



TRAINERS CHECKLIST FOR

MODULE – CORE 04

DEMONSTRATE AN UNDERSTANDING

OF LEGAL REQUIREMENTS

AND COMPLETE LOG BOOKS

ASSESSMENT CRITERION 1.1

Regulations applicable to the appointment of persons to examine winding equipment

Do NOT refer to the regulations when answering these questions!

Question 1:

According to regulation 16.74, who is responsible to appoint you in writing to examine winding plant?

The responsible engineer

Question 2:

According to regulation 16.74.1,

(a) when must you conduct the examination?

(b) In your case, what must you examine?

(a) Daily.

(b) All external parts of the winding equipment, brakes, depth indicators and safety devices.

Question 3:

When will the examinations NOT be required?

If less than 50 trips are made during any such day.

Question 4:

What are the requirements of regulation 16.74.2?

Signalling arrangements and safety devices must be tested at least once per week.

ASSESSMENT CRITERION 1.2

Regulations applicable to the winding plant record and log books

Question 1:

Who shall provide a Machinery Record Book for each winding plant?

The Manager

Question 2:

Who must appoint you in writing in the Machinery record Book?

The responsible engineer

Question 3:

What must you do to acknowledge the appointment?

You must sign to acknowledge your appointment

Question 4:

What must you enter in the Machinery Record Book?

A true report of the winding plant

Question 5:

When must you record and sign the Machinery record Book?

Before starting or after completing any tasks on the winder.

ASSESSMENT CRITERION 1.3

Regulations applicable to the driver's log book

Question 1:

What log book will you find in the engine room?

Drivers' Log Book.

Question 2:

What must you record in the above log book?

Any warning given in terms of regulation **16.55**, such as examinations or repairs to be carried out and the time.

Question 3:

Before carrying out your duties as specified in regulation 16.74.1, what must you do?

Scrutinize the entries in the Drivers' Log Book and countersign

Question 4:

Before starting any examination, repairs or other work on a winding plant, what must you do?

Enter task in the Drivers' Log Book, the time and sign.

Question 5:

What is the driver's duty with regards to your entry?

To countersign the Log Book in your presence.

Question 6:

If you have to work in the shaft, and you have no adequate protection from other conveyances, falling stones or falling material, what shall you do?

With the engineers' permission inform all the drivers that you will be working in the shaft and stop winding operations.

Make the necessary entries in the Drivers' Log Book and sign, drivers to countersign in your presence.

Clear the log books when the work has been completed.

Question 7:

What shall you do for instance if it is not practical whilst carrying out repairs or other work in a shaft, to log what you are about to do in the driver's log book? Who then may make the entry on your behalf?

(a) Warn driver over the shaft telephone (intercom).

(b) The driver can make the entry in his log book on your behalf.

Question 8:

What shall you do after completion of such repairs or other work?

Clear the driver's log book by recording the time cleared and sign.

Driver to countersign in your presence.

ASSESSMENT CRITERION 1.4

Regulations applicable to small winding plants

Answer the questions below by giving a brief but meaningful description.

Question 1:

Does a 38 kW Fulton winch require to be licensed? If NOT, explain why.

No. It does not carry personnel and is less than 250 KW

Question 2:

If a winding plant is not licensed, may it be used to raise or lower persons in a shaft or winze?

Yes, only when effecting repairs or examination.

Question 3:

What equipment is it your duty to examine on the winding plant?

The safety devices, external electrical parts, the signalling arrangements and safety devices used in connection therewith.

Question 4:

Who is responsible to appoint you in writing in the Small Hoist Record Book?

Sectional Engineer.

Question 5:

At what frequency is it your duty to examine the winding plant?

Once weekly.

ASSESSMENT CRITERION 1.5

Regulations applicable to the elevator record book

Question 1:

Who is responsible to appoint you in the Elevator Record Book?

Sectional Engineer.

Question 2:

What must you record in the Elevator Book after your examination?

Results of examination, including details of any repairs or alterations carried out.

Question 3:

List the equipment which it is your responsibility to examine.

The motor and all the electrical safety appliances

Question 4:

At what frequency shall you conduct your examination?

Weekly.

Question 5:

What shall you do if during your examination you detect a defect on the equipment?

Stop the elevator and immediately report to the Engineer, and enter in the Elevator Record Book results of the examination and the defects.

ASSESSMENT CRITERION 1.6

Regulations applicable to the Humble Hook record book

Question 1:

REG. 16.58 states what must be fitted if the winding rope is fastened to the drum of the winding engine?

There shall be fitted detaching hooks to detach from the winding rope any conveyance over wind in the headgear and to support it.

Question 2:

At what intervals must the connections be removed and inspected?

16.18	At intervals of not more than 6 months the connections between -
(a)	any winding rope and the conveyance or counterpoise,
(b)	the conveyance and any trailer or other attached conveyance, and
(c)	any balance rope or tail rope and the conveyance or counterpoise,

Question 3:

What must be recorded in accordance to regulation 16.19?

16.19 A proper record shall be kept of the heat treatment and working life of the connections referred to in regulation 16.18 and an engineer shall add to the record the report on the method procedure followed in such treatment and his comments on the results.
All such connections and their component parts shall be marked clearly for the purpose of identification.

ASSESSMENT CRITERION 2.1

Preface to the substation record book

Question 1:

What is the most important information given in the preface that relates to the substation record book?

Under no circumstances is it to be removed, defaced or used for any other purpose whatsoever.

Question 2:

What type and capacity of fire extinguishers are used in the substations?

9 kg dry type fire extinguishers and 15Kg CO2

ASSESSMENT CRITERION 2.2

Code of practice of the substation record book

Question 1:

What are the requirements of the code with regards to the Substation Record Book?

- (a) The substation record book is only to be used in accordance with the instructions of the Preface To Substation Record Books.
- (b) It must never be removed or allowed to be removed from the substation.
- (c) Do not deface, tear out pages, or use the Substation Record Book for any other purpose whatsoever, other than what it is intended for.

Question 2:

Give the 5 operations that must be recorded in the Substation Record Book.

- (a) All switching operations.
- (b) Any material adjustment of any kind.
- (c) Maintenance to H.V. equipment.
- (d) Testing of protective devices.
- (e) Protection relay setting (as changed by electrical engineer only).

Question 3:

Who must record the operations in the record book?

By the person responsible.

Question 4:

What is still required to be entered in the record book by the person doing the recording, to complete his entries?

It must be dated and signed.

Question 5:

When is it the duty of the Surface Foreman Electrician to check and initial the Substation Record Book?

Once every 30 days.

Question 6:

What are the requirements of the code with regards to the removal of the record book from the substation?

It must remain in the Substation at all times.

Question 7:

Whenever a H.V. circuit breaker trips, what must you record in the record book?

What protective relays have "flagged" and on what panel they are situated.

Question 8:

On a standard 3 tier CDG36 relay, what words must you use to identify the flag that dropped on a trip-out to prevent any misunderstanding?

The words "top", "middle" and "bottom".

Question 9:

When must you inspect the substation fire extinguishers?

On a monthly basis.

Question 10:

What must you check on the fire extinguishers?

That the extinguishers are in place and the seals are not broken.

Question 11:

What should you do after your inspection of the fire extinguishers?

Record the results of inspection in the Substation Record Book.

Question 12:

If on your inspection you found that the seals are broken on the fire extinguishers, what will you do?

Record it in the Record Book and immediately notify the Surface Foreman Electrician.

ASSESSMENT CRITERION 3.1, 3.2, 3.3 & 3.4

Requirements of the driver's report

Requirements regarding the examination

Special instructions or warnings to the engine driver

Reporting of defects or dangerous practices

Question 1:

Assume that according to the Planned Maintenance Schedule for daily hoist examination, you are given 30 minutes to complete the examination and you started at 07h00. Complete this extract from the driver's log book.

	TIME	SIGNATURE	DRIVER'S SIGNATURE	TIME CLEAR	SIGNATURE	DRIVER'S SIGNATURE
Fitter Skip/ Cage Exam						
B/Maker Skip/ Cage Exam						
Rigger Rope Exam						
Fitter Daily Hoist Exam						
Elec. Daily Hoist Exam	07h00	A.N. Other	Driver	07h30	A.N. Other	Driver
Elec. Working on Hoist						
Fitter Working on Hoist						
Engineer Working on Hoist						
Monthly Rope Exam						
Shaft Examination						
Special Instructions or Warnings to Engine Driver						
Special Remarks by Drivers						
REPORT ANY DEFECTS OR DANGEROUS PRACTICES						
	ARE YOU FULLY AWARE OF THE REQUIREMENTS OF REG. 16.74 & 16.74.1?					

Question 2:

Assuming that during your daily examination on the Man Winder, you find that the left hand Lilly Controller's duplex governor heads are not turning, even though the drive shaft is turning. Complete this extract from the driver's log book, assume that you started your examination at 07h15, and the Section Engineer is not readily available.

Depth indicator						
All other fittings						
Safety Devices etc						
Signalling arrangements						
Faulty signals received						
SIGNATURE OF DRIVER						
	TIME	SIGNATURE	DRIVER'S SIGNATURE	TIME CLEAR	SIGNATURE	DRIVER'S SIGNATURE
Fitter Skip/ Cage Exam						
B/Maker Skip/ Cage Exam						
Rigger Rope Exam						
Fitter Daily Hoist Exam						
Elec. Daily Hoist Exam	07h15	A.N. Other	Driver			
Elec. Working on Hoist						
Fitter Working on Hoist						
Engineer Working on Hoist						
Monthly Rope Exam						
Shaft Examination						
Special Instructions or Warnings to Engine Driver						
Special Remarks by Drivers						
REPORT ANY DEFECTS OR DANGEROUS PRACTICES	LEFT HAND LILLY CONTROLLER FAULTY (SHAFT SHEARED).					
	WINDER NOT TO BE USED UNTIL SECTION ENGINEER OR RESIDENT					
	ENGINEER HAS EXAMINED AND LILLY CONTROLLER REPAIRED. A.N. Other					
	ARE YOU FULLY AWARE OF THE REQUIREMENTS OF REG. 16.74 & 16.74.1?					

Question 3:

Assume you have to change the left hand Lilly Controller on the Man Winder. You start working at 08h00 and complete the task at say 12h00. Complete this extract from the driver's log book.

Depth indicator						
All other fittings						
Safety Devices etc						
Signalling arrangements						
Faulty signals received						
SIGNATURE OF DRIVER						
	TIME	SIGNATURE	DRIVER'S SIGNATURE	TIME CLEAR	SIGNATURE	DRIVER'S SIGNATURE
Fitter Skip/ Cage Exam						
B/Maker Skip/ Cage Exam						
Rigger Rope Exam						
Fitter Daily Hoist Exam						
Elec. Daily Hoist Exam	08h00	A.N. Other	Driver	12h00	A.N. Other	Driver
Elec. Working on Hoist						
Fitter Working on Hoist						
Engineer Working on Hoist						
Monthly Rope Exam						
Shaft Examination						
Special Instructions or Warnings to Engine Driver						
Special Remarks by Drivers						
REPORT ANY DEFECTS OR DANGEROUS PRACTICES	CHANGED FAULTY LEFT HAND LILLY CONTROLLER. A.N. Other					
	ARE YOU FULLY AWARE OF THE REQUIREMENTS OF REG. 16.74 & 16.74.1?					

ASSESSMENT CRITERION 4.1

Requirements to complete the machinery record book

Question 1:

Assuming during your daily hoist examination you find that the winder's right hand Lilly Man overwind trips out when the conveyance is 3m above the bank instead of 1m as a standard laid down for the specific winder. You find that the overwind cam is loose and has shifted.

(a) Complete the example sheet of the Record Book.

(b) On the same page write down a brief description of what you will do in this case.

Date	Trade	Name	Equipment examined	Parts replaced	Remarks	Signature
	Fitter					
2007-07-31	Electrician	A.N. Other	xxxxxx	xxxxxx	xxxxxx	A.N. Other
	Boilermaker					
	Rigger					
What will you do in this situation?						
xxxxxx						

Question 2:

- (a) During your weekly hoist examination you found that it was required to replace the brushes on the D.C. Rock Winder's No. 1 Generator of the M.G. set.

Complete the example sheet of the Record Book below.

- (b) On the same page write down a brief description of what you will do in this situation.

Date	Trade	Name	Equipment examined	Parts replaced	Remarks	Signature
	Fitter					
2007-07-31	Electrician	A.N. Other	MG Set Generator No. 1	Set of brushes	Found brushes worn down and replaced the full set	A.N. Other
	Boilermaker					
	Rigger					
What will you do in this situation?						
XXXXXX						

ASSESSMENT CRITERION 5.1

Requirements to complete the small hoist record book

No separate assessment is made of this criterion due to the similarity between this record and the Machinery Record Book.

ASSESSMENT CRITERION 6.1

Requirements to complete the elevator record book

Question 1:

Assuming during your examination you find that the arm of the door switch in the hatchway on the second landing has been broken off and the switch requires to be replaced. You have a spare switch in your workshop. Complete the examination report below.

- (a) Give a brief explanation of what you will do about the situation.

WEEKLY EXAMINATION OF THE GUIDES AND ROPES, THE ENGINE OR MOTOR, ALL DRUM, AND SHEAVES AND ALL SAFETY APPLIANCES: AS REQUIRED BY REGULATION No. C118		
Date	Signature of person who made the examination	Report of the result of the examination
2007-07-31	A.N. Other	2nd DOOR LANDING SWITCH BROKEN

- (b) After having done what you stipulated in (a) above, what will you record in the section below?

Date	Reports of any stoppages, breakdowns, accidents or repair details
2007-07-31	2nd door landing switch broken. Stopped elevator & installed new switch. Elevator checked and in order.

ASSESSMENT CRITERION 7.1

Requirements to complete the substation record book

Question 1:

Assume you have to do a weekly examination on a man winder, and you trip the winder's H.V. circuit breaker by means of manually operating the "top" overcurrent relay of the CDG36 relay at 08h00. After your examination which took 4 hours to complete, you reclose the circuit breaker.

Complete the log sheet below.

Date	Time	Operations performed HV equipment	Protection relays "Flagged" (if applicable)	Signature
2007-08-31	08h00	Tripped Man Winder circuit breaker for hoist exam	Manually operated "Top" O/C relay	A.N. Other
2007-08-31	12h00	Reclosed Man Winder circuit breaker		A.N. Other

Question 2:

Assume on Sunday 5 August 2007 you have to do a yearly examination on the Auxiliary Transformer H.V.O.C.B. of a Rock Winder and change the oil as well.

You isolate and rack out the OCB at 07h00 and rack in and reclose the OCB at 10h00 to check if all is in order.

The Surface Foreman Electrician does the necessary inspection tests and recording thereof in the log book.

Complete this copy of the log sheet showing what you have done.

Date	Time	Operations performed HV equipment	Protection relays "Flagged" (if applicable)	Signature
2007-08-05	07h00	Isolate and rack out rock winder auxiliary transformer H.V. OCB for yearly exam. Changed oil.		A.N. Other
2007-08-05	10h00	Rack in and reclose rock winder auxiliary transformer H.V. OCB.		A.N. Other

Note to Trainer:

This is a complex record. Ensure that the trainee discusses various scenarios that could arise, and let them practice filling in the record sheets.

ASSESSMENT CRITERION 8.1

Requirements to complete the humble hook record book

Question 1:

Assume humble hook serial No. 3636 has been removed from 14 shaft rock hoist U/L compartment on 18th November 2007. The humble hook is completely dismantled, cleaned and ready for inspection. According to the Section Engineer the following parts are to be changed: Thimble pin, Standard Shackle, standard pin and lower link pin. The reason for replacement parts is that they are badly worn. The parts were installed on 21st Nov 2007.



HUMBLE HOOK DATA AND CASE HISTORY

HOOK NO: 3636 SIZE: 254 WINDER: ROCK DWG NO: 2040 REV 4

DATE		LOCATION		TOTAL MONTHS		DATE OF LAST N.D.T	ENGRS. INTLS
INSTALLED	REMOVED	SHAFT	COMPT	WORKED	PROGRESSIVE		
	18.11.2007	14	U/L	6 MTS			

HOOK PARTS REPLACED SUMMARY

PART DESCRIPTION	REASON FOR REPLACEMENT	DATE	ENG INTL
THIMBLE PIN	BADLY WORN	20.11.2007	
STANDARD SHACKLE	BADLY WORN	20.11.2007	
STANDARD PIN	BADLY WORN	20.11.2007	
LOWER LINK PIN	BADLY WORN	20.11.2007	

Question 2:

The Engineer of 20 Shaft purchased a new Humble Hook on the 04th April 2007. The Serial number is 4528 and the drawing number used is IMP2510 According to the drawing the size is 254. NDT took place of the humble hook on 14th April 2007. You installed it on the O/L of the Man conveyance on 14th May 2007.

Fill in the required information on the Data sheet.



HUMBLE HOOK DATA AND CASE HISTORY

HOOK NO: 4528 SIZE: 254 WINDER: MAN DWG NO: IMP 2510

DATE		LOCATION		TOTAL MONTHS		DATE OF LAST N.D.T	ENGRS. INTLS
INSTALLED	REMOVED	SHAFT	COMPT	WORKED	PROGRESSIVE		
14.05.2007		20	O/L	NEW	N/A	14.04.2007	

HOOK PARTS REPLACED SUMMARY

PART DESCRIPTION	REASON FOR REPLACEMENT	DATE	ENG INTL