

# **SERVICE MANUAL**

**CR6090 / CR7090 / CR8080 /  
CR8090 / CR9090**

**Tier 4a**  
**Combine**

**Part number 84561155**  
1st edition English  
July 2012



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# INTRODUCTION

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### Foreword

CR6090 [YBG115106 - ] NA, CR8080 [YBG115106 - ] NA, CR9090 [YBG115106 - ] NA, CR9090 NA, CR7090 [YBG115106 - ] NA, CR7090, CR8090 [YBG115106 - ] NA, CR8090

Soil, air, and water are vital factors of agriculture and life in general. When legislation does not yet rule the treatment of some of the substances required by advanced technology, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

**NOTE:** *The following are recommendations that may be of assistance:*

- Become acquainted with and ensure that you understand the relative legislation applicable to your country.
- Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, antifreeze, cleaning agents, etc., with regard to their effect on man and nature and how to safely store, use, and dispose of these substances.
- Agricultural consultants will, in many cases, be able to help you as well.

### Helpful hints

- Avoid filling tanks using cans or inappropriate pressurized fuel delivery systems that may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of them 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 draining off used engine coolant mixtures, engine, gearbox and hydraulic oils, brake fluids, etc. Do not mix drained brake fluids or fuels with lubricants. Store them safely until they can be disposed of in a proper way to comply with local legislation and available resources.
- Modern coolant mixtures, i.e. antifreeze and other additives, should be replaced every two years. They should not be allowed to get into the soil, but should be collected and disposed of properly.
- Do not open the air-conditioning system yourself. It contains gases that should not be released into the atmosphere. Your NEW HOLLAND AGRICULTURE dealer or air conditioning specialist has a special extractor for this purpose and will have to recharge the system properly.
- Repair any leaks or defects in the engine cooling 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 as penetrating weld splatter may burn a hole or weaken them, allowing the loss of oils, coolant, etc.

---

## Safety rules

CR6090, CR8080 [YBG115106 - ], CR8080 NA, CR9090 [YBG115106 - ], CR9090 NA, CR7090, CR8090

### 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 which, if not avoided, will result in death or serious injury.

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

 CAUTION, used with the safety alert symbol, indicates a hazardous situation which, 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 which, 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 which 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.

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## Safety rules - Personal safety

CR6090, CR8080, CR9090 [YBG115106 - ] NA, CR7090 [YBG115106 - ] NA, CR8090 [YBG115106 - ] NA

**Carefully study these precautions, and those included in the external attachment operators manual, and insist that they be followed by those working with and for you.**

1. Thoroughly read and understand this manual and the attachment Operator's Manual before operating this or any other equipment.
2. Be sure all people and pets are clear of the machine before starting. Sound the horn, if equipped, three times before starting engine.
3. Only the operator should be on the machine when in operation. Never allow anyone to climb on to the machine while it is in motion. If the machine is equipped with an Instructors Seat, this must only be used for training purposes. Passengers must not be allowed to use the Instructors Seat.
4. Keep all shields in place. Never work around the machine or any of the attachments while wearing loose clothing that might catch on moving parts.
5. Observe the following precautions whenever lubricating the machine or making adjustments.
  - Disengage all clutching levers or switches.
  - Lower the attachment, if equipped, to the ground or raise the attachment completely and engage the cylinder safety locks. Completing these actions will prevent the attachment from lowering unexpectedly.
  - Engage the parking brake.
  - Shut off the engine and remove the key.
  - Wait for all machine movement to stop before leaving the operators platform.
6. Always keep the machine in gear while travelling downhill.
7. The machine should always be equipped with sufficient front or rear axle weight for safe operation.
8. Under some field conditions, more weight may be required at the front or rear axle for adequate stability. This is especially important when operating in hilly conditions or/when using heavy attachments.
9. Always lower the attachment, shut off the engine, set the parking brake, engage the transmission gears, remove the key and wait for all machine movement to stop before leaving the operators platform.
10. If the attachment or machine should become obstructed or plugged; set the parking brake, shut off the engine and remove the key, engage the transmission gears, wait for all machine or attachment motion to come to a stop, before leaving the operators platform to removing the obstruction or plug.
11. Never disconnect or make any adjustments to the hydraulic system unless the machine and/or the attachment is lowered to the ground or the safety lock(s) is in the engaged position.
12. Use of the flashing lights is highly recommended when operating on a public road.
13. When transporting on a road or highway, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local government regulations. Various safety lights and devices are available from your NEW HOLLAND AGRICULTURE dealer.
14. Practice safety 365 days a year.
15. Keep all your equipment in safe operating condition.
16. Keep all guards and safety devices in place.
17. Always set the parking brake, shut off the engine and remove the key, engage the transmission gears, wait for all machine or attachment motion to come to a stop, before leaving the operators platform to service the machine and attachment.
18. Remember: A careful operator is the best insurance against an accident.
19. Extreme care should be taken in keeping hands and clothing away from moving parts.



# **SERVICE MANUAL**

## **Engine**



**CR6090 [YBG115106 - ]**  
**CR7090 [YBG115106 - ]**  
**CR8080 [YBG115106 - ]**  
**CR8090 [YBG115106 - ]**  
**CR9090 [YBG115106 - ]**

## Aftercooler - Remove

CR6090 [YBG115106 - ], CR7090 [YBG115106 - ] NA

### Prior operation:

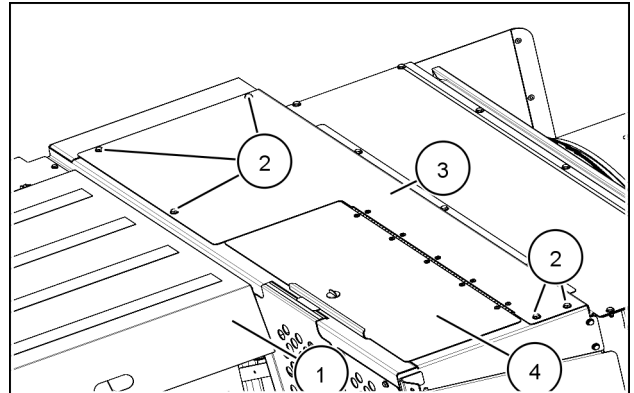
Radiator wiper - Remove (10.418).

**ATTENTION:** Left hand side and right hand side are determined by facing the front of the cooler box.

**ATTENTION:** Retain all hardware and components unless otherwise specified.

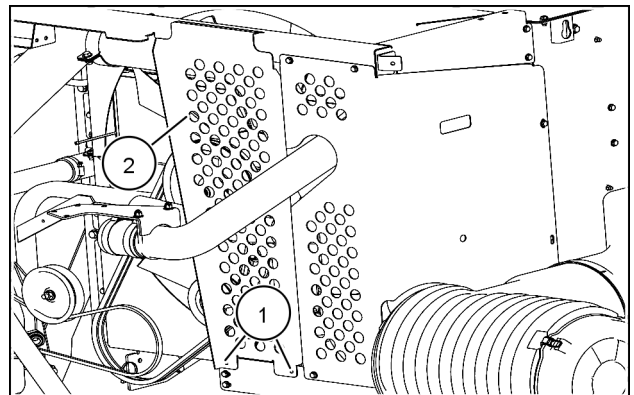
1. Open the top engine hood (1). Remove the hardware (2) securing the top engine cover (3) to the engine cover frame.

**NOTE:** There is no need to remove the access panel (4) since it is attached to the top cover.



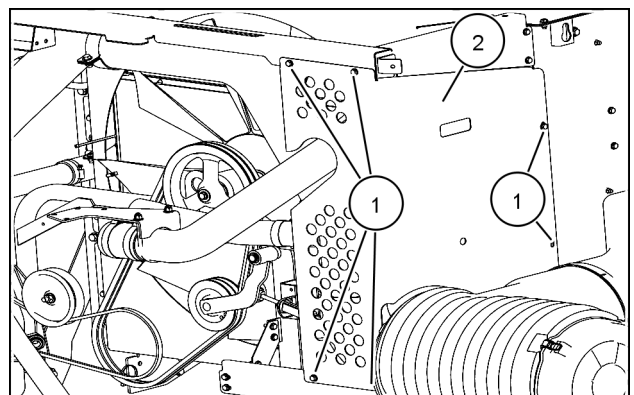
20104118 1

2. Remove the hardware (1) securing the engine shield to the frame. Remove the engine shield (2) by lifting it upwards and off of the slot in frame.



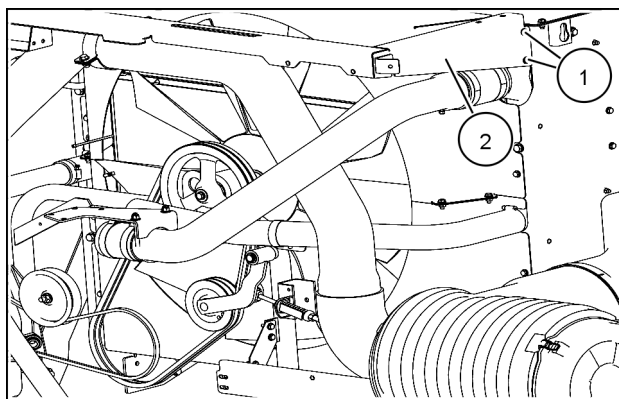
20104119 2

3. Remove the hardware (1) securing the engine corner side shield (2) to the engine cover frame and remove the shield.



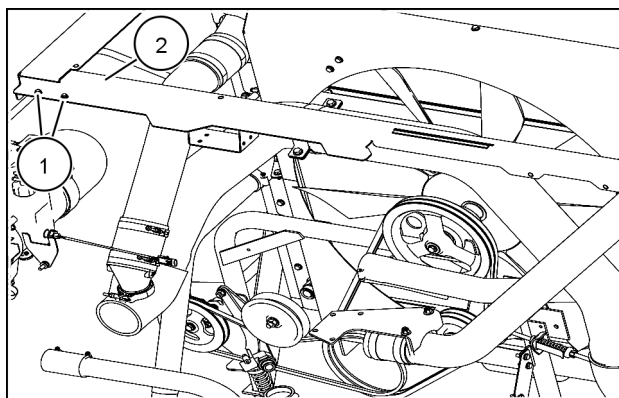
20104120 3

4. Remove the hardware (1) from the left side of the engine shield upper frame (2).



20104121 4

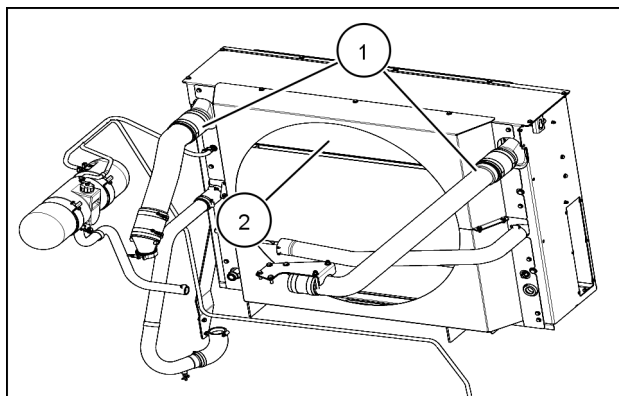
5. Remove the hardware (1) from the right side of the engine shield upper frame (2), and remove the frame from the combine.



20104122 5

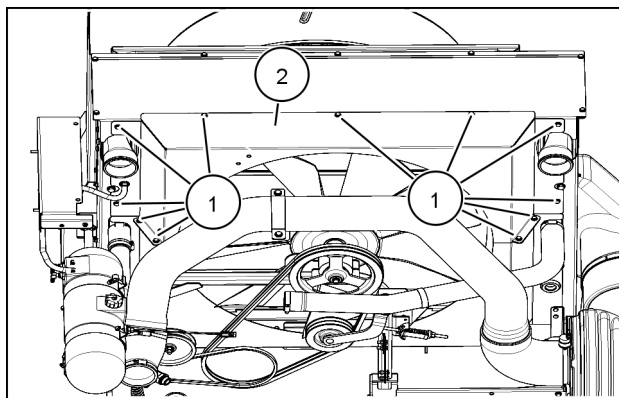
6. Loosen the clamps on the hoses and remove the two hoses (1) from the charge air cooler (CAC) (2).

**NOTE:** There is no need to remove the hoses from the engine.



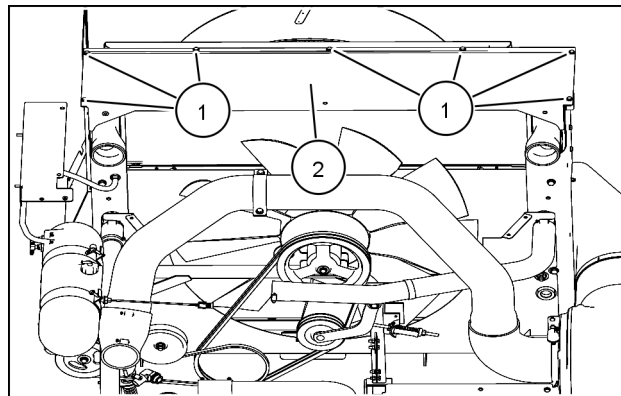
20104100 6

7. Remove the eleven M8 X 20 hex bolts, washers and nuts (1) from the upper fan shroud (2) and remove the fan shroud.



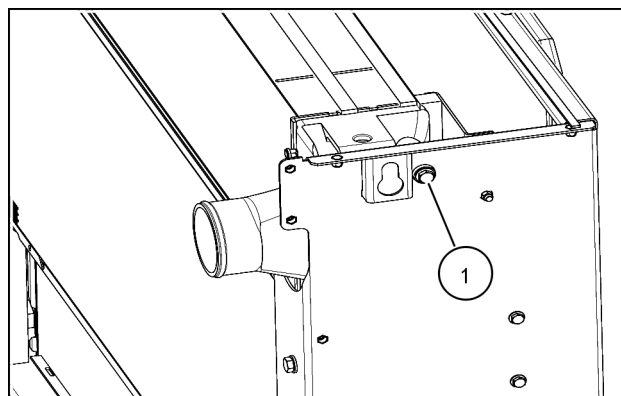
20104124 7

8. Remove the seven M8 X 20 hex bolts and washers **(1)** from the top plate **(2)** of the cooler box and remove the top plate.



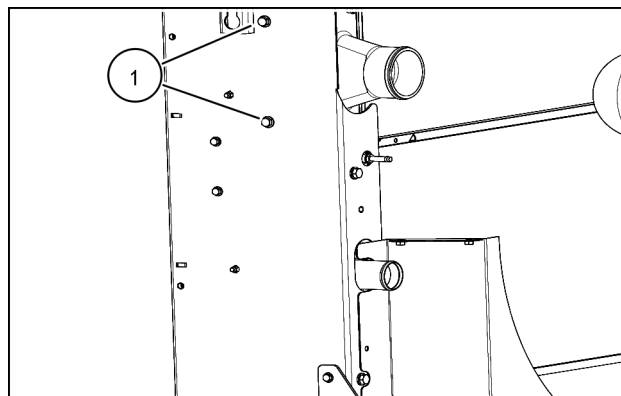
20104123 8

9. On the left hand side of the cooler box, remove the bolt and washer **(1)** securing the CAC to the cooler box.



20104105 9

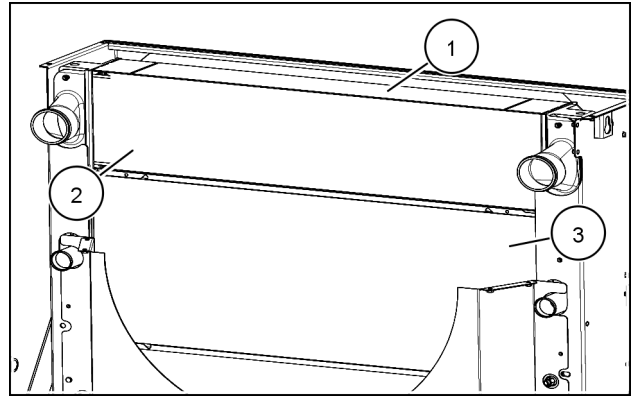
10. On the right hand side of the cooler box, remove the two bolts and washers **(1)**, securing the CAC to the cooler box.



20104106 10

**ATTENTION:** Foam rubber strips (1) are installed between each component to prevent damage from rubbing. To remove each component, gently pry the component being removed from the one below it.

11. Gently pry the CAC radiator (2) from the engine coolant radiator (3) and lift the CAC radiator from the cooler box assembly.



20104111 11

**Next operation:**  
**Aftercooler - Install (10.310).**



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## Aftercooler - Install

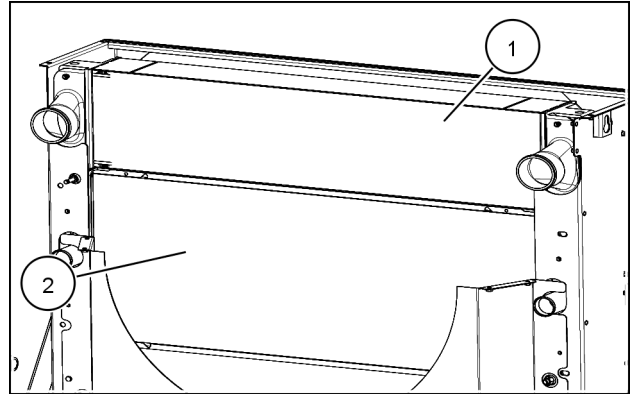
CR6090 [YBG115106 - ], CR7090 [YBG115106 - ] NA

### Prior operation:

#### Aftercooler - Remove (10.310).

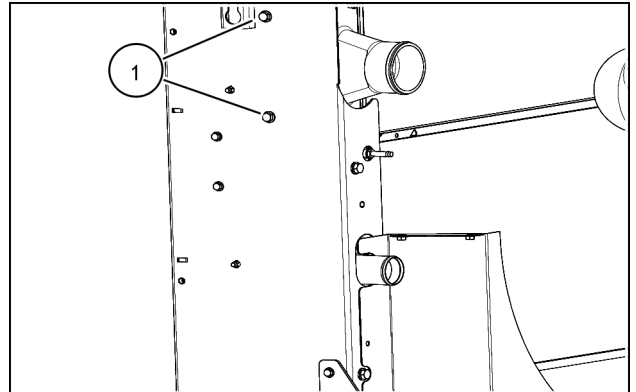
**ATTENTION:** When installing the components on top one another, check the foam strips and replace as needed.

1. Install the charge air cooler (CAC) radiator (1) on top of the engine coolant radiator (2) as shown.



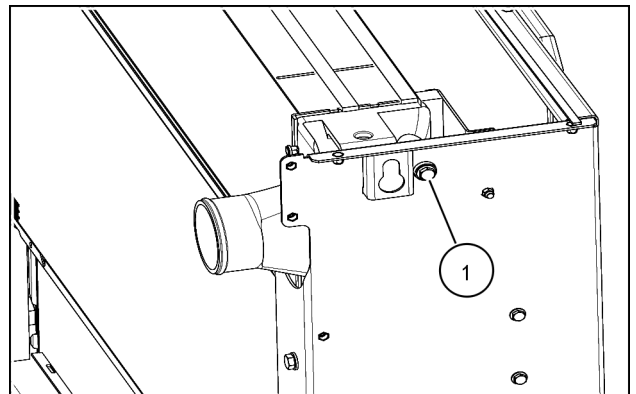
20104111 1

2. On the right hand side of the cooler box, install the two bolts and washers (1), securing the CAC to the cooler box. Tighten hardware to standard torque.



20104106 2

3. On the left hand side of the cooler box, install the bolt and washer (1) securing the CAC to the cooler box. Tighten hardware to standard torque.



20104105 3

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