

 SLA Document COS-001	SilverLight Aviation 40420 Free Fall Ave, Unit A Zephyrhills, FL 33542. USA info@silverlightaviation.com	SAFETY ALERT / SAFETY DIRECTIVE	
		Release Date: 01/15/2018 Effective Date: 01/15/2018	Notice # 003 Superseded Notice # __ <i>(if applicable)</i> Page 1 of 8
Limitations for completion of any required corrective actions: Inspection before next flight. Install with Red Loctite Threadlocker 271 within next 5 hours		Affected Aircraft Make and Model: AR-1 Aircraft Serial Number(s): 0001 through 0017	

Reinstalling Nose Gear Spindle Bolt Using Loctite 271 (Red)

Repeating Symbols:

Please pay special attentions to the following symbols throughout this document, which are used to emphasize particular information.

- ◆ **Warning:** Used to identify an instruction that, if not followed, may cause serious injury or fatality.
- **Caution:** Used to identify an instruction that, if not followed, may cause severe damage to the aircraft or lead to suspension of warranty.
- **Note:** Used to identify useful information for better handling.

1 Planning Information

1.1 Affected Aircraft


Make: SilverLight Aviation (Kit Built)
 Model: AR-1
 Serial Number(s): 0001 through 0017
 Applicable Countries: All

1.2 Concurrent Documents

Not Applicable

1.3 Reason

Front fork spindle bolt secured with blue Loctite can work loose

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1.4 Subject

The front fork assembly of AR-1 gyroplane has a spindle bolt that screws into the lower fork assembly and is tightened with Blue Loctite to 50 foot pounds. In one aircraft that bolt broke the torque and over time unthreaded. The pilot/owner discovered it right after a back wheel landing. Once the front wheel touched down, he had hard time turning. Upon inspection he found the spindle bolt had unthreaded from lower front fork assembly.

1.5 Compliance

The spindle bolt has to be taken out, Loctite Threadlocker 271 (Red) or equivalent Permatex etc. threadlocker applied (3 to 5 drops) and bolt reinstalled into the lower assembly and torqued tight.

1.6 Approval

Not applicable

1.7 Type of Maintenance

Line Maintenance

1.8 Personnel Qualifications


Owner/Operator

1.9 Return to Service

Logbook entry, taxi testing

1.10 Weight and Balance

Not applicable

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1.11 References

Not applicable

1.12 Superseded Documents

None

1.13 Contact Details

For further information on this Safety Alert or to report any Safety of Flight or Service Difficulty issues, please contact SilverLight Aviation at:

SilverLight Aviation

40420 Free Fall Ave, Unit A
Zephyrhills. FL 33542.
USA
info@silverlightaviation.com

1.14 Disclaimer

This Safety Alert has been generated with utmost care. Nevertheless errors and misunderstandings can never be fully excluded. In case of any doubts the recipient of this Service Alert is requested to contact SilverLight Aviation immediately to clarify the issue. If as an owner you are not mechanically inclined and are not able to use simple hand tools, we advise using a qualified mechanic to fulfill this task. SilverLight Aviation, cannot be held responsible for incorrectly performed work in this task.

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2 Resources

2.1 Parts

None

2.2 Materials

Loctite 271 (Red) or equivalent such as Permatex Grease

2.3 Tools

Allen head wrench set
Socket Set including 5/8" and 1/2" Sockets,
Ratcheting driver

2.4 Special Tools

None

2.5 Manpower

1 person, 45 minutes


2.6 Cost

None

3 Instructions

3.1 General

1. To gain access to the spindle bolt, take off the instrument panel side plate using appropriately sized allen head wrench. We recommend taking off right side plate (from pilot's perspective)

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2. If you have a neoprene sewn Velcro secured front fork hole cover, gently and carefully pull it off now. If you have an ABS plastic plate (later serial numbers) secured by bolts into the fiberglass, take it off by undoing those fasteners and sliding it out of the way
3. There are 4 bolts connecting the rudder pedals to the front fork. Two from the front pedals to front fork assembly and two from front fork to back rudder pedals. Remove these bolts and nuts
4. Spindle bolt nut is visible on the top of the keel tube through the bearing barrel that is welded into the keel tube for securing the front fork spindle bolt. Hold the front tire in place so it cannot move and use an appropriate sized socket to loosen the spindle bolt nut
5. Rock the gyroplane on it tail and either use someone to hold it there or place some weights on the keel tube so it does not rock forward
6. Carefully pull the front fork under the gyro in the front. It may be necessary to gently tap the spindle bolt on top to loosen the friction to drop it down
7. The whole front fork assembly is shown below in Fig-1 including the spindle bolt. Fig-2 shows the sub-assembly which is the concern of this bulletin. Fig-2 shows nose gear spindle bolt as item number 4 (Part# 715640). It would good to study these figures before attempting this task.
8. Using a 5/8" wrench on the spindle bolt flat spots and holding the front fork in place, unscrew the bolt from the front fork lower assembly
9. Use Loctite Threadlocker 271 (Red) or equivalent on the threads of the bolt (3 to 5 drops). Then reinsert the spindle bolt into the lower front fork assembly and using the 5/8" wrench tighten up the bolt into the front fork assembly. Tighten it as much as you can. Apply liberal amounts of grease on the spindle bolt shank
10. Re-install the front fork into the gyroplane reversing the steps used to remove it. Let stand overnight before using the gyroplane to allow thread locker to dry
11. A good taxi test is needed after a good pre-flight of the area paying attention to this area to make sure everything works correctly



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within next 5 hours

Affected Aircraft
Make and Model: AR-1

Aircraft Serial Number(s): 0001 through 0017

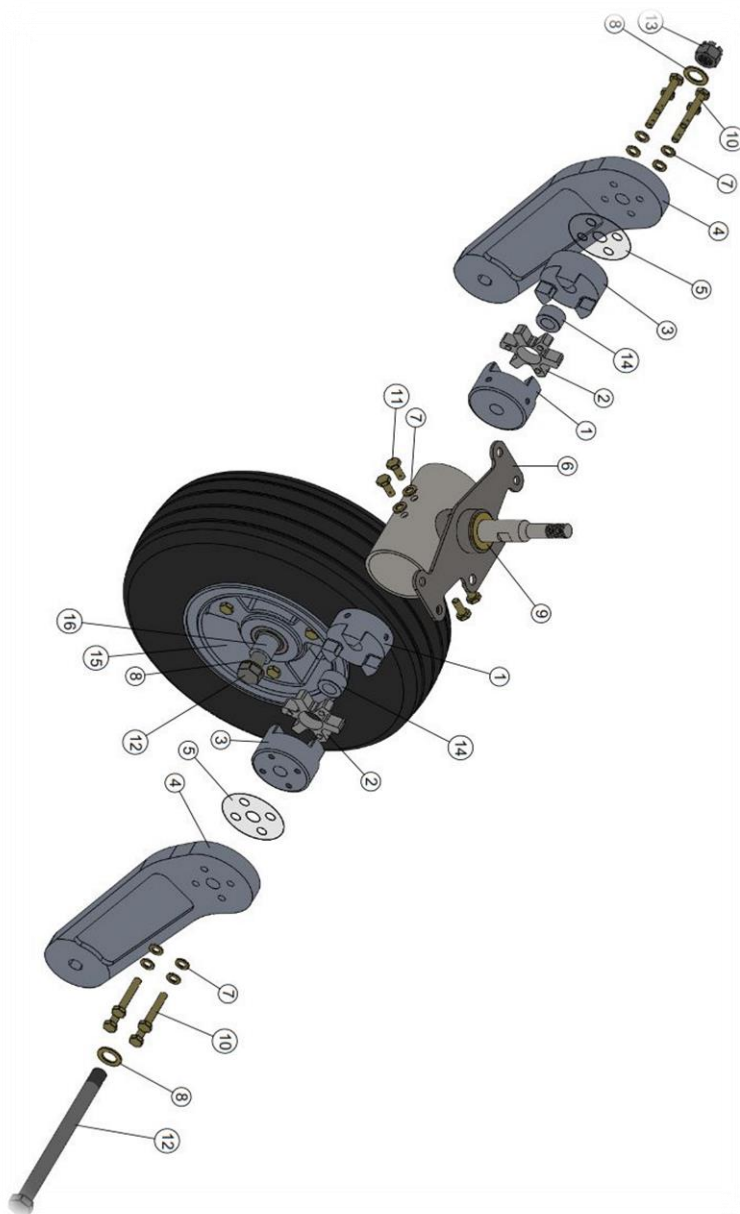


Fig-1



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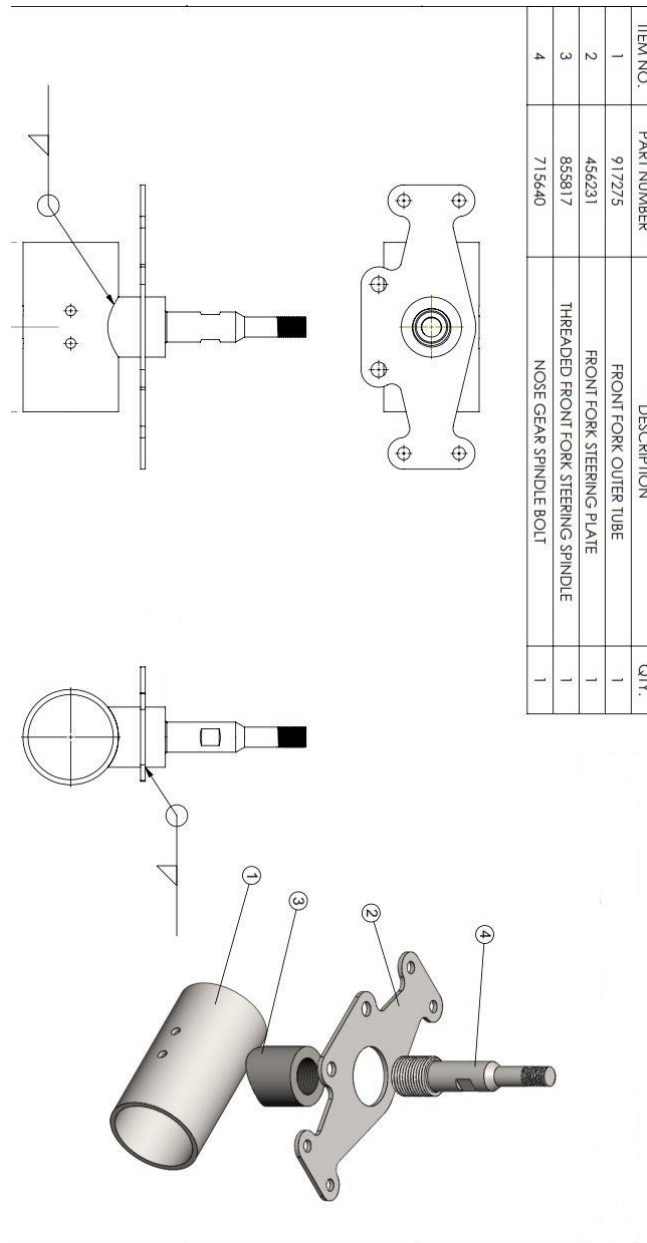



Fig-2

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3.2 Documentation

Conduct of this Safety Alert 003 must be logged in the aircraft logbook with date and signature of the responsible Person conducting the procedure. The entry must include the following information:

- Identified AR-1 Serial Number and N-Number (if applicable)

4 Appendix

4.1 Changes to Previous Revision

Original Revision – no changes

4.2 Feedback Template

No feedback is necessary