SW1500 Low Voltage Rewire on Site in Arkansas

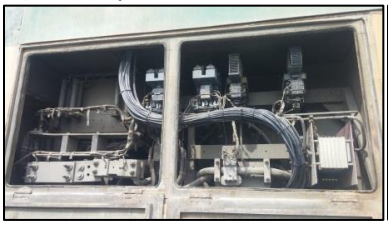
(Originally built as Richmond Fredericksburg and Potomac Railway Engine #1) (170)

This locomotive was rewired due to numerous low voltage grounds, deteriorated insulation, and failure to start. Root cause of failure was the deterioration of the main loom (#2 run) from the main terminal boards (50s) to the front terminal boards (80s). The loom had been buried under dust and dirt. This trapped the moisture next to the wires, providing a path to ground as well as from circuit to circuit.

(012)

HIGH VOLTAGE CABINET

The high voltage cabinet was stripped of components, cabinet cleaned and painted. Components were cleaned, qualified, labeled and reapplied. New hardware was used on high voltage connections.
Head light resistors were moved from under the walkway step to the resistor panel to improve ease of maintenance. Remote control air lines and electrical harness were not disturbed. Battery charge rectifier (CRBC) was repaired and rotated 180 degrees to allow it to be installed per manufacturer's instruction.



Before (160)

During (019)

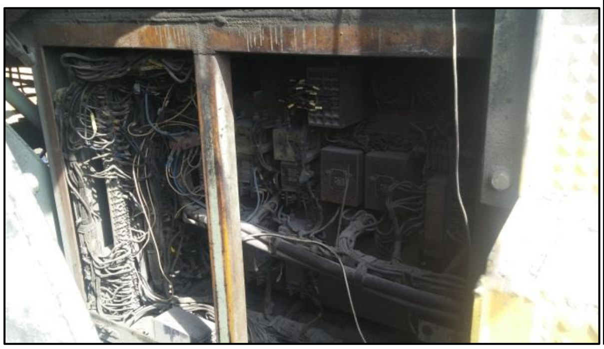
During (225)

After (281)

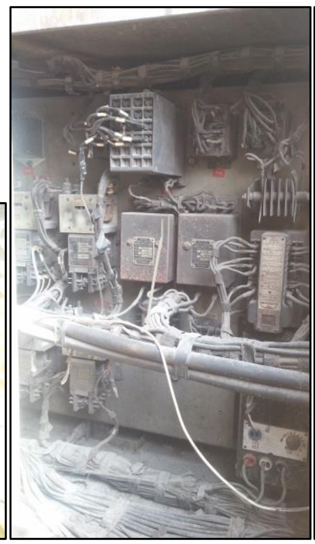
After (282)

RELAY CABINET

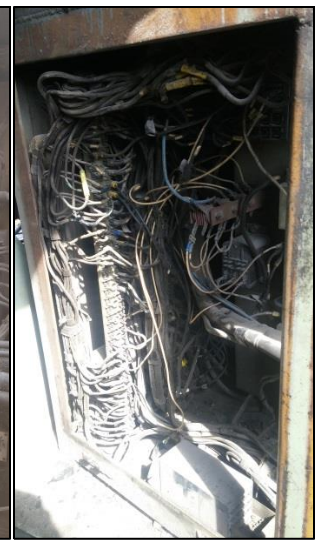
The relay cabinet was stripped of components, cabinet cleaned and painted. Components were cleaned, qualified, labeled and reapplied. New hardware was used on high voltage connections and bolt on terminal boards. Terminal boards 35 and 38 were moved to improve ease of maintenance. Bad order and near fail components were replaced.



Before (174)



Before (175)



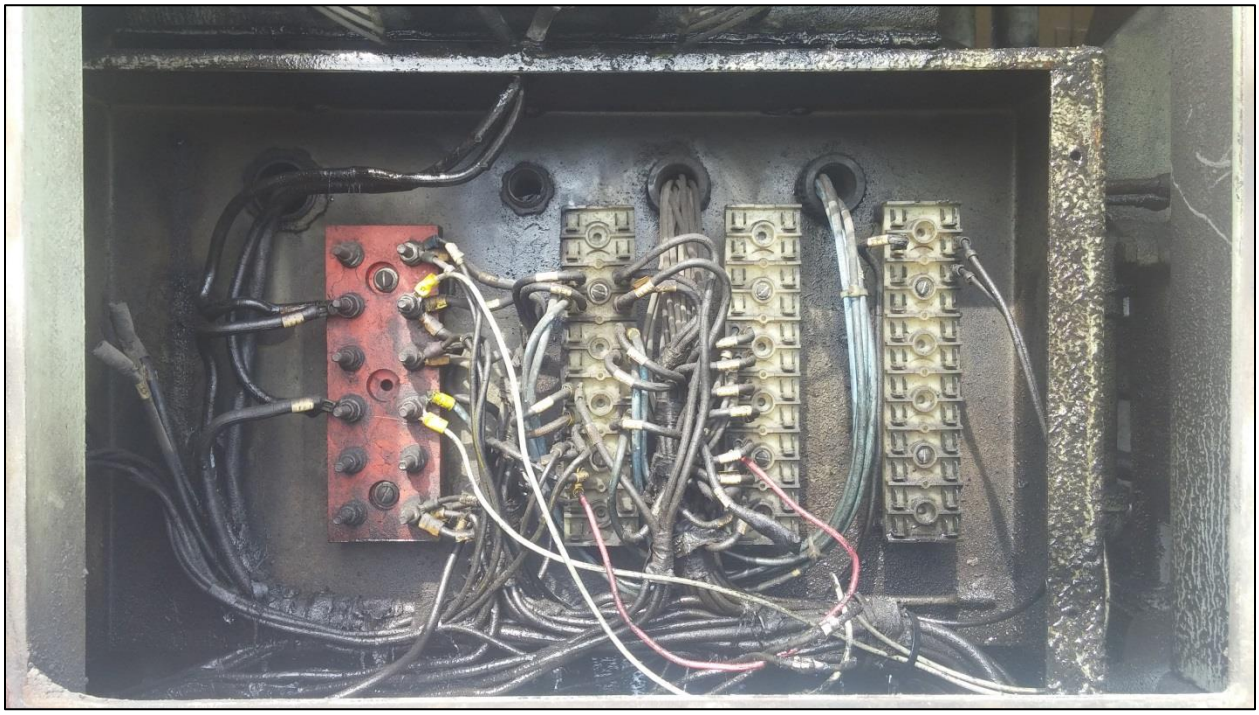
Before (176)

After (325)

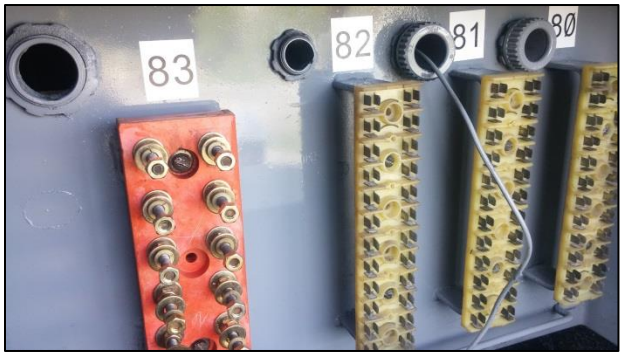
After (326)

TERMINAL BOARD CABINET 80-83

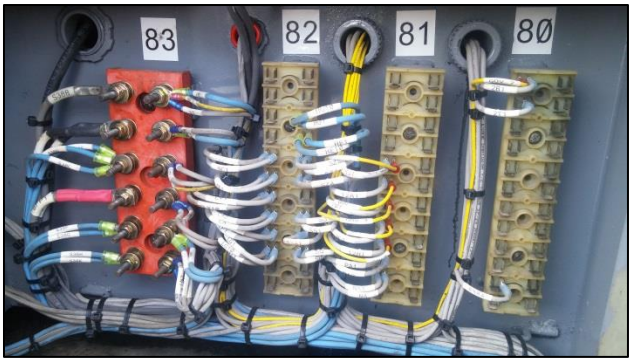
The terminal board cabinet for terminal boards 80 through 83 was stripped of components, cabinet cleaned and painted. Terminal boards were cleaned, qualified, labeled and reapplied. New hardware was used on bolt on terminal board 83. Spare wires were added and terminated to terminal boards.



Before (165)



During (227)



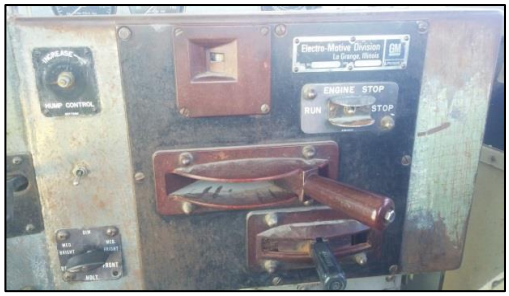
After (267)

CONTROL STAND

The control stand was stripped of components and cleaned. All light fixtures and switches were replaced with new components. This included all roller switches in the controller. Obsolete switches were removed and other switches were relocated to control stand for ease of access to the engineer.

Before (007)

Before (002)



Before (195)

After (306)

After (316)

BATTERY SWITCH CABINET

The battery switch compartment was cleaned. All fuses qualified and inspected. Circuit breaker panel was removed, cleaned, painted and labeled. Circuit breakers were replaced with new components. Cab heat circuit breakers had been located in inaccessible locations. All circuit breakers are now located in the circuit breaker panel.

Before (198)

During (288)

Before (201)

After (319)

After (318)