OPERATOR'S MANUAL

FENDT FENDT 5220 E from serial no. 551610001



## TABLE OF CONTENT

General Information	1
Safety	2
Operation	3
Controls and Instruments	4
Field Operations	
Lubrication and Maintenance	
Adjustments	7
Systems	8
Troubleshooting	9
Off-Season Storage	
Optional equipment	
Technical Specifications	



## **1. General Information**

inform	information		
1.1.1	Customer information	1	
Use		3	
1.2.1	Use of the combine	3	
Trailer	<sup>,</sup> hitch	4	
1.3.1	Combine identification	4	
Confo	rmity	9	
1.4.1	EC Declaration of Conformity 1	9	
inform	ation	0	
1.5.1	Ecology	0	
1.5.2			
1.5.3	Scrapping and disposal 2	1	
Weigh			
1.6.1	Weight distribution 2	2	
	1.1.1 Use 1.2.1 Trailer 1.3.1 Confo 1.4.1 inform 1.5.1 1.5.2 1.5.3	1.1.1   Customer information   1     Use   1     1.2.1   Use of the combine   1     1.3.1   Combine identification   1     1.3.1   Comformity   1     1.4.1   EC Declaration of Conformity   1     information   2     1.5.1   Ecology   2     1.5.2   Hydraulic systems: hoses   2	



## 1.1 information

## **1.1.1 Customer information**

#### Introduction

Your new self-propelled combine is manufactured for harvesting seed and cereal crops, for threshing, separating, cleaning and conveying the grain into the tank and depositing the straw on the ground.

This Operator's Manual should be used as a practical reference guide: It contains all the necessary practical information for the operation, adjustment and maintenance of your new machine.

Your combine was designed and built to ensure optimum performance, comfort and ease-of-operation in a wide variety of crops and conditions.

The combine has been thoroughly inspected prior to delivery both at the factory and by your Dealer, to ensure you receive it in perfect condition.

To keep the combine in perfect condition and to ensure trouble-free performance, the periodical maintenance operations listed in this manual should be carried out at the recommended intervals.

## Before operating and/or driving the combine, read this Operator's Manual carefully, paying particular attention to the section on safety rules.

#### Always keep this manual on hand for further reference.

The terms "left" and "right" are always used with reference to the machine travelling direction.

Should you require further information about the machine, please do not hesitate to contact your authorised Dealer. Your Dealer provides specially trained personnel, genuine spare parts and the required tools to solve any problems that may arise.

#### Note:

- This combine has been designed and built in compliance with the Machine Directive 2006/42/EC. A CE Declaration of Conformity is supplied with the machine (see specific chapter).
- This manual is published for worldwide distribution, and the availability of equipment shown as standard or optional varies according to the territory in which the combine is to be used. Specifications may differ from those contained in this Operator's Manual according to the customer's requirements
- In order to provide a better view of features or adjustments, certain illustrations in this manual may show an assembly with standard guards, or the guards required by law in different countries, open or removed.
  However, a machine should never be operated in this condition. For your own safety, always ensure all safety guards are fitted and closed correctly before operating the machine.
- This Operator's Manual, along with the Operator's Manuals for the PTO shaft and the table trailer, must always be kept in the compartment under the passenger seat for storage and convenient reference.

#### **Company policy**

In accordance with the Company's policy of continuous improvements to its products, the Company reserves the right to modify and improve its products whenever necessary and to the required extent, without any obligation to apply such modifications to previously sold products.

The information contained in this Manual refers to the current situation at the time it was written. All the data given may vary.

#### **Optional equipment**

Your machine was designed to operate in a wide variety of crops and conditions.

However, in certain cases it may be necessary to fit additional accessories to improve machine performance or adapt the machine to harvesting special crops.

A list of available accessories is provided in the chapter **Optional equipment**.

#### Spare parts and accessories

The genuine spare parts and accessories have been specifically designed for this type of machine.

Only genuine parts supplied by your authorised Dealer can guarantee correct operation and optimum performance.

Never use non-genuine spare parts or accessories: Some accessories (e.g. PTO shafts, straw choppers, tables) require an EC certification, which can be provided only by the manufacturer or his qualified and recognised sub-suppliers.

Non-genuine spare parts have not been tested and are not authorised by the manufacturer.

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## 1.2 Use

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## 1.2.1 Use of the combine

#### Acceptable use

These combines are designed as self-propelled units with a diesel engine.

The machines are manufactured exclusively for agricultural purposes, i.e. for harvesting cereal, seed, rice, maize, soya etc. by cutting or picking up from the swath, threshing and separating the grains from the ears, delivering the grains in the grain tank and unloading them into the grain wagon.

Machine performance may be limited by various factors such as harvesting speed, weather conditions, ground characteristics and the type and degree of ripeness of the crop.

When operating the machine, make sure the cab doors are shut. The operator and instructor, if present, must remain seated in their respective seats with their seatbelts fastened (the operator should not drive the machine when standing).

The machines may be operated only by skilled personnel, who are thoroughly familiar with all the machine's functions and harvesting techniques.

Machine stability is ensured on the following inclinations, on condition that the ground is firm and the tyres offer sufficient grip:

- 20% (11°) longitudinally (uphill and downhill).
- 20% (11°) crosswise.

These models are designed for working on level ground to ensure even distribution of the crop inside the machine.

#### These models HAVE NOT been developed for working on sloping ground.

#### Forbidden uses

Do not use the machine for tasks or purposes other than those specified in this Manual, on the safety decals or on other safety information provided with the machine.

The following pages contain recommendations on correct and incorrect use of the machine when travelling on public roads, during field operations and during maintenance.

#### Table types (please see the specific Operator's Manual)

These combines may use FreeFlow and PowerFlow cutting tables.

**Note:** In this manual, the term "table/s" signifies both the cutting table and the maize header when used generically. The term "cutting table" refers to the assembly consisting of reel, cutting bar, table auger etc. used to harvest grain, barley, rice, soya, etc. The term "maize header" refers to the assembly consisting of stalk grippers, stripping blades, conveyor chains etc. used for harvesting maize.



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## 1.3 Trailer hitch

## 1.3.1 Combine identification

The combine and its main components are identified by serial numbers and/or production codes. The position of the different identification data is described below.

**NOTE:** Always quote the combine serial number when contacting your Dealer for spare parts or assistance.

#### Combine approval and safety plates

The manufacturer's type plate (1), statutory for all countries (or (2), for France only), is positioned on the outer right-hand side of the operator platform and shows the following information:

- Combine type.
- Approval number.
- Combine serial number.
- Total maximum permitted weight.
- Weight (on both axles).
- Towing weight.

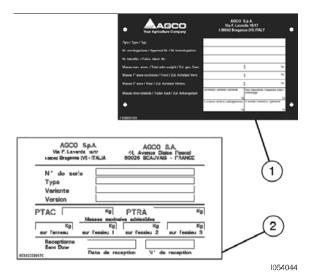
For further details, please refer to the type approval certificate.

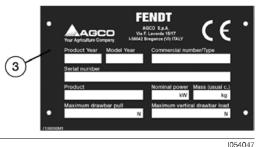
The safety plate (3) is located next to the approval plate, and guarantees that the combine was built in compliance with Machinery Directive 2006/42/EC as well as Directive 2004/108/EC.

This plate shows the following information:

- Manufacturing year.
- Marketing year.
- Model.
- Combine serial number.
- Crop type.
- Total weight (normal configuration).
- Nominal engine power.
- Maximum towing weight.
- Maximum vertical load on the trailer hitch.

In certain countries (e.g. Russia) these two plates are positioned next to an additional decal/plate corresponding to the approval for that specific country.





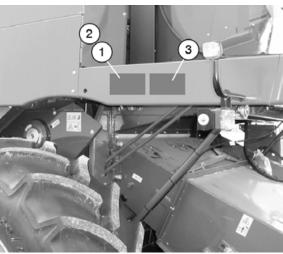


Fig. 1.

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#### **Combine identification**

Combine type and serial number appear on the plate and are also punched into the rear right-hand side of the frame (1).

## 1. General Information



Fig. 2.

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#### **Engine Identification**

The engine is identified by the type plate (1) in the middle of the cylinder block.

The following information appears on the plate (1):

- Engine manufacturer \_
- Engine type \_
- Engine power and rated speed
- Engine serial number \_
- Valve clearance \_
- Customer reference code \_
- Idling speed \_
- Compliance with Directive 97/68/EC \_
- Name of the engine assembler. \_

The engine serial number is always also stamped on the cylinder block.

#### **Cutting table identification**

The cutting table can be identified by a metal plate affixed on the left-hand side.

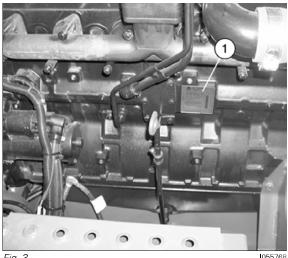


Fig. 3.

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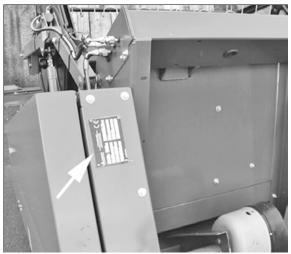


Fig. 4.

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#### 1. General Information



#### **Cab identification**

The cab identification plate is located on the lower left-hand corner of the driver's seat.



Fig. 5.

#### Hydrostatic pump identification

The type plate is located on the front part of the pump.

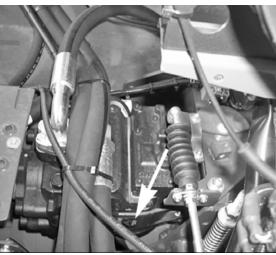
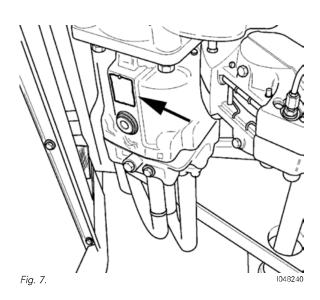


Fig. 6.

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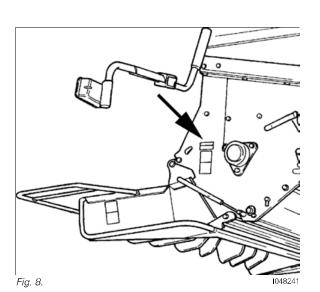
Hydrostatic motor identification

The type plate is located on the lower part of the motor.

#### 1. General Information

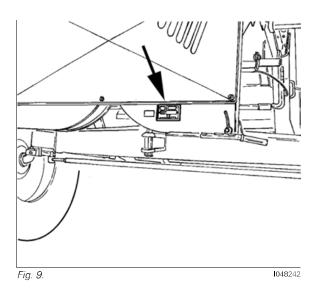
#### Straw chopper identification (if fitted)

The straw chopper type plate is located on the righthand side next to the rotor support.



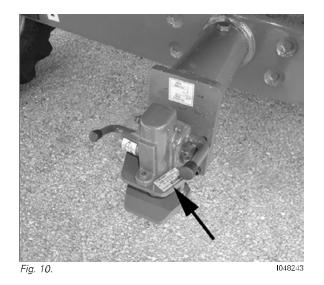
Chaff spreader identification (if fitted)

The type plate is located on the right-hand side next to the chaff spreader adjustment lever.



#### Trailer hitch identification (if fitted)

The plate is positioned on the right-hand side of the trailer hitch.



### 1. General Information

Please enter the identification details of your combine for convenient reference:
Combine model
Combine seriel number
Combine serial number
Engine type and serial number
Cab serial number
Straw chopper serial number
Cutting table serial number
Date of initial start-up
Dealer's telephone number

# 1

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## 1.4 Conformity

## **1.4.1 EC Declaration of Conformity**

The CE Declaration of Conformity, shown below, certifies that the combine was designed and built in compliance with the regulations currently applicable within the European Community.

The cutting table has its own EC Declaration of Conformity.



Fig. 1.

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1.5 information

## 1.5.1 Ecology

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#### Information for the prevention of environmental pollution

Soil, air and water are essential for agriculture and all life on earth. **Protect them**. In areas where no local regulations impose standards for the use and disposal of chemicals and petrochemical products required by modern technology, all necessary precautions must be adopted to avoid any risk of pollution.

The following guidelines may be helpful:

- Find out about the legal requirements in your country and comply strictly with them.
- If no regulations are in force, ask your Dealer about the effects of lubricants, fuels, antifreeze mixtures, cleaning agents etc. on people and the environment. Also ask how to store, use and dispose of such products correctly. In most cases, agricultural advisers will be able to answer your questions satisfactorily.

#### **Important Notes**

- 1. When refuelling the machine, take all necessary precautions to avoid fuel spillage. In particular, avoid using pressurised containers or fuel supply systems, as these are unsuitable.
- 2. As a rule, avoid any skin contact with liquid fuels, lubricants, acids, solvents etc. Most of these products contain substances that are potentially harmful.
- 3. Do not dispose of lubricants by burning: They contain substances that may be noxious when burned.
- 4. Whenever possible, use biodegradable oil for lubricating the chains, as this oil cannot be collected.
- Avoid spillage while draining oil, brake fluid, coolant etc. from the engine, gearbox and hydraulic system. Collect the fluids in suitable containers and dispose of them properly, according to regulations in force and the availability of suitable systems.
- 6. Modern coolants and mixtures, e.g. antifreeze and other additives, must be replaced every two years. Never let them drain into the ground; collect and dispose of them safely.
- 7. Never open or modify the air-conditioning system. It contains gases which must not be released in the atmosphere. Contact your Dealer or a specialist who has the correct equipment for emptying and re-charging the system and for carrying out any required maintenance or repair.
- 8. Immediately repair any leaks or defects in the engine cooling or hydraulic system to prevent any risk of pollution.
- 9. Never increase the pressure in a pressurised system. This may cause the components to burst.
- 10. When welding, protect the hoses properly against welding spatters that could damage or weaken hoses and sleeves, resulting in oil and coolant leaks.

## **1.5.2** Hydraulic systems: hoses

Hoses are an important part of modern machines.

Hose features may change over the years when exposed to pressure, vibrations, weather conditions, etc. Inspect the hydraulic hoses at the beginning of each new harvesting season.

Regulations in force (e.g. DIN 20066) require hose replacement six years from manufacturing (the manufacturing date is printed on most hoses, which helps determine when replacement is due).

It is important to observe these recommendations.

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DANGER:

- In the event of leaks, pressurised liquid may penetrate your skin and cause severe injury. Immediately seek medical advice from a doctor familiar with this type of accident. This kind of injury requires surgery.
- Always relieve pressure before working on components of the hydraulic system
- Ensure that all hydraulic couplings are properly tightened before letting oil into a pressurised circuit.
- Search for leaks without touching with bare hands; e.g. use a piece of cardboard.
- Wear suitable protective clothing to avoid touching liquids with hands or body.

#### Safety requirements for hydraulic systems and their components

- Hoses may not be manufactured using recycled material.
- Never weld on hydraulic lines.
- In case of damage, immediately replace the lines.
- Do not modify hydraulic accumulators through adjustment, welding, etc.
- Before removing the hydraulic accumulators to carry out service or maintenance, relieve the pressure of the liquid contained therein completely.
- Service or maintenance on hydraulic accumulators should only be carried out by skilled technicians who are thoroughly familiar with these components.

## 1.5.3 Scrapping and disposal

In addition to the recommendations in the section "Important Notes on Environmental Protection", which should be followed at all times, the instructions listed below must be followed when the time comes to scrap the combine.

- Find out about the legal requirements in your country and comply strictly with them.
- If no regulations are in force, contact your Dealer about the possibility of handing over the combine to a company skilled in machine disposal.

Instructions:

- 1. Drain the hydraulic and hydrostatic circuits, engine sump, gearbox, final drives, etc., collecting the oil in suitable containers to be kept in a safe place until they can be disposed of appropriately.
- 2. Drain radiator coolant and store it as described above.
- 3. Empty the air-conditioning system. Contact your Dealer or an authorised workshop who has the correct tools for emptying the system.
- 4. Separate different materials, such as glass, plastic, iron, aluminium, tyres, etc. for easier recycling.

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## 1.6.1 Weight distribution

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The weight distribution on the two axles depends on how the combine is equipped. If a cutting table other than the standard table is attached to the combine, please note that at least 20% of the total weight of the combine must rest on the rear axle.

In accordance with the above, ballast weights could be required at the rear of the combine.

#### Checking the total weight distribution (with table attached) on both axles

Ensure that the capacity of the weighing equipment is sufficient.

When weighed, the machine fuel tank must be filled and the operator must be in his seat.

Check that the load resting on each axle and the total weight do not exceed the maximum values permitted **by the manufacturer and indicated in the documents for road transport.** 

#### Proceed as follows:

- Position the table approx. 350 mm above the ground; position the combine front axle in the middle of the weighing platform (1) and measure the weight (Ma).
- Position the rear axle in the middle of the weighing platform (1) and measure the weight (Mp).
- Calculate the total weight by adding up the two weights: Mt = Ma + Mp.
- Determine if 20% of the total weight of the machine rests on the rear axle, dividing Mp by Mt. This value must be higher or equal to 0.20, corresponding to 20%:

#### Mp: Mt ≥ 0.20 (or 20%)

If the calculated value is lower than 0.20, the weight on the rear axle must be increased by adding ballast weights (Mz).

When recalculating, the weight of the additional ballast weights must be taken into account in the total weight:

#### (Mp + Mz): $(Mt + Mz) \ge 0.20$ (or 20%)

Example: Weight measured on the front axle, with table attached Ma=12000kg; weight measured on the rear axle, with table attached Mp=3100kg.

Machine total weight:

Mt = Ma + Mp = 12000 + 3100 = 15100 kg.

The value Mp: Mt = 3100: 15100 = 0.205 which corresponds to 20.5%, is correct.

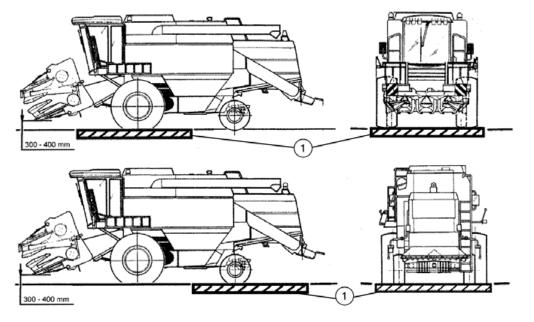


Fig. 1.

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