Summary and Response to Diamond Owners Meeting #1
March 26th, 2020

On March 26, 2020 10am EST a meeting was held via video teleconference between the representatives of the Diamond Aviators Network, Diamond Aircraft Industries Canada, Diamond Aircraft Industries GmbH and Garmin International. This meeting was originally intended to be held in person at the Garmin headquarters in Olathe, Kansas, however, due to the imposed travel restrictions associated with COVID-19, it was determined that because of its importance, the meeting should not be postponed and that it should proceed using alternate means of communication.

Below is a list of names of those that were able to attend the meeting:

Diamond Aviators Network (DAN)
Scott Sutton
Dave Passmore
Paul Koch
Russ Irwin

Diamond Aircraft Industries Canada (DAIC)
Scott McFadzean (CEO)
Kevin Bruce (Director of Airworthiness and Quality)
Graham Cartwright (Engineering Manager)
Chris Wood (Avionics & Electrical Specialist)
Ed Hollestelle (After Sales Manager / Director of Maintenance)
Annemarie Mercedes Heikenwalder (Sales Manager)
Trevor Mustard (Sales Manager)
Tony Boros (Sales Administrator)

Diamond Aircraft Industries GmbH (DAIA)
Robert Kremnitzer (Head of Design Organization)
Reinhard Schwaiger (Acting Director of Sales)

Garmin International
Matt Jones (Manager, Aviation Systems & Programs)
Zach Evans (Aviation OEM Sales Manager)

The intent of this meeting was to provide a means through which the representatives from the Diamond Aviators Network could express some of the concerns Diamond owners have raised regarding avionics upgrades, missing features, and software updates. In addition, comments from Diamond owners regarding parts availability, pricing, and access to Diamond service centers were to be addressed. Because a number of these questions/concerns may stem from a lack of understanding of the aircraft certification process and its challenges, it was suggested that each party prepare a presentation describing the process they follow.

Following introductions, Scott McFadzean of Diamond Aircraft Industries Canada, provided a presentation on the history of Diamond Aircraft and how, through maintaining a focus on technology and innovation, has evolved into being one of the largest GA aircraft manufacturers in the world. Through the combination of modern composite airframe technology, and the integration of their own FADEC controlled engines, Diamond has been able to maintain being an industry leader in aircraft efficiency and safety. Diamond plans to have an increased focus on aftermarket support of legacy products as this is key to maintaining customer's confidence. Diamond was excited about this meeting and sees it as an opportunity to improve Diamonds products using the DAN as a direct line for customer feedback.

Below you will find each of the planned agenda items and an associated response from Diamond Aircraft. In some cases, time did not allow for an in-depth discussion and it was determined that a follow-up (planned for April 2, 2020) would be necessary. Some responses to agenda items can be found within responses to others.

Diamond Owners Agenda Item #01

Certification Ground School: Why are airframes with a 75yr product life being driven towards obsolescence by the inability to replace avionics with a 10yr product life?

- *Certification of airframes and avionics*
- *Certification of software updates to integrated avionics*
- *Certification of hardware upgrades to integrated avionics*
- *Supplemental type certifications and Approved Manufacturer Lists, e.g., TXi and GFC500/GFC600, GI275, etc.*
- *Certification of parts*

On DAN there is enormous speculation about the process, requirements, costs, timing and motivations of certification. Some owners are more knowledgeable than others, some more skeptical, some more cynical and none of us experts. This subject underlies 80% of our issues. Our belief is that all of our discussions will benefit from first establishing a shared understanding of certification and its implications for the various topics we have raised. With that in mind, we would like to begin the meeting with "certification ground school" presented by DAI and Garmin to dispel the speculation and establish a shared understanding as a foundation for discussion of other issues. Additionally, it will provide us with first-hand information that we can communicate to the owners on DAN.

Diamond Aircraft Response to Agenda Item #01

Kevin Bruce and Robert Kremnitzer of Diamond Aircraft provided an overview of the aircraft certification process drawing attention to the differences in how a design organization is structured under differing regulating authorities (in this case TCCA versus EASA). Their presentation included the definition of what a type design change is depending on the design data being affected. Further description of the design change classification process was provided, and an explanation of the phases related to the certification of a type design change was demonstrated along with a description of the post certification responsibilities of the type design holder to maintain continued airworthiness of their aircraft.

Matt Jones and Zach Evans described the software development and TSO approval processes applied to the products they develop for the GA market. In addition, they described their business philosophy and how they provide unlimited support to OEM's such as Diamond to have their products certified in their aircraft and their approach to bundling software system releases to enable new features and the limitations around single software changes. They also described their views on the use of AML STC's as a vehicle best suited for aftermarket applications for more stand alone equipment that is not as heavily integrated or airframe specific. These integrated systems that are more tailored to specific aircraft are developed in close collaboration with the OEM's.

Diamond Aircraft is proud to say that Garmin is a deep-rooted partner of ours and they are committed to supporting us in both new product development, but also with the support of legacy equipment. It is Diamond's position that the aircraft of existing owners will not be made obsolete by avionic systems with a shorter product life cycle. Diamond is committed to offering a range of upgrade paths (see Table: 1) on an ongoing basis for existing owners, however, we admit that the most significant challenge is accurately determining the demand and prioritizing certification efforts in order to best meet the needs of our customer base as a whole (both existing and new customers). Diamond suggests that an electronic survey be generated and distributed within the DAN group in order to gain some direct insight into the needs of their customer base. Diamond is committed to meeting these

needs if it makes business sense, but more importantly, best serves the needs of the majority. Diamond will create this survey and make it available to the DAN for distribution by April 17, 2020.

Diamond Owners Agenda Item #02

Avionics hardware upgrades: We appreciate DAI's response to this issue in September 2019 but are unaware of any owner who has been able to realize an upgrade. This issue is central to widespread owner frustration and dissatisfaction for the following reasons:

- *Planes with GIA63s can no longer upgrade to WAAS because GIA63Ws are no longer produced and Legacy G1000 software won't work with newer GIA64Ws.*

Diamond Aircraft Response to Agenda Item #02

We have a plan in place to allow legacy customers to upgrade to WAAS capability, however, this plan is predicated on the customer demand for NXi Phase II upgrades for legacy aircraft that are already WAAS equipped. For those customers that would like to upgrade to NXi Phase II (and are WAAS equipped) we would incentivize this upgrade by requiring the trade in of their GIA63w's and offering a $16k USD credit towards the Phase II upgrade. If the upgrade was being carried out by a Diamond approved service center, it would be required that those GIA63w's would need to be returned to the factory for re-distribution.

In order to determine this demand, we need to have customers to commit to NXi phase II upgrades by providing a deposit. We have only had limited number of customer requests for this and feel there could be more if we reach out to the DAN group (using the survey) and make this plan known. In addition, Ed Hollestelle of Diamond Aircraft will make contact with those customers who have already expressed interest. However, if there are more customers that would like to pursue a NXi Phase II upgrade, please send an email to parts-canada@diamondaircraft.com by May 1, 2020 requesting information on how to proceed. This will allow us to better understand how we can provide WAAS capability to other legacy customers within 2020 that do not wish to upgrade to NXi.

Diamond Owners Agenda Item #03

- *Planes with GIA63s and GTX345R can't display ADS-B IN weather.*

Diamond Aircraft Response to Agenda Item #03

Both GTX345R units (with internal or external WAAS signal) can receive the FIS-B weather (assuming the LRU software level is correct). However, for legacy G1000 aircraft, display of FIS-B weather requires a minimum of GDU v12.00 and GIA 63 v6.20 (or later). For aircraft equipped with older software, FIS-B weather is still visible on Apple or Android mobile devices via the Garmin Pilot application. All G1000 NXi equipped aircraft are capable of displaying FIS-B weather on the MFD. Diamond will investigate current software levels across all airframes to identify any system software gaps that would preclude an owner from displaying FIS-B weather on the MFD when equipped with the GTX 345R Diamond recognizes that the Bluetooth signal coming from the GTX345R is limited <u>if</u> installed within the HIRF box. Garmin and Diamond are collaborating on a path forward to ensure a strong Bluetooth signal from the GTX345R to an Apple device is maintained for both legacy and NXi customers.

Diamond Owners Agenda Item #04

- *Planes with GIA63Ws require the $800 more expensive GTX345R version with integral WAAS position source and the additional expense of installing a 3rd GPS antenna.*

Diamond Aircraft Response to Agenda Item #04

We don't believe that this statement is correct. It is Garmin's AML STC requirement that you only need a 3rd antenna (WAAS capable) if you do not have GIA63W with SW v7.00/GPS v5.00 (or later) or 64Ws installed. Alternatively, Diamond has a protocol to remove the comm 1 antenna (on all models) and replace it with a dual comm/WAAS antenna which reduces the need for a 3rd GPS antenna. This will provide the FIS-B weather requested in agenda item #03. It is recommended that installations of this nature are carried out by a Diamond approved service centre.

Diamond Owners Agenda Item #05

- *With a GTX345R installed, replacement of most failed G1000 hardware requires a "software patch" by laptop that's not included with the aircraft's G1000 Loader software installation SD Card. This unnecessarily complicates the G1000 hardware repair process and confuses avionics repair shops.*

Diamond Aircraft Response to Agenda Item #05

This is correct. Software patches to the GTX345R on legacy G1000 installations are only possible using a laptop and Garmin's GTX installation tool. On NXi aircraft this requirement has been eliminated as the GTX345R is configured as part of the initial software load. At this time, there are no plans to resolve this requirement on legacy aircraft and we recommend that customers take their aircraft to a Diamond and/or Garmin approved service centre to perform these installations.

Diamond Owners Agenda Item #06

- *Aircraft which are equipped with WAAS can't fly all approaches in the NavData database (e.g., LP approaches).*

Diamond Aircraft Response to Agenda Item #06

This was not discussed during this meeting. Diamond requires more time to investigate this concern and we will carry it forward as an agenda item in the next meeting planned April 2, 2020.

Diamond Owners Agenda Item #07

- *Missing Legacy G1000 features for aircraft unable to run GDU v15 including high resolution SVT terrain display, user-defined holding patterns, and the ability to load the more-complete nav2_db.bin version of the current NavData database. This is important since the older avtn_db.bin NavData used by pre-GDU v15 G1000s is too small to include all airports.*

Diamond Aircraft Response to Agenda Item #07

We discussed the ability to update those systems that are capable of being updated to version GDU v15. If your system is not able to be updated, then future feature options will not be available unless those customers decide to upgrade to Nxi. More information will be offered regarding the determination of update capabilities. More details will be discussed on this topic in our follow up meeting planned April 2, 2020.

Diamond Owners Agenda Item #08

- *Can't receive newer SiriusXM "All Access" music service, despite Diamond promoting this in their 3-month free SXM new aircraft offer.*

Diamond Aircraft Response to Agenda Item #08

We install the GDL-69 A/SXM unit which has the capability as described. This was a known issue on a limited number of aircraft which have since been resolved for those previously identified customers. It was determined that this was due to an incorrect submission for the subscription documentation (ie. Clerical error).

Diamond Owners Agenda Item #09

- *Inability to display the newest free ADS-B IN weather services such as lightning.*

Diamond Aircraft Response to Agenda Item #09

Refer to agenda item #03

Diamond Owners Agenda Item #10

- *No benefit from multiple years of Garmin software bug fixes.*

Diamond Aircraft Response to Agenda Item #10

This agenda item was touched on during Garmin's discussion on their internal processes (refer to agenda item #01). As stated previously, Diamond is committed to offering a range of hardware and software upgrade paths on an ongoing basis for existing owners, but it is important that this remain a targeted effort to benefit as many existing owners as possible. The results of the forthcoming survey will help focus development efforts on high-impact activities

Diamond Owners Agenda Item #11

Upon further discussion and consideration, we would like to discuss the following:

   A.   *A solution to enable all Diamond aircraft with G1000 to be updated to GDU v15.*

Diamond Aircraft Response to Agenda Item #11

Refer to agenda item #07.

Diamond Owners Agenda Item #12

   B.   *We believe the only viable implementation of this upgrade would be installation of the necessary software and hardware by the owner's preferred avionics service facility.*

Diamond Aircraft Response to Agenda Item #12

Diamond has agreed that it will not be required to perform the work associated with all aircraft upgrades at the Diamond factory. It will be recommended however, that this work be performed at approved Diamond service centers relevant to each specific upgrade path and/or aircraft model.

Diamond Owners Agenda Item #13

G1000 NXi missing features & software updates:

   •   *Diamond's implementation of the G1000NXi does not include a number of headline NXi features such as 3D audio, Surface Watch, and Visual Approaches. Diamond aircraft owners with G1000NXi would like to have the full NXi implementation, rather than the "NXi Lite" version that has been delivered.*

Diamond Aircraft Response to Agenda Item #13

Diamond Aircraft just completed Phase 2 NXi certification for the DA40NG (May 2019), DA62 (March 20, 2020) and DA40-180 (Expected March 31, 2020) and will begin to work on follow-on NXi approvals for all of these platforms including 3D Audio, Surface Watch, Visual Approaches etc. Diamond and Garmin will work together towards the goal of releasing these features within 2020, however, this is highly dependant on being granted approval through the appropriate aviation regulatory authority.

Diamond Owners Agenda Item #14

- *Owners with G1000 NXi equipped aircraft have not received any software updates, including those to address known bugs and support for all FIS-B weather products and Sirius XM music services.*

Diamond Aircraft Response to Agenda Item #14

Refer to agenda item #03, item #08 and item #10.

Diamond Owners Agenda Item #15

- *Despite DAI's assurances that it would issue software updates for "safety of flight" issues, nothing has been forthcoming to address the Garmin Service Bulletin for the GTX345R issued in October 2019 to correct problems with the traffic display. Diamond owners with G1000NXi systems would like to see the safety of flight issues addressed immediately and receive an unambiguous statement of policy from DAI regarding software updates.*

Diamond Aircraft Response to Agenda Item #15

While we understand that the DAN perception is that this is a safety of flight issue, we feel as though had this been the case, an AD would be have been issued by the aviation regulating authority. Garmin has committed to answering the DAN question relating to which targets are dropped during the next meeting April 2, 2020. Further discussion will be had at this time.

Diamond Owners Agenda Item #16

Parts availability and pricing

- *Parts availability in the U.S. is unnecessarily expensive and slow due to the fact that every order involves an international shipment. U.S. owners would like to see the establishment of a parts depot in the U.S. that would minimally stock the most commonly required service parts and kits (e.g., 100hr kits, etc.). We realize that this would take time to implement. In lieu of immediate implementation, we suggest that Diamond immediately adopt a policy of paying the shipping and customs expense for all warranty parts. Additionally, until a U.S. parts depot is established, Diamond could pay one half of the shipping and customs costs for non-warranty parts. This change of policy would be simple to implement and deliver immediate benefit to all owners. Additionally, it would improve the perceived value of the warranty for pilots considering purchase of a new Diamond airplane and provide a smooth bridge until a U.S. parts depot is established*

Diamond Aircraft Response to Agenda Item #16

Ed Hollestelle of Diamond Aircraft provided a description of the work being done at Diamond to re-shape the after sales support model through the implementation of Sales Force, which is a customer relationship management

(CRM) tool being utilized to generate a ticket within the system which allows Diamond track customers issues and ensure an appropriate response to each is provided. Diamond anticipates that the implementation of this new system will drastically improve communication and speed of issue resolution.

In addition, Ed described how Diamond recently underwent an organizational change in order to better serve its customers. The staff responsible for external parts distribution were moved out from the Customer Support group and were added to the Supply Chain department so that they could better collaborate with other Supply Chain staff. This move has shown a significant reduction in Q1 2020 parts back orders which Diamond anticipates will continue to improve. Diamond is also in active dialogue with some US partners who have shown interest in being Diamond parts distribution centers which would allow Diamond to reach customers even sooner with parts that are both scheduled and non-scheduled maintenance items. A global parts pricing model has been developed and will be released in 2020 which would ensure consistent pricing for the customers whether they purchase parts from the factory direct, through a distribution center or a service center.

Ed continued to explain that the technical representatives at Diamond are being shifted to focus more on after sales technical issues instead of parts supply issues and that plans are in place to re-evaluate Diamonds service center model within 2020 which will provide additional training (both airframe and powerplant) to their staff allowing Diamonds internal technical representatives to focus on more fleet-wide issues. Diamond sees this initiative as a way to better serve the customer through increased font-line support at the service centers in addition to increased capacity to handle fleet wide issues within the new After Sales department.

Diamond Owners Agenda Item #17

- *Additionally, all owners feel that the markup on third party parts is excessive. For example, why does a Bosch fuel injector available for $135 from a Mercedes dealer cost broad array of readily available third-party parts.*

Diamond Aircraft Response to Agenda Item #17

This was not discussed during this meeting. This concern will be carried forward as an agenda item in the next meeting planned April 2, 2020.

With the above agenda items in mind, there was conversation about all possible upgrade solutions for all legacy customers. Diamond shared these options in the form of a table (see table: 1 below) and discussions regarding pricing and limitations for each option was had. In addition, Diamond described the possibility of having a NXi "Lite" option for existing G1000 legacy customers which would involve only the replacement of displays provided the aircraft is WAAS equipped and the LRU's software matches the minimum requirement. This would allow for customers to gain access to several features that were introduced with NXi phase I including flight stream. It was pointed out that this NXi lite options was not offered in the table presented and that the DAN group would like to further explore the minimum option of upgrading GDU software to version 15.xx to take advantage of features that are currently unavailable.

Further discussion regarding upgrade paths and pricing will be carried forward as an agenda item in the next meeting planned April 2, 2020.

TABLE 1:

Description	ROM PRICE $K (USD)	DA20	DA40-180	DA40 NG	DA42(TDI)	DA42 NG	DA42 NG-VI	DA62
G1000 Legacy to NXi PI	45							X
G1000 NXi PI to NXi PII (-$16K Trade in of GIA63W's)	35			X		X		X
G1000 Legacy to NXi PII	85		X	X	X	X	X	X
G1000 NXi conversion (from Steam Gauge)	15		X		X			
G500 TXi	TBD	X						
GTX 335R installation	13.5		X	X	X	X	X	X
GTX 345R installation	15.5		X	X	X	X	X	X
GDL 69 installation	11		X	X	X	X	X	X
Tablet Mounts	1.4		X	X	X	X	X	X
USB installation	1.3	X	X	X	X	X	X	X
FMS Keyboard, GCU 476 (With NXi PI or PII)	26							X
Flight Stream 510	1.6		X	X	X	X	X	X
WAAS installation (GIA63W or GIA64W)	25		X	X	X	X	X	X
GFC 700 installation	78		X	X	X	X		
HIRF Box installation	10		X	X	X	X		