RECOMMENDED

SERVICE BULLETIN

SB_CLT_02 Revision NC

Nose Landing Gear Reinforcement

Warnings, Cautions, and Notes

The following safety definitions are used in this manual:

WARNING

A WARNING STATEMENT IDENTIFIES A SPECIFIC HAZARD TO PERSONNEL OR DAMAGE TO THE EQUIPMENT. FAILURE TO FOLLOW THE CORRECT PROCEDURE CAN RESULT IN INJURY AND LOSS OF LIFE.

CAUTION

A CAUTION statement identifies the possible risk of damage to the aircraft or equipment if the correct procedure is not followed.

NOTE

A NOTE statement highlights an important or unusual procedure.

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1. Information Planning

To ensure satisfactory compliance with this bulletin, the service must be performed by an Airframe certified Aviation Mechanic, or an Approved Repair Station in accordance with RBAC 145.

1.1. Applicability

Serial Numbers:

- Aircraft subject to excessive takeoff and landing procedures.

1.2. Reason

CAUTION

Two minor accidents, in which, after abnormal runway contact, the landing gear leg fractured and collapsed near the fork pivot, both aircraft being used for instruction.

It was decided to reinforce the fracture area.

1.3. Subject

Recommended replacement of the nose landing gear leg.

1.4. Compliance

Not mandatory, however, if in excessive use (training), it is recommended.

1.5. Manpower Qualification

Manufacturer or Airframe Rated Mechanic.

1.6. Return to service

The service performed as cited in this bulletin must be recorded in the airframe logbook with the signature of the responsible mechanic.

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1.7. Weight and Balance

Not Affected.

1.8. References

T1-AMM in its latest revision.

1.9. Disclaimer

This Service Bulletin has been prepared with the utmost care. However, errors and misunderstandings can never be completely ruled out. In case of doubt, the requester is asked to immediately contact TEXAS AIRCRAFT MANUFACTURING to clarify the issue.

2. Resources:

Tools for disassembly of the fairings and removal of the front landing gear leg

3. Instructions

NOTE

TEXAS AIRCRAFT MANUFACTURING cannot accept any responsibility for the quality of the work performed. Refer to the latest revision of Advisory Circular 43.13 – 1B "Acceptable Methods, Techniques, and Practices - Aircraft Inspection and Repair".

3.1. Contact TEXAS AIRCRAFT MANUFACTURING::

Request a new landing gear leg, citing this bulletin. The reinforcement must be performed by the manufacturer only.
The difference between the old and the new leg is the reinforcement Number 10, whose PN is T1.32A.20A0.008, also made of AISI 4130 material, with a thickness of 0.063”:

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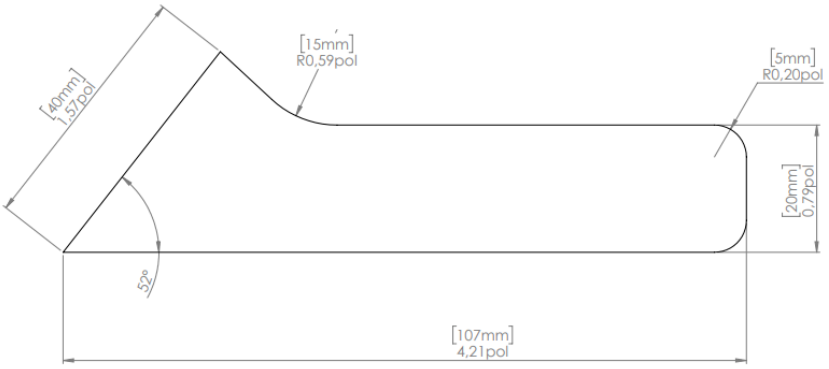

Figure 3.1.1 Reinforcement of the landing gear leg

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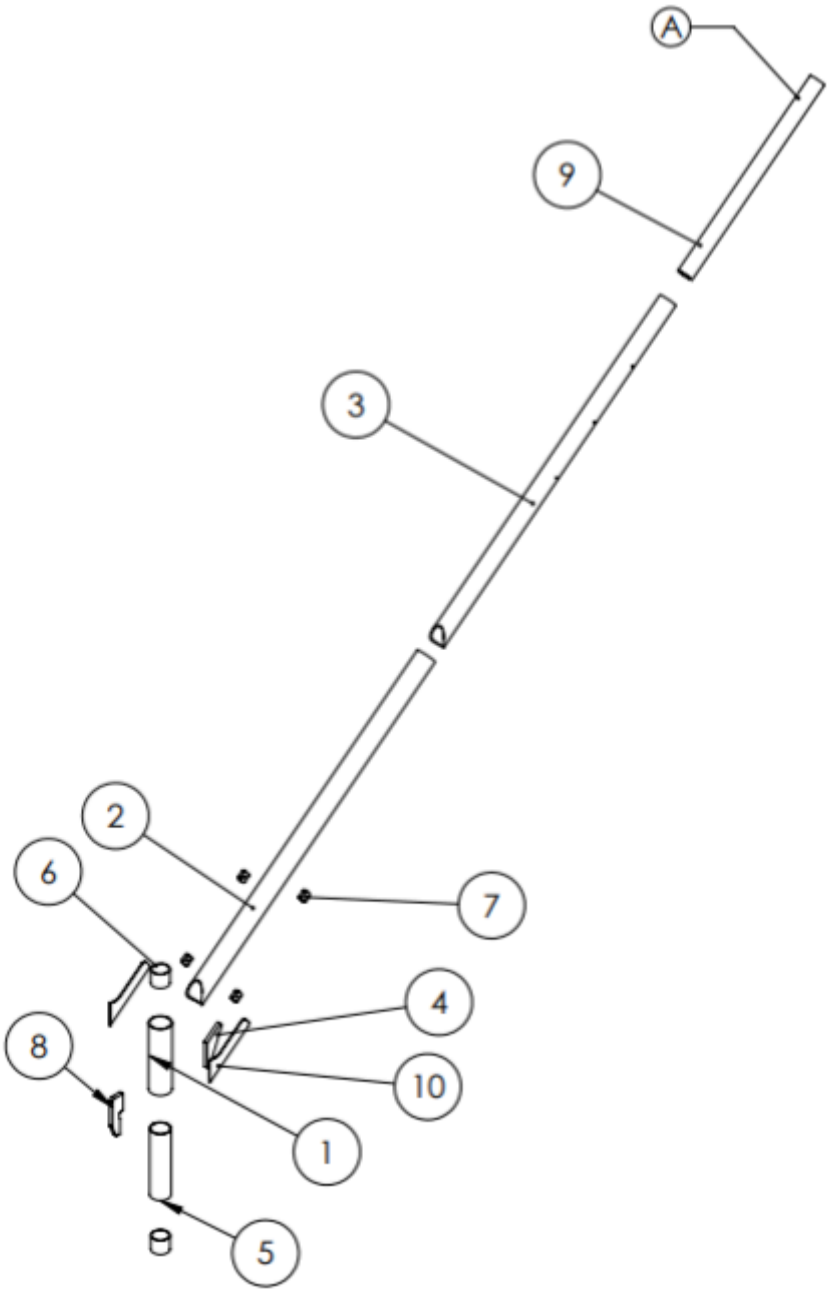

Figure 3.1.2 Nose landing gear leg

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3.2. LEG REMOVAL:

NOSE LANDING GEAR REMOVAL

CAUTION

CAUTION!!! Ensure that there are no objects under the aircraft and do not allow the tail to touch the ground.

CAUTION!!! Before lifting the aircraft, find an appropriate method as indicated in reference [3].

CAUTION!!! Only a trained professional may use a dangerous tool.

- Remove the upper and lower engine fairings from the aircraft;
- Using a screwdriver, remove the front and rear nose landing gear fairings;
- Using a screwdriver, remove the nose landing gear leg fairing;
- Select a lifting point on the engine and raise it to about 10 inches (approximately 25 cm) from the ground. (CAUTION!!! Ensure that there are no objects under the aircraft and do not allow the tail to touch the ground. Use an appropriate method as indicated in reference [3]);
- Remove the AN5-20A bolt that secures the leg to the engine mount;

Figure 3.2.1 AN5-20A Bolt.

- Remove the complete assembly from the aircraft;

3.3. NOSE LANDING GEAR INSTALLATION

LANDING GEAR LEG ASSEMBLY

- Install the nose landing gear fork on the leg as shown in Engineering Drawing T1.32A.2000.000;

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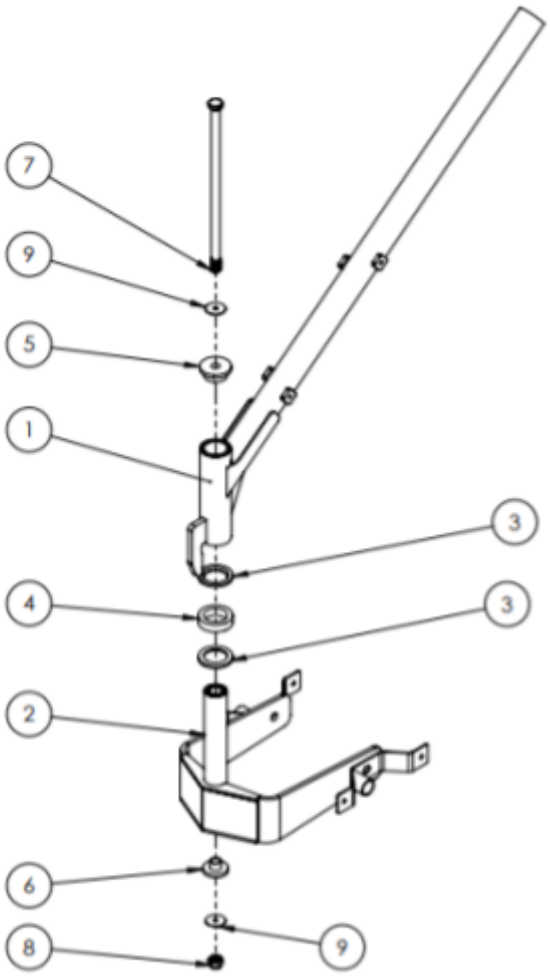

Figure 3.3.1 Assembly of the new landing gear.

Install the nose landing gear wheel on the assembly as shown in chapter 3.5.2 of the Colt 100 Maintenance Manual (Nose Landing Gear);

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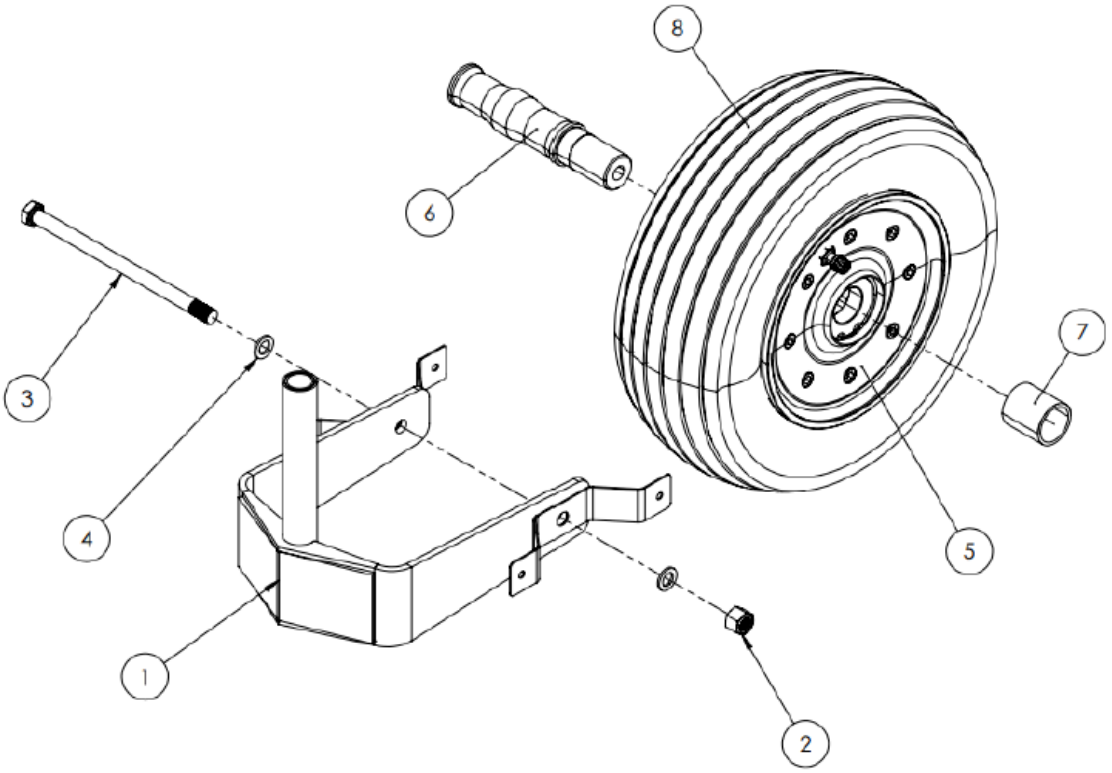

Figure 3.3.3 Nose Landing Gear Assembly.

LANDING GEAR LEG INSTALLATION

- Insert the assembly into the engine mount;
- Level the aircraft by lowering the nose until the tire contacts the ground (do not allow the full weight to be applied to the nose landing gear wheel);
- The landing gear fork must be aligned with the longitudinal axis of the aircraft;
- Only the central strip of the wheel should touch the ground and in a symmetrical manner;

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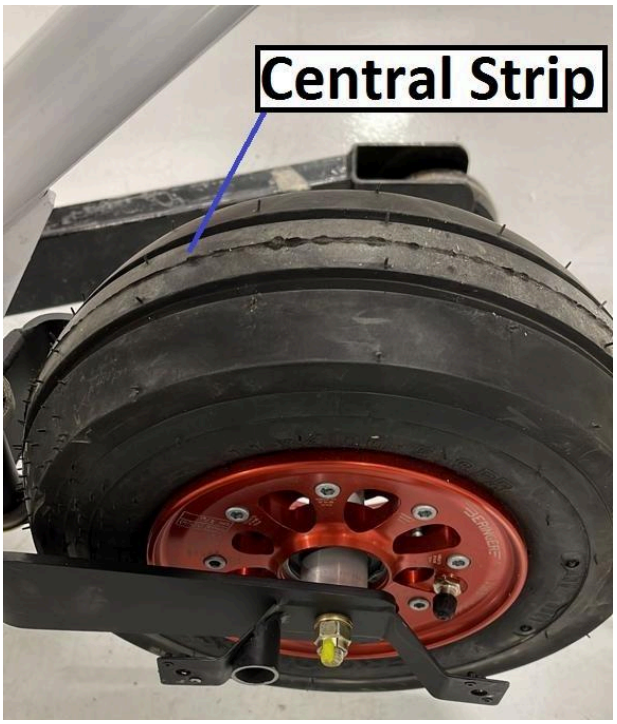

Figure 3.3.4 TIRE CENTERLINE

-Provide for the leveling of the aircraft and the alignment of the wheel, ensuring it is calibrated according to the Maintenance Manual instructions and that only the center of the tire touches the ground, ensuring that the measurement from the lowest section of the firewall to the ground is 61 cm / 24 in, as shown in the following image;

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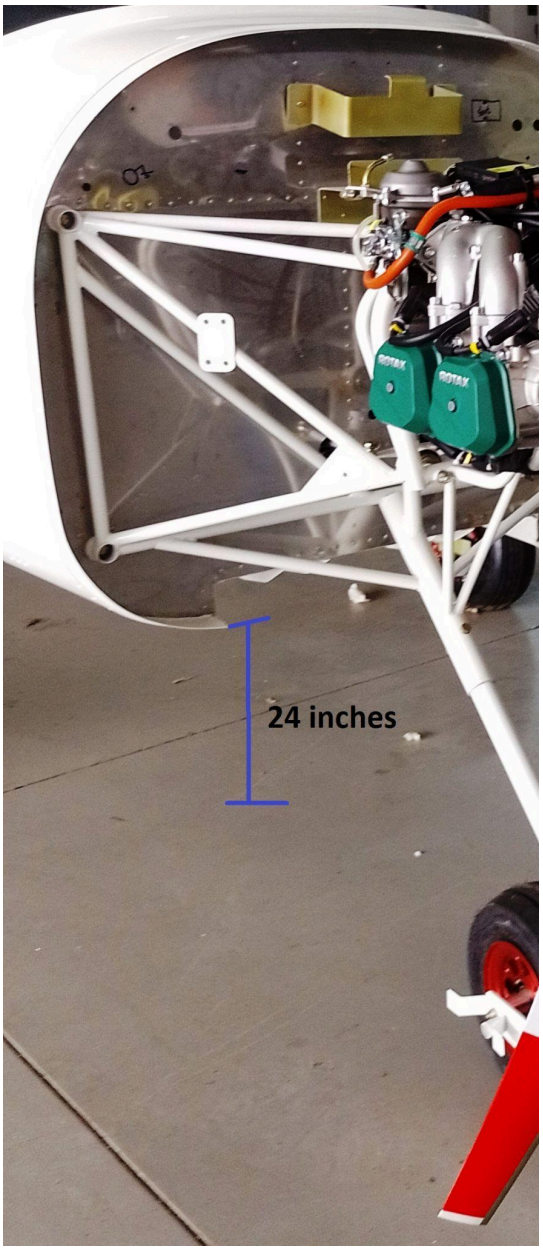

Figure 3.3.5 Vertical Distance to the Ground.

-Using a ⅛ inch drill bit, start drilling a hole in the landing gear leg, using the holes in the engine mount as a reference;
-Using a 5/16 inch drill bit, finish drilling the hole in the landing gear leg, using the holes in the engine mount as a reference;

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-Install the AN5-20A bolt (item 47) in the hole, use AN960-516 washers (items 81) and the AN364-524A nut (item 61);

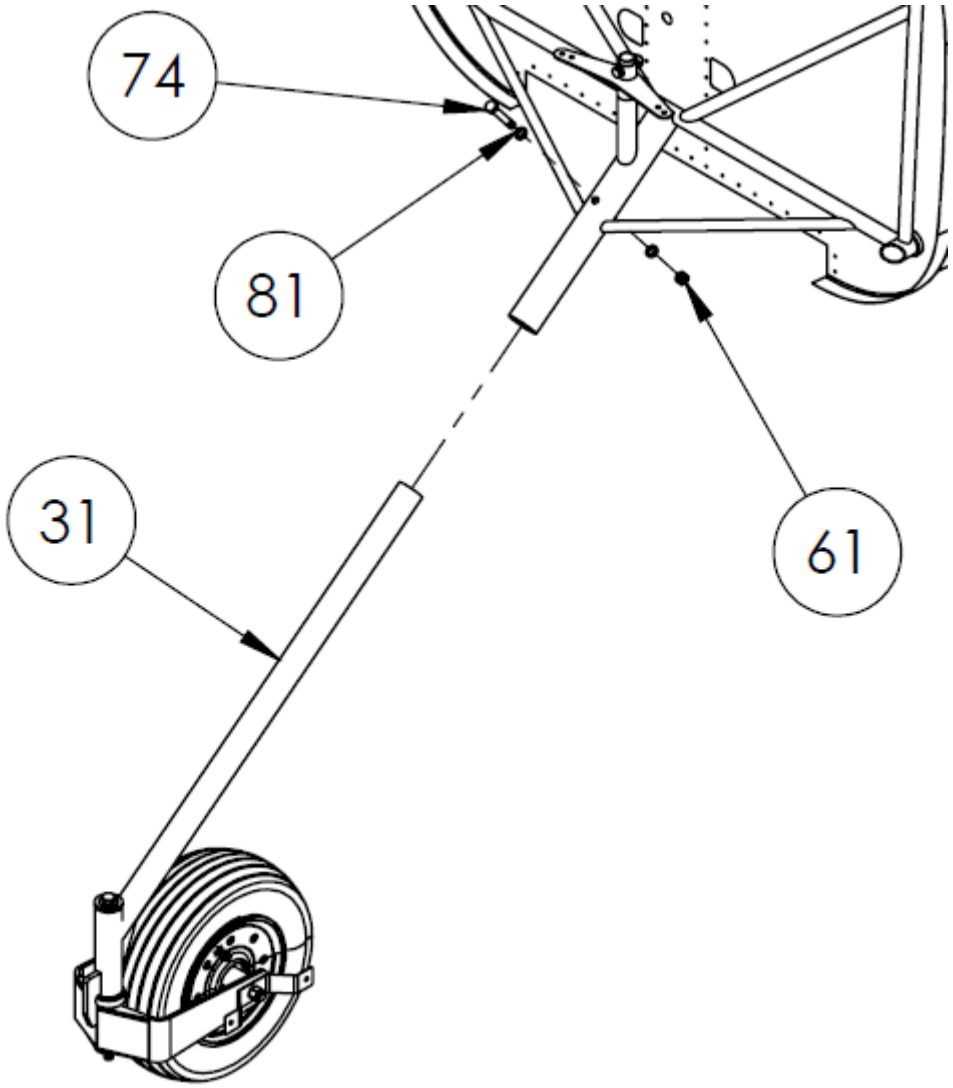

Figure 3.3.6. Installation.

- The torque value to be used must be as indicated in the following table (present in reference [1]);

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AN Bolt Size	Bolt Size- Threads Per Inch	Standard Nuts AN310, AN315, AN365	
		INCH POUNDS	*FOOT POUNDS*
AN3	*#10-32*	*20-25*	*1.6-2.0*
AN4	*1/4-28*	*50-70*	*4.2-5.8*
AN5	*5/16-24*	*100-140*	*8.3-11.6*
AN6	*3/8-24*	*160-190*	*13.3-15.8*
AN7	*7/16-20*	*450-500*	*37.5-41.7*
AN8	*1/2-20*	*480-690*	*40.0-57.5*
AN9	*9/16-18*	*800-1000*	*66.6-83.3*
AN10	*5/8-18*	*1100-1500*	*91.6-125.0*

Figure 3.3.7 Torque values (inch-pounds). Ref: AC 43.13-1B

FAIRINGS INSTALLATION

- Using a screwdriver, install the landing gear leg fairing;
- Using a screwdriver, install the rear and front nose landing gear fairings;
- Install the upper and lower engine fairings;

Figure 3.3.8 Nose Landing Gear with Fairings.