

American Helicopter Co.
3613 Aviation Boulevard
Manhattan Beach, Calif.
Phone: Osborne 61138

RELEASE MONDAY, MAR. 13, 1950

Scholer Bangs
Publicity Consultant

START PULSEJET HELICOPTER (illustrated)
AIR FORCE PROVING FLIGHTS

Military value of the pulsejet helicopter as a ground and air forces auxiliary became increasingly evident this month with the start of advanced flight tests of American Helicopter Co.'s "Top Sergeant".

Weight, payload, structural simplicity and cost features combine favorably to focus active interest on jet power in a wide range of rotary wing designs.

Within restrictions imposed by a U.S. Air Force research and development contract, Corwin D. Denney, AHC Co president, has been able to indicate the trend of data accumulated during a year of preliminary development leading up to the present flight program: Payload of a pulsejet helicopter for a flight of one hour's duration should be double that of a piston engined helicopter of the same gross weight; production cost should be one-fourth that of today's lowest-priced commercial helicopter; pulsejet maintenance and overhaul costs should be less than 25 percent of similar costs on a conventional helicopter; use of lowest grades of kerosene or jet fuel by the pulsejet machine should lower fire risks and operating costs materially.

The AHC Co president declared:

"We are very close to being out of the woods in basic research and it may not be too long before production can be considered. Under our research contract we have eliminated many engine problems. Early engine designs which failed under whirl loads of up to 200-G have been corrected and now show no structural weakness. Pulsejet engine valve blocks, the only moving engine component, which once had a relatively short life expectancy now are performing

2...START PULSEJET HELICOPTER
AIR FORCE PROVING FLIGHTS

for hours and improved designs now under test should have a life of 30 hours or more. Replacement of a worn valve block can be accomplished in the field in five minutes, and is the only major overhaul required for a pulsejet.

"A new engine configuration evolved just recently will reduce substantially the drag of pulsejets mounted at rotor tips and reduce autorotation problems. Massive pulsejet helicopters of the popularized 'flying crane' conception will carry their engines buried in the rotor structure and will present only minor engine drag problems. Our studies to date indicate that pulsejet engine size, and unit thrust, will not have to be increased with the advancing weight of the helicopter itself. We merely will increase the number of engines per blade up to required thrust."

Denney displayed as the Top Sergeant's only engine system accessories, an electrically driven fuel pump, throttle, master shutoff valves, fuel flow gauge (rotometer), and a rotary fuel line transfer seal purchased "off the shelf" from an oil well supply firm. Two rotor mounting bearings were shown as the only highly loaded moving parts in the helicopter's structure.

"At times the absence of a welter of moving parts, whirling and bobbing up and down, amazes even us. Its like discovering a good five-cent cigar!" he said.

###