

SUBSEA SECONDARY RELEASE TOOL

USER GUIDE

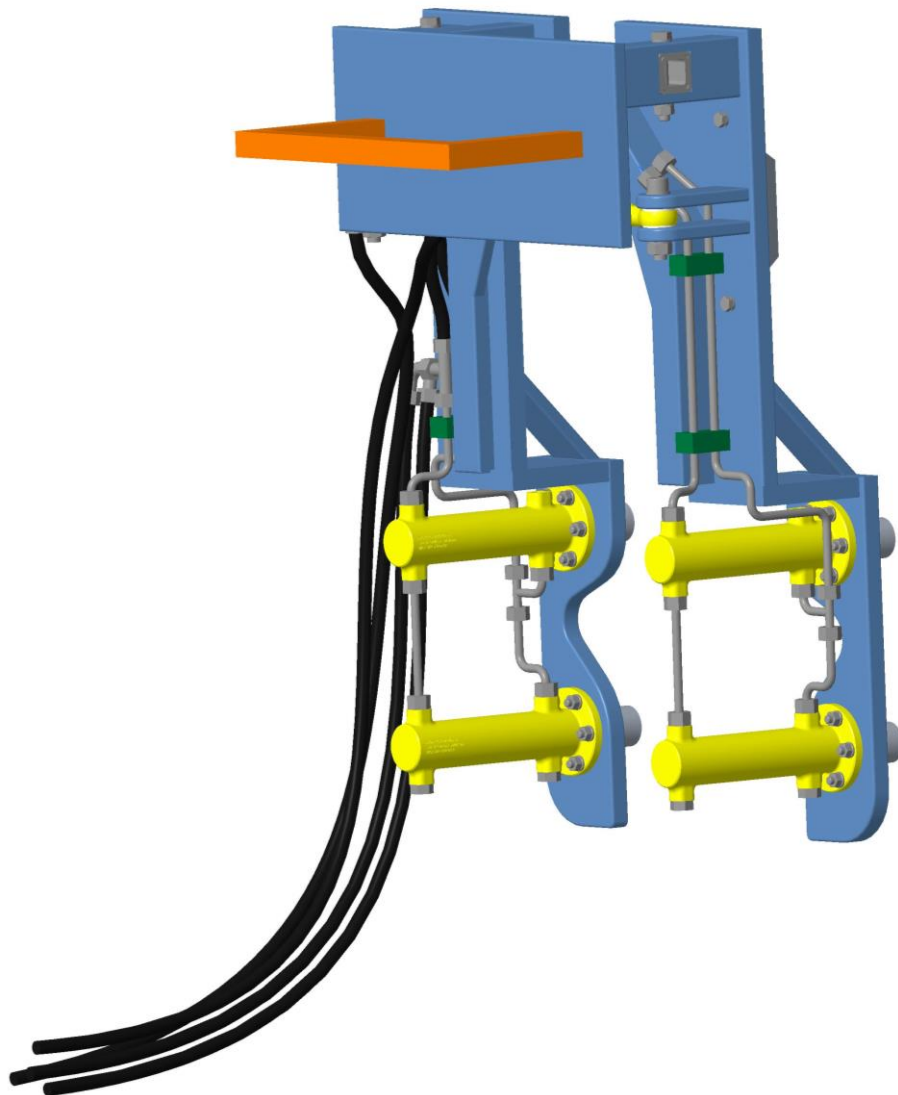
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SSRT

The Subsea Secondary Release Tool is an additional tool for demating a OneSubsea MV-head. This tool is only to be used when the connector is stuck to the slot plate. It is a secondary ROV tool, and it requires certified personnel for operation. Please read the whole user guide before operations.

The tool is made by students at Western Norway University of Applied Sciences (WNUAS) after a request from OneSubsea. The SSRT is OneSubsea property and shall not be used without approval from OneSubsea.



SSRT

Product Name	SSRT
Materials	Tool – AISI 316 Bolts – AISI 8.8 Cylinder washer – Nylon Cylinder socket – Aluminum Anodes - Zinc
Hydraulic Supply	Pressure: Max 207bar (3,000 psi)
Supply Fluid	Mineral Oil
Force Output	0N - 40 000N (0 Bar - 207 Bar)
Hydraulic Connections	1/8" BSP
Weight in Air	36,1kg (without hoses and oil)
Weight in Water	N/A
Dimension	W330mm, H605mm, D398mm

User manual:

Warning! Always follow general safety rules when using hydraulic tools to avoid line of fire. Read the user manual before use and retain it for later reference.

General Safety Rules:

- 1. Keep away from unauthorized personnel.**

Always keep the tool away from unauthorized personnel to prolong the lifetime of the tool.
- 2. Keep the workspace clean.**

When maintenance on the tool is ongoing, keep the workspace clean. Always keep in mind the line of fire. A messy workspace can cause accidents.
- 3. Store the tool in a proper place.**

To ensure that the tool is ready for use when needed, store the tool in a manner that the tool will not get any damage.
- 4. Always wear proper PPE**

Working with the tool demands proper PPE (Personal Protection Equipment). This includes a minimum of safety goggle, hard hat, coverall, and impact gloves.
To enhance your list of general safety rules, consider adding the following points:
- 5. Use the tool only for its intended purpose.**

Ensure the tool is used only for its designated tasks as outlined in the operating manual. Avoid using the tool for any other applications to prevent accidents or damage.
- 6. Conduct regular inspections and maintenance.**

Regularly inspect the tool for any signs of wear, damage, or malfunction. Perform routine maintenance as recommended by the manufacturer to keep the tool in safe and optimal working condition.
- 7. Be aware of surroundings and potential hazards.**

Stay alert to your surroundings while using the tool and be mindful of potential hazards such as moving parts, electrical sources, or tripping hazards. Keep others clear of the work area to prevent accidents.
- 8. Use proper lifting techniques.**

When handling heavy or bulky tools, use proper lifting techniques to avoid strain or injury. Lift with your legs, not your back, and ask for assistance if needed.
- 9. Report any safety concerns or incidents immediately.**

If you notice any safety concerns, defects, or accidents related to the tool, report them to your supervisor or safety officer immediately. Prompt reporting can prevent future incidents and ensure a safe work environment for everyone.

SSRT

Instructions:

Before deploying the SSRT to the sea, it is recommended to grease the sliding bar with marine grease. Function test the SSRT with the dedicated ROV and check for errors. Inspect the tool before deploying.

When deploying the tool at sea, make sure that the tool is correctly fastened to either the subsea basket or the ROV skid, in case of buoyancy. Lower the tool in an open position, due to the load that the cylinders are exposed to.

When the ROV and SSRT are placed in the relevant operation place, the ROV must carefully pick up the SSRT and maintain it in a vertical position while holding on to it. If the SSRT is not opened topside, the ROV pilot must operate the open/close cylinder to open the tool.

When the tool is placed in the right place over the MV-head, the ROV pilot must close the tool carefully with low hydraulic pressure. When the guiding for the flying handle is in the right place, the ROV can let go of the tool when fully closed. The tool will not fall off, so the ROV pilot can place its manipulator on the pulling handle. It is important that the ROV does not pull the MV-head but keeps the manipulator ready to take it when the de-mating is finished. The tool will maintain the position after the de-mating and can be retrieved either before placing the MV-head in its parking position, or while the MV-head is free. The operation can then continue.

After the operation, it is important to retrieve the tool topside and flush it with fresh water. When the tool is flushed an inspection of the tool is necessary. This is to detect any errors early. If errors occur, maintenance must be done either on the field or at OneSubsea's facilities.

SSRT

