The Queensland Fire and Rescue Service (QFRS) Skills and Drills manual provides firefighters entering the QFRS with information on the core skills and drills required to be an effective member of an operational firefighting crew. It also provides firefighters with a study and reference point when practising or delivering firefighting skills and drills during training sessions.

The manual divides the information into five sections. The diagram below identifies these sections and indicates the order in which they appear in this document.
CHAPTER 1 – Training/Safety Information

Training/ Safety Information

It is the responsibility of the Officer-In-Charge (OIC) to ensure that any training activity being carried out is performed in a safe manner following accepted practices. It is also the responsibility of all firefighters taking part in a training activity to carry out their function in such a way that neither their personal safety nor that of any other firefighter or member of the public is placed in unnecessary danger.

The following points must be observed during training activities:

- The safety of all personnel involved in the activity is paramount
- All forms of jewellery (e.g. watches, rings, earrings and necklaces) must be removed prior to engaging in any training activities
- The correct level of protective clothing must be worn. This will be at the discretion of the OIC, taking into consideration:
  - the type of training
  - the environment
  - the safety of the personnel involved.

Before firefighters can undertake any form of training involving the skills and drills that are detailed in Sections 3 and 4 of this workbook or form part of an operational crew, they must have a thorough understanding of the information concerning:

- orders, words of command and signals
- squad and crew formation
- appliance mounting and dismounting
- appliance positioning
- ladders
- hose.
1. Hazards and risk management

It is important to remember that a firefighter’s workplace is often someone else’s emergency, which does not mean that the health and safety of firefighters is to be ignored. Properly implemented and monitored procedures for the identification and assessment of risks faced by firefighters in emergency situations are an essential Workplace Health and Safety (WH&S) tool for the prevention of injuries and illnesses.

The trainer responsible for the instruction will undertake hazards and risk management strategies but it must be understood that everybody plays a role in risk management. As a member of a crew you have a responsibility to yourself and fellow crew members to ensure hazards are identified and effective risk management strategies are implemented and followed. Hazard identification and risk assessment are two of the five main steps involved in a process called risk management. The five basic sequential steps involved in risk management are as follows:

1. Identification of workplace hazards – this should be an on-going process of inspecting, observing and examining all aspects of the work environment and work processes to identify any hazards present

2. Risk assessment – this is a process which involves the evaluation of the likelihood and potential severity of injury or some harm associated with each identified hazard

3. Deciding on control measures – this is the process of determining appropriate control measures for each identified hazard

4. Implementing control measures – this is the process of introducing control measures into the workplace

5. Monitoring and reviewing the entire risk management process – this process ensures that control measures are working effectively to reduce the identified risks and that the process of risk management is working to identify all new hazards.
Hazards and Risks

The terms *hazard* and *risk* are often used interchangeably. They actually have very different meanings.

A hazard is *something with the potential to cause harm* (QLD WH&S Advisory Standard for Risk Management). Hazards may include substances, plant and other aspects of the work environment such as lighting levels and noise.

A risk is *the likelihood that death, injury or illness might result because of the hazard* (QLD WH&S Advisory Standard for Risk Management). Risk is the likelihood of the potential being realised (i.e., an interaction occurs between the hazard and worker/s). Risk is also a product of two factors - the *frequency* and *severity* of harm resulting from human interaction with the hazard.

The following table provides some examples of the difference between hazard and risk taken from the QLD WH&S Advisory Standard for Risk Management.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confined space: Using a petrol powered pump in a well</td>
<td>that workers might suffer carbon monoxide poisoning because of inadequate ventilation and proximity to the pump (i.e. being in the bottom of the well).</td>
</tr>
<tr>
<td>Electricity: Exposed live wires</td>
<td>that workers might be electrocuted because they are exposed to electrical wires while using a deep fryer that has inadequate insulation on the power cable.</td>
</tr>
<tr>
<td>Manual handling: Of heavy loads</td>
<td>that workers might suffer back strain from inappropriate and unassisted manual handling.</td>
</tr>
<tr>
<td>Noise: Constant low level background noise</td>
<td>that office workers might suffer stress in the form of fatigue, anxiety and/or aggression because they are exposed to constant low level noise of 75 dB(A).</td>
</tr>
<tr>
<td>Hazardous substance: Infected blood</td>
<td>that workers might sustain a needle stick injury and become infected from a patient with infected blood.</td>
</tr>
</tbody>
</table>
Identifying Hazards

There are many different methods that can and should be applied when looking for workplace hazards. These may include the use of checklists, visual observation and personal experience. The starting point in many cases is to break the work or workplace into all of its components and then systematically identify all the issues (i.e. hazards) that may have the potential to cause harm or injury. For example:

- list all the tasks that are carried out (turning out, proceeding to an incident, arriving at an incident and commencing procedures, maintenance of equipment, etc.)
- locations (different areas within the station, outside, different emergency locations—roads, houses, buildings, parks, water supply etc)
- roles (firefighter, OIC, etc)
- functions or production processes (responding to fires, rescues, responding to transport systems incidents, etc).

Once hazards are identified appropriate steps should then be taken to control, minimise or eliminate them.

2. Orders, words of command and signals

Firefighters must be capable of giving and responding to a variety of standard orders, words of command and signals at both training and emergency incidents.

These methods of fire service communication must be conveyed clearly and concisely to ensure all members of the crew understand and carry out their assigned duties in an orderly and proficient manner.

Orders

At training and emergency incidents, the QFRS use two types of orders. These are:

- cautionary orders
- executive orders.
Cautionary orders

Cautionary orders detail the task to be implemented and the positioning of equipment. When a cautionary order is being detailed, firefighters must listen intently and think through their roles and responsibilities in relation to carrying out the activity.

Executive orders

Firefighters are not released to perform their assigned duties until the executive order, Action, has been given. By sequencing orders in this manner, firefighters are trained to listen to instructions in their entirety, before leaving the OIC. An example of the complete order is given below.

Fire on the workshop roof:

(Cautionary order)
- Case 3 using the extension ladder.

(Executive order)
- Action!

Words of command

Listed alphabetically in the following table are standard words of command which are used in relation to the following areas:

- marching
- drills and skills
- ladders
<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commands relating to marching:</strong></td>
<td></td>
</tr>
<tr>
<td>Attention</td>
<td>• Move left foot to right foot;</td>
</tr>
<tr>
<td></td>
<td>• Hold heels together and turn feet out at an angle of 30º;</td>
</tr>
<tr>
<td></td>
<td>• Keep knees straight;</td>
</tr>
<tr>
<td></td>
<td>• Maintain body erect with shoulders level, square to the front and moderately back;</td>
</tr>
<tr>
<td></td>
<td>• Let arms hang down naturally, wrists straight;</td>
</tr>
<tr>
<td></td>
<td>• Close hands with thumbs to the front and close to the forefinger;</td>
</tr>
<tr>
<td></td>
<td>• Position hand immediately behind the seam of the trousers;</td>
</tr>
<tr>
<td></td>
<td>• Hold head erect with eyes straight ahead.</td>
</tr>
<tr>
<td>Break off</td>
<td>• This command is given when the squad is required to break-off for some reason other than dismissal;</td>
</tr>
<tr>
<td></td>
<td>• Squad will turn right, march three paces and then move away.</td>
</tr>
<tr>
<td>Close order march (two ranks)</td>
<td>• Used after the inspection of firefighters and their personal equipment;</td>
</tr>
<tr>
<td></td>
<td>• Stepping off with the left foot, the rear rank takes two paces forward;</td>
</tr>
<tr>
<td></td>
<td>• The front rank remains stationary.</td>
</tr>
<tr>
<td>Close order march (three ranks)</td>
<td>• Used after the inspection of firefighters and their personal equipment;</td>
</tr>
<tr>
<td></td>
<td>• Stepping off with the left foot, the squad resumes their original formation.</td>
</tr>
<tr>
<td>Dismissed</td>
<td>• Indicates the OIC has no further duties for the squad/crew;</td>
</tr>
<tr>
<td></td>
<td>• The squad/crew quarter turns to the right, pause and then break off.</td>
</tr>
<tr>
<td>Eyes front</td>
<td>• Squad - turn heads smartly to the front</td>
</tr>
<tr>
<td></td>
<td>• Front rank - lower right arms</td>
</tr>
<tr>
<td></td>
<td>• Avoid slapping of the thigh.</td>
</tr>
<tr>
<td>Command</td>
<td>Firefighter response / use</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Fall in                 | • Squad - come to attention, double smartly into position and form ranks on the left of the marker  
• Maintain a distance of one arm length between ranks and files  
• When in position, stand at-ease.                                                                                                                                 |
| Halt                    | • Stop, cease the action that is being undertaken  
• Indicates that the desired position has been reached; e.g., when extending and lowering ladders, depressing or elevating a turntable ladder, reversing an appliance into position.                                      |
| Left Turn               | • This command is given with the firefighter at attention  
• On hearing the command the firefighter:  
  - raises the right heel and left toe  
  - turns 90° to the left on the left heel and right toe, positioning the weight of the body on the left foot  
  - brings the right foot smartly up to the left  
• On completion the firefighter resumes the attention position.                                                                                                           |
<p>| Left Turn (on the march)| • The executive word of command is given as the right foot passed the left. The step is completed with the left foot, the right foot is placed at a 45° angle across the toe of the left foot and the firefighter marches of in the new direction |</p>
<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left wheel</td>
<td>• The command is, <em>Change direction left, left wheel</em></td>
</tr>
<tr>
<td></td>
<td>• The firefighters on the inner leading rank march around a quarter of the circumference of a circle having a radius of approximately one metre, stepping short to enable the remainder of the section to wheel with them</td>
</tr>
<tr>
<td></td>
<td>• The inner firefighters turn their heads and eyes smartly to the outer firefighters, the remainder looking towards the inner firefighters, so that alignment is maintained</td>
</tr>
<tr>
<td></td>
<td>• When the quarter circle is completed the squad leads on in the new direction.</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Diagram of left wheel movement" /></td>
</tr>
<tr>
<td>Mark time</td>
<td>• Mark time by alternately raising each foot 150 mm</td>
</tr>
<tr>
<td></td>
<td>• Retain the arms at the sides</td>
</tr>
<tr>
<td></td>
<td>• The order is given as the left foot contacts the ground.</td>
</tr>
<tr>
<td>Marker fall in</td>
<td>• Command given when forming a squad for training activities</td>
</tr>
<tr>
<td></td>
<td>• The instructor initially nominates a firefighter to perform the duties of ‘Marker’</td>
</tr>
<tr>
<td></td>
<td>• On hearing the command, <em>Marker fall in</em>, the firefighter:</td>
</tr>
<tr>
<td></td>
<td>- moves on the double to the position designated by the instructor</td>
</tr>
<tr>
<td></td>
<td>- stands to attention</td>
</tr>
<tr>
<td></td>
<td>- pauses then assumes the position of stand at ease.</td>
</tr>
<tr>
<td>Command</td>
<td>Firefighter response / use</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Open order march        | - Used for the inspection of firefighters and their personal equipment
- Stepping off with the left foot, the rear rank takes two paces back
- Inspections are made with the firefighters in the Attention position. |
| (two ranks)             |                                                                                                                                                    |
| Open order march        | - Used for the inspection of firefighters and their personal equipment
- Stepping off with the left foot, the front rank takes two paces forward
- The rear rank takes two paces to the rear
- Inspections are made with the firefighters in the Attention position. |
| (three ranks)           |                                                                                                                                                    |
| Quick march             | - The command given for this action is, ‘Squad will advance by the right, Quick march’
- On the executive word of command, March, the squad steps off with the left foot using a full pace of 750 mm
- A rate of paces per minute is maintained
- Firefighters maintain the carriage of the head and body as for the position of attention
- The arms are as straight as their natural bend will allow and swing freely from the shoulders front to rear, the hands reaching belt height
- The legs are swung freely and naturally from the hip joints and straightened as the foot comes to the ground
- Direction may be maintained by focussing on objects directly to the front
- Strict attention must be paid to alignment when marching
- When turning to the right, flank dressing is maintained to the left. If turning to the left, dressing is maintained to the right. |
<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Right dress</strong></td>
<td>• The squad, with the exception of the right hand file, turn their heads to the right and move backwards or forwards until they can just see the lower portion of the firefighter’s face second from them</td>
</tr>
<tr>
<td></td>
<td>• At the same time the front rank firefighters only, with exception of the marker, raise the right arm to shoulder height, hand clenched, knuckles uppermost and move to the right or left until they can just touch the shoulder of the firefighters on the right</td>
</tr>
<tr>
<td></td>
<td>• The centre and rear ranks cover off the front rank firefighters. (allowance should be made for very tall or short firefighters to ensure uniformity of rank and file)</td>
</tr>
<tr>
<td><strong>Right turn</strong></td>
<td>• This command is given with the firefighter at attention</td>
</tr>
</tbody>
</table>
|                          | • On hearing the command, the firefighter  
  - raises the left heel and right toe  
  - turns 90° to the right on the right heel and left toe, positioning the weight of the body on the right foot  
  - brings the left foot smartly up to the right |
|                          | • On completion the firefighter resumes the attention position.                                                                                                                                                         |
| **Right Turn**           | • The executive word of command is given as the left foot passes the right. The step is completed with the right foot and the left foot is places at a 45° angle across the toe of the right foot and the firefighter marches off in the new direction. |
| **(on the march)**       |                                                                                                                                                                                                                         |
| **About Turn**           | • The executive word of command is given as the right foot passes the left. The step is completed with the left foot, the right foot is placed at a 90° angle across the toe of the right foot, the right foot is brought down pointing in the new direction. The left foot is placed down beside the right foot and the firefighter steps off with the right foot. |
## Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right wheel</td>
<td>• The command is, <em>Change direction right, right wheel</em></td>
</tr>
<tr>
<td></td>
<td>• The inner firefighters of the leading rank march around a quarter of the circumference of a circle making a radius of approximately one metre, stepping short to enable the remainder of the section to wheel with them</td>
</tr>
<tr>
<td></td>
<td>• The inner firefighters turn their heads and eyes smartly to the outer person. The remainder look towards the inner firefighters so that alignment will be maintained</td>
</tr>
<tr>
<td></td>
<td>• When the quarter circle is completed, the squad leads on in the new direction.</td>
</tr>
<tr>
<td>Roll call</td>
<td>• Firefighters standing at ease come to attention when acknowledging their names by calling, <em>Here</em></td>
</tr>
<tr>
<td></td>
<td>• Stand at-ease when the next name is called</td>
</tr>
<tr>
<td></td>
<td>• Roll call is conducted on parade while firefighters are standing at ease.</td>
</tr>
<tr>
<td>Squad halt</td>
<td>• On receipt of the executive word, <em>Halt</em>, which is given when the right foot reaches the ground, the pace is completed with the left foot and the right foot brought smartly up in line</td>
</tr>
<tr>
<td></td>
<td>• At the same time the hands are cut smartly to the sides</td>
</tr>
<tr>
<td></td>
<td>• The squad remains steady at Attention on completion of the movement</td>
</tr>
<tr>
<td></td>
<td>• The cautionary and executive orders of command are given as the right foot reaches the ground.</td>
</tr>
<tr>
<td>Command</td>
<td>Firefighter response / use</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Stand at ease</td>
<td>• Move the left foot about 300 mm to the left, so that the weight of the body rests equally on both feet</td>
</tr>
<tr>
<td></td>
<td>• At the same time place hands behind back and place the back of right hand in the palm of left hand; grasp it lightly; then allow the arms to hang to their full extent.</td>
</tr>
<tr>
<td>Stand easy</td>
<td>• While standing at ease crewmembers may move limbs, head and body, but crews should not move feet. This is so that when you come to attention there will be no loss of dressing</td>
</tr>
<tr>
<td></td>
<td>• Slouching is not be permitted</td>
</tr>
<tr>
<td></td>
<td>• On the cautionary command, Squad, immediately assume the stand at ease position.</td>
</tr>
<tr>
<td>Squad number</td>
<td>• Used when forming a squad for training activities</td>
</tr>
<tr>
<td></td>
<td>• Commencing from the marker the squad will number off consecutively, e.g. 1-2-3-4-5-6.</td>
</tr>
</tbody>
</table>

**Commands relating to drills:**

<table>
<thead>
<tr>
<th>Action</th>
<th>An executive order used to instigate a cautionary order at training or emergency incidents.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As you were</td>
<td>• Cancels an order previously given;</td>
</tr>
<tr>
<td></td>
<td>• Firefighters will resume their previous position.</td>
</tr>
<tr>
<td>Carry on</td>
<td>• Normally given after the command, Stand fast or Still;</td>
</tr>
<tr>
<td></td>
<td>• Firefighters carry on with their previous duties.</td>
</tr>
</tbody>
</table>
## Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change around</td>
<td>Used during drills - firefighters move around the pumper to a new position and perform a different set of duties;</td>
</tr>
<tr>
<td></td>
<td>To be given at the post position and carried out in an anti-clockwise direction on the double;</td>
</tr>
<tr>
<td></td>
<td>On hearing the command:</td>
</tr>
<tr>
<td></td>
<td>- Crew members on the off-side pause before moving to the next firefighter position;</td>
</tr>
<tr>
<td></td>
<td>- Crew members on the near-side make an about turn before moving to the next firefighter position.</td>
</tr>
<tr>
<td>Crews number</td>
<td>Used when forming crews for training activities, when there are more than three firefighters in a squad</td>
</tr>
<tr>
<td></td>
<td>Number one of each crew numbers consecutively.</td>
</tr>
<tr>
<td>Dismiss</td>
<td>Indicates the OIC has no further duties for the squad/crew;</td>
</tr>
<tr>
<td></td>
<td>The squad/crew quarter turns to the right, pause and then break off.</td>
</tr>
<tr>
<td>Dismount</td>
<td>Firefighters dismount from the appliance, return to the post position and adopt the attention position.</td>
</tr>
<tr>
<td>Command</td>
<td>Firefighter response / use</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Fall in               | • Squad - come to attention, double smartly into position and form ranks on the left of the marker  
|                       | • Maintain a distance of one arm length between ranks and files                           
|                       | • When in position, stand at-ease.                                                       |
| Fall in at the rear   | • Used during drills, firefighters move around the pumper in an anti-clockwise direction and take up position at the rear of the pump  
|                       | • The command is given while firefighters are at attention at the post position, and carried out on the double  
|                       | • On hearing the command:                                                                  
|                       |   - firefighters on the off-side pause before moving off;                                 
|                       |   - firefighters on the near-side make an about turn before moving off                     
|                       |   - firefighter No.1 moves off first followed by firefighter No.2 then firefighter No.3  
|                       |   - firefighters assemble facing the rear of the appliance, at a distance of 3 metres in single rank and adopt the at-ease position  
|                       |   - firefighter No.1 takes a marking in line with the off-side of the pumper.            |

![Diagram of 3 crew members with firefighter No. 1 in line with offside of pumper](image)
<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
</table>
| Haul aloft No.1         | • Used when equipment (e.g. branch and hose) are being taken into an elevated position using a line  
                              • On hearing the command, firefighter No.1 hauls the equipment aloft and secures in the elevated position.                                           |
| In crews of three, number | • Used to form a crew for training purposes  
                              • Starting from the marker each firefighter calls their number, e.g. 1-2-3.                                                                 |
| Light back               | • Performed by firefighters controlling hose lines  
                              • Firefighters move backwards with the hose line.                                                                                                      |
| Light up                 | • Performed by firefighters controlling hose lines  
                              • Firefighters move forward with the hose line.                                                                                                     |
| Lower suction            | • Lower lengths of suction hose into water supply or to the ground.                                                                                      |
| Makeup                   | • Performed at the completion of training and emergency incidents  
                              • Firefighters close down water supplies and restow all equipment  
                              • Priority is given to the return of all standing gear to appliances e.g., branches, hose reels, ladders, standpipes, etc, before rolling hose.     |
| Marker fall in           | • Command given when forming a squad for training activities  
                              • The instructor initially nominates a firefighter to perform the duties of ‘Marker’  
                              • On hearing the command, Marker fall in, the firefighter:  
                                - moves on the double to the position designated by the instructor  
                                - stands to attention  
                                - pauses then assumes the position of stand at ease.                                                                                           |
<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount</td>
<td>• Crew mount the pumper and wait for further instruction.</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>No. 1 offside rear seat</td>
<td>No. 2 driving position</td>
</tr>
<tr>
<td>No. 3 nearside rear seat</td>
<td></td>
</tr>
<tr>
<td>Raise suction</td>
<td>• Lift connected lengths of suction hose from the ground or use suction line to raise lengths of suction hose from water.</td>
</tr>
<tr>
<td>Ready</td>
<td>• Used by branch operators to indicate they are ready to receive water</td>
</tr>
<tr>
<td></td>
<td>• The branch operator holds one arm above the head with fist clenched and calls, <em>Ready</em></td>
</tr>
<tr>
<td></td>
<td>• On receipt of the call the OIC signals the pump/standpipe operator to turn the water on.</td>
</tr>
<tr>
<td>Ready at pump</td>
<td>• Used by pump operators to indicate they are ready for the feed hoses to be charged</td>
</tr>
<tr>
<td></td>
<td>• The pump operator holds one arm above the head with fist clenched and calls, <em>Ready at pump</em></td>
</tr>
<tr>
<td></td>
<td>• This indicates to the firefighter at the hydrant that the feed hoses have been connected and are ready to be charged.</td>
</tr>
<tr>
<td>Run back</td>
<td>• Command given in conjunction with hand signal</td>
</tr>
<tr>
<td></td>
<td>• The driver reverses the appliance with caution.</td>
</tr>
<tr>
<td>Run up</td>
<td>• Command given in conjunction with hand signals</td>
</tr>
<tr>
<td></td>
<td>• The driver drives the appliance forward with caution.</td>
</tr>
<tr>
<td>Stand fast</td>
<td>• Prevents further action being commenced</td>
</tr>
<tr>
<td></td>
<td>• Firefighters cease all activity and remain still</td>
</tr>
<tr>
<td></td>
<td>• May be used by instructors to halt an activity and point out that a mistake has occurred.</td>
</tr>
</tbody>
</table>
### Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
</table>
| Stand from under | - Used by firefighters when lowering equipment or material from an elevated position.  
- On hearing this command firefighters look above and move to a position of safety.                                                  |
| Still         | - To be used by any crew member to indicate a dangerous situation has developed and to prevent an accident from occurring  
- Firefighters remain still in their present position and identify the hazard  
- Once the risk has been assessed the OIC will give the command, *Carry-on*.                                                  |
| Squad number  | - Used when forming a squad for training activities  
- Commencing from the marker the squad will number off consecutively, e.g. 1-2-3-4-5-6.                                                                                                                       |
**Command**

**Take post**

- Used when performing drills
- The command is generally given from the rear of the appliance
- On hearing the command, *Take post*, firefighters:
  - make a right turn
  - break off and move around the appliance in an anti-clockwise direction on the double
  - halt on reaching the spot adjacent to their riding position on the appliance (1 metre from side of appliance) and stand at ease
  - Near side firefighters will make an about turn to face the front of the appliance
  - Post positions depends on the layout of the appliance (See below.)
  - On a two-door appliance No1 waits for No3 to arrive and they about turn together.

---

**3 crew members**

- 4 door pumper
- 2 door pumper (fire-pac)

No. 1 offside midships
No. 2 adjacent to driving position
No. 3 nearside opposite No. 1

No. 1 nearside adjacent to front door
No. 2 adjacent to driving position
No. 3 nearside adjacent to front wheel
<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
</table>
| Water off          | • Directs the closing down of water supplies  
                     • May be used to shut down branches, standpipes or delivery valves on pumps.                                                                   |
| Water on           | • Directs the turning on of water supplies  
                     • May be used to turn on branches, standpipes or delivery valves on pumps.                                                                    |
| Washer checked     | • Indicates sealing washers are in position and serviceable  
                     • Washers must be checked when using branches, delivery, feed and suction hose.                                                                |
| **Commands relating to ladders:** |                                                                                                                                                          |
| Depress to ground  | • Lower the head of the ladder to ground.                                                                                                               |
| Depress to building| • Lower the head of the ladder to building.                                                                                                              |
| Elevate ladder     | • Increase the angle of the ladder from the horizontal or from a structure.                                                                             |
| Extend to house    | • Used to prepare the ladder for housing  
                     • Raise the sliding section of the ladder to clear the pawls.                                                                                  |
| Extend ladder      | • Increase the length of the ladder.                                                                                                                     |
| Halt! House ladder | • Indicates the ladder pawls have disengaged and housing of the ladder can commence  
                     • Housing the ladder means to retract the sliding section within the main section.                                                               |
| Ladder safe        | • Indicates the ladder is ready to climb  
                     • Firefighters must check to ensure the ladder is in position and stable, the pawls have engaged and the correct pitch has been achieved. |
| Lower ladder       | • Lower the ladder to the ground, sliding section lower most.                                                                                           |
| Over ladder        | • Turn or roll the ladder over onto the opposite face.                                                                                                  |
| Raise ladder       | • Raise the ladder to the side, sliding section nearest the body.                                                                                       |
| Ship ladder        | • Replace the ladder on the appliance.                                                                                                                    |
### Command

**Firefighter response / use**

<table>
<thead>
<tr>
<th>Command</th>
<th>Firefighter response / use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step in</td>
<td>• Used to warn firefighters descending ladders that their foot is about to be placed on the rung of the main section.</td>
</tr>
<tr>
<td>Train</td>
<td>• Used to direct the head of a ladder or aerial platform of the appliance into position.</td>
</tr>
</tbody>
</table>

### Signals

Signals are broken into:

- whistle signals
- hand signals.

### Whistle signals

Whistle signals are a form of communication used by the QFRS at training and emergency incidents. These signals are given by the OIC; to be effective, they must be thoroughly understood by all firefighters. Outlined in the table below are the various whistle signals used by the QFRS.

<table>
<thead>
<tr>
<th>Signal</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>One blast of whistle</td>
<td>Turn water on.</td>
</tr>
<tr>
<td>Two blasts of whistle</td>
<td>Turn water off.</td>
</tr>
<tr>
<td>Three blasts of whistle</td>
<td>All firefighters except branch operators and/or those controlling water supplies report to the OIC.</td>
</tr>
<tr>
<td>Four blasts of whistle</td>
<td>This is the danger signal.</td>
</tr>
<tr>
<td></td>
<td>All firefighters report to the OIC.</td>
</tr>
<tr>
<td>A series of short whistle blasts</td>
<td>Firefighters’ attention is drawn to the person blowing the whistle.</td>
</tr>
</tbody>
</table>
Additional information

Other relevant information for whistle signals includes:

- whistle signals must be loud and clear to be effective
- signals one and two are used only on the delivery side of an action
- signal four (the danger signal) indicates to pump operators to throttle back immediately branch operators have exited to a safe position and close delivery outlets
- signal five may also be used to gain the attention of firefighters who may be in danger. In this situation whistles or sirens may be used.

Hand signals

Hand signals are another form of communication used by the QFRS at training and emergency incidents. Hand signals may be more appropriate in certain operations, particularly when firefighters are operating pumps, wearing breathing apparatus and working in elevated positions. In these situations, verbal communication and whistle signals may not be effective or their true meaning may be misunderstood. The hand signals used by the QFRS are outlined in the following table.
<table>
<thead>
<tr>
<th>Command</th>
<th>Hand signal</th>
<th>Firefighter response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halt</td>
<td>• Raise the right hand and arm vertically, palm facing the driver, fingers extended and together. Shout, <em>Halt</em>, loud and clear.</td>
<td>Firefighter giving the signal takes up position where the driver can view the signal.</td>
</tr>
</tbody>
</table>
### Training/Safety Information

#### Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Hand signal</th>
<th>Firefighter response</th>
</tr>
</thead>
</table>
| Change direction | • Extend arm and clenched fist sideways from the shoulder in the direction the rear of the vehicle is to be steered  
• When the required direction is reached, the arm is immediately dropped to the side and the *Run back* signal is given. | The firefighter giving signals should take up a safe position far enough back to allow the appliance to be moved without stepping backwards and step left or right to remain in the line-of-sight, (either direct or via mirrors) of the driver. |

[Image of a fire truck and firefighter giving hand signals]

---

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<table>
<thead>
<tr>
<th>Command</th>
<th>Hand signal</th>
<th>Firefighter response</th>
</tr>
</thead>
</table>
| Run back  | • Position the right hand and forearm vertically, palm away from the driver  
            • Bend the forearm back towards the body, drawing the driver into position  
            • Use the command, *Run back*.                                            | The firefighter giving signals should take up a safe position far enough back to allow the appliance to be moved without stepping backwards and remain in the line-of-sight, (either direct or via mirrors) of the driver. |
| Run up    | • The hand signals are given from a position in front of the appliance  
            • Use the command, *Run up*.                                                | The firefighter giving signals should take up a safe position far enough forward to allow the appliance to be moved without stepping backwards and remain in the line-of-sight of the driver. |
<table>
<thead>
<tr>
<th>Command</th>
<th>Hand signal</th>
<th>Firefighter response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ready</td>
<td>• Hold arm fully extended above the head with fist clenched</td>
<td>The firefighter controlling the water supply will turn the water on when the OIC gives the appropriate whistle signal. (One whistle blast)</td>
</tr>
<tr>
<td></td>
<td>• This signal should be used by branch operators particularly those wearing breathing apparatus to indicate they are ready for water on.</td>
<td></td>
</tr>
<tr>
<td>Command</td>
<td>Hand signal</td>
<td>Firefighter response</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Decrease pump pressure (100 kPa) | • Arm extended to side at shoulder height  
• Lower hand smartly to side  
• Repeat movement until desired response is achieved/acknowledged. | The pump operator adjusts throttle and observes pressure gauge to ensure 100 kPa decrease in pump pressure.                                             |
### CHAPTER 1 – Training/Safety Information

<table>
<thead>
<tr>
<th>Command</th>
<th>Hand signal</th>
<th>Firefighter response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase pump pressure</td>
<td>- Arm extended to side at shoulder level</td>
<td>The pump operator adjusts throttle and observes pressure gauge to ensure a 100 kPa increase in pump pressure.</td>
</tr>
<tr>
<td>(100 kPa)</td>
<td>- Palm facing upwards, raise hand up smartly over the head</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Repeat arm movement until desired result is achieved/acknowledged.</td>
<td></td>
</tr>
<tr>
<td>Command</td>
<td>Hand signal</td>
<td>Firefighter response</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Come down from the elevated position | • Arm raised to shoulder height, elbow bent, palm of the hand facing away from the branch operator  
|                                     | • Move palm toward the face                                                  | Firefighter receiving the signal leaves the branch in position and comes down from elevated position.  
|                                     | • Repeat this beckoning signal until desired response is achieved/acknowledged. |                                                                                      |
## Command Table

<table>
<thead>
<tr>
<th>Command</th>
<th>Hand signal</th>
<th>Firefighter response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water off</td>
<td>• Right arm swung a couple of times at shoulder height with a crossover action in front of the chest.</td>
<td>The firefighter controlling the water supply will turn the water off when the OIC gives the hand signal. This hand signal can be used in conjunction with the appropriate whistle signal. (Two whistle blasts)</td>
</tr>
<tr>
<td>Command</td>
<td>Hand signal</td>
<td>Firefighter response</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| Makeup  | - Both arms are swung at shoulder height with a cross over action in front of the chest  
- Arms are then placed beside the body. | Firefighters receiving signal close down water supply.  
Restow equipment on appliance giving priority to all standing gear; e.g. branches, hose reels, ladders, standpipes, etc, before rolling hose. |
3. Squad and crew formation

Squad formation

A squad is a group of firefighters not yet formed into crews. When firefighters form a squad for any purpose they form ranks in the following manner:

- single ranks - where one to three firefighters are present
- two ranks - where four to eight firefighters are present
- three ranks - where nine or more firefighters are present.

The front rank and left file must always be complete. When there are insufficient numbers to complete all ranks, designated positions will be left vacant in the following sequence:

- one vacancy - the file second from the left and in the centre rank
- two vacancies - the file second from the left and in the centre and rear ranks.

![Diagram of squad formation](image)

Figure 1.1 Forming a squad

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A squad is formed using the sequence of commands outlined in Figure 1.2.

![Squad formation commands diagram](image)

**Figure 1.2 Sequence of commands for squad formation**

**Crew formation**

A crew is a team of firefighters formed to do a particular task during training or emergency incidents. A crew is formed from a squad using the sequence of commands which flow on from the squad formation commands outlined in Figure 1.2. Crew formation commands are outlined in Figure 1.3.
CHAPTER 1 – Training/Safety Information

In a training situation any members of a squad not assigned to a crew shall be placed in a position to observe the training exercise.

4. Appliance mounting and dismounting

To reduce the possibility of injury, firefighters must ensure that they use ‘three points of contact’ when mounting and dismounting appliances. Listed below are points which must be adhered to when mounting and dismounting:

- always use the ‘three points of contact’ method
- ensure the appliance has been brought to a complete stop
- check for hazards such as approaching traffic
- identify uneven ground, tripping hazards and incident hazards
- never jump out of an appliance
- use the hand rails and foot steps that are provided
- perform mounting forward
- dismount in reverse to mounting (see figure 1.4).

Figure 1.3 Sequence of commands for crew formation

Figure 1.4 Firefighter mounting/dismounting an appliance
5. Appliance positioning

There are two main sections to be discussed when positioning appliances:

- guiding appliances into position
- placing wheel chocks.

Guiding appliances into position

The guiding and positioning of appliances depends on:

- the role of drivers
- the role of guides.

The role of drivers

When an appliance is being manoeuvred in confined spaces, sited or reversed into position, the driver is responsible for the following:

- accepting responsibility for the safe driving of the appliance
- being prepared to stop, dismount and check the area behind the appliance
- ensuring a guide is appointed to assist with directions when necessary
- maintaining the appliance in a stationary position when the guide is not in full view
- reversing the appliance carefully at slow speed
- driving the appliance in a straight line through restricted openings (where practical).

The role of the guide

It is QFRS policy that, when an appliance has to be reversed or manoeuvred in confined spaces, a guide must be appointed.
The guide assisting the driver of an appliance will give directions when required and
has the following responsibilities:

- ensuring personal safety and that of others in the vicinity
- checking the area thoroughly before giving any directions
- using the appropriate signals when required
- remaining in view of the driver at all times while the appliance is moving
- giving signals in sufficient time to allow the driver to act upon them
- directing the appliance from the rear when being reversed.

**Placing wheel chocks**

The following points highlight safety issues when placing wheel chocks:

- wheel chocks must be correctly positioned whenever the pump is engaged
- firefighters placing the wheel chocks must ensure they are positioned square to
  the tyres
- the pump operator must not attempt to engage the pump, until the firefighter has
correctly placed the wheel chocks and called, *Chocks*
- the firefighter placing the wheel chocks must **never position** any part of the hand
  between the tyre and the face of the wheel chock. This will prevent injury should
  the pumper roll onto the wheel chock
- when the pumper is positioned on level ground, the wheel chocks must be placed
  fore and aft of the rear wheel. On an inclined surface, the wheel chocks must be
  placed on the downhill side of the front and rear wheel.

6. **Ladders**

Ladders used by the QFRS come in a variety of different sizes and configurations and
are carried on top of fire appliances. The methods used to secure ladders onto
appliances will vary considerably because of the different types of appliances in use.
To become competent in the use of ladders, firefighters need to conduct regular
training sessions using ladders in a variety of situations; e.g. at night, or while wearing
breathing apparatus.
The information on ladders is divided into three sections:

- safety information
- general information
- straddle method.

**Safety information**

The following information has been prepared to reduce the possibility of injuries occurring when using ladders and must be fully understood by all firefighters:

- the OIC initiates precautions depending on conditions; e.g. strong winds, rain and night time operations
- when necessary, the head of the ladder is secured to the structure; e.g. working in windy conditions
- no more than two people should work on a ladder at any one time, one person per extension
- the ladder must be correctly footed by a firefighter before any attempt is made to ascend or descend
- maintain 2 points of contact while ascending, descending or working on the ladder.
- before elevating or depressing the ladder, firefighters must check above for hazards such as electrical wires and behind for tripping hazards such as hose and people
- when a ladder is left unattended at incidents, it should be sited parallel to the wall face in a safe area to prevent it from being damaged or becoming an obstacle for personnel or vehicles
- care must be taken when working with ladders to prevent fingers being injured between the moving parts
- during extension or housing, the ladder head will be slightly angled towards the structure. Should the ladder become unstable, the head can be depressed against the structure to regain control
• firefighters operating the extending line should use a hand-over-hand motion when extending the ladder and a hand-under-hand motion when housing the ladder. The extending line must not be allowed to slide through the hands.

• the safe working pitch of a ladder is checked with the firefighter standing between the strings with shins against the bottom rung. Without bending the firefighter should be able to reach forward and grasp the rung at chest height. The ladder when correctly pitched should form a 60° - 70° angle with wall face (See figure 1.5).
General information

Before training is conducted, firefighters must have a thorough understanding of the general information listed below:

- firefighter No.1 gives all commands in relation to ladder movements. The OIC may countermand given commands
- the ladder may need to be positioned at a suitable angle to achieve elevation to the vertical when erecting ladders in confined spaces
- one heel of the ladder may need to be recessed or supported to achieve correct plumbing when working on soft or uneven surfaces
- the ladder is always taken heel first to the fire ground. This reduces unnecessary movements when siting the ladder
- when the ladder is used to place a hose line in an elevated position, the coupling nearest the ladder heel must be broken prior to making up
- where possible the ladder is positioned to the right hand side of a window or opening and extended three to five rungs above the sill
- a hose clip is used to secure the hose to the third rung from the head of the ladder, while the hose at ground level is laid out straight approximately 3-5 metres from the heel.

Straddle method

It is not always possible for firefighters to stand on a windowsill, parapet or landing, which allows for easy mounting and dismounting of the ladder. In these circumstances the straddle method should be used (See figure 1.7). The technique used to perform the straddle method is detailed in the firefighter information outlined in *Skill 21, To climb a ladder.*
7. Hose

On the fire ground, it is essential that fire hose is laid out without hesitation. The ability to lay out hose effectively on the fire ground is an essential requirement of a good firefighter.

The information on hose is divided into two sections:

- general information
- hose numbering and identification.

General information

The following points will assist firefighters to lay out hose correctly:

- when coupling hose to a pump, feed hose **must not** be laid over the top of delivery hose
- before delivery lines are charged with water, firefighters ensure that all excess hose is taken to the fire and laid out in ‘S’ bends
- the last three to five metres of hose before the branch should be laid out straight.
Hose numbering and identification

The following points detail information on how hose is numbered or identified at drill and during firefighting operations:

- all hose is numbered from the water supply
- delivery hoses are coupled to pump outlets from left to right and numbered in the same order
- lengths within a delivery line are numbered from the pump
- the pump length is the length of hose connected to the pump within a delivery line
- the branch length is the length which has the branch connected to it. Its number from the pump will vary
- a specified length may be the branch length, pump length or any specified length within a delivery line
- feed hoses are coupled to the pump inlets from left to right and numbered in the same order
- lengths within a feed line are numbered from the standpipe.
Tradespeople, computer operators, store assistants, transport drivers and firefighters are all skilled in some way and all employ skills of some kind to carry out effectively the responsibilities associated with their employment. These skills range from natural abilities requiring little or no development to skills and/or knowledge obtained through formal courses of study undertaken either prior to employment, or as in-service training.

Firefighters need to know what it means to have a skill. A skill for a firefighter can be broadly defined as an activity (usually made up of a series of sequential actions) learned from experience and practice, and performed with complete control.

1. Learning skills in the QFRS

Firefighters need to have a common core of firefighting skills. This can only be achieved through regular formatted skill training sessions. To ensure training sessions are uniform throughout the state, the QFRS has adopted the four-step method of instruction, which is carried out in the following sequence:

- Step 1 - Introduction
- Step 2 - Demonstration
- Step 3 - Practice
- Step 4 - Conclusion.

Training objectives

The skills outlined in this workbook are broken down into a number of stages. These stages are then broken down further into key points. At the completion of a skill training session, firefighters must be capable of performing all stages and key points of the selected skill safely and correctly to a required standard. Training objectives specify exactly what a firefighter has to do at the end of a training session to reach the required standard.
There are 27 firefighting skills outlined in this chapter of the workbook. When performed correctly, they allow firefighters to participate as a team member of an operational firefighting crew safely and competently. To obtain the required level of competency, firefighters need to practise these set skills on a regular basis. Once the skills have been mastered, firefighters need to expand their knowledge of firefighting further by combining a set number of these skills to perform drills and simulated firefighting actions.

<table>
<thead>
<tr>
<th>No.</th>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To bowl a coil of hose</td>
</tr>
<tr>
<td>2</td>
<td>To under run hose</td>
</tr>
<tr>
<td>3</td>
<td>To make up a coil of hose on the bight (Dutch roll)</td>
</tr>
<tr>
<td>4</td>
<td>To ship a standpipe</td>
</tr>
<tr>
<td>5</td>
<td>To unship a standpipe</td>
</tr>
<tr>
<td>6</td>
<td>To couple hose to a standpipe</td>
</tr>
<tr>
<td>7</td>
<td>To couple a branch to a delivery hose (fixed collar branch)</td>
</tr>
<tr>
<td>8</td>
<td>To couple a branch to a delivery hose (rotating collar branch)</td>
</tr>
<tr>
<td>9</td>
<td>To provide a branch and sufficient hose to objective</td>
</tr>
<tr>
<td>10</td>
<td>To hold a branch</td>
</tr>
<tr>
<td>11</td>
<td>To couple lengths of hose</td>
</tr>
<tr>
<td>12</td>
<td>To couple a delivery hose to a pump</td>
</tr>
<tr>
<td>13</td>
<td>To make up forward flaked hose</td>
</tr>
<tr>
<td>14</td>
<td>To run out reverse flaked hose</td>
</tr>
<tr>
<td>15</td>
<td>To couple a dividing breeching</td>
</tr>
<tr>
<td>16</td>
<td>To unship and carry a short extension ladder</td>
</tr>
<tr>
<td>17</td>
<td>To erect a short extension ladder</td>
</tr>
<tr>
<td>18</td>
<td>To unship and carry an extension ladder</td>
</tr>
<tr>
<td>19</td>
<td>To erect an extension ladder</td>
</tr>
<tr>
<td>20</td>
<td>To make up an extension ladder</td>
</tr>
<tr>
<td>21</td>
<td>To climb a ladder</td>
</tr>
<tr>
<td>22</td>
<td>To take case one hose reel delivery aloft</td>
</tr>
<tr>
<td>23</td>
<td>To take a branch and delivery hose aloft</td>
</tr>
<tr>
<td>24</td>
<td>To prepare a delivery for elevated hose line</td>
</tr>
<tr>
<td>25</td>
<td>To flake hose to carry aloft</td>
</tr>
<tr>
<td>26</td>
<td>To couple suction hose</td>
</tr>
<tr>
<td>27</td>
<td>To couple suction hose to a pump</td>
</tr>
</tbody>
</table>
### Skill 1: To bowl a coil of hose

**Training outcome**

**Performance:** The firefighter will bowl a length of coiled hose (Dutch roll) and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **1.1 Grasp coil of hose** | a. Position coil of hose with couplings nearest to hip.  
   b. Ensure female coupling is lowermost.  
   c. Hold hose behind tail of couplings with one hand.  
   d. Span top of coil with other hand, thumb facing body.  
   **Note:** a length of 64 mm coiled hose weighs approximately 20 kg. |
| **1.2 Bowl coil of hose**      | a. Face direction in which hose is to be bowled.  
   b. Take pace forward with outside foot and swing coil of hose forward.  
   c. Maintain grip with hand holding couplings.  
   d. Release grip of other hand.  
   e. Ensure couplings do not contact body.  
   **Note:** posture and hand arm position, consider uphill v’s down hill. |
1.3 Draw back on couplings

a. Draw couplings back towards body as coil nears end of roll to uncoil hose completely.

Firefighter information

- Coiled hose is bowled out on the fireground for the following:
  - to provide a delivery line
  - to provide a feed line from hydrant to pumper
  - to add or replace hose in delivery and/or feed lines
  - to allow a hose to be taken aloft, flaked over a firefighter’s shoulders.
- Before bowling out hose, the firefighter must ensure the couplings are in line. This will reduce the possibility of couplings striking the body.
- Firefighters bowling out 64mm hose may not be able to span the top of the coil with the hand as detailed in Stage 1.1, Grasp coil of hose. In this situation, firefighters will need to adopt an alternate method such as sliding the hand between the top two layers of hose (see below).
Skill 2: To under-run hose

Training outcome

Performance: The firefighter will under-run a previously charged length of hose and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Prepare hose</td>
<td>a. Check hose is clear of debris.</td>
</tr>
<tr>
<td></td>
<td>b. Lay hose out straight, removing all twists.</td>
</tr>
<tr>
<td></td>
<td>c. Proceed to coupling at highest elevation.</td>
</tr>
<tr>
<td>2.2 Under-run hose</td>
<td>a. Pick up coupling.</td>
</tr>
<tr>
<td></td>
<td>b. Raise hose and hold at waist height.</td>
</tr>
<tr>
<td></td>
<td>c. Using hand-under-hand action, keep hose raised from ground.</td>
</tr>
<tr>
<td></td>
<td>d. Walk along hose slowly continuing hand-under-hand action.</td>
</tr>
<tr>
<td></td>
<td>e. Ensure water drains from hose.</td>
</tr>
</tbody>
</table>

Firefighter information

- Hose is under run to remove excess water prior to coiling or rolling.
- An alternative method of under running hose is performed by holding the hose at shoulder height and using a hand-under-hand action. This method is not recommended when the hose might be contaminated with hazardous materials.
Skill 3: To make up a coil of hose on the bight (Dutch roll)

**Training outcome**

**Performance:** The firefighter, as part of a team of two firefighters will perform the tasks associated with making up a coil from one length of hose on the bight. The firefighter will demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Prepare hose</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Lay hose out straight removing all twists.</td>
</tr>
<tr>
<td>3.2 Lay out hose</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Take male coupling to female coupling.</td>
</tr>
<tr>
<td></td>
<td>b. Ensure female coupling is lowermost.</td>
</tr>
<tr>
<td></td>
<td>c. Place female coupling between heels.</td>
</tr>
<tr>
<td></td>
<td>d. Grasp male coupling with both hands. <strong>Firefighter No.2.</strong></td>
</tr>
<tr>
<td></td>
<td>a. Take up position at bight. <strong>Note:</strong> posture and PPE face shield down</td>
</tr>
<tr>
<td>3.3 Align hose</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Remove all twists from top layer.</td>
</tr>
<tr>
<td></td>
<td>b. Overlay and align hose.</td>
</tr>
<tr>
<td></td>
<td>c. Place male coupling 0.4 metres from female coupling.</td>
</tr>
<tr>
<td></td>
<td>d. Tension both layers. <strong>Firefighter No.2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Remove all twists from bottom layer.</td>
</tr>
<tr>
<td></td>
<td>b. Tension both layers.</td>
</tr>
</tbody>
</table>
3.4 Roll hose

**Firefighter No.1.**
- a. Proceed along hose to within 3 metres of bight and lift top layer to add tension.
- b. Maintain alignment and tension.

**Firefighter No.2.**
- a. Call *Clear behind*.
- b. Maintain alignment and roll hose tightly.
- c. Ensure couplings are even.
- d. Check washer is in position and serviceable.

**Firefighter information**
- Fire hose is made up in a Dutch roll for ease of storage and to facilitate instant layout in a fireground action.
- When rolling canvas hose, a 0.3 m fold is to be placed at the bight formed in the hose prior to rolling. The fold is not required in Duraline hose.
- Care should be taken by firefighters to ensure they are not injured by the sharp metal edges of the hose ties and couplings.
- Hose may also be rolled on the female or male coupling. Rolling hose in this manner can be performed by one firefighter. This allows firefighters to carry out other fireground duties.
- Hose rolled on the female coupling indicates the length of hose is damaged and unserviceable.
- Hose rolled on the male coupling indicates the hose is serviceable and requires testing on return to station.
- Hose made up on the male coupling should **never** be bowled out as damage may occur to the thread of the male coupling. By grasping the lugs of the male coupling the hose can be rolled out if required.
- Overhand knots tied in a length of hose near the couplings indicate the hose has been damaged.
Skill 4: To ship a standpipe

Training outcome

Performance: The firefighter will ship a standpipe. The firefighter will demonstrate, in sequence, all stages and key points without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Check standpipe</td>
<td>a. Check pressure disc is flush with base.</td>
</tr>
<tr>
<td></td>
<td>b. Check rotating collar is fully down.</td>
</tr>
<tr>
<td></td>
<td>c. Check washer is in position and serviceable.</td>
</tr>
<tr>
<td>4.2 Remove plate</td>
<td>a. On arrival at hydrant, call, <em>Hydrant</em>.</td>
</tr>
<tr>
<td></td>
<td>b. Insert hydrant bar in plate recess; use a lever action to lift plate.</td>
</tr>
<tr>
<td></td>
<td>c. Check hydrant pit is clear before inserting hand.</td>
</tr>
<tr>
<td></td>
<td>d. Remove obstructions.</td>
</tr>
<tr>
<td></td>
<td>e. Remove ball cover.</td>
</tr>
<tr>
<td>4.3 Position standpipe</td>
<td>a. Grasp spindle shaft with hand below T handle.</td>
</tr>
<tr>
<td></td>
<td>b. Grasp tightening handle with other hand.</td>
</tr>
<tr>
<td></td>
<td>c. Place standpipe in ground hydrant and hold vertically.</td>
</tr>
<tr>
<td></td>
<td>d. Rotate clockwise one turn to engage lugs of rotating collar.</td>
</tr>
<tr>
<td></td>
<td>e. Raise sharply to ensure lugs are engaged.</td>
</tr>
</tbody>
</table>

Note: Head back away from T handle
### 4.4 Tighten standpipe

- a. Maintain grip on spindle shaft.
- b. Hold standpipe in a vertical position.
- c. Rotate tightening handle clockwise until firm.
- d. Go down on one knee.
- e. Tighten standpipe fully using both tightening handles.

### 4.5 Operate standpipe

- a. Turn T handle clockwise until water flows unrestricted.
- b. Allow standpipe to flush.

### Firefighter information

- It may be necessary to give the hydrant plate a sharp hit with the weighted end of the hydrant bar to break the grit seal formed around the rim.
- The standpipe water head **must always be rotated clockwise** to prevent unshipping of the standpipe.
- Always turn the standpipe T-handle fully down, back-off half a turn to ensure maximum water flow from hydrant.
- When one outlet of the standpipe is used, that outlet must be rotated to face the fire/pumper and a blank cap placed over the idle outlet. Where both outlets are used, the water head should be rotated so as to face at right angles to the fire/pumper.
- The initial checks on the standpipe are to be performed before leaving the pumper, as the pumper may be some distance from the hydrant.
- The standpipe is carried to and from the hydrant by grasping a tightening handle in one hand and resting the standpipe barrel against the shoulder with rotating collar facing uppermost.
- When shipping a standpipe at night, the firefighter needs to take a torch to conduct a thorough check of the hydrant pit.
Skill 5: To unship a standpipe

**Training outcome**

**Performance:** The firefighter will unship a shipped standpipe and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.1 To unship a standpipe</strong></td>
<td>a. Turn standpipe T handle anti-clockwise until water is off.</td>
</tr>
</tbody>
</table>
| **5.2 Loosen standpipe** | a. Go down on one knee.  
b. Grasp tightening handles in both hands.  
c. Turn tightening handles anti-clockwise until standpipe rotates freely.  
d. Support spindle with one hand; continue rotation with other hand.  
e. Remove standpipe when rotating collar lugs disengage.  
f. Replace ball cover and plate. |
| **5.3 Reset standpipe** | a. Turn rotating collar fully down.  
b. Check washer is in position and serviceable.  
c. Return pressure disc flush with base. |
Firefighter information

- To prevent possible damage to reticulated water mains through water hammer, a standpipe must never be turned off harshly.
- On removal of the standpipe, always check that the hydrant ball valve has reseated.
- The washer at the base of the standpipe must always be inspected for serviceability after use.
- The standpipe is to be carried to and from the hydrant by grasping a tightening handle in one hand and resting the standpipe barrel against the shoulder with rotating collar facing uppermost.
Skill 6: To couple hose to a standpipe

Training outcome

Performance: The firefighter will couple a length of hose to a standpipe and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| 6.1 Prepare to couple | a. Face standpipe outlet and straddle hose.  
b. Hold tail of coupling in one hand.  
c. Check washer is in position and serviceable. |
| 6.2 Couple to standpipe | a. Align female coupling with outlet of standpipe.  
b. Rotate collar of female coupling clockwise with other hand.  
c. Hand tighten coupling.  

Note: posture, legs shoulder width apart
Firefighter information

- Couplings may be tightened using case 3 spanners if required.
- Firefighters must ensure, when coupling hose to a standpipe, that the head of the standpipe is not rotated anti-clockwise, as this could cause the standpipe to unship.
Skill 7: To couple a branch to a delivery hose (fixed collar branch)

**Training outcome**

**Performance:** The firefighter will couple a branch (fixed collar type) to a length of delivery hose and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| 7.1 Prepare to couple  | a. Grasp tail of male coupling in one hand, holding thread uppermost.  
 |                         | b. Grasp branch by barrel with other hand.           
 |                         | c. Check washer is in position and serviceable.      
 |                         | d. Hold branch vertically.                           |
| 7.2 Couple branch to hose | a. Place branch on male coupling.                     
 |                         | b. Rotate branch clockwise.                          
 |                         | c. Hand tighten coupling.                            |
Firefighter information

- Fireground variables may require this skill to be carried out while moving hose towards the objective; firefighters should therefore practise carrying out this skill on the double.
- Couplings may be tightened using case 3 spanners if required.
- Before coupling the branch operate controls through a full range of movements to check serviceability.
Skill 8: To couple a branch to a delivery hose (rotating collar branch)

**Training outcome**

**Performance:** The firefighter will couple a branch (rotating collar type) to a length of delivery hose and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **8.1 Position branch and coupling** | a. Support branch between thighs.  
  c. Check washer is in position and serviceable. |
| **8.2 Couple branch to hose** | a. Hold male coupling in one hand.  
  b. Align male coupling to female coupling.  
  c. Rotate collar of female coupling of branch clockwise.  
  d. Hand tighten coupling. |

**Firefighter information**

- Couplings may be tightened using case 3 spanners if required.
- Before coupling the branch operate controls through a full range of movements to check serviceability.
Skill 9: To provide a branch and sufficient hose to objective

Training outcome

**Performance:** The firefighter as part of a team (two firefighters) will provide a branch and sufficient hose to objective and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.1 Take branch and hose</strong></td>
<td><strong>Firefighter No. 1</strong></td>
</tr>
<tr>
<td>a.</td>
<td>Take branch in one hand.</td>
</tr>
<tr>
<td>b.</td>
<td>Check branch controls are functioning correctly.</td>
</tr>
<tr>
<td>c.</td>
<td>Flake one third of first length of hose over arm holding the branch.</td>
</tr>
<tr>
<td>d.</td>
<td>Flake remainder of first length of hose out of hose box.</td>
</tr>
<tr>
<td>e.</td>
<td>Take branch, flakes of hose and first coupling towards objective.</td>
</tr>
<tr>
<td>f.</td>
<td>On arrival at objective, place coupling on ground.</td>
</tr>
<tr>
<td><strong>9.2 Run out hose</strong></td>
<td><strong>Firefighter No. 2</strong></td>
</tr>
<tr>
<td>a.</td>
<td>Flake second length of hose from hose box.</td>
</tr>
<tr>
<td>b.</td>
<td>Call, <em>Coupling</em>, before it withdraws from hose box.</td>
</tr>
<tr>
<td>c.</td>
<td>Break coupling, and couple to the delivery outlet of pump.</td>
</tr>
</tbody>
</table>
9.3 Firefighter in position

**Firefighter No.1**

a. Lay out hose in ‘S’ bends with final 3-5 metres laid straight ready to light up.
b. Grasp branch.
c. Check position for safety in relation to fire ground hazards.
d. Ensure sound footing.
e. When set, call and signal, *Ready.*
Firefighter information

- Variations of this skill should be practised using the pumper to lay out the hose.
- Firefighters flaking hose out from a pumper which is mobile must not stand between the pumper and the hose being flaked out of the hose locker.
- This skill indicates a layout of not less than two lengths of hose. Firefighters should practise laying out multiple lengths of hose.
- When laying out a delivery line, all surplus hose should be taken while dry towards the fire.
- The term sufficient hose indicates an amount of hose that will allow firefighters to advance the delivery line after initial knockdown, to cut off potential fire spread, and protect nearby exposures within range.
- To prevent water restrictions, firefighters should remove sharp kinks and bends by forming smooth arcs (S bends) when laying out hose.
- Firefighters flaking additional lengths of hose out of the pumper will call, Coupling, when there is still sufficient hose in the hose box to reach the delivery outlet of the pump. This will serve as a warning to firefighter No.1, who will then reduce the speed at which the hose is being drawn from the hose box.
- Forward flaked hose may also be made up with the first length of hose and branch bundled together and held in place with a quick release strap. In this situation, firefighters will remove the bundle of hose and first coupling from the locker and take it to the fire. On arrival, they will remove the strap and lay out the hose as detailed.
- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill will be performed by firefighter No.1 in the drill. The duties of firefighter No.2 in the skill will be performed by, either firefighter No. 2 or 3 in the drill.
Skill 10: To hold a branch

**Training outcome**

**Performance:** The firefighter as part of a team (two firefighters) will hold one charged length of hose fitted with a branch and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1 Prepare to hold</td>
<td><strong>Firefighter No.1.</strong></td>
</tr>
<tr>
<td></td>
<td>a. Grasp branch in one hand.</td>
</tr>
<tr>
<td></td>
<td>b. Pass other arm around hose and support underside of branch and hose with hand.</td>
</tr>
<tr>
<td></td>
<td>c. Place forward hand on topside of branch barrel.</td>
</tr>
<tr>
<td>10.2 Brace for reaction</td>
<td><strong>Firefighter No.1.</strong></td>
</tr>
<tr>
<td></td>
<td>a. Stand with front foot braced forward, rear leg braced back.</td>
</tr>
<tr>
<td></td>
<td>b. Bend knees slightly and angle body forward.</td>
</tr>
<tr>
<td></td>
<td>c. Exert downward and forward pressure.</td>
</tr>
</tbody>
</table>
10.3 Backing up

**Firefighter No.2**

a. Remove kinks from hose.
b. Lay hose straight 3 to 5 metres behind firefighter No.1.
c. Take up position behind firefighter No.1 and face hose line.
d. Support the hose with both hands.
e. Place front foot against rear foot of firefighter.
f. Provide support by placing shoulder against firefighter No.1.

10.4 Brace for reaction

**Firefighter No.2**

a. Stand with front foot braced forward, rear leg braced back.
b. Knees slightly bent, body angled forward.
c. Exert downward and forward pressure.
d. Assist firefighter No.1 with all movements.
To light up, both firefighters will slide their feet forward in unison, ensuring both feet are in contact with the ground at all times. Firefighter No. 2 should position their front foot approximately half a metre behind the foot of firefighter No. 1. This allows both firefighters to slide front and rear feet in unison and maintain a balanced position.

To light back is a similar procedure with the delivery line moved to the rear. Where possible, the branch should be shut off to reduce water damage and prevent jet reaction, which could endanger the firefighter at the branch.

When lighting up or lighting back, steps no greater than 0.3m at a time should be taken.

When firefighters are providing assistance with lighting back of fire hose, the first 3 to 5 metres of hose behind firefighter No.2 must remain on the ground at all times to prevent jet reaction affecting the light back operation.

Words of command used when lighting up or lighting back will be initiated by the OIC or firefighter No.1. These are as follows:

- Prepare to Light-up/Light-back - a cautionary order telling firefighters to position themselves for lighting up lighting back.
- Step - an executive order telling firefighters to move forward/back one pace.

When using large diameter hoses at high pressures, additional firefighters may be required to assist with lighting up and back. Firefighters assist by providing support for firefighters holding the branch or move back along the hose line to haul hose forward or clear hose away.

Note: posture into slope of ground
# Skill 11: To couple lengths of hose

## Training outcome

**Performance:** The firefighter will couple two lengths of hose and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.1 Prepare to couple</strong></td>
<td>a. Face water supply and straddle hose.&lt;br&gt;b. Support hose and female coupling between thighs.&lt;br&gt;c. Check washer is in position and serviceable.&lt;br&gt;d. Hold male coupling in one hand.</td>
</tr>
<tr>
<td><strong>11.2 Marry couplings</strong></td>
<td>a. Align male coupling with female coupling.&lt;br&gt;b. Rotate collar of female coupling clockwise with other hand.&lt;br&gt;c. Hand tighten couplings.</td>
</tr>
</tbody>
</table>

## Firefighter information

- To break the coupling is the reverse of the detailed procedure.
- Firefighters call *Coupling broken* when elevated hose lines on ladders or buildings are used.
- Couplings may be tightened using case 3 spanners if required.
Skill 12: To couple delivery hose to a pump

Training outcome

**Performance:** The firefighter will couple a length of delivery hose to a pump outlet and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1 Prepare to couple</td>
<td>a. Face pump outlet and straddle hose.</td>
</tr>
<tr>
<td></td>
<td>b. Hold tail of female coupling in one hand.</td>
</tr>
<tr>
<td></td>
<td>c. Check washer is in position and serviceable.</td>
</tr>
<tr>
<td>12.2 Couple to pump outlet</td>
<td>a. Align female coupling with pump outlet.</td>
</tr>
<tr>
<td></td>
<td>b. Rotate collar of female coupling clockwise with other hand.</td>
</tr>
<tr>
<td></td>
<td>c. Hand tighten coupling.</td>
</tr>
</tbody>
</table>

Firefighter information

- Coupling feed hose to the pump inlet is carried out in a similar manner, using the male coupling after removal of the male blank cap from the collecting inlet.
- Feed and delivery hose lines are numbered from **left to right**.
- When coupling hose to a pump, **delivery hose lines** must always be placed **over feed hose lines**.
- Couplings may be tightened using case 3 spanners if required.
### Skill 13: To make up forward flaked hose

#### Training outcome

**Performance:** The firefighter will make up a forward flaked hose and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **13.1 Prepare hose box** | a. Check hose box is clean and dry.  
b. Bowl out length of coiled hose.  |
| **13.2 Flake hose into box** | a. Place female coupling in rear corner of hose box.  
b. Lay hose flat from rear to front and front to rear, ensuring hose is neat and in line with face of hose box.  
c. Cover two-thirds of each flake, moving across hose box.  
d. Continue operation until length is fully flaked.  |
| **13.3 Flake additional length(s)** | a. Bowl length of coiled hose.  
b. Couple to hose flaked in hose box.  
c. Stagger placement of married couplings to ensure that they do not sit directly on top of previous couplings.  
d. Flake length of hose into box ensuring hose is neat and in line with front of hose box.  
e. Ensure male couplings face front of hose box.  
f. Flake additional lengths of hose as required.  |
| **13.4 Place branch** | a. Couple branch to male coupling.  
b. Position branch in hose box.  
c. Check branch can be easily removed from hose box.  |
### Firefighter information

- To make up reversed flaked hose, use the same procedure commencing with the male coupling.
- Check all female couplings to ensure sealing washers are in position and serviceable.
- When marrying couplings together, ensure joints are only hand tightened, this will allow couplings to be easily broken for coupling purposes.
- Coupled joints should be positioned in the hose box in a manner that will prevent them from standing up when being withdrawn from the box.
- Forward flaked hose will be made up with male coupling forward; reverse flaked hose with female coupling forward.
- A length of 38mm hose can be used as the final length of hose flaked into the hose box, depending on the type of pumper and local requirements.
- Variations to this skill will need to be adopted to suit the type of pumper; e.g., hose boxes used on the firepac pumpers require the hose to be flaked on edge.
Skill 14: To run out reverse flaked hose

### Training outcome

**Performance:** The firefighter, as part of a team, will run out a reverse flaked hose and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.1 Take female coupling</strong></td>
<td><strong>Firefighter No. 1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Take female coupling in one hand.</td>
</tr>
<tr>
<td></td>
<td>b. Flake one third of first length of hose over arm holding female coupling.</td>
</tr>
<tr>
<td></td>
<td>c. Withdraw remainder of first length of hose from hose box.</td>
</tr>
<tr>
<td></td>
<td>d. Take female coupling and flakes of hose towards standpipe.</td>
</tr>
<tr>
<td><strong>14.2 Run out hose</strong></td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Continue to run out hose till reaching standpipe.</td>
</tr>
<tr>
<td></td>
<td>b. Couple female coupling to standpipe.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Flake out second length of hose.</td>
</tr>
<tr>
<td></td>
<td>b. Call, <em>Coupling</em>, before it withdraws from hose box.</td>
</tr>
<tr>
<td></td>
<td>c. Break coupling and couple to pump inlet.</td>
</tr>
</tbody>
</table>
Firefighter information

- Variations of this skill should be practised using the pumper to lay out the hose.
- Firefighters flaking hose out of a pumper which is mobile, must not stand between the pumper and the hose being flaked out of the hose box.
- Firefighters flaking hose from the hose box will call, coupling, before it withdraws.
- This skill indicates a layout of not less then two lengths of hose. Firefighters should practise laying out multiple lengths of hose.
- To prevent water restrictions within hose, firefighters should remove sharp kinks and bends by forming smooth arcs (S bends) when laying out hose.
- This skill may be utilised to:
  - Provide feed lines from standpipe to pumper
  - Lay out hose from water supply pumper to pumper to fireground during water relay actions
  - Lay out delivery lines between hydrant and fire.
# Skill 15: To couple a dividing breeching

## Training outcome

**Performance:** The firefighter will couple a dividing breeching into a delivery line and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.1 Prepare to couple</td>
<td>a. Place branch, breeching and coil of hose at point of connection.</td>
</tr>
<tr>
<td></td>
<td>b. Bowl coil of hose in required direction.</td>
</tr>
<tr>
<td></td>
<td>c. Couple branch to bowled hose.</td>
</tr>
<tr>
<td></td>
<td>d. Lay branch back on bowled hose.</td>
</tr>
<tr>
<td>15.2 Couple to hose</td>
<td>a. Support hose and female coupling of bowled hose between thighs.</td>
</tr>
<tr>
<td></td>
<td>b. Check washer is in position and serviceable.</td>
</tr>
<tr>
<td></td>
<td>c. Grasp breeching and align with female coupling.</td>
</tr>
<tr>
<td></td>
<td>d. Make coupling.</td>
</tr>
<tr>
<td></td>
<td>e. Place breeching on ground.</td>
</tr>
<tr>
<td></td>
<td>b. Support hose and female coupling between thighs.</td>
</tr>
<tr>
<td></td>
<td>c. Break coupling in first delivery line.</td>
</tr>
<tr>
<td></td>
<td>d. Check washer is in position and serviceable.</td>
</tr>
</tbody>
</table>
### 15.4 Couple breeching to hose

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Grasp breeching.</td>
</tr>
<tr>
<td>b.</td>
<td>Align male coupling of breeching with female coupling.</td>
</tr>
<tr>
<td>c.</td>
<td>Make coupling.</td>
</tr>
<tr>
<td>d.</td>
<td>Support breeching and hose between thighs.</td>
</tr>
<tr>
<td>e.</td>
<td>Check washer is in position and serviceable.</td>
</tr>
<tr>
<td>f.</td>
<td>Grasp male coupling of first delivery and align with female of breeching.</td>
</tr>
<tr>
<td>g.</td>
<td>Make coupling, position breeching on ground.</td>
</tr>
</tbody>
</table>

### 15.5 Set breeching

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Set breeching control.</td>
</tr>
<tr>
<td>b.</td>
<td>Lay out second delivery line.</td>
</tr>
<tr>
<td>c.</td>
<td>When set, call and signal <em>Ready</em>.</td>
</tr>
</tbody>
</table>
CHAPTER 2 - Skills

**Firefighter information**

- A dividing breeching may be used to conserve hose at a fire, particularly during the damping down stage, or as a means of providing a third outlet on a two outlet pump.
- A collecting breeching may be used as a means of providing an extra inlet on a two-inlet pump.
- When changing from Case one to Case three using a **two-inlet pump**, the collecting breeching must be coupled to the left hand inlet after the initial feed hose has been removed. The twin feeds are then coupled to the collecting breeching.
- Due to space restrictions, breechings may need to be coupled to the pump at an angle.
- Couplings may be spanner tightened if required.
- Certain dividing breechings may not have a control device.
- When setting the control on the dividing breeching, the centre lug will be positioned uppermost to achieve a full flow of water from both outlets.
- To obtain flow from one outlet only the centre lug will be positioned towards that outlet.
- Before calling, *Water off*, the firefighter will ensure the branch operator has adequate warning of the pending action, allowing sufficient time to withdraw to a safe position.
Skill 16: To unship and carry a short extension ladder

**Training outcome**

**Performance:** The firefighter will unship and carry a short extension ladder, mounted on a pumper and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **16.1 Unshipping of ladder** | a. Remove restraining device.  
b. Remove ladder from pumper. |
| **16.2 Carrying of ladder**   | a. Place ladder on side.  
b. Grasp uppermost string at centre of ladder.  
c. Raise ladder to side, sliding section resting nearest body and support with both hands.  
d. Proceed to point of erection. |

**Firefighter information**

- When the ladder is to be left unattended, it should be sited parallel to the wall face in a safe area. This should ensure that the ladder does not become an obstacle on the fireground and is not damaged by fire, vehicle movement or falling debris.
- Because of the position in which some ladders are secured on pumpers, another firefighter may be required to assist with the unshipping of the ladder.
Skill 17: To erect a short extension ladder

**Training outcome**

**Performance:** The firefighter will erect a short extension ladder and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **17.1 Positioning the ladder** | a. Position ladder at desired point of erection.  
b. Check for overhead obstructions.  
c. Place ladder in vertical position. |
| **17.2 Extending the ladder** | **Ladder without extending line.**  
a. Place foot against ladder heel.  
b. Grasp string at chest height with one hand to steady ladder.  
c. Grasp rung of sliding section with other hand.  
d. Extend ladder to required height.  
e. Engage pawls at required extension.  
**Ladder fitted with extending line.**  
a. Place foot against ladder heel fitted with extending line.  
b. Grasp extending line.  
c. Extend ladder to required height.  
d. Engage pawls at required extension. |
| **17.3 Depressing the ladder to building** | a. Grasp a rung with one hand.  
b. Grasp a string with other hand to steady ladder.  
c. Position both feet against ladder heel.  
d. Rest ladder head against structure.  
e. Adjust ladder heel to provide safe working pitch. |
| **17.4 Plumbing the ladder** | a. Check ladder head is resting evenly against structure with centre line on a vertical plane  
b. Check pawls for positive engagement.  
c. Check ladder for stability. |
| **17.5 Making up the ladder** | a. Making up ladder is reverse of previous procedure. |
Firefighter information

- Before erecting or making up a ladder, check overhead for obstructions such as electrical wires and check behind for tripping hazards such as hose.
- The short extension ladder may be used as follows:
  - Accessing ceiling voids and elevated positions
  - Providing a stretcher
  - Negotiating fences or walls, where ladder design permits the separation of the two sections
  - Forming a stepladder when the two ladder sections are bound together at the top.
- A safe working pitch for the ladder is obtained by the firefighter standing between the strings with shins against the bottom rung. Without bending, reach forward with arms straight and grasp the rung at chest height (See figure 1.5.).
- An alternate method used to extend the ladder can be performed by placing the ladder on the ground at right angles to the point of erection, sliding section uppermost (see below). The sliding section of the ladder is then extended the required distance and pawls engaged. The ladder is then turned on the opposite face and under walked to the vertical position. Depressing the ladder to the building and plumbing the ladder is carried out as detailed in stages three and four.
### Skill 18: To unship and carry an extension ladder

#### Training outcome

**Performance:** The firefighter as part of a team (two firefighters) will unship and carry an extension ladder mounted on a pumper and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| 18.1 Unshipping of ladder | **Firefighter No.1**  
  a. Remove restraining device, check clear behind.  
  b. Call, *Unship ladder.*  
  c. Face ladder heel and grasp overhead rungs.  
  d. Withdraw ladder from pumper and support in overhead position.  
  **Note:** 3 points of contact  
  e. Call, *Over ladder left/right.*  
  f. Roll ladder to side, sliding section nearest body  
  **Firefighter No.2**  
  a. Take position at ladder heel, face ladder head, grasp rungs at heel.  
  b. Withdraw ladder until head is resting in rear gallows.  
  c. Withdraw ladder from pumper and support in overhead position.  
  d. Turn and face ladder heel, support in overhead position.  
  e. Roll ladder to side, sliding section nearest body |
### 18.2 Carrying of ladder

<table>
<thead>
<tr>
<th><strong>Firefighter No.1</strong></th>
<th>Firefighter No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Grasp uppermost string <strong>0.5 metres</strong> from ladder head.</td>
<td>a. Grasp uppermost string <strong>0.5 metres</strong> from ladder heel.</td>
</tr>
<tr>
<td>b. Call, <em>Forward.</em></td>
<td>b. Proceed to point of erection, commencing with left foot.</td>
</tr>
<tr>
<td>c. Proceed to point of erection, commencing with left foot.</td>
<td>c. Halt on reaching objective.</td>
</tr>
<tr>
<td>d. Call, <em>Halt</em> on reaching point of erection.</td>
<td></td>
</tr>
</tbody>
</table>

### 18.3 Placing the ladder on ground

<table>
<thead>
<tr>
<th><strong>Firefighter No.1</strong></th>
<th><strong>Firefighter No.2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Lower ladder to ground, sliding section lowermost.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Version 3 - 11/04*
### 18.4 Carrying ladder to pumper

**Firefighter No.1**
- Take up position 0.5 metres from ladder head.
- Call *Raise ladder.*
- Grasp ladder string and raise to side, sliding section nearest body.
- Call *Forward.*
- Carry ladder to pumper commencing with left foot.
- Call *Halt* on reaching pumper.

**Firefighter No.2.**
- Take up position 0.5 metres from ladder heel.
- Grasp ladder string and raise to side, sliding section nearest body.
- Carry ladder to pumper commencing with left foot.

### 18.5 Reshipping the ladder

**Firefighter No.1.**
- Grasp rungs and call, *Over ladder.*
- Roll ladder into overhead position.
- Call *Ship ladder.*
- Slide ladder into gallows.
- Secure restraining device.

**Firefighter No.2.**
- Grasp rungs and roll ladder into overhead position.
- Slide ladder into gallows.

*Note:* 3 points of contact
**Firefighter information**

- Crews will find it more efficient to take the ladder to the structure **Heel first** as this will reduce the need for additional manoeuvres during siting.
- Firefighter No.1 gives all commands relating to the movement of the extension ladder.
- Because of different ladder mounting heights firefighter No.2 may be required to lower the ladder heel to waist height while the ladder head is in the rear gallows, to allow firefighter No.1 to reach the rungs at the ladder head. After the gallows have been cleared reposition the heel in the overhead position, to allow the ladder to be rolled to the side safely.
- When the ladder is to be left unattended, it should be sited parallel to the wall face in a safe area. This should ensure the ladder does not become an obstacle on the fire ground and is not damaged by fire, vehicle movement or falling debris.
- Due to the variety of ladder securing devices used on pumpers, it may be necessary for firefighter No.1 to mount the pumper when releasing and securing the restraining device fitted at the front gallows.
- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill are performed by firefighter No.1 in the drill. The duties of firefighter No.2 in the skill are performed by firefighter No.3 in the drill.
Skill 19: To erect an extension ladder

**Training outcome**

**Performance:** The firefighter as part of a team (two firefighters) will erect an extension ladder and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **19.1 Positioning the ladder** | **Firefighter No.1**  
  a. Position ladder at right angles to structure.  
  b. Place ladder on ground sliding section lowermost.  
  c. Check for overhead obstructions.  
  d. Call Clear above and behind.  
  **Firefighter No.2**  
  a. Position ladder at right angles to structure.  
  b. Place ladder on ground sliding section lowermost.  
  c. Check for overhead obstructions. |

| **19.2 Elevating the ladder** | **Firefighter No.1**  
  a. Call Elevate ladder.  
  b. Grasp first rung at ladder head and raise to chest height.  
  c. Grasp each rung in turn and under-walk ladder until vertical.  
  d. Place right foot against right hand ladder heel and brace back with left leg.  
  **Firefighter No.2**  
  a. Place feet at ladder heel and grasp rungs.  
  b. Provide a counterweight and stability until ladder is vertical.  
  c. Place right foot against right hand ladder heel and brace back with left leg.  
  d. Grasp strings at chest height. |
### 19.3 Extending the ladder

<table>
<thead>
<tr>
<th>Firefighter No.1</th>
<th>Firefighter No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Grasp extending line.</td>
<td>a. Support and steady ladder by maintaining hand and feet positioning.</td>
</tr>
<tr>
<td>b. Call, <em>Extend ladder.</em></td>
<td></td>
</tr>
<tr>
<td>c. Pulling in a downward motion, extend ladder to required height.</td>
<td></td>
</tr>
<tr>
<td>d. Engage pawls at required height.</td>
<td></td>
</tr>
</tbody>
</table>

### 19.4 Depressing the ladder to building

<table>
<thead>
<tr>
<th>Firefighter No.1</th>
<th>Firefighter No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Place both feet against ladder heel and grasp rungs at chest height.</td>
<td>a. Grasp strings at chest height and brace back with legs.</td>
</tr>
<tr>
<td>b. Call, <em>Depress to building.</em></td>
<td>b. Support and steady ladder head onto structure.</td>
</tr>
<tr>
<td>c. Lower ladder head onto structure.</td>
<td></td>
</tr>
</tbody>
</table>

*Version 3 - 11/04*
19.5 Plumbing the ladder

**Firefighter No.1**

a. Move to left hand string.
b. Adjust ladder heel to ensure head is resting evenly on structure with centre line on the vertical plane.
c. Check ladder for safe working pitch.
d. Check pawl engagement.
e. Check ladder for stability.

**Firefighter No.2.**

a. Move to left hand string.
b. Adjust ladder heel to ensure head is resting evenly on structure with centre line on the vertical plane.
c. Check pawl engagement.
d. Check ladder for stability.
This ladder skill is designed for use with ladders which have the extending line mounted on the right hand side of firefighter No.1; e.g., Bailey fibreglass extension ladder. Ladders that have different mounting systems for the extending line may require firefighters to reposition their hands and feet. The firefighter extending the ladder will position a foot at the heel fitted with the extending line.

Firefighter No.1 will give all commands relating to the movement of the extension ladder. However, due to variations in ladder design and extension line layout, it may be necessary for firefighter No.2 to extend the ladder.

Where possible, the head of the ladder should always be positioned three to five rungs above the sill or parapet and to the right hand side of the opening. This allows firefighters climbing the ladder to dismount with greater safety.

Certain ladders used in the QFRS are fitted with a chain at the head. This chain is not to be counted as a rung.

Before erecting the ladder, both firefighters check for overhead obstructions such as electrical wires and check on the ground for tripping hazards such as hose.

During extension and housing, the ladder should be angled a few degrees towards the structure.

To prevent injury, the firefighter supporting the ladder during extension must exercise extreme care when positioning hands in relation to the sliding section of the ladder.

Firefighters positioning the ladder should initially place the heel at a distance from the structure that will give an approximate safe working pitch when the ladder is erected.

A safe working pitch for the ladder is obtained by the firefighter standing between the ladder strings with shins against the bottom rung. Without bending, reach forward with straight arms and grasp the rung at chest height (See figure 1.5.).

The extension ladder may be used as follows:
- accessing elevated positions within its range
- providing a stretcher
- effecting life rescue from elevated positions
- providing a working platform at the discretion of the OIC
- providing a means of escape for endangered personnel.
Firefighter information

- On certain ladders it will be necessary for firefighter No.1 to tie off the extending line using a clove hitch, fastened to a convenient rung.
- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill will be performed by firefighter No.1 in the drill. The duties of firefighter No.2 in the skill will be performed by firefighter No.3 in the drill.
Skill 20: To make up an extension ladder

### Training outcome

**Performance:** The firefighter as part of a team (two firefighters) will make up an extension ladder, erected against a structure and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.1 Elevating the ladder from building</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Place feet against ladder heel and grasp rungs at chest height.</td>
</tr>
<tr>
<td></td>
<td>b. Call <em>Elevate ladder</em>.</td>
</tr>
<tr>
<td></td>
<td>c. Pull back on ladder until vertical.</td>
</tr>
<tr>
<td></td>
<td>d. Place right foot against right hand ladder heel and brace back with left leg.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Check and call <em>Clear above and behind</em>.</td>
</tr>
<tr>
<td></td>
<td>b. Grasp ladder strings at chest height.</td>
</tr>
<tr>
<td></td>
<td>c. Push ladder away from structure until vertical.</td>
</tr>
<tr>
<td></td>
<td>d. Place right foot against right hand ladder heel and brace back with left leg.</td>
</tr>
<tr>
<td>20.2 Extending and housing the ladder</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Grasp extension line.</td>
</tr>
<tr>
<td></td>
<td>b. Call, <em>Extend to house</em>.</td>
</tr>
<tr>
<td></td>
<td>c. Extend ladder to disengage pawls.</td>
</tr>
<tr>
<td></td>
<td>d. Call, <em>Halt house ladder</em>, when pawls have disengaged.</td>
</tr>
<tr>
<td></td>
<td>e. Complete housing of sliding section.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Support and steady ladder.</td>
</tr>
</tbody>
</table>
### 20.3 Depress ladder to ground

**Firefighter No.1**
- Call, *Depress to ground.*
- Grasp each rung in turn and under-walk ladder to ground.

**Firefighter No.2**
- Check and call, *Clear behind.*
- Place both feet on ladder heel and grasp rungs at chest height.
- Lever back and provide a counter weight until ladder head is at chest height of firefighter No.1.
- Ensure heel of ladder is not put under pressure as ladder reaches ground level (firefighter lifts feet off heel).
Firefighter information

- This ladder skill is designed for use with ladders which have the extending line mounted on the right hand side of firefighter No.1; e.g., Bailey fibreglass extension ladder. Ladders that have different mounting systems for the extending line, may require firefighters to reposition their hands and feet. The firefighter extending the ladder positions a foot at the heel fitted with the extending line.

- Firefighter No.1 gives all commands relating to the movement of the extension ladder. However, due to variations in ladder design and extension line layout, it may be necessary for firefighter No.2 to extend the ladder.

- Before extending the ladder to house and depressing the ladder to ground, both firefighters check above for hazards such as electrical wires and behind for tripping hazards such as hose.

- To prevent injury, the firefighter supporting the ladder during housing must exercise extreme care when positioning hands in relation to the sliding section of the ladder.

- The firefighter operating the extending line uses a hand-under-hand action, maintaining a firm grip on the line at all times. The line should not be allowed to run freely through hands.

- During extension and housing, the ladder should be angled a few degrees towards the structure. Should the ladder become unstable, the head can be depressed against the structure to regain control.

- On certain ladders it may be necessary for firefighter No.1 to untie the extending line from the rung.

- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill are be performed by firefighter No.1 in the drill. The duties of firefighter No.2 in the skill are be performed by firefighter No.3 in the drill.
Skill 21: To climb a ladder

Training outcome

**Performance:** The firefighter as part of a team will climb an extension ladder erected against a structure (A second firefighter must foot the ladder) and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>21.1 Preparing to climb</strong></td>
<td>a. Stand one arm’s length away from heel and face ladder.</td>
</tr>
<tr>
<td></td>
<td>b. Place left foot on bottom rung.</td>
</tr>
<tr>
<td></td>
<td>c. Grasp ladder rung with left hand at chest height, thumb under rung.</td>
</tr>
<tr>
<td><strong>21.2 Climbing the ladder</strong></td>
<td>a. Mount ladder using left foot.</td>
</tr>
<tr>
<td></td>
<td>b. Place right foot on next uppermost rung.</td>
</tr>
<tr>
<td></td>
<td>c. Grasp next ladder rung with right hand.</td>
</tr>
<tr>
<td></td>
<td>d. Continue this hand and foot unison movement to point of entry to structure.</td>
</tr>
</tbody>
</table>
21.3 Dismounting the ladder

- Position both feet on rung above level of parapet or sill before stepping off.
- Grasp rung at chest height with right hand.
- Keeping right foot on rung, step onto structure with left foot.
- Test that structure will support body weight.
- Step off ladder, when sure of stability of structure.

Note:
Three points of contact method.
Height of ladder above landing.

21.4 Mounting the ladder from elevated position

- Check ladder is being correctly footed.
- Grasp underside of rung at chest height with left hand, palm facing upwards.
- Position right foot on rung above mounting level.
- Grasp rung at chest height with right hand.
- Step onto ladder with left foot.
- Grasp rung at chest height with left hand.

21.5 Descending the ladder

- Descend ladder using, hand and foot unison movement. (right hand - right foot).
CHAPTER 2 - Skills

Firefighter information

- Under no circumstances does a firefighter commence to ascend or descend a ladder until a second firefighter foots the ladder.
- The ladder will be footed by placing one foot on the bottom rung of the ladder, both hand grasp the stringers and use full body weight to bare down on the ladder to maintain maximum ladder stability.
- To gain entry over a windowsill or rail, firefighters need to use the straddle method.
- The straddle method is performed by firefighters as follows:
  - To mount
    - Grasp a convenient rung of the ladder with the left hand, palm facing up uppermost
    - Place the right leg over the sill and position the foot on a convenient rung below sill level
    - Sit on sill, positioning the body close up and square on to the ladder;
    - Grasp a convenient rung with the right hand
    - When set, position the left leg onto the same rung as the right foot;
    - Reposition the left hand onto the same rung as the right hand
    - Descend the ladder in the prescribed manner.
  - To dismount: Use this procedure in reverse.
- Before the firefighter descending the ladder places his foot on the rungs of the overlapping sections of the ladder, the firefighter footing the ladder alerts the firefighter by calling, Step In.
## Skill 22: To take a case one hose reel delivery aloft

### Training outcome

**Performance:** The firefighter as part of a team (two firefighters) will take sufficient case one delivery hose to reach the elevated position via an extension ladder, erected against a structure and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.1 Preparation</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Pass nozzle and hose under right arm, across chest and over left shoulder.</td>
</tr>
<tr>
<td></td>
<td>b. Repeat action, placing nozzle in middle of back.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No. 2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Assist where necessary</td>
</tr>
<tr>
<td>22.2 Climbing ladder</td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Take one hose clip.</td>
</tr>
<tr>
<td></td>
<td>b. Mount and climb ladder to elevated position.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Foot ladder, ensure hose runs clear.</td>
</tr>
</tbody>
</table>
### 22.3 Dismounting ladder

**Firefighter No.1**
- a. Remove hose from body and place over top rung of ladder.
- b. Dismount ladder at elevated position.

**Firefighter No.2**
- a. Foot ladder until firefighter No.1 dismounts.

### 22.4 Lighting up

**Firefighter No.1**
- a. Draw aloft sufficient hose to reach objective.
- b. Place hose clip around hose.
- c. Secure hose clip to third rung from head of ladder, close to right hand string.
- d. When set, call and signal, *Ready*.

**Firefighter No.2**
- a. Feed up hose for firefighter No.1.
- b. Position hose to right hand side of ladder flush with wall face.
- c. Ensure hose is laid out straight from ladder heel approximately 3 to 5 metres.
- d. Foot ladder until hose reel has been charged.
22.5 Mounting ladder from elevated position.

Firefighter No.1
a. Remove hose clip.
b. Lower nozzle to ground.
c. Call, *Stand from under.*
d. Cast remainder of hose to ground.
e. Mount and descend ladder.

Firefighter No.2
a. Assist with lowering of nozzle to ground.
b. Foot ladder for firefighter No.1.
**Firefighter information**

- Certain types of high-pressure hose may not be sufficiently flexible to allow this method to be practised. Alternative arrangements will be necessary; e.g., using a line or sling.
- If, while climbing the ladder, the hose does not run clear, firefighter No.2 calls, *Halt No. 1* firefighter No.1 then descends the ladder to permit the hose to be cleared.
- Firefighter No.2 must at all times have two hands on the ladder strings when footing the ladder.
- Firefighter No.1 should remove the hose from their body at the head of the ladder using one hand where possible to maintain ‘three-points-of-contact’ with the ladder. If this proves too difficult firefighter No.1 should lean in towards the head of the ladder so that all body weight is forward of the point of contact between their feet and the ladder rungs before removing the hose from the body.

- Firefighters climb the ladder as detailed in *Skill No.21, (To climb a ladder).*
- Certain ladders used in the QFRS are fitted with a chain at the head. This chain is not to be included as a rung. The hose will be passed over the chain and secured to the third rung from the head.
- An alternate method for bringing the hose and nozzle down from the elevated position is achieved by mounting the ladder and repositioning the hose on to the body before descending the ladder.
- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill are performed by firefighter No.1 in the drill. The duties of firefighter No.2 in the skill are performed by firefighter No.3 in the drill.
Skill 23: To take a branch and delivery hose aloft

### Training outcome

**Performance:** The firefighter as part of a team (two firefighters) will take sufficient delivery hose with branch to reach the elevated position (via a ladder erected against a structure) and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>23.1 Preparation</strong></td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Pass branch and hose under right arm, across chest and over left shoulder.</td>
</tr>
<tr>
<td></td>
<td>b. Position branch into middle of back.</td>
</tr>
<tr>
<td><strong>23.2 Climbing ladder</strong></td>
<td><strong>Firefighter No.1</strong></td>
</tr>
<tr>
<td></td>
<td>a. Take one hose clip.</td>
</tr>
<tr>
<td></td>
<td>b. Mount and climb ladder to elevated position.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong></td>
</tr>
<tr>
<td></td>
<td>a. Foot ladder, ensure hose runs clear.</td>
</tr>
</tbody>
</table>
| 23.3 Dismounting ladder | **Firefighter No.1**  
a. Remove hose from body and place over top rung of ladder.  
b. Dismount ladder at elevated position.  

**Firefighter No.2**  
a. Foot ladder until firefighter No.1 dismounts. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
</tr>
</tbody>
</table>

| 23.4 Lighting up | **Firefighter No.1**  
a. Draw aloft sufficient hose to reach objective.  
b. Place hose clip around hose.  
c. Secure hose clip to third rung from head of ladder, close to right hand string.  
d. When set call and signal, *Ready.*  

**Firefighter No.2**  
a. Position hose to right hand side of ladder flush with wall face.  
b. Ensure hose is laid out straight from ladder heel, approximately 3 to 5 metres.  
c. Foot ladder until hose has been charged. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Image" /></td>
<td><img src="image4" alt="Image" /></td>
</tr>
</tbody>
</table>

| 23.5 Mounting ladder from elevated position | **Firefighter No.1**  
a. Remove hose clip.  
b. Lower branch to ground.  
c. Call, *Stand from under.*  
d. Cast remainder of hose to ground.  
e. Mount and descend ladder.  

**Firefighter No.2**  
a. Assists with lowering of branch and hose.  
b. Foot ladder for firefighter No.1. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Image" /></td>
<td><img src="image6" alt="Image" /></td>
</tr>
</tbody>
</table>
Firefighter information

- If, while climbing the ladder, the hose does not run clear, firefighter No.2 calls, *Halt No.1*. Firefighter No.1 then descends the ladder to allow the hose to be cleared.
- Firefighter No.2 must at all times have two hands on the ladder strings when footing the ladder.
- Firefighter No.1 should remove the hose from their body at the head of the ladder using one hand where possible to maintain ‘three-points-of-contact’ with the ladder. If this proves too difficult firefighter No.1 should lean in towards the head of the ladder so that all body weight is forward of the point of contact between the feet and the ladder rungs before removing the hose from their body.

- Firefighters climb the ladder as detailed in *Skill No.21, To climb a ladder*.
- Certain ladders used in the QFRS are fitted with a chain at the head. This chain is not to be included as a rung. The hose will be passed over the chain and secured to the third rung from the head.
- The delivery hose and branch can also be brought down from the elevated position by mounting the ladder and repositioning the hose on the body before descending the ladder.
- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill is performed by firefighter No.1 in the drill. The duties of firefighter No.2 in the skill are performed by firefighter No.3 in the drill.
Skill 24: To prepare a delivery for elevated hose line

Training outcome

Performance: The firefighter will prepare a hose to be hauled aloft and demonstrate, in sequence, all stages and key points of this skill without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.1 Prepare hose</td>
<td>a. Provide branch and hose and position a safe distance from structure (approx 2 metres).</td>
</tr>
<tr>
<td></td>
<td>b. Grasp branch and form a 2 metre bight in hose.</td>
</tr>
<tr>
<td></td>
<td>c. Place coupled branch back on hose.</td>
</tr>
<tr>
<td>24.2 Tie long line to hose</td>
<td>a. Obtain long line.</td>
</tr>
<tr>
<td></td>
<td>b. Tie a round turn and bowline with running end of line around hose opposite branch.</td>
</tr>
<tr>
<td></td>
<td>c. Tie a clove hitch on branch below top boss.</td>
</tr>
<tr>
<td></td>
<td>d. Call, <em>Haul aloft no.1.</em></td>
</tr>
<tr>
<td></td>
<td>e. Clear hose (maintain slight tension on hose).</td>
</tr>
</tbody>
</table>
Firefighter information

- The branch and hose should be laid out and prepared approximately 2 metres from the structure to protect it from falling debris.
- Ensure the weight of the hose is taken by the round turn and bowline. When the round turn and bowline reach the elevated position, the branch is cleared and the line is doubled and made fast with a clove hitch to a suitable fixed object on the structure.
- When the hose is correctly secured in the elevated position, the round turn and bowline is located approximately 0.5 metres below the landing.
- The firefighter in the elevated position draws sufficient hose through the round turn and bowline before the hose is charged.
CHAPTER 2 - Skills

Firefighter information

- When replacing a damaged elevated branch length, the first clove hitch should be cast off and the free end of the line lowered for hauling. The line is then secured to the new hose length with a round turn and bowline, at approximately 3 to 5 metres from the male coupling and a clove hitch attached below the male coupling. Once aloft, the hose is secured in the approved manner and the damaged length replaced.

- When making up an elevated hose line, the coupling is broken at the base of the elevated hose line to drain the hose. The clove hitch securing the hose in the elevated position is released and the branch and hose lowered using the line. If the elevated position is less than 8 metres from the ground the hose can be lowered to the ground as detailed in Skill 22: To take a case one hose reel delivery aloft, Skill 23: To take a branch and delivery hose aloft.

- When this skill is performed in a three-firefighter drill action, the duties of the firefighter securing the line to the hose in the skill are performed by firefighter No.3 in the drill.

- The line is to be secured below the top boss of the branch.

- When the line is correctly secured to the hose, the firefighters hand should slide comfortably under the round turn bowline.

Case One

- When preparing a case one hose for elevated hose line, a bight is placed in the hose to take the weight off the nozzle. The nozzle is not placed back on the hose.

- By preparing the hose in the prescribed manner, firefighter No.2 will not have to change position when securing the line to the hose.
## Skill 25: To flake hose to carry aloft

### Training outcome

**Performance:** The firefighter will flake a hose to carry aloft and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>25.1 Prepare hose</strong></td>
<td><strong>Firefighter No.1</strong>&lt;br&gt;a. Bowl hose from point adjacent to means of going aloft.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong>&lt;br&gt;a. Take up position adjacent to means of going aloft.</td>
</tr>
<tr>
<td><strong>25.2 Flake hose</strong></td>
<td><strong>Firefighter No.1</strong>&lt;br&gt;a. Place hose over the neck and shoulders of firefighter No.2.</td>
</tr>
<tr>
<td></td>
<td>b. Flake hose over neck and shoulders taking flakes no lower than <strong>waist height</strong>.</td>
</tr>
<tr>
<td></td>
<td>c. Continue flaking hose from side to side until fully flaked.</td>
</tr>
<tr>
<td></td>
<td><strong>Firefighter No.2</strong>&lt;br&gt;a. Position couplings at <strong>waist height</strong> in front of body.</td>
</tr>
<tr>
<td></td>
<td>b. Draw hose towards body while hose is being flaked.</td>
</tr>
</tbody>
</table>
### 25.3 Carry aloft

**Firefighter No.1**
- a. Provide firefighter No.2 with assistance as required.
- b. Foot ladder.

**Firefighter No.2**
- a. Proceed to elevated position.

### 25.4 Discarding hose

**Firefighter No.2**
- a. Grasp couplings and hose.
- b. Leaning and rolling shoulder, draw hose from body.

---

**Firefighter information**

- The hose is carried to the elevated position in this manner, leaving hands free to negotiate ladders and stairs.
- Hose may be required in the elevated position to add to or replace lengths.
- Fire ground variables may require this skill to be performed by one firefighter.
- The flakes of hose are taken no lower than waist height to prevent the hose forming a tripping hazard.
Skill 26: To couple suction hose

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| 26.1 Prepare to couple hose | Firefighter No.1  
    a. Straddle and support male suction coupling between calves and ankles.  
    b. Check washer of female coupling is in position and serviceable.  
    c. Call, Washer checked.  
    d. Align male coupling to female.  
    Firefighter No.2  
    a. Straddle female suction coupling.  
    b. Raise female suction coupling to allow firefighter No.1 to check washer.  
    c. Support female suction coupling between calves and ankles.  |
| 26.2 Marry couplings   | Firefighter No.1  
    a. Fit suction spanner to male coupling.  
    b. Bear down to the right to harden joint.  
    Firefighter No.2  
    a. Rotate collar of female coupling clockwise until firm.  
    b. Fit suction spanner to female coupling.  
    c. Bear down to the right to harden joint. |
Firefighter information

- Suction hose is laid out from the pump and numbered from the water supply.
- To harden suction hose couplings, firefighters will bear down to the right. Remember, **right to tight**.
- There are a number of different types of coupling used in QFRS. This skill may need to be adapted to suit, e.g. Stortz.

- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill are performed by firefighter No.1. The duties of firefighter No.2 in the skill are performed by firefighter No.3.
## Skill 27: To couple suction hose to a pump

### Training outcome

**Performance:** The firefighter will couple a suction hose to the pump and demonstrate, in sequence, the duties of each team member without error.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Key points</th>
</tr>
</thead>
</table>
| **27.1 Prepare to couple hose** | **Firefighter No.1**  
   a. Check blank cap and inlet strainer have been removed.  
   b. Support suction hose with one arm.  
   c. Allow firefighter No.2 to check sealing washer.  
   d. Align coupling with pump inlet.  
   **Firefighter No.2**  
   a. Check washer is in position and serviceable.  
   c. Assist firefighter No.1 to support and align suction hose to pump inlet. |

| **27.2 Marry coupling to pump** | **Firefighter No.1**  
   a. Rotate female collar clockwise until firm.  
   b. Fit suction spanner to female coupling and bear down right to harden coupling.  
   **Firefighter No.2**  
   a. Support suction hose. |

### Firefighter information

- To harden suction hose coupling, firefighters will bear down to the right. Remember, *right to tight.*
- When this skill is performed in a three-firefighter drill action, the duties of firefighter No.1 in the skill are performed by firefighter No.3 in the drill. The duties of firefighter No.2 in the skill are performed by firefighter No.1 in the drill.
When firefighters respond to an emergency incident, they respond as an operational firefighting crew. To ensure that all crewmembers understand and perform their individual duties, firefighters need to train on a regular basis. Drills are one of the many forms of training a firefighter must perform to maintain a high level of competence and personal fitness.

Drills are a sequence of skills that have been detailed in chapter 2 of this workbook. The required number of skills are linked together in a defined sequence to form an initial action which will be implemented at training or emergency incidents. Before firefighters can effectively participate in training and emergencies, they must be capable of safely and competently performing all the skills laid down in this workbook.

Drills used by the QFRS are divided into four basic categories, termed case evolutions. These evolutions are listed below:

- Case 1
- Case 2
- Case 3
- Case 4.

When firefighters become proficient in carrying out the four basic evolutions of case drill, they will then progress further in their training, by the introduction of additional skills and drill variations. Outlined in this section of the workbook are 17 variations on the four basic evolutions of case drill. These variations do not form a complete list, as the OIC may need to introduce additional skills to provide variations that will achieve the desired outcome at training or emergencies.
To prepare for emergency incidents, firefighters need to conduct simulated training exercises involving drill variations. These exercises should include the wearing of different levels of protective clothing and breathing apparatus in a variety of situations and conditions; e.g., at night. This will ensure firefighters understand and appreciate the difficulty of the tasks they may be required to perform at emergency incidents.

The OIC of an incident is required to give the crew an initial command to initiate an action; e.g., Case 1. From this command, the crew understand that a defined sequence of firefighting skills needs to be initiated.

The OIC will order the required case drill variation based on the following information:
- the type of incident
- the size of the incident
- the size and type of water supply available.

The sequence of actions required to perform each case drill and associated variations is discussed in detail on the following pages.
1. Case one

Case one is a sequence of skills, which allows the water carried in the pumper on-board water tank to be pumped to the hose reels of the pumper. The quantity of water carried on the pumper will determine the duration of this operation. Feed hoses from the reticulated supply to the pump will be established if necessary.

Before taking the nozzle/branch to the fire, the hose reel valve must be opened. The branch operator performs this task if the valve is fitted at the hose reel, or by the pump operator, if fitted at the pump panel.

On arrival at your assigned station, check which type of pump and hose reel are in use on the pumpers you will crew.

![Figure 3.1 Case one](image-url)
2. Case two

Case two is a sequence of skills, which allows the water from reticulated supplies to be delivered at mains pressure via a standpipe, delivery hose and branch to a designated position. Where the reticulated water supply is adequate for firefighting, case two actions may be used to free the pumper for further use, or provide firefighters with an alternate means of conveying water to the fireground should the pumper malfunction.

Figure 3.2 Case two
3. Case three

Case three is a sequence of skills, which allows the water from the reticulated mains supply to be introduced into the pump of the pumper through feed hose lines. The water is then delivered by delivery hose and branch to the fire ground at pump pressure. There are two options when considering this action.

Case three options are:

- Case three tanker
- Case three direct.

**Case three tanker**

Case three tanker is an action used to set up an initial rapid attack utilising the on-board water supply fitted to the pumper, prior to introducing water into the pump from the reticulated supply through feed hoses. This action is also used in situations where there is no other water supply available.

Fireground factors which can necessitate a decision to use case three tanker:

- endangered life
- reduction of rapid fire spread
- quantity of water carried by individual pumpers
- need to establish an initial fireground attack pump
- the distance and availability of the reticulated water supply from the fireground.

**Case three direct**

Case three direct is an action used to introduce water into the pump fitted to the pumper from a reticulated water supply through at least two feed hoses. This is prior to directing water through delivery hose and branch onto the fire.
Fireground factors which can necessitate a decision to use case three direct:

- local knowledge of water supplies (location, pressure and volume)
- quantity of water carried by individual pumpers
- the need to relay water to other fire ground pumpers, pumps, and/or aerial equipment
- reticulated water supply being further than three hose lengths from the incident.
4. Case four

Case four is a sequence of skills, which allows water from a static supply to be introduced into the pump fitted to the appliance through suction hose and strainer. The water is energized by the pump and delivered by delivery hose and branch to the fireground.

![Diagram of Case four](image)

Figure 3.4 Case four

When the appliance is to be committed to pumping from a static water supply some distance from the fire, the required equipment for the job at hand; e.g., ladders, foam, breathing apparatus and equipment, will be left adjacent to the fireground before the layout of hose commences.

If the pumper has to pass the water supply prior to reaching the fire, the pumper is to be positioned and water supply accessed prior to equipment being deployed to the fireground.
Other relevant information required for Case four drills include:

- notes on pumper positioning
- notes on suction lines
- notes on suction hose.

**Pumper positioning**

The positioning of pumpers for case four actions will depend on the location of the water supply and the layout of the pumper; e.g., side or rear mounted pump. Where possible, pumpers should be positioned to give the pump operator a clear line of sight to the fireground (See figure 3.5).
Notes on suction line

A suction line is a length of rope that is long enough to allow all lengths of suction hose, to be secured to the pump when coupled together. The suction line will have an eye splice formed in one end to facilitate easy attachment to the suction strainer. The line must be capable of supporting the full weight of the hose when filled with water.

The suction line must be attached to the suction hose by the eye splice at the strainer end and a half hitch (as illustrated in Figure 3.7) positioned below each hose coupling.

Before lowering of suction hose into the water, the suction line will be attached to a bollard on the pumper, using a locking hitch (see Figure 3.6). This will prevent the suction hose from being lost during attachment to the pump. In the absence of a bollard the suction line should be secured to an object such as a towing eye or similar strong point on the pumper.

Figure 3.6 Forming a locking hitch
A general-purpose line may be used as an alternative to a suction line. When a general-purpose line is used, it is attached to the strainer using a clove hitch formed in the centre of the line. The free end of the line can then be used for raising and lowering the suction hose into the water (See Figure 3.7).

![Figure 3.7 Attaching a general-purpose line to the suction hose](image)

After the suction hose is placed in the water, and before the pump is primed, the suction line may require re-tensioning.

**Notes on suction hose**

Suction hose lengths are laid out from the pumper and numbered from the water supply. The length of suction hose at the pumper is positioned in a manner that will allow the hose to marry to the pump inlet, without being dragged across the ground.
There are 22 drills as indicated in the table below.

<table>
<thead>
<tr>
<th>New No.</th>
<th>Drill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case one</td>
</tr>
<tr>
<td>2</td>
<td>Case one - second hose reel required</td>
</tr>
<tr>
<td>3</td>
<td>Case one using the short extension ladder</td>
</tr>
<tr>
<td>4</td>
<td>Case one using the extension ladder</td>
</tr>
<tr>
<td>5</td>
<td>Case one with elevated hose line</td>
</tr>
<tr>
<td>6</td>
<td>Case one using breathing apparatus</td>
</tr>
<tr>
<td>7</td>
<td>Case two</td>
</tr>
<tr>
<td>8</td>
<td>Case three tanker</td>
</tr>
<tr>
<td>9</td>
<td>Case three direct</td>
</tr>
<tr>
<td>10</td>
<td>Change from Case one to Case three tanker</td>
</tr>
<tr>
<td>11</td>
<td>Case three - second delivery required</td>
</tr>
<tr>
<td>12</td>
<td>Case three - insufficient water - third feed required</td>
</tr>
<tr>
<td>13</td>
<td>Case three add a length at the branch</td>
</tr>
<tr>
<td>14</td>
<td>Case three branch length disabled - replace damaged length</td>
</tr>
<tr>
<td>15</td>
<td>Case three pump length disabled - replace damaged length</td>
</tr>
<tr>
<td>16</td>
<td>Case three specified length disabled - replace damaged length</td>
</tr>
<tr>
<td>17</td>
<td>Case three tanker using the short extension ladder</td>
</tr>
<tr>
<td>18</td>
<td>Case three tanker using the extension ladder</td>
</tr>
<tr>
<td>19</td>
<td>Case three tanker using elevated hose line</td>
</tr>
<tr>
<td>20</td>
<td>Case three tanker using foam induction branch</td>
</tr>
<tr>
<td>21</td>
<td>Case three tanker using breathing apparatus</td>
</tr>
<tr>
<td>22</td>
<td>Case four with nominated lengths of suction hose</td>
</tr>
</tbody>
</table>

**NOTE**

All case evolutions require adding and replacing lengths of delivery hose. These tasks will be carried out as in case three.
Drill 1: Case one

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream using the pumper hose reel for a simulated fire 20m from the pumper. Water supply is also 20m from the pumper.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Take nozzle and sufficient hose to fire.  
b. When set, call and signal, *Ready*. |
| 2           | a. Position pumper; engage pump.  
b. Open tank valve.  
c. Tend hose reel; ensure hose runs clear.  
d. Operate pump when *Water on* signal is given.  
e. Provide feeds; couple to inlets; call and signal, *Ready at pump*.  
f. Operate pump. |
| 3           | a. Place wheel chocks; call, *Chocks*.  
b. Take hydrant bar, standpipe, and female feed couplings.  
c. Ship standpipe, flushes standpipe.  
d. Couple to standpipe; turn water on when pump operator calls and signals, *Ready at pump*.  
e. Remove kinks and bends; return hydrant bar.  
f. Back up firefighter No 1. |
CHAPTER 3 - Drills

Firefighter information

- When the hydrant is within one hose length of the pump, introduce two feed hoses initially. This will facilitate the speed at which case one can be changed to case three, should the fire escalate. When the hydrant is further than one length from the pump, introduce a single feed hose initially. When time and safety permit, introduce a second feed line into the pump.
- Sufficient hose is considered to be enough hose to allow firefighters to light up and extinguish the fire or to protect exposures within range.
- Firefighter No.1 initially draws off a large bight of hose from the hose reel (approx 5-7 metres) grasps the bight formed in the hose, and runs out the hose towards the fire. **Note! The hose is not coiled over the arm.**
- Firefighter No.1 lays the hose out in “S” bends, with the last 3-5 metres laid straight.
- Firefighter No.3 ensures sufficient hose is drawn towards the fire to allow firefighter No.1 to light up. This is done before backing up firefighter No.1.
- The hose reel valve is opened by firefighter No.1 if mounted at the hose reel or by firefighter No.2 if mounted at the pump panel.
- On makeup, the hose reel is made up first, allowing the pumper to respond if required.
## Drill 2: Case one - second hose reel required

### Training outcome

**Performance:** The crew will provide and maintain a second delivery using the pumper hose reel. Case one in action with one delivery.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a. Stand fast.</td>
</tr>
</tbody>
</table>
| 2           | a. Tend reel ensure hose runs clear.  
b. Operate pump when *Water on* signal is given for second delivery. |
| 3           | a. Take nozzle and sufficient hose to fire.  
b. When set, call and signal, *Ready*. |

### Firefighter information

- The hose reel valve is opened by firefighter No.2.
Drill 3: Case one using the short extension ladder

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream from an elevated position using the short extension ladder and pumper hose reel. There is a simulated fire at first floor level (3m) and the structure and water supply are both 20m from the pumper. The short extension ladder will be positioned with 3 rungs above the parapet; hose reel will be in action, on or in the structure.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1 | a. Provide and erect short extension ladder.  
b. Take hose line aloft.  
c. Dismount ladder; draw sufficient hose aloft; place hose clip.  
d. When set, call and signal, *Ready*. |
| 2 | a. Position pumper; engage pump.  
b. Open tank valve.  
c. Tend reel; see hose runs clear.  
d. Provide feeds; couple to inlets and operate pump immediately *Water on* signal is given.  
e. Call and signal, *Ready at pump*.  
f. Foot ladder for firefighter No. 3.  
g. Operate pump. |
3

a. Place wheel chocks; call, Chocks.
b. Provide nozzle, sufficient hose, hose clip, and place to the right side of the ladder, close to string.
c. Foot ladder for firefighter No. 1.
d. Take hydrant bar, standpipe and female feed couplings.
e. Ship standpipe.
f. Couple feeds to standpipe; turn water on when pump operator calls and signals, Ready at pump.
g. Remove kinks and bends; return hydrant bar.
h. Back up firefighter No. 1.

Firefighter information

- Firefighter No.3 remains at the foot of the ladder until firefighter No.1 has dismounted the ladder, secured the hose clip into position and the hose has been charged with water.
- Should the hose not run clear as Firefighter No1 is climbing the ladder, Firefighter No 3 calls Halt No 1. Firefighter No.1 then descends the ladder to allow the hose to be cleared.
- Firefighters must have two hands on the ladder strings at all times when footing the ladder.
- The hose reel is made up after use by lowering the nozzle to the ground, calling, Stand from under and casting the remainder of the hose to the ground.
Drill 4: Case one using the extension ladder

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream from an elevated position using the extension ladder and pumper hose reel. There is a simulated fire at second floor level (6m) and the structure and water supply are both 20m from the pumper.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Assisted by firefighter No.3, unship and erect ladder.  
b. Take hose line aloft.  
c. Dismount ladder; draw sufficient hose aloft; place hose clip.  
d. When set, call and signal, *Ready*. |
| 2           | a. Position pumper; engage pump.  
b. Open tank valve.  
c. Provide nozzle, sufficient hose and hose clip and place to the right hand side of the ladder, close to string.  
d. Provide feeds; couple to inlets and operate pump immediately *Water on* signal is given.  
e. Call and signal, *Ready at pump*.  
f. Foot ladder for firefighter No.3.  
g. Operate pump. |
| 3           | a. Place wheel chocks; call, *Chocks*.  
b. Assist firefighter No.1 to unship and erect ladder.  
c. Foot ladder for firefighter No.1.  
d. Take hydrant bar, standpipe and female feed couplings.  
e. Ship standpipe.  
f. Couple feeds to standpipe; turn water on when pump operator calls and signals, *Ready at pump*.  
g. Remove kinks and bends; return hydrant bar.  
h. Back up firefighter No.1. |
Firefighter information

- Firefighter No.3 remains at the foot of the ladder until firefighter No.1 has dismounted the ladder, secured the hose clip into position and the hose has been charged with water.

- Should the hose not run clear as Firefighter No.1 is climbing the ladder, Firefighter No 3 calls *Halt No 1*. Firefighter No.1 then descends the ladder to allow the hose to be cleared.

- Firefighters must have two hands on the ladder strings at all times when footing the ladder.

- Certain ladders used in the QFRS are fitted with a chain at the head; this chain is not to be counted as a rung. The hose is passed over the chain and secured to the third rung from the head.

- The case one hose can be made up after use by lowering the nozzle to the ground, calling, *Stand from under* and casting the remainder of the hose to the ground.
Drill 5: Case one with elevated hose line

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream from an elevated position using the general purpose (GP) line and pumper hose reel. There is a simulated fire at second floor level (6m) and the structure and water supply are both 20m from the pumper; hose reel in action, on or in the structure.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Take GP line to elevated position.  
b. Make line fast.  
c. Call, *Stand from under*.  
d. Drop sufficient line to ground.  
e. Haul hose line aloft.  
f. Make line fast and haul up sufficient hose.  
g. When set, call and signal, *Ready*. |
| 2           | a. Position pumper; engage pump.  
b. Open tank valve.  
c. Tend reel; see hose runs clear.  
d. Provide feeds; couple to inlets and operate pump immediately  
  *Water on* signal is given.  
e. Call and signal, *Ready at pump*.  
f. Operate pump. |
3

a. Place wheel chocks; call, Chocks.
b. Provide nozzle and sufficient hose.
c. Secure GP line to hose.
d. Call, Haul aloft No.1; clear hose.
e. Take hydrant bar, standpipe and female couplings.
f. Ship standpipe.
g. Couple feeds to standpipe; turn water on when pump operator calls and signals, Ready at pump.
h. Remove kinks and bends; return hydrant bar.
i. Back up firefighter No.1.

Firefighter information

- Firefighter No.1 ensures the standing part of the GP line is secured to a solid object in the immediate working area, prior to casting the running end of the line to the ground. This prevents the entire line falling from the structure.
- When preparing a case one hose reel for elevated hose line, a bight is placed in the hose to take the weight off the nozzle. The nozzle is not placed back on the hose.
- Firefighter No.3 secures the running end of the long line to the hose with a round turn and bowline, approximately three metres from the nozzle and a clove hitch secured at the nozzle.
- When the round turn and bowline reaches the elevated position, the branch is cleared and the line is doubled and made fast with a clove hitch to a suitable fixed object on the structure.
- The weight of the charged hose must be taken by the round turn and bowline.
- The round turn and bowline must be located approximately 0.5 metres below the landing when the hose is correctly secured in the elevated position.
- The firefighter in the elevated position draws sufficient hose through the round turn and bowline before the hose is charged.
Drill 6: Case one using breathing apparatus

Training outcome

**Performance:** The crew, with firefighter No.1 and No.3 wearing breathing apparatus, will provide and maintain an effective firefighting stream using the pumper hose reel. There is a simulated fire 20m from pumper; water supply 20m from the pumper; comply with breathing apparatus stage 1 control procedures.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Don breathing apparatus; hand tally to firefighter No.2.  
b. Take nozzle and sufficient hose to fire.  
c. When set, signal, *Ready*. |
| 2           | a. Position pumper; engage pump.  
b. Open tank valve.  
c. Initiate breathing apparatus stage one control procedures.  
d. Tend reel; ensure hose runs clear.  
e. Operate pump when *Water on* signal is given.  
f. Provide feeds; couple to inlets; call and signal, *Ready at pump*.  
g. Operate pump.  
h. Continue breathing apparatus stage one control procedures. |
| 3           | a. Place wheel chocks; call, *Chocks*.  
b. Take hydrant bar, standpipe and female feed couplings.  
c. Ship standpipe.  
d. Couple to standpipe; turn water on when pump operator calls and signals, *Ready at pump*.  
e. Remove kinks and bends; return hydrant bar.  
f. Don breathing apparatus; hand tally to firefighter No. 2.  
g. Back up firefighter No. 1. |
Firefighter information

- SCBA donning procedures are completed before leaving the breathing apparatus control point.
- Firefighter No.1 must not enter any structure until firefighter No.3 is in the back-up position.
- Firefighter No.2 must don breathing apparatus controllers tabard.
- The breathing apparatus control board must be placed in a safe and secure position, where it will not be damaged or have recorded information erased.
- If time permits, firefighter No.2 assists firefighters with the donning of breathing apparatus.
Drill 7: Case two

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream direct from the hydrant supply. Simulated fire 40m from the water supply; flaked hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Leave branch and sufficient hose adjacent to fire.  
b. Flake out hose.  
c. Return to branch; when set, call and signal, *Ready*. |
| 2           | a. Drive to fire; allow crew to dismount.  
b. When firefighter No.3 calls, *Run up/Run back*, drive to hydrant.  
c. Break coupling; couple to standpipe.  
d. Turn water on when signal is given. |
| 3           | a. Call, *Run up/Run back*.  
c. Take hydrant bar and standpipe.  
d. Ship standpipe.  
e. Remove kinks and bends; return hydrant bar.  
f. Back up firefighter No. 1. |
Firefighter information

For this action, the pumper should be sited approximately 3 to 5 metres from the hydrant;

Firefighters flaking hose out of a pumper which is mobile must not stand between the pumper and the hose being flaked out of the hose box;

Firefighters may also perform a One firefighter case two drill. This drill is used at competitions or to monitor fitness using a combination of laid down skills in a defined sequence. Information in relation to this action is laid out below.

Performance: The firefighter will lay out a case two delivery (Ground hydrant; hydrant bar and standpipe; length of 64mm delivery hose (Dutch roll); one branch (fixed collar type) and demonstrate, in sequence, all stages and key points of this skill without error.

NB This skill is to be performed dry and without spanners.

Practical demonstrations begin from the command Action and conclude when the hose is fully laid out and the firefighter calls and signals, Ready. Prior to the command, Action, the following preparation is to be undertaken:

- Standpipe, hose and branch are placed on the ground at the hydrant;
- The firefighter holding the hydrant bar commences the skill at a distance of one metre from the hydrant.
Drill 8: Case three tanker

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream using a branch, delivery hose and pumper. Simulated fire 40m from the pumper; water supply 20m from the pumper; flaked hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Take branch and sufficient hose to fire.  
             | b. When set, call and signal, Ready. |
| 2           | a. Position pumper; engage pump.  
             | b. Open tank valve.  
             | c. Break coupling; couple to outlet.  
             | d. Operate pump when Water on signal is given.  
             | e. Provide feeds; couple to inlets; call and signal, Ready at pump.  
             | f. Operate pump. |
| 3           | a. Place chocks; call, Chocks.  
             | b. Flake out hose.  
             | c. Take hydrant bar, standpipe and female feed couplings.  
             | d. Ship standpipe, flush standpipe.  
             | e. Couple feeds to standpipe; turn water on when pump operator calls and signals, Ready at pump.  
             | f. Remove kinks and bends; return hydrant bar.  
             | g. Back up firefighter No.1. |
### Firefighter information

- This drill indicates a minimum of two lengths of hose to be run out in the delivery line.
- When working with a two-outlet pump, firefighter No.2 couples a dividing breeching to the second pump outlet. This allows a third delivery line to be coupled if required.
- Before additional deliveries are taken off the pump, a third feed hose into the pump must be considered.
Drill 9: Case three direct

Training outcome

Performance: The crew will provide and maintain an effective firefighting stream using a branch, delivery hose, and pumper. Simulated fire 60m from the water supply; the pumper to be used to lay flaked hose; water supply 5m from the pumper.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Leaves branch and sufficient hose adjacent to fire.  
|             | b. Flakes out hose.  
|             | c. Places wheel chocks; calls, Chocks.  
|             | d. Return to branch, when set, call and signal, Ready.  |
| 2           | a. Drive to fire; allow crew to dismount.  
|             | b. When firefighter No.3 calls, Run up/Run back, drive to hydrant.  
|             | c. Engage pump.  
|             | d. Provide feeds; couple to inlets; call and signal, Ready at pump.  
|             | e. Break coupling; couple to outlet.  
|             | f. Operate pump when Water on signal is given.  |
| 3           | a. Call, Run up/Run back.  
|             | b. Call, Halt at hydrant.  
|             | c. Take hydrant bar and standpipe.  
|             | d. Ship standpipe, flush standpipe.  
|             | e. Obtain female feed couplings.  
|             | f. Couple to standpipe; turn water on when pump operator calls and signals, Ready at pump.  
|             | g. Remove kinks and bends; return hydrant bar.  
|             | h. Back up firefighter No.1.  |
Firefighter information

- This action is to be considered when there is a limited amount of water carried on the pumper or the hydrant is further than three lengths of hose from the fire.
- For this action, the pumper is to be sited approximately 3 to 5 metres from the hydrant.
- The use of short feeds can be employed when setting up for case three direct. Listed below are the advantages:
  - hose conservation - short feeds do not deplete the 30m lengths of operational hose carried on the pumper;
  - friction loss is reduced using shorter lengths of hose.
- Before additional deliveries are taken off the pump, a third feed hose into the pump must be considered.
- When working with a two-outlet pump, firefighter No2 couples a dividing breeching to the second pump outlet. This allows a third delivery line to be coupled if required.
Drill 10: Change from case one to case three tanker

**Training outcome**

**Performance:** The crew will change from case one to case three tanker and provide and maintain an effective firefighting stream. In action case one, fire has spread 40m from the pumper.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Take branch from firefighter No. 3.  
b. Light up.  
c. When set, call and signal, *Ready*. |
| 2           | a. Flake out hose.  
b. Break coupling; couple to pump outlet.  
c. Operate pump when *Water on* signal is given.  
d. Make up case one hose reel. |
| 3           | a. Take branch and sufficient hose to firefighter No.1.  
b. Obtain case one nozzle from firefighter No.1  
c. Operate case one nozzle until case three delivery is charged.  
d. Remove kinks and bends from case three delivery.  
e. Back up firefighter No. 1. |

**Firefighter information**

- Firefighter No. 2 makes up the case one delivery line at the first opportunity.
- Firefighter No. 3 operates the case one nozzle until the case three delivery is charged with water and in operation.
Drill 11: Case three - second delivery required

Training outcome

**Performance:** The crew will provide and maintain an effective firefighting stream from a second delivery. Case three in action; simulated fire 40m from the pumper; flaked hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a. Stand fast.</td>
</tr>
</tbody>
</table>
| 2           | a. Flake out hose.  
             | b. Break coupling; couple to pump outlet.  
             | c. Operate pump when *Water on* signal is given.  
             | d. Remove kinks and bends.  
             | e. Operate pump. |
| 3           | a. Take branch and sufficient hose to fire.  
             | b. When set, call and signal, *Ready*. |

Firefighter information

- Before a second delivery is brought into action, the OIC should consider the necessity of a third feed.
- When the second delivery is run out, firefighters must ensure that the pumper is not encircled with hose.
- When working with a two-outlet pump, firefighter No2 couples a dividing breeching to the second pump outlet. This allows a third delivery line to be coupled if required.
Drill 12: Case three (insufficient water) - third feed required

Training outcome

**Performance:** The crew will provide a third feed to the pump from an independent hydrant. Case three in action; coiled hose to be used; independent hydrant 40m from the pumper.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a. Stand fast.</td>
</tr>
</tbody>
</table>
| 2           | a. Bowl out from pump towards second hydrant.  
|             | b. Hand female coupling to firefighter No.3.  
|             | c. Couple to pump inlet; call and signal, *Ready at pump.*  
|             | d. Operate pump. |
| 3           | a. Take hydrant bar, standpipe, female feed coupling and coil of hose; run out first feed length.  
|             | b. Bowl second length; make coupling; proceed to hydrant.  
|             | c. Ship standpipe, flush standpipe.  
|             | d. Couple feed to standpipe; turn water on when pump operator calls and signals, *Ready at pump.*  
|             | e. Remove kinks and bends; return hydrant bar.  
|             | f. Back up firefighter No.1. |

Firefighter information

- If more than two lengths of hose are required to establish a third feed, firefighter No. 3 provides the additional lengths.
- The third feed should, whenever possible, be established from a water main that is independent from the established water supply, as the pressure within the original water main may not be sufficient to maintain an effective firefighting stream.

**NOTE:** A greater volume of water is required at the pump.
Drill 13: Case three - add a length at the branch

Training outcome

**Performance:** The crew will add a length at the branch. Case three in action; coiled hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. When water is turned off, remove branch.  
b. Couple to additional length of hose.  
c. Light up.  
d. When set, call and signal, *Ready.* |
| 2           | a. Turn water off and on when signals are given.  
b. Operate pump. |
| 3           | a. Provide coil of hose.  
b. Bowl out from branch; call and signal, *Water off.*  
c. Couple in new length of hose; call, *Water on,* when firefighter No.1 calls and signals, *Ready.*  
d. Remove kinks and bends.  
e. Back up firefighter No.1. |

Firefighter information

- Before calling *Water off,* firefighter No.3 ensures firefighter No.1 has been informed of the action.
- Where possible, firefighter No.3 bowls the new length of hose at right angles to the initial delivery.
- Once the new length of hose is coupled, firefighter No.1 takes full advantage of the additional length and lights up towards the fire, laying out the new length of hose in ‘S’ bends.
Drill 14: Case three branch length disabled - replace damaged length

Training outcome

**Performance:** The crew will replace a damaged branch length. Case three in action; coiled hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. When water is turned off, remove branch.  
b. Couple branch to new delivery.  
c. When set, call and signal, *Ready*. |
| 2           | a. Turn water off and on when signals are given.  
b. Operate pump. |
| 3           | a. Provide coil of hose.  
b. Bowl out from last coupling.  
c. Take male coupling to firefighter No.1.  
d. Return to female coupling, anticipating arrival by 20m (approx); call and signal, *Water off*.  
e. Couple in new length of hose.  
g. Remove kinks and bends.  
h. Tie overhand knot in ends of damaged hose.  
i. Back up firefighter No.1. |

Firefighter information

- Before calling *Water off*, firefighter No.3 ensures firefighter No.1 has been informed of the action and given sufficient time to light back into a safe position.
- Overhand knots are used to indicate a length of hose is damaged and no longer serviceable.
Drill 15: Case three pump length disabled - replace damaged length

Training outcome

**Performance:** The crew will replace a damaged pump length. Case three in action, coiled hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a. Stand fast.</td>
</tr>
</tbody>
</table>
| 2           | a. Turn water off when signal is given.  
b. Couple new length to pump outlet.  
c. Turn water on when signal is given.  
d. Operate pump.  
e. Tie overhand knot in end of damaged hose. |
| 3           | a. Provide coil of hose.  
b. Bowl out from pump.  
c. Take male coupling; lay out new length of hose, anticipating arrival by 20 metres (approx); call and signal, *Water off*.  
d. Couple in new length of hose; call and signal, *Water on*.  
e. Tie overhand knot in end of damaged hose.  
f. Back up firefighter No.1. |

Firefighter information

- Before calling, *Water off*, firefighter No.3 ensures firefighter No.1 has been informed of the action and given sufficient time to light back into a safe position.
- Overhand knots are used to indicate a length of hose is damaged and no longer serviceable.
Drill 16: Case three specified length disabled - replace damaged length

Training outcome

Performance: The crew will replace a damaged length at the nominated place. Case three in action; coiled hose to be used.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. When water is turned off, leave branch and proceed to male coupling of damaged length.  
b. Couple in new length.  
c. Return to branch.  
d. When set, call and signal, Ready. |
| 2           | a. Turn water off and on when signals are given.  
b. Operate pump. |
| 3           | a. Provide coil of hose.  
b. Bowl out from female coupling of damaged length.  
c. Lay out new length.  
d. Return to female coupling, anticipating arrival by 20 metres (approx); call and signal, Water off.  
e. Couple in new length of hose; call and signal, Water on, when firefighter No.1 calls and signals, Ready.  
f. Remove kinks and bends.  
g. Tie overhand knot in ends of damaged hose.  
h. Back up firefighter No.1. |
### Firefighter information

- Over-hand knots are used to indicate a length of hose is damaged and no longer serviceable.
- Before calling *Water off* firefighter No. 3 must inform firefighter No. 1 of the action and give sufficient time for firefighter No. 1 to light back to a safe position if necessary.
- Replacement of feed lengths: This action will be carried out by firefighter No. 2 as follows:
  - Bowl out feed length from pump in direction of water supply
  - Couple to third inlet of pump (if available)
  - Open pumper tank valve; operate pump
  - Take female coupling to standpipe
  - Turn standpipe off; remove damaged length
  - Couple female coupling to standpipe
  - Turn standpipe on; tie overhand knot in damaged length;
  - Close pumper tank valve and operate pump
  - When time permits, tie overhand knot and clear hose away from pump operators area
- Damaged feed lengths are replaced by firefighter No. 2 assisted by No. 3 (if available).
- If more than one delivery is in use, the OIC will specify which delivery has the disabled length to be replaced.
Drill 17: Case three tanker using the short extension ladder

Training outcome

Performance: The crew will provide and maintain an effective firefighting stream from an elevated position using the short extension ladder, branch, delivery hose and pumper. Simulated fire at first floor level (3m); structure 20m from pumper; water supply 20m from pumper; short extension ladder three to five rungs above the parapet; hose line in action, on or in the structure.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Provide and erect short extension ladder.  
b. Take hose line aloft.  
c. Dismount ladder; draw sufficient hose aloft; place hose clip.  
d. When set, call and signal, Ready. |
| 2           | a. Position pumper; engage pump.  
b. Open tank valve.  
c. Flake out hose.  
d. Break coupling; couple to outlet.  
e. Provide feeds; couple to inlets and operate pump immediately Water on signal is given.  
f. Call and signal, Ready at pump.  
g. Operate pump.  
h. Foot ladder for firefighter No.3.  
i. Operate pump. |
| 3 | a. Place chocks; call, *Chocks*.  
   b. Provide branch, sufficient hose and hose clip; place at the right side of ladder, close to string.  
   c. Foot ladder for firefighter No.1.  
   d. Take hydrant bar, standpipe and female feed couplings.  
   e. Ship standpipe flush standpipe.  
   f. Couple to standpipe; turn water on when pump operator calls and signals, *Ready at pump*.  
   g. Remove kinks and bends; return hydrant bar.  
   h. Back up firefighter No.1. |

**Firefighter information**

- Before erecting or making up a ladder, firefighters must check for overhead obstructions such as electrical wires.
- Firefighters must ensure the branch is sitting in the small of the back, allowing the hands freedom to ascend and descend the ladder using three points of contact, where possible.
- Where possible, the head of the ladder should always be positioned three to five rungs above the sill or parapet and to the right hand side of the opening. This allows firefighters climbing the ladder to dismount and mount with safety (see Figure 1.7).
- A safe working pitch for the ladder is obtained by the firefighter standing between the ladder strings with shins against the bottom rung. Without bending, reach forward with arms straight and grasp the rung at chest height (See Figure 1.5).
- The delivery hose is made up after use by lowering the branch to the ground, calling, *Stand from under* and casting the remainder of the hose to ground.
- When making up, firefighter No.2 breaks the coupling immediately outside the structure to release the water in the hose and then foot the ladder to allow firefighter No.3 to descend.
Drill 18: Case three tanker using the extension ladder

Training outcome

Performance: The crew will provide and maintain an effective firefighting stream from an elevated position using the extension ladder, branch, delivery hose and pumper. Simulated fire at second floor level (6m); structure 20m from pumper; water supply 20m from the pumper.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a. Assisted by firefighter No.3, unship and erect ladder.&lt;br&gt;b. Take hose line aloft.&lt;br&gt;c. Dismount ladder; draw sufficient hose aloft; place hose clip.&lt;br&gt;d. When set, call and signal, Ready.</td>
</tr>
<tr>
<td>2</td>
<td>a. Position pumper; engage pump.&lt;br&gt;b. Open tank valve.&lt;br&gt;c. Provide branch, sufficient hose and hose clip; place these at right side of ladder, close to string.&lt;br&gt;d. Break coupling; couple to outlet.&lt;br&gt;e. Provide feeds; couple to inlets and operate pump immediately Water on signal is given.&lt;br&gt;f. Call and signal, Ready at pump.&lt;br&gt;g. Operate pump.&lt;br&gt;h. Foot ladder for firefighter No.3.&lt;br&gt;i. Operate pump.</td>
</tr>
</tbody>
</table>
3

a. Place wheel chocks; call, Chocks.
b. Assist firefighter No.1 to unship and erect ladder.
c. Foot ladder for firefighter No.1.
d. Take hydrant bar, standpipe and female feed couplings.
e. Ship standpipe, flush standpipe.
f. Couple to standpipe; turn water on when pump operator calls and signals, Ready at pump.
g. Remove kinks and bends; return hydrant bar.
h. Back up firefighter No.1.

Firefighter information

- Before erecting or making up a ladder, firefighters must check for overhead obstructions such as electrical wires.
- Firefighters must ensure the branch is sitting in the small of the back, allowing the hands freedom to ascend and descend the ladder.
- Where possible, the head of the ladder should always be positioned three to five rungs above the sill or parapet and to the right hand side of the opening. This allows firefighters climbing the ladder to dismount and mount with safety.
- Certain ladders used in the QFRS are fitted with a chain at the head; this chain is not to be counted as a rung. The hose will be passed over the chain and secured to the third rung from the head.
- A safe working pitch for the ladder is obtained by the firefighter standing between the ladder strings with shins against the bottom rung. Without bending, reach forward with arms straight and grasp the rung at chest height (See Figure 1.5).
- The delivery hose is made up after use by lowering the branch to the ground, calling, Stand from under and casting the remainder of hose to the ground.
- When making up, firefighter No. 2 breaks the coupling immediately outside the structure to release the water in the hose and then foots the ladder to allow firefighter No. 3 to descend.
Drill 19: Case three tanker using elevated hose line

Training outcome

Performance: The crew will provide and maintain an effective firefighting stream from an elevated position using the GP line, branch, delivery hose and pumper. Simulated fire at second floor level (6m); structure 20m from the pumper; water supply 20m from the pumper; hose line in action, on or in the structure.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Take long line to elevated position.  
               b. Make line fast.  
               c. Call, *Stand from under.*  
               d. Drop sufficient line to ground.  
               e. Haul hose line aloft.  
               f. Make line fast; haul up sufficient hose.  
               g. When set, call and signal, *Ready.* |
| 2           | a. Position pumper; engage pump.  
               b. Open tank valve.  
               c. Break coupling; couple to outlet.  
               d. Provide feeds; couple to inlet; operate pump immediately *Water on* signal is given.  
               e. Call and signal, *Ready at pump.*  
               f. Operate pump. |
a. Place wheel chocks; call, *Chocks*.
b. Provide branch and sufficient hose.
c. Secure long line to hose.
d. Call, *Haul aloft No.1*; clear hose.
e. Take hydrant bar, standpipe and female feed couplings.
f. Ship standpipe, flush standpipe.
g. Couple feeds to standpipe; turn water on when pump operator calls and signals, *Ready at pump*.
h. Remove kinks and bends; return hydrant bar.
i. Back up firefighter No.1.

**Firefighter information**

- When preparing the delivery hose to go aloft, locate the branch and hose approximately 2 metres from the structure to protect from falling debris.
- Firefighters must ensure the weight of the hose is taken by the round turn and bowline. When the round turn and bowline reaches the elevated position, the branch is cleared and the line is doubled and made fast with a clove hitch to a suitable fixed object on the structure.
- When the hose is correctly secured in the elevated position, the round turn and bowline should be located approximately 0.5 metres below the landing.
- The firefighter in the elevated position should draw sufficient hose through the round turn and bowline before the hose is charged.
- When replacing a damaged elevated branch length, the first clove hitch should be cast off and the free end of the line lowered for hauling purposes. The line is then secured to the new hose length with a round turn and bowline, at approximately 3 to 5 metres from the male coupling and a clove hitch attached below the male coupling. Once aloft, the hose is secured and the damaged length replaced.
- When making up, firefighter No.2 will break the coupling immediately outside the structure to release the water in the hose.
- The delivery hose is made up after use by reattaching the line to the branch and hose and lowering to the ground. If the elevated position is less than 8 metres from the ground the hose can be lowered to the ground as detailed in *Skill 23: To take a branch and delivery hose aloft*. 


Drill 20: Case three tanker using foam induction branch

Training outcome

**Performance:** The crew will provide and maintain an effective foam stream using the foam making branch, delivery hose and pumper. Simulated fire 40m from the pumper; water supply 20m from the pumper; foam concentrate induced at the branch.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Provide foam branch and induction tube.  
              b. Remove branch from flaked hose.  
              c. Couple foam branch to delivery hose.  
              d. Take branch and sufficient hose to fire.  
              e. When set, call and signal, *Ready.* |
| 2           | a. Position pumper; engage pump.  
              b. Open tank valve.  
              c. Flake out hose.  
              d. Break coupling; couple to outlet.  
              e. Operate pump when *Water on* signal is given.  
              f. Provide feeds; couple to inlets; call and signal, *Ready at pump.*  
              g. Operate pump. |
| 3           | a. Place wheel chocks; call, *Chocks.*  
              b. Provide foam concentrate to fire.  
              c. Take hydrant bar, standpipe and female feed couplings.  
              d. Ship standpipe, flush standpipe.  
              e. Couple feeds to standpipe; turn water on when pump operator calls and signals, *Ready at pump.*  
              f. Remove kinks and bends; return hydrant bar.  
              g. Back up firefighter No. 1.  
              h. Supply additional foam concentrate. |
Firefighter information

- Firefighter No.1 directs the branch away from the fire until a satisfactory consistency of foam is produced.
- Produced foam is directed to fall onto the surface of the burning liquid to form a sealing blanket.
- Firefighter No.1 couples the branch and induction tube to the delivery hose before leaving the pump.
- Firefighter No.3 initially takes two containers of foam concentrate to the fire and then provides additional concentrate as required.
- Variations of this drill should be practised using pumpers fitted with round-the-pump proportioners and ‘in-line inductors’.
Drill 21: Case three tanker using breathing apparatus

**Training outcome**

**Performance:** The crew, with firefighters No. 1 and No. 3 wearing breathing apparatus, will provide and maintain an effective firefighting stream using a branch, delivery hose and pumper. Simulated fire 40m from the pumper; water supply 20m from the pumper; flaked hose to be used; comply with breathing apparatus stage one control procedures.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Don breathing apparatus; hand tally to firefighter No. 2.  
             b. Take branch and sufficient hose to fire.  
             c. When set, signal, *Ready*. |
| 2           | a. Position pumper; engage pump.  
             b. Open tank valve.  
             c. Initiate breathing apparatus stage one control procedures.  
             d. Flake out hose.  
             e. Break coupling; couple to outlet.  
             f. Operate pump when *Water on* signal is given.  
             g. Provide feeds; couple to inlet; call and signal, *Ready at pump*.  
             h. Operate pump.  
             i. Continue breathing apparatus stage one control procedures. |
| 3           | a. Place wheel chocks; call, *Chocks*.  
             b. Take hydrant bar, standpipe and female feed couplings.  
             d. Couple to standpipe; turn water on when pump operator calls and signals, *Ready at pump*.  
             e. Remove kinks and bends; return hydrant bar.  
             f. Don breathing apparatus; hand tally to firefighter No. 2.  
             g. Back up firefighter No. 1. |
## Firefighter information

- SCBA donning procedures must be completed before leaving breathing apparatus control point.
- Firefighter No.1 must not enter any structure until firefighter No.3 is in the back-up position.
- Firefighter No.2 must don ‘BA Sector Commander’ tabard.
- The breathing apparatus control board must be placed in a safe and secure position, where it will not be damaged or have recorded information erased.
- If time permits, firefighter No.2 assists with the donning of breathing apparatus.
Drill 22: Case four with nominated lengths of suction hose

Training outcome

Performance: The crew will draught water from a static water supply and provide and maintain an effective firefighting stream using a branch, delivery hose and pumper. Simulated fire 40m from pumper; flaked hose to be used; 2, 3 or 4 lengths of suction hose to be nominated.

The drill is to be carried out efficiently and safely in accordance with the laid down procedures.

<table>
<thead>
<tr>
<th>Firefighter</th>
<th>Duties</th>
</tr>
</thead>
</table>
| 1           | a. Leave branch and sufficient hose adjacent to fire.  
b. Flake out hose.  
c. Assisted by firefighter No.3, provide required lengths of suction hose.  
d. Couple suction strainer.  
e. Make all joints and assist firefighter No.3 to couple suction hose to pump inlet.  
a. Direct lowering of suction hose into water.  
b. Return to branch; when set call and signal, Ready. |
| 2           | a. Drive to fire; allow crew to dismount.  
b. When firefighter No. 3 calls, Run up/Run back drive to the static water supply.  
c. Engage pump.  
d. Loosen collector head/blank cap.  
e. Provide suction line, strainer, chafing gear and spanners.  
f. Remove collecting head/blank cap.  
g. Attach suction line to suction strainer and hose; make line fast to bollard.  
h. Assist to lower suction hose into water.  
i. Prime pump.  
j. Break coupling; couple to outlet.  
k. Operate pump when Water on signal is given. |
<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Call, <em>Run up/Run back</em>.</td>
</tr>
<tr>
<td>b.</td>
<td>Call, <em>Halt</em> at static water supply.</td>
</tr>
<tr>
<td>c.</td>
<td>Place wheel chocks; call, <em>Chocks</em>.</td>
</tr>
<tr>
<td>d.</td>
<td>Assist firefighter No.1 to provide required lengths of suction hose.</td>
</tr>
<tr>
<td>e.</td>
<td>Assisted by firefighter No.1, make all joints and couple suction hose to pump inlet.</td>
</tr>
<tr>
<td>f.</td>
<td>Assist to lower suction hose into water.</td>
</tr>
<tr>
<td>g.</td>
<td>Place chafing gear.</td>
</tr>
<tr>
<td>h.</td>
<td>Remove kinks and bends from delivery hose.</td>
</tr>
<tr>
<td>i.</td>
<td>Back up firefighter No.1.</td>
</tr>
</tbody>
</table>

**Firefighter information**

- A locking hitch will be used to make fast the suction line to the bollard. On pumpers not fitted with a bollard, an appropriate knot (e.g., a round turn and two half hitches) may be used to tie off the suction line to the pumper.
- When the pumper is initially driven to the fire, firefighters unload required equipment for the job at hand; e.g., ladders, lines, breathing apparatus.
- In some cases it may be appropriate to locate the pumper at the water supply before laying out hose to the fire.
- Suction hose couplings are tightened by fitting suction spanners and rotating collars in a clockwise direction. **Remember Right to Tight: Left to loosen!**
- Suction hose will be coupled as follows:

**Firefighter No.1**

Fit suction strainer  
Straddle all male couplings  
Check all sealing washers  
Align couplings  
Fit suction spanners where required and tighten suction joints

**Firefighter No.3**

Straddle all female couplings  
Align couplings  
Align and couple female coupling to pump  
Fit suction spanners where required and tighten suction joints.
CHAPTER 3 - Drills

Operational Conditions (evolution G)

The information outlined in the previous sections of this workbook lays the foundation for actions used by firefighting crews at emergency incidents. To prepare for the challenges encountered at emergency incidents, firefighters must undergo regular training sessions involving combinations of skills, drills and variations, under a variety of situations and conditions. This will ensure that when firefighters respond to an emergency incident, they understand and have the ability to perform the duties of each member of the crew competently and safely. Firefighters will then be capable of reacting to changes in conditions and introduce operational conditions (evolution G).

Operational conditions (evolution G) is a term used by firefighters. It refers to a firefighter’s ability to react and adapt to changes in situations and conditions at emergency and training incidents. To effectively overcome problems, firefighters must be capable of prioritizing actions and performing the duties of other crew members when required. A broad definition of the term evolution G is when problems occur or conditions change at training or emergency incidents, firefighters will anticipate and eliminate factors reducing efficiency, by carrying out some of the duties of other team members in a timely manner.

Examples of situations and conditions that may require firefighters to respond to changes in operational conditions are as follows:

- diminished crew sizes, as a result of a firefighter being injured or assigned to a specific duty
- increased crew sizes at large incidents involving multiple appliance responses
- position of water supplies in relation to the incident
- equipment failure such as burst hose or pump failure.

When introducing changes in operational conditions, there are a number of safety points firefighters must consider:

- breathing apparatus procedures will always take precedence
- only implement if time and safety permit
- ensure firefighting standards are not reduced to increase the speed at which tasks are performed
- be logical and prioritise actions in a sequential order
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliance</td>
<td>generic name given to fire service emergency response vehicles; e.g., aerial appliance, pumping appliance</td>
</tr>
<tr>
<td>Branch</td>
<td>item of firefighting equipment which, when coupled to the end of a delivery hose, enables firefighters to control the projection, flow, direction and formation of firefighting streams</td>
</tr>
<tr>
<td>Collecting head</td>
<td>item of equipment attached to the inlet side of the pump, which allows the coupling of one (or more) feed hose to the pump</td>
</tr>
<tr>
<td>Collecting breeching</td>
<td>item of firefighting equipment used to join two lengths of feed hose into one or provide an extra inlet for a pump</td>
</tr>
<tr>
<td>Delivery hose line</td>
<td>hose used on the delivery side of a pump or standpipe to transport water directly to the fireground - the standard sizes are 30 metres in length and 38mm or 64mm in diameter</td>
</tr>
<tr>
<td>Dividing breeching</td>
<td>item of firefighting equipment used to divide one line of delivery hose into two or provide an extra outlet from a pump or pillar hydrant</td>
</tr>
<tr>
<td>Effective firefighting stream</td>
<td>continuous stream of water or foam projected from a branch onto the fire incident - its effectiveness is related to the size, type of branch/nozzle and operating pressure</td>
</tr>
<tr>
<td>Engage pump</td>
<td>means by which the pump operator activates the drive mechanism of a pump</td>
</tr>
<tr>
<td>Feed hose line</td>
<td>hose used on the incoming side of a pump to transport the water from the standpipe to the pump inlet</td>
</tr>
<tr>
<td>Flakes out hose</td>
<td>duties performed by a crew to ensure that flaked hose is not snagged or damaged while being extracted from the pumper hose boxes during a case evolution</td>
</tr>
<tr>
<td>General purpose line (GP line)</td>
<td>length of rope approximately 30 metres in length 19mm in diameter, primarily used to raise, lower and secure items of equipment</td>
</tr>
<tr>
<td>Hose clip</td>
<td>item of firefighting equipment consisting of a metal hook and ‘D’ ring joined by a short length of canvas and used to secure delivery hose to a ladder - also known as a hose becket</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hose reel</td>
<td>carried on many pumpers for firefighting use. Consists of hose carried on a revolving reel from which only the required length need be drawn off; water carried in a tank on the pumper is passed through the hose by operation of the main or auxiliary pump.</td>
</tr>
<tr>
<td>Make fast</td>
<td>attach a line to a fixed object</td>
</tr>
<tr>
<td>Midship</td>
<td>midway of a pumper</td>
</tr>
<tr>
<td>Nearside</td>
<td>lefthand side of a pumper (Passenger side)</td>
</tr>
<tr>
<td>Offside</td>
<td>righthand side of a pumper (Driver side)</td>
</tr>
<tr>
<td>Open water supplies</td>
<td>sources of water such as rivers, dams and swimming pools - also referred to as static water supplies</td>
</tr>
<tr>
<td>Operational scenario</td>
<td>tactical training for one or more firefighting crews to simulate fireground procedures and variables</td>
</tr>
<tr>
<td>Pump</td>
<td>mechanical device used to impart energy to fluids</td>
</tr>
<tr>
<td>Pumper</td>
<td>purpose built fire appliance which has a built-in pump - the primary function to transport crews and equipment and to pump water from a water supply to the fireground</td>
</tr>
<tr>
<td>Reticulated water supply</td>
<td>system of piping and valves used to distribute water from a holding area to streets throughout cities and suburban areas</td>
</tr>
<tr>
<td>Standpipe</td>
<td>item of firefighting equipment which, when attached to a ground hydrant, allows firefighters to gain access to a controlled flow of water from a reticulated water supply</td>
</tr>
<tr>
<td>Suction line</td>
<td>length of rope approximately 15 metres long 19 mm in diameter and primarily used to raise, lower and secure suction hose, when coupled together, and securing to the pump</td>
</tr>
<tr>
<td>Sufficient hose</td>
<td>amount of hose that will allow firefighters to light up and extinguish fires and protect exposures within range</td>
</tr>
<tr>
<td>Tends reel</td>
<td>duties performed by a firefighter to ensure that hose leaving the hose reel continues to be drawn off freely, and at a steady pace - firefighters will need to ensure the hose does not overrun the reel and become tangled or damaged</td>
</tr>
<tr>
<td>Training ground duties</td>
<td>duties performed by crews in preparation for, during participation in, or on completion of the training session</td>
</tr>
</tbody>
</table>
Review

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The attached review form is to be completed if you believe there are inaccuracies within this document.

Send the information to:

Manager Operational Training
PDU – QFRS
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BRISBANE 4001
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Please photocopy the relevant pages from the study guide and attach them to this form. Write your comments with regard to diagrammatic, photographic or script inaccuracies in the space provided. (Attach extra pages if the space is not sufficient.) You may also comment on inaccuracies in grammar, format, etc.

You may need to be contacted for further clarification. Please provide the following contact details.

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>Position:</td>
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<td>Location:</td>
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Manager Operational Training

Notified above personnel of Evaluation Form receipt ☐

Action Taken:

Signature ____________________________ Date _________________