

Textron Lycoming:

Priority Letter issued on June 23, 1994. Docket No. 94-ANE-34.

Applicability: Textron Lycoming (formerly Avco Lycoming) O-235-12C, O-235-L, O-320- A, O-320-B2C, O-320-E, O-320-E2A, O-320-E2D, O-320-E20, O-320-D2J, O-320-D3G, O-320-H2AD, IO-320-B, IO-320-B, IO-320-C, LO-320-A4K, LO-320-D1D, O-360- A, O-360-A4M, O-360-F, IO-360-A, IO-360-BIB, IO-360-C, LO-360-A1A, LO-360- A1D, LIO-360-A1A, LIO-360-A3B6D, TIO-360-C, TVO-435-AIA, O-540-E, O-540- C, O-540-J, IO-540-C, IO-540-D, IO-540 E 290, IO-540-K, TIO-540-F, TIO-540-J, TIO-540-S, 165D-540-B 380, and R-680 series reciprocating engines, installed on the following U.S. registered aircraft:

N1010F, N106RE, N1068M, N110MP, N1285X, N1317P, N1344V, N14006, N15851, N1666C, N177DT, N1920F, N1928Q, N20HT, N20NC, N20ND, N207X, N2040Q, N2128W, N2165M, N2185K, N2232Z, N22874, N2300R, N2346G, N2394Q, N24395, N24627, N24860, N250M, N2555V, N25562, N2578L, N2603Y, N26602, N28FG, N2811R, N2815F, N2817Q, N2819A, N2848Q, N28683, N2927M, N2964K, N3060M, N32388, N33696, N34242, N36358, N3737U, N37500, N3945K, N40ES, N40VF, N400JM, N4222J, N4293Y, N4316T, N4320F, N4497U, N4515P, N4602S, N4674S, N4687P, N47SG, N4796V, N47964, N48ES, N494FL, N5199U, N52015, N5217L, N5254K, N5344K, N5418W, N54228, N54661, N5547Q, N55521, N56GS, N56884, N59850, N6005Z, N6045M, N61569, N6239H, N62801, N6286W, N6297V, N63R, N6370P, N6412D, N64120, N6480D, N6483Q, N6493Q, N65425, N671A, N67615, N67975, N68SC, N68937, N6905V, N7ZX, N70416, N71RJ, N711PG, N714ZU, N7157V, N7195G, N7213P, N7230F, N7230Q, N7248H, N73064, N733WH, N734TA, N7361R, N737CM, N737NV, N738GX, N738KC, N738KF, N738KK, N738RC, N738ZL, N739RF, N75381, N755GA, N756RV, N757SK, N757SX, N757TU, N7724M, N777EE, N78887, N78901, N7894V, N792BW, N804EH, N8070P, N8094Q, N81RP, N81203, N8144G, N8149E, N8184X, N8201B, N82182, N8223W, N8264W, N8286W, N8306D, N8372L, N8494E, N8537J, N8579H, N8691Y, N8810P, N8961P, N9114H, N9140J, N9157S, N9296P, N9407K, N9444R, N9451B, N95WT, N9574L, N96TB, N96134, N9666V, N9673L, N9728U, N9783L, N9808J and N9864C.

Compliance: Required as indicated, unless accomplished previously.

To prevent detonation due to low octane, which can result in severe engine damage and subsequent failure, accomplish the following:

(a) For engines that are certified to operate on only 91 or higher octane aviation gasoline (avgas) within the next 2 hours time in service (TIS) after the effective date

of this airworthiness directive (AD) perform an engine teardown and analytical inspection, and replace with serviceable parts as necessary in accordance with Avco Lycoming Service Bulletin (SB) No. 398, dated April 30, 1976.

(b) For engines that are certified to operate on 80 octane avgas, within the next 2 hours TIS after the effective date of this AD conduct a differential compression test on all cylinders in accordance with Avco Lycoming Service Instruction (SI) No. 1191, dated March 31, 1972, and examine the oil filter by cutting the oil filter apart and spreading the filter paper out to look for metal particles. If metal particles are present, or if one or more cylinders shows unacceptable compression as specified in Avco Lycoming SI No. 1191, dated March 31, 1972, perform an engine teardown and analytical inspection, and replace with serviceable parts as necessary in accordance with Avco Lycoming SB No. 398, dated April 30, 1976.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine and Propeller Standards Staff. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Engine and Propeller Standards Staff.

NOTE: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine and Propeller Standards Staff.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(e) Priority Letter AD 94-14-13, issued June 23, 1994, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT: Locke Easton, Aerospace Engineer, Engine and Propeller Standards Staff, FAA, Engine and Propeller Directorate, 12 New England Executive Park; telephone (617) 238-7113, fax (617) 238-7199.