LOMBARD'S ADVICE: CARE AND OPERATION OF A STEAM LOG HAULER

Many farmers and woodsmen in the 1900 period were utterly devoid of mechanical ability; it is hard to believe today how they carried on with their haywire systems. Inborn talent naturally possessed by the Lombards and their steam foreman, George Kidder, is rarely met with at any time. This factor generated a large problem for Lombard when his machines went to isolated locations for long periods of hard work. The evidence of this problem exists in an instructional booklet, probably dictated by AO Lombard to a secretary, and printed in Waterville entitled "Lumbering with the Lombard Log Hauler." This rare booklet, found in the Lombard records, the only copy in existence known to us, seems to date from about 1908. The particular problems needing special note, as the Lombards had found from experience, were divided into seven areas as follows:

Instructions for engineers in regard to the care of log haulers
Care of the log hauler when it is in the engine house
Fuel to be used
Preparation of the wood
Building and care of the logging road
Use of water on the road
Skidding and hauling the logs for the steam log hauler

To give the instructions in this booklet required a considerable personal knowledge of traditional woods operations. This experience was possessed by Alvin Lombard; and he also knew from observation how the steam log hauler worked from the start in 1900. Almost certainly this booklet was derived from his personal experience in the woods of the Penobscot many years before, as well as his work with the log hauler since 1900.

Many people today wonder how their huge machines, first primitive caterpillar tractors, could be operated in the woods, given the handicaps of the time. The following "Important Instructions fill in this information for us:

FIRST---Be absolutely sure that you have enough water in the boiler at all times

SECOND--- When going down a hill so steep that the water flows to the front end of the boiler enough to expose the crown sheet, always open the fire box door and close the damper so that there will not be enough heat against the crown sheet to cause the tubes to leak.

THIRD--- When going down a hill so steep that your engine has to be reversed in order to hold back, be sure and have the drip cocks open and do not throw the reverse lever over far enough to cause the endless lag bed to stop revolving, for if the lag bed should slip it would cause the Log Hauler to skid sidewise, whereas if the endless lag bed always keeps revolving the Log Hauler is bound to go straight ahead. If the endless lag bed should happen to stop revolving it must be started again at once. This may be done by putting the reverse lever forward instantly.

FOURTH--- When starting to climb a steep hill be sure not to have too much water in the boiler. In other words, the boiler should not be so full as to prevent the engines from taking dry steam. If there should be too much water in the boiler, it would stall the engines.

FIFTH--- In case the Log Hauler is left for any great length of time everything should be properly taken care of to avoid freezing including the steam and suction hose.

SIXTH--- Every bolt and nut on this Log Hauler should be carefully looked over every day to see that they are properly tightened, and the necessary care should be taken not to tighten any nut or set screw to destroy its thread. This would render it almost as useless as if it were not there.

SEVENTH--- Be sure that the set screws on the keys in the connecting rods are kept good and tight. Always have a cotter pin in the lower end of each key so that if the set screw for any cause becomes loose the gib key cannot come clear out. If such a thing should happen bad results would surely follow.

EIGHTH--- Be absolutely sure that every part of this Log Hauler is getting its necessary oil. Do not allow yourself to get the idea that it will run a few miles further without oiling unless you know that it will

NINTH--- Do not run the engine above its normal speed of five miles per hour actual running time. To illustrate what we mean by this: If you start with a load of logs five miles from your landing and should stop on the road fifteen minutes to take water, your time to the landing should be one hour and fifteen minutes, not one hour.

These were the nine key instructions on actual road running. With this machine in cold country obviously it was necessary to have an engine house for the down hours. The plans for such a structure were incorporated in the booklet, with maintenance directions included, once the steamer was inside for the night. "The machine should be gone over, cleaned up, and everything adjusted, the tubes cleaned out, smoke arch and fire box well cleaned, oil cups filled, and every precaution taken to insure a successful run the next day." The carbon accumulation at the tip of the exhaust nozzle must be cleaned once a week, because "if this is not done in the course of a few weeks the nozzle will become sufficiently contracted in size to produce an appreciable back pressure."

If the engineer of the log hauler had put in an extra-long day and could not be expected to care for his machine once back in the engine house, then an assistant engineer should be available for this necessary purpose fully as competent, a wise measure in any event if the engineer could not operate at all for a period. Lombard said "What we mean by a helper is not any common woodsman whom you can pick up, one who will go into the engine house, climb in where it is warm and go to sleep." And above everything, as a final warning in this section: "never fill the tank with muddy or dirty water. In case that you find that the water is too hard for the good of your boiler a good boiler compound should be used."

A Lombard steamer could be fueled with either wood or coal. If the log hauler was hauling to the cars on a railroad siding, Lombard thought it "most practical to use steam coal." If using wood, as it is probable that most of the log haulers at that early day did, he especially warned against any great hopes from using green wood to try and make steam. Although not impossible, "there is one thing that you must absolutely remember and that is that it is hard work to boil water with poor green wood." He advised carefully in this matter of wood preparation. It should be good heating wood, cut in summer or early fall in four foot lengths, then each length split a little and then cut into three pieces about sixteen inches long, and this piled up with tiers somewhat separated to dry, or left in four foot to dry and hauled to the wood station on the logging road on the first snow, where it would then be sawed into fuel wood.

The actual delivery into the wood box of the steamer he had found to be most successful in the following way: “Have an apron built on the ground about as high as the wood box on the engine. Have the wood as it is sawed piled on to a jumper and hauled up on to this apron. Then when the log hauler comes along the wood can be very easily and quickly thrown into the wood box.”

The condition and preparation of the terrain over which the huge machine passed was of the greatest concern. It is already clear that only skillful engineers could master the hauler on steep slopes. Lombard said in this connection that “the roads should be built and put into proper shape before there comes any snow.” This meant knocking off the tops of knolls and filling in the cradles, as well as cutting stumps low to the ground. When traveling sidling on slopes the lower side must be filled up so as to make the machine set level. Soft, springy places that would not freeze much in the winter had to be corduroyed and filled carefully so that sticks would not rise and go into the caterpillar tracks or sled shoes. Lombard’s test was that the hauling road should be in such condition that the steamer could haul over it on bare ground. He had known of cases where a machine had gone down in a spot of soft ground not properly filled and several days spent as a result by a large crew in getting it back into operation. A good road lengthened the hauling season, early and late, by from four to six weeks.

Just as in a railroad locomotive, water in travel for the steamer was a necessity. In this connection, Lombard said “the logging road is not complete unless there are two water holes situated conveniently near to it so that water may be sucked up into the tank by means of the suction hose.” And again he warned “the water should be clear, as no muddy water should be fed to the boiler.”

After a snowfall it was necessary to plow a log hauler road. So as not to hold up the steamer from its priceless work, the plowing should be done with four horses, and frequently, to keep the road in good shape. Otherwise the steamer could be used to plow.

With horses in hauling to the landing, it had been customary to ice the road by sprinkling it at night with water, and a special tank and procedures had been devised for this purpose as far back as the 1870’s. This had to be particularly attended to on the up slopes going out to the landing. Just as with horses, Lombard advised the steepest grades determined “the load which can be carried over the road.” He wanted to be sure that the road waterers sprinkled the road widely enough. If not, when the sleds went off the tracked ruts slightly, they would hit soft snow “but if the very outside shoulders are icy your sleds will never cut out.”

When going downhill with a log hauler with many tons of logs on sleds behind pressing on the engine, some breaking force had to be applied. For this Lombard advised “never use gravel on the down hills. Always use road hay or straw. Gravel dulls the toe caulks so called on the Log Hauler, and before winter is gone you will find that you cannot haul very large loads, for the same reason that a horse cannot haul a large load on ice if he is smooth shod. For this reason you can see too that it does not pay to expose toe caulks to bare ground.”

It was possible to put the heavy hauler on the pond ice, but Lombard warned, “Not unless you are absolutely sure that in every place where you wish to go there is sixteen inches or more of good blue ice.” There were cases of machines going through the ice through carelessness in this respect and they are in the north country lake bottom to this day.

Lombard did not believe his steam hauler economical unless the hauling distance started about four miles at least from the landing. He wanted the logs horse-yarded to a pick-up point and all sleds in

the train to be hauled at one place and hitched together. “If they are not all coupled together and ready to start it takes a good deal of valuable time from the log hauler to get the sleds ready for starting.”

In this way, taking from his unusual wealth of personal experience of working in the woods at the stump and with the horses, his work with steam mills and as a millwright, Alvin Lombard was the man to teach the use of the steam log hauler that he had been working with since 1900.

When new machines went out, sometimes a shop man would be sent along to help train the woods engineers and helpers on the job. When repairs were called for that could not be handled by the men on the job, a shop man would be sent north to handle the trouble. Marshall Larkin (1869-1947), from North Belgrade, one of Lombard’s early workmen, sometimes performed the field repairs. Al Penny, an old railroad engineer who worked for Lombard, would sometimes go north for the winter to be engineer on a steamer on a woods operation.

In the early days, Alvin and Sam themselves might take a machine to a distant operation. They may have taken the 1906 machine purchased by the Hinckley Fiber Company to Hinckley, New York. Alvin later told John F. Hill a story of one of his New York trips. When he came back through Syracuse, unkempt and in his work clothes, he decided to go into the local Locomobile Automobile Agency and look over the very fine and expensive machines. These early cars cost so much that only wealthy men could afford them. When the Maine rube stepped through the door into the sales room and began to inspect the beautiful car standing there, he was silently and contemptuously stared at by the supercilious salesman. Finally Alvin turned to the salesman “I believe I’ll take this car and I want it delivered by rail to Waterville, Maine.” He then told the salesman to call a company not far away in New York and verify the check he was about to write. The salesman hemmed and hawed and coughed and allowed that he could accept the check without question. Alvin said “No, you made it quite clear when I came in here that you thought I wasn’t good for this; you make the call and find out if I am.” That is when a Maine rube bought a limousine from a New York salesman.

The common replacement parts for a Lombard steam log hauler most frequently called for were listed at the end of the operations booklet:

Engine bed on right side of log hauler
Engine bed on left side of log hauler
Crank shaft box
Cap for crank shaft box
Crank shaft complete
Spreader for engine bed
Stud, crank shaft box to engine bed
Stud, crank shaft box to cap
Forward end cylinder housing
Rear end cylinder housing
Steam chest housing
Cylinder cock shaft box