

Anatomy Of A Fire Engine

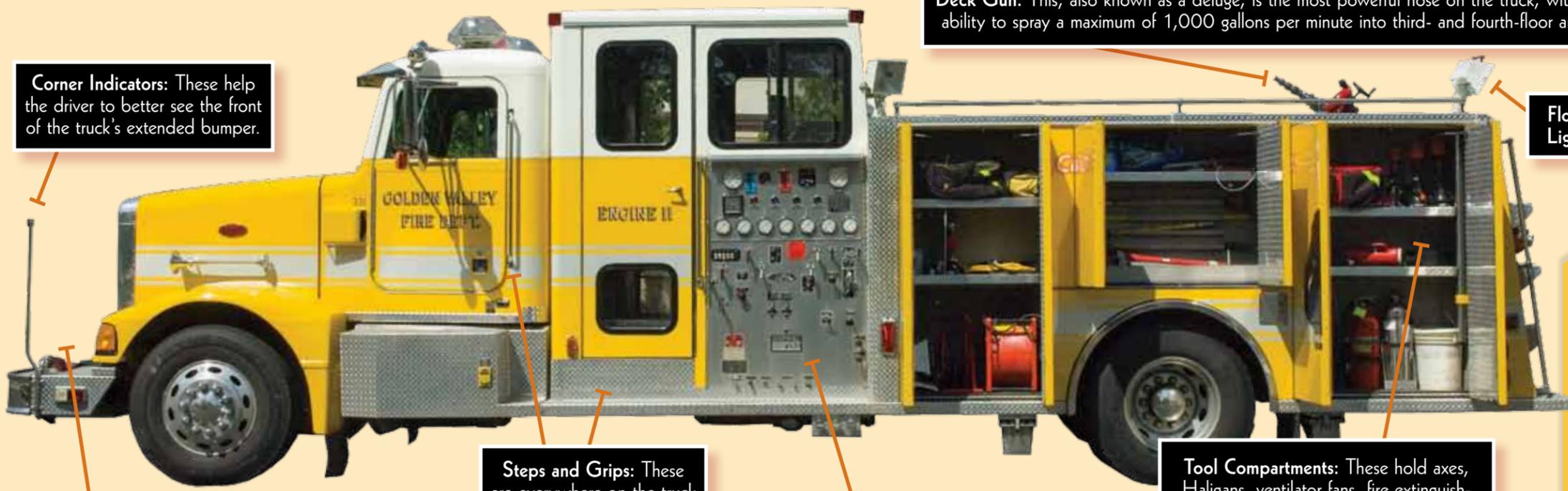
When called upon, firefighters must be ready for anything—house and building fires, grass fires, car fires, car accidents, gas leaks, chemical spills—and they must have the exact tools they need at any given time.

That's where the fire engine comes in. The fire engine, of which Golden Valley has four, is a self-contained apparatus, meaning it can function without any other resources. It has a generator that can power flood lights. It has a tank filled with 500 gallons of water. And it houses all the equipment and hoses firefighters need

to do their job effectively. The engine is a complex machine, and it takes several years of training to learn how to properly run it, says Stephen Baker, fire education specialist. The following is a brief look at Golden Valley's Engine 11, and what it provides the City's firefighters.

Aerial And Rescue

In addition to the engine, firefighters also use aerial and rescue trucks. The aerial truck is equipped with a 105-foot ladder topped with a 1,000-gallon-per-minute master stream hose. Aerial trucks are generally used for commercial fires. The rescue trucks come equipped with emergency medical devices that can be used if an ambulance is not yet on the scene.



Corner Indicators: These help the driver to better see the front of the truck's extended bumper.

Deck Gun: This, also known as a deluge, is the most powerful hose on the truck, with the ability to spray a maximum of 1,000 gallons per minute into third- and fourth-floor areas.

Flood Lights

Steps and Grips: These are everywhere on the truck to allow firefighters to move quickly about the vehicle without getting hurt.

Bumper Line: A small hose is stored in the bumper and used for car and garbage fires.

Tool Compartments: These hold axes, Haligans, ventilator fans, fire extinguishers, cutters, nozzles and a variety of other tools used in common firefighter situations.

Back

The back of the fire truck contains the bulk of the hoses, including the large-diameter hose that acts as an above-ground water main from a hydrant to the truck. There are also the skid load and blitz lines. The blitz line requires two to three operators and is used outside a building. The skid load is smaller and can be dragged inside with a firefighter. The back of the truck also holds three ladders of varied heights.



Inside The Truck

Inside the engine are radio systems, flashlights, thermal imaging cameras, and four air tanks with 40 minutes of air each. The air tanks are placed on the seats in order to be strapped on quickly by firefighters while seated.



Pump Panel

The most complicated part of the engine is the pump panel, which controls the flow and pressure of the half dozen hoses firefighters may use at any given time. For example, if firefighters are using the deck gun at 360 gallons a minute, they have less than two minutes to switch from a self-contained 500 gallon tank to a hydrant flow, and the pump panel operator must be ready to switch off one and turn on the other at just the right moment as to never lose a constant stream. Controlling the pump panel efficiently takes years of practice to master, Baker says.

