



# Spare Parts Catalog

16 S 151

Material number: 1315.051.141

Current date: 19.11.2014

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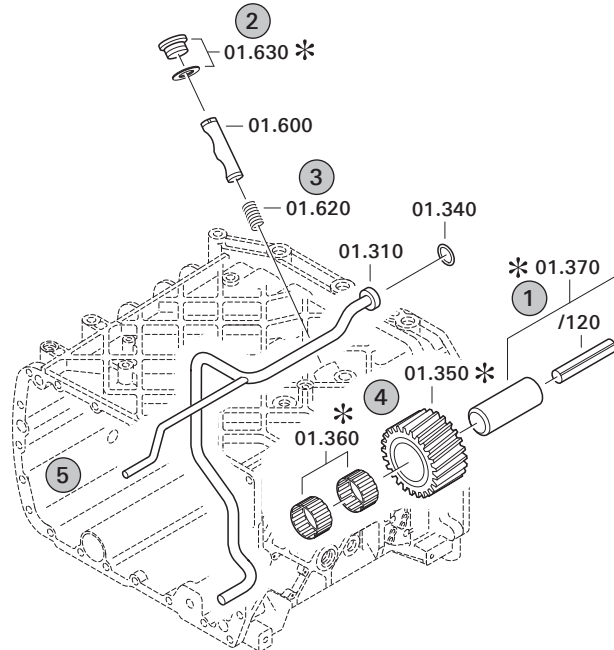
zuständiges Werk:  
Friedrichshafen

# 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: 1315.051.141



16 S 151 /

Pos.	Information	Amendment number
001	Use case -----	
002	Customer GM Daewoo Auto & Technology	
003	City Chungnam	
004	DUNS	
005	Vehicle / Apparatus -----	
006	Sales Name	
007	Manufacturer GM Daewoo Auto & Technology	
008	Engineering Name	
009	Product Use TRUCK	
010	Vehicle/Hardware Type ROAD TRACTOR	
011	SOP	
012	Engine	
013	Sales Designation	
014	Manufacturer GM Daewoo Auto & Technology	
015	Eng.Displ.	
016	Cylinder	
017	Nom. power 279 kW	
018	RPM at nom. power 2300 1/min	
019	Nom. torque 1200 Nm	
020	RPM at nom. torque 1300 1/min	
021	Classification use case -----	
024	TOTAL NUMBER OF WHEELS 6	
025	NUMBER OF DRIVING WHEELS 4	
026	DYNAMIC TYRE RADIUS 522 mm	
027	REAR AXLE RATIO 4.88	
028	MAXIMUM SPEED 110 km/h	
031	PERMISS.GROSS VEHICLE WEIGHT 25 t	
032	PERMISS.GROSS COMBIN.WEIGHT 53 t	
033	Product description -----	
034	INSTALLATION POS TRANSMISSION HORIZONTAL LEFT	
035	TRANSMISSION ATTACHMENT FLANGE-MOUNTED	
037	RATIO, BOTTOM GEAR 13.8	
038	RATIO, TOP GEAR .84	



Pos.	Information	Amendment number
039	RATIO, 1ST GEAR 13.8	
040	RATIO, 2ND GEAR 11.55	
041	RATIO, 3RD GEAR 9.59	
042	RATIO, 4TH GEAR 8.02	
043	RATIO, 5TH GEAR 6.81	
044	RATIO, 6TH GEAR 5.7	
045	RATIO, 7TH GEAR 4.58	
046	RATIO, 8TH GEAR 3.84	
047	RATIO, 9TH GEAR 3.01	
048	RATIO, 10TH GEAR 2.52	
049	RATIO, 11TH GEAR 2.09	
050	RATIO, 12TH GEAR 1.75	
051	RATIO, 13TH GEAR 1.49	
052	RATIO, 14TH GEAR 1.24	
053	RATIO, 15TH GEAR 1	
054	RATIO, 16TH GEAR .84	
055	RATIO, 1ST GEAR REVERSE 13.17	
056	RATIO, 2ND GEAR REVERSE 11.03	
057	SET OF RATIOS SG	
062	DESIGN, SHIFT SYSTEM TURNING SHAFT	
063	POSITION, GEAR SHIFT SYSTEM HORIZONTAL LEFT	
064	DESIGN, SHIFT PATTERN H-H	
065	VERSION SHIFT SUPPORT WITHOUT GROOVE	
066	VERSION ACTUATION SHIFT SYSTEM MECHANICAL	
080	DESIGN, THROTTLE, CUT-OFF VALVE D=1.55	
081	DESIGN AIR CONNECT. CUT-OFF VALVE F	
082	ASSEMBLY NOTE CUT-OFF VALVE CUT-OFF VALVE	
085	SELECTION PATTERN VARIANT GEAR SHIFT PATTERN 1	
089	DESIGN, SEPARATING CLUTCH FULL-SYNCHRONIZED	
090	VERSION OF SYNCHRONIZER 1 1.+2.GEAR DK-SYNCHRONIZATION	
091	VERSION OF SYNCHRONIZER 2 3.+4.GEAR BK-SYNCHRONIZATION	
092	REFERENCE LENGTH INPUT SHAFT 109 mm	
093	STANDARD TYPE INPUT SHAFT SAE	



Pos.	Information	Amendment number
094	NUMBER OF WEDGES INPUT SHAFT 10	
097	VERSION OF INPUT SHAFT FORM C	
098	NOMINAL DIAMETER INPUT SHAFT 2 in	
100	DIAMETER, JOURNAL, INPUT SHAFT 25 mm	
101	TYPE FIT SPIGOTS INPUT SHAFT F7	
102	VER. BEAR. SPIGOTS INPUT SHAFT TAPER ROLLER	
103	LENGTH, INPUT SHAFT 382.5 mm	
104	DIAMETER SHAFT OF INPUT SHAFT 50.3 mm	
105	LENGTH, PROFILE, INPUT SHAFT 120 mm	
106	BUSH VARIANT INPUT SHAFT WITHOUT GROOVE	
107	VERSION BEARING CONSTANT 1 GL	
108	DIAMETER BEARING INPUT SHAFT 99.916 mm	
109	TYPE FIT BEAR. INPUT SHAFT H5	
117	DESIGN BEARING OUTPUT STANDARD SUSPENSION	
119	POSITION MOUNT. FACE HOUSING 2 WITHOUT GROOVE	
126	REF.LENGTH,RELEASE BEAR.FLAN -7 mm	
127	DIAMETER, RELEASE FLANGE 60 mm	
128	TYPE FIT RELEASE BEARING FLA. F8	
133	OUTER DIA. OUTPUT FLANGE RA 180 mm	
137	NO.OF SCREWS OUTPUT FLANGE RA 4	
139	DIA. THREAD OUTPUT FL. SCR. RA M14	
140	THREAD PITCH OUTPUT FL SCR. RA 1.5 mm	
141	THREAD LENGTH OUTP.FL SCREW RA 50 mm	
143	REF. LENGTH OUTPUT FLANGE RA 209 mm	
150	DIMENSION SHIFT TURRET DIST. 288 mm	
151	MEAS. LOC. SHIFT TURRET DIST. SHIFT LEVER-LOCATION	
157	RADIUS 1 SHIFT LEVER 110 mm	
158	SHIFT LEVER CONNECTION KNURLING	
159	DESIGN, OFFSET, SHIFT LEVER INSIDE	
161	LEVER POSITION SHIFTING OUTPUT C	
175	SPRING ARRANGEMENT Q3	
176	SPRING FORCE DETENT PLUNGER RG 60 N	
177	HUMP SPRING FORCE, OUTSIDE 120 N	



Pos.	Information	Amendment number
180	SELECTOR SPRING FORCE, OUTSIDE 50 N	
181	SELECTOR SPRING FORCE, INSIDE 26 N	
182	SPRING FORCE,GEAR DETENT NG+GG 87 N	
183	SPRING FORCE OUTS. DETENT NEUT 200 N	
191	RATIO MECHANIC TACHO INPUT 1.545	
193	SWITCH, REVERSE GEAR y	
194	DESIGN, RG (REV.GEAR) SWITCH CLOSING	
197	PROT.CAP SWITCH, REVERSE GEAR y	
199	NOTE ON SWITCH, REVERSE GEAR G.SHIFT SHAFT	
200	SWITCH, NEUTRAL GEAR y	
201	DESIGN,NG(NEUTRAL GEAR)SWITCH OPENING SWITCH	
204	PROT.CAP SWITCH, NEUTRAL GEAR y	
221	FUNCTION OF R/C SWITCH GP	
222	DESIGN, GP SWITCH OPENING SWITCH	
225	PROTECTING CAP GP SWITCH y	
232	FUNCTION OF S/G SWITCH GV	
233	DESIGN, GV SWITCH CLOSING	
236	PROTECTING CAP GV SWITCH y	
283	ATTACHM.POS.HEAT EXCHANGER IN FRONT LEFT PREPARED	
336	POSITION, OIL FILLER HOUSING LEFT+RIGHT	
337	NOTE ON OIL FILL FILL IN OVERFLOW	
338	OIL CAPACITY, GEARBOX 11 dm3	
340	OIL GRADE PERMISSIBLE ACC. TO TE-ML02	
341	OIL CLASS FIRST FILLING H	
342	CODING OUTER CONSERVATION KA2	
343	SCOPE OUTER CONSERVATION T	
344	CODING INNER CONSERVATION KI2	
345	CONSERVATION SPECIFICATION ZFN 916	
346	CODING NUMBER OF PLUGS S30	
347	COLOR JET BLACK	
348	COLOUR CLASSIFICATION ACC. TO RAL 9005	
349	PAINTING, ZF STANDARD 915 W	

# Plant

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Material number: 1315.051.141

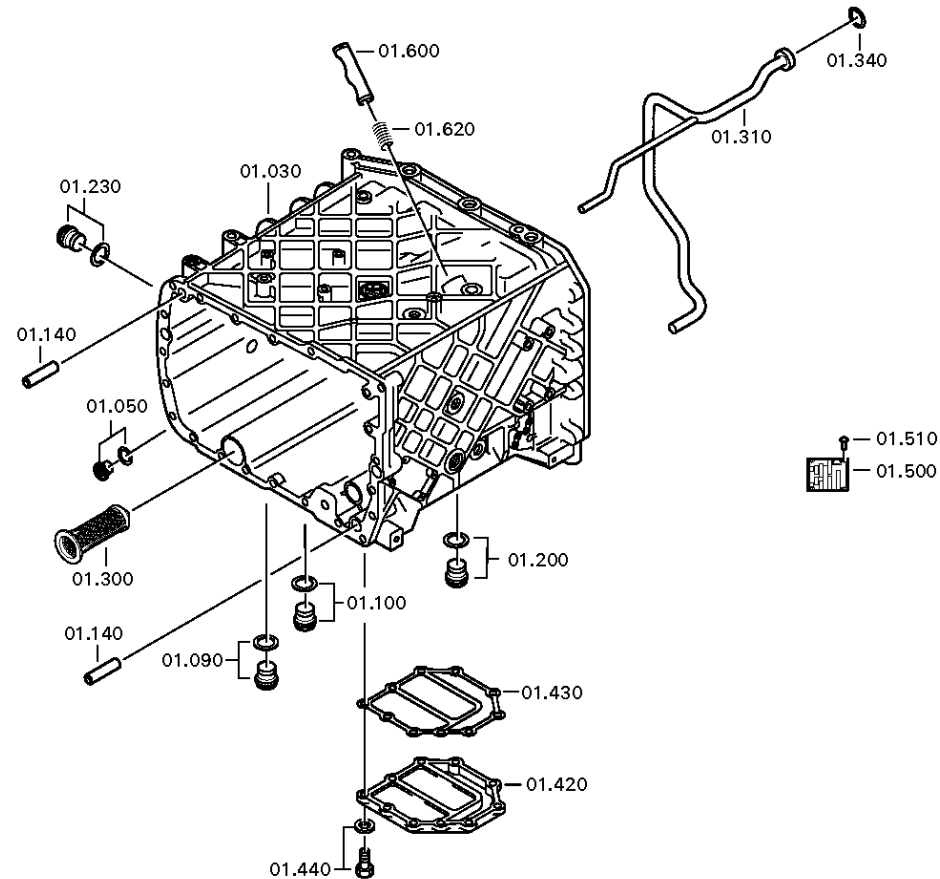
Plant: 068.01.05-1

TRANSMISSION HOUSING



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TRANSMISSION HOUSING



# Plant

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Material number: 1315.051.141

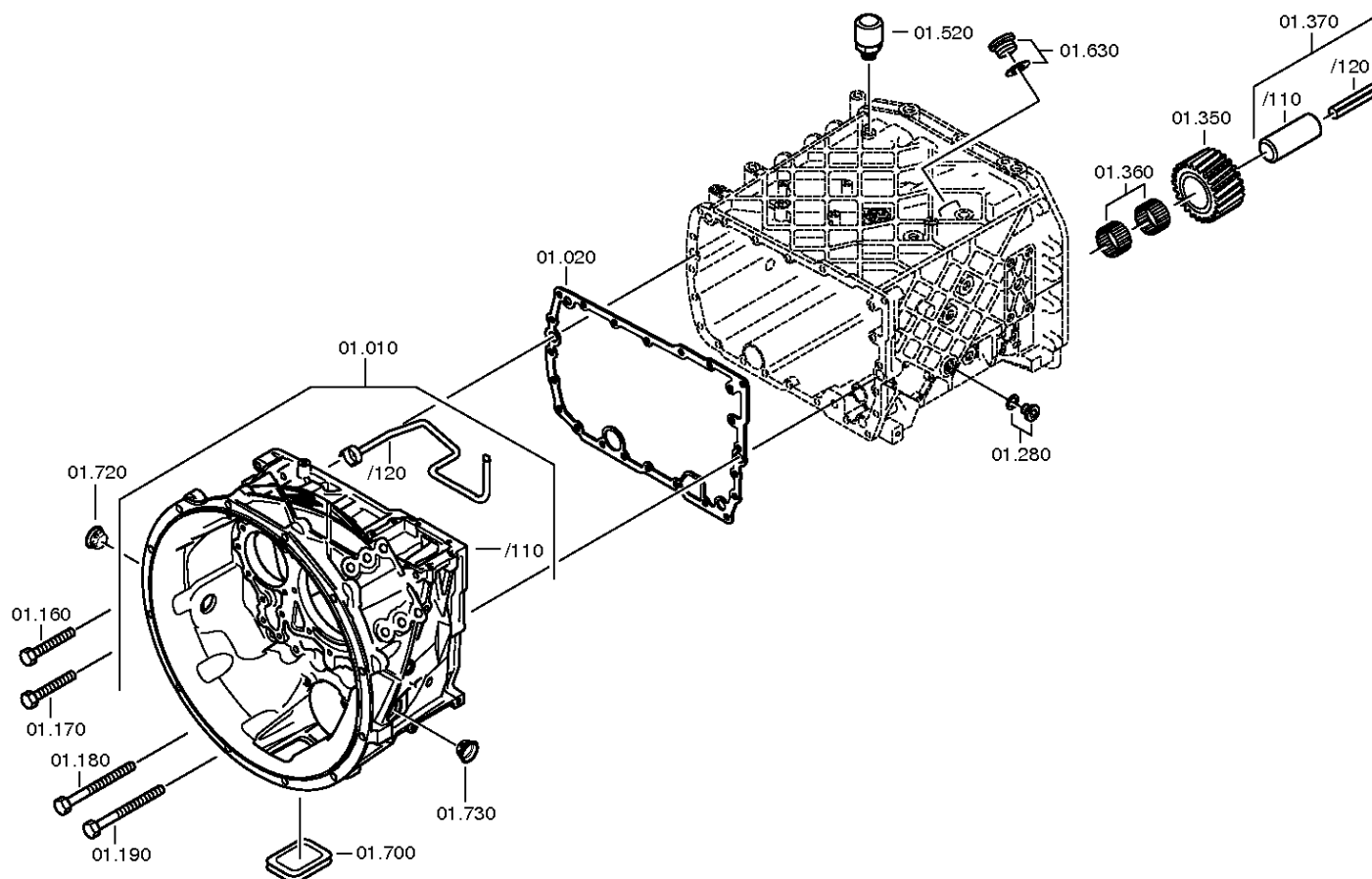
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TRANSMISSION HOUSING



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TRANSMISSION HOUSING





# Plant

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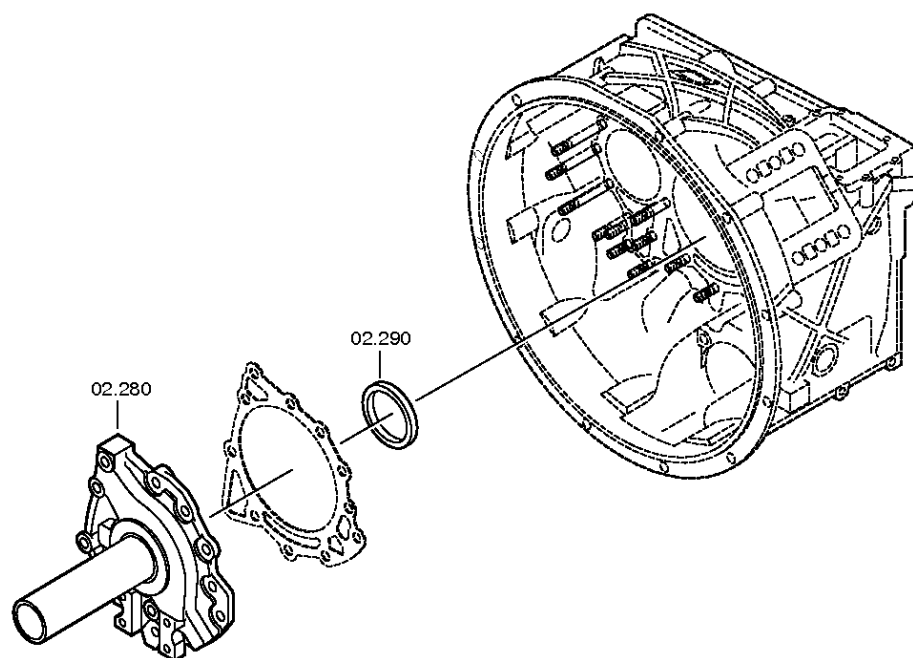
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Plant: 068.02.54-1

CONNECTION PLATE



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CONNECTION PLATE



# Plant

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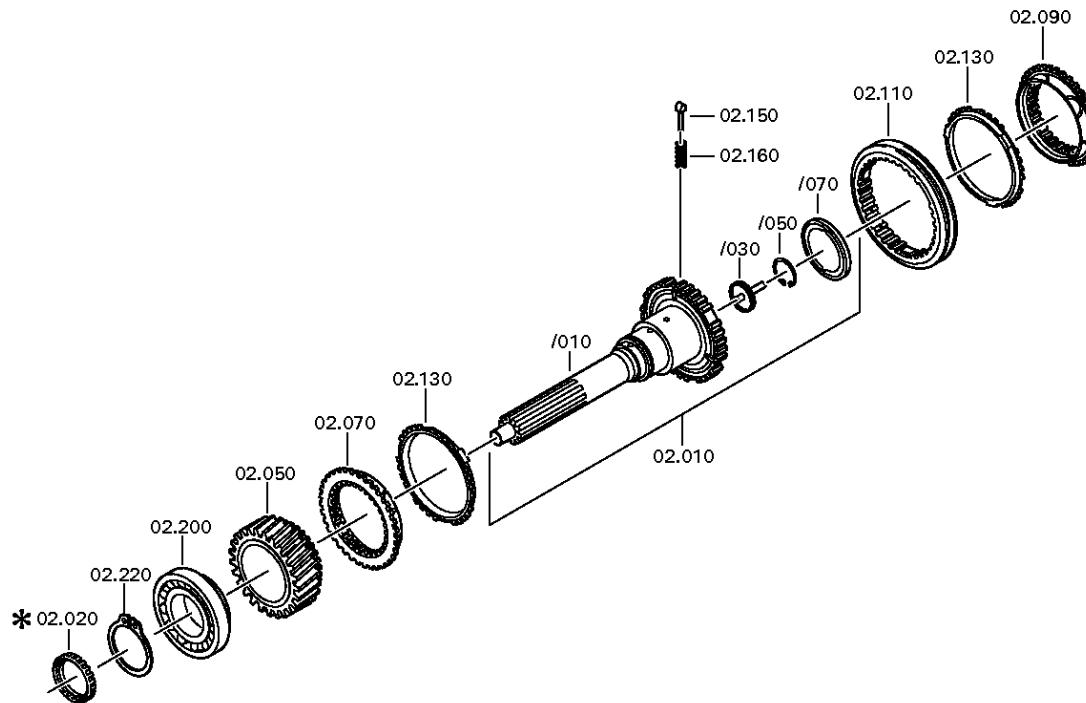
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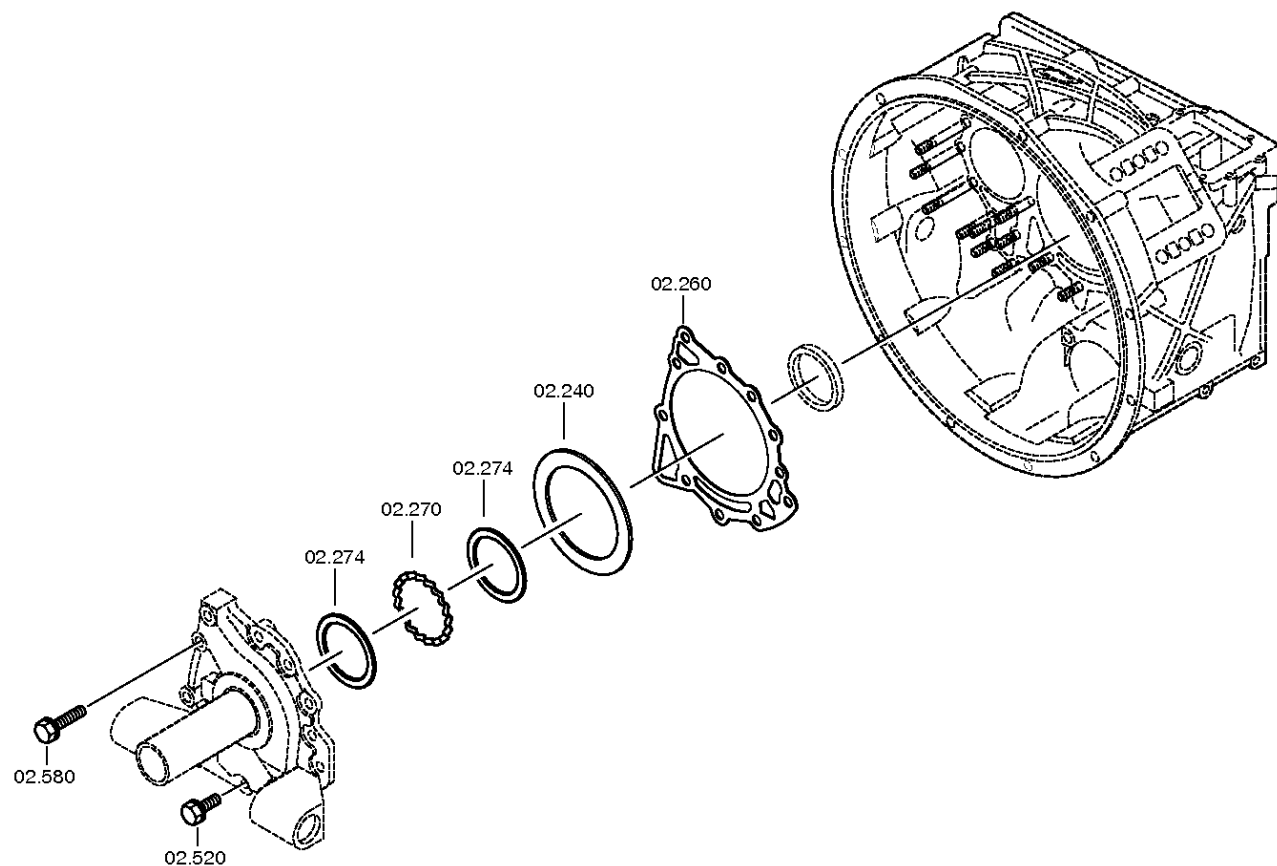
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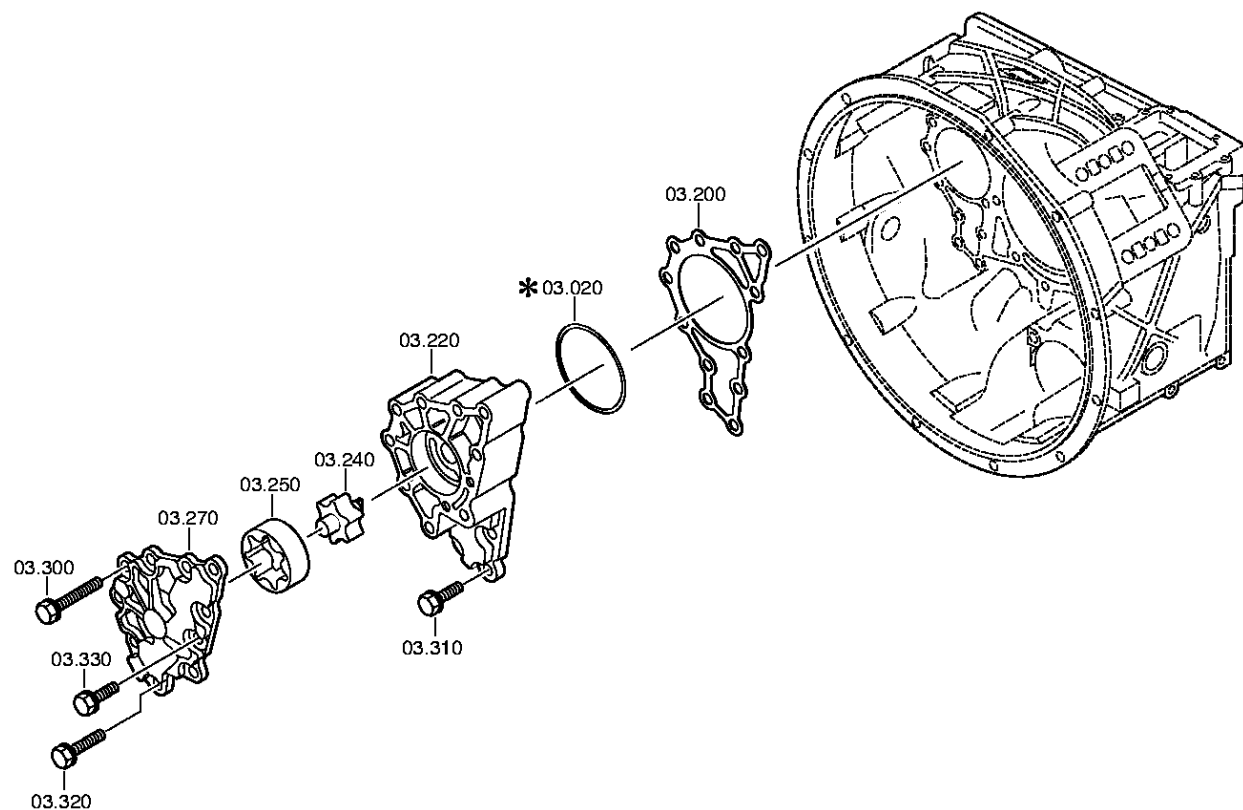
CONNECTION PLATE

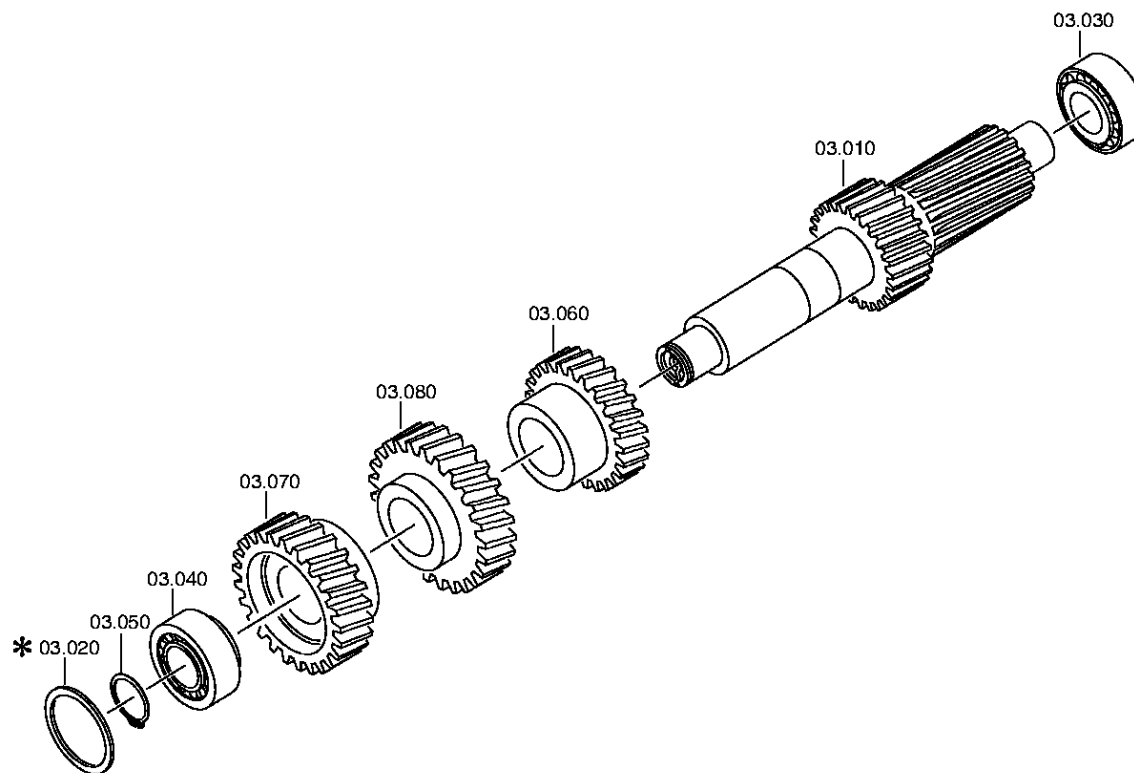


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CONNECTION PLATE









# Plant

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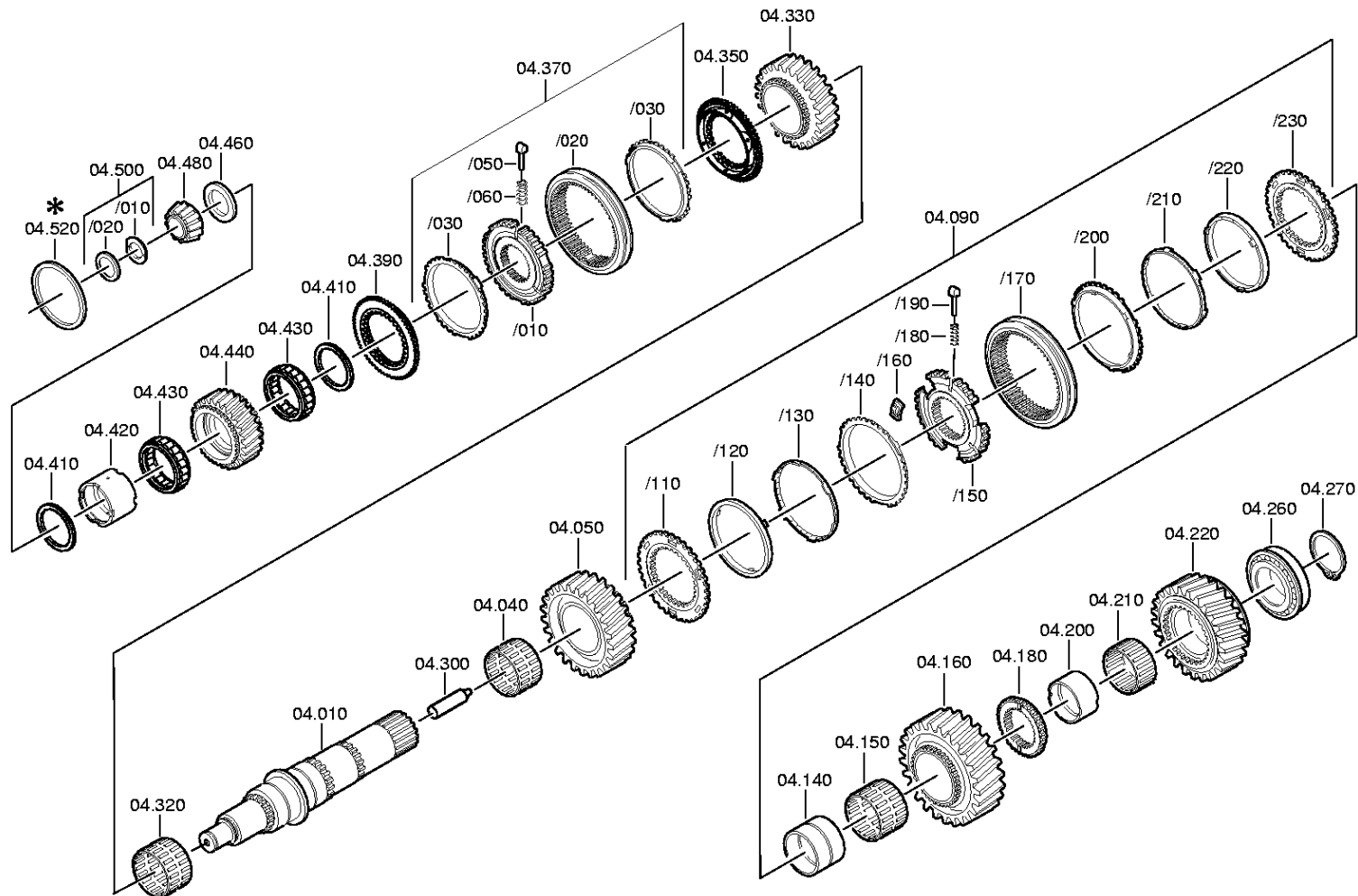
Material number: 1315.051.141

Plant: 068.04.10-1

Material-assembly-group-no: 1315.104.020



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MAIN SHAFT



# Plant

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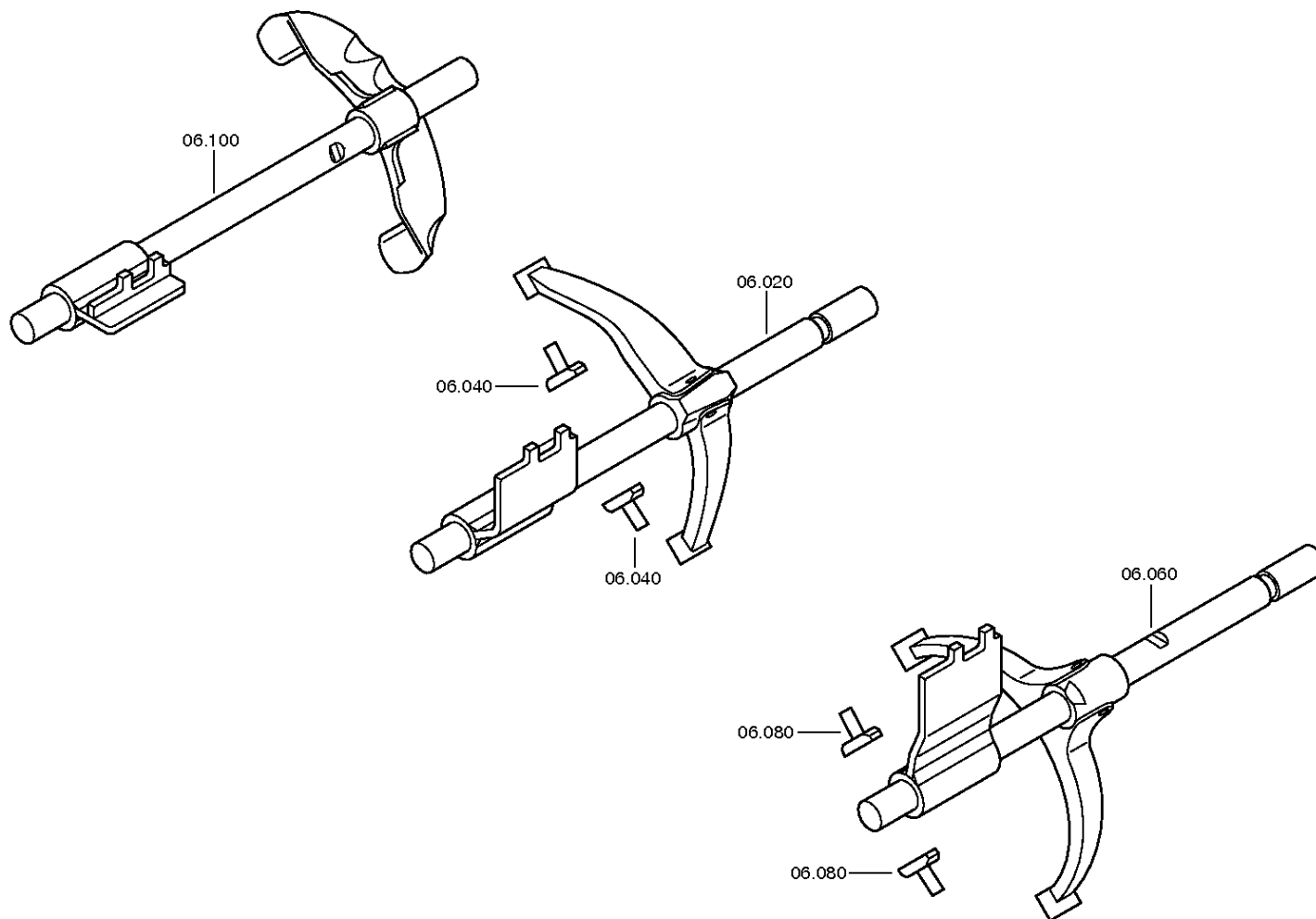
Material number: 1315.051.141

Plant: 068.06.01-1

SHIFT SYSTEM



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SHIFT SYSTEM



# Plant

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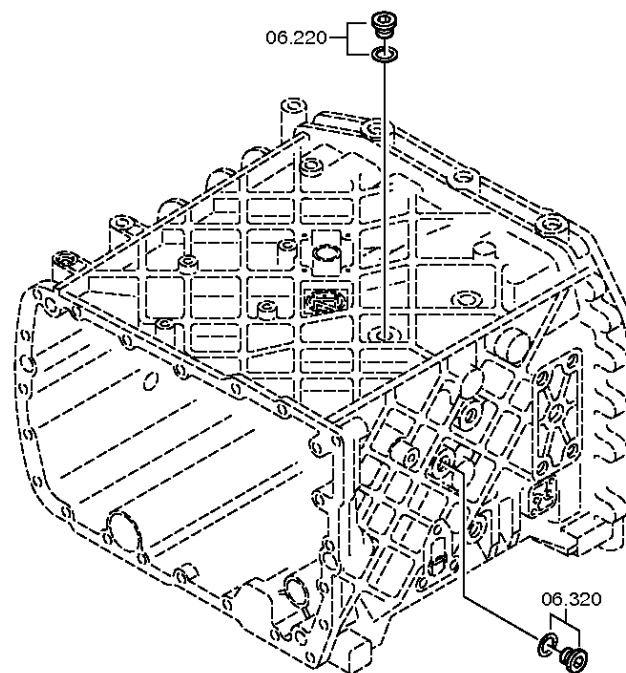
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Plant: 068.06.43-1

SHIFT SYSTEM



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SHIFT SYSTEM





# Plant

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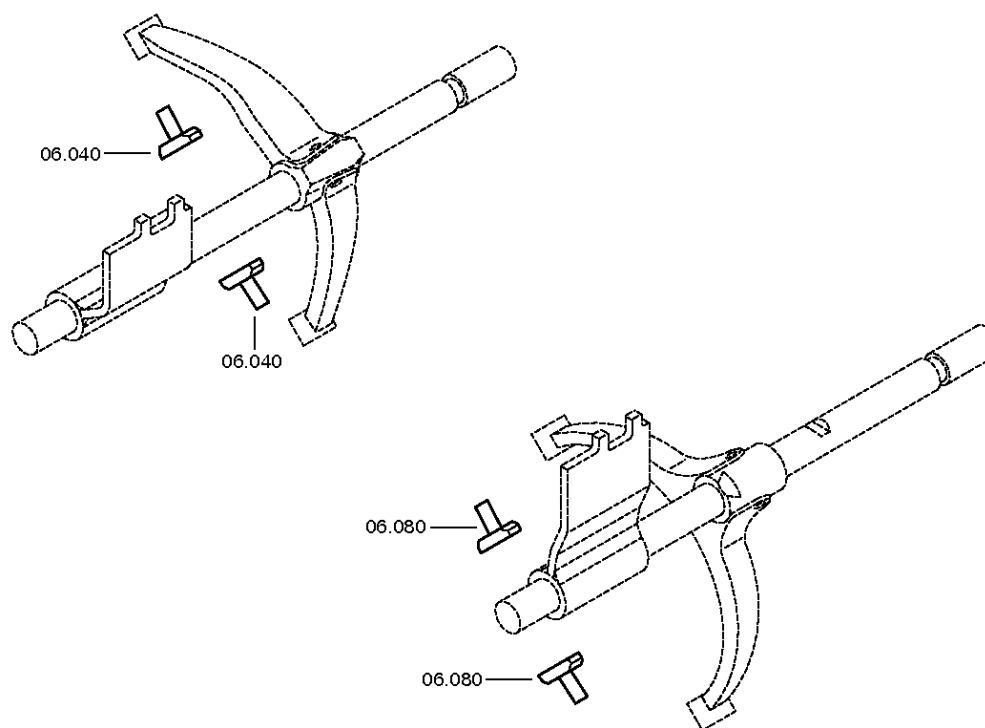
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Plant: 068.06.80-1

SHIFT SYSTEM



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SHIFT SYSTEM



# Plant

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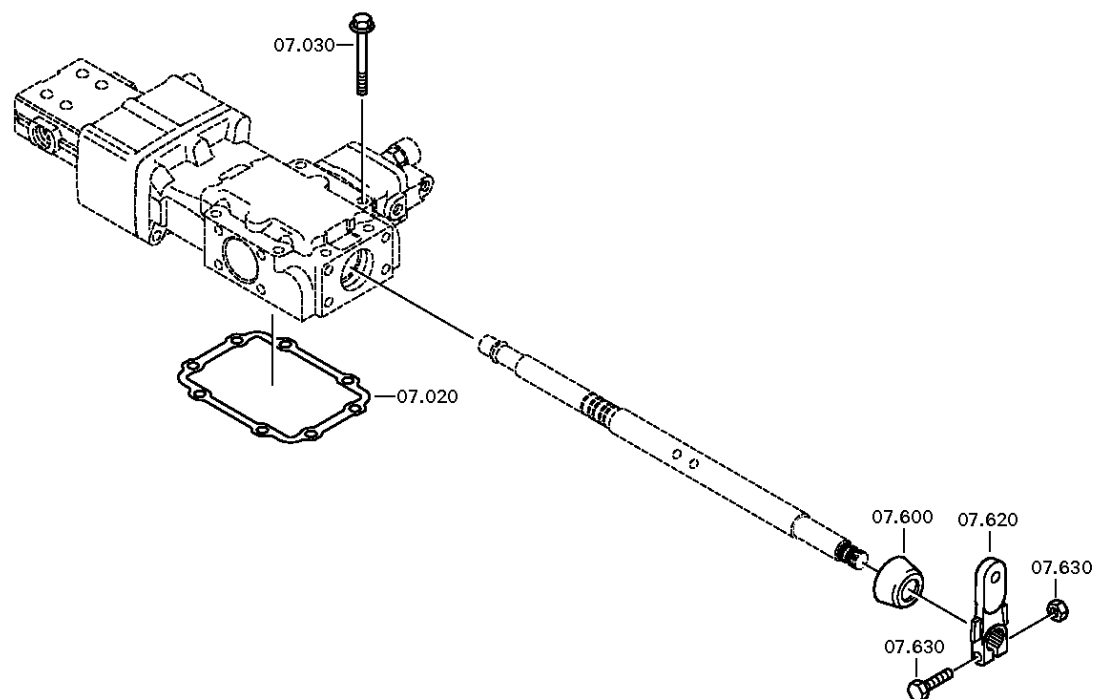
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Plant: 068.07.71-1

GEAR SHIFT HOUSING



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GEAR SHIFT HOUSING



# Plant

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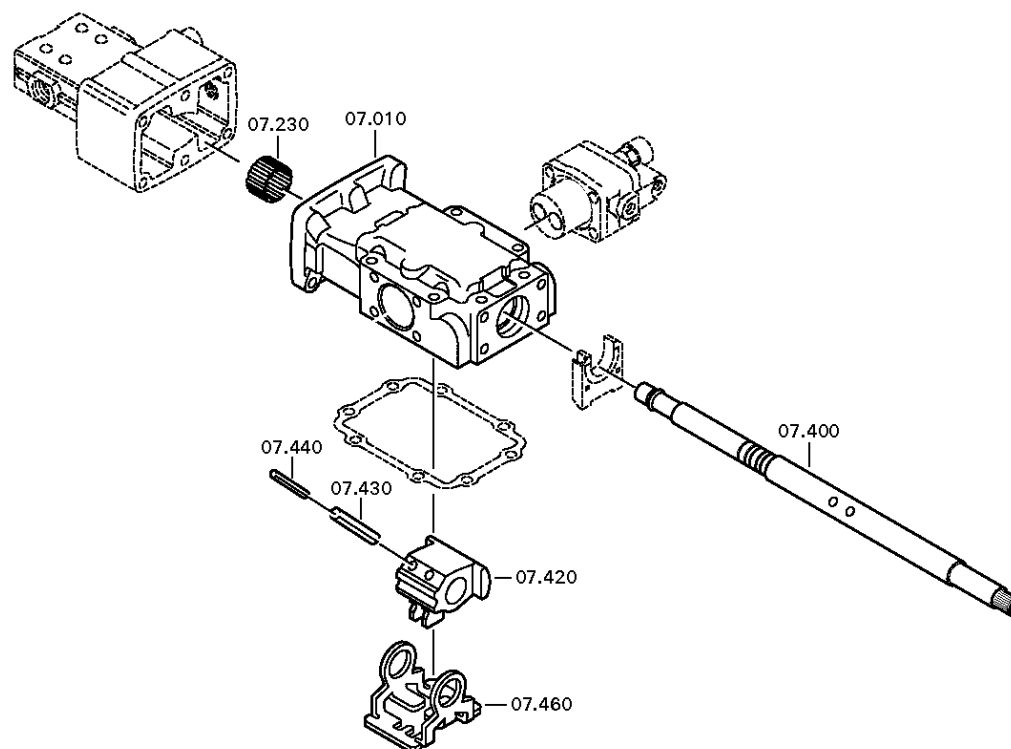
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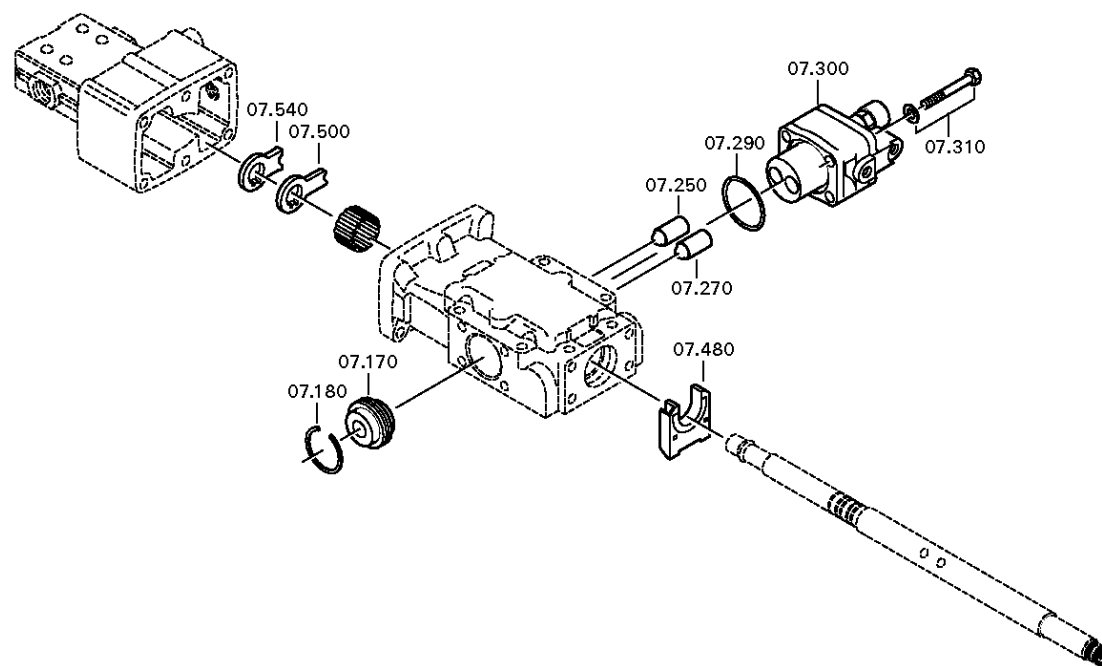
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GEAR SHIFT HOUSING



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GEAR SHIFT HOUSING





# Plant

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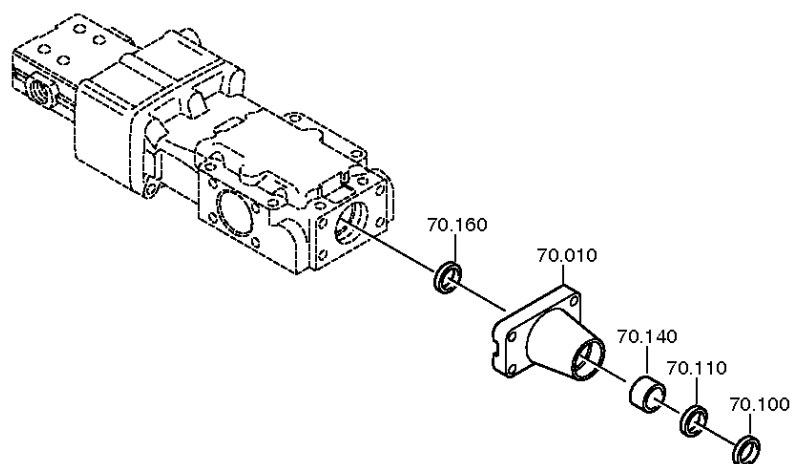
Material number: 1315.051.141

Plant: 068.08.17-1

SHIFT TURRET



16 S 151 /  
SHIFT TURRET



# Plant

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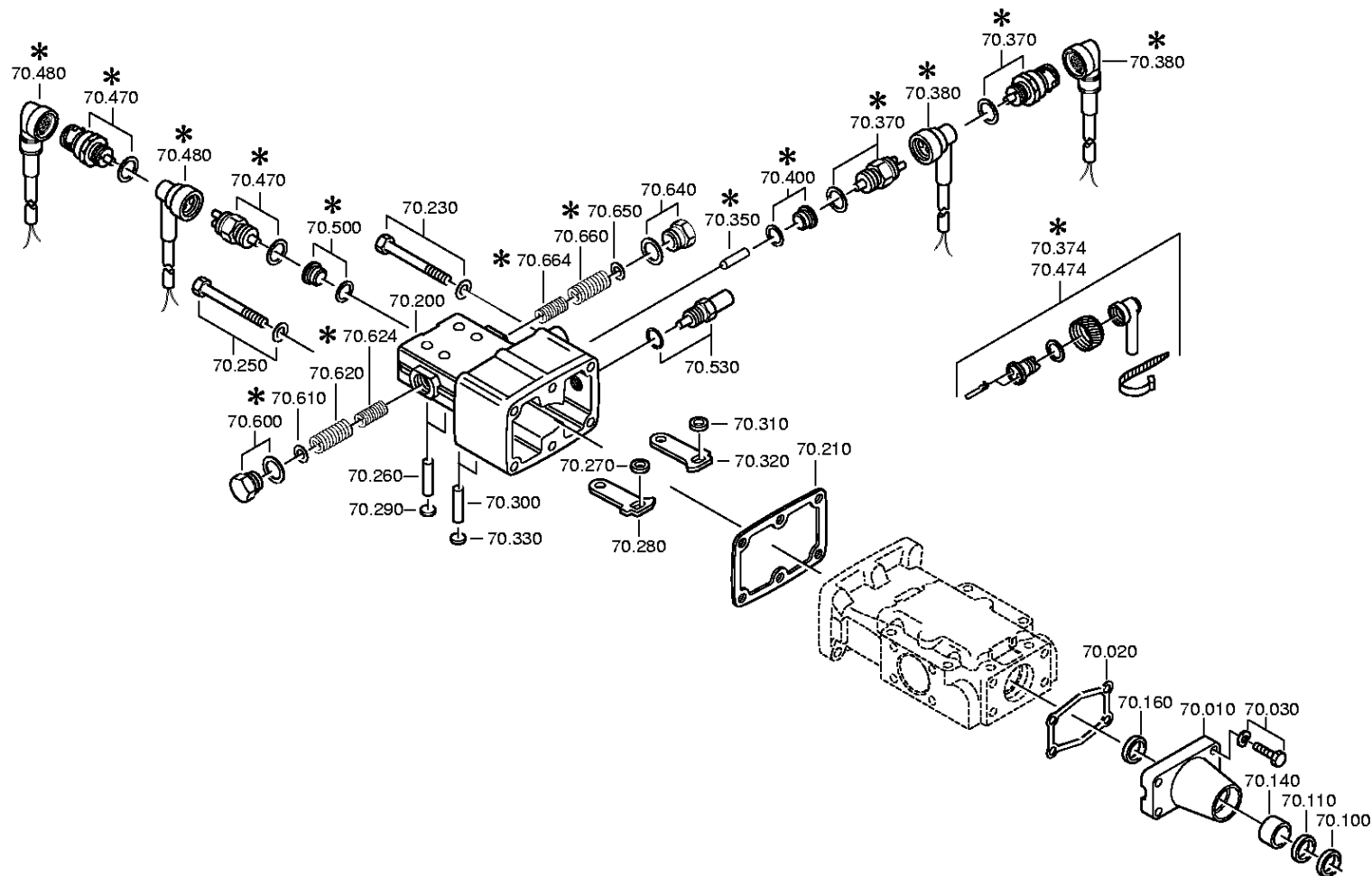
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Plant: 068.08.06-1

SHIFT TURRET



16 S 151 /  
SHIFT TURRET



# Plant

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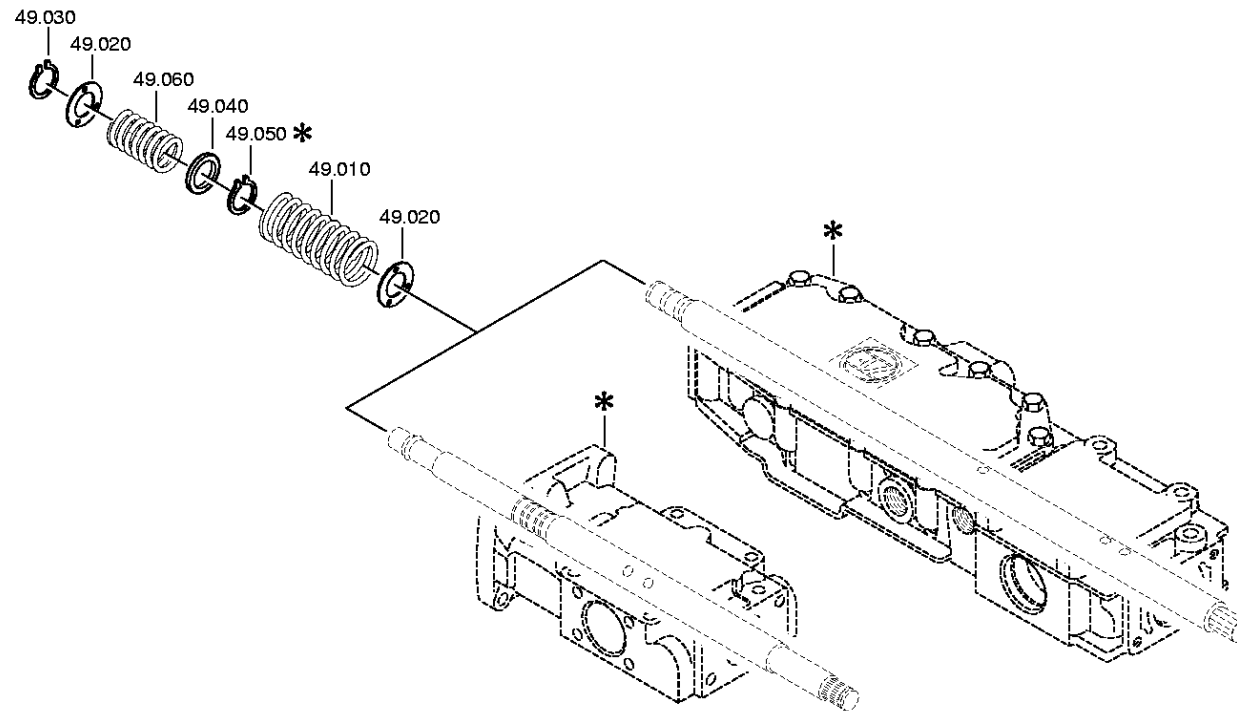
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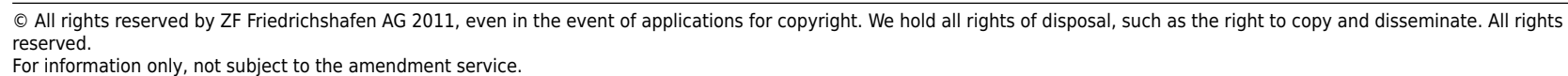
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Material-assembly-group-no: 1316.149.002



16 S 151 /  
SET OF SPRINGS







# Plant

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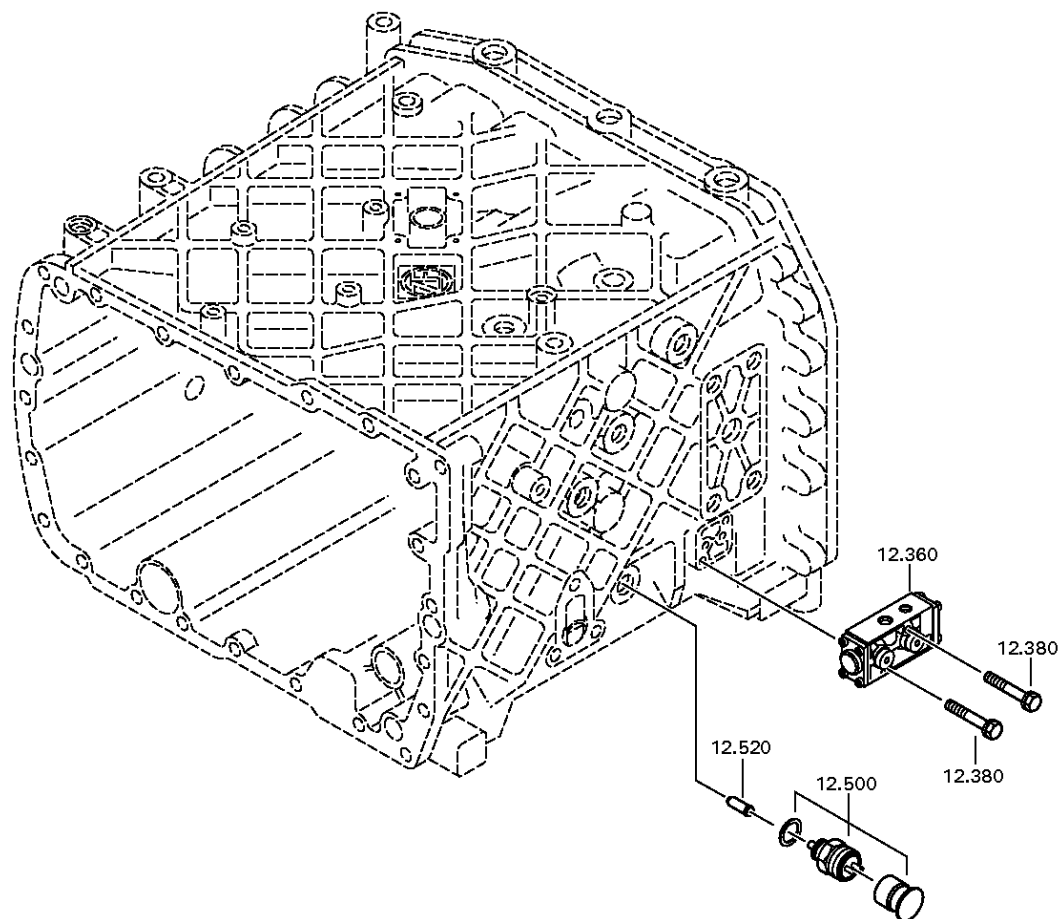
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Plant: 068.40.42-1

GV-SHIFT SYSTEM



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GV-SHIFT SYSTEM



# Plant

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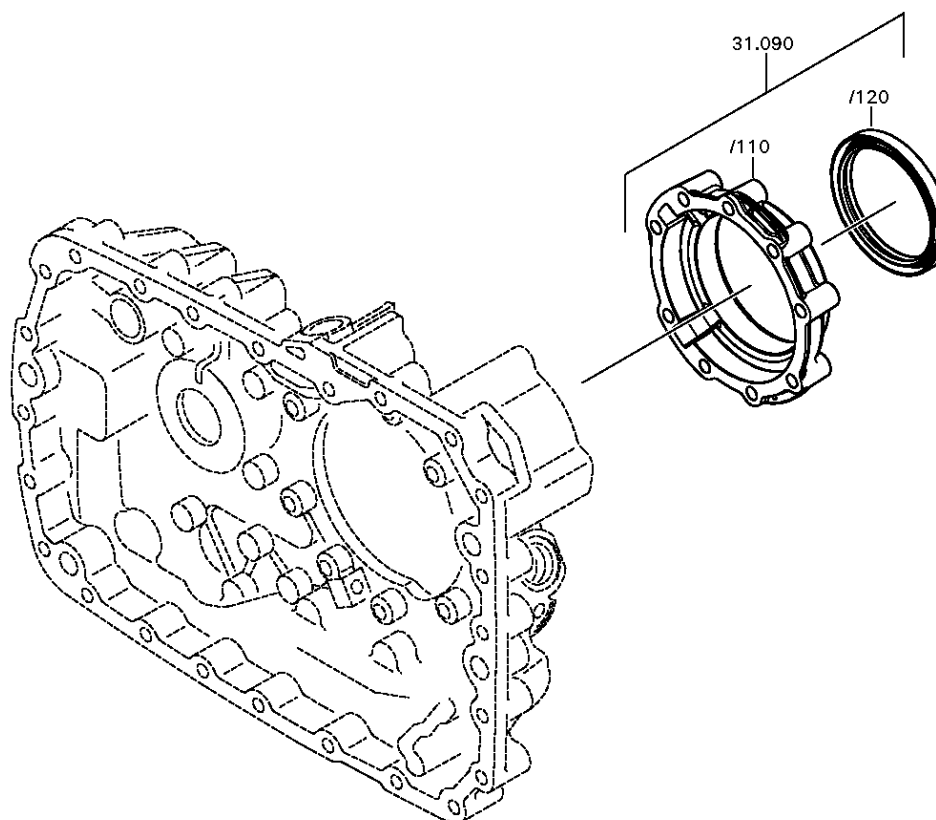
Material number: 1315.051.141

Plant: 068.43.21-1

COVER



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COVER



# Plant

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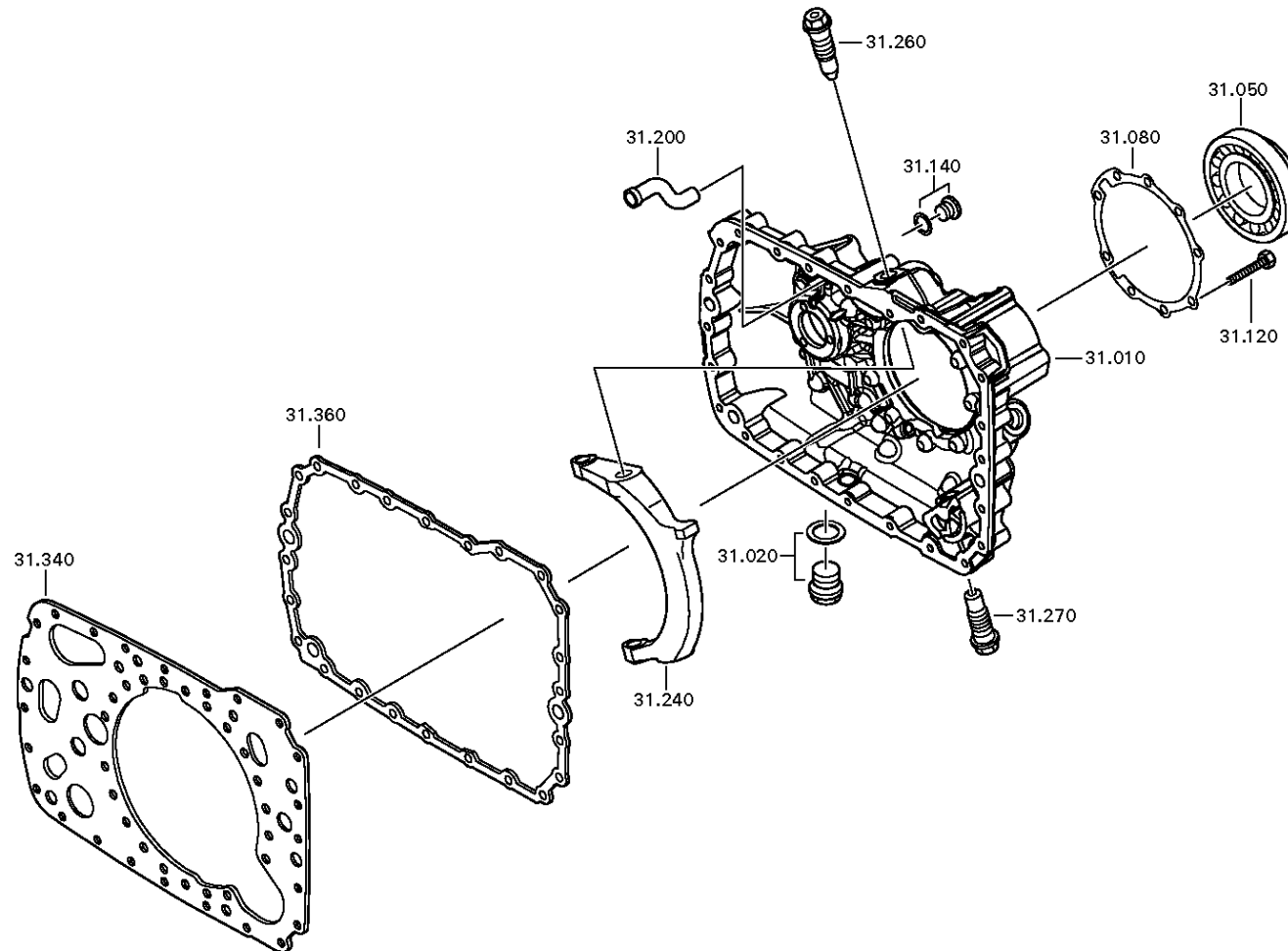
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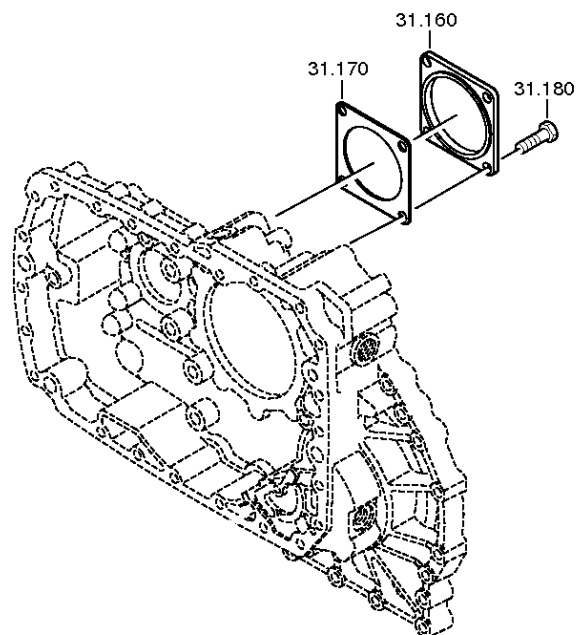
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COVER



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COVER





# Plant

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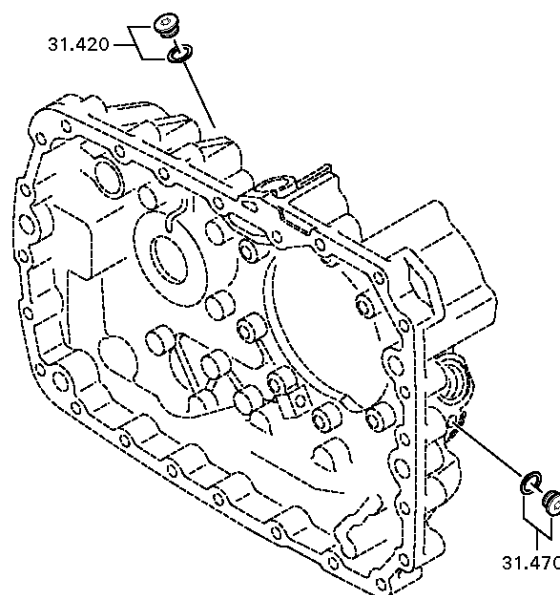
Material number: 1315.051.141

Plant: 068.43.45-1

COVER



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COVER



# Plant

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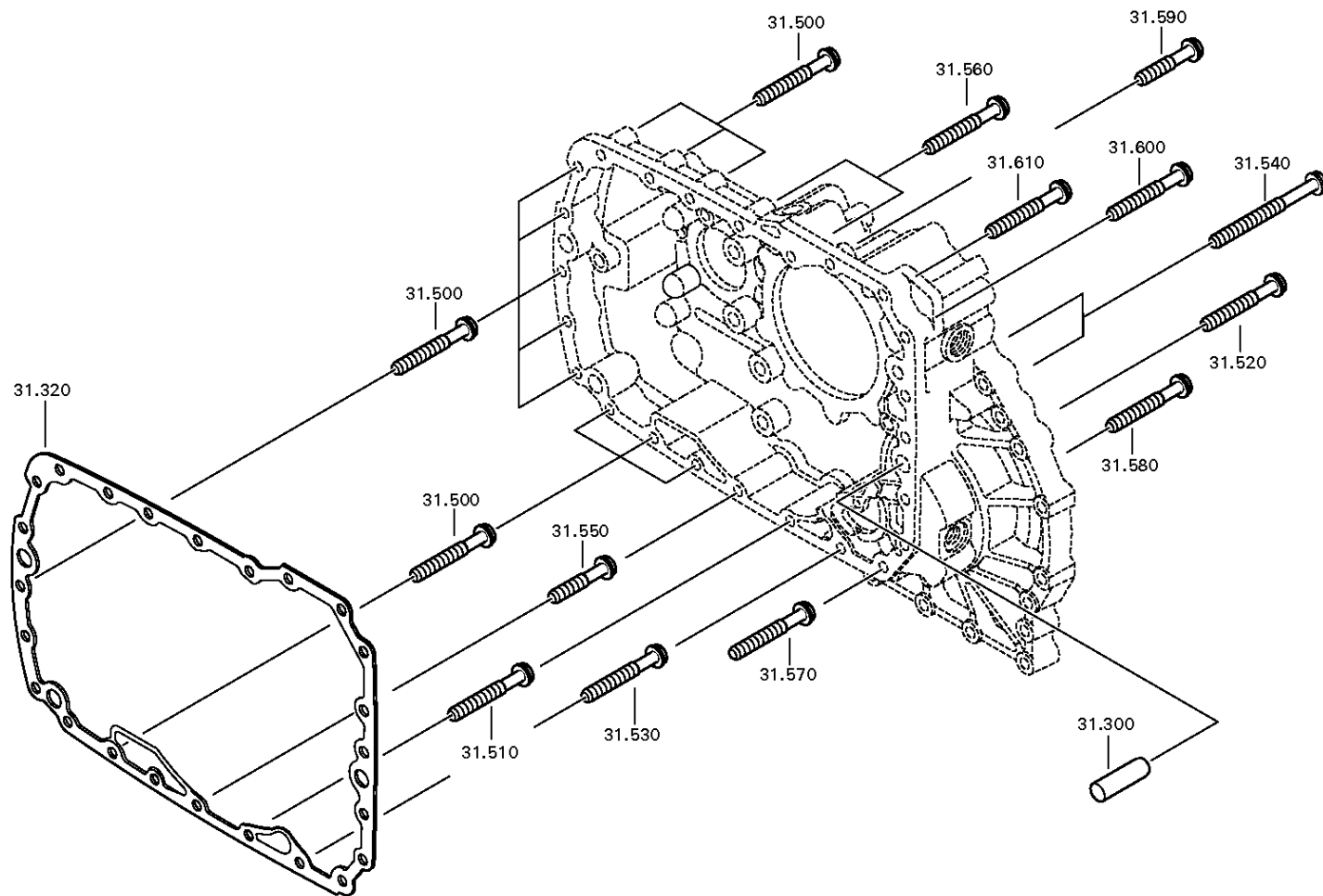
Material number: 1315.051.141

Plant: 068.43.80-1

COVER



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COVER



# Plant

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Material number: 1315.051.141

Plant: 068.44.04-1

PLANETARY DRIVE

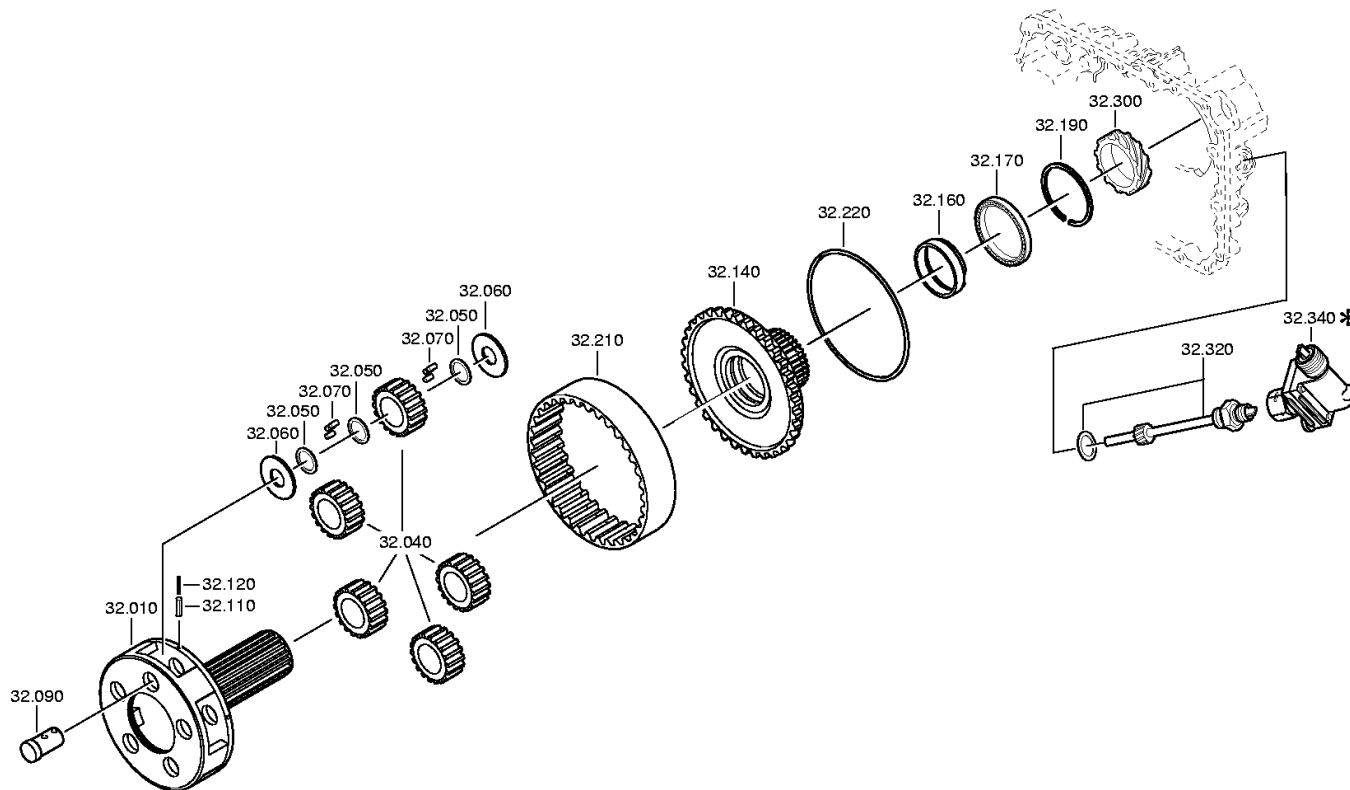


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PLANETARY DRIVE

Bildtafel:  
Figure:  
Figure:  
Figura:

068.44.04

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



# Plant

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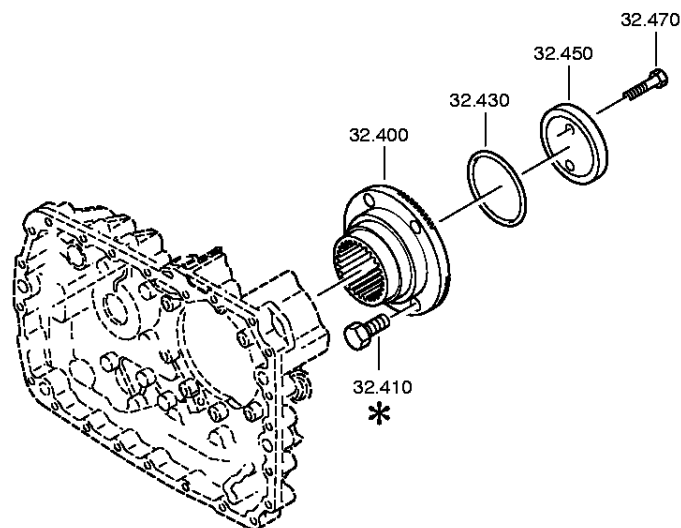
Material number: 1315.051.141

Plant: 068.44.41-1

PLANETARY DRIVE



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PLANETARY DRIVE





# Plant

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Material number: 1315.051.141

Plant: 068.45.07-1

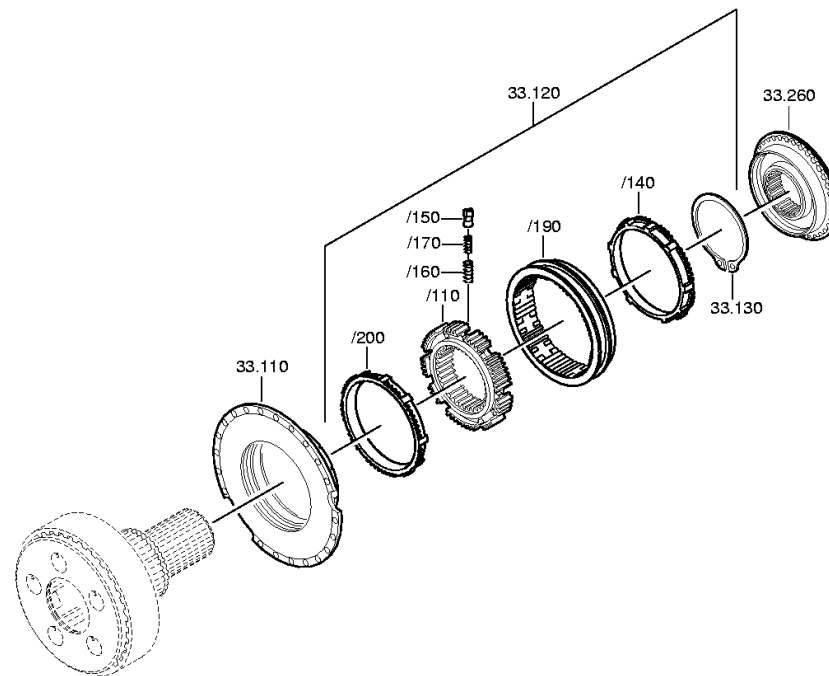
SYNCHRONIZER



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SYNCHRONIZER

Bildtafel:  
Figure:  
Figure:  
Figura:

068.45.07

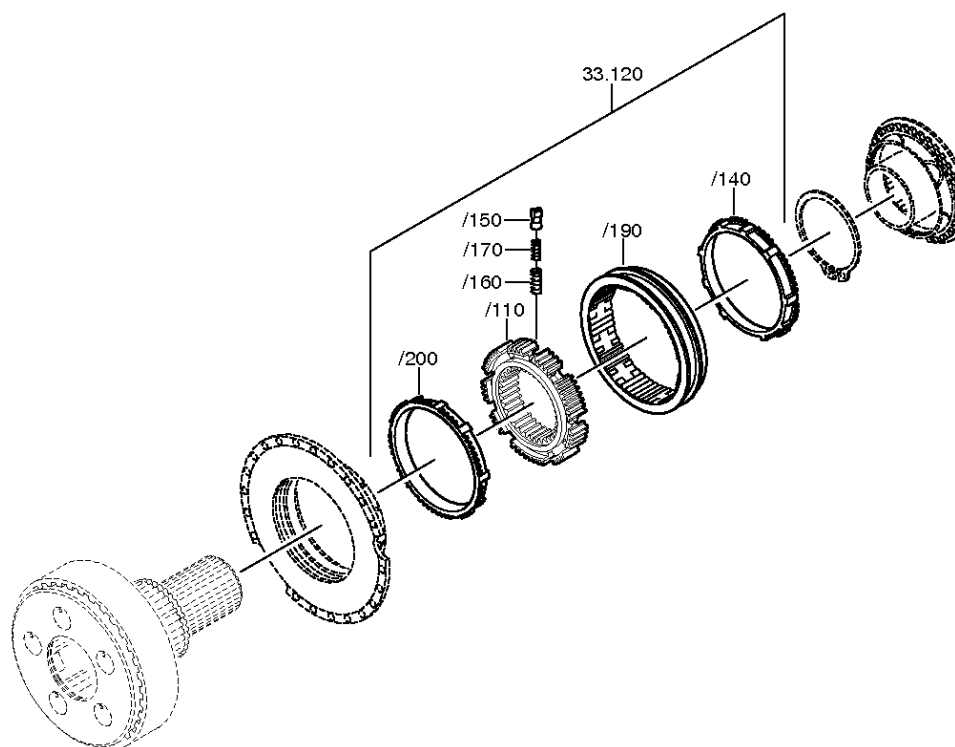


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Plant: 068.45.40-1



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SYNCHRONIZER



# Plant

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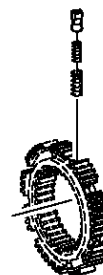
Material number: 1315.051.141

Plant: 073.98.01-1

Material-assembly-group-no: 1272.298.934



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SMALL COMP.SET



# Plant

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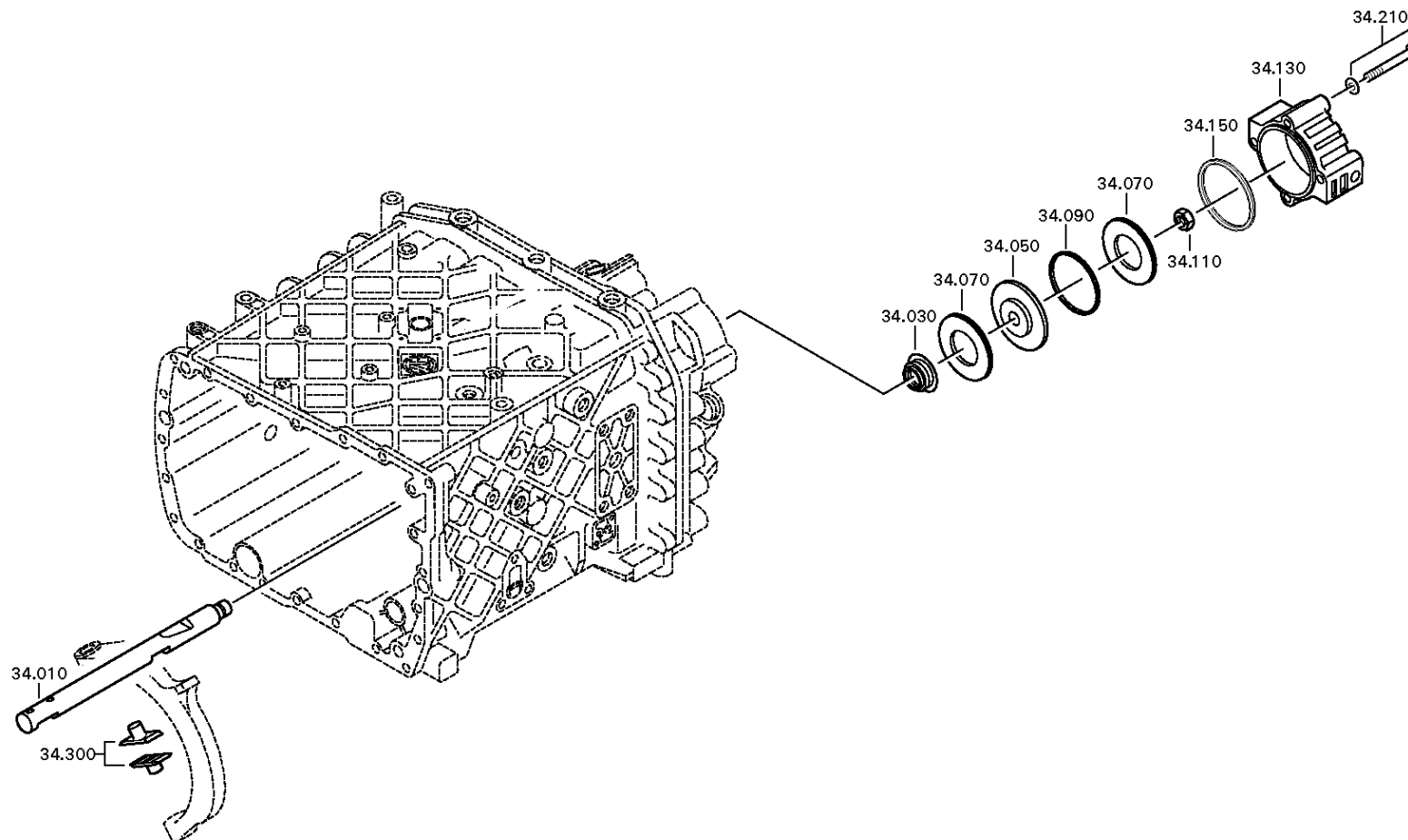
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Plant: 068.46.03-1

GP SHIFT SYSTEM



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GP SHIFT SYSTEM



# Plant

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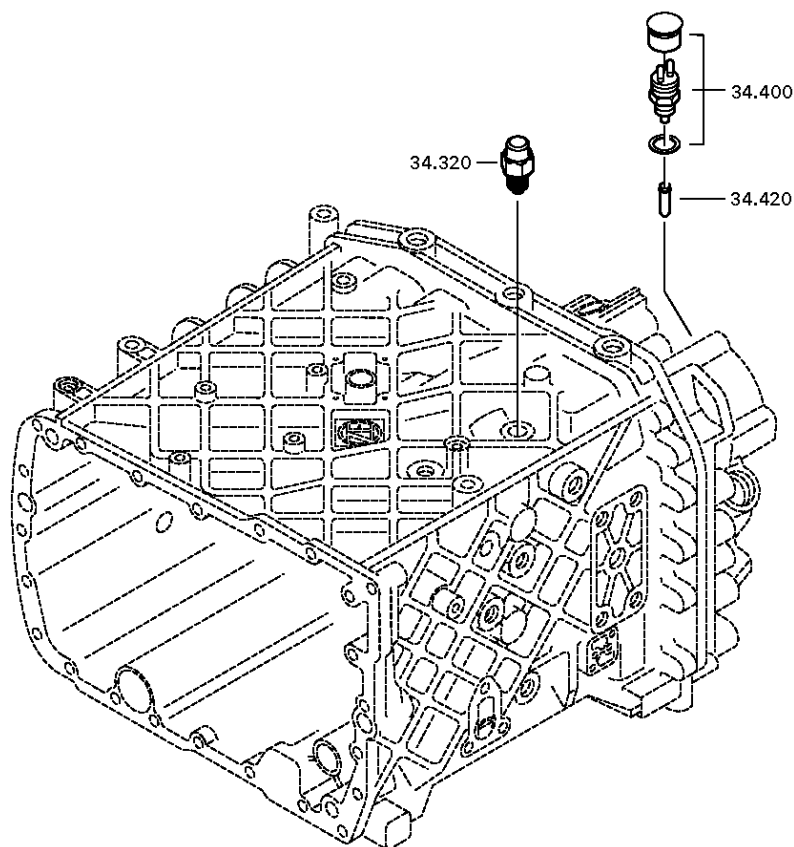
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Plant: 068.46.40-1

GP SHIFT SYSTEM



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GP SHIFT SYSTEM



# Plant

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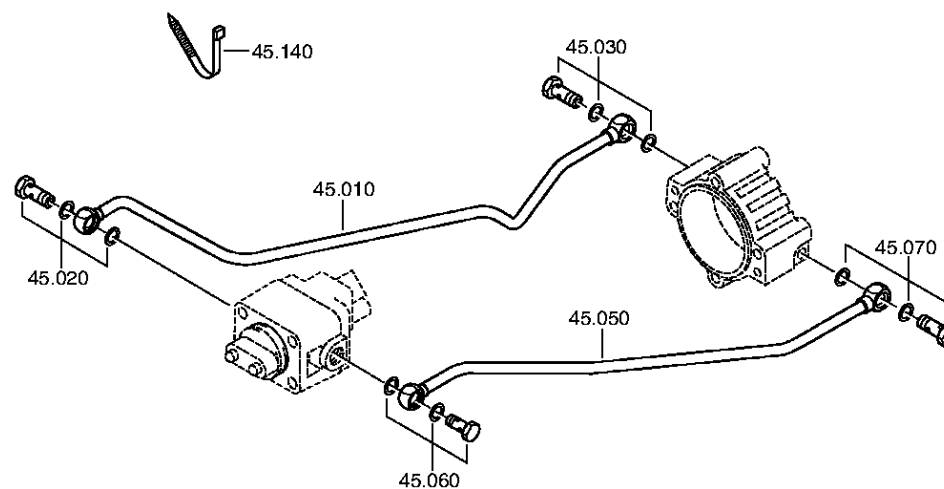
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Plant: 068.57.04-1

Material-assembly-group-no: 1315.145.004



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RANGE SELECTION



# Plant

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Material number: 1315.051.141

Plant: 068.93.07

Material-assembly-group-no: 1315.168.019



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CLUTCH RELEASE DEVICE

