



## RST, Rotary Support Table Preservation & Storage

**SERIAL NUMBER:** \_\_\_\_\_

**SHOP ORDER:** \_\_\_\_\_

**WITNESS by:** \_\_\_\_\_

**WITNESS DATE + SIGNATURE:** \_\_\_\_\_

**REMARKS:** \_\_\_\_\_

Keep original with RST  
2 paper copies to Document  
Control Department

REFERENCE RST	REFERENCE DESCRIPTION Rotary Support Table	
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**REVISION HISTORY**

D	12-02-215	See change description
C	29-01-2014	See change description
B	13.09.2013	See change description
A	03.12.2012	See change description
-	06.02.2011	First issue
<b>Rev</b>	<b>Date (dd.mm.yyyy)</b>	<b>Reason for issue</b>

**CHANGE DESCRIPTION**

Revision	Change description
-	First issue
A	Project comments added, e.g. specific RST495, boxing data, etc.
B	Handling removed and new handling procedure established Name columns removed
C	P-002 (paint spec) removed from document.
D	Remove Denso tape and add Premtape

## **TABLE OF CONTENTS**

<b>1</b>	<b>INTRODUCTION .....</b>	<b>4</b>
1.1	Purpose.....	4
1.2	Definition .....	4
1.3	Procedure .....	4
1.4	Safety.....	4
<b>2</b>	<b>SHOP-PRESERVATION, RE-PRESERVATION &amp; STORAGE .....</b>	<b>5</b>
2.1	Shop-Preservation during manufacturing.....	5
2.2	Long term storage.....	5
	<b>2.2.1 Customer Procedure for long term preservation</b>	
	<b>2.2.2 Customer Procedure for Re-preservation</b>	
	<b>2.2.3 Customer Procedure for Storage</b>	
<b>3</b>	<b>INSTALLATION .....</b>	<b>7</b>
3.1	Welding.....	7
3.2	Installation period.....	7
<b>4</b>	<b>RECOMMENDED PRESERVATIVES (OR EQUIVALENT):.....</b>	<b>7</b>
<b>5</b>	<b>PRESERVATION SPECIFICATION RECORDS.....</b>	<b>8</b>
<b>6</b>	<b>PRESERVATION CHECKS RECORDS .....</b>	<b>9</b>
<b>7</b>	<b>DE-PRESERVATION .....</b>	<b>10</b>
	<b>7.1.1 Customer Procedure for de-preservation</b>	
<b>8</b>	<b>PRESERVATION LABEL .....</b>	<b>11</b>

## 1 INTRODUCTION

### 1.1 Purpose

The purpose of this procedure is to provide information involving preservation of the RST.

All the outlined procedures in this Preservation Record shall be governing for the entire period from manufacturing until installation.

### 1.2 Definition

- **Shop-Preservation:** Preservation in the manufacturer's plant during final assembly and before transport.
- **Re-preservation:** Any preservation carried out AFTER **Shop-Preservation**.
- **De-preservation:** Removal of any preservative materials.
- **Preservation record:** The Preservation log + the log of any Re-preservation carried out.
- **Preservation label:** The label attached to the RST to be filled in when preservation activities are carried out.
- **Preservation period:** The period AFTER shipping the RST from manufacturer's plant.

### 1.3 Procedure

- This document must be kept with the RST at final assembly.
- The Preservation record shall be filled in by assembly-crew.
- Prior to shipment from manufacturer's plant, a copy of this document must be attached to the RST and Dispatch Dossier (R01), ensuring availability at receipt of the RST.
- The original document shall be filed in the DATA book at manufacturers Document Control Dept.
- Prior to shipment from manufacturer's plant, a Preservation label shall be attached to the RST. The label reflects the most recent preservation work carried out.

#### **PURCHASERS RESPONSIBILITY:**

- After shipment, any preservation action must be logged in the preservation-log.

### 1.4 Safety

- **WARNING:** Shop-Preservation, re-preservation and de-preservation may involve usage of solvents that may be harmful. Personnel performing this type of work should be wearing personnel protection equipment.

## 2 SHOP-PRESERVATION, RE-PRESERVATION & STORAGE

### 2.1 Shop-Preservation during manufacturing.

- The preservation-records will be signed off by the assembly crew, indicating that the checks are carried out. The RST and Control Station leave the factory in undamaged and new condition.
- Shop preservation will guarantee the correct preservation for a period of **3** months.
- It is recommended the consignee organisation checks the RST after reception.

### 2.2 Long term storage.

- Long term storage preservation has been ordered from NOV
- Long term preservation will guarantee the correct preservation for a period of **12** months.

#### **2.2.1 Customer Procedure for long term preservation**

- Check RST immediately after reception.
- Carry out interval checks according to preservation.
- If found required, re-preservation shall be carried out. Use the check records in this document.

#### **2.2.2 Customer Procedure for Re-preservation**

Carry out according to the preservation-records. Any anomaly shall be rectified.

- The hydraulic piping system on the RST & Control Station is sealed off by the manufacturer. All fittings shall remain plugged or capped to avoid ingress of material that may contaminate the piping and the fluid in the system.
- All hydraulic components are flushed with clean hydraulic oil prior to storage and transport.
- All non-terminated cable ends shall be fitted with shrinking shroud.
- PREM-TAPE PROTECTION: All fittings, as well as any extended rod end are covered with Prem tape to avoid corrosion. They shall be checked for damage of the Prem tape. The Prem tape must not be allowed to dry. If the Prem tape oil/grease vaporizes the result is corrosion underneath the tape. Replace the Prem tape or add oil/grease to the tape if necessarily.

### **2.2.3 Customer Procedure for Storage**

- Every attempt should be made to avoid wide variations in temperature and high humidity. The preferred environment would be clean and dry at 60°F (16° C) ambient. Recommended max. humidity is 70%.
- All openings should be covered to prevent water or dust from entering. The use of Desiccant (e.g. Silica) is recommended.

#### **RST:**

- If acceptable to store outside, the RST shall be supported on beams to avoid contact with the ground.
- If suitable, protect the RST with a tarpaulin against water ingress, salt, dust and grit. Ensure the RST is dry before covering, otherwise condensate may cause corrosion. Ensure ventilation of the RST is possible at all times.

#### **Control Station:**

- If acceptable to store outside, the Control Station shall be supported on beams to avoid contact with the ground.
- The Control Station may be stored outdoors, provided that the junction box openings are installed with plugged nipples and the door gaskets are intact and tight.
- If suitable, protect the Control Station with a tarpaulin against water ingress, salt, dust and grit. Ensure the Control Station is dry before covering, otherwise condensate may cause corrosion. Ensure ventilation of the Control Station is possible at all times.

### 3 INSTALLATION

#### 3.1 Welding

- The RST and Control Station must be protected from spatter of welding and grinding with protective sheets.
- Any black steel spatter on stainless steel material shall be removed with a suitable method to avoid pitting corrosion and to re-establish Pre surface quality.

#### 3.2 Installation period

- The procedures as outlined in this document shall continue during installation and after installation onboard until taken into operation.

### 4 RECOMMENDED PRESERVATIVES (OR EQUIVALENT):

- The following materials are used by manufacturer and recommended.
  1. Castrol Rustilo DWX 32: For medium to long term protective for use in severe conditions where a high degree of protection is required: Leaves a **soft** greasy protective film (to be used on dynamic surfaces e.g. cylinder rods & static surfaces e.g. blank steel surfaces)
  2. Dow Corning Molykote® 1000 Paste: Anti-seize compound for application on bolts and nuts (to be used when bolts/nuts have to be released on a regular basis, e.g. hatches).
  3. Premier coatings Ltd, Premtape: Flexible anti corrosion tape (to be used for application on hydraulic fittings, e.g. sockets)
  4. Autol Top 2000 grease: Lubricant for general purpose, OLF-compliant (to be used mandatory for all bowls and slips lubrication applications).
  5. Paint repairs according to P-001.
  6. Castrol Hyspin AWH-M 32: Hydraulic fluid (to be used for the hydraulic system, see also user's manual for details).
  7. Plugs / caps: Plastic/steel plugs/caps (to be used for plugging/capping open fittings/QD's)
  8. EP2: General multi purpose grease
  9. Eoniromonpastax: Anti-galvanic corrosion paste (to be used on stainless steel threads).

5 PRESERVATION SPECIFICATION RECORDS									
Record page 1 of 2		Serial No:.....	Shop-preservation				Customer's responsibility		
Activity No.:	Intervals (Months)	Description	Standard Preservative	Standard Shop-Preservation (sign)	Long term Preservative (optional)	Long term Shop-Preservati on (sign)	Date/Sign Re-Preserved (1)	Date/Sign Re-Preserved (2)	Date/Sign Re-Preserved (3)
1	4	All unpainted static steel surface and flanges.	Rustilo DWX 32	X	Rustilo DWX 32				
2	4	All unpainted dynamic steel surfaces.	Rustilo DWX 32	X	Rustilo DWX 32				
3	4	Extended cylinder rods	Rustilo DWX 32	X	Rustilo DWX 32 + Prem Tape				
4	4	Bolts and nuts (head )	-	X	Rustilo DWX 32				
5	4	Bolts and nuts (threads; removable): e.g. Hatches, retainers, adjustment rods etc	Molykote® 1000	X	Molykote® 1000				
6	4	Bolts and nuts (threads; non removable)	EP2	X	EP2				
7	4	Hydraulic/pneumatic/grease fittings (open-end).	Plugs / caps	X	Plugs / caps + Prem tape				
8	4	Hydraulic/pneumatic/grease fittings (non open-end).	-	X	Prem tape				
9	4	Stainless steel threads e.g fittings	Eoniromon-pastax	X	Eoniromon-pastax				
10	8	Bearings	EP2	X	EP2				
11	8	Hydraulic system; pre-filled and drained	Hyspin AWH-M 32	X	Hyspin AWH-M 32				
Comments:									
Shop-Preservation Performed by: Date/Sign: _____									



**6 PRESERVATION CHECKS RECORDS**

Record page 2 of 2		Serial No:.....	Shop-preservation				Customer's responsibility		
Activity No.:	Intervals (Months)	Description	Standard Shop-Preservation (sign)				Date/Sign Re-Preserved (1)	Date/Sign Re-Preserved (2)	Date/Sign Re-Preserved (3)
12	4	All non-terminated cable ends fitted with shrinking shroud.	<b>X</b>						
13	4	J-boxes seals present and correctly fitted							
14	4	J-boxes checked for proper closing							
15	4	Inspect internals for moisture (must be dry)							
16	4	All spare cable entrances plugged							
17									
18									
19									
20									
21									
22									
Comments:									
Shop-Preservation Performed by:									
Date/Sign: _____									

## 7 DE-PRESERVATION


De-preservation must be done after installation and prior to commissioning. The commissioning activities comprise checking, functional activities and operational activities.

### **7.1.1 Customer Procedure for de-preservation**


- Remove all protection structure and protective cloths.
- Extended cylinder rods to be washed with dissolving agent to remove preservation.
- Remove preservative from all unpainted steel surfaces and flanges.
- Remove Prem-tape of all parts necessary.
- Remove plugs or caps for all open-end fittings, which shall be available during operation.

8 PRESERVATION LABEL

REAR OF LABEL

  
**NOV NATIONAL OILWELL VARCO**  
**SHOP PRESERVATION**  
NOV-Project No: \_\_\_\_\_  
  
Serial No: \_\_\_\_\_  
  
Date preservation carried out: \_\_\_\_\_  
  
Name / Signature: \_\_\_\_\_  
  
Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FRONT OF LABEL

  
**RE-PRESERVATION**  
Interval:  
**Every \_\_\_\_\_ months**  

<u>Name / Signature</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
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PN 50000130

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