



THIS BULLETIN DOES NOT CHANGE AIRCRAFT TYPE DESIGN

- SUBJECT:** Garmin G1000 software upgrade required to correct the TIT display and support the display of ADS-B FIS-B NEXRAD radar data.
- MODEL / SN AFFECTED:** Mooney M20TN Aircraft equipped with GARMIN G1000, GIA 63W integrated avionics units, and GTX 345R transponder unit
- TIME OF COMPLIANCE:** **Next 100 Hour Inspection or Annual Inspection, whichever comes first**
- INSTRUCTIONS:** Read entire Service Bulletin before completing work. Fill out the completion card on page 5 and return to Mooney International when this service bulletin is complete.
This service bulletin is to be completed by a Mooney Authorized Service Center that is authorized to update software in a M20TN Garmin G1000.
- INTRODUCTION:** This Service Bulletin lets Mooney Aircraft owners know of new software that provides two functional updates:
- A) Corrects the display scale of the Turbine Inlet Temperature (TIT) displays of the Engine Instrumentation System (EIS), both EIS strip and EIS page
 - B) Allows display of NEXRAD weather radar data on the MFD when the aircraft is equipped appropriately.

The current TIT display of the EIS does not reflect the entire normal operating range of the Continental TSIO-550-G engine, as referenced in the Limitations Section of the FAA approved flight manual for the M20TN Acclaim. The TIT normal operating range (as indicated by the "green" band) is 1000-1750 deg F.

Figure SB M20-342-1 Illustrates the current configuration of the EIS Engine Page.



Figure SB M20-342-1 - Current EIS Page TIT Display

With this software introduction, the display EIS page has been updated to reflect the entire green band range (see Figure SB M20-342-2). The TIT display on the EIS strip has also been updated to show the full extent of the green bar's range.



THIS BULLETIN DOES NOT CHANGE AIRCRAFT TYPE DESIGN

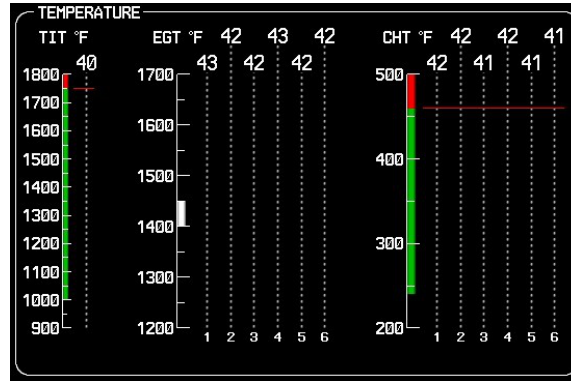


Figure SB M20-342-2 - Updated EIS Page TIT Display



Figure SB M20-342-3 - Updated EIS Strip TIT Display

**THIS BULLETIN DOES NOT CHANGE AIRCRAFT TYPE DESIGN**

ADS-B, or Automatic Dependent Surveillance-Broadcast, is the Next Generation air traffic modernization. When a M20TN is equipped with a G1000 system, GIA 63W integrated avionics units, and a GTX 345R transponder unit, the transponder unit provides the following functions:

- Transmission of ADS-B “Out” data on 1090 extended squitter (1090ES) (1090 MHz)
 - Integration of data from internal and external sources to transmit the following data per 14 CFR 91.227:
 - GPS Position, Altitude, and Position Integrity
 - Ground Track and/or Heading, Ground Speed, and Velocity Integrity
 - Air Ground Status
 - Flight ID, Call Sign, ICAO Registration Number
 - Capability and Status Information
 - Transponder Squawk Code, IDENT, and Emergency Status
 - Pressure Altitude Broadcast Inhibit
- Reception of TIS-A traffic data from a ground station
- Provide TIS-A traffic alerting to the pilot via interfaced display and audio output.
- Reception of ADS-B “In” data on 1090 MHz
 - ADS-B (Data directly from another transmitting aircraft)
 - ADS-R (Rebroadcast of ADS-B data from a ground station)
- Reception of ADS-B “In” data on UAT (978 MHz)
 - ADS-B (Data directly from another transmitting aircraft)
 - ADS-R (Rebroadcast of ADS-B data from a ground station)
 - TIS-B (Broadcast of secondary surveillance radar) (SSR) derived traffic information from a ground station.
 - FIS-B (Broadcast of aviation data from a ground station)
- Provide ADS-B traffic information and alerting to the pilot via an interfaced display
 - Correlation and consolidation of traffic data from multiple traffic sources
 - Aural and visual traffic alerting
- Provide FIS-B data to the pilot via an interfaced display
 - Graphical and textual weather products
 - NEXRAD
 - PIREP's
 - AIRMET/SIGMET's
 - METAR's
 - TAF's
 - Winds Aloft
 - Aviation Data
 - TFR's
 - NOTAM's

Figure SB M20-342-4 presents a typical MFD NEXRAD radar display for the M20TN using ADS-B FIS-B source data when equipped as indicated by this service bulletin.



THIS BULLETIN DOES NOT CHANGE AIRCRAFT TYPE DESIGN



Figure SB M20-342-4 - Example ADS-B FIS-B NEXRAD Display

Aircraft will require new software installation to be completed by a Mooney Authorized Service Center who can access and load the new software revision required to comply with this Service Bulletin.

The aircraft must also carry a copy of *Garmin G1000 Cockpit Reference Guide for Mooney M20M, M20R, M20TN, M20U and M20V*, PN 190-00450-06 Revision B

WARRANTY:

N/A

REFERENCE

1. Garmin FAA approved STC SA01714WI for GTX 345R - Can be obtained from Garmin Dealer.

DATA:

System Software Version 0401.37

PARTS LIST:

Mooney International Corporation, Parts Kit: 810525-503



THIS BULLETIN DOES NOT CHANGE AIRCRAFT TYPE DESIGN

MOONEY INTERNATIONAL CORPORATION
KERRVILLE, TEXAS 78028 – FAX 830-257-4635

SERVICE (BULLETIN) (INSTRUCTION) NO. _____ HAS BEEN COMPLIED
WITH ON AIRCRAFT MODEL _____ SERIAL NUMBER _____

Tach. Time: _____ N-Number _____ (Reg. No.)
Owner: _____ Date of Compliance: _____
_____ Complied
By: _____

Inspection Report: _____

Form 07-0001

PLACE
STAMP
HERE

MOONEY INTERNATIONAL CORPORATION
ATT'N: TECHNICAL SUPPORT
165 Al Mooney Road, North
Kerrville, Texas 78028

SEND TO: Mooney International Corporation
165 Al Mooney Road North
Kerrville, TX 78028
FAX: (830) 257-4635 or EMAIL support@mooney.com