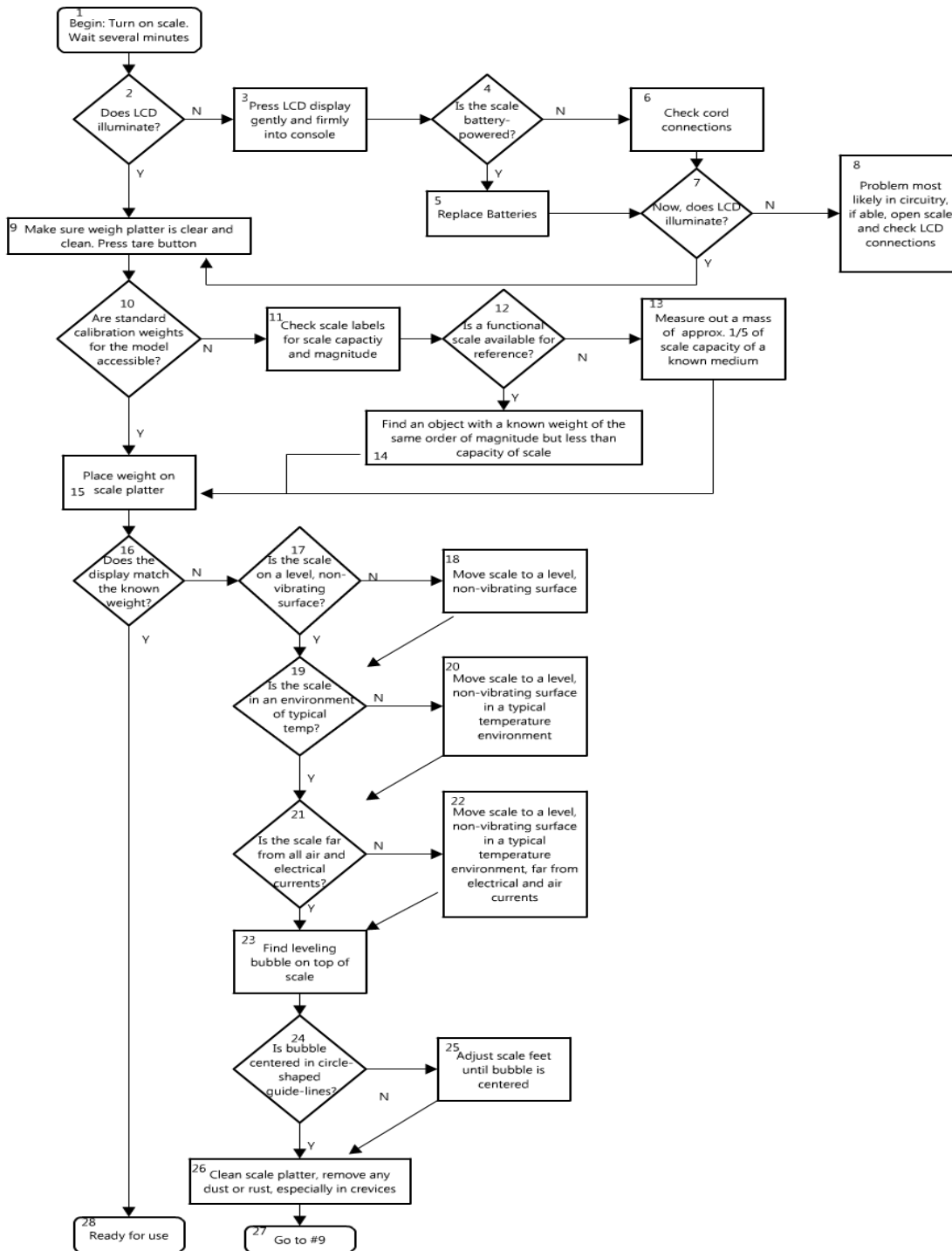


Scales (Digital) Repair and Troubleshooting

Flowchart



Description

#	Text box	Explanation or comment
1	Begin: Turn on scale. Wait several minutes	Start the diagnostic process for a work order on Scales (digital). It is important to allow scale to warm up before use.
2	Does LCD illuminate?	The first part of the diagnostic process will investigate the electronic components of the scale, beginning with the LCD display. Look for numbers, a decimal point, zeros, dashes or a weight unit of measurement on display.
3	Press LCD display gently and firmly into console	If connection between LCD display and internal circuitry is loose, a simple push may suffice to reconnect.
4	Is the scale battery powered?	Look for battery cavity covering and check batteries for rust, leakage and expiration. See BTA skills for Batteries.
5	Replace batteries	If the batteries are too old, power cannot be supplied. See BTA skills on Batteries.
6	Check cord connections	Power cord may disconnected from scale console, it is important that it stays in contact with internal circuitry to maintain power supply.
7	Now does LCD illuminate?	See #2
8	Problem most likely in circuitry, if able, open scale and check internal LCD connections	Troubleshoot circuitry for loose, rusted or otherwise damaged connections. See BTA skills for Connections.
9	Make sure weigh platter is clear and clean. Press tare button	Tare button is on keypad and is labeled as "ZERO", "0/T", "TARE", etc. Pressing this button resets calibration to zero.
10	Are standard calibration weights available?	Every scale should come with official calibration weights with explicit instruction for care and storage, if available, these should be used.
11	Check scale labels for scale capacity and magnitude	Text on scale exterior should give an indication of the precision and degree of magnitude for which the model is designed.
12	Is a functional scale available for reference?	It is best to verify calibration of scale with an object with a known and verified weight
13	Measure out a mass of approx. 1/5 of scale capacity of a known medium	If a functional scale is available, a makeshift calibration weight can easily be found. Suggested mediums for weight include any item with a labeled package weight (i.e. bags of sugar or flour for scales with higher magnitude and lower precision or pre-

		packaged medical substances or powders for scales of lower magnitude and higher precision), or plastic containers filled with water (size the container appropriately and proportionately to the scale magnitude). It is important to record the weight of this mass for reference.
14	Find an object with a known weight of the same order of magnitude but less than capacity of scale	Suggested items would be any pre-packaged object with a prescribed weight, though this rests on the assumption that the written, packaged weight is accurate.
15	Place weight on scale platter	Place weight on scale platter.
16	Does the display match the known weight?	If the scale is properly calibrated, the display should show the known weight for the item.
17	Is the scale on a level, non-vibrating surface?	If the scale is on an uneven or vibrating surface, it is likely to display an incorrect weight reading.
18	Move scale to a level, non-vibrating surface	Examples of level, non-vibrating surfaces include a paved or finished floor, a counter-top, or a table.
19	Is the scale in an environment of typical temperature?	If the scale is in an environment with an abnormal temperature, the circuitry may not function properly. A typical temperature is approximately within the range of 10-32.2 degrees C.
20	Move scale to a level, non-vibrating surface in an environment with a typical temperature	If possible, store and use scale in a temperature-controlled room. Otherwise, store and use scale in shaded area away from moisture.
21	Is the scale far from all electrical and air currents?	Electrical currents affect the internal circuitry and air currents can distort the effective mass on top of the scale.
22	Move scale to a level, non-vibrating surface in an environment with a typical temperature and no currents	Electrical currents can come from high-power machinery or appliances. Air currents can come from open windows, open doors, heating or cooling vents. Store and use scale as far from all of these as possible.
23	Find leveling bubble on top of scale	This should be on the console as opposed to the scale platter, probably towards the rear of the scale. There should be two concentric circles showing fluid and an air bubble beneath.
24	Is bubble centered in circle-shaped guide-lines?	The bubble should be about the size of the smaller circle, the scale is level when the two line up.
25	Adjust scale feet until bubble is centered	All four scale feet should be adjustable by rotation to slowly change the height of each supporting leg of the scale. There may also be a fifth "phantom" leg towards the front of the scale

		that can be lowered to add balance while adjusting the feet.
26	Clean scale platter, remove any dust or rust, especially in crevices	Scale platter should be cleaned with clean, warm water, a cloth and gentle scrubbing. A cloth can typically remove dust or rust from crevices, as can blowing a jet of air gently through any cracks or crevices. See BTA skills for Mechanical Cleaning.
27	Go to #9	Restart calibration process to ensure that scale is properly calibrated.
28	Ready for use	Scale is ready for use.