PHOENIX OS

MINING TRANSPORTATION DISCOVERY CHECKLIST

A decision-ready brief for mine owners, project teams and contractors. Use it to prepare the operating evidence required before fleet, parts, maintenance or delivery recommendations.

How to use this checklist

Complete what is known, identify the source of each figure, and mark assumptions clearly. Unknown inputs are not failures—they are decisions that still need evidence. Final equipment selection requires site-specific engineering review, manufacturer confirmation and an agreed commercial scope.

01 / OPERATION PROFILE

■	Mine or project name, country and site location	Evidence / owner / open question:
■	Mine type, project stage and responsible decision team	Evidence / owner / open question:
■	Material type, density, fragmentation, abrasiveness and moisture	Evidence / owner / open question:
■	Target tonnes per hour / shift / day and working calendar	Evidence / owner / open question:
■	Number of shifts, planned operating hours and seasonal changes	Evidence / owner / open question:

02 / HAUL ROUTE

■	Loaded and empty travel distance; route map and elevation profile	Evidence / owner / open question:
■	Maximum and sustained grades; curves, intersections and stopping areas	Evidence / owner / open question:
■	Road width, surface material, rolling condition and maintenance practice	Evidence / owner / open question:

■	Drainage, water crossings, dust, visibility and wet-season conditions	Evidence / owner / open question:
■	Loading and dumping approaches; traffic controls and interaction risks	Evidence / owner / open question:

03 / CURRENT FLEET & PERFORMANCE

■	Existing truck, body, loader and support-equipment models and quantities	Evidence / owner / open question:
■	Payload policy, typical payload evidence and loading compatibility	Evidence / owner / open question:
■	Observed cycle-time breakdown: loading, travel, dumping, return, queueing	Evidence / owner / open question:
■	Availability, utilization and downtime definitions with measurement period	Evidence / owner / open question:
■	Repeat failures, tyre issues, fuel constraints and operator concerns	Evidence / owner / open question:

04 / TARGET REQUIREMENT

■	Decision to make: new fleet, replacement, capacity increase or reliability improvement	Evidence / owner / open question:
■	Required output, payload range, implementation date and operating constraints	Evidence / owner / open question:
■	Preferred configuration requirements and non-negotiable site rules	Evidence / owner / open question:
■	Scenario range: expected, constrained and peak operating case	Evidence / owner / open question:
■	Success measures and the evidence that will be used to verify them	Evidence / owner / open question:

05 / MAINTENANCE & PARTS READINESS

■	Workshop, lifting, tooling, diagnostics and technician capability	Evidence / owner / open question:
■	Manufacturer manuals, service history and maintenance-record quality	Evidence / owner / open question:
■	Critical parts, consumables, tyres and current replenishment lead times	Evidence / owner / open question:
■	Fuel, lubricants, filtration and storage conditions	Evidence / owner / open question:
■	Remote support, field service, warranty and escalation expectations	Evidence / owner / open question:

06 / DELIVERY & SITE READINESS

■	Target destination, port, inland route and import responsibility	Evidence / owner / open question:
■	Site access, unloading, assembly and commissioning constraints	Evidence / owner / open question:
■	Required inspections, documents and acceptance process	Evidence / owner / open question:
■	Operator and technician training needs	Evidence / owner / open question:
■	Named owners for technical, commercial, logistics and site decisions	Evidence / owner / open question:

DECISION GATE

Before requesting a final proposal, confirm: the latest site inputs are dated and approved; assumptions are visible; equipment interfaces have technical owners; performance definitions are agreed; parts, maintenance, training and logistics are inside the scope; and final specifications will be confirmed by the relevant manufacturer and project team.

Reference basis

This discovery tool reflects a systems approach to haulage. Useful public references include the U.S. NIOSH Haul Truck Research Roadmap and Design of Surface Mine Haulage Roads — A Manual. See the Phoenix Knowledge Center for dated source links and contextual guidance.

Important: This checklist is an educational discovery aid. It is not engineering advice, a safety assessment, a product specification, a quotation or a performance guarantee.