

Walk Behind Concrete Floor Grinding JHA

Worked instructional example

Work and worksite

A trained operator will use an electric walk-behind planetary grinder for specified nonstructural correction on a bare, cured ground-floor slab. Accepted removal limits exclude structural depth and embedded services. Dry grinding uses manufacturer-recommended extraction and the employer's floor-grinder silica method. Work ends with contained cleanup before coatings or polishing. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The responsible planner has identified bare concrete and accepted the surface-treatment limits. Unknown coatings, hazardous contamination, embedded items or an uncertain removal depth are resolved before grinding; this resource does not authorize structural alteration.
- The actual grinder, tooling and extractor manuals govern compatibility, operating configuration, handling, electrical supply and tool changes. The employer fully implements the applicable walk-behind floor-grinder silica controls or establishes the required alternative exposure-control basis.
- Connections to repair and patching 238110-28 and placement and finishing 238110-09 are partial, limited to cured-floor surface correction. Handheld wall grinding, concrete placement, full polishing, coating removal and elevated or structural grinding are excluded.

Questions before work

- Who establishes the accepted surface-removal limits and confirms bare concrete without an unresolved coating or embedded-item concern?
- Which actual grinder and extractor combination meets the chosen floor-grinder silica-control method, including indoor between-pass cleanup?
- How will the machine, hose and power cable stay controlled during passes, isolation and tool changes?

Task Hazard Control

1 Release the surface and removal limits

Hazard: Unknown coatings, embedded services or excessive removal can create hazardous exposure or damage the slab.

Control: Surface lead identifies the released bare-concrete area, accepted nonstructural treatment and stop limits. Check available slab and material information and resolve uncertain areas with the responsible planner. Mark excluded locations and establish the receiving finish requirement without expanding the grinder operation into structural repair.

Verification: Lead checks the work boundary and actual surface-treatment authorization with the operator.

Reasoning: A grinder can remove material beyond its permitted scope unless the boundary is made explicit.

2 Prepare the machine and work route

Hazard: An unstable machine, incompatible tooling or a trapped cable can cause unexpected movement, contact or electrical injury.

Control: With the grinder disconnected, operator fits compatible tooling and checks guards, skirt, handles and controls under the actual manual. Prepare the specified electrical protection and sound cables. Clear the route and manage the extractor hose and power lead away from the grinding head, pinch areas and unrelated workers.

Verification: Operator checks the isolated assembly, supply arrangement and manageable pass route before energizing.

Reasoning: Reliable machine control depends on both the tooling and the attached cables and hoses.

3 Verify extraction and the silicacontrol method

Hazard: An apparently running extractor can leave respirable silica uncontrolled when airflow, filters or containment are unsuitable.

Control: Assigned lead verifies the selected walk-behind floor-grinder method against the employer's silica plan. Use manufacturer-recommended extraction with required airflow, filtration and filter cleaning; confirm sound connections and the specified function checks. Arrange indoor HEPA cleanup between passes and needed exhaust. Resolve additional assessed respiratory protection before work.

Verification: Silica-control lead checks equipment specifications and actual function findings against the chosen method.

Reasoning: Handheld-grinder rules and a spinning vacuum motor cannot establish compliance for this equipment category.

Complete the work and hand over

4 Make controlled surface correction passes

Hazard: The rotating head, irregular floor or failed capture can injure nearby people or spread dust beyond the boundary.

Control: Operator follows the selected manual and accepted removal method while maintaining stable footing and control of the machine. Keep others clear of the head and route; use the agreed pass sequence without forcing the grinder over excluded areas. Stop for unusual movement, damaged tooling, lost capture or an uncertain surface condition.

Verification: Surface lead checks initial results and the operator verifies capture, route and boundaries during passes.

Reasoning: The next pass should remain within the accepted treatment instead of chasing an unexplained defect.

5 Isolate before tool checks and changes

Hazard: A restart, hot tooling or disturbed dust can injure the worker inspecting beneath the grinding head.

Control: Stop and disconnect under the actual manual before accessing tooling or adjustment points. Use the specified stable servicing position and control stored movement; allow hot parts to cool as required. Maintain dust capture and assessed protection during tool changes, and replace only approved compatible parts before completing restart checks.

Verification: Operator verifies disconnection and stable servicing support before anyone enters the head area.

Reasoning: An emergency-stop button alone is not the required disconnection before tooling work.

6 Contain residue and hand over the surface

Hazard: Loose dust, overloaded collection bags or an unrecorded overgrind can expose the cleanup crew or mislead the next trade.

Control: Use the silica plan's HEPA collection and sealed handling method; avoid uncontrolled dry sweeping or dust-blowing cleanup. Disconnect and secure equipment after the final pass. Record actual surface results, excluded areas and defects for the receiving lead before later coatings, patching or polishing begin.

Verification: Lead checks dust-contained cleanup and records the accepted boundary and unresolved surface findings.

Reasoning: Clean appearance is separate from the agreed surface acceptance and control of collected dust.

Pause and reassess

- Surface identity, coating status, embedded-item information or permitted removal depth becomes uncertain or differs from the accepted work.
- Extraction performance, a hose, filter, dust skirt or electrical protection cannot maintain the selected control method.
- The machine moves unexpectedly, tooling is damaged, the cable enters the danger area, or the route becomes unmanageable.

Improve the controls

Needs improvement: Use the same dust setup as a handheld grinder.

More useful: Verify the actual walk-behind floor-grinder method, compatible extraction specifications and indoor HEPA cleanup requirements before passes.

Needs improvement: Press stop and reach under the head.

More useful: Disconnect and establish the manual's stable servicing condition, dust control and cooling requirements before touching tooling.

Decisions that change the analysis

Does the cosmetic wall-patching example already cover this work?

It uses localized handheld preparation before patching. This operation controls a traveling planetary floor machine, its cable and hose, tooling access and equipment-specific silica method across an accepted cured-floor area. It does not authorize deeper structural removal, unknown coating treatment or an entire polished-floor process.

What must the crew record for actual use?

Record the slab area and surface-treatment limits, bare-material basis, excluded locations, grinder/tooling and extractor identity, manual revisions, silica-control method and specification checks, electrical arrangement, operator assignment and actual findings. Record tool changes, control interruptions, cleanup and remaining defects for the receiving finish lead; this example provides no exposure measurement or surface acceptance.

Training needs

- Selected-grinder instruction on tooling, guards, handling, stop controls and verified disconnection before servicing or tool changes.
- Floor-grinder silica-control instruction on extraction, filtration, containment and indoor HEPA cleanup between passes; recognize failure and follow the employer's exposure/protection plan.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

Husqvarna PG 5 and PG 5 S operator manual, current manufacturer download

<https://www.husqvarnaconstruction.com/hcp/tdrdownload/pub000093840/doc000238646/312137513?httpoute=True>

OSHA 1926.1153: walk-behind floor-grinder silica controls

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1153>

OSHA 1926.300 Tool condition and guarding

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.300>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This original draft supplies no fabricated inspection, signature or approval.