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RA Troubleshooting on automatic transmission A5S 310Z Issue status (01/2005) Valid only until next CD is issued

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| Position D: No power transmission    | a) Clutch A destroyed   | a) Exchange transmission, refer                 |
|--------------------------------------|---|---|
| INO power transmission               | b) 1st gear one-way Gear defective  | to 24 00 046 b) Exchange transmission, refer    |
|                                      | c) Shift linkage between selector   | to 24 00 046                                    |
|                                      | lever and transmission maladjusted  | c) Adjust selector lever, refer to 24 00 007    |
| Hard shift impact N - D)             | a) Idling speed too high  | a) Refer to Inspection Manual                   |
| (neng > 1500 rpm                     | b) Also refer to "Troubleshooting Valve Body"                                     |   |
| No shift (warm or cold)              | a) Refer to "Troubleshooting<br>Valve Body"                                       |   |
| No shift:<br>Shift 1-2               | a) Brakes C1 and 2 faulty   | a) Exchange transmission, refer                 |
| SIIII 1-2                            | b) Insufficient oil supply to brakes  | to 24 00 046                                    |
|                                      | C1 and C2   | b) Exchange transmission, refer<br>to 24 00 046 |
| Shift 2-1                            | a) Refer to "Troubleshooting<br>Valve Body"                                       |   |
| Shift 2-3                            | a) Clutch F faulty  | a) Exchange transmission, refer                 |
|                                      | b) Insufficient oil supply to clutch  F   | to 24 00 046 b) Exchange transmission, refer    |
|                                      | ·   | to 24 00 046                                    |
| Shift 3-2                            | a) Refer to "Troubleshooting Valve Body"  |   |
| Condition                            | Cause   | Remedy  |
| Shift 3-4                            | <ul><li>a) Clutch E faulty</li><li>b) Insufficient oil supply to clutch</li></ul> | a) Exchange transmission, refer to 24 00 046    |
|                                      | E   | b) Exchange transmission, refer to 24 00 046    |
| No braking effect:<br>Shift 4-3      | a) Brake band C2 faulty; in this case shift 1-2 not OK                            | a) Exchange transmission, refer to 24 00 046    |
|                                      | b) Insufficient oil supply to brake<br>C2   | b) Exchange transmission, refer to 24 00 046    |
| No shift:<br>Shift 4-5               | a) Refer to "Troubleshooting     Valve Body"                                      |   |
| No shift:<br>Shift 5-4               | a) Clutch A faulty, in this case no<br>1st 4th gear                               | a) Exchange transmission, refer to 24 00 046    |
| Shift from full load to kickdown too | a) Plates broken  |   |

Shift from full load to kickdown too long

| RA Troubleshooting on automatic transmiss                                     | sion A5S 310Z   | BMW AG - TIS 06.09.2008   |
|---|---|---|
| No positive engagement in forward or reverse                                  | a) Driver pressed off impeller  | a) Exchange transmission, refer to 24 00 046  |
| Engine dies when moving off in Drive (converter lockup clutch always engaged) | a) Torque converter faulty     b) Also refer to "Troubleshooting     Valve Body"            | a) Replace converter, refer to 24 40 006  |
| No converter lockup clutch  | a) Torque converter faulty b) Also refer to "Troubleshooting Valve Body"                    | a) Replace converter, refer to 24 40 006  |
| Shift transition too hard   | a) Torque converter faulty     b) Also refer to "Troubleshooting     Valve Body"            | a) Replace converter, refer to 24 40 006  |
| No 1st gear, no braking action  | a) Brake D faulty     b) Also refer to "Troubleshooting Valve Body"                         | a) Exchange transmission, refer<br>to 24 00 046   |
| No engine braking effect, no manual downshift 4-3/3-2                         | a) Refer to "Troubleshooting Valve Body"  | a) Exchange transmission, refer to 24 00 046  |
| No engine braking effect, no manual downshift 5-4                             | a) Clutch A damaged b) Also refer to "Troubleshooting                                       | a) Exchange transmission, refer to 24 00 046  |
| Engine spins in shift 4-5/5-4   | a) Poor friction torque at plates     b) Also refer to "Troubleshooting     Valve Body"     | a) Exchange transmission, refer to 24 00 046  |
| Engine spins in shift 4-3   | <ul><li>a) Poor friction torque at plates</li><li>b) 3rd gear one-way Gear not OK</li></ul> | <ul><li>a) Exchange transmission, refer to 24 00 046</li><li>b) Exchange transmission, refer to 24 00 046</li></ul> |
| Engine spins in shift 2-3/3-2   | a) Poor friction torque at plates     b) Also refer to "Troubleshooting     Valve Body"     | a) Exchange transmission, refer<br>to 24 00 046   |
| Engine spins in shift 2-1   | <ul><li>a) Poor friction torque at plates</li><li>b) 1st gear one-way Gear not OK</li></ul> | <ul><li>a) Exchange transmission, refer to 24 00 046</li><li>b) Exchange transmission, refer to 24 00 046</li></ul> |
|   | b) Also refer to "Troubleshooting<br>Valve Body"  | a) Exchange transmission, refer<br>to 24 00 046   |

|  | <ul> <li>a) ATF level too low</li> <li>b) Valve body leaks</li> <li>c) Oil strainer dirty</li> <li>d) Round seal on oil filter missing/faulty</li> </ul> | <ul> <li>a) Correct ATF level, refer to 24 00 026</li> <li>b) Replace valve body, refer to 24 30 006</li> <li>c) Replace oil strainer, refer to 24 31 156</li> <li>d) Replace round seal, refer to 24 31 156</li> </ul> |
|--|--|---|
| Leaks Oil dripping from converter bell housing | <ul> <li>a) Round seal on oil pump body leaks</li> <li>b) Round seal on pump body leaks</li> <li>c) Radial oil seal for converter leaks</li> </ul>       | <ul> <li>a) Replace round seal, refer to 24 31 020</li> <li>b) Replace round seal, refer to 24 31 020</li> <li>c) Replace radial oil seal, refer to 24 31 020</li> </ul>  |
| Condition                                      | Cause  | Remedy  |
| Leak between transmission case and oil sump    | <ul><li>a) Mounting bolts loose</li><li>b) Gasket faulty</li></ul>   | <ul><li>a) Tighten bolts. For tightening torque, refer to Technical Data</li><li>b) Replace gasket, refer to 24 11 008</li></ul>  |
| Leaks<br>Output leaks                          | <ul><li>a) Radial oil seal for output flange leaks</li><li>b) O-ring for transmission extension leaks</li></ul>  | <ul><li>a) Replace radial oil seal, refer to<br/>24 12 016</li><li>b) Replace O-ring, refer to<br/>24 12 016</li></ul>  |
| Manual shift valve shaft leaks                 | a) Radial oil seal faulty  | a) Replace radial oil seal, refer to 24 12 106  |
| Transmission plug leaks                        | a) Nut loose b) O-ring faulty  | a) Tighten nut. For tightening torque, refer to Technical Data     b) Replace O-ring  |
| Plugs on transmission case leak                | a) Plugs loose     b) Seals faulty   | a) Tighten plugs For tightening torque, refer to Technical Data     b) Replace seals  |
| Oil cooler pipes leak                          | a) Oil cooler pipes loose     b) O-rings faulty  | a) Tighten oil cooler pipes. For tightening torque, refer to Technical Data  b) Replace O-rings   |