

SCHWEIZER AIRCRAFT CORP.

Supplement to the Approved
Rotorcraft Flight Manual

For

Schweizer 300C Model 269C Helicopter

See Page 2 for Effectivity

**“STAR” System
Startup RPM Limiter/Automatic Engagement/Rotor Low RPM Warning
Installation**

Part No. 269A9532-1

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SCHWEIZER MODEL 269C HELICOPTER
CSP-C-1W

ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
FOR
300C MODEL 269C HELICOPTERS
AES/Startup RPM Limiter/Low Rotor Warning Control Unit

All 269C Helicopters equipped with 24 volt electrical system
and 269A4540 series large face instrument panel.

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NOTE: The change bar (▮) defines the latest
Approved changes.

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REVISION TABLE

Revision Number	Date	Description
#1	24 Oct 2002	Incorporate the Star System panel features.

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Section I
Introduction and General

This Supplement is provided for 300C Model 269C Helicopters with Automatic Engagement System installed and must be attached to the FAA Approved Flight Manual. The Flight Manual and all supplements must be kept aboard the aircraft at all times.

Except as modified by this Rotorcraft Flight Manual Supplement, operation in compliance with Section II thru V of the basic Approved Rotorcraft Flight Manual is mandatory. Other sections of the RFM or Supplement are recommended procedures.

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Section II
Limitations

Not affected.

Section III
Emergency Procedures

3-1. Main Rotor Low Speed Warning

The “ROTOR - LOW RPM” warning indicator (red light) is located at the top of the instrument panel adjacent to the other standard warning lights and is of the same type. This light will illuminate and the horn will sound as specified in the following:

- Less than **3000 Engine RPM**; flashing light and pulsing horn,
- Less than **390 Rotor RPM**; steady light and steady horn.

To compensate for low main rotor speed, the pilot should immediately increase throttle and/or lower the collective to increase M/R speed to within normal operating range.

A momentary push button on the panel, when pushed, will silence the low rotor warning horn while in flight but the light will continue to be illuminated as long as the rotor is outside operating limits. The warning system will automatically reset when the rotor RPM returns within normal operating limits.

Section IV
Normal Procedures

4-1. Engine Starting Procedure

CAUTION

Do not abuse the overspeed limiter by starting the engine with the throttle open excessively, or by suddenly advancing throttle causing the engine to rapidly accelerate through the limiter's range of operation. Such abuse may exceed the limiter's capability to prevent an overspeed condition.

Refer to Paragraph 4-6 of the basic flight manual for normal engine starting procedures. When the 269A9532 AES/Startup RPM Limiter/Low Rotor Warning Control is installed, it will prevent engine overspeed with the clutch disengaged, by grounding the magnetos momentarily at approximately 1800 RPM, and will reduce engine speed to just above the idle speed. The limiter will ground the magnetos repeatedly until the engine speed is reduced. RPM indicator needle fluctuations exceeding 2000 RPM can result, when the limiter is activated, which does not require a maintenance inspection. When the clutch switch is in Auto Engage/HOLD or ENGAGED position, the limiter is inoperative.

Under no circumstances should the limiter be used as a governor to replace the pilot's responsibility to observe the 1600 Engine RPM limitation. The occasions for limiter actuation are intended to be extremely rare.

4-2. Rotor Engagement

The AES/Startup RPM Limiter/Low Rotor Warning Control Unit will automatically control the rate of engagement of the main rotor, when activated. Refer to Paragraph 4-6 of the basic Rotorcraft Flight Manual. Prior to the sixth step in Paragraph 4-6, turn the Auto Engage control unit on by selecting the "Slow" or "Fast" position on the Auto Engage switch. Note: the green "Auto Engage" indicator light will not illuminate. For most conditions, use the "Slow" engagement position. The "Fast" engagement position may be used if the belt drive is already near operating temperature from prior flights or engagements.

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Engage the main rotor by selecting “Engage” followed by “Auto Engage/HOLD” on the main rotor engage switch. This is a similar action when manually engaging the main rotor. The “Auto Engage” green indicator light will illuminate indicating the system is on and engaging the main rotor belt drive. The main rotor will automatically engage at a controlled rate. Once the rotor is fully engaged, the Auto Engage control unit will automatically be turned off. Move the engagement switch to the “Engaged” position and close the switch guard. The Auto Engage switch may now be switched to the “Off” position if desired. The Auto Engage switch may be switched to “Off” at any time to revert to manual clutch operation.

In the event the engagement must be aborted, turn the Auto Engage switch to the “Off” position at any time during the engagement sequence, or select “Release” on the rotor engagement switch. With the Auto Engage control switch in the “Off” position, the main rotor may be engaged using normal operating procedures.

Under no circumstances should the Auto Engagement System be used to replace the pilot’s responsibility to observe normal engagement operating procedures.

4-3. Engine Ground Check

- At the end of Engine Ground Check (PFM Para. 4-7) perform functional check on main rotor low speed warning indicator as follows:
- ● Verify Low Rotor Warning Light is “Steady On” for all RPM less than 390 Main rotor RPM. Horn should be silent, while on ground.
- ● Verify Low Rotor Warning Light is “Flashing ON” for RPM less than 3000 engine RPM. Horn should be silent, while on ground.
- ● Push the horn disable button, when light is “ON”, to test the horn (only with weight on skids).
- ● Verify that warning light is extinguished above 3000 engine RPM.

4-4. Practice Autorotation (Refer to Paragraph 4-10 of basic flight manual.)

WARNING

Low rotor speed warning requires immediate corrective action by the pilot. To compensate for low main rotor speed, the pilot should immediately increase throttle and/or lower the collective to increase M/R speed to within normal operating range.

- During practice autorotation, the main rotor low-speed warning system will start flashing the “Rotor – Low RPM” warning light and pulsing the horn as the rotor RPM degrades in speed through approximately 442 rotor RPM. The horn may be silenced by pushing the “Test/Mute - Horn” button momentary.
- At or slightly above the minimum rotor speed of 390 RPM, the “Rotor – Low RPM” warning light will illuminate steadily and the horn will sound continuously. The horn may be silenced by pushing the “Test/Mute - Horn” button momentarily.

The warning system will automatically reset when the rotor RPM returns within normal operating limits.

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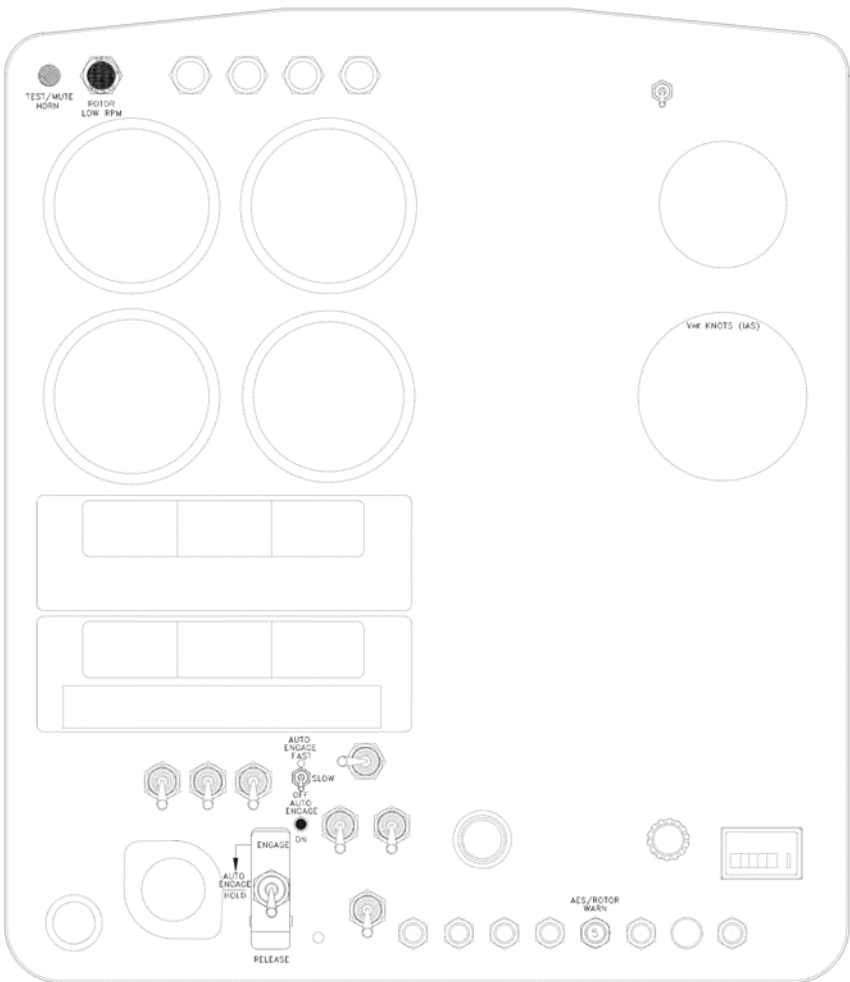


Figure 4-2C. Star System Panel Features

Section V
Performance

Not affected

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Section VI
Weight and Balance

At the time of delivery, Schweizer Aircraft Corp. provides each rotorcraft with an original weight and balance report and a list of equipment (equipment both required and optional) installed on the helicopter at the time of licensing. The removal or addition of any equipment can affect the basic empty weight and center of gravity. Any change to the permanently installed equipment or modification, which affects weight or moment, must be entered in the weight and balance record.

Section VII
Aircraft Handling, Servicing and Maintenance

Not affected

Section VIII
Additional Operations and Performance Data

Not affected

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