

KOMATSU MACHINE MAINTENANCE

MODULE 4 : TROUBLESHOOTING

1. Module Details

1.1 Module Name

Troubleshooting

1.2 Nominal Duration

8 hours

1.3 Discipline Group

4.1.1.1 General Mechanical Engineering Trades Person

4.2.1.1 Motor Mechanic

4.2.1.2 Automotive Electrician

4.3.1.1 Electricians

2. Module Purpose.

This module provides people who hold trade qualifications in either automotive, engineering or electrical or equivalent industry experience with the knowledge and skills to perform troubleshooting of the machine systems and components.

3. Pre-requisites

Holding trade qualifications in either automotive, engineering or electrical or equivalent industry experience.

Komatsu Machine Maintenance, Introduction and General Service

Komatsu Machine Maintenance, Structure and Function

Komatsu Machine Maintenance, Test and Adjust

4. Content

On the completion of the module the participants will be able to:

- a) Carry out safety precautions to be observed when evaluating and diagnosing the Komatsu machine.
- b) Use Komatsu test equipment in maintaining the Komatsu machine.
- c) Evaluate and diagnose engine faults of the Komatsu machine.
- d) Evaluate and diagnose powertrain faults of the Komatsu machine.
- e) Evaluate and diagnose undercarriage faults of the Komatsu machine.
- f) Evaluate and diagnose electrical control system faults of the Komatsu machine.
- g) Evaluate and diagnose faults in the hydraulic equipment of the Komatsu machine.
- h) Interpret schematic drawings for hydraulic and electrical components and systems.

It is suggested that the following areas be covered in the learning process:

- Safety requirements and considerations when working on equipment, including Komatsu's OHS & E policies, procedures and programs.
- Use of test kits to diagnose specific system faults.
- Engine Evaluation and Diagnosis e.g. poor starting performance, poor follow up performance, lack of power etc.
- Electrical control system evaluation and diagnosis.
- Hydraulic systems & components evaluation and diagnosis e.g. Hoist, steering, pumps and circuits, actuators and valves.
- Transmission or propulsion system evaluation and diagnosis.

- **Troubleshooting system and schematic drawings:**

Troubleshooting points to remember	Using troubleshooting charts
Electrical connection locations	Troubleshooting matrix
Table for electrical connector pin numbers	Equipment electrical circuits
Using judgement tables	Equipment hydraulic circuits