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SCHWEIZER SERVICE INFORMATION LETTER

LETTER NO. L-88
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TO—All owners and operators of Hughes Helicopters

SUBJECT: PROPER CORRELATION OF THROTTLE AND COLLECTIVE PITCH CONTROLS

MODELS AFFECTED: All Model 269 Series Helicopters

Reference

269 Series - Basic HMI, Issued 1 April 1973; Revision No. 3, 15 March 1975
269 Series - HMI Appendix A, Issued 1 April 1973
269 Series - HMI Configuration Supplement (A/A-1, TH-55A, B or C as applicable)

The throttle control system used on Model 269 Series helicopters provides both manual control of engine rpm by rotating the throttle grip on the collective stick, and automatic control (increase or decrease) of the throttle setting when the collective stick is raised or lowered. Correlation of the throttle and collective controls is designed to help maintain constant rotor speed as the collective is raised or lowered.

On occasion, a pilot may experience a drop-off of rotor rpm when the collective is raised, or conversely, an rpm increase when the collective is lowered. This condition may be due to looseness or excessive wear in the throttle control system, and will make it difficult to maintain constant rotor rpm.

Proper maintenance of the throttle control system starts with inspection of the throttle cable and each link and bushing for wear and excessive clearance. If excessive play is found, rebushing links and replacing the cable or other components will restore proper operation of the throttle system. A minimum of play is necessary before throttle system correlation with collective control can be effective.

For specific flight conditions, manual coordination of the throttle and collective controls may be required to maintain constant rotor rpm. An engine speed-up of about 500 rpm can be expected when the throttle is held fixed when going from ground flat pitch to a hover. This speed-up is designed to provide a high flight idle for practice autorotations, but will require some adjustment of the throttle to prevent over or under speeds. Conversely, during normal power-on flight, correlation should be rigged so that no throttle adjustment is required to maintain rpm in the 'green'.

It is suggested that HMI procedures for rebushing and throttle rigging be performed whenever throttle correlation is improper and after any work is accomplished on the throttle system.

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