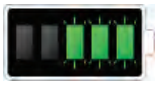
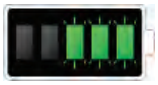
## MACHINE TROUBLESHOOTING

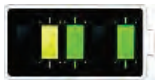
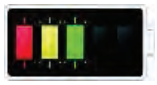
| Problem | Cause | Remedy |
|---|---|---|
| Trailing water-poor or no water pickup | Vacuum fan turned off | Turn vacuum fan button on |
| | Worn squeegee blades | Rotate or replace squeegee blades |
| | Vacuum hose clogged | Flush vacuum hoses |
| | Vacuum fan filter dirty | Clean vacuum fan filter |
| | Vacuum fan cover seals worn | Replace seals |
| | Debris caught on squeegee | Remove debris |
| | Vacuum hose to squeegee or recovery tank disconnected or damaged | Reconnect or replace vacuum hose |
| | Recovery tank cover not completely closed | Check for obstructions and close cover |
| Vacuum fan will not turn on | Vacuum fan switch turned off | Turn vacuum fan button on |
| | Recovery tank full | Drain recovery tank |
| | Foam filling recovery tank | Empty recovery tank |
| | | Use less detergent |
| | Recovery tank sensor dirty or stuck | Clean or replace sensor |
| Little or no solution flow to the floor | Solution tank empty | Fill solution tank |
| | Solution flow turned off | Turn solution flow on |
| | Solution supply lines plugged | Flush solution supply lines |
| | Clogged solution tank filter | Drain solution tank, remove solution tank filter, clean and reinstall |
| Poor scrubbing performance | *1-Step button* not on | Turn *1-Step button* on |
| | Improper detergent or brushes used | Contact Tennant service representative |
| | Recovery tank full | Empty recovery tank |
| | Solution tank empty | Fill solution tank |
| | Debris caught on scrub brushes or pads | Remove debris |
| | Worn scrub brush | Replace scrub brush |
| | Low battery charge | Charge batteries until the charger automatically turns off |
| XC1 docking station not charging | Charger AC cord unplugged | Plug in AC power cord |
| | Rescue charging cable not plugged in. | Plug in rescue charging cable. |
| | Charging terminals are dirty | Clean machine and docking station terminals |
| | Obstacles or debris in the way | Remove obsticles or debris |
| | Camera or sensors dirty | Clean camera and sensors |

## SERVICE INDICATOR CODES

When the machine or battery charger detects a fault, the service indicator will flash. A fault code will be provided to determine problem as described below.



| LED Light Pattern | LCD Fault Code | Fault Condition | Reason | Correction |
|---|---|---|---|---|
| None | 0x0000 | FAULT_NONE | | |
| None | 0x0010 | FAULT_PARKING_BRAKE | | |
|  | 0x0790 | FAULT_SOLUTION_ TANK_EMPTY | 1. Solution tank empty.<br>2. Wiring, connector, or solution tank switch issue. | 1. Fill solution tank.<br>2. If solution tank is not empty, check tank switch and wiring. |
|  | 0x0791 | FAULT_RECOVERY_ TANK_FULL | 1. Recovery tank full.<br>2. Wiring, connector, or recovery tank switch issue. | 1. Empty recovery tank.<br>2. If recovery tank is not full, check tank switch and wiring. |
| | 0xFF11 | FAULT_LOW_ BATTERY | 1. Battery voltage too low. | 1. Charge battery. |
| | 0xFF12 | FAULT_VERY_LOW_ BATTERY | 1. Battery voltage too low. | 1. Charge battery. |
|  | 0xFFF0 | FAULT_ESTOP | 1. E-Stop pressed.<br>2. E-Stop wiring problem. | 1. Key off machine.<br>2. Press and reset E-Stop button.<br>3. Key on machine.<br>4. If fault persists, check harness connections between E-Stop and Propel Controller.<br>5. Replace or repair harness.<br>6. Replace E-Stop button. |
|  | 0xFFFF | FAULT_UNKNOWN | | |
|  | 0xF100 | FAULT_CHARGER_ GENERIC | 1. Charger error condition. | 1. Contact service. |

| LED Light Pattern | LCD Fault Code | Fault Condition | Reason | Correction |
|---|---|---|---|---|
|  | 0xF101 | FAULT_CHARGER_NO_ BATTERY | 1. Charger not connected to battery pack. | 1. Check cable connections.<br>2. If fault code persists, contact service. |
|  | 0xF102 | FAULT_CHARGER_ OVERHEAT | 1. Charger overheated. | 1. Let charger cool. Move to well ventilated area.<br>2. If fault persists, contact service. |
|  | 0xF103 | FAULT_CHARGER_ CAN_LOST | 1. Charger communication fault. | 1. Power cycle machine.<br>2. If fault code persists, contact service. |
|  | 0xF104 | FAULT_CHARGER_ TIMER_PHASE_I | 1. Battery unable to charge correctly | 1. Contact service. |
| | 0x100B | FAULT - SCRUB BRUSH NOT DETECTED | 1. Scrub brushes not detected. | 1. Ensure both scrub brushes are present and securely installed.<br>2. if the fault code persists, contact service. |
| | 0x100C | FAULT - SCRUB BRUSH LENGTH EXCEEDED | 1. Scrub motor current unexpectedly high when fully retracted. | 1. Ensure scrub brushes being used are compatible with the model of the machine.<br>2. Remove any string, banding, plastic wrap, or other debris wrapped around the scrub brushes or scrub brush motors.<br>3. If fault code persists, contact service. |
|  | 0xF200 | FAULT -DOCK STATION GENERIC FAULT | 1. Docking station unplugged. | 1. Remove machine from docking station.<br>2. Plug in docking station.<br>3. Connect machine to docking station in robotic mode.. |
|  | 0xF202 | FAULT -DOCK STATION OVER HEAT | 1. Charger overheated | 1. Remove machine from charger.<br>2. Let charger cool.<br>If fault persists, contact service. |
|  | 0xF203 | FAULT - DOCK STATION MANUAL MODE ATTEMPT FAILED | 1. Manual connection of docking station not possible. | 1. Remove machine from docking station.<br>2. Connect machine to docking station in robotic mode. |
|  | 0xF204 | FAULT -DOCK STATION TOP OFF FAULT | 1. Docking station unplugged. | 1. Remove machine from docking station.<br>2. Plug in docking station.<br>3. Connect machine to docking station in robotic mode. |

*NOTE: Contact a Tennant Service representative***for all other fault codes.**