



## **SPARE PARTS CATALOGUE**

**0091 757 023b 11/2005**

**16 S 1650**

**ZF Parts list n° 1297 095 111**

**customer: MAZ**

**ZF do Brasil Ltda.**

part list: 1297 095 111

16S-1650 / OD\*LL\*D-L H-H\* MAZ

item	text	mod.no.
A10	CUSTOMER : MAZ	
A14	COUNTRY : BIELO RUSSIA	
A16	CUST.SPEC.NO: CODE:	
F06	INSTAL.POSITION:HOR.LH*FLANGE MONTED*	
F10	RATIO: 11,64 - 0,83	
	H11,64 * 8,00 * 5,73 * 4,07 * 2,86 * 1,96 * 1,41 * 1,00 * R9,41 *	
	S9,70 * 6,67 * 4,77 * 3,40 * 2,38 * 1,64 * 1,17 * 0,83 * R7,84 *	
F34	CONTROL : LATERAL LH H-H	
F38	SEPARAT.CLUTCH: SYNCHRONIZED	
F40	INPUT SHAFT : L=115* SAE 10C 2"	
F46	REL.BRG.CARRIER: Ø60f8 X L=60	
	CLUTCH BELL HOUSING NOT STANDARD	
	CLUTCH FORK PULL TYPE X OPENING 78mm	
F50	OUTPUT :STANDARD BEARINGS	
F52	OUTP.FLANGE: RA : BOLT 4XM14X1.50X50 *	
F64	CONN.OF GEARSHIFT:	
F66	CONTROL G. SHIFT SHAFT : A=273	
F68	MEAS POINT SHIFTLEVER	
F74	SHIFT LEVER : R=75	
F78	GEARSHIFT FLANGE : G (CUSTOMER)	
F80	SHIFT LEVER : POS.	
F84	DIMENSION : S (CUSTOMER)	
F90	SETTING DIMENSION:S=(CUSTOMER)	
F94	ANGLE LEVER : E21°	
F96	SET OF SPRINGS : LAYOUT Q1 *	
F98	PAWL STOP: SPRING FORCE RG=300N	
G16	SELECTION PATTERN: I	
G30	SWITCH : RG * WITH * NA	
G32	SWITCH : NG * WITH * NF	
G36	SWITCH : GP * WITH * NA	
G56	SWITCH : GV * WITH * NF	

part list: 1297 095 111

16S-1650 / OD\*LL\*D-L H-H\* MAZ

item	text	mod.no.
G60	AUXILIARY UNITS/ACCESSORIES	
G64	HEAT EXCHANGER FRONT LEFT PREP*	
H50	ELETRONIC :	
H68	PULSE TRANSMITTER: E/Z6	
M00	DRAWING:	
M12	ASSEMBLY DRAWING 1297.695.116(0)	
M14	SECTION 1295.107.071(0)	
M16	SECTION 1297.095.019(0)	
M90	OIL CAPACITY: AP. 14,5L	
M92	OIL GRADE ACC.TO ZF:TE-ML02	
M94	MASS: APPRX. 390,0 KG	
M96	PAINT:DEEP-BLACK*RAL 9005*ZFN915W	
M98	PRESERVATION:KA2 T/KI2/S09*ZFN 916	
S02	VEHICLE DATA 1:	
S04	MODEL : SEMI-TRAILLER	
	GVW 6X4 :65.000 KG	
	MARKET : BIELO RUSSIA	
	APPLICATION :ON ROAD	
	MOTOR : YAMZ 7511	
	294KW @ 1900rpm	
	1715N.m @ 1100rpm	
S18	CLUTCH PULL TYPE MFZ 430	
	REAR AXLE : I:3,86	
	PNEU : 295/80 R22,5	
	rdyn :0,506m	
	FRONT AREA : 8,0m²(ADOPTED)	
	FR : 0,01 (ADOPTED)	
	CW : 0,85 (ADOPTED)	
	80 MISCELLANEOUS MATERIAL	

part list: 1297 095 111

16S-1650 / OD\*LL\*D-L H-H\* MAZ

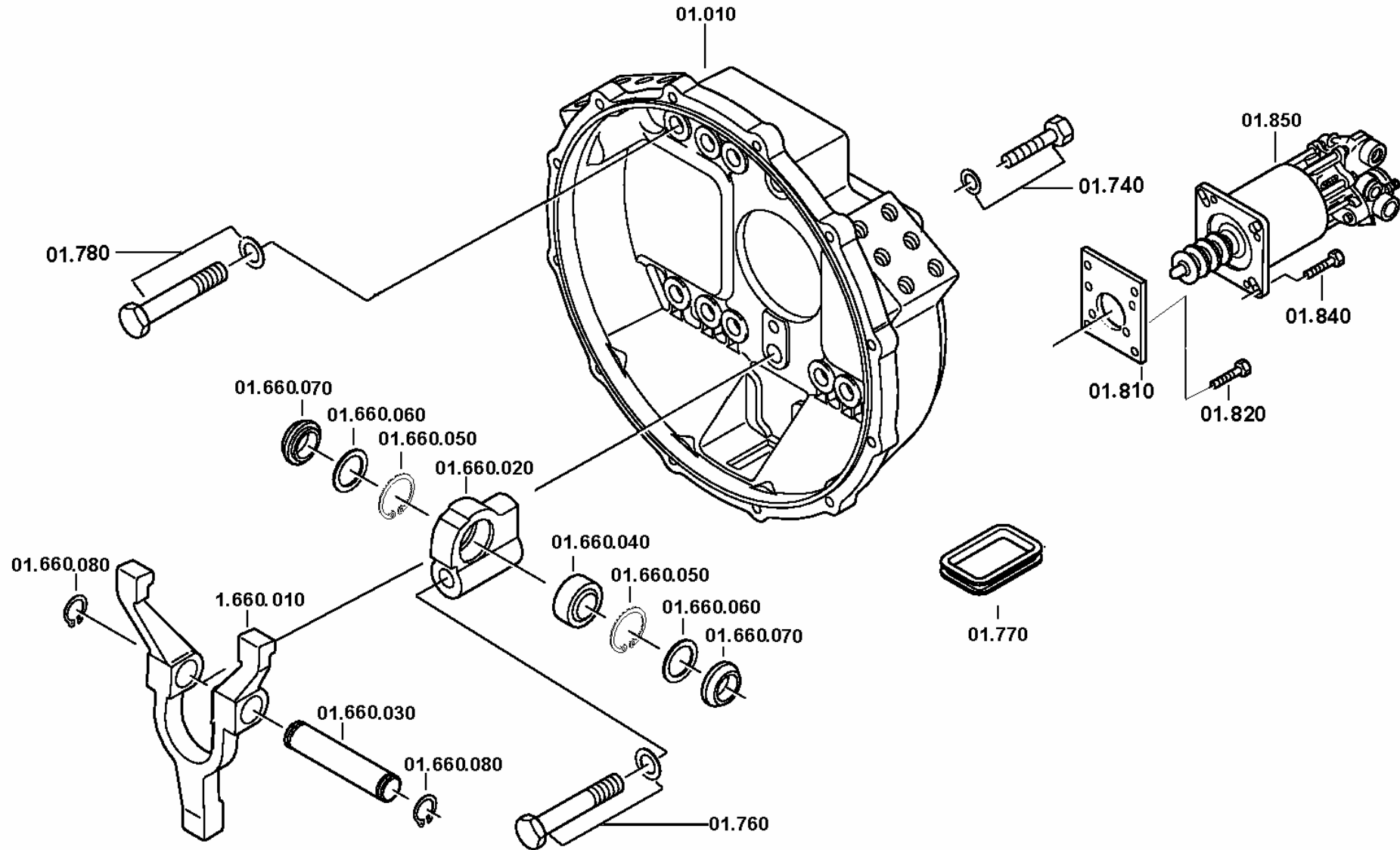
figure	part no.	description	mod.n°	technical information
0097 660 001	0091 101 256	CLUTCH HOUSING		
0097 001 005	0091 101 215	GEARBOX HOUSING		
0097 001 004	0091 101 255	GEARBOX HOUSING		
0097 002 003	0091 102 072	INPUT SHAFT		
0097 002 003	0091 102 219	INPUT SHAFT		
0097 002 003	0091 102 220	CONN.PLATE		
0097 003 001	0091 103 080	LAY SHAFT		
0097 004 004	0091 104 115	MAIN SHAFT		
0097 004 004	0091 104 213	MAIN SHAFT		
0097 006 003	0091 106 073	GEAR SHIFT RAIL		
0097 007 003	0091 107 135	GEAR SHIFT SYSTEM		
0097 007 003	0091 107 318	GEAR SHIFT SHAFT		
0097 007 003	0091 107 312	COVER		
0097 007 003	0091 107 319	CONN.PARTS		
0097 007 003	0091 107 179	CONN.PARTS		
0097 049 003	0091 149 029	SET OF SPRINGS		
0097 012 004	0091 112 010	GV-SHIFT SYSTEM		
0097 012 004	1295 112 449	CONNECTING PARTS		
0097 012 004	1295 112 440	CYLINDER		
0097 031 004	0091 131 043	GP HOUSING		
0097 031 003	1295 131 084	COVER		
0097 031 003	1295 131 400	CONN.PLATE		
0097 032 003	0091 132 062	PLANETARY DRIVE		
0097 032 003	1297 132 800	PLANETARY DRIVE		
0097 032 004	0091 132 006	OUTPUT FLANGE		
0097 033 002	1297 133 004	SYNCHRONIZER		
0097 033 002	1295 133 401	SYNCHRONIZER		
0097 034 004	0091 134 016	GP.SHIFT SYSTEM		
0097 034 004	0091 134 015	CONN.PARTS		
0097 059 001	0091 159 019	RANGE SELECTION		

parts list:  
figure:

1297 095 111  
0097 660 001

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
CLUTCH HOUSING

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 660 001

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
CLUTCH HOUSING

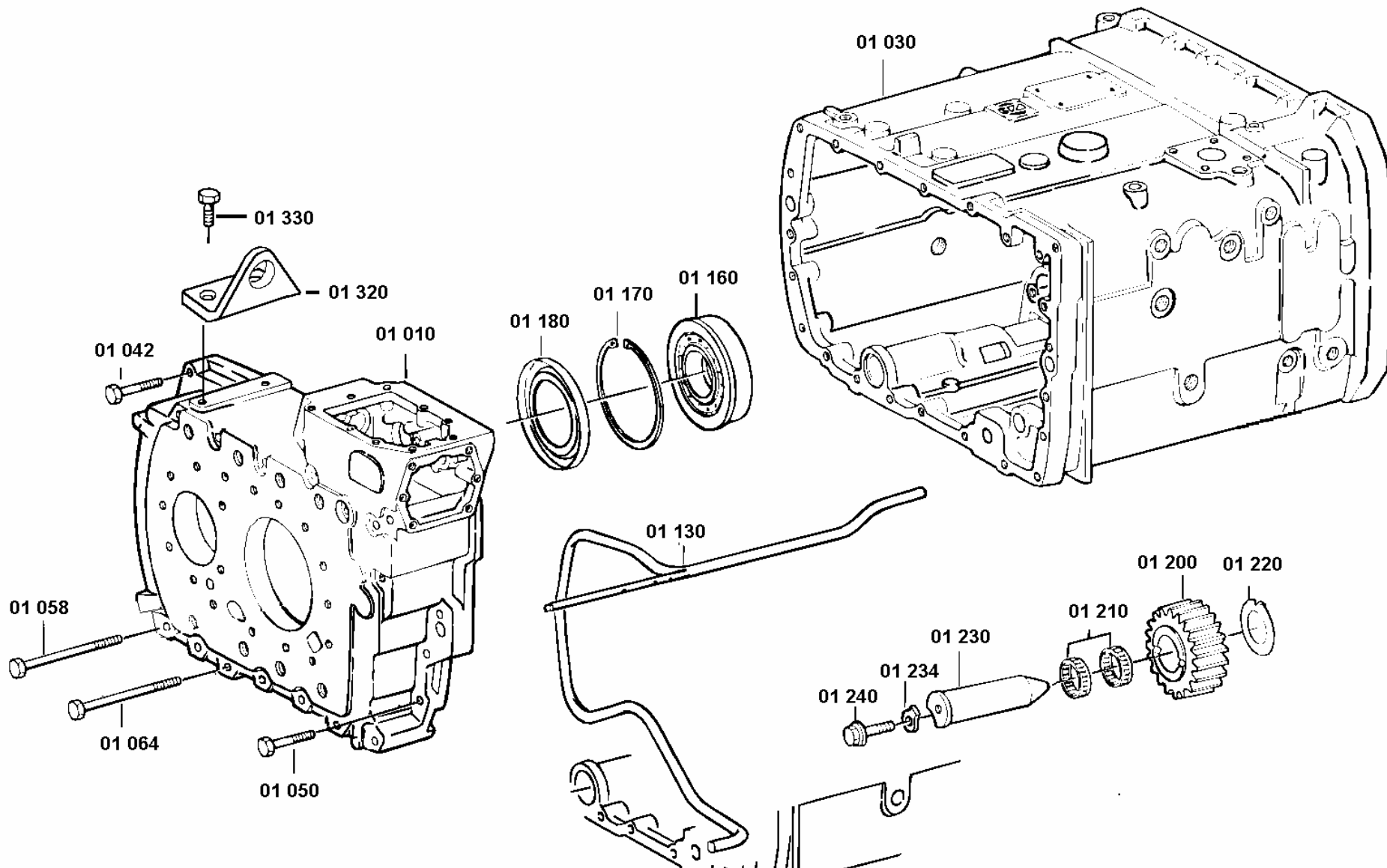
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	6060 201 261	CLUTCH HOUSING		60065	
/010	1	0091 268 001	CLUTCH FORK			
/020	1	0091 306 107	BEARING BRACKET		60219	
/030	1	0501 398 765	PIN		58894	
/040	1	0635 285 060	ARTIC. ROLLER			GE25 UK-2RS 25x42x20 FA.ELGES
/050	2	0630 502 023	RETAINING RING			42X1,75 DIN 472
/060	2	0501 315 198	SEALING RING			32 X 42 X5 FA.CFW.
/070	2	6060 306 087	SEALING WASHER			
/080	1	0630 501 020	RETAINING RING			25X1,2 DIN 471
740	1		HEXAGON SCREW			M12X35*DIN 933 * 8.8 * A3C
/010	1	0636 011 335	HEXAGON SCREW			M12X35*DIN 933 * 8.8 * A3C
/020	1	0630 001 049	WASHER			13 DIN 125 AUSG.9 200 HV A3C
760	1		HEXAGON SCREW			M18X1,5X145 * ISO 8765 * 8.8 * A3C
/010	1	0636 020 413	HEXAGON SCREW			M 18X1,5X145 * ISO 8765 * 8.8 * A3C
/020	1	0630 001 021	WASHER			19 DIN 125 200HV AUSG.90-
770	1	1315 301 230	CLOSURE CAPE			
780	7		HEXAGON SCREW			M18X1,5X70 * ISO 8765 * 8.8 * A3C
/010	7	0636 020 407	HEXAGON SCREW			M18X1,5X70 * ISO 8765 * 8.8 * A3C
/020	7	0630 001 021	WASHER			19 DIN 125 200HV AUSG.90-
810	1	6060 201 221	INTERM.PLATE			DIN EN 1706 * EN AC-ALSI9CU3
820	4		HEXAGON SCREW			M8X20 ISO 4017 /ZFB 988 8.8 A3C
/010	4	0636 015 299	HEXAGON SCREW			M8X20 ISO 4017 /ZFB 988 8.8 A3C
840	4		HEXAGON SCREW			M8X14 ISO 4017 8.8 A3C
/010		0636 015 406	HEXAGON SCREW			M8X14 ISO 4017 8.8 A3C
850	1	0501 006 570	CYLINDER			970.051.423.0

parts list:  
figure:

1297 095 111  
0097 001 004

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
GEARBOX HOUSING

\*depending on parts list n°.

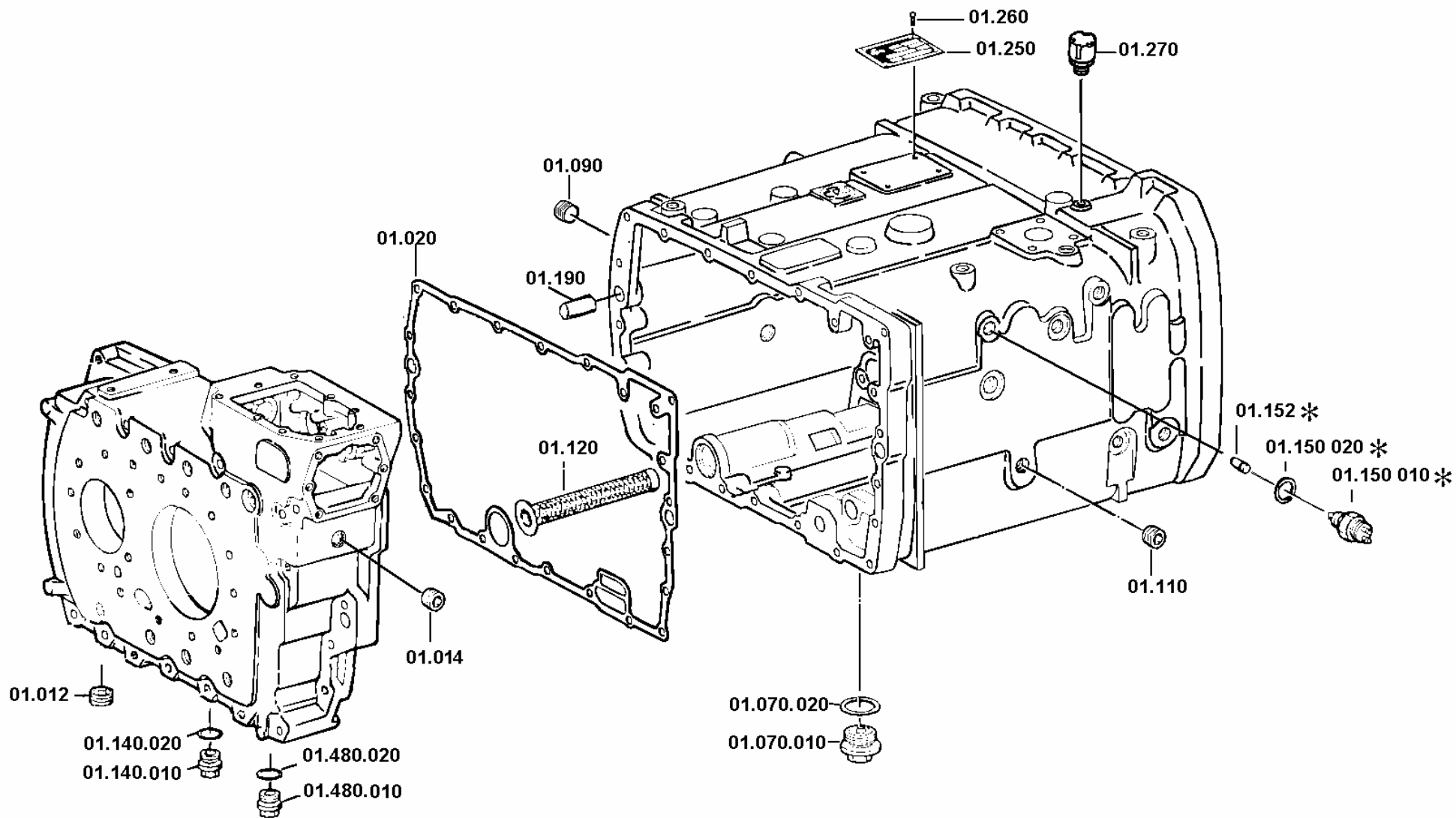


parts list:  
figure:

1297 095 111  
0097 001 005

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
GEARBOX HOUSING

\*depending on parts list n°.





part list: 1297 095 111  
figure: 0097 001 005  
0097 001 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GEARBOX HOUSING  
GEARBOX HOUSING

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 301 136	HOUSING I			
012	1		SCREW PLUG			M24X1,5*50N.M
	1	0736 303 005	SCREW PLUG			M24X1,5
014	1	0501 398 708	SCREW PLUG			M24X1,5 *50,0N.M*
020	1	1313 301 038	GASKET			
030	1	0091 301 164	HOUSING II		59792	
042	2		HEX CAP SCREW			M10X55*46N.M*DIN931*
	2	0636 010 172	HEX CAP SCREW			M 10X55*DIN 931*8.8
050	6		HEX CAP SCREW			M10 X55*46N.M*DIN931*
	6	0636 010 172	HEX CAP SCREW			M 10X55*DIN 931*8.8
058	13		HEXAGON SCREW			M10X125 DIN931*ALT/8.8
	13	0636 010 205	HEXAGON SCREW			M 10X125 DIN 931 ALT 8.8
064	2		HEXAGON SCREW			M10X125 DIN 931 ALT/8.8
	2	0636 010 205	HEXAGON SCREW			M 10X 125 DIN 931 ALT 8.8
070	1		MAGNETIC SCREW PLUG			M38X1,5*140N.M*DICHTRING
/010	1	0501 398 755	MAGNETIC SCREW PLUG		57775	M38X1,5 DIN 7604 ST * FE/ZN5-8C
/020	1	0634 801 321	SEALING RING			A 38 x 44*DIN 7603*AL
090	1		SCREW PLUG			M24X1,5*50N.M
	1	0736 303 005	SCREW PLUG			M24X1,5
110	1		SCREW PLUG			M24X1,5*50N.M
	1	0736 303 005	SCREW PLUG			M24X1,5
120	1	0750 131 001	FILTER			WTB
130	1	0091 201 013	SPRAY TUBE			
140	1		SCREW PLUG			M22X1,5 * 60N.M*DICHTRING
/010	1	0636 302 045	SCREW PLUG			M22X1,5*DIN 908*ST*A3C
/020	1	0634 801 074	SEALING RING			A 22 X 27 DIN 7603 CU

part list: 1297 095 111  
figure: 0097 001 005  
0097 001 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GEARBOX HOUSING  
GEARBOX HOUSING

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
150	1		SWITCH			SCHL 45,0NM DICHTRI *BAYONET
/010	1	0501 210 058	SWITCH			
/020	1	0634 801 062	SEALING RING			A18X24 DIN 7603 AL
152	1	1295 212 007	PIN			
160	1	0501 398 714	ROLLER BEARING			80 X 140 X 33,4 FA F
170	1		RETAINING RING			WTB A=3,65-4,00(ABSTUFUNG:0,05MM)
	1	0630 502 097	RETAINING RING			148X4 J148*FA.ORBIS
	1	0630 502 166	RETAINING RING			148X3,95 J*FA.ORBIS
	1	0630 502 167	RETAINING RING			148X3,9 J* FA.ORBIS
	1	0630 502 168	RETAINING RING			148X3,85 J* FA.ORBIS
	1	0630 502 169	RETAINING RING			148X 3,8 J*FA.ORBIS
	1	0630 502 170	RETAINING RING			148X 3,75 J*FA.ORBIS
	1	0630 502 216	RETAINING RING			
	1	0630 502 217	RETAINING RING			148X3,65 J*FA.ORBIS
180	1	1297 301 004	OIL COLL.PLATE			
190	2	0731 201 459	CYLINDRICAL PIN			
200	1	1295 305 052	SPUR GEAR REVERSE			RE Z=24
210	2	0750 115 011	NEEDLE CAGE			WTB 45,0X53,0X21,0
220	1	0730 150 064	THRUST WASHER			
230	1	1295 305 056	REV.IDLER SHAFT			
234	1	1295 305 057	WASHER			
240	1	0501 308 588	LOCKING SCREW			
250	1	0091 307 299	TYPE PLATE			DIN 1745 AL99,5 F13
260	4	0501 398 460	BLIND RIVET			7,4X2,43 AIMG5

part list: 1297 095 111  
figure: 0097 001 005  
0097 001 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GEARBOX HOUSING  
GEARBOX HOUSING

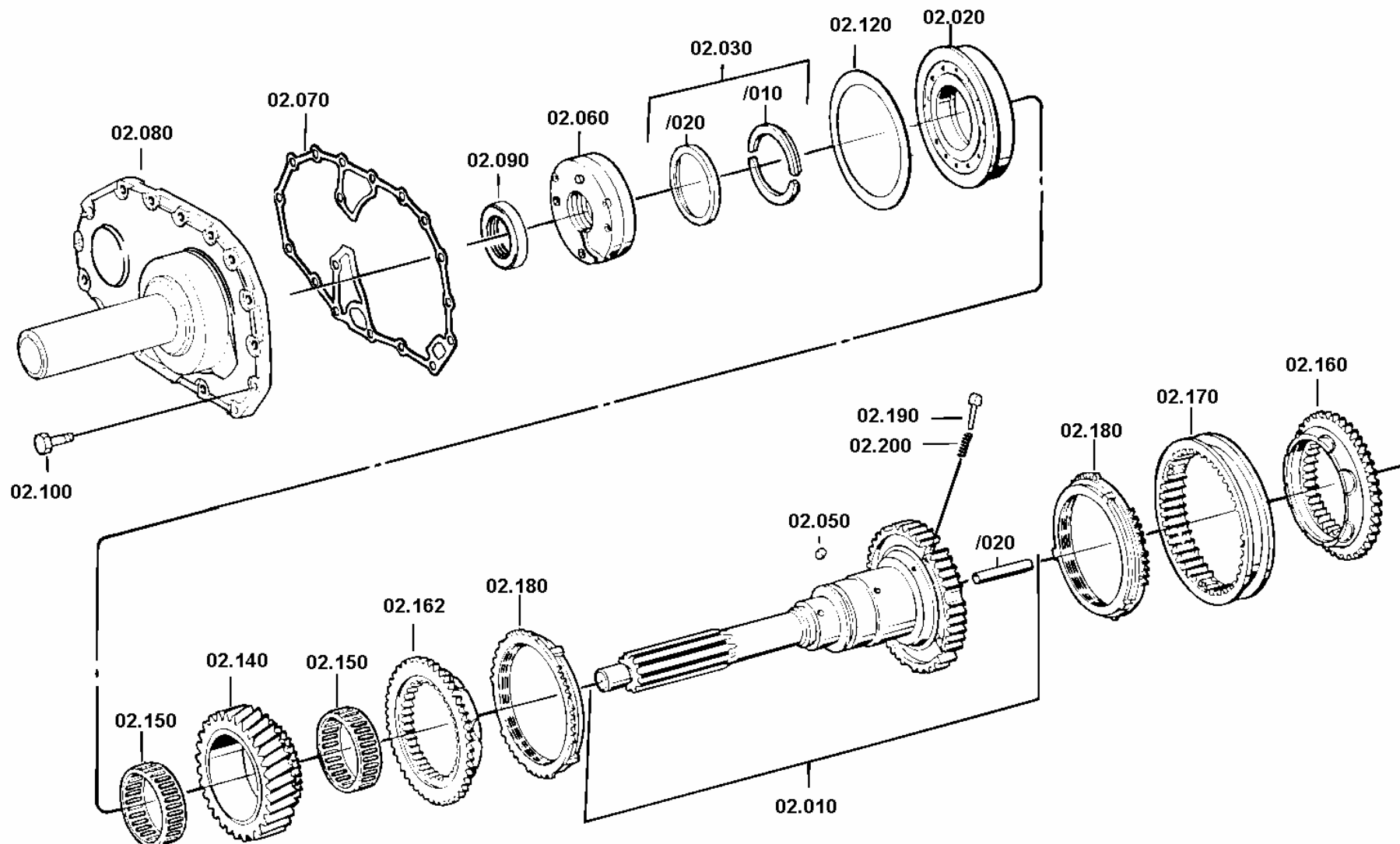
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
270	1		BREATHER			
	1	0501 202 797	BREATHER			
320	1	0091 301 167	GEARBOX SUPPORT			
330	2	0636 015 264	HEX CAP SCREW			M10X20 ISO 4017 8.8 A3C
480	1		SCREW PLUG			M22X1,5 * 60N.M*DICHTRING
/010	1	0636 302 045	SCREW PLUG			M22X1,5*DIN 908*ST*A3C
/020	1	0634 801 074	SEALING RING			A 22 X 27 DIN 7603 CU

parts list:  
figure:

1297 095 111  
0097 002 003

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
INPUT SHAFT

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 002 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
INPUT SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 202 062	INPUT SHAFT			CPL.
/020	1	0730 062 323	PIPE			A=60,00 EE
020	1	0750 118 130	CY.ROLL.BEARING			WTB 80,0X150,0X27,5
030	1		SPLIT RING			WTB
/010	1	1295 202 034	SPLIT RING	X		CPL.GESTANZT
	1		SPLIT RING			4,00(ABSTUFUNG:0,10MM)
	1	0730 105 156	SPLIT RING			A=4,00
	1	0730 105 155	SPLIT RING			A=3,90
	1	0730 105 154	SPLIT RING			A=3,80
/020	1	0730 062 579	RETAINING RING			A=4,20
	1	1295 202 033	SPLIT RING	X		
/010	1		SPLIT RING			4,30(ABSTUFUNG:0,05MM)
	1	0730 103 244	SPLIT RING			A=4,30
	1	0730 104 338	SPLIT RING			A=4,25
	1	0730 104 337	SPLIT RING			A=4,20
	1	0730 103 941	SPLIT RING			A=4,10
	1	0730 103 940	SPLIT RING			A=4,05
	1	0730 103 939	SPLIT RING			A=4,00
	1	0730 103 938	SPLIT RING			A=3,95
	1	0730 103 937	SPLIT RING			A=3,90
	1	0730 103 936	SPLIT RING			A=3,85
	1	0730 103 935	SPLIT RING			A=3,80
/020	1	0730 061 816	RETAINING RING			81X93X7,5
050	1	0635 470 012	CYL.ROLLER			7 X 7 DIN 5402
060	1	1295 202 054	PUMP			
070	1	1313 302 014	GASKET			
080	1	0091 302 306	CONN. PLATE			

part list: 1297 095 111  
figure: 0097 002 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
INPUT SHAFT

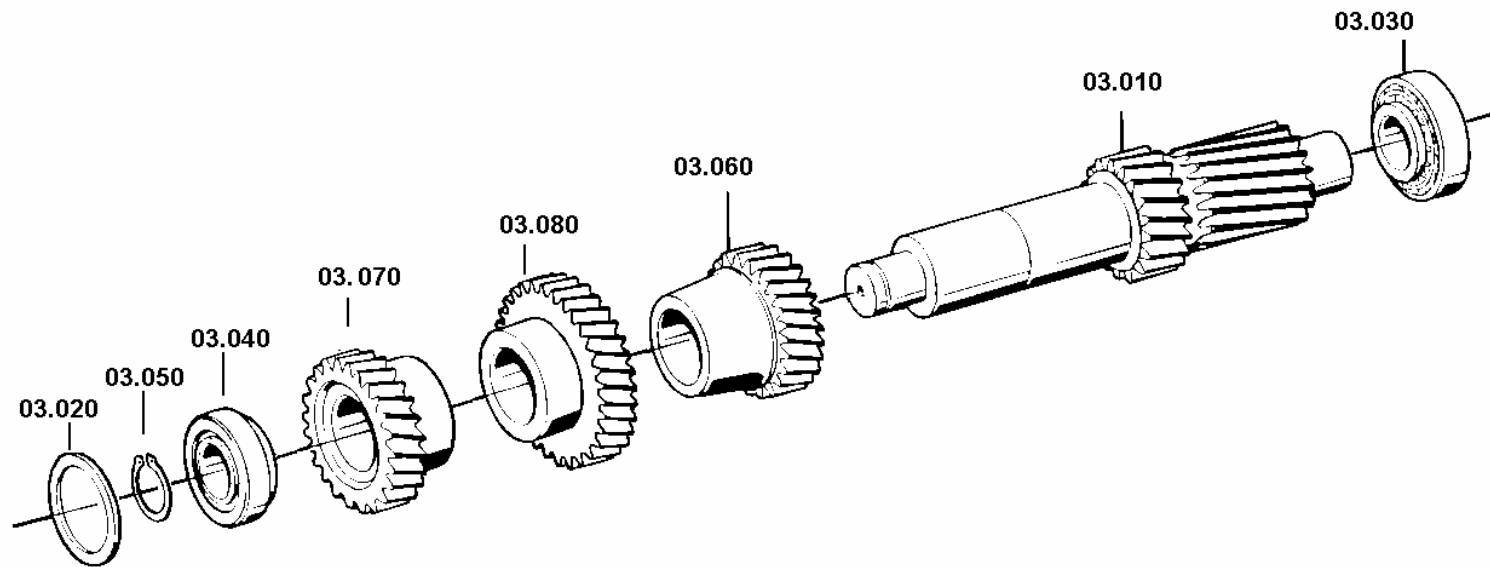
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
090		0734 310 386	SHAFT SEAL		58951	55X75X8 FA CFW
100	16		HEX.CAP.SCREW			M10X25 DIN 933 8.8
	16	0636 015 120	HEX.CAP.SCREW			M10X25 DIN 933 8.8
120	1		SHIM			0,80(ABSTUFUNG:0,08MM)
	1	0730 103 804	SHIM			A=0,80
	1	0730 108 096	SHIM			A=0,75
	1	0730 102 505	SHIM			A=0,70
	1	0730 102 504	SHIM			A=0,60
	1	0730 102 503	SHIM			A=0,50
140	1	0091 302 294	HELICAL GEAR			1M KONST.Z=36 ZF7B
150	2	0735 320 896	NEEDLE CAGE			88 X 96 X 29*FA.SKF
160	1	0091 304 311	CLUTCH BODY			ZF-BK 150
162	1	0091 304 310	CLUTCH BODY			ZF-BK-150
170	1	1310 304 202	SLIDING SLEEVE		59567	ZF-BK150
180	2	1297 304 484	SYNCHRONIZER RING			ZF-BK150
190	3	1297 304 436	PRESSURE PIECE			
200	3	0732 040 409	COMPRESSION SPRING			

parts list:  
figure:

1297 095 111  
0097 003 001

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
LAY SHAFT

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 003 001

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
LAY SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 303 156	INTERMEDIATE SHAFT			
020	1		SHIM			3,25(ABSTUFUNG:0,05MM) DIN 17222
	1	0730 103 117	SHIM			A=3,25
	1	0730 103 116	SHIM			A=3,20
	1	0730 103 115	SHIM			A=3,15
	1	0730 103 114	SHIM			A=3,10
	1	0730 102 098	SHIM			A=3,05
	1	0730 102 099	SHIM			A=3,00
	1	0730 102 100	SHIM			A=2,95
	1	0730 102 101	SHIM			A=2,90
	1	0730 102 102	SHIM			A=2,85
	1	0730 102 103	SHIM			A=2,80
	1	0730 102 104	SHIM			A=2,75
	1	0730 102 105	SHIM			A=2,70
	1	0730 102 106	SHIM			A=2,65
	1	0730 102 060	SHIM			A=2,60
	1	0730 102 061	SHIM			A=2,55
	1	0730 102 062	SHIM			A=2,50
	1	0730 102 063	SHIM			A=2,45
	1	0730 102 064	SHIM			A=2,40
	1	0730 102 065	SHIM			A=2,35
	1	0730 102 066	SHIM			A=2,30
	1	0730 102 067	SHIM			A=2,25
	1	0730 102 068	SHIM			A=2,20
	1	0730 102 069	SHIM			A=2,15
	1	0730 102 070	SHIM			A=2,10



part list: 1297 095 111  
figure: 0097 003 001

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
LAY SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
	1	0730 102 071	SHIM			A=2,05
	1	0730 102 072	SHIM			A=2,00
	1	0730 102 073	SHIM			A=1,95
	1	0730 102 074	SHIM			A=1,90
	1	0730 102 075	SHIM			A=1,85
030	1	0750 117 008	TA.ROLL.BEARING			WTB 50,0X110,0X42,2
040	1	0750 117 010	TA.ROLL.BEARING			WTB 50,8X100,0X35,0
050	1		RETAINING RING			WTB A=2,10- 3,20(ABSTUFUNG:0,05MM) DIN 471
	1	0630 501 151	RETAINING RING			50X3,2
	1	0630 501 298	RETAINING RING			50X3,15
	1	0630 501 150	RETAINING RING			50X3,1
	1	0630 501 299	RETAINING RING			50X3,05
	1	0630 531 065	RETAINING RING			50X3
	1	0630 501 111	RETAINING RING			50X2,95
	1	0630 501 112	RETAINING RING			50X2,9
	1	0630 501 113	RETAINING RING			50X2,85
	1	0630 501 114	RETAINING RING			50X2,8
	1	0630 501 115	RETAINING RING			50X2,75
	1	0630 501 116	RETAINING RING			50X2,7
	1	0630 501 117	RETAINING RING			50X2,65
	1	0630 501 118	RETAINING RING			50X2,6
	1	0630 501 160	RETAINING RING			50X2,55
	1	0630 531 064	RETAINING RING			50X2,5
	1	0630 501 159	RETAINING RING			50X2,45
	1	0630 501 148	RETAINING RING			50X2,4
	1	0630 501 294	RETAINING RING			50X2,35
	1	0630 501 147	RETAINING RING			50X2,3

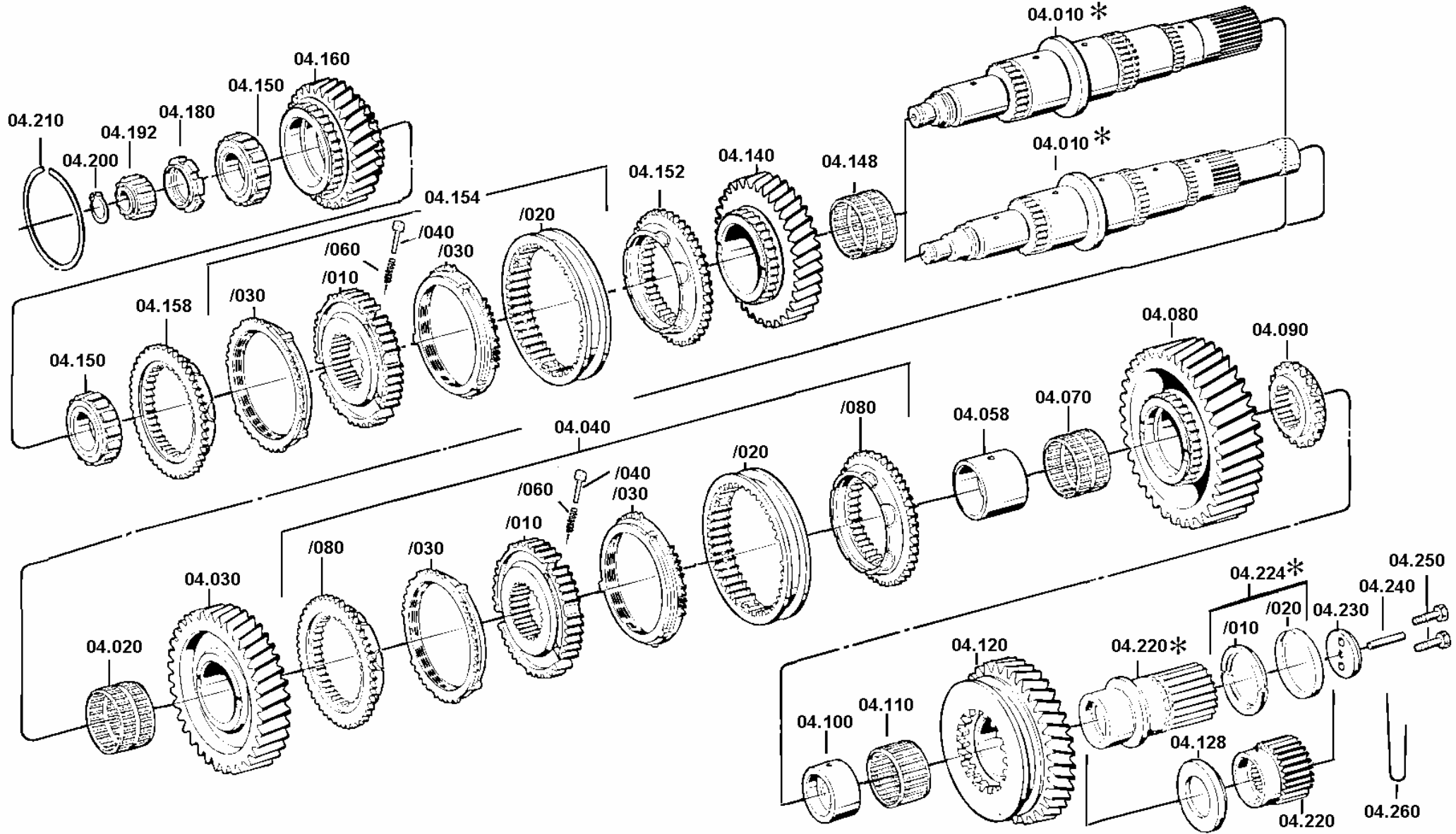


parts list:  
figure:

1297 095 111  
0097 004 003

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
MAIN SHAFT

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 004 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
MAIN SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 304 359	MAIN SHAFT		60285	
020	1	0735 320 418	NEEDLE CAGE			K82X90X50
030	1	0091 304 322	HELICAL GEAR			Z=38 2M
040	1	1316 204 017	SYNCHRONIZER			
/010	1	1316 304 152	SYNCHRONIZER BODY			ZF-BK160
/020	1	1316 304 169	SLIDING SLEEVE			ZF-BK 160
/030	2	1316 304 170	SYNCHRONIZER RING			ZF-BK 160
/040	3	1297 304 436	PRESSURE PIECE			
/060	3	0732 040 409	COMPRESSION SPRING			ZFN 403
/080	2	1316 304 154	CLUTCH BODY			ZF-BK160
058	1	1297 304 035	BUSH			
070	1	0735 320 487	NEEDLE CAGE			K82 X 90 X 68
080	1	0091 304 297	HELICAL GEAR			Z=47 1M
090	1	0091 304 207	CLUTCH BODY			
100	1	0091 304 034	BUSH			
110	1	0735 320 486	NEEDLE CAGE			K78 X 86 X 44
120	1	0091 304 210	GEAR			Z=38 REVERSE
128	1	0091 304 209	RING			
140	1	0091 304 317	HELICAL GEAR			Z=35 3M
148	1	0735 320 452	NEEDLE CAGE			K82 X 90 X 55
150	2	0750 118 005	CY.ROLL.BEARING			WTB 63,0X97,5X34,8
152	1	0091 304 310	CLUTCH BODY			ZF-BK-150
154	1	0091 204 034	SYNCHRONIZER			3+4M*BK*150* KPL
/010	1	0091 304 361	SYNCHRONIZER BODY		59353	ZF-BK150
/020	1	1310 304 225	SLIDING SLEEVE			ZF-BK150
/030	2	1297 304 484	SYNCHRONIZER RING			ZF-BK150

part list: 1297 095 111  
figure: 0097 004 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
MAIN SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
/040	3	1297 304 436	PRESSURE PIECE			
/050	3	0732 040 409	COMPRESSION SPRING			ZFN 403
158	1	0091 304 310	CLUTCH BODY			ZF-BK-150
160	1	0091 304 314	HELICAL GEAR			4M Z=30
180	1		LOCKING NUT			M60X1,5*500N.M
	1	0501 398 371	LOCKING NUT			M60 X 1,5
192	1	0735 455 040	CY.ROLL.BEARING			35x68x28
200	1	0630 501 028	RETAINING RING			35X1,5*DIN 471
210	1		RING			5,90(ABSTUFUNG:0,20MM) DIN 1652-4
	1	0730 005 473	RING			A=5,00
	1	0730 005 472	RING			A=4,80
	1	0730 005 471	RING			A=4,60
	1	0730 005 470	RING			A=4,40
	1	0730 005 469	RING			A=4,20
	1	0730 005 468	RING			A=4,00
	1	0730 005 467	RING			A=3,80
	1	0730 005 466	RING			A=3,60
	1	0730 005 465	RING			A=3,40
	1	0501 398 358	RING			A=5,30
	1	0501 398 362	RING			A=5,60
	1	0501 398 360	RING			A=5,90
	1	0730 005 464	RING			A=3,20
	1	0730 007 747	RING			A=3,00
220	1	0091 304 194	SUN GEAR			Z=27

part list: 1297 095 111  
 figure: 0097 004 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
 MAIN SHAFT

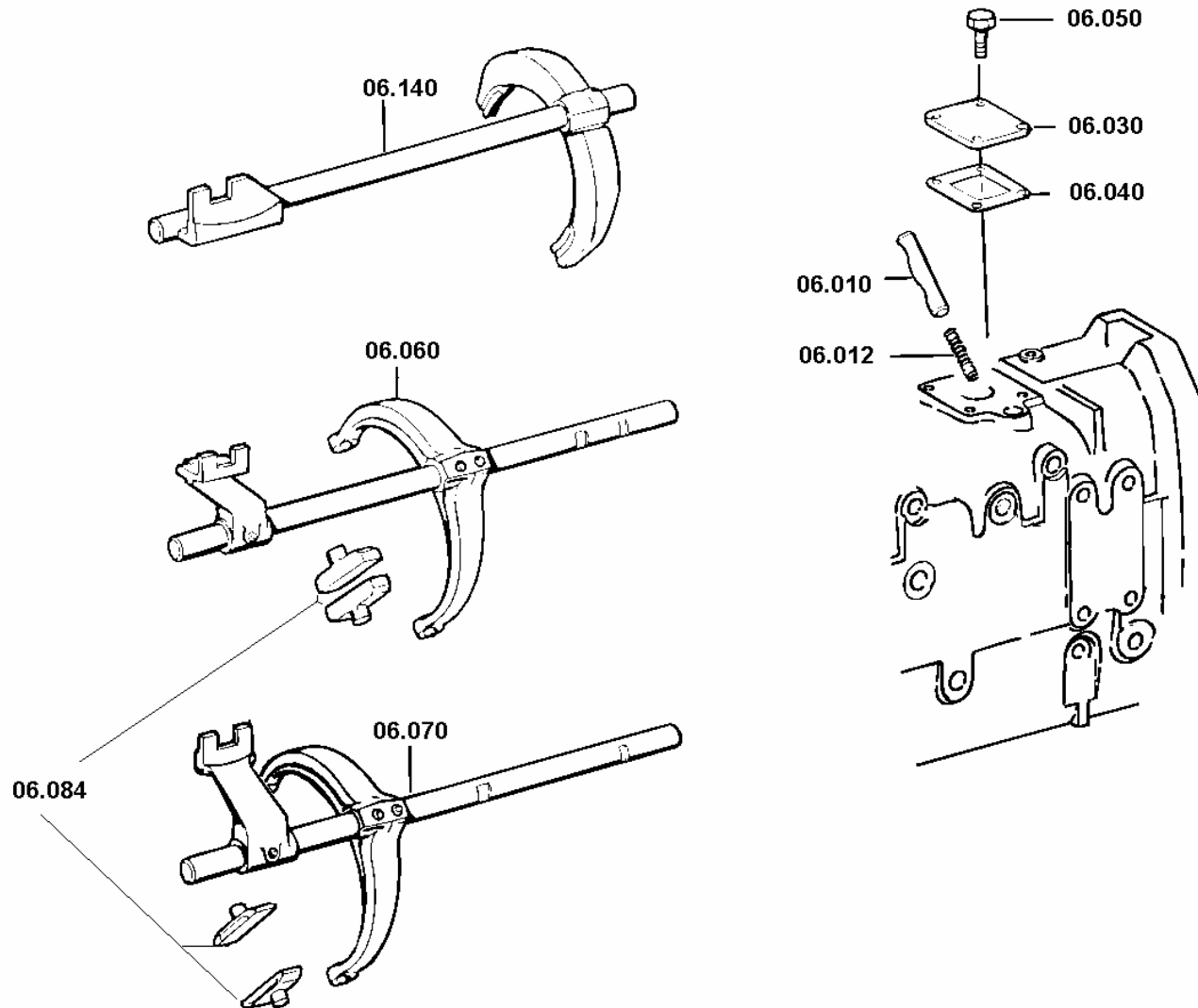
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
230	1	0091 304 291	FIXING WASHER			
240	1	0730 061 842	PIPE			A=50,00
250	2		HEXAGON SCREW			M 10 X50 DIN 931 8.8
	2	0636 010 168	HEXAGON SCREW		60285	M 10 X50 DIN 931 8.8
260	1	0666 890 019	WIRE			1,4 MM X220mm

parts list:  
figure:

1297 095 111  
0097 006 003

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
GEARSHIFT RAIL

\*depending on parts list n°.



part list: 1297 095 111  
 figure: 0097 006 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
 GEARSHIFT SYSTEM

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	1313 306 013	LOCKING PIN			
012	1	0732 040 736	COMPR.SPRING			
030	1	7315 003 185	COVER			
040	1	1313 306 012	GASKET			
050	4		HEX CAP SCREW			M8X16 ISO 4017 / ZFB 9 8.8
	4	0636 015 278	HEX CAP SCREW			M 8X16*DIN 933*8.8 23,0N.M
060	1	0091 206 073	GEAR SHIFT RAIL			
070	1	0091 206 076	GEAR SHIFT RAIL			
084	4	1297 306 120	SLIDING PAD			
140	1	0091 206 052	GEAR SHIFT RAIL			CPL.RÉ*WR* WII*



parts list:

1297 095 111

16S 1650 / OD \* LL \* D-L H-H \* MAZ

figure:

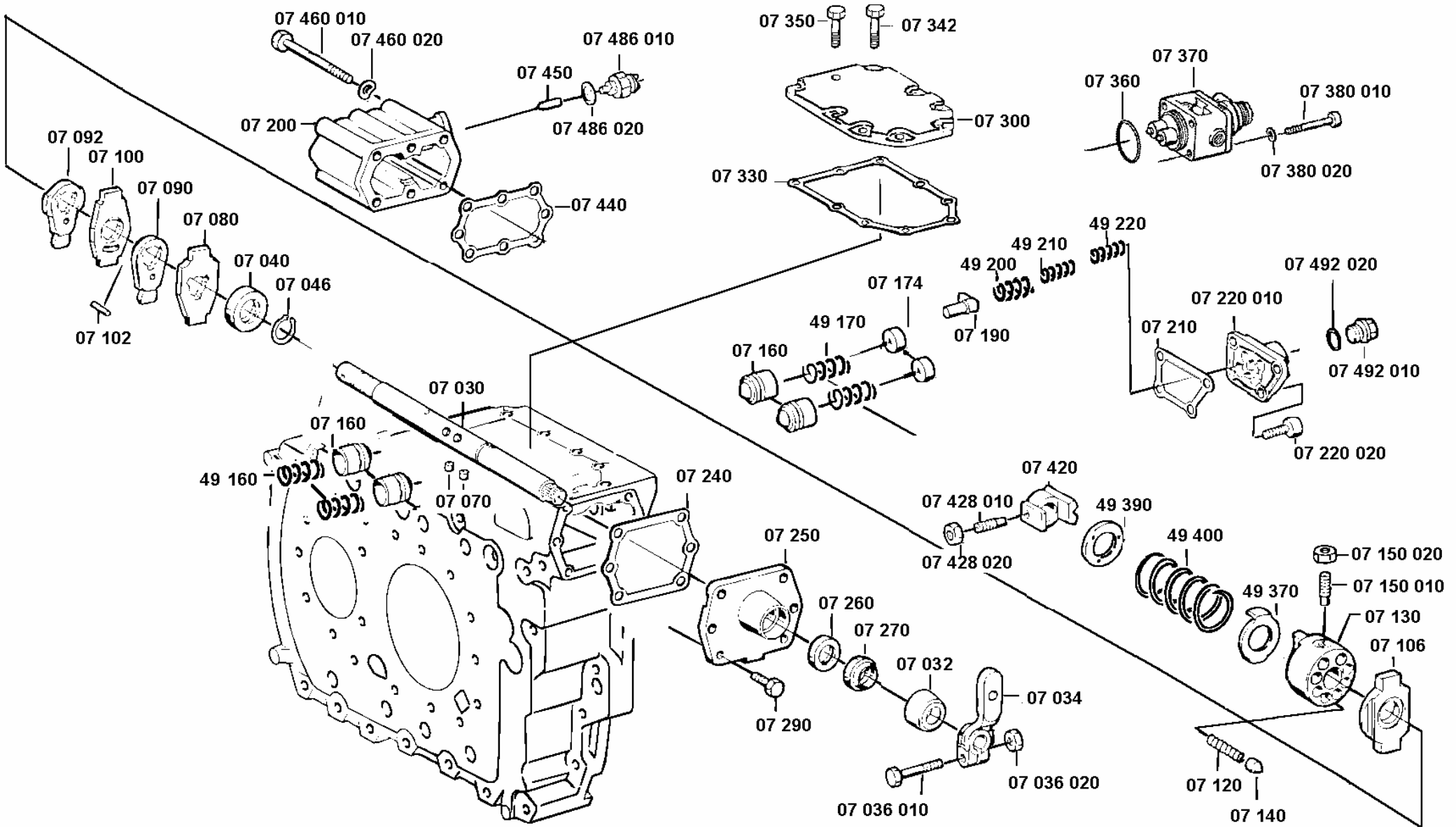
0097 007 003

GEAR SHIFT SYSTEM

0097 049 003

SET OF SPRINGS

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 007 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GEARSHIFT SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
030	1	0091 307 304	G.SHIFT SHAFT			
032	1	1238 307 411	PROTECTING CAP			
034	1	1307 307 006	GEAR SHIFT LEVER		60101	
036	1		HEXAGON SCREW			M10X40*DIN 933/ZFB988*10.9 A3C
/010	1	0636 015 469	HEXAGON SCREW			M10X40*DIN 933/ZFB988*10.9 A3C
/030	1	0637 006 120	HEXAGON NUT			M10 DIN 934 A3C
040	1		WASHER			
	1	1295 307 379	WASHER	X		
	1	1295 307 250	WASHER	X		
046	1	0630 532 205	V RING			
070	6	0735 470 007	ROLLER			
080	1		LOCK			
/010	1	1295 307 585	LOCK	X		
/020	1	1295 307 156	LOCK	X		
090	1	1295 307 178	DRIVER			
092	1	1295 307 175	DRIVER			
100	1	1295 307 176	SKID PIECE			
102	1	0091 380 071	CYLINDRICAL PIN			
106	1	0091 307 197	SKID PIECE			
120	8	0732 040 736	COMPR.SPRING			
130	1	1295 307 409	STOP PART			
140	8	1295 307 243	STOP BOLT			
150	1		THREADED BOLT			M12X1,5
/010	1	0501 398 399	THREADED BOLT			M12X1,5 45,0N.M
/020	1	0637 002 039	HEXAGON NUT			BM12X1,5 70,0N.M
160	4	0750 115 335	BALL ROLLER			WTB 20X8,1

part list: 1297 095 111  
figure: 0097 007 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GEARSHIFT SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
174	2	0730 062 448	BUSH			A=11,00
190	1	0091 307 160	BOLT			
200	1	0091 307 153	COVER			
210	1	1313 307 002	GASKET			
220	1		COVER			
/010	1	0091 307 149	COVER			
	4		HEXAGON SCREW			
/020	4	0636 015 084	HEXAGON SCREW			
240	1	1313 307 020	GASKET			
250	1	1295 307 434	COVER			
260	1	0634 300 302	SHAFT SEAL			25X35X7B
270	1	0634 307 367	SHAFT SEAL			AS25X35X10
290	6		HEXAGON SCREW			M8X22 ISO 4017 8.8
	6	0636 015 084	HEXAGON SCREW			M8X22 ISO 4017 8.8 23,0N.M
300	1	0091 307 500	COVER			
330	1	1313 307 003	GASKET			
342	8		HEXAGON SCREW			M8X18 ISO 4017 8.8
/010	8	0636 015 073	HEXAGON SCREW			M8X18 ISO 4017 8.8 23,0N.M
350	1		HEXAGON SCREW			M8X22 ISO 4017 8.8
/010	1	0636 015 084	HEXAGON SCREW			M8X22 ISO 4017 8.8 23,0N.M
360	1	0634 314 021	RING			36,2X3 ZFN744 ACM-70-10
370	1	6038 202 003	CUT-OFF VALVE			
380	4		CYLINDRICAL SCREW			M8X60 ISO 4762 8.8 A3C
/010	4	0636 101 664	CYLINDRICAL SCREW			M8X60 ISO 4762 8.8 A3C
/020	4	0630 302 090	WASHER			B8 DIN 137
420	1	0091 307 219	STOP PART			

part list: 1297 095 111  
figure: 0097 007 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GEARSHIFT SHAFT

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
428			THREADED			M12X1,5
/010	1	0501 398 398	THREADED			M12X1 ,5 45,0N.M
/020	1	0637 002 039	HEXAGON NUT			BM12X1,5 DIN 439/ZFB999
440	1	1313 307 004	GASKET			
450	1	0731 208 056	PIN			
460			HEXAGON SCREW			M8X105 ISO 4014 8.8
/010	6	0636 010 121	HEXAGON SCREW			M8X105 ISO 4014 8.8 23,0N.M
/020	6	0630 302 090	SPRING WASHER			B8 DIN 137 FST FE/ZN8C
486			SWITCH			
/010	1	0501 210 059	SWITCH			
/020	1	0634 801 062	SEALING RING			A18X24 DIN 7603
492			SCREW PLUG			M18X1,5
/010	1	0636 302 021	SCREW PLUG			M18X1,5 DIN 908 ST A3C
/020	1	0634 801 062	SEALING RING			A18X24 DIN 7603 AL

part list: 1297 095 111  
 figure: 0097 049 003

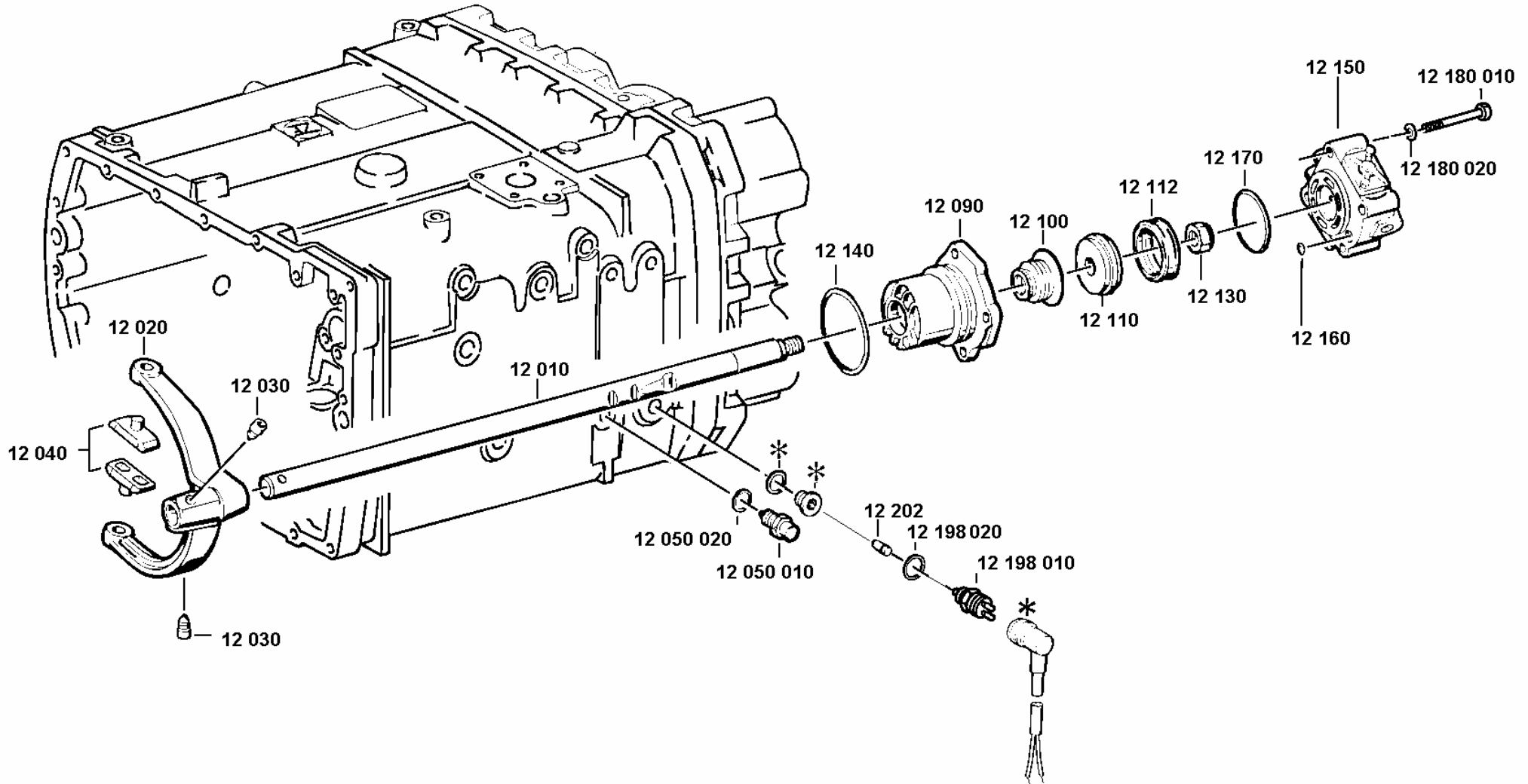
16S-1650 / OD\*LL\*D-L H-H\* MAZ  
 SET OF SPRINGS

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
160	2	0732 040 986	COMPR. SPRING			ZFN 403
170	1	0732 040 986	COMPR. SPRING			ZFN 403
200	2	0732 040 986	COMPR. SPRING			
210	1	0732 040 984	COMPR. SPRING			
220	1	0732 040 983	COMPR. SPRING			
370	1	1295 307 522	WASHER			
390	1	0730 104 083	WASHER			A=2,00
400	1	0732 040 765	COMPR. SPRING			

parts list: 1297 095 111  
figure: 0097 012 004

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
GV SHIFT SYSTEM

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 012 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GV-SHIFT SYSTEM

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 312 013	GEAR SHIFT RAIL			
020	1	1313 312 002	GEAR SHIFT FORK			
030	2	1315 312 047	SCREW			M12X1 DIN EM 10083-1 70 N.M*
040	2	1297 306 120	SLIDING PAD			
050	1		DETENT PLUNGER			235N*65N.M
/010	1	1313 207 003	DETENT PLUNGER			
/020	1	0634 801 050	SEALING RING			A 16 X 22 DIN 7603 CU
090	1		CYLINDER			WTB*GV
	1	1296 312 042	CYLINDER	X		
	1	1296 312 016	CYLINDER	X		
100	1	0750 112 034	FLANGE PACKING			WTB 25X38X14,2
110	1		PISTON			
	1	0091 312 016	PISTON		59109	
112	1	0750 112 089	DOUB.U-PACKING			WTB 53X63X16,2
130	1	0637 011 574	LOCKING NUT			V M 16X1,5 DIN 980 STOVER*10 FE/ZN8C
140	1	0634 313 671	O-RING			80 X 3 ZFN 744 ACM-80-10
150	1	0501 396 632	WAY VAL			
160	1	0634 314 017	O-RING			5,28X 1,78 ZFN 744 ACM -70-10
170	1	0634 314 018	O-RING			59 X 2 ZFN 744 ACM -70-10
180	4		HEXAGON SCREW			WTB*M8X60DIN931/8.8FE/ZN8C
	4		HEX CAP SCREW			M8X60*DIN931*8.8 *23,0N.M*
/010	4	0636 010 096	HEX CAP SCREW			M8X60*DIN 931*8.8
/020	4	0630 302 090	SPRING WASHER			B 8 DIN 137 FST FE/ZN8C

part list: 1297 095 111  
figure: 0097 012 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GV-SHIFT SYSTEM

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
198	1		SWITCH			
/010	1	0501 210 059	SWITCH			OEFF 45,0N.M
/020	1	0634 801 062	SEALING RING			A 18 X 24      DIN 7603    AL
202	1	1295 212 006	PIN			

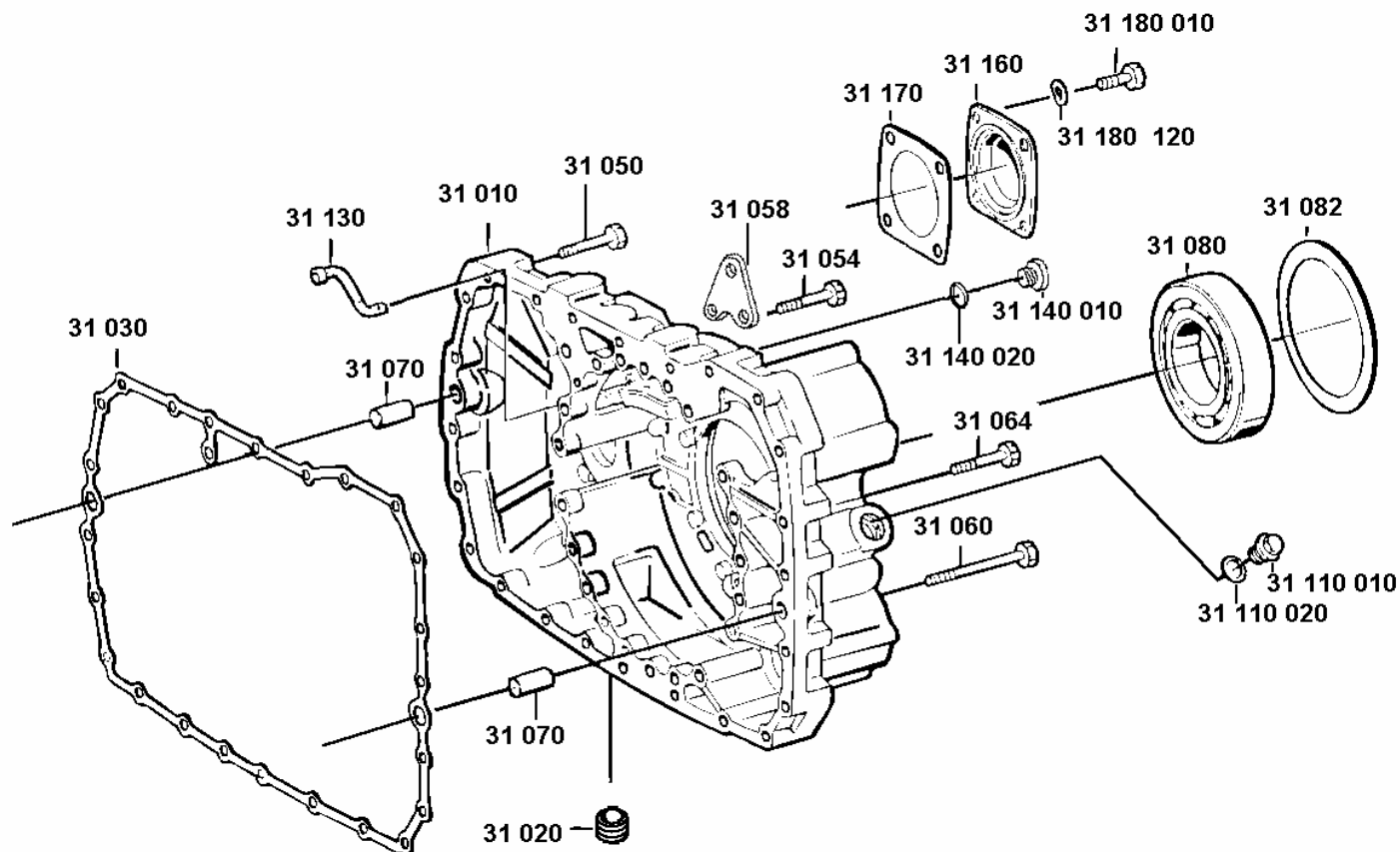


parts list:  
figure:

1297 095 111  
0097 031 004

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
GP HOUSING

\*depending on parts list n°

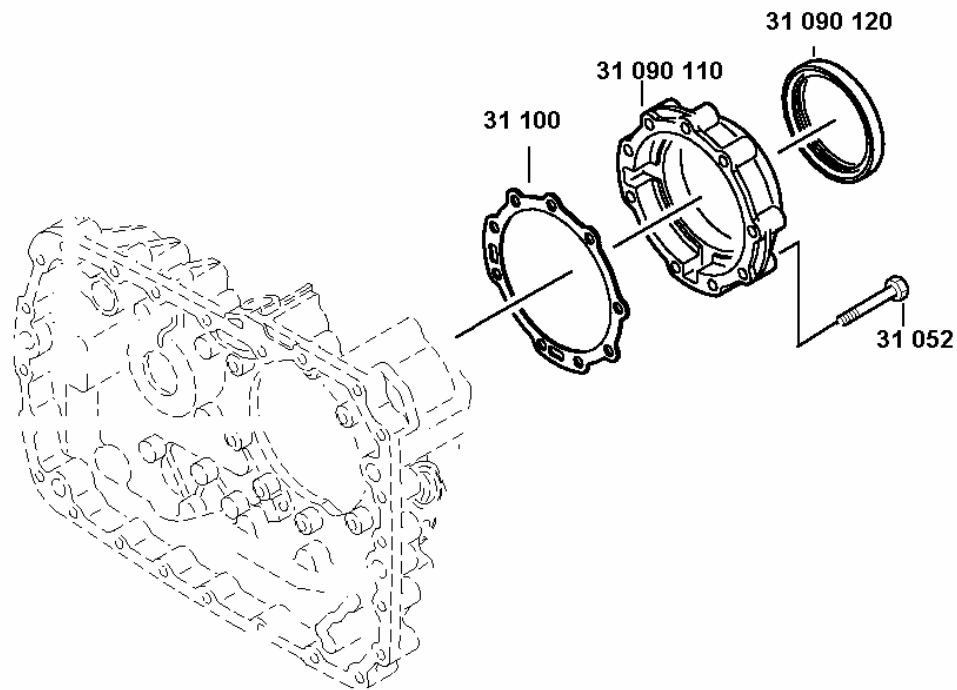


parts list:  
figure:

1297 095 111  
0097 031 003

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
COVER-GP

\*depending on parts list n°



part list: 1297 095 111  
figure: 0097 031 004  
0097 031 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GP HOUSING  
GP COVER

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 301 162	HOUSING			
020	1		SCREW PLUG			M24X1,5*50N.M*
	1	0736 303 005	SCREW PLUG			M24X1,5
030	1	1313 301 037	GASKET			
050	17		HEX CAP SCREW			M10X50*DIN931*8.8*
	17	0636 010 168	HEX CAP SCREW			M10X50*DIN931*8.8*
052	9		HEX CAP SCREW			M10X50*DIN 931*8.8*
	9	0636 010 168	HEX CAP SCREW			M10X50*DIN931*8.8*
054	2		HEX CAP SCREW			M10X50*DIN931*8.8*
	2	0636 010 168	HEX CAP SCREW			M10X50*DIN931*8.8*
058	1	0091 301 115	SUPPORT PLATE			
060	2		HEX CAP SCREW			M 10X90*DIN931*8.8*
	2	0636 010 190	HEX CAP SCREW			M 10X90*DIN 931*8.8
064	1	0636 010 494	HEX CAP SCREW			M 10X50 SK*DIN 931*8.8
068	2	0636 010 172	HEX CAP SCREW			M10X55*DIN931*8.8*
070	2	0731 201 459	CYLINDRICAL PIN			
080	1	0750 116 002	BALL BEARING			WTB 90,0X160,0X30,0
082	1		SHIM			0,60(ABSTUFUNG:0,10MM)
	1	0730 003 515	SHIM	X		A=0,60
	1	4005 302 034	SHIM	X		A=0,50
	1	0730 100 115	SHIM	X		A=0,30
	1	0730 100 846	SHIM	X		A=0,40
	1	0730 100 116	SHIM	X		A=0,20
090	1		COVER			
/110	1	1296 301 006	COVER			
/120	1	0750 111 341	SHAFT SEAL			WTB 105X130X12 2EE

part list: 1297 095 111  
figure: 0097 031 004  
0097 031 003

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GP HOUSING  
GP COVER

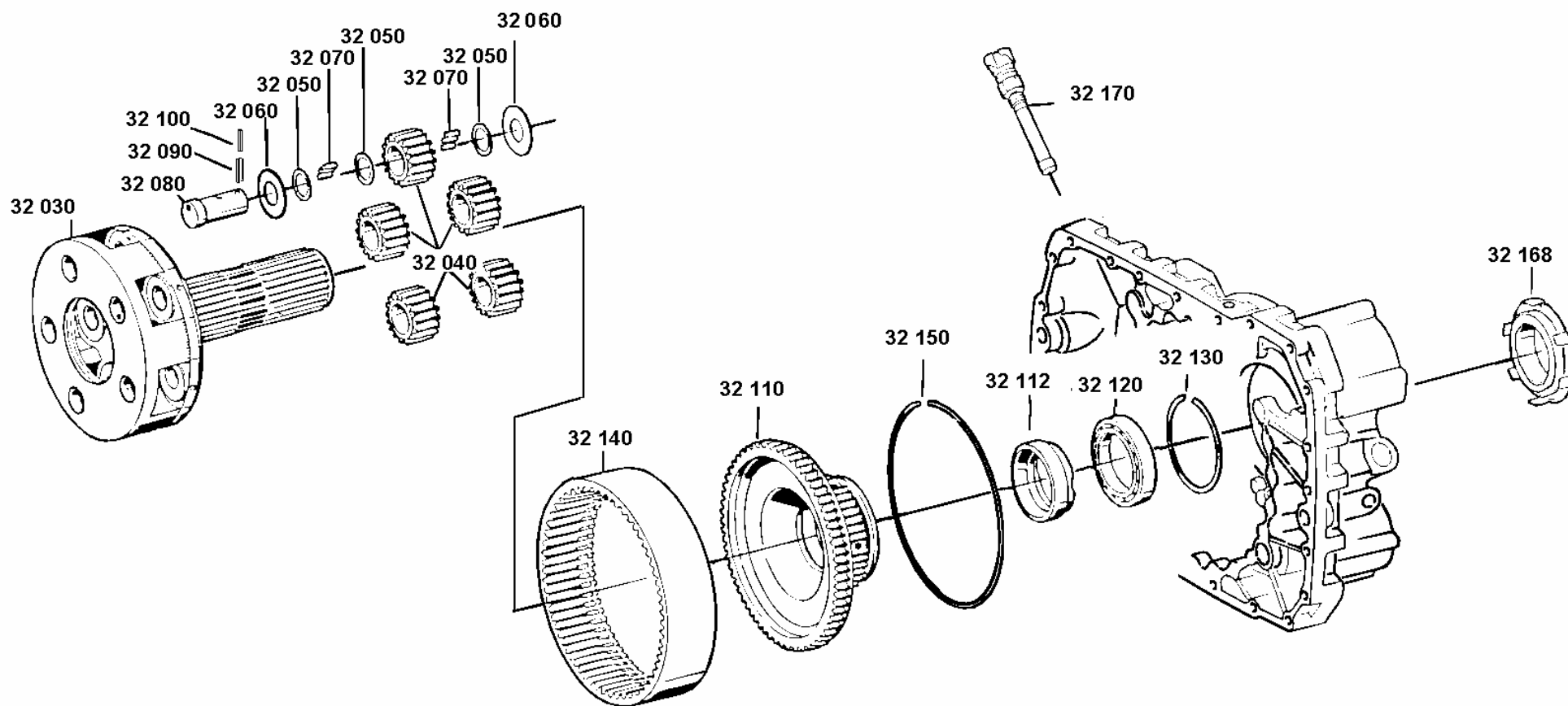
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
100	1	1313 301 036	GASKET			
110	1		SCREW PLUG			
/010	1	0636 302 066	SCREW PLUG			M30X1,5 DIN 908 100,0N.M
/020	1	0634 801 324	SEALING RING			A30X36 DIN 7603 ST FE/ZN8C
130	1	1296 301 008	SPRAY TUBE			
140			SCREW PLUG + RING			M10X1
/010	1	0636 302 053	SCREW PLUG			M10X1 DIN 908 ST
/020	1	0634 801 013	SEALING RING			A 10X14 DIN 7603 AL
160	1	1238 308 165	COVER			DIN EM 10130 DC01-A
170	1	1238 308 201	GASKET			
180	4		HEX CAP SCREW			M12X20*DIN 933*8.8
/010	4	0636 016 005	HEX CAP SCREW			M12X20*DIN 933*8.8 60,0N.M
/020	4	0630 302 021	SPRING WASHER			B12*DIN 137*FST*

parts list:  
figure:

1297 095 111  
0097 032 003

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
PLANETARY DRIVE

\*depending on parts list n°

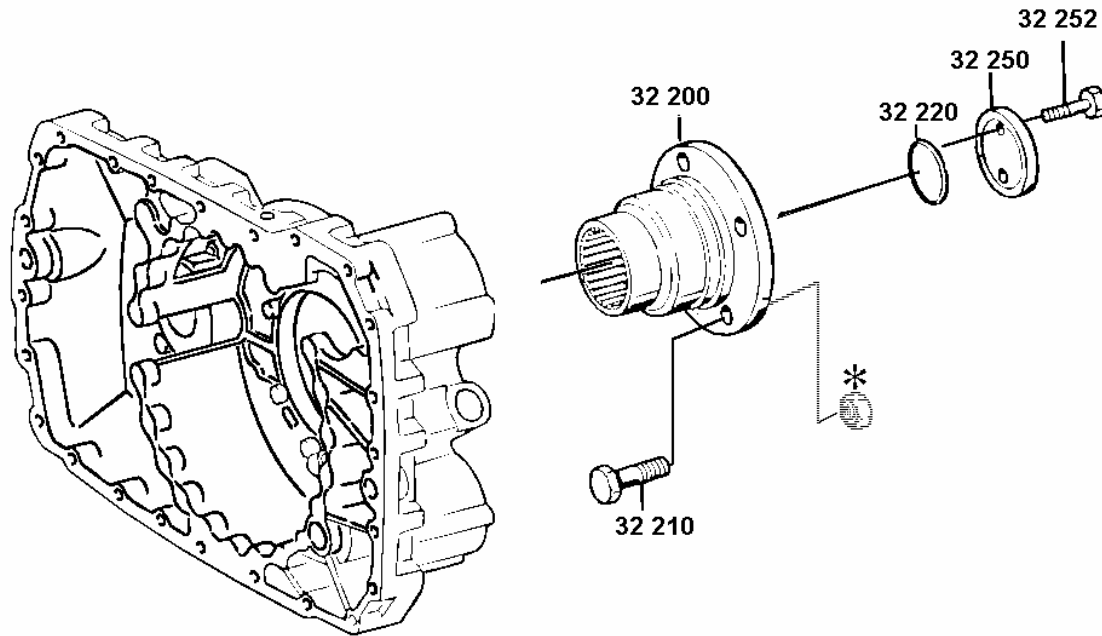


parts list:  
figure:

1297 095 111  
0097 032 004

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
OUTPUT FLANGE

\*depending on parts list n°



part list: 1297 095 111  
figure: 0097 032 003  
0097 032 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
PLANETARY DRIVE  
OUTPUT FLANGE

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
030	1	0091 232 022	PLANET CARRIER			CPL.
040	1	1297 232 023	GEAR SET			CPL.
050	15	0730 103 846	INTERM.WASHER			A=1,00
060	10	0501 306 212	SHIM			
070	120	0750 119 109	ROLLER			WTB 10,0X16,8
080	5	1297 332 109	PLANET SHAFT			
090	5	0631 329 050	SLOT.PIN			5 X 24 ISO 8752 ST
100	5	0631 329 017	SLOT.PIN			3 X 24 ISO 8752 ST
110	1	0091 332 022	DIFFERENTIAL GEAR			
112	1		INTERMEDIATE RING			WTB
	1	1297 332 122	INTERMEDIATE RING	X		
	1	1297 332 002	INTERMEDIATE RING	X		
120	1	0750 116 165	BALL BEARING			WTB 80,0X110,0X16,0
130	1		SNAP RING			2,50(ABSTUFUNG:0,10MM)
	1	0730 513 755	SNAP RING			A=2,50*
	1	0730 513 756	SNAP RING			A=2,40*
	1	0730 513 757	SNAP RING			A=2,30*
	1	0730 513 758	SNAP RING			A=2,20*
	1	0730 513 759	SNAP RING			A=2,10*
	1	0730 513 760	SNAP RING			A=2,00*
140	1	1297 332 080	RING GEAR			
150	1	0730 505 055	LOCKING WIRE			A=3,20

part list: 1297 095 111  
figure: 0097 032 003  
0097 032 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
PLANETARY DRIVE  
OUTPUT FLANGE

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT	MOD.NO.	TECHNICAL INFORMATION
168	1		PULSE WASHER			
/010	1	0091 338 045	PULSE WASHER	X		
/020	1	0091 338 042	PULSE WASHER	X		
170	1	0501 210 859	PULSE SENSOR			N°VDO 2159.20.10.00
200	1	1297 338 041	OUTPUT FLANGE			
210	4		HEXAGON SCREW			M14X1,5X50 DIN 960/ZFB 988 10.9 A3C
	4	0636 020 211	HEXAGON SCREW			M14X1,5X50 DIN 960/ZFB 988 10.9 A3C
220	1	0634 314 015	O-RING			68 X 4 ZFN 744 ACM -70-10
250	1	1295 332 051	FIXING WASHER			
252	2	0636 011 540	HEX CAP SCREW			M 12 x 60*DIN 931*10.9 A3C

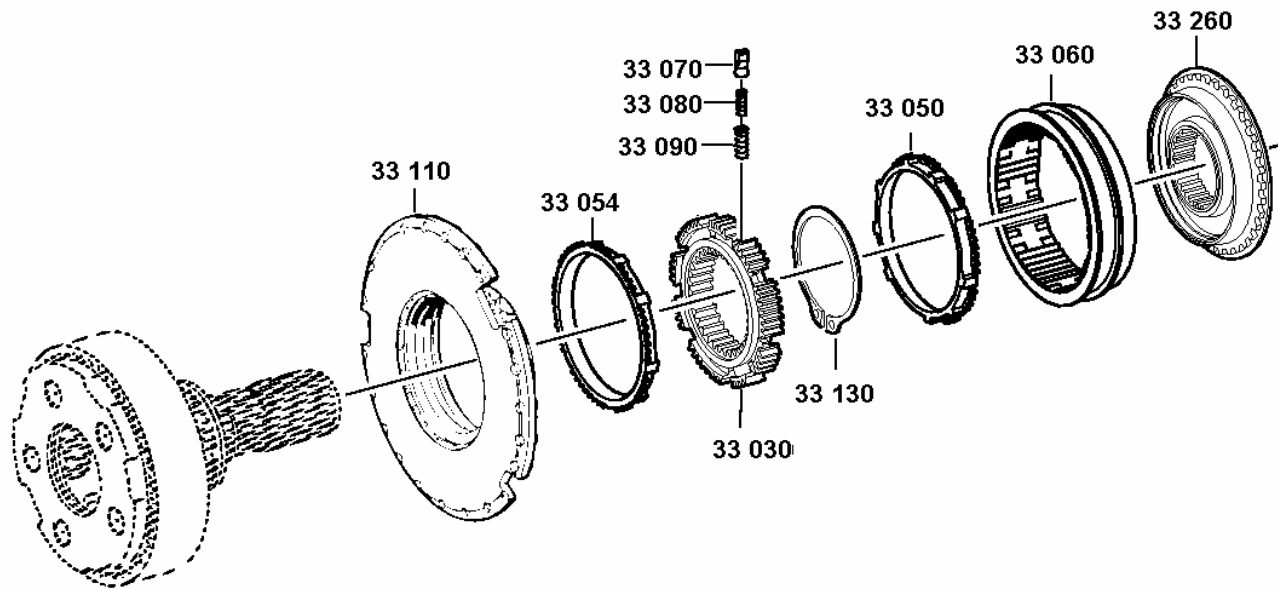


parts list:  
figure:

1297 095 111  
0097 033 002

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
SYNCHRONIZER

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 033 002

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
SYNCHRONIZER

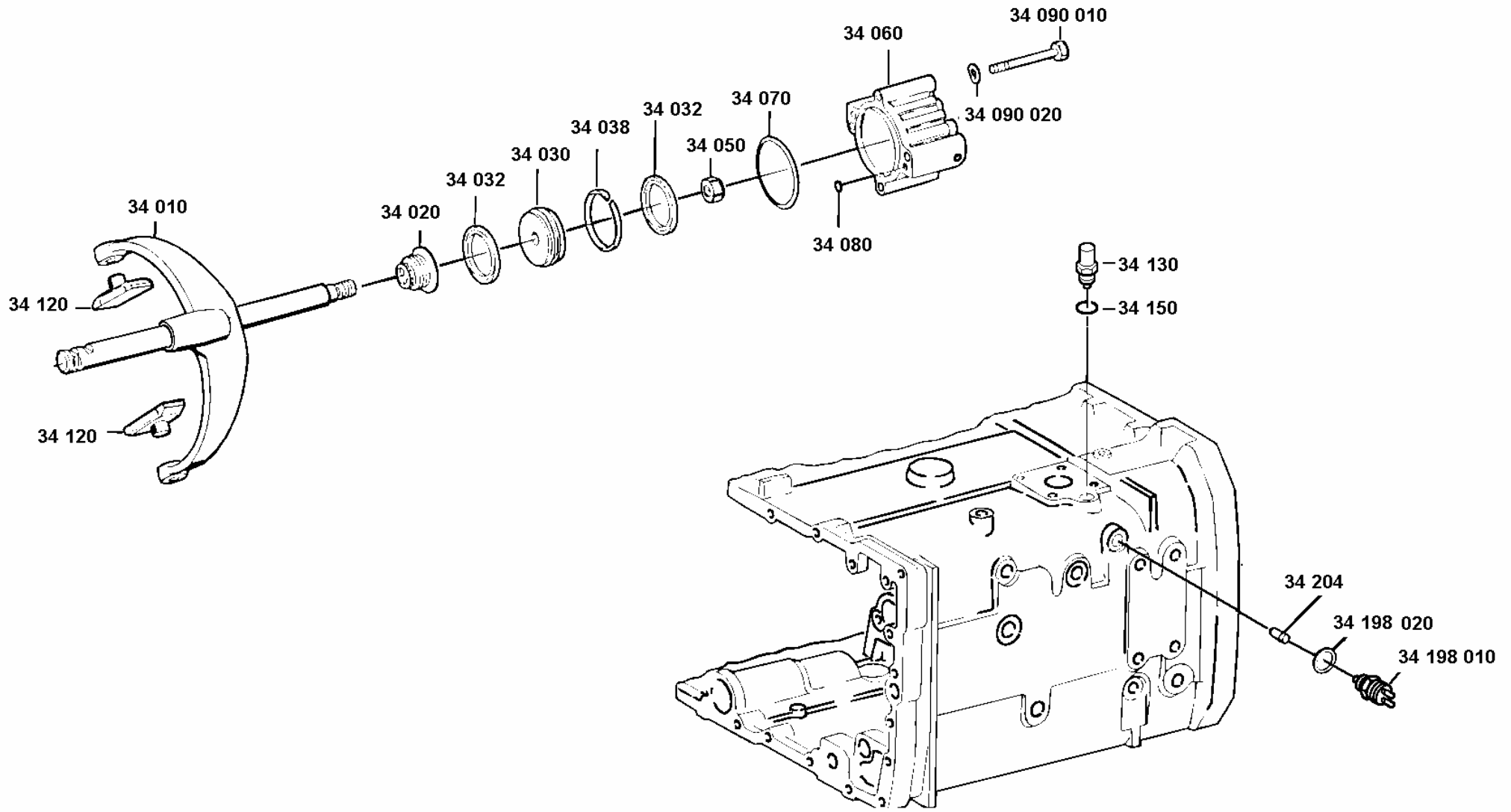
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
030	1	1296 333 002	SYNCHRO.BODY			
050	1		SYNCHRO.RING			WTB*SINT/SCHMIEDE*MOLYB.
/010	1	1296 333 044	SYNCHRO.RING	X		
/020	1	1296 333 045	SYNCHRO.RING	X		
054	1		SYNCHRO.RING			WTB*SINT/SCHMIEDE*MOLYB.
/010	1	1296 333 044	SYNCHRO.RING	X		
/020	1	1296 333 045	SYNCHRO.RING	X		
060	1	1296 333 023	SLIDING SLEEVE			
070	9	1240 304 278	PRESSURE PIECE			ZF_B119-167
080	9	0732 040 385	COMPR.SPRING			
090	9	0732 040 386	COMPR.SPRING			
110	1	1296 233 006	CLUTCH BODY			CLP.LANGSAME GRUPPE
130	1		RETAINING RING			DIN 471
	1	0630 501 061	RETAINING RING			125X4
	1	0630 501 173	RETAINING RING			125X3,9
	1	0630 501 174	RETAINING RING			125X3,8
	1	0630 501 175	RETAINING RING			125X3,7
260	1	1313 233 001	CLUTCH BODY			

parts list:  
figure:

1297 095 111  
0097 034 004

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
GP SHIFT SYSTEM

\*depending on parts list n°.



part list: 1297 095 111  
figure: 0097 034 004

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
GP SHIFT SYSTEM

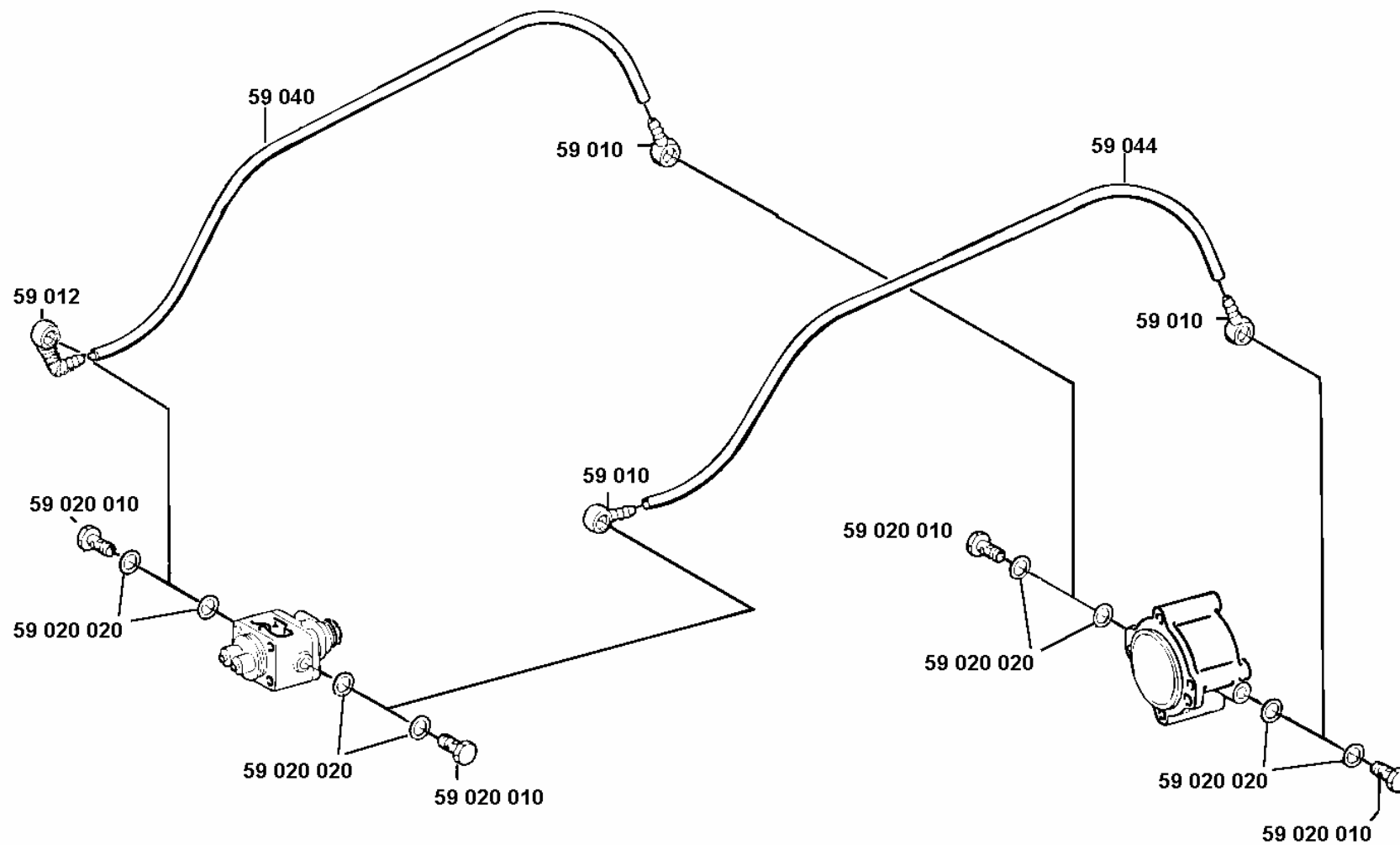
FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	1	0091 234 006	GEAR SHIFT RAIL			CPL
020	1	0750 112 034	FLANGE PACKING			WTB 25X38X14,2
030	1	1296 334 039	PISTON			
032	2	0734 317 150	U-RING			80X90X4,8 FA.KACO
038	1	0750 112 066	GUIDE RING			WTB
050	1		LOCKING NUT			M16X1,5 STOVER*10 FE/ZN8C
	1	0637 011 574	LOCKING NUT			M 16X1,5 STOVER*10 FE/ZN8C
060	1	1295 334 075	CYLINDER			
070	1	0634 314 019	O-RING			94 X 3 ZFN 744 ACM -70-10
080	1	0634 314 020	O-RING			8 X 2 ZFN 744 ACM -70-10
090	4		HEX CAP SCREW			M10x80*ISO4014*8.8*A3C
/010	4	0636 010 550	HEX CAP SCREW			M10x80*ISO4014*8.8*A3C
/020	4	0630 302 091	SPRING WASHER			B 10 DIN 137 FST FE/ZN8C
120	2	1296 334 004	SLIDING PAD			
130	1	1313 207 004	DETENT PLUNGER			105N*65N.M
150	1	0634 801 050	SEALING RING			A 16 X 22 DIN 7603 CU
198	1		SWITCH			
/010	1	0501 210 058	SWITCH			
/020	1	0634 801 062	SEALING RING			A18X24 DIN 7603 AL
204	1	1295 212 006	PIN			

parts list:  
figure:

1297 095 111  
0097 059 001

16S 1650 / OD \* LL \* D-L H-H \* MAZ  
RANGE SELECTION

\*depending on parts list n°.



part list: 1297 095 111  
 figure: 0097 059 001

16S-1650 / OD\*LL\*D-L H-H\* MAZ  
 RANGE SELECTION

FIG.	QTY.	PART-NUMBER	DESCRIPTION	OPT.	MOD.NO.	TECHNICAL INFORMATION
010	3	0750 146 953	RING NIPPLE			WTB.
012	1	0501 396 701	RING NIPPLE			FA. SPARTA
020	4		UNION SCREW			10 DIN7643
/010	4	0637 835 515	UNION SCREW			10 DIN 7643
/020	8	0634 801 260	SEALING RING			A 14 X 18 DIN 7603 AL
040	1	0632 702 528	TECALAN TUBE			12X2*DIN73378*PA11W SW LT ME (850 mm)
044	1	0632 702 528	TECALAN TUBE			12X2*DIN73378*PA11W SW LT ME ( 570 mm)