

***SERVICE BULLETIN 008: XT-912/582 REAR HUB AXLE INSPECTION***

Identification	SB-008
Status	Mandatory
Issue	1
Issue Date	September 2009
Applicability	All XT Aircraft
Compliance	At or before 100 hours of operation.

Issued by: Simon Ross
Approved by: The technical content of this service bulletin has been approved by the Australian Civil Aviation Safety Authority.

Summary of Changes
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***Introduction***

It has been brought to the attention of Airborne that a rear axle - Airborne part # 108452 - HUB AXLE EDGE XT TYPE 2, has been found to be significantly cracked at the tapped locking bolthole. The aircraft involved was a XT 912 tourer edition with approximately 250 service hours.

The hollow axle has already been replaced with a solid axle with significantly higher yield strength in trike serial numbers above XT-912-0245 for the 912 XT series and XT-582-0043 for the 582 XT series. This was as part of the tundra model approval process.

It is noted that no cracking has been observed in the solid type of Axle to this date (part # 109012).

The aircraft in which the cracked component was found is a training aircraft, subject to "circuit" flying and would experience more landings than a recreational machine.

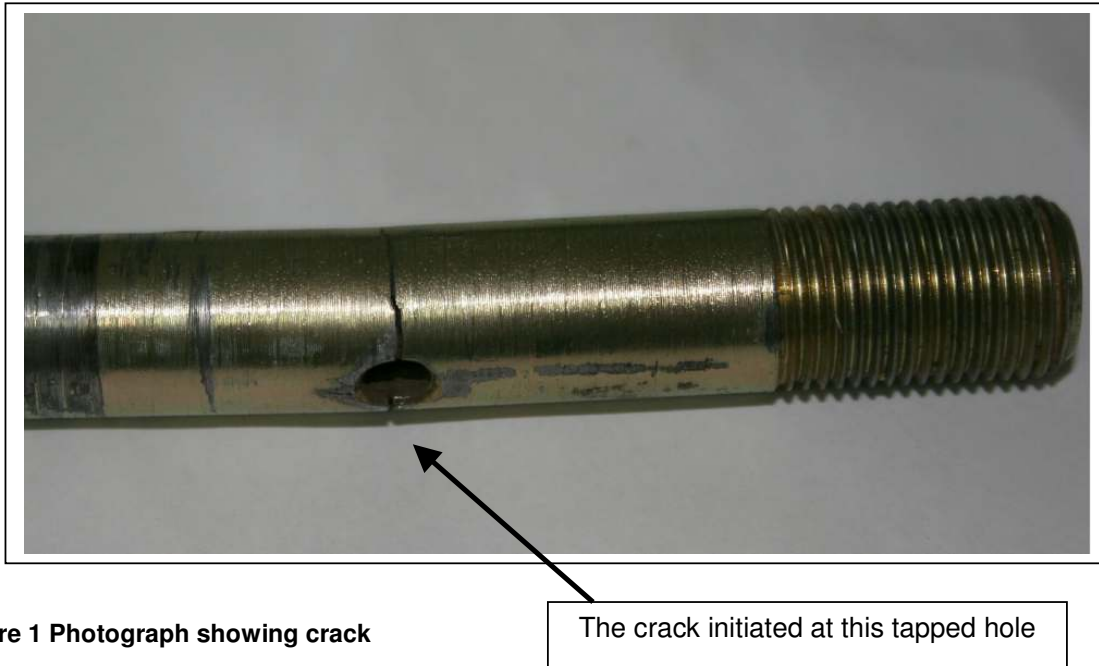
This service bulletin introduces a mandatory axle inspection regime in addition to existing maintenance checks outlined in the aircrafts maintenance schedule.

A maintenance manual page is provided with the updated schedule.

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## ***Photograph of the crack in the component***



**Figure 1 Photograph showing crack**

The crack initiated at this tapped hole

### ***Action***

- Remove, clean and inspect the axles after each 100 hours, and during tyre changing.
- A 10 x magnifying glass should be used to aid this inspection.
- Any cracks however small are reason for replacement of the component.
- Repeat this process each 100 hours, as well as each time tyres are replaced.
- Any cracked components should be reported to Airborne Windsports to aid service history.
- Conduct an inspection according to the checklist (Chapter 20 – Standard Practices Airframe).
- Complete a service note in the aircraft logbook.
- It is suggested that if a crack is found in one axle then both should be replaced at the same time.

### ***Skills***

Where allowable by the applicable national airworthiness authority according to the category of registration, the owner / maintainer can incorporate this service bulletin with care.

### ***Weight and Balance***

Insignificant or negligible change.

### ***Parts Replacement***

Any cracking observed during inspection is reason for replacement of:

- The original part # 108452 - HUB AXLE EDGE XT TYPE 2, (Hollow Axle)
- New part # 109012 - HUB AXLE EDGE XT TYPE 3 ZINC PLATED, (Solid Axle)

Replace before further use.

Order part # 109012 from Airborne.

### ***Tooling***

- See the aircraft maintenance manual.

### ***Documentation***

Any cracked component should be replaced, and noted in the aircraft logbook by the person who performed the maintenance.

## Safety Bulletin Compliance

### SB-008 XT Series Axle Periodic Inspection / Replacement

This template is to be completed by a person with appropriate maintenance authority as determined by the National Airworthiness Authority in the country of registration, for the category of registration of the aircraft.

### Base Serial Number

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Please fill the following table after each inspection:

Aircraft hours	Inspection result LHS	Inspection result RHS	Action taken	Print name and sign
example	OK	Small crack	Replaced LHS and RHS part 108452 with 109012	
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

Part Number		Part Name
109012	Solid	HUB AXLE EDGE XT TYPE 3 ZINC PLATED
108452	Hollow	HUB AXLE EDGE XT TYPE 2

**Please advise the factory if any axles are found to have cracking.**

I/we have incorporated Service Bulletin SB – 008, for the above aircraft component

Signed	
Print Name	

Insert sheet in rear of applicable maintenance manual.

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**Time Limit for Coolant and Oil**

See section 12.10.30 for Coolant details and section 12.10.20 for Oil details.  
 See Rotax Maintenance Manual Section 10.

**NOTE**

There are Special Instructions when using Avgas, Consult the Rotax Service Information 18 UL 97 D/E.

**Time limit for maintenance Intervals**

See Rotax Maintenance Manual Section 10

**5.60.20 Trike Base and Landing Gear Maintenance Schedule**

The procedure should be repeated from 500 to 1000 hours.

TRIKE BASE FRAME MAINTENANCE SCHEDULE	Manual Section Reference	AIRCRAFT OR ITEM HOURS OF OPERATION						
		25	100	200	300	400	500	600
Inspection Items								
Trike base tube for bend or cracking (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Trike mast for bends or cracking (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Drag links and rear struts for bends or hole elongation (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Brake system inspect dimensions & wear limits. Disk brake fluid level	32.40 table 18/19	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Mast brace for bend or cracking. Should. Outer brace should slide freely (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Windscreen extension, mounting and screen integrity	As directed	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]
Engine bonnet mount rubbers and rubber cord.	As directed	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]
Rubber cushion, Front suspension (on XT outback only)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Pitot Drain, drain & reseal	34.10.10	2 (O)	2 (O)	2 (O)	2 (O)	2 (O)	2 (O)	2 (O)
Heart bolt (see 4.20.00 for time limits)	As directed	4 (O)	6 (O)	6 (O)	6 (O)	6 (O)	6 (O)	6 (O)
Rear axle disassembly and inspection. (Service Bulletin 008)	20.10.00	NA	4 [R]	4 [R]	4 [R]	4 [R]	4 [R]	4 [R]

**Table 11 Trike Base frame Maintenance Schedule**

**Special Instructions**

**Time Limit for Rubber Parts**

For checking the Engine Mount Rubbers, see “Mounts” Section 71.20.00, for other rubber components related to the engine, see below.

See Rotax Maintenance Manual Section 05-10-00 “Operating Hours Related Checks”

Engine Bonnet rubber mount and rubber chord, time limits by condition inspection.

**5.70.00 Fatigue**

The fatigue life calculations given in Section 4. Airworthiness Limitations, give life estimates for the masts, attachments to the wing and base tube structure of 953 hours. Service announcements may increase the fatigue life as the service history of the airframe evolves.

### 5.20.20 Trike Base Frame Maintenance Schedule

TRIKE BASE FRAME MAINTENANCE SCHEDULE	Manual Section Reference	AIRCRAFT OR ITEM HOURS OF OPERATION						
		25	100	200	300	400	500	600
Trike base tube for bend or cracking (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Trike mast for bends or cracking (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Drag links and rear struts for bends or hole elongation (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Brake system inspect dimensions & wear limits. Disk brake fluid level	32.40 table 18/19	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Mast brace for bend or cracking. Should. Outer brace should slide freely. (see 4.20.00 for time limits)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Windscreen extension, mounting and screen integrity	As directed	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]
Engine bonnet mount rubbers and rubber cord. Inspect for chafing of engine components, hoses, controls, under bonnet	As directed	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]	3 [O]
Rubber cushion, Front suspension (on XT outback only)	As directed	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]	3 [R]
Pitot Drain, drain & reseal	34.10.10	2 (O)	2 (O)	2 (O)	2 (O)	2 (O)	2 (O)	2 (O)
Heart bolt (see 4.20.00 for time limits)	As directed	4 (O)	6 (O)	6 (O)	6 (O)	6 (O)	6 (O)	6 (O)
Rear axle disassembly and inspection. (Service bulletin 008)	20.10.00	NA	4 (R)	4 (R)	4 (R)	4 (R)	4 (R)	4 (R)

**Table 11 Trike Base frame Maintenance Schedule**

#### Special Instructions Requirements for TBO

Rotech Research Ltd. is pleased to join with ROTAX in announcing the extension of the T.B.O. (Time Between Overhaul) period for Rotax® 912 and 914 series of piston aviation aircraft engines. The Austrian civil aviation authority (Certificate Authority Austro Control GmbH or ACG) has now granted all of the necessary approvals to increase the time before overhaul (TBO) of the Rotax 912 series from 1200 hours to 1500 hours. The TBO for the popular turbo-charged 914 engine has been increased from 1000 hours to 1200 hours.

These TBO increases are effective immediately and apply to both new engines and existing engines subject to compliance with applicable service bulletins. Please refer to Service Bulletins [SB-912-041](#) / [SB-914-027](#) and [SB-912-041UL](#) / [SB-914-027UL](#) for complete compliance information. Reference <http://www.rotec.com/whatnew.htm>

**Table 14 Requirements for Rotax 912 Time Between Overhaul**

#### Time Limit for Rubber Parts

For checking the Engine Mount Rubbers, see “Mounts” Section 71.20.00, for other rubber components related to the engine, see below.

See Rotax Maintenance Manual Section 05-10-00 “Operating Hours Related Checks”  
 Engine Bonnet rubber mount and rubber chord, time limits by condition inspection.

#### Time Limit for Coolant and Oil

See Rotax Maintenance Manual Section 05-20-00 “Operating Hours Related Checks”  
 See section 12.10.30 for Coolant details and section 12.10.20 for Oil details.

#### NOTE

There are Special Instructions when using Avgas. Consult the Rotax Service Information 18 UL 97 D/E.