



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **SFIFISH210C Assemble and repair damaged netting**

**Release: 1**

## SFIFISH210C Assemble and repair damaged netting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit of competency involves repairing various types of damage that occurs to netting material used for fish or prawn trawls, purse seines, beach seines or gill nets.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit has application to fishing operations.</p> <p>All enterprise or workplace procedures and activities are carried out according to <i>relevant government regulations, licensing and other compliance requirements</i>, including <i>occupational health and safety (OHS) guidelines</i>, maritime and occupational diver codes of practice and procedures and <i>ecologically sustainable development (ESD) principles</i>.</p> <p>Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. Appropriate <i>personal protective equipment (PPE)</i> is selected, checked, used and maintained.</p>
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### Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare netting material for repair	<p>1.1. Netting <b>material</b> is arranged and repair <b>tools</b> organised to maximise job <b>efficiency</b> and safety.</p> <p>1.2. Material required for the <b>repair operation</b> is identified by <b>measuring</b> existing material or by reference to a gear plan.</p> <p>1.3. Damaged netting is removed using net work tools and disposed of correctly.</p> <p>1.4. <b>Retained netting is prepared</b> ready to accept replacement.</p> <p>1.5. Replacement netting is <b>shaped</b> with net repair tools.</p> <p>1.6. Replacement netting is <b>strengthened</b> according to the gear plan or supervisor's instructions before being added to the net.</p>
2. Mend holes and rips using twine	<p>2.1. Starting points are identified and twine is <b>secured</b> to the netting according to supervisor's instructions.</p> <p>2.2. Twine is used to tie <b>knots</b> that make meshes to resemble original <b>netting</b>.</p> <p>2.3. Twine is secured at the end of the repair according to supervisor's instructions.</p>
3. Mend large scale damage using netting material	<p>3.1. Starting points are identified and twine is secured to the netting according to supervisor's instructions.</p> <p>3.2. Existing and replacement material is <b>joined</b> using twine and knots to resemble original netting.</p> <p>3.3. Existing and replacement material is joined using twine and <b>lacing</b> to resemble original netting.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- cutting tapers into netting material
- joining panels of netting of different sized meshes
- mending damage to hung areas of netting
- mending rips and holes by sewing twine and knots

**REQUIRED SKILLS AND KNOWLEDGE**

- preparing repair jobs by establishing start and end points and either meshes or points in between
- repairing large scale damage to netting material by sewing in patches and panels
- recognising polyethylene and polyamide netting
- strengthening netting material
- using a taper table to design netting panels of a required depth, width or taper
- using net mending tools.

**Literacy skills used for:**

- interpreting the abbreviations on a gear plan
- reading tables describing the effect of tapers on panel shape.

**Numeracy skills used for:**

- calculating joining ratios
- counting meshes
- counting the ply of twine
- measuring the diameter of twine.

**Required knowledge**

- factors which contribute to an efficient, fast and safe net mending job
- how a gear plan describes a net
- measuring techniques for different types of netting
- naming, identifying and understanding different netting terms
- order in which knots are tied to form netting material.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment evidence required to demonstrate competence in this unit</b>	<p>Assessment must confirm the ability to:</p> <ul style="list-style-type: none"> <li>• mend damage to hung areas of netting</li> <li>• mend rips in netting</li> <li>• repair large scale damage to netting material by sewing in patches and panels</li> <li>• repair various types of damage that occurs to the netting material used for fish or prawn trawls, purse seines, beach seines or gill nets.</li> </ul> <p>Assessment must confirm knowledge of:</p> <ul style="list-style-type: none"> <li>• how a gear plan describes a net.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment is to be conducted at the workplace or in a simulated work environment.</p> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• different types of netting requiring repair</li> <li>• fully operational net repair area.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• observation of practical demonstration</li> <li>• practical exercises</li> <li>• project work</li> <li>• written or oral short-answer testing.</li> </ul>
<b>Guidance information for assessment</b>	This unit may be assessed holistically with other units within a qualification.

## Range Statement

**RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Relevant government regulations, licensing and other compliance requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• business or workplace operations, policies and practices</li> <li>• ESD principles, environmental hazard identification, risk assessment and control</li> <li>• OHS hazard identification, risk assessment and control.</li> </ul>
<p><b><i>OHS guidelines</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• appropriate workplace provision of first aid kits and fire extinguishers</li> <li>• clean, uncluttered, hygienic workplace</li> <li>• codes of practice, regulations and/or guidance notes which may apply in a jurisdiction or industry sector</li> <li>• enterprise-specific OHS procedures, policies or standards</li> <li>• hazard and risk assessment of workplace, maintenance activities and control measures</li> <li>• induction or training of staff, contractors and visitors in relevant OHS procedures and/or requirements to allow them to carry out their duties in a safe manner</li> <li>• OHS training register</li> <li>• safe lifting, carrying and handling techniques, including manual handling, and the handling and storage of hazardous substances</li> <li>• safe systems and procedures for outdoor work, including protection from solar radiation, fall protection, confined space entry and the protection of people in the workplace</li> <li>• systems and procedures for the safe maintenance of property, machinery and equipment, including hydraulics and exposed moving parts</li> <li>• the appropriate use, maintenance and storage of PPE.</li> </ul>
<p><b><i>ESD principles</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• applying animal welfare ethics and procedures</li> <li>• controlling effluents, chemical residues,</li> </ul>

<b>RANGE STATEMENT</b>	
	<p>contaminants, wastes and pollution</p> <ul style="list-style-type: none"> <li>• improving energy efficiency</li> <li>• increasing use of renewable, recyclable and recoverable resources</li> <li>• minimising noise, dust, light or odour emissions</li> <li>• reducing emissions of greenhouse gases</li> <li>• reducing use of non-renewable resources</li> <li>• reducing energy use</li> <li>• reducing interactions with native and protected flora and fauna, marine or land parks or areas</li> <li>• reducing live cultured or held organisms from escaping into environment</li> <li>• undertaking environmental hazard identification, risk assessment and control</li> <li>• using and recycling of water, and maintaining water quality.</li> </ul>
<b>PPE</b> may include:	<ul style="list-style-type: none"> <li>• gloves, mitts or gauntlets</li> <li>• non-slip and waterproof boots (gumboots) or other safety footwear</li> <li>• protective eyewear, glasses and face mask</li> <li>• respirator or face mask</li> <li>• safety harness</li> <li>• sun protection (e.g. sun hat, sunscreen and sunglasses)</li> <li>• uniforms or overalls.</li> </ul>
<b>Material</b> may include:	<ul style="list-style-type: none"> <li>• gill netting: <ul style="list-style-type: none"> <li>• monofilament</li> <li>• multi-monofilament</li> </ul> </li> <li>• trawl and purse seine netting: <ul style="list-style-type: none"> <li>• polyamide (nylon) (PA)</li> <li>• polyethylene (PE)</li> <li>• braided twine</li> <li>• knotted and knotless netting</li> <li>• twisted twine</li> </ul> </li> <li>• strengthening ropes.</li> </ul>
<b>Tools</b> may include:	<ul style="list-style-type: none"> <li>• knives</li> <li>• measuring devices: <ul style="list-style-type: none"> <li>• marked rod</li> <li>• mesh gauge</li> </ul> </li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• ruler</li> <li>• netting needles: <ul style="list-style-type: none"> <li>• bone</li> <li>• flat</li> </ul> </li> <li>• scissors</li> <li>• stands</li> <li>• tensioning devices.</li> </ul>
<i>Efficiency</i> may include:	<ul style="list-style-type: none"> <li>• posture of workers</li> <li>• proximity to resources</li> <li>• safety of working area</li> <li>• speed of work</li> <li>• worker comfort.</li> </ul>
<i>Repair operation</i> may include:	<ul style="list-style-type: none"> <li>• holes</li> <li>• joining two panels with: <ul style="list-style-type: none"> <li>• sewing</li> <li>• lacing</li> <li>• additional strengthening ropes</li> <li>• different sized meshes</li> </ul> </li> <li>• patches</li> <li>• patching</li> <li>• rips.</li> </ul>
<i>Measuring</i> may include:	<ul style="list-style-type: none"> <li>• material type: <ul style="list-style-type: none"> <li>• PE</li> <li>• PA</li> <li>• braided</li> <li>• monofilament</li> <li>• twisted</li> </ul> </li> <li>• mesh size for fisheries regulation purposes</li> <li>• mesh size for mending purposes</li> <li>• twine: <ul style="list-style-type: none"> <li>• ply</li> <li>• diameter</li> <li>• tex and Rtex.</li> </ul> </li> </ul>
<i>Retained material is prepared</i> may include:	<ul style="list-style-type: none"> <li>• knots: <ul style="list-style-type: none"> <li>• cleaned off</li> <li>• remaining</li> </ul> </li> <li>• starting point</li> <li>• end point</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• all other meshes, either:               <ul style="list-style-type: none"> <li>• points</li> <li>• meshes.</li> </ul> </li> </ul>
<i>Shaped</i> may include:	<ul style="list-style-type: none"> <li>• all meshes</li> <li>• all points</li> <li>• all bars</li> <li>• combinations of above to form tapers.</li> </ul>
<i>Strengthened</i> may include:	<ul style="list-style-type: none"> <li>• bordering with stronger netting</li> <li>• gathering meshes</li> <li>• strengthening ropes</li> <li>• use of double twine</li> <li>• use of selvedge.</li> </ul>
Twine may be <i>secured</i> by:	<ul style="list-style-type: none"> <li>• double sheet bend</li> <li>• sheet bend with overhand knot.</li> </ul>
<i>Knots</i> may include:	<ul style="list-style-type: none"> <li>• baiting</li> <li>• double sheet bend</li> <li>• joining (fisherman's) knot</li> <li>• rolling hitch or hanging knots</li> <li>• sheet bend tied horizontally and vertically</li> <li>• side knot:               <ul style="list-style-type: none"> <li>• net maker's</li> <li>• two half hitches</li> </ul> </li> <li>• sewn with meshes horizontal</li> <li>• sewn with meshes vertical.</li> </ul>
<i>Netting</i> may include:	<ul style="list-style-type: none"> <li>• regular meshes of netting</li> <li>• meshes running through a join in two panels</li> <li>• meshes along the side of a panel:               <ul style="list-style-type: none"> <li>• all bar taper decreasing along a hung edge</li> <li>• all bar taper increasing along a hung edge</li> <li>• combinations of points, meshes and bars to form a taper.</li> </ul> </li> </ul>
<i>Joined</i> may include:	<ul style="list-style-type: none"> <li>• mesh to mesh</li> <li>• point to point</li> <li>• taper to taper</li> <li>• gathering meshes together.</li> </ul>
<i>Lacing</i> may include:	<ul style="list-style-type: none"> <li>• in seine netting</li> <li>• strengthening ropes</li> <li>• temporary mending</li> <li>• two panels together.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Fishing operations
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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