

Case Study: Class 1 Railroad Accelerates Release of Stored Locomotives with Assist from LOCO-72

Background Overview

Freight railroads are huge contributors to North American commerce, transporting our fuel, building materials, chemicals, grain, equipment, automobiles, food and most of the consumer merchandise sold by on-line and classic retailers. All Class I railroads forecast the locomotive power they will need to transport these goods based on trends and network traffic capacities. When market demand drops, it is normal for railroads to put excess locomotives in storage. These locomotives are returned to service as the railroad's freight volumes and transportation network demand for horsepower rises.

Class I railroads also maintain extra locomotives in strategic locations to enable them to respond to unforeseen spikes, such as the 2020/21 higher-than-network forecasted demand for horsepower. Occasionally, locomotives must be pulled from storage to alleviate bottlenecks caused by derailments, natural disasters and other factors that are temporarily preventing the normal traffic flow.

Returning Locomotives to Service is an Arduous Process

Returning stored locomotives back to service is not a simple process. Large crews of skilled craftspeople must prep and inspect all of the on-board systems and equipment, make any necessary repairs and restore fluids and fuel. It's a costly, labor-intensive process that is crucial for a railroad to fulfill expectations within network planning teams.

Day One: Results Don't Match Efforts

One bitterly cold February 2021 day in the mid-west, a team of four (4) different crafts consisting of twelve (12) employees at a Class 1 yard were working a string of locomotives that had been in storage for periods ranging from months to multiple years. The team's goal by the end of their 8-hour shift was to have a release plan for at least five of these locomotives.



Example of Low Demand Period – Number of Stored Locomotives per Class 1s

Based on June 2009 media report*

<i>Class I Railroad</i>	Stored Locomotives as of May 20, 2009*	Percent of Total Fleet*
<i>Union Pacific Railroad</i>	2,100	25%
<i>BNSF Railway Co</i>	900	Not Reported
<i>CSX Transportation</i>	600	15.8%
<i>Norfolk Southern Railway</i>	400	11%
<i>Canadian Pacific</i>	350	23%
<i>Kansas City Southern</i>	360	Not Reported
<i>Canadian National</i>	281	Not Reported

*Progressive Railroading, June 2009 Rail News

Throughout their shift, the team struggled to identify defective parts, find leaks, and deal with frozen and discharged starting batteries. Only when new batteries were utilized to start some locomotives, were the craftsmen able to identify the need for additional parts or recognize problems requiring heavy repair in the shop. At a disappointing end to their arduous shift, the team was not able to release any locomotives and could not confidently estimate the number of locomotives that would be ready for release after a second shift finished.

Day Two: Results with LOCO-72

On day two in sub-zero temperature, the Richardson LOCO-72 Jumpstarter was connected to each of the locomotives in turn, enabling the team to pre-start, crank and run each engine. This made it possible to quickly triage each locomotive. The units judged to be in fair condition were quickly separated into three groups:

- A Group – Necessary repairs can be done in place.**
- B Group – Move locomotive to shop for heavier repairs.**
- C Group – Locomotive will run and meets inspection criteria.**



**The LOCO-72 JUMPSTARTER
can be transported on any compatible
mechanical response vehicle for
IN-SHOP and TRACKSIDE use.**

The ability to efficiently diagnose the condition of equipment on each locomotive, initiate procurement of necessary parts, and precisely plan their repair schedule enabled this railroad to better manage their employees' workload, and to establish a realistic return-to-service date for each locomotive.

Overall Synopsis

The labor cost was estimated by the Class I to be \$12,000 in labor per day. On both days, an equal number of Craft Employees, Supervisor and Foreman were utilized. However, their efficiency and productivity were dramatically increased on Day Two by using the Loco-72 Jumpstarter, and the railroad's turnaround time for moving stored locomotives to active duty was accelerated and more precise. The railroad's network operations team was thankful for the quick recovery and the ability to meet demand faster.

The LOCO-72 Jumpstarter performed perfectly in the sub-zero temperatures, providing ample machine uptime for repetitive starts before needing a recharge. The LOCO-72 proved easy to maneuver along the trackside into position for each locomotive by using a mechanical response vehicle.

Loco-72 Benefits to a Railroad's Locomotive RTS Efforts

- **Dependable starting power when and where it is needed**
- **Streamline triage and diagnostics of each locomotive**
- **Quickly plan repair logistics and parts management**
- **Project realistic Return-to-Service dates to meet railroad's volume demands**



**The Richardson LOCO-72 is distributed by RBS – Railroad Battery Services.
To learn more about the Richardson LOCO-72, or to arrange a demonstration,
contact the TPSC sales team: 866-211-1754**

