

# Your road to a great career begins here.

At JCB, we have always put the customer first. It is therefore not a surprise that we are committed to offering the **very best customer support** in the industry.

Our dealers need the best service technicians, trained to **world-class levels**, in order to service and maintain our customer's machines. That is where you come in!





As you start your career in the service department you will be given specialist training on JCB products. You will be ultimately responsible for the service, maintenance and diagnostics of the range of JCB agricultural machinery.

The service department offers a clear development route from Apprentice to Service Manager.

- Apprentice Technician
- Service Technician
- Senior Service Technician
- Master Service Technician
- Service Manager

JCB Global Learning and Reaseheath
College in Cheshire, have worked
together to develop a **bespoke**Service Technician Apprentice
programme to support the JCB
network of agricultural dealers.

As an apprentice, you will have an **amazing opportunity** to train on the latest JCB machinery and get your career off to a flying start.

# Your future.

The Agricultural sector has changed significantly in the last two decades with rapid advancement in machine technology.

The levels of technology used on modern agricultural machinery is more advanced than those seen in the automotive, commercial and industrial equipment markets.

You will be working with the latest technology to maximise machine uptime and will develop your skills to provide our dealers and customers with world-class customer support.

Innovation is at the heart of JCB and we are constantly striving to improve our machines and move forward with the times. You will provide a crucial role in supporting JCB products as we continue to advance our machine range.

Throughout your career you will develop the skills, knowledge and experiences required to become a JCB Master Service Technician, which will form the basis of your future.







### Why wouldn't you want...

- Job satisfaction
- Job security
- High earning potential
- Clear progression routes
- A wide range of career opportunities



# Course overview.

You will study towards a nationally recognised apprenticeship whilst being employed by a JCB dealer. You will learn through a combination of on the job training and formal college based education.

Course duration: 3 years

Apprenticeship awarded: Land Based service engineering Technician Level 3 apprenticeship.

Structure: 3 blocks of 4 weeks training per year:

- 12 weeks annually at Reaseheath College
- 2 weeks training per year at Global Learning focusing on JCB products and systems throughout your apprenticeship program.









#### **YEAR ONE**

#### **BLOCK ONE**

# Reaseheath College

Health and safety

Introduction to agricultural machinery and equipment

Fundamentals of electrics and electrical principles

Machine servicing and daily checks

Introduction to compression ignition engines

# Training delivered at JCB Global Learning

Introduction to JCB

Welcome to the apprentice programme

The importance of the JCB brand and our global dealers

Structured factory tours and presentations

Machine familiarisation and overview of the JCB product range

#### **BLOCK TWO**

# **Reaseheath College**

Engine lubrication systems

Engine cooling systems

Introduction to common rail fuel systems

Engine compression and cylinder leakage testing

PDI process and use of dynamometer to test engine performance

Introduction to hydraulic control valves

Principles of electric motors

# Training delivered at **JCB Global Learning**

JCB engine introduction

Introduction to JCB engines

Overview of JCB engine range

Principles of diesel engines

Dismantle and rebuild of JCB engines

Introduction to engine emission control

Exhaust gas recirculation systems

Variable geometry turbochargers

Engine after treatment systems

#### **BLOCK THREE**

# Reaseheath College

Vehicle transmissions and drivelines

Mechanical transmissions systems

JCB 4WD axle systems

4WD axle repair, set-up and adjustment

Introduction to hydraulic systems

Vehicle electrical schematics

Electrical and electronic components





#### **YEAR TWO**

#### **BLOCK FOUR**

# Reaseheath College

Welding and fabrication exercises

Engineering materials

Principles of steering systems

Introduction to hydraulic schematics

Hydraulic pressure relief valves

Load sensing hydraulic systems

Vehicle suspension systems

Principles of CAN bus systems

# Training delivered at JCB Global Learning

Introduction to JCB hydraulic systems

Principles of hydraulic systems used on JCB machines

JCB hydraulic schematics and symbols

Function and operation of hydraulic components

Hydraulic fault finding, pressure and flow testing and circuit testing on a JCB machine

#### **BLOCK FIVE**

# **Reaseheath College**

Transmission systems

Semi and full power-shift gearboxes

JCB transmission disassemble, setup and rebuild

Continuously Variable
Transmission (CVT) systems

Hydrostatic transmissions

Vehicle braking systems

Oil immersed braking systems

Welding and fabrication exercises

# Training delivered at JCB Global Learning

Introduction to JCB transmissions

Principles of JCB's drivetrains and components

Function of torque convertors

Synchro shuttle and power-shift gearboxes, JCB axles and braking systems

Dismantle and rebuild JCB gearboxes

Transmission stall testing

Hydraulic clutch pack pressure testing

Disassemble, rebuild and setup of JCB axles and driveheads

#### **BLOCK SIX**

### Reaseheath College

Electrical and electronic systems

Service department procedures and practices e.g. warranty reporting and customer service skills

Precision planting machinery

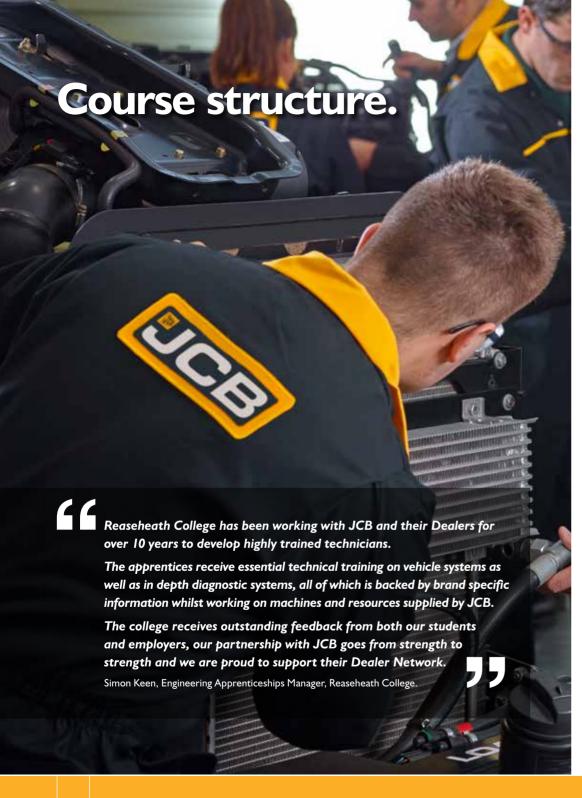
Application machinery

Cultivation machinery

Thermal cutting

Arc and MIG welding





#### **YEAR THREE**

#### **BLOCK SEVEN**

### Reaseheath College

Forage harvesters and baling machinery

Harvesting machinery

Applications of ISOBUS precision farming systems

ISOBUS communication

GPS auto guidance applications in agriculture

Engineering calculations

# Training delivered at JCB Global Learning

Introduction to JCB electrics

Principles of basic electrical circuits

Function of batteries

Starting circuits

Charging circuits

JCB CAN bus systems

Reference voltage circuits

ECU fault finding

Use of JCB Servicemaster diagnostic tool

Use of JCB wiring diagrams to fault find basic electrical circuits

#### **BLOCK EIGHT**

### Reaseheath College

GPS auto guidance setup and use

ISOBUS electronic system operation and fault finding

Hydraulic system diagnostics and fault finding

CAN bus fault finding

Electro-hydraulic systems

Common rail fuel system fault finding

# Training delivered at JCB Global Learning

JCB Tier 4 Final engines

Principles of emission regulation on JCB diesel engines

Selective Catalyst Reduction (SCR) system DEF dosing system operation and testing

Engine de-rate regulations

Use of JCB Servicemaster to monitor and diagnose emission system faults

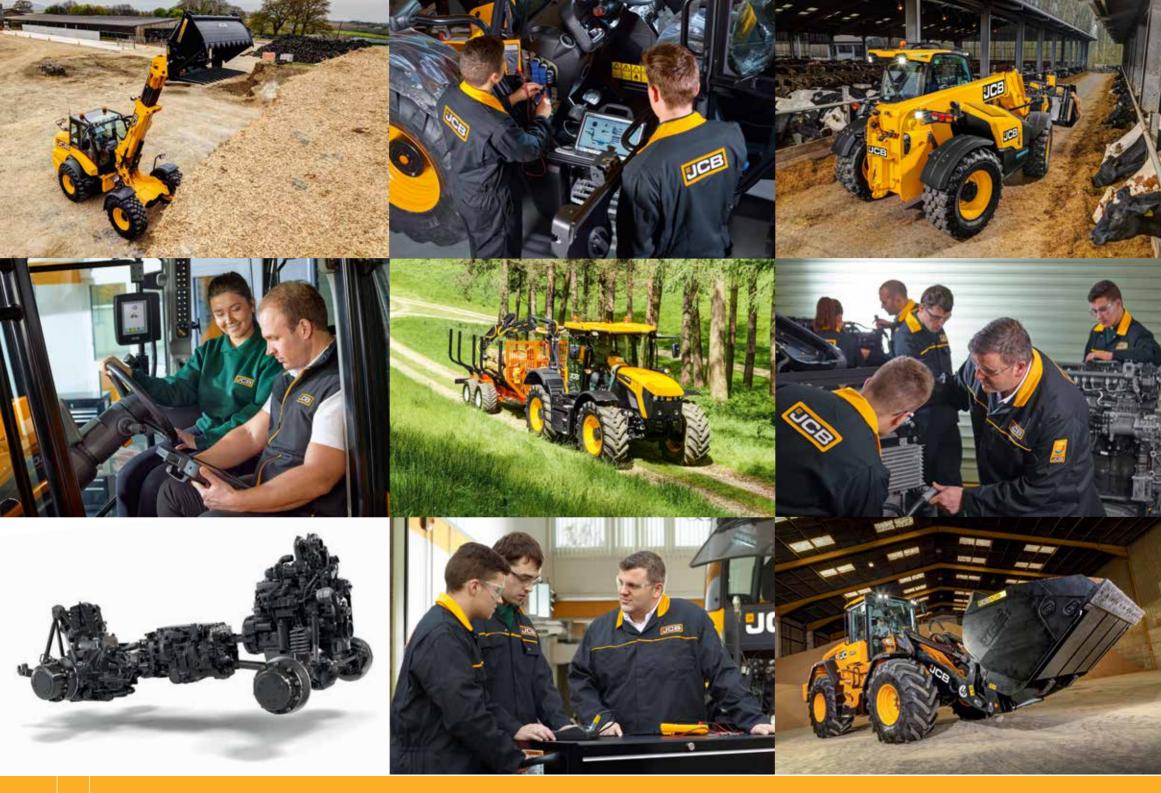
#### **BLOCK NINE**

### Reaseheath College

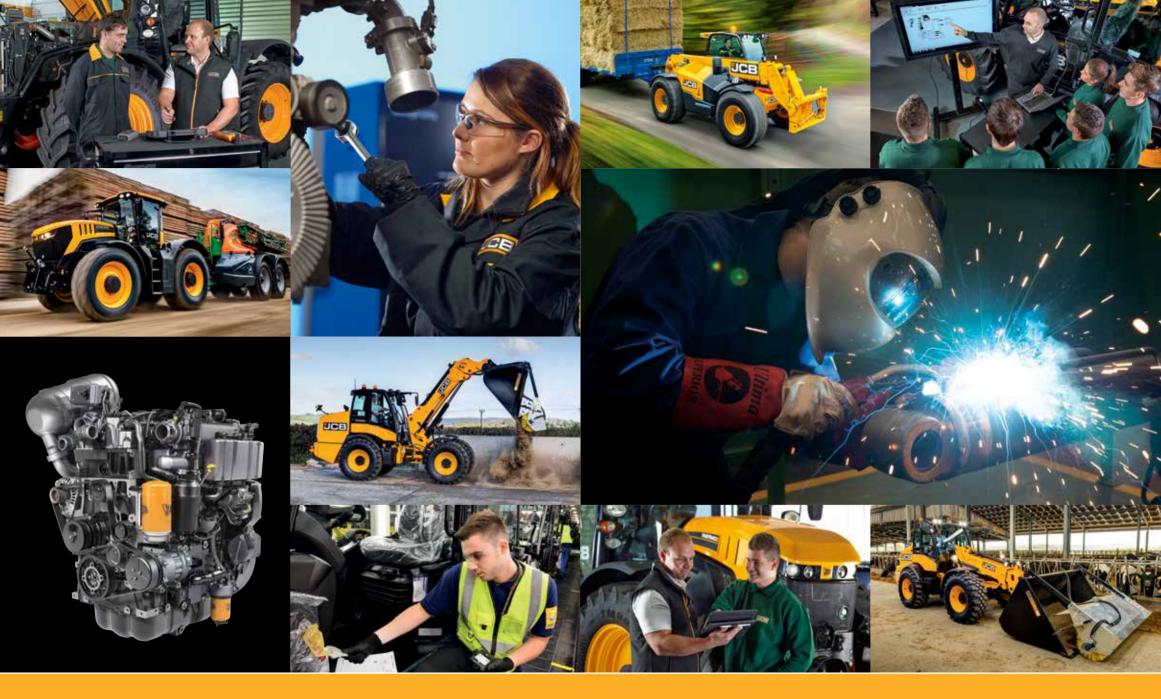
Preparation for end-point assessments

End-point assessments









#### **JCB GLOBAL LEARNING**

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