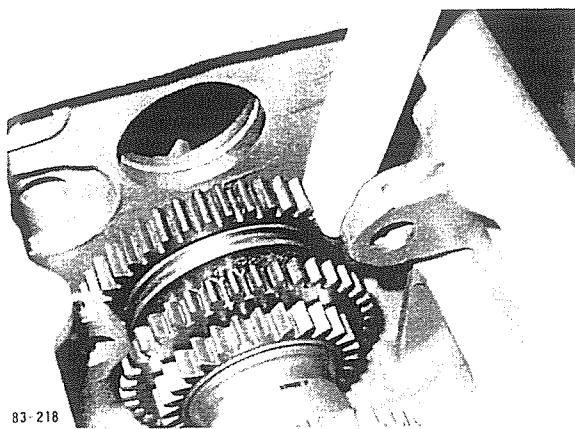
83-215



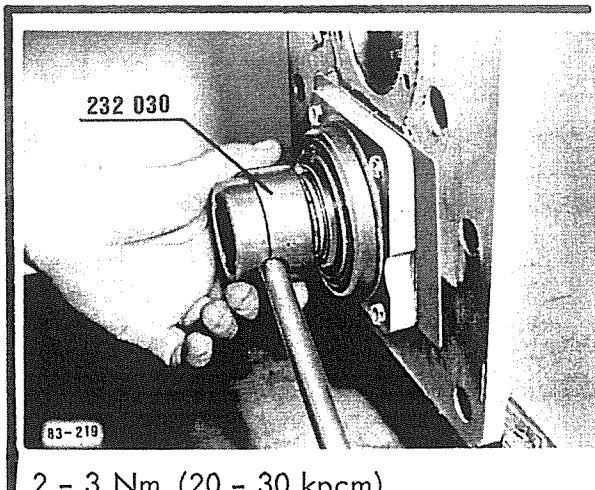
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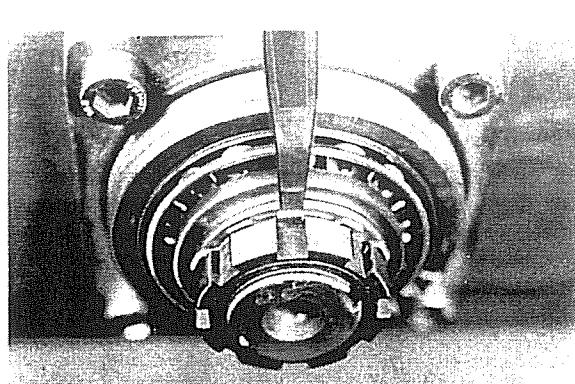
83-217



83-218



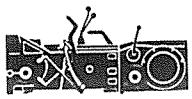
83-219



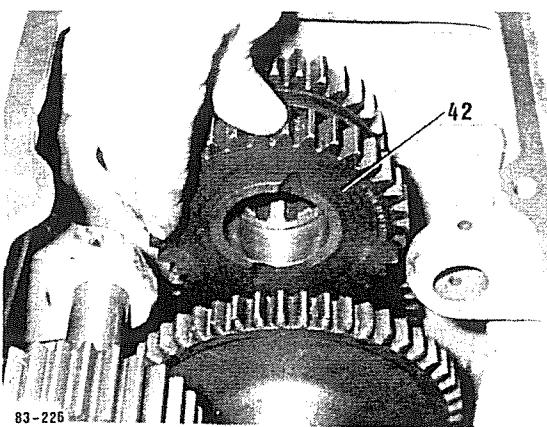
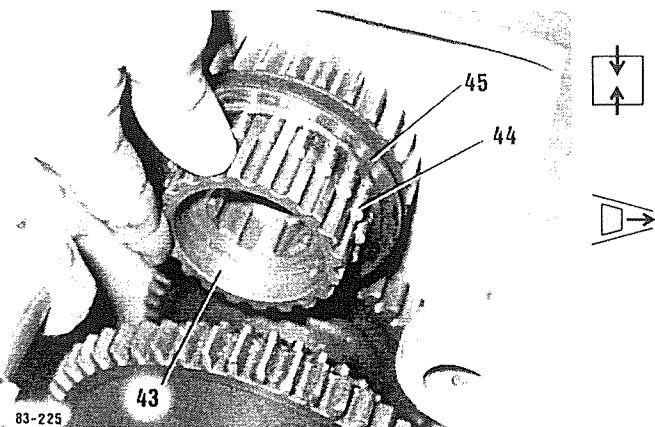
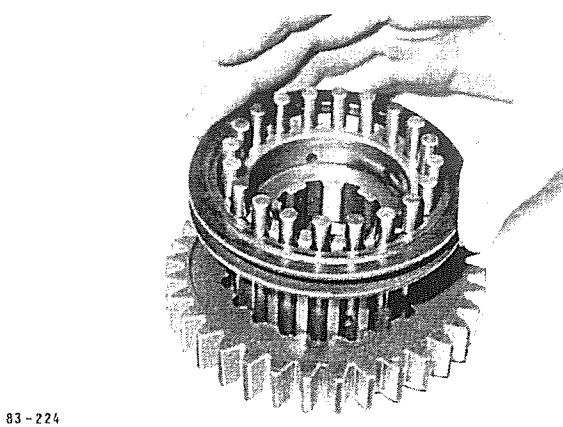
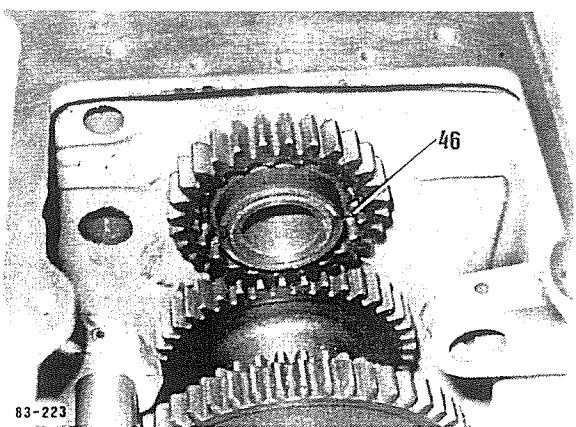
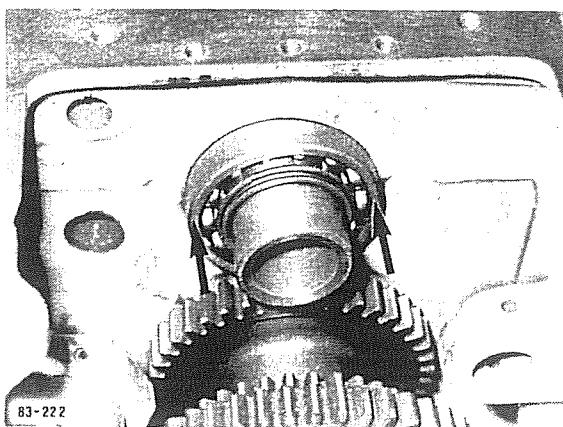
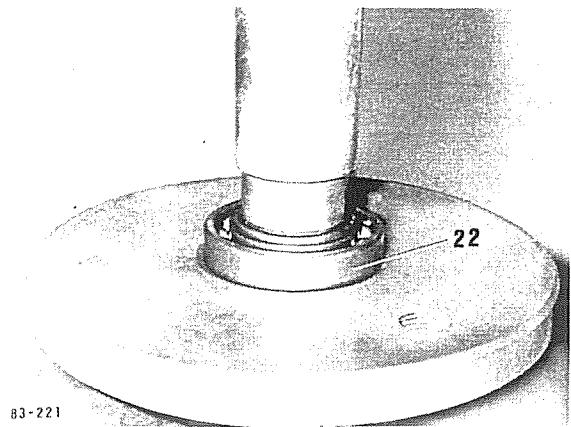
83-220

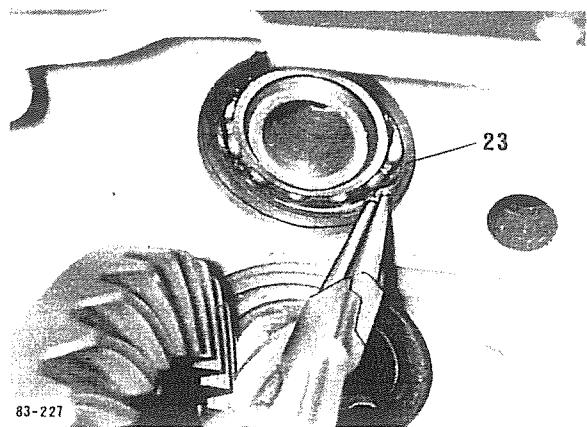


2 - 3 Nm (20 - 30 kpcm)

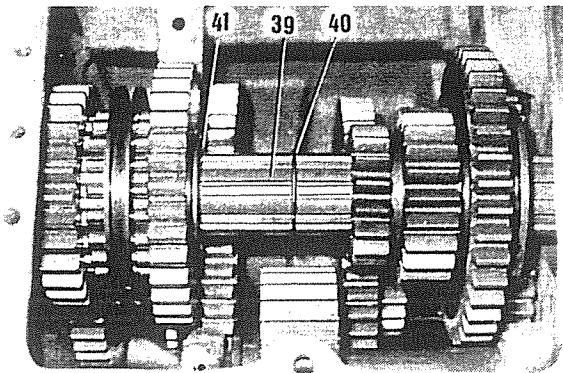


ANTRIEBSHOHLWELLE EINBAUEN  
REFITTING THE DRIVE QUILL  
ARBRE CREUX DE COMMANDE: REMONTER  
REMONTAR EL EJE HUECO DE ACCIONAMIENTO

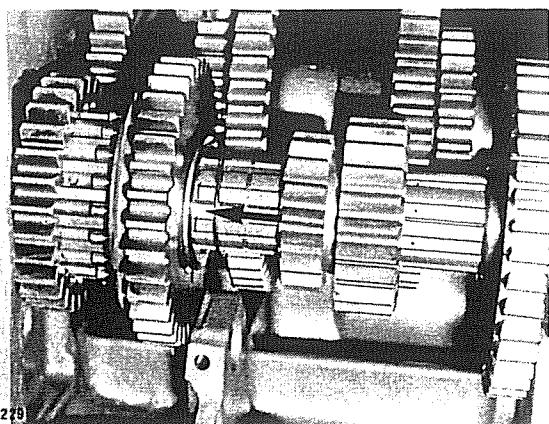




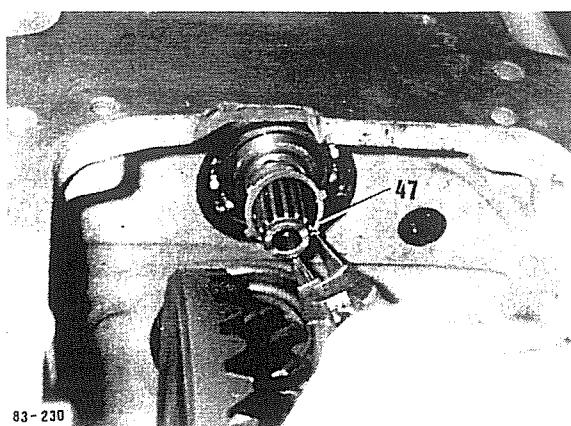
83-227



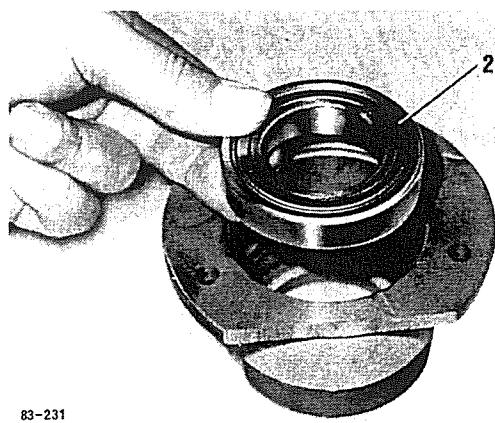
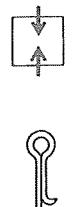
83-228



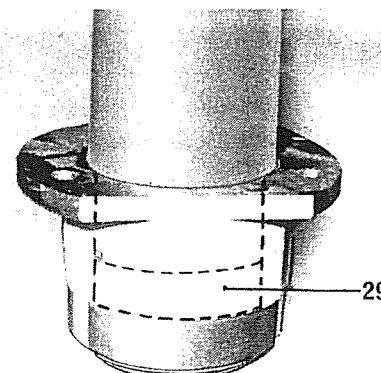
83-229



83-230

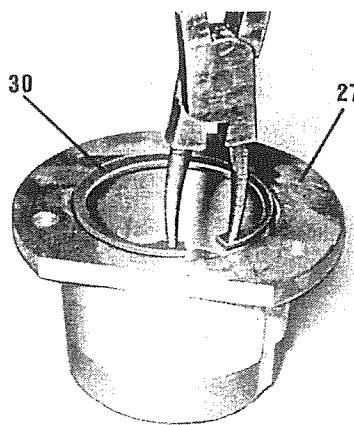
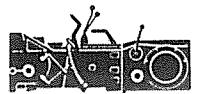


83-231

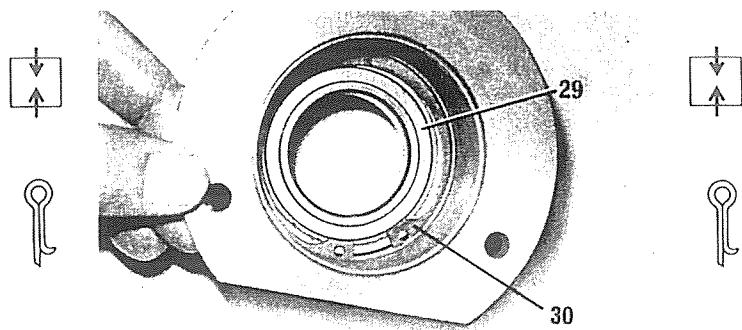


83-232

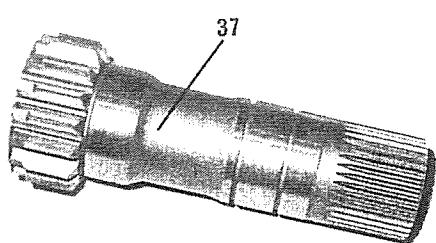




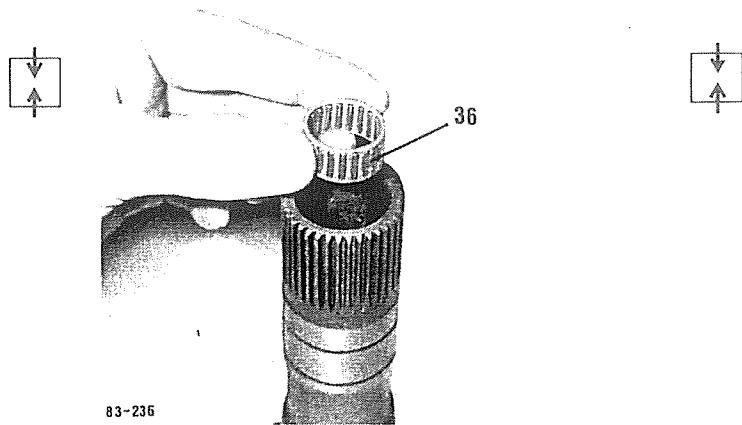
83-233



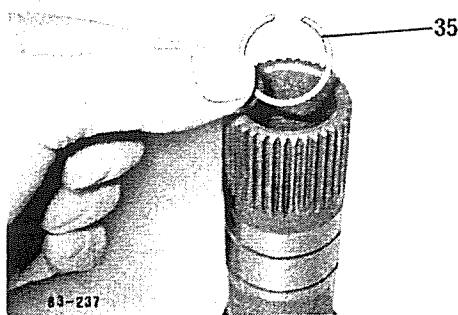
83-234



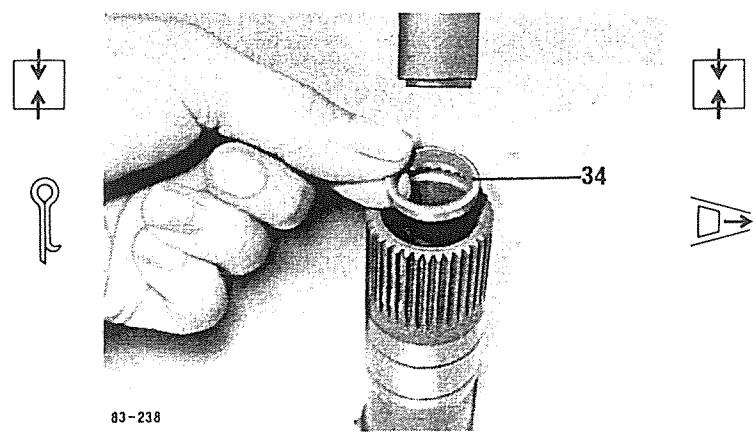
83-235



83-236

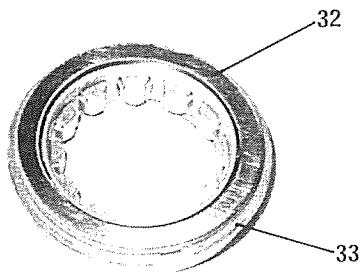


83-237

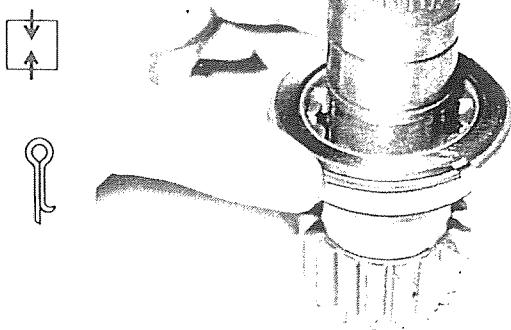


83-238

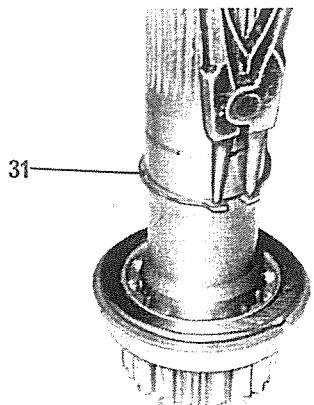
Hilfsmittel verwenden  
Auxiliary tool  
Employer moyen auxiliaire  
Utilizar medio auxiliar



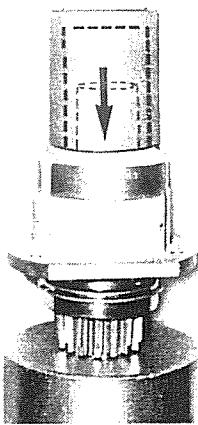
83-239



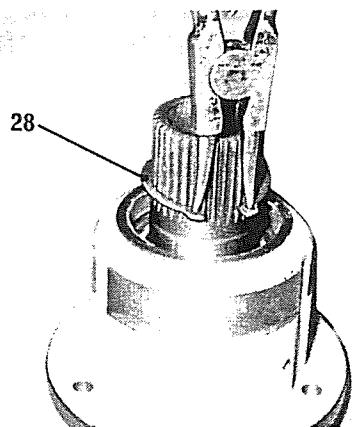
83-240



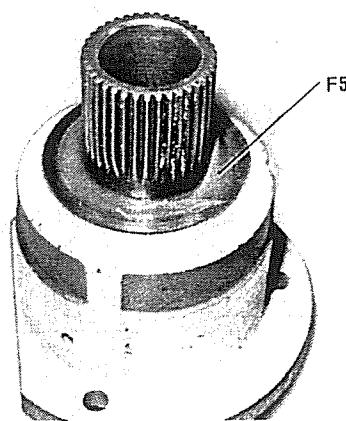
83-241



83-242

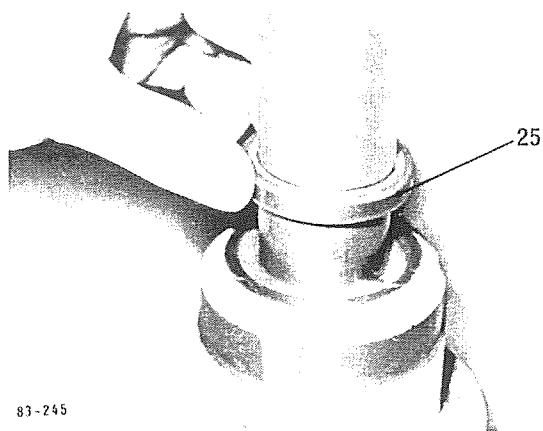
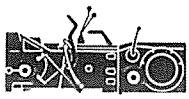


83-243

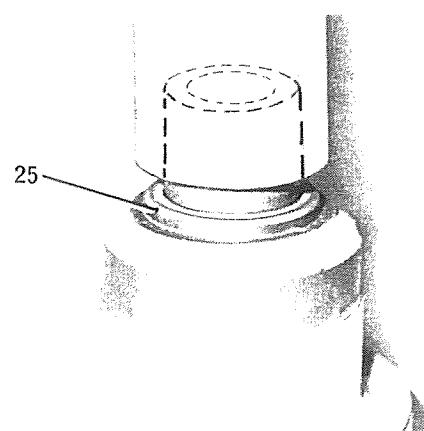


83-244





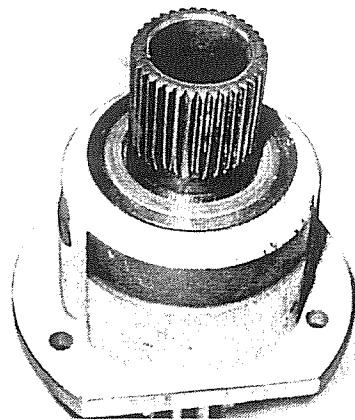
83-245



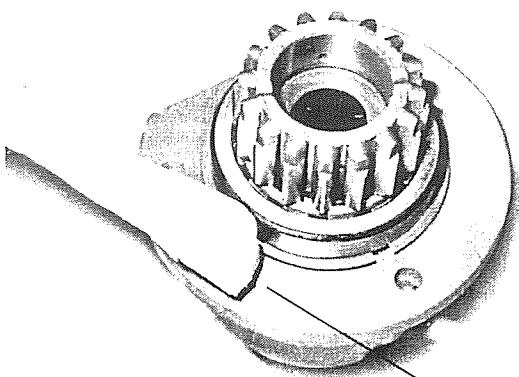
83-246



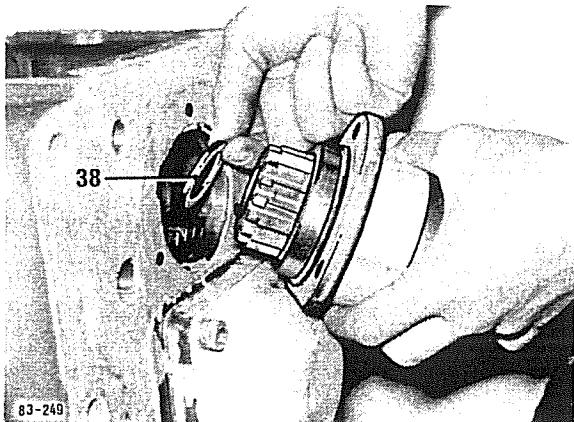
Hilfsmittel verwenden  
Auxiliary tool  
Employer moyen auxiliaire  
Utilizar medio auxiliar



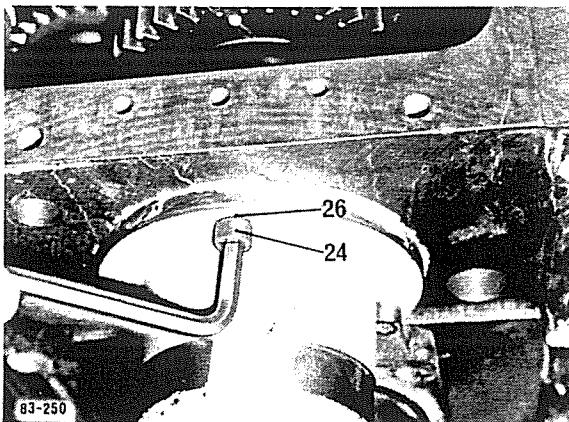
83-247



DW 51



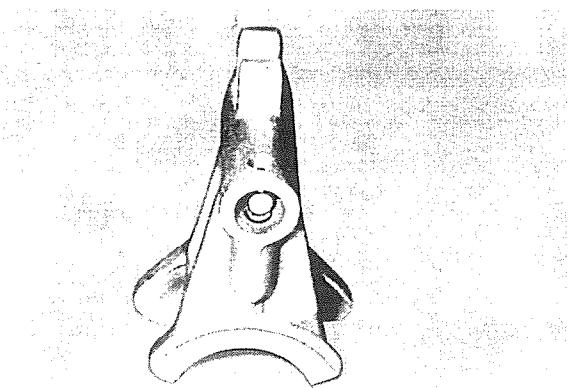
83-249



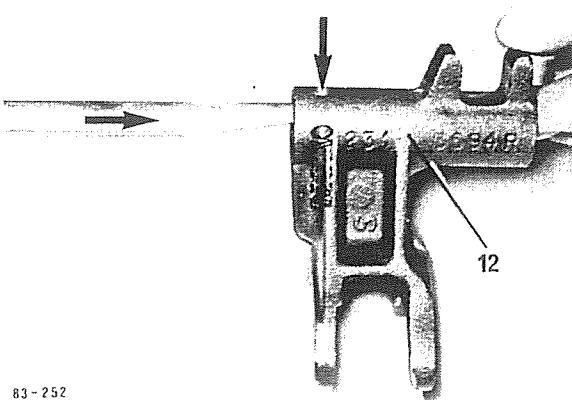
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SCHALTGESTÄNGE EINBAUEN  
 REFITTING THE SHIFT LINKAGE  
 TRINGLE DE COMMANDE: REMONTER  
 REMONTAR EL VARILLAJE DE CAMBIO

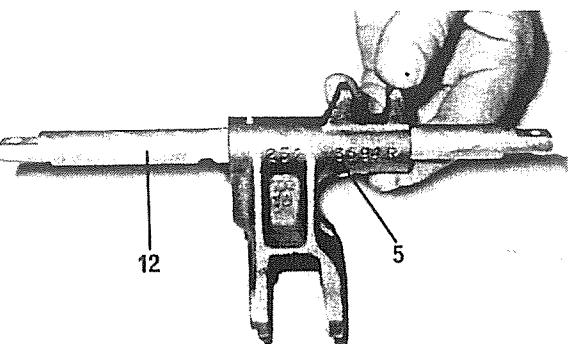


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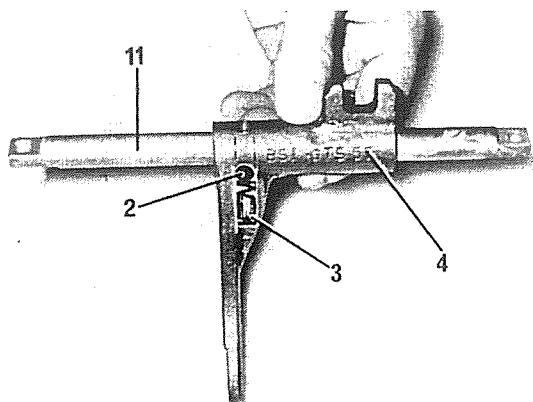


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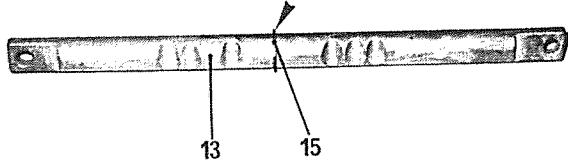
Hilfsmittel verwenden  
 Auxiliary tool  
 Employer moyen auxiliaire  
 Utilizar medio auxiliar



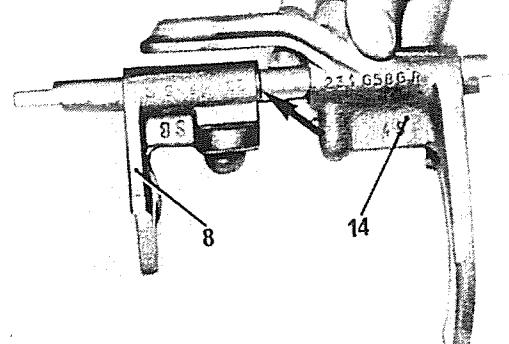
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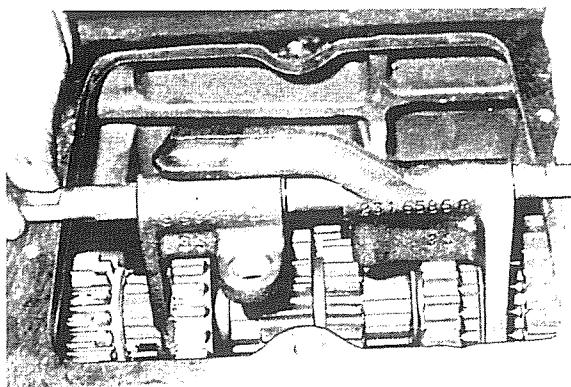
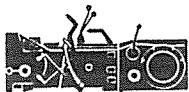


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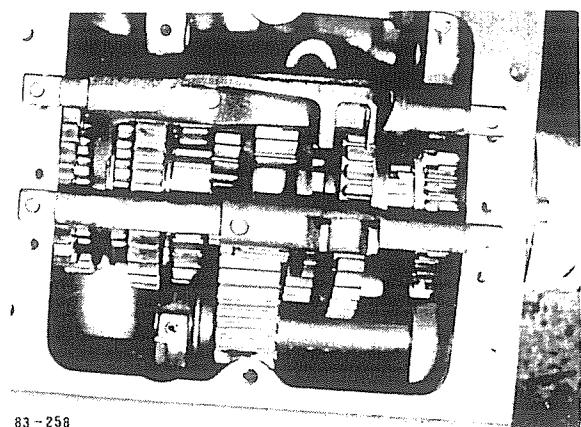


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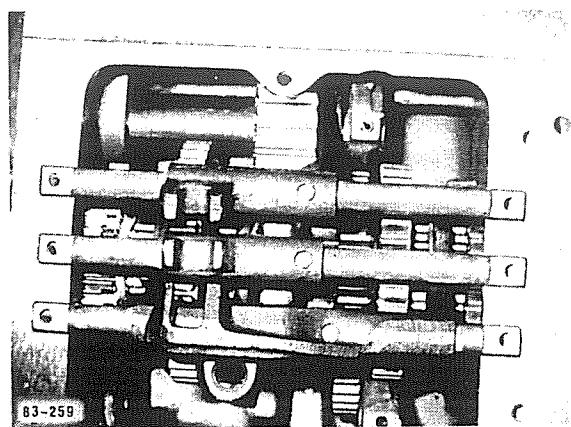




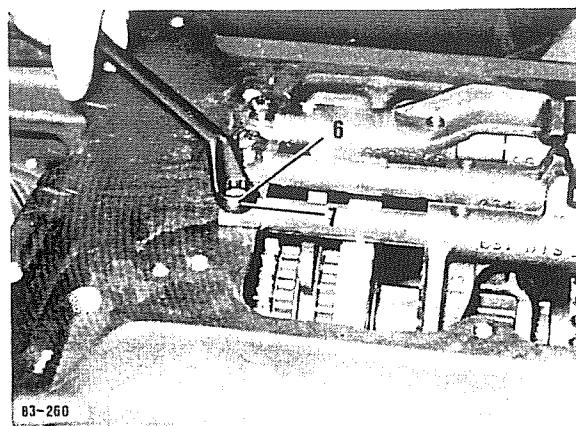
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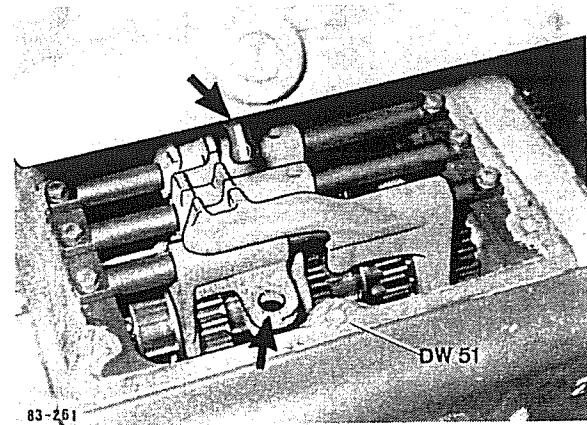
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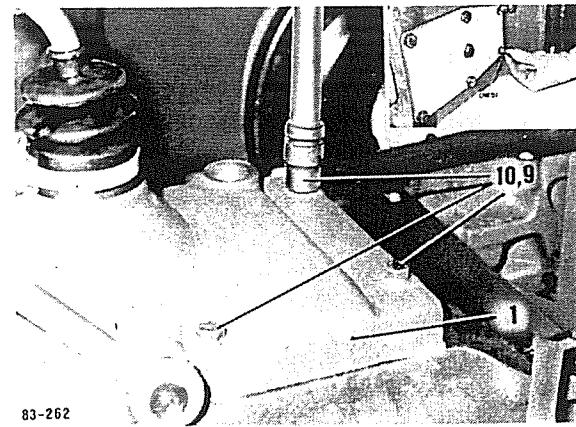
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83-260



83-261

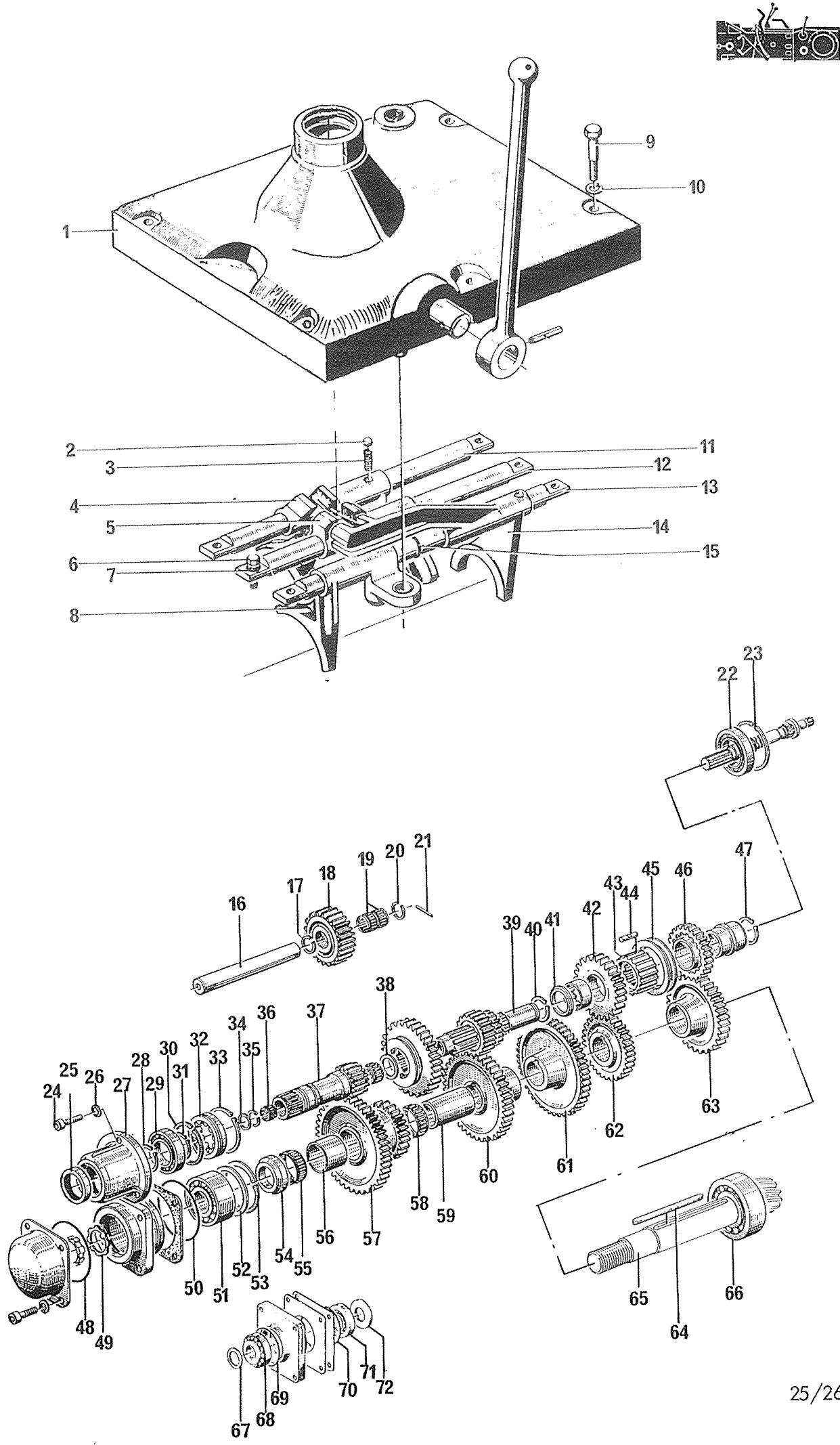


83-262





- |   |   |
|---|---|
| 1. Schaltdeckel                                   | 1. Gear shift cover                     |
| 2. Kugel  | 2. Ball                                 |
| 3. Druckfeder                                     | 3. Spring                               |
| 4. Schaltgabel, Rückwärtsgang                     | 4. Fork, reverse gear                   |
| 5. Schaltgabel 1-2 Gang                           | 5. Fork, 1st and 2nd gear               |
| 6. Sechskantschraube                              | 6. Bolt                                 |
| 7. Federring                                      | 7. Lockwasher                           |
| 8. Schaltgabel, Schnell-Langsam                   | 8. Fork, high-low                       |
| 9. Sechskantschraube                              | 9. Bolt                                 |
| 10. Federring                                     | 10. Lockwasher                          |
| 11. Schaltstange, Rückwärtsgang                   | 11. Rod, reverse gear                   |
| 12. Schaltstange, 1-2 Gang                        | 12. Rod, 1st and 2nd gear               |
| 13. Schaltstange, Schnell-Langsam<br>und 3-4 Gang | 13. Rod, high-low<br>and 3rd + 4th gear |
| 14. Schaltgabel 3-4 Gang                          | 14. Fork, 3rd + 4th gear                |
| 15. Sicherungsring                                | 15. Circlip                             |
| 16. Bolzen  | 16. Pin                                 |
| 17. Sicherungsring                                | 17. Circlip                             |
| 18. Rücklaufrad                                   | 18. Reverse gear                        |
| 19. Doppelnadelkäfig                              | 19. Needle cage                         |
| 20. Sicherungsring                                | 20. Circlip                             |
| 21. Spannhülse                                    | 21. Dowel sleeve                        |
| 22. Rillenkugellager                              | 22. Ball bearing                        |
| 23. Sicherungsring                                | 23. Circlip                             |
| 24. Zylinderschraube                              | 24. Screw                               |
| 25. Radial-Wellendichtring                        | 25. Radial shaft seal                   |
| 26. Sicherungsscheibe                             | 26. Lockwasher                          |
| 27. Lagerdeckel                                   | 27. Cap                                 |
| 28. Sicherungsring                                | 28. Circlip                             |
| 29. Rillenkugellager                              | 29. Ball bearing                        |
| 30. Sicherungsring                                | 30. Circlip                             |
| 31. Sicherungsring                                | 31. Circlip                             |
| 32. Rollenlager                                   | 32. Roller bearing                      |
| 33. Sicherungsring                                | 33. Circlip                             |
| 34. Radial-Wellendichtring                        | 34. Radial shaft seal                   |
| 35. Sicherungsring                                | 35. Circlip                             |
| 36. Nadelkäfig                                    | 36. Needle cage                         |
| 37. Antriebshohlwelle                             | 37. Drive quill                         |
| 38. Abstandsscheibe                               | 38. Spacer                              |
| 39. Hohlwelle                                     | 39. Quill                               |
| 40. Sicherungsring                                | 40. Circlip                             |
| 41. Abstandsscheibe                               | 41. Spacer                              |
| 42. Zahnrad                                       | 42. Gear                                |
| 43. Bolzenträger                                  | 43. Pin carrier                         |
| 44. Schaltbolzen                                  | 44. Pin                                 |
| 45. Schiebemuffe                                  | 45. Sleeve                              |
| 46. Zahnrad                                       | 46. Gear                                |
| 47. Sicherungsring                                | 47. Circlip                             |
| 48. Rundgummiring                                 | 48. O-seal                              |
| 49. Sicherungsblech                               | 49. Locking plate                       |
| 50. Rundgummiring                                 | 50. O-seal                              |
| 51. Schrägkugellager                              | 51. Ball bearing                        |
| 52. Beilage                                       | 52. Shim                                |
| 53. Sicherungsring                                | 53. Circlip                             |
| 54. Abstandsring                                  | 54. Spacer                              |
| 55. Nadelkäfig                                    | 55. Needle cage                         |
| 56. Abstandsröhr                                  | 56. Spacer                              |
| 57. Doppelzahnrad                                 | 57. Cluster gear                        |
| 58. Nadelkäfig                                    | 58. Needle cage                         |
| 59. Lagerbuchse                                   | 59. Bearing bush                        |
| 60. Zahnrad                                       | 60. Gear                                |
| 61. Zahnrad                                       | 61. Gear                                |
| 62. Zahnrad                                       | 62. Gear                                |
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| 64. Paßfeder                                      | 64. Key                                 |
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| 66. Zylinderrollenlager                           | 66. Roller bearing                      |
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| 68. Kegelrollenlager                              | 68. Roller bearing                      |
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| 70. Rundgummiring                                 | 70. O-seal                              |
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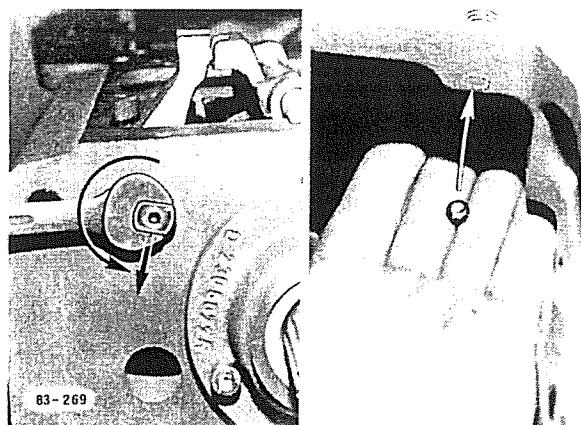
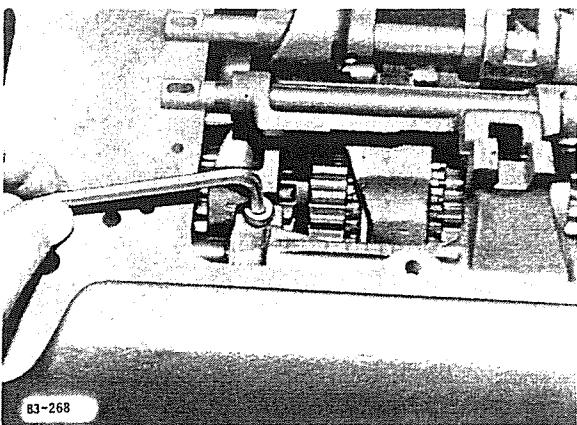
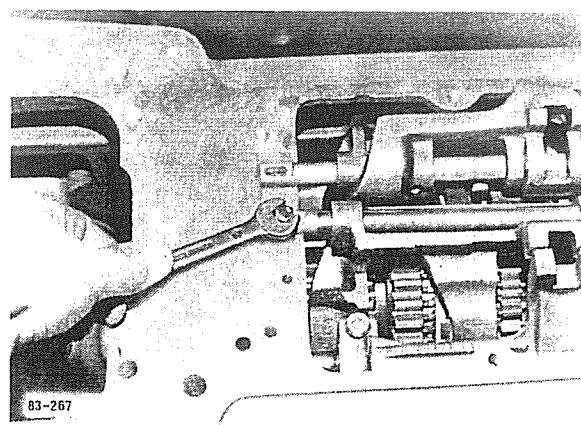
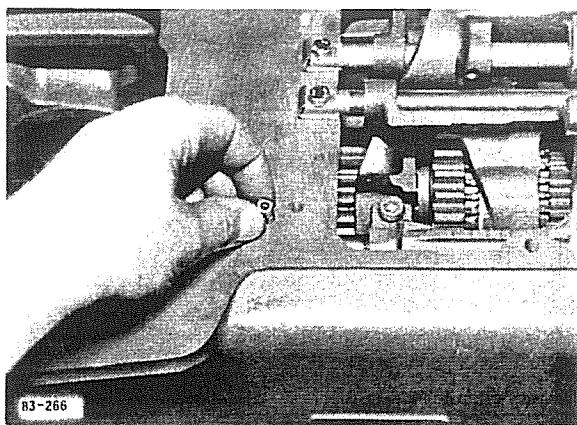
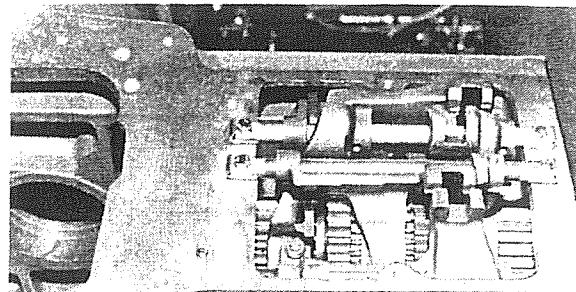
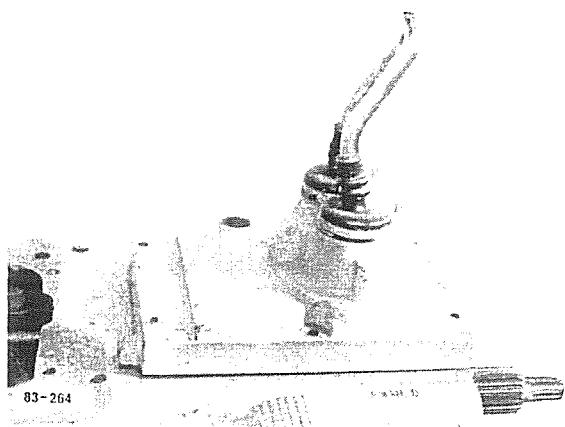
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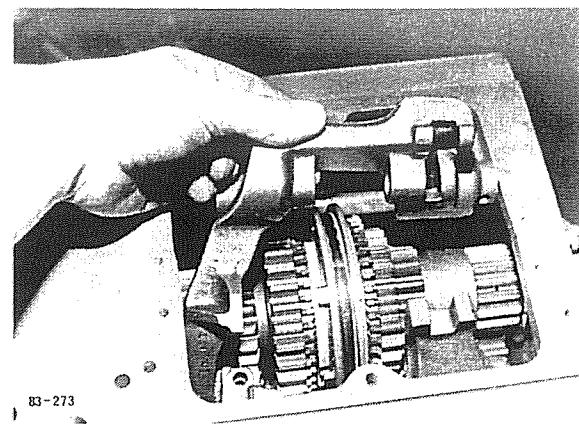
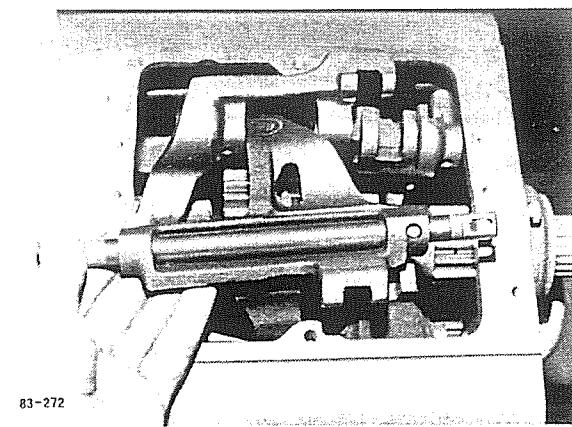
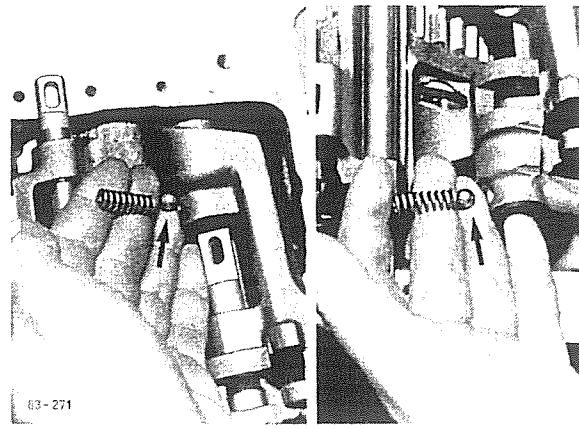
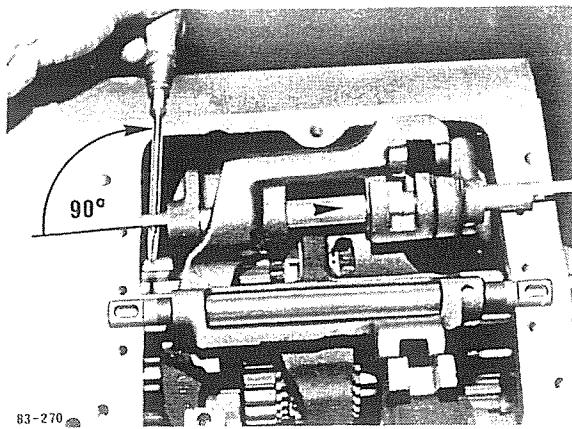
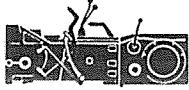
SCHALTUNG AUSBAUEN

REMOVING THE GEAR SHIFT MECHANISM

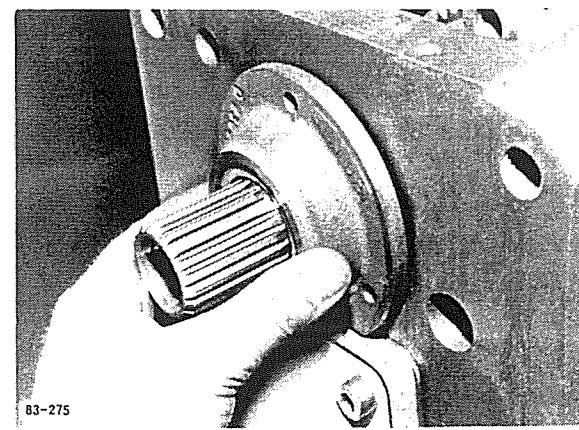
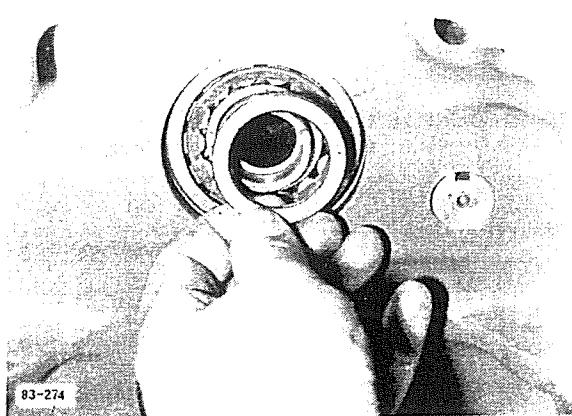
COMMANDE DE CHANGEMENT DES VITESSES: DEMONTER

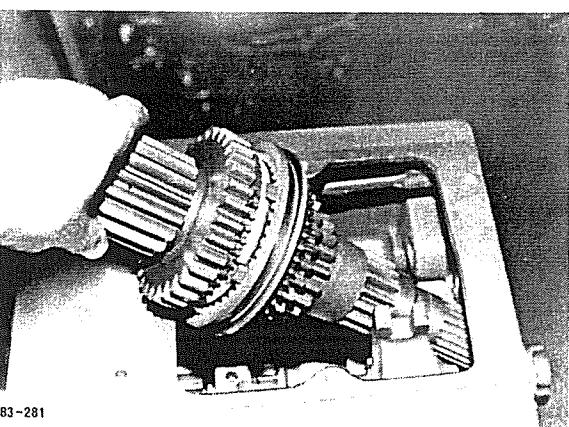
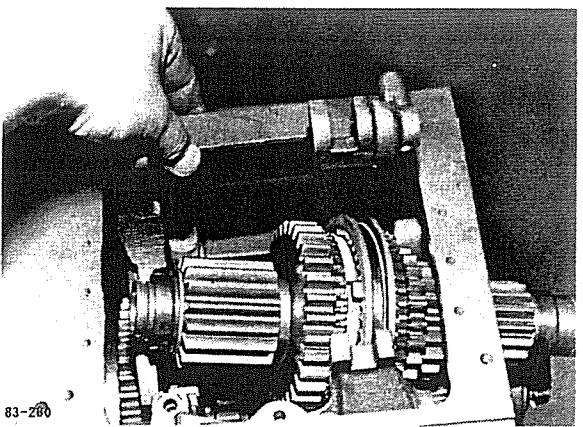
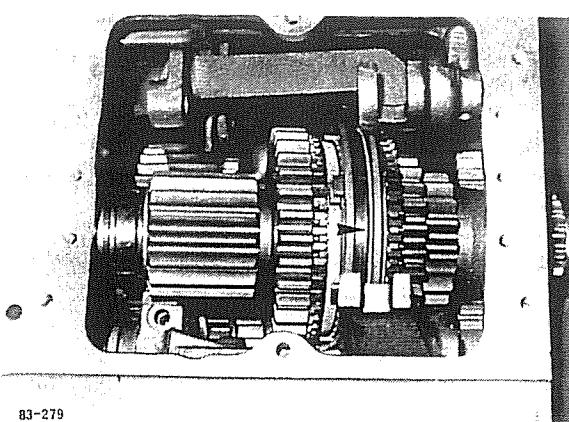
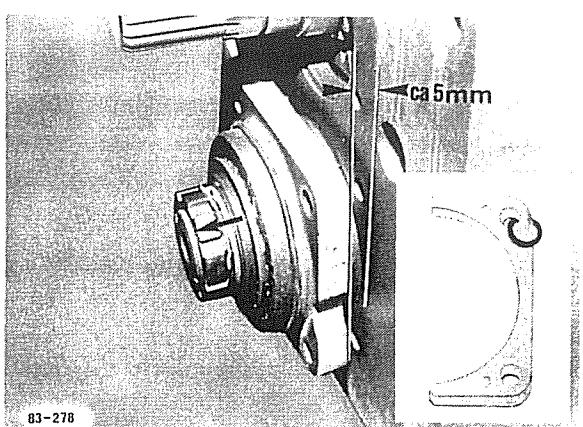
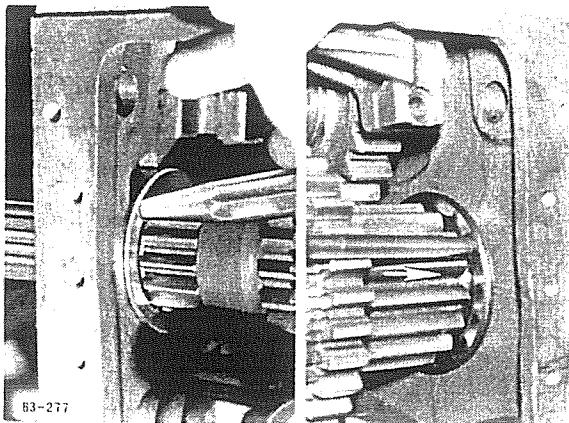
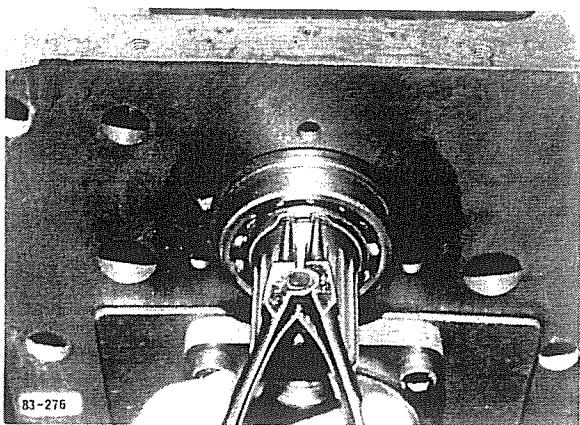
DESMONTAR EL CAMBIO DE VELOCIDADES

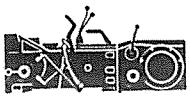




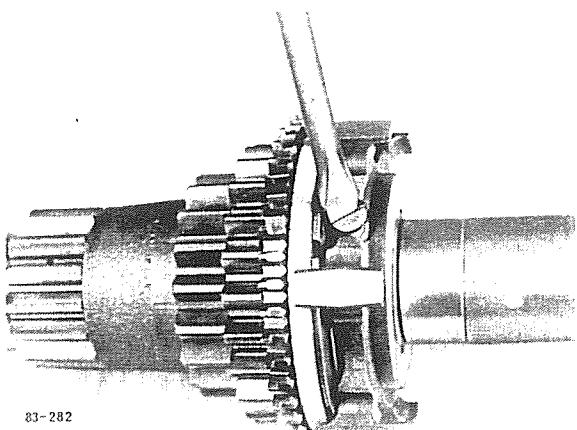
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REMOVING THE DRIVE QUILL  
ARBRE CREUX DE COMMANDE: DEMONTER  
DESMONTAR EL EJE HUECO DE ACCIONAMIENTO**



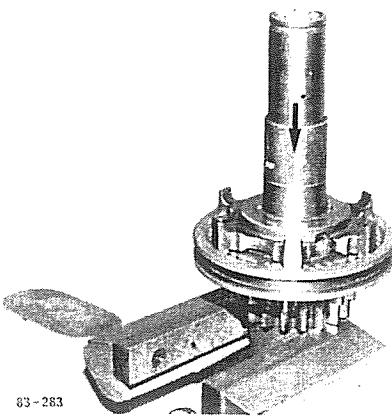




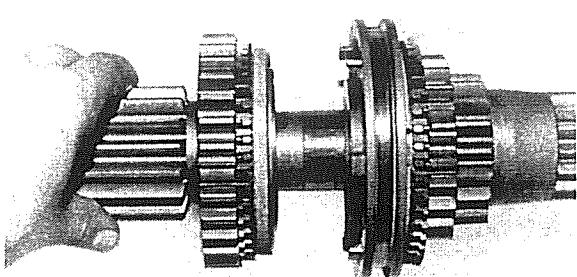
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DISMANTLING THE DRIVE QUILL  
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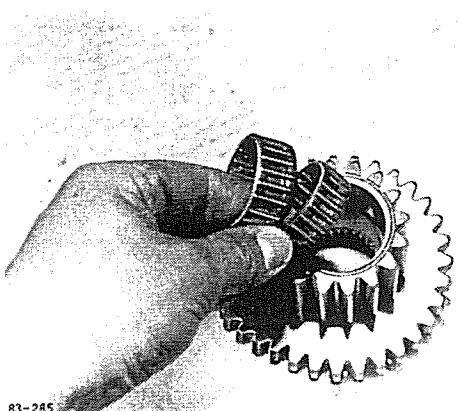
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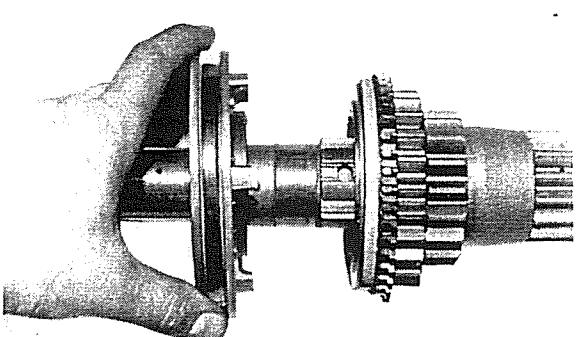
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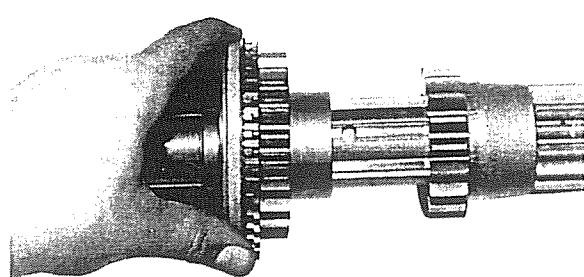
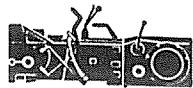


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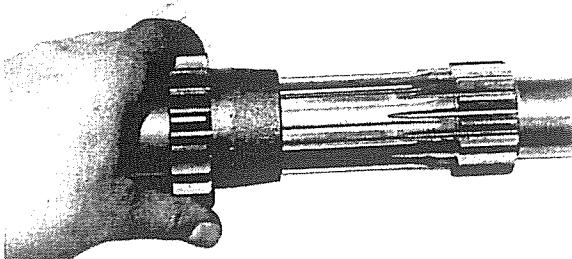


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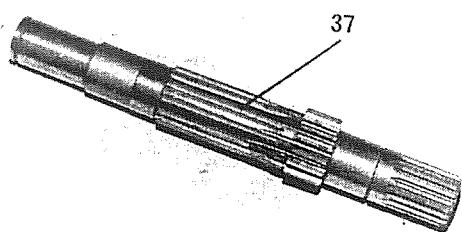




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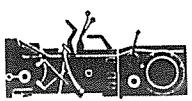


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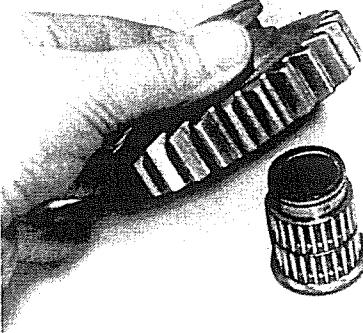
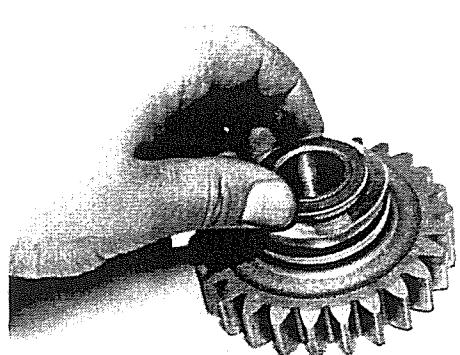
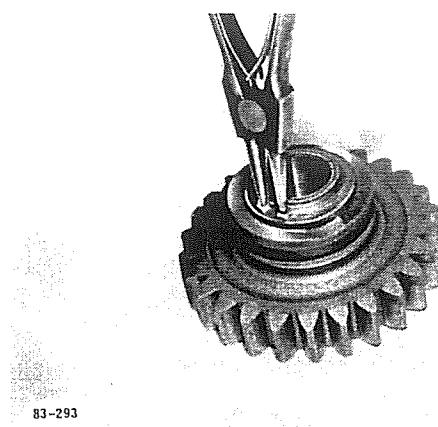
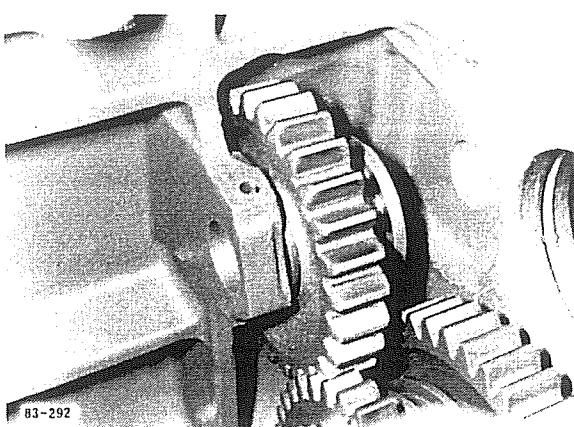
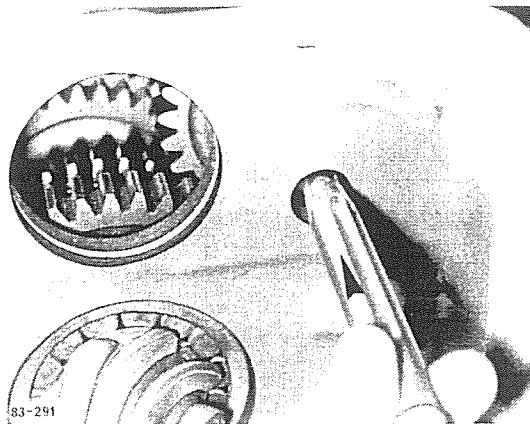
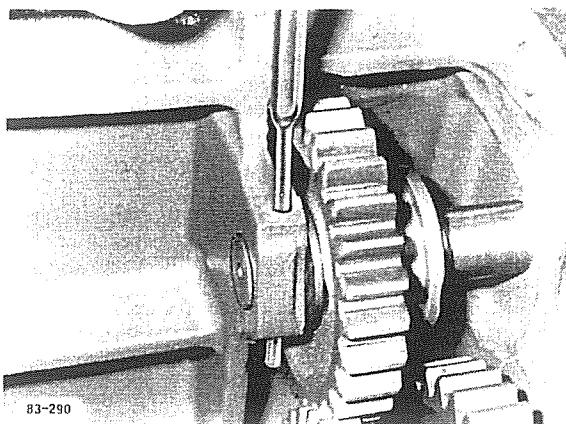


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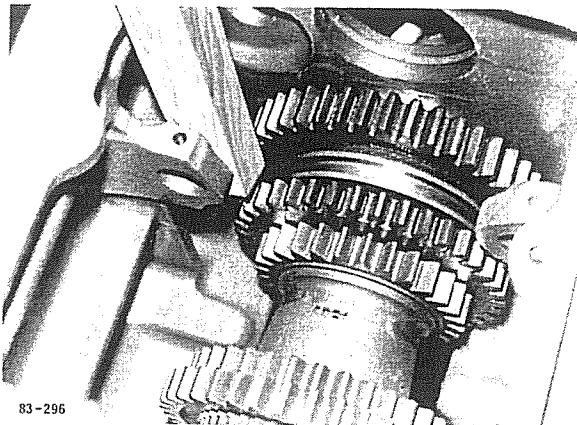
RÜCKWÄRTSGANG AUSBAUEN UND ZERLEGEN  
REMOVING AND DISMANTLING THE REVERSE GEAR  
MARCHE AR: DEMONTER ET DESASSEMBLER  
DESMONTAR Y DESARMAR LA MARCHA ATRAS



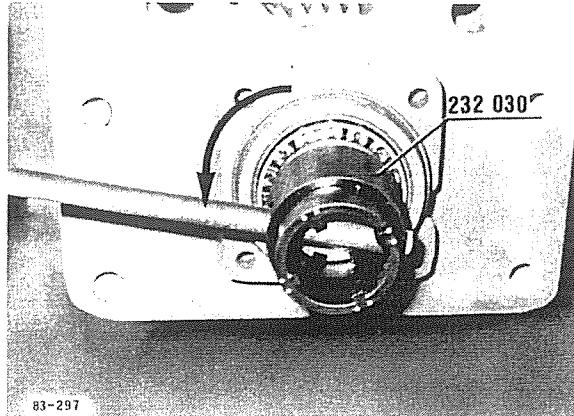
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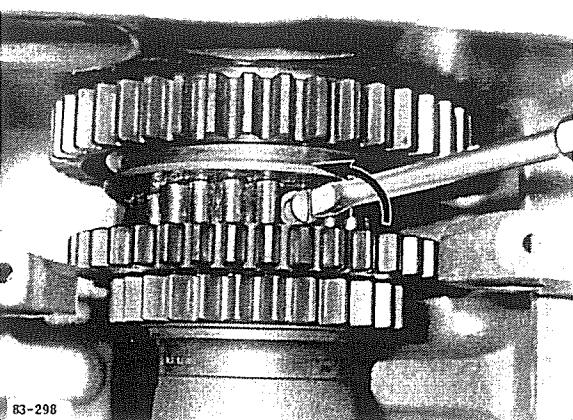
**KEGELRADWELLE AUSBAUEN UND ZERLEGEN**  
**REMOVING AND DISMANTLING THE BEVEL GEAR SHAFT**  
**ARBRE DE PIGNON CONIQUE: DEMONTER ET DESASSEMBLER**  
**DESMONTAR Y DESARMAR EL EJE DE RUEDA CONICA**



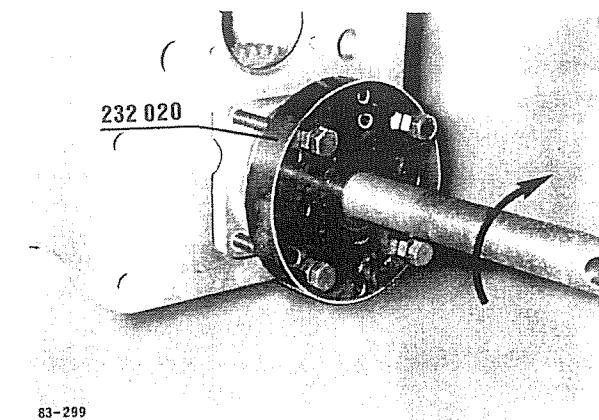
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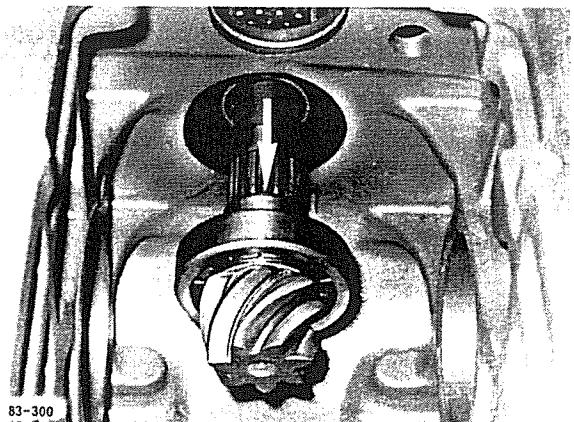
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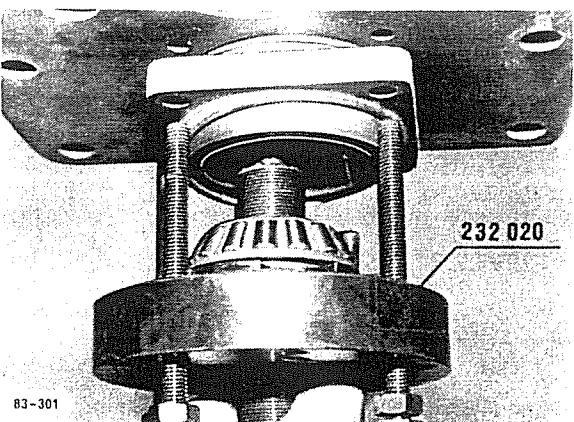
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83-299

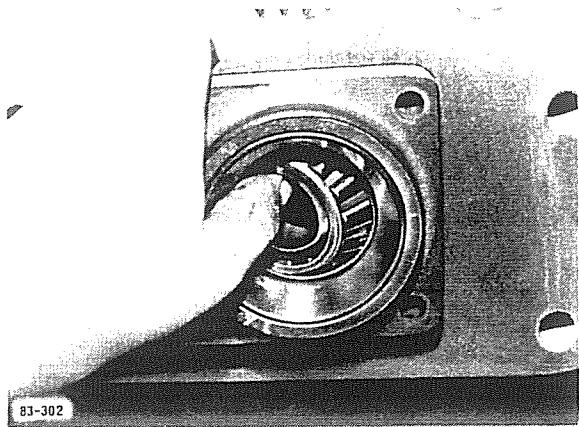
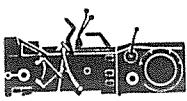


83-300

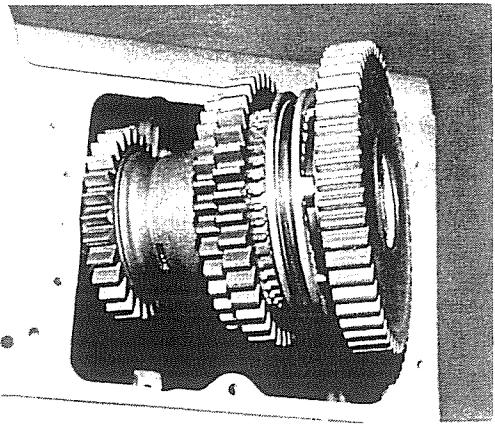


83-301

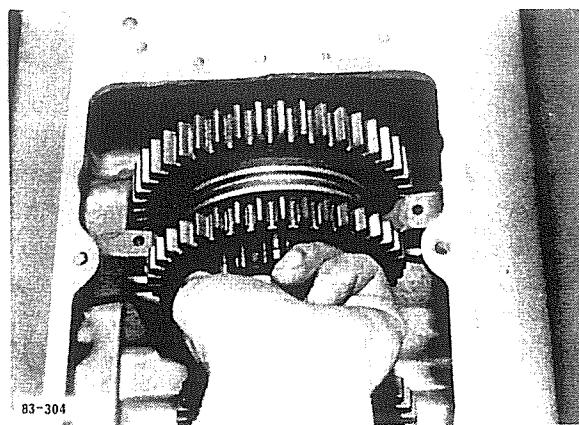




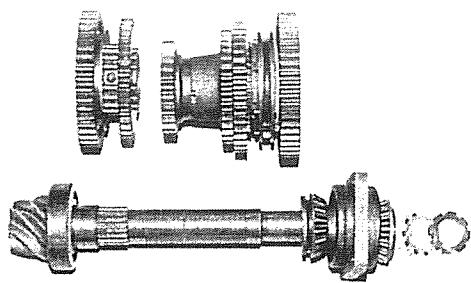
83-302



83-303



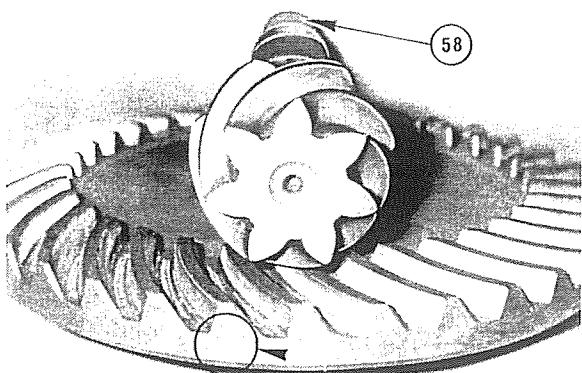
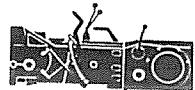
83-304



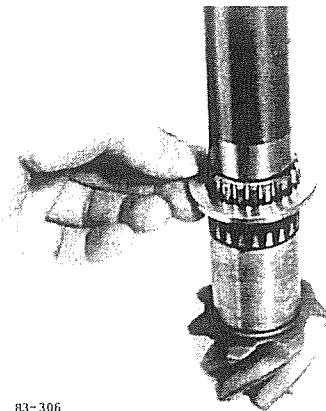
83-305



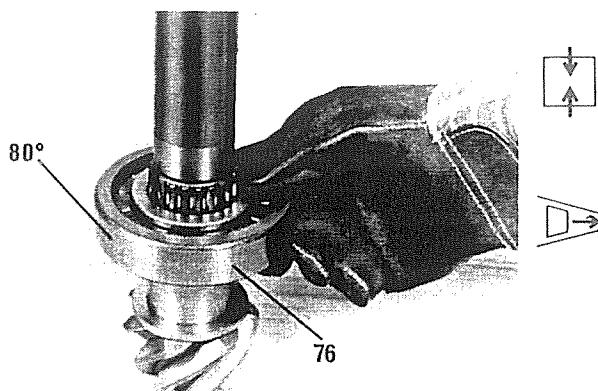
KEGELRADWELLE EINBAUEN  
 REFITTING THE BEVEL GEAR SHAFT  
 ARBRE DE PIGNON CONIQUE: REMONTER  
 REMONTAR EL EJE DE RUEDA CONICA



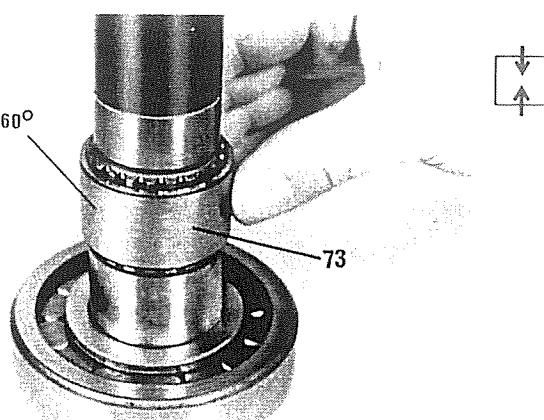
83-179



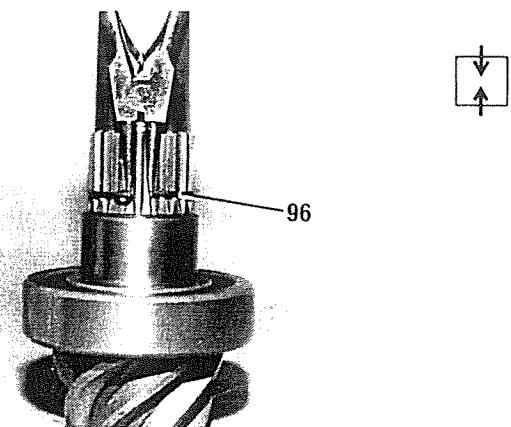
83-306



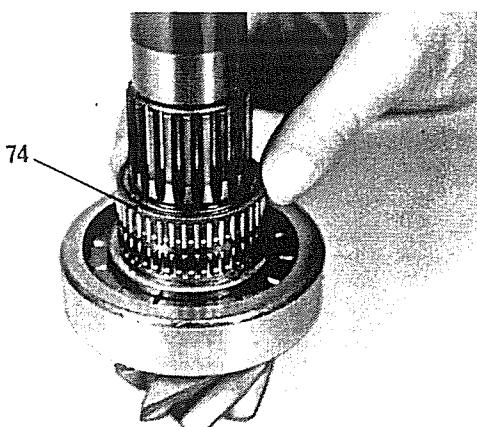
83-307



83-308

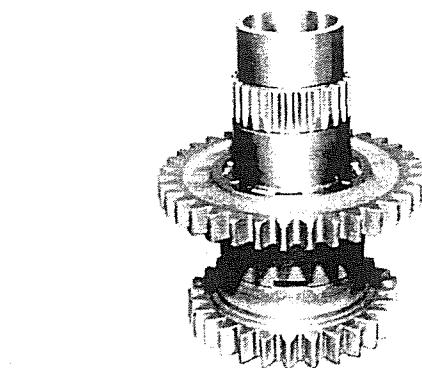
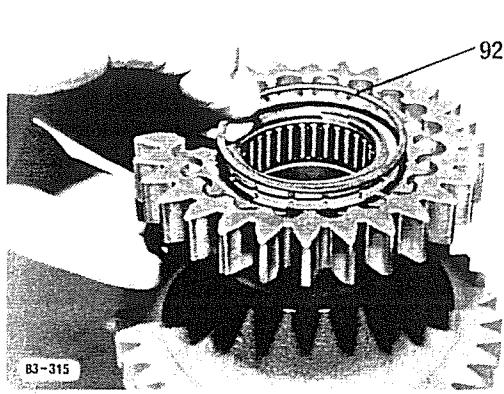
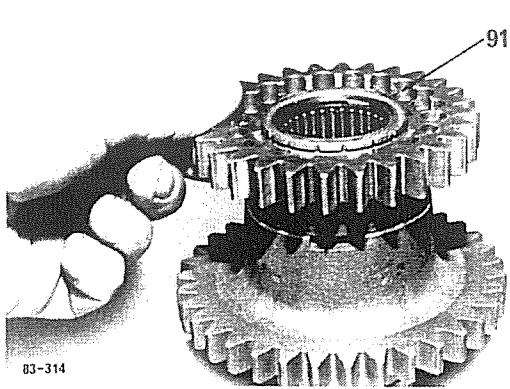
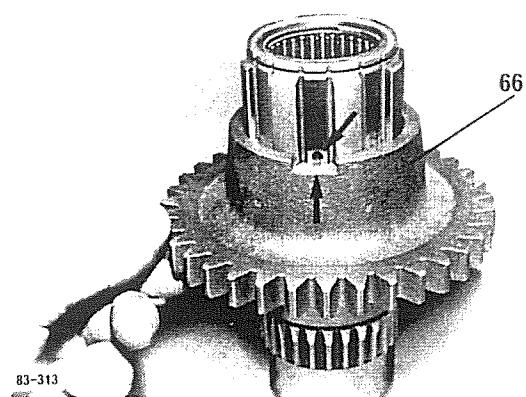
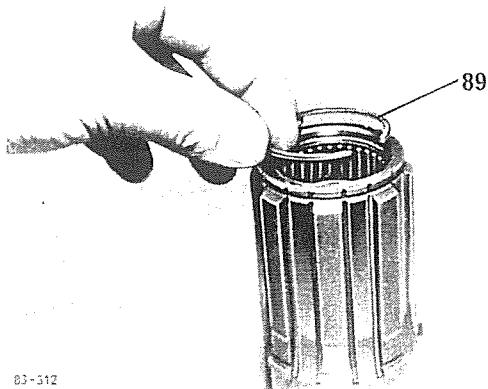
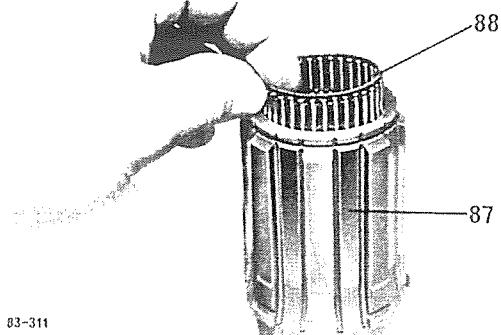
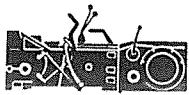


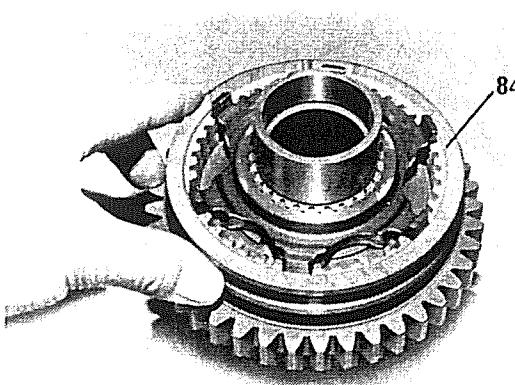
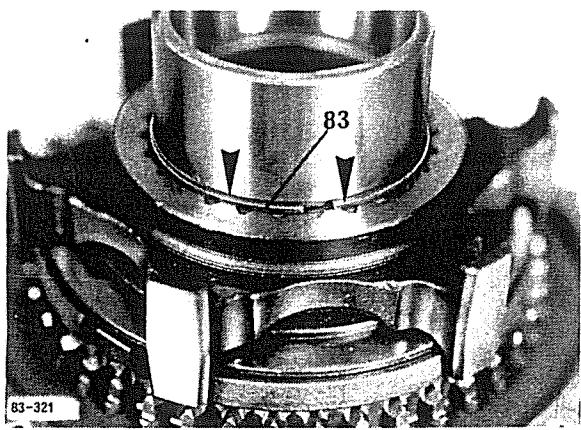
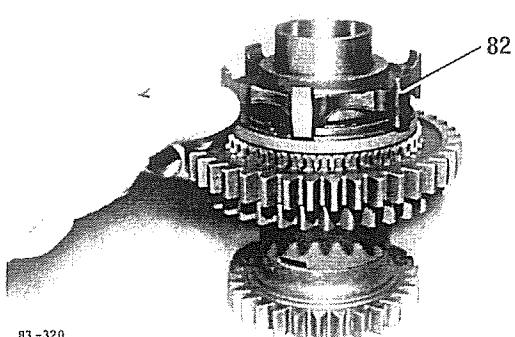
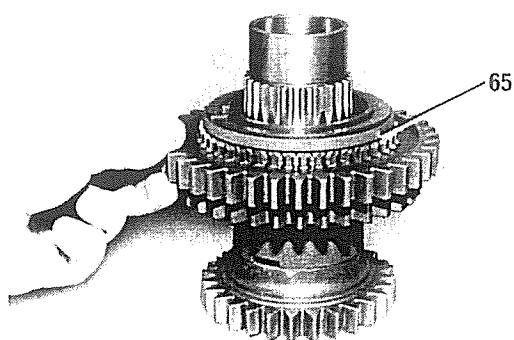
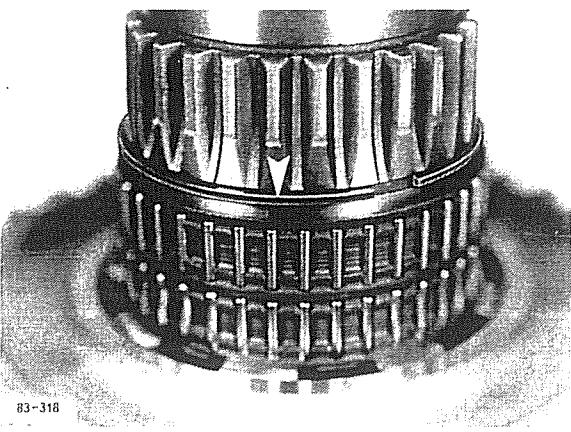
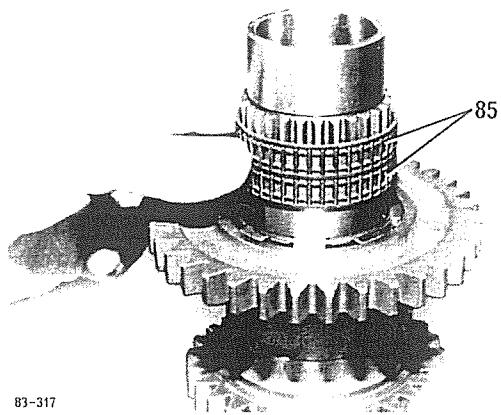
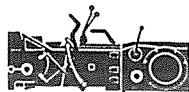
83-309

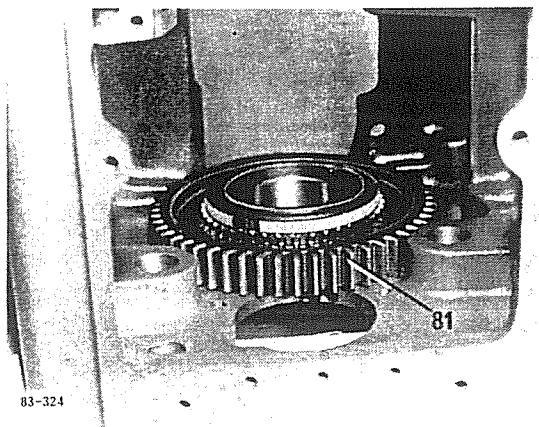
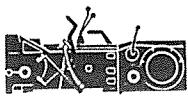


83-310

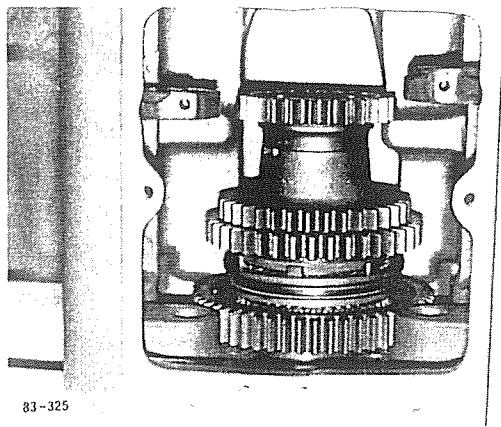




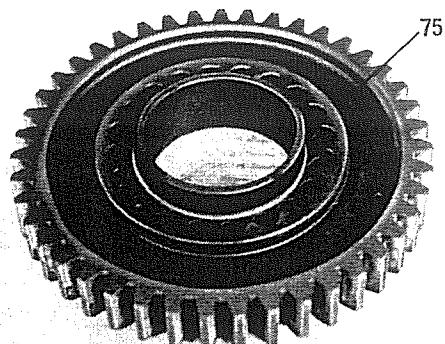




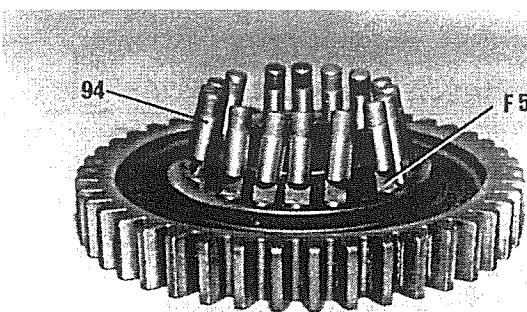
83-324



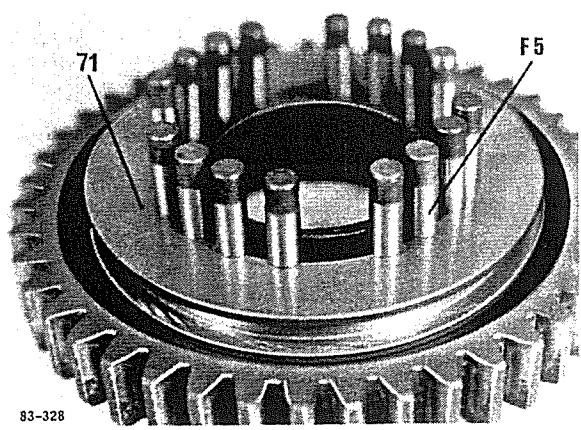
83-325



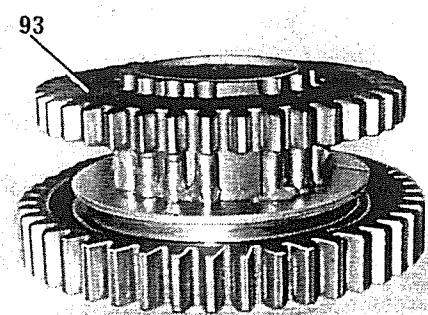
83-326



83-327

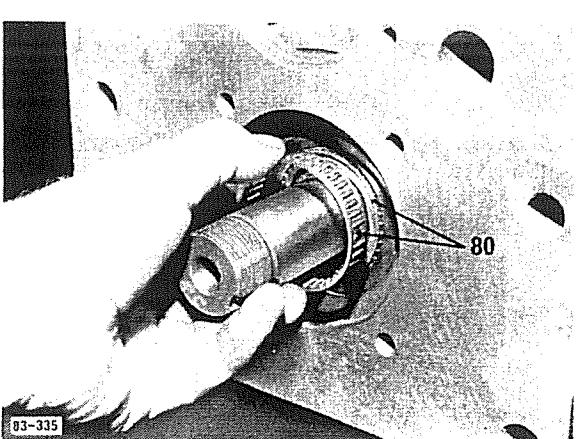
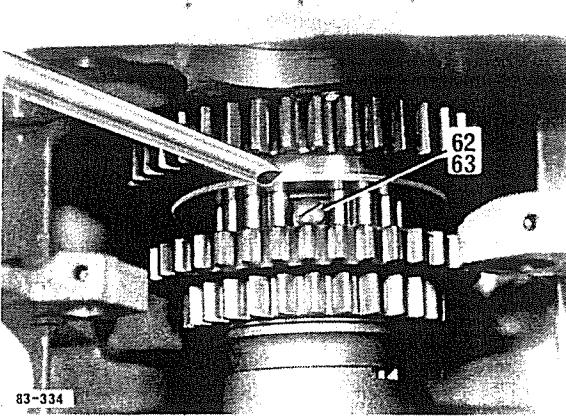
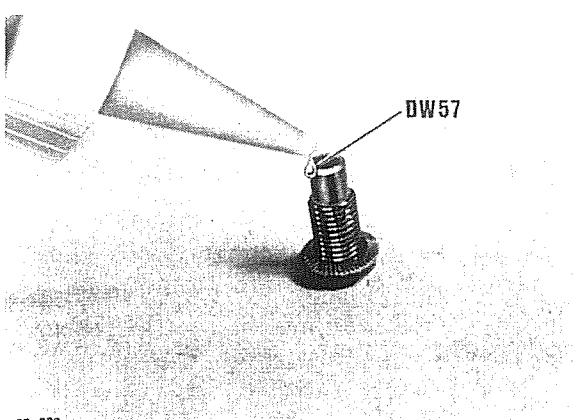
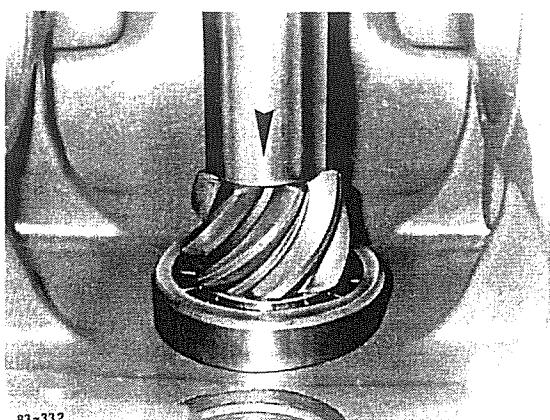
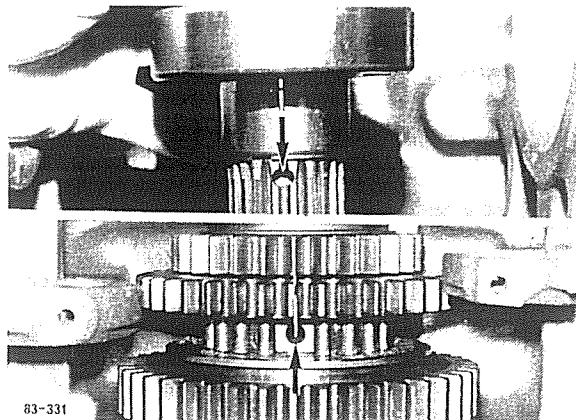
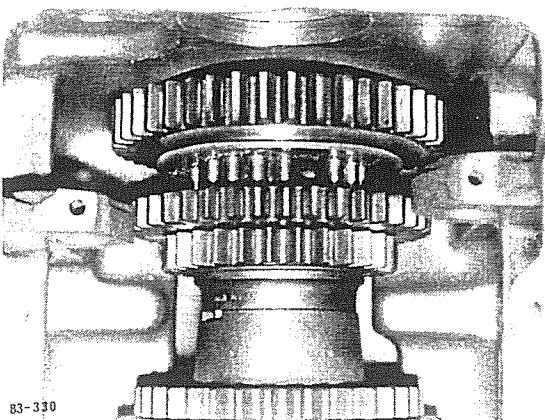


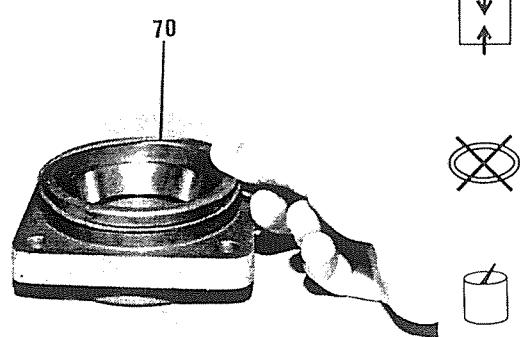
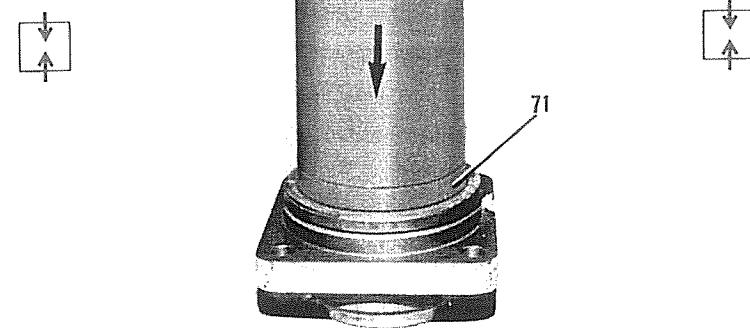
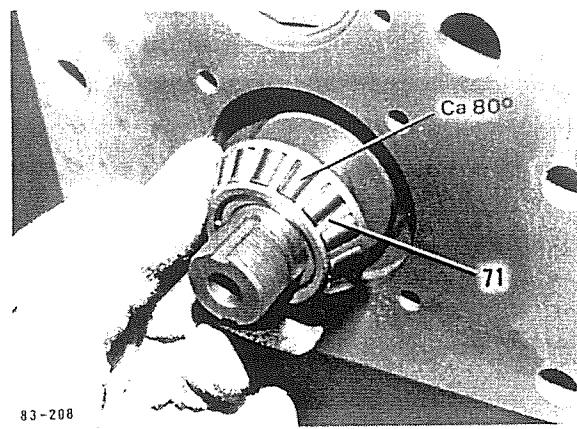
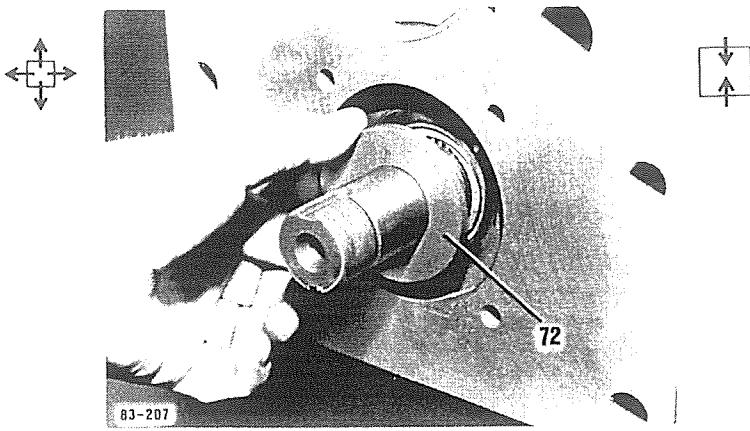
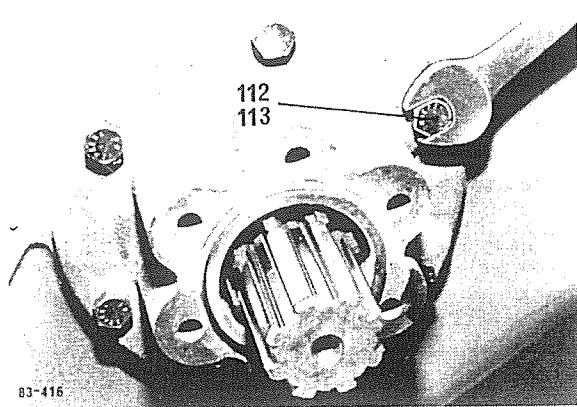
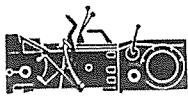
83-328



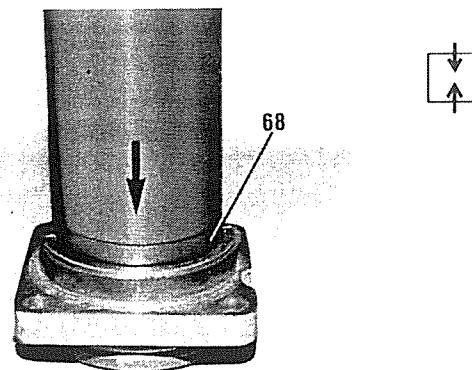
83-329

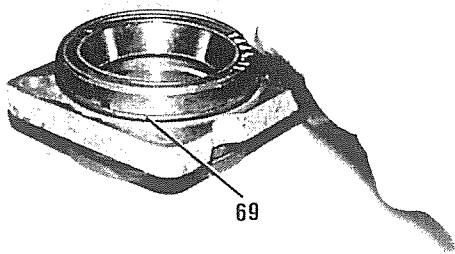
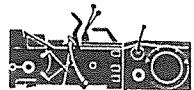




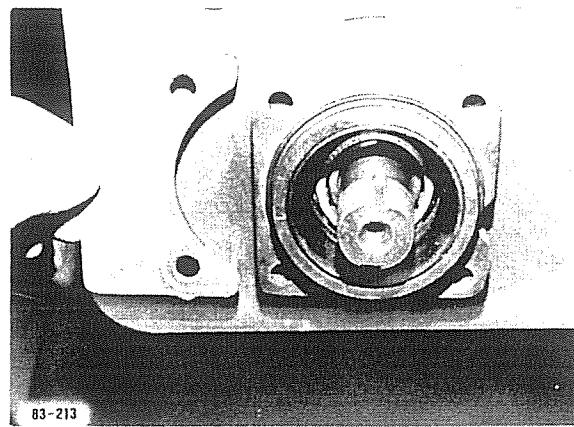


83-211

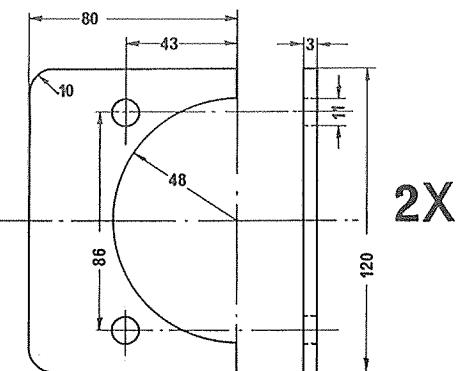




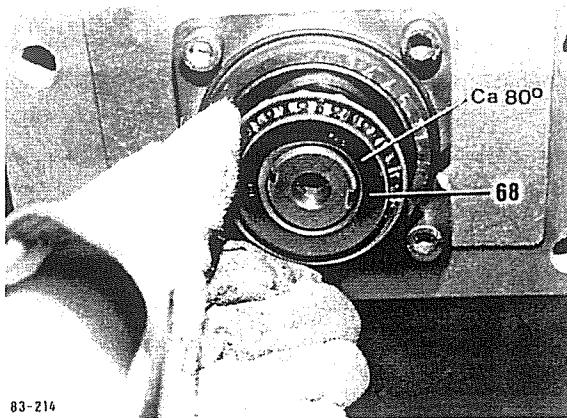
83-212



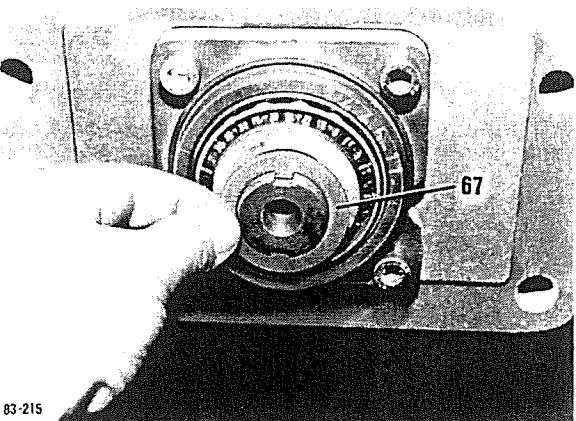
83-213



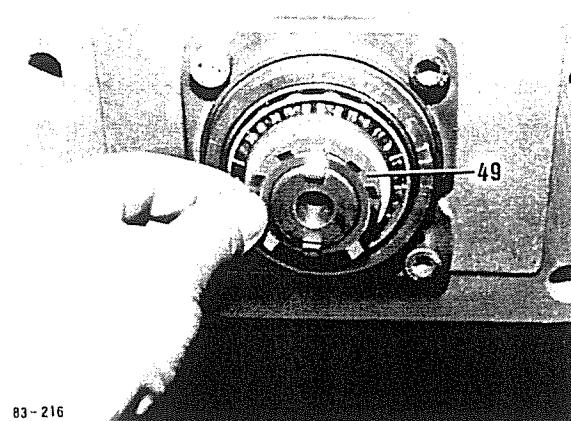
83-206



83-214

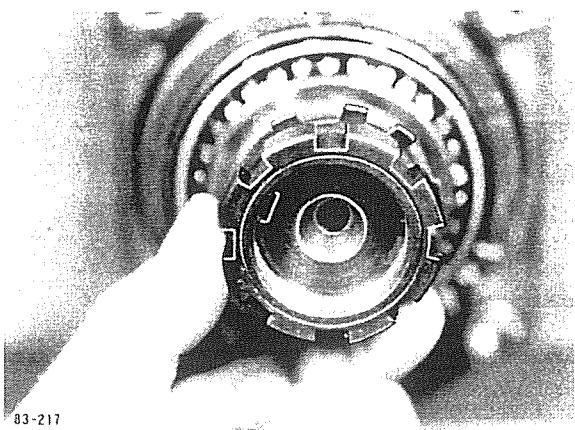
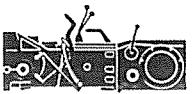


83-215

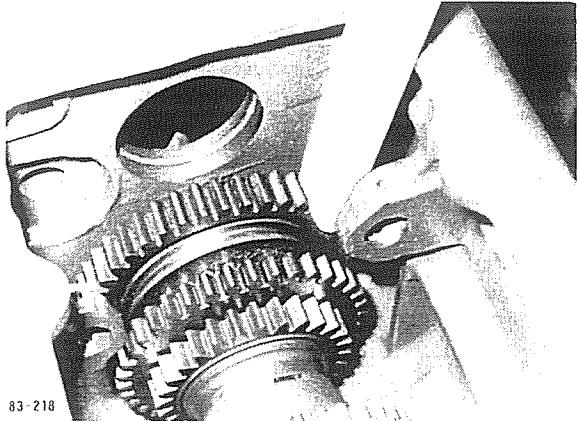


83-216

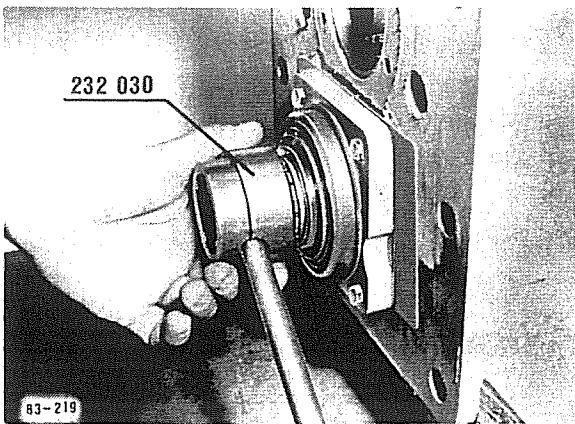




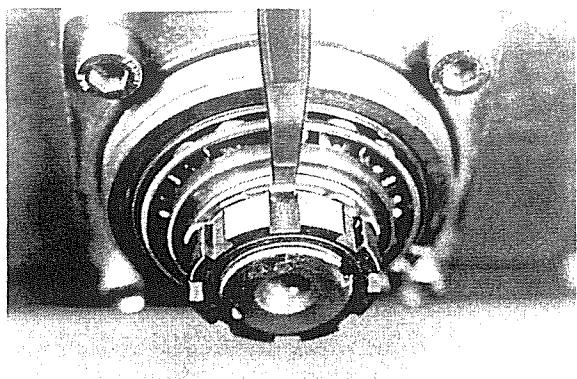
83-217



83-218



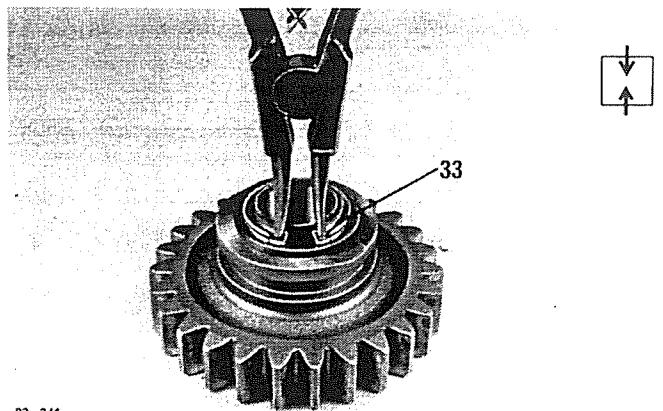
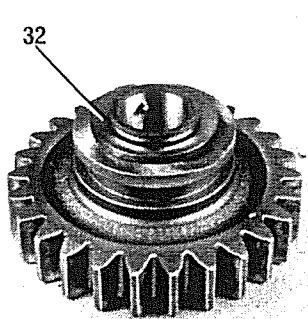
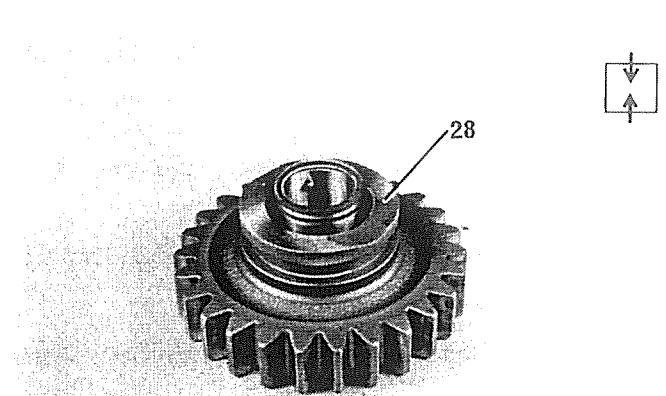
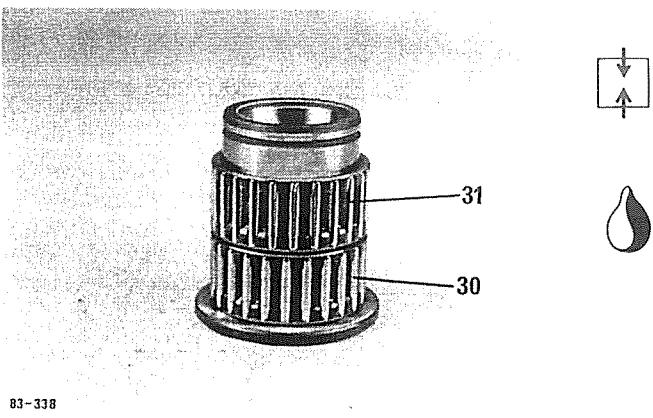
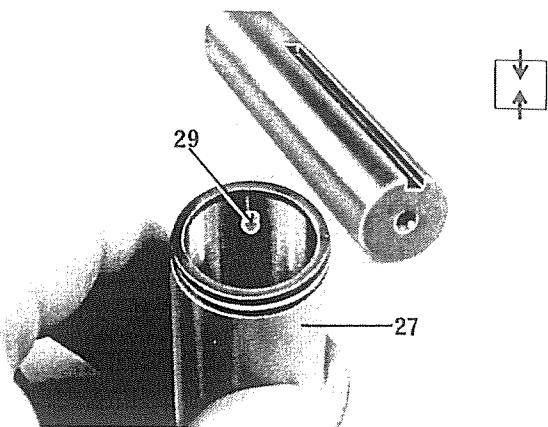
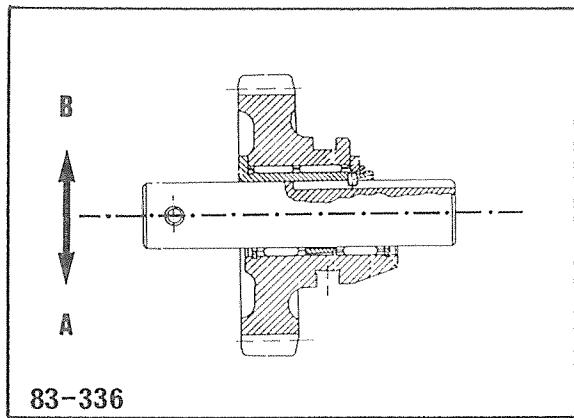
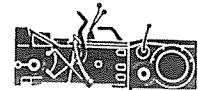
83-219

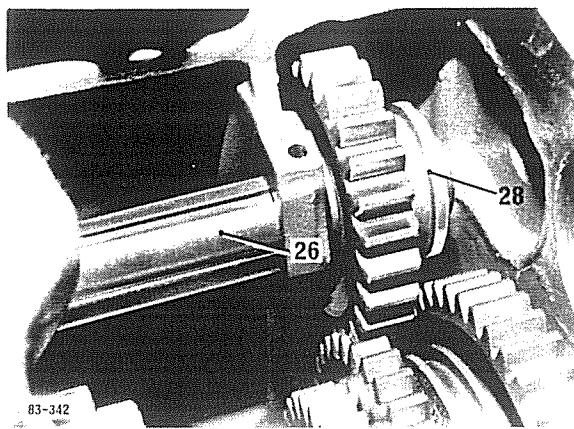


83-220

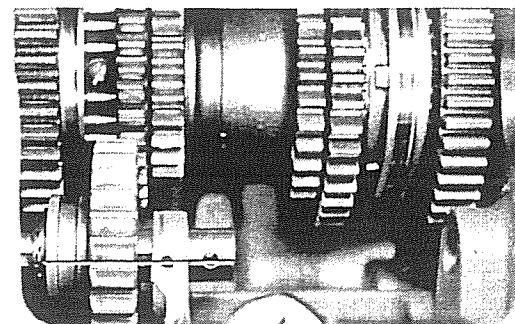


RÜCKWÄRTSGANG ZUSAMMEN- UND EINBAUEN  
 REASSEMBLING AND REFITTING THE REVERSE GEAR  
 MARCHE AR: REASSEMBLER ET REMONTER  
 REARMAR Y REMONTAR LA MARCHA ATRAS

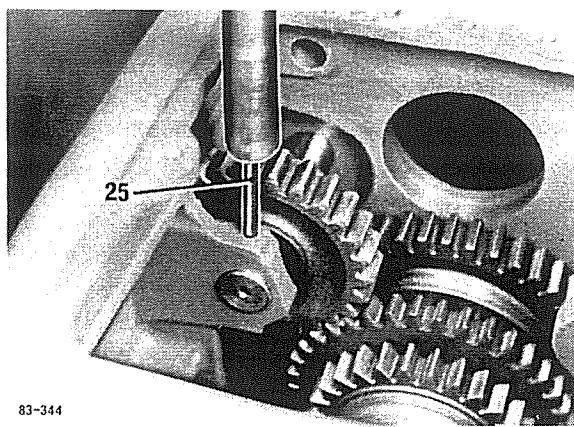
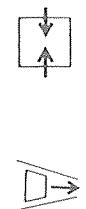




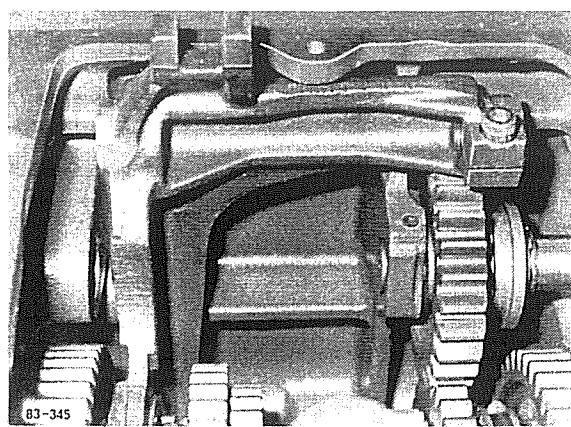
83-342



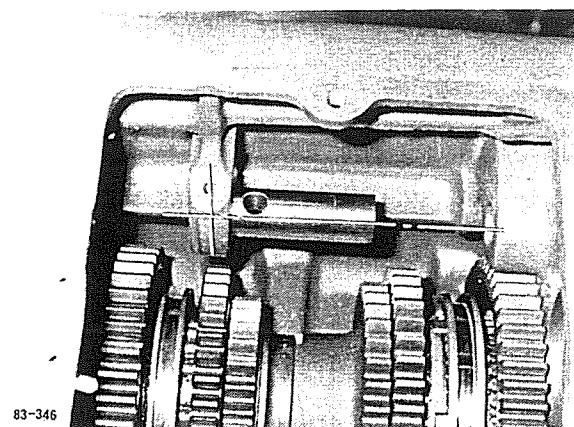
83-343



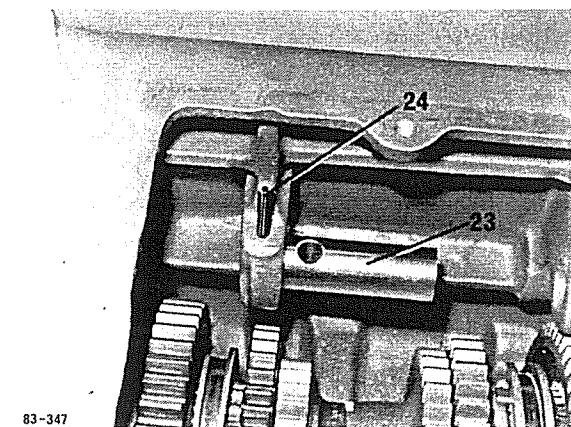
83-344



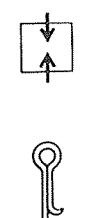
83-345



83-346



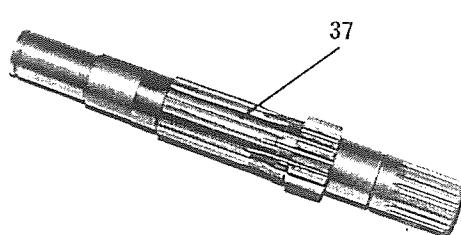
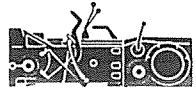
83-347



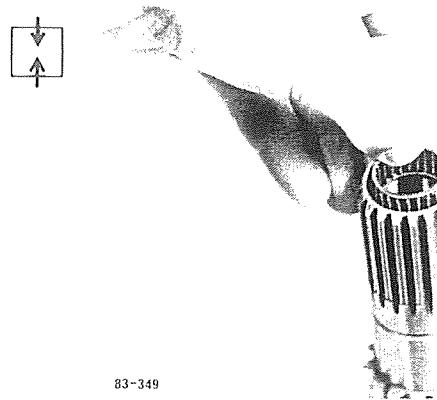
nur K-Gang  
only creep-gear  
vit. rampante seulement  
sólo marcha ultralenta

nur K-Gang  
only creep-gear  
vit. rampante seulement  
sólo marcha ultralenta

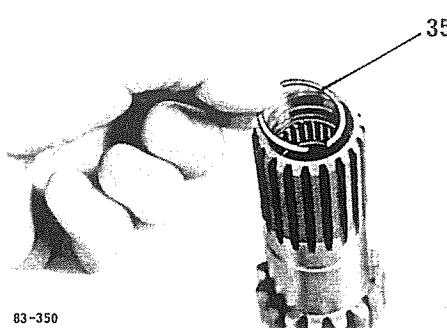
ANTRIEBSHOHLWELLE MONTIEREN UND EINBAUEN  
 REASSEMBLING AND REFITTING THE DRIVE QUILL  
 ARBRE CREUX DE COMMANDE: MONTER ET REASSEMBLER  
 REARMAR Y REMONTAR EL EJE HUECO DE ACCIONAMIENTO



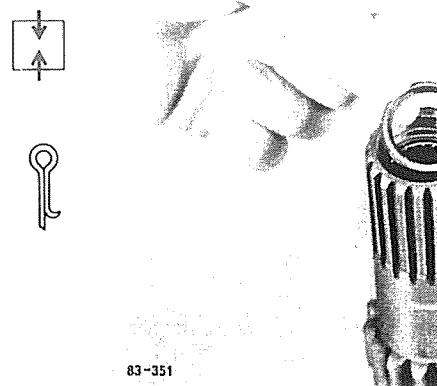
83-289



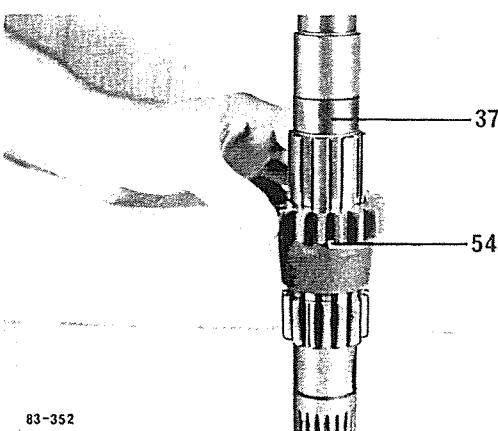
83-349



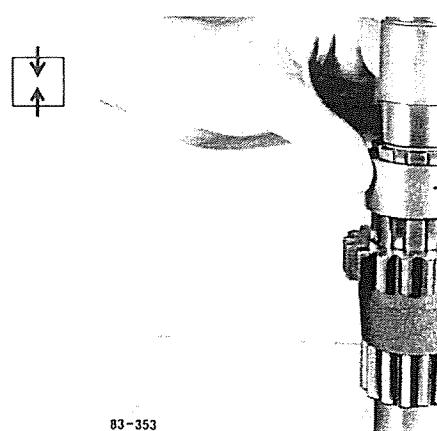
83-350



83-351

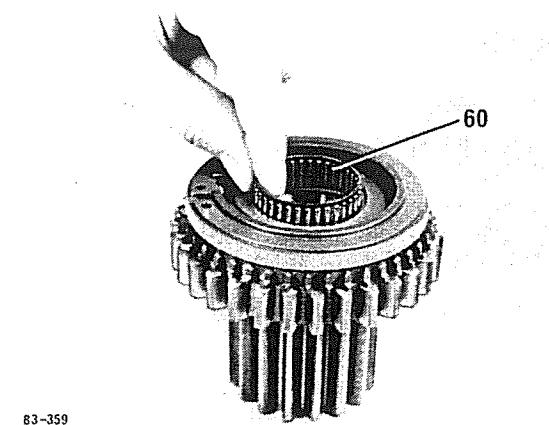
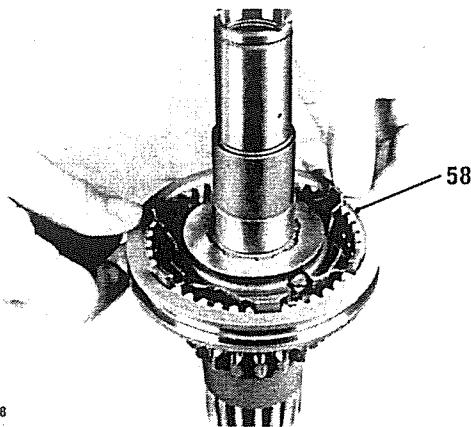
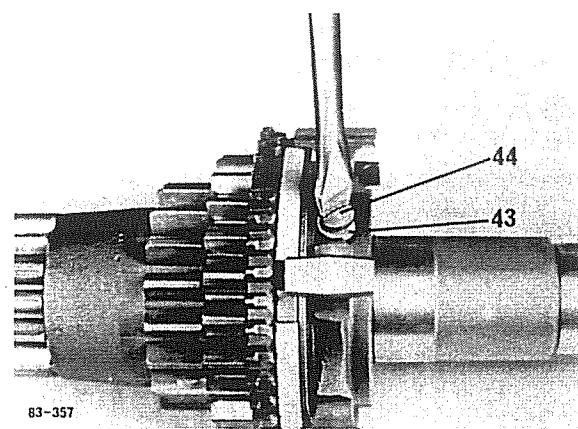
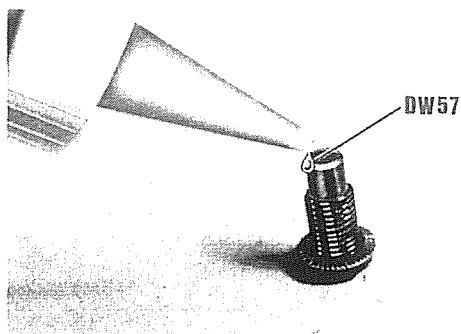
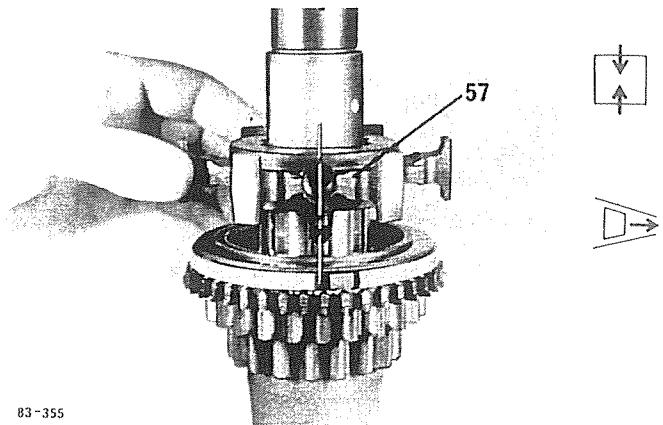
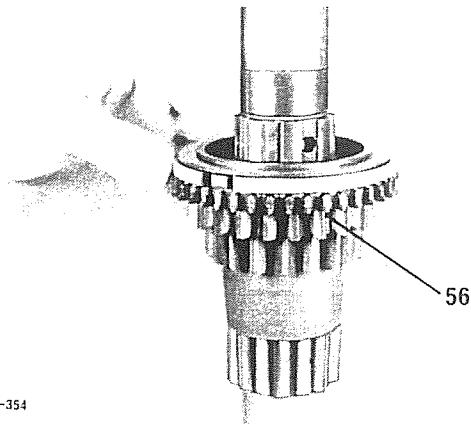
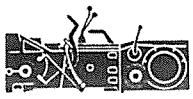


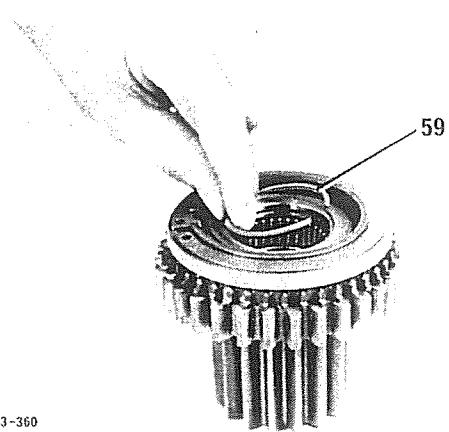
83-352



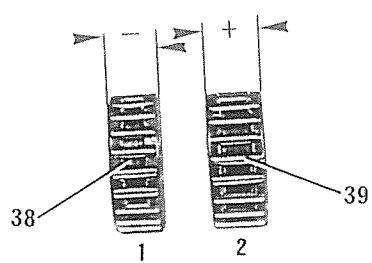
83-353



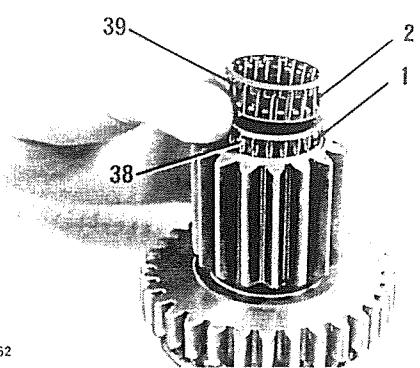




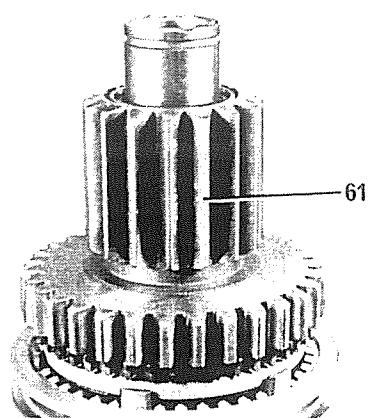
83-360



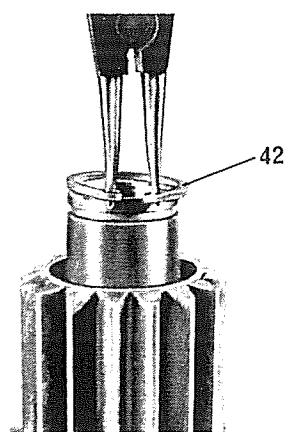
83-361



83-362

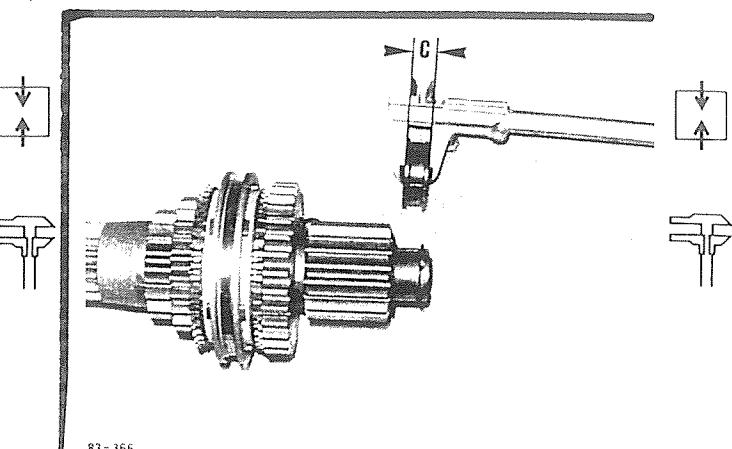
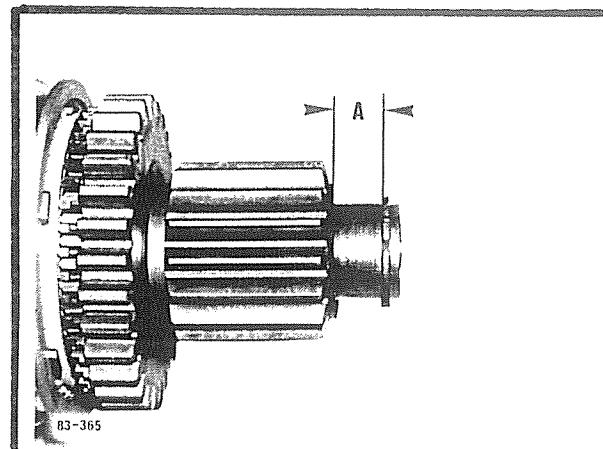
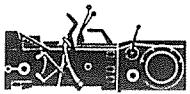


83-363

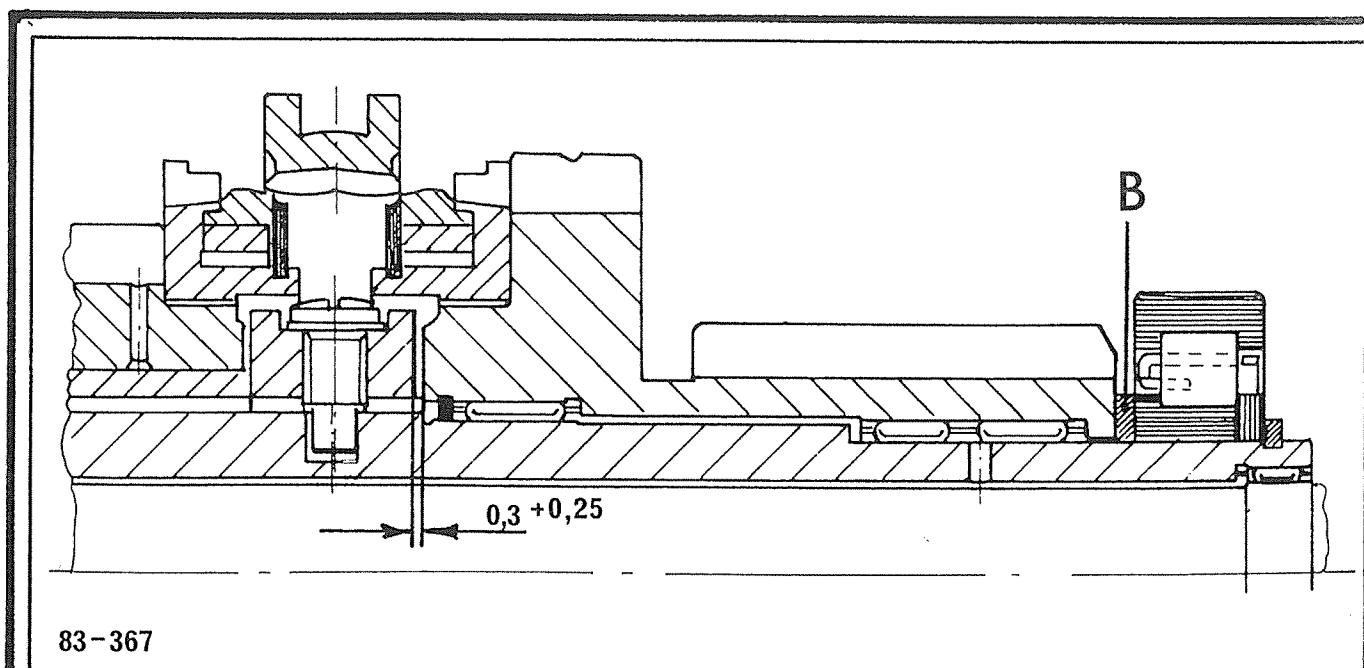
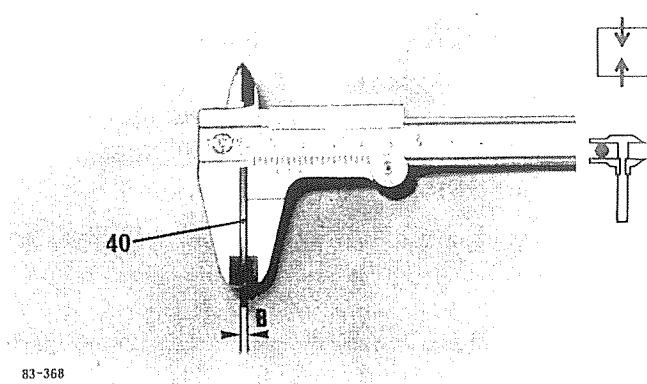


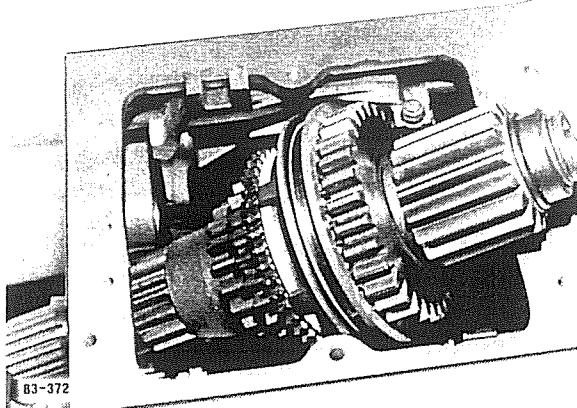
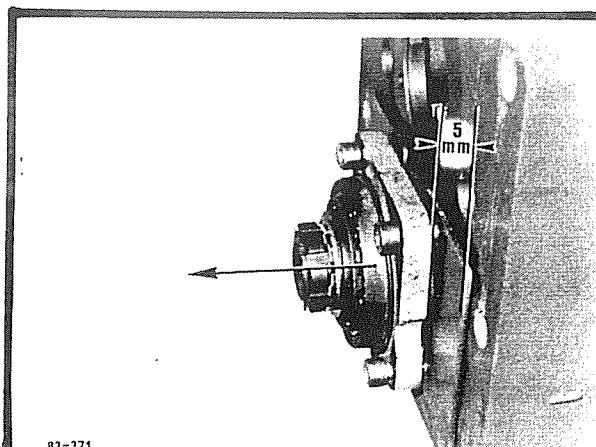
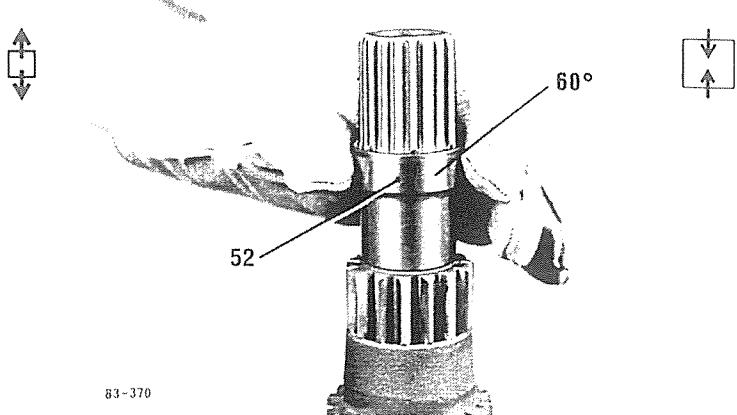
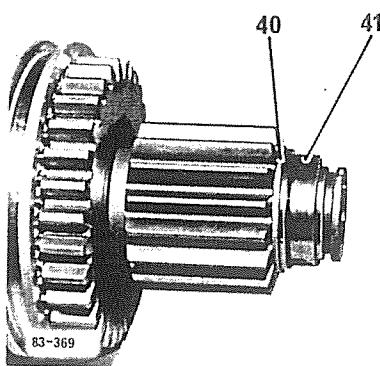
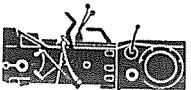
83-364

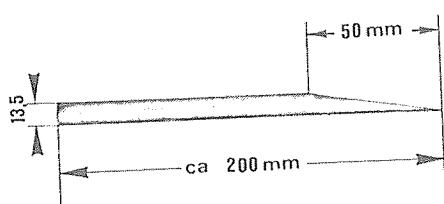
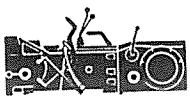




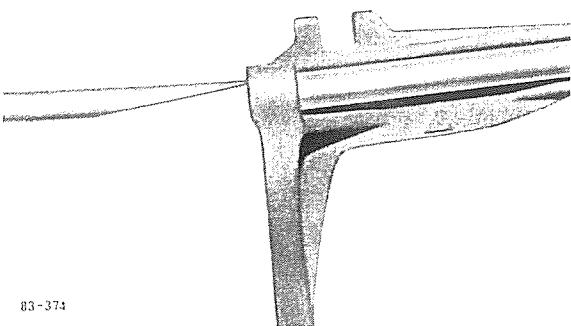
$$B = A - (C + 0,3)$$



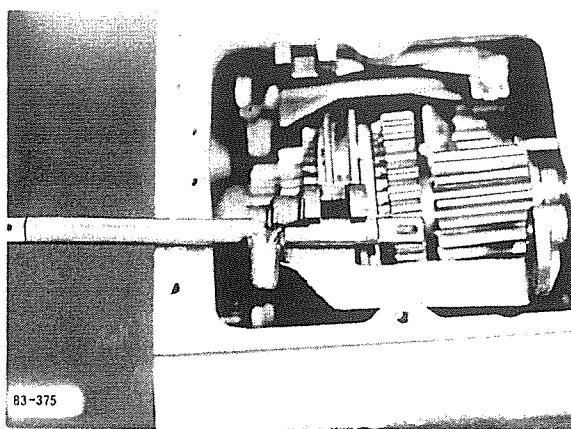




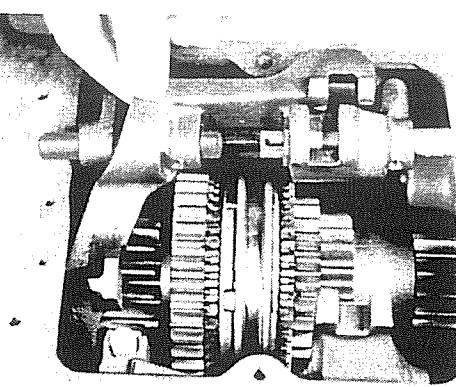
83-373



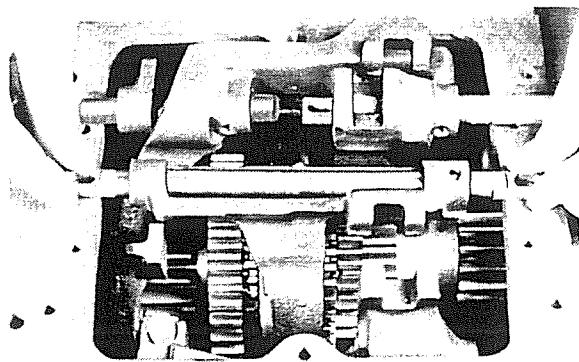
83-374



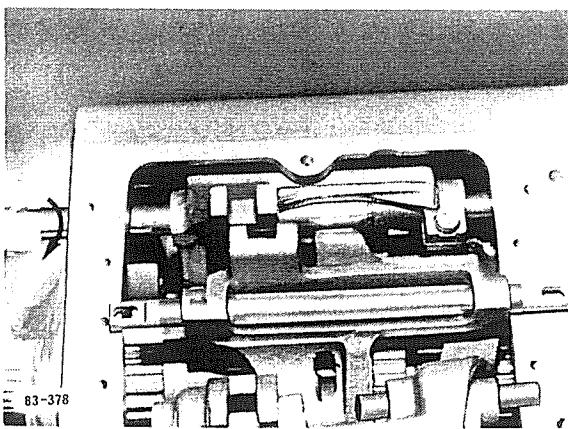
83-375



83-376

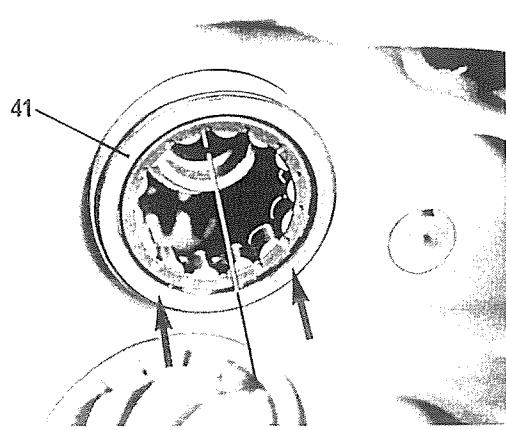
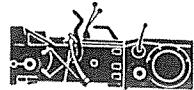


83-377

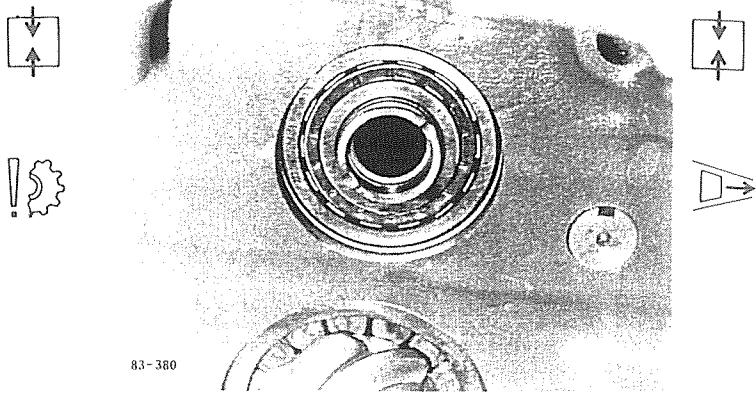


83-378

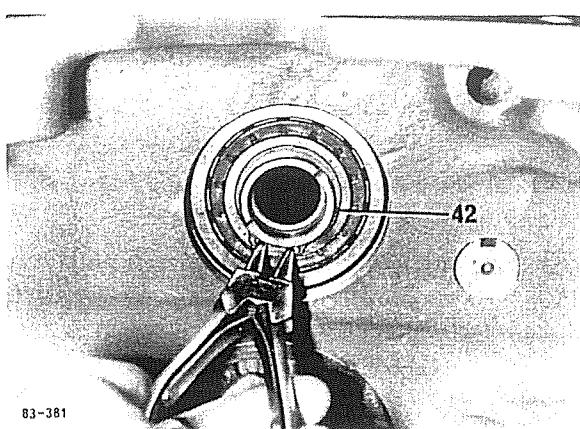




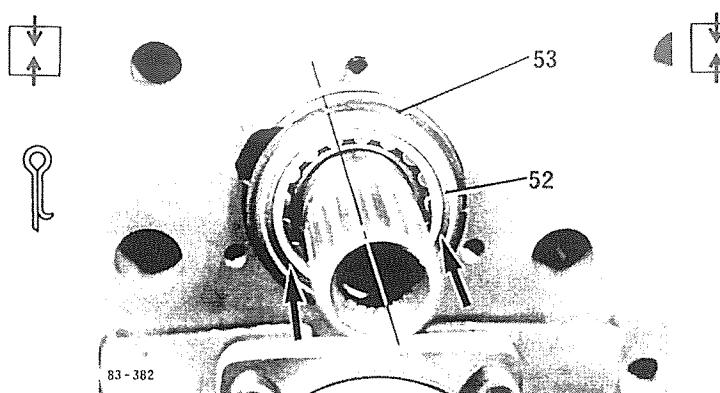
83-379



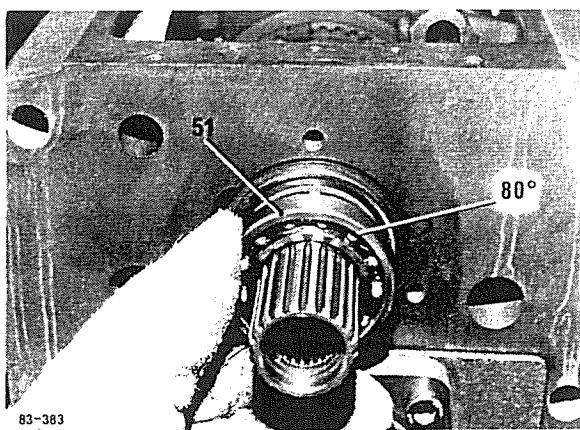
83-380



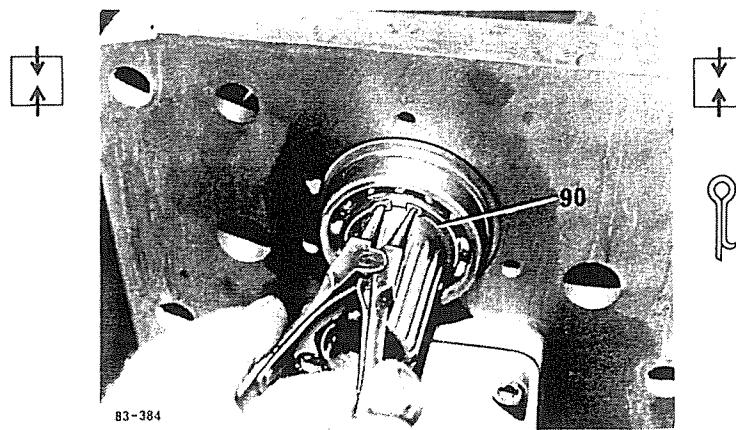
83-381



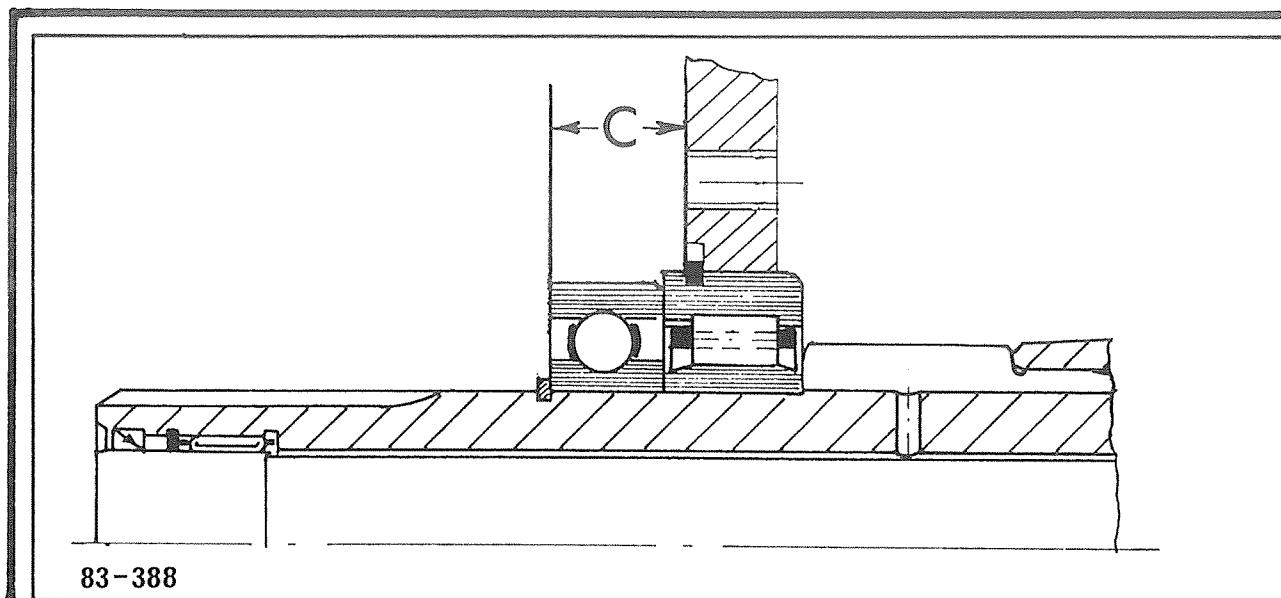
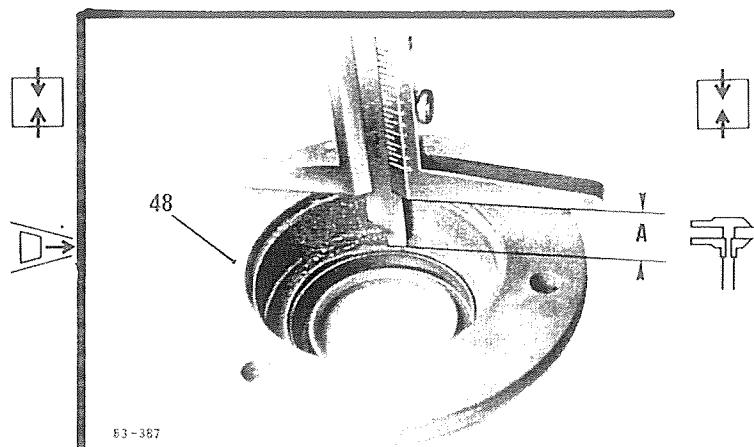
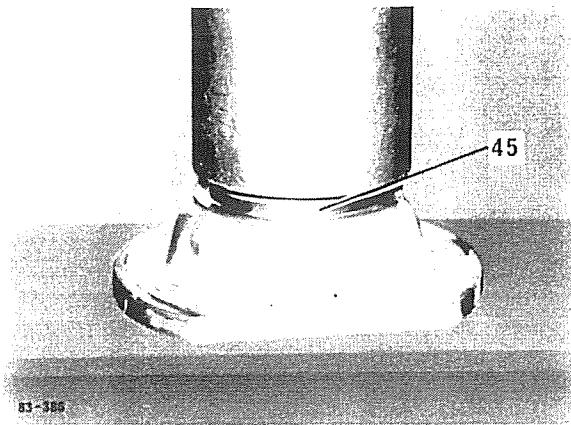
83-382



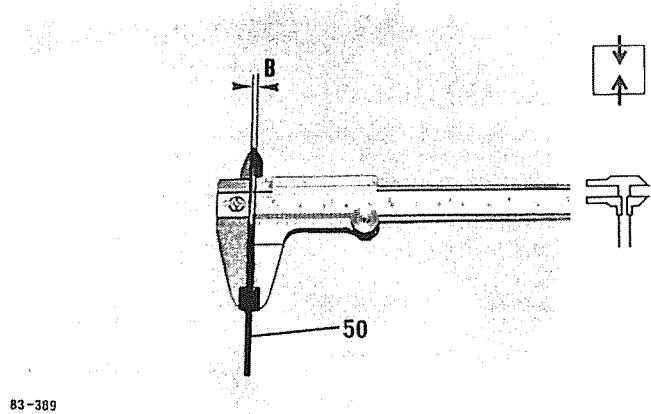
83-383

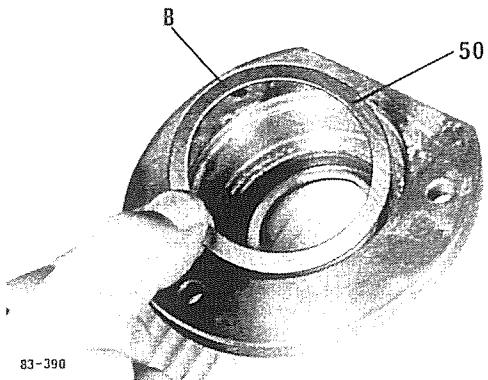
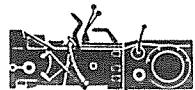


83-384

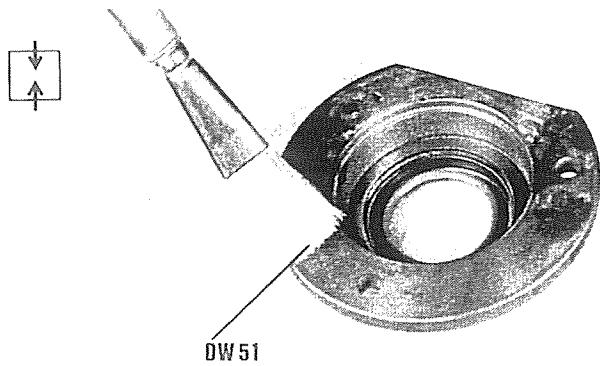


$B = A - C$

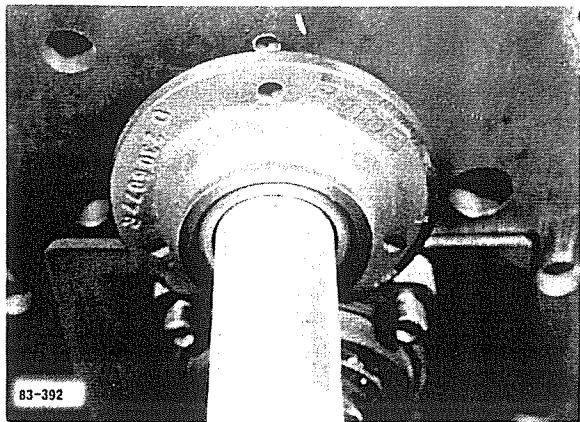




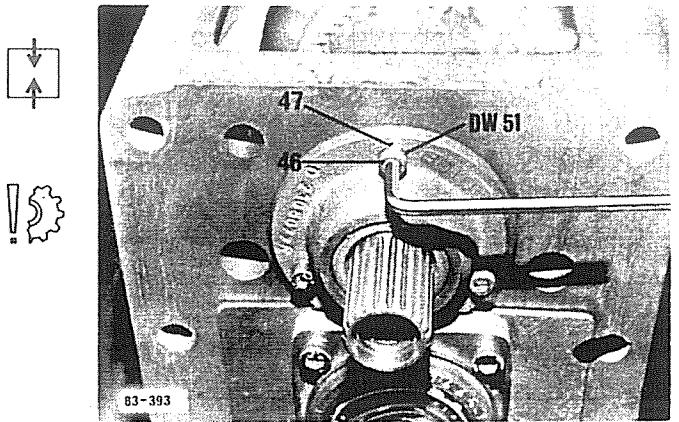
83-390



83-391

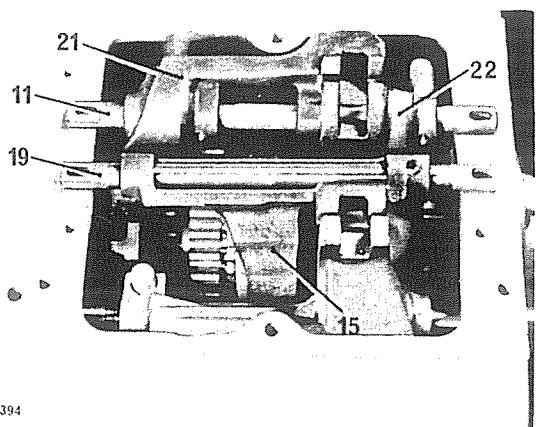
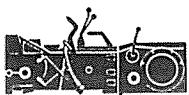


83-392

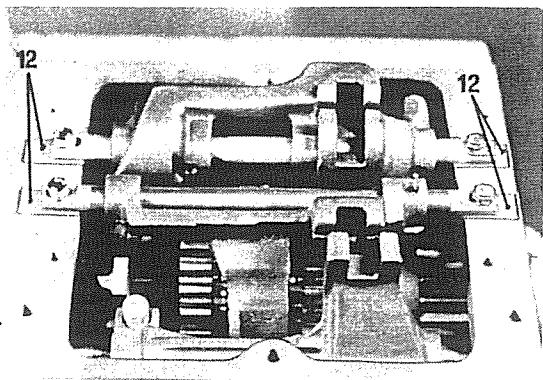


83-393

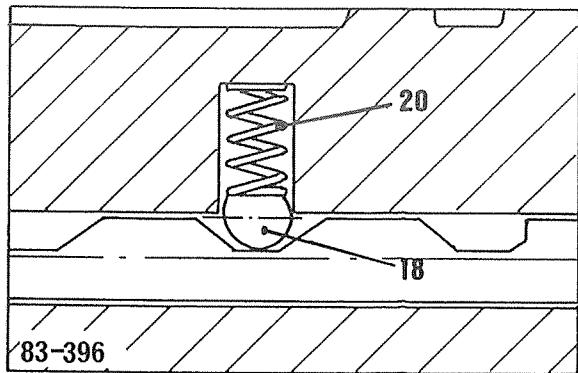
geeignete Hilfsmittel  
suitable means  
moyen auxiliaire convenable  
medio auxiliar apropiado



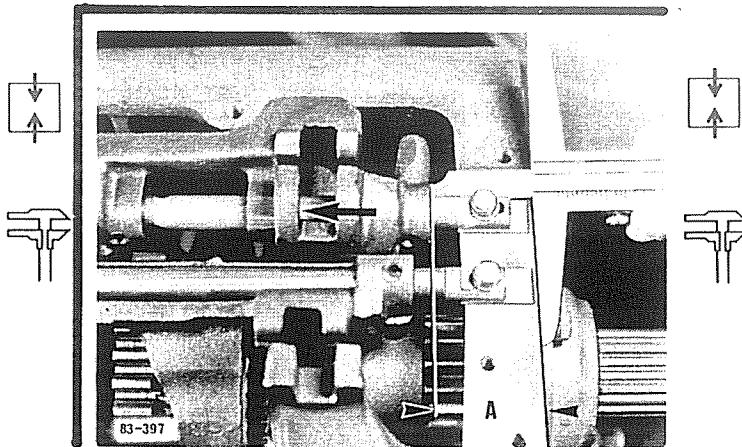
83-394



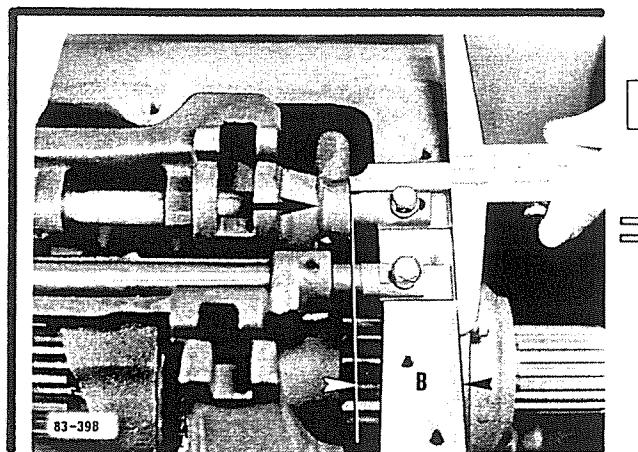
83-395



83-396

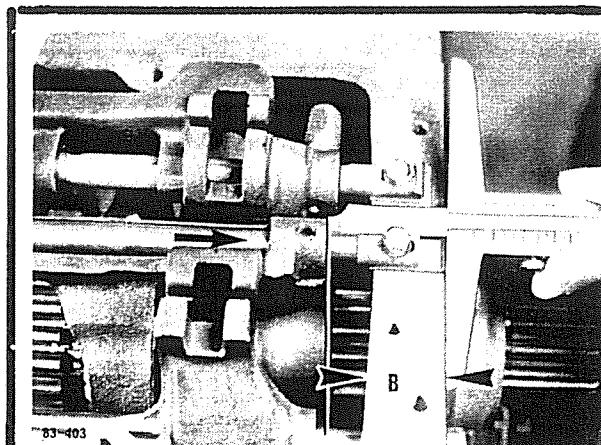
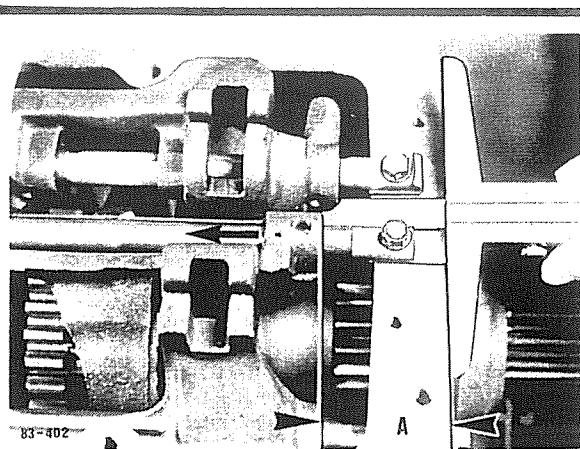
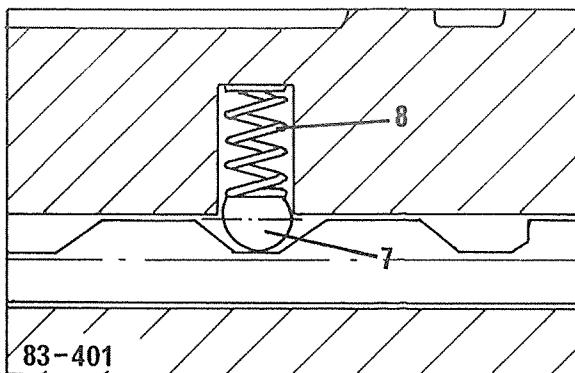
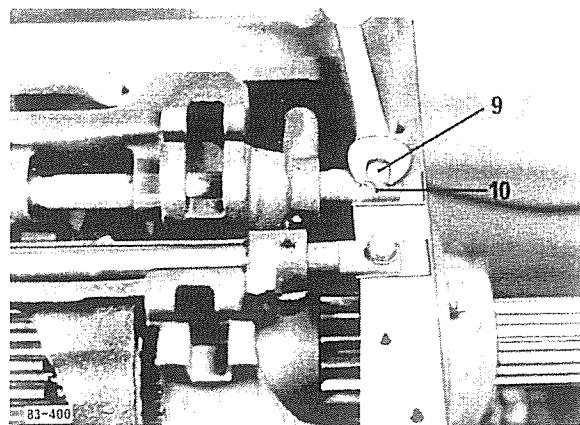
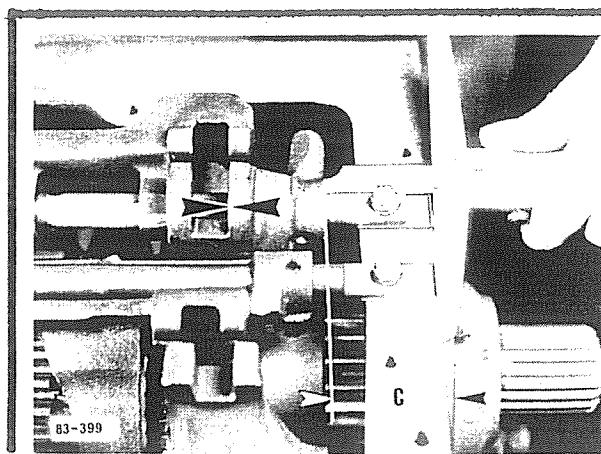
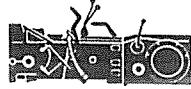


83-397

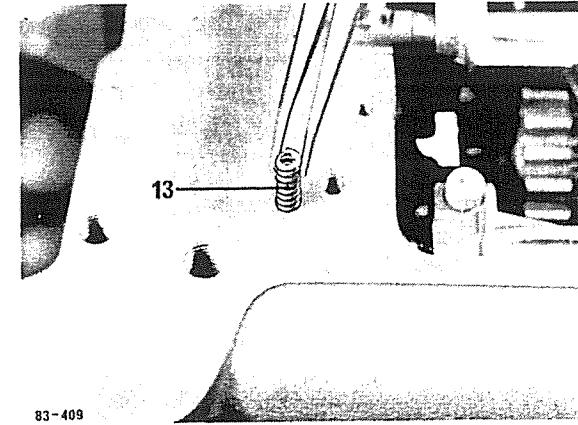
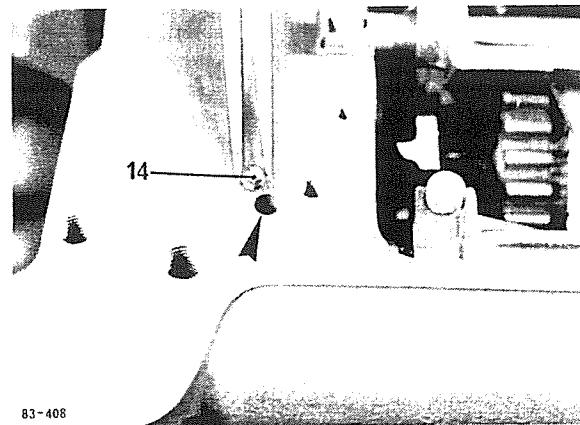
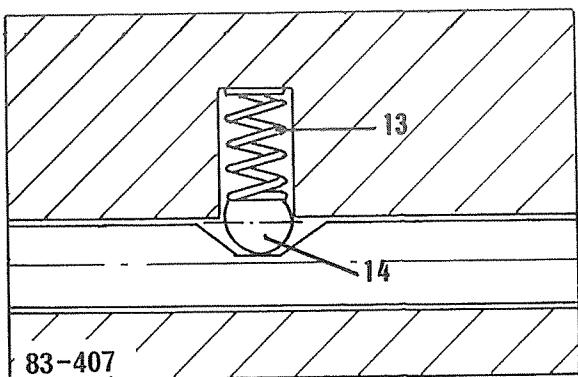
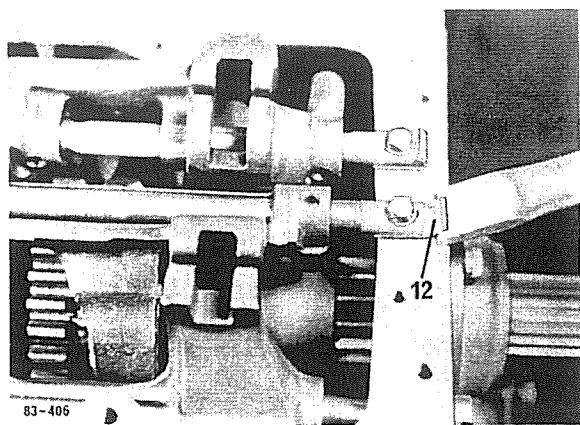
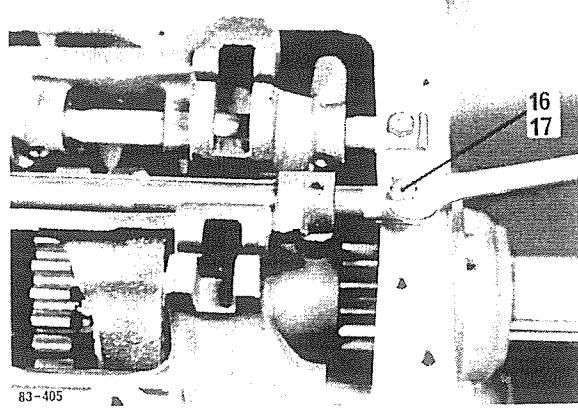
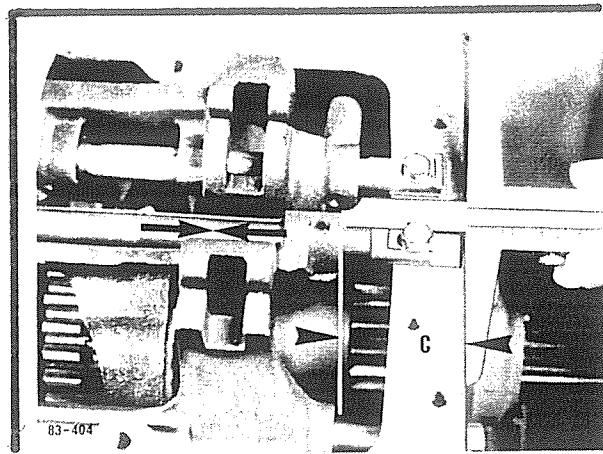
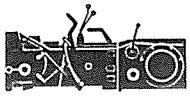


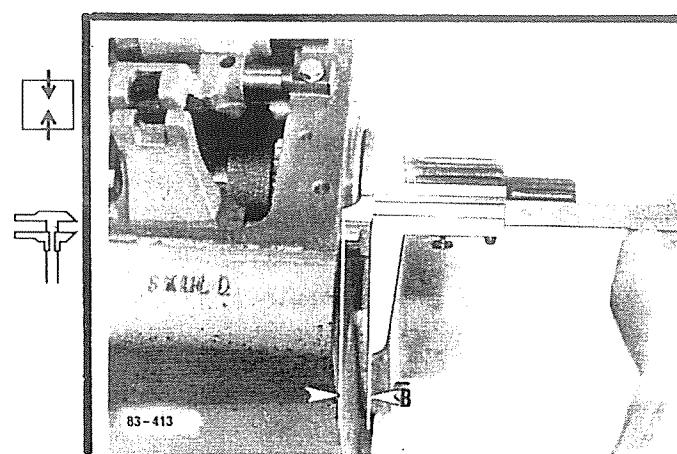
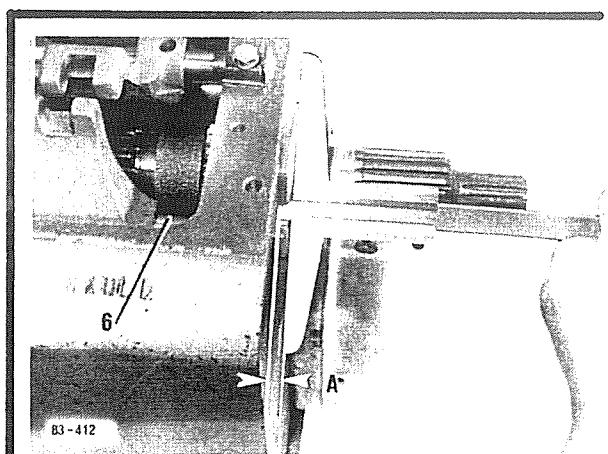
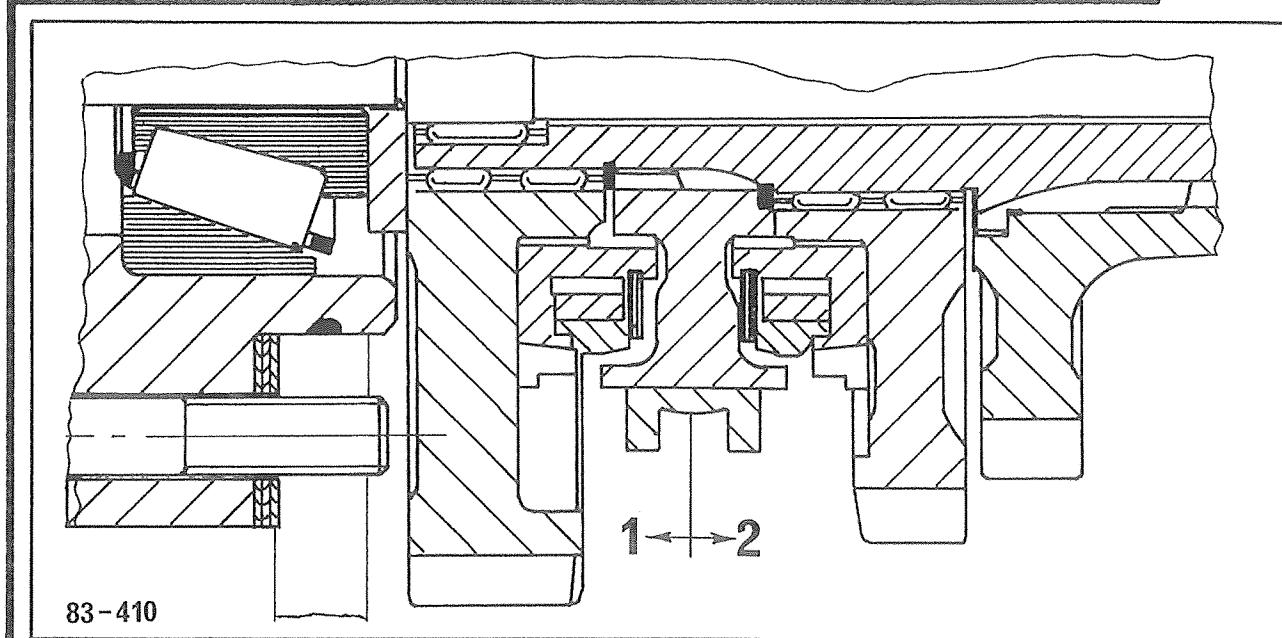
$$\frac{A + B}{2} = C$$

SCHALTGESTÄNGE EINSTELLEN  
 SETTING THE SHIFT LINKAGE  
 TRINGLE DE COMMANDE: REGLER  
 GRADUAR EL VARILLAJE DE CAMBIO

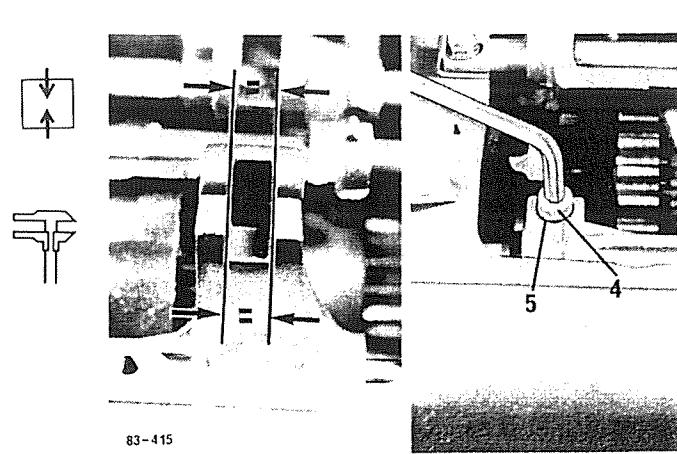
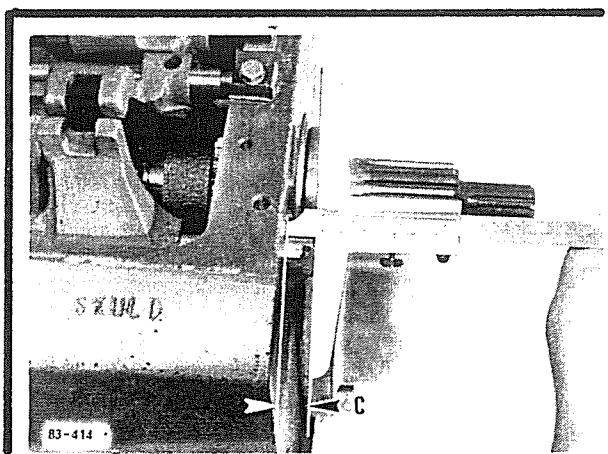


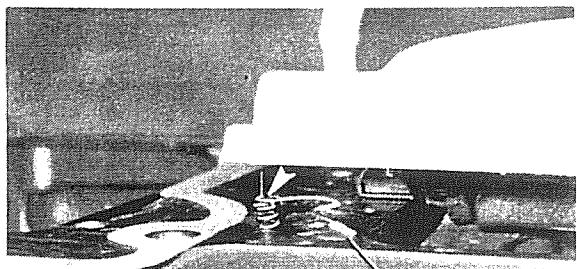
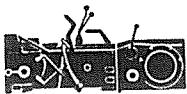
$$\frac{A + B}{2} = C$$





$$\frac{A + B}{2} = C$$

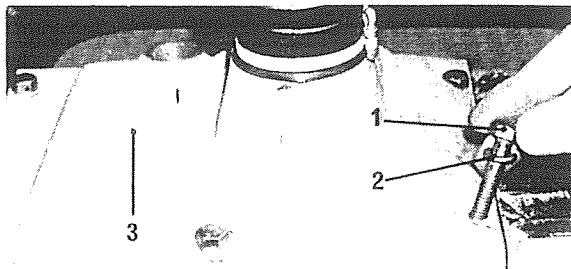




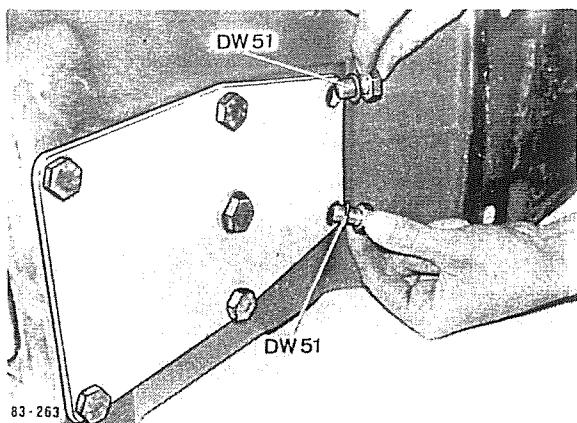
83-348



DW 51



83-356

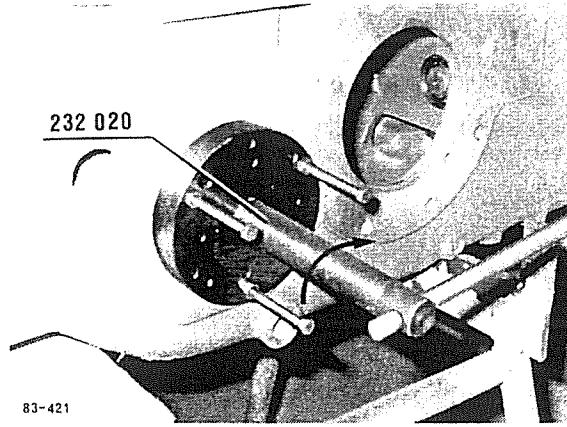
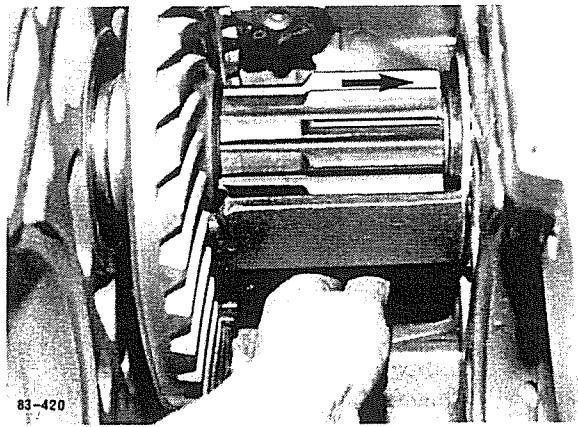
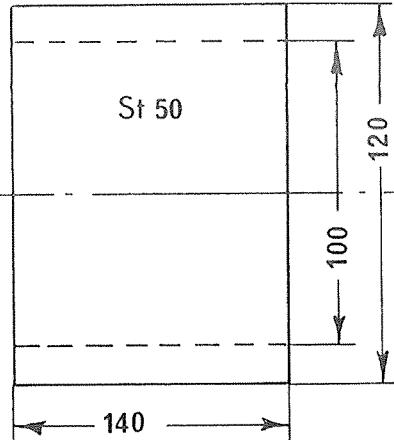
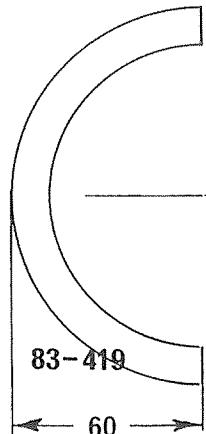
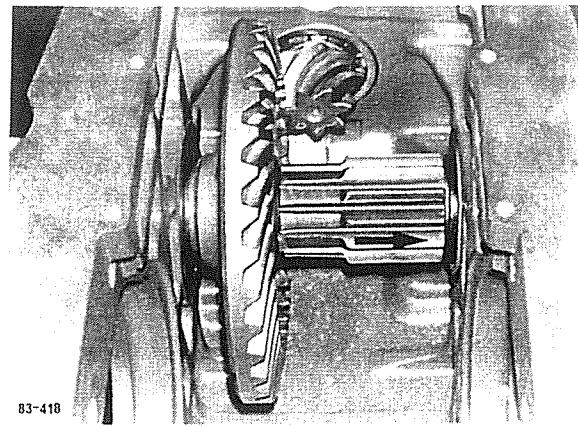
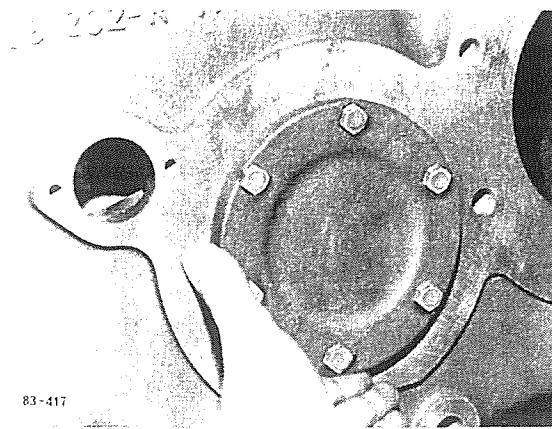
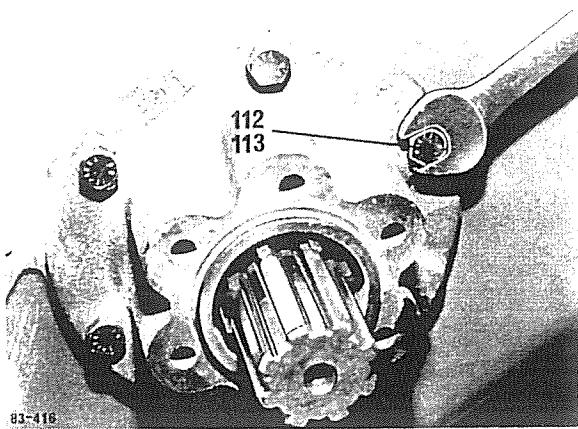
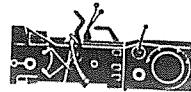


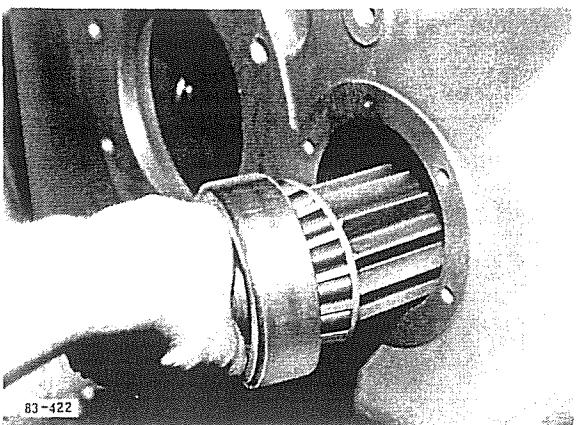
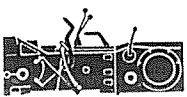
83-263



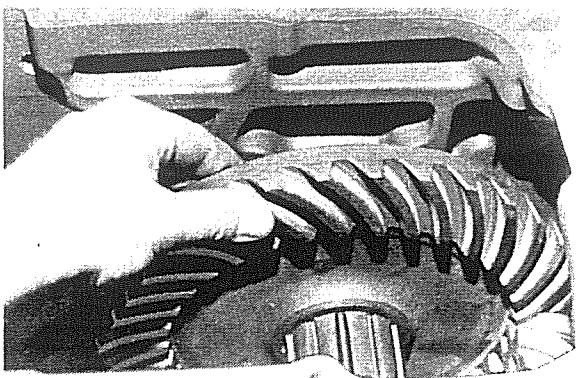
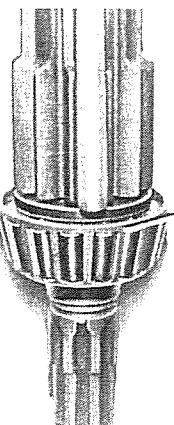
DW 51

ZWISCHENWELLE AUSBAUEN  
 REMOVING THE INTERMEDIATE SHAFT  
 ARBRE INTERMEDIAIRE: DEMONTER  
 DESMONTAR EL EJE INTERMEDIO



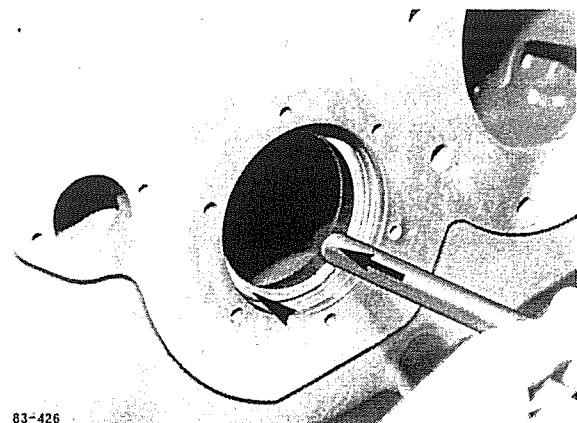
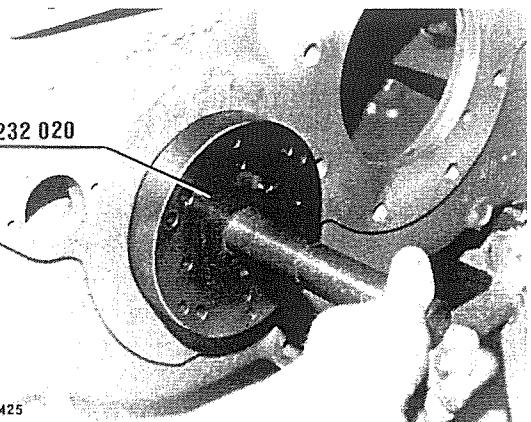


83-423

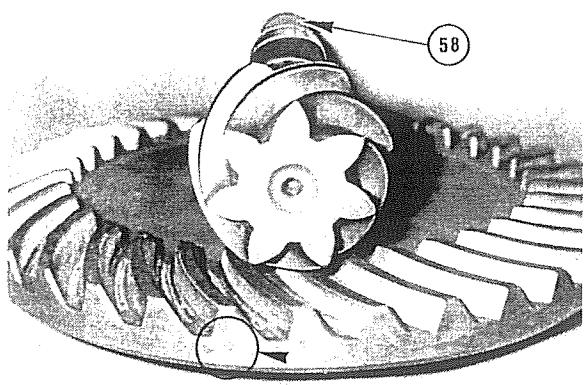
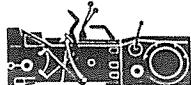


232 020

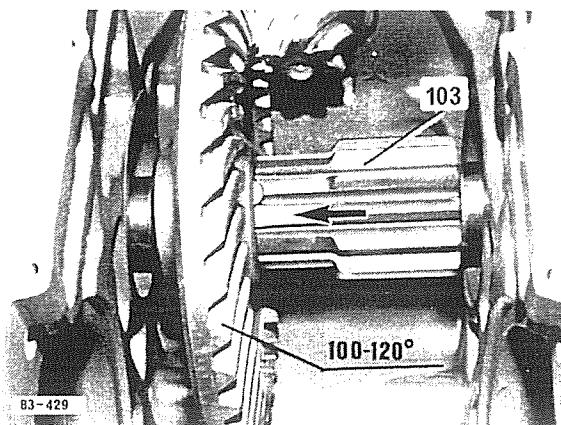
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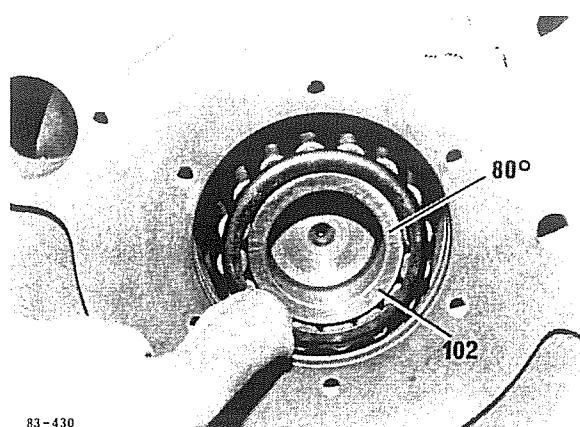
ZWISCHENWELLE EINBAUEN  
 REFITTING THE INTERMEDIATE SHAFT  
 ARBRE INTERMEDIAIRE: REMONTER  
 REMONTAR EL EJE INTERMEDIO



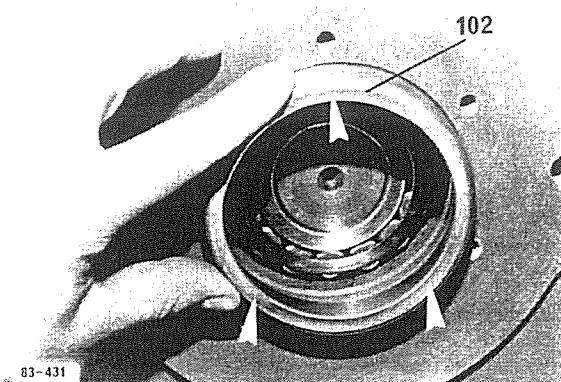
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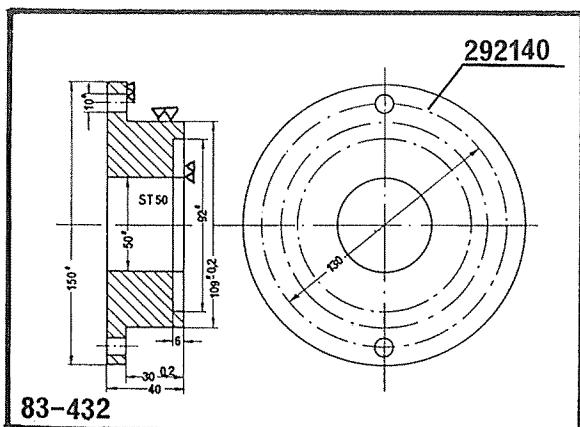
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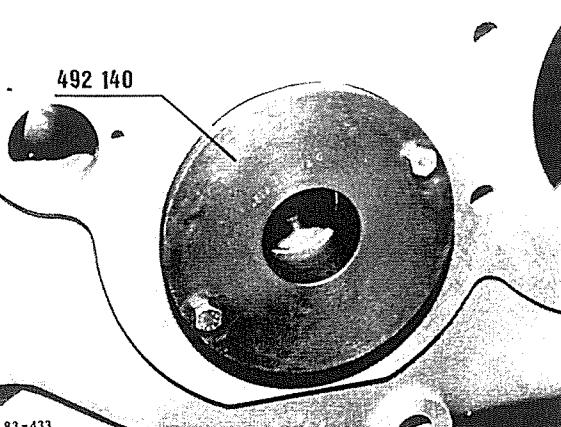
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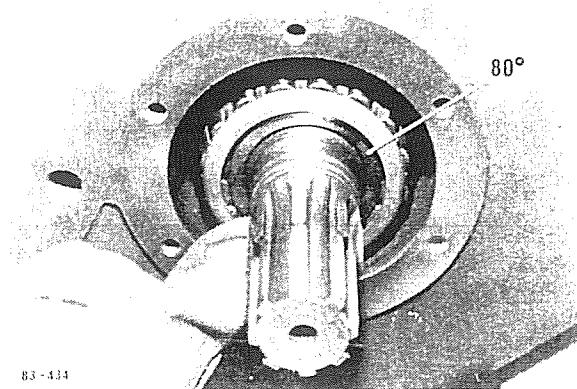
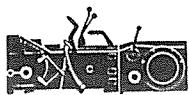


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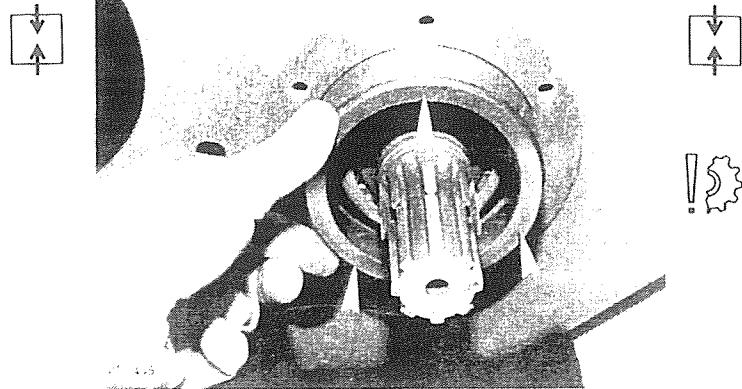


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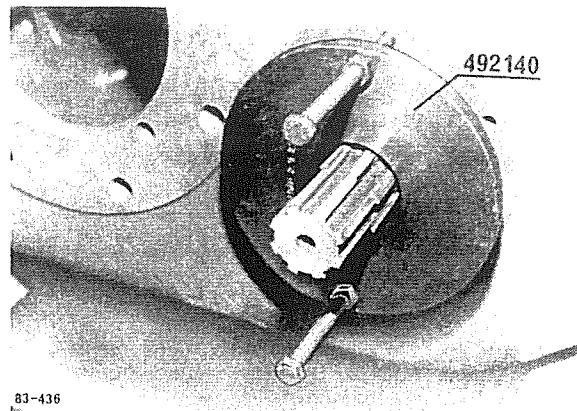




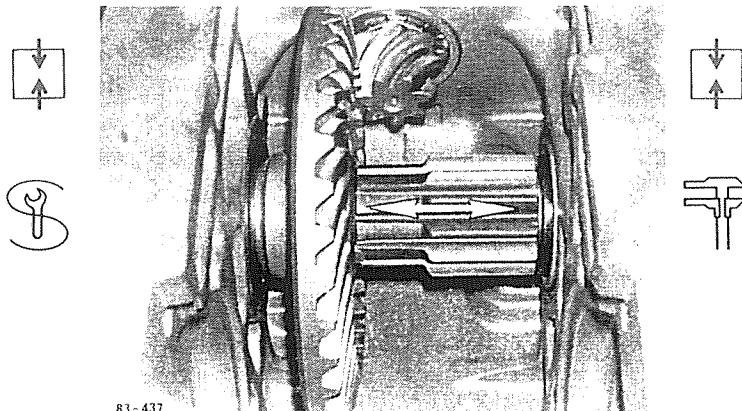
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83-435

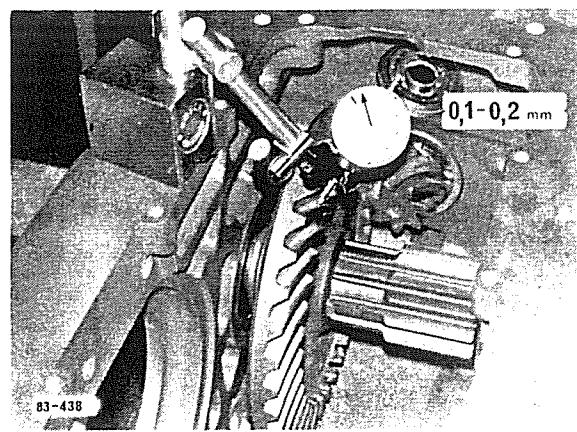


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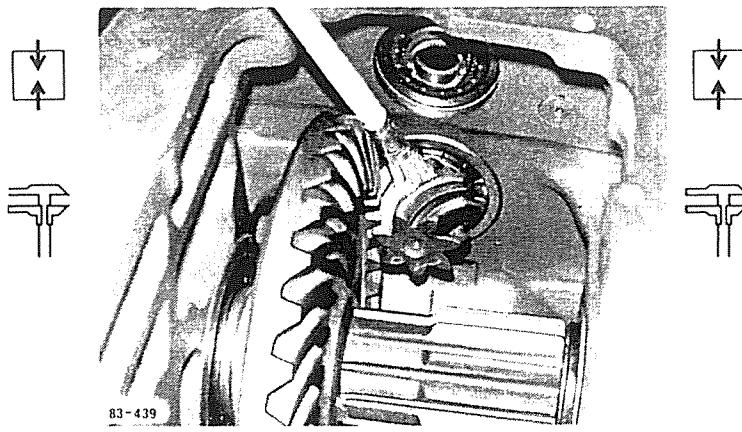


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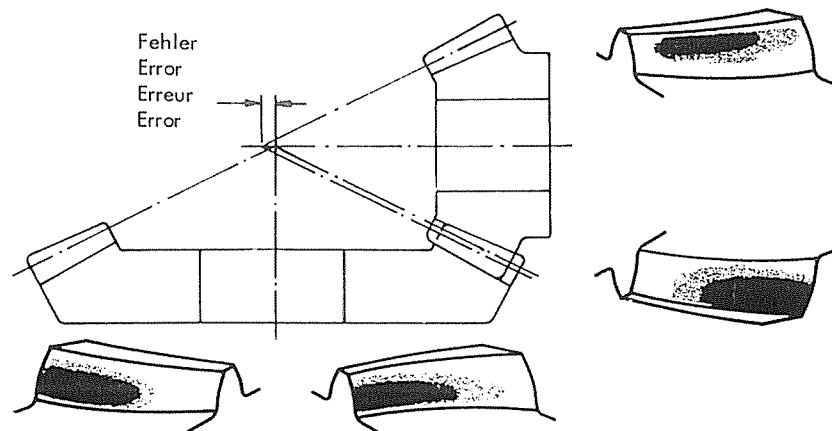
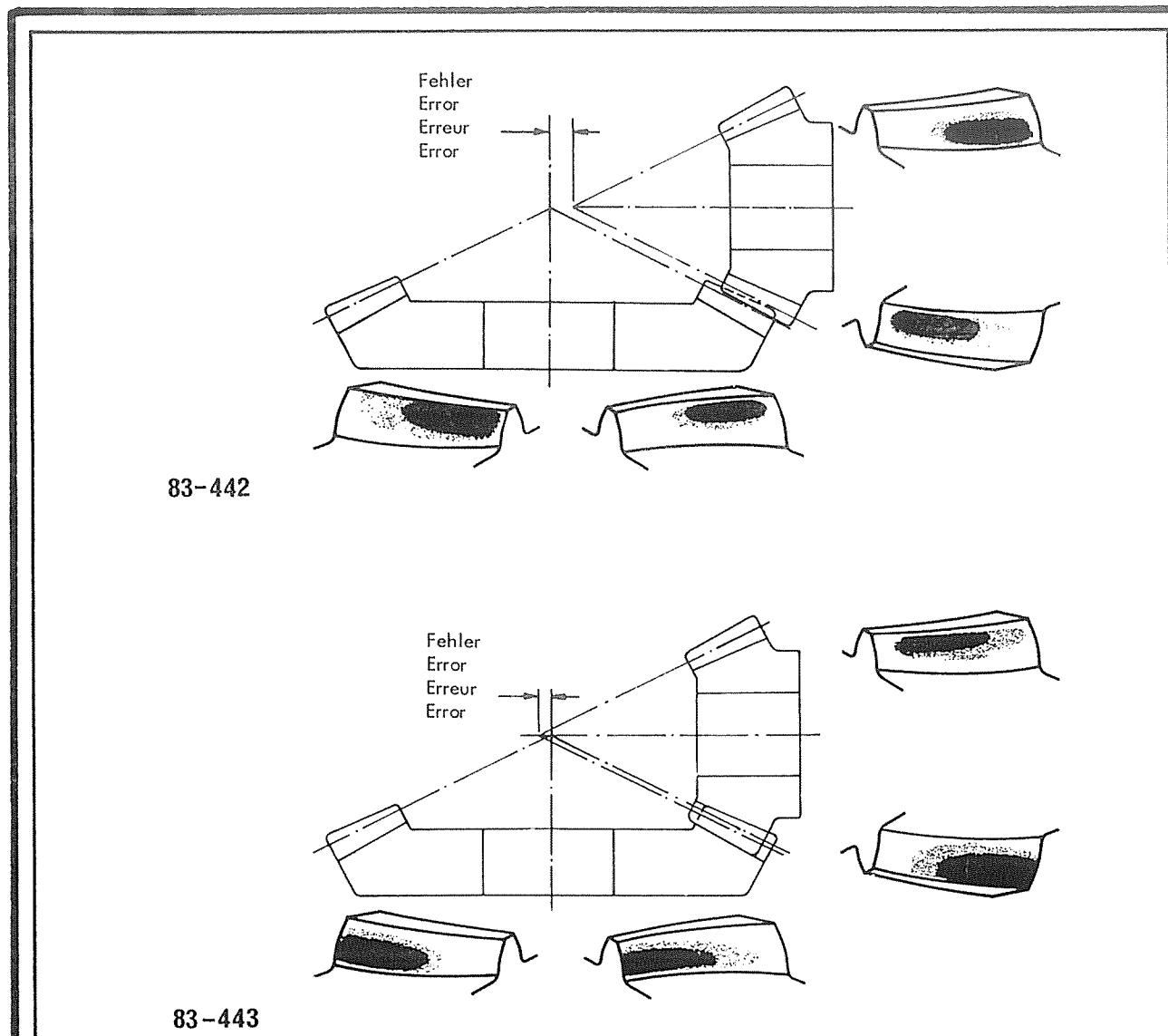
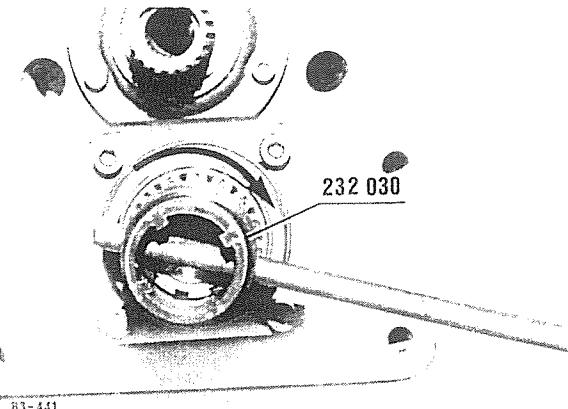
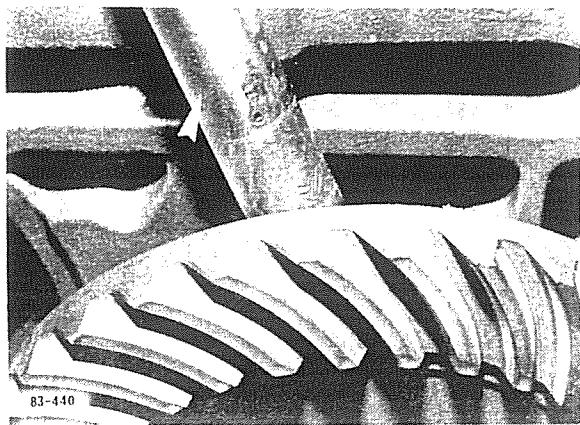
KEGELTRIEB EINSTELLEN  
SET BEVEL DRIVE  
COUPLE CONIQUE: REGLER  
GRADUAR EL GRUPO CONICO

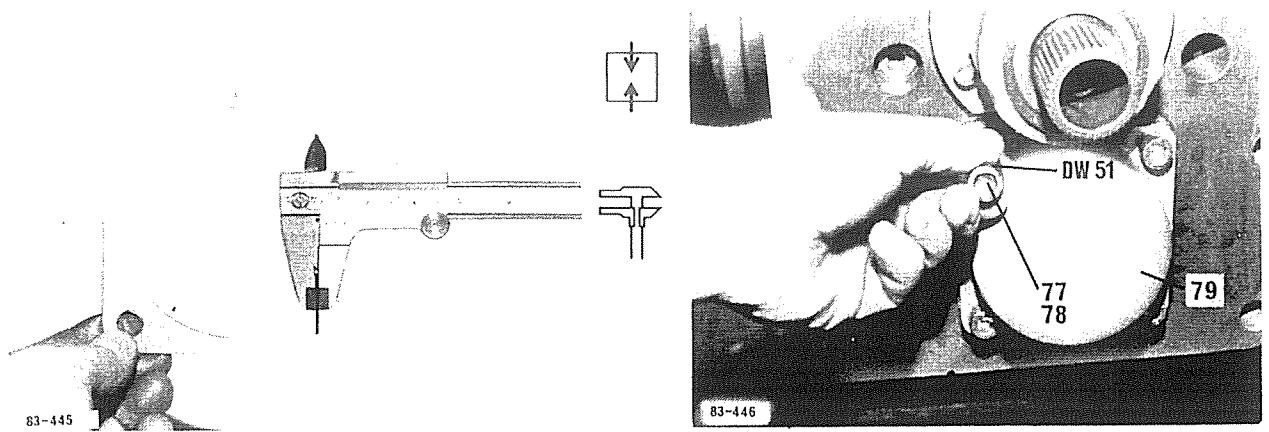
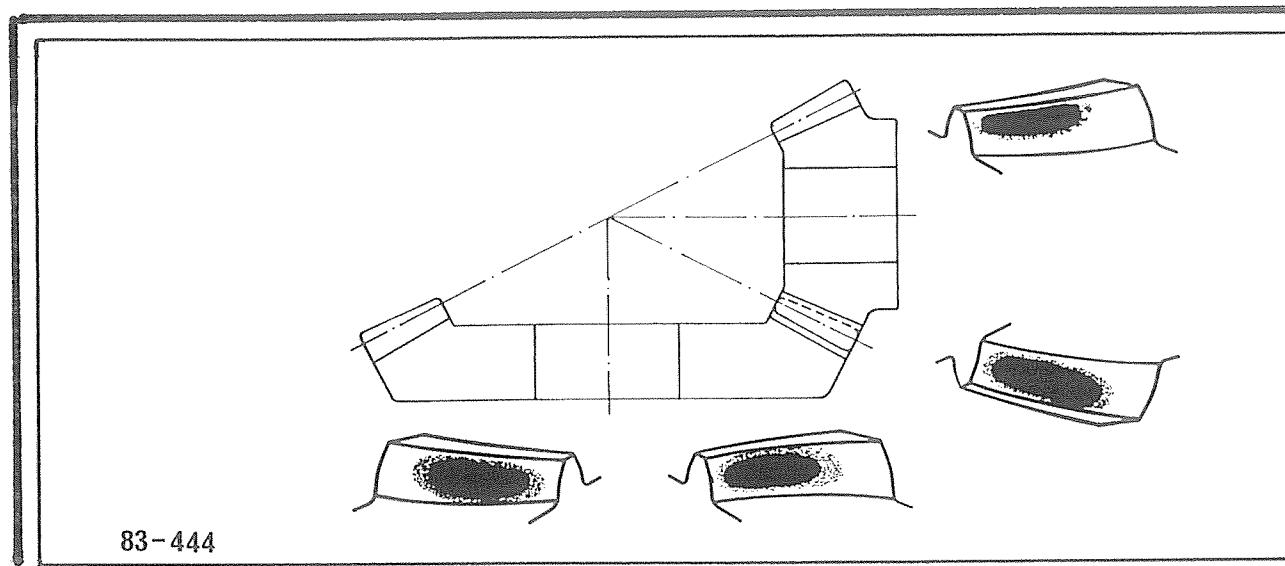
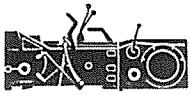


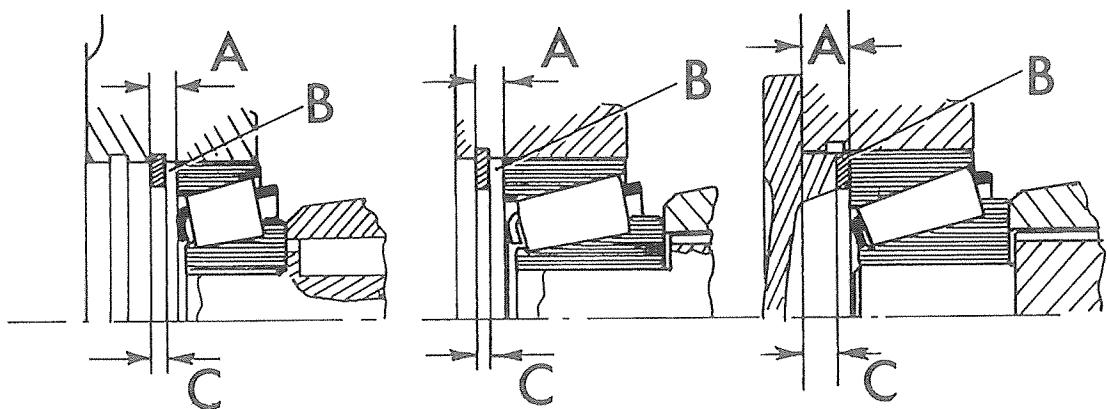
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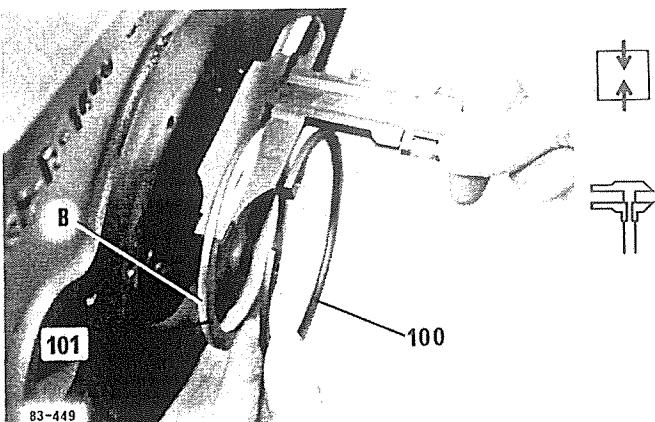
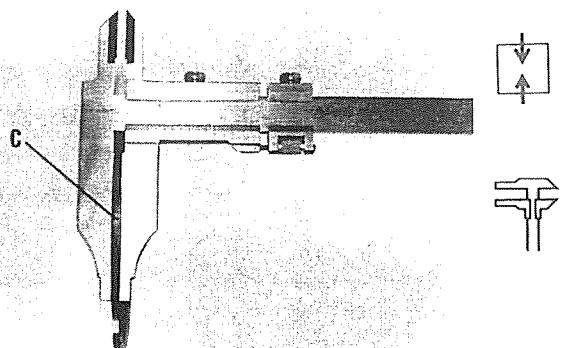




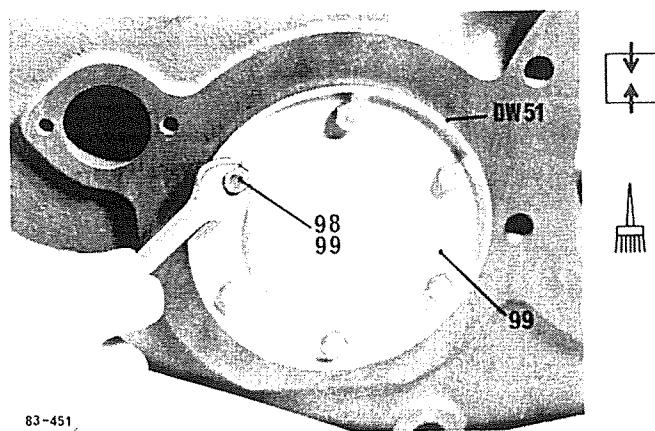
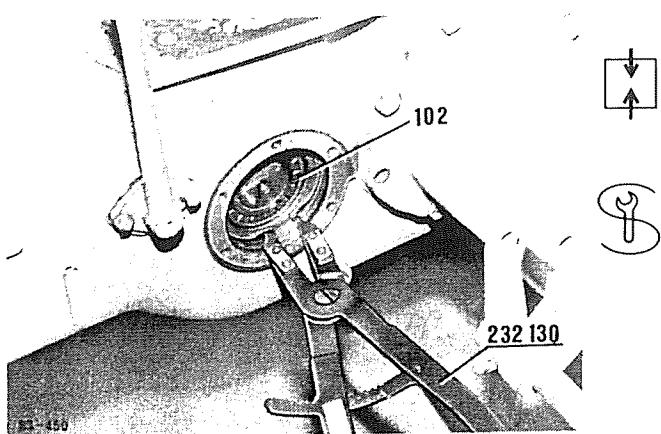


$B = A - C$

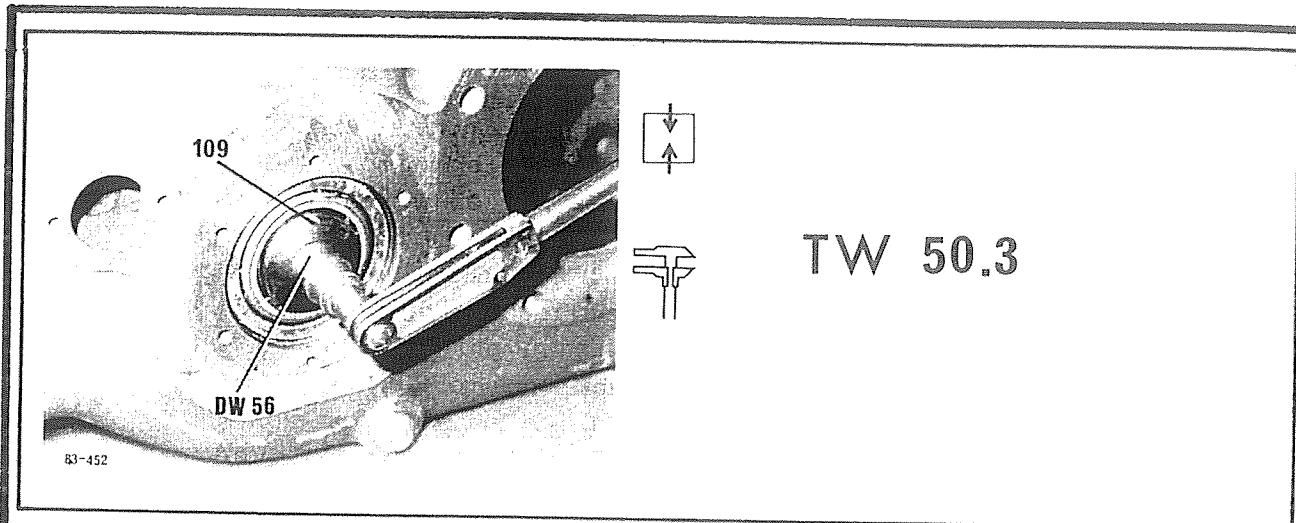
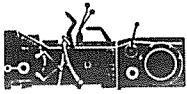
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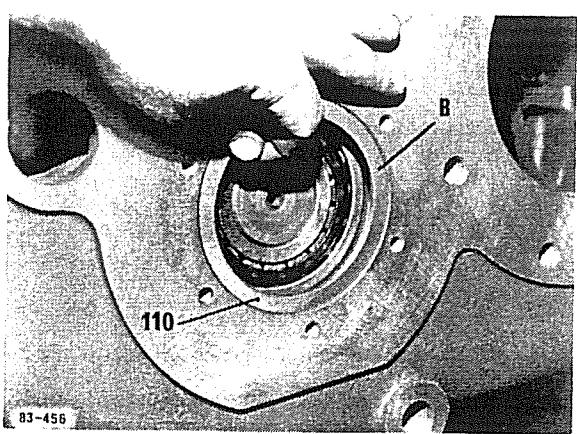
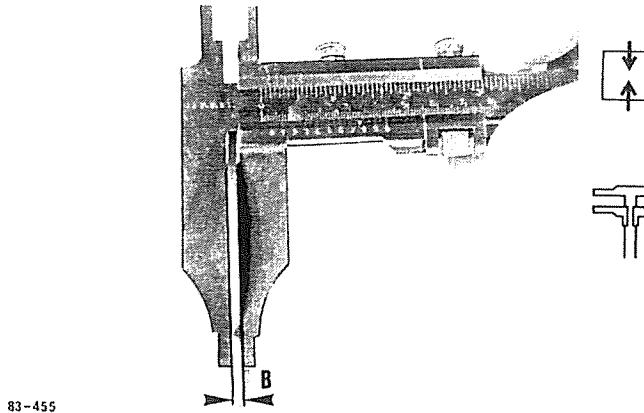
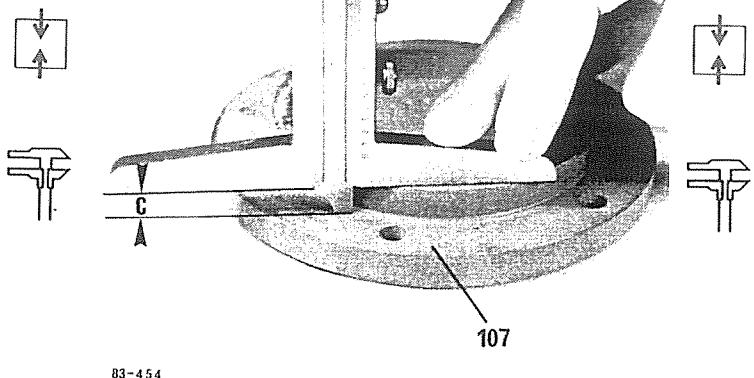
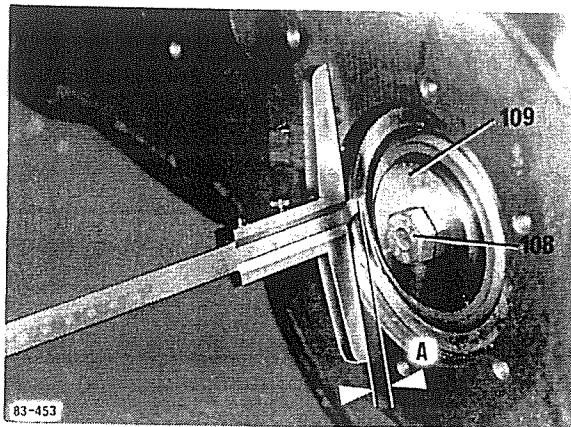
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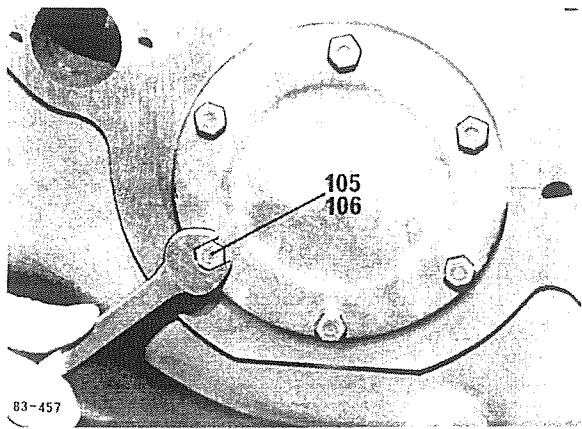


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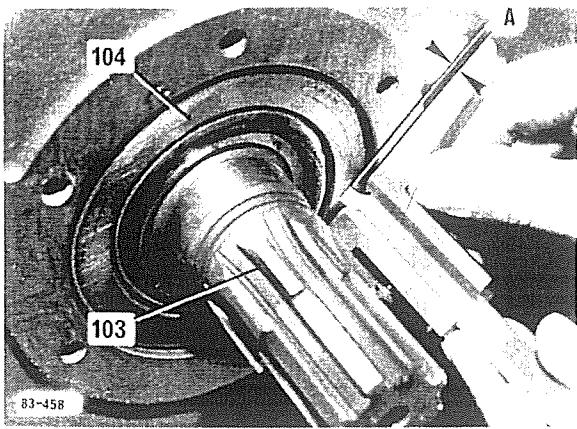


135 Nm (13,5 kpm)

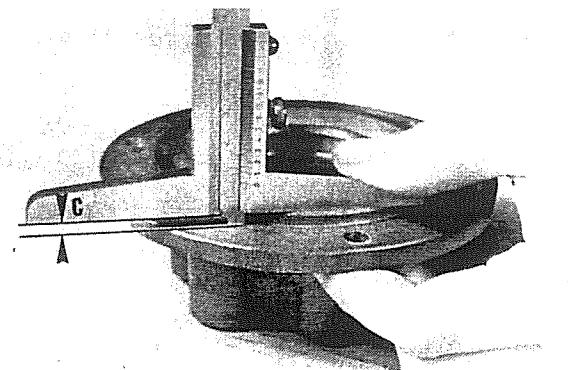




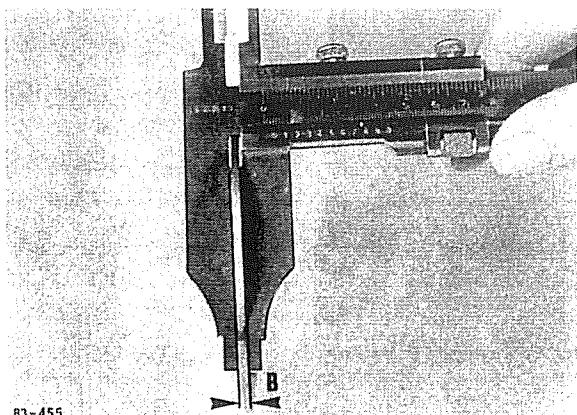
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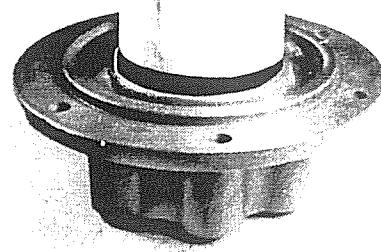
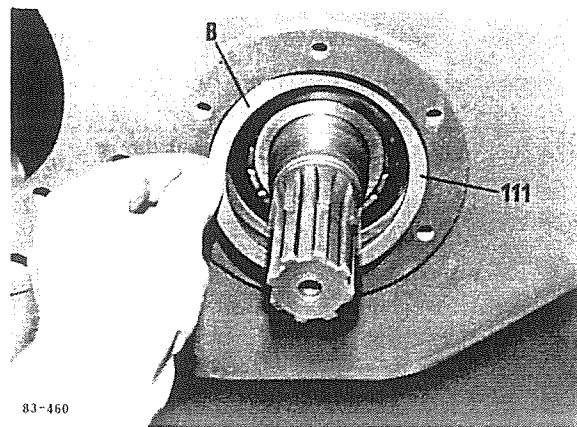
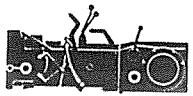


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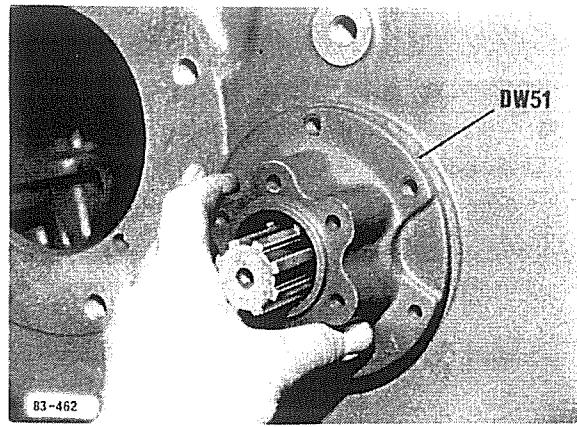


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$$A - C = B$$



83-461



83-463

25 Nm (2,5 kpm)

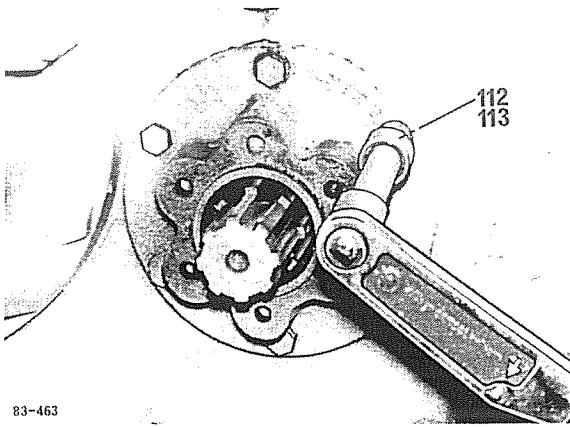
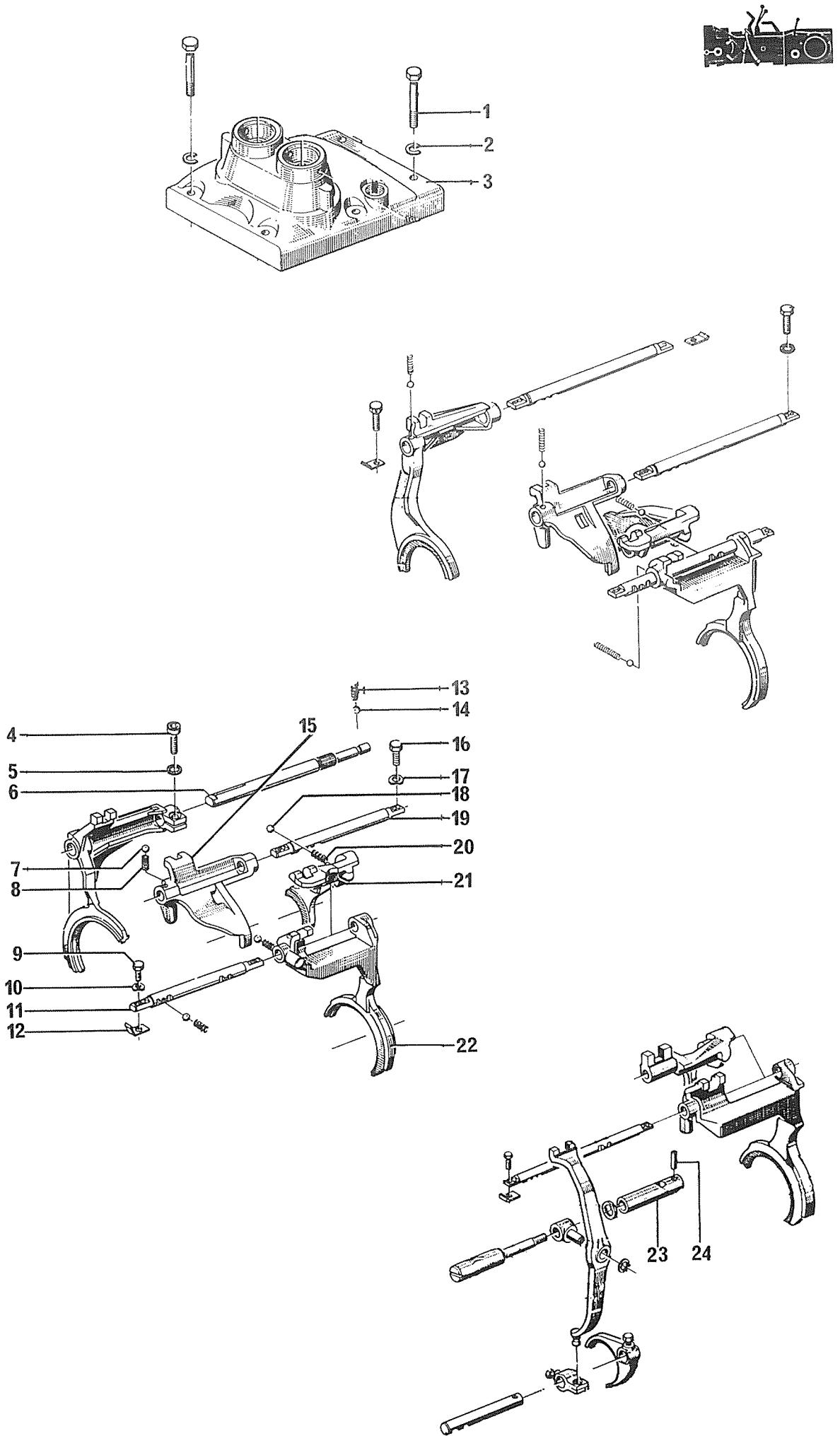
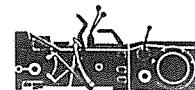




Abb. 1	Schaltung zum Wechselgetriebe alte Ausführung	Fig. 1	Gear-shift mechanism old type
Abb. 2	Schaltung zum Wechselgetriebe neue Ausführung	Fig. 2	Gear-shift mechanism new type
Abb. 3	Schaltung zum Wechselgetriebe bei Kriechgang	Fig. 3	Gear-shift mechanism with creep gear

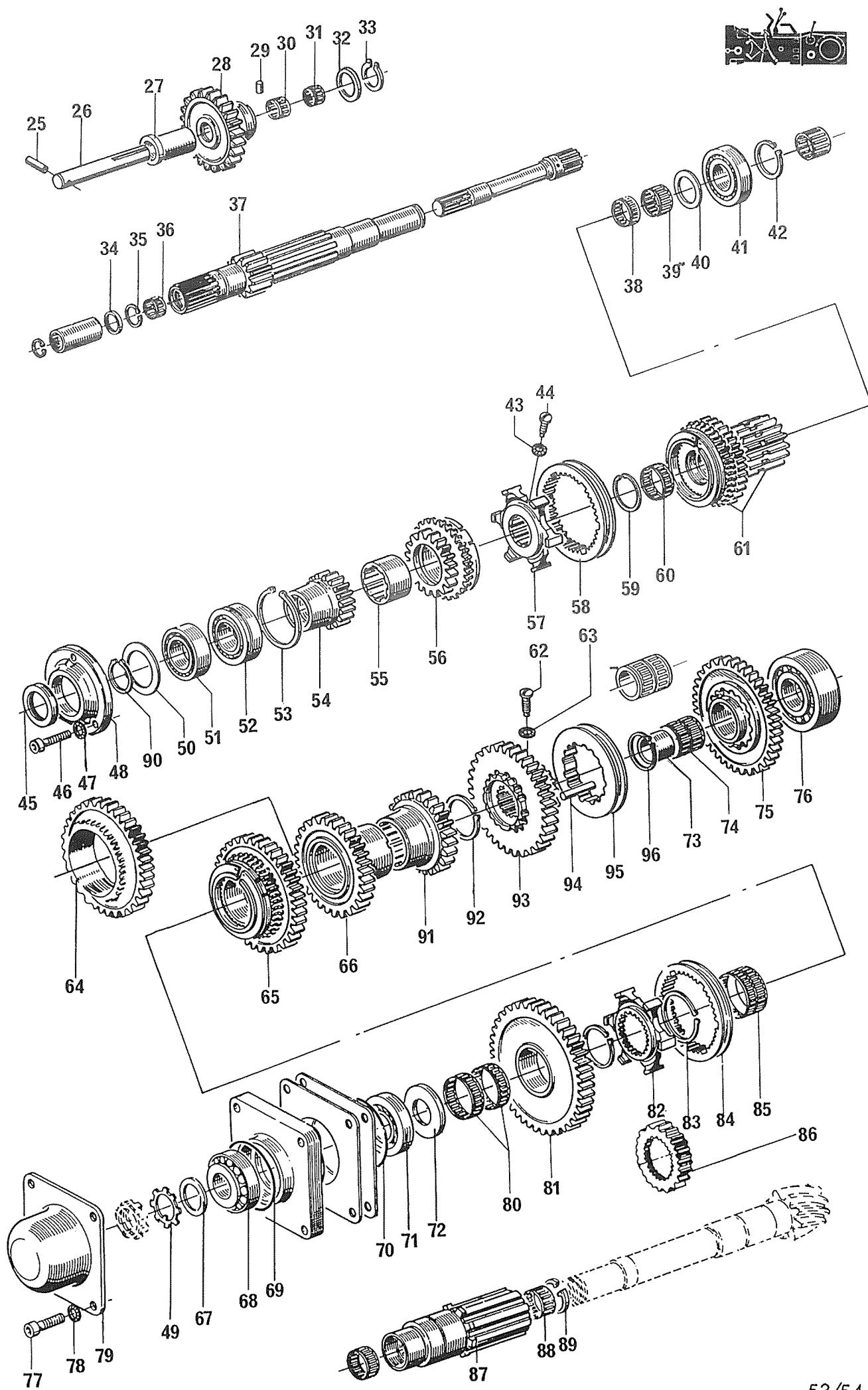
- |                                   |                                    |
|-----------------------------------|------------------------------------|
| 1. Sechskantschraube              | 1. Hex. bolt                       |
| 2. Federring                      | 2. Lockwasher                      |
| 3. Schaltdeckel                   | 3. Cover                           |
| 4. Zylinderschraube               | 4. Screw                           |
| 5. Sicherungsscheibe              | 5. Lockwasher                      |
| 6. Schaltstange 1-2 Gang          | 6. Rod, 1st and 2nd gear           |
| 7. Kugel                          | 7. Ball                            |
| 8. Druckfeder                     | 8. Spring                          |
| 9. Sechskantschraube              | 9. Bolt                            |
| 10. Federring                     | 10. Lockwasher                     |
| 11. Schaltstange, Schnell-Langsam | 11. Rod, high-low                  |
| 12. Sicherungsblech               | 12. Locking plate                  |
| 13. Druckfeder                    | 13. Spring                         |
| 14. Kugel                         | 14. Ball                           |
| 15. Schaltgabel, 3-4 Gang         | 15. Fork, 3rd and 4th gear         |
| 16. Sechskantschraube             | 16. Bolt                           |
| 17. Federring                     | 17. Lockwasher                     |
| 18. Kugel                         | 18. Ball                           |
| 19. Schaltstange 3-4 Gang         | 19. Rod, 3rd and 4th gear          |
| 20. Druckfeder                    | 20. Spring                         |
| 21. Schaltgabel, Rückwärtsgang    | 21. Fork, reverse gear             |
| 22. Schaltgabel, Langsam-Schnell  | 22. Fork, high-low                 |
| 23. Zwischenwelle, Kriechgang     | 23. Intermediate shaft, creep gear |
| 24. Spannhülse                    | 24. Dowel sleeve                   |

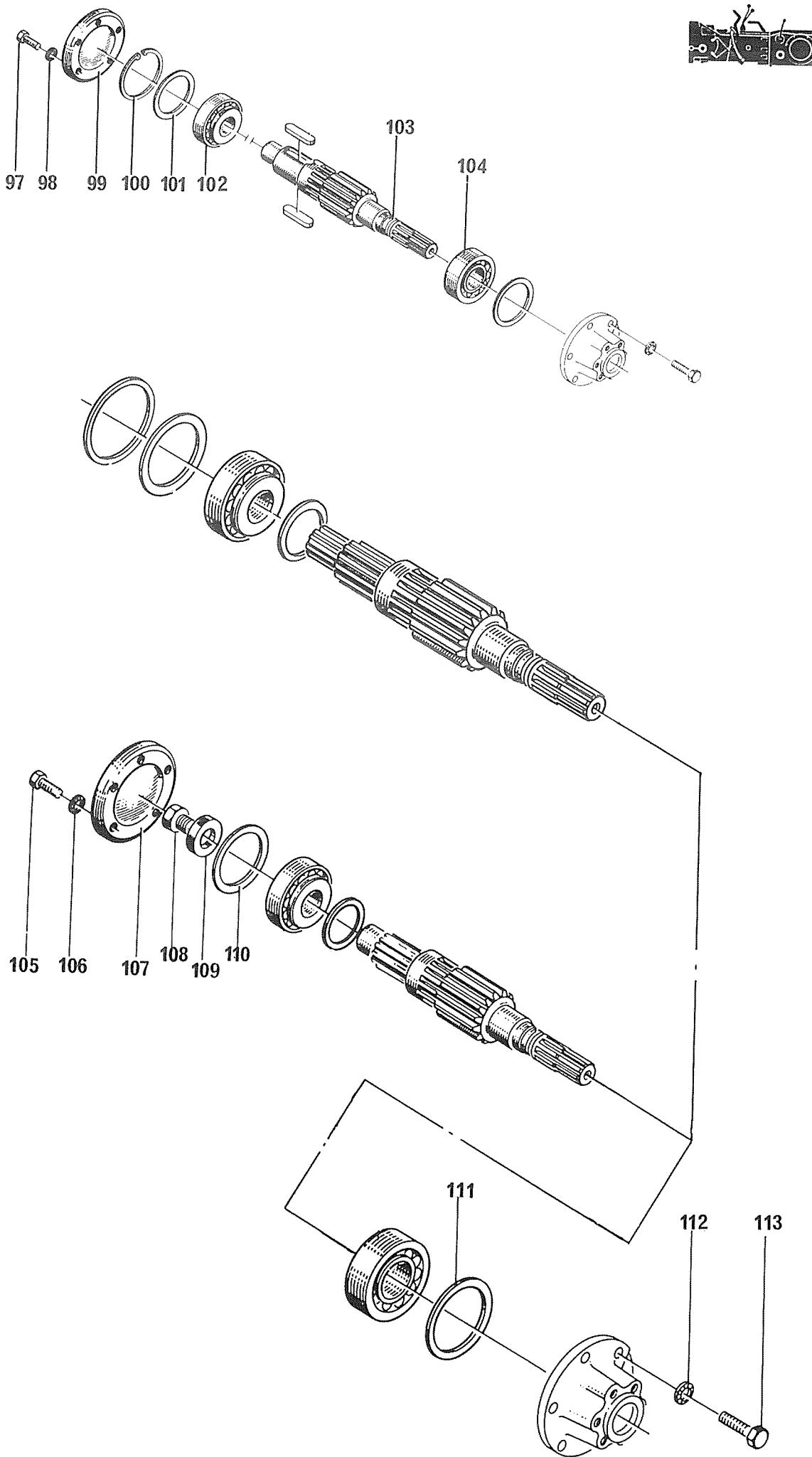




25. Spannhülse	25. Dowel sleeve
26. Bolzen	26. Pin
27. Lagerbuchse	27. Bush
28. Zahnrad	28. Gear
29. Zylinderstift	29. Pin
30. Nadelkäfig	30. Needle cage
31. Nadelkäfig	31. Needle cage
32. Anlaufscheibe	32. Stop washer
33. Sicherungsring	33. Circlip
34. Radial-Wellendichtring	34. Radial shaft seal
35. Sicherungsring	35. Circlip
36. Nadelkäfig	36. Needle cage
37. Antriebshohlwelle	37. Drive quill
38. Nadelkäfig	38. Needle cage
39. Nadelkäfig	39. Needle cage
40. Beilage	40. Shim
41. Zylinderrollenlager	41. Roller bearing
42. Sicherungsring	42. Circlip
43. Sicherungsscheibe	43. Lockwasher
44. Linsenschraube	44. Screw
45. Radial-Wellendichtring	45. Radial shaft seal
46. Zylinderschraube	46. Screw
47. Sicherungsring	47. Circlip
48. Lagerdeckel	48. Cap
49. Sicherungsblech	49. Locking plate
50. Beilage	50. Shim
51. Rillenkugellager	51. Ball bearing
52. Zylinderrollenlager	52. Roller bearing
53. Sicherungsring	53. Circlip
54. Zahnrad	54. Gear
55. Buchse	55. Bush
56. Zahnrad	56. Gear
57. Muffe	57. Sleeve
58. Schaltmuffe	58. Sleeve
59. Sicherungsring	59. Circlip
60. Nadelkäfig	60. Needle cage
61. Zahnrad	61. Gear
62. Linsenschraube	62. Screw
63. Sicherungsscheibe	63. Lockwasher
64. Zahnrad, unsynchronisiert	64. Gear, not synchronised
65. Zahnrad, synchronisiert	65. Gear, synchronised
66. Zahnrad	66. Gear
67. Nasenscheibe	67. Tab washer
68. Kegelrollenlager	68. Roller bearing
69. Rundgummiring	69. O-seal
70. Rundgummiring	70. O-seal
71. Kegelrollenlager	71. Roller bearing
72. Anlaufscheibe	72. Stop washer
73. Buchse	73. Bush
74. Nadelkäfig	74. Needle cage
75. Zahnrad	75. Gear
76. Zylinderrollenlager	76. Roller bearing
77. Zylinderschraube	77. Screw
78. Sicherungsring	78. Circlip
79. Deckel	79. Cover
80. Nadelkäfig	80. Needle cage
81. Zahnrad	81. Gear
82. Muffe	82. Sleeve
83. Sicherungsring	83. Circlip
84. Schaltmuffe	84. Sleeve
85. Doppelnadelkäfig	85. Needle cage
86. Muffenträger, unsynchronisiert	86. Sleeve carrier, not synchronised
87. Hohlwelle	87. Quill
88. Nadelkäfig	88. Needle cage
89. Sicherungsring	89. Circlip
90. Sicherungsring	90. Circlip
91. Zahnrad	91. Gear
92. Sicherungsring	92. Circlip
93. Zahnrad	93. Gear
94. Schaltbolzen	94. Pin
95. Schiebemuffe	95. Sleeve
96. Sicherungsring	96. Circlip

97.	Sechskantschraube	97.	Bolt
98.	Sicherungsscheibe	98.	Lockwasher
99.	Deckel	99.	Cover
100.	Sicherungsring	100.	Circlip
101.	Beilage	101.	Shim
102.	Kegelrollenlager	102.	Roller bearing
103.	Zwischenwelle	103.	Intermediate shaft
104.	Kegelrollenlager	104.	Roller bearing
105.	Sechskantschraube	105.	Bolt
106.	Sicherungsscheibe	106.	Lockwasher
107.	Deckel	107.	Cover
108.	Sechskantschraube	108.	Bolt
109.	Druckscheibe	109.	Thrust washer
110.	Beilage	110.	Shim
111.	Beilage	110.	Shim
112.	Sicherungsscheibe	111.	Lockwasher
113.	Sechskantschraube	112.	Bolt
97.	Vis 6 pans	97.	Tornillo hexagonal
98.	Rondelle d'arrêt	98.	Arandela de seguridad
99.	Couvercle	99.	Tapa
100.	Circlip	100.	Circlip
101.	Cale	101.	Suplemento
102.	Roulement à rouleaux coniques	102.	Cojinete de rodillos cónicos
103.	Arbre intermédiaire	103.	Eje intermedio
104.	Roulement à rouleaux coniques	104.	Cojinete de rodillos cónicos
105.	Vis 6 pans	105.	Tornillo hexagonal
106.	Rondelle d'arrêt	106.	Arandela de seguridad
107.	Couvercle	107.	Tapa
108.	Vis 6 pans	108.	Tornillo hexagonal
109.	Rondelle de serrage	109.	Arandela de presión
110.	Cale	110.	Suplemento
111.	Cale	111.	Suplemento
112.	Rondelle d'arrêt	112.	Arandela de seguridad
113.	Vis 6 pans	113.	Tornillo hexagonal







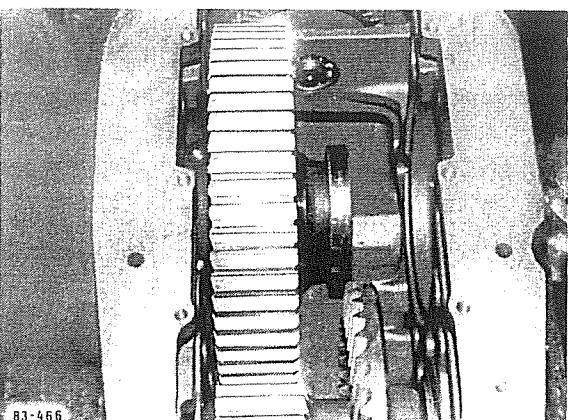
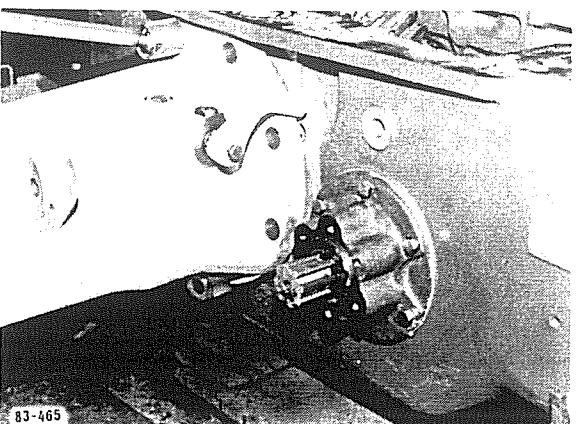
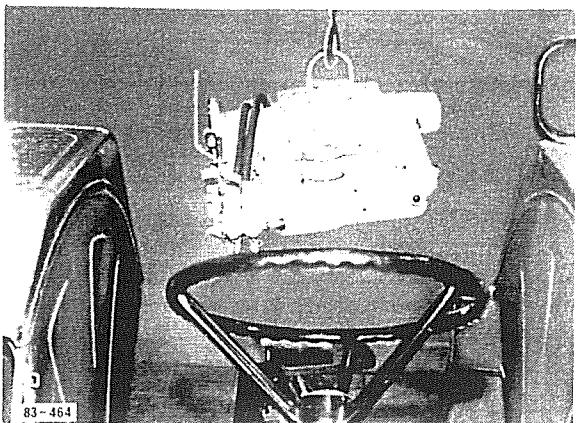
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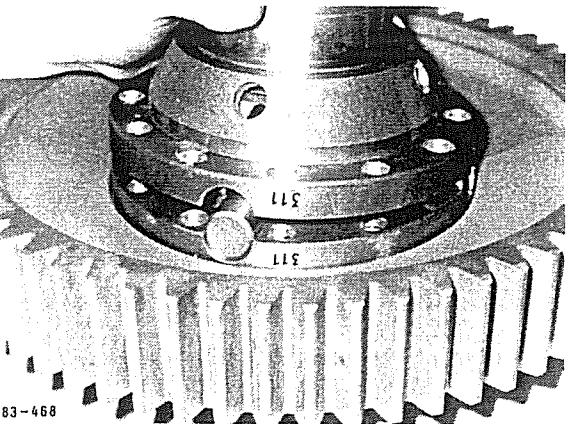
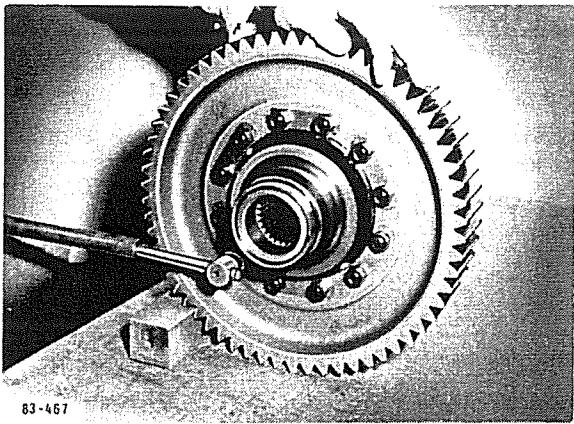
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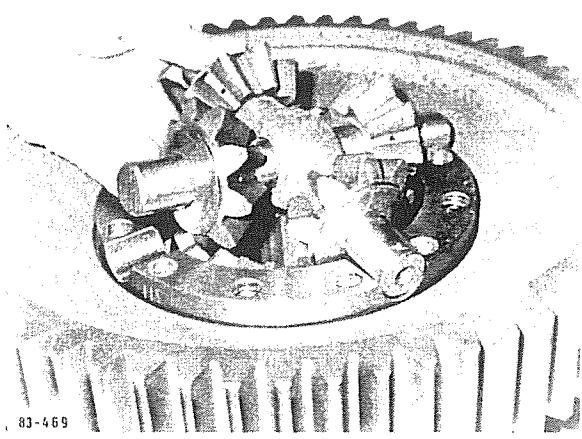
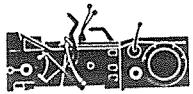
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AUSGLEICHGETRIEBE AUSBauen  
REMOVING THE DIFFERENTIAL GEAR  
DIFFÉRENTIEL: DEMONTER  
DESMONTAR EL DIFERENCIAL

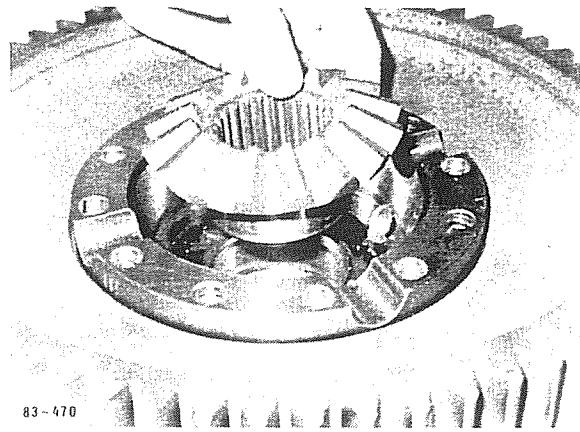


AUSGLEICHGETRIEBE ZERLEGEN UND ZUSAMMENBAUEN  
DISMANTLING AND REASSEMBLING THE DIFFERENTIAL GEAR  
DIFFÉRENTIEL: DESASSEMBLER ET REASSEMBLER  
DESARMAR Y REARMAR EL DIFERENCIAL

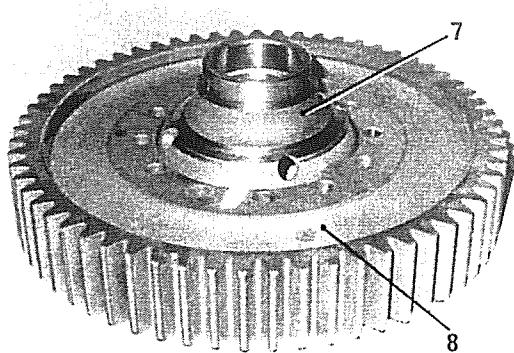




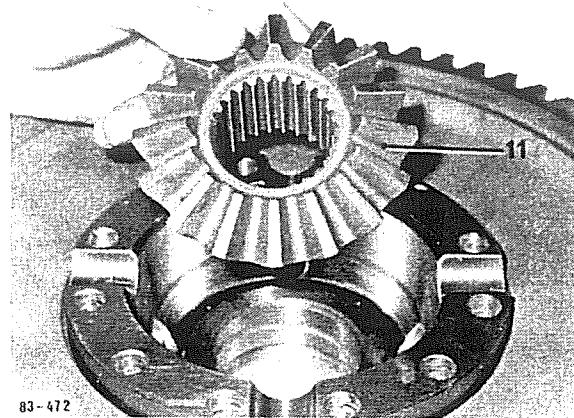
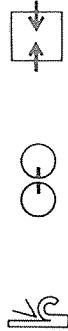
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83-470



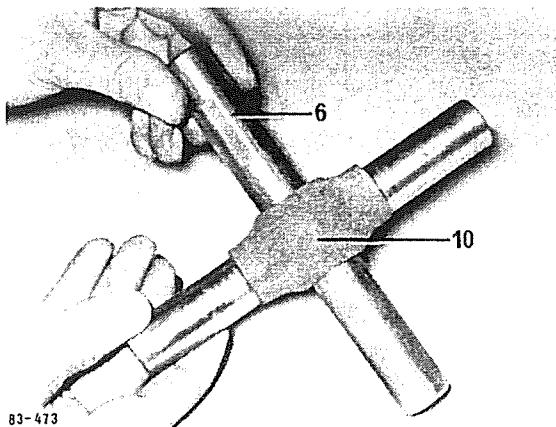
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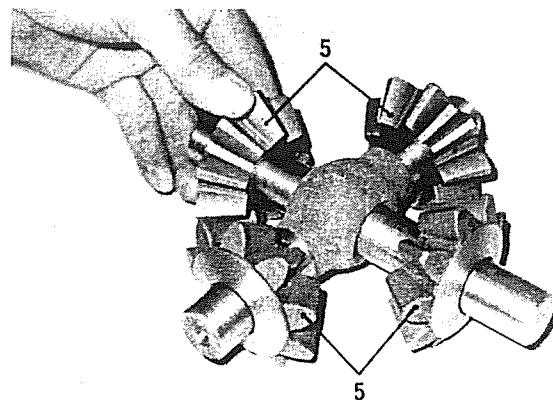
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8 Paßbohrungen  
8 Dowel holes  
8 Alésages justes  
8 Taladros de ajuste

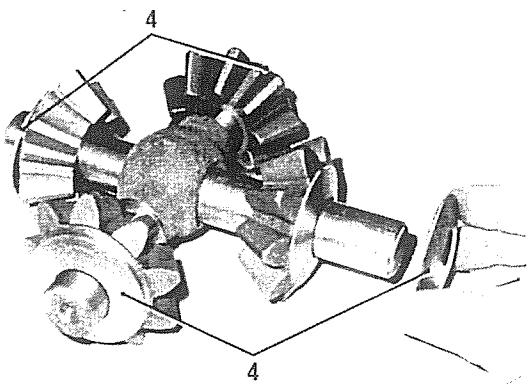
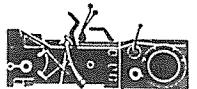


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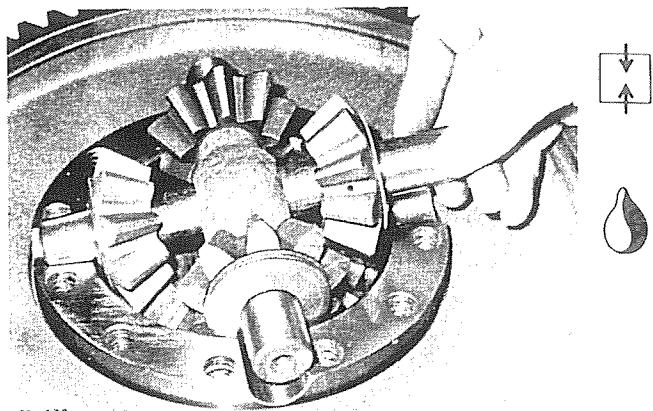


83-474

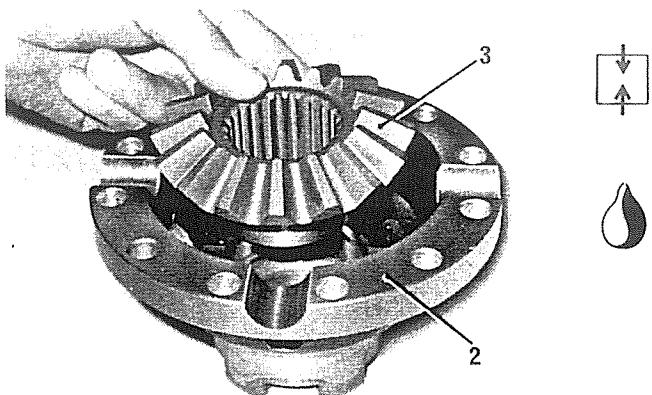




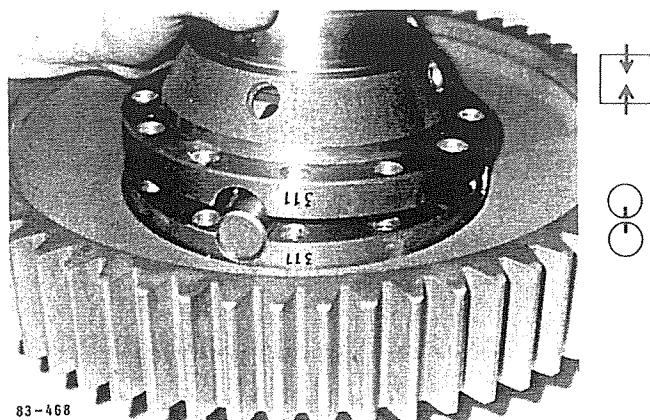
83-475



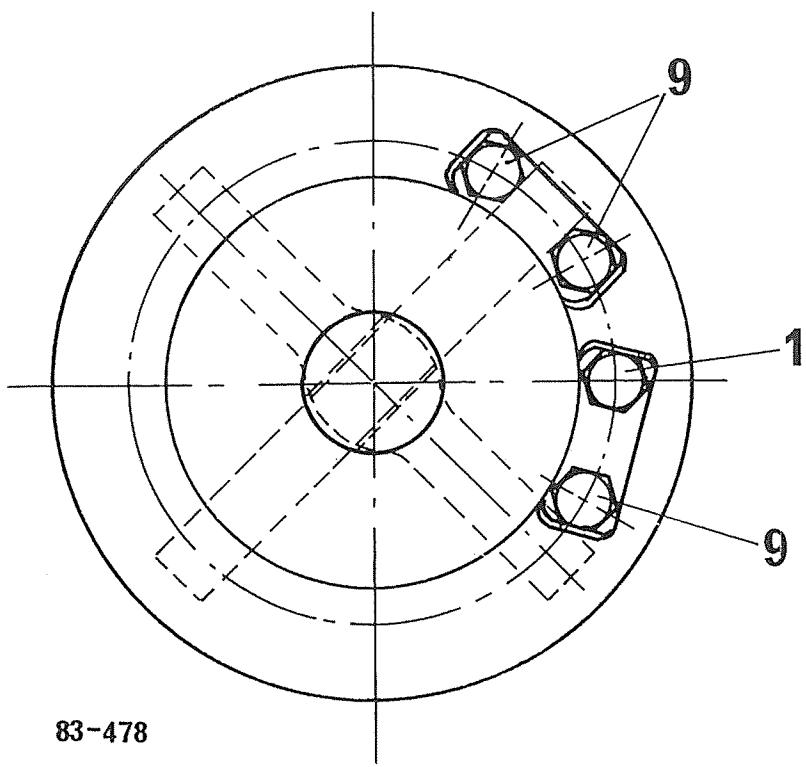
83-476



83-477



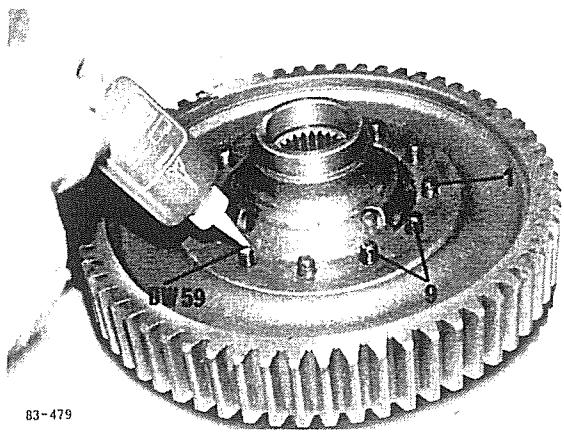
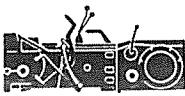
83-468



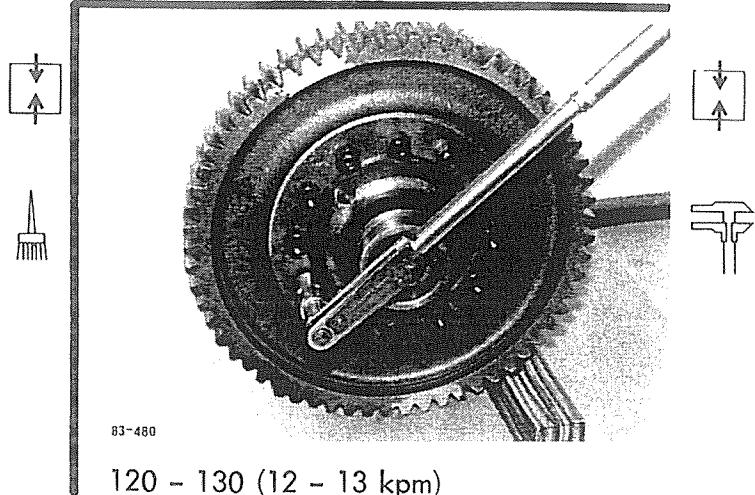
83-478

**1 =** SECHSKANTPASSSCHRAUBE  
FITTED BOLT  
VIS D'AJUSTAGE 6 PANS  
TORNILLO HEXAGONAL

**9 =** SECHSKANTSCHRAUBE  
BOLT  
VIS 6 PANS  
TORNILLO HEXAGONAL

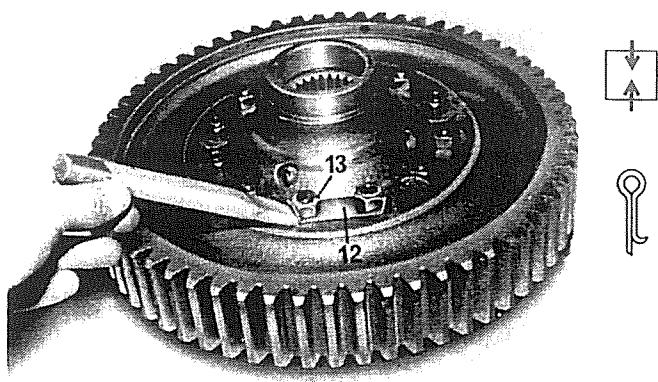


83-479



83-480

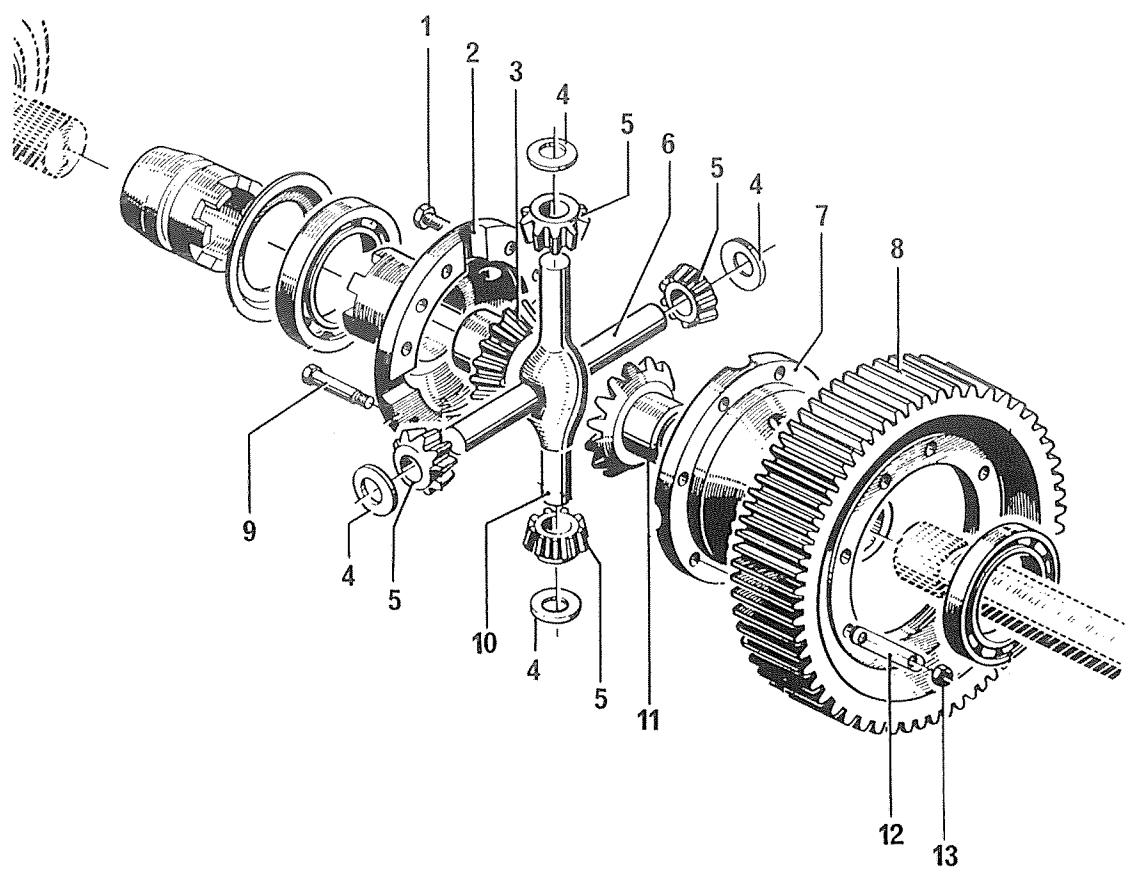
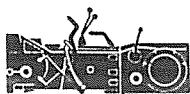
120 - 130 (12 - 13 kpm)

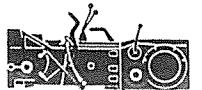


83-481

- |                         |                        |
|-------------------------|------------------------|
| 1. Sechskantschraube    | 1. Bolt                |
| 2. Differentialgehäuse  | 2. Differential casing |
| 3. Kegelrad             | 3. Bevel gear          |
| 4. Anlauf scheibe       | 4. Stop washer         |
| 5. Kegelrad             | 5. Bevel gear          |
| 6. Kreuzzapfen          | 6. Cross-type pin      |
| 7. Differentialgehäuse  | 7. Differential casing |
| 8. Zahnrad              | 8. Gear                |
| 9. Sechskantpaßschraube | 9. Fitted bolt         |
| 10. Kreuzzapfen         | 10. Cross-type pin     |
| 11. Kegelrad            | 11. Bevel gear         |
| 12. Sicherungsblech     | 12. Lockwasher         |
| 13. Sechskantmutter     | 13. Nut                |

- |                            |  |
|----------------------------|--|
| 1. Vis 6 pans              | 1. Tornillo hexagonal                    |
| 2. Boîtier de différentiel | 2. Caja de diferencial                   |
| 3. Engrenage conique       | 3. Piñón                                 |
| 4. Disque de butée         | 4. Arandela de tope                      |
| 5. Engrenage conique       | 5. Piñón                                 |
| 6. Tourillon en croix      | 6. Muñón de cruceta                      |
| 7. Boîtier de différentiel | 7. Caja de diferencial                   |
| 8. Engrenage               | 8. Rueda dentada                         |
| 9. Vis d'ajustage 6 pans   | 9. Tornillo hexagonal de vástago calibr. |
| 10. Tourillon en croix     | 10. Muñón de cruceta                     |
| 11. Engrenage conique      | 11. Piñón                                |
| 12. Tôle d'arrêt           | 12. Chapa de seguridad                   |
| 13. Ecrou 6 pans           | 13. Tuerca hexagonal                     |





## INHALTSVERZEICHNIS

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SCHALTDECKEL ZERLEGEN  
 DISMANTLING THE SHIFT COVER  
 COUVERCLE DE LA GRILLE DE PASSAGE DES VITESSES: DESASSEMBLER  
 DESARMAR LA TAPA DE CAMBIO



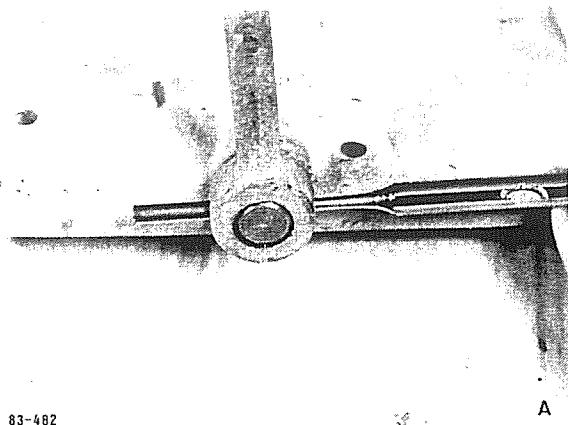
Normalausführung  
 Standard type  
 Version standard

Versión standard

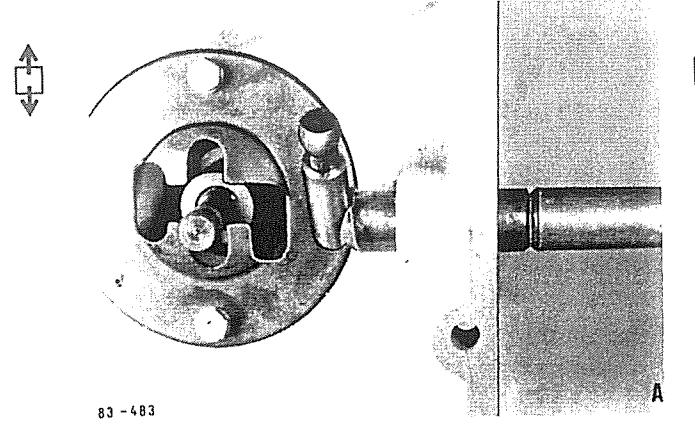
Synchronausführung  
 Synchronous type  
 Version synchronisée

Versión sincronizada

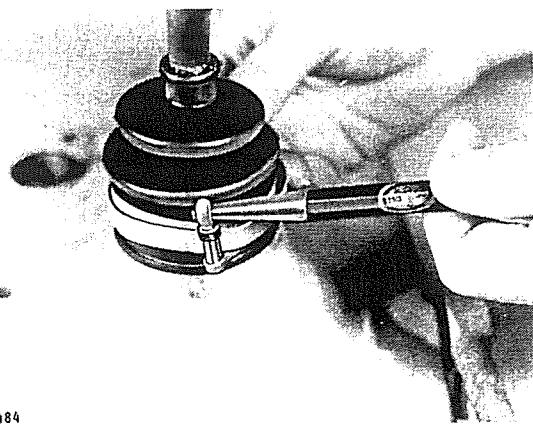
mit Anlaßsperrre  
 with starting lock  
 avec contacteur de  
 démarrage  
 con bloqueo contra  
 arranque



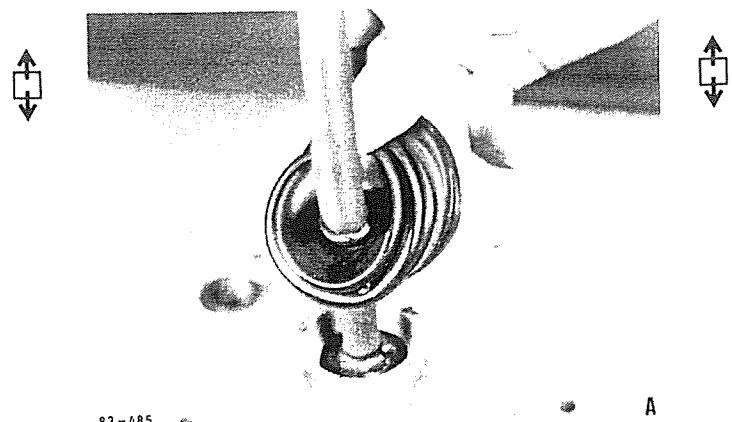
83-482



83-483

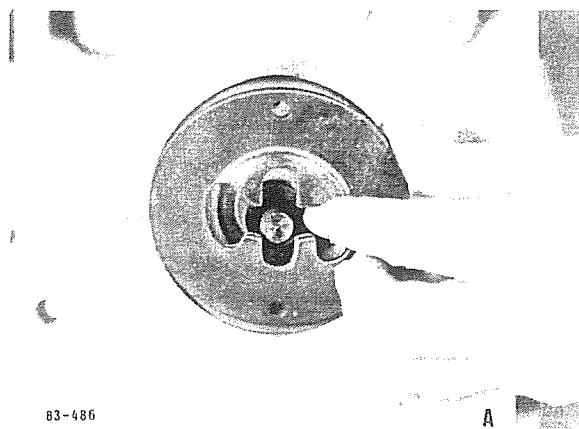
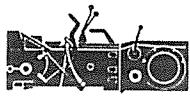


83-484

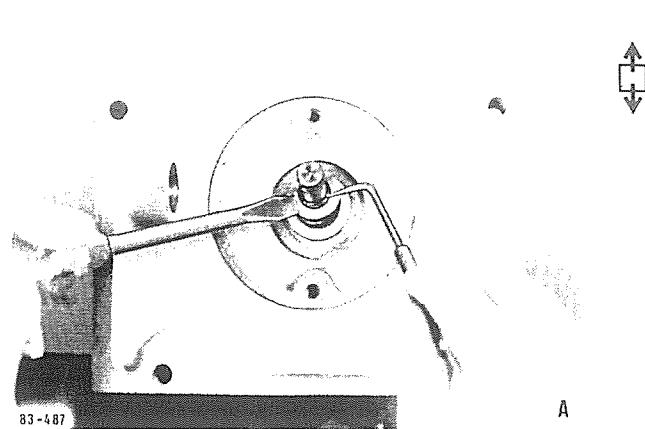


83-485

A



83-486



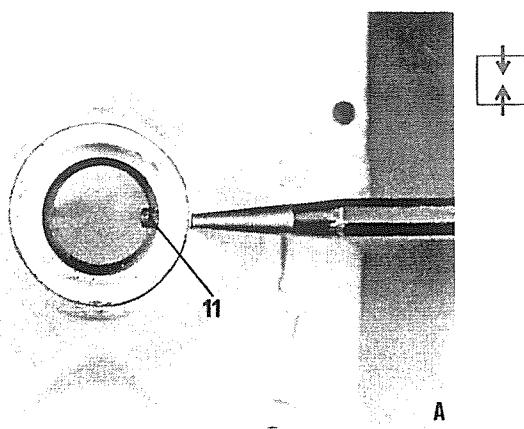
83-487

### SCHALTDECKEL ZUSAMMENBAUEN

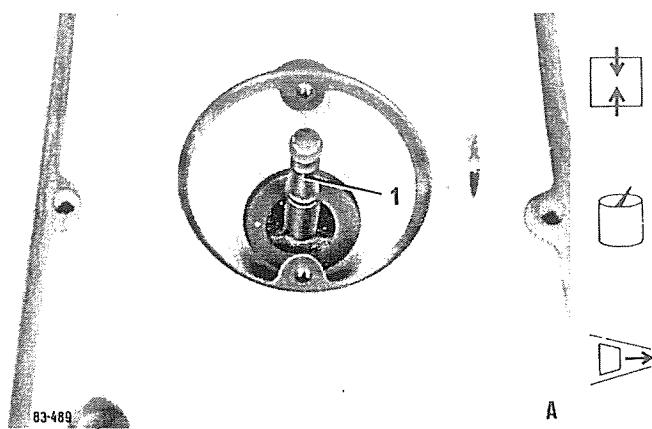
REASSEMBLING THE COVER

COUVERCLE DE LA GRILLE DE PASSAGE DES VITESSES: REASSEMBLER

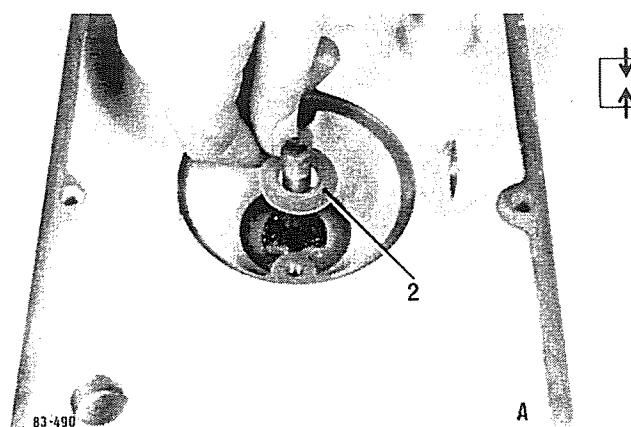
REARMAR LA TAPA DE CAMBIO



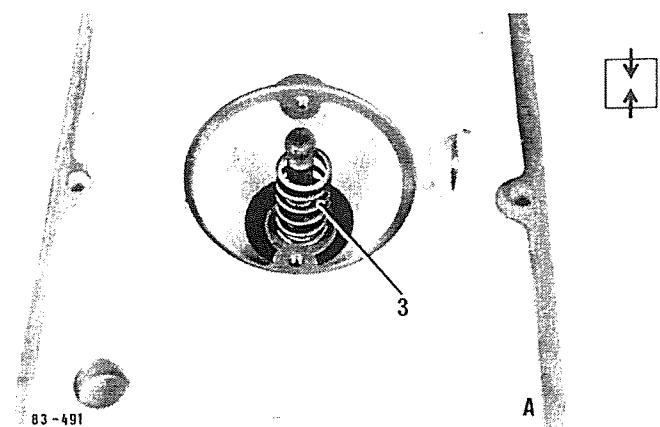
83-488



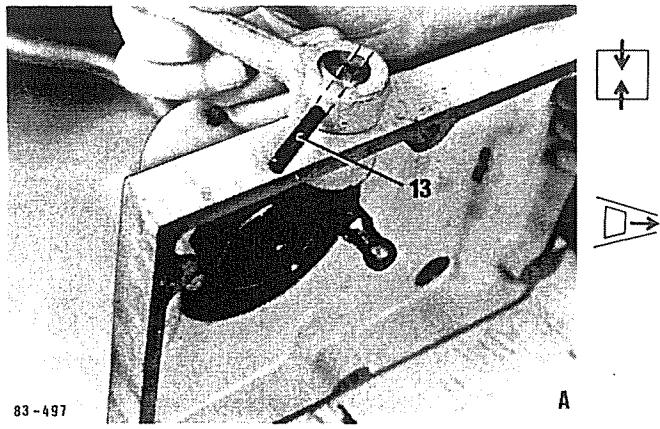
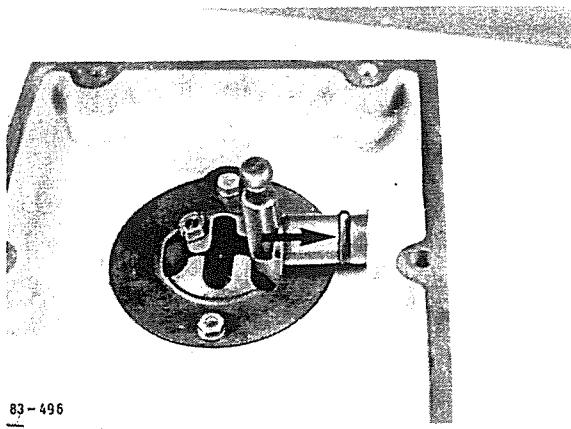
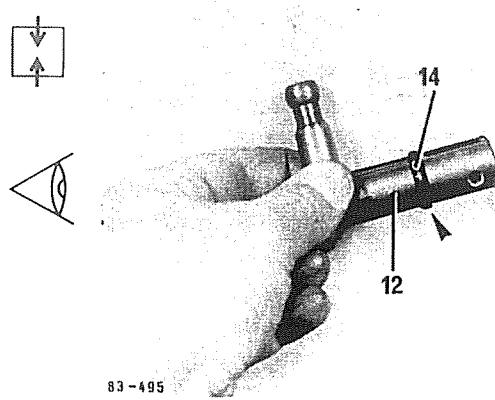
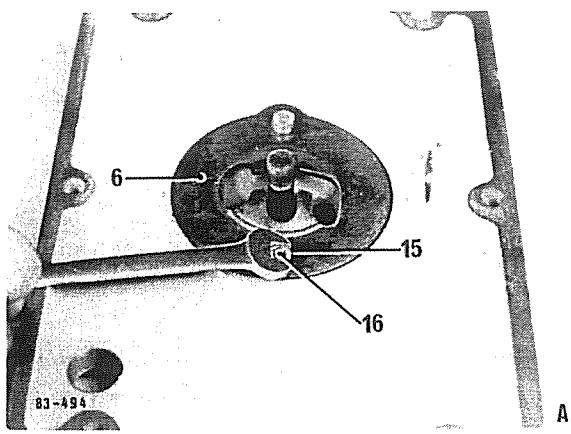
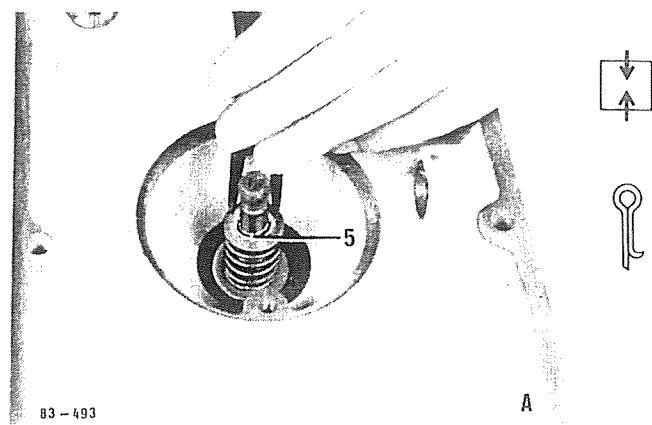
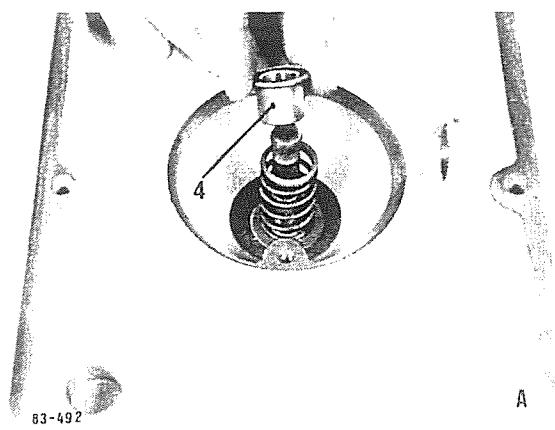
83-489

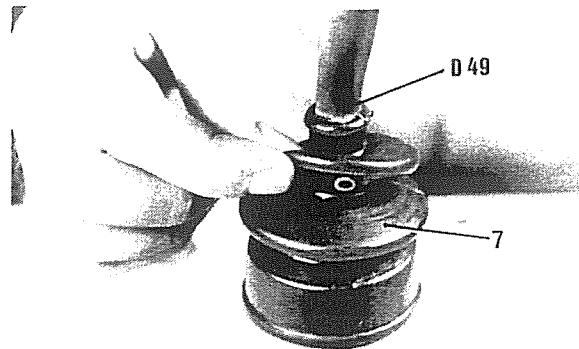
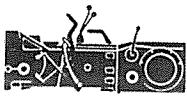


83-490



83-491

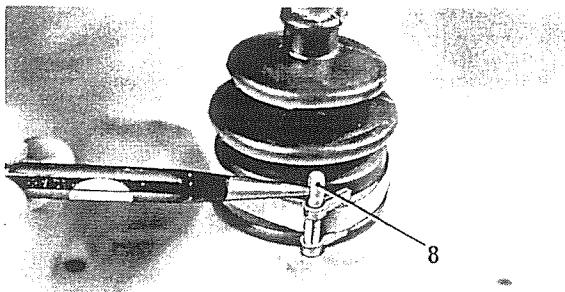




83-498



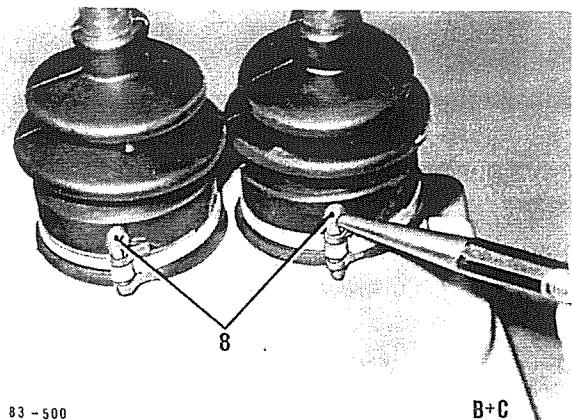
A



83-499



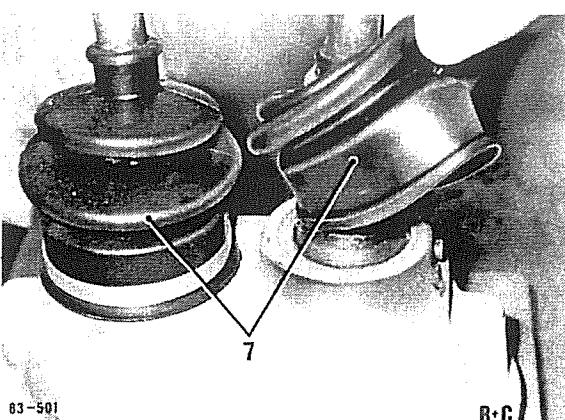
A



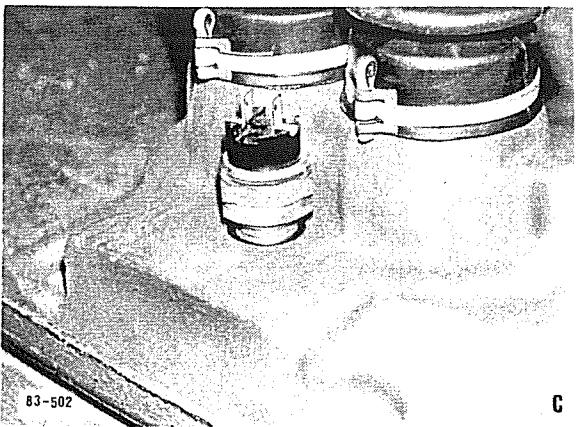
83-500



B+C

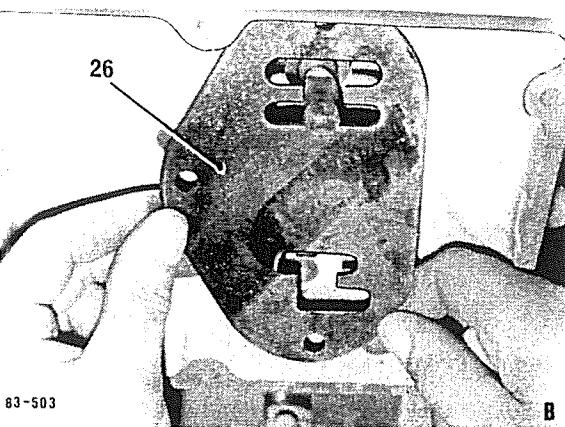


B+C



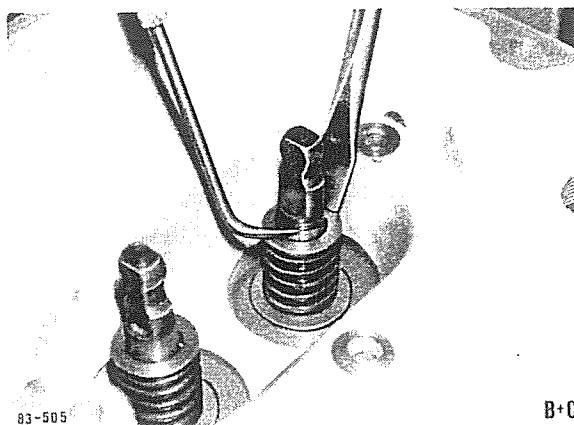
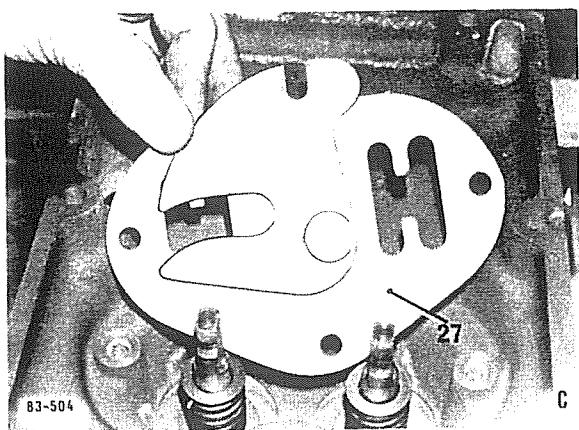
83-502

C

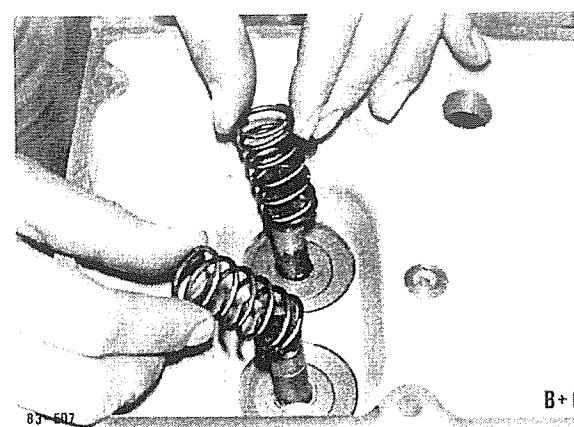
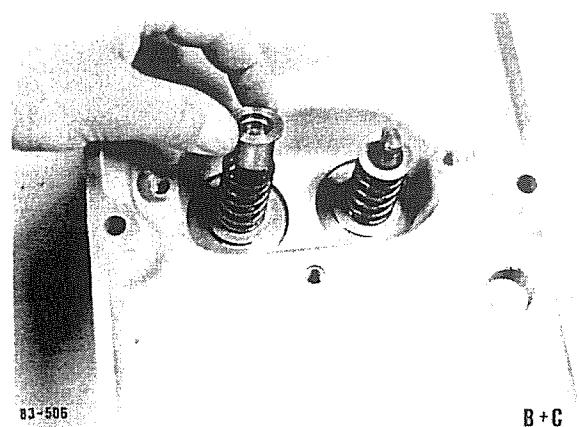


83-503

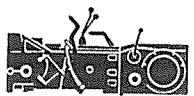




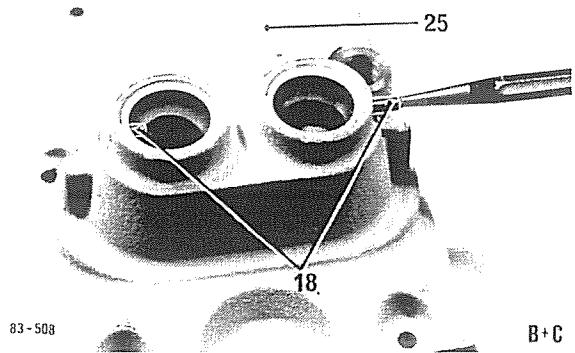
B+C



B+C



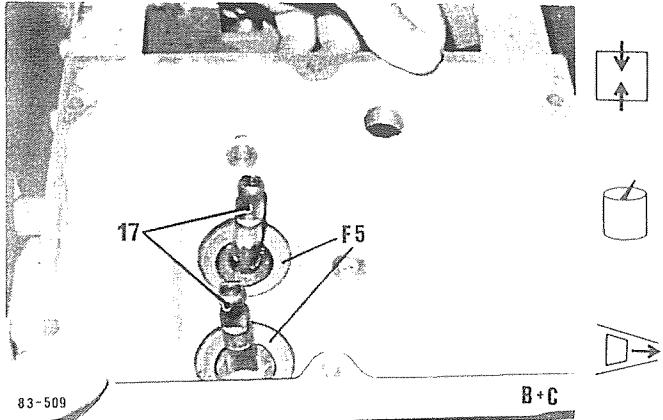
FRONT VIEW



83-508

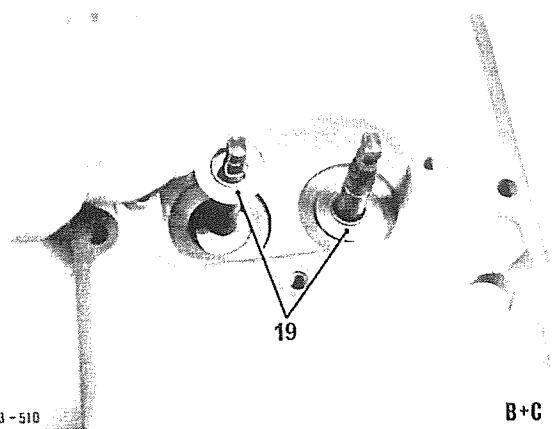


B+C



83-509

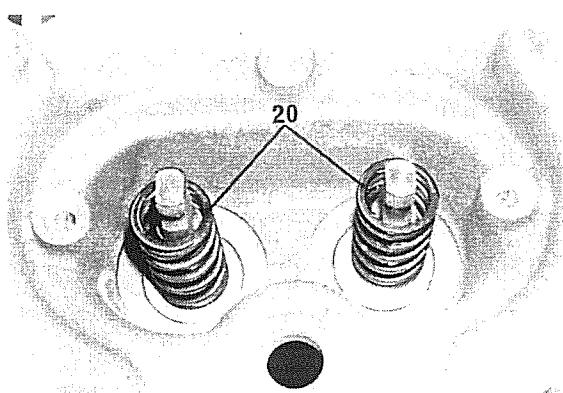
B+C



83-510

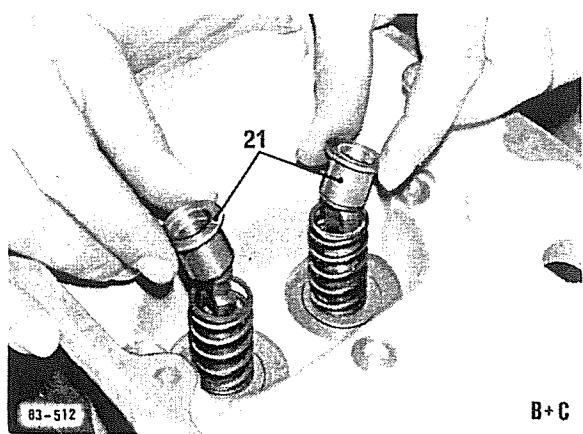


B+C



83-511

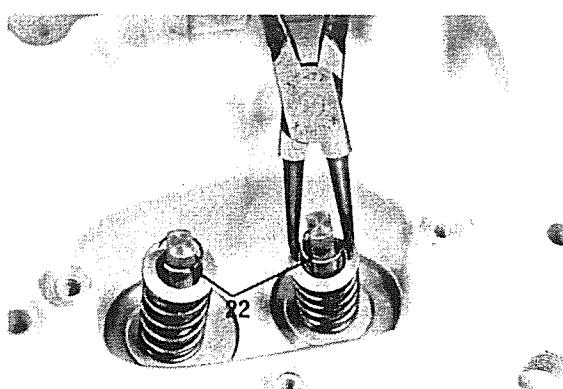
B+C



83-512



B+C



83-513

B+C

