

Below is a **comprehensive inspection checklist** that distinguishes between **what a home inspector (visual inspection)** should check versus **what a licensed plumber or pump technician (detailed assessment)** would evaluate.

This example can provide clear guidance for a non-invasive inspection and outlines a more technical evaluation performed by a professional.

1. Visual Inspection Checklist (Home Inspector)

Objective: Conduct a non-invasive, visual-only inspection to observe any signs of defects, malfunction, or safety concerns. If applicable, report the visible name brand, model/serial numbers. If found, report the last maintenance date(s).

A. Exterior Components of the Lift Station:

- **Sump Pit Cover:**
 - Is the cover securely fastened and free from cracks or damage?
 - Are there any gaps in the seal that could allow odors or gases to escape?
(Note: Some covers may have vents designed to release air pressure.)
 - **Visible Pipes and Connections:**
 - Are the inlet and outlet pipes securely connected and free of visible leaks or stains?
 - Check for corrosion or signs of mineral buildup at pipe joints.
 - **Check Valve (if visible):**
 - If installed, is the check valve properly installed, and are there signs of dripping or failure?
 - **Electrical Components (without opening panels):**
 - Check the condition of the electrical connections (no visible frays, cracks, or kinks).
 - Is the GFCI outlet or circuit breaker functioning correctly (test with GFCI button if safe)?
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B. Environmental and Performance Indicators:

- **Odor:**
 - Is there any foul sewage odor near the pit? (This may indicate a loose cover, gasket failure, or venting issue.)
- **Audible Signs:**

- Is the pump unusually loud during operation (grinding, knocking, or buzzing)? (*Note: Noise may be heard if the system operates during the inspection.*)
 - **Moisture or Leaks:**
 - Check for signs of water pooling near the ejector pit.
 - Are there water stains around the base of the pit indicating overflow?
 - **Alarms or Warning Lights (if installed):**
 - Is there a high-water-level alarm? If so, check that it is not currently active.
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C. Inquiry with the Owner/Seller:

- Are there any known issues with the pump (e.g., recent failures, backups, or power interruptions)?
- When was the last time the pump was serviced?
- Is there a battery backup system for power outages? (If so, when was the battery last replaced - look for dates or records?)

Estimated Service Interval: These systems typically require servicing every **3 to 5 years**, depending on usage and manufacturer recommendations.

2. Detailed Technical Inspection Checklist (Plumber or Pump Installation Tech)

Objective: Conduct a thorough inspection of the mechanical, electrical, and performance components of the sewage ejector pump or grinder pump system.

A. Interior Components and Mechanical Functionality:

- **Float Switch Operation:**
 - Test the float switch by adding water to the pit to simulate wastewater levels rising.
 - Confirm the float switch moves freely without obstructions or sticking.
 - **Grinder Pump Blades (for grinder pumps):**
 - Inspect the pump's cutting blades for wear, debris, or damage.
 - Remove debris (if present) and ensure blades are sharp and functional.
 - **Pump Motor:**
 - Test the motor by engaging the pump through the control panel or float switch.
 - Check for abnormal vibrations, overheating, or unusual noise during operation.
 - Measure the motor's amp draw to confirm that it is within manufacturer specifications.
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B. Check Valve and Discharge Line:

- **Check Valve:**
 - Confirm the check valve prevents backflow and is not stuck in the open or closed position.
 - **Discharge Line:**
 - Ensure the discharge line is sloped correctly and free from obstructions.
 - Confirm there is no airlock preventing flow.
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C. Venting and Seals:

- **Vent Pipe:**
 - Verify that the vent pipe is clear and properly connected to prevent air pressure buildup.
- **Pit Seals:**

- Check the condition of the pit gasket and ensure a proper seal to prevent sewer gases from escaping.
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D. Control System (if applicable):

- **Alarms and Backup Systems:**

- Test any high-water-level alarm to ensure it triggers correctly.
- Inspect battery backups or generator connections for functionality.

- **Electrical Wiring:**

- Open the control panel (if accessible) and check for loose connections, corroded terminals, or burnt wires.
 - Test the system's response to power loss by simulating an outage (if safe).
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E. Cleaning and Maintenance:

- Clean out debris, grease, and sediment from the pit.
- Ensure the pump impeller or grinder components are clear of obstructions.