# 2 - SAFETY INFORMATION

## Personal safety

### 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.

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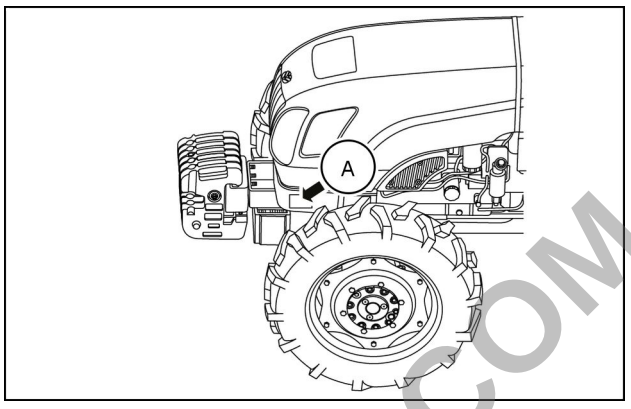


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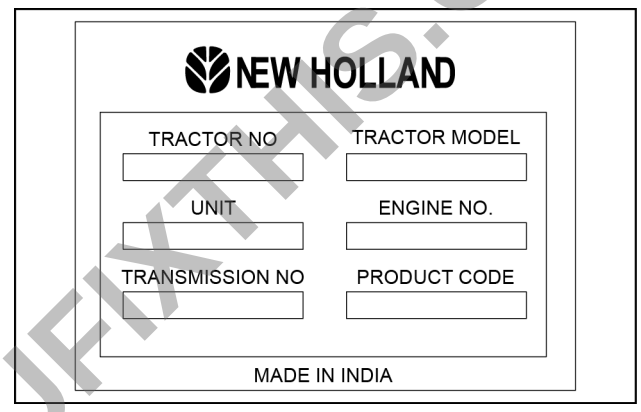
# Product Identification Number (PIN)

## Product Identification Number (PIN) plate

The tractor identification decal **(A)** is located on the left-hand side of the battery plate. The first line represents tractor make and model while the second line represents engine serial number and product code followed by transmission serial number. Record the information that is on the decal for quick reference.



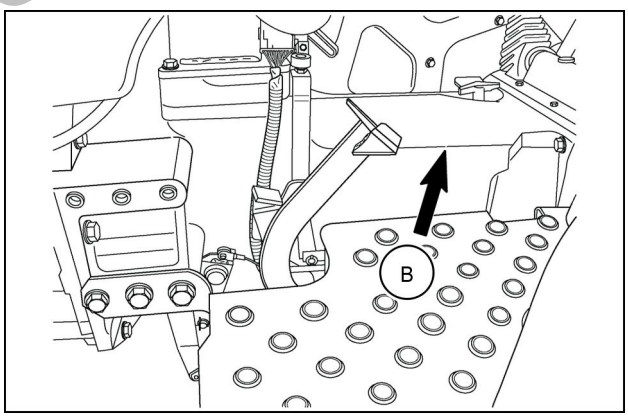

GNIL14TR00508AA 1




GNIL14TR00588AA 2

## Product Identification Number (PIN) location (Stamped)

The tractor serial number, unit code and engine number are stamped on the top of the transmission housing at **(B)**. These numbers are also repeated on the product identification number (PIN) plate reproduced above.
Tractor PIN.....




86090118NNN 3

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**(1)**

**DANGER**

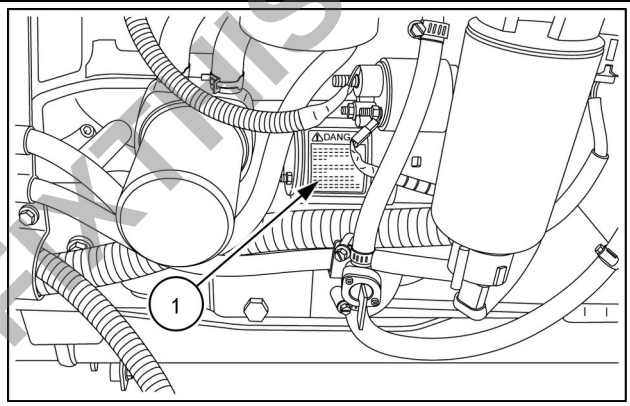
- **Start engine only from operator's seat. If safety switch is bypassed, engine can start with transmission in gear.**
- **Do not connect or short across terminals on starter solenoid.**
- **Attach booster cables as shown on battery decal.**
- **Starting in gear causing runaway can result in serious injury.**
- **Failure to comply will result in death or serious injury.**

**Quantity: 1**
**English Part Number: 82985062**




82985062N 2

**(1)** Location: On starter motor.




GNIL14TR00568AA 3

**(2)**
**DANGER**

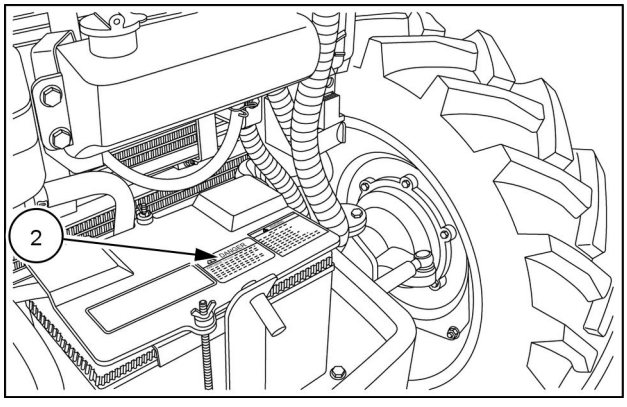
- **EXPLOSIVE**
  **can cause blindness or sever injury, protect eyes, sparks, flames, cigarettes can cause explosion. Tools and cable clamps can cause sparks. Do not use without instruction. Keep vents tight and level.**
- **ACID-POISON**
  **causes severe burns, contains sulfuric acid. In the event of contact, flush with water and see a doctor. Keep out of reach of children.**
- **Failure to comply will result in death or serious injury.**

**Quantity: 1**
**English Part Number: 87531227**




87531227N 4

**(2)** Location: Top side of battery hold down bracket.




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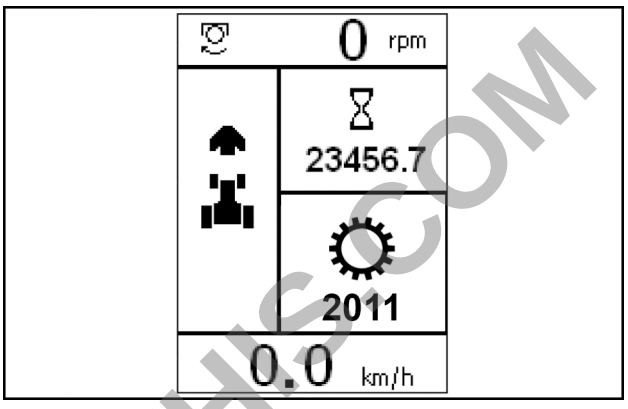
# 8 - TROUBLESHOOTING

**SYMPTOM(S)**

## Viewing error codes

### Error codes transmission

The tractor's electronic control units are able to detect operating faults or errors occurring in key areas such as the engine, gearbox, electric systems.
Should a malfunction or error occur, the relevant symbol and error code will appear in the display.
This display may be accompanied by the amber or red warning lights on the control panel coming on and by an audible warning, depending on the severity of the fault. Contact your NEW HOLLAND authorized dealer's specialized personnel where envisaged.



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## Engine - Troubleshooting

| Problem | Possible Cause | Correction |
|---|---|---|
| **During the ignition phase the control board and the engine do not start.** | Flat battery | Recharge or replace battery |
| | Blown fuse | Replace fuse |
| | The electric cables are disconnected or they do not guarantee continuity | Check the electric connections |
| | Failure of engine revolution sensor | Replace the sensor<br>Apply to a service workshop |
| **The engine does not start** | Presence of air in the fuel supply circuit | Carry out bleeding (See “Fuel supply circuit bleeding”) |
| | Dirty or faulty injectors | Replace the injectors<br>Apply to a service workshop |
| | Faulty fuel pressure regulation valve | Replace the valve<br>Apply to a service workshop |
| | Failure of the start control | Replace the start control<br>Apply to a service workshop |
| | water and/or impurities in the fuel | Apply to a service workshop |
| | Clogged fuel filter | Replace filter (See “Fuel filter replacement.”) |
| **The starter motor runs idle** | Electromagnet failure | Check the starter motor<br>Apply to a service workshop |
| **The starter motor is not running** | Flat battery | Recharge or replace battery |
| | Interrupted electric connection | Check the electric connections |
| | Worn brushes | Replace the worn brushes<br>Apply to a service workshop |
| **The engine stops after ignition** | Presence of air in the fuel supply circuit | Carry out bleeding (See “Fuel supply circuit bleeding”) |
| | Clogged fuel filter | Replace filter (See “Fuel filter replacement.”) |
| | Injection pump malfunction | Apply to a service workshop |
| | Faulty fuel pressure regulation valve | Replace the valve<br>Apply to a service workshop |
| | Presence of air in the fuel supply circuit | Carry out bleeding (See “Fuel supply circuit bleeding”) |
| | Water and/or impurities in the fuel | Apply to a service workshop |


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# Consumables

| Recommended fluids and application | International specification | Approximate quantities | |
|---|---|---|---|
| | | | |
| Engine oil<br>**NEW HOLLAND AMBRA AUTO SUPREME 5W-30**<br>**NEW HOLLAND AMBRA UNITEK MASTERGOLD SBL CJ-4 SAE 10W-40**.<br>See **7-20**. | API CJ4.....<br>..... | **6.3 l** (**6.6 US qt**) | **6.3 l** (**6.6 US qt**) |
| Transmission oil or rear axle oil<br>**NEW HOLLAND AMBRA MULTI G 134™ HYDRAULIC TRANSMISSION OIL** | API GL4, ISO 32/46 | **23.0 L** (**24.3 US qt**) for 2WD | **25.0 L** (**26.4 US qt**) for 4WD |
| Front axle differential or final reduction gear case<br>**NEW HOLLAND AMBRA MULTI G 134™ HYDRAULIC TRANSMISSION OIL** | API GL4, ISO 32/46 | **7.5 l** (**8.0 US qt**) | **7.5 l** (**8.0 US qt**) |
| Grease fittings or bearings<br>**NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE**. | NLGI No. 2..... | As required | As required |
| Steering oil (Hydraulic)<br>**NEW HOLLAND AMBRA MULTI G 134™ HYDRAULIC TRANSMISSION OIL** | API GL4, ISO 32/46 | **2.0 l** (**2.1 US qt**) | **2.0 l** (**2.1 US qt**) |
| Engine radiator coolant<br>System Capacity<br>*Water<br>Ethylene Glycol | .....<br>.....<br>..... | **8.5 l** (**9.0 US qt**)<br>50%<br>50% | **8.5 l** (**9.0 US qt**)<br>50%<br>50% |

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**MAINTENANCE CHART**

# Frame - Maintenance chart

| Service points | Cleaning | Drain fluid | Lubricate | Replace | Check | Adjust | Grease | Test | Change fluid | Bleed | Page no. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Every 10 hours of operation or daily** | | | | | | | | | | | |
| Engine oil level | ■ | | | | | | | | | | **7-13** |
| Engine cooling system | ■ | | | | | | | | | | **7-13** |
| Steering reservoir oil level | ■ | | | | | | | | | | **7-14** |
| **After the first 50 hours of operation** | | | | | | | | | | | |
| Clutch pedal free play | ■ | | | | | ■ | | | | | **7-15** |
| Brake pedal free play | ■ | | | | | ■ | | | | | **7-15** |
| Wheels and tires | ■ | | | | | | | | | | **7-15** |
| Hydraulic oil filter | | ■ | | | | | | | | | **7-15** |
| **Every 50 hours** | | | | | | | | | | | |
| Clutch pedal free play | ■ | | | | | ■ | | | | | **7-16** |
| Brake pedal free play | ■ | | | | | ■ | | | | | **7-16** |
| Wheels and tires | ■ | | | | | ■ | | | | | **7-17** |
| Transmission or hydraulics oil level | ■ | | | | | | | | | | **7-17** |
| Front axle differential oil level | ■ | | | | | | | | | | **7-18** |
| Front wheel hub oil level (4WD) | ■ | | | | | | | | | | **7-18** |
| Air cleaner | ■ | | | | | | | | | | **7-19** |
| **Every 150 hours** | | | | | | | | | | | |
| Battery electrolyte level | ■ | | | | | | | | | | **7-20** |
| **Every 300 hours** | | | | | | | | | | | |
| Engine oil and filter | | ■ | | | | | | | | | **7-20** |
| Engine air cleaner outer element | | | | | ■ | | | | | | **7-22** |
| Hydraulic oil filter | | ■ | | | | | | | | | **7-26** |
| Power Take-Off (PTO) clutch | | | | | | ■ | | | | | **7-27** |
| **Every 600 hours** | | | | | | | | | | | |
| Transmission breather | | | | | ■ | | | | | | **7-28** |
| Front wheel bearings - (2WD) | | | | | | | ■ | | | | **7-28** |
| Fuel injectors - servicing | | | | | | | | ■ | | | **7-29** |
| Fuel filter replacement | | ■ | | | | | | | | | **7-30** |
| Hydraulic oil filter | | ■ | | | | | | | | | **7-31** |
| **Every 900 hours** | | | | | | | | | | | |
| Air cleaner restriction indicator | | | | | ■ | | | | | | **7-32** |
| **Every 1200 hours** | | | | | | | | | | | |
| Transmission or hydraulics oil level | | | | | | | | | ■ | | **7-32** |
| Fuel tank cleaning | | | | | ■ | | | | | | **7-33** |
| Engine coolant | | | | | | | | | ■ | | **7-34** |
| Steering oil reservoir | | | | | | | | | ■ | | **7-35** |
| Four-Wheel Drive (4WD) front axle differential oil | | | | | | | | | ■ | | **7-36** |
| Four-Wheel Drive (4WD) front axle hub oil | | | | | | | | | ■ | | **7-36** |

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# 4 - OPERATING INSTRUCTIONS

## STARTING THE UNIT

### Starting the tractor

**⚠ DANGER**

**Run-over hazard!**
**Start engine only from operator's seat. If you bypass the safety start switch, the engine can start with the transmission in gear and the machine will move. DO NOT short or connect across terminals of the starter solenoid. Failure to comply will result in death or serious injury.**

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To start the engine:

1. Step onto the tractor from left-hand side only.
2. Sit on the operator's seat and fasten seat belt.
3. Make sure that both gear-shift levers and shuttle lever are in neutral.

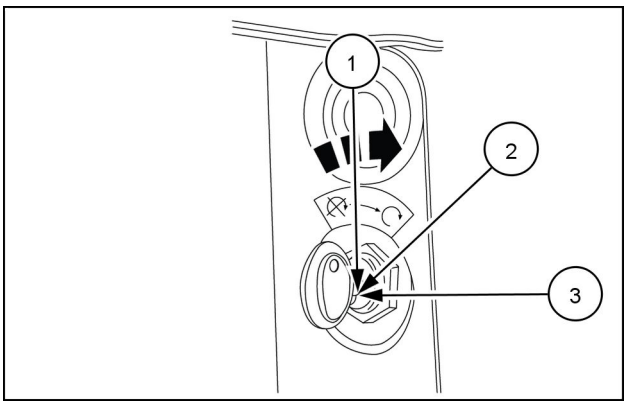
   ***NOTICE:*** *Neutral start switch prevents operation of the starting motor unless the gear levers are in the neutral position.*
4. Make sure the Power Take-Off (PTO) is disengaged.
5. Depress the clutch pedal.

   ***NOTICE:*** *Clutch switch prevents operation of the starting motor unless the clutch pedal is depressed.*
6. Turn the key switch to the start position. Release the key when the engine starts.

***NOTICE:*** *Never push or tow the tractor to start the engine. Doing so may overstress the drive train.*

A three-position key-start switch is installed. The key-start switch positions are as follows:

| | |
|---|---|
| Position 1 | Electrical equipment Off. |
| Position 2 | Accessories on (head lamp, Instrument cluster, horn and gauges, brake lights, turn signals) engine 'ON'. |
| Position 3 | Engine Start -- The full clockwise position activates the starter motor, to start the engine. Once the key is released, the switch returns to Position 2. |




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# 9 - SPECIFICATIONS

## General specification

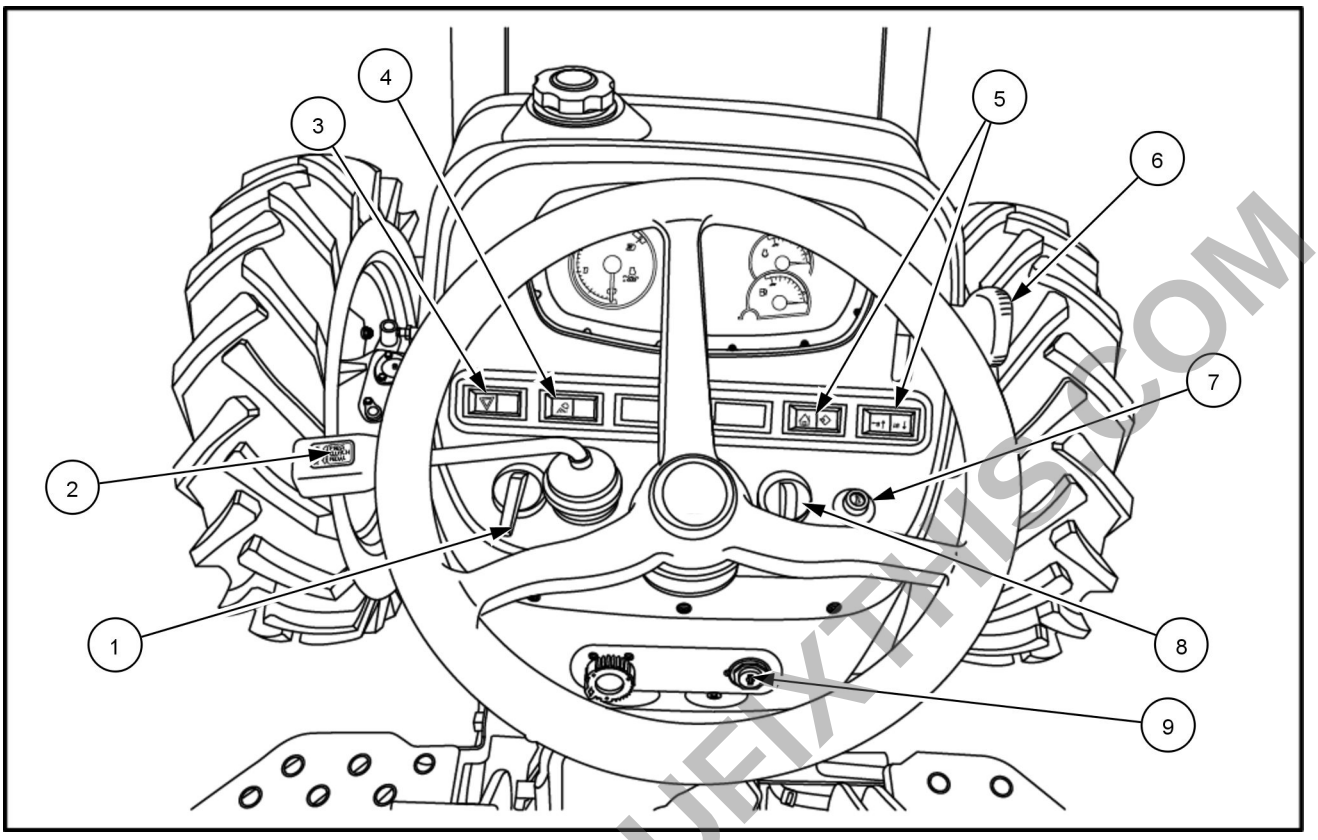
| | | | |
|---|---|---|---|
| **Engine** | | | |
| Type/Model | | CRDI/VM R753IE4 | |
| Emission Level | | Tier 4 | |
| Engine Net Horsepower | **39.5 kW** (**53.7 Hp**) | **44.8 kW** (**60.9 Hp**) | **52.2 kW** (**71.0 Hp**) |
| PTO Horsepower | **34.0 kW** (**46.2 Hp**) | **38.0 kW** (**51.7 Hp**) | **46.0 kW** (**62.5 Hp**) |
| Cylinders | | 3 | |
| Bore | | **94.0 mm** (**3.7 in**) | |
| Stroke | | **107.0 mm** (**4.2 in**) | |
| Displacement | | **2227.0 cm³** (**135.9 in³**) | |
| Compression Ratio | | 17.5:1 | |
| Firing Order | | 1-3-2 | |
| Aspiration | | Turbocharged Intercooler | |
| Low Idle Speed | | **900±100 RPM** | |
| Maximum no-load speed | | **2750±50 RPM** | |
| Rated Speed | | **2600 ±50 RPM** | |
| Tappet Clearance | | | |
| Intake/Exhaust (cold) | | Hydraulically Adjustable | |
| Crankcase Oil Capacity | | **6.3 L** (**6.7 US qt**) | |
| **Capacities** | | | |
| Fuel Tank | | **65.0 L** (**17.2 US gal**) | |
| Cooling system | | **10.0 L** (**10.6 US qt**) | |
| Engine Crankcase Oil Capacity | | **6.3 L** (**6.7 US qt**) | |
| Rear Axle & Transmission | | **23.0 L** (**6.1 US gal**) for 2WD<br>**25.0 L** (**6.6 US gal**) for 4WD | |
| Front Axle (Four Wheel Drive) | | **7.5 l** (**8.0 US qt**) | |
| **Cooling system** | | | |
| Type | | Pressurized Liquid with Recirculating bypass | |
| Water Pump | | Centrifugal | |
| Drive | | poly V-Belt | |
| Belt Deflection | | Auto Adjustable | |
| Fan Diameter | | **415.0 mm** (**16.3 in**) | |
| Number of Fan Blades | | 8 | |
| Thermostat: | | | |
| Start to Open | | **80.0 °C** (**176.0 °F**) | |
| Fully Open | | **95.0 °C** (**203.0 °F**) | |
| Radiator Cap | | **90 kPa** (**13 psi**) | |
| Antifreeze | | Ethylene Glycol | |
| System Capacity | | **8.3 L** (**8.8 US qt**) | |

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# Hand controls and switches




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## Turn signal switch

The turn signal switch **(1)** activates the turn signals. Move the turn signal switch to the right to operate the right-hand turn indicator light and to the left to operate the left-hand turn indicator light.

***NOTE:*** *The turn signal will operate only when the key switch is turned on.*

## Shuttle shift lever

The shuttle shift lever **(2)** is used to change the direction of travel, between forward and reverse.

## Central display navigation buttons

Navigate through the menus of the central Liquid Crystal Display (LCD) with the rocker switches **(5)**.
**(A)** and **(B)** see the image in the previous page.

## Hand throttle lever

The hand throttle lever **(6)** should be used during field operation of the tractor.

Push the lever forward to increase the engine speed and rearward to reduce the engine speed.

## Hazard switch

The hazard switch **(3)** activates the hazard flasher lights. Use the hazard flasher lights when traveling on public roads, day or night.

## Head light switch

The head light switch **(4)** consists of four positions, (see head light switch positions, see **2** ).

## Horn Button

Press the horn button **(7)** to activate the horn.

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# 6 - WORKING OPERATIONS

## GENERAL INFORMATION

## Field operation

### Before operating

**⚠ WARNING**

**IMPROPER OPERATION OF THIS MACHINE CAN CAUSE DEATH OR SERIOUS INJURY.**
**MAKE SURE THAT EVERY OPERATOR:**
**-learns and practices the safe use of machine controls in a safe, clear area before operating the machine on a job site.**
**-clears the work area of all bystanders.**
**-observes pertinent laws and regulations.**
**-follows the instructions in this operator's manual.**
**Failure to comply could result in death or serious injury.**

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Read this section carefully for a thorough understanding of operational requirements. Even if you operate other tractors, you should thoroughly read this section of the manual and ensure that you are familiar with the location and function of all the controls of this tractor

Do not start the engine or attempt to drive or operate the tractor until you are fully familiar with all controls. It is too late to learn once the tractor is moving. If you have any questions about the operation of tractor, consult your Authorized Dealer.

See Tractor specifications will be found in **9-1** and **9-7** .

### Running-in procedure

Your tractor will provide long and dependable service if given proper care during the first **50 h** running-in period and if serviced at the recommended intervals.

Avoid overloading the engine. Operating in a high gear under heavy load may cause engine overloading. Overloading occurs when the engine will not respond to a throttle increase.
Do not operate the engine without a load. This can be as harmful to the engine as overloading. Ensure that the engine is subjected to heavy as well as light loads during the running-in period.

### Pre-operation checks

Perform daily lubrication and maintenance operation in accordance with **7-11**

After completing the daily maintenance operations, perform a walk around visual inspection of the tractor. Pay particular attention and check the following items:

1. Fan belt for cracks.
2. Engine area for accumulation of debris.
3. Hoses, lines, and fittings for leaks and damages
4. Tires for damage.
5. Hardware for looseness.
6. Leakage at joints.

Make any necessary repairs before using the tractor.

## POWER TAKE OFF (PTO)

## Two-speed rear Power Take-Off (PTO) - Grouped Safety Message

**⚠ WARNING**

**Entanglement hazard!**
**Before attaching or detaching equipment or changing the Power Take-Off (PTO) shaft: 1) Apply the parking brake. 2) Move all controls to neutral and PTO control knob to the disengaged position. 3) Stop the engine and remove the key. 4) Wait for the PTO shaft to stop turning before leaving the cab.**
**Failure to comply could result in death or serious injury.**

W0323A

**⚠ WARNING**

**Entanglement hazard!**
**The Power Take-Off (PTO) guard must be installed when operating PTO-driven equipment.**
**Failure to comply could result in death or serious injury.**

W0322A



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# 5 - TRANSPORT OPERATIONS

## ROAD TRANSPORT

## Towing attachments

**⚠ WARNING**

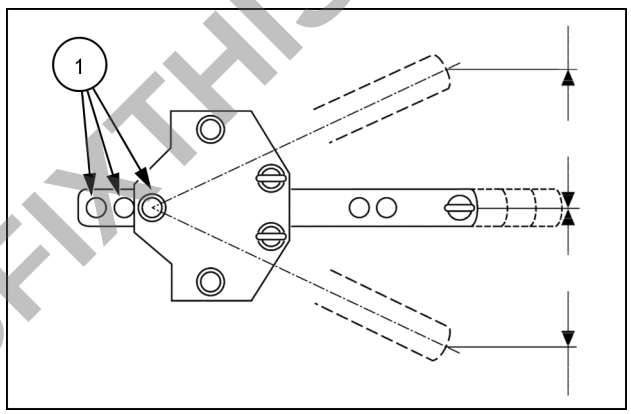
**Overturning hazard!**
**Always use the drawbar, pick-up hitch, or lower links in the lowered position for pull-type work. Do not pull from the lower links if they are above the horizontal position. Failure to comply could result in death or serious injury.**

**W0417A**

### Swinging/Extendable drawbar

Use the drawbar to tow agricultural implements and trailers.
The drawbar length may be adjusted by inserting the pin in the series of holes **(1)** in the drawbar.

***NOTICE:*** *When transporting equipment on roads, a safety chain with a tensile strength equal to the gross weight of the implement should be installed between the tractor and implement hitch.*



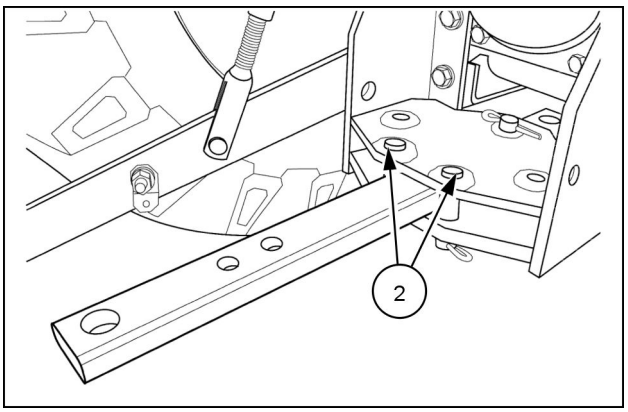

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**⚠ WARNING**

**Collision hazard!**
**During road transport, the drawbar must be locked in the center position, and the implement must be centered behind the tractor. Failure to comply could result in death or serious injury.**

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Drawbar swing may be adjusted by location of pins **(2)**.




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# 7 - MAINTENANCE

## GENERAL INFORMATION

## Lubrication and maintenance general information

### Introduction

This section gives full details of the service procedures necessary to maintain your tractor at peak efficiency. The lubrication and maintenance chart provides a ready reference to these requirements ,see **7-11**. Each operation being numbered for easy reference. If in doubt about any aspect of lubrication and maintenance, consult your authorized dealer.

### Safety precautions

Read and observe all safety precautions listed in "Servicing the Tractor" in the safety rules section at the front of this Manual. See **2-2**.

***NOTE:*** *Dispose of used filters and fluids properly.*

**⚠ CAUTION**

**Maintenance hazard!**
**Always stop the machine before performing any lubrication. Observe the following precautions before leaving the operator's platform: Disengage all drives. Engage the parking brake. Raise the header. Engage the header lifter safety latch. Turn the machine engine OFF. Remove the ignition key.**
**Failure to comply could result in minor or moderate injury.**

C0029A

### 10 hours or daily check

- Coolant: check coolant level (top up if required)
- Air filter: check clogging indicator (clean if required)
- Check engine oil

### During first 50 hour operation

In addition to the regular maintenance operations listed, check the following items every 10 hours or daily during the first 50 hours of operation:

- Check engine oil.
- Check Transmission/Hydraulic, rear axle oil level.
- Wheel nuts for tightness.

***NOTICE:*** *Park the tractor on level ground and where applicable, extend all cylinders on implements or attachments before checking these oil levels.*

### The first 50 hour service

At the first 50-hours service, ensure that the following additional service operations are carried out. The items are listed in the "First 50-Hour service" check list

- Change hydraulic oil filter.
- Check and tighten all cooling system hose connections.
- Check and tighten all air intake connections.
- Check and torque front end weight bolts.
- Check torque of all wheel nuts

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