

CSX Transportation* awarded Bronze (3rd) in recent ASQ International Team Competition for “Locomotive Shutdown – A Fuel Conservation Project”

CSX Locomotive Fuel Process Improvement Team



Top - headquarters members: L to R Dean Menefee, Andy John, Wayne Seguin

Bottom - sample of field members: (seated L to R) Derik Skeens, Sam Shadd, John Baker, Jim Ward, Phil Bartley, Tim Goddard, Randy Gilliam, Dave Nicolls, (standing L to R) Dan Jarrell, Bob Henderson, Roger Ford, Greg Turner

(1st time participant)

Type of business: TRANSPORTATION

Team type: PROCESS IMPROVEMENT/SIX SIGMA

A CSX Process Improvement Team sponsored by the vice president of Transportation was created to address a \$30 million per year fuel waste problem. Locomotives idling, running but not in productive use, were found to be burning four gallons of fuel per hour. With a fleet size of some 3,800 locomotives the team had a challenge.

The team was formed to include all effected stakeholders. All team members received at least one day of Six Sigma overview training with additional training regarding specific tool use including, FMEA, C&E matrix, SIPOC and process mapping. In addition 20% of the team is six sigma black belt or master black belt certified.

Following the DMAIC roadmap, the team employed a wide variety of qualitative, quantitative, and project management tools. The insights of subject matter experts were developed through FMEA and C&E matrix exercises. Hard data tests including, ANOVAs and Mood Median's of locomotive GPS location and shutdown status, along with regression models of temperature decay after shutdown supported SME insights. The CSX accountability model was also an integral part of the process, with defined timelines of who was responsible for what by when.

The team included benchmarking of other railroad in identifying the few critical X's. The operating rule for locomotive shut down was changed to allow shutdowns at lower temperatures. With this solution, the team had to develop communication and control plans to impact almost 8,000 employees directly involved in locomotive shut down.

The locomotive shutdown team increased shutdown time of idling locomotives, reducing fuel consumption across CSX. The team generated savings of more than 14 million gallons of fuel

worth \$28.8 million over the three year span of the project, in addition; the reduction of idling locomotives improved citizen and government relations at a number our locations.

*** About CSX Corporation**

CSX Corporation, based in Jacksonville, Fla., owns companies providing rail, intermodal and rail-to-truck transload services that are among the nation's leading transportation companies, connecting more than 70 river, ocean and lake ports, as well as more than 200 short line railroads.

Its principal operating company, CSX Transportation Inc., operates the largest railroad in the eastern United States with a 22,000-mile rail network linking commercial markets in 23 states, the District of Columbia, and two Canadian provinces. CSXT headquarters are in Jacksonville, Fla.