**Appendix A: EM Installation Summary**

(to be completed by EM Service Provider)

**EM Summary**

 Frequency of Data Logging:

 What hydraulic pressure sensor is set at (psi):

 Drum sensor settings (if applicable):

Image Resolution:

Run On Time:

**Camera Information and Views (for each camera)**

|  |  |
| --- | --- |
| Camera Name:  |  |
| Location: |  |
| View: |  |
| Aim: |  |
| Hardware: |  |
| FPS: |  |
| Recording Trigger:  |  |
| Camera Status (critical or non-critical) | TBD |
| Recording Exceptions: |  |
| [INSERT IMAGE OF CAMERA VIEW] | INSERT IMAGE OF CAMERA LOCATION) |

|  |  |
| --- | --- |
| Camera Name:  |  |
| Location: |  |
| View: |  |
| Aim: |  |
| Hardware: |  |
| FPS: |  |
| Recording Trigger:  |  |
| Camera Status (critical or non-critical) | TBD |
| Recording Exceptions: |  |
| [INSERT IMAGE OF CAMERA VIEW] | INSERT IMAGE OF CAMERA LOCATION) |

|  |  |
| --- | --- |
| Camera Name:  |  |
| Location: |  |
| View: |  |
| Aim: |  |
| Hardware: |  |
| FPS: |  |
| Recording Trigger:  |  |
| Camera Status (critical or non-critical) | TBD |
| Recording Exceptions: |  |
| [INSERT IMAGE OF CAMERA VIEW] | INSERT IMAGE OF CAMERA LOCATION) |

|  |  |
| --- | --- |
| Camera Name:  |  |
| Location: |  |
| View: |  |
| Aim: |  |
| Hardware: |  |
| FPS: |  |
| Recording Trigger:  |  |
| Camera Status (critical or non-critical) | TBD |
| Recording Exceptions: |  |
| [INSERT IMAGE OF CAMERA VIEW] | [INSERT IMAGE OF CAMERA LOCATION) |

|  |  |
| --- | --- |
| Camera Name:  |  |
| Location: |  |
| View: |  |
| Aim: |  |
| Hardware: |  |
| FPS: |  |
| Recording Trigger:  |  |
| Camera Status (critical or non-critical) | TBD |
| Recording Exceptions: |  |
| [INSERT IMAGE OF CAMERA VIEW] | [INSERT IMAGE OF CAMERA LOCATION) |

**Sensor Configurations**

|  |  |
| --- | --- |
| Gear |  |
| Position Tracking Sensor: |  |
| Position Tracking Sensor Location: |  |
| Position Tracking Power Source: |  |
| Drumline Sensor: |  |
| Drumline Location: |  |
| Hydraulics Sensor 1: |  |
| Hydraulics Location 1: |  |
| Hydraulics Sensor 2: |  |
| Hydraulics Location 2: |  |
| Electric Switch Sensor: |  |
| Electric Switch Location: |  |
| Sleep Sensor: |  |
| User Interface Location: |  |
| Software and Version: |  |

**Appendix B: System Malfunction or Power Loss to System:**

**Malfunction Prior to Departure:**

1. If the system malfunctions prior to departure, contact your EM Service Provider (phone number, email) to report and troubleshoot the problem. Some possible solutions are listed in **Table 1**.
2. If the malfunction cannot be resolved, take the Action described in **Table 1** corresponding to the type of malfunction.
3. Report the date/time, nature of malfunction, and outcome in the logbook.

**Malfunction While Fishing:**

1. If the system malfunctions while gear is in the water, vessel may complete hauling gear out of the water, but **GEAR CANNOT BE RESET until the problem is resolved**.
2. Call your EM Service Provider to report and troubleshoot the problem. Schedule a service event for your return to port to have the issue resolved as quickly as possible. Some possible solutions are provided in **Table 2**.
3. If the malfunction cannot be resolved, take the Action described in **Table 2** corresponding to the type of malfunction.
4. Report the date/time, nature of the malfunction and the outcome in the logbook.

**Power Loss**

In the event of a temporary loss of power, return power to the system immediately, and record the time, date, and duration of the power interruption in the logbook.

Table 1. Summary of types of dockside malfunctions of EM system and associated equipment, and actions to be taken.

| **Malfunction Type** | **Critical/Not Critical** | **Report to Service Provider?** | **Report in Log?** | **Possible Solution Downgrades to Not Critical (non-exclusive list)** | **Action if Malfunction Not Resolved or Not Downgraded**  |
| --- | --- | --- | --- | --- | --- |
| Drum sensor | Not critical | Y | Y | Carry spare reflectors. | Vessel operator may depart on trip, but must trigger video recording manually. Malfunction must be repaired before next trip. |
| Hydraulic sensor | Not critical | Y | Y | Restart system. Follow troubleshooting guidance. | Vessel operator may depart on trip but must trigger video recording manually. Malfunction must be repaired before next trip. |
| Drum and hydraulic sensors | Critical | Y | Y | Restart system. Follow troubleshooting guidance. Carry spare reflectors. | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |
| GPS | Critical | Y | Y | Restart system.  | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |
| Keyboard | Not critical | Y | Y | Carry spare USB keyboard. Connect spare keyboard | Vessel operator may depart on trip provided cameras are recording without keyboard. Malfunction must be repaired before next trip. |
| Critical if manual record is required. | Y | Y | Carry spare USB keyboard. Connect spare keyboard. | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |
| Monitor | Critical | Y | Y | Connect to a different VGA monitor. | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |
| Control box | Critical | Y | Y | Restart system, follow troubleshooting guidance. | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |
| Green Screen | Critical | No, unless unresolved. | Y | Restart system, follow troubleshooting guidance. | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |
|
|
| Lighting | Critical | No | Y | Vessel operator will not retrieve gear at night | Vessel operator may depart on trip provided he does not retrieve gear at night (i.e., 30 minutes before official sunset to 30 minutes after official dawn). Malfunction must be repaired before next trip. |
| Camera(s) | Critical | Y | Y | Restart system, follow troubleshooting guidance. Carry and connect spare camera. | Vessel operator may not depart on trip until malfunction is repaired or vessel operator voluntarily obtains observer. |

Table 2. Summary of types of at-sea malfunctions of EM system and associated equipment, and actions to be taken.

| **Malfunction Type** | **Critical/Not Critical** | **Report to Service Provider?** | **Report in Log?** | **Possible Solution Downgrades to Not Critical (non-exclusive list)** | **Action if Malfunction Not Resolved or Downgraded**  |
| --- | --- | --- | --- | --- | --- |
| Drum sensor | Not critical | Y | Y | Carry spare reflectors. | Vessel operator may resume fishing but must trigger video recording manually. |
| Hydraulic sensor | Not critical | Y | Y | Restart system. Follow troubleshooting guidance. | Vessel operator may resume fishing but must trigger video recording manually. |
| Drum and hydraulic sensors | Critical | Y | Y | Restart system. Follow troubleshooting guidance. Carry spare reflectors. | Vessel operator may resume fishing but must trigger video recording manually. |
| GPS | Critical | Y | Y | Restart system. | If not resolved, vessel operator must return to port. |
| Keyboard | Not critical | Y | Y | Carry spare USB keyboard. Connect spare keyboard. | Vessel operator may resume fishing provided cameras are recording without keyboard. Otherwise return to port. |
| Critical if manual record is required. | Y | Y | Carry spare USB keyboard. Connect spare keyboard. | If not resolved, vessel operator must return to port. |
| Monitor | Critical | Y | Y | Connect to a different VGA monitor. | If not resolved, vessel operator must return to port. |
| Control box | Critical | Y | Y | Restart system, follow troubleshooting guidance. | If not resolved, vessel operator must return to port. |
| Green Screen | Critical | No, unless unresolved. | Y | Restart system, follow troubleshooting guidance. | If not resolved, vessel operator must return to port. |
|
|
| Lighting | Critical | No | Y | Vessel operator will not retrieve gear at night | Vessel operator may resume fishing provided the vessel operator does not retrieve gear at night (i.e., 30 minutes before official sunset to 30 minutes after official dawn). |
| Camera(s) | Critical | Y | Y | Restart system, follow troubleshooting guidance. Carry and connect spare camera. | If not resolved, vessel operator must return to port. |