

List of Shop-made Tools and Translation of the German Text on Drawings

(All measures on the technical drawings are in millimeters)

No. of Drawing	Designation	Items	Part	Material
W 5002	1 ea Drift punch for gudgeon pin R 24, R 25, R 51, R 67.	1 d. p.		st. SAE 1034
W 5003	1 ea piston ring compressor (applier) R 24, R 25, R 51, R 67. Text on drawing: „gestreckte Länge“ = stretched length	8 rivets 2 reinforcements 1 applier	3 2 1	alu 3 × 5 mm alu SAE 25 alu SAE 25
L 5008	1 ea feeler gauge for checking clearance between Woodruff key and flywheel R 25/51/67	1 gauge		st. SAE 1006
W 5009	1 ea arbour for centering of clutch plate R 51, R 67 Text on drawing: „Schnitt A – B“ = Cut A – B	1 tommy bar 1 adjuster 1 arbour	3 2 1	st. SAE 1034 st. SAE 1015 st. SAE 1034
W 5013	1 ea drift punch for guiding tube R 51, R 67	1 punch		st. SAE 1034
V 5014 sheet 1	1 ea adjustable assembly cradle for engine and transmission R 24, R 25, R 51, R 67 Text on drawings: Rohr = tube Lagerung für Gabelstück = bearing for fork piece Haken zum Einhängen der Zwischenplatte = hook for installation of intermediate plate Zwischenplatte zum Aufspannen von Motor und Getriebe = intermediate plate for fixation of engine and transmission vernieten = to rivet	3 studs 1 intermediate plate 1 set screw 1 stand of welded tubes	4 3 2 1	st. SAE 1042 st. SAE 1010 st. SAE 1020 steel
V 5014 sheet 2		2 knurl nuts 2 nuts M 12 2 bolts 1 fixing ring 2 springs 2 pins 2 knurl nuts 2 bolts 1 fork piece	9 8 7 6 5 4 3 2 1	st. SAE 1020 st. SAE 1020 st. SAE 1020 st. SAE 1020 spring steel spring steel st. SAE 1020 st. SAE 1020 steel

No. of Drawing	Designation	Items	Part	Material
V 5017	1 ea fixture for transmission R 24, R 25, R 51 assembly welded assembly welded	1 plate 2 bearing plates 1 fixture ring 1 fixture for model R 24, R 25 3 studs 1 bearing plate 1 fixture plate 1 fixture for model R 51	8 7 6 5 4 3 2 1	st. SAE 1006 st. SAE 1006 st. SAE 1006 consisting of parts 6, 7, 8 st. SAE 1034 st. SAE 1006 st. SAE 1006 consisting of parts 2 and 3
W 5020	1 ea drift tool for Simmerring (oil seal) of crankcase R 51, R 67	1 drift head 1 tube	2 1	st. SAE 1034 st. SAE 1034
W 5021	2 ea praying forks for alignment of connecting rods	1 pray bar cranked 1 pray bar straight	2 1	st. SAE 1010 st. SAE 1010
W 5024	1 ea drift and replacer tool for Simmerring (oil seal) of drive shaft and front wheel fork R 51, R 67 Text on drawing: (in Teil 2 gleitend eingepaßt) = (slideably fitted in part 2) Kordel = knurl fest eingepaßt = tight fit	1 replacer bushing 1 drift bushing 1 drift head	1 2 3	st. SAE 1060 st. SAE 1060 st. SAE 1060
W 5026	1 ea drift tool for Simmerring of driven shaft R 51/3, R 67 Text on drawing: fest einpassen = fit tightly rändeln = knurl	1 drift head 1 bushing	2 1	st. SAE 1060 st. SAE 1015
V 5029	1 ea ignition timing device R 24/25/R 51/3, R 67	1 washer 4 nuts 1 indicator bolt 1 indicator for R 51/3, R 67 1 indicator for R 24, R 25 1 circlip, inner dia. 8 mm 1 head screw 1 spacer bushing 1 graduated dial	9 8 7 6 5 4 3 2 1	st. SAE 1006 st. SAE 1006 st. SAE 1040 alu sheet metal st. SAE 1040 1 mm spring wire st. SAE 1006 st. SAE 1040 alu sheet metal available from BMW
V 5030	1 ea puller screw for dynamo armature and ignition magneto rotor R 25, R 51, R 67	1 puller bolt	1	st. SAE 1045 hardened

No. of Drawing	Designation	Items	Part	Material
V 5031	1 ea inspection cover (dummy) for transmission adjustment R 51, R 67. Text on drawing: Aus Deckel . . . für Schaltwelle geschnitten = cut off cover for gear selector shaft	1 inspection cover	1	alu casting
V 5032	3 ea holder bushings for flywheel fixture Matra 292 R 51, R 67 Text on drawing: 3 Loch 8.2 ϕ bohren in Haltevorrichtung Matra = drill three 8.2 dia. bores in fixture Matra (8.2 mm)	3 head screws M 8 x 11 3 holder bushings	2 1	st. SAE 1020 st. SAE 1020
V 5033	1 ea puller clamp for cam and crankshafts R 51/3, R 67 Text on drawing: Hierzu Spindel und Dornmutter Vorrichtung Matra 355 verwenden = to use with the help of spindle assembly Matra 355.	1 puller clamp	1	st. SAE 1020
V 5034	1 ea valve spring lifter with wooden plate Matra 361 R 25, R 51, R 67 Text on drawing: Montageholz = wooden plate	2 lock screws M 10 x 120 1 head screw M 6 x 45 1 knurl nut 1 lever bearing 1 lever	5 4 3 2 1	st. SAE 1006 st. SAE 1006 st. SAE 1020 st. SAE 1020 st. SAE 1020
V 5035	2 ea wooden guards for connecting rod R 24, 25, R 51, 67	2 wooden guards	1	beech-tree wood
L 5036	2 ea parallel bars for alignment of connecting rods R 25, R 51, R 67 Text on drawing: Stirnkanten brechen = chamfer edges Beide Prismen zusammen auf genau gleiche Maße rechtwinkelig und seitenparallel schleifen = grind both parallel bars to exactly the same values of squareness and parallelism.	2 parallel bars (square edges)	1	st. SAE 1015 to be hardened
W 5037	1 ea hexagonal plug wrench 5 mm R 51/3, R 67 Text on drawing: 5 SW Sechskant = hexagon end width 5 mm	1 hex. plug wrench	1	st. SAE 1042

No. of Drawing	Designation	Items	Part	Material
W 5038	1 ea pressure bushing for pressing front ball bearing on crankshaft R 51/3, R 67 Text on drawing: Dazu Spindel und Dornmutter Matra 355 = furthermore spindle assembly Matra 355	1 bushing	1	st. SAE 1006
W 5039	1 ea pressure bushing for pressing camshaft gear on camshaft and ball bearing 6203 on crankshaft R 51/3, R 67 Text on drawing: Dazu Spindel und Dornmutter Matra 355 = furthermore spindle assembly Matra 355	1 bushing	1	st. SAE 1006
V 5040	1 ea replacer for gear on crankshaft R 51/3, R 67 Text on drawing: gehärtet und geschliffen = hardened and ground	1 bushing	1	st. SAE 1015
V 5041	1 ea drift punch for valve tappet bushings R 51/3, R 67	1 drift punch	1	st. SAE 1034
V 5042	1 ea backlash metering device for rear wheel drive R 25, R 51, R 67	1 fixing screw 1 stand for gauge holder 1 clamp screw 1 dial gauge holder 1 bushing for R 25 1 bushing for R 51/ R 67 1 stop pin 1 arbour	8 7 6 5 4 3 2 1	st. SAE 1034 st. SAE 1034 st. SAE 1034 st. SAE 1034 st. SAE 1034 st. SAE 1034 st. SAE 1034 st. SAE 1034
V 5043	1 ea assembly stand for motorcycles Text on drawing: versenkte Holzschrauben = countersunk wood-screws Querhölzer in Füße einzapfen = fit transverse woods in legs	1 assembly stand	1	fir-tree wood
V 5045	1 ea pin wrench for wheel hub cover Text on drawing: (einpressen) = press in	4 pins 1 tool	2 1	spring steel hardened st. SAE 1034 harden