



Instruction Manual
ENGLISH

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1. INTRODUCTION

1.1 General

Congratulations on the purchase of your GYSTEEL VISION material testing tool.

GYSTEEL VISION is an electronic analysis tool, intended for checking and testing the type and hardness of the material in a vehicle bodywork.

The product consists primarily of the following components:

- GYSTEEL VISION electronic analysis tool
 - Lip clamp
 - Storage box
- Web-based software with Certificate:
 - where the measurement value is indicated and which thereafter creates a PDF-document including:
 - vehicle particulars
 - measurement data
 - information about the general properties and limitations of the tested material
 - when available, information and address of the vehicle manufacturer's homepage to access the recommended repair methods.

This manual includes a description of the tool in addition to instructions for its use, handling and care.

IMPORTANT!

Read the instructions carefully to learn the correct handling of the GYSTEEL VISION measuring tool and program.

The equipment is intended to be used in accordance with current practice while observing the relevant safety regulations.

1.2 Maintenance

A. General

GYSTEEL VISION is a precision instrument and it shall therefore be handled with care so that the measurement results are not jeopardized. It is important that you follow the instructions below and in general take the necessary steps to protect the equipment.

B. Service

Always clean the tool after use.

NOTE! Use only a dry rag with no cleaning agent.

Always keep the parts of the measurement system in the storage box when they are not in use. If the measurement tool ceases to function or if some part has been damaged, contact your local agent.

C. Control

At least once a year or when there is a suspicion that the measuring system has been damaged, it should be checked by your agent. He has at his disposal a control instrument which has been supplied by the manufacturer to enable him to carry out such a control.

D. Disposal

If components of the measurement system are scrapped or dismantled, components of plastic, steel and aluminum and all electronic components shall be separated for recovery.



1.3 Guarantee

IMPORTANT!

Read the instructions carefully to learn the correct handling of the GYSTEEL VISION measurement tool.

Incorrect handling can result in personal injury or damage to the equipment.

A guarantee is offered for one year from the date of delivery and covers material defects assuming normal operation and care.

The guarantee presupposes that:

- The handling and reasonable and necessary servicing have been in accordance with what is indicated in this instruction manual.
- The equipment has not been altered or rebuilt without the approval of the manufacturer.
- Original GYSTEEL VISION components are used in any repair.

The equipment is intended to be used in accordance with current practice while observing the relevant safety regulations.

In the event of any complaint, contact your agent for assessment and control.

2 GYSTEEL VISION MATERIAL ANALYSER

2.1 General description



GYSTEEL VISION Material Analyser

The product consists primarily of three (3) components: 1. The electronic Material analyser 2. The lip clamp 3. The web-based software GYSTEEL VISION CERTIFICATE.

The material analyser provides information about the hardness of the material by showing the measurement value on the display after the test has been carried out.

The lip clamp with its threaded shaft is intended to give the material to be tested the necessary stability and fixation required to give stable and accurate measurement values. It is applied and clamped by tightening the shaft with the help of a ring spanner (13 mm).

The web-based software GYSTEEL VISION CERTIFICATE makes it possible to present the test values in an intelligible way through an electronic file (PDF) or print-out.

By indicating the vehicle particulars in addition to the measurement value which the Analyser has shown, a test certificate is automatically created.

The certificate indicates:

- Vehicle particulars
- Measurement data
- Information about the general properties and limitations of the tested material
- When available, information and address of the vehicle manufacturer's homepage to access the recommended repair methods.

2.2 Preparation before the test is carried out

The material to be tested

It is decisive for the accuracy of the product that the material to be tested is checked and prepared in the correct way.

It is therefore important that the following recommendations are followed when carrying out the material test.



Cleaning of the material to be tested

Always clean the material very carefully using a **3M Scotch Brite soft** grinding wheel.

It is important that the material is completely cleaned from paint, rust etc. The surface to be tested must be completely "plate clean".

Never use a rough grinding disc or material for cleaning, since too rough a surface influences the test result negatively.

Testing exposed/simple material

Clean the surface to be tested, regardless of material thickness, and carry out the test.



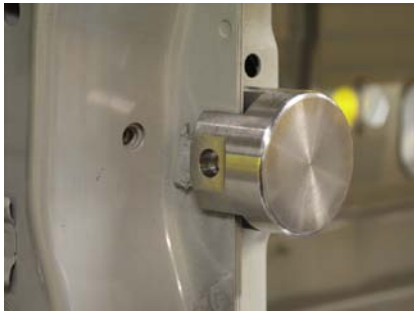
Testing double material (2 or more layers) when the material thickness is less than 1.2 mm

Always expose the material to be tested by opening the weld etc and removing the part, which is not to be tested (see picture).

Testing double material (2 or more layers) when the material thickness is greater than 1.2 mm.

Clean or expose the material to be tested and then carry out the test. It is thus possible to directly test on a material with a thickness greater than 1.2 mm, even if the material is joined together with other materials in two or more layers, without having to expose the material on the opposite side.

2.3 Attach the lip clamp



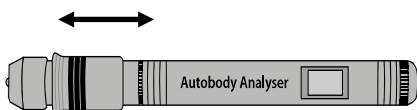
Attachment

Before attaching the lip clamp, make sure that the surface to be tested has been completely cleaned and that paint, coatings and dirt have been ground off.

Thereafter, attach the lip clamp and fasten it by tightening the threaded shaft with a 13 mm ring spanner, until the full clamping force has been attained.

The material is now ready to be tested with the Material Analyser.

2.4 Material testing



Activate the Material Analyser

To activate the Analyser, move the front spring-loaded clamping ring backwards until a click is heard. When this has been done, the Analyser is ready to carry out the material test.

Positioning the Analyser

Insert the analyser into the lip clamp. Make sure that the analyser is in contact with the material to be tested.

Testing

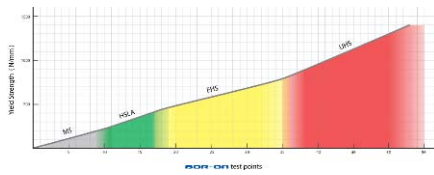
To carry out the test, move the front clamping ring forwards, in order to release the test mechanics of the analyser. A "click" is heard from the analyser and the display shows the measured material value.

Always measure with the Analyser vertical or horizontal – Never with an inclination greater than 90°.

NOTE!

IF A NEW TEST IS TO BE CARRIED OUT ON THE SAME MATERIAL, ALWAYS CHANGE THE POSITION OF THE RETAINER. NEVER MAKE A SECOND TEST IN THE SAME PLACE, SINCE THE MEASUREMENT VALUE WILL BE INFLUENCED. (It will show a higher value due to penetration/ influence on the material of the first test).

2.5 Determination of material type



Material type

Information about the type and nature of the material is obtained by comparing the measurement value indicated on the display of the Analyser with the GYSTEEL VISION general material graphs and material type descriptions. (See 3. GYSTEEL VISION graphs and material types)

Remember that some types of material overlap each other to a certain extent, so always assume that it is the higher (harder) material type if the measurement value is at the border between two types of material.

3. Software

3.1 Registration



Start the registration

Go to the address gys.jne.se and click "[Product & Warranty registration](#)" to start the registration of your product

[Product & Warranty Registration »](#)

Select language

Choose language in the list-box and click "Select" to start the registration with your selected language



Welcome to the "GYSTEEL VISION" Product and warranty registration form.
Please enter your information below to complete the registry.
Fields marked with * are required

Product Serial Number (*)
123-456

Company Name (*)
JNE AB

Contact Person (*)
Lars Nilsson

Address (*)
Box 200

City (*)
Årstadberg

ZIP / Postal Code (*)
59724

State

Country (*)
Sweden

Telephone
+46 120 109 90

Email (*)
info@jne.se

Verify Email (*)
info@jne.se

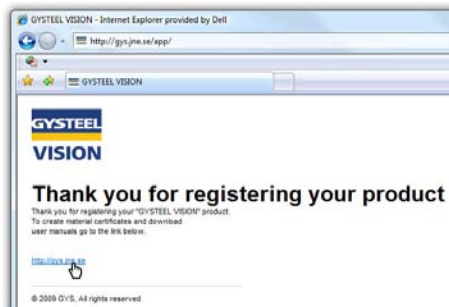
Fill out your information

Fill out all mandatory fields, marked with (*), and send the information by clicking "Send registration"

Serial number?

You will find your serial number on the outside of the GYSTEEL VISION storage case and on the Analyser itself





Confirmation

When you have sent the registration you will see a confirmation page with a link to the actual certificate software. An email will also be sent to your address to confirm that your registration have completed successfully.

3.2 Certificate

Enter Product Serial Number:

Login

Login to the software with your GYSTEEL VISION serial number that you filled out during the registration.
(You will find the serial number on the storage case and on the Analyser itself)

Create Certificate

Please select language :

English

Choose language to create certificate

Choose language in the list-box under "Create Certificate" and click "Select"

1. Please select language :

English

2. Please select language :

English

English
Español
Italiano
Deutsch
Svenska

3. Please select language :

English

Fill out "Vehicle information"

"Vehicle make" is mandatory while Model, Year & License no. are optional "extra information" fields. All values will be on the certificate.

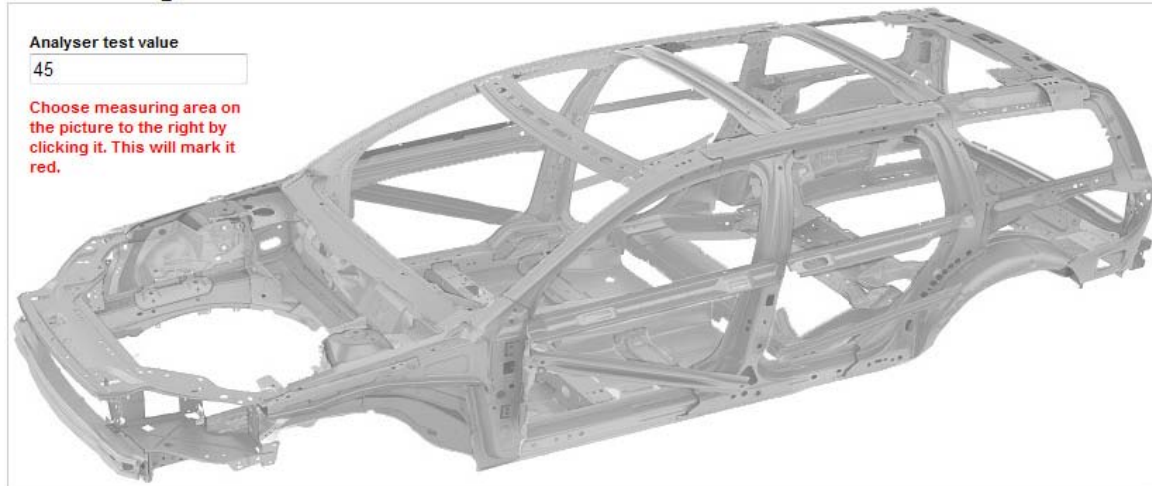
Vehicle information:

Vehicle make	Model	Year (model)	License.no.
Volvo	V70	2003	ABC 123

Enter Analyser test value

In the field "Analyser test value" you fill out the value given by the Analyser.

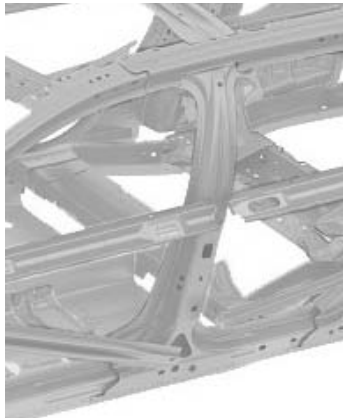
Measuring Situation 1:



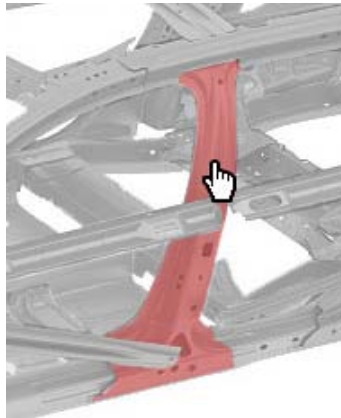
Mark area

Choose measured area on the schematic sketch by hovering the area and left click.

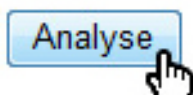
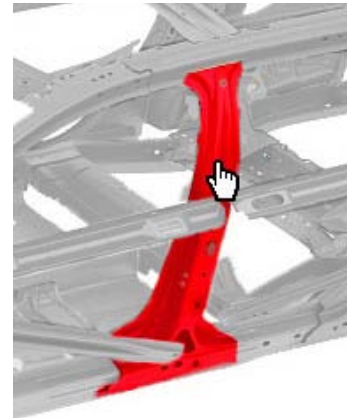
1.



2. Hover the area and click



3. The area is marked



Analyse

Measuring situation 2 is not mandatory to fill in but you can if you have measured several areas on the same vehicle and want them to go on the same certificate.

When fields are filled in and areas are marked click "Analyse" to create the certificate.

Analyze done!

Click here to view the result (opens in a new window)

Start new analyse.

Show Certificate

When the analyse is done you can open it by clicking "Click here to view the result".

The certificate opens as a PDF-file in a new window. From this window you can also save and print the file.

Certificate parts

Below follows a description of the different parts of the certificate

GYSTEEL VISION

Vehicle information

Vehicle information:

Vehicle make	Model	Year (model)	License.no.
Volvo	V70	2003	ABC 123

For more information see the manufacturers website at: <http://vccs.volvocars.se/wsguide/>
USA: www.volvotechinfo.com

Analysers test value: 45

TESTED MATERIAL INFORMATION:

UHS steel:
This material obtains its extremely high strength due to the addition of the element boron in combination with hardening of the component during manufacturing.

Welding and straightening:
Straightening is impossible because of the high elastic limit and hardness. Cracking is often encountered in attempts at straightening, which weakens the material. Application of heat reduces cracking but instead softens the material. The harder materials require special tools, ex. titanium bits for drilling, cutting etc.

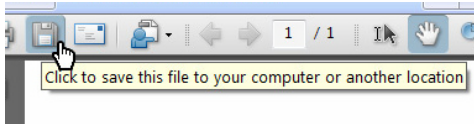
Warning regarding tested material:
CHECK AND FOLLOW THE MANUFACTURERS RECOMMENDED REPAIR METHOD FOR CORRECT REPAIR

Analysers test value

Information about the analysed material.

Measured area is marked with color codes according to the material graph

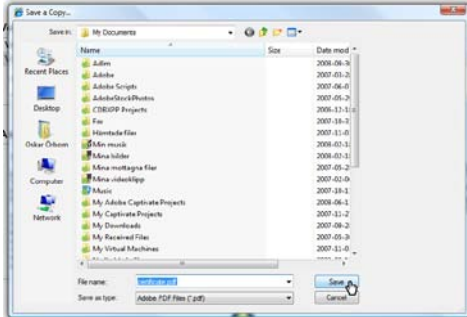
Links to the manufacturer's recommended repair method pages.



Save the certificate

Save the certificate by clicking the disc icon.

A dialog is shown where you choose where to save the file.



Print the certificate

Print the certificate by clicking the printer icon.

NOTE! Since the printouts contains color information they are best printed on a color printer.



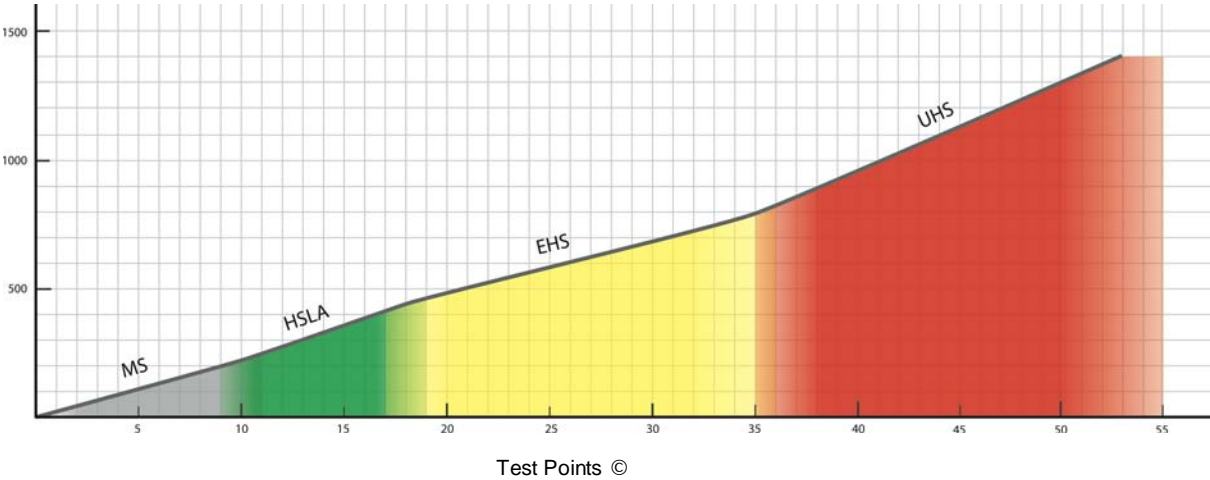
Close and create a new certificate

Close the window and click "Start new analyse" to start over and create a new certificate.



4. GRAPHS AND TYPES OF MATERIAL

4.1 GYSTEEL VISION Material graphs



Rapid guide - material test points:

	Test Points
MS - Soft to medium-strength steels	0 – 10
HSLA - High-strength low-alloy steels	10 – 18
EHS - Extra high-strength steels (Dual Phase, Trip etc)	18 – 35
UHS - Ultra high-strength steels (Boron or higher)	35 –

4.2 GYSTEEL VISION Material Types

10 - 18 Test Points

HSLA-Steel (High strength low alloy steel):

Is a low alloy high strength steel and obtains its increased strength through the alloying elements vanadium, niobium, or titanium etc.

Welding and straightening:

There can be some limitations in terms of heat distribution during welding and hot-straightening. Cold-straightening can however be carried out without affecting the material, but it is limited because of the high elastic limit and hardness. The harder materials require special titanium bits for drilling etc.

ALWAYS FOLLOW THE MANUFACTURERS RECOMMENDED REPAIR METHOD!

18 - 35 Test Points

EHS steel (Extra high strength steel):

Extra High Strength Steels obtain their increased strength by heat-treatment (hardening) during manufacturing phase, some of them also retained austenite, which is converted to martensite (!) during deformation.

Welding and straightening:

EHS Steels are very sensitive to heat, even at low temperatures and for short periods, so restrictions on heating and welding apply. Straightening is limited because of the high elastic limit and hardness. They require special tools, ex. titanium bits for drilling, cutting etc.

ALWAYS FOLLOW THE MANUFACTURERS RECOMMENDED REPAIR METHOD!

over 35 Test Points

UHS steel (Ultra high strength steel):

This material obtains its extremely high strength due to the addition of the element Bor in combination with hardening/heat treatment of the component during manufacturing phase.

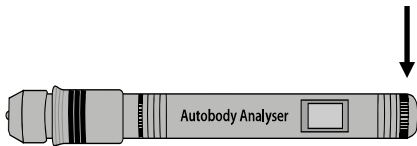
Welding and straightening:

Straightening is impossible because of the high elastic limit and hardness. Cracking is encountered in attempts to straightening, which weakens the material. Application of heat reduces cracking but instead softens the material. The harder materials require special tools, ex. titanium bits for drilling, cutting etc.

ALWAYS FOLLOW THE MANUFACTURERS RECOMMENDED REPAIR METHOD!

5. BATTERY

5.1 Change of battery



The GYSTEEL VISION Material Analyser is operated with 2 x 1.5 V button cell batteries.

The batteries are changed by carefully unscrewing the battery case at the display end of the Material Analyser.

The plus (+) pole on the batteries shall always be in the direction towards the Analyser.

NOTE!

The GYSTEEL VISION Material Analyser is a sealed unit (except for the battery case). To avoid incorrect measurement values and possible damage and to ensure that the guarantee on the product is valid, the unit must under no circumstances be opened, dismantled, altered or adjusted in any way.

6. RESPONSIBILITY

6.1 Responsibility

JNE AB and other directly or indirectly involved parties cannot be held responsible for any damage or loss, which may arise through any lack or deficiency in this information, or through the design, performance or recommendations of the product.

No part of this publication or the actual product may be copied in any form, or be stored in any other way in some system without the prior permission of JNE AB. The right to change is reserved.

7. RAPID GUIDE

7.1 Check list

Remember the following:

- Always grind off and carefully clean the surface to be tested
- Never use a rougher grinding material than the **3M Scotch Brite** soft grinding wheel.
- Never make a material test twice in the same place.
- Never make a test on double (2 or more) layers of material if the material is less than 1.2 mm thick.
- Always expose the material to be tested.
- Always measure with the Analyser vertical or horizontal – Never with an inclination greater than 90
- Never carry out tests on the material unless the Analyser has been fitted and fastened correctly in the lip clamp. (This will otherwise lead to an incorrect measurement value and, if the material is thin, the Analyser will not start at all).
- To rapidly check the function of the Analyser, make a test on the top of the lip clamp. A measurement value should then be displayed. If this does not occur, check the contact surfaces of the batteries, or if necessary change the batteries).
- Never unscrew the Analyser, since this means that the guarantee will no longer be valid and that its function can be affected.
- Remember that the measurement value given by the Analyser is an approximate value and is to be taken as a general indication of the nature and type of the material and not as an exact determination.
- **IMPORTANT: Always follow the vehicle manufacturer's recommended repair method in any repair work!**