

Vehicle System Design Estimate



Quality is Behind the Diamond®

Amerex

7595 Gadsden Highway
Trussville, AL 35173-0081

Vehicle Information

Make: Hitachi
Type: Excavator
Model: EX 5500
No Engines: 2
Engine HP: 2 x 1,350

Operating Weight: 1,142,000 lbs
Hydraulic Capacity: 1640 gallons
Diesel Capacity: 2,750 gallons
No. Turbo Chargers: 4
Capacity CU Yards: 40 yard

Date Rev: 7/1/14
VSDE No:
Drawing No:

Purpose: Amerex Fire Suppression Systems and components are FM approved and designed to suppress fires on mobile and self-propelled equipment. The primary mission of these systems is to suppress the fire long enough for the operator(s) to safely exit the vehicle/equipment and minimize subsequent damage. They are not intended to be able to extinguish any possible fire that could occur on or near the vehicle. Fires that originate outside of the protected area, within combustible materials outside of the vehicle, environmental hazards and excessive amounts of pressurized flammable liquids are examples of

QTY	Part #	Description
3	22838	Agent Cylinder Assy—250 ABC w/Pressure Sw
1	22373	Agent Cylinder Assy—75 ABC w/Pressure Sw
2	20775	Electric nitrogen actuator
3	22853	Distributor 1-1/4 x 3/4 x 3
9	22698	Distributor 3/4 x 1/2 x 6 outlets
1	22517	Distributor 3/4 x 4
3	10178	Distributor 3/4 x 1/2 x 4
66	10250	Cone Nozzle with B/O cap
3	22869	Pneumatic control head
1	10147	Pneumatic control head
1	10173	Vent Check
4	10262	Check Valve
4	09956	Nitrogen Cylinder
2	10210	Manual Actuator
1	104053	Manual Switch
2	22579	Linear Actuator
3	22966	Mounting Ring 250lb cylinder (Optional)
66	10780	Bracket, Nozzle
4	10354	Outdoor N2 Bracket
1	16389	Display—Safety Net
1	16390	SafetyNet Driver Panel
1	16395	SafetyNet Detection and Release Module
2	16473	Actuator Lead shielded 20'
2	16472	Actuator Lead shielded 10'
1	14017	Power Lead 25'
4	20083-25	Modular Linear Wire (ALHD) w/spring 25'
1	16457	Thermostat/Manual switch lead Shielded 3'
1	16458	Thermostat/Manual switch lead Shielded 6'
1	16460	Thermostat/Manual switch lead Shielded 15'
2	14376	Sensor cable to connect SN modules

Bill of Materials

Note #1 Dual Agent discharge is a requirement of NFPA Standard 122 (Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral processing Facilities) 12.3.6.1.1 "For hydraulic systems above 567.8L (150 gal) in the lines, a dual agent system shall be provided."

Note #2

QTY	Part #	Description
3	19724	ICE V12
36	21981	Close Range Single Nozzle
3	22966	Mounting Ring 250lb cylinder (Optional)
3	10147	Pneumatic control head
3	10199	Discharge fitting Kit
36	19248	Reducer Bushing 1/2" NPT 3/8" NPT
36	10780	Nozzle bracket

The purpose of this Bill of Materials (BOM) is for reference and estimation purposes only and does not replace an onsite hazard analysis. The BOM estimate should be considered the Minimum level of protection and a complete onsite hazard analysis is required to identify final protection requirements. Additional distributor supplied materials (hose, fittings, hardware etc) not supplied by Amerex will be required.

Potential Nozzle Locations

Dry Chemical nozzle locations				ICE Liquid nozzle Locations			
Nzl Qty	Haz Description	Nzl Qty	Haz Description	Nzl Qty	Haz Description	Nzl Qty	Haz Description
14	Left side engine	4	Hydraulic Pump filter room	16	4 per turbo		
14	Right side engine	10	Swing device center joint	10	Exhaust manifold		
4	Exhaust manifold shroud	10	Hydraulic cooler, pump, filter room	10	Hydraulic pumps		
6	Hydraulic and fuel tanks						
4	Control Valves						

Not use these Potential Nozzle locations for final nozzle placement without conducting a complete hazard analysis on the machine.

Note: The information provided in this form is for reference and estimation purposes only. Estimates are determined by information provided in whole or part by the vehicle manufacturer, available sales literature and data sheets, OEM dealers, Amerex field surveys, Amerex distributor experience and field surveys and comparisons with similar types of equipment. Modifications and optional accessory equipment made at the factory, dealer or end user site could change the protection requirements and nullify previous field surveys. A complete hazard analysis and risk assessment will have to be performed on the vehicle to determine the most probable ignition sources along with the fire characteristics and quantity of the various fuels exposed to the ignition sources. The Amerex Fire Suppression system requires periodic maintenance by factory trained and certified individuals to maintain the system in operable condition, including assessing the vehicle for any changes that may affect the system performance.