

DEWATERING SCREEN (MECHANICAL)

This troubleshooting guide does not cover all possible situations, but does represent the most common problem areas, causes, and recommended corrective actions to be taken when troubleshooting this equipment. Contact McLanahan Corporation if additional assistance is required.

1. SCREEN IS MAKING NOISE

(REVIEW THE WARNING IN THE TEST RUN SUB-SECTION)

Probable Cause	Corrective Action
a. Check for loose bolts, guards or screen panels.	a. Tighten all bolts, guards and screen panels.
b. Ancillary structures such as feed chute, underpan or discharge chute may be hitting the screen.	b. Check clearances and adjust accordingly.
c. The screen is overloaded.	c. Reduce the feed to the screen, or reduce the incline, which reduces the retention time of the feed on the deck.
d. Noise is coming from the exciter drive mechanism.	d. Check the oil level and fill if necessary. The gear or bearing may need to be replaced.
e. Noise is coming from one of the three drive/connecting shafts.	e. Check the drive shafts for wear and replace if necessary.
f. Noise is coming from structural components indicating possible loose or damaged fastener(s) or structural component(s).	f. Isolate the specific cause and area, then tighten/replace fastener(s) and/or repair/replace structural component(s).

2. SECONDARY MOTIONS

Probable Cause	Corrective Action
a. (*) Rubber buffers are misaligned (center to center and/or diagonally) fatigued and/or damaged.	a. Check and correct as necessary. Replace rubber buffers as complete sets only.
b. (**) Inadequate structural support due to improper support design and/or vibration fatigue.	b. Consult a structural engineer and correct as necessary.
c. (*) Uneven loading of the screen.	c. Even out the loading of the feed to the screen.
d. (*) Exciter counterweights are out of position.	d. All counterweights must be in the same relative position. Loosen the connecting shaft and reposition the counterweights.

3. SCREEN PANELS FAIL PREMATURELY OR BECOME LOOSE DURING OPERATION (REFER TO THE NOTE IN THE DECK PANELS SUB-SECTION)

Probable Cause	Corrective Action
a. There are stud caps that are worn or damaged.	a. Replace stud caps as necessary.
b. Molded inserts in screen panels are worn.	b. Replace screen panels as necessary.
c. Fine diluted feed is passing through the panels causing premature wear.	c. Replace screen panels as necessary.
d. (*) Isolated wear spots primarily due to uneven feed to the screen, or possibly an inconsistent vibration frequency.	d. Redistribute the feed evenly across the screen panels to correct the vibration frequency phenomenon.

***SCREEN ONLY.**

****SCREEN AND/OR THE STRUCTURE.**

(NOTE: IF THE FREQUENCY OF THE STRUCTURE AND THE SCREEN ARE IN PHASE, MATERIAL MAY NOT TRANSPORT ACROSS THE DECK AND/OR DEWATERING EFFICIENCY MAY BE REDUCED)

DEWATERING SCREEN (PROCESS)

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1. CAKE DISCHARGE IS TOO WET

Corrective Action	Possible Side Effect
a. Replace some of the deck panels with ones with coarser apertures.	a. Decreased recovery of solids to the screen overflow weirs.
b. Reduce the feed water.	b. Increased recovery of fines to the overflow weirs.
c. Increase the settings on all counterweights.	c. More splash in the pool area and higher wear on the motor bearings.
d. Raise the adjustable weir.	d. None apparent.

2. TOO MUCH THROUGHGS

Probable Cause	Possible Side Effect
a. Replace some, or all, of the screen deck panels with ones with finer apertures.	a. Liquid drainage may be impeded causing the pool to creep out over the discharge.
b. Increase the amount of water in the feed.	b. None apparent.
c. Decrease the settings on all of the counterweights.	c. Discharge moisture may increase.
d. Lower the discharge weir.	d. Discharge moisture may increase due to higher surface area associated with finer product.

3. RECOVERY OF FINES IS TOO HIGH

Probable Cause	Possible Side Effect
a. Replace some of the screen panels with ones with larger apertures.	a. None apparent.
b. Add spray bars to wash the cake.	b. Adequate drainage capacity and larger aperture screen panels in vicinity of spray may be required.
c. Decrease the feed solids loading.	c. Diversion of the feed is required.
d. Increase the feed dilution.	d. The drainage capacity may be limited.