

FIELD SERVICE BULLETIN

Navion



RYAN AERONAUTICAL COMPANY, LINDBERGH FIELD, SAN DIEGO 12, CALIFORNIA

REVISION

FIELD SERVICE BULLETIN NO. 4
REVISED AUGUST 5, 1949

RYAN MANDATORY BY 1-1-50

TO: ALL NAVION DISTRIBUTORS, DEALERS AND OWNERS

SUBJECT: INSPECTION OF NOSE GEAR RETRACTING DRAG LINK

EFFECTIVITY: NAVIONS, NAV-4-2 THROUGH 1150

CANCELS: FIELD SERVICE BULLETIN NO. 4 DATED JULY 12, 1948

A few cases have been reported on earlier Navions where Nose Gear Retracting Drag Links, Part No. 145-34106 have failed in service. Despite the fact that a large number of these links have given many hours of service without trouble, it is considered necessary to reinforce all links having butt welds (either arc or flash) regardless of the position of the oil drain hole. Reinforced links will be furnished on an exchange basis by the Ryan Aeronautical Company and handled through authorized Ryan Navion Distributors or Dealers. Owners should contact their nearest Distributor or Dealer in advance to arrange for installation and make sure that reinforced links are available.

The procedure will be to make available through authorized Ryan Navion Distributors a quantity of factory reinforced link assemblies at a cost of \$58.40. This will be a complete link assembly including Parts No. 145-34106 reinforced aft link attached to a 145-34164 forward link together with 145-34121 hinge clevis bolt, 145-34132 bushing, 145-34183 roller, AN960 washer and AN980-T nut. (See Figure 1.) Installation will be made for Navion owners on an exchange basis whereby parts removed from airplanes will be returned to the factory prepaid for a credit of \$50.40 for a complete assembly. This credit can only be allowed if parts are repairable. It is no longer necessary to submit an Application for Warranty Adjustment to obtain credit. All parts returned MUST be properly identified by tags. Distributor or Dealer installation cost, to be borne by the airplane owner, should not exceed the approximate equivalent of two man hours. When returned parts are received at the factory they will be inspected and credit will be issued for all repairable parts. Link assemblies will be properly mated and the correct over-travel angle provided; therefore, exchange assemblies must be complete as shown in Figure 1. In the event an incomplete assembly is returned, missing part or parts will be added and customer charged for the additions.

Install replacement links consisting of the following Part No. 145-34120 link assembly (less Part No. 145-34108 shaft) as follows:

See Figure 1, page 48, Navion Service Manual

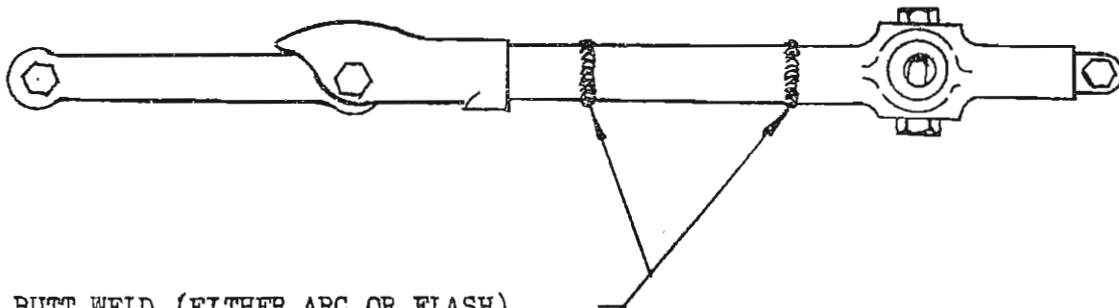
1. Place airplane on jacks so landing gear can be operated.
2. Remove right hand engine cooling gill cover. Place a piece of dural or wood next to skin under lower nose gear bungee attachment. This is to prevent bungee from rotating too far and damaging indicating light switches.
3. Remove bolt attaching forward 145-34164 link from nose gear strut. Remove bolt connecting operating hydraulic cylinder to 145-34106 link. Remove bolt attaching 145-34106 link to bungee shaft.
4. Install reinforced link assembly by attaching link to bungee shaft with bolt previously removed. Install bolt, attaching link 145-34164 to nose gear strut. Connect hydraulic operating cylinder strut to link and safety.
5. Operate gear with hand pump at least three (3) operations, checking indicating lights and up-locks for proper functioning.

NOTE: It is important that the proper adjustments of the link installation be accomplished to eliminate faulty gear operation. For adjusting bungee, see Service Letter No. 39 or Navion Service Manual, page 48, figure 31, drawing number 145-33-342 revision C, reference items three (3) and four (4), which read as follows:

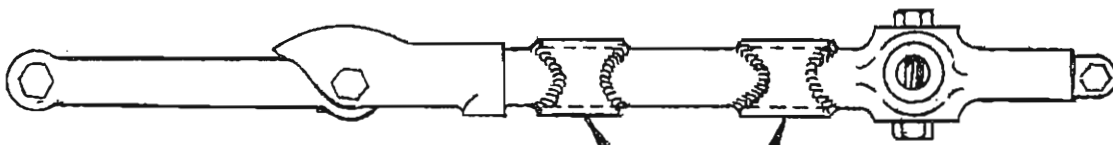
Reference Item 3: "With nose gear in down position, link past center adjust bungee so that bolt hole (A) lines up with control arm connecting part. Before connecting together adjust bungee out four (4) turns (to lengthen). Remove attaching link bolt (A) from nose gear strut allowing link assembly to drop down so bungee can be connected, then re-assemble strut link bolt (A). This should compress bungee approximately 1/8 inch. This can be noted by examining pin in slot inside of bungee spring."

Reference Item 4: "With gear down, linkage in past-center position, and operating strut in retracted position, adjust strut rod end so that hole aligns with bolt hole in actuating arm. Then screw in one additional turn, and connect."

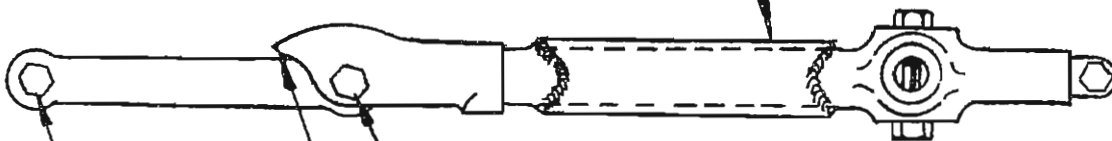
NOTE: Due to the fact the \$8.00 charge made for reworking links forwarded to Ryan from the field does not actually cover the entire cost of the rework, all links must be changed by the January 1, 1950 mandatory date of this bulletin as the \$8.00 exchange offer will expire on that date.



BUTT WELD (EITHER ARC OR FLASH)
IS UNSATISFACTORY AND BULLETIN
NO. 4 WILL APPLY



EITHER TYPE OF REINFORCEMENT IS
SATISFACTORY, BULLETIN NO. 4
WILL NOT APPLY



BOLT A

BOLT MUST ALLOW ABSOLUTE FREEDOM
OF KNUCKLE MOVEMENT

SHOULDER SHOULD TOUCH WHEN
IN PAST-CENTER POSITION

FIGURE I