

PIPER AIRCRAFT, INC.
PA-46-350P, MALIBU MIRAGE / PA-46R-350T, MALIBU MATRIX
MAINTENANCE MANUAL

C. Cleaning, Inspection, and Repair

- (1) Clean all parts with a suitable dry-type cleaning solvent.
- (2) Inspect the gear components for the following unfavorable conditions:
 - (a) Bolts, bearings and bushings for excessive wear, corrosion and damage.
 - (b) Gear housing, torque links and down spring for cracks, bends or misalignment.
- (3) Check the general condition of each limit switch and its actuator. Check wiring for fraying, poor connections or conditions that may lead to failures.
- (4) The bungee requires no service other than routine inspection. In case of damage or malfunction, the bungee should be replaced rather than repaired.
- (5) Repair to the landing gear is limited to reconditioning of parts such as replacing bearings and bushings, smoothing out minor nicks and scratches, repainting of areas where paint has chipped or peeled and replacement of parts.

D. Adjustment

NOTE: The nose gear rake angle should be inspected and/or adjusted any time the pilot experiences poor steering, or there is replacement or service to the nose gear trunnion, the nose gear actuator, or the engine mount.

- (1) Place the airplane on jacks (refer to Jacking 7-10-00).
- (2) Place gear in DN position. Extended position is determined by the cylinder locking (refer to 32-30-00, Nose Gear Actuator Assembly).
- (3) Verify that the nose gear rake angle is set between zero (vertical) and one-half degree forward, as shown in "Figure 4" on page 32209. Using a prop protractor, digital level, or other suitable tool, measure the relative angle between the nose gear piston tube and the lower (belly) skin of the fuselage, just aft of the nose gear wheel well. When properly rigged, this angle will measure between 90.0 and 90.5 degrees. If necessary, adjust the length of the fully extended actuator to achieve the required nose gear rake angle as follows:
 - (a) Loosen the jam nut(s) that secure the rod end bearing to the forward end of the actuator.
 - (b) Adjust the overall length of the rod end/actuator assembly to achieve the required nose gear rake angle.
 - (c) Tighten jam nut(s).

NOTE: If unable to rig nose gear rake angle with two jam nuts installed, remove one jam nut. Maximum thread exposure with single nut is 0.28 inch.

- (4) Remove airplane from jacks.

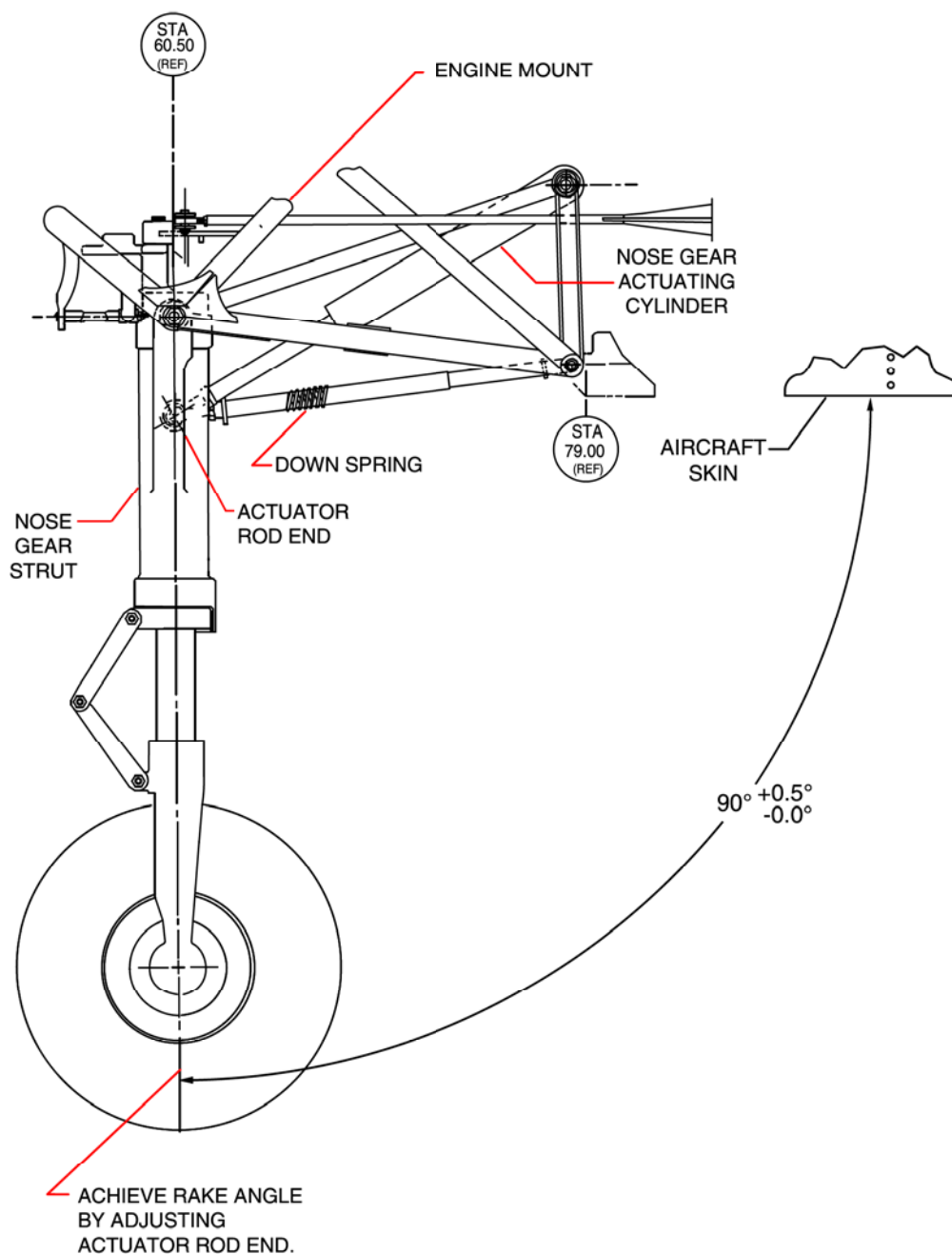
NOTE: Any change to the nose gear rake angle will also affect the clearance between the steering arm and the nose gear steering rollers. Verify/adjust this clearance as described in "Alignment" below.

E. Alignment

- (1) Place the airplane on a smooth level floor that will accommodate the striking of a chalk line.
- (2) Ascertain that the nose gear is properly adjusted as given in Nose Gear Assembly - Adjustment, above.
- (3) With the landing gear in the down locked position, weight proportionally on the nose gear and the nose wheel facing forward, adjust the steering arm - roller clearance as described in 27-20-00, Rudder Controls, Rigging and Adjustment.
- (4) Place the airplane on jacks (refer to 7-10-00).
- (5) Level the airplane laterally and longitudinally (refer to 8-20-00).

PIPER AIRCRAFT, INC.
PA-46-350P, MALIBU MIRAGE / PA-46R-350T, MALIBU MATRIX
MAINTENANCE MANUAL

89785 AN



Nose Gear Adjustment
Figure 4 (Sheet 1 of 2)