



Quarries National Joint Advisory Committee (QNJAC)

Plant Safety

Information Sheet 3

November 2011

Drill Rigs

Maintenance and Safety checks

This Information Sheet has been developed by the Quarries National Joint Advisory Committee (QNJAC) to help quarry operators, contractors, managers and others learn how to make health and safety improvements in the quarry industry. This guidance represents good practice which may go further than the minimum you need to do to comply with the law.

Approved by the Quarries National Joint Advisory Committee (QNJAC)
(Version 1: 2 November 2011)

Use of this Book

The purpose of this book is to ensure that all drill rigs operated are maintained in safe condition. Maintenance and safety checks are to be made as soon as practicable when a machine is used. Local rules will provide more detail.

The book shall be retained in the drill rig cab and be available at all times for inspection. If the book is lost or damaged, report it immediately to your supervisor/manager.

1. Enter name of site/quarry where drilling operations are taking place.
2. Enter the drill rig make and type and plant number on the front cover and at the top of each sheet used.
3. All items must be meaningfully addressed with the appropriate box receiving a (✓) if in order, a cross (X) is requiring attention or a zero (0) if not applicable. The defects box requires a **yes** or **no** entering.
4. The operator shall initial the sheet for each shift operated.
5. At the end of each week, the sheet shall be signed by the operator and the supervisor/manager.
6. On days when the drill rig is not in use this should be clearly identified on the sheet.
7. When the book is full, it shall be handed back to the quarry supervisor/manager and replaced with a new one.

Defect Reporting

1. **All defects shall be recorded in the defects section and be reported to the supervisor/manager IMMEDIATELY.**
2. Where a category 'A' defect is identified the drill rig must be isolated, the keys removed and a 'Do Not Operate' notice posted in a prominent position on the machine.
3. Where a defect is likely to affect the safe operation of the drill rig, e.g. brakes, steering, reversing aids, horn, emergency stops, dust collector and lighting during darkness, the defect sheet must be completed and the book handed back to the quarry supervisor/manager immediately.
4. Where the supervisor/manager deems the machine is safe to continue working, they shall make a note of the reason on both copies of the defect sheet before acknowledging receipt and removing the top copy from the book.
5. Where a defect sheet is received by the supervisor/manager, it shall be given a job reference number (top right hand box).

Daily Checks

Oil Fuel & Coolant Levels	: Check as per manufacturer's recommendations.
Oil Fuel & Coolant Leaks	: Visual check for any significant leaks.
Visible Flexible Pipework	: Visual check for excessive wear to pipes, hoses and couplings.
Air leaks	: Visual check for any significant leaks, drain tanks to release water and necessary restrains in place.
Tracks	: Wear on tracks, tension of track and test braking system on slight incline in a designated safe area, as per local rules.
Windows & Wipers	: Check condition and operation.
Mirrors	: Mirrors fitted and are in good order.
Steps & Handrails	: Check condition, particularly bottom step and treads, ensure handrails on-top of main body are in good order.
Lights/Beacon	: Check operation and condition including reversing lights.
Horn	: Check operation.
Reverse/Travel Alarms	: Check that audible warning operates when reverse gears selected or in travel mode.
Seat (include sensors)	: Check condition of seat structure, springs & dampers, test sensor works when driller is out of seat.
Seat Belt	: Check condition and mountings for security.
Instruments	: Check that all instruments & engine management systems are working.
Fire Extinguishers	: In place and fully charged.
Steering Controls	: Check machine steers okay before proceeding to work.
Air Conditioning (where fitted):	Working satisfactorily.
Cab Cleanliness	: Check for excessive build up of dust and the presence of heavy loose objects. Check condition of cab filters where fitted.
CCTV	: Check for correct operation and picture quality.
Emergency stops	: Check that system is operational. (Test once a week)
Dust Collector	: Check that collector is working and there are no leaks in the pipe.
Inclinometer set -up	: Check accuracy and that it is working.
Rig structure & Drill bits	: Check for signs of cracking or structural failures affecting the safe operation of the rig, check drilling components are in good order.
Machine guards	: Check all guards on the machine are in place and secure.
Remote Control(s)	: If defective rig may be used in manual mode only, subject to risk assessment.
Whip Check Restraint	: Correctly fitted to airline
Two way radios	: Check two way radio communication systems are operating correctly.

Category A

When defects with any of the following occur, the vehicle **MUST** be taken out of service immediately and reported:

- Cameras, proximity warning device, audible reverse/travel warning system, reverse light.
- Braking system.
- Steering.
- Front windscreen cracks in line of vision.
- Mirrors impairing vision.
- Headlights in hours of darkness or poor visibility.
- Rig structure and drilling components.
- Any safety warning device.
- Wipers in wet conditions.
- Steps and handrails other than cosmetic.
- Major oil leaks, air leaks or fuel leaks.
- Damaged seat where the integrity of the seat is compromised or seat sensors are not working.
- Guards damaged or missing.
- Door handles (operating devices) which prevent efficient opening.
- Seat belts, damage of any kind.
- Significant loss of track integrity.
- Inoperative or ineffective communication system.

Category B

When defects with any of the following occur the quarry management **MUST** be informed immediately and arrangements made to rectify the defect ASAP.

- Working lights in hours of daylight.
- Flashing beacons.
- Wipers in dry conditions
- Steps and handrails where damage is more cosmetic than safety.
- Any minor cracking to windscreen.
- Dust collector inoperative/ inefficient
- Inoperative or ineffective communication system.

Category C – 1 Month

Anything else that is not mentioned above and is not considered a major safety hazard.

Drill Rig Daily Safety Check Sheet

Site Name:

Driller's Name..... Plant No.....

Make..... Type.....

Week Commencing.....Shift Hours.....

To be completed prior to the start of each shift

Inspection areas (if applicable)	M	T	W	T	F	S	S
Oil, Fuel and Coolant Levels							
Oil, Fuel and Coolant Leaks							
Visible Flexible Pipework							
Air Leaks							
Tracks (including braking system)							
Windows/Wipers							
Mirrors							
Steps and handrails							
Lights/Beacon							
Horn							
Audible Reverse/Travel Warning System							
Seat condition (include seat sensors if fitted)							
Seatbelt							
Instrumentation							
Fire Extinguisher							
Steering Controls							
Air Conditioning (where fitted)							
Cab Cleanliness							
CCTV Camera							
Emergency Stops							
Dust Collector							
Inclinometer set-up							
Drill rig structure & Drilling components							
Machine guards							
Remote Control(s)							
Whip Check Restaint							
Two way radio communication system							
Defect/Job No. Form at rear of book							
Operators Initials							
All defects must be completed using the forms in the back of this book. Comments only on wear (rod threads, drill bit) in this section.							
Operator	Manager/Supervisor						

Vehicle Defect Report:	Job Ref No:
Machine:	Plant No:
Defect:	
Reported by:	Date:
Received by:	Date:
Remedial Action Taken:	
Fitter's Signature:	Date:
Manager/Supervisor:	Date:

DRILL RIG DAILY SAFETY CHECK

Machine:

Drill Rig Owner:

Plant No:

Date From:

Date To:

THIS BOOK SHOULD BE HANDED TO AND
SIGNED BY THE MANAGER OR SUPERVISOR ON
A **WEEKLY** BASIS