

# Fresh Aero Oil Filter Change Drain Pan For General Aviation Aircraft

## Study and save this manual



*Read this entire manual before using the Fresh Aero Oil Filter Change Drain Pan. Make sure you understand the instructions and safety precautions in this manual. Keep this manual and your invoice in a safe place for future reference. If you have questions regarding the use of this kit, or just need another manual, please call or write Fresh Aero Aviation using our contact numbers or e-mail address at the bottom of the last page. Manuals are also available on our web site in PDF format.*

## Fresh Aero Oil Filter Change Drain Pan Safety Warnings and Precautions

***Warning: always adhere to the following safety precautions when using this product***

- The engine, filter and oil will be very hot if oil is changed soon after engine shutdown. Use caution when working around these hot components to prevent burns.
- Always keep the work area clean. Cluttered areas invite accidents and possible injuries.
- Stay alert and concentrate on safety.
- Never perform maintenance if under the influence of alcohol or drugs. Read warning labels on prescriptions you are taking to determine if your judgment or reflexes will be impaired while taking these drugs.
- Always wear ANSI approved safety goggles when working with tools and equipment.
- Keep this product away from children. Do not use as a toy.

***Warning: The warnings, precautions and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the user of this product that common sense and caution are factors that cannot be built into this product and must be supplied by the person or persons using this product.***

### Other Legal Notices

Fresh Aero Aviation makes no representations or warranties regarding any damages, injuries or benefit expected by using this unit lawfully, or any request from a third person, which are caused by the inappropriate use of this product.

# **Fresh Aero Oil Filter Change Drain Pan For General Aviation Aircraft**

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## **The Fresh Aero Oil Filter Drain Pan For General Aircraft Aircraft**

### **2 year Limited Warranty**

Fresh Aero Aviation makes every effort to provide high quality and durable products to the aviation community and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 2 years from the date of purchase. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents; repairs or alterations outside our facilities; or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the defect or problem must be included with the product. If our inspection verifies the defect, we will either repair or replace the product at our discretion or may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return the repaired or replaced product at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then the purchaser must bear the cost of returning the product.

This warranty gives you specific rights and you may also have other rights which vary from state to state.

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# Fresh Aero Oil Filter

## Change Drain Pan For General Aviation Aircraft

### Oil & Filter Change Procedure using the Fresh Aero Oil Filter Drain Pan



*Read and understand all the proceeding safety precautions and warnings before using the Fresh Aero Oil Filter Change Drain Pan.*

**Note:** This is the procedure we use for Grumman aircraft but most of the information can be used for other aircraft, especially Lycoming powered aircraft. Use of the filter drain pan and hose may not be applicable to some non-Lycoming powered aircraft or aircraft with filters mounted on the firewall.

#### Materials Needed

Newspaper, shop towels, nitril or latex gloves, plastic oil drain tubing (for “quick drain” valve), 2 gallon or larger container, oil sample container (if taking sample), 1 inch socket with ratchet torque wrench, filter drain pan & hose, large pan for oily parts, Dow Corning #4 lubricant or equivalent, safety wire, pliers, proper replacement oil filter, aviation oil and “Sharpie” pen.

#### 1. Preparation

- 1.1 Fly plane for at least 1/4 hour to warm engine oil & suspend contaminants.
- 1.2 Shut engine down and chock aircraft tires properly to prevent movement.
- 1.3 Spread newspaper on floor below engine and over front wheel pant. Open engine compartment and stuff newspaper or absorbent towels into engine compartment below oil filter to catch stray oil. Don't be stingy with paper.

***Warning:** Engine will be hot from running. Use caution not to come in contact with hot parts of engine. Serious burns are possible.*

#### 2. Draining Oil

**Note:** If your engine does not have a “quick drain” oil drain valve, we strongly recommend that you purchase and properly install one on your engine. These valves are real time and mess savers. Just attach the drain hose and open the valve -- this makes the oil drain procedure considerably easier. The following procedure is written for aircraft equipped with these valves.

# Fresh Aero Oil Filter

## Change Drain Pan For General Aviation Aircraft

### 2. Draining Oil -- Continued

- 2.1 Attach hose that came with “quick drain” oil valve (or equivalent hose) to valve at the right bottom of oil sump and route hose through opening in lower cowling. Place the other end of hose into at least a 2-gallon container (use larger container if engine holds more than 8 quarts of oil). An old gasoline container with a screw-on lid works well. Be sure that hose is securely captured by drain valve and container and that container is resting on newspaper.
- 2.2 Open “quick drain” valve to allow oil to flow from engine into container.
- 2.3 If taking an oil sample, allow about 1 pint of oil to drain into container, then lift tube and take sample (this can be messy).
- 2.4 Close quick drain when all oil is drained and remove drain tubing.

### 3. Removing the Oil Filter

- 3.1 Cut and remove safety wire from oil filter.

**Warning:** *Cut safety wire is sharp and can cause puncture wounds. Use caution.*

- 3.2 Push oil filter drain pan hose onto the hose fitting at the bottom of the drain pan if not attached. Remove the cap plug from other end of hose.

**Note:** **Support the hose fitting nut inside the drain pan with your other hand when pushing the hose onto the fitting to prevent fracturing the drain pan. Do this whenever attaching the hose to the fitting.**

- 3.3 Position the oil filter drain pan below filter with drain hose at the rear. Fit the front edge of pan below the filter/flange joint. Wrap chain loosely around filter and hook the loose end of chain on the “S” hook on opposite side of the pan. Adjust the chain to position the pan slightly lower at the rear to facilitate draining. Route the drain hose down and through the lower cowling and into the drain container located on the floor below the engine. Confirm that drain pan is in properly positioned under the oil filter.
- 3.4 Loosen the filter with a 1-inch socket and ratchet handle on the hex at rear of filter by turning counterclockwise (looking at the rear of the filter). The drain pan should stay stationary as the filter is loosened and catch the spilled oil from the filter/flange joint.

# Fresh Aero Oil Filter

## Change Drain Pan For General Aviation Aircraft

### 3. Removing Oil Filter -- Continued

3.5 Allow time for the oil to flow into drain pan and down the hose and push cap plug back on hose below engine. Cap oil container and dispose of oil properly.

3.6 Remove drain pan and hose using care not to spill any oil left in the pan or hose.

**Note:** All oil in the pan will not drain through the hose so use extra care to keep the pan level as you remove the pan up and out of the engine compartment.

3.7 Continue turning the filter counterclockwise and remove, using care to keep open end up to minimize spillage. Place filter, drain pan and other oily parts in a larger pan to contain the oil until cleanup and disposal time.

### 4. Installing the New Filter

4.1 Wipe the engine filter flange with a clean fabric cloth. Lubricate new filter rubber gasket with Dow Corning #4 or equivalent lubricant and install new filter, turning clockwise. Torque to the specifications listed on the new filter.

4.2 Using a "Sharpie" type permanent marker, write date and engine (tach) hours on the filter.

4.3 Safety wire the oil filter using approved procedure.

4.4 Confirm that the oil sump drain valve is closed and add the required amount of the proper specification aviation oil to the engine.

4.5 Start the engine using normal procedures. Run engine briefly then shut down and check for oil leaks. Repair any leaks before flying aircraft.

4.6 Make the proper entry in the engine logbook.

4.7 Clean and store all tools and parts properly. Keep out of the reach of children.

4.8 If an oil sample was taken, be sure to send the sample to the analysis lab.

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