REPLENISHING - DESCRIPTION AND OPERATION

1. General

A. This section gives maintenance personnel the service information to replenish fuel, oil, and anti-ice fluid.

2. Description

A. For an illustration of service points located on the airplane, refer to Figure 1. This illustration can be used in conjunction with replenishing tables to help maintenance technicians in servicing the airplane.

B. The following tables are provided to establish replenishment capacities of various systems:

(1) Fuel Capacity (Table 1)

(2) Approved Fuel Additives(Table 2)

(3) Engine Oil Capacity (Table 3)

(4) Synthetic Lubricating Oil For Ambient Temperature Above 0°F (Table 4)

(5) Synthetic Lubricating Oil For Ambient Temperature 0° or Below (Table 5)

(6) Approved TKS Anti-Ice Fluid (Table 6)

3. Fuel Capacity Table

A. The following table lists airplane fuel capacity.

NOTE: Total fuel and usable fuel quantities are based on 6.75 pounds per gallon.

WARNING: Only aviation grade fuels are approved for use.

Table 1. Fuel Capacity

SYSTEM	U.S.	IMPERIAL	METRIC
Fuel Capacity (Beginning with Airplanes 20800130 and 208B0089 when modified per SK208-52)	335.6 Gallons	279.45 Gallons	1270.3 Liters
Fuel Capacity (Airplanes Thru 20800129 and 208B0088 when not modified per SK208-52)	335.0 Gallons	278.95 Gallons	1268.0 Liters
Usable Fuel	332.0 Gallons	276.25 Gallons	1257 Liters

4. Approved Fuel Table and Fuel Additives

A. For information on fuel specifications approved for use in Model 208/208B Airplanes, refer to the approved Model 208/208B Airplane Flight Manual.

NOTE: Fuels must comply with Pratt & Whitney Engine Service Bulletin number 1244 and all supplements and revisions.

B. The anti-ice additives EGME/DIEGME have shown, through service experience, that they may provide acceptable protection from microorganisms such as bacteria and fungi that can rapidly multiply and cause serious corrosion in tanks and may block filters, screens and fuel metering equipment.

NOTE: Sohio Biobar JF biocide additive is approved to be used in fuel at a concentration, not to exceed 20 ppm (270 ppm total additive) of elemental boron.

NOTE: Anti-icing additive (PRIST) per MIL-DTL-27686 or MIL-DTL-85470 must be included in concentrations of 0.10 to 0.15 percent by volume for all fuel types.

Table 2. Russian Fuel Additives

TYPE	SPECIFICATION	MAX CONCENTRATION
Fluid I	GOST 8313	0.30% by volume
Fluid I-M	TU6-10-1458	0.30% by volume
Fluid TGF	GOST 17477	0.30% by volume
Fluid TGF-M	TU6-10-1457	0.30% by volume
Sigbol	TU38-101741	0.0005% by mass

NOTE 1:

The minimum concentration is 0.10 percent by volume of anti-ice additive for effective protection.

NOTE 2:

Fluids I-M and TGF-M are a mixture of Fluids I and TGF with methanol (GOST 2222) in a 1:1 proportionate ratio.

NOTE 3:

Sigbol type fuel additive is an antistatic additive.

5. Engine Oil Capacity Table

A. The following table lists oil capacity for the airplane.

WARNING: The U. S. Environmental Protection Agency advises mechanics and other workers who handle oil to minimize skin contact with used oil and promptly remove used oil from skin. In a laboratory study, mice developed skin cancer after skin was exposed to used engine oil twice a week without being washed off, for most of their span. Substances found to cause cancer in laboratory animals may also cause cancer in humans.

Table 3. Engine Oil Capacity

SYSTEM	U.S. QUARTS	IMPERIAL QUARTS	METRIC LITERS
Oil Capacity (total with filter, oil cooler and cooler hoses)	14.0 quarts	11.66 quarts	13.25 liters
Oil Tank Capacity	9.5 quarts	7.92 quarts	8.99 liters

6. Specified Synthetic Lubricating Oil Table (Ambient Temperature Above 0°F)

A. For information on approved synthetic lubricating oil specifications for ambient temperatures above 0°F (-18°C), approved for use in Model 208/208B Airplanes, refer to the approved Model 208/208B Airplane Flight Manual.

CAUTION: Do not mix viscosities.

CAUTION: Because of engine manufacturer recommendations, only change from an existing lubricant formulation to a "third generation" lubricant formulation when an engine is new or freshly overhauled. For additional information on use of third generation oils, refer to Engine Manufacturer's Pertinent Oil Service Bulletins.

NOTE: Engine lubricating oils must comply with Pratt & Whitney Engine Service Bulletin number 1001 and all supplements or revisions. Do not mix brands unless specifically approved.

7. Specified Synthetic Lubricating Oil Table (Ambient Temperature 0°F or Below)

A. For information on approved synthetic lubricating oil specifications for ambient temperatures below 0°F (-18°C), approved for use in Model 208/208B Airplanes, refer to the approved Model 208/208B Airplane Flight Manual.

CAUTION: Do not mix viscosities.

CAUTION: Because of engine manufacturer recommendations, only change from an existing lubricant formulation to a "third generation" lubricant formulation when an engine is new or freshly overhauled. For additional information on use of third generation oils, refer to Engine Manufacturer's Pertinent Oil Service Bulletins.

NOTE: Engine lubricating oils must comply with Pratt & Whitney Engine Service Bulletin number 1001 and all supplements or revisions. Do not mix brands unless specifically approved.

8. TKS Anti-Ice Fluid

A. Designations and manufacturers of approved TKS anti-ice fluid are shown in the table that follows:

NOTE: Ice protection fluid must meet the AL5 (DTD406B) specifications. You can mix fluids that meet these specifications in the anti-ice fluid tank in any proportion. Refer to Figure 1.

WARNING: Do not use automobile anti-freeze fluids because they can contain additives that are harmful to the membranes in the porous panels or to other system components. Also, you are not permitted to use thickened deice fluid for runway or parked aircraft deicing.

Table 4. TKS Anti-Ice Fluid

SYSTEM	U.S. GALLONS	IMPERIAL GALLONS	METRIC LITERS	NAME, NUMBER OR TYPE
Windshield and Surface Reservoir	20.92	17.45	79.067	AL 5 Canyon Industries P.O. Box 26447 Tempe, AZ 85282 AEROSHELL COMPOUND 07 Shell Oil Company One Shell Plaza Houston, TX 77001 BP AERO DEICING 2 BP Oil Limited BP House Victoria Street London SWIE 5NJ UK AVL-TKS Aviation Laboratories 5401 Mitchelldale B6 Houston, TX 77092

NOTE 1:

All anti-icing fluids that are in accordance with British Deicing Fluid Specification DTD 406B (NATO Symbol S-745) are approved.

Figure 1 : Sheet 1 : Airplane Service Points

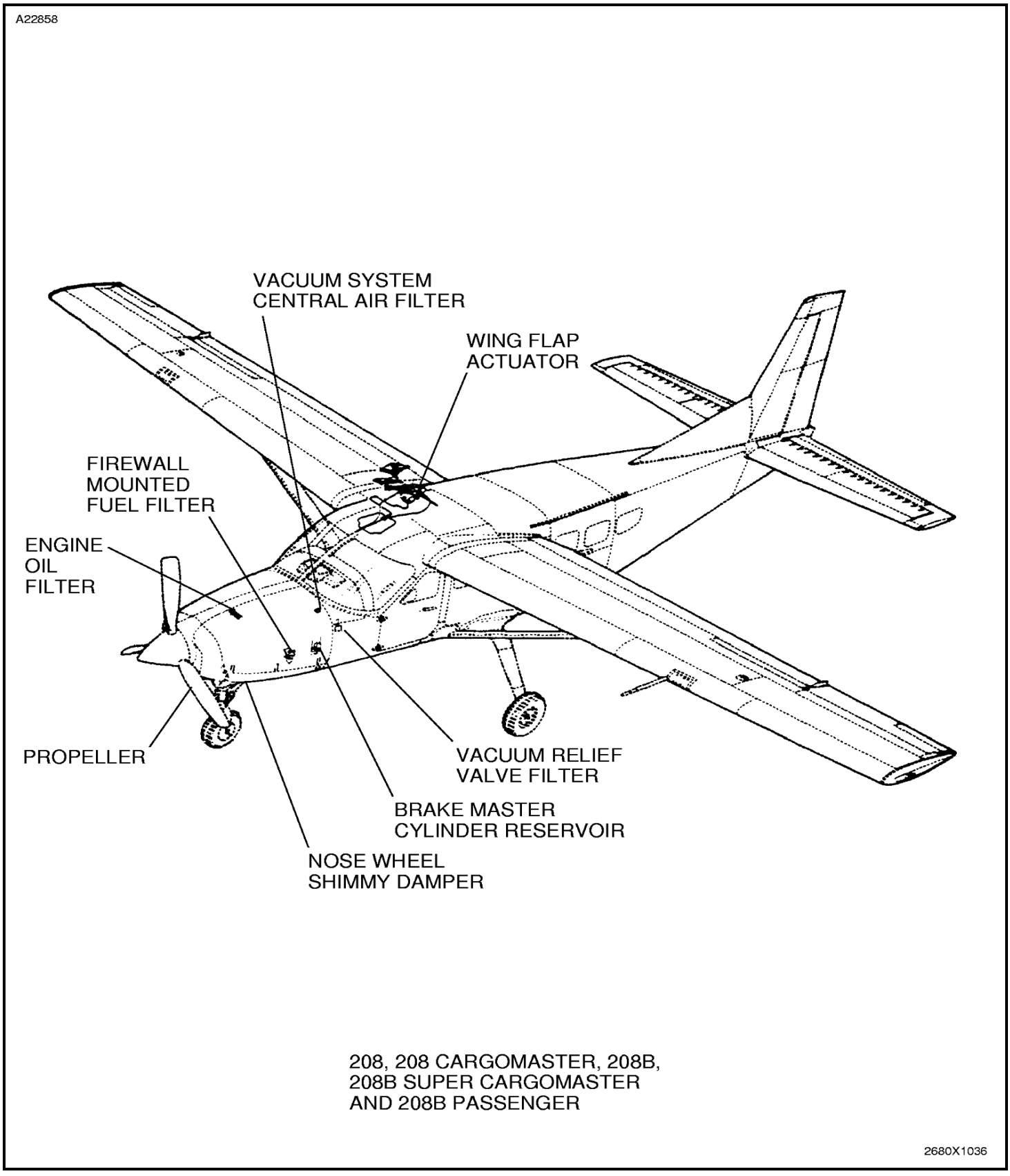

Figure 1 : Sheet 2 : Airplane Service Points

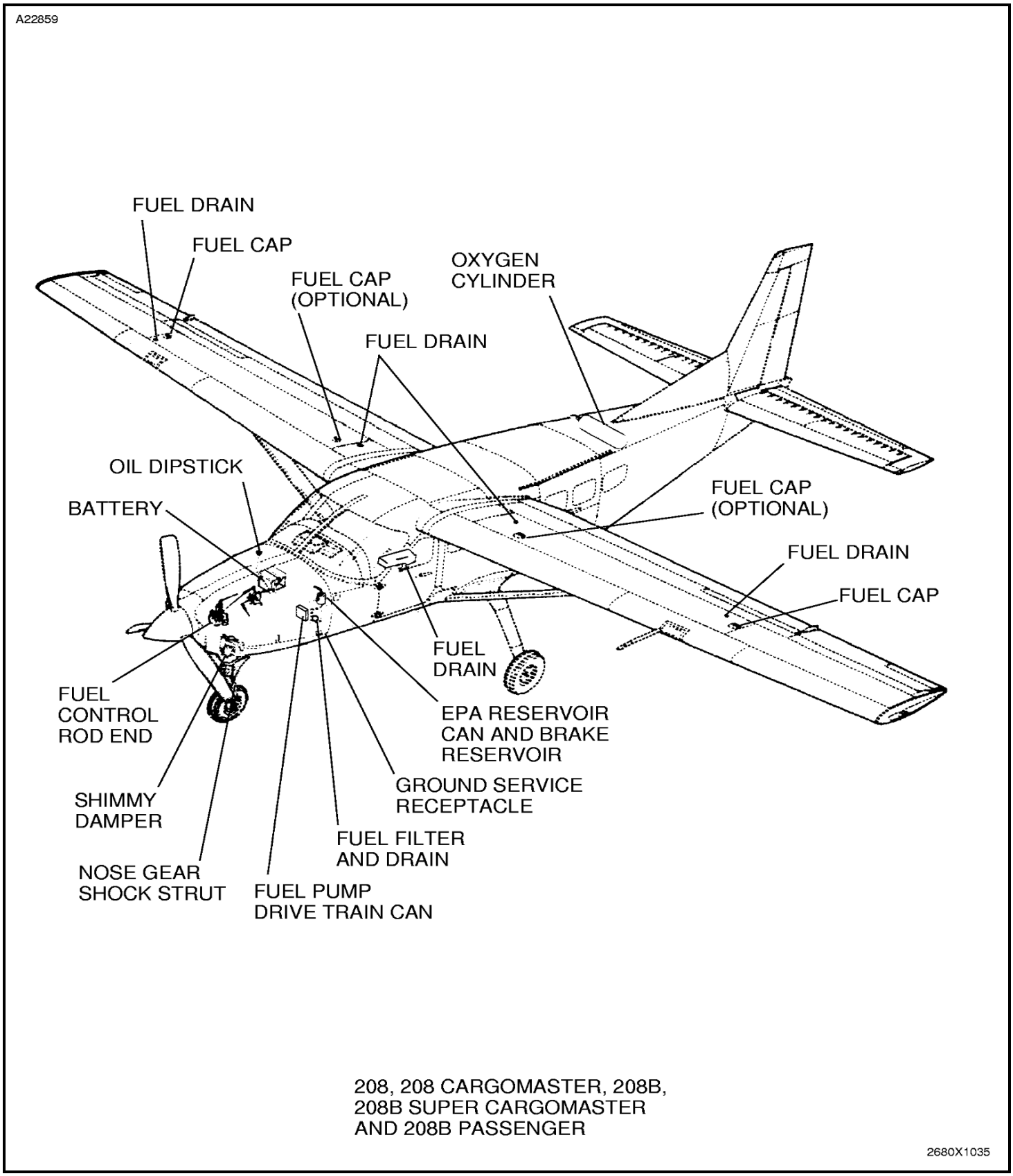

Figure 1 : Sheet 3 : Airplane Service Points

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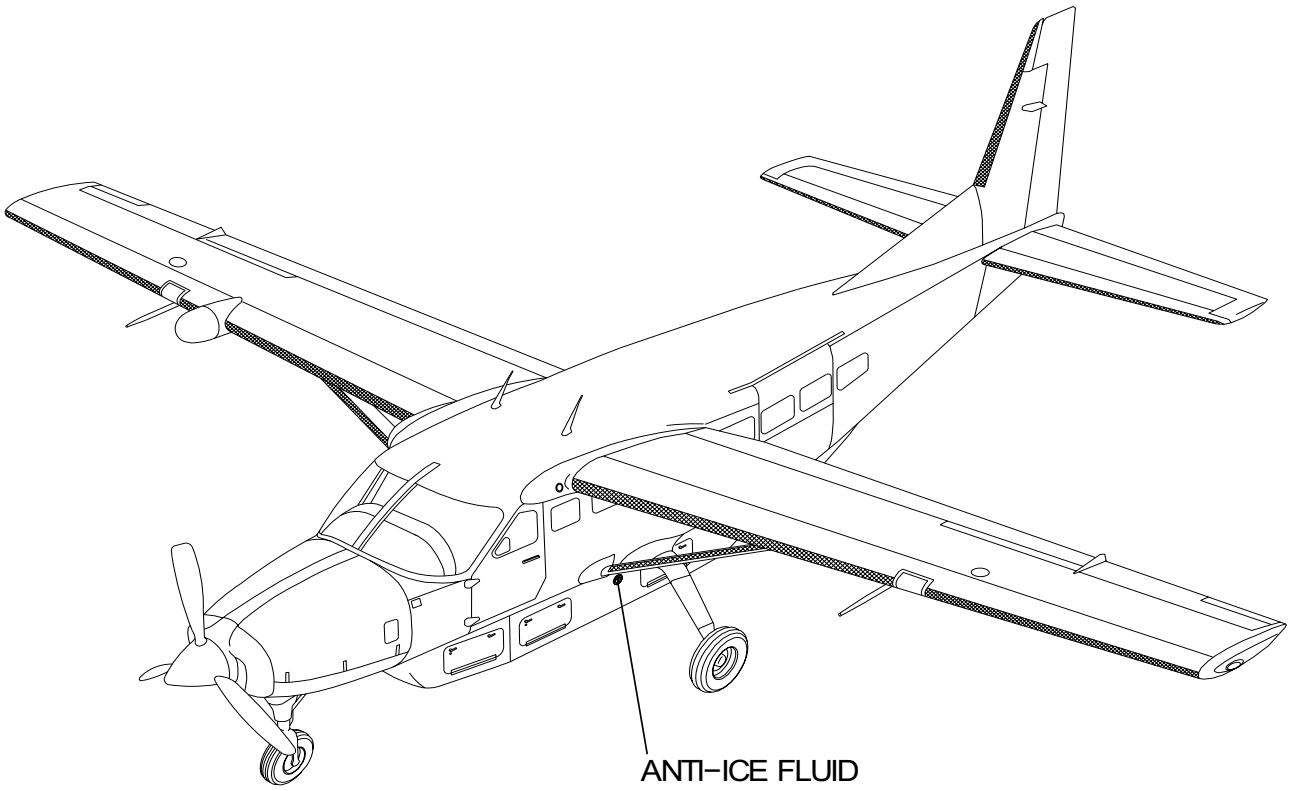

AIRPLANES WITH TKS ANTI−ICE SYSTEM

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