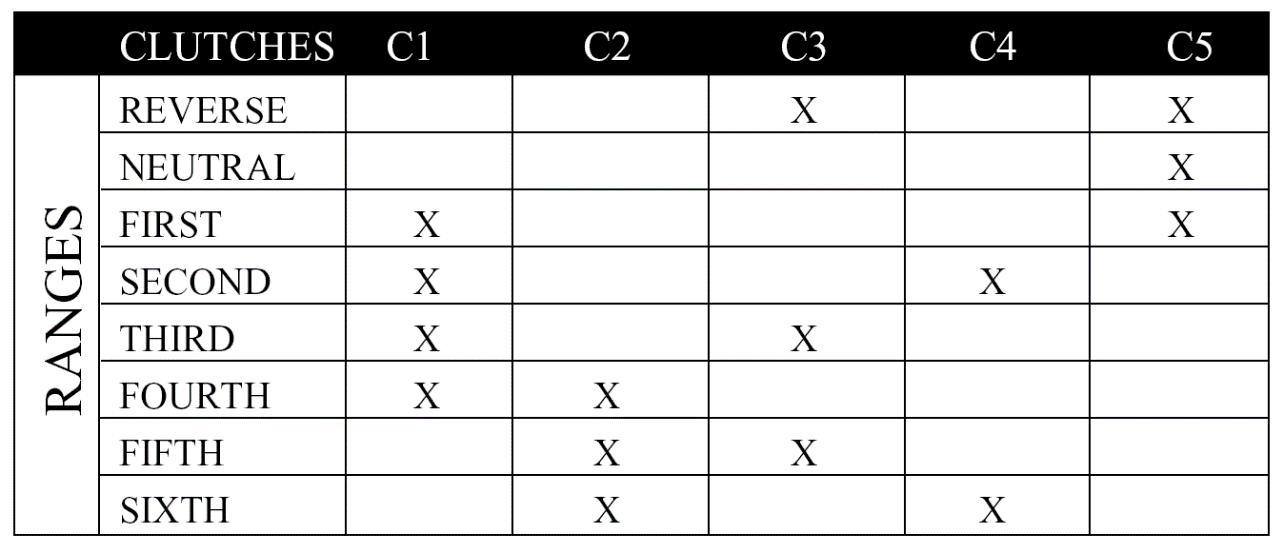
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DGS-Kopf-2016 | | | | | | | | | | | | | | | Service Report | | | | | | | | | |
| Repair Order (RO) Nr. | | | | | Tbd by Global Industrial Solutions | | | | |
| Date of failure | | | | | 02.06.2023 | | | | |
| Repair Order Open Date | | | | | 02.06.2023 | | | | |
| **<<Global Industrial Solutions>> LLC, 100097 Tashkent, Uzbekistan, Tel: +998712319238** | | | | | | | | | | | | | | | | | | | | | | | | |
| **Report to: Rolf Oerter, Customer Support, Training**  Tel: +49 6131-5807-737, cell: +49 1761-5807-737 email: [roerter@dgs-mainz.com](mailto:roerter@dgs-mainz.com) | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **Customer, Orderer:** | | | | | | | | | | **Enduser, Owner of vehicle:** | | | | | | **Location of repair:** | | | | | | | |
| **Name:** | Yutong, Allison Transmission | | | | | | | | | | TOSHSHAHARTRANSXIZMAT | | | | | | TOSHSHAHARTRANSXIZMAT | | | | | | | |
| **Street:** | 1320,Marketing Center, No.66 Yuxing Road | | | | | | | | | | Amir Temur Street, 6 | | | | | | Amir Temur Street, 6 | | | | | | | |
| **Town:** | Economic Development Zone Zhengzhou, China | | | | | | | | | | Tashkent, Uzbekistan | | | | | | Tashkent, Uzbekistan | | | | | | | |
| **ZIP Code** |  | | | | | | | | | |  | | | | | |  | | | | | | | |
| **Province:** |  | | | | | | | | | |  | | | | | |  | | | | | | | |
| **Contact:** | Yang Wei, Yutong/ Jason Ding, ATI | | | | | | | | | | Azizov, Abdujamil Abdugafarovich | | | | | |  | | | | | | | |
| **Tel.:** |  | | | | | | | | | | +998981772552 | | | | | | +998981772552 | | | | | | | |
| **Fax:** |  | | | | | | | | | |  | | | | | |  | | | | | | | |
| email: | yangweih[@yutong.com](mailto:yangweih@yutong.com), Jason Ding | | | | | | | | | | info@tashbus.uz | | | | | | info@tashbus.uz | | | | | | | |
| **Customer Purchase order #:** | | Per email of 02.06.2023 | | | | | | | |  | | | | | | | **Customer PO Date:** | | | | 02.06.2023 | | | |
| **Repairing Outlet (Allison Dealer)** | | | | | | | | | | | Global Industrial Solutions | | | | | |  | | | |  | | | |
| **Transm. Model:** | | T375 | | | | | | | | | **PN:** | | E027061 | | | | **SN:** | | | | 6511879677 | | | |
| **Replacement Transmission:** | |  | | | | | | | | | **PN:** | |  | | | | **SN:** | | | | 6520238396 | | | |
| **TCM, ECU, or Shift Sel.** | |  | | | | | | | | | **PN 2:** | | 63CR0YQ8 | | | | **SN 2:** | | | |  | | | |
| **Replacement TCM, ECU, or Shift Sel.** | |  | | | | | | | | | **Replacement PN 2:** | |  | | | | **Replacement SN 2:** | | | |  | | | |
| **Non-Allison Part** | |  | | | | | | | | | **PN 3:** | |  | | | | **SN 3:** | | | |  | | | |
| **Application:** | | City Bus | | | | | | | | | **OEM:** | | Yutong | | | | Model: | | | | ZK6126HG | | | |
| **Application Code:** | | BU02 | | | | | | | | |  | | | | | | | | | | | | | |
| **vehicle ID #:** | | LZYTMGEF8P1003793 | | | | | | | | | **Registr.plate:** | |  | | | | **Engine:** | |  | | | | | |
| **In Service Date:** | | **23.05.2023** | | | | | | | | | **Veh. hours:** | |  | | | | **Veh.km:** | | 14834 | | | | | |
| **Pre Delivery** | | **YES** | | |  | **NO** | | **X** | | | **Claim Type:** | |  | | | | **Field Action # or Activity Indicator** | | | | |  | | |
| **Date in Service after last repair, or Date in Service of exchange unit if failed unit was repaired once before, or if failed unit is already a replacement (SWING) Transmission** : | | | | | | | | | | | | | | | | |  | | | | | | | |
| **Travel Time:** | | | |  | | | | | **Travel km if company car used:** | | | | |  | | | **PFPN:** | | | | | | tbd | |
| **Labor Last Applied date:** | | | | Reassembly Not yet finished | | | | | **Technician’s Name:** | | | | | Gayratbek Niyazov, Tokhir Abbasov, Rolf Oerter | | | | | | | | |  | |
| **AWAARE Complaint Code:** | | | EL02 | | | | **AWAARE Failure Code** | | | | | AD05 | | | |  | |  | | | | | |  |
| **Diagnostic Codes:** | | | P0732 | | | | P2714 | | | | |  | | | |  | |  | | | | | |  |

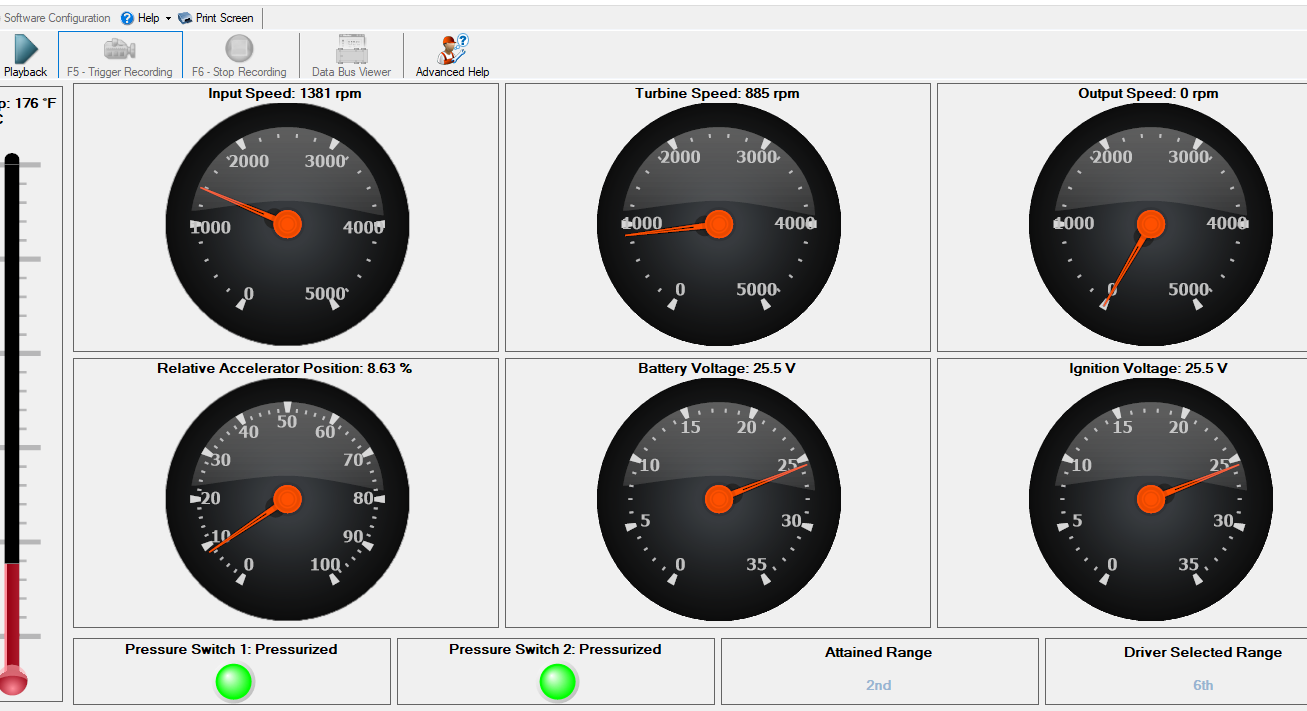
**Complaint: Friday, 02.06.2023:** DTC P0732 and DTC P2714. Transmission locks in 3rd range**.** According to the driver, the Transmission TCM had already been swapped from another bus for diagnostic purposes, but the malfunction stood the same.

**Cause:** Slipping C4 clutch, as found by clutch test and t/shooting and as found later during disassembly of transmission. C4 clutch piston seal ruptured causing pressure loss.

**Correction: Monday, 05.06.2023.** OurDealer Global Industrial Solutions LLC checked vehicle on job site:

* Checked oil level and found ok. But the Oil level had recently been corrected by either OEM Service or by customer fleet technician by having added 1 to 2 liters. Since required fluid spec was not on hand, any available oil was added. Unknown, which oil was added.
* Performed test drive to evaluate complaint. Found DTC P0732 occuring during a 1-2 upshift. The transmission consequently locked in 3rd range for fail safe operation.
* Checked all connectors and wiring. Visually ok.
* Performed clutch test with Allison DOC Diagnostic tool, supported by a pressure test. **Found slip in 2nd range and in 6th range**, and found C4 clutch pressure slightly lower than Main and than C1 and C2 respectively. All other ranges are ok. This indicates C4 clutch is slipping under load, caused by reduced C4 clutch pressure . See DOV Snapshot file 6511879677-ClutchTest\_slip.ad4 , file time 00:01:26 and 00:02:35 (Bookmark #1 and #2) and file time 00:03:17 (Bookmark #3)





**Comment:**

Transmission needs to be replaced and needs to be disassembled for further diagnosis and failure analysis.



The transmission is wet of oil on the upper front part. Likely from breather blow-out or from another source of oil from above.

Distributor DGS Mainz, Germany (9307300000) prepared a **new** replacement transmission for airfreight-transportation and customs clearance and sent to Tashkent.

**Correction: Cont.**

**Tuesday, 27.06.2023:** Transmission replacement. Removed failed unit SN 6511879677 and installed new replacement unit SN 6520238396, as advised by Distributor Customer Support Manager, Rolf Oerter.

* The replacement unit had been modified into required spec of original unit prior to installation.
* Recorded some DOC snapshots, reset Adaptives, Transhealth and Prognostics information.
* Final Test Drive. Ok.

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| --- | --- | --- | --- |
| **Labor Code** | **Description** | Time allowed | Time needed |
| 11111111 | **05.06.2023:** Dealer travelled to jobsite and back home. |  | 1,0 |
| 00096900 | Initial road test drive with fleet’s driver. Initial conversation with fleet shop foreman. Place bus on pit for investigation. | 0,1 | 1,0 |
| 00096901 | Troubleshooting with DOC under guidance of Rolf Oerter via phone | 1,0 | 1,0 |
|  |  |  |  |
| 00094006 | **27.06.2023:** Steam clean transmission and installed area | 0,5 | 0,5 |
| 00094011 | R&R underfloor protection plate and cross member panels | 1,0 | 1,0 |
| 00094000 | R&R transmission, transmission replacement. | 6,0 | 8,5 |
| 00096401 | Final Test drive with adaptives | 1,0 | 1,0 |
| 00096901 | Diagnostics with DOC. Recorded snapshots by advice or Rolf Oerter, Distributor customer support manager. Reset Adaptives, Transhealth and Prognostics information. | 1,0 | 1,0 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Labor Code** | **Description** | Time allowed | Time needed |
| 00095200 | **25.07.2023:** Disassembly, Overhaul | 9,6 | 9,6 |
| 00095206 | Overhaul Model with Retarder | 1,6 | 1,6 |
|  |  |  |  |

**Correction: Cont.**

**Tuesday, 25.07.2023:** After arrival and customs clearance of new replacement transmission from Uzbekistan customs boarder, Distributor Customer Support- & Training Mgr. Rolf Oerter flew to Tashkent in order to support our new dealer Global Industrial Solutions in their very first overhaul.

Just assuming from the previous clutch test result that the the C4 clutch piston was eventually leaking, he took the most basic seals, gaskets and C4 piston in the luggage.

Disassembled unit, found C4 piston lip ruptured. But C4 clutch friction- and reaction plates had already severely suffered and needs to being replaced too.

* The ruptured segment of the C4 piston lip was found in the suction screen.
* No evidence of coolant or water. No corrosion.

Ordered new parts.

Overhaul to being continued when new clutch plates will be on stock at new dealer at Tashkent.

Rolf Oerter,

Customer Support Manager,

DGS Diesel- und Getriebeservice GmbH

Allison Transmission Distributor Germany and CIS countries,

29.08.2023