

Oil Reservoirs

Parker Aerospace oil reservoirs are used to store and/or replenish engine and gearbox lubrication systems as well as hydraulic systems. Many of these reservoirs are provided with all accessory detail components necessary.



Product Features

Parker oil reservoirs are designed for each application's unique envelope and performance requirements. Most often the reservoirs are required to be conformal, which require innovative solutions that Parker has developed and proven in numerous applications.

Depending on performance requirements, reservoirs are either manufactured from aluminum or stainless steel. They can be completely cast or welded constructions. Most are welded constructions consisting of both sheet and cast components. They often have internal tubing and baffles that must be installed prior to final welding.

The engine oil reservoir's primary functions are to:

- Receive air-oil mixture directly from the combined scavenge pump.
- Provide an internal air/oil separator which achieves up to 99% air removal efficiency. Separated air is vented through the breather.
- Provide sufficient oil storage for the lubrication system.
- Provide greater than 95% quality (minimal entrained air) oil feed to the lubrication pump.
- Pressure regulation and venting.

The oil reservoir secondary functions are to:

- Provide additional reservoir volume for thermal expansion and initial start up.
- Provide a means of adding oil to the lubrication system and contain spills.
- Provide a means to verify oil level in flight.
- Provide accommodations for remote oil filling.
- Provide a visual means to read oil level (quantity).

- Provide a means for draining the reservoir with self-sealing capability.
- Prevent the passage of large debris into the lubrication system.
- Provide capability to sample oil for testing.

Typical aerospace oil reservoir systems must operate in the following environment:

- Engine and gearbox lubrication: MIL-PRF-23699 or MIL-PRF-7808 lube turbo oils.
- Hydraulic systems: Skydrol type VI normal operating temperatures from 200° F to 400° F.
- Maximum design short duration cold start condition of -65° F.
- Scavenge pump discharge pressures typically up to 30 psig during normal operation.
- Scavenge inlet pressures typically 13.7 psia.
- Bearing scavenge pumps with a suction air-to-oil ratio varying from 2:1 to 4:1.
- Gearbox scavenge pumps with a suction air-to-oil ratio of between 1:1 and 2:1.

Applications

Parker oil reservoirs are used on a multitude of aircraft and by many customers worldwide.

- Commercial and regional
- Military
- General aviation
- Business aviation

Optional Features

- Fill cap and adapter
- Fluid-level sensors
- Temperature sensors
- Drain valves
- Chip collectors
- Sight glasses
- Air/oil deaerators
- Negative G valves
- Negative G requirements
- Flexible pick-up hoses
- Vent valves
- Pressure oilers
- Pressure-relief valves
- Strainers
- Fire blankets
- Fire proof design

Contact Information





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Oil Reservoirs

A partial listing of our oil reservoir tanks is provided in the table below. More information is available upon request.

Part Number	Pressures	Material	Flow	Weight	Volume	Location	Features	Envelope
Cf34-10	Operating: 28 PSIG Proof: 42 PSIG Burst: 56 PSIG	Stainless steel 321/347		23.7 lbs.		Fancase mounted, solid mounts	1, 2, 4	
230-0324-05	Operating: 16.7 PSIG Proof: 25 PSIG Burst: 33.4 PSIG	Aluminium alloy A356/6061-T6				Nacelle mounted	1, 4, 5, 6	
231-0099-01 (RH) & 231-0101-01 (LH) 230-0309-05	Operating: 30 PSIG Proof: 64 PSIG Burst: 128 PSIG	Aluminium alloy 6061-T6		7.47 lbs.		Boiler room	1, 4, 7	
	Operating: 19 PSIG Proof: 28.6 PSIG Burst: 38.1 PSIG	Aluminium alloy A357-T6 with fire blanket				Fancase mounted	1, 2, 4, 5	
230-0289-01	Operating: 15.3 PSIG Proof: 23 PSIG burst: 30.1 PSIG	Aluminium alloy A356-T-6				Engine mounted	1,4,5,6	
230-0534-09	Operating: 25.3 PSIG Proof: 38 PSIG Burst: 50.7 PSIG	Aluminium alloy A356-T-6 with fire blanket		32.7 lbs.		Fancase mounted	1, 2, 4, 6, 7	

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Part Number	Pressures	Material	Flow	Weight	Volume	Location	Features	Envelope
231-0001-07 & 30-0028-30	Operating: 1.5 PSIG Proof: 3 PSIG Burst: 5 PSIG	Aluminium alloy 6061-T6		23.7 lbs.		Boiler room	1, 4, 7	
230-1001-01	Operating: 21.0 PSIG Proof: 27.9 PSIG Burst: 115.0 PSIG	Stainless steel 321/347		49.1 lbs.		Fancase mounted	1, 4	
	Operating: 27 PSIG Proof: 37.9 PSIG Burst: 54 PSIG	Aluminium alloy A357-T6/6061-T6				Fancase mounted	1, 2, 3, 4	
94-7976-2	Operating: 4 PSIG Proof: -4 PSIG & + 8 PSIG Burst: 16 PSIG	Aluminium alloy A356/6061-T6		1.7 lbs.		Hydraulic system	1, 4	

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