MEETS MARKET REQUIREMENTS AND MANDATES

The BHVM is designed and certified to meet all of the comprehensive Vibration Health Monitoring (VHM) requirements specified by all major market segment mandates. These requirements cover extensive fault detection requirements for monitoring the health of aircraft rotors, airframe, drive system and engines. Specific applicable requirements met include CAA CAP 693/753 as well as the latest requirements (which supersede these documents) specified in EASA C-29 Amendment 3 29.1465. The system incorporates all vibration-related maintenance functions such as main and tail rotor track and balance and main driveshaft balancing. Approved and developed by Bell Helicopter, the BHVM is fully supported by Bell Helicopter's industry leading Customer Support and Services organization.

Aeronautical A C C E S S O R I E S ™

A Bell Helicopter Brand

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800.251.7094
aero-access.com

If you are a current owner and wish to register for the BHVM Website, send your company's information, including the point of contact and aircraft serial number, to Bell Helicopter Product Support Engineering at psemedium@bh.com.

For more information about BHVM, visit the Aeronautical Accessories website: http://goo.gl/a6S99.

BELL HELICOPTER VIBRATION MONITORING SYSTEM

Enhance Safety While Reducing Costs.

BHVM system for Bell 212, Bell 412 and Bell 412EP

BHVM IS THE ONLY BELL HELICOPTER SUPPORTED SYSTEM AVAILABLE FOR THE BELL 212, 412 AND 412EP.

The Bell Helicopter Vibration Monitoring system (BHVM) increases safety, maximizes efficiency and decreases costs. It is the only monitoring system for the Bell 212, Bell 412 and Bell 412EP supported by Bell Helicopter. The BHVM succeeds in meeting operational requirement criteria and delivers convenient and detailed analysis.

INCREASE ROTORCRAFT SAFETY

Equipped with 18 strategically placed accelerometers, BHVM enhances safety by continuously monitoring the following systems and components:

- Main/tail rotor track and balance
- Engine health
- Transmission and gearboxes
- Airframe health

Remotely based aircraft can be monitored from a central maintenance base using the Bell Helicopter Web server.

MAXIMIZES THE EFFICIENCY OF YOUR OPERATION

BHVM replaces portable test equipment to conduct routine vibration-related maintenance and mandatory checks. BHVM's diagnostics assist in maintenance planning of the following systems and components:

- Engine to main gearbox input drive shafts
- Gearboxes, transmission and engines
- Tail rotor drive shaft and bearings
- Instrument panel Frahm absorber tuning

By detecting defects early, operators can avoid unplanned repair and other operations-related disruptions. The system safeguards operational readiness with trend data that can be used to plan and coordinate the timing of maintenance activities.

DECREASE OPERATING COSTS

Reduce your long-term cost of operations by integrating BHVM diagnostics into your maintenance program. Through proactive monitoring of key systems, a maintenance operator can:

- Reduce maintenance ground runs
- Conduct minor rotor adjustments between flights
- Detect component degradation
- Minimize undetected component degradation

These measures help reduce maintenance costs and potentially help avoid costly repairs between scheduled maintenance intervals.

OVERVIEW OF ACCELEROMETER LOCATIONS FOR THE BELL 412 HELICOPTER

Accelerometers monitor vibration at critical locations in the aircraft.
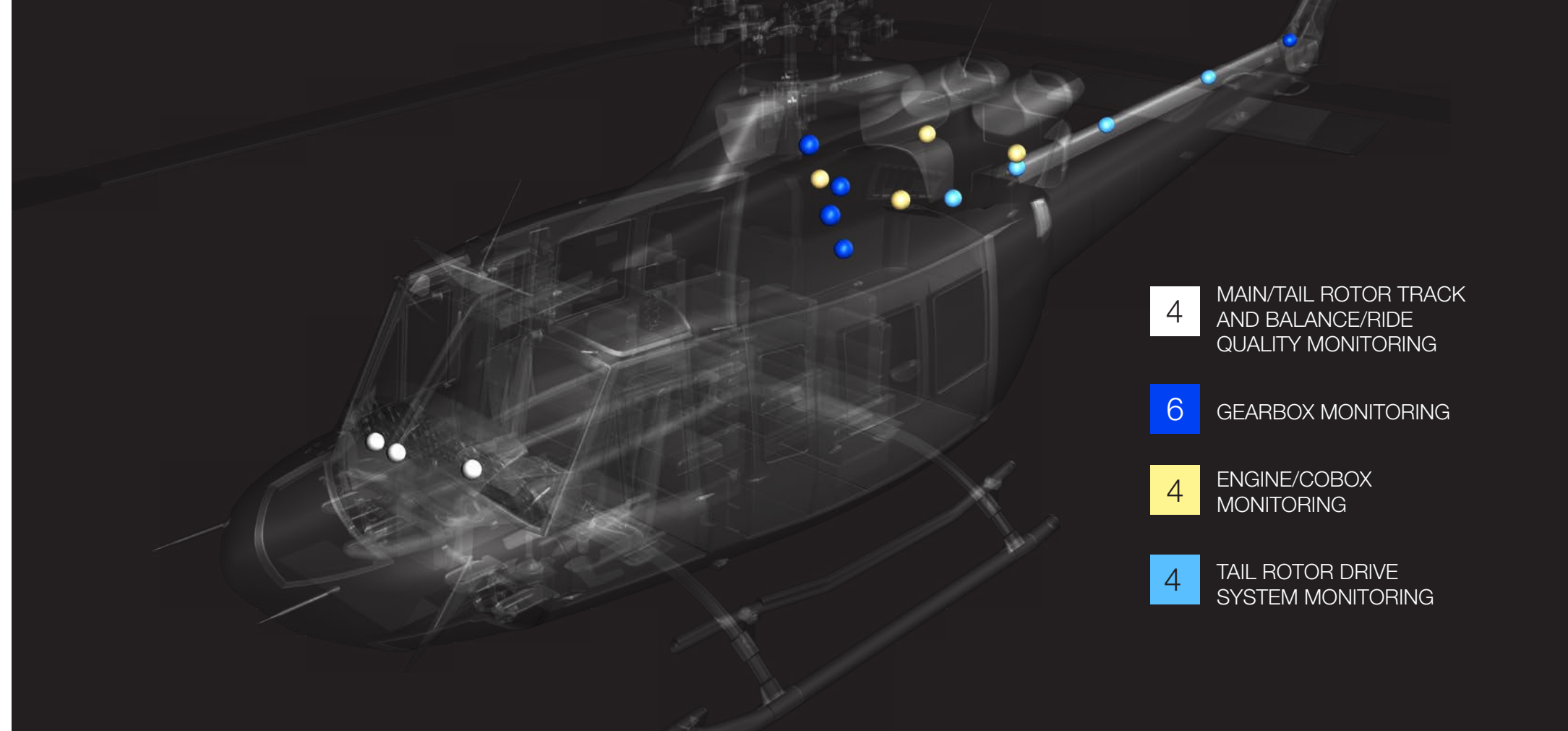
4	MAIN/TAIL ROTOR TRACK AND BALANCE/RIDE QUALITY MONITORING
6	GEARBOX MONITORING
4	ENGINE/COBOX MONITORING
4	TAIL ROTOR DRIVE SYSTEM MONITORING

ADVANCED ANALYTICS COUPLED WITH SUPERIOR SUPPORT

ONBOARD EQUIPMENT:

Vibration and rotor track-and-balance data is received and stored by the Main Signal Processor Unit (MSPU). The MSPU then analyzes the data to determine the health of the aircraft.

Flight crews can manually command data acquisition and conduct routine maintenance tests via a BHVM control panel located in the cockpit. For customers who elect to install the optional Altair Avionics SmartCycle+™, all aircraft health condition indicators are automatically acquired via flight regime recognition using data supplied from the SmartCycle+ ™.

Data can be retrieved from the MSPU and stored on the ground station using the USB memory stick, an Ethernet connection to the ground station or by utilizing an optional onboard USB memory module that can be removed from the aircraft.

Maintenance personnel can connect a laptop with the ground station to the MSPU through an Ethernet port. This provides an optional way to command rotor track and balance and health monitoring functions using a graphical interface, which provides increased flexibility.

GROUND STATION:

The BHVM ground station (PC-GBS) provides fleet and individual aircraft status in three levels. A drilldown capability allows the operator to determine what is causing higher-than-normal results.

In addition to the normal system monitoring, the ground station provides detailed rotor track and balance analyses that specifies the optimum setting(s) to minimize vibration.

WEB SERVER:

The secure web server is an optional, no-cost, fleet management application. This feature allows Bell Helicopter Product Support Engineers to provide additional monitoring and support. The Web server enables remote monitoring, data analysis and trending information for each aircraft. It also provides insight by comparing data of aircraft elsewhere to yours without revealing specific locations or owner information.