

## Tip: Improve Performance of the 78100/78101 Rolling Test Stand

Revised: 04-06-2008 Correction factor added for increased diameter of the measurement bearing.

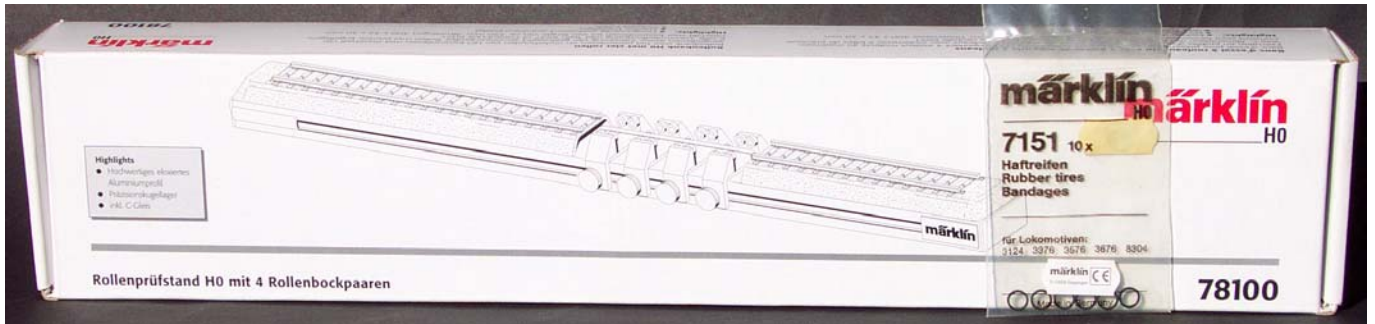
Revised: 26-10-2007 Magnet on bearing fixed after coming loose.

Date: 05-06-2007

Hi All,

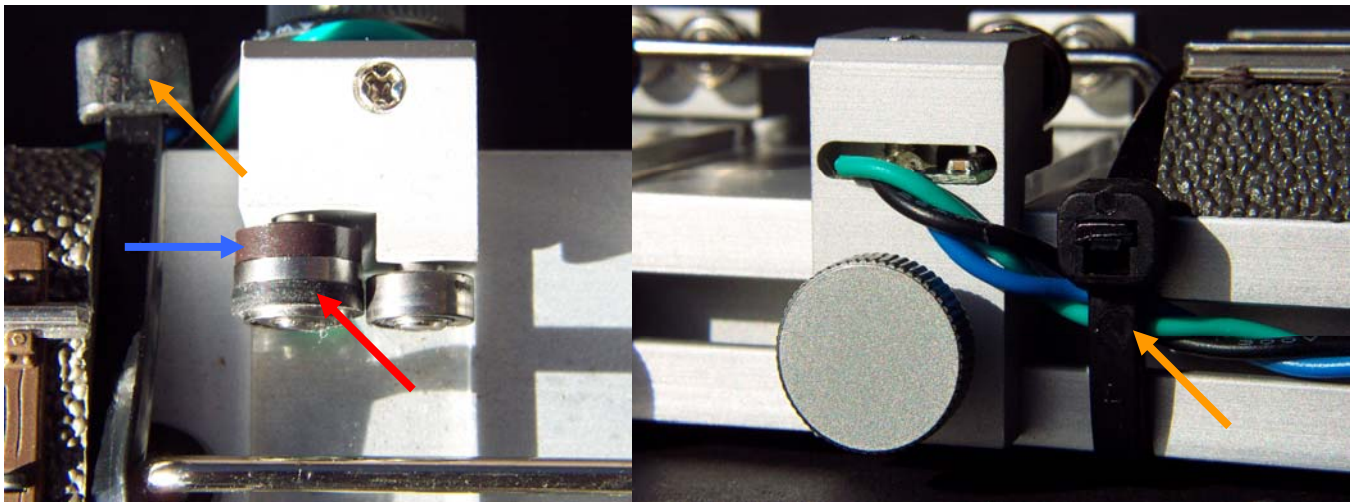
You may well ask why I have a photo of the rolling test stand and a packet of 7151 rubber tires, but if you have become frustrated with the inconsistent performance of trying to set a speed for your locomotive and have observed the locomotive appears to be going faster than the indicated speed on the 78111 measurement device you are not alone. I found that if I applied pressure over the special roller bracket with measurement transducer the speed on the measurement device increased, this indicates that the driving wheel is slipping on the measurement transducer.

26-10-2007 Measurement became erratic again. This time the magnet on the bearing for the transducer had become loose.



I solved this problem by fitting a 7151 rubber tyre onto the measurement transducer bearing.

04-06-2008 the diameter of the measurement bearing has been increased from 6.0mm to 7.3mm with the tyre fitted, your engines will appear to run slower on the measurement device (try the measurement with and without the tyre) and you will need to use a correction factor of "1.24485". If you read 96.6 km/hr on the measurement device, multiply it by 1.24485 and you will have the correct speed of 120.2 km/hr.



Red arrow indicates location of tyre.

Blue arrow indicates magnet

Cable tie provides strain relief for wires (orange arrow).

I fixed the slipping magnet on the bearing by using a small amount of super glue so the magnet and bearing revolve as one assembly.

The other improvement was to provide a cable strain relief using a plastic cable tie to avoid the wires breaking off as they are soldered directly to the measurement transducer.

As always enjoy your hobby.