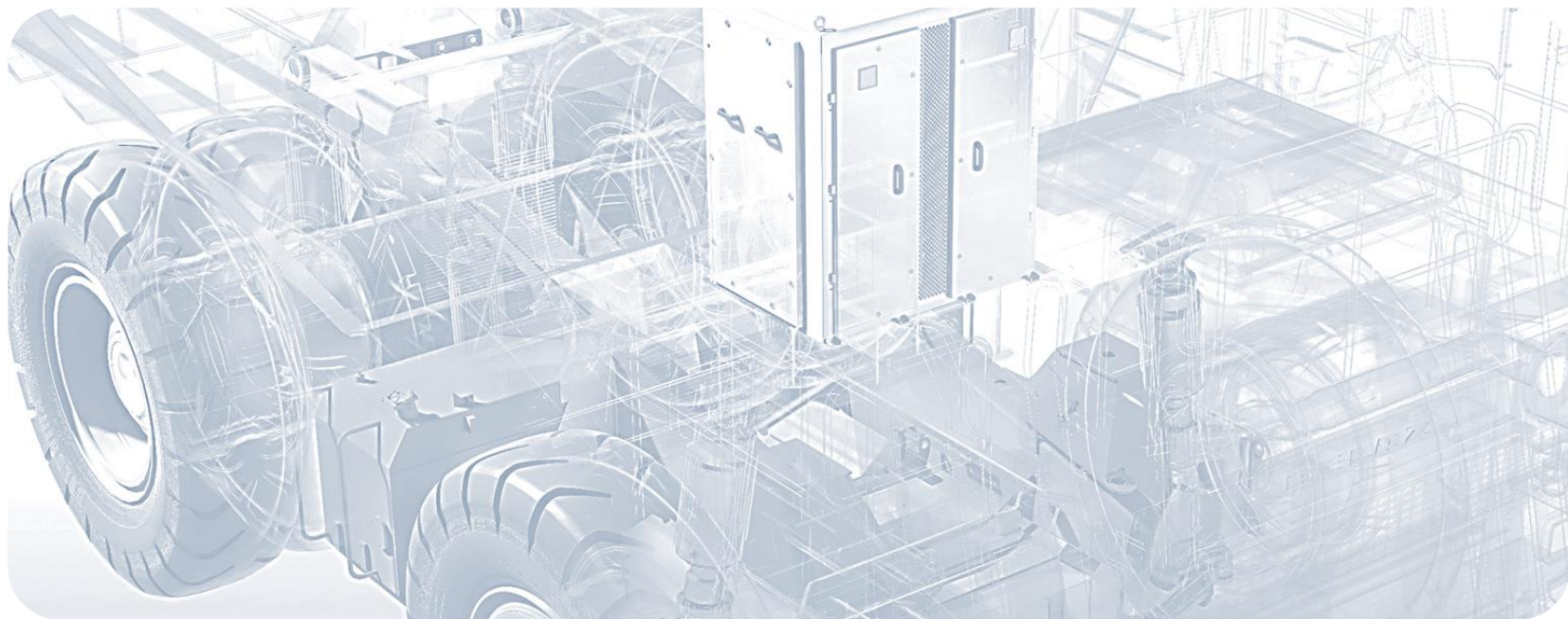


NEW SOLUTION FOR DUMP TRUCKS **CONTROL UNIT WITHOUT CONTACTORS**



Connecting technologies

KNOWN ISSUES OF CONVENTIONAL CONTROL UNITS

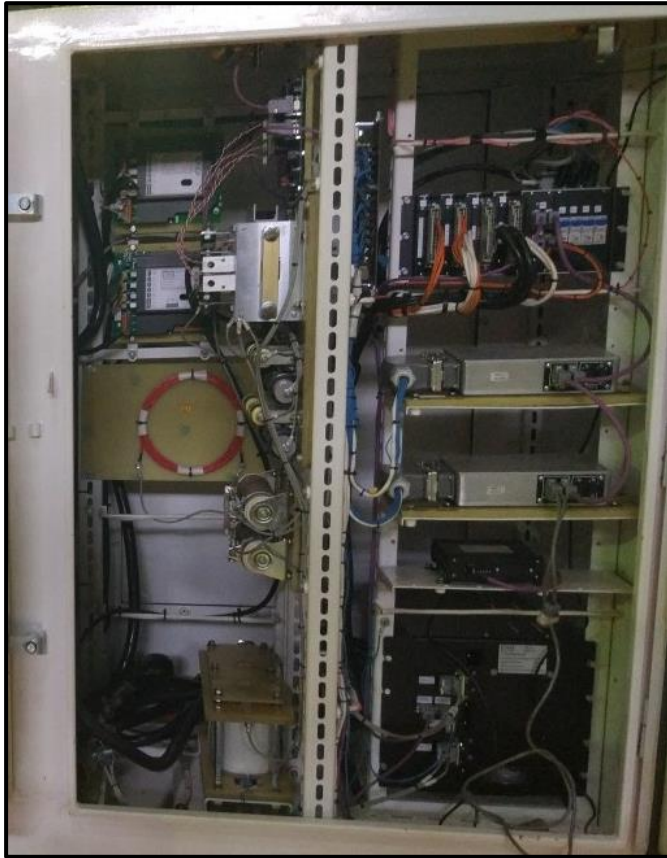


The conventional electric drive control units are based on contactor blocks which are used for excitation windings switching.

Known issues of the contactors:

- ❑ Sparking during the switching process causes degradation and destruction of the contactor.
- ❑ Regular cleaning is required.
- ❑ Pneumatic or electrical system requires regular maintenance.
- ❑ The contactors are subject to vibration which reduces its life time.
- ❑ **Contactor replacement is expensive.**

THE CONTROL UNIT WITHOUT CONTACTORS



Our new control unit uses thyristor blocks instead of contactors which allows to perform soft electronic switch of the excitation windings of traction electric drives.

Benefits of thyristors:

- Switching without sparking.
- No regular maintenance is required.
- Switching without vibration and noise.
- Low maintenance and repair expenses.
- The cost of a thyristor is 4 times less than a contactor.**

CAPABILITIES OF THE UPGRADED TRUCK



HSA



Traction control



ABS



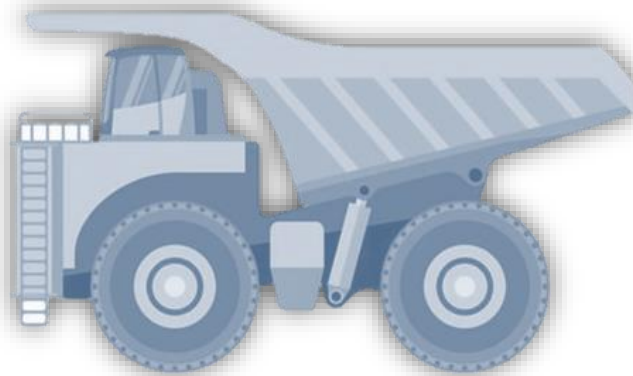
New system with
CAN support



Load-optimized
speed limiter



Cruise control



Enhanced
onboard
diagnostics



HDC



Fast mode switching



Fuel consumption
reducing



Remote
diagnostics
& service

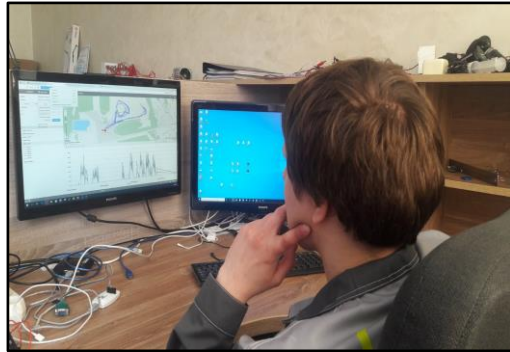
ENHANCED ONBOARD DIAGNOSTICS SYSTEM



Benefits of the onboard diagnostics system:

- Processing more than 200 different parameters of the machine and its electric drive.
- Event & data storage up to 30 days.
- Displaying the drive parameters on the cabin controller display.
- Informing an operator about emergency states of the control unit and power node.
- Protecting the power electronics against emergency modes of operation.
- Easy setup and programming process of the control unit using display and

REMOTE SETUP AND DIAGNOSTICS



STRIM provides the remote control of control unit parameters and characteristics.

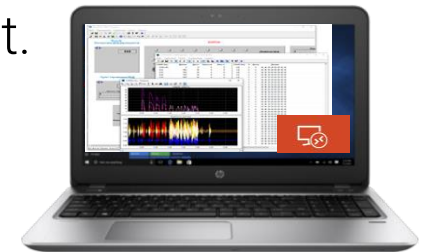
- ❑ New dump truck can be optionally equipped with the brand new data logging device "BARS-2020" which supports our remote monitoring service.
- ❑ By request STRIM offers 24/7 monitoring of the truck operation provided by our specialists using BARS-2020 system.
- ❑ The monitoring service can be activated for a certain period of time or the truck full lifetime.
- ❑ If deviations of parameters are detected, our specialists will be able to perform software tuning by using the remote connection.
- ❑ When GSM connection is lost, BARS-2020 stores data into built-in memory and send it once the connection will be restored.



SOFTWARE TUNING KIT

Our software tuning kit “KN-1” is suitable to perform the software tuning of the control unit.

- The tuning kit is well known as a part of our other products: SKAT-01EM, BUVG, MVS.
- Fully compatible with the new thyristor control unit.
- Easy to maintain and operate.
- User friendly software interface.



Contents of delivery:

- USB–CAN converter;
- StrimSoft Software & drivers CD;
- Connection cables kit.



NEW FEATURES OF THE UPGRADED TRUCK

- ✓ **Dump truck with the new features for the same price.**
- ✓ **Increasing the coefficient of technical readiness.**
- ✓ **Reducing of the fuel consumption due to the state-of-art electronic control system.**
- ✓ **Reducing the maintenance expenses.**
- ✓ **Useful functions of the control system to increase the truck performance level.**
- ✓ **Enhanced diagnostics system.**
- ✓ **STRIM remote monitoring service (optional feature).**
- ✓ **Well known and easy to use software tuning kit.**
- ✓ **Technical support and training of client's specialists.**

