

Equipping the Force Fuel and Water Systems



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Canada's Defence Policy

STRONG, SECURE, ENGAGED; released in 2017

STRONG AT HOME

- Enhanced air and maritime surveillance and control, including the Arctic
- Concurrent response to multiple domestic emergencies

SECURE IN NORTH AMERICA

- Modernize NORAD with the US

ENGAGED IN THE WORLD

CAF prepared to concurrently conduct:

- 2 major sustained deployments
- 1 major time-limited deployment (6-9 months)
- 2 minor sustained and 2 minor time-limited deployments
- 1 DART mission
- 1 Non-combatant Evacuation Operation

Canada's Defence Policy

INVESTING IN JOINT CAPABILITIES

Improve the Army's ability to operate in remote regions by investing in modernized communications, shelters, power generation, advanced water purification systems, and equipment for austere environments.

ENHANCING ARCTIC CAPABILITY

Enhance the mobility, reach and footprint of the Canadian Armed Forces in Canada's North to support operations, exercises, and the Canadian Armed Forces' ability to project force into the region.

INVESTING IN THE ARMY

Modernize logistics vehicles, heavy engineer equipment and light utility vehicles.



SEI and DND

SEI PRODUCTS DESIGNED TO SUPPORT CF OPERATIONS
IN REMOTE ENVIRONMENTS AND ALL CLIMACTIC CONDITIONS

DESIGNED TO BE COMPACT, SIMPLE, RELIABLE – AUSTERE LOCATIONS

PRODUTS FOR TRANSPORTATION, STORAGE AND DISPENSING
OF FUEL OR WATER:

FUEL BLADDERS – SUPPORT FSDS

PUMPING SYSTEMS – HPARS

WATER BLADDERS, ONION TANKS – SUPPORT:

- MECC ABLUTIONS
- ROWPU
- UPCOMING REQUIREMENT FOR SUB UNIT
WATER PURIFICATION



SEI and DND



SEI is the Canadian Army's primary re-locatable fuel systems supplier.

We've provided DND equipment and services since 1991.

**SEI Fuel
Storage and
Distribution
System**

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Remote Fuel Storage

FUEL STORAGE AND DISTRIBUTION SYSTEM (FSDS)

NSN 4930-21-910-0723

- Turnkey system stored in 2 x 20' sea containers
- 4 Arctic King fuel bladders and containment berms
- 360,000 liters total storage
- 7 pump skids, electric with diesel backups:
 - 100 GPM fill pump x 2
 - 20 GPM dispense pump x 2
 - Filter / meter skid x 1
 - Hose reel skid x 2



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Remote Fuel Station

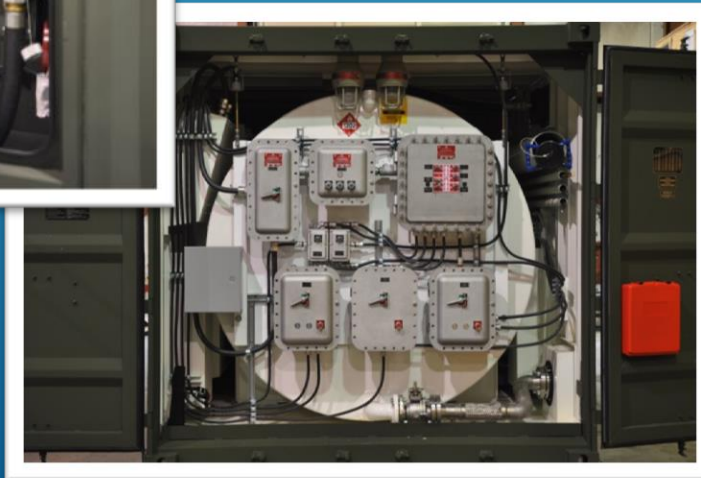
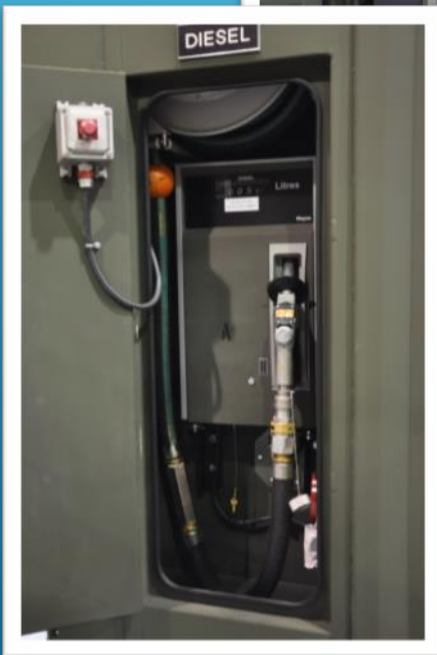
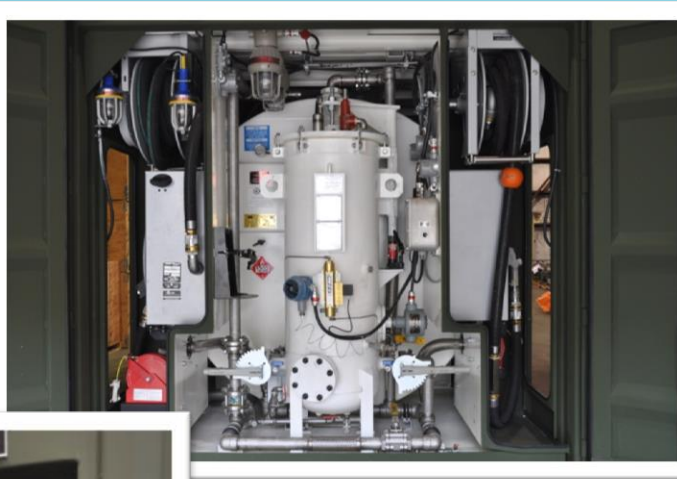
NATO F34 FUEL DISPENSING SYSTEM (F34DS)
NSN 4930-30-005-8899



- Designed for Canadian Military specification
- Custom-built 20' ISO Sea container
- CARC II
- 13,000 L double-wall fuel tank per ULC S-601
- Integral spill containment
- 9 units built and in service

F34 DS

- API 1581 5th Ed filtration
- Sampling ports
- All stainless steel piping
- Explosion proof connectors, lighting and controls
- CSA Certified for Hazardous Locations
- Dual dispenser cabinets
- 80 LPM working together
- 600 LPM fill fuel pump



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Remote Aviation Fueling



HIGH PRESSURE AIRCRAFT REFUELING SYSTEM (HPARS)

NSN 4320-20-002-4780

- 750 LPM high pressure truck and aviation fill pump
- Skid mounted, full enclosure, integral secondary containment
- Red / white LED low voltage lighting
- Chemical Agent Resistant Coating (CARC)
- 50' powered hose reel, w/ 3" hose
- API 1581 5th Ed filtration
- 9 units built and in service



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Austere Location Helicopter Refueling



PORTABLE FUEL DISTRIBUTION SYSTEM (PFDS)

- Designed for SOF requirement
- Simultaneous HCCR fueling
- Fully modular
- Compatible with F37 fuel
- 2 x 5,000 L storage double wall bladders
- Double wall bladders meets CDN environmental legislation



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Forward Fuel Delivery

DOUBLE DRUM FUEL BLIVET

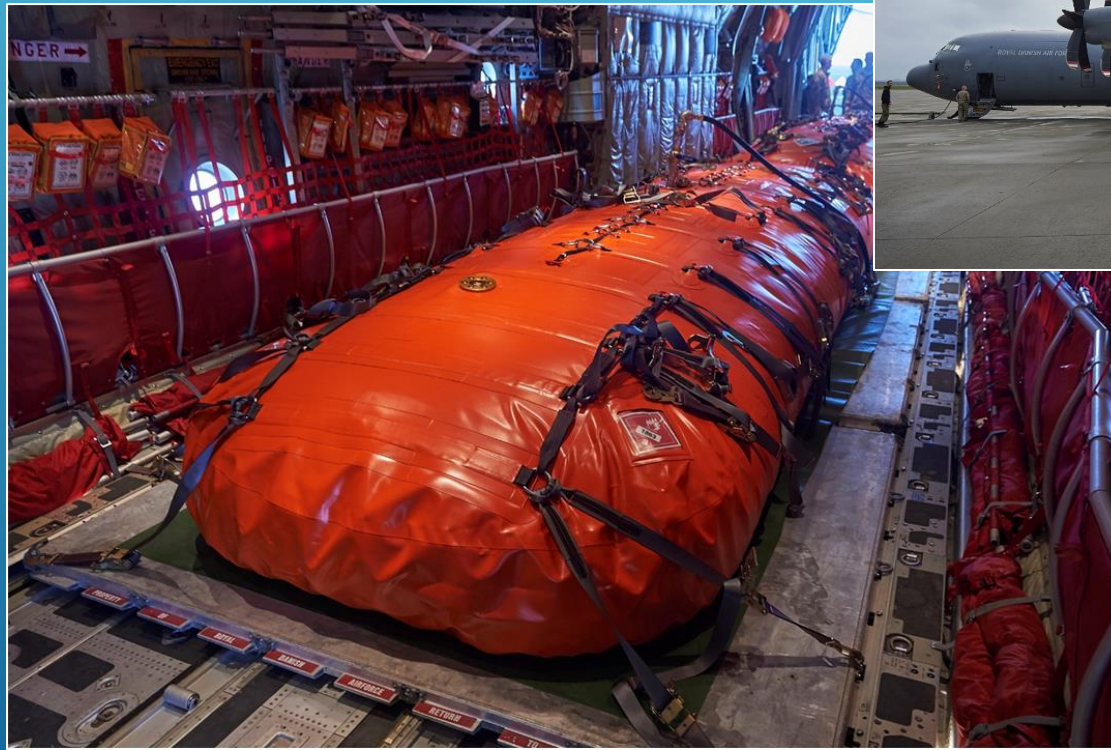
- Double Walled
- 250 USG
- 500 USG



Forward Fuel Delivery

BULK AVIATION TRANSPORT TANK

- Collapsible
- Baffled
- Double Walled



Bulk Aviation Transport Tank



- Fuel in, cargo out
- Transport Canada approved
- TDG Equivalency Certificate
- Classified as cargo
- Sizes ranging from 378 L to 9450 L
- Suitable for carrying:
 - F34 (JP-8)
 - F54 (Commercial Diesel)
 - F57 (Gasoline)

Water Storage Systems

WATER STORAGE AND DISTRIBUTION SYSTEM (WSDS)

NSN 4930-21-910-0722

Turnkey system stored in 2 x 20' sea containers

- Up to 360,000 litres of potable water storage
- 6 pump skids, electric with diesel backups:
 - Fill pump x 2
 - Discharge pump x 2
 - Filtration skid x 1
 - Chlorination skid x 2



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Repair and Overhaul Services



Repair and Overhaul

- ▶ Full assessment, repair, testing
- ▶ Upgrades and modernization
- ▶ Recertification

Field Support Representatives

- ▶ Repair and service
- ▶ Site assessments
- ▶ Installation
- ▶ Training
- ▶ Inspections and reporting



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The Future: Logistics Vehicle Modernization Program Fuel Pods



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Logistics Vehicle Modernization Program

LVM Objectives:

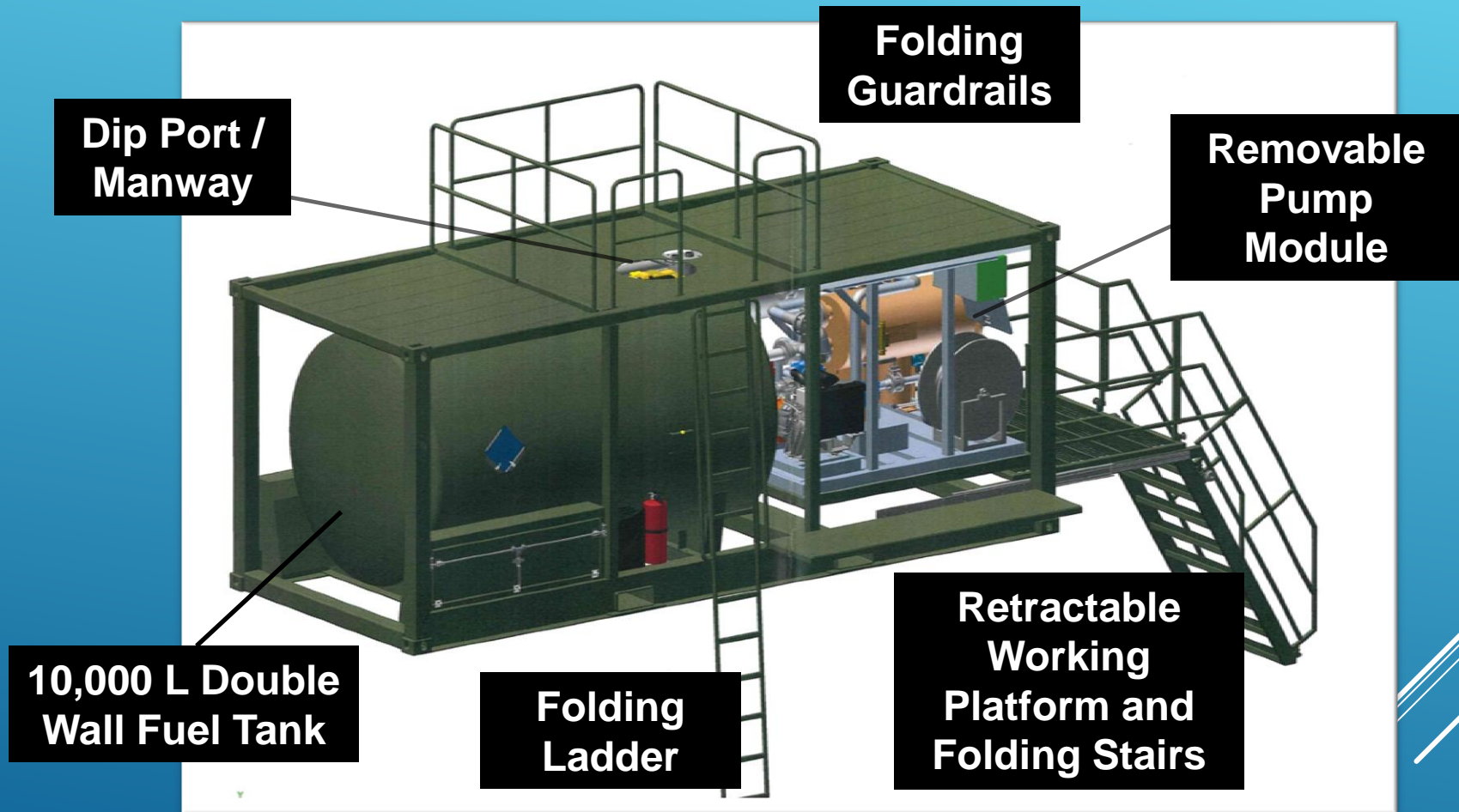
- Replace all light and heavy trucks in the CAF
- Total budget. \$1.9 BN
- Contract to be awarded to single prime vendor
- 710-845 Heavy Trucks required, all variants
- Capable of carrying 20' ISO modules known as pods
- Heavy truck payload capacity is 16,500 kg

Project Timeline:

- 2018 - 2019 Start Definition / Draft RFP
- 2021 - 2022 Start Implementation / RFP / Contract Award
- 2025 – 2026 Initial Delivery
- 2026 – 2029 Final Delivery



Fuel Pods



Fuel Pods

Fuel Pod (215-255 Req.)

- 20' ISO Frame
- CHU, Forklift capable
- 10,000 L capacity
- Self-sealing coating
- Operate mounted and dismounted
- Compliant with all applicable CDN health, safety, environmental regulations
- Self-contained; powered
- Self-load
- Dispense to variety of equipment
 - Leopard II MBT (Army)
 - Light and heavy trucks (Army)
 - Chinook (RCAF)
 - Griffon (RCAF)

Thank You

