

PAPERWORK FOR LANDING GEAR EMERGENCY
EXTENSION SECURITY INSTALLATION

Kit List (721012)

Paperwork List (721012)

Installation Instructions (721012)

Sketch "A" (721012) (Ref. Dwgs. 26360 & 26361)

Sketch "B" (721012) (Ref. Dwg. 23636)

Sketch "C" (721012) (Ref. Dwgs. 21715, 21716 & 26462)

Sketch "D" (721012) (Ref. Dwgs. 26462 & 26808)

Sketch "E" (721012)

P. A. C. Flight Manual Supplement Report 1769

P. A. C. Flight Manual Supplement No. 13 (Report 1269)

P. A. C. Flight Manual Pages 11 and 16 of Section II (Report 1269)

P. A. C. Flight Manual Addendums - 1 Page

Owner's Handbook Addendums - 4 Pages

LANDING GEAR EMERGENCY EXTENSION SECURITY INSTALLATION

PA-24-180-250-260 - Serial Nos. 24-1 to 24-4782, 24-4784 to 24-4803 inclusive

PA-24-400 - Serial Nos. 26-2 and up

PA-30 - Serial Nos. 30-2 to 30-1744 inclusive

(Factory Reference Only, Drawings 21715 - Rev. S, 21716 - Rev. AC, 23636 - Rev. U,
26360 - Rev. Z, 26361 - Rev. U, 26462 - Rev. K, 26808 - Rev. B)

<u>PART NO.</u>	<u>QUANTITY</u>	<u>NOMENCLATURE</u>
	1	Paperwork (721012)
13098-00	1	Spring
21698-00	1	Plate
21829-01	1	Lug - Front
21830-01	1	Lug - Rear
21868-00	1	Bracket Assembly
24916-00	1	Bracket Assembly
26514-00	1	Bracket Assembly
26522-00	1	Spring
26529-00	1	Bolt
26542-00	1	Lock Assembly
26807-00	1	Brace
29999-02	1	Bushing
26499-00	1	Placard (581 470)
27834-00	1	Placard
27835-00	1	Placard
80012-06	1	Bushing
81262-92	1	Link

LANDING GEAR EMERGENCY EXTENSION SECURITY INSTALLATION

<u>PART NO.</u>	<u>QUANTITY</u>	<u>NOMENCLATURE</u>
151 295	3.5 inches	Lock Wire - MS20995-C20
400 004	1	Bolt - AN4-7A
400 438	1	Bolt - AN3-4A
401 266	4	Bolt - AN3-5A
404 887	4	Nut - MS20365-1032C
404 888	1	Nut - MS20365-428C
407 135	1	Washer - AN936-A10
407 564	2	Washer - AN960-10
407 565	1	Washer - AN960-410
407 584	2	Washer - AN960-10L
419 600	1	Screw - AN535-2-4
420 201	4	Rivet - AN470AD3-4
420 216	3	Rivet - MS20470AD4-4
420 217	4	Rivet - MS20470AD4-5
424 060	1	Pin - Cotter MS24665-285
480 700	1	Pin - Roll #59-022-094-0375

INSTALLATION INSTRUCTIONS

A. PREPARATION OF AIRPLANE FOR INSTALLATION OF KIT.

1. Be certain that all switches are in the off position.
2. Place the airplane on jacks. Refer to the appropriate Service Manual for correct jacking points.
3. Refer to kit sketches for general areas and remove existing installations necessary to perform this installation.

B. INSTALLATION OF BRACKET ASSEMBLY Part No. 26514-00. REFER TO SKETCH "A".

1. The location for the bracket assembly is aft of the Sta. 68.0 bulkhead and to the left of the airplane centerline at B.L. 3.62. Maintain centerline alignment between the transmission and the bracket assembly. Alignment takes precedence over B.L. dimension stated if a choice is necessary.
2. Remove any existing rivets, at bracket location, necessary to allow bracket to be fastened firmly against the bulkhead and skin.
3. Using the bracket assembly as a template, mark and drill .129 rivet holes maintaining the alignment of the centerlines. Rivet the assembly in place.
4. Drill the bracket and replace the rivets removed in Step 2.

C. INSTALLATION, ADJUSTMENT AND CHECK OF THE LANDING GEAR SAFETY LOCK ASSEMBLY Part No. 26542-00.

1. Temporarily assemble all parts of the safety lock installation, except the cotter pin and lock wire. See Sketch "B".

NOTE

Prior to final adjustment of the safety lock, determine that the landing gear retraction system is properly rigged and operating satisfactorily. See appropriate Service Manual for rigging instructions.

2. Final adjustment of the landing gear safety lock installation is to be made by the following procedure. Refer to Sketch "E".
 - a. Disconnect the retraction transmission by pulling up on the emergency release lever.
 - b. The down safety lock should be adjusted as close to the spacer (1) on the torque arm through bolt (2) as possible, yet freely engage when the gear is fully extended.
 - c. To adjust the lock, remove cotter pin (7) loosen jam nut (6) and turn lock arm (4) in the desired direction.
 - d. If one half turn is needed for correct adjustment, remove bolt (10) attaching lock fitting (8) to the bulkhead bracket and turn fitting in the desired direction.
 - e. Install fitting and spring (9) in the bulkhead bracket and secure with bolt.
 - f. Tighten jam nut, install cotter pin and safety wire attachment bolt head.

3. Check the gear down safety lock by using the following procedure:
 - a. Install the emergency gear extension lever in the torque tube socket, making sure it is properly seated and fully extended.
 - b. Attach an accurate spring scale (0 to 100 pound range) to the bottom of the extension lever knob.
 - c. Pull out the gear motor circuit breaker and turn on the master switch.
 - d. Disengage the torque tube assembly.
 - e. Disengage the down safety lock and measure force on the extension lever by pulling horizontally aft on the spring scales until the gear downlock light goes out.
 - f. Engage the down safety lock and make the same force measurement with the addition of 35 pounds to the first measurement.
 - g. The gear downlock light should remain "ON".
 - h. If the gear downlock light goes out, recheck adjustment of the gear down lock as outlined in step 2b.

**D. INSTALLATION OF AN ADDITIONAL NOSE GEAR PAST CENTER LOCKING SPRING.
REFER TO SKETCHES "C" AND "D".**

1. Remove the existing spring, link, attachment lug and limit switch from the drag link brace. Retain the limit switch for re-use.
2. Replace the existing brace with new Brace Part No. 26807-00. Use existing hardware and tighten fingertight only at this time.
3. Install the existing and new Part No. 21830-01 rear spring attachment lugs to the drag link brace as shown in View A-A on Sketch "D".
4. Locate, drill and tap a mounting bolt hole, in the nose gear housing, for the new spring attachment lug Part No. 21829-01 as shown in View A-A on Sketch "C".
5. Install the new front lug using Washer AN936-A10 and Bolt AN3-4A.
6. Reinstall the original link and spring removed in Step D-1.
7. Install new Link Part No. 81262-92 to rear lug using Bushing Part No. 80012-06, Bolt AN3-5A, Washer AN960-10 and Nut MS20365-1032C.
8. Attach the new Spring Part No. 13098-00 to the link and front lug.

NOTE

Extend and retract the nose gear manually to determine that each nose gear drag link assembly locks simultaneously and independently of each other. Should one or both nose gear drag links not lock as required, refer to the appropriate Service Manual for the correct adjustments to be made.

9. Tighten the drag link brace hardware when proper drag link locking is achieved.
10. Choose the correct switch mounting bracket Part No. 21868-00 or 24916-00, depending on the existing limit switch, and install on the drag link brace as shown in View B-B on Sketch "D".
11. Mount the limit switch on the bracket.
12. If necessary, replace the existing switch actuator plate, on the drag link, with plate Part No. 21698-00 as shown on Sketch "D" using the existing hardware. The forward edge of the plate should lay along the shoulder of the drag link.
13. Adjust the limit switch for proper operation.
14. Replace the installations removed from the aircraft to make this installation.
15. Check gear electrically and manually for proper operation. If correct, remove jacks,

E. INSTALLATION OF PLACARDS (REVISING INSTRUCTIONS) ON LANDING GEAR RELEASE ACCESS DOOR.

1. On PA-24 airplanes with Serial Nos. 24-1 to 24-2174, 24-2176 to 24-2298 inclusive, remove the protective cover from the adhesive back of Placard Part No. 27835-00 and place on the landing gear release access door above the words INSTRUCTIONS FOR EMERGENCY EXTENSION OF LANDING GEAR. Remove the protective cover from the adhesive back of Placard Part No. 27834-00 and place directly over existing Step 5 of the instructions on the access door. Be certain to retain Steps 1 thru 4. Insert the airplane identification number in space provided on placard Part No. 27835-00.

2. On PA-24 airplanes with Serial Nos. 24-2175, 24-2299 to 24-4782, 24-4784 to 24-4803 inclusive and PA-24-400 with Serial Nos. 26-2 and up, remove the protective cover from the adhesive back of Placard Part No. 27835-00 and place on the landing gear release access door between existing warning check 3 and the words INSTRUCTIONS FOR EMERGENCY EXTENSION OF LANDING GEAR. Remove the protective cover from the adhesive back of Placard Part No. 27834-00 and place directly over the existing Step 5 of the instructions. Retain existing Steps 1 thru 4. Insert the airplane identification number in space provided on Placard Part No. 27835-00.

3. On PA-30 airplanes with Serial Nos. 30-2 to 30-1716, 30-1718 to 30-1744 inclusive, remove the existing placard from the landing gear release access door. Position the new Placard Part No. 26499-00 lengthwise in the same area and drill four .098 holes using the placard as a template. Secure the placard to the door with MS20470AD3-4 rivets.

NOTE

Change the Emergency Gear Extension Procedures in the Flight Manual and Owner's Handbook as outlined in Sections F and G.

F. SELECT THE INSTRUCTIONS FROM THE FOLLOWING STEPS PERTAINING TO THE FLIGHT MANUAL OF THE AIRPLANE BEING MODIFIED.

1. Place supplement to airplane Flight Manual Piper Report 1769 in supplement section of the Flight Manual Piper Report No. 934, 973, 974, 997, 1047, 1127, 1179, 1220, 1295, 1333, 1334, 1358 or 1359.

2. Place Supplement No. 13 in supplement section and replace pages 11 and 16 of Section 2 of Piper Report No. 1269 with revised pages 11 and 16.

3. Airplane Flight Manual Piper Report No. 934, 973, 974, 997, 1047, 1127 or 1333, revise page 3 of Section 1, Airplane Flight Manual Piper Report No. 1179, 1220 or 1358, revise page 4 of Section 1.

a. Remove the addendum designated to be used for reports listed. Cut on dotted line and trim slightly if necessary to cover unwanted part of the page only.

b. Remove the protective cover from the adhesive back of the addendum and cover all existing information between step d of procedure 1 and procedure 2. Procedure 1 should now consist of steps a thru f plus the revised caution note. Do not cover any part of step 3 of Procedure 1 or Procedure 2.

c. Report 1179 revision is to be made on page 4 of Section 1. Remove the protective cover from the adhesive back of the addendum and cover the existing step e and the caution note. Procedure 1 should now consist of steps a thru d on page 3 and steps e and f and revised caution note on page 4. Do not cover any part of Procedure 2.

4. Flight Manual 1295 or 1334. Revise page 4 of Section 1.
 - a. Remove the addendum designated to be used for Airplane Flight Manual Piper Report No. 1295 or 1334. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the procedure only. Include the tab on the addendum when revising report 1295.
 - b. Revised Airplane Flight Manual Piper Report No. 1295 by removing the protective cover from the adhesive back of the addendum and covering existing steps a thru e including the words (and locked) in the second paragraph. Procedure 1 should now consist of steps a thru f and the sentence: When the instrument panel light is turned on, the intensity of the gear down light is reduced and may be invisible during daylight.
 - c. Revise Airplane Flight Manual Piper Report No. 1334 by removing the protective covering from the adhesive back of the addendum and covering existing steps a thru e of Procedure 1 retaining the caution note. Procedure 1 should now consist of steps a thru f and the existing caution note. Be certain the tab for Report 1295 does not appear in this revision or that any part of the caution note has been removed.
5. Airplane Flight Manual Piper Report No. 1359 - Revise page 4 of section 1.
 - a. Remove addendum designated to be used for Piper Report No. 1359. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the procedure only.
 - b. Remove the protective cover from the adhesive back of the addendum and cover existing steps a thru e and the caution note of Procedure 1. Procedure 1 should now consist of steps a thru f and the revised caution note. Do not cover any part of Procedure 2.
6. Airplane Flight Manual Piper Report No. 1269 - Revise page 7 of section 1.
 - a. Remove the addendum designated to be used for Piper Report No. 1269. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the procedure only.
 - b. Remove the protective cover from the adhesive back of the addendum and place between step 4 of Procedure D and the words Circuit Breakers of Procedure E. Do not cover any part of step 4 or Procedure E. Procedure D should now consist of steps 1 thru 5 plus the revised note.
7. Weight and Balance is negligible.

G. PROCEDURES FOR REVISING OWNER'S HANDBOOKS, SELECT INSTRUCTIONS FROM THE FOLLOWING STEPS PERTAINING TO THE HANDBOOK OF AIRCRAFT BEING MODIFIED.

NOTE

If a discrepancy exists between the information contained on the following addendums and the Airplane Flight Manual, the Airplane Flight Manual shall be considered the final authority.

1. 1958 Owner's Handbook Part No. 752 467 issued March 1968 and revised June 1970 or 1959 Owner's Handbook Part No. 753 507 for PA-24-180-250 aircraft.
 - a. Turn to page 24 Section II of the handbook.
 - b. Remove addendum number 1 from sheet 1. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
 - c. Remove the protective cover from the adhesive back of the addendum and cover all existing information below the illustration.

2. 1960 Owner's Handbook Part No. 753 529 or 1961 Owner's Handbook Part No. 753 570 for PA-24-180-250 aircraft.

a. Turn to page 24 Section II of 1960 Handbook or page 26 Section II of 1961 Handbook.
b. Remove addendum number 1 from sheet 1 cutting on the dotted line. Remove step 2 from the bottom of the addendum retaining the page number. Trim slightly if necessary to cover unwanted part of the page only.

c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from the first paragraph of Emergency Procedures, beginning with the words To extend the gear, to the bottom of the page.

d. Apply the page number from the addendum for page 24 or insert the number with a pen for page 26.

3. Owner's Handbook Part No. 753 597 issued November 1961 and revised September 1962, October 1963 and August 1968 for PA-24-180-250 aircraft.

a. Turn to page 31 Section III of the handbook.
b. Remove addendum number 2 from sheet 1. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.

c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step 4 of the gear extension procedure to the bottom of the page. Do not cover any part of Step 4.

4. Owner's Handbook Part No. 753 598 issued March 1964 for PA-24-400 aircraft.

a. Turn to Page 26 Section III of the handbook.
b. Remove addendum number 3 from sheet 1. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.

c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step 4 of the gear extension procedure to the bottom of the page. Do not cover any part of step 4.

5. Owner's Handbook Part No. 753 598 revised September 1964 and July 1965 for PA-24-400 aircraft.

a. Turn to page 26 Section III of the handbook.
b. Remove addendum number 4 from sheet 2. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.

c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step 4 of the gear extension procedure to the bottom of the page. Do not cover any part of step 4.

6. Owner's Handbook Part No. 753 685 for PA-24-260 aircraft.

a. Turn to page 32 Section III of the handbook.
b. Remove addendum number 5 from sheet 2. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.

c. Remove the protective cover from the adhesive back of the addendum and cover all existing information, except the words Emergency Procedures.

7. Owner's Handbook Part No. 753 696 issued July 1965 for PA-24-260 "B" aircraft.

a. Turn to page 32 Section III of the handbook.
b. Remove addendum number 6 from sheet 3. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.

c. Remove the protective cover from the adhesive back of the addendum and cover all existing information, except the words Emergency Procedures.

8. Owner's Handbook Part No. 753 696 revised October 1966, July 1967 and September 1971 for PA-24-260 "B" aircraft.

- a. Turn to page 32 Section III of the handbook.
- b. Remove addendum number 7 from sheet 3. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
- c. Remove the protective cover from the adhesive back of the addendum and cover all existing information, except the words Emergency Procedures.

9. Owner's Handbook Part No. 753 644 issued April 1963 and revised April 1964, March 1965 and November 1965 for PA-30 aircraft.

- a. Turn to page 32 Section III of the handbook.
- b. Remove addendum number 8 from sheet 4. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
- c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step 3 of the gear extension procedure to the bottom of the page. Do not cover any part of step 3.

10. Owner's Handbook Part No. 753 644 revised May 1970 for PA-30 aircraft.

- a. Turn to page 48 Section III of the handbook.
- b. Remove addendum number 9 from sheet 4. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
- c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step c of the gear extension procedure to the bottom of the note. Do not cover any part of step c.

11. Owner's Handbook Part No. 753 697 issued August 1965 and revised December 1965, June 1966, April 1967 and March 1968 for PA-30 "B" aircraft.

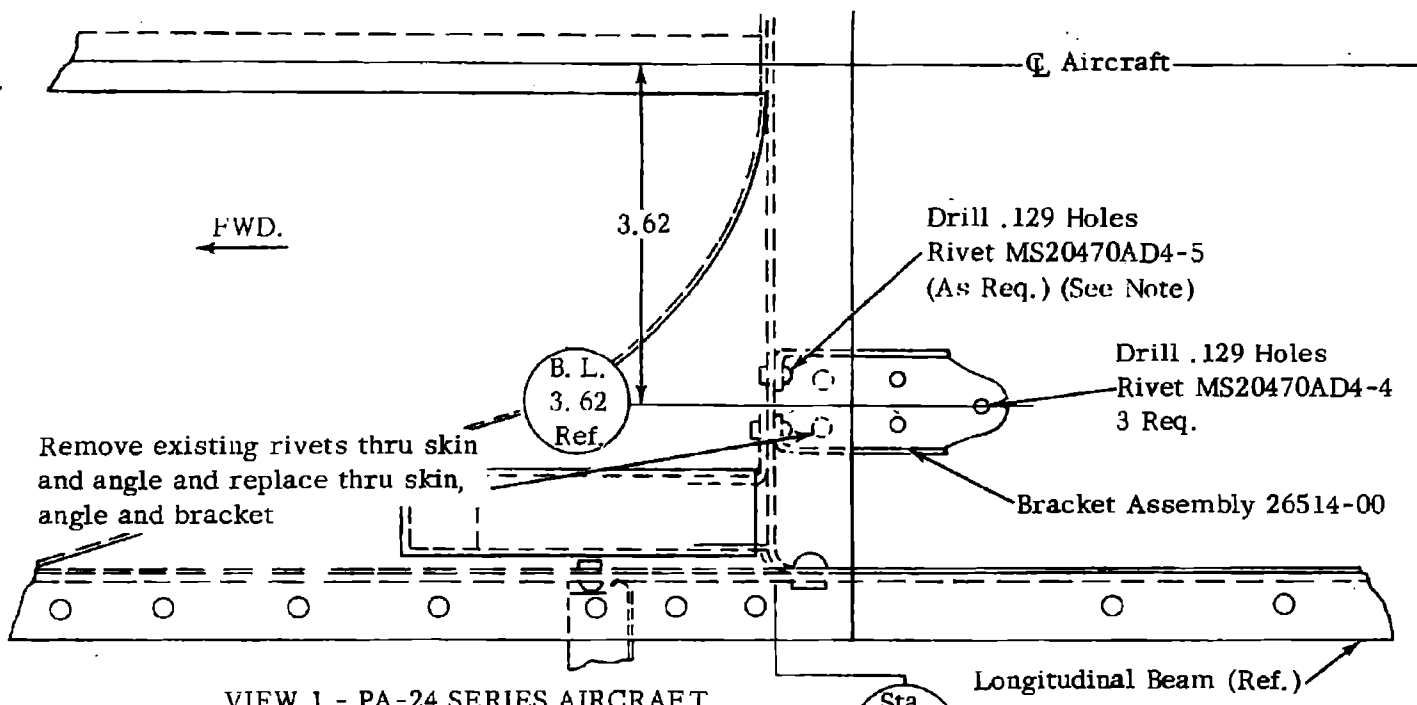
- a. Turn to page 36 Section III of the handbook.
- b. Remove addendum number 8 from sheet 4. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
- c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step 3 of the gear extension procedure to the bottom of the note. Do not cover any part of step 3.

12. Owner's Handbook Part No. 753 697 revised March 1970 and March 1971 for PA-30 "B" aircraft.

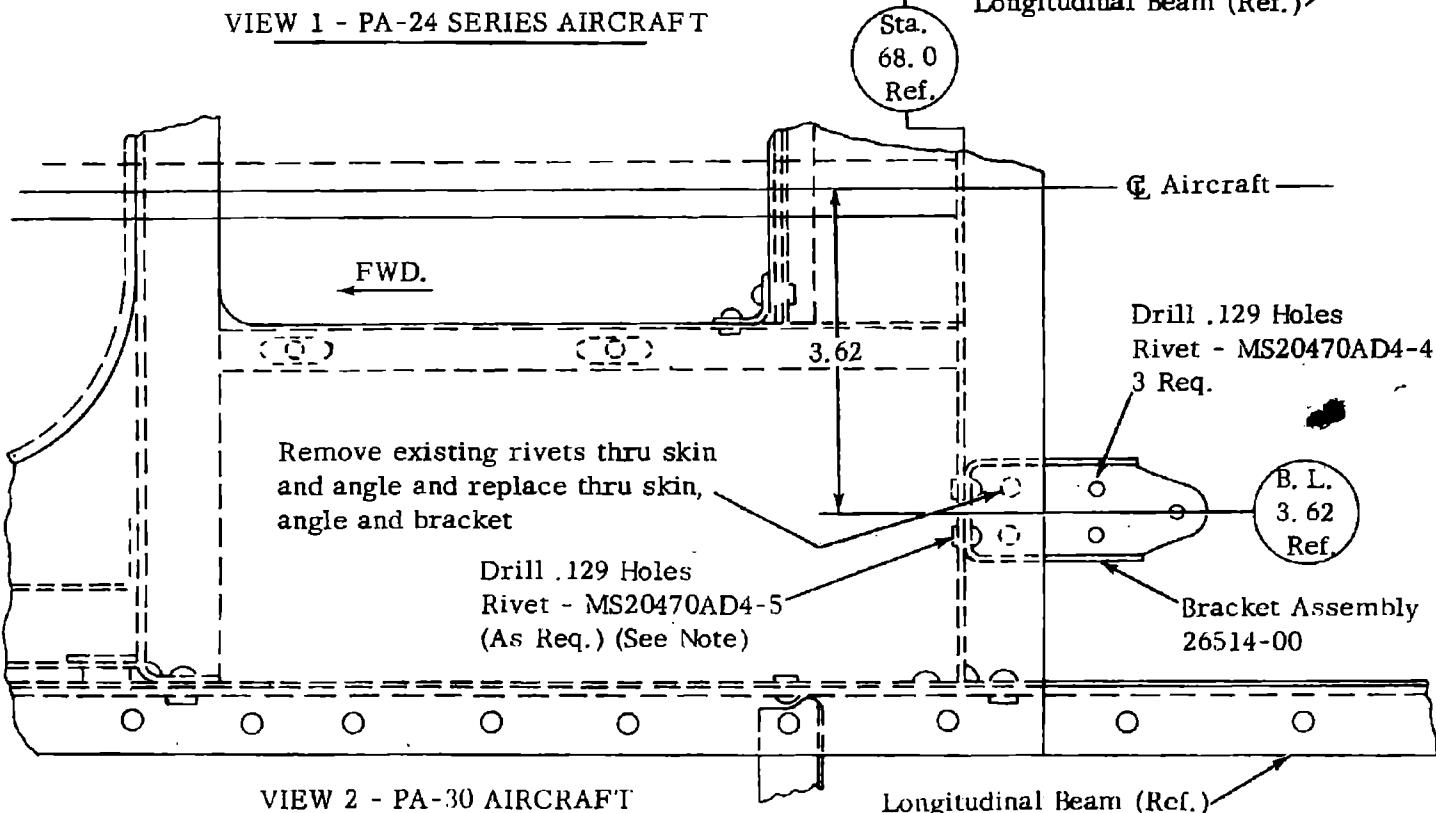
- a. Turn to page 48 Section III of the handbook.
- b. Remove addendum number 9 from sheet 4. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
- c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step c of the gear extension procedure to the bottom of the note. Do not cover any part of step c.

13. Owner's Handbook Part No. 761 452 issued May 1970 and revised March 1971 for PA-30 "B" Turbo aircraft.

- a. Turn to page 49 Section III of the handbook.
- b. Remove addendum number 9 from sheet 4. Cut on the dotted line and trim slightly if necessary to cover unwanted part of the page only.
- c. Remove the protective cover from the adhesive back of the addendum and cover all existing information from step c of the gear extension procedure to the bottom of the note. Do not cover any part of step c.



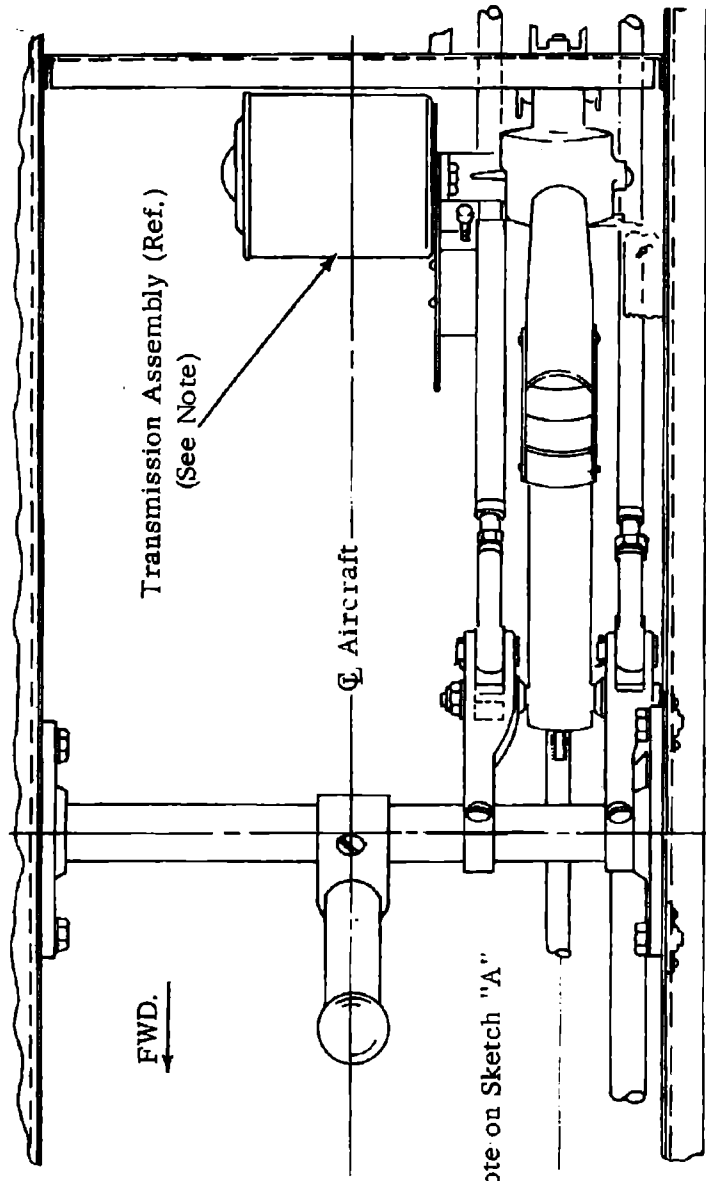
VIEW 1 - PA-24 SERIES AIRCRAFT



VIEW 2 - PA-30 AIRCRAFT

NOTE: When locating Bracket Assembly Part No. 26514-00, be certain Bracket Assembly center line and transmission assembly center line are in perfect alignment. Use the bracket assembly as a template when locating and drilling rivet holes.

Landing Gear Extension Security Installation	
Sketch "A"	KIT 760 627
PIPER AIRCRAFT CORPORATION	
LOCK HAVEN, PENNSYLVANIA	

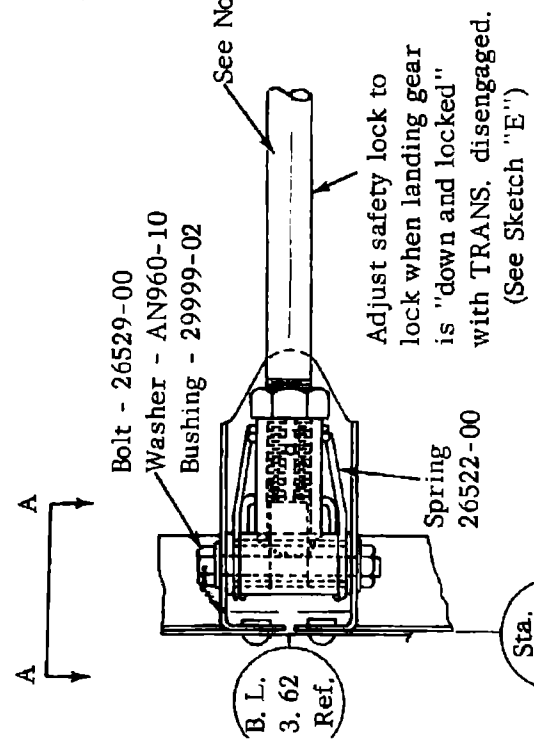


FWD.

⊕ Aircraft

Transmission Assembly (Ref.)
(See Note)

Sta.
73.5
Ref.



Bolt - 26529-00

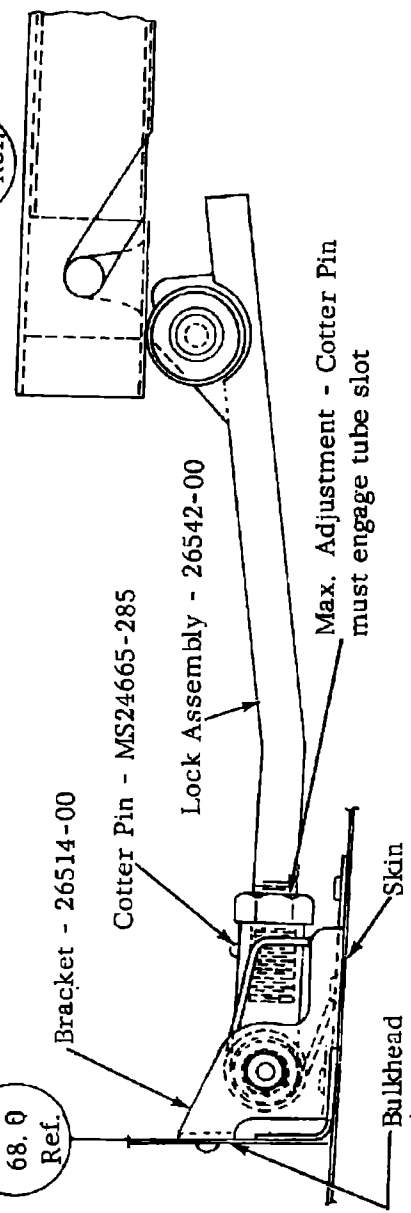
Washer - AN960-10

Bushing - 29999-02

Spring
26522-00

Adjust safety lock to
lock when landing gear
is "down and locked"
with TRANS. disengaged.
(See Sketch "E")

B. L.
3.62
Ref.



Bracket - 26514-00

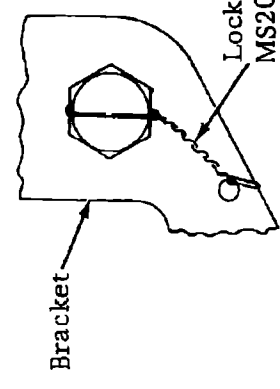
Cotter Pin - MS24665-285

Lock Assembly - 26542-00

Max. Adjustment - Cotter Pin
must engage tube slot

Bulkhead

Sta.
68.0
Ref.



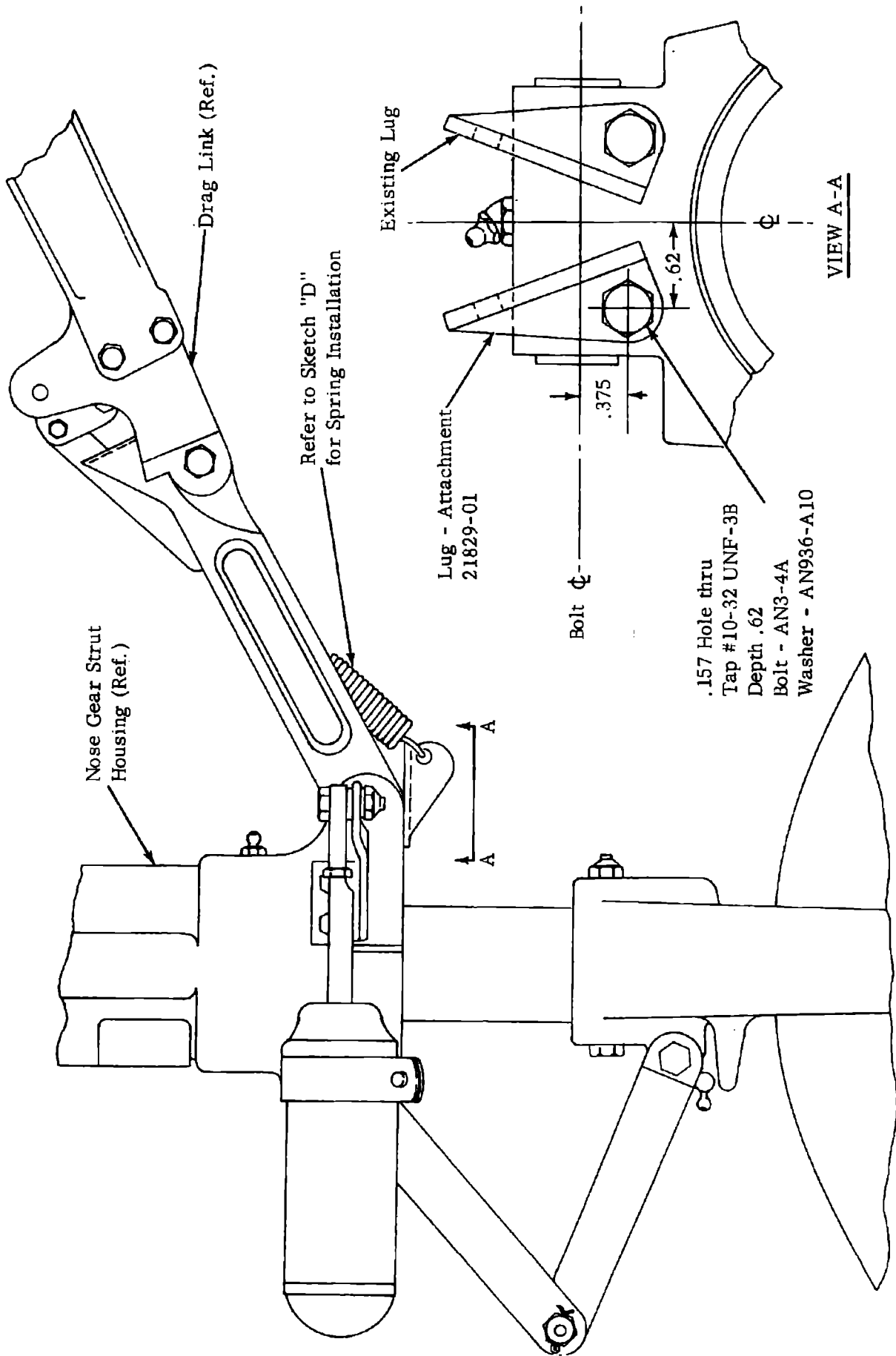
Bracket

Lock Wire
MS20995-C20

VIEW A-A

NOTE: Upon disengagement of transmission assembly from torque tube for manual extension purposes, the transmission must pull clear of the gear retraction linkage so as not to interfere with the manual operation of the landing gear system.

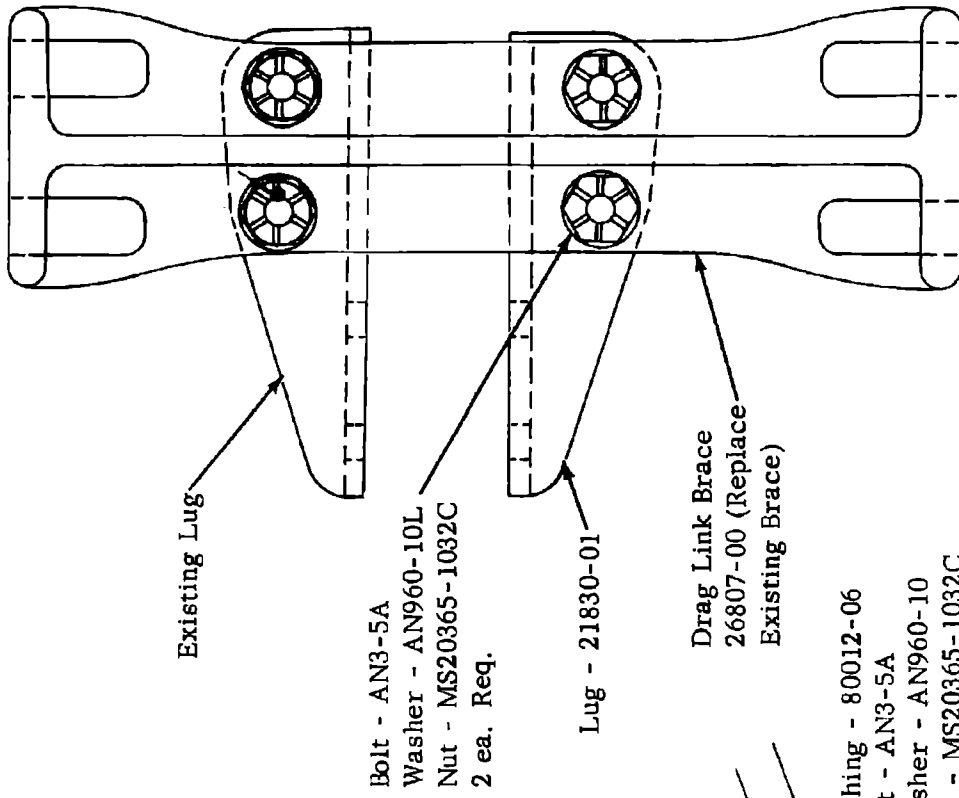
Landing Gear Extension Security Installation	
Sketch "B"	KIT 760 627
PIPER AIRCRAFT CORPORATION	
LOCK HAVEN, PENNSYLVANIA	



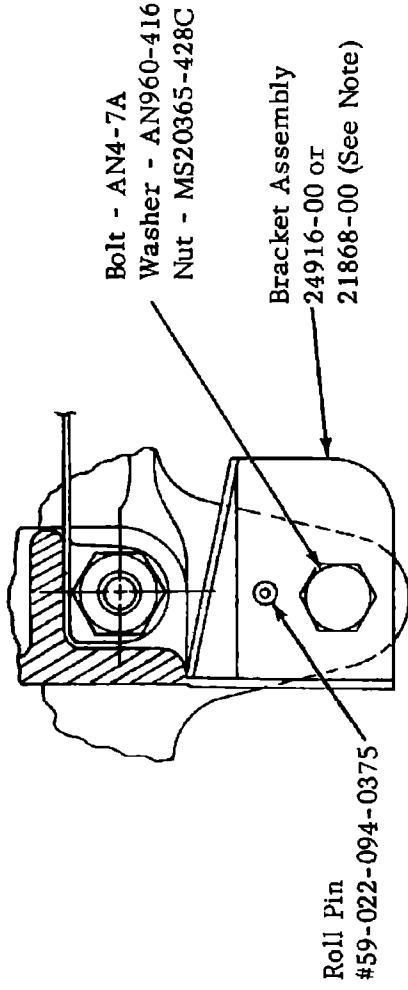
.157 Hole thru
 Tap #10-32 UNF-3B
 Depth .62
 Bolt - AN3-4A
 Washer - AN936-A10

NOTE: Use this Sketch to locate, drill and tap bolt hole in nose gear strut housing for installation of front spring attachment lug Part No. 21829-01.

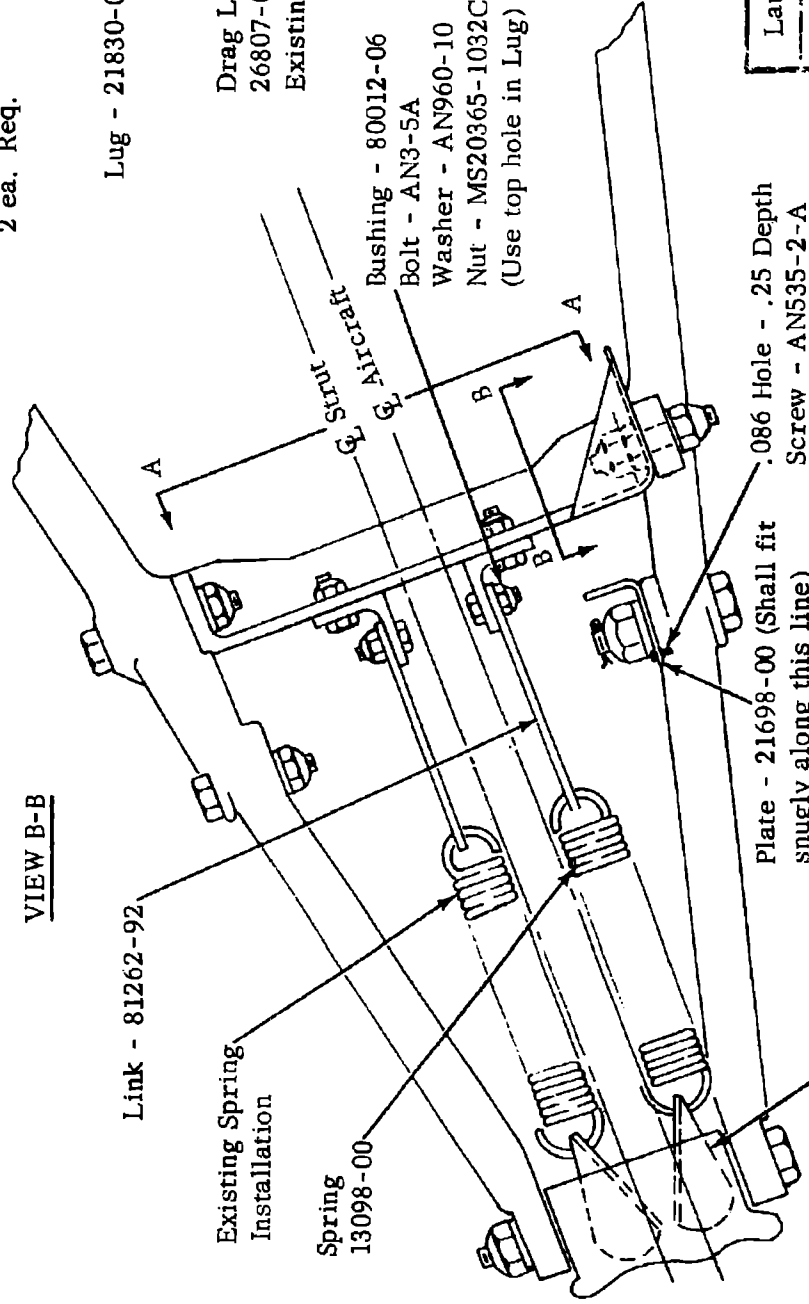
Landing Gear Extension Security Installation	
Sketch "C"	KIT 760 627
PEPPER AIRCRAFT CORPORATION	
LOCK HAVEN, PENNSYLVANIA	



VIEW A-A



VIEW B-B



See Sketch "C" for Installation of Lug

.086 Hole - .25 Depth
Screw - AN535-2-A

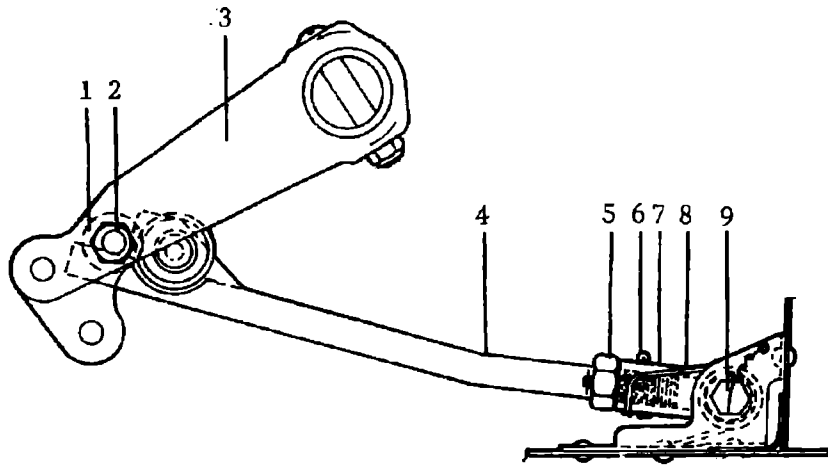
Landing Gear Extension Security Installation

Sketch "D" KIT 760 627

PIPER AIRCRAFT CORPORATION

NOTE: Use bracket assembly compatible with existing switch.

LOCK HAVEN, PENNSYLVANIA



1. SPACER
2. THROUGH BOLT, TORQUE ARM
3. TORQUE TUBE ASSEMBLY
4. LOCK ASSEMBLY
5. JAM NUT
6. COTTER PIN
7. ATTACHMENT FITTING
8. SPRING
9. ATTACHMENT BOLT

NOTE: Use this Sketch when adjusting the Landing Gear Safety Lock Assembly.

Landing Gear Extension Security Installation	
Sketch "E"	KIT 760 627
PIPER AIRCRAFT CORPORATION	
LOCK HAVEN, PENNSYLVANIA	