

STUDENT ASSESSMENT INFORMATION

RIIVEH305A OPERATE AND MAINTAIN A FOUR WHEEL DRIVE VEHICLE

This unit covers the operation and maintenance of four-wheel drive vehicles in the resources and infrastructure industries. It includes identifying four-wheel drive specific terms, terminology and techniques, planning for minimal environmental impact, performing pre-departure checks, using the features of a four-wheel drive vehicle to drive in a variety of terrain types, and performing maintenance and minor repairs on four-wheel drive vehicles. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Competency Unit Elements:

1. Identify four wheel drive specific terms, terminology and techniques
 - 1.1 Access, interpret and apply compliance documentation relevant to the work activity
 - 1.2 Identify the structural and handling differences between a conventional two wheel drive and a four wheel drive vehicle
 - 1.3 Identify and demonstrate the purpose and use of front wheel hubs
 - 1.4 Identify factors affecting tyre size, fitment, rating, and pressure
 - 1.5 Correctly identify, recovery hooks and mounting features
 - 1.6 Identify hazards associated with incorrect use of vehicle features or equipment
2. Plan for minimal environmental impact
 - 2.1 Determine types of impact likely to occur during four wheel driving and associated activities
 - 2.2 Demonstrate compliance with land management principles and policies when planning exploration activities
 - 2.3 Comply with policies and management plans relevant to the activity area
 - 2.4 Plan and conduct activities in a manner which minimises environmental impact
 - 2.5 Adopt and implement procedures to ensure minimization of harm to the environment from four wheel drive activities
 - 2.6 Demonstrate cooperation and consideration towards other land users

3. Perform pre-departure checks

- 3.1 Perform routine pre-departure checks under the bonnet, under the body, and on external and internal items and accessories
- 3.2 Take action to correct any deficiency
- 3.3 Determine food and water requirements for journey
- 3.4 Select suitable navigation equipment where necessary
- 3.5 Interpret weather conditions to determine suitability for driving
- 3.6 Apply safe vehicle loading practices
- 3.7 Secure items of personal luggage safely
- 3.8 Advise passengers of any special safety precautions to be taken when traversing rough terrain

4. Use the features of a four wheel drive vehicle to drive in a variety of terrain types

- 4.1 Operate four wheel drive vehicles correctly and safely both on and off road, in accordance with road rules, principles of four wheel driving and OH&S regulations
- 4.2 Apply smooth accelerator control strategies over a range of terrain types
- 4.3 Demonstrate recommended braking techniques for hard top surfaces and off road conditions
- 4.4 Correctly identify situations where the engagement of four wheel drive is required
- 4.5 Engage correctly, where fitted, front hubs or centre differential lock (constant four wheel drive vehicles)
- 4.6 Survey track to identify hazards, assess risk and select a best route
- 4.7 Select routes to minimise damage to the environment
- 4.8 Use appropriate range, gear, speed, driving and braking technique to negotiate a range of terrain types whilst maintaining control of vehicle at all times
- 4.9 Perform a stop stall key start recovery procedure on a moderate incline
- 4.10 Check brakes and undercarriage after negotiating varying terrain
- 4.11 Perform repairs to damaged tracks if necessary
- 4.12 Use standardised operating procedures when travelling in company with other vehicles
- 4.13 Maintain appropriate hand positioning on steering wheel

5. Use a single snatch strap to recover a vehicle
 - 5.1 Identify risks associated with vehicle recovery and develop and implement strategies to minimise risks
 - 5.2 Identify recovery hooks
 - 5.3 Confirm use of recommended mounting strategy on the four wheel drive vehicle and use of rated recovery equipment when practicable
 - 5.4 Demonstrate procedures for preparing vehicles for recovery
 - 5.5 Demonstrate techniques to minimise impact on the environment during vehicle recovery
 - 5.6 Demonstrate techniques for joining two snatch straps
 - 5.7 Coordinate safe recovery of a four wheel drive vehicle using a single snatch strap
 - 5.8 Correctly perform post recovery checks and repairs

6. Perform maintenance and minor repairs on four wheel drive vehicles
 - 6.1 Select/access maintenance equipment correctly, including spares and fluids, prior to departure after consideration of contextual issues
 - 6.2 Check vehicles regularly prior to and during trip and correctly perform routine maintenance/repair tasks
 - 6.3 Make vehicle performance reports to the designated person
 - 6.4 Demonstrate safe use of a jack to support a four wheel drive vehicle on uneven ground