

SUBJECT: M20J INDUCTION AIR/ALTERNATE AIR DOOR RETROFIT

MODEL/S/N
AFFECTED: M20J - S/N 24-0001 THRU 24-3243

TIME OF
COMPLIANCE: REVISION B: - WITH IN NEXT 10 OPERATING HOURS.

INTRODUCTION:

Revision B is prepared to change part number call out for a new style nut and larger OD cotter pin. Revision A was prepared to change the configuration of the plate assembly (formely "nut plate assembly") and install this new plate assembly onto the existing alternate air door on aircraft which have complied with original SB M20-250, dated 11-15-91. If SB M20-250, Revision A, has been complied with, and all components are within wear tolerances, only the nut and cotter pin need to be replaced in accordance with SB M20-250, Revision B. Kit number SB M20-250 B-1 contains all components necessary to retrofit an aircraft to the current configuration. Kit number SB M20-250 B-2 contains only the new nut and cotter pin. **The FAA has indicated that an AD is to be issued to make the incorporation of this SB mandatory.**

There have been reports of the alternate air door lodging in the induction air duct and restricting induction air flow to the engine. This retrofit kit is prepared to reduce the possibility of this occurring.

INSTRUCTIONS:

1. Remove top and bottom cowling from aircraft per M20J Service and Maintenance manual, reference Section 71-11-00.
2. Obtain access to the alternate air door assembly located on the forward portion of the engine induction air system duct.
3. Remove cotter pin, AN381-2-8, from shank of bolt, AN4-23, which retains the alternate air door to doubler assembly, 600118-039, on the aft wall of the induction air duct.
4. Remove the AN4-23 bolt from nut plate on alternate air door assembly, 600118-015.

CAUTION - The bolt is spring loaded.

5. Retain sleeve, washer(s) (if installed), nylon bearings and spring. Inspect sleeve and nylon bearings for evidence of wear. It is recommended that components showing any wear be replaced.
6. Remove the alternate air door assembly, 600118-015, from induction area.
7. Remove the nut plate assembly, 600355-505 (or AN362F428 nutplate/original configuration), from alternate air door by carefully drilling out the MS20426AD3 rivets.
8. Install new 600355-507 plate assembly (included in kit) to alternate air door, 600118-015, using 4 MS20426AD3 rivets (included in kit). Use next oversize rivets, if necessary. Insert bolt of 600355-507 plate assembly into hole in 600118-015 alternate air door (from opposite side of rubber seal). Align bolt in center of hole as components are being riveted together. Use existing rivet holes in 600118-015 alternate air door.

Note: If modifying original configuration with AN362F428 nutplate installed, two existing rivet holes for AN362F428 nut plate should be aligned with two holes of 600355-507 plate assembly and two more holes drilled to match the other two holes in the 600355-507 plate assembly.

9. Check security of seal to alternate air door assembly prior to re-installation into induction air duct assembly. Use EC1403 * adhesive (3M Products) to attach seal securely to door assembly. Coat exposed seal face with TEFLON spray/lubricant prior to re-installation.
10. Re-assemble alternate air door assembly (on forward side of aft wall of duct) to doubler assembly (on aft side of aft wall of duct) with nylon bearings, sleeve, spring, **new self locking/castellated nut, MS17825-4, and new cotter pin** (new nut and cotter pin included in Revision B kit).
11. Inspect preload on assembled alternate air door assembly per M20J Service and Maintenance manual, Section 5-20-06, 1,G. If pre-load is too low, add washers under nut to obtain proper preload.
12. After proper preload is obtained, install new cotter pin, MS24665-132, (included in Revision B kit) into hole in bolt hank and secure.

* -- Now EC1300L (low viscosity) or EC1300 or EC08001 (OSHA declared alternates)

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- 13. Re-install lower and upper cowling per Section 71-11-00 of S & M manual.
- 14. Enter compliance note into aircraft log book and return aircraft to service.

WARRANTY: Retrofit kits may be ordered through the Mooney Service Center (MSC) in your area. Normal billing policies will be in effect for parts. For aircraft within the original warranty period as of date of this Service Bulletin, Mooney Aircraft Corporation will allow up to 1.5 hours labor, plus parts, to modify the alternate air door assembly upon receipt of completed warranty claim if accomplished within 120 days from date of the Service Bulletin.

REFERENCE DATA: N/A

PARTS LIST: KIT PART NUMBER - SB M20-250 B-1

ITEM	P/N	DESCRIPTION	QTY
1.	600355-507	PLATE ASSEMBLY	1
2.	MS20426AD3	RIVET	4
3.	MS24665-132	COTTER PIN	1
4.	MS17825-4	NUT, SELF LOCKING/CASTELLATED	1
5.	AN960-416	WASHER	2

KIT P/N - SB M20-250 B-2

- 1. MS24665-132 . PIN . . . 1
- 2. MS17825-4 . . . NUT . . . 1

FIGURES/
 TABLES:
 SEE BEFORE AND AFTER CON-
 FIGURATIONS BELOW,
 SB M20-250 B-1.

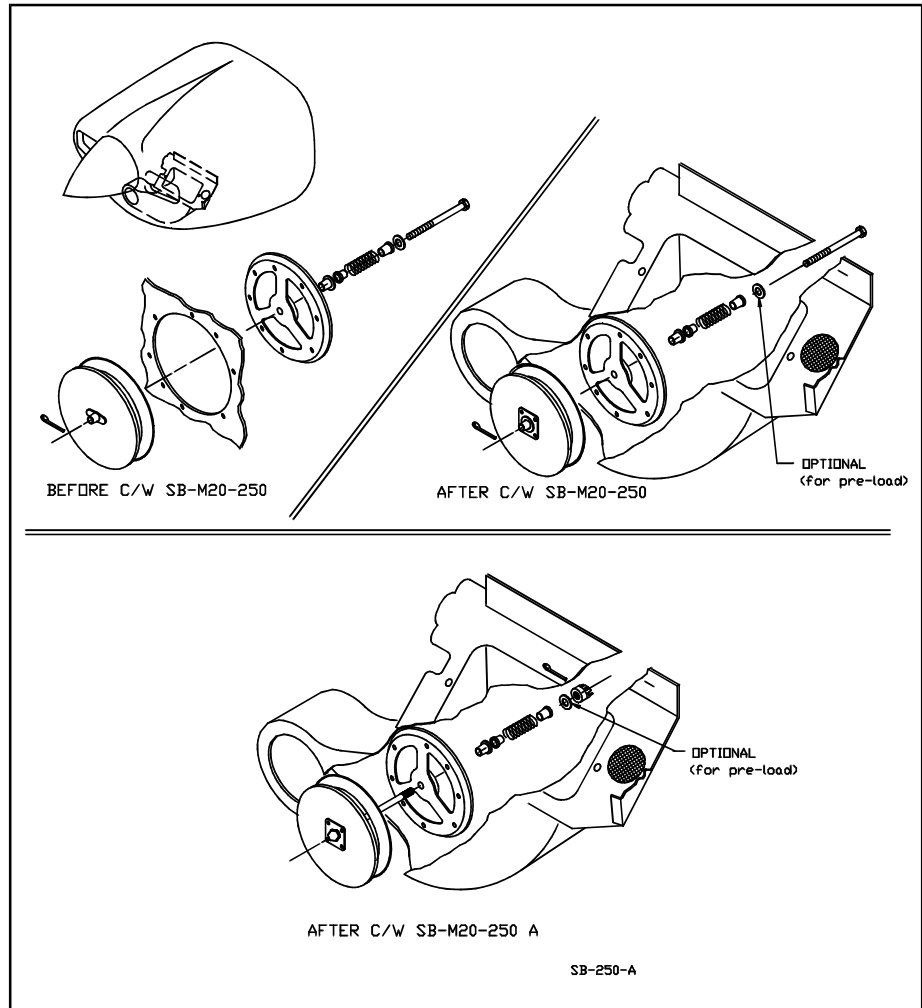


FIGURE SB M20-250 B-1