

RECOMMENDED SERVICE BULLETIN

RSB 42NG-098

I **TECHNICAL DETAILS**

I.1 **Category**

Recommended.

I.1 **Airplanes affected**

Type: DA 42 NG
Serial numbers: 42.N272, 42.N274, 42.N523,
42.N525 through 42.N527,
42.N529, 42.N531 through 42.N544,
42.N546, 42.N547

I.2 **Date of effectivity**

20-Oct-2025

I.3 **Time of Compliance**

Within 200 flight hours or the next annual inspection, whichever comes first.

I.4 **Subject**

Replacement of double check valve of main hydraulic manifold assy.

ATA-Code: 29-00

I.5 **Reason**

On one airplane it was detected that the landing gear extends slower than usual due to incorrect installation of a check-valve. This issue could be isolated to a small number of potentially affected airplanes. This service bulletin corrects the check valve installation on airplanes already in service.

I.6 Concurrent Documents

None.

I.7 Approval

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

I.8 Accomplishments / Instructions

See WI-RSB 42NG-098, latest effective issue.

II Mass (Weight) and CG

Not affected.

II PLANNING INFORMATION**II.1 Material and Availability**

See WI-RSB 42NG-098, latest effective issue.

II.2 Special Tools

Modified 22 mm wrench socket.

II.3 Labour Effort

Approx. 2 hours.

II.4 Credit

For aircraft within warranty, material according to WI-RSB 42NG-098 latest effective issue.

II.5 Reference Documents

DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, 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. If material and/or labor hours are subject to be credited through Diamond Aircraft Industries, the Service Bulletin must be done by an authorized Diamond Service Center within the time of compliance and the Warranty Application incl. Work Report must be sent not later than 30 days after completion of work.
5. In case of doubt contact Diamond Aircraft Industries GmbH.

EXECUTION REPORT TO SERVICE BULLETIN RSB 42NG-098

AIRPLANE INFORMATION

Airplane Serial Number		_____
Hydraulic assy Serial Number		_____
Valve Serial Number		_____
Airplane Registration		_____
Airplane Operator		_____
Hours of operation of airplane		_____
Number of landings		_____
Hours of operation – engine	LH	_____
	RH	_____
Typical operation of airplane	private, training, other	_____

Date, Name, Sign

Submit the execution report to Diamond Aircraft Industries GmbH.:

- Use preferably the electronic execution report via the Diamond Partner Portal.
 - Login to the Diamond Partner Portal <https://partners.diamondaircraft.com/>.
 - Search for the Aircraft (A/C):
 - Use the search field at the top, or
 - Navigate through the menu: Support > My Fleet, then open the A/C by clicking the link.
 - In the right section "Aircraft Action," click the button "Add Execution Report".
 - Choose "RSB-42NG-098".
 - Either create a new execution report or select a draft you previously created.
 - Save and then submit the execution report
- Alternatively send the execution report to executionreports@diamondaircraft.com.
Keep a copy of the execution report in the aircraft log.

WORK INSTRUCTION

WI-RSB 42NG-098

I GENERAL INFORMATION

I.1 Subject

Replacement of double check valve of main hydraulic manifold assy.

I.2 Reference Documents

DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, 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 if not 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

Modified 22 mm wrench socket (Included).

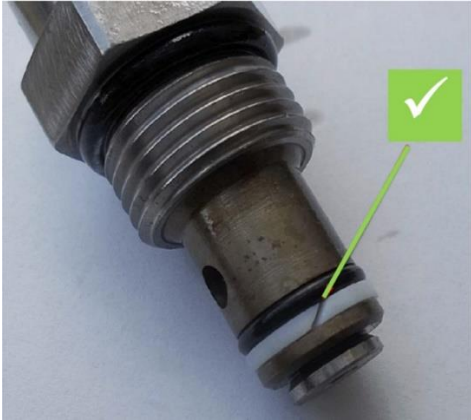
II.3 Material

Quantity	Part Number	Description
1	X11-S014-00-00.00	Double check valve (Including modified 22mm wrench socket)

Material is available from Diamond Aircraft Industries.

III INSTRUCTIONS

1	Pull the GEAR circuit breaker.
2	Raise the airplane on jacks in accordance with AMM Section 07-10.
3	Get access to the hydraulic system in accordance with AMM Section 29-10. If necessary, remove passenger seats in accordance with AMM section 25-10.
NOTE The following steps will prevent contamination of the hydraulic system and minimize oil leakage into the airplane.	
4	Clean the hydraulic system to prevent particles from entering the system.
5	Drain the oil in the hydraulic tank to a maximum of 2-3 cm or use a suction device before starting the work. NOTE If this is not possible, open the tank filler cap to equalize pressure, then close it again. Temporarily seal the ventilation port with a cap. 
6	Place absorbent cloths or paper towels around the assembly and between the control block and the mounting plate.

7	Use the 22 mm wrench socket and extension to untighten the valve counterclockwise. After loosening, the valve can be removed by hand after approximately 2 turns. 
8	Examine the new valve for contamination. Examine the white PTFE ring for improper seat or protrusion CAUTION Improperly seated and protruding rings can be sheared off during installation. 
9	Coat the O-rings and threads with suitable assembly paste (e.g., Rivolta F.L.A.). 

10	Install the check valve into the control block by hand.
11	Torque the check valve with 20 Nm.  CAUTION When the O-rings enter the tapered section of the thread, increased resistance is normal. Continue screwing the valve with the socket. A consistent torque of 4-6 Nm until the mechanical hard stop is normal. If higher resistance is observed, the support ring may have protruded and been sheared off. In this case, unscrew and check the check valve again.
12	Clean spilled oil from the assembly.
13	WARNING Only use new hydraulic fluid according to AMM Section 29-10 Refill the tank with the same amount hydraulic fluid in accordance with Section 29-10. Check the hydraulic fluid level of the hydraulic system according to AMM Section 29-10. Remove the caps from the tank ventilation.
14	Set the GEAR circuit breaker.
15	Test the hydraulic system: • Do a normal operation test of the hydraulic system according to AMM Section 29-10. • Measure the extraction and extension time according to AMM Section 29-10. • Do an emergency operation test according to AMM Section 29-10. • Check for external leakage according to AMM Section 29-10.
16	Check the hydraulic fluid level of the hydraulic system according to AMM Section 29-10.

17	Reinstall all covers and passenger seats according to AMM.
18	Clean working areas, check for foreign objects.
19	Check all altered, replaced, repaired parts for proper function.
20	Test all systems in working area for function.
21	Make all necessary entries in the airplane logs.
22	Return exchanged check valve to Diamond Aircraft Industries GmbH.