

**95-21-15 Teledyne Continental Motors:** Amendment 39-9402. Docket No. 95-ANE-34. Supersedes priority letter AD 94-14-12.

Applicability: Teledyne Continental Motors (TCM) A-65-8, C-85-12, E-185-11, O-200, O-300-D, GO-300, IO-360-G, IO-360-K, TSIO-360, O-470-L, O-470-R, O-470-U, IO-470-C, IO-470-E, IO-470-F, IO-470-L, IO-470-N, IO-470-S, IO-470-V, IO-520-A, IO-520-B, IO-520-C, IO-520-D, IO-520-F, IO-520-K, IO-520-M, TSIO-520, TSIO-520-C, TSIO-520-M, TSIO-520-N, TSIO-520-UB, GTSIO-520, IO-550-C, and R-670 reciprocating engines, installed on the following U.S. registered aircraft: N101G, N101JB, N101PQ, N1077B, N11PT, N111MK, N114R, N1162D, N1167J, N1208U, N121LG, N124WN, N13159, N1344V, N1360L, N140NL, N1503S, N1556T, N1584V, N16165, N166AU, N1672R, N1680R, N172CB, N1724T, N17793, N179SV, N1806F, N1818L, N182MC, N186Q, N19193, N19346, N207X, N200BD, N2051S, N2083S, N210KC, N21179, N2168N, N22FG, N2248Z, N2281T, N231KQ, N24FG, N2616N, N26560, N27G, N27326, N2841W, N2854W, N2881M, N2928B, N2995F, N3DX, N30C, N30CA, N300RS, N3097D, N31CU, N313TM, N3145Y, N3153B, N323K, N3397Q, N340VV, N3499G, N35MX, N35840, N35964, N3599L, N3603L, N36319, N3639D, N3700J, N39545, N4008F, N4088V, N41CU, N41032, N4105C, N4154Y, N421CW, N421EM, N421SM, N4218L, N4259B, N46GS, N4302L, N4354K, N4354W, N444BJ, N4562D, N4568D, N4591S, N4598S, N4672B, N476KE, N4761K, N47964, N4812F, N4884B, N4895E, N5089V, N51EN, N5204C, N5314T, N5357A, N5377J, N5453J, N550DF, N5517A, N555YT, N5591D, N57032, N5732X, N58BS, N5808F, N58689, N60DM, N60062, N619B, N6108F, N6158R, N6169N, N6193X, N62121, N6222F, N6278V, N6281F, N6285H, N6341X, N6363K, N6421P, N65WW, N65031, N6527P, N6579M, N6664L, N6669X, N6670G, N66909, N6706G, N67249, N677PC, N6789R, N6800R, N6822R, N6837Q, N68937, N6915F, N6951M, N6952M, N6992E, N704GY, N704NQ, N7125E, N714BD, N7208V, N721X, N724BE, N7248H, N7303Y, N7309Q, N732DD, N735DV, N739JG, N7405S, N758JF, N777E, N7981D, N800WB, N8103Z, N8107D, N8150Q, N8160Q, N8168U, N8210, N8241N, N8307D, N8308Z, N836BQ, N8426S, N8432Z, N8465L, N8491S, N85WB, N8501S, N8532R, N8579H, N8579M, N85797, N86VS, N8660M, N8669A, N8867T, N9099G, N9114A, N9124U, N9151M, N9157S, N91603, N91860, N922DK, N92465, N9410S, N9434N, N9435U, N9516Y, N9547U, N9597T, N9606Y, N96134, N9613Y, N9673L, N96761, N9764E, N9777R, N97799, N9833H, N984BC, and N9992G.

NOTE: This airworthiness directive applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (c) to request approval from the Federal Aviation Administration (FAA). This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

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 AD perform an engine teardown and analytical inspection, and replace with serviceable parts as necessary in accordance with TCM Service Bulletin (SB) No. M88-10, dated August 24, 1988.

(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 TCM SB No. M84-15, dated December 21, 1984, 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 TCM SB No. M84-15, dated December 21, 1984, perform an engine teardown and analytical inspection, and replace with serviceable parts as necessary in accordance with TCM SB No. M88-10, dated August 24, 1988.

(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) The actions required by this AD shall be done in accordance with the following SB's:

<b>DOCUMENT NO.</b>	<b>PAGE</b>	<b>DATE</b>
TCM SB No. M88-10	1	August 24, 1988
Total Pages: 1.		
TCM SB No. M84-15	1-6	December 21, 1984
Total Pages: 6.		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, AL 36601; telephone (334) 438-3411. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment supersedes priority letter AD 94-14-12, issued June 23, 1994.

(g) This amendment becomes effective on November 28, 1995.