

1. **ATA Code:** 3450

2. **Effectivity:** All DA42 aircraft with TCCA STC SA09-54 or FAA STC SA02725NY installed with Garmin GIA 63W (WAAS).

3. **General:** This Service Bulletin enables installation of the Garmin GTX 33ES Extended Squitter Modes S transponder, providing ADS-B Out compliance to TSO C166b.

4. **Compliance:** Compliance with this Service Bulletin is optional.

5. **Approval:** Engineering data referenced or contained in this Service Bulletin is approved as part of the supplemental type design (STC SA09-54).

6. **Labor:** Approximately 2 hours will be required to accomplish this service bulletin.

This estimate is for direct labor performed by a technician and it does not include setup, planning, familiarization, cure time, part fabrication or tool acquisition.

7. Material:	Part Number	Description	Qty
	010-00267-30	GTX 33ES	1
	*006-B1054-04	Garmin Loader Card Image	n/a

*software can be obtained through a Garmin distributor and must be loaded onto a SD card to perform this service bulletin.

8. **Special Tools:** None

9. **References:** DA42 Series Airplane Maintenance Manual, Document # 7.02.01
DA42 L360 Airplane Maintenance Manual, Document # D42L-AMM-001

10. Accomplishment Instructions:

- 10.1 Install GTX 33ES unit.
 - 10.1.1 Pull the Battery circuit breaker located on the right side of the instrument panel.
 - 10.1.2 Remove rear baggage access door per DA42 AMM chapter 25-50-00.
 - 10.1.3 Remove GTX 33 unit from avionics remote enclosure.
 - 10.1.4 Install GTX 33ES unit (010-00267-30) in its place.
 - 10.1.5 Clean the work area and inspect for foreign objects.
 - 10.1.6 Install rear baggage access door per DA42 AMM chapter 25-50-00.
- 10.2 Install Garmin software 006-B1054-04.
 - 10.2.1 Remove SD Terrain Cards. Mark which one is from the PFD and which one is from the MFD.
 - 10.2.2 Start the MFD in configuration mode by pressing the ENT key and engaging the MFD circuit breaker.
 - 10.2.3 While in configuration mode write down the transponder and audio panel configuration settings.
 - 10.2.4 Load Garmin software 006-B1054-04 per DA42L-360 AMM chapter 31-40 instructions.

CAUTION: Loading WAAS software in a non-WAAS-equipped G1000 system, may result in a corrupted GIA.

 - 10.2.5 Once software loading is complete update configuration module by selecting the UPDT CFG softkey.
 - 10.2.6 When the configuration module update is completed, re-enter the recorded transponder and audio panel configuration settings.
 - 10.2.7 If the aircraft is factory equipped with optional equipment, perform steps 10.2.8 to 10.2.14 to load related software and configuration

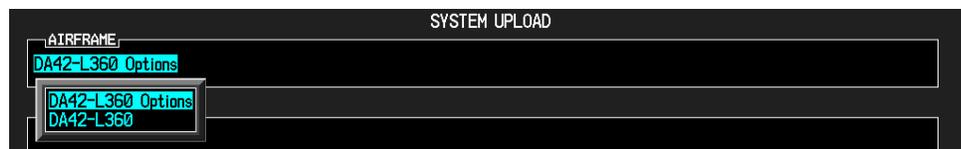
files. If aircraft is not equipped with any of the following options, proceed to Step 10.3 of this bulletin.

NOTE: Equipment interfaced to a G1000 system that was not factory installed may require manual configuration to re-enable. Contact the installing company for information on manual configuration settings.

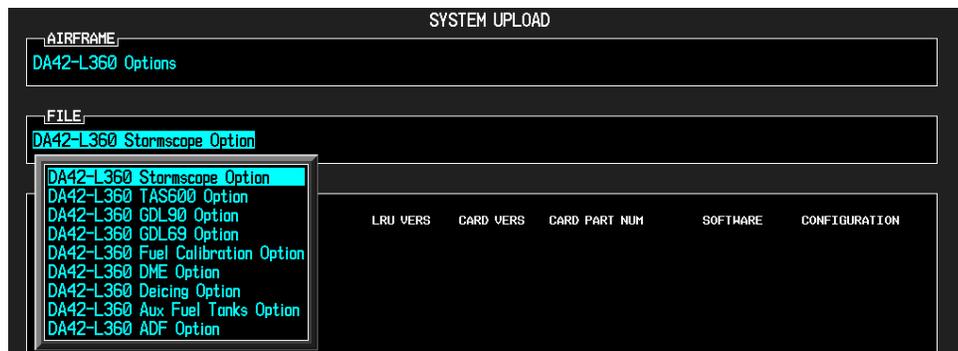
10.2.8 Go to the SYSTEM UPLOAD using the FMS knob.

10.2.9 Activate the cursor and highlight the AIRFRAME field.

10.2.10 Using the FMS knob, select DA42-L360 Options and press the ENT key.



10.2.11 Using the FMS knob, select the appropriate options installed on the aircraft and press the ENT key.



10.2.12 Press the LOAD softkey to begin the software and configuration loading process.

10.2.13 Press the ENT key to acknowledge the Upload Complete prompt.

10.2.14 View the SUMMARY field and ensure that all items are "COMPLETED".

10.2.15 Repeat steps 10.2.10 through 10.2.14 to load any other equipped options.

10.3 Software Verification:

10.3.1 Scroll to manifest configuration page and verify the installed software system and related manifest with the approved ones shown in the below table.

Software Part Number	Approved Version	Software Component
System		
006-B1054-04	V1.00	DA42-L360 System
Manifest		
006-B0544-4G	V7.60	GIA 6X Main System Software
006-D0425-08	V2.13	GIA 6X Audio
006-B0193-05	V2.07	GEA 7X System Software
006-B0203-44	V4.04	GMA 1347 System Software
006-B0223-24	V3.04	GRS 77 System Software
006-B0224-01	V2.05	GMU 44 System Software
006-B0261-19	V3.09	GDC 74 System Software
006-B0319-C2	V14.02	GDU 1XXX Software
006-B0172-XX	V7.04	GTX 33 Software

- 10.4** Once all software and configuration files have been loaded, turn off the G1000 system and re-install SD Terrain cards into the lower slots of the PFD and MFD.
- 10.5** Power up the G1000 and verify the software part number appears in the upper right corner of the MFD power-up screen.
- 10.6** Verify in the normal operating mode that no red X's are displayed in the data fields after the initialization of the system.

10.7 Equipment Testing:

NOTE: If an Avidyne TAS600 is installed pull the circuit breaker prior to transponder testing.

Transponder Test:

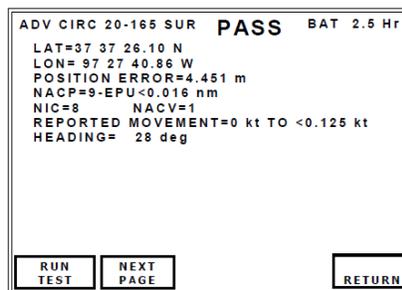
10.7.1 Using an IFR6000 (with ADS-B features) complete the XPDR test.

NOTE: An equivalent tester may be used. Consult manufacturer's manual for operating instructions.

10.7.2 Verify all tests PASS; except test numbers 14, 15 and 16. These will state 'NO REPLY'.

ADS-B Test:

10.7.3 Select the 'ADV CIRC' test option and run the 'AC 20-165 SURFACE' test. Verify that PASS is displayed on the IFR6000 screen when test is completed.



(Example screen shots)

10.7.4 Power down aircraft.

10.8 Insert Aircraft Flight Manual Supplement 7 into the Aircraft Flight Manual.

10.9 Insert Aircraft Maintenance Manual Temporary Revision AMM-TR-05-01 into the Aircraft Maintenance Manual.

10.10 Make a log book entry that this service bulletin has been incorporated.

11. Weight and Balance:

This service bulletin has no impact to weight and balance.

Items Removed		Items Installed	
Description	Weight kg (lbs)	Description	Weight kg (lbs)
GTX 33	1.59 kg (3.5 lbs)	GTX 33ES	1.59 kg (3.5 lbs)

12. Electrical Load Data:

This service bulletin has no impact to electrical load.

Items removed		Items Installed	
Description	Current (A)	Description	Current (A)
GTX 33	1.6	GTX 33ES	1.6

13. Credit: None

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this Service Bulletin if it is not incorporated. If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries, Inc., at the address below.

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