



KARARA MINING LIMITED

Karara Mining Limited

2.5T Forklift

2.5 吨叉车

JUL-2025

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2.5T FORKLIFT 2.5 吨叉车

SYNOPSIS

This document has been prepared for the procurement of the 2.5-tonne capacity diesel-powered forklift to support operational needs at the Karara Mining Project in Western Australia. The forklift will be utilized in various critical applications, including maintenance operations, production material handling, and warehouse logistics. The specification outlines all technical, safety, compliance, and documentation requirements to ensure the equipment meets Karara’s operational standards, Australian regulatory obligations, and the environmental and safety conditions specific to mining environments. It serves as a foundational document for supplier selection, tendering, and contract execution.

本文件旨在采购额定起重量为 2.5 吨的柴油驱动叉车，以支持西澳卡拉拉矿业项目的运营需求。该叉车将用于多个关键场景，包括设备检修、生产物料搬运及仓储物流等作业。技术规范明确了所有技术、安全、合规及文件要求，确保所供设备符合卡拉拉运营标准、澳大利亚相关法规以及矿山作业环境下的安全与环境条件。本文件作为供应商遴选、招标及合同执行的基础依据。

Disclaimer

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2.5T FORKLIFT – TECHANICAL SPECIFICATION						
REV	DESCRIPTION	ORIG	MANAGER APPROVAL	THIRD PARTY APPROVAL	COMMERCIAL DEPARTMENT APPROVA	DATE
A	Issued for Review	JINDONG YAN <i>Jindong Yan</i>				Jul- 25

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1 SCOPE OF APPLICATION

适用范围

This specification applies to the procurement of the 2.5- ton capacity forklift for the Karara Mining Project in Western Australia. The forklift will operate in a mining environment and is required to meet the site's production, safety, environmental, and operational compliance standards. It must be suitable for off-road and heavy-duty use, with robust performance under harsh conditions such as high dust levels, temperature fluctuations, and corrosive exposure. This document defines all technical, functional, and documentation requirements to be met by the supplier to ensure full operational readiness and regulatory compliance.

本技术规范适用于为西澳卡拉拉矿业项目采购额定起重量为 2.5 吨的叉车。该设备将在矿区环境中运行，必须满足现场在生产、安全、环保及运营合规方面的标准要求。叉车应适用于非公路重载作业，具备在高粉尘、温差波动及腐蚀性环境下稳定运行的能力。本文件明确了供应商需满足的所有技术、功能及文档要求，以确保设备具备全面的运行准备状态并符合相关法规要求。

2 DESCRIPTION OF THE 2.5T FORKLIFT

2.5 吨叉车描述

The 2.5- ton forklift covered by this specification will be used for multi-departmental support within the Karara mine site. It will primarily assist:

- The maintenance department, by transporting and positioning filter plates and heavy components during equipment servicing.
- The production department, by handling bulk materials essential to the milling process.
- The warehouse/logistics department, by performing general material loading and unloading tasks.

The forklift must feature excellent manoeuvrability in constrained spaces, corrosion resistance for outdoor exposure, and operator safety features suitable for continuous operation in a remote mining environment. The machine shall be diesel-powered, equipped with a robust chassis, a high-visibility operator cabin, and be fully compliant with Australian Design Rules (ADR), AS 2359, AS 4024, AS 2550, and applicable mining safety and emissions legislation.

本规范所涉及的 2.5 吨叉车将服务于卡拉拉矿区多个部门的日常运营，主要应用包括：

- 设备检修部门：用于运输与定位滤板及设备检修过程中所需的重型部件；
- 生产部门：用于搬运选矿流程中关键的散装物料；
- 仓储/物流部门：执行各类常规物料的装卸任务。

叉车必须具备优异的狭窄空间机动性、良好的耐腐蚀性能（适应户外作业），并配备适用于偏远矿区连续作业的操作者安全功能。设备应为柴油驱动，配备高强度底盘结构与高可视性驾驶室，并全面符合澳大利亚设计规则（ADR）、AS 2359、AS 4024、AS 2550 及相关矿区作业与排放法规的要求。

3 BASIC REQUIREMENTS

基本要求

3.1 Performance Parameters 性能参数

The forklift shall be engineered for high reliability, strong structural integrity, and consistent performance under demanding mining conditions, including high dust, heat, and corrosive exposure typical of Western Australia operations.

叉车应具备高可靠性、结构强度及在严苛矿山环境下持续稳定运行的能力，能适应西澳典型的高粉尘、高温及腐蚀性工况。

It must feature:

- Certified ROPS/FOPS Level II cabin protection, in accordance with AS 2294.1 and ISO 3449, to ensure operator safety against rollovers and falling objects.
- Integrated grade safety features, including auto parking brake (activates at gradients $\geq 5\%$) and hill-start assist to prevent rollback.
- Collision avoidance system comprising 360° surround-view cameras and radar sensors with a minimum detection range of 3 meters, compliant with AS 2359.2 safety standards.

设备必须配备：

- 经认证的 ROPS/FOPS Level II 防护驾驶室，符合 AS 2294.1 和 ISO 3449 标准，保障操作人员在翻车或坠物事故中的人身安全。
- 集成坡度安全控制功能，包括 自动驻车制动器（坡度 $\geq 5\%$ 自动启用）及坡道起步辅助，防止溜坡。
- 防撞预警系统，配备 360°环视摄像头及雷达传感器（探测距离不小于 3 米），符合 AS 2359.2 安全要求。

Parameter	Specification
Rated lifting capacity	$\geq 2,500$ kg @ 500mm LC
Maximum lifting height	≥ 3 m
Engine output	35-50 kW
Fuel type	Diesel (low-sulphur, off-road grade)
Gradeability (loaded)	$\geq 25\%$
Ground clearance	≥ 220 mm
Turning radius	≤ 2.3 meters
Travel speed	23/25 km/h with/without load
Fuel tank capacity	≥ 65 litres
Forward blind spot	$\leq 5^\circ$ (AS 2144:2023 compliant)

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Dynamic load factor	≥ 2.5 (ISO 3691)
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参数	技术规格
额定起重量	≥ 2,500 kg @ 600mm LC
最大起升高度	≥ 3 m
发动机功率	35-50 kW
燃料类型	柴油（低硫，符合非公路用燃油标准）
满载爬坡能力	≥ 25%
最小离地间隙	≥ 220 mm
最小转弯半径	≤ 2.3 米
行驶速度	23/25km/h 满载/空载
燃油箱容积	≥ 65 升
前方盲区标准	≤ 5°（符合 AS 2144:2023 要求）
动载荷系数	≥ 2.5（依据 ISO 3691）

3.2 Environmental Adaptability Requirements 环境适应性要求

- Protection Rating: The entire vehicle electrical system shall be rated to IP67 protection level, with all wiring harnesses coated with flame-retardant insulation（AS/NZS 3808:2020）to ensure safe operation in harsh mining environments.
防护等级：全车电路系统须具备 IP67 防护等级，所有线束应涂覆 阻燃涂层，（AS/NZS 3808:2020）以确保在严苛矿区环境下的安全运行。
- Corrosion Resistance: Key components must be treated against corrosion in accordance with AS 4312:2008 to withstand exposure to dust, humidity, and salt spray typical of mining environments.
耐腐蚀性：关键部件按 AS 4312:2008 标准进行防腐处理，适应矿区潮湿、多尘和盐雾环境。
- Temperature Range: The equipment must reliably operate in ambient temperatures ranging from -20°C to +55°C.
工作温度范围：-20°C 至 +55°C，确保在极端温度条件下运行。

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3.3 Standards Compliance 标准合规性

The equipment shall obtain:

- Vehicle Import Approval (VIA)
- Concessional RAV Entry Approval via ROVER system
- Documentation must include:
 - Emission compliance certificate
 - Asbestos-free declaration
 - DMIRS equipment registration (WA)
 - IECEx Zone 22 certification (if applicable)

设备须取得以下合规认证与文件：

- 澳大利亚车辆进口批准（VIA）
- 通过 ROVER 系统 获取减免车辆登记批准（Concessional RAV Entry）
并提供以下文件：
- 排放合规证书
- 无石棉声明
- 向西澳矿业与工业监管局（DMIRS）注册设备
- IECEx Zone 22 防爆认证（如适用）

3.4 Structural and Functional Design

- Compact frame with heavy-duty chassis suitable for tight spaces and rugged terrain
- Operator cabin shall include:
 - Enhanced visibility and low blind-zone structure
 - Filtered pressurization system
 - Certified ROPS/FOPS protection
 - Air-conditioning system suitable for +55°C
 - Automatic engine shutdown when coolant temperature exceeds 105°C
- 结构设计应为紧凑型车架+重载底盘结构，适应狭小空间和复杂地形；
- 驾驶室配置包括：
 - 高可视性与低盲区结构
 - 过滤加压系统
 - 经认证的 ROPS/FOPS 防护
 - 适用于+55°C 高温环境的空调系统

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- 当冷却液温度超过 105°C 时自动关闭发动机

3.5 Certification Requirements 认证要求

- Application via ROVER system: Submit an application through the ROVER system for Concessional RAV Entry Approval, including all technical documents, an NTC emission certificate, and an asbestos compliance declaration.

ROVER 系统申请：通过 ROVER 系统申请 Concessional RAV Entry Approval, 需提交技术文件、NTC 排放证书及石棉合规声明。

- Usage Restriction: The equipment must be restricted to use within Australian mining sites and is not permitted on public roads.

使用范围限制：设备仅限澳洲矿区使用，禁止进入公共道路。

3.6 Warranty Period 质保期

Component	Warranty Period
Whole machine	12 months or 2,000 hours
Drive & hydraulic system	24 months or 4,000 hours
Chassis & structural frame	60 months or 10,000 hours

部件	质保期限
整机	12 个月 或 2,000 小时（以先到为准）
驱动与液压系统	24 个月 或 4,000 小时
底盘与结构框架	60 个月 或 10,000 小时

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3.7 Reference Brand 参考品牌: Toyota 5FD70



Reference picture 参考图片:



3.8 Others 其他

3.8.1 Attachment Technical Requirements 附件技术规范

Attachment Type	Technical Specification	Application Scenario	Standard Reference
Side Shifter	Hydraulic type, minimum lateral displacement ≥ 150 mm; load-holding valve for automatic locking under load	Precise positioning	AS 2359

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Fork Tynes	Made from wear-resistant alloy, rated for full 2.5-ton load	Prevent load slippage during handling of heavy materials	AS 2359
Load Monitoring System	Real-time display of lifting weight (accuracy $\pm 1\%$), automatic overload cut-off, and dynamic centre-of-gravity tracking	Prevent tipping accidents and improve lifting safety	AS 2359
Reversing Radar + Camera System	IP67-rated waterproof and dustproof; detection range ≥ 3 m; equipped with dust mode for mining conditions	Enhance safety in blind spots and during reverse operations	AS/NZS IEC 60947.1:2015
Centralized Lubrication System	Automatic lubrication system covering 8 key pivot points, including mast and steering axle	Reduce maintenance downtime and extend service life	AS 4457
Quick-Attach Tool Interface	Interface in compliance with ISO 2328; compatible with clamp arms, drum clamps, etc.	Expand functionality for handling barrels, pipes, and irregular loads	ISO 2328 (Mounting dimensions for fork arms and attachments)
Cabin Protective Mesh	Steel wire mesh, aperture ≤ 50 mm, minimum impact resistance ≥ 120 J	Protection against flying debris during grinding ball loading	AS 4024.1603 (Fixed and movable guarding for hazardous areas)

附件类型	技术规格要求	适用场景	标准依据
侧移器	液压式，最大侧移量 ≥ 150 mm，具备负载自锁功能	精准定位	AS 2359
货叉	耐磨合金钢材质，满足 2.5 吨载荷	防止搬运重物时负载滑落	AS 2359

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载荷监控系统	实时显示重量（精度 $\pm 1\%$ ）、自动监测重心位置，超载自动切断液压	防止倾翻事故	AS 2359
倒车雷达+影像	防水防尘等级 IP67，探测距离 ≥ 3 米，具备粉尘模式，适应矿区高粉尘环境	提高盲区作业安全性	AS/NZS IEC 60947.1:2015
集中润滑系统	自动注油系统，覆盖全车 8 个关键铰点（包括门架与转向轴）	减少人工维护与停机时间	AS 4457
快换属具接口	接口符合 ISO 2328 标准，兼容夹臂、桶夹等常见属具	拓展多功能属具使用（如油桶）	ISO 2328（属具接口通用规范）
驾驶室防护网	钢丝防护网，网孔直径 ≤ 50 mm，抗冲击能力 ≥ 120 J	防止钢球装填作业中矿石飞溅	AS 4024.1603（危险区域防护）

3.8.2 Reverse Alarm 倒车警报

- AS 1319:1994 (Acoustic signals for mobile machinery).
AS 1319:1994（移动机械声响信号）
- The reverse alarm must emit a pulsed signal of 105–110 dB(A) at a distance of 1 meter, clearly distinguishable from background noise, in compliance with AS/NZS 1269.3:2005.
1 米距离处 105–110 dB(A)脉冲报警，声频与环境噪音显著区分（符合 AS/NZS 1269.3:2005）。
- Distinctive dual-tone pulse pattern is required, such as 0.5 seconds on / 0.5 seconds off.
特征性间歇双音调（如 0.5 秒开/0.5 秒关）。

3.8.3 Rotating Warning Light 旋转警示灯

- AS/NZS 1906.4:2010 (Retroreflective devices for heavy vehicles).
AS/NZS 1906.4:2010（重型车辆逆反射装置）
- Must provide 360-degree visibility with intensity of at least 1.0 candela/lux/m².
360 度可见，亮度 ≥ 1.0 坎德拉/勒克斯/平方米。

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- Amber in colour, meeting Class RB requirements.
琥珀色（RB 级）。
- Surface use: Must meet IP67 rating with additional anti-dust coating.
地面使用：IP67 防护等级+防尘涂层

3.8.4 "Etc." Items (Critical Additions for WA Mines) “其他”项目（西澳矿山关键补充项）

- Fire Extinguisher 便携式灭火器
AS 1851:2021 (Portable fire extinguishers) – ABE class dry powder type, minimum 5kg capacity.
AS 1851:2021（便携式灭火器）——至少 5 公斤 ABE 类干粉型。
- Automatic Fire Suppression System (Engine Compartment)
 - Certified to AS 5062-2022
 - Thermally activated agent release
 - Minimum agent capacity: ≥ 2 kg, MSDS must be provided发动机舱自动灭火系统
 - 符合 AS 5062-2022
 - 热感应触发
 - 灭火剂容量不低于 2 kg，并提供化学品安全数据表（MSDS）
- Seatbelts 安全带
AS 2593:2021 (Seatbelt systems for earth-moving machinery).
AS 2593:2021（工程机械安全带）。
- Lighting 照明
ISO 12508:2017, colour temperature 5,000K $\pm 10\%$.
ISO 12508:2017（色温 5,000K $\pm 10\%$ ）。
WA Mandatory: LED work lights must be installed at both front and rear, with an initial luminous output of $\geq 3,000$ lumens, and rated to IP68K for high-pressure cleaning environments.
西澳强制要求：前后 LED 工作灯（初始光通量 $\geq 3,000$ 流明，IP68K 防护等级）。

4 TRANSPORTATION, INSTALLATION, COMMISSIONING, AND ACCEPTANCE 运输、安装、调试与验收

4.1 Transportation 运输

4.1.1 Ocean Freight & Customs Clearance 海运与清关

- The supplier shall arrange sea transportation to Western Australia Port and provide real-time access to a logistics tracking system.
- Suppliers must complete Australian biosecurity inspections, including AQIS BMSB treatment, and submit customs duty exemption applications under Section 123 of the Mining Act 1978 (Mining Equipment Exemption).
- 供应商应安排海运至西澳港口并提供物流追踪系统的实时访问权限。
- 必须完成澳大利亚生物安全检验（包括 AQIS BMSB 处理），并根据《1978 年采矿法》第 123 条提交采矿设备关税豁免申请。

4.1.2 Inland Transport 内陆运输

- Main Roads WA Oversize Transport Permit must be obtained, including full dimensional and weight details.
- Transport route must avoid Aboriginal heritage areas per the Aboriginal Heritage Act 1972, with submission of route plans.
- 须取得 Main Roads WA 颁发的超限运输许可（包括设备尺寸与重量说明）。
- 运输路线应避开土著文化保护区，并根据《1972 年土著文化遗产法》提交路线图纸。

4.2 Installation 安装

- The supplier shall supervise unloading and mechanical positioning of the equipment at the designated mine site installation area.
- Lifting operations must follow AS 1418.8-2008 for loader lifting points and AS 4991-2004 for lifting devices.
- Electrical connections must comply with AS/NZS 3000:2018 and be inspected by Western Power prior to energisation.
- 供应商需负责监督设备在矿区指定安装区域的卸载与就位。
- 吊装作业需符合《AS 1418.8-2008 装载机吊点要求》及《AS 4991-2004 吊装装置》标准。

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- 电气连接须符合《AS/NZS 3000:2018》规范，并由 Western Power 检验通过后方可通电。

4.3 Commissioning 调试

- The equipment shall undergo initial commissioning including hydraulic system validation, engine parameter calibration, and safety interlock checks.
- Real-time emission interface shall be connected to the mine monitoring system for verification.
- Mechanical guarding for all rotating parts must be in place as per *Work Health and Safety (Mines) Regulations 2022*, Clause 47.
- 设备需完成初始调试，包括液压系统验证、发动机参数校准及安全联锁测试。
- 实时排放数据接口应接入矿区监控系统并完成验证。
- 所有旋转部件必须安装机械防护罩，符合《2022 年矿山健康与安全条例》第 47 条。

4.4 Acceptance 验收

In addition to complying with applicable Australian standards and certifications, the skid steer loader must also meet the regulatory requirements of the state government where the mine is located. These include, but are not limited to: the *Product Emissions Standards Act 2017*, the *Product Emissions Standards (Customs) Charges Act 2017*, and the *Product Emissions Standards (Excise) Charges Act 2017*.

该滑移装载机除需满足澳大利亚相关标准及认证外，还必须符合矿区所在地州政府的法规要求，包括但不限于：《2017 年产品排放标准法》、《2017 年产品排放标准（海关）收费法》及《2017 年产品排放标准（消费税）收费法》等。

Factory Acceptance Test (FAT) 工厂验收	• Tipping Load Test (ISO 14397-1) • Hydraulic Peak Pressure Test $\geq 110\%$ of design pressure	FAT report signed by third-party laboratory (English) 第三方实验室签署的英文报告
Site Acceptance Test (SAT)	• 72-hour continuous operation test (≤ 1 failure)	SAT log + compatibility certificate

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现场验收	CAT Mine System integration check	试运行记录+系统兼容性证明
Regulatory Certification 合规认证	- ROPS/FOPS compliance - Noise level ≤ 82 dB(A) - Audit Tier 4 Final emissions data against Product Emissions Standards Act 2017	Certificates issued by WorkSafe WA- authorised body 由 WorkSafe WA 授权机构出具的合规证书

4.5 Notes 说明

4.5.1 Third-Party Verification Framework 第三方验证框架

Verification Authority 验证机构资质

- Must hold NATA accreditation (ISO/IEC 17025) and WorkSafe WA authorization for mining equipment certification.
需持有 NATA 认证 (ISO/IEC 17025) 及 WorkSafe WA 矿山设备授权。
- Scope includes Design review, FAT/SAT witnessing, compliance auditing.
服务范围涵盖：设计审查、工厂/现场验收见证、合规审计。

4.5.2 Contractual Obligations 合同义务

1. Third Party as Karara's Technical Agent 第三方作为卡拉拉技术代理

- Review all design documents for AS 1418.10:2025 compliance.
审核全部设计文件是否符合 AS 1418.10:2025。
- Hold veto power on SAT approval if safety standards are breached.
若违反安全标准，对 SAT 验收拥有一票否决权。

2. Deliverables 交付物

- Signed FAT/SAT certificates with NATA logo.
签署带 NATA 标识的 FAT/SAT 证书。
- ROVER registration package submitted to DMIRS within 30 days.
30 日内向 DMIRS 提交 ROVER 注册包。

3. Cost & Liability 费用与责任

- Verification costs borne by supplier (per WA Mines Regulation 12A).

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验证费用由 供应商承担（依据西澳矿山条例 12A 条）。

- Third party liable for negligent certification (Civil Liability Act 2002).
第三方对 认证过失 承担法律责任（《2002 民事责任法》）。

5 DOCUMENTATION AND LABELLING 文档与标识

All product nameplates and labels shall be in English. All relevant technical documentation shall be provided in English. All products shall be accompanied by English labels that comply with regulatory requirements.

所有产品的铭牌、标识均应用英文标示。所有相关的技术文档均应提供英文版本。所有产品均应附带符合法规要求的英文标识。

5.1 Nameplates & Labels 铭牌与标签

All nameplates and safety labels shall be written in 100% English, in compliance with Chapter 2.6 of the *Competition and Consumer Act 2010*.

语言：

所有铭牌及安全标签必须为 100%英文，符合《2010 年竞争与消费者法》第 2.6 章要求。

Mandatory Contents:

- Equipment serial number and date of manufacture
- ROPS/FOPS certification number (per ISO 3471 & ISO 3449)
- NTC emission compliance code (Tier 4 Final)
- Electrical safety rating (IP67 + AS/NZS 3000:2018)
- WA registration mark (RAV Entry Approval No.)

强制内容：

- 设备序列号、出厂日期
- ROPS/FOPS 认证编号（符合 ISO 3471 与 ISO 3449）
- NTC 排放认证码（Tier 4 Final）
- 电气安全等级（IP67 + AS/NZS 3000:2018）
- 西澳注册标识（RAV Entry Approval No.）

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Durability:
All plates must be laser-etched on stainless steel, resistant to salt spray corrosion per AS 4312:2008.

耐久性：
铭牌必须使用不锈钢激光蚀刻工艺，具备抗盐雾腐蚀能力，符合 AS 4312:2008 标准。

5.2 Technical Documentation 技术文档

Documentation shall be provided in English as the primary language. A Chinese version may be provided as a reference only and shall have no legal effect.

语言：
技术文档以英文为主，中文仅作为参考辅助，不具备法律效力。

Submission Timeline:

- Draft version: Due at least 45 days before Factory Acceptance Test (FAT)
- Final version: Due 7 days before delivery

交付时效：

- 初稿：需在工厂验收（FAT）前 45 天提交
- 终稿：需在交付前 7 天提交

5.3 Required Document List 核心文件清单

Document Type 文档类型	Additional Compliance Requirement 新增合规要求	Reference 依据
Declaration of Conformity 符合性声明	Must be signed by a licensed Australian engineer, covering AS/NZS 3000, ISO 3471, AS 5062:2022	Work Health and Safety Act 2020

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Factory Acceptance Procedure 工厂验收程序	Must include video of tipping load test (ISO 14397-1) and hydraulic peak pressure curve	<i>DEMIRS MDG 41</i>
Inspection Report 检验报告	Corrosion coating to be tested via $\geq 1,000$ -hour salt spray test per AS 4312:2008	<i>WA Mine Corrosion Guidelines</i>
Noise Test Report 噪音测试报告	Must be issued by WorkSafe WA accredited lab and include full-condition sound profiles (unloaded/loaded/steering)	<i>AS/NZS 1269.1:2005</i>
IOM Manual 使用维护手册	Dedicated section on maintenance in high-dust WA environments (HEPA filter change cycle ≤ 250 hours)	<i>AS 2985:2009</i>
Maintenance Strategy 维护策略	Include critical component life prediction based on AS 4457.1-2018 mining equipment lifecycle model	<i>AS 4457.1</i>

5.4 Specific Supplementary Clauses 补充条款

5.4.1 Electrical Safety Certification 电气安全认证

- Requirement:
All electrical schematics must bear a Western Power compliance stamp as required by the *WA Electricity Regulations 1991*.
- 要求:
所有电路图须加盖 Western Power 合规印章, 符合《1991 年西澳电气法规》(*WA Electricity Regulations 1991*) 要求。

5.4.2 Documentation Upload Obligations 文件注册义务

Requirement:

The supplier shall assist in uploading the following documents into the DEMIRS ROVER system as part of equipment registration:

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- Noise test report (PDF format and original .CSV data file)
- Fire suppression system certificate compliant with AS 5062:2022

要求:

供应商需协助将以下文件上传至 DEMIRS ROVER 系统作为设备注册材料之一:

- 噪音测试报告 (PDF 格式及原始.CSV 数据文件)
- 灭火系统合规证书 (符合 AS 5062:2022 标准)

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The supplier must possess ISO 9001 Quality Management System certification.

供应商需具备 ISO9001 质量管理体系认证。

This specification ensures that the design, manufacturing, installation, and commissioning of the skid steer loader fully comply with the safety and environmental regulations of the Australian mining area. For any other unspecified requirements related to design, installation, certification, etc., the supplier must clarify with the owner's senior project engineer or technical personnel of equivalent or higher qualification.

本规范确保滑移装载机的设计、制造、使用全面符合澳大利亚矿区的安全和环保法规。其它未尽的设计、安装、认证等的要求供应商须与业主方项目高级工程师或以上资格的技术人员澄清。

The equipment needs to comply with Australian standards and Australian mining area usage standards, including but not limited to:

该设备需符合澳大利亚相关标准及澳大利亚矿区使用标准，包括但不限于：

Document No. 文件编号	Document Title 文件名称
AS 4024:2019	focuses on the safety of machinery
AS 2294	Earth-moving machinery-Protective structures
ISO 3471	Earth-moving machinery – Roll-over protective structures – Laboratory tests and performance requirement
ISO 3449	Earth-moving machinery – Falling-object protective structures – Laboratory tests and performance requirement
AS 3000:2018	focuses on ensuring safe work practices for electrical and refrigeration/air-conditioning workers
AS 3820	standard for suppliers of electrical equipment, including compressors

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AS 3760	focuses on the safety of portable electrical equipment. This is relevant for any electrical tools or equipment used in conjunction with a skid loader.
ISO 20474-3	provides safety requirements for earthmoving machinery
AS 1418.8-2008	focuses on cranes, hoists, and winches, and includes specific provisions for wheel loaders used to lift suspended loads, relevant to some skid loader applications
AS 4772:2008	Earth-moving machinery – Quick hitches for excavators and backhoe loaders
AS 5062-2022	Fire prevention and protection for mobile and transportable equipment
	<i>Mines Safety and Inspection Act 1994 (WA)</i>
	<i>Work Health and Safety (Mines) Regulations 2022 (WA)</i>

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7 KML STANDARD 卡拉拉设备标准列表

Document No. 文件编号	Document Title 文件名称
CORP-GE-SPC-1001_1	EQUPMENT LABELLING SPECIFICATION
CORP-GE-SPC-1002_0	SPECIFICATION FOR PACKING, MARKING AND DOCUMENTATION REQUIREMENTS
CORP-GE-SPC-1004_1	SPECIFICATION FOR SURFACE TREATMENT OF STRUCTURAL STEELWORK AND PIPEWORK
CORP-GE-SPC-1005_0	TECHNICAL SPECIFICATION FOR SHOP DETAILING OF STRUCTURAL AND MECHANICAL ITEMS
CORP-EL-SPC-1008_0	SPECIFICATON FOR ELECTRIC MOTORS
CORP-IN-SPC-1001_0	SPECIFICATION FOR GENERAL INSTRUMENTS
CORP-IN-SPC-1002_0	SPECIFICATION FOR CONTROL AND INSTRUMENTATION FOR PACKAGES
CORP-IN-SPC-1007_0	SPECIFICATION FOR INSTRUMENTATION INSTALLATION
CORP-IN-SPC-107_0	SPECIFICATION FOR CONTROL SYSTEM HARDWARE
CORP-IN-SPC-1018_0	SPECIFICATION FOR CONTROL SYSTEM SOFTWARE