

Equipment



Altitude Chamber



Blowing Rain Chamber



Hydraulic Crash Apparatus



Manual Crash Apparatus



Electromagnetic Interference Chamber



Environmental Climatic Chamber



Vibration Table



Settling Dust Chamber



JUH-60 Black Hawk Helicopter

For more information about airworthiness test and evaluation, contact:

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Merging the science of aviation and medicine to optimize human protection and performance.

U.S. Army Aeromedical Research Laboratory



**En Route
Care and
Prolonged
Field Care**



Airworthiness Testing Process

Airworthiness Testing

1. Test request and requirements
2. Test Plan development
3. Laboratory testing
4. Test Airworthiness Release (AWR)
5. Rotary-wing Flight Test
6. Medical Risk Assessment
7. Fleet-wide AWR*
8. Aeromedical Certification Memorandum (ACM)¹
9. Airworthiness Eligibility (AWE)²

¹ If approved
² CRADA only



AWR

- ❖ Rotary-wing Flight Testing
- ❖ Explosive Atmosphere*
- ❖ Crash Hazard Acceleration*
- ❖ Night Vision Devices (NVD)
- ❖ Electromagnetic Interference Emission*
- ❖ Aircraft Noise Floor



Army Airworthiness Testing



Test Data and Report



AWR and ACM



- ❖ Baseline Performance Assessment*
- ❖ Battery Life
- ❖ Electrical Safety
- ❖ Vibration*
- ❖ Climatic* (Temperature & Humidity)
- ❖ Low Pressure (Altitude)
- ❖ Blowing Sand / Dust / Rain*
- ❖ Electromagnetic Interference Susceptibility*



ACM

Additional capabilities include Rapid Decompression, Settling Dust & Transit Drop Test

*Data exchanged with Wright-Patterson Air Force Base to support Safe-To-Fly Certification

Joint Airworthiness Testing



Test Data and Report



Corresponding Certifying Agencies

En Route Care Research

Patient Protection

- Litter Enhancements for Reduced Vibration & Greater Comfort
- New Devices for Unique Evacuation Environments

Medical Interior

- Space & Design Requirements for Critical Medical Tasks
- Vehicle Ride Quality Health Effects of Jolt & Vibration

Cooperative Research and Development Agreement (CRADA)



Test Data and Report



AWE



Medical Provider Performance

- Task Saturation & Patient Care
- Enhanced Provider Awareness
- Autonomous Patient Care Documentation

