



**Instructions for Continued
Airworthiness**

Project Reference
STC-008

ICA-STC-008







REV. 03

Instructions for Continued Airworthiness and Installation Instructions

for BERINGER wheels and brakes on
De Havilland DHC-6 Twin Otter aircraft

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PREPARED(**)	CHECKED(**)	APPROVED(**)
Design Office Staff	Certification Manager	Accountable Manager
Célia BERTELOOT  	Yann MERLE  	Claire BERINGER  
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(*) I.a.w. the numbering system defined in the APDOA manual.

(**) Authorised signatories shall be as defined in the APDOA manual.

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1 LOG OF REVISIONS

Rev. No	Rev. date	Description
00	2012.10.30	Initial edition
01	2012.12.04	Modification of §3
02	2015.01.22	Modification of §2
03	19 Oct. 2021	Administrative change: MM-STC-008 becomes ICA-STC-008 and include new maintenance document structure.

2 INTRODUCTION

2.1 Purpose of the document

This manual gives removal and installation instructions of BERINGER wheels and brake system STC on the De Havilland DHC-6 Twin Otter aircraft and guide you toward BERINGER maintenance system for continued airworthiness instructions.

NOTE: These BERINGER products have been fully tested and certified on the aircraft.

NOTE: Wheels and brake assemblies are TSO C26d/ETSO C26c approved, for detailed maintenance and overhaul procedures, please refer to the Servicing Manuals of BERINGER, in §6.

CAUTION: Substitution of parts by other than originally certified parts may cause failure of brake system. BERINGER quality process assures that replacement parts are produced and controlled with the same quality level as originally certified.

2.2 Applicable Certification Requirements

- CS-23
- FAR part 23

2.3 Effectivity

Type: De Havilland

Models: DHC-6 Twin Otter

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3 GENERAL

3.1 Components list

This STC scope includes Nose wheels as replacement parts to original equipment. All the assemblies are listed in NP-STC-008, at the last revision.

For the assembly detailed composition to piece part, refer to the BERINGER Illustrated Part Catalogues (IPC) that are available in the maintenance documents MM-0x-001, sorted per product family, see §6.

3.2 Tires

Wheel	Tire Size	Type	Max. Inflation pressure
RA-008	8.90-12.5	Tubeless	30 PSI *

* Tire inflation pressure is not changed: refer to the aircraft maintenance manual for the proper inflation pressure.

3.3 Weight and Balance

BERINGER Assembly Name	Weight (Kg)	Weight (Lbs)
Nose wheel	8,04	17,72

(Weight is given without the tire, per wheel)

Refer to local regulation requirements to determine if mass and balance must be updated.

3.4 Torque

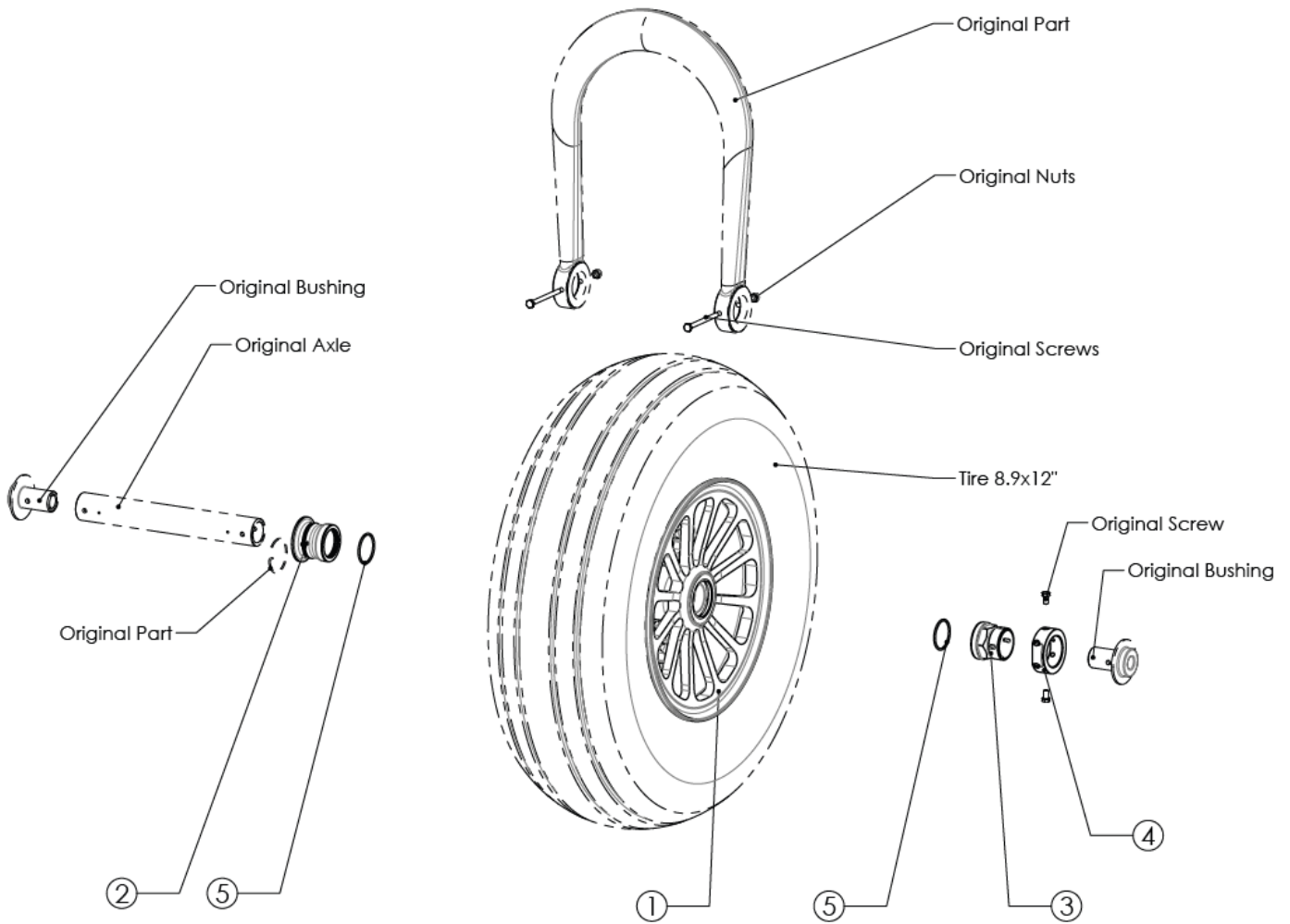
All torques for BERINGER product assembly are specified in the installation instructions in this document or in the maintenance working cards.

For interface parts with aircraft, unless otherwise specified by BERINGER, all fasteners should be torqued as per Aircraft Manual.

3.5 Standard product and tools

- Tire lubricant : Tire lubricant or liquid soap
- Tire mounting tool: Refer to MM-02-002.
- Bearing grease
- Torque wrench
- Paint marker

4 REMOVAL AND INSTALLATION



5	J-JTR-015N	42x2.62_O-Ring / Joint Torique	2
4	AV-DEH-003	Twin Otter 8.9x12.5"_Axle Nut / Ecrou	1
3	AV-DEH-002	Twin Otter 8.9-12.5_Threaded Spacer / Entretoise Filetée	1
2	AV-DEH-001	Twin Otter 8.9-12.5_ Bearing Spacer / Entretoise Rlt	1
1	RA-008	8.90x12.5" _Nose Wheel Assy/ Roue AV	1
REP	PART NUMBER	DESCRIPTION	QTY.

AV-DEH-030

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4.1 REMOVAL:

- a) Remove original wheel, axle and parts from the gear leg

NOTE: Some original parts must be kept to install the new system, please refer to drawing and part list above.

4.2 INSTALLATION:

CAUTION: Make sure that axle is clean before applying new grease

- a) Install the proper tire size 8.90-12.5" tubeless on the wheel as per procedure described within SM-02.
- b) Lubricate the bearing lipseal with a thin coat of grease MIL-G-81322
- c) Insert o-ring n°5 in the spacers, parts n°2 and 3
- d) Place the parts n° 2, 3, and 4 on each side of the wheel
- e) Position the wheel inside the fork
- f) Insert the axle through all
- g) Insert axle ends and then insert bolts
- h) Place the original ring onto the part n°2
- i) Tighten the part n°3 and 4 to load the tapered roller bearings
- j) Tighten the bolts to the required torque by the aircraft manual
- k) Adjust again the pre-load on tapered roller bearings, then secure with original screws
- l) Adjust tire pressure when the aircraft is loaded on ground

5 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

All instructions for continued airworthiness are provided through the Servicing Manuals (SM) and Maintenance Manual (MM) of BERINGER.

- The Servicing Manuals (SM) sums-up the parts replacement scheme, the maintenance intervals, troubleshooting and the Maintenance Working Cards to be used for each BERINGER assembly.
- The Maintenance Manual (MM) describes each maintenance step for all BERINGER products.

Refer to the maintenance guide **SM-00** for **general guidance**.

The SM breakdown structure is as follows:

Servicing Manual Reference	Product Type	Product Reference
SM-01	Brake Assembly	EA-xxx
SM-02	Nose/Tail wheel	RA-xxx
SM-02	Main wheel	RF-xxx
SM-03	Control-stick Master-Cylinders	MM-xxx
SM-03	Longitudinal Master-Cylinders	MP-xxx
SM-04	Parking Brake	FP-xxx
SM-05	Brake Pressure regulator	RE-xxx
SM-06	Brake Pressure limiter	LM-xxx
SM-07	Shock Wheel	LL-xxx
SM-08	SensAIR device	TP-xxx
SM-09	Tyre 5x2.00-3.7 & 6x2.00-3.7	PAR-xxx
SM-10	Carbon Fairing	CR-xxx

All documents are all available on:



BERINGER website: www.beringer-aero.com/Support
Go to Support section.

6 AIRWORTHINESS LIMITATIONS SECTION

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of Title 14 of the Code of Federal Regulations unless an alternative program has been FAA approved.

7 ASSOCIATED DOCUMENTS

Document reference	Document title
NP-STC-008	Part Nomenclature
SM-00	BERINGER PRODUCTS MAINTENANCE GUIDE
SM-02	Wheels Servicing Manual

Refer to the latest revision.