

Disassembling and Assembling Transmission

Special Tools:

P 31a	Guide ring used with tool P 31 to tighten castle nut of pinion shaft.	P 64	Mandrel for installing outer bushing of clutch pivot shaft.
P 36	Holder for brake drum and guide for axle nut wrench.	P 65	Plate for removing inner roller bearing race from main shaft.
P 37	Holder for main shaft for tightening castle nuts of main and pinion shafts.	P 66	Puller for selector rod lock bushings.
P 42	Torque wrench 50 mkg (360 ft. lb.) for rear axle nuts (used with P 44).	P 67	Press guide for removing roller bearing from pinion shaft.
P 44	Socket 36 mm with extension (used with P 42).	P 68	Selector rod guide for adjusting shift forks.
P 46	Socket 32 mm for castle nut of pinion shaft.	VW 118	Torque wrench (6 mkg, 44 ft. lb.) general application.
P 55	Stand, to press main and pinion shafts into intermediate plate.	VW 222	Drift for starter shaft bushing.
P 56	Stand, to press main and pinion shaft out of intermediate plate.	VW 228	Puller for removing starter bushing with engine installed.
P 57	Short guide pin for installing selector rod lock bushing (1st, 2nd and reverse gear).	VW 246	Limit gauge for starter shaft bushing.
P 58	Long guide pin for installing selector rod lock bushing (3rd and 4th gear).	VW 291 b	Press stand for installing oil seal.
P 59	Puller to remove roller bearing races from transmission housing.	VW 308	Assembly stand for transmission.
P 60	Mandrel for installing roller bearing race in transmission housing (pinion shaft).	VW 400	Hydraulic press.
P 61	Mandrel for installing roller bearing race in transmission housing (main shaft).	VW 401	Frame for various press operations.
P 62	Drift for clutch pivot shaft bushing.	VW 407	Arbor, general application.
P 63	Puller for inner bushing of clutch pivot shaft.	VW 408	Arbor, general application.
		VW 409	Arbor, general application.
		VW 415	Tube, 57 mm dia. for general application and differential ball bearings in transmission side covers.
		VW 433	Press accessory, general application.
		VW 438	Guide (cylindrical) general application.

General

Due to high precision machining of transmissions all cast parts are interchangeable. If it becomes necessary to replace the transmission housing; the ring and pinion clearance must be computed as well as the preload on the ball bearings (11 RA). Should the intermediate plate or the double ball bearing of the pinion be exchanged; computations and new adjustments are necessary (10 RA).

Disassembly

1. Mount transmission with rear axle on special tool VW 308.
2. Remove transmission drain plug and drain oil.
3. Remove starter.
4. Remove clutch release bearing and clutch pivot shaft if necessary (20 RA).