SERVICE MANUAL

9090X Olive Side Conveyor TIER 3
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Grape Harvester

Part number 51697772
English
November 2019

NEW HOLLAND AGRICULTURE

SERVICE MANUAL

Extra High Capacity TIER 3

Link Product / Engine

Product	Market Product	Engine
9090X Olive TIER 3	Australia New Zealand	F4HE9687
9090X Side Conveyor TIER 3	Australia New Zealand	F4HE9687
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Contents

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.

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.

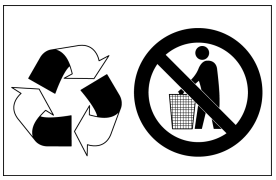
Familiarize yourself with the relative legislation applicable to your country, and make sure that you understand this legislation. Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, anti-freeze, cleaning agents, etc., with regard to the effect of these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

Safety rules

PRECAUTIONARY STATEMENTS
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 injury or death.

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.

⚠ CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. The color associated with CAUTION is YELLOW.

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

NOTICE: *Install new decals if the old decals are destroyed, lost painted over or cannot be read. When parts are replaced that have decals make sure you install a new decal with each new part.*

MACHINE SAFETY

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INFORMATION

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ACCIDENT PREVENTION

⚠ WARNING

Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.
1. **Disengage all drives.**
2. **Engage parking brake.**
3. **Lower all attachments to the ground, or raise and engage all safety locks.**
4. **Shut off engine.**
5. **Remove key from key switch.**
6. **Switch off battery key, if installed.**
7. **Wait for all machine movement to stop.**

Failure to comply could result in death or serious injury.

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Most accidents or injuries that occur in workshops are the result of non compliance to simple and fundamental safety principles. For this reason, IN MOST CASES THESE ACCIDENTS CAN BE AVOIDED by applying the fundamental safety principles, acting with the necessary caution and care.

Accidents may occur with all types of machine, regardless of how well the machine in question was designed and built.

SAFETY REQUIREMENTS FOR FLUID POWER SYSTEMS AND COMPONENTS - HYDRAULICS (EUROPEAN STANDARD EN982)

- Flexible hose assemblies must not be constructed from hoses which have been previously used as part of a hose assembly.
- Do not weld hydraulic pipes: when flexible hoses or piping are damaged, replace them immediately.
- It is forbidden to modify a hydraulic accumulator by machining, welding or any other way.
- Before removing hydraulic accumulators for servicing, the liquid pressure in the accumulators must be reduced to zero.
- Pressure check on hydraulic accumulators must be carried out by a method recommended by the accumulator manufacturer.
- Take care not to exceed the maximum allowed pressure of the accumulator. After any check or adjustment, check for leakages or gas in the hoses or pipes.

SAFETY RULES

General guidelines

- Carefully follow specified repair and maintenance procedures.
- When appropriate, use P.P.E (Personal Protective Equipment)
- Do not wear rings, wristwatches, jewellery, unbuttoned or loose articles of clothing such as: ties, torn clothing, scarves, open jackets or shirts with open zips that may remain entangled in moving parts. It is advised to wear approved safety clothing, e.g.: non-slip footwear, gloves, safety goggles, helmets, etc.
- Do not carry out repair operations with someone sitting in the driver's seat, unless the person is a trained technician who is assisting with the operation in question.
- Do not operate the machine or use any of the implements from different positions, other than the driver's seat.
- Do not carry out operations on the machine with the engine running, unless specifically indicated.
- Bring all hydraulic cylinders to the home positions (down, retracted, etc.) before engine shut down.
- Stop the engine and check that the hydraulic circuits are pressure-free before removing caps, covers, valves, etc.
- All repair and maintenance operations must be carried out using extreme care and attention.
- Service steps and platforms used in the workshop or elsewhere should be built according to the applicable standards and legislation.
- Disconnect the power take off (p.t.o). and label the controls to indicate that the machine is being serviced. Any parts that are to be raises must be locked in position.
- Brakes are inoperative when manually released for repair or maintenance purposes. Use blocks or similar devices to secure the machine in these conditions.
- Only use specified towing points for towing the machine. Connect parts carefully. Make sure that all pins and/or locks are secured in position before applying traction. Never remain near the towing bars, cables or chains that are operating under load.
- When loading or unloading the machine from the trailer (or other means of transport), select a flat area capable of sustaining the trailer or truck wheels. Firmly secure the machine to the truck or trailer and lock the wheels in the position used by the carrier.
- Electric heaters, battery-chargers and similar equipment must only be powered by auxiliary power supplies with efficient ground insulation to avoid electrical shock hazards.
- Always use suitable hoisting or lifting devices when raising or moving heavy parts.

SERVICE MANUAL

Engine

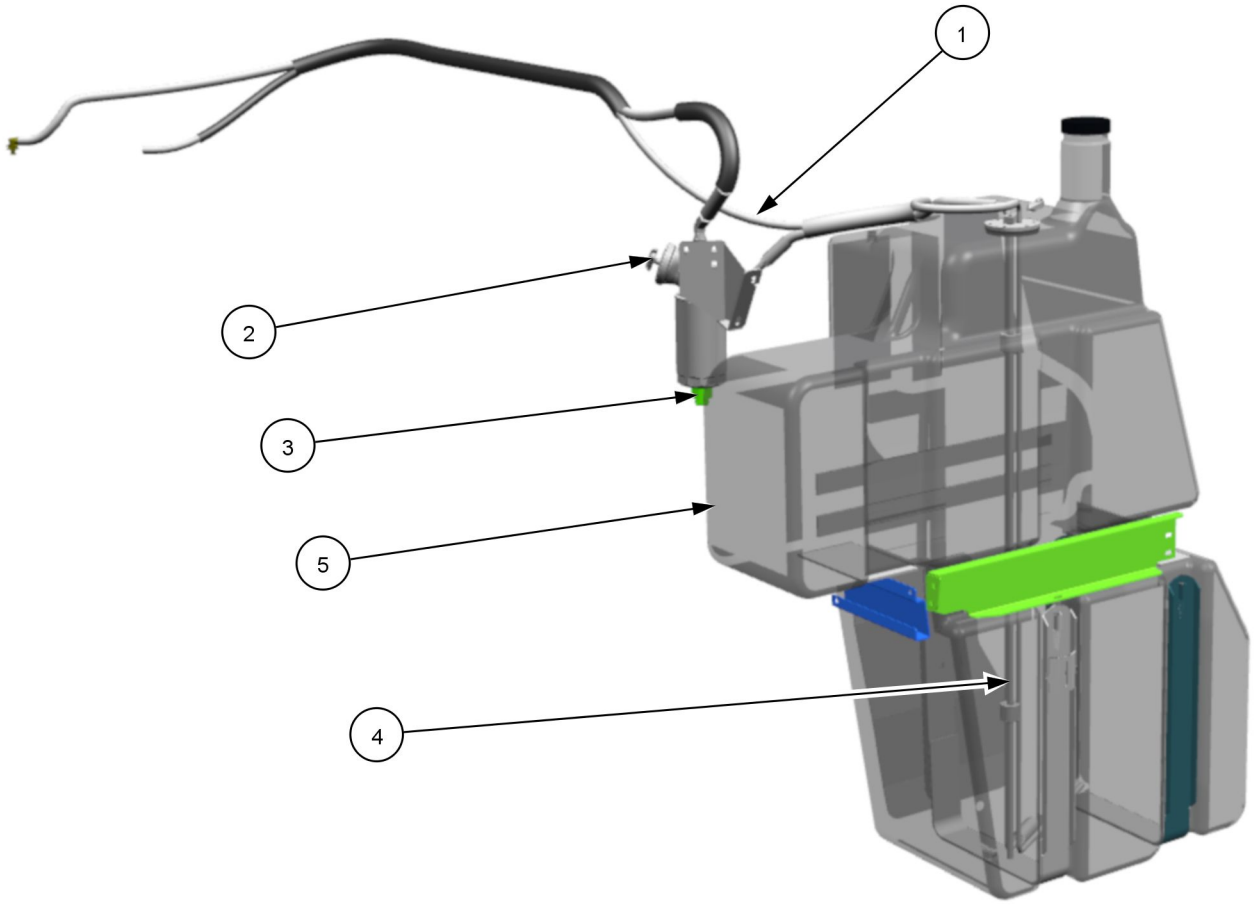
Extra High Capacity TIER 3

Fuel tanks - Detailed view - Fuel System

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

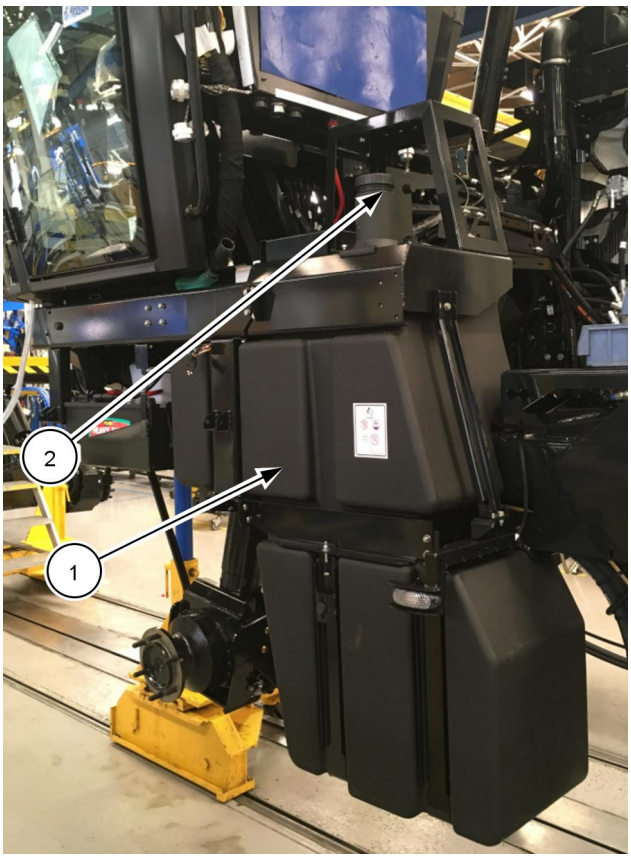
The tank capacity is **270.0 L** (**71.3 US gal**). The fuel tank has a fuel gauge.

An anti-theft cap is available in a kit.



COIL18GR00734UA 1

1	Fuel return
2	Manual priming pump
3	Pre-filter + water separator
4	Fuel Gauge
5	Tank



COIL18GR01096TA 2

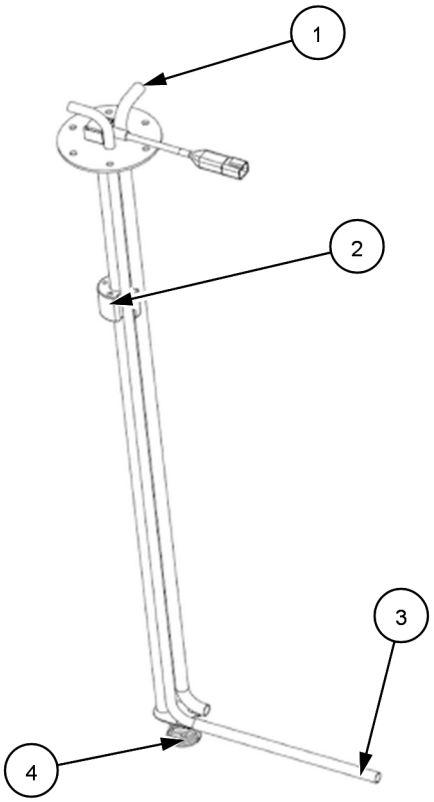
1	Tank
2	Filler cap

The fuel gauge

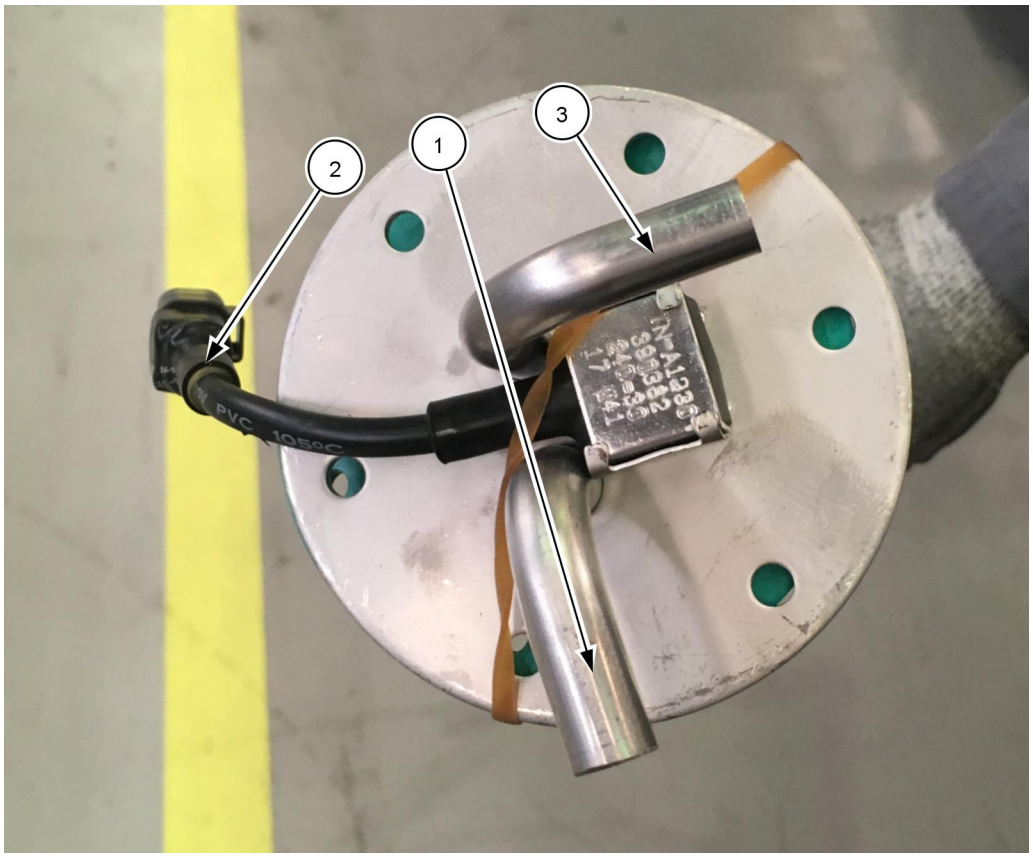
The gauge comprises three tubes: a suction tube, a return tube, and a third tube with a float that contains a magnet, which indicates the fuel level.

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 3



COIL16GR00710TA 4

1	Suction operation
2	Floater, gauge
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%**
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%**

The circuit and the fuel filter

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 (if water is present = **0 V** and if no water is present = **12 V**) 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.