UH-1H Plus

“The PERFECT Addition TO YOUR FLEET”

“A high performance option for the UH-1H”

Northwest Helicopters LLC
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MEET THE NEW UH-1H Plus

We’ve taken a standard UH-1H and turned it into a high performance UH-1H helicopter.

Our Formula:
Refurbished UH-1H Aircraft + BLR Fast Fin & Strake™ + Engine Upgrades = UH-1H Plus

The upgrade starts with a standard UH-1H helicopter, either customer provided or Northwest Helicopters can supply one.

✓ Engine is replaced or upgraded to the T-53-L-703 configuration
✓ Tailboom is modified with BLR Strake Kit™ and BLR Fast Fin Kit™
✓ 212 intermediate gearbox installed
✓ High output Bell 209 oil cooler blower installed
✓ Cockpit is upgraded for 1800 horsepower engine operations
✓ Optional high skid landing gear installed

WHY THE UH-1H Plus IS THE PERFECT ADDITION TO YOUR FLEET

The Northwest Helicopters UH-1H upgrade program is a modern cost effective way to achieve performance goals. Direct operating costs of the UH-1H Plus is estimated to be only $644.11/hour. Another option, making it even more obtainable, is the ability to upgrade your fleet in phases, either at your facility or our facility can do it for you. You will retain the commonality between the majority of the UH-1 components and use spares that you may already have in stock.

Newly refurbished UH-1H Plus helicopters from Northwest Helicopters will offer the customer several options.

- CHOICE OF AVIONICS
- CHOICE OF INTERIOR AND EXTERIOR PAINT COLORS
- EXTENDED HEIGHT LANDING GEAR
- HOIST OR HOIST PROVISIONS
- PARTICLE SEPARATOR
- MECHANICAL SPECIALTIES
- CARGO HOOK
- WIRE STRIKE
- FAST ROPE SYSTEM
**BENEFITS OF THE UH-1H Plus OVER OTHER UPGRADED UH-1H**

- Commonality between the UH-1H Plus and the standard UH-1H parts, tooling, pilot training and maintenance
- Conversion can be done in stages or all at the same time
- Simple conversion process can be done in our shop or yours
- Short turn around time on conversion
- Considerable savings over other UH-1H upgrade programs
- All parts are available from Northwest Helicopters LLC
- Cost-effective solution for military firefighting, law enforcement, and general utility applications

**THE UH-1H Plus vs. THE STANDARD UH-1H**

- 28% or 400 SHP increase in available engine power
- Extended time between overhauls on the engine and some components
- Decreased pilot workload with modified tail
- Increase in crosswind capability with modified tailboom
- Better altitude performance with the new optional modern blades
- With optional glass cockpit, your UH-1H Plus will be as modern as any NEW helicopter

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**UH-1H vs. UH-1H Plus COMPONENT TBO/RETIREMENT LIVES IMPROVEMENT WITH ENGINE UPGRADE**

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<th>UH-1H Plus with -13 HONEWELL ENGINE</th>
<th>UH-1H Plus with -703 HONEWELL ENGINE</th>
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<tr>
<td>ENGINE</td>
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<td>MAIN ROTOR BLADES</td>
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<td>42° GEARBOX</td>
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*NEW COMPOSITE BLADES WILL HAVE A 10,000 LIFE*
OPTIONAL Main Rotor Blades:
High performance new built composite blades will be available in mid-late 2008 and will provide a dramatic performance improvement over any other blade on the UH-1H.

OPTIONAL Upgraded Cockpit:
Fully integrated Sagem Glass Cockpit with optional 2-axis autopilot.

Engine is upgraded from T53-13 of 1400SHP to T53-703 of 1800SHP for Hot Temperature and High Altitude performance.

Tailboom is upgraded with the BLR Strake Kit™ with FAA approved performance enhancement. Requires less tail rotor input for improved power to the main rotor.

Tailboom BLR Fast Fin™ is installed for improved tail rotor performance. This improvement is gained by “un-shading” the tail rotor.

Tailboom 42° gearbox upgraded to Bell 212 unit for improved safety and a TBO of 5000 hours.
UH-1H Plus SPECIFICATIONS

MANUFACTURER: Bell Helicopter

TYPE: Utility Helicopter

ENGINE: Honeywell T-53 Single Turbine 1,800 Horsepower

ROTOR DIAMETER: 48’0”

LENGTH: 41’10 ½”

HEIGHT: 14’6”

CRUISE SPEED: 127 m.p.h.

MAXIMUM SPEED: 138 m.p.h.

GROSS WEIGHT: 9,500 lbs.

RANGE: 318 miles

CREW: One or Two

CAPACITY: Variable

CEILING: 12,600 feet
Boundary Layer Research, along with NASA, has developed these amazing upgrades to the UH-1H tailboom. These upgrades provide a dramatic increase in tail rotor authority with a decrease in the power it takes to maintain directional control.

This translates into more available power to the main rotor, which increases the altitude and high temperature performance of the aircraft.

These benefits are accomplished without modifying the original drive train or gearboxes in any way. This is a distinct advantage when maintaining the UH-1H Plus. It has the same tail rotor gearbox configuration as thousands of other UH-1H aircraft operating around the world today.

Northwest Helicopters believes so strongly in these modifications that they have become an official distributor and installation facility for the Boundary Layer Research Fast Fin™ and Tailboom Strakes™.
Honeywell, the manufacturer of the T53 series engines, estimates that the T53 series engine has operated safely and reliably for over 70,000,000 flight hours.

Many authorities believe this to be the most reliable helicopter turbine engine ever developed.

The original equipment T53-L-13B at 1400 horsepower, while extremely reliable, has proven to be underpowered at high elevations and hot temperatures.

The upgraded T53-L-703 at 1800 horsepower, solves this problem. The additional 400 horsepower provides the needed power at high altitudes yet still maintains the extraordinary reliability of the proven T53 engine in the Bell UH-1H Plus.
Extrapolating these figures to hover **In Ground Effect**, the aircraft is predicted to be able to hover **In Ground Effect** at 12,000 feet at maximum gross weight of 9500 lbs.

Our UH-1H **Plus** helicopter has an endurance of 2 hours and 8 minutes at 107 knots.
Historically a weak point of the Bell UH-1H when used in extreme environments is the 204-040-003, 42° gearbox. While it has provided a uniquely long military service life, a better option is now available.

Northwest Helicopters installs upgraded 212-040-003, 42° gearboxes on the performance enhanced Bell UH-1H Plus. This gearbox is virtually indestructible and with its 5000 hour overhaul interval is very cost effective to operate.

Another important upgrade Northwest Helicopters incorporates into all of their performance enhanced UH-1H Plus aircraft is the installation of the Global Helicopter Technology Improved Vertical Fin Spar.

The Global Spar eliminates the problems associated with the original equipment “laminated” spar that was prone to cracking. This spar is indestructible and adds to the already phenomenal safety and reliability record of the UH-1H Plus.