



## Contents

|   |           |
|---|-----------|
| <b>00 - Technical data</b>  | <b>1</b>  |
| <b>1 General repair notes</b>   | <b>1</b>  |
| 1.1 Gearbox   | 1         |
| 1.2 Torque converter  | 1         |
| 1.3 ATF   | 1         |
| 1.4 Automatic gearbox control unit J217 with fuzzy logic                  | 1         |
| 1.5 Control units in vehicle  | 1         |
| 1.6 Information on "09G gearbox"  | 1         |
| 1.7 Tools   | 2         |
| 1.8 Gearbox   | 2         |
| 1.9 Gaskets, seals and oil  | 3         |
| 1.10 Nuts and bolts   | 3         |
| 1.11 Electrical components  | 4         |
| 1.12 Guided fault finding, vehicle self-diagnosis and test instruments    | 4         |
| <b>2 Capacities</b>   | <b>5</b>  |
| 2.1 Planetary gearbox and final drive                                     | 5         |
| <b>3 Code - engine allocation</b>   | <b>6</b>  |
| 3.1 Gearbox codes   | 6         |
| <b>4 Golf 2004 ►</b>  | <b>7</b>  |
| <b>5 Golf Plus 2005 ►</b>   | <b>8</b>  |
| <b>6 Golf 2009 ►</b>  | <b>9</b>  |
| <b>7 Touran 2003 ►</b>  | <b>10</b> |
| <b>8 Passat 2006 ►</b>  | <b>11</b> |
| <b>9 Passat CC 2009 ►, CC 2010 ►</b>                                      | <b>12</b> |
| <b>32 - Torque converter</b>  | <b>13</b> |
| <b>1 Proper handling and installation of torque converter</b>             | <b>13</b> |
| 1.1 Identification of torque converter                                    | 13        |
| 1.2 Draining torque converter   | 13        |
| 1.3 Removing and installing torque converter oil seal                     | 14        |
| 1.4 Installing torque converter   | 15        |
| <b>37 - Controls, housing</b>   | <b>16</b> |
| <b>1 Connecting »tester«</b>  | <b>16</b> |
| 1.1 Connecting vehicle diagnosis, testing and information system VAS 5051 | 16        |
| <b>2 Electrical and electronic components and their locations</b>         | <b>18</b> |
| <b>3 Multifunction switch F125</b>  | <b>23</b> |
| 3.1 Removing multifunction switch F125                                    | 23        |
| 3.2 Installing multifunction switch F125                                  | 24        |
| 3.3 Adjusting multifunction switch F125                                   | 25        |
| <b>4 Emergency release of selector lever</b>                              | <b>27</b> |
| <b>5 Removing and installing selector lever handle</b>                    | <b>28</b> |
| 5.1 Moving pushbutton to installation position in the handle              | 30        |
| <b>6 Selector mechanism up to 02.2009</b>                                 | <b>33</b> |
| 6.1 Overview of selector mechanism up to 02.2009                          | 33        |
| 6.2 Removing and installing selector mechanism with selector lever        | 34        |
| 6.3 Removing and installing selector lever cable                          | 34        |
| 6.4 Checking selector lever cable   | 42        |
| 6.5 Adjusting selector lever cable  | 43        |
| <b>7 Selector mechanism from 03.2009 onwards</b>                          | <b>45</b> |



|                            |  |            |
|----------------------------|--|------------|
| 7.1                        | Overview - selector mechanism  | 45         |
| 7.2                        | Removing and installing selector mechanism with selector housing                                       | 46         |
| 7.3                        | Removing and installing selector mechanism without selector housing                                    | 48         |
| <b>8</b>                   | <b>Checking selector mechanism</b>   | <b>50</b>  |
| 8.1                        | Selector lever in "P" position and ignition switched on  | 50         |
| 8.2                        | Selector lever in "N" position and ignition switched on  | 50         |
| 8.3                        | Selector lever in position "Tiptronic"   | 50         |
| 8.4                        | Ignition and light switched on   | 50         |
| 8.5                        | Selector lever position display  | 50         |
| <b>9</b>                   | <b>Removing and installing gearbox, Golf 2004 ►</b>  | <b>51</b>  |
| 9.1                        | Removing gearbox, Golf 2004 with 1.6 l - 75 kW, 1.6 l - 85 kW (FSI) and 2.0 l - 110 kW (FSI) engines   | 51         |
| 9.2                        | Installing gearbox, Golf 2004 with 1.6 l - 75 kW, 1.6 l - 85 kW (FSI) and 2.0 l - 110 kW (FSI) engines | 57         |
| 9.3                        | Removing gearbox, Golf 2004 with 2.5 l - 110 kW and 125 kW engines                                     | 57         |
| 9.4                        | Installing gearbox, Golf 2004 with 2.5 l - 110 kW and 125 kW engines                                   | 65         |
| 9.5                        | Torque settings, gearbox to engine   | 66         |
| <b>10</b>                  | <b>Removing and installing gearbox, Golf Plus 2005 ►</b>   | <b>70</b>  |
| 10.1                       | Removing gearbox, Golf Plus 2005   | 70         |
| 10.2                       | Installing gearbox, Golf Plus 2005   | 76         |
| 10.3                       | Torque settings, gearbox to engine   | 77         |
| <b>11</b>                  | <b>Removing and installing gearbox, Touran 2003 ►</b>  | <b>81</b>  |
| 11.1                       | Removing gearbox, Touran 2003  | 81         |
| 11.2                       | Installing gearbox, Touran 2003  | 85         |
| 11.3                       | Torque settings, gearbox to engine   | 86         |
| <b>12</b>                  | <b>Removing and installing gearbox, Passat 2003 ►</b>  | <b>89</b>  |
| 12.1                       | Removing gearbox, Passat with 1.6 l - 85 kW and 2.0 l - 110 kW engines                                 | 89         |
| 12.2                       | Installing gearbox, Passat with 1.6 l - 85 kW and 2.0 l - 110 kW engines                               | 95         |
| 12.3                       | Torque settings, gearbox to engine   | 96         |
| 12.4                       | Removing gearbox, Passat with 1.8 l - 118 kW and 2.0 l - 147 kW engines                                | 97         |
| 12.5                       | Installing gearbox, Passat with 1.8 l - 118 kW and 2.0 l - 147 kW engines                              | 103        |
| 12.6                       | Torque settings, gearbox to engine   | 104        |
| <b>13</b>                  | <b>Removing and installing gearbox, Passat CC 2009 ►, CC 2010 ►</b>                                    | <b>106</b> |
| 13.1                       | Removing gearbox, Passat CC 2009, CC 2010 with 2.0 l 147 kW TFSI engine                                | 106        |
| 13.2                       | Installing gearbox, Passat CC 2009, CC 2010 with 2.0 l 147 kW TFSI engine                              | 114        |
| 13.3                       | Torque settings, gearbox to engine   | 115        |
| <b>14</b>                  | <b>Removing and installing gearbox, Golf 2009 ►</b>  | <b>117</b> |
| 14.1                       | Removing gearbox, Golf 2009 with 2.5 l - 125 kW engine   | 117        |
| 14.2                       | Installing gearbox, Golf 2009 with 2.5 l - 125 kW engine   | 125        |
| 14.3                       | Torque settings, Golf 2009 with 2.5 l - 125 kW engine  | 126        |
| <b>15</b>                  | <b>Transporting gearbox</b>  | <b>128</b> |
| <b>16</b>                  | <b>ATF cooler for 1.6 l - 85 kW and 2.0 l - 110 kW engines</b>   | <b>129</b> |
| 16.1                       | Assembly overview - ATF cooler   | 129        |
| <b>17</b>                  | <b>ATF lines, ATF water cooler and additional ATF cooler, Passat with 2.0 l TFSI engine</b>            | <b>130</b> |
| 17.1                       | Overview   | 130        |
| <b>18</b>                  | <b>Checking ATF level and topping up</b>   | <b>135</b> |
| 18.1                       | Checking ATF level   | 137        |
| 18.2                       | Topping up ATF   | 138        |
| 18.3                       | Draining and filling ATF   | 139        |
| <b>38 - Gears, control</b> |  | <b>141</b> |
| <b>1</b>                   | <b>Renewing oil seal for selector shaft</b>  | <b>141</b> |
| <b>2</b>                   | <b>Removing and installing ATF pan</b>   | <b>142</b> |
| 2.1                        | Removing   | 142        |



|           |   |            |
|-----------|---|------------|
| 2.2       | Installing .....  | 143        |
| <b>3</b>  | <b>Removing and installing ATF strainer .....</b>                                   | <b>145</b> |
| 3.1       | Removing .....  | 145        |
| 3.2       | Installing .....  | 145        |
| <b>4</b>  | <b>Removing and installing valve body .....</b>                                     | <b>146</b> |
| 4.1       | Overview - valve chest .....  | 146        |
| 4.2       | Removing valve body .....   | 148        |
| 4.3       | Installing valve body .....   | 151        |
| 4.4       | Specified torques .....   | 155        |
| <b>5</b>  | <b>Removing and installing wiring harness for solenoid valves and senders .....</b> | <b>156</b> |
| 5.1       | Removing .....  | 156        |
| 5.2       | Installing .....  | 156        |
| <b>6</b>  | <b>Removing and installing gearbox input speed sender G182 .....</b>                | <b>157</b> |
| 6.1       | Removing .....  | 157        |
| 6.2       | Installing .....  | 157        |
| <b>7</b>  | <b>Removing and installing gearbox output speed sender G195 .....</b>               | <b>158</b> |
| 7.1       | Removing .....  | 158        |
| 7.2       | Installing .....  | 158        |
| <b>39</b> | <b>- Final drive - differential .....</b>   | <b>159</b> |
| <b>1</b>  | <b>Renewing oil seals for flange shafts .....</b>                                   | <b>159</b> |
| 1.1       | Renewing oil seal for left flange shaft .....                                       | 159        |
| 1.2       | Renewing seal for right flange shaft .....  | 160        |