



### Ford Cab & Chassis

Unit is to be installed on a Ford F550, Regular Cab, 4 x 4.

GVWR : 18,000 lb  
Front Axle : 7,000 lbs  
Rear Axle : 13,500 lbs  
84" Cab to Axle  
Std Ford scuff plates  
Rear and Front Stabilizer suspension bar  
Ambulance Prep. Package  
Tow Command System with Trailer Brake Controller

The power train should consist of the following :  
Ford Power stroke V8, 6.7 L Turbo Diesel Motor  
5 Speed TorqShift Automatic transmission  
Power Steering  
Part-time four wheel drive  
Dual Alternators with combined output of 320 AMPS

Interior requirements are as follows (XL Value Package) :  
Black floor mats in place of carpeting  
Upfitter switches (4)  
40/Console/40 Heavy duty vinyl seats  
Air conditioning with high output fresh air heater  
Am/Fm Stereo, CD with digital clock  
Cruise Control  
Power equipment - Driver window, door locks & windows w/backlit switches & accessory delay.  
Keyless Entry



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0

Telephone: 1-800-567-2719

Fax: 1-800-434-2613

[www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

Exterior requirements are as follows (XL Value Package):

The chassis shall be painted by the chassis manufacturer according to the chassis manufacturer's factory standards. The body builder shall not repaint the chassis. Cab to be Ford Fire Red (F1) with clear coat.

Chromed front bumper

New design front lights

Black grill

Dual front tow hooks

Powered Mirrors, manually telescoping trailer tow with power glass and two-way fold

The chassis exhaust system shall be extended to the rear of the right rear wheel.

The tires should be a maximum traction mud tire

The wheel base should be 200" wheelbase (W.B.) with a 84" Cab to Axle (C.A.)

Wheels to be primed grey

Major Standard Features :

Two (2) front tow hooks

Axle – Front Monobeam with coil spring suspension

Battery – 750 CCA 78-AH

Brakes – Anti-lock System (ABS)

Engine hour meter

Engine Block Heater

Exterior cargo light – Back of cab

Front and rear stabilizer bars

Fuel tank – 40 gallon capacity

Grab handles – Driver and front passenger

Manual transfer case and hubs (4 x 4)

Power steering

Roof clearance lights

Solar tinted glass

Steering damper

Windshield wipers – interval

Safety & Security :

Airbag – Driver and front passenger

Belt-Minder safety belt reminder

BlockerBeam – includes valance air dam

Passenger airbag deactivation switch

Ford Warranty :

3 years 36,000 miles bumper to bumper

5 years 60,000 miles Transmission

5 years 100,000 miles motor

The Fire Apparatus shall meet all the requirements of the NFPA 1906 standard while stationary on a grade of 10 percent in any direction.

A permanent plate or label, stating the maximum number of personnel allowed to ride on the apparatus, shall be provided and installed in clear view of the driver.

## **Winch (12,000#) & Brush Guard**

There shall be a 12000 lbs. WARN M12000 Thermometric removable electric winch. As per NFPA 1906 (13.2.2), the winch shall have a minimum wire rope length of 125 ft (38m) with a large latched hook. The wire rope will be 3/8" in diameter and shall be constructed of aircraft wire rope and galvanized to help resist corrosion.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

Feature of the winch will include a 3 stage planetary gear system for fast line speed, cam action clutch disengages planetary gear system for free spooling and automatic load holding brake for strength and reliability.

There shall be a winch carrier to mount the winch with a Warn 2" front receiver mounted directly on cab & chassis frame without drilling. A rear mounted Class III trailer hitch shall be securely attached to the chassis frame and shall include the 7-pin wiring trailer harness. Front and Rear Warn Quick Connectors and battery power leads to connect the winch shall be run to each of these locations for mounting of the winch. Dust Cover to be installed front and rear.

A remote with 25' (7.6m) of cable shall be supplied (NFPA 1906, 13.3.1.1 requirement).

In addition, this system includes a Warn Trans4mer Black Coated grille/brush guards which wraps to the outside of the headlights.

### Outer wheel inserts

The front and rear wheels shall be dressed with polished, stainless steel wheel liners, hub covers and lug nut covers. Brand to be Realwheels.

### Stainless Steel Side Step Bars

One (1) set of 3" diameter stainless steel side step bars. Steps to be marine grade 304 prime stainless steel polished to a mirror finish with moulded plastic step pad. Step area is compressed, rather than a cut out hole, to enhance strength and prevents interior corrosion. Lifetime Limited Warranty

In addition, to meet NFPA 1901 standard, plastic step pad shall be covered with a Stainless Steel non-slip texture cover. Brand to be RealWheels model #RW420-2.

### Lettering & Stripping

The finished apparatus shall be lettered to match the existing apparatus, the door logo shall be provided by the Fire Department. The Apparatus number shall be applied to each side of the chassis hood. 6" Reflective 3M stripping shall be applied on the Cab & the truck bed as per NFPA.

At least 50 percent of the cab and body length on each side, at least 50 percent of the width of the rear, and at least 25 percent of the width of the front of the apparatus shall have the reflective material affixed to it.

Stripping to be applied at the direction of the Fire Department. \$750.00 maximum allowance given for the lettering and stripping.

### Rear Chevron

6" Rear reflective chevron to be applied at rear of apparatus covering the entire area. Chevron to be Red & Yellow 3M stripes.

### Inside Doors Reflective

All driving and crew compartment doors shall have at least 96 in<sup>2</sup> of reflective material affixed to the inside of each door.

### Engine Speed Control Device

An automatic engine speed control device shall be installed to allow an increase in the engine speed when the apparatus is parked. (NFPA 1906, 5.2.1.4 requirement)

An interlock shall prevent the operation of this engine speed control device unless the parking brake is fully engaged and the transmission is in neutral or park, or unless the engine speed control device is used with chassis engine driven components, in which case it shall be interlocked with the engagement of those components.



## PolyBody

The body shall consist of a left and right side module with doors. In addition, there shall be a formed metal header panel, threshold panel and floor panel. These components shall be assembled to form the modular body and shall be supported by a steel sub frame weldment. All components of the body shall be bolted together to allow for easy replacement. Threaded inserts shall be installed into all blind mounting holes. All other fasteners shall be stainless steel.

Body shall be manufactured in the factory of the bidder (no exception).

## Standard Features

- Rust and corrosion free body module
- Lightweight material allows for increased payload
- Compartments constructed with ½" high impact resistant copolymer sheet
- Modular construction offers easy replacement or repair of side packs
- 3 years warranty against defects in material and workmanship
- Continuous automotive bulb door gasket for leak proof seal

## Material

The material used to construct the body side modules and doors shall be extruded copolymer polypropylene made from PolymarCo-PP™ resin.

Materials that deteriorate when exposed to sunlight, extreme weather or operational conditions shall not be used or shall have a means of protection against such conditions that will not prevent compliance with performance standards. Protective coatings that chip, crack, or scale with age or extremes of climatic conditions or by exposure to heat or cold shall not be used

## Body & Compartments mounting

All compartments shall be ventilated through an integrated positive pressure vent system allowing for movement of air between compartments. Vent outlet at the front of the side compartment modules shall provide a water resistant entry and exit for air.

The compartment floors shall be of sweep out design for easy cleaning and have provision for drainage of moisture.

All compartment floors will be covered with Plastic Tiles. The tiles shall be black with yellow angled leading edges.

An angle of approach and an angle of departure of at least 8 degrees shall be maintained at the front and the rear of the vehicle when it is loaded to its GVWR.

The rear wheel wells shall be radius cut with polished aluminum fenderette installed at well opening.

A bright, anodized aluminum rub rail extrusion shall be bolted on both sides of the body below the compartment to protect the body from minor scrapes.

## Compartment doors

Compartment doors shall be equipped with Amdor brand roll-up doors or equivalent complete with the following features: door ajar switch, two (2) LED Lumabar rope style lights, aluminum double wall slats with continuous ball & socket hinge joint and recessed slat seal, double wall reinforced bottom panel with stainless steel lift bar latching system, reusable slat shoes with positive snap-in securement, one-piece aluminum door track / side frame, top gutter with non-marring seal, non-marring side seals, bottom seal, with all wear component material to be Type 6 Nylon. Roll-up doors to be anodized gray.



### Left (Driver) side body module

There shall be a multi-compartment body module constructed from ½" polypropylene provided to form 3 compartments on the left (driver) side of the body. There shall be a single door compartment ahead of the rear wheels, a single door compartment over the rear wheels and a single door compartment behind the rear wheels.

Compartment dimensions shall be as follows

|                                | Width   | Depth   | Height |
|--------------------------------|---------|---------|--------|
| Compartment ahead rear wheels  | 58"     | 21-1/2" | 52"    |
| Compartment behind rear wheels | 22-1/2" | 21-1/2" | 50"    |
| Compartment over rear wheel    | 45"     | 21-1/2" | 36"    |

Rear wheel compartment corners to be notched to match the body left rear angles.

### Fuel Fill Bezel

The fuel tank fill will be protected by a cast aluminum fuel fill guard with polished flanges. This fuel fill guard will have a breakaway safety collar feature incorporated into its construction.

### SCBA Storage Compartments

There shall be two (2) storage compartments for SCBA bottle(s). There shall be a latched door to secure the bottle in location during transport.

The location(s) shall be ahead of the rear wheels one (1) on the drivers side, one (1) on the passenger side.

### Right (Passenger) side body module

There shall be a multi-compartment body module constructed from ½" polypropylene provided to form 3 compartments on the curb side of the body. There shall be a single door compartment ahead of the rear wheels, a single door compartment over the rear wheels and a single door compartment behind the rear wheels.

Compartment dimensions shall be as follows

|                                | Width   | Depth   | Height |
|--------------------------------|---------|---------|--------|
| Compartment ahead rear wheels  | 58"     | 21-1/2" | 52"    |
| Compartment behind rear wheels | 22-1/2" | 21-1/2" | 50"    |
| Compartment over rear wheel    | 45"     | 21-1/2" | 36"    |

Three (3) SCBA brackets shall be installed in the passenger side compartment over the rear wheels.

Rear wheel compartment corners to be notched to match the body right rear angles.



### Rear Storage Compartment

One (1) integrated to the platform compartment approximately 5" high x 22" wide x 103" long for suction hose storage and folding ladders or pike poles. A flip-down horizontally hinges door is furnished at the rear. The interior compartments is made from polished 3003-H14 alloy smooth plate. Steel frame underneath Drop-In-Unit shall not be acceptable

### Adjustable shelf tracking

Each compartment shall have four (4) aluminum tracks fastened to the interior sidewalls to provide an adjustable mounting surface for shelving.

### Adjustable shelving

There shall be adjustable shelving formed from .125" thick smooth aluminum sheet. Each shelf shall be fastened to the tracking using four (4) adjustable shelf clips and stainless steel hardware.

|                                  |                   |
|----------------------------------|-------------------|
| Compartment Location             | Number of shelves |
| To be determined by / Fire Dept. | 6                 |

### Upper section of the body

Passenger side shall have one (1) pre-connect hose compartment tray to hold a minimum of 1-3/4" x 750' of hose. There shall be one (1) 1.5" valve piped from the discharge manifold to the hose tray. The valve shall be located on the control panel with a push/pull locking rod and be connected to the hose tray by high pressure flexible plumbing. The Hose tray shall have one (1) 1-1/2" Pre-Connect elbow. Red canvas with snaps shall be installed on top of the Storage Tray along with rear or side protective net.

Driver side shall have one (1) pre-connect hose compartment tray to hold a minimum of 1-3/4" x 750' of hose. There shall be one (1) 1.5" valve piped from the discharge manifold to the hose tray. The valve shall be located on the control panel with a push/pull locking rod and be connected to the hose tray by high pressure flexible plumbing. The Hose tray shall have one (1) 1-1/2" Pre-Connect elbow. Red canvas with snaps shall be installed on top of the Storage Tray along with rear or side protective net.

All area shall be designed to prevent the accumulation of water and allow for ventilation to aid in drying hose in the storage area. Black Turtle Tiles to be installed and bolted on the floor.

Upper section will be made from .125" high bright aluminum diamond plate.

### Subframe

A Stainless Steel subframe weldment shall be fabricated from tubing and formed sheet metal to provide a mounting platform for the body side modules and the floor. There shall be outriggers extending out and down from the sub frame to provide support to the side pack floors. There shall be a minimum of four (4) outriggers supporting each side module. There shall be common attachment points along the length of the sub frame for mounting it to the truck chassis. The finish on the subframe shall be painted black.

### Body header panel

A formed .125" high bright aluminum diamond plate panel shall be provided at the front of the body and shall extend the full width and height of the body to provide full frontal protection to the body side modules. The header panel shall be fastened to both body side modules. Steel cross members shall be installed at front.



### Body threshold panel

Rear body side modules shall be joint with a middle bottom welded polypropylene sheet reinforced with an heavy duty inner steel tube.

#### Rear Configuration

Rear step mounted in the receiver hitch shall be supplied and installed. Step to have an integrated red LED light strip that acts as an additional brake light. Step to be made from a tubular steel construction with a black plastic step pad.

Stepping height from the ground to the first step shall not exceed 24 in. All steps, platforms shall be designed and installed to sustain a minimum static load of 500 lb without deformation.

Two (2) access handrails shall be provided, one (1) located at the rear left top side of the body module and one (1) located at the rear right top side of the body module. Handrails shall be constructed of or covered with a slip-resistant, non corrosive material. Handrails shall be between 1in. and 1-5/8 in. in diameter and have a minimum clearance between the handrails and any surface of at least 2 in.

The rear of the flat bed shall have six (6) non-skid rear steps for access to pump and controls. The rear steps shall be made so it can be folded up for use in rough terrain. All steps shall sustain a minimum static load of 500 lb (227 kg) without deformation (NFPA 1906 & 1901 compliant). Stepping height from the ground to the first step shall not exceed 24".

### Others

The exhaust piping and discharge outlet shall be located or shielded so as not to expose any portion of the apparatus or equipment to excessive heating. Exhaust pipe discharge shall be directed away from the pump operator's position.

Tow hooks or tow eyes shall be attached directly to the frame structure to provide a means to allow recovery from the front and rear. Hardware shall have a clear and unobstructed access.

Medium Kochek Wheel Chocks with storage bracket.

### Electrical components

A 12 volt electrical system is supply. The built in emergency light switch panel have a master switch plus individual switches for selective control. The switch panel is located in the cab on the driver's side to allow for easy access. The switches on the dashboard is lighted rocker type.

The wiring is secured in place, readily accessible and protected against heat, water and physical damage.

Electrical harness lines shall be mechanically attached to the frame or body structure of the apparatus.

All wiring will be run in heat and moisture resistant plastic convoluted split loom.

Electrical harness lines shall be furnished with protective looms, grommets, or other devices at each point where they pass through body panels or structural members or wherever they lie against a sharp metal edge. A through-the-frame connector shall be permitted to be used in place of metal protective looms or grommets.

Switches, relays, terminals, and connectors shall have a direct current (dc) rating of 125 percent of maximum current for which the circuit is protected.

Conductor insulation will conform to S.A.E. requirements. All circuit are protected by automatic reset circuit breakers.

All wiring furnished will conform to the national Electric Code.

All circuits will be wired in conformance with S.A.E. J1292, Automobile wiring standard.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**



All wiring will be function worded schematically.

A set (2) of electric diagram will be remit upon delivery.

One (1) back-up alarm that meets the type D (87 dBa) requirements of SAEJ994 shall be provided at the rear of the apparatus. It will activate when the transmission is placed in reverse.

### DOT lighting

Clearance, marker, license plate lights and reflectors will be furnished per D.O.T.

LED Signal, brake and reverse lights will be High Quality Grote Automotive lights recessed mount into rear aluminum skirt area of body per FMVSS 108 and CMVSS 108 requirements. Light to be LED Oval with chromed housing.

Two (2) LED Amber marker/clearance lights with chrome housing and clear lens will be installed on the front side of the bed, one (1) each side. Two (2) LED Red marker/clearance lights with chrome housing and clear lens will be installed on the rear side of the bed, one (1) each side. Three (3) LED Red marker/clearance lights with chrome housing and clear lens will be installed at the rear center of the bed. Amber & Red reflectors shall be installed around the perimeter of the bed as per DOT requirement.

License plate light shall be an Eon light with SS polish case that has a light output equivalent to a 10 watt halogen lamp. Eon light to have a 50,000 hr LED life.

### Ground lights

Two (2) ground lights shall be installed at the entry of the cab, one (1) on each side.

Lighting designed to provide illumination on areas under the driver and crew riding area exits shall be switchable but activated automatically when the exit doors are opened.

Two (2) ground lights shall be installed below the front bed, one (1) on each side.

Two (2) ground lights shall be installed below the rear steps, one (1) on each side.

These ground lights will be illuminated at any time the chassis parking brake is activated.

Lights to be white oval LED w/28 diodes ea. with bracket.

### Scene lights

Two (2) 150 Watts telescoping 12v Scene Lights mounted at rear of the body. The light shall be single head design. Lights will increase visibility around the apparatus during night or light operations.

Lights to be High Intensity Discharge (HID). Unlike the halogen incandescent bulbs, the HID bulb does not contain a filament. Instead, it creates light from an electrical discharge between two electrodes. This technology provides a brighter and crisper white light that is superior to halogen source because it most resembles natural daylight and is very efficient.

Model is to be Fire Research Optimum lamp heads with side mount, push up telescopic pole, #OPA512-H15. A switchbox is provided underneath each lamp head. Scene lights shall be wired.

### Emergency lighting

One (1) 54" LED Whelen Lightbar, Liberty model # SLN2VLED. Lightbar to be mounted on the front top body with clear lens.

- 4 x SUPER LED Corners (2 red on passenger side & 2 blue on driver side)
- 2 x SUPER LED Inner (1 red on passenger side & 1 blue on driver side)
- 2 x White SUPER LED Inner
- 2 x Front Facing Takedown lamps
- 2 x Side Alley lamps, one (1) each side





For Blocking Right-of-Way Mode of operation, white Super LED Inner lightbar lights (2) shall be turned off when parking brake is applied.

Mounted on front Ford grill, Two (2) Whelen M4 series Linear Super LED, Drivers Side red with clear lens, and Passenger Side Blue with clear lens each with a chrome flange.

Mounted each side of the chassis, Two (2) Whelen M4 series Linear Super LED, one (1) each side, red with clear lens with a chrome flange,

Mounted each side of the body, Two (2) Whelen M4 series Linear Super LED, one (1) each side, red with clear lens with a chrome flange,

Mounted in the rear lower section of the body Two (2) Whelen M4 series Linear Super LED, 1 red on Drivers side & 1 blue on Passenger side, with clear lens, each with a chrome flange.

Mounted in the rear upper section of the body Two (2) Whelen M4 series Linear Super LED, 1 Red on Drivers Side and 1 Blue on Passenger side, with clear lens, each with a chrome flange.

### Traffic Advisor Split Arrow Stick

There shall be one (1) Whelen Model #TA4437L LED traffic advisor mounted on the rear upper section of the apparatus body, the split design of the traffic advisor shall allow for one (1) piece to be mounted on the left side of the body and one (1) piece to be mounted on the right side of the body and be controlled in the cab center console.

### Siren & Speaker

One (1) Whelen, model # 295LSA1, 100 watts electronic siren amplifier with PA and switch control center to be provided and installed. Siren shall have wail, hyper-yelp and air horn tones as well as public address and shall be capable of radio rebroadcast.

One (1) Whelen, model # SA315P, 100 watt speaker, to be provided and mounted on the front bumper with SAK1 universal mounting bracket.

### Compartment Lights switches

One (1) switch per compartment shall be installed so the compartment light(s) shall come on only when compartment door is open.

### Door Ajar

One (1) door ajar warning light shall be provided and installed in the consol to indicate an open body compartment door. The light shall be properly marked with a sign "Warning Door Ajar".

### Battery charger

One (1) Auto Charger Kit, dual system, 20 amps, 12 volts. Location of the installation is to be determined by the fire dept.. The Auto Charge kits include the Automatic battery charger, circuit breaker & ground fault protected outlet to power accessories on the vehicle and Super Auto Eject with water proof cover. Brand to be Kussmaul.

One 120 Volt wire shall be ran from the Kussmaul Charger to center console for Fire Department to Install electrical outlet upon delivery.

Kussmaul Auto Eject shall be installed on the Rear Drivers Side of the Body as high as manageable.

### Console

One CET aluminum fire application custom consol installed between seats with rocker switch. To be quickly identified and visible to the driver and passenger while seated, the rocker switches shall be installed on the top face of the console designed with a 40 deg. angle. This area shall be able to hold at least two rows of rocker switch. All switches shall be rocker style internally lighted and appropriately identified by panel mounted legends.

The first lighted rocker switch to be a red Master Optical Warning switch. A master body disconnect automatic switch, normally open contacts, shall be provided to disconnect all electrical loads not provided by the chassis manufacturer. The starter solenoids shall be connected directly to the batteries.



All rocker switch to have a green "On" indicator that is visible from the driver's position shall be provided.

Map Light, 12" gooseneck Halogen, Havis Shield, model C-MAP-T-LED, side mounted on the cab console.

A voltmeter shall be mounted on the console to allow direct observation of the system voltage.

The console will have an area to accommodate department map books, clipboards etc..

The console shall also have an area for radio head & Siren installation.

All electrical components like breaker, relays, wiring etc. will be installed inside this customized consol and protected with an aluminum box. This consol will be design to easily gain access to those breaker, relays, wiring, etc.

Controls and switches that are expected to be operated by the driver while the apparatus is in motion shall be within convenient reach for the driver.

Console to be painted black scratch free Herculiner finish.

## Paint

The paint or coating, including any primer, shall be applied in accordance with the paint or coating manufacturer's recommendation.

Body Modules shall be thoroughly washed with grease cutting solvents prior to any sanding. After the body has been sanded and the minor imperfections corrected, the body shall be washed again with a solution to remove any contaminants on the surface. The first coating to be applied is a universal plastics adhesion promoter followed with three coats of primer. The primer coat is to be hand sanded with 320 grit sandpaper to insure maximum gloss of the paint. Application of at least three coats of Concept Acrylic Urethane paint shall be applied with the final addition of a clear coat process.

The commercial body paint will have to match the Cab & Chassis color.

All exposed ferrous metal surfaces that are not plated or stainless steel shall be cleaned and prepared and shall be painted or coated.

The interior of the body compartments shall be left in their natural color of white.

## CET Fire Pumps Mfg Drop-In-Unit

### Water Tank

The water tank shall be constructed of 1/2" thick polypropylene sheet stock with PolymarCo-PP™ resin. Water tank shall be welded with Heavy Duty extruded joint. The material shall be of a certified, high quality, non-corrosive, stress relieved thermo plastic, black in colour with a textured finish, and UV stabilized for maximum protection. The skid type water tank shall be of a standard configuration and shall be so designed to have complete modular slide in capability. The unit shall incorporate transverse partitions manufactured for 3/8" PT2E polypropylene which shall interlock with a series of longitudinal partitions constructed of 3/8" PT2E polypropylene. All swash partitions shall be so designed to allow for maximum water and air flow between compartments and are fully welded to each other as well as to the inside of the tank.

The passenger side rear wall of the tank shall have a standard built in sight gauge 3" in width, and 70% transparent.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

The tank shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall have a 8" x 8" x 8" square drop-on type cover. The cover shall be fastened to the tower with a teather to prevent loss. The tower shall be located in the right rear corner of the tank. There shall be a vent / overflow installed inside and to the extreme rear of the tower approximately 2" down from the top. This vent / overflow shall be of a standard schedule 40 polypropylene pipe with minimum ID of 3". The vent / overflow shall be piped internally toward the front and exit out the front tank wall with a 1/2" extension past the front tank wall. The tank cover shall be constructed of 1/2" thick PT2E polypropylene, black in color, UV stabilized.

Tank will be baffles in accordance with NFPA bulletin 1901 requirements, latest version.

### Tank Capacity

The tank shall have a capacity of 300 U.S. gallons of water. The tank shall be covered by the ALL OUT No Fault Life Time Warranty.

In addition, a 10 gallon Drop-in integrated foam cell will be included. A label that reads "Foam" shall be placed at any foam concentrate tank fill opening.

### Sump

The floor of the tank shall be manufactured from 3/4" PT2E polypropylene. There shall be one (1) sump as standard per tank. The sump shall be integral to the tank floor and be a minimum of 3/8" deep recessed into the floor. The sump shall not be visible from or protrude through the bottom of the tank.

### Tank Outlets

There shall be two standard tank outlets located in the same vertical plane on the driver side rear wall of the tank. One (1) 2-1/2" female NPT tank to pump suction fitting and one (1) 1-1/2" female NPT tank fill fitting with flow deflector.

### 1" Tank Drain

There shall be a 1" tank drain to the rear side of the tank with a brass plug.

### Tank Mounting Blocks

The cover shall incorporate two (2) booster reel mounting blocks that shall be to accommodate two (2) each sliding nut fasteners. These 4" large mounting blocks shall be welded to the covers running from the rear edge of the tank forward.

### Skid Base

The tank shall be mounted directly to the apparatus bed. The mounts shall allow for the tank to be secured directly to a truck bed without the need for any skid frame work underneath.

### Mounting

The Drop-In-Unit shall be mounted in a manner that allows access to the engine, pump, and auxiliary systems for routine maintenance. The Drop-In-Unit shall not be welded or otherwise permanently secured to other components

## 80 CFM CAFS SPECIFICATIONS

The CAFS provides a self-contained, diesel-powered, "slide-in" type compressed air foam system (CAFS) unit. The CAFS unit is designed to fit into the back of a standard length and width pick-up truck body.

The CAFS is designed to discharge water only, air only or compressed air foam from the same discharge outlet. In addition, the consistency of the compressed air foam (expansion ratio), wet/dry is fully adjustable. There is also a water only discharge that will supply two spray nozzles to protect the truck.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0

Telephone: 1-800-567-2719

Fax: 1-800-434-2613

[www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

## Engine

The power to drive the system is provided by a Kubota, 4-cylinder, 4-cycle, water-cooled diesel engine at a rating of 44HP @ 3000 RPM. Automotive engines or ratings will not be used. The power unit has a 40 amp alternator, a dry cartridge air filter and a muffler.

## Water Pump

The water pump is a Model MR single-stage centrifugal pump with a vertically split aluminum case with replaceable bronze impeller and seal rings on a stainless steel shaft. It is designed to provide up to 210 GPM of plain water flow and pressured up to 250 PSI with the air compressor in the "unload" mode. The pump seal is of a mechanical design.

## Air Compressor

The air compressor is of the oil injected screw type, designed and installed to supply a minimum of 80 CFM at 125 PSI of air at maximum engine RPM. The air compressor is capable of maintaining prolonged pressure from 100 to 150 pounds per square inch throughout the service life of the complete CAFS unit.

The compressor and the compressed air are cooled with a water cooler. The system is be capable of maintaining recommended operating temperatures throughout the full operational range in ambient temperatures up to 115 Degrees F.

A dry cartridge type air filter is provided on the compressor air intake.

## Foam Proportioner

The foam proportioner is a Aquis Model 1.5 Direct Injection, 12-volt, direct-injection system capable of maintaining a solution ratio of as low as 0.1% to at least 1% of class "A" foam. The proportioner has a maximum operating flow range of 3-145 GPM (11-549 liters per minute) and a maximum accuracy flow range of 5-110 GPM (19-416 liters per minute). The proportioner is capable of using different types of class "A" liquid foam concentrates. This complete system is mounted within the module.

## Drive System

The water pump and the air compressor are pulleys driven. They are mounted to the engine flywheel housing by two (2) dry "V" type belts each.

## Electrical System

All electrical equipment installed by the manufacturer is in conformance with current automotive electrical system standards and the requirements of the applicable NFPA apparatus standards. The wiring is individually and permanently color and function coded.

All exposed wiring runs in loom with a minimum of 300 Degrees F rating. All wiring loom is properly supported and attached to frame members along the entire run. At any point where wire or looms must pass through metal, rubber grommets are installed to protect the wire from abrasion.

The main low voltage electrical terminal block and circuit breaker panel are provided behind the pump operators panel in a location which provides easy service access.

The electrical connections are made using heat shrink and/or waterproof connectors. All electrical circuits are protected with automatic reset circuit breakers or fuses.

## Priming System

A Ventury type priming system is utilized. The primer is capable of priming the water pump through 20' of hard suction hose with a 15' lift. Primer controls is mounted on the operators panel.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

## Plumbing, Hoses and Lines

All piping is stainless steel. Use of grooved end pipe couplings are required for flexibility and movement of system components on mobile equipment. The compressor hoses are made of Teflon and braided with stainless steel. Check valves are required throughout the system to maintain integrity and shall be placed so that the air, water foam and foam solution do not inadvertently mix. Drain valves are provided on the unit to completely drain the system to prevent freeze damage.

## Tank to Pump

There is a 2.5" tank to pump suction valve fitted in the module and controlled from the operators panel.

## Inlet

A gated 2.5 inlet is provided to draw water from the control panel with a 2.5" NH male connection and cap is provided. It is possible to use that line for "direct tank fill" operations with a pressurized water source.

## Discharge Outlets

There shall be one (1) 1.5" NST CAFS male discharges with stainless steel, plumbing to panel, mounted discharge outlets.

Three (3) additional 1.5" NST CAFS male discharges are plumbed to the rear of the module for use as a hose reel and pre-connect(s).

There shall be a provision for a 2" electric valve to control the front monitor installed on the manifold.

Check valves are installed on each discharge to prevent foam from back flowing into the pump. Discharge valves are Fire grade self-locking, swing-out valves.

## 1 1/2" NSTM WATER ONLY DISCHARGE VALVE ON CAFS SYSTEM

There shall be a 1 1/2" fire service type drop out style ball valve with 1 1/2" NSTM threads, cap and chain which shall have a hard-coated anodized, high-strength, light-weight aluminum alloy body with rugged stainless steel ball and two PTFE seats.

The valve shall be capable of bi-directional flow with a minimum working pressure rating of 250 psig.

All stainless steel parts shall be made from 300 series material. The valves shall NOT require lubrication of the seats or any other internal waterway component and shall be capable of swinging out of the attached waterway plumbing for easy maintenance, with the removal of six (6) to eight (8) bolts.

This valve shall be feed from the pump head in a manner so to NOT allow the induction of foam and/or air into its plumbing allowing it to maintain the fullest of its pumping capacity as restricted by the size of the pump / engine combination and not being restricted by the foam system limitations in plain water flow.

This valve shall be capable of clean water pumping operations simultaneous to the discharging of CAFS through the other manifolded discharges as specified.

This valve shall be operated at the pump panel with in easy reach of the operator and be clearly labeled as a "WATER ONLY" discharge.

## Tank Refill

A 1" tank refill line with a 1" Fire grade type ball valve and flexible, reinforced hose using internally expanded fittings to allow maximum flow.

## Module Frame

The frame is constructed of steel and designed for rigorous fire service.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

## Labels

All controls, inlets and discharges are clearly labeled. The labels comply with applicable NFPA standards.

## Control Panel

A laser-cut control panel is mounted to the electrical box, which is of a water resistant design. The following items are marked in a logical manner on the control panel to provide for simple and easy operation.

- Ignition switch.
- Vernier Throttle Control.
- High Temperature Engine Light.
- Low Pressure Oil Engine Light.
- Low Volts Engine Light.
- Glow Plugs Engine Light.
- Hour meter.
- Air Compressor Unload Valve Switch.
- High Temperature Compressor Light.
- Aquis Concentrate Proportioner Control.
- 3 Lamps Shielded Pump Panel Light & Switch.
- 2.5" Master Water Pressure Gauge.
- 2.5" Master Air Pressure Gauge.
- 2.5 Suction Intake Pressure Gauge.
- Water Tank Level Indicator.
- Foam Tank Level Indicator.
- Primer Control.
- Auxiliary Air Service Outlet.
- 2 Discharge Outlets 1.5" NH male with Cap & Chain.
- 4 Mixture Valve Controls.
- 4 Air Valves.
- 4 - 2.5" Mixture Pressure Gauges.
- Intake Valve Control.
- Intake Inlet 2.5" NH Male With Cap & Chain.
- Tank To Pump Valve Control.
- Tank Fill Valve Control.
- Fresh Water Outlet 1.5 NH Male With Cap & Chain.
- Fresh Water Valve control.
- 2.5" Fresh Water Pressure Gauge.
- 2 Drain Valves.

## WATER TANK INDICATOR

Fire Research TankVision model WLA200-A00 tank indicator kit shall be installed. The kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The indicator shall show the volume of water in the tank on nine (9) easy to see super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and have a distinctive blue label.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, and a datalink to connect remote indicators. Low water warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom. No probe shall place on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

## CLASS A FOAM TANK INDICATOR

Fire Research TankVision model WLA260-A00 tank indicator kit shall be installed. The kit shall include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator shall show the volume of Class A foam concentrate in the tank on nine (9) easy to see super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and have a distinctive green label.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, and a datalink to connect remote indicators. Low foam warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the foam tank near the bottom. No probe shall place on the interior of the tank. The foam tank vent shall be installed on the foam fill tower. Wiring shall be weather resistant and have automotive type plug-in connectors.

Location of foam tank indicator shall be: Pump Panel Area

## Testing

The completed unit shall undergo a manufacturers run-in test prior to delivery. The engine, pump and air compressor are operated for a minimum period of one day, during which time the test operator will monitor and record the functions and performance of each system component. Compressed air foam is produced during the test.

This testing will be performed to ensure proper system operation and performance prior to shipment. Water flow performance is measured using standard fire department test methods.

## Manual

One (1) copy of the Operation and Maintenance Manual is provided to the purchaser with each unit. This manual includes detailed instructions in the operation and maintenance of the overall unit, engine, water pump, air compressor and foam proportionner.

## Dimensions

|        |            |
|--------|------------|
| Length | 48"        |
| Width  | 48"        |
| Height | 40 1/2"    |
| Weight | 1,450 lbs. |

## Performance

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| Water Pump | 200 GPM @ 100 PSI<br>Max. Flow : 210 GPM<br>Max. Pressure : 250 PSI |
|------------|---------------------------------------------------------------------|

|                |                  |
|----------------|------------------|
| Air Compressor | 80 CFM @ 125 PSI |
|----------------|------------------|

|                   |                  |
|-------------------|------------------|
| Engine Horsepower | 44 HP @ 3000 RPM |
|-------------------|------------------|

## Warranty

|                   |                      |
|-------------------|----------------------|
| Engine            | 2 years / 2000 hours |
| Compressor        | 1 year               |
| Water Pump        | 2 years / 2000 hours |
| Chemical Injector | 1 year               |
| Water Tank        | Lifetime             |



**ACCEPT ONLY THE BEST™**

75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

\*CET is a trademark of CET Fire Pumps Mfg Ltd.

**A CENTURY OF ENGINEERING FOR THE BRAVEST**



All fabrication and materials are warranted for a period of two (2) years barring accidents, abuse or negligence. Excluded from the warranty are all consumables and parts subject to routine replacement. We will repair or assist in the repair or replacement of the product in its entirety.

### Front Monitor

A Task Force Tips Tornado remote controlled monitor. The monitor shall have a range of movement of 185 degrees horizontally and 45 below to 90 above horizontal. The monitor shall include a console mounted with quick release joystick and electrically controlled valve. There shall be a ¼ turn air valve installed on in the center console to allow for Water/Foam or CAFS to be discharged through the monitor.

### Front Bumper Ground Sweeps

There shall be two (2) bumper nozzles installed on the lower outside corners of the front bumper. The nozzles shall be controlled by one (1) 1" electric valve. The switch shall be located in the center console and labeled "Ground Sweeps". The nozzles shall be plumber with high pressure 1" hose. The nozzles shall flow no more than 15 gpm.

### One (1) 12v Electric Rewind Low Profile Booster Reel

One (1) Hannay 12v electric rewind Low Profile booster reels capable of handling 150' of 1" diameter booster hose each. Booster hose not supplied. Booster reel to be installed on the left side of the pump at the rear of the truck bed. The reel shall have a push button rewind control and a backup geared crank rewind handle. The reel shall be equipped with a 1" NPT 90 degree swivel inlet, and a 1" NST outlet riser. The reel shall be manufactured of steel and shall be primed and painted red.

Reel to be installed on top of the front passenger side compartment.

150' of 1" Booster hose shall be supplied and installed for the reel.

One high mounted roller and spool assemblies shall be furnished and installed facing passenger side of the truck.

Two (2) Hose Reel Buttons to be supplied. Location shall be determined by the Fire Department.

### Manufacturer's discretion

Materials, parts, or procedures used are subject to change at manufacturer's discretion at any time to provide equal or better products.



