



Spare Parts Catalog

16 S 2530 TO

Material number: 1356.002.117

Current date: 14.09.2020

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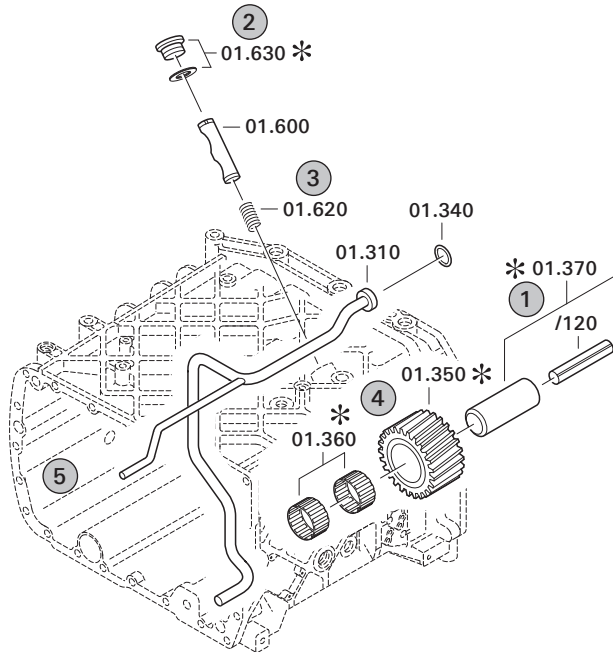
zuständiges Werk:
Friedrichshafen

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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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	INSTALLATION POS TRANSMISSION HORIZONTAL LEFT	
035	TRANSMISSION ATTACHMENT FLANGE-MOUNTED	
036	CO2-FAMILY XXX	



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Pos.	Information	Amendment number
037	CO2-CERTIFICATE XXX	
038	COMPANY NAME ON TYPE PLATE ZF-CUSTOMER	
043	ATTACHMENT VARIANT, INTARDER	
044	NUMBER OF GEARS 16	
045	RATIO, BOTTOM GEAR 13.8	
046	RATIO, TOP GEAR .84	
047	SET OF RATIOS SG	
048	NOTE ON TYPE OF GEAR SHIFT SYS TURNING SHAFT	
049	POSITION, GEAR SHIFT SYSTEM HORIZONTAL LEFT	
050	DESIGN, SHIFT PATTERN UEH	
051	VERSION SHIFT SUPPORT GATE DEPENDENT SERVO	
052	VERSION ACTUATION SHIFT SYSTEM CONTROL CABLE	
053	DESIGN, SHIFT SYSTEM E13	
054	DESIGN PSE PSE5	
056	DESIGN, VALVE BLOCK E13-MODUL	
063	SELECTION PATTERN VARIANT GEAR SHIFT PATTERN 1	
064	VERSION OF SYNCHRONIZER 1 1+2 GANG BK-SYNCHR.CARBON	
065	VERSION OF SYNCHRONIZER 2 3+4 GANG BK-SYNCHR.CARBON	
066	REFERENCE LENGTH INPUT SHAFT 109 mm	
067	STANDARD TYPE INPUT SHAFT SAE	
068	NUMBER OF WEDGES INPUT SHAFT 10	
069	VERSION OF INPUT SHAFT FORM C	
070	NOMINAL DIAMETER INPUT SHAFT 2 in	
071	DIAMETER, JOURNAL, INPUT SHAFT 25 mm	
072	TYPE FIT SPIGOTS INPUT SHAFT F7	
073	VER. BEAR. SPIGOTS INPUT SHAFT TAPER ROLLER	
076	DESIGN,CONN., CLUTCH HOUSING SAE 1	
077	CENTR.DIA,HSG/ENGINE CONNECT. 511.175 mm	
078	NUMBER OF BORES,ENGINE CONN. 12	
079	BORE DIA, ENGINE CONNECTION 13 mm	
080	DESIGN, RELEASE SHAFT	
081	WIDTH ACROSS FLATS,RELEAS.FORK 116 mm	
084	REF.LENGTH,RELEASE BEAR.FLAN -24.2 mm	



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Pos.	Information	Amendment number
085	DIAMETER, RELEASE FLANGE 62.62 mm	
086	DESIGN RELEASE CYLINDER WITHOUT GROOVE	
087	OUTER DIA. OUTPUT FLANGE RA 180 mm	
088	NO.OF BORES OUTPUT FLANGE HA1 4	
089	NO.OF SCREWS OUTPUT FLANGE RA	
090	BORE DIA. OUTPUT FLANGE RA 15.000 mm	
091	DIA. THREAD OUTPUT FL. SCR. RA	
092	THREAD PITCH OUTPUT FL SCR. RA mm	
093	THREAD LENGTH OUTP.FL SCREW RA mm	
094	CORROS.PROTECTION, OUTP.FLANGE COATED	
095	DIMENSION SHIFT TURRET DIST. 300 mm	
096	MEAS. LOC. SHIFT TURRET DIST. SHIFT LEVER-LOCATION	
097	SELECTOR LEVER y	
098	RADIUS SELECTOR LEVER 69 mm	
099	SELECTOR LEVER POSITION B	
100	DESIGN OFFSET SELECTOR LEVER OUTSIDE	
101	LENGTH OFFSET SELECTOR LEVER 3.6 mm	
102	SHIFT LEVER y	
103	RADIUS 1 SHIFT LEVER 57 mm	
106	SHIFT LEVER CONNECTION HEXAGON	
107	DESIGN, OFFSET, SHIFT LEVER OUTSIDE	
109	LEVER POSITION SHIFTING OUTPUT A	
113	SPRING ARRANGEMENT Q4	
114	SPRING FORCE DETENT PLUNGER RG 117 N	
118	SELECTOR SPRING FORCE, INSIDE 40 N	
125	SWITCH, REVERSE GEAR y	
126	DESIGN, RG (REV.GEAR) SWITCH CLOSING	
128	DESIGN, CONNECTION, RG SWITCH DIN BAYONET	
129	CODE SWITCH RG A2	
130	PROT.CAP SWITCH, REVERSE GEAR y	
131	SWITCH, NEUTRAL GEAR y	
132	DESIGN,NG(NEUTRAL GEAR)SWITCH OPENING SWITCH	
134	DESIGN, CONNECTION, NG SWITCH DIN BAYONET	



Pos.	Information	Amendment number
135	CODE SWITCH NG A1	
136	PROT.CAP SWITCH, NEUTRAL GEAR y	
152	SWITCH GP	
153	DESIGN, GP SWITCH	
154	DESIGN, CONNECTION, GP SWITCH	
155	CODE SWITCH GP	
156	PROTECTING CAP GP SWITCH	
157	SWITCH GP-END POSITION y	
158	DESIGN SWITCH GP-END POSITION OPENING SWITCH	
159	DESIGN CONNECT. SWITCH GP-END POS. DIN BAYONET	
160	CODE SWITCH GP-END POSITION A1	
161	PROTECTING CAP GP-END POSITION y	
177	ATTACHM.POS.HEAT EXCHANGER IN FRONT RIGHT	
178	DES.CONN.HEAT EXCHANGER PREPARED	
179	VER. TRANSMISSION VENTILATION PLUG CONNECTION 90 DEGREE	
181	POS.TRANSMISSION VENTILATION IN FRONT	
182	PULSE SENSOR INPUT WITH	
183	PROT.CAP PULSE SENSOR INPUT y	
184	DES.CONN.PULSE SENSOR INPUT DIN BAYONET	
185	DESIGN PULSE SENSOR INPUT INDUKTIVE	
186	PULSE SENSOR TRANSMISSION PREPARED	
187	PULSE RATE PULSE SENS GEARBOX 6.000 IMP/U	
191	PULSE SENSOR INTARDER	
192	PULSE RATE PULSE SENS INTARDER IMP/U	
196	OIL CAPACITY, GEARBOX 15.500 dm3	
197	OIL FILL VARIANT EX WORKS	
198	OIL GRADE PERMISSIBLE ACC. TO TE-ML01	
199	OIL CLASS FIRST FILLING E	
200	CODING OUTER CONSERVATION KA1	
201	SCOPE OUTER CONSERVATION T	
202	CODING INNER CONSERVATION KI1	
203	CONSERVATION SPECIFICATION ZFN 916	
204	COLOR JET BLACK	

Technical Cover

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Pos.	Information	Amendment number
205	COLOUR CLASSIFICATION ACC. TO RAL 9005	
206	PAINTING, ZF STANDARD 915 W	
207	INFO TO PAINTING	

Assembly group overview

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Graphics	Pos.	Material number	Name	Quantity	Amend. no.	Techn. Info.
161.01.07-1	110	1356.101.009	TRANSMISSION HOUSING	1		
161.01.82-1	180	1325.101.820	CLUTCH HOUSING	1		
161.02.03-1	10	1356.102.004	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	1316.103.013	COUNTERSHAFT	1		
161.04.13-1	30	1356.104.006	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		
068.07.84-1	460	1341.108.806	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		
062.08.30-1	954	1316.171.403	END COVER	1		
068.08.02-1	960	1316.171.434	PNEUMATIC SERVO UNIT	1		
161.09.20-1	934	1325.109.011	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	1341.149.011	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		
161.40.84-1	340	1325.112.814	GV-SHIFT SYSTEM	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		
161.44.40-1	60	1325.132.405	OUTPUT FLANGE	1		
161.45.01-1	20	1325.133.004	SYNCHRONIZER	1		
161.46.01-1	30	1325.134.006	GP SHIFT SYSTEM	1		

Assembly group overview

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Graphics	Pos.	Material number	Name	Quantity	Amend. no.	Techn. Info.
161.46.45-1	400	1325.134.407	SWITCH	1		
161.57.06-1	510	1325.145.002	RANGE SELECTION	1		
161.70.11-1	480	1356.170.007	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.R0.04-1	KIT	1316.298.037	SYNCHRONIZER SET	1		

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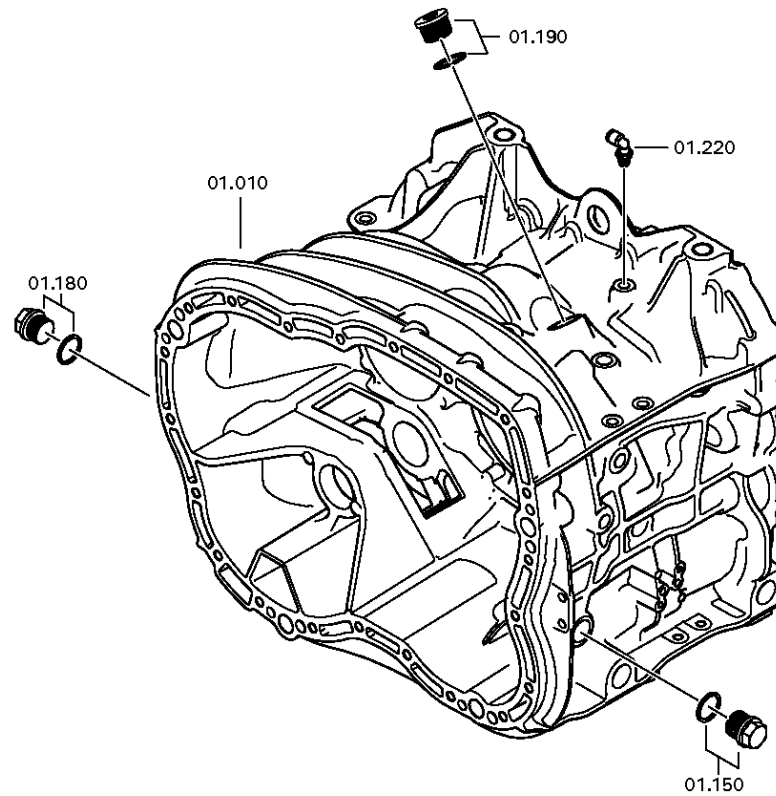
Material number: 1356.002.117

Plant: 161.01.07-1

TRANSMISSION HOUSING



16 S 2530 TO /
TRANSMISSION HOUSING



Plant

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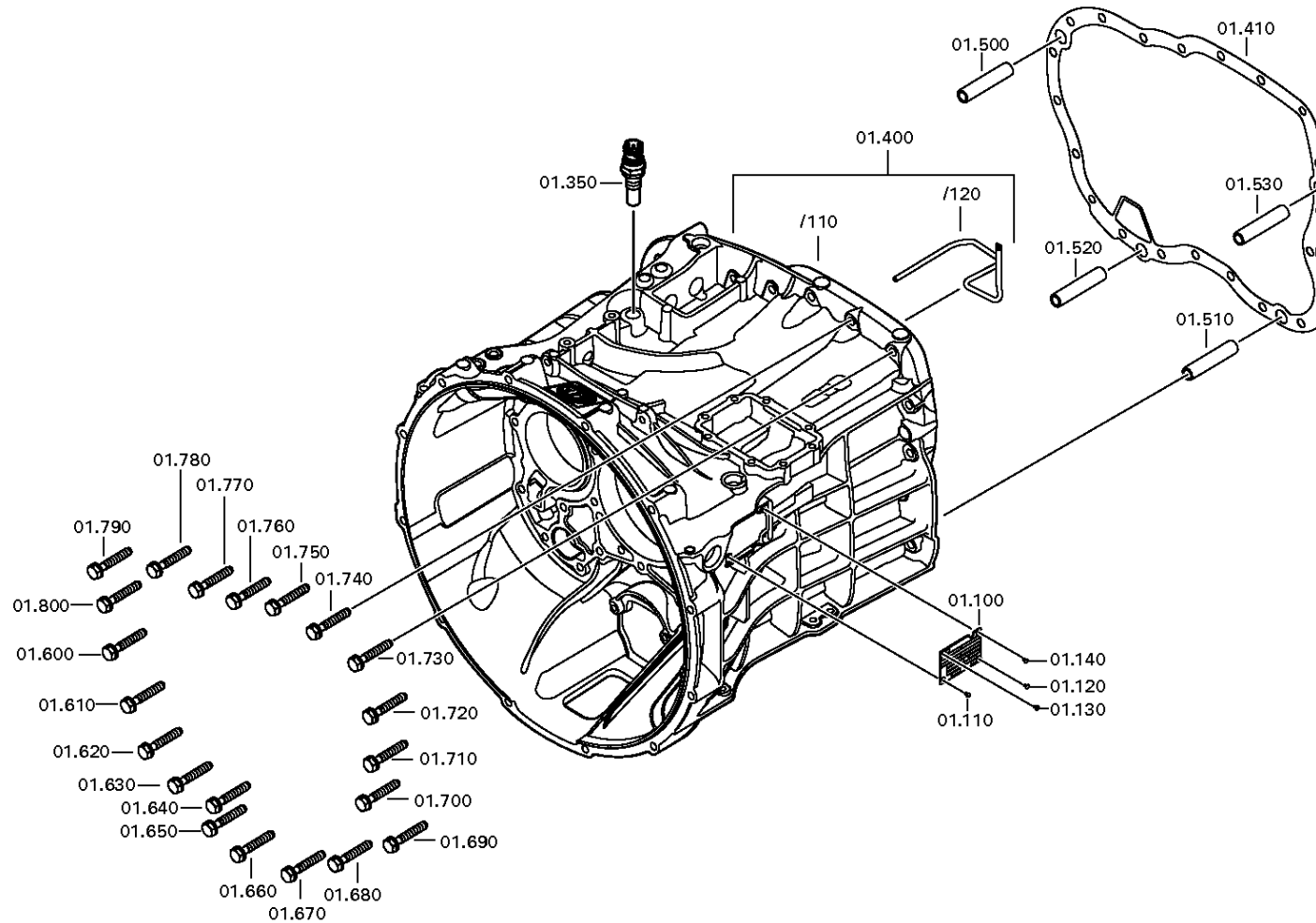
Material number: 1356.002.117

Plant: 161.01.82-1

TRANSMISSION HOUSING



16 S 2530 TO /
TRANSMISSION HOUSING



Plant

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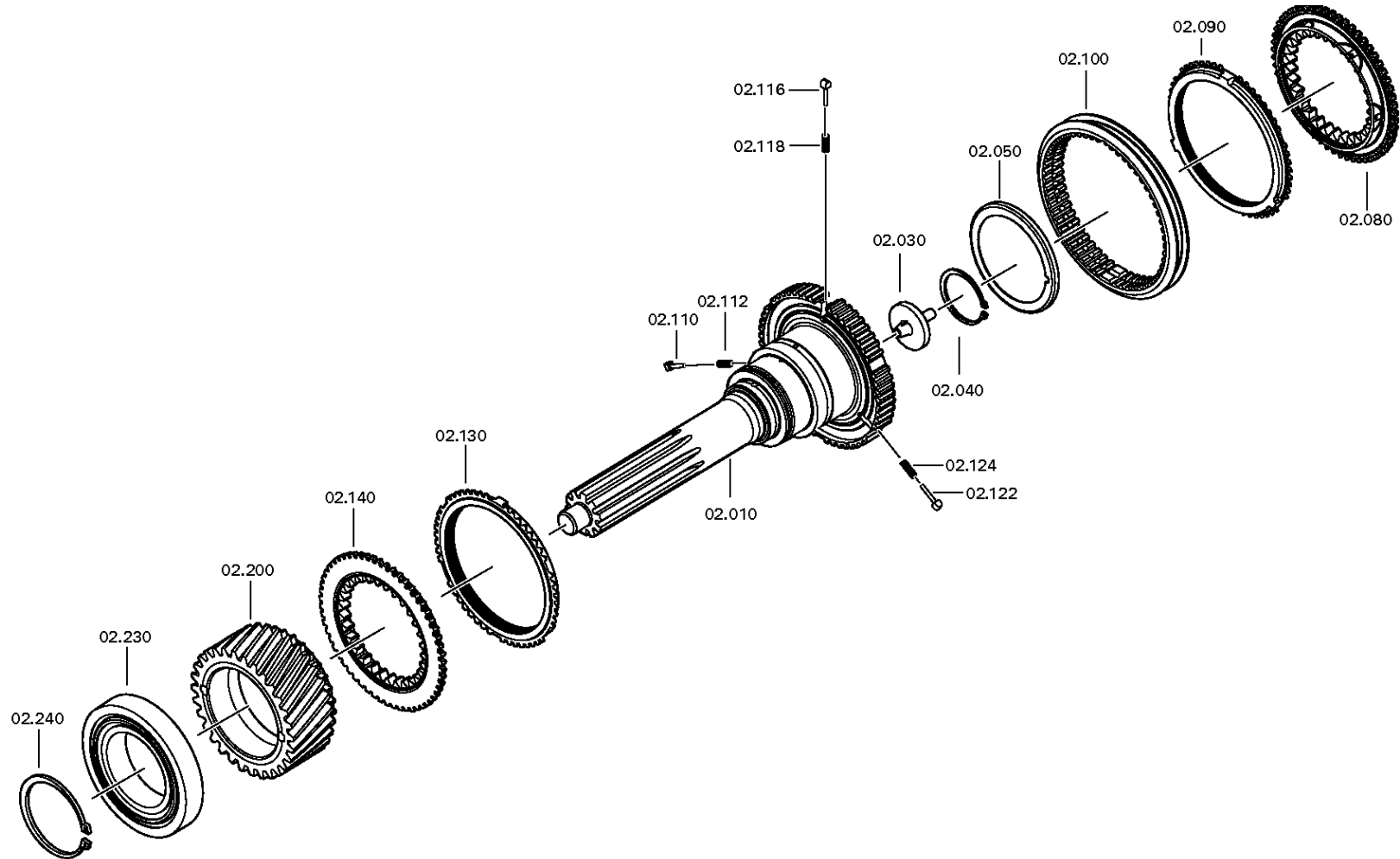
Material number: 1356.002.117

Plant: 161.02.03-1

INPUT SHAFT



16 S 2530 TO /
INPUT SHAFT



Plant

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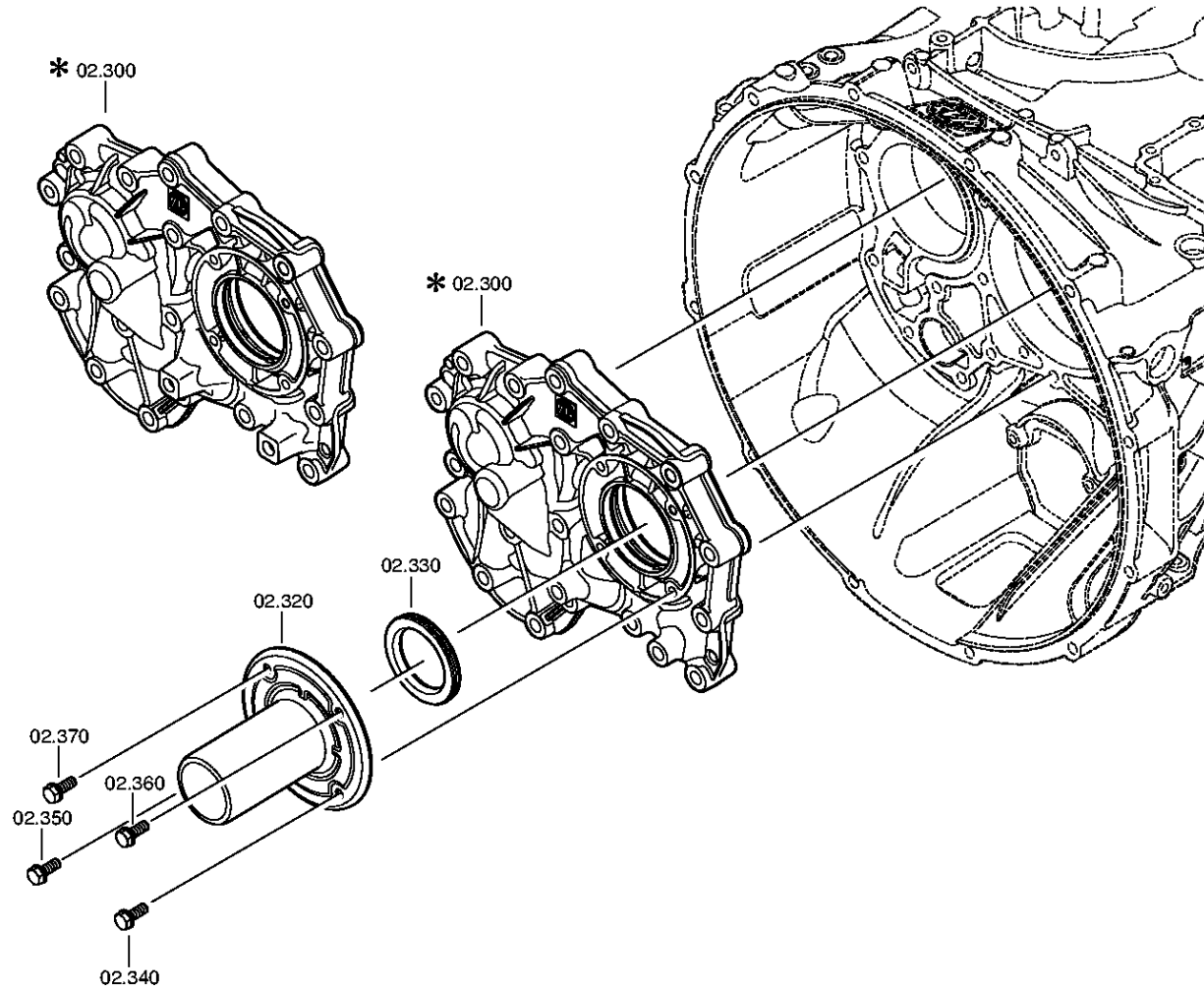
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Plant: 161.02.01-1

INPUT SHAFT



16 S 2530 TO /
INPUT SHAFT



Plant

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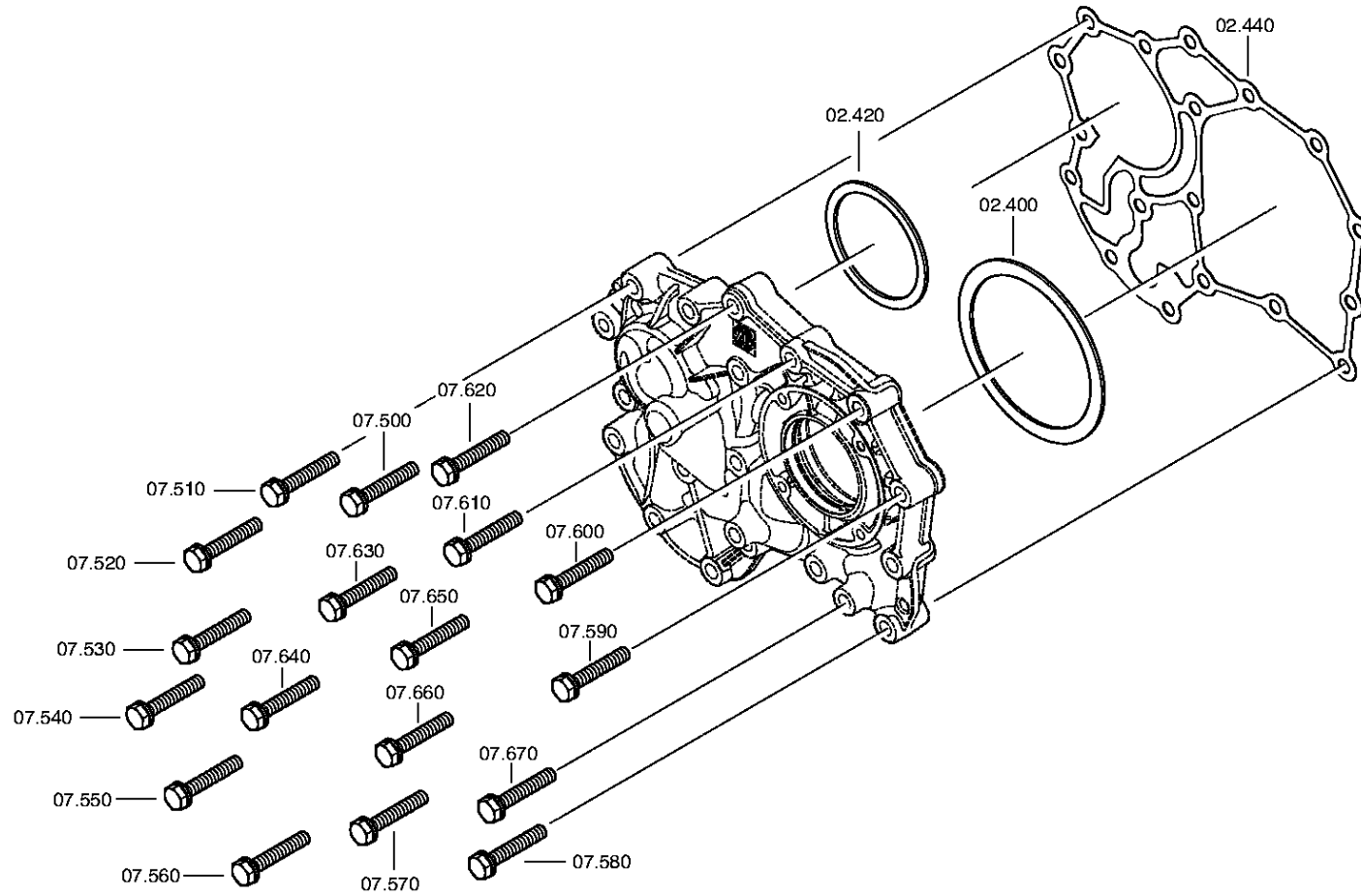
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Plant: 161.02.80-1

INPUT SHAFT



16 S 2530 TO /
INPUT SHAFT



Plant

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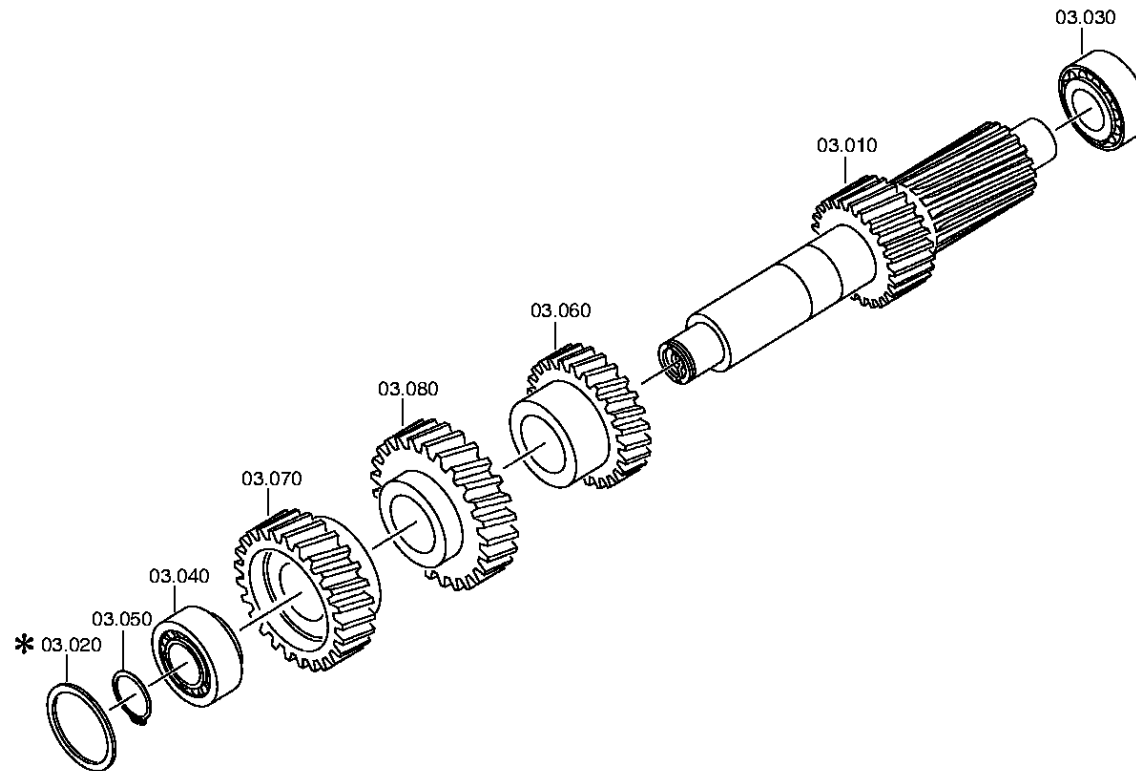
Material number: 1356.002.117

Plant: 068.03.01-1

Material-assembly-group-no: 1316.103.013



16 S 2530 TO /
COUNTERSHAFT



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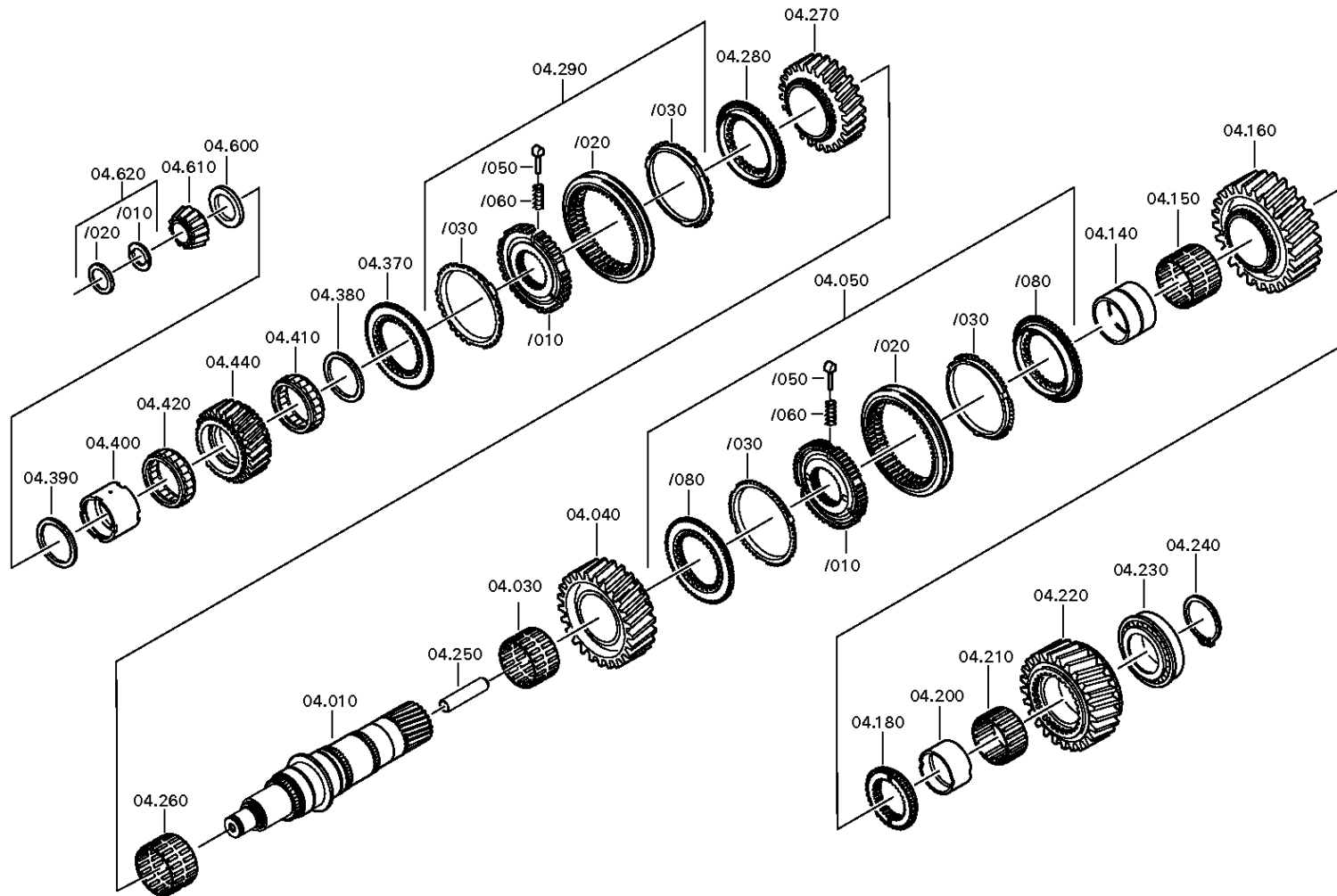
Material number: 1356.002.117

Plant: 161.04.13-1

MAIN SHAFT



16 S 2530 TO /
MAIN SHAFT



Plant

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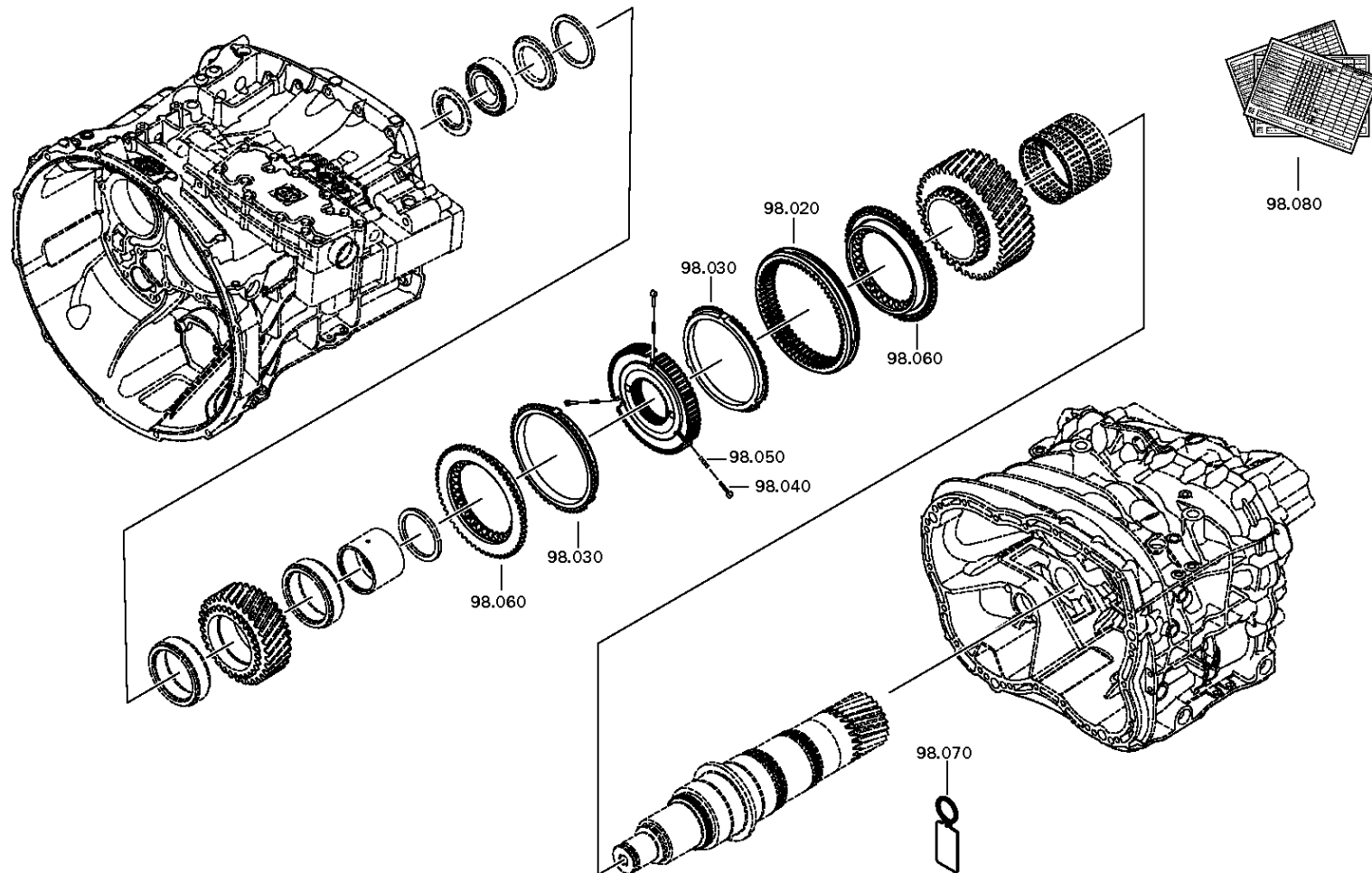
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Plant: 068.R0.04-1

MAIN SHAFT



16 S 2530 TO /
MAIN SHAFT



Plant

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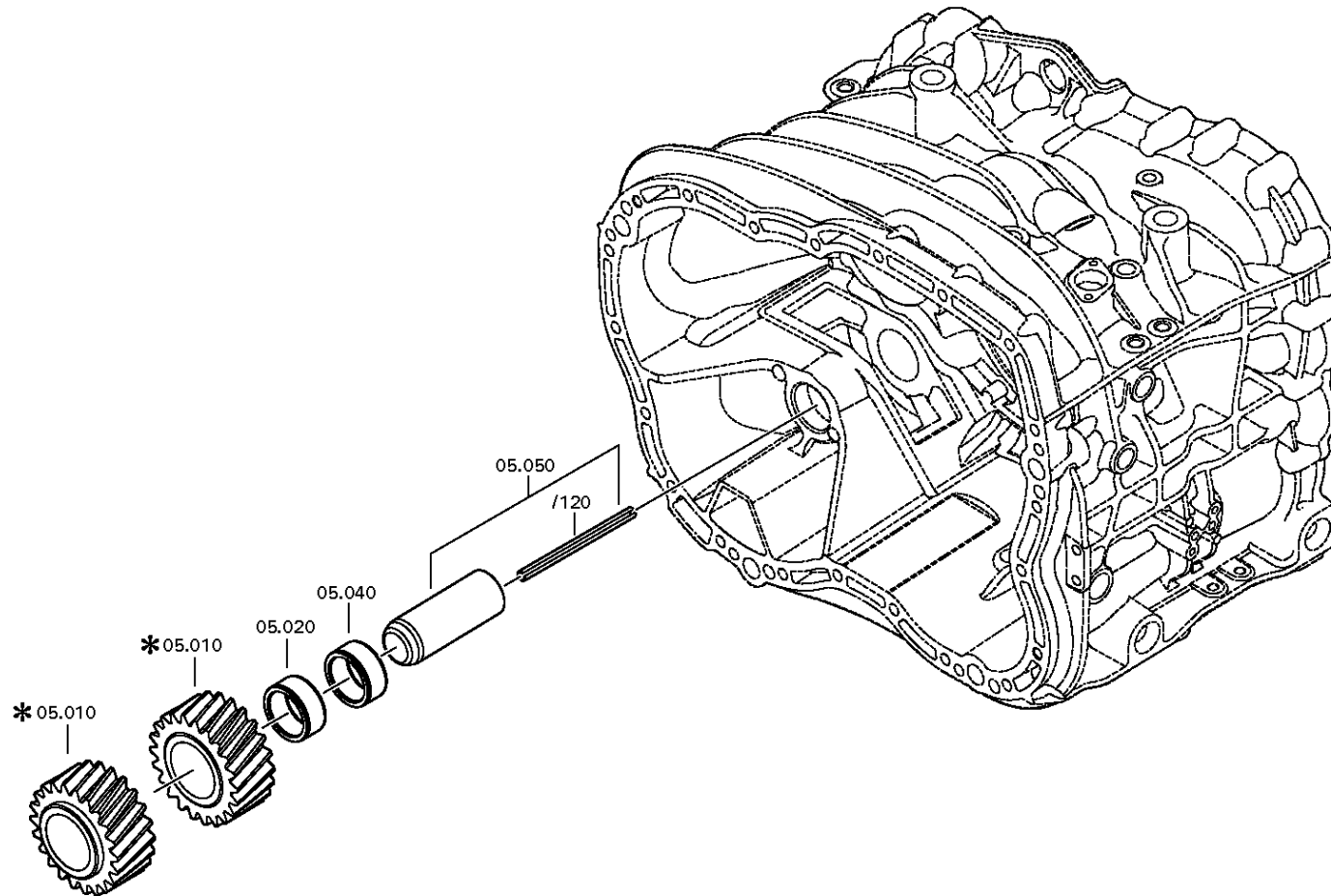
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Plant: 161.05.01-1

Material-assembly-group-no: 1325.105.001



16 S 2530 TO /
RETURN



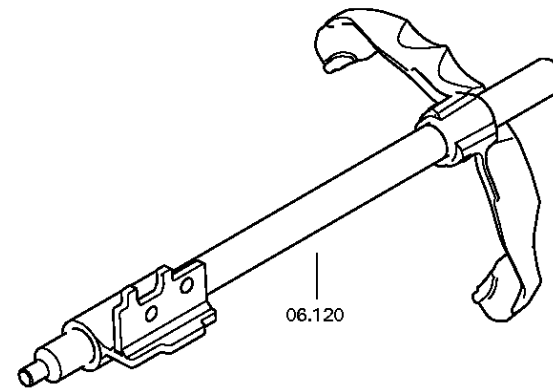
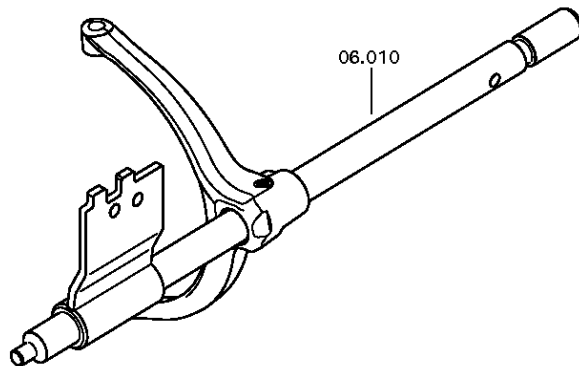
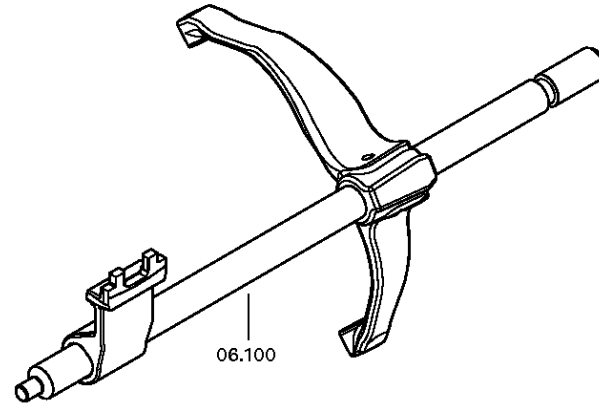
Plant

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Material number: 1356.002.117
Plant: 161.06.04-1
TRANSMISSION SHIFT SYSTEM



16 S 2530 TO /
TRANSMISSION SHIFT SYSTEM



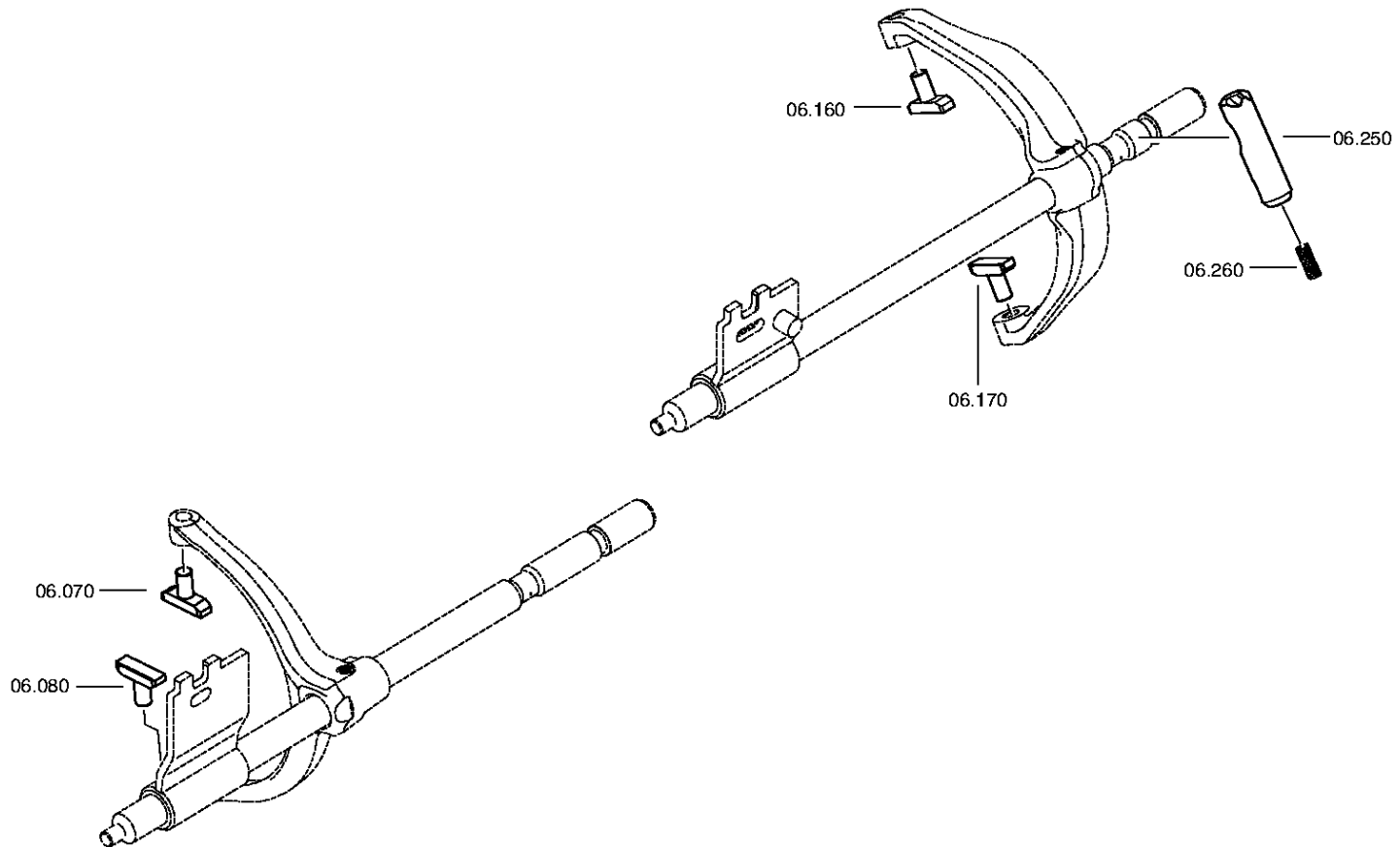
Plant

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Material number: 1356.002.117
Plant: 161.06.02-1
TRANSMISSION SHIFT SYSTEM



16 S 2530 TO /
TRANSMISSION SHIFT SYSTEM



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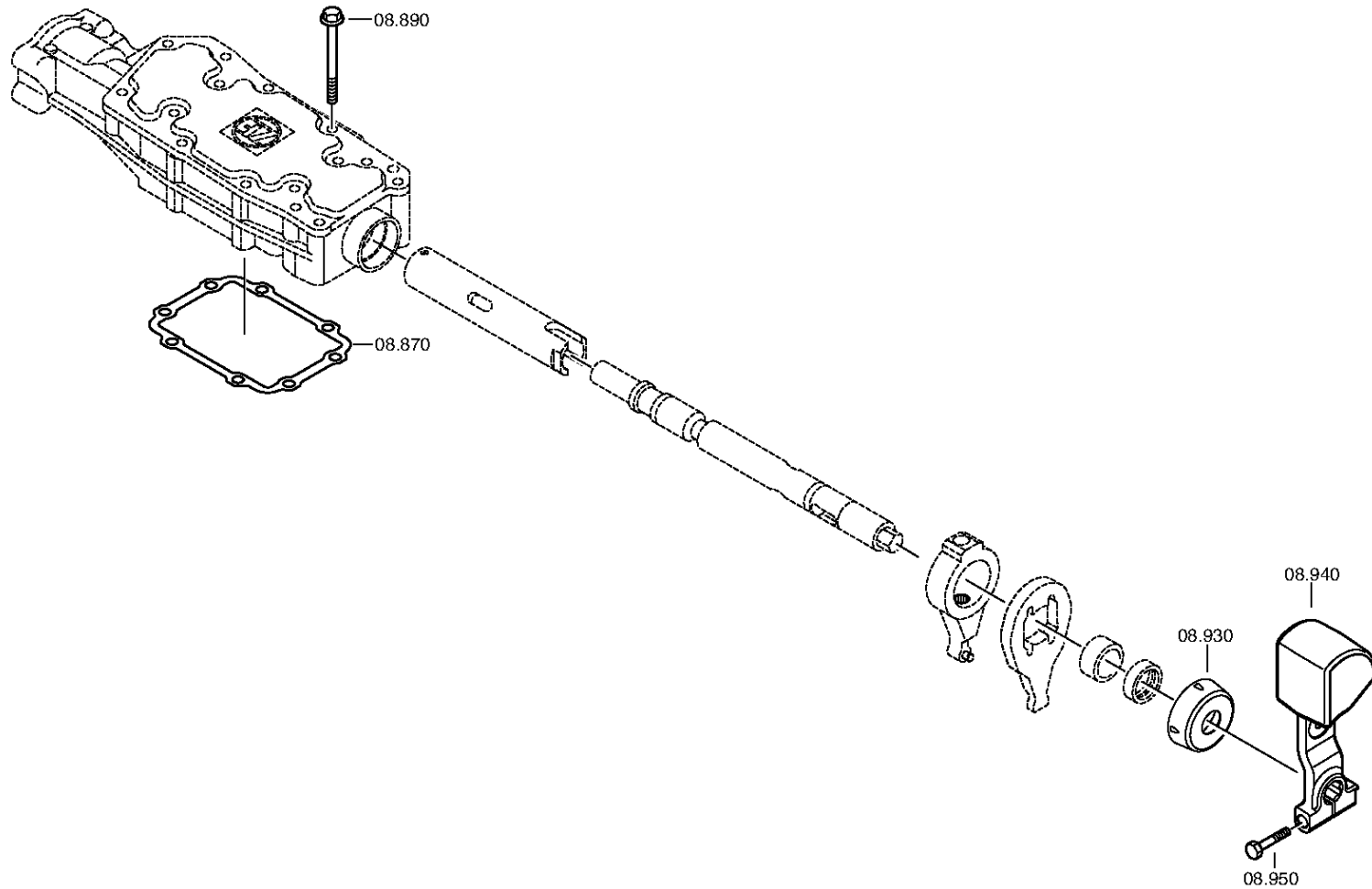
Material number: 1356.002.117

Plant: 068.07.84-1

GEAR SHIFT HOUSING



16 S 2530 TO /
GEAR SHIFT HOUSING



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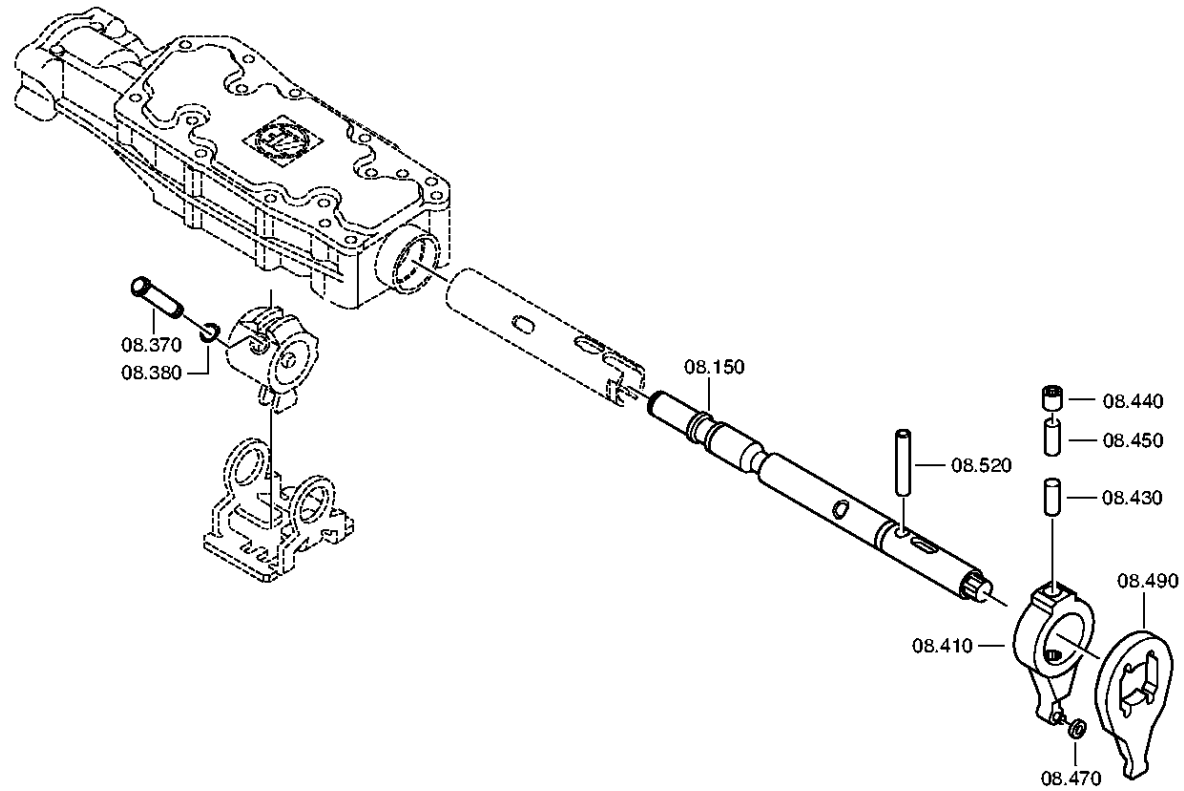
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Plant: 068.07.47-1

GEAR SHIFT HOUSING



16 S 2530 TO /
GEAR SHIFT HOUSING



Plant

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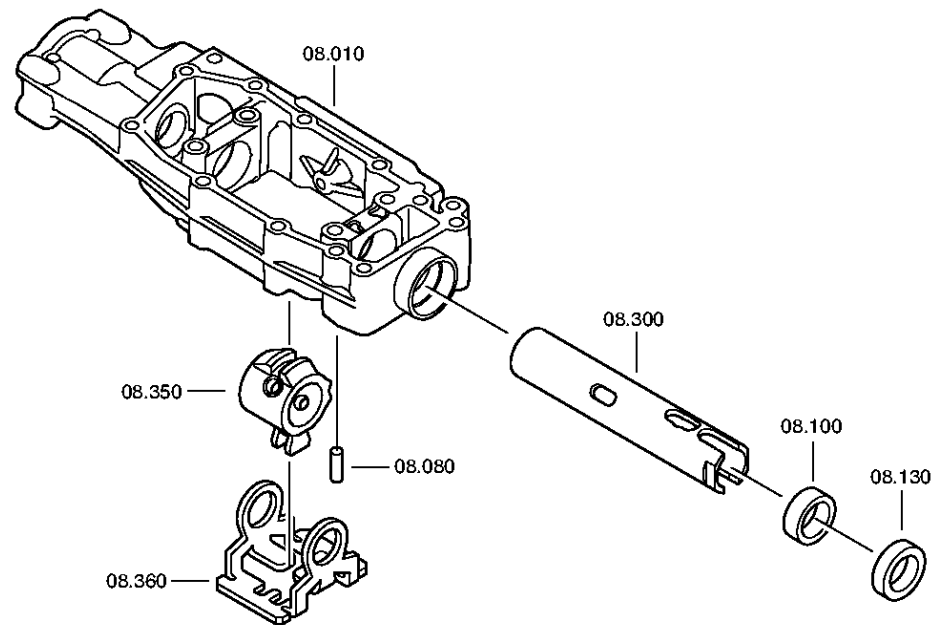
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Plant: 068.07.48-1

GEAR SHIFT HOUSING



16 S 2530 TO /
GEAR SHIFT HOUSING



Plant

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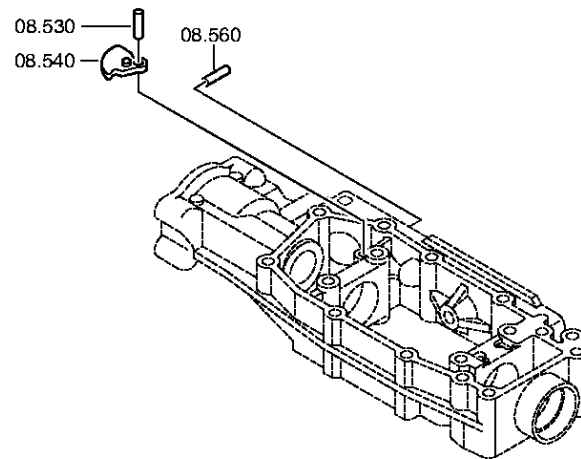
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Plant: 068.07.82-1

GEAR SHIFT HOUSING



16 S 2530 TO /
GEAR SHIFT HOUSING



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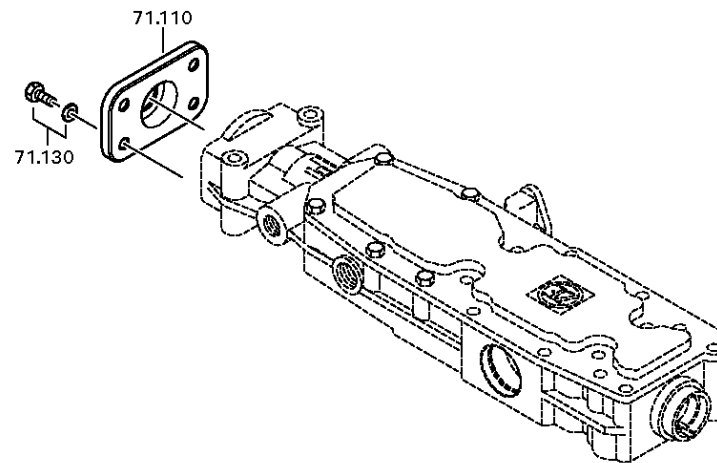
Material number: 1356.002.117

Plant: 062.08.30-1

END COVER



16 S 2530 TO /
END COVER



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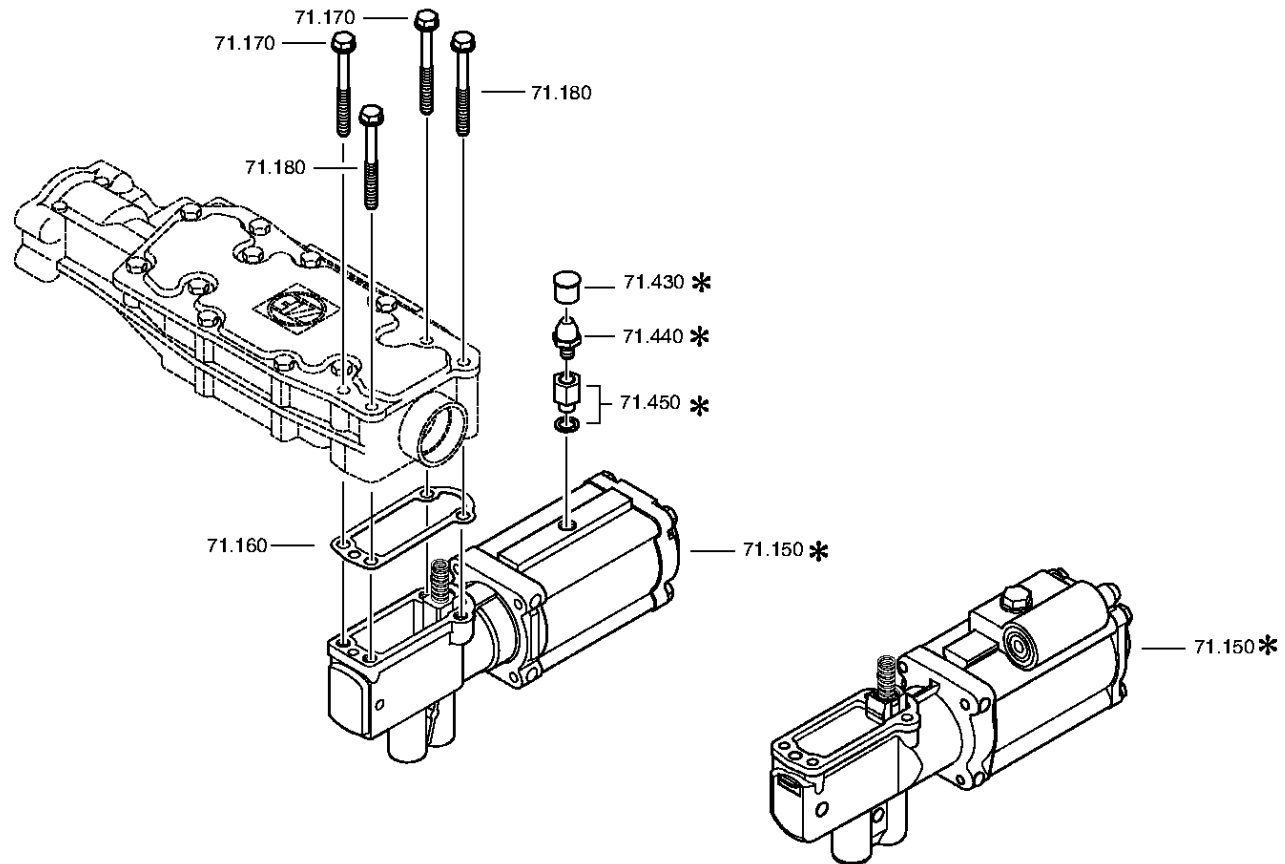
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Plant: 068.08.02-1

END COVER



16 S 2530 TO /
END COVER



Plant

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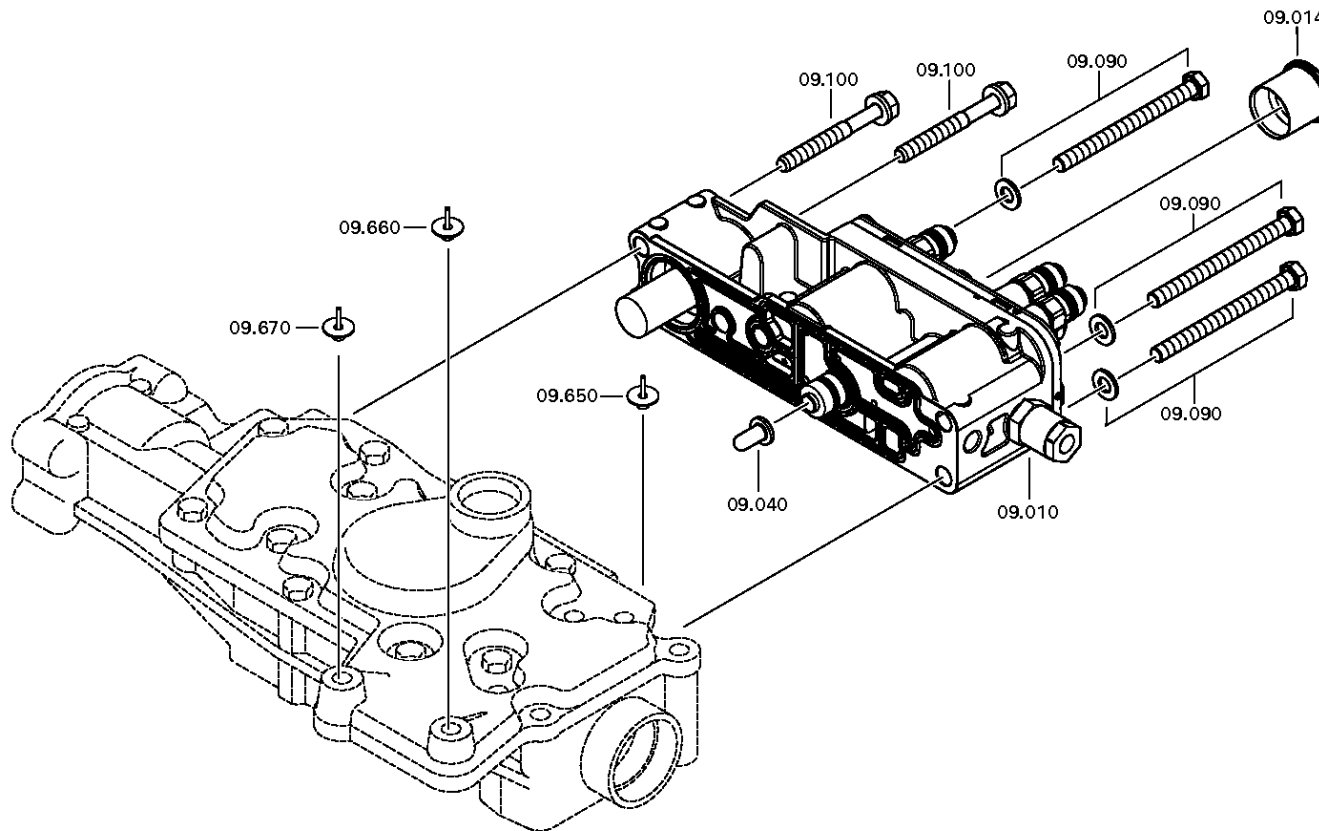
Material number: 1356.002.117

Plant: 161.09.20-1

VALVE BLOCK



16 S 2530 TO /
VALVE BLOCK



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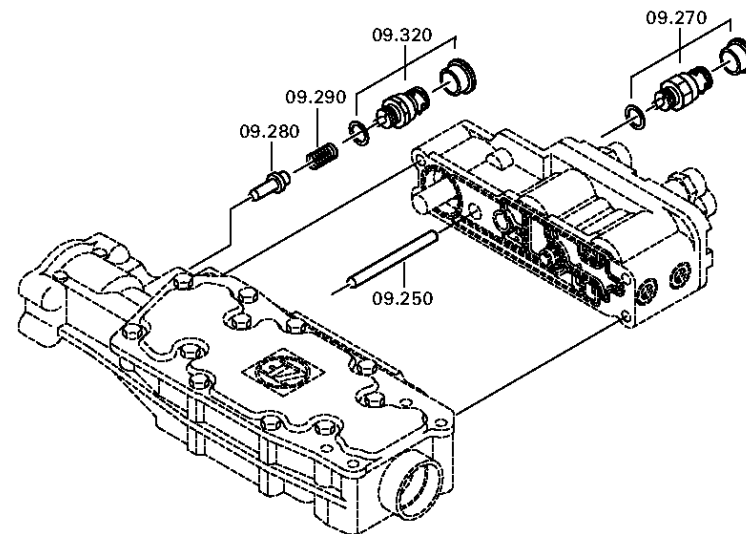
Material number: 1356.002.117

Plant: 161.09.03-1

VALVE BLOCK



16 S 2530 TO /
VALVE BLOCK



Plant

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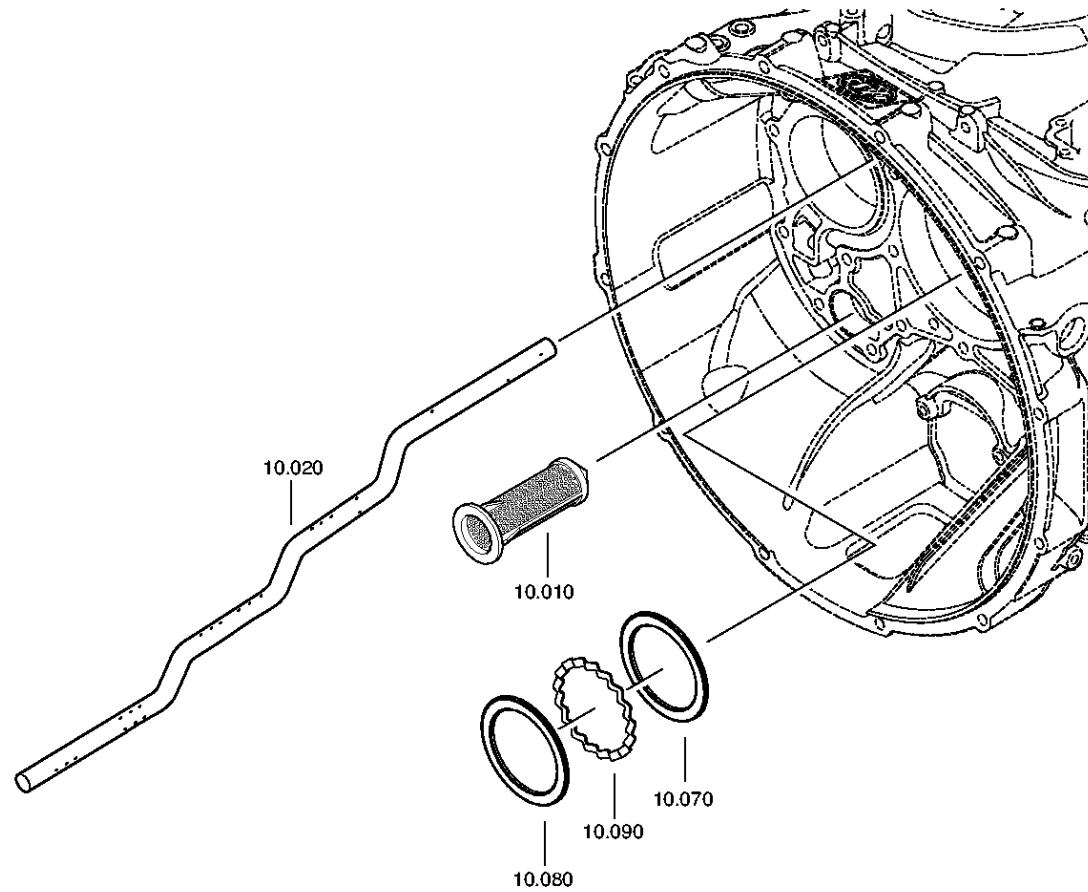
Material number: 1356.002.117

Plant: 161.10.04-1

OIL SUPPLY



16 S 2530 TO /
OIL SUPPLY



Plant

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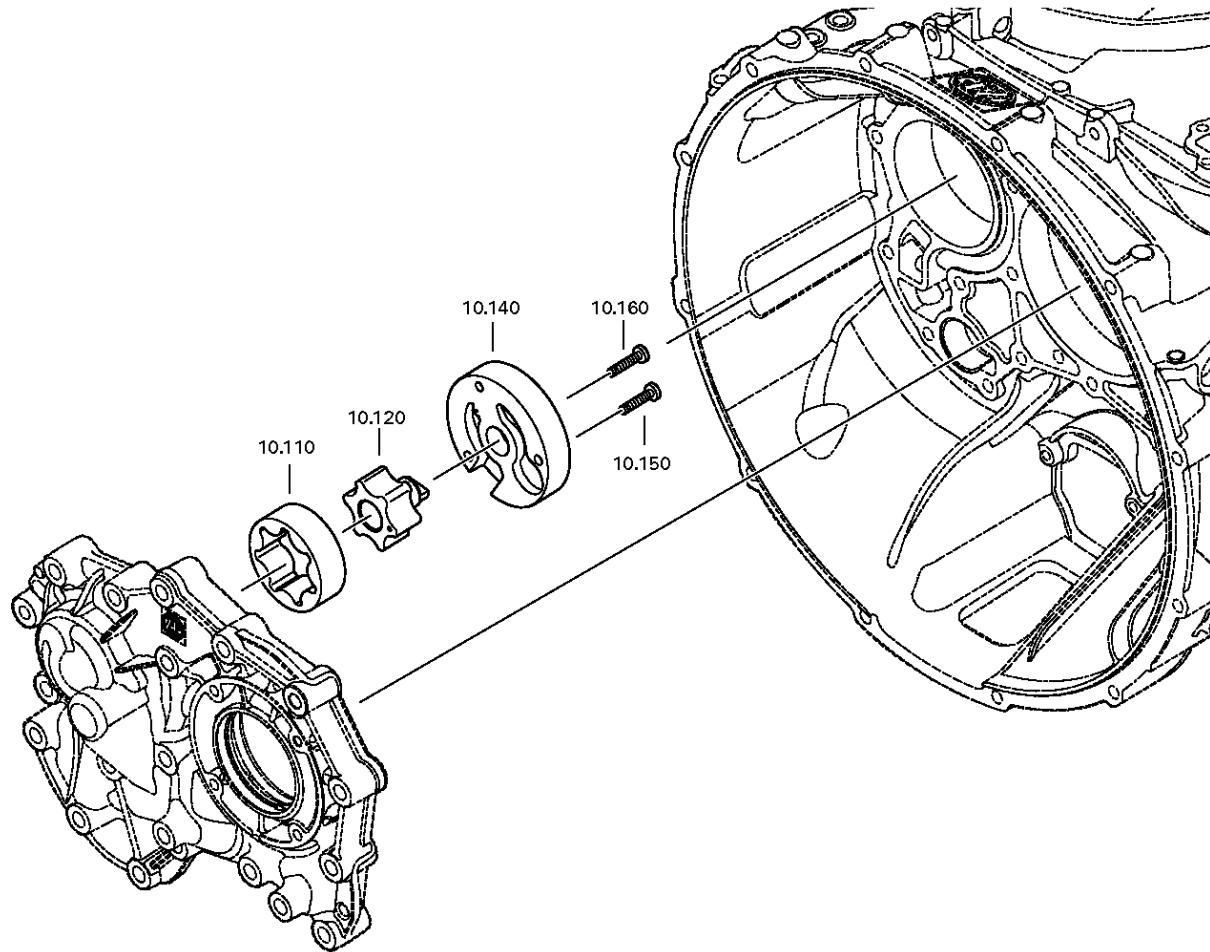
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Plant: 161.10.01-1

OIL SUPPLY



16 S 2530 TO /
OIL SUPPLY



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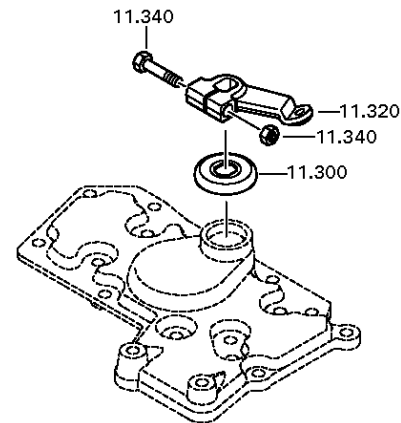
Material number: 1356.002.117

Plant: 068.10.89-1

SELECTOR LEVER



16 S 2530 TO /
SELECTOR LEVER



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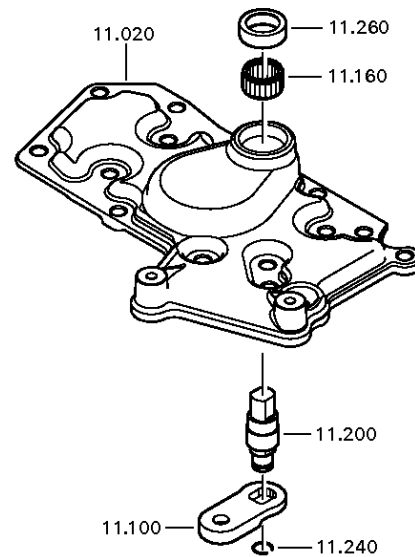
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Plant: 068.10.08-1

SELECTOR LEVER



16 S 2530 TO /
SELECTOR LEVER



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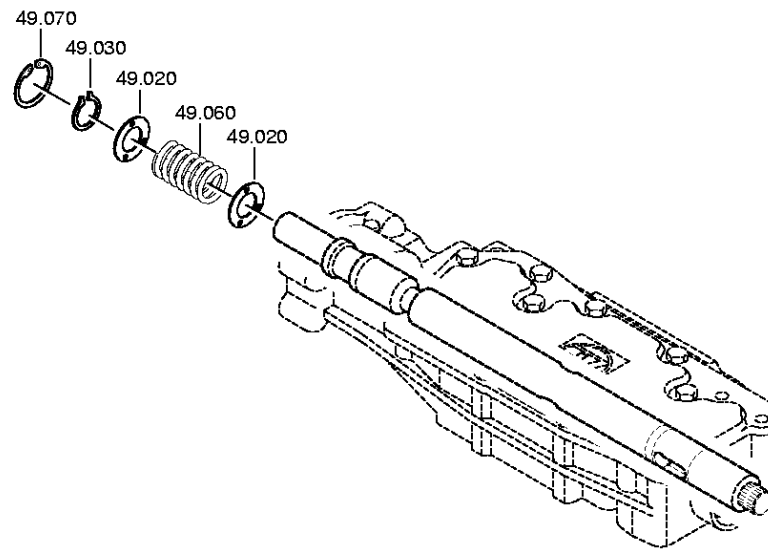
Material number: 1356.002.117

Plant: 068.12.25-1

Material-assembly-group-no: 1341.149.011



16 S 2530 TO /
SET OF SPRINGS



Plant

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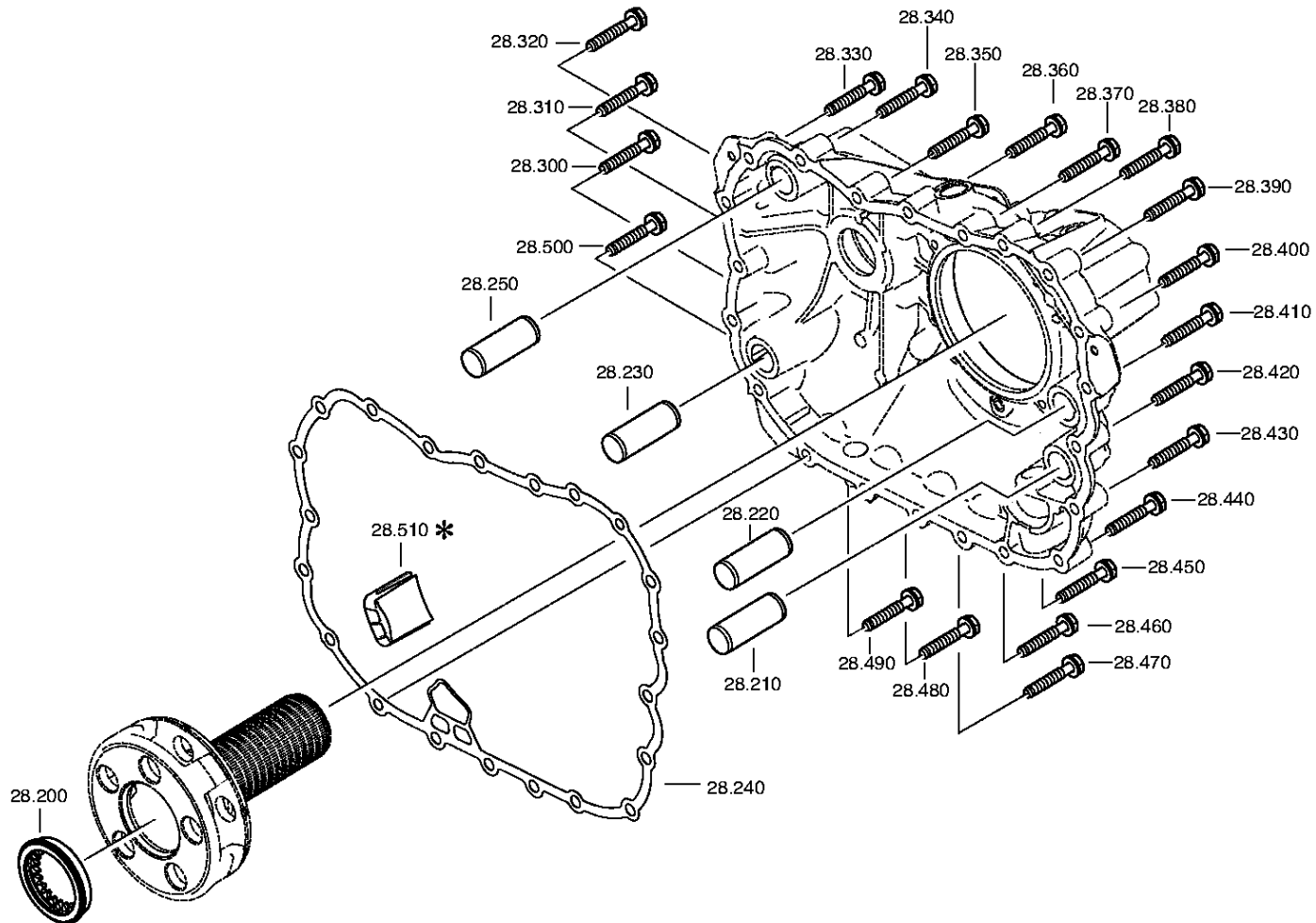
Material number: 1356.002.117

Plant: 161.28.01-1

Material-assembly-group-no: 1325.128.806



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PLANETARY RANGE



Plant

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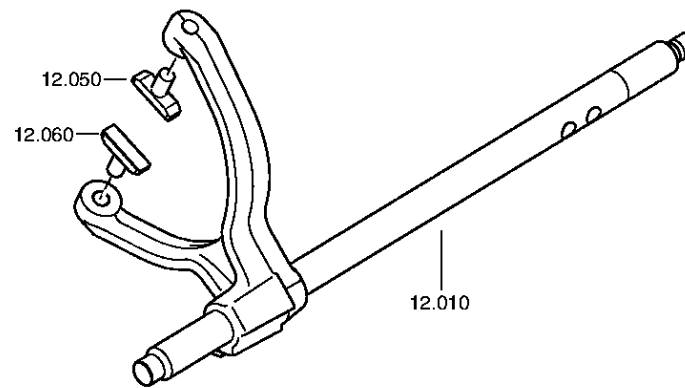
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Plant: 161.40.01-1

GV-SHIFT SYSTEM



16 S 2530 TO /
GV-SHIFT SYSTEM



Plant

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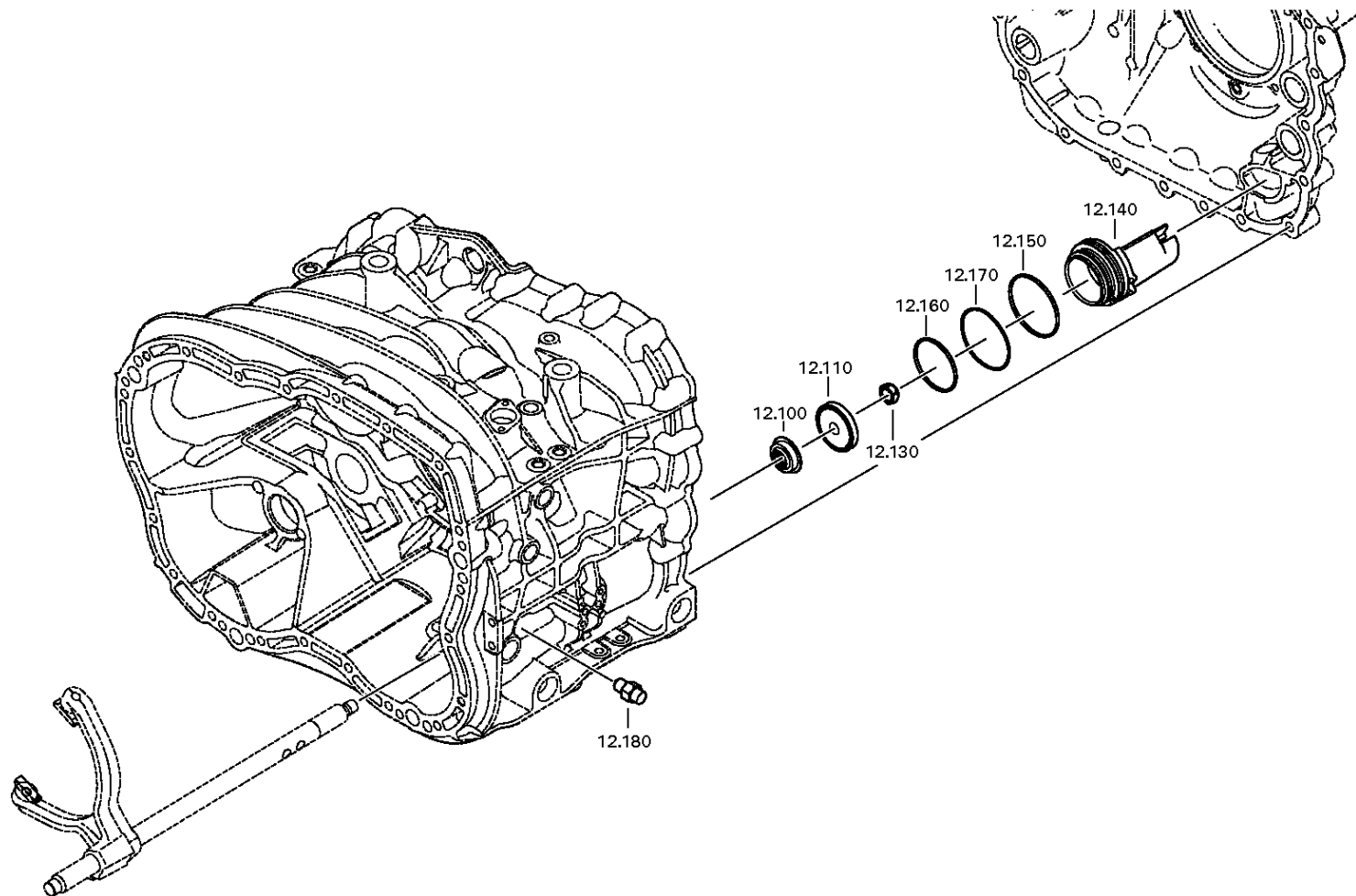
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Plant: 161.40.84-1

GV-SHIFT SYSTEM



16 S 2530 TO /
GV-SHIFT SYSTEM



Plant

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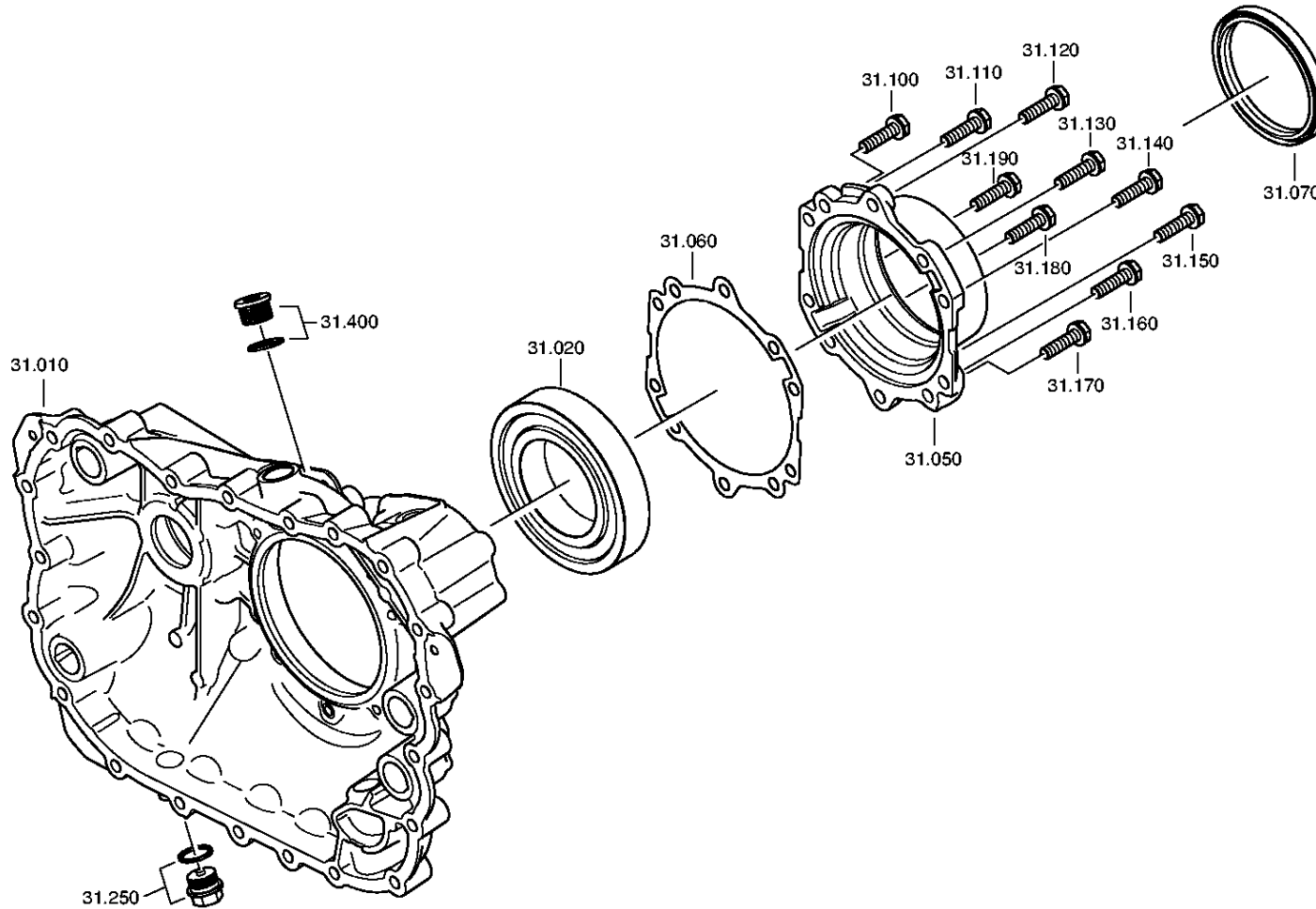
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Plant: 161.43.03-1

RC HOUSING



16 S 2530 TO /
RC HOUSING



Plant

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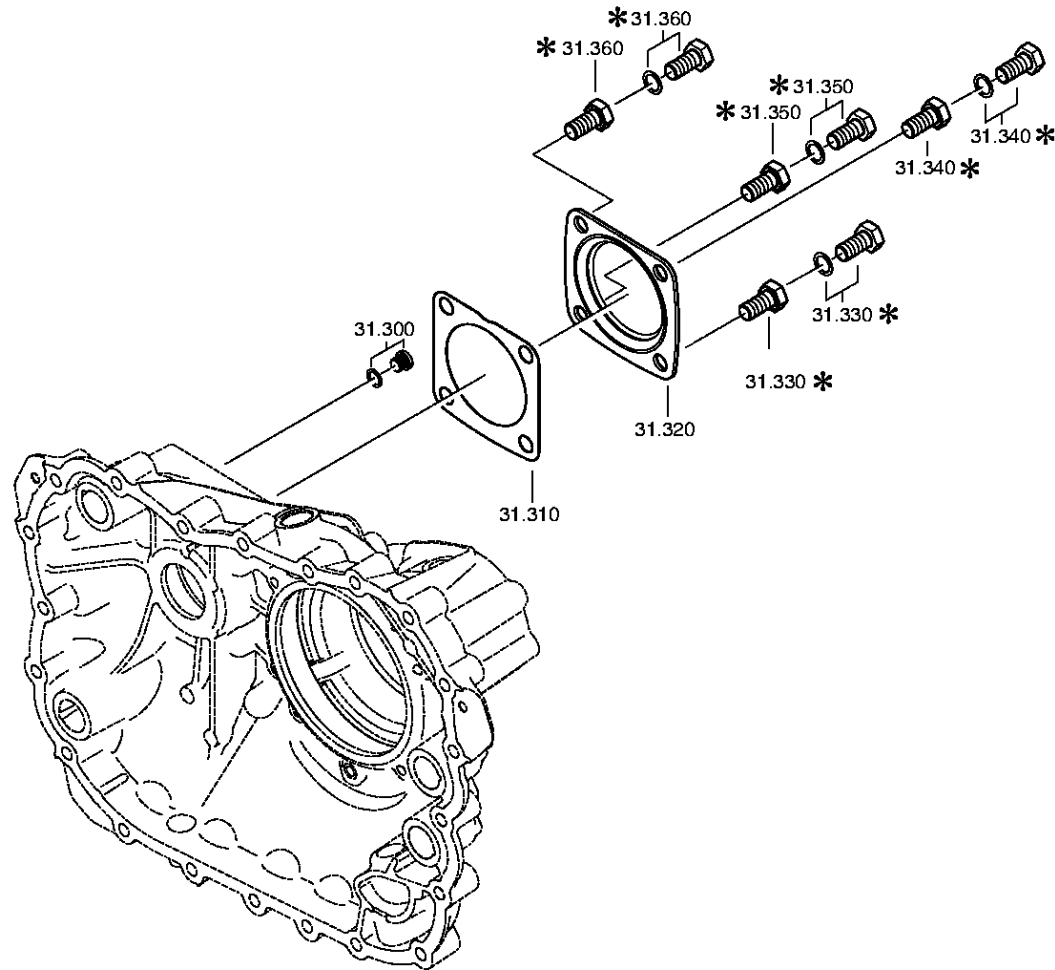
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Plant: 161.43.40-1

RC HOUSING



16 S 2530 TO /
RC HOUSING



Plant

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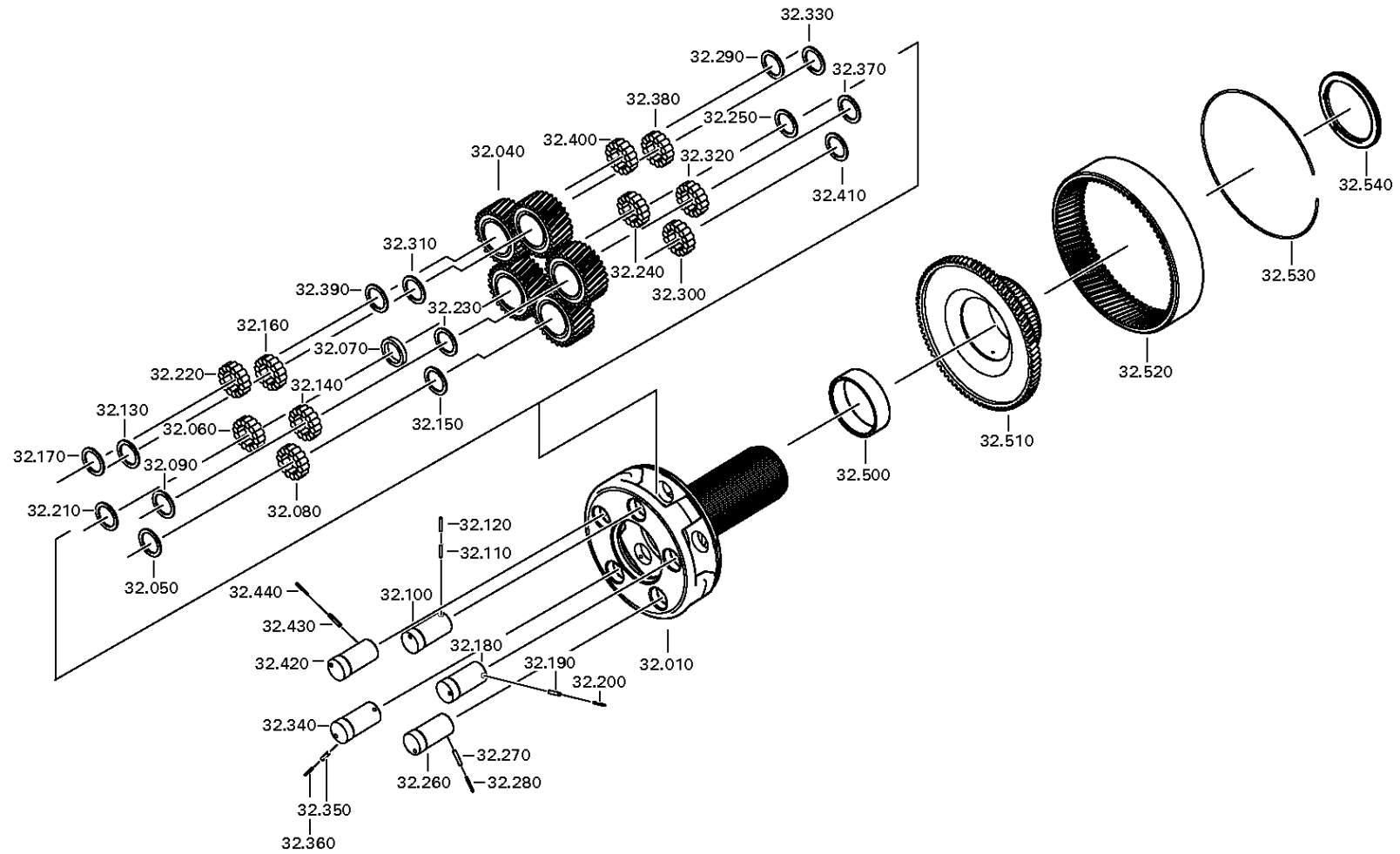
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Plant: 161.44.03-1

PLANETARY DRIVE



16 S 2530 TO /
PLANETARY DRIVE



Plant

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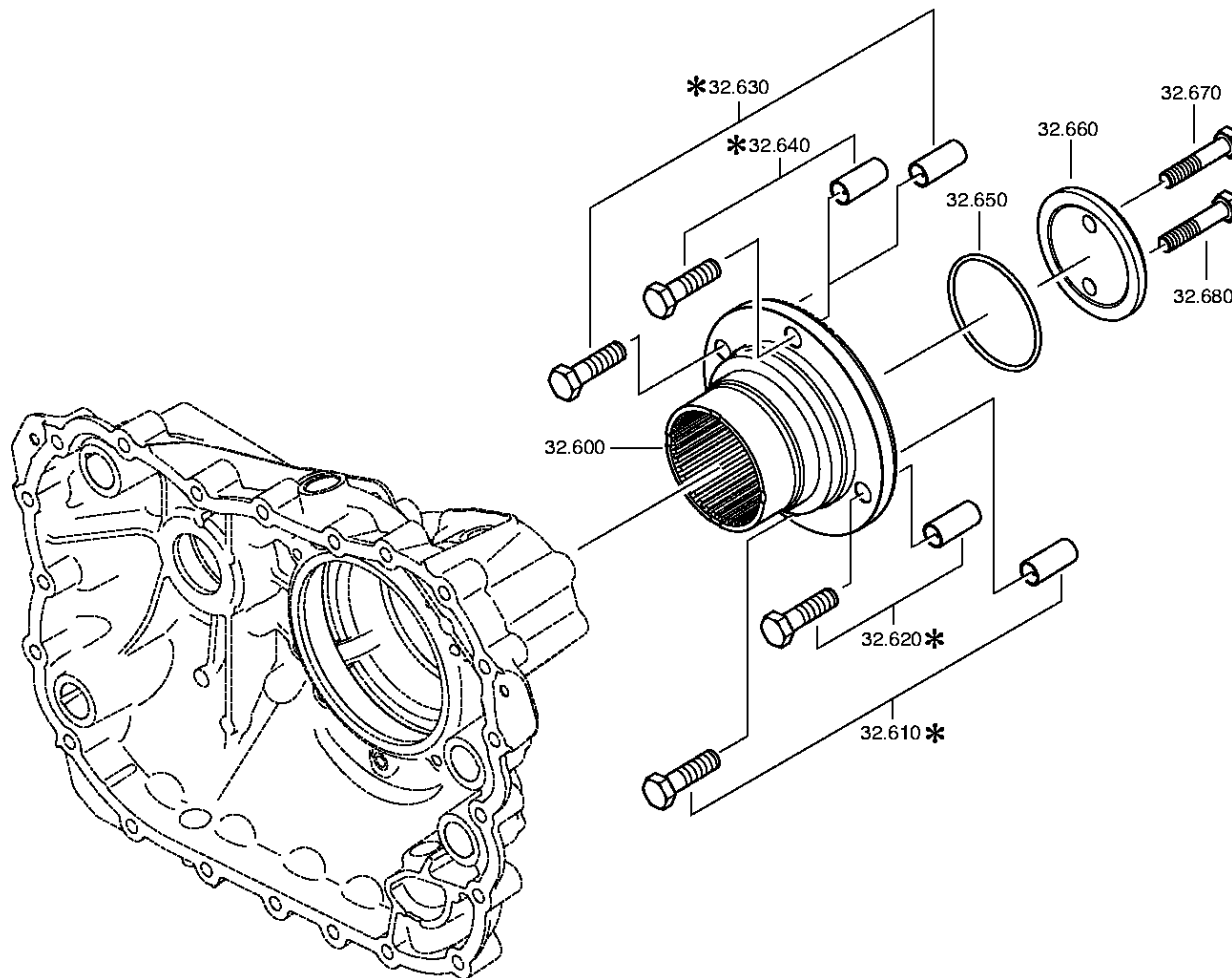
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PLANETARY DRIVE



16 S 2530 TO /
PLANETARY DRIVE



Plant

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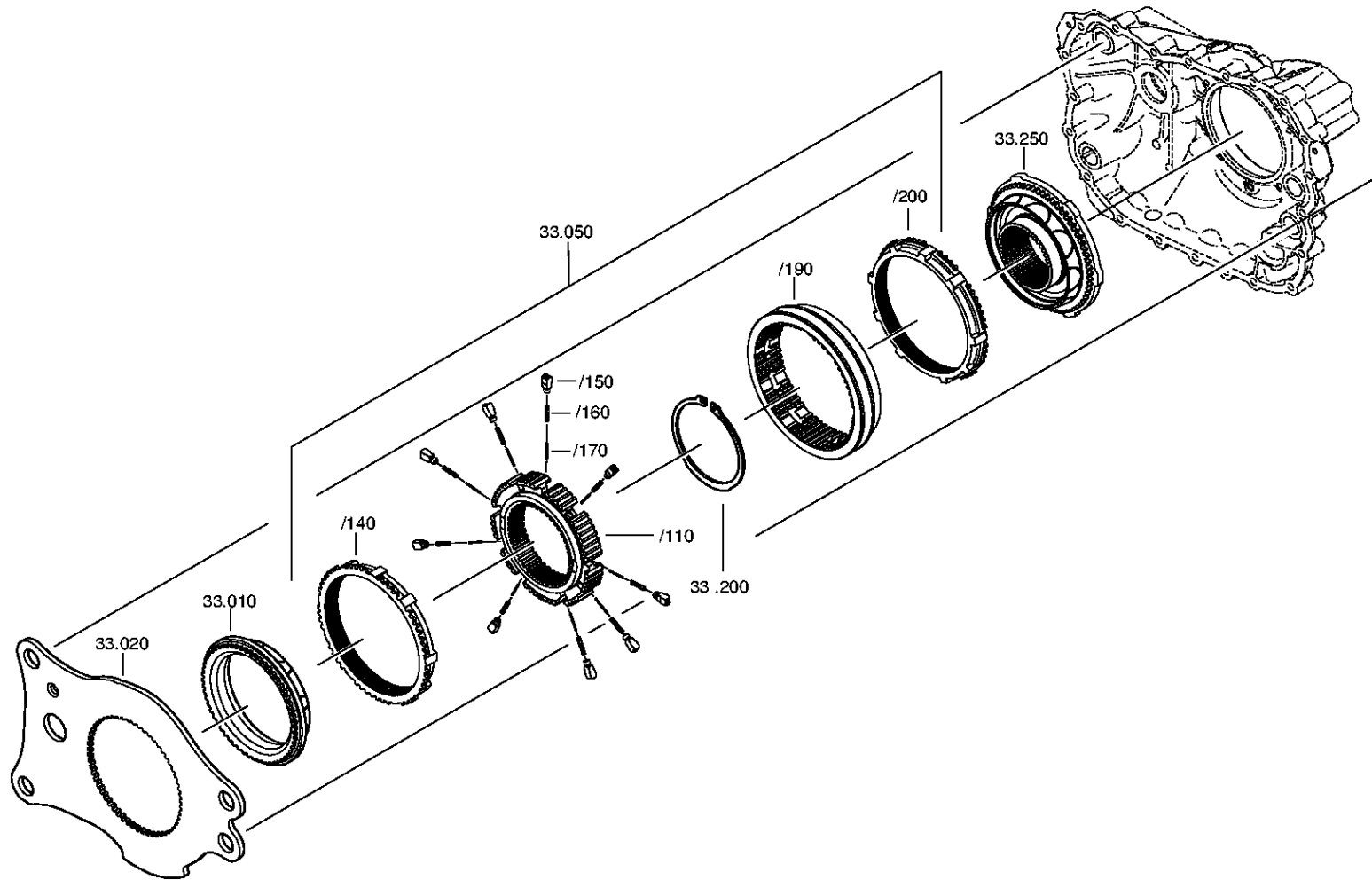
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16 S 2530 TO /
SYNCHRONIZER



Plant

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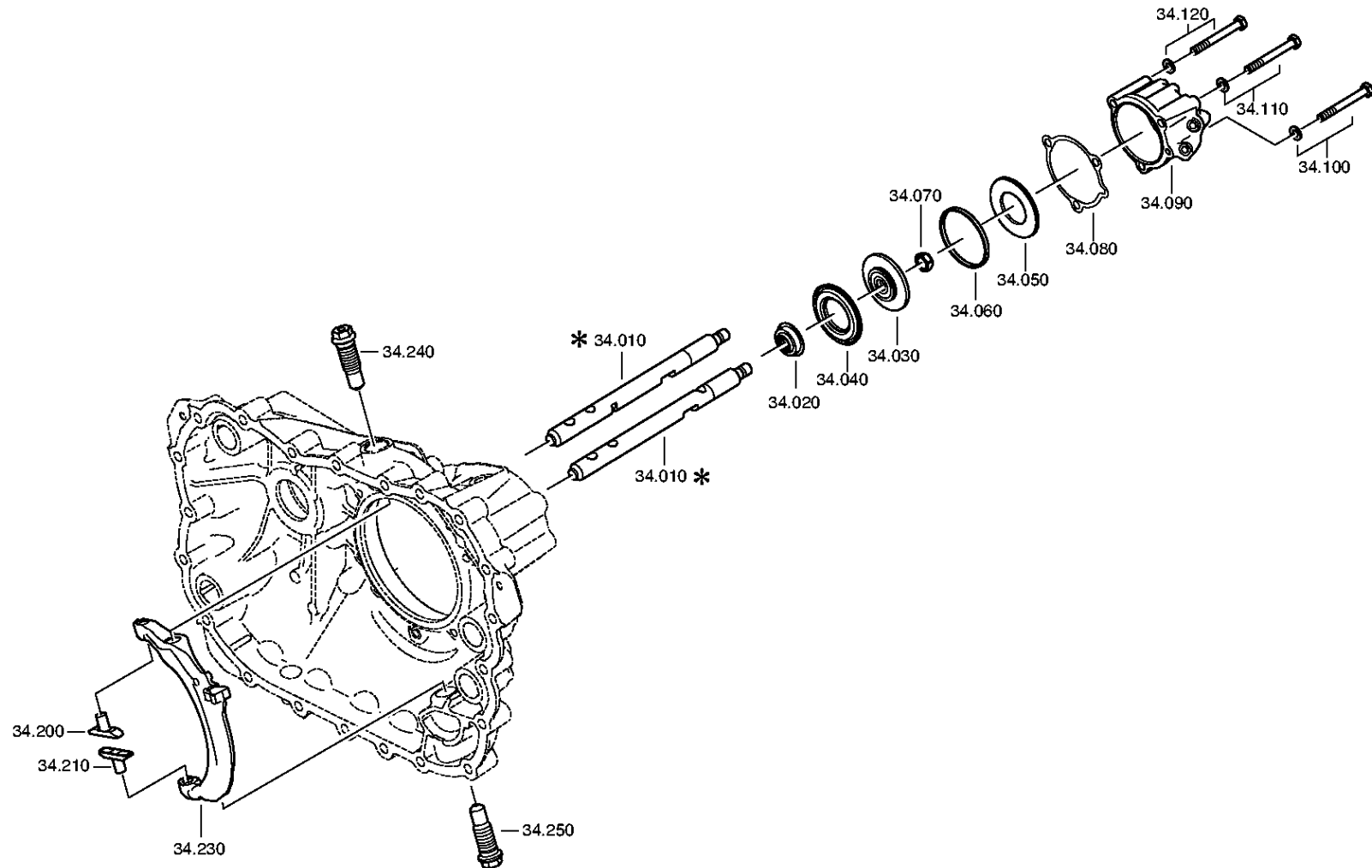
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Plant: 161.46.01-1

GP SHIFT SYSTEM



16 S 2530 TO /
GP SHIFT SYSTEM



Plant

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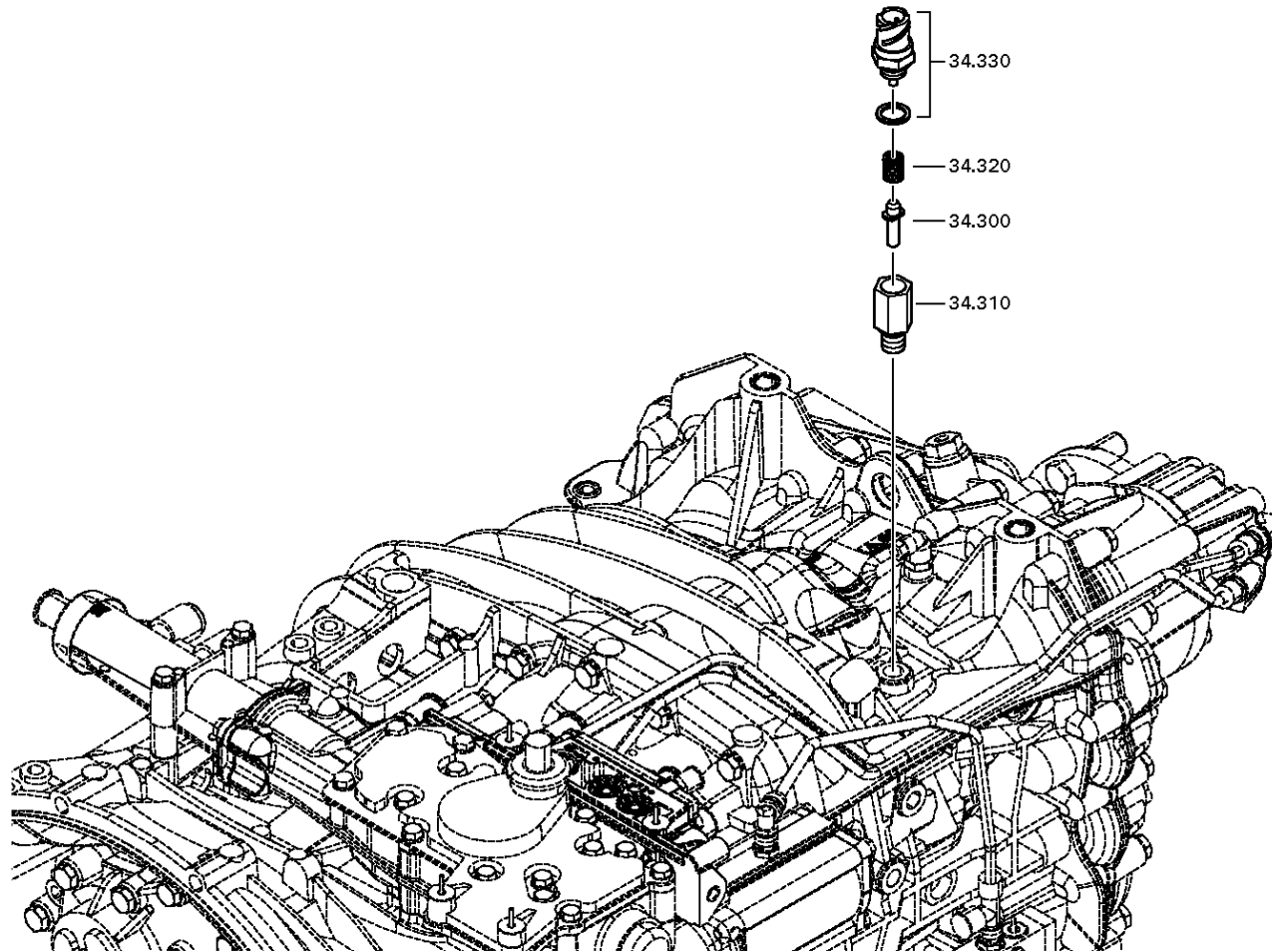
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Plant: 161.46.45-1

GP SHIFT SYSTEM



16 S 2530 TO /
GP SHIFT SYSTEM



Plant

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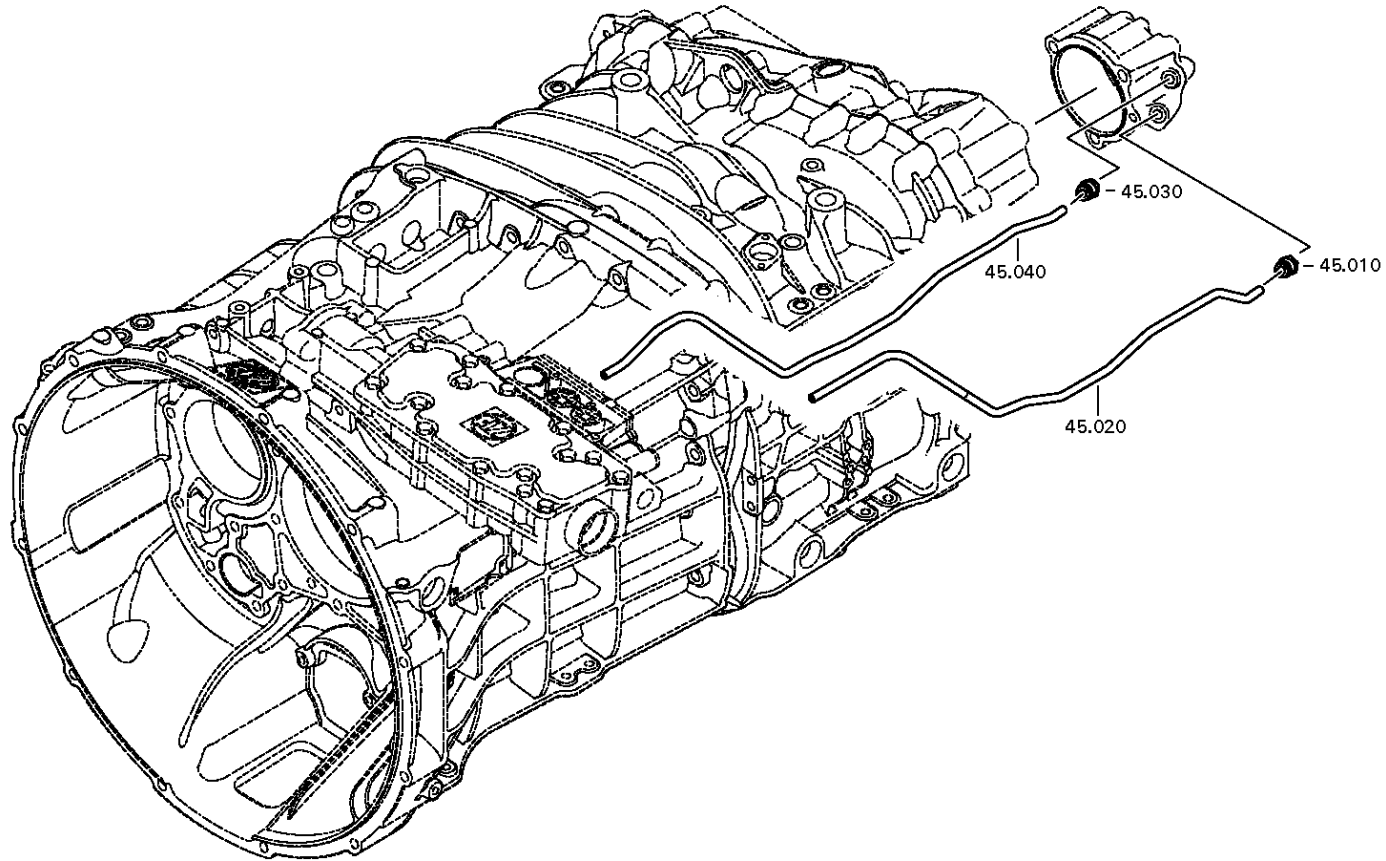
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16 S 2530 TO /
RANGE SELECTION



Plant

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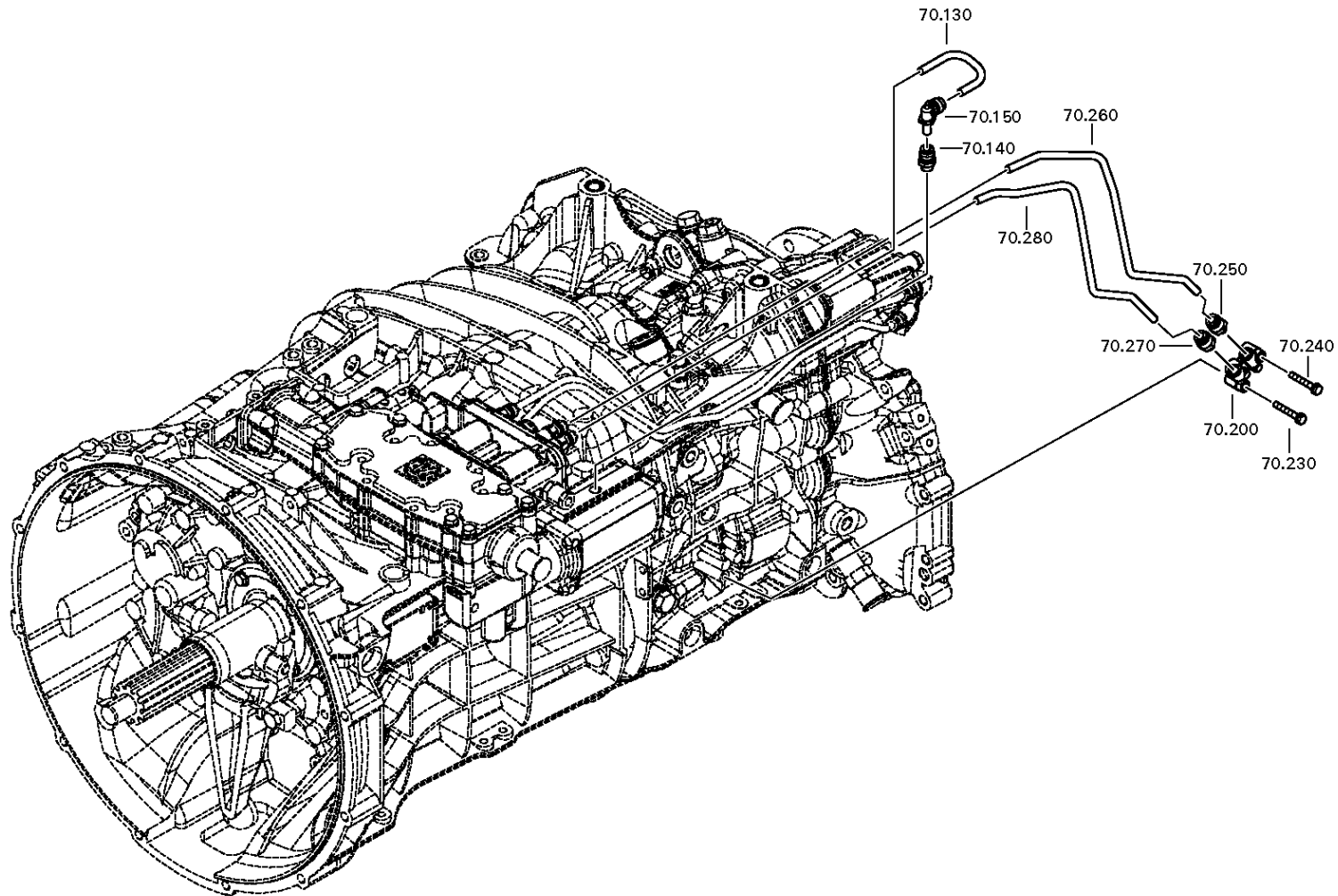
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Plant: 161.70.11-1

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16 S 2530 TO /
SHUT-OFF VALVE



Plant

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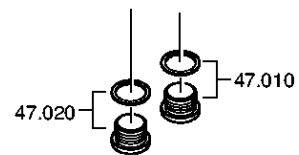
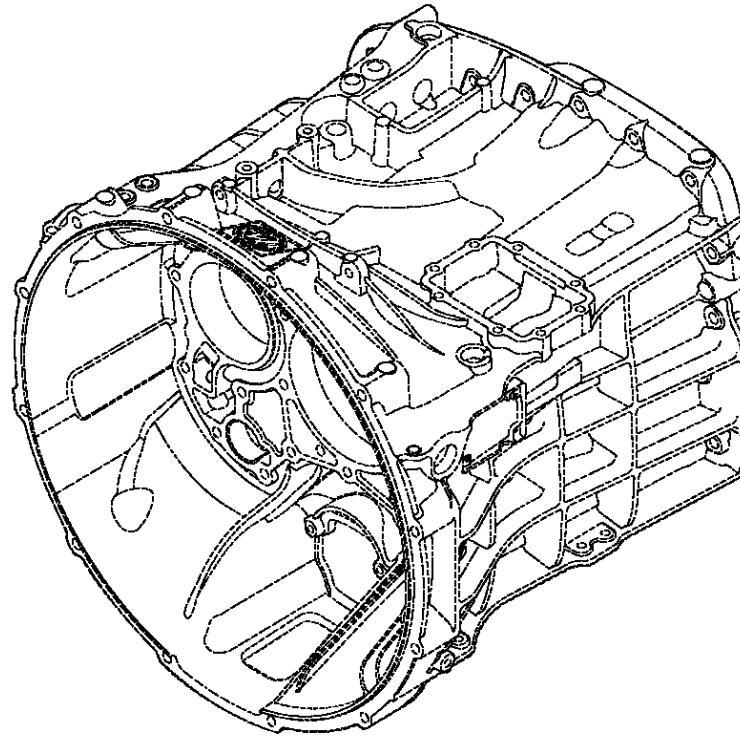
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16 S 2530 TO /
SCREW PLUG



Plant

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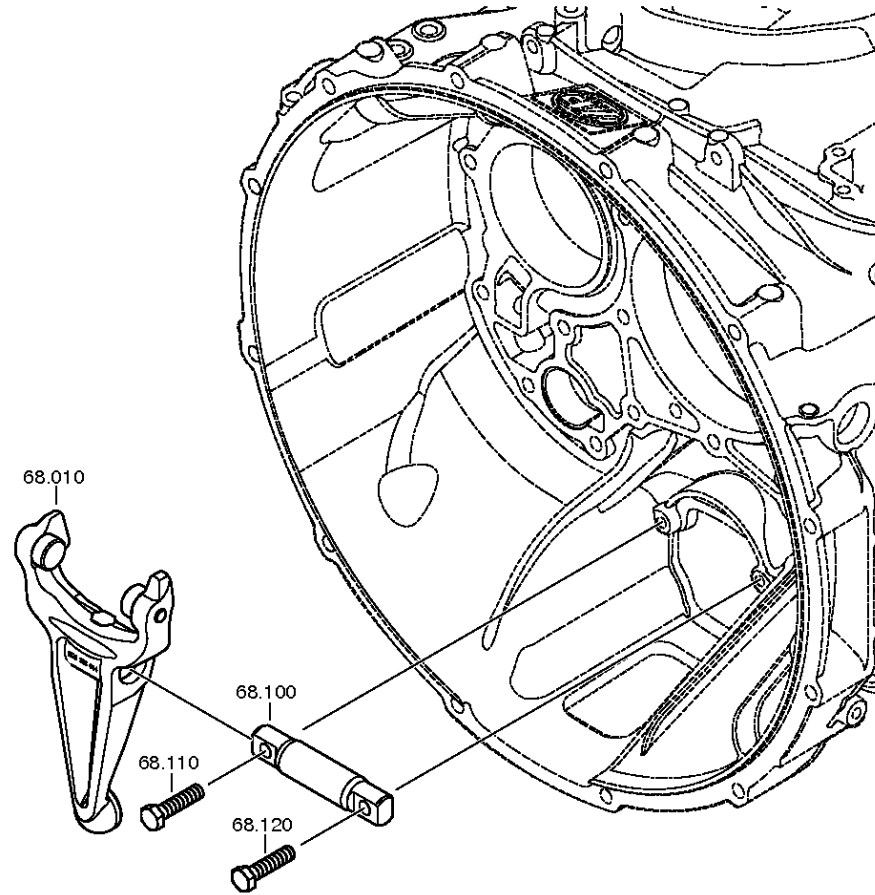
Material number: 1356.002.117

Plant: 161.93.25-1

CLUTCH RELEASE DEVICE



16 S 2530 TO /
CLUTCH RELEASE DEVICE



Plant

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Material number: 1356.002.117

Plant: 161.93.17-1

CLUTCH RELEASE DEVICE



16 S 2530 TO /
CLUTCH RELEASE DEVICE

