



Spare Parts Catalog

16 S 2330 TD

Material number: 1356.003.065

Current date: 29.06.2023

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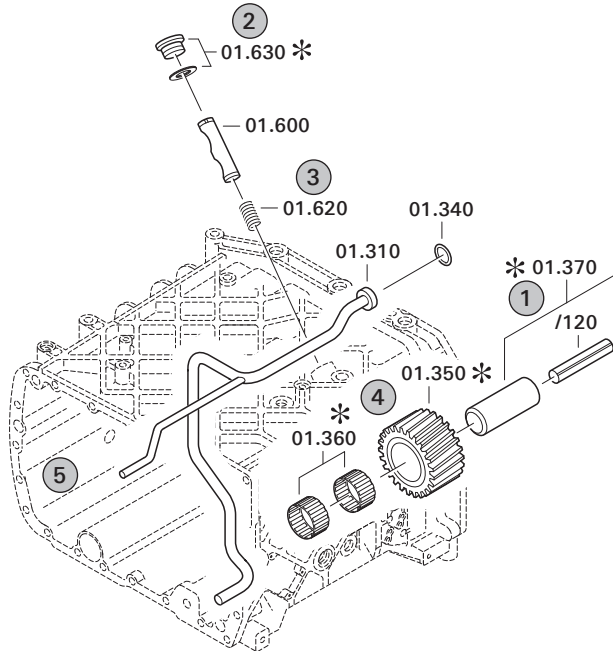
zuständiges Werk:
Friedrichshafen

Notes relating to the spare parts catalog

Setup of the spare parts catalog

- Cover sheet
- Technical Cover (only in SDM print)
- Overview of figures
- Figure
- Associated parts list
- Next figure
- Associated parts list
- ...

Figure and parts list



Overview of figures

Bildtafel Figure	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
068.08.17	1316.170.001	AUSLEGER	WL	SHIFT TURRET	1	Stk
068.08.06	1316.170.031	DECKEL	WL*H-H *VM	COVER	1	Stk
068.08.14	1316.170.808	DECKEL	WL*AUSL+GEH*H-H*HF160N	COVER	1	Stk
08	1316.170.441	ANSCHLUSSTEILE	WL*NG-VORB*RG-SCHL*168N *BAJONETT	CONNECTING PARTS	1	Stk

The "gap" indicates that there is no separate graphics panel (poster) for this assembly
The parts of this assembly are shown with the same mid-section number on the figure

1 Positions and subpositions

Pos.	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
0370	1315.201.054	RUECKLAUFBOLZEN	KPL.16S151*SG*L= 79	REV.IDLER SHAFT	1	Stk
/0120	0631.329.293	SPANNSTIFT		SLOT. PIN	1	Stk

Positions marked with "/" are the individual items of a completion
For example: Position 0370 contains a centering pin with the position /0120

2 Combinations with standardized parts

Pos.	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
0630		VERSCHL.SCHR.		SCREW PLUG	1	Stk
	0636.302.067	VERSCHL.SCHR.		SCREW PLUG	1	Stk
	0634.801.249	DICHTRING	A 26 X 31	SEALING RING	1	Stk

The parts list shows the components included in the combination of standardized parts

3 Depiction of position/item number on the figure and in the parts list

01.620 - on the figure 01 relates to the assembly in which the position is included. Due to program-related reasons, it is shown on the figure.

0620 - in the parts list

Pos.	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
0620	0732.040.736	DRUCKFEDER		COMPRESSION SPRING	1	Stk

4 *-Positions

Positions marked with an * are optional i.e. inclusion in the parts list is not mandatory.
The following note is shown on the figure

je nach Stücklistenausführung
depending on spec. number
*
suivant la nomenclature
secondo la distinta base

5 Parts, dotted display

Parts with dotted display on the figure are only used for orientation of other parts

Technical Cover

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Material number: 1356.003.065

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Pos.	Information	Amendment number
001	Use case -----	
002	Customer Hyundai Motor Company HMC	
003	City Gyeonggido	
004	DUNS 68-774-8277	
005	Product description -----	
006	INSTALLATION POS TRANSMISSION HORIZONTAL LEFT	
007	TRANSMISSION ATTACHMENT FLANGE-MOUNTED	
008	CO2-FAMILY XXX	
009	CO2-CERTIFICATE XXX	
010	COMPANY NAME ON TYPE PLATE ZF-CUSTOMER	
011	E1 CERTIFICATE XXX	
017	NUMBER OF GEARS 16	
018	RATIO, BOTTOM GEAR 16.41	
019	RATIO, TOP GEAR 1	
020	SET OF RATIOS DG	
021	NOTE ON TYPE OF GEAR SHIFT SYS TURNING SHAFT	
022	POSITION, GEAR SHIFT SYSTEM HORIZONTAL LEFT	
023	DESIGN, SHIFT PATTERN UEH	
024	VERSION SHIFT SUPPORT GATE DEPENDENT SERVO	
025	VERSION ACTUATION SHIFT SYSTEM CONTROL CABLE	
026	DESIGN, SHIFT SYSTEM E13MP	
027	DESIGN PSE PSE5	
029	DESIGN, VALVE BLOCK OHNE LUFTVERTEILER	
034	DESIGN AIR SHUT-OFF GV-SERVO	
036	SELECTION PATTERN VARIANT GEAR SHIFT PATTERN 1	
037	VERSION OF SYNCHRONIZER 1 1+2 GANG BK-SYNCHR.CARBON	
038	VERSION OF SYNCHRONIZER 2 3+4 GANG BK-SYNCHR.CARBON	
039	REFERENCE LENGTH INPUT SHAFT 117 mm	
040	STANDARD TYPE INPUT SHAFT SAE	
041	NUMBER OF WEDGES INPUT SHAFT 10	
042	VERSION OF INPUT SHAFT FORM C	
043	NOMINAL DIAMETER INPUT SHAFT 2 in	
044	DIAMETER, JOURNAL, INPUT SHAFT 30 mm	



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Pos.	Information	Amendment number
045	TYPE FIT SPIGOTS INPUT SHAFT F7	
046	VER. BEAR. SPIGOTS INPUT SHAFT TAPER ROLLER	
049	DESIGN,CONN., CLUTCH HOUSING SAE 1	
050	CENTR.DIA,HSG/ENGINE CONNECT. 511.175 mm	
051	NUMBER OF BORES,ENGINE CONN. 12	
052	BORE DIA, ENGINE CONNECTION 11 mm	
053	DESIGN, RELEASE SHAFT	
054	WIDTH ACROSS FLATS,RELEAS.FORK 116 mm	
057	REF.LENGTH,RELEASE BEAR.FLAN -24.2 mm	
058	DIAMETER, RELEASE FLANGE 62.62 mm	
059	DESIGN RELEASE CYLINDER WITHOUT GROOVE	
060	OUTER DIA. OUTPUT FLANGE RA 180 mm	
061	NO.OF BORES OUTPUT FLANGE HA1 4	
062	NO.OF SCREWS OUTPUT FLANGE RA 4	
063	BORE DIA. OUTPUT FLANGE RA 15 mm	
064	DIA. THREAD OUTPUT FL. SCR. RA M14	
065	THREAD PITCH OUTPUT FL SCR. RA 1.5 mm	
066	THREAD LENGTH OUTP.FL SCREW RA 50 mm	
067	CORROS.PROTECTION, OUTP.FLANGE COATED	
068	DIMENSION SHIFT TURRET DIST. 300 mm	
069	MEAS. LOC. SHIFT TURRET DIST. SHIFT LEVER-LOCATION	
070	SELECTOR LEVER y	
071	RADIUS SELECTOR LEVER 69 mm	
072	SELECTOR LEVER POSITION B	
073	DESIGN OFFSET SELECTOR LEVER OUTSIDE	
074	LENGTH OFFSET SELECTOR LEVER 3.6 mm	
075	SHIFT LEVER y	
076	RADIUS 1 SHIFT LEVER 85 mm	
079	SHIFT LEVER CONNECTION HEXAGON	
080	DESIGN, OFFSET, SHIFT LEVER INSIDE	
082	LEVER POSITION SHIFTING OUTPUT A	
086	SPRING ARRANGEMENT Q4	
087	SPRING FORCE DETENT PLUNGER RG 117 N	



Pos.	Information	Amendment number
091	SELECTOR SPRING FORCE, INSIDE 17 N	
098	SWITCH, REVERSE GEAR y	
099	DESIGN, RG (REV.GEAR) SWITCH CLOSING	
101	DESIGN, CONNECTION, RG SWITCH DIN BAYONET	
102	CODE SWITCH RG A2	
103	PROT.CAP SWITCH, REVERSE GEAR y	
104	SWITCH, NEUTRAL GEAR y	
105	DESIGN,NG(NEUTRAL GEAR)SWITCH OPENING SWITCH	
107	DESIGN, CONNECTION, NG SWITCH DIN BAYONET	
108	CODE SWITCH NG A1	
109	PROT.CAP SWITCH, NEUTRAL GEAR y	
110	PRESSURE SWITCH y	
111	DESIGN PRESSURE SWITCH CLOSING	
112	DESIGN CONN. PRESSURE SWITCH DIN BAYONET	
113	CODE PRESSURE SWITCH A3	
114	PROTECTING CAP PRESS.SWITCH y	
115	RG-GATE-IDENTIFICATION SWITCH	
120	SWITCH RG-ENGAGED	
125	SWITCH GP y	
126	DESIGN, GP SWITCH PREPARED	
129	PROTECTING CAP GP SWITCH n	
130	SWITCH GP-END POSITION n	
135	SWITCH GV y	
136	DESIGN, GV SWITCH OPENING SWITCH	
137	DESIGN, CONNECTION, GV SWITCH DIN BAYONET	
138	PROTECTING CAP GV SWITCH y	
139	CODE SWITCH GV A1	
140	SWITCH HG	
145	SWITCH 1 GEAR	
150	ATTACHM.POS.HEAT EXCHANGER IN FRONT RIGHT	
151	DES.CONN.HEAT EXCHANGER PREPARED	
152	VER. TRANSMISSION VENTILATION BREATHER	
159	PULSE SENSOR TRANSMISSION PREPARED	

Technical Cover

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Pos.	Information	Amendment number
160	PULSE RATE PULSE SENS GEARBOX 6 IMP/U	
169	OIL CAPACITY, GEARBOX 15.5 dm3	
170	OIL FILL VARIANT EX WORKS	
171	OIL GRADE PERMISSIBLE ACC. TO TE-ML01	
172	OIL CLASS FIRST FILLING E	
173	CODING OUTER CONSERVATION KA2	
175	CODING INNER CONSERVATION KI1	
176	CONSERVATION SPECIFICATION ZFN 916	
177	COLOR JET BLACK	
178	COLOUR CLASSIFICATION ACC. TO RAL 9005	
179	PAINTING, ZF STANDARD 915 W	
186	Alias ID -----	
187	Hyundai Motor Company HMC 43000-7S000	

Assembly group overview

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Material number: 1356.003.065

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Picture	Pos.	Material number	Name	Quantity	Amend. no.	Techn. Info.
161.01.09-1	110	1356.101.004	TRANSMISSION HOUSING	1		
161.01.81-1	180	1325.101.811	CLUTCH HOUSING	1		
161.02.03-1	10	1356.102.010	INPUT SHAFT	1		
161.02.80-1	240	1325.102.802	CONNECTION PLATE	1		
161.02.01-1	910	1325.102.016	CONNECTION PLATE	1		
068.03.01-1	20	1316.103.014	COUNTERSHAFT	1		
161.004.013-1	30	1356.104.013	MAIN SHAFT	1		
161.05.01-1	130	1325.105.001	RETURN	1		
161.06.04-1	40	1356.106.001	TRANSMISSION SHIFT SYSTEM	1		
161.06.02-1	44	1325.106.803	TRANSMISSION SHIFT SYSTEM	1		
068.07.96-1	460	1341.108.812	GEAR SHIFT HOUSING	1		
068.07.48-1	910	1341.108.010	GEAR SHIFT HOUSING	1		
068.07.47-1	914	1341.108.409	GEARSHIFT SHAFT	1		
068.07.82-1	924	1341.108.004	DETENT	1		
062.08.30-1	954	1316.171.403	END COVER	1		
068.08.02-1	960	1316.171.434	PNEUMATIC SERVO UNIT	1		
161.09.02-1	934	1325.109.001	VALVE BLOCK	1		
161.09.03-1	940	1325.109.414	SWITCH	1		
161.10.04-1	200	1356.110.002	OIL SUPPLY	1		
161.10.01-1	920	1325.110.005	PUMP	1		
068.10.89-1	466	1341.111.802	SELECTOR LEVER	1		
068.10.08-1	932	1341.111.002	SELECTOR LEVER	1		
068.12.25-1	920	1341.149.006	SET OF SPRINGS	1		
161.28.01-1	370	1325.128.806	PLANETARY RANGE	1		
161.40.01-1	50	1356.112.001	GV-SHIFT SYSTEM	1		
161.40.80-1	340	1325.112.811	GV-SHIFT SYSTEM	1		
161.40.41-1	380	1325.112.402	SWITCH	1		
161.43.03-1	40	1325.131.012	RC HOUSING	1		
161.43.40-1	50	1325.131.400	CLOSING COMPONENTS	1		
161.44.03-1	10	1325.132.003	PLANETARY DRIVE	1		
161.44.41-1	60	1325.132.411	OUTPUT FLANGE	1		

Assembly group overview

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Picture	Pos.	Material number	Name	Quantity	Amend. no.	Techn. Info.
161.45.01-1	20	1325.133.004	SYNCHRONIZER	1		
161.046.001-1	30	1325.134.006	GP SHIFT SYSTEM	1		
161.46.41-1	400	1325.134.401	SWITCH	1		
161.57.01-1	510	1325.145.003	RANGE SELECTION	1		
161.70.07-1	480	1356.170.010	SHUT-OFF VALVE	1		
161.90.08	320	1325.147.009	SCREW PLUG	1		
161.93.25-1	260	1325.168.005	CLUTCH RELEASE DEVICE	1		
161.93.17-1	262	1315.301.230	PROTECTION CAP	1		
068.R0.004-1	KIT	1316.298.037	SYNCHRONIZER SET	1		

Picture

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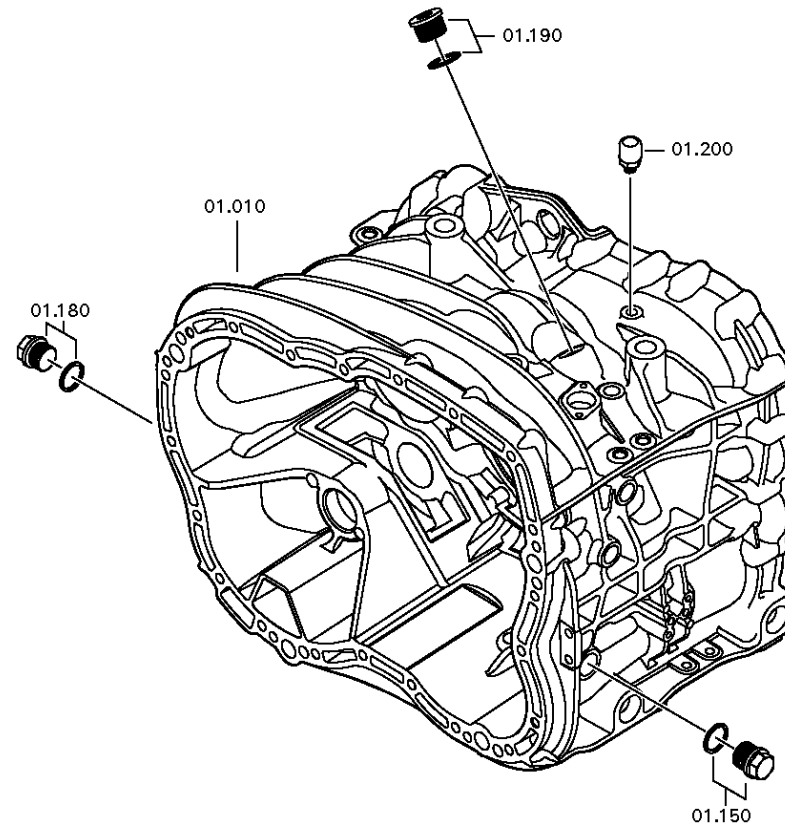
Material number: 1356.003.065

Picture: 161.01.09-1

TRANSMISSION HOUSING



16 S 2330 TD /
TRANSMISSION HOUSING



Picture

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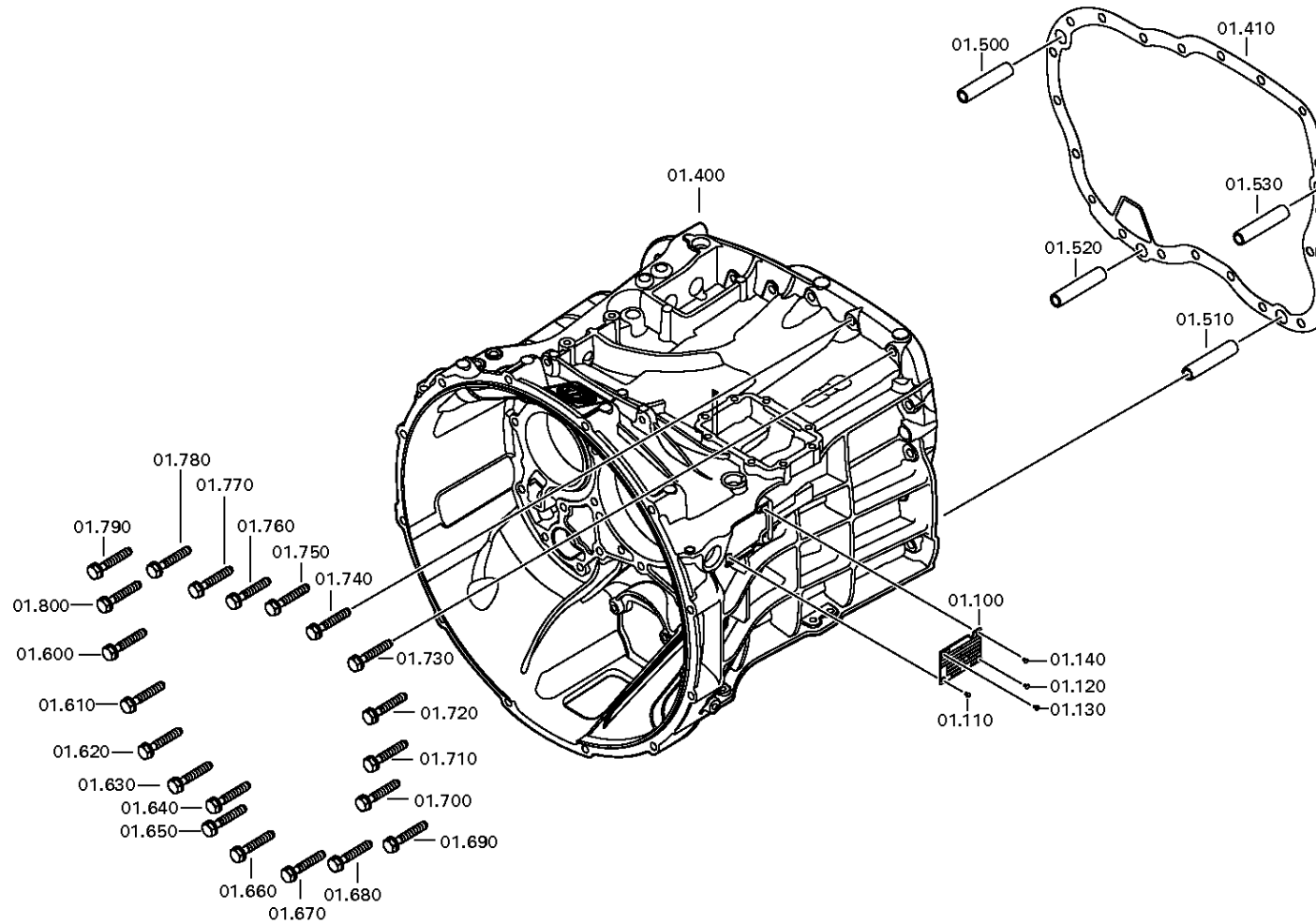
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TRANSMISSION HOUSING



16 S 2330 TD /
TRANSMISSION HOUSING



Picture

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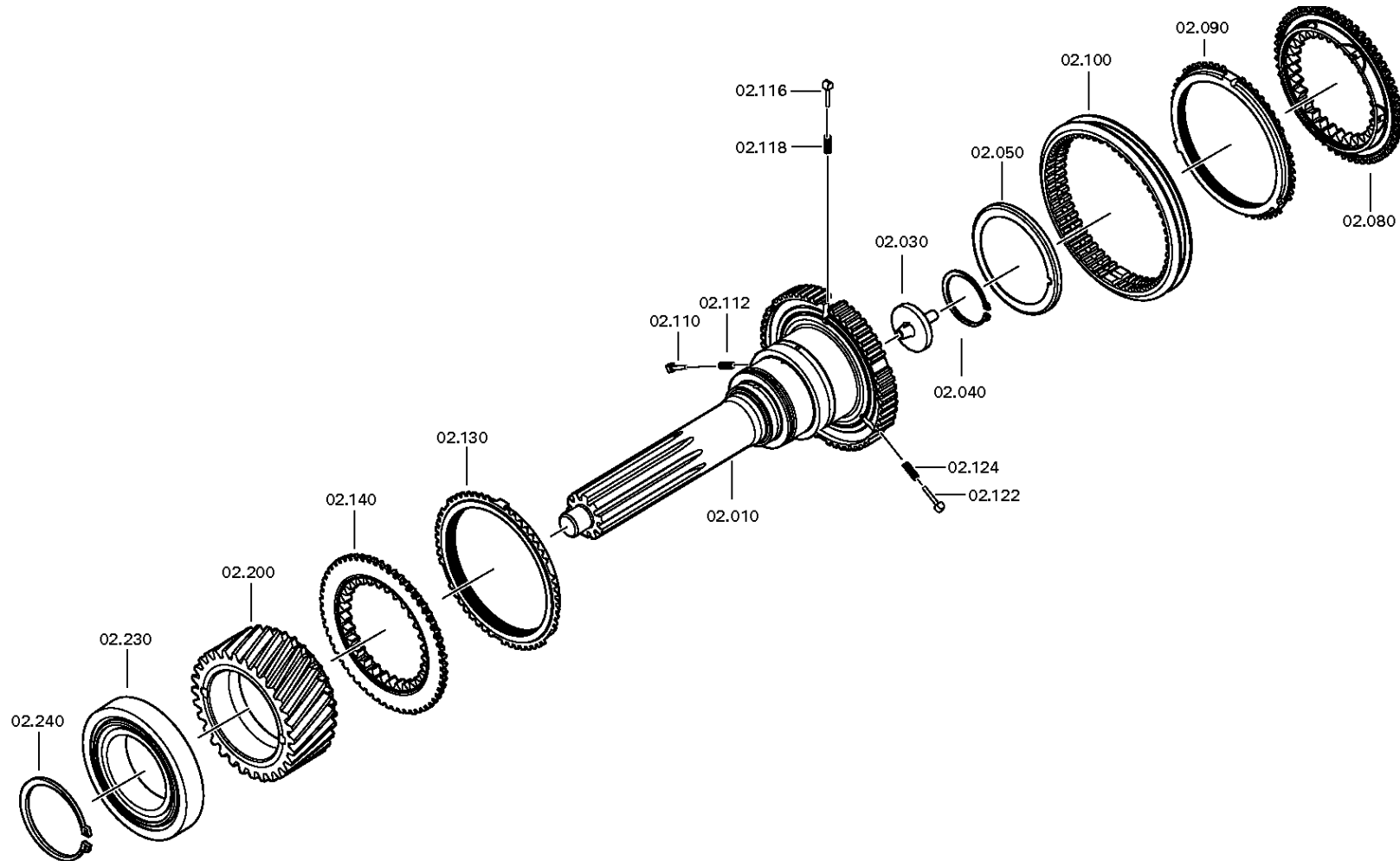
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Picture: 161.02.03-1

INPUT SHAFT



16 S 2330 TD /
INPUT SHAFT



Picture

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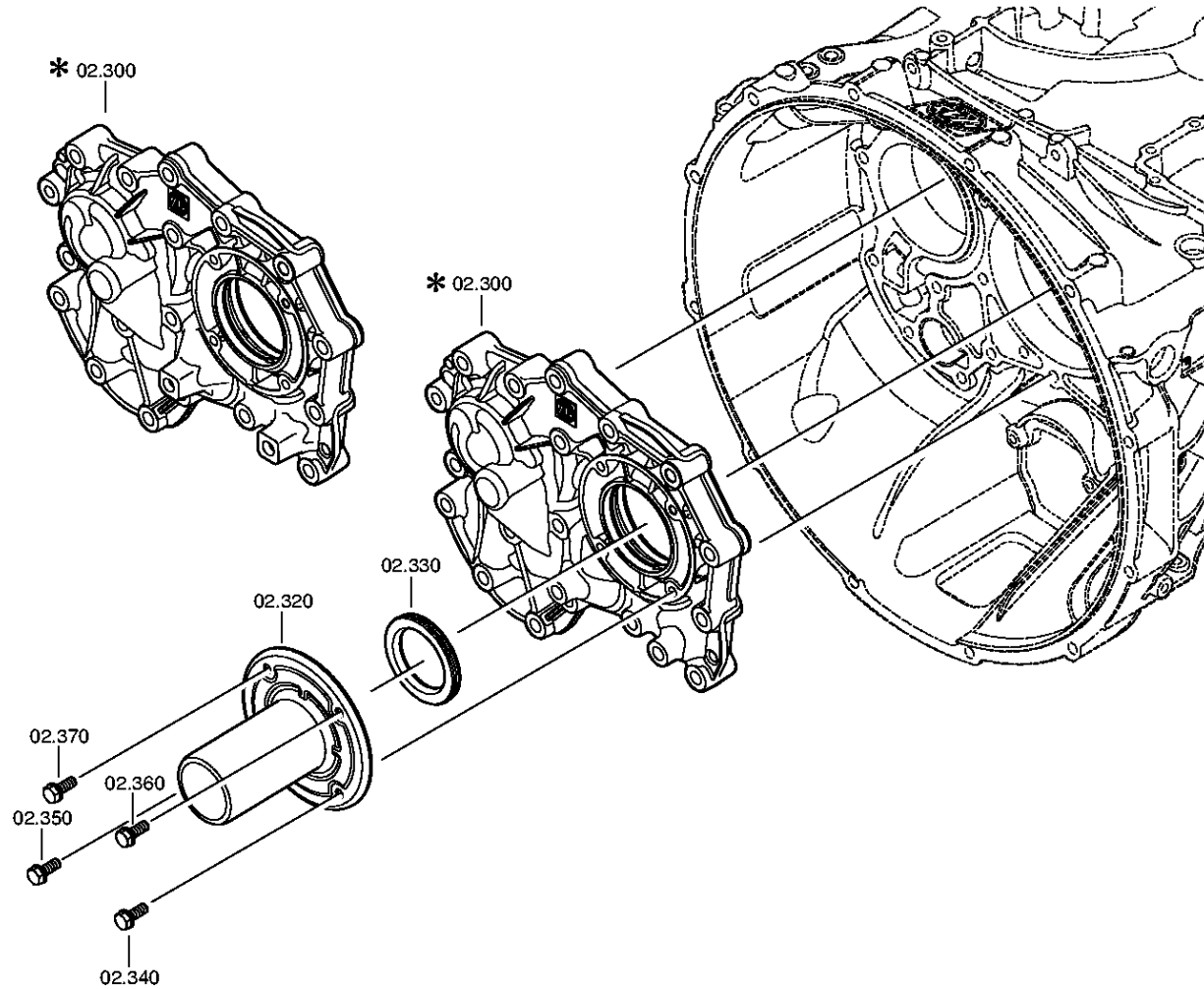
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INPUT SHAFT



16 S 2330 TD /
INPUT SHAFT



Picture

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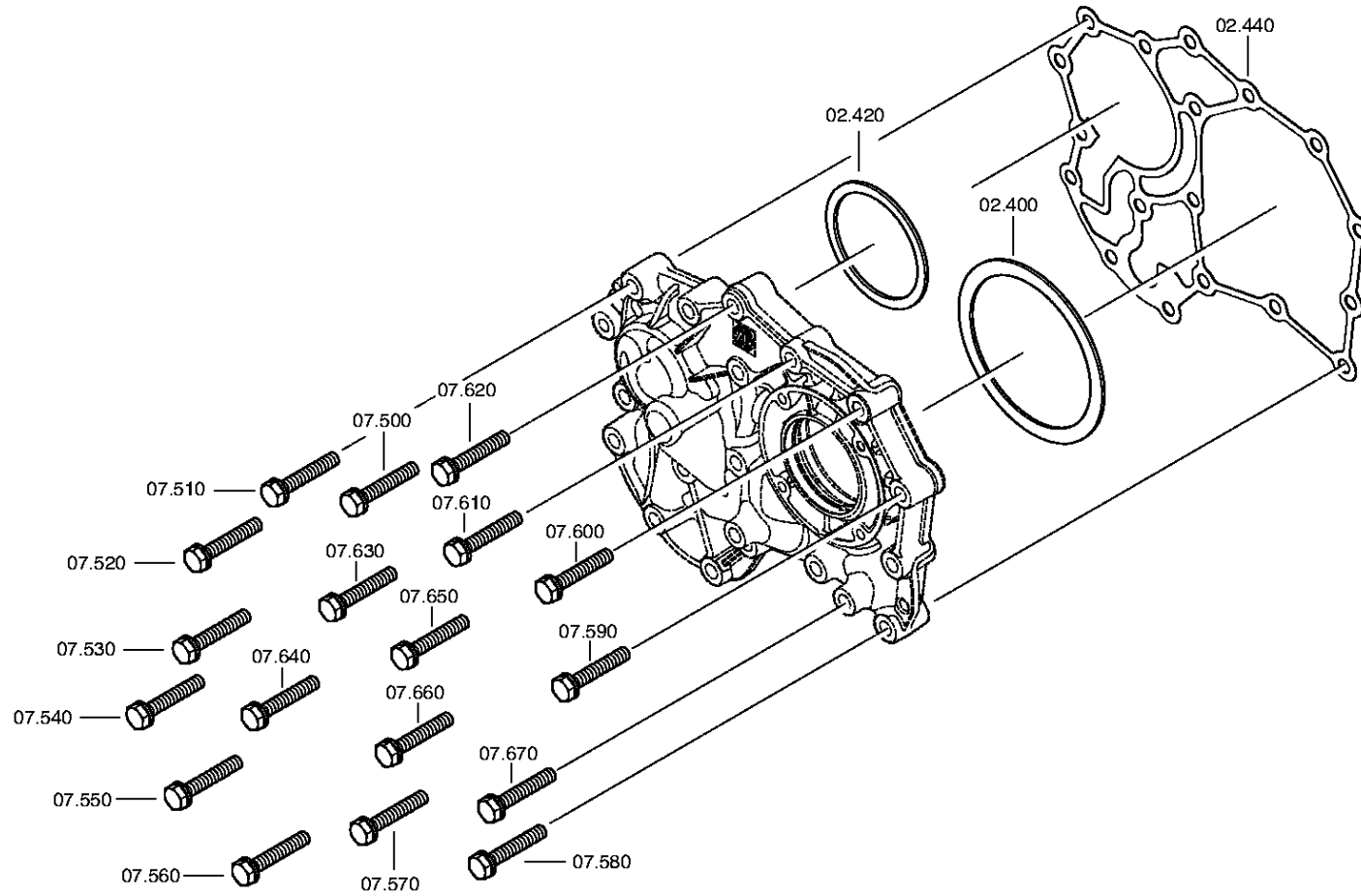
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INPUT SHAFT



16 S 2330 TD /
INPUT SHAFT



Picture

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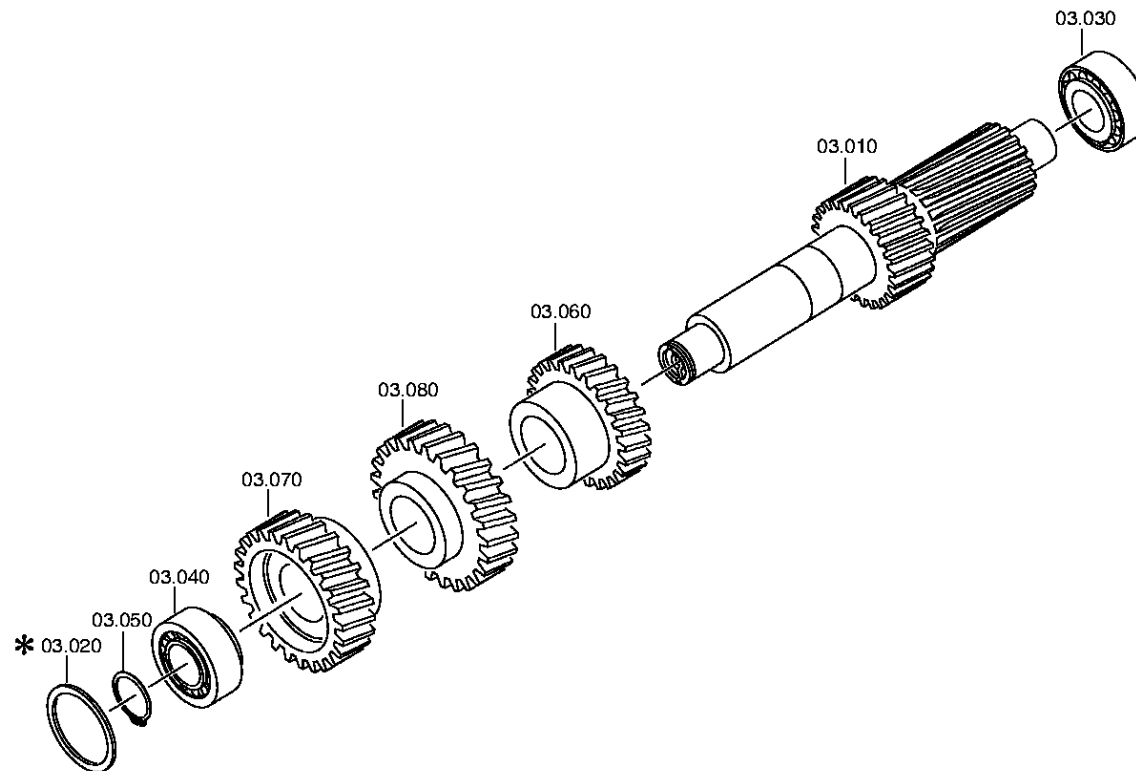
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Picture: 068.03.01-1

Material-assembly-group-no: 1316.103.014



16 S 2330 TD /
COUNTERSHAFT



Picture

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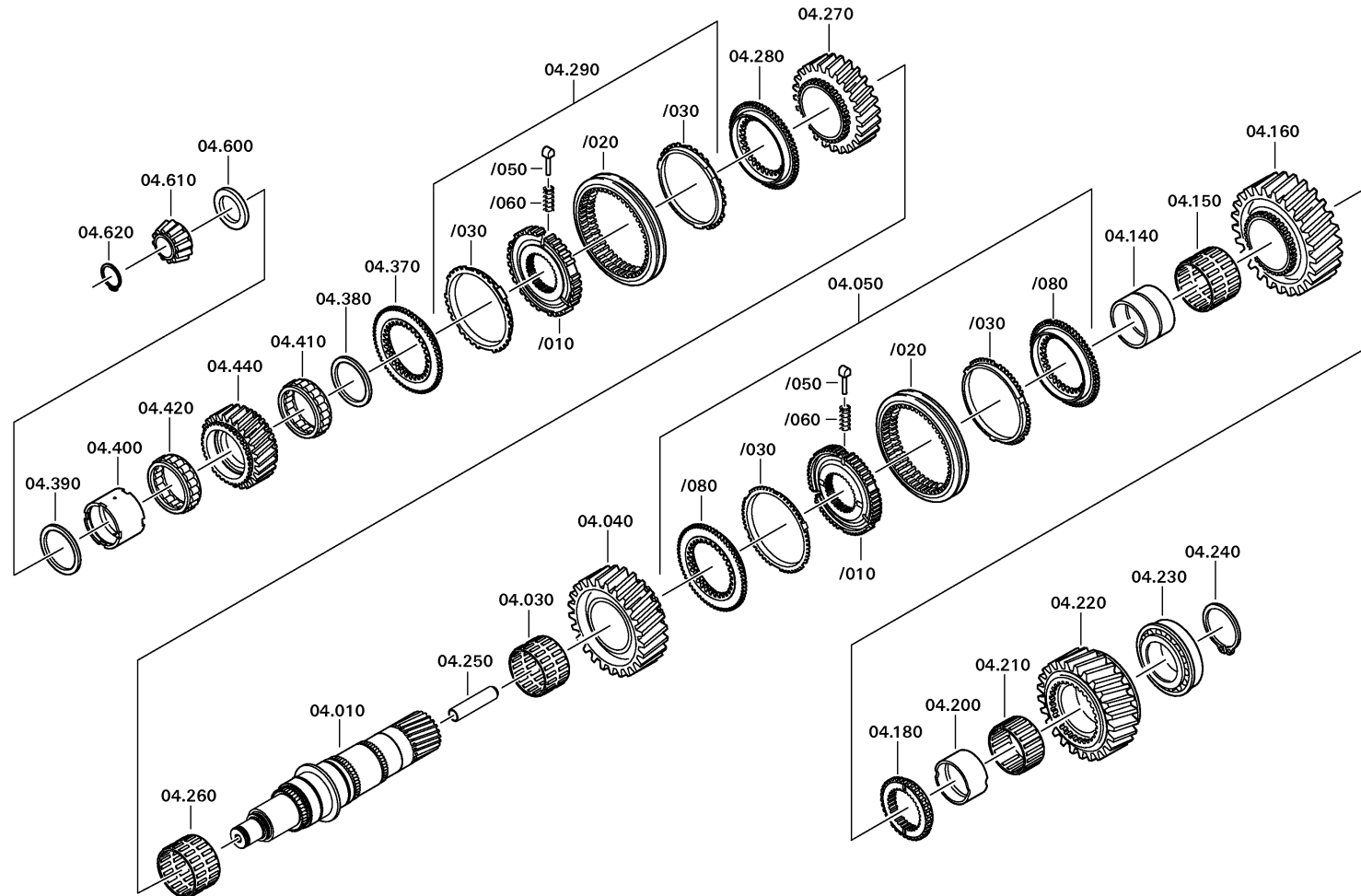
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16 S 2330 TD /
MAIN SHAFT



Picture

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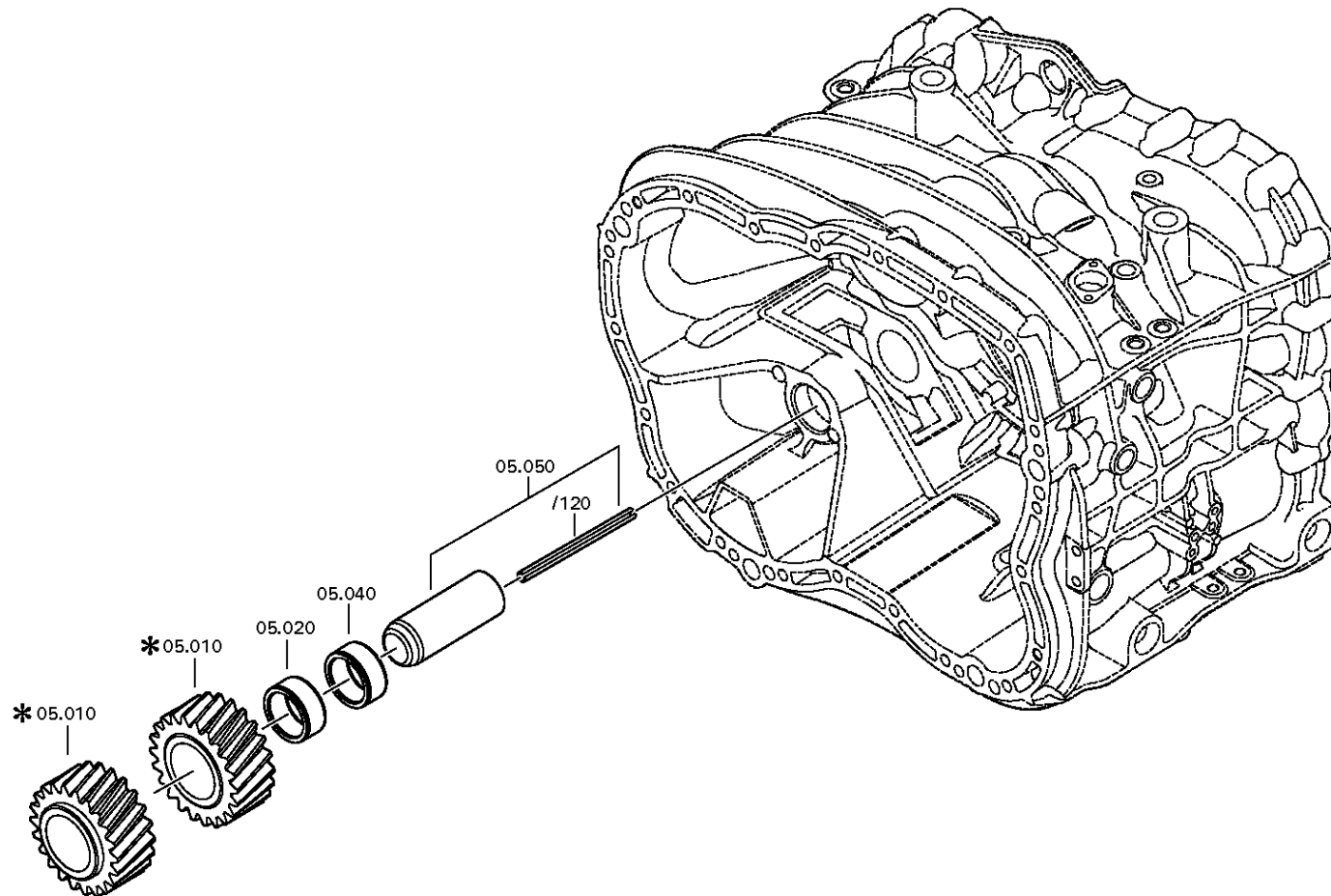
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16 S 2330 TD /
RETURN



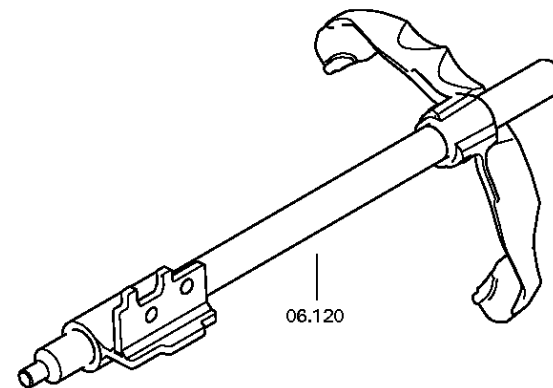
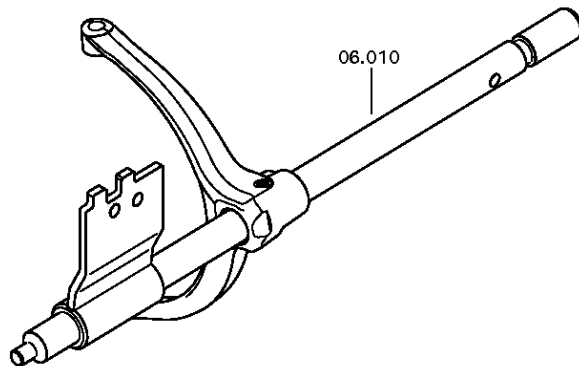
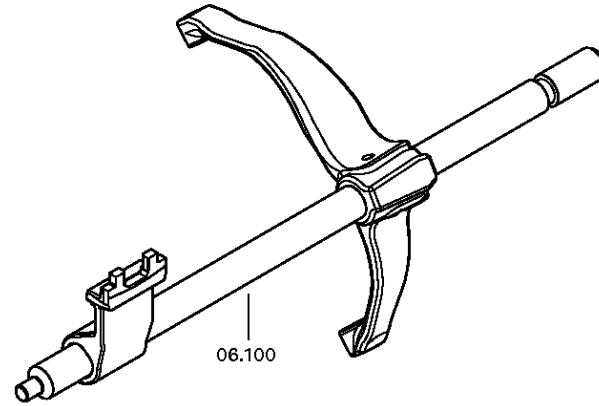
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Material number: 1356.003.065
Picture: 161.06.04-1
TRANSMISSION SHIFT SYSTEM



16 S 2330 TD /
TRANSMISSION SHIFT SYSTEM



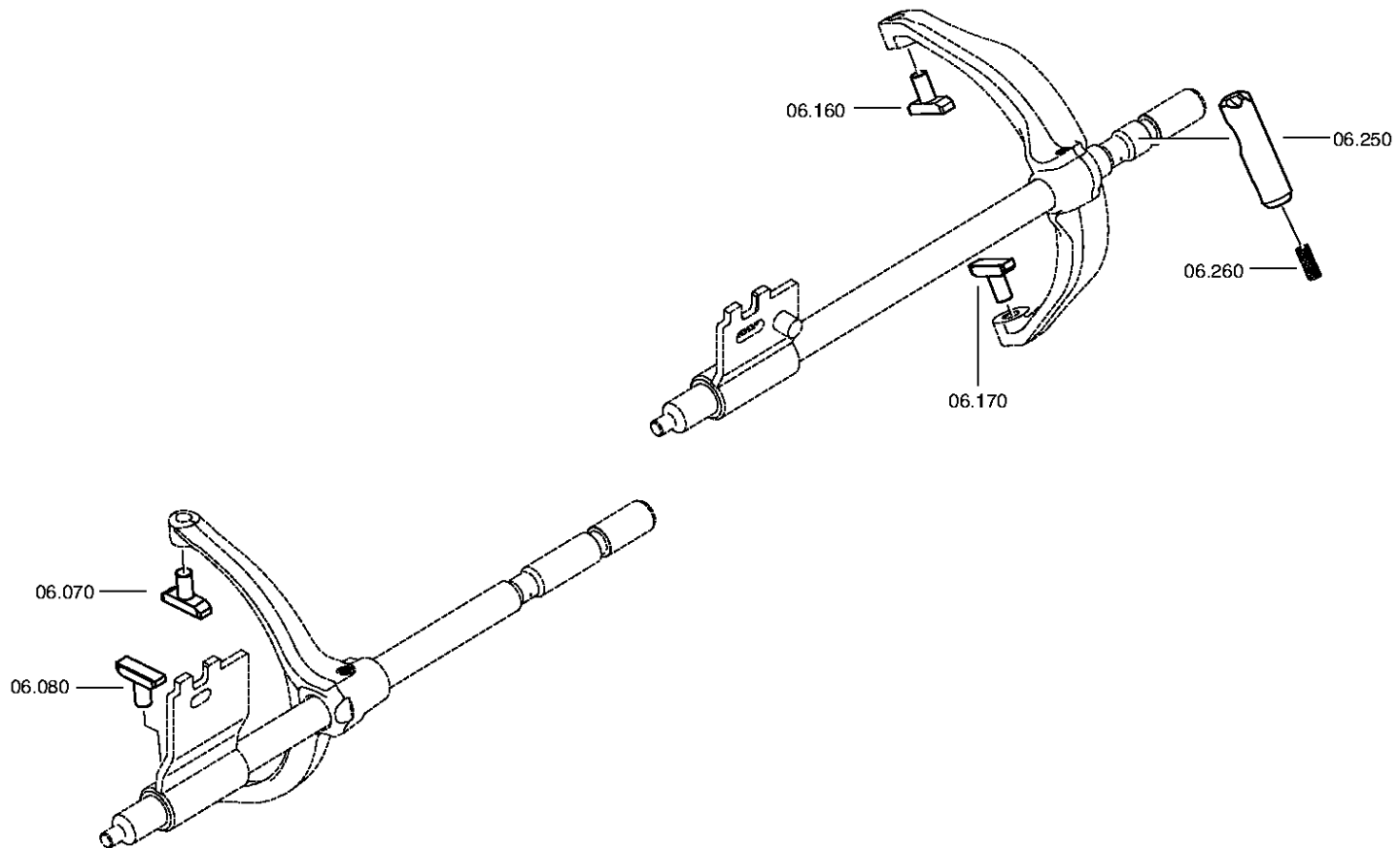
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Picture: 161.06.02-1
TRANSMISSION SHIFT SYSTEM



16 S 2330 TD /
TRANSMISSION SHIFT SYSTEM



Picture

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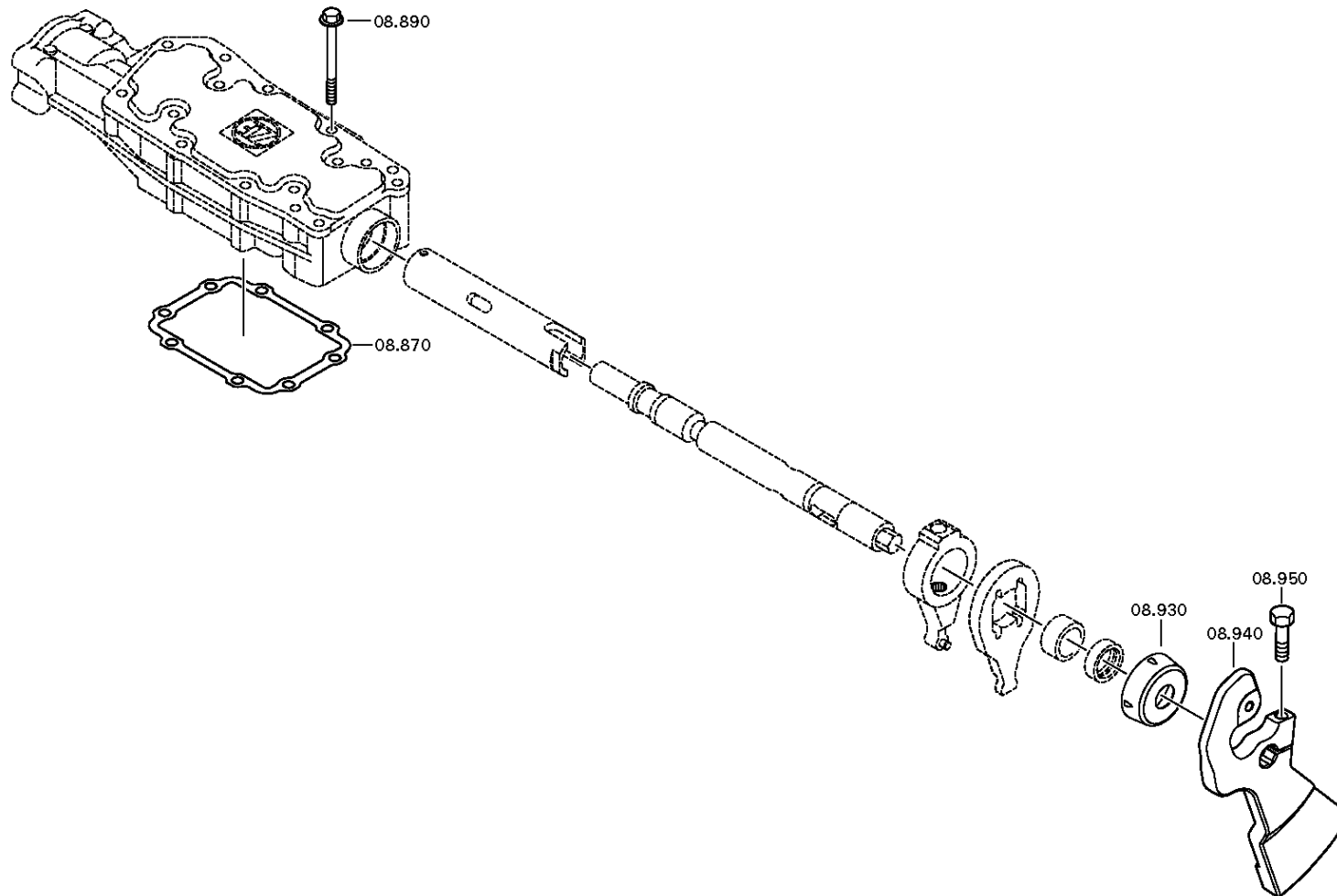
Material number: 1356.003.065

Picture: 068.07.96-1

GEAR SHIFT HOUSING



16 S 2330 TD /
GEAR SHIFT HOUSING



Picture

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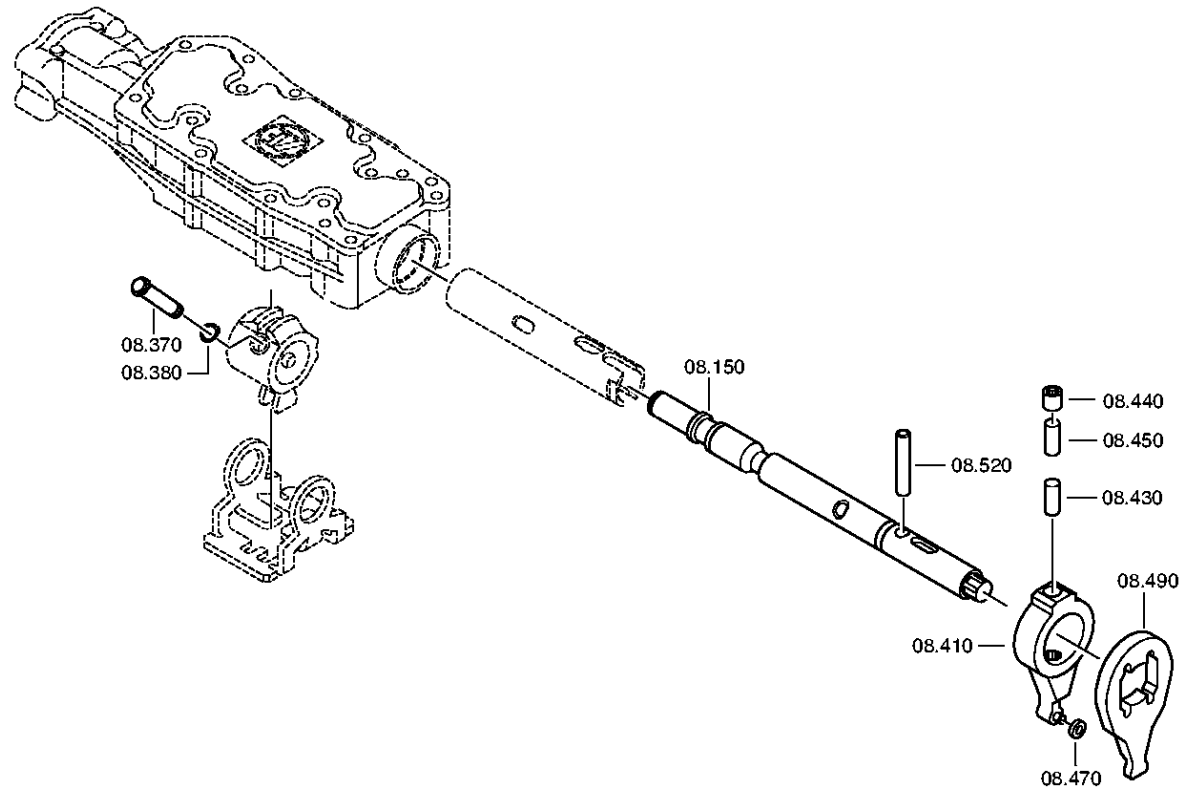
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GEAR SHIFT HOUSING



16 S 2330 TD /
GEAR SHIFT HOUSING



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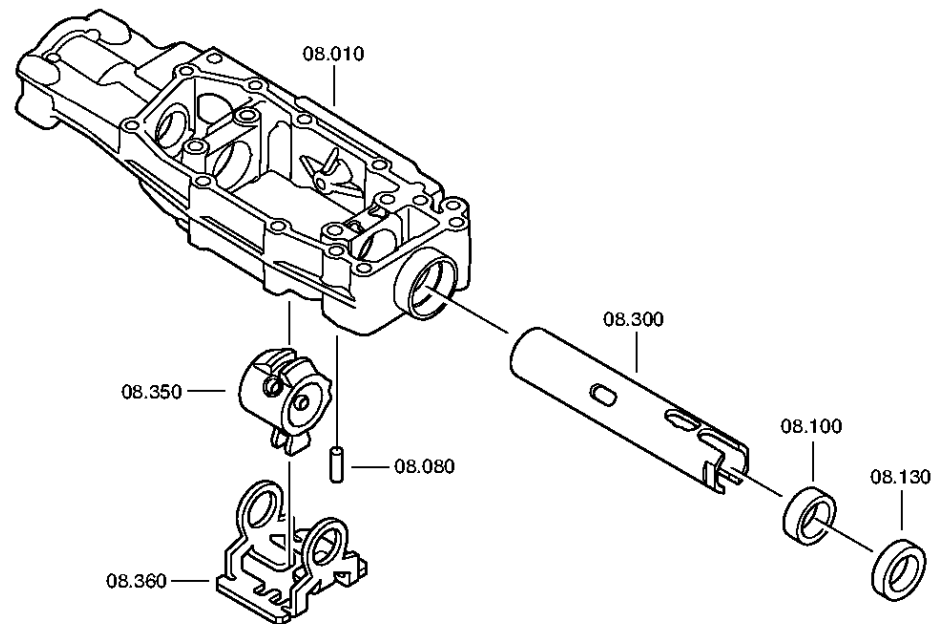
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GEAR SHIFT HOUSING



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GEAR SHIFT HOUSING



Picture

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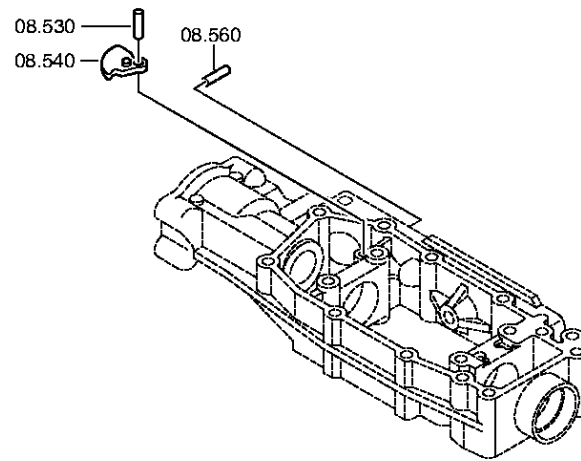
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GEAR SHIFT HOUSING



16 S 2330 TD /
GEAR SHIFT HOUSING



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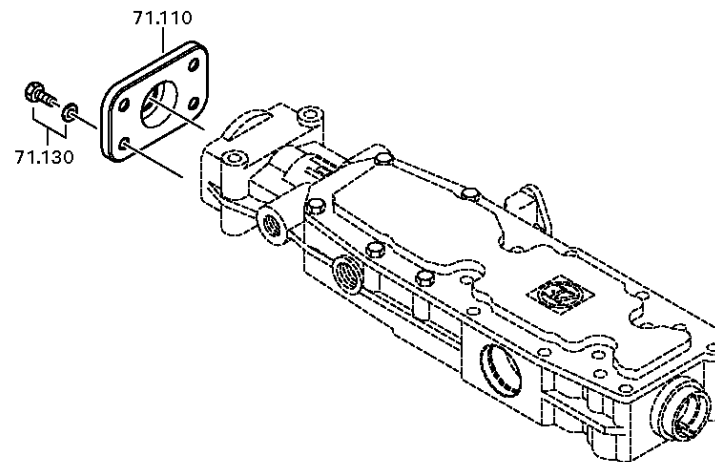
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Picture: 062.08.30-1

END COVER



16 S 2330 TD /
END COVER



Picture

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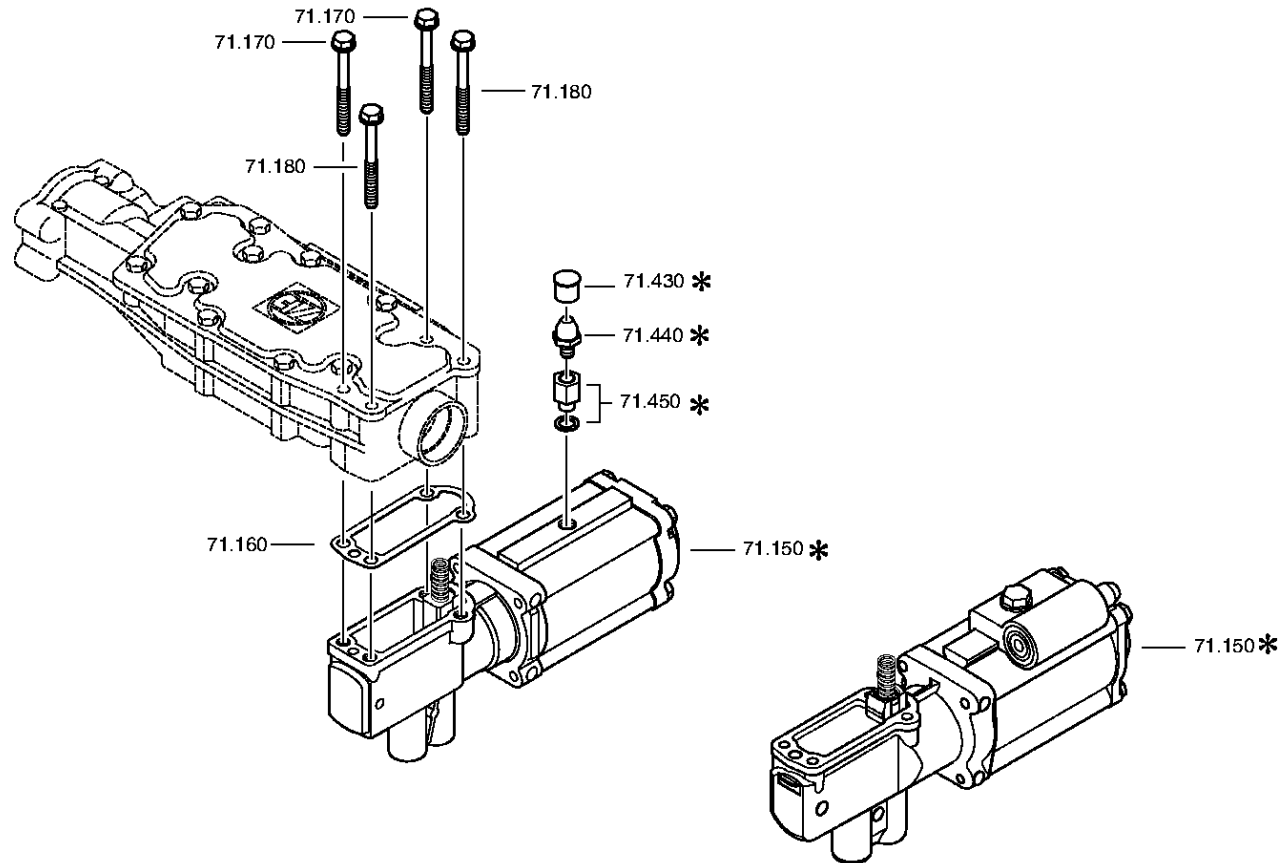
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END COVER



16 S 2330 TD /
END COVER



Picture

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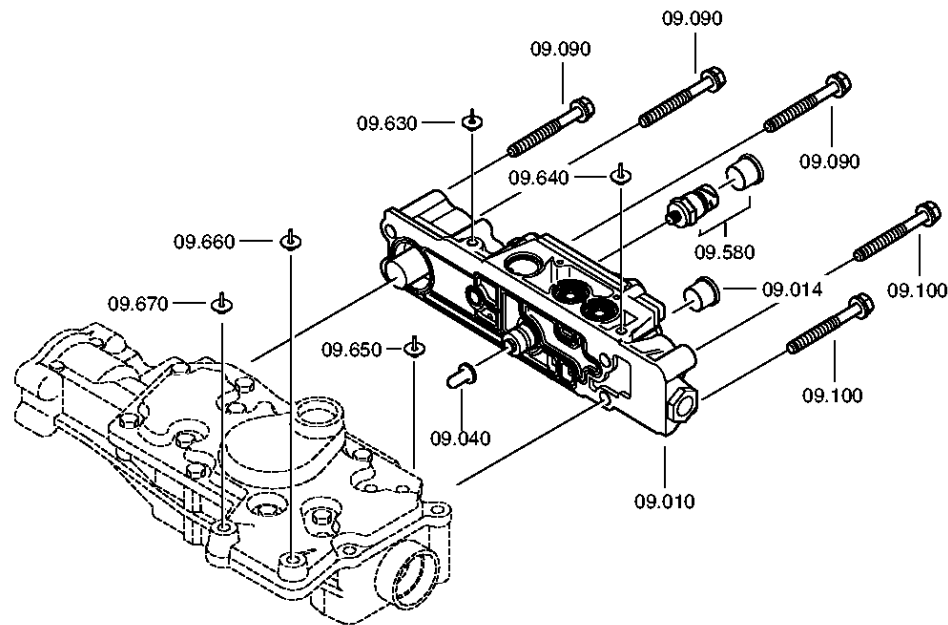
Material number: 1356.003.065

Picture: 161.09.02-1

VALVE BLOCK



16 S 2330 TD /
VALVE BLOCK



Picture

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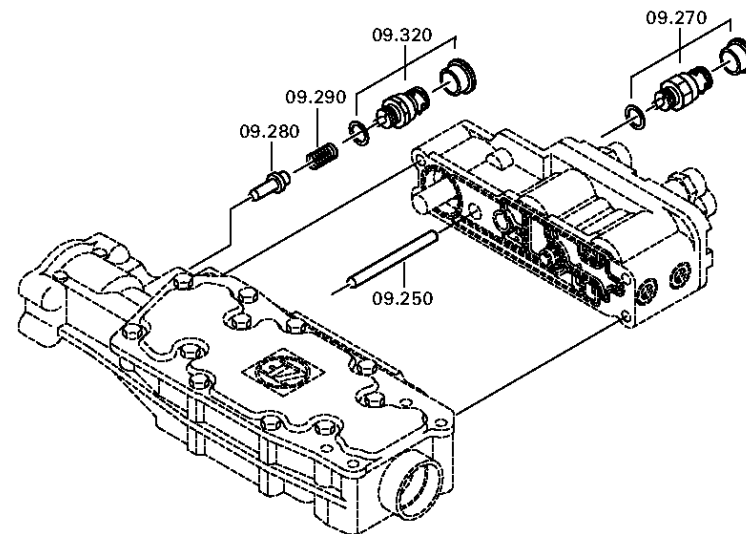
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Picture: 161.09.03-1

VALVE BLOCK



16 S 2330 TD /
VALVE BLOCK



Picture

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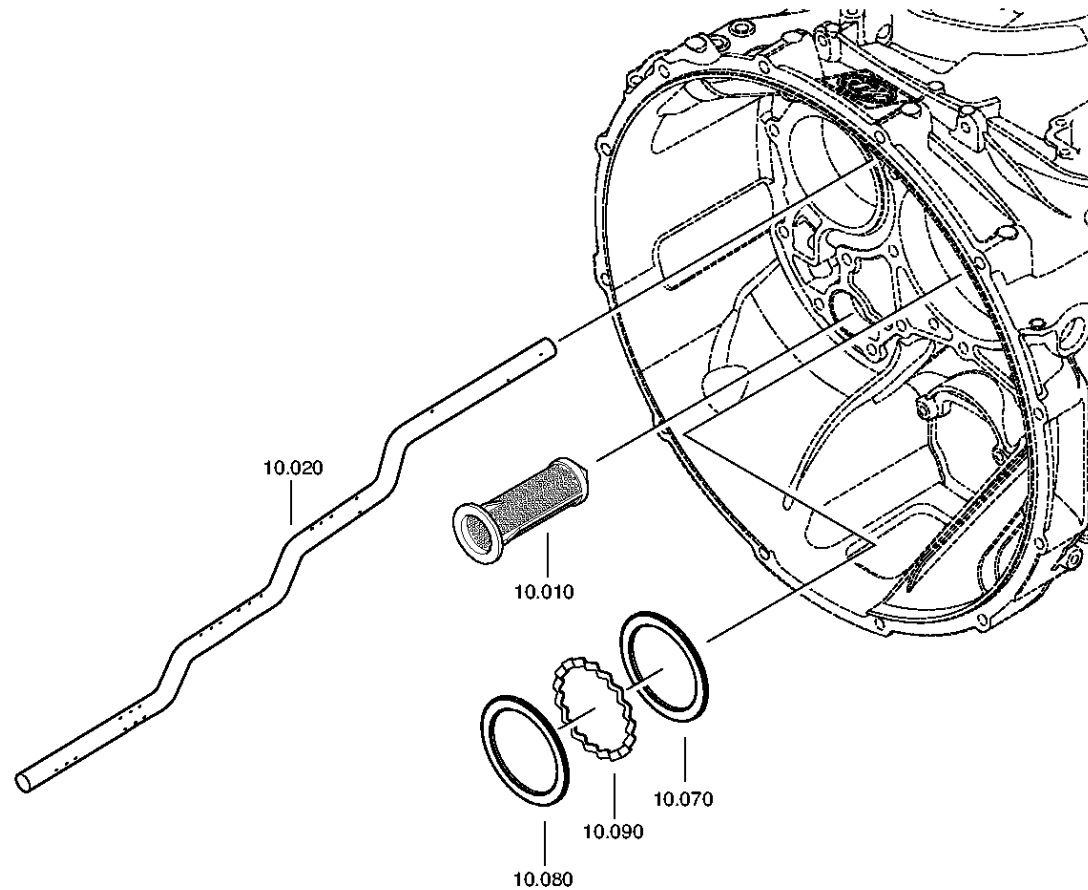
Material number: 1356.003.065

Picture: 161.10.04-1

OIL SUPPLY



16 S 2330 TD /
OIL SUPPLY



Picture

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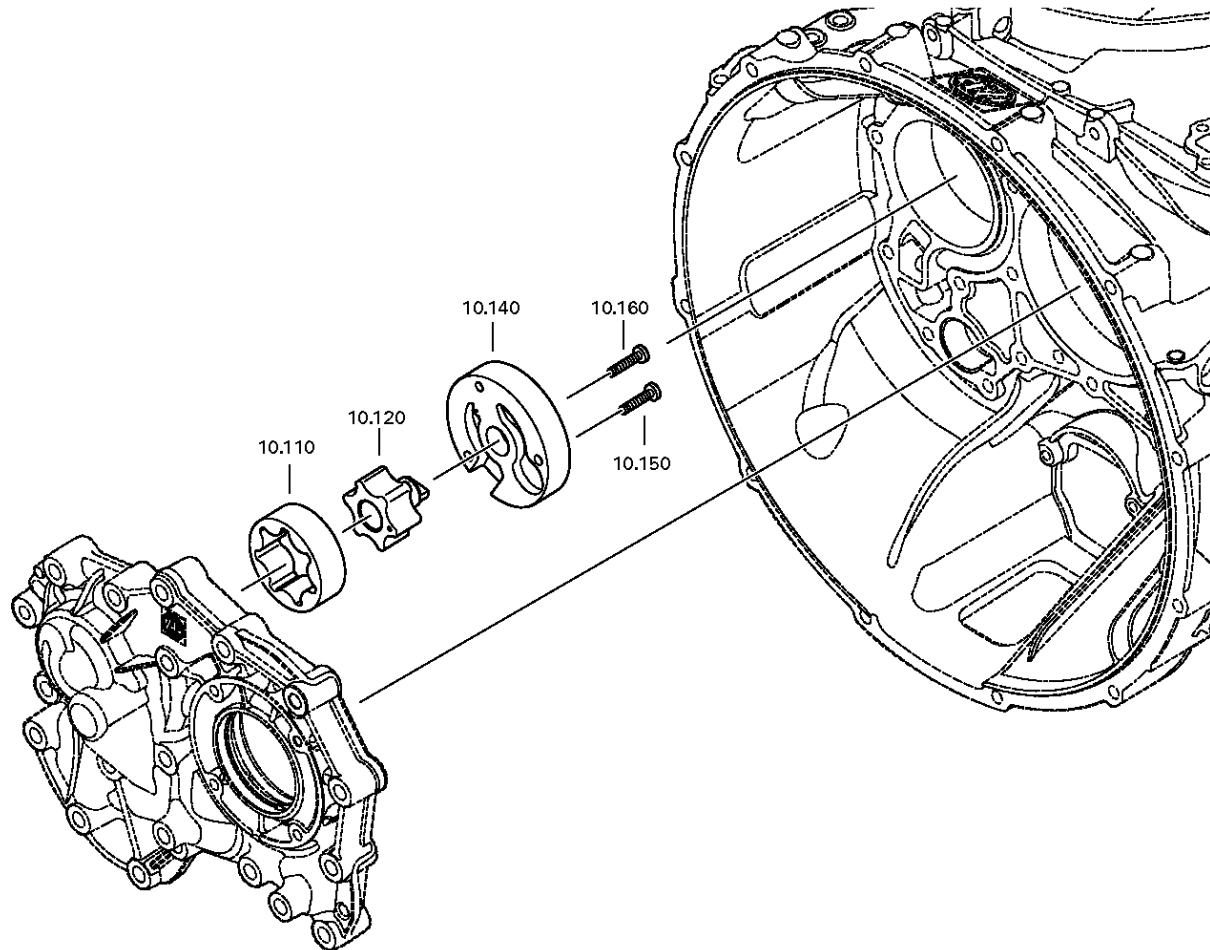
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OIL SUPPLY



16 S 2330 TD /
OIL SUPPLY



Picture

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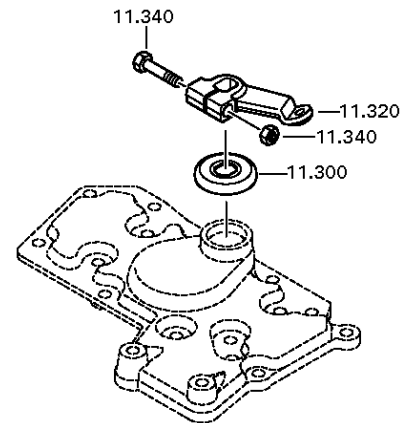
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SELECTOR LEVER



16 S 2330 TD /
SELECTOR LEVER



Picture

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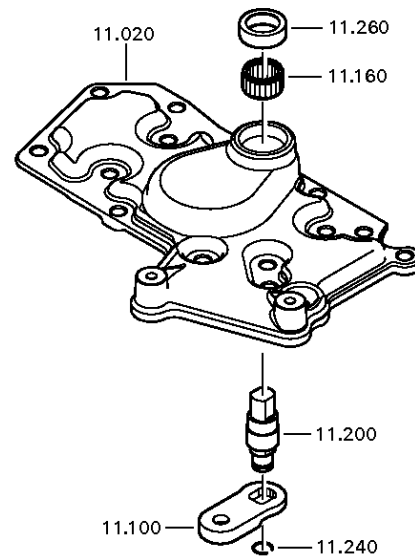
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SELECTOR LEVER



16 S 2330 TD /
SELECTOR LEVER



Picture

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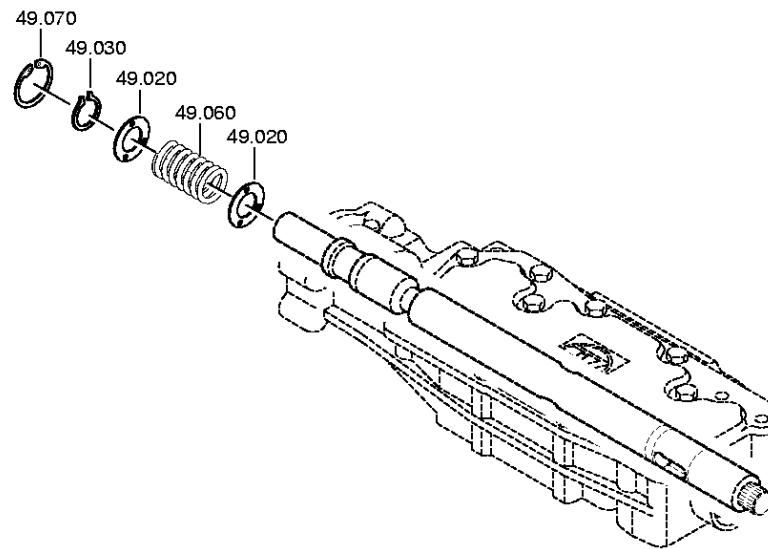
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Material-assembly-group-no: 1341.149.006



16 S 2330 TD /
SET OF SPRINGS



Picture

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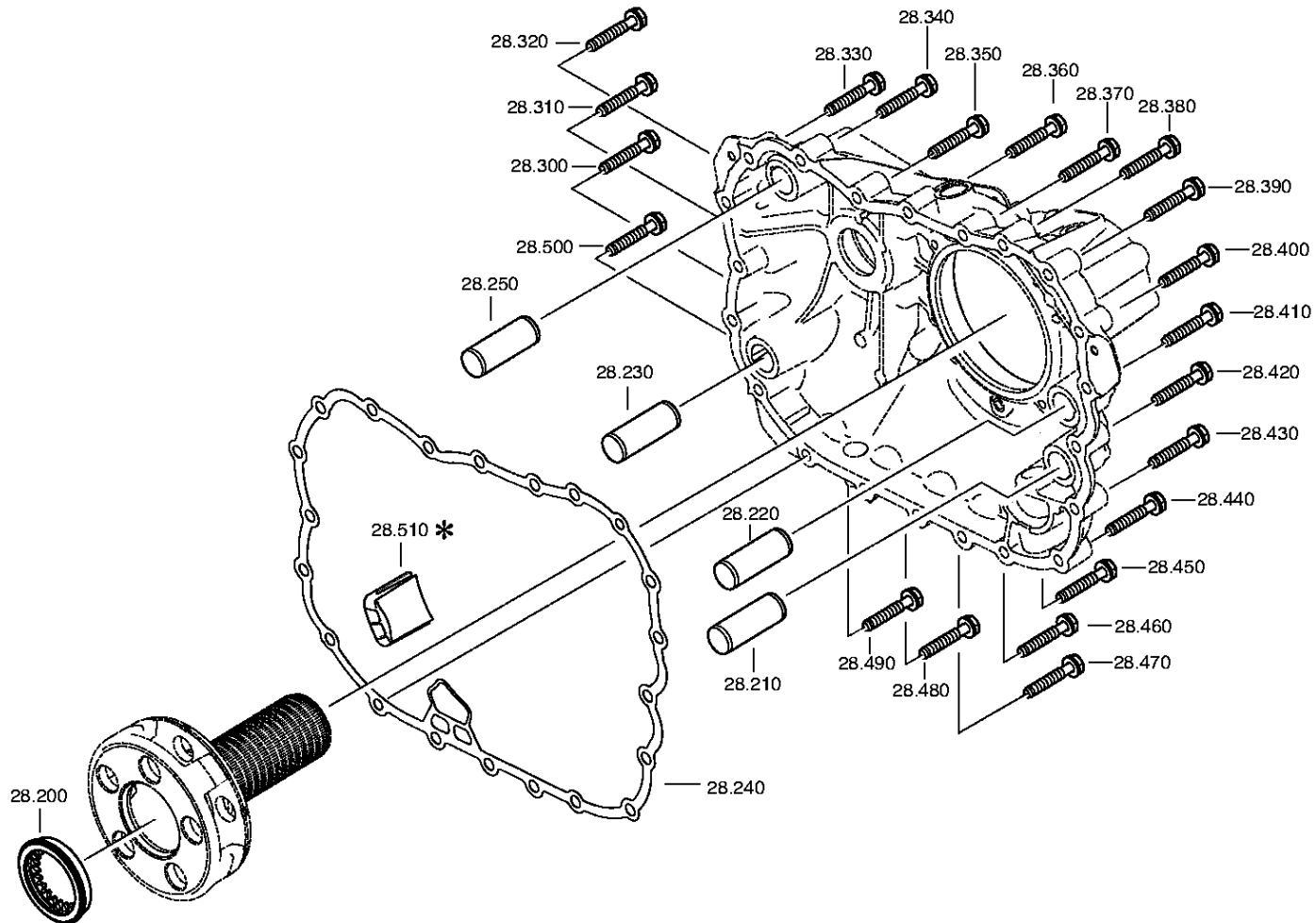
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Material-assembly-group-no: 1325.128.806



16 S 2330 TD /
PLANETARY RANGE



Picture

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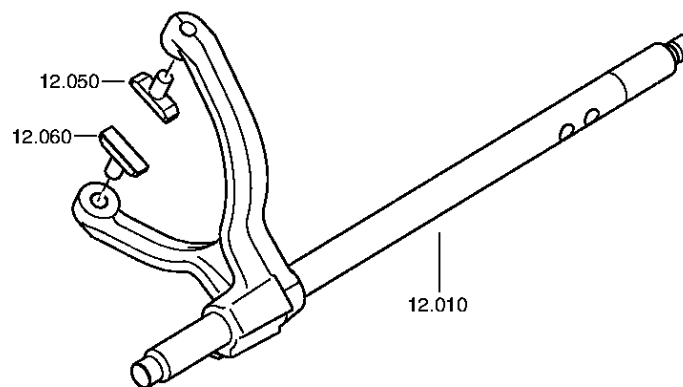
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GV-SHIFT SYSTEM



16 S 2330 TD /
GV-SHIFT SYSTEM



Picture

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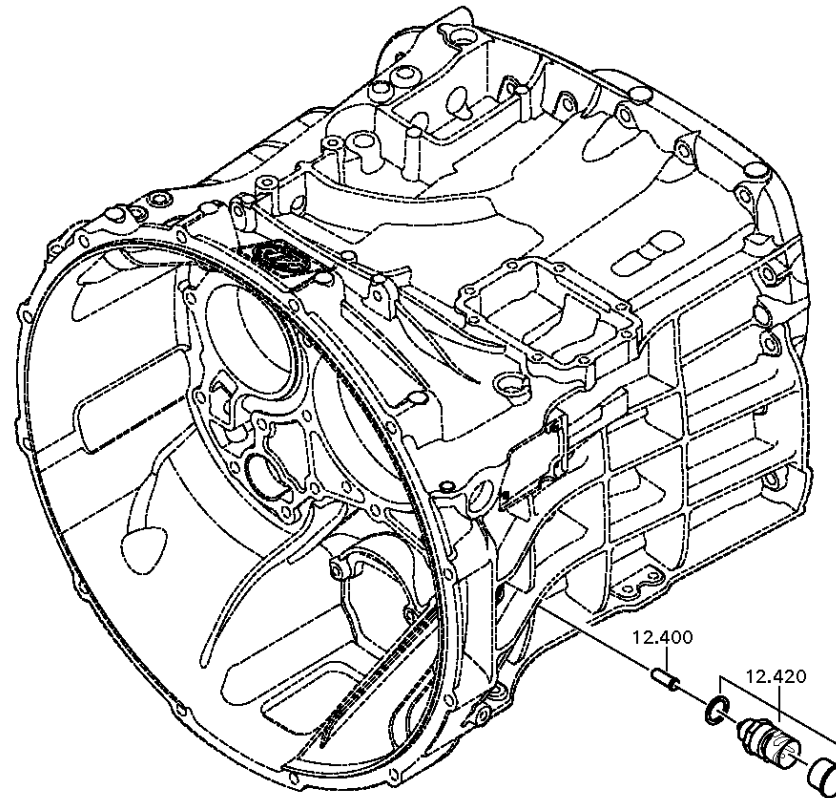
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GV-SHIFT SYSTEM



16 S 2330 TD /
GV-SHIFT SYSTEM



Picture

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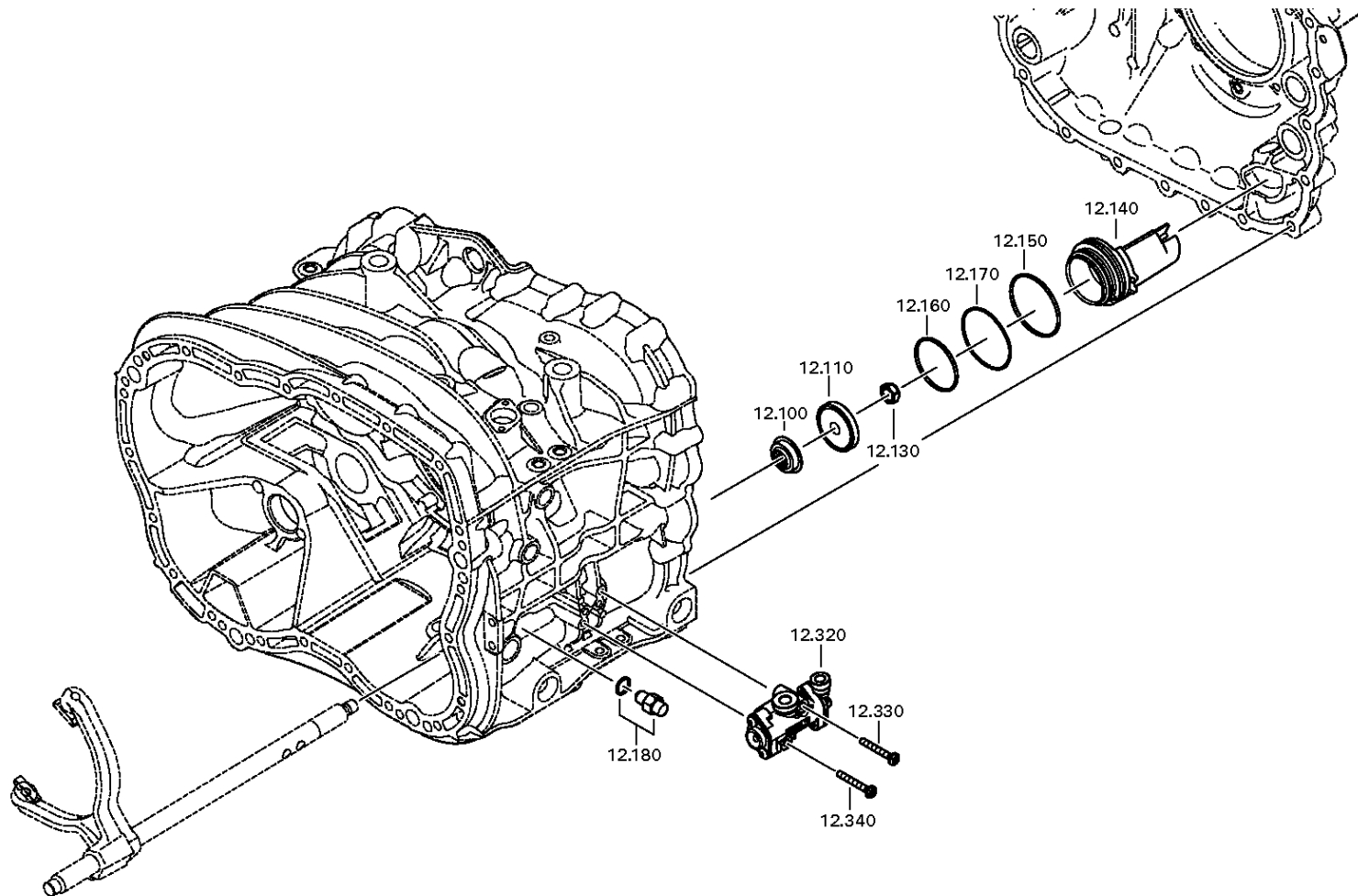
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GV-SHIFT SYSTEM



16 S 2330 TD /
GV-SHIFT SYSTEM



Picture

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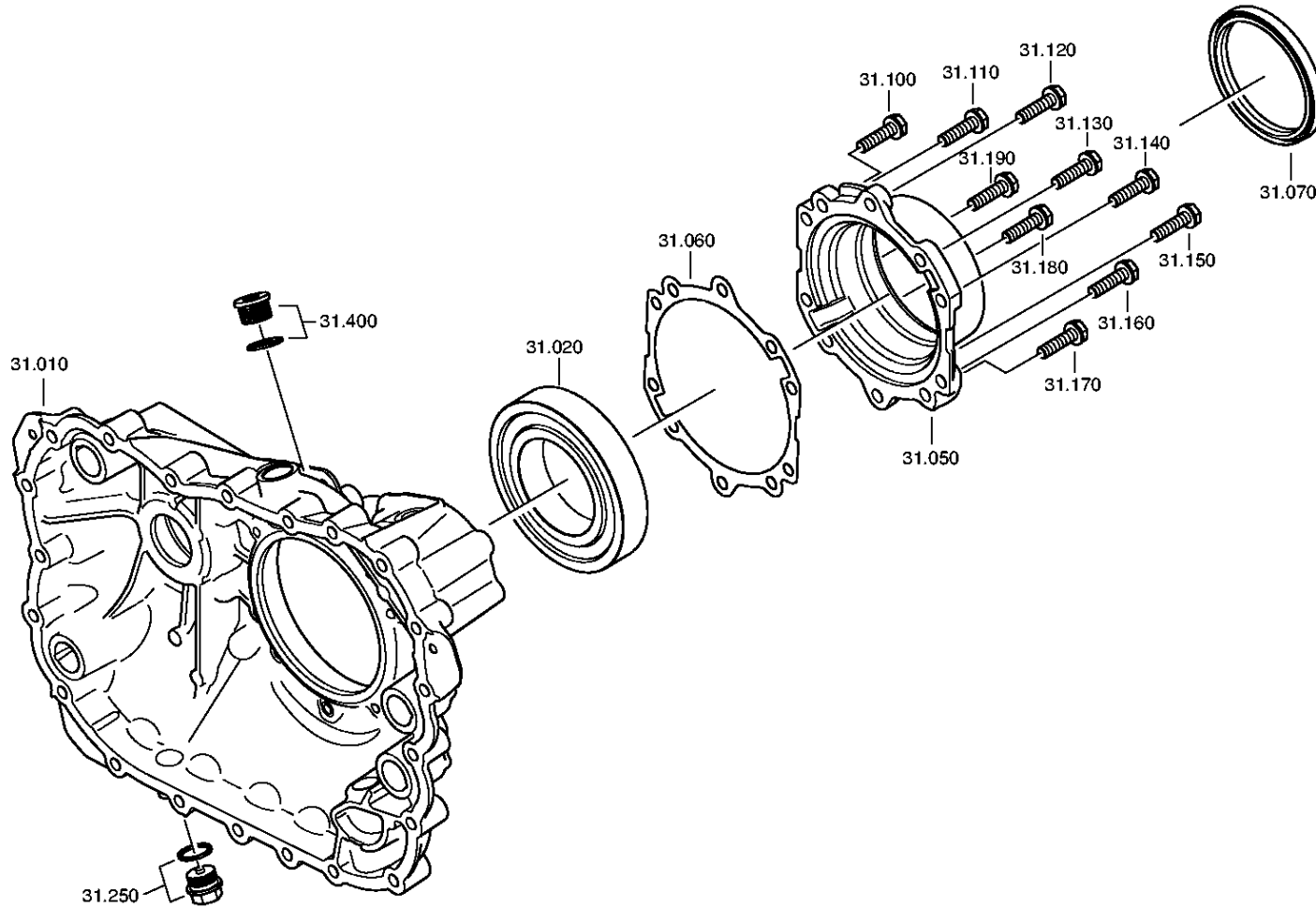
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RC HOUSING



16 S 2330 TD /
RC HOUSING



Picture

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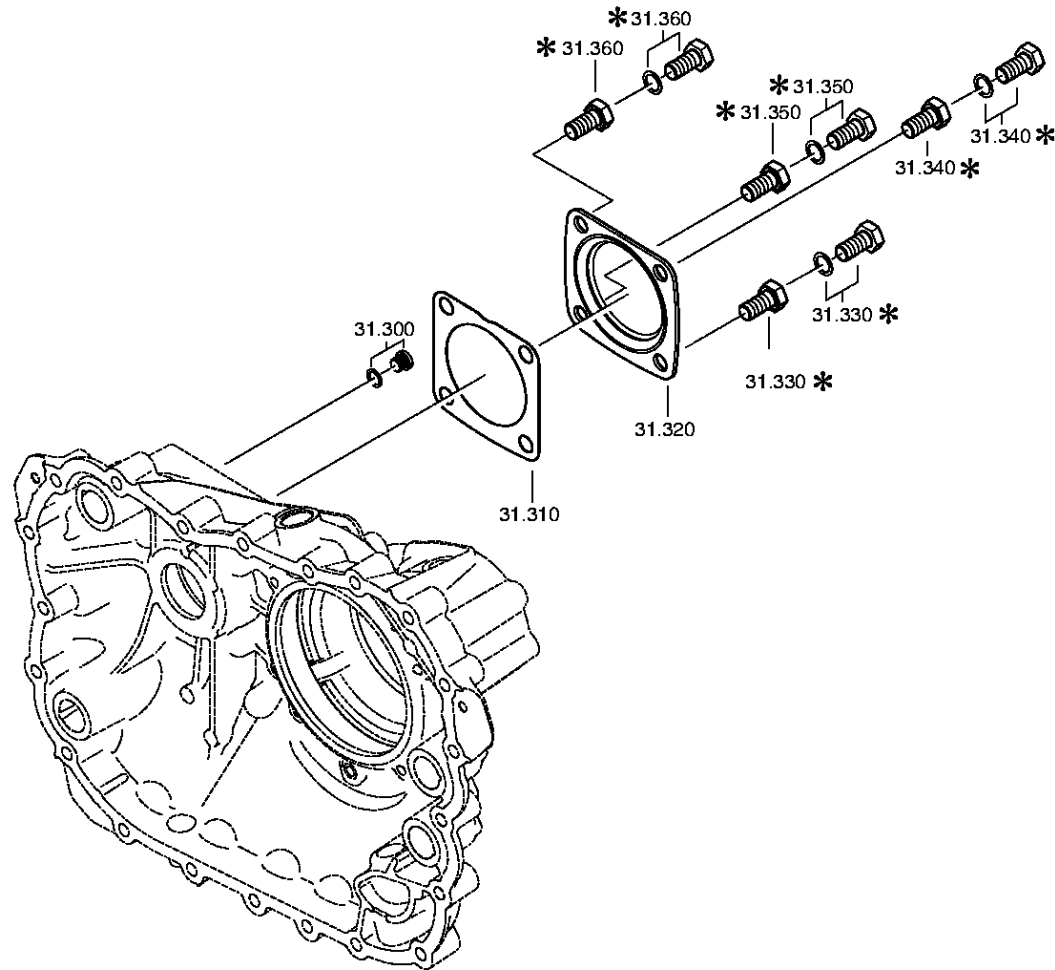
Material number: 1356.003.065

Picture: 161.43.40-1

RC HOUSING



16 S 2330 TD /
RC HOUSING



Picture

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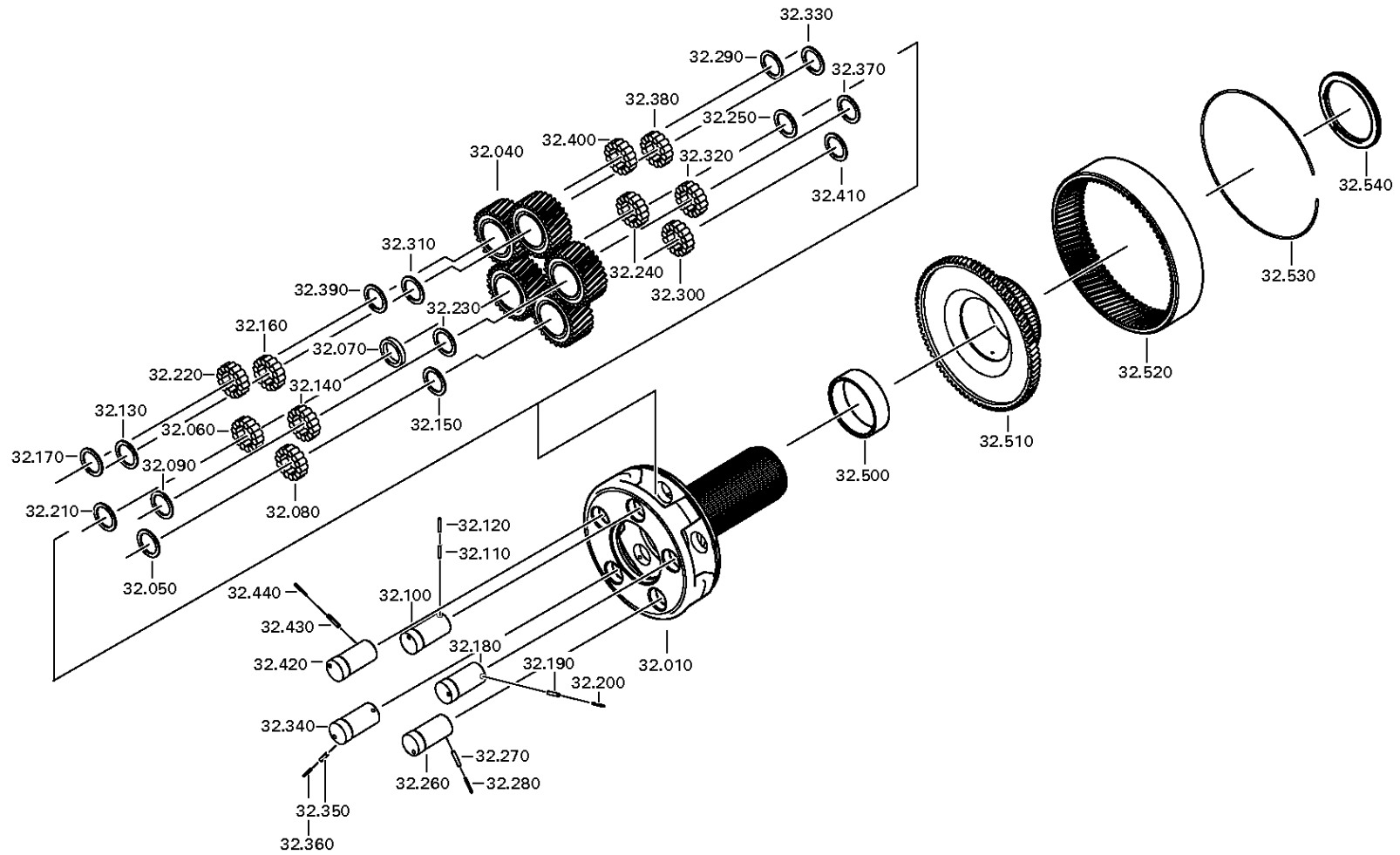
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PLANETARY DRIVE



16 S 2330 TD /
PLANETARY DRIVE



Picture

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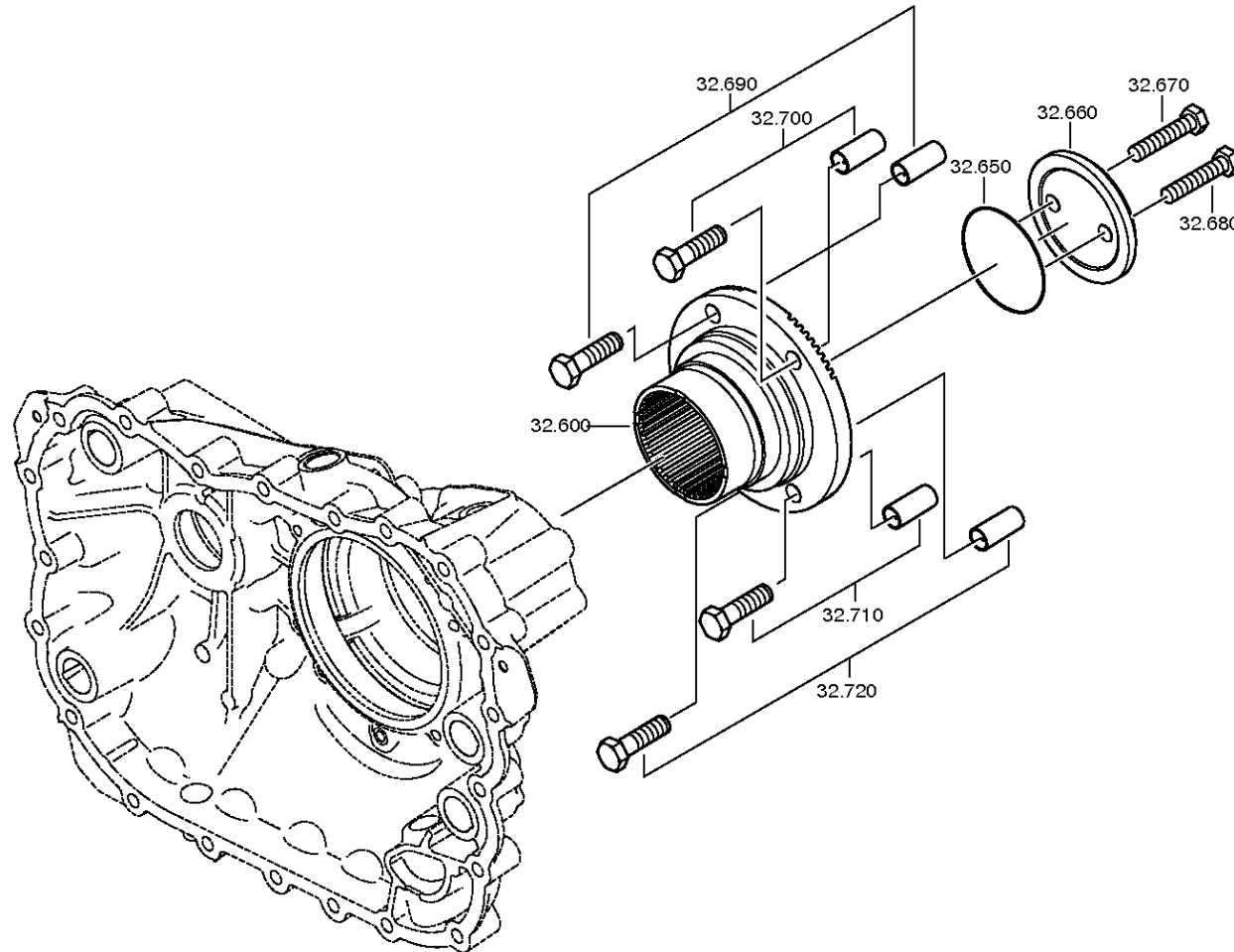
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PLANETARY DRIVE



16 S 2330 TD /
PLANETARY DRIVE



Picture

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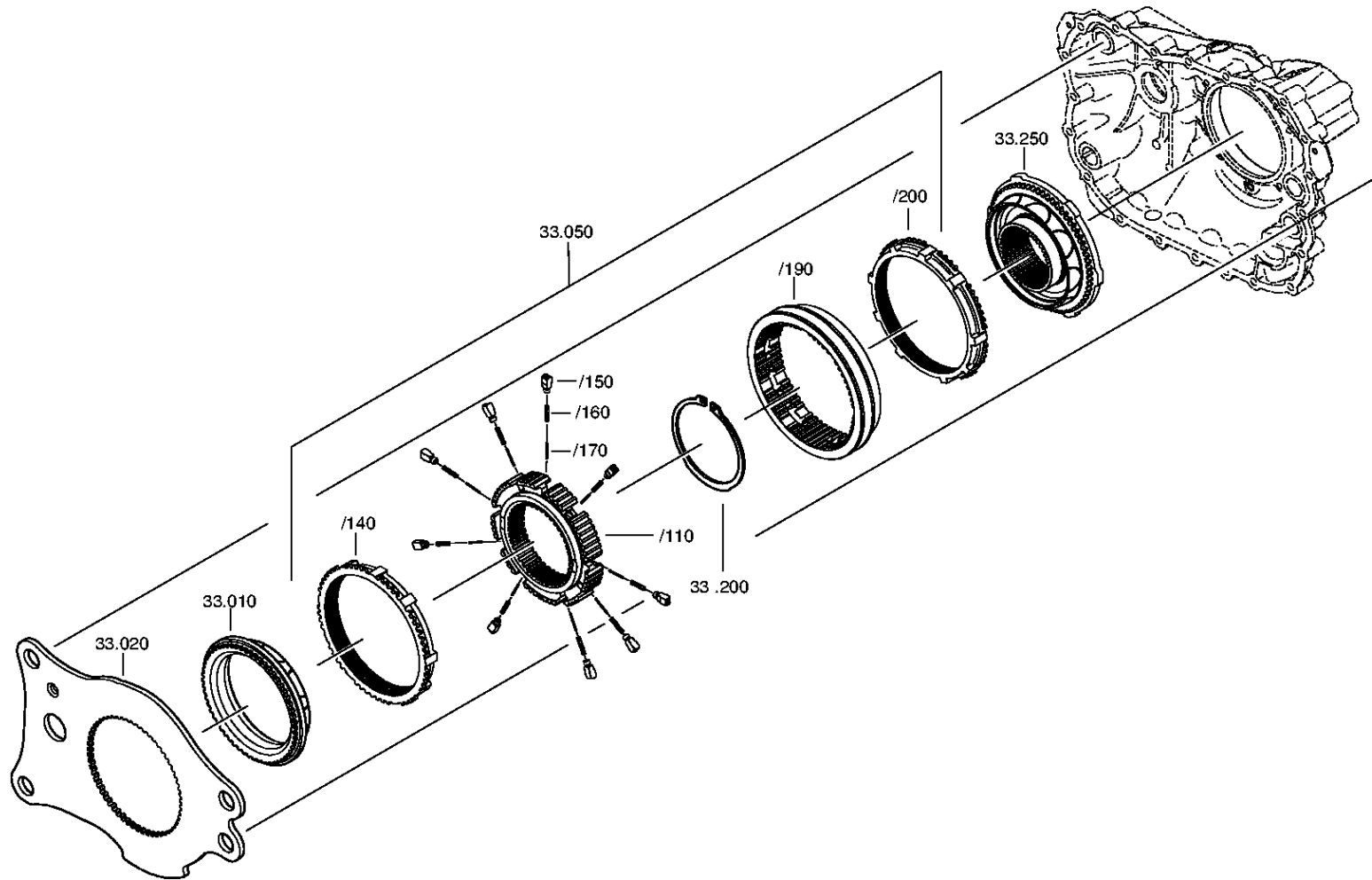
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Material-assembly-group-no: 1325.133.004



16 S 2330 TD /
SYNCHRONIZER



Picture

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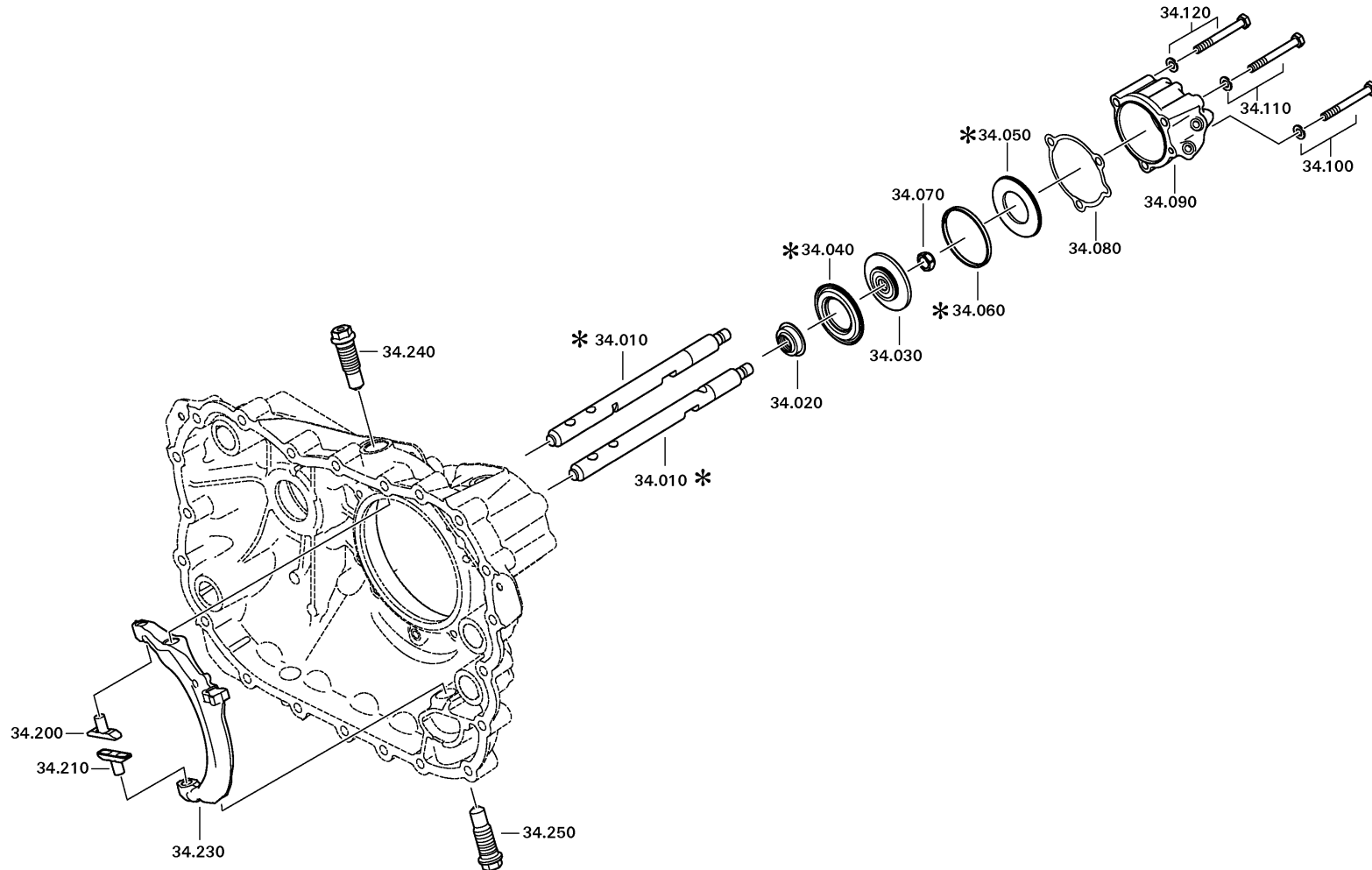
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GP SHIFT SYSTEM



16 S 2330 TD /
GP SHIFT SYSTEM



Picture

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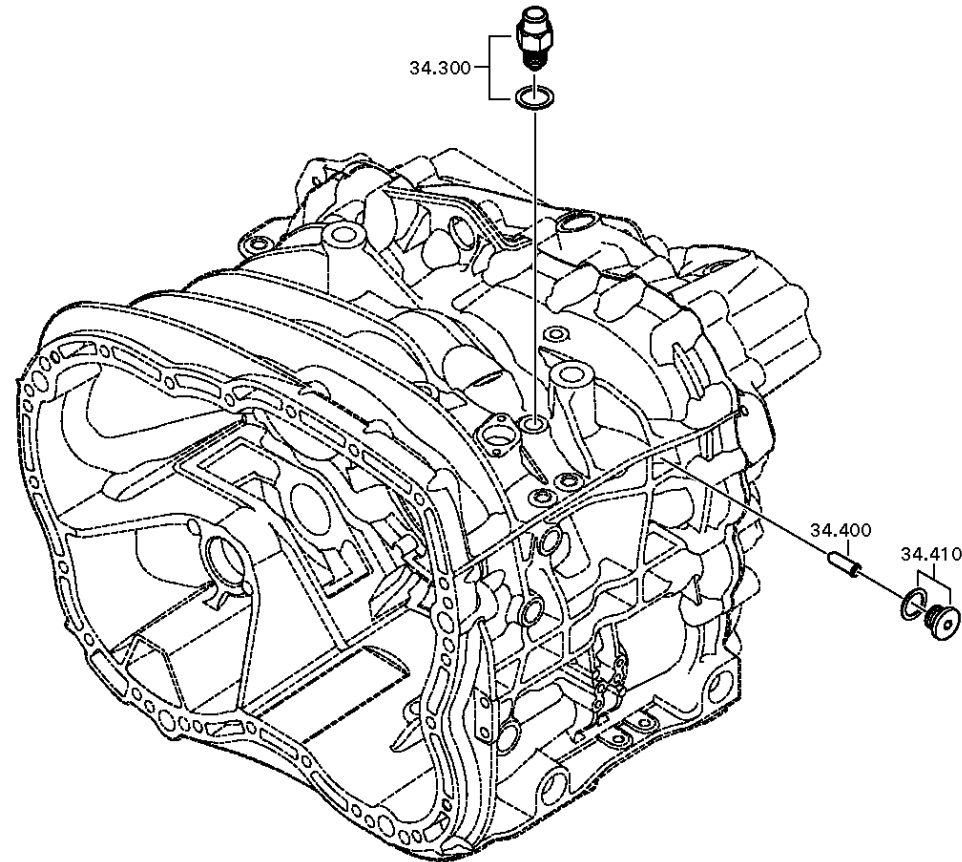
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GP SHIFT SYSTEM



16 S 2330 TD /
GP SHIFT SYSTEM



Picture

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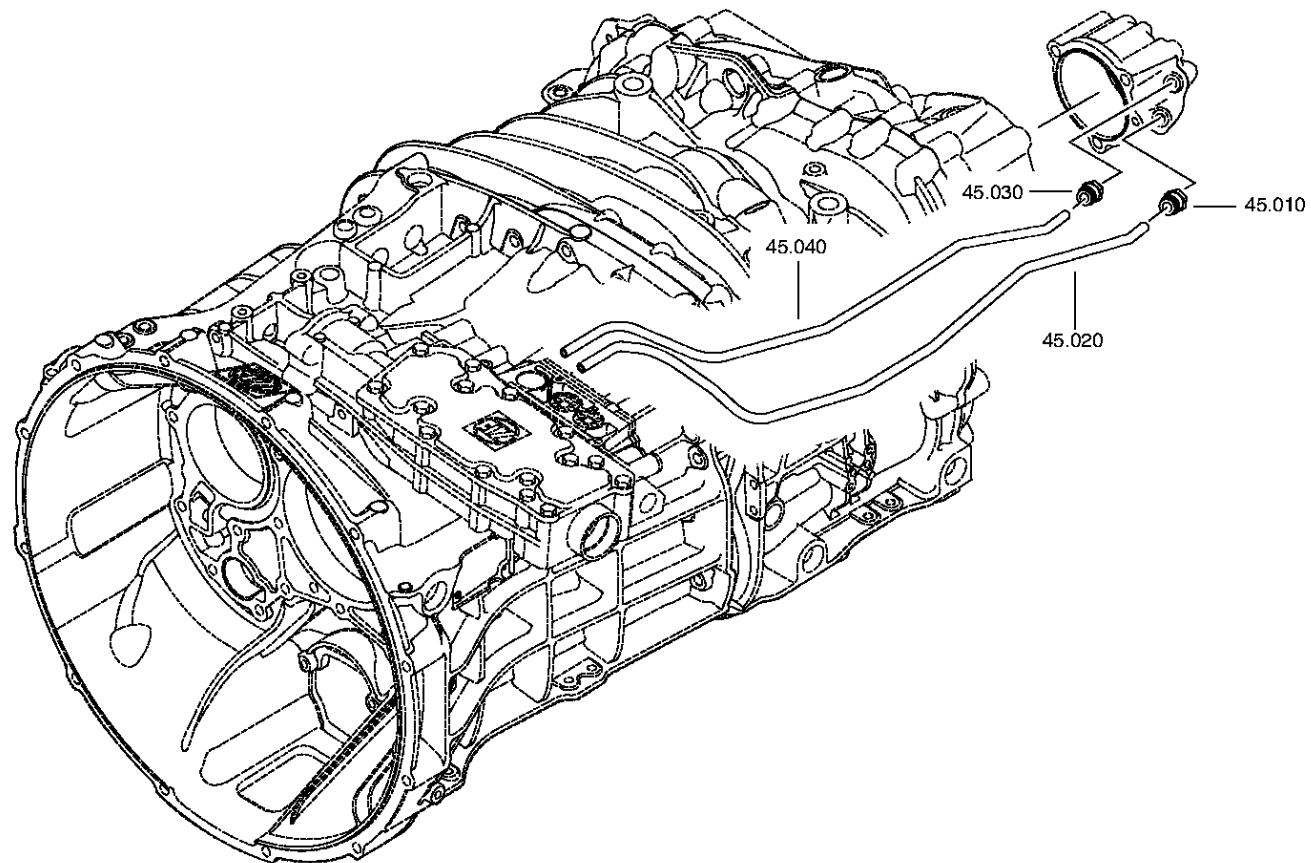
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16 S 2330 TD /
RANGE SELECTION



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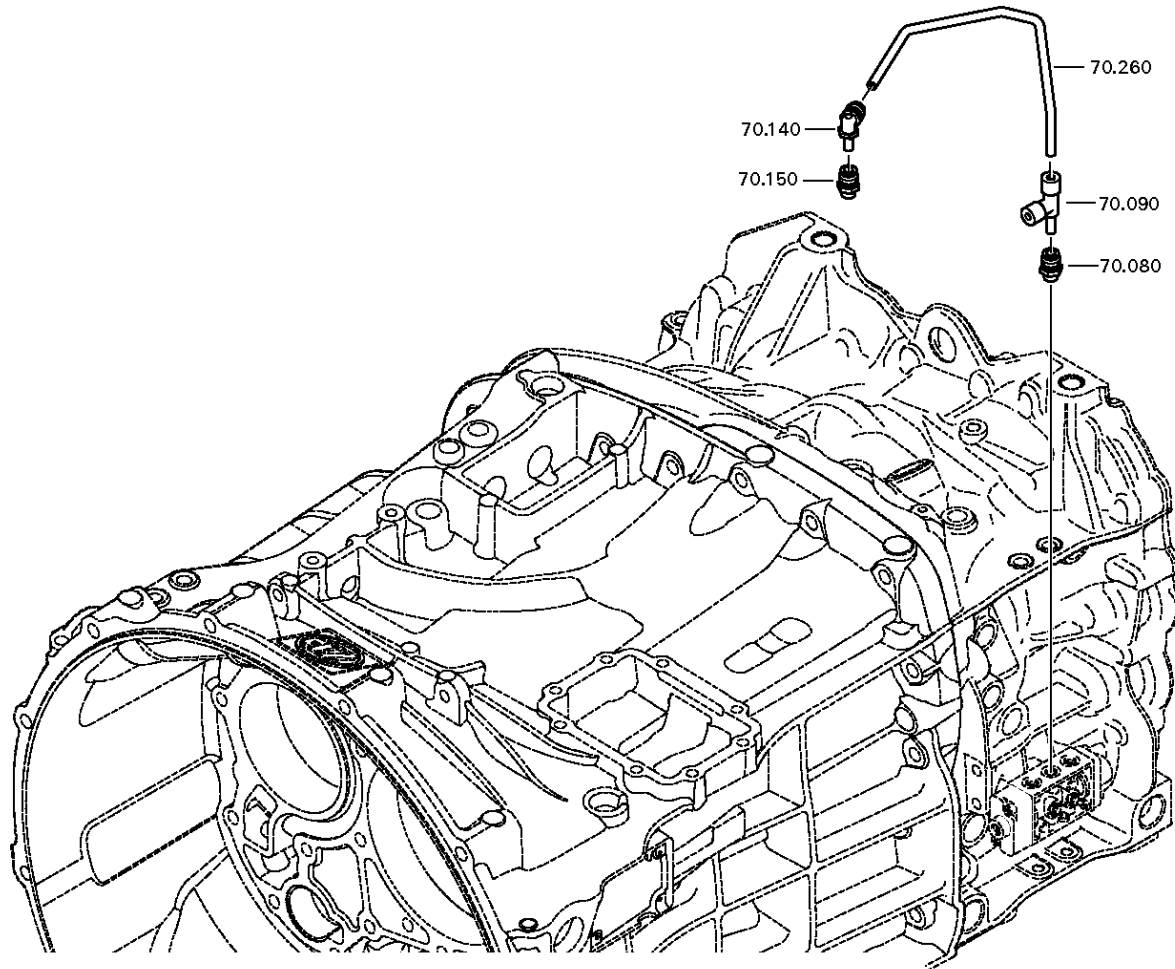
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16 S 2330 TD /
SHUT-OFF VALVE



Picture

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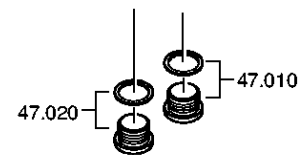
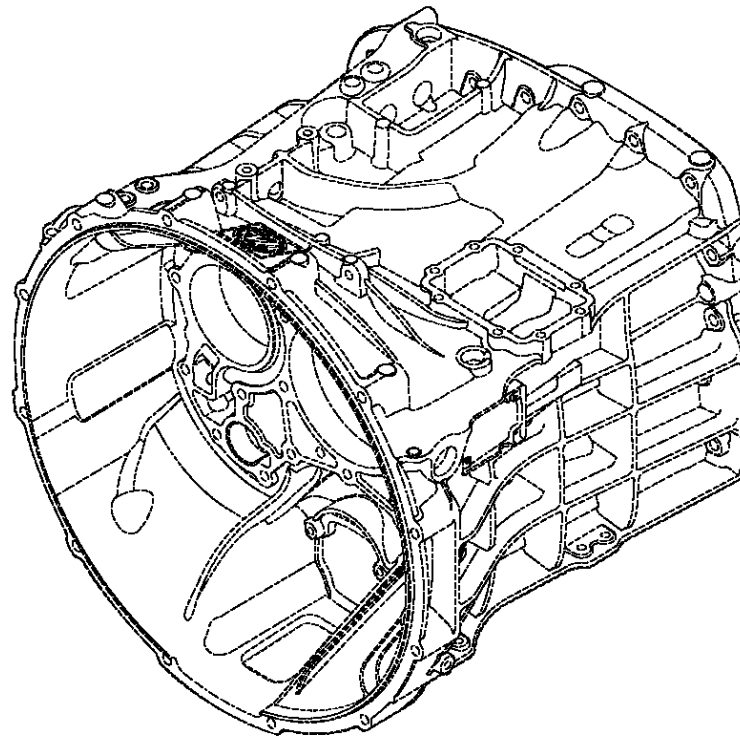
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16 S 2330 TD /
SCREW PLUG



Picture

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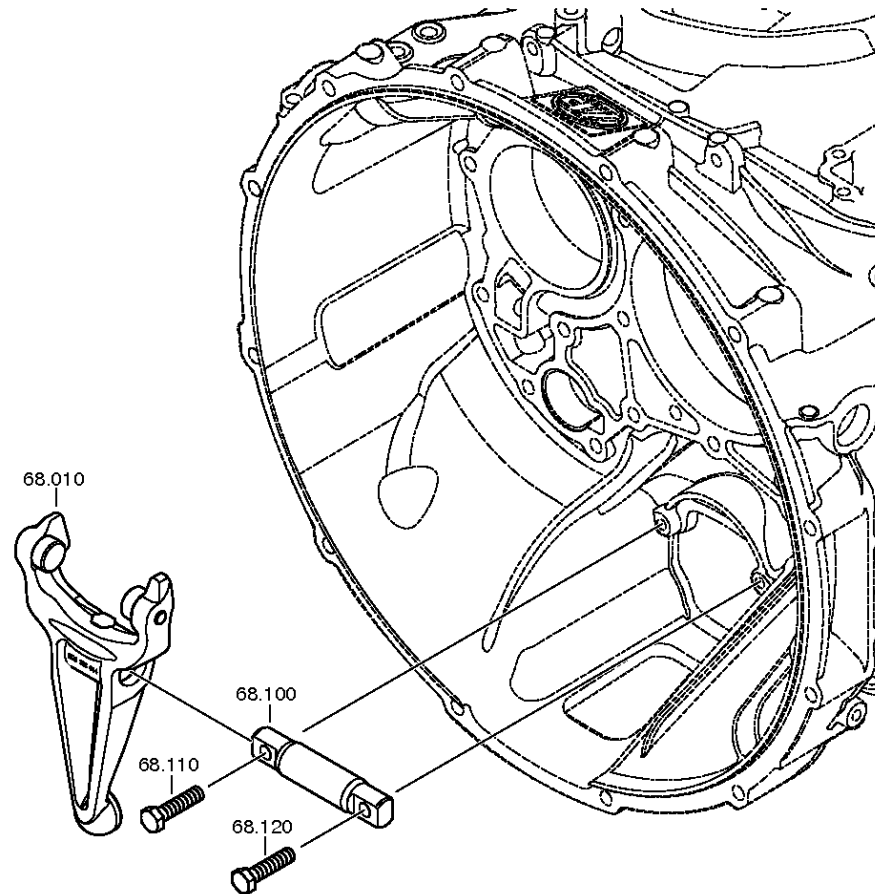
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CLUTCH RELEASE DEVICE



16 S 2330 TD /
CLUTCH RELEASE DEVICE



Picture

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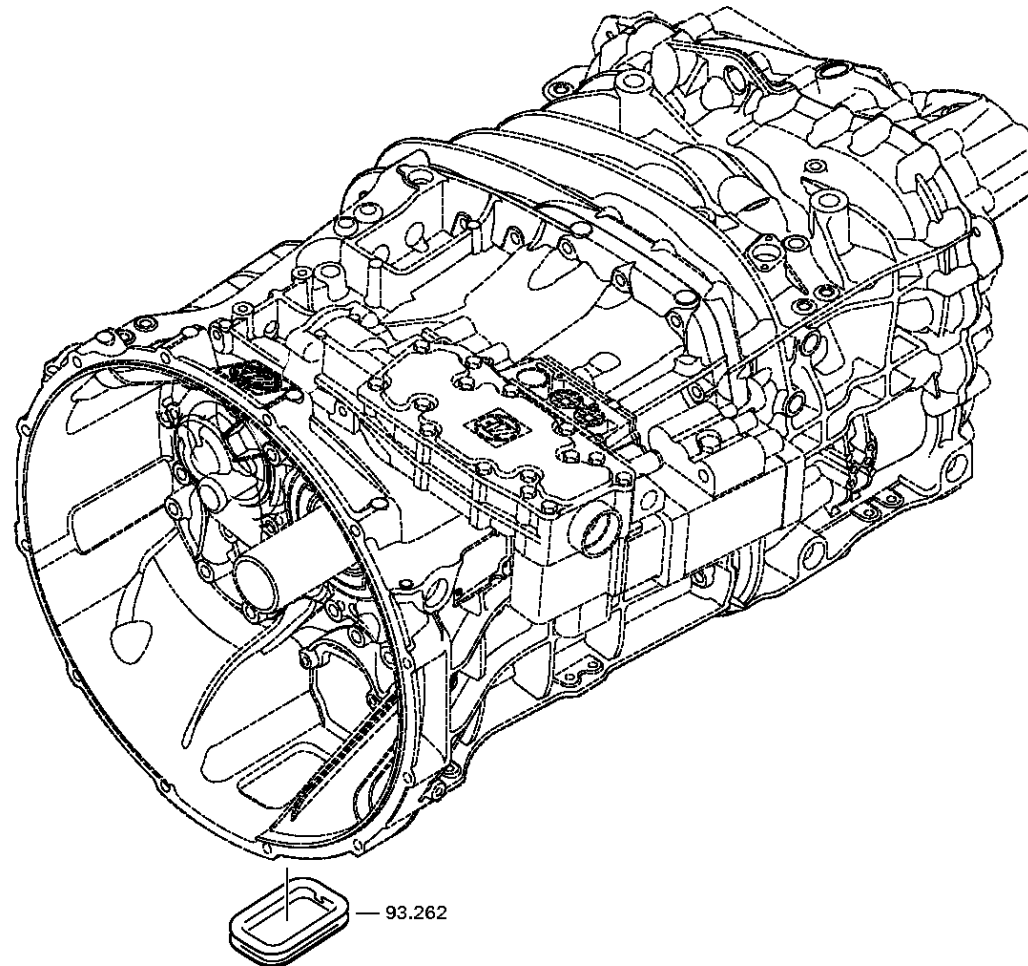
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Picture: 161.93.17-1

CLUTCH RELEASE DEVICE



16 S 2330 TD /
CLUTCH RELEASE DEVICE



Picture

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Material number: 1356.003.065

Picture: 068.R0.004-1

Material-assembly-group-no: 1316.298.037



16 S 2330 TD /
SYNCHRONIZER SET

