

MANDATORY SERVICE BULLETIN NO. MSB 40NG-003 REV. 15
SUPERSEDES MSB 40NG-003 REV. 14

I TECHNICAL DETAILS

I.1 Category

Mandatory.

I.2 Airplanes Affected

Type: DA 40 NG

S/N: D4.111, D4.365

40.N001 and subsequent

40.NC001 and subsequent

40.NS001 and subsequent

All DA 40 NG converted using OSB D4-080

I.3 Time of Compliance

At next maintenance action.

NOTE: Prior compliance with MSB 40NG-003 Rev. 0 through MSB 40NG-003 Rev. 14 does not preclude compliance with this MSB.

I.4 Subject

Software for Garmin G1000; approved systems, manifests, and configurations.

I.5 Reason

Summary of approved software systems, manifests, and configurations for the Garmin G1000.

I.6 Concurrent Documents

None.

I.7 Approval

The technical information and instructions contained in this document relate to Design Change Advisories No. VÄM 40-004, MÄM 40-447, MÄM 40-497, MÄM 40-550/a, MÄM 40-600, MÄM 40-618/b, MÄM 40-780, MÄM 40-854/a, MÄM 40-862, MÄM 40-868 (NXi phase I), MÄM 40-1007 (NXi phase II), OÄM 40-340, OÄM 40-370, and MAM 40-1144.

The technical content of this document has been approved as part of the type design.

I.8 Accomplishment/Instructions

Compare installed software system and related manifests with the approved ones stated in this service bulletin.

If the installed software system and related manifests are not approved, perform an update to the latest approved software version according to the instructions given in the latest effective revision of the G1000 System Maintenance Manual (for non NXi installations), the latest effective revision of the G1000 Line Maintenance Manual (for NXi installations), or other related Garmin documents.

An update to a later approved software system with the related manifest may be carried out on every aircraft. Perform the update according to the instructions given in the latest effective revision of the G1000 System Maintenance Manual (for non NXi installations), the latest effective revision of the G1000 Line Maintenance Manual (for NXi installations), or other related Garmin documents.

NOTE: Changing the software system requires a new configuration of the system. Refer to the Garmin documentation for software configuration.

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I.8.1 Applicable to Airplanes Converted via OSB D4-080 (Non-WAAS)

Software Part Number	Approved Version	Function	Remarks
System			<ul style="list-style-type: none"> AFM Doc. No. 6.01.15-E Rev. 1 or higher with Supplement A01 must be used. AFM-TR-MÄM 40-618/a must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM revision in which this TR has been incorporated to, must be used. Garmin G1000 Pilot's Guide P/N 190-00952-02 Rev. A (or latest appropriate revision) and Garmin G1000 Cockpit Reference Guide P/N 190-00953-02 Rev. A (or latest appropriate revision) must be used.
010-00915-06	V1.00		
Manifest			
006-B0093-XX	V3.03	GPS1, GPS2	
006-B0172-01	V5.01	GTX1	
006-B0190-48	V5.65	GIA1, GIA2	
006-B0193-05	V2.07	GEA1	
006-B0203-41	V4.01	GMA1	
006-B0223-09	V2.11	GRS1	
006-B0224-00	V2.01	GMU1	
006-B0319-75	V9.05	PFD1, MFD1	
006-B0328-10	V5.01		
006-B0329-01	V3.03		
006-C0048-00	V2.00	GMU1 FPGA	
006-C0049-00	V02.00	GRS1 FPGA	
006-C0055-00	V01.05	GDC1 FPGA	
-	-	GRS1 MV DB (see below)	
006-B0261-12	V3.02	GDC1	
006-D0425-05	V2.05	GIA1 Audio DB, GIA2 Audio DB	
006-B0398-30	V2.20	GSA 8X	
006-D1306-00	V2.00	GFC700 Cert Gains	
006-C0036-04	V1.04	GDU 1XXX FPGA	
006-B0191-04	V2.03	GDU 10XX BB	

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I.8.2 Applicable to S/N D4.111, D4.365, 40.N001 and Subsequent, and Airplanes Converted via OSB D4-080 with WAAS Equipment

Software Part Number	Approved Version	Function	Remarks
System			<ul style="list-style-type: none"> AFM Doc. No. 6.01.15-E Rev. 1 or higher, together with Supplement A01 must be used.
010-00915-07	V1.00		
Manifest			<ul style="list-style-type: none"> AFM-TR-MÄM 40-618/a must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM revision in which this TR has been incorporated to, must be used. WAAS equipment is necessary for this software version. Garmin G1000 Pilot's Guide P/N 190-00952-02 Rev. A (or latest appropriate revision) and Garmin G1000 Cockpit Reference Guide P/N 190-00953-02 Rev. A (or latest appropriate revision) must be used.
006-B0172-XX	V6.11	GTX1	
006-B0193-05	V2.07	GEA1	
006-B0203-44	V4.04	GMA1	
006-B0223-22	V3.02	GRS1	
006-B0224-01	V2.05	GMU1	
006-B0319-9D	V11.13	PFD1, MFD1	
006-B0328-13	V6.11		
006-C0048-00	V2.00	GMU1 FPGA	
006-C0049-00	V02.00	GRS1 FPGA	
006-C0055-00	V01.05	GDC1 FPGA	
-	-	GRS1 MV DB (see below)	
006-B0261-18	V3.08	GDC1	
006-D0425-08	V2.13	GIA1 Audio DB, GIA2 Audio DB	
006-B0398-32	V2.30	GSA 8X	
006-D1306-00	V2.00	GFC700 Cert Gains	
006-B0339-0A	V3.2	GPS1, GPS2	
006-B0544-3A	V6.11	GIA1, GIA2	
006-C0036-04	V1.04	GDU 1XXX FPGA	
006-B0191-04	V2.03	GDU 10XX BB	

Optional Secondary Configuration P/N	Function	Remarks
010-12074-04	Fuel temperature indicator for diesel operation	AFM-TR-OÄM 40-370 and Supplement O04 must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM revision in which this TR has been incorporated to, must be used.
010-12074-06	Coolant temperature indicator (upper caution range 100 °C to 105 °C)	AFM-TR-MÄM 40-780 must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM revision in which this TR has been incorporated to, must be used.

Approved Configurations (Software)	Remarks
DA40NG Option - ADF	
DA40NG Option - Aux Fuel Tanks	
DA40NG Option - DME	
DA40NG Option - GFC700	
DA40NG Option - Stormscope	
DA40NG Option - TAS600 Series Installation	

Approved Magnetic Field Charts (GRS1 MV DB)		
Software Part Number	Approved Version	Remarks
006-D0159-03	V2015.00	Valid until 31 Dec 2021.
006-D0159-04	V2020.00	

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I.8.3 Applicable to Airplanes with Garmin G1000 NXi (Phase I) Installed

Software Part Number	Software Version	Software Name	Remarks
System			<ul style="list-style-type: none"> AFM Doc. No. 6.01.15-E Rev. 3 or higher, together with Supplement A02 Rev. 1 or higher must be used.
010-01929-00	1929.00		
Manifest			<ul style="list-style-type: none"> AFM-TR-MÄM 40-868 must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM revision in which this TR has been incorporated to, must be used. Garmin G1000 Pilot's Guide P/N 190-02257-00 Rev. A (or latest appropriate revision) and Garmin G1000 Cockpit Reference Guide P/N 190-02258-00 Rev. A (or latest appropriate revision) must be used.
006-B0081-42	V11.30	COM System	
006-B0082-12	V6.02	NAV System	
006-B0193-05	V2.07	GEA System	
006-B0203-44	V4.04	GMA System	
006-B0224-01	V2.05	GMU System	
006-B0339-22	V5.2	GPS/WAAS System	
006-B0398-32	V2.30	GSA 8X System	
006-B0544-6A	V8.05.4	GIA System	
006-B1177-56	V20.05	GDU System	
006-B1607-05	V2.05	GTX 3X5 System	
006-B1838-03	V2.03	GRS 79 System	
006-B1838-52	V2.02	GDC 72 System	
006-C0048-00	V2.00	GMU FPGA	
006-C0124-00	V1.00	NAV FPGA	
006-C0153-22	V2.20	GTX 3X5 FPGA	
006-D5080-00	V2.00	GRS 79 Region List	
006-D5080-50	V2.00	GDC 72 Region List	
006-D1306-01	V2.01	GFC Cert Gains (GFC700)	

Approved Configurations (Software)	Remarks
NOTE: Even though more options may be included in the software loader card, only those shown below are currently approved for installation.	
DA40NG Option - ADF	Install if an ADF is installed in the airplane.
DA40NG Option - Aux Fuel Tanks	Install if Long Range Tanks are installed in the airplane.
DA40NG Option - Diesel Temperature	Install if OÄM 40-370 is installed in the airplane.
DA40NG Option - DME	Install if a DME is installed in the airplane.
DA40NG Option - GFC700	Install if the GFC 700 A/P System is installed in the airplane.
DA40NG Option - TAS600 Series Installation	Install if a TAS 6XX is installed in the airplane.
DA40NG Option - Stormscope	Install if a Stormscope is installed in the airplane.

Approved Magnetic Field Charts (GRS1 MV DB)		
Software Part Number	Approved Version	Remarks
006-D0159-03	V2015.00	Valid until 31 Dec 2021
006-D2658-02	V2020.00	

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**1.8.4 Applicable to Airplanes with Garmin G1000 NXi (Phase II) Installed**

Software Part Number	Software Version	Software Name	Remarks
System			<ul style="list-style-type: none"> AFM Doc. No. 6.01.15-E Rev. 3 or higher, together with Supplement A02 Rev. 1 or higher, must be used.
006-B2948-11	2948.11		
Manifest			<ul style="list-style-type: none"> AFM-TR-MÄM 40-868 and AFM-TR-MÄM 40-1007 must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM Revision in which this TR has been incorporated to, must be used. Garmin G1000 Pilot's Guide P/N 190-02453-00 Rev. A (or latest appropriate revision) and Garmin G1000 Cockpit Reference Guide P/N 190-02452-00 Rev. A (or latest appropriate revision) must be used.
006-B0224-01	2.05	GMU44/System SW	
006-B0398-32	2.3	GSA8X/System SW	
006-B1177-64	20.8	GDUXXX/System SW	
006-B1607-09	2.12	GTX3X5/System SW	
006-B1797-04	2.1	GTX3X5/ADS-B SW	
006-B1827-10	7	WAAS/System SW	
006-B1838-04	2.04	GRS79/System SW	
006-B1838-54	2.04	GDC72/System SW	
006-B2139-02	2.1	GEA71B/System SW	
006-B2210-04	5.15D	DIG GMA36B ARM/System SW	
006-B2212-04	5.15D	DIG GMS36B DSP/System SW	
006-B2253-00	2	GIA64 NAV/System SW	
006-B2371-02	2.02	GIA64 COM/System SW	
006-B2548-07	2.02.1	GIA64/System SW	
006-C0048-00	2	GMU FPGA/FPGA	
006-C0153-22	2.2	GTX3X5/FPGA	
006-C0157-21	2.1	GTX3X5/ADS-B FPGA	
006-C0164-01	1.1	GIA64 FPGA/FPGA	
006-C0175-06	1.38	DIG GMA36B FPGA/FPGA	
006-D0425-23	4.03	GIA Audio/Audio Data	
006-D1306-01	2.01	GFC Cert Gains (GFC700)	
006-D3034-B1	5.00D	DIG GMA36B Aux Region List/Region List	
006-D3034-B3	5.00D	DIG GMA36B Audio Data/Audio Data	

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Software Part Number	Software Version	Software Name	Remarks
006-D3035-B1	5.00D	DIG GMA36B Region List/Bin Region List	
006-D3035-DB	5.16D	DIG GMA Routing Table/Routing Table	
006-D5080-00	2	GRS 79 Region List	
006-D5080-50	2	GDC 72 Region List	
006-D5761-00	2	GIA 64 NAV/Region List	
006-D6318-01	2.01	GIA64/Region List	
006-D6358-00	2	GEA71B/Region List	
006-D6512-00	2	GIA64 COM/Region List	

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Software Part Number	Software Version	Software Name	Remarks
System			<ul style="list-style-type: none"> AFM Doc. No. 6.01.15-E Rev. 3 or higher, together with Supplement A02 Rev. 1 or higher, must be used.
006-B1669-12	1669.12		
Manifest			<ul style="list-style-type: none"> AFM-TR-MÄM 40-868 and AFM-TR-MÄM 40-1007 must be incorporated into the AFM Doc. No. 6.01.15-E, or the AFM Revision in which this TR has been incorporated to, must be used. Garmin G1000 Pilot's Guide P/N 190-02453-00 Rev. A (or latest appropriate revision) and Garmin G1000 Cockpit Reference Guide P/N 190-02452-00 Rev. A (or latest appropriate revision) must be used. Software P/N 006-B3787-01 is required if GDC72 P/N 011-03734-01 is installed.
006-B0224-01	2.05	GMU44/System	
006-B0398-32	2.30	GSA8X/System	
006-B1177-64	20.80	GDUXXXX/System	
006-B1607-09	2.12	GTX3X5/System SW	
006-B1797-04	2.10	GTX3X5/ADS-B SW	
006-B1827-10	7.00	WAAS/System SW	
006-B1838-04	2.04	GRS79/System SW	
006-B1838-58	2.08	GDC72/System SW	
006-B1902-05	5.20	GDL69e SYS/System SW	
006-B2139-02	2.10	GEA71B/System SW	
006-B2181-03	1.20	GDL 69e XM FW/XM Firmware	
006-B2210-04	5.15D	DIG GMA36B ARM/System SW	
006-B2212-04	5.15D	DIG GMS36B DSP/System SW	
006-B2253-00	2.00	GIA64 NAV/System SW	
006-B2371-02	2.02	GIA64 COM/System SW	
006-B2548-07	2.02.1	GIA64/System SW	
006-C0048-00	2.00	GMU44/FPGA	
006-C0153-22	2.20	GTX3X5/FPGA	
006-C0157-21	2.10	GTX3X5/ADS-B FPGA	
006-C0164-01	1.10	GIA64 FPGA/FPGA	
006-C0175-06	1.38	DIG GMA36B FPGA/FPGA	
006-D0425-23	4.03	GIA Audio/Audio Data	
006-D1306-01	2.01	GFC Cert Gains (GFC700)	
006-D3034-B1	5.00D	DIG GMA36B Aux Region List/Region List	

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Software Part Number	Software Version	Software Name	Remarks
006-D3034-B3	5.00D	DIG GMA36B Audio Data/Audio Data	
006-D3035-B1	5.00D	DIG GMA36B Region List/Bin Region List	
006-D3035-DB	5.16D	DIG GMA Routing Table/Routing Table	
006-D5080-00	2.00	GRS 79/Region List	
006-D5080-50	2.00	GDC 72/Region List	
006-D5402-02	1.10	GDL 69e APP/App Package	
006-D5761-00	2.00	GIA 64 NAV/Region List	
006-D6318-01	2.01	GIA64/Region List	
006-D6358-00	2.00	GEA71B/Region List	
006-D6512-00	2.00	GIA64 COM/Region List	

Approved Configurations (Software)	Remarks
NOTE: Even though more options may be included in the software loader card, only those shown below are currently approved for installation.	
DA40NG Option - ADF	Install in an ADF is installed in the airplane.
DA40NG Option - Aux Fuel Tanks	Install if Long Range Tanks are installed in the airplane.
DA40NG Option - Diesel Temperature	Install if OÄM 40-370 is installed in the airplane.
DA40NG Option - DME	Install if a DME is installed in the airplane.
DA40NG Option - GFC700	Install if the GFC 700 A/P System is installed in the airplane.
DA40NG GDL 69A SXM Option	Install if the GDL 69 SXM System is installed in the airplane.
DA40NG GTX 345 Option	Install if the GTX 345 System is installed in the airplane.
DA40NG Option - TAS600 Series Installation	Install if a TAS 6XX is installed in the airplane.
DA40NG GTX 345 and TAS600 Option	Install if a GTX 345 and a TAS600 System is installed in the airplane. (This option replaces the individual system loads listed above.)
DA40NG Option - Stormscope	Install if a Stormscope is installed in the airplane.
DA40NG Option - Flight Stream 510	Install if the Flight Stream 510 system is installed in the airplane.

Approved Magnetic Field Charts (GRS1 MV DB)		
Software Part Number	Approved Version	Remarks
006-D0159-03	V2015.00	Valid until 31 Dec 2021.
006-D2658-02	V2020.00	

I.9 Mass (Weight) and CG

The change in mass and CG is negligible.

II PLANNING INFORMATION

II.1 Material and Availability

II.1.1 Applicable to Garmin G1000

Quantity	Part Number	Description
1	010-00915-06, or 010-00915-07	G1000 software loader card (Diamond DA40NG)
1*1)	010-12074-04	Fuel temperature indicator for diesel operation
1*1)	010-12074-06	Coolant temperature indicator (upper caution range 100 °C to 105 °C)

*1) Optional for Loader Card P/N 010-00915-06 and P/N 010-00915-07.

The required Garmin G1000 Cockpit Reference Guide (CRG) and Pilot's Guide (PG) are referenced to the System Software Version number. The System Software Version number is displayed at the top right side of the MFD Power-up page.

System Software Version	Cockpit Reference Guide	Pilot's Guide
0915.06	P/N 190-00953-02 Rev. A, or later appropriate revision	P/N 190-00952-02 Rev. A, or later appropriate revision
0915.07	P/N 190-00953-02 Rev. A, or later appropriate revision	P/N 190-00952-02 Rev. A, or later appropriate revision

Software and concurrent documents can be obtained through your Garmin distributor.

II.1.2 Applicable to Garmin G1000 NXi (Phase I) Installed

Quantity	Part Number	Description
1	010-01929-00	G1000 NXi software loader card (Diamond DA40NG)
1	010-00474-50	GIFD supplemental data card (for G1000 NXi)

The required Garmin G1000 Cockpit Reference Guide (CRG) and Pilot's Guide (PG) are referenced to the System Software Version number. The System Software Version number is displayed at the top right side of the MFD Power-Up page.

System Software Version	Cockpit Reference Guide	Pilot's Guide
1929.00	P/N 190-02258-00 Rev. A, or later appropriate revision	P/N 190-02257-00 Rev. A, or later appropriate revision

Software and concurrent documents can be obtained through your Garmin distributor.

II.1.3 Applicable to Garmin G1000 NXi (Phase II) Installed

Quantity	Part Number	Description
1	010-01929-11	G1000 NXi software loader card (Diamond DA40NG), software P/N 006-B2948-11
1	010-00474-50	GIFD supplemental data card (for G1000 NXi)
1	010-02849-00	G1000 NXi software loader card (Diamond DA40NG), software P/N 006-B1669-12

The required Garmin G1000 NXi Cockpit Reference Guide (CRG) and Pilot’s Guide (PG) are referenced to the System Software Version number. The System Software Version number is displayed at the top right side of the MFD Power-Up page.

System Software Version	Cockpit Reference Guide	Pilot’s Guide
2948.11	P/N 190-02452-00 Rev. A, or later appropriate revision	P/N 190-02453-00 Rev. A, or later appropriate revision
1669.12	P/N 190-02452-00 Rev. A, or later appropriate revision	P/N 190-02453-00 Rev. A, or later appropriate revision

Software and concurrent documents can be obtained through your Garmin distributor.

II.2 Special Tools

None.

II.3 Labour Effort

Approximately 30 minutes will be required to accomplish this service bulletin.

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

II.4 Credit

None.

II.5 Reference Documents

DA 40 NG series Airplane Maintenance Manual, Doc. No. 6.02.15, latest effective issue.

For non NXi installations: Garmin G1000 System Maintenance Manual, P/N 190-00907-00, latest effective issue.

For NXi installations: Garmin G1000 NXi Line Maintenance Manual, P/N 190-02631-00, latest effective issue.

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular which is not especially described in this service bulletin, must be done in accordance with the referenced maintenance manual.
3. Completion of all work must be recorded in the logbook.
4. In case of doubt, contact Diamond Aircraft Industries Inc.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft 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 at the address below.

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**EXECUTION REPORT TO
SERVICE BULLETIN
MSB 40NG-003 REV. 15**

AIRPLANE DATA

Airplane serial number _____

Airplane registration _____

Airplane operator _____

Hours of operation of airplane (TSN) _____

Typical operation of airplane private, club, training, other: _____

MAINTENANCE DATA

Date of maintenance _____

Maintenance carried out by _____

During scheduled inspection? Yes No

Name _____ Signature _____ Date _____

Please e-mail the completed form to techpubs@diamondaircraft.com.