

Contents

00 - Technical data	1
1 Gearbox identification	1
1.1 Gearbox identification	1
1.2 Code letters, gearbox allocation, ratios, capacities	2
2 Transmission layout	7
2.1 Transmission layout	7
3 Calculations	9
3.1 Calculations	9
3.2 Calculating transmission ratios "i"	9
4 General repair instructions	9
4.1 General repair instructions	9
30 - Clutch	13
1 Servicing clutch mechanism	13
1.1 Servicing clutch mechanism	13
1.2 Assembly overview, pedal cluster	14
1.3 Hydraulic system - general layout	19
1.4 Removing and installing master cylinder	22
1.5 Bleeding clutch system	23
2 Servicing clutch release mechanism	25
2.1 Servicing clutch release mechanism	25
3 Servicing clutch	29
3.1 Servicing clutch	29
34 - Controls, Housing	36
1 Servicing selector mechanism	36
1.1 Servicing selector mechanism	36
1.2 Gear selector mechanism on vehicles > VIN 8G-X-003 500	36
1.3 Removing and installing selector mechanism	42
1.4 Adjusting gear selector mechanism on vehiclesä VIN 8G-X-003 500	43
1.5 Gear selector mechanism on vehicles from 05..99, VIN8G-X-003 501 ä(without vertical travel on reverse gear selector lock)	46
1.6 Adjusting gear selector mechanism on vehicles from 05.99, VIN 8G-X-003 501 > (without vertical travel on reverse gear selector lock)	49
2 Removing and installing gearbox	51
2.1 Removing and installing gearbox	51
2.2 Securing gearbox to repair stand	62
2.3 Transporting the gearbox	62
3 Checking oil level in gearbox	67
3.1 Checking oil level in gearbox	67
4 Dismantling and assembling gearbox	68
4.1 Dismantling and assembling gearbox	68
4.2 Overview	68
4.3 Assembly overview	70
4.4 Removing and installing input shaft ball bearing and multi-function sender	71
4.5 Removing and installing input shaft, pinion shaft, selector rods and gearbox cover	75
4.6 Removing and installing input shaft ball bearing, multi-function sender, input shaft, pinion shaft, selector rods and gearbox cover	78
5 Dismantling and assembling selector mechanism in gearbox	87
5.1 Dismantling and assembling selector mechanism in gearbox	87
35 - Gears, Shafts	95
1 Dismantling and assembling input shaft	95



1.1	Dismantling and assembling input shaft	95
2	Adjusting input shaft	110
2.1	Adjusting input shaft	110
3	Dismantling and assembling pinion shaft	112
3.1	Dismantling and assembling pinion shaft	112
3.2	Reinforcement measures from 08.98 > in area of 4th gear wheel	135
4	Removing and installing reverse gear wheel	138
4.1	Removing and installing reverse gear wheel	138
39	- Final drive, Differential	140
1	Renewing seal for flange shaft	140
1.1	Renewing seal for flange shaft	140
2	Removing and installing speedometer sender and drive wheel	143
2.1	Removing and installing speedometer sender and drive wheel	143
2.2	Removing and installing speedometer sender -G22	143
2.3	Removing and installing speedometer drive wheel	144
3	Removing and installing differential	145
3.1	Removing and installing differential	145
4	Dismantling and assembling differential	151
4.1	Dismantling and assembling differential	151
5	Adjusting pinion shaft and crown wheel	162
5.1	Adjusting pinion shaft and crown wheel	162
5.2	Adjusting and marking of gear sets	162
5.3	Position of shims	164
5.4	Adjustment overview	164
5.5	Recommended sequence for readjusting final drive set	165
5.6	Adjusting pinion shaft	166
5.7	Re-determining "S4" shim when fitting new gearbox cover	175
5.8	Adjusting crown wheel	177