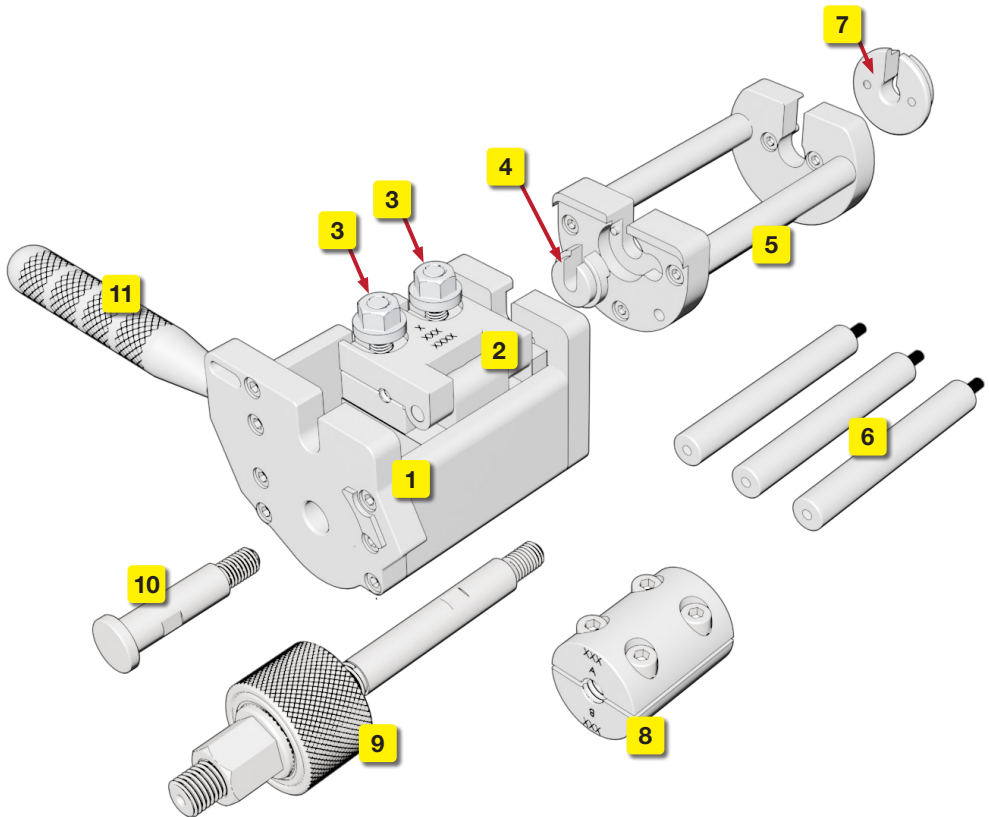




Hydrajaws

Safety Lifeline Cable Tester Kits 1,2,3

Hydrajaws Safety Lifeline Cable Tester



Safety Lifeline Cable Tester Frame Core Parts

- | | |
|----------------------------------|---|
| 1. Cable Test Frame | 8. 8mm Barrel Clamp |
| 2. 8mm Cable Clamp | 9. Operating nut and drop rod
(for attaching M35+ Tester onto frame) |
| 3. 2 x Hinged Clamp Locking Nuts | 10. Pulling Pin
(for attaching M2000 Tester onto frame) |
| 4. Knurled Adaptor | 11. Steadying Handle |
| 5. Test Frame extension rods | |
| 6. Extra extension rods | |
| 7. Extension slotted collar | |

USE OF THE TESTER AS DIRECTED

The tester is intended for use by skilled personnel with the appropriate training and knowledge of the applicable safety precautions.

SAFETY RULES

- Modification of the tester, or tampering with its parts is not permissible.
- Observe the information printed in the operating instructions applicable to operation care and maintenance.
- The tester and its accessories may present hazards when used incorrectly by untrained personnel or not as directed.
- Use only the genuine Hydrajaws accessories or ancillary equipment listed in the operating instructions.



It is essential that the operating instructions are read before the tester is operated for the first time.

Always keep these operating instructions together with the tester.

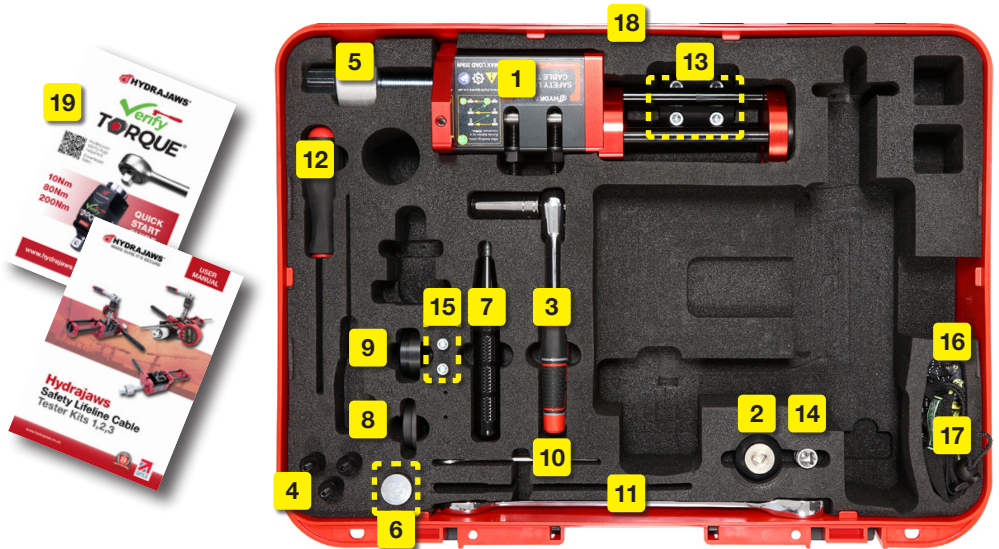
Ensure that the operating instructions are with the tester for other operatives to refer to.

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5. Prepare and Mounting a Pull Tester onto the Frame	14

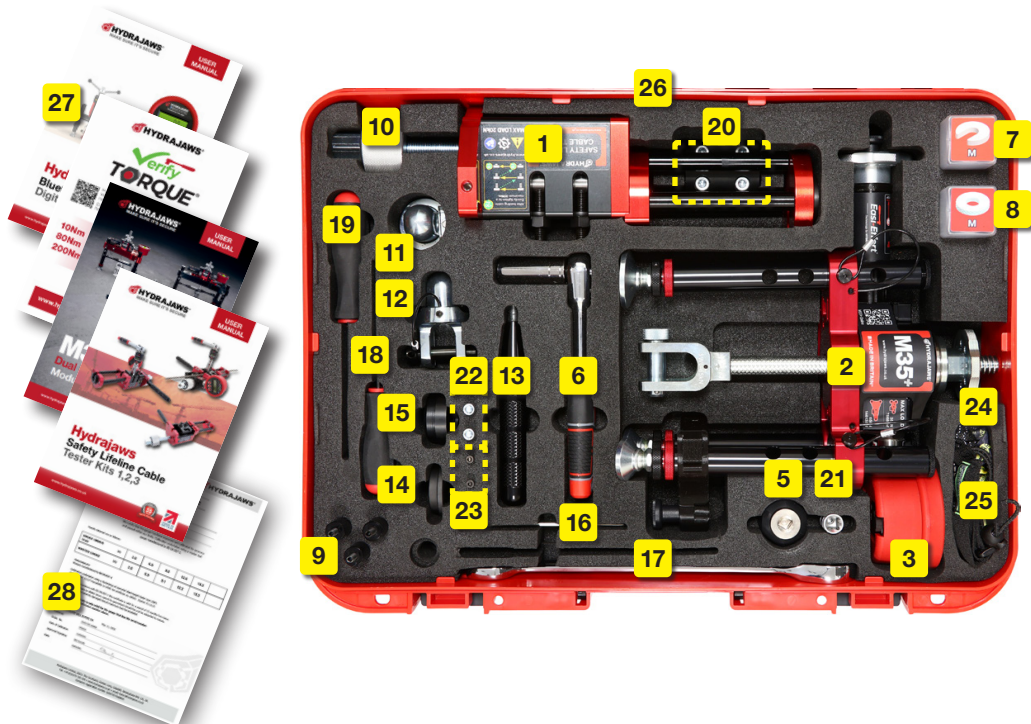
TESTER AND ACCESSORIES – KIT 1 CONTENTS

1. Test Frame fitted with Extension rods
2. Hydrajaws Verify Torque 80Nm
3. Ratchet Wrench with 17mm Socket
4. Extra Extension rods
5. Operating Nut & Drop Rod
(for attaching M35+ Tester onto frame)
6. Pulling Pin
(for attaching M2000 Tester onto frame)
7. Steadying Handle
8. Extension Collar Insert 12mm
9. Slotted Adaptor 12mm
10. 14mm Spanner
11. 24mm Operating Spanner
12. 5mm Ball Driver
13. Barrel Clamp 8mm (Under Test frame unit)
14. 6mm Hex Bit
15. 2 x M6 x 16 screws
16. Wrist Tool Lanyard
17. Tool Lanyard with Screw Lock Carabiner and Adjustable Loop
18. Carry Case with foam filler
19. Operating Instructions



TESTER AND ACCESSORIES – KIT 2 CONTENTS

1. Test Frame fitted with Extension rods
2. M35+ Tester with Standard Bridge
3. Rechargeable Digital Gauge
4. Gauge Recharging Cable (Not shown)
5. Hydrajaws Verify Torque 80Nm
6. Ratchet Wrench with 17mm Socket
7. M35+ Slotted Buttons
8. M35+ Threaded Buttons
9. Extra Extension rods
10. Operating Nut & Drop Rod
11. M35+ Bolt Test Adaptor
12. M35+ Clevis Fork 20mm
13. Steadying Handle
14. Extension Collar Insert 12mm
15. Slotted Adaptor 12mm
16. 14mm Spanner
17. 24mm Operating Spanner
18. 3mm Ball Driver
19. 5mm Ball Driver
20. Barrel Clamp 8mm (Under Test frame unit)
21. 6mm Hex Bit
22. 2 x M6 x 16 screws
23. 2 x M4 x 18 screws
24. Wrist Tool Lanyard
25. Tool Lanyard with Screw Lock Carabiner and Adjustable Loop
26. Carry Case with foam filler
27. Operating Instructions
28. Calibration Certificate



TESTER AND ACCESSORIES – KIT 3 CONTENTS

1. Test Frame fitted with Extension rods
2. Cable Pull Tester with Rechargeable Digital Gauge
3. Hydrajaws Verify Torque 80Nm
4. 24mm Operating Spanner
5. Extra Extension rods
6. Operating Nut & Drop Rod
7. Steadying Handle
8. Extension Collar Insert 12mm
9. Slotted Adaptor 12mm
10. Barrel Clamp 8mm
11. Ratchet Wrench with 17mm Socket (Not shown, in zip pocket)
12. 14mm Spanner (Not shown, in zip pocket)
13. 5mm Ball Driver (Not shown, in zip pocket)
14. 6mm Hex Bit (Not shown, fitted to Verify Torque)
15. 2 x M6 x 16 screws
16. Hydrajaws Rucksack
17. Wrist Tool Lanyard (Not shown)
18. Tool Lanyard with Screw Lock Carabiner and Adjustable Loop (Not shown)
19. Gauge Recharging Cable (Not shown)
20. Operating Instructions
21. Calibration Certificate



1. GENERAL GUIDELINES FOR TESTING SAFETY LIFELINES

The Safety Lifeline Cable Tester is a purpose made system for primarily testing 8mm cable connections (other options are available for larger cable widths). It consists of a hydraulic load cell, which measures the load applied to the cable connection directly.

Swage Testing

For swage testing, apply the recommended test load and hold for 3 minutes, checking for any cable slipping from the swage. This will be indicated by the gauge showing that the load has not been held and the separation of the swage slip indicator away from the end of the swage termination.

If any signs of slippage are detected, the swage joint must be rejected and replaced.

End Anchors

For end anchors secured using resin/chemically fixed anchor bolts, the fixing shall be subjected to an axial pull test to 10kN. This load shall be held for 3 minutes. End anchor fixings not sustaining the test load must be rejected and replaced for intermediate anchors using resin/chemically fixed anchor bolt(s), the fixing shall be subjected to an axial pull test of 5kN. This load shall be held for 3 minutes.

Intermediate anchors not sustaining the test load must be rejected and replaced.

The cable test frame requires a tester with minimum a 20kN gauge to operate it.

A comprehensive range of accessories is also available, further increasing the scope of possible testing applications.

Mechanically fixed Anchors

For mechanically fixed ends and intermediate anchors secured to structural steelwork, the fixing bolts shall be subjected to a torque check to the recommended values.

If the tightening torque value is not achieved the fixing bolts should be replaced.

Torque measurement and reporting can be done using the Hydrajaws Verify Torque wrench adaptor supplied in the kit. The adaptor attaches to your existing tools and digitally captures your torque data via the Verify App for compliance and traceability. The data is secured safely in the cloud.

Expansion Anchor Bolts

For end anchors secured using expansion anchor bolts the fixing shall be subjected to an axial pull test to 10kN and held for 3 minutes. For intermediate anchors secured using expansion anchor bolts the fixing shall be subjected to an axial pull test to 5kN. This load shall be held for 3 minutes.

All single-point anchors, push lock safety rings, etc should be subjected to an axial pull test of 6kN. This load shall be held for 3 minutes.

It is recommended that the Hydrajaws test kit is used to perform all proof tests described above.

All proof load testing and torque measurement reporting can be done via the Free to use Hydrajaws Verify App. Download it here:



2. TESTING PROCEDURE OF NON “SLIP INDICATOR” SWAGES

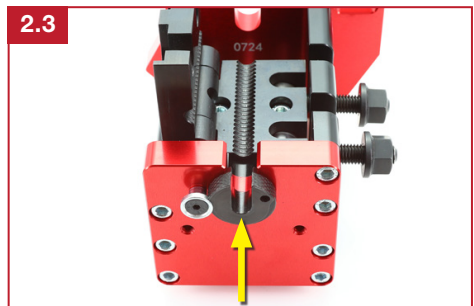
1. **NOTE:** the position of the cable clamp should be flush to the left side of the test frame. The clamp nuts can only be undone at this position (fig 2.1).
2. Loosen the two clamp nuts (fig 2.2). Lower the clamp bolts through the slots. Lift and hinge the clamp open into it's vertical position.



3. Ensure that the knurled adaptor is aligned to the slot (fig 2.3).
4. Slide the cable through the slots (fig 2.4). Close the clamp and raise the clamp nuts up ready for tightening.
5. **We recommend tightening each clamp nut to a maximum torque setting of 30Nm.**

Alternately and evenly tighten each nut, for example, tighten the left clamp nut to 15Nm then the right one to 15Nm, then return to the left one and tighten to 30Nm and then the right to 30Nm.

The supplied Verify Torque and the Hydrajaws Verify app can aid with measuring this (fig 2.5).



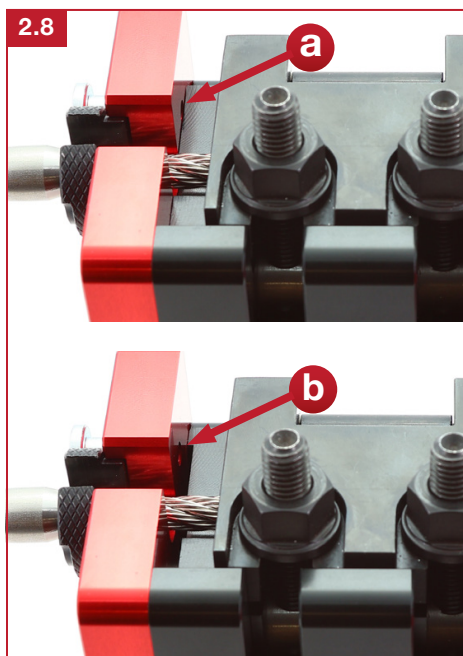
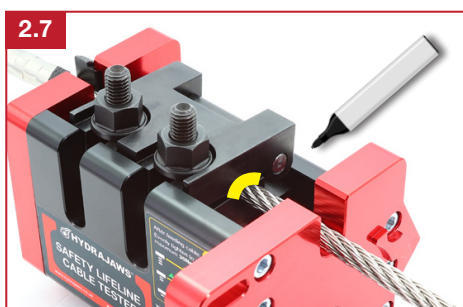
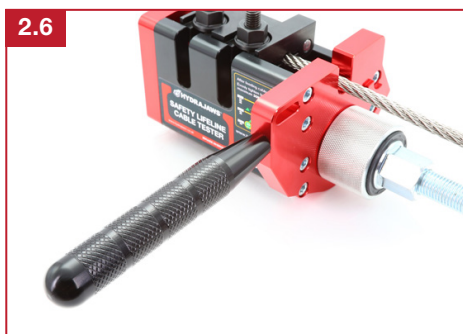
6. If not already fitted, connect the steadying handle (**fig 2.6**).
7. Mount a pull tester on to the frame.

Please see Section 5 on page 14 for preparing and mounting a tester unit (Hydrajaws M35+ or M2000).

8. It is recommended to mark the cable with a permanent marker which will indicate any slip (**fig 2.7**).

Movement or slip will be indicated by a gap between the clamp and block (**fig 2.8a & 2.8b**).

9. Turn on the digital gauge (and connect to the Hydrajaws app if applicable).



2. TESTING PROCEDURE OF NON “SLIP INDICATOR” SWAGES

KIT 2 Tester

Ensure that the position of the Easi-Effort piston is at the start position. The window shows  (fig 2.8).

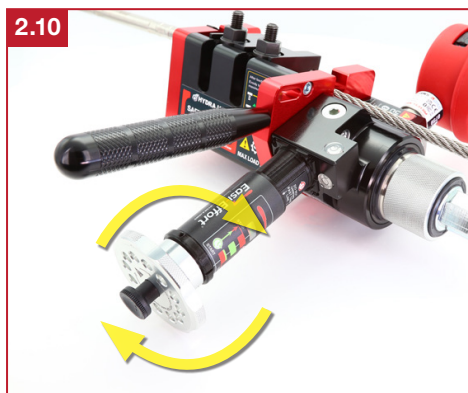
An initial load can be applied through the operating nut with the 24mm spanner – turning in a clockwise motion (fig 2.9).

Then turn the Easi-Effort handwheel to progressively increase to the desired load (fig 2.10).

For loads above 12-15kN remove the handwheel and use the ratchet wrench with the 17mm socket (fig 2.11).

Or use the 24mm ratchet spanner on the operating nut.

Max loads of 20kN can be achieved using either operating methods.

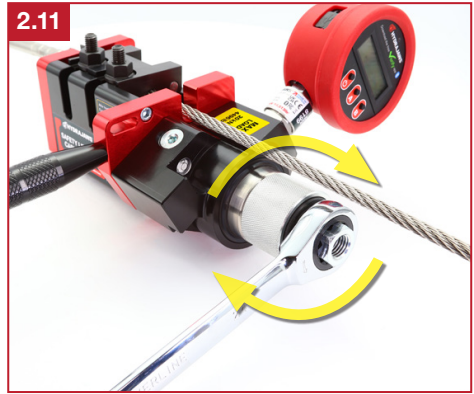


Refer to your fixing manufacturers recommended testing regime.

KIT 3 Tester

To apply a load to the cable, use the 24mm spanner on the operating nut and turn in a clockwise motion to progressively increase to the desired load (**fig 2.11**).

Refer to your fixing manufacturers recommended testing regime.



M2000 Tester

To apply a load to the cable, use a 22mm spanner on the operating nut and turn in a clockwise motion to progressively increase to the desired load (**fig 2.12**).

Refer to your fixing manufacturers recommended testing regime.

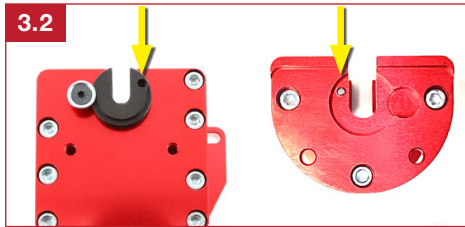


3. TESTING PROCEDURE OF SWAGES WITH “SLIP INDICATOR”

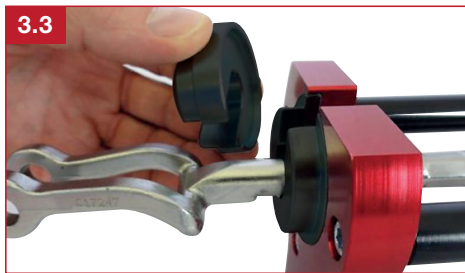
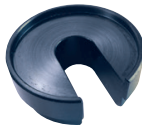
1. Start by fitting the extension rod.

Hold and line up the extension rod frame and screw in the two M6 cap head screws using the 5mm ball driver (fig 3.1).

Ensure the knurled adaptor is vertical to the slot to be able to align to the pin on the extension rod frame (fig 3.2).

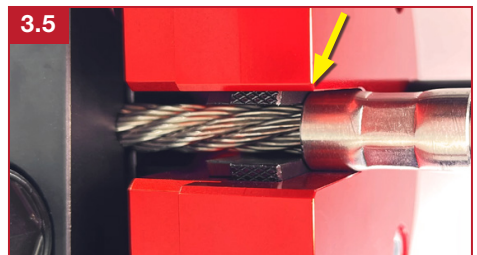
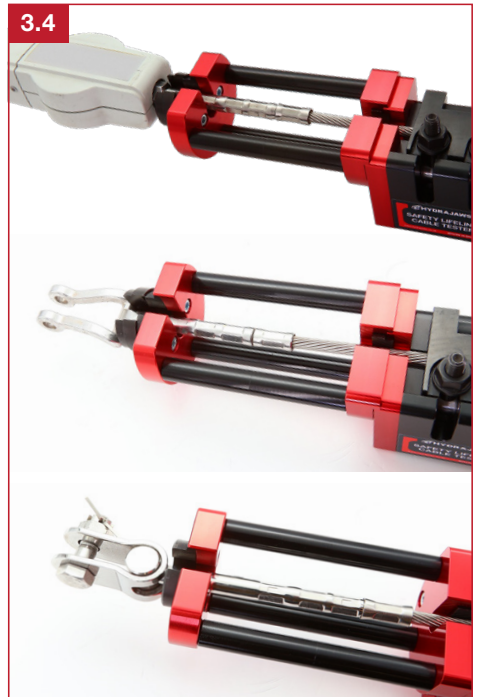
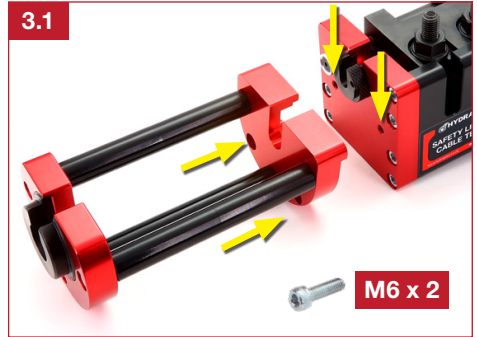


2. Set up and clamp the cable either using the supplied slotted adaptor or without, this depends on the type of fitting (fig 3.3).



3. (Fig 3.4) shows examples of fittings using the extension rod frame.
4. Should a slip indicator touch the knurled adaptor (fig 3.5), extend the extension rod frame with the extra extension rods provided in the kit. This will allow more room to clamp the slip indicator away from the knurled adaptor.

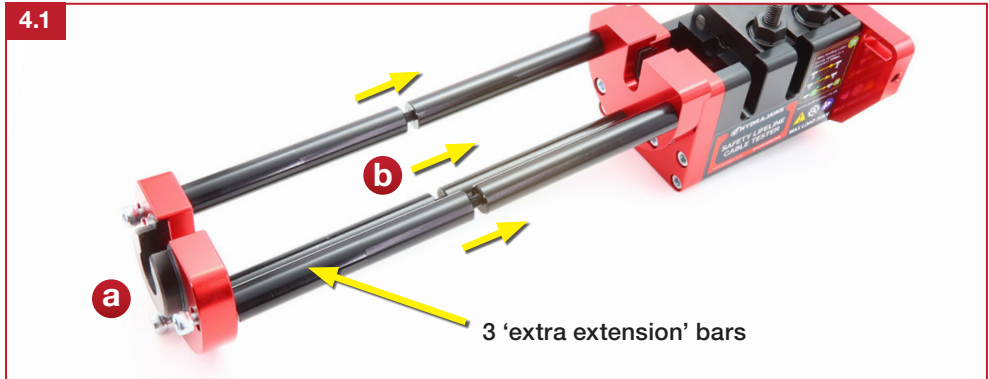
See Section 4 for fitting these extra extension rods (fig 4.1).



4. TESTING PROCEDURE FOR SWAGE JOINERS

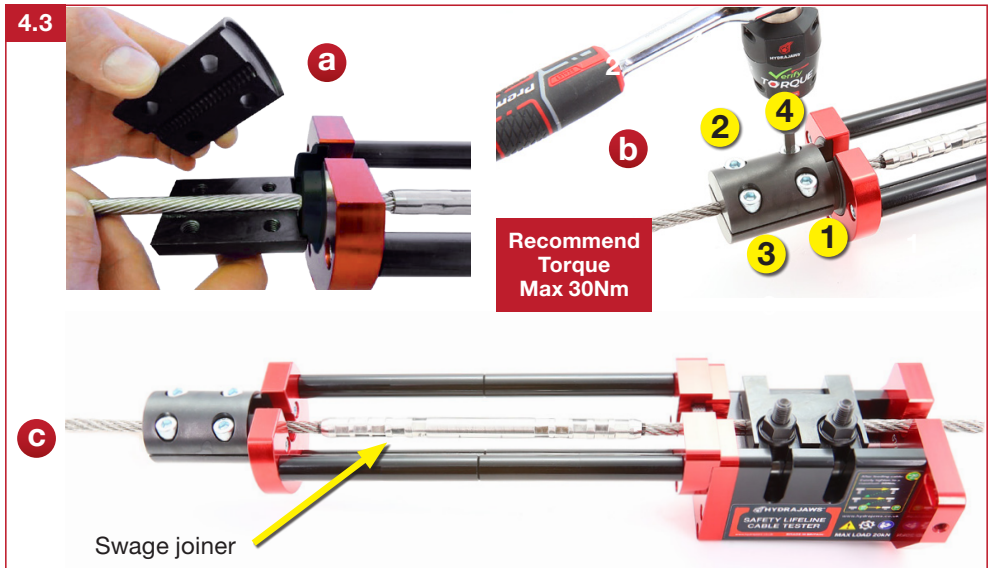
Fit the extra extension bars:

1. To test a swage joiner, the extra cable clamp and the 3 'extra extension' rods are required. To fit the rods, remove the three M6 screws (fig 4.1a) and thread on each rod until tight (fig 4.1b). Replace the end plate and three M6 screws and tighten.



To fit the barrel clamp:

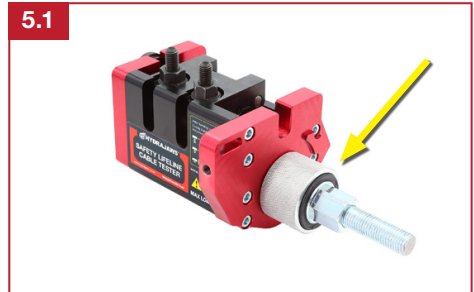
1. Position over cable (fig 4.3a). (Please note the difference of the ends of the barrel clamp as it is designed to locate slightly over the end block.)
 2. Close barrel clamp and screw in the four M8 screws (fig 4.3b). It is recommended to tighten the screws evenly in the order shown to a maximum of 30Nm, with the Verify Torque tool.
- The unit will now fit over the swage joiner (fig 4.3c) and testing can be started (see section 2).



5. PREPARE AND MOUNTING A PULL TESTER ONTO THE FRAME

PREPARING A M35+ TESTER

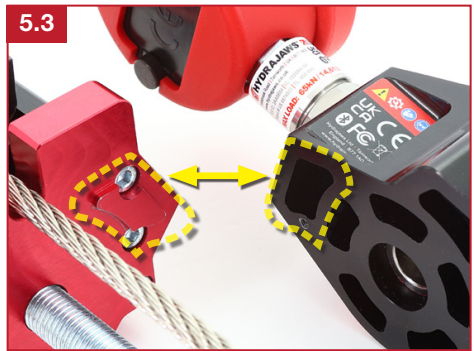
1. For a M35+ or a Hydrajaws Safety Lifeline KIT 3 Tester use the drop rod and operating nut as shown here (fig 5.1).



2. Remove the load spreading bridge from the M35+ unit by unscrewing the two M4 cap screws on the underside of the unit (fig 5.2).



3. Remove the lock nut from the drop rod and slide the M35+ unit through the drop rod. Align onto the tester frame by locating the tab shown here (fig 5.3).



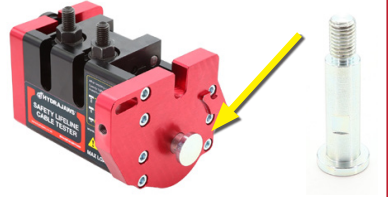
4. Turn the operating nut clockwise by hand to apply enough tension to secure the tester onto the frame (fig 5.4).



PREPARING A M2000 TESTER

1. For a M2000 tester use the pulling pin as shown here (fig 5.5).
2. Remove the load spreading bridge from the M2000 by unscrewing the two M4 cap screws underneath the unit (fig 5.6).

5.5



3. Ensure that the jaw on the tester is fully closed. Check this by looking at the scale on the body of the tester which should be near zero (fig 5.7).

5.6



5.7



4. Remove the M12 round locking adaptor from the inside slot on the bottom of the M2000 unit by first unlocking/slackening the hex screw (fig 5.8).

5.8



5.9

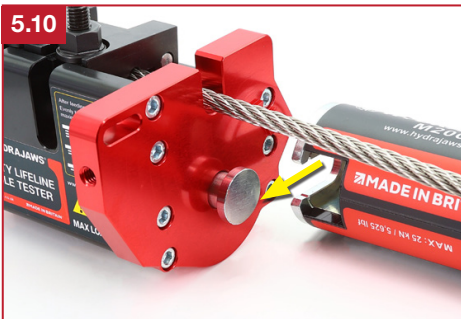


5. Remove the handles by unscrewing from the base using the 10mm wrench (fig 5.9).

4. The M2000 tester should be located over the pulling pin on the opposite end to the swage under test (fig 5.10).

5. Turn the operating nut clockwise by hand to apply enough tension to secure tester (fig 5.11).

5.10



5.11



FOR MORE INFORMATION ON HYDRAJAWS AND A
FULL RANGE OF TESTING APPLICATIONS PLEASE
VISIT THE WEBSITE AT:

www.allfasteners.com.au/hydrajaws



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