AC

54-4-1 AC Spark Plug Applies to All Engines Equipped With AC LA-87 Spark Plugs, Except Pratt and Whitney R-1830 Engines of 1,200 HP or Less and Wright R-1820 Engines of 1,200 HP or Less.

Compliance required prior to March 1, 1954.

A. In order to preclude possibilities of engine failure, when using AC LS-87 spark plugs in engines for which they are not approved, these spark plugs must be removed from all engines with the exceptions of the R-1820 having a T.O. rating of 1,200 h.p. or less and the R-1830 having a T.O. rating of 1,200 h.p. or less.

B. On R-1820 and R-1830 engines of 1,200 h.p. or less, the LS-87 plug is limited to a maximum of 120 hours of service with no reconditioning permitted. Plugs having over 120 hours must be removed from service.

This supersedes AD 49-26-2.

54-21-1 AC Diaphragm Type Fuel Pumps Applies to All Aircraft Powered by Continental, Aircooled or Lycoming Engines Which Are Equipped With AC Diaphragm Type Fuel Pumps.

Compliance required as soon as possible but not later than November 30, 1954.

The occurrence of severe fuel leakage in flight, caused by loosening of AC fuel pump surge chambers, has revealed the existence of AC fuel pumps not adequately safetied to prevent loosening of the sediment bowl and the surge chamber.

The following should be accomplished:

1. Inspect sediment bowl cap screw and surge chamber (if there is one) for adequate safetying.

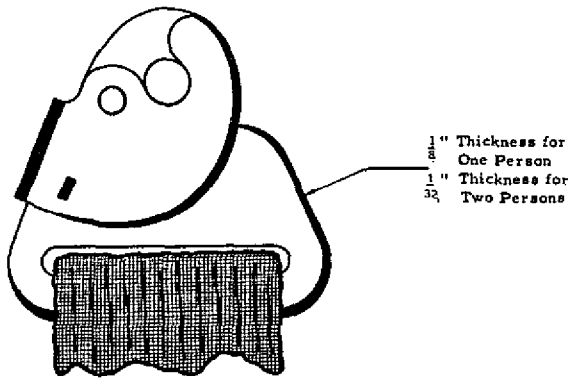
2. If not safetied, lockwiring or equivalent must be accomplished in accordance with good aircraft practice. One acceptable method of safetying is described by Lycoming Service Bulletin No. 174.

AIR ASSOCIATES

50–18–3 Air Associates Applies to Model M–264 Safety Belts Incorporating Warren McArthur End Fitings, P/N 275–AS26 (Air Associates P/N M–1842).

Compliance required as indicated.

Warren McArthur end fittings, P/N 275–AS26 (Air Associates P/N M–1842) have been found to be of insufficient strength for use in two-person belts. These fittings are not marked, have a fitting plate thickness of 1/8 inch, and may be identified by comparison with Figure 1. One-person belts using these fittings must be modified not later than the next annual inspection (or the next seat overhaul for aircraft on a continued maintenance basis) so that the label will read "APPROVED FOR ONE PERSON". This may be done by blanking out the words "OR TWO" and the letter "S" in the word "PERSONS" on the label with India ink or an equally effective method. All such belts presently used in two-person applications shall be removed and replaced by other belts approved for two persons not later than May 1, 1950.



WARREN McARTHUR FITTING NO. 275-AS26

FIGURE 1

Care should be taken not to confuse these fittings with another Warren McArthur fitting P/N 13971 (also known as P/N 314–AS12) which is identical in appearance except that the fitting plate thickness is 5/32 inch.

This supersedes AD 50–2–1.

AIRCRAFT BELT

54–20–1 Aircraft Belt and Trim (Safety Belt) Applies to Model LBM–1900 (Dwg. No. 19001) Safety Belts Manufactured Prior to April 1, 1954.

Compliance required as soon as possible but not later than March 1, 1955.

Based on a complaint alleging noncompliance with strength standards of FAA Technical Standard Order C22, verification tests were conducted by the National Bureau of Standards at FAA request, which revealed that the belt assemblies of this make and model manufactured prior to April 1, 1954, with LBM–1900–3 and –3A buckles, were under strength for a majority of specimens tested. These tests are considered as evidence of nonconformance with the terms of the TSO.

Therefore, TSO-labeled belts of this model as noted above which were manufactured prior to April 1, 1954, can no longer be considered as complying with the prescribed airworthiness standards and, accordingly, must not be used in civil aircraft.

Belts of this model manufactured subsequent to April 1, 1954, incorporate a buckle of improved design and tests reveal this belt assembly to be in accordance with TSO–C22 tension test requirements.

This supersedes AD 54–3–1.

ANDREA RADIO CORPORATION

62–13–1 Andrea Radio Corporation Amdt. 447 Part 507 Federal Register June 1, 1962. Applies to All Aircraft Equipped With Intercommunication Sets Models AN/AIC–10A and AN/AIC–18(A–81), Except Those With Control Panel Serial Number 332 and Subsequent.

Compliance required as indicated.

Within the next 200 hours' time in service after the effective date of this airworthiness directive unless already accomplished, modify Model AN/AIC–18(A–81) in accordance with Andrea Radio Corporation Field Modification C41–5115 and Model AN/AIC–10A in accordance with Andrea Radio Corporation Field Modification C41–5116, so that the adjustable attenuation range does not exceed 10 decibels.

When the modification has been completed add marking "MOD" adjacent to the TSO–C50 label.

Within the next 10 hours' time in service after the effective date of this airworthiness directive unless already accomplished, as an interim procedure pending modification, install a placard requiring that the master level control on the isolation amplifier be full "ON" at any time range problems are being worked.

(Andrea Radio Corporation Field Modification C41–5115 for AN/AIC–18(A–81) and C41–5116 for the AN/AIC–10A, both dated April 5, 1962, cover this same subject.)

This directive effective June 1, 1962.

AUTO CRAT

61-20-1 Auto Crat Manufacturing Company Safety Belt Amdt. 341 Part 507 Federal Register September 23, 1961. Applies to All Aircraft Equipped With Auto Crat Model BN 1-1700 Series Safety Belts.

Compliance required within the next 25 hours' time in service after the effective date of this AD.

It has been determined by static test that the Auto Crat safety belt Model BN 1-1700 assemblies manufactured under Technical Standard Order C22 standards do not meet the minimum strength requirements of this TSO. Accordingly, these belt assemblies must either be replaced with belt assemblies that conform to TSO-C22 standards, or be reworked to incorporate a steel frame buckle BN 1-2000AW supplied by Auto Crat, or equivalent. When this steel frame buckle is installed, the modified belt assembly becomes Model BN 1-2000, which meets the TSO requirements and shall be marked with the new model number.

(Auto Crat letters to various air carriers dated May 10, 1961, pertains to the same subject.)

This directive effective October 24, 1961.

62-23-1 Auto Crat Manufacturing Company Safety Belts Amdt. 499 Part 507 Federal Register October 26, 1962. Applies to All Aircraft Equipped With Auto Crat Models BN 1-2001, BN 3-1501, BN 3-6001, or BN 3-7001 Series Safety Belts.

Compliance required within the next 25 hours' time in service after the effective date of this AD.

It has been determined that Auto Crat Models BN 1-2001, BN 3-1501, BN 3-6001, or BN 3-7001 Series safety belts, not intended for aircraft use and which do not fully comply with the requirements of Technical Standard Order C22, have been improperly marked with TSO-C22 identification. Accordingly, Auto Crat belt assemblies identified with these model numbers shall be replaced with belt assemblies that conform to TSO-C22 standards.

This directive effective November 19, 1962.

BEECH

55–8–1 Beech Safety Belt Buckles Applies to All Beech Safety Belt Buckles, P/N 113652.

Compliance required as soon as possible but not later than September 1, 1955.

Inspect Beech safety buckles by checking the buckle lever attachment pin for snap ring retainers installed at each end.

All Beech buckles with buckle lever dowel type attaching pin retainers in lieu of buckle lever attaching pins with snap ring retainers should be retired from service by replacement with the newer improved safety buckle with through pin and snap ring retainers.

(Beech Service Bulletin No. OS–55–1 issued January 25, 1955, covers this same subject.)

BRIGGS AND STRATTON

50–4–1 Briggs and Stratton Applies to All Aircraft Equipped Wit Army Air Force Type A–8 Ignition Switches Manufactured by Briggs and Stratton.

Initial compliance required not later than March 1, 1950, and every 100 hours operation thereafter.

A serious hazard may exist on this type switch after considerable use has worn the internal switch lever stops, allowing overtravel past the "OFF" position. Such overtravel may allow the magneto ground to be broken and permit the engine to fire when the switch is in the "OFF" position.

Type A–8 ignition switches manufactured by Briggs and Stratton can be identified by the name Briggs and Stratton stamped on the rear of the switch case. Another distinguishing feature of this switch is a formed sheet metal lever which is not found on other makes of type A–8 switch.

1. Inspection should consist of the following: Check switch lever for overtravel past the "OFF" position. Figure 1 shows the location of the switch lever in the "OFF" position. The pointer projecting from the lever points to the middle "F" in the word "OFF". When the lever can be turned to a point beyond the centerline of the "O" in the word "OFF", the rotation stops have become worn and the switch should be replaced.

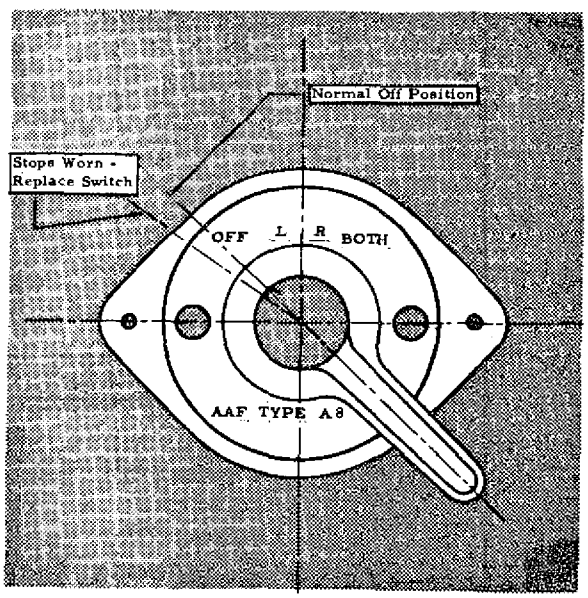


FIGURE 1

2. This inspection must be repeated at 100-hour intervals.

3. Inspection may be discontinued if switch is replaced by Type A–8 of another make or by some other satisfactory type ignition switch.

53–26–1 Briggs and Stratton Applies to All Airplanes Equipped With AAF Type B–5 Ignition Switch Manufactured by Briggs and Stratton. Affected Airplanes Include Beech Models D18S (Serial Numbers A–1 Through A–537), D18C, D18C–T, C18S and AT–11 Having the AAF Type B–5 Briggs and Stratton Switch Installed.

Compliance required not later than April 1, 1954.

Design of the Briggs and Stratton AAF Type B–5 switch will permit foreign objects to enter the master ignition switch portion of the switch assembly. As a result, the magnetos of both engines connected to the switch may accidentally become grounded. Gaps in the enclosure of the Briggs and Stratton master switch can allow entry of foreign objects; whereas, AAF Type B–5 switches produced by other manufacturers are tightly sealed. These latter switches are not considered hazardous.

Briggs and Stratton AAF Type B–5 switches are identified by:

(1) The letters "AAF TYPE B–5" on the face of the switch and

(2) The words "Briggs & Stratton Corp., Milwaukee, Wis., U. S. A." stamped on the master switch enclosure. Determination of whether the switch carries the designation of (2) will probably necessitate examination with a flashlight and mirror or removal of the switch from its mount in the airplane.

If AAF Type B–5 switches manufactured by Briggs and Stratton are installed, accomplish either of the following:

(*a*) Replace the Briggs and Stratton AAF Type B–5 switch with a Type B–5 switch having the master ignition switch portion adequately sealed against entry of foreign objects.

(*b*) Remove the master ignition and battery switch portion of the Briggs and Stratton AAF Type B–5 in the following manner:

1. Remove the switch assembly from its mount or the airplane.

2. Drill out the three rivets attaching the master switch portion to the face plate of the ignition switch assembly.

3. The six electrical wires connecting the master switch portion to the threaded terminals are to be disconnected at the threaded terminals and discarded with the master switch portion.

4. Clean the ignition switch brass ground strip to make a good electrical contact and rivet it to the case with AN rivet.

5. Reinstall the modified Type B–5 ignition switch assembly in the airplane. Minor rework of the airplane electrical system may be required if the electrical master switch was connected through th Type B–5 master ignition and battery switch.

NOTE: Proper precautions should be observed when the ignition switch is removed or disconnected since the engine magnetos are not grounded.

(Beech Service Bulletin; Model D18S, D–18C, D–18C–T, C18S, AT–11; No. 64, issued November 10, 1953, covers this same subject.)

BROWN-LINE

59–24–3 Brown-Line Corporation Safety Belt Applies to All Model WB–2002–2 Safety Belts.

Investigation of two recent accidents involving aircraft in which the subject model safety belts were installed, disclosed that the wearer could not free himself from the belt, thereby preventing his escape from the aircraft. The design of this belt buckle is such that it will not enable the wearer to quickly and easily release the belt from the buckle. Thus this belt does not conform with Section 4.1.2 of TSO–C22 [1] and compliance is considered essential to safety in cases of fire or emergencies involving landings in water.

Accordingly, since this model safety belt does not meet the necessary safety requirements, it is not acceptable for installation in civil aircraft. Furthermore, all belts of this model that are in service must be replaced with acceptable safety belts within the next 25 hours of service time or the next periodic inspection whichever occurs first.

[1] Section 4.1.2 of TSO–C22 states in part: ". . . shall include an easily operable quick release mechanism which will enable the wearer to release himself easily under a load simulating the wearer hanging in the belt".

CLEVELAND

48–8–2 Aeronca, Champion and Silvaire Applies to All Aeronca 11 Series, Champion (Aeronca) 7 Series, and Silvaire (Luscombe) 8 Series Aircraft Equipped With Cleveland Model 6:00 DMB Wheels, Assembly No. C–38500.

Compliance required after initial 500 hours of operation and each 100 hours of operation thereafter.

Remove the tires and inspect the wheel flanges for fatigue cracks. The wheel should be replaced if cracks are found.

C-O-TWO

59–24–2 Kidde and C-O-TWO Applies to Smoke Detectors, Kidde Model A4532–M1, and C–O–TWO Models ASDC–2 and ASDT–3, Installed in Civil Transport Category Aircraft.

The Walter Kidde Model A4532–M1 and the C–O–TWO Models ASDC–2 and ASDT–3 smoke detectors have unstable and over-sensitive alarm settings; thus resulting in false indications. Due to this unsatisfactory characteristic, the manufacturers, Walter Kidde and Company and the C–O–TWO Division of Fyr-Fyter Company have withdrawn their statements of conformance with Technical Standard Orders, TSO–C1 and C1a for these smoke detectors. Therefore, their TSO approvals are invalidated.

All Models A4532–M1, ASDC–2 and ASDT–3 smoke detectors installed in transport category aircraft shall be removed from service prior to January 31, 1960, except when these models are approved as a part of the airplane installation under a supplemental type certificate. The TSO identification shall be eliminated from the detector label of such detectors approved as a part of the airplane installation.

DAVIS

57–14–2 Davis Aircraft Products (Safety Belts) Applies to Model FDC–1650 Belts, (P/N FDC–1650, FDC–1650–27, FDC–1650–27M1).

Compliance required as soon as possible but not later than August 15, 1957.

Some of the release fittings of the subject belt assemblies are so constructed as to require one particular side of the fitting UP when being inserted in the buckle.

It is possible to improperly fasten the belts effected so that the buckle may become unfastened under load. The unsatisfactory release fittings have a tab bent up to an angle of approximately 11° with the plane of the fitting (see Figure 1).

To provide for securely assembling the buckle with the release fitting in either position, the tab area indicated in the sketch must be removed or bent flush with the plane of the adjoining metal.

This rework applies only to the release fitting shown in the sketch. Other portions of the buckle assembly than that shown should not be modified. This condition has been corrected on all assemblies of current manufacture.

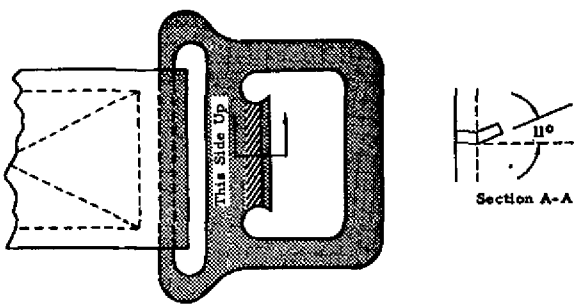


FIGURE 1

ECLIPSE-PIONEER

58–8–1 Bendix Applies to Bendix (Eclipse-Pioneer) 756–62C or D, and 756–64C or D Starters Installed on Lycoming Engines.

Compliance required not later than October 1, 1958.

Bendix 756–62C or D and 756–64C or D electric engine starters must incorporate a holdback spring assembly as outlined in Bendix Aviation Corporation, Utica Division, Service Bulletin 41a. This modification will assure positive jaw disengagement from the engine and thereby prevent jaw fracturing with associated possibility of an engine failure as previously experienced with this engine-starter combination.

This supersedes AD 58–3–1.

EDISON

52–23–1 Edison Fire Detectors Applies to All Aircraft Equipped With Edison P/N 35534 Fire Detectors Installed in Junction Boxes.

To be accomplished not later than next engine change after January 1, 1953.

In order to prevent grounding of either or both terminals of Edison P/N 35534 fire detectors due to inadequate clearance between the detector terminals and the structure to which the junction box and detector assembly are mounted, or the junction box cover in some instances, the following corrective action must be accomplished.

The dimensions of the P/N 35534 Edison fire detector should be compared with the dimensions of the junction box employed by each operator to assure that there is sufficient clearance between the detector terminals and the structure to which it is mounted, or the cover. Sufficient clearance will depend on the construction of the junction box, but $\frac{3}{16}$ of an inch may be used as a general guide. If such clearance does not exist an appropriate modification should be made, or appropriate insulation provided between the terminals and the structure or the junction box cover, as the case may be.

(Douglas General Service Letter DC–6 No. 115, dated January 29, 1952, covers this same subject.)

EDO

47–50–5 Aeronca, Champion, Piper, Silvaire (Luscombe) Applies to Airplanes Equipped With Edo Model 92–1400 Floats.

Compliance required by February 15, 1947.

To prevent the possible failure of the wirepull attachment on Edo Model 92–1400 floats, install redesigned wirepull (Edo P/N 92–S–239 on J3C–50S and J3C–65S, Edo P/N 92–S–229 on PA–11S, Edo P/N 92–S–237 and –239 on S7AC, Edo P/N 92–S–237 on S11AC, and Edo P/N 92–S–233 and –235 on Silvaire (Luscombe) 8 Series) under each of the front and rear strut attachment fittings.

(Edo Service Bulletin No. 2 dated August 15, 1947, contains detailed instructions for making this change.)

62–6–2 Edo Amdt. 406 Part 507 Federal Register March 10, 1962. Applies to All Aircraft Equipped With Models 345 and 345A Airborne Loran A Receivers.

Compliance required within 1,200 hours' time in service after the effective date of this AD.

In order to reduce the spurious radiation which can adversely effect other navigational and communication equipment, modify Models 345 and 345A receivers in accordance with Edo Field Change Bulletin No. 27, dated August 28, 1961, so that the maximum radiation is 400 micromicrowatts.

This directive effective April 10, 1962.

62–17–4 Edo Amdt. 473 Part 507 Federal Register August 4, 1962. Applies to Model 249A2870 (A Model Only) Float Installations, Float Serial Numbers 1 to 280, Installed on Cessna Model 180 Series Per STC SA1–622 and Cessna Model 185 Seaplanes.

Compliance required within the next 5 hours' time in service after the effective date of this AD, unless already accomplished.

Longitudinal cracks have been found on Edo streamlined struts P/N 6061T6, in the area near the 30 and 60 percent chord sections. To preclude operation with defective struts accomplish the following:

Visually inspect each side of the full length of the attachment strut, P/N 6061T6, for longitudinal cracks. Replace cracked struts prior to further flight.

NOTE: Report the details on any defective struts found to the FAA Engineering and Manufacturing Branch, ATTN: EA–212, Hangar 18, Room 210, New York International Airport, Jamaica 30, New York.

(Edo telegram of July 7, and Edo letter of July 9, 1962, cover the same subject.)

This directive effective August 14, 1962.

FEDERAL

54-2-2 Federal Skis Applies to All Universal (Stinson) 108 and Cessna 170, 170A and 170B Airplanes Equipped With Federal Models AWB-2500 and AWB-2500A Wheel Skis and Piper PA-20 Airplanes Equipped With Federal Model AWB-2100 Wheel Skis.

Compliance required as soon as possible but not later than February 15, 1954.

To preclude the possibility of the ski dropping down against the mechanical rigger and possible subsequent damage to the aircraft structure, the rigging arrangement must be revised in accordance with Federal Aircraft Works Drawing No. 11D1077.

55-4-1 Federal Skis Applies to All Cessna Model 180 Aircraft Equipped With Federal Model AWB-2500A Wheel Skis.

Compliance required as soon as possible but no later than next 100-hour inspection.

Instances have been reported of the main skis pitching downward against the forward limiting cables during normal flight causing the airplane to assume a dive attitude with a resulting loss of altitude before recovery. To preclude the possibility of the serious consequences that might result should this condition occur at low altitudes, the following corrective action must be accomplished:

1. Replace the existing mechanical rigger with Federal No. 11G1064-3 mechanical rigger.

2. Install Federal No. 11D1059-5 preloaded bungee assembly in each of the forward limiting cables and adjust the cables so that the skis when in the "up" position on the wheel, will be allowed to pitch nose down minus 12° to 14° in flight without extending the bungee units. This angle is measured between the top of the ski channel and the horizontal reference line of the airplane.

(Federal Service Bulletin No. 102 covers the same subject.)

GRAVINER

59–6–8 Graviner Applies to Aircraft Fitted With Graviner Automatic Fire Extinguishers of the Separate Cartridge Type and the Following Type Numbers May Be Affected: Numbers 4AX, 4AZ, 5AX, 5AZ, 7AX, 8AX, 12A, 13A, 14A, 17A, 20A, 33A, 34A, 35A, 36A, 39A, 40A, 41A, 42A, 55A Through 63A.

Compliance required as soon as possible but not later than September 1, 1959.

(1) Experience in service has revealed that age-hardening of the material used for sealing of the charge plug in automatic extinguishers of the separate cartridge type which were manufactured prior to August 1957 can interfere with the charge plug movement when the cartridge is fired and thus stop discharge of the extinguishant.

(2) A different type of sealant has been introduced by Graviner Modification AU 332. Incorporation of this modification is signified by the letter "L" stamped adjacent to the serial number of the extinguisher, or to the date of manufacture, both of which appear on the operating head. The above date appears as two numbers which signify the month of the year of manufacture (e.g. 8/57 signifies August 1957) but care must be taken to avoid confusion with the cartridge manufacture date which is stamped in a similar manner on the cartridge flange.

(3) All extinguishers indicated above which are of an age of three years or more and which do not embody Modification AU 332 must be removed from service. Replacement extinguishers should preferably be of the modified type although unmodified units may be fitted provided the three-year life is not exceeded.

(4) If doubt exists as to whether the modification has been incorporated, the light alloy junction box may be removed and the charge plug sealant inspected. The new sealant is of a yellow/green color, the old type is of a brown/black color.

(5) Extinguishers which have exceeded the three-year life should be returned to an overhaul organization approved by Graviner Manufacturing Co. Ltd., Poyle Mill Works, Colnbrook, Buck, England, for modification. (Fenwal Inc., Pleasant Street, Ashland, Mass., is an approved Overhaul Agency.)

The British Air Registration Board considers this mandatory. The FAA concurs with this action and considers compliance therewith mandatory.

61–2–1 Graviner Amdt. 241.
Superseded by AD 62–11–3.

62–11–3 Graviner Amdt. 429 Part 507 Federal Register April 21, 1962. Applies to Aircraft Equipped With Automatic Fire Extinguisher Cartridge Mark 2, A–716, A–717, A–718, A–719 and Fenwal P/N 690202–3, A–716, A–717, A–718, A–719. (The Fenwal Installations Noted Are Graviner Systems. Some Mark 2 Cartridges Modified to Mark 3 Have "–3" Added to The Number on The Flat Plate, i.e., A–716–3, Etc. This AD Does Not Apply to Mark 3 Cartridges.)
Compliance required as indicated.

As a result of instances of the igniter wire in extinguisher cartridges becoming corroded in service, the following shall be accomplished:

(a) Within the next 275 hours' time in service or the next 60 days, whichever occurs first after effective date of this AD, unless already accomplished within the past 275 hours' time in service or the past 60 days conduct a continuity inspection of the cartridge circuits using a safety ohmmeter which restricts the current used to 13 milliamperes. A resistance reading of between 5 and 6 ohms indicates a serviceable fuse wire. A resistance reading not between 5 and 6 ohms indicates a defective fuse wire. Repetitive inspection of all cartridge circuits shall be accomplished within each succeeding 550 hours' time in service or 120 days, whichever occurs first after the last inspection.

(b) Replace defective Mark 2 cartridges with either serviceable Mark 2 cartridges or with Mark 3 cartridges which have an improved fuse wire. If Mark 2 cartridges are installed the repetitive inspection specified in

(a) shall be continued. If Mark 3 cartridges are installed the repetitive inspections specified in (a) may be discontinued.

(c) Upon request of the operator, an FAA maintenance inspector, subject to prior approval of the Chief, Engineering and Manufacturing Branch, International Division, may adjust the repetitive inspection intervals specified in this AD to permit compliance at an established inspection period of the operator if the request contains substantiating data to justify the increase for such operator.

(Graviner Technical Notice No. 2 covers this subject.)

This supersedes AD 61–2–1.

This directive effective May 22, 1962.

KIDDE

59–24–2 Kidde and C–O–TWO Applies to Smoke Detectors, Kidde Model A4532–M1, and C–O–TWO Models ASDC–2 and ASDT–3, Installed in Civil Transport Category Aircraft.

The Walter Kidde Model A4532–M1 and the C–O–TWO Models ASDC–2 and ASDT–3 smoke detectors have unstable and over-sensitive alarm settings; thus resulting in false indications. Due to this unsatisfactory characteristic, the manufacturers, Walter Kidde and Company and the C–O–TWO Division of Fyr-Fyter Company have withdrawn their statements of conformance with Technical Standard Orders, TSO–C1 and C1a for these smoke detectors. Therefore, their TSO approvals are invalidated.

All Models A4532–M1, ASDC–2 and ASDT–3 smoke detectors installed in transport category aircraft shall be removed from service prior to January 31, 1960, except when these models are approved as a part of the airplane installation under a supplemental type certificate. The TSO identification shall be eliminated from the detector label of such detectors approved as a part of the airplane installation.

62–1–1 *See* Fairchild Aircraft.

MARECO (Maximoff Research Co.)

62-24-5 Mareco Safety Belts Amdt. 503 Part 507 Federal Register November 3, 1962. Applies to All Aircraft Equipped With Mareco Model 15-1 Safety Belts Which Are Identified on the Manufacturer's Identification Label on the Safety Belt as Being Manufactured in the Third and Fourth Quarters of 1959 and the First and Second Quarters of 1960.

Compliance required within the next 100 hours' time in service after the effective date of this AD.

Service difficulties with the Mareco Model 15-1 safety belt assemblies have occurred wherein the buckle locking cam became disengaged when tension on the belt assembly was relieved and would not reengage upon application of tension to the belt assembly due to the cam spring slipping from its retention slot. Therefore, the following is required:

Replace Mareco Model 15-1 safety belts manufactured in the third and fourth quarters of 1959 and the first and second quarters of 1960, or modify with an FAA approved modification to prevent the slipping of the cam spring from its retaining end slot and to correct the misalinement between the cam and buckle frame. When an FAA approved modification is made after the effective date of this AD, the buckle frame or cam lever shall be permanently marked "MOD." followed by the date of modification.

NOTE: Belts which were modified prior to the effective date of this AD in accordance with an FAA approved modification and identified with an embossed "X" are acceptable.

This directive effective December 4, 1962.

MARVEL-SCHEBLER

59–13–7 Marvel-Schebler Applies to All Marvel-Schebler MA4–5 and MA4–5AA Carburetors With Serial Numbers 3999574 and Under. These Carburetors Are Used With Various Continental, Franklin, and Lycoming Engine Models.

Compliance required by August 15, 1959, unless already accomplished.

Repetitive reports of retention failure of the float and lever assembly used with early type MA4–5 and MA4–5AA carburetors necessitate compliance with the following to correct this difficulty and maintain engine airworthiness:

(1) Remove float assembly P/N 30–629. (In this assembly the float is soldered to the lever for retention.)

(2) Install revised float assembly P/N A–30–629 which has a rigid reinforcing brace added at the junction of the float and lever or the latest version of the float which is made of molder rubber. The reinforced float is incorporated in Serial Numbers 3999575 through 4012823 and the molded rubber float is incorporated in Serial Numbers 4012824 and up.

(Marvel-Schebler Products Division, Borg-Warner Corporation, Decatur, Illinois, Service Bulletins Nos. 5–57 and 4–59, Continental Service Bulletin 57–3, and Lycoming Service Bulletin No. 237 cover this same subject.)

This supersedes AD 58–15–2.

62–4–2 Marvel-Schebler Amdt. 400 Part 507 Federal Register February 16, 1962. Applies to All Aircraft Equipped With Marvel-Schebler MA–3A, MA–3SPA, MA–4SPA, MA–4–5, MA–4–5AA Carburetors Used On Various Models Of Franklin (Air-cooled), Continental, Lycoming, and Ranger Engines.

Compliance required at the next carburetor replacement or overhaul of either the carburetor or engine, whichever occurs first, after the effective date of this AD.

Failure of the solder safety on the two Marvel-Schebler P/N A15–A21 screws which secure the float bracket to throttle body of the carburetor allows the screws to back out, thus causing loosening of the float bracket and loss of normal needle valve action resulting in reduction of engine power and complete engine stoppage at reduced throttle settings. To preclude this, the following shall be accomplished:

Replace all solder safetied float bracket attaching screws, P/N A15–A21, with "Long-Lok" safety screws incorporating nylon inserts, and replace all solder safetied float valve assemblies with "Long-Lok" matched float valves and float valve seats, in the manner described in Marvel-Schebler Service Bulletins Nos. 9–60 and 15–60.

(Marvel-Schebler Service Bulletins Nos. 9–60 and 15–60 cover this same subject.)

This directive effective March 20, 1962.

RUPERT

61–8–2 Rupert Amdt. 275 Part 507 Federal Register April 15, 1961. Applies to All Aircraft Equipped With Rupert Models 50, N50, 65, 80, and S–2194 Safety Belts.

Compliance required within the next 75 hours of time in service after the effective date of this AD.

Recurring instances have been reported wherein Rupert belt assemblies have slipped under low tension loads. Accordingly, it has been determined by test the Rupert safety belt assemblies manufactured under Technical Standard Order C22 standards are deficient and must either be replaced with belt assemblies that conform to TSO–C22 standards or be reworked by accomplishing the following:

(a) Remove all of the three bar slide length adjustors and replace them with new Rupert R–60 adjustors. Replacement adjustors will have thicknesses greater than 0.120.

(b) Measure the distance between the crests of the outermost serrations on the tongue of the buckle. (See Figure 1.) If this distance measures $\frac{5}{16}$ inch or less the buckle shall be reworked by replacing the tongue with one in which this distance is at least $\frac{3}{8}$ inch.

(Rupert Service Bulletin No. 101 covers this same subject.)

This directive effective May 16, 1961.

RUSSELL

56–21–4 Russell Applies to Safety Belts Equipped With Russell Manufacturing Co.'s 2 Inch Rusco Tog-L-Lok Safety Belt Buckle.

Compliance required as soon as possible but not later than December 30, 1956.

Recurring instances have been reported wherein Russell Model RM–3 and RM–4 belt assemblies have slipped and unlocked under relatively low tension loads. Accordingly, it has been determined that safety belt assemblies RM–3 and RM–4 manufactured between July 1, 1954, and August 1, 1956, as meeting Technical Standard Order C22b standards and equipped with Rusco Tog-L-Lok buckles, are unairworthy and must be reworked or replaced with belt assemblies that conform to TSO–C22b standards. Due to the need for precise jigs to accomplish the rework of these assemblies, reworking in the field is not feasible. However, the Russell Manuafcturing Co. has submitted satisfactory substantiating data for reworking the unsatisfactory safety belt assemblies at the factory.

In addition to the above difficulty, some of the faulty Tog-L-Lok buckles may have been sold as, or on, military surplus equipment and, therefore, there is some likelihood that other companies or individuals may have renovated or manufactured and sold safety belt assemblies which incorporate these faulty buckles. The characteristics of these buckles are such that if the assembly does not slip or unlock under a maximum tensile load of 100 pounds, the belt assembly is satisfactory. Accordingly, a maximum tensile load of 100 pounds need be applied to these belt assemblies to check their airworthiness. If the assembly does not slip or unlock under this load, the assembly may be considered satisfactory and rework or replacement is not necessary.

61–20–3 Russell Manufacturing Company Safety Belt Amdt. 337 Part 507 Federal Register September 20, 1961. Applies to All Aircraft Equipped With Rusco Model RM23 P/N SB1709 Safety Belts Manufactured From October 1959, through June 1960, and Equipped With D–832B Buckles.

Compliance required within the next 25 hours' time in service after the effective date of this directive.

Service difficulties with Rusco Model RM23, P/N SB1709, safety belt assemblies manufactured from October 1959, through June 1960, have been reported wherein the buckle cam does not securely grip the webbing thereby causing the assembly to slip.

In order to determine the airworthiness of these belts, a minimum tensile load of 100 pounds must be applied to the belt assembly. If the webbing slips through the buckle as a result of this test, the belt must be considered unairworthy and replaced with an airworthy belt assembly conforming to TSO–C22 standards prior to further flight.

(Russell Manufacturing Company Bulletin No. 61–5 covers this same subject.)

This directive effective October 20, 1961.

SCINTILLA

60–26–2 Bendix Amdt. 237 Part 507 Federal Register December 23, 1960. Applies to the Following Scintilla Magneto Models With Serial Numbers 635577 and Below. These Magnetos Are Used In Engines Rated At 400 Or Less H.P.

S4LN and S4RN–20, –21, –200 and –204.
S6LN and S6RN–20, –21, –22, –23, –25, –200, –201, –202, –204, –205 and –206.

Compliance required within 25 hours' time in service after effective date of this amendment.

Service information indicates that the distributor gear shaft and distributor block bushing of the above magnetos require additional lubrication to preclude damage to the distributor gear and finger assembly. Accordingly, unless already accomplished, these magnetos shall be relubricated as follows:

(a) Disconnect the ignition harness from the magneto. Apply enough SAE No. 30 lubricating oil to the distributor shaft felt washer to completely saturate the washer.

(b) Rotate the "tru-arc" distributor shaft retaining ring until the ring gap is straight up. Carefully apply one or two drops of SAE No. 30 oil in the gap of the ring and allow it to seep into the space between the distriubtor gear shaft and the distributor block bushing.

(c) Carefully clean off any oil which may have run on to the distributor block. Do not blot or wipe any oil from the felt washer.

(d) Identify magnetos lubricated in accordance with this directive by painting a ¼-inch diameter white dot on the housing between the timing window plug and the high tension outlet. This dot will indicate the lubrication has been accomplished and need not be lubricated again until regular magneto overhaul.

(Scintilla Service Bulletin No. 459, Lycoming Service Bulletin No. 277 and Continental Service Bulletin M60–11 cover this same subject.)

This directive effective December 23, 1960.

SHAKESPEARE

50–5–2 Shakespeare Controls Applies to Shakespeare Vernier Type Flexible Push-Pull Controls, Models 3A–42 and 3A–81, Installed in Beech Models 35 and A–35, Navion, and Any Other Certified Aircraft. To be accomplished not later than April 1, 1950.

A serious accident recently occurred on an aircraft employing a Vernier throttle control of the above type due to unscrewing of the male thread adapter which secures the outer casing of the flexible control to the body tube, at the instrument panel end. This resulted in the pilot's being unable to control the throttle. The means employed in these controls to secure this connection is the machining of some imperfect threads on the brass adapter. This method of locking is not considered satisfactory, as assembly and disassembly of these components can result in rendering this locking means ineffective. The control manufacturer has advised that a staking operation to positively secure this connection is now being incorporated on all their Vernier type flexible controls during manufacture.

To prevent the possibility of the adapter becoming separated from the body tube on aircraft in service equipped with the subject Vernier control, all such controls must be inspected to ascertain whether these components are positively secured by staking, drilling and lock-wiring, or equivalent means. If the adapter is not found to be so secured in the body tube, it should be locked by one of the foregoing locking means.

(Beech Engineering Service Bulletins Nos. 35–16 and A35–7, dated November 23, 1949, cover this subject as it applies to their Models 35 and A–35 airplanes.)

THOMPSON

55–26–2 Thompson Engine Drive Fuel Pumps Applies to All Thompson TF–1100–2 and TF–1100–M2 Pumps.

Compliance required as indicated.

To prevent TF–1100 fuel pump failure resulting from excessive drive pin wear, accomplish the following:

1. Remove pump from certificated airplanes and replace with Thompson TF–1900 pump having larger diameter drive pin not later than August 1, 1956. TF–1100 pumps may be converted to TF–1900 pumps when modified in accordance with Thompson Service Bulletin ESD–182A and Amendment ESD–182B.

2. Until installation of the TF–1900 pump, the drive pin (Thompson Part No. TF–1191) in the TF–1100 pumps should be replaced with an unused pin at the next 100-hour aircraft inspection and each 100 hours thereafter. At the time of pin replacement, inspect the drilled hole in the TF–1100 rotor for excessive elongation and, if necessary, replace rotor.

(Thompson Products Service Bulletin ESD–176A covers this same subject.)

This supersedes AD 55–19–2.