Field Reference Guide—OpticMapper

Keep with OpticMapper and refer to daily.

(Refer to Operating Instruction Manual for complete instructions)

STEP I. PRIOR TO MAPPING: PERFORM ROUTINE DAILY MAINTENANCE

1. Inspect unit for loose or missing bolts, other obvious problems

2. Do side depth wheels and disks rotate freely? If not, clear mud or other obstructions.

3. Check wear plate and window for excessive wear or damage

4. Install test load on OpticMapper external controller rear panel—port marked Optical Power port. Turn power on and go to data acquisition mode on DataLogger or SoilViewer.

OM values should be:
Sensor 1: 833
Sensor 2: 289

Readings are acceptable if within 10 numbers from these.

5. Clean sapphire window and install test reference under window. Click OM System check on Soilveiwer, or press 2 on Datalogger for OM System Check. Follow onscreen instructions. Reference values bellow.

Sensor 1: Difference of 200 or > between dark and light reference.
Sensor 2: Difference of 90 or > between dark and light reference.
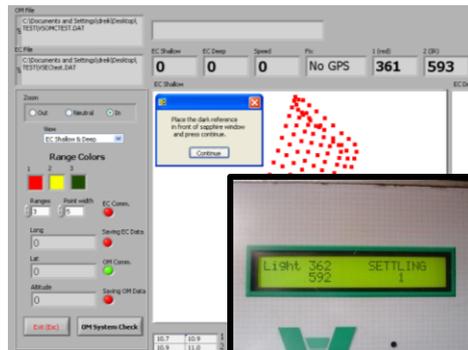
Field operations: (note: in-field adjustments may cause shifts in sensor data)

6. Lower gauge wheels so EC coulters and optical row unit penetrate to desired depth.

7. Adjust top-link so implement operates level in field position; in rocky conditions shorten top-link and tip implement slightly forward to reduce pressure on window; if soil adheres to window, lengthen top-link to increase pressure on window.

Field operations:

8. Adjust front coulter so it cuts slightly deeper than mapping depth

9. Adjust side depth wheels on optical row unit to allow deeper or shallower mapping. Move T-handle forward for deeper depth. Depth wheels should be snug, but freely moving, against the disks. See manual for adjustments.

Field operations:

10. Adjust spring pressure on row unit as needed. With implement lifted to reduce pressure on springs, move handle forward to reduce spring pressure and back to increase. Additional weight may be required in hard soils. Reduce pressure in rocky conditions to prevent damage to window.

11. Adjust closing wheel pressure if needed to close slot. Pulling handle back increases pressure.

When mapping:

• check depth of sensor; add weights or adjust down-pressure on row unit if needed

• view OM data when unit is raised; are values within 10% of original readings when starting?

• always raise unit when turning

• make sure window is staying clean and intact

• make sure row unit side depth wheels and disks are rotating freely, and are clear of excess mud and crop residue

• check furrow closing; adjust pressure as needed

• **always start a new file if adjustments are made or field conditions change**

Example of varying field conditions, date change and/or adjustment changes. To fix this problem always start a new file in any of the above situations.