

# Airworthiness Directive Schedule

## Aeroplanes

### Mooney M20 Series

23 February 2023

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- Notes**
1. This AD schedule is applicable to Mooney Aircraft Corp. M20C, M20E, M20F, M20G, M20J, M20M, and M20R aircraft manufactured under FAA Type Certificate Number 2A3.
  2. The Federal Aviation Administration (FAA) is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for these aircraft. State of Design ADs can be obtained directly from the FAA website at: [Dynamic Regulatory System \(faa.gov\)](https://www.faa.gov/dynamic-regulatory-system)
  3. The date above indicates the amendment date of this schedule.
  4. New or amended ADs are shown with an asterisk \*

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The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at <https://www.aviation.govt.nz/aircraft/airworthiness/airworthiness-directives/links-to-state-of-design-airworthiness-directives/> If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below. .... 13

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**DCA/MY/1      Static Pressure Button - Inspection and Replacement**

**Applicability:** Models M20, M20A, M20B, M20C, M20D and M20E with S/N listed in SB 20-118

**Requirement:** Mooney SB M20-118

**Compliance:** Every 100 hours TIS until button is replaced in accordance with SB 20-118

**Effective Date:** 28 February 1969

*Note: Document previously referred to as Service Letter (SL). Title changed by Mooney Service Bulletin Index dated 7 January 1968*

**DCA/MY/2      Dukes Astronautics Fuel Pumps Part Numbers 4140-00-19, 4140-00-19A, 4140-00-21 and 4140-00-21A - Replacement**

**Applicability:** Models M20C, M20D and M20E S/N as listed in SB M20-121B

**Requirement:** Mooney SB M20-121B

**Compliance:** As detailed

**Effective Date:** 28 February 1969

**DCA/MY/3      Hartzell Propellers and Mooney Decal - Inspection and Modification**

**Applicability:** Model M20E S/N 101 through 722

**Requirement:** Mooney SB M20-127

**Compliance:** Within the next 25 hours TIS

**Effective Date:** 28 February 1969

*Note: Document previously referred to as Service Letter (SL). Title changed by Mooney Service Bulletin Index dated 7 January 1968*

**DCA/MY/4      Cancelled: Once only inspection, purpose fulfilled****DCA/MY/5      Fuel Line from Electric Boost Pump to Fuel Fitting Box - Modification**

**Applicability:** Models M20C, M20D and M20E S/N as listed in SB M20-125

**Requirement:** Mooney SB M20-125

**Compliance:** Within the next 100 hours TIS

**Effective Date:** 28 February 1969

*Note: Document previously referred to as Service Letter (SL). Title changed by Mooney Service Bulletin Index dated 7 January 1968*

**DCA/MY/6 Master Power Relay Cover - Modification**

**Applicability:** Models M20C and M20D S/N as listed in SB M20-126

**Requirement:** Mooney SB M20-126

**Compliance:** Within the next 100 hours TIS

**Effective Date:** 28 February 1969

*Note: Document previously referred to as Service Letter (SL). Title changed by Mooney Service Bulletin Index dated 7 January 1968*

**DCA/MY/7 Cancelled: Purpose fulfilled**

**DCA/MY/8 Main Gear Retract Truss Bracket - Attachment Bolts - Replacement**

**Applicability:** Model M20C S/N 2807 through 3466 and M20E S/N 470 through 1270

**Requirement:** Mooney SB M20-143

**Compliance:** Within the next 100 hours TIS

**Effective Date:** 28 February 1969

**DCA/MY/9 Installation of Alternate Static Air Source Placard - Modification**

**Applicability:** Models M20C, M20E and M20F S/N as listed in SB M20-158

**Requirement:** Mooney SB M20-158

**Compliance:** Within the next 50 hours TIS

**Effective Date:** 28 February 1969

**DCA/MY/10 Fuel Line Routing - Modification**

**Applicability:** Models M20E and M20F S/N as listed in SB M20-166

**Requirement:** Mooney SB M20-166

**Compliance:** Within the next 50 hours TIS

**Effective Date:** 28 February 1969

**DCA/MY/11 Steering Horn Bolt on Nose Gear Truss - Modification**

**Applicability:** Models M20, M20A, M20B, M20C, M20D, M20E, M20F and M20G S/N as listed in SB M20-169

**Requirement:** Mooney SB M20-169

**Compliance:** Within the next 100 hours TIS

**Effective Date:** 28 February 1969

**DCA/MY/12 Retraction Handle and Down Lock Block - Inspection****Applicability:** All model M20C**Requirement:** An accident during landing occurred due to the retraction handle not engaging fully in the down lock block P/N 560006.

Inspect as follows:

1. With the aircraft jacked up check the retraction operation and ensure that the retraction handle engages fully in the down lock block P/N 560006 and that the pre-load of the over-centre locking mechanism is within the limits prescribed in the Mooney Service and Maintenance Manual.
2. Inspect the rear face of the bore below the latch for grooving and/or ovality and renew the down lock block if found excessive, i.e. to such extent that the retraction handle could be restricted from entering fully the down lock position.

**Compliance:** Before further flight and thereafter at intervals not exceeding 50 hours TIS**Effective Date:** 31 May 1969**DCA/MY/13 Throttle, Mixture and Propeller-Governor Controls - Modification****Applicability:** Models M20C, M20D, M20E, M20F and M20G S/N as listed in SB M20-174**Requirement:** Mooney SB M20-174**Compliance:** Within the next 100 hours TIS**Effective Date:** 30 April 1971**DCA/MY/14A Flight Control and Landing Gear Systems - Lubrication and Inspection****Applicability:** All model M20, M20A, M20B, M20C, M20D, M20E, M20F and M20G**Requirement:** To prevent corrosion and possible binding of the subject systems lubricate and inspect as follows:

1. Lubricate all flight control system and landing gear system rod end bearings with a silicone spray lubricant.
2. Perform a landing gear retraction test and check the landing gear rigging.

**Compliance:** Within the next 25 hours TIS and thereafter at intervals not to exceed 12 calendar months from the last inspection or 100 hours TIS from the last inspection whichever comes first**Effective Date:** 30 November 1973**DCA/MY/15 Flight Control and Landing Gear Systems - Modification****Applicability:** Models M20, M20A, M20B, M20C, M20D, M20E, M20F and M20G as detailed in FAA AD 72-12-2**Requirement:** FAA AD 72-12-2 amendment 39-1482**Compliance:** By 1 March 1973*Note: A copy of the reference document may be obtained from the Director*

**DCA/MY/16 Landing Gear Actuator - Modification****Applicability:** Models M20C, M20E and M20F with S/N listed in SB M20-191**Requirement:** Mooney SB M20-191  
(FAA AD 75-04-09 also refers)**Compliance:** Before further flight**Effective Date:** 28 February 1975*Note: Requirement notified to registered owners on effective date***DCA/MY/17 Dukes Electric Gear Actuators (P/N 4196-00-1C) and Ball Joint - Inspection and Lubrication****Applicability:** All model M20 series with Dukes Electric Gear Actuator P/N 4196-00-1C**Requirement:** Mooney SB M20-190**Compliance:**

1. Part I of SB within the next 25 hours TIS and thereafter at intervals not exceeding 200 hours TIS.
2. Part II of SB within the next 100 hours TIS and thereafter at intervals not exceeding 100 hours TIS.
3. Part III of SB in conjunction with Part I within the next 25 hours TIS.

**Effective Date:** 19 May 1975**DCA/MY/18 Engine Mount Members - Inspection****Applicability:** Models M20C, M20D, M20E, M20F and M20G with S/N listed in SB M20-192**Requirement:** Mooney SB M20-192  
(FAA AD 75-09-08 also refers)**Compliance:** Within the next 50 hours TIS or before the accumulation of 450 hours TIS whichever occurs later, thereafter at intervals not exceeding 100 hours TIS. The repetitive inspection may be discontinued after rework in accordance with Mooney SB M20-192 or after installation of a new revised mount**Effective Date:** 19 May 1975**DCA/MY/19A Oil Cooler - Inspection and Replacement****Applicability:** Model M20E, S/N 101 through 466 and M20F, S/N 22-0001 through 22-1437 fitted with Stewart Warner oil cooler 8432H, S/N 001 through 499 or 8432F S/N 1610 through 1717**Requirement:**

1. Remove cowl assembly as necessary to gain access to oil cooler.
2. Check oil cooler model and serial number, found on fluid fitting side.
3. If oil cooler is model 8432H S/N 001 through 499 or, model 8432F S/N 1610 through 1717, replace with an approved oil cooler outside the applicability range of this Airworthiness Directive.
4. Affected coolers may remain fitted for a further 5 hours TIS, subject to a satisfactory inspection for leaks prior to each flight. If any leaks are detected replace cooler before further flight.

(FAA AD 77-08-06 amendment 39-2903 also refers)

**Compliance:** 1. Inspection - before further flight and if cooler is in affected S/N range, prior to each flight until replaced.

2. Replacement - within the next 5 hours TIS

**Effective Date:** DCA/MY/19 - 28 April 1977  
DCA/MY/19A - 20 July 1977

*Note: Requirement notified to registered owners on effective date*

#### **DCA/MY/20B Propeller RPM Restriction - Tachometer Marking and Placard**

**Applicability:** All model M20E and M20F with Hartzell HC-C2YK-1 ( ) propeller

**Requirement:** Unless already accomplished,

1. re-mark engine tachometer face or bezel with red arcs covering the ranges 2000 to 2350 RPM and 2600 to 2700 RPM,

2. remove propeller vibration placard covering range 2100 to 2350 RPM if installed, and on instrument panel adjacent to tachometer affix placard which reads:

"AVOID CONTINUOUS OPERATION BETWEEN 2000 AND 2350 RPM"

In addition, aircraft fitted with a propeller not inspected per Hartzell SB 118A or later revision shall have, unless already accomplished, on instrument panel adjacent to tachometer a placard which reads:

"AVOID CONTINUOUS OPERATION ABOVE 2600 RPM IN FULL THROTTLE LEVEL FLIGHT"

(FAA AD 77-12-06 refers)

**Compliance:** By 17 April 1978

**Effective Date:** DCA/MY/20A - 31 August 1977  
DCA/MY/20B - 17 March 1978

#### **DCA/MY/21A Control Wheel Shaft - Inspection**

**Applicability:** All model M20 series

**Requirement:** 1. Inspect per Mooney SB M20-205B.  
2. Replace or modify cracked shafts with new original type or with strengthened type per SB M20-205B before further flight.

(FAA AD 77-17-04 amendment 39-3258 refers)

**Compliance:** At 1000 hours TTIS and thereafter at intervals not exceeding 500 hours TIS. Aircraft which have exceeded 1000 hours TIS shall be initially inspected within next 30 days unless already accomplished within last 250 hours TIS.

When new original type parts fitted, new initial inspection time is 1000 hours TIS.  
When strengthened type parts fitted, requirement for 500 hours inspections is removed.

**Effective Date:** DCA/MY/21 - 14 June 1978  
DCA/MY/21A - 1 September 1978

**DCA/MY/22 Main Landing Gear - Modification**

**Applicability:** All model M20F. Model M20J S/N 24-0001 through 24-0609

**Requirement:** Replace side brace bolts per Mooney SB M20-212  
(FAA AD 78-15-02 refers)

**Compliance:** By 30 November 1978

**Effective Date:** 1 September 1978

**DCA/MY/23 Rear Spar - Inspection**

**Applicability:** Model M20B, M20C, M20D, M20E, M20F and M20G with S/N listed in Mooney SB M20-217 and manual, or hydraulically actuated, flaps

**Requirement:** Inspect rear spar centre splice per Mooney SB M20-217 and repair as necessary

**Compliance:** At intervals not exceeding 500 hours TIS until repaired or modified. Aircraft which have exceeded 500 hours TIS shall be inspected within next 100 hours TIS or 90 days whichever is the sooner

**Effective Date:** 1 June 1979

**DCA/MY/24 Fuel System - Modification**

**Applicability:** All model M20E with Dukes model 4140-00-19A fuel pump

**Requirement:** Install fuel filter per Mooney SB M20-222 or replace fuel pump with Dukes model 1499-00-19  
(FAA AD 80-13-03 refers)

**Compliance:** Within the next 25 hours TIS

**Effective Date:** 1 August 1980

**DCA/MY/25 Fuel Tanks and Filter Caps - Inspection**

**Applicability:** All model M20B, M20C, M20D, M20E and M20F

**Requirement:** To preclude water entrapment and fuel contamination accomplish the following:

1. Inspect fuel tank bays and rib stations per Mooney SB M20-230
2. Inspect filler caps per Mooney SB M20-229. Rectify defective installation before further flight

(FAA AD 85-24-03 refers)

**Compliance:** (1) and (2) - within next 50 hours TIS or by 31 May 1986, whichever is the sooner, and thereafter repeat (2) at intervals not exceeding 12 months

**Effective Date:** 28 February 1986

**DCA/MY/26 Fuel Filler Cap Retaining Lanyard - Removal**

**Applicability:** Model M20F all S/N, M20J S/N 24-0001 through 24-3381 and M20L S/N 26-0001 through 26-0041.

**Requirement:** To prevent false fuel gauge indication during flight, accomplish the following:-  
Remove the lanyard (nylon type material) from the left-hand and right-hand fuel filler cap assembly per the INSTRUCTIONS section of Mooney Aircraft Corporation SB M20-259.  
(FAA AD 97-26-08 refers)

**Compliance:** Within next 50 hours TIS.

**Effective Date:** 13 February 1998

**DCA/MY/27 Aileron Control Links - Inspection**

<b>Applicability:</b>	<u>Models</u>	<u>Serial Numbers</u>
	M20B	all serial numbers
	M20C	all serial numbers
	M20D	all serial numbers
	M20E	all serial numbers
	M20F	all serial numbers
	M20G	all serial numbers
	M20L	all serial numbers
	M20J	24-0001 through 24-3359
	M20K	25-0001 through 25-1999
	M20M	27-0001 through 27-0197
	M20R	29-0001 through 29-0042

**Requirement:** To detect and correct cracked aileron control links, which could result in loss of aileron control, accomplish the following:-

1. Visually inspect the aileron control links (left-hand and right-hand) at the second 90-degree angle joint from the Heim bearing for the installation of a reinforcement gusset per Mooney SB M20-264.

If a reinforcement gusset is installed, this AD requires no further action.

2. If a reinforcement gusset is not installed, inspect, using magnetic particle methods, the aileron control links for cracks per Mooney SB M20-264.

If cracks are found, prior to further flight, replace the cracked aileron control link with an aileron control link of improved design per SB M20-264.

Note 1: Replacing both aileron control links with aileron control links of improved design may be accomplished at any time as terminating action for the repetitive inspection requirement of this AD, but must be accomplished prior to further flight on any aileron control link found cracked.

Note 2: If one aileron control link is replaced when a crack is found, the other aileron control link must still be repetitively inspected every 100 hours TIS until replacement with an improved design part.  
(FAA AD 98-24-11 refers)

**Compliance:**

1. Within the next 100 hours TIS.
2. Within the next 100 hours TIS, and thereafter at intervals not to exceed 100 hours TIS.

**Effective Date:** 18 December 1998

**DCA/MY/28 Turbocharger Exhaust – Modifications**

**Applicability:** Model M20M aircraft S/N 27-0001 through 27-0321

**Requirement:** To prevent engine bay and possible cockpit in-flight fire, replace the radiant heat shield P/N 600182-501 and the V band clamp P/N 55677-340M or 40D21162-30M, and modify the hydraulic brake line, in accordance with Mooney Airplane Company SB M20-283A.  
(FAA AD 2004-23-17 refers)

**Compliance:** Within 10 Hours TIS.

**Effective Date:** 31 March 2005

**DCA/MY/29 O & N Bladder Fuel Cell – Inspection and Replacement**

**Applicability:** Models M20B, M20C, M20D, M20E, M20F, M20G, and M20J aircraft, all serial numbers equipped with an O & N Bladder Fuel Cell installed per STC SA2277CE or STC SA2350CE.

**Requirement:** To prevent rainwater from entering the fuel bladders, which could result in rough engine operation or complete loss of engine power, accomplish the following:

1. On both the left and right wing, inspect the drain valve to assure that it was inserted fully into the drain nipple. Modify any drain valve found not to be inserted fully into the drain nipple before further flight.
2. On both the left and right wing do the following:
  - a) Install a foam wedge to reduce the amount of trapped fluids in the center fuel cell.
  - b) Install an anti-ice mast forward of the vent tubes to prevent icing of the fuel tank vents.
  - c) Drill a vent hole to prevent icing of the engine's crankcase breathers; and
  - d) Replace the flush style fuel caps and adapters with raised style caps and adapters.

Follow the instructions in paragraph 3. of this AD as an alternative method of compliance for replacing the flush style fuel caps.

3. Instead of replacing the flush style fuel caps as required in paragraph 2. d) of this AD, you may do a preflight fuel system check prior to each flight. To do this, you must insert the following "Pilot Operating Procedures-Preflight Fuel System Check" into the Limitation Section of the FAA-approved Airplane Flight Manual (AFM):
  - a) Place a suitable container under the fuel strainer drain outlet prior to operating the strainer drain control for at least 4 seconds. Check strainer to ensure drain is closed.
  - b) Inspect the fluid drained from the fuel strainer and each wing tank quick drain for evidence of fuel contamination in the form of water, rust, sludge, ice, or any other substance not compatible with fuel. Also check for proper fuel grade before the first flight of each day and after each refueling. If any contamination is detected, comply with paragraph (f)(4) of this AD.
  - c) Repeat steps a. & b. on each wing tank quick drain.

- d) If the airplane has been exposed to rain, sleet, or snow, or if the wing fuel tanks or fuel strainer drains produce water or other contamination, you must purge the airplane fuel system to the extent necessary to ensure that there is no water, ice, or other fuel contamination.

(FAA AD 2004-25-04 refers)

- Compliance:**
1. Before 28 January 2006
  2. Before 28 January 2006
  3. Before 28 January 2006

**Effective Date:** 31 March 2005

**DCA/MY/30 Engine Mount Attachment – Torque and Replacement**

**Applicability:** Model M20M aircraft, S/N 27-0317 through to 27-0355  
Model M20R aircraft, S/N 29-0290 through to 29-0448

**Requirement:** To prevent the upper right and upper left engine mounting hardware from losing torque, which could result in a reduction in engine mount load carrying capability and could lead to engine mount failure, accomplish the following:

1. Torque the upper left and upper right engine mount attachment hardware, per Mooney Airplane Company, Inc. Service Bulletin M20-292A, dated 22 December 2006.
2. Replace the engine mount attachment hardware per SB M20-292A.

(FAA AD 2007-05-04 refers)

**Note:** Accomplishment of Requirement 2 is a terminating action to this AD.

- Compliance:**
1. Within the next 25 hours TIS, unless Requirement 2 of this AD has been accomplished.
  2. Within the next 100 hours TIS, unless already accomplished.

**Effective Date:** 26 April 2007

**DCA/MY/31 Cancelled – DCA/MY/32 refers**

**Effective Date:** 27 March 2012

**DCA/MY/32 Tail Pitch Trim – Inspection and Rework**

**Applicability:** Models M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S and M20TN aircraft, all S/N.

**Note 1:** This AD supersedes DCA/MY/31 to expand the AD applicability and remove the requirement to report inspection results to the manufacturer.

**Requirement:** To prevent failure of the tail pitch trim assembly which could result in loss of aircraft control accomplish the following:

Inspect the tail pitch trim assembly for correct configuration and attachment and inspect the huck bolt fasteners for security per the instructions in Mooney Aviation Company SB No. M20-313A dated 29 February 2012.

If the tail pitch trim assembly is found incorrectly positioned, or the tail pitch trim fitting, hinge and filler plate are found incorrectly attached, and/or the huck bolt fasteners are found loose or incorrectly installed, accomplish the instructions in Mooney SB No. M20-314A dated 29 February 2012 before further flight.

**Note 2:** Inspections accomplished before 27 March 2012 per the instructions in Mooney Aviation Company, Inc. SB No. M20-313, dated 7 February 2012 and corrective actions accomplished before 27 March 2012 per the instructions in Mooney Aviation Company, Inc. SB No. M20-314, dated 10 February 2012 satisfies the requirements of this AD.

(FAA AD 2012-05-09 refers)

**Compliance:** Within the next 10 hours TIS unless previously accomplished.

**Effective Date:** 27 March 2012

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If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below.

**2014-15-18 Empennage Attach Fittings – Inspection**

**Applicability:** M20C aircraft, S/N 2313; M20E aircraft, S/N 761; M20M aircraft, S/N 27-0057; M20R, S/N 29-0141 and 29-0513 through to 29-0519; and M20TN aircraft, S/N 31-0101 through to 31-0127.

**Effective Date:** 20 August 2014

**\* 2023-02-04 Elevator Balance Weight – Inspection**

**Applicability:** M20C, M20D, M20E, M20F and M20G aircraft, all S/N up to 680170 inclusive.

**Effective Date:** 13 February 2023