



American Aviation Corporation
318 Bishop Road Cleveland, Ohio 44143

SERVICE KIT

Service Kit Number SK-108

K
I
T

DATE: February 9, 1970
 TITLE: Upper Main Landing Modification
 MODELS AFFECTED: AAL-0002 thru AAL-0008 and AAL-0011 thru AAL-0014
 WEIGHT AND BALANCE CHANGE: Negligible

Parts List

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
1	701044-501	Bracket Assembly
1	701044-502	Bracket Assembly
1	701052-501	Bracket Assembly
1	701052-502	Bracket Assembly
1	701051-503	Bracket Assembly
1	701051-504	Bracket Assembly
4	901045-1	Washer
2	701041-1	Shim
2	701041-3	Shim
2	701041-5	Shim
2	701041-7	Shim
2	701041-9	Shim
2	701041-13	Shim
2	701060-1	Shim
2	701060-2	Shim
2	701060-3	Shim
2	701060-4	Shim
2	701060-5	Shim
2	701061-1	Shim
2	701061-2	Shim
2	701061-3	Shim
2	701061-4	Shim
2	701061-5	Shim
2	701062-1	Shim
2	701062-2	Shim
2	701062-3	Shim
2	701066-1	Washer
2	701023-1	Spacer
2	701024-1	Spacer
8	AN6-10A	Bolt
6	AN6-12A	Bolt
2	AN6-13A	Bolt
2	AN6-15A	Bolt
4	AN6-16A	Bolt
2	AN6-20A	Bolt
2	AN8-13A	Bolt
2	AN8-15A	Bolt
2	AN365-820	Nut
16	AN365-624	Nut
2	NAS148-29	Bolt

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
34	AN960-616	Washer
4	AN960-816L	Washer
2	AN960-816	Washer
2	AN960-616L	Washer
1	McLube 1708	Lubricant
1	16-701051	Drawing

NOTE: The parts supplied with this kit will update the above aircraft to the configuration as AAL-0016 and up. Therefore, when referring to drawing No. 16-701051 observe parts assembly notes for AAL-0016 and up.

Description of Modification

1. Removal of upper main landing gear brackets from wing carry through spar and removal of struts from brackets.
2. Installation of new upper main landing gear brackets and re-installation of main landing gear.

Modification Instructions - Removal

NOTE: It is necessary to remove the wings on Aircraft Serial AAL-0002 thru AAL-0008 to provide access to the landing gear bracket retaining nuts located inside the fuselage carry through spar. Aircraft AAL-0011 and up do not require wing removal as nut plates are permanently attached to the inside of the carry through spar, however, wing and wing root fairing removal will simplify installation of the new brackets.

1. Wing Removal:
 - a. Remove the inspection cover from under wing root.
 - b. Disconnect the airspeed pitot line located in the wing root (left wing only).
 - c. Drain all fuel and disconnect the main fuel line and fuel measurement gauge lines located in the wing root.
 - d. Disconnect all wiring in the wing root.
 - e. Raise the baggage compartment carpet and remove the inspection plate from the compartment floor.
 - f. Remove the nut and bolt securing the aileron bellcrank to the torque tube and remove bellcrank by rotating and sliding it from the end of the tube.
 - g. Remove the two bolts holding the flap bellcrank to the flap torque tube and rotate bellcrank out of way.

NOTE: Do not disturb turnbuckles or control surface rigging when disconnecting flap and aileron bellcranks.

- h. Through the wing root access opening, remove the two 3/8-inch wing lock bolts.
 - i. Use three men; one at the wing tip to support weight and pull; one at the leading edge; and one at the rear edge to rotate wing slightly, clockwise and counter-clockwise, until the wing is free of the spar.
2. Support the aircraft on jacks and a tail support. A rubber pad and wooden block should be positioned between the fuselage floor and the jacks.
 3. Bleed fluid from the brake system and disconnect the brake lines at fuselage sides.
 4. Remove the six bolts that attach the "L" angle brackets to the carry-through spar and remove gear from aircraft.
 5. Remove the four bolts that attach the strut to the brackets and withdraw strut.

Modification Instructions - Installation

NOTE: To facilitate assembly, the strut and all brackets should be bench assembled prior to installation on the aircraft. Shims taped in place on the 701044-501 and 502 or 701052-501 and 502 bracket assemblies should be assembled as positioned. The following applies to the left-hand gear and is also applicable to the right-hand gear.

1. Support the 701051-503 "L" angle bracket assembly (1 figure 1) in a soft jaw vise with strut attach side up and level.
2. Attach the 701044-501 bracket assembly (3) to the "L" angle per the Engineering Drawing. Do not install the bolt common to the carry-through spar.
3. Position the strut (4) to the 701044-501 bracket assembly with a 701023-1 phenolic spacer (11) located between the strut and the bracket assembly. Add 701061 shims (8) as required between the phenolic spacer (11) and the bracket assembly so that outboard face of the strut is flush with the flange on the 701044-501 bracket assembly.
4. Attach the 701052-501 bracket assembly (2) to the "L" angle (1) per the Engineering Drawing with one (1) 701024-501 phenolic spacer (12) between the strut and the bracket assembly. Do not install the bolt common to the carry-through spar. Add 701060 shims (7) as required between the phenolic spacer (12) and the bracket assembly (2) so that the strut is captured between the 701044-501 (3) and the 701052-501 (2) bracket assemblies with little or no clearance.
5. The four strut attach bolts may now be installed per the Engineering Drawing and figure 1.

6. Install 701041 (10) shims as required between the aft face of the strut and the flange of the 701044-501 (3) bracket assembly so that little or no clearance exists. Bend the shim edges around the flange to hold them in place.
7. Install 701062 shims as required and the two remaining bolts which attach the flange on the 701044-501 bracket assembly to the 701052-501 bracket assembly per the Engineering Drawing and figure 1. The upper bolt attaches the brake line support.
8. Apply solid film lubricant (McLube 1708 or equivalent) to the mating surfaces of spar and "L" bracket.
9. Attach the complete assembly to the carry-through spar per the Engineering Drawing.

NOTE: Torque values for bolts are as follows:

- 1/2 inch bolts - 650-730 inch lbs.
- 3/8 inch bolts - 200-250 inch lbs.
- 5/16 inch bolts - 200-225 inch lbs.

10. Wing Installation:

- a. Modify the right-hand ^{GEAR} in accordance with the above instructions. Refer to the drawing 16-701051 for correct part numbers.
- b. Apply solid film lubricant (McLube 1708 or equivalent) to the spar mating surfaces, then apply general purpose lubricating oil to the fuselage carry through spar.
- c. Install wing in reverse order of removal instructions (1) above.

CAUTION: When installing the flap bellcrank, be sure the drive pin is engaged in the flap torque tube hole. This is essential for proper flap operation and rigging. (See figure 5-5, page 5-8 in Service Manual)

AMERICAN AVIATION CORPORATION

1. 701051-503 Bracket
2. 701052-501 Bracket
3. 701044-501 Bracket
4. 701055 Shim
5. Shim
6. Shim
7. 701066 Shim

8. 701061 Bracket
9. 701062 Bracket
10. 701041 Shim
11. 701023-1 Shim
12. 701024-1 Shim
13. AN6-10A Bolt
14. AN6-12A Bolt

15. AN6-13A Bolt
16. AN6-15A Bolt
17. AN6-16A Bolt
18. AN6-20A Bolt
19. AN8-13A Bolt
20. M5148-29 Bolt
21. AN960-616t Washer

22. AN960-616 Washer
23. AN960-816t Washer
24. AN960-816 Washer
25. 701066-1 Washer
26. AN365-820 Washer
27. AN365-624t Washer
28. AN8-15A Washer

29. 901045-1 Washer

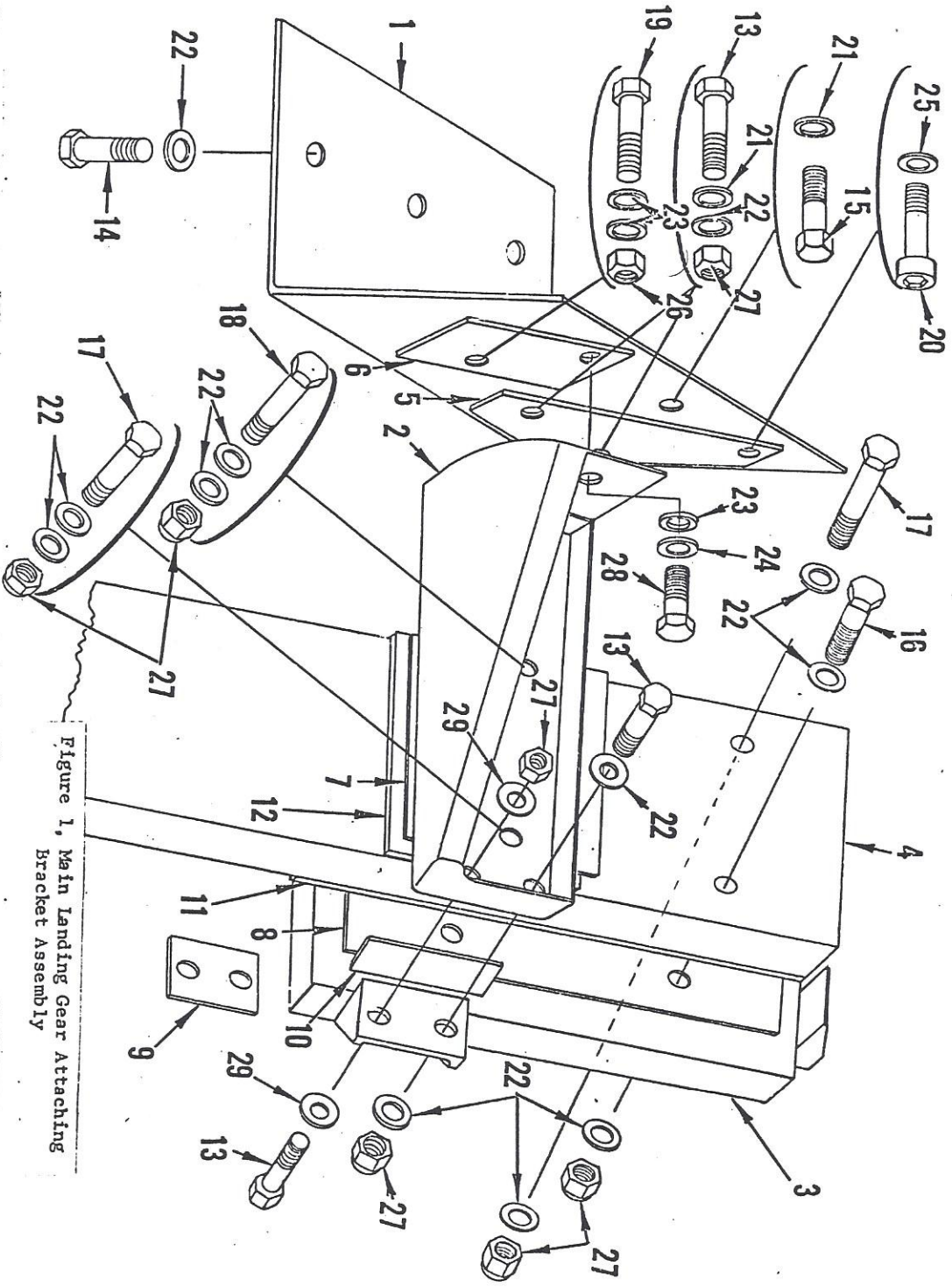


Figure 1, Main Landing Gear Attaching Bracket Assembly