

Lesson Plan



For the
P-19



Objectives

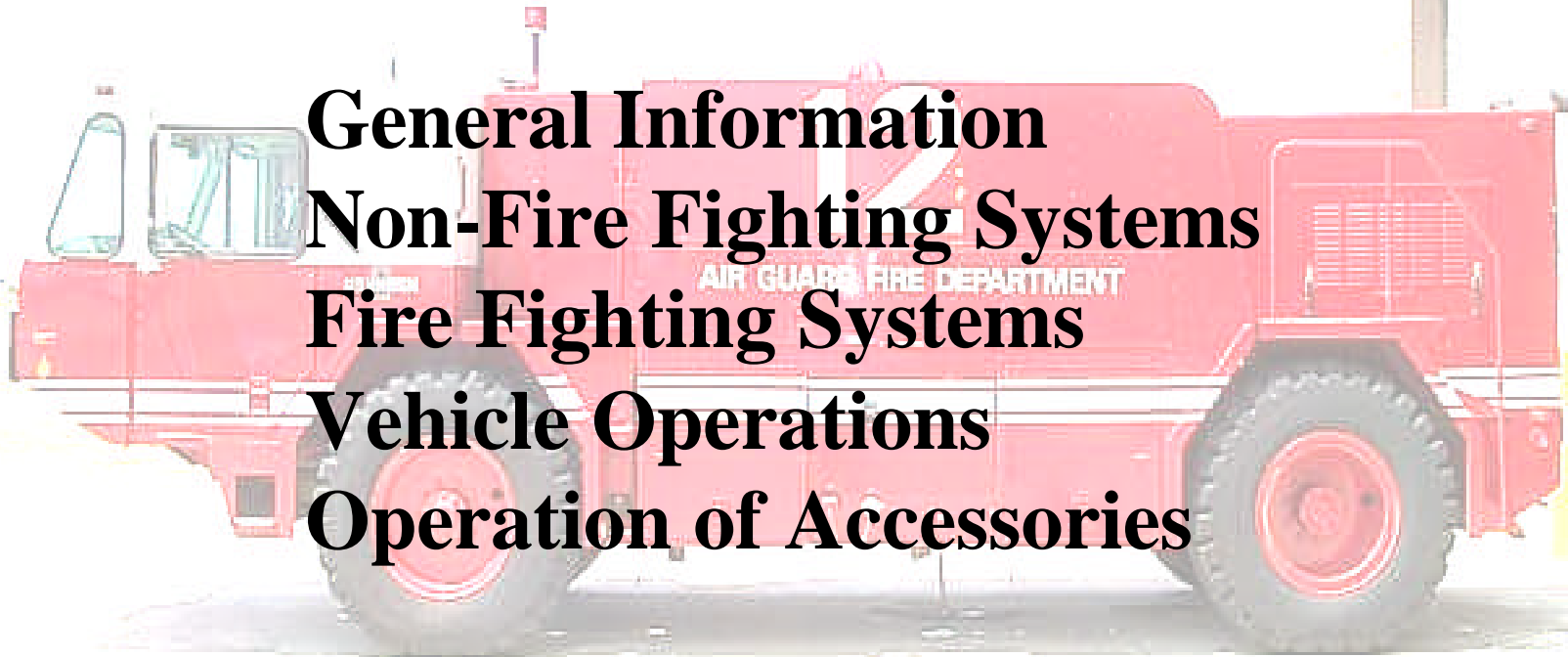
General Information

Non-Fire Fighting Systems

Fire Fighting Systems

Vehicle Operations

Operation of Accessories



General Information

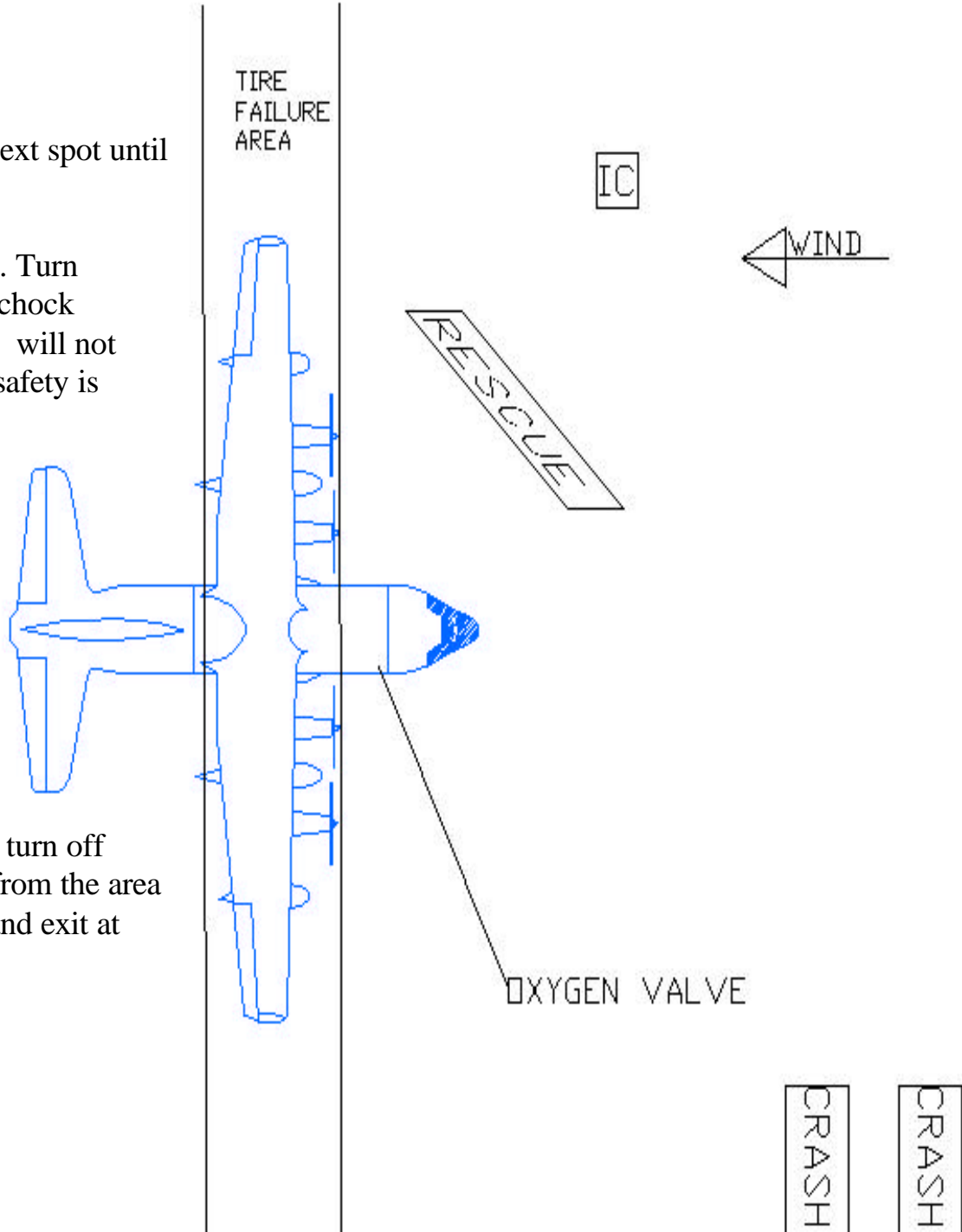
A red and white fire truck is parked in front of a brick building with large garage doors. The truck has "ARLINGTON FIRE DEPARTMENT" written on its side. The scene is brightly lit, possibly by a strong light source from the right, creating a high-contrast, almost washed-out effect in some areas.

- **Preventative Maintenance**
- **Inspections**
- **Vehicle Safety**
- **Specifications**
 - **Engine**
 - **Transmission**

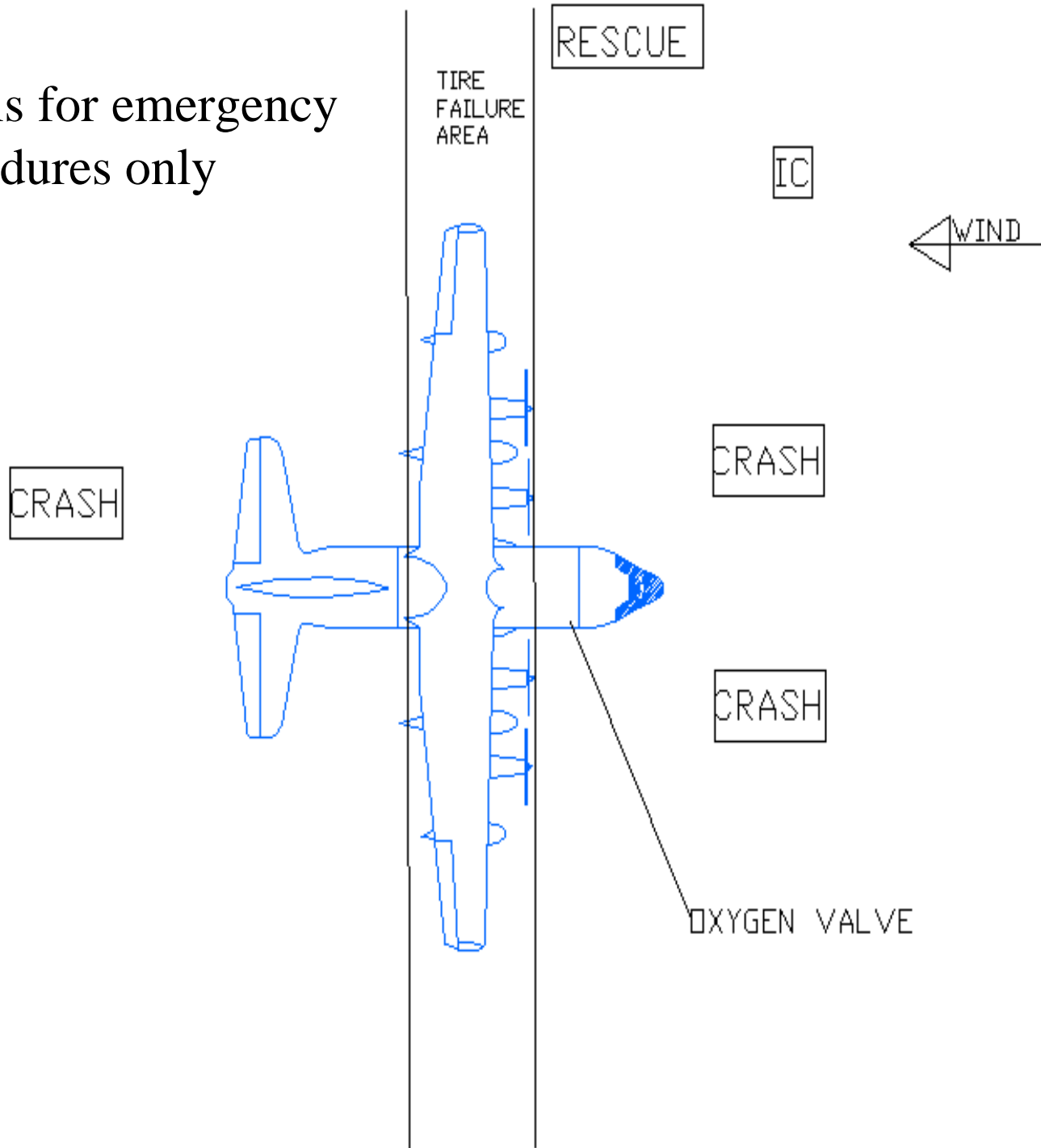
1) Initially stage on the nose of the next spot until props have stopped turning

2) Only rescue will approach aircraft. Turn pointing toward next spot, park, chock and contact crew. Crash vehicles will not move toward aircraft unless fire safety is questioned.

3) After termination all vehicles will turn off emergency lighting and proceed from the area with drivers side toward aircraft and exit at entry control point



This is for emergency procedures only





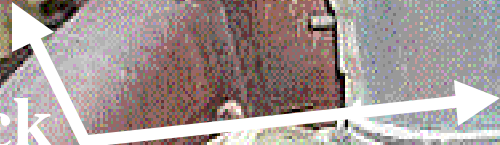
Hydraulic Reservoir

When Checking out the Engine
be sure that you inspect the hoses
and belts for wear and tear.

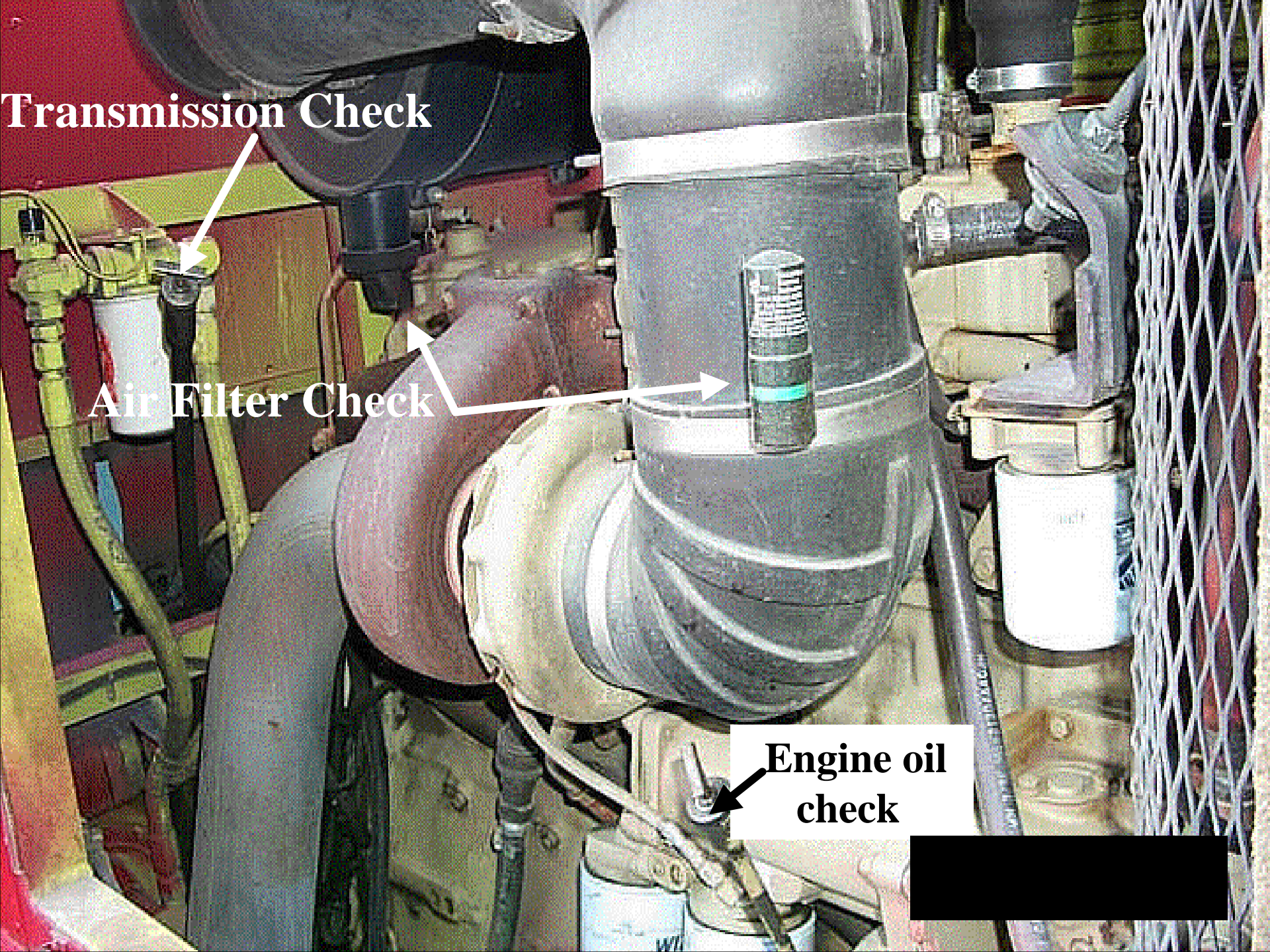
Transmission Check



Air Filter Check



Engine oil check



12

ADD FIRE DEPARTMENT

**42 gal tank
Alternative Fuels
JP-4, 5 and 8**

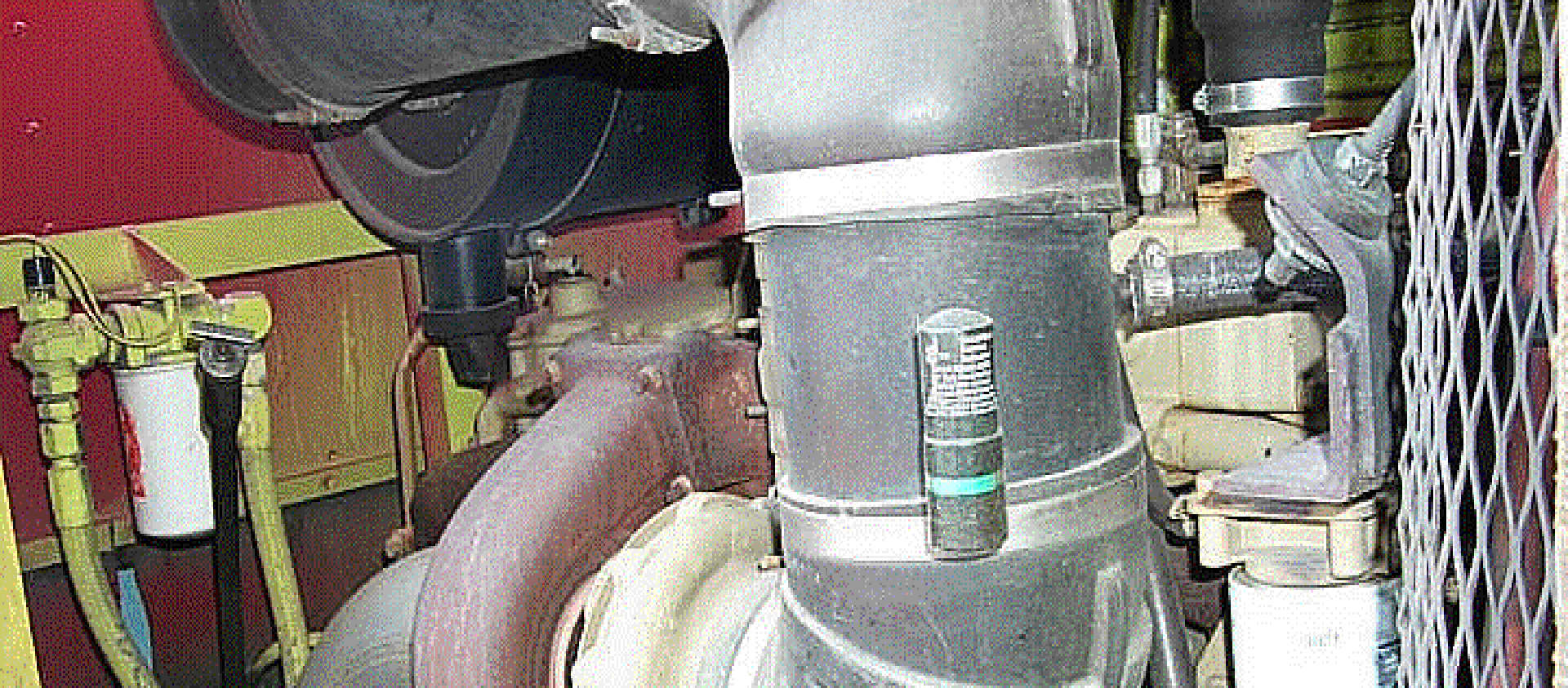


Fuel



**100 Foot
Booster Line**





Cummins inline 6 cylinder @	680 hp
400 brake hp @	1250 hp
Engine Idle	600 rpm
Governed speed	2100 rpm
Oil capacity	11 gal 15 w 40
Normal operating temp	158- 195 Degrees
Oil pressure	
a- 8psi @	225 degrees
b- governed 40 psi @	225 degrees

Specification

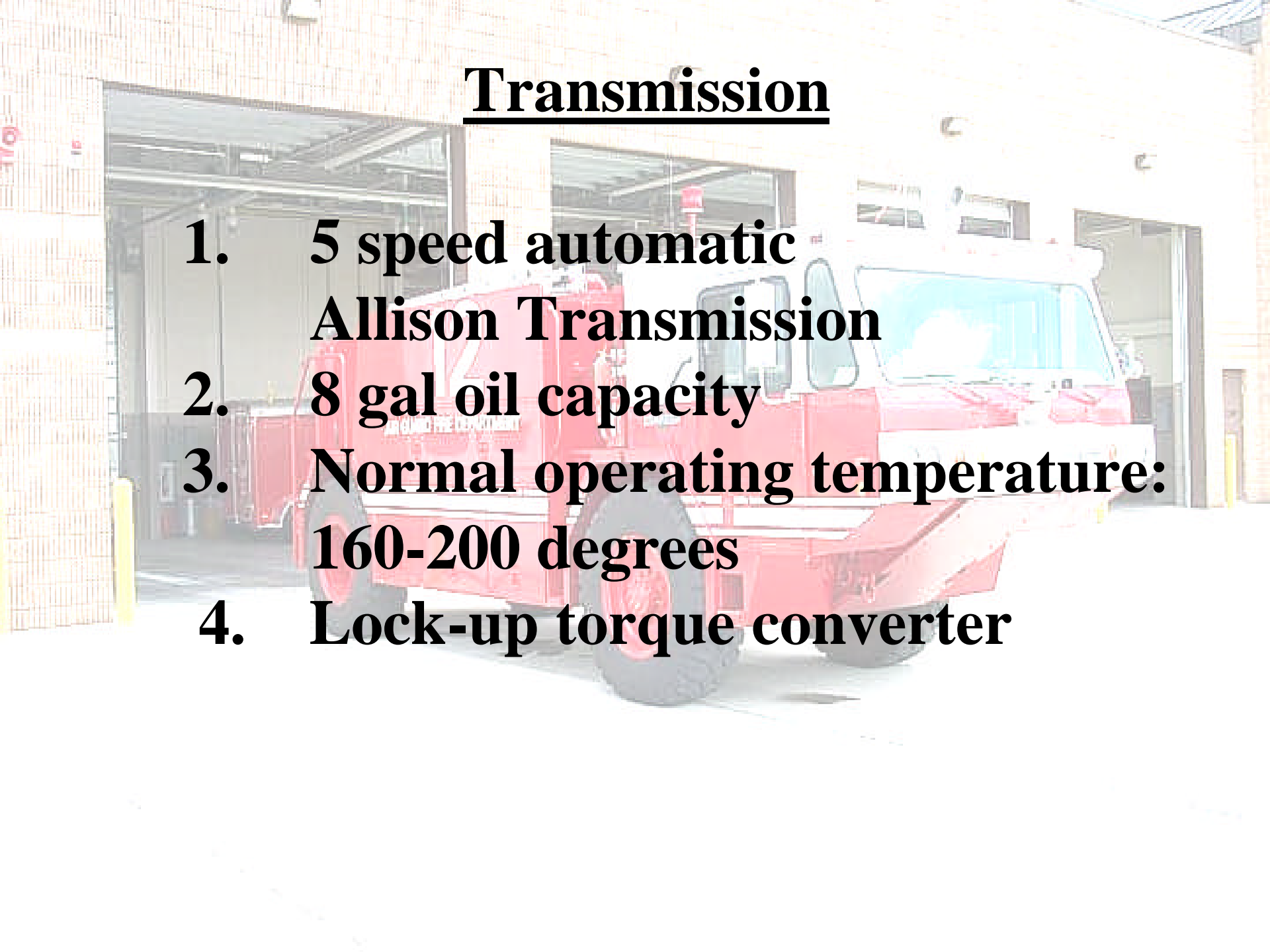
Length	325"	Chassis	4X4 drive
Width	96"	MPH	0-50 in 25 sec
Height		Turning Radius	80'
normal	120"	Wheel Base	14' - 2"
reduced	102"	Ground Clearance	13"



Angle of approach & departure - 30 degrees

Weight	<u>Loaded</u>	<u>Unloaded</u>
P-19 A	32,100 LBS	22,760 LBS

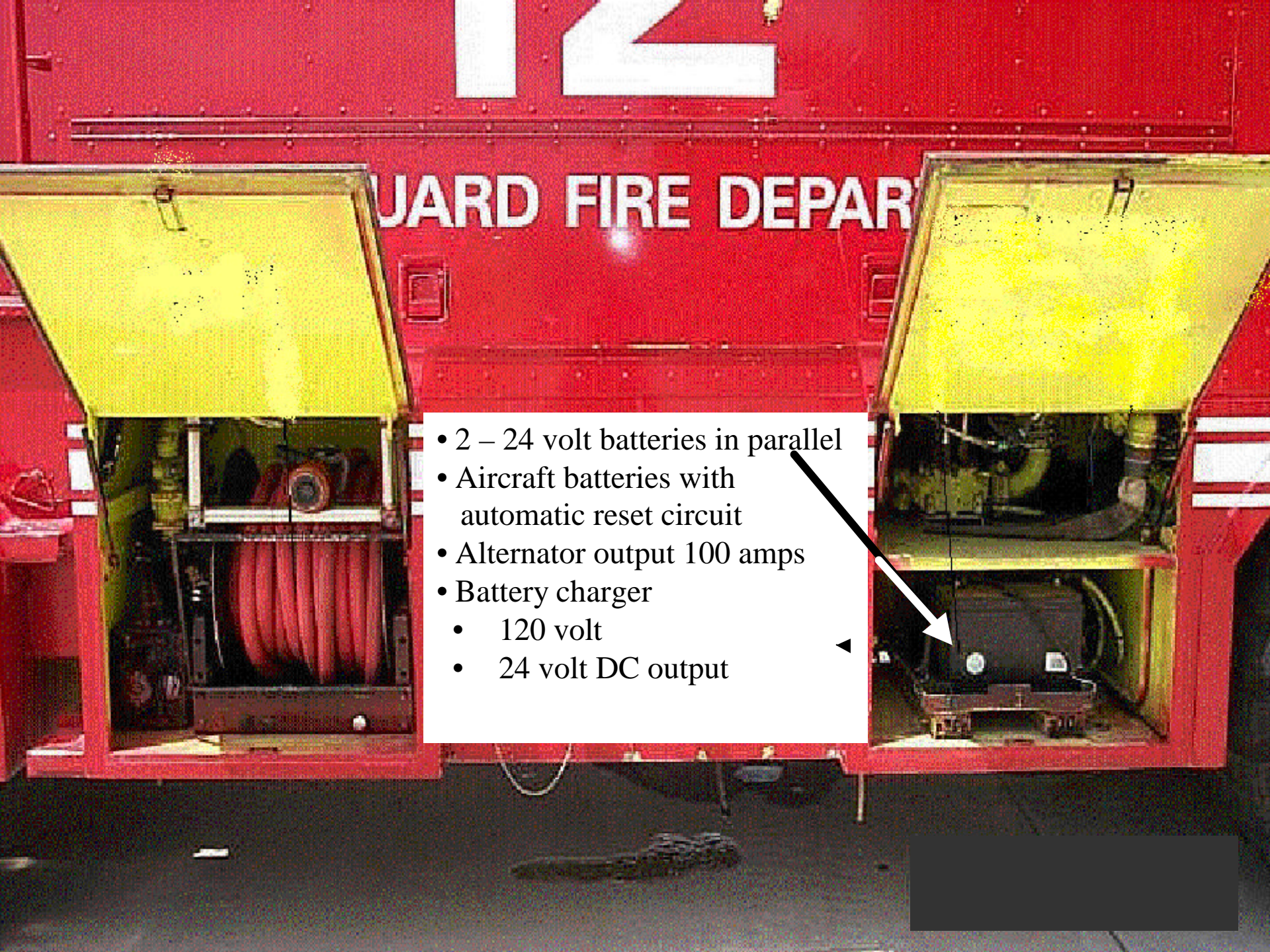
Transmission

- 1. 5 speed automatic
Allison Transmission**
 - 2. 8 gal oil capacity**
 - 3. Normal operating temperature:
160-200 degrees**
 - 4. Lock-up torque converter**
- 
- A red fire truck with a white cab is parked in front of a brick building with large glass windows. The truck is viewed from a side-rear angle. The building has a brick facade and several large glass doors or windows. The scene is brightly lit, suggesting daytime.

A red fire truck with the number 12 is parked in front of a brick fire station. The truck has "12" and "ANGLAND FIRE DEPARTMENT" written on its side. The station has several large open bays. The text "Non Fire Fighting" is overlaid on the top part of the image.

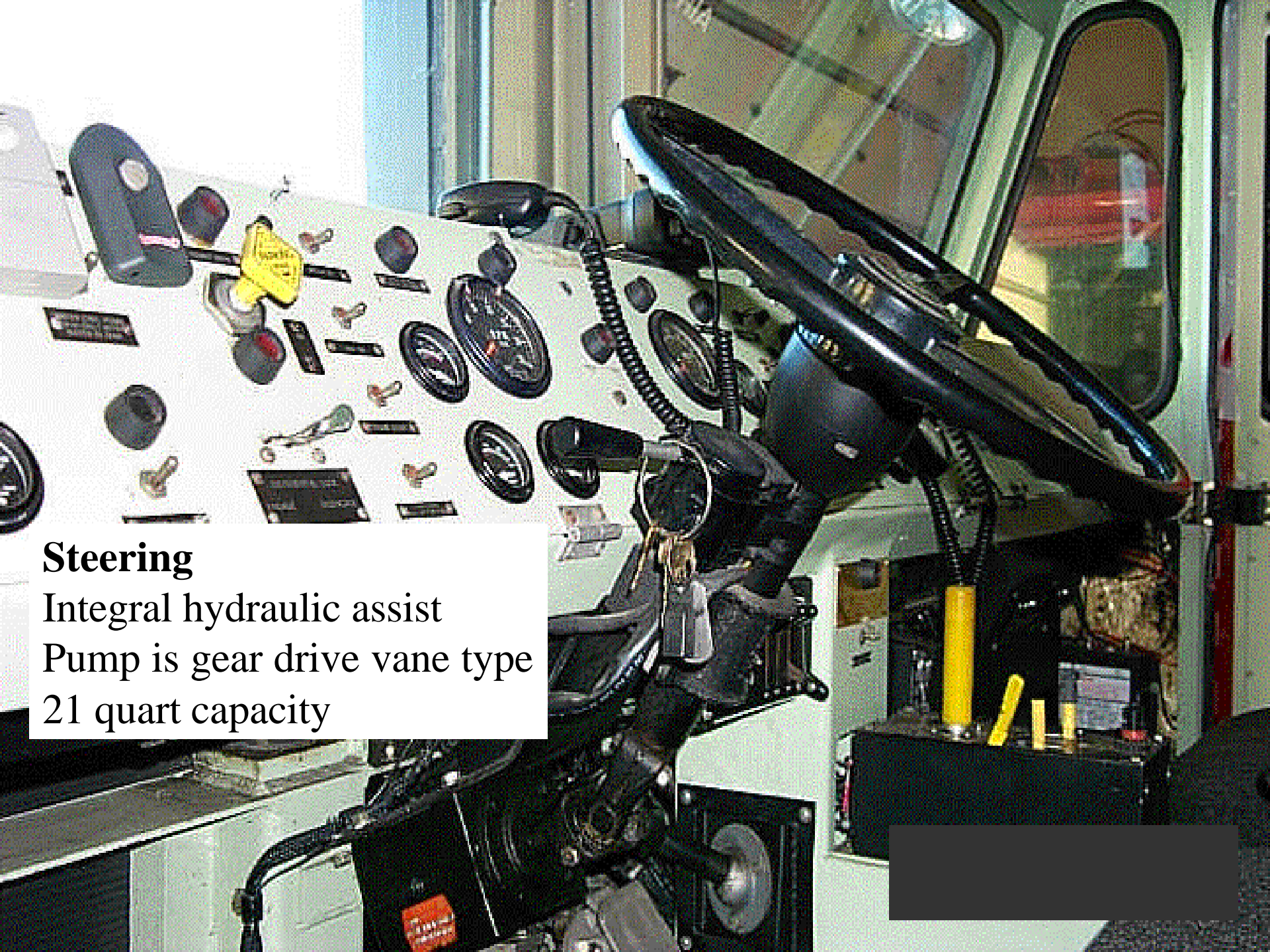
Non Fire Fighting

**Electrical
Steering
Tires
Air System**



GUARD FIRE DEPART

- 2 – 24 volt batteries in parallel
- Aircraft batteries with automatic reset circuit
- Alternator output 100 amps
- Battery charger
 - 120 volt
 - 24 volt DC output



Steering

Integral hydraulic assist

Pump is gear drive vane type

21 quart capacity



Wheel and Tire

Tire - Tubeless (inflate to 60 psi)

Steel belted radials

Wheel - 3 piece steel disc

Air System

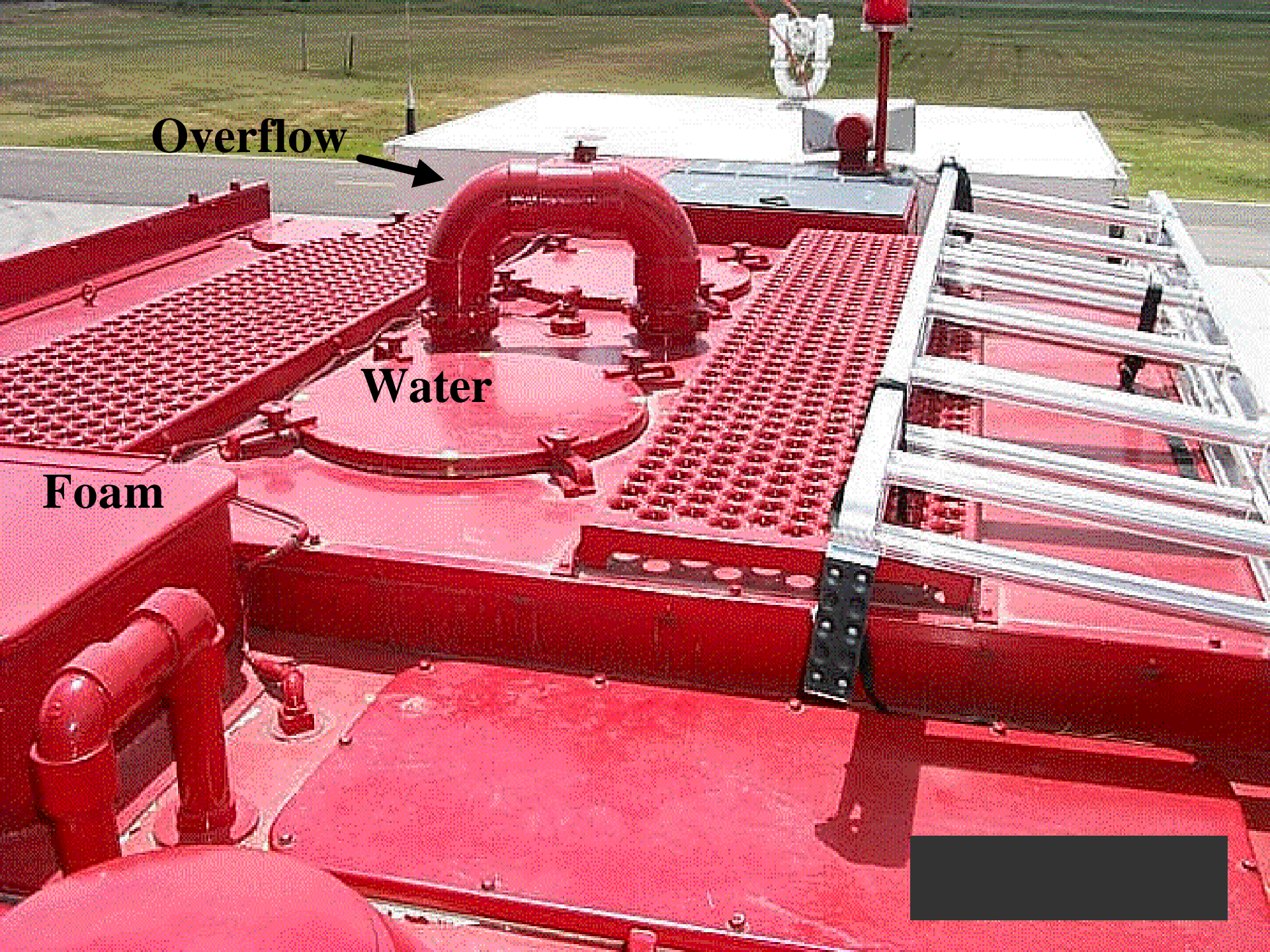
1. 16.1 cfm @ 1250 rpm
2. Air dryer Desiccant type w/heating elements
3. Storage Tanks
 - a. One quick build up
 - b. Two service tanks
4. 27.62 cu ft total storage
5. Low air warning: 65 psi

Minimum fire fighting pressure: 90 psi

Fire Fighting Systems



- » **Water**
- » **Foam**
- » **Water pump**
- » **Foam Proportioner**
- » **Roof Turret**
- » **Bumper Turret**
- » **Hand line**
- » **Re-servicing**

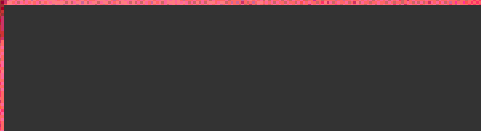


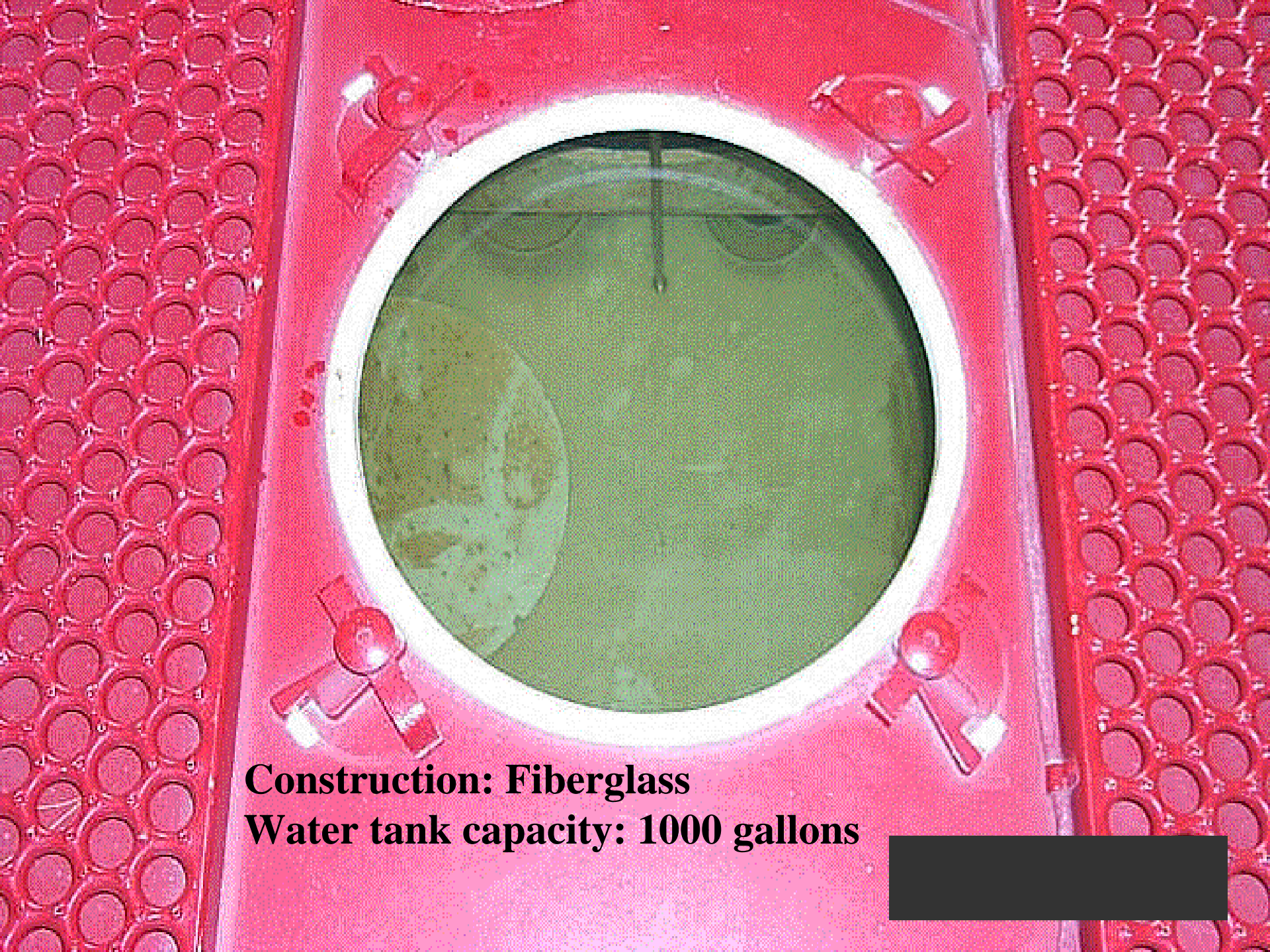
Overflow



Water

Foam





Construction: Fiberglass

Water tank capacity: 1000 gallons





Caution

Do NOT exceed 100 psi during filling operations from a hydrant

Blades for cutting AFFF cans



Foam tank construction: Fiber glass
Foam tank capacity: 130 gal



Caution

Do NOT exceed 75 psi
When operating the transfer
pump for the foam filling
operation.

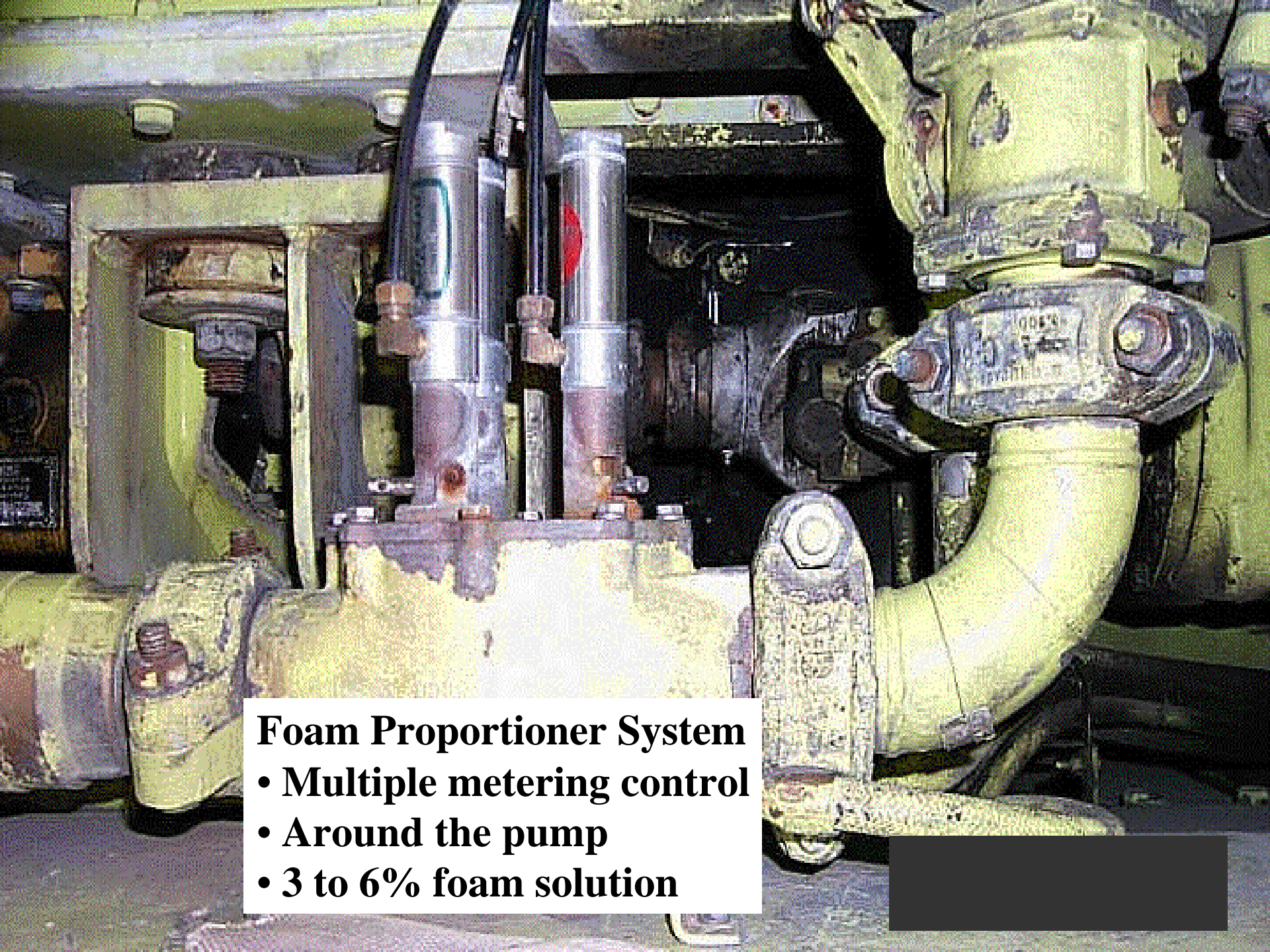


Overhead fills
are located in the
high bay over
all vehicles

Water pump

1. **Single stage centrifugal**
2. **950 gpm @ 200 psi @ 2100 rpm**





Foam Proportioner System

- Multiple metering control
- Around the pump
- 3 to 6% foam solution

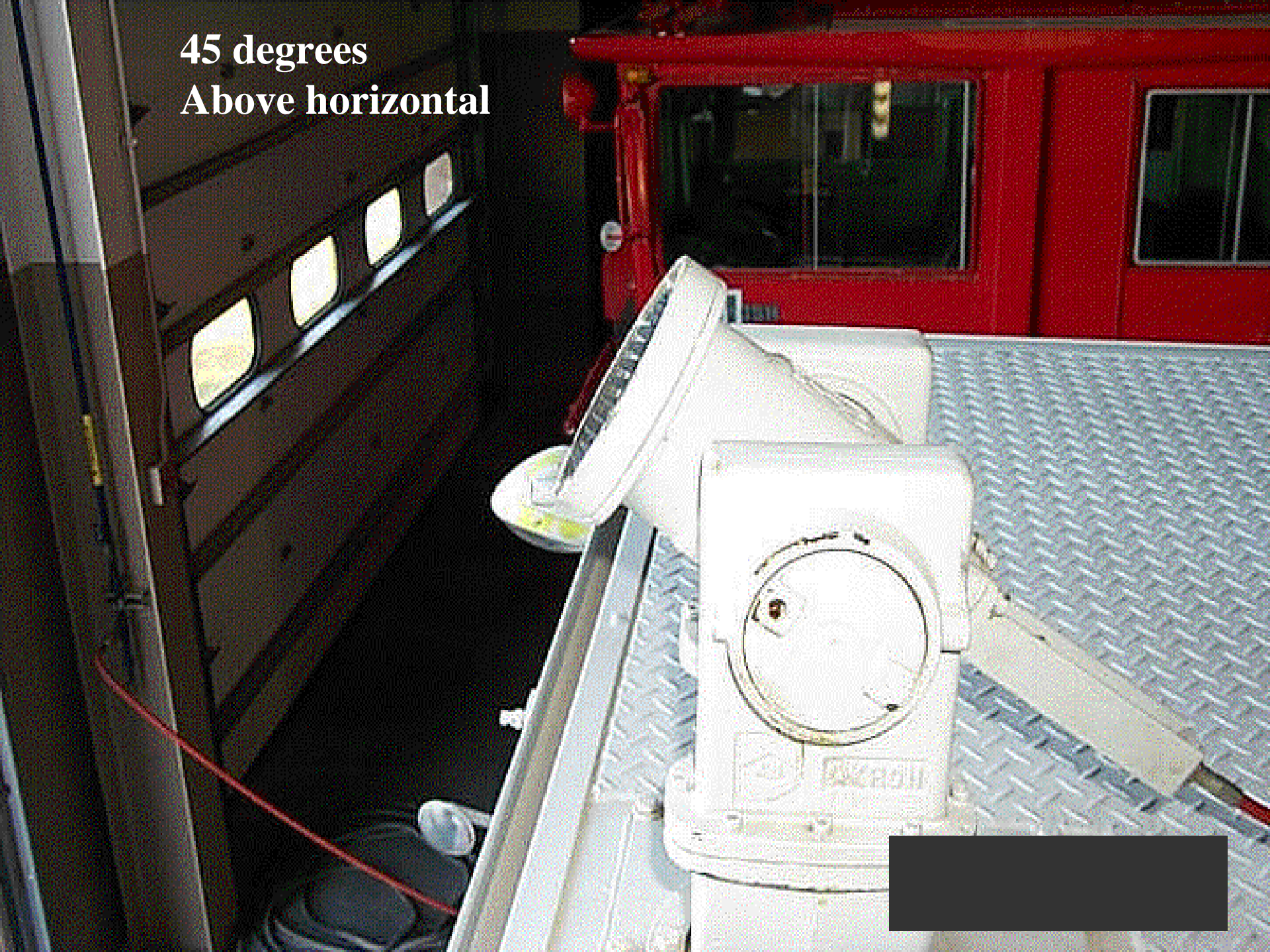
Roof Turret



**15 degrees
Below horizontal**



45 degrees
Above horizontal



**200 degrees Arch
(side to side)**





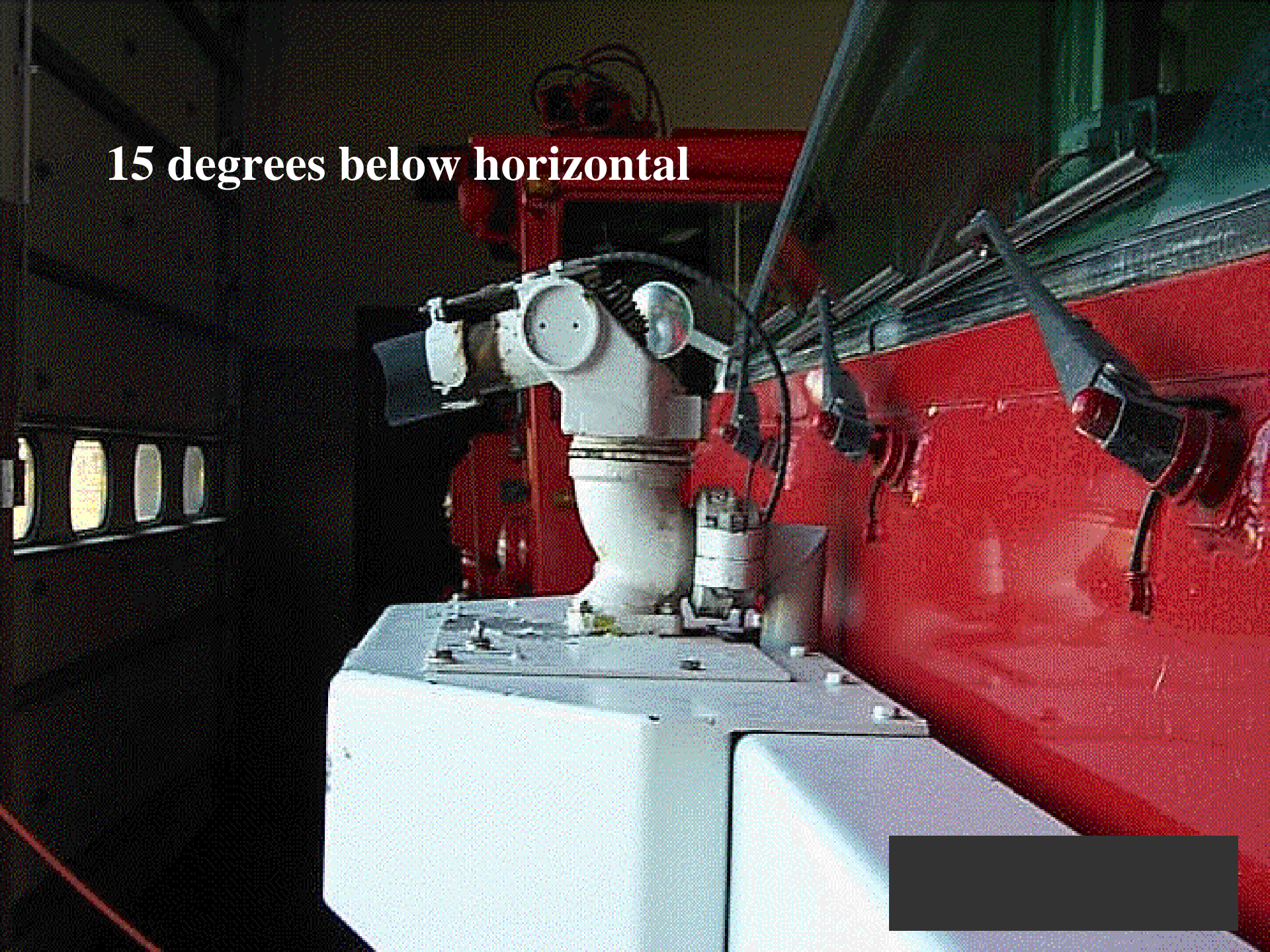


175 feet

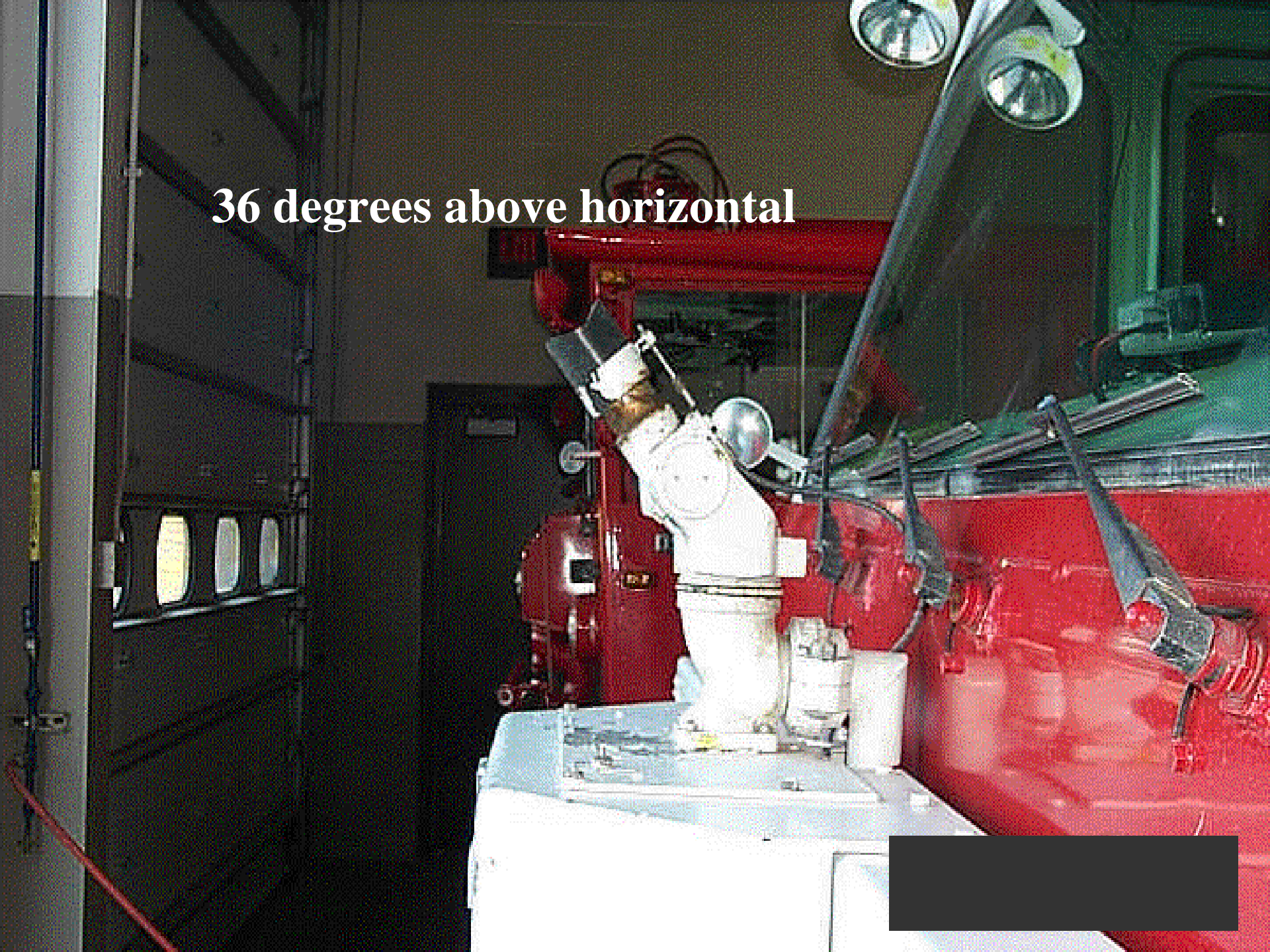
Bumper Turret



15 degrees below horizontal



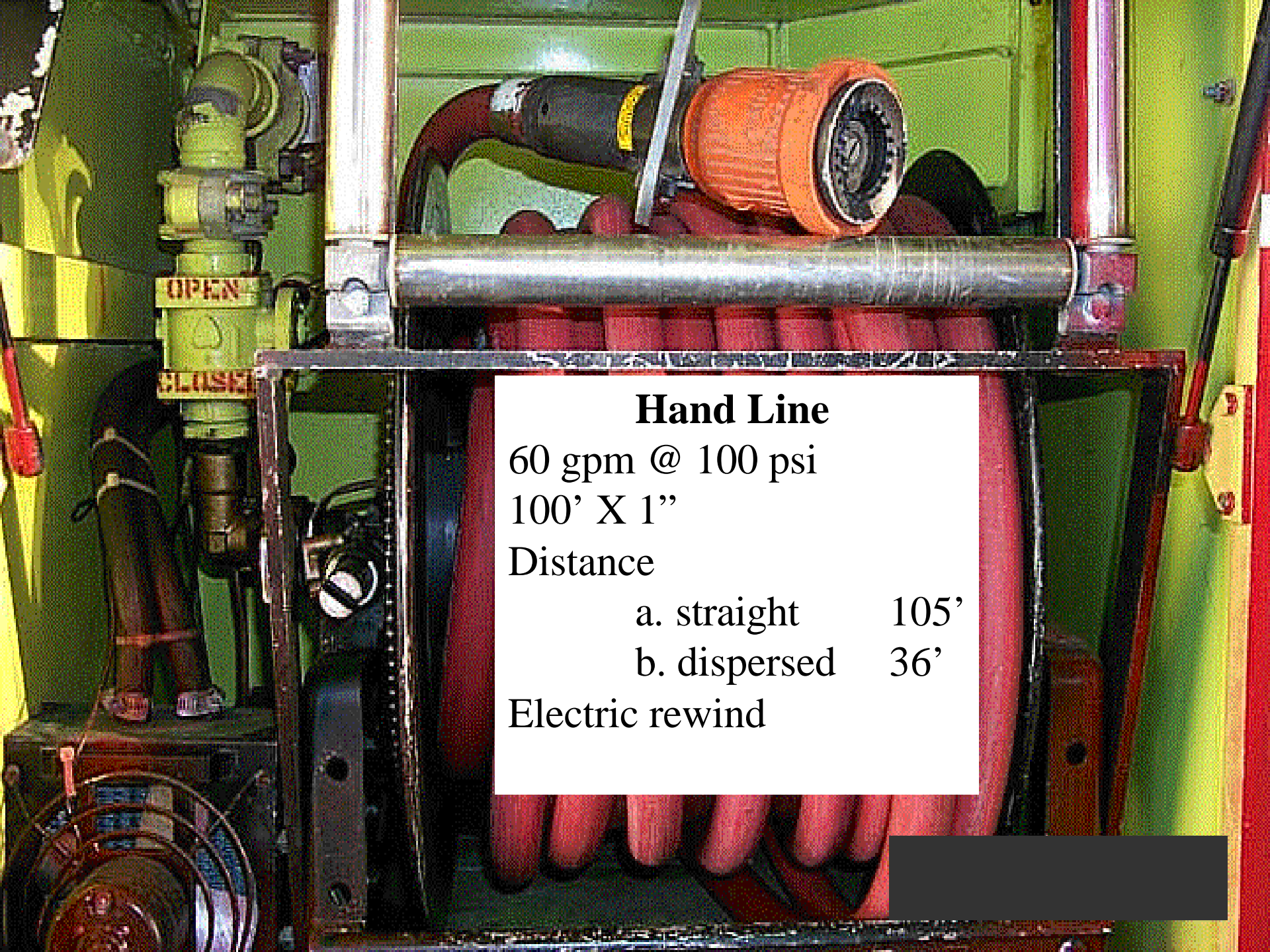
36 degrees above horizontal





150 feet





Hand Line

60 gpm @ 100 psi

100' X 1"

Distance

a. straight 105'

b. dispersed 36'

Electric rewind

Starting the P-19

- 1- Parking brake on
- 2- Transmission in neutral
- 3- Turn master switch on
- 4- Turn ignition switch on
- 5- Engine switch hold until engine starts
- 6- It is necessary when starting the P-19 to accelerate engine to 1200 rpm, to engage alternator, failure to do so will result in dead batteries
- 7- Run engine 2-5 to allow P-19 to warm up

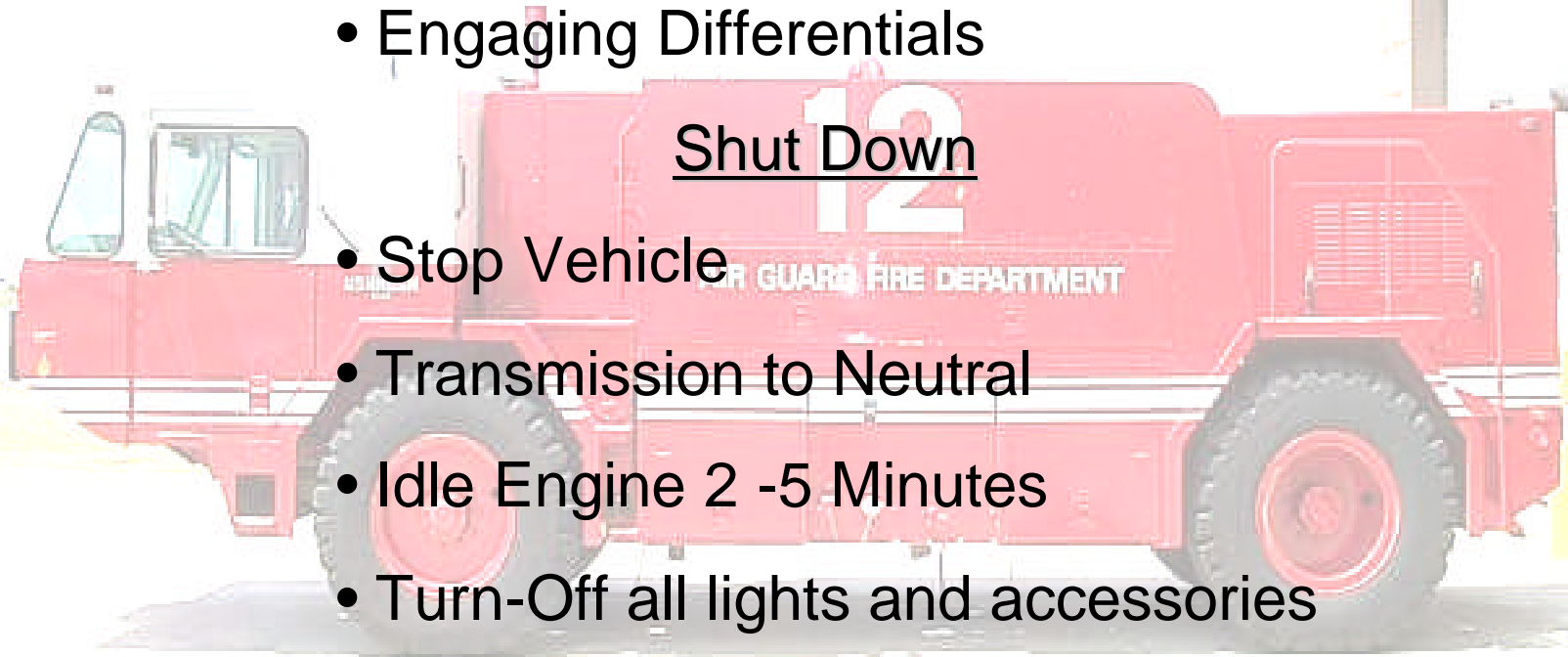


Driving the Truck

- Pulling Out of the Station 2-3 MPH
- Backing into the Station-- Have a Backer
- Aircraft Set-ups– AFTO 88
- Modulating
- Engaging Differentials

Shut Down

- Stop Vehicle
- Transmission to Neutral
- Idle Engine 2 -5 Minutes
- Turn-Off all lights and accessories
- Ignition Switch “OFF”
- Master Switch “OFF”



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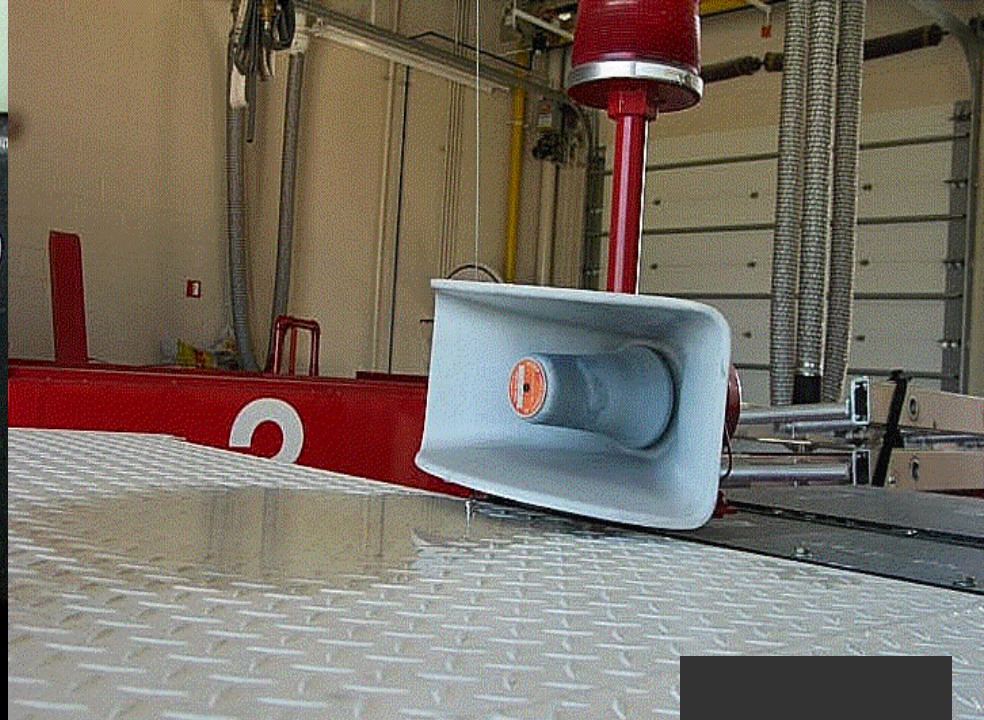
Operations of Accessories

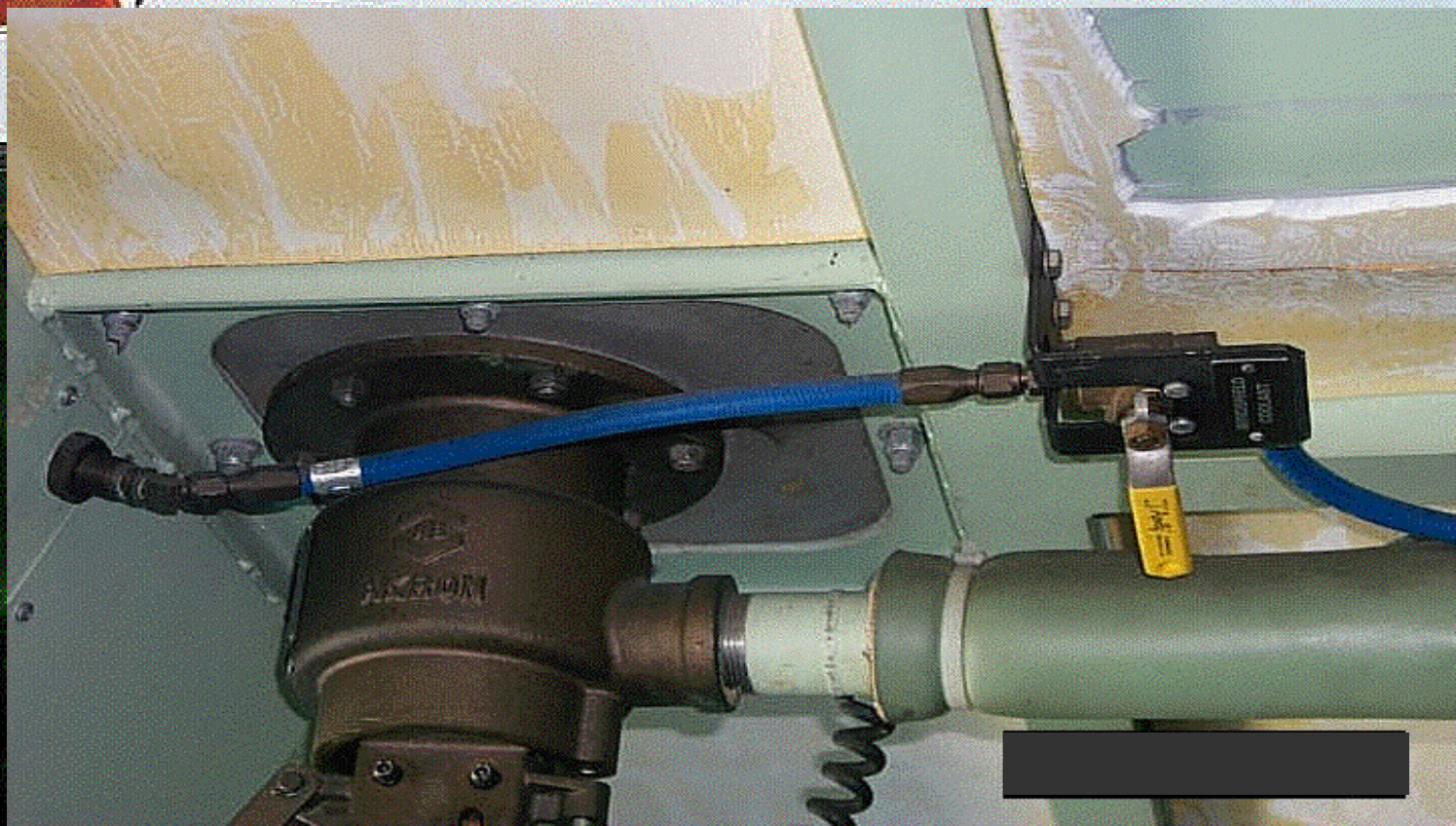
» AC/Defrost

» Siren/PA System

» Windshield coolant

» Winterization





Winterization

1. Check Coolant Tank Level
2. Booster Heater Switch “ON” – Verify with indicator light
3. After initial ignition, Thermostat controls operation
4. Check Circuit Breakers if Ignition does not occur
5. Turn Circulating Pump “ON”
6. Monitor Pump Pressure/Water Temp. Gauges –
 1. Both Should be “Green”
7. Shutdown
 1. Booster Heater “OFF”
 2. Circulating Pump “OFF”
8. System will continue to operate for 2 minutes.

The End

