

Proposal for
Repainting, Installation of New Main Hoist Cable
And Necessary Maintenance
On WPMW 37 (200 ton Crane)

History:

WPMW is a 200-ton capacity railroad wrecking crane built in 1937 by the Industrial Brownhoist Company for the Western Pacific Railroad. As built, this machine was powered by a steam engine using steam generated by a vertical fire tube boiler mounted in the rear of the house or rotating portion of the machine. The steam engine was mounted on the left side of the house towards the rear. The steam engine drove the various winches, swing machinery and the inner axles of the six wheel Buckeye trucks and was connected to the driven devices by a system of gears and air-controlled friction and dog clutches. In addition, air powered brakes were provided for the hoist winches, swing and travel mechanisms. In addition to the air-operated brakes, a wheel operated mechanical brake is provided for the 200-ton capacity main hoist and a foot operated mechanical brake is provided for the 60-ton capacity auxiliary or headline hoist.

On or around 1971, the steam boiler and engine were removed and replaced by a Caterpillar diesel engine of approximately 500 horsepower that drives the original machinery through a fluid coupling. (Torque Converter) and a silent chain drive mechanism. The diesel engine and associated machinery are mounted in the rear of the rotating house in the area formerly occupied by the steam boiler and engine. A 200 (approximately) gallon tank is mounted in the rearmost portion of the house that holds a supply of diesel fuel for the Caterpillar engine. The machinery beyond the silent chain drive and the air control system appears to be as originally constructed in 1937.

WPMW 37 spent most of its career with the Western Pacific Railroad stationed in Oroville, CA as the "Oroville Hook" and was used to clear wrecks that occurred in the Feather River Canyon and vicinity. This machine is capable of pulling anything from "Big Mallets" on down in size out of the river and back to the right of way. A few years after the Western Pacific Railroad was merged with the Union Pacific Railroad, the UP donated WPMW 37 and its associated boom and tool car to the Feather River Rail Society for display at the Portola Railroad Museum.

Current Situation:

WPMW 37 is in operating condition, but now needs some restoration work done. It is imperative that before any further operation of the machine takes place that a comprehensive servicing be performed on the machine. This includes but is not limited to:

1. A complete lubrication and inspection of all gears and bearings with the proper grades of grease and oil.

2. Inspection and lubrication of auxiliary hoist and main boom suspension cables.
- 3 Adjustment, inspection and thorough testing of all brakes and clutches.
4. A complete inspection of the entire machine, including the boom, boom pivots, all sheaves, turntable, air lines and controls with repairs as required.

The above work will enable safe operation of the machine using the headline only without risk of damage to the machinery by doing so.

Cost: \$30-\$50 for grease and spray cable lube.

Labor: All items: 8-16 man-hours.

In addition, so that the machine will be safe, fully functional and perform as designed, the following work should be done:

1. Replacement of main hoist cable.
2. Lubrication and freeing up of the travel gear shifting mechanism.
3. Repair and re-installation of missing and damaged brake rigging on trucks.

Cost: \$2987.50 (\$11.95 ft. as of 2/8/05) for 250 ft. of 1 1/4" Cable for Main Hoist.

Labor: Item #1: 16 man-hours.

Items #2-3: 20-40 man-hours.

In order for the WPMW 37 to be represented in its appearance as closely as possible to when the machine was in service on the Western Pacific Railroad, it should be painted in its original color, BLACK. In addition, every effort should be made to duplicate as nearly as possible the original large WP logos on both sides, the original "Industrial Brownhoist" plates on the boom and other markings and lettering that were present when it was in WP service. Proper Placement of the large WP logo on the left side of the house will be problematical due to the diesel engine radiator opening impinging on the area where the original logo was placed. This can be discussed and worked out.

The work of prepping and painting the machine will include a complete cleaning inside and out with a steam cleaner. Most of the exterior prep can be done with a DA sander along with heat and scraping to remove the UP logos from the sides of the house. In addition, rust spots are to be treated with a product which I am very familiar with, that turns rust into a black primer-like material along with a rotary wire brush.

Cost: Approx \$700 for four gallons of Centauri paint and hardener.

Labor: 40-50 man-hours.

The work outlined above will put WPMW 37 in condition to give, with proper maintenance and operation, many more years of reliable service at the museum and will in addition, enhance it's appearance, making it a more representative piece of Western Pacific equipment.

Submitted by:

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