

# SERVICE BULLETIN

SUBJECT: REAR SPAR CENTER SPLICE INSPECTION,  
P/N 2212 or 210057

MODELS

AFFECTED:

M20B S/N 1701-1851, 1853-1923  
M20C S/N 1852, 1940-3342, 3344-3445,  
3447-3466, 670001-670123,  
670125-670134, 670136-670149,  
680001-680198  
M20D S/N 101-260  
M20E S/N 101-1219, 1221, 1223-1308,  
670001-670062  
M20F S/N 660002-660004, 670001-670363,  
670365-670385, 670387-670482,  
670484-670539, 680001-680206  
M20G S/N 680001-680164

Aircraft equipped with manual or hydraulically  
actuated flaps with over 500 hours time in service.

TIME OF  
COMPLIANCE:

MANDATORY compliance within 90 days of notification  
and thereafter at intervals not to exceed 500 hours  
time in service from last inspection.

INTRODUCTION:

To prevent the possible failure of the rear spar  
center splice web due to cracking with associated  
crack growth, accomplish the following inspection:

- a) Remove the aft belly fairing assembly to gain  
access to the flap actuator jack shaft assembly.
- b) Inspect the rear spar center splice (see  
Figure 217-2) for cracks, paying particular  
attention to the web area above the flap actuator  
attachment brackets. It may be necessary to  
remove the flap torque tube and brackets to  
inspect behind this area. Use visual or dye  
penetrant inspection methods aided by magnification  
devices as required.
- c) Inspect the rib area forward of the rear spar  
for cracks in the same manner as above.
- d) Repair or modify the rear spar center splice as  
defined in the following repair paragraph.  
Repair or modification of the spar will permit  
discontinuance of the inspection.
- e) Reinstall belly fairing and return to service  
by proper log book entry.

REPAIR OR  
MODIFICATION:

1. Remove baggage compartment floor to gain access to the top of wing center section.
2. Remove flap actuator jackshaft and the four support brackets. Retain hardware.
3. Stop drill all cracks in spar.
4. If rib is not damaged, install the 020-217-1 doubler as follows (see Figure 217-2): Locate doubler and bracket over spar web, and drill three .193/.200 holes through rib flange, spar web, doubler, and bracket to match existing spar web holes. Install doubler on spar web and upper rib flange with 17 MS 20470AD4 rivets. Attach bracket with three AN3-5A bolts, MS 21045L3 nuts, and AN 960-10 washers. (Apply zinc chromate primer on all mating surfaces.)
5. If rib is damaged, stop drill cracks or remove damaged portion and install 020-217-3 angle forward of the spar at the rib as shown in Figure 217-2. The angle is attached to the rib web with five MS 20470AD4 rivets. Drill three .193/.200 holes in the angle to match the existing holes in the spar web. Install the 020-217-1 doubler as described in 4 above.
6. Install 020-217-5 shims under all flap jackshaft support brackets using new bolts with existing washers and nuts. The shims are required to align the brackets with the new doubler. Depending on the configuration, the 020-217-7 shim may need to be installed under the rudder bellcrank for alignment.
7. Reinstall all hardware as removed.
8. Re-rig flaps for proper positioning in accordance with Mooney M20 series Service and Maintenance Manual.
9. Reinstall baggage floor.
10. Reinstall belly fairing assembly.

SERVICE  
BULLETIN KIT  
No. M20-217

- |    |                             |       |
|----|-----------------------------|-------|
| 1. | 020-217-1 Doubler . . . . . | 1 ea. |
| 2. | 020-217-3 Angle . . . . .   | 1 ea. |
| 3. | 020-217-5 Spacer . . . . .  | 3 ea. |
| 4. | 020-217-7 Spacer . . . . .  | 1 ea. |
| 5. | AN3-5A Bolt . . . . .       | 7 ea. |
| 6. | AN3-13A Bolt . . . . .      | 4 ea. |
| 7. | MS 21045L3 Nut . . . . .    | 3 ea. |
| 8. | AN 960-10 Washer . . . . .  | 3 ea. |

COMPLIANCE:

Upon compliance with this Service Bulletin, please fill out the enclosed card and specify findings of inspection and disposition. Mail card to Mooney Aircraft, P. O. Box 72, Kerrville, TX 78028.

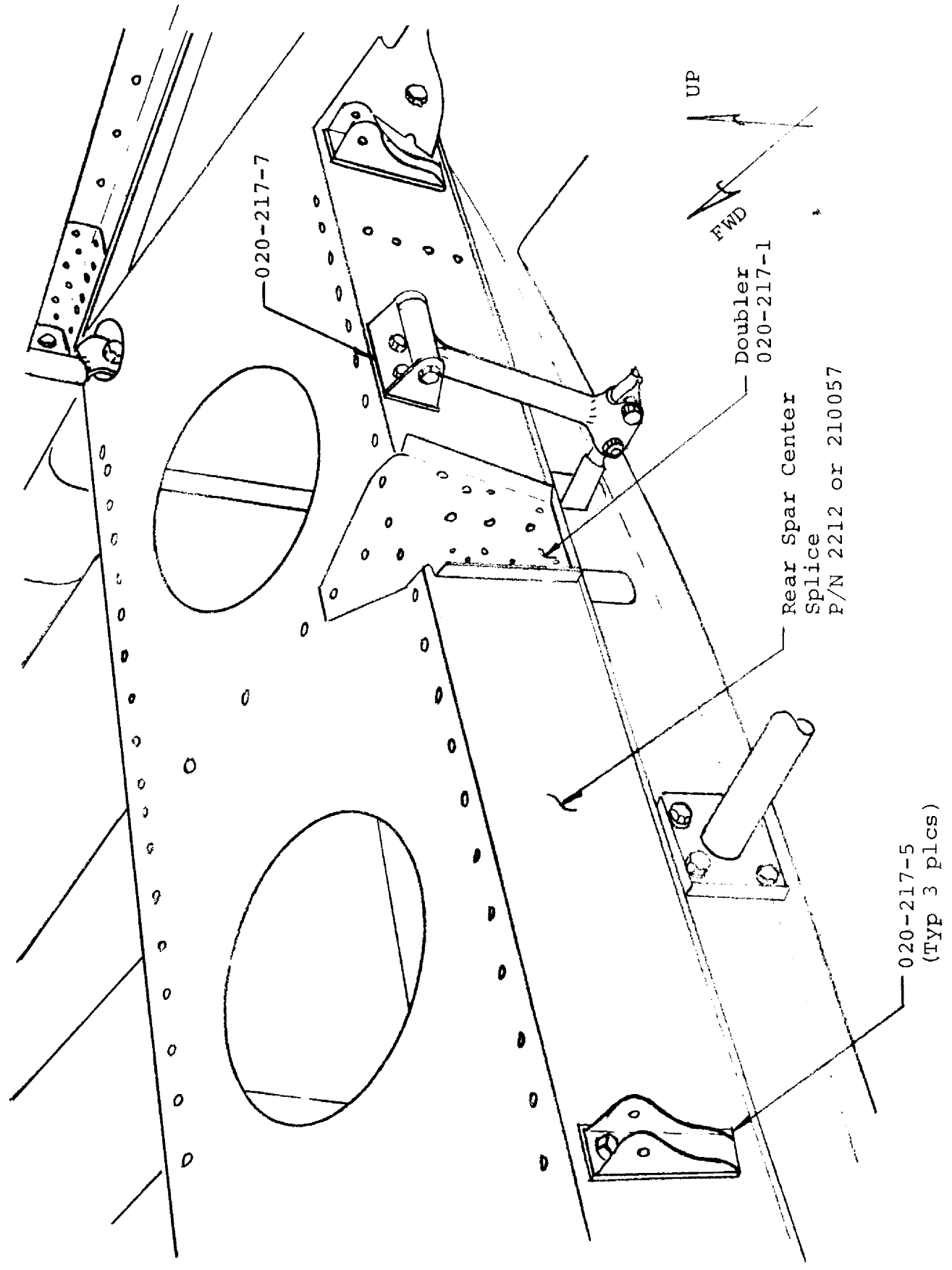


FIGURE 217-1

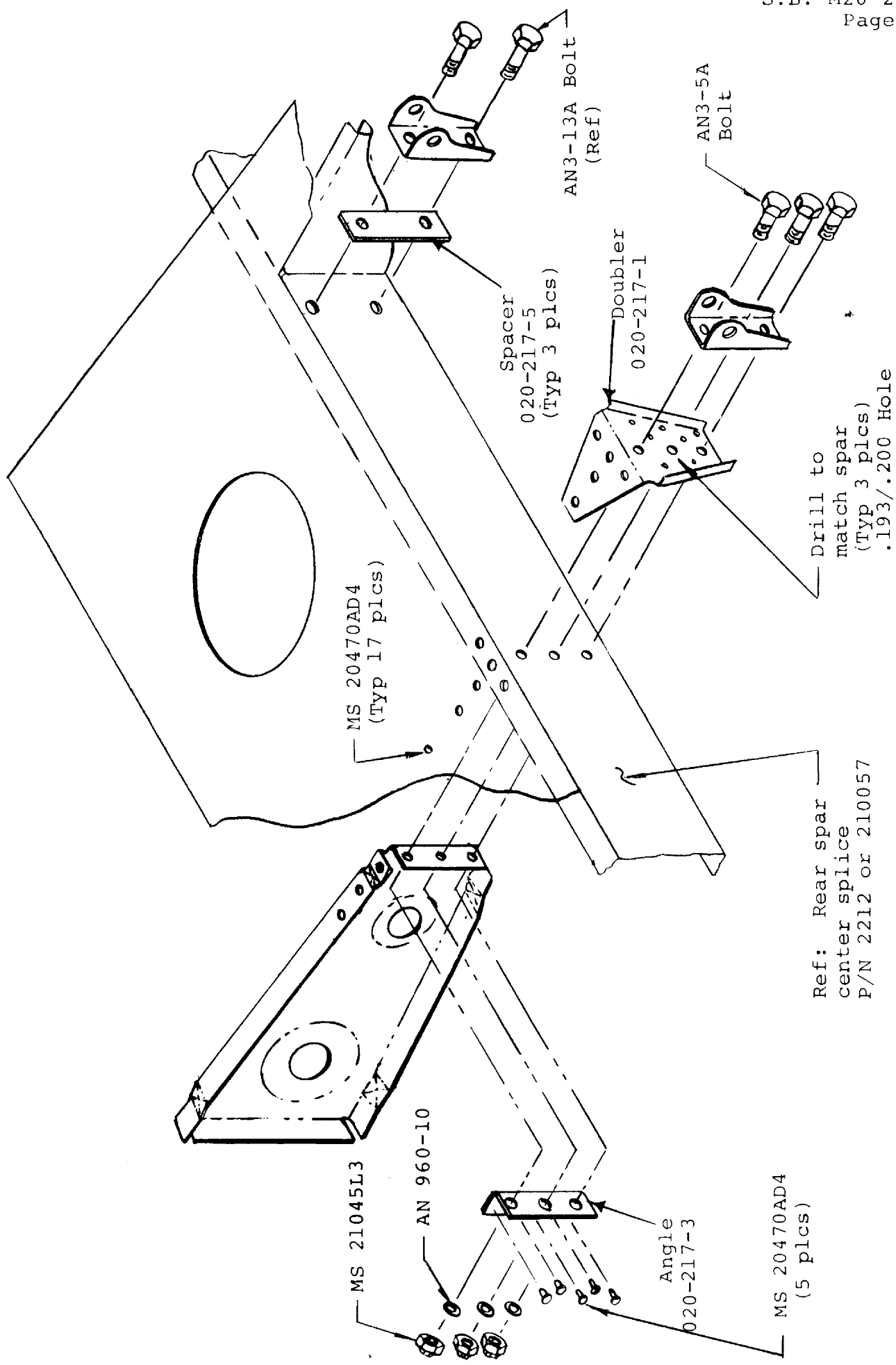


FIGURE 217-2