



User Manual

OSA4 CoolCheck™ VERSION 1.54

Original Instructions

Guide to the OSA4 CoolCheck™ Analyzer



PREFACE

This user manual is the first part of the complete guide to the OSA4 CoolCheck™ Analyzer. This manual is intended to guide operators of the Analyzer through the normal procedures associated with processing samples.

This manual is intended for mechanics, technicians, or anyone else who wants to learn the proper way to analyze samples using the OSA4 CoolCheck™ Analyzer. The introductory sections of this manual orient the user with the equipment and supplies that are used. The reader is taken through a step-by-step process of how to analyze an oil sample.

When pulling samples from the vehicle-----

SAFETY WARNING: REMOVAL OF RADIATOR CAP IS DANGEROUS

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CoolCheck™ Manual Outline

Introduction

<i>Overview</i>	4
<i>Safety Information</i>	5
<i>Necessary Supplies</i>	5
<i>Analyzer Features</i>	6

Getting Started

<i>Setup</i>	7
<i>Instrument Setup</i>	8

How to Analyze a Coolant Sample

<i>Analyzing a Sample</i>	10
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Pulling a Coolant Sample

<i>Pulling a Sample</i>	13
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INTRODUCTION

OVERVIEW

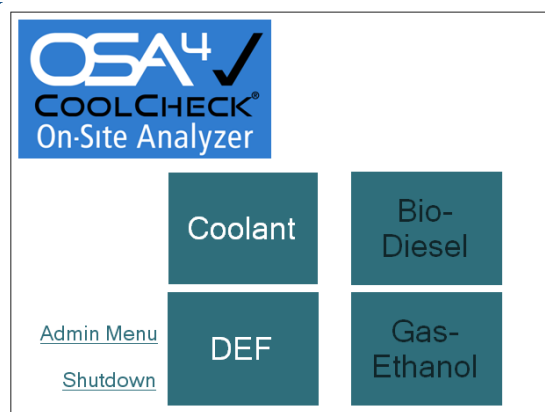
This is the User Manual for the OSA4 CoolCheck™ Analyzer. The Analyzer is a tool for evaluating the condition of coolant. The Analyzer tests for qualitative and quantitative properties of the coolant. By comparing test results to normal conditions, the analyzer can determine the physical properties of the coolant.

The OSA4 CoolCheck™ Analyzer is an instrument that integrates two sources with a spectrometer. This dual path length design allows the Analyzer to capture both NIR and UV spectral ranges.

An onboard computer controls the spectrometer and tabulates the results based on the data gathered. The software generates a report that includes the test results and a grading code. The code is a summary of the test results and gives an indication of the coolant properties..

This manual is about operating the OSA4 CoolCheck™ Analyzer. The introduction will acquaint you with the features of the Analyzer and bring your attention to safety concerns. In the following sections you will be given details on how to properly analyze a sample of coolant and produce useful reports.

Always leave your CoolCheck™ Analyzer plugged in and powered up. This eliminates warm-up time and ensures more repeatable results.



If it becomes necessary to shut the unit down, select the Shutdown link from Main Menu - Select OK - then turn off power. Please note that these units are equipped with an internal UPS (uninterruptible power supply) and will experience a 5-10 second delay before powering down.

SAFETY INFORMATION

To reduce the risk of injury, do not open the instrument panel. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

Always keep the Sample Chamber Cover in a closed position to keep contaminants from entering the inside of the Analyzer.

SAFETY WARNING: REMOVAL OF RADIATOR CAP IS DANGEROUS

Radiators are under pressure. Hot coolant under pressure can cause severe burns. Do not remove the radiator cap on a hot engine. Wait until the temperature is below 50° Celsius (120° Fahrenheit) before removing the cap. Failure to wait may result in personal injury from hot coolant spray or steam. Remove cap slowly to relieve all pressure.

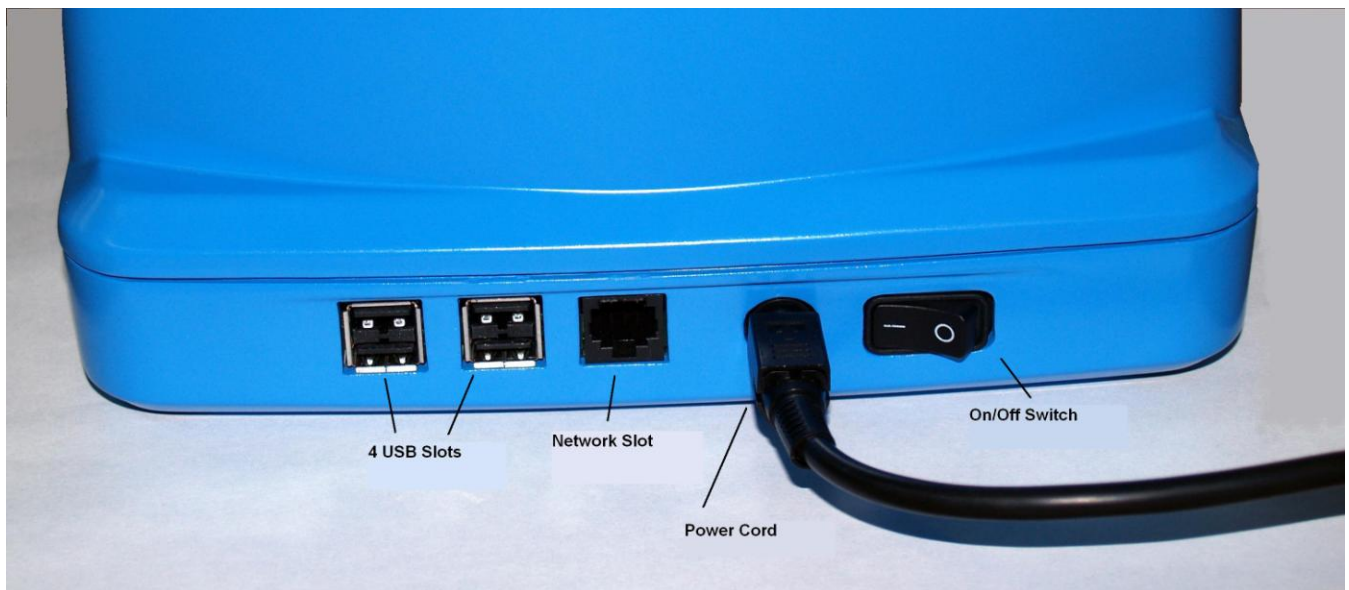
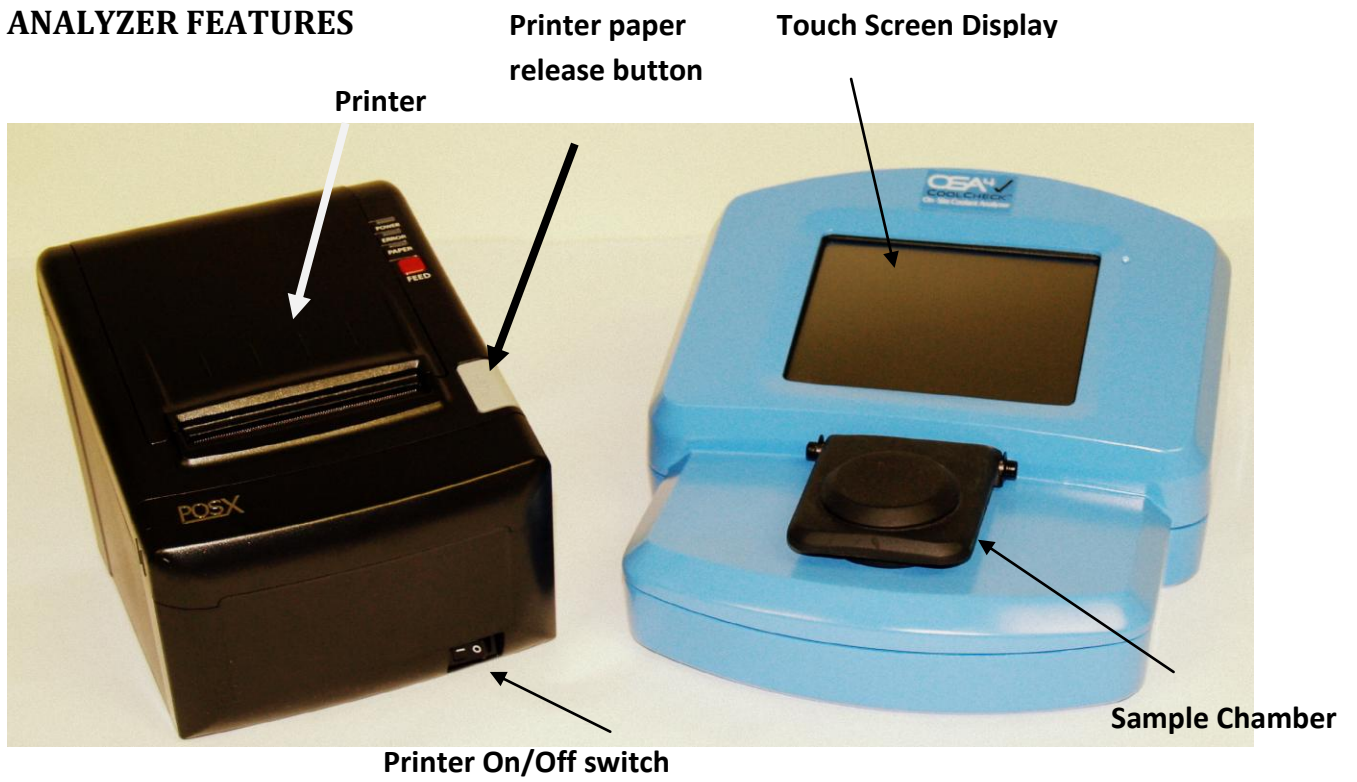
Please consult 'Pulling a Coolant Sample' addendum before pulling any samples.

NECESSARY SUPPLIES

Each CoolCheck™ kit will come with the following supplies.

1. OSA4 CoolCheck™ Analyzer
2. Power cable
3. EVO POS-X Printer
4. 1 roll of thermal printer paper
5. USB cable for printer
6. Vampire suction pump for sample extraction
7. Tubing for sample extraction
8. 200 sample bottles
9. Control samples – P850, R500, DEF100

ANALYZER FEATURES



GETTING STARTED

1. Carefully un-box the OSA4 CoolCheck™ Analyzer kit and ensure all the parts are contained within the box by checking against the necessary supplies list.
2. Remove each component from its individual container and place all the material on the bench where the unit will be operated.
3. Plug the power cord into the back of the CoolCheck™ (illustrated in Analyzer Features) and then plug it into the wall. The power cord and supply is rated at both 110 VAC or 220VAC.
4. Switch the CoolCheck™ on (switch located on back as shown above) and ensure it boots up to the User Interface. This should take about 30 seconds.
5. Plug the power cord into the back of the printer and plug into the wall. The power cord and supply is rated at both 110 VAC or 220VAC. Turn the printer on by pushing the button located on the right side of the printer. Load the roll of paper into the printer by pushing the gray printer paper release button on top of the printer (illustrated in Analyzer Features). Lower the roll into the chamber and feed the paper out, closing the lid as you proceed.
6. Plug the supplied USB cable into the printer and then plug the other end into one of the open USB slots on the back of the Analyzer.
7. The printer and Analyzer have been pre-programmed to work together once they have been connected. Follow the next steps to properly setup the Analyzer.

Always leave your CoolCheck™ Analyzer plugged in and powered up. This eliminates warm-up time and ensures more repeatable results.

If you must shutdown the CoolCheck™ - select the Shutdown link from the main screen – Press OK and turn off unit.

INSTRUMENT SETUP

Every day when beginning your sample run, or whenever the unit has been powered back up, the CoolCheck™ will need to run through a quick Instrument setup. This setup consists of taking a series of background samples to acclimate the unit.

When the unit is powered on-- The first instructions will ask you to run an EMPTY chamber calibration as shown in the message below. Ensure that NO bottle is in the chamber and follow the instructions.

Instrument Setup Required

Please ensure NO bottle is in the chamber,
and close the lid.

Press 'Start' to start the calibration.

Cancel

Start

After a few seconds a second message will ask you to place an empty/clean bottle in the sample chamber as shown in the message below.


Instrument Setup Required

Please place an 'empty/clean' bottle into the
instrument and close the sample chamber lid.

Press START to begin instrument setup.

Cancel

Start

Lift the Sample Chamber Cover straight up and notice the  groove design that is located inside the sample chamber.



Insert the empty clean bottle into the sample chamber making sure to line up the pattern on the bottle with the grooves inside the sample chamber.



Select Start on the Instrument setup screen and the unit will go through a setup/warm-up process.

Instrument Setup

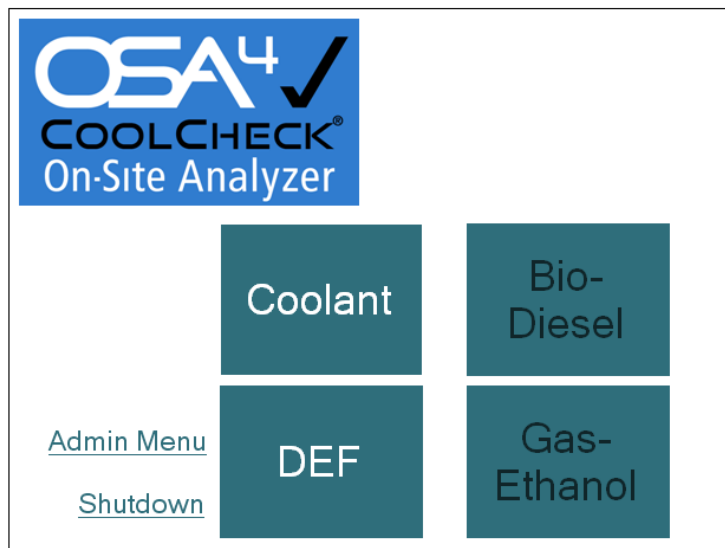
Please stand by while instrument warms up.
This will take approximately 1 minute(s)

Cancel

Start

HOW TO ANALYZE A COOLANT SAMPLE

After the setup process the analyzer will go directly to the User Interface screen and samples are now ready to be processed.



Select the Coolant button from the screen above – (as of time of print for this manual – only Coolant and DEF tests are available. The other buttons will be grayed out until software is available)

Enter the Unit ID from the Vehicle in which the sample was taken in the provided space. A pop-up keyboard is available to properly enter the data. Select Enter when finished.

Enter Unit ID:

Print Report:



To print a report after the sample is finished select YES or select NO if no report is needed.

Enter Unit ID:

Print Report:

Sample Instructions will be shown asking the operator to ensure that NO sample bottle is in the chamber as shown in the message below.

Non-Bottle Calibration Instructions

Please remove bottle from chamber and ensure that the lid is closed.

Press Start to continue.

Cancel

Start

Press Start when you have ensured that the sample chamber is empty. After a few seconds a second message will appear asking you to place the sample bottle into the sample chamber as shown in the message below.

Sample Instructions

Please place sample bottle into the instrument and close the sample chamber lid.

Press START to begin.

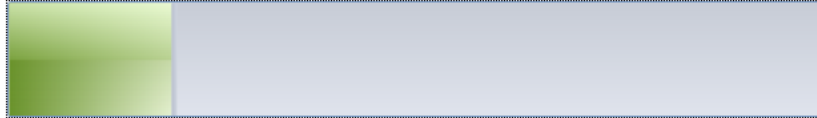
Cancel

Start

Follow the instructions and Press Start when the sample bottle is fully inserted into the chamber. The sampling process will take about 40 seconds and a status bar will track the acquisition.



Initializing Instrument. Please stand by...



When the sample is finished the report is automatically printed out (if Print Report was selected on previous screen) and the results will be shown on the screen. They will be divided into 2 pages of results.

OK/GOOD		
ID:	yz9087	
Type:	ELC	
Clarity:	Clear	N
Contamination:	None	N
Color:	Pink-Purple	
Freeze Point:	-6 F	N
Glycol Content:	35.7%	N
Boil Point:	219 F	N
Nitrites:	800 PPM	N

Re-Print

Repeat Scan

Export ▾

Finish

You will have 4 options from this page – Re-print, Repeat Scan, Export the data, and Finish to continue to the next sample.

For future use when you run the next sample – previous sample unit id

PULLING A COOLANT SAMPLE

*******Always pull the sample from the radiator and NOT the coolant reservoir*******

SAFETY WARNING: REMOVAL OF RADIATOR CAP IS DANGEROUS

Radiators are under pressure. Hot coolant under pressure can cause severe burns. Do not remove the radiator cap on a hot engine. Wait until the temperature is below 50° Celsius (120° Fahrenheit) before removing the cap. Failure to wait may result in personal injury from hot coolant spray or steam. Remove cap slowly to relieve all pressure

- Always pull a sample when fluid has been properly mixed (but following hot radiator guidelines)
- Cut a 2 foot section of tubing and insert into the opening of the extraction pump with about 1 inch extending down and tighten down the fitting
- Screw the sample bottle onto the extraction pump head
- CAREFULLY remove the radiator cap and Insert the tubing into the liquid going down 6 inches into the radiator. Never pull from the bottom of the radiator.
- Pull back the pump plunger 2 or 3 times to get the flow of the coolant moving into the bottle
- To stop the flow of oil into the sample bottle, simply unscrew the sample bottle. This stops the suction and the flow
- Immediately cap the sample being careful not to get the cap dirty
- Mark the Unit ID on top of sample for easy reference

For any technical questions or help – Call 1-877-685-4357