



SUBJECT: TO ADVISE M20TN OWNERS OF CORRECT PART NUMBERS AND MOUNTING SEQUENCE OF THE ENGINE MOUNT ISOLATORS AND RELATED HARDWARE AS SHOWN IN BOTH THE SERVICE MANUAL AND ILLUSTRATED PARTS CATALOG.

MODELS/ SN AFFECTED: Mooney M20TN 31-0001 THRU 31-0023 and 31-0025 THRU 31-0127

TIME OF COMPLIANCE: As Required

INTRODUCTION: There is incorrect Engine Mount Isolator data identified within the M20TN Service Manual (part number MAN180) and M20TN Illustrated Parts Catalog (part number MAN280). Both the Service Manual and Illustrated parts Catalog will be updated at their next revision cycle to reflect this information. This Service Instruction also contains tips on how to install new mounts as done at the factory.

INSTRUCTIONS: Read entire procedures before beginning work.

Tips on Installing Engine Mount Isolators

- 1.1. Turn master switch - OFF.
- 1.2. Remove top and bottom cowling, refer to M20TN Service and Maintenance Manual.
- 1.3. Support the engine using an "A" Frame with chain hoist or hydraulic "Cherry Picker" and hook into the front and rear engine lifting hooks, refer to M20TN Service and Maintenance Manual.
- 1.4. Remove or disconnect any components that prevent lifting engine slightly to remove engine isolator mounts.
- 1.5. Remove all four (4) retaining bolts, washers, heat shields and lower isolators at all four locations. Keep heat shield and mounting hardware
- 1.6. Lift engine to allow removal of all four upper engine isolator mounts and hardware.
- 1.7. Inspect Heli-Coils in engine legs for any damage i.e., cross-threading. Replace legs as required.

NOTE:

The arrangement of engine isolator mounts is extremely critical. Make certain they are arranged as shown in Figure 1.

- 1.8. Use "dummy" bolts (NAS6607-15 or equivalent) and washers to secure each of the top halves of isolator mounts with upper washer and heat shields in place to engine motor mount castings (4 places). Tighten bolts to compress rubber mounts to approximate thickness shown in Figure 2.
- 1.9. Before lowering engine, lube all four mount cups with silicone lubricant to help facilitate alignment.
- 1.10. Slowly lower engine into motor mount cradle. Support weight of engine with lift until engine is properly placed in mount. When engine is first lowered, the isolator mounts will not rest squarely in the cups on the mount refer to Figure 2. Seat both rear mounts first, then front left & right mounts.
- 1.11. Use a large flat screwdriver to pry mounts into cups. This step requires a considerable amount of patience and "elbow grease" - refer to Figure 2.



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- 1.12. Once top engine mounts are all seated in the cups, begin removing “dummy” bolts and washers. Start at right rear (RR), then left rear (LR), left front (LF), and right front (RF).

NOTE:

Keep bolt and washer centered in the cup to prevent binding and stripping of threads.

- 1.13. Correctly position each heat shield in place per figure 1, index drain holes at lowest point of installation & index cutouts parallel to sides of engine mount. Make sure heat shields are oriented to prevent chaffing or interference on engine mount or engine components.
- 1.14. Install both retaining bolts, washers and torque to specification - refer to Figure 1.

NOTE:

Be sure bolts are properly aligned to prevent cross-threading.

- 1.15. Reinstall top and bottom cowling, refer to M20TN Service and Maintenance Manual.
- 1.16. Complete a log book entry.
- 1.17. Return aircraft to service.
- 1.18. Procedure complete.

NOTE:

For any reason you are having trouble installing the new mounts as demonstrated in this Service Instruction, Please contact Mooney Technical Support at 830-896-6000 or email support@mooney.com for more information.

WARRANTY: N/A

REFERENCE DATA: 1. MAC M20TN Service and Maintenance Manual

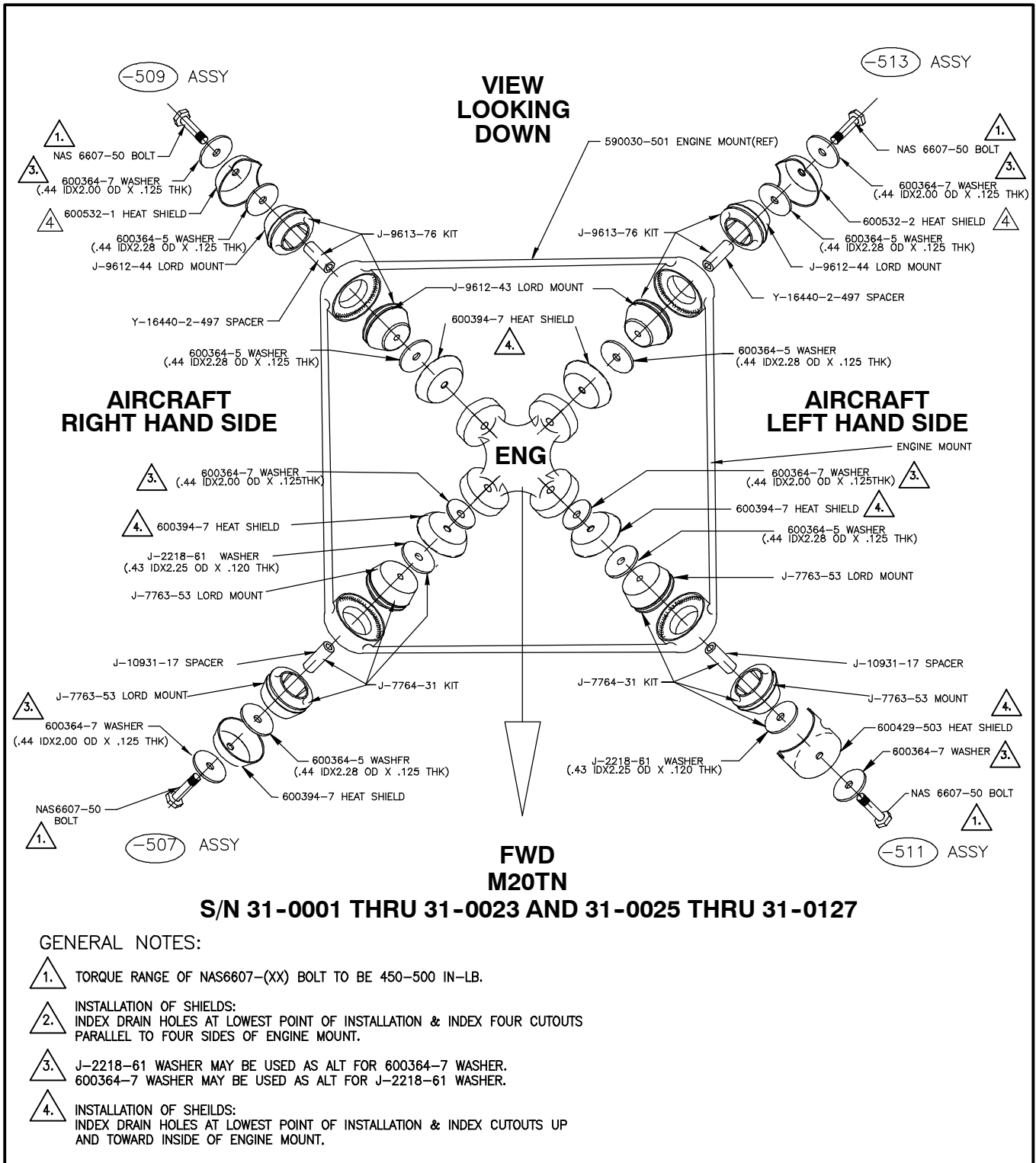
PARTS LIST:

<u>Item</u>	<u>P/N</u>	<u>Description</u>	<u>Qty</u>
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165 Al Mooney Road North
Kerrville, Texas 78028

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S/N 31-0001 THRU 31-0023 AND 31-0025 THRU 31-0127

GENERAL NOTES:

- 1. TORQUE RANGE OF NAS6607-(XX) BOLT TO BE 450-500 IN-LB.
- 2. INSTALLATION OF SHIELDS:
INDEX DRAIN HOLES AT LOWEST POINT OF INSTALLATION & INDEX FOUR CUTOUTS PARALLEL TO FOUR SIDES OF ENGINE MOUNT.
- 3. J-2218-61 WASHER MAY BE USED AS ALT FOR 600364-7 WASHER.
600364-7 WASHER MAY BE USED AS ALT FOR J-2218-61 WASHER.
- 4. INSTALLATION OF SHIELDS:
INDEX DRAIN HOLES AT LOWEST POINT OF INSTALLATION & INDEX CUTOUTS UP AND TOWARD INSIDE OF ENGINE MOUNT.

Figure 1 - ENGINE MOUNT AND HARDWARE INSTALLATION



TIGHTEN "DUMMY" BOLTS (NAS6607-15 OR EQUIVALENT) TO COMPRESS RUBBER MOUNTS



ISOLATOR MOUNT SEATED
REMOVE - "DUMMY" BOLTS

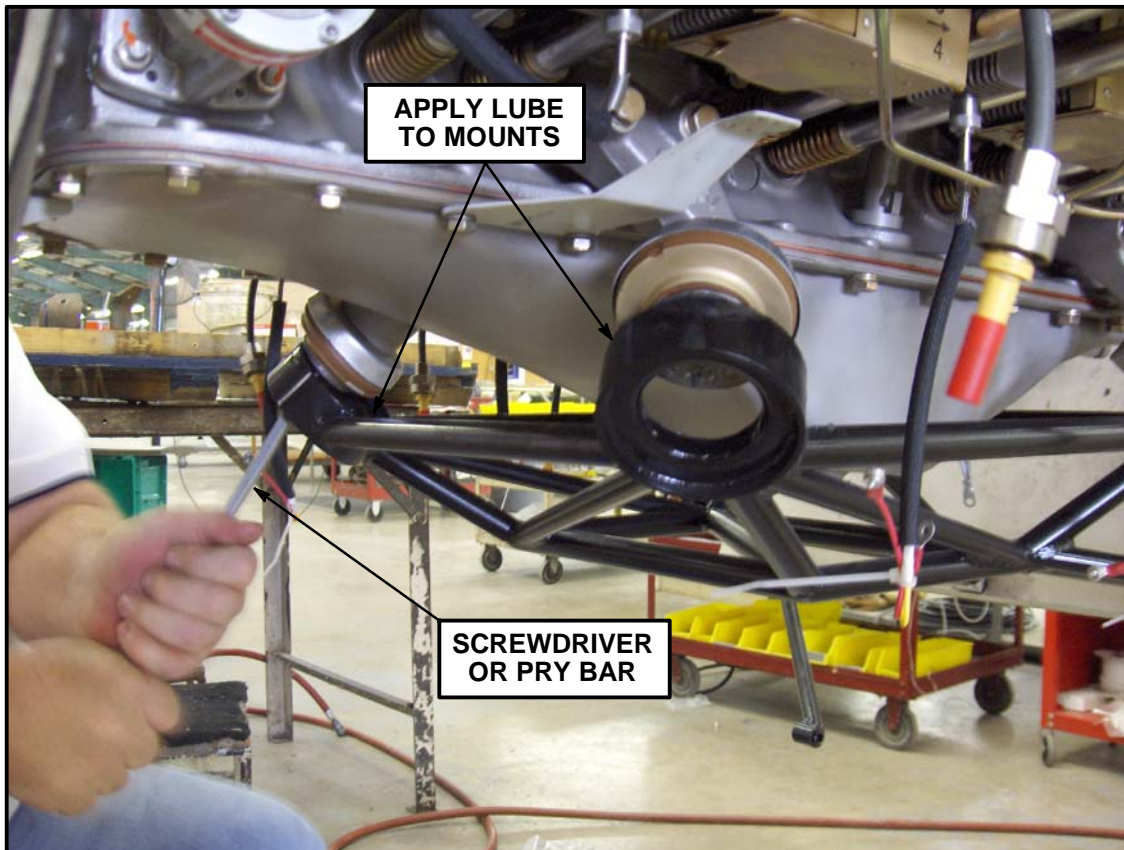


Figure 2 - INSTALL ENGINE ISOLATOR MOUNTS AND HARDWARE