**Level 3 Diploma in Land-based Engineering Operations (0059-3)**

**Unit 315 Assignment**

**Inspect & Test Land-based Machinery and Equipment**

**Underpinning Knowledge**

**Candidate:**

**OVERVIEW**

The aim of this unit is to provide you with the knowledge, understanding and skills required to inspect and test land-based machinery & equipment.

This assignment consists of element three of this unit and successful completion will demonstrate that you understand how to inspect and test machinery & equipment.

1. Explain how you might tackle identifying intermittent faults by:

* Simulation
* Substitution
* Operational tests.

2. Give two examples of a malfunction on two different machines, and with each machine describe the symptoms of the malfunction then suggest likely causes.

3. For each item in the following list, describe the methods used to establish conformity with manufacturers requirements when fault finding:

* Diagnostic methods
* Specialist equipment
* Process of elimination
* Simulation
* Comparison.

4. Explain the differences between a *characteristic* of a machine and a *malfunction*.

5. Explain how to analyse, interpret and present findings after inspection & testing machinery/equipment.

6. Using the following list, describe the actions you could take following inspection & testing:

* Replace
* Repair
* Modify
* Update
* Substitute
* Impound
* Beyond economical repair
* Service.

7. With reference to number 6 above, what are the implications when considering:

* Warranty
* Cost effectiveness
* Integrity of repair
* Insurance
* Timescale
* Health & safety
* Economics
* Impact on dealership operations
* Impact on customer operations.

Describe an example for each.

8. Give an example for each in the following list how you would determine the class of repair and where appropriate, identify the need for operator training to avoid reoccurrence of failures:

* Warranty
* Insurance claim
* Forced breakage
* Lack of maintenance
* Unauthorized modification
* Vandalism
* Overload
* Operator abuse
* Inappropriate usage.