Seabee Service News

REPUBLIC AVIATION CORPORATION
FARMINGDALE, LONG ISLAND, NEW YORK
SERVICE DEPARTMENT

September 6, 1946 DISTRIBUTORS BULLETIN No. 4

SERVICING THE SHOCK ABSORBER STRUT

The following service instructions when followed will result in a rapid and proper servicing of your shock absorber. All references used in this outline pertain to the illustration shown.

Instructions are given for both pressure readings and measurements. Before attempting to take an extension measurement the airplane must be vigorously rocked. This is necessary since the gear is equipped with packing and is subject to the usual binding loads. It is also recommended that the gear be inflated to a higher pressure and the air bled to achieve proper extension, rather than try to build up the proper pressure by lifting the entire airplane with air pressure.

The fluid level should be checked with the gear in the fully compressed condition before inflation. Before attempting to add to or check the fluid it is absolutely necessary to first bleed off any air that might be present by depressing the air valve. When all air has escaped the valve housing may be removed so that fluid can be added.

1. Depress air valve (A) illustrated. Allow all air to escape.

2. Rock airplane vigorously. Check dimension (X) for full compression. This should be 2-7/16 inches.

3. Remove air valve body (A) and fill to overflowing with petroleum oil base hydraulic fluid. Specification AAF-3580D or equivalent. DO NOT USE ALCOHOL OR CASTOR OIL BASE FLUIDS IN SEABEE STRUTS.

4. Replace and tighten air valve body and with the airplane in the empty weight condition, inflate to approximately 140-150 psi. Rock the airplane vigorously to get a true extension reading at “X”. This should be 6 ½ ± ¼.

SERVICING THE SHOCK ABSORBER STRUT

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1. Depress air valve (A) allowing all air to escape.
2. Rock airplane vigorously. Check dimension (X) for full compression. This should be approximately 2-7/16 inches.
3. Remove air valve body (A) and fill to overflowing with petroleum oil base hydraulic fluid, Specification AAF-3580D or equivalent. DO NOT USE ALCOHOL OR CASTOR OIL BASE FLUIDS IN SEABEE STRUTS.
4. Replace and tighten air valve body and with the airplane in the empty weight condition, inflate to approximately 140-150 psi. Rock the airplane vigorously to get a true extension reading at "X". This should be 6 ½" ± ¼.
5. If necessary to obtain this reading, slowly bleed the air valve, rocking the Seabee at intervals until the desired dimension has been reached.
6. Should the gas tanks be full but the airplane otherwise empty inflate to approximately 190-200 psi. Bleed air pressure, rocking aircraft at intervals until the "X" dimension is 5" ± ¼.
7. To service the gear on a jacked-up plane, the strut should be inflated to 53 psi ± 5. This should indicate a full extension or 10-7/16" ± ¼.

REMOVAL OF WHEEL AXLE

The proper method of removing the axle from the strut is related to the other phases of strut servicing in that *the air must be completely removed from the strut before the axle itself is touched.* The air valve body must not only be loosened, but must be removed when sufficient air has escaped to safely permit this. This is necessary because even with the air valve in the open position there still remains enough trapped air to push down on the lower sealing ring as the axle is removed. This force although slight could result in injury.

When the air pressure has been removed from the strut loosen and remove the bolt (B) in the lower portion of the strut and exact the axle. As an added safely precaution, a soft metal mandrel should be used to tap the axle out of the strut.