SCHWEIZER AIRCRAFT CORP.

Supplement to the Approved Rotorcraft Flight Manual

for

300C Model 269C Helicopters

(See page 2 for Serial Number Effectivity)

ENGINE THROTTLE GOVERNOR INSTALLATION

PART NO. 269A4995-301/-303

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FAA APPROVED ROTORCRAFT FLIGHT MANUAL SUPPLEMENT ENGINE THROTTLE GOVERNOR INSTALLATION PART NO. 269A4995-301/-303 FOR 300C MODEL 269C HELICOPTERS

HELICOPTER SERIAL NO. EFFECTIVITY 269C Serial No. 0004 and subsequent

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NOTE

The change bar () defines the latest FAA Approved changes.

Log of Revisions

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Number Change	Date	Description
	Issued 18 Dec 1980	As noted per Drawing No. 269A4995
	Reissued 21 Sep 1988	Updated to reformat
1	Revised 19 Aug 1991	Corrected Part Number and added Part Number
2	Reissued 08 Feb 2006	Added recommended procedure for take-off with throttle governor engaged.

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INTRODUCTION

The 269A4995-301/-303 Engine Throttle Governor Installation is a limited authority throttle control system which will automatically maintain a preset engine speed selected by the pilot. The installation consists of the electronic governor; the throttle servo motor, and rpm transducer; collective and tail rotor control potentiometers; a special throttle grip; an on/off switch and speed select control located on the pilot's panel and a governor engage/disengage switch on the pilot's cyclic stick. A friction clutch mounted on the servo motor allows the pilot to override the system at any time with the forward portion of the throttle grip.

The "GOV-DIS" switch on the cyclic grip allows the pilot to engage or disengage the governor from the throttle. An amber light on the instrument panel will illuminate whenever the governor is on, but is not governing and will extinguish when it is governing.

This supplement must be carried in the applicable basic FAA approved 300C Model 269C Rotorcraft Flight Manual when the rotorcraft is modified by installation of the 269A4995-301 (identified as 269A4995 in previous versions of this Supplement) or 269A4995-303 Engine Throttle Governor Installations in accordance with appropriate installation instructions

Note: Previous versions of this Supplement made reference to the "269A4995 Engine Throttle Governor Installation". The proper Part Number for that installation should have been 269A4995-301. The 269A4995-301 installation incorporates a maximum engine governing speed of 3200 RPM; the 269A4995-303 installation incorporates a maximum engine governing speed of 3100 RPM.

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SECTION I

OPERATING LIMITATIONS

Not Affected

SECTION II

OPERATING PROCEDURES

- 1. Preflight Requirements:
 - **a.** Have a thorough understanding of throttle governor system operation from this Supplement.
 - **b.** Start engine.
 - c. Engage rotor and conduct magneto checks in accordance with basic manual.
 - **d.** Turn governor ON-OFF switch to position ON.
 - e. Turn "GOV-DIS" switch on cyclic to "GOV" position.

Note: Amber "GOV-OUT" light will illuminate.

f. Set speed select potentiometer to "31" which is approximately 3100 rpm.

<u>Note:</u> Governor may be turned on at any time, but will not engage with "GOV-DIS" switch in DIS position or until rpm is within 200 rpm of preset speed. Throttle friction is to be completely off for proper operation of governor.

2. Gradually open the throttle to increase engine speed, noting engine rpm on tachometer. At approximately 200 rpm below the selected speed, the amber light will go out, and the

governor will engage and open the throttle to bring the engine rpm to the preset speed.

- 3. Check the ability to override by decreasing speed about 50 rpm with the throttle grip. The rpm should return to its original setting when the throttle grip is released. Decrease rpm more than 200 rpm and note that the governor will disengage and then re-engage when engine speed is brought back within 200 rpm.
- 4. Adjust speed select knob to 2900 rpm. Gradually increase engine speed with throttle grip to 3200 rpm and note that governor remains engaged. The governor does not disengage with an engine speed increase.
- 5. Adjust speed select knob to obtain desired rpm for take-off.

<u>Note:</u> The recommended procedure is to conduct the take-off with the throttle governor engaged. Do not take off with the governor disengaged and then engage it in a low hover due to pilot workload considerations.

Follow operating procedures and limitations in basic manual. The governor will maintain approximately \pm 50 rpm during normal maneuvers; and \pm 150 rpm during abrupt or rapid changes in flight conditions.

<u>Note:</u> Adjust rpm to the tachometer so that operation outside the red line limits does not occur.

- 6. Monitor engine rpm and follow through on throttle during take-off and landing when governor is engaged.
- 7. To operate on dual rpm mode, the 269A4957 Dual rpm Kit must be installed. Follow altitude, airspeeds, and other limitations in the Rotorcraft Flight Manual Supplement for the 269A4957 Dual rpm Kit. Turn speed select knob counterclockwise toward the "29" position and observe rpm on tachometer to set engine speed within operating limits.

8. It is recommended that the governor not be used during practice autorotation. Turn cyclic switch to "DIS". If the governor is left on during autorotation, the governor will re-engage when engine speed is within 200 rpm of set speed during power recovery.

9. EMERGENCY PROCEDURES

- a. Follow procedures in basic manual for engine failure.
- **b.** If air restart is attempted, turn governor cyclic and instrument panel ON/OFF switches to OFF position until air restart is completed and engine rpm stabilizes.
- c. If governor malfunction occurs, place governor cyclic switch to "DIS" position to disengage governor from throttle. Use manual throttle control for remainder of flight. Turn instrument panel ON/OFF switch to OFF position.

SECTION III

PERFORMANCE DATA

Note: All performance data in the Rotorcraft Flight Manual is based on 3200 RPM operation. Some aircraft have throttle governor systems that limit maximum governed engine speed to 3100 RPM. On these aircraft, it will be necessary to manually override the throttle governor system to obtain engine RPM of 3200.

SECTION IV

WEIGHT AND BALANCE

1. The following information concerning 269A4995-301/-303 engine throttle governor installation can be used to determine helicopter weight and center of gravity.

Weight	Longitudinal Arm	Longitudinal Moment
_(lb.)	(in.)	(inlb./100)
7.8	79.3	6.18

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