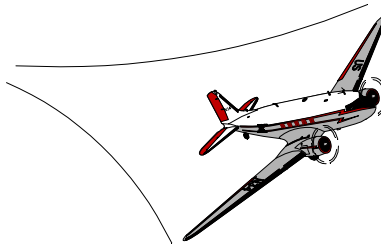


SPECIAL AIRWORTHINESS INFORMATION BULLETIN



U.S. Department
of Transportation
**Federal Aviation
Administration**

AIRCRAFT CERTIFICATION SERVICE
800 INDEPENDENCE AVENUE, S.W.
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This is issued for informational purposes only and any recommendation for corrective action is not mandatory.

Introduction

The purpose of this Special Airworthiness Information Bulletin (SAIB) is to alert owners/operators of Teledyne Continental Motors (TCM) models C-75, C-85, C-90 (except C-90-8F and C-90-8FJ), O-200, IO-240 series and Rolls-Royce, plc (RR) Models C-90 (except C-90-8F and C-90-8FJ), O-200, O-240 series reciprocating engines of the distribution of unapproved magneto drive gears. These magneto drive gears were distributed and/or manufactured by Fresno Airparts Company (formerly Fresno Airmotive Company) and were found to have deficient material properties. Fresno Airparts Company was not authorized by the Federal Aviation Administration (FAA) to manufacture these parts. This information is valuable to anyone who operates one of the above listed engines because of the possibility of magneto drive gear failure which could result in engine failure and possible forced landing.

These engines are installed on, but not limited to:

American Champion Models 7AC, 7BCM, 7CCM, 7DC, S7DC, S7CCM, 7EC, S7EC, 7FC, 7JC, 7ECA and 402;
Cessna Models 120, 140, 150, 150A through 150M, A150K through A150M;
Luscombe Models 8E, 8F, and T-8F;
The New Piper Models PA-18 and PA-19;
Reims Models F150G through F150M, FA150K, FA150L, FRA150L, and FRA150M;
Taylorcraft Models 19 and F19;
Univair (Erco) Models 415-D, 415-E and 415-G;
Univair (Forney) Models F-1 and F-1A;
Univair (Alon) Model A-2: and Univair (Mooney) Model M-10 aircraft.

This information is advisory in nature and not mandated by regulation.

Background

A report of a failure of a magneto drive gear distributed and/or manufactured by Fresno Airparts Company was received by the FAA. The reported failure occurred in under 100 hours time-in-service since installation of the magneto gear. An analysis was conducted on 12 additional gears which were found to not comply with type design. An investigation was conducted by the FAA and the Department of Transportation Inspector General's Office and revealed that the magneto drive gears were distributed by Fresno Airparts Company (formerly Fresno Airmotive Company) and other repair stations, distributors, or persons listed in Note 1 of this SAIB. The magneto drive gears were manufactured from improper materials, not heat treated or not heat treated properly, and do not conform to the dimensional tolerances of approved gears. These findings led the FAA to conduct a Suspected Unapproved Parts (SUPS) inquiry. The improperly manufactured magneto drive gears have a part number (P/N) 36066 ink stamped on them and were typically shipped in a plastic bag which was placed inside a brown box usually marked only with the P/N. The suspect magneto gear drives are not ones produced by a manufacturer holding a parts manufacturing authority (PMA), which will have a P/N indicating the PMA, or ones produced by the original equipment manufacturer (OEM), which are shipped in boxes marked with the OEM's logo. Improperly manufactured

magneto gear drives were distributed by Fresno Airparts Company (formerly Fresno Airmotive Company) to many repair stations, distributors, and other persons. The FAA has secured a list of persons to whom Fresno Airparts Company (formerly Fresno Airmotive Company) distributed suspect magneto drive gears. The list appears in Note 1.

There are approximately 36,000 engines installed on aircraft of U.S. registry on which the suspect magneto gear drives are eligible for installation. The FAA has determined that these parts did not begin to be distributed before December 1993. All magneto drive gears installed from December 1993 to the present must, therefore, be considered suspect. There is no visual test to distinguish an improperly manufactured magneto drive gear bearing P/N 36066 from a properly manufactured magneto drive gear with that same P/N. This condition, if not corrected, could result in magneto drive gear failure due to being improperly manufactured, which could result in an engine failure and possible forced landing.

NOTE 1: This list may be used to assist in determining whether P/N 36066 may have been purchased from Fresno Airparts Company. These listed entities may have resold parts to others. Invoices indicate that improperly manufactured magneto drive gears were purchased from Fresno Airparts Company (formerly Fresno Airmotive Company) by the following from December 1993 to December 1997:

Aero Maintenance, Vancouver, WA;	DeMars Aero, Fort Collins, CO;
Aero Pacific, Oceanside, CA;	Don George Aircraft, Orlando, FL;
Aero Tech, San Jose, CA;	Dream Machine, Jonesboro, GA;
Aerospars, Mississauga, Ontario;	E.A.A. Maintenance, Oshkosh, WI;
Aerotech, Karup, Denmark;	El Reno Aviation, Inc., El Reno, OK;
Aerstone Supplies, LTD, Oxon, UK;	Engine Components N.W., Aurora, OR;
Air Support Int., Inc., Marshfield, MO;	Estergard Aviation, Chandler, AZ;
Air West Aircraft Engines, San Carlos, CA;	Tyrone Ewig, Iron Mountain, MI;
Alta Aircraft Maintenance, W. Jordan, UT;	Gibson Aviation, El Reno, OK;
Athens Air, Athens, TN;	Glen Beard Airspares, Jandakot Airport Western Australia;
Aviation Buyers Group, Inc., Salt Lake City, UT;	Glen's Aircraft Repair, Palmyra, WI;
B & K Aircraft Salvage, Mandan, ND;	Gunter Goggelmann, Dallas, TX;
Bob Bailey, Ruston, LA;	Gold Coast Aviation, Salinas, CA;
Barkhorn Precision Engines, Vista, CA;	Golden Horn Aviation, Sebastin, FL;
Bela's Aircraft, Dallas, TX;	Gran-Aire, Inc., Milwaukee, WI;
Black Hills Aero, Spearfish, SD;	Hetrick Aircraft, Lawrence, KS;
David Branson, Tucson, AZ;	Art Heunemann, Garland, TX;
Bruce Machines, Lakeville, CT;	Hortman Aviation, Philadelphia, PA;
C3D Aviation, Waller, TX;	J's Aircraft Engine + Parts Inc., Dallas, TX;
Central Air Parts, Inc., Staunton, IL;	Kaylor Engines, Ocala, FL;
Central Illinois Aviation, New Berlin, IL;	Kay Air, Indianapolis, IN;
William Christensen, Taylors, SC;	Kline Aviation, Brooklyn, MI;
Chuck's Aircraft, San Carlos, CA;	Lake Aero Repair, Lakeville, MN;
Chris Clew, Murfreesboro, TN;	Robert Larson, Medina, OH;
Bill Collins, Gould, AR;	Leading Edge Aviation, Searcy, AR;
Coastal Aircraft, Juneau, AK;	John Linke, Omaha, NE;
Cooper Aviation, Fowlerville, MI;	Lycoming Air Services, Montoursville, PA;
Corporate Aircraft Salvage Pty, Ltd., Jandakot, Perth Western Australia;	Lycon Rebuilding Company, Visalia, CA;
Corporate Aircraft Service, Jandakot, Western Australia;	Lycon, Inc., Mesa, AZ;
Costa Flying Service, Painted Post, NY;	Lynn's Aircraft, El Monte, CA;
Crotts Aircraft Service, Dodge City, KS;	Lynn's Aircraft Engines, El Monte, CA;
D + D Aircraft, Fresno, CA;	Edwin Macauley, Medford, OR;
DD + D Inc., Grady, AR;	Mad Par Aviation, Hillsboro, OR;
Delta Aviation, Stillwater, OK;	Mad River Airport, Urbana, OH;
	Mainland Machine, San Luis Obispo, CA;

Richard Maresh, Syracuse, IN;
 Steve Markham, Odiham, Hampshire, England;
 Mattituck Aviation Corporation, Mattituck, NY;
 Menasco Air, Sonoma, CA;
 Mertz Aero, West Chester, PA;
 Mid Valley Aviation, Los Banos, CA;
 Monticello Aviation, Inc., Monticello, CA;
 National Aviation Supply, Seattle, WA;
 Nick Carter Aviation, Elizabethton, TN;
 North Central Aviation, Linton, ND;
 Northern Skies Aviation, Laurel, MT;
 O Kanogan Aero Engine, Kelowna, BC, Canada;
 Ormond Beach Aviation, Inc., Ormond Beach, FL;
 Owatonna Airport, Inc., Owatonna, MN;
 Pacific Continental Engines, Van Nuys, CA;
 Pete Mason Banner Towing, Santa Paula, CA;
 Craig Pickren, Heber Springs, AR;
 Progress Photo, Norfolk, VA;
 Q.G. Aviation, Fort Collins, CO;
 Regional Air Inc., Lawton, KS;
 Reimers Aircraft, Anchorage, AK;
 Reliant Aviation, Albany, OR;
 Carew Rice, Seabrook, SC;
 Riley Aviation, Coldwater, MI;
 Rocky Mountain Air Service, Nampa, ID;
 Ron's Repair, Lopey Island, WA;
 Ross Repair, Cambridge, MD;

Sanders Aircraft, Chino, CA;
 Savage Magneto, Oakland, CA;
 Scott Vally Aviation, Greenview, CA;
 Jim Skilling, Groveland, CA;
 Sky Dancer Aviation, Lincoln, CA;
 Sky Haven Enterprises, Rochester, NH;
 Kraig Smyth, Fairbanks, AK;
 Snohomish Flying Service, Snohomish, WA;
 Ken Snyder, Savage, MN;
 South East Airmotive Corporation, Charlotte, NC;
 Spana Flight, Puyallup, WA;
 Standard Aircraft, Belmont, NC;
 Stanton Kline Moss, Gilroy, CA;
 Vivian Starr, Plymouth, MN;
 Stauffer Aero, Calgary, Alberta, Canada;
 Steve's Aircraft Repair, Chester, MT;
 Sussex Aero Maintenance, Georgetown, DE;
 Tears Aviation, McKinney, TX;
 Kirk Tegeriehner, Indianapolis, IN;
 Twin Oaks Aviation, Hillsboro, OR;
 Vermont Flying Service, Barre, VT;
 Victor Aviation, Palo Alto, CA;
 West Fargo Aviation, West Fargo, ND;
 Jack White, Orangevale, CA;
 White Wing Aircraft Engines, Inc., Junction, TX;
 Nancy Zawistowski, North Reading, MA.

Recommendation

Based on the currently available information, the FAA is only recommending the following actions. However, the FAA will continue this investigation and additional actions, such as issuance of an Airworthiness Directive which may be found to be warranted based upon analysis of new information.

The FAA is recommending the following:

(a) If no work was performed on the magneto drive gears during the time period December 1993 through December 1997, no further action is required.

NOTE 2: A check of engine maintenance records or engine log books for the time period December 1993 to December 1997 may help determine if any work was accomplished on the magneto drive gears (invoices may be necessary to determine exactly what work was completed and what parts replaced).

(b) If work was performed on the magneto drive gears during the time period December 1993 through December 1997, accomplish the following:

(1) Remove from service all magneto drive gears distributed by Fresno Airparts Company (formerly Fresno Airmotive Company), and replace with serviceable parts. (See Note 1.)

NOTE 3: The suspect parts have an ink stamped P/N 36066 and were usually shipped in a plastic bag, which, in turn, was placed in a brown box and usually marked only with the P/N.

(2) If the origin of the magneto drive gear installed cannot be determined, remove the magnetos in accordance with the appropriate maintenance manual, then remove the magneto drive gear from the magneto, and either:

(i) Remove the magneto drive gear from service, and replace with a serviceable part; or

(ii) Perform the following Rockwell hardness test on the gear. Test in a minimum of two of the following three locations; on the back of the gear, on a gear tooth end, or on the central boss. The type design specifies a Rockwell C scale value of 38 - 42. Any gear that does not meet this specification must be removed from service and replaced with a serviceable part.

(c) A serviceable part may be defined as a new or used magneto drive gear which successfully passes the Rockwell hardness test specified above or was **not** distributed from Fresno Airparts Company (formerly Fresno Airmotive Company). (See Note 1.)

(d) Operators are requested to report any occurrences of magneto failures, engine failure or aircraft incidents that were found to be due to failure of the magneto gear.

For Further Information Contact

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