

GENERAL SPECIFICATION

SUBSEA SYSTEMS

GS EP SPS 023

Cleaning and Flushing of Hydraulic Systems

08	05/2015	Organisation change – January 2015
07	09/2013	Fluid sampling, cleaning / flushing requirements added
06	01/2012	General revision
05	10/2008	Standard references update
00	10/2002	First issue
Rev.	Date	Purpose of the revision

Owning entity: DSO/TEC

Managing entity: DSO/TEC/SBS

Document update realised by
standards coordination
Reorganisation 2015

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1. Scope

This specification covers the minimum requirements for cleaning and flushing of hydraulic systems used for subsea equipment from manufacturing up to and including field operation.

Hydraulic system is defined as a system that contains hydraulic fluid or uses pressurized hydraulic fluid to operate or control component, for example: actuator, hydraulic power unit (HPU), subsea control module (SCM), hydraulic flying lead, work over control system (WOCS).

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of this document.

Reference	Title
ISO 4021	Hydraulic fluid power - Particulate contamination analysis - Extraction of fluid samples from lines of an operating system
SAE AS 4059F	Cleanliness classification of hydraulic fluids

Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published in the applicable yearly collection.

Reference	Title
GS EP SPS 010	Preservation requirements for subsea package

3. Introduction

3.1 Responsibility

It is the responsibility of the Vendor to develop a detailed procedure for cleaning and flushing in the workshop for each part of the hydraulic systems in compliance with the requirements defined by this specification. This procedure shall be submitted for reviewed and approval by Company. Verification of the hydraulic cleanliness shall be witnessed by a Company representative before considering the equipment as "Ready for Shipment".

In addition to the workshop procedure, Vendor shall also develop a site cleaning and flushing procedure for the following cases:

- Before site installation when considered necessary by Company
- During operation in case of major intervention on the hydraulic equipment.