

# Railcar Maintenance Crew Provides Vital Function

In the Plant Morrow railcar shop, located next to the warehouse several hundred yards from the plant's powerhouse, three long-time South Mississippi Electric employees toil day-in and day-out to maintain the plant's most important lifeline – the cars that transport the coal used to fuel the facility. Two trains of 105 cars each make the 1,600-mile round trip from a Kentucky or West Virginia mine to Morrow's coal yard on a continuous basis. Mechanics Robert Davis, Randy Smith, and Jerry Denson are charged with the daunting task of maintaining each car in SME's 230-car fleet to ensure that the railcars comply with ever-changing, rigorous transportation and safety standards and remain a reliable link in the power generation process.

The veteran three-man crew has a total of 80 years employment service with SME, with more than 60 combined years of experience maintaining the Association's railcars (Davis-27 years; Smith-21 years; Denson-15 years). Davis originally attended a school specializing in railcar maintenance and has helped train his fellow employees on the job. Each team member has participated in a variety of regular training and certification programs. The result of their expertise, knowledge and hard work is an industry-wide acknowledgement that South Mississippi Electric has one of the most dependable, well-maintained fleets in the rail system.

"Very few companies have their own rail shops anymore," said Smith. "The three of us are about the only mechanics around who are certified to do the work we do on our cars. In our department, we consider what we

do to be part of a great public service. Plant Morrow could not generate electricity without the trains running safely and reliably. We might not get much public recognition for what we do, but we get great satisfaction in doing the best job we can and in successfully keeping the cars rolling."

Since the shop opened in 1980, the often-overlooked service has resulted in significant savings for the Association. Costs for in-house maintenance and repairs are less than one-half of what the railroad or outside vendors would charge for the same services.



*Mechanic Jerry Denson inspects the springs on a railcar truck assembly.*

"Our job is to try to catch problems before the railroad does," said Davis. "If they find anything defective, such as bad bearings or brakes, they have to pull a car out of the train and do the repairs, charging us back for labor, parts and service. If we can prevent a problem or catch it beforehand, it can save our Members a lot of money."

*Mechanics (left to right) Robert Davis, Jerry Denson and Randy Smith perform all of SMEPA's railcar maintenance*



In 2005 and 2006, SME replaced its 15-year-old fleet of cars with the current aluminum-car fleet manufactured by Trinity Rail. Because the aluminum cars are lighter, their coal capacity increased from 105 tons per car to 119 tons per car. The overall weight of the train decreased, however, making the fleet more efficient.

Each time one of the two 105-car trains unloads coal at Plant Morrow, approximately ten cars are removed from the train for inspection purposes. The cars pulled previously, now inspected and repaired, if necessary, are returned to the outbound train. The process creates a constant rotation, meaning that each railcar is inspected twice a year and receives necessary maintenance. All cars must also pass a brake test each time an inspection is performed before the railcar can be released for service onto open tracks. In addition, the Norfolk Southern Rail System inspects each car every 2,000 miles.

Davis, Smith, and Denson have developed an efficient working relationship in order to subject each car to a thorough inspection. Depending on the task, the group works individually, in pairs or all together to ensure the performance of everything from the pressure within the air tanks to the grade of the wheels. The most common problems involve the pneumatic doors and rotary systems that enable the five hoppers in each car to be remotely controlled and unload coal over Plant Morrow's trestle area. Pins that hold the doors closed often break, as do the spool valves used to open the doors.

"The door pins often need changing, each averaging a couple of hours to replace," said Davis. "These new door systems are more of a challenge to us than the doors on the old railcars, but we learn as we go. As with anything, the older the cars get, the more maintenance they will require."

Other typical repairs include changing brake shoes, removing coal trapped in the car's flanges, and replacing wheels, the most important component on the car and the one most costly to repair.

The wheels are cast from solid-tempered steel in order to withstand the constant pressure of rolling along the tracks. Two wheels connected by an axle constitute a set, and there are two sets used together – along with brakes, springs and other components – in a "truck." Each car has two trucks. The mechanics use a variety of standardized measuring tools to inspect every aspect of the wheels and trucks. Wheels are replaced as their

bearings wear out; when considerable wear shows on the wheel itself; or if noticeable damage is detected. An average of one to two new wheel sets is put on a train during each cycle through the plant, with each set of wheels lasting three to five years.

"These (current) wheels are the best we have ever had on our railcars," said Davis. "We expect the trucks on the cars to wear out in the coming years as they age, but our only maintenance for now is general upkeep." Davis and his coworkers also reverse the direction of the cars on a regular basis to evenly distribute the wear on the wheels.

Each member of the crew believes that their first priority is safety. The last thing anyone would want would be for an equipment failure to cause a major problem while a train is in transit, which would cause lost productivity. "When the cars leave here on a trip, we know we have done everything we can to ensure that the cars get to the mine and back safely," said Denson. "It is our responsibility on a daily basis to make sure we do not overlook anything."

"After 10 years in my current position overseeing the men in this shop, it still amazes me how meticulous they are and the things they catch," said Trevor Cameron, coal and utility supervisor. "They are held to high standards – the shop, equipment, and their procedures are inspected every year by the Association of American Railroads. In addition, they each must be recertified every three years on administering brake tests.

"This job is not only highly physical, but requires individuals who are experienced, highly-skilled, highly-trained and knowledgeable. They often work under difficult conditions; but when those trains leave here, we know they are as well maintained as they can possibly be."



*Coal trains at Plant Morrow can normally be unloaded in less than one hour*