

# Bulk Aviation Transport Tank

Operational Cost Analysis and Mission Profile



## About the BATT

SEI's bulk aviation transport tank is the world's first doublewalled, baffled fuel transportation tank. Each tank is designed specifically by aircraft type to ensure a precise fit and to maximize the load-carrying capacity of the aircraft. Bulk fuel aviation transport tanks are made from two main components: a heavy duty, abrasion-resistant outer tank (with a built-in strapping system that also serves as secondary containment) and a fuel-specific, baffled inner tank.

## Mission Cost Analysis

The chart below represents a sample mission cost analysis to allow comparison between common fuel systems. The following data is assumed for the chart.

- 100,000 litres delivered to a site 45 min away (one way)
- 90 min flight fuel plus reserve = 3500 lb useful load inbound
- Return trip flight cost is estimated at \$3375

System Type	Load Optimization	System Installation	Fuel Loading Time	Back Haul Options	Cost Differences	Customer Satisfaction
Drums	Drums are never able to optimize aircraft weight.	Fork lift required + two persons, high risk of damage to aircraft over time, zero hours of installation time.	Approx. one hour to load and unload at destination.	Ultimately, back haul is required for empty drums.	Annual damage assessments, incurred additional risk and cost for empty drum back haul.	Drums are in expensive, environmentally sensitive choice, increasingly under pressure to not be used.
Fixed Tank	Can be optimized but with heavy tare weight.	Forklift required 3-4 hours of installation time.	11-15 min depending on volume.	Nil opportunity for back haul or other utilization. Aircraft completely dedicated to one way trip.	STC costs 100K to 300K, plus incurred dead head return flight costs.	Expensive with no flexibility.
BATT	Fully optimized load factor with lightest possible tare weight.	Two persons, 10-15 minutes installation time.	11-15 min depending on volume.	Aircraft fully available for back haul mission or alternate utilization.	No STC required, total mission flexibility, post-fuel delivery.	Most flexible and cost effective system.

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## Certification

In the past, only fuel drums were allowed to transport fuel without special permits. Today, SEI is proud to be the first company to receive a Transportation of Dangerous Goods Equivalency Certificate (SA 10638) from Transport Canada allowing the BATT to be used without special permits for the transportation of fuels.

This certificate states that the BATT is limited to supplying fuel to areas with remote access or where other transportation options are not readily available or practical. The certificate also states that the fuel must be loaded into a flexible tank that meets all the specifications of the BATT as manufactured by SEI Industries.

## Models

- The BATT comes in a range of sizes to fit various aircraft. Currently, the DC-3, MIL-17, Cessna Caravan and Twin Otter models are available.
- Future sizes include models for the DC-6, Sikorsky S-61, Bell 412 and C-130 Hercules aircraft.
- Currently, SEI is working with operators to test new models of the BATT. If you have an aircraft not listed above, you may qualify to become a Flight Club partner and receive a special offer.

## Operational Cost Analysis

The chart below represents an operational cost analysis between common fuel systems.

System Type	Litres Delivered (Less Tare)	Total Return Trip Time	Trips Possible Per Day	Total Per Day	Black Haul Value Available	Cost Per Litre
Drums	1435 (205 x 7 drums)	.5 hour load, .5 hour off load = 1 hour	4	5740 L	Zero value as empty drums must come out.	\$2.29
Fixed Tank	1477 (250# tare)	11 minutes load, 11 minutes off load, 2.0 hours install = 2.5 hours (one time install)	5 (1.9 per trip over 10.5 duty day)	7385 L	Zero value as dedicated aircraft, also incurs uninstall time.	\$2.28
BATT	1556 (75# tare)	11 min load, 11 min off load, 15 min install	6 (1.9 per trip over 11.7 duty day)	9336 L	\$1500 value available (approx. 90% of aircraft for use)	\$1.20