

# WORKSHOP MANUAL

***EXPLORER II Special***

***70 - 75 HP***

***80 - 85 - 90 - 95 HP***

**SAME**

# WORKSHOP MANUAL

# SAME

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## ***EXPLORER II Special***

### ***70 - 75 HP***

### ***80 - 85 - 90 - 95 HP***

#### **Introduction**

This publication is addressed to the specialised technicians who work on our tractors.

It contains all the general information about the tractors, with particular emphasis on checking, overhaul and adjustment operations, as well as general removal and refitting procedures.

The workshop manual is the obvious text for technicians attending the annual courses held at our training centre as it contains the information required to enable them to work safely and effectively on the tractor.

It also provides a useful reference work for trained technicians seeking confirmation on the correct procedures; we therefore recommend that all authorised service centres keep a copy of this manual ready to hand for consultation whenever necessary.

We wish to thank all those who have contributed by offering their suggestions for corrections and improvements to our publications.

**CAUTION: For instruction on engine servicing procedures, testing and adjustment, please to the refer specific manual for SDFG engines code 307.1072.3.5**

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Because of the possible time lag between the introduction of technical modifications (an on-going process the aim of which is to offer products which are being continually improved) and the latest update of the manual, we must point out, for the sake of correctness, that the data contained in this edition are liable to change at any time and are therefore not binding.

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La diferencia entre los tiempos necesarios para poner al dia la impresiòn y los tiempos de las modificaciones tècnicas (las que se verifican continuamente, con el objeto de ofrecer productos cada vez màs calificados) nos imponen declarar, por correcciòn, que los datos contenidos en la presente ediciòn estàn sujetos a variaciones en cualquier momento y que portanto no son obligativos.

A diferença entre os tempos necessãrrios para actualizar a impressào e os tempos das modificações técnicas (que se verificam continuamente, a fim de oferecer um produto cada vez mais qualificado), obrigam-nos a declarar, que os dados contidos neste manuel são susceptíveis de variaçào em qualquer momento e que portanto não são vinculatórios.

## INTRODUCTION

The purpose of this workshop manual is to provide instruction for repair technicians and a practical guide for improving the quality of repairs.

This manual enables repair technicians to acquire a thorough knowledge of the machine, indicating the correct methods for fault diagnosis, for working in safety and for accurate dimensional checks and visual inspections. The instructions also indicate the products to use, the tightening torques and the adjustment data.

The technical material contained in this manual is reserved for Authorised Dealers and Service Centres which will be duly informed of any technical changes to the machines in question through the issue of documents regarding modifications, updates and supplements for optional equipment.

All technicians and their colleagues are expressly forbidden from reproducing any part of this manual in any form or from communicating the contents to third parties without the express written permission of the Manufacturer, who remains the sole owner of this document with all rights reserved in accordance with applicable laws.



## SAFETY NOTES

To ensure that machines entrusted to Authorised Service Centres for repair or overhaul continue to function correctly, it is very important that all repair work is carried out in the prescribed manner.

The procedures for checks and repairs indicated in this manual are safe and effective.

Some of the operations described require the use of special tools and equipment; these tools have been specifically designed for the intended purpose and may be ordered directly from the Manufacturers.

**DO NOT USE MAKESHIFT TOOLS;** not only is there a risk of personal injury, but such tools are rarely suited to the purpose for which they are used.

To prevent injury to operators, the symbols  and  are used in this manual to indicate the safety precautions required. The warnings accompanying these symbols must always be adhered to carefully.

In potentially hazardous situations, always give priority to personal safety and take the necessary actions to eliminate the danger.

## GENERAL SAFETY RULES

- 1 - Even if you have a thorough knowledge of the machine as regards its components, operation and controls, always take particular care when carrying out manoeuvres; remember that the machine you are working on is in need of repair or overhaul and consequently may not always behave as expected.
- 2 - Before starting work, clean the machine thoroughly to remove all mud, dust and road dirt. Also clean the cab to remove all traces of oil, snow and ice from the access steps and grab rails.
- 3 - When climbing up to or down from the cab, always ensure you maintain three points of contact at a time (foot or handholds) in order to keep your balance and prevent accidental falls.
- 4 - Always take special care when carrying out fault diagnosis operations; these operations often require two persons, who must never stand in front of the wheels when the engine is running.
- 5 - When carrying out checks and repairs, wear close-fitting clothing, safety goggles and protective gloves that are suitable for the task (cleaning, draining fluids, repairs).  
When working near moving parts, long hair should be gathered up and secured safely under a cap to prevent the risk of entanglement and severe injury.
- 6 - Do not allow anyone who is not directly involved in the work to approach the machine; ensure that they remain at a safe distance.
- 7 - Keep well clear of moving parts; when the engine is running, some moving parts are not easily visible and therefore present a risk of entanglement, even if protected by safety guards.
- 8 - Ensure that the area is well ventilated before starting the engine in order to avoid the formation of dangerous concentrations of toxic gases; always connect suitable fume extraction equipment to the exhaust pipe.

## **SAFETY PRECAUTIONS FOR REMOVAL AND REFITTING OPERATIONS**

- ★ When removing or refitting parts, always take the following safety precautions.

### **1. PRECAUTIONS FOR REMOVAL OPERATIONS**

- Unless otherwise indicated, lower the working implement until it rests on the ground.
- After disconnecting hydraulic and fuel system pipes, always fit plugs to the open ends of the pipes to prevent ingress of impurities.
- Before removing a cylinder, fully retract the piston and secure it in this position using a retaining strap.
- Use containers of sufficient capacity when draining oil, coolant or fuel.
- Before removing a part from the machine, check for alignment markings indicating the correct assembly position. If necessary, make new markings to ensure correct assembly.
- When unplugging electrical connectors, always grip the connectors firmly to avoid pulling on the wires.
- Where necessary, label wires and pipes before removal to avoid confusion when reconnecting.
- Check the number and thickness of any shims removed and keep them together in a safe place.
- To lift the machine or any of its main components, use lifting equipment of suitable capacity.
- When using eyebolts for lifting components, first check that they are not bent or damaged; screw them fully home and then turn the bolt so that the eye is aligned with the lifting hook.
- Before removing a part, clean the surrounding area and, after removing the part, cover it to protect it from dirt and dust.

### **2. PRECAUTIONS FOR REFITTING OPERATIONS**

- Tighten nuts and bolts to the specified tightening torques.
- When refitting flexible pipes and wires, take care not to twist or tangle them.
- Always fit new seals, O-rings, split pins and safety stop rings; make sure that the ends of the split pins are separated and bent back so that the pin cannot be withdrawn from the hole.
- Ensure that circlips are correctly installed in their seatings.
- When applying threadlocking compound, first clean the part removing all oil and grease, then cover the thread evenly applying a few drops of the compound.

## HOW THE MANUAL IS STRUCTURED

- SECTION 00** Contains the general safety rules, information on how to use and update the manual, the symbols used, the products required, the standard tightening torques and a conversion table for units of measurement.
- SECTION 10** Contains technical descriptions and information regarding the mechanical and hydraulic operation of machine components, the designations of the various components, hydraulic diagrams and general technical data.
- SECTION 30** Contains the methods, checks and adjustments regarding the external components; the operations dealt with in this section do not require removal of the various assemblies that form the tractor frame and cab.
- SECTION 40** Contains information and diagrams regarding the machine's electrical and electronic systems

### CAUTION!

This manual does not contain information and instructions regarding the engine, which can be found in the following manuals:

Engine 1000/3/4/6	307.1103.1.5	Italian
	307.1103.5.5	German
	307.1103.3.5	English
	307.1103.2.5	French
	307.1103.4.5	Spanish
	307.1103.7.5	Portuguese

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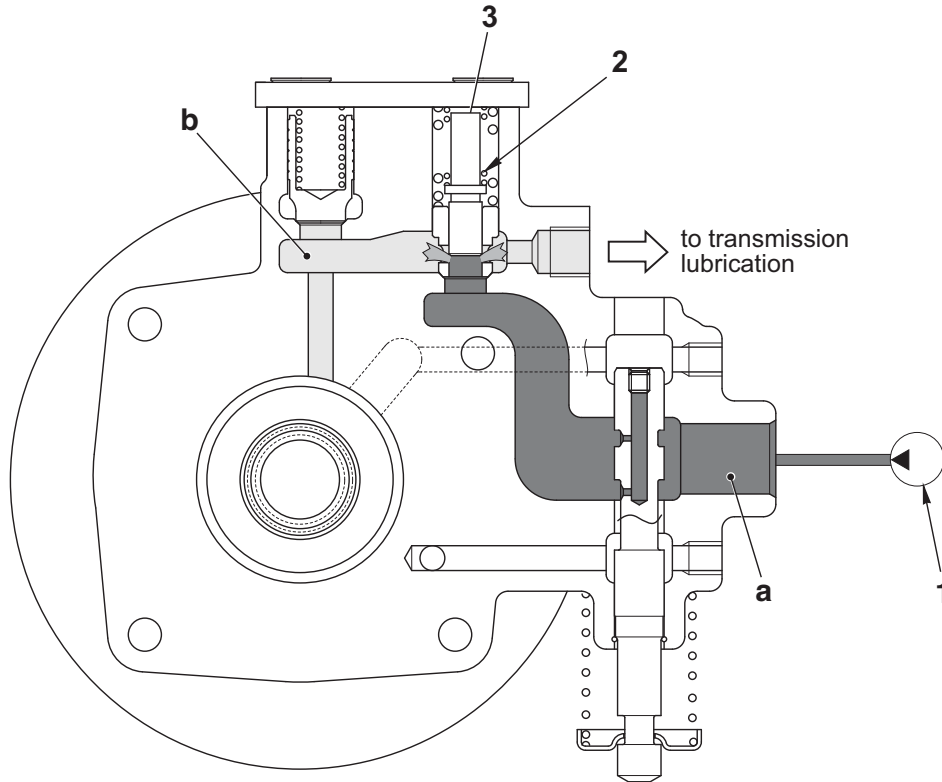
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### 2.2.1 PRESSURE HOLDING VALVE AND LUBRICATION CIRCUIT PRESSURE RELIEF VALVE

#### FUNCTION

The pressure holding valve is designed to maintain the PTO hydraulic circuit at 10 bar.



D0031960

#### OPERATION

When the engine is running pump (1) sends oil to the clutch unit.

The pressurized oil thus enters chamber **a** and the pressure increases.

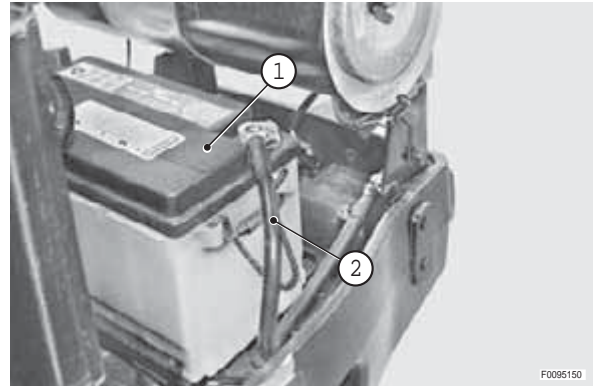
As the pressure increases, the force exerted by the pressure on piston (2) overcomes the resistance of spring (3) and piston (2) shifts upwards, thereby connecting chambers **a** and **b** and regulating the pressure in chamber **a** at 10 bar.

The oil that flows into chamber **b** is used for lubrication of the transmission.

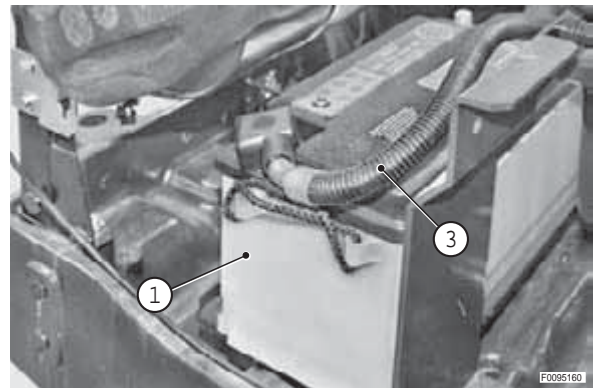
## BATTERY

### Removal

- 1 - Remove left and right side panels.  
(For details, see "FRONT HOODS").
- 2 - Disconnect lead (2) from negative terminal (-) of battery (1).



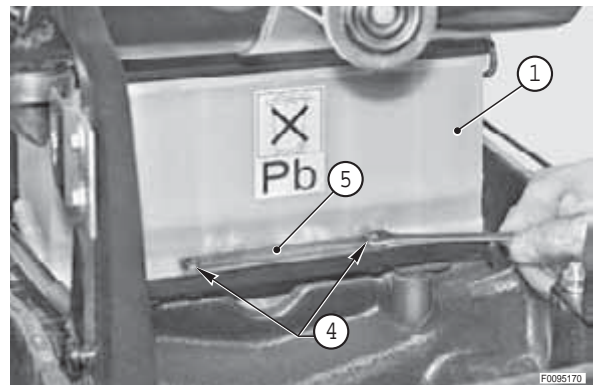
- 3 - Disconnect lead (3) from the positive terminal (+) of battery (1).



- 4 - Remove screws (4), bracket (5) and remove battery (1).



If the battery is not to be used for several days, store it in a dry, well-ventilated place at a temperature above +5°C.



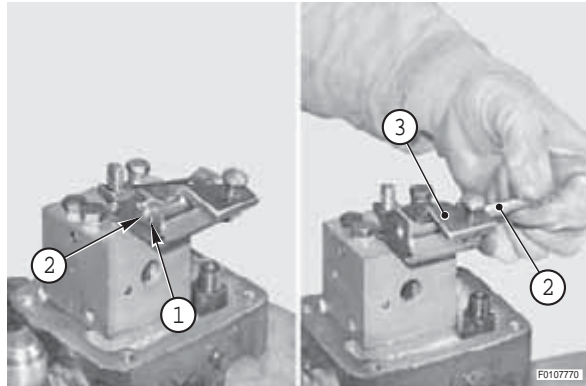
### Refitting

- Refitting is the reverse of removal.
- ★ Pay attention when fitting the battery to ensure that the negative terminal is positioned on the right-hand side of the tractor.

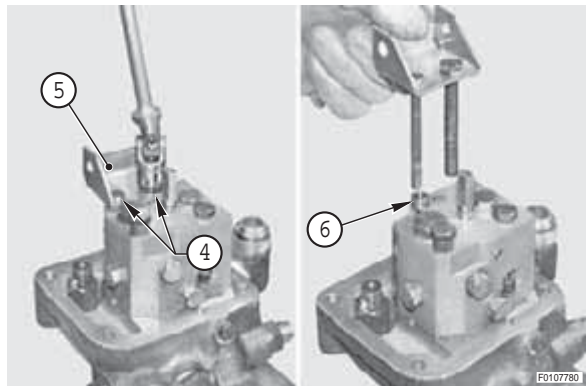


## Disassembly

- 1 - Remove split pin (1), pivot pin (2) and lever (3).  
 ★ Renew the split pin on reassembly.

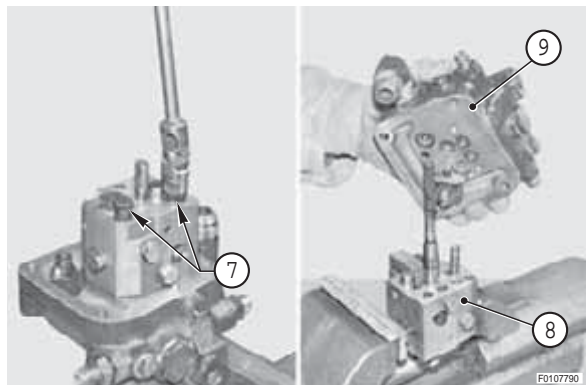


- 2 - Loosen screws (4) and remove support (5).  
 ★ Recover spacer (6).

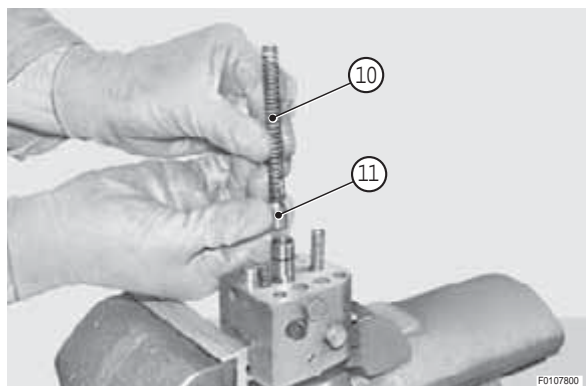


- 3 - Loosen screws (7) without removing them and turn directional control valve (8) over so that the aluminium body is facing downwards. ☒ 1

- 4 - Remove screws (7) and separate directional control valve assemblies (8) and (9).

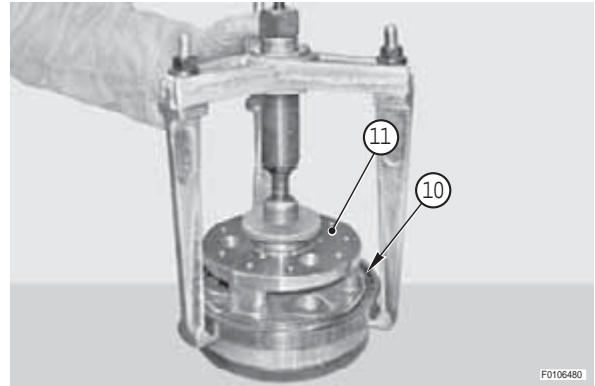


- 5 - Remove spring (10) and spacer (11).

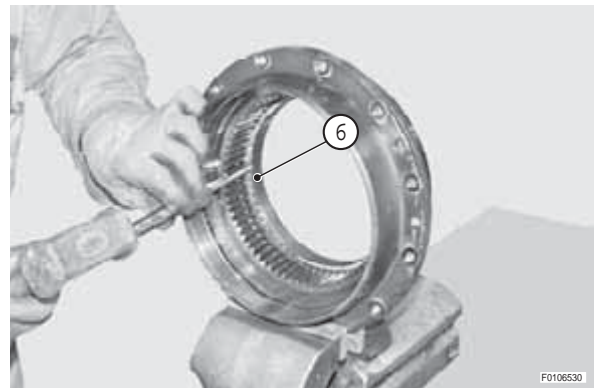




- 7 - Using a puller, remove bearing (10) from planet carrier (11).

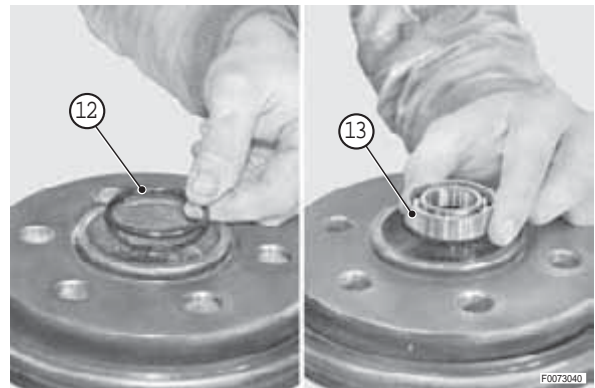


- 8 - Using a suitable drift, remove bearing (6).



- Only if necessary

- 8 - Remove O-ring (12) and withdraw bearing (13).



### Assembly

- To assemble, follow the disassembly steps in reverse order.

#### ✳ 1

 Screws: 62÷68 Nm (45.7–50.0 lb.ft.)

- ★ Using a press and a suitable drift, install oil seal (1) in the final drive reduction unit.

