

25.11.2019

Spare Parts Catalog 16 S 2522 TO

Material number: 1343.006.041

Current date: 25.11.2019

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Notes relating to the spare parts catalog

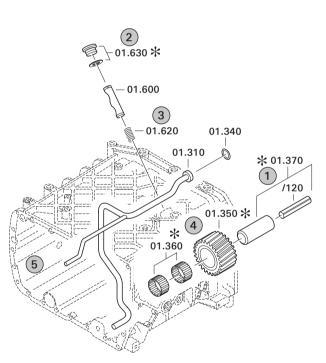


Setup of the spare parts catalog

- Cover sheet
- Tecnical 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			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
0680814	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)		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

		Sachnummer Product number	Benennung (Description)		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)	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 distina base

(5) Parts, dotted display

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

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Pos.	Information	Amendment number
001	Use case	
002	Customer MAN	
003	City NN	
004	DUNS	
005	Vehicle / Apparatus	
006	Sales Name TGS-TGX	
007	Manufacturer MAN	
008	Engineering Name	
009	Product Use TRUCK	
010	Vehicle/Hardware Type ROAD TRACTOR	
011	SOP	
012	Engine	
013	Sales Designation	
014	Manufacturer MAN	
015	Eng.Displ.	
016	Cylinder	
017	Nom. power 390 kW	
018	RPM at nom. power 1900 1/min	
019	Nom. torque 2400 Nm	
020	RPM at nom. torque 1000 1/min	
021	Classification use case	
022	DESIGNATION, CLUTCH MFZ430	
023	MANUFACTURER, CLUTCH ZF-SACHS	
024	TOTAL NUMBER OF WHEELS 4	
025	NUMBER OF DRIVING WHEELS 2	
026	DYNAMIC TYRE RADIUS 522 mm	
027	REAR AXLE RATIO 3.08	
031	PERMISS.GROSS VEHICLE WEIGHT 18 t	
032	PERMISS.GROSS COMBIN.WEIGHT 44 t	
033	Product description	
034	CO2-FAMILY XXX	
035	CO2-CERTIFICATE XXX	
036	INSTALLATION POS TRANSMISSION HORIZONTAL LEFT	

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Pos.	Information	Amendment number
037	TRANSMISSION ATTACHMENT FLANGE-MOUNTED	
038	RATIO, BOTTOM GEAR 13.8	
039	RATIO, TOP GEAR .84	
040	RATIO, 1ST GEAR 13.8	
041	RATIO, 2ND GEAR 11.54	
042	RATIO, 3RD GEAR 9.49	
043	RATIO, 4TH GEAR 7.93	
044	RATIO, 5TH GEAR 6.53	
045	RATIO, 6TH GEAR 5.46	
046	RATIO, 7TH GEAR 4.57	
047	RATIO, 8TH GEAR 3.82	
048	RATIO, 9TH GEAR 3.02	
049	RATIO, 10TH GEAR 2.53	
050	RATIO, 11TH GEAR 2.08	
051	RATIO, 12TH GEAR 1.74	
052	RATIO, 13TH GEAR 1.43	
053	RATIO, 14TH GEAR 1.2	
054	RATIO, 15TH GEAR 1	
055	RATIO, 16TH GEAR .84	
056	RATIO, 1ST GEAR REVERSE 12.92	
057	RATIO, 2ND GEAR REVERSE 10.8	
058	SET OF RATIOS SG	
059	RATIO RANGE BASIC DG	
060	NUMBER OF PLANETARY GEARS 5	
061	RATIO PLANETARY GEAR SET 4.565	
062	VER. SPLINE PLANETARY GEAR SET OBLIQUE TOOTHING	
063	DESIGN, SHIFT SYSTEM TURNING SHAFT	
064	POSITION, GEAR SHIFT SYSTEM HORIZONTAL LEFT	
065	DESIGN, SHIFT PATTERN UEH	
066	VERSION SHIFT SUPPORT GATE DEPENDENT SERVO	
067	VERSION ACTUATION SHIFT SYSTEM CONTROL CABLE	
069	DESIGN PSE PSE5	
070	VERSION TUBE R/C PLASTIC-FORM-PIPE	

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Pos.	Information	Amendment number
071	VERSION TUBE SERVO PLASTIC PIPING	
072	NOTE ON VERSION SHIFT SYSTEM GEAR SHIFT COVER WITH AIR DIST	
073	DESIGN DOWNSHIFT GATE INTERLOCK RADIAL	
074	VERSION TUBE GATE INTERLOCK WITHOUT PIPING	
075	1ST CUSTOMER SPEC SHIFT SYSTEM RANGE INTERLOCK	
076	2ND CUSTOMER SPEC SHIFT SYSTEM GATE INTERLOCK	
080	DESIGN VALVE AIR SUPPLY VALVE BLOCK	
082	SELECTION PATTERN VARIANT GEAR SHIFT PATTERN 1	
083	DESIGN, SEPARATING CLUTCH FULL-SYNCHRONIZED	
084	VERSION OF SYNCHRONIZER 1 1+2 GANG BK-SYNCHR.CARBON	
085	VERSION OF SYNCHRONIZER 2 3+4 GANG BK-SYNCHR.CARBON	
086	REFERENCE LENGTH INPUT SHAFT 109 mm	
087	STANDARD TYPE INPUT SHAFT SAE	
088	NUMBER OF WEDGES INPUT SHAFT 10	
089	VERSION OF INPUT SHAFT FORM C	
090	NOMINAL DIAMETER INPUT SHAFT 2 in	
091	DIAMETER, JOURNAL, INPUT SHAFT 25 mm	
092	TYPE FIT SPIGOTS INPUT SHAFT F7	
093	VER. BEAR. SPIGOTS INPUT SHAFT TAPER ROLLER	
094	LENGTH, INPUT SHAFT 515.2 mm	
095	DIAMETER SHAFT OF INPUT SHAFT 50.3 mm	
096	LENGTH, PROFILE, INPUT SHAFT 65 mm	
097	BUSH VARIANT INPUT SHAFT WITHOUT GROOVE	
098	VERSION BEARING CONSTANT 1 GL	
099	DIAMETER BEARING INPUT SHAFT 99.916 mm	
100	TYPE FIT BEAR. INPUT SHAFT H5	
101	DESIGN,CONN., CLUTCH HOUSING SAE 1	
102	CENTR.DIA,HSG/ENGINE CONNECT. 511.175 mm	
103	NUMBER OF BORES, ENGINE CONN. 12	
104	BORE DIA, ENGINE CONNECTION 13 mm	
105	VERSION OF CLUTCH HOUSING INTEGRATED	
107	VERSION ENGINE CONNECTION NMV 221	
108	POSITION MOUNT. FACE HOUSING 2 WITHOUT GROOVE	

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Pos.	Information	Amendment number
109	LENGTH CLAMP. FLAP RH ENG CONNECT. 308 mm	
110	TYPE OF RELEASE MECHANISM WITH	
111	ASSEMBLY POS. CLUTCH CYLINDER 6	
112	OUTER DIA. OUTPUT FLANGE RA 180 mm	
113	NO.OF BORES OUTPUT FLANGE HA1 4	
115	BORE DIA. OUTPUT FLANGE RA 15 mm	
120	REF. LENGTH OUTPUT FLANGE RA 211.5 mm	
121	DIMENSION SHIFT TURRET DIST. 300 mm	
122	MEAS. LOC. SHIFT TURRET DIST. SHIFT LEVER-LOCATION	
124	RADIUS SELECTOR LEVER 69 mm	
125	SELECTOR LEVER POSITION B	
126	DESIGN OFFSET SELECTOR LEVER OUTSIDE	
127	LENGTH OFFSET SELECTOR LEVER 3.6 mm	
129	RADIUS 1 SHIFT LEVER 57 mm	
130	SHIFT LEVER CONNECTION HEXAGON	
131	DESIGN, OFFSET, SHIFT LEVER OUTSIDE	
133	LEVER POSITION SHIFTING OUTPUT A	
136	SPRING ARRANGEMENT Q4	
137	SPRING FORCE DETENT PLUNGER RG 120 N	
139	SELECTOR SPRING FORCE, OUTSIDE 40 N	
144	SWITCH, REVERSE GEAR y	
145	DESIGN, RG (REV.GEAR) SWITCH CLOSING	
147	DESIGN, CONNECTION, RG SWITCH DIN BAYONET	
148	CODE SWITCH RG A2	
149	PROT.CAP SWITCH, REVERSE GEAR y	
150	NOTE ON SWITCH, REVERSE GEAR G.SHIFT SHAFT	
151	SWITCH, NEUTRAL GEAR y	
152	DESIGN,NG(NEUTRAL GEAR)SWITCH OPENING SWITCH	
154	DESIGN, CONNECTION, NG SWITCH DIN BAYONET	
155	CODE SWITCH NG A1	
156	PROT.CAP SWITCH, NEUTRAL GEAR y	
167	FUNCTION OF R/C SWITCH GP	
168	DESIGN, GP SWITCH PREPARED	

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Pos.	Information	Amendment number
171	PROTECTING CAP GP SWITCH n	
177	FUNCTION OF S/G SWITCH GV	
178	DESIGN, GV SWITCH WITHOUT GROOVE	
181	PROTECTING CAP GV SWITCH n	
195	DESIGN PTO J02 NMV221	
196	NO. OF TEETH PTO OUTPUT GEAR Z1 J02 51	
197	NO. OF TEETH PTO IDLER GEAR Z2 J02 45	
198	NO. OF TEETH PTO OUTPUT GEAR Z3 J02 52	
199	SWITCHING TYPE PTO J02 PNEUMATIC INTEGRATED	
200	POSITION PTO J02 TOP	
201	OUTP.SPEED PTO (X N-ENG) J02 .98	
202	DIAMETER OUTSIDE PTO OUTPUT FLANGE J02 150 mm	
203	NO. OF BORES PTO FLANGE J02 K10 K32 8	
204	DIAMETER BORE PTO OUT FLANGE J02 K10 K32 12.1 mm	
205	RELEASE BEARING J02 n	
206	DESIGN SEPARATING CLUTCH J02 DISC	
207	FUNCTION PTO SWITCH J02 PTO	
208	DESIGN PTO SWITCH JO2 WITHOUT GROOVE	
209	PROTECTION CAP PTO SWITCH J02 n	
210	MTG POS. PTO SWITCH J02 WITHOUT GROOVE	
211	ATTACHM.POS.HEAT EXCHANGER IN FRONT LEFT PREPARED	
212	VER. TRANSMISSION VENTILATION ELBOW JOINT	
214	POS.TRANSMISSION VENTILATION IN FRONT	
215	DESIGN PULSE SENSOR INPUT WITH	
216	DES.CONN.PULSE SENSOR INPUT DIN BAYONET	
217	PROT.CAP PULSE SENSOR INPUT y	
218	DM PLACE OF TAKEOFF PULSE SENSOR IN 172 mm	
219	PLACE OF TAKEOFF PULSE SENSOR INPUT COUNTER SHAFT CONSTANT 2	
220	VERSION PULSE SENSOR SFA H68 WITHOUT GROOVE	
224	PROT.CAP PULSE SENSOR SFA H68 n	
225	NO. PULSES PULSE SENSOR SFAH68 6 IMP/U	
229	VER. PULSE SENSOR TRANSM. H70 WITHOUT GROOVE	
230	VER. CONNECT. PULSE SENSOR H70	

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Pos.	Information	Amendment number
231	DESIGN PULSE SENSOR H70	
232	INSTRUCTION SENSOR H70	
233	PROT.CAP PULSE SENSOR TM H70 n	
234	NO PULSES PULSE SENSOR TM H70 6 IMP/U	
235	ASSEMBLY POS PULSE SENSOR H70 1	
236	NOTE ASS. POS PULSE SENSOR H70 INSTALLATION DRAWING	
248	POSITION, OIL FILLER HOUSING LEFT+RIGHT	
249	NOTE ON OIL FILL IN OVERFLOW	
250	OIL CAPACITY, GEARBOX 15 dm3	
251	OIL FILL VARIANT EX WORKS	
252	OIL GRADE PERMISSIBLE ACC. TO TE-ML01	
253	OIL CLASS FIRST FILLING E	
254	CODING OUTER CONSERVATION KA1	
255	SCOPE OUTER CONSERVATION T	
256	CODING INNER CONSERVATION KI1	
257	CONSERVATION SPECIFICATION ZFN 916	
258	COLOR JET BLACK	
259	COLOUR CLASSIFICATION ACC. TO RAL 9005	
260	PAINTING, ZF STANDARD 915 W	
272	Alias ID	
273	MAN 81.32004-6315	

Assembly group overview

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Graphics	Pos.	Material number	Name	Quantit y	Amend. no.	Techn. Info.
068.01.23-1	110	1316.101.133	TRANSMISSION HOUSING	1		
068.01.40-1	118	1315.101.409	CONNECTING PARTS	1		
068.01.68-1	120	1316.101.992	TRANSMISSION HOUSING	1		
068.02.80-1	150	1315.102.808	INPUT SHAFT	1		
068.02.02-1	910	1316.102.060	INPUT SHAFT	1		
068.03.82-1	180	1316.103.800	COUNTERSHAFT	1		
068.03.01-1	920	1316.103.013	COUNTERSHAFT	1		
068.04.13-1	930	1316.104.052	MAIN SHAFT	1		
068.06.01-1	230	1316.106.008	SHIFT SYSTEM	1		
068.06.43-1	234	1315.106.422	CONNECTING PARTS	1		
068.06.80-1	238	1315.106.800	SHIFT SYSTEM	1		
068.07.84-1	292		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	1341.108.002	DETENT	1		
068.08.22-1	954	1341.171.403	END COVER	1		
068.08.02-1	960	1316.171.434	PNEUMATIC SERVO UNIT	1		
068.08.79-1	964	1341.171.813	CONNECTING PARTS	1		
068.09.03-1	934	1341.109.025	CONNECTING PARTS	1		
068.09.08-1	940	1341.109.409	CONNECTING PARTS	1		
068.10.89-1	296	1341.111.802	SELECTOR LEVER	1		
068.10.08-1	932	1341.111.002	SELECTOR LEVER	1		
068.12.25-1	920	1341.149.011	SET OF SPRINGS	1		
068.40.04-1	500	1316.112.014	GV-SHIFT SYSTEM	1		
068.40.43-1	502	1315.112.425	CONNECTING PARTS	1		
068.43.21-1	10	1315.131.047	COVER	1		
068.43.06-1	20	1315.131.050	RC HOUSING	1		
068.43.45-1	24	1315.131.401	CONNECTING PARTS	1		
068.43.40-1	30	1315.131.400	CLOSING COMPONENTS	1		
068.43.80-1	512	1315.131.805	RC HOUSING	1		
068.44.09-1	40	1316.132.015	PLANETARY DRIVE	1		
068.44.47-1	50	1316.132.421	PLANETARY DRIVE	1		

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Assembly group overview

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Graphics	Pos.	Material number	Name	Quantit y	Amend. no.	Techn. Info.
068.45.04-1	70	1316.133.008	SYNCHRONIZER	1		
068.45.40-1	80	1315.133.405	SYNCHRONIZER	1		
068.46.02-1	90	1316.134.021	GP SHIFT SYSTEM	1		
068.46.41-1	554	1315.134.409	CONNECTING PARTS	1		
068.57.12-1	390	1316.145.012	RANGE SELECTION	1		
068.75.01-1	900	1316.164.011	HOUSING	1		
068.75.80-1	902	1316.164.800	HOUSING	1		
068.76.01-1	930	1316.166.001	OUTPUT	1		
068.76.80-1	932	1316.166.800	OUTPUT	1		
068.77.01-1	940	1316.167.001	CONTROL UNIT	1		
068.79.01-1	910	1316.165.002	INPUT	1		
068.93.09	920	1315.168.021	CLUTCH RELEASE DEVICE	1		
073.R0.01-1	KIT	1272.298.934	SMALL COMP.SET	1		
068.R0.04-1	KIT	1316.298.037	SYNCHRONIZER SET	1		

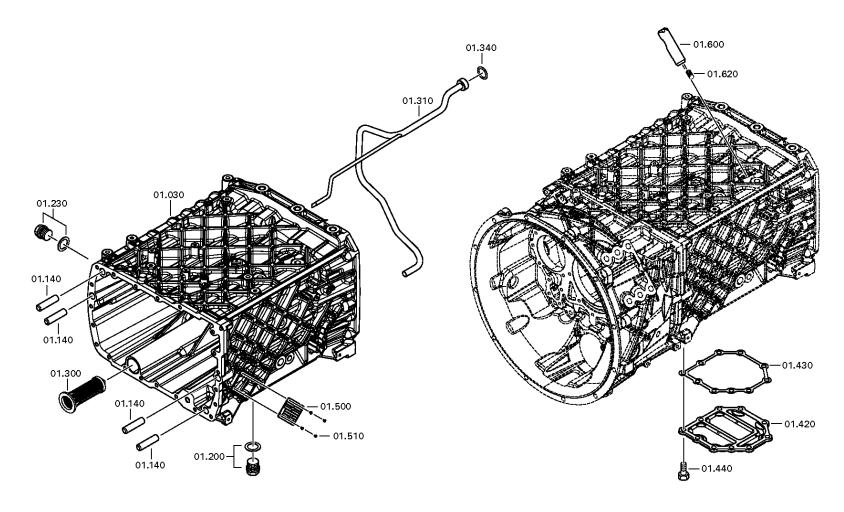
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Material number: 1343.006.041

Plant: 068.01.23-1

TRANSMISSION HOUSING





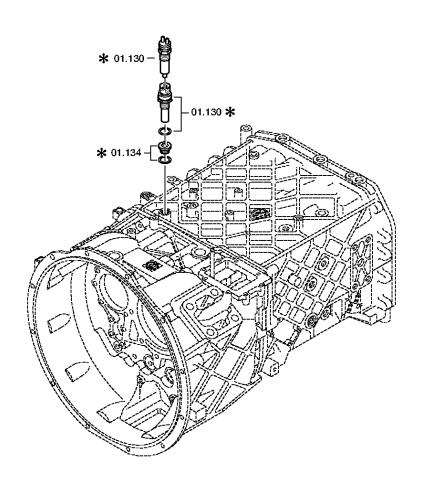
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Material number: 1343.006.041

Plant: 068.01.40-1

TRANSMISSION HOUSING





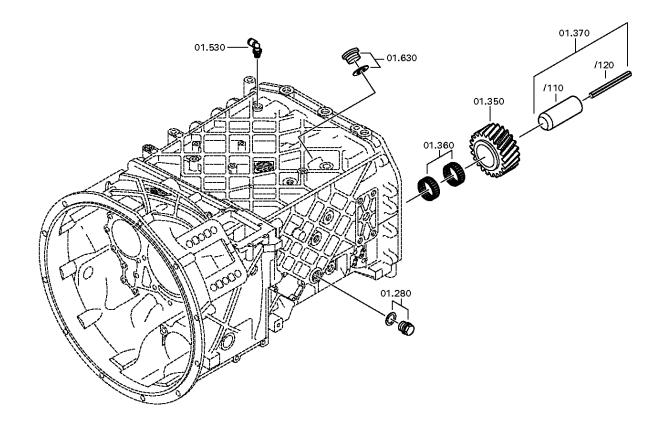
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Material number: 1343.006.041

Plant: 068.01.68-1

TRANSMISSION HOUSING



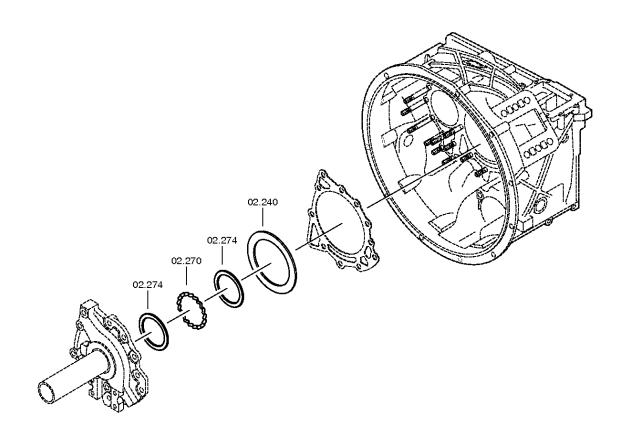


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Material number: 1343.006.041

Plant: 068.02.80-1 INPUT SHAFT



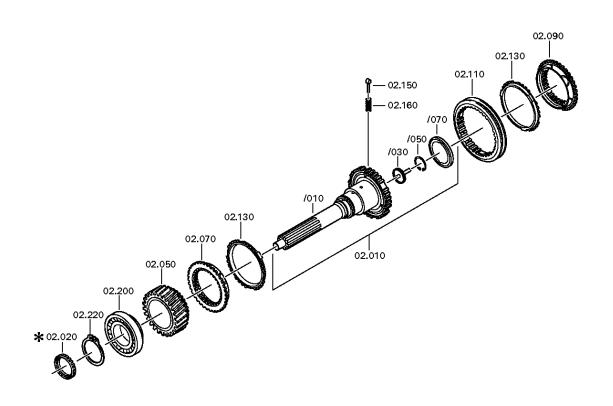


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Material number: 1343.006.041

Plant: 068.02.02-1 INPUT SHAFT



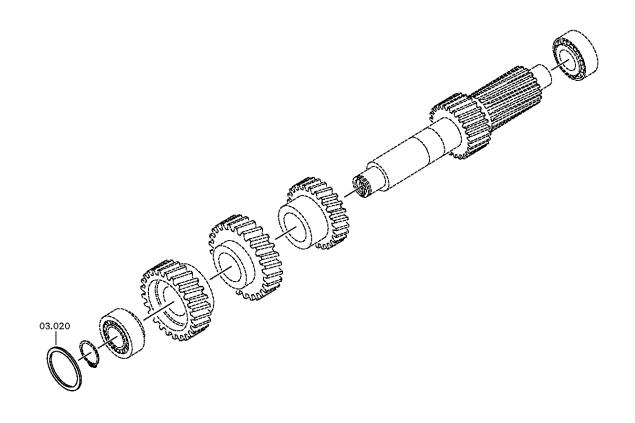


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Material number: 1343.006.041

Plant: 068.03.82-1 COUNTERSHAFT



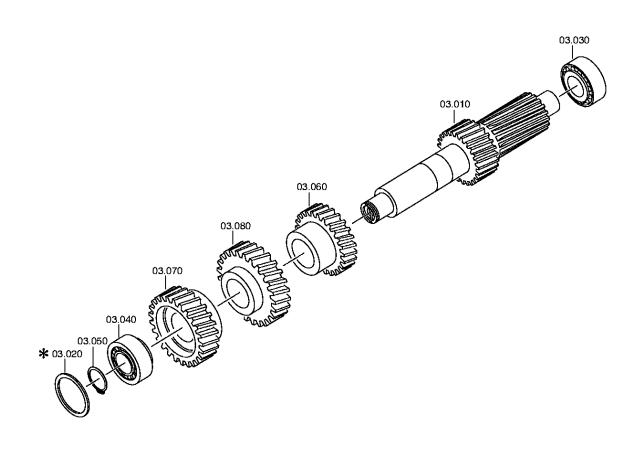


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Material number: 1343.006.041

Plant: 068.03.01-1 COUNTERSHAFT



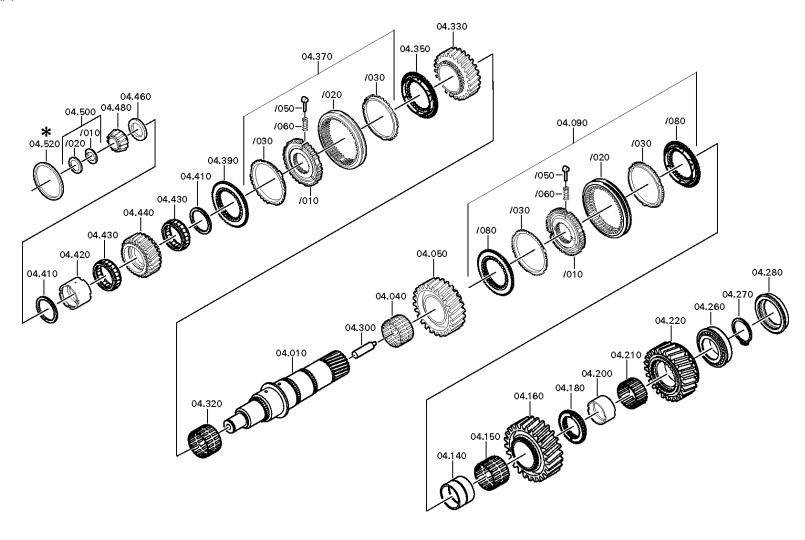


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Material number: 1343.006.041

Plant: 068.04.13-1 MAIN SHAFT



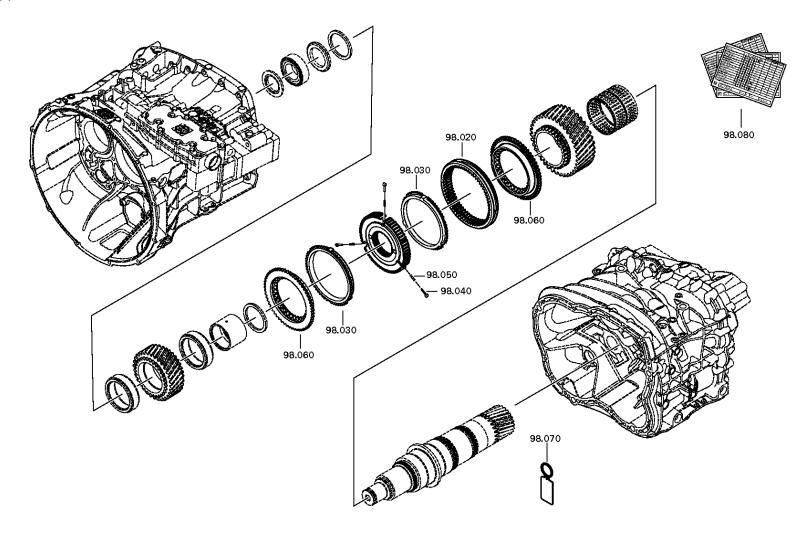


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Material number: 1343.006.041

Plant: 068.R0.04-1 MAIN SHAFT



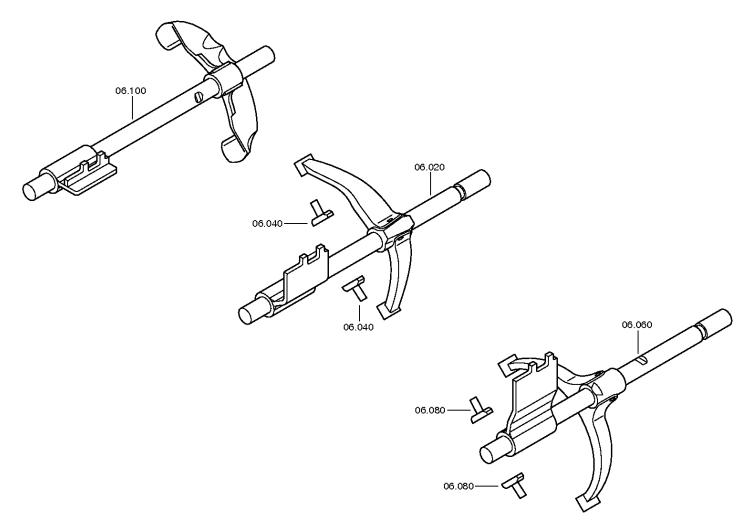


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Material number: 1343.006.041

Plant: 068.06.01-1 SHIFT SYSTEM



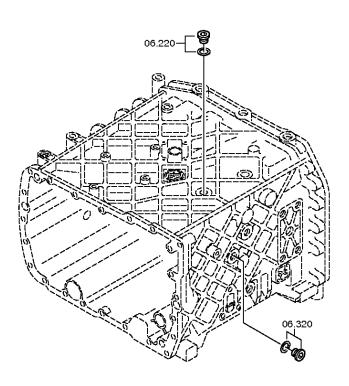


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Material number: 1343.006.041

Plant: 068.06.43-1 SHIFT SYSTEM



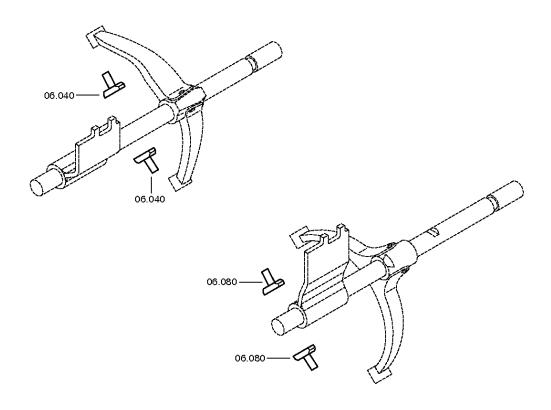


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Material number: 1343.006.041

Plant: 068.06.80-1 SHIFT SYSTEM



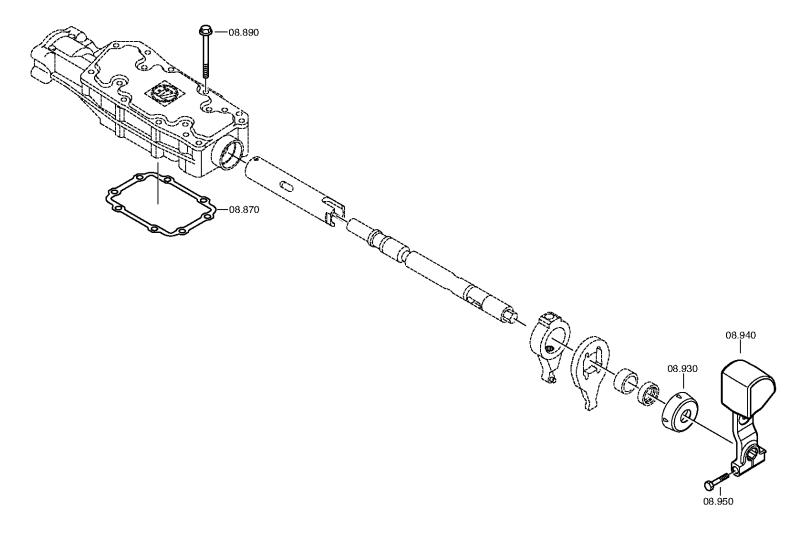


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Material number: 1343.006.041

Plant: 068.07.84-1 GEAR SHIFT HOUSING



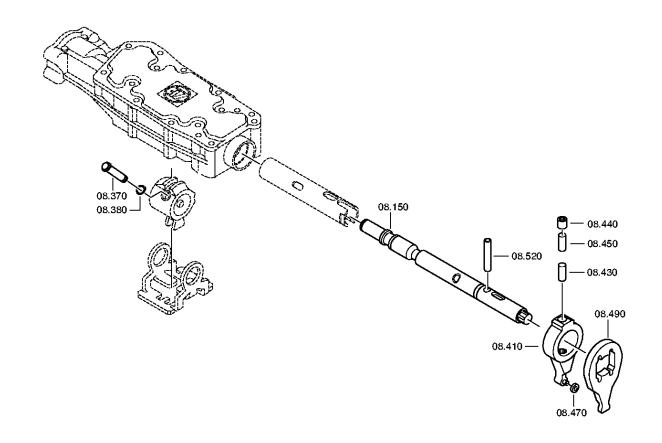


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Material number: 1343.006.041

Plant: 068.07.47-1 GEAR SHIFT HOUSING



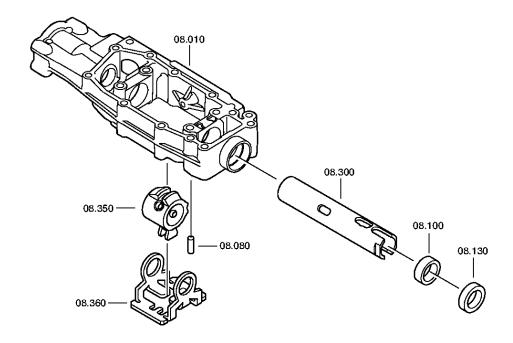


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Material number: 1343.006.041

Plant: 068.07.48-1 GEAR SHIFT HOUSING



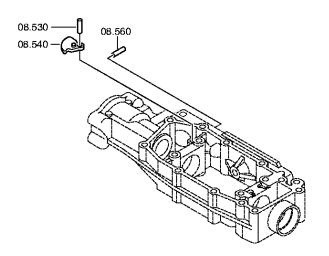


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Material number: 1343.006.041

Plant: 068.07.82-1 GEAR SHIFT HOUSING



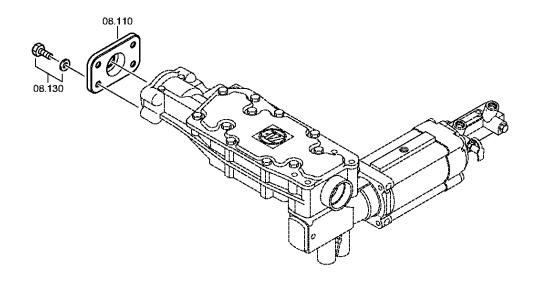


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Material number: 1343.006.041

Plant: 068.08.22-1 END COVER



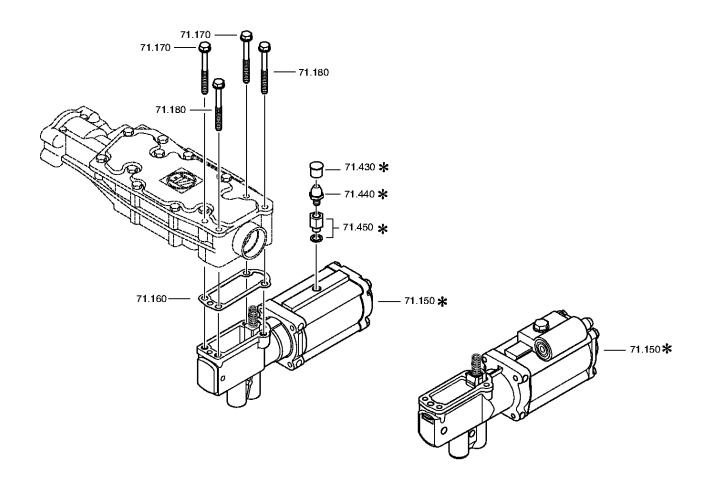


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Material number: 1343.006.041

Plant: 068.08.02-1 END COVER



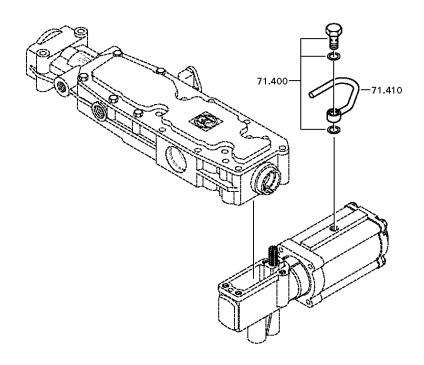


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Material number: 1343.006.041

Plant: 068.08.79-1 END COVER



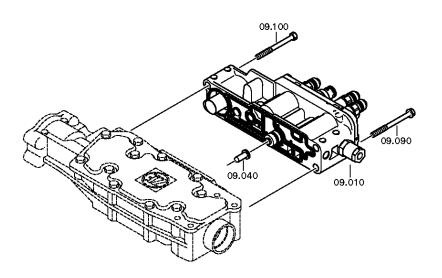


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Material number: 1343.006.041

Plant: 068.09.03-1 CONNECTING PARTS



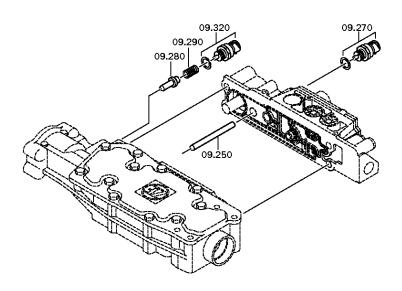


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Material number: 1343.006.041

Plant: 068.09.08-1 CONNECTING PARTS



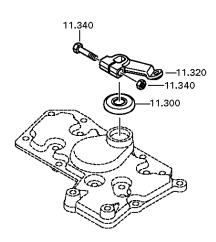


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Material number: 1343.006.041

Plant: 068.10.89-1 SELECTOR LEVER



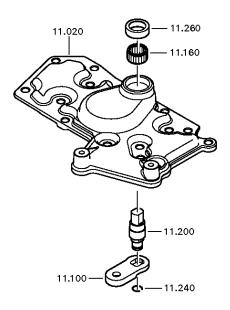


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Material number: 1343.006.041

Plant: 068.10.08-1 SELECTOR LEVER





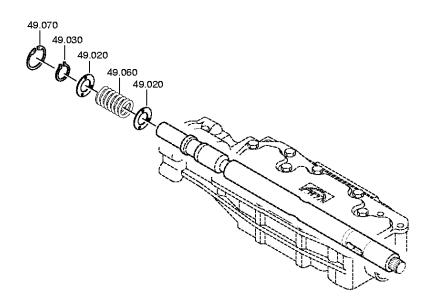
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Material number: 1343.006.041

Plant: 068.12.25-1

Material-assembly-group-no: 1341.149.011



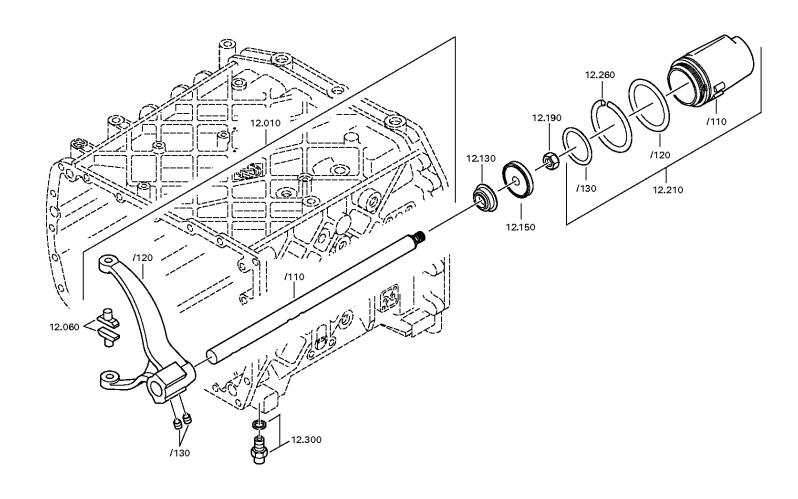


Page 1 from 2

Material number: 1343.006.041

Plant: 068.40.04-1 GV-SHIFT SYSTEM



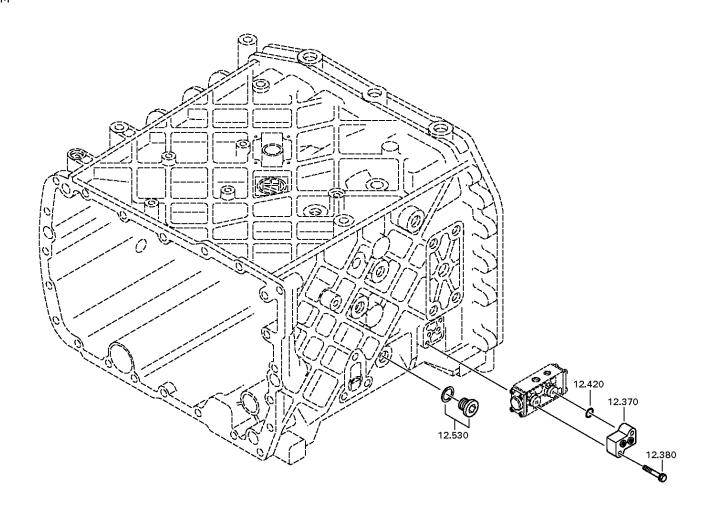


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Material number: 1343.006.041

Plant: 068.40.43-1 GV-SHIFT SYSTEM



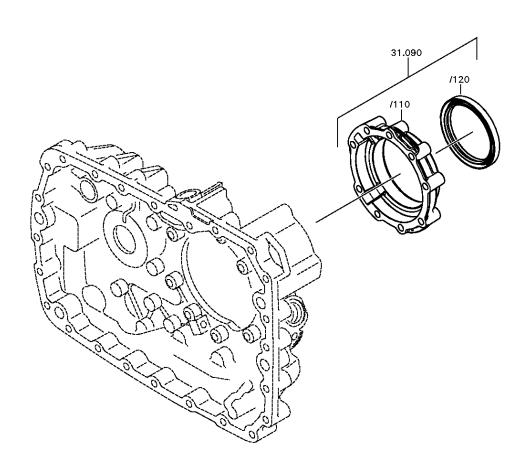


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Material number: 1343.006.041

Plant: 068.43.21-1



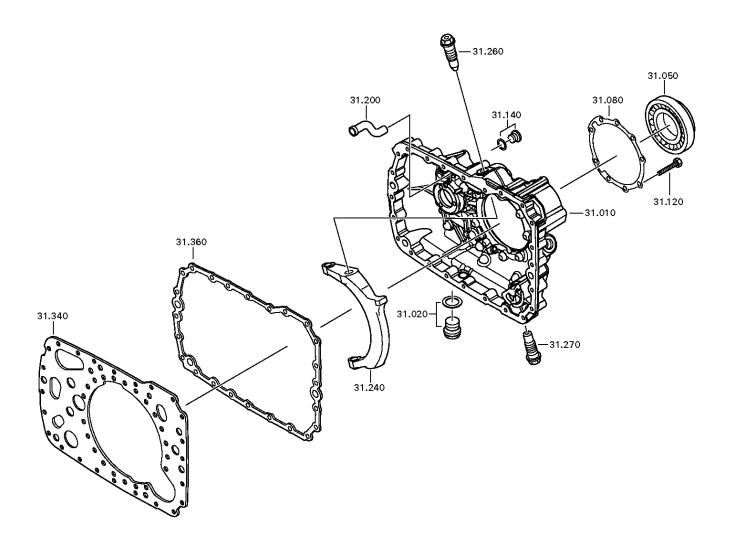


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Material number: 1343.006.041

Plant: 068.43.06-1



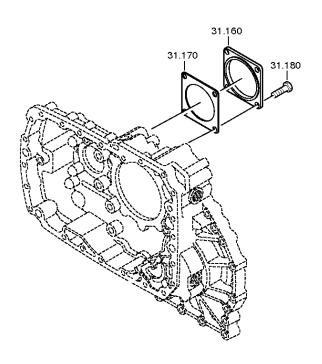


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Material number: 1343.006.041

Plant: 068.43.40-1



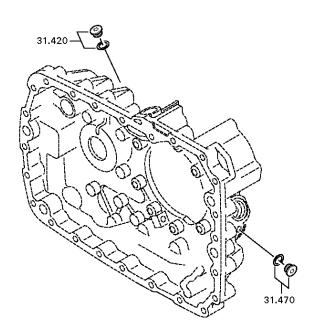


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Material number: 1343.006.041

Plant: 068.43.45-1



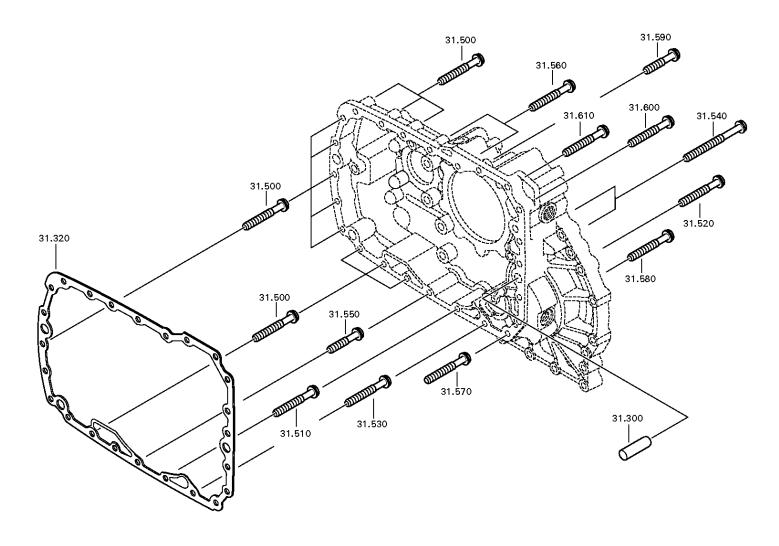


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Material number: 1343.006.041

Plant: 068.43.80-1



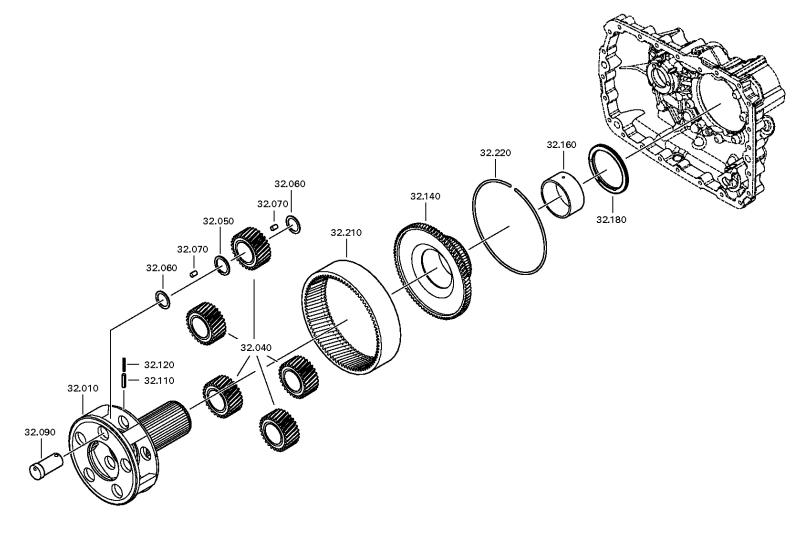


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Material number: 1343.006.041

Plant: 068.44.09-1 PLANETARY DRIVE





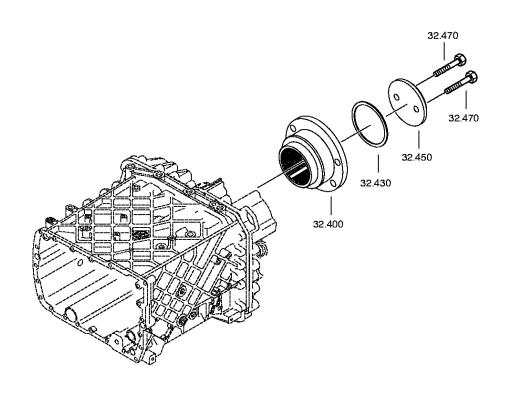
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Material number: 1343.006.041

Plant: 068.44.47-1 PLANETARY DRIVE



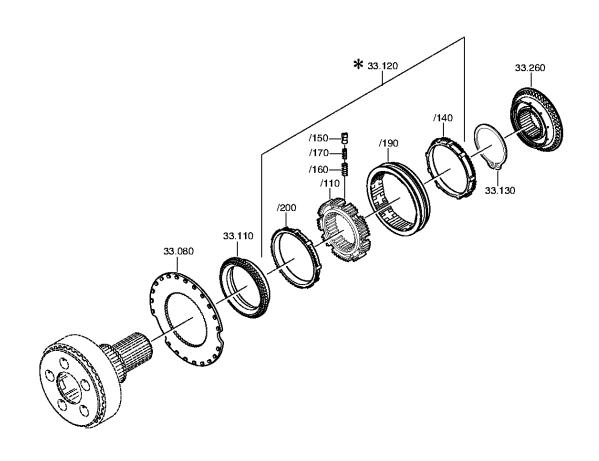


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Material number: 1343.006.041

Plant: 068.45.04-1 SYNCHRONIZER



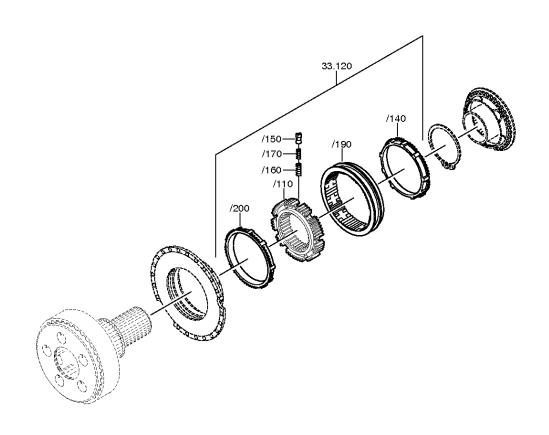


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Material number: 1343.006.041

Plant: 068.45.40-1 SYNCHRONIZER



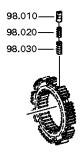


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Material number: 1343.006.041

Plant: 073.R0.01-1 SYNCHRONIZER



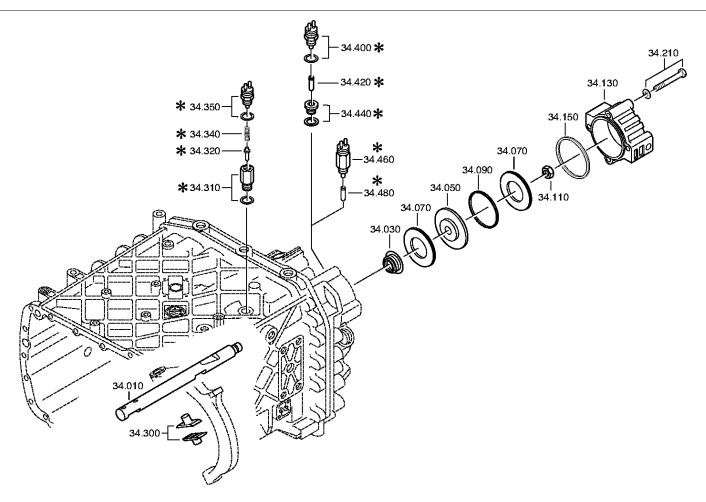


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Material number: 1343.006.041

Plant: 068.46.02-1 GP SHIFT SYSTEM



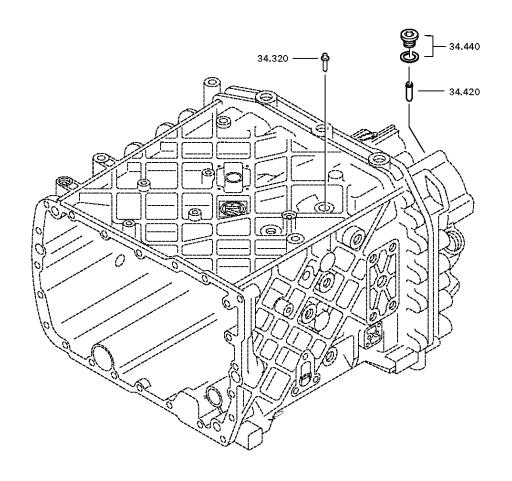


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Material number: 1343.006.041

Plant: 068.46.41-1 GP SHIFT SYSTEM





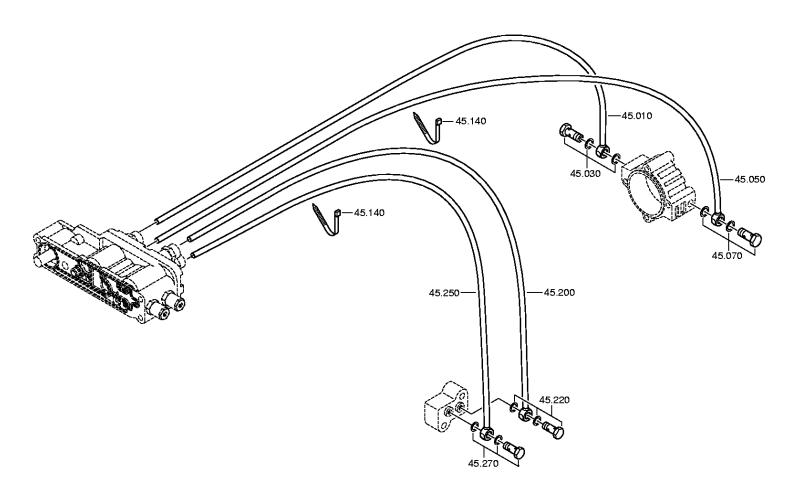
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Material number: 1343.006.041

Plant: 068.57.12-1

Material-assembly-group-no: 1316.145.012





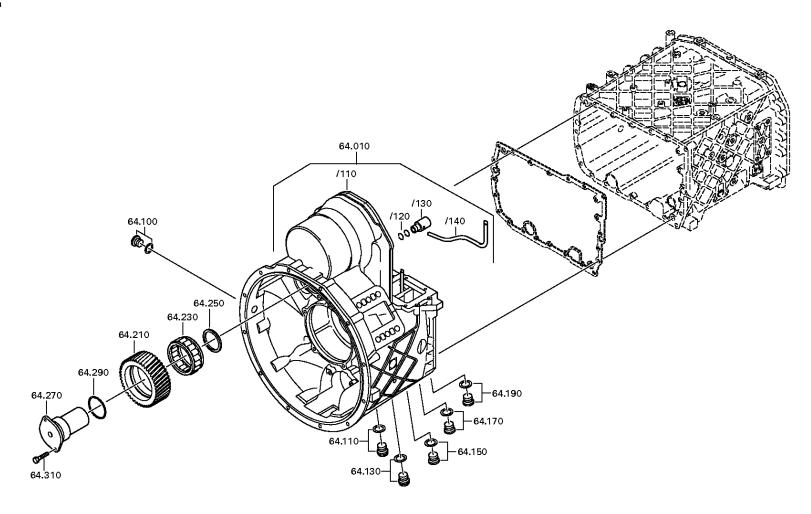
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Material number: 1343.006.041

Plant: 068.75.01-1

HOUSING





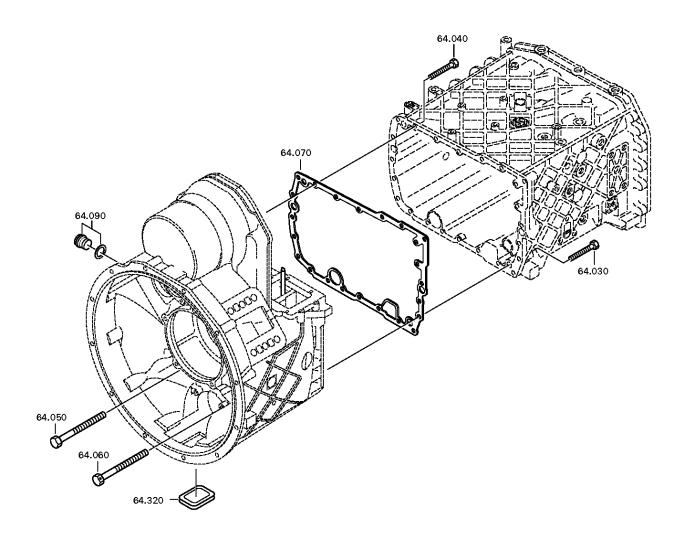
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Material number: 1343.006.041

Plant: 068.75.80-1

HOUSING





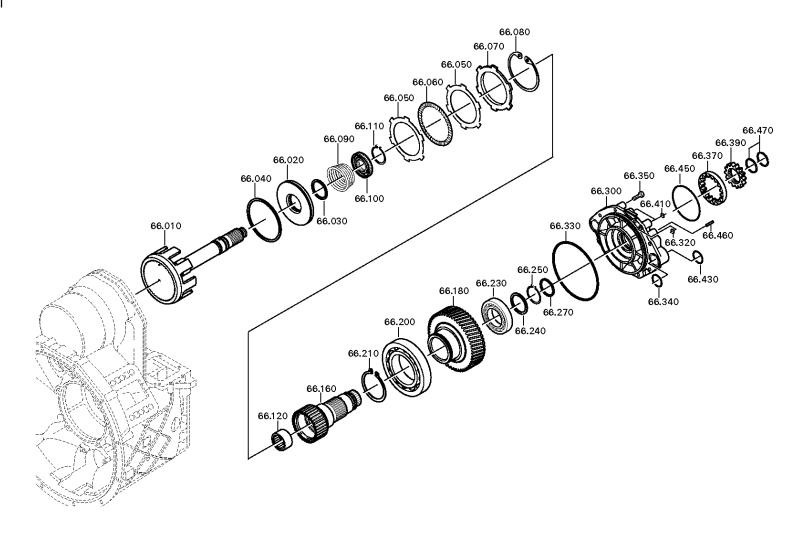
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Material number: 1343.006.041

Plant: 068.76.01-1

OUTPUT





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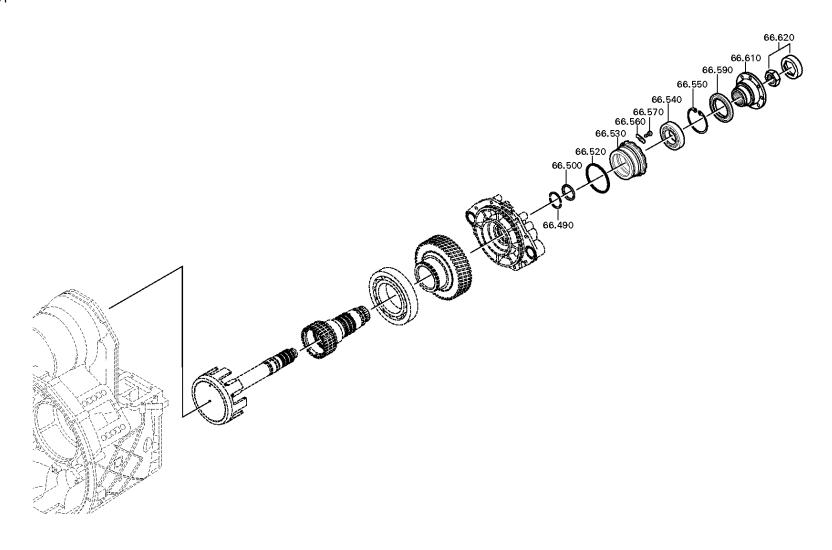
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Material number: 1343.006.041

Plant: 068.76.80-1

OUTPUT





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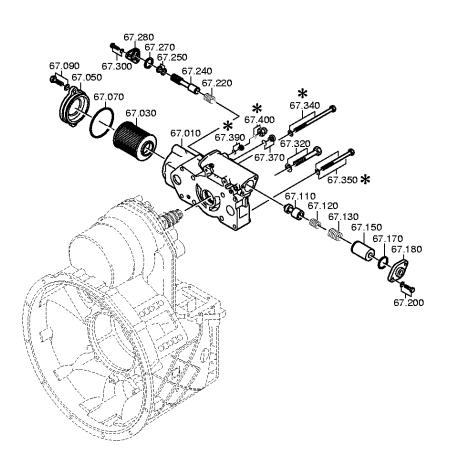
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Material number: 1343.006.041

Plant: 068.77.01-1

Material-assembly-group-no: 1316.167.001





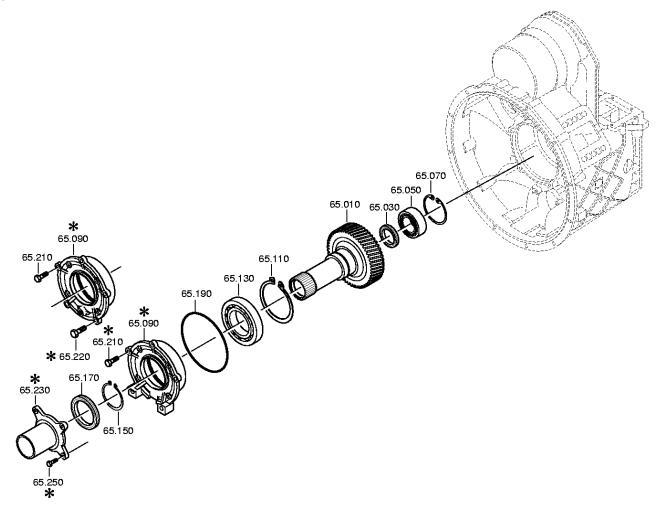
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Material number: 1343.006.041

Plant: 068.79.01-1

Material-assembly-group-no: 1316.165.002





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Material number: 1343.006.041

Plant: 068.93.09

Material-assembly-group-no: 1315.168.021



