

Warwick (via email) 9 November 2012

I read with interest the information on the AALS website on the subject of Speedos and Speeds on Miniature locos and trains and the two letters from the Castledare and Morphett Vale clubs. I ask the following questions and make the following points to be considered in this debate. Firstly I ask if you were a Cyclist on a pushbike how would you tell how fast you were going if the bike was not fitted with a Speedo.

There are a couple of answers to this question the first and most obvious is that you only go as fast as you feel safe.

The second is that when the front wheel starts to wobble you put the brakes on.

If you were the person giving instruction on how to ride the same bicycle you would be shouting, yelling to your student or putting the brakes on yourself when things didn't feel safe that is you are instructing or teaching.

Lets face the facts most of us have all taught somebody to ride a bike at some stage.

Both letters from the clubs ask interesting questions that I will endeavour to put up answers to from both a modelling and prototypical point of view.

Morphett Vale asks the question in their letter ' When a person is being trained to drive a locomotive how does that person know what speed they are doing when there is no speedometer ?"

There are a number of answers here that apply to both the prototype and miniature trains, note that I said trains and not locomotives as in the original question. As in most cases a driver would be learning to drive with a train coupled to the locomotive as the instructor needs to be accommodated close to the trainee.

The average load behind a miniature locomotive is around two passenger riding trucks the average load behind today's modern locos which more often run in multiples of three or four locos is around 3000 tonnes.

How do these equate in simple terms, when fully loaded they are both running at somewhere close to the full capacity of the motive power.

Back to the original question when running trains on the modern day network with a Speedo failure we use sectional running times that is the time taken to go from Point A to Point B this was how trains were run long before Speedos were fitted, this is part of something known as Road knowledge.

Road knowledge means that you know where your humps and hollows are or if you like the top and bottom of the hills, this allows you to know where your train is going to run, where you need to shut off and brake and where to steam.

To draw an easier analogy when you get in your car to drive from say home to the local shop you know what speeds you are supposed to do, where pedestrian crossings are, what landmarks indicate where you may have to turn off or use your blinker etc.all this is without realising it simply road knowledge

Land marks are important as they indicate the tops of hills and bottoms of the hollows and are often points to open the regulator, shut off and brake or in the case of steam locos put the injector on. These can be things as simple as the third gum tree on the left to a set of points at a junction.

Morphett Vale's second question revolved around the possibility of a serious incident.

If adequate training and supervision is given and a combination of the Cyclist analogy and road knowledge is applied through training the worst as questioned in their letter shouldn't happen.

The point is that the current AALS rules provide for adequate training on how to drive a train or run a railway how they are interpreted just as with prototype operations is the problem. They show a duty of care and by training in simple things such as train operation and road knowledge the need for Speedos is not there.

We as Model Engineers/ Enginepersons need to be proactive in training rather than reactive to the possibility of incidents.

On Morphett Vale's last point not all locos are fitted with data loggers some are fitted with Hasler Speedometers which operate on a paper tape recording system. Dataloggers are computer based recording mechanisms whilst Haslers are mechanically based in their recording.

Both systems record but are neither inclusive or exclusive of all of the following:

- Train Speed
- Brake Pipe Air Pressure
- Main Reservoir Air Pressure
- Brake Applications
- Train Direction
- Engine RPM for Diesel Locos
- Throttle Notches for Diesel Loco
- Real Time
- Whistle Use
- Headlight Use
- Foglight Use
- Vigilance Control operation and acknowledgment.

Far from suggesting that anything other than a Speedo be optionally fitted so that the driver may see how fast the train is going these are some of the things that are monitored on the prototype locomotives.

Having seen the way in which some form of recording systems have been retrofitted to prototype steam and diesel locos I would suggest that fitting Speedos particularly to smaller locos would be a model engineering challenge if not a nightmare.

To answer the two items from the Castledare Club the issuing of qualification licenses is a good idea however slightly fraught with danger.

To give an analogy on this subject I hold qualifications that would let me drive and fire various classes of locomotives on trains within NSW particularly those locos that are now employed on heritage trains and to this end have travelled most of NSW on these trains.

However whilst I have travelled most of NSW I am not qualified for all the roads and yards and Safeworking Systems and seek instruction from those who are qualified for particular roads or yards and have often taken the time to walk yards before commencing to shunt in them.

It is one thing to say you are competent to operate a loco but another to say you are qualified for a track and one license does not cover this.

I put to you this example how would a member of Castledare for example be confident to walk into say the club at say Narara on the Central Coast of NSW and be competent, let alone capable of properly operating a train on the track at Narara. This is an extreme I know but it does illustrate the dangers.

Their letter is contradictory in a sense if you look at it with out being derogatory because in one breath they are suggesting that there be a qualification that will let you run at any club but then suggest that there could be errors of judgment on the part of Drivers of locos without Speedos. The two go hand in hand if there is adequate training provided to Drivers there should be no or minimal errors remember no one is perfect.

You may ask what qualifications I have to write on this subject, I have been an Engineman on the railways for around 25 years a railway modeller and model engineer for a lot longer than I care to remember. Add to this I am one of a group of model engineers (not a club) who have built and run a track in northern NSW and I'm former member of the Central Coast Steam Model Co-op.

In closing the need for Speedos on miniature locomotives is not needed and in some clubs may hinder their passenger carrying capacity and ability if locos are not fitted with Speedos. The answer lays in the training of members and the way in which the locos/trains are managed.

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