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## **SCHWEIZER AIRCRAFT CORP.**

Supplement to the Approved  
Rotorcraft Flight Manual

For

Model 269D Helicopters

### **THERMAL IMAGING SYSTEM**

**FLIR Systems, Ultra 7000**

Part Number 269D9271-1

“Centerline Belly Mount”

and

Part Number 269D9236-1

“R/H Dual Mount”

Date of Approval: 11 Dec 2000

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Approved By:                     

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SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S

LOG OF PAGES

PAGE	DATE
1	09 Jul 2002
2	09 Jul 2002
3	11 Dec 2000
4	11 Dec 2000
5	09 Jul 2002
6	09 Jul2002
7	11 Dec 2000
8	11 Dec 2000
9	09 Jul 2002
10	09 Jul 2002

REVISION TABLE

NUMBER CHANGE	DATE	DESCRIPTION
# 1	09 Jul 2002	Add optional dual mount information

SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S

INDEX

Paragraph	Title	Page No.
Section I	General	5
Section II	Limitations	6
Section III	Emergency Procedures	6
Section IV	Normal Procedures	7
Section V	Performance	8
Section VI	Weight and Balance	9
Section VII	Aircraft Handling, Servicing & Maintenance	10
Section VIII	Additional Operations & Performance	10

**SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S**

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SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S

**SECTION I**

General

This supplement must be carried in the applicable basic FAA approved Model 269D Rotorcraft Flight Manual when the rotorcraft is equipped with 269D9271-1 or 269D9236-1 Thermal Imaging Systems (FLIR Systems Model ULTRA 7000). Also the Ultra 7000 Operator's Manual 3301460 revision A or later approved revision must be available to the system operator during system operation.

The 269D9271-1 installation is a centerline belly mount system. The 269D9236-1 is a dual mount installation which has provisions for both the SX-5 Searchlight and Ultra 7000 FLIR. See RFM Supplement CSP-D-1M for Searchlight operation and limitations.

**NOTE:** The dual mount configuration allows the Ultra 7000 FLIR and the SX-5 Searchlight to be located at either mounting pad singularly or in unison.

Except as modified by this flight manual supplement, operation in compliance with the basic approved Rotorcraft Flight manual is mandatory.

**SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S**

**SECTION II  
Limitations**

**2-1. LIMITATIONS**

- (269D9236-1) Limit installation to Model 269D Config. "A" only
- (269D9236-1) Limit VNE to 108 KIAS
- FLIR system installation is limited to aircraft configured with Extended Height Landing Gear (P/N 269D7100).
- FLIR systems operator other than the pilot-in-command required during operation.
- FLIR Systems Ultra 7000 Operator's Manual 3301460 revision A or later approved revision must be available to the system operator during system operation.

**SECTION III  
Emergency Procedures**

In the event of emergency malfunction of Thermal Imaging System:

- Turn power switch on hand controller to the OFF position.
- Pull FLIR, DISPLAY/COMP and VCR circuit breakers located on instrument panel Non-Essential Bus.

SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S

**SECTION IV**  
Normal Procedures

**WARNING**

**VERIFY FLIR CONTROLLER AND ASSOCIATED CABLES ARE FREE FROM FLIGHT CONTROL INTERFERENCE.**

**4.1 PREFLIGHT**

- a. Verify the FLIR gimbal and mounting frame are secure and verify all associated hardware is properly attached and safety wired.
- b. Verify that all associated cables are tightly connected (externally at Imager, internally at hand controller), show no evidence of cracking or fraying and are properly routed and secured to remain clear of flight controls.
- c. Verify Monitor/Keyboard tray movement, as limited by lanyard, does not interfere with any controls throughout full adjust range.
- d. Position Monitor at desired viewing orientation. Verify Monitor Gimbal adjustments are tight.
- e. Verify that the FLIR, DISPLAY/COMP and VCR circuit breakers (located in the Non-Essential Bus on instrument panel) are pushed in.

SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S

4.2 ENGINE START-UP

**CAUTION**

**Starting the aircraft engine while the system is turned ON can damage the system power input filters. Always turn system OFF prior to starting aircraft engine.**

- a. Before powering up, the system must have all cables connected and the operator must be familiar with the system controls. The system can then be powered up using start-up procedures in the appropriate FLIR Systems Operator's Manual.
- b. Normal system operation requires up to 3 amps during start, and 3 amps during continuous operation. Check ammeter for appropriate margins prior to start.

4.3 OPERATION

- a. See operations manual.

**CAUTION**

**Prior to landing or shutdown the Turret-Sensor Unit should be returned to stow mode. This protects the entrance windows during landing and while the system is not operating.**

- b. Position and adjust brightness of main and VCR monitors to minimize cabin glare effects.

4.4 SHUTDOWN

- a. See operations manual.

**SECTION V**  
Performance  
Not Affected



SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S

**SECTION VI**  
**Weight And Balance**

At time of delivery, Schweizer Aircraft Corporation 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 effects weight or moment must be entered in the weight and balance record.

The weight and balance information for the removable turret is given to support mission flexibility. This weight does not include external mount, support structure, wiring and internal components.

Ultra 7000						
Imager	Installation	Imager Weight (lbs.)	Long. Arm (lbs.)	Long. Moment (In.-lbs.)	Lateral Arm (lbs.)	Lateral Moment (In.-lbs.)
269D9271-1 Lower Fuselage Mount		30.3	64.7	1,960	0.0	0.0
269D9236-1 Side Mount	Fwd Pad	30.3	STA. 76.0	2303	RBL 45.9	1,390
	Aft Pad		STA. 92.4	2799	RBL 48.9	1,480

**NOTE:** Aircraft equipped with the FLIR System Installation (Lower Fuselage or Fwd Pad Mount) will have a more forward empty weight C.G. than most Model 269D helicopters. The pilot must carefully consider his loaded weight and C.G. to insure that he stays within weight and C.G. limitations in flight. Components of the installation such as the controller, turret, monitor, pedestal stand and VCR may be removed by authorized personnel in order to maintain operation within C.G. envelope as required.

**SCHWEIZER MODEL 269D HELICOPTER  
CSP-D-1S**

**SECTION VII**

**Aircraft Handling, Servicing and Maintenance**

- 7.1** Reference FLIR Systems Ultra 7000 Operator's Manual for servicing and handling of assembly itself. Refer to FLIR Systems Manual 3301460.

**SECTION VIII**

**Additional Operations and Performance Data**

- 8.1** Thermal Imaging System effects on cruise performance have not been determined.