

MANDATORY SERVICE BULLETIN NO. MSB 40-086 REV. 4

SUPERSEDES MSB 40-086 REV. 3

I TECHNICAL DETAILS

I.1 Category

Mandatory.

I.2 Airplanes Affected

Model: DA 40-180

S/N: 40.1210 and subsequent. (Garmin G1000 NXi Avionics System Installed)

I.3 Time of Compliance

At next maintenance action.

NOTE: Prior compliance with MSB 40-086 Rev. 0 through MSB 40-086 Rev. 3 does not preclude compliance with this MSB.

I.4 Subject

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

I.5 Reason

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

I.6 Concurrent Documents

Garmin G1000 NXi System Maintenance Manual, P/N 190-02631-00, latest effective issue.

I.7 Approval

The technical information and instructions contained in this document relate to Desing Change Advisories MÄM 40-1008, MÄM 40-1144, MÄM 40-1182 and MÄM 40-1221.

The technical content of this document has been approved as part of this 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 G1000 NXi System Maintenance Manual, latest effective issue, or other related Garmin documents.

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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 G1000 NXi System Maintenance Manual, latest effective issue, 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.

1.8.1 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. 6.01.0-E Rev. 9 or higher, together with Supplement A30 Rev. 0 or higher, must be used. • AFM-TR-MÄM 40-1008 must be incorporated into the AFM Doc. No. 6.01.01-E, or the AFM Revision in which this TR has been incorporated to, must be used. • Latest revision of applicable Garmin G1000 NXi Pilot's Guide and Cockpit Reference Guide must be used.
006-B3462-01	3462.01		
Manifest			
006-B0224-01	2.05	GMU System	
006-B0398-32	2.30	GSA 8X System	
006-B1177-6H	20.90	GDU System	
006-B1607-09	2.12	GTX 3X5 System	
006-B1797-04	2.10	GTX 3X5 ADS-B System	
006-B1827-10	7.00	GPS/WAAS System	
006-B1838-04	2.04	GRS 79 System	
006-B1838-54	2.04	GDC 72 System	
006-B1902-0A	5.50	GDL 69e System (optional)	
006-B1902-BB	5.00	GDL69e Boot Block SW (optional)	
006-B2139-03	2.11	GEA System	
006-B2181-03	1.20	GDL69e XM Firmware (optional)	
006-B2210-04	5.15D	DIG GMA36B ARM/System SW	
006-B2212-04	5.15D	DIG GMA36B DSP/System SW	
006-B2253-00	2.00	GIA64 NAV/System SW	
006-B2371-02	2.02	GIA64 COM/System SW	
006-B2548-0L	2.07	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	
006-C0175-06	1.38	DIG GMA36B FPGA	
006-D0425-23	4.03	GIA Audio/Audio Data	
006-D3034-B1	5.00D	DIG GMA36B AUX Region List	
006-D3034-B3	5.00D	DIG GMA36B Audio Data	
006-D3035-B1	5.00D	DIG GMA36B Region List	
006-D3035-FD	5.18D	DIG GMA Routing Table	
006-D5080-00	2.00	GRS79/Region List	
006-D5080-50	2.00	GDC72/Region List	
006-D0577-04	2.04	Cert Gain/Cert Gain Archive	
006-D5402-02	1.10	GDL69e APP/APP Package	
006-D5761-00	2.00	GIA64/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	

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Software Part Number	Software Version	Software Name	Remarks
System			<ul style="list-style-type: none"> • AFM Doc. No. 6.01.0-E Rev. 9 or higher, together with Supplement A30 Rev. 0 or higher, must be used. • AFM-TR-MÄM 40-1008 must be incorporated into the AFM Doc. No. 6.01.01-E, or the AFM Revision in which this TR has been incorporated to, must be used. • Latest revision of applicable Garmin G1000 NXi Pilot's Guide and Cockpit Reference Guide must be used. • Software P/N 006-B4391-00 or later is required if GDC72 P/N 011-03734-01 is installed.
006-B4391-00	4391.00		
Manifest			
006-B0224-01	2.05	GMU44/System	
006-B0398-32	2.30	GSA8X/System	
006-B1177-6H	20.90	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-B1902-0A	5.50	GDL 69e System SW (Optional)	
006-B1902-BB	5.00	GDL 69e Boot Block SW (Optional)	
006-B2139-03	2.11	GEA 71B System SW	
006-B2181-03	1.20	GDL69e XM Firmware (optional)	
006-B2210-04	5.15D	DIG GMA36B ARM/System SW	
006-B2212-04	5.15D	DIG GMA36B DSP/System SW	
006-B2253-00	2.00	GIA64 NAV/System SW	
006-B2371-02	2.02	GIA64 COM/System SW	
006-B2548-0L	2.07	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	
006-C0175-06	1.38	DIG GMA36B FPGA	
006-D0425-23	4.03	GIA Audio/Audio Data	
006-D3034-B1	5.00D	DIG GMA36B AUX Region List	
006-D3034-B3	5.00D	DIG GMA36B Audio Data	
006-D3035-B1	5.00D	DIG GMA36B Region List	
006-D3035-FD	5.18D	DIG GMA Routing Table	
006-D5080-00	2.00	GRS79/Region List	
006-D5080-50	2.00	GDC72/Region List	
006-D0577-04	2.04	Cert Gain/Cert Gain Archive	
006-D5402-02	1.10	GDL69e APP/APP Package	
006-D5761-00	2.00	GIA64/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.	
DA40 Option - Extended Range Fuel Tanks	Install if long range tanks are installed in the airplane.

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DA40 Option - GFC700	Install if the GFC 700 autopilot system is installed in the airplane.
DA40 Option - GDL 69A SXM Option	Install if the GDL 69 SXM system is installed in the airplane.
DA40 Option - GTX 345 Option	Install if the GTX 345 System is installed in the airplane.
DA40 Option - TAS600 Series Installation	Install if a TAS 6XX is installed in the airplane.
DA40 Option - GTX 345 and TAS600 Option	Install if the GTX 345 and TAS 600 systems are installed in the airplane. This option replaces the individual system loads listed above.
DA40 Option - CO Guardian	Install if the CO Guardian is installed in the airplane.
DA40 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.8.2 Applicable to Airplanes with Garmin G1000 NXi (Phase III) Installed

Software Part Number	Software Version	Software Name	Remarks
System			• AFM Doc. No. 6.01.0-E Rev. 9 or higher, together with Supplement A30 Rev. 0 or higher, must be used.
006-B4391-01 or 006-B4391-02	4391.01 or 4391.02		
Manifest			• AFM-TR-MÄM 40-1008 must be incorporated into the AFM Doc. No. 6.01.01-E, or the AFM Revision in which this TR has been incorporated to, must be used.
006-B0224-01	2.05	GMU44/System	
006-B0398-32	2.30	GSA8X/System	• Latest revision of applicable Garmin G1000 NXi Pilot's Guide and Cockpit Reference Guide must be used.
006-B1177-6H	20.90	GDUXXXX/System SW	
006-B1607-0K	2.60	GTX3X5/System SW	
006-B1797-1D	3.32	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-B2139-03	2.11	GEA71B/System SW	
006-B2210-04	5.15D	DIG GMA36B ARM/System SW	
006-B2212-04	5.15D	DIG GMA36B DSP/System SW	
006-B2253-00	2.00	GIA64 NAV/System SW	
006-B2371-02	2.02	GIA 64 COM/System SW	
006-B2548-0L	2.07	GIA64/System SW	
006-B2679-01	2.01	GMU44B/System SW	

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006-C0048-00	2.00	GMU44/FPGA	<ul style="list-style-type: none"> • Software P/N 006-B4391-00 or later is required if GDC72 P/N 011-03734-01 is installed. • Software P/N 006-B4391-01 or later is required if any of the following items are installed: <ul style="list-style-type: none"> - GMU 44B P/N 011-04201-00 - GDL 69A SXM P/N 011-03177-10 - GTX 345R P/N 011-03303-01
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-D0577-04	2.04	Cert Gain/Cert Gain/Cert Gain, Archive	
006-D3034-B1	5.00D	DIG GMA36B AUX Region List/Region List	
006-D3034-B3	5.00D	DIG GMA36B Audio Data/Audio Data	
006-D3035-B1	5.00D	DIG GMA36B Region List/Region List	
006-D3035-FD	5.18D	DIG GMA Routing Table/Routing Table	
006-D5080-00	2.00	GRS79/Region List	
006-D5080-50	2.00	GDC72/Region List	
006-D5761-00	2.00	GIA64 NAV/Region List	
006-D6318-01	2.01	GIA 64/Region List	
006-D6358-00	2.00	GEA71B/Region List	
006-D6512-00	2.00	GIA 64 COM/Region List	
006-D6994-00	2.00	GMU44B/Region List, Archive	
006-D7109-00	2.00	GTX3X5D Region List/Region List, Archive	

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.	
DA40 Option - Extended Range Fuel Tanks	Install if long range tanks are installed in the airplane.
DA40 Option - GFC700	Install if the GFC 700 autopilot system is installed in the airplane.
DA40 Option - GDL 69A SXM Option	Install if the GDL 69 SXM system is installed in the airplane.
DA40 Option - GTX 345 Option	Install if the GTX 345 System is installed in the airplane.
DA40 Option - TAS600 Series Installation	Install if a TAS 6XX is installed in the airplane.
DA40 Option - GTX 345 and TAS600 Option	Install if the GTX 345 and TAS 600 systems are installed in the airplane. This option replaces the individual system loads listed above.
DA40 Option - CO Guardian	Install if the CO Guardian is installed in the airplane.
DA40 Option - Flight Stream 510	Install if the Flight Stream 510 system is installed in the airplane.

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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 & Availability**

Quantity	Part Number	Description
1	006-B3462-01	G1000 NXi Software Image (Diamond DA 40), software P/N 006-B3462-01
1	010-02848-00	G1000 NXi Software Image (Diamond DA 40), software P/N 006-B4391-00
1	010-02848-01	G1000 NXi Software Image (Diamond DA 40), software P/N 006-B4391-01
1	010-02848-02	G1000 NXi Software Image (Diamond DA 40), software P/N 006-B4391-02

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 MDF Power-up page.

System Software Version	Cockpit Reference Guide	Pilot's Guide
3462.01	P/N 190-02529-00 latest revision.	P/N 190-02528-00 latest revision.
4391.00	P/N 190-02529-00 latest revision.	P/N 190-02528-00 latest revision.
4391.01	P/N 190-03134-00 latest revision.	P/N 190-03133-00 latest revision.
4391.02	P/N 190-03134-00 latest revision.	P/N 190-03133-00 latest revision.

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

II.2 Special Tools

None.

II.3 Labor Effort

Approximately 3 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.

II.4 Credit

None.

II.5 Reference Documents

DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01, 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.

Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad, London, Ontario,
Canada N5V 1S2

Customer Support:
Phone: (519) 457-4041
Portal: partners.diamondaircraft.com



**EXECUTION REPORT TO
SERVICE BULLETIN
MSB 40-086 Rev. 4**

AIRPLANE DATA

Airplane serial number	<hr/>
Airplane registration	<hr/>
Airplane operator	<hr/>
Hours of operation of airplane (TSN)	<hr/>
Typical operation of airplane	private, club, training, other: <hr/>

MAINTENANCE DATA

Date of maintenance	<hr/>	
Maintenance carried out by	<hr/>	
During scheduled inspection?	Yes	No
	<hr/>	

<hr/>	<hr/>	<hr/>
Name	Signature	Date

**Please submit the Execution Report through the Diamond Partner Portal at
<https://partners.diamondaircraft.com/>**