COST MANAGEMENT OF THE AVAILABILITY AND UTILIZATION OF MINING EARTH MOVING EQUIPMENT

ELIZABETH J. P. BALT

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by

Elizabeth J. P. Balt

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Study leader: Mr. G. Basson

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DECLARATION

I declare that this research is entirely my own, unaided work, except where otherwise stated. All sources referred to are adequately acknowledged in the text and listed.

I accept the rules of assessment of the University of Pretoria and the consequences of transgressing them.

This treatise is being submitted in partial fulfillment of the requirements for the degree of MSc (Project Management) at the University of Pretoria.

It has not been submitted before for any degree or examination at any other university.

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Elizabeth J. P. Balt

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ABSTRACT

Title of treatise:	Cost management of the availability and utilization of mining earth moving equipment
Name of author:	E J P Balt
Name of study leader:	Mr G Basson
Institution:	Faculty of Engineering Built Environment Information Technology University of Pretoria
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The cost structure for the maintenance and repair contract is based on an equipment availability of ninety percent and is guaranteed by the service provider. It was proved that the actual utilization percentage achieved by the equipment is significantly lower than the provided availability percentage of the equipment.

The main data collection method used was observing the maintenance and repair activities pertaining to the mining earth moving equipment and the phenomena being researched. Participant observation took place in a workshop setting. The method of exploratory data analysis in analysing the quantitative data was applied. In this way the data are described and summarised and then presented in tables, charts, graphs and other diagrammatic forms.

The guaranteed availability was reduced by adjusting the service provider's overhead cost structure. The variable costs were also reduced by eliminating the emergency provision from the unit costs.

The outcome of this research project will spill over to other national and international mining sites with similar contracts in place by applying the same principles to similar active contracts. Continuous improvement will also mature and strengthen the relationship between the client and the contractor further.

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LIST OF ABBREVIATIONS

“BEC” - Barloworld Equipment Company

“EME” - Earth moving equipment

“KSA” - Komatsu Southern Africa

“MARC” - maintenance and repair contract

“MMS” - Middelburg Mine Services

“NEC” - New Engineering Contract

“FIDIC” – Federation Internationale des Ingeniers Conceils

“JBCC” – Joint Building Contracts Committee

“N/A” – Not applicable

CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 INTRODUCTION

Only a few generations will experience in one lifetime what the current generation in South Africa is experiencing. From a very isolated business environment before the 1994 election, an unknown international investment injection is the topic of many conversations every day.

With the numerous benefits of these investments, came the realisation that managerial level in many companies asks for innovative thinking and change management. Choosing to ignore the obvious can be the death sentence of many organisations in the corporate world.

Innovative thinking, change management as well as quality management is the future of worldwide competitiveness. Productive innovation starts with hiring the right people. It is so often found with current Human Rights legislation that experienced managers are replaced by inexperienced managers. As more senior employees leave organisations, junior members suddenly have to be appointed to senior positions. A situation is created where inexperienced managers have to lead other inexperienced personnel. It is also found that very large organisations and highly skilled, creative people are not always a perfect match.

It is very important to identify those in an organisation which have the potential of being creative. Through training and education, individuals can be armed with a sound base of knowledge on any subject. According to Von Oetinger the most successful ideas come from those who have enough experience and understanding of their business area to recognise gaps to be filled, flaws to be corrected and potential to be tapped into (Von Oetinger, 2005: 29).

The survival of an organisation therefore depends on the level of maturity of the relationships within. Emphasis is also placed on the level of maturity of the relationships with external organisations.

Any service must be designed and delivered in order to meet a customer's expectations. If a specific service meets or even exceeds the customer's expectations, the customer is satisfied with the service. If they are satisfied they are more likely to use the service again and may even recommend it to others (Johnson & Clark, 2001).

1.2 INTRODUCTION TO MIDDELBURG MINE SERVICES

Middelburg Mine Services is one of many companies going through a process of transformation, business improvement and inventive thinking. In order to understand the problem and its setting completely, it is necessary to introduce the reader to the organisation.

Middelburg Mine Services is located approximately 20 km south of the town of Middelburg in the Mpumalanga province of South Africa. The consolidation of the mining industry during the past decade has resulted in numerous changes in ownership of Middelburg Mines. Currently the mine is a joint venture between Ingwe Coal (84%) and Xstrata Coal (16%). Ingwe Coal is wholly owned by a global resource giant, BHP Billiton.

BHP Billiton made record profit figures in the year 2005 and forecasts more impressive figures for the next five years.

Duvha Opencast mine was originally established in 1979 to supply coal to Eskom's Duvha Power Station. In 1982, Middelburg Mine Services commenced operations as an export mine in the area adjacent to Duvha Opencast mine. The two mines merged in 1994, after the formation of Ingwe Coal, to become Middelburg Mines. In 2003 the opencast section of Douglas Colliery (Boschmanskrans Pillar section) was incorporated into Middelburg Mine and so became one of the largest opencast coal mines in the world.

Middelburg Mine is a multi product mine producing both export quality and domestic power station coal. By combining export and domestic markets, the mine optimize its reserves and value to the shareholders. The recoverable reserves of the total mine is approximately 580 Mt. This translates into a production life of 30 years for power station coal and 12 years for export coal at the current production rates.

Middelburg Mine has a total labour force of 2,500 full time employees and contractors.

The mine has a supply contract with Eskom to supply 10 million tonnes of coal annually to Duvha Power Station. In addition, 7 Mt per annum of saleable export coal is produced annually and exported via the Richards Bay Coal Terminal. Lastly 6 Mt per annum of run-of-mine coal is supplied to Douglas Colliery as inter-company sales.

To fully understand the complexity of managing a fleet of earth moving equipment, it is necessary to explain the process in more detail.

Middelburg Mine is a modern surface coal mining operation and, as mentioned previously, it is one of the largest mines in the world. Annually the mine moves more than 115 million cubic meters of topsoil and burden material. The run-of-mine coal totals approximately 28 million tones per annum (Du Plessis, 2005: 2).

Middelburg Mine Services recently changed the traditional organisational structure by creating a new department called Business Improvement.

This department examines and evaluates the functioning of departments, sections and processes within the organisation. Projects are registered and detailed tracking is done to measure and monitor improvements. Human resources are studied and changes in the structure of the organisation are

being implemented. The mining processes are also improved with emphasis on simplicity.

1.3 INTRODUCTION TO EARTH MOVING EQUIPMENT

One of the most critical elements of its operation is the primary earthmoving equipment which forms the heart of the mine's activities. In addition to six draglines, a large fleet of trucks, loaders, dozers and shovels are utilised in the mining process at Middelburg Mine, as per Table 1 below. Ancillary mobile equipment such as graders, tyre dozers, service trucks, cranes and skid loaders are also required to provide other important services (Du Plessis, 2005: 4).

Table 1: Total fleet of major equipment employed at Middelburg Mine

Equipment Group	Quantity	Equipment Type
Draglines	6	Bucyrus Erie 1570W draglines
Shovels	2	Komatsu PC8000 electric face shovels
	1	Komatsu H255 diesel backhoe
	1	Komatsu H95 diesel backhoe
Dozers	7	CAT D11 track dozers
	10	CAT D10 track dozers
	8	CAT D9 track dozers
	7	CAT 824 & CAT 834 tyre dozers

Front end loaders	1	Le Tourneau L1800
	2	Le Tourneau L1400
	2	CAT 994 FEL
	4	CAT 992 FEL
Haulers	6	CAT 793C
	5	CAT 789C
	9	CAT 785
	10	CAT 777D
	6	CAT 776
Drills	8	IR DM-M2 diesel drills
	2	Atlas Copco Pit Viper 275 drills
	7	In-pit drills
Auxiliary equipment	9	CAT 16H & 16G motor graders
	5	Water bowsers
	5	Diesel bowsers

When considering the maintenance of earth moving equipment, a company can consider three options. Firstly the service can be outsourced to an independent second party. Secondly the company can maintain its own fleet with its own resources. Lastly, the company can make use of a combination of the mentioned options. Middelburg Mine Services implemented the third and last mentioned option. The agreement between the parties involved is known as a Maintenance and Repair Contract (MARC).

The commercial side of the contracts between the mine and earth moving equipment maintenance contractors are so complex that few people have the courage, knowledge or experience to make informed decisions in this field.

The responsibilities of the contractor performing the maintenance and repair service are stipulated below:

(a) The performance of remedial maintenance, which is remedying any unscheduled defect in the equipment, including the replacement or repair of defective components as may be necessary to restore the equipment to perform acceptably.
(b) The performance of routine preventative maintenance that is necessary to ensure the continued optimum performance of the equipment. This includes the inspection, replacement or repairs of parts determined to be worn or otherwise defective upon a reasonable examination thereof, adjustments, lubrication, replacement of filters, and
(c) The supply of all labour, management, supervision and resources in order to execute the maintenance and repair of the equipment.
(d) The keeping of adequate stock of replacement components
(e) The service provider is responsible for general welding repairs, all electrical, air-conditioner repairs and all hydraulic component and hose repairs
(f) The cleaning of the equipment
(g) Provide training to the operator, including operator-training support.

(h) Prepare the necessary reports concerning the scheduled equipment on a monthly basis.

(i) The attendance of all scheduled meetings

(j) Ensure that no more than twenty percent of the equipment scheduled for its routine service is withdrawn from service for this purpose.

(k) Manage and maintain the workshop.

The service excludes the following:

(a) Supply and maintenance of tyres, wheel rims and all related hardware

(b) The supply and fitting of damaged cab windows and mud flaps.

(c) Accident damage, neglect, abuse and misuse

(d) Fire, vandalism and theft

(e) Road hazards and flying objects

(f) Any type of insurance in respect of the equipment and workshop facilities on site

(g) Re-fuelling of the machines

In 2003 Middelburg Mine took over the contractual obligations of the Maintenance and Repair Contract from Douglas Colliery with Komatsu Southern Africa with the incorporation of the Boshmanskrans section into Middelburg Mine. The contract with Komatsu Southern Africa covers the total fleet of the Komatsu type earth moving equipment. Barloworld Equipment Company is responsible for the maintenance and repair of the bulk of the Caterpillar type earth moving equipment at the Boschmanskrans section. At that stage similar agreements with P&H Minepro Services for the

maintenance and repair of the Le Tourneau fleet and once again Barloworld Equipment Company for the Caterpillar fleet at the Klipfontein section of Middelburg Mine Services were in place.

Table 2 summarises the MAR contracts and the fleet allocated to each contract currently active at Middelburg Mine.

Table 2: MARC type and earth moving equipment coverage

Maintenance and repair contract	Equipment type	Quantity	Equip= ment Number
Barloworld Equipment Company (excluding Boschmanskrans section)	CAT 16H & 16G motor graders	2	6436-7
	CAT 789C	4	7351-5
	CAT 824C	1	6145
	CAT 994 FEL	1	7974
	CAT D10 track dozers	3	6261
	CAT D11 track dozers	6	6292-7
Barloworld Equipment Company (Boschmanskrans section)	CAT 16H & 16G motor graders	4	N/a
	Water bowsers	1	N/a
	Diesel Bowsers	2	N/a
	CAT 777D	7	N/a
	CAT 793C	6	N/a
	CAT 824 & CAT 834 tyre dozers	4	N/a

	CAT 992 FEL	3	N/a
	CAT D10 track dozers	1	N/a
	CAT D9 track dozers	2	N/a
Komatsu Southern Africa	Komatsu PC8000 electric face shovels	2	N/a
	Komatsu H255 diesel backhoe	1	N/a
	Komatsu H95 diesel backhoe	1	N/a
P&H Minepro Services	Le Tourneau L1800	1	N/a
	Le Tourneau L1400	2	N/a

In addition to massive capital costs, these machines also incur high maintenance and repair costs as shown in Table 3.

Table 3: Annual maintenance and repair costs

Maintenance and repair contract	Annual value spent (R'000) (excluding 14% VAT)
Barloworld Equipment Company (excluding Boschmanskrans section)	R 56,484
Barloworld Equipment Company (Boschmanskrans section)	R 31,416
Komatsu Southern Africa	R 18,072

P&H Minepro Services	R 16,728
TOTAL	R 122,700

1.4 INTRODUCTION TO BARLOWORLD EQUIPMENT COMPANY

It is also appropriate to introduce the other party involved in the contract used as baseline for this project. The company profile for Barloworld Equipment Company reads as follows:

"Barloworld is a diversified industrial company founded in 1902. We manufacture, market and distribute our products and services and market and distribute leading international brands on behalf of principles. We have operations in thirty-one countries around the world and approximately half of our twenty five thousand people are in South Africa. We offer our customers business solutions backed by leading industrial brands, supported by service, relationships and attention to detail. These include both the sale of products and service options. Through our business philosophy of Value Based Management we focus on creating sustainable value for all our stakeholders simultaneously."

Built on the foundation of being a Caterpillar dealer for 78 years, we supply solutions in earth moving equipment, power systems and related equipment internationally. Our core Caterpillar offering to our customers in the mining construction generation industries is supported by complementary brands.

Our business model is built on providing total solutions to customers who buy our products."

1.5 THE STATEMENT OF THE PROBLEM

An availability of ninety percent or greater is currently required and provided on the equipment. The cost structure for the contracts is based on the availability percentage guaranteed by the service provider. The actual Utilization percentage achieved is significantly lower than the guaranteed availability percentage of the equipment. The main problem is to ascertain what can be done to safely reduce the guaranteed equipment availability without increasing the risk of production losses because of such an implementation.

1.6 THE STATEMENT OF THE SUB PROBLEMS

1.6.1 The first sub problem

The daily results in terms of the availability of each piece of equipment included in the contractual scope of work must be determined. The results will be represented by means of graphs. The average trend in the availability of the equipment will be analysed.

1.6.2 The second sub problem

The daily results in terms of the Utilization of each piece of equipment included in the contractual scope of work must be determined. The results will be represented by means of graphs. The average trend in the Utilization of the equipment will be analysed.

1.6.3 The third sub problem

The third sub problem will be to establish what the important factors are that influence the cost structure for the required equipment percentage availability that the mine is paying the service provider. As mentioned previously the mine is currently paying the service provider for a guaranteed availability of ninety percent.

Based on this information the mine can re-negotiate guarantee percentages to suit the specific requirements of the mine at any stage, thus closing the gap between the guaranteed availability provided and the actual Utilization percentage reached with the equipment. Thereby all parties involved will have optimal benefit and satisfaction from the contract.

1.7 THE HYPOTHESES

1.7.1 The hypothesis for the first sub problem

A standard sheet will have to show a summary of the relevant availability reached by each piece of earth moving equipment listed in the scope of works of the contract.

There will be definite trends relating to the availability of each piece of earth moving equipment when a comparison of results is made on a daily basis.

1.7.2 The hypothesis for the second sub problem

A standard sheet will have to show a summary of the relevant Utilization factors reached by each piece of earth moving equipment listed in the scope of works of the contract.

There will be definite trends relating to the Utilization of each piece of earth moving equipment when a comparison of results is made on a daily basis.

The student will be able to determine if the difference between the availability percentage and the Utilization percentage is substantial enough to justify an adjustment in the guaranteed availability percentage by the service provider.

1.7.3 The hypothesis for the third sub problem

The important factors that determine the availability percentage guaranteed by the service provider is the following:

(a) Parts inventory location and availability i.e. the waiting period on ordered parts for a scheduled service.

(b) The contractor's overhead costs and human resources structure.

(c) The service provider can store parts and components for a scheduled service within close proximity of the mine and has to carry the cost for storage facilities not located at their head office storerooms. The mine will, however, incur the costs indirectly. Alternatively the mine can provide the service provider with the required storage facilities, but will have a capital expenditure. Therefore the mine is paying for the accessibility of parts and components. If the guaranteed availability is lowered, the waiting time on parts and components can be extended and costs thereby reduced.

(d) The high percentage in the guaranteed availability requires a permanent skilled labour structure on site at all times. The mine is also paying for the accessibility to the permanent labour force. If the guaranteed availability is lowered, the supply of skilled labour can be provided on a planned ad-hoc basis and costs thereby reduced.

1.8 THE DELIMITATIONS

The research will be conducted at Middelburg Mine Services in the Mpumalanga province in South Africa. As mentioned previously Middelburg Mine Services has several maintenance and repair of earth moving equipment contracts in place with different preferred service providers. These contracts are based on the same principles. The results of this specific project would be applicable in practice to future contractual agreements of similar nature or size. The principles learned would be applicable to the industry as a whole. Therefore the contract with Barloworld Equipment Company for the Klipfontein section will be used as a model for the study.

Any mining process is well planned. All capital and resources are optimally used to produce the maximum product for the lowest cost per unit produced. Mining equipment is allocated to the different processes for the purpose it was designed for. The fleet size of the earth moving equipment may be over designed for the current mining requirements. This may have a negative influence on the Utilization percentage determined on a daily basis. It also means that the mine is paying for the running cost of machines not necessary in the current mining requirements. The student, however, will not include the fleet size in this study.

The service provider is paid a rate per hour the equipment has run on a monthly basis. The hours are measured with electronic hour meters readers installed in the earth moving equipment. The hours are monitored and

recorded by both parties on a daily basis. Should a machine achieve low hour meter readings, and therefore low Utilization factors, the service provider will not reach his projected profit margins. An under utilised piece of earth moving equipment also is an unnecessary expenditure to the mine.

The reasoning behind this is to avoid making the research field for this project too complicated. Each of the mentioned delimitations is a project on its own and will be recommended for future research.

1.9 THE DEFINITIONS OF TERMS

“Maintenance” - the combination of all technical and associated administrative actions intended to retain an item in, or restore it to, a state in which it can perform its required function.

“Repair” - to restore an item to an acceptable condition by the renewal, replacement or mending of worn, damaged or decayed parts.

“Availability” - the ability of an item (under combined aspects of its reliability, maintainability and maintenance support) to perform its required function at a stated instant of time or over a stated period of time or at a given point in time.

“Utilization” - a measure of the use of Available Time (Production Time + Process Down Time) during which Production Time occurs

“Available time” - the period of time during which an item is in a condition to perform its required function and is required to perform that function

“Process down time” - time during which an item is not performing its required production function. In this time the process is down as a result of an activity or other event not related to the availability of equipment used within the process. Relocating a production drill to a new bench is not a production function as there is no throughput in the system and is process downtime even though the equipment is operating.

“Production time” - time during which there is measurable throughput in the process including incidental activities necessary to sustain the system’s production cycle.

“Breakdown” - failure resulting in the non-availability of an item.

“Calendar time” - the International agreed upon Gregorian calendar of 365 days per year, leap year every fourth year (the year being evenly divisible by 4 and double zeroth years divisible by 400); 24 hours per day; 60 minutes per hour 60 seconds per minute.

“Downtime” - the period of time during which an item is not performing its required production function.

“Equipment” - the implements or apparatus used in an operation, process or activity. More generally, equipment is all the fixed assets other than land and buildings of a business enterprise.

“Life cycle cost” - the total cost to the owner of an item over its full life. It includes the cost of acquisition, operation, support; the costs arising from its failures, and, where applicable, the cost of its disposal.

“Mine” - an excavation made in the earth for the purpose of extracting minerals. Or the act of excavating for the purpose of extracting minerals.

“Earth moving equipment” – shovels, excavators, loaders, dozers, bottom dump trucks and rear dump trucks.

“Mining” - the combination of processes required to extract minerals from the earth. In open-pit mining, mining includes drilling, blasting, loading and haulage.

“Planned maintenance” - maintenance activities organised and carried out with forethought, control and the use of records according to a predetermined planning process.

“Services” - support activities for processes. Generally these support a range of processes within the overall processes of open pit mining.

“Cost Control” - the regulation by executive action of the costs of operating an undertaking, particularly where such action is guided by cost accounting.

1.10 THE ASSUMPTIONS

1.10.1 The first assumption

The results achieved and observations made on this project will be generally applicable on contracts of similar nature and principles.

1.10.2 The second assumption

The data in the daily summary sheets are correct and reflect the correct availability and Utilization percentages for each piece of earth moving equipment listed in the contract scope of work.

1.10.3 The third assumption

The results should represent the norm of factors that would normally influence the cost structure for the availability percentage guaranteed by the service provider.

Managing these factors to suite the current requirements of the mine would result in the mine paying for the precise service it needs. The assumption is that all these factors could be controlled by applying the principles of effective cost and operation management.

1.11 THE IMPORTANCE OF THE STUDY

The importance of efficient production systems in the mining industry can hardly be over emphasised. Mining of minerals is a fairy simple process. Although working in volumes to the million in unit, the lowest cost per ton of minerals produced is strived for. In any given production system efficient management will to a large extent depend on an efficient information system, to ensure proper planning, decision making and issuing of production instructions. Attention must consequently be given to aspects such as demand forecasting, inventory control, production planning, cost control, quality control, mechanisation and automation, the maintenance and replacement of machinery, and the training of workers.

The outcome of this research project will spill over to other national and international mining sites with similar contracts in place. The problem may not have been identified at these mines and the results of this research project may make the responsible personnel aware of the improvement that it may have on their cost management.

As mentioned previously, when considering the maintenance of earth moving equipment, a company can consider three options. Firstly the service can be outsourced to an independent third party. Secondly the company can maintain its own fleet with its own resources. Lastly, the company can make use of a combination of the mentioned options. As also mentioned, Middelburg Mine Services implemented the last mentioned option. With the outcome of this research project it may be decided at top

management level that the maintenance and repair contract does not satisfy their requirements and that it is time for the mine to re-visit one of the other options in order to carry out the maintenance and repair of earth moving equipment more efficiently and cost effectively.

Currently Ingwe is not performing to BHP Billiton's expectations. Production targets are not met due to several external factors that the mine has no control over. A high cost per unit product produced does not ease the pressure experienced. The research project will add value to the current Business Improvement initiative running at the mine.

1.12 SUMMARY

It is not only technology that improves at an astonishing rate. An effective manager has to master many skills and it is also very important to maintain and improve these skills continuously. Innovative thinking, change management as well as quality management is the future of worldwide competitiveness. The survival of an organisation also depends on the level of maturity of the relationships within.

In order to understand the problem and its setting completely, it is necessary to introduce the reader to the organisation in detail.

One of the most critical elements of its operation is the primary earthmoving equipment which forms the heart of the mine. A service to maintain and repair the earth moving equipment fleet can be outsourced to an

independent third party or the company can maintain the fleet with its own resources. Middelburg Mine Services implemented a combination resulting in an agreement between the parties involved known as a Maintenance and Repair Contract.

An availability of ninety percent or greater is currently required and provided on the equipment fleet. The cost structure for the contracts is based on the availability percentage the service provider is guaranteeing. The actual Utilization percentage reached with the equipment is significantly lower than the guaranteed availability percentage. The main problem is to ascertain what can be done to safely reduce the guaranteed equipment availability without increasing the risk of production losses because of such an implementation.

The research will be conducted at Middelburg Mine Services in the Mpumalanga province in South Africa. As mentioned previously Middelburg Mine Services has several maintenance and repair of earth moving equipment contracts in place with different preferred service providers. The results of this specific project would be applicable in practice to contractual agreements of similar nature or size. The principles learned would be applicable to the industry as a whole.

CHAPTER 2

THE REVIEW OF THE RELATED LITERATURE

2.1 INTRODUCTION

There is no specific literature available on the subject of the availability requirements in maintenance and repair contracts applicable to mining earth moving equipment, nationally or internationally.

During 2004 BHP Billiton internally compiled a document containing operational definitions and key performance indicators. The document, however, does not refer to this specific type of contract, but to mining earth moving equipment in general. The purpose of the document is to provide consistency in all communications and measurements within BHP Billiton regarding operational functions.

Consistency in communications measurement will provide for:

(a) benchmarking and identification of improvement opportunities;
(b) measuring improvements in performance;
(c) facilitate the transfer of improvement opportunities between different sites within BHP Billiton;
(d) quantifying the benefits of improvements, and;

(e) fundamental to maximising the performance of the sites within BHP Billiton.

The aim is to complete the dissertation within the mentioned provisions in order to achieve consistency in and add value to communications within BHP Billiton.

Growth will take place during the process. Continuous improvement will also mature and strengthen the relationship between the client and the contractor further. This benefit may spill over to the different sites within BHP Billiton by applying the same principles to similar active contracts.

The contract is the basis of the topic investigated. The contract value of the maintenance and repair contracts is so high that by devoting this chapter to commercial law principles is justified. This chapter of the dissertation will be approached by:

(a) Discussing the current contract stipulations of the maintenance and repair contract.
(b) Discussing literature as published by experts in the legal field.
(c) Comparing the contract with the information from the literature study, identifying the deficits and make significant improvements to the contract content by applying the knowledge gained.

Good procurement practices can increase corporate profitability by taking advantage of quantity discounts, minimising cash flow problems, and

seeking out quality suppliers (Kerzner, 2001: 1,139). A project manager must recognise the advantages and disadvantages of all basic contractual planning to select the best possible option for a particular project or service.

Every decision made on site regarding the contract works may have legal repercussions. It is important for every party involved to have a basic knowledge of the contract law.

Nagel et al (2000: 37) defines a contract as:

> *An agreement (based on consensus between legal subjects with contractual capacity, and which is legal, physically possible and complies with the prescribed formalities) reached with the intention of creating a legal obligation with resulting rights and duties. In short, a contract is an agreement which gives rise to a legal obligation. A mere social appointment between parties does not constitute a contract between them.*

Finsen (1991: 1) defines a contract in simpler terms:

> *A contract is an agreement between two or more persons which gives rise to personal rights and corresponding obligations; in other words it is an agreement which is legally binding on the parties.*

Three types of contracts were distinguished by the Romans namely:

1. the letting and hiring of an object,
2. the letting and hiring of services, today known as an employment contract, and
3. the letting and hiring of a piece of work, today identified as a separate contract known as letting and hiring of work, or construction and engineering contracts (Nagel et el, 2000: 582).

The difference between an employment contract and the letting and hiring of a piece of work, lies in the fact that the contractor always delivers the service under the control and supervision of the client, while a contractor of a piece of work delivers the work and complies with his duties independently from the client (Nagel et el, 2000: 582).

A contract for the letting and hiring of work is a reciprocal agreement between a client and a contractor, in terms of which the contractor undertakes to build, manufacture, repair, alter or maintain a corporeal thing within an agreed time, in exchange for the payment of compensation by the client to the contractor (Nagel et el, 2000: 582).

The maintenance and repair contract under discussion is a combination of the employment contract and the letting and hiring of a piece of work type of contract. Although the contractor delivers the maintenance and repair service independently from the client, certain aspects needs the approval and authorisation of the client.

During the last fifteen years two important contracts have been developed and are used by many professionals with great success.

The NEC contract is recognised and used in the international market. The contract documentation is divided in two sections, one containing the proposed clauses and the other is a guideline on how to compile such a contract. One first determines which primary clauses are required, and after that the secondary option clauses. The necessary attachments are added in order to complete the document.

The FIDIC contract documentation is structured more simply than the NEC documents, although the clauses are longer and more complexed grammar is used.

Within BHP Billiton unique contract documents are compiled to cater for each specific project or service required. The framework of the contract, however, is built on NEC and FIDIC principles.

2.2 CONTENTS OF THE CONTRACT

According to Nagel et al (2000: 586) a contract for the letting and hiring of work should at least contain the essentialia for this type of contract. Where the parties want to exclude or limit the effect of these naturalia, specific incidentalia to that effect must be added. Any other provisions that the parties would like to include in their contract can be added as additional essentialia.

The current contract between Barloworld Equipment Company and Middelburg Mine contains the following clauses:

(a) Clause 1: Definitions

(b) Clause 2: The scope of the services

(c) Clause 3: The contractor's responsibility

(d) Clause 4: The client's responsibility

(e) Clause 5: Contract pricing and adjustments

(f) Clause 6: The repair reserve account

(g) Clause 7: Machine availability

(h) Clause 8: Contract duration and termination

(i) Clause 9: Terms of payment

(j) Clause 10: Laws and regulations

(k) Clause 11: Force maior

(l) Clause 12: Breach

(m) Clause 13: Dispute resolution and arbitration

(n) Clause 14: Liability, indemnity and insurance

(o) Clause 15: General

(p) Clause 16: Domicilium

The clauses are followed by the following annexures:

- Annexure 1: Equipment on full repair and maintenance
    - The contractor's responsibility
    - The employer's responsibility

    - Non contractual wear items and accident damage
    - Machine availability
    - Monthly collection of hours
    - Component changes
    - Contract pricing and adjustment
- Annexure 2: Equipment on maintenance only
    - Equipment servicing
    - Contract pricing and adjustment
    - Equipment review
- Annexure 3: Fixed monthly cost
    - Personnel
    - Assets and other costs
    - Contract pricing and adjustment

Clauses one and eight up to sixteen is based on common law principles, whereas clauses two up to seven as well as the annexures to the contract are specifically designed for the service provided by the contractor.

2.2.1 Definitions (clause 1 of the contract)

It is very important to use the correct terminology in contract documentation in order to avoid confusion when reading the contract.

In the contract certain words and phrases are given particular meanings that differ from the meanings they ordinarily have, unless

it is inconsistent with the context. These meanings are defined in the first clause of the contract. Where such words and phrases are intended to convey these meanings in the agreement, they are printed in capital letters.

Not all of the particular meanings of words and phrases that are used in the agreement are listed in the definitions in this clause. Only when a word or phrase with a particular meaning is used in several different clauses it is included as a definition in this clause. Where it is used only once, it is defined in the particular clause.

Although the definition list in the contract is comprehensive and described in detail, an introduction to the interpretation of the words and phrases is not discussed with the same approach. The reason for typing the words and phrases in capital letters may therefore not be clear to the reader.

Words such as contractor, employer, engineer, equipment, etc. are defined as interpreted in the mining sector. An engineer cannot be described easily as the description will be so wide as to include many professions. An engineer in the mining sector will not have the same definition as an engineer in the construction industry.

An engineer must be registered with the Engineering Council of South Africa. Persons who must register as such are professional technicians (engineering), professional engineers, diplomaed

engineers, engineering technicians and any of these in training. The engineer is empowered by common law to fulfil all duties required in order to complete the work, unless his actions are limited by the contract. The engineer gives instructions to the contractor regarding the execution and specifications of the work to be completed.

Where the client is a company or other independent juristic person it must be described properly. The registered name of the company or juristic person as well as the registration number must be used. The contract states the parties to the contract, but not in the full registered names of the companies. The registration numbers of the companies are not presented at all. A contract modification is highly recommended to rectify the lack of information provided.

2.2.2 Scope of services, the contractor's responsibility and the employer's responsibility (clauses 2, 3 and 4 of the contract)

The parties have to reach an agreement on support and maintenance of the work by the contractor after the work has been completed. A separate contract is often concluded for support and maintenance, and will usually immediately succeed the main contract. It depends on the parties whether they want to conclude one agreement for the work and for support and maintenance, or split these into two separate agreements (Nagel et el, 2000: 588).

Middelburg Mine decided that the latter is more practical. The main contract referred to was the agreement to obtain the mining earth moving equipment from a supplier. The contract came to an end since each party fulfilled his obligations under the contract. The contract under discussion for the support and maintenance of the earth moving equipment succeeded the main contract.

The maintenance and repair contract is external to the organisation, in other words a formal tender process was followed. The contractor assisted in preparing the statement of work for the client, because the client did not have a team of people with the necessary training in statement of work preparation.

The statement or scope of work is a description of the work required for the project in a specific sequence of events. The complexity of the statement of work is determined by the needs of each party involved in the contract.

A description of the scope of work is given in clauses two, three and four in the contract under the headings namely the scope of services, the contractor's responsibility and the employer's responsibility. The contract makes provision for the supply of repair and maintenance contract services by the contractor to the client or employer on the fleet of equipment based at Middelburg Mine Services.

The preparation and compilation of the statement of work is of the utmost importance. Kerzner (2001: 569) compiled a checklist for statement of work preparation. Table 4 lists the questions in the checklist. The checklist was applied to the foregoing statement of work as claused in the contract.

Table 4: Checklist for statement of work preparation

Nr.	Question	Yes	No
1	Is the SOW specific enough to permit a contractor to make a tabulation and summary of manpower and resources needed to accomplish each SOW task element?	Yes	
2	Are the specific duties of the contractor stated so he will know what is required, and can the contracting officer's representative, who signs the acceptance report, tell whether the contractor has complied?	Yes	
3	Are all the parts of the statement of work so written that there is no question as to what the contractor is obligated to do, and when?	Yes	
4	When it is necessary to reference other documents, is the proper reference document described? Is it properly cited? Is all of it really pertinent to the task? Is it cross-referenced to the applicable SOW	Yes Yes	 No No

	task element?		
5	Are any specifications or exhibits applicable in whole? If so, are they properly cited and referenced to the appropriate SOW element?	Yes	 No
6	Are directions clearly distinguishable from general information?	Yes	
7	Is there a time-phased data requirement for each deliverable item? If elapsed time is used, does it specify calendar or work days?	Yes Yes	
8	Are proper quantities shown?	Yes	
9	Have headings been checked for format and grammar? Are subheadings comparable? Is the text compatible with the title? Is a multi decimal or alpha-numeric numbering system used in the SOW? Can it be cross-referenced with the CWBS?	Yes Yes Yes	 No
10	Have appropriate portions of procurement regulations been followed?	Yes	
11	Has extraneous portions of procurement regulations been followed?		No
12	Can SOW task/contract line items and configuration item breakouts at lower levels be identified and defined I sufficient detail so		No

	they can be summarised to discrete third-level CWBS elements?		
13	Have all requirements for data been specified separately in a data requirements appendix or its equivalent? Have all extraneous data requirements been eliminated?	Yes	
14	Are security requirements adequately covered if required?	Yes	
15	Has its availability to contractors been specified?		No

Kerzner (2001: 569) will agree that the scope of work included in the contract is formless. A scope of work must be structured and cross-references to supporting documentation must be in place. The scope of work is also not structured in task elements nor does it contain a work breakdown structure. The availability to the contractor is not specified in the scope of work. It is strongly recommended that attention is given to the outstanding issues regarding the scope of work. A contract with this high monetary value can not be measured or managed effectively if the basic information is vague. Last mentioned is only worsened during the life of the contract with a probable personnel turnover on both parties to the contract.

The contractor's main duty is to complete the work as agreed upon. The contractor gives an implicit undertaking that he has the required skill and capabilities to complete the work.

Subject to the provisions of the contract the employer grants the contractor the exclusive right and obligations to take all reasonable steps necessary to maintain the earth moving equipment of the client in safe and proper working conditions in accordance with the manufacturer's specifications and recommendations. The obligations of the contractor performing the maintenance and repair service are as follows:

(a) The performance of remedial maintenance, which is remedying any unscheduled deficits in the equipment, including the replacement or repair of defective components as may be necessary to restore the equipment.
(b) The performance of preventative maintenance which is necessary to ensure the continued performance of the equipment including inspection, replacement or repairs of parts determined to be worn or otherwise defective upon a reasonable examination thereof, adjustments, lubrication and replacement of filters. It may be added that the contractor must inspect the work to be completed and plan the execution of the work properly by taking into account the relevant circumstances.

(c) Testing of earth moving equipment. The testing or acceptance procedures of the work must be documented and be accessible to both parties. This is not currently done in practice.

(d) The supply of all labour, management, supervision and resources in order to execute the maintenance and repair of the equipment.

(e) The contractor must keep stock of replacement components, is responsible for general welding repairs, all electrical, air-conditioner, hydraulic component and hose repairs, the cleaning of the equipment and to provide training to the operator, including operator training support.

(f) Prepare the necessary reports with regards to the scheduled equipment on a monthly basis and is obliged to attend all scheduled meetings.

(g) Ensure that there shall be no more than twenty percent of the equipment scheduled for its service intervals as at one service interval.

(h) Manage and maintain the workshop. It may also be added that the contractor must vacate the client's site or premises upon completion of the work. He must leave the premises as he initially found it and must remove all tools and equipment.

(i) Will be liable for insurance in respect of his equipment and tools.

It is of essence that the work must be completed within a prescribed time limit. The contract does not prescribe a time limit in calendar measurements. Clause seven of the contract, however, states that

an equipment availability of 90% or greater is required on all equipment that have a guaranteed cost per hour. This clause is the axis around which this dissertation revolves and will be discussed in depth in Chapter four and five. If the contractor does not maintain the availability figure, it has the same consequences as not completing the work within the prescribed time limit of a contract.

Even though the contractor has completed the work or reached certain agreed performance milestones, he only becomes entitled to payment of remuneration after the client approves the work. The engineering manager and general manager will approve this high value contract payment on a monthly basis electronically via an accounting computer software program. The invoices and supporting documentation are stored in archives for a period of three years.

The main duty of the client, however, is to pay the compensation due to the contractor.

Other contractual obligations of the client are as follows:

(a) The supply of fuel, commercial gases, greases that comply fully with the manufacturer's specification, all lubrications, oils, coolants and the necessary cleaning agents for washing the equipment.

(b) The client must provide access to the site or premises and must provide the contractor with the specifications as well as the necessary tools and equipment for the completion of the work. The workshop facility comprises of a main workshop, service bay, wash bay and parts store, ablution facilities including a change house, showers and toilets, workshop overhead cranes, a dedicated site office and storage facility, telephone lines, computer network, electricity, water and compressed air supply.

(c) The supply of evaporation dams and the treatment of water used for cleaning equipment.

(d) With regard to the equipment: the supply and maintenance of the tyres, wheel rims and all related hardware, the supply and fitting of damaged cab windows and mirrors, the supply and fitting of windshields and mud flaps, accident damages, neglect, abuse and misuse, fire, vandalism and theft, road hazards and flying objects, replacement of wear parts not covered under the contractor's responsibility, re-fuelling of the machines and using the equipment in conformity with the specifications, recommendations and information supplied by the manufacturer and the general conditions outlined in the original agreement of purchase.

(e) Is responsible for the removal of hazardous waste from site and any changes to the application and site severity must be communicated to the contractor in writing. The contractor reserves the right to review the contract price when applying such changes.

(f) The client shall make the equipment available to the contractor's service personnel on demand at such times as agreed to at the weekly planning meetings so that the latter can carry out its duties.

(g) If it is impossible for the client to have a service carried out on the scheduled date as per the planned maintenance schedule, the client shall inform the contractor accordingly. This information must reach the contractor at least two days before the scheduled planned maintenance service date. However, should the service accuracy of any piece of equipment exceed ten percent, the client shall not be permitted to extend the use of such piece of equipment and shall release such equipment to the contractor for maintenance as planned.

(h) The employer shall report damage to the equipment to the contractor's service staff without delay and shall operate the equipment only after inspection by such staff.

(i) The client is to give the contractor or his authorised representative all information they require concerning the equipment and shall make all relevant documentation available.

2.2.3 Contract price and adjustment (clause 5 of the contract)

The procedure for applying for a contract price adjustment is described in this clause.

A portion 70.43% of the parts installed into the earth moving equipment is imported from the United States of America. The rate of exchange applicable to the subject contract is one US dollar equals R10.95.

On an annual basis, the contractor and client will take a decision on whether to take forward cover for a year to fix the hourly rates for a year, or whether to use the parts price contract as a basis for the parts escalation.

2.2.4 Equipment review (partial to the second annexure to the contract)

A written contract often contains a clause stating that the contract may only be amended in writing and where the amendment is signed by both parties. Unless specifically otherwise agreed no duty rests upon the lessee to perform any additional work.

On an annual basis the client must advise the contractor in writing whether it intends to continue with the maintenance of machines as covered by the contract.

Once the equipment reaches the end of life hours, the contractor reserves the right to re-negotiate the terms of the contract. The expected life of equipment is scheduled in Table 5

Table 5: Expected life of machines (hours)

D10N track type dozers	50,000 hours
16H grader	40,000 hours
777C water bowser	50,000 hours
834 rubber tyre dozer	40,000 hours
988 cable realer	50,000 hours

2.2.5 Repair reserve account (clause 6 of the contract)

The contractor will open a separate internal account for each piece of equipment covered by the contract. The account will indicate the monthly contract price paid by the client, and the actual cost incurred by the contractor for that specific unit. The transactions and balance of the account will be transparent whereby the contractor and the client will at any stage be able to have access to the account.

At the end of the life of the piece of earth moving equipment or when the piece of equipment is withdrawn from the contract, the contract price paid by the client on a monthly basis shall be reconciled with the actual costs incurred by the contractor in supplying the parts and components to the date of termination.

In the event that the reconciliation indicates that the amount paid by the client is greater than the actual costs incurred by the contractor, the surplus amount will be split by the two parties by means of

negotiations. The contractor will refund the client the amount agreed. Similarly, if the amount paid by the client is less than the actual costs incurred by the contractor, the client will pay the contractor a portion of the shortfall as determined by negotiations.

2.2.6 Duration and termination (clause 8 of the contract)

The contract is effective for the life of the machines as summarised in Table 1. Should the parties wish to extend the contract the terms and conditions of the contract will be reviewed.

According to Nagel et el (2000, 601) the following methods of termination are relevant for the termination of this type of contract:

(a) Notice: the parties must reach an express agreement regarding when the contract may be terminated by the unilateral notice given by one of the parties to the contract.
(b) Agreement: where a party waives his contractual rights it has to be accepted or approved by the other party before the legal obligation will come to an end.
(c) Compromise: where the parties intend to terminate the total agreement between them and to substitute this agreement with a compromise, care must be taken to ensure that the compromise is complete and that it contains all aspects which are to apply between the parties in future.

(d) Prescription: a claim prescribes three years from the date of claim or on the date on which the plaintiff becomes aware of a possible claim.

(e) Insolvency or liquidation: if any party to this type of contract is declared insolvent or liquidated, the trustee of the insolvent estate has the right to decide within a reasonable time whether the contract is to be maintained or terminated. If he chooses the latter, the other party has a claim against the insolvent estate.

The contract stipulations of the contract states that the contract may be terminated at any time by mutual consent subject to six months written notice and provided that neither party breaches any of their obligations in terms of the contract thus by agreement between the parties to the contract.

2.2.7 Terms of payment (clause 9 of the contract)

The contractor will invoice the client on a monthly basis for charges payable in respect of the contract and the work carried out. The contractor's invoices will reflect the contract number and the serial number of the equipment. The invoices will be forwarded to the client by the 25th of every month in order to qualify for payment the end of the following month by electronic money transfer into the contractor's bank account.

Disputed amounts on the invoice shall be raised by the client within 14 days of the receipt of the invoice. The client will, however pay the contractor the value of the invoice less the disputed amount. Any outstanding amount will be paid immediately after resolution of the dispute.

2.2.8 Laws and regulations (clause 10 of the contract)

According to Nagel et el (2000: 588) it is wise to agree that the law of a specific country will apply to an agreement, as well as to agree on the jurisdiction of a specific court for the solving of disputes. The parties may also agree on who will be liable for legal costs, and on what scale.

The laws applicable to this contract are the law of the Republic of South Africa. All matters arising in the fulfilment of the contract will conform with all laws and to all regulations and by-laws and requirements of local and other authorities. The contract currently does not mention the jurisdiction of a specific court for the solving of disputes.

The contractor must at all times comply with all safety instructions and standards prescribed and as directed by the mine. The necessary documentation must be available for scrutiny by the contractor. Should the contractor incur additional costs in order to adhere to the client's safety instructions and standards, the

contractor will be entitled to recover such costs from the client. The contractor undertook to ensure that contracts with sub-contractors will contain the same stipulation as provided in this clause of the contract.

2.2.9 Acts of God or vis maior (clause 11 of the contract)

A contract is unenforceable if circumstances beyond the control of the parties to the contract render performance impossible.

The contract states that neither party hereto will be in default of any provision of this contract or be liable to any other party for delay, error or failure in performance or interruption of the performance resulting from causes beyond that party's reasonable control. The parties will arrange a new date for continuing or to carry out the suspended duties as soon as possible. Any downtime hours due to vis maior will not form part of the machine availability calculations.

2.2.10 Breach (clause 12 of the contract)

A contract imposes various obligations on the parties involved. Should one of the parties fail to carry out any obligation, he is in breach of contract.

It is a contractual right to cancel a contract should breach of contract occur, irrespective of whether the common law allows for cancellation or not. This clause enables a party, prejudiced by the other party's negligible breach of contract, to immediately cancel the contract should the prejudiced party wish to do so. This is the party's right of rescission (Nagel et el, 2000: 111).

In practice the parties usually agree that the prejudiced party is obliged to give the party in breach proper notice of the breach and afford him a notice period within which the breach of contract can be rectified. The contract can only be cancelled by the prejudiced party where the breach continues after the notice period lapses.

The contract states that should either party commit any breach of any terms of the contract and fails to remedy such breach within seven days of receiving a written notice requiring to do so, the other party shall be entitled to cancel the contract without prejudice to its other rights in law. Neither party will be liable for any consequential losses including loss of profits or indirect damages arising from any breach by any party to the contract.

According to the JBCC contract documentation a contract may be cancelled due to the following circumstances:

(a) default by the contractor entitling the client to cancel the contract;

(b) default by the client entitling the contractor to cancel the contract;
(c) the work as the core of the contract may be destroyed entitling the client to cancel the contract; and
(d) hostilities may break out entitling either party to cancel the contract.

The maintenance and repair of earth moving equipment contract stipulations regarding the cancellation of the contract can easily be subject to the mentioned circumstances. The contract, however, does not state the circumstances and the remedies applicable to each circumstance in detail. It is necessary to look at the subject in more detail from a legitimate point of view.

2.2.10.1 Default by the contractor

The three remedies available by operation of law are:

(a) Cancellation;
(b) Damages; and
(c) Retaining fees

According to Nagel et el (2000: 594) The client cannot cancel an agreement immediately due to the contractor's breach of contract, unless:

(a) the contract contains a right of cancellation;

(b) time is of the essence;

(c) the client acquires the right of rescission by proper notice; and

(d) in the event of positive malperformance (substantial or material)

Where the contractor has rendered performance impossible cancellation is the only remedy.

The client is entitled to claim damages in order to be placed in the position he would have been in had performance been made properly by the contractor. Damages may include the costs the client incurred to repair the defective performance or the difference in price between the breaching contractor's contract amount and that of an ensuing contractor for the appropriate completion of the work.

One of the most effective remedies that a client has is to retain monies and to utilise these amounts to cover damages incurred by the client. Where a contractor does not perform properly penalty clauses may be enforced or suretyships may be called up. The contract currently does not make provision for this remedy.

2.2.10.2 Default by the client

The contractor is entitled to the same remedies as discussed under the previous heading. The contractor is entitled to a lien on the work already completed by him. Where the client does not perform properly, the contractor is entitled to retain possession of the work until he receives payment.

Where both parties were negligent and contributed to the damages suffered, the damages have to be distributed between them.

Contracts usually contain one or more clauses that limit or exclude the parties' liabilities where breach of contract occurs. This is also the case with the contract under discussion. Neither party will be liable for any consequential losses arising from any breach by any party to the contract. A person can, however, only exclude liability for his negligent actions, not his intentional acts.

2.2.11 Dispute resolution and arbitration (clause 13 of the contract)

It is of extreme importance to take alternative dispute resolution procedures under consideration for this type of contract. Litigation is detrimental to the parties and their relationship. Arbitration is beneficial for all concerned, it is in the parties' interest to first follow

alternative dispute resolution procedures before entering into litigation, if at all (Nagel et el, 2000: 606).

Arbitration is a well established procedure for resolving disputes. Finsen (1991: 124) defines arbitration as:

> *The reference of a dispute or difference between not less than two parties capable of entering into a contract for determination, after hearing both sides in a judicial manner, by a person or persons other than the court of competent jurisdiction.*

In mediation the parties also submit their dispute to the decision of some objective third party. In mediation, however, the parties are not legally represented. The parties are not bound to accept the mediator's opinion. Should the latter transpire the dispute can be taken to arbitration or litigation. Litigation, however, may be a very costly and time consuming process.

The parties acknowledge the fact that a dispute may arise between them during the course of the contract. Notwithstanding the referral of any dispute for resolution the parties agree to continue to perform their respective obligations. It is clear that the parties need to preserve their relationship because of ongoing interests. Therefore, should a dispute arise, mediation will be the recommended route.

According to the contract any dispute, technical or operational in nature:

(a) will initially be referred to a joint committee comprising of the authorised representatives or alternative appointed representatives of the client and the contractor. The dispute must be resolved within 14 days of it having been referred; and
(b) that is not resolved in accordance with the foregoing, may be submitted to and decided by arbitration. The rules of the Arbitration Foundation of South Africa will apply.

Without an administered system parties are largely unprotected. The contract is clear that the rules of the Arbitration Foundation of South Africa will apply should a dispute arise. The clause is therefore adequate for the purpose it serves.

2.2.12 Liability, indemnity and insurance (clause 14 of the contract)

It is important that any party subject to risk ensure that proper insurance against such risk is obtained. The parties agree in the contract that insurance cover has to be obtained, as well as what the scope of such cover should be.

Clause 14 of the contract addresses liability, indemnity and insurance issues. Losses may arise out of the execution of the contract and suffered by those who are not parties to the

agreement. A person is liable for any harm that he may negligently cause to another person or property. In order to pass the liability for possible damage claims by such third parties, it is necessary for the contractor to indemnify the employer, which he does with this clause.

The contractor undertakes to perform his obligations in a workmanlike a fashion as far as possible. The contractor will not be liable to the client for any loss in production or profit by the client for any other special damages or consequential loss suffered as a consequence of any wrongful act or omission by the contractor as a consequence of any breach or failure to observe any of the provisions of the contract save where such loss or damage arises as a result of any grossly negligent or wilful act or omission by the contractor.

The purpose of insurance is to provide a means whereby when loss or damage occurs, the person who is liable for making good the loss or damage is provided with the resources to do so. In the absence of insurance the contractor will be obliged to make good loss or damage from his own finances (Finsen, 1991: 51).

The contractor will arrange for and maintain insurance policies at his own cost to cover his responsibilities in terms of the contract. Copies of the policies will be provided on request of the client. The contractor will be liable for the levy imposed on the client in terms of

Chapter 53 of the Regulations of the Minerals Act of 1991 in the event that any person is injured or killed in the execution of the contract works.

The contractor is often also requested to guarantee the work done for a specific time period. The contractor must, in terms, of such a guarantee, within the agreed time limit or within a reasonable time rectify any malperformance at his own cost (Nagel et el, 2000: 588). The maintenance and repair of mining earth moving equipment is very costly. Individuals with the necessary knowledge are employed by Middelburg Mine Services to specifically manage guarantee claims and inspections.

The client, naturally, is liable for any type of insurance in respect of the equipment and the workshop facility on site. The mining sector is a risky business. The mining operation has huge machinery and nerve-racking heights in the pit area to mention a few risks. Although the contract addresses the issues surrounding liability insurance, it is not very specific. On enquiry neither party could supply copies of the supposed policies. It is highly recommended that the parties meet in order to:

(a) identify the areas of risk;
(b) allocate the area of responsibility to each risk; and
(c) manage the implementation and maintenance of the implemented policies.

To establish a claim for damages is often complicated and a lengthy process. In order to avoid this problem the parties can agree to penalty clauses. These clauses also have a preventative function in the sense that the parties are aware that an amount of money may be claimed directly from a party in breach of contract, and therefore act with greater caution to prevent breaches from occurring.

It is recommended that a properly researched and developed incentive model be implemented. Currently the performance of both parties is measured on a limited basis. Without managing and controlling contract performance it is not possible to improve such performance.

2.2.12.1 Monthly collection of hours (partial to the first annexure to the contract)

The completed work has to be accepted as such by the client. Each piece of earth moving equipment is equipment with an hour meter reader. The hour meter will count machine hours run as soon as the machine is switched on. The hour meter reader therefore keeps count of the age of a machine.

On a monthly basis, the hour meter reading of each piece of equipment will be taken by the contractor and

the client's representative by not later than the 16th day of each month. This will be approved and verified, by signature, by the client.

This process is very important, since the contract duration is determined by the machine age measured in hours. The agreed monthly run hour total is also used to calculate the machine availability and Utilization percentage. The variable cost in the contract is also determined by the mentioned total. The supporting documentation is authorised by the relevant responsible personnel on the mine and stored for a minimum period of three years.

2.2.12.2 Hourly or variable maintenance and repair rate per machine

The client is charged a specific determined hourly rate for each piece of equipment. These rates cover the parts costs for each machine. The hourly rate depends on the following:

(a) The type of machine.
(b) The life cycle costing of the machine as supplied by the contractor.
(c) The availability required by the client.

(d) The hourly age of the machine, and

(e) The specific requirements of the clients in other words are ground engaging tools, miscellaneous items, etc. included.

2.2.12.3 The fixed monthly costs

The labour and company overhead costs of the contractor are covered under this monthly charge.

The fixed amount is firm between the 1st of July and 30th of June of each calendar year that the contract is in force. The contractor may apply for a decrease or increase in contract price 60 days before the 30th of June.

2.2.12.4 Component changes (partial to the first annexure to the contract)

The contractor shall inform the client in writing of all planned component change-outs, where possible, 28 days in advance. The component change-out will be done at intervals determined by the manufacturer's scheduled hours and life cycle costing. Extended

change-outs will be subject to mutual agreement by the client and the contractor.

2.2.13 General (clause 15 of the contract)

The contract, as also mentioned previously, contains a clause stating that the contract may only be amended in writing and where the amendment is signed by both parties. This is emphasised in the final clauses of the contract by stating the obligation once again. Such a clause usually also states that the written document is the only source of the agreement between the parties. Although this specification is repeated in the contract, the latter does not form part of the wording. It is recommended that the contract be altered to include the statement.

The possibility exists for the client to request additional work from the contractor during the span of their agreement. When the contractor accepts such a request a new separate contract for the additional work is concluded. The contractor is then entitled to compensation for the additional work completed in terms of the second agreement concluded between the parties. The contract states that the contractor reserves the right to review the contract rates when changes to the contract are made.

In addition to the stipulations under this heading, neither party will be entitled to cede, assign or transfer any of its rights, interests or

obligations under and in terms of the contract except with the prior written consent of the other party.

It is difficult to prove the existence of a verbal agreement, and obviously the terms thereof. The conduct of the parties, who perform in accordance with the verbal agreement, may proof the existence of the agreement. The contract, however, states that no party will be bound by any express or implied term, representation, warranty, promise or the like, not recorded herein.

The parties undertake at all times to do all such things, to perform all such acts and to take all such steps necessary for or incidental to the putting into effect the terms and conditions of the contract. The objective of a contract summarises what the contract is all about. The responsibilities of the parties to the contract forms part of the objective of the contract. The objective should be discussed under the statement of work after the definitions in the contract, not as an afterthought in the last clauses of the contract.

Most contracts for letting and hiring of work contain some clauses covering the non-disclosure of confidential information. The price structure of any contractor is confidential. Disclosing this information to direct competition of the contractor is unethical. The contractor may have a disadvantage in a tender process for a similar service elsewhere should his unit prices be known to his competitors. If proven, this may lead to a claim for loss of income.

BHP Billiton has a procedure addressing public relation issues and the release of statements to the media, etc. Some of its operations and specifics to the operations may be confidential. By including a clause in the contract addressing the non-disclosure of confidential information may protect the interests of all the parties involved.

2.2.14 Domicilium (clause 16 of the contract)

The formalities for the issue of proper notice are addressed in clause 16 of the contract.

The domicilium citandi et executandi for each party to the contract are specified in this clause. The parties are entitled to change its domicilium citandi et executandi, provided that any address shall be a physical address (other than a post office box) in the Republic of South Africa. Such change will be effective upon receipt of notice in writing by the other party. A party can not claim that he did not receive a notice delivered, because he failed to inform the other party of a change in the domicilium citandi et executandi.

All notices, demands and communications intended for either party shall be delivered to the specified addresses. A notice sent by one party to another shall be deemed to be received:

(a) on the same day, if delivered by hand;

(b) on the 14th day after posting, if sent by registered mail.

(c) Although the domicilium citandi et executandi is listed in the contract, the postal addresses of the parties should also be included. The latter will be used to forward invoices and informal correspondence between the parties.

2.3 SUMMARY

There is no specific literature available on the subject of the availability requirements in maintenance and repair contracts applicable to mining earth moving equipment, nationally or internationally.

A project manager must recognise the advantages and disadvantages of all basic contractual planning to select the best possible option for a particular project or service.

During 2004 BHP Billiton internally compiled a document containing operational definitions and key performance indicators. The purpose of the document is to provide consistency in all communications and measurements within BHP Billiton regarding operational functions. The aim is to complete the dissertation within the mentioned provisions in order to achieve consistency in and add value to communications within BHP Billiton.

Growth will take place during the process. Continuous improvement will also mature and strengthen the relationship between the client and the contractor

further. This benefit may spill over to the different sites within BHP Billiton by applying the same principles to similar active contracts.

The contract is the basis of the topic investigated. The contract value of the maintenance and repair contracts is so high that by devoting this chapter to commercial law principles is justified. Every decision made on site regarding the contract works may have legal or monetary repercussions. It is important for every party involved to have a basic knowledge of contract law.

During the last fifteen years, two important contracts have been developed and are used by many professionals with great success. The NEC and FIDIC contract is recognised and used in the international market. Within BHP Billiton unique contract documents are compiled to cater for each specific project or service required. The framework of the contract, however, is built on NEC and FIDIC principles.

According to Nagel et al (2000: 586) a contract for the letting and hiring of work should at least contain the essentialia for this type of contract. Where the parties want to exclude or limit the effect of these naturalia, specific incidentalia to that effect must be added. Any other provisions that the parties would like to be included in their contract can be added as additional essentialia.

It is very important to use the correct terminology in contract documentation in order to avoid confusion when reading the contract.

The statement or scope of work is a description of the work required for the project in a specific sequence of events. The complexity of the statement of work is determined by the needs of each party involved in the contract. The preparation and compilation of the statement of work is of the utmost importance.

It is recommended that a proper researched and developed incentive model be implemented. Currently the performance of both parties is measured on a limited basis. Without managing and controlling contract performance it is not possible to improve such performance.

The framework of the contract is discussed in detail in this chapter of the dissertation. Areas were identified to be improved, but in the context of the contract as it is currently standing. In discussions held with the contractor in the recent past, it came to light that the contractor is not satisfied with the contract content as a whole. Suggestions can be made to improve technical points in the contract, but the contractor expressed his intention of terminating the contract as is in order to start a process of re-negotiating a new contract between the parties addressing the latest rights and duties of each party.

CHAPTER 3

DATA COLLECTION AND ANALYSIS

3.1 INTRODUCTION

This chapter describes the method of data collection and analysis completed. The source of the data, as well as the manipulation thereof will be described.

As discussed in Chapter 1 an availability of ninety percent or greater is currently required and provided by the contractor on the mining earth moving equipment. The foundation of the cost structure for the contract is the machine availability percentage the service provider is guaranteeing as based on the initial requirements of the client at tender stage. The necessary data was collected in order to calculate the machine availability and Utilization. Machine availability and Utilization are calculated with specific formulae. Once the machine availability and Utilization have been determined, it was clear that the Utilization percentage reached with the equipment is significantly lower than the guaranteed machine availability percentage.

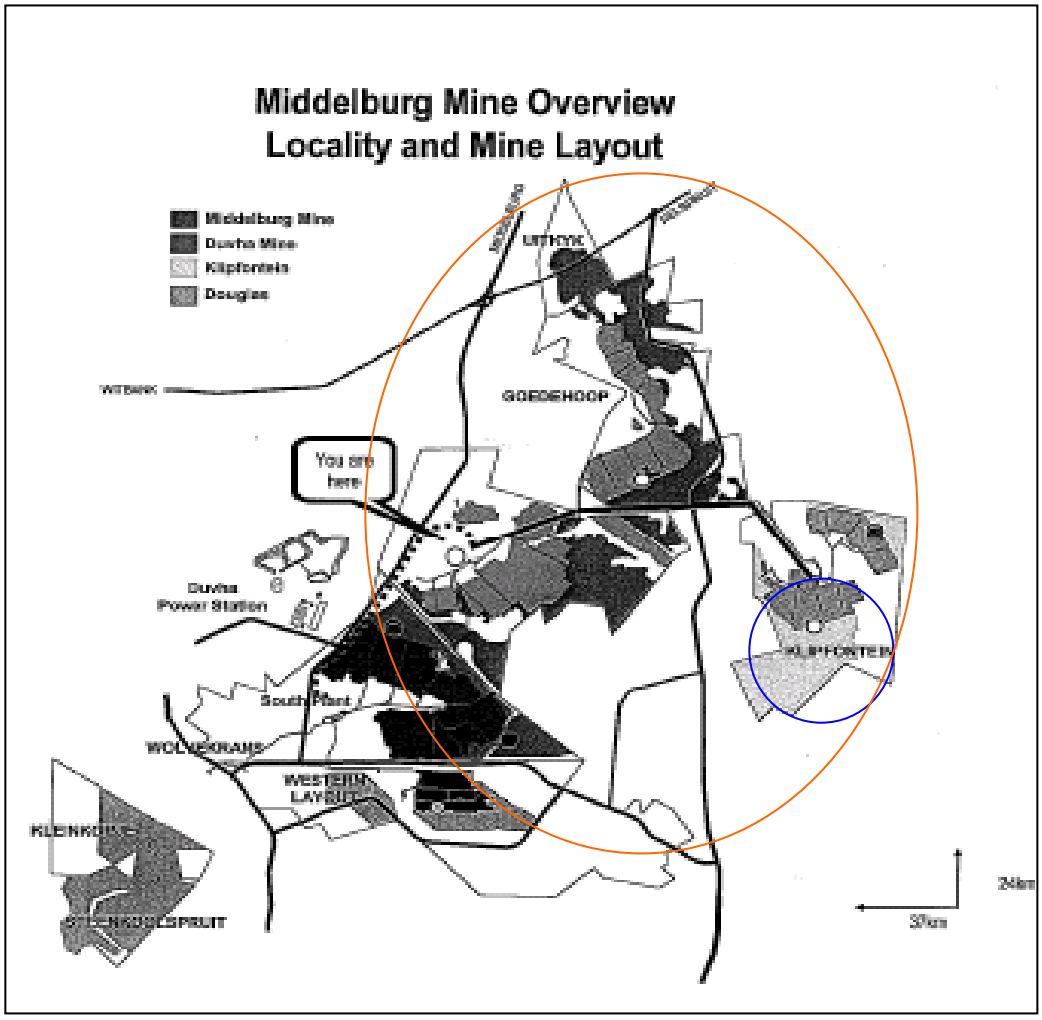
3.2 THE DATA

The data of research may be of two types; primary data and secondary data. The primary data is the most valid and the only source of reference of this research. The nature of the primary data is described briefly below.

3.2.1 The primary data

As mentioned previously, Middelburg Mine has contracts in place with several service providers in the field of maintaining and repair of mining earth moving equipment. The study field is narrowed down by selecting a sample namely the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine. The Klipfontein section as well as the area served by the workshop is indicated in the site plan in Figure 1 (Middelburg Mine Services, 2005).

Figure 1: Middelburg Mine overview – locality and layout



The primary data will be gathered from the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine. This is in the form of log sheets for each machine on every calendar day for the period November 2005 to April 2006. The information was collected and sorted on a weekly basis. The following raw data is collected and manipulated:

(a) The type of machine and the unique equipment number allocated to it.

(b) The date on which the data is captured.

(c) The machine opening and closing hour meter readings taken on a specific time every 24 hours.

(d) The guaranteed hours of work per machine. According to the contract it is always 24 hours for each machine.

(e) The operating hours (run hours) recorded for each machine.

(f) Recording of each type of down time hours and the reason therefore.

(g) A specific formula is used to calculate the machine availability factor with the information obtained.

(h) A specific formula is used to calculate the machine Utilization factor with the information obtained.

3.2.2 The data collection method

The main data collection method used was by observing the maintenance and repair activities pertaining to the mining earth moving equipment and the phenomena being researched. Participant observation took place in a workshop setting. The aim in participant observation was to obtain a detailed understanding of the values and practices of those observed.

3.2.3 The data analysis strategy

The method of exploratory data analysis (descriptive statistics) in analysing the quantitative data was applied. Exploratory data analysis implies techniques that are used to present frequencies and to measure location, dispersion and change. In this way the data are described and summarised and then presented in tables, charts, graphs and other diagrammatic forms. This enables patterns and relationships to be discerned which are not apparent in the raw data.

The data was fed into the Microsoft Office Excel computer system on a weekly basis in a specific format. The data was sorted per piece of mining earth moving equipment, as listed in the contract, for each day of each calendar month in the research period. Graphs are used to illustrate the level of machine availability obtained, as well as the Utilization figure reached with each machine. Calculations are done to show the average gap between the availability figure and Utilization figure of each machine and as a range of machines.

All the data will be represented as an addendum to the document displaying the processed data sheets.

3.2.4 The admissibility of the data

Only data from complete sections of the data log sheets were used.

3.3 THE SPECIFIC TREATMENT OF THE DATA

3.3.1 The first and second sub problem – the equipment availability and utilization level maintained by the contractor

The daily results in terms of the availability and Utilization of each piece of equipment included in the contractual scope of work must be determined. The results will be represented by means of graphs. The average trend in the availability and Utilization of the equipment will be analysed.

3.3.1.1 Data required

The data required to determine the availability and Utilization of each piece of mining earth moving equipment by means of formulae are as mentioned previously and as follows:

(a) The type of machine and the unique equipment number allocated to it.
(b) The date of the data capturing.
(c) The machine opening and closing hour meter reading taken on a specific time every 24 hours.

(d) The guaranteed hours of work per machine. According to the contract it is always 24 hours for each machine.

(e) The operating hours (run hours) recorded for each machine.

(f) Recording of each type of down time hours and the reason therefore.

(g) A specific formula is used to calculate the machine availability factor with the information obtained.

(h) A specific formula is used to calculate the machine Utilization factor with information obtained.

3.3.1.2 Data location and securement

The primary data will be gathered from the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine. The information was collected and sorted on a weekly basis.

The main data collection method used was by observing the maintenance and repair activities pertaining to the mining earth moving equipment and the phenomena being researched. The data was

obtained from service log books completed by the workshop personnel of the contractor as well as participant observation took place in a workshop setting. The aim in participant observation was to obtain a detailed understanding of the values and practices of those observed.

3.3.1.3 Data screening

The objective of the sub-problem was to develop a log sheet that will reflect the availability and Utilization for each piece of mining earth moving equipment calculated on a daily basis. The data was therefore screened by developing a spreadsheet to manageable detail. The spreadsheet must be sufficient to facilitate adequate and accurate measurement and evaluation of the equipment availability and Utilization.

3.3.2 The third sub problem – important factors influencing the contract cost structure

The most important factors that are influencing the current contract cost structure of the service provider must be defined. As mentioned previously the mine is currently paying the service provider for a guaranteed availability of ninety percent.

Based on this information the mine can re-negotiate guarantee percentages to suit the specific requirements of the mine at any stage, thus closing the gap between the guaranteed availability provided and the actual Utilization reached with the equipment.

3.3.2.1 Data required

The most important factors influencing the current contract cost structure are the following:

(a) The supply of service personnel, service vehicles and other company assets.
(b) The supply of spare parts.
(c) Support from service engineers.
(d) The introduction of technical improvements and upgrades.
(e) The hire of equipment to ensure production targets are maintained.

Each of the mentioned factors is a research field on its own. In the third sub-problem only the first two factors as mentioned above will be analysed. Additional information required will be as follows:

- The supply of service personnel, service vehicles and other company assets:
  - The structure of service personnel provided.
  - The layout of service vehicles provided.
  - The layout of other company assets allocated to the contract.
  - The cost allocated to each listed company overhead item.
- The supply of spare parts.
  - The cost breakdown of the variable cost per machine.
  - The effect on the cost structure by implementing lower availability requirements.

3.3.2.2 Data location and securement

The necessary information was obtained from the contract documentation and from the contractor himself. The contract documentation is readily available at Ingwe's procurement department. The contractor's head office is allocated in Johannesburg, Gauteng. The contractor opened regional offices in Middelburg, Mpumalanga to serve the maintenance and repairs contracts in this mining area. The applicable personnel and information were obtained from the regional offices.

3.3.2.3 Data screening

The data will be captured in tables in order to make the necessary comparisons and conclusions.

The objective of the sub-problem was to create tables in order to make the necessary comparisons and reach conclusions. The data was therefore screened by developing a spreadsheet and tables to manageable detail.

3.4 RESEARCH METHODOLOGY

This is a positivistic study in which the presentation and interpretation of the data is discussed in separate successive chapters. In the presentation of the data namely chapter four, a description of the sample is given. The research questions and hypotheses are addressed in chapter four and five. The majority of data is given in the form of tables and graphs.

3.5 SUMMARY

The data forms the core of the research and is essential to the outcome of the project. The research data may be of two types; primary data and secondary data. The primary data is the most valid and the only source of reference for this research.

The primary data was gathered from the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine. This is in the form of log sheets for each machine on every calendar day for the period from the 1st of November 2005 until the 30th of April 2006. The information was collected and sorted on a weekly basis. The log sheets were created as a method to manipulate and summarise the data into practical envelopes.

The main data collection method used was by observing the maintenance and repair activities pertaining to the mining earth moving equipment and the phenomena being researched. Participant observation took place in a workshop setting. The aim in participant observation was to obtain a detailed understanding of the values and practices of those observed.

The method of exploratory data analysis (descriptive statistics) in analysing the quantitative data was applied. Exploratory data analysis implies techniques that are used to present frequencies and to measure location, dispersion and change. In this way the data are described and summarised and then presented in tables, charts, graphs and other diagrammatic forms, which enables patterns and relationships to be discerned which are not apparent in the raw data.

The data was fed into the Microsoft Office Excel computer system on a weekly basis in a specific format. The data was sorted per piece of mining earth moving equipment, as listed in the contract, for each day of each calendar month in the research period. Graphs are used to illustrate the

level of machine availability managed, as well as the Utilization figure reached with each machine. Calculations are done to show the average gap between the availability figure and Utilization figure of each machine and as a range of machines. Only data from complete sections of the data log sheets were used.

The specific treatment of the data for each sub-problem is set out as follows:

(a) Data required

(b) Data location and securement

(c) Data screening

This is a positivistic study in which the presentation and interpretation of the data is discussed in separate successive chapters. In the presentation of the data namely chapter four, a description of the sample is given. The research questions and hypotheses are addressed in chapter four and five. The majority of data is given in the form of tables and graphs.

CHAPTER 4

RESEARCH RESULTS

4.1 INTRODUCTION

As mentioned in chapter 3 of the treatise, Middelburg Mine has contracts in place with several service providers in the field of maintaining and repair of mining earth moving equipment. The study field was narrowed down by selecting a sample namely the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine.

The primary data was gathered from the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine. This is in the form of log sheets for each machine on every calendar day for the period November 2005 to April 2006. The information was collected and sorted on a weekly basis.

4.2 THE LOG SHEET

In this chapter the log sheet and the research results will be discussed in detail. Table 6 is an example of a log sheet. A single log sheet for the piece of mining earth moving equipment numbered 6261 for the period of April 2006 is displayed. For practical reasons the table is split in two sections for

discussion purposes, since it is excessively wide and long in order to fit onto one page.

Each column will be discussed under separate headings. At the end of the chapter the entire table, or alternatively log sheet, will be understood completely.

Table 6.1: Research results sample

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time
Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H
6261	1-Apr	44414	24	16	100.00	66.67	0.00
	2-Apr	44430	24	17	100.00	70.83	0.00
	3-Apr	44447	24	17	100.00	70.83	0.00
	4-Apr	44464	24	17	100.00	70.83	0.00
	5-Apr	44481	24	16	100.00	66.67	0.00
	6-Apr	44497	24	16	100.00	66.67	0.00
	7-Apr	44513	24	16	100.00	66.67	0.00
	8-Apr	44529	24	16	100.00	66.67	0.00
	9-Apr	44545	24	16	100.00	66.67	0.00
	10-Apr	44561	24	16	100.00	66.67	0.00
	11-Apr	44577	24	16	100.00	66.67	0.00
	12-Apr	44593	24	18	100.00	75.00	0.00
	13-Apr	44611	24	18	100.00	75.00	0.00
	14-Apr	44629	24	18	100.00	75.00	0.00
	15-Apr	44647	24	21	100.00	87.50	0.00
	16-Apr	44668	24	6	100.00	25.00	0.00
	17-Apr	44674	24	4	100.00	16.67	0.00
	18-Apr	44678	24	4	100.00	16.67	0.00
	19-Apr	44682	24	4	100.00	16.67	0.00
	20-Apr	44686	24	7	100.00	29.17	0.00
	21-Apr	44693	24	20	100.00	83.33	0.00
	22-Apr	44713	24	12	100.00	50.00	0.00
	23-Apr	44725	24	12	100.00	50.00	0.00
	24-Apr	44737	24	13	100.00	54.17	0.00
	25-Apr	44750	24	16	100.00	66.67	0.00
	26-Apr	44766	24	16	100.00	66.67	0.00
	27-Apr	44782	24	17	100.00	70.83	0.00
	28-Apr	44799	24	16	100.00	66.67	0.00
	29-Apr	44815	24	21	100.00	87.50	0.00
	30-Apr	44836	24	22	0.00	0.00	0.00
	Closing	44858					0.00
	TOTALS		720	444.00	99.86	61.67	1.00
	AVERAGE			14.80	99.86		

4.2.1 Machine number (column A)

Each piece of mining earth moving equipment has a unique number. In this example the 6261 equipment number is allocated to a D10R type track dozer. This number is allocated to the piece of equipment for the life duration thereof. The equipment number is used as reference number:

(a) In correspondence;
(b) On invoices;
(c) In the financial system where all costs incurred by a machine are allocated to the machine; and
(d) In the list of equipment in the contract documentation.

4.2.2 Date (column B)

All the required information is gathered and processed on a daily basis. A line in a schedule is allocated to a day in a calendar month. The results of each day are used to calculate the final availability and Utilization factors for a specific piece of mining earth moving equipment in a specific calendar month.

4.2.3 Machine hours (column C)

Several aspects are measured with the hours worked by a specific piece of mining earth moving equipment and cover the following:

(a) The variable portion of the contract payable to the contractor on a monthly basis.

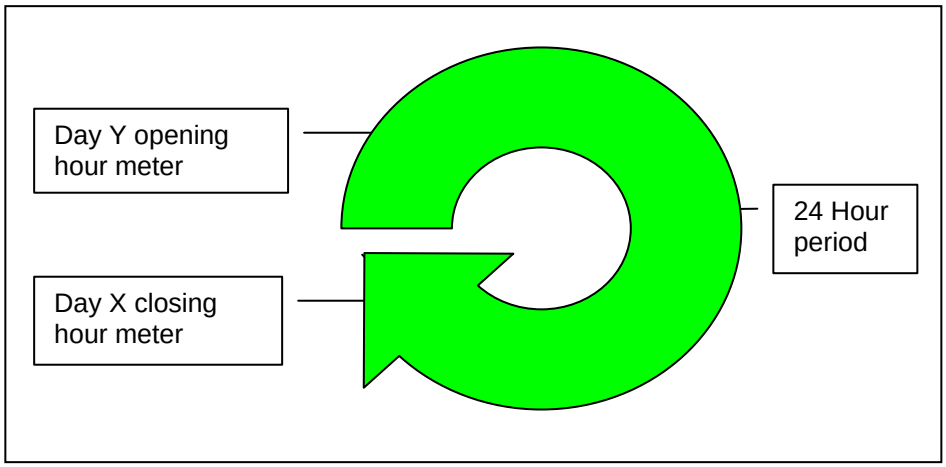
(b) Reflects the age of a machine. In this case machine 6261 - D10R type track dozer was 44,858 hours old on the 30th of April 2006.

(c) Are used in formulae in order to determine each machine's availability and Utilization figure.

(d) Determine the machine components which must be serviced or replaced at a specific stage in the machine's life and life cycle costing.

The closing and opening hour meter readings for each piece of machinery are taken at specific time every calendar day. Figure 1 illustrates the process followed when scheduling the hour meter readings every day.

Figure 2: Scheduling machine hour meter readings



4.2.4 Machine work hours (column D)

According to contract a machine availability of 90% or greater is required on all mining earth moving equipment as scheduled in the contract. The availability is calculated on the basis of seven operating days per week and 24 hours per day. The log sheet therefore account for each 24 hour day for the month of April 2006. It also means that a machine may work for a period of 24 hours uninterrupted. A flaw in the contract though is that the 24 hours are overstated. No provision has been made for shift changes, in other words, the time that it takes to change operators must be deducted from the 24 hours. The total working hours per machine per month is calculated as follows:

Working hours = Total days of month x 24 hours

For April 2006 this will be:

Working hours = Total days of month x 24 hours
(04/06) = 30 days x 24 hours per day
= 720 hours

4.2.5 Run hours (column E)

The run hours for a specific piece of earth moving equipment is the total of hours that the machine was actually working or running. The run hours are calculated as follows:

Run hours (per day) = Closing hour meter reading of machine – opening hour meter reading of machine

For example, on the 9th of April 2006, machine 6261 had an opening hour meter reading of 44,545 hours and a closing hour meter reading of 44,561. The closing hour meter reading of the 9th of April 2006 is also the opening hour meter reading for the 10th of April 2006. Therefore:

Run hours (09/04/06) = Closing hour meter reading of machine – opening hour meter reading of machine

= 44,561 – 44,545

= 16 run hours

The run hours are totalled on the last day of the month to give 444 run hours for machine 6261 during the month of April 2006. Thus the average run hours per month for this specific machine will be calculated as follows:

Average run hours (04/06) = Total run hours / Total number of days for the month

= 444 / 30

= 14.8 hours

4.2.6 Machine availability and utilization (column F and G)

These terms are, as mentioned several times, the core of this research. For clarity purposes the calculation of the machine availability and Utilization are discussed in detail after the remainder of the log sheet columns have been reviewed.

Table 6.2: Research results sample

Machine	Date	Machine Hours	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
Column A	Column B	Column C	Column J	Column K	Column L	Column M	Column N
6261	1-Apr	44414	0.00	0.00	0.00	0	Not applicable
	2-Apr	44430	0.00	0.00	0.00	0	Not applicable
	3-Apr	44447	0.00	0.00	0.00	0	Not applicable
	4-Apr	44464	0.00	0.00	0.00	0	Not applicable
	5-Apr	44481	0.00	0.00	0.00	0	Not applicable
	6-Apr	44497	0.00	0.00	0.00	0	Not applicable
	7-Apr	44513	0.00	0.00	0.00	0	Not applicable
	8-Apr	44529	0.00	0.00	0.00	0	Not applicable
	9-Apr	44545	0.00	0.00	0.00	0	Not applicable
	10-Apr	44561	0.00	0.00	0.00	0	Not applicable
	11-Apr	44577	0.00	0.00	0.00	0	Not applicable
	12-Apr	44593	0.00	0.00	0.00	0	Not applicable
	13-Apr	44611	0.00	0.00	0.00	0	Not applicable
	14-Apr	44629	0.00	0.00	0.00	0	Not applicable
	15-Apr	44647	0.00	0.00	0.00	0	Not applicable
	16-Apr	44668	0.00	0.00	0.00	0	Not applicable
	17-Apr	44674	0.00	0.00	0.00	0	Not applicable
	18-Apr	44678	0.00	0.00	0.00	0	Not applicable
	19-Apr	44682	0.00	0.00	0.00	0	Not applicable
	20-Apr	44686	0.00	0.00	0.00	0	Not applicable
	21-Apr	44693	0.00	0.00	0.00	0	Not applicable
	22-Apr	44713	0.00	0.00	0.00	0	Not applicable
	23-Apr	44725	0.00	0.00	0.00	0	Not applicable
	24-Apr	44737	0.00	0.00	0.00	0	Not applicable
	25-Apr	44750	0.00	0.00	0.00	0	Not applicable
	26-Apr	44766	0.00	0.00	0.00	0	Not applicable
	27-Apr	44782	0.00	0.00	0.00	0	Not applicable
	28-Apr	44799	0.00	0.00	0.00	0	Not applicable
	29-Apr	44815	0.00	0.00	0.00	0	Not applicable
	30-Apr	44836	0.00	0.00	0.00	0	Not applicable
	Closing	44858				0.00	
	TOTALS		0.00	0.00	0.00	1.00	
	AVERAGE		MTTR	1.00		Mean time to repair	
			MTBS	444.00		Mean time between shut downs	

Breakdown percentage	=	Breakdown hours / Run hours	=	0.225%

4.2.7 Down time (column G to L)

According to definition down time can be described as the period of time during which an item is not performing its required production function. The log sheet makes provision for four types of down time namely:

(a) Contractual down time;
(b) Non-contractual down time;
(c) “Window of opportunity” down time, and
(d) Service down time.

- Contractual and service down time includes:
    - Remedial maintenance including repairing defective parts;
    - The performance of preventative maintenance necessary to ensure the continued performance of the equipment;
    - Testing of equipment;
    - General welding repairs;
    - Electrical repairs;
    - Repairs to the air-conditioning system of the equipment;
    - Adding lubricants to the equipment;
    - Hydraulic component and hose repairs, and
    - The cleaning of the equipment.

- Non-contractual down time includes:
    - The maintenance and repair of tyres, wheel rims and related hardware;
    - Re-fuelling the equipment;
    - Replacing damaged cab windows, mirrors and mud flaps;
    - Replacing or repairing ground engaging tools such as buckets, etc.;
    - Accident damage, neglect, abuse and misuse of the equipment;
    - Fire, vandalism and theft, and
    - Down time due to road hazards and flying objects.

A window of opportunity exists where a contractual activity is performed while the equipment is engaged by a non-contractual activity. An example is that the contractor performs a daily inspection on the machine while the machine is being refuelled. Thus instead of recording two types of down time separately, two types of down time are performed simultaneously. This “window of opportunity” in not persuade though. Chapter seven briefly discuss this as a possible research project in the future.

Down time is recorded in hours on a daily basis and forms part of the formulae that is used to calculate the availability and Utilization factors of mining earth moving equipment. According to

mathematical principles one can not divide by a zero figure. Should the down time total for the month be less than one hour, the total will automatically display a total of one otherwise the calculations will be invalid.

4.2.8 Break down (column M)

A breakdown can be dined as a failure resulting in the non-availability of an item. The break downs of a specific machine are recorded on a daily basis. The breakdown total is used to calculate the mean time for repair, the mean time between shut downs and breakdown percentage per machine. This is discussed further into the chapter under a separate heading. Once again mathematical principles are adhered to. One can not divide by a zero figure. Should the breakdown total for the month be less than one hour, the total will automatically display a total of one otherwise the calculations will be invalid.

4.2.9 Remarks (column N)

A short description of the daily activities is given in the last column of the log sheet. It is also used to supply reasons for down time recorded.

4.2.10 Machine availability (column F)

Availability can be defined as the ability of an item (under combined aspects of its reliability, maintainability and maintenance support) to perform its required function at a stated instant of time or over a stated period of time or at a given point in time.

The contractor is required to deliver an availability of at least ninety percent on the mining earth moving equipment as scheduled in the contract. Since the contractor has no control over non-contractual down time (column J and K), it is excluded from the availability calculation. Therefore:

Total down time = contractual downtime + service down time (columns H and L)

As mentioned previously the availability is calculated on the basis of seven operating days per week and 24 hours per day. Therefore the possible working hours are 24 as stated in the contract.

Availability is calculated with the following formula:

$$\text{Availability (\%)} = \frac{\text{possible working hours} - \text{total down time}}{\text{possible working hours}} \times 100$$

The availability on machine 6261 for April 2006 is calculated as follows:

$$\text{Availability (\%)} = \frac{\text{possible working hours} - \text{total down time}}{\text{possible working hours}} \times 100$$

$$= \frac{(24 - 1)}{24} \times 100$$

= 99.86% availability

The availability can also be calculated for each machine on a daily basis as shown on the log sheet.

The availability percentage can not be 100%. The machine had to stand one time or another. A daily inspection is an example of standing time. The daily service may have taken less than an hour and was therefore not recorded. In order to compensate for this the contractual down time and breakdown totals are automatically adjusted to display a total of one, as explained previously in this chapter.

4.2.11 Machine utilization (column G)

Utilization is a measure of the use of available time (production time + process down time) during which production time occurs.

Utilization is calculated with the following formula:

$$\text{Utilization (\%)} = \frac{\text{total run hours}}{\text{possible working hours}} \times 100$$

The Utilization on machine 6261 for April 2006 is calculated as follows:

$$\text{Utilization (\%)} = \frac{\text{total run hours}}{\text{possible working hours}} \times 100$$

$$= \frac{444}{720} \times 100$$

= 61.67% Utilization

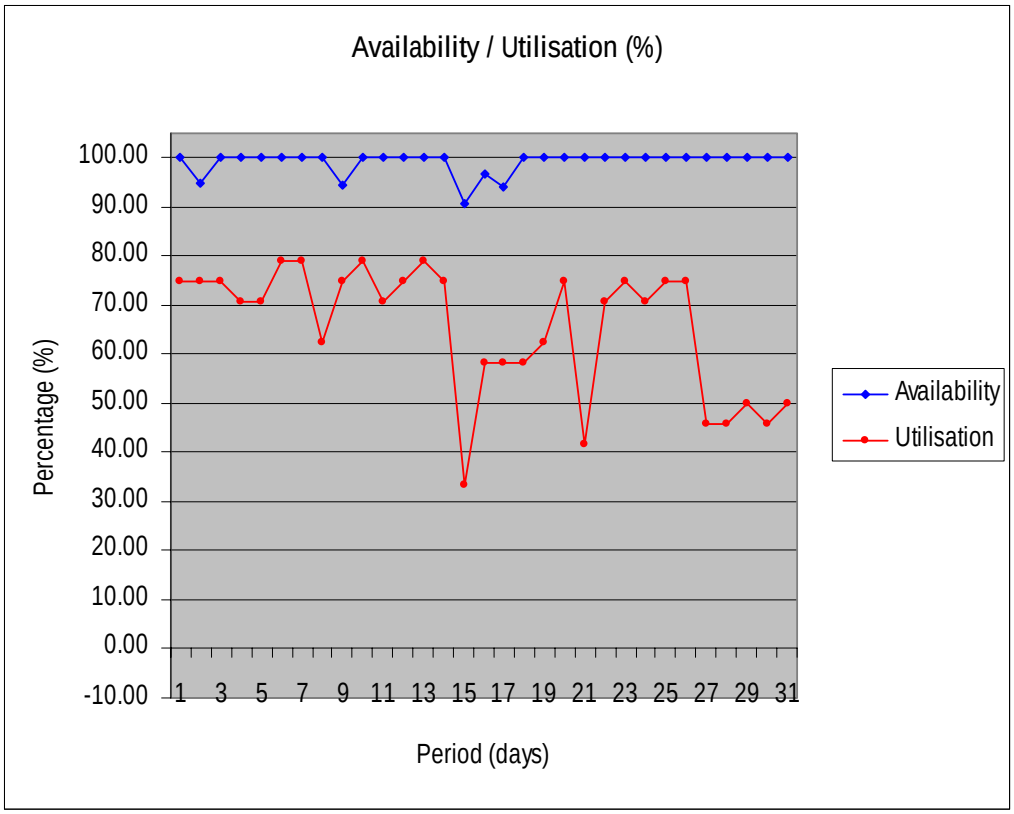
The Utilization can also be calculated for each machine on a daily basis as shown in the log sheet.

4.3 GRAPH

At the end of every month the availability and Utilization of each machine is plotted on a linear graph. The effect of the high percentage availability delivered by the contractor and the poor Utilization percentage maintained is clearly visible by making use of this specific graph. Graph 1 hereafter is a typical example of the described graph. A graph was created for each machine on a monthly basis. At the end of the research period a graph was

created in order to display the effect over the total research period displaying the results in total.

Graph 1: Availability vs. Utilization of machine 6261 during April 2006



4.3.1 Mean time to repair (MTTR)

The mean time to repair is the average corrective maintenance time of an item or a population of items. The lower the value of the mean time to repair, the higher the availability percentage will be that the contractor is supplying. It is in other words a tools the contractor uses to measure his contractual performance.

Mean time to repair is calculated with the following formula:

$$\text{MTTR (hours)} = \frac{\text{total contractual down time (column H)}}{\text{total breakdown (column M)}}$$

The mean time to repair on machine 6261 for April 2006 is calculated as follows:

$$\text{MTTR (hours)} = \frac{\text{total contractual down time (column H)}}{\text{total breakdown (column M)}}$$

$$= 1 / 1$$

$$= 1 \text{ hour}$$

4.3.2 Mean time between shut downs (MTBS)

The mean time between shut downs is the average time interval between maintenance actions (preventive, corrective or both). The higher the value of the mean time between shut downs, the higher the availability percentage will be that the contractor is supplying. It is in other words it is a tool the contractor uses to measure his contractual performance.

Mean time between shut downs is calculated with the following formula:

$$\text{MTBS (hours)} = \frac{\text{total run hours (column E)}}{\text{total breakdown (column M)}}$$

The mean time between shut downs on machine 6261 for April 2006 is calculated as follows:

$$\text{MTBS (hours)} = \frac{\text{total run hours (column E)}}{\text{total breakdown (column M)}}$$

$$= 444 / 1$$

$$= 444 \text{ hours}$$

4.3.3 The break down percentage

The break down percentage is another instrument to measure the contractor's performance. The threshold for good performance is less than 0.13%. This means the machine did not stand a lot.

The break down percentage is calculated with the following formula:

$$\text{Breakdown (\%)} = \frac{\text{total contractual down time}}{\text{total run hours}}$$

The break down percentage for machine 6261 for April 2006 is calculated as follows:

$$\text{Breakdown (\%)} = \frac{\text{total contractual down time}}{\text{total run hours}} \times 100$$

$$= 1 / 444 \times 100$$

$$= 0.225\ \%$$

4.3.4 Results of entire fleet

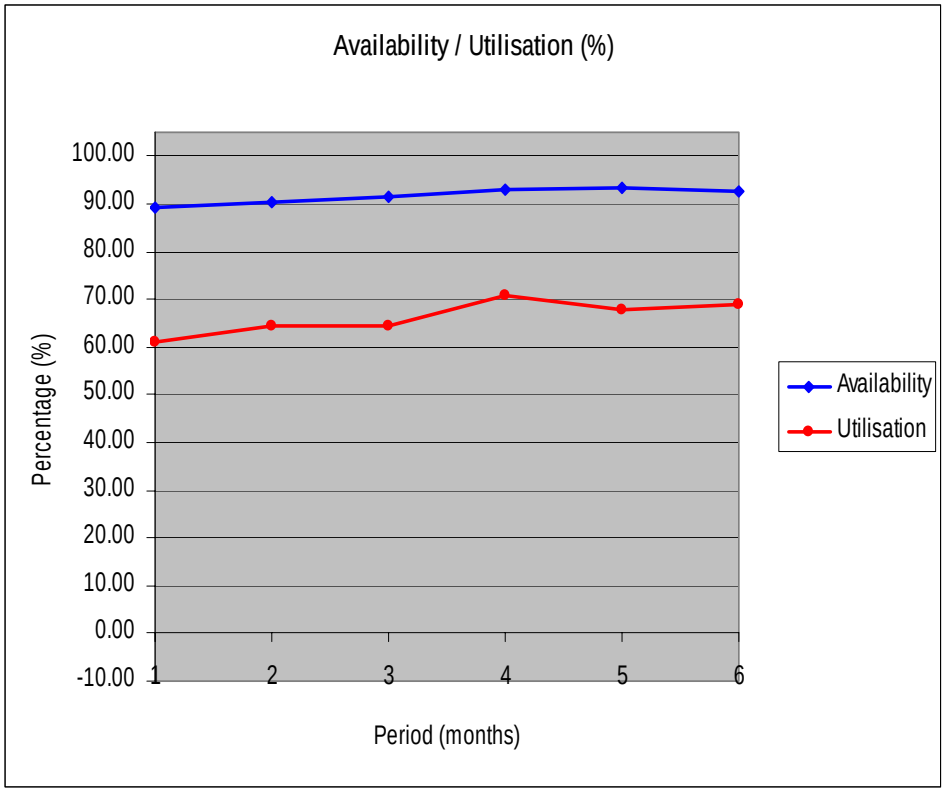
For explanatory purposes, the log sheet of only one machine namely the 6261 D10R type track dozer for the April 2006 period was discussed. A log sheet was completed for every machine as scheduled in table 6 for the research period from November 2005 to April 2006.

Table 7: Equipment scheduled in the Klipfontein MAR contract

Equipment type	Quantity
CAT 16H & 16G motor graders	2
CAT 789C	4
CAT 824C	1
CAT 994 FEL	1
CAT D10 track dozers	3
CAT D11 track dozers	6

The average availability and Utilization for the total fleet are plotted in graph 2. It is very clear that the contractor delivers the set contract availability percentage, but the mine is under utilising the fleet. The individual log sheets for each machine are annexed to the treatise.

Graph 2: Availability vs. Utilization of entire Klipfontein MAR fleet during entire Research period



4.4 SUMMARY

Due to the nature and scope of the problem a basic log sheet has further been developed to capture the data necessary to calculate the machine availability and Utilization with the explained formulae. The data includes, but is not limited to the following:

(a) Machine type and unique identification number;
(b) Period of data processing;
(c) Machine opening and closing hour meter readings;
(d) The calculated machine availability;
(e) The calculated machine Utilization;
(f) Recorded different types of machine down time;
(g) Daily comments, and
(h) Contractor performance measures.

The problem was stated in chapter 1. An availability of ninety percent or greater is currently required and provided on the equipment. The cost structure for the contracts is based on the availability percentage the service provider is guaranteeing. The Utilization percentage reached with the equipment is significantly lower than the guaranteed availability percentage.

The problem setting was confirmed with the results obtained from the log sheets. Graphs based on the log sheet results have highlighted the problem clearly.

The next step is to ascertain what can be done to safely reduce the guaranteed equipment availability without increasing the risk of production losses because of such an implementation.

CHAPTER 5

ANALYSIS AND RESULTS OF THE FIXED COSTS

5.1 INTRODUCTION

The first and second sub-problem has been stated and proved in the first few chapters of the dissertation. The purpose of this chapter is to ascertain what can be done to safely reduce the guaranteed equipment availability without increasing the risk of production losses as a result of such an implementation.

According to the contract, in the event that the availability targets are not met for the fleet of the scheduled equipment, the contractor will undertake appropriate measures to increase the machine availability. These measures include, but are not limited to, the following:

(a) the supply of additional service personnel;
(b) the supply of additional spare parts;
(c) additional support from service engineers;
(d) the introduction of technical improvements and upgrades, and
(e) the hire of additional equipment to ensure production targets are maintained.

Since these are the measures the contractor will take to increase the availability, the opposite effect can be achieved by implementing the same

measures. In the next two chapters of the dissertation, however, only two of the five mentioned measures will be addressed namely:

(a) The supply of additional service personnel or for the purpose of this chapter, the decrease in service personnel numbers and other company overheads.
(b) The supply of additional spare parts or for the purpose of chapter six, looking at the parts inventory and supply.

The first reason for looking at the mentioned measures being that, in general, the data availability was not as accessible as originally anticipated at the proposal stage. The main reason appears to be that the mine and the contractor are tied in negotiations for a new, improved contract to suite both the parties' requirements. The contractor may feel uneasy to disclose too much information at this sensitive stage. Another reason may be that the contractor is satisfied with the contractual relationship or status at this stage. Only few people are making statements regarding the contract availability supplied vs. the machine Utilization. The contractor is thus supplying the contractually specified availability percentage without substantial effort, since the equipment is under-utilised. Why propose to decrease the contract rates?

The second reason for looking at the mentioned measures being that the mine has limited information on the measures not discussed in this chapter. The detail displayed in the contract is discussed with the contractor and

certain proposed changes to the fixed monthly cost have been identified and applied. The proposed changes are discussed later on in the chapter.

The contract unit prices of any contractor are confidential. In order to carry over the effect of proposed amendments to the contract, all unit prices, as well as the possible saving due to such proposed amendments to the contract, will be shown as percentage figures.

5.2 THE CONTRACTOR'S COMPANY OVERHEADS

The company overhead cost structure in order to supply and maintain a contractual required 90% machine availability as scheduled in the contract document is summarised in table 8. The contractor's overhead expenses are divided in three sections namely the labour layout and costs, the vehicle layout and costs and lastly the dedicated assets and other costs.

Table 8: Fixed monthly cost per contract

No.	Description	Quantity		Percentage fixed monthly amount
Section A: Labour costs				
1	Project Manager	1	No	5.91%
2	Workshop supervisor	1	No	3.18%
3	Planner	1	No	3.18%
4	Administration clerk	1	No	1.92%
5	Assistants	2	No	3.84%
6	Operatives	3	No	5.76%
7	Maintenance artisans	4	No	8.87%
8	Shift artisans	4	No	8.87%
9	Welder	1	No	2.22%
10	Auto electricians	1	No	2.22%
	Total labour	19		45.96%
Section B: Vehicle costs				
11	Single cab LDV	5	No	4.27%
12	Double cab LDV	1	No	1.20%
13	Passenger vehicle	1	No	1.37%
	Total vehicles	7		6.83%
Section C: Dedicated assets / other costs				
14	All necessary tooling			10.98%
15	Office furniture and expenses			7.69%
16	Workshop furniture and expenses			7.69%
17	IT equipment and expenses			6.59%
18	Service truck			3.29%
19	Lubrication truck			3.29%
20	Workshop maintenance			1.10%
21	Employee transport			6.59%
	Total other costs			47.21%
	Total fixed monthly amount payable			100.00%

The percentage displayed in the last column of table one is the weight each item carries in this section.

5.2.1 Labour costs

As mentioned previously, Middelburg Mine has maintenance and repair contracts in place with Barloworld Equipment Company for two sections on the mine premises namely: Boshmanskrans and Klipfontein. Middelburg Mine is paying for a project manager on each site. Recently the project manager at Boschmanskrans was promoted in his company. Barloworld Equipment Company decided not to appoint a new project manager for the site, but to appoint the project manager at Klipfontein as project manager for both sites. As a result the costs for the two project managers are smoothed out over the two contracts. The cost for the project managers is 5.91% of the contract amount for the fixed cost. Dividing the cost over the two contracts will result in a saving of 2.96% on the contract cost for this section.

The contractor only made provision for one workshop supervisor, planner and administration clerk. These quantities can not be reduced unless the personnel are rotated every second day between the different sites. This arrangement, however, will not be practical for the contractor and may result in higher transport costs due to the additional travelling. The specified labour supplied by the contractor will thus remain unchanged.

In order to accommodate three shift changes every 24 hours, the contractor provides two assistants, three operators, four maintenance artisans and four shift artisans. The labour supplied by

the contractor is necessary to maintain a guaranteed 90% availability figure. Should the availability figure be lowered by five percent in order to eliminate emergency cost due to unscheduled maintenance and repair work, the total labour quantity of 13 can be reduced to nine heads. This will result in a contract cost reduction of 3.84% to 1.92% for the artisans; 5.76% to 3.84% for the operatives; 8.87% to 6.65% for the maintenance and shift artisans. The total result will be a saving of 8.28% on the monthly fixed cost payable to the contractor.

Once again, the contractor only made provision for one welder and auto electrician. This specified labour supplied by the contractor will thus also remain unchanged.

The total saving on the labour costs will be 11.24% of a possible saving of 20.03% on the total fixed costs per month.

5.2.2 Vehicle costs

The current contract provides for five single cab light delivery vehicles, one double cab light delivery vehicle and a passenger vehicle. Due to the reduction in personnel numbers, the single cab light delivery vehicles can be reduced by one. The double cab light delivery vehicle and a passenger vehicle will remain unchanged. The cost for the single cab light delivery vehicles is 4.27% of the

contract amount for the fixed cost. Reducing the vehicle numbers will result in a saving of 0.85% on the contract cost for this section.

5.2.3 Dedicated assets and other costs

The contract does provide detail to the extend of counting every piece of equipment, office and workshop furniture and displaying expenses. The contractor made provision for this in his tender based on experience and a data bases build up on other contracts. Therefore, only an amount is allocated to each item under this heading. In order to determine the exact cost of each item, a thorough stocktaking exercise will have to be conducted and that is not the aim of this research. Certain conclusions were made based on the figures established under the previous two headings. The proposed reduction in percentages was confirmed with the contractor.

The tooling cost will include all tools, containers, storage, maintenance and cleaning of the tools in order to maintain and repair the mining earth moving equipment. As discussed under labour costs, the workshop personnel were reduced with a figure of 20%. This figure can therefore be applied to the tools expenditure per month. All the necessary tooling is 10.98% of the contract amount of the fixed cost. By reducing the tooling cost with 20% as a result of reducing personnel numbers will result in a saving of 2.20% on the contract cost for this section.

The workshop furniture and expenses will include all working stations, lockers, protective clothing, ablution facilities and material needed by the workshop personnel. As established with the tooling expenditure, a reduction figure of 20% can be applied to the workshop furniture and expenses. The workshop furniture and expenses are 7.69% of the contract amount for the fixed cost. By reducing the tooling cost with 20% as a result of reducing personnel numbers will result in a saving of 1.84% on the contract cost for this section.

The office furniture and information technology equipment will include items such as desks, chairs, filing cabinets, stationary, computer hardware, software and licenses. Once again, as discussed under labour costs, the total personnel component was reduced with a figure of 24%. This figure can therefore be applied to the office and information technology equipment and expenses per month. The total spend on the mentioned items is 14.28% of the contract amount for the fixed cost. By reducing the cost with 24% as a result of reducing personnel numbers will result in a saving of 3.12% on the contract cost for this section.

Employee transport will include the transportation of personnel to site as well as travel expenses incurred by personnel on behalf of the company. By applying a reduction of 24% to the allocated contract costs to this item, will reduce the total spend from 6.59% to 5.80%, a result of 0.79%

The contractor made provision for one service vehicle, lubrication truck and provision for workshop maintenance. It is not advisable to alter the arrangements around these items, therefore it will remain unchanged.

The total saving on the dedicated assets and other company overhead cost will be 7.95% of a possible saving of 20.03% on the total fixed costs per month.

Table 9 summarises proposed changes compared to table 8 and the effect of each amendment.

Table 9: Proposed fixed monthly cost

No.	Description	Quantity		Proposed percentage fixed monthly amount
Section A: Labour costs				
1	Project Manager	0.5	No	2.96%
2	Workshop supervisor	1	No	3.18%
3	Planner	1	No	3.18%
4	Administration clerk	1	No	1.92%
5	Assistants	1	No	1.92%
6	Operatives	2	No	3.84%
7	Maintenance artisans	3	No	6.65%
8	Shift artisans	3	No	6.65%
9	Welder	1	No	2.22%
10	Auto electricians	1	No	2.22%
	Total labour	14.5		34.73%
Section B: Vehicle costs				
11	Single cab LDV	4	No	3.42%
12	Double cab LDV	1	No	1.20%
13	Passenger vehicle	1	No	1.37%
	Total vehicles	6		5.98%
Section C: Dedicated assets / other costs				
14	All necessary tooling			8.78%
15	Office furniture and expenses			6.15%
16	Workshop furniture and expenses			5.84%
17	IT equipment and expenses			5.01%
18	Service truck			3.29%
19	Lubrication truck			3.29%
20	Workshop maintenance			1.10%
21	Employee transport			5.80%
	Total other costs			39.26%
	Total fixed monthly amount payable			79.97%

The impact of the reduction can be explained with an example. Say for example the client pays the contractor a fixed monthly amount of R650,000.00 per month. This will add to an amount of R7,800,000.00 per

annum. If a saving of 20.03% is applied to this amount, the total saving will be R1,562,340.00 per annum.

5.3 SUMMARY

The purpose of this chapter is to ascertain what can be done, firstly, to safely reduce the guaranteed equipment availability without increasing the risk of production losses as a result of such an implementation.

According to the contract, in the event that the availability targets are not met for the fleet of the schedules equipment, the contractor will undertake appropriate measures to increase the machine availability. These measures include, but are not limited to the following:

(a) the supply of additional service personnel;
(b) the supply of additional spare parts;
(c) additional support from service engineers;
(d) the introduction of technical improvements and upgrades, and
(e) the hire of additional equipment to ensure production targets are maintained.

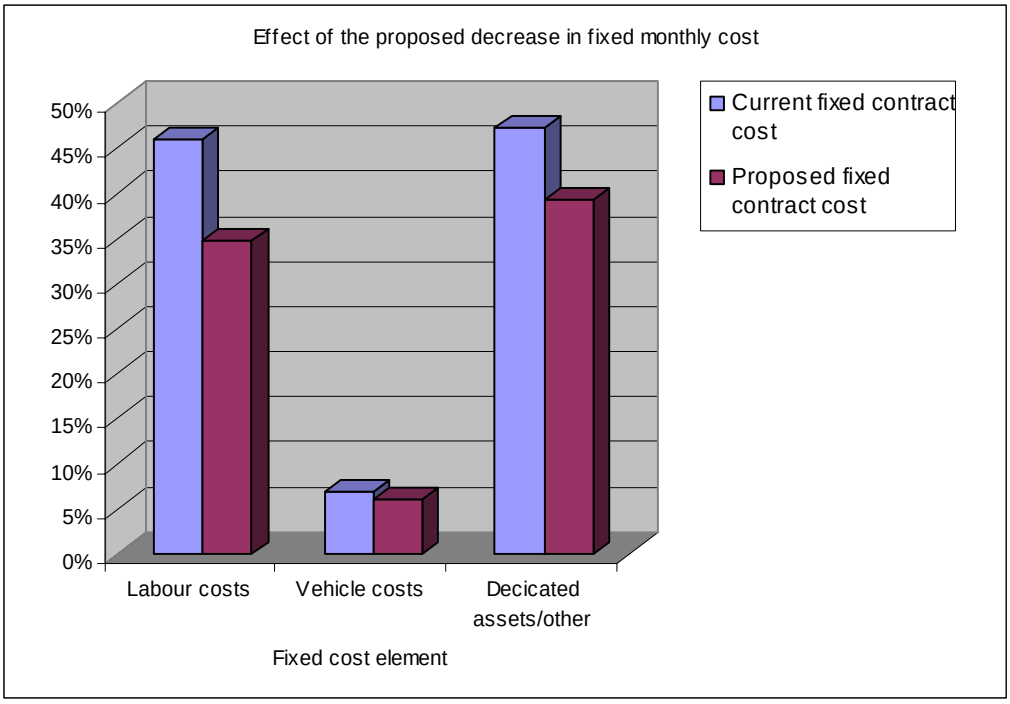
Since these are the measures the contractor will take to increase the availability, the opposite can be achieved by implementing the same measures. Only two of the five mentioned measures will be addressed. In this chapter the supply of additional service personnel or for the purpose of this dissertation, the decrease in service personnel numbers and other company overheads will be discussed.

The contractor's overhead expenses are divided in three sections namely the labour layout and costs, the vehicle layout and costs and lastly the dedicated assets and other costs. By applying certain principles to the cost allocated to each items listed under the separate headings will result in the following:

(a) The total saving on the labour costs will reduce from 45.96% on the total fixed costs per month to 34.73%.
(b) The reducing of the vehicle numbers will result in a saving from 6.83% to 5.98% on the contract cost for this section.
(c) The total saving on the dedicated assets and other company overhead cost will reduce from 47.21% to 3.26% on the total fixed costs per month.

The total saving on each of the three sections will add up to a total of 20.03% on the total fixed costs payable to the contractor by the client on a monthly basis.

Graph 3:Availability vs. Utilization of entire Klipfontein MAR fleet during entire Research period



In Chapter 2 it was mentioned that the contract contains a clause stating that the contract may only be amended in writing and where the amendment is signed by both parties.

CHAPTER 6

ANALYSIS AND RESULTS OF THE VARIABLE COSTS

6.1 INTRODUCTION

The first and second sub-problem have been stated and proved in the first few chapters of the dissertation. In chapter five, the fixed cost to the contract is analysed and discussed. The same methodology was used in this chapter to analyse and discuss the variable cost to the contract.

According to the contract, a variable hourly rate is payable to the contractor based on the age of the machine and the hours run by the machine in the specific month. The hours run by the machine were measured by means of an hour meter reader installed in the machine.

The detail displayed in the contract was discussed with the contractor and certain proposed changes to the variable monthly cost have been identified and applied. The proposed changes are discussed later on in the chapter.

The contract unit prices of any contractor are confidential. In order to carry over the effect of proposed amendments to the contract, all unit prices, as well as the possible saving due to such proposed amendments to the contract, will be shown as percentage figures.

For explanatory purposes, the variable cost structure of a 6261 D10R type track dozer is discussed. A cost structure for the variable cost was completed for each machine as scheduled in the contract and attached to the dissertation.

6.2 VARIABLE CONTRACT COST

The variable cost structure per machine, based on the age of the machine and measured in run hours, consists of three main components:

(a) The maintenance portion
(b) Repair portion
(c) Utility cost

According to the definition the term maintenance is the combination of all technical and associated administrative actions intended to retain an item in, or restore it to, a state in which it can perform its required function.

According to definition to repair a piece of equipment is to restore it to an acceptable condition by the renewal, replacement or mending of worn, damaged or decayed parts.

The Utilization cost will be miscellaneous items that are low in value, but high in quantity such as bolts, nuts, etc.

The life cycle cost of any piece of equipment is the total cost to the owner of an item over its full life. It includes the cost of acquisition, operation, support, the costs arising from its failures, and, where applicable, the cost of its disposal. From the contractor's point of view and for the purposes of the contract, this will be the parts and labour components. Table 10 summarises the cost components for the life of the mentioned machine.

Table 10: Variable cost on machine 6261 – current contract stipulations

D10R (6261)										
Study	Scheduled Hours		Maintenance			Repairs			Utility	Grand
Period	From	To	Parts	Labour	Total	Parts	Labour	Total		Total
1	0	6,000	44.97%	0.00%	44.97%	39.32%	4.25%	43.58%	11.45%	100.00%
2	6,000	12,000	16.46%	0.00%	16.46%	73.93%	5.71%	79.64%	3.91%	100.00%
3	12,000	18,000	3.75%	0.00%	3.75%	90.09%	4.01%	94.10%	2.16%	100.00%
4	18,000	24,000	26.79%	0.00%	26.79%	61.71%	6.93%	68.63%	4.58%	100.00%
5	24,000	30,000	16.38%	0.00%	16.38%	73.99%	5.72%	79.71%	3.91%	100.00%
6	30,000	36,000	3.77%	0.00%	3.77%	90.07%	4.01%	94.08%	2.16%	100.00%
7	36,000	42,000	15.98%	0.00%	15.98%	73.97%	5.85%	79.82%	4.20%	100.00%
8	42,000	48,000	26.94%	0.00%	26.94%	61.58%	6.91%	68.49%	4.57%	100.00%
9	48,000	54,000	3.75%	0.00%	3.75%	90.09%	4.01%	94.10%	2.16%	100.00%
10	54,000	60,000	16.93%	0.00%	16.93%	73.44%	5.71%	79.16%	3.91%	100.00%

In order for the contractor to guarantee and maintain the availability percentage of 90%, the parts unit price is divided in an 80:20 relationship. Twenty percent of the parts price is provision for unscheduled work to be performed by the contractor. Unscheduled work on equipment can be

defined as the maintenance carried out to no predetermined plan or production is stopped for an unforeseen reason. Fifty percent of the unscheduled work is allocated as emergency cost.

By reducing the guaranteed availability percentage by five percent, it will result in the contractor not having to make special provision to manage and control unscheduled work. This can be compared with a hospital. Any hospital must be prepared for emergency cases. The ambulance must rush the patient to the hospital and emergency personnel are on standby to receive the patient. The theatre must be ready with surgery personnel in place. Afterwards the hospital must have a bed, medicine and aftercare personnel in order to treat the patient. Say the same person is diagnosed with far less condition, but treatable in hospital. The patient can go to the hospital with his own arranged transport and be submitted calmly. The necessary procedures can be executed as planned and on time. The patient's bed will be booked and ready when needed. All the medicine can be ordered and applied when needed. The provisions to be made in both cases are different and the one more expensive than the other. The principal can be applied to the maintenance and repair of mining earth moving equipment. The unscheduled work becomes planned activities resulting in lower costs.

On the 30th of April 2006, machine 6261 had a closing hour meter reading of 44,858. This means the machine age falls within the 42,000 to 48,000 hour window. The maintenance parts and labour costs, the repair parts and labour costs and the utility cost will add up to a 100% in table 8. The

maintenance parts price is 26.94% of the total price per hour and the repair parts price is 61.58% of the total price per hour for this age category of the machine. By eliminating the emergency cost from the hourly unit rates will result in a cost reduction. This is determined by applying the 80/20 rule and taking out the fifteen percent emergency costs will be done as follows:

Emergency cost	=	Parts price x 20% x 15%
(maintenance)	=	26.94 - (26.94 x 0.2 x 0.15)
	=	26.14%

Emergency cost	=	Parts price x 20% x 15%
(repair)	=	61.58 - (61.58 x 0.2 x 0.15)
	=	59.73%

Therefore the maintenance parts price of 26.94% reduces to 26.14% of the total price per hour and the repair parts price of 61.58% reduces to 59.73% of the total price per hour for this age category of the machine.

The new maintenance parts cost, maintenance labour cost, the new repair parts cost, repair, labour cost, and the utility cost will now add up to 97.34% as summarised in table 9. The result is a saving of 2.66% on the variable cost on a monthly basis for this specific machine.

The principle was applied to the variable cost structure of each machine. The schedules are attached to the dissertation. An average cost reduction of 2.78% was reached. The impact of the reduction can be explained with an

example. Say the client pays the contractor a monthly amount determined with the variable unit price of R2,500,000.00 per month. This will add to an amount of R30,000,000.00 per annum. If a saving of 2.78% is applied to this amount, the total saving will be approximately R834,000.00 per annum.

6.3 SUMMARY

The purpose of this chapter, as with chapter 5, is to ascertain what can be done firstly to safely reduce the guaranteed equipment availability without increasing the risk of production losses because of such an implementation.

According to the contract a variable hourly rate is payable to the contractor based on the age of the machine and the hours run by the machine in the specific month. The hours run by the machine are measured by means of an hour meter reader installed in the machine.

For explanatory purposes, the variable cost structure of 6261 D10R type track dozer is discussed. A cost structure for the variable cost was completed for each machine as scheduled in the contract and attached to the dissertation.

The variable cost structure per machine, based on the age of the machine and measured in run hours, consists of three main components:

(a) The maintenance portion

(b) Repair portion

(c) Utility cost

According to definition the term maintenance is the combination of all technical and associated administrative actions intended to retain an item in, or restore it, to a state in which it can perform its required function.

According to definition to repair a piece of equipment is to restore an item to an acceptable condition by the renewal, replacement or mending of worn, damaged or worn parts.

The Utilization cost will be miscellaneous items that are low in value, but high in quantity such as bolts, nuts, etc.

The life cycle cost of any piece of equipment is the total cost to the owner of an item over its full life. It includes the cost of acquisition, operation, support, the costs arising from its failures, and, where applicable, the cost of its disposal. From the contractor's point of view and for the purposes of the contract this will be the parts and labour components.

In order for the contractor to guarantee and maintain the availability percentage of 90%, the parts unit price is divided in an 80:20 relationship. Twenty percent of the parts price is provision for unscheduled work to be performed by the contractor. Unscheduled work on equipment can be defined as the maintenance carried out to no predetermined plan or production is stopped for an unforeseen reason. Fifty percent of the unscheduled work is allocated as emergency cost.

By reducing the guaranteed availability percentage, it will result in the contractor not having to make special provision to manage and control unscheduled work. The unscheduled work becomes planned activities resulting in lower costs.

The average saving on the variable cost payable to the contractor by the client on a monthly basis will be approximately 2.78%.

In Chapter 2, it was mentioned that the contract contains a clause stating that the contract may only be amended in writing and where both parties sign the amendment.

CHAPTER 7

SUMMARY AND CONCLUSION

7.1 INTRODUCTION

It is not only technology that improves at an astonishing rate. To be an effective manager one has to master many skills. It is also very important to maintain and improve these skills continuously. Innovative thinking, change management as well as quality management is the future of worldwide competitiveness. The survival of an organisation also depends on the level of maturity of the relationships within.

In order to understand the problem and its setting completely, it is necessary to introduce the reader to the organisation in detail.

One of the most critical elements of its operation is the primary earthmoving equipment which forms the heart of the mine. A service to maintain and repair the mining earth moving equipment fleet can be outsourced to an independent third party or the company can maintain the fleet with its own resources. Middelburg Mine Services implemented a combination resulting in an agreement between the parties involved known as a Maintenance and Repair Contract.

An availability of ninety percent or greater is currently required and provided on the equipment fleet. The cost structure for the contracts is based on the

availability percentage the service provider is guaranteeing. The Utilization percentage reached with the equipment is significantly lower than the guaranteed availability percentage. The main problem is to ascertain what can be done to safely reduce the guaranteed equipment availability without increasing the risk of production losses because of such an implementation.

The research will be conducted at Middelburg Mine Services in the Mpumalanga province in South Africa. As mentioned previously Middelburg Mine Services has several maintenance and repair of earth moving equipment contracts in place with different preferred service providers. The results of this specific project would be applicable in practice to contractual agreements of similar nature or size. The principles learned would be applicable to the industry as a whole.

7.2 SUMMARY OF THE LITERATURE STUDY

There is no specific literature available on the subject of the availability requirements in maintenance and repair contracts applicable to mining earth moving equipment, nationally or internationally.

A project manager must recognise the advantages and disadvantages of all basic contractual planning to select the best possible option for a particular project or service.

During 2004 BHP Billiton internally compiled a document containing operational definitions and key performance indicators. The purpose of the

document is to provide consistency in all communications and measurements within BHP Billiton regarding operational functions. The aim is to complete the dissertation within the mentioned provisions in order to achieve consistency in and add value to communications within BHP Billiton.

Growth will take place during the process. Continuous improvement will also mature and strengthen the relationship between the client and the contractor further. This benefit may spill over to the different sites within BHP Billiton by applying the same principles to similar active contracts.

The contract is the basis of the topic investigated. The contract value of the maintenance and repair contracts is so high that by devoting this chapter to commercial law principles is justified. Every decision made on site regarding the contract works may have legal repercussions. It is important for every party involved to have a basic knowledge of the contract law.

During the last fifteen years two important contracts have been developed and are used by many professionals with great success. The NEC and FIDIC contract is recognised and used in the international market. Within BHP Billiton unique contract documents are compiled to cater for each specific project or service required. The framework of the contract, however, is built on NEC and FIDIC principles.

According to Nagel et al (2000: 586) a contract for the letting and hiring of work should at least contain the essentialia for this type of contract. Where the parties want to exclude or limit the effect of these naturalia, specific

incidentalia to that effect must be added. Any other provisions that the parties would like include in their contract can be added as additional essentialia.

It is very important to use the correct terminology in contract documentation in order to avoid confusion when reading the contract.

The statement or scope of work is a description of the work required for the project in a specific sequence of events. The complexity of the statement of work is determined by the needs of each party involved in the contract. The preparation and compilation of the statement of work is of the utmost importance.

It is recommended that a proper researched and developed incentive model be implemented. Currently the performance of both parties is measured on a limited basis. Without managing and controlling contract performance it is not possible to improve such performance.

The framework of the contract is discussed in detail in this chapter of the dissertation. Areas were identified to be improved, but in the context of the contract as it is currently standing. In recent discussions held with the contract in the recent past, it came to light that the contractor is not satisfied with the contract content as a whole. Suggestions can be made to improve technical points in the contract, but the contractor expressed his intention of terminating the contract as is in order to start a process of re-negotiating a

new contract between the parties addressing the latest rights and duties of each party.

7.3 SUMMARY OF THE RESEARCH METHODOLOGY, DATA COLLECTION AND ANALYSIS

The data forms the core of the research and is essential to the outcome of the project. The data of research may be of two types; primary data and secondary data. The primary data is the most valid and the only source of reference of this research.

The primary data was gathered from the Barloworld Equipment Company site and workshop at the Klipfontein section of Middelburg Mine. This is in the form of log sheets for each machine on every calendar day for the period from the 1st of November 2005 until the 30th of April 2006. The information was collected and sorted on a weekly basis. The log sheets were created as a method to manipulate and summarise the data into practical envelopes.

The main data collection method used was by observing the maintenance and repair activities pertaining to the mining earth moving equipment and the phenomena being researched. Participant observation took place in a workshop setting. The aim in participant observation was to obtain a detailed understanding of the values and practices of those observed.

The method of exploratory data analysis (descriptive statistics) in analysing the quantitative data was applied. Exploratory data analysis implies

techniques that are used to present frequencies and to measure location, dispersion and change. In this way the data are described and summarised and then presented in tables, charts, graphs and other diagrammatic forms, which enables patterns and relationships to be discerned which are not apparent in the raw data.

The data was fed into the Microsoft Office Excel computer system on a weekly basis in a specific format. The data was sorted per piece of mining earth moving equipment, as listed in the contract, for each day of each calendar month in the research period. Graphs are used to illustrate the level of machine availability managed, as well as the Utilization figure reached with each machine. Calculations are done to show the average gap between the availability figure and Utilization figure of each machine and as a range of machines. Only data from complete sections of the data log sheets were used.

The specific treatment of the data for each sub-problem is set out as follows:

(a) Data required
(b) Data location and securement
(c) Data screening

This is a positivistic study in which the presentation and interpretation of the data is discussed in separate successive chapters. In the presentation of the data namely chapter four, a description of the sample is given. The research

questions and hypotheses are addressed in chapter four and five. The majority of data is given in the form of tables and graphs.

7.4 SUMMARY OF THE RESEARCH RESULTS

Due to the nature and scope of the problem a basic log sheet has been developed further to capture the data necessary to calculate the machine availability and utilization with the explained formulae. The data includes, but is not limited to the following:

(a) Machine type and unique identification number.
(b) Period of data processing.
(c) Machine opening and closing hour meter readings.
(d) The calculated machine availability.
(e) The calculated machine Utilization.
(f) Recorded different types of machine down time.
(g) Daily comments.
(h) Contractor performance measures.

In chapter 1 the problem has been stated. An availability of ninety percent or greater is currently required and provided on the equipment. The cost structure for the contracts is based on the guaranteed availability. The utilization percentage reached with the equipment is significantly lower than the guaranteed availability percentage.

The daily results in terms of the availability of each piece of equipment included in the contractual scope of work were determined. The results were represented by means of graphs and are annexed to the treatise. According to contract the contractor must maintain a guaranteed equipment availability of 90% or greater. Research established that the contractor is fulfilling this requirement with an average equipment availability of 91.62%. Research results also revealed an average equipment utilization of 66.25%. The 25.37% variance between the two measures supports the intention of contractual adjustments.

The next step is to ascertain what can be done to safely reduce the guaranteed equipment availability without increasing the risk of production losses because of such an implementation.

Important factors that influence the cost structure for the required equipment percentage availability were analysed. The contractor is paid fixed and variable monthly amounts. The fixed monthly amount covers the contractor's overhead costs. The variable cost is an hourly rate for parts used to complete the maintenance and repair of the equipment.

In order for the contractor to guarantee and maintain the availability percentage of 90%, the parts unit price is divided in an 80:20 relationship. Twenty percent of the parts price is provision for unscheduled work to be performed by the contractor. Unscheduled work on equipment can be defined as the maintenance carried out to no predetermined plan or

production is stopped for an unforeseen reason. Fifty percent of the unscheduled work is allocated as emergency cost.

By reducing the guaranteed availability percentage, it will result in the contractor not having to make special provision to manage and control unscheduled work. The unscheduled work becomes planned activities resulting in lower costs.

The contractor's overhead expenses are divided in three sections namely the labour layout and costs, the vehicle layout and costs and lastly the dedicated assets and other costs. By applying certain principles to the cost allocated to each items listed under the separate headings will result in the following:

(d) The total saving on the labour costs will reduce from 45.96% on the total fixed costs per month to 34.73%.
(e) The reducing of the vehicle numbers will result in a saving from 6.83% to 5.98% on the contract cost for this section.
(f) The total saving on the dedicated assets and other company overhead cost will reduce from 47.21% to 3.26% on the total fixed costs per month.

7.5 SUMMARY OF THE ANALYSIS AND DISCUSSION OF FIXED MONTHLY COSTS

The purpose of this chapter is to ascertain what can be done firstly to safely reduce the guaranteed equipment availability without increasing the risk of production losses as a result of such an implementation.

According to the contract in the event that the availability targets are not met for the fleet of the schedules equipment, the contractor will undertake appropriate measures to increase the machine availability. These measures include, but are not limited to the following:

(a) the supply of additional service personnel;
(b) the supply of additional spare parts;
(c) additional support from service engineers;
(d) the introduction of technical improvements and upgrades, and
(e) the hire of additional equipment to ensure production targets are maintained.

Since these are the measures the contractor will take to increase the availability, the opposite can be achieved by implementing the same measures. Only two of the five mentioned measures will be addressed. In this chapter the supply of additional service personnel or for the purpose of this dissertation, the decrease in service personnel numbers and other company overheads will be discussed.

The contractor's overhead expenses are divided in three sections namely the labour layout and costs, the vehicle layout and costs and lastly the dedicated assets and other costs. By applying certain principles to the cost allocated to each items listed under the separate headings will result in the following:

(a) The total saving on the labour costs will reduce from 45.96% on the total fixed costs per month to 34.73%.
(b) The reducing of the vehicle numbers will result in a saving from 6.83% to 5.98% on the contract cost for this section.
(c) The total saving on the dedicated assets and other company overhead cost will reduce from 47.21% to 3.26% on the total fixed costs per month.

The total saving on each of the three sections will add up to a total of 20.03% on the total fixed costs payable to the contractor by the client on a monthly basis.

In Chapter 2 it was mentioned that the contract contains a clause stating that the contract may only be amended in writing and where the amendment is signed by both parties.

7.6 SUMMARY OF THE ANALYSIS AND DISCUSSION OF VARIABLE MONTHLY COSTS

The purpose of this chapter, as with chapter 5, is to ascertain what can be done firstly to safely reduce the guaranteed equipment availability without increasing the risk of production losses as a result of such an implementation.

According to the contract a variable hourly rate is payable to the contractor based on the age of the machine and the hours run by the machine in the specific month. The hours run by the machine are measured by means of an hour meter reader installed in the machine.

For explanatory purposes, the variable cost structure of 6261 D10R type track dozer is discussed. A cost structure for the variable cost was completed for each machine as scheduled in the contract and attached to the dissertation.

The variable cost structure per machine, based on the age of the machine and measured in run hours, consists of three main components:

(a) The maintenance portion

(b) Repair portion

(c) Utility cost

According to definition the term maintenance is the combination of all technical and associated administrative actions intended to retain an item in, or restore it to, a state in which it can perform its required function.

According to definition to repair a piece of equipment is to restore an item to an acceptable condition by the renewal, replacement or mending of worn, damaged or decayed parts.

The Utilization cost will be miscellaneous items that are low in value, but high in quantity such as bolts, nuts, etc.

The life cycle cost of any piece of equipment is the total cost to the owner of an item over its full life. It includes the cost of acquisition, operation, support; the costs arising from its failures, and, where applicable, the cost of its disposal. From the contractor's point of view and for the purposes of the contract this will be the parts and labour components.

In order for the contractor to guarantee and maintain the availability percentage of 90%, the parts unit price is divided in an 80:20 relationship. Twenty percent of the parts price is provision for unscheduled work to be performed by the contractor. Unscheduled work on equipment can be defined as the maintenance carried out to no predetermined plan or production is stopped for an unforeseen reason. Fifty percent of the unscheduled work is allocated as emergency cost.

By reducing the guaranteed availability percentage, it will result in the contractor not having to make special provision to manage and control unscheduled work. The unscheduled work becomes planned activities resulting in lower costs.

The average saving on the variable cost payable to the contractor by the client on a monthly basis will be approximately 2.78%.

CHAPTER 8

FUTURE RESEARCH

8.1 INTRODUCTION

The opportunities for future research in this field are unlimited. The fact that no extensive research in this field was yet completed makes it even more a necessity.

Future research can be investigated from two viewpoints namely that of a contractual nature and an operational nature. The first mentioned includes a thorough investigation into outsourcing and in-sourcing. Should outsourcing still remain the favourable option, the issues of an over guaranteed availability figure and the under Utilization of mining earth moving equipment must be addressed and managed.

Before the operational issues can be addressed, the company must make a management decision: should the contract continue (outsourcing) or should the company fall back to maintaining and repairing the mining earth moving equipment internally (in-sourcing).

8.2 OUTSOURCING

The first step will be to establish a case for outsourcing. The default situation is that BHP Billiton should own and operate equipment rather than contractors. BHP Billiton can obtain financing more economically than most other companies in the mining industry and has a huge range of competencies. In concept BHP Billiton should be able to obtain funds, buy equipment and construct facilities more inexpensively than contractors. If BHP Billiton can manage operations as well as others then it should have a head start over contractors.

To establish a case for considering outsourcing it should be demonstrated that there are skill, timeframe, propriety knowledge, industry, economic, opportunistic or other considerations that outweigh BHP Billiton's natural economic advantage. It is likely that this reasoning will be tested in any review, so it is best to do this conceptual thinking before getting into economic modelling. Ultimately these reasons, whether overtly monetary should be expressed in economic terms. Rolling over contracts or making assertions that the activity is not one of BHP Billiton's core activities or competency is not adequate. It needs to be properly supported with an explanation and ultimately by economics. This is not saying BHP Billiton will not use contractors, but that contractors need to be justified.

8.3 EQUIPMENT UTILIZATION

The research proved that an over guaranteed availability figure is currently provided by the contractor. As discussed in detail in Chapter 6 of this dissertation, the guaranteed availability percentage must be manipulated downwards and the necessary steps must be taken to enforce this. This will include operational as well as contractual alterations.

When investigating the Utilization, several factors have an influence on the result every day. These factors will include:

(a) The fleet size of mining earth moving equipment has to be compared to the operational requirements. The poor Utilization factor may be indicative that fleet size is too big for the current mining requirements on site. Arrangements must be made to park under utilised equipment. Apart from high maintenance and repair costs, the costs of fuel, lubricants, operators, tyres, etc. can most definitely not be excluded from the equation.

(b) Mining practices may be re-addressed and investigated. The movements of the equipment must be managed effectively and planning must be optimal. Operating a fleet of this size can cause commotion if not conducted constructively and effectively.

(c) Under Utilization has another down side. As mentioned previously the contractor is compensated for his services with a pre-determined rate per hour that the machine was switched on. Any business rendering a service does it for the profit. Should the mining earth moving equipment

be under utilised, it automatically means that the contractor receives a much lower income. To compensate for this, the contractor may inflate his hourly rates to compensate for the loss in company turnover.

8.4 DEVELOPING AN INCENTIVE MODEL

It was suggested in many meetings that an incentive model should be developed to monitor party performance. Should an incentive model be developed, the core measures will be availability and Utilization. Unfortunately it was also proven on more than one occasion that the contractor is meeting his contractual requirements easily by only considering the availability factor. The poor Utilization once again poses a problem for the client.

Once healthy availability and Utilization figures exist in a balanced relationship a proper incentive model can be researched and developed inspiring both parties to reach even greater milestones.

No matter from which perspective under Utilization is looked at, it is not and will not ever be a win-win situation for the equipment owner.

8.5 THE IMPACT OF CONTRACT PRICE ADJUSTMENTS ON THE GUARANTEED AVAILABILITY PERCENTAGE

The earth moving equipment owner may wish to increase or decrease the contractually guaranteed equipment availability. This is done by adjusting

the contract price structure. Possible future research may establish the impact of such adjustments on the guaranteed availability percentage.

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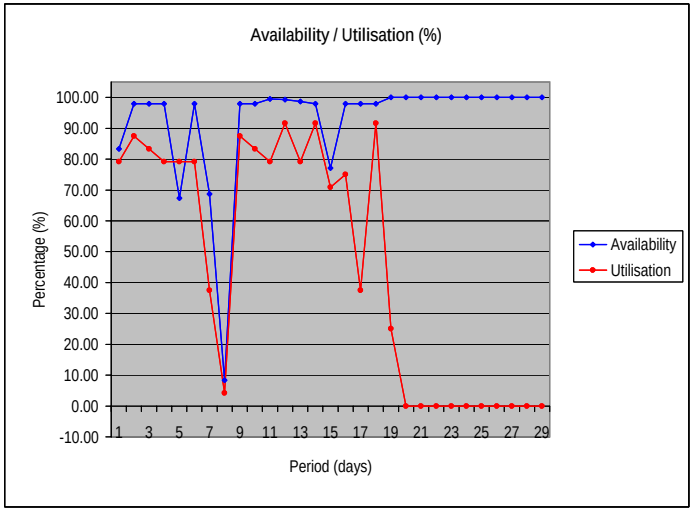
Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6294	01-Nov	31238	24	19	83.33	79.17	4.00	0.00	0.00	0.00	1	Replace tilt hoses
	02-Nov	31257	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	03-Nov	31278	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	04-Nov	31298	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	05-Nov	31317	24	19	67.38	79.17	0.00	0.00	0.00	7.83	1	1,000 hour service; adjust valves
	06-Nov	31336	24	19	97.92	79.17	0.50	0.00	0.00	0.00	0	Daily
	07-Nov	31355	24	9	68.75	37.50	7.50	0.00	0.00	0.00	1	Track adjuster faulty
	08-Nov	31364	24	1	8.33	4.17	22.00	0.00	0.00	0.00	0	Track adjuster faulty
	09-Nov	31365	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	10-Nov	31386	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	11-Nov	31406	24	19	99.46	79.17	0.13	0.00	0.00	0.00	1	Repair strobe light
	12-Nov	31425	24	22	99.29	91.67	0.17	0.00	0.00	0.00	1	Daily
	13-Nov	31447	24	19	98.63	79.17	0.33	0.00	0.00	0.00	1	Implements not working
	14-Nov	31466	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	15-Nov	31488	24	17	77.08	70.83	5.50	0.00	0.00	0.00	1	Implements not working
	16-Nov	31505	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	17-Nov	31523	24	9	97.92	37.50	0.50	0.00	0.00	0.00	1	Daily
	18-Nov	31532	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	19-Nov	31554	24	6	100.00	25.00	0.00	15.00	0.00	0.00	1	Accident damage - high wall fell onto machine
	20-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	21-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	22-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	23-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	24-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	25-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	26-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	27-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	28-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	29-Nov	31560	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	30-Nov	31560	24	0	0.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - high wall fell onto machine
	Closing	31560					44.63				15.00	
	TOTALS		720	322.00	92.71	44.72	44.63	279.00	0.00	7.83	15.00	
	AVERAGE			10.73	53.96			MTTR	2.98			
								MTBS	21.47			



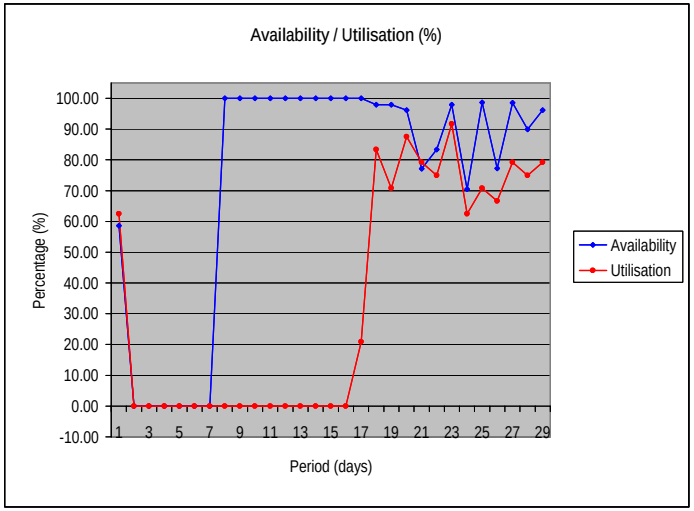
Breakdown percentage	=	Breakdown hours / Run hours	=	16.292%

For machine type:
Refer to chapter 1, table 2, page 21

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6295	01-Nov	25245	24	15	58.67	62.50	9.92	0.00	0.00	0.00	2	Top up coolant
	02-Nov	25260	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Low power - engine cam follower failure
	03-Nov	25260	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Low power - engine cam follower failure
	04-Nov	25260	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Low power - engine cam follower failure
	05-Nov	25260	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Low power - engine cam follower failure
	06-Nov	25260	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Low power - engine cam follower failure
	07-Nov	25260	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Low power - engine cam follower failure
	08-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	09-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	10-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	11-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	12-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	13-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	14-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	15-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	16-Nov	25260	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	17-Nov	25260	24	5	100.00	20.83	0.00	22.00	0.00	0.00	0	Undercarriage repairs
	18-Nov	25265	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	19-Nov	25285	24	17	97.92	70.83	0.50	0.00	0.00	0.00	1	Daily
	20-Nov	25302	24	21	96.17	87.50	0.92	0.00	0.00	0.00	1	Low transmission oil
	21-Nov	25323	24	19	77.08	79.17	5.50	0.00	0.00	0.00	1	Repair oil leak
	22-Nov	25342	24	18	83.33	75.00	4.00	0.00	0.00	0.00	2	Top up transmission oil
	23-Nov	25360	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	24-Nov	25382	24	15	70.50	62.50	7.08	0.00	0.00	0.00	2	Top up transmission oil
	25-Nov	25397	24	17	98.63	70.83	0.33	0.00	0.00	0.00	1	Pump tracks and lights
	26-Nov	25414	24	16	77.21	66.67	5.47	0.00	0.00	0.00	1	Repair T/M oil leak - replace hose
	27-Nov	25430	24	19	98.54	79.17	0.35	0.00	0.00	0.00	1	Top up coolant
	28-Nov	25449	24	18	89.92	75.00	2.42	0.00	0.00	0.00	2	Low coolant
	29-Nov	25467	24	19	96.17	79.17	0.92	0.00	0.00	0.00	1	Repair lights
	30-Nov	25486	24	10	0.00	0.00	4.75	0.00	0.00	0.00	3	Repair lights
	Closing	25496					187.16				18.00	
	TOTALS		720	251.00	74.01	34.86	187.16	238.00	0.00	0.00	18.00	
	AVERAGE			8.37	40.95			MTTR	10.40			
								MTBS	13.94			



Breakdown percentage	=	Breakdown hours / Run hours	=	74.566%

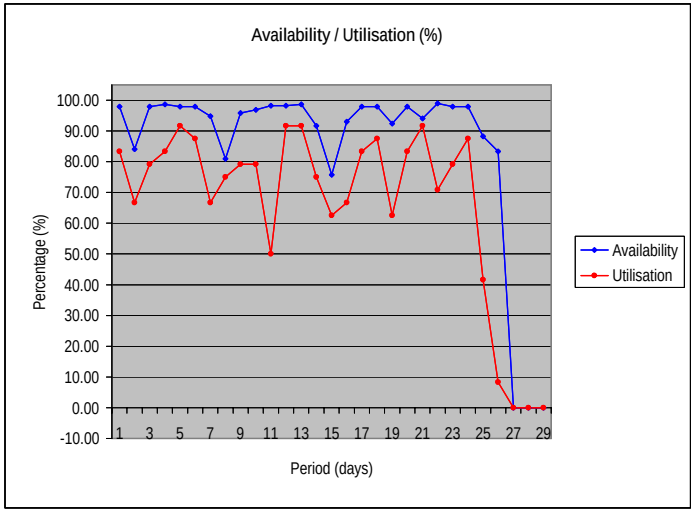
For machine type:
Refer to chapter 1, table 2, page 21

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6296	01-Nov	23119	24	20	97.92	83.33	0.50	0.00	0.00	0.00	0	Daily
	02-Nov	23139	24	16	84.04	66.67	3.83	0.00	0.00	0.00	1	Tighten loose cutting edge
	03-Nov	23155	24	19	97.92	79.17	0.50	1.25	0.00	0.00	2	Top up T/M and hydraulic oil
	04-Nov	23174	24	20	98.63	83.33	0.33	0.00	0.00	0.00	1	Top up hydraulic oil
	05-Nov	23194	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	06-Nov	23216	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	07-Nov	23237	24	16	94.79	66.67	1.25	0.00	5.17	0.00	2	Top up coolant
	08-Nov	23253	24	18	80.92	75.00	4.58	0.00	0.00	0.00	1	Repair oil leak
	09-Nov	23271	24	19	95.83	79.17	1.00	0.00	0.00	0.00	1	Adjust tracks, check for oil leak
	10-Nov	23290	24	19	96.88	79.17	0.75	0.00	0.00	0.00	1	Daily
	11-Nov	23309	24	12	98.25	50.00	0.42	0.00	0.00	0.00	2	Repair lights
	12-Nov	23321	24	22	98.25	91.67	0.42	0.00	0.00	0.00	1	Daily
	13-Nov	23343	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Top up coolant
	14-Nov	23365	24	18	91.67	75.00	2.00	0.00	0.00	0.00	1	Top up coolant - high temperature
	15-Nov	23383	24	15	75.71	62.50	5.83	0.00	0.00	0.00	2	Battery and cable terminal burn
	16-Nov	23398	24	16	93.04	66.67	1.67	0.00	0.00	0.00	2	Machine won't start
	17-Nov	23414	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Adjust alternator belt
	18-Nov	23434	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	19-Nov	23455	24	15	92.38	62.50	1.83	0.00	0.00	0.00	3	No hydraulic oil
	20-Nov	23470	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	21-Nov	23490	24	22	94.08	91.67	1.42	0.00	0.00	0.00	2	Repair hydraulic oil leak
	22-Nov	23512	24	17	98.96	70.83	0.25	0.00	0.00	0.00	1	Daily
	23-Nov	23529	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	24-Nov	23548	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	25-Nov	23569	24	10	88.21	41.67	2.83	4.33	0.00	0.00	3	Broken stabilizer
	26-Nov	23579	24	2	83.33	8.33	4.00	17.50	0.00	0.00	1	Broken stabilizer
	27-Nov	23581	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine oil mixing with water
	28-Nov	23581	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine oil mixing with water
	29-Nov	23581	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine oil mixing with water
	30-Nov	23581	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine oil mixing with water
	Closing	23581					133.24				34.00	
	TOTALS		720	462.00	81.49	64.17	133.24	23.08	5.17	0.00	34.00	
	AVERAGE			15.40	78.29			MTTR	3.92			
								MTBS	13.59			

Breakdown percentage = Breakdown hours / Run hours = 28.840%



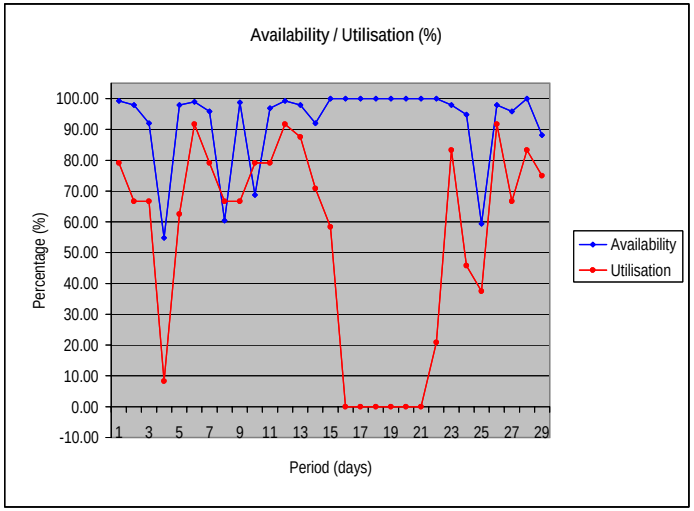
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6297	01-Nov	24464	24	19	99.29	79.17	0.17	0.00	0.00	0.00	0	Replace globe
	02-Nov	24483	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	03-Nov	24499	24	16	92.00	66.67	1.92	0.00	0.00	0.00	1	Top up coolant
	04-Nov	24515	24	2	54.88	8.33	0.00	0.00	0.00	10.83	1	1,000 hour service; replace lift cylinder
	05-Nov	24517	24	15	97.92	62.50	0.50	0.00	0.00	0.00	1	Daily
	06-Nov	24532	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Repair ripper light
	07-Nov	24554	24	19	95.83	79.17	1.00	0.00	0.00	0.00	2	Top up coolant
	08-Nov	24573	24	16	60.42	66.67	9.50	0.00	0.00	0.00	1	Repair water leak
	09-Nov	24589	24	16	98.75	66.67	0.30	0.00	0.00	0.00	1	Tighten the adjustment screw on aircon belt
	10-Nov	24605	24	19	68.75	79.17	7.50	0.00	0.00	0.00	2	Electrical problem - short on blade
	11-Nov	24624	24	19	96.88	79.17	0.75	0.00	0.00	0.00	1	Repair light wires front
	12-Nov	24643	24	22	99.29	91.67	0.17	0.00	0.00	0.00	1	Daily
	13-Nov	24665	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	14-Nov	24686	24	17	92.00	70.83	1.92	0.00	0.00	0.00	1	High temperature - adjust fan pressure
	15-Nov	24703	24	14	100.00	58.33	0.00	6.33	0.00	0.00	1	Bogie has no rollers
	16-Nov	24717	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	17-Nov	24717	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	18-Nov	24717	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	19-Nov	24717	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	20-Nov	24717	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	21-Nov	24717	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarriage repairs
	22-Nov	24717	24	5	100.00	20.83	0.00	11.50	0.00	0.00	0	Undercarriage repairs
	23-Nov	24722	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	24-Nov	24742	24	11	94.79	45.83	1.25	0.00	0.00	0.00	2	Check aircon
	25-Nov	24753	24	9	59.38	37.50	9.75	0.00	0.00	0.00	1	Hydraulic oil leak
	26-Nov	24762	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	27-Nov	24784	24	16	95.83	66.67	1.00	0.00	0.00	0.00	1	Tripped on low coolant
	28-Nov	24800	24	20	100.00	83.33	0.00	1.75	0.00	0.00	1	Roller came out
	29-Nov	24820	24	18	88.21	75.00	2.83	0.00	0.00	0.00	1	Replace tilt hose
	30-Nov	24838	24	18	0.00	0.00	2.50	0.00	0.00	0.00	1	Lift cylinder pin missing
	Closing	24856					43.31				24.00	
	TOTALS		720	392.00	92.48	54.44	43.31	163.58	0.00	10.83	24.00	
	AVERAGE			13.07	69.76			MTTR	1.80			
								MTBS	16.33			



Breakdown percentage	=	Breakdown hours / Run hours	=	13.811%

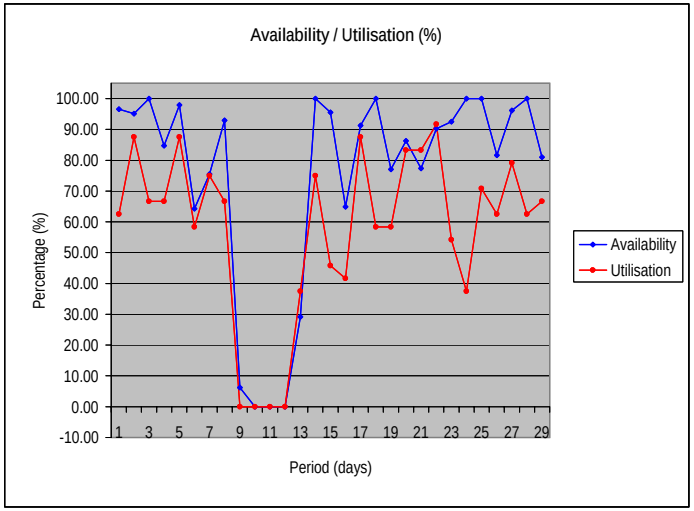
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7974	01-Nov	36416	24	15	96.54	62.50	0.83	2.58	0.00	0.00	2	Accident damage - steel tube damaged by coal
	02-Nov	36431	24	21	95.13	87.50	1.17	0.00	0.00	0.00	0	Daily
	03-Nov	36452	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Nov	36468	24	16	84.79	66.67	3.65	0.00	0.00	0.00	4	Machine overheat; repair radar system
	05-Nov	36484	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	06-Nov	36505	24	14	64.25	58.33	8.58	0.00	0.00	0.00	2	Replace damaged hose
	07-Nov	36519	24	18	75.50	75.00	5.88	0.00	0.00	0.00	1	Bucket drift
	08-Nov	36537	24	16	92.92	66.67	1.70	0.00	0.00	0.00	2	Daily
	09-Nov	36553	24	0	6.25	0.00	22.50	0.00	0.00	0.00	1	Engine failure
	10-Nov	36553	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	11-Nov	36553	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	12-Nov	36553	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	13-Nov	36553	24	9	29.17	37.50	17.00	0.00	0.00	0.00	0	Engine failure
	14-Nov	36562	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	15-Nov	36580	24	11	95.50	45.83	1.08	0.00	0.00	0.00	3	Check hydraulic oil leak on steering pump
	16-Nov	36591	24	10	64.92	41.67	0.42	0.00	0.00	8.00	2	500 hour service
	17-Nov	36601	24	21	91.33	87.50	2.08	0.00	0.00	0.00	3	Repair air hose in cab
	18-Nov	36622	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Nov	36636	24	14	77.08	58.33	5.50	0.00	0.00	0.00	3	Daily; repair indicators
	20-Nov	36650	24	20	86.25	83.33	3.30	0.00	0.00	0.00	3	Repair water leak
	21-Nov	36670	24	20	77.42	83.33	5.42	0.00	0.00	0.00	1	Repair propshaft
	22-Nov	36690	24	22	90.29	91.67	2.33	0.00	0.00	0.00	3	Repair water leak
	23-Nov	36712	24	13	92.58	54.17	1.78	0.83	0.00	0.00	3	Operator complaint: revs not picking up
	24-Nov	36725	24	9	100.00	37.50	0.00	5.33	0.00	0.00	1	Power failure - hydraulic oil not available
	25-Nov	36734	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	26-Nov	36751	24	15	81.58	62.50	4.42	0.00	0.00	0.00	5	Tripped on over speed
	27-Nov	36766	24	19	96.17	79.17	0.92	0.00	0.00	0.00	2	Tripped on over speed
	28-Nov	36785	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	29-Nov	36800	24	16	81.04	66.67	4.55	0.00	0.00	0.00	3	Daily
	30-Nov	36816	24	1	0.00	0.00	13.00	0.00	0.00	0.00	2	Top up hydraulic oil
	Closing	36817					178.61				45.00	
	TOTALS		720	401.00	74.08	55.69	178.61	8.74	0.00	8.00	45.00	
	AVERAGE			13.37	72.87			MTTR	3.97			
								MTBS	8.91			



Breakdown percentage	=	Breakdown hours / Run hours	=	46.536%

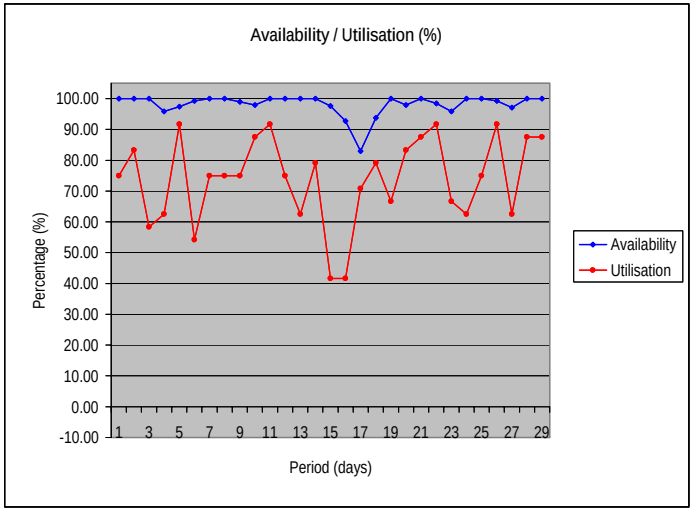
For machine type:
Refer to chapter 1, table 2, page 21

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7351	01-Nov	37592	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	02-Nov	37610	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Nov	37630	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	04-Nov	37644	24	15	95.83	62.50	1.00	0.00	0.00	0.00	1	Wiper not working
	05-Nov	37659	24	22	97.42	91.67	0.62	0.00	0.00	0.00	1	Top up grease
	06-Nov	37681	24	13	99.29	54.17	0.17	0.00	0.00	0.00	1	Tighten mirror
	07-Nov	37694	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	08-Nov	37712	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	09-Nov	37730	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Loose mirror
	10-Nov	37748	24	21	97.92	87.50	0.50	0.00	0.00	0.00	2	Loose mirror bracket; tighten mirror
	11-Nov	37769	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Nov	37791	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	13-Nov	37809	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	14-Nov	37824	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	15-Nov	37843	24	10	97.58	41.67	0.58	0.00	0.00	0.00	1	Top up grease
	16-Nov	37853	24	10	92.71	41.67	1.75	0.00	0.00	0.00	1	Top up diff oil
	17-Nov	37863	24	17	83.00	70.83	4.08	0.00	0.00	0.00	1	Trouble shooting - hydraulic system
	18-Nov	37880	24	19	93.75	79.17	1.50	0.00	0.00	0.00	1	Bowl pick up slowly
	19-Nov	37899	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Nov	37915	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Repair strobe light
	21-Nov	37935	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Nov	37956	24	22	98.46	91.67	0.37	0.00	0.00	0.00	1	Top up coolant
	23-Nov	37978	24	16	95.83	66.67	1.00	0.00	0.00	0.00	1	Repair strobe light; top up coolant and steering oil
	24-Nov	37994	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	25-Nov	38009	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	26-Nov	38027	24	22	99.25	91.67	0.18	0.00	0.00	0.00	1	Change L/H light
	27-Nov	38049	24	15	97.08	62.50	0.70	0.00	0.00	0.00	1	Repair spotlight
	28-Nov	38064	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	29-Nov	38085	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	30-Nov	38106	24	19	0.00	0.00	4.67	0.00	0.00	0.00	2	T/M oil overfull - drain oil
	Closing	38125					17.87				17.00	
	TOTALS		720	533.00	97.52	74.03	17.87	0.00	0.00	0.00	17.00	
	AVERAGE			17.77	97.52			MTTR	1.05			
								MTBS	31.35			

Breakdown percentage	=	Breakdown hours / Run hours	=	3.353%



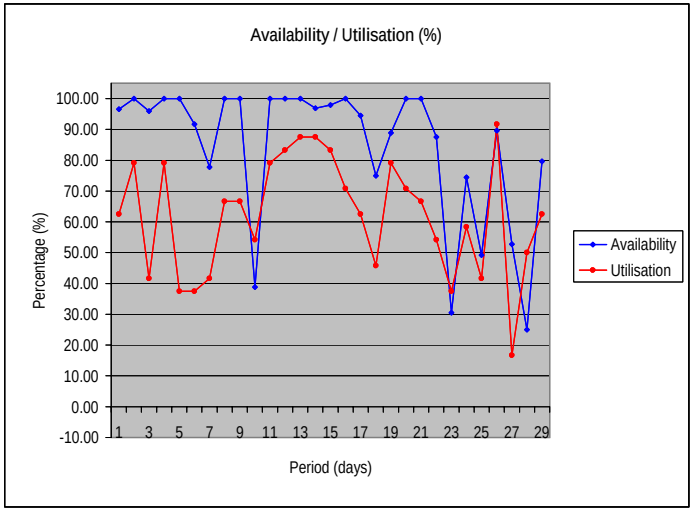
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7352	01-Nov	37080	24	15	96.54	62.50	0.83	0.00	0.00	0.00	1	Hydraulic oil level low
	02-Nov	37095	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	03-Nov	37114	24	10	95.96	41.67	0.97	0.00	0.00	0.00	1	Replace grease fitting on grease pump
	04-Nov	37124	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	05-Nov	37143	24	9	100.00	37.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Nov	37152	24	9	91.67	37.50	2.00	0.00	0.00	0.00	2	Won't start
	07-Nov	37161	24	10	77.79	41.67	5.33	0.00	0.00	0.00	1	Diff oil level low; errors on VIMS
	08-Nov	37171	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	09-Nov	37187	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	10-Nov	37203	24	13	38.88	54.17	4.75	0.00	0.00	9.92	2	Can't lift bowl
	11-Nov	37216	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	12-Nov	37235	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	13-Nov	37255	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	14-Nov	37276	24	21	96.88	87.50	0.75	0.00	0.00	0.00	1	Repair spot lights
	15-Nov	37297	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Replace R/H turbo clamp
	16-Nov	37317	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	17-Nov	37334	24	15	94.46	62.50	1.33	0.00	0.00	0.00	1	Repair lights
	18-Nov	37349	24	11	75.00	45.83	6.00	0.00	0.00	0.00	2	Lights, grease suspension
	19-Nov	37360	24	19	88.88	79.17	2.67	0.00	0.00	0.00	0	Lights - harness
	20-Nov	37379	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	21-Nov	37396	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Nov	37412	24	13	87.50	54.17	3.00	0.00	0.00	0.00	3	Light problem (machine won't start)
	23-Nov	37425	24	9	30.54	37.50	16.67	0.00	0.00	0.00	1	Replace air starter
	24-Nov	37434	24	14	74.46	58.33	6.13	0.00	0.00	0.00	2	Attend no gears
	25-Nov	37448	24	10	49.17	41.67	12.20	0.00	0.00	0.00	2	Slack adjuster failure
	26-Nov	37458	24	22	89.58	91.67	2.50	0.00	0.00	0.00	1	Aircon/heater switch; front brake temperature high
	27-Nov	37480	24	4	52.71	16.67	11.35	0.00	0.00	0.00	2	Replace hydraulic pump; change suspension
	28-Nov	37484	24	12	25.00	50.00	18.00	0.00	0.00	0.00	0	T/M not upshifting
	29-Nov	37496	24	15	79.67	62.50	4.88	0.00	0.00	0.00	4	Bowl lift light on; adjust bowl limit
	30-Nov	37511	24	0	0.00	0.00	18.75	0.00	0.00	0.00	1	Engine failure
	Closing	37511					118.61				27.00	
	TOTALS		720	431.00	82.15	59.86	118.61	0.00	0.00	9.92	27.00	
	AVERAGE			14.37	82.15			MTTR	4.39			
								MTBS	15.96			



Breakdown percentage	=	Breakdown hours / Run hours	=	29.821%

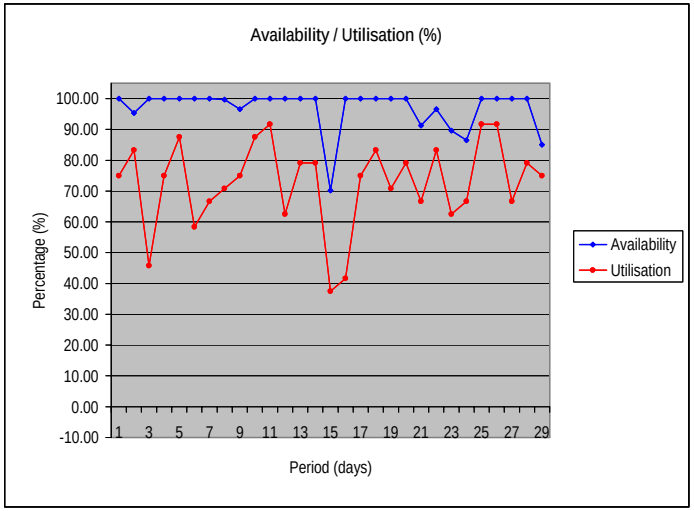
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7353	01-Nov	2691	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	02-Nov	2709	24	20	95.33	83.33	1.12	0.00	0.00	0.00	1	Top up grease
	03-Nov	2729	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	04-Nov	2740	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	05-Nov	2758	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Nov	2779	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	07-Nov	2793	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	08-Nov	2809	24	17	99.67	70.83	0.08	0.00	0.00	0.00	1	Top up engine oil
	09-Nov	2826	24	18	96.58	75.00	0.82	0.00	0.00	0.00	1	Replace batteries
	10-Nov	2844	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	11-Nov	2865	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Nov	2887	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Nov	2902	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Nov	2921	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	15-Nov	2940	24	9	70.17	37.50	1.33	0.00	0.00	5.83	2	500 hour service; repair leak on transmission filter
	16-Nov	2949	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	17-Nov	2959	24	18	100.00	75.00	0.00	0.42	0.00	0.00	1	Replace L/H mirror
	18-Nov	2977	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Nov	2997	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	20-Nov	3014	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	21-Nov	3033	24	16	91.33	66.67	2.08	0.00	0.00	0.00	2	Top up transmission oil; weld mirror bracket
	22-Nov	3049	24	20	96.54	83.33	0.83	0.00	0.00	0.00	1	Loose mirror bracket
	23-Nov	3069	24	15	89.58	62.50	2.50	0.00	0.00	0.00	1	Broken handrails
	24-Nov	3084	24	16	86.46	66.67	3.25	0.00	0.00	0.00	1	Weld mirror bracket and handrails
	25-Nov	3100	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Nov	3122	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Nov	3144	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Nov	3160	24	19	100.00	79.17	0.00	0.50	0.00	0.00	1	L/H mirror broken
	29-Nov	3179	24	18	85.08	75.00	3.58	0.00	0.00	0.00	3	Noise on turbo - all nuts missing
	30-Nov	3197	24	21	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	3218					15.59				14.00	
	TOTALS		720	527.00	97.03	73.19	15.59	0.92	0.00	5.83	14.00	
	AVERAGE			17.57	96.90			MTTR	1.11			
								MTBS	37.64			



Breakdown percentage = Breakdown hours / Run hours = 4.065%

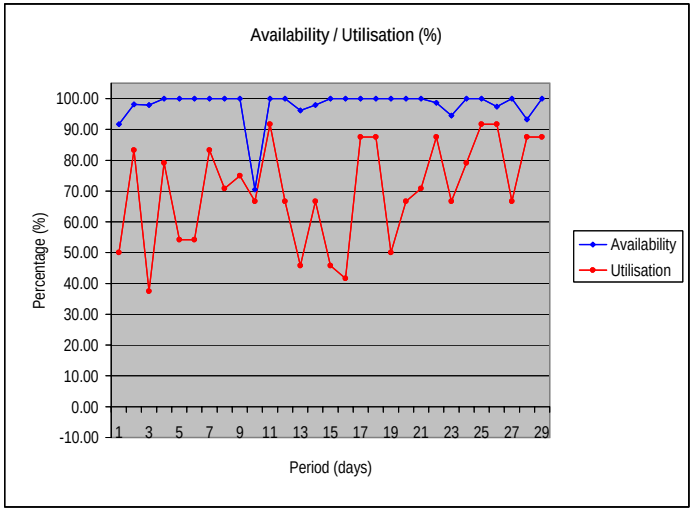
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7354	01-Nov	2879	24	12	91.67	50.00	2.00	0.00	0.00	0.00	1	Tripped on engine - overspeed
	02-Nov	2891	24	20	98.13	83.33	0.45	0.00	0.00	0.00	1	Transmission temperature high
	03-Nov	2911	24	9	97.92	37.50	0.50	0.00	0.00	0.00	1	Tripped on high temperature
	04-Nov	2920	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	05-Nov	2939	24	13	100.00	54.17	0.00	0.82	0.00	0.00	1	Broken bolts on trunnion on tailgate
	06-Nov	2952	24	13	100.00	54.17	0.00	11.50	0.00	0.00	0	Broken bolts on trunnion on tailgate
	07-Nov	2965	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	08-Nov	2985	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	09-Nov	3002	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	10-Nov	3020	24	16	70.50	66.67	0.00	0.00	0.00	7.08	1	1,000 hour service
	11-Nov	3036	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Nov	3058	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	13-Nov	3074	24	11	96.17	45.83	0.92	0.00	0.00	0.00	2	Oil leak on transmission
	14-Nov	3085	24	16	97.92	66.67	0.50	0.00	0.00	0.00	2	Tripped on crankcase pressure
	15-Nov	3101	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	16-Nov	3112	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	17-Nov	3122	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	18-Nov	3143	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Nov	3164	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	20-Nov	3176	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	21-Nov	3192	24	17	100.00	70.83	0.00	1.22	0.00	0.00	1	L/H mirror damage
	22-Nov	3209	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Broken mirror bolt
	23-Nov	3230	24	16	94.46	66.67	1.33	0.00	0.00	0.00	1	Weld handrails
	24-Nov	3246	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	25-Nov	3265	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Nov	3287	24	22	97.42	91.67	0.62	0.00	0.00	0.00	2	Loose mirror
	27-Nov	3309	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Nov	3325	24	21	93.25	87.50	1.62	0.00	0.00	0.00	1	Bolt missing on mirror bracket
	29-Nov	3346	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	30-Nov	3367	24	17	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	3384					8.27				13.00	
	TOTALS		720	505.00	97.87	70.14	8.27	13.54	0.00	7.08	13.00	
	AVERAGE			16.83	95.99			MTTR	0.64			
								MTBS	38.85			



Breakdown percentage	=	Breakdown hours / Run hours	=	3.040%

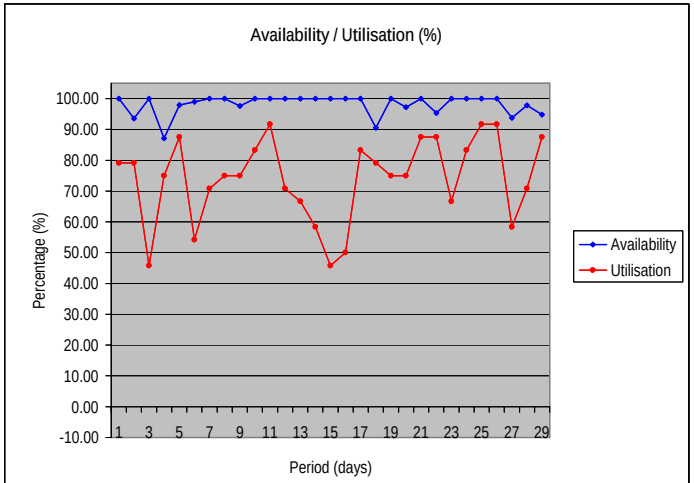
For machine type:
Refer to chapter 1, table 2, page 21

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7355	01-Nov	2057	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	02-Nov	2076	24	19	93.54	79.17	1.55	0.00	0.00	0.00	1	Weld mirror bracket
	03-Nov	2095	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	04-Nov	2106	24	18	87.17	75.00	3.08	0.00	0.00	0.00	0	Repair handrails
	05-Nov	2124	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Repair headlight
	06-Nov	2145	24	13	98.96	54.17	0.25	0.00	0.00	0.00	1	Top up steering oil and repair aircon
	07-Nov	2158	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Nov	2175	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	09-Nov	2193	24	18	97.58	75.00	0.58	0.00	0.00	0.00	1	Repair spot light
	10-Nov	2211	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	11-Nov	2231	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Nov	2253	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	13-Nov	2270	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	14-Nov	2286	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	15-Nov	2300	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	16-Nov	2311	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Nov	2323	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	18-Nov	2343	24	19	90.54	79.17	2.27	0.00	0.00	0.00	1	Repair mirror
	19-Nov	2362	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	20-Nov	2380	24	18	97.21	75.00	0.67	0.00	0.00	0.00	1	Weld mirror bracket
	21-Nov	2398	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Nov	2419	24	21	95.29	87.50	1.13	0.00	0.00	0.00	1	Repair light and top up all oils
	23-Nov	2440	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	24-Nov	2456	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	25-Nov	2476	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Nov	2498	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Nov	2520	24	14	93.75	58.33	1.50	0.00	0.00	0.00	1	Top up engine oil
	28-Nov	2534	24	17	97.79	70.83	0.53	0.00	0.00	0.00	1	L/H spot light not working
	29-Nov	2551	24	21	94.79	87.50	1.25	0.00	0.00	0.00	1	Low air pressure
	30-Nov	2572	24	22	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	2594					13.31				9.00	
	TOTALS		720	537.00	98.15	74.58	13.31	0.00	0.00	0.00	9.00	
	AVERAGE			17.90	98.15			MTTR	1.48			
								MTBS	59.67			

Breakdown percentage = Breakdown hours / Run hours = 2.479%



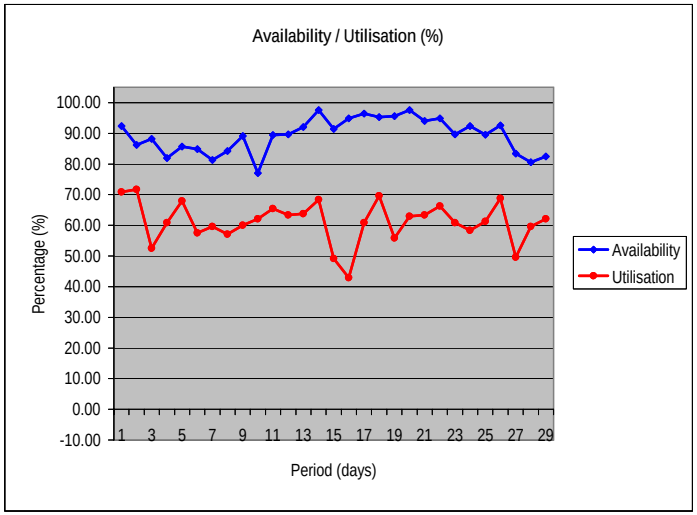
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: November 2005

Machine	Date	Availability %	Utilization %
TOTAL	01-Nov	92.40	70.83
	02-Nov	86.20	71.67
	03-Nov	88.17	52.50
	04-Nov	81.92	60.83
	05-Nov	85.65	67.92
	06-Nov	84.90	57.50
	07-Nov	81.27	59.58
	08-Nov	84.23	57.08
	09-Nov	89.19	60.00
	10-Nov	77.08	62.08
	11-Nov	89.46	65.42
	12-Nov	89.68	63.33
	13-Nov	92.05	63.75
	14-Nov	97.64	68.33
	15-Nov	91.40	49.17
	16-Nov	94.86	42.92
	17-Nov	96.46	60.83
	18-Nov	95.30	69.58
	19-Nov	95.63	55.83
	20-Nov	97.55	62.92
	21-Nov	93.99	63.33
	22-Nov	94.90	66.25
	23-Nov	89.68	60.83
	24-Nov	92.41	58.33
	25-Nov	89.54	61.25
	26-Nov	92.63	68.75
	27-Nov	83.41	49.58
	28-Nov	80.60	59.58
	29-Nov	82.50	62.08
	30-Nov	0.00	0.00
Average	%	89.33	61.11



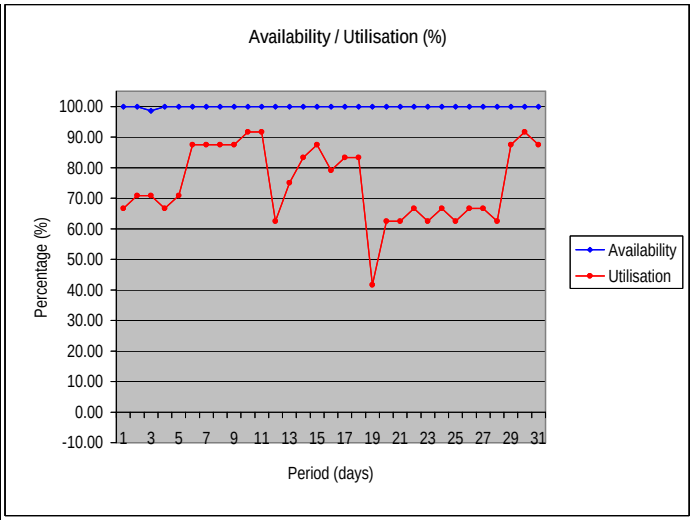
For machine type:
Refer to chapter 1, table 2, page 21

Period:
November 2005

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6294	01-Dec	42364	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Dec	42380	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	03-Dec	42397	24	17	98.61	70.83	0.33	0.00	0.00	0.00	1	Tripped on coolant pressure
	04-Dec	42414	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	05-Dec	42430	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	06-Dec	42447	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	07-Dec	42468	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Dec	42489	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Dec	42510	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	10-Dec	42531	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Dec	42553	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Dec	42575	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Dec	42590	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	14-Dec	42608	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	15-Dec	42628	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	16-Dec	42649	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	17-Dec	42668	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	18-Dec	42688	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Dec	42708	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Dec	42718	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Dec	42733	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Dec	42748	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Dec	42764	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	24-Dec	42779	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	25-Dec	42795	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	26-Dec	42810	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Dec	42826	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Dec	42842	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	29-Dec	42857	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	30-Dec	42878	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	31-Dec	42900	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	42921					0.33				1.00	
	TOTALS		744	557.00	99.96	74.87	0.33	0.00	0.00	0.00	1.00	
	AVERAGE			17.97	99.96			MTTR	0.33			
								MTBS	557.00			

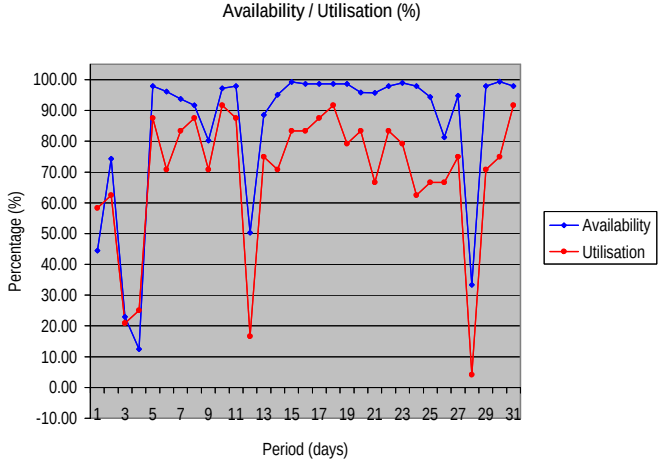


Breakdown percentage	=	Breakdown hours / Run hours	=	0.060%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6295	01-Dec	25496	24	14	44.44	58.33	13.33	0.00	0.00	0.00	1	Lift cylinder broken
	02-Dec	25510	24	15	74.31	62.50	6.17	0.00	0.00	0.00	2	Daily
	03-Dec	25525	24	5	22.92	20.83	18.50	0.00	0.00	0.00	2	Adjust track
	04-Dec	25530	24	6	12.50	25.00	21.00	0.00	0.00	0.00	0	Repair track adjuster
	05-Dec	25536	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	06-Dec	25557	24	17	96.11	70.83	0.93	0.00	0.00	0.00	2	Adjust L/H track
	07-Dec	25574	24	20	93.75	83.33	1.50	0.00	0.00	0.00	2	Top up coolant
	08-Dec	25594	24	21	91.67	87.50	2.00	0.00	0.00	0.00	1	Coolant level low
	09-Dec	25615	24	17	80.21	70.83	4.75	0.00	0.00	0.00	2	Heater valve faulty
	10-Dec	25632	24	22	97.22	91.67	0.67	0.00	0.00	0.00	3	Top up coolant - heater core
	11-Dec	25654	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	12-Dec	25675	24	4	50.35	16.67	0.00	0.00	0.00	11.92	1	500 hour service; replace lift cylinder
	13-Dec	25679	24	18	88.54	75.00	0.50	0.00	0.00	2.25	1	501 hour service; replace lift cylinder
	14-Dec	25697	24	17	95.14	70.83	1.17	0.00	0.00	0.00	1	Top up hyd oil
	15-Dec	25714	24	20	99.31	83.33	0.17	0.00	0.00	0.00	1	Daily
	16-Dec	25734	24	20	98.61	83.33	0.33	0.00	0.00	0.00	1	Daily
	17-Dec	25754	24	21	98.61	87.50	0.33	0.00	0.00	0.00	2	Daily
	18-Dec	25775	24	22	98.61	91.67	0.33	0.00	0.00	0.00	1	Tighten light bracket
	19-Dec	25797	24	19	98.61	79.17	0.33	0.00	0.00	0.00	1	Adjust L/H track
	20-Dec	25816	24	20	95.83	83.33	1.00	0.00	0.00	0.00	2	Adjust track
	21-Dec	25836	24	16	95.76	66.67	1.02	0.00	0.00	0.00	2	Adjust track
	22-Dec	25852	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	23-Dec	25872	24	19	98.96	79.17	0.25	0.00	0.00	0.00	1	Adjust L/H track
	24-Dec	25891	24	15	97.92	62.50	0.50	0.00	0.00	0.00	1	Daily
	25-Dec	25906	24	16	94.44	66.67	1.33	0.00	0.00	0.00	2	Seat adjuster broken, adjust L/H track
	26-Dec	25922	24	16	81.32	66.67	4.48	0.00	0.00	0.00	2	Top up coolant(Top up coolant, hydraulic oil
	27-Dec	25938	24	18	94.79	75.00	1.25	0.00	0.00	0.00	2	Steering temp error
	28-Dec	25956	24	1	33.33	4.17	16.00	0.00	0.00	0.00	1	Repair L/H slack adjuster; repair aux water pump
	29-Dec	25957	24	17	97.92	70.83	0.50	0.00	0.00	0.00	1	Daily
	30-Dec	25974	24	18	99.38	75.00	0.15	0.00	0.00	0.00	1	Replace 1x globe
	31-Dec	25992	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Replace filters
	Closing	26014					100.50				43.00	
	TOTALS		744	518.00	84.59	69.62	100.50	0.00	0.00	14.17	43.00	
	AVERAGE			16.71	84.59			MTTR	2.34			
								MTBS	12.05			

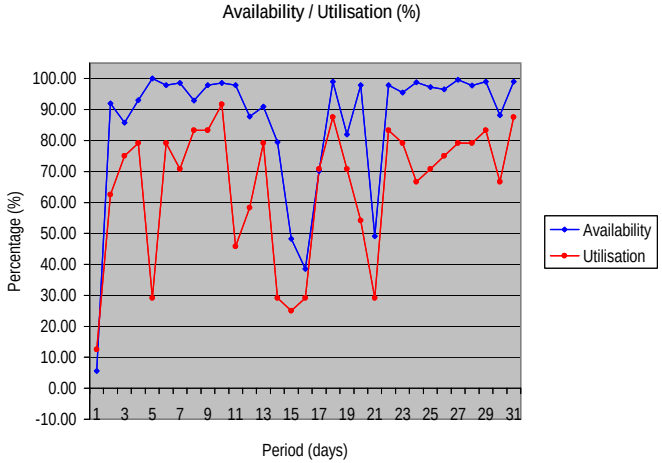


Breakdown percentage	=	Breakdown hours / Run hours	=	22.136%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6296	01-Dec	23581	24	3	5.56	12.50	22.67	0.00	0.00	0.00	0	Replace engine
	02-Dec	23584	24	15	92.01	62.50	1.92	0.00	0.00	0.00	2	Daily
	03-Dec	23599	24	18	85.76	75.00	3.42	0.00	0.00	0.00	2	Replace cover on aftercooler
	04-Dec	23617	24	19	93.06	79.17	1.67	0.00	0.00	0.00	2	Low hyd oil
	05-Dec	23636	24	7	100.00	29.17	0.00	14.67	0.00	0.00	1	Machine jump on sprocket segments
	06-Dec	23643	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	07-Dec	23662	24	17	98.61	70.83	0.33	0.00	0.00	0.00	1	Top up hydraulic oil, T/M and coolant
	08-Dec	23679	24	20	92.92	83.33	1.70	0.00	0.00	0.00	1	Fan filter plugged
	09-Dec	23699	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	10-Dec	23719	24	22	98.61	91.67	0.33	0.00	0.00	0.00	1	Top up hydraulic/T/M
	11-Dec	23741	24	11	97.92	45.83	0.50	0.00	0.00	0.00	1	Daily
	12-Dec	23752	24	14	87.78	58.33	2.93	0.00	0.00	0.00	2	Top up hydraulic oil
	13-Dec	23766	24	19	90.97	79.17	2.17	0.00	0.00	0.00	1	Top up hydraulic and T/M oil
	14-Dec	23785	24	7	79.51	29.17	4.92	0.00	0.00	0.00	2	Overheat and replace fan filter
	15-Dec	23792	24	6	48.26	25.00	12.42	0.00	0.00	0.00	3	Electrical problem
	16-Dec	23798	24	7	38.54	29.17	14.75	0.00	0.00	0.00	1	Replace waterpump
	17-Dec	23805	24	17	70.14	70.83	7.17	0.00	0.00	0.00	2	Tripped on circuit breaker
	18-Dec	23822	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	19-Dec	23843	24	17	81.94	70.83	4.33	0.00	0.00	0.00	2	Top up engine oil
	20-Dec	23860	24	13	97.92	54.17	0.50	0.00	0.00	0.00	1	Top up oil
	21-Dec	23873	24	7	49.10	29.17	12.22	0.00	0.00	0.00	2	Repair water leak
	22-Dec	23880	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	23-Dec	23900	24	19	95.49	79.17	1.08	0.00	0.00	0.00	2	Top up hydraulic oil
	24-Dec	23919	24	16	98.75	66.67	0.30	0.00	0.00	0.00	0	Top up t/m oil
	25-Dec	23935	24	17	97.22	70.83	0.67	0.00	0.00	0.00	1	Top up oils and coolant
	26-Dec	23952	24	18	96.53	75.00	0.83	0.00	0.00	0.00	0	Top up oils and coolant
	27-Dec	23970	24	19	99.65	79.17	0.08	0.00	0.00	0.00	1	Globes and heater
	28-Dec	23989	24	19	97.78	79.17	0.53	0.00	0.00	0.00	1	Top up hydraulic oil, coolant
	29-Dec	24008	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Top up T/M oil
	30-Dec	24028	24	16	88.19	66.67	0.00	0.00	0.00	2.83	1	500 hour service
	31-Dec	24044	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Top up hydraulic oil
	Closing	24065					99.68				39.00	
	TOTALS		744	484.00	86.22	65.05	99.68	14.67	0.00	2.83	39.00	
	AVERAGE			15.61	84.25			MTTR	2.56			
								MTBS	12.41			

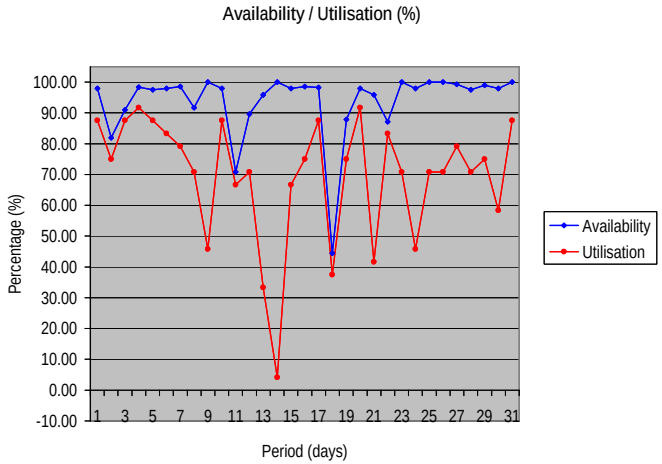


Breakdown percentage	=	Breakdown hours / Run hours	=	21.181%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6297	01-Dec	24856	24	21	97.92	87.50	0.50	0.00	0.00	0.00	0	Daily
	02-Dec	24877	24	18	81.94	75.00	4.33	0.00	0.00	0.00	2	Lift cylinder steel tube leaking
	03-Dec	24895	24	21	90.97	87.50	2.17	0.00	0.00	0.00	2	Top up oils
	04-Dec	24916	24	22	98.40	91.67	0.38	0.00	0.00	0.00	1	Daily
	05-Dec	24938	24	21	97.57	87.50	0.58	0.00	0.00	0.00	1	Daily; top up coolant
	06-Dec	24959	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	07-Dec	24979	24	19	98.61	79.17	0.33	0.00	0.00	0.00	1	Top up hydraulic oil
	08-Dec	24998	24	17	91.67	70.83	2.00	0.00	0.00	0.00	1	Radiator blocked - overheat
	09-Dec	25015	24	11	100.00	45.83	0.00	10.00	0.00	0.00	1	R/H front roller seized
	10-Dec	25026	24	21	97.92	87.50	0.50	4.25	0.00	0.00	2	R/H front roller seized
	11-Dec	25047	24	16	70.83	66.67	7.00	0.00	0.00	0.00	1	Weld R/H bogie
	12-Dec	25063	24	17	89.58	70.83	2.50	0.00	0.00	0.00	1	Radiator blocked
	13-Dec	25080	24	8	95.83	33.33	0.00	9.25	0.00	1.00	2	500 hour service
	14-Dec	25088	24	1	100.00	4.17	0.00	23.17	0.00	0.00	0	Bogie failure
	15-Dec	25089	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	16-Dec	25105	24	18	98.61	75.00	0.33	0.00	0.00	0.00	1	Aircon faulty
	17-Dec	25123	24	21	98.26	87.50	0.42	0.00	0.00	0.00	1	Daily
	18-Dec	25144	24	9	44.44	37.50	13.33	0.00	0.00	0.00	1	R/H blade lift cylinder
	19-Dec	25153	24	18	87.85	75.00	2.92	0.00	0.00	0.00	2	Top up hydraulic oil
	20-Dec	25171	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	21-Dec	25193	24	10	95.83	41.67	1.00	3.00	0.00	0.00	2	Repair hydraulic oil leak
	22-Dec	25203	24	20	87.15	83.33	3.08	1.25	0.00	0.00	1	Repair hydraulic oil leak
	23-Dec	25223	24	17	100.00	70.83	0.00	4.67	0.00	0.00	2	L/H major bogie wedge under track
	24-Dec	25240	24	11	97.92	45.83	0.50	0.00	0.00	0.00	1	Daily
	25-Dec	25251	24	17	100.00	70.83	0.00	9.00	0.00	0.00	1	Bogie needs welding
	26-Dec	25268	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	27-Dec	25285	24	19	99.31	79.17	0.17	0.00	0.00	0.00	1	Heater
	28-Dec	25304	24	17	97.57	70.83	0.58	0.00	0.00	0.00	1	Daily
	29-Dec	25321	24	18	98.96	75.00	0.25	4.83	0.00	0.00	2	Top up hydraulic oil
	30-Dec	25339	24	14	97.92	58.33	0.50	4.50	0.00	0.00	3	Replace 2x globes; replace 3x globes; top up clnt
	31-Dec	25353	24	21	100.00	87.50	0.00	2.92	0.00	0.00	0	Remove major bogie
	Closing	25374					44.88				37.00	
	TOTALS		744	518.00	93.83	69.62	44.88	76.83	0.00	1.00	37.00	
	AVERAGE			16.71	83.51			MTTR	1.21			
								MTBS	14.00			

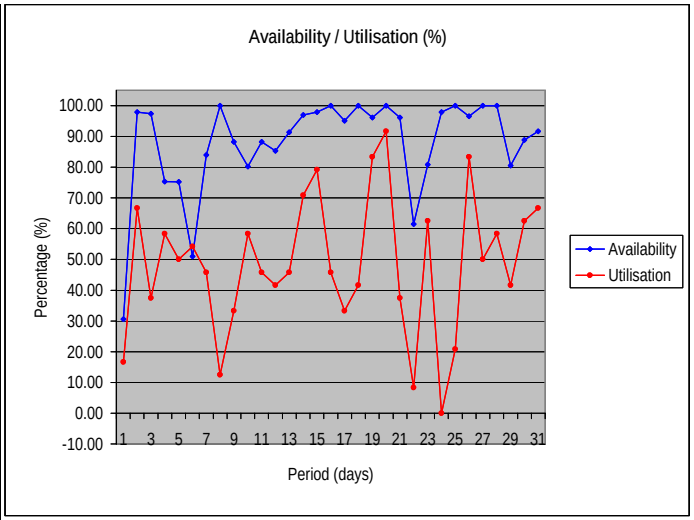


Breakdown percentage	=	Breakdown hours / Run hours	=	8.858%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7974	01-Dec	36817	24	4	30.56	16.67	16.67	0.00	0.00	0.00	2	Repair leaking diesel tank
	02-Dec	36821	24	16	97.92	66.67	0.50	0.00	0.00	0.00	0	Daily
	03-Dec	36837	24	9	97.43	37.50	0.62	0.00	0.00	0.00	0	Replace t/m filter seal; daily
	04-Dec	36846	24	14	75.35	58.33	5.92	0.00	0.00	0.00	3	Replace R/H lift cylinder
	05-Dec	36860	24	12	75.28	50.00	5.93	0.00	0.00	0.00	2	Tripped on high temp
	06-Dec	36872	24	13	50.97	54.17	11.77	0.00	0.00	0.00	3	Tripped on overspeed
	07-Dec	36885	24	11	84.03	45.83	3.83	0.58	0.00	0.00	3	Slow hydraulics
	08-Dec	36896	24	3	100.00	12.50	0.00	0.00	0.00	0.00	0	Not applicble
	09-Dec	36899	24	8	88.19	33.33	2.83	0.00	0.00	0.00	1	Slow hydraulics - adjust middle pump pressure
	10-Dec	36907	24	14	80.21	58.33	4.75	0.00	0.00	0.00	1	Replace hydraulic hose
	11-Dec	36921	24	11	88.19	45.83	2.83	0.00	0.00	0.00	2	Tighten loose hose
	12-Dec	36932	24	10	85.35	41.67	3.52	0.00	0.00	0.00	2	Engine saver tripped on overspeed
	13-Dec	36942	24	11	91.32	45.83	2.08	0.00	0.00	0.00	1	Replace o-ring on hydraulic filter
	14-Dec	36953	24	17	96.94	70.83	0.73	0.00	0.00	0.00	1	Oil leak in cab
	15-Dec	36970	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	16-Dec	36989	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicble
	17-Dec	37000	24	8	95.14	33.33	1.17	0.00	0.00	0.00	1	Auto lube pressure low
	18-Dec	37008	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicble
	19-Dec	37018	24	20	96.18	83.33	0.92	0.00	0.00	0.00	1	Daily
	20-Dec	37038	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicble
	21-Dec	37060	24	9	96.18	37.50	0.92	0.00	0.00	0.00	1	Daily
	22-Dec	37069	24	2	61.46	8.33	0.00	0.00	0.00	9.25	1	500 hour service
	23-Dec	37071	24	15	80.90	62.50	4.58	0.00	0.00	0.00	2	Replace hyd hose
	24-Dec	37086	24	0	97.92	0.00	0.50	0.00	0.00	0.00	2	Tripped on engine high temp
	25-Dec	37086	24	5	100.00	20.83	0.00	0.00	0.00	0.00	0	Not applicble
	26-Dec	37091	24	20	96.53	83.33	0.83	0.00	0.00	0.00	1	Daily
	27-Dec	37111	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicble
	28-Dec	37123	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicble
	29-Dec	37137	24	10	80.56	41.67	4.67	0.00	0.00	0.00	2	Daily and repair oil leak
	30-Dec	37147	24	15	88.89	62.50	2.67	0.00	0.00	0.00	1	Replace relief valves
	31-Dec	37162	24	16	91.67	66.67	2.00	0.00	0.00	0.00	3	Tripped on engine overspeed
	Closing	37178					80.73				37.00	
	TOTALS		744	361.00	87.91	48.52	80.73	0.58	0.00	9.25	37.00	
	AVERAGE			11.65	87.83			MTTR	2.18			
								MTBS	9.76			

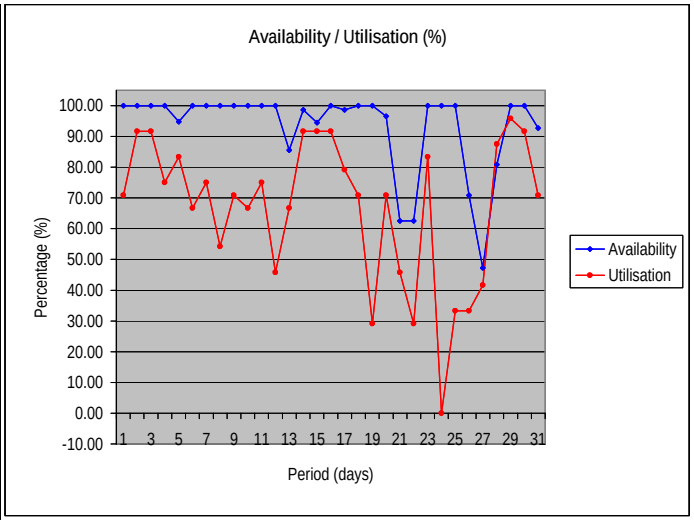


Breakdown percentage	=	Breakdown hours / Run hours	=	24.926%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7351	01-Dec	38125	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	02-Dec	38142	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	03-Dec	38164	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Dec	38186	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	05-Dec	38204	24	20	94.79	83.33	1.25	0.00	0.00	0.00	2	Adjust and tighten L/H mirror
	06-Dec	38224	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	07-Dec	38240	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	08-Dec	38258	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	09-Dec	38271	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	10-Dec	38288	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Dec	38304	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	12-Dec	38322	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	13-Dec	38333	24	16	85.56	66.67	3.47	0.00	0.00	0.00	1	Top up coolant
	14-Dec	38349	24	22	98.61	91.67	0.33	0.00	0.00	0.00	1	Mirror bracket loose
	15-Dec	38371	24	22	94.44	91.67	1.33	0.00	0.00	0.00	2	Top up diff oil
	16-Dec	38393	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	17-Dec	38415	24	19	98.61	79.17	0.33	0.00	0.00	0.00	1	Fill grease
	18-Dec	38434	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	19-Dec	38451	24	7	100.00	29.17	0.00	0.00	0.00	0.00	0	Not applicable
	20-Dec	38458	24	17	96.53	70.83	0.83	0.00	0.00	0.00	2	Tighten mirror bracket
	21-Dec	38475	24	11	62.50	45.83	9.00	0.00	0.00	0.00	3	Replace injector line
	22-Dec	38486	24	7	62.50	29.17	0.00	0.00	0.00	9.00	1	500 hour service
	23-Dec	38493	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	24-Dec	38513	24	0	100.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	25-Dec	38513	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Not applicable
	26-Dec	38521	24	8	70.83	33.33	7.00	0.00	0.00	0.00	2	Replace air starter
	27-Dec	38529	24	10	47.22	41.67	12.67	0.00	0.00	0.00	1	Machine won't start - replace starter
	28-Dec	38539	24	21	80.90	87.50	4.58	0.00	0.00	0.00	1	Repair wires on body lift solenoid
	29-Dec	38560	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	30-Dec	38583	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	31-Dec	38605	24	17	92.71	70.83	1.75	0.00	0.00	0.00	2	Top up coolant
	Closing	38622					42.55				19.00	
	TOTALS		744	497.00	93.07	66.80	42.55	0.00	0.00	9.00	19.00	
	AVERAGE			16.03	93.07			MTTR	2.24			
								MTBS	26.16			

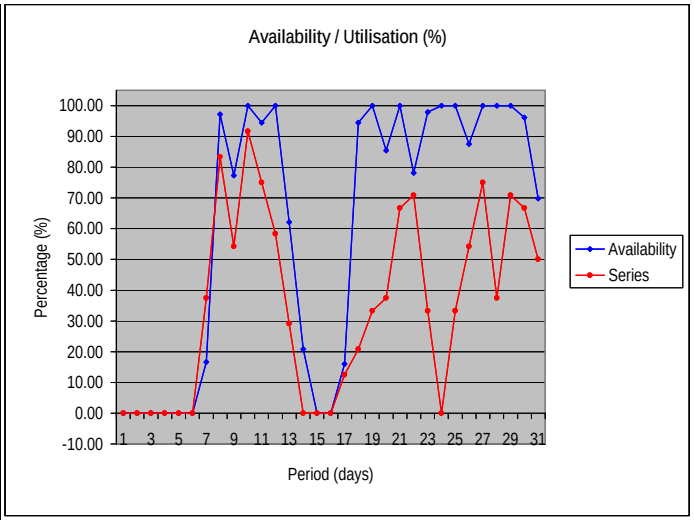


Breakdown percentage	=	Breakdown hours / Run hours	=	10.372%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7352	01-Dec	37511	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	02-Dec	37511	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	03-Dec	37511	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	04-Dec	37511	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	05-Dec	37511	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	06-Dec	37511	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Engine failure
	07-Dec	37511	24	9	16.67	37.50	20.00	0.00	0.00	0.00	1	Engine failure
	08-Dec	37520	24	20	97.22	83.33	0.67	0.00	0.00	0.00	1	Air pressure low
	09-Dec	37540	24	13	77.36	54.17	5.43	0.00	0.00	0.00	3	Tighten mirror
	10-Dec	37553	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Dec	37575	24	18	94.44	75.00	1.33	0.00	0.00	0.00	1	Adjust park brake pressure
	12-Dec	37593	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	13-Dec	37607	24	7	62.15	29.17	9.08	0.00	0.00	0.00	3	Air pressure low
	14-Dec	37614	24	0	20.83	0.00	19.00	0.00	0.00	0.00	1	Steering problem; repair L/H brake group
	15-Dec	37614	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Steering problem; repair L/H brake group
	16-Dec	37614	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Steering problem; repair L/H brake group
	17-Dec	37614	24	3	15.97	12.50	20.17	0.50	0.00	0.00	1	Steering problem; repair L/H brake group
	18-Dec	37617	24	5	94.44	20.83	1.33	6.00	0.00	0.00	1	Tyres
	19-Dec	37622	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Not applicable
	20-Dec	37630	24	9	85.42	37.50	3.50	0.00	0.00	0.00	1	Park brake not releasing
	21-Dec	37639	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Dec	37655	24	17	78.13	70.83	5.25	0.00	0.00	0.00	1	Steering pressure low, repair fuel leak
	23-Dec	37672	24	8	97.92	33.33	0.50	0.00	0.00	0.00	1	Repair aircon
	24-Dec	37680	24	0	100.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	25-Dec	37680	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Not applicable
	26-Dec	37688	24	13	87.50	54.17	3.00	0.00	0.00	0.00	1	Air jump start
	27-Dec	37701	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	28-Dec	37719	24	9	100.00	37.50	0.00	0.00	0.00	0.00	0	Not applicable
	29-Dec	37728	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	30-Dec	37745	24	16	96.18	66.67	0.92	0.00	0.00	0.00	1	Top up coolant and open heater taps
	31-Dec	37761	24	12	69.79	50.00	7.25	0.00	0.00	0.00	1	Top up coolant and open heater taps
	Closing	37773					289.43				18.00	
	TOTALS		744	262.00	61.10	35.22	289.43	6.50	0.00	0.00	18.00	
	AVERAGE			8.45	60.22			MTTR	16.08			
								MTBS	14.56			

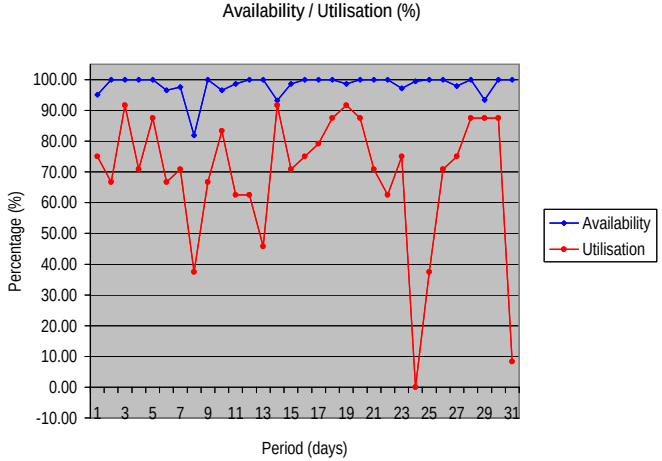


Breakdown percentage	=	Breakdown hours / Run hours	=	110.471%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7353	01-Dec	3218	24	18	95.14	75.00	1.17	0.00	0.00	0.00	1	Adjust/charge rear suspension cylinder
	02-Dec	3236	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	03-Dec	3252	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Dec	3274	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	05-Dec	3291	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Dec	3312	24	16	96.53	66.67	0.83	0.00	0.00	0.00	1	Not engaging gears; top up transmission oil
	07-Dec	3328	24	17	97.57	70.83	0.58	0.00	0.00	0.00	1	Replace globe
	08-Dec	3345	24	9	81.94	37.50	4.33	0.00	0.00	0.00	1	Weld mirror bracket and replace mirror
	09-Dec	3354	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	10-Dec	3370	24	20	96.53	83.33	0.83	0.00	0.00	0.00	2	Top up engine oil
	11-Dec	3390	24	15	98.61	62.50	0.33	0.00	0.00	0.00	1	Top up T/M oil
	12-Dec	3405	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Dec	3420	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	14-Dec	3431	24	22	93.19	91.67	1.63	0.00	0.00	0.00	2	Tighten mirror
	15-Dec	3453	24	17	98.61	70.83	0.33	0.00	0.00	0.00	1	Top up diff oil
	16-Dec	3470	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Dec	3488	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	18-Dec	3507	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Dec	3528	24	22	98.61	91.67	0.33	0.00	0.00	0.00	1	Tighten mirror
	20-Dec	3550	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Dec	3571	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	22-Dec	3588	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	23-Dec	3603	24	18	97.22	75.00	0.67	0.00	0.00	0.00	1	Charge rear suspension cylinder
	24-Dec	3621	24	0	99.51	0.00	0.12	0.00	0.00	0.00	1	Tighten L/H mirror
	25-Dec	3621	24	9	100.00	37.50	0.00	0.00	0.00	0.00	0	Not applicable
	26-Dec	3630	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	27-Dec	3647	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Top up t/m oil
	28-Dec	3665	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	29-Dec	3686	24	21	93.40	87.50	1.58	0.00	0.00	0.00	2	Top up engine oil
	30-Dec	3707	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	31-Dec	3728	24	2	100.00	8.33	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	3730					13.25				16.00	
	TOTALS		744	512.00	98.22	68.82	13.25	0.00	0.00	0.00	16.00	
	AVERAGE			16.52	98.22			MTTR	0.83			
								MTBS	32.00			

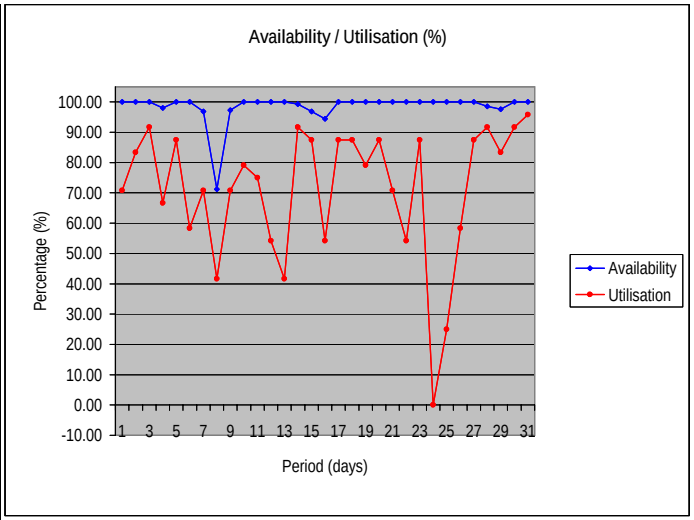


Breakdown percentage	=	Breakdown hours / Run hours	=	2.588%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7354	01-Dec	3384	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	02-Dec	3401	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Dec	3421	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Dec	3443	24	16	97.99	66.67	0.48	0.00	0.00	0.00	1	Light tripped on circuit breaker - earth on body
	05-Dec	3459	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Dec	3480	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	07-Dec	3494	24	17	96.88	70.83	0.75	0.00	0.00	0.00	1	Replace 2x globes
	08-Dec	3511	24	10	71.18	41.67	0.00	0.00	0.00	6.92	1	500 hour service
	09-Dec	3521	24	17	97.29	70.83	0.65	0.00	0.00	0.00	1	Repair oil leak on filter
	10-Dec	3538	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	11-Dec	3557	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	12-Dec	3575	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	13-Dec	3588	24	10	100.00	41.67	0.00	1.75	0.00	0.00	1	Broken mirror L/H - accident
	14-Dec	3598	24	22	99.31	91.67	0.17	0.00	0.00	0.00	1	Tripped on overspeed
	15-Dec	3620	24	21	96.88	87.50	0.75	0.00	0.00	0.00	1	Tyre wearing on tailgate linkage
	16-Dec	3641	24	13	94.44	54.17	1.33	0.00	0.00	0.00	2	Tripped engine overspeed
	17-Dec	3654	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	18-Dec	3675	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Dec	3696	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	20-Dec	3715	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Dec	3736	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	22-Dec	3753	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	23-Dec	3766	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	24-Dec	3787	24	0	100.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	25-Dec	3787	24	6	100.00	25.00	0.00	0.00	0.00	0.00	0	Not applicable
	26-Dec	3793	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	27-Dec	3807	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	28-Dec	3828	24	22	98.54	91.67	0.35	0.00	0.00	0.00	1	Tighten mirror
	29-Dec	3850	24	20	97.57	83.33	0.58	0.00	0.00	0.00	1	Repair wires on front lights
	30-Dec	3870	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	31-Dec	3892	24	23	100.00	95.83	0.00	0.25	0.00	0.00	1	Replace L/H mirror
	Closing	3915					5.07				12.00	
	TOTALS		744	531.00	98.39	71.37	5.07	2.00	0.00	6.92	12.00	
	AVERAGE			17.13	98.12			MTTR	0.42			
								MTBS	44.25			

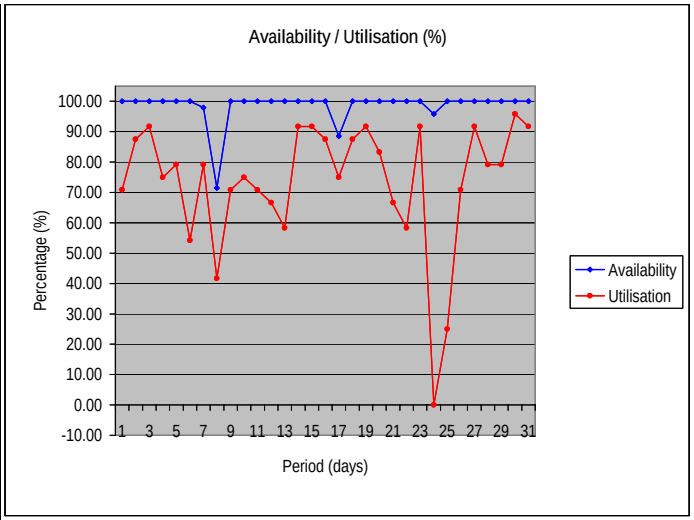


Breakdown percentage	=	Breakdown hours / Run hours	=	2.257%

Middelburg Mine Services: Klipfontein Section

Period: December 2005

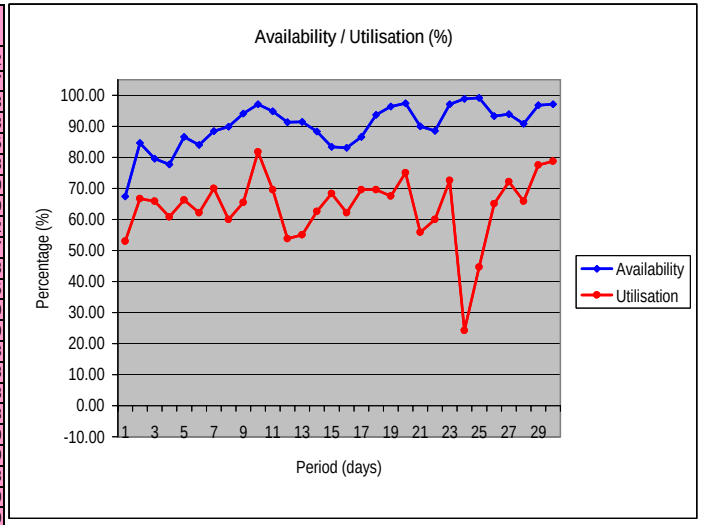
Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7355	01-Dec	2594	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	02-Dec	2611	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	03-Dec	2632	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Dec	2654	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	05-Dec	2672	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	06-Dec	2691	24	13	100.00	54.17	0.00	0.42	0.00	0.00	1	Replace L/H mirror
	07-Dec	2704	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Top up engine oil
	08-Dec	2723	24	10	71.53	41.67	0.00	0.00	0.00	6.83	1	500 hour service
	09-Dec	2733	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	10-Dec	2750	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	11-Dec	2768	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	12-Dec	2785	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	13-Dec	2801	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	14-Dec	2815	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	15-Dec	2837	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	16-Dec	2859	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	17-Dec	2880	24	18	88.54	75.00	2.75	0.00	0.00	0.00	1	T/M oil leak on filter housing
	18-Dec	2898	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Dec	2919	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Dec	2941	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	21-Dec	2961	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Dec	2977	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	23-Dec	2991	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	24-Dec	3013	24	0	95.83	0.00	1.00	0.00	0.00	0.00	2	Top up engine oil
	25-Dec	3013	24	6	100.00	25.00	0.00	0.00	0.00	0.00	0	Not applicable
	26-Dec	3019	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	27-Dec	3036	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Dec	3058	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	29-Dec	3077	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	30-Dec	3096	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	31-Dec	3119	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	3141					4.25				6.00	
	TOTALS		744	547.00	98.51	73.52	4.25	0.42	0.00	6.83	6.00	
	AVERAGE			17.65	98.45			MTTR	0.71			
								MTBS	91.17			



Breakdown percentage	=	Breakdown hours / Run hours	=	2.026%

Middelburg Mine Services: Klipfontein Section
Period: December 2005

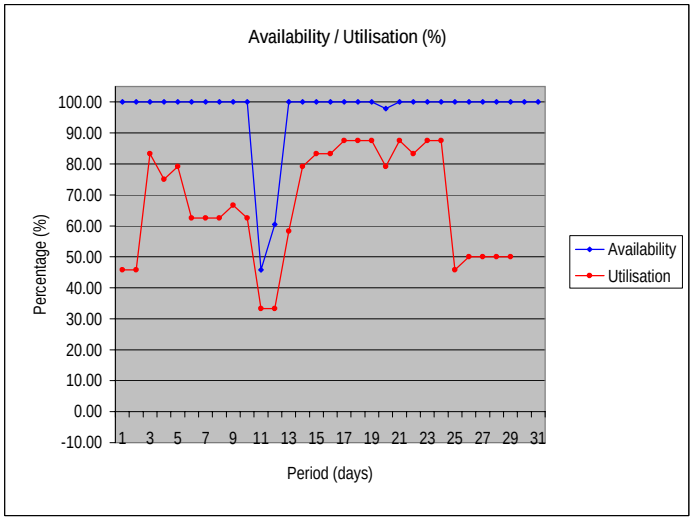
Machine	Date	Availability %	Utilization %
TOTAL	01-Dec	67.36	52.92
	02-Dec	84.62	66.67
	03-Dec	79.57	65.83
	04-Dec	77.73	60.83
	05-Dec	86.56	66.25
	06-Dec	83.94	62.08
	07-Dec	88.40	70.00
	08-Dec	89.81	60.00
	09-Dec	94.10	65.42
	10-Dec	97.05	81.67
	11-Dec	94.79	69.58
	12-Dec	91.31	53.75
	13-Dec	91.44	55.00
	14-Dec	88.35	62.50
	15-Dec	83.33	68.33
	16-Dec	83.02	62.08
	17-Dec	86.53	69.58
	18-Dec	93.65	69.58
	19-Dec	96.32	67.50
	20-Dec	97.36	75.00
	21-Dec	89.94	55.83
	22-Dec	88.51	60.00
	23-Dec	97.05	72.50
	24-Dec	98.78	24.17
	25-Dec	99.17	44.58
	26-Dec	93.27	65.00
	27-Dec	93.89	72.08
	28-Dec	90.81	65.83
	29-Dec	96.74	77.50
	30-Dec	97.06	78.75
	31-Dec	95.10	73.75
Average	%	90.18	64.34



Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6261	01-Jan	42921	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	02-Jan	42932	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	03-Jan	42943	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	04-Jan	42963	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	05-Jan	42981	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	06-Jan	43000	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	07-Jan	43015	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Jan	43030	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Jan	43045	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	10-Jan	43061	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	11-Jan	43076	24	8	45.83	33.33	13.00	0.00	0.00	0.00	1	Replace equl. bar pin
	12-Jan	43084	24	8	60.42	33.33	9.50	0.00	0.00	0.00	0	Replace equl. bar pin
	13-Jan	43092	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	14-Jan	43106	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	15-Jan	43125	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	16-Jan	43145	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	43165	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	18-Jan	43186	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Jan	43207	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Jan	43228	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Oil leak on lift cylinder seal; top up oil
	21-Jan	43247	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Jan	43268	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	23-Jan	43288	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	24-Jan	43309	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	25-Jan	43330	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	26-Jan	43341	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	27-Jan	43353	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	28-Jan	43365	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	29-Jan	43377	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	30-Jan	43389	24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						23.00				2.00	
	TOTALS		744	468.00	96.91	62.90	23.00	0.00	0.00	0.00	2.00	
	AVERAGE			16.14	96.91			MTTR	11.50			
								MTBS	234.00			

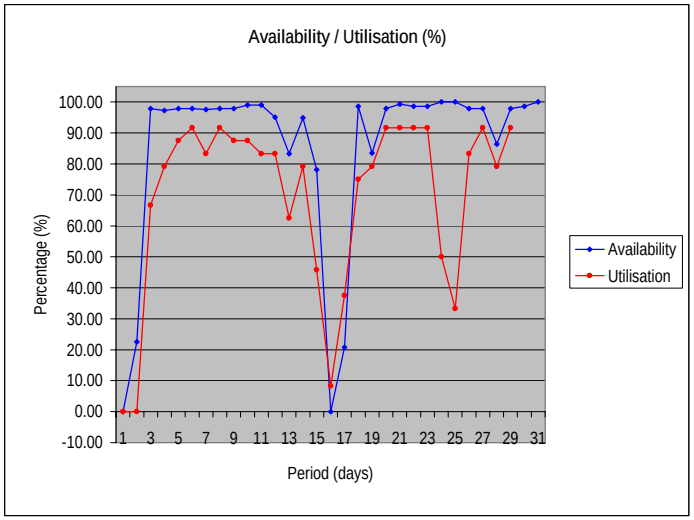


Breakdown percentage	=	Breakdown hours / Run hours	=	4.915%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6292	01-Jan	38279	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Replace no.8 cylinder head
	02-Jan	38279	24	0	22.58	0.00	18.58	0.00	0.00	0.00	0	Replace no.8 cylinder head
	03-Jan	38279	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	04-Jan	38295	24	19	97.21	79.17	0.67	0.00	0.00	0.00	1	Low coolant level
	05-Jan	38314	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Tup up hydraulic oil and coolant
	06-Jan	38335	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	07-Jan	38357	24	20	97.58	83.33	0.58	0.00	0.00	0.00	1	Change engine oil and filters
	08-Jan	38377	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	09-Jan	38399	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	10-Jan	38420	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Repair lights; top up oil
	11-Jan	38441	24	20	98.96	83.33	0.25	0.00	0.00	0.00	0	Repair lights; top up oil
	12-Jan	38461	24	20	95.13	83.33	1.17	0.00	0.00	0.00	1	Engine oil leak on drain valve
	13-Jan	38481	24	15	83.33	62.50	4.00	0.00	0.00	0.00	1	Engine oil leak on drain valve
	14-Jan	38496	24	19	94.88	79.17	1.23	0.00	0.00	0.00	2	Daily
	15-Jan	38515	24	11	78.13	45.83	5.25	0.00	0.00	0.00	2	Daily
	16-Jan	38526	24	2	0.00	8.33	24.00	0.00	0.00	0.00	0	Water leak at no.1 cylinder head
	17-Jan	38528	24	9	20.83	37.50	19.00	0.00	0.00	0.00	0	Water leak at no.1 cylinder head; replace head
	18-Jan	38537	24	18	98.63	75.00	0.33	0.00	0.00	0.00	1	Repair seat; install stopper
	19-Jan	38555	24	19	83.54	79.17	3.95	0.00	0.00	0.00	3	Daily
	20-Jan	38574	24	22	97.92	91.67	0.50	0.00	0.00	0.00	0	Daily
	21-Jan	38596	24	22	99.29	91.67	0.17	0.00	0.00	0.00	1	Daily
	22-Jan	38618	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	23-Jan	38640	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	24-Jan	38662	24	12	100.00	50.00	0.00	0.17	0.00	0.00	1	Belly plate and T/C damaged by rocks
	25-Jan	38674	24	8	100.00	33.33	0.00	22.67	0.00	0.00	0	Belly plate and T/C damaged by rocks
	26-Jan	38682	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	27-Jan	38702	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	28-Jan	38724	24	19	86.38	79.17	3.27	0.00	0.00	0.00	3	Tup up hydraulic oil and t/m oil
	29-Jan	38743	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	30-Jan	38765	24		98.63		0.33	0.00	0.00	0.00	1	Daily
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						112.19				29.00	
	TOTALS		744	486.00	84.92	65.32	112.19	22.84	0.00	0.00	29.00	
	AVERAGE			16.76	81.85			MTTR	3.87			
								MTBS	16.76			

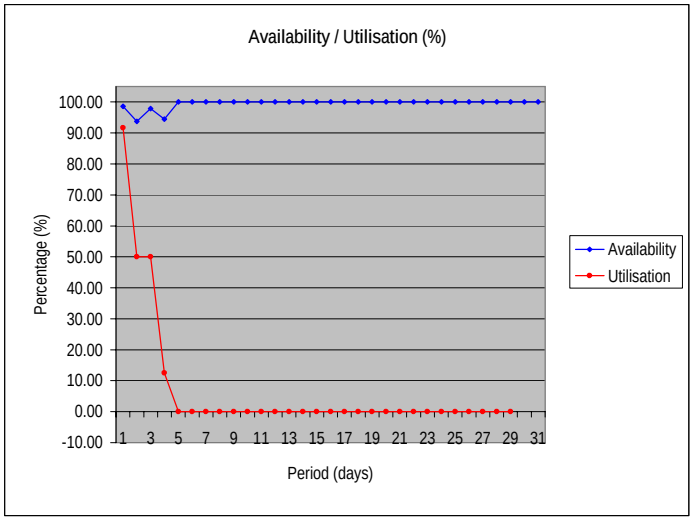


Breakdown percentage	=	Breakdown hours / Run hours	=	23.084%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6293	01-Jan	38226	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Tighten light bracket
	02-Jan	38248	24	12	93.75	50.00	1.50	0.00	0.00	0.00	1	Wash blocked radiator
	03-Jan	38260	24	12	97.92	50.00	0.50	0.00	0.00	0.00	1	Daily
	04-Jan	38272	24	3	94.46	12.50	1.33	13.00	0.00	0.00	2	Tripped on coolant pressure; radiator leaking
	05-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	06-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	07-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	08-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	09-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	10-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	11-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	12-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	1	Undercarraige repairs
	13-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	14-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	15-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	16-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	17-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	18-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	19-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	20-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	21-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	22-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	23-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	24-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	25-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	26-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	27-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	28-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	29-Jan	38275	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	30-Jan	38275	24		100.00		0.00	0.00	0.00	0.00	0	Undercarraige repairs
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Undercarraige repairs
	Closing						3.66				6.00	
	TOTALS		744	49.00	99.51	6.59	3.66	613.00	0.00	0.00	6.00	
	AVERAGE			1.69	17.12			MTTR	0.61			
								MTBS	8.17			

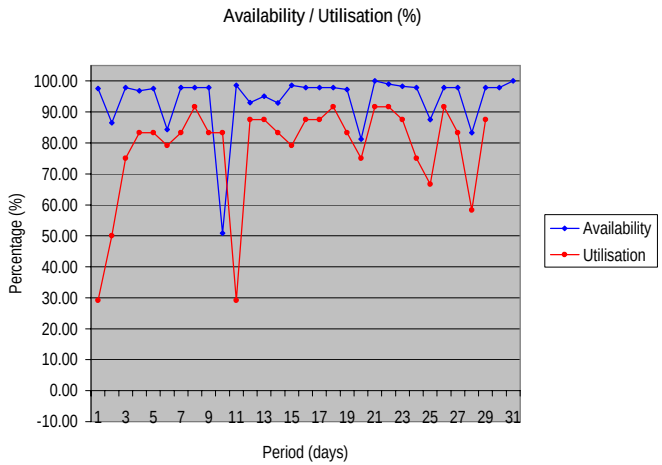


Breakdown percentage	=	Breakdown hours / Run hours	=	7.469%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6294	01-Jan	31929	24	7	97.58	29.17	0.58	0.00	0.00	0.00	1	Daily
	02-Jan	31936	24	12	86.46	50.00	3.25	0.00	0.00	0.00	1	Braze L/H tilt hose
	03-Jan	31948	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Repair lights and wipers
	04-Jan	31966	24	20	96.88	83.33	0.75	0.00	0.00	0.00	2	Daily
	05-Jan	31986	24	20	97.58	83.33	0.58	0.00	0.00	0.00	2	Replace globe
	06-Jan	32006	24	19	84.38	79.17	3.75	0.00	0.00	0.00	1	Replace rubber coupling on T/M pump
	07-Jan	32025	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	08-Jan	32045	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	09-Jan	32067	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	10-Jan	32087	24	20	50.83	83.33	11.80	0.00	0.00	0.00	2	Hydraulic hose burst
	11-Jan	32107	24	7	98.63	29.17	0.33	0.00	0.00	0.00	1	Daily
	12-Jan	32114	24	21	93.04	87.50	1.67	0.00	0.00	0.00	1	Repair l/h tilt cylinder stel tube
	13-Jan	32135	24	21	95.13	87.50	1.17	0.00	0.00	0.00	1	Top up t/m oil
	14-Jan	32156	24	20	92.92	83.33	1.70	0.00	0.00	0.00	1	Top up t/m oil
	15-Jan	32176	24	19	98.63	79.17	0.33	0.00	0.00	0.00	1	Daily
	16-Jan	32195	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	17-Jan	32216	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	18-Jan	32237	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	19-Jan	32259	24	20	97.21	83.33	0.67	0.00	0.00	0.00	1	Daily
	20-Jan	32279	24	18	81.25	75.00	0.50	0.00	0.00	4.00	2	Daily
	21-Jan	32297	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Jan	32319	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	23-Jan	32341	24	21	98.25	87.50	0.42	0.00	0.00	0.00	1	Tighten l/h air filter housing
	24-Jan	32362	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	25-Jan	32380	24	16	87.50	66.67	3.00	0.00	0.00	0.00	1	Repair hydraulic oil leak
	26-Jan	32396	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	27-Jan	32418	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	28-Jan	32438	24	14	83.33	58.33	4.00	0.00	0.00	0.00	2	Top up hydraulic and t/m oil
	29-Jan	32452	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	30-Jan	32473	24		97.92		0.50	0.00	0.00	0.00	1	Daily
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						40.75				34.00	
	TOTALS		744	544.00	93.99	73.12	40.75	0.00	0.00	4.00	34.00	
	AVERAGE			18.76	93.99			MTTR	1.20			
								MTBS	16.00			

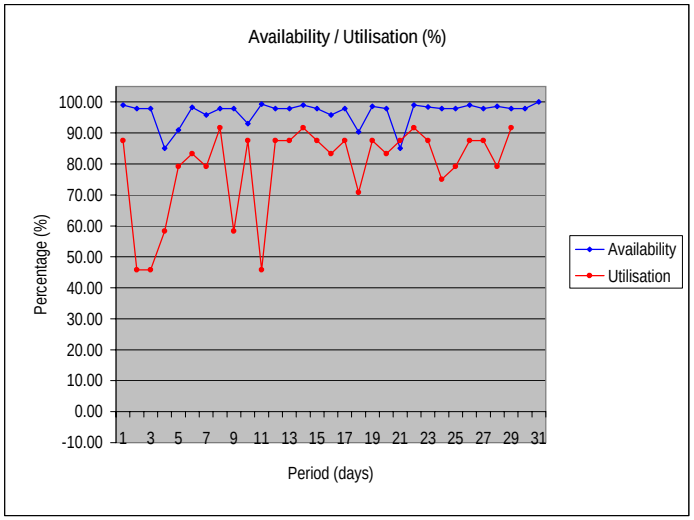


Breakdown percentage	=	Breakdown hours / Run hours	=	8.226%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6295	01-Jan	26014	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	02-Jan	26035	24	11	97.92	45.83	0.50	0.00	0.00	0.00	1	Daily
	03-Jan	26046	24	11	97.92	45.83	0.50	0.00	0.00	0.00	1	Daily
	04-Jan	26057	24	14	85.08	58.33	3.58	0.00	0.00	0.00	1	Replace seat
	05-Jan	26071	24	19	90.96	79.17	2.17	0.00	0.00	0.00	1	Replace window rubbers; top up engine oil/coolant
	06-Jan	26090	24	20	98.25	83.33	0.42	0.00	0.00	0.00	1	Replace 2x globes and top up hydraulic oil
	07-Jan	26110	24	19	95.83	79.17	1.00	0.00	0.00	0.00	1	Top up coolant; daily
	08-Jan	26129	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	09-Jan	26151	24	14	97.92	58.33	0.50	0.00	0.00	0.00	1	Daily
	10-Jan	26165	24	21	93.04	87.50	1.67	0.00	0.00	0.00	1	500 hour service
	11-Jan	26186	24	11	99.29	45.83	0.17	0.00	0.00	0.00	1	Daily
	12-Jan	26197	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	13-Jan	26218	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	14-Jan	26239	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	15-Jan	26261	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	16-Jan	26282	24	20	95.83	83.33	1.00	0.00	0.00	0.00	1	Low power - replace l/h exh temperature sensor
	17-Jan	26302	24	21	97.92	87.50	0.50	0.00	0.00	0.00	0	Daily
	18-Jan	26323	24	17	90.29	70.83	2.33	0.00	0.00	0.00	2	Tighten condenser
	19-Jan	26340	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	20-Jan	26361	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	21-Jan	26381	24	21	85.08	87.50	3.58	0.00	0.00	0.00	1	Replace b.lift cylinder steel tube - leaking
	22-Jan	26402	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	23-Jan	26424	24	21	98.42	87.50	0.38	0.00	0.00	0.00	1	Daily
	24-Jan	26445	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	25-Jan	26463	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	26-Jan	26482	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Change head light
	27-Jan	26503	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	28-Jan	26524	24	19	98.63	79.17	0.33	0.00	0.00	0.00	1	Daily
	29-Jan	26543	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	30-Jan	26565	24		97.92		0.50	0.00	0.00	0.00	1	Daily
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						24.96				30.00	
	TOTALS		744	551.00	96.65	74.06	24.96	0.00	0.00	0.00	30.00	
	AVERAGE			19.00	96.65			MTTR	0.83			
								MTBS	18.37			

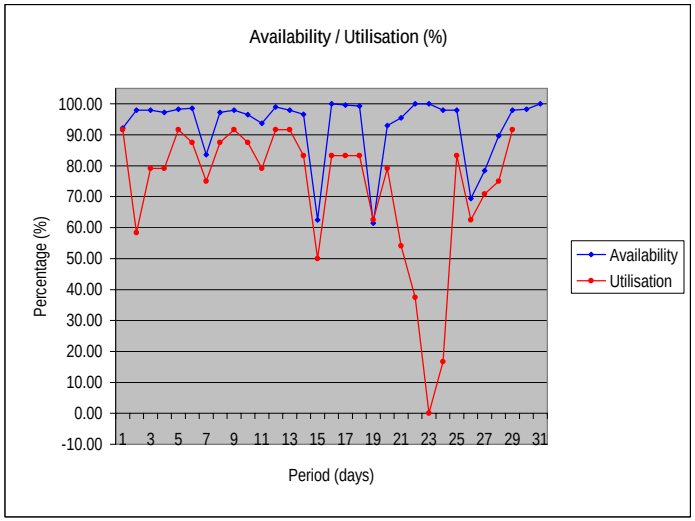


Breakdown percentage	=	Breakdown hours / Run hours	=	4.530%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6296	01-Jan	24065	24	22	92.17	91.67	1.88	0.00	0.00	0.00	0	Daily
	02-Jan	24087	24	14	97.92	58.33	0.50	0.00	0.00	0.00	1	Daily
	03-Jan	24101	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	04-Jan	24120	24	19	97.21	79.17	0.67	0.00	0.00	0.00	2	Daily
	05-Jan	24139	24	22	98.25	91.67	0.42	0.00	0.00	0.00	1	Top hydraulic, T/M oil and coolant
	06-Jan	24161	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Top up hydraulic oil
	07-Jan	24182	24	18	83.54	75.00	3.95	0.00	0.00	0.00	1	Replace hose on tilt line
	08-Jan	24200	24	21	97.21	87.50	0.67	0.00	0.00	0.00	1	Adjust tracks; daily
	09-Jan	24221	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	10-Jan	24243	24	21	96.54	87.50	0.83	0.00	0.00	0.00	1	Top up hydraulic oil
	11-Jan	24264	24	19	93.75	79.17	1.50	0.00	0.00	0.00	1	T/M oil low; daily
	12-Jan	24283	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Top up hydraulic + t/m oil
	13-Jan	24305	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	14-Jan	24327	24	20	96.67	83.33	0.80	0.00	0.00	0.00	2	Daily
	15-Jan	24347	24	12	62.50	50.00	9.00	0.00	0.00	0.00	0	Tilt hose leaking under b. plate - replace hose
	16-Jan	24359	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	24379	24	20	99.67	83.33	0.08	0.00	0.00	0.00	1	Daily
	18-Jan	24399	24	20	99.29	83.33	0.17	0.00	0.00	0.00	1	Daily
	19-Jan	24419	24	15	61.46	62.50	9.25	0.00	0.00	0.00	2	Daily
	20-Jan	24434	24	19	93.04	79.17	1.67	0.00	0.00	0.00	1	Daily
	21-Jan	24453	24	13	95.50	54.17	1.08	5.50	0.00	0.00	2	Top up hydraulic oil
	22-Jan	24466	24	9	100.00	37.50	0.00	12.58	0.00	0.00	2	Weld missing roller in place
	23-Jan	24475	24	0	100.00	0.00	0.00	17.92	0.00	0.00	0	Replace worn bogies; 500 hour service
	24-Jan	24475	24	4	97.92	16.67	0.50	0.00	0.00	0.00	1	Daily
	25-Jan	24479	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	26-Jan	24499	24	15	69.46	62.50	7.33	0.00	0.00	0.00	3	L/H side frame pin came out
	27-Jan	24514	24	17	78.46	70.83	5.17	0.00	0.00	0.00	1	Replace strobe light
	28-Jan	24531	24	18	89.71	75.00	2.47	0.00	0.00	0.00	2	Daily
	29-Jan	24549	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	30-Jan	24571	24		98.25		0.42	0.00	0.00	0.00	1	Daily
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						51.44				34.00	
	TOTALS		744	506.00	93.09	68.01	51.44	36.00	0.00	0.00	34.00	
	AVERAGE			17.45	88.25			MTTR	1.51			
								MTBS	14.88			

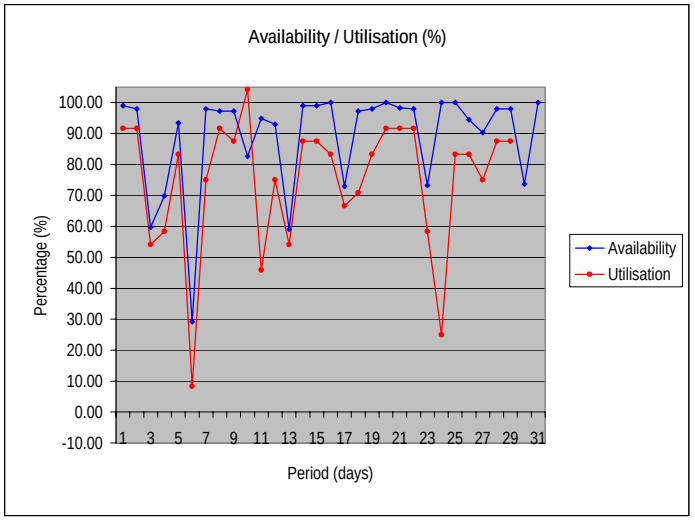


Breakdown percentage	=	Breakdown hours / Run hours	=	10.166%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6297	01-Jan	25374	24	22	98.96	91.67	0.25	0.00	0.00	0.00	0	Daily
	02-Jan	25396	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	03-Jan	25418	24	13	59.71	54.17	9.67	0.00	0.00	0.00	2	Replace fan hose
	04-Jan	25431	24	14	69.79	58.33	7.25	0.00	0.00	0.00	3	Top up coolant; T/M oil; replace front headlight
	05-Jan	25445	24	20	93.42	83.33	1.58	0.00	0.00	0.00	2	Overheat; top up hydraulic oil and coolant
	06-Jan	25465	24	2	29.17	8.33	17.00	0.00	0.00	0.00	1	1,000 hour service; replace fan pump; L/H cylinder
	07-Jan	25467	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	08-Jan	25485	24	22	97.21	91.67	0.67	0.00	0.00	0.00	1	Adjust tracks; daily
	09-Jan	25507	24	21	97.21	87.50	0.67	0.00	0.00	0.00	1	Daily
	10-Jan	25528	24	25	82.63	104.17	4.17	0.00	0.00	0.00	1	Top up hydraulic oil
	11-Jan	25553	24	11	94.88	45.83	1.23	0.00	0.00	0.00	2	Repair lights and wiper blades
	12-Jan	25564	24	18	93.04	75.00	1.67	0.00	0.00	0.00	1	Low hydraulic oil
	13-Jan	25582	24	13	59.04	54.17	9.83	0.00	0.00	0.00	1	Burst seal on control valve
	14-Jan	25595	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	15-Jan	25616	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	16-Jan	25637	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	25657	24	16	72.92	66.67	6.50	0.00	0.00	0.00	2	Change burst seal on tilt line
	18-Jan	25673	24	17	97.21	70.83	0.67	0.00	0.00	0.00	1	Daily
	19-Jan	25690	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	20-Jan	25710	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	21-Jan	25732	24	22	98.25	91.67	0.42	0.00	0.00	0.00	1	Daily
	22-Jan	25754	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	23-Jan	25776	24	14	73.25	58.33	6.42	0.00	0.00	0.00	1	Replace c-edges
	24-Jan	25790	24	6	100.00	25.00	0.00	4.00	0.00	0.00	1	Install 4x missing cutting edges
	25-Jan	25796	24	20	100.00	83.33	0.00	2.42	0.00	0.00	0	Install 4x missing cutting edges
	26-Jan	25816	24	20	94.46	83.33	1.33	0.00	0.00	0.00	1	Top up hydraulic oil
	27-Jan	25836	24	18	90.29	75.00	2.33	0.00	0.00	0.00	1	Repair hydraulic oil leak
	28-Jan	25854	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Adjust tracks
	29-Jan	25875	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	30-Jan	25896	24		73.63		6.33	0.00	0.00	0.00	2	Daily
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						81.49				33.00	
	TOTALS		744	522.00	89.05	70.16	81.49	6.42	0.00	0.00	33.00	
	AVERAGE			18.00	88.18			MTTR	2.47			
								MTBS	15.82			

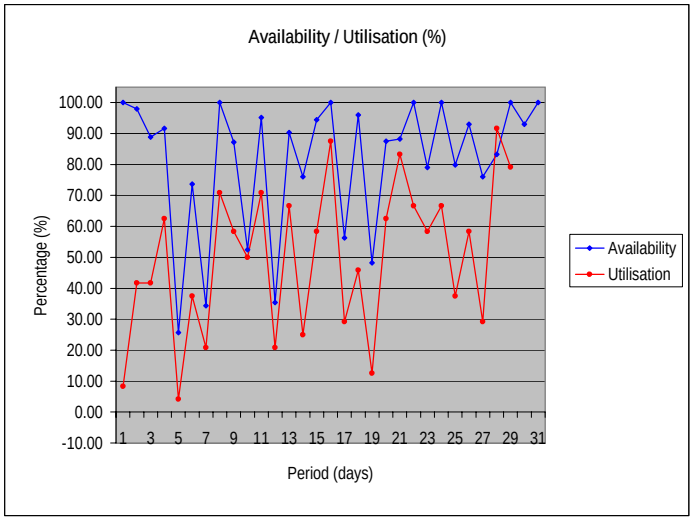


Breakdown percentage	=	Breakdown hours / Run hours	=	15.611%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7974	01-Jan	37178	24	2	100.00	8.33	0.00	0.00	0.00	0.00	0	Not applicable
	02-Jan	37180	24	10	97.92	41.67	0.50	0.00	0.00	0.00	0	Daily
	03-Jan	37190	24	10	88.88	41.67	2.67	0.00	0.00	0.00	0	Daily; replace hydraulic hose o-ring
	04-Jan	37200	24	15	91.67	62.50	2.00	0.00	0.00	0.00	1	Daily
	05-Jan	37215	24	1	25.71	4.17	3.83	0.00	0.00	14.00	2	Leaking pilot valve; 500 hour service
	06-Jan	37216	24	9	73.63	37.50	6.33	0.00	0.00	0.00	2	Repair oil leak; replace hydraulic pump
	07-Jan	37225	24	5	34.38	20.83	15.75	0.00	0.00	0.00	0	Replace hydraulic pump
	08-Jan	37230	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	09-Jan	37247	24	14	87.17	58.33	3.08	0.00	0.00	0.00	2	Daily; burst hydraulic hose
	10-Jan	37261	24	12	52.42	50.00	11.42	0.00	0.00	0.00	2	Burst hydraulic hose
	11-Jan	37273	24	17	95.13	70.83	1.17	0.00	0.00	0.00	1	Steering neutral bracket loose
	12-Jan	37290	24	5	35.42	20.83	15.50	0.00	0.00	0.00	1	Repair oil leaks
	13-Jan	37295	24	16	90.29	66.67	2.33	0.00	0.00	0.00	1	Brakes bind - no fault
	14-Jan	37311	24	6	76.04	25.00	5.75	0.00	0.00	0.00	2	No gears - broken wires
	15-Jan	37317	24	14	94.46	58.33	1.33	0.00	0.00	0.00	1	Daily
	16-Jan	37331	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	37352	24	7	56.25	29.17	10.50	0.00	0.00	0.00	1	Change R/H bucket pin
	18-Jan	37359	24	11	96.04	45.83	0.95	0.67	0.00	0.00	2	R/H lift cylinder leaking (sweat only); key control
	19-Jan	37370	24	3	48.25	12.50	0.00	0.00	0.00	12.42	1	250 hour service + change hydraulic hoses
	20-Jan	37373	24	15	87.50	62.50	3.00	0.00	0.00	0.00	1	Change hydraulic hose
	21-Jan	37388	24	20	88.21	83.33	2.83	0.28	0.00	0.00	2	Change hydraulic hose
	22-Jan	37408	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Jan	37424	24	14	79.08	58.33	5.02	0.00	0.00	0.00	2	Change fuel filter; top up steering oil; daily
	24-Jan	37438	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	25-Jan	37454	24	9	79.88	37.50	4.83	0.00	0.00	0.00	2	Top up engine oil; no dash power; repair harness
	26-Jan	37463	24	14	93.04	58.33	1.67	0.00	0.00	0.00	0	No dash power - repair harness
	27-Jan	37477	24	7	76.04	29.17	5.75	0.00	0.00	0.00	3	Hydraulic filter housing seal leaking; daily
	28-Jan	37484	24	22	83.33	91.67	4.00	0.00	0.00	0.00	0	Burst steering line
	29-Jan	37506	24	19	100.00	79.17	0.00	0.00	0.00	0.00	1	Not applicable
	30-Jan	37525	24		93.04		1.67	0.00	0.00	0.00	1	Replace blown seal on hydraulic line
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						111.88				31.00	
	TOTALS		744	347.00	81.41	46.64	111.88	0.95	0.00	26.42	31.00	
	AVERAGE			11.97	81.28			MTTR	3.61			
								MTBS	11.19			

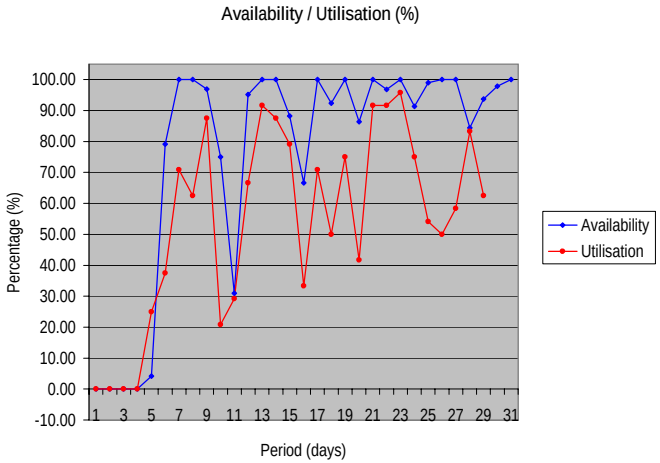


Breakdown percentage = Breakdown hours / Run hours = 39.856%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7351	01-Jan	38622	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Fan pulley broken
	02-Jan	38622	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Radiator and fan repairs
	03-Jan	38622	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Radiator and fan repairs
	04-Jan	38622	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Radiator and fan repairs
	05-Jan	38622	24	6	4.17	25.00	23.00	0.00	0.00	0.00	0	Radiator and fan repairs
	06-Jan	38628	24	9	79.17	37.50	5.00	0.00	0.00	0.00	1	Replace V-belt set
	07-Jan	38637	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Jan	38654	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Jan	38669	24	21	96.96	87.50	0.73	0.00	0.00	0.00	1	Top up grease
	10-Jan	38690	24	5	75.00	20.83	6.00	0.00	0.00	0.00	1	Vibration on fan
	11-Jan	38695	24	7	30.92	29.17	16.58	0.00	0.00	0.00	2	Fan vibrate - replace pulley
	12-Jan	38702	24	16	95.13	66.67	1.17	0.00	0.00	0.00	1	Spot light wire broken
	13-Jan	38718	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	14-Jan	38740	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	15-Jan	38761	24	19	88.21	79.17	2.83	0.00	0.00	0.00	1	Replace V-belts
	16-Jan	38780	24	8	66.67	33.33	8.00	0.00	0.00	0.00	1	Jockey pulley arm bush u.s.
	17-Jan	38788	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	18-Jan	38805	24	12	92.38	50.00	1.83	0.00	0.00	0.00	1	Repair brake oil lines
	19-Jan	38817	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	20-Jan	38835	24	10	86.38	41.67	3.27	0.00	0.00	0.00	1	Replace V-belt
	21-Jan	38845	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Jan	38867	24	22	96.88	91.67	0.75	0.00	0.00	0.00	1	Top up engine coolant
	23-Jan	38889	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	24-Jan	38912	24	18	91.33	75.00	2.08	0.00	0.00	0.00	1	Short on indicators and headlights
	25-Jan	38930	24	13	98.96	54.17	0.25	0.00	0.00	0.00	1	Weld hand rails
	26-Jan	38943	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	27-Jan	38955	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	28-Jan	38969	24	20	84.38	83.33	3.75	0.00	0.00	0.00	2	Top up diff. oil
	29-Jan	38989	24	15	93.75	62.50	1.50	3.10	0.00	0.00	2	Remove tail gate
	30-Jan	39004	24		97.83		0.52	0.00	0.00	0.00	1	Loose mirror bracket
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	1	Not applicable
	Closing						173.26				19.00	
	TOTALS		744	382.00	76.71	51.34	173.26	3.10	0.00	0.00	19.00	
	AVERAGE			13.17	76.30			MTTR	9.12			
								MTBS	20.11			

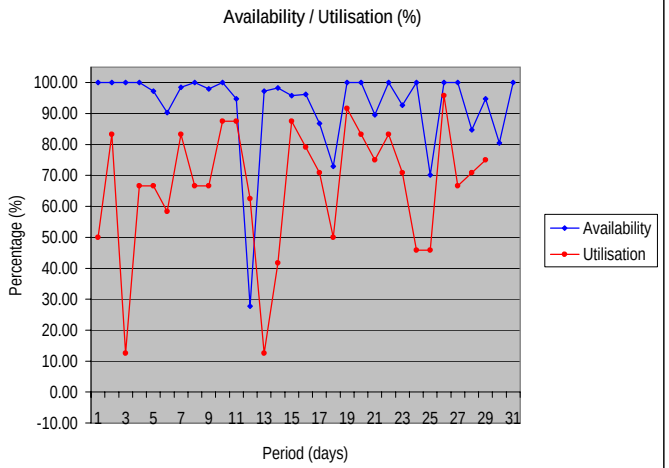


Breakdown percentage	=	Breakdown hours / Run hours	=	45.356%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7352	01-Jan	37773	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	02-Jan	37785	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Jan	37805	24	3	100.00	12.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Jan	37808	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	05-Jan	37824	24	16	97.21	66.67	0.67	0.00	0.00	0.00	2	Replace aircon belt
	06-Jan	37840	24	14	90.29	58.33	2.33	0.00	0.00	0.00	2	Replace aircon belt; clean harness
	07-Jan	37854	24	20	98.46	83.33	0.37	0.00	0.00	0.00	1	Top up T/M oil
	08-Jan	37874	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	09-Jan	37890	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Adjust seat
	10-Jan	37906	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	11-Jan	37927	24	21	94.79	87.50	1.25	0.00	0.00	0.00	2	Adjust seat; body up switch mulfunction; mirror b.
	12-Jan	37948	24	15	27.79	62.50	0.33	0.00	0.00	17.00	2	L/H mirror bracket welded; 1,000 hour service
	13-Jan	37963	24	3	97.21	12.50	0.00	0.00	0.00	0.67	0	1,000 hour service
	14-Jan	37966	24	10	98.25	41.67	0.42	0.00	0.00	0.00	1	Replace strobe light
	15-Jan	37976	24	21	95.83	87.50	1.00	0.00	0.00	0.00	1	Daily
	16-Jan	37997	24	19	96.17	79.17	0.92	0.00	0.00	0.00	2	Air jump start; adjust seat
	17-Jan	38016	24	17	86.79	70.83	3.17	0.50	0.00	0.00	2	Key control faulty; repair A/C; mirror bracket
	18-Jan	38033	24	12	72.92	50.00	6.50	0.00	0.00	0.00	1	Replace seat
	19-Jan	38045	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Jan	38067	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	21-Jan	38087	24	18	89.58	75.00	2.50	0.00	0.00	0.00	1	Weld mirror bracket
	22-Jan	38105	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	23-Jan	38125	24	17	92.71	70.83	1.75	0.00	0.00	0.00	1	Weld mirror bracket
	24-Jan	38142	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	25-Jan	38153	24	11	70.13	45.83	7.17	2.17	0.00	0.00	2	Weld mirror bracket; repair camera
	26-Jan	38164	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	27-Jan	38187	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Jan	38203	24	17	84.71	70.83	3.67	0.00	0.00	0.00	1	Repair exhaust; top up coolant
	29-Jan	38220	24	18	94.79	75.00	1.25	0.00	0.00	0.00	1	Air jump start
	30-Jan	38238	24		80.54		4.67	0.00	0.00	0.00	3	Air jump start; replace mirror bolt
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						38.47				26.00	
	TOTALS		744	465.00	92.45	62.50	38.47	2.67	0.00	17.67	26.00	
	AVERAGE			16.03	92.10			MTTR	1.48			
								MTBS	17.88			

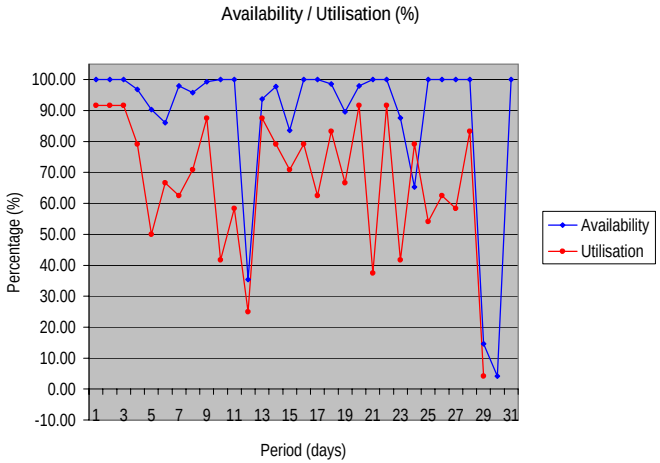


Breakdown percentage	=	Breakdown hours / Run hours	=	12.073%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7353	01-Jan	3750	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Jan	3772	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	03-Jan	3794	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Jan	3816	24	19	96.88	79.17	0.75	0.00	0.00	0.00	1	Error on L/H rear suspension cylinder
	05-Jan	3835	24	12	90.29	50.00	2.33	0.00	0.00	0.00	1	Broken handrails
	06-Jan	3847	24	16	86.13	66.67	3.33	0.00	0.00	0.00	2	Weld mirror bracket; check body hoist switch
	07-Jan	3863	24	15	97.92	62.50	0.50	0.00	0.00	0.00	1	Top up engine oil
	08-Jan	3878	24	17	95.83	70.83	1.00	0.00	0.00	0.00	1	Adjust rod in body up switch
	09-Jan	3895	24	21	99.29	87.50	0.17	0.00	0.00	0.00	1	Adjust mirror
	10-Jan	3916	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Jan	3926	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	12-Jan	3940	24	6	35.42	25.00	0.00	0.00	0.00	15.50	1	500 hour service
	13-Jan	3946	24	21	93.75	87.50	1.50	0.00	0.00	0.00	2	T/M speed densor error
	14-Jan	3967	24	19	97.79	79.17	0.53	0.00	0.00	0.00	2	T/M speed densor error
	15-Jan	3986	24	17	83.54	70.83	3.95	0.00	0.00	0.00	2	T/M speed densor error; repair T/M harness
	16-Jan	4003	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	4022	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	18-Jan	4037	24	20	98.63	83.33	0.33	0.00	0.00	0.00	0	Circuit breaker tripped on lights - reset
	19-Jan	4057	24	16	89.58	66.67	2.50	0.00	0.00	0.00	1	Engine overspeed
	20-Jan	4073	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Engine overspeed
	21-Jan	4095	24	9	100.00	37.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Jan	4104	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Jan	4126	24	10	87.63	41.67	2.97	0.00	0.00	0.00	2	Weld broken hand rails; short on electrical system
	24-Jan	4136	24	19	65.29	79.17	8.33	0.00	0.00	0.00	0	Short on electrical system
	25-Jan	4155	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	26-Jan	4168	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	27-Jan	4183	24	14	100.00	58.33	0.00	0.50	0.00	0.00	1	Broken mirror
	28-Jan	4197	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	29-Jan	4217	24	1	14.58	4.17	20.50	0.00	0.00	0.00	1	No gears - T/M faiure
	30-Jan	4218	24		4.17		23.00	0.00	0.00	0.00	0	No gears - T/M faiure
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						72.19				20.00	
	TOTALS		744	468.00	88.21	62.90	72.19	0.50	0.00	15.50	20.00	
	AVERAGE			16.14	88.15			MTTR	3.61			
								MTBS	23.40			

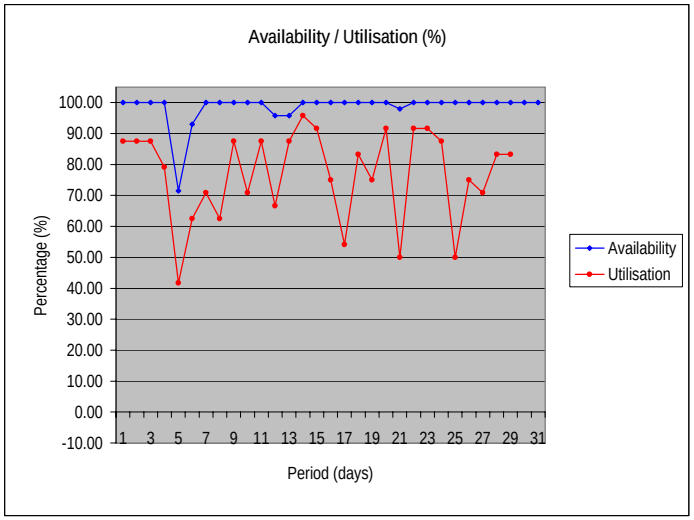


Breakdown percentage	=	Breakdown hours / Run hours	=	18.737%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7354	01-Jan	3915	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	02-Jan	3936	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	03-Jan	3957	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Jan	3978	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	05-Jan	3997	24	10	71.54	41.67	1.00	0.00	0.00	5.83	2	2,000 hour service
	06-Jan	4007	24	15	93.04	62.50	1.67	0.00	0.00	0.00	1	Mirror bolts broken
	07-Jan	4022	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Jan	4039	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Jan	4054	24	21	100.00	87.50	0.00	0.28	0.00	0.00	1	Weld mirror bracket
	10-Jan	4075	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Weld mirror bracket
	11-Jan	4092	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	12-Jan	4113	24	16	95.83	66.67	1.00	0.00	0.00	0.00	1	Not applicable
	13-Jan	4129	24	21	95.83	87.50	1.00	0.00	0.00	0.00	1	Not applicable
	14-Jan	4150	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	15-Jan	4173	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	16-Jan	4195	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	4213	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	18-Jan	4226	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Jan	4246	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	20-Jan	4264	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	21-Jan	4286	24	12	97.92	50.00	0.50	0.00	0.00	0.00	0	Not applicable
	22-Jan	4298	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Jan	4320	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	24-Jan	4342	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	25-Jan	4363	24	12	100.00	50.00	0.00	0.00	0.00	0.00	1	Weld mirror bracket
	26-Jan	4375	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	27-Jan	4393	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	28-Jan	4410	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	29-Jan	4430	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	30-Jan	4450	24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	31-Jan		24		100.00		0.00	0.00	0.00	0.00	0	Not applicable
	Closing						5.17				7.00	
	TOTALS		744	535.00	98.52	71.91	5.17	0.28	0.00	5.83	7.00	
	AVERAGE			18.45	98.48			MTTR	0.74			
								MTBS	76.43			

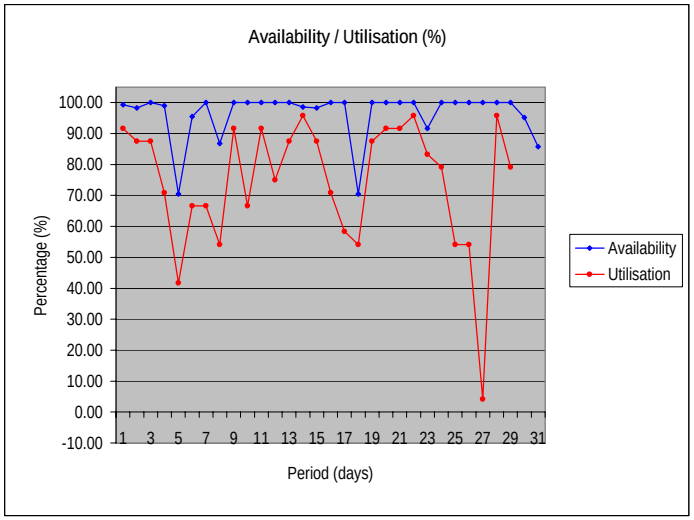


Breakdown percentage	=	Breakdown hours / Run hours	=	2.056%

Middelburg Mine Services: Klipfontein Section

Period: January 2006

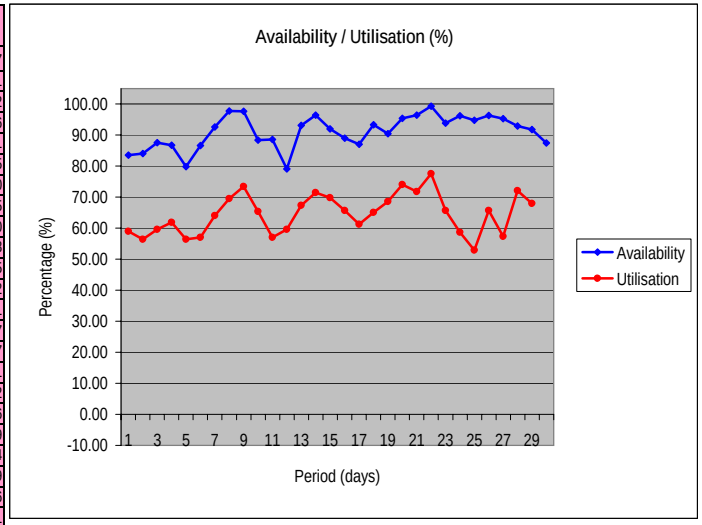
Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7355	01-Jan	3141	24	22	99.29	91.67	0.17	0.00	0.00	0.00	1	Weld handrail
	02-Jan	3163	24	21	98.25	87.50	0.42	0.00	0.00	0.00	1	Repair front light
	03-Jan	3184	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Jan	3205	24	17	98.96	70.83	0.25	0.00	0.00	0.00	0	Top up engine oil
	05-Jan	3222	24	10	70.50	41.67	0.00	0.00	0.00	7.08	1	1,000 hour service
	06-Jan	3232	24	16	95.50	66.67	1.08	0.00	0.00	0.00	2	Repair wires on headlights; spotlight loose wiring
	07-Jan	3248	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	08-Jan	3264	24	13	86.79	54.17	3.17	0.00	0.00	0.00	1	Wiring on lights
	09-Jan	3277	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	10-Jan	3299	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Jan	3315	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Jan	3337	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	13-Jan	3355	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	14-Jan	3376	24	23	98.63	95.83	0.33	0.00	0.00	0.00	1	Weld hand rails
	15-Jan	3399	24	21	98.25	87.50	0.42	0.00	0.00	0.00	1	R/H mirror loose - replace bolt
	16-Jan	3420	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	17-Jan	3437	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	18-Jan	3451	24	13	70.50	54.17	7.08	0.00	0.00	0.00	2	Mirror bolt broken; indicators not working
	19-Jan	3464	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Jan	3485	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	21-Jan	3507	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Jan	3529	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	23-Jan	3552	24	20	91.67	83.33	2.00	0.00	0.00	0.00	1	Engine saver tripped on coolant press
	24-Jan	3572	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	25-Jan	3591	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	26-Jan	3604	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	27-Jan	3617	24	1	100.00	4.17	0.00	1.67	0.00	0.00	1	Tailgate broke off
	28-Jan	3618	24	23	100.00	95.83	0.00	4.00	0.00	0.00	0	Engine saver faulty - bypass
	29-Jan	3641	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	30-Jan	3660	24		95.13		1.17	0.00	0.00	0.00	1	Spot lights not working - repair harness
	31-Jan		24		85.75		3.42	0.00	0.00	0.00	0	Spot lights not working - repair harness
	Closing						19.51				13.00	
	TOTALS		744	519.00	96.43	69.76	19.51	5.67	0.00	7.08	13.00	
	AVERAGE			17.90	95.66			MTTR	1.50			
								MTBS	39.92			



Breakdown percentage	=	Breakdown hours / Run hours	=	5.123%

Middelburg Mine Services: Klipfontein Section
Period: January 2006

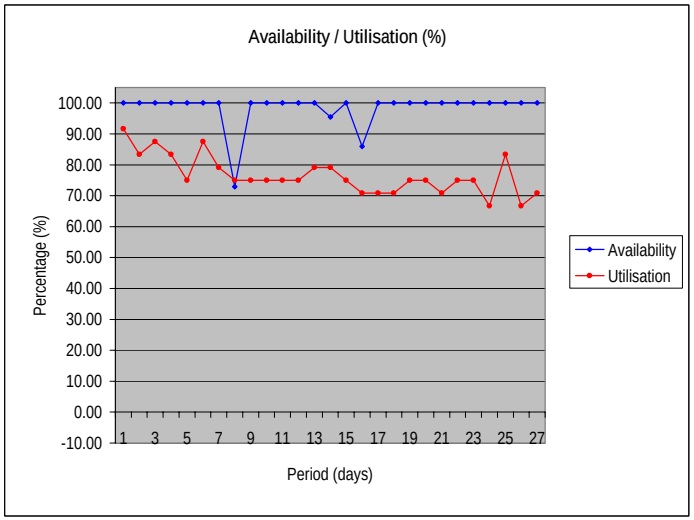
Machine	Date	Availability %	Utilization %
TOTAL	01-Jan	83.51	58.97
	02-Jan	84.05	56.41
	03-Jan	87.55	59.62
	04-Jan	86.78	61.86
	05-Jan	79.81	56.41
	06-Jan	86.62	57.05
	07-Jan	92.58	64.10
	08-Jan	97.75	69.55
	09-Jan	97.71	73.40
	10-Jan	88.42	65.38
	11-Jan	88.63	57.05
	12-Jan	79.08	59.62
	13-Jan	93.11	67.31
	14-Jan	96.39	71.47
	15-Jan	92.03	69.87
	16-Jan	88.97	65.71
	17-Jan	87.10	61.22
	18-Jan	93.37	65.06
	19-Jan	90.51	68.59
	20-Jan	95.37	74.04
	21-Jan	96.45	71.79
	22-Jan	99.33	77.56
	23-Jan	93.82	65.71
	24-Jan	96.18	58.65
	25-Jan	94.79	52.88
	26-Jan	96.29	65.71
	27-Jan	95.27	57.37
	28-Jan	92.95	72.12
	29-Jan	91.75	67.95
	30-Jan	87.46	
	31-Jan	98.90	
Average	%	91.37	64.57



Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6261	01-Feb	43419	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Feb	43441	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Feb	43461	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Feb	43482	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	05-Feb	43502	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	06-Feb	43520	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	07-Feb	43541	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	43560	24	18	72.92	75.00	6.50	0.00	0.00	0.00	1	No gears
	09-Feb	43578	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	10-Feb	43596	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	11-Feb	43614	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	12-Feb	43632	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	13-Feb	43650	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Feb	43669	24	19	95.50	79.17	1.08	0.00	0.00	0.00	1	Engine temperature high
	15-Feb	43688	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	16-Feb	43706	24	17	85.96	70.83	3.37	0.00	0.00	0.00	1	Replace hydraulic hose
	17-Feb	43723	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	18-Feb	43740	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	19-Feb	43757	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	43775	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	43793	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	22-Feb	43810	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	43828	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	43846	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	25-Feb	43862	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	26-Feb	43882	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Feb	43898	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	28-Feb	43915	24	11	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	43926					10.95				3.00	
	TOTALS		672	507.00	98.37	75.45	10.95	0.00	0.00	0.00	3.00	
	AVERAGE			18.11	98.37			MTTR	3.65			
								MTBS	169.00			

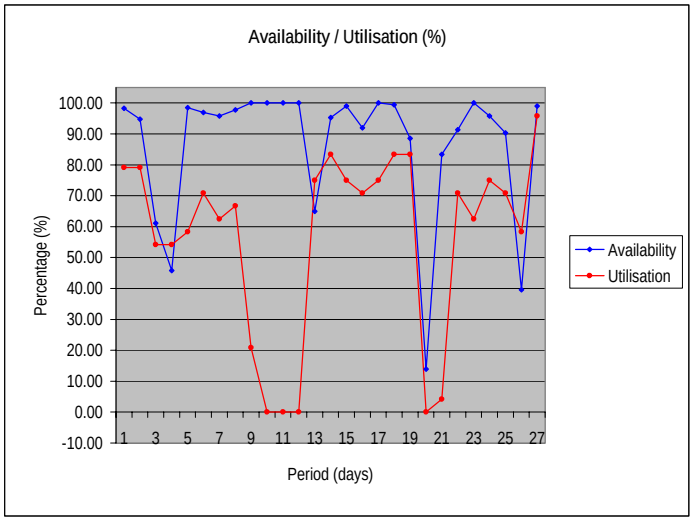


Breakdown percentage = Breakdown hours / Run hours = 2.160%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6292	01-Feb	38801	24	19	98.25	79.17	0.42	0.00	0.00	0.00	1	Daily
	02-Feb	38820	24	19	94.79	79.17	1.25	0.00	0.00	0.00	1	Daily
	03-Feb	38839	24	13	61.13	54.17	9.33	0.00	0.00	0.00	2	Daily; replace leaking tilit hoses
	04-Feb	38852	24	13	45.83	54.17	13.00	0.00	0.00	0.00	0	Replace leaking tilit hoses
	05-Feb	38865	24	14	98.46	58.33	0.37	0.00	0.00	0.00	0	Daily
	06-Feb	38879	24	17	96.88	70.83	0.75	0.00	0.00	0.00	1	Battery hold down loose
	07-Feb	38896	24	15	95.83	62.50	1.00	0.00	0.00	0.00	1	Daily
	08-Feb	38911	24	16	97.71	66.67	0.55	5.33	0.00	0.00	2	Blade lift cylinder pin missing; top up coolant
	09-Feb	38927	24	5	100.00	20.83	0.00	17.00	0.00	0.00	1	Undercarraige repair
	10-Feb	38932	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	11-Feb	38932	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	12-Feb	38932	24	0	100.00	0.00	0.00	14.50	0.00	0.00	0	Undercarraige repair
	13-Feb	38932	24	18	64.92	75.00	8.42	0.00	0.00	0.00	3	Replace burst cooling hose
	14-Feb	38950	24	20	95.29	83.33	1.13	0.00	0.00	0.00	1	Replace coolant leak; daily
	15-Feb	38970	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Daily
	16-Feb	38988	24	17	92.00	70.83	1.92	0.00	0.00	0.00	2	Replace damaged battery; daily
	17-Feb	39005	24	18	100.00	75.00	0.00	0.17	0.00	0.00	1	Over heat - test
	18-Feb	39023	24	20	99.46	83.33	0.13	3.33	0.00	0.00	2	Over heat - test; daily
	19-Feb	39043	24	20	88.54	83.33	2.75	0.00	0.00	0.00	1	Not applicable; replace diff; transmission; T/M
	20-Feb	39063	24	0	13.88	0.00	20.67	0.00	0.00	0.00	0	Replace diff; transmission; T/M pump
	21-Feb	39063	24	1	83.33	4.17	4.00	0.00	0.00	0.00	1	Over heat - top up coolant
	22-Feb	39064	24	17	91.33	70.83	2.08	0.00	0.00	0.00	2	Daily; repair wiring
	23-Feb	39081	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	39096	24	18	95.83	75.00	1.00	0.00	0.00	0.00	2	Top up coolant; replace A/C belt
	25-Feb	39114	24	17	90.29	70.83	2.33	0.00	0.00	0.00	0	R/H turbo failure
	26-Feb	39131	24	14	39.58	58.33	14.50	0.00	0.00	0.00	1	R/H turbo failure
	27-Feb	39145	24	23	98.96	95.83	0.25	0.00	0.00	0.00	1	Daily
	28-Feb	39168	24	17	0.00	0.00	2.42	0.00	0.00	0.00	0	Repair coolant leak
	Closing	39185					88.52				27.00	
	TOTALS		672	384.00	86.83	57.14	88.52	88.33	0.00	0.00	27.00	
	AVERAGE			13.71	73.68			MTTR	3.28			
								MTBS	14.22			



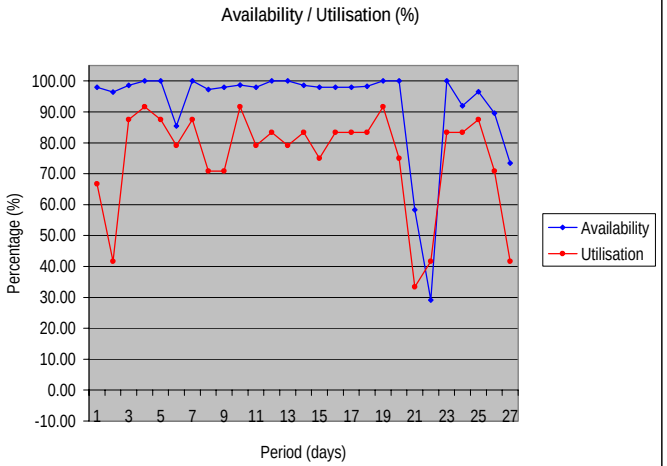
Breakdown percentage = Breakdown hours / Run hours = 23.052%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6293	01-Feb	38277	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	02-Feb	38293	24	10	96.38	41.67	0.87	0.00	0.00	0.00	2	Repair lights; daily
	03-Feb	38303	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	04-Feb	38324	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	05-Feb	38346	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Feb	38367	24	19	85.42	79.17	3.50	0.00	0.00	0.00	1	Top up hydraulic oil; replace strobe light
	07-Feb	38386	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	38407	24	17	97.21	70.83	0.67	0.00	0.00	0.00	2	Replace strobe light; daily
	09-Feb	38424	24	17	97.92	70.83	0.50	0.00	0.00	0.00	1	Daily
	10-Feb	38441	24	22	98.67	91.67	0.32	0.00	0.00	0.00	1	Daily
	11-Feb	38463	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	12-Feb	38482	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	13-Feb	38502	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Feb	38521	24	20	98.63	83.33	0.33	0.00	0.00	0.00	1	Daily
	15-Feb	38541	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	16-Feb	38559	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	17-Feb	38579	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	18-Feb	38599	24	20	98.25	83.33	0.42	0.00	0.00	0.00	1	Daily
	19-Feb	38619	24	22	100.00	91.67	0.00	0.00	0.00	0.00	1	Not applicable
	20-Feb	38641	24	18	100.00	75.00	0.00	2.00	0.00	0.00	2	Engine saver faulty
	21-Feb	38659	24	8	58.33	33.33	10.00	0.00	0.00	0.00	1	Water pump leaking
	22-Feb	38667	24	10	29.17	41.67	17.00	0.00	0.00	0.00	0	Replace water pump
	23-Feb	38677	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	38697	24	20	92.00	83.33	1.92	0.00	0.00	0.00	2	Blade don't trip; daily
	25-Feb	38717	24	21	96.54	87.50	0.83	0.00	0.00	0.00	1	Repair engine saver
	26-Feb	38738	24	17	89.58	70.83	2.50	0.00	0.00	0.00	1	Replace radiator hose
	27-Feb	38755	24	10	73.46	41.67	6.37	0.00	0.00	0.00	3	Daily; brakes binding; clean radiator
	28-Feb	38765	24	19	0.00	0.00	11.25	0.00	0.00	0.00	1	Brakes binding - change b+s valve
	Closing	38784					59.31				27.00	
	TOTALS		672	507.00	91.17	75.45	59.31	2.00	0.00	0.00	27.00	
	AVERAGE			18.11	90.88			MTTR	2.20			
								MTBS	18.78			

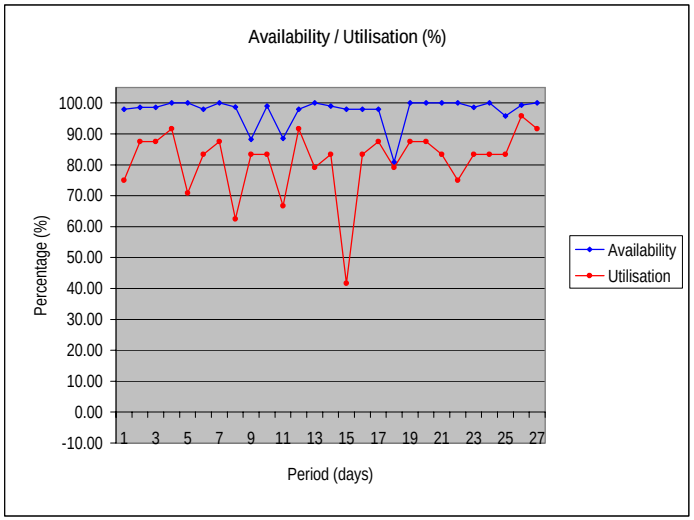
Breakdown percentage = Breakdown hours / Run hours = 11.698%



Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6294	01-Feb	32508	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	02-Feb	32526	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	03-Feb	32547	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	04-Feb	32568	24	22	100.00	91.67	0.00	1.25	0.00	0.00	1	Accident damaged hose
	05-Feb	32590	24	17	100.00	70.83	0.00	1.00	0.00	0.00	0	Accident damaged hose
	06-Feb	32607	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	07-Feb	32627	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	32648	24	15	98.67	62.50	0.32	0.00	0.00	0.00	1	Daily
	09-Feb	32663	24	20	88.21	83.33	2.83	0.00	0.00	0.00	1	Replace fan hose
	10-Feb	32683	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	11-Feb	32703	24	16	88.54	66.67	2.75	0.00	0.00	0.00	2	Repair fire extinguisher bracket; daily
	12-Feb	32719	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Repair A/C
	13-Feb	32741	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Feb	32760	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	15-Feb	32780	24	10	97.92	41.67	0.50	0.00	0.00	0.00	1	Daily
	16-Feb	32790	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	17-Feb	32810	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	18-Feb	32831	24	19	80.83	79.17	4.60	0.00	0.00	0.00	2	Coolant hose burst; daily
	19-Feb	32850	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	32871	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	32892	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	22-Feb	32912	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	32930	24	20	98.63	83.33	0.33	0.00	0.00	0.00	0	Not applicable
	24-Feb	32950	24	20	100.00	83.33	0.00	0.00	0.00	0.00	1	Daily
	25-Feb	32970	24	20	95.83	83.33	1.00	0.00	0.00	0.00	0	Not applicable
	26-Feb	32990	24	23	99.29	95.83	0.17	0.00	0.00	0.00	1	Daily
	27-Feb	33013	24	22	100.00	91.67	0.00	0.00	0.00	0.00	1	Daily
	28-Feb	33035	24	13	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	33048					16.16				20.00	
	TOTALS		672	540.00	97.60	80.36	16.16	2.25	0.00	0.00	20.00	
	AVERAGE			19.29	97.26			MTTR	0.81			
								MTBS	27.00			



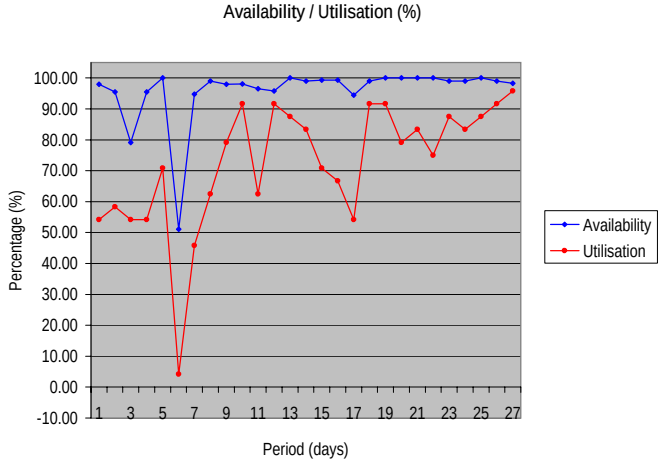
Breakdown percentage = Breakdown hours / Run hours = 2.993%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6295	01-Feb	26599	24	13	97.92	54.17	0.50	0.00	0.00	0.00	1	Daily
	02-Feb	26612	24	14	95.50	58.33	1.08	0.00	0.00	0.00	2	Daily
	03-Feb	26626	24	13	79.17	54.17	5.00	0.00	0.00	0.00	1	Replace alttenator belt; jump start machine
	04-Feb	26639	24	13	95.50	54.17	1.08	0.00	0.00	0.00	1	Daily
	05-Feb	26652	24	17	100.00	70.83	0.00	0.00	0.00	0.00	1	Not applicable
	06-Feb	26669	24	1	51.04	4.17	0.00	0.00	0.00	11.75	1	1,000 hour service
	07-Feb	26670	24	11	94.79	45.83	1.25	0.00	0.00	0.00	1	Top hydraulic oil
	08-Feb	26681	24	15	99.04	62.50	0.23	1.05	0.00	0.00	2	Machine don't start - main switch off; daily
	09-Feb	26696	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	10-Feb	26715	24	22	98.04	91.67	0.47	0.00	0.00	0.00	1	Daily
	11-Feb	26737	24	15	96.54	62.50	0.83	0.00	0.00	0.00	2	Daily
	12-Feb	26752	24	22	95.83	91.67	1.00	0.00	0.00	0.00	1	Repair A/C
	13-Feb	26774	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	14-Feb	26795	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	15-Feb	26815	24	17	99.29	70.83	0.17	0.00	0.00	0.00	0	Daily
	16-Feb	26832	24	16	99.29	66.67	0.17	0.00	0.00	0.00	1	No steering
	17-Feb	26848	24	13	94.46	54.17	1.33	0.00	0.00	0.00	1	No steering; A/C not working
	18-Feb	26861	24	22	99.04	91.67	0.23	0.00	0.00	0.00	1	Daily
	19-Feb	26883	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	26905	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	26924	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	22-Feb	26944	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	26962	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Adjust L/H track
	24-Feb	26983	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	25-Feb	27003	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Repair strobe light
	26-Feb	27024	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	27-Feb	27046	24	23	98.25	95.83	0.42	0.00	0.00	0.00	1	Not applicable
	28-Feb	27069	24	13	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	27082					15.26				23.00	
	TOTALS		672	483.00	95.98	71.88	15.26	1.05	0.00	11.75	23.00	
	AVERAGE			17.25	95.82			MTTR	0.66			
								MTBS	21.00			

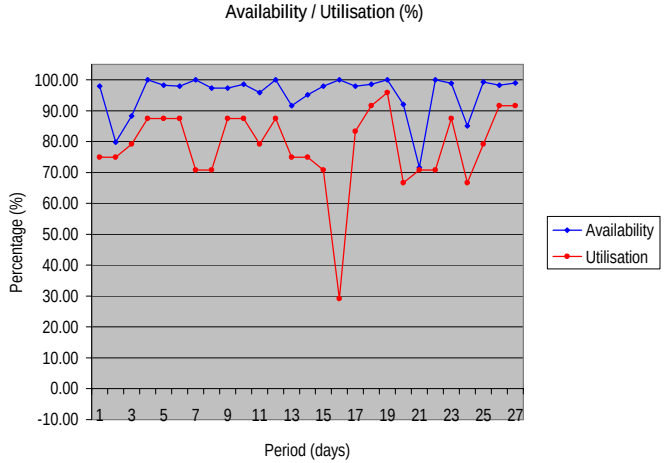
Breakdown percentage = Breakdown hours / Run hours = 5.592%



Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6296	01-Feb	24597	24	18	97.92	75.00	0.50	0.00	0.00	0.00	0	Daily
	02-Feb	24615	24	18	79.88	75.00	4.83	0.00	0.00	0.00	2	Repair oil leak
	03-Feb	24633	24	19	88.33	79.17	2.80	0.00	0.00	0.00	1	Repair T/M gauge wiring
	04-Feb	24652	24	21	100.00	87.50	0.00	0.83	0.00	0.00	1	Repair roller
	05-Feb	24673	24	21	98.25	87.50	0.42	0.00	0.00	0.00	1	Daily
	06-Feb	24694	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	07-Feb	24715	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	24732	24	17	97.29	70.83	0.65	0.00	0.00	0.00	1	Daily
	09-Feb	24749	24	21	97.29	87.50	0.65	0.00	0.00	0.00	1	Top up hydraulic oil
	10-Feb	24770	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	11-Feb	24791	24	19	95.83	79.17	1.00	0.00	0.00	0.00	2	Daily
	12-Feb	24810	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Feb	24831	24	18	91.67	75.00	2.00	0.00	0.00	0.00	1	Repair front lights
	14-Feb	24849	24	18	95.13	75.00	1.17	0.00	0.00	0.00	1	Daily
	15-Feb	24867	24	17	97.92	70.83	0.50	0.00	0.00	0.00	1	Daily
	16-Feb	24884	24	7	100.00	29.17	0.00	13.00	0.00	0.00	1	Remove broken bogie
	17-Feb	24891	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	18-Feb	24911	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	19-Feb	24933	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	24956	24	16	92.00	66.67	1.92	0.00	0.00	0.00	1	Repair hydraulic oil leak
	21-Feb	24972	24	17	71.67	70.83	0.00	0.00	0.00	6.80	1	1,000 hour service
	22-Feb	24989	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	25006	24	21	98.88	87.50	0.27	0.00	0.00	0.00	1	Repair stobe light
	24-Feb	25027	24	16	85.08	66.67	3.58	0.00	0.00	0.00	2	Daily; repair lights
	25-Feb	25043	24	19	99.29	79.17	0.17	0.00	0.00	0.00	0	Repair lights
	26-Feb	25062	24	22	98.25	91.67	0.42	0.00	0.00	0.00	1	Daily
	27-Feb	25084	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	28-Feb	25106	24	12	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	25118					22.79				24.00	
	TOTALS		672	521.00	95.60	77.53	22.79	13.83	0.00	6.80	24.00	
	AVERAGE			18.61	93.54			MTTR	0.95			
								MTBS	21.71			



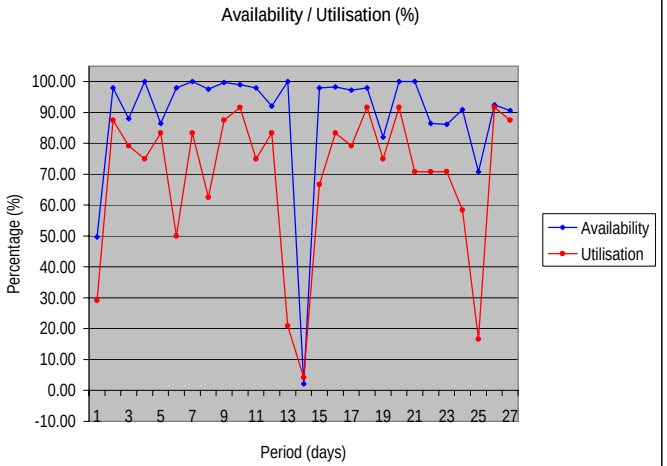
Breakdown percentage	=	Breakdown hours / Run hours	=	5.679%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6297	01-Feb	25928	24	7	49.67	29.17	12.08	0.00	0.00	0.00	0	1,000 Hour service; curring edges
	02-Feb	25935	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	03-Feb	25956	24	19	88.04	79.17	2.87	0.00	0.00	0.00	2	Daily; repair hydraulic oil leak
	04-Feb	25975	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	05-Feb	25993	24	20	86.46	83.33	3.25	0.00	0.00	0.00	1	Repair oil leak
	06-Feb	26013	24	12	97.92	50.00	0.50	0.00	0.00	0.00	1	Daily
	07-Feb	26025	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	26045	24	15	97.50	62.50	0.60	0.00	0.00	0.00	2	Top up hydraulic oil; daily
	09-Feb	26060	24	21	99.67	87.50	0.08	0.00	0.00	0.00	1	Reset A/C breaker
	10-Feb	26081	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	11-Feb	26103	24	18	97.92	75.00	0.50	0.00	0.00	0.00	0	Daily
	12-Feb	26121	24	20	92.00	83.33	1.92	0.00	0.00	0.00	1	Replace leaking pilot line
	13-Feb	26141	24	5	100.00	20.83	0.00	13.00	0.00	0.00	1	Change roller; replace radiator
	14-Feb	26146	24	1	2.08	4.17	23.50	0.00	0.00	0.00	0	Replace radiator
	15-Feb	26147	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	16-Feb	26163	24	20	98.25	83.33	0.42	0.00	0.00	0.00	1	Daily
	17-Feb	26183	24	19	97.21	79.17	0.67	0.00	0.00	0.00	1	Repair A/C
	18-Feb	26202	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	19-Feb	26224	24	18	81.96	75.00	4.33	0.00	0.00	0.00	1	Blade control lever center spring u.s.
	20-Feb	26242	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	26264	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	22-Feb	26281	24	17	86.46	70.83	3.25	0.00	0.00	0.00	1	Repair leaking lift cylinder tube
	23-Feb	26298	24	17	86.13	70.83	3.33	0.00	0.00	0.00	3	Repair oil leak on hydraulic control valve
	24-Feb	26315	24	14	90.96	58.33	2.17	0.00	0.00	0.00	2	Repair oil leak; daily
	25-Feb	26329	24	4	70.83	16.67	7.00	0.00	0.00	0.00	2	Fan hose burst; repair oil leak
	26-Feb	26333	24	22	92.50	91.67	1.80	0.00	0.00	0.00	0	Repair oil leak
	27-Feb	26355	24	21	90.63	87.50	2.25	0.00	0.00	0.00	1	Repair oil leak
	28-Feb	26376	24	17	0.00	0.00	2.43	0.00	0.00	0.00	1	Repair hydraulic control valve
	Closing	26393					74.70				26.00	
	TOTALS		672	465.00	88.88	69.20	74.70	13.00	0.00	0.00	26.00	
	AVERAGE			16.61	86.95			MTTR	2.87			
								MTBS	17.88			

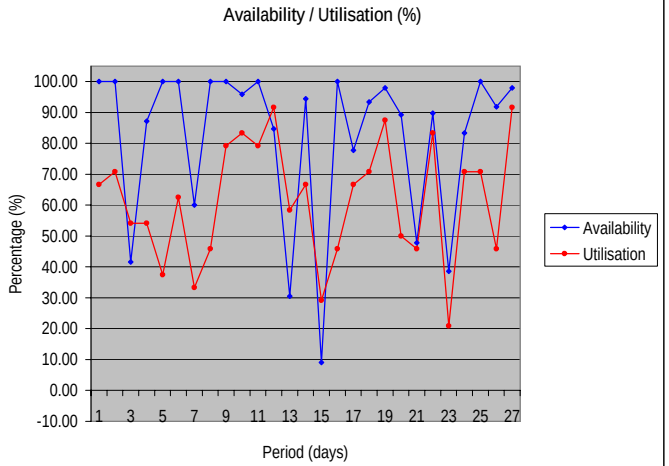
Breakdown percentage = Breakdown hours / Run hours = 16.065%



Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7974	01-Feb	37556	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Feb	37572	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	03-Feb	37589	24	13	41.58	54.17	14.02	0.00	0.00	0.00	0	Top up steering oil; change R/H lift cyliner; 250 hrs
	04-Feb	37602	24	13	87.17	54.17	3.08	0.00	0.00	0.00	3	Auto lube press low; install lub hose)
	05-Feb	37615	24	9	100.00	37.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Feb	37624	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	07-Feb	37639	24	8	60.08	33.33	9.58	0.00	0.00	0.00	1	R/H tilt cylinder leaking
	08-Feb	37647	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	09-Feb	37658	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Top up hydraulic and steering oil
	10-Feb	37677	24	20	95.83	83.33	1.00	0.00	0.00	0.00	1	Daily
	11-Feb	37697	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	12-Feb	37716	24	22	84.71	91.67	3.67	0.00	0.00	0.00	2	Repair case drain filter leak; daily
	13-Feb	37738	24	14	30.54	58.33	16.67	0.00	0.00	0.00	1	Replace L/H tilt cylinder
	14-Feb	37752	24	16	94.46	66.67	1.33	0.00	0.00	0.00	1	Slow hydraulic - adjust link
	15-Feb	37768	24	7	9.08	29.17	21.82	0.00	0.00	0.00	1	Replace steering pumps; 250 hour service
	16-Feb	37775	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	17-Feb	37786	24	16	77.79	66.67	5.33	0.00	0.00	0.00	2	Repair hydraulic oil leak; burst pilot hose
	18-Feb	37802	24	17	93.42	70.83	1.58	0.00	0.00	0.00	0	Burst pilot hose
	19-Feb	37819	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	20-Feb	37840	24	12	89.25	50.00	2.58	0.00	0.00	0.00	1	Daily; A/C
	21-Feb	37852	24	11	47.79	45.83	12.53	0.00	0.00	0.00	1	Repair hydraulic oil leak
	22-Feb	37863	24	20	89.79	83.33	2.45	0.00	0.00	0.00	1	Replace burst seal on hydraulic system
	23-Feb	37883	24	5	38.54	20.83	14.75	0.00	0.00	0.00	1	Change L/H hoist cylinder; daily
	24-Feb	37888	24	17	83.33	70.83	4.00	0.00	0.00	0.00	3	Change burst hydraulic seal
	25-Feb	37905	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	26-Feb	37922	24	11	91.79	45.83	1.97	0.00	0.00	0.00	1	Repair water leak
	27-Feb	37933	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	28-Feb	37955	24	13	0.00	0.00	0.50	0.00	0.00	0.00	1	Repair hydraulic oil leak
	Closing	37968					117.86				23.00	
	TOTALS		672	412.00	82.46	61.31	117.86	0.00	0.00	0.00	23.00	
	AVERAGE			14.71	82.46			MTTR	5.12			
								MTBS	17.91			

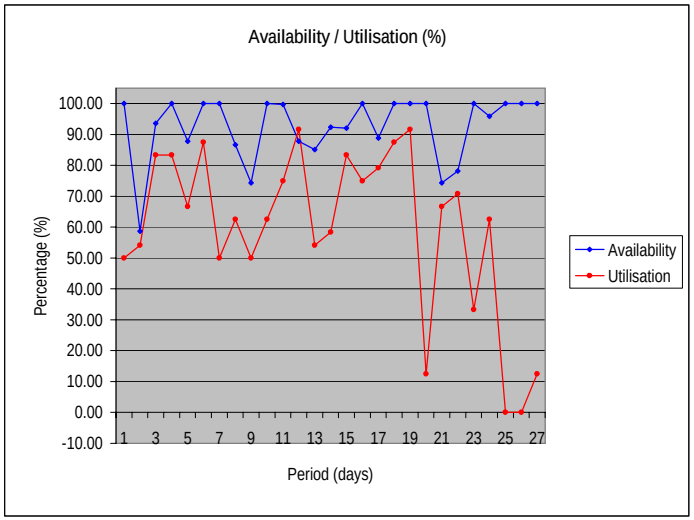


Breakdown percentage = Breakdown hours / Run hours = 28.607%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7351	01-Feb	39038	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	02-Feb	39050	24	13	58.67	54.17	9.92	0.00	0.00	0.00	1	Electrical system not working
	03-Feb	39063	24	20	93.63	83.33	1.53	0.00	0.00	0.00	2	Diff temperature high - clean diff housing
	04-Feb	39083	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	05-Feb	39103	24	16	87.83	66.67	2.92	0.00	0.00	0.00	2	Repair steps; top up hydraulic oil
	06-Feb	39119	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	07-Feb	39140	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	39152	24	15	86.67	62.50	3.20	3.47	0.00	0.00	2	Steering hose burst
	09-Feb	39167	24	12	74.29	50.00	6.17	0.00	0.00	0.00	1	Repair fuel tank
	10-Feb	39179	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	11-Feb	39194	24	18	99.67	75.00	0.08	0.00	0.00	0.00	1	Replace burst cooling hose
	12-Feb	39212	24	22	87.83	91.67	2.92	0.00	0.00	0.00	2	Replace burst cooling hose; repair starter solinoid
	13-Feb	39234	24	13	85.08	54.17	3.58	0.00	0.00	0.00	1	Slow hydraulic - test
	14-Feb	39247	24	14	92.38	58.33	1.83	0.00	0.00	0.00	2	Repair dash lights; repair v-belts
	15-Feb	39261	24	20	92.00	83.33	1.92	0.00	0.00	0.00	0	Replace V-belts; replace diff lube press valve
	16-Feb	39281	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Feb	39299	24	19	88.88	79.17	2.67	0.00	0.00	0.00	0	Repair air fitting on starter
	18-Feb	39318	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Feb	39339	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	39361	24	3	100.00	12.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	39364	24	16	74.29	66.67	6.17	0.00	0.00	0.00	2	Slow hydraulic; change hoist pump
	22-Feb	39380	24	17	78.13	70.83	5.25	0.00	0.00	0.00	1	Don't start
	23-Feb	39397	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	39405	24	15	95.83	62.50	1.00	0.00	0.00	0.00	1	Weld mirror bracket
	25-Feb	39420	24	0	100.00	0.00	0.00	21.00	0.00	0.00	1	Accident damage - radiator and fan
	26-Feb	39420	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - radiator and fan
	27-Feb	39420	24	3	100.00	12.50	0.00	19.67	0.00	0.00	0	Accident damage - radiator and fan
	28-Feb	39423	24	13	0.00	0.00	3.52	0.00	0.00	0.00	1	Change starter
	Closing	39436					52.68				20.00	
	TOTALS		672	398.00	92.16	59.23	52.68	68.14	0.00	0.00	20.00	
	AVERAGE			14.21	82.02			MTTR	2.63			
								MTBS	19.90			

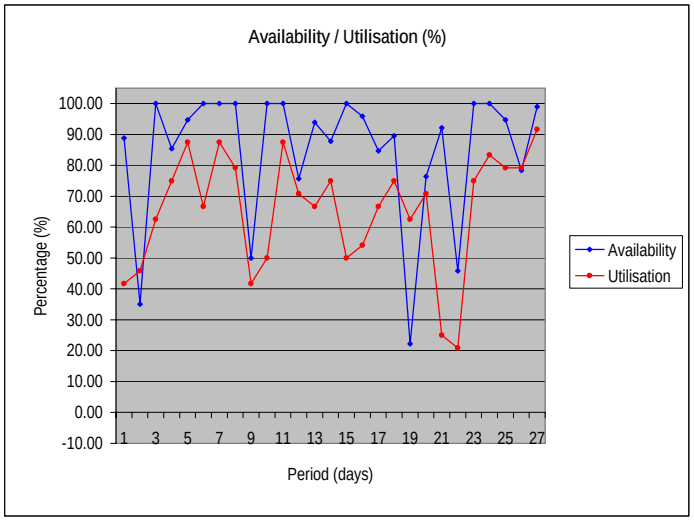


Breakdown percentage	=	Breakdown hours / Run hours	=	13.236%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7352	01-Feb	38271	24	10	88.88	41.67	2.67	0.00	0.00	0.00	2	Install exhaust ring; air jump start
	02-Feb	38281	24	11	35.08	45.83	15.58	0.00	0.00	0.00	1	Fan blade broken - replace fan
	03-Feb	38292	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Feb	38307	24	18	85.42	75.00	3.50	1.93	0.00	0.00	3	Air jump start; key control
	05-Feb	38325	24	21	94.79	87.50	1.25	0.00	0.00	0.00	1	Air jump start
	06-Feb	38346	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	07-Feb	38362	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	38383	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	09-Feb	38402	24	10	50.00	41.67	0.00	0.00	0.00	12.00	1	500 hour service
	10-Feb	38412	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	11-Feb	38424	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	12-Feb	38445	24	17	75.71	70.83	5.83	0.00	0.00	0.00	3	Repair mirror bracket
	13-Feb	38462	24	16	93.96	66.67	1.45	0.00	0.00	0.00	1	Air jump start
	14-Feb	38478	24	18	87.83	75.00	2.92	0.00	0.00	0.00	1	Low air - jump start
	15-Feb	38496	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	16-Feb	38508	24	13	95.83	54.17	1.00	0.00	0.00	0.00	1	Low air pressure
	17-Feb	38521	24	16	84.71	66.67	3.67	2.00	0.00	0.00	3	Low air pressure; jump start
	18-Feb	38537	24	18	89.58	75.00	2.50	0.00	0.00	0.00	1	Fast fill fitting missing
	19-Feb	38555	24	15	22.21	62.50	18.67	0.00	0.00	0.00	1	Replace batteries
	20-Feb	38570	24	17	76.38	70.83	5.67	0.00	0.00	0.00	3	Replace starter
	21-Feb	38587	24	6	92.17	25.00	1.88	0.00	0.00	0.00	2	Air jump start; repair strobe lights
	22-Feb	38593	24	5	45.83	20.83	13.00	0.00	0.00	0.00	1	Air jump start; repair strobe lights
	23-Feb	38598	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	38616	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	25-Feb	38636	24	19	94.79	79.17	1.25	0.00	0.00	0.00	1	Repair lights
	26-Feb	38655	24	19	78.42	79.17	5.18	0.00	0.00	0.00	0	Repair exhaust system
	27-Feb	38674	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Replace broken mirror bolt
	28-Feb	38696	24	13	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	38709					86.27				27.00	
	TOTALS		672	438.00	85.38	65.18	86.27	3.93	0.00	12.00	27.00	
	AVERAGE			15.64	84.79			MTTR	3.20			
								MTBS	16.22			



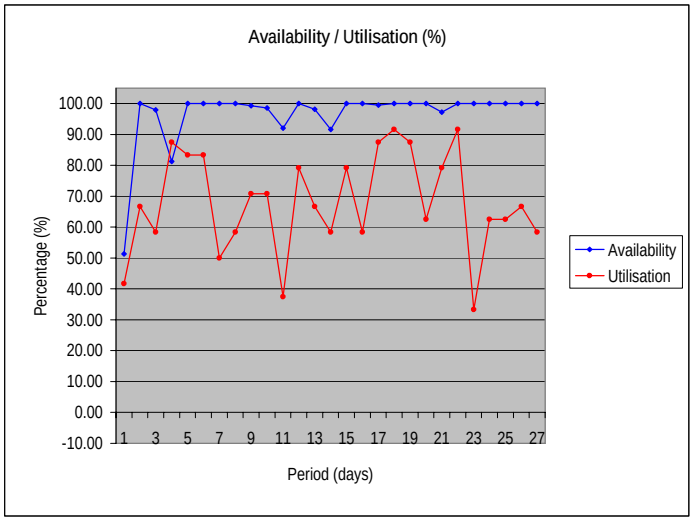
Breakdown percentage = Breakdown hours / Run hours = 22.436%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7353	01-Feb	4233	24	10	51.33	41.67	11.68	0.00	0.00	0.00	2	VIMS disply unit faulty; weld mirror bracket
	02-Feb	4243	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	03-Feb	4259	24	14	97.92	58.33	0.50	0.00	0.00	0.00	1	Top up engine oil
	04-Feb	4273	24	21	81.25	87.50	4.50	0.00	0.00	0.00	1	Mirror bracket broken
	05-Feb	4294	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	06-Feb	4314	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	07-Feb	4334	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	4346	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	09-Feb	4360	24	17	99.29	70.83	0.17	0.00	0.00	0.00	1	Tighten wiper blade
	10-Feb	4377	24	17	98.63	70.83	0.33	0.00	0.00	0.00	1	Tighten light unit
	11-Feb	4394	24	9	92.08	37.50	1.90	0.37	0.00	0.00	2	Repair safety belt wiring; weld hand rails
	12-Feb	4403	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	13-Feb	4422	24	16	98.13	66.67	0.45	0.00	0.00	0.00	1	Repair A/C
	14-Feb	4438	24	14	91.67	58.33	2.00	0.00	0.00	0.00	1	Repair seat belt and strobe lights
	15-Feb	4452	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	16-Feb	4471	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Feb	4485	24	21	99.50	87.50	0.12	0.00	0.00	0.00	1	Repair lights
	18-Feb	4506	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	19-Feb	4528	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	4549	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	4564	24	19	97.21	79.17	0.67	0.00	0.00	0.00	1	Weld hand rails
	22-Feb	4583	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	4605	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Tyre bay
	24-Feb	4613	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	25-Feb	4628	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	26-Feb	4643	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Feb	4659	24	14	100.00	58.33	0.00	0.00	0.00	0.00	1	Not applicable
	28-Feb	4673	24	8	0.00	0.00	0.75	0.00	0.00	0.00	0	Daily
	Closing	4681					23.07				13.00	
	TOTALS		672	448.00	96.57	66.67	23.07	0.37	0.00	0.00	13.00	
	AVERAGE			16.00	96.51			MTTR	1.77			
								MTBS	34.46			

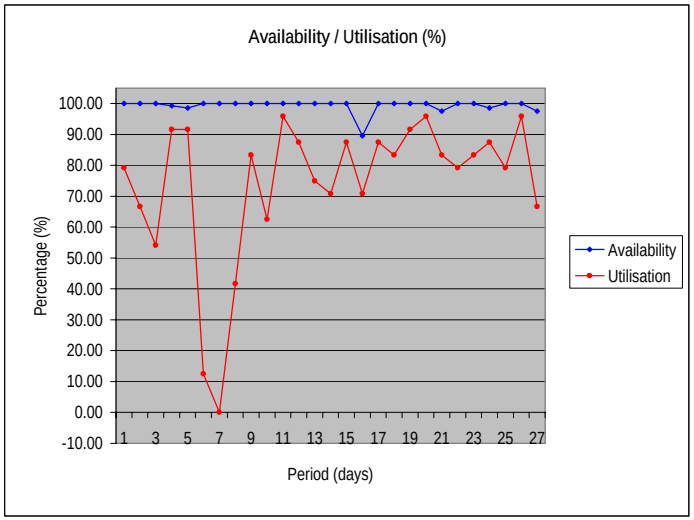
Breakdown percentage = Breakdown hours / Run hours = 5.150%



Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7354	01-Feb	4488	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	
	02-Feb	4507	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	
	03-Feb	4523	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	
	04-Feb	4536	24	22	99.29	91.67	0.17	0.00	0.00	0.00	1	Daily
	05-Feb	4558	24	22	98.63	91.67	0.33	0.00	0.00	0.00	0	Daily
	06-Feb	4580	24	3	100.00	12.50	0.00	9.50	0.00	0.00	1	Sump leaking - accidnet damage
	07-Feb	4583	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Sump leaking - accidnet damage
	08-Feb	4583	24	10	100.00	41.67	0.00	16.00	0.00	0.00	0	Sump leaking - accidnet damage
	09-Feb	4593	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	10-Feb	4613	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	11-Feb	4628	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	12-Feb	4651	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Feb	4672	24	18	100.00	75.00	0.00	0.50	0.00	0.00	1	Repair damaged steps
	14-Feb	4690	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	15-Feb	4707	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	16-Feb	4728	24	17	89.58	70.83	2.50	0.00	0.00	0.00	1	Weld broken mirror bracket
	17-Feb	4745	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	18-Feb	4766	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Feb	4786	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	4808	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	4831	24	20	97.58	83.33	0.58	0.00	0.00	0.00	1	Weld hand rails
	22-Feb	4851	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	4870	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	4890	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Tighten mirror
	25-Feb	4911	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	26-Feb	4930	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	27-Feb	4953	24	16	97.58	66.67	0.58	0.00	0.00	0.00	1	Weld hand rails
	28-Feb	4969	24	16	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	4985					4.49				7.00	
	TOTALS		672	497.00	99.33	73.96	4.49	50.00	0.00	0.00	7.00	
	AVERAGE			17.75	91.89			MTTR	0.64			
								MTBS	71.00			

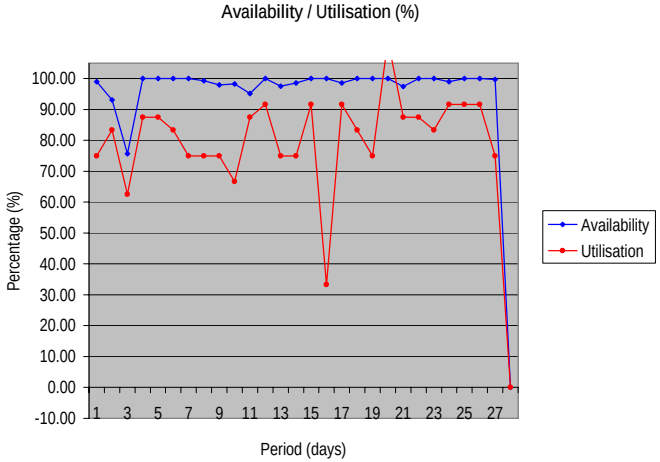


Breakdown percentage = Breakdown hours / Run hours = 0.903%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7355	01-Feb	3692	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Adjust lights
	02-Feb	3710	24	20	93.04	83.33	1.67	0.00	0.00	0.00	1	Repair strobe lights
	03-Feb	3730	24	15	75.71	62.50	0.00	0.00	0.00	5.83	1	1,000 hour service
	04-Feb	3745	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	05-Feb	3766	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Feb	3787	24	20	100.00	83.33	0.00	0.18	0.00	0.00	1	A/C not working - found nothing wrong
	07-Feb	3807	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	08-Feb	3825	24	18	99.29	75.00	0.17	0.00	0.00	0.00	1	Tighten bonnet bolts
	09-Feb	3843	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Tighten mirror
	10-Feb	3861	24	16	98.25	66.67	0.42	0.00	0.00	0.00	1	Tighten mirror bracket
	11-Feb	3877	24	21	95.13	87.50	1.17	0.00	0.00	0.00	0	Brake over stroke
	12-Feb	3898	24	22	100.00	91.67	0.00	0.25	0.00	0.00	1	Replace mirror - guard fell off
	13-Feb	3920	24	18	97.58	75.00	0.58	0.00	0.00	0.00	1	Daily
	14-Feb	3938	24	18	98.63	75.00	0.33	0.00	0.00	0.00	1	Tighten loose mirror
	15-Feb	3956	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	16-Feb	3978	24	8	100.00	33.33	0.00	14.42	0.00	0.00	1	Repair accident mirror bracket
	17-Feb	3986	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Repair grease lines
	18-Feb	4008	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Feb	4028	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	20-Feb	4046	24	27	100.00	112.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Feb	4073	24	21	97.42	87.50	0.62	0.00	0.00	0.00	2	Tighten wiper nut
	22-Feb	4094	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	23-Feb	4115	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	24-Feb	4135	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	25-Feb	4157	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Feb	4179	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Feb	4201	24	18	99.67	75.00	0.08	0.83	0.00	0.00	2	Brake over stroke; accident damage - radiator, fan
	28-Feb	4219	24	0	0.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - radiator and fan
	Closing	4219					6.37				17.00	
	TOTALS		672	527.00	98.18	78.42	6.37	39.68	0.00	5.83	17.00	
	AVERAGE			18.82	92.28			MTTR	0.37			
								MTBS	31.00			

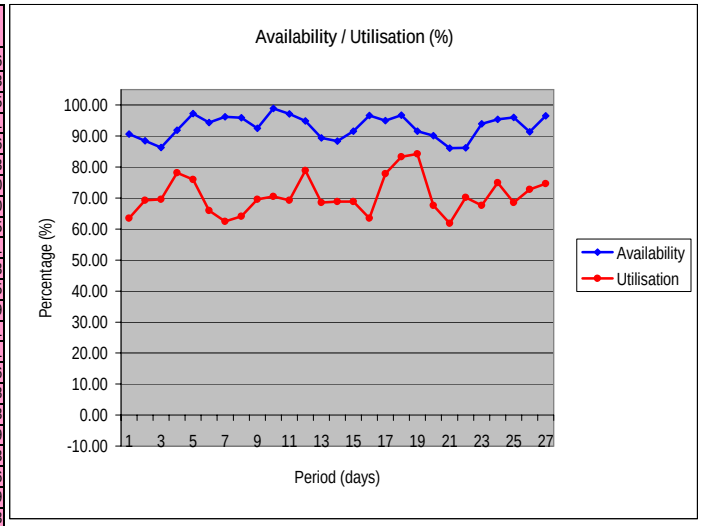


Breakdown percentage = Breakdown hours / Run hours = 2.315%

Middelburg Mine Services: Klipfontein Section

Period: February 2006

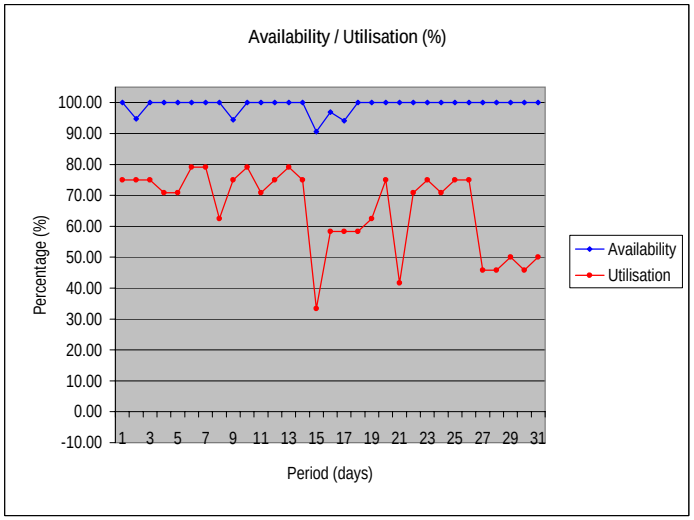
Machine	Date	Availability %	Utilization %
TOTAL	01-Feb	90.67	63.46
	02-Feb	88.45	69.23
	03-Feb	86.37	69.55
	04-Feb	91.88	78.21
	05-Feb	97.26	75.96
	06-Feb	94.39	66.03
	07-Feb	96.21	62.50
	08-Feb	95.87	64.10
	09-Feb	92.50	69.55
	10-Feb	98.92	70.51
	11-Feb	97.20	69.23
	12-Feb	94.92	78.85
	13-Feb	89.38	68.59
	14-Feb	88.42	68.91
	15-Feb	91.62	68.91
	16-Feb	96.67	63.46
	17-Feb	94.99	77.88
	18-Feb	96.70	83.33
	19-Feb	91.59	84.29
	20-Feb	90.12	67.63
	21-Feb	86.14	61.86
	22-Feb	86.21	70.19
	23-Feb	93.93	67.63
	24-Feb	95.35	75.00
	25-Feb	95.97	68.59
	26-Feb	91.41	72.76
	27-Feb	96.49	74.68
	28-Feb	0.00	0.00
Average	%	92.95	70.77



Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6261	01-Mar	43926	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	02-Mar	43944	24	18	94.79	75.00	1.25	0.00	0.00	0.00	1	Tripped on engine saver - coolant temperature high
	03-Mar	43962	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	43980	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	05-Mar	43997	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	44014	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	44033	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	44052	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Mar	44067	24	18	94.46	75.00	1.33	0.00	0.00	0.00	1	Trip on crank case press
	10-Mar	44085	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	11-Mar	44104	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	12-Mar	44121	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	13-Mar	44139	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Mar	44158	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	15-Mar	44176	24	8	90.63	33.33	2.25	0.00	0.00	0.00	1	Machine won't start
	16-Mar	44184	24	14	96.88	58.33	0.75	0.00	0.00	0.00	1	Low coolant
	17-Mar	44198	24	14	94.08	58.33	1.42	0.00	0.00	0.00	1	Won't start - battery
	18-Mar	44212	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	19-Mar	44226	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Mar	44241	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	21-Mar	44259	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Mar	44269	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	23-Mar	44286	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	24-Mar	44304	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	25-Mar	44321	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	26-Mar	44339	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	27-Mar	44357	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	28-Mar	44368	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	29-Mar	44379	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	30-Mar	44391	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	31-Mar	44402	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	44414					7.00				5.00	
	TOTALS		744	488.00	99.06	65.59	7.00	0.00	0.00	0.00	5.00	
	AVERAGE			15.74	99.06			MTTR	1.40			
								MTBS	97.60			

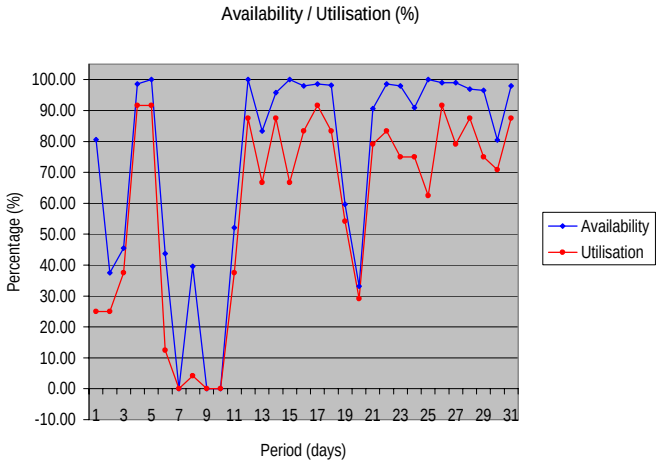


Breakdown percentage	=	Breakdown hours / Run hours	=	1.434%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6292	01-Mar	39185	24	6	80.54	25.00	4.67	0.00	0.00	0.00	2	Repair hydraulic oil leak
	02-Mar	39191	24	6	37.50	25.00	15.00	0.00	0.00	0.00	1	Replace leaking cyllinder head gasket
	03-Mar	39197	24	9	45.50	37.50	13.08	0.00	0.00	0.00	0	Replace leaking cyllinder head gasket
	04-Mar	39206	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	05-Mar	39228	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	39250	24	3	43.75	12.50	13.50	0.00	0.00	0.00	1	Radiator leaking
	07-Mar	39253	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Radiator leaking
	08-Mar	39253	24	1	39.58	4.17	14.50	0.00	0.00	0.00	1	Radiator leaking
	09-Mar	39254	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Remove engine
	10-Mar	39254	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Remove engine
	11-Mar	39254	24	9	52.08	37.50	11.50	0.00	0.00	0.00	0	Remove engine
	12-Mar	39263	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Mar	39284	24	16	83.33	66.67	4.00	0.00	0.00	0.00	1	Replace burst hydraulic hose
	14-Mar	39300	24	21	95.83	87.50	1.00	0.00	0.00	0.00	1	T/M over heat - over full
	15-Mar	39321	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	16-Mar	39337	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	17-Mar	39357	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	18-Mar	39379	24	20	98.13	83.33	0.45	0.00	0.00	0.00	2	Repair lights
	19-Mar	39399	24	13	59.71	54.17	9.67	0.00	0.00	0.00	2	Daily
	20-Mar	39412	24	7	33.13	29.17	16.05	0.00	0.00	0.00	0	Equaliser bar broken
	21-Mar	39419	24	19	90.63	79.17	2.25	0.00	0.00	0.00	2	Daily
	22-Mar	39438	24	20	98.63	83.33	0.33	0.00	0.00	0.00	1	Daily
	23-Mar	39458	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	24-Mar	39476	24	18	90.96	75.00	2.17	6.00	0.00	0.00	2	Top up coolant
	25-Mar	39494	24	15	100.00	62.50	0.00	6.00	0.00	0.00	0	Caught in mud
	26-Mar	39509	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	27-Mar	39531	24	19	98.96	79.17	0.25	0.00	0.00	0.00	1	Daily
	28-Mar	39550	24	21	96.88	87.50	0.75	0.00	0.00	0.00	1	Daily
	29-Mar	39571	24	18	96.54	75.00	0.83	0.00	0.00	0.00	1	Heater not working
	30-Mar	39589	24	17	80.50	70.83	4.68	0.00	0.00	0.00	2	Oil leak on transmission
	31-Mar	39606	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	Closing	39627					189.09				27.00	
	TOTALS		744	442.00	74.58	59.41	189.09	12.00	0.00	0.00	27.00	
	AVERAGE			14.26	72.97			MTTR	7.00			
								MTBS	16.37			

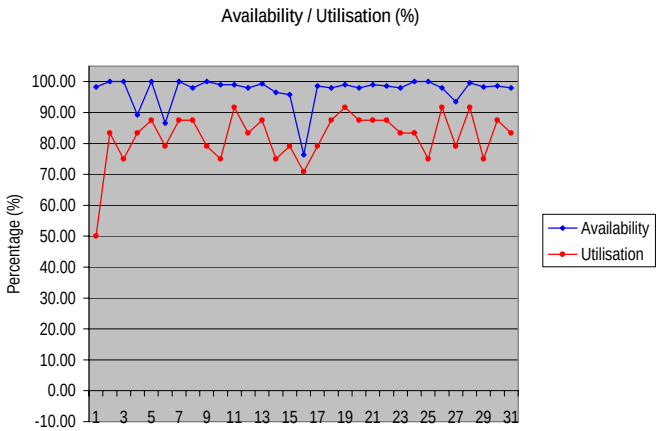


Breakdown percentage = Breakdown hours / Run hours = 42.781%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6293	01-Mar	38784	24	12	98.25	50.00	0.42	0.00	0.00	0.00	1	Daily
	02-Mar	38796	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	38816	24	18	100.00	75.00	0.00	2.17	0.00	0.00	1	Replace cutting edge
	04-Mar	38834	24	20	89.25	83.33	2.58	0.00	0.00	0.00	1	Top up coolant
	05-Mar	38854	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	38875	24	19	86.54	79.17	3.23	0.00	0.00	0.00	2	Remove and install heater core
	07-Mar	38894	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	38915	24	21	97.92	87.50	0.50	0.00	0.00	0.00	2	Daily
	09-Mar	38936	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	10-Mar	38955	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Repair wires and replace head light
	11-Mar	38973	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	12-Mar	38995	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Tripped on engine overspeed
	13-Mar	39015	24	21	99.29	87.50	0.17	0.00	0.00	0.00	1	Repair hydraulic control lever
	14-Mar	39036	24	18	96.54	75.00	0.83	0.00	0.00	0.00	1	Replace A/C compressor
	15-Mar	39054	24	19	95.83	79.17	1.00	0.00	0.00	0.00	1	Repair ignition
	16-Mar	39073	24	17	76.38	70.83	1.67	0.00	0.00	4.00	3	500 hour service
	17-Mar	39090	24	19	98.63	79.17	0.33	0.00	0.00	0.00	1	Daily
	18-Mar	39109	24	21	98.00	87.50	0.48	0.00	0.00	0.00	2	Repair lights
	19-Mar	39130	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	20-Mar	39152	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	21-Mar	39173	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	22-Mar	39194	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	23-Mar	39215	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	24-Mar	39235	24	20	100.00	83.33	0.00	6.00	0.00	0.00	1	Caught in mud
	25-Mar	39255	24	18	100.00	75.00	0.00	3.00	0.00	0.00	0	Caught in mud
	26-Mar	39273	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	27-Mar	39295	24	19	93.54	79.17	1.55	0.00	0.00	0.00	2	Secure masterlink
	28-Mar	39314	24	22	99.63	91.67	0.09	0.00	0.00	0.00	1	Daily
	29-Mar	39336	24	18	98.25	75.00	0.42	0.50	0.00	0.00	2	Daily
	30-Mar	39354	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	31-Mar	39375	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	Closing	39395					17.43				33.00	
	TOTALS		744	611.00	97.12	82.12	17.43	11.67	0.00	4.00	33.00	
	AVERAGE			19.71	95.55			MTTR	0.53			
								MTBS	18.52			

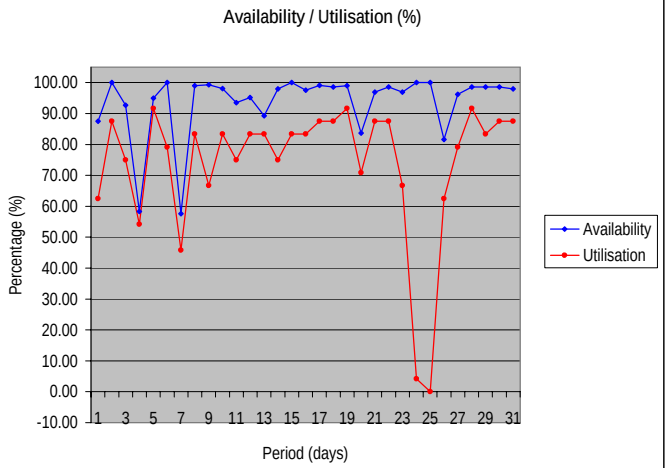


Breakdown percentage	=	Breakdown hours / Run hours	=	3.507%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6294	01-Mar	33048	24	15	87.50	62.50	3.00	0.00	0.00	0.00	1	Repair T/M oil leak
	02-Mar	33063	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	33084	24	18	92.71	75.00	1.75	0.00	0.00	0.00	1	Repair leak on heater core
	04-Mar	33102	24	13	58.33	54.17	10.00	0.00	0.00	0.00	2	Blade control lever loose
	05-Mar	33115	24	22	94.92	91.67	1.22	0.00	0.00	0.00	2	Side track lights faulty; repair L/H side track wire
	06-Mar	33137	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	33156	24	11	57.63	45.83	10.17	1.50	0.00	0.00	2	Heater core leaking; replace cutting edge
	08-Mar	33167	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	09-Mar	33187	24	16	99.29	66.67	0.17	0.00	0.00	0.00	1	Top up transmission oil
	10-Mar	33203	24	20	98.04	83.33	0.47	0.00	0.00	0.00	2	A/C not working; replace 2x head lights
	11-Mar	33223	24	18	93.54	75.00	1.55	0.00	0.00	0.00	2	Daily; T/M oil level low
	12-Mar	33241	24	20	95.13	83.33	1.17	0.00	0.00	0.00	1	Top up T/M oil and repair lights
	13-Mar	33261	24	20	89.25	83.33	0.00	0.00	0.00	2.58	1	500 hour service
	14-Mar	33281	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	15-Mar	33299	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	16-Mar	33319	24	20	97.58	83.33	0.58	0.00	0.00	0.00	1	Daily
	17-Mar	33339	24	21	99.08	87.50	0.22	0.00	0.00	0.00	1	Daily
	18-Mar	33360	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	19-Mar	33381	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	20-Mar	33403	24	17	83.67	70.83	3.92	0.00	0.00	0.00	1	Replace hydraulic hose on pilot line
	21-Mar	33420	24	21	96.88	87.50	0.75	0.00	0.00	0.00	1	Daily, install L/H track pin
	22-Mar	33441	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	23-Mar	33462	24	16	96.88	66.67	0.75	0.00	0.00	0.00	1	Weld stopper on L/H side frame pin
	24-Mar	33478	24	1	100.00	4.17	0.00	20.00	0.00	0.00	1	Machine caught in mud
	25-Mar	33479	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Machine caught in mud
	26-Mar	33479	24	15	81.58	62.50	4.42	0.00	0.00	0.00	2	Not applicable; replace hydraulic hose
	27-Mar	33494	24	19	96.17	79.17	0.92	0.00	0.00	0.00	1	Repair A/C
	28-Mar	33513	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	29-Mar	33535	24	20	98.63	83.33	0.33	0.00	0.00	0.00	1	Daily
	30-Mar	33555	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	31-Mar	33576	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	Closing	33597					44.21				33.00	
	TOTALS		744	549.00	93.71	73.79	44.21	45.50	0.00	2.58	33.00	
	AVERAGE			17.71	87.60			MTTR	1.34			
								MTBS	16.64			

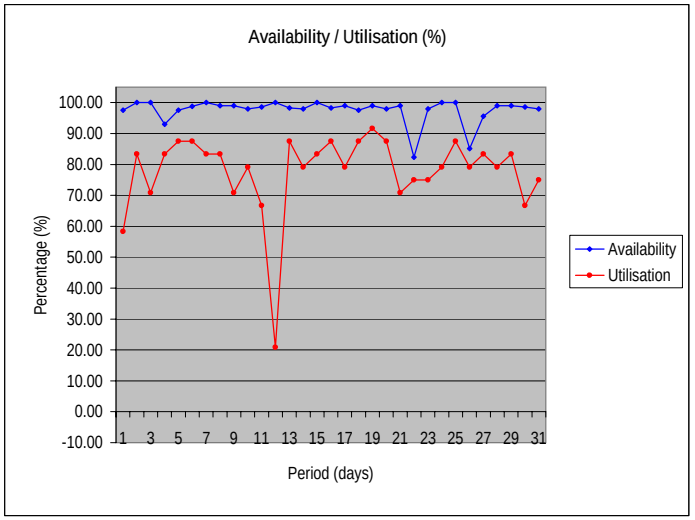


Breakdown percentage	=	Breakdown hours / Run hours	=	8.523%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6295	01-Mar	27082	24	14	97.58	58.33	0.58	0.00	0.00	0.00	1	Daily
	02-Mar	27096	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	27116	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	27133	24	20	93.04	83.33	1.67	0.00	0.00	0.00	2	Water level low - top up; daily
	05-Mar	27153	24	21	97.58	87.50	0.58	0.00	0.00	0.00	1	Top up water. Heater core leaking.
	06-Mar	27174	24	21	98.83	87.50	0.28	0.00	0.00	0.00	1	Remove and install heater core
	07-Mar	27195	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	27215	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	09-Mar	27235	24	17	98.96	70.83	0.25	0.00	0.00	0.00	1	Front lights trip. Short circuit.
	10-Mar	27252	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Replace 2x head lights
	11-Mar	27271	24	16	98.63	66.67	0.33	4.33	0.00	0.00	2	Daily; L/H track broken
	12-Mar	27287	24	5	100.00	20.83	0.00	17.00	0.00	0.00	0	L/H track broken
	13-Mar	27292	24	21	98.25	87.50	0.42	0.00	0.00	0.00	1	Daily
	14-Mar	27313	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	15-Mar	27332	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	16-Mar	27352	24	21	98.25	87.50	0.42	0.00	0.00	0.00	1	Daily
	17-Mar	27373	24	19	99.04	79.17	0.23	0.00	0.00	0.00	1	Daily
	18-Mar	27392	24	21	97.58	87.50	0.58	0.00	0.00	0.00	2	Repair lights; daily
	19-Mar	27413	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	20-Mar	27435	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	21-Mar	27456	24	17	98.96	70.83	0.25	0.00	0.00	0.00	1	Daily
	22-Mar	27473	24	18	82.29	75.00	4.25	0.00	0.00	0.00	1	Replace hydraulic hose
	23-Mar	27491	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	24-Mar	27509	24	19	100.00	79.17	0.00	4.50	0.00	0.00	1	Caught in mud
	25-Mar	27528	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	26-Mar	27549	24	19	85.08	79.17	3.58	0.75	0.00	0.00	2	Lube manifold bolts broken - accident damage
	27-Mar	27568	24	20	95.54	83.33	1.07	0.00	0.00	0.00	2	Top up water; daily
	28-Mar	27588	24	19	98.96	79.17	0.25	0.00	0.00	0.00	1	Daily
	29-Mar	27607	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	30-Mar	27627	24	16	98.63	66.67	0.33	0.00	0.00	0.00	1	Daily
	31-Mar	27643	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	Closing	27661					18.32				30.00	
	TOTALS		744	579.00	97.54	77.82	18.32	26.58	0.00	0.00	30.00	
	AVERAGE			18.68	93.97			MTTR	0.61			
								MTBS	19.30			

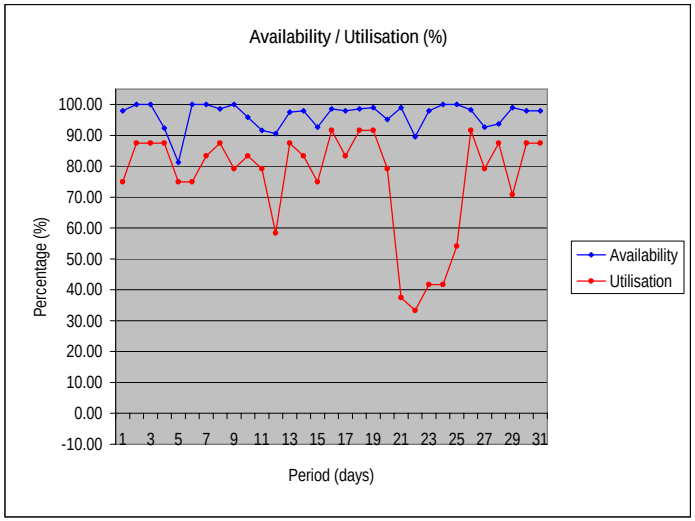


Breakdown percentage	=	Breakdown hours / Run hours	=	3.164%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6296	01-Mar	25118	24	18	97.92	75.00	0.50	0.00	0.00	0.00	0	Daily
	02-Mar	25136	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	25157	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	25178	24	21	92.38	87.50	1.83	0.00	0.00	0.00	1	Machine not engaging gears; daily
	05-Mar	25199	24	18	81.25	75.00	4.50	0.00	0.00	0.00	1	Replace hose on ripper control supply
	06-Mar	25217	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	25235	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	25255	24	21	98.63	87.50	0.33	0.00	0.00	0.00	1	Daily
	09-Mar	25276	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	10-Mar	25295	24	20	95.83	83.33	1.00	0.00	0.00	0.00	1	Top up hydraulic and transmission oil
	11-Mar	25315	24	19	91.67	79.17	2.00	0.00	0.00	0.00	1	Top up hydraulic and transmission oil; daily
	12-Mar	25334	24	14	90.63	58.33	2.25	0.00	0.00	0.00	1	Top hydraulic oil level
	13-Mar	25348	24	21	97.58	87.50	0.58	0.00	0.00	0.00	1	Daily
	14-Mar	25369	24	20	97.92	83.33	0.50	0.00	0.00	0.00	0	Daily
	15-Mar	25389	24	18	92.71	75.00	1.75	0.00	0.00	0.00	1	Daily
	16-Mar	25407	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Top up T/M oil
	17-Mar	25429	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	18-Mar	25449	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	19-Mar	25471	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	20-Mar	25493	24	19	95.13	79.17	1.17	0.00	0.00	0.00	1	Top up hydraulic oil
	21-Mar	25512	24	9	98.96	37.50	0.25	5.75	0.00	0.00	2	Daily; R/H track broken
	22-Mar	25521	24	8	89.58	33.33	0.00	13.00	0.00	2.50	0	R/H track broken; 500 hour service
	23-Mar	25529	24	10	97.92	41.67	0.50	0.00	0.00	0.00	1	Daily
	24-Mar	25539	24	10	100.00	41.67	0.00	4.33	0.00	0.00	1	Replace track
	25-Mar	25549	24	13	100.00	54.17	0.00	10.33	0.00	0.00	0	Replace track
	26-Mar	25562	24	22	98.25	91.67	0.42	0.00	0.00	0.00	1	Daily
	27-Mar	25584	24	19	92.71	79.17	1.75	0.00	0.00	0.00	1	Daily; top up hyrdraulic oil
	28-Mar	25603	24	21	93.75	87.50	1.50	0.00	0.00	0.00	2	Daily; replace battery and adjust tracks
	29-Mar	25624	24	17	98.96	70.83	0.25	2.58	0.00	0.00	2	Daily; replace roller on L/H frame
	30-Mar	25641	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	31-Mar	25662	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	Closing	25683					23.49				25.00	
	TOTALS		744	565.00	96.51	75.94	23.49	35.99	0.00	2.50	25.00	
	AVERAGE			18.23	91.67			MTTR	0.94			
								MTBS	22.60			

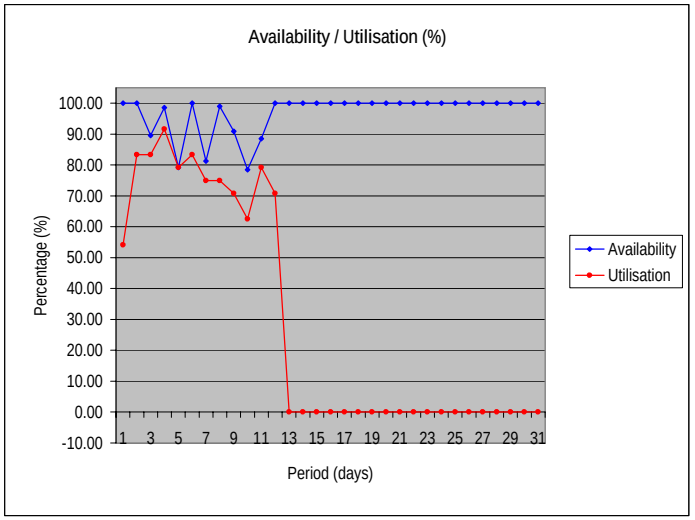


Breakdown percentage	=	Breakdown hours / Run hours	=	4.600%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6297	01-Mar	26393	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	02-Mar	26406	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	26426	24	20	89.58	83.33	0.00	0.00	0.00	2.50	1	500 hour service
	04-Mar	26446	24	22	98.63	91.67	0.33	0.00	0.00	0.00	1	Daily
	05-Mar	26468	24	19	79.17	79.17	5.00	0.00	0.00	0.00	1	Remove broken bolts on radiator relief valve
	06-Mar	26487	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Daily
	07-Mar	26507	24	18	81.25	75.00	4.50	0.00	0.00	0.00	1	Jump start
	08-Mar	26525	24	18	98.96	75.00	0.25	0.00	0.00	0.00	0	Blade control not working
	09-Mar	26543	24	17	90.96	70.83	2.17	0.00	0.00	0.00	1	Replace burnt fuses
	10-Mar	26560	24	15	78.46	62.50	5.17	0.00	0.00	0.00	2	Not applicable
	11-Mar	26575	24	19	88.54	79.17	2.75	0.00	0.00	0.00	1	Undercarraige repair
	12-Mar	26594	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Undercarraige repair
	13-Mar	26611	24	0	100.00	0.00	0.00	18.00	0.00	0.00	1	Undercarraige repair
	14-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	15-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	16-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	17-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	18-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	19-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	20-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	21-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	22-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	23-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	24-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	25-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	26-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	27-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	28-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	29-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	30-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	31-Mar	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repair
	Closing	26611					20.17				9.00	
	TOTALS		744	218.00	96.95	29.30	20.17	450.00	0.00	2.50	9.00	
	AVERAGE			7.03	36.47			MTTR	2.24			
								MTBS	24.22			



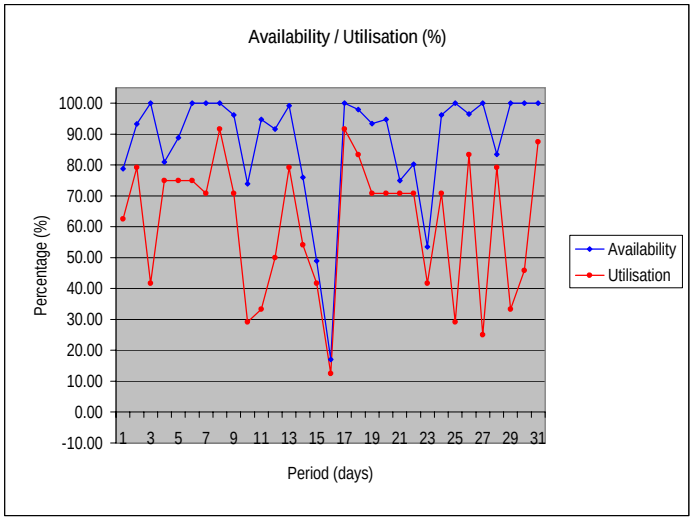
Breakdown percentage	=	Breakdown hours / Run hours	=	10.399%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7974	01-Mar	37968	24	15	78.83	62.50	0.00	0.00	0.00	5.08	1	250 hour service; electrical (SOS on machine)
	02-Mar	37983	24	19	93.25	79.17	1.62	0.75	0.00	0.00	0	No gears - steering lock on; repair harness
	03-Mar	38002	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	38012	24	18	80.92	75.00	4.58	0.67	0.00	0.00	3	Test for slow hydraulic - no fault found
	05-Mar	38030	24	18	88.88	75.00	2.67	0.00	0.00	0.00	1	Repair grease leak. Change fill up hose.
	06-Mar	38048	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	38066	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	38083	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	09-Mar	38105	24	17	96.17	70.83	0.92	0.00	0.00	0.00	2	Top up water; lube pressure low; change hose
	10-Mar	38122	24	7	73.88	29.17	6.27	0.00	0.00	0.00	2	Repair burnt wires; bucket not raising
	11-Mar	38129	24	8	94.79	33.33	1.25	0.00	0.00	0.00	1	Not applicable; slow hydraulics
	12-Mar	38137	24	12	91.67	50.00	2.00	0.00	0.00	0.00	1	Not engaging gears
	13-Mar	38149	24	19	99.17	79.17	0.20	0.00	0.00	0.00	0	Adjust seat
	14-Mar	38168	24	13	76.04	54.17	5.75	0.00	0.00	0.00	2	Daily
	15-Mar	38181	24	10	48.96	41.67	12.25	0.00	0.00	0.00	2	Slow hydraulics - replace hydraulic pump
	16-Mar	38191	24	3	17.00	12.50	19.92	0.00	0.00	0.00	0	Oil leak on front pumpdrive - change 3x hydraulic
	17-Mar	38194	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	18-Mar	38216	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	19-Mar	38236	24	17	93.42	70.83	1.58	0.00	0.00	0.00	1	Replace grease hose
	20-Mar	38253	24	17	94.79	70.83	1.25	0.00	0.00	0.00	1	Daily
	21-Mar	38270	24	17	75.00	70.83	6.00	0.00	0.00	0.00	1	Hydraulic hose damaged
	22-Mar	38287	24	17	80.21	70.83	4.75	0.00	0.00	0.00	1	Replace hydraulic hose
	23-Mar	38304	24	10	53.46	41.67	11.17	0.00	0.00	0.00	1	500 hour service - L/H tilt cylinder, replace seals
	24-Mar	38314	24	17	96.17	70.83	0.92	0.00	0.00	0.00	1	Repair oil leaks
	25-Mar	38331	24	7	100.00	29.17	0.00	2.92	0.00	0.00	1	Tyres
	26-Mar	38338	24	20	96.54	83.33	0.83	0.00	0.00	0.00	1	Daily
	27-Mar	38358	24	6	100.00	25.00	0.00	0.00	0.00	0.00	0	Not applicable
	28-Mar	38364	24	19	83.42	79.17	3.98	0.00	0.00	0.00	2	Repair water leak on heater hose
	29-Mar	38383	24	8	100.00	33.33	0.00	14.58	0.00	0.00	1	Tyres
	30-Mar	38391	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	31-Mar	38402	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	38423					88.41				27.00	
	TOTALS		744	455.00	87.43	61.16	88.41	18.92	0.00	5.08	27.00	
	AVERAGE			14.68	84.89			MTTR	3.27			
								MTBS	16.85			

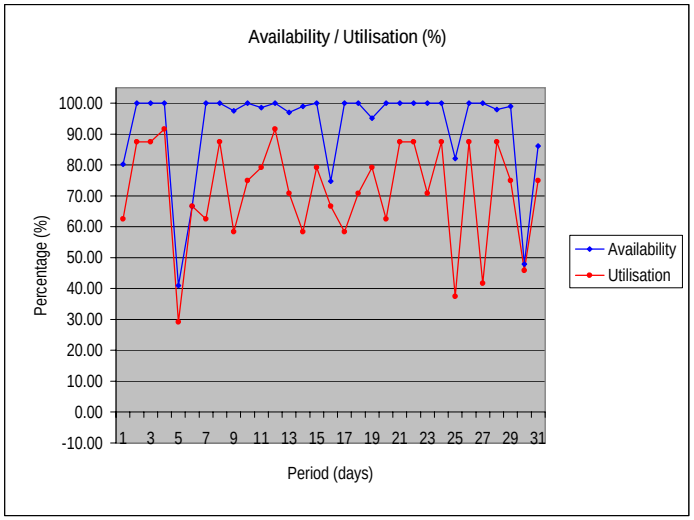
Breakdown percentage	=	Breakdown hours / Run hours	=	20.547%



Middelburg Mine Services: Klipfontein Section 24 28.75

Period: March 2006 19.25 24 0.8020833 100 80.208333

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7351	01-Mar	39436	24	15	80.21	62.50	4.75	0.00	0.00	0.00	1	Replace leaking water pump
	02-Mar	39451	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	39472	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	39493	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	05-Mar	39515	24	7	40.96	29.17	14.17	0.00	0.00	0.00	1	Hard steering. Fill up oil. Change accumulator kit.
	06-Mar	39522	24	16	66.67	66.67	8.00	0.00	0.00	0.00	1	Change right rear turbo
	07-Mar	39538	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	39553	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Mar	39574	24	14	97.58	58.33	0.58	0.00	0.00	0.00	2	Change front light globe; engine oil level low
	10-Mar	39588	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	11-Mar	39606	24	19	98.63	79.17	0.33	0.00	0.00	0.00	1	Water level low
	12-Mar	39625	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	13-Mar	39647	24	17	97.00	70.83	0.72	0.00	0.00	0.00	1	Repair lights
	14-Mar	39664	24	14	98.96	58.33	0.25	0.00	0.00	0.00	1	Repair front lights
	15-Mar	39678	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	16-Mar	39697	24	16	74.71	66.67	6.07	0.00	0.00	0.00	1	Change leaking brake cooling hoses
	17-Mar	39713	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	18-Mar	39727	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	19-Mar	39744	24	19	95.13	79.17	1.17	0.50	0.00	0.00	3	Daily; broken light wires; broken mirror
	20-Mar	39763	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	21-Mar	39778	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Mar	39799	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	23-Mar	39820	24	17	100.00	70.83	0.00	5.00	0.00	0.00	1	Replace R/H mirror
	24-Mar	39837	24	21	100.00	87.50	0.00	1.50	0.00	0.00	1	Key control
	25-Mar	39858	24	9	82.08	37.50	4.30	9.42	0.00	0.00	4	Stuck in mud; tyres; repair seat belt wires
	26-Mar	39867	24	21	100.00	87.50	0.00	0.83	0.00	0.00	1	Replace L/H mirror
	27-Mar	39888	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Mar	39898	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Seat not adjusting
	29-Mar	39919	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Connect heater cable
	30-Mar	39937	24	11	47.92	45.83	0.00	0.00	0.00	12.50	1	1,000 hour service
	31-Mar	39948	24	18	86.13	75.00	3.33	0.00	0.00	0.00	1	Indicator lights not working
	Closing	39966					44.42				23.00	
	TOTALS		744	530.00	92.35	71.24	44.42	17.25	0.00	12.50	23.00	
	AVERAGE			17.10	90.03			MTTR	1.93			
								MTBS	23.04			

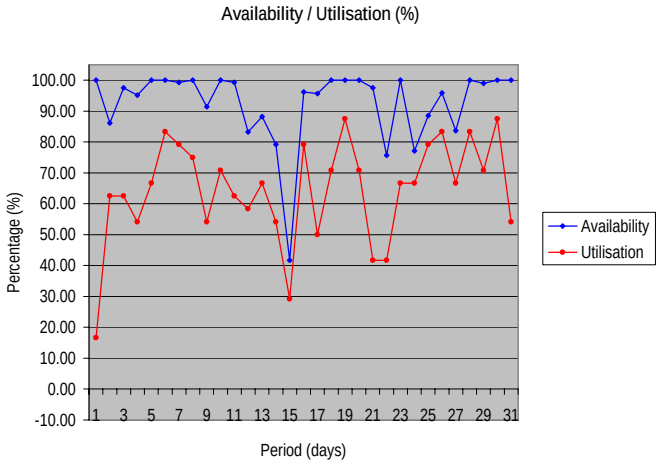


Breakdown percentage	=	Breakdown hours / Run hours	=	10.740%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7352	01-Mar	38709	24	4	100.00	16.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Mar	38713	24	15	86.13	62.50	3.33	0.00	0.00	0.00	2	Air jump start; weld mirror bracket
	03-Mar	38728	24	15	97.58	62.50	0.58	0.00	0.00	0.00	1	Air jump start
	04-Mar	38743	24	13	95.13	54.17	1.17	0.33	0.00	0.00	1	Heater cable not working - damage by operator
	05-Mar	38756	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	38772	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	38792	24	19	99.29	79.17	0.17	0.00	0.00	0.00	1	Heater not working. Open taps
	08-Mar	38811	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	09-Mar	38829	24	13	91.46	54.17	2.05	0.00	0.00	0.00	2	Top up hydraulic oil; seat belt wire broken
	10-Mar	38842	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	11-Mar	38859	24	15	99.29	62.50	0.17	0.00	0.00	0.00	1	Repair seat wires; left hand window not working
	12-Mar	38874	24	14	83.21	58.33	4.03	0.00	0.00	0.00	1	Repair seat wires
	13-Mar	38888	24	16	88.21	66.67	2.83	0.00	0.00	0.00	1	Repair hand rails
	14-Mar	38904	24	13	79.17	54.17	5.00	0.00	0.00	0.00	1	Repair leaking fuel tank
	15-Mar	38917	24	7	41.67	29.17	14.00	0.00	0.00	0.00	0	Repair leaking fuel tank
	16-Mar	38924	24	19	96.17	79.17	0.92	0.00	0.00	0.00	1	Daily
	17-Mar	38943	24	12	95.71	50.00	1.03	0.00	0.00	0.00	1	Low air press - jump start
	18-Mar	38955	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	19-Mar	38972	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Mar	38993	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	21-Mar	39010	24	10	97.58	41.67	0.58	0.00	0.00	0.00	1	Steering oil low
	22-Mar	39020	24	10	75.71	41.67	5.83	0.00	0.00	0.00	1	R/H fender loose
	23-Mar	39030	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	24-Mar	39046	24	16	77.08	66.67	5.50	0.00	0.00	0.00	1	Install bowl pin; repair grease system
	25-Mar	39062	24	19	88.54	79.17	2.75	0.00	0.00	0.00	1	Repair strobe light
	26-Mar	39081	24	20	95.83	83.33	1.00	0.00	0.00	0.00	1	Repair lights
	27-Mar	39101	24	16	83.67	66.67	3.92	0.00	0.00	0.00	2	Steering pressure high; repair spot light wires
	28-Mar	39117	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	29-Mar	39137	24	17	98.96	70.83	0.25	0.00	0.00	0.00	1	Repair light wires
	30-Mar	39154	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	31-Mar	39175	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	39188					55.12				21.00	
	TOTALS		744	479.00	92.59	64.38	55.12	0.33	0.00	0.00	21.00	
	AVERAGE			15.45	92.55			MTTR	2.62			
								MTBS	22.81			

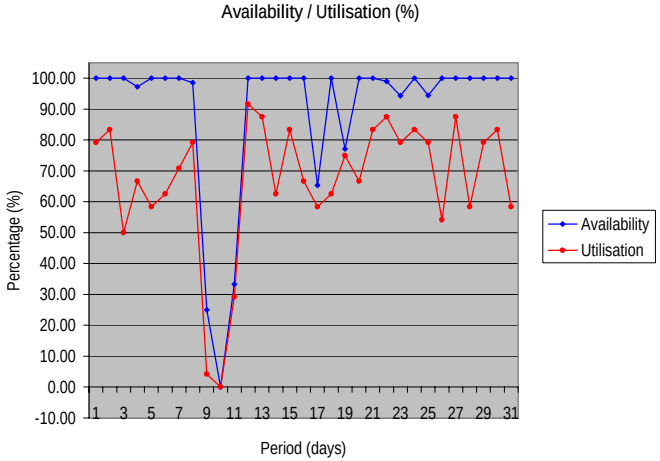


Breakdown percentage	=	Breakdown hours / Run hours	=	11.507%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7353	01-Mar	4681	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	02-Mar	4700	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	03-Mar	4720	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	4732	24	16	97.21	66.67	0.67	0.00	0.00	0.00	1	Hard steering. Charge accumulator
	05-Mar	4748	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	4762	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	4777	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	4794	24	19	98.63	79.17	0.33	0.00	0.00	0.00	0	Brake overstroke
	09-Mar	4813	24	1	25.00	4.17	18.00	0.00	0.00	0.00	1	500 hour service. Remove diff
	10-Mar	4814	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Remove diff
	11-Mar	4814	24	7	33.33	29.17	16.00	0.00	0.00	0.00	0	Remove diff
	12-Mar	4821	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	13-Mar	4843	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	14-Mar	4864	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	15-Mar	4879	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	16-Mar	4899	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	17-Mar	4915	24	14	65.29	58.33	8.33	0.00	0.00	0.00	1	R/H bowl pin missing
	18-Mar	4929	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Mar	4944	24	18	77.08	75.00	5.50	0.00	0.00	0.00	1	R/S side lights + indicators wires burned
	20-Mar	4962	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	21-Mar	4978	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	22-Mar	4998	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Brake stroke high
	23-Mar	5019	24	19	94.38	79.17	1.35	0.00	0.00	0.00	3	Brake stroke high; top up engine oil
	24-Mar	5038	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	25-Mar	5058	24	19	94.46	79.17	1.33	0.00	0.00	0.00	1	Replace switch - brake overstroke
	26-Mar	5077	24	13	100.00	54.17	0.00	11.00	0.00	0.00	1	Tyres
	27-Mar	5090	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	28-Mar	5111	24	14	100.00	58.33	0.00	3.25	0.00	0.00	1	Tyres
	29-Mar	5125	24	19	100.00	79.17	0.00	2.17	0.00	0.00	0	Tyres
	30-Mar	5144	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	31-Mar	5164	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	5178					75.76				11.00	
	TOTALS		744	497.00	89.82	66.80	75.76	16.42	0.00	0.00	11.00	
	AVERAGE			16.03	87.61			MTTR	6.89			
								MTBS	45.18			

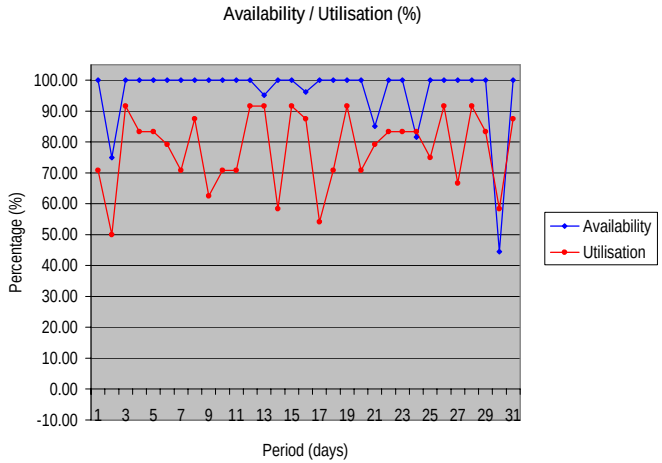


Breakdown percentage	=	Breakdown hours / Run hours	=	15.243%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7354	01-Mar	4985	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	02-Mar	5002	24	12	75.00	50.00	0.00	0.00	0.00	6.00	1	500 hour service
	03-Mar	5014	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	5036	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	05-Mar	5056	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	5076	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	5095	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Mar	5112	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	09-Mar	5133	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	10-Mar	5148	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	11-Mar	5165	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	12-Mar	5182	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	13-Mar	5204	24	22	95.13	91.67	1.17	0.00	0.00	0.00	1	Repair lights
	14-Mar	5226	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	15-Mar	5240	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	16-Mar	5262	24	21	96.17	87.50	0.92	0.00	0.00	0.00	1	Repair light bracket
	17-Mar	5283	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	18-Mar	5296	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	19-Mar	5313	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Mar	5335	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	21-Mar	5352	24	19	85.08	79.17	3.58	0.27	0.00	0.00	2	Replace hyd hose
	22-Mar	5371	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	23-Mar	5391	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	24-Mar	5411	24	20	81.54	83.33	4.43	0.00	0.00	0.00	1	Replace air starter
	25-Mar	5431	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	26-Mar	5449	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Mar	5471	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Mar	5487	24	22	100.00	91.67	0.00	0.42	0.00	0.00	1	Tyres
	29-Mar	5509	24	20	100.00	83.33	0.00	0.67	0.00	0.00	0	Tyres
	30-Mar	5529	24	14	44.46	58.33	0.00	0.00	0.00	13.33	1	4,000 hour service
	31-Mar	5543	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	5564					10.10				8.00	
	TOTALS		744	579.00	96.04	77.82	10.10	1.36	0.00	19.33	8.00	
	AVERAGE			18.68	95.86			MTTR	1.26			
								MTBS	72.38			

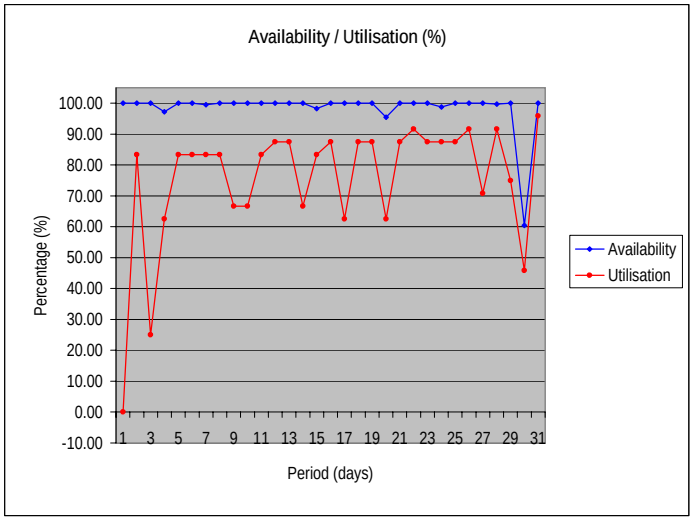


Breakdown percentage = Breakdown hours / Run hours = 5.083%

Middelburg Mine Services: Klipfontein Section

Period: March 2006

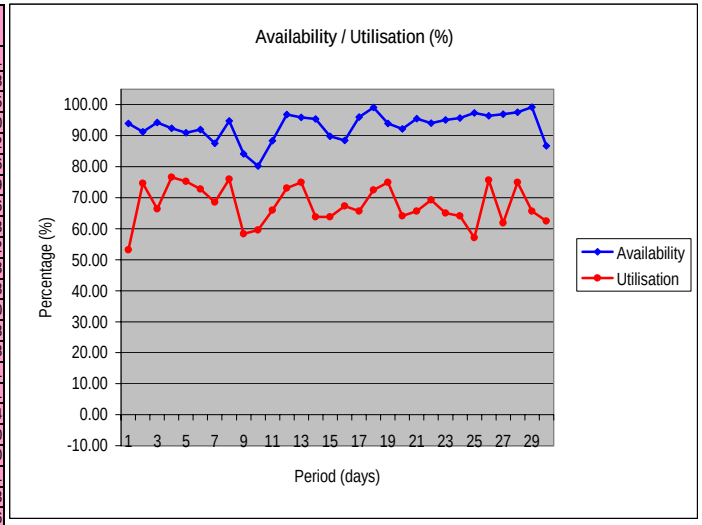
Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7355	01-Mar	4201	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Replace radiator + fan - accident damage
	02-Mar	4201	24	20	100.00	83.33	0.00	0.42	0.00	0.00	1	Repair spot light wiring - broke due to mud
	03-Mar	4221	24	6	100.00	25.00	0.00	0.00	0.00	0.00	0	Not applicable
	04-Mar	4227	24	15	97.21	62.50	0.67	0.00	0.00	0.00	0	Repair front indicators
	05-Mar	4242	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	06-Mar	4262	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	07-Mar	4282	24	20	99.50	83.33	0.12	0.00	0.00	0.00	1	Brake stroke high. Push pin in position
	08-Mar	4302	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	09-Mar	4322	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	10-Mar	4338	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Mar	4354	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	12-Mar	4374	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	13-Mar	4395	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	14-Mar	4416	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	15-Mar	4432	24	20	98.25	83.33	0.42	0.00	0.00	0.00	0	Repair light harness
	16-Mar	4452	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	17-Mar	4473	24	15	100.00	62.50	0.00	0.00	0.00	0.00	0	Not applicable
	18-Mar	4488	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	19-Mar	4509	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	20-Mar	4530	24	15	95.50	62.50	1.08	0.00	0.00	0.00	1	Brake stroke high
	21-Mar	4545	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	22-Mar	4566	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Mar	4588	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	24-Mar	4609	24	21	98.83	87.50	0.28	0.00	0.00	0.00	1	Top up oil
	25-Mar	4630	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	26-Mar	4651	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Mar	4673	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	28-Mar	4690	24	22	99.67	91.67	0.08	0.00	0.00	0.00	1	Brake stroke high
	29-Mar	4712	24	18	100.00	75.00	0.00	1.33	0.00	0.00	1	Seat belt not connected - operator problem
	30-Mar	4730	24	11	60.42	45.83	0.00	0.00	0.00	9.50	1	4,000 hr service
	31-Mar	4741	24	23	100.00	95.83	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	4764					2.65				7.00	
	TOTALS		744	563.00	98.37	75.67	2.65	25.75	0.00	9.50	7.00	
	AVERAGE			18.16	94.91			MTTR	0.38			
								MTBS	80.43			



Breakdown percentage	=	Breakdown hours / Run hours	=	2.158%

Middelburg Mine Services: Klipfontein Section
Period: March 2006

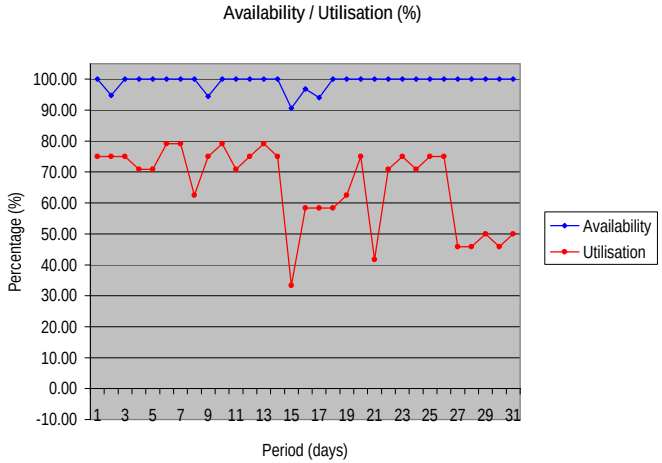
Machine	Date	Availability %	Utilization %
TOTAL	01-Mar	93.91	53.21
	02-Mar	91.28	74.68
	03-Mar	94.26	66.35
	04-Mar	92.36	76.60
	05-Mar	90.98	75.32
	06-Mar	91.98	72.76
	07-Mar	87.51	68.59
	08-Mar	94.74	75.96
	09-Mar	84.14	58.33
	10-Mar	80.24	59.62
	11-Mar	88.42	66.03
	12-Mar	96.81	73.08
	13-Mar	95.94	75.00
	14-Mar	95.41	63.78
	15-Mar	89.85	63.78
	16-Mar	88.44	67.31
	17-Mar	96.03	65.71
	18-Mar	99.14	72.44
	19-Mar	93.94	75.00
	20-Mar	92.16	64.10
	21-Mar	95.54	65.71
	22-Mar	94.05	69.23
	23-Mar	95.11	65.06
	24-Mar	95.74	64.10
	25-Mar	97.31	57.05
	26-Mar	96.47	75.64
	27-Mar	96.97	61.86
	28-Mar	97.60	75.00
	29-Mar	99.17	65.71
	30-Mar	86.70	62.50
	31-Mar	98.13	71.47
Average	%	93.24	67.77



Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6261	01-Apr	44414	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Apr	44430	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	03-Apr	44447	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	04-Apr	44464	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	05-Apr	44481	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	06-Apr	44497	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	07-Apr	44513	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	08-Apr	44529	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	09-Apr	44545	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	10-Apr	44561	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Apr	44577	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Apr	44593	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	13-Apr	44611	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	14-Apr	44629	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	15-Apr	44647	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	16-Apr	44668	24	6	100.00	25.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Apr	44674	24	4	100.00	16.67	0.00	0.00	0.00	0.00	0	Not applicable
	18-Apr	44678	24	4	100.00	16.67	0.00	0.00	0.00	0.00	0	Not applicable
	19-Apr	44682	24	4	100.00	16.67	0.00	0.00	0.00	0.00	0	Not applicable
	20-Apr	44686	24	7	100.00	29.17	0.00	0.00	0.00	0.00	0	Not applicable
	21-Apr	44693	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	22-Apr	44713	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	23-Apr	44725	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	24-Apr	44737	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	25-Apr	44750	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Apr	44766	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	27-Apr	44782	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	28-Apr	44799	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	29-Apr	44815	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	30-Apr	44836	24	22	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	44858					0.00				0.00	
	TOTALS		720	444.00	99.86	61.67	1.00	0.00	0.00	0.00	1.00	
	AVERAGE			14.80	99.86			MTTR	1.00			
								MTBS	444.00			

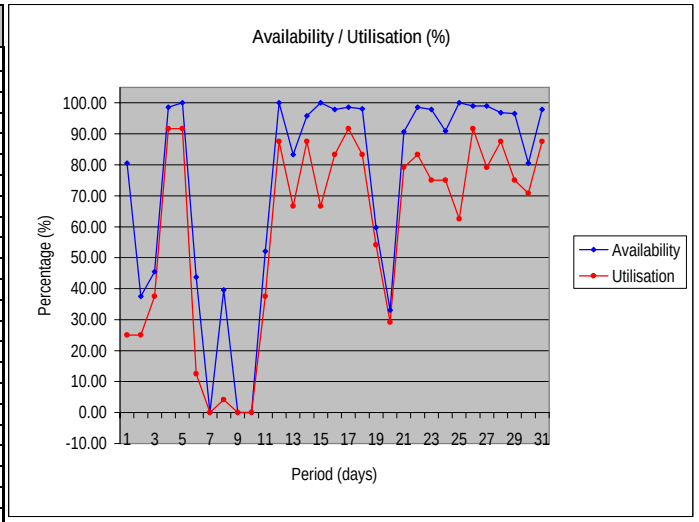


Breakdown percentage	=	Breakdown hours / Run hours	=	0.225%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6292	01-Apr	39627	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	02-Apr	39649	24	19	94.44	79.17	1.33	0.00	0.00	0.00	1	Oil leak
	03-Apr	39668	24	21	98.61	87.50	0.33	0.00	0.00	0.00	1	Repair lights
	04-Apr	39689	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	05-Apr	39709	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	06-Apr	39725	24	19	95.49	79.17	1.08	0.00	0.00	0.00	1	Tripped on low coolant
	07-Apr	39744	24	19	98.61	79.17	0.33	0.00	0.00	0.00	1	Replace 3 x lights, tighten L/H light bracket
	08-Apr	39763	24	8	39.58	33.33	14.50	0.00	0.00	0.00	1	Radiator leaking
	09-Apr	39771	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Radiator leaking
	10-Apr	39771	24	0	18.75	0.00	19.50	0.00	0.00	0.00	0	Radiator leaking
	11-Apr	39771	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	12-Apr	39787	24	14	95.49	58.33	1.08	0.00	0.00	0.00	2	Top up hydraulic oil
	13-Apr	39801	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	14-Apr	39819	24	17	100.00	70.83	0.00	2.00	0.00	0.00	1	Replace window
	15-Apr	39836	24	19	97.57	79.17	0.58	0.50	0.00	0.00	2	Replace window; replace air filters
	16-Apr	39855	24	15	95.83	62.50	1.00	0.00	0.00	0.00	2	Top up hydraulic oil; no power
	17-Apr	39870	24	10	57.64	41.67	10.17	0.00	0.00	0.00	1	No power; lights tripped
	18-Apr	39880	24	8	97.92	33.33	0.50	0.00	0.00	0.00	1	Daily
	19-Apr	39888	24	8	97.92	33.33	0.50	0.00	0.00	0.00	1	Daily
	20-Apr	39896	24	9	97.92	37.50	0.50	0.00	0.00	0.00	1	Daily
	21-Apr	39905	24	10	49.65	41.67	12.08	0.00	0.00	0.00	1	Replace 2 x B/Lift cylinder, 1 x B/Tilt R/H cylinder
	22-Apr	39915	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	23-Apr	39937	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	24-Apr	39957	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	25-Apr	39973	24	17	79.31	70.83	4.97	0.00	0.00	0.00	1	Radiator hose leak
	26-Apr	39990	24	14	82.99	58.33	4.08	0.00	0.00	0.00	2	Blade not tilting; replace water hose
	27-Apr	40004	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	28-Apr	40024	24	12	84.38	50.00	3.75	0.00	0.00	0.00	1	Replace tilt hose
	29-Apr	40036	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	30-Apr	40052	24	20	0.00	0.00	0.50	0.00	0.00	0.00	1	Daily
	Closing	40072					105.80				30.00	
	TOTALS		720	445.00	85.31	61.81	105.80	2.50	0.00	0.00	30.00	
	AVERAGE			14.83	84.96			MTTR	3.53			
								MTBS	14.83			

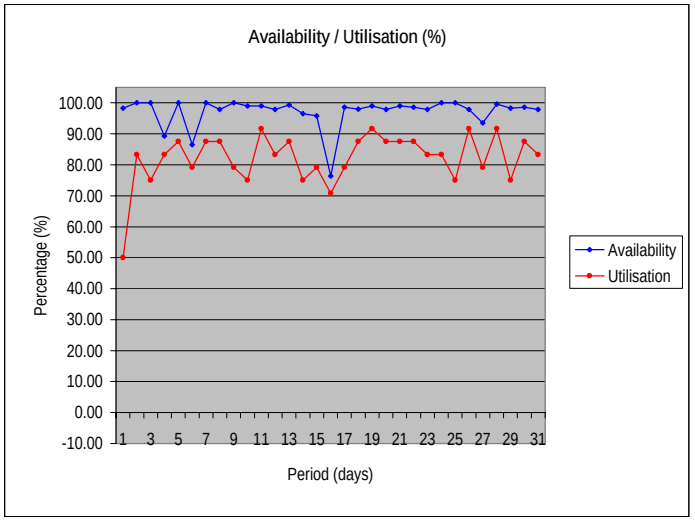


Breakdown percentage = Breakdown hours / Run hours = 23.775%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6293	01-Apr	39395	24	13	97.92	54.17	0.50	0.00	0.00	0.00	1	Daily
	02-Apr	39408	24	13	97.92	54.17	0.50	0.00	0.00	0.00	1	Daily
	03-Apr	39421	24	14	97.92	58.33	0.50	0.00	0.00	0.00	1	Daily
	04-Apr	39435	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	05-Apr	39456	24	17	97.92	70.83	0.50	0.00	0.00	0.00	1	Daily
	06-Apr	39473	24	19	86.46	79.17	3.25	0.00	0.00	0.00	2	Repair fuel lines; repair rear and front lights
	07-Apr	39492	24	18	97.22	75.00	0.67	0.00	0.00	0.00	1	Replace aircon belt
	08-Apr	39510	24	19	91.67	79.17	2.00	0.00	0.00	0.00	2	Tripped on coolant pressure; repair A/C
	09-Apr	39529	24	21	96.88	87.50	0.75	0.00	0.00	0.00	1	Low coolant flow
	10-Apr	39550	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	11-Apr	39570	24	14	92.01	58.33	1.92	0.00	0.00	0.00	3	Daily; top up coolant
	12-Apr	39584	24	12	35.42	50.00	15.50	0.00	0.00	0.00	0	Aftercooler seal leak - front - 500 hour service
	13-Apr	39596	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Daily
	14-Apr	39616	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	15-Apr	39637	24	20	98.61	83.33	0.33	0.00	0.00	0.00	1	Daily
	16-Apr	39657	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Top up water and repair lights
	17-Apr	39675	24	17	97.64	70.83	0.57	0.00	0.00	0.00	1	Daily
	18-Apr	39692	24	12	97.92	50.00	0.50	0.00	0.00	0.00	1	Daily
	19-Apr	39704	24	13	90.63	54.17	2.25	0.00	0.00	0.00	1	Replace damaged heater tap
	20-Apr	39717	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	21-Apr	39737	24	13	97.22	54.17	0.67	0.00	0.00	0.00	1	Daily
	22-Apr	39750	24	21	98.61	87.50	0.33	0.00	0.00	0.00	1	Daily
	23-Apr	39771	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	24-Apr	39792	24	15	97.92	62.50	0.50	0.00	0.00	0.00	1	Daily
	25-Apr	39807	24	0	40.97	0.00	14.17	0.00	0.00	0.00	1	Replace pivot shaft; voltage low - jump start
	26-Apr	39807	24	13	23.61	54.17	18.33	0.00	0.00	0.00	1	Replace pivot shaft
	27-Apr	39820	24	20	99.31	83.33	0.17	0.00	0.00	0.00	1	Daily
	28-Apr	39840	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Heater core leak - top up water
	29-Apr	39856	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	30-Apr	39877	24	20	0.00	0.00	0.33	0.00	0.00	0.00	1	Top up coolant
	Closing	39897					68.23				31.00	
	TOTALS		720	502.00	90.52	69.72	68.23	0.00	0.00	0.00	31.00	
	AVERAGE			16.73	90.52			MTTR	2.20			
								MTBS	16.19			

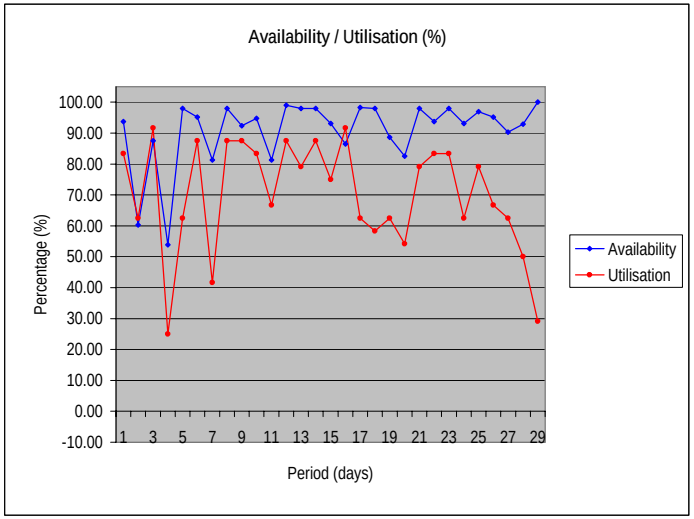


Breakdown percentage	=	Breakdown hours / Run hours	=	13.592%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6294	01-Apr	33597	24	20	93.75	83.33	1.50	0.00	0.00	0.00	1	Hydraulic pump noisy
	02-Apr	33617	24	15	60.28	62.50	9.53	0.00	0.00	0.00	2	Hydraulic hose damaged; hydraulic fan pump leak
	03-Apr	33632	24	22	87.50	91.67	3.00	0.00	0.00	0.00	1	Hydraulic oil leak; replace blade tilit cylinder
	04-Apr	33654	24	6	53.82	25.00	11.08	0.00	0.00	0.00	2	Daily
	05-Apr	33660	24	15	97.92	62.50	0.50	0.00	0.00	0.00	1	Daily
	06-Apr	33675	24	21	95.14	87.50	1.17	0.00	0.00	0.00	1	L/H corner bit loose
	07-Apr	33696	24	10	81.25	41.67	0.00	0.00	0.00	4.50	1	2,000 hour service
	08-Apr	33706	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	09-Apr	33727	24	21	92.36	87.50	1.83	0.00	0.00	0.00	2	Low coolant; daily
	10-Apr	33748	24	20	94.79	83.33	1.25	0.00	0.00	0.00	1	Low coolant
	11-Apr	33768	24	16	81.25	66.67	4.50	0.00	0.00	0.00	2	Low coolant, loose battery terminal; adjust tracks
	12-Apr	33784	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	13-Apr	33805	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	14-Apr	33824	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	15-Apr	33845	24	18	93.06	75.00	1.67	0.00	0.00	0.00	2	Daily; hydraulic hose damaged
	16-Apr	33863	24	22	86.46	91.67	3.25	0.00	0.00	0.00	1	Hydraulic hose damaged; top up water & hydraulic
	17-Apr	33885	24	15	98.26	62.50	0.42	0.00	0.00	0.00	1	Daily
	18-Apr	33900	24	14	97.92	58.33	0.50	0.00	0.00	0.00	1	Daily
	19-Apr	33914	24	15	88.68	62.50	2.72	0.00	0.00	0.00	2	Top up T/M and hydraulic oil; top up coolant
	20-Apr	33929	24	13	82.50	54.17	4.20	0.00	0.00	0.00	3	Top up coolant; replace L/H lift cylinder
	21-Apr	33942	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	22-Apr	33961	24	20	93.75	83.33	1.50	0.00	0.00	0.00	1	Coolant level low
	23-Apr	33981	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	24-Apr	34001	24	15	93.06	62.50	1.67	0.00	0.00	0.00	2	Front aftercooler gasket leak; replace globes
	25-Apr	34016	24	19	96.88	79.17	0.75	0.00	0.00	0.00	1	Top up coolant and hydraulic oil
	26-Apr	34035	24	16	95.14	66.67	1.17	0.00	0.00	0.00	1	Top up coolant
	27-Apr	34051	24	15	90.28	62.50	2.33	0.00	0.00	0.00	1	Repair coolant leak
	28-Apr	34066	24	12	92.85	50.00	1.72	0.00	0.00	0.00	2	Daily; replace o-ring
	29-Apr	34078	24	7	100.00	29.17	0.00	10.00	0.00	0.00	1	Accident damage - front belly plate broken off
	30-Apr	34085	24	0	0.00	0.00	0.00	24.00	0.00	0.00	0	Accident damage - front belly plate broken off
	Closing	34085					59.00				36.00	
	TOTALS		720	488.00	91.18	67.78	59.00	34.00	0.00	4.50	36.00	
	AVERAGE			16.27	86.46			MTTR	1.64			
								MTBS	13.56			

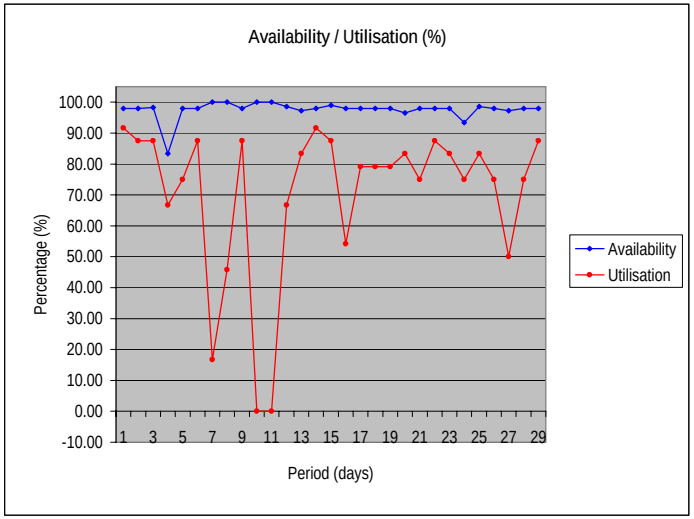


Breakdown percentage = Breakdown hours / Run hours = 13.012%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6295	01-Apr	27661	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	02-Apr	27683	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	03-Apr	27704	24	21	98.26	87.50	0.42	0.00	0.00	0.00	1	Repair lights
	04-Apr	27725	24	16	83.33	66.67	0.00	0.00	0.00	4.00	1	500 hour service
	05-Apr	27741	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	06-Apr	27759	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	07-Apr	27780	24	4	100.00	16.67	0.00	19.33	0.00	0.00	1	L/H track broken on master bolts
	08-Apr	27784	24	11	100.00	45.83	0.00	12.50	0.00	0.00	0	L/H track broken on master bolts
	09-Apr	27795	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	10-Apr	27816	24	0	100.00	0.00	0.00	10.00	0.00	0.00	1	Stuck, damaged push arm - accident
	11-Apr	27816	24	0	100.00	0.00	0.00	19.50	0.00	0.00	0	Stuck, damaged push arm - accident
	12-Apr	27816	24	16	98.61	66.67	0.33	0.00	0.00	0.00	1	Daily
	13-Apr	27832	24	20	97.22	83.33	0.67	0.00	0.00	0.00	1	Replace globes
	14-Apr	27852	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Daily
	15-Apr	27874	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Daily
	16-Apr	27895	24	13	97.92	54.17	0.50	0.00	0.00	0.00	1	Daily
	17-Apr	27908	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	18-Apr	27927	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	19-Apr	27946	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	20-Apr	27965	24	20	96.53	83.33	0.83	0.00	0.00	0.00	1	Tighten loose light bracket
	21-Apr	27985	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	22-Apr	28003	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	23-Apr	28024	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	24-Apr	28044	24	18	93.40	75.00	1.58	0.00	0.00	0.00	2	Coolant level low; check water leak
	25-Apr	28062	24	20	98.61	83.33	0.33	0.00	0.00	0.00	1	Daily
	26-Apr	28082	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	27-Apr	28100	24	12	97.22	50.00	0.67	0.00	0.00	0.00	2	Top up coolant; daily
	28-Apr	28112	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	29-Apr	28130	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	30-Apr	28151	24	22	0.00	0.00	0.50	0.00	0.00	0.00	1	Daily
	Closing	28173					13.58				28.00	
	TOTALS		720	512.00	97.56	71.11	13.58	61.33	0.00	4.00	28.00	
	AVERAGE			17.07	89.04			MTTR	0.49			
								MTBS	18.29			

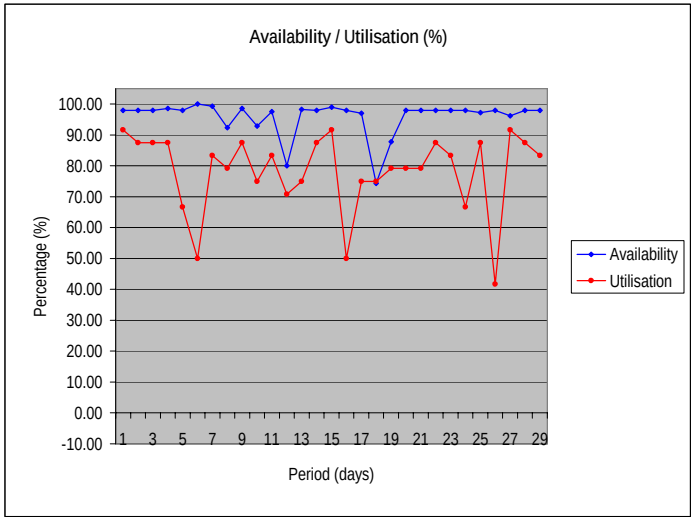


Breakdown percentage = Breakdown hours / Run hours = 3.434%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6296	01-Apr	25683	24	22	97.92	91.67	0.50	0.00	0.00	0.00	0	Daily
	02-Apr	25705	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	03-Apr	25726	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	04-Apr	25747	24	21	98.61	87.50	0.33	0.00	0.00	0.00	1	Daily
	05-Apr	25768	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	06-Apr	25784	24	12	100.00	50.00	0.00	12.67	0.00	0.00	1	Roller missing
	07-Apr	25796	24	20	99.31	83.33	0.17	0.00	0.00	0.00	1	Replace 2 x lights
	08-Apr	25816	24	19	92.36	79.17	1.83	0.00	0.00	0.00	1	Replace service brake switch
	09-Apr	25835	24	21	98.61	87.50	0.33	0.00	0.00	0.00	1	Daily
	10-Apr	25856	24	18	92.85	75.00	1.72	0.00	0.00	0.00	1	Blade tilt hose damaged
	11-Apr	25874	24	20	97.57	83.33	0.58	0.00	0.00	0.00	1	Daily
	12-Apr	25894	24	17	80.00	70.83	4.80	0.00	0.00	0.00	1	Lights not working
	13-Apr	25911	24	18	98.26	75.00	0.42	0.00	0.00	0.00	1	Daily
	14-Apr	25929	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	15-Apr	25950	24	22	98.96	91.67	0.25	0.00	0.00	0.00	1	Daily
	16-Apr	25972	24	12	97.92	50.00	0.50	0.00	0.00	0.00	1	Daily
	17-Apr	25984	24	18	97.01	75.00	0.72	0.00	0.00	0.00	1	Lights not working
	18-Apr	26002	24	18	74.31	75.00	0.00	0.00	0.00	6.17	1	2,000 hour service
	19-Apr	26020	24	19	87.85	79.17	2.92	0.00	0.00	0.00	1	System voltage low
	20-Apr	26039	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	21-Apr	26058	24	19	97.92	79.17	0.50	0.00	0.00	0.00	1	Daily
	22-Apr	26077	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	23-Apr	26098	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	24-Apr	26118	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	25-Apr	26134	24	21	97.22	87.50	0.67	0.00	0.00	0.00	1	Top up hydraulic and T/M oil
	26-Apr	26155	24	10	97.92	41.67	0.50	0.00	0.00	0.00	1	Daily
	27-Apr	26165	24	22	96.18	91.67	0.92	0.00	0.00	0.00	1	Daily and adjust tracks
	28-Apr	26187	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	29-Apr	26208	24	20	97.92	83.33	0.50	0.00	0.00	0.00	1	Daily
	30-Apr	26228	24	22	0.00	0.00	0.75	0.00	0.00	0.00	2	Replace 1 x globe; A/C
	Closing	26250					23.40				29.00	
	TOTALS		720	567.00	95.89	78.75	23.40	12.67	0.00	6.17	29.00	
	AVERAGE			18.90	94.13			MTTR	0.81			
								MTBS	19.55			

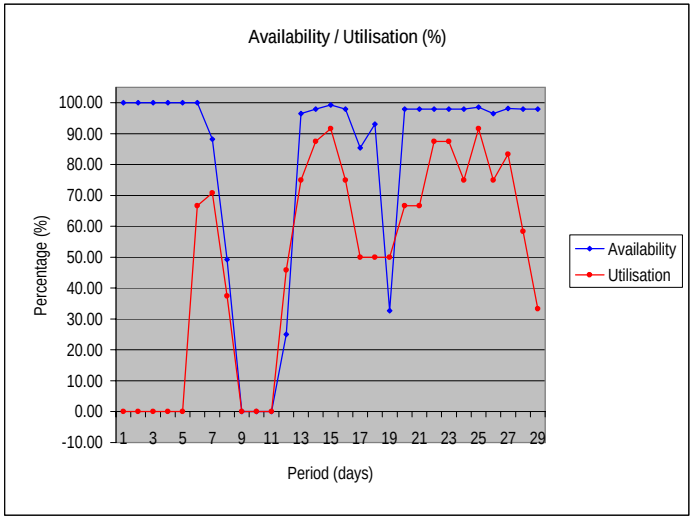


Breakdown percentage = Breakdown hours / Run hours = 5.215%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
6297	01-Apr	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	02-Apr	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	03-Apr	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	04-Apr	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	05-Apr	26611	24	0	100.00	0.00	0.00	24.00	0.00	0.00	0	Undercarraige repairs
	06-Apr	26611	24	16	100.00	66.67	0.00	4.50	0.00	0.00	0	Undercarraige repairs
	07-Apr	26627	24	17	88.19	70.83	2.83	0.00	0.00	0.00	2	Tube on header tank loose; burnt fuses
	08-Apr	26644	24	9	49.24	37.50	12.18	0.00	0.00	0.00	2	Tripped on lights; fan pump failure
	09-Apr	26653	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Fan pump failure
	10-Apr	26653	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Fan pump failure
	11-Apr	26653	24	0	0.00	0.00	24.00	0.00	0.00	0.00	0	Fan pump failure
	12-Apr	26653	24	11	25.00	45.83	18.00	0.00	0.00	0.00	0	Fan pump failure
	13-Apr	26664	24	18	96.53	75.00	0.83	0.00	0.00	0.00	2	Repair wires on lights; daily
	14-Apr	26682	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Aircon hose damaged
	15-Apr	26703	24	22	99.31	91.67	0.17	0.00	0.00	0.00	1	Daily
	16-Apr	26725	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	17-Apr	26743	24	12	85.42	50.00	3.50	0.00	0.00	0.00	1	Replace aircon pump and repair gas leak
	18-Apr	26755	24	12	93.06	50.00	1.67	0.00	0.00	0.00	2	Overheat
	19-Apr	26767	24	12	32.64	50.00	16.17	0.00	0.00	0.00	0	Overheat
	20-Apr	26779	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Daily
	21-Apr	26795	24	16	97.92	66.67	0.50	0.00	0.00	0.00	1	Aircon not working
	22-Apr	26811	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	23-Apr	26832	24	21	97.92	87.50	0.50	0.00	0.00	0.00	1	Daily
	24-Apr	26853	24	18	97.92	75.00	0.50	0.00	0.00	0.00	1	Daily
	25-Apr	26871	24	22	98.61	91.67	0.33	0.00	0.00	0.00	1	Daily
	26-Apr	26893	24	18	96.53	75.00	0.83	0.00	0.00	0.00	1	Replace globe and fuse
	27-Apr	26911	24	20	98.13	83.33	0.45	0.00	0.00	0.00	1	Daily and adjust tracks
	28-Apr	26931	24	14	97.92	58.33	0.50	0.00	0.00	0.00	1	Daily
	29-Apr	26945	24	8	97.92	33.33	0.50	0.00	0.00	0.00	1	Daily
	30-Apr	26953	24	0	0.00	0.00	0.00	11.00	0.00	0.00	1	Machine stuck in mud
	Closing	26953					133.47				23.00	
	TOTALS		720	342.00	81.46	47.50	133.47	135.50	0.00	0.00	23.00	
	AVERAGE			11.40	62.64			MTTR	5.80			
								MTBS	14.87			

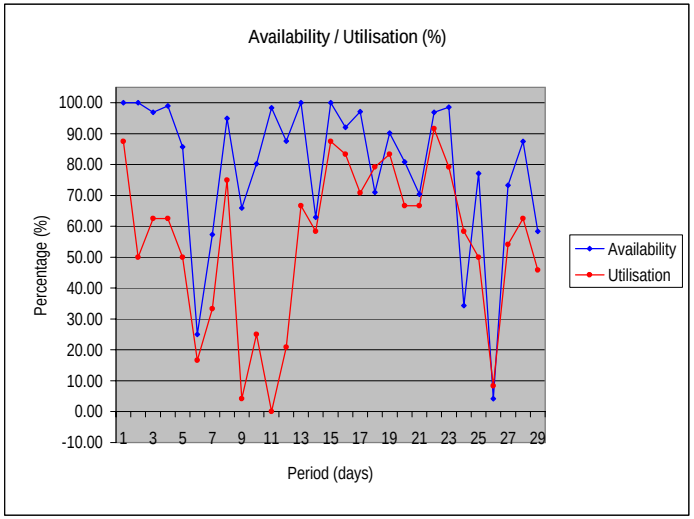


Breakdown percentage = Breakdown hours / Run hours = 39.025%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7974	01-Apr	38423	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	02-Apr	38444	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	03-Apr	38456	24	15	96.88	62.50	0.75	0.00	0.00	0.00	0	Daily
	04-Apr	38471	24	15	98.96	62.50	0.25	0.00	0.00	0.00	1	Repair lights
	05-Apr	38486	24	12	85.76	50.00	3.42	0.00	0.00	0.00	3	Daily; repair oil leak; clean sensor wire
	06-Apr	38498	24	4	25.00	16.67	0.00	0.00	0.00	18.00	1	Service, replace injectors & repair electrical syst.
	07-Apr	38502	24	8	57.29	33.33	7.50	0.00	0.00	2.75	1	Service, replace injectors & repair electrical syst.
	08-Apr	38510	24	18	94.93	75.00	1.22	0.00	0.00	0.00	1	Daily
	09-Apr	38528	24	1	65.97	4.17	8.17	0.00	0.00	0.00	2	Daily; weld stopper on bucket pin; replace grease
	10-Apr	38529	24	6	80.21	25.00	4.75	0.00	0.00	0.00	2	Hydraulic and grease hoses damaged
	11-Apr	38535	24	0	98.33	0.00	0.40	0.00	0.00	0.00	2	Tighten loose bucket kick-off clamp; daily
	12-Apr	38535	24	5	87.57	20.83	2.98	7.70	0.00	0.00	5	Daily; slow hydraulics; tyres
	13-Apr	38540	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	14-Apr	38556	24	14	62.92	58.33	8.90	0.00	0.00	0.00	1	Replace L/H tilt cylinder
	15-Apr	38570	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	16-Apr	38591	24	20	92.01	83.33	1.92	0.00	0.00	0.00	1	Daily
	17-Apr	38611	24	17	97.08	70.83	0.70	0.00	0.00	0.00	1	Daily; replace 2 x bucket tips
	18-Apr	38628	24	19	71.04	79.17	6.95	0.00	0.00	0.00	3	Hydraulic hose damaged; adjust main relief valve
	19-Apr	38647	24	20	90.21	83.33	2.35	0.00	0.00	0.00	1	Adjust pressure and replace pilot hose
	20-Apr	38667	24	16	80.90	66.67	4.58	0.00	0.00	0.00	4	Damaged o-ring; replace grease hose
	21-Apr	38683	24	16	70.35	66.67	1.37	0.00	0.00	5.75	2	250 hour service; replace damaged o-ring
	22-Apr	38699	24	22	96.88	91.67	0.75	0.00	0.00	0.00	1	Repair radar; daily
	23-Apr	38721	24	19	98.61	79.17	0.33	0.00	0.00	0.00	1	Daily
	24-Apr	38740	24	14	34.38	58.33	15.75	0.00	0.00	0.00	3	Daily; replace hydraulic hose; change line valves
	25-Apr	38754	24	12	77.08	50.00	5.50	0.00	0.00	0.00	2	Daily; replace 2 x lift cylinders
	26-Apr	38766	24	2	4.17	8.33	23.00	0.00	0.00	0.00	1	Replace 2 x lift cylinders; replace heater hose
	27-Apr	38768	24	13	73.26	54.17	6.42	0.00	0.00	0.00	2	Daily; clean all line relief valves
	28-Apr	38781	24	15	87.50	62.50	3.00	0.00	0.00	0.00	0	Clean all line relief valves
	29-Apr	38796	24	11	58.33	45.83	10.00	0.00	0.00	0.00	1	L/H top lift cylinder pin seized - replace
	30-Apr	38807	24	12	0.00	0.00	0.00	10.25	0.00	0.00	1	Accident damage
	Closing	38819					120.95				43.00	
	TOTALS		720	396.00	79.52	55.00	120.95	17.95	0.00	26.50	43.00	
	AVERAGE			13.20	77.03			MTTR	2.81			
								MTBS	9.21			

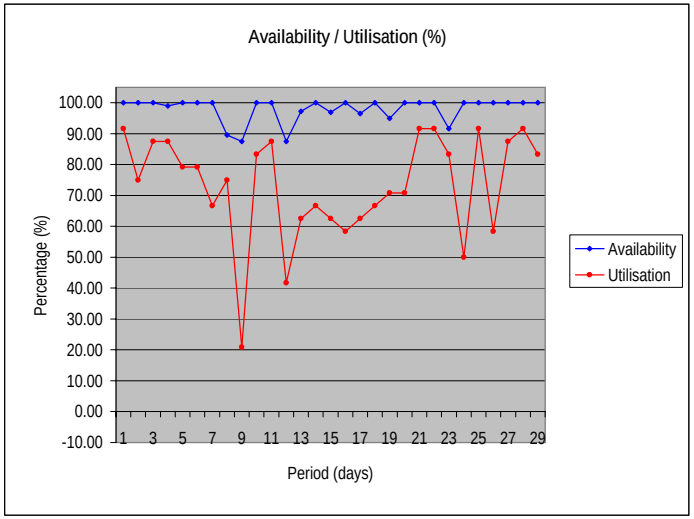


Breakdown percentage = Breakdown hours / Run hours = 37.235%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7351	01-Apr	39966	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	02-Apr	39988	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	03-Apr	40006	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Apr	40027	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Mirror bracket broken
	05-Apr	40048	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	06-Apr	40067	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	07-Apr	40086	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	08-Apr	40102	24	18	89.58	75.00	2.50	0.00	0.00	0.00	1	Replace fuel gauge
	09-Apr	40120	24	5	87.50	20.83	3.00	0.00	0.00	0.00	1	Repair fuel gauge and hooter
	10-Apr	40125	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	11-Apr	40145	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	12-Apr	40166	24	10	87.50	41.67	3.00	0.00	0.00	0.00	1	Repair hooter
	13-Apr	40176	24	15	97.22	62.50	0.67	0.00	0.00	0.00	1	Replace radiator cap
	14-Apr	40191	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	15-Apr	40207	24	15	96.88	62.50	0.75	0.00	0.00	0.00	1	Leak on T/M filter
	16-Apr	40222	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Apr	40236	24	15	96.53	62.50	0.83	0.00	0.00	0.00	1	Won't lift bowl - sensor faulty
	18-Apr	40251	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	19-Apr	40267	24	17	95.00	70.83	1.20	0.00	0.00	0.00	1	Low diff oil; grease machine
	20-Apr	40284	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	21-Apr	40301	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	22-Apr	40323	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Apr	40345	24	20	91.67	83.33	2.00	0.00	0.00	0.00	1	Replace bowl lift solenoid
	24-Apr	40365	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	25-Apr	40377	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Apr	40399	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	27-Apr	40413	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	28-Apr	40434	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	29-Apr	40456	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	30-Apr	40476	24	19	0.00	0.00	1.00	0.00	0.00	0.00	1	Low after cooler coolant
	Closing	40495					15.20				10.00	
	TOTALS		720	529.00	97.89	73.47	15.20	0.00	0.00	0.00	10.00	
	AVERAGE			17.63	97.89			MTTR	1.52			
								MTBS	52.90			

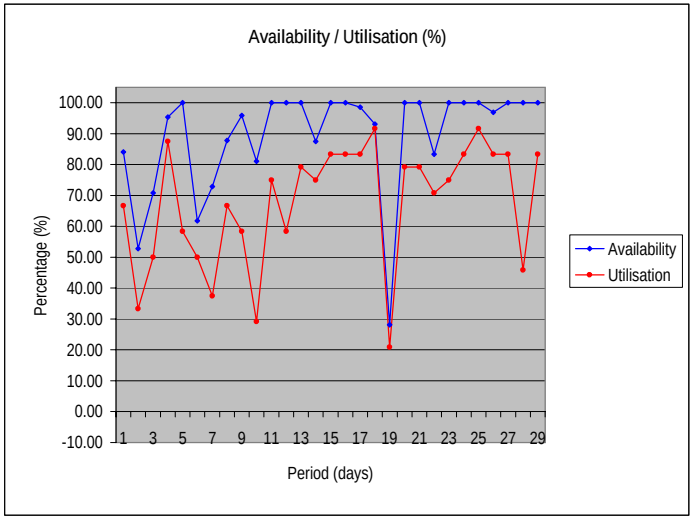


Breakdown percentage	=	Breakdown hours / Run hours	=	2.873%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7352	01-Apr	39188	24	16	84.03	66.67	3.83	0.00	0.00	0.00	1	Lights on rear and park lights
	02-Apr	39204	24	8	52.78	33.33	11.33	0.00	0.00	0.00	1	Lights on rear and park lights; replace 1 x battery
	03-Apr	39212	24	12	70.83	50.00	7.00	0.00	0.00	0.00	1	Rear lights not working
	04-Apr	39224	24	21	95.42	87.50	1.10	0.00	0.00	0.00	2	Open heater manually; replace spotlight globe
	05-Apr	39245	24	14	100.00	58.33	0.00	1.08	0.00	0.00	1	Stuck in the ramp
	06-Apr	39259	24	12	61.81	50.00	0.00	0.00	0.00	9.17	1	500 hour service
	07-Apr	39271	24	9	72.92	37.50	6.50	0.00	0.00	0.00	1	Replace alternator
	08-Apr	39280	24	16	87.85	66.67	2.92	0.00	0.00	0.00	2	Adjust cable heater; repair A/C
	09-Apr	39296	24	14	95.83	58.33	1.00	0.00	0.00	0.00	1	Bowl switch sticky
	10-Apr	39310	24	7	81.11	29.17	4.53	0.00	0.00	0.00	1	Replace 1 x battery
	11-Apr	39317	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	12-Apr	39335	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	13-Apr	39349	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Apr	39368	24	18	87.50	75.00	3.00	0.00	0.00	0.00	1	Fill T/M and hydraulic oil
	15-Apr	39386	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	16-Apr	39406	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Apr	39426	24	20	98.61	83.33	0.33	0.00	0.00	0.00	1	Park lights faulty
	18-Apr	39446	24	22	93.06	91.67	1.67	0.00	0.00	0.00	1	Air starter problem
	19-Apr	39468	24	5	28.13	20.83	17.25	0.00	0.00	0.00	1	Air starter problem; L/H rear final drive leaking
	20-Apr	39473	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	21-Apr	39492	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	22-Apr	39511	24	17	83.33	70.83	4.00	0.00	0.00	0.00	1	Replace cooling hose
	23-Apr	39528	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	24-Apr	39546	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	25-Apr	39566	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	26-Apr	39588	24	20	96.88	83.33	0.75	0.00	0.00	0.00	1	Bucket lift position error
	27-Apr	39608	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	28-Apr	39628	24	11	100.00	45.83	0.00	0.00	0.00	0.00	0	Not applicable
	29-Apr	39639	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	30-Apr	39659	24	20	0.00	0.00	1.08	0.00	0.00	0.00	1	Repair wires on front headlight
	Closing	39679					66.30				17.00	
	TOTALS		720	491.00	89.52	68.19	66.30	1.08	0.00	9.17	17.00	
	AVERAGE			16.37	89.37			MTTR	3.90			
								MTBS	28.88			

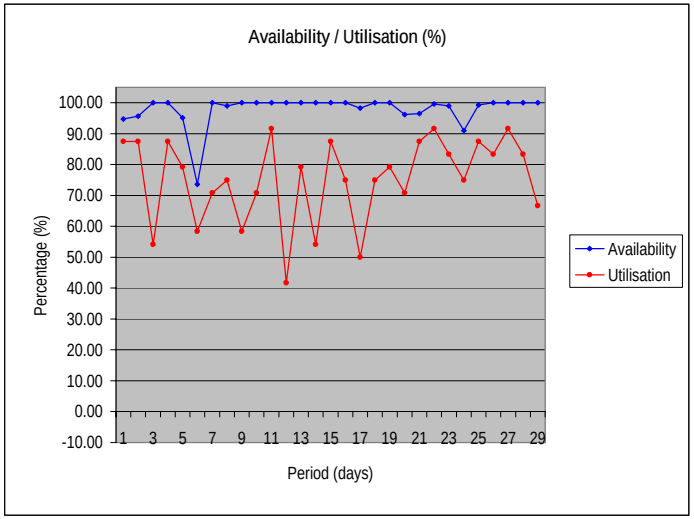


Breakdown percentage	=	Breakdown hours / Run hours	=	15.370%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7353	01-Apr	5178	24	21	94.79	87.50	1.25	0.00	0.00	0.00	2	Top up engine oil; A/C switch faulty
	02-Apr	5199	24	21	95.63	87.50	1.05	0.00	0.00	0.00	1	Light switch not working
	03-Apr	5220	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	04-Apr	5233	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	05-Apr	5254	24	19	95.14	79.17	1.17	0.00	0.00	0.00	2	Top up steering oil; hard steering
	06-Apr	5273	24	14	73.61	58.33	0.00	0.00	0.00	6.33	1	1,000 hour service
	07-Apr	5287	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Apr	5304	24	18	98.96	75.00	0.25	0.00	0.00	0.00	1	Rear bracket broken
	09-Apr	5322	24	14	100.00	58.33	0.00	0.00	0.00	0.00	0	Not applicable
	10-Apr	5336	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	11-Apr	5353	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Apr	5375	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	13-Apr	5385	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	14-Apr	5404	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	15-Apr	5417	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	16-Apr	5438	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Apr	5456	24	12	98.26	50.00	0.42	0.17	0.00	0.00	2	Remove tailgate; top up water
	18-Apr	5468	24	18	100.00	75.00	0.00	10.50	0.00	0.00	0	Remove tailgate
	19-Apr	5486	24	19	100.00	79.17	0.00	1.50	0.00	0.00	1	Broken mirror bracket
	20-Apr	5505	24	17	96.18	70.83	0.92	0.00	0.00	0.00	2	Broken camera bracket; top up water
	21-Apr	5522	24	21	96.53	87.50	0.83	0.00	0.00	0.00	2	Tighten mirror bracket; mirror broken
	22-Apr	5543	24	22	99.65	91.67	0.08	0.00	0.00	0.00	1	Mirror bracket loose
	23-Apr	5565	24	20	98.96	83.33	0.25	0.00	0.00	0.00	1	Top up engine oil
	24-Apr	5585	24	18	90.97	75.00	2.17	0.00	0.00	0.00	2	Brake stroke high; tighten mirror
	25-Apr	5603	24	21	99.31	87.50	0.17	0.00	0.00	0.00	1	Coolant level low
	26-Apr	5624	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	27-Apr	5644	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	28-Apr	5666	24	20	100.00	83.33	0.00	0.50	0.00	0.00	1	Replace mirror
	29-Apr	5686	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	30-Apr	5702	24	19	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	5721					8.55				17.00	
	TOTALS		720	543.00	97.93	75.42	8.55	12.67	0.00	6.33	17.00	
	AVERAGE			18.10	96.17			MTTR	0.50			
								MTBS	31.94			

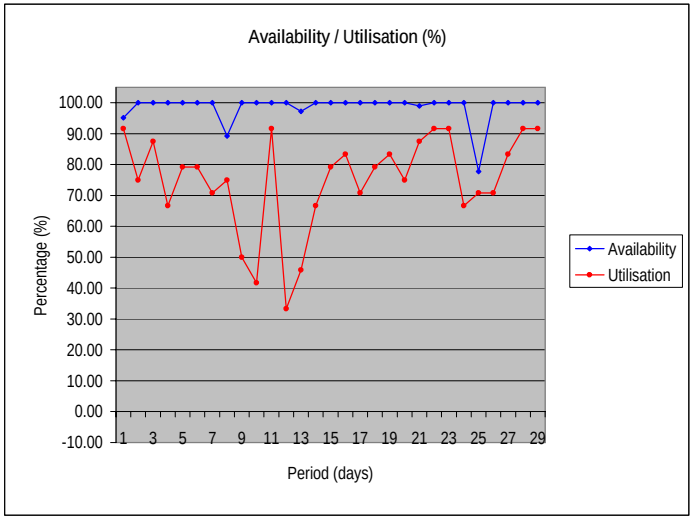


Breakdown percentage = Breakdown hours / Run hours = 2.741%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7354	01-Apr	5564	24	22	95.14	91.67	1.17	0.00	0.00	0.00	1	Repair handrails/steps
	02-Apr	5586	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	03-Apr	5604	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Apr	5625	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	05-Apr	5641	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	06-Apr	5660	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	07-Apr	5679	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	08-Apr	5696	24	18	89.24	75.00	2.58	0.00	0.00	0.00	1	Stop block bracket broken
	09-Apr	5714	24	12	100.00	50.00	0.00	0.00	0.00	0.00	0	Not applicable
	10-Apr	5726	24	10	100.00	41.67	0.00	0.00	0.00	0.00	0	Not applicable
	11-Apr	5736	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	12-Apr	5758	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Not applicable
	13-Apr	5766	24	11	97.22	45.83	0.67	0.00	0.00	0.00	2	Repair broken light wires; replace globe
	14-Apr	5777	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	15-Apr	5793	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	16-Apr	5812	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	17-Apr	5832	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	18-Apr	5849	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	19-Apr	5868	24	20	100.00	83.33	0.00	0.50	0.00	0.00	1	L/H broken mirror
	20-Apr	5888	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	21-Apr	5906	24	21	98.96	87.50	0.25	0.00	0.00	0.00	1	Adjust loose mirror
	22-Apr	5927	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	23-Apr	5949	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	24-Apr	5971	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	25-Apr	5987	24	17	77.78	70.83	0.00	0.00	0.00	5.33	1	500 hour service
	26-Apr	6004	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	27-Apr	6021	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	28-Apr	6041	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	29-Apr	6063	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	30-Apr	6085	24	19	0.00	0.00	0.00	0.00	0.00	0.00	0	Not applicable
	Closing	6104					4.67				6.00	
	TOTALS		720	540.00	98.61	75.00	4.67	0.50	0.00	5.33	6.00	
	AVERAGE			18.00	98.54			MTTR	0.78			
								MTBS	90.00			

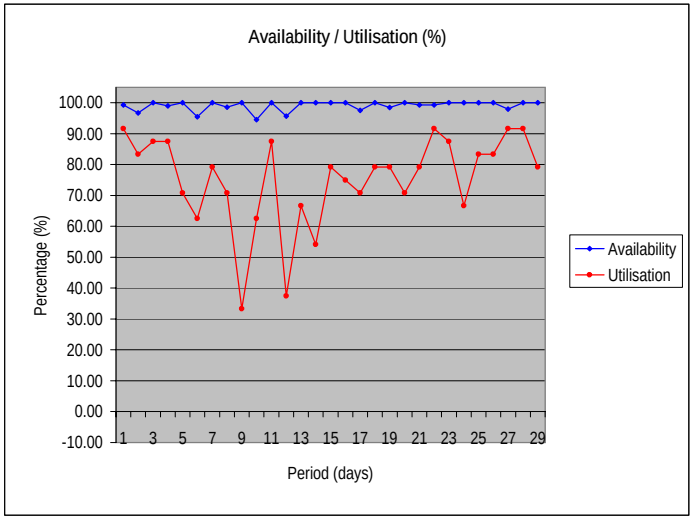


Breakdown percentage = Breakdown hours / Run hours = 1.852%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Machine Hours	Work Hours	Run Hours	Availability %	Utilization %	Contractual D/time	N/contr D/time	Win D/time	Serv D/time	Break Down	Remarks
7355	01-Apr	4764	24	22	99.31	91.67	0.17	0.00	0.00	0.00	1	L/H side lights out
	02-Apr	4786	24	20	96.67	83.33	0.80	0.00	0.00	0.00	1	Broken L/H mirror; tighten grease hose
	03-Apr	4806	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	04-Apr	4827	24	21	99.03	87.50	0.23	0.00	0.00	0.00	0	Tighten mirror rubber
	05-Apr	4848	24	17	100.00	70.83	0.00	0.00	0.00	0.00	0	Not applicable
	06-Apr	4865	24	15	95.49	62.50	1.08	0.00	0.00	0.00	2	Brake stroke high; repair strobe light rear & handr.
	07-Apr	4880	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	08-Apr	4899	24	17	98.61	70.83	0.33	0.00	0.00	0.00	1	Weld crack on handrail
	09-Apr	4916	24	8	100.00	33.33	0.00	0.00	0.00	0.00	0	Not applicable
	10-Apr	4924	24	15	94.58	62.50	1.30	0.00	0.00	0.00	1	Repair rear strobe light wires
	11-Apr	4939	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	12-Apr	4960	24	9	95.63	37.50	1.05	0.00	0.00	0.00	2	Replace 2 x globes; top up engine oil
	13-Apr	4969	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	14-Apr	4985	24	13	100.00	54.17	0.00	0.00	0.00	0.00	0	Not applicable
	15-Apr	4998	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	16-Apr	5017	24	18	100.00	75.00	0.00	0.00	0.00	0.00	0	Not applicable
	17-Apr	5035	24	17	97.57	70.83	0.58	0.00	0.00	0.00	2	Top up water; adjust mirror bracket
	18-Apr	5052	24	19	100.00	79.17	0.00	0.00	0.00	0.00	0	Not applicable
	19-Apr	5071	24	19	98.47	79.17	0.37	0.00	0.00	0.00	1	Loose mirror bracket
	20-Apr	5090	24	17	100.00	70.83	0.00	8.33	0.00	0.00	1	Weld handrails, replace mirror
	21-Apr	5107	24	19	99.31	79.17	0.17	0.00	0.00	0.00	1	Replace cab light
	22-Apr	5126	24	22	99.31	91.67	0.17	0.52	0.00	0.00	2	Replace mirror; tighten mirror
	23-Apr	5148	24	21	100.00	87.50	0.00	0.00	0.00	0.00	0	Not applicable
	24-Apr	5169	24	16	100.00	66.67	0.00	0.00	0.00	0.00	0	Not applicable
	25-Apr	5185	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	26-Apr	5205	24	20	100.00	83.33	0.00	0.00	0.00	0.00	0	Not applicable
	27-Apr	5225	24	22	97.92	91.67	0.50	0.00	0.00	0.00	1	Top up coolant and engine oil
	28-Apr	5247	24	22	100.00	91.67	0.00	0.00	0.00	0.00	0	Not applicable
	29-Apr	5269	24	19	100.00	79.17	0.00	1.33	0.00	0.00	1	Replace mirrors x 2
	30-Apr	5288	24	16	0.00	0.00	1.00	0.00	0.00	0.00	1	Weld cracks on handrail and platform
	Closing	5304					7.75				16	
	TOTALS		720	540.00	98.92	75.00	7.75	10.18	0.00	0.00	16.00	
	AVERAGE			18.00	97.51			MTTR	0.48			
								MTBS	33.75			

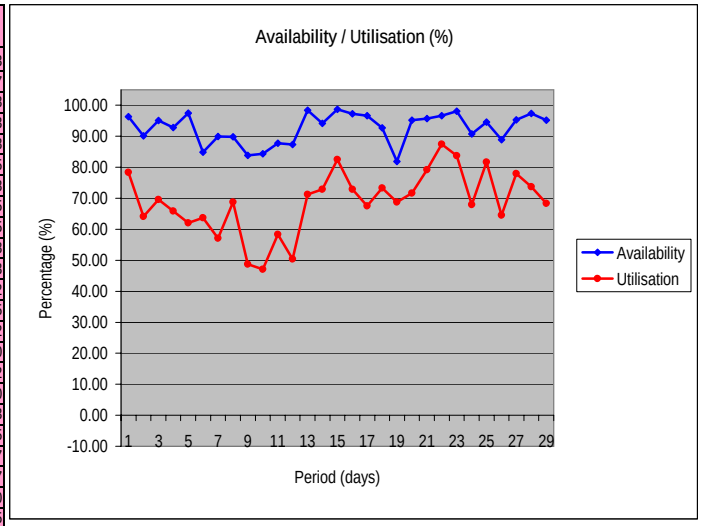


Breakdown percentage = Breakdown hours / Run hours = 1.435%

Middelburg Mine Services: Klipfontein Section

Period: April 2006

Machine	Date	Availability %	Utilization %
TOTAL	01-Apr	96.28	78.33
	02-Apr	90.12	64.17
	03-Apr	95.14	69.58
	04-Apr	92.81	65.83
	05-Apr	97.47	62.08
	06-Apr	84.90	63.75
	07-Apr	89.90	57.08
	08-Apr	89.87	68.75
	09-Apr	83.82	48.75
	10-Apr	84.35	47.08
	11-Apr	87.72	58.33
	12-Apr	87.33	50.42
	13-Apr	98.44	71.25
	14-Apr	94.21	72.92
	15-Apr	98.72	82.50
	16-Apr	97.22	72.92
	17-Apr	96.67	67.50
	18-Apr	92.73	73.33
	19-Apr	81.89	68.75
	20-Apr	95.19	71.67
	21-Apr	95.68	79.17
	22-Apr	96.67	87.50
	23-Apr	98.09	83.75
	24-Apr	90.76	67.92
	25-Apr	94.55	81.67
	26-Apr	88.85	64.58
	27-Apr	95.30	77.92
	28-Apr	97.41	73.75
	29-Apr	95.21	68.33
	30-Apr	0.00	0.00
Average	%	92.66	68.95



Middelburg Mine Services: Klipfontein Section

Period: TOTAL (fleet)

Machine	Date	Availability %	Utilization %	Difference
TOTAL	Nov'05	89.33	61.11	28.23
	Dec'05	90.18	64.34	25.84
	Jan'06	91.37	64.57	26.81
	Feb'06	92.95	70.77	22.18
	Mar'06	93.24	67.77	25.46
	Apr'06	92.66	68.95	23.71
Average	%	91.62	66.25	25.37