

# *E-Learning* Service Training Course Catalog



February 22, 2024

## Kubota Engine Academy

Kubota Engine Academy helps you meet the new challenges of servicing Kubota engines with the latest technology. The Academy provides e-learning training courses, as well as instructor led training (ILT) courses at our new Lincolnshire Training Center in Lincolnshire, Illinois. The online courses in this catalog will help you understand and service our product line. Many of these courses are prerequisites for our hands-on ILT courses. *Please note:* Not all courses are available to all users.

[Click here](#) to read or download our Training Policy.

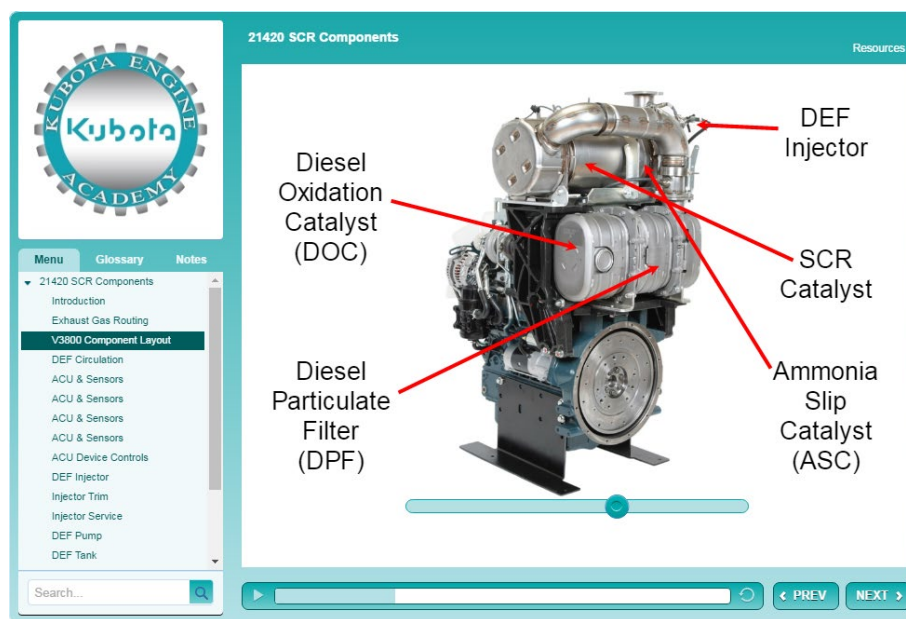
## How to Enroll

[Click here](#) to access our online training.

We recommend you bookmark this website for easy access. If you do not already have a User ID and password, please contact us at [kea\\_ex.academy@kubota.com](mailto:kea_ex.academy@kubota.com).

## How to Use This Catalog

This [catalog](#) is organized by topics such as basic courses and different engine systems. In most cases, you must take the courses in the sequence shown in this catalog. Each topic in this catalog includes links that will take you to the courses. They will prompt you to log into your account if you aren't already logged in.



***Great Kubota Service . . starts with Great Kubota Training!***



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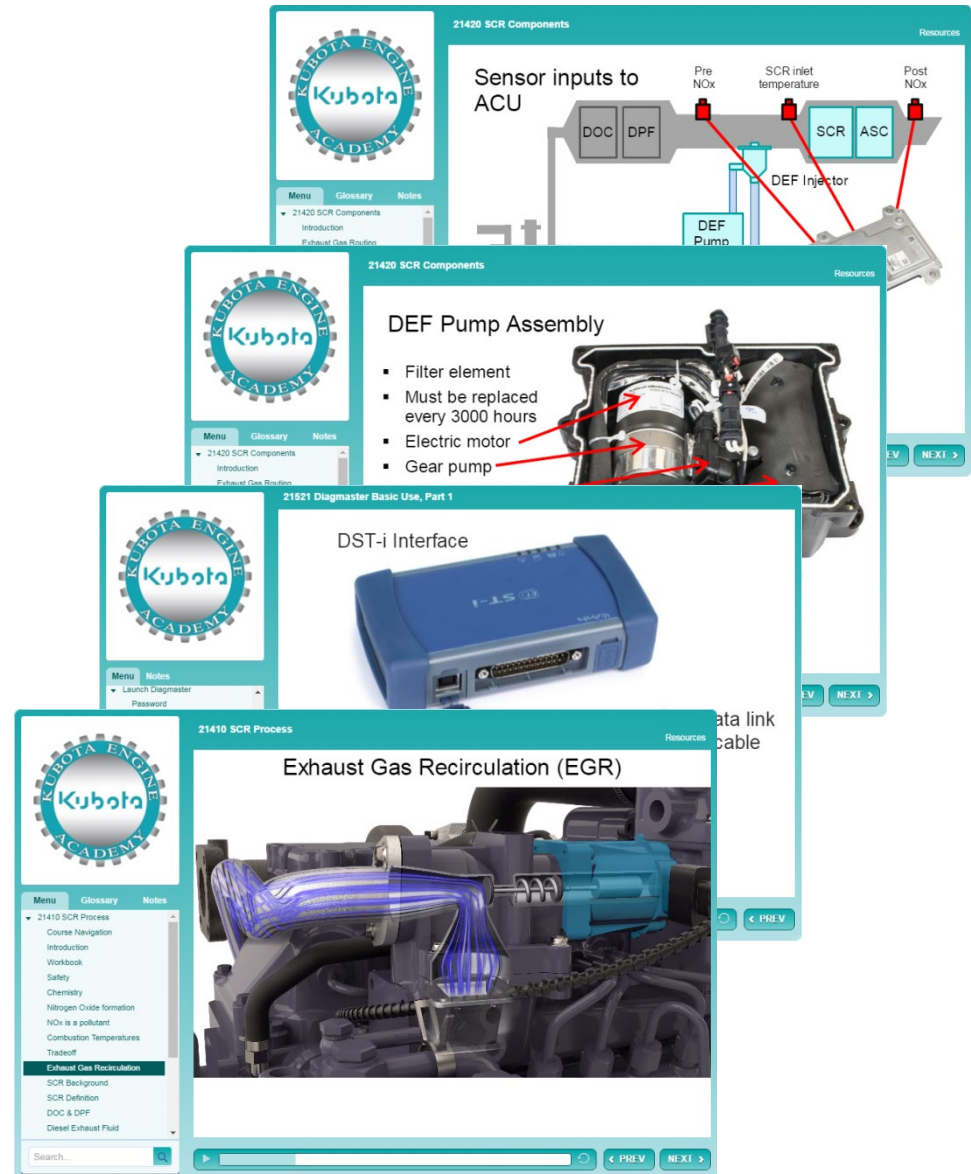
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# Kubota Service

These courses introduce Kubota's products, our service organization, and the resources we provide to our service network. These courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## [10010 Kubota Tour](#)

This course examines the products Kubota manufactures, the company and its history. It takes a close look at Kubota engines, where they are produced and sold, and how they are manufactured. (25 min.)

## [10020 Kubota Engine Lineup](#)

This course will introduce you to the engine families that Kubota offers to Original Equipment Manufacturers. We will look at engines that Kubota manufactures, or plans to manufacture, as of January 2018. (20 min.)

## [10042 Introduction to Kubota Engine Park](#)

This course is an introduction to KEP (Kubota Engine Park), our online portal for service information, registrations and more. It explains the KEP functions available to service technicians at Kubota Engine Service Network dealers. (35 min.)

## [10050 Service Documents](#)

This course introduces the six kinds of service documents that provide technical information on Kubota engines: the Illustrated Parts List, Operator's Manual, Workshop Manual, Flat Rate Schedule, Service Data Book, and Diagnosis Manual. (20 min.)

## Kubota Service

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### **10060 Kubota Engine Service Network**

This course explains the Kubota Engine Service Network, or KESN: what it is, what they do, and how to find a KESN dealer. (15 min.)

### **10070 Self Service OEM & Non-Self Service OEM**

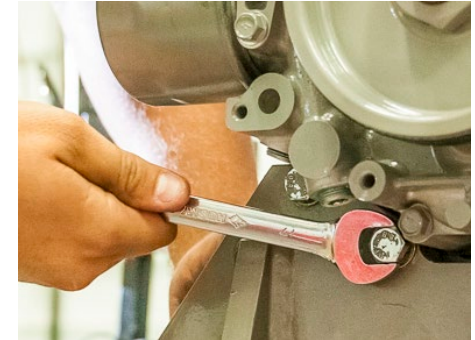
This course discusses the differences between Self Service OEMs and Non-Self Service OEMs, how they affect servicing the product, and the implications for KESN dealers. (15 min.)

### **10080 Applications Powered by Kubota**

This course looks at the main applications powered by Kubota engines, encompassing a wide variety of machines that perform many different jobs. (15 min.)

# Fundamentals

These courses explain fundamental physical principles involved in engine and machine operation, and industry standards for working with them. Each course has multiple parts. These courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## Basic Electrical

This course introduces the basic concepts of electricity, including voltage, current and resistance, and basic electrical diagrams. It assumes the student has minimal knowledge of electricity. [Click here](#) to access the online catalog.

[10301 Basic Electrical 1: Safety & Fundamentals](#) (15 min.)

[10302 Basic Electrical 2: Components](#) (10 min.)

[10303 Basic Electrical 3: More Components](#) (15 min.)

[10304 Basic Electrical 4: Electromechanical Components](#) (15 min.)

[10305 Basic Electrical 5: Circuits](#) (20 min.)

[10306 Basic Electrical 6: Wiring Diagrams](#) (20 min.)

[10307 Basic Electrical 7: Tools](#) (15 min.)

[10308 Basic Electrical 8: Troubleshooting & Scenarios 1 & 2](#) (20 min.)

[10309 Basic Electrical 9: Troubleshooting Scenarios 3 & 4](#) (20 min.)

## Fundamentals

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### Electrical Schematics Overview

This course introduces the basic concepts of reading an electrical schematic. It assumes the student has minimal knowledge of schematics. [Click here](#) to access the online catalog.

[10331 Electrical Schematics 1: Fundamentals](#) (20 min.)

[10332 Electrical Schematics 2: Navigating a Schematic](#) (20 min.)

### CAN Bus System Fundamentals

This course introduces the CAN Bus system and components. It assumes the student has minimal knowledge of CAN Bus systems. [Click here](#) to access the online catalog.

[10361 CAN Bus 1: System](#) (20 min.)

[10362 CAN Bus 2: Components](#) (15 min.)

[10363 CAN Bus 3: Theory and Troubleshooting](#) (20 min.)

# Fundamentals

*Continued from previous page*

## Basic Hydraulics

This course introduces the basic concepts of hydraulics, including hydraulic components and basic hydraulic diagrams. It assumes the student has minimal knowledge of hydraulic systems. [Click here](#) to access the online catalog.

[10391 Basic Hydraulics 1: Fundamentals](#) (20 min.)

[10392 Basic Hydraulics 2: Reservoirs, pumps & motors](#) (20 min.)

[10393 Basic Hydraulics 3: Valves, cylinders & filters](#) (20 min.)

[10394 Basic Hydraulics 4: Coolers, lines & hoses](#) (15 min.)

[10395 Basic Hydraulics 5: Circuits](#) (15 min.)

[10396 Basic Hydraulics 6: Tools & Troubleshooting](#) (15 min.)

[10397 Basic Hydraulics 7: Troubleshooting Scenarios 1 & 2](#) (20 min.)

[10398 Basic Hydraulics 8: Troubleshooting Scenarios 3 & 4](#) (20 min.)



# Fundamentals

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## Failure Analysis Overview

This course introduces failure analysis: determining root causes in order to prevent future failures. It describes different types of failures and common failure modes, and explains the methods used to determine root causes. [Click here](#) to access the online catalog.

[10421 Failure Analysis 1: Overview & Practices](#) (20 min.)

[10422 Failure Analysis 2: Process](#) (25 min.)

[10423 Failure Analysis 3: Failure Modes](#) (25 min.)

## Precision Measuring Tools

This course introduces the different types of precision measuring tools, the fundamentals of how to use them to obtain accurate measurements, and how to properly care for them. [Click here](#) to access the online catalog.

[10451 Precision Measuring 1: Torque](#) (20 min.)

[10452 Precision Measuring 2: Calipers & Micrometers](#) (15 min.)

[10453 Precision Measuring 3: Specialized Tools](#) (15 min.)

[10454 Precision Measuring 4: Other Measurements](#) (20 min.)

# Engine Basics

These courses explain basic engine components and systems, and how they operate. These courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## [20020 Core Parts Component: 5C & Piston](#)

This course covers the basic components of a Kubota engine: the cylinder block, cylinder head, crankshaft, camshaft, connecting rod and piston. It describes these parts and their functions, and how they interact with each other. (30 min.)

## [20021 Core Parts Component: Intake & Exhaust](#)

This course covers the intake and exhaust systems of a Kubota engine, including their major components and features and their functions. (20 min.)

## [20022 Core Parts Component: Cooling](#)

This course covers the cooling system of Kubota engines. It describes the system, its major components and features, and their functions. (30 min.)

## [20023 Core Parts Component: Lubrication](#)

This course covers the lubrication system of Kubota engines, including its major components and features and their functions. (25 min.)

# Engine Basics

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## **20030 Core Parts Component: Maintenance**

This course covers basic maintenance on Kubota diesel engines to ensure reliable, efficient service and long engine life. (20 min.)

## **20050 Cause & Effect: Piston Seizure**

This course covers the causes and failure analysis of piston seizure, with the objective of determining the root cause to prevent repeat failures. (20 min.)

## **20051 Cause & Effect: Oil Consumption**

This course covers the most common causes of excessive oil consumption on Kubota diesel engines, and how to prevent them. (15 min.)

## **20061 Engine Oil**

This course discusses engine lubricating oils, including their functions, types, viscosity, and classifications. (10 min.)

## **20062 Diesel Fuel and Gasoline**

This course discusses diesel fuel and gasoline: how they're produced, their technical differences and characteristics, and contamination issues. (20 min.)

## **20063 Gasoline Safety**

This course covers gasoline safety, including health effects, first aid, fire prevention, how to deal with leaks and spills, handling and storage, and safety equipment. (15 min.)

# Troubleshooting

These courses demonstrate how to troubleshoot Kubota engines. Course **26311 Effective Troubleshooting** must be completed before enrolling in the Troubleshooting Scenario course. [Click here](#) to access the online catalog.



## [26311 Effective Troubleshooting](#)

Troubleshooting is the most valuable skill a service technician needs to develop. Today's engines are far more sophisticated than they used to be. This course demonstrates how to take a systematic approach to find the root cause of the problem and fix it right the first time. Keeping your customers happy is the best way to build a great reputation and grow your business. (20 min.)

## Troubleshooting Scenarios

Sharpen your skills with this troubleshooting scenario. This interactive course presents you with a real-world problem and challenges you to find the root cause. It's a great way to build your troubleshooting abilities!

## [26312 Troubleshooting Scenario: Electronic Diesel Engines](#) (20 min.)

# All Kubota Engine Types

These courses apply to all Kubota engine types: mechanical and electronic (CRS) diesel engines, and WG spark-ignited engines.



## [26110 Getting Started with Kubota Engines](#)

This course will give you a quick overview of the types of Kubota engines, how they work, and what you need to know to work with our engines. It includes an explanation of four-stroke engine operation, with a test-out option for those who understand engines. It also demonstrates how to identify different Kubota engines. This knowledge is crucial if you want to be an effective part of the greater Kubota network. (20 min.)

## [43041 Adjusting Valve Clearance](#)

This Virtual Instructor Led Training (VILT) course demonstrates how to adjust the valves on a Kubota engine. This procedure must be performed periodically as specified in the Maintenance Check List in the Workshop Manual. (10 min.)

## [43091 Long Term Storage](#)

Many Kubota engines spend time in long-term storage before they're installed in a machine and put into service. This VILT course discusses how to store new engines properly. It demonstrates how to inspect a new engine before putting it in service, and how to prepare an engine for long-term storage. (10 min.)



# Emissions Systems

These courses explain emissions regulations, and the emissions systems on Kubota diesel engines that enable them to meet these regulations. [Click here](#) to access the online catalog.



## **10500 Emissions Regulations**

This course discusses exhaust emissions from engines, and introduces the principles regarding worldwide emissions regulations. (25 min.)

## **21010 Kubota Emissions Technology**

This course explains the technologies Kubota uses to comply with engine exhaust regulations. (15 min.)

## **21020 Exhaust Gas Recirculation (EGR) System**

This animated video demonstrates the operation of the Exhaust Gas Recirculation (EGR) System on electronically-controlled Kubota diesel engines. (5 min.)

## **21030 Aftertreatment Emissions Systems**

This animated video demonstrates the operation of the aftertreatment emissions system on electronically-controlled Kubota diesel engines. It explains the Diesel Oxidation Catalyst (DOC), Diesel Particulate Filter (DPF), and the Selective Catalytic Reduction (SCR) system. (10 min.)

# Diagmaster

Diagmaster is the diagnostic software used with Kubota electronically-controlled diesel engines. These courses must be completed in the sequence shown, except as noted. **Note: Access to Diagmaster diagnostic software is limited to Authorized Kubota Dealers.** [Click here](#) to access the online catalog.



## [21510 Diagmaster Installation](#)

This course explains how to install, update and register Kubota's Diagmaster diagnostic software on a laptop or other Windows-based computer. (up to 45 min.)

## [21521 Diagmaster Basic Use, Part 1](#)

This course demonstrates the basic use of Kubota's Diagmaster diagnostic software. Topics include launching Diagmaster, and working in Training Mode. You do not need to connect to an engine to take this course. (15 min.)

## [21522 Diagmaster Basic Use, Part 2](#)

Topics include retrieving Diagnostic Trouble Codes or DTCs, and using the Data Monitor to graph engine running conditions and actions. (20 min.)

## [21523 Diagmaster Basic Use, Part 3](#)

Topics include performing Active Tests to aid in troubleshooting, and using Utilities that are necessary to perform certain service procedures. (15 min.)

# Diagmaster

*Continued from previous page*

## **21534 Diagmaster Advanced Use, Part 4**

This course demonstrates the advanced use of Kubota's Diagmaster diagnostic software. Topics include Exporting and Importing Projects, and Displaying Graphs. (20 min.)

## **21535 Diagmaster Advanced Use, Part 5**

Topics include Data Monitor Trigger Settings to allow you to flag engine events for easy review, and Saving Signal Settings for future tests. (15 min.)

## **21536 Diagmaster Advanced Use, Part 6**

Topics include the Project Information List; the functions of the D-STi Indicator Lights; and Changing Appearance of the graphs. (20 min.)

## **21541 Diagmaster Advanced Function: Supply Pump Learning**

This course demonstrates the Supply Pump Learning procedure on Kubota model 07 and V3 diesel engines with the Denso common-rail system. You must complete 21536 “Diagmaster Advanced Use, Part 6” before enrolling in this course. (5 min.)

## **21542 Diagmaster Advanced Function: DPF Manual Regeneration**

This course demonstrates how to use Diagmaster’s DPF Manual Regeneration function. You must complete 21536 “Diagmaster Advanced Use, Part 6” before enrolling in this course. (10 min.)

## **21543 Programming Blank ECUs**

This course demonstrates how to program blank ECUs for electronically-controlled Kubota diesel engines. You must have a working knowledge of Diagmaster to use this course. (15 min.)

# Common Rail System (CRS)

CRS models feature an electronically controlled fuel injection system for maximum efficiency, smooth, quiet running, and low emissions. These courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## [21110 CRS Mechanism](#)

This course introduces the Common Rail System, or CRS. It explains the major components and basic operation, and compares CRS models to mechanical fuel injection models. (25 min.)

## [21120 CRS Components: Actuators](#)

This course covers the electrically controlled parts (commonly called actuators) of the CRS system, including the Engine Control Unit (ECU), fuel injectors, and other components. (15 min.)

## [21121 CRS Components: Sensors](#)

This course covers the sensors related to the CRS system, including descriptions, internal parts, and operating principles of each sensor. (25 min.)

## [21122 CRS Components: Mechanical Parts](#)

This course covers the mechanical parts related to the CRS system, including descriptions, internal parts, and operating principles of each part. (15 min.)

## Common Rail System (CRS)

*Continued from previous page*

### **21130 CRS Parts Inspection**

This course covers electronic and physical inspection of the sensors, actuators and mechanical parts of the Common Rail System. (15 min.)

### **21131 CRS Maintenance & Repair**

This course covers routine maintenance for the Common Rail System, including fuel injectors, the Suction Control Valve, the EGR system, and other components. (15 min.)

### **21140 CRS System Control: Calibration**

This course covers the calibration functions for the CRS system: Injector Compensation, Supply Pump Learning, and Injection Timing Calibration. (15 min.)

### **21150 CRS Cause & Effect: Actuators**

This course covers Diagnostic Trouble Codes relating to actuators for the Common Rail System, and the actions the ECU takes for each DTC. (15 min.)

### **21151 CRS Cause & Effect: Sensors**

This course covers Diagnostic Trouble Codes relating to sensors for the Common Rail System, and the actions the ECU take for each DTC. (15 min.)



# Diesel Particulate Filter (DPF)

These models use a filter system and regeneration systems to trap and burn particulate matter (PM) emissions. These courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## [21310 DPF Mechanism](#)

This course explains the mechanism and operation of the Diesel Particulate Filter, or DPF, an aftertreatment system for cleaning exhaust gases. (10 min.)

## [21320 DPF Components](#)

This course covers the parts related to the Diesel Particulate Filter or DPF system, including descriptions, internal parts, and operating principles of each part. (15 min.)

## [21330 DPF Maintenance](#)

This course covers inspection and maintenance of the Diesel Particulate Filter system and its components on a Kubota diesel engine. (15 min.)

## [21340 DPF Regeneration Control](#)

This course covers regeneration control for the Diesel Particulate Filter systems, which is the process of periodically burning the PM trapped in the DPF. (15 min.)

# Diesel Particulate Filter (DPF)

*Continued from previous page*

## **21350 DPF Cause & Effect**

This course covers Diagnostic Trouble Codes for the Diesel Particulate Filter system, and major symptoms for each DTC. (20 min.)

## **41301 DPF Removal & Replacement**

This VILT (Virtual Instructor Led Training) course is a video that explains how to remove and replace the Diesel Particulate Filter. (15 min.)

# Diesel Oxidation Catalyst (DOC)

These models are equipped with a DOC to reduce hydrocarbon emissions, but without a Diesel Particulate Filter (DPF).



## 21210 DOC Only

This course covers the DOC (Diesel Oxidation Catalyst) Only emissions system on Kubota diesel engines, and compares and contrasts them to similar DPF models. (15 min.)

# Selective Catalytic Reduction (SCR)

SCR is a technology used on some Kubota diesel models to reduce nitrogen oxide (NOx) emissions. These courses must be completed in the sequence shown, except as noted. [Click here](#) to access the online catalog.



## [21410 SCR Process](#)

This course is an introduction to Selective Catalytic Reduction, or SCR, a clean-air technology that Kubota employs on select diesel engines. It explains emissions and the SCR chemical process. (25 min.)

## [21420 SCR Components](#)

This course explains the SCR system components used on some Kubota diesel engines, including their function and maintenance. (15 min.)

## [21430 SCR System Operation](#)

This course explains the SCR system sensors used on some Kubota diesel engines, and how they are used to control the SCR system. (20 min.)

## [21440 SCR Maintenance](#)

This course explains maintenance procedures on the Selective Catalytic Reduction system used on some Kubota diesel engines, include the filters, DEF injector, and DEF tubes. (15 min.)

# Selective Catalytic Reduction (SCR)

*Continued from previous page*

## **21441 SCR Parts Inspection**

This course covers parts inspection procedures on the Selective Catalytic Reduction system used on some Kubota diesel engines, including electrical and diagnostic tests. (15 min.)

## **21450 SCR DTCs: Major Components**

This course covers Diagnostic Trouble Codes relating to major components of the Selective Catalytic Reduction or SCR system used on some Kubota diesel engines. It explains the conditions that can trigger a DTC, and the actions the ECU or ACU takes for each DTC. (15 min.)

## **21451 SCR DTCs: Sensors**

This course covers Diagnostic Trouble Codes relating to sensors of the Selective Catalytic Reduction or SCR system used on some Kubota diesel engines. It explains the conditions that can trigger a DTC, and the actions the ECU or ACU takes for each DTC. (15 min.)

## **21452 SCR DTCs: Other Components**

This course covers Diagnostic Trouble Codes relating to other components of the Selective Catalytic Reduction or SCR system used on some Kubota diesel engines. It explains the conditions that can trigger a DTC, and the actions the ECU or ACU takes for each DTC. (15 min.)

## **21460 Diesel Exhaust Fluid (DEF)**

This course covers Diesel Exhaust Fluid, or DEF: its physical properties, how it should be stored and handled, and the importance of keeping it free from contamination. You do not need to complete any other courses before enrolling in this course. (15 min.)



# Selective Catalytic Reduction (SCR)

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*The courses below may be completed in any sequence, except as noted.*

## [41401 SCR DEF Pump](#)

This VILT (Virtual Instructor Led Training) course is a video explains how to service and replace the DEF pump assembly on SCR-equipped engines, including the Diagnostic Trouble Codes relating to the pump. (10 min.)

## [41402 SCR DEF Injector: Removal, Service and Test](#)

This VILT course explains how to remove, service and test the DEF injector on SCR-equipped engines, including the 1500-hour injector flow test. (10 min.)

## [41403 SCR DEF Injector: Diagnosis & Replacement](#)

This VILT course looks at Diagnostic Trouble Codes relating to the DEF injector. It also covers installing the injector, updating the ACU, and registering the injector in K-iSS. You must first complete **41402 SCR DEF Injector: Removal, Service and Test** before enrolling in this course. (10 min.)

## [41404 DEF Tubes](#)

This VILT course explains how to inspect and diagnose the DEF tubes on SCR-equipped engines, including Diagnostic Trouble Codes. (10 min.)

## [41405 SCR Coolant Valve](#)

This VILT course explains how to check the coolant valve on SCR-equipped engines, including DTCs relating to the coolant valve. (10 min.)

# Mechanical Diesel Engines

These courses cover diesel engines with mechanical fuel injection systems. Courses 23010 through 23070 must be completed in the sequence shown. [Click here](#) to access the online catalog.



## **23010 Mechanical Fuel System Mechanism**

This course explains the mechanical fuel system used on Kubota diesel engines, including the fuel circuit, the fuel tank, the fuel feed pump, the fuel sedimenter and filter, the injection pump, and the fuel injectors. (20 min.)

## **23021 Mechanical Fuel System Components: Other Parts**

This course covers some of the components of a mechanical diesel fuel system: the water separator, mechanical and electric fuel feed pumps, and the fuel filter. (15 min.)

## **23022 Mechanical Fuel System Components: Injection Pump**

This course covers the injection pump used on Kubota diesel engines with mechanical fuel systems. It explains the pump's internal parts and how they operate. (15 min.)

## **23023 Mechanical Fuel System Components: Injection Nozzle**

This course covers the injection nozzles used on Kubota diesel engines with mechanical fuel systems. It explains the nozzles' internal parts and how they operate. (10 min.)

## **23031 Mechanical Fuel System Regular Maintenance**

This course covers the regular maintenance items of the mechanical fuel system on a Kubota diesel engine to ensure the engine's efficiency, reliability and longevity. (10 min.)

# Mechanical Diesel Injection

*Continued from previous page*

## **23032 Mechanical Fuel System Parts Inspection**

This course covers parts inspection of the mechanical fuel system on a Kubota diesel engine, including the injection pump and injection nozzles. (10 min.)

## **23040 Mechanical Governor Overview**

This course covers mechanical governors and their internal parts. It explains how they balance opposing forces to regulate engine RPM. (15 min.)

## **23050 Mechanical Fuel System Cause & Effect**

This course explains the different causes of mechanical diesel fuel injection system failure in order to determine the root cause and prevent repeat failures. (20 min.)

## **23061 Electrical Governor Overview**

This course provides an overview of the electrical governor system used on some Kubota diesel engines with mechanical fuel injection systems, including components, system operation, and its advantages. (15 min.)

## **23062 Electrical Governor Components & System Control**

This course covers the components of an electrical governor system, and how they are used to control engine speed and power output. (15 min.)

## **23063 Electrical Governor Error Indication**

This course describes the error indications that might be generated by a Kubota diesel engine with an electrical governor. (15 min.)

# Mechanical Diesel Injection

*Continued from previous page*

## **23070 Boost Compensator**

This course covers the Boost Compensator on mechanical injection diesel engines, and explains when and how it adjusts fuel injection. (15 min.)

*The courses below may be completed in any sequence.*

## **43021 Mechanical Fuel Injector Tests**

This Virtual Instructor Led Training (VILT) course explains how to check fuel injector nozzles on Kubota mechanical injection diesel engines. (10 min.)

## **43022 Mechanical Injection Timing**

This VILT course demonstrates how to set the mechanical fuel injection timing on a Kubota diesel engine. This procedure is crucial to engine performance. (5 min.)

## **43023 Bleeding Mechanical Fuel Systems**

This VILT course demonstrates how to how to bleed air from the fuel system of a mechanical diesel engine. This procedure is necessary when working on the fuel system, or when air is found in the fuel system. (5 min.)

## **43031 Compression & Cylinder Leakage Tests**

This VILT course demonstrates how to perform compression and cylinder leakage tests, a valuable tool for troubleshooting engines that suffer from low power or rough running. (10 min.)

# Spark Ignited Engines (WG series)

These models are fueled with gasoline, propane/LPG, and/or natural gas. Courses 22010 through 22530 must be completed in the sequence shown. [Click here](#) to access the online catalog.



## [22010 WG Engine Overview](#)

This course provides an overview of Kubota's WG series spark-ignition engines. It explains the different fuel types, basic fuel system operation, and the sensors and actuators used on these models. (20 min.)

## [22020 WG Mechanism](#)

This course explains the operation of the fuel and ignition systems on Kubota's electronically controlled WG models, including the differences between gasoline and LPG or natural gas systems. (20 min.)

## [22110 WG Components: Sensors](#)

This course covers the sensors used on Kubota spark-ignited WG engines, such as the Pre & Post O<sub>2</sub> sensors, knock sensor, and TMAP sensor. (15 min.)

## [22120 WG Components: Actuators](#)

This course covers the actuators used on Kubota spark-ignited WG engines, such as the Electronic Throttle Body, fuel injectors and Direct Electronic Pressure Regulator. (15 min.)

## [22130 WG Components: Mechanical Parts](#)

This course covers the mechanical fuel system parts on WG models, such as the Three-way Catalyst, Fuel Pressure Manifold and Vaporizer. (15 min.)



## Spark Ignited Engines (WG series)

*Continued from previous page*

### 22210 WG Parts Inspection: Common Parts

This course covers the inspection of common parts on Kubota WG series engines, such as sensors and ignition components. (15 min.)

### 22211 WG Parts Inspection: Actuators

This course covers the inspection of actuators on Kubota WG series engines, such as fuel injectors and the DEPR. (10 min.)

### 22220 WG Maintenance

This course covers the routine maintenance procedures specific to Kubota's WG series engines, such as the spark plugs, fuel filter and vaporizer. (15 min.)

### 22310 WG System Control

This course covers fuel and ignition system control on electronically controlled Kubota WG models, including actuators and sensors and how the ECU uses them to properly control combustion. (20 min.)

### 22410 WG Cause & Effect: System Action

This course describes the different types of System Actions that may occur when a Kubota WG series engine experiences a Diagnostic Trouble Code. (15 min.)

### 22510 WG Engine Diagnostic Tool Overview

This course introduces the diagnostic tools used on Kubota's WG series engines: EDIS (E-control's Display and Interface Software) and KGST (Kubota Gasoline Service Tool). **Note: Access to Kubota diagnostic software and tools is limited to Authorized Kubota Dealers.** (15 min.)

## Spark Ignited Engines (WG series)

*Continued from previous page*

### 22520 WG EDIS Introduction

This course covers the basic features and operation of the EDIS diagnostic software used on some Kubota WG series engines. (25 min.)

### 22530 WG KGST Introduction

This course covers the basic features and operation of the KGST diagnostic software used on some Kubota WG series engines. (15 min.)

*The courses below may be completed in any sequence.*

### 22545 ECI ECU Reprogramming

This course demonstrates how to reprogram (reflash) the ECU on a Kubota spark-ignited engine with an E-Controls 4G ECU (also called the ECI ECU) on the WG1605, WG1903, WG2503 and WG3800 models. **Note: Access to Kubota diagnostic software and tools is limited to Authorized Kubota Dealers.** (15-30 min., depending on whether you have already installed KGST)

### 22551 Kubota Natural Gas Calculator

This course explains how to select and download the correct ECU software for a wellhead application of a Kubota natural gas engine. **Note: Access to Kubota diagnostic software and tools is limited to Authorized Kubota Dealers.** (15 min.)

## Spark Ignited Engines (WG series)

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### **42011 WG972 Fuel Injector**

This is a Virtual Instructor Led Training (VILT) course that explains how to inspect, test and replace fuel injectors on Kubota WG972 spark-ignited engines. (10 min.)

### **42041 WG972 Lock Off Valve**

This VILT course explains how to inspect, test and replace the lock-off valve on WG972 spark-ignited engines. (10 min.)

### **42043 Checking LP Pressure**

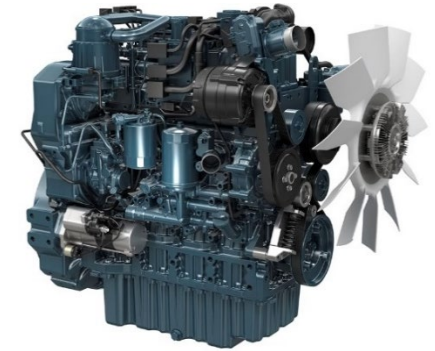
This VILT course demonstrates how to check LPG pressure at the vaporizer on a Kubota spark-ignited WG engine. (10 min.)

### **42071 Using a Spark Tester**

This VILT course demonstrates how to perform a spark test on a spark-ignited Kubota engine. This test will indicate if the ignition system is operating correctly. (10 min.)

## Platform-specific courses

These courses cover specific Kubota engine platforms.



### [25901 Kubota's New 09 Series: What's Different](#)

This course introduces Kubota's new 09 series engines, explains their new features, and highlights the many improvements they deliver. These new engines are designed for the high power demands and diverse needs of construction and industrial machines. (15 min.)

# Generators

These courses introduce and explain Kubota's GL series generators. Courses 24001 through 24040 must be completed in the sequence shown. [Click here](#) to access the online catalog.



## **24001 Generator Training, Part 1**

This covers operational, safety and maintenance features; specifications; component identification; hook up and grounding instructions; and requirements and precautions for operation. (25 min.)

## **24002 Generator Training, Part 2**

This course covers pre-operation checks; starting, running and stopping procedures; and an overview of maintenance, storage and troubleshooting. (20 min.)

## **24010 Generator Mechanism**

This course explains how Kubota generators with separate excitation units produce electric power, and how they are controlled to maintain the proper voltage output. (15 min.)

## **24020 Generator System Control Overview**

This course covers several control systems used on Kubota generators: the Output Voltage Control System, the Glow System, the Battery Charging System, the Engine Starting System, and the Engine Stopping System. (15 min.)

# Generators

*Continued from previous page*

## [24040 Generator Maintenance](#)

This course covers routine maintenance on Kubota generators, including the brushes, slip rings, and ball bearings. (Engine maintenance is covered in other courses.) (10 min.)

## [44011 Generator Coil Tests](#)

This Virtual Instructor Led Training (VILT) course demonstrates some easy electrical checks on the coils on most Kubota GL-series generators. (10 min.)

## [44012 Generator Disassembly](#)

This VILT course demonstrates how to disassemble most Kubota GL-series generators, and how to perform the last electrical check. You must first complete **44011 Generator Coil Tests** before enrolling in this course. (10 min.)

## [44013 Generator Reassembly](#)

This VILT course demonstrates how to reassemble most Kubota GL-series generators. You must first complete **44012 Generator Disassembly** before enrolling in this course. (10 min.)

# V1505-T-E4 Reformer

These courses explain the reformer system used on Kubota 05 series diesel engines, which feature a Diesel Particulate Filter (DPF) and a mechanical fuel injection system. These courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## [21610 Reformer Mechanism](#)

This course introduces the reformer system. It explains the system's sensors and actuators, and how the system works. (15 min.)

## [21620 Reformer Components: Reformer Assembly](#)

This course covers the internal components and operation of the reformer assembly, including the glow plugs, catalysts and sensors. (15 min.)

## [21621 Reformer Components: Blower, Pump, DPF](#)

This course covers the external components of the reformer system: the blower, pump, and Diesel Particulate Filter. (15 min.)

## [21640 Reformer Regeneration Control](#)

This course covers regeneration control for the reformer system, including PM level criteria, the conditions required to start regeneration, and the control strategy. (25 min.)

## [21650 Reformer Cause & Effect](#)

This course covers Diagnostic Trouble Codes for the reformer system, and the actions the ECU takes for each DTC. (20 min.)

# Warranty & Administration

These courses explain KEA's warranty process. Except for 11010, these courses must be completed in the sequence shown. [Click here](#) to access the online catalog.



## **11010 Introduction to Kubota Warranty System**

This course introduces the Kubota Warranty System product service web portal, demonstrating its features and how to navigate the site. It also reviews the KEA mobile app. (35 min.)

## **11501 KEA Warranty Process, Part 1: Resources and Mize**

This course is the first of three parts about KEA's warranty process. In Part 1, we'll discuss the KEA and K-iSS websites and other service resources that provide critical information you'll need when creating warranty claims. We'll look at the warranty process in Mize, along with the do's and don'ts when submitting a claim. (20 min.)

## **11502 KEA Warranty Process, Part 2: Best Practices and Diagnostic Tools**

This course is the second of three parts about KEA's warranty process. In Part 2, we'll look at some real-life examples and explain why warranty was denied. And we'll discuss using diagnostic tools to support warranty claims. (20 min.)

## **11503 KEA Warranty Process, Part 3: Documentation, Returns & Payment**

This course is the third of three parts about KEA's warranty process. In Part 3, we'll learn how to take good photos to support warranty claims. We'll explain how to ship returned parts, and we'll discuss how warranty claims are paid. (20 min.)





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