



2012 Customer Training Schedule

Training Center - PT Trakindo Utama



2012 CUSTOMER TRAINING SCHEDULE

NO	TRAINING TITLE	MONTH	DATE	LOCATION
1	320D HEX Product Training	January	16 - 20 January 2012	Pekanbaru
2	320D HEX Product Training	July	09 - 13 July 2012	Pekanbaru
3	320D HEX Product Training	December	10 - 14 December 2012	Pekanbaru
4	740B Product Familiarization	May	28 - 30 May 2012	Balikpapan
5	740B Product Familiarization	October	01 - 03 October 2012	Balikpapan
6	740B Product Familiarization	December	17 - 19 December 2012	Balikpapan
7	777D OHT Product Familiarization	May	14 - 16 May 2012	Balikpapan
8	777D OHT Product Familiarization	July	16 - 18 July 2012	Balikpapan
9	Air Conditioning	March	05 - 09 March 2012	Cileungsi
10	Air Conditioning	May	14 - 16 May 2012	Cileungsi
11	Applied Failure Analysis-1	March	05 - 09 March 2012	Cileungsi
12	Applied Failure Analysis-1	April	09 - 13 April 2012	Balikpapan
13	Applied Failure Analysis-1	May	07 - 11 May 2012	Cileungsi
14	Applied Failure Analysis-1	July	02 - 06 July 2012	Balikpapan
15	Applied Failure Analysis-1	July	02 - 06 July 2012	Cileungsi
16	Applied Failure Analysis-1	September	03 - 07 September 2012	Cileungsi
17	Applied Failure Analysis-1	November	19 - 23 November 2012	Cileungsi
18	Applied Failure Analysis-2	March	12 - 16 March 2012	Cileungsi
19	Applied Failure Analysis-2	May	21 - 25 May 2012	Cileungsi
20	Applied Failure Analysis-2	July	09 - 13 July 2012	Cileungsi
21	Applied Failure Analysis-2	September	10 - 14 September 2012	Cileungsi
22	Applied Failure Analysis-2	November	26 - 30 November 2012	Cileungsi
23	Basic Mechanic for Customer	March	05 - 30 March 2012	Balikpapan
24	Basic Mechanic for Customer	April	16 April - 11 May 2012	Balikpapan
25	Basic Mechanic for Customer	June	04 - 29 June 2012	Balikpapan
26	Basic Mechanic for Customer	September	03 - 28 September 2012	Balikpapan
27	Basic Mechanic for Customer	October	15 Oct - 09 November 2012	Balikpapan
28	Diesel Electric Set Operation & Maintenance	March	26 - 30 Maret 2012	Cileungsi
29	Diesel Electric Set Operation & Maintenance	April	09 - 13 April 2012	Cileungsi
30	Diesel Electric Set Operation & Maintenance	May	28 May - 1 June 2012	Cileungsi
31	Diesel Electric Set Operation & Maintenance	June	04 - 08 June 2012	Cileungsi
32	Diesel Electric Set Operation & Maintenance	July	16 - 20 July 2012	Cileungsi
33	Diesel Electric Set Operation & Maintenance	September	17 - 21 September 2012	Cileungsi

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NO	TRAINING TITLE	MONTH	DATE	LOCATION
34	Diesel Electric Set Operation & Maintenance	September	17 - 21 September 2012	Pekanbaru
35	Diesel Electric Set Operation & Maintenance	November	19 - 23 November 2012	Balikpapan
36	Diesel Electric Set Operation & Maintenance	December	10 - 14 December 2012	Balikpapan
37	Diesel Engine Maintenance	April	16 - 20 April 2012	Cileungsi
38	Diesel Engine Maintenance	April	16 - 20 April 2012	Pekanbaru
39	Diesel Engine Maintenance	May	07 - 11 May 2012	Cileungsi
40	Diesel Engine Maintenance	June	11 - 15 June 2012	Cileungsi
41	Diesel Engine Maintenance	July	23 - 27 July 2012	Cileungsi
42	Diesel Engine Maintenance	July	30 July - 13 August 2012	Balikpapan
43	Diesel Engine Maintenance	November	12 - 16 November 2012	Balikpapan
44	Electronic Engine	May	21 - 25 May 2012	Pekanbaru
45	Electronic Engine	November	19 - 23 November 2012	Pekanbaru
46	Electronic Technician Introduction	March	19 - 20 March 2012	Cileungsi
47	Electronic Technician Introduction	May	14 - 15 May 2012	Cileungsi
48	Electronic Technician Introduction	May	21 - 22 May 2012	Balikpapan
49	Electronic Technician Introduction	May	23 - 24 May 2012	Balikpapan
50	Electronic Technician Introduction	July	09 - 10 July 2012	Balikpapan
51	Electronic Technician Introduction	July	12 - 13 July 2012	Balikpapan
52	Gas Electric Set Operation & Maintenance	December	03 - 07 December 2012	Balikpapan
53	Gas Electric Set Operation & Maintenance	March	05 - 09 March 2012	Cileungsi
54	Gas Electric Set Operation & Maintenance	April	23 - 27 April 2012	Cileungsi
55	Gas Electric Set Operation & Maintenance	May	21 - 25 May 2012	Cileungsi
56	Gas Electric Set Operation & Maintenance	June	18 - 22 June 2012	Cileungsi
57	Gas Electric Set Operation & Maintenance	July	02 - 06 July 2012	Cileungsi
58	Gas Electric Set Operation & Maintenance	September	24 - 28 September 2012	Cileungsi
59	Heavy Equipment Maintenance	March	12 - 16 March 2012	Cileungsi
60	Heavy Equipment Maintenance	May	28 May - 01 June 2012	Cileungsi
61	Heavy Equipment Maintenance	July	09 - 13 July 2012	Cileungsi
62	Heavy Equipment Maintenance	August	06 - 10 August 2012	Balikpapan
63	Heavy Equipment Maintenance	October	08 - 12 October	Balikpapan
64	Heavy Equipment Maintenance Management	February	13 - 17 February 2012	Pekanbaru
65	Heavy Equipment Maintenance Management	March	26 - 30 March 2012	Cileungsi
66	Heavy Equipment Maintenance Management	May	07 - 11 May 2012	Cileungsi

2012 CUSTOMER TRAINING SCHEDULE

NO	TRAINING TITLE	MONTH	DATE	LOCATION
67	Heavy Equipment Maintenance Management	July	16 - 20 July 2012	Cileungsi
68	Heavy Equipment Maintenance Management	September	03 - 07 September 2012	Cileungsi
69	Heavy Equipment Maintenance Management	November	05 - 09 November 2012	Cileungsi
70	Heavy Equipment Maintenance Management	December	03 - 07 December 2012	Cileungsi
71	HEX Mechanical Awareness	August	06 - 10 August 2012	Pekanbaru
72	HEX Operator Training	March	12 - 15 March 2012	Pekanbaru
73	HEX Operator Training	October	22 - 25 October 2012	Pekanbaru
74	Sykes Pump	April	02 - 03 April 2012	Cileungsi
75	Sykes Pump	May	14 - 15 April 2012	Cileungsi



Subject:
DIESEL ENGINE MAINTENANCE

Target Audience:

Persons 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 ELECTRIC SET OPERATION & MAINTENANCE

Target Audience:

Person who has an access to daily diesel electric set maintenance and operation activity, such as: generator set operator, foreman and supervisor

Topic:

1. Basic Diesel Engine
 - a. Principle of 4 - Stroke Diesel Engine
 - b. Diesel Engine Classification
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. Basic Power Generation
 - a. Current Generation
 - b. SR4 Generator Principle
 - c. Voltage Regulator
 - d. Governor
 - e. Engine Speed Switch
 - f. Panels
4. Safety Procedure
5. Maintenance and Operating Practices
6. Single and Parallel Operating Procedure
7. Caterpillar Literature:
 - a. Using Operation & Maintenance Manual
 - b. Using Partsbook



Subject:
HEAVY EQUIPMENT MAINTENANCE

Target Audience:

Person who has direct access to daily heavy equipment maintenance activity, such as: maintenance mechanic, maintenance foreman and maintenance supervisor.

Topic:

1. Caterpillar Product Line
2. Basic Principle of Diesel Engine
3. Basic Engine Component
4. Diesel Engine System
 - a. Fuel System & Governor
 - b. Air Induction & Exhaust System
 - c. Lubrication System
 - d. Cooling System
 - e. Starting System
 - f. Charging system
5. Basic Hydraulic System
 - a. Hydraulic Component
 - b. Hydraulic System Operation
6. Power Train
 - a. Torque Converter
 - b. Transmission
 - c. Steering System
7. Maintenance Practices
8. Caterpillar Literature
 - a. Using Operation & Maintenance Manual
 - b. Using Partsbook
9. Basic Troubleshooting



Subject:
**HEAVY EQUIPMENT MAINTENANCE
MANAGEMENT**

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. Caterpillar Equipment Management System
 - a. Basic Concept & Implementation
 - b. The 5 Stages of Equipment Management
 - c. The 8 Elements of Equipment Management
2. Preventive Maintenance
 - a. Scheduling
 - b. Preventive Maintenance Item
 - c. Fluid Recommendation
 - d. Filter
3. Contamination Control
4. SOS Service
5. Condition Monitoring
 - a. Technical Analysis
 - b. Custom Track Service
6. Repair Management
 - a. Repair Indicator
 - b. Repair Before Failure
 - c. Troubleshooting
 - d. Repair Option
7. Record & Analysis
 - a. Daily Recording
 - b. Maintenance Control System
8. Case Study: Maintenance
9. General Management
 - a. Benchmarking
 - b. Solving Management Problem
10. Parts Management
 - a. The Risk of Using Non – Genuine Parts
 - b. Alternative Parts
 - c. Using Partsbook
11. Safety On Job

Subject:
**GAS ELECTRIC SET OPERATION &
MAINTENANCE**

Target Audience:

Person who has an access to daily gas engine maintenance and operating activity, such as: mechanic, foreman and supervisor.

Topic:

1. Caterpillar
2. Fuel Background Story & Safety Procedure
3. Major Component
4. System Operation
5. Air Fuel Ratio Adjustment
6. Wastegate Adjustment
7. Using Oxygen Meter
8. Using Methane Number Software
9. Using BTU Graph
10. Power Screw Adjustment
11. Differential Pressure Adjustment
12. Using Fuel Usage Guide
13. Ignition Timing Adjustment
14. Basic Power Generation
15. Data Interpretation
16. Set up & Performance Test
17. Setting Safety Device & Verification
18. Using Related Caterpillar Service Literature



Subject:
AIR CONDITIONING SYSTEM

Target Audience:

Person who has an access to daily air conditioning system maintenance, such as: maintenance mechanic, foreman and supervisor.

Topic:

1. Principle of Heat Transfer
2. Principle of Air Conditioning
3. Air Conditioning Component
4. Air Conditioning System
5. Servicing Air Conditioning System



Subject:
ELECTRONIC TECHNICIAN INTRODUCTION

Target Audience:

Person who has responsibility to utilize Electronic Technician Software, such as: mechanic, foreman and supervisor.

Topic:

1. Basic PC Operation
2. Getting Started with ET
3. Using ET Screen
4. Engine Diagnostic With ET
5. Printing and File Management



Subject:
**APPLIED FAILURE ANALYSIS I
(ENGINE COMPONENT)**

Target Audience:

Person who has responsibility for analyzing 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. Principles of Fractures
5. Principles of Wear
6. Visual Examination
7. Application of Basic Principle to Engine Component (Engine Bearing, Crankshaft, Connecting Rod, Piston, Rings and Liner, Valves, Turbocharger, Threaded Fastener)

Subject:
**APPLIED FAILURE ANALYSIS II
(POWER TRAIN & HYDRAULIC COMPONENT)**

Target Audience:

Person who has responsibility for analyzing 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 & Hydraulic Component (Gear Failure Analysis, Anti Friction Bearing, Hydraulic Pump and Motor, Shaft Failure Analysis)

Subject:
320D HEX PRODUCT TRAINING

Target Audience:

Person who knows the principles of machine system operation, simple diagnostic equipment and procedure for testing & adjusting and has an access to daily maintenance, operation and service activity on 320 HEX, such as: Mechanic/Technician, Electrician, Service Foreman

Topic:

1. Maintenance & Safety
 - a. Walk around inspection
 - b. Safety hazard/warning/caution
 - c. Safety procedure
2. Engine System
 - a. C6.4 ACERT Engine System
 - b. Problem Identification
3. Hydraulic System
 - a. ISO Hydraulic Schematic
 - b. Implement Hydraulic system operation
 - c. Problem identification
4. Electrical System
 - a. ISO Electric schematic
 - b. Machine and Engine electric control system
 - c. Problem identification

Subject:
740B PRODUCT FAMILIARIZATION

Target Audience:

Person who has an access to daily operation and maintenance activity on 740B ADT Product, such as: Maintenance Mechanic, Operator, Leader

Topic:

1. Introduction
2. Machine Identification
3. Operation & Maintenance
4. Engine
5. Power Train
6. Steering System
7. Hoist System
8. Brake System
9. CAT Electronic Technician



Subject:
777D PRODUCT FAMILIARIZATION

Target Audience:

Person who has an access to daily operation and maintenance activity on 777D OHT Product, such as: Maintenance Mechanic, Operator, Leader

Topic:

1. Introduction
2. Machine Identification
3. Operation & Maintenance
4. Engine
5. Power Train
6. Steering System
7. Hoist System
8. Brake System
9. CAT Electronic Technician



Subject:
BASIC MECHANIC FOR CUSTOMER

Target Audience:

Serviceman Trainee who will handle preventive maintenance job on Caterpillar machine

Topic:

1. Contamination Control
2. Safety Procedure
3. Machine Identification
4. Jacking, Blocking and Lifting
5. Use Literature
6. Seal, Bearing and Gasket
7. Measuring Tools
8. Fastener
9. Basic Engine
10. Practice PM on Machine
11. Basic Electric
12. Basic Power Train
13. Basic Hydraulic
14. Multi Media Class

Subject: ELECTRONIC ENGINE

Target Audience:

Person who has an access for maintaining, testing & adjusting and servicing of Caterpillar Electronic Engine, such as: Technician, Electrician, Service Foreman

Topic:

1. Explain the basic concept of electronic engine
2. Identify components and explain the system operation, testing and adjusting procedures for the Caterpillar Electronic Unit Injection (EUI) fuel system
3. Identify components and explain the system operation, testing and adjusting procedures for the Caterpillar Hydraulic Electronic Unit Injection (HEUI) fuel system
4. Explain the procedures for removing and reinstalling ECM & fuel injector in a Caterpillar Electronic Unit Injection (EUI) and Hydraulic Electronic Unit Injection (HEUI) fuel system
5. Perform replace Injector on EUI & HEUI engine
6. Perform replace ECM on electronic engine
7. Perform testing & adjusting procedure for the Caterpillar Electronic Unit Injection (EUI) fuel system
8. Perform testing & adjusting procedure for the Caterpillar Hydraulic Electronic Unit Injection (HEUI) fuel system
9. Perform service task on electronic engine problem



Subject:
HEX MECHANICAL AWARENESS

Target Audience:

Person who needs awareness about how the particular system works on Caterpillar Hydraulic Excavator, such as: maintenance mechanic and operator

Topic:

1. Maintenance and Safety
 - a. Walk Around Inspection
 - b. Safety Hazard / Warning / Caution
 - c. Safety Procedure
2. Engine System
 - a. Basic Diesel Engine System
 - b. Engine System Operation
 - c. Air Intake & Exhaust System
 - d. Cooling System
 - e. Lubrication System
3. Hydraulic System
 - a. Identification Component & Function
 - b. ISO Schematic
 - c. Implement Hydraulic System Operation
4. Electrical System
 - a. Identification Component & Function
 - b. ISO Schematic
 - c. Battery maintenance
5. Monitoring System
 - a. Component Identification
 - b. Monitoring Feature
 - c. Warning Operation

Subject:
HEX OPERATOR TRAINING

Target Audience:

Person who has basic knowledge about operating and maintaining Caterpillar Hydraulic Excavator

Topic:

1. Basic Engine Diesel
 - a. Principle of 4-Stroke Diesel Engine
 - b. Basic Component Engine Diesel
 - c. Air Intake and air Exhaust System
 - d. Lubrication System
 - e. Cooling System
 - f. Fuel System
2. Basic Hydraulic System
 - a. Basic Component Hydraulic System
3. Warning Level Category
 - a. Identify Main Components
 - b. Component Input
 - c. Component Output
 - d. Warning Level Category
4. Operation Practices
 - a. Walk Around Inspection



Training **Registration Form**

TERMS & CONDITION

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1. Minimum participants for each class session is 6 and maximum 12 participants
2. Technical Training Course Fee (5 Days Training Duration):
 - a. Conducted at PT. Trakindo Utama: **Rp 5.400.000,-** per participant per session (including hardcopy's photocopy handout, stationary, 2x coffee break, lunch, and certificate of attendance)
 - b. In House: **Rp 4.400.000,-** per participant per session (excluding travel expenses of instructor)
3. Operator Training Course Fee (5 Days Training Duration):
 - a. Conducted at HEX Excellent Center (Pekanbaru): **Rp 8.000.000,-** per participant per session (including hardcopy's photocopy handout, stationary, 2x coffee break, lunch, and certificate of attendance)
 - b. In House : **Rp 4.400.000,-** per participant per session (excluding travel expenses of instructor)

Note for In House Training:
Customer should provide machine, fuel, etc for practical session
4. Accommodation (Cileungsi Training Center only): **Rp 320.000,-** per day per participant (shared room, including breakfast, dinner, laundry and cleaning service)
5. The prices above are excluding 10% VAT
6. Training Registration should be submitted at least two weeks before training commencement
7. Payment term 30 days after invoice is received
8. Payment should be made to:

PT TRAKINDO UTAMA

Bank Account (IDR) no. : 0 – 105472 – 048

Bank Account (USD) no. : 0 – 105472 – 528

BANK CITIBANK N.A – CITIBANK TOWER

Jln. Jendral Sudirman Kav. 54 – 55 Jakarta – Indonesia

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Customized Training

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

SATELLITE TRAINING CENTER (PEKANBARU)

Jl. Soekarno Hatta No. 36
Labuh Baru Barat, Pekanbaru, Riau
Phone : (62 - 761) 789 1149, 789 1150
Fax : (62 - 761) 789 3151

Contact Person:

Febry Yani Syukur
Email: febry.syukur@trakindo.co.id
Cell phone: +62 8126799663

SATELLITE TRAINING CENTER (BALIKPAPAN)

Jl. M.T. Haryono Blok I No 7 - 8
Balikpapan 76114
(Bukit Damai Indah)
Phone: (62 - 542) 7206464
Fax: (62 - 542) 7206460

Contact Person:

Jimmy Simamora
Email: jimmy.simamora@trakindo.co.id
Cell phone: +62 8115428062

CILEUNGI TRAINING CENTER

Jl. Raya Narogong Km 19 Cileungsi - Bogor 16820
Phone: (62 - 21) 8233361 (Hunting)
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Contact Person:

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<http://www.trakindo.co.id/trainingcenter>