





















change to		ECE (A)	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
		US Models	Version	ECE - Models with Mechanical transmission				
		Japanese Models	Model	628 CS i	630 CS	633 CS i	635 CS i	M 6
Technical Data	- Automatic Transmission		Unit					

No Automatic Transmission

change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89	
	 US Models	Version	ECE - Models with Automatic transmission					
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 	
Technical Data - Automatic Transmission		Unit						
24 00... Transmission in General								
Designation	ZF - 3 HP - 22		x	x	x	x	x	
	ZF - 4 HP - 22 / H		x	-	-	x	x	
	ZF - 4 HP - 22 / EH		-	-	-	x	x	
Transmission no.	ZF - 3 HP - 22		-	1 043 000 240	1 043 000 026	-		
	> model ' 80		1 043 000 174	-	1 043 000 120	1 043 000 089		
	> model 4. 81		1 043 000 205	-	1 043 000 148	1 043 000 149		
	> model ' 82		1 043 000 237	-	1 043 000 238	1 043 000 239		
	ZF - 4 HP - 22 / H		1 043 010 069	-	-	1 043 010 070	1 043 010 089	
			1 043 010 130	-	-	1 043 010 132	1 043 010 131	
			1 043 010 355	-	-	1 043 010 193	-	
			-	-	-	1 043 010 266	-	
			-	-	-	1 043 010 302	-	
			-	-	-	1 043 010 307	-	
	ZF - 4 HP - 22 / EH		-	-	-	1 043 010 134	1 043 010 170	
			-	-	-	1 043 010 163	-	
			-	-	-	1 043 010 288	-	
Code letters on data plate/ Colour code on data plate	ZF - 3 HP - 22		-	silver / gold	silver / blue	-		
	> model ' 80		PN	-	V	Z		
	> model 4. 81		RD	-	PG	PE		
	> model ' 82		RN	-	RO	RP		
	ZF - 4 HP - 22 / H		TD	-	-	TE	TH	
			UJ	-	-	UK	UL	
			YH	-	-	VF	-	
			-	-	-	WN	-	
			-	-	-	YA	-	
			-	-	-	YC	-	
	ZF - 4 HP - 22 / EH		-	-	-	UM	UX	
			-	-	-	UU	-	
			-	-	-	XM	-	
Ratios	1st gear		2,478					
	2nd gear		1,478					
	3rd gear		1					
	4th gear		0,73					
	Reverse gear		2,09					





change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00... Transmission in General (Continuation)							
Oil grade			see BMW Service-Information				
Total oil volume for new and reconditioned transmission (transmission + oil cooler)							
	ZF - 3 HP - 22	l	6,85 ... 7,25				
	ZF - 4 HP - 22 / ...	l	7,5				
Initial oil volume for new and reconditioned transmission							
	ZF - 3 HP - 22		2,2				
	ZF - 3 HP - 22 with deep oil pan	l	2,4				
	ZF - 4 HP - 22 / ...	l	2,2				
Oil change volume (transmission warm)							
	ZF - 3 HP - 22	l	2,0				
	ZF - 4 HP - 22 / ...	l	3,0				
24 00...Upshift Points Transmission ZF - 3 HP - 22							
1st/ 2nd gear, Selector lever position D							
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min	-	3710 ± 360	3745 ± 365	-	
	Road speed	km/h	-	47 ± 5	50 ± 6	-	
> mod. ' 80	Engine speed (shift at)	1/min	3870 ... 4660	-	3900 ... 4680	3860 ... 4600	
	Road speed	km/h	49 ... 60	-	52 ... 64	54 ... 66	
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min	-	5650 ± 330	5660	-	
	Road speed	km/h	-	74 ± 5	79 ± 5	-	
> mod. ' 80	Engine speed (shift at)	1/min	5480 ... 6130	-	5500 ... 6140	5320 ... 6000	
	Road speed	km/h	72 ... 81	-	76 ... 86	78 ... 89	
2nd / 3rd gear, Selector lever position D							
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min	-	5020 ± 260	5035 ± 255	-	
	Road speed	km/h	-	110 ± 6	116 ± 6	-	
> mod. ' 80	Engine speed (shift at)	1/min	4990 ... 5440	-	5000 ... 5460	4840 ... 5310	
	Road speed	km/h	109 ... 120	-	116 ... 127	118 ... 130	
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min	-	5650 ± 230	2660 ± 220	-	
	Road speed	km/h	-	124 ± 5	132 ± 6	-	
> mod. ' 80	Engine speed (shift at)	1/min	5590 ... 6030	-	5610 ... 6050	5430 ... 5880	
	Road speed	km/h	123 ... 134	-	131 ... 142	133 ... 146	





change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i ^(S)
Technical Data - Automatic Transmission		Unit					
24 00...Upshift Points Transmission ZF - 4 HP - 22 / H							
1st/ 2nd gear, Selector lever position D							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min	2060 ... 2080	-	-	2190 ... 2210	2210 ... 2230
	Road speed	km/h	19,3 ... 19,9	-	-	21,7 ... 22,3	205 ... 21,2
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min	3300 ... 4010	-	-	3210 ... 3870	3290 ... 3980
	> Transm. No. 14300 (Data plate)	1/min	4170 ... 4810	-	-	4020 ... 4620	4140 ... 4790
	Road speed	km/h	41,2 ... 51,2	-	-	44,5 ... 55,9	43,9 ... 54,8
	> Transm. No. 14300 (Data plate)	1/min	53,9 ... 63,0	-	-	58,3 ... 68,3	-
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min	5700 ... 6240	-	-	5510 ... 6020	5700 ... 6250
	> Transm. No. 14300 (Data plate)	1/min	5430 ... 5970	-	-	5240 ... 5750	5430 ... 5970
	Road speed	km/h	76,0 ... 83,3	-	-	82,7 ... 91,2	80,9 ... 89,2
	> Transm. No. 14300 (Data plate)	1/min	72,2 ... 79,9	-	-	78,2 ... 86,6	76,9 ... 85,1
2nd / 3rd gear, Selector lever position D							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min	2150 ... 2360	-	-	2260 ... 2470	2300 ... 2490
	Road speed	km/h	37,3 ... 46,8	-	-	40,3 ... 50,7	39,7 ... 50,0
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min	4970 ... 5340	-	-	4780 ... 5160	4960 ... 5340
	Road speed	km/h	109,6 ... 118,7	-	-	118,7 ... 128,7	116,7 ... 126,4
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min	5570 ... 5930	-	-	5380 ... 5710	5570 ... 5930
	Road speed	km/h	124,3 ... 132,8	-	-	134,7 ... 143,9	132,4 ... 141,4





change to		ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
		US Models	Version	ECE - Models with Automatic transmission				
		Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 





Technical Data	- Automatic Transmission	Unit	
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24 00...Upshift Points Transmission ZF - 4 HP - 22 / H (Continuation)			
3rd / 4th gear, Selector lever position D			
Accelerator pedal in partial throttle			
Engine speed (shift at)	1/min	2140 ... 2250	-
Road speed	km/h	54,6 ... 62,5	-
Full throttle accelerator pedal position			
Engine speed (shift at)	1/min	4600 ... 4890	-
Road speed	km/h	148,8 ... 159,4	-
Converter lookup closed , Selector lever position D			
Accelerator pedal in partial throttle			
Engine speed (shift at)	1/min	2240 ... 2310	-
Road speed	km/h	84,1 ... 91,1	-
Converter lookup open , Selector lever position D			
Accelerator pedal in partial throttle			
Engine speed (shift at)	1/min	1727 ... 1875	-
Road speed	km/h	81,2 ... 88,1	-
Kickdown-accelerator pedal position			
Engine speed (shift at)	1/min	-	-
Road speed	km/h	-	-





change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00...Upshift Points Transmission ZF - 4 HP - 22 / EH							
1st/ 2nd gear , Program E , Selector lever position D							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min	-		2097 ... 2285		
	Road speed	km/h	-		21,0 ... 28,7		
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min	-		4155 ... 4621		
	Road speed	km/h	-		60,7 ... 68,4		
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min	-		5452 ... 5924		
	Road speed	km/h	-		81,8 ... 89,6		
2nd / 3rd gear , Program E , Selector lever position D							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min	-		5152 ... 2270		
	Road speed	km/h	-		39,6 ... 47,3		
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min	-		4372 ... 4654		
	Road speed	km/h	-		107,9 ... 115,6		
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min	-		5655 ... 5935		
	Road speed	km/h	-		142,6 ... 150,4		





change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00...Upshift Points Transmission ZF - 4 HP - 22 / EH (Continuation)							
3rd /4th gear , Program E , Selector lever position D							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min		-			2247 ... 2348
	Road speed	km/h		-			68,1 ... 75,9
Full throttle accelerator pedal position							
	Engine speed (shift at)	1/min		-			4440 ... 4636
	Road speed	km/h		-			162,5 ... 170,3
4th gear Converter lookup closed							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min		-			2204 ... 2266
	Road speed	km/h		-			88,0 ... 95,8
4th gear Converter lookup open							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min		-			1488 ... 1634
	Road speed	km/h		-			79,3 ... 87,1
3rd gear Converter lookup closed							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min		-			2889 ... 3066
	Road speed	km/h		-			194,2 ... 111,9
3rd gear Converter lookup open							
Accelerator pedal in partial throttle							
	Engine speed (shift at)	1/min		-			1852 ... 2052
	Road speed	km/h		-			71,9 ... 79,6
Kickdown-accelerator pedal position							
	Engine speed (shift at)	1/min		-			6474 ... 6665
	Road speed	km/h		-			244,5 ... 252,2




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	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00...Downshift Points Transmission ZF - 3 HP - 22							
3rd / 2nd gear, Selector lever position D							
Full throttle accelerator pedal position							
> mod. ' 80	Engine speed (shift at)	1/min	2900 ... 3200	-	2940 ... 3230	2950 ... 3200	
	Road speed	km/h	85 ... 97	-	90 ... 103	93 ... 106	
Kickdown-accelerator pedal position							
> mod. ' 80	Engine speed (shift at)	1/min	3740 ... 4050	-	3760 ... 4060	3690 ... 3990	
	Road speed	km/h	117 ... 128	-	124 ... 136	127 ... 139	
manual							
> mod. ' 80	Engine speed (shift at)	1/min	3600 ... 4050	-	3600 ... 4050	3450 ... 3950	
	Road speed	km/h	124 ... 137	-	132 ... 146	135 ... 150	
2nd / 1st gear, Selector lever position D							
Full throttle accelerator pedal position							
> mod. ' 80	Engine speed (shift at)	1/min	-	-	-	-	
	Road speed	km/h	-	-	-	-	
Kickdown-accelerator pedal position							
> mod. ' 80	Engine speed (shift at)	1/min	3180 ... 3600	-	3220 ... 3620	3160 ... 3570	
	Road speed	km/h	65 ... 75	-	69 ... 80	70 ... 82	
manual							
> mod. ' 80	Engine speed (shift at)	1/min	2900 ... 3500	-	2900 ... 3500	2800 ... 3450	
	Road speed	km/h	69 ... 81	-	73 ... 86	74 ... 88	

change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00...Downshift Points Transmission ZF - 4 HP - 22 / H							
4th / 3rd gear, Selector lever position D							
Full throttle accelerator pedal position							
Engine speed (shift at)		1/min	2910 ... 3120	-	-	2480 ... 2700	2930 ... 3110
> Transm. No. 14300 (Data plate)		1/min	2584 ... 2809	-	-	-	2574 ... 2801
Road speed		km/h	121,4 ... 132,0	-	-	130,9 ... 142,5	128,8 ... 140,2
> Transm. No. 14300 (Data plate)		1/min	-	-	-	-	-
Kickdown-accelerator pedal position							
Engine speed (shift at)		1/min	immediately	-	-	immediately	immediately
Road speed		km/h	immediately	-	-	immediately	immediately
manual							
Engine speed (shift at)		1/min	immediately	-	-	immediately	immediately
Road speed		km/h	immediately	-	-	immediately	immediately
3rd / 2nd gear, Selector lever position D							
Full throttle accelerator pedal position							
Engine speed (shift at)		1/min	2710 ... 2960	-	-	2770 ... 2960	2760 ... 2960
Road speed		km/h	79,9 ... 89,9	-	-	85,4 ... 96,5	84,2 ... 95,1
Kickdown-accelerator pedal position							
Engine speed (shift at)		1/min	3730 ... 3980	-	-	3590 ... 3830	3690 ... 3940
Road speed		km/h	117,3 ... 126,7	-	-	126,5 ... 136,7	124,5 ... 134,5
manual							
Engine speed (shift at)		1/min	3600 ... 4020	-	-	3510 ... 3900	3620 ... 4030
Road speed		km/h	127,5 ... 141,0	-	-	138,8 ... 152,9	135,7 ... 150,1
2nd / 1st gear, Selector lever position D							
Full throttle accelerator pedal position							
Engine speed (shift at)		1/min	2160 ... 2210	-	-	2240 ... 2290	2220 ... 2290
> Transm. No. 14300 (Data plate)		1/min	2310 ... 2590	-	-	2350 ... 2650	2380 ... 2650
Road speed		km/h	24,9 ... 28,9	-	-	28,1 ... 31,3	26,2 ... 30,8
> Transm. No. 14300 (Data plate)		km/h	35,9 ... 49,6	-	-	36,5 ... 52,2	36,8 ... 51,8
Kickdown-accelerator pedal position							
Engine speed (shift at)		1/min	3020 ... 3520	-	-	3010 ... 3330	3020 ... 3500
> Transm. No. 14300 (Data plate)		1/min	2920 ... 3330	-	-	2910 ... 3220	2920 ... 3290
Road speed		km/h	62,3 ... 74,4	-	-	67,5 ... 78,5	66,3 ... 79,2
> Transm. No. 14300 (Data plate)		km/h	59,9 ... 69,8	-	-	63,6 ... 74,6	62,9 ... 73,6
manual							
Engine speed (shift at)		1/min	2750 ... 3250	-	-	2600 ... 3130	2720 ... 3260
> Transm. No. 14300 (Data plate)		1/min	2580 ... 3090	-	-	2460 ... 2970	2570 ... 3090
Road speed		km/h	65,9 ... 77,8	-	-	71,5 ... 84,6	70,1 ... 82,9
> Transm. No. 14300 (Data plate)		km/h	62,6 ... 74,2	-	-	67,8 ... 80,4	66,6 ... 79,0


change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00...Downshift Points Transmission ZF - 4 HP - 22 / EH							
4th / 3rd gear , Program E , Selector lever position D							
Full throttle accelerator pedal position							
Engine speed (shift at)		1/min	-		2490 ... 2635		
- (CL closed before shifting)							
Road speed		km/h	-		132,7 ... 140,5		
- (CL closed before shifting)							
Kickdown-accelerator pedal position							
Engine speed (shift at)		1/min	-		4423 ... 4569		
- (CL closed before shifting)							
Road speed		km/h	-		235,8 ... 243,5		
- (CL closed before shifting)							
manual							
Engine speed (shift at)		1/min	-		4484 ... 4633		
Road speed		km/h	-		244,5 ... 252,2		
3rd / 2nd gear , Program E , Selector lever position D							
Full throttle accelerator pedal position							
Engine speed (shift at)		1/min	-		2204 ... 2404		
- (CL closed before shifting)							
Road speed		km/h	-		85,5 ... 93,9		
- (CL closed before shifting)							
Kickdown-accelerator pedal position							
Engine speed (shift at)		1/min	-		3196 ... 3396		
- (CL closed before shifting)							
Road speed		km/h	-		124,0 ... 131,8		
- (CL closed before shifting)							
manual							
Engine speed (shift at)		1/min	-		3397 ... 3600		
Road speed		km/h	-		136,4 ... 144,2		
2nd / 1st gear , Program E , Selector lever position D							
Full throttle accelerator pedal position							
Engine speed (shift at)		1/min	-		2491 ... 2616		
Road speed		km/h	-		39,6 ... 47,3		
Kickdown-accelerator pedal position							
Engine speed (shift at)		1/min	-		3005 ... 3183		
Road speed		km/h	-		65,7 ... 73,4		
manual							
Engine speed (shift at)		1/min	-		2729 ... 3042		
Road speed		km/h	-		75,6 ... 83,4		




change to	 ECE	Year	79 - 87	75 - 79	75 - 81	77 - 89	83 - 89
	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 00...Reverse gear lock							
Road speed	ZF - 3 HP - 22	km/h	-				
	ZF - 4 HP - 22 / H	km/h	24,2 ... 26,0	-	-	27,2 ... 29,2	25,8 ... 27,7
	ZF - 4 HP - 22 / EH	km/h	-			6,6 ... 14,4	
24 00...Oil Pressure							
Pump pressure with selector lever in «R»							
ZF - 3 HP - 22	Idle	bar	-	132 ... 14,5		-	
	Kickdown	bar	-	17,6 ... 19,4	18,4 ... 20,5	-	
ZF - 4 HP - 22 / H	Idle > mod. ' 80	bar	12,5 ... 14,5	-	12,5 ... 14,5		
	Kickdown > mod. ' 80	bar	17,3 ... 19,4	-	18,2 ... 20,5	19,0 ... 21,3	
ZF - 4 HP - 22 / EH	Idle	bar	11,0 ... 13,0	-	-	11,0 ... 13,0	
	Kickdown	bar	16,1 ... 18,2	-	-	16,7 ... 18,7	
Pump pressure with selector lever in 1, 2, D (A), N (O), P							
ZF - 3 HP - 22	Idle	bar	5,8 ... 6,4				
	Kickdown	bar	-	7,7 ... 8,3	8,5 ... 8,95	-	
ZF - 4 HP - 22 / H	Idle > mod. ' 80	bar	12,5 ... 14,5				
	Kickdown > mod. ' 80	bar	17,3 ... 19,4	-	18,2 ... 20,5	19,0 ... 21,3	
ZF - 4 HP - 22 / EH	Idle 1st gear	bar	6,0 ... 7,5	-	-	6,0 ... 7,5	
	Kickdown 1st gear	bar	16,1 ... 18,2	-	-	16,7 ... 18,7	
	at 4000 1/min 2nd ... 4th gear	bar	4,6 ... 5,8	-	-	4,6 ... 5,8	
ZF - 4 HP - 22 / EH	Kickdown 2nd ... 4th gear	bar	7,7 ... 8,7	-	-	8,0 ... 8,9	
	Idle 1st gear	bar	5,5 ... 7,7				
	Kickdown 1st gear	bar	-				
ZF - 4 HP - 22 / EH	at 4000 1/min 2nd ... 4th gear	bar	-				
	Kickdown 2nd ... 4th gear	bar	-				
24 30...Control unit							
Distance adjusted between control unit and needle in piston		mm	11,5				

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	 US Models	Version	ECE - Models with Automatic transmission				
	 Japanese Models	Model	628 CS i A	630 CS A	633 CS i A	633 CS i A	635 CS i 
Technical Data - Automatic Transmission		Unit					
24 40...Torque Converter							
Converter - Ø		mm	280				
	> model ' 80	mm	260				
Code/ Colour code			-	white	white		-
ZF - 3 HP - 22	> model ' 80		J	-	L		
	> model ' 81		V	white	X		
	> model ' 82		D	-	N		
ZF - 4 HP - 22 / H			02	-	-	R1	J1
			F3			R2	R2
ZF - 4 HP - 22 / EH			-			RS	R2
			-			R2	
Stall speed		1/min	-	1990 ± 50	2150 ± 50		-
ZF - 3 HP - 22	> model ' 80	1/min	1990 ... 2090	-	2020 ... 2120	2090 ... 2190	
ZF - 4 HP - 22 / H		1/min	1980 ... 2180	-	-	2060 ... 2230	1970 ... 2120
ZF - 4 HP - 22 / EH		1/min		-		2060 ... 2230	
Journal - Ø		mm	32				
24 61... AEGS - Control Unit							
Bosch - No.			-			0 260 002 001	
Code			-			B or K	

change to	 ECE	Year	77 - 84	84 - 89
	 ECE (A)	Version	US Models	
	 Japanese Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00... Transmission in General				
Designation	ZF - 3 HP - 22		x	x
	ZF - 4 HP - 22 / H		-	x
	ZF - 4 HP - 22 / EH		-	x
Transmission no.	ZF - 3 HP - 22		1 043 000 026	-
	> model ' 80		1 043 000 120	1 043 000 089
	> model 4. 81		1 043 000 148	1 043 000 149
	> model ' 82		1 043 000 238	1 043 000 239
	ZF - 4 HP - 22 / H		-	1 043 010 070
			-	1 043 010 132
			-	1 043 010 193
			-	1 043 010 266
			-	1 043 010 302
			-	1 043 010 307
	ZF - 4 HP - 22 / EH		-	1 043 010 134
			-	1 043 010 163
			-	1 043 010 288
Code letters on data plate/ Colour code on data plate	ZF - 3 HP - 22		silver / blue	-
	> model ' 80		V	Z
	> model 4. 81		PG	PE
	> model ' 82		RO	RP
	ZF - 4 HP - 22 / H		-	TE
			-	UK
			-	VF
			-	WN
			-	YA
			-	YC
	ZF - 4 HP - 22 / EH		-	UM
			-	UU
			-	XM
Ratios	1st gear		2,478	
	2nd gear		1,478	
	3rd gear		1	
	4th gear		0,73	
	Reverse gear		2,09	




change to	ECE	Year	77 - 84	84 - 89
	ECE (A)	Version	US Models	
	Japanese Models	Model	633 CS i A	635 CS i A
Technical Data		- Automatic Transmission	Unit	
24 00... Transmission in General (Continuation)				
Oil grade			see BMW Service-Information	
Total oil volume for new and reconditioned transmission (transmission + oil cooler)				
ZF - 3 HP - 22			6,85 ... 7,25	
ZF - 4 HP - 22 / ...			7,5	
Initial oil volume for new and reconditioned transmission				
ZF - 3 HP - 22			2,2	
ZF - 3 HP - 22 with deep oil pan			2,4	
ZF - 4 HP - 22 / ...			2,2	
Oil change volume (transmission warm)				
ZF - 3 HP - 22			2,0	
ZF - 4 HP - 22 / ...			3,0	
24 00...Upshift Points Transmission ZF - 3 HP - 22				
1st/ 2nd gear, Selector lever position D				
Full throttle accelerator pedal position				
Engine speed (shift at)			1/min	3745 ± 365
Road speed			km/h	50 ± 6
> mod. ' 80			Engine speed (shift at)	1/min
			3900 ... 4680	3860 ... 4600
			Road speed	km/h
			52 ... 64	54 ... 66
Kickdown-accelerator pedal position				
Engine speed (shift at)			1/min	5660
Road speed			km/h	79 ± 5
> mod. ' 80			Engine speed (shift at)	1/min
			5500 ... 6140	5320 ... 6000
			Road speed	km/h
			76 ... 86	78 ... 89
2nd / 3rd gear, Selector lever position D				
Full throttle accelerator pedal position				
Engine speed (shift at)			1/min	5035 ± 255
Road speed			km/h	116 ± 6
> mod. ' 80			Engine speed (shift at)	1/min
			5000 ... 5460	4840 ... 5310
			Road speed	km/h
			116 ... 127	118 ... 130
Kickdown-accelerator pedal position				
Engine speed (shift at)			1/min	2660 ± 220
Road speed			km/h	132 ± 6
> mod. ' 80			Engine speed (shift at)	1/min
			5610 ... 6050	5430 ... 5880
			Road speed	km/h
			131 ... 142	133 ... 146




change to		ECE	Year	77 - 84	84 - 89
		ECE (A)	Version	US Models	
		Japanese Models	Model	633 CS i A	635 CS i A
Technical Data		- Automatic Transmission		Unit	
24 00...Upshift Points Transmission ZF - 4 HP - 22 / H					
1st/ 2nd gear, Selector lever position D					
Accelerator pedal in partial throttle					
		Engine speed (shift at)	1/min	-	2190 ... 2210
		Road speed	km/h	-	21,7 ... 22,3
Full throttle accelerator pedal position					
		Engine speed (shift at)	1/min	-	3210 ... 3870
		> Transm. No. 14300 (Data plate)	1/min	-	4020 ... 4620
		Road speed	km/h	-	44,5 ... 55,9
		> Transm. No. 14300 (Data plate)	1/min	-	58,3 ... 68,3
Kickdown-accelerator pedal position					
		Engine speed (shift at)	1/min	-	5510 ... 6020
		> Transm. No. 14300 (Data plate)	1/min	-	5240 ... 5750
		Road speed	km/h	-	82,7 ... 91,2
		> Transm. No. 14300 (Data plate)	1/min	-	78,2 ... 86,6
2nd / 3rd gear, Selector lever position D					
Accelerator pedal in partial throttle					
		Engine speed (shift at)	1/min	-	2260 ... 2470
		Road speed	km/h	-	40,3 ... 50,7
Full throttle accelerator pedal position					
		Engine speed (shift at)	1/min	-	4780 ... 5160
		Road speed	km/h	-	118,7 ... 128,7
Kickdown-accelerator pedal position					
		Engine speed (shift at)	1/min	-	5380 ... 5710
		Road speed	km/h	-	134,7 ... 143,9




change to		ECE	Year	77 - 84	84 - 89
		ECE (A)	Version	US Models	
		Japanese Models	Model	633 CS i A	635 CS i A


Technical Data	- Automatic Transmission	Unit		
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24 00...Upshift Points Transmission ZF - 4 HP - 22 / H (Continuation)				
3rd / 4th gear, Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2260 ... 2370
	Road speed	km/h	-	59,1 ... 67,6
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4420 ... 7410
	Road speed	km/h	-	161,3 ... 172,8
Converter lookup closed , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2330 ... 2400
	Road speed	km/h	-	88,9 ... 96,6
Converter lookup open , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	1623 ... 1768
	Road speed	km/h	-	85,7 ... 93,4
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	-
	Road speed	km/h	-	-

change to	 ECE  ECE (A)  Japanese Models	Year	77 - 84	84 - 89
		Version	US Models	
		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Upshift Points Transmission ZF - 4 HP - 22 / EH				
1st/ 2nd gear , Program E , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2097 ... 2285
	Road speed	km/h	-	21,0 ... 28,7
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4155 ... 4621
	Road speed	km/h	-	60,7 ... 68,4
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	5452 ... 5924
	Road speed	km/h	-	81,8 ... 89,6
2nd / 3rd gear , Program E , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	5152 ... 2270
	Road speed	km/h	-	39,6 ... 47,3
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4372 ... 4654
	Road speed	km/h	-	107,9 ... 115,6
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	5655 ... 5935
	Road speed	km/h	-	142,6 ... 150,4




change to	 ECE	Year	77 - 84	84 - 89
	 ECE (A)	Version	US Models	
	 Japanese Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Upshift Points Transmission ZF - 4 HP - 22 / EH (Continuation)				
3rd /4th gear , Program E , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2247 ... 2348
	Road speed	km/h	-	68,1 ... 75,9
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4440 ... 4636
	Road speed	km/h	-	162,5 ... 170,3
4th gear Converter lookup closed				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2204 ... 2266
	Road speed	km/h	-	88,0 ... 95,8
4th gear Converter lookup open				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	1488 ... 1634
	Road speed	km/h	-	79,3 ... 87,1
3rd gear Converter lookup closed				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2889 ... 3066
	Road speed	km/h	-	194,2 ... 111,9
3rd gear Converter lookup open				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	1852 ... 2052
	Road speed	km/h	-	71,9 ... 79,6
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	6474 ... 6665
	Road speed	km/h	-	244,5 ... 252,2



change to	 ECE	Year	77 - 84	84 - 89
	 ECE (A)	Version	US Models	
	 Japanese Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Downshift Points Transmission ZF - 3 HP - 22				
3rd / 2nd gear, Selector lever position D				
Full throttle accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	2940 ... 3230	2950 ... 3200
	Road speed	km/h	90 ... 103	93 ... 106
Kickdown-accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	3760 ... 4060	3690 ... 3990
	Road speed	km/h	124 ... 136	127 ... 139
manual				
> mod. ' 80	Engine speed (shift at)	1/min	3600 ... 4050	3450 ... 3950
	Road speed	km/h	132 ... 146	135 ... 150
2nd / 1st gear, Selector lever position D				
Full throttle accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	-	-
	Road speed	km/h	-	-
Kickdown-accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	3220 ... 3620	3160 ... 3570
	Road speed	km/h	69 ... 80	70 ... 82
manual				
> mod. ' 80	Engine speed (shift at)	1/min	2900 ... 3500	2800 ... 3450
	Road speed	km/h	73 ... 86	74 ... 88



change to		ECE	Year	77 - 84	84 - 89
		ECE (A)	Version	US Models	
		Japanese Models	Model	633 CS i A	635 CS i A
Technical Data		- Automatic Transmission		Unit	
24 00...Downshift Points Transmission ZF - 4 HP - 22 / H					
4th / 3rd gear, Selector lever position D					
Full throttle accelerator pedal position					
	Engine speed (shift at)	1/min	-	2480 ... 2700	
	> Transm. No. 14300 (Data plate)	1/min	-	-	
	Road speed	km/h	-	130,9 ... 142,5	
	> Transm. No. 14300 (Data plate)	1/min	-	-	
Kickdown-accelerator pedal position					
	Engine speed (shift at)	1/min	-	immediately	
	Road speed	km/h	-	immediately	
manual					
	Engine speed (shift at)	1/min	-	immediately	
	Road speed	km/h	-	immediately	
3rd / 2nd gear, Selector lever position D					
Full throttle accelerator pedal position					
	Engine speed (shift at)	1/min	-	2770 ... 2960	
	Road speed	km/h	-	85,4 ... 96,5	
Kickdown-accelerator pedal position					
	Engine speed (shift at)	1/min	-	3590 ... 3830	
	Road speed	km/h	-	126,5 ... 136,7	
manual					
	Engine speed (shift at)	1/min	-	3510 ... 3900	
	Road speed	km/h	-	138,8 ... 152,9	
2nd / 1st gear, Selector lever position D					
Full throttle accelerator pedal position					
	Engine speed (shift at)	1/min	-	2240 ... 2290	
	> Transm. No. 14300 (Data plate)	1/min	-	2350 ... 2650	
	Road speed	km/h	-	28,1 ... 31,3	
	> Transm. No. 14300 (Data plate)	km/h	-	36,5 ... 52,2	
Kickdown-accelerator pedal position					
	Engine speed (shift at)	1/min	-	3010 ... 3330	
	> Transm. No. 14300 (Data plate)	1/min	-	2910 ... 3220	
	Road speed	km/h	-	67,5 ... 78,5	
	> Transm. No. 14300 (Data plate)	km/h	-	63,6 ... 74,6	
manual					
	Engine speed (shift at)	1/min	-	2600 ... 3130	
	> Transm. No. 14300 (Data plate)	1/min	-	2460 ... 2970	
	Road speed	km/h	-	71,5 ... 84,6	
	> Transm. No. 14300 (Data plate)	km/h	-	67,8 ... 80,4	



change to	 ECE	Year	77 - 84	84 - 89
	 ECE (A)	Version	US Models	
	 Japanese Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Downshift Points Transmission ZF - 4 HP - 22 / EH				
4th / 3rd gear , Program E , Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2490 ... 2635
	- (CL closed before shifting)			
	Road speed	km/h	-	132,7 ... 140,5
	- (CL closed before shifting)			
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	4423 ... 4569
	- (CL closed before shifting)			
	Road speed	km/h	-	235,8 ... 243,5
	- (CL closed before shifting)			
manual				
	Engine speed (shift at)	1/min	-	4484 ... 4633
	Road speed	km/h	-	244,5 ... 252,2
3rd / 2nd gear , Program E , Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2204 ... 2404
	- (CL closed before shifting)			
	Road speed	km/h	-	85,5 ... 93,9
	- (CL closed before shifting)			
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	3196 ... 3396
	- (CL closed before shifting)			
	Road speed	km/h	-	124,0 ... 131,8
	- (CL closed before shifting)			
manual				
	Engine speed (shift at)	1/min	-	3397 ... 3600
	Road speed	km/h	-	136,4 ... 144,2
2nd / 1st gear , Program E , Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2491 ... 2616
	Road speed	km/h	-	39,6 ... 47,3
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	3005 ... 3183
	Road speed	km/h	-	65,7 ... 73,4
manual				
	Engine speed (shift at)	1/min	-	2729 ... 3042
	Road speed	km/h	-	75,6 ... 83,4




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	ECE (A)		Version	US Models	
	Japanese Models		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission			Unit		
24 00...Reverse gear lock					
Road speed	ZF - 3 HP - 22		km/h	-	
	ZF - 4 HP - 22 / H		km/h	-	27,2 ... 29,2
	ZF - 4 HP - 22 / EH		km/h	-	6,6 ... 14,4
24 00...Oil Pressure					
Pump pressure with selector lever in «R»					
ZF - 3 HP - 22	Idle		bar	-	-
	Kickdown		bar	18,4 ... 20,5	-
	Idle > mod. ' 80		bar	12,5 ... 14,5	
	Kickdown > mod. ' 80		bar	18,2 ... 20,5	19,0 ... 21,3
ZF - 4 HP - 22 / H	Idle		bar	-	11,0 ... 13,0
	Kickdown		bar	-	16,7 ... 18,7
ZF - 4 HP - 22 / EH	Idle		bar	-	11,0 ... 14,0
	Kickdown		bar	-	19,4 ... 22,4
Pump pressure with selector lever in 1, 2, D (A), N (O), P					
ZF - 3 HP - 22	Idle		bar	5,8 ... 6,4	
	Kickdown		bar	8,5 ... 8,95	-
	Idle > mod. ' 80		bar	12,5 ... 14,5	
	Kickdown > mod. ' 80		bar	18,2 ... 20,5	19,0 ... 21,3
ZF - 4 HP - 22 / H	Idle 1st gear		bar	-	6,0 ... 7,5
	Kickdown 1st gear		bar	-	16,7 ... 18,7
	at 4000 1/min 2nd ... 4th gear		bar	-	4,6 ... 5,8
	Kickdown 2nd ... 4th gear		bar	-	8,0 ... 8,9
ZF - 4 HP - 22 / EH	Idle 1st gear		bar	-	5,5 ... 7,7
	Kickdown 1st gear		bar	-	10,5 ... 12,5
	at 4000 1/min 2nd ... 4th gear		bar	-	4,6 ... 6,0
	Kickdown 2nd ... 4th gear		bar	-	8,1 ... 10,1
24 30...Control unit					
Distance adjusted between control unit and needle in piston			mm	11,5	

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	 ECE (A)	Version	US Models	
	 Japanese Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 40...Torque Converter				
Converter - Ø		mm		
	> model ' 80	mm	260	
Code/ Colour code			white	-
ZF - 3 HP - 22	> model ' 80		L	
	> model ' 81		X	
	> model ' 82		N	
ZF - 4 HP - 22 / H			-	R1
				R2
ZF - 4 HP - 22 / EH			-	RS
				R2
Stall speed		1/min	2150 ± 50	
ZF - 3 HP - 22	> model ' 80	1/min	2020 ... 2120	
ZF - 4 HP - 22 / H		1/min	-	
ZF - 4 HP - 22 / EH		1/min	-	
Journal - Ø		mm	32	
24 61... AEGS - Control Unit				
Bosch - No.			-	0 260 002 001
Code			-	B or K

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	ECE (A)	Version	Japanese Models	
	 US Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00... Transmission in General				
Designation	ZF - 3 HP - 22		x	x
	ZF - 4 HP - 22 / H		-	x
Transmission no.	ZF - 4 HP - 22 / EH		-	x
	ZF - 3 HP - 22		1 043 000 026	-
	> model ' 80		1 043 000 120	1 043 000 089
	> model 4. 81		1 043 000 148	1 043 000 149
	> model ' 82		1 043 000 238	1 043 000 239
	ZF - 4 HP - 22 / H		-	1 043 010 070
			-	1 043 010 132
			-	1 043 010 193
			-	1 043 010 266
			-	1 043 010 302
			-	1 043 010 307
	ZF - 4 HP - 22 / EH		-	1 043 010 134
			-	1 043 010 163
			-	1 043 010 288
Code letters on data plate/ Colour code on data plate				
	ZF - 3 HP - 22		silver / blue	-
	> model ' 80		V	Z
	> model 4. 81		PG	PE
	> model ' 82		RO	RP
	ZF - 4 HP - 22 / H		-	TE
			-	UK
			-	VF
			-	WN
			-	YA
			-	YC
	ZF - 4 HP - 22 / EH		-	UM
			-	UU
			-	XM
Ratios	1st gear		2,478	
	2nd gear		1,478	
	3rd gear		1	
	4th gear		0,73	
	Reverse gear		2,09	




change to	 ECE  US Models	Year	78 - 84	84 - 88
		Version	Japanese Models	
		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00... Transmission in General (Continuation)				
Oil grade			see BMW Service-Information	
Total oil volume for new and reconditioned transmission (transmission + oil cooler)				
ZF - 3 HP - 22			6,85 ... 7,25	
ZF - 4 HP - 22 / ...			7,5	
Initial oil volume for new and reconditioned transmission				
ZF - 3 HP - 22			2,2	
ZF - 3 HP - 22 with deep oil pan			2,4	
ZF - 4 HP - 22 / ...			2,2	
Oil change volume (transmission warm)				
ZF - 3 HP - 22			2,0	
ZF - 4 HP - 22 / ...			3,0	
24 00...Upshift Points Transmission ZF - 3 HP - 22				
1st/ 2nd gear, Selector lever position D				
Full throttle accelerator pedal position				
Engine speed (shift at)			3745 ± 365	-
Road speed			50 ± 6	-
> mod. ' 80				
Engine speed (shift at)			3900 ... 4680	3860 ... 4600
Road speed			52 ... 64	54 ... 66
Kickdown-accelerator pedal position				
Engine speed (shift at)			5660	-
Road speed			79 ± 5	-
> mod. ' 80				
Engine speed (shift at)			5500 ... 6140	5320 ... 6000
Road speed			76 ... 86	78 ... 89
2nd / 3rd gear, Selector lever position D				
Full throttle accelerator pedal position				
Engine speed (shift at)			5035 ± 255	-
Road speed			116 ± 6	-
> mod. ' 80				
Engine speed (shift at)			5000 ... 5460	4840 ... 5310
Road speed			116 ... 127	118 ... 130
Kickdown-accelerator pedal position				
Engine speed (shift at)			2660 ± 220	-
Road speed			132 ± 6	-
> mod. ' 80				
Engine speed (shift at)			5610 ... 6050	5430 ... 5880
Road speed			131 ... 142	133 ... 146




change to	 	ECE	Year	78 - 84	84 - 88
		ECE (A)	Version	Japanese Models	
		US Models	Model	633 CS i A	635 CS i A
Technical Data	- Automatic Transmission		Unit		
24 00...Upshift Points Transmission ZF - 4 HP - 22 / H					
1st/2nd gear, Selector lever position D					
Accelerator pedal in partial throttle					
	Engine speed (shift at)	1/min	-	2190 ... 2210	
	Road speed	km/h	-	21,7 ... 22,3	
Full throttle accelerator pedal position					
	Engine speed (shift at)	1/min	-	3210 ... 3870	
	> Transm. No. 14300 (Data plate)	1/min	-	4020 ... 4620	
	Road speed	km/h	-	44,5 ... 55,9	
	> Transm. No. 14300 (Data plate)	1/min	-	58,3 ... 68,3	
Kickdown-accelerator pedal position					
	Engine speed (shift at)	1/min	-	5510 ... 6020	
	> Transm. No. 14300 (Data plate)	1/min	-	5240 ... 5750	
	Road speed	km/h	-	82,7 ... 91,2	
	> Transm. No. 14300 (Data plate)	1/min	-	78,2 ... 86,6	
2nd / 3rd gear, Selector lever position D					
Accelerator pedal in partial throttle					
	Engine speed (shift at)	1/min	-	2260 ... 2470	
	Road speed	km/h	-	40,3 ... 50,7	
Full throttle accelerator pedal position					
	Engine speed (shift at)	1/min	-	4780 ... 5160	
	Road speed	km/h	-	118,7 ... 128,7	
Kickdown-accelerator pedal position					
	Engine speed (shift at)	1/min	-	5380 ... 5710	
	Road speed	km/h	-	134,7 ... 143,9	




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	 ECE (A)	Version	Japanese Models	
	 US Models	Model	633 CS i A	635 CS i A



Technical Data	- Automatic Transmission	Unit		
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24 00...Upshift Points Transmission ZF - 4 HP - 22 / H (Continuation)				
3rd / 4th gear, Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2260 ... 2370
	Road speed	km/h	-	59,1 ... 67,6
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4420 ... 7410
	Road speed	km/h	-	161,3 ... 172,8
Converter lookup closed , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2330 ... 2400
	Road speed	km/h	-	88,9 ... 96,6
Converter lookup open , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	1623 ... 1768
	Road speed	km/h	-	85,7 ... 93,4
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	-
	Road speed	km/h	-	-




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		Version	Japanese Models	
		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Upshift Points Transmission ZF - 4 HP - 22 / EH				
1st/ 2nd gear , Program E , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2097 ... 2285
	Road speed	km/h	-	21,0 ... 28,7
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4155 ... 4621
	Road speed	km/h	-	60,7 ... 68,4
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	5452 ... 5924
	Road speed	km/h	-	81,8 ... 89,6
2nd / 3rd gear , Program E , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	5152 ... 2270
	Road speed	km/h	-	39,6 ... 47,3
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4372 ... 4654
	Road speed	km/h	-	107,9 ... 115,6
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	5655 ... 5935
	Road speed	km/h	-	142,6 ... 150,4




change to	 ECE	Year	78 - 84	84 - 88
	 ECE (A)	Version	Japanese Models	
	 US Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Upshift Points Transmission ZF - 4 HP - 22 / EH (Continuation)				
3rd /4th gear , Program E , Selector lever position D				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2247 ... 2348
	Road speed	km/h	-	68,1 ... 75,9
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	4440 ... 4636
	Road speed	km/h	-	162,5 ... 170,3
4th gear Converter lookup closed				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2204 ... 2266
	Road speed	km/h	-	88,0 ... 95,8
4th gear Converter lookup open				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	1488 ... 1634
	Road speed	km/h	-	79,3 ... 87,1
3rd gear Converter lookup closed				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	2889 ... 3066
	Road speed	km/h	-	194,2 ... 111,9
3rd gear Converter lookup open				
Accelerator pedal in partial throttle				
	Engine speed (shift at)	1/min	-	1852 ... 2052
	Road speed	km/h	-	71,9 ... 79,6
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	6474 ... 6665
	Road speed	km/h	-	244,5 ... 252,2

change to	 ECE  ECE (A)  US Models	Year	78 - 84	84 - 88
		Version	Japanese Models	
		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Downshift Points Transmission ZF - 3 HP - 22				
3rd / 2nd gear, Selector lever position D				
Full throttle accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	2940 ... 3230	2950 ... 3200
	Road speed	km/h	90 ... 103	93 ... 106
Kickdown-accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	3760 ... 4060	3690 ... 3990
	Road speed	km/h	124 ... 136	127 ... 139
manual				
> mod. ' 80	Engine speed (shift at)	1/min	3600 ... 4050	3450 ... 3950
	Road speed	km/h	132 ... 146	135 ... 150
2nd / 1st gear, Selector lever position D				
Full throttle accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	-	-
	Road speed	km/h	-	-
Kickdown-accelerator pedal position				
> mod. ' 80	Engine speed (shift at)	1/min	3220 ... 3620	3160 ... 3570
	Road speed	km/h	69 ... 80	70 ... 82
manual				
> mod. ' 80	Engine speed (shift at)	1/min	2900 ... 3500	2800 ... 3450
	Road speed	km/h	73 ... 86	74 ... 88

change to	 ECE  US Models	Year	78 - 84	84 - 88
		Version	Japanese Models	
		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Downshift Points Transmission ZF - 4 HP - 22 / H				
4th / 3rd gear, Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2480 ... 2700
	> Transm. No. 14300 (Data plate)	1/min	-	-
	Road speed	km/h	-	130,9 ... 142,5
	> Transm. No. 14300 (Data plate)	1/min	-	-
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	immediately
	Road speed	km/h	-	immediately
manual				
	Engine speed (shift at)	1/min	-	immediately
	Road speed	km/h	-	immediately
3rd / 2nd gear, Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2770 ... 2960
	Road speed	km/h	-	85,4 ... 96,5
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	3590 ... 3830
	Road speed	km/h	-	126,5 ... 136,7
manual				
	Engine speed (shift at)	1/min	-	3510 ... 3900
	Road speed	km/h	-	138,8 ... 152,9
2nd / 1st gear, Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2240 ... 2290
	> Transm. No. 14300 (Data plate)	1/min	-	2350 ... 2650
	Road speed	km/h	-	28,1 ... 31,3
	> Transm. No. 14300 (Data plate)	km/h	-	36,5 ... 52,2
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	3010 ... 3330
	> Transm. No. 14300 (Data plate)	1/min	-	2910 ... 3220
	Road speed	km/h	-	67,5 ... 78,5
	> Transm. No. 14300 (Data plate)	km/h	-	63,6 ... 74,6
manual				
	Engine speed (shift at)	1/min	-	2600 ... 3130
	> Transm. No. 14300 (Data plate)	1/min	-	2460 ... 2970
	Road speed	km/h	-	71,5 ... 84,6
	> Transm. No. 14300 (Data plate)	km/h	-	67,8 ... 80,4

change to	 ECE  US Models	Year	78 - 84	84 - 88
		Version	Japanese Models	
		Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 00...Downshift Points Transmission ZF - 4 HP - 22 / EH				
4th / 3rd gear , Program E , Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2490 ... 2635
	- (CL closed before shifting)			
	Road speed	km/h	-	132,7 ... 140,5
	- (CL closed before shifting)			
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	4423 ... 4569
	- (CL closed before shifting)			
	Road speed	km/h	-	235,8 ... 243,5
	- (CL closed before shifting)			
manual				
	Engine speed (shift at)	1/min	-	4484 ... 4633
	Road speed	km/h	-	244,5 ... 252,2
3rd / 2nd gear , Program E , Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2204 ... 2404
	- (CL closed before shifting)			
	Road speed	km/h	-	85,5 ... 93,9
	- (CL closed before shifting)			
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	3196 ... 3396
	- (CL closed before shifting)			
	Road speed	km/h	-	124,0 ... 131,8
	- (CL closed before shifting)			
manual				
	Engine speed (shift at)	1/min	-	3397 ... 3600
	Road speed	km/h	-	136,4 ... 144,2
2nd / 1st gear , Program E , Selector lever position D				
Full throttle accelerator pedal position				
	Engine speed (shift at)	1/min	-	2491 ... 2616
	Road speed	km/h	-	39,6 ... 47,3
Kickdown-accelerator pedal position				
	Engine speed (shift at)	1/min	-	3005 ... 3183
	Road speed	km/h	-	65,7 ... 73,4
manual				
	Engine speed (shift at)	1/min	-	2729 ... 3042
	Road speed	km/h	-	75,6 ... 83,4

change to	 ECE		Year	78 - 84	84 - 88
	 ECE (A)		Version	Japanese Models	
	 US Models		Model	633 CS i A	635 CS i A
Technical Data		- Automatic Transmission		Unit	
24 00...Reverse gear lock					
Road speed	ZF - 3 HP - 22	km/h	-		
	ZF - 4 HP - 22 / H	km/h	-	27,2 ... 29,2	
	ZF - 4 HP - 22 / EH	km/h	-	6,6 ... 14,4	
24 00...Oil Pressure					
Pump pressure with selector lever in «R»					
ZF - 3 HP - 22	Idle	bar	-	-	
	Kickdown	bar	18,4 ... 20,5	-	
	Idle > mod. ' 80	bar	12,5 ... 14,5		
	Kickdown > mod. ' 80	bar	18,2 ... 20,5	19,0 ... 21,3	
ZF - 4 HP - 22 / H	Idle	bar	-	11,0 ... 13,0	
	Kickdown	bar	-	16,7 ... 18,7	
ZF - 4 HP - 22 / EH	Idle	bar	-	11,0 ... 14,0	
	Kickdown	bar	-	19,4 ... 22,4	
Pump pressure with selector lever in 1, 2, D (A), N (O), P					
ZF - 3 HP - 22	Idle	bar	5,8 ... 6,4		
	Kickdown	bar	8,5 ... 8,95	-	
	Idle > mod. ' 80	bar	12,5 ... 14,5		
	Kickdown > mod. ' 80	bar	18,2 ... 20,5	19,0 ... 21,3	
ZF - 4 HP - 22 / H	Idle 1st gear	bar	-	6,0 ... 7,5	
	Kickdown 1st gear	bar	-	16,7 ... 18,7	
	at 4000 1/min 2nd ... 4th gear	bar	-	4,6 ... 5,8	
	Kickdown 2nd ... 4th gear	bar	-	8,0 ... 8,9	
ZF - 4 HP - 22 / EH	Idle 1st gear	bar	-	5,5 ... 7,7	
	Kickdown 1st gear	bar	-	10,5 ... 12,5	
	at 4000 1/min 2nd ... 4th gear	bar	-	4,6 ... 6,0	
	Kickdown 2nd ... 4th gear	bar	-	8,1 ... 10,1	
24 30...Control unit					
Distance adjusted between control unit and needle in piston		mm	11,5		

change to	 ECE	Year	78 - 84	84 - 88
	 ECE (A)	Version	Japanese Models	
	 US Models	Model	633 CS i A	635 CS i A
Technical Data - Automatic Transmission		Unit		
24 40...Torque Converter				
Converter - Ø		mm		
	> model ' 80	mm	260	
Code/ Colour code			white	-
ZF - 3 HP - 22	> model ' 80		L	
	> model ' 81		X	
	> model ' 82		N	
ZF - 4 HP - 22 / H			-	R1
				R2
ZF - 4 HP - 22 / EH			-	RS
				R2
Stall speed		1/min	2150 ± 50	
ZF - 3 HP - 22	> model ' 80	1/min	2020 ... 2120	
ZF - 4 HP - 22 / H		1/min	-	
ZF - 4 HP - 22 / EH		1/min	-	
			2060 ... 2230	
Journal - Ø		mm	32	
24 61... AEGS - Control Unit				
Bosch - No.			-	0 260 002 001
Code			-	B or K



Service-Information BMW Automobile



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All Service Informations are saved in german language, please find them in the german manual.