



Engines Part 3: Motorized Pumpers

By the 1900s, gasoline engine technology had been invented and its use was spreading rapidly. While firefighters initially saw gasoline motors as unreliable, the cities they were protecting had grown substantially and horses used to pull the heavy apparatus often tired within a half mile. In 1904, the first motorized pumper was delivered to the Finchley Brigade in England. The United States followed suit with its first self-propelled motorized pumper which was delivered to the fire company of Wayne, Pennsylvania. Soon all big cities were being challenged to convert to motorized vehicles since a motorized company was faster and could operate at a third of the cost of a horse drawn unit. Although many cities took several years to achieve total motorization, the year 1906 is the generally accepted year of motorization for the fire department. Pumpers originally had two separate motors; one to propel the apparatus, and a separate motor to operate the pump, but by 1907 a pumper utilizing a single motor for both the engine and the water pump had been created. As motorized engines became more reliable, the fire department was able to incorporate multiple functions into a single vehicle, leading to the development of triple combination rigs that served as hose wagon, chemical engine, and pumper altogether.

At the turn of the century, Denver, like other cities, was challenged to convert to motorized vehicles without bankrupting the city. Denver chose to switch over gradually and took nearly twenty years to achieve total motorization, a longer period than most cities. While the first motorized unit was delivered in 1909, the first motorized pumper was not in service until June of 1915. By 1923, the stations were remodeled to house the new motorized engines, and by the following year, the last horse drawn unit was decommissioned and the fire department was fully motorized. The engine shown here is a 1953 Seagraves engine with a 1250 GPM centrifugal pump. The engine can hold 300 gallons of water and has a dual ignition system and dual carburetors. It was manned by a crew of five: a driver and officer in the cab and three men to ride on the back step. While the engine has a federal electric siren and Mars "888" lights, it also includes an alarm bell to aid in the warning. It is capable of carrying 1200 feet of 2 ½ inch hose

and two 350 foot sections of 1 ½ inch hose, as well as various tools. The engine served from 1953 to 1970 at which point it was assigned as a reserve engine until 1985.

The engines of today are even more advanced than the 1953 Seagraves. Further improvements in engines such as: windshields, an enclosed cab, automatic transmission, and a diesel engine followed, creating the large and powerful motorized pumpers of today. These pumpers have a tank of at least 500 gallons of water, and once connected to a hydrant, can spray water at 750 gallons per minute.

The featured podcast is an interview with retired Denver firefighter Dan Farley, in which he describes his personal experiences with the 1953 Seagraves engine.