

Vehicle jerks during gearchange, hard 1-2 and 2-3 shifts,  
torque converter lockup clutch (KüB) not engageable

|                   |   |
|-------------------|---|
| Topic number      | LI27.20-P-051537  |
| Version           | 3   |
| Design group      | 27.20 Torque converter  |
| Date              | 02-13-2012  |
| Validity          | Model designation 212, 216, 218, 221,251 and 164 with automatic transmission NAG2FE+ (identifiable by EHS part no., starting with A 212 ...)<br>In combination with OM 642 LS up to transmission sequence no. 3.154.598 and M278 up to transmission sequence no. 3.166.389, OM651 100 kW up to transmission sequence no. 3.155.579, OM651 125/150 kW up to transmission sequence no. 3.155.551. |
| Reason for change | AR document on flushing transmission deleted.   |

**Complaint:**

Vehicle jerks during gearchange or has hard or slipping shifts.  
In some cases the torque converter lockup clutch (KüB) cannot be actuated.  
The following fault codes may be stored in the transmission control unit:  
2783, 0741, 0894, 0893, 0735, 0734, 0733, 0732, 0731, 0729, 0606, 076F  
Affects veh. up to production date 10.01.2011

**Cause:**

Torque converter lockup clutch (KüB) cannot be actuated due to a clogged filter in the KüB valve.  
Other valve filters, e.g. K1 control solenoid valve (Y3/8y2), may also be clogged with wear debris.

**Remedy:**

Removal of EHS and removal of all valves from the EHS to evaluate the contamination of the valve filters. Please observe AR27.19-P-0212A.  
Install repair filter A 221 277 00 00.  
The filter is only valid for NAG2FE+ with OM 642 LS up to transmission sequence no. 3.154.598 and M278 up to transmission sequence no. 3.166.389, OM651 100 kW up to transmission sequence no. 3.155.579, OM651 125/150 kW up to transmission sequence no. 3.155.551.  
Replacement of the torque converter is not necessary if this repair is performed.  
Important: It must always be ensured that the valves are installed correctly, as each valve has a specific characteristic.  
The transmission magnets must always be replaced.  
Finally, re-adapt only the specific problem gearshifts.

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| Symptoms   |
| Automatic transmission / Power transmission / Automatic transmission - function / Limp-home mode / |
| Automatic transmission / Power transmission / Automatic transmission - function / General /        |
| Automatic transmission / Power transmission / Shifts / Automatic transmission - function /         |

|   |
|---|
| Automatic transmission / Power transmission / Automatic transmission - function / Slips /                                   |
| Automatic transmission / Shifting is not performed or is delayed / Power transmission / Automatic transmission - function / |
| Power generation / Engine performance / Engine management / No/poor output /  |
| Power generation / Engine performance / Engine management / Cuts off /  |
| Power generation / Engine performance / Engine management / Poor acceleration /   |
| Automatic transmission / Poor shift quality / Power transmission / Automatic transmission - function /                      |

| Control unit/fault code   |            |   |
|---|------------|---|
| Control unit  | Fault code | Fault text  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0893       | Hydraulic fault in transmission (disengaging shift element does not disengage). ([VGS2_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0894       | The gear is implausible or the transmission is slipping. ([VGS3_*])   |
| EGS53 - Electronic transmission control (N15/3) (GLK (204), E (212))          | 0741       | Actuation of the torque converter lockup clutch is not possible.  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0894       | The gear is implausible or the transmission is slipping. ([VGS2_*])   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0741       | Actuation of torque converter lockup clutch is not possible. ([VGS3_*])(not(ECU1_DV_HEX@04A1),not(ECU1_DV_HEX@04A2),not(ECU1_DV_HEX@04A3))) |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0606       | This fault code relates to a bogus fault. ([VGS3_*])(not(ECU1_DV_HEX@04A1),not(ECU1_DV_HEX@04A2),not(ECU1_DV_HEX@04A3)))                    |
| ETC-Electronic transmission control (EGS3) (CL (216),S (221))                 | 0741       | Actuation of torque converter lockup clutch is not possible.  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 2783       | The friction power of the wet start-off clutch (NAK) is too high. ([VGS3_*])(ECU1_DV_HEX@04A1)or(ECU1_DV_HEX@04A2) or(ECU1_DV_HEX@04A3))    |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0893       | Hydraulic fault in transmission (disengaging shift element does not disengage). ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0729       | The gear is implausible or the transmission is slipping.(6. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 076F       | The gear is implausible or the transmission is slipping.(7. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0733       | The gear is implausible or the transmission is slipping.(3. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0741       | Actuation of torque converter lockup clutch is not possible. ([VGS2_*])   |

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|---|------|---|
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0741 | Actuation of the wet start-off clutch (NAK) is not possible. ([VGS3_*](ECU1_DV_HEX@04A1)or(ECU1_DV_HEX@04A2) or(ECU1_DV_HEX@04A3))                              |
| ETC-Electronic transmission control (EGS3) (CL (216),S (221))                 | 2783 | The torque converter lock-up clutch has excessive power consumption.  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0731 | The gear is implausible or the transmission is slipping.(1. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0732 | The gear is implausible or the transmission is slipping.(2. gear) ([VGS3_*])  |
| EGS53 - Electronic transmission control (N15/3) (GLK (204), E (212))          | 2783 | The input power at the torque converter lockup clutch is too high.  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0734 | The gear is implausible or the transmission is slipping.(4. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0606 | Component Y3/8n4 (Fully integrated transmission control (VGS) control unit) is defective. ([VGS3_*](ECU1_DV_HEX@04A1) or(ECU1_DV_HEX@04A2)or(ECU1_DV_HEX@04A3)) |

| Parts           |     |     |                        |          |   |     |         |
|-----------------|-----|-----|------------------------|----------|---|-----|---------|
| Part number     | ES1 | ES2 | Designation            | Quantity | Note  | EPC | Non-EPC |
| A0019897803     | 09  | 11  | ATF fluid              | 1        | As required:<br>ES1= 1 Liter<br>ES2= 5 Liter  |     | X       |
| A 220 277 09 98 |     |     | Control solenoid valve | 1        | Valve with rising characteristic (blue cap)   | X   |         |
| A 220 277 10 98 |     |     | Control solenoid valve | 1        | Valve with falling characteristic (black cap)   | X   |         |
| A 221 277 00 00 |     |     | Repair filter          | 1        | Only for NAG2FE+ with OM 642 LS with transmission sequence no. 3.154.599 and M278 with transmission sequence no. 3.166.390, OM651 100 kW up to transmission sequence no. 3.155.579,OM651 125/150 kW up to transmission sequence no. 3.155.551 | X   |         |

| Work units |                |      |             |                                |
|------------|----------------|------|-------------|--------------------------------|
| Op. no.    | Operation text | Time | Damage code | Note                           |
|            |                |      | 27287 D1    | Torque converter lockup clutch |

# XENTRY

| WIS-References  |  |                    |            |
|-----------------|--|--------------------|------------|
| Document number | Title  | Note               | Allocation |
| AR27.19-P-0212A | Remove/install control solenoid valves of electric controller unit | Transmission 722.9 | Remedy     |

**Vehicle jerks during gear change, hard 1-2 and 2-3 shifts,  
torque converter lockup clutch (KüB) not engageable**

|                   |  |
|-------------------|--|
| Topic number      | LI27.20-P-051537   |
| Version           | 2  |
| Design group      | 27.20 Torque converter   |
| Date              | 11-18-2011   |
| Validity          | BM 212, 216, 218, 221,251 and 164 with A/T NAG2FE+ (recognizable by EHS part no., starting with A 212 ...)<br>In combination with OM 642 LS up to GFZ 3.154.598 and M278 up to GFZ 3.166.389, OM651 100 KW up to GFZ 3.155.579, OM651 125/150 KW up to GFZ 3.155.551 |
| Reason for change | Changed repair measure, no more replacement of converter, but rather install the repair filter.  |
| Reason for block  |  |

**Complaint:**

Vehicle jerks during gear change or has hard or slipping shifts.  
In some cases the torque converter lockup clutch (KüB) cannot be actuated.  
The following fault codes may be stored in the transmission control unit:  
2783, 0741, 0894, 0893, 0735, 0734, 0733, 0732, 0731, 0729, 0606, 076F  
Affected vehicles up to production date 10.01.2011.

**Cause:**

Torque converter lockup clutch (KüB) cannot be actuated due to a clogged filter in the KüB solenoid valve.  
Other solenoid valve filters, e.g. K1 control solenoid valve (Y3/8y2), may also be clogged with wear debris.

**Remedy:**

Removal of EHS and removal of all Solenoid valves from the EHS to evaluate the contamination of the Solenoid valve filters. Please observe AR27.19-P-0212A.  
Install repair filter A 221 277 00 00.  
The filter is only valid for NAG2FE+ with OM 642 LS up to serial number 3,154,598 and M278 up to serial number 3,166,389.  
A replacement of the torque converter is no longer necessary for this repair.  
Important: It must always be ensured that the solenoid valves are installed in the correct location, as each valve has a specific characteristic.  
The transmission magnets must always be replaced.  
Finally, only the shift mechanisms with complaint need to be adapted again to suit.

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| <b>Symptoms</b>  |
| Automatic transmission / Power transmission / Automatic transmission - function / Limp-home mode / |
| Automatic transmission / Power transmission / Automatic transmission - function / General /        |
| Automatic transmission / Power transmission / Shifts / Automatic transmission - function /         |
| Automatic transmission / Power transmission / Automatic transmission - function / Slips /          |

|   |
|---|
| Automatic transmission / Shifting is not performed or is delayed / Power transmission / Automatic transmission - function / |
| Power generation / Engine performance / Engine management / No/poor output /  |
| Power generation / Engine performance / Engine management / Cuts off /  |
| Power generation / Engine performance / Engine management / Poor acceleration /   |
| Automatic transmission / Poor shift quality / Power transmission / Automatic transmission - function /                      |

| Control unit/fault code   |            |  |
|---|------------|--|
| Control unit  | Fault code | Fault text   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0893       | Hydraulic fault in transmission (disengaging shift element does not disengage). ([VGS2_*])   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0894       | The gear is implausible or the transmission is slipping. ([VGS3_*])  |
| EGS53 - Electronic transmission control (N15/3) (GLK (204), E (212))          | 0741       | Actuation of the torque converter lockup clutch is not possible.   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0894       | The gear is implausible or the transmission is slipping. ([VGS2_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0741       | Actuation of torque converter lockup clutch is not possible. ([VGS3_*](not(ECU1_DV_HEX@04A1),not(ECU1_DV_HEX@04A2),not(ECU1_DV_HEX@04A3))) |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0606       | This fault code relates to a bogus fault. ([VGS3_*](not(ECU1_DV_HEX@04A1),not(ECU1_DV_HEX@04A2),not(ECU1_DV_HEX@04A3)))                    |
| ETC-Electronic transmission control (EGS3) (CL (216),S (221))                 | 0741       | Actuation of torque converter lockup clutch is not possible.   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 2783       | The friction power of the wet start-off clutch (NAK) is too high. ([VGS3_*](ECU1_DV_HEX@04A1)or(ECU1_DV_HEX@04A2)or(ECU1_DV_HEX@04A3))     |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0893       | Hydraulic fault in transmission (disengaging shift element does not disengage). ([VGS3_*])   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0729       | The gear is implausible or the transmission is slipping.(6. gear) ([VGS3_*])   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 076F       | The gear is implausible or the transmission is slipping.(7. gear) ([VGS3_*])   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0733       | The gear is implausible or the transmission is slipping.(3. gear) ([VGS3_*])   |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0741       | Actuation of torque converter lockup clutch is not possible. ([VGS2_*])  |

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|   |      |   |
|---|------|---|
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0741 | Actuation of the wet start-off clutch (NAK) is not possible. ([VGS3_*](ECU1_DV_HEX@04A1)or(ECU1_DV_HEX@04A2) or(ECU1_DV_HEX@04A3))                              |
| ETC-Electronic transmission control (EGS3) (CL (216),S (221))                 | 2783 | The torque converter lock-up clutch has excessive power consumption.  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0731 | The gear is implausible or the transmission is slipping.(1. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0732 | The gear is implausible or the transmission is slipping.(2. gear) ([VGS3_*])  |
| EGS53 - Electronic transmission control (N15/3) (GLK (204), E (212))          | 2783 | The input power at the torque converter lockup clutch is too high.  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0734 | The gear is implausible or the transmission is slipping.(4. gear) ([VGS3_*])  |
| ETC-Electronic transmission control (EGS2) (CL (216),M (164),R (251),S (221)) | 0606 | Component Y3/8n4 (Fully integrated transmission control (VGS) control unit) is defective. ([VGS3_*](ECU1_DV_HEX@04A1) or(ECU1_DV_HEX@04A2)or(ECU1_DV_HEX@04A3)) |

| Parts           |     |     |                        |          |   |     |         |
|-----------------|-----|-----|------------------------|----------|---|-----|---------|
| Part number     | ES1 | ES2 | Designation            | Quantity | Note  | EPC | Non-EPC |
| A0019897803     | 09  | 11  | ATF fluid              | 1        | as required:<br>ES1= 1 Liter<br>ES2= 5 Liter  |     | X       |
| A 220 277 09 98 |     |     | Control solenoid valve | 1        | Valve with rising characteristic (blue cap)   | X   |         |
| A 220 277 10 98 |     |     | Control solenoid valve | 1        | Valve with falling characteristic (black cap)   | X   |         |
| A 221 277 00 00 |     |     | Repair filter          | 1        | Only for NAG2FE+ with OM 642 LS with GFZ 3.154.599 and M278 with GFZ 3.166.390, OM651 100 KW up to GFZ 3.155.579,OM651 125/150 KW up to GFZ 3.155.551 | X   |         |

| Work units |                |      |             |                                |
|------------|----------------|------|-------------|--------------------------------|
| Op. no.    | Operation text | Time | Damage code | Note                           |
|            |                |      | 27287 D1    | Torque converter lockup clutch |

| WIS-References  |       |      |            |
|-----------------|-------|------|------------|
| Document number | Title | Note | Allocation |
|                 |       |      |            |

# XENTRY

|                  |  |  |        |
|------------------|--|--|--------|
| AR27.55-P-0100SX | Flush out automatic transmission and converter                     | TRANSMISSION 722.9 in MODEL 221.00 /02 /05 /07 / 10 /12 /15 /17, 216.37<br>With transmission flushing unit | Remedy |
| AR27.19-P-0212A  | Remove/install control solenoid valves of electric controller unit | Transmission 722.9   | Remedy |

| Validity |        |              |
|----------|--------|--------------|
| Vehicle  | Engine | Transmission |
| 164.120  | 642    | *            |
| 164.121  | 642    | *            |
| 164.122  | 642    | *            |
| 164.124  | 642    | *            |
| 164.125  | 642    | *            |
| 204.901  | 651    | 722.996      |
| 204.901  | 651    | 722.908      |
| 204.902  | 651    | 722.908      |
| 204.982  | 651    | 722.965      |
| 204.984  | 651    | 722.965      |
| 212.002  | 651    | 722.908      |
| 212.003  | 651    | 722.908      |
| 212.005  | 651    | 722.996      |
| 212.023  | *      | *            |
| 212.082  | 651    | 722.965      |
| 212.093  | *      | *            |
| 212.202  | 651    | 722.908      |
| 212.203  | 651    | 722.908      |
| 212.205  | 651    | 722.996      |
| 212.223  | *      | *            |
| 212.282  | 651    | 722.965      |
| 212.293  | *      | *            |
| 216.373  | *      | *            |
| 216.394  | *      | *            |
| 218.323  | *      | *            |
| 221.003  | 651    | 722.908      |
| 221.026  | *      | *            |
| 221.083  | *      | *            |
| 221.103  | 651    | 722.908      |
| 221.126  | *      | *            |
| 221.183  | *      | *            |
| 251.021  | *      | *            |



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|---------|---|---|
| 251.023 | * | * |
| 251.123 | * | * |