

THIS BULLETIN IS FAA APPROVED FOR ENGINEERING DESIGN

SERVICE BULLETIN M20-253 A
DATE: 12-95

SUBJECT: M20J ALTERNATE AIR DOOR RETROFIT

MODEL/
S/N AFFECTED: M20J - S/N 24-3244 THRU 24-3250, 24-3252 THRU 24-3374

TIME OF
COMPLIANCE: Revision A - WITH IN NEXT 10 HOURS OR SOONER.

See SB 250B
ALSO
FOR ORIGINAL
S/N'S

AD #
95-26-16
121

INTRODUCTION:

REVISION A is prepared to change part number call outs for a new style nut and a larger OD cotter pin. The Original Issue SB was prepared to change the configuration of the plate assembly (formely "nut plate assembly") and install this new plate assembly on to the existing alternate air door on aircraft. If SB M20-253, Original Issue, 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 M20-253, Revision A. Kit number SB M20-253 A-1 contains all components necessary to retrofit an aircraft to the current configuration. Kit No. SB M20-253 A-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 has been a report of the alternate air door lodging in the induction air duct and restricting induction air flow to the engine. The bolt threads within the modified nut became worn due to vibration. This SB is to change the configuration of the plate assembly and 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 assembly 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, from alternate air door by carefully drilling out four MS20426AD3 rivets.
8. Insert bolt shank of new 600355-507 plate assembly (included in kit) into hole of alternate air door, 600118-015 (from opposite side of rubber seal). Use 4 MS20426AD3 rivets (included in kit) to fasten plate assembly to alternate air door. Use next oversize rivets, if necessary. Align bolt in center of hole as components are being riveted together. Use existing rivet holes in 600118-015 alternate air door. *RIB EC1300 OR EC1300L ADHESIVE*
9. Check security and condition of seal to alternate air door assembly prior to re-installation into induction air duct assembly and if cracked replace. 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 A 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.

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12. After proper preload is obtained, install new cotter pin, **MS24665-132**, into hole in bolt shank and secure.
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 SB M20-253B

PARTS LIST: KIT P/N - SB M20-253 A-1

ITEM	P/N	DESCRIPTION	QTY
1.	600355-507	PLATE ASSEMBLY	1
2.	MS20426AD3	RIVET	4
3.	MS24665-132	COTTER PIN (1/16 in. X .5 in. lg)	1
4.	MS17825-4	NUT, SELF-LOCKING/CASTELLATED	1
5.	AN960-416	WASHER	2

KIT P/N -
SB M20-253 A-2

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

FIGURES/
TABLES:

SEE
BEFORE AND AFTER
CONFIGURATIONS,
IN FIGURE
SB M20-253 A-1

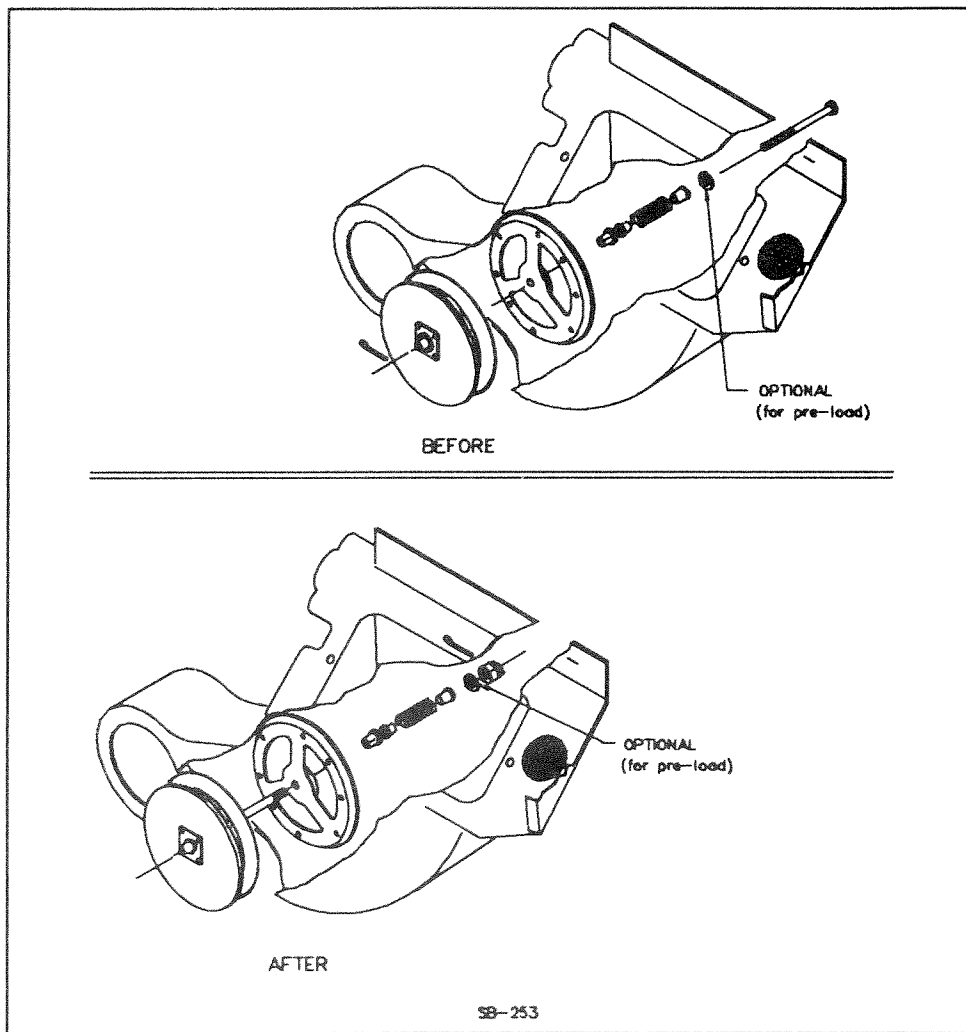


FIGURE SB M20-253 A-1