

Nomad

SERVICE BULLETIN

LANDING GEAR - INSPECTION OF NOSE LANDING GEAR ACTUATOR (MOD N521)

1. PLANNING INFORMATION

A. Effectivity

All Nomad N22-Series and N24-Series aircraft which have not had Modification N521 embodied.

B. Reason

An instance has occurred in which the spring pin that locks the nose landing gear screw actuator end-fitting to the actuator screw became loose. This is believed to have been caused by incorrect rigging of the landing gear retraction system, which allowed a mechanical limit stop to be contacted during operation of the landing gear.

C. Description

The spring pin is inspected for security. If the pin is secure, it is lockwired to prevent movement. If the pin has loosened, a new pin (oversize if necessary) is fitted with Loctite, then lockwired.

D. Compliance

As soon as possible after receipt of this service bulletin, but not later than the next service.

E. Approval

The inspection and repair procedures detailed herein have been approved pursuant to Air Navigation Regulation 40 and conform with the type certification requirements.

F. Manpower

Two manhours.

G. Materials , Price and Availability

The materials required to accomplish this inspection and repair should be procured from operator stock or local sources.

H. Tooling , Price and Availability

None required.

I. Weight and Balance

None required.

J. References

Maintenance Manual (MM)
Component Maintenance Manual (CMM)

K. Publications Affected

None

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2. ACCOMPLISHMENT INSTRUCTIONS

- A. Inspect the nose landing gear screw actuator.

NOTE

It is not necessary to jack the aircraft to carry out the following initial inspection:



ENSURE LANDING GEAR CIRCUIT BREAKERS ARE TRIPPED BEFORE PERFORMING ANY MANUAL TASK ON THE NOSE LANDING GEAR.

- (1) Detach the bottom end of the rubber dust cover from the groove in the nose landing gear screw actuator end-fitting.
 - (2) Raise the dust cover to give access to the spring pin which locks the end-fitting to the actuator screw.
 - (3) Inspect the spring pin for security. If spring pin is secure, follow the PART A procedure detailed in Para 2.B. If the spring in is insecure, following the PART B procedure detailed in Para 2.C.
- B. Procedure to be followed if spring pin shows signs of movement, or is loose:
- (1) Jack the aircraft (Ref MM7-00-00).
 - (2) Partially retract the landing gear to remove compression from screw actuator end-fitting (Ref MM 32-00-00).
 - (3) Trip the landing gear circuit breakers.
 - (4) Disconnect the nose landing gear screw actuator from the drag strut (Ref MM 32-30-12, Page 201, Para 1.A.(5)).
 - (5) Screw the nose landing gear actuator screw out until the mechanical stop is reached. Note the number of turns required.
 - (6) Remove and discard the spring pin (Ref CMM 32-01-05, page 303/304, Figure 301, Item 24).
 - (7) Check that the hole for the spring pin is between 0.125 inch and 0.129 inch diameter.

NOTE

If hole is oversize, use a 0.156 inch dia (oversize) spring pin during the following procedure.

- (8) Unscrew the end-fitting from the actuator screw.
- (9) Use Locqic T primer or equivalent to clean the 1/2-20 UNF thread in the end-fitting and the corresponding thread on the actuator screw.



DURING THE FOLLOWING STEP, TAKE CARE THAT THE ACTUATOR SCREW DOES NOT SUFFER DAMAGE WHILE BEING HELD TO ENABLE THE END-FITTING TO BE FITTED.

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- (10) Apply Loctite Nutlock or equivalent sealant to threads, then screw the end-fitting onto the actuator screw until the spring pin holes are aligned.
- (11) Fit new spring pin 0.875 inch long x 0.125 inch dia P/N MS9047-106 or P/N MS16562-131. If hole is oversize (Ref 2.C (7) above) drill out hole to between 0.150 inch and 0.156 inch dia and fit oversize (O/S) spring pin 0.875 inch long x 0.156 inch dia P/N MS16562-137.

NOTE

Refer Para 3.A.(1) for alternative spring pins.

- (12) Lockwire the spring pin, passing the lockwire through the centre of the spring pin and around the end-fitting.
- (13) Screw the actuator screw into the actuator by the same number of turns as previously unscrewed (Ref 2.C.(5)).
- (14) Reconnect the actuator screw end-fitting to the drag strut (Ref MM 32-30-12, Pages 203 and 204, Para B.(9), (10) and (11)).
- (15) Refit the dust cover.
- (16) Extend the landing gear using the emergency extension system until main landing gear screw actuators are on their mechanical stops.
- (17) Check that the gap between the end-fitting and the spring housing on the nose landing gear screw actuator is between 0.020 inch and 0.060 inch (Ref MM 32-30-12, Figure 201). If gap is incorrect, re-synchronise the nose landing gear (Ref MM 32-30-12, Pages 208 and 209/210, Paragraphs 3.A.(2) to 3.A.(9) inclusive).
- (18) Disconnect and tie back the nose landing gear doors.
- (19) Fully retract the landing gear (Ref MM 32-00-00) then trip the landing gear circuit breakers.
- (20) Check that the clearance between the nose gear drag strut and the screw actuator rear support beam is between 0.050 inch and 0.080 inch. If gap is incorrect, investigate cause and carry out the appropriate rigging checks, and rigging and synchronisation procedures as detailed in Service Letter SL 78-01. A copy of this service letter has been included with this service bulletin for the convenience of operators.
- (21) Fully extend the landing gear (Ref MM 32-00-00) then trip the landing gear circuit breakers.
- (22) Reconnect the nose landing gear doors.
- (23) Remove the jacks from the aircraft (Ref MM 7-00-00).

3. MATERIALS INFORMATION

No kit is issued for the accomplishment of this service bulletin. Operators are to procure the following items from stock or local sources:

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New Part No	Qty	Description	Old Part No	Instruction/Disposition
Items required for Part A procedure only				
	AR	Lockwire		
Items required for Part B procedure only				
MS20995-C20	AR	Lockwire		
	AR	Locquic Primer or equivalent cleaning agent		
	AR	Loctite Nutlock or equivalent sealant		
MS9047-106	AR	Spring Pin, 0.875in long X 0.125in dia or		
MS16562-131	AR	Spring Pin, 0.875in long X 0.125in dia or		Alternate
MS16562-37	AR	Spring Pin, 0.875in long X 0.125in dia or		Alternate
MS16562-225	AR	Spring Pin, 0.875in long X 0.125in dia or		Alternate
MS9048-106	AR	Spring Pin, 0.875in long X 0.125in dia or		Alternate
MS16562-137	AR	Spring Pin, 0.875in long X 0.156in dia or		Over size
MS16562-43	AR	Spring Pin, 0.875in long X 0.156in dia or		Alternate
MS16562-231	AR	Spring Pin, 0.875in long X 0.156in dia or		Alternate
MS9047-137	AR	Spring Pin, 0.875in long X 0.156in dia or		Alternate
MS9048-137	AR	Spring Pin, 0.875in long X 0.156in dia or		Alternate

4. SPECIAL TOOLS AND EQUIPMENT

None

5. RECORDING ACTION

Record compliance with Service Bulletin NMD-32-14 Part B in the airframe log book.