# **Operator's Manual**

140-180 | **MF7 1 0 0** 

**Tractors** 

Models: 7140 - 7150 - 7170 - 7180

6287050M1 - 09/10



INNOVATION - COMMITMENT - PROXIMITY - VISION - RELIABILITY - LEADERSHIP - SUPPORT - TECHNOLOGY



## **Tractor models applied:**

MF 7140, 7150, 7170, and 7180

## Footstep (Fig. 1) and cab versions (Fig. 2)

#### **CONGRATULATIONS!**

You have just purchased a modern, resistant and reliable tractor.

The 7100 series tractors are the result of researches, improvements and a wide experience in manufacturing agricultural and industrial machines.

These tractors were developed to operate in several different working conditions, and deliver excellent performance, fuel economy and operational comfort.

Read this manual carefully before operating the tractor for the first time and before servicing. You will be ensuring enhanced performance and prolonged life to your tractor.

During the Installation on the Farm, ask your Dealer to provide all necessary information. Apart from supplying genuine replacement parts, adequate tools and factory-trained personnel, the Authorized Dealership is the only one that offers reliable Technical Assistance.



Fig. 1



Fig. 2

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MF 7100 Series **0-1** 

# A Word to the Operator

- Keep this Manual under perfect conditions and present it to the Dealership clerk so as the Free Post-delivery Inspection date can be set.
- 2 Read Chapter 1 on Safety Instructions very carefully.
- 3 The Warranty will only be effective after the Tractor Delivery Certificate is properly registered at the AGCO do Brasil Aftermarket Department.
  - Therefore, ask your Dealership staff to fill out your tractor delivery certificate.
- 4 Installation on the Farm
  - It will be performed by a member of your Dealership staff.
  - In the booklet attached to this Instruction Book you will find general and relevant information.
- ✓ Inspection Instructions
- ✓ Delivery Instructions
- ✓ Delivery Certificates
- 5 Changes in the tractors
  - In accordance with the Company's policy of continuous improvement to its machines, alterations in the specifications of machines may be made at any time without notice and without incurring any kind of obligation to previously manufactured products.
  - The content in this Manual is updated to the moment it was printed and can also be changed without prior notice.
- 6 In some of the illustrations used in this manual, panels or guards may have been removed for clarity. However, never operate the tractor without these components in position.
- 7 Some pictures can have different details in relation to your tractor since they were obtained from prototypes or tractors configured with accessories which are not included in your machine.

- 8 Massey Ferguson original parts
  - Not using Massey Ferguson original parts may result in poor performance from your tractor or affect other components.
  - AGCO do Brasil will not accept liability for losses resulting from the use of non-original parts. If non-original parts are used during the Warranty period, the tractor warranty may be void.
- 9 Owing to wide variations in operating conditions, it is impossible for the Company to make comprehensive or definitive statements in its publications regarding performance or methods of use of its machines, or to accept liability for any loss or damage which may result from these statements, or from any errors or omissions.
  - If the tractor is to be used for abnormal conditions which may be detrimental, (e.g. deep water of paddy fields), consult your Massey Ferguson Dealer for special instructions. Otherwise, your tractor Warranty may be voided.
  - These tractors are designed solely for use in customary agricultural operations (intended use). Use in any other way is considered as contrary to the intended use. AGCO do Brasil accepts no liability for any damage or injury resulting from misuse and these risks must be borne solely by the user.
- 10 -Compliance with, and strict adherence to, the conditions of operation, service and repair, as specified by AGCO do Brasil also constitute essential elements for the intended use.
- 11- These tractors should be operated, serviced and repaired only by persons familiar with their particular characteristics and who are acquainted with the relevant safety rules (accident prevention).
  - Therefore, customers are strongly advised to use an official Massey Ferguson Dealer in connection with any service problems and adjustments that may occur.

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#### 1 - Introduction

The purpose of this book is to enable the owner and driver to operate the tractor in a safe and proper manner. If instructions are followed correctly, the tractor will work for many years, following AGCO's tradition. Tractor setting and adjustments made in the dealership will ensure that these operation and service instruction be properly understood.

Always contact your dealer if you don't understand any part of this manual. It is very important that these instructions be understood and followed.

Daily maintenance can become a routine. Always keep a log of the service hours.

When ordering new parts, use only original MF parts. MF Dealer network supplies original parts and can provide installation and use instructions. Low quality parts can cause severe damage to the equipment.

We recommend our customers to buy their service parts only from authorized MF Dealers.

Owing to wide variations in operating conditions, it is impossible for the Company to make comprehensive or definitive statements in its publications regarding performance or methods of use of its machines, or to accept liability for any loss or damage which may result from these statements, or from any errors or omissions.

To avoid warranty to be void, consult your MF Dealers to obtain special instructions, if your tractor is used under special conditions, which may be harmful (use in deep water or in flood fields, for instance). These tractors are designed solely for use in agricultural operations (intended use). Any other use may be considered inadequate.

AGCO accepts no responsibility for material or personal damage caused by misuse. The consequences of improper use of equipment should be held by users only.

The compliance and adhesion to operating, service, and maintenance requirements specified by AGCO are essential factors to intended use.

These tractors should be operated, serviced and repaired only by qualified personnel familiar with all their particular characteristics and who are acquainted with the relevant safety rules (accident prevention).

We recommend customers to contact one of our MF Dealers in the event of after-sales issues and for any adjustment required.

MF 7100 Series 1-3

#### 2 - General Recommendations

Why is safety important to you?

- 1 Accidents disable and kill.
- 2 Accidents can be very costly.
- 3 Accidents can be avoided.

This manual is compiled to cover those safe working practices that are associated with the base tractor operation. It does not cover all operation and safety instructions relevant to all known implements and attachments that may be fitted at the time of tractor delivery or at some future date.

This section of the Manual aims at presenting some basic safety situations involving your tractor and suggestions on how to avoid risky situations and accidents.

Additional precautions may be necessary, depending on attachments used and conditions at the work site or in the service area. For each implement, attachment and working situation, there is always a set of cares to be taken. Therefore, it would be impossible to have them all listed in this Manual.

AGCO do Brasil has no direct control over tractor application, operation, inspection, lubrication or maintenance. Therefore, it's YOUR responsibility to use good safety practices in these areas.

#### 3 - Your Tractor

The tractor is a source of mechanical and hydraulic power.

- On its own, the tractor is of little practical value.
   Only when used in conjunction with an implement or other attachment does it become a working unit.
- This Maintenance Guide was compiled to cover safety practices when the tractor is operating under normal conditions.
- This manual does not cover all operation and safety instructions relevant to all known implements and attachments that may be fitted at the time of tractor delivery or at some future date.
- It is essential that operators read and understand the manuals about implements and related attachments.

# 4 - Safety Notes Used Throughout the Text

Read the symbols below. Whenever they appear next to a text, read the instructions carefully.



#### DANGER!

This symbol together with the word DANGER indicates an imminently hazardous situation that, if not avoided, will result in DEATH OR SERIOUS INJURY.



#### ATTENTION!

This symbol together with the word ATTENTION indicates a potentially hazardous situation that, if not avoided, will result in DEATH OR SERIOUS INJURY.



#### **IMPORTANT:**

This symbol and the word IMPORTANT identifies special instructions or procedures that, when not strictly followed, may result in damage or destruction of the machine, of the operating process or even objects near the machine.



#### NOTE:

This symbol and the word NOTE indicates additional information about a topic or procedure that will make the operation or repair more convenient or efficient.

**1-4** MF 7100 Series

## 5 - A Word to the Operator

It is your responsibility to read and understand the safety section in this Guide before operating your machine. You must follow these safety instructions that will take you step by step through your working day.

Remember that you are a key element for the machine operation to be safe. Good safety practices not only protect you, but also the people around you. Carefully read the safety practices contained in this Guide and include them in your safety program.

Keep in mind that this safety section is written only for this type of machine. Follow all usual safety instructions and, above all, REMEMBER THAT YOUR SAFETY IS YOUR RESPONSIBILITY. YOU HAVE THE POWER TO PREVENT ACCIDENTS.

## 6 - Follow a Safety Program

#### 60.1 - For Proper Operation

So as the agricultural tractor delivers a proper operation, it should be operated by qualified and authorized personnel only. To be qualified you must understand the written instructions supplied in this Maintenance Guide, receive proper training, and know the safety rules and regulations for the job. Some traffic regulations specify that no one under the age of 16 years old, for example, can operate any agricultural machinery. In other locations, the law indicates they only persons older than 18 years old can do it. Tractors belong to this category. It is your responsibility to know all regulations and observe them.

These will include, but are not limited to, the following instructions for safe operation:



#### ATTENTION!

An operator should not use alcohol or drugs which can change his alertness or co-ordination. Whether the operator is taking prescribed medicine or over-the-counter medicine, he must consult a doctor to find out if his capacity to operate the machine will be affected by such medication.

Follow the instructions below:

- DO NOT allow children or unqualified persons to operate the tractor. Keep others away from your work area.
- Always wear seat belt.
- Whenever possible, avoid operating the tractor near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slippery, or muddy surfaces.
- Avoid crossing steep slopes if possible.
- Pay very close attention where you are going, especially at the end of rows, on highways or when operating close to trees.
- The instructor seat should be use for short periods of time only.
- DO NOT allow children on the instructor seat.
- DO NOT let anyone ride on the machine or implement, unless there is a proper instructor seat.
- The implement should only be coupled to the drawbar and hitch points recommended, and never above the center line of the rear axle.
- Operate the tractor slowly and smoothly no jerky turns, sudden starts or stops. Apply the parking brake while the tractor is stopped. Lower the implement and remove the key from the ignition switch.
- DO NOT modify or remove any part of the equipment and DO NOT use attachments unless they match your tractor.

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#### 7 - Protection

#### 7.1 - Cab

A cab with ROPS (Rollover Protective Structure) meets all the legal safety requirements and noise level requirements, apart from complying with international safety standards.

The ROPS cab should NEVER be drilled or modified for the installation of attachments or implements (Fig. 3). DO NOT weld any component to the cab.

DO NOT tie ropes or chains to the cab main frame in order to pull equipment,

If you find it necessary to add extra controls or displays to the operator area, contact your MF dealer for detailed information.

The ROPS cab and the seat belt are very effective to reduce injuries caused by accidents shuch as rollover. It is mandatory you wear your seat belt at all times.

- Always wear the seat belt tight to your body (Fig. 4).
- Check the seat belt for damage. If the seat belt is damaged, it should be replaced.

### 7.2 - Damage do Cab Fitted with ROPS

If the ROPS is damaged during a rollover or when colliding with an object, it should be replaced and not repaired.

DO NOT operate the tractor with a damaged frame.



Fig. 3

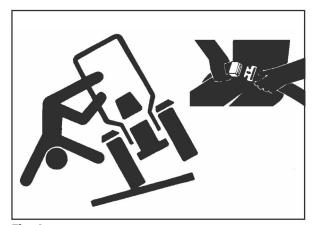


Fig. 4

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## 8 - Prepare for a Safe Operation

#### 8.1 - Know your Equipment

Know your tractor, learn how to operate all the equipment

in your machine and the implement and attachments used with it. Know the purpose of all the controls, gauges, instruments, and dials. Be aware of the nominal load capacity, the speed range, the braking capacity, and the steering characteristics of your machine, besides the turning radius and the operation plays.

Keep in mind that rain, snow, ice, loose gravel, soft ground, etc. can change the way your tractor operates. Under bad weather conditions, drive more slowly and be more careful. Four-wheel drive front axle engagement (If fitted)

Study the safety decals for DANGER, WARNING, PRECAUTION or CAUTION located in your tractor, besides the information decals.

READ THIS MAINTENANCE GUIDE BEFORE TURNING THE ENGINE ON. STUDY THEM BEFORE STARTING TO WORK (Fig. 5). IF YOU DON'T UNDERSTAND ANY OF THE INFORMATION CONTAINED IN THE GUIDE, ASK SOMEONE TO EXPLAIN IT TO YOU.

This manual covers all general safety practices for agricultural tractors. It should be kept inside the tractor at all times. In case you need copies of this manual, please contact your MF dealer.



Use proper safety devices and clothing for your work (Fig. 6). Don't take chances.

You will need:

- A helmet;
- Goggles or a mask;
- Ear plugs;
- Respirator or filter mask;
- Special clothing for cold days;
- Reflective clothing;
- Heavy gloves (neoprene for chemicals, leather for rough work);
- · Boots.

DO NOT wear loose clothing, jewelry or other items that may entangle in controls or other parts of the tractor.

In addition, if your hair is long, tie it up.

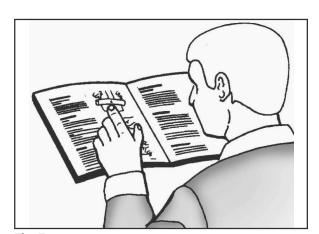


Fig. 5

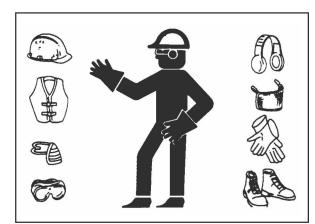


Fig. 6

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Note where fire extinguishers and first-aid or emergency equipment (Fig 7) is kept and find out where to get help in case of emergency. Get to know your equipment and how to use it.

# 8.3 - Use all Available Protective and Safety Devices

Keep all protective devices in place and properly secured. Make sure all guards, shields and safety signs are properly installed, as specified, and in good condition.

To help keep you and others around you safe, your tractor must be equipped with:

- Seat Belt
- Tractor PTO shield.

Depending on the type of operation, your tractor will also need:

- Rearview mirror;
- Fire extinguisher;
- Warning triangle (SMV), shields, backup alarm, lighting, and additional safety decals.

It is very important to know how to use the safety devices in your tractor. Make sure they are in place and in good condition. DO NOT remove or disconnect any safety device.

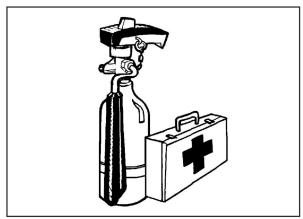


Fig. 7

#### 8.4 - Check your Equipment

Before you begin your working day, take time to check your tractor and ensure that all systems are in good operating condition.

- DO NOT smoke while refueling the tractor. Keep any type of open flame away (Fig. 8).
- Stop the engine and wait for it to cool down before refueling.
- Check for loose, broken, missing, or damaged parts.
   Keep all parts in good condition. Make sure that all the guards and shields are in place.
- Check the seat belt for damage. If the seat belt is damaged, it should be replaced.
- Ensure that implements and attachments are properly installed and that the tractor and implement PTO rpm ratings match.
- Check the condition and tire pressure (absence of cuts and bulges). Replace worn or damaged tires. Check whether the parking brake and pedal are working properly. Adjust if necessary.

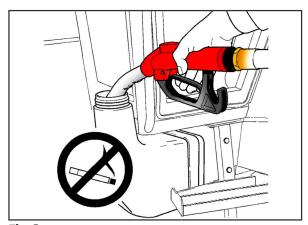


Fig. 8

- Check the oil level and add oil if required.
- Make sure all safety devices of the PTO shaft are locked. Perform all maintenance procedures outlined in the maintenance section of this Guide.
- Ensure that the PTO shield and shaft shields are in place and working properly.
- Check the tractor and implement hydraulic system. Repair or replace all damaged or missing parts.

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#### ATTENTION!

Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause serious personal injury, blindness or death. Fluid leaks, under pressure, may not be visible. Use a piece of cardboard or wood to find leaks. DO NOT use your bare hands. Always wear goggles. If any fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of procedure (Fig. 9).

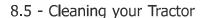
Before applying pressure to the fuel or hydraulic system, be sure all connections are tight and that lines, pipes, and hoses are not damaged. Before disconnecting fuel or hydraulic lines, be sure to relieve all pressure. Make sure that all hydraulic lines are correctly installed and not crossed.



#### **ATTENTION!**

The cooling system builds up pressure while the engine heats up. Before removing the radiator cap, stop the engine and let the system cool.

Check the engine cooling system and add coolant as required.



- Keep work surfaces and engine compartments clean.
- Before cleaning the machine, always lower the implements to the ground, place the tractor in neutral, engage parking brake, shut off the engine and remove the key from the ignition.
- Clean steps, pedals and floor. Remove grease or oil. Clean all dust and mud. In winter, scrape away snow and ice. Remember: slippery surfaces are dangerous.
- Remove or put away tools, chains and hooks.

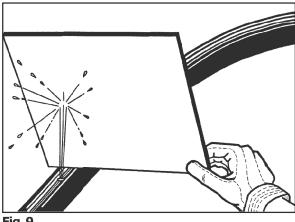


Fig. 9

#### 8.6 - Protect the Environment

It is illegal to pollute drains, water courses or soil. Use authorized waste disposal facilities, including civic amenity sites and companies providing facilities for receipt of used oil. In addition, the dirty oil removed from the tractor must be stored in proper containers before being thrown in the garbage. If in doubt, contact your local authority for advice.

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#### 9 - Tractor Maintenance

- DO NOT service the tractor while the engine is running or hot, or if the tractor is in motion (Fig.10).
- Before making adjustments to, or servicing the electrical system, disconnect the battery cables: the negative (-) cable first.
- To prevent fires or explosions keep open flame away from the battery or cold weather starting aids. To prevent sparks which could cause explosions use jumper cables according to instructions provided in this manual.
- When making repairs and adjustments, we recommend you consult your AGCO dealer so as the work be performed by trained personnel.
- The implement and/or tractor must be supported on suitable wooden blocks or stands. NEVER on a hydraulic jack.
- Check all nuts and bolts periodically for tightness, especially wheel hub and rim nuts. Tighten all hardware to the recommended torques.

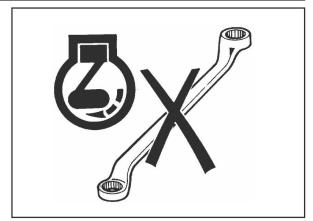


Fig. 10

#### **10 - Start**

### 10.1 - Warning Before Starting

Before starting the tractor, walk around the tractor and coupled implement. Make sure that no one is under, on or close to the machines. Warn people close to the tractor that it will be turned on soon. Do not start the tractor while there are people near the tractor, implements or towed implements.

Ensure that all bystanders, particularly children, are at a reasonable distance away before starting the engine.

# 10.2 - How do Mount and Dismount your Tractor Safely

Three point contact means both hands and one foot or one hand and both feet in contact with the machine at all times during mounting and dismounting.

Clean your shoes and wipe your hands before climbing on. Use the handrail. Grab the handrail and alway use the stairs or steps when mounting or dismounting the machine.

DO NOT use control levers as handrails and never step on pedals while mounting or dismounting.

DO NOT attempt to mount or dismount from a moving tractor. DO NOT jump off a tractor unless it is an emergency.

#### 10.3 - A Safe Start



#### **IMPORTANT:**

Before starting the engine make sure there is plenty of ventilation. DO NOT start the engine in confined spaces. The engine smoke may cause asphyxiation.

Always start the engine from the operator's seat with all the transmission levers and the PTO lever in neutral. Make sure that the tractor brake pedals are latched together at all times unless you are making turns in the field, which requires independent use of the brakes. Make sure the brakes are properly adjusted so that both brakes engage at the same time.

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