

Number: SA16-03  
Issued: March 7, 2016

**SUBJECT:** Nose Landing Gear Strut Assembly Inspection

## 1. EFFECTIVITY

SR20 Serials 2065 & subs  
SR22 Serials 3712 & subs  
SR22T Serials 0001 & subs

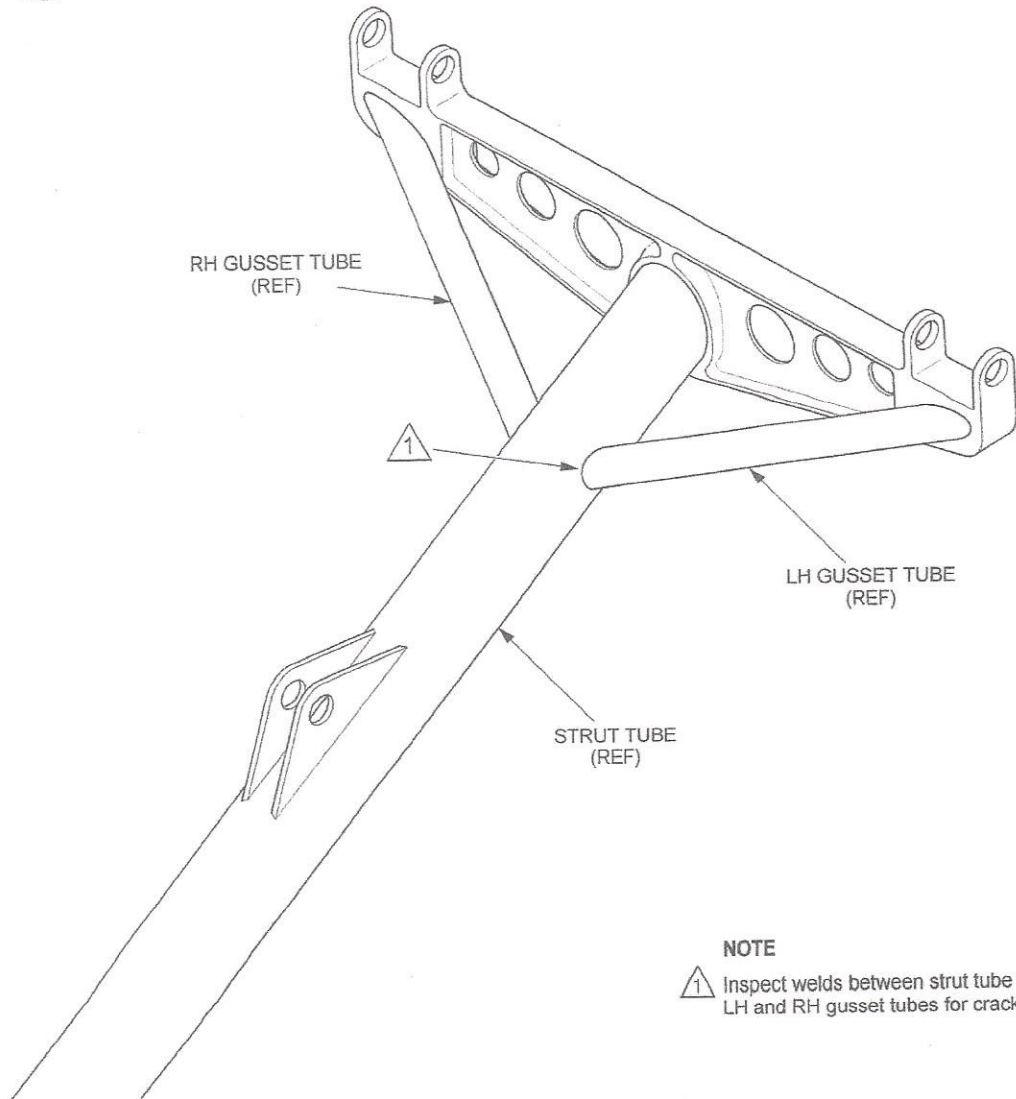
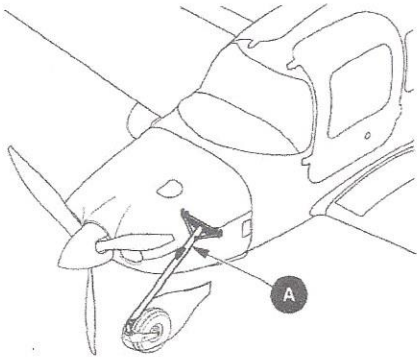
## 2. DESCRIPTION

Cracks have been discovered on the nose landing gear strut assembly at the welds between the strut tube and LH and RH gusset tubes.

A visual inspection of the welds between the strut tube and LH and RH gusset tubes for cracks must be performed every time the engine cowling is removed. (See Figure 01)

If cracks are found, the aircraft is prohibited from flight until the nose landing gear strut assembly is replaced. (Refer to AMM 32-20)

EFFECTIVITY:  
SR20 Serials 2065 & subs  
SR22 Serials 3712 & subs  
SR22T Serials 0001 & subs



**NOTE**  
⚠ Inspect welds between strut tube and LH and RH gusset tubes for cracks.

**DETAIL A**

SR2\_SA32\_1029

**Figure 01**  
**Nose Landing Gear Strut Assembly Inspection**

**EFFECTIVITY:**  
SR20 Serials 2065 & subs  
SR22 Serials 3712 & subs  
SR22T Serials 0001 & subs

---

**Number:** SA16-05  
**Issued:** April 12, 2016

---

**SUBJECT:** Aircraft Towing Guidance

---

## 1. EFFECTIVITY

SR20 Serials 1005 & subs  
SR22 Serials 0002 & subs  
SR22T Serials 0001 & subs

## 2. DESCRIPTION

Cracks have been discovered on some nose landing gear strut assemblies at the fillet welds between the strut tube and the LH and RH gusset tubes. Evaluation by Cirrus Engineering points to aggressive ground handling at nose wheel angles greater than 45° either side of center as a potential root cause. To prevent structural damage to the nose landing gear, Cirrus recommends the following practices:

- A. When towing aircraft, do not stop/start abruptly, especially when the tow bar is at an angle greater than 45° either side of center.
- B. When positioning the aircraft with a towing vehicle, the angle of the tow bar must be less than 45° either side of center for both pulling and pushing. Hand towing must be used if angles greater than 45° either side of center are needed for positioning.
- C. Do not tow aircraft at speeds higher than 15 mph.

<p><b>EFFECTIVITY:</b> SR20 Serials 1005 &amp; subs SR22 Serials 0002 &amp; subs SR22T Serials 0001 &amp; subs</p>
--

**Number:** SA17-08  
**Issued:** July 14, 2017

**SUBJECT:** Possible Cracking at Nose Landing Gear Fillet Welds

## 1. EFFECTIVITY

SR20 Serials 2065 and subs w/ Beringer wheels  
SR22 Serials 3712 and subs w/ Beringer wheels  
SR22T Serials 0001 and subs w/ Beringer wheels

## 2. DESCRIPTION

Cracks have been discovered on some nose landing gear (NLG) strut assemblies at the fillet welds between the strut tube and the LH and RH gusset tubes. These cracks have led to the collapse of NLG assemblies.

Each of the aircraft involved had a history of excessive nose wheel shimmy following touchdown of the nose landing gear. *Nose wheel shimmy* is defined as "a lateral oscillation or wobble of the NLG resulting in a shaking feeling throughout the cabin of the aircraft that can vary in intensity." This is normally encountered during the landing roll-out and will subside as speed is reduced. Although less common, NLG shimmy may also be present during the take-off roll, or during high speed taxi. This shimmy is not pilot landing technique critical.

Although no injuries have been reported, failure to comply with the following actions may contribute to collapse of the NLG, which may result in damage and significant repair costs.

Cracking or breaking of the nose wheel pant or nose wheel pant bracket could be indication of shimmy occurring on the aircraft. Inspect the aircraft in accordance with:

- SB2X-32-22 - Nose Landing Gear Strut Assembly Inspection, and
- SB2X-32-23 - Nose Wheel Shimmy Reduction.

## 3. ACTIONS

If excessive or significant shimmy is experienced, further flight operations should be discontinued until inspections of the NLG assemblies can be performed per the AMM and subsequent Service Bulletins.

Nose wheel shimmy can be reduced or eliminated by lowering the tire pressure. Prior to the next flight, adjust the tire pressure on the nose landing gear to 40 - 50 psi (276 - 344 kPa).

This shimmy may not be pilot landing technique critical, but certain actions may minimize or exacerbate it. Pilot actions that may mitigate nose wheel shimmy include the following:

- Minimize side-load on landing by landing with the longitudinal axis aligned with the runway.
- Gently lower the nose gear to the runway on landing and avoid abruptly releasing control yoke back-pressure.
- If shimmy is experienced on landing, add back-pressure to the control yoke to minimize weight on the nose gear. Minimize use of brakes until shimmy subsides.

**EFFECTIVITY:**  
SR20 Serials 2065 and subs w/ Beringer wheels  
SR22 Serials 3712 and subs w/ Beringer wheels  
SR22T Serials 0001 and subs w/ Beringer wheels



**Number:** SA17-08R1  
**Issued:** July 14, 2017  
**Revised:** January 5, 2018

**SUBJECT:** Possible Cracking at Nose Landing Gear Fillet Welds

## 1. EFFECTIVITY

SR20 Serials 2065 thru 2364 w/ Beringer wheels

SR22 Serials 3712 thru 4505, 4507, 4510, 4511, 4520, and 4523 w/ Beringer wheels

SR22T Serials 0001 thru 1573, 1593 thru 1595 w/ Beringer wheels

This advisory was revised to update Effectivity and the NLG tire pressure.

## 2. DESCRIPTION

Cracks have been discovered on some nose landing gear (NLG) strut assemblies at the fillet welds between the strut tube and the LH and RH gusset tubes. These cracks have led to the collapse of NLG assemblies.

Each of the aircraft involved had a history of excessive nose wheel shimmy following touchdown of the nose landing gear. *Nose wheel shimmy* is defined as "a lateral oscillation or wobble of the NLG resulting in a shaking feeling throughout the cabin of the aircraft that can vary in intensity." This is normally encountered during the landing roll-out and will subside as speed is reduced. Although less common, NLG shimmy may also be present during the take-off roll, or during high speed taxi. This shimmy is not pilot landing technique critical.

Although no injuries have been reported, failure to comply with the following actions may contribute to collapse of the NLG, which may result in damage and significant repair costs.

Cracking or breaking of the nose wheel pant or nose wheel pant bracket could be indication of shimmy occurring on the aircraft. Inspect the aircraft in accordance with:

- SB2X-32-22 - Nose Landing Gear Strut Assembly Inspection
- SB2X-32-23 - Nose Wheel Shimmy Reduction

## 3. ACTIONS

If excessive or significant shimmy is experienced, further flight operations should be discontinued until inspections of the NLG assemblies can be performed per the AMM and subsequent Service Bulletins.

Nose wheel shimmy can be reduced or eliminated by lowering the tire pressure. Prior to the next flight, adjust the tire pressure on the nose landing gear to 30 - 35 psi (207 - 241 kPa).

This shimmy may not be pilot landing technique critical, but certain actions may minimize or exacerbate it. Pilot actions that may mitigate nose wheel shimmy include the following:

- Minimize side-load on landing by landing with the longitudinal axis aligned with the runway.
- Gently lower the nose gear to the runway on landing and avoid abruptly releasing control yoke back-pressure.
- If shimmy is experienced on landing, add back-pressure to the control yoke to minimize weight on the nose gear. Minimize use of brakes until shimmy subsides.

EFFECTIVITY:  
See effectivity section.