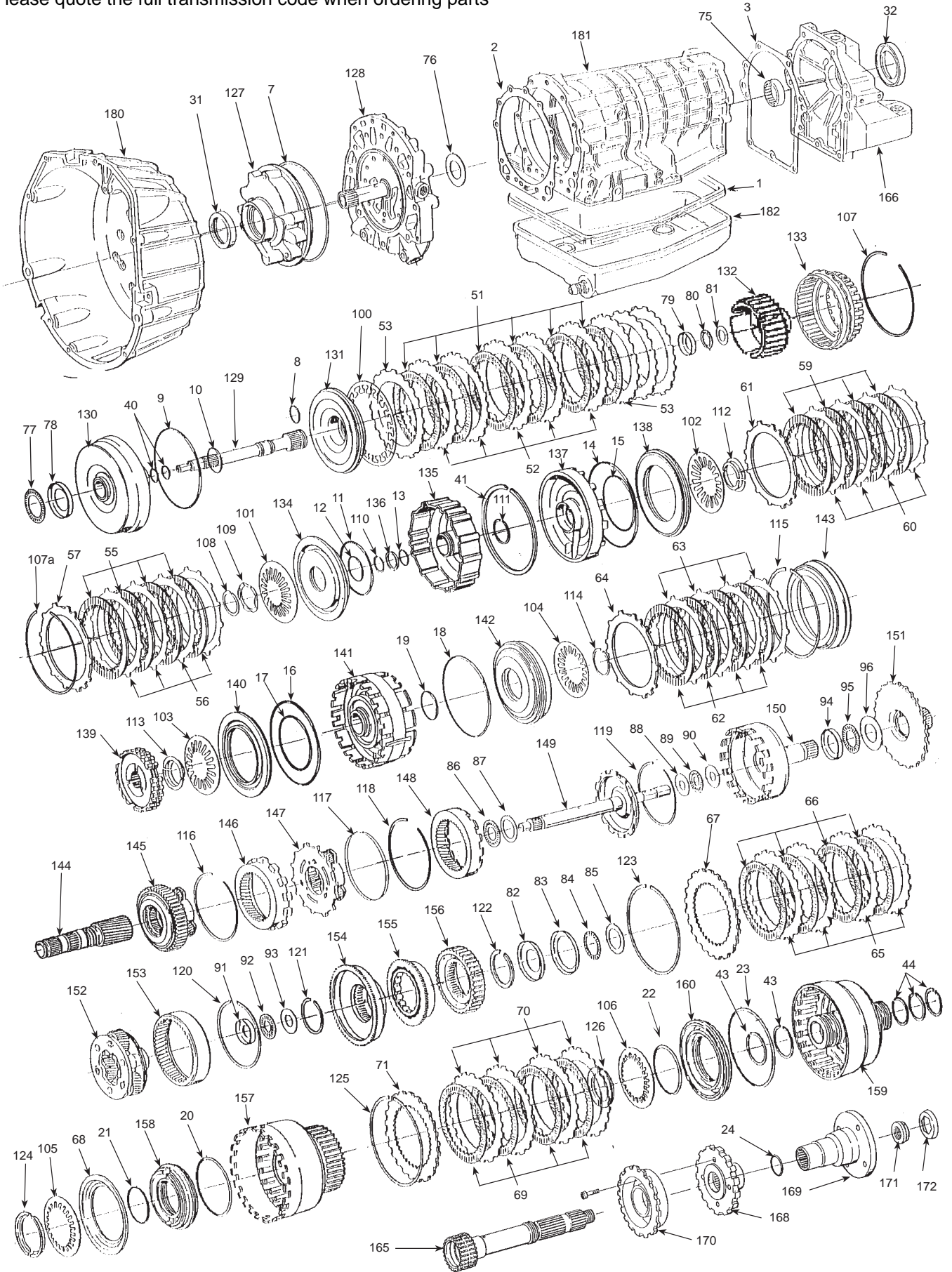


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ZF4HP24 iss 12

ZF 4HP24
1043 030

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

Iss 06/04/01



Illus	Description	Part No.	Illus	Description	Part No.
	KITS				
	Overhaul (no parts for Range Rover transfer box)	204 02 01	55	B clutch friction 148mm x 1.6 x 24T (5)	137 11 02
	Overhaul Range Rover chain trans. box only 89-	178 02 04	56	B clutch steel 144mm x 1.74 x 12T std (5)	137 12 03
	Overhaul 4HP22/24EH (BMW, Jag) ZF kit	178 02 05	56	B clutch end steel 144mm x 1.52 x 12T sel (1)	137 12 04
	Overhaul 4HP22/24EH (Land Rover) ZF kit	178 02 06	56	B clutch end steel 144mm x 1.74 x 12T sel (1)	137 12 03
			56	B clutch end steel 144mm x 2.10 x 12T sel (1)	137 12 05
	Gasket & seal	204 03 01	56	B clutch wavy 1.20mm	178 12 05
	Shaft sealing rings		57	B clutch pressure	183 13 01
	Thrusts				
	GASKETS				
1	Pan	178 25 01	59	C1 & C clutch friction 148mm x 1.6 x 24T (4)	137 11 03
2	Pump	178 25 02	60	C1 & C clutch steel 144mm x 2.10 x 12T std (2)	137 12 05
3	Extension	178 25 03	60	C1 & C clutch steel 144mm x 1.74 x 12T sel (4)	137 12 03
NI	Plate to valve body - Jag / Peugeot / Range Rover		61	C clutch pressure (1)	137 13 01
	- Volvo				
	- BMW		62	D clutch friction 142mm x 1.60 x 58T (5)	178 11 02
	Various EH trans		63	D clutch steel sel 144mm x 1.20 x 12T (5)	204 12 02
	Various EH trans		64	D clutch end steel sel 1.50mm selective (1)	204 12 03
	Various EH trans		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
	RUBBER COMPONENTS				
7	Pump "O" ring	157 16 05	65	E clutch friction 128 x 1.50 x 40T (4)	178 11 01
8	Input shaft "O" ring	137 16 02	66	E clutch steel 128mm o/d x 1.5 x 24T (5)	178 12 03
9	"A" clutch outer "O" ring	137 16 07	67	E clutch press (flat with inner serrations)	178 13 01
10	"A" clutch inner "O" ring	180 16 17	68	E clutch pressure - shaped	178 29 24
11	"B" clutch outer "O" ring	137 16 06			
			69	F clutch friction 128 x 1.50 x 40T (4)	178 11 01
12	"B" clutch inner "O" ring	137 16 04	70	F clutch steel 128mm o/d x 2.0 x 24T (4)	178 12 01
13	"B" clutch drum "O" ring	137 16 02	71	F clutch pressure	178 13 02
14	"C1" clutch drum "O" ring	137 16 07			
15	"C1" clutch inner "O" ring	137 16 08		FILTER	
16	"C" clutch outer "O" ring	137 16 07	NI	Pick up	178 27 04
				BUSHES & BEARINGS	
17	"C" clutch inner "O" ring	137 16 08	NI	Front pump body	178 21 01
18	"D" clutch outer "O" ring	137 16 07		THRUST WASHERS	
19	"D" clutch inner "O" ring	137 16 09	76	Input selective thrust 54.5/32/0.80mm	178 22 03
20	"E" clutch outer "O" ring	137 16 06	76	Input selective thrust 54.5/32/1.00mm	137 22 01
21	"E" clutch inner "O" ring	178 16 07	76	Input selective thrust 54.5/32/1.20mm	178 22 04
			76	Input selective thrust 54.5/32/1.40mm	178 22 05
22	"F" clutch inner "O" ring	178 16 09	76	Input selective thrust 54.5/32/1.60mm	178 22 06
23	"F" clutch outer "O" ring	178 16 10			
24	Output shaft "O" ring	178 16 14	76	Input selective thrust 54.5/32/1.80mm	178 22 07
NI	Valve body seals (8)	137 20 01	76	Input selective thrust 54.5/32/2.00mm	178 22 08
NI	Valve body seals (Angled)	178 20 01	76	Input selective thrust 54.5/32/2.20mm	178 22 09
NI	Filter "O" ring	178 16 05	76	Input selective thrust 54.5/32/2.40mm	178 22 10
NI	Filter "O" ring Jaguar	178 16 15	76	Input selective thrust 54.5/32/2.60mm	178 22 11
NI	Electronic harness to case "O" ring	178 16 36	76	Input selective thrust 54.5/32/2.80mm	178 22 12
NI	Breather "O" ring	173 16 14	77	Input shaft needle bearing 55/43/2/38 needles	137 23 01
			78	Input shaft race 57.5/40/1 cupped	137 22 02
	METAL CLAD SEALS				
31	Pump	137 15 01	79	A clutch front race 42/22/1 cupped	178 22 01
32	Extension	137 15 02	80	A clutch needle 37/14/2/26 needles	137 23 03
32	Extension L/Rover 049, 061, 063, 064 (48 x 70 x 8/12)	178 15 02	81	A clutch rear plain race 36/14/0/0.6 flat	137 22 07
NI	Control shaft	137 15 04			
NI	Transfer box - Range Rover 62 x 42 x 8 (2)	127 15 09	82	F clutch front thrust 64/36/0.6 cupped	178 22 16
NI	Freight Rover ext 60 x 45 x 8	135 15 03	83	F clutch brass thrust 65/60.5/0.5 cupped	178 22 17
			84	F clutch front needle	137 23 04
			85	F clutch rear thrust 51.5/34/1 flat	178 22 18
	SHAFT SEALING RINGS				
40	Input shaft (2)	178 26 01	86	Intermediate shaft front needle	137 23 02
41	2nd clutch	178 26 05	87	Intermediate shaft front race	137 22 06
42	Sun gear to centre (2)	178 26 02			
43	F clutch cyl to "E" clutch cyl (2)	178 26 03	88	Intermediate shaft rear race	178 22 13
44	F clutch rear (1)	178 26 07	89	Intermediate shaft rear needle	178 23 04
45	Gearset (1)	178 26 06	90	Intermediate shaft rear race	178 22 13
	CLUTCH PLATES		94	Spider shaft rear cupped race 54/34/1 cupped	137 22 08
51	A clutch friction grooved 128 x 1.50 x 40T (6)	178 11 01	95	Spider shaft rear needle 49/32/2/38 needles	137 23 04
51	A clutch friction smooth (alt) 128 x 1.50 x 40T (6)	204 11 01	96	Spider shaft rear cupped race 48/32.5/1 flat	178 22 15
52	A clutch steel 128mm x 2.1 x 24T (6)	178 12 01			
52	A clutch steel 128mm x 1.5 x 24T (1)	178 12 03	91	Rear gearset to output shaft race 42/22/1 cupped	178 22 01
53	A clutch steel (wavy) (2)	204 12 01	92	Rear g/set to o/put shaft 42.5/22.5/2/26 needles	137 23 02
			93	Rear gearset to output shaft race 42/22.5/1 flat	137 22 06
			NI	Gearset planets small	178 22 21
			NI	Gearset planets large	178 22 20



iss 16/11/2000

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4 speed rear wheel drive with lock up.
BMW, Range Rover**ZF 4HP24**
1043 030

Illus	Description	Part No.	Illus	Description	Part No
	SPRINGS				
100	A clutch diaphragm (142mm/102mm)	137 24 01	151	Sun gear & flange	204 65 02
101	B"clutch diaphragm (102mm/44mm)	137 24 02	152	3rd gearset	204 66 03
102	C1 clutch diaphragm (103mm/49mm)	137 24 04	153	3rd ring gear	178 29 21
103	C clutch diaphragm	137 24 04	154	3rd ring gear hub & OWC inner	204 44 02
104	D clutch diaphragm (92mm/52mm)	137 24 05	155	One way clutch assembly inc outer	204 44 03
			156	Carrier rear sprag OWC	178 29 50
105	E clutch diaphragm	178 24 01	157	E clutch cylinder	204 29 08
106	F clutch diaphragm	178 24 05	158	E clutch piston	178 29 25
NI	Valve body to clutch 29mm long (4)	137 24 07	159	F clutch cylinder	204 29 09
NI	Valve body to clutch 42mm long (4)	178 24 02	160	F clutch piston	178 45 05
	CIRCLIPS		161	F clutch screws (10)	178 37 03
107	A clutch retainer	204 32 01	165	Output shaft	204 57 01
107A	B clutch retainer sel 1.50mm	132 32 01	166	Extension housing	178 54 03
107A	B clutch retainer sel 2.00mm	204 32 02	NI	Pan supporting plate (6)	137 29 33
107A	B clutch retainer sel 2.50mm	204 32 03	NI	Pan retaining bolts (6)	137 29 34
108	B clutch spring retainer	137 32 02	NI	Supplementary "A" clutch feed pipe	178 63 01
109	B clutch spring retainer lock tag (4 sided)	137 32 12	NI	Plastic breather cap	137 29 39
			168	Parking wheel	204 29 10
110	C1 piston carrier to "B" clutch	137 32 03	169	Output flange	204 57 02
111	C1 clutch retainer	137 32 11	170	Output speed sensor hub	204 29 11
112	C1 spring retainer (2 halves)	137 32 09	171	Output shaft locknut	137 34 01
113	C spring retainer (2 halves)	137 32 09	172	Output shaft locknut washer	113 34 01
			180	Bell housing	178 55 14
114	D clutch spring retainer	137 32 05	181	Main case	178 53 03
115	D clutch retainer	137 32 06	182	Sump pan - 027, 042, 048, 051,	204 56 01
			182	Sump pan - 043, 056	204 56 02
116	Forward planet to hollow gear	137 32 07		Valve body orifice valve 0.70 mm dia	178 62 03
117	Intermediate planet	178 32 04		Valve body orifice valve 0.80 mm dia	178 62 04
118	Rear planetary to hollow gear	137 32 07		Valve body orifice valve 0.90 mm dia	178 62 14
119	Intermediate to output shaft	137 32 08		Valve body orifice valve 1.00 mm dia	178 62 06
120	3rd gearset snap ring	178 32 05		Valve body orifice valve 1.20 mm dia	178 62 02
121	E carrier snap ring	178 32 06		Valve body orifice valve 1.30 mm dia	178 62 15
122	Output snap ring	178 32 07		Valve body orifice valve 1.50 mm dia	178 62 05
123	E clutch snap ring	178 32 08		Valve body orifice valve 1.70 mm dia	178 62 01
124	E clutch retaining collets (2)	178 32 09			
125	F clutch snap ring	178 32 08		MISCELLANEOUS	
126	F clutch spring retaining collets (2)	178 32 01	NI	"B" clutch restrictor valve (plastic)	178 62 09
NI	Valve body seal & spring retainer (8)	137 32 10		TORQUE CONVERTERS	
	HARD PARTS			Jaguar XJ40 89-	204 30 01
127	Pump assembly without stator support	204 38 01		BMW 750	204 30 02
128	Stator support with valve (Prefix "R" for recon)	204 39 01		Range Rover with 345mm dia body	204 30 03
129	Input shaft	204 64 01		TOOLS	
130	A clutch cylinder	204 29 01		Pump gear tool	137 33 01
131	A clutch piston	204 45 01		C, C1, D work locating tool	137 33 02
132	A clutch hub	204 29 02		"O" ring mounting sleeve	137 33 03
133	A clutch pressure & B clutch hub	204 29 03		Output flange peining tool	137 33 04
134	B clutch piston	204 45 02		Valve body setting tool	178 33 01
135	B clutch cylinder	204 29 04		Mounting support for E & F clutch	178 33 02
136	B clutch support ring	137 29 35		4th gear mounting sleeve	178 33 03
137	C1 centring plate	204 29 05			
138	C1 clutch piston	178 29 12			
139	C clutch one way clutch assembly	204 44 01			
140	C clutch piston	204 45 03			
141	Centre support	204 29 06			
NI	Centre support feather keys	137 29 31			
142	D clutch piston	204 45 04			
143	D clutch support ring	178 29 10			
144	Sun shaft	204 65 01			
145	1st gearset & one way clutch assembly	204 66 01			
146	1st ring gear	178 29 16			
147	2nd gearset	204 66 02			
148	2nd ring gear	137 29 22			
149	Intermediate shaft	204 29 07			
150	Spider shaft	178 29 54			

