RECOMMENDED SERVICE BULLETIN
RSB 40NG-042

I TECHNICAL DETAILS

I.1 Category

Recommended.

I.2 Airplanes affected

Type: DA 40 NG

Serial numbers: 40.N001 through 40.N063

DA 40 D airplanes converted to DA 40 NG via OSB D4-080 using WI-OSB D4-080 up to revision 7

I.3 Date of effectivity

14-Mar-2016

I.4 Time of Compliance

Recommend to be carried out at the next 200h/annual inspection after the date of effectivity

I.5 Subject

Inspection and improved bushing installation of charged air duct assy.

ATA-Code: 81-20

I.6 Reason

There has been a report from the field of one charge air duct assy where the bonding of the metal bushings failed and the bushings were found loose. In order to increase the durability of the charged air duct assy Diamond Aircraft has modified the assembly process. This Service Bulletin describes all necessary work to inspect and improve the bushing installation of the charged air duct assy, that were produced using the initial assembly process.

I.7 Concurrent Documents

None.

I.8 Approval

The technical content of this document has been approved under the authority of DOA ref. EASA.21J.052.

I.9 Accomplishments / Instructions

Comply with WI-RSB 40NG-042, latest effective issue.

I.10 Mass (Weight) and CG

No Change.

II PLANNING INFORMATION

II.1 Material and Availability

See WI-RSB 40NG-042, latest effective issue.

II.2 Special Tools

Hand rivet squeezer.

II.3 Labour Effort

Approx. 2 hours.

II.4 Credit

None.

II.5 Reference Documents

DA 40 NG Airplane Maintenance Manual, Doc. No. 6.02.15, 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, particular that, 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 log book.
4. In case of doubt contact Diamond Aircraft Industries GmbH.

EXECUTION REPORT TO SERVICE BULLETIN RSB 40NG-042

AIRPLANE DATA

Airplane Serial Number _____

Airplane Registration _____

Airplane Operator _____

Hours of operation of airplane _____

No. of landings _____

Hours of operation-engine _____

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

_____
Date, Name, Sign

Please fax the completed form to Fax No. +43-2622-26700-1369 or e-mail to airworthiness@diamond-air.at

WORK INSTRUCTION

WI-RSB 40NG-042

I GENERAL INFORMATION

I.1 Subject

Inspection and improved bushing installation of the charged air duct assy.

I.2 Reference Documents

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

I.3 Remarks

a) All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.

b) All work, in particular that which is not especially described in this work instruction, must be done in accordance with the referenced maintenance manual.

c) For conversion factors between SI units and US/Imperial units refer to AMM Chapter 02.

d) In case of doubt, contact Diamond Aircraft Industries GmbH.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings

None

II.2 Special Tools

Hand rivet squeezer (e.g. Aircraft Spruce P/N 12-00300) and Yokes for rivet squeezer 1-1/4”X2” (e.g. Aircraft Spruce P/N 12-00310) or equivalent.

II.3 Material

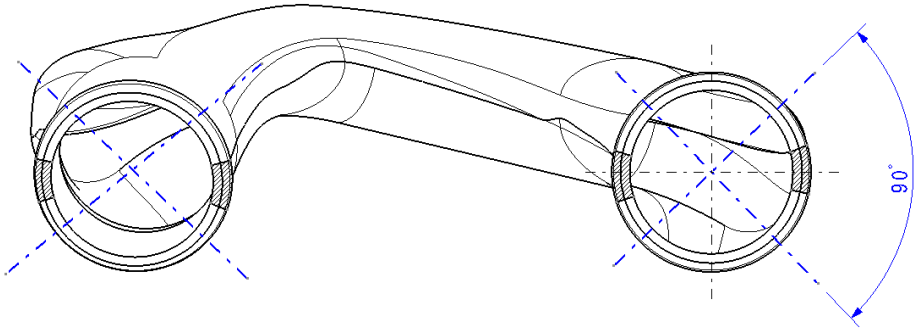
Quantity	Part No.	Description
8	MS20426AD4-5	Counter sunk Rivet
2	TORRO_60-80_12_W1	Clamp
2	TORRO_60-80_9_W1	Clamp
(1)	6049050	Scotch-Weld DP 490, 50ml
(2)	102 188	Static mixer

Material in () is only necessary if loose bushings are found.
Material is available from Diamond Aircraft Industries.

III INSTRUCTIONS

1	Remove engine cowlings i.a.w. AMM Section 71-10.
2	Remove the charged air duct assy.
3	Check the tightness of the collar bushes in the charged air duct assy. If the bonding of the collar bush is fine continue with step 9.
4	If the collar bushes are loose: • remove the bushes • grind it with sand paper (grit 120) i.a.w. the picture • after grinding clean the bonding surface with aceton 

5	Grind the charged air duct assy i.a.w. the picture. After grinding clean the bonding surface with aceton. 
6	**Warning: Do not get in contact with adhesive. Adhesive can cause skin disease. It can damage clothing. Refer to the manufacturer's health and safety instructions.** Bond the collar with Scoth-Weld DP 490 into the charged air duct assy i.a.w. the picture. Use an applicator gun for 2 component adhesive (e.g. Loctite P/N 083375) 
7	Remove the excess adhesive in and outside of the charged air duct assy.
8	Cure the charged air duct assy for 2 hours at 65°C.

9	Drill four 3,2 mm (1/8 in.) holes at each inlet (total 8) through the composite and the metal part. The position of the holes is shown below. CAUTION: Do not drill through the bonding area of the duct (hatched area). 
10	Countersunk the holes from the outside.
11	Install rivet MS20426AD4-5 according to AC43.13-1B in each hole. 
12	Clean the charged air duct assy inside.
13	Install the charged air duct assy with new clamp i.a.w. AMM Chapter 20. Refer to the AMM for correct installation and tightening torque of worm-drive-clamps.
14	Install engine cowlings i.a.w. AMM Section 71-10.
15	Clean working area, check for foreign objects.
16	Check all altered, replaced, repaired parts for proper function.
17	Test all systems in working area for function.
18	Make all necessary entries in the airplane logs.