BELL 429

ROTORCRAFT FLIGHT MANUAL

SUPPLEMENT

TRANSPONDER GARMIN GTX 345R

429-704-025

CERTIFIED
23 APRIL 2021

This supplement shall be attached to the BHT-429-FM-1 when Garmin GTX 345R Transponder 429-704-025 is installed.

Information contained herein supplements information in the basic Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, refer to the basic Flight Manual.

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NOTICE PAGE

PROPRIETARY RIGHTS NOTICE

DESTINATION CONTROL STATEMENT

LOG OF REVISIONS

Original	0	23 APR 21

LOG OF PAGES

PAGE	REVISION NO.	PAGE	REVISION NO.
FLIGHT MANUAL		**MANUAL FOR MAINTENANCE PERSONNEL**	
Title	0	7/8	0
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NOTE

Revised text is indicated by a black vertical line. A revised page with only a vertical line next to the page number indicates that text has shifted or that non-technical correction(s) were made on that page. Insert latest revision pages; dispose of superseded pages.

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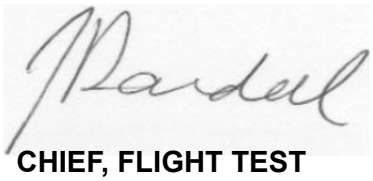

23 April 2021

CHIEF, FLIGHT TEST
FOR
DIRECTOR — NATIONAL AIRCRAFT CERTIFICATION
TRANSPORT CANADA

GENERAL INFORMATION

The Garmin GTX 345R transponder is a remotely installed unit controlled by either the GTN 750 or GTN 650. This installation replaces the Garmin GTX 33H ES transponder installation.

Refer to Manufacturer's Data section for GTX 345R transponder functions.

Section 1

LIMITATIONS

1-1. INTRODUCTION

Statement of Compliance: The Garmin GTX 345R transponder ADS-B Out System has been shown to meet equipment requirements of 14 CFR 91.227.

1-5. CONFIGURATION

Garmin GTX 345R main software shall be version 2.54 (or later).

Garmin GTN 750/650 main software shall be version 6.62 and GPS software shall be 5.2.

1-6. WEIGHT AND CENTER OF GRAVITY

Actual weight change will be determined after kit installation. Ballast will then be adjusted, as required, to return empty weight CG to within allowable limits.

1-20. INSTRUMENT MARKINGS AND PLACARDS

Refer to Figure 1-3 for Placards and Decals.

DU ONLY DISPLAYS TCAS TRAFFIC
(COMBINED ADS-B IN/TCAS ONLY AVAILABLE ON GTN)

Location: Instrument panel — For Rogerson Kratos display only, when equipped with TCAS

429_FMS-53_01_0003_c01

Figure 1-3. Placards and Decals

Section 2

NORMAL PROCEDURES

2-1. INTRODUCTION

Traffic display and alerting is an aid to visual acquisition and should not be used as the sole basis for rotorcraft maneuvering.

For system operation, refer to the following documents:

- **Garmin GTX 335/345 Pilot's Guide, publication No. 190-01499-00, Rev F (or later).**

NOTE

Refer to the following GTN 750 / 650 Pilot's Guides for transponder control panel operating information.

- **Garmin GTN 725/750 Pilot's Guide, publication No. 190-01007-03, Rev R (or later).**
- **Garmin GTN 625/635/650 Pilot's Guide, publication No. 190-01004-03, Rev P (or later).**

2-4. INTERIOR AND PRESTART CHECK

1. **Instrument panel — Garmin units: condition; set as required.**

NOTE

The Extended Squitter (ES) function of the GTX 345R defaults to the ON position on power up.

To turn the ES function OFF using the GTN 750, select the "Enable ES" icon on the XPDR control display.

NOTE

To turn the ES function OFF using the GTN 650, select the "Enable ES" icon via the MENU icon of the XPDR control display.

2-8. TAKEOFF

NOTE

Transponder maintains on-ground status up to 25 feet AGL or 15 knots ground speed

2-9. IN-FLIGHT OPERATIONS

1. **TRAFFIC alert annunciation and aural — Visually acquire traffic.**

2-10. DESCENT AND LANDING

NOTE

Transponder defaults to on-ground status, below 25 feet AGL and less than 15 knots ground speed.

Section 3

EMERGENCY AND MALFUNCTION PROCEDURES

Should a failure of the system be detected, a failure annunciation message will be displayed on the GTN750/650 display. Crew shall continue to visually monitor for potential traffic conflicts.

Loss of the interfaced GPS SBAS source or Uncorrected Pressure Altitude source to the GTX 345R may cause transponder to stop transmitting ADS-B Out data.

ADS-B Out transmit failure messages are presented on the Garmin GTN 750/650 displays, when ADS-B Out System is not operational.

Loss of the interfaced GPS SBAS source to the GTX 345R will cause transponder to stop providing ADS-B In traffic data.

NOTE

The following statement is only applicable when Astronautics Corporation of America (ACA) Display Units are installed (BHT-429-FMS-46).

Upon loss of traffic data from the transponder (ADS-B In (and TCAS, if installed)) to the display units, TCAS OFF is displayed to the right of the EHSI heading readout.

Section 4

PERFORMANCE

No change from basic manual.

Section 5

WEIGHT AND BALANCE

No change from basic manual.

Section 1

SYSTEMS DESCRIPTION

The GTX 345R transponder performs the following functions:

- **Transmission of Automatic Dependent Surveillance - Broadcast (ADS-B) out data on 1090 Extended Squitter (1090ES)(1090 MHz), which provides the ADS-B out capability. With ADS-B out capability, position, velocity, and altitude information are automatically transmitted to other aircraft and ground stations to improve situational awareness and flight safety (i.e., immediate surveillance of air-to-air traffic).**

- **Reception of ADS-B In traffic data - the GTX 345R includes receivers for both the 978 MHz (UAT) and the 1090 MHz frequency bands.**

- **The GTX 345R receives ADS-B transmissions from nearby ADS-B Out equipped aircraft, and TIS-B as well as FIS-B information from Surveillance and Broadcast Services System (SBSS) ground stations.**

- **Traffic Information Service–Broadcast (TIS-B): This air traffic advisory service provides the altitude, ground track, speed and distance of aircraft (having transponders, but, are not equipped with ADS-B Out) flying in radar contact with controllers and within a 15-nautical-mile (nm) radius, up to 3,500 feet above or below the receiving aircraft's position.**

- **The GTX 345R also receives traffic data from configured TCAS (when installed). These traffic data are received, processed, and sent to the connected GTN and main cockpit displays (ACA Display Units only), without pilot interaction.**

- **To optimize situational awareness, the GTX 345R correlates TCAS with ADS-B In traffic, combining data from all sources. When a correlation is made, the most relevant target is displayed. There are no duplicates.**

- **The GTX 345R also receives FIS-B information data (including weather) broadcasted by ADS-B ground stations.**

- **The GTX 345R (FIS-B) function receives weather and flight information from these stations using the 978 MHz frequency data link (only in the United States).**

- **Reception of FIS-B data requires the aircraft to be within range and line-of-sight of a ground station.**

- **The GTX 345R supplies compatible data to GTN units only for display.**

The Extended Squitter (ES) function of the GTX 345R defaults to the "Enable ES" (ON) position on power up. The "Enable ES" function may be toggled ON/OFF through either GTN 750/650 transponder (XPDR) touch screen.