

**Nose Leg and Nose fork Assembly**

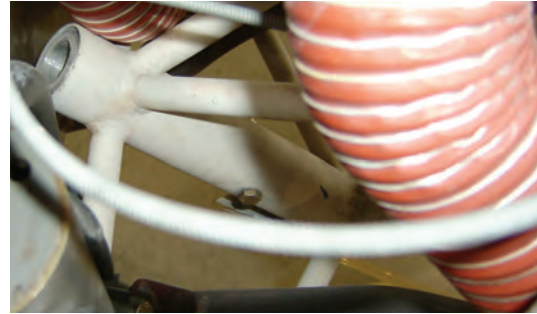
**Required Items:** Nose leg ALG-0020, Nose leg lower socket ALG-0021, 2 Nose forks ALG-0022, Phenolic nose block ALG-0025, AN3 hardware, AN4 hardware, 5/8" axle bolt, axle nut, #10 drill bit, 5/8"



1. To install the nose gear leg: Slide the leg into the mount up to the end of the receptacle in the mount.



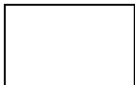
2. Measure the mid point of this socket, drill a 1/4" hole horizontally thru the mount and leg and install a AN4-21A Nyloc nut and washer if needed.



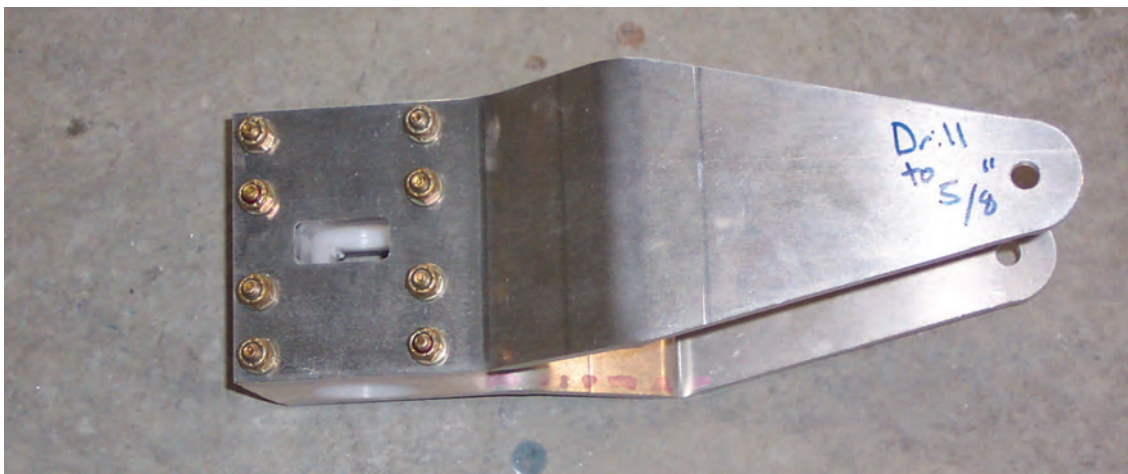
3. Locate from the kit parts the nose forks and the Phenolic blocks. The nose forks are identical parts.



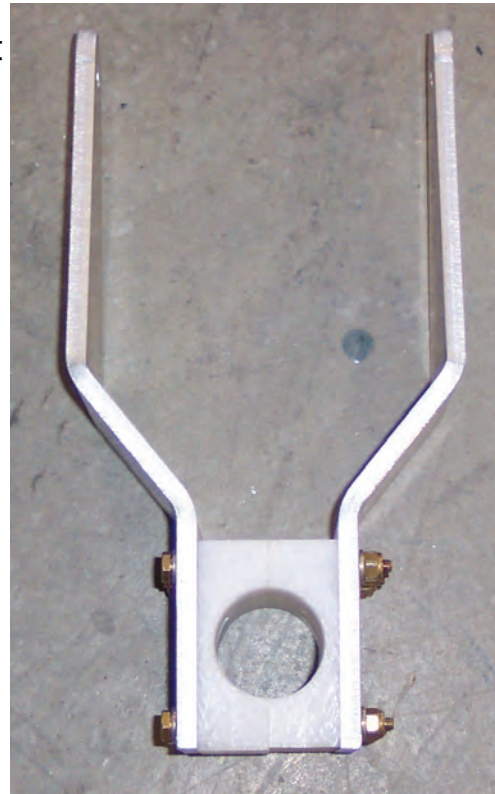
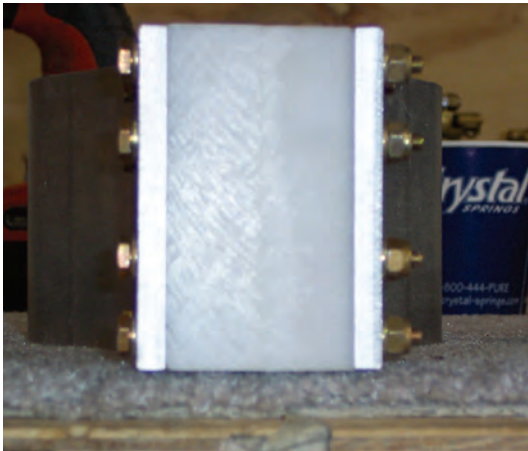
4. Drill the axle bolt hole out to 5/8 inch. The 8 holes on the front of the forks must be drilled out with a #10 drill bit.



5. Locate the phenolic nose fork spacers (see photo below) and the AN3-26A bolts, AN960-10 washers (one washer under head and another under nut) and AN365-1032A nylocks. Assemble the forks, blocks, nuts & bolts per the photo below.



6. Once the forks and blocks are assembled the hole for the leg bracket must be run through with a 1 3/8" hole saw to true up the hole. The bracket should move freely in the hole. Also the top and bottom of the phenolic must be filed down for a flat surface.



7. Prep, prime, and paint the nose leg weldment.

**Do not paint the portion that goes in the Forks**

8. Slide the weldment all the way on to the lower nose leg. Note how far in the leg goes, the hole that will be drilled will be half of the distance.

9. Drill a 1/4 inch hole through the weldment and mark the leg only nose leg.

10. Dissassemble and drill the rest of the way thru each with a V-block and a press to ensure the hole is thru the center.

11. Deburr the hole and insert a AN4-16A bolt, AN960-416 washer and AN365-428 nyloc.



## 38. Nose Gear Assembly



12. With the fork assembly slid onto the nose leg bracket, position the forks so that they are directly in trail of the nose block.

13. In the side of the forward section of the fork there is a rectangular slot, this is for the turn stop bolt. A 1/4" hole must be drilled in the center of the slot. Drill only one side, use a V-block and a press to drill thru the other side.

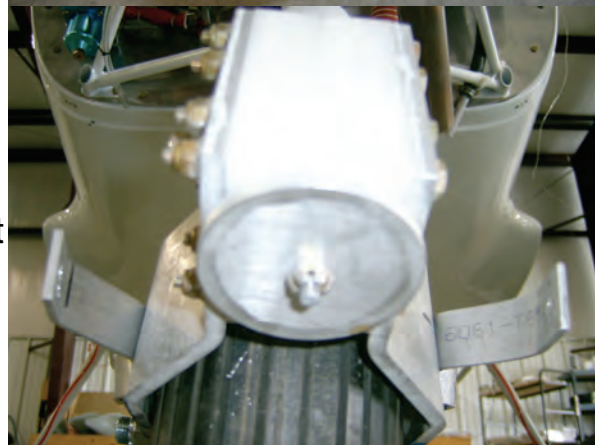
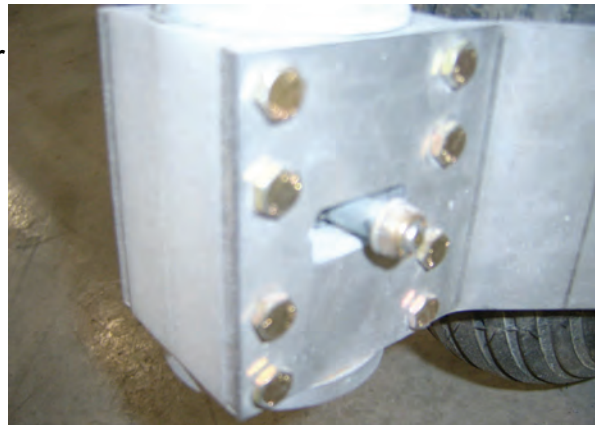
14. An AN4-31A bolt is to be used for the stop bolt. It should be much longer than the width of the forks, spacers must be made to equal its distance on both sides of the forks. Once fabricated install the bolt and spacers.

15. Finally, install the thick aluminum washer at the bottom of the nose leg weldment and secure with a AN310-4 castle nut and cotter pin.

16. Fabricate axle spacers to fit between the fork and wheel. They must center the wheel in the fork.

17. Install the nut and tighten down against the forks, do not pinch the forks.

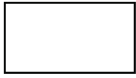
18. Drill an 1/8" hole in the bolt up against the nut, and install a 1/8" cotter key so the nut does not back off.





## Nose Wheel Pant installation

**Required items:** Nose Pant, Aluminum stock 1" by 0.125" by 16" long, #8 screws, #8 nut plates, 1/32" rivets, Drill bits; 3/32, 1/8, 5/32. 1/8" clecos, sanding block, cut off wheels.



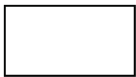
1. Fit the front half to the rear half of the pant, some block sanding of the front half will be necessary to get the seam looking good.



2. Determine the center of the top of the pant at the seam, mark this spot.



3. Measure from this spot down along the seam 3" and in from the seam 1/2", mark this spot.



4. Drill a pilot hole of 1/8" and install a Cleco.

5. Measure up from the bottom opening of the back half 1" , than measure in 1/2" from the seam.

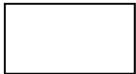


6. Drill a pilot hole of 1/8" and install a Cleco.

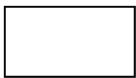
7. Complete this for the other side of the pant.



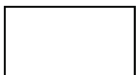
8. Trim the rear half so that the pant will slide forward and the seam is even with the front of the weldment, and in front of the tire.



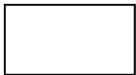
9. The pant should be high enough that it fits over the forks in the front, make sure that it is level. The pant is far enough forward when no trimming is necessary to the front half for the tire.



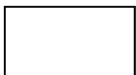
10. Measure the inside distance between the fork and the inside of the wheel pant.



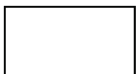
11. This measurement will give the amount of bend needed in the front bracket.



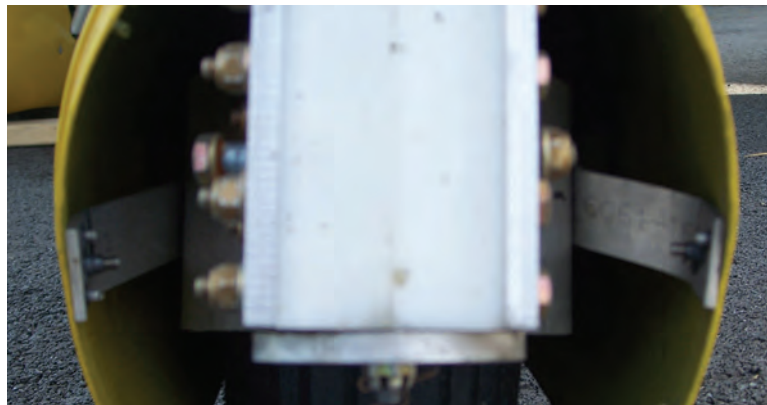
12. Fabricate from the aluminum stock two 8" long parts.



13. Measure and mark: 1" in from each end; 3" in from each end, you should have 4 marks.



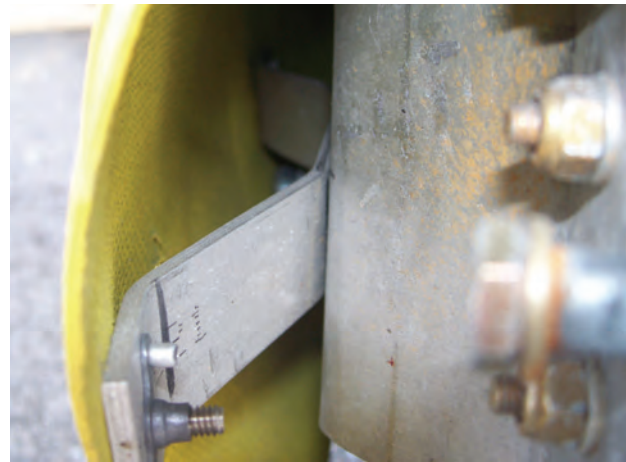
14. Evenly bend the part to make a bracket as in the picture, do not bend on a sharp object. If using a vise put a small piece of wood in it to soften the bend.



## 38. Nose Gear Assembly



- 15. With the bracket formed drill two 3/16" holes in the flat that will mount to the fork, these holes are to be 3/8" from the bend and centered in the part.
- 16. Clamp the bracket to the fork, it must be level and not contact the axle.
- 17. Mark the mount hole positions.
- 18. Drill with a #21 bit and tap to 10-32, when doing this put something between the fork and tire to avoid puncturing it.
- 19. Repeat for the other side.
- 20. Install the brackets to the fork with either #10 screws and loctite 242 or AN3-3 bolts and loctite 242.
- 21. Slide the wheel pant on and position it where you trimmed it to sit.
- 22. At this time it may be necessary to adjust the brackets to better fit the shape of the pant.
- 23. Remove the wheel pant
- 24. Straighten the nose wheel. Measure up from the floor where the mounting areas are on the brackets, both sides.
- 25. Position the pant on once again, and transfer those measurements to the outside of the wheel pant.
- 26. Find the center of the mounting area, Drill an 1/8" pilot hole thru the pant and bracket, hold in place with clecos.
- 27. Temporarily install the front half of the pant with clecos, make sure that it clears the tire and leg, trim if needed.
- 28. Move the wheel assembly form lock to lock and trim the hole in the top of the pant if needed.
- 29. Disassemble all clecos.
- 30. Install #8 nut plates in all mounting holes. Use 3/32 counter sunk rivets.

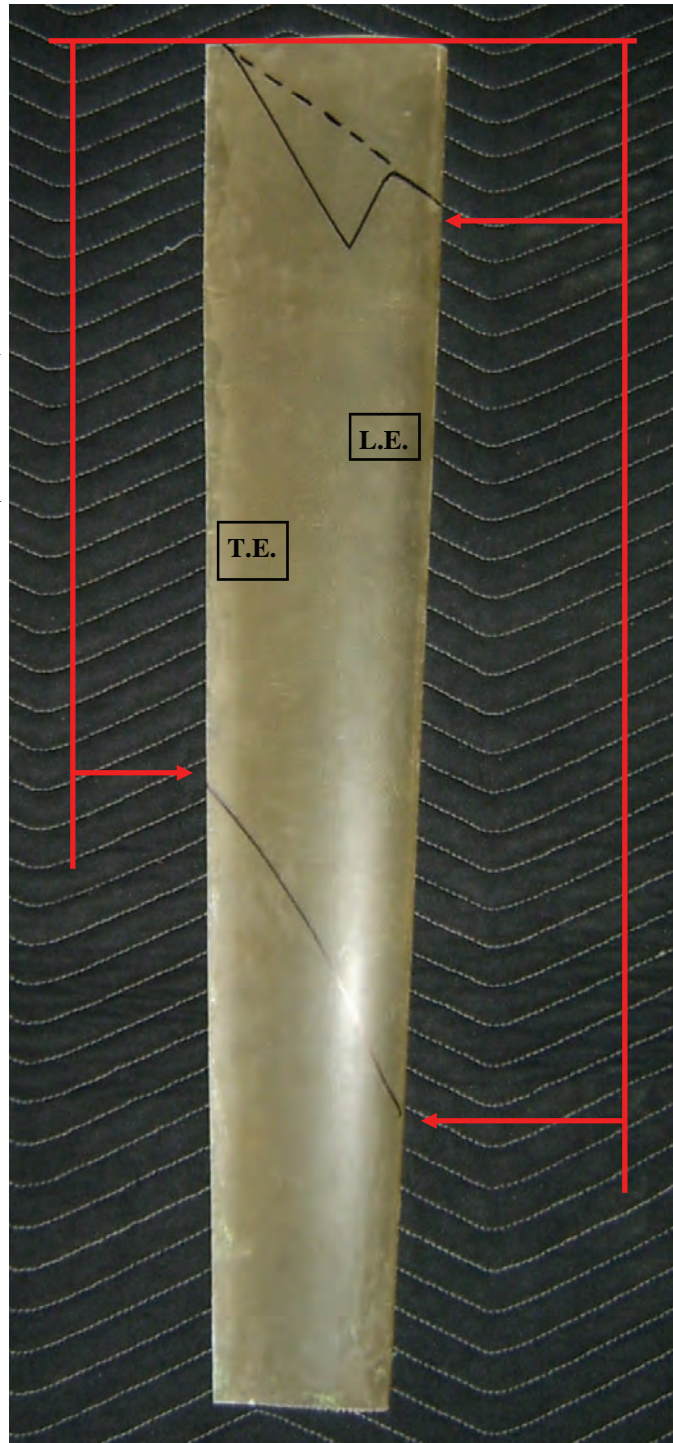




### Nose Leg Fairing

**Required Items:** Leg Fairing, 18" aluminum hinge, 3/32" rivet, clecos, 3/32 drill bit, rivet puller, snips,

1. Measure down the leading edge from the top 4.5" to the first mark.
2. From this point draw a line to the trailing edge upper corner.
3. Next measure down 27 1/8" down on the leading edge .
4. Than measure down 19 5/8" down from the top on the trailing edge.
5. Connect the 2 lowest marks, your line will appear straight but after some trimming on the plane will appear curved.
6. Note that the top as a jog in it. After fitting to the aircraft the faring will look like this.
7. These are the first rough cuts make the same measurements to the other side of the fairing keeping in mind which is edge is which.



## 38. Nose Gear Assembly



- 8. The nose wheel pant should be installed and unpainted at this point to help with fitting correctly and to avoid scratches if it were painted.
- 9. Trim the upper half to fit around the motor mount supports as shown.
- 10. Take care to trim a little at a time, growing fiberglass can be done although difficult.
- 11. If there is enough clearance to get the lower portion on with out trouble, mark where the bolt is on the fairing and drill out to 7/16" to allow the bolt to protrude both sides.
- 12. With the fairing now in place use a marker to follow the curve of the pant and mark you cut on the fairing, The minumum clearance must allow the pant to move freely with out contact.



- 13. Install the piano hinge 7/8" inset in the fairing with the hinge facing outward.
- 14. Secure with 3/32 rivets every 4th leaf, and in the last leaf of each end.
- 15. Turn over and repeat for the other side, the pin must be installed to insure that the leafs stay aligned.
- 16. Trim the pin so it will fit flush with the top of the fairing and that about 1.5-2" is out the bottom.
- 17. Create a loop in the last few inches of pin.
- 18. This can be tucked in the fairing after installation and provide a loop to pull on to take the fairing off.

