



# Driving down transit fleet costs

## DIWA Health Check

Unscheduled downtime not only interrupts the smooth operation of your fleet, it is also expensive. The DIWA Health Check has been developed especially for the vehicles in your transit bus fleet.

Based on a comprehensive analysis of data from your transmission, Voith technicians get a snapshot of your transmission's conditions. You are then presented with a detailed report that includes actionable feedback and maintenance recommendations to extend the life of your transmission. With information from the DIWA Health Check, you can then budget prudently and arrange for the work to be completed during planned downtime.

### Prerequisites: Transmission type DIWA.5 and DIWA.6

The DIWA Health Check provides you with an overview of the condition of your transmission and if a midlife overhaul of the transmission is required. It can help identify worn parts and the need for new seals, bushings, electrical parts (sensors and solenoids) and clutches (hard parts excluded).

### Health Check features

- Analysis of the event memory of the transmission control unit
- Clutch condition
- Oil temperature history of transmission.
- Preparation of a detailed report with targeted recommendations

## Sample inspection report

Bus No.	Mileage	SW Version <sup>1</sup>	1-2 Shift	2-3 Shift`	3-4 Shift	Retarder	Temp Index
101 <sup>2</sup>	425,214	5.6	0.1	-0.1	-0.2	0.1	98
102 <sup>2</sup>	410,098	5.6	0.1	-0.2	-0.3	0.0	99
103	418,854	5.6	0.0	-0.1	-0.6	-0.2	100
104	402,650	5.6	-0.1	0.0	-0.1	1.2 <sup>3</sup>	82 <sup>3</sup>
105	390,652	5.6	0.0	-0.5	-0.1	0.0	97
201	201,540	5.12	-0.2	-0.8	-0.5	-0.6	100
202	211,879	5.14	-0.3	-1.0	-0.8	-0.8	99
203	198,234	5.14	-1.0	-0.5	1.2 <sup>4</sup>	-1.0	99
204	216,423	5.14	-0.5	-1.0	-0.6	-1.2 <sup>5</sup>	100
205	208,775	5.14	-0.8	-1.2	-1.0	-1.8	94 <sup>6</sup>

- Units 101 through 201 are in need of an ECU update.
- Units 101 and 102 are up next for a soft overhaul.
- Unit 104 is showing a worn retarder and temp sensor fault . A soft overhaul and wiring harness update is recommended.
- Unit 203 is showing a faulty SK solenoid for 4th gear shifts.
- Unit 204 is showing bad OEM brake air pressure switch for the second retarder stage.
- Unit 205 is showing a temperature index deviation. Check the radiator and cooling system.

### Inspection sheet

With Health Check, you can choose the amount of details you want. Based on that selection, your report will include condition data as well as recommendations for maintenance that can be performed by your team or by factory-trained technicians at a Voith facility.

### Clutches

Through data analysis, the Health Check will determine the condition of your clutches without disassembling the transmission.

### Oil analysis program

One option for the Health Check is an oil analysis, which can help find contaminants.

### Experts at your facility

Our factory-trained service technicians visit your facility to perform the DIWA Health Check at a time that's best for your schedule and perform any needed repairs.

### Health Check frequency

The best way to access your DIWA transmission's performance is to perform multiple Health Checks, establish a baseline performance and then study the data for anomalies. Once these anomalies are detected, they can be addressed by your team or Voith experts.

### Diagnostic system ALADIN

You can pair your DIWA transmission with ALADIN, a free diagnostic program that monitors and records the operational data of your transmission. Through these recordings and tests, technicians can quickly and efficiently identify and troubleshoot gearbox issues and operational events, including valve actuation, retarder inputs, transmission ECU and the gear-range selector. The advantages of ALADIN include:

- Simplified access to event memory and runtime data
- Improved access to useful service tools
- Available free of charge with no subscription fees or licensing fees
- Data is easily shared with your Voith Service Provider (VSP), if additional troubleshooting support is required

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