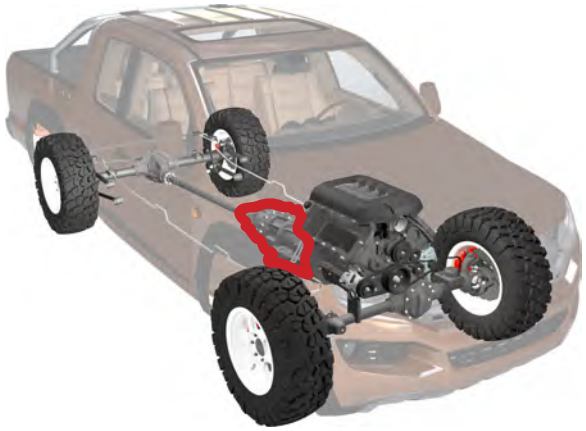
TRANSFER CASE PRINCIPLES

eLearning courses designed to increase productivity and profits



Learning made Simple, Visual, and Interactive

Transfer Case Principles introduces learners to the main types of vehicle architectures, concepts on how a transfer case functions within a four-wheel vehicle, and how human interactions can influence how a transfer case operates.

Credit Hours **1**

Learning Objectives

- Differentiate the various types of vehicle architectures.
- Recognize mechanical components with the drivetrain of a four-wheel drive vehicle.
- Recall electrical hardware and software used within a four-wheel drive vehicle.
- Outline the supporting physics that allow four-wheel drive vehicles to operate.
- Name the different transfer case subsystems.
- Define driver selectable modes and how an operator can directly or indirectly communicate with the transfer case.

Table of Contents

I. Vehicle Architecture

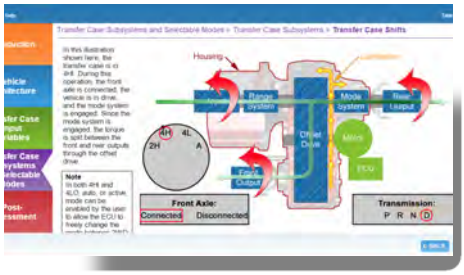
- **Architecture Types**
  - o 2WD
  - o 4WD
- **Drivetrain Components**
  - o Mechanical Components
  - o Electrical Hardware
  - o 4WD Software Control Systems

II. Transfer Case Input Variables

- **Torque**
  - o Driveline Torque
- **Skid Torque**
  - o Determining Skid Torque
  - o Optimizing Skid Torque
- **Traction**
- **Wheel Slip**
- **Driveline Speed**
- **Vehicle Steering**

III. Transfer Case Sub-Systems and Selectable Modes

- **Transfer Case Subsystems**
- **Transfer Case Driver Selectable Modes**
- **Transfer Case HMI**



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