



Contents

00 - Technical data	1
1 Gearbox identification	1
1.1 Location on gearbox	1
1.2 Identification code, assembly allocation and capacities	1
2 Overview - power transmission	3
3 Calculating overall gear ratio "i"	5
4 General repair instructions	6
4.1 Components	6
30 - Clutch	9
1 Repairing clutch mechanism	9
1.1 Overview	9
1.2 Pedal cluster - Assembly overview	10
1.3 Removing and installing over-centre spring	11
1.4 Removing and installing clutch pedal	12
1.5 Removing and installing clutch pedal switch F36	13
1.6 Hydraulic system - Assembly overview	14
1.7 Removing and installing master cylinder	16
1.8 Removing and installing slave cylinder	20
1.9 Bleeding clutch system	22
2 Repairing clutch release mechanism	24
3 Repairing clutch	26
3.1 Determining clutch manufacturer	26
3.2 Repairing Sachs clutch	28
3.3 Removing and installing Sachs clutch	28
3.4 Repairing LuK clutch	30
3.5 Removing and installing LuK clutch	31
34 - Controls, housing	34
1 Repairing selector mechanism	34
1.1 Installation position of selector mechanism	34
1.2 Removing and installing selector lever knob and cover - Assembly overview	36
1.3 Separating gaiter from selector lever and assembling with selector lever knob	36
1.4 Repairing selector lever and selector lever housing	37
1.5 Removing and installing selector cables - Assembly overview	39
1.6 Removing and installing selector mechanism	40
1.7 Adjusting selector mechanism	44
2 Removing and installing gearbox	48
2.1 Modifying support rail VW 457/1	49
2.2 Removing gearbox	49
2.3 Transporting gearbox	55
2.4 Installing gearbox	55
3 Checking and topping up gear oil	62
3.1 Preparation	62
3.2 Draining gear oil	63
3.3 Filling with gearbox oil	64
4 Dismantling and assembling gearbox	65
4.1 Overview - rear final drive	65
4.2 Assembly overview	66
4.3 Removing and installing cover for gearbox housing and 5th gear	67
4.4 Removing and installing gearbox housing and selector mechanism	68
4.5 Removing and installing input shaft, output shaft, differential and selector forks	69



4.6	Dismantling and assembling procedure	70
5	Repairing gearbox housing and clutch housing	82
6	Repairing selector unit	88
7	Dismantling and assembling selector forks	91
35	Gears, shafts	96
1	Input shaft	96
1.1	Dismantling and assembling input shaft	96
1.2	Revised shortly after start of series production: offset ends on springs A for 5th gear synchronization	103
1.3	Adjusting input shaft	103
2	Output shaft	108
2.1	Dismantling and assembling output shaft	108
2.2	Adjusting output shaft	121
3	Reverse shaft	125
3.1	Dismantling and assembling reverse shaft	125
39	Final drive - differential	128
1	Renewing flange shaft oil seals with gearbox installed	128
1.1	Renewing oil seal for left flange shaft	128
1.2	Renewing seal for right flange shaft	129
2	Adjustment overview	134
3	Differential	135
3.1	Dismantling and assembling differential	135
3.2	Adjusting differential	141