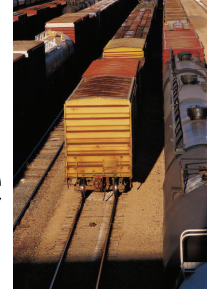




## BIGGS APPRAISAL

PROVIDING VALUATION AND TRANSPORTATION SERVICES TO THE RAIL INDUSTRY



# Subjects of Value

*The Inspection and Appraisal of Rail Equipment*

Volume 6, Issue 1

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## WINDOWS OF OPPORTUNITY

In the days when Gandies really danced maintenance of way was a strong arm job. Every piece of equipment that was used in a tie replacement job could be lifted off the rails to allow trains to get by.

The numbers of ties installed per man day could easily be counted in multiples of fingers on your hands.

Today's Gandies sit in air conditioned cabs running high tech automated equipment that makes large tie jobs possible in short order. None of this equipment is lifted off the track as the machines weigh as much as 40,000 pounds.

Today's Rail Operations has to give the maintenance of way forces a significant window of opportunity to allow this mechanized production force to

get to the job site, do its work and get to a clearance point so that trains can run again. This can be on a short line segment or a major portion of a railroad's mainline. A line segment Blitz many have a hundred or more maintenance specialists in track, grade crossings, switches, signals and bridge repair, focused on all of the large repairs required on a rail line segment in a night and day maximum effort.

Some things never change and this is still brutal hard, dusty, and noisy work. Much of the equipment is unsprung and vibration is transmitted to both the machine's parts and operators. Normal wear and tear factors are high because a big part of the process involves the rough surfaces of ballast that is beat into place with the regulators and tampers, or hammered metal on metal with the spikers. Even the names of the equipment are different; Tripp's, Ballast Regulators Kribber and Adzer's, Spreaders, Spikers, Anchors Adjusters, Plate Placers, Railvacs, and Tie Cranes. This equipment is often supplemented with Yellow Iron such as

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## RAILROAD FINANCIAL CONFERENCE

The Railroad Financial Conference is geared to two of the largest capital investment areas in the railroad industry: freight cars and locomotives. The presentations by experts cover the hottest topics with insight that is not normally easy to find. During this past recession attendance at this world class meeting exceeded 200 industry professionals. As an appraiser, I am always looking at value. Networking, business leads, friendship, and a

wealth of valuable and timely information make the RFC a valuable investment for me. If that was not enough, I also get to spend quality time with a number of clients as well. I hope you will mark March 6- 9, 2011 on your calendar for the Railroad Financial Conference at the La Quinta Resort in Sunny California. I hope to see you there so I can introduce you to Stuart Biggs, who is taking an increasingly active role in Biggs Appraisal.



# Ever Need A Jump Start?

You can be pretty sure if you have a machine that has starting batteries that you will at some time need some alternative to get it started. Different equipment can be started with alternate means. The pull cord on the lawn mower, the hand crank on an antique car, push start on a standard transmission car, even the rope around the propeller on your airplane might do the trick. Getting a jump start from another vehicle is the most viable option with automobiles. When it comes to a locomotive your starting options are some what limited.

On most diesel electric locomotives you are using the main generator/ alternator as the starting motor. Generally you have a set of massive lead acid batteries at the sides of the short hood connected in series to give 64 volts to the generator for enough umpf to turn over the 12 to 20 cylinder diesels that power locomotives. Whether you hear that Click- Click sound or no sound at all, you have low or dead batteries.

There are any number of reasons for a low charge or dead battery. It could be that your voltage regulator is not

putting out enough juice to properly run all the electrics and charge the batteries. Someone left too many switches on and drained the battery, a bad cell or dead cell will bring down all of the others. Overcharging or not servicing the battery will allow the battery to dry out and hamper electric flow. Dirty battery terminals are often a culprit. Prolonged storage will naturally drain many batteries.

Yes, you can solve any of those causes of a dead battery, recharge the individual batteries and start the locomotive.

In the real world when its cold and you have just filled the locomotive with water and you have dead batteries, you need a jump start before things start to freeze. In the old days you might drag out that long and very heavy set of jumper cables and hook them up to either to a fork lift load of batteries or a locomotive on an adjacent track and hope for the best. You attach positive to positive and negative to negative and pray that the engine turns over.

Cold weather, cold engine, and oil thicker than molasses, you might get it to turn over but not fast enough to start. Make sure that those cables are heavy duty or that glow in the cab will not be your flashlight. Is there a better way to do this?

On a recent return inspection on a group of locomotives, I had occasion to see a better way in action. Outside of the locomotive shop, there were two parallel tracks with a jump start station. This is an all electrical operation with a swivel tower that allows the jumping cables to be swung to either track. The cables at the end of the tower have enough length to reach in through the cab window to the knife switch. A relay box allows the operator to both turn the device on and off from the cab window. Plenty of juice flows to the starting circuit to turn over the largest and most recalcitrant diesel right now in any weather. This is a modern safe and sensible alternative to a back braking method that might injure a worker or not get the unit started.



# WINDOWS OF OPPORTUNITY

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Gridders, Bucket loaders and

Excavators with many attachments. Who said machinery and equipment appraising lacked variety.

Rough service, high vibration and high wear and tear translate to high maintenance requirements. Railroads with large mileage can not afford to have breakdown that slow the production. There is little tolerance for major equipment failure. High performance with few breakdowns during the windows of opportunity calls for either new or equipment maintained to a near new condition. This requirement demands a higher than normal amount of preventative maintenance as well.

None of this equipment is what anyone would call cheap. There has been an increasing demand for MOW Equipment with all the higher levels of track maintenance and Cap X

programs to add track and remove bottlenecks in the rail systems. There is both new and used equipment in the market and demand for equipment can be high in a seasonally brisk marketplace.

If you are financing this equipment, it is important to have eyes on the equipment. New equipment can get old very quickly in this environment without an off season repair program with skilled repairmen. Does MOW equipment hold its value? Yes but! Condition, Condition, Condition, is key to MOW equipment value. Older equipment, properly maintained and upgraded can have a substantial value with a reasonable remaining useful life and demand in the market as well.



## PUCKER YOUR SCHNABEL

My Dad had a canny knack for manipulating the English language to suit a particular expression. While dad's description using the word Schnabel was related to the German definition of beak, it aptly described the facial expression of one who was eating a sour pickle for the first time.

The Schnabel railcar on the other hand is in the category of Special type Railcars. It is a car of massive construction having two separable interlocking beak like units which form a car body. Units may be separated and a load interposed between and locked in place to form a complete transportation unit.

The CCRX 40010 has an Association of American Railroads (AAR) car type L090. It has 20 axles in combinations of four and six axle trucks with span

bolsters to distribute its cargo load limit of 1,000,000 pounds. In its empty movement configuration it is 109' long and its maximum loaded length is 161'.

CCRX 40010 was built in May of 1971 by Norca Machinery Corp. It was reportedly rebuilt recently. If you ever wanted to see what kind of car would be around to make the AAR's 65 year interchange life rule a reality this is the car that should do it with flying colors.

The subject cars first loaded move after the rebuild was to carry an 848,000 pound transformer to the new Sandy Creek power plant near Waco Texas. Schnabel cars are very expensive cars and are a key component in the industries they serve. While the cost of the movement of these very high value cargos is high, it is an insignificant part of the overall cost of a major facility such as a power plant. The

rail component of the movement is only part of the journey. The heavy special load riggers have to move the cargo to the car, load, and secure it, as well as unload and transport and install it at the plant.

The rail industry often values equipment by utilization. Special cars such as Schnabel cars are designed around the movement of as few as one particular cargo or a relatively small class of cargos. The value of the special car is more related to the cargo than the number of times it gets used in a year. One move may cover the cars cost for an extended period of time. Special moves are often counter cyclical. Generally items that move on special cars have long lead times. It is not uncommon for special cars to have long

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*Biggs Appraisal and Subjects of Value are service products of Edward D. Biggs III, LLC. An Accredited Senior Appraiser (ASA) member of the American Society of Appraisers with a focus on rail equipment, locomotive, railcar, and maintenance of way equipment valuations. Biggs has spent over 30 years in the railroad industry with a mix of significant experience with railroads and leasing companies, including experience in fleet operations, mechanical, and sales. Biggs has particularly in-depth knowledge of railcar extended life upgrade and rebuilding programs. He also researches a wide variety of subjects to support valuations, both for his own interests and those of his clients. The articles in Subjects of Value are by necessity brief and are designed to spur further conversation. Questions, comments, and feedback are always appreciated. This newsletter is aimed at people interested in the rail industry. If you wish to be either added or removed from our mailing list, please email us at [biggsappraisal@yahoo.com](mailto:biggsappraisal@yahoo.com).*

# PUCKER YOUR SCHNABEL

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idle periods and then very busy cycles. Many of these cargos have a periodic return to the factory of manufacture for an overhaul. That overhaul period may be many years away.

Schnabel cars fall into the category of Heavy Capacity and Special Flat Cars. They are massively built and extremely well maintained to meet the strict requirements of the shipper and the railroads. The railroads like high wide loads because they are big revenue generators. Railroads have special clearance department staffed with experts set up to make sure these cargos are moved

in a safe and expeditious manner. Clearance moves are highly choreographed and effect many departments on the railroads. Shortlines often share in the movement bringing the cargo as close to the delivery site as possible. Often a shortline will shut down its mainline, so a high value cargo can be off or on loaded at a site that allows the riggers to move the cargo with the least number of bridges and other obstacles being encountered.

Schnabel and other heavy capacity and special flatcars are costly long lived assets that hold their value over an extended period of time even with very little utilization.

