

**An introduction to S1000D
and**

xignal
S1000D



What is S1000D?

- S1000D is an international specification for the production and management of technical publications.
- Typically used in Aerospace and Defence (although other industries are adopting it)
- Based on XML (eXtensible Markup Language)
- Non-proprietary (no single company owns the rights, specification or a specific tool to work with S1000D)

Benefits of S1000D?

- Maximum data reuse methodology utilising a modular approach to data
- Single source - can be used to output multiple formats (PDF, IETP) from same data
- Any look and feel of output is possible from the same data (using stylesheets at publish-time)
- Data can be exchanged between partner companies and combined into the same dataset without concern of formatting or interchangeability issues
- Used by most Aerospace and Defence companies globally so compliance is assured
- Authors do not need to be concerned with formatting of data, only the data content
- Strict workflow and revision management
- Reduced cost over documentation lifecycle

How does S1000D Work?

- S1000D uses Data Modules (DMs) which are small chunks of data which can be reused across the dataset
- For example, a Procedure to 'make the aircraft safe' would be a DM. This DM would be referenced from other procedures, rather than writing the 'make safe' steps each time. Same principle for Remove and Install procedures, Clean procedures, Inspect procedures, and so on
- All these DMs (chunks of data) inter-reference each other, to avoid duplication of data throughout the dataset, and to ensure only one 'single point of truth'
- The order in which these DMs are structured to make the final publication is entirely up to you, and can be changed for each publication output (if required)

What is the Signal S1000D Suite?

Signal S1000D Suite is a modern, browser-based S1000D solution for creating and managing S1000D data through its lifecycle.

It includes:

- S1000D **CSDB** - A content management system which manages Data Modules (DMs) and their status and workflow, as well as graphic files used within the DMs
- S1000D **Editing** environment - for Authors to write the content/Data Modules
- S1000D **Review** environment - for Reviewers to review and comment on the content/Data Modules
- S1000D **Publication Module (PM) builder** - for generating the structure of the published output i.e. Table of Content structure, and assigning Data Modules to that structure
- PDF **Publisher** - to build a complete **PDF** manual from the PM using all the allocated DMs and graphics. Also creates IETP output for use in your chosen IETP tool.

Take advantage of the power of S1000D without the complexities and costs of traditional S1000D solutions.

Xignal S1000D is designed with the user experience at the forefront. Modern wizards and tooltips make initial project set-up quick and easy.

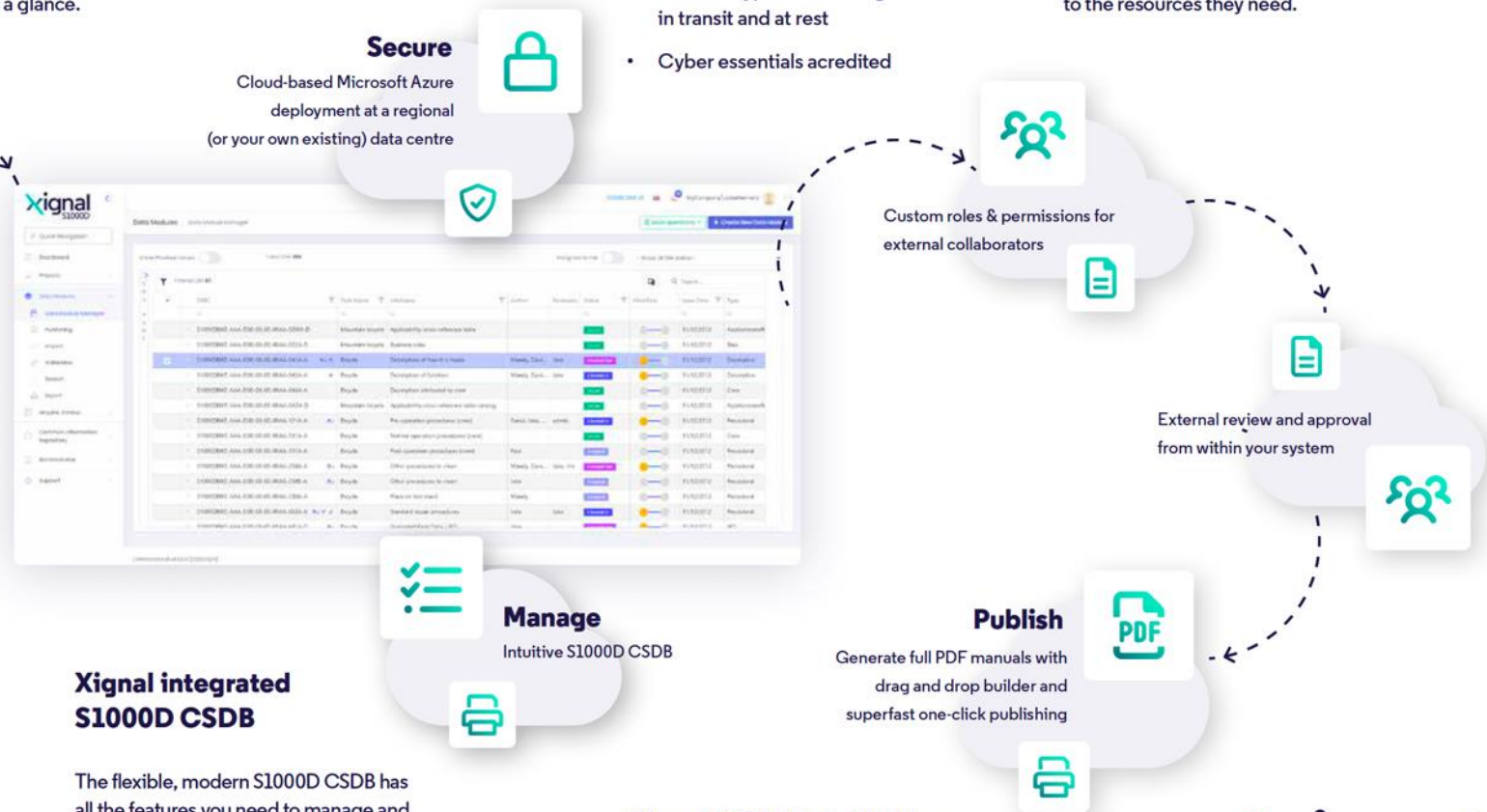
You can assign users, roles, permissions and set up a workflow for your team in an instant. The fully customisable dashboard helps you to monitor user workload, project progress and the status of each dataset at a glance.

Xignal S1000D Authoring Tool

Start authoring in S1000D with tools that work the way you do.

Our S1000D editor is designed with a familiar MS Word look and feel. The authoring environment is browser-based and fully integrated into the CSDB. This means that with one click you can insert graphics and data module references. At the same time continuous schema validation means that you can confidently create S1000D data modules with little-to-no XML knowledge.

Whether you are looking for smarter ways of collaborating with suppliers and partners, or coming to S1000D for the first time, Xignal is a secure and easy to use solution for authoring, sharing and publishing technical documentation.



Xignal integrated S1000D CSDB

The flexible, modern S1000D CSDB has all the features you need to manage and deliver your technical documentation. You can easily import project business rules (BREX) and common information repositories (CIRs) and the Publication Module (PM) builder ensures that publishing is as easy and drag and drop.

Built for Security

Xignal is a secure environment for collaborating on S1000D documentation of a sensitive nature. Xignal is designed with robust security provisions to ensure your data is secure.

- Hosted in Microsoft Azure in-country data centre
- Data encryption including in transit and at rest
- Cyber essentials accredited

Built for Collaboration

Secure collaboration in real time with your colleagues, customers and distributed teams throughout the supply chain.

Create custom roles, granting specific permissions within your team and across the supply-chain. Xignal will ensure everyone is alerted when they have a task to complete or a review is needed, and that everyone has access to the resources they need.

Xignal S1000D Publishing

Publish data instantly with the drag and drop builder and one click publishing.

Print your publications directly from the S1000D CSDB or editor for PDF or IETM output.



Contact us today for a Demo
info@xignal-s1000d.com
www.xignal-s1000d.com

Advantages of Xignal S1000D

There are various S1000D solutions out there, so why choose Xignal S1000D?

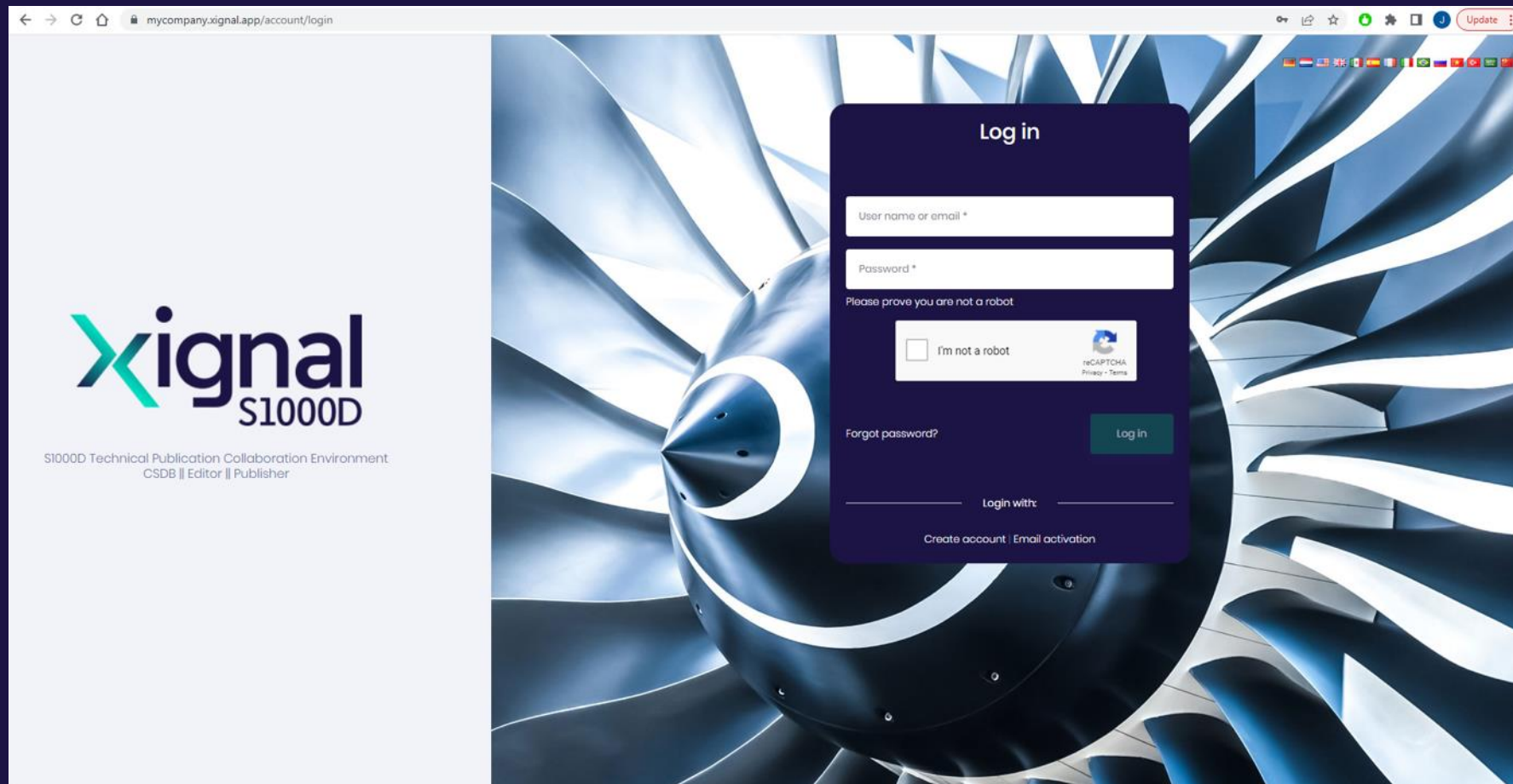
- It's a unique and intuitive toolset designed to *simplify* S1000D data creation and management
- The ease of use reduces the need for extensive author training on S1000D and XML
- You get instant access, with no internal IT support required
- It has a much lower cost of entry than traditional S1000D tools
- It is designed as a collaboration environment, meaning external stakeholders can be part of the workflow and review/sign off process within the system which eliminates external data exchange between stakeholders (suppliers/customer)

Need to convert existing data into S1000D data?

- Manually converting MS Word documents to S1000D is *very* time consuming
- We offer a clever Xignal S1000D for Word conversion tool:
 - Integrates with Word (Word Add-in)
 - Just map existing Styles to the new S1000D Styles
 - Batch convert styles of multiple documents automatically
 - Automatically generate the Data Module and extract graphics with their associated S1000D numbering
 - 'Per page' cost model (no connection to online services required)

Xignal S1000D Screenshots

Logging in



Xignal S1000D Screenshots

Dashboard

The screenshot displays the Xignal S1000D dashboard interface. At the top left is the Xignal S1000D logo. The top right shows the user 'MyCompany \ JakeMemery' and a language selector for 'S1000D BIKE v8'. Below the header is a navigation menu with options like Dashboard, Projects, Data Modules, Graphic Entities, Common Information Repository, Administrator, and Support. The main dashboard area features a 'Default Page' tab and an 'Edit mode' toggle. Key statistics are shown in four cards: Total Projects (13), Data Modules (112), Data Modules Issued (82), and Data Modules unassigned (7). Below these are two donut charts for 'All Project Status' (S1000D BIKE v8) and 'User Overview' (Diamond DA42). A table on the right provides a detailed user overview for 'S1000D BIKE v8'.

Users	Assigned	Checked Out	Checked In	Awaiting approval	Rejected	Issued
admin	0	0	0	0	0	0
Mandy	1	0	0	0	0	0
Amanda	1	0	0	0	0	0
Jake	6	12	2	0	0	0
Paul	1	0	0	0	0	0
Jim	0	0	0	0	0	0
David	0	2	0	0	0	0
Nitish	0	0	0	0	0	0
Jan	0	0	0	0	0	0

Author Workload S1000D BIKE v8

LIRXStandard| v8.1.0.0 [20220527]

Signal S1000D Screenshots

Data Module Manager

Signal S1000D BIKE v8 | MyCompany \ JakeMemory

Data Modules | Data Module Manager

Excel operations | Create New Data Module

Show Previous Issues Total DMs 112 Assigned to me --Show all DM status--

Filtered DM 89

DMC	Tech Name	InfoName	Author	Reviewers	Status	Workflow	Issue Date	Type	Issue
S1000DBIKE-AAA-D00-00-00-00AA-00WA-D	Mountain bicycle	Applicability cross-reference table			Issued		31/12/2012	Appliccrossreftable	006
S1000DBIKE-AAA-D00-00-00-00AA-022A-D	Mountain bicycle	Business rules			Issued		31/12/2012	Brex	008
S1000DBIKE-AAA-D00-00-00-00AA-041A-A	Bicycle	Description of how it is made	Mandy, David, Jake, admin	Jake	Checked Out		31/12/2012	Descriptive	009
S1000DBIKE-AAA-D00-00-00-00AA-042A-A	Bicycle	Description of function	Mandy, David, Jake, admin	Jake	Checked In		31/12/2012	Descriptive	008
S1000DBIKE-AAA-D00-00-00-00AA-043A-A	Bicycle	Description attributed to crew			Issued		31/12/2012	Crew	008
S1000DBIKE-AAA-D00-00-00-00AA-0A3A-D	Mountain bicycle	Applicability cross-reference table catalog			Issued		31/12/2012	Appliccrossreftable	001
S1000DBIKE-AAA-D00-00-00-00AA-121A-A	Bicycle	Pre-operation procedures (crew)	David, Jake, admin	admin	Checked In		31/12/2012	Procedural	008
S1000DBIKE-AAA-D00-00-00-00AA-131A-A	Bicycle	Normal operation procedures (crew)	Jake		Checked Out		31/12/2012	Crew	008
S1000DBIKE-AAA-D00-00-00-00AA-151A-A	Bicycle	Post-operation procedures (crew)	Paul		Assigned		31/12/2012	Procedural	008
S1000DBIKE-AAA-D00-00-00-00AA-258A-A	Bicycle	Other procedures to clean	Mandy, David, Jake	Jake, Jim	Checked Out		31/12/2012	Procedural	008
S1000DBIKE-AAA-D00-00-00-00AA-258B-A	Bicycle	Other procedures to clean	Jake		Assigned		31/12/2012	Procedural	001
S1000DBIKE-AAA-D00-00-00-00AA-330A-A	Bicycle	Place on test stand	Mandy		Assigned		31/12/2012	Procedural	008
S1000DBIKE-AAA-D00-00-00-00AA-663A-A	Bicycle	Standard repair procedures	Jake	Jake	Checked Out		31/12/2012	Procedural	009
S1000DBIKE-AAA-D00-00-00-01AA-941A-D	Bicycle	Illustrated Parts Data - IPD	Jake		Checked Out		31/12/2012	IPD	007

LIRXStandard v8.1.0.0 [20220527]

Xignal S1000D Screenshots

Data Module Editor

The screenshot displays the Xignal S1000D Data Module Editor interface. The top navigation bar includes the Xignal S1000D logo and menu items: Table, Review, and Add/Insert. Below this is a rich text editor toolbar with icons for undo, redo, search, bold, italic, underline, text color, background color, list, link, unlink, and other editing functions.

The main content area shows two red-bordered boxes with a warning icon and the word "Caution" in red. The first box contains the text: "Do not point the hose directly at the hub or at the bottom bracket bearings. This can cause damage to the parts." The second box contains the text: "Apply **Detergent B** in accordance with the instruction on the container. The substance may cause damage to the Bike paint if it is not applied correctly."

Below the cautions is a section titled "Procedure" in bold. It contains a single step: "1 Clean the bike with water to remove all dirt. Refer to [Fig 1](#)." Below this step is a line drawing of a bicycle on a repair stand. A hand is shown holding a spray nozzle, spraying water onto the front wheel and handlebars. The caption below the drawing reads "Fig 1 Cleaning the bike".

On the right side of the editor, there is a sidebar with a "XML" label. It contains a "Table of contents" section with a plus sign, an "Attributes" section with a minus sign, and a breadcrumb trail: dmodule > content > procedure > mainProcedure > proceduralStep > para. Below the breadcrumb is an "Add attribute" dropdown menu. At the bottom of the sidebar are sections for "Comments", "Changes", and "Insert element", each with a plus sign.

At the bottom of the editor, there is a breadcrumb trail: dmodule > content > procedure > mainProcedure > proceduralStep > para.

The screenshot displays the Signal S1000D Data Module Editor interface. The top menu includes 'Table', 'Review', and 'Add/Insert'. The main editing area shows a procedure document with a diagram of bicycle components labeled 'A'. The procedure steps are:

- 5 Flush the sprockets, the derailleurs, the chain rings and the chain with water.
Applicable to: Mountain bicycle Mountain storm Mk1
- 6 **Wash the Bike**
- 6.1 Soak the [Sponge](#) into [Detergent A](#) and water. Refer to [S1000DBIKE-AAA-D00-00-00-00AA-663A-A](#)
- 6.2 Clean the bicycle with the soaked sponge.
- 6.3 Flush the bicycle and make sure that all [Detergent A](#) is removed.
- 6.4 Move the bicycle up and down on its tires to remove all water.
Applicable to: Mountain bicycle Brook trekker Mk9
- 7 **Wash the Bike**
- 7.1 Soak the [Sponge](#) into [Detergent B](#) and water.
- 7.2 Clean the bicycle with the soaked sponge.
- 7.3 Soak the [Sponge](#) into [Detergent A](#) and water.
- 7.4 Fully clean the bicycle with the soaked sponge.
- 7.5 Flush the bicycle to make sure that all detergents are removed.
- 7.6 Move the bicycle up and down on its tires to remove all water.
- 8 Lubricate the bicycle (refer to [S1000DBIKE-AAA-DA4-10-00-00AA-241A-A](#)).

Requirements after job completion

Required conditions

The XML view on the right shows the underlying structure of the document, including procedural steps and paragraphs with internal references.

```
XML
</dmRefIdent>
</dmRef>
</para>
</proceduralStep>
<proceduralStep>
  <para>
    Clean the bicycle with the soaked sponge.
  </para>
</proceduralStep>
<proceduralStep>
  <para>
    Flush the bicycle and make sure that all
    <internalRef internalRefId="sup-0002"
      internalRefTargetType="irtt04" xlink:href="#sup-0002">
    </internalRef>
    is removed.
  </para>
</proceduralStep>
<proceduralStep>
  <para>
    Move the bicycle up and down on its tires to remove all
    water.
  </para>
</proceduralStep>
</proceduralStep>
<proceduralStep applicRefId="apMK9">
  <title>
    Wash the Bike
  </title>
  <proceduralStep>
    <para>
      Soak the
      <internalRef internalRefId="seq-0003"
        internalRefTargetType="irtt05" xlink:href="#seq-0003">
      </internalRef>
      into
      <internalRef internalRefId="sup-0003"
        internalRefTargetType="irtt04" xlink:href="#sup-0003">
      </internalRef>
      and water.
    </para>
  </proceduralStep>
  <proceduralStep>
    <para>
      Clean the bicycle with the soaked sponge.
    </para>
  </proceduralStep>
</proceduralStep>
```

Example Outputs

Example PDF
output

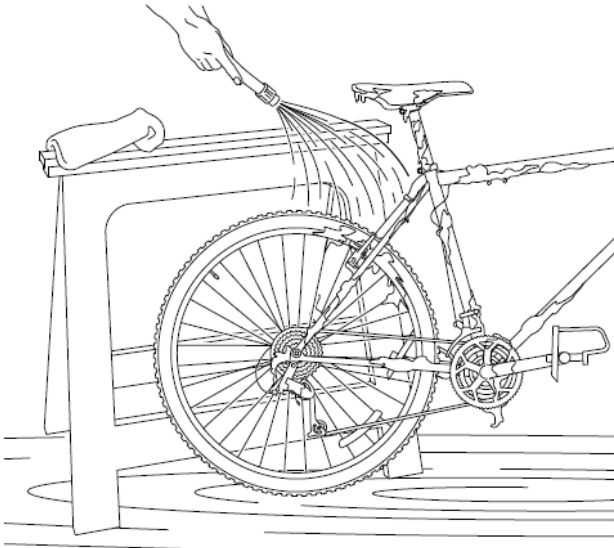
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S1000DBIKE-C3002-
LOAP1-00

Procedure

1 Clean the bicycle with water to remove all dirt. Refer to Fig 1.



ICN-S1000DBIKE-AAA-D000000-0-U8025-00502-A-04-1

Fig 1 Cleaning the bike

2 Use a **Stiff bristle brush** to get access to areas that are not easy to clean. These are the shift levers, the knobby tires, and the brakes.

3 Clean the caked grime from the chain and the sprockets with a screwdriver that has a small blade.

4 Remove the grease from the freewheel assembly with the **Degreasing agent** as shown in Fig 2 .
Use a brush to remove the grease from these parts:

- sprockets

S1000DBIKE-AAA-D00-00-00-00AA-258B-A

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Applicable to: Mountain bicycle
and (Mountain storm Mk1 or
Brook trekker Mk9)

Example Outputs

Example IETP
output

...Same source
dataset used

File Edit View Author Help

Back Forward Home Search Print Help

Table of Contents

Previous Next Edit

Bicycle - Performance support
 Bicycle - Pre-operation procedures (crew)
 Bicycle - Riding a bicycle
 Bicycle - Normal operation procedures
 Bicycle - Normal operation procedures
 Bicycle - Post-operation procedures
 Bicycle - Servicing: Attention required
 Bicycle - Servicing: Prerequisites
 Bicycle - Time limits
 Bicycle - Scheduled maintenance
 Bicycle - Scheduled maintenance
 Wheel - Description of how it works
 Wheels - Description of how they work
 Inner tube - Remove and install
 Tire - Fill with air
 Tire - Check pressure
 Front wheel - Fault reports and diagnosis
 Front wheel - Remove procedure
 Tire - Remove and install a new tire
 Rear wheel - Detected fault
 Rear wheel - Remove procedure
 Front wheel - Remove procedure
 Front wheel - Install procedure
 Brake system - Description of how it works
 Brake system - Manual test
 Brake pads - Clean with rubber
 Front brake - Remove procedure
 Front brake - Install procedure
 Steering - Description of how it works
 Steering - Description of how it works
 Stem - Remove procedure
 Stem - Install procedure
 Handlebar - Remove procedure
 Handlebar - Install procedure
 Headset - Description of how it works
 Headset - Remove procedure
 Headset - Install procedure
 Spacer - Install procedure
 Frame - Description of how it works
 Horn - Isolated fault
 Horn - Remove and install a new horn
 Drivetrain - Description of how it works
 Chain - Oil
 Chain - Clean with chain cleaner
 Drive train - Correlated faults
 Gears - Description of how it works

Bicycle - Pre-operation procedures (crew)

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Required Conditions
None.

Required Persons

Person	Category	Trade/Trade code	Estimated Time
Man A	Basic user	Operator	0,3

Required Support Equipment

Name	CAGE	Part No	Quantity
Tire pressure gauge	KZ666	BSK-TLST-001-01	1 EA
Specialist toolset	KZ666	BSK-TLST-001	1 EA

Required Supplies

Name	CAGE	Part No	Quantity
General lubricant	KZ222	LL-001	As required

Required Spares
None.

Safety Conditions
None.

Procedure

- Examine the condition of the brakes.
 - Open the brake quick release.
 - Examine the condition and the thickness of the brake pads.
 - 1.2.1. Make sure that there is a large quantity of rubber left.
 - 1.2.2. Make sure that the pad is not too hard.
 - Clean all the unwanted material.
- Do an inspection of the installation of the brakes.

[Hydraulic brake function](#)

 - 2.1. Check the hydraulic brake system function.
 - 2.2. Make sure that there is sufficient clearance between the pad and the inner diameter of the brake surface.

CAUTION

Figure 1. Brake pad seating