LS4 - ELECTRONIC SCALE

FAULT FINDING AND TROUBLE SHOOTING

The Tal-Tec LS4 scale is a robust scale manufactured to work in the farm environment, but like all electronics are not indestructible. If your scale has been damaged or has stopped working you can follow these steps to pin point the fault.

The LS4 instrument – Battery

1. The instrument is powered by a 6 volt (lead acid sealed) battery and not mains. If the battery is low it will affect the performance of the scale. Charge the battery using the Mains adaptor or Car battery jumper lead both supplied with a new scale.
2. To check the internal battery voltage, turn the instrument on; press the setup button; and then the up arrow button until position 5. The display shows for example 5 ≡ 6.20
   Good voltage is above 6, but it will work from 5.80 volts. Position 4 indicates the charging voltage if the charger is connected and working.

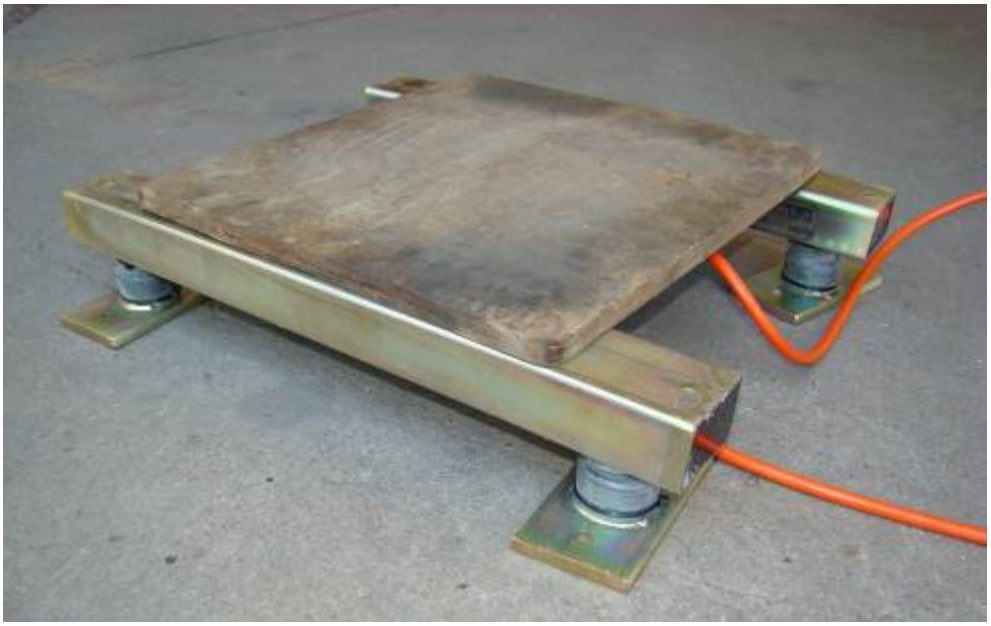
3. If the battery has been so dis-charged or run down over time that it does not turn the instrument on, the battery must be replaced, charging it will not help.
4. The battery voltage as displayed must be stable and not fluctuate up and down. If this is so the circuit board must be replaced.

The LS4 instrument – Operation

1. Refer to the operating manual. There is very little that can go wrong in the field if the battery is kept fully charged.
2. By placing a wet finger on the pins at the bottom of the instrument (you can short out the pins) and see if the instrument responds. If not, it could be faulty.

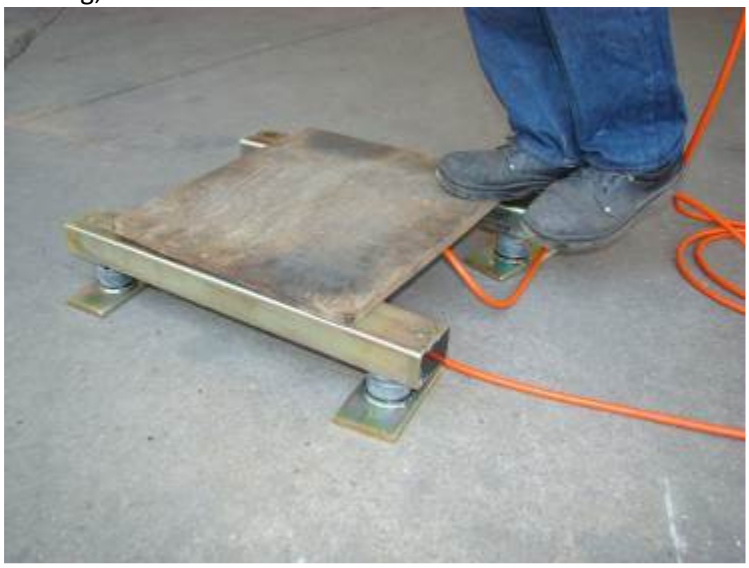
The LS4 Loadbars – Testing

1. (Back ground)Each loadbar is fitted with two loadcells. There is an electric current flowing through each loadcell. When an animal stands on the scale there is a resistance change in the loadcell; this change is in the range of millivolts. So if there is any damage to the cable, plugs or loadbar the instrument is reading that damage and displaying an in-correct mass.
2. To eliminate any fault that could be caused by the installation of the platform/crate; first remove the loadbars and place on a level concrete slab. Workshop floor is a good place. Now place a wooden plank on the two loadbars so that when you climb onto the scale they do not rock. See picture below….



3. Switch the instrument on. Now connect the plug from the loadbar; one at a time; after each one observe the reading on the display; the reading should be less than ±100kg and stable. This reading is called the offset and is normal. If the offset is above 100kg it is possible that a loadcell has been overloaded. If the offset is fluctuating in the hundreds it could indicate water damage. If the offset is fluctuating in the thousands it could indicated cable damage.

4. Once the loadbars are connected and you zeroed the scale by pressing the zero button you can test the loadbars. Climb onto the scale standing on a corner and take note of the reading; now climb off.



The display must return to zero. Now repeat this on every corner; remember to climb off every time. If the readings are the same on every corner your scale is in a good condition.



5. If not, identify the loadbar with the problem (the one with the incorrect reading). Inspect the loadbar for cable damage; loose bolts or a shifted loadcell or plug damage. Repair yourself or return to Tal-Tec.