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Engineering Level 1 Unit 4

Diploma Portfolio Extracts

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Authorised by Nick Kelly
Prepared by Mark Woodcock

Foreword

Welcome to the sample of portfolio guidance extracts for Phase One Principal Learning subjects. We are delighted to continue to add to the range of support materials Edexcel has on offer to further support Consortia in maximising their Principal Learning performance. For our full range of information and guidance across administration, delivery and assessment support please see our website www.edexcel.com/diploma, or contact the DAB delivery team to access our range or training and support.

Purpose

The purpose of these materials is to help practitioners understand the requirements of the Principal Learning unit assessment through review and commentary on extracts of learner work. We have used a selection of learner evidence across a range of learner performance to help improve understanding of how to maximise performance.

This material has been selected and commented on by our Senior Moderation team after the first year of reviewing and setting the standards on the initial cohort of learners. Please ensure to read all of the commentary available as this aims to show how the extracted evidence used is relevant for that mark band and, where possible, what might make it suitable for the other bands.

If you have any feedback or comments regarding these materials, or any of our Diploma services, please contact diplomaops@edexcel.com. Alternatively for further discussion or questions around standards or Principal Learning specifications please use our **Ask The Expert service**, via our website, for a direct response from our Senior team within 2 working days.

Using these materials

The basic principle when awarding marks against the relevant mark grids is that it is 'best fit'. It is not a hurdle approach. Marks may be awarded from the next band if one or more of the items within the marking criteria have been met. With this in mind it is essential when reviewing the enclosed commentaries that you read the comments across all 3 of the marks bands.

All marks awarded on the enclosed sample assignments are for "Marking Grid A" only. The awarding of marks for "Mark Grid B", which is ephemeral, has not been commented on or included in the overall marks awarded.

This work is indicative only, not all learners will approach their assignments in the same way. Similarly, they will not necessarily present their evidence in the same format.

Important note!

The evidence contained within these pages has been extracted from a variety of completed portfolios and not all of the learner's evidence has therefore been included. These extracts are not designed to show you how much work to produce but show different types of evidence that could contribute to a learner's final work.

Your Training & Support from Edexcel

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Training
Our training events are an ideal opportunity for you to understand the qualification requirements, share experience and learn from emerging practice. The sessions are designed to be practical, stimulating and informative, and are developed each year to reflect the evolving needs of practitioners.

Previewing the Diploma events are Line of Learning specific and designed for practitioners who will be delivering the Principal Learning for the first time, Local authority advisors and Diploma advisors.

Delivery and assessment events cover all of our lines of Principal Learning and are focused on approaches to planning for assessment, writing assignments and assessing learner work.

Developing assignments and assessing learners events cover all of our lines of Principal Learning and will review tutor support materials and will look at developing assignments as well as standardisation exercises.

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Consortium-based training is for any consortium or group of consortia, working together, who wishes to access our off-the-shelf training, delivered at a time and place of your choice. There is also the option to customise the events to suit your own individual requirements. These events are aimed at consortium managers, assessors and practitioners – in fact, your whole Diploma team!

To book or search for an event visit **www.edexcel.com/training** if you are an Edexcel Online user. If you are not an Edexcel Online user email your request to **trainingbookings@edexcel.com** so our training team can process the booking for you.

Alternatively, call 0844 576 0028 for further details and book your place.

Diploma Delivery Pack
Your **Diploma Delivery Pack** is an essential administrative support tool for your Consortium. It also contains important information for your exams office, your teachers and tutors! For example it includes:

- Administration, procedures and delivery options and requirements
- ASL cross sector model and sector specific model
- Introduction to Diploma planning and roles
- 36 example Delivery Plans across Levels 1 & 2 for Phase I & II Diplomas
- CD-ROM access with practical guidance and useful links

These are available through your local training events or via your DAB Centre Support Officer.

Contact us about this Diploma Sample Portfolio
If you have ideas, comments or suggestions on what went well and what can be improved, please email diplomaops@edexcel.com or call your DAB Centre Support Officer (CSO) on 0844 576 0028.

LO1.1 Examples

Focus
Know about different types of maintenance procedures

30th April 2009. ①
Ref. LO.1.1-1

Jack Mitchell Ks4 HBS

Engineering Foundation – unit 4: Developing Routine Maintenance Skills

Planned Maintenance:

Planned maintenance is where a vehicle such as a car is booked into a garage for certain parts to be checked over or replaced eg. oil filter is replaced after so many miles (round about 1,000 miles depending on make and model of the car)this is the same for a M.O.T, however the M.O.T is a safety requirement by the Ministry of transport and is carried out after the first 3 years of purchasing a new vehicle then once every year to ensure that the vehicle is road worthy .When ever a vehicle is going to be serviced paper work has to be provided eg. a pre-delivery service and a job card, this shows the vehicle's previous maintenance history this is required by the Ministry of transport.

LO1. ① Tick 1.1

Unplanned maintenance:

Un planned maintenance is where a vehicle has broken down and a fault has accrued within the vehicle. A mechanic is then called out to checked over the vehicle and to locate the fault and then if possible to fix the problem .

Routine maintenance:

L.O1. ① Tick 1.1

Routine maintenance is where electrical surplus, connexions and fluid levels are toped up so that the vehicle can function propel e.g power steering, brake fluid and engine coolant levels are kept above standard .Vehicles should regularly be serviced to ensure that the vehicle complies with the current legislation. Also to provide the driver with transport that is reliable and dependable. But as well as that it is important to provide the driver with a vehicle that performs to that manufacturers specifications.

Tick 1.2 – 3 types given

Mark Band 1
Three applications of maintenance activities have been identified. These are of different types. The assessment instrument has taken the learner to this methodology. A use has been stated for each.

Mark Band 2
A range of descriptions has been included, one may be limited but most marks can be awarded from this mark band.

Mark Band 3
There is limited evidence to support why the procedures are needed. It has been accepted that this has been done for two of the maintenance types and so balances the shortage of range of description in mark band 2.

LO1.2 Examples

Focus
Know about different types of maintenance documentation

Such Mitchell HS14 HBS
Engineering Portfolio
Unit 4 30th April 2009 (2)

Ref LO1 1.2

Documentation

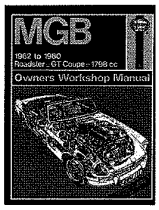
When carrying out a maintenance procedure tow main types of documentation is needed. One type of documentation is a Pre- delivery service sheet this is a list of items for inspection: this includes the vehicle exterior eg. Lights, doors, bonnet, tail gate, headlight cleaners, fuel flap and exterior finsh(paint/body work)the inspection also includes conponets under the bonnet and within the engine eg. Engine coolant, windscreen washer fluid, engine oil, brake and clutch fluid, battery terminals, re-fit transit fuses, wiring connectors and hose connectors this is basely a check list made by the ministry of transport for the roadworthiness test (M.O.T). The second type of documentation is a job card this is a MITC technical data sheet where the mechanic fills it in to prove what he/she has down and how long it has took him/her.

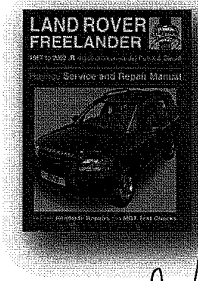
1.1

What should be covered by two different types of maintenance documentation.

L.O.1 1.2.

When maintenance is carried out on a vehicle the mechanic uses a manual called Haynes manual. Each Haynes manual is relevant to the model and make of the vehicle, this enables the mechanic to carry out a pacific maintenance procedure on the vehicle. Auto data is also used, it is a computer based document which has technical data referring to the pacific vehicle as well.





Ref. L.O.1. Task 1.1 and 1.2.
RKR

Mark Band 1
Two examples of documentation have been identified along with a maintenance task where they would be applied so a full range of marks can be awarded from this mark band.

Mark Band 2
The different sorts of documentation have been described and examples of maintenance applications have been given.

Mark Band 3
How to use the documentation has not been fully explained. There is some confusion as the learner has mentioned service sheets, job cards, Haynes manuals and Auto data as documentation.

LO3 Examples

Focus
Be able to assess a product, piece of equipment or system against causes of failure

(5)
2.03

Jack [redacted]

Unit 4 LO3 Assess a product against failure

11/6/09

Vehicle registration

Vehicle chassis number

Procedure;

put in to be a table to show ticks as we work alongside with the procedure.

- ***Raise car***
- ***Remove wheels***
- ***Remove brake pads***
- ***Locate dial gauge onto suspension point***
- ***Zero gauge***
- ***Secure disc***
- ***Measure run out***
- ***Record data onto data collection sheet***
- ***Use micrometer to establish disc thickness***
- ***Record data onto data collection sheet***
- ***Evaluate data against manufacture's specifications***
- ***Report finding and recommendations.***
- ***Replace compnents***

a nicer table to show measurements & specifications and results.

Signature of tutor and me

Mark Band 1
A simple plan has been devised and implicitly appears to have been carried out. Full marks can be awarded from this mark band. The Assessor has initialled the data collection sheets.

Mark Band 2
Key measurements have been recorded, this supports the implicit nature that the practical work has been carried out. The records clearly show how the measurements taken compare with the manufacturers requirements enabling a judgement to be made about whether a failure during use might occur. The evidence to presented against this by a statement whether parts need to be replaced or not. This enables a full range of marks to be awarded from this mark band.

Mark Band 3
The plan has been reviewed albeit it appears after feedback was given to the learner and a second plan in the form of a table is accepted to be the improvement for its use.

LO3 Examples continued

Sa
L.03

Jack [redacted]

Unit 4 Lo3 Assess a product against failure

11/6/09

Vehicle details:

Make	Model	Vin Number
Peugeot	370, 1.4	Vf 83755430

Procedure;

• Raise car	✓	• Use micrometer to establish disc thickness	✓
• Remove wheels	✓	• Record data onto data collection sheet	✓
• Remove brake pads	✓	• Evaluate data against Manufacture's specifications	✓
• Locate dial gauge onto suspension point	✓	• Report finding and recommendations	✓
• Zero Gauge	✓	• Replace components	✓
• Secure disc	✓	• Put tools away	✓
• Measure run out	✓	• Change out of ppe	✓
• Record data onto data collection sheet	✓		

Manufacturer's max. disc run-out	Front N/S disc run-out	Front O/S run-out	
—	0,05	0,05	✓✓
Manufacturer's min. disc thickness	Front N/S disc thickness	Front O/S disc thickness	
20:00	20:92	20:92	✓✓
Manufacturer's min. pad thickness	OS pads thickness	NS pads thickness	
2.5mm	Inner 4 outer 5	Inner 4 outer 5	✓✓

Assessor signature [redacted]

Candidate signature Jack [redacted]

Mark Band 1

A simple plan has been devised and implicitly appears to have been carried out. Full marks can be awarded from this mark band. The Assessor has initialled the data collection sheets.

Mark Band 2

Key measurements have been recorded, this supports the implicit nature that the practical work has been carried out. The records clearly show how the measurements taken compare with the manufacturers requirements enabling a judgement to be made about whether a failure during use might occur. The evidence to presented against this by a statement whether parts need to be replaced or not. This enables a full range of marks to be awarded from this mark band.

Mark Band 3

The plan has been reviewed albeit it appears after feedback was given to the learner and a second plan in the form of a table is accepted to be the improvement for its use.

LO3 Examples continued

5b
L.03

DATA COLLECTION SHEET LEVEL 1 LIGHT VEHICLE REPAIR

TASK NO. 17 REPLACE BRAKE PADS & SHOES

CANDIDATE NAME: Zach [redacted] **DATE:** 11/6/09

Vehicle Details:

Make	Model	VIN Number
Peugeot	307, 1.4	VF637554 3C

List the procedure you used for checking Disc Brake serviceability.

See devised maintenance schedule Attached

Tools and equipment used:
Dial gauge, Micrometer, Spanner, Screwdriver

Manufacturer's max. Disc run-out	Front N/S disc run-out		Front O/S disc run-out	
~~2.1 mm~~ 0.01 mm	0.01 mm		~~2.0 mm~~ 0.005 mm	
Manufacturer's min. Disc thickness	Front N/S disc thickness		Front O/S disc thickness	
20:00	20:02		20:02	
Manufacturer's min. pad thickness	OS Pads thickness		NS Pads thickness	
2.5 mm	inner 4	outer 4	inner 5	outer 4

ASSESSOR SIGNATURE [redacted]

Mark Band 1

A simple plan has been devised and implicitly appears to have been carried out. Full marks can be awarded from this mark band. The Assessor has initialled the data collection sheets.

Mark Band 2

Key measurements have been recorded, this supports the implicit nature that the practical work has been carried out. The records clearly show how the measurements taken compare with the manufacturers requirements enabling a judgement to be made about whether a failure during use might occur. The evidence to presented against this by a statement whether parts need to be replaced or not. This enables a full range of marks to be awarded from this mark band.

Mark Band 3

The plan has been reviewed albeit it appears after feedback was given to the learner and a second plan in the form of a table is accepted to be the improvement for its use.

LO3 Examples continued

CENTRE NAME:
LEVEL: 1

CENTRE NUMBER:
ROUTE: Light Vehicle

PRACTICAL TRAINING TASK No: 17 – Check Brake Discs and Pads for serviceability

TIME ALLOCATION: Job dependant - about 2.5 hours

Candidate Name JACK [redacted]

Rationale: Candidate is required to replace the brake pads and check braking system for wear, leaks and defects.

	Unit/Objective	The candidate: -	Attempt 1 Yes	Attempt 1 No	Attempt 2 Yes	Attempt 2 No	Assessor's Comments
1		Candidate used all necessary PPE and vehicle protection equipment	✓				Jack tackled all the areas of this task well. Confidently completed all work following his plan!
2		Correctly identified vehicle make, model and VIN number	✓				
3		Correctly and safely positioned vehicle on lift OR axle stands removed all vehicle wheels using appropriate tools	✓				
4		Removed all brake pads using appropriate tools and procedures	✓				
5		Used Micrometer to check disc thickness	✓				
		Used Micrometer to check Pad thickness	o				
6		Checked brake disc for run-out using dial test indicator	✓				
7		Located disc run-out tolerances from manufacturer's data and determined if the run out is within tolerance	✓				
		Located disc thickness tolerances from manufacturer's data and determined if the disc is within tolerances	✓				
8		Correctly refitted brake pads using appropriate tools and procedures	✓				
9		Checked the operation of footbrake and parking brake systems	✓				
10		Correctly and safely refitted all vehicle wheels and replaced vehicle at floor level using appropriate tools (air tools/wheel brace/sockets)					
11	-	Completed the Data Collection sheet for this task					

Date 11/6/09 **Assessor Signature** [redacted]

30,000

LO3 5c

Mark Band 1

A simple plan has been devised and implicitly appears to have been carried out. Full marks can be awarded from this mark band. The Assessor has initialled the data collection sheets.

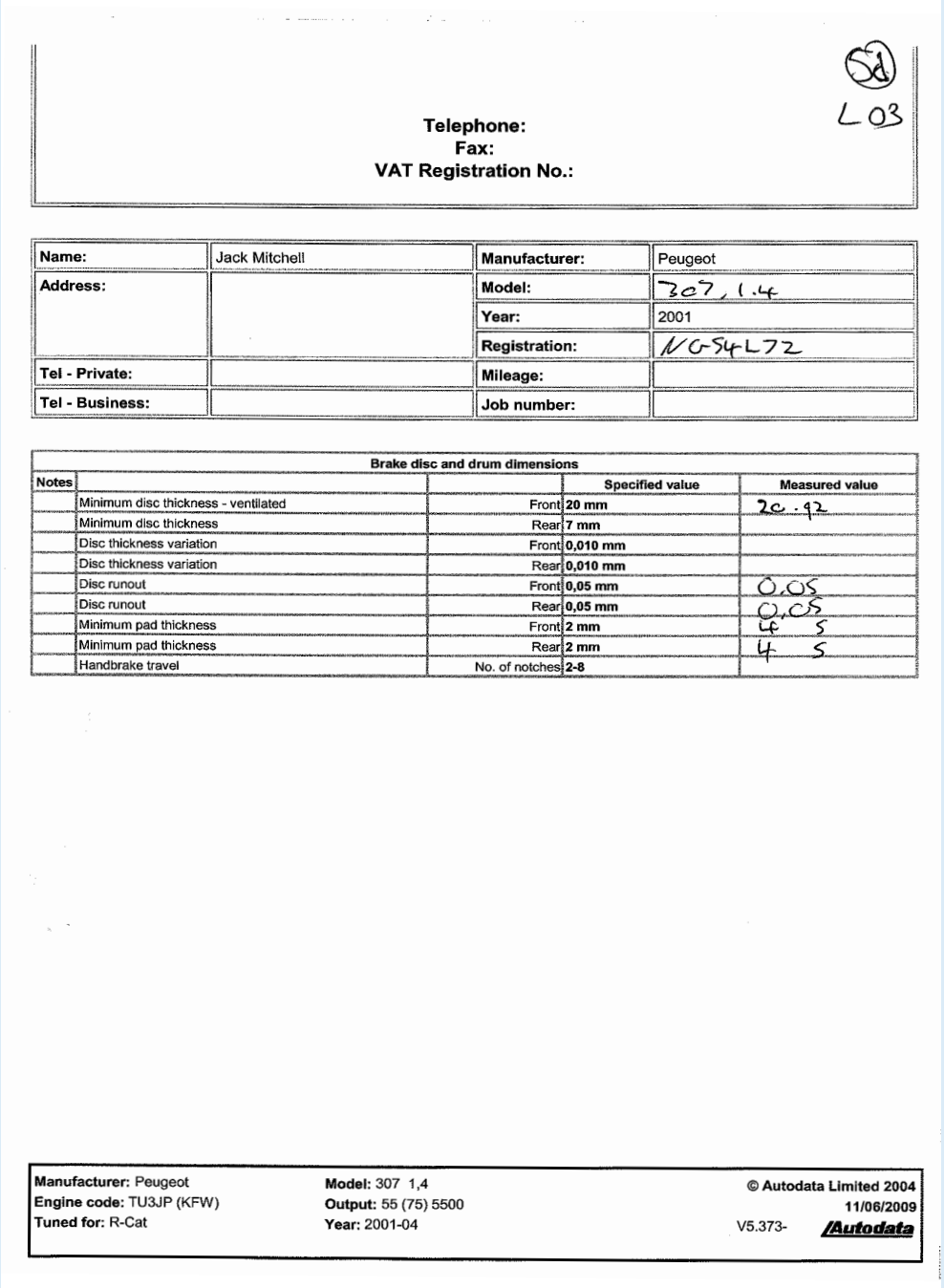
Mark Band 2

Key measurements have been recorded, this supports the implicit nature that the practical work has been carried out. The records clearly show how the measurements taken compare with the manufacturers requirements enabling a judgement to be made about whether a failure during use might occur. The evidence to presented against this by a statement whether parts need to be replaced or not. This enables a full range of marks to be awarded from this mark band.

Mark Band 3

The plan has been reviewed albeit it appears after feedback was given to the learner and a second plan in the form of a table is accepted to be the improvement for its use.

LO3 Examples continued



Telephone:
Fax:
VAT Registration No.:

LO3

Name:	Jack Mitchell	**Manufacturer:**	Peugeot
Address:		**Model:**	307, 1.4
		Year:	2001
		Registration:	NG54L72
Tel - Private:		**Mileage:**	
Tel - Business:		**Job number:**	

Brake disc and drum dimensions

Notes			Specified value	Measured value
	Minimum disc thickness - ventilated	Front	**20 mm**	20.92
	Minimum disc thickness	Rear	**7 mm**	
	Disc thickness variation	Front	**0,010 mm**	
	Disc thickness variation	Rear	**0,010 mm**	
	Disc runout	Front	**0,05 mm**	0.05
	Disc runout	Rear	**0,05 mm**	0.05
	Minimum pad thickness	Front	**2 mm**	4 5
	Minimum pad thickness	Rear	**2 mm**	4 5
	Handbrake travel	No. of notches	**2-8**	

Manufacturer: Peugeot
Engine code: TU3JP (KFW)
Tuned for: R-Cat

Model: 307 1,4
Output: 55 (75) 5500
Year: 2001-04

11/06/2009
V5.373- Autodata

Mark Band 1

A simple plan has been devised and implicitly appears to have been carried out. Full marks can be awarded from this mark band. The Assessor has initialled the data collection sheets.

Mark Band 2

Key measurements have been recorded, this supports the implicit nature that the practical work has been carried out. The records clearly show how the measurements taken compare with the manufacturers requirements enabling a judgement to be made about whether a failure during use might occur. The evidence to presented against this by a statement whether parts need to be replaced or not. This enables a full range of marks to be awarded from this mark band.

Mark Band 3

The plan has been reviewed albeit it appears after feedback was given to the learner and a second plan in the form of a table is accepted to be the improvement for its use.

LO3 Examples continued

5e

Jack Mitchell HBS
Unit 4 Lo3 assess a product against failure
11/6/09

Evolution of Peugeot 370,1.4

Looking at the manufacturer's specification of the Peugeot 370,1.4 on auto data a computer based software and then comparing them to my results of the disc run-out and disc thickness the brakes will not need any work or replacement for at least another 30,000 miles as the min disc thickness is 20.00mm and at the moment the thickness is riding at 20.92 so therefore the car is safe to drive.

Mark Band 1
A simple plan has been devised and implicitly appears to have been carried out. Full marks can be awarded from this mark band. The Assessor has initialled the data collection sheets.

Mark Band 2
Key measurements have been recorded, this supports the implicit nature that the practical work has been carried out. The records clearly show how the measurements taken compare with the manufacturers requirements enabling a judgement to be made about whether a failure during use might occur. The evidence to presented against this by a statement whether parts need to be replaced or not. This enables a full range of marks to be awarded from this mark band.

Mark Band 3
The plan has been reviewed albeit it appears after feedback was given to the learner and a second plan in the form of a table is accepted to be the improvement for its use.

Marking Grid B
LO2 Examples

Focus
Be able to use tools safely and effectively to carry out a routine maintenance task

Sach Mitchell (3)
Not LO2

Maintenance of procedure on oil filter

We as a group where told to change the oil filter on a car in the workshop. So first we change into are P.P.E(personal protective equipment)

- **Helmet** (we have some to borrow. Hard hats are okay. Or you can purchase at www.thefirestore.com/store/category.cfm ?cID=1501)
- **Ear protection** (we'll supply these)
- **Eye protection** (sunglasses are okay)
- **Long sleeve shirt**
- **Work gloves**
- **Long pants** (army surplus stores sell cargo/emt pants)
- **Boots** (preferably steel toe)

Additional protective padding is optional (knees, elbows).

PPE

and then split into groups of 4, before we made a start on changing the oil filter we had to fill in paperwork this consist of data about the car eg. Make, model, VIN number, engine oil specification, engine oil capacity and filter type after that we made sure that the car had not been running within two hours, otherwise we may scald are self's on the hot oil, also the dipstick will not show a true reading. However we run the engine at low revs for no more than two or three minutes beforehand to thin the oil. We then opened the bonnet and remove the oil-filler cap. The cap is usually plastic, and located on top of the engine block.

We then put are hard hats on and used the two post lift to rays the car to work from underneath so that we can drain the oil and access the oil filter

Using the spanner/socket set, we start to unscrew the sump plug anticlockwise and used the container to catch the oil. Making sure that are heads is not directly beneath the plug so that we do not get a face full of oil. We then took the last few turns of the sump plug off by hand, and let the oil drain into the container. However we had to keep a eye on the container as the flow of oil is likely to move as the sump empties. Once

Mark Band 1

There is a lot of documentation to show what the learner did in a 'car maintenance' environment. A lot of underpinning knowledge has been included. Holistically taken some of this can consolidate the award of marks given in mark grid A, otherwise it can also support the use of documentation, tools and equipment for a routine maintenance task.

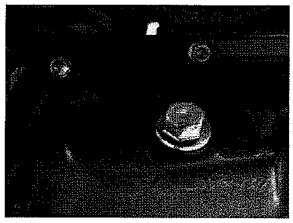
Mark Band 2

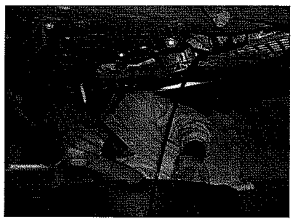
A lot of this evidence is superfluous to requirement. There is however scattered annotation on the evidence against this assessment focus. It does lack any clarity but because the Assessor has awarded 18 marks for this assessment focus it has been accepted that in the main the learner worked with limited guidance and their performance when carrying out the routine task performed in line with the guidance given in the specification of this unit for this mark band.

Mark Band 3

There is no evidence to support independent working. A witness statement needs to be included to explain exactly what guidance the learner received. Page 68 and 69 of the specification gives clear terminology to use to represent the level of support given and observed. In this evidence the term 'minimum guidance' has been taken as a mark band 2 performance.

LO2 Examples continued





empted we would then take the old oil to a garage or a recycling plant. We also had to Gently wipe the oil off and inspect the sump plug. Some sump plugs have a washer to ensure a good seal.we had to make sure that this did not fall off, and if it looks at all damaged, if it dose we have to replace it.

Unscrew the oil filter anticlockwise. In theory this can be done with your hands, but most of the time you will have to use a chain wrench because:

.The filter is slightly too large to get a grip on.

.The rubber seal will have contracted.

.are hands will, quite probably, be covered in oil and grease and we won't be able to get a grip.

Then wipe a thin layer of oil around the rubber seal of the new oil filter to ensure a perfect contact.

Screw the new filter in to hand tightness only. If Too tight it will strip the seal or break the threads. By this point, the oil should have finished draining, so we replaced the sump plug, tightening roughly one half-turn past hand-tightness with the spanner/socket set.

We then jacketed the car back down using the two post lift once down and locked into position we lifted the bonito and Locate the dipstick. It is a removable thin metal strip, marked with the recommended upper and lower oil levels. We Wiped the old oil off the dipstick and replace.

We then replaced the old oil with the new oil, adding about a pint at a time. After each charge of oil, we gave it 30 seconds to run down through the engine, and then checked the level on the dipstick. Where we then Continue filling until the oil level approaches the upper level on the dipstick and Replace the oil-filler cap and close the bonnet. after that we restarted the engine, and checked that the oil warning light goes out. then Run the engine for a few minutes, and check that there are no leaks in the system. then the car is finished and can be driven.

Mark Band 1

There is a lot of documentation to show what the learner did in a 'car maintenance' environment. A lot of underpinning knowledge has been included. Holistically taken some of this can consolidate the award of marks given in mark grid A, otherwise it can also support the use of documentation, tools and equipment for a routine maintenance task.

Mark Band 2

A lot of this evidence is superfluous to requirement. There is however scattered annotation on the evidence against this assessment focus. It does lack any clarity but because the Assessor has awarded 18 marks for this assessment focus it has been accepted that in the main the learner worked with limited guidance and their performance when carrying out the routine task performed in line with the guidance given in the specification of this unit for this mark band.

Mark Band 3

There is no evidence to support independent working. A witness statement needs to be included to explain exactly what guidance the learner received. Page 68 and 69 of the specification gives clear terminology to use to represent the level of support given and observed. In this evidence the term 'minimum guidance' has been taken as a mark band 2 performance.

LO2 Examples continued

26-3-09

IMI Awards Ltd — Practical Assessments LV

3a

Ref L.O.2. 2.1.

DATA COLLECTION SHEET
LEVEL 1 AWARD IN PRE-VOCATIONAL LEARNING
LIGHT VEHICLE

TASK NO. 5 CARRYOUT AN ENGINE OIL CHANGE

LEARNER NAME: Jack [redacted] DATE: 26/03/09

Vehicle Details:

Make	Model	VIN Number
Volkswagen	Passat	WVW2229625P041789
Engine Oil Specification	**Engine Oil Capacity**	**Filter Type**
10w/40	3,5 Liters	SJ/A2
Sump Plug Sealing Ring Condition	**Sump Plug Torque Setting**	**Oil Level Checked**
✓	15 Nm / line = 45 Nm	✓

CHECK FOR ANY OIL LEAKS:

List any documentation and information sources that were used for the task

Workshop Manual	Computer Manual	Parts Manual	COSHH Sheets	Other
Haynes Manual	Atadata Manual (pc)		✓	Autodeal Hanes

List the procedure for replacing the oil & filter, including the procedure for safe disposal of oil & filter.

1) first i have to selice the nut / Bolt releasing using a spana
2) then drain the oil in to a black oil containa.
3) once the oil has draned out of the oil sump the oil filter has to be changed by unfastening it.

Tools and equipment and P.P.E. used:
- Spana
- Oil tube

To who would you report any delays or problems that are related to the vehicle?

Iwd the boss / manager — or the cousumer to know the car be back to.

State how the vehicle presentation should be checked after completing the task

the vehicle should be cleand down so that the coustermer dose not complaine.

ASSESSOR SIGNATURE: [redacted] DATE: 26/3/09

This task sheet is evidence against the following units/objectives	Unit 1, 1.3, Unit 3, 2.1 Unit 4, 1.1

01-03-08v2 7

Ref. LO2. Cover. Task 2.1

BKR.

Mark Band 1

There is a lot of documentation to show what the learner did in a ‘car maintenance’ environment. A lot of underpinning knowledge has been included. Holistically taken some of this can consolidate the award of marks given in mark grid A, otherwise it can also support the use of documentation, tools and equipment for a routine maintenance task.

Mark Band 2

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LO2 Examples continued

IMI Awards Ltd

Practical Assessments LV

CENTRE NAME: [redacted]

CENTRE NUMBER:

LEVEL: 1 Pre-vocational Learning

ROUTE: Light Vehicle

TIME ALLOCATION: Job dependent – about 1 hour

PRACTICAL TRAINING TASK No: 5 – Carryout an Engine Oil Change

Learner Name Jack [redacted]

Rationale: The Learner is required to carryout oil change using correct procedures.

	Unit/Objective SLF1-3 SLF LV4-5-6	The Learner: -	Attempt 1		Attempt 2		Assessor's Commens
			Yes	No	Yes	No	
1	Unit 1, 1.3	Learner used all necessary vehicle protection and PPE	✓		✓		Very good work with attentiveness throughout the session adhering to all H&S requirements. Used tools as appropriate to task. Completed task with minimum guidance
2	Unit 3, 2.1	Identified vehicle make, model and VIN number	✓		✓		
3	Unit 4, 1.1	Located and identified engine oil specifications for the vehicle	✓		✓		
4	Unit 4, 1.1	Correctly drained engine oil into appropriate container	✓		✓		
5	Unit 4, 1.1	Correctly removed oil filter using appropriate tools where required	✓		✓		
6	Unit 4, 1.1	Correctly replaced engine oil filter	✓		✓		
7	Unit 4, 1.1	Identified correct torque setting for engine sump plug	✓		✓		
8	Unit 4, 1.1	Correctly replaced & tightened sump plug using washer/gasket	✓		✓		
9	Unit 4, 1.1	Correctly replenished engine oil and checked correct level	✓		✓		
10	Unit 4, 1.1	Completed job card and/or in-vehicle service log	✓		✓		
11		Completed the Data Collection sheet for this task	✓		✓		

Date 19/3/09 **Assessor Signature** ____________

Ref. L.O.2. This covers a requirement of Task 2.1. SKK (3)

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Mark Band 1

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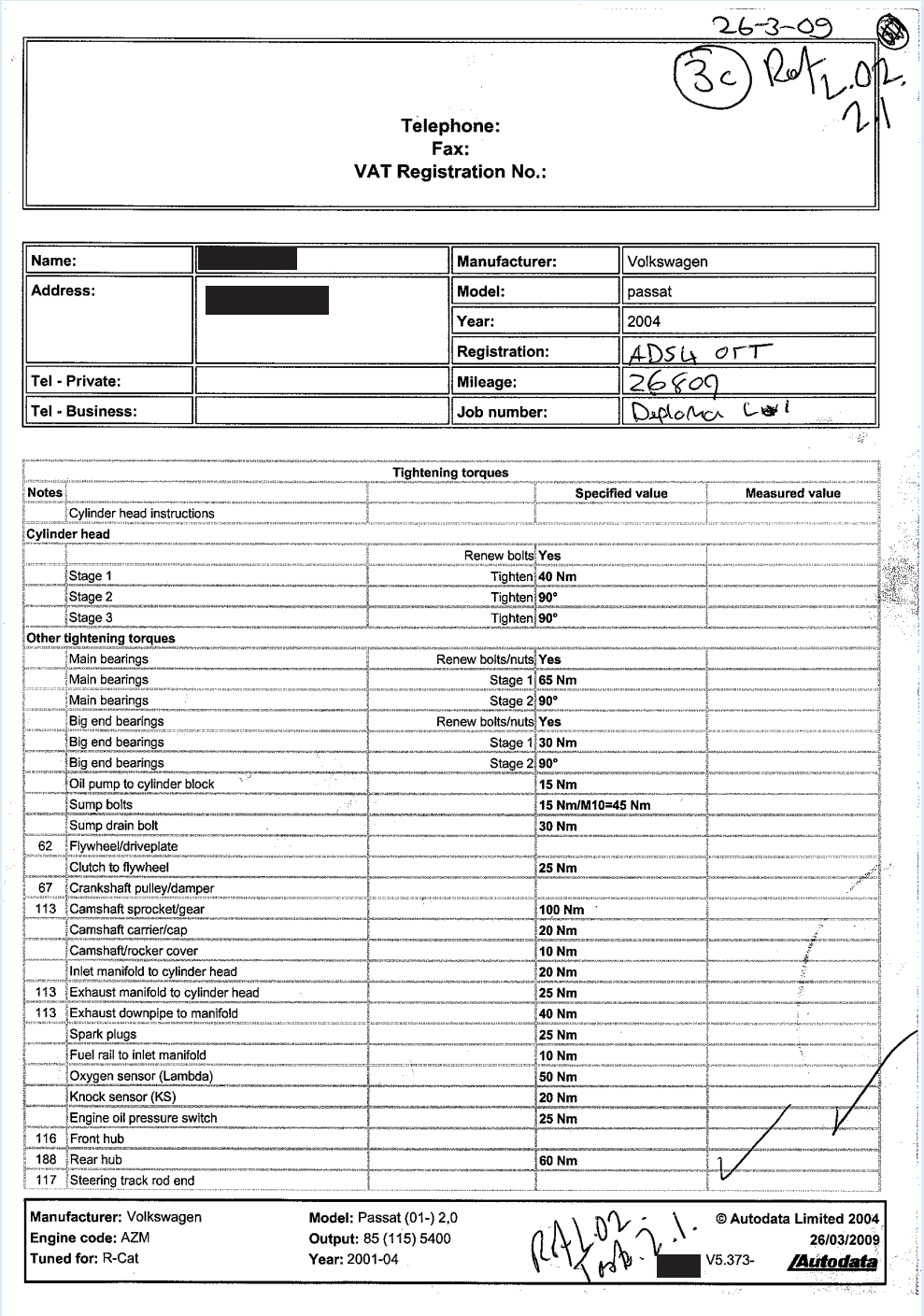
LO2 Examples continued



26-3-09

3c Ref L.02. 2.1

Telephone:
Fax:
VAT Registration No.:

Name:	[redacted]	**Manufacturer:**	Volkswagen
Address:	[redacted]	**Model:**	passat
		Year:	2004
		Registration:	ADS4 OFT
Tel - Private:		**Mileage:**	26809
Tel - Business:		**Job number:**	Diploma Unit

Tightening torques

Notes			Specified value	Measured value
	Cylinder head instructions			
Cylinder head				
		Renew bolts	Yes	
	Stage 1	Tighten	40 Nm	
	Stage 2	Tighten	90°	
	Stage 3	Tighten	90°	
Other tightening torques				
	Main bearings	Renew bolts/nuts	Yes	
	Main bearings	Stage 1	65 Nm	
	Main bearings	Stage 2	90°	
	Big end bearings	Renew bolts/nuts	Yes	
	Big end bearings	Stage 1	30 Nm	
	Big end bearings	Stage 2	90°	
	Oil pump to cylinder block		15 Nm	
	Sump bolts		15 Nm/M10=45 Nm	
	Sump drain bolt		30 Nm	
62	Flywheel/driveplate			
	Clutch to flywheel		25 Nm	
67	Crankshaft pulley/damper			
113	Camshaft sprocket/gear		100 Nm	
	Camshaft carrier/cap		20 Nm	
	Camshaft/rocker cover		10 Nm	
	Inlet manifold to cylinder head		20 Nm	
113	Exhaust manifold to cylinder head		25 Nm	
113	Exhaust downpipe to manifold		40 Nm	
	Spark plugs		25 Nm	
	Fuel rail to inlet manifold		10 Nm	
	Oxygen sensor (Lambda)		50 Nm	
	Knock sensor (KS)		20 Nm	
	Engine oil pressure switch		25 Nm	
116	Front hub			
188	Rear hub		60 Nm	
117	Steering track rod end			

Manufacturer: Volkswagen
Engine code: AZM
Tuned for: R-Cat

Model: Passat (01-) 2,0
Output: 85 (115) 5400
Year: 2001-04

Ref L.02 Task 2.1. [redacted] V5.373-

26/03/2009
Autodata

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LO2 Examples continued

	Brake caliper to carrier	Front	**25 Nm**	
	Brake caliper carrier to hub	Front	**120 Nm**	
113	Brake caliper to carrier	Rear	**35 Nm**	
	Brake caliper carrier to hub	Rear	**95 Nm**	
	Back plate to hub	Rear	**60 Nm**	
	ABS sensor	Front	**10 Nm**	
	ABS sensor	Rear	**10 Nm**	
	Road wheels		**120 Nm**	

Autodata Note 62

Flywheel bolts

Use new bolts and tighten to 60 Nm + 90°.

Autodata Note 67

Crankshaft pulley

Use new bolts
Hexagonal bolt = 90 Nm + 120°.
Multi-point bolt = 90 Nm + 90°.

Autodata Note 113

Use new nuts/bolts.

Autodata Note 116

Front hub

Use new bolt
M14 = 115 Nm +180°
M16 = 190 Nm + 180°.

Autodata Note 188

Rear hub

4x4:
M14 = 115 Nm + 180°
M15 = 190 Nm + 180°.

Autodata Note 117

Steering track rod end

Hexagonal bolt = 7 Nm
Hexagonal nut = 45 Nm.

[redacted]

Manufacturer: Volkswagen	**Model:** Passat (01-) 2,0	© Autodata Limited 2004
Engine code: AZM	**Output:** 85 (115) 5400	26/03/2009
Tuned for: R-Cat	**Year:** 2001-04	V5.373- Autodata

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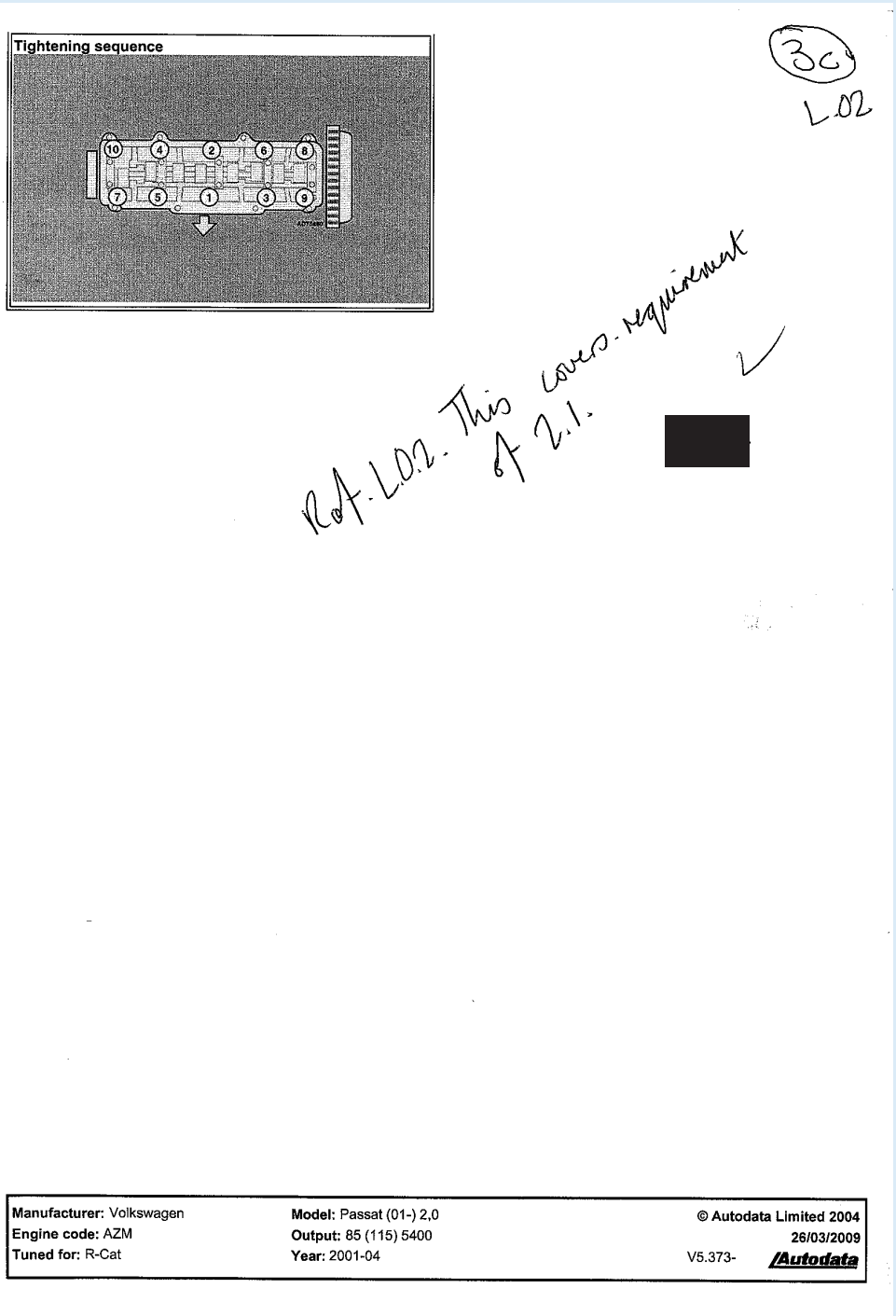

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LO2 Examples continued

Ref 1 LO.2 (4) 2.1.

IMI Awards Ltd — Practical Assessments LV

DATA COLLECTION SHEET
LEVEL 1 AWARD IN PRE-VOCATIONAL LEARNING
LIGHT VEHICLE

TASK NO. 1 WORKSHOP SAFETY INVESTIGATION

LEARNER NAME: Jack [redacted] **DATE:** 26/03/09

Workshop Details:

Name/Location	Type (College/School)
College ←	[redacted]

Identify all the health and safety information, equipment and hazards found during the investigation

Objective	Location	Location	Description	Description
Statutory signs		on doors	-	fire door sign
Warning signs	on walls	class 3	Warning / Park lift truck	Electrical
Product warning labels	Lic door	class 3	- corrosive - flammable	
Different types of PPE	in different units		- goggles - overalls - boots gloves	Ear muffs, protection boots
Fire Extinguishers	next to door at back	on shop floor	- blue powdered	
Fire Assembly point	Front and yard		+ no Foam	
Locate power isolation switches				
Potential hazards	In yellow cases		Danger Highly flammable	+ Corrosive

State the PPE that should be used when carrying out each of the following tasks:

Re: Complete

- Removing a hot radiator cap: Gloves.
- Removing a corroded exhaust system: Gloves.
- When working under a vehicle on a lift/hoist: Overalls.

State ONE Act or Regulation that is concerned with health and safety in vehicle workshops

Toe cap boots

ASSESSOR SIGNATURE: [redacted] **DATE:** 28/3/09

This task sheet is evidence against the following units/objectives	Unit 1, 1.1, 1.2,1.3,1.4,1.5,1.6,1.7,1.8,1.9

01-03-08v2 3

Ref. LO2. This relates to task 2.1. MKN

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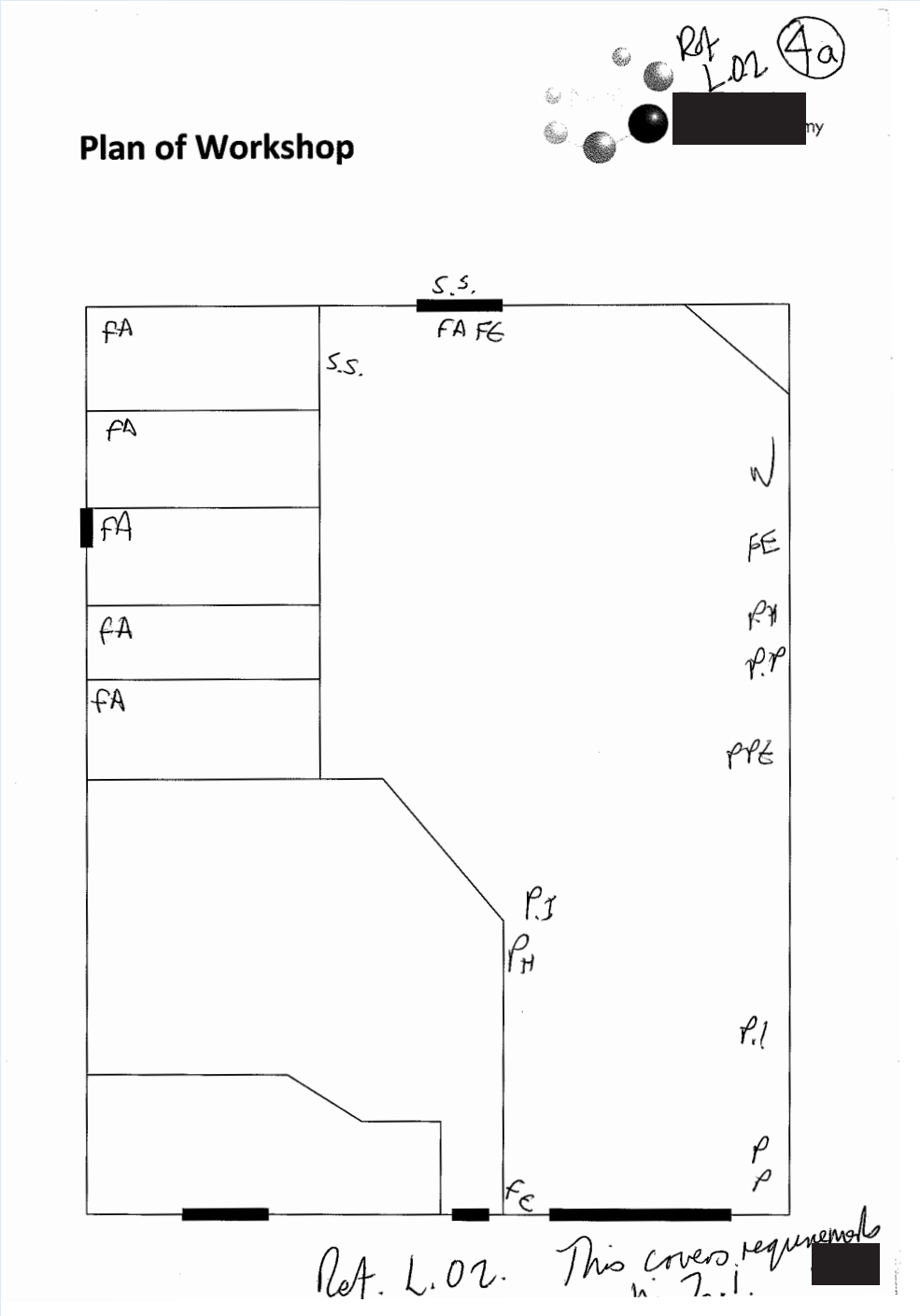

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LO2 Examples continued

IMI Awards Ltd

Practical Assessments LV

CENTRE NAME: [redacted]

CENTRE NUMBER:

LEVEL: 1 Pre-Voc[redacted]

ROUTE: Light Vehicle

PRACTICAL TRAINING TASK No: 1 - Workshop Safety Investigation [redacted]

TIME ALLOCATION: Job dependent
About 1.5 hours

Learner Name JACK

Rationale: The Learner is required to investigate a typical light vehicle workshop and identify health and safety provisions and information including statutory notices, warning labels, safety information potential hazards and safety equipment.

	Unit/Objectives SLF1-3 SLF LV4-5-6	The Learner: -	Attempt 1 Yes	Attempt 1 No	Attempt 2 Yes	Attempt 2 No	Assessor's Comments
1	Unit 1, 1.3	Learner used all necessary PPE during investigation	✓				Fit for purpose - Has carried out required identification of H & S. areas and the specific related signs etc. noted for position within the workshop.
2	Unit 1, 1.1	Located and identified statutory notices	✓				
3	Unit 1, 1.2	Located and identified warning signs (min. of 2)	✓				
4	Unit 1, 1.6	Located and identified product warning labels (min. 2)	✓				
5	Unit 1, 1.3	Located and identified different types of PPE (min. of 2)	✓				
6	Unit 1, 1.8	Located and identified one type of fire extinguisher	✓				
7	Unit 1,1.9	Located fire alarm activator	✓				
8	Unit 1,1.9	Located fire assembly point	✓				
9	Unit 1,1.4,1.5	Identified any potential health & safety hazards	✓				
10	Unit 1,1.7	Located and identified power isolation switches	✓				
11		Completed the Data Collection sheet for this task					

Date 26/3/09 **Assessor Signature** [redacted]

Ref L.O2. ✓ This relates to task 2.1. (4b) [redacted]

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LO2 Examples continued

L1 Eng. Unit 4 Developing Routine maintenance skills

RA L.O2 (4)

Workshop safety investigation

Key reference;

Statutory signs	S.S.
Warning signs	W
Product warning label	P
Different types of P.P.E.	P.P.E.
Fire Extinguishers	F.E.
Fire Assembly Point	F.A.
Local power isolation switch	P.I.
Potential hazards	P.H.

There is a record of the time spent by the learner on the assessment of this unit. The assignment brief follows that laid out in the tutor support materials supplied by Edexcel.

In future it would be expected that the centre should support the achievement of process type activities by the use of well produced witness statements that in this case needed to express the amount of support given to the learner better when using tools safely to carry out a routine maintenance task. This would normally be supported
by annotated photograph of the learner doing that task and say a table of results/measurements. It is a little
concerning that the centre allowed the learner statement about sun glasses being OK for eye protection in a
maintenance workshop to go unchecked.

Centres are encouraged to use the teacher resource disc "Engineering Level 1 Foundation Diploma Assessment
and Delivery Resource with CD-ROM ISBN 978-0-435756-26-0, and the student book "Edexcel Engineering Level 1 Foundation Diploma" ISBN 978-0-435756-25-3.

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