

## **HEALTH AND USAGE MONITORING SYSTEM (HUMS)**

HUMS is a sensor-based monitoring system that enables Condition-Based Maintenance by measuring the health and performance of mission-critical components on aircraft.

- Continuous vibration monitoring of drivetrain
  - Performs Rotor, Track and Balance
- Provides actionable information for informed maintenance decisions
- Pinpoints mechanical faults before they become catastrophic failures

#### T/R MAG P/U M ENGINE COMPRESSOR #1 CABIN FEEDTHROUGH ENGINE COMPRESSOR #2 SWASHPLATE BEARING A ENGINE ACC GBX #1 **TAIL ROTOR** A ENGINE ACC GBX #2 M/R MAG P/U M **STATION 65** A HANGER BEARING #1 VERTICAL HANGER BEARING #3 🔼 T/R LATERAL **OPTICAL** TRACKER INTERMEDIATE GEARBOX TRANS LATERAL L/R 🔼 A HANGER BEARING #2 STATION 92 RIGHT TRANS VERTICAL DATA AQUISITION UNIT STATION 92 LEFT INPUT SHAFT LEFT STATION 92 RIGHT INPUT SHAFT RIGHT 🔼 LATERAL BLADETRACK CONNECTOR

### **HUMS BY THE NUMBERS**



## **BENEFITS OF CONDITION-BASED MAINTENANCE (CBM)**



#### ENHANCES SAFETY

A proactive approach heads off accidents before they happen. Data signaling potential problems on one aircraft can be used to comprehensively analyze an entire fleet.



less unplanned downtime, faster

turnaround and increased mission

readiness to support the operator.





#### INCREASES AVAILABILITY REDUCES COSTS Better maintenance planning means CBM substantially of

CBM substantially cuts maintenance/ operating costs in the near term and over the life cycle of the rotocraft and avoids costs of spares usage, dedicated test flights and asset recapitalization.potential problems on one aircraft can be used to comprehensively analyze an entire fleet.

# WHAT PROBLEMS DOES CBM ADDRESS?

- Is my equipment ready now?
- Is it safe to fly?
- How many aircraft are prepared for flight today?
- What parts do I need for repair next week/month?
- What can I do to improve overall fleet availability and cost containment next year?

## **TYPICAL INSTALLATION**