

ADVANCING **YOU FORWARD>>**°

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Dear Trakindo Customers,

I hope you are doing well this year. We have prepared Customer Training Brochure 2024 to make it easier for you to plan the training that can be tailored to your needs.

You can see the available training from our list of modules. If needed, you could also request customized training. Our Learning Consultant will be happy to discuss this with you.

This Customer Training Brochure will be updated periodically. To get the latest information, this brochure can be accessed via the following link:

https://trakindo.co.id/customer-training-

Hopefully, this Customer Training Brochure 2024 will help your overall employee development plan and help to Advancing You Forward.

Warm regards, PT Trakindo Utama

Yudi Adrian Learning & Development Manager

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2024 CUSTOMER TRAINING SCHEDULE

NO.	TRAINING TITTLE	MONTH	DATE	DURATION	LOCATION	METHOD
1	Heavy Equipment Maintenance Management	March	11 - 15 March 2024	5 days	STC Banjarmasin	Inclass
2	Heavy Equipment Maintenance	May	13 - 17 May 2024	5 days	STC Banjarmasin	Inclass
3	Gas Engine Electric Set Operation & Maintenance	May	27-31 May 2024	5 days	TC Cileungsi	Inclass
4	Diesel Engine Electric Set Operation & Maintenance	June	10 - 14 June 2024	5 days	TC Cileungsi	Inclass
5	Diesel Engine Electric Set Operation & Maintenance	July	15 - 19 July 2024	5 days	TC Cileungsi	Inclass
6	Gas Engine Electric Set Operation & Maintenance	August	26 - 30 August 2024	5 days	TC Cileungsi	Inclass
7	Heavy Equipment Maintenance	September	09 - 13 September 2024	5 days	STC Balikpapan	Inclass
8	Diesel Engine Electric Set Operation & Maintenance	November	4 - 8 November 2024	5 days	TC Cileungsi	Inclass
9	Gas Engine Electric Set Operation & Maintenance	November	18 -22 November 2024	5 days	TC Cileungsi	Inclass
10	Heavy Equipment Maintenance Management	December	2 - 6 December 2024	5 days	STC Balikpapan	Inclass

NOTE

• Custom training request will be further discussed with PIC Customer training

DIESEL ENGINE ELECTRIC SET OPERATION & MAINTENANCE

Objective:

This course provides an in-depth study and hands- on activity in operating, maintaining and simply troubleshooting Caterpillar Diesel Generator Set.

Target Audience:

Person who maintain Caterpillar Diesel Generator Set, such as: maintenance mechanic, generator set operator, foreman and supervisor.

- 1. Basic Diesel Engine.
 - a. Principle of 4 Stroke Diesel Engine
 - b. Diesel Engine Classification
 - c. Caterpillar Engine Product Line
 - d. Diesel Engine Component
- 2. Diesel Engine System.
 - a. Fuel System & Governor
 - b. Air Induction & Exhaust System
 - c. Lubrication System
 - d. Cooling System
- 3. Basic Power Generation.
 - a. CAT® Generator Principle
 - b. Main components of Generator
 - c. Excitation Concept
 - d. Automatic Voltage Regulator
 - e. Electronic Modular Control Panel
- 4. Safety Procedure.
- 5. Single and Parallel Operating Procedure
- 6. Maintenance and Operating Practices
- 7. Caterpillar Literature:
 - a. Using Operation & Maintenance Manual
 - b. Using Parts book
- 8. Basic Diesel Genset Troubleshooting.

GAS ENGINE ELECTRIC SET OPERATION & MAINTENANCE

Objective:

This course provides an in-depth study and hands-on activity in operating, maintaining and simply troubleshooting Caterpillar Gas Generator Set.

Target Audience:

Person who maintain Caterpillar Gas Generator Set, such as: maintenance mechanic, generator set operator, foreman and supervisor.

- 1. CAT Gas Engine Classification.
- 2. Operating Principles & Terminology of CAT gas engine.
- 3. Fuel Gas Properties Consideration Related with Application in The Gas Engine.
 - a. Calculating LHV
 - b. Calculating HHV
 - c. Using Methane Number Software
- 4. Major Components & Operation Air Intake & Exhaust System.
 - a. Regulator Adjustment
 - b. Wastegate Adjustment
- 5. Major Components & Operation Fuel System.
 - a. Using Fuel Usage Guide
 - b. Carburator Adjustment
 - c. Using Emission Tester
- 6. Major Components & Operation Ignition System.
 - a. Ignition Timing Adjustment
 - b. Magnet test
- 7. Basic Operation of Safety Device.
- 8. CAT Generator Introduction.
 - a. Generator Concept
 - b. Generator Main Components
 - c. Excitation Concept
 - d. Automatic Voltage Regulator
 - e. Electronic Modular Control Panel
- 9. Operation & Maintenance
 - a. Start-up Gas Engine G333
 - b. Genset Single Operation
 - c. Using Related CAT Service Literature
- 10. Basic Gas Genset Troubleshooting.

HEAVY EQUIPMENT MAINTENANCE

Objective:

This course provides an in-depth study and hands-on activity in maintaining and repairing (basic) Caterpillar Heavy Equipment, including how to use Operation & Maintenance Manual and Parts Book and introducing basic troubleshooting procedure

Target Audience:

People who has direct access to daily heavy equipment maintenance activity

TOPIC:

- 1. Literature and resource identification.
- 2. Caterpillar Product Line.
- 3. Basic Engine Component.
- 4. Engine System.
- 5. Basic Hydraulic System.
- 6. Hydraulic System Operation.
- 7. Power Train Hydraulic System.
- 8. Power Train Electronic System.
- 9. Monitoring System.
- Using Operation & Maintenance Manual and Parts Book.
- 11. Basic Troubleshooting.



HEAVY EQUIPMENT MAINTENANCE MANAGEMENT

Objective:

This course provides an identifies the competency required to understand maintenance management concept & able to perform maintenance planning & scheduling on Caterpillar Heavy Equipment.

Target Audience:

Person who has authority to design, manage, supervise or evaluate maintenance aspect of heavy equipment, such as: maintenance planner, maintenance supervisor and maintenance manager.

Topic:

- 1. Heavy Equipment Management.
 - a. Basic Concept & Implementation
 - b. The 5 Stages of Equipment Management
 - c. 8 Element of Equipment Management
- 2. Heavy Equipment Maintenance Management.
 - a. Preventive Maintenance
 - b. Contamination Control
 - c. SOS Service
 - d. Condition Monitoring
 - e. Training
 - f. Scheduling
 - g. Repair Management
 - h. Recording
- 3. Evaluating Maintenance Effectiveness.
 - a. Mechanical Availability (MA)
 - b. Mean Time Between Shutdown (MTBS)
 - c. Mean Time To Repair (MTTR)
- 4. Case Study:

Maintenance Planning & Scheduling.

CUSTOMIZED TRAINING - SAMPLE 1 16M MOTOR GRADER PRODUCT TRAINING

Objective:

This course provides an in-depth study and hands-on activity to identify component, explain system operation and able to perform testing & adjusting on engine, hydraulic, electronic control & monitoring system at Caterpillar 16M Motor Grader.

Target Audience:

Person who has an access for maintaining, operating and servicing of Caterpillar 16M Motor Grader, such as: mechanic and technician.

- 1. Operator's Station.
- 2. Messenger.
- 3. C13 ACERT™ Engine.
 - a. Air intake & Exhaust System
 - b. Fuel System
 - c. Cooling System
 - d. Lubrication System
- 4. Power Train.
 - a. Transmission/Chassis Electrical System
 - b. Power Train Hydraulic System
- 5. Implement And Steering System.
 - a. Implement Electrical System
 - b. Implement Hydraulic System
- 6. Brake And Fan System.
 - a. Service Brake System
 - b. Parking Brake System
 - c. Fan System
- 7. Practical on Machine.



CUSTOMIZED TRAINING - SAMPLE 2 C32 ACERT MARINE ELECTRONIC ENGINE

Objective:

This course provides an in-depth study and hands-on activity to have underpinning knowledge system operation, service task and diagnostic procedures on C32 Caterpillar Marine Diesel Engine.

Target Audience:

Person who has an access for maintaining, operating and servicing of Caterpillar C32 ACERT Marine Engine, such as: mechanic, chief engineer, port engineer and technical advisor.

- 1. Identify major engine components.
- 2. Explain diesel engine four stroke concept.
- 3. Explain fuel system, air intake & exhaust system, lubrication system and cooling system.
- 4. Explain basic concept of electronic engine.
- 5. Explain Electronic Unit Injector (EUI) Fuel System.
- 6. Explain diagnostic tools needed and diagnostic procedure on Caterpillar electronic engine.
- 7. Perform diagnostic and calibration test on Caterpillar electronic engine

CUSTOMIZED TRAINING - SAMPLE 3 GAS ENGINE ADVANCE

Objective:

This course provides an in-depth study and hands-on activity to have the underpinning knowledge required to perform service and repair on electronic gas engine in term of doing service and perform testing and adjusting

Target Audience:

Person who has an access for maintaining, operating and servicing of Caterpillar Gas Engine, such as: mechanic and technician.

- 1. Explain system operation & technical consideration of electronic gas engines
- 2. Explain factors affect to HP in the gas engine.
- 3. Explain E.I.S system operation, diagnostic, harness wire identification, electrical connection description identification, electronic system logic diagram, and E.I.S component identification and location.
- 4. Explain ADEM 3 system operation, diagnostic, electronic system troubleshooting, and component identification and location.
- Explain procedure using DDT or ET for accessing E.I.S and ADEM 3 module due to access and parameters programming.
- 6. Identify Caterpillar literature required to find performance data
- 7. Perform using DDT or ET for accessing E.I.S and ADEM 3 module due to access and parameters programming.
- 8. Perform programming E.I.S and ADEM 3 parameters.
- 9. Perform Interpreting electronic code due to solve the problem.
- 10. Perform electronic system functional test.
- 11. Perform accessing Caterpillar literatures to find performance data.
- 12. Perform witness test and performance analyzing data



TRAINING REGISTRATION FORM

FAX / EMAIL

To:

PT Trakindo Utama - Cileungsi Training Center

Jl. Narogong Raya Km.19 Cileungsi Bogor 16820

Contact Person : Nanang Kurniawan Email: nanang.kurniawan@trakindo.co.id

Cell Phone: 0812 1181 490, Phone: 021 823 3361 Fax: 021 823 3360

SATELLITE TRAINING CENTER BANJARMASIN

Jln. A. Yani KM 16.4 Kec. Gambut, Kab. Banjar, Kalimantan Selatan 70235

Contact person : Mochammad Sulthon Kautsar Email : mochammad.kautsar@trakindo.co.id

Cell Phone: 081351235075, Phone: (62 - 511) 674 7991, Fax: (62 - 511) 674 7990

SATELLITE TRAINING CENTER BALIKPAPAN

Jl. Jend. Sudirman No. 848 Balikpapan 76114 - Kalimantan Timur

Contact Person : Yenni

Email: yenni.yohanes@trakindo.co.id

Cell Phone: 0811596953, Phone: (62 - 542) 762 810, Fax: (62 - 542) 762 806

Here with I	would like to register:
Name (s) 1	
2	
3	
4	
5	
8	
To attend the	training
Date	
Venue	: Cileungsi / Balikpapan / Banjarmasin (circle one)
Customer Inf	ormation (Important)
	•
Please send	the invoice to (must be with accurate data)
Company	:
Name	:
Address	·
Accounting	Contact :
Phone	•
Email	:

TERMS & CONDITION

- 1. Training Conducted at PT. Trakindo Utama
 - a. Heavy Equipment Maintenance Management (HEMM)

5 Days Training Duration IDR 7.000.000,- /participant/session

b. Heavy Equipment Maintenance (HEM)

5 Days Training Duration IDR 7.500.000,- /participant/session

c. Gas Engine Electric Set Operation & Maintenance (GESOM)

5 Days Training Duration IDR 7.400.000,- /participant/session

d. Diesel Engine Electric Set Operation & Maintenance (DESOM)

5 Days Training Duration IDR 7.500.000,- /participant/session

e. Minestar Fleet Office Controller

5 Days Training Duration IDR 8.400.000,- /participant/session

f. Conducted at Customer's Site (In House)

5 Days Training Duration IDR 6.600.000,- /participant/session

Note:

- The prices above are including full colour handout, certificate of attendance, stationary, lunch, 2x meal break, Merchandize for participant.
- Classroom, Machine or Engine and hand tool for practical session are provided by PT. Trakindo Utama.
- 1. Class capacity each session are 6 (minimum) and 10 (maximum).
- 2. Training Registration should be submitted at least 1 month before training commencement.
- 3. Payment term 14 days after invoice is received.
- 4. Custom training request will be further discussed with PIC.
- 5. Payment should be made to:

PT TRAKINDO UTAMA BANK MANDIRI

Jl. Cilandak KKO, Jakarta Selatan - INDONESIA

Bank Account (IDR) No: 127-00010216-31



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