

Spare Parts Catalog

16 S 1920 TD

Material number: 1342.001.001

Current date: 02.10.2013

ZF Friedrichshafen AG Hauptverwaltung 80038 Friedrichshafen Deutschland

Telefon: +49 7541 77-0

Telefax: +49 7541 77-908000 zuständiges Werk: www.zf.com Friedrichshafen

Notes relating to the spare parts catalog

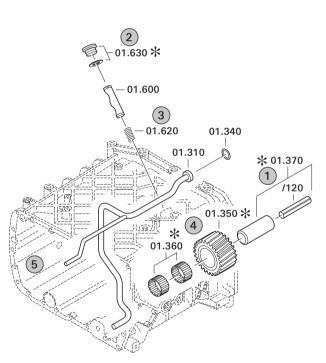


Setup of the spare parts catalog

- 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	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
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)	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 distina base

(5) Parts, dotted display

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

Page 1 from 6



Pos.	Information	Amendment number
001	Use case	
002	Customer MAN	
003	City NN	
004	DUNS	
006	Sales Name TG-A	
007	Manufacturer MAN	
008	Engineering Name	
009	Product Use TRUCK	
011	SOP	
012	Engine	
013	Sales Designation D2866LF31	
014	Manufacturer MAN	
015	Eng.Displ.	
016	Cylinder	
017	Nom. power 301 kW	
018	RPM at nom. power 1900 1/min	
019	Nom. torque 1850 Nm	
020	RPM at nom. torque 1300 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	RATIO, BOTTOM GEAR 16.41	
037	RATIO, TOP GEAR 1	
038	RATIO, 1ST GEAR 16.41	

[©] All rights reserved by ZF Friedrichshafen AG 2011, even in the event of applications for copyright. We hold all rights of disposal, such as the right to copy and disseminate. All rights reserved.

Page 2 from 6



Pos.	Information	Amendment number
039	RATIO, 2ND GEAR 13.8	
040	RATIO, 3RD GEAR 11.28	
041	RATIO, 4TH GEAR 9.49	
042	RATIO, 5TH GEAR 7.76	
043	RATIO, 6TH GEAR 6.53	
044	RATIO, 7TH GEAR 5.43	
045	RATIO, 8TH GEAR 4.57	
046	RATIO, 9TH GEAR 3.59	
047	RATIO, 10TH GEAR 3.02	
048	RATIO, 11TH GEAR 2.47	
049	RATIO, 12TH GEAR 2.08	
050	RATIO, 13TH GEAR 1.7	
051	RATIO, 14TH GEAR 1.43	
052	RATIO, 15TH GEAR 1.19	
053	RATIO, 16TH GEAR 1	
054	RATIO, 1ST GEAR REVERSE 15.36	
055	RATIO, 2ND GEAR REVERSE 12.92	
056	SET OF RATIOS DG	
057	UEBERSETZUNGSREIHE BASIS DG	
058	NUMBER OF PLANETARY GEARS 5	
059	UEBERSETZUNG PLANETENSATZ 4.565	
060	AUSF VERZAHNUNG PLANETENSATZ OBLIQUE TOOTHING	
061	DESIGN, SHIFT SYSTEM TURNING SHAFT	
062	POSITION, GEAR SHIFT SYSTEM HORIZONTAL	
063	DESIGN, SHIFT PATTERN UEH	
064	VERSION SHIFT SUPPORT SERVO	
065	VERSION ACTUATION SHIFT SYSTEM HGS	
068	VERSION TUBE R/C PLASTIC-FORM-PIPE	
069	VERSION TUBE SERVO PLASTIC PIPING	
070	HINWEIS ZU AUSF SCHALTUNG GEAR SHIFT COVER WITH AIR DIST	
071	AUSF RUECKSCHALTG GASSENSPERRE RADIAL	
072	VERSION TUBE GATE INTERLOCK WITHOUT PIPING	
073	1ST CUSTOMER SPEC SHIFT SYSTEM RANGE INTERLOCK	

Page 3 from 6



Pos.	Information	Amendment number
074	2ND CUSTOMER SPEC SHIFT SYSTEM GATE INTERLOCK	
078	DESIGN VALVE AIR SUPPLY VALVE BLOCK	
079	DIA.THROTTLE VALVE AIR SUPPLY 1.3 mm	
080	SELECTION PATTERN VARIANT GEAR SHIFT PATTERN 1	
081	DESIGN, SEPARATING CLUTCH FULL-SYNCHRONIZED	
082	VERSION OF SYNCHRONIZER 1 14.GEAR BK-SYNCHRONIZATION	
084	REFERENCE LENGTH INPUT SHAFT 109 mm	
085	STANDARD TYPE INPUT SHAFT SAE	
086	NUMBER OF WEDGES INPUT SHAFT 10	
087	VERSION OF INPUT SHAFT FORM C	
088	NOMINAL DIAMETER INPUT SHAFT 2 in	
089	DIAMETER, JOURNAL, INPUT SHAFT 25 mm	
090	TYPE FIT SPIGOTS INPUT SHAFT F7	
091	VER. BEAR. SPIGOTS INPUT SHAFT TAPER ROLLER	
092	LENGTH, INPUT SHAFT 395.5 mm	
093	DIAMETER SHAFT OF INPUT SHAFT 50.3 mm	
094	LENGTH, PROFILE, INPUT SHAFT 120 mm	
095	BUSH VARIANT INPUT SHAFT WITHOUT GROOVE	
096	VERSION BEARING CONSTANT 1 GL	
097	DIAMETER BEARING INPUT SHAFT 99.916 mm	
098	TYPE FIT BEAR. INPUT SHAFT H5	
099	DESIGN,CONN., CLUTCH HOUSING SAE 1	
100	CENTR.DIA,HSG/ENGINE CONNECT. 511.175 mm	
101	NUMBER OF BORES, ENGINE CONN. 12	
102	BORE DIA, ENGINE CONNECTION 11 mm	
103	VERSION OF CLUTCH HOUSING INTEGRATED	
104	DESIGN BEARING OUTPUT STANDARD SUSPENSION	
105	VERSION ENGINE CONNECTION NOT FORDABLE	
106	POSITION MOUNT. FACE HOUSING 2 WITHOUT GROOVE	
107	LAENGE SPANNLAPPEN RE MOTANSCH 292 mm	
109	TYPE OF RELEASE MECHANISM WITH	
110	REF.LENGTH,RELEASE BEAR.FLAN -7 mm	
111	DIAMETER, RELEASE FLANGE 60 mm	

Page 4 from 6



Pos.	Information	Amendment number
112	TYPE FIT RELEASE BEARING FLA. F8	
113	D-LAGERBUCHSE AUSRUECKUNG LI 35 mm	
114	ASSEMBLY POS. CLUTCH CYLINDER 6	
115	OUTER DIA. OUTPUT FLANGE RA 180 mm	
116	NO.OF BORES OUTPUT FLANGE HA1 4	
118	BORE DIA. OUTPUT FLANGE RA 15 mm	
123	REF. LENGTH OUTPUT FLANGE RA 211.5 mm	
133	SHIFT LEVER CONNECTION	
136	SPRING ARRANGEMENT Q5	
137	SPRING FORCE DETENT PLUNGER RG 150 N	
140	SELECTOR SPRING FORCE, OUTSIDE 35 N	
141	SELECTOR SPRING FORCE, INSIDE 190 N	
145	SWITCH, REVERSE GEAR y	
146	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	
153	DESIGN, CONNECTION, NG SWITCH DIN BAYONET	
154	CODE SWITCH NG A1	
155	PROT.CAP SWITCH, NEUTRAL GEAR y	
176	FUNCTION OF R/C SWITCH GP	
177	DESIGN, GP SWITCH PREPARED	
180	PROTECTING CAP GP SWITCH n	
181	FUNCTION OF S/G SWITCH GV	
182	DESIGN, GV SWITCH WITHOUT GROOVE	
185	PROTECTING CAP GV SWITCH n	
207	ATTACHM.POS.HEAT EXCHANGER IN FRONT LEFT PREPARED	
208	VER. TRANSMISSION VENTILATION ELBOW JOINT	
210	POS.TRANSMISSION VENTILATION IN FRONT	
211	DESIGN PULSE SENSOR INPUT WITH	

Page 5 from 6



Pos.	Information	Amendment number
212	DES.CONN.PULSE SENSOR INPUT DIN BAYONET	
213	PROT.CAP PULSE SENSOR INPUT y	
214	D-ABNAHMESTELLE IMP.GEBER ANTR 172 mm	
215	ABNAHMESTELLE IMP.GEBER ANTR COUNTER SHAFT CONSTANT 2	
216	VERSION PULSE SENSOR SFA H68 WITHOUT GROOVE	
220	PROT.CAP PULSE SENSOR SFA H68 n	
221	NO. PULSES PULSE SENSOR SFAH68 6 IMP/U	
226	VER. PULSE SENSOR TRANSM. H70 WITH	
227	VER. CONNECT. PULSE SENSOR H70 DIN BAYONET	
228	DESIGN PULSE SENSOR H70 KITAS II	
229	INSTRUCTION SENSOR H70 ADR-EXPLOSION-PROOF	
230	PROT.CAP PULSE SENSOR TM H70 y	
231	NO PULSES PULSE SENSOR TM H70 6 IMP/U	
232	ASSEMBLY POS PULSE SENSOR H70 1	
233	NOTE ASS. POS PULSE SENSOR H70 INSTALLATION DRAWING	
234	POSITION, OIL FILLER HOUSING LEFT+RIGHT	
235	NOTE ON OIL FILL IN OVERFLOW	
236	OIL CAPACITY, GEARBOX 13 dm3	
237	OIL FILL VARIANT EX WORKS	
238	OIL GRADE PERMISSIBLE ACC. TO TE-ML02	
239	OIL CLASS FIRST FILLING E	
240	CODING OUTER CONSERVATION KA1+2	
241	SCOPE OUTER CONSERVATION T	
242	CODING INNER CONSERVATION KI1	
243	CONSERVATION SPECIFICATION ZFN 916	
244	COLOR JET BLACK	
245	COLOUR CLASSIFICATION ACC. TO RAL 9005	
246	PAINTING, ZF STANDARD 915 W	
248	Documents	
249	Drawing 1316.051.550	
250	Drawing 1316.101.035	
251	TURN.SHAFT CONT Assembly 1341.173.001	
252	TURN.SHAFT CONT Drawing 1341.173.001	

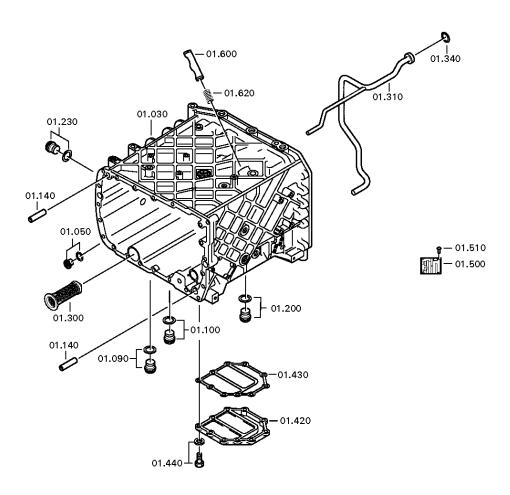
[©] All rights reserved by ZF Friedrichshafen AG 2011, even in the event of applications for copyright. We hold all rights of disposal, such as the right to copy and disseminate. All rights reserved.

Page 1 from 3

Material number: 1342.001.001

Plate: 068.01.05-1 GEARBOX HOUSING 16 S 1920 TD / GEARBOX HOUSING



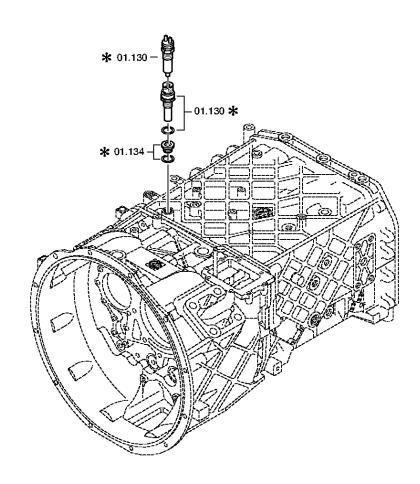


Page 2 from 3

Material number: 1342.001.001

Plate: 068.01.40-1 GEARBOX HOUSING 16 S 1920 TD / GEARBOX HOUSING



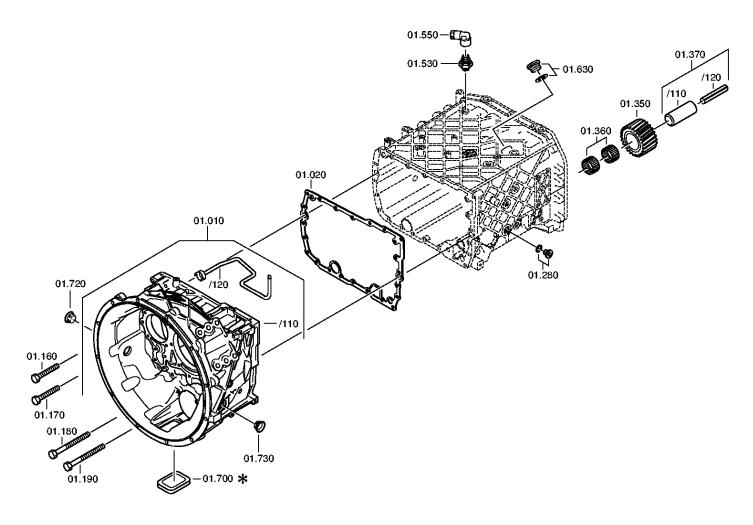


Page 3 from 3

Material number: 1342.001.001

Plate: 068.01.57-1 GEARBOX HOUSING 16 S 1920 TD / GEARBOX HOUSING





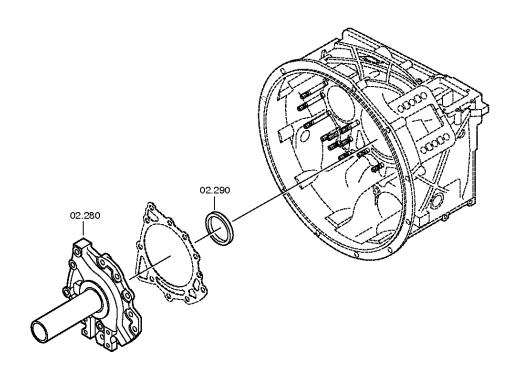
Page 1 from 3

Material number: 1342.001.001

Plate: 068.02.54-1 INPUT SHAFT

16 S 1920 TD / CONNECTION PLATE





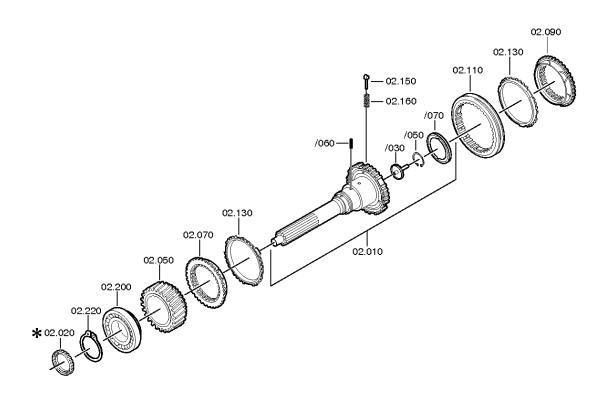
Page 2 from 3

Material number: 1342.001.001

Plate: 068.02.02-1 INPUT SHAFT

16 S 1920 TD / CONNECTION PLATE





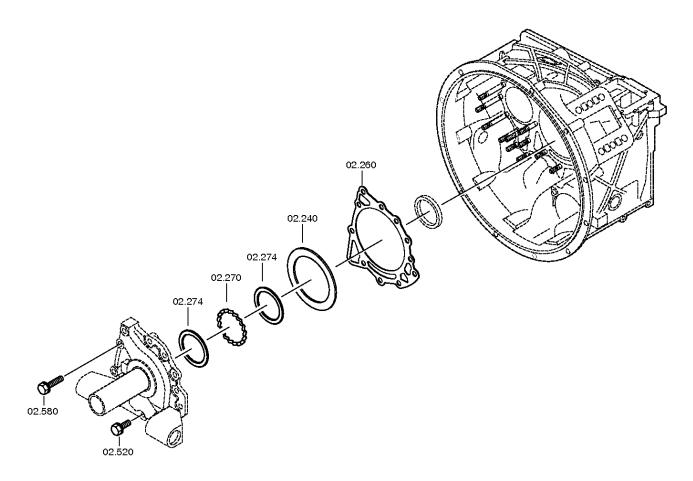
Page 3 from 3

Material number: 1342.001.001

Plate: 068.02.82-1 INPUT SHAFT

16 S 1920 TD / CONNECTION PLATE

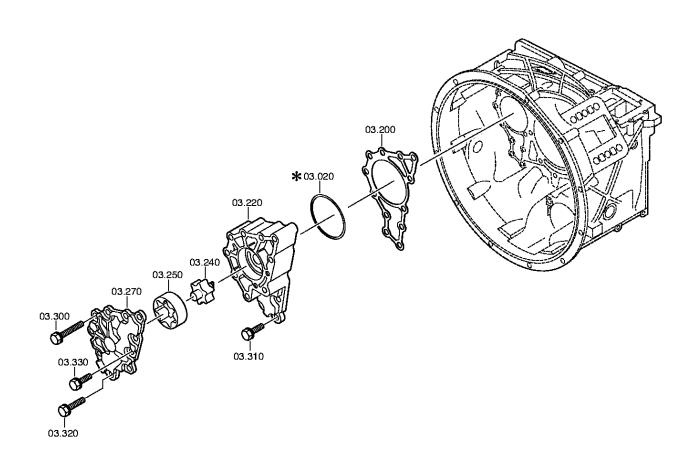




Material number: 1342.001.001

Plate: 068.03.80-1 LAYSHAFT 16 S 1920 TD / COUNTERSHAFT



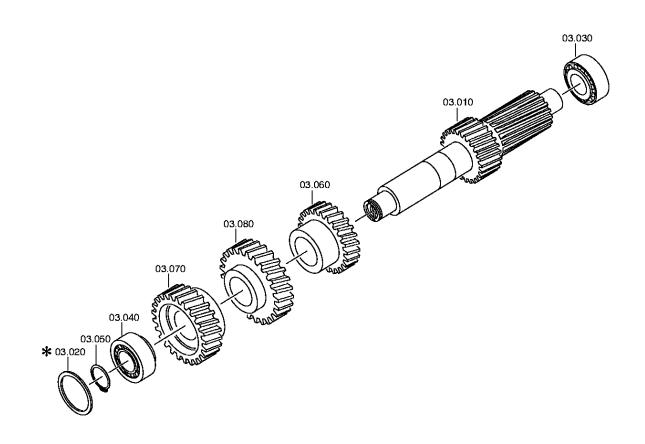


Page 2 from 2

Material number: 1342.001.001

Plate: 068.03.01-1 LAYSHAFT 16 S 1920 TD / COUNTERSHAFT

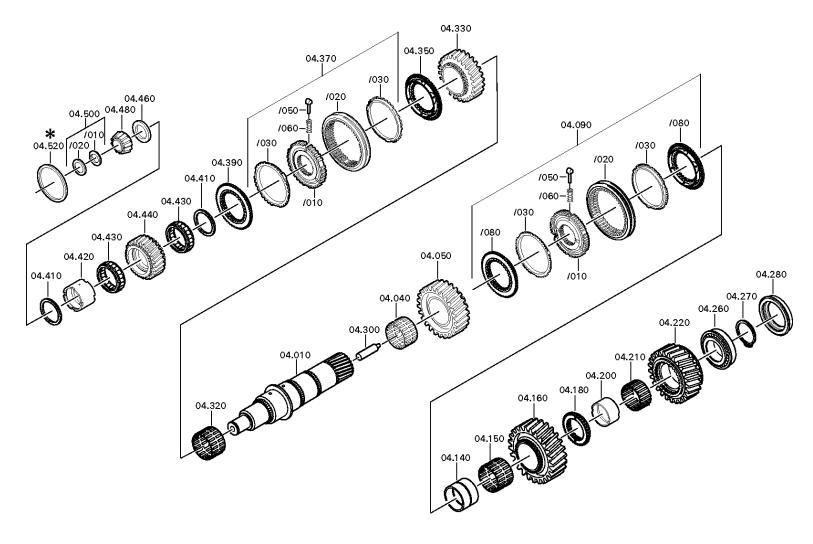




Page 1 from 1

Material-assembly-group-no: 1316.104.037



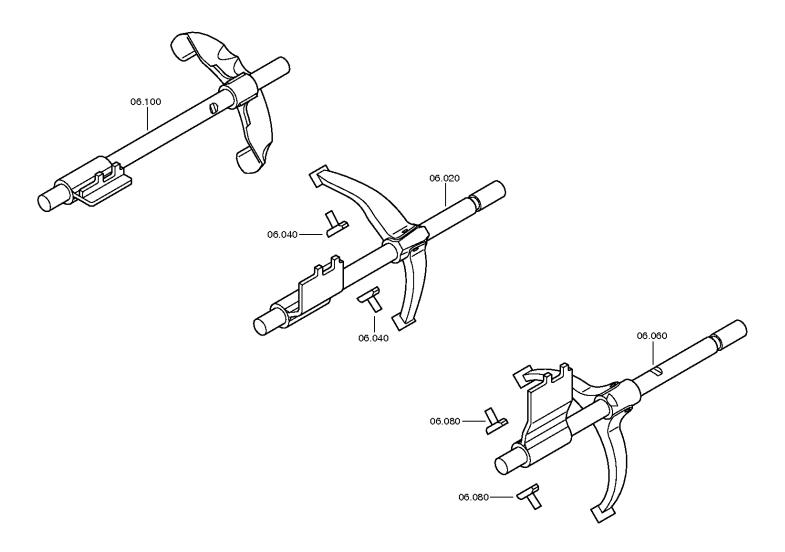


Page 1 from 3

Material number: 1342.001.001

Plate: 068.06.01-1 SHIFT SYSTEM 16 S 1920 TD / SHIFT SYSTEM



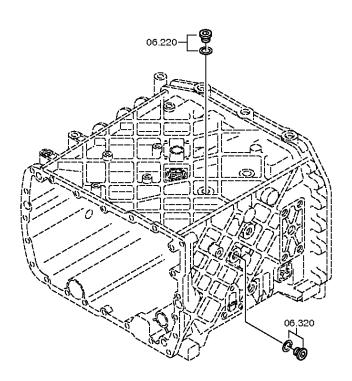


Page 2 from 3

Material number: 1342.001.001

Plate: 068.06.43-1 SHIFT SYSTEM 16 S 1920 TD / SHIFT SYSTEM



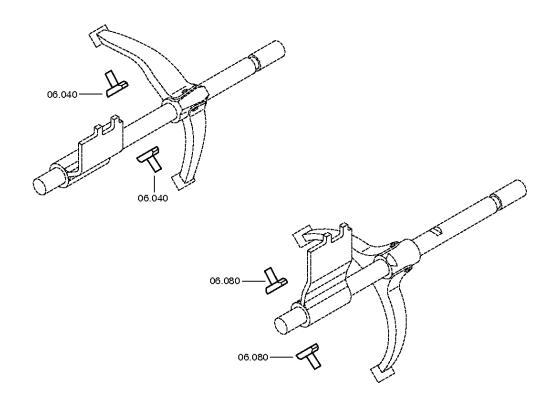


Page 3 from 3

Material number: 1342.001.001

Plate: 068.06.80-1 SHIFT SYSTEM 16 S 1920 TD / SHIFT SYSTEM



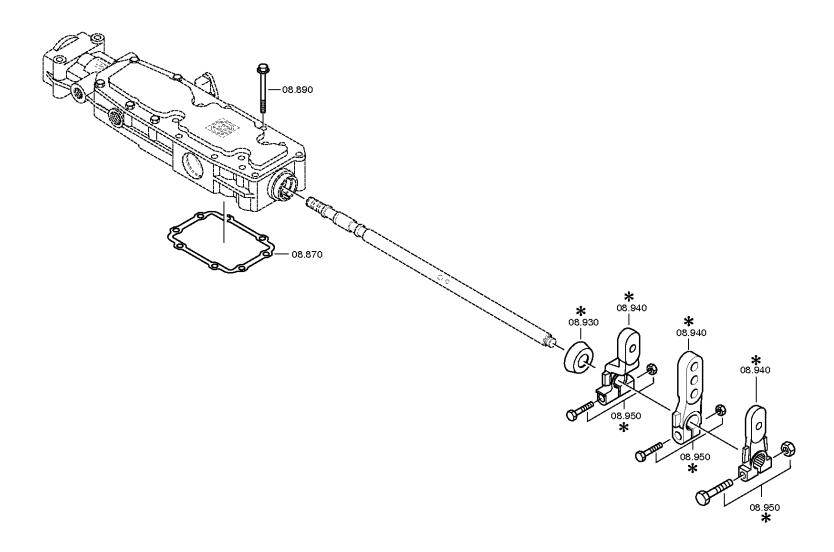


Page 1 from 6

Material number: 1342.001.001

Plate: 068.07.81-1 GEAR SHIFT SHAFT



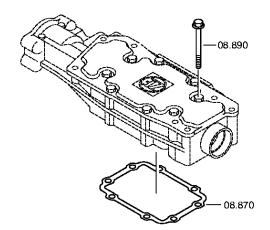


Page 2 from 6

Material number: 1342.001.001

Plate: 161.07.81-1 GEAR SHIFT SHAFT



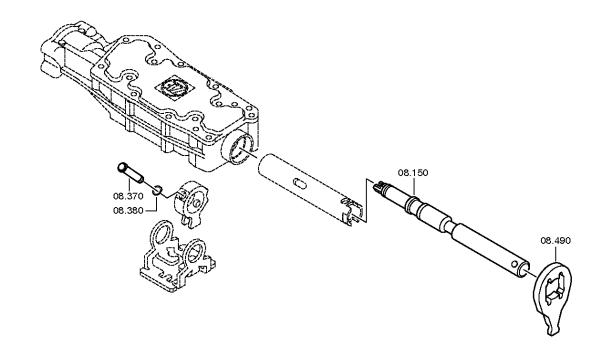


Page 3 from 6

Material number: 1342.001.001

Plate: 068.07.40-1 GEAR SHIFT SHAFT



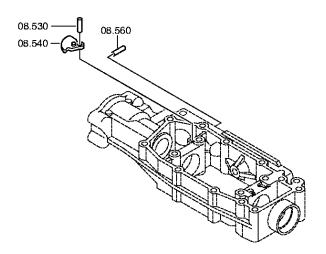


Page 5 from 6

Material number: 1342.001.001

Plate: 068.07.82-1 GEAR SHIFT SHAFT



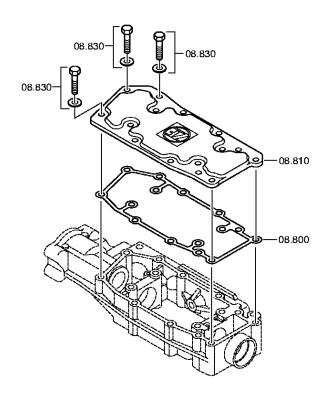


Page 6 from 6

Material number: 1342.001.001

Plate: 068.07.83-1 GEAR SHIFT SHAFT



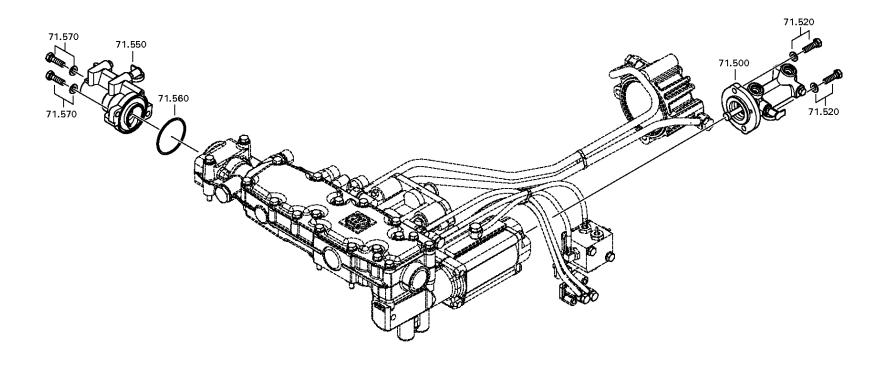


Page 1 from 3

Material number: 1342.001.001

Plate: 068.08.26-1 SELECTOR CYLINDER 16 S 1920 TD / SELECTOR CYLINDER



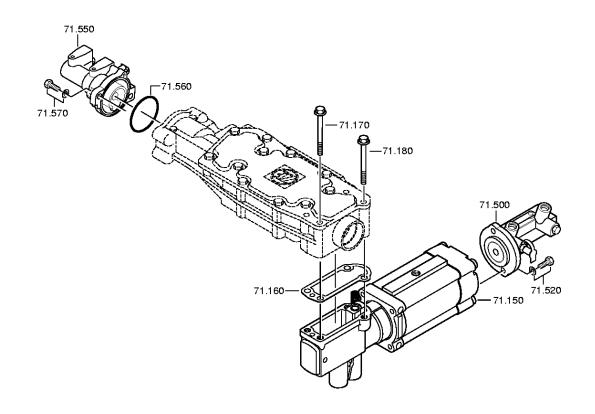


Page 2 from 3

Material number: 1342.001.001

Plate: 068.08.34-1 SELECTOR CYLINDER 16 S 1920 TD / SELECTOR CYLINDER



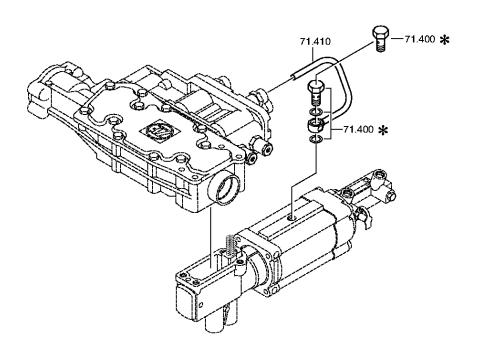


Page 3 from 3

Material number: 1342.001.001

Plate: 068.08.91-1 SELECTOR CYLINDER 16 S 1920 TD / SELECTOR CYLINDER



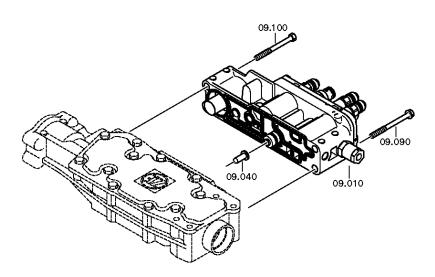


Page 1 from 2

Material number: 1342.001.001

Plate: 068.09.03-1 CONNECTING PARTS 16 S 1920 TD / CONNECTING PARTS



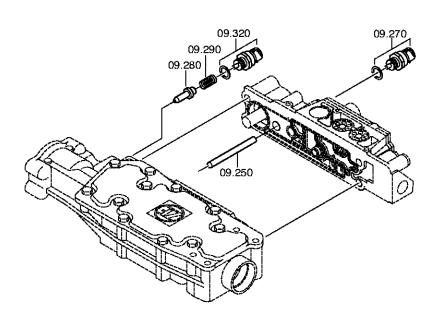


Page 2 from 2

Material number: 1342.001.001

Plate: 068.09.08-1 CONNECTING PARTS 16 S 1920 TD / CONNECTING PARTS



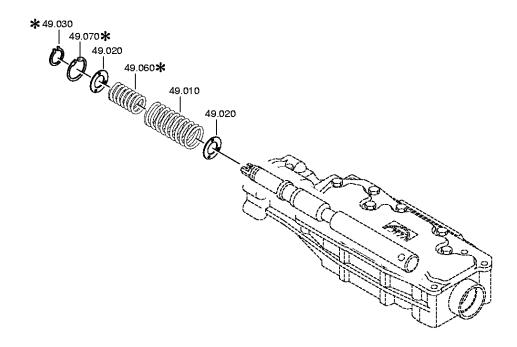


Page 1 from 1

Material number: 1342.001.001 16 S 1920 TD / Plate: 068.12.07-1 SET OF SPRINGS

Material-assembly-group-no: 1316.149.029



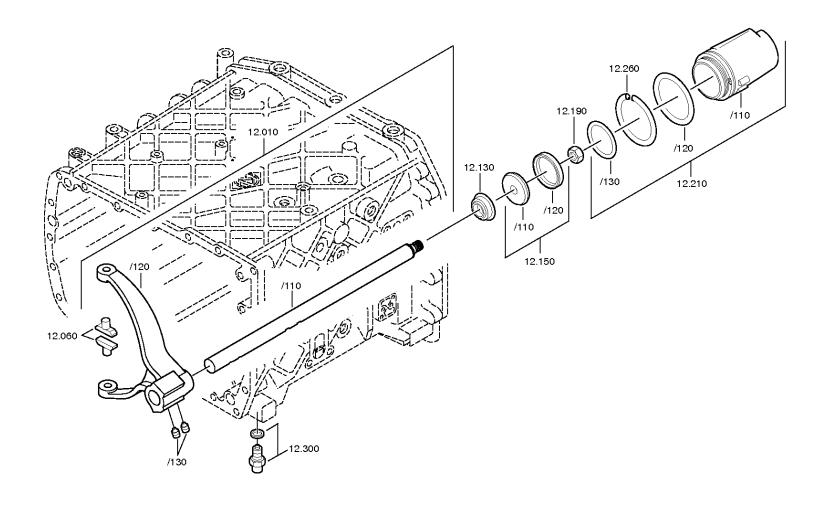


Page 1 from 2

Material number: 1342.001.001

Plate: 068.40.04-1 GV-SHIFT SYSTEM 16 S 1920 TD / GV-SHIFT SYSTEM



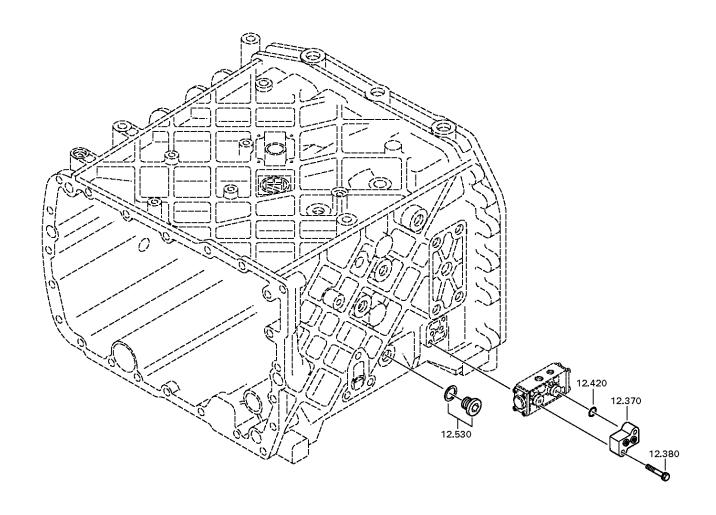


Page 2 from 2

Material number: 1342.001.001

Plate: 068.40.43-1 GV-SHIFT SYSTEM 16 S 1920 TD / GV-SHIFT SYSTEM



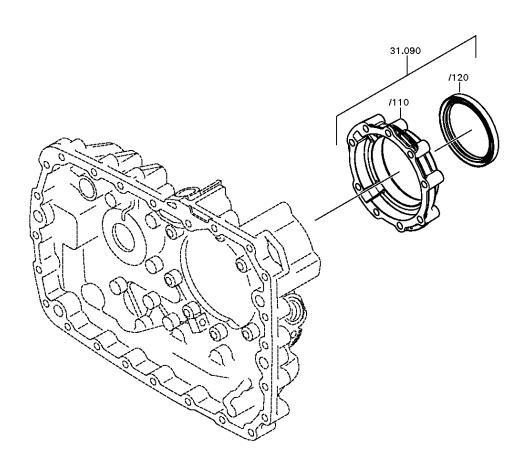


Page 1 from 5

Material number: 1342.001.001

Plate: 068.43.21-1 RC HOUSING



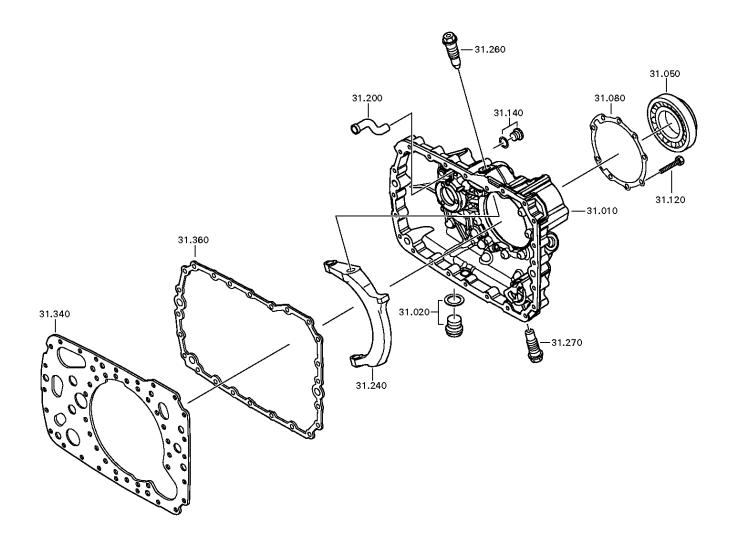


Page 2 from 5

Material number: 1342.001.001

Plate: 068.43.06-1 RC HOUSING



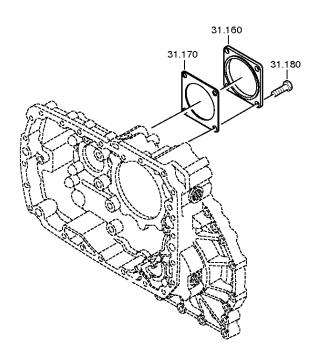


Page 3 from 5

Material number: 1342.001.001

Plate: 068.43.40-1 RC HOUSING



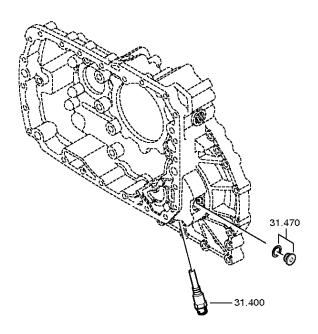


Page 4 from 5

Material number: 1342.001.001

Plate: 068.43.41-1 RC HOUSING



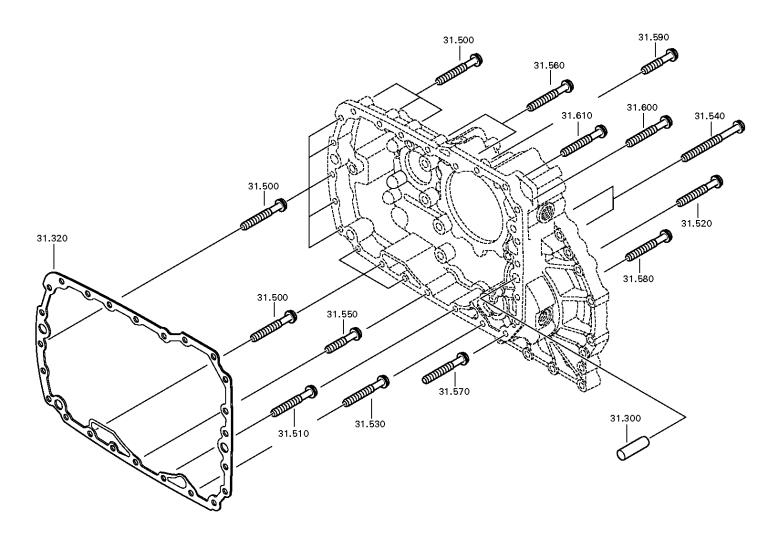


Page 5 from 5

Material number: 1342.001.001

Plate: 068.43.80-1 RC HOUSING

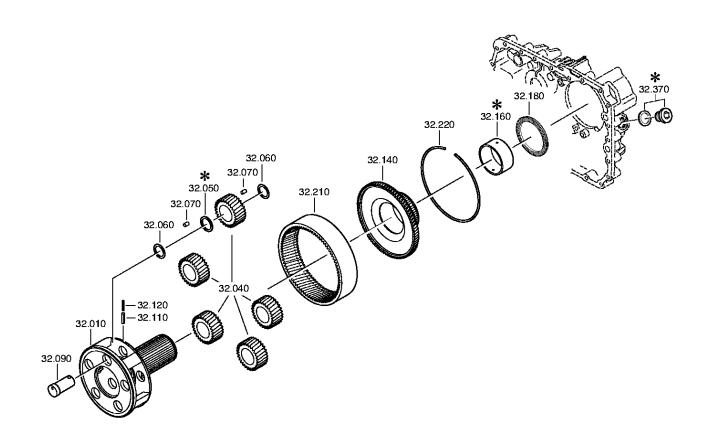




Material number: 1342.001.001

Plate: 068.44.07-1 PLANETARY DRIVE 16 S 1920 TD / PLANETARY DRIVE



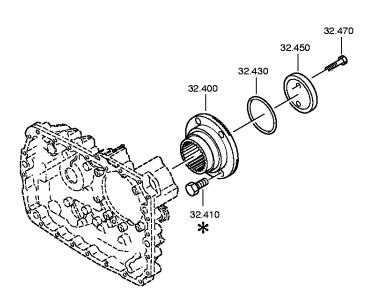


Page 2 from 2

Material number: 1342.001.001

Plate: 068.44.41-1 PLANETARY DRIVE 16 S 1920 TD / PLANETARY DRIVE





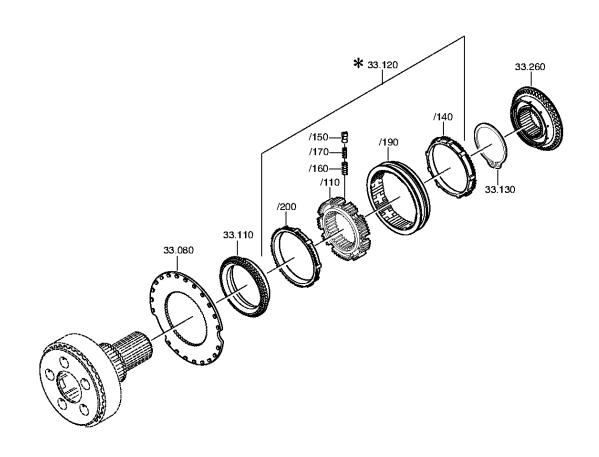
Page 1 from 2

Material number: 1342.001.001

Plate: 068.45.04-1 SYNCHRONIZER

16 S 1920 TD / SYNCHRONIZER



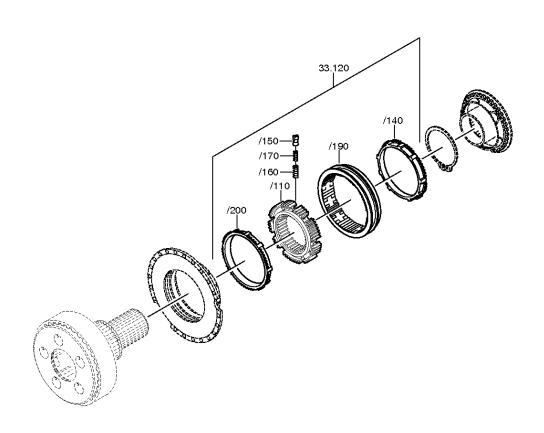


Page 2 from 2

Material number: 1342.001.001

Plate: 068.45.40-1 SYNCHRONIZER 16 S 1920 TD / SYNCHRONIZER

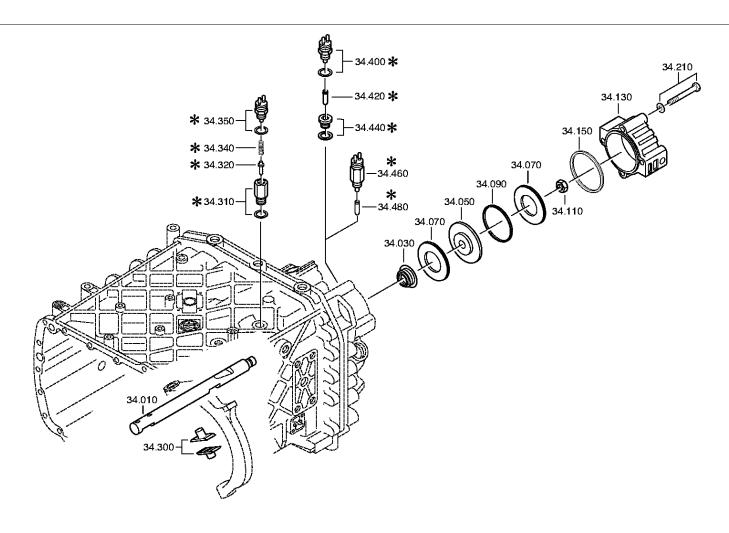




Material number: 1342.001.001

Plate: 068.46.02-1 GP SHIFT SYSTEM 16 S 1920 TD / GP SHIFT SYSTEM



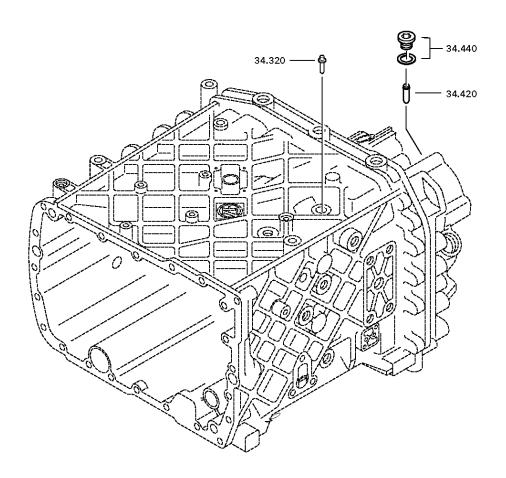


Page 2 from 2

Material number: 1342.001.001

Plate: 068.46.41-1 GP SHIFT SYSTEM 16 S 1920 TD / GP SHIFT SYSTEM



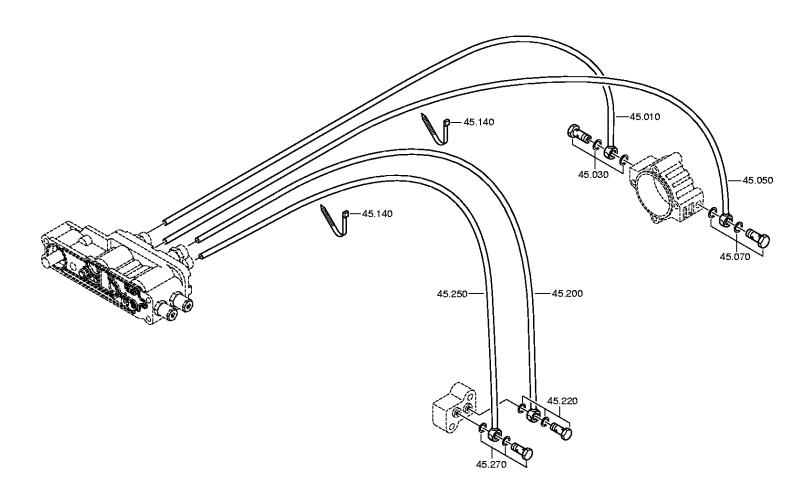


Page 1 from 1

Material number: 1342.001.001 16 S 1920 TD / Plate: 068.57.12-1 RANGE SELECTION

Material-assembly-group-no: 1316.145.012





Page 1 from 1

Material number: 1342.001.001 16 S 1920 TD / CLUTCH RELEASE DEVICE

Material-assembly-group-no: 1315.168.019



