# Airworthiness Directives

## Header Information

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
14 CFR Part 39
Amendment 39-4498; AD 82-24-05

DETROIT DIESEL ALLISON Model 250 Series Engines

## Preamble Information

DATES: Effective November 26, 1982.

## Regulatory Information

82-24-05 DETROIT DIESEL ALLISON: Amendment 39-4498. Applies to all Detroit Diesel Allison (DDA) Model 250 series engines equipped with Bendix fuel control assemblies and power turbine governor assemblies containing or suspected of containing P/N 2526146 bushing assemblies with a nylon ball bearing separator.
NOTE: Assemblies listed in the appendix to this AD have steel ball bearing separators.
Compliance required, as indicated, unless already accomplished.
To prevent possible engine power loss, autoacceleration, overspeeding, or power turbine governor instability/malfunctioning caused by failure of P/N 2526146 bushing assemblies with a nylon ball bearing separator installed in Bendix fuel control assemblies and power turbine governor assemblies, accomplish the following:
(a) Before further flight, remove from service affected Bendix fuel control assembly and power turbine governor assembly that exhibit one or more of the following symptoms that cannot be corrected by following the maintenance procedures in the appropriate DDA Operations and

Maintenance Manual and, where applicable, install assemblies that have steel ball bearing separators:

Fuel Control Assembly Symptoms
N1 fluctuation
Autoacceleration or overspeed
Inability to obtain maximum power or N1 limiting
Inability to adjust/set idle speed or excessive flight idle

Power Turbine Governor Symptoms
Governor instability
Excessive droop which cannot be cured by correct control system rigging

NOTE: Above symptoms manifested by fuel control assemblies or power turbine governor assemblies which incorporate steel ball bearing separators should be corrected using appropriate DDA Operations and Maintenance Manual procedures.
(b) Inspect in accordance with Paragraph (c) affected Bendix fuel control assemblies and power turbine governor assemblies within the hours time in service specified in the following schedule or before October 16, 1983, whichever occurs first:

| Time in Service (Hours) of Fuel Control or Power Turbine Governor Since New or Last Overhaul | Inspect Within The Following Time (Hours) In Service |
|---|---|
| Less than 300 | 100 |
| 300 or more and less than 600 | 50 |
| 600 or more and less than 900 | 150 |
| 900 or more and less than 1200 | 200 |
| More than 1200 | 250 |

(c) Inspect in accordance with the applicable DDA Commercial Engine Alert Bulletin, or later FAA- approved revision, listed below to determine whether the P/N 2526146 bushing assembly with a nylon ball bearing separator is installed:

| Engine Model | Bulletin No., dated October 15, 1982 |
|---|---|
| 250-C18 | CEB-A-229 |

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| | |
|---|---|
| 250-C20, -C20B, -C20F, -C20J | CEB-A-1206 |
| 250-B15G | CEB-A-99 |
| 250-B17, -B17B, -B17C | CEB-A-1166 |
| 250-C28B, -28C | CEB-A-73-2026 |
| 250-C30, -C30P, -C30S | CEB-A-73-3021 |

(d) If a bushing assembly containing a nylon ball bearing separator is identified during inspection required by Paragraph (c), replace the bushing assembly with a serviceable assembly having a steel ball bearing separator. Reidentify serviceable fuel control assemblies or power turbine governor assemblies, after inspection, in accordance with the applicable DDA service bulletin.
(e) Special flight permits may be issued in accordance with FARs 21.197 and 21.199 to operate aircraft to a base where compliance with this AD can be accomplished.
(f) Upon request of an operator, the Manager, Chicago Aircraft Certification Office, FAA, Central Region, may adjust the compliance time specified in this AD provided such requests are made through an FAA maintenance inspector, and the request contains substantiating data to justify the request for that operator.
(g) Upon request of the operator, an equivalent means of compliance with the requirements of this AD may be approved by the Manager, Chicago Aircraft Certification Office, FAA, Central Region.
This amendment becomes effective November 26, 1982.

AD 82-24-05 APPENDIX
All Bendix fuel control assemblies and power turbine governor assemblies installed in DDA Model 250 series engines are suspected of containing nylon ball bearing separators, except the following assemblies all of which have steel ball bearing separators:
1. Units identified by the letter "K" marked on the fuel control assemblies or power turbine governor assemblies identification plate in the "less issues" (LI) block.
2. The following fuel control assemblies and power turbine governor assemblies which have acceptable New Hampshire Ball Bearing (NHBB) bushing assemblies and are NOT marked with letter "K."

| Model | Bendix Part No. | DDA Part No. | DDA Model | Unit Serial No. |
|---|---|---|---|---|
| Fuel Control Assemblies: | | | | |

| | | | | |
|---|---|---|---|---|
| DP-N2 | 2524644-18 | 23001794 | 250-C20B/F/J | 336103 and subsequent |
| DP-P2 | 2524654-15 | 23001796 | 250-B17B/C | 336036 and subsequent |
| DP-T3 | 2524738-20 | 23001797 | 250-C28B/C | 334078 and subsequent |
| DP-V1 | 2524854-1 | 23004537 | 250-C30P | 336051 and subsequent |
| DP-V1 | 2524745-17 | 23001798 | 250-C30/S | 334132 and subsequent |
| Power Turbine Governor Assemblies: | | | | |
| AL-AA1 | 2524667-8 | 23005492 | 250-C20/B/F | 29288 and subsequent |
| AL-AA1 | 2524769-7 | 23005493 | 250-C20B/J | 29367 and subsequent |
| AL-AC1 | 2524677-6 | 23005494 | 250-C28B/C | 27511 and subsequent |
| AL-AD1 | 2524692-5 | 23006268 | 250-C30/P/S | 28914 and subsequent |

3. Fuel control assemblies and power turbine governor assemblies manufactured prior to November 7, 1979, provided that they have NOT been overhauled or have NOT had P/N 2526146 bushing assembly replaced since that date. The following listed fuel control assemblies and power turbine governor assemblies were manufactured prior to November 7, 1979:

| Model | Bendix Part No. | Engine Model | All Serial Numbers Including and Prior To |
|---|---|---|---|
| Fuel Control Assemblies: | | | |

| | | | |
|---|---|---|---|
| DP-D3 | 2524463 | 250-C18 | 323884 |
| DP-D3 | 2524527 | 250-C18 | 326174 |
| DP-M1 | 2524384 | 250-B15G | 319258 |
| DP-N1 | 2524552 | 250-C20 | 320894 |
| DP-N2 | 2524644 | 250-C20B, C20F, C20J | 327936 |
| DP-P1 | 2524558 | 250-B17 | 319575 |
| DP-P2 | 2524654 | 250-B17B | 327892 |
| DP-P2 | 2524661 | 250-B17B, B17C | 317461 |
| DP-T3 | 2524738 | 250-C28B, C28C | 328100 |
| DP-V1 | 2524745 | 250-C30, C30S | 326387 |
| Power Turbine Governor Assemblies: | | | |
| AL-AA1 | 2524553 | 250-C20/B/F | 18010 |
| AL-AA1 | 2524667 | 250-C20/B/F | 22797 |
| AL-AA1 | 2524706 | 250-C20/B/J | 20218 |
| AL-AA1 | 2524769 | 250-C20/B/J | 22921 |
| AL-AC1 | 2524677 | 250-C28B, C28C | 23097 |
| AL-AD1 | 2524692 | 250-C30, C30P, C30S | 21897 |

**Footer Information**

**Federal Register Information**

This information is not available.

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**Comments**

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