



2021

EXPANDING KNOWLEDGE TO EXCEL BETTER

Customer Training Schedule
Training Center PT Trakindo Utama

ADVANCING YOU FORWARD >>>®

Call Center 1500 228 info@trakindo.co.id    

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Trakindo 

2021 CUSTOMER TRAINING SCHEDULE

NO	TRAINING TITTLE	MONTH	DATE	REMARKS	LOCATION	METHOD
1	Applied Failure Analysis 1	October	11-15 October 2021	Regular	STC Banjarmasin	Inclass
2	Applied Failure Analysis 1	April	5-9 April 2021	Regular	STC Balikpapan	Inclass
3	Applied Failure Analysis 1	September	6-10 September 2021	Regular	TC Cileungsi	Inclass
4	Applied Failure Analysis 1	November	8-12 November 2021	Regular	TC Cileungsi	Inclass
5	Applied Failure Analysis 2	June	21-25 June 2021	Regular	TC Cileungsi	Inclass
6	Applied Failure Analysis 2	September	20-24 September 2021	Regular	STC Balikpapan	Inclass
7	Applied Failure Analysis 2	September	20-24 September 2021	Regular	TC Cileungsi	Inclass
8	Diesel Engine Electric Set Operation & Maintenance	September	13-17 September 2021	Regular	TC Cileungsi	Inclass
9	Diesel Engine Electric Set Operation & Maintenance	November	1-5 November 2021	Regular	TC Cileungsi	Inclass
10	Diesel Engine Maintenance	March	8-10 March 2021	Regular	Virtual	Online
11	Diesel Engine Maintenance	May	10-12 May 2021	Regular	Virtual	Online
12	Gas Engine Electric Set Operation & Maintenance	July	12-16 July 2021	Regular	TC Cileungsi	Inclass
13	Gas Engine Electric Set Operation & Maintenance	October	25-29 October 2021	Regular	TC Cileungsi	Inclass
14	Heavy Equipment Maintenance	March	8-10 March 2021	Regular	Virtual	Online
15	Heavy Equipment Maintenance	May	10-12 May 2021	Regular	Virtual	Online
16	Heavy Equipment Maintenance Management	April	19-23 April 2021	Regular	Virtual	Online
17	Heavy Equipment Maintenance Management	August	2-6 August 2021	Regular	Virtual	Online
18	Heavy Equipment Maintenance Management	October	25-29 October 2021	Regular	Virtual	Online
19	Heavy Equipment Maintenance Management	May	17-21 May 2021	Regular	Virtual	Online
20	Condition Monitoring Bootcamp	April	12-16 April 2021	Regular	Virtual	Online
21	Condition Monitoring Bootcamp	November	22-26 November 2021	Regular	Virtual	Online
22	SOS Interpretation for Customer	December	6-8 December 2021	Regular	Virtual	Online
23	CAT Product, Technology & Value	August	22-26 August 2020	Regular	Virtual	Online

* In-class training will be conducted when possible

* Virtual training method will be using Microsoft Teams platform

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SUBJECT:

DIESEL ENGINE MAINTENANCE

Objective:

This course provides an in-depth study and in operating, maintaining and simply troubleshooting Caterpillar Diesel Engine.

Target Audience:

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

Topic:

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
 - e. Starting System
 - f. Charging system
3. Safety Procedure.
4. Maintenance Practices.
5. Caterpillar Literature:
 - a. Using Operation & Maintenance Manual
 - b. Using Partsbook
6. Basic Engine Troubleshooting.

SUBJECT:

DIESEL ENGINE ELECTRIC SET OPERATION & MAINTENANCE

Objective:

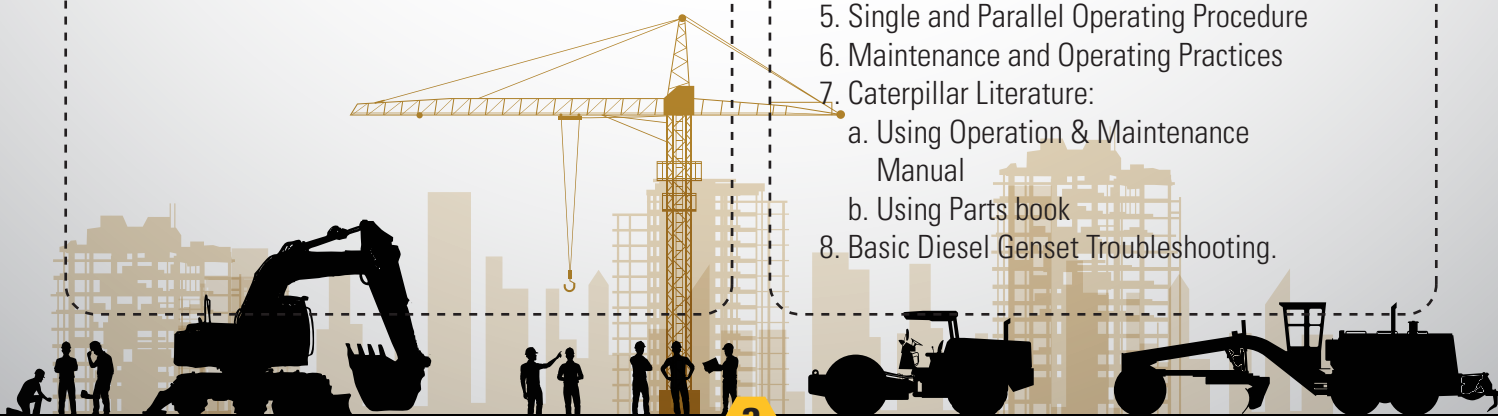
This course provides an in-depth study and hands- on activity in operating, maintaining and simply troubleshooting Caterpillar Diesel Generator Set.

Target Audience:

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

Topic:

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.



SUBJECT:

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.



SUBJECT:

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.

Topic:

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. Carburetor 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.



SUBJECT:

CUSTOMIZED TRAINING - SAMPLE 1 16 M 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.

Topic:

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.



SUBJECT:

CUSTOMIZED TRAINING - SAMPLE 2

C32 ACERT MARINE ELECTRONIC ENGINE

Objective:

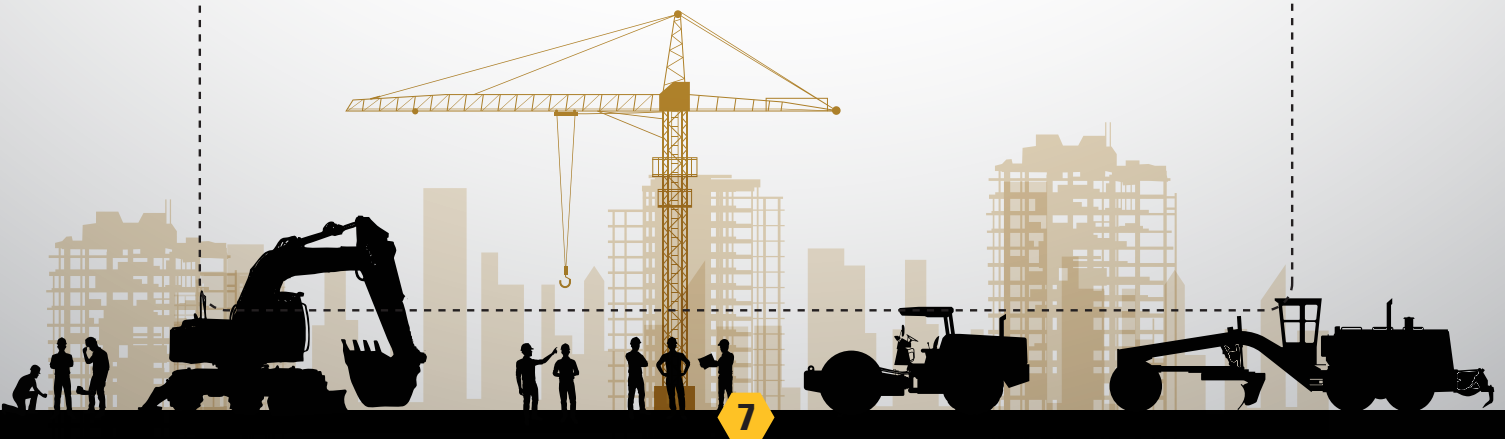
This course provides an in-depth study and hands-on activity to have underpinning knowledge system operation, service task and diagnostic procedures on C32 Caterpillar Marine Diesel Engine.

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.

Topic:

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



SUBJECT:

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.

Topic:

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.
5. 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



SUBJECT:

APPLIED FAILURE ANALYSIS I (ENGINE COMPONENTS)

Objective:

This course provides an in-depth study and hands-on activity to have underpinning knowledge to perform failure analysis procedure to engine component.

Target Audience:

Person who has responsibility to analyze engine Components Failure, such as: Technical (Machine, Engine), electrician (Machine Electrical, Generator Set), Service Analyst, Service Foreman, Customer Service Analyst.

Topic:

1. Introduction to Failure Analysis.
2. Failure Analyst Management.
3. Metallurgy.
4. Principle of Fractures.
5. Principle of Wear.
6. Visual Examination.
7. Application of Basic Principle to Engine Components (Engine Bearing, Crankshaft, Connecting Rod, Piston, Ring and Liner, Valves, Turbocharger, Threaded Fastener).

SUBJECT:

APPLIED FAILURE ANALYSIS II (POWER TRAIN & HYDRAULIC COMPONENTS)

Objective:

This course provides an in-depth study and hands-on activity to have underpinning knowledge to perform failure analysis procedure to powertrain and hydraulic component.

Target Audience:

Person who has responsibility to analyze Power Train & Hydraulic Components Failure such as: Technical (Machine), Service Analyst, Service Foreman, Customer Service Analyst.

Topic:

1. Introduction to Failure Analysis
2. Failure Analysis Management
3. Metallurgy
4. Principle of Fractures
5. Principle of Wear
6. Visual Examination
7. Application of Basic Principle to Power Train & Hydarulic Component (Gear Failure Analysis, Anti Friction Bearing, Hydraulic Pump and Motor, Shaft Failure Analysis)



SUBJECT:

CAT PRODUCTS, TECHNOLOGY & VALUE

Objective:

This course provides CAT Product knowledge and Technology, Trakindo Support in order to maintain understanding Customer product and service of Trakindo

Target Audience:

Person who has authority as Procurement, Operation and Maintenance Engineer, Plant.

TOPIC:

1. Cat Product features & benefit.
2. Maintenance Management.
3. Caterpillar commodity Product line.
4. Repair Option.
5. Product Link.

SUBJECT:

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.
10. Using Operation & Maintenance Manual and Parts Book.
11. Basic Troubleshooting.



SUBJECT:

S•O•S INTERPRETATION FOR CUSTOMER

Objective:

This course identify the competence required for understanding S•O•S Services, taking sample, S•O•S reports, follow up abnormal reports, and Oil Commander System.

Target Audience:

Persons who has access to maintain, service and perform condition monitoring on Caterpillar/ Non-Caterpillar equipment, such as Mechanic, Technician, Planner, Analyst, Service Supervisor.

Topic:

1. S•O•S Products and Services
2. Taking Sample
3. How to Read S•O•S Report
4. Follow-up Abnormal Reports
5. Case Study
6. Oil Commander System

SUBJECT:

TRAKINDO CONDITION MONITORING BOOTCAMP

Objective:

This course to give a student a head-start on being a CMA and understanding what is involved in the process and the ability to write a recommendation using a combination of the five elements of condition monitoring.

Target Audience:

Persons who has to maintain, machine health and perform condition monitoring on Caterpillar/ Non-Caterpillar equipment and five elements of CM and how they interrelate in identifying proactive product support recommendations and solutions.

Topic:

1. The TU CMAs
2. Five Elements of Condition Monitoring
3. Implementation of CM Data into Day to Day Activities



TRAINING REGISTRATION FORM

TRAINING REGISTRATION FORM

FAX / EMAIL

To:
PT Trakindo Utama - Cileungsi Training Center
Jl. Narogong Raya Km.19 Cileungsi
Bogor 16820
Fax: 021 823 3380
Phone: 021 823 3361
Email: nanang.kurniawan@trakindo.co.id

Here with I would like to register:

Name (s)	Use Accommodation*
1.	Yes / No (circle one)
2.	Yes / No (circle one)
3.	Yes / No (circle one)
4.	Yes / No (circle one)
5.	Yes / No (circle one)
6.	Yes / No (circle one)
7.	Yes / No (circle one)
8.	Yes / No (circle one)
9.	Yes / No (circle one)
10.	Yes / No (circle one)

To attend the training

Training Title :
Date :
Venue : Cileungsi / Balikpapan (circle one)

Customer Information (Important)

Please send the invoice to (must be with accurate data)

Company	:
Name	:
Address	:
Accounting Contact	:
Phone	:
Email	:

Name & Company Stamp

*) Accommodation will be provided (if available) when training conducted at Cileungsi Training Center

TERMS & CONDITION

1. The participants for each class session are 4 (minimum) and 10 (maximum).
2. Course Fees:
 - a. Conducted at PT. Trakindo Utama:
 - 1 Days Training Duration: IDR 3.400.000,- per participant per session
 - 2 Days Training Duration: IDR 4.300.000,- per participant per session
 - 3 Days Training Duration: IDR 5.200.000,- per participant per session
 - 5 Days Training Duration: IDR 7.000.000,- per participant per session
 - 20 Days Training Duration: IDR 28.000.000,- per participant per sessionThe prices above are including full color handout, stationary, 2x coffee breaks, lunch and certificate of attendance. The prices above are excluding transportation & accommodation of participant.
 - b. Conducted at Customer's Site (In House):
 - 1 Days Training Duration: IDR 2.400.000,- per participant per session
 - 2 Days Training Duration: IDR 3.300.000,- per participant per session
 - 3 Days Training Duration: IDR 4.200.000,- per participant per session
 - 5 Days Training Duration: IDR 6.000.000,- per participant per session
 - 20 Days Training Duration: IDR 24.000.000,- per participant per sessionThe prices above are including full color handout, stationary and certificate of attendance. The prices above are excluding transportation, accommodation and meal of Instructors during training.
 - c. Conducted with virtual training method (online)
 - 1 Days Training Duration: IDR 1.700.000,- per participant per session
 - 2 Days Training Duration: IDR 2.150.000,- per participant per session
 - 3 Days Training Duration: IDR 2.600.000,- per participant per session
 - 4 Days Training Duration: IDR 3.050.000,- per participant per session
 - 5 Days Training Duration: IDR 3.500.000,- per participant per sessionThe prices above are including full color handout, stationary and certificate of attendance.
3. Cileungsi Training Center has own dormitory with the amount of IDR430.000,- per day per participant (shared room, including breakfast, dinner, laundry and cleaning service) for participant's accommodation
4. The prices above are excluding 10% VAT
5. Training Registration should be submitted at least 1 month before training commencement
6. Payment term 30 days after invoice is received
7. Payment should be made to :

PT TRAKINDO UTAMA BANK MANDIRI
Jl. Cilandak KKO, Jakarta Selatan - INDONESIA
Bank Account (IDR) No.: 127-00010216-31

Contact Person:
Nanang Kurniawan
Email : nanang.kurniawan@trakindo.co.id
Phone : +62 21 8233361 Ext: 6410
Fax : +62 21 8233360

Customized Training

Customer request training that is not mentioned on this brochure can be customized as required, where subject, schedule, pre-requisite and location are subject to prior discussion

SATELLITE TRAINING CENTER (BANJARMASIN)

Jln. A Yani KM 16.4

Kec. Gambut, Kab. Banjar Kalimantan Selatan 70235

Phone: (62 - 511) 674 7991 Fax: (62 - 511) 674 7990

Contact Person: Fuad Rahman Email: fuad.rahman@trakindo.co.id

Phone : (62 - 511) 674 7991

Fax: (62 - 511) 674 7990

Cell phone: +62 811 5110 436

SATELLITE TRAINING CENTER (BALIKPAPAN)

Jl. Jend. Sudirman No. 848

14 Balikpapan 76114 - Kalimantan Timur

Phone: (62 - 542) 762 810 Fax: (62 - 542) 762 806

Contact Person: Agus Hermanto

Email: agus.hermanto@trakindo.co.id

Phone : (62 - 542) 762 810

Fax: (62 - 542) 762 806

Cell phone: +62 811 5933 256

CILEUNGI TRAINING CENTER

Jl. Raya Narogong Km 19 Cileungsi, Bogor 16820

Phone: (62 - 21) 823 3361 (Hunting)

Fax: (62 - 21) 823 3360

Contact Person: Nanang Kurniawan

Email: nanang,kurniawan@trakindo.co.id

Phone : (62 - 21) 8233 361

Fax: (62 - 21) 8233 360

Cell phone: +62 81211 814 90

Gedung TMT 1, 11th-17th Floor

Jl. Cilandak KKO No.1

Jakarta 12560 - Indonesia

Phone : (62 - 21) 782 2373

Fax : (62 - 21) 782 2357, 782 2379

www.trakindo.co.id