

TELEDYNE CONTINENTAL[®] AIRCRAFT ENGINE
MANDATORY SERVICE BULLETIN

The Subject Matter Of This Service Bulletin Is Incorporated
In Whole Or In Part In An FAA Airworthiness Directive

CATEGORY 1

MSB93-12

FAA APPROVED

SUBJECT: VALVE RETAINER KEY INSTALLATION INSPECTION

PURPOSE: To verify proper valve retainer key installation.

COMPLIANCE: Before further flight.

NOTE...Those engines that have complied with TCM Special Service Notice SSN 2-93 are not affected by this service bulletin.

MODELS AFFECTED: All engine models identified by the serial numbers listed below having less than 25 hours total time in service.

MODEL	SERIAL NUMBER
NEW ENGINES	
O200A	256034 thru 256037
O470R	466712 thru 466716
O470S	464585
O470U	470739 thru 470741
IO240A	806000 thru 806011, 806027
IO470L	468575 thru 468578
IO520BB	578883 thru 578886, 578892 thru 578914, 578923
IO520CB	576309, 576310
IO520D	575895 thru 575904
IO520F	579202, 579203, 579205 thru 579207
IO520K	557542, 557543
IO520L	577212, 577213
IO520MB	575054, 575055
IO550B	675772 thru 675799, 675801 thru 675811, 675813, 675814, 675823, 675829, 675830
IO550C	676651 thru 676674, 676680, 676682, 676683, 676686, 676688
IO550E	681008 thru 681012, 681016 thru 681018
IO550G	679050, 679061, 679062, 679065

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		1 of 7	
05	12	93						

MODEL	SERIAL NUMBER
LTSIO360KB	319129 thru 319159, 319162 thru 319173
TSIO360HB	308146
TSIO360KB	320129 thru 320159, 320162 thru 320172
TSIO520AE	523344
TSIO520BB	526038 thru 526041
TSIO520BE	528521
TSIO520C	501627
TSIO520CE	530158
TSIO520M	520995 thru 520999, 532000 thru 532004, 532006
TSIO520R	522657, 522658, 522660, 522662
TSIO520T	515433
TSIO520UB	527180 thru 527183, 527185
TSIO520VB	529098
TSIO550B	802027 thru 802038, 802040 thru 802042, 802044
TSIOL550A	800555 thru 800564
GTSIO520L	608751 thru 608753
GTSIO520M	613069, 613070
REBUILT ENGINES	
O200A	285136-R thru 285182-R, 285184-R thru 285192-R, 285195-R thru 285202-R
O300D	25631D-R thru 25634D-R, 25636D-R thru 25648D-R
O470J	202175-R thru 202178-R
O470K	049442-R thru 049446-R
O470L	069761-R thru 069768-R
O470R	288019-R thru 288043-R, 288045-R thru 288049-R, 288051-R thru 288057-R, 288059-R thru 288087-R, 288089-R thru 288093-R, 288097-R
O470S	269230-R, 269231-R, 269233-R thru 269250-R, 269252-R thru 269262-R
O470U	286608-R, 286612-R, 286616-R thru 286643-R, 286646-R thru 286648-R, 286650-R thru 286668-R, 286670-R thru 286680-R
IO360C	060620-R thru 060623-R
IO360D	062959-R thru 062972-R
IO360DB	239734-R thru 239740-R, 239742-R thru 239750-R
IO360G	244566-R thru 244568-R, 244571-R, 244572-R
IO360GB	236674-R thru 236676-R, 236679-R, 236680-R

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		2 of 7	
05	12	93						

MODEL	SERIAL NUMBER
IO360H	226554-R thru 226558-R, 226560-R
IO360HB	265183-R, 265184-R
IO360K	240113-R thru 240117-R
IO360KB	288506-R thru 288525-R, 288527-R, 288528-R
IO470C	242137-R, 242139-R, 242140-R
IO470D	105620-R, 105621-R
IO470E	088741-R thru 088744-R
IO470F	089837-R thru 089842-R
IO470K	092929-R thru 092938-R
IO470L	272876-R thru 272882-R, 272884-R thru 272895-R, 272898-R, 272899-R
IO470N	096182-R, 096562-R, 096564-R thru 096574-R
IO470S	109340-R thru 109344-R
IO470U	118431-R thru 118436-R
IO470V	171056-R, 171057-R
IO520A	112665-R thru 112678-R, 112680-R
IO520B	234762-R
IO520BA	280787-R, 280790-R thru 280819-R, 280821-R thru 280846-R
IO520BB	285655-R, 285657-R thru 285690-R, 285692-R thru 285701-R, 285703-R, 285705-R thru 285735-R, 285738-R thru 285744-R, 285747-R
IO520C	287047-R, 287050-R thru 287092-R, 287094-R thru 287102-R, 287104-R thru 287106-R
IO520CB	282217-R thru 282237-R, 282239-R thru 282262-R, 282264-R thru 282267-R, 282269-R thru 282275-R, 282277-R thru 282287-R, 282290-R thru 282294-R, 282296-R thru 282304-R
IO520D	282767-R thru 282817-R, 282819-R thru 282828-R, 282830-R thru 282834-R, 282836-R thru 282848-R, 282850-R thru 282857-R, 282859-R, 282860-R, 282862-R, 282863-R
IO520E	215789-R thru 215794-R
IO520F	286271-R, 286272-R, 286277-R thru 286340-R, 286343-R thru 286371-R, 286373-R thru 286378-R, 286381-R thru 286403-R, 286405-R thru 286420-R, 286422-R, 286423-R
IO520J	216519-R, 216520-R
IO520K	224072-R thru 224076-R, 224078-R

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		3 of 7	
05	12	93						

MODEL	SERIAL NUMBER
IO520L	270339-R thru 270370-R, 270372-R thru 270380-R, 270382-R thru 270397-R, 270399-R, 270401-R, 270403-R IO520M 270798-R thru 270803-R, 270806-R thru 270826-R, 270828-R thru 270831-R
IO520MB	277417-R thru 277441-R, 277443-R
IO550A	280331-R thru 280337-R
IO550B	281688-R, 281695-R thru 281698-R, 281700-R thru 281730-R, 281732-R thru 281741-R, 281744-R, 281746-R thru 281786-R
IO550C	271739-R thru 271742-R, 271750-R thru 271764-R, 271766-R thru 271791-R, 271793-R thru 271796-R
IO550D	284021-R thru 284039-R
IO550E	283278-R thru 283283-R
IO550F	283277-R, 284526-R thru 284549-R
IO550L	289002-R thru 289018-R
LTSIO360E	225645-R, 225646-R
LTSIO360EB	266365-R, 266367-R thru 266376-R, 266379-R thru 266388-R, 266390-R thru 266392-R
LTSIO360KB	268382-R thru 268398-R
TSIO360A	197104-R, 197105-R
TSIO360C	283518-R thru 283523-R, 283525-R, 283526-R
TSIO360CB	236177-R thru 236186-R
TSIO360EB	265828-R thru 265837-R, 265839-R, 265841-R thru 265852-R
TSIO360F	232809-R thru 232812-R
TSIO360FB	281109-R, 281111-R thru 281133-R, 281135-R
TSIO360HB	239970-R thru 239973-R
TSIO360KB	268144-R thru 268150-R, 268152-R thru 268157-R
TSIO360LB	247209-R thru 247226-R, 247228-R
TSIO360MB	279231-R thru 279233-R
LTSIO520AE	246609-R, 246611-R thru 246617-R
TSIO520AE	246111-R thru 246115-R, 246610-R
TSIO520AF	245217-R thru 245220-R
TSIO520B	176601-R thru 176604-R, 176606-R thru 176615-R
TSIO520BB	287507-R, 287509-R thru 287511-R, 287514-R thru 287516-R
TSIO520BE	273719-R thru 273727-R, 272729-R thru 273731-R, 273734-R

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		4 of 7	
05	12	93						

MODEL	SERIAL NUMBER
TSIO520C	178374-R thru 178388-R
TSIO520CE	268538-R thru 268543-R
TSIO520D	180097-R, 180098-R
TSIO520DB	242009-R, 242010-R
TSIO520E	275232-R, 275233-R, 275237-R thru 275244-R, 275246-R thru 275250-R, 275252-R thru 275275-R
TSIO520EB	271209-R thru 271213-R, 271216-R thru 271237-R, 271239-R
TSIO520G	216043-R
TSIO520H	217280-R thru 217291-R
TSIO520J	218956-R, 218957-R
TSIO520JB	237154-R, 237155-R
TSIO520K	224602-R, 224603-R
TSIO520L	241936-R thru 241940-R
TSIO520M	283163-R thru 283215-R, 283218-R thru 283222-R
TSIO520N	228590-R thru 228594-R
TSIO520NB	276955-R thru 276960-R 276962-R thru 276977-R, 276981-R, 276982-R, 276984-R thru 276986-R, 276989-R thru 276999-R, 290501-R thru 290515-R, 290517-R thru 290523-R, 290528-R thru 290534-R, 290536-R
TSIO520P	278611-R, 278613-R, 278614-R, 278616-R thru 278619-R, 278621-R, 278623-R thru 278638-R
TSIO520R	269847-R thru 269853-R, 269855-R thru 269858-R, 269860-R thru 269862-R, 269864-R, 269865-R, 269867- R thru 269897-R, 269899-R
TSIO520T	239382-R thru 239388-R
TSIO520UB	248994-R thru 248999-R, 249000-R thru 249004-R, 249006-R thru 249016-R
TSIO520VB	278485-R thru 278487-R, 278490-R thru 278499-R, 290051-R thru 290086-R, 290088-R thru 290091-R, 290093-R thru 290121-R, 290123-R thru 290125-R
TSIO520WB	274237-R thru 274252-R
GTSIO520C	155562-R, 155563-R
GTSIO520D	219454-R, 219455-R
GTSIO520H	267251-R thru 267253-R, 267255-R thru 267282-R, 267284-R
GTSIO520K	226127-R

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		5 of 7	
05	12	93						

MODEL	SERIAL NUMBER
GTSIO520L	272412-R, 272413-R, 272415-R thru 272454-R, 272456-R, 272457-R, 272459-R, 272460-R, 272461-R, 272463-R
GTSIO520M	276274-R thru 276329-R, 276340-R
GTSIO520N	277120-R thru 277147-R
OVERHAUL ENGINES	
O470R	901224-H, 901264-H, 901274-H, 901275-H, 901299-H, 901319-H
O470S	901242-H, 901322-H
O470U	901237-H, 901255-H, 901335-H
IO360C	901331-H
IO360G	901279-H
IO470C	901298-H
IO470F	901238-H
IO470L	901214-H, 901329-H, 901332-H, 901333-H
IO470N	901336-H
IO520A	901226-H
IO520BA	901204-H, 901208-H, 901215-H, 901283-H
IO520BB	901343-H
IO520C	243665-H, 901246-H, 901303-H, 901304-H
IO520CB	901297-H, 901324-H, 901325-H, 901334-H
IO520D	901205-H, 901209-H, 901216-H, 901225-H, 901227-H, 901228-H, 901240-H, 901241-H, 901247-H, 901256-H, 901282-H, 901284-H, 901305-H 901312-H, 901321-H
IO520E	901280-H
IO520F	901217-H, 901266-H, 901276-H, 901292-H, 901326-H
IO520L	901218-H
IO520M	901211-H, 901248-H
IO520MB	901235-H, 901236-H, 901277-H, 901290-H
TSIO360EB	901230-H, 901257-H, 901309-H, 901320-H
LTSIO360KB	901219-H, 901265-H, 901294-H, 901328-H, 901337-H thru 901339-H, 901345-H
TSIO360E	901245-H, 901251-H
TSIO360EB	901220-H, 901243-H, 901258-H, 901271-H, 901272-H, 901287-H, 901288-H, 901300-H
TSIO360F	901293-H

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		6 of 7	
05	12	93						

MODEL	SERIAL NUMBER
TSIO360FB	901221-H, 901231-H, 901244-H, 901259-H
TSIO360KB	901291-H, 901295-H, 901323-H, 901327-H, 901340-H thru 901342-H 901344-H
TSIO520E	901285-H, 901306-H, 901307-H, 901314-H, 901315-H
TSIO520H	506200-H
TSIO520J	901317-H, 901330-H
TSIO520K	901267-H, 901268-H
TSIO520M	901206-H, 901210-H, 901222-H, 901233-H, 901253-H, 901260-H
TSIO520N	901212-H
TSIO520NB	519163-H, 901213-H, 901223-H, 901234-H, 901254-H, 901261-H
TSIO520T	901278-H, 901308-H, 901316-H, 901318-H

INSPECTION: The following inspection must be performed on all cylinders on the affected engines.

1. Remove engine cowling and appropriate baffling to gain access to each cylinder rocker valve cover.
2. Remove all rocker valve cover attaching hardware. Remove rocker valve covers and discard gaskets.
3. Using an inspection light, inspect each cylinder intake and exhaust valve retainer and/or rotocoil for proper installation of the valve retainer keys.
4. Notify TCM (205-438-3411, ext. 305) immediately if any retainer keys are found to be missing or improperly installed.
5. If all retainer keys are found in place and properly installed, clean rocker valve cover gasket surfaces and install new gaskets. Install rocker valve covers and attaching hardware. Torque all screws to 55 to 65 in. lbs. torque as listed in TCM "Torque Limits" Service Bulletin M92-15 or current revision as applicable.
6. Reinstall the baffling and cowling.
7. Operate engine until oil temperature is in the green arc. Shut down engine and inspect the engine for oil leaks.
8. Make a logbook entry as to compliance with this service bulletin.

Warranty action required to comply with this bulletin is covered by the TCM Gold Medallion Warranty, subject to its terms and conditions. A labor allowance of 3 hours inspection time per engine will be allowed as well as replacement of the rocker valve cover gaskets.

ISSUED			REVISED			 TELEDYNE CONTINENTAL MOTORS P.O. Box 90 • MOBILE ALABAMA 36601 205-438-3411	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		7 of 7	
05	12	93						