



SERVICE BULLETIN

No. 724A

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

FAA DOA SO-1 Approved

April 20, 1982 S

Service Bulletin No. 724A supersedes and voids Service Bulletin No. 724, dated October 20, 1981.

This Service Bulletin is divided into two (2) PARTS. Check each PART for aircraft Model and Serial Numbers affected.

Reason for Revision: Add NCTE in PART II for Aircraft Affected.

PART I

Subject: Nose Landing Gear Inspection and Rigging

Models Affected: Serial Numbers Affected:

PA-28R-201T Turbo Arrow III 28R-7703001 through 28R-7803373
PA-28RT-201T Turbo Arrow IV 28R-7931001 through 28R-8131193

Compliance Time: Within the next one hundred (100) hours of operation or to coincide with the next regularly scheduled inspection event.

Purpose: Reports have been received of cracked or broken nose landing gear link and brace assemblies, nose gear actuator housing, and hat section fairings.

If this condition exists and is left uncorrected, while in flight, the nose landing gear may inadvertently extend and lock in the down position.

PART I of this Service Bulletin provides instructions and illustrations to inspect these areas for cracks and to properly rig the nose landing gear to alleviate these conditions.

Instructions:

1. Remove top and bottom engine cowl.
2. Place aircraft on jacks.
3. Inspect the nose landing gear link and brace assembly, the aft attachment end of the nose actuator and the right front hat section fairing for cracks and loose rivets. Dye penetrant may be required. (See Sketch 1 and 3.)
4. If any of the parts are cracked, remove and replace. (See Material Required.)
5. If parts show no sign of cracks, loosen the jam nut on the rubber bumper stop and turn stop in so it will not interfere with initial rigging.
6. Loosen jam nut on the nose actuator rod end bearing and disconnect from downlock hook. Set rod end so that threads are engaged only enough to cover the witness hole in the actuator rod and reconnect actuator to downlock hook. ATA: 3220

Instructions: (continued)

7. Retract the landing gear with care, by turning the master switch on, raising the emergency gear extension lever and moving the gear selector handle to the UP position. Retain the emergency extension lever in the UP override position. Be sure that the actuator piston is fully retracted (bottomed) before any part of the gear mechanism contacts adjacent parts. At this time the dimension at the 5.00" ± .12" location should read 5.30" to 5.50" (See Sketch 4). If not, adjust piston rod end to obtain this range.
8. With the gear in the retracted position, manually pull the tire down and adjust rubber bumper stop to obtain a 5.00" ± .12" dimension and tighten jam nut. (See Sketch 4).
9. Move gear selector handle to the DOWN position. With gear down and locked, check to ensure that some additional actuator rod travel is available by removing rod end bolt and pulling the piston until it bottoms.
10. Check to ensure that rod end threads cover witness hole in the actuator rod.
11. Tighten jam nut on rod end bearing and complete hook-up of piston rod end bearing to downlock hook.
12. Cycle gear, including free-fall and final dimensional check of 5.00" ± .12".

NOTE: Certain instructions above differ from those in Maintenance Manual. Maintenance Manual will be revised to reflect these changes.

13. Install lower cowl and rig nose gear doors. (Refer to Chapter 32, Section 20 of the Maintenance Manual).
14. Ensure three (3) green lights, gear selector DOWN and a positive down and locked condition on entire gear. Remove aircraft from jacks, complete cowl installation and make appropriate logbook entry of compliance with PART I of this Service Bulletin.

Material Required:

If required by Instruction 4, one (1) each Link and Brace Assembly, Piper Part Number 76426-03V; or one (1) each Nose Gear Actuator Cylinder, Piper Part Number 35797-02V; or one (1) each Hat Section Fairing, Piper Part Number 67271-00V, per aircraft.

PART II

Subject: Nose Landing Gear Inspection and Modification

Models Affected:

Serial Numbers Affected:

PA-28R-200 Arrow II

28R-7635522 through 28R-7635545

PA-28R-201 Arrow III

28R-7737001 through 28R-7837317

PA-28RT-201 Arrow IV

28R-7918001 through 28R-8118082

NOTE: PART II of this Service Bulletin affects only those aircraft equipped with Gar Kenyon Nose Landing Gear Actuators (gold in color, Gar Kenyon Part Number 94951) and not the Syncro Devices Actuator (silver in color, Syncro Devices Part Number SFA 231-2 or SFA 231-3).

Compliance Time: Within the next one hundred (100) hours or to coincide with the next regularly scheduled inspection event, whichever occurs first.

Purpose: Reports have been received of cracked or broken nose landing gear link and brace assemblies, nose gear actuator housings and hat section fairings.

If this condition exists and is left uncorrected, while in flight the nose landing gear may inadvertently extend and lock in the down position.

PART II of this Service Bulletin provides instructions and an illustration to decrease the stroke of the nose landing gear actuator thus eliminating the possibility of component damage.

Instructions:

1. Remove top and bottom engine cowl.
2. Place aircraft on jacks.
3. Inspect the nose landing gear link and brace assembly, the aft attachment end of the nose gear actuator and the right front hat section fairing for cracks and loose rivets. Dye penetrant may be required. (See Sketch 2.)
4. If any of the parts are cracked, remove and replace. (See Material Required.)
5. If parts show no sign of cracks, disconnect the cylinder operating rod end from the downlock hook by removing attachment nut and bolt.
6. Remove safety wire, unscrew end gland, and remove piston from actuator.
7. Insert Spacer, Piper Part Number D35797-01V. (See Sketch 2.) Inspect O-Rings for damage and replace, if required. (See Parts Catalog.) Lubricate the areas around the O-rings with hydraulic fluid. Slide the piston rod into the cylinder. Secure the end gland into the cylinder body (torquing gland to 20 ± 1 ft. lbs.) and safety wire, using .032 diameter wire.
8. Initially set rod end bearing mid way between witness hole and full engagement and reinstall on downlock hook.
9. Loosen the jam nut on the rubber bumper stop and turn in approximately three (3) turns.

NOTE: Some aircraft are equipped with a large 1 1/8" diameter flat rubber stop. If these stops have washers of any type between the jam nut and threaded receptacle, remove these washers and discard.

10. Operate pump to purge system of air and check fluid level in reservoir. Replenish as necessary.
11. Retract landing gear with care, by turning master switch ON, raising the emergency gear extension lever and moving the gear selector handle to the UP position. Be sure that the actuator piston is fully retracted (bottomed) before any part of the gear mechanism contacts adjacent parts.
12. Check $5.80" \pm .12"$ dimension. (See Sketch 4.) Adjust piston rod end to obtain this dimension.

(over)

Instructions: (continued)

NOTE: Be sure gear retraction is not being limited by rubber bumper.
Turn in further if necessary.

13. With gear retracted and rigged to 5.80" ± .12" dimension, turn rubber bumper finger tight against the upper drag link. Lower gear, extend bumper screw an additional one half turn and tighten jam nut.
14. With gear down and locked, check to ensure that positive additional actuator rod travel is available by removing rod end bolt and pulling piston out until it "bottoms".
15. Check to ensure that rod end threads cover witness hole in the actuator rod.
16. Tighten jam nut on rod end bearing and complete hook-up of piston rod end bearing to downlock hook.

NOTE: Certain instructions above differ from those in Maintenance Manual.
Maintenance Manual will be revised to reflect these changes.

17. Cycle gear, including free-fall to ensure proper operation.
18. Install lower cowl and rig nose gear doors. (Refer to Chapter 32, Section 20 of the Maintenance Manual.)
19. Ensure three (3) green lights, gear selector DOWN and a positive down and locked condition on entire gear. Remove aircraft from jacks, complete cowl installation and make appropriate logbook entry of compliance with PART II of this Service Bulletin.

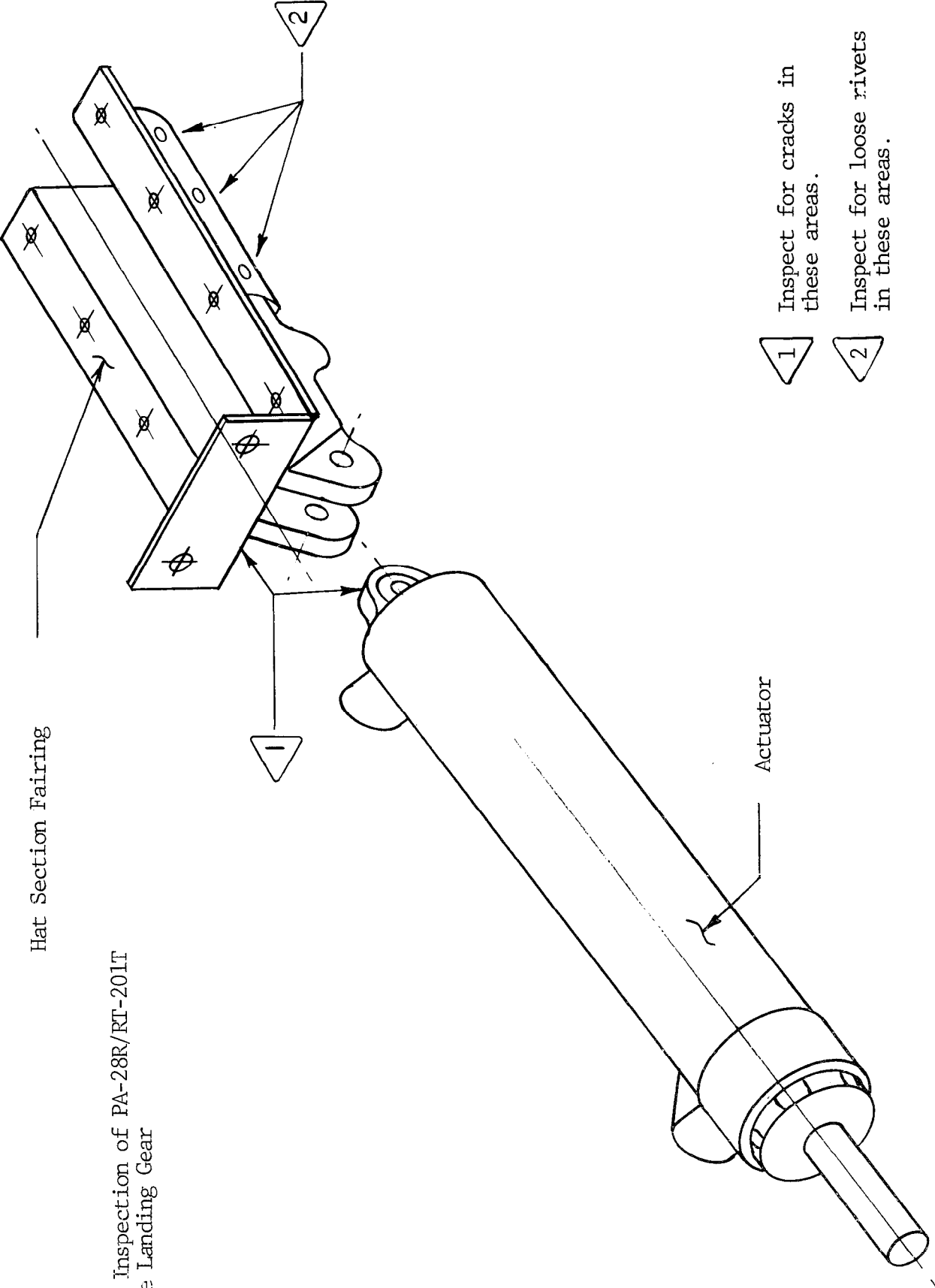
Material Required: One (1) each Spacer, Piper Part Number D35797-01V; if required by Instruction 4, one (1) each Link and Brace Assembly, Piper Part Number 76426-03V; or one (1) each Nose Gear Actuator Cylinder, Piper Part Number 35797-03V; or one (1) each Hat Section Fairing, Piper Part Number 67271-00V, per aircraft.

Availability of Parts: Your Piper Field Service Facility.

Effectivity Date: This Service Bulletin is effective upon receipt.

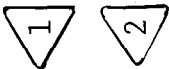
Summary: Please contact your Piper Field Service Facility to make arrangements for compliance with the provisions of this Service Bulletin in accordance with the Compliance Times, indicated.

Any applicable Factory Participation will remain in effect for a period of time not to exceed 180 days from the date of this Service Bulletin.



Inspect for cracks in these areas.

Inspect for loose rivets in these areas.



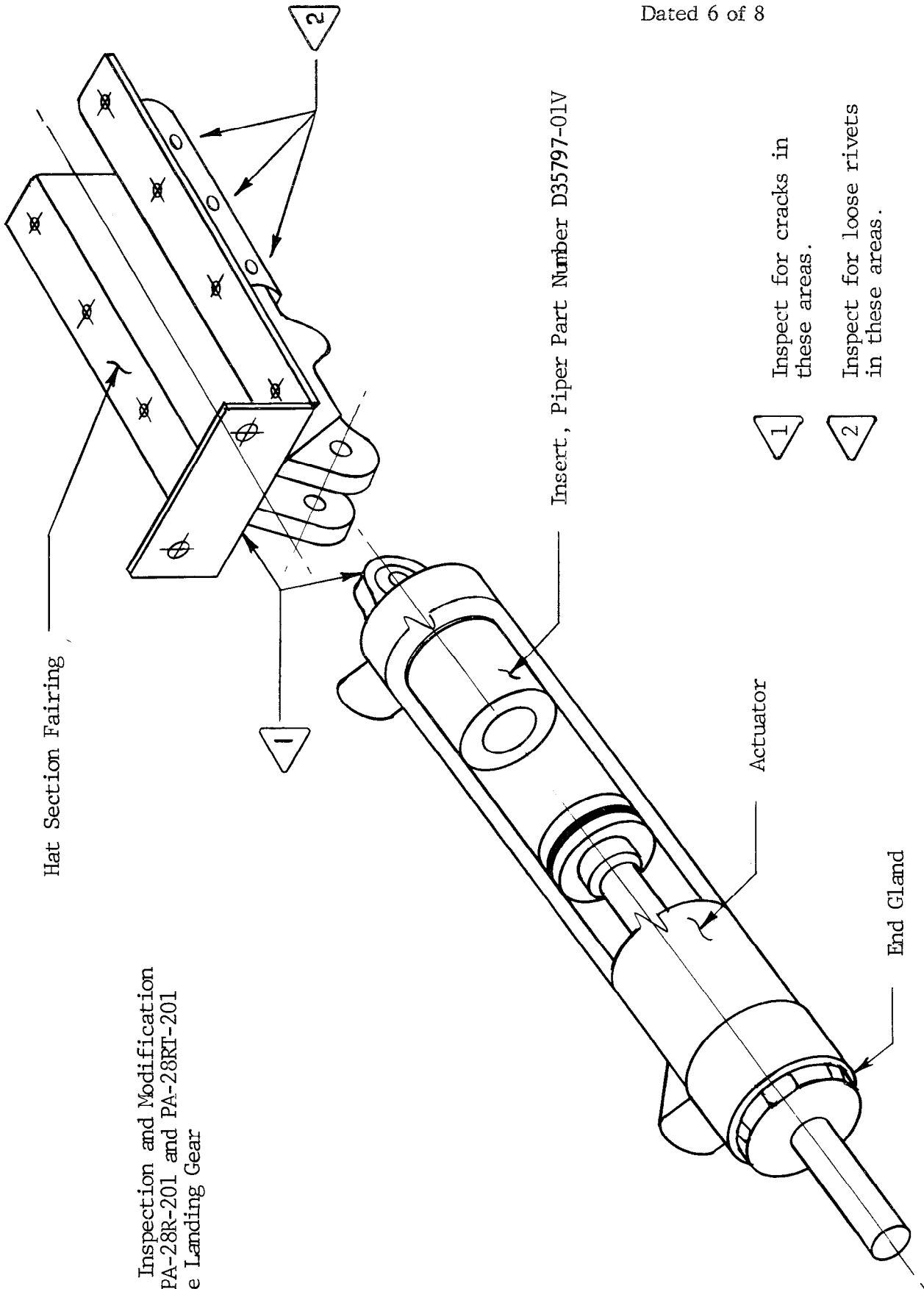
Hat Section Fairing

Actuator

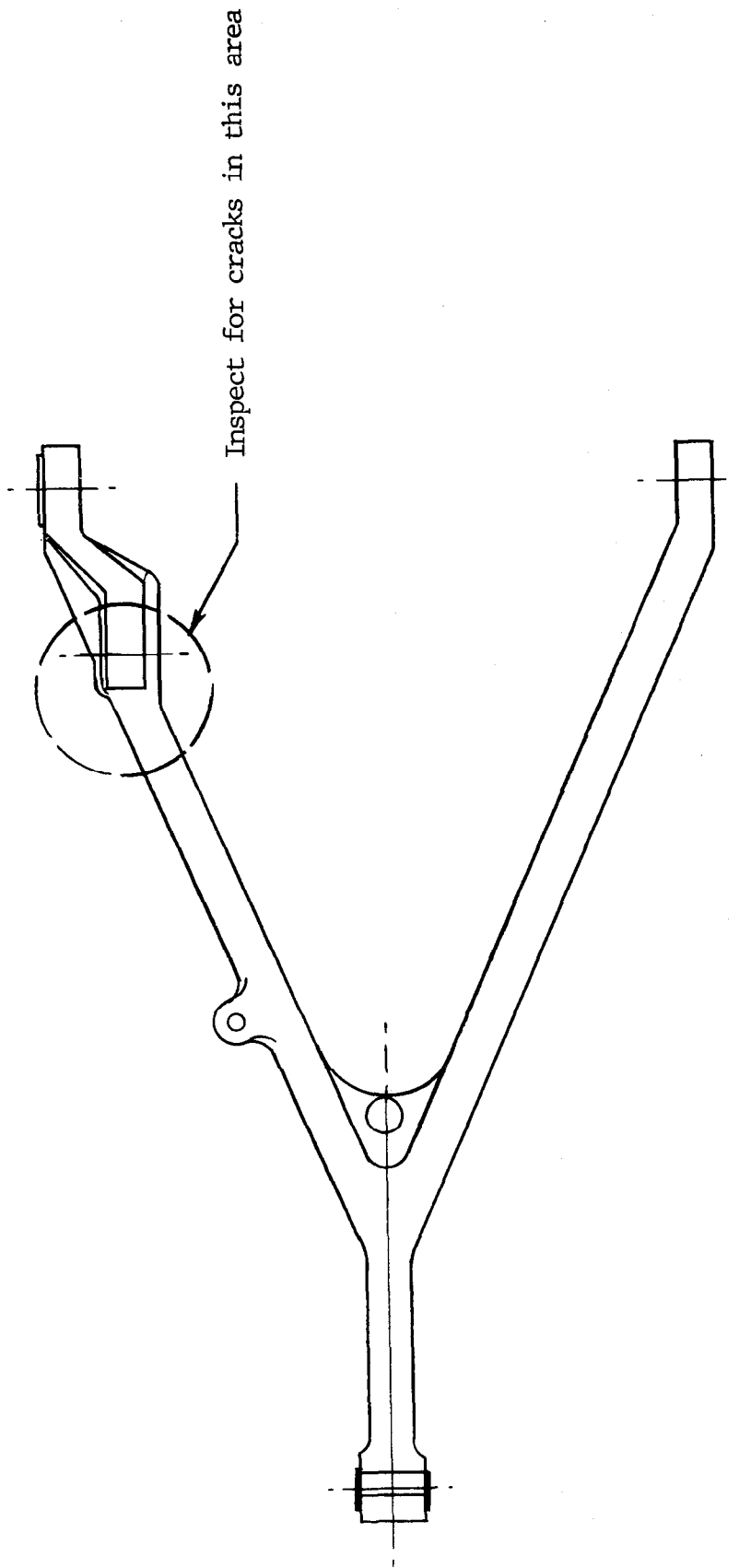
For Inspection of PA-28R/RT-201T
Nose Landing Gear

SKETCH 1

SKETCH 2



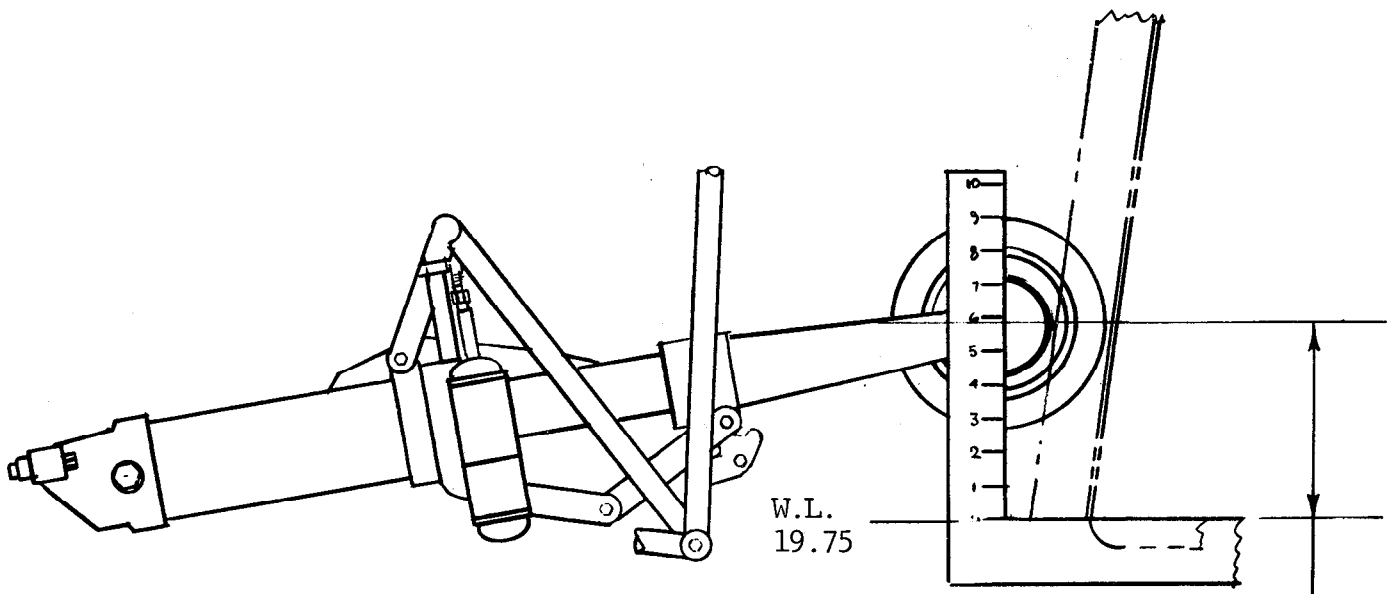
Upper Drag Brace



SKETCH 3

SKETCH 4

Final Rigging Dimensions



PA-28R/RT-201	5.80 in.	\pm	.12 in.
PA-28R/RT-201T	5.00 in.	\pm	.12 in.