

Vehicle System Design Estimate



Quality is Behind the Diamond®

Amerex
7595 Gadsden Highway
Trussville, AL 35173-0081

Vehicle Information

Make: Caterpillar	Operating Weight: 67,338 lbs	Date Rev: 1/9/14
Model: 16M	Hydraulic Capacity: 30 gal	VSDE No: 1316
Type: Grader	Diesel Capacity: 141 gal	Drawing No: N/A
No Engines: 1	No. Turbo Chargers: 1	
Engine HP: 297 HP	Capacity CU Yards/Tons: N/A	

Purpose: Amerex Fire Suppression Systems and components are FM approved and designed to suppress fires on mobile and self propelled equipment and not intended to be able to extinguish any possible fire that could occur on or near the vehicle. Fire origins outside of the protected area, outside combustible materials, environmental hazards and excessive amounts of pressurized flammable liquids are examples of hazards which could exceed the capacity of the fire suppression system.

Bill of Materials

QT	Part Number	Description
1	22373	V75 ABC agent cylinder w/pres switch
1	10199	Discharge fitting Kit
3	10178	Distributor 1/2 x 4
1	22517	Distributor 3/4 x 4
12	10250	Cone Nozzle with B/O cap
1	17068	Electric/Pneumatic control head
1	10173	Vent Check
1	10262	Check Valve
1	09956	Nitrogen Cylinder
1	10210	Manual Actuator
1	14053	Manual Switch
1	22579	Linear Actuator
1	22260	Bracket, Agent cylinder 75
12	10780	Bracket, Nozzle
1	10354	Outdoor N2 Bracket
1	17311	Control Panel III (Back Wiring exit)
1	17418	Actuator Lead 15'
1	14017	Power Lead 25'
2	20075-16	Modular Linear wire 16'
1	16457	Thermostat/Manual switch lead Shielded 3'
1	16458	Thermostat/Manual switch lead Shielded 6'

Supplemental Protection:

In applications where there is an opportunity for Flammable Liquids to come into contact with heated surfaces beyond the discharge time of the dry chemical discharge a secondary discharge of Amerex ICE is recommended. The ICE system will cool the surface temperatures and reduce the possibility of a fire re-ignition.

QTY	Part Number	Description
1	20271	ICE4
1	10181	ICE4 Bracket
4	21981	Close Range Single Nozzle ICE
1	22579	Linear Actuator
1	17068	Electric/Pneumatic control head
2	14724	Actuator Lead 6'
1	17091	2-Way Linear Actuator Junction Box
4	19248	Reducer Bushing 1/2" NPT 3/8" NPT
1	10199	Discharge fitting kit

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

Note #1

Note #2

Potential Nozzle Locations

Nzl Qty	Haz Description	Nzl Qty	Haz Description	Nzl Qty	Haz Description
1	Turbo Charger	2	Transmission area		
2	Exhaust manifold Engine top	2	Hydraulic pump area	1	
1	Engine Right Side	2	Hydraulic hoses/under cab		
1	Engine Left side	1	Engine bottom, belly pan		

Do 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. 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.