



# SERVICE BULLETIN

No. 218

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

November 11, 1963

SUBJECT: Replacement of Vacuum Pump Splined Coupling

MODELS AFFECTED: PA-18, PA-22-108, PA-23-235, PA-23-250 (six place), PA-24, PA-24 "250" and PA-30 Aircraft. (SEE PARAGRAPH 2, ALL PIPER MODELS)

| <u>AIRCRAFT<br/>SERIAL NO.</u> | <u>PUMP<br/>SERIAL NO.</u> | <u>AIRCRAFT<br/>SERIAL NO.</u> | <u>PUMP<br/>SERIAL NO.</u> |
|--------------------------------|----------------------------|--------------------------------|----------------------------|
| Model PA-18:                   |                            | Model PA-23-250 (cont):        |                            |
| 18-8036                        | 7G-2539                    |                                | Left<br>Pump               |
| Model PA-22-108:               |                            |                                | Right<br>Pump              |
| 22-9696                        | 7G-2531                    | 27-2437                        | 7G-2541 ok                 |
| 22-9700                        | 7G-2522                    | 27-2438                        | ok 7G-2536                 |
| 22-9702                        | 7G-2532                    | 27-2439                        | 8G-2853 8G-2799            |
| 22-9715                        | 7G-2524                    | 27-2441                        | 8G-2797 ok                 |
| 22-9730                        | 7G-2540                    | 27-2442                        | ok 8G-2856                 |
| 22-9736                        | 7G-2538                    | 27-2449                        | ok 8G-2855                 |
| 22-9740                        | 8G-2800                    | 27-2450                        | 8G-2777 ok                 |
| 22-9744                        | 8G-2779                    |                                |                            |
| 22-9747                        | 7G-2557                    | Model PA-30:                   |                            |
| Model PA-23-235:               |                            | 30-123                         | 7G-2582 ok                 |
|                                | Left<br>Pump               | 30-129                         | ok 7G-2578                 |
|                                | Right<br>Pump              | 30-131                         | ok 7G-2577                 |
| 27-587                         | 7G-2535                    | 30-133                         | ok 7G-2579                 |
| 27-585                         | 7G-2520                    | 30-134                         | 7G-2580 ok                 |
| Model PA-23-250 (six place):   |                            | 30-136                         | ok 7G-2583                 |
| 27-2418                        | ok 7G-2525                 | 30-138                         | ok 7G-2576                 |
| 27-2423                        | 7G-2527 ok                 | 30-139                         | ok 7G-2581                 |
| 27-2426                        | ok 7G-2514                 | 30-140                         | ok 7G-2585                 |
| 27-2427                        | 7G-2523 7G-2529            | 30-151                         | 8G-2837 8G-2831            |
| 27-2428                        | 7G-2521 7G-2516            | 30-152                         | 8G-2833 8G-2839            |
| 27-2429                        | ok 7G-2518                 | 30-153                         | 8G-2821 8G-2829            |
| 27-2432                        | 7G-2542 ok                 | 30-154                         | 8G-2827 8G-2830            |
| 27-2436                        | 7G-2543 ok                 | 30-155                         | 8G-2844 8G-2641            |
|                                |                            | 30-156                         | 8G-2845 8G-2825            |
|                                |                            | 30-157                         | 8G-2826 8G-2823            |
|                                |                            | 30-158                         | 8G-2824 8G-2828            |

| <u>AIRCRAFT<br/>SERIAL NO.</u> | <u>PUMP<br/>SERIAL NO.</u> |                       | <u>AIRCRAFT<br/>SERIAL NO.</u> | <u>PUMP<br/>SERIAL NO.</u> |                       |
|--------------------------------|----------------------------|-----------------------|--------------------------------|----------------------------|-----------------------|
| Model PA-30:                   | <u>Left<br/>Pump</u>       | <u>Right<br/>Pump</u> | Model PA-30:                   | <u>Left<br/>Pump</u>       | <u>Right<br/>Pump</u> |
| 30-159                         | 8G-2850                    | 8G-3843               | 30-167                         | 9G-3078                    | 9G-3118               |
| 30-160                         | 8G-2846                    | 8G-2822               | 30-168                         | 9G-3076                    | 9G-3110               |
| 30-161                         | 8G-2842                    | 8G-2849               | 30-169                         | ok                         | 9G-3114               |
| 30-162                         | 8G-2847                    | 8G-2835               | 30-170                         | ok                         | 9G-3071               |
| 30-163                         | 8G-2848                    | 8G-2816               | 30-171                         | 9G-3107                    | ok                    |
| 30-164                         | 8G-2801                    | 8G-2811               | 30-172                         | 9G-3079                    | ok                    |
| 30-165                         | 8G-2838                    | 8G-2836               | 30-175                         | 9G-2813                    | ok                    |
| 30-166                         | ok                         | 9G-3077               | 30-182                         | 9G-3120                    | ok                    |

We have received reports indicating that the vacuum pump splined coupling, part number 753 865, on Airborne Mechanisms Vacuum Pumps, Models 113A5 and 113A8, may fail prematurely as a result of over-curing. The failure of the splined coupling renders the vacuum flight instruments of the aircraft inoperative.

There are two phases to this bulletin and they are as follows: First, the original factory installations and, second, field replacements and field stocks of pumps and couplings. Compliance with both phases of this bulletin are as follows:

1. All aircraft indicated by the serial numbers listed above and the pump serial numbers which are also listed as being installed on the aircraft must have the splined coupling replaced.
2. All Piper model aircraft which have had a dry vacuum pump of Airborne Mechanism's manufacture, Models 113A5 or 113A8, Piper part numbers 481 681 or 481 683, replaced between August 15, 1963 and November 5, 1963 inclusive, must be inspected and providing the pump falls within the pump serial number range 7G-2494 through 7G-2678, 8G-2679 through 8G-2892, 9G-2893 through 9G-3250 and 10G-3251 through 10G-3714 inclusive, the coupling, Piper part number 753 865, must be changed.
3. All couplings, Piper part number 753 865, which have been replaced since October 1, 1963 must be changed. All couplings, Piper part number 753 865, in field stocks which have been received prior to November 5, 1963 are to be immediately returned to the factory for credit. They must not be used.

#### NOTE

THE SUBJECT AIRCRAFT SHOULD NOT BE OPERATED IN INSTRUMENT FLIGHT CONDITIONS UNTIL COMPLIANCE WITH THIS BULLETIN HAS BEEN ACCOMPLISHED.

November 11, 1963

DISTRIBUTORS: Submit your purchase orders for your requirements of the coupling, Piper part number 753 865, for compliance with this bulletin. It is requested that your requirements be carefully screened with your sales and service records for the past two months to avoid over-ordering due to limited supply available at this time.

Credit for compliance with this Bulletin will be issued by following the normal warranty and credit claim procedure. One and one-half (1-1/2) hours labor per coupling change and credit for the coupling will be allowed.