

SERVICE MANUAL

9050L / 9070L / 9070M
Grape Harvester

Part number 51697921

English

November 2019



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INTRODUCTION

Foreword - Important notice regarding equipment servicing

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given, and using, whenever possible, the special tools.

Anyone who performs repair and maintenance operations without complying with the procedures provided herein shall be responsible for any subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional, or local dealers, reject any responsibility for damages caused by parts and/or components not approved by the manufacturer, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages caused by parts and/or components not approved by the manufacturer.

The manufacturer reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at time of publication but are subject to change without notice.

In case of questions, refer to your NEW HOLLAND Sales and Service Networks.

Foreword

IMPORTANT INFORMATION

All repair and maintenance operations described in this manual must be carried out exclusively by the New Holland Service network, strictly complying with the instructions provided and using specific tools as required.

Any operator who carries out the operations specified in this document without complying strictly with the instructions provided shall be personally liable for the damages that may result.

The manufacturer and all organizations in its distribution chain, including, without limitation, national, regional, and local dealers, do not accept any liability for damages resulting from a malfunction of parts and/or components not approved by the manufacturer and used for maintenance operations and/or repair of products manufactured or marketed by the manufacturer. In no case is a warranty granted to the product manufactured or marketed by the manufacturer in case of damage caused by improper operation of parts and/or components not approved by the manufacturer.

No reproduction, partial or complete, of the text or illustrations is permitted.

Safety rules

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

 DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

 WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

 CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: Notice indicates a situation that, if not avoided, could result in machine or property damage.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

Safety rules - Ecology and the environment

Soil, air, and water quality is important for all industries and life in general. When legislation does not yet rule the treatment of some of the substances that advanced technology requires, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

Familiarize yourself with the relative legislation applicable to your country, and make sure that you understand this legislation. Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, anti-freeze, cleaning agents, etc., with regard to the effect of these substances on man and nature and how to safely store, use, and dispose of these substances.

Helpful hints

- Avoid the use of cans or other inappropriate pressurized fuel delivery systems to fill tanks. Such delivery systems may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of these products contain substances that may be harmful to your health.
- Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
- Avoid spillage when you drain fluids such as used engine coolant mixtures, engine oil, hydraulic fluid, brake fluid, etc. Do not mix drained brake fluids or fuels with lubricants. Store all drained fluids safely until you can dispose of the fluids in a proper way that complies with all local legislation and available resources.
- Do not allow coolant mixtures to get into the soil. Collect and dispose of coolant mixtures properly.
- The air-conditioning system contains gases that should not be released into the atmosphere. Consult an air-conditioning specialist or use a special extractor to recharge the system properly.
- Repair any leaks or defects in the engine cooling system or hydraulic system immediately.
- Do not increase the pressure in a pressurized circuit as this may lead to a component failure.
- Protect hoses during welding. Penetrating weld splatter may burn a hole or weaken hoses, allowing the loss of oils, coolant, etc.

Battery recycling

Batteries and electric accumulators contain several substances that can have a harmful effect on the environment if the batteries are not properly recycled after use. Improper disposal of batteries can contaminate the soil, groundwater, and waterways. NEW HOLLAND strongly recommends that you return all used batteries to a NEW HOLLAND dealer, who will dispose of the used batteries or recycle the used batteries properly. In some countries, this is a legal requirement.



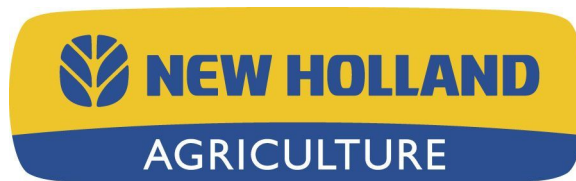
Mandatory battery recycling

NOTE: The following requirements are mandatory in Brazil.

Batteries are made of lead plates and a sulfuric acid solution. Because batteries contain heavy metals such as lead, CONAMA Resolution 401/2008 requires you to return all used batteries to the battery dealer when you replace any batteries. Do not dispose of batteries in your household garbage.

Points of sale are obliged to:

- Accept the return of your used batteries
- Store the returned batteries in a suitable location
- Send the returned batteries to the battery manufacturer for recycling

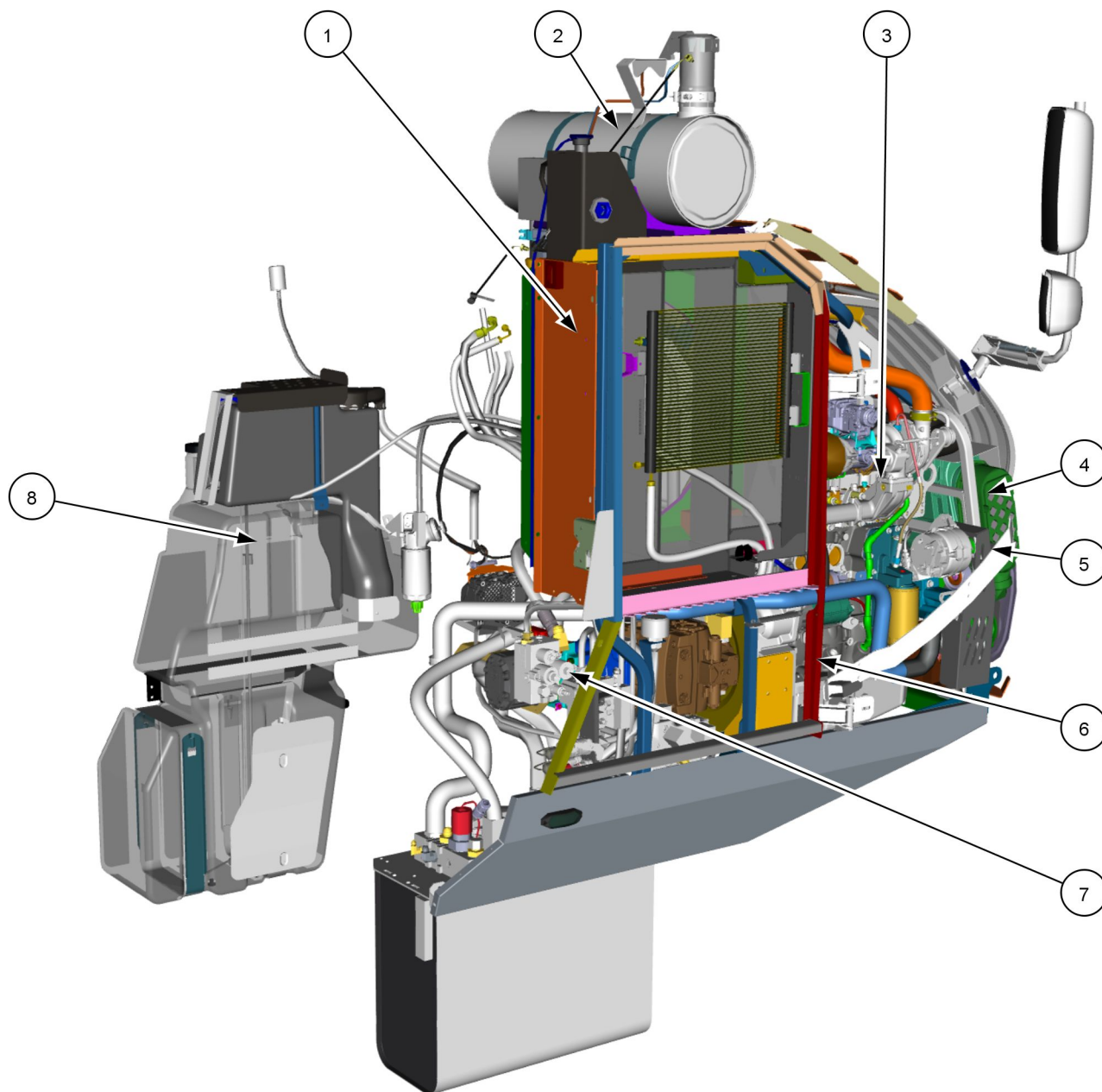


SERVICE MANUAL

Engine

**9050L
9070L
9070M**

Engine and crankcase - Overview - GENERAL COMBUSTION ENGINE

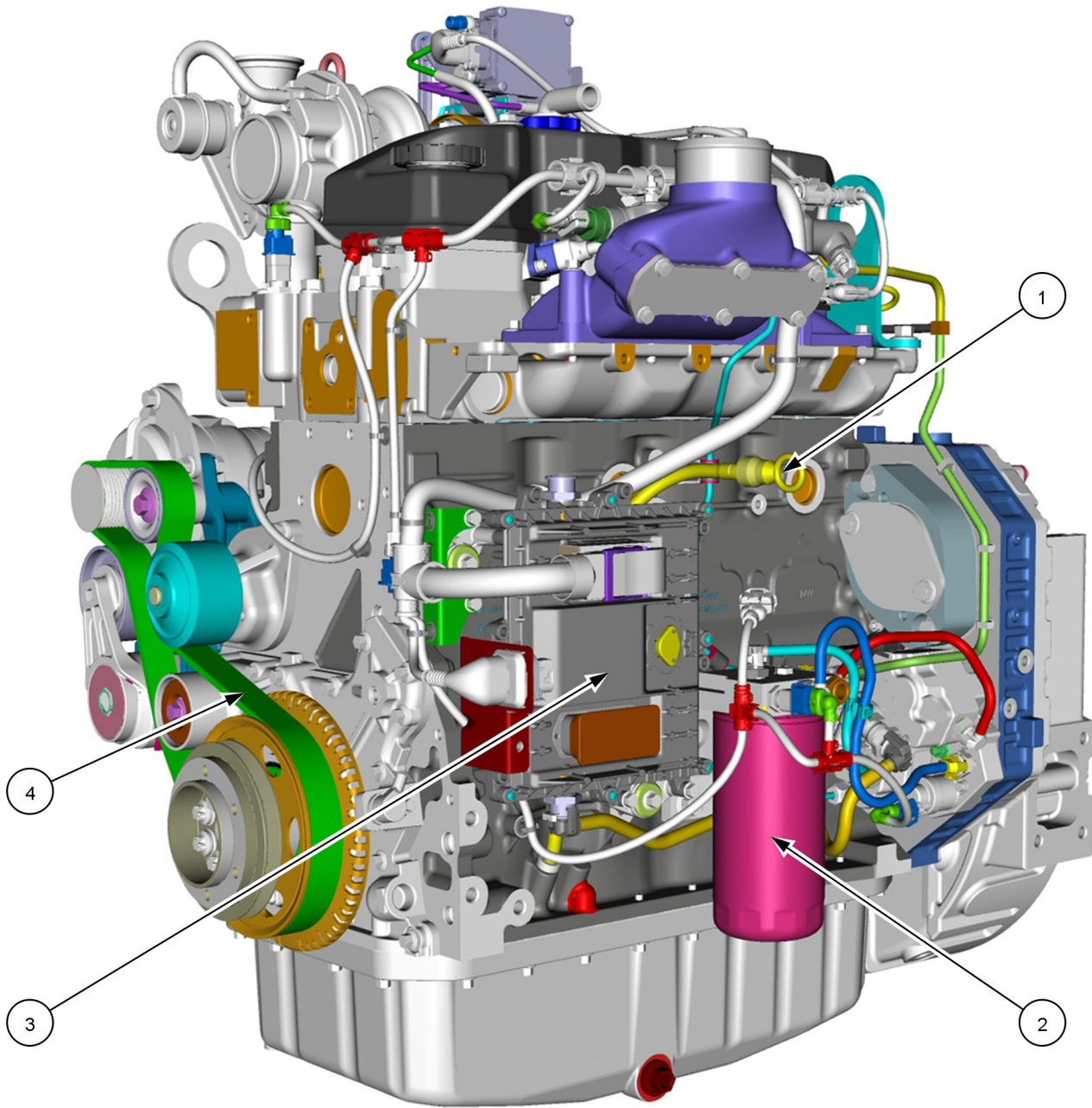


COIL17GR00851UA 1

1	Cooling system	Radiator - Detailed view - Engine cooling (10.400)
2	Exhaust gas after treatment - SCR	Selective Catalytic Reduction (SCR) exhaust treatment - Detailed view (10.500)
3	Engine – General specifications	Engine and crankcase - Detailed view - Engine general information (10.001)
4	Air cleaner	Engine and crankcase - Detailed view - Air filter (10.001)
5	Servo belt	Engine and crankcase - Detailed view - Servo belt (10.001)
6	Engine mount	Engine and crankcase - Detailed view of the engine frame - 9000 M & L (10.001)
7	Pumps	Engine and crankcase - Detailed view - Pumps (10.001)
8	Fuel system	Fuel tanks - Detailed view - Fuel System (10.216)
9	Flector	Engine and crankcase - Detailed view - The flex disc (10.001)

Engine and crankcase - Detailed view - Engine general information

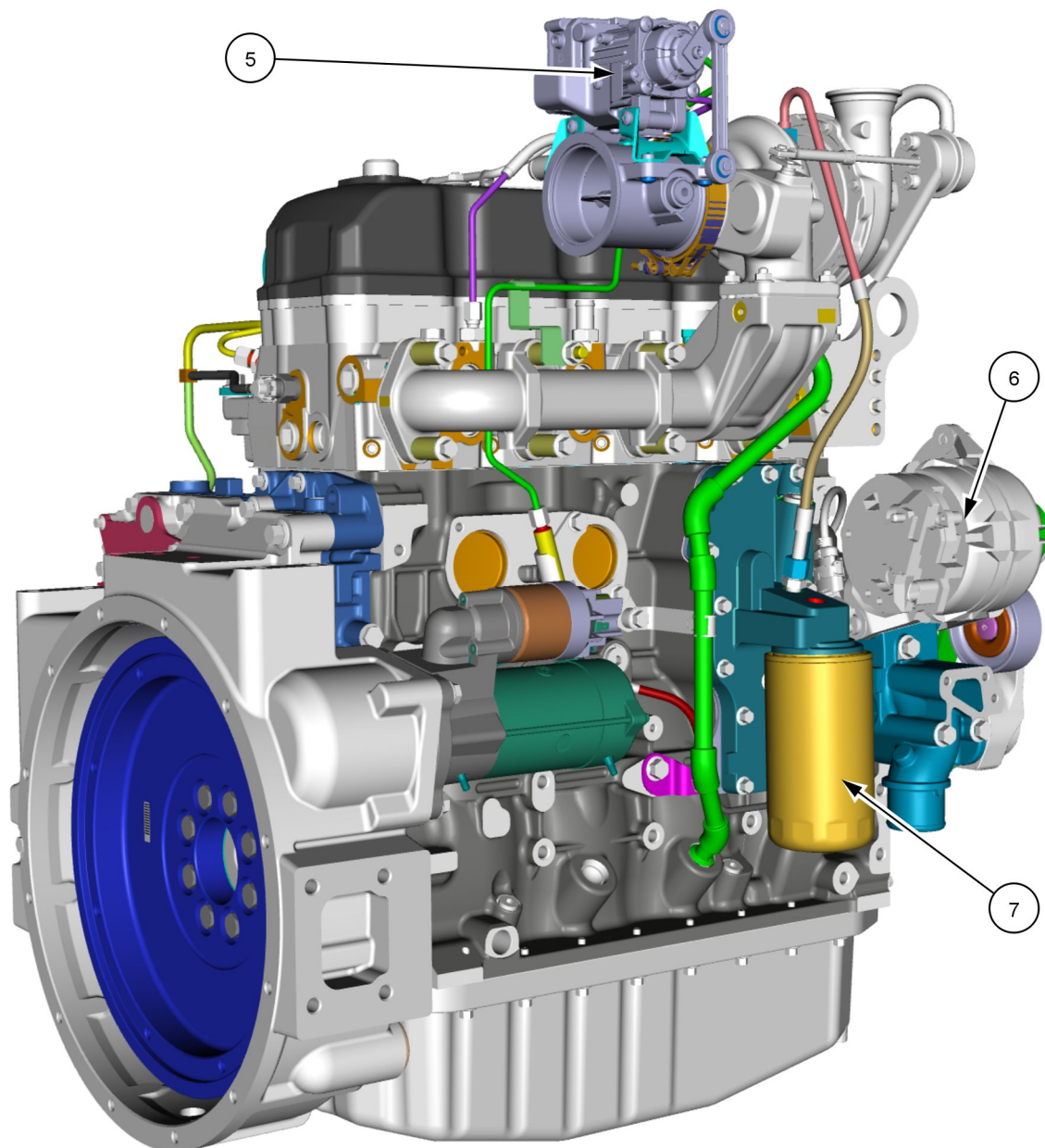
Location of components



COIL17GR00853UA 1

DESCRIPTION

- 1 Engine oil dipstick
- 2 Fuel filter
- 3 ECU
- 4 Servo belt



COIL17GR00852UA 2

DESCRIPTION

- 5 Exhaust flap
- 6 Alternator
- 7 Oil filter

Oil filter

The oil filter is located on the inner face of the engine. It should be replaced every **600 h** or every year.

Engine breather filter

The breather filter is made of foam. It should be replaced every **1500 h**. To replace this filter, remove the rocker cover.

Preservation

Change the engine breather filter	Engine - Replace (10.001)
Replace fuel filters	Fuel filters - Replace (10.206)

Engine - Engine and crankcase

Draining and replacing the engine oil filter	Engine lubrication system - Replace (10.304)
Checking the engine oil level	Engine lubrication system - Check (10.304)
Adjusting the spacing between the engine valve rockers	Engine - Check (10.001)
Draining the fuel filter water separator	Fuel filters - Drain fluid (10.206)

From series 098 onward the alternator housing has been revised to prevent any interference.

From series 095 onward, access to the drain plug has been improved.

Fuel tanks - Detailed view - Fuel System

Volume

The fuel tank is on the left-hand side of the machine.

The tank capacity is **270.0 L (71.3 US gal)** for 9000M, L and X models. The fuel tank has a fuel gauge.

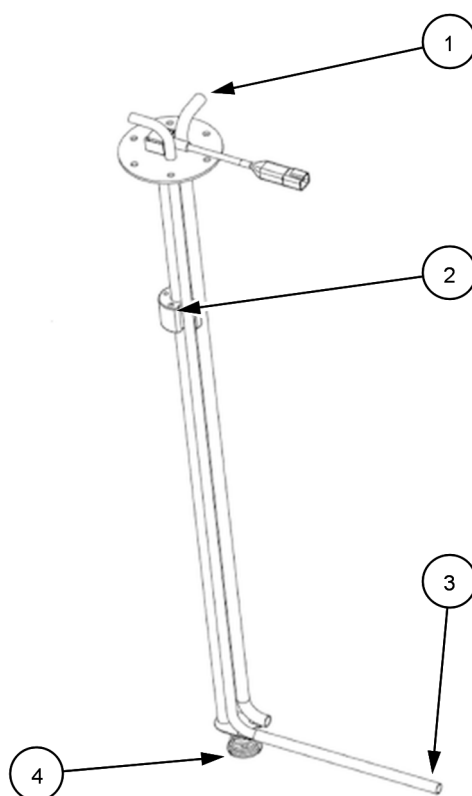
An anti-theft cap is available in a kit.

Diesel gauge

The gauge comprises three tubes: a suction tube, a return tube, and a third tube with a float that contains a magnet, which indicates the fuel level.

The gauge also contains a resistor with values that vary based on the amount of fuel.

To check the operation of the sensor (stuck float), add fuel and observe whether the value of the resistor changes.



COIL15GR01348QA 1

DESCRIPTION

- 1 Suction operation
- 2 Floater
- 3 Return
- 4 Spring

Voltage	Effective volume	Alarm	Level indicated on the IntelliView™ IV
1,57 V	0.0 L (0.0 US gal)	Alarm 1102	0%
1,52 V	20.0 L (5.3 US gal)	Alarm 1102	0%
1,47 V	28.3 L (7.5 US gal)	Alarm 1102	0%
1,44 V	34.0 L (9.0 US gal)		2%
1,41 V	39.0 L (10.3 US gal)		4%

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1,38 V	43.6 L (11.5 US gal)		6%
1,35 V	48.3 L (12.8 US gal)		8%
1,32 V	52.9 L (14.0 US gal)		10%
1,29 V	58.0 L (15.3 US gal)		12%
1,26 V	62.8 L (16.6 US gal)		14%
1,23 V	68.3 L (18.0 US gal)		17%
1,15 V	82.8 L (21.9 US gal)		23%
1,07 V	98.6 L (26.0 US gal)		29%
0,99 V	113.0 L (29.9 US gal)		35%
0,91 V	131.5 L (34.7 US gal)		43%
0,82 V	146.2 L (38.6 US gal)		49%
0,74 V	150.7 L (39.8 US gal)		51%
0,66 V	170.2 L (45.0 US gal)		59%
0,57 V	189.6 L (50.1 US gal)		67%
0,50 V	213.0 L (56.3 US gal)		76%
0,43 V	237.0 L (62.6 US gal)		86%
0,35 V	251.7 L (66.5 US gal)		92%
0,27 V	264.9 L (70.0 US gal)		98%
0,22 V	270.0 L (71.3 US gal)		100%

FILTRATION

The fuel is drawn in at the base of the tank. It is initially filtered by the diesel pre-filter on the left-hand side of the machine under the cab. The prefilter is also the water separator. It has a water-in-fuel sensor (**0 V** if water is present and **12 V** if no water is present) and a hand pump to prime the fuel supply.

The fuel then travels to the right-hand side of the machine. It is filtered again by the main diesel filter. The fuel then passes into the ECU to be cooled.

Finally, the fuel flows under pressure to the injectors for the engine.

The fuel tank is kept in place thanks to a metal strap. This strap can be adjusted thanks to buffers on the side. These adjusters mean the tank can be held better by eliminating the gap between the tank and the strap.