## SCHWEIZER AIRCRAFT CORP.

Supplement to the Approved Rotorcraft Flight Manual

For

Schweizer 300C Model 269C Helicopter

## GARMIN GPS150 / GPS150XL NAVIGATION SYSTEM OPERATING PROCEDURES

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#### SECTION 1

General

This supplement must be carried in the applicable basic FAA approved 300C Model 269C Rotoreraft Flight Manual when the rotoreraft is equipped with a Garmin GPS150 or GPS150XL navigation system. Except as modified by the flight manual supplement, operation in compliance with the basic approved Rotoreraft Flight Manual is mandatory.

The Garmin GPS150 / GPS150XL navigation system is a panel-mounted unit that, in conjunction with an external antenna, receives signals from the Global Positioning System (GPS) for use as a supplemental navigation system for VFR flight. Appropriate electrical interfaces are available to allow connection to flight instruments. The GPS150 / GPS150XL is powered by aircraft power and the GPS150 (but not the GPS150XL) also contains a battery backup system for emergency operation. A plug-in data card allows regular scheduled updates of navigation data for the user. User defined waypoints and routes can be entered by the front panel controls to enhance operation of the system.

After an appropriate satellite acquisition period, the GPS150 / GPS150XI, can provide precise latitude and longitude position information. With its internal processing, the unit also provides velocity, track and bearing, as well as a multitude of other navigation information for the user. This information can be presented to the user on the unit's high visibility display, or on other instrumentation as desired. Detailed operation is described in the GPS150 Pilot's Guide (Garmin P/N 190-00048-00), or Garmin GPS150XL Pilot's Guide and Reference (Garmin P/N 190-00067-80).

The GPS150 / GPS150XL has a mounting rack that is permanently installed in the aircraft. The GPS150 / GPS150XL can be easily installed and removed from the rack with a 3/32" hex drive wrench. For complete installation information, refer to the GPS150 Installation Manual (Garmin P/N 190-00026-00); or GNC 250/GNC 250XL/GPS150XL Installation Manual (Garmin P/N 190-00067-62). See Weight and Balance Section.

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#### SECTION II

Limitations

- The Garmin GPS150 Pilot's Guide 190-00048-00, dated May 13, 1993, or Garmin GPS150XL Pilot's Guide and Reference 190-00067-80, dated March 1997 (or later revision) must be immediately available to the flight crew.
- 2. A placard stating "GPS limited to VFR use only" (Garmin 161-00024-00 or equivalent) must be installed in clear view, and easily readable by the pilot.
- 3. The GPS150 must have software version 2.XX (2.02 or later) for proper interface with other equipment. The GPS150XL must have software version 2.03, or later. The software version is viewable on the GPS150 / GPS150XL self test page, which is displayed for approximately 5 seconds immediately after the unit is turned on.

#### SECTION III

Emergency and Malfunction Procedures

If Garmin GPS150 / GPS150XL information is flagged, utilize remaining operational navigational equipment as required.

#### SECTION IV

Normal Procedures

1. Normal operating procedures are outlined in the Garmin GPS150 Pilot's Guide, P/N 190-00048-00, dated May 13, 1993, or Garmin GPS150XL Pilot's Guide and Reference, P/N 190-00067-80, dated March 1997 (or later revision).

#### NOTE

In some areas outside the United States. Map Datums other than WGS84 may be used, as dictated by the appropriate airworthiness authority; see GPS150 or GPS150XL Pilot's Guide.

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## 2. Waypoint Annunciator:

Unit Annunciation - The annunciator next to the GPS150 STAT key or the GPS150XL MSG key will flash to indicate arrival at a selected waypoint. The arrival message can be viewed by pressing the GPS150 STAT key or the GPS150XL MSG key. After viewing the message, press the STAT or MSG key repeatedly, until the page that was previously being viewed appears.

## 3. Message Annunciator:

Unit Annunciation - The annunciator next to the GPS150 STAT key or the GPS150XL MSG key will flash to indicate when the GPS has a new message. The message can be viewed by pressing the GPS150 STAT key or the GPS150XL MSG key. After viewing the message, press the STAT or MSG key repeatedly, until the page that was previously being viewed appears.

External Annunciation - An external message annunciator will flash when the Garmin GPS150 / GPS150XL has a new message. The message can be viewed by pressing the GPS150 STAT key or the GPS150XL MSG key. After viewing the message, press the STAT key or MSG key repeatedly until the page that was previously being viewed appears. The "GPS Message" annunciator is integrally illuminated, white in color, and located on the instrument panel.

- 4. The GPS150XL has up and down arrows, just to the right of the "OFF-ON" knob, that change the scale of the moving map, when the NAV moving map page is selected.
- 5. NAV/GPS switch (installed only when the GPS is installed in conjunction with another navigational indicator):

A NAV/GPS switch is used to switch the indicator source between the GPS and the navigation system to which it defaults or automatically returns, in the absence of a valid GPS signal.

Default navigation system:

Switch annunciation:

GPS position legend:

Default position legend:

Switch location:

Integral illumination

GPS/White

NAV/White

Instrument panel

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#### SECTION IV

Normal Procedures (cont)

The NAV/GPS Switch selects an external indicator with the following characteristics:

Indicator type: Indicator location: CDI, RMI, and/or HSI

Instrument panel

Pilot's Display:

The Garmin GPS150 / GPS150XL navigation system data may appear on the CDI, RMI, or HSI which is located in the instrument panel, when selected by the NAV/GPS switch.

7. HSI Compass System Display:

When GPS information is selected for display on a Horizontal Situation Indicator (HSI), the pilot must <u>manually</u> set the <u>HSI's</u> OBS arrow (course arrow) to the desired track (dtk) or bearing to waypoint (brg), indicated on the GPS150 / GPS150XL display, to provide proper guidance and wind correction.

#### NOTE

When the GPS150 / GPS150XL is in route mode, the OBS arrow (course arrow) must be <u>manually</u> reset to the new desired track (dtk), at each route leg change.

#### SECTION V

Performance Data Not Affected

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#### SECTION VI

Weight and Balance Data

At the 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 affects weight or moment must be entered in the weight and balance record. The removable panel unit weighs 2.1 pounds for the GPS150, or 1.7 pounds for a GPS150XL, and is located at longitudinal arm 56.1 (in) in the standard instrument panel.

### SECTION VII

Aircraft Handling, Servicing and Maintenance Not Affected

#### SECTION VIII

Additional Operations and Performance Data Not Affected

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