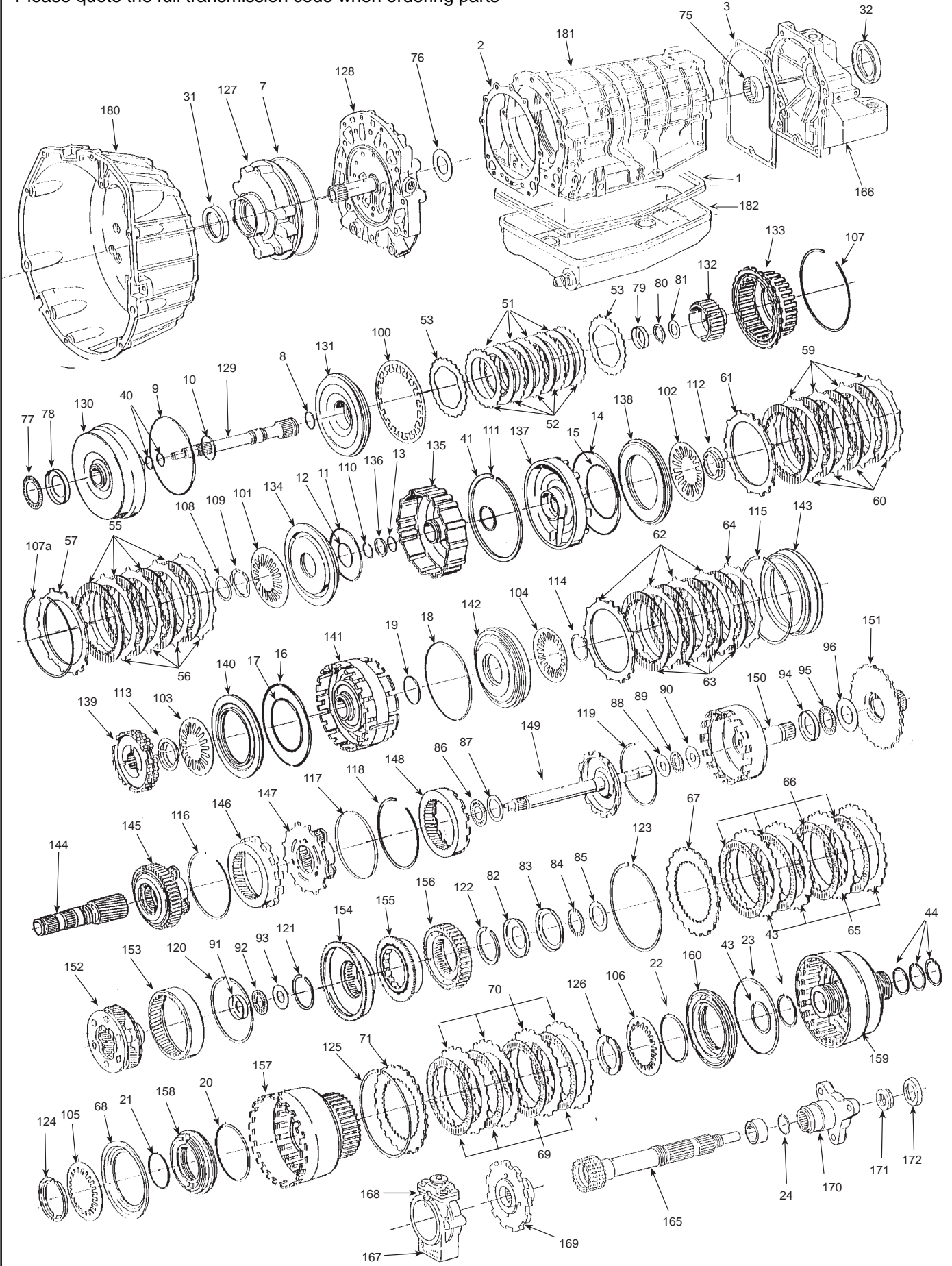


Please quote the full transmission code when ordering parts



**ZF4HP22** iss 17

**ZF 4HP22**  
**1043 010**

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4 speed rear wheel drive with lock up.  
BMW, Jaguar, Volvo, Peugeot, Range Rover

Iss 16/11/2000



Illus	Description	Part No.
<b>KITS</b>		
	Overhaul (no parts for Range Rover transfer box)	178 02 01
	Overhaul Range Rover gear trans. box only 86-88	127 02 05
	Overhaul Range Rover chain trans. box only 89-	178 02 04
	Overhaul 4HP22H (BMW,Peu,Volvo,Jag) ZF kit	178 02 03
	Overhaul 4HP22H (Land Rover) ZF kit	178 02 07
	Overhaul 4HP22/24EH (BMW, Jag) ZF kit	178 02 05
	Overhaul 4HP22/24EH (Land Rover) ZF kit	178 02 06
	Gasket & seal	178 03 01
	Shaft sealing rings	178 06 01
	Thrusts	178 10 01
	"A" clutch assistance kit	178 07 01
	Full friction kit	178 07 02
	E clutch drum saver kit	178 07 04
<b>GASKETS</b>		
1	Pan	178 25 01
2	Pump	178 25 02
3	Extension	178 25 03
NI	Plate to valve body - Jag / Peugeot / Range Rover	178 25 04
	- Volvo	178 25 05
	- BMW	178 25 06
	Various EH trans	178 25 08
	Various EH trans	178 25 11
	Various EH trans	178 25 12
<b>RUBBER COMPONENTS</b>		
7	Pump "O" ring	137 16 01
8	Input shaft "O" ring	137 16 02
9	"A" clutch outer "O" ring	137 16 07
10	"A" clutch inner "O" ring	137 16 04
11	"B" clutch outer "O" ring	137 16 06
12	"B" clutch inner "O" ring	137 16 04
13	"B" clutch drum "O" ring	137 16 02
14	"C1" clutch drum "O" ring	137 16 07
15	"C1" clutch inner "O" ring	137 16 08
16	"C" clutch outer "O" ring	137 16 07
17	"C" clutch inner "O" ring	137 16 08
18	"D" clutch outer "O" ring	137 16 07
19	"D" clutch inner "O" ring	137 16 09
20	"E" clutch outer "O" ring	137 16 06
21	"E" clutch inner "O" ring	178 16 07
22	"F" clutch inner "O" ring	178 16 09
23	"F" clutch outer "O" ring	178 16 10
24	Output shaft "O" ring	178 16 03
NI	Valve body seals	137 20 01
NI	Valve body seals (Angled)	178 20 01
NI	Filter "O" ring BMW	178 16 05
NI	Filter "O" ring R/Rover & L/Rover	117 16 05
NI	Filter "O" ring Jaguar	178 16 15
NI	Electronic harness to case "O" ring	178 16 16
NI	Cable "O" ring	113 16 09
NI	Range Rover output shaft to ring bolt "O" ring	117 16 06
NI	Cooler union to stator "O" ring	110 16 10
NI	Breather "O" ring	183 16 24
<b>METAL CLAD SEALS</b>		
31	Pump	137 15 01
32	Extension	137 15 02
32	Ext L/Rover 727,728,759,763,764,768 (48x70x8/12)	178 15 02
NI	Control shaft	137 15 04
NI	Transfer box - Range Rover 62 x 42 x 8 (2)	127 15 09
NI	Freight Rover ext 60 x 45 x 8	135 15 03

Illus	Description	Part No
<b>SHAFT SEALING RINGS</b>		
40	Input shaft (2)	178 26 01
41	2nd clutch	178 26 05
42	Sun gear to centre (2)	178 26 02
43	F clutch cyl to "E" clutch cyl (2)	178 26 03
44	Governor steel - all exc Peugeot (3)	178 26 04
44	Governor rubber - Peugeot (3)	178 26 07
45	Gearset (1)	178 26 06
<b>CLUTCH PLATES</b>		
51	A clutch friction 100mm x 1.55 x 34T (5/6)	137 11 01
52	A clutch steel 108mm x 1.7 x 24T (6/7)	137 12 02
52	A clutch steel (flat - 1.20mm) alt (6/7)	178 12 04
52	A clutch steel (flat - 1.60mm) alt (6/7)	178 12 08
52	A clutch steel (flat - 2.10mm) AR	178 12 09
53	A clutch steel (wavy) (2)	137 12 01
55	B clutch friction 143mm x 1.6 x 24T (3/4)	137 11 02
56	B clutch steel 144mm x 1.74 x 12T std (3/4)	137 12 03
56	B clutch steel 144mm x 1.52 x 12T sel (AR)	137 12 04
56	B clutch steel 144mm x 2.10 x 12T sel (AR)	137 12 05
57	B clutch pressure	137 13 01
NI	B spring plate Peugeot (not all)	178 12 05
59	C1 & C clutch friction 143mm x 1.6 x 24T (4)	137 11 02
60	C1 & C clutch steel 144mm x 1.52 x 12T sel (2)	137 12 04
60	C1 & C clutch steel 144mm x 2.10 x 12T std (2)	137 12 05
60	C1 & C clutch steel 144mm x 1.74 x 12T sel (4)	137 12 03
60	C1 & C clutch end steels (2)	178 12 02
61	C clutch pressure	137 13 01
<b>D clutch early</b>		
62	D clutch friction 142mm x 1.55 x 48T (4/5)	137 11 03
63	D clutch steel 144mm x 1.74 x 12T (4/5)	137 12 03
64	D clutch end steel (1)	178 12 02
	D clutch cushion AR	178 12 06
<b>D clutch late</b>		
62	D clutch friction 142mm x 1.60 x 58T (5)	178 11 02
63	D clutch steel sel 144mm x 1.20 x 12T (5)	204 12 02
64	D clutch end steel sel 1.50mm selective (1)	204 12 03
64	D clutch end steel sel 1.80mm selective (1)	204 12 04
64	D clutch end steel sel 2.10mm selective (1)	204 12 05
65	E clutch friction 128 x 1.50 x 40T (4)	178 11 01
66	E clutch steel 128mm o/d x 1.5 x 24T (4)	178 12 03
67	E clutch press (flat with inner serrations)	178 13 01
68	E clutch pressure - shaped (3 friction)	178 29 23
68	E clutch pressure - shaped (4 friction)	178 29 24
69	F clutch friction 128 x 1.50 x 40T (3/4)	178 11 01
70	F clutch steel 128mm o/d x 2.0 x 24T (3/4)	178 12 01
71	F clutch pressure	178 13 02
<b>FILTER</b>		
NI	Pick up BMW, Jaguar, Volvo (flat - no pickup)	178 27 01
NI	Pick up Peugeot (not code 358)	178 27 01
NI	Pick up Peugeot (code 358 only)	178 27 02
NI	Pick up R/Rover 085, 115, 332, 593, 631, 699	178 27 03
NI	Pick up with 20mm spout	178 27 04
<b>BUSHES &amp; BEARINGS</b>		
NI	Front pump body 13mm	137 21 01
NI	Front pump body oversize	137 21 04
NI	Front pump body oversize 16mm	178 21 01
	1st clutch drum	137 21 02
75	Extension housing needle bush BMW, Volvo	178 21 02
NI	Inner for 178 21 02 (some BMW)	178 21 03
<b>THRUST WASHERS</b>		
76	Input selective thrust 54.5/32/0.80mm	178 22 03
76	Input selective thrust 54.5/32/1.00mm	137 22 01
76	Input selective thrust 54.5/32/1.20mm	178 22 04
76	Input selective thrust 54.5/32/1.40mm	178 22 05
76	Input selective thrust 54.5/32/1.60mm	178 22 06
76	Input selective thrust 54.5/32/1.80mm	178 22 07
76	Input selective thrust 54.5/32/2.00mm	178 22 08
76	Input selective thrust 54.5/32/2.20mm	178 22 09
76	Input selective thrust 54.5/32/2.40mm	178 22 10
76	Input selective thrust 54.5/32/2.60mm	178 22 11



01/06/98

Please quote the full transmission code when ordering parts

4 speed rear wheel drive with lock up.  
BMW, Jaguar, Volvo, Peugeot, Range Rover**ZF 4HP22****1043 010**

Illus	Description	Part No.	Illus	Description	Part No.
76	Input selective thrust 54.5/32/2.80mm	178 22 12	129	Input shaft	178 29 27
77	Input shaft needle bearing 55/43/2/38 needles	137 23 01	NI	A clutch assembly	178 29 33
78	Input shaft race 57.5/40/1 cupped	137 22 02	130	A clutch cylinder	178 29 03
79	A clutch front race 42/22/1 cupped	178 22 01	131	A clutch piston	178 29 04
80	A clutch needle 37/14/2/26 needles	137 23 03	132	A clutch hub	178 29 05
81	A clutch rear plain race 36/14/0.6 flat	137 22 07	133	A & B clutch carrier	137 29 06
82	F clutch front thrust 64/36/0.6 cupped	178 22 16	134	B clutch piston	178 29 06
83	F clutch brass thrust 65/60.5/0.5 cupped	178 22 17	135	B clutch cylinder (4 friction)	178 29 07
84	F clutch front needle	137 23 04	135	B clutch cylinder (3 friction)	178 29 08
85	F clutch rear thrust 51.5/34/1 flat	178 22 18	135	B clutch cylinder (4 friction) wavy steel	
86	Intermediate shaft front needle	137 23 02	136	B clutch support ring	137 29 35
87	Intermediate shaft front race	137 22 06	137	C1 centring plate	178 29 11
88	Intermediate shaft rear race	178 22 13	138	C1 clutch piston for 3 friction	137 29 10
89	Intermediate shaft rear needle	178 23 04	138	C1 clutch piston for 4 friction	178 29 12
90	Intermediate shaft rear race	178 22 13	139	C clutchone way clutch asembly	137 44 01
94	Spider shaft rear cupped race 54/34/1 cupped	137 22 08	140	C clutch piston	137 29 12
95	Spider shaft rear needle 49/32/2/38 needles	137 23 04	141	Centre support	178 29 09
96	Spider shaft rear cupped race 48/32.5/1 flat	178 22 15	NI	Centre support feather keys	137 29 31
91	Rear gearset to output shaft race 42/22/1 cupped	178 22 01	142	D clutch piston (3 friction)	137 29 14
92	Rear g/set to o/put shaft 42.5/22.5/2/26 needles	137 23 02	142	D clutch piston (4 friction)	137 29 15
93	Rear gearset to output shaft race 42/22.5/1 flat	137 22 06	143	D clutch support ring	178 29 10
NI	Gearset planets small	178 22 21	144	Sun shaft for 178 29 15	178 29 13
NI	Gearset planets large	178 22 20	144	Sun shaft for 178 29 34	178 29 14
			144	Sun shaft for 204 66 01	204 65 01
	<b>SPRINGS</b>		145	1st gearset (3 planets) for 48 teeth friction	178 29 15
100	A clutch diaphragm (142mm/102mm)	137 24 01	145	1st gearset (4 planets) for 48 teeth friction	178 29 34
101	B clutch diaphragm (102mm/44mm)	137 24 02	145	1st gearset (4 planets) for 58 teeth friction	204 66 01
102	C1 clutch diaphragm (103mm/49mm)	137 24 04	146	1st ring gear	137 29 19
103	C clutch diaphragm	137 24 04			
104	D clutch diaphragm (92mm/52mm)	137 24 05	147	2nd gearset Volvo 042 - 117 - 151 - 161 - 323 - 324 389 - 549 - 551	137 29 20
105	E clutch diaphragm	178 24 01			
106	F clutch diaphragm	178 24 05	147	2nd gearset Volvo 123 - 209 - 257 - 325 - 388 608 - 610	137 29 21
NI	Valve body to clutch 29mm long (4)	137 24 07	147	2nd gearset Volvo 330	178 66 01
NI	Valve body to clutch 42mm long (4)	178 24 02	147	2nd gearset Volvo 060 - 062 - 106 0 151 - 153 175 - 326 - 327 - 328 - 492 - 493 - 494	178 66 02
	<b>CIRCLIPS</b>		147	2nd gearset Peugeot all up to 465 (except 351 - 352 - 353 - 415 & 417)	137 29 20
107	A clutch retainer	137 32 01	147	2nd gearset Peugeot 351 - 352 - 353 - 415 & 417	137 29 21
107A	B clutch retainer	137 32 01	147	2nd gearset Jaguar 345 - 346 - 391	137 29 21
108	B clutch spring retainer	137 32 02	147	2nd gearset Jaguar 344 - 390	178 66 01
109	B clutch spring retainer lock tag (4 sided)	137 32 12	147	2nd gearset Range Rover 115 - 332 - 593 - 631 - 699	137 29 21
110	C1 piston carrier to "B" clutch	137 32 03	147	2nd gearset Range Rover 085	178 66 01
111	C1 clutch retainer	137 32 11	147	2nd gearset BMW 068 - 071 - 078 - 082 - 093 - 094 095 - 104 - 109 - 119 - 120 - 129 - 144 - 149 - 150 157 - 168 - 169 - 203 - 210 - 211 - 213 - 214 - 215 224 - 232 - 261 - 268 - 271 - 272 - 273 - 274 - 275 277 - 278 - 279 - 280 - 281 - 282 - 283 - 284 - 291 292 - 296 - 297 - 331 - 372 - 373 - 657 - 659 - 663 676	137 29 20
112	C1 spring retainer (2 halves)	137 32 09	147	2nd gearset BMW 049 - 050 - 051 - 053 - 054 - 069 070 - 077 - 083 - 089 - 090 - 091 - 097 - 101 - 108 126 - 127 - 130 - 131 - 132 - 133 - 134 - 140 - 141 163 - 170 - 171 - 184 - 186 - 187 - 188 - 192 - 193 194 - 204 - 255 - 259 - 260 - 262 - 263 - 264 - 265 266 - 267 - 269 - 270 - 286 - 287 - 288 - 289 - 299 300 - 302 - 303 - 307 - 308 - 355 - 369 - 370 - 371 655 - 668, 683 to 717	137 29 21
113	C spring retainer (2 halves)	137 32 09	147	2nd gearset BMW 081 - 088 - 092 - 121 - 122 - 226 248 - 249 - 251 - 253 - 254 - 191 - 212 - 218 - 244 245 - 247 - 285 - 293 - 294 - 298 - 321 - 349 - 368	178 66 02
114	D clutch spring retainer	137 32 05			
115	D clutch retainer	137 32 06	148	2nd ring gear	137 29 22
116	Forward planet to hollow gear	137 32 07	149	Intermediate shaft	178 29 17
117	Intermediate planet	178 32 04	150	Spider shaft all Volvo	178 29 51
118	Rear planetary to hollow gear	137 32 07	150	Spider shaft all Peugeot	178 29 18
119	Intermediate to output shaft	137 32 08	150	Spider shaft all Jaguar	178 29 18
120	3rd gearset snap ring	178 32 05	150	Spider shaft all Range Rover	178 29 18
121	E carrier snap ring	178 32 06	150	Spider shaft all BMW 224 - 226 - 232 - 244 - 245 247 - 248 - 249 - 251 - 253 - 254 - 255 - 259 - 260 261 - 262 - 263 - 264 - 265 - 266 - 267 - 268 - 269 270 - 271 - 272 - 273 - 274 - 275 277 to 303, and 307 to 373	178 29 18
122	Output snap ring	178 32 07			
123	E clutch snap ring	178 32 08			
124	E clutch retaining collets	178 32 09			
125	F clutch snap ring	178 32 08			
126	F clutch spring retaining collets	178 32 01			
NI	Valve body seal & spring retainer (8)	137 32 10			
	<b>HARD PARTS</b>				
127	Pump assembly without stator support	178 38 01			
128	Stator support with valve (Prefix "R" for recon)	178 39 01			
128	Stator support without valve (Prefix "R" for recon)	178 39 04			
128	Stator support (cooler pipes have compression fittings, not adaptors (Prefix "R" for recon)	178 39 05			
NI	Hardened stator tube (for assembly by customer)	178 39 02			

**ZF 4HP22**  
**1043 010**

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4 speed rear wheel drive with lock up.  
BMW, Jaguar, Volvo, Peugeot, Range Rover

01/06/98



Illus	Description	Part No.	Illus	Description	Part No.
150	Spider shaft all BMW 049 - 050 - 053 - 068 - 069 071 - 078 - 081 - 083 - 089 - 090 - 091 - 092 - 093 094 - 095 - 097 - 104 - 109 - 119 - 120 - 121 - 122 126 - 127 - 129 - 130 - 131 - 133 - 140 - 144 - 149 150 - 157 - 168 - 169 - 170 - 171 0 188 - 191 - 192 203 - 204 - 210 - 211 - 212 - 213 - 214 - 215 - 218	178 29 54	166	Extension housing for BMW 668	178 54 02
150	Spider shaft all BMW 051 - 054 - 070 - 077 - 101 108 - 132 - 134 - 141 - 163 - 184 - 186 - 187 193 - 194	178 29 54	167	Governor hub Volvo 042 - 060 - 062 - 106 - 117 123 - 151 - 152 - 153 - 161 - 175 - 323 - 324 - 326 327 - 328 - 389 - 549 - 551	178 59 02
150	Spider shaft all BMW 655 - 657 - 659 - 663 - 668 676 - 683 - 684 - 685 - 686 - 687 - 689 - 695 - 715 716 - 717	178 29 58	167	Governor hub Volvo 209 - 257 - 325 - 330 - 388 492 - 493 - 494 - 608 - 610	178 29 28
151	Sun gear & flange	178 29 19	167	Governor hub all Peugeot	178 29 28
152	3rd gearset	178 29 20	167	Governor hub Jaguar 344 - 345 - 346 - 390	178 29 28
153	3rd ring gear	178 29 21	167	Governor hub Jaguar 391	178 59 02
154	3rd ring gear hub & OWC inner	178 44 02	167	Governor hub Range Rover 085 - 115 - 332	178 59 02
155	One way clutch assembly inc outer	178 44 01	167	Governor hub Range Rover 593 - 631 - 699	178 59 02
156	Carrier rear sprag OWC	178 29 50	167	Governor hub BMW all except electronic control	178 59 02
156	Carrier rear roller OWC	178 29 22	NI	Pan supporting plate (6)	137 29 33
157	E clutch cylinder	178 29 01	NI	Pan retaining bolts (6)	137 29 34
158	E clutch piston	178 29 25	168	Governor housing Volvo 042 - 117 - 123 - 151 - 161 323 - 324 - 389 - 446 - 549 - 551 - 697 - 707	178 59 08
159	F clutch cylinder 3 friction mechanical	178 29 30	168	Governor housing Volvo 060 - 062 - 106 - 152 - 153 175 - 326 - 327 - 328	178 59 09
159	F clutch cylinder 4 friction mechanical	178 29 29	168	Governor housing Volvo 209 - 257 - 325 - 388 608 - 610	178 59 10
159	F clutch cylinder 4 friction electronic	178 29 31	168	Governor housing Volvo 330 - 492 - 493 - 494 - 700 - 701 - 702	178 59 11
160	F clutch piston	178 45 05	168	Governor housing Volvo 712	178 59 01
161	F clutch screws (10)	178 37 03	168	Governor housing Range Rover 085 - 332 - 593 631 - 699	178 59 04
164	Output shaft lock washer	113 34 01	168	Governor housing Jaguar 344 - 390	178 59 05
165	Output shaft for Volvo all up to 610	178 57 04	168	Governor housing Jaguar 345 - 346	178 59 06
165	Output shaft for Jaguar 344 - 345 - 346 - 390 - 391	178 57 04	168	Governor housing Jaguar 391	178 59 07
165	Output shaft for Range Rover 085 - 115 - 332 - 593 631 - 699 - 740 - 741 - 742 - 744	178 57 05	168	Governor housing Peugeot 337 - 338 - 339 - 340 341 - 383	178 59 12
NI	Output shaft extension coupling - Range Rover	178 57 15	168	Governor housing Peugeot 358	178 59 13
165	Output shaft for BMW 049 - 050 - 051 - 053 - 054 069 - 070 - 071 - 077 - 0078 - 083 - 089 - 090 - 091 101 - 104 - 108 - 109 - 126 - 127 - 129 - 130 - 131 132 - 133 - 134 - 140 - 141 - 144 - 149 - 150 - 157 163 - 168 - 169 - 170 - 171 - 184 - 186 - 187 - 188 191 - 192 - 193 - 194 - 203 - 204 - 215 - 218 - 226 232 - 248 - 249 - 251 - 253 - 254 - 255 - 259 - 260 261 - 262 - 263 - 264 - 265 - 266 - 267 - 268 - 269 270 - 274 - 275 - 277 - 278 - 279 - 280 - 283 - 285 286 - 287 - 288 - 289 - 290 - 302 - 303 - 307 - 308 331 - 355 - 369 - 370 - 371 - 372 - 373 - 392 - 393 394 - 462 - 491 - 531 - 575 - 601 - 640 - 642 - 647 649 - 652 - 655 - 663 - 668 - 670 - 676 - 683 - 684 686 - 687 - 688 - 689 - 693 - 695 - 717 - 715 - 716	178 57 04	168	Governor housing Peugeot 356 - 359 - 360 - 385 411 - 415 - 463 - 464 - 465	178 59 15
165	Output shaft for BMW 068 - 081 - 082 - 088 - 092 - 093 - 094 - 095 - 097 - 119 - 120 - 121 - 122 - 191 210 - 211 - 212 - 213 - 214 - 224 - 244 - 245 - 247 271 - 272 - 273 - 281 - 282 - 284 - 291 - 292 - 293 294 - 296 - 297 - 298 - 299 - 300 - 321 - 349 - 368 397 - 422 - 423 - 454 - 481 - 503 - 504 - 506 - 507 508 - 509 - 510 - 511 - 517 - 519 - 536 - 560 - 564 603 - 656 - 682 - 685 - 690	178 57 06	168	Governor housing Peugeot 335 - 336	178 59 16
165	Output shaft for Peugeot all up to 465	178 57 01	168	Governor housing BMW 049 - 050 - 069 - 071 - 083 089 - 090 - 093 - 094 - 095 - 097 - 104 - 119 - 120 126 - 127 - 129 - 130 - 131 - 133 - 149 - 150 - 157 192 - 203 - 204 - 210 - 211 - 213 - 214 - 224 - 251 259 - 260 - 261 - 265 - 268 - 269 - 271 - 272 - 273 278 - 279 - 281 - 282 - 284 - 291 - 292 - 296 297 - 355	178 59 01
166	Extension housing for all Volvo	178 54 04	168	Governor housing BMW 051 - 070 - 132 - 184 - 186 187 - 193 - 194 - 226 - 249 - 253 - 254 - 262 - 263 264 - 266 - 267 - 270 - 299 - 300 - 302 - 303 - 307 308 - 369	178 59 17
166	Extension housing for all Peugeot	178 54 01	168	Governor housing BMW 082	178 59 18
166	Extension housing for all Range Rover	178 54 02	168	Governor housing BMW 077	178 59 19
166	Extension housing for all Jaguar	178 54 03	168	Governor housing BMW 068 - 078 - 109 - 141 - 168 215 - 274 - 275 - 277 - 280 - 283	178 59 17
166	Extension housing for BMW 068 - 081 - 082 - 088 095 - 097 - 126 - 127 - 129 - 130 - 131 - 132 - 133 134 - 141 - 144 - 157 - 163 - 168 - 169 - 170 - 184 186 - 187 - 188 - 193 - 194 - 203 - 204 - 245 - 262 Extension housing for BMW 263 - 264 - 266 - 267 - 268 - 269 - 270 - 273 - 277 279 - 280 - 284 - 285 - 288 - 290 - 299 - 300 - 302 303 - 307 - 308 - 331 - 355 - 369 - 657 - 659 - 663 676	178 54 05	168	Governor housing BMW 081 - 088 - 092 - 218 - 285	178 59 21
166	Extension housing for BMW 049 - 050 - 051 - 053 054 - 069 - 070 - 071 - 077 - 078 - 083 - 089 - 090 091 - 092 - 093 - 094 - 101 - 104 - 108 - 109 - 119 120 - 121 - 122 - 140 - 149 - 150 - 171 - 191 - 192 210 - 211 - 212 - 213 - 214 - 215 - 232 - 244 - 247 259 - 260 - 261 - 265 - 271 - 272 - 274 - 275 - 278 281 - 282 - 283 - 286 - 287 - 289 - 291 - 292 - 293 294 - 296 - 297 - 298 - 349 - 368 - 372 - 373	178 54 06	168	Governor housing BMW 121 - 122 - 191 - 212 - 244 245 - 247 - 293 - 294 - 298 - 321 - 349 - 368	178 59 22
166	Extension housing for BMW 248 - 249 - 251 - 253 254 - 255 - 655 - 683 - 684 - 686 and 687 to 717	178 54 06	168	Governor housing BMW 232 - 248 - 371 - 372 - 373	178 59 23
			NI	Supplementary "A" clutch feed pipe	178 63 01
			NI	Plastic breather cap	137 29 39
			169	Parking wheel	178 29 59
			170	Output flange for Volvo 042 - 060 - 151 - 324 - 389 549 - 551	178 57 09
			170	Output flange for Volvo 608 - 610	178 57 14
			170	Output flange for Volvo all others to 549	178 57 08
			170	Output flange for Peugeot all up to 465	178 57 15
			170	Output flange for Jaguar all up to 624	178 57 08
			170	Output flange for BMW 049 - 050 - 051 - 053 - 054 069 - 070 - 071 - 077 - 078 - 083 - 089 - 090 - 091 101 - 104 - 108 - 109 - 127 - 129 - 130 - 131 - 132 133 - 134 - 140 - 141 - 144 - 149 - 150 - 157 - 163 168 - 169 - 170 - 171 - 184 - 187 - 188 - 192 - 193 194 - 203 - 204 - 215 - 218	178 57 13
			170	Output flange for BMW 081 - 088 - 092 - 093 - 094 095 - 119 - 120 - 121 - 122 - 191 - 210 - 211 - 212 213 - 214 - 224 - 244 - 245 - 247 - 271 - 272 - 273 281 - 282 - 283 - 291 - 292 - 293 - 294 - 296 - 297 298 - 321 - 349 - 368 - 657 - 659	178 57 11
			170	Output flange for BMW 126 - 186 - 226 - 263 - 270	178 57 12
			170	Output flange for BMW 068 - 082 - 097 - 299 - 300	178 57 10
			170	Output flange for BMW 232 - 248 - 249 - 251 - 253 254 - 255 - 259 - 260 - 261 - 262 - 264 - 265 - 266 267 - 268 - 269 - 274 - 275 - 277 - 278 - 279 - 280 283 - 285 - 286 - 287 - 288 - 289 - 290 - 302 - 303 307 - 308 - 331 - 355 - 369 - 370 - 371 - 372 - 373	



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Iss 01/05/98

4 speed rear wheel drive with lock up.  
BMW, Jaguar, Volvo, Peugeot, Range Rover

**ZF 4HP22**  
**1043 010**

Illus	Description	Part No.	Illus	Description	Part No.
	655 and 663 to 717	178 57 13		Valve body orifice valve 0.90 mm dia	178 62 14
171	Output shaft locknut	137 34 01		Valve body orifice valve 1.00 mm dia	178 62 06
172	Output shaft locknut washer	113 34 01			
180	Bell housing for Volvo 042 - 117 - 151 - 161 - 323 324 - 388 - 389 - 610	178 55 01		Valve body orifice valve 1.20 mm dia	178 62 02
180	Bell housing for Volvo060 - 062 - 106 - 152 - 153 175 - 326 - 327 - 328 - 330 - 492 - 493 - 494	178 55 02		Valve body orifice valve 1.30 mm dia	178 62 15
180	Bell housing for Volvo 123 - 209 - 257 - 325 - 549 551 - 608	178 55 03		Valve body orifice valve 1.50 mm dia	178 62 05
180	Bell housing for Peugeot 335 - 336 - 415	178 55 04		Valve body orifice valve 1.70 mm dia	178 62 01
180	Bell housing for Peugeot 359 - 385 - 411	178 55 05			
180	Bell housing for Peugeot 337 - 338 - 339 - 358 - 383	178 55 06		<b>ELECTRICAL</b>	
180	Bell housing for Peugeot 347 - 348 - 356 - 360	178 55 07		Inductive sensor Trans 143	178 35 01
180	Bell housing for Peugeot 340 - 341	178 55 08		Switch	178 35 02
180	Bell housing for Peugeot 463 - 464 - 465	178 55 09		Plate to hold loom	178 35 03
180	Bell housing for Peugeot 352 - 417	178 55 10		Solenoid	178 35 04
180	Bell housing for Peugeot 351 - 353	178 55 11		Solenoid (narrow spade connectors)	
180	Bell housing for Jaguar 344 - 345 - 346 - 390 - 391	178 55 12		Pressure regulating valve	178 35 05
180	Bell housing for Range Rover 085	178 55 13		Valve body loom	178 35 06
180	Bell housing for Range Rover 115 - 332 - 593 631 - 699	178 55 14		EH1/EH2 inhibitor switch	178 35 07
180	Bell housing for BMW 049 - 050 - 051 - 053 - 069 070 - 071 - 077 - 083 - 089 - 090 - 097 - 101 - 104 108 - 126 - 127 - 129 - 130 - 131 - 132 - 133 - 134 141 - 163 - 170 - 171 - 184 - 186 - 187 - 191 - 192 193 - 194 - 203 - 204 - 226 - 248 - 249 - 251 - 253 254 - 255 - 259 - 260 - 261 - 262 - 263 - 264 - 265 266 - 267 - 268 - 269 - 270 - 287 - 288 - 289 - 299 300 - 302 - 303 - 307 - 308 - 355 - 369 - 370 - 371 655 - 668 - 683 - 684 - 686 - 687 - 689 - 181			<b>MISCELLANEOUS</b>	
180	Bell housing for BMW 068 - 078 - 081 - 082 - 088 092 - 093 - 094 - 095 0 109 - 144 - 149 - 150 - 157 168 - 169 - 213 - 214 - 215 - 218 - 224 - 244 - 245 271 - 272 - 273 - 274 - 275 - 277 - 278 - 279 - 280 281 - 282 - 283 - 284 - 285 - 321 - 331 - 368	178 55 16	NI	"B" clutch clutch restrictor valve (plastic)	178 62 09
180	Bell housing for BMW 091 - 140 - 188 - 286 - 290	178 55 17		Torque tube to Ext house bolts (Peugeot)	178 37 18
180	Bell housing for BMW 119 - 120 - 121 - 122 - 210 211 - 212 - 247 - 291 - 292 - 293 - 294 - 296 - 297 298 - 349	178 55 18		Sump bolts	178 37 19
180	Bell housing for BMW 232,372,373,657, 659,663	178 55 19			
180	Bell housing for BMW 676	178 55 20		<b>TORQUE CONVERTERS</b>	
181	Main case for BMW For Trans 049 - 050 - 051 - 068 - 069 - 070 - 071 077 - 078 - 081 - 082 - 083 - 088 - 089 - 090 - 091 092 - 093 - 094 - 095 - 097 - 104 - 109 - 119 - 120 121 - 122 - 126 - 127 - 129 - 130 - 131 - 132 - 133 144 - 149 - 150 - 157 - 168 - 184 - 186 - 187	178 53 01		BMW 325 (275mm body)	178 30 03
181	Main case for BMW 370 - 371 - 373 - 657 - 663	178 53 08		BMW 325E (code 283) & 325i (code 508)	178 30 07
181	Main case for BMW 053 - 054 - 091 - 101 - 108 - 134 - 140 - 141 - 163 169 - 170 - 171 - 188 - 191 - 192 - 193 - 194 - 203 204 - 210 - 211 - 212 - 213 - 214 - 215 - 218	178 53 02		Range Rover	178 30 08
181	Main case for BMW 224 - 226 - 244 - 245 - 247 - 249 - 251 - 253 - 254 259 - 260 - 261 - 262 - 263 - 264 - 265 - 266 - 267 268 - 269 - 270 - 271 - 272 - 273 - 274 - 275 - 277 278 - 279 - 280 - 281 - 282 - 283 - 284 - 285 - 291 292 - 293 - 294 - 296 - 297 - 298 - 299 - 300 - 302 303 - 307 - 308 - 321 - 331 - 349 - 355 - 368 - 369	178 53 04		BMW 325 etc (275mm body)	178 30 11
181	Main case for BMW 232 - 248 - 372	178 53 07		BMW 325 etc (255mm body)	178 30 13
181	Main case for BMW 684 - 687 - 695 - 716	178 53 09		Peugeot 504/505	178 30 23
181	Main case for Jaguar	178 53 06		Peugeot 504gr (with ring gear)	178 30 24
181	Main case for Peugeot	178 53 05		Peugeot 505	178 30 25
181	Main case for Range Rover	178 53 05		Jaguar XJ6 3.6 litre	178 30 26
181	Main case for Volvo	178 53 06		Jaguar XJ6 2.9 litre	178 30 28
182	Sump pan for Volvo, Peugeot and Jaguar	178 56 03		Volvo	178 30 29
182	Sump pan for Range Rover	178 56 04		Volvo 700	178 30 30
182	Sump pans for BMW Trans Code 122 - 191 - 247 - 294 - 349 655 - 657 - 659 - 663 - 676 - 683 - 684 - 686 o49 to 109, 119 - 120 - 121 - 126 126 to 189, 192 to 245, 248 to 293, 296 to 331, 355 to 373, 668	178 56 02 178 56 05 178 56 03 178 56 03 178 56 03		BMW 318	178 30 37
	Valve body orifice valve 0.70 mm dia	178 62 03		Range Rover Code 699 with catylist (low stall)	178 30 40
	Valve body orifice valve 0.80 mm dia	178 62 04		Land Rover Discovery 2..5 diesel	178 30 43
				Land Rover Discovery 2..5 diesel (low stall)	178 30 44
				<b>TOOLS</b>	
				Pump gear tool	137 33 01
				C, C1, D work locating tool	137 33 02
				"O" ring mounting sleeve	137 33 03
				Output flange peining tool	137 33 04
				Valve body setting tool	178 33 01
				Mounting support for E & F clutch	178 33 02
				4th gear mounting sleeve	178 33 03



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Please quote the full transmission code when ordering parts

**Converter & cable code interchange (Prefix 1043 010 ###) for ZF 4HP22**

Code	Car	T/Conv.	Cable	Code	Car	T/Conv.	Cable	Code	Car	T/Conv.	Cable
042	Volvo	178 30 29	178 50 15	218	BMW	178 30 11	178 50 11	345	Jaguar	178 30 26	178 50 13
049	BMW	178 30 11	178 50 01	222	BMW	178 30 11	178 50 21	346	Jaguar	178 30 26	178 50 13
050	BMW	178 30 11	178 50 01	224	BMW	178 30 13	178 50 10	347	Peugeot	178 30 24	178 50 04
051	BMW	178 30 03	178 50 01	226	BMW	178 30 03	178 50 01	348	Peugeot	178 30 24	178 50 04
053	BMW	178 30 11	Electric	232	BMW	178 30 11	178 50 10	349	BMW	178 30 13	178 50 10
054	BMW	178 30 11	Electric	233	BMW	178 30 11	Electric	351	Peugeot	178 30 25	178 50 08
060	Volvo	178 30 29	178 50 19	242	Jaguar	178 30 26	178 50 13	352	Peugeot	178 30 25	178 50 08
062	Volvo	178 30 30	178 50 19	243	Jaguar	178 30 26	178 50 13	353	Peugeot	178 30 25	178 50 08
068	BMW	178 30 11	178 50 10	244	BMW	178 30 13	178 50 10	355	BMW	178 30 11	178 50 01
069	BMW	178 30 11	178 50 01	245	BMW	178 30 13	178 50 10	356	Peugeot	178 30 24	178 50 06
070	BMW	178 30 03	178 50 01	247	BMW	178 30 13	178 50 10	358	Peugeot	178 30 23	178 50 07
071	BMW	178 30 11	178 50 01	248	BMW	178 30 11	178 50 12	359	Peugeot	178 30 23	178 50 04
077	BMW	178 30 03	178 50 01	249	BMW	178 30 11	178 50 12	360	Peugeot	178 30 24	178 50 06
078	BMW	178 30 03	178 50 10	251	BMW	178 30 11	178 50 12	368	BMW	178 30 13	178 50 10
081	BMW	178 30 11	178 50 11	253	BMW	178 30 11	178 50 12	369	BMW	178 30 03	178 50 10
082	BMW	178 30 03	178 50 10	254	BMW	178 30 03	178 50 21	370	BMW	178 30 11	Electric
083	BMW	178 30 03	178 50 01	255	BMW	178 30 03	Electric	371	BMW	178 30 07	Electric
085	Range Rover	178 30 08	178 50 16	259	BMW	178 30 11	178 50 01	372	BMW	178 30 11	178 50 10
088	BMW	178 30 11	178 50 11	260	BMW	178 30 03	178 50 01	373	BMW	178 30 11	Electric
089	BMW	178 30 03	178 50 01	261	BMW	178 30 11	178 50 01	383	Peugeot	178 30 23	178 50 07
090	BMW	178 30 11	178 50 01	262	BMW	178 30 03	178 50 01	385	Peugeot	178 30 23	178 50 04
091	BMW	178 30 12	Electric	263	BMW	178 30 03	178 50 01	388	Volvo	178 30 29	178 50 20
092	BMW	178 30 11	178 50 11	264	BMW	178 30 03	178 50 01	389	Volvo	178 30 29	178 50 15
093	BMW	178 30 11	178 50 10	265	BMW	178 30 11	178 50 01	390	Jaguar	178 30 28	178 50 13
094	BMW	178 30 13	178 50 10	266	BMW	178 30 03	178 50 01	391	Jaguar	178 30 27	178 50 13
095	BMW	178 30 13	178 50 10	267	BMW	178 30 03	178 50 01	392	BMW	178 30 11	178 50 10
097	BMW	178 30 03	178 50 10	268	BMW	178 30 11	178 50 01	393	BMW	178 30 11	178 50 21
101	BMW	178 30 14	Electric	269	BMW	178 30 11	178 50 01	394	BMW	178 30 11	178 50 21
104	BMW	178 30 11	178 50 01	270	BMW	178 30 03	178 50 01	397	BMW	178 30 13	178 50 10
106	Volvo	178 30 30	178 50 19	271	BMW	178 30 13	178 50 10	400	BMW	178 30 11	Electric
108	BMW	178 30 11	Electric	272	BMW	178 30 11	178 50 10	401	BMW	178 30 07	Electric
109	BMW	178 30 03	178 50 10	273	BMW	178 30 13	178 50 10	411	Peugeot	178 30 23	178 50 04
115	Range Rover	178 30 08	178 50 14	274	BMW	178 30 03	178 50 10	415	Peugeot	178 30 23	178 50 03
117	Volvo	178 30 29	178 50 17	275	BMW	178 30 03	178 50 10	416	Peugeot	178 30 23	178 50 03
119	BMW	178 30 13	178 50 12	277	BMW	178 30 03	178 50 10	417	Peugeot	178 30 25	178 50 08
120	BMW	178 30 13	178 50 10	278	BMW	178 30 13	178 50 10	420	BMW	178 30 10	178 50 10
121	BMW	178 30 13	178 50 10	279	BMW	178 30 13	178 50 10	421	BMW	178 30 10	Electric
122	BMW	178 30 13	178 50 10	280	BMW	178 30 03	178 50 10	422	BMW	178 30 13	178 50 10
123	Volvo	178 30 29	178 50 15	281	BMW	178 30 13	178 50 10	423	BMW	178 30 13	178 50 10
126	BMW	178 30 03	178 50 01	282	BMW	178 30 11	178 50 10	426	BMW	178 30 13	Electric
127	BMW	178 30 03	178 50 01	283	BMW	178 30 03	178 50 10	427	BMW	178 30 13	Electric
129	BMW	178 30 11	178 50 01	284	BMW	178 30 13	178 50 10	436	BMW	178 30 10	178 50 10
130	BMW	178 30 11	178 50 01	285	BMW	178 30 11	178 50 11	446	Volvo	178 30 29	178 50 15
131	BMW	178 30 03	178 50 01	286	BMW	178 30 12	Electric	454	BMW	178 30 13	178 50 10
132	BMW	178 30 03	178 50 01	287	BMW	178 30 11	Electric	460	BMW	178 30 11	178 50 10
133	BMW	178 30 11	178 50 01	288	BMW	178 30 11	Electric	461	BMW	178 30 11	178 50 10
134	BMW	178 30 11	Electric	289	BMW	178 30 14	Electric	462	BMW	178 30 11	178 50 10
140	BMW	178 30 12	Electric	290	BMW	178 30 12	Electric	463	Peugeot	178 30 23	178 50 04
141	BMW	178 30 03	Electric	291	BMW	178 30 13	178 50 12	464	Peugeot	178 30 23	178 50 04
144	BMW	178 30 03	178 50 10	292	BMW	178 30 13	178 50 10	465	Peugeot	178 30 23	178 50 04
149	BMW	178 30 11	178 50 10	293	BMW	178 30 02	178 50 10	490	BMW	178 30 11	178 50 10
150	BMW	178 30 13	178 50 10	294	BMW	178 30 13	178 50 10	491	BMW	178 30 11	178 50 10
151	Volvo	178 30 29	178 50 15	296	BMW	178 30 13	178 50 12	492	Volvo	178 30 29	178 50 19
152	Volvo	178 30 30	178 50 19	297	BMW	178 30 13	178 50 10	493	Volvo	178 30 30	178 50 19
153	Volvo	178 30 30	178 50 19	298	BMW	178 30 02	178 50 10	494	Volvo	178 30 30	178 50 19
157	BMW	178 30 13	178 50 10	299	BMW	178 30 03	178 50 01	495	BMW	178 30 11	178 50 10
161	Volvo	178 30 29	178 50 17	300	BMW	178 30 03	178 50 01	496	BMW	178 30 11	Electric
163	BMW	178 30 11	Electric	302	BMW	178 30 03	178 50 01	497	BMW	178 30 11	178 50 10
167	Peugeot	178 30 23		303	BMW	178 30 03	178 50 01	499	BMW	178 30 11	Electric
168	BMW	178 30 03	178 50 10	304				501	BMW	178 30 11	Electric
169	BMW	178 30 03	Electric	307	BMW	178 30 03	178 50 01	502	BMW	178 30 10	Electric
170	BMW	178 30 03	Electric	308	BMW	178 30 03	178 50 01	503	BMW	178 30 07	178 50 10
171	BMW	178 30 03	Electric	318	Peugeot	178 30 23		504	BMW	178 30 11	178 50 11
173	Peugeot	178 30 23		319	Peugeot	178 30 23	178 50 05	506	BMW	178 30 11	178 50 10
174	Peugeot	178 30 23		320	Peugeot	178 30 24	178 50 04	507	BMW	178 30 11	178 50 10
175	Volvo	178 30 29	178 50 19	321	BMW	178 30 13	178 50 10	508	BMW	178 30 07	178 50 10
184	BMW	178 30 03	178 50 01	323	Volvo	178 30 29	178 50 17	509	BMW	178 30 11	178 50 10
186	BMW	178 30 03	178 50 01	324	Volvo	178 30 29	178 50 15	510	BMW	178 30 11	178 50 10
187	BMW	178 30 03	178 50 01	325	Volvo	178 30 29	178 50 15	511	BMW	178 30 11	178 50 10
188	BMW	178 30 12	Electric	326	Volvo	178 30 29	178 50 19	512	BMW	178 30 11	Electric
191	BMW	178 30 15	178 50 10	327	Volvo	178 30 30	178 50 19	513	BMW	178 30 11	Electric
192	BMW	178 30 11	178 50 01	328	Volvo	178 30 30	178 50 19	514	BMW	178 30 07	Electric
193	BMW	178 30 03	178 50 01	330	Volvo	178 30 30	178 50 19	515	BMW	178 30 11	Electric
194	BMW	178 30 03	178 50 01	331	BMW	178 30 11	Electric	517	BMW	178 30 11	178 50 10
203	BMW	178 30 11	178 50 01	332	Range Rover	178 30 08	178 50 14	518	BMW	178 30 10	178 50 10
204	BMW	178 30 11	178 50 01	335	Peugeot	178 30 23	178 50 03	519	BMW	178 30 11	178 50 10
209	Volvo	178 30 29	178 50 15	336	Peugeot	178 30 23	178 50 03	521	BMW	178 30 37	178 50 22
210	BMW	178 30 13	178 50 12	337	Peugeot	178 30 23	178 50 02	522	BMW		178 50 22
211	BMW	178 30 13	178 50 10	338	Peugeot	178 30 23	178 50 02	531	BMW	178 30 11	178 50 21
212	BMW	178 30 13	178 50 10	339	Peugeot	178 30 23	178 50 02	536	BMW	178 30 11	
213	BMW	178 30 13	178 50 10	340	Peugeot	178 30 23	178 50 05	537	BMW	178 30 07	Electric
214	BMW	178 30 11	178 50 10	341	Peugeot	178 30 23	178 50 05	538	BMW	178 30 07	Electric
215	BMW	178 30 03	178 50 10	344	Jaguar	178 30 28	178 50 13	540	BMW	178 30 13	Electric

Please quote the full transmission code when ordering parts

# ZF 4HP22 converter & cable code interchange (Prefix 1043 010 ###)

Iss 30/11/2000



Code	Car	T/Conv.	Cable	Code	Car	T/Conv.	Cable	Code	Car	T/Conv.	Cable
541	BMW	178 30 13	Electric	700	Volvo	178 30 30	178 50 19				
544	BMW	178 30 13	178 50 25	701	Volvo	178 30 30	178 50 19				
551	Volvo	178 30 29	178 50 15	702	Volvo	178 30 30	178 50 19				
556	BMW	178 30 11	Electric	704	BMW	178 30 11	178 50 10				
557	BMW	178 30 11	Electric	707	Volvo	178 30 29	178 50 15				
560	BMW	178 30 13	178 50 10	708		178 30 08	178 50 14				
561	BMW	178 30 13	178 50 10	709		178 30 08	178 50 14				
562	BMW	178 30 13	Electric	710		178 30 11	178 50 11				
564	BMW	178 30 11	178 50 10	712	Volvo	178 30 29	178 50 15				
570	BMW	178 30 13	178 50 10	713	Jaguar	178 30 28	178 50 13				
575	BMW	178 30 11	178 50 10	715	BMW	178 30 11	Electric				
577	BMW	178 30 11	178 50 10	716	BMW	178 30 11	Electric				
583	BMW	178 30 11	Electric	727	L/Rover	178 30 47	Electric				
584	BMW	178 30 13	Electric	728	L/Rover	178 30 46	Electric				
590	BMW	178 30 13	178 50 25	717	BMW	178 30 11	Electric				
591	BMW	178 30 11	Electric	723	BMW	178 30 35	Electric				
593	Range Rover	178 30 08	178 50 14	724	BMW	178 30 35	Electric				
601	BMW	178 30 13	178 50 10	726	BMW	178 30 10					
602	BMW	178 30 37	178 50 22	733	BMW	178 30 11	178 50 01				
603	BMW	178 30 37	178 50 22	734	BMW	178 30 11	178 50 10				
607	BMW	178 30 13	178 50 10	735	BMW	178 30 11	178 50 01				
608	Volvo	178 30 33	178 50 15	736	BMW	178 30 11	178 50 11				
610	Volvo	178 30 33	178 50 20	738	BMW	178 30 11	Electric				
618	BMW	178 30 13	Electric	740	L/Rover	178 30 08	178 50 14				
620	BMW	178 30 13	178 50 10	741	L/Rover	178 30 08	178 50 14				
622	BMW	178 30 13	178 50 10	742	L/Rover	178 30 08	178 50 14				
623	BMW	178 30 10	178 50 10	744	L/Rover	178 30 43	178 50 23				
624	Jaguar	178 30 26	178 50 13	745	Jaguar	178 30 26	178 50 13				
627	Maserati	178 30 11	178 50 26	746	Jaguar	178 30 26	178 50 13				
630	BMW	178 30 13	178 50 25	747	L/Rover	178 30 51	178 50 14				
631	Range Rover	178 30 08	178 50 14	748	L/Rover	178 30 43	178 50 23				
632	BMW	178 30 11	178 50 25	749	Jaguar	178 30 26	178 50 27				
638	BMW	178 30 11	Electric	759	L/Rover	178 30 47	Electric				
639	BMW	178 30 37	178 50 22	760	L/Rover	178 30 08	178 50 14				
640	BMW	178 30 34	178 50 21	761	Maserati	178 30 11	178 50 26				
641	BMW	178 30 11	Electric	762	Jaguar	178 30 26	178 50 27				
642	BMW	178 30 34	178 50 21	763	L/Rover	178 30 46	Electric				
643	BMW	178 30 11	Electric	764	L/Rover	178 30 47	Electric				
644	BMW	178 30 07	Electric	765	L/Rover	178 30 48	Electric				
645	BMW	178 30 07	Electric	766	L/Rover	178 30 49	Electric				
647	BMW	178 30 34	178 50 21	767	L/Rover	178 30 48	Electric				
648	BMW	178 30 11	Electric	768	L/Rover	178 30 50	Electric				
649	BMW	178 30 34	178 50 21	769	L/Rover	178 30 50	Electric				
650	BMW	178 30 11	Electric								
652	BMW	178 30 34	178 50 21								
653	BMW	178 30 34	178 50 21								
654	BMW	178 30 07	Electric								
655	BMW	178 30 07	Electric								
656	BMW	178 30 13	178 50 10								
657	BMW	178 30 13	Electric								
658	BMW	178 30 13	178 50 10								
658	BMW	178 30 13	178 50 10								
659	BMW	178 30 13	Electric								
660	BMW	178 30 13	178 50 10								
661	BMW	178 30 13	178 50 10								
662	BMW	178 30 11	178 50 10								
663	BMW	178 30 11	Electric								
663	BMW	178 30 11	Electric								
664	BMW	178 30 11	178 50 10								
665	BMW	178 30 11	Electric								
666	BMW	178 30 11	178 50 10								
668	BMW	178 30 11	Electric								
669	BMW	178 30 11	178 50 21								
670	BMW	178 30 11	178 50 21								
676	BMW	178 30 35	Electric								
680	BMW	178 30 10	178 50 10								
681	Jaguar	178 30 26	178 50 13								
682	BMW	178 30 13	178 50 10								
683	BMW	178 30 11	Electric								
684	BMW	178 30 11	Electric								
685	BMW	178 30 13	178 50 10								
686	BMW	178 30 07	Electric								
687	BMW	178 30 07	Electric								
688	BMW	178 30 11	178 50 21								
689	BMW	178 30 07	Electric								
690	BMW	178 30 11	178 50 10								
691	BMW	178 30 11	178 50 10								
693	BMW	178 30 11	178 50 21								
694	Peugeot	178 30 23	178 50 04								
695	BMW	178 30 07	Electric								
697	Volvo	178 30 29	178 50 17								
698	Jaguar	178 30 26	178 50 13								
699	Range Rover	178 30 08	178 50 14								

