

"ALL" WP 705 needs is a governor and a governor wiring harness...

- Paul Finnegan

Number 705 was completed by EMD on October 10, 1952 and delivered to WP on October 29. Carrying serial number 17029 and frame number 5197-5. The 705 stayed on the roster until after the merger with UP. It was sold by UP to Mountain Diesel Transportation on July 15, 1987. Mountain Diesel in turn sold it to the Great Western in August 1987. It was repainted and lettered Arizona Central 705 in May 1989. It was later acquired by OmniTrax. In 2003 it was declared excess and scheduled to be scrapped if a purchaser could not be found. Several FRRS members stepped up and pooled their money to purchase the 705 and donated it to the Feather River Rail Society.

When it was purchased for preservation, we were told, "All she needs is a governor and a governor wiring harness."

Working together, Lew Barnard and Kenneth Finnegan, found a wiring diagram for EMD GP-7s in our Mechanical Department records, built and installed the wiring harness in July 2006. The donors recently decided she will be painted in a Perlman Green scheme after mechanical restoration. In reality it turned out, she will need much more than just a replacement governor, but we still hope she will eventually return to service for RAL and caboose train operations.



Above - Lew Barnard is seen wiring the new harness for WP 705.

Left - Kenneth Finnegan is installing it.

- photos by Paul Finnegan

What the heck is a governor?

from WP OPERATING MANUAL GP9 LOCOMOTIVES

As an example, the governor on an EMD GP-7 (e.g. WP 707), is on the front end of the engine, it performs the function of controlling the speed of the diesel engine, as directed by the position of the throttle at the control stand. The speed of the engine is controlled from 275 RPM at idle to 835 RPM in run 8. The "orders" of the throttle are transmitted to the electro-hydraulic governor through electrical circuits. The governor is connected through a linkage to the injector control shafts on each bank of the engine. By regulating the position of the injector racks, and consequently the fuel injected to each cylinder, the speed of the engine is controlled. The governor performs its job of seeing that the engine rotates at the speed ordered by the throttle, regardless of how much or how little fuel is needed.

A device called the load regulator, acts to cause the governor to allow injection of no more or no less fuel to each cylinder than that which will result in a predetermined power output for each throttle position.

A low oil pressure device built into the governor protects the engine in case of low oil pressure or high vacuum on the suction side of the pressure lubricating oil pump. In this event, the governor will immediately stop the engine and light the yellow low oil alarm signal in the unit affected. The alarm bell will ring. If an engine is stopped by the governor low oil device, the push button must be reset before the engine can again be started.

When the engine is started and run at idling speed, the governor will again stop the engine after approximately forty seconds, if the condition re- mains which caused the original shutdown. The engine should not be repeatedly started if the governor persists in shutting the engine down. If an attempt is made to run the engine above idling speed during the delay period, the governor will immediately stop the engine if the oil pressure and suction are not normal.