

Specification: Factory Fit™ Sub Base Fuel Systems



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Factory Fit Sub Base Fuel Systems: Specifications

1.0 General

1.1 This specification describes a dual wall sub base fuel system. Used in conjunction with a diesel powered generator set of ___ rating with an overall weight of ___ lbs., the sub base fuel system will contain ___ gallons of fuel to support the generator set for a period of ___ hours.

1.2 The sub base fuel system is listed under UL 142, subsection entitled Special Purpose Tanks EFVT category, and will bear their mark of UL Approval according to their particular classification.

2.0 Classification

2.1 Secondary Containment Generator Base Tank

2.2 Aboveground steel secondary containment rectangular tank for use as a sub base for diesel generators intended to be installed in accordance with the standards of NFPA 37 & 110. These tanks have provisions for monitoring the annular (containment) space for leakage. (Both the inner and outer containments tanks must provide for emergency venting per NFPA 30.)

3.0 Construction

3.1 Primary Tank: It will be rectangular in shape and constructed using 10 gauge steel. The tank shall be constructed in a clam shell fashion to minimize welding, ensure maximum structural integrity and

allow the use of a full throat fillet weld.

3.2 Steel Channel Support System:

Reinforced steel box channel for generator support, with a load rating of 5,000 lbs. per gen-set mounting hole location. Full height gussets at gen-set mounting holes shall be utilized.

3.3 Quality Control Processes: The manufacturer shall utilize through inspectional processes prior to acceptance of any steel.

3.4 The manufacturer shall have in place an in-process quality control assurance program.

3.5 Each product shall pass standards through rigorous testing, that it has demonstrated to meet the capabilities required by this specification.

3.6 Primary and secondary sections are to be pressurized from 3 psi to ensure integrity of sub base seams per UL 142 Standards.

3.7 Interior Rust Preventative Coating – a solvent based film rust preventative that provides indefinite inter-operational protection.

3.8 Exterior Finish – The exterior coating has been tested to withstand continuous salt spray testing at 100% exposure for 750 hours to a 5 percent salt solution at 92-97 degrees F. The coating has been subjected to full exposure humidity testing to 100 percent humidity at 100 degrees F for 24

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hours. Tests were conducted in accordance with the American Standard Testing Methods Society.

4.0 Venting

4.1 Normal Venting – Normal venting shall be sized in accordance with either: 1) the American Petroleum Institute Standard No. 2000, Venting Atmospheric and Low Pressure Storage Tanks not less than 1 1/4" (3cm.) nominal inside diameter. A 2" atmospheric mushroom cap shall be furnished and the installing contractor shall pipe above the highest fill point as a minimum. *Consult local codes for specifics on the vent size and location of the normal vent outlet.*

4.2 Emergency Venting – The total capacity of both normal and emergency venting openings shall not be less than that derived from NFPA-2000, table 2.2.5.2.3., and based on the wetted surface area of the tank. The wetted area of the tank shall be calculated on the basis of 100 percent of the primary tank. A ___" emergency pressure relief vent cap shall be furnished for the primary and secondary containment portions of the tank. They shall comprise a small surface area that is not much larger than the opening itself. The vent is spring – pressure operated; initial opening pressure is 0.5 psig and full opening pressure is 2.5 psig. Limits are marked on top of each vent. The emergency relief vent is sized to accommodate the total venting capacity of both normal and emergency vents.

5.0 Ancillary Equipment

5.1 The following items are considered essential to the successful operation of a sub base fuel system

5.1.1 Fuel Fill – There shall be a 2" NPT opening within the primary tank, raised fill pipe (opening located above the normal vent cap) and lockable manual fill cap.

5.1.2 Low Fuel Level Switch - Consists of a 50watt float switch for remote or local annunciation of a (50% standard) low fuel level condition.

5.1.3 Side Mounted Leak Detection Switch – 50watt float switch.

6.0 Optional Adders

6.1 A Dual (High/Low) Fuel Level Switch that consists of two 50 watt float switches for local or remote annunciation of two fuel level conditions. Fuel level annunciation shall occur at a high level of (___percentage) and a low level of (___percentage).

6.2 A Remote Fill Panel that may include up to three visual and three audible alarms relaying fuel in containment area, low fuel level, and high fuel level.

6.3 Modular Fuel Transfer System – MFTS with pump and motor sized to accommodate fuel flow rate of generator set and provide a minimum of 17 feet of vertical lift. Controller pump and motor shall be prewired and plumbed with solenoid

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and fuel strainer on a vertical support assembly base. Reverse pump system shall be used when main tank outlet is at a higher level than the sub base tank.

6.4 5 Gallon Fill/Spill Containment constructed of high carbon steel with a 3" fitting, 2" fill and combination drain. Tank to be extended 20" past generator when location is outside generator set enclosure.

7.0 Qualifying Experience

7.1 Tramont Corporation has over 25 years experience in the design, manufacture and testing of fuel containment systems.

8.0 Warranty

8.1 The fuel containment systems manufacturer shall warrant the product against defects in workmanship and materials for no less than one year after date of completion of manufacture.

9.0 Acceptable Manufacturers

9.1 Only Tramont Corporation,
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