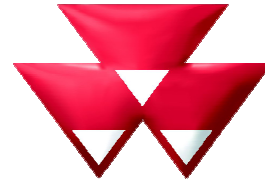


Operator's Manual



MASSEY FERGUSON

MF 5700 - Operation - Maintenance

MF 5710 / MF 5711



Beauvais
AGCO S.A.S. - 41 avenue Blaise Pascal - 60000
Beauvais - France - RC B562 104 539
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Original Operator's Manual

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Foreword

We would like to welcome you to the ever-growing number of people who own a Massey Ferguson tractor; people who appreciate quality. We are proud of every tractor that leaves our factories, each being technically advanced and of a high quality.

This Operator's Manual contains the specifications for your new tractor. Please ensure that all operators read the instructions and follow them carefully. The pages that follow contain vital information on your tractor; please read them carefully.

Your Massey Ferguson dealer will guarantee you quality servicing and will provide you with all the assistance you need. When it comes to servicing, remember that your dealer knows your tractor best and that he wants you to be completely satisfied.

Please leave this Operator's Manual in the tractor if resold. The subsequent owner will need the information it contains.

All information and specifications in this manual are up to date at the time of publication. However, our ongoing policy to improve our products obliges us to reserve the right to make alterations at any time without notice.

Please note that this manual relates to all models and refers to both standard and optional equipment. You may therefore find details relating to equipment that is not fitted on your tractor.

This Operator's Manual complies with Directive 2010/52 EC.

Massey Ferguson

1.1 Locating serial numbers

1.1.1 Locating serial numbers

IMPORTANT: Tell your dealer or agent the tractor serial number.

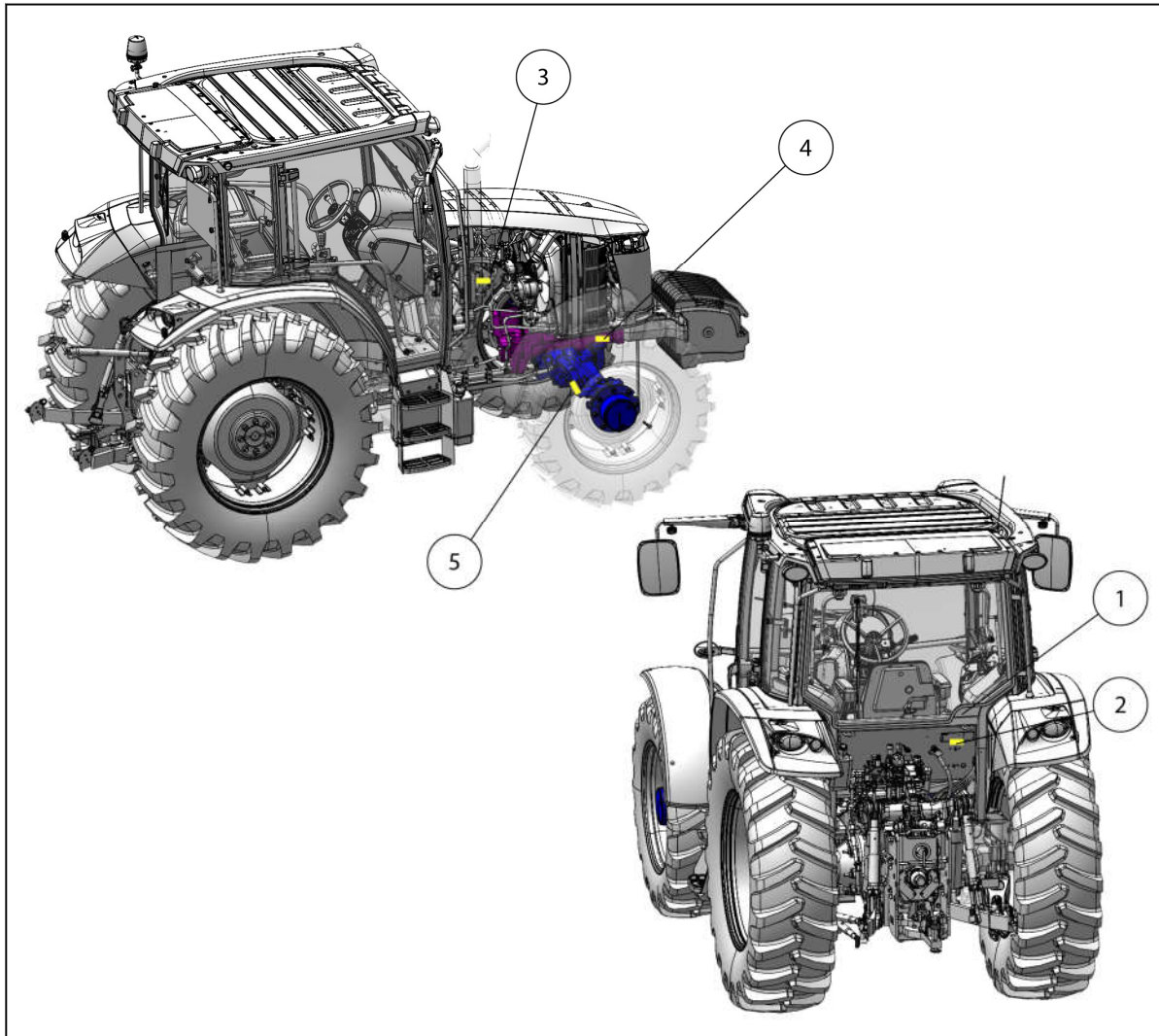
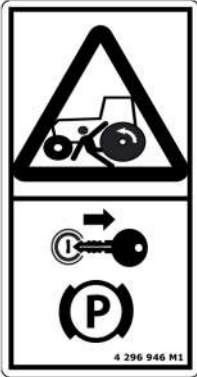

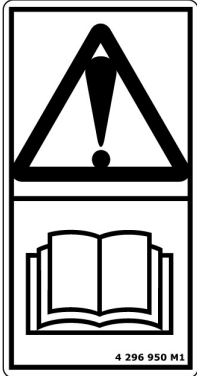
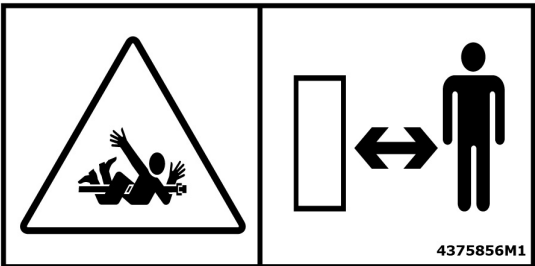


Fig. 1

- | | |
|--------------------------|------------------------------|
| (1) Cab serial number | (4) Chassis serial number |
| (2) Name plate | (5) Front axle serial number |
| (3) Engine serial number | |

| | |
|---|---|
|  | <ul style="list-style-type: none"> • 4296946M1 ((E)) • WARNING: Runaway machine and runover hazards <p>Shut off engine and remove key before performing maintenance or repair work.</p> |
|  | <ul style="list-style-type: none"> • 4375885M1 ((G)) • WARNING: Risk of burning <p>Keep away from hot engine components when engine has been running.</p> <p>Shut off engine, remove key and wait for system to cool before performing maintenance or repair work.</p> <p>Refer to the instructions in the technical manual when removing and reconditioning.</p> |
|  | <ul style="list-style-type: none"> • 4296950M1 ((H)) • WARNING: <p>To avoid personal injury, read the Operator's Manual for safety information and operating instructions before operating the tractor.</p> |
|  | <ul style="list-style-type: none"> • 4375856M1 ((I)) • DANGER: Entanglement hazard <p>PTO shaft. Stand clear of rotating shafts. Keep all driveline, tractor and equipment guards in place during operation.</p> |

Standard safety devices and items according to country regulations

- ROPS (Roll Over Protective Structure)
- Seat belt
- Power take-off guard
- SMV warning triangle
- Signaling lights
- Safety signs
- Fire extinguisher
- First aid kit



WARNING:
Also make sure you know the emergency numbers.



Fig. 6

Additional devices and items

Depending on the work to be carried out, other safety devices and items may be required; for example, guards or additional lights and signs.

2.5.4 Checking the tractor

Check the tractor and ensure that all systems are in good operational condition before beginning the working day. Pay particular attention to the points mentioned below.

- Check for loose, broken, missing or damaged parts. Ensure that everything has been properly repaired.
- Check that the seat belt is in good condition. If it is not, replace it.
- Check that implements are correctly installed.
- Check that the PTO output speed is in keeping with the implement PTO input speed.
- Ensure that all PTO shaft locking devices are engaged.
- Ensure that the tractor PTO guard and the shaft guards are in place and operating correctly.
- Check to ensure that the tractor is correctly balanced.



WARNING:
An unbalanced tractor could overturn and cause serious injury or death. Ensure that front frame counterweights, wheel weights and wheel ballasts are used as recommended by the manufacturer. Do not add extra counterweights to compensate for an overloaded tractor; the load must be reduced instead.

- Check the condition and pressure of tires (absence of cuts and bulges). Replace worn or damaged tires.
- Check the correct operation of the brake pedals and the parking brake. Adjust if necessary.
- Check the hydraulic system for the tractor and the implement as well as the tractor fuel system: Correct tightening of all the unions; no damage to the lines, pipes and hoses; hydraulic systems do not cross one another.

- Ensure that the tractor and implements are fitted with SMV warning triangles and other markings recommended to improve visibility when driving on roads (unless the regulations state otherwise).

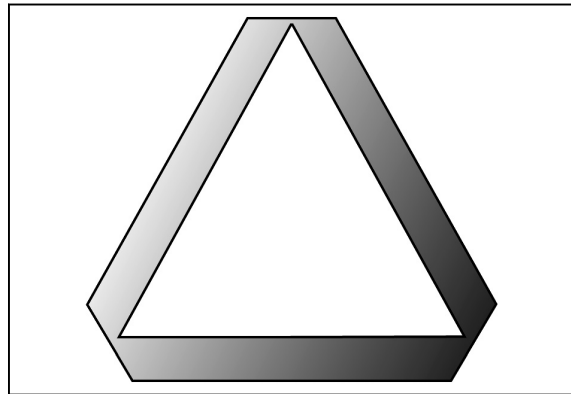


Fig. 15

- Place all implements in the transport position (as specified in the national road traffic regulations) so that they take up minimum space and lock them in position.
 - Lock the brake pedals together.
 - Disengage the power take-off and the differential lock.
 - Observe all current local and national regulations regarding the use of a tractor on the road.
 - Depending on the equipment fitted to the tractor and unless regulations state otherwise, use the rotary beacons or the hazard warning lights day and night.
 - Familiarize yourself with the road you will be traveling on.
 - Exercise the utmost caution when driving on snow-covered or slippery roads.
 - Wait for traffic to clear before entering a public road.
 - Beware of blind intersections: Slow down until you have a clear view.
 - Do not attempt to push your way through at any intersection.
 - Slow down for turns and curves.
 - Make wide turns at a moderate speed.
 - Signal your intention to slow down, stop or turn.
 - Shift to a lower gear before going up or down hills.
 - Always drive the tractor in gear. Do not coast with the clutch disengaged or transmission in neutral.
 - Do not overlap the lane of traffic for vehicles traveling the other way.
- Stay in your lane, as close as possible to the roadside.
- If a traffic jam forms behind the tractor, pull off the road and allow the vehicles behind to pass.
 - Drive carefully. Anticipate what other drivers might do.

If towing a load

- Always anticipate obstacles, especially if the trailed implement is not fitted with brakes.
- Start braking much earlier than usual and slow down gradually.
- Ensure that the load is not concealing the lights or the rotary beacons.
- Take account of your load, especially for high obstacles.

2.9.4 Passenger seat

The passenger seat is available as an option.

- The passenger seat should only be used by an adult. The seat is NOT suitable for children.
- The safety belt must always be worn and correctly adjusted when using the passenger seat.

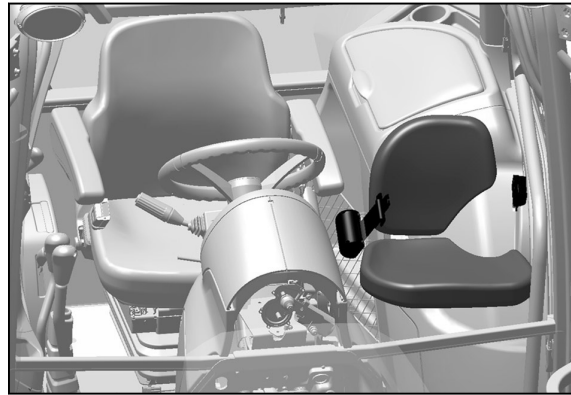


Fig. 28

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Transmission oil temperature

With the ignition on and the engine on or off, this screen indicates the temperature of the transmission oil, the stored speed and the number of hours remaining until the next service. To navigate between the temperature, the stored speed and the number of hours remaining, press position B of the switch (7).



Fig. 12

Stored speed A

With the engine running, briefly press the memory switch; the engine accelerates to the stored speed. Pressing the switch again brings engine speed to idling speed or to the speed preset by the hand throttle if this is lower than the stored speed.

Hold the switch for at least 5 seconds to store the current engine speed.



Fig. 13

Screen (3)

Work hours

This screen appears when the ignition is on and the engine off. This screen shows the number of true engine hours.



Fig. 14

3.1.10 Left-hand console

- (1) Holder for cup, can or bottle
- (2) Storage tray
- (3) Document storage

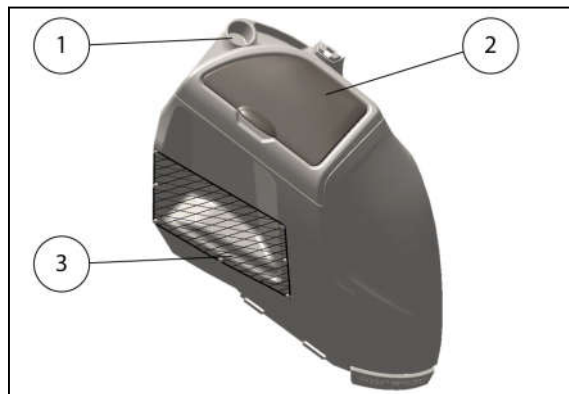


Fig. 29

3.1.11 Upper console

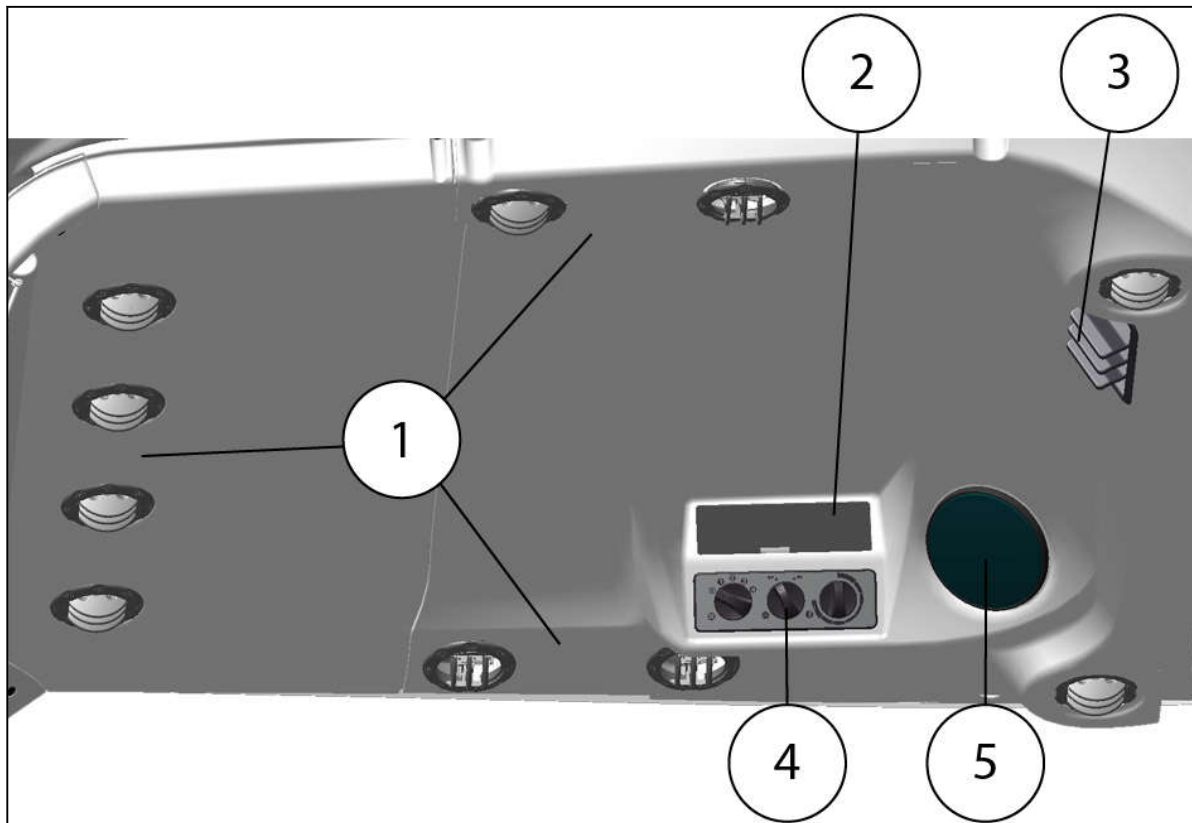



Fig. 30

- (1) 10 adjustable air circulation vents
- (2) Radio slot.
- (3) Adjustable recirculation grille: Air recirculation inside the cab, outside air intake
- (4) Air conditioning control module (see description of manual air conditioning system)
- (5) Speaker location

2.  **DANGER:**
Never run the tractor engine in an enclosed space unless the exhaust is ventilated to the outside air.
Never run the engine unless you are sitting at the steering wheel of the tractor.

Leave the engine running for several seconds at idle speed. Allow the turbocharger to reduce speed.

NOTE: *If the tractor has been operating under heavy load, allow the engine to run at idle speed for 1 to 2 minutes, depending on the ambient temperature, to allow the turbocharger to cool before stopping the engine.*

3. **IMPORTANT:** *Do not stop the engine suddenly when the engine is running at a high speed, because the turbocharger continues running under its own momentum and is no longer lubricated. Slow the engine before stopping it.*

Return the ignition key to the "Stop" position.

3.3.4 Engine speed

- (1) Foot throttle
- (2) Hand throttle
- (3) Engine speed memory button, if fitted

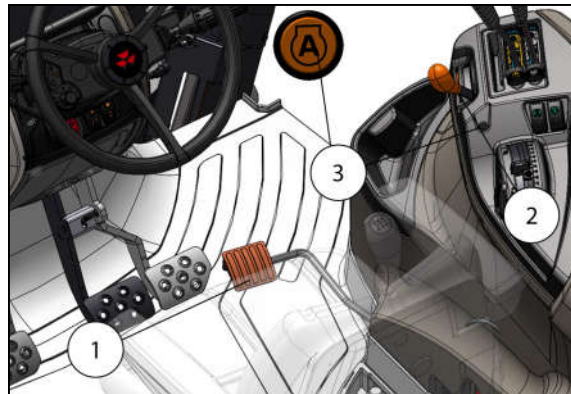


Fig. 45

Foot throttle

Use of the foot throttle enables you to exceed the engine speed set by the hand throttle. When the foot throttle pedal is released, the engine rpm returns to that set by the hand throttle.



CAUTION:

- **If the foot throttle pedal is used, the hand throttle lever must be placed in the "idle" position.**
- **Do not keep your foot on the clutch pedal and do not keep it halfway engaged.**
- **Always descend slopes with the tractor in gear, never with the clutch disengaged.**
- **When turning on headlands with heavy mounted implements, reduce the engine rpm.**
- **Steering is not power assisted when the engine is not running.**

Hand throttle

Using the hand throttle allows you to vary the engine speed and to maintain a constant speed.

- Push or pull the lever to select a speed.
- The lever remains in this position to maintain the selected speed.
- The lever in rear position corresponds to idle speed.

Choosing the correct gear ratio

- Select the ratio which gives the optimum fuel consumption without overloading the engine and the transmission.
- The soil conditions can vary within a matter of a few yards in the same field.

IMPORTANT: Measures to be taken in the event of accidental spillage

- The fluid is very corrosive. If the tractor is splashed with the fluid, wipe off and rinse with water.
- If an electrical connector is splashed with the fluid, replace it.
- In the event of spillage, DEF crystals may appear on the vehicle. Rinse immediately with water to remove these crystals.

IMPORTANT: Never put DEF in the fuel tank as this may damage the engine and fuel system.

IMPORTANT: Never modify DEF or use another fluid which does not comply with standard DIN 70070 or ISO 22241-1: There is a risk that it will not have the desired effect and may damage the SCR Technology system.

Level of DEF

Instrument panel



Fig. 54

The level of DEF in the tank appears on the instrument panel gauge

When the level of DEF reaches the minimum mark on the tank (it must remain at a minimum of 5% for the system to operate correctly):

- The gage level bars flash on the instrument panel
- The final degraded mode is activated progressively.

3.7 Four-wheel drive front axle

3.7.1 Control locations

- (2) 4-wheel drive front axle engagement switch

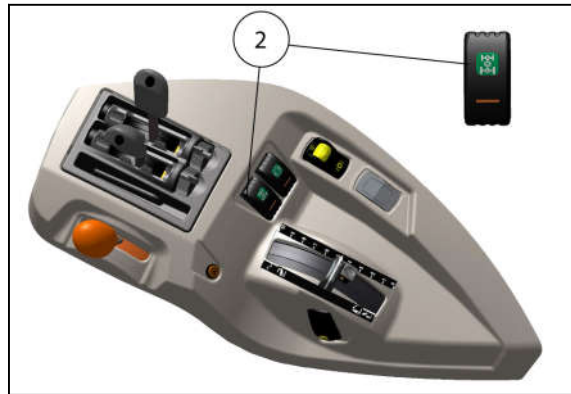


Fig. 62

3.7.2 Operation

General

Engaging the 4-wheel drive front axle activates traction by the front wheels. This function is strongly advised for field work to keep wheel slip to a minimum.

NOTE:

When the tractor is started, the 4-wheel drive front axle will be in the mode stored when the engine was last switched off.

IMPORTANT: *So as not to damage the tractor, it is essential to disengage the 4-wheel drive front axle during use on the open road.*

Special conditions:

- The 4-wheel drive front axle is engaged as soon as the tractor is stopped.
- The 4-wheel drive front axle is engaged as soon as the parking brake is engaged.
- The 4-wheel drive front axle is engaged as soon as the differential lock is engaged.
- If both brake pedals are depressed, the 4-wheel drive front axle is engaged automatically to provide 4-wheel braking, irrespective of the forward speed. When the brake pedals are released, the 4-wheel drive front axle is disengaged.

- (A) 4-wheel drive front axle indicator light
 (B) Automatic 4-wheel drive front axle indicator light

The 4-wheel drive front axle may be used in accordance with the following operating modes:

- Manual,

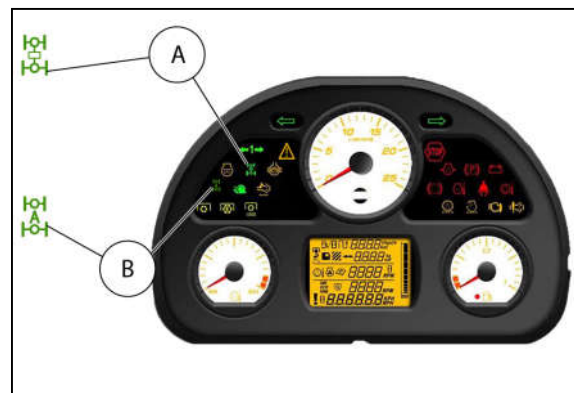


Fig. 63

Adjustment of the universal joint

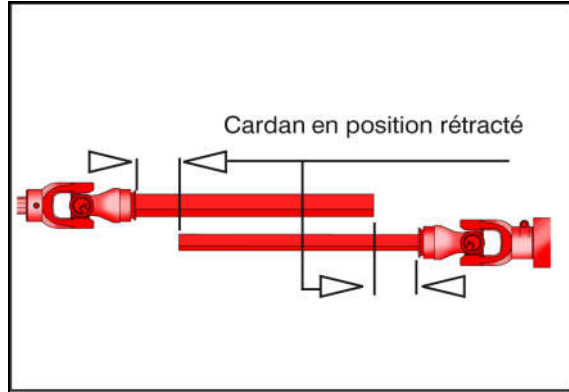


Fig. 74

Maximum angle to observe for the use of an implement hitched to the three-point linkage.

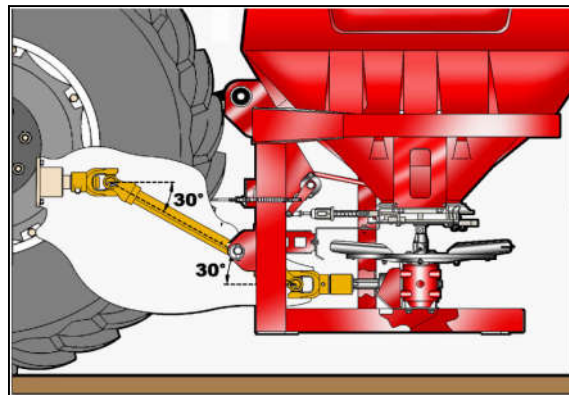


Fig. 75

Maximum angle for the universal joints present on towed implements.

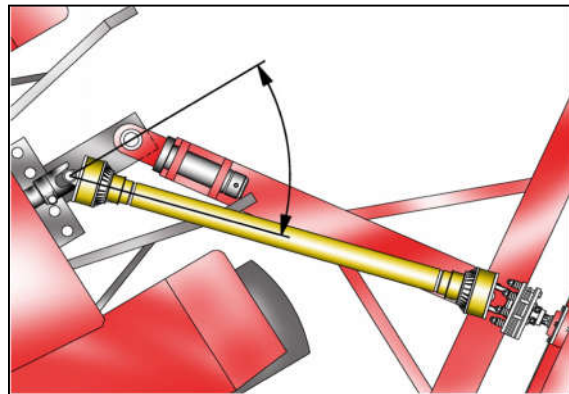


Fig. 76

3.9.7 Coupling to the PTO shaft

NOTE: Move the lever at least once a month to prevent the system from seizing.

To unlock the linkage using the switch (7):

If switch 7 is in the neutral position:

Move the switch to the lifting position.

If switch 7 is in the lifting position:

Move the switch to the neutral position then the lifting position.

If switch 7 is in the lowering position:

Move the switch to the neutral position then the lifting position.

To unlock the linkage using the lever (5), the switch (7) must be in the lowering position (C):

- Move the lever (5) to reference mark (10) then to reference mark (1).
- The linkage starts to move as soon as the position of the lever (5) is the same as the position of the linkage arms.

NOTE: *If the linkage arms and the lever (5) are in the lowered position, move the lever away and back to unlock the linkage.*

Rear-linkage lifting/lowering/quick soil engagement switch (7)

(7) Switch

(7a) Quick soil engagement button

The linkage switch can be set to four positions:

- (A) Lifting
- (B) Neutral
- (C) Lowering
- (D) Quick soil engagement

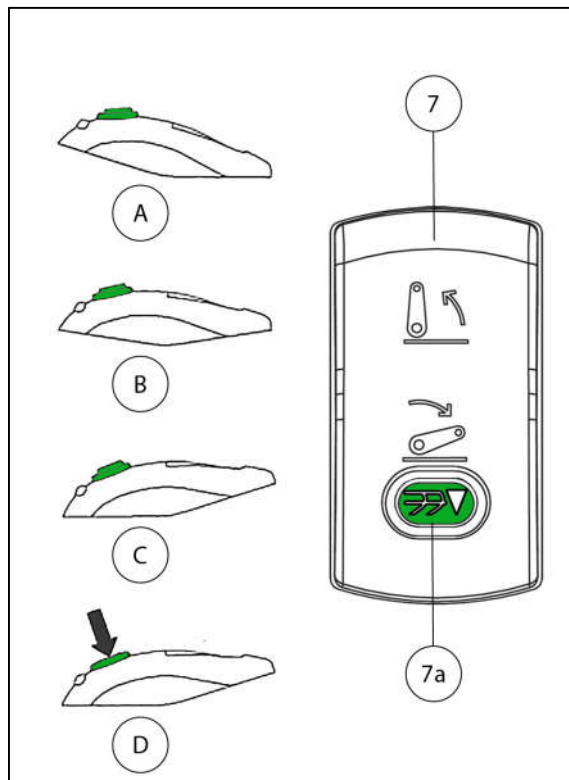


Fig. 90

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6. Refit the pin (2) in the hole to prevent lateral movement of the stabilizer.
7. Operate the rear linkage lever to engage the transport position.
Carry out the same operation for the other stabilizer.

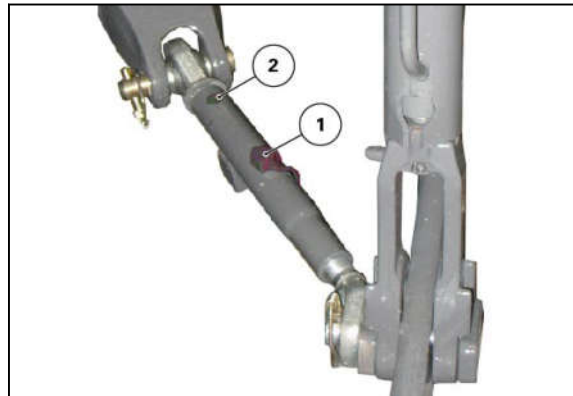


Fig. 110

Adjusting the stabilizers for work

8. Start the engine
9. Activate the linkage and pull on the lowering switch for the rear linkage.
10. Apply the parking brake.
11. Remove the pin (2).
12. For certain conditions of use, such as with a seeder, unscrew the tube (1) of the stabilizer in the direction (A) to lock and center the bottom link and prevent lateral movement.
13. For particular conditions of use, such as with a plough, tighten the tube (1) of the stabilizer in direction (B) to unlock the bottom link.

NOTE: Check that the two stabilizers have the same length. The rear implement must be centered with respect to the top link.

NOTE: Do not forget to reinstall the pin (2) after adjusting the stabilizers.

NOTE: Make sure the bottom links and stabilizers cannot strike the rear tires.

Carry out the same operation for the other stabilizer.

14. To maintain lateral movement of the stabilizers, remove the pin (2) and place it in location (3).

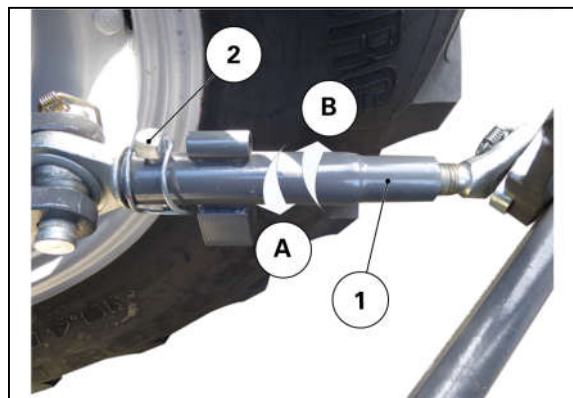


Fig. 111

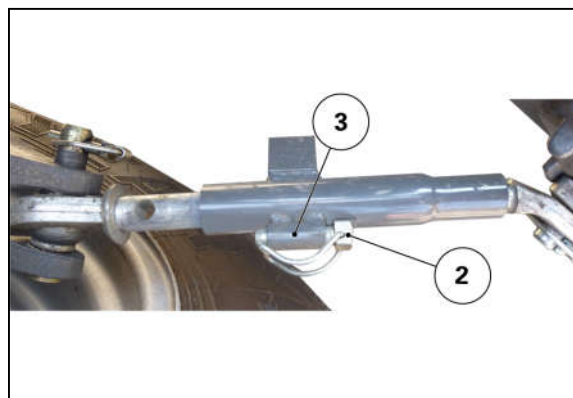


Fig. 112

15. Carry out the same operation for both stabilizers.

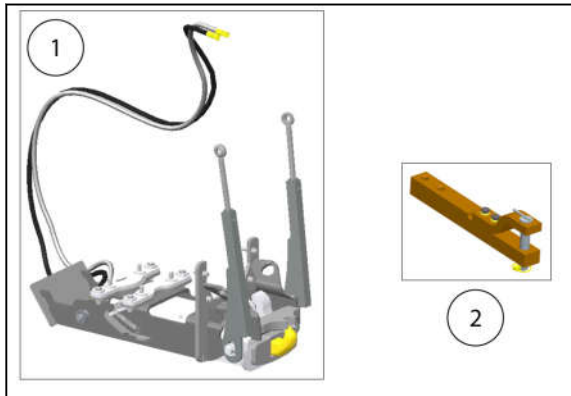


Fig. 124

- (1) Pick-up hitch
- (2) Drawbar adaptation for pickup hitch

| Pickup hitch (1) | |
|---|-----------------------|
| Brand(s) | Dromone - P138 Roller |
| CE type approval mark(s) | e1 D 0460 |
| Maximum dynamic force on the swinging drawbar | 60 kN |
| Test trailed weight (kg) | 21500 kg (47399 lb) |
| Maximum vertical load (kg) | 3000 kg (6614 lb) |
| Height of hitch point (mm) | 485 mm (19.1 in) |
| Distance: Vertical surface/rear axle pin (mm) | 610 mm (24 in) |

| Pickup hitch (drawbar attachment) (2) | |
|---|-----------------------|
| Brand(s) | Dromone - P138 Roller |
| CE type approval mark(s) | e1 D 0460 |
| Maximum dynamic force on the swinging drawbar | 47 kN |
| Test trailed weight (kg) | 10900 kg (24030 lb) |
| Maximum vertical load (kg) | 1100 kg (2425 lb) |
| Height of hitch point (mm) | 460 mm (18.1 in) |
| Distance: Vertical surface/rear axle pin (mm) | 620-770 mm |

3.13.10 Pick-up hitch

3.13.10.1 General

The pickup hitch enables a trailer to be hitched without the driver having to get out of the tractor. It also enables good visibility of the stud because the hydraulic system is able to move the stud toward the rear of the tractor. It is designed to pull trailers that transfer heavy loads to the tractor and require frequent hitching and unhitching. This hitch type can be fitted with a standard hook or a clevis.

3.13.10.2 Lift rod-type pick-up hitch

Before starting the procedure

Conditions of use: Tractor engine running, linkage unlocked.

3.15.3.2 Adjustment of position 2 of the axle

Adjusting the extension

1. Adjust the arm assembly so that one hole is visible on the extension of the beam.

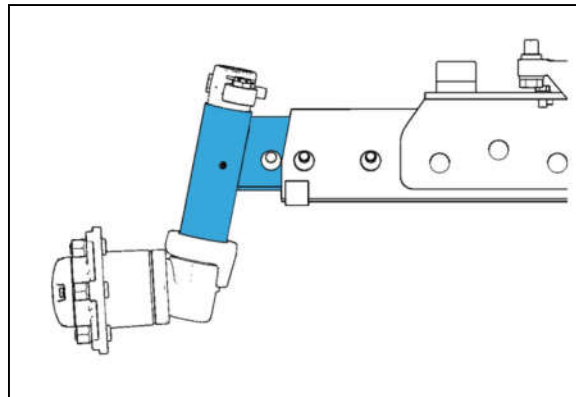


Fig. 142

Adjusting the steering rods

2. Adjust the steering rod so that one hole is visible and one hole is visible on the intermediate piece.

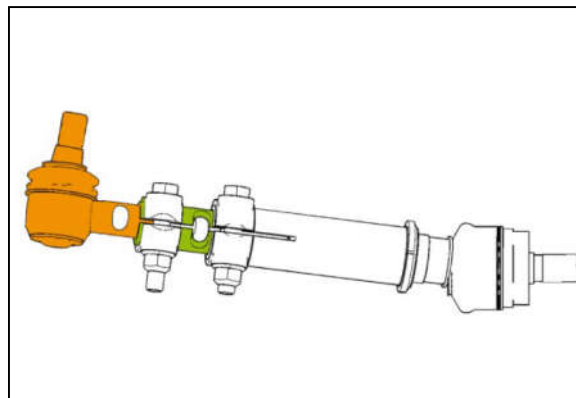


Fig. 143

Position the rims

3. When the axle is in position 2, it is possible to reverse the rims to obtain two different track widths.

| Minimum track width (1) | Maximum track width (2) |
|-------------------------|-------------------------|
| 1536 mm (60.5 in) | 1636 mm (64.5 in) |

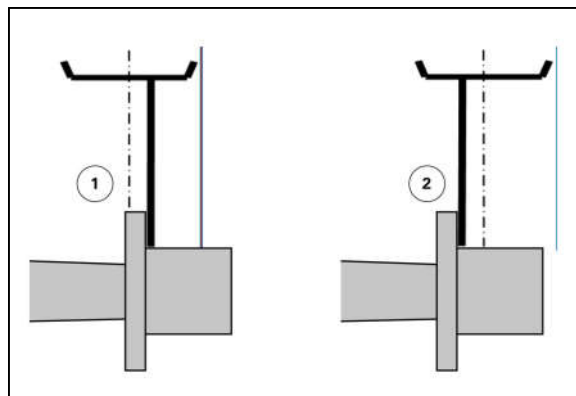


Fig. 144

| Dimension | Pressure under load | | | | | |
|-----------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|
| 16.9R38 | 1.6 bar (23 psi) | 0.6 bar (9 psi) | 1.9 bar (28 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 18.4R30 | 1.6 bar (23 psi) | 0.6 bar (9 psi) | 1.9 bar (28 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 18.4R34 | 1.6 bar (23 psi) | 0.6 bar (9 psi) | 1.9 bar (28 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 18.4R38 | 1.6 bar (23 psi) | 0.6 bar (9 psi) | 1.9 bar (28 psi) | 0.4 bar (6 psi) | 1.6 bar (23 psi) | 0.6 bar (9 psi) |
| 18.4R42 | - | - | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 20.8R38 | 1.6 bar (23 psi) | 0.6 bar (9 psi) | 1.9 bar (28 psi) | 0.5 bar (7 psi) | 1.2 bar (17 psi) | 0.6 bar (9 psi) |
| 320-85R50 | - | - | - | - | - | - |
| 420-80R46 | - | - | 2.7 bar (39 psi) | 0.4 bar (6 psi) | - | - |
| 480-70R34 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 2.7 bar (39 psi) | 1 bar (15 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 420-70R38 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | - | - | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 480-80R42 | - | - | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 480-80R46 | - | - | 2.7 bar (39 psi) | 0.4 bar (6 psi) | - | - |
| 520-70R34 | 1.6 bar (23 psi) | 0.4 bar (6 psi) | - | - | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 520-70R38 | 1.6 bar (23 psi) | 0.4 bar (6 psi) | 1.4 bar (20 psi) | 0.4 bar (6 psi) | 1.2 bar (17 psi) | 0.6 bar (9 psi) |
| 540-65R34 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 1.8 bar (26 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 540-65R38 | 1.6 bar (23 psi) | 0.4 bar (6 psi) | 1.8 bar (26 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 580-70R38 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | - | - | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 600-65R34 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 1.8 bar (26 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 600-65R38 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 1.4 bar (20 psi) | 0.4 bar (6 psi) | 1.2 bar (17 psi) | 0.6 bar (9 psi) |
| 650-65R38 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 1.8 bar (26 psi) | 0.4 bar (6 psi) | 2 bar (29 psi) | 0.6 bar (9 psi) |
| 650-75R38 | 2.4 bar (35 psi) | 0.4 bar (6 psi) | - | - | - | - |
| 650-85R38 | 2.4 bar (35 psi) | 0.4 bar (6 psi) | - | - | 3 bar (44 psi) | 0.6 bar (9 psi) |
| 710-70R38 | 2.1 bar (30 psi) | 0.4 bar (6 psi) | 1.9 bar (28 psi) | 0.4 bar (6 psi) | 3 bar (44 psi) | 0.6 bar (9 psi) |

4.1 Service Guide

4.1.1 Service Guide

Understanding the table:

Initial 50-hour service interval marked °°: this maintenance instruction is to be carried out by a dealer as part of the 50-hour service defined in the Service Record Book.

Intervals marked °: Regular service intervals marked ° are to be carried out at regular intervals (every day, every 50 hours, every 500 hours, etc.).

| Service Guide | 50 hours | 250 hours | 500 hours | 1000 hours | 1500 hours | 2000 hours |
|--|----------|-----------|-------------|------------|------------|------------|
| General | | | | | | |
| Check the accumulator pressures. | | | Once a year | | | |
| Lubricate all points with grease or oil as specified in the Operator's Manual. | °° | | ° | | | |
| Check that all safety guards are in place and that decals are secure and legible. | °° | | ° | | | |
| Road test the tractor to check all instruments and systems for correct operation. | °° | | ° | | | |
| Carry out a tractor road test to check for correct operation of the steering system and brakes. | °° | | ° | | | |
| After the road test, check for any leaks of oil, fuel or coolant. | °° | | ° | | | |
| Enquire if the operator has any operational difficulties and correct or demonstrate the solution as necessary. | °° | | ° | | | |
| Complete the Service Record Book. | °° | | ° | | | |
| Operator environment | | | | | | |
| Check and top up the windscreen washer bottle. | °° | | ° | | | |
| Clean the cab air filter element. | | | ° | | | |
| Change the cab air filter element. | | | | | ° | |
| Check the air conditioning system for correct operation. | °° | | ° | | | |
| Check the cab tightening torque. | °° | | ° | | | |
| Change the rubber mounts. | | | 3000 hours | | | |
| AGCO Power engine | | | | | | |
| Check the engine oil level. | | | Every day | | | |
| Change engine oil and filter. | | | ° | | | |
| Change the fuel prefilter. | | | ° | | | |
| Change the fuel filter. | | | ° | | | |
| Bleed the water from the fuel prefilter. | ° | | | | | |

2. Unscrew and discard the complete filter and the seal.
3. Fill the new filter slowly with clean oil.
4. Smear a few drops of clean engine oil on the new seal ring, then place the ring in the housing of the upper part of the new filter.
5. Screw on the filter until the seal ring touches the filter head, then tighten it a further half-turn by hand only (do not overtighten).
6. Refill with the recommended type of engine oil.
7. Start the engine

IMPORTANT: After changing the oil and the filter, avoid depressing the throttle pedal when starting the engine. Let the engine run at idle speed for several minutes with no load until the oil pressure is obtained. Wait for the 5 bar (73 psi) indicator light to go out.

8. Turn off engine.
9. Recheck the oil level and top up if necessary.
10. Restart the engine and check that there are no leaks.

4.3.6 SCR system maintenance

AGCO POWER SCR system is durable and almost maintenance free. Only main filter change for supply module is required in normal use. AGCO POWER SCR is equipped with on-board diagnostic, which will warn the operator or limit the usage of the machine if any problems (e.g. leakages or blocking of lines) occur in the system.

NOTE: Engine with aftertreatment system meets EU97/68/EC Stage IV and EPA 40 CFR 1039 Tier 4 final emission requirements.

Do not fit any components on the engine other than those originally intended for it. The use of other than original AGCO Parts spare parts invalidates the responsibility of AGCO Power Inc. on the meeting of the emission requirements.



CAUTION:

Make sure that genuine DEF (DIN 70070 or ISO 22241 certified) is used as a reducing agent. Diluting of DEF or mixing it with other substances is not allowed, it may damage the catalyst!



CAUTION:

Make sure that genuine DEF (DIN 70070 or ISO 22241 certified) is used as a reducing agent. If urea quality sensor detects a problem related to urea quality, it will alert the engine control system via CAN message thus causing the engine to run under degraded mode.



CAUTION:

Even small amounts of diesel fuel in DEF tank may damage the gaskets of the SCR system!



CAUTION:

The storage of DEF must be done under 30°C, avoiding direct sunlight.

4.3.7 Fuel system: SCR Technology engine injection

The injection system must be checked and adjusted by the dealer or agent (in accordance with the service guide).

- [1] If the engine does not have SCR system or cooled external EGR system, maximum permitted sulfur content is 500 mg/kg.

Cetane number

Cetane number must be minimum 43. Cetane number above 47 is preferred, especially for temperatures below -20°C (-4°F) and elevations above 1500m (5000 ft) from the sea level.

4.3.18.1 Biodiesel blends

1st generation biodiesel blends

Use of 1st generation biodiesel, which has less than 10% fatty acid methyl esters (FAME) / fatty acid mono-alkyl esters (FAAE), does not require changes in engine or its maintenance.

| Allowed fuels | Maximum allowed 1st generation biodiesel content | Standard for biodiesel blend |
|----------------------------|---|------------------------------|
| EN 590 - Europe | 0 - 10% fatty acid methyl esters (FAME) / fatty acid mono-alkyl esters (FAAE) | EN 14214 |
| ASTM D 975 - North America | | ASTM D 6751 |
| JIS K2204 - Japan | | JIS K2390 |
| GB 19147 St5 - China | | - |
| TS 15940 EU BTL/HVO | | EN 14214 |

Use of higher (10-20%) biodiesel proportions requires changes in the engine and its maintenance as follows:

- You must change oil, oil filter and fuel filter elements twice as often than with less than 10% biodiesel content.
- Engine must have an additional fuel pre-filter or water separator in the fuel line between the fuel tank and the engine. The water separator requires frequent checks.
- The additional fuel pre-filter (inclusive water separator) must be specified and approved by AGCO Power.

Use of higher biodiesel proportions are not allowed!

Consequences of use of fuels with 1st generation biodiesel blends

If you use biodiesel blends from 10% to 20%, you must consider the risks:

- Possible power and fuel economy reduction even up to 6%.
- Reduced fuel flow in cold environment.
- Possible fuel filters restriction and plugging.
- Possible fuel leakage through damaged seals and hoses.
- Possible coking of fuel injector nozzles.
- Possible engine oil dilution.
- Possible high acid levels within fuel system.
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass and bronze) used in fuel handling process.
- Reduction of service life on engine and exhaust system systems (SCR and cEGR).
- Increase of engine emissions that can lead engine to de-rate on SCR engines.

All the above mentioned risks are bigger with higher than 20% biodiesel blends. In addition higher biodiesel blends cause other problems:

- Blockage of injector nozzles, resulting loss of power and engine malfunction.
- Crankcase oil soot formation, which results in shorter oil and oil filter lifetime.
- Corrosion of fuel injection equipments.
- Seizure of engine or internal components of the injection system.

4.6 Front axle and steering

4.6.1 Recommended products

IMPORTANT: *The warranty remains valid only as long as the lubricants used comply with the following classifications, and no other products are used.*

Oil for DANA front axle

Final drives: API GL4; SAE 85W90

Assembled center housing: API GL4; SAE 85W90

Grease: AGCO M.1105 or lithium multi-purpose grease in accordance with the N.L.G.I. indices:

- N.L.G.I. number 1: Temperature often below 7°C
- N.L.G.I. number 2: Temperatures consistently between 7°C and 27°C
- N.L.G.I. number 3: Temperature often exceeds 27°C

Oil for CARRARO front axle

Final drives: API GL4; SAE 80W90

Assembled center housing: API GL4; SAE 80W90

Grease: AGCO M.1105 or lithium multi-purpose grease in accordance with the N.L.G.I. indices:

- N.L.G.I. number 1: Temperature often below 7°C
- N.L.G.I. number 2: Temperatures consistently between 7°C and 27°C
- N.L.G.I. number 3: Temperature often exceeds 27°C

4.6.2 Two-wheel drive front axle: lubrication

Frequency

Lubricate the front axle every 500 hours.

Lubrication points

- (1) Pivot pins

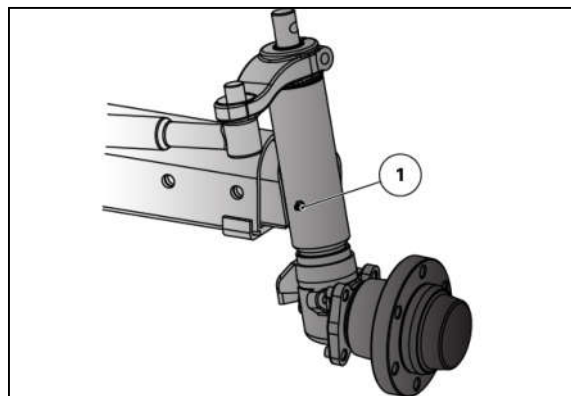


Fig. 31

Socket at rear of vehicle, terminal no.:

- (1) (15/30): +12 V permanent protected by fuse F11 (30 A)
- (2) (82): +12 V ignition on protected by fuse F2 (15 A)
- (3) (31): - Earth

NOTE: Contact a dealer to obtain a male plug (G 205900900020) that connects to the power socket.

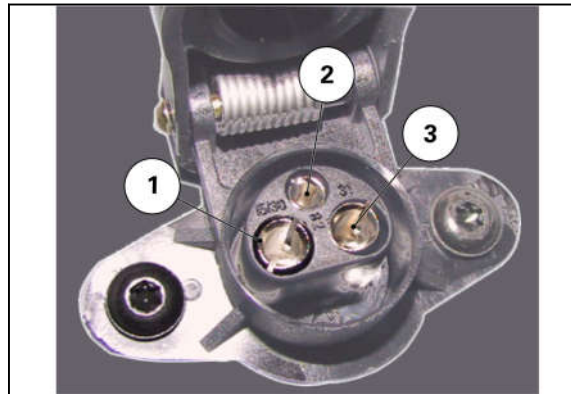


Fig. 45

4.8.6 Accessories sockets (ASAE)

Identifying the connectors

12 volt electrical connector for connecting monitoring screens, control units and other accessories.

Socket at rear of vehicle, terminal:

- (1) +12 V ignition on protected by fuse F2 (15 A)
- (2) +12 V permanent protected by fuse F11 (30 A)
- (3) - Earth

NOTE: A female plug (3779786M2 or P/N 1714005) which connects to the power socket (2) is available from your dealer.

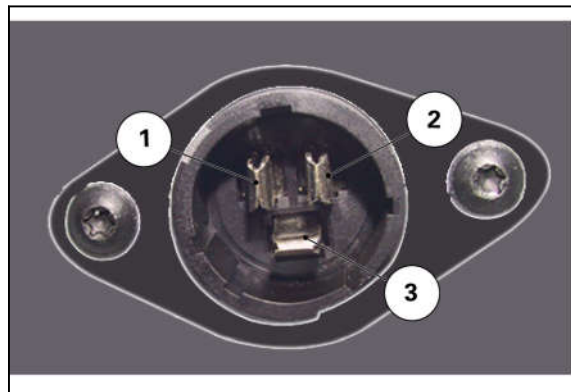


Fig. 46

4.8.7 Adjusting the headlights

Adjustment diagram

- (A) Distance between the headlights and a wall or a screen
- (B) Height from the center of the headlights to the ground
- (C) Center-to-center distance between headlights
- (D) Vertical offset

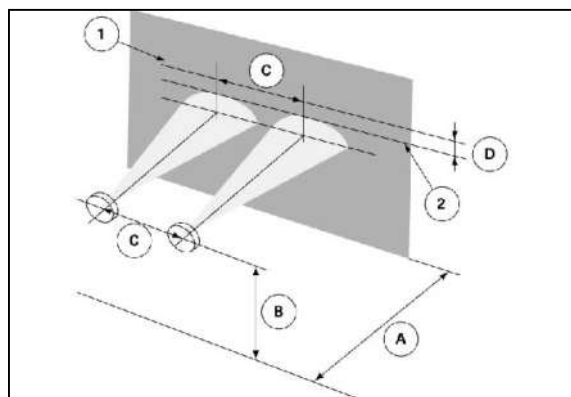


Fig. 47

NOTE: Do not let your fingers come into direct contact with the iodine bulbs.

| Number | Amp erage | Size | Protected function |
|--------|--------------|-------|---|
| | | | <ul style="list-style-type: none"> • X136 - Differential lock switch • X137 - 4-wheel drive switch • X156 - Cigarette lighter plug (backlighting) • X220 - Trailer connection (left-hand side light) • X256-B - Right-hand hand rail harness • X395 - Radio supply • X740 - Rear work lights switch • X741 - Front work lights switch • X744 - -/+ navigation switch • X948 - Side lights/brake lights/left-hand indicator • X956 - Front work lights (left and right) with German lights |
| F23 | 20 A | Small | +BAT: <ul style="list-style-type: none"> • X155 - Cigarette lighter plug (power) • X157 - Left-hand side power socket (power) |
| F24 | 25 A | Small | +APC: <ul style="list-style-type: none"> • X58 - Windscreen wiper and direction indicator control unit • X65 - Front windscreen wiper motor • X932 - Front windscreen wiper speed relay |
| F25 | 5A | Small | +APC: <ul style="list-style-type: none"> • X267 - Switch for left-hand side heater |
| F26 | 25 A | Small | +BAT: <ul style="list-style-type: none"> • K28 relay power circuit supplying the +BAT to the rear work lights (left and right) |
| F27 | 10A | Small | +BAT: <ul style="list-style-type: none"> • K25 relay power circuit supplying the radio +BAT |
| F28 | 15 A | Small | +APC: <ul style="list-style-type: none"> • X403 - Rear windscreen wiper motor • X411 - Rear windscreen wiper switch |
| F29 | 10A | Small | +BAT: <ul style="list-style-type: none"> • X395 - Radio supply • X416-A - Reverse connector of the radio battery supply, tractor side • X416-B - Reverse connector of the radio battery supply, radio side |
| F30 | 15 A | Small | +BAT: |

4.11 Faults and solutions

4.11.1 General table of faults

The table below lists the various checks that can be carried out by the operator in the event of a system fault, prior to contacting the dealer.

If the proposed solutions do not resolve the problem, it is recommended that you contact a dealer.

IMPORTANT: For all issues related to an electrical/electronic function, check inside the fuse box to ensure that the fuse concerned is in good condition. Please refer to the chapters concerning the fuse boxes.

| The engine will not start. | |
|--|--|
| Cause | Solution |
| There is air inside the fuel system. | Contact the dealer. |
| The fuel system is blocked by impurities. | Clean the filter inlet. If necessary, change the filter cartridge. |
| In very cold conditions: defective cold start device. | Ensure that the preheating system is good working order. Contact the dealer. |
| In winter, below -5 °C (23 °F): fuel flow blocked by ice or fuel waxing. | Unblock the filter inlet and the diesel filter. Replace with winter fuel. |
| No starting contact/the starter is defective | Check the battery starter connection. |
| Electrical failure with no current. | Check the fuse and the connections. |
| Other | Contact the dealer. |

| The engine stops | |
|--|---|
| Cause | Solution |
| There is air inside the fuel system. | Contact the dealer. |
| The fuel system is blocked by impurities. | Clean the filter inlet. If necessary, replace the filter cartridge. |
| In winter, below -5 °C (23 °F): fuel flow blocked by ice or fuel waxing. | Unblock the filter inlet and the diesel filter. Replace with winter fuel. |
| Other | Contact the dealer. |

| The engine lacks power. | |
|---|--|
| Cause | Solution |
| Fuel filter and fuel prefilter blocked. | Replace the cartridge. |
| Air hose too flexible. | Contact the dealer. |
| Air filter blocked. | Clean the filter. |
| problem | Refer to the relevant chapter (see information on the operating mode of the SCR Technology engine in the Operation section). |
| Other | Contact the dealer. |

| No. | Components concerned | Causes |
|--------|---|---|
| 6.X.4A | X776 - Rear PTO end-fitting speed sensor | The PTO speed engaged (economic or standard) does not match the selected speed. |
| 6.X.4B | X776 - Rear PTO end-fitting speed sensor | 21-bar check by deformation calculation (ratio between the PTO input speed and PTO output speed <1) |
| 6.X.4C | X776 - Rear PTO end-fitting speed sensor | Engine overspeed problem detected in relation to the selected PTO speed. |
| 6.X.4D | X776 - Rear PTO end-fitting speed sensor | The number of splines on the PTO output shaft is undetermined. |
| 6.X.4E | X776 - Rear PTO end-fitting speed sensor | The number of splines on the PTO output shaft is not compatible with the speed of 1000 rpm. |
| 6.X.E2 | X481 - Engine speed sensor | The engine rotation speed is above 1780 rpm with the economy PTO engaged. |
| 6.X.E7 | | Checksum error for the operating temperatures and the clutch times of the PTO. |

Rear linkage

| No. | Components concerned | Causes |
|--------|---|---|
| 8.X.12 | X28 - Solenoid valve for rear linkage lifting/lowering selection | The circuit of the solenoid valve for selecting the lifting/lowering of the rear linkage is short-circuited to +12 V. |
| 8.X.16 | | The battery voltage is less than 11 V or more than 16 V. |
| 8.X.18 | X119 - Rear linkage lifting/lowering switch | The signal of the lifting/lowering of the rear linkage switch is incorrect. |
| 8.X.1A | | The engine speed is insufficient for linkage operation. |
| 8.X.1B | X97 - Linkage lifting/lowering switch on left-hand fender | The signal of the lifting/lowering rear linkage switch on the left-hand fender is incorrect. |
| 8.X.2B | X934 - Rear-linkage active transport control button | The signal of the rear-linkage active transport control button is incorrect. |
| 8.X.22 | X30 - Rear linkage position sensor | The signal of the rear linkage position sensor is incorrect. |
| 8.X.23 | X751 - Rear-linkage height/depth adjustment potentiometer | The signal of the rear-linkage height/depth adjustment potentiometer is incorrect. |

| No. | FMI | Components concerned | Causes | Stand ard modes | SCR Techn ology modes |
|------|-----|-----------------------------|---|-----------------------|--------------------------------|
| 3521 | 31 | DEF quality sensor | Presence of fuel in the DEF tank | | |
| 3532 | 3 | DEF tank gage | Open circuit | | |
| 3532 | 4 | DEF tank gage | Short circuit | | |
| 3562 | 14 | Boost pressure sensor 2 | Boost pressure inconsistent | 2 | |
| 3562 | 31 | Boost pressure sensor 2 | Boost pressure inconsistent | 2 | |
| 3573 | 3 | Air dosing unit 2 | Voltage above normal | 1 | |
| 3573 | 4 | Air dosing unit 2 | Voltage below normal | 1 | |
| 3573 | 13 | Air dosing unit 2 | Calibration error | 1 | |
| 4090 | 31 | DEF system | NOx limit exceeded, unknown reason | | |
| 4095 | 31 | DEF system | NOx limit exceeded due to stoppage of the DEF dosing control unit | | X |
| 4201 | 2 | Crankshaft speed sensor | Irregular signal | 2 | |
| 4201 | 31 | Crankshaft speed sensor | No signal | 2 | |
| 4332 | 0 | DEF system | Excess pressure detected | | X |
| 4332 | 11 | DEF system | Metering pump fault | | X |
| 4332 | 14 | DEF system | Pressure test fault | | X |
| 4332 | 16 | DEF system | Metering module pressure above normal | | X |
| 4332 | 18 | DEF system | Metering module pressure below normal | | X |
| 4332 | 31 | DEF system | Draining interrupted at previous stop | | |
| 4334 | 3 | DEF pressure sensor | Voltage above normal or open circuit | | X |
| 4334 | 4 | DEF pressure sensor | Voltage below normal | | X |
| 4340 | 3 | DEF preheating suction line | Short circuit to +12 V | | |
| 4340 | 4 | DEF preheating suction line | Short circuit to earth (-) | | |
| 4340 | 5 | DEF preheating suction line | Open circuit | | |
| 4340 | 31 | DEF preheating suction line | Excessive temperature | | |
| 4342 | 3 | DEF preheating return line | Short circuit to +12 V | | |
| 4342 | 4 | DEF preheating return line | Short circuit to earth (-) | | |
| 4342 | 5 | DEF preheating return line | Open circuit | | |
| 4342 | 31 | DEF preheating return line | Excessive temperature | | |
| 4344 | 2 | DEF heating module | Invalid temperature signal | | X |
| 4344 | 3 | DEF heating module | Short circuit to +12 V | | |
| 4344 | 4 | DEF heating module | Short circuit to earth (-) | | |

5.1 Technical specifications

5.1.1 MF 5710 model

| Engine | |
|---------------------|------------|
| Brand | AGCO Power |
| Type | TIER 4F |
| Model | 44AWFC |
| Number of cylinders | 4 |

| Gearbox |
|---|
| GBA2A - 12X12 SMS with synchronizers and mechanical reverse shuttle |
| GBA2A - 12X12 SPS with synchronizers and PowerShuttle |

| Rear axle type |
|----------------|
| GPA50 - P144B |

| Final drive type |
|------------------|
| GPA52 |

| Power take-off | |
|------------------------|---|
| PTO type | Shiftable |
| Speeds | 540/540E rpm - 540/1000 rpm - 540/540E/1000 rpm |
| Speed selector control | Electrohydraulic |

| Four-wheel drive | | | | | | |
|---|-----------------|-------------------|---------------|-------------------|----------|-------------------|
| Front axle type | 2-wheel drive | | 4-wheel drive | | | |
| Brand | Massey Ferguson | | CARRARO 20.19 | | DANA 725 | |
| Speed | 30 kph | 35 kph and 40 kph | 30 kph | 35 kph and 40 kph | 30 kph | 35 kph and 40 kph |
| Synchronization ratio (displayed on the name plate) | Not applicable | | 17.077 | 14.769 | (17) | 14.571 |

5.7 Power take-off

5.7.1 Specifications

| | |
|--------------------------------|--|
| Power take-off | Proportional to engine speed. |
| Clutch | Electrohydraulic |
| PTO shaft | <ul style="list-style-type: none"> • Single speed, 6 splines, diam. 35 mm (1.4 in), fixed shaft • Multiple speeds: 6, 8, 21 splines, diam. 35 mm (1.4 in), interchangeable flanged shaft |
| Shifting. Multiple speeds only | By switch located on the right-hand pillar |
| Control | By button located on the right-hand console. |

| Speed available | |
|---------------------------|--|
| 2 speeds, 540/540 economy | <ul style="list-style-type: none"> • 540 rpm standard at \pm 1920 rpm engine speed • 540 rpm economy at \pm 1560 rpm engine speed |
| 2 speeds, 540/1000 rpm | <ul style="list-style-type: none"> • 540 rpm at \pm 1920 rpm engine speed • 1000 rpm at \pm 1964 rpm engine speed |
| 3 speeds, 540/540E/1000 | <ul style="list-style-type: none"> • 540 rpm at \pm 1920 rpm engine speed • 540 rpm economy at \pm 1560 rpm engine speed • 1000 rpm at \pm 1964 rpm engine speed |

5.7.2 Tightening torques

| | |
|-----------------------------|--|
| Interchangeable plate screw | 72 Nm (53 lbf ft) to 96 Nm (71 lbf ft) |
|-----------------------------|--|

NOTE: This table is not exhaustive. Ask a dealer for further information on other choices.

5.11.3 Compatible tires

Tires compatible with MF 5700 tractors

| KLEBER tire | | | |
|-------------|------------|-----------|------------|
| MF 5710 | | MF 5711 | |
| Rear axle | Front axle | Rear axle | Front axle |
| 340/85R38 | 280/85R28 | 340/85R38 | 280/85R28 |

| MICHELIN tire | | | |
|---------------|------------|-----------|------------|
| MF 5710 | | MF 5711 | |
| Rear axle | Front axle | Rear axle | Front axle |
| 420/85R30 | 320/85R24 | 420/85R34 | 340/85R24 |
| 420/85R34 | 340/85R24 | 420/85R38 | 340/85R28 |
| 460/85R34 | 380/85R24 | 380/80R38 | 380/85R24 |
| 420/85R38 | 340/85R28 | - | - |
| 340/85R38 | 11.2R28 | | |
| 380/80R38 | 380/85R24 | | |

| MITAS tire | | | |
|------------|------------|-----------|------------|
| MF 5710 | | MF 5711 | |
| Rear axle | Front axle | Rear axle | Front axle |
| 340/85R38 | 280/85R28 | 340/85R38 | 280/85R28 |
| 420/85R34 | 380/85R24 | 420/85R34 | 380/85R24 |
| 460/85R34 | 380/85R24 | 460/85R34 | 380/85R24 |
| 420/85R38 | 340/85R28 | 420/85R38 | 340/85R28 |
| 540/65R34 | 440/65R24 | 540/65R34 | 440/65R24 |
| 480/70R38 | 380/70R28 | 480/70R38 | 380/70R28 |
| 540/65R38 | 440/65R28 | 540/65R38 | 440/65R28 |

| TAISHAN tire | | | |
|--------------|------------|-----------|------------|
| MF 5710 | | MF 5711 | |
| Rear axle | Front axle | Rear axle | Front axle |
| 18.4x30 | 7.50x16 | - | - |
| 15.5x38 | 13.6x24 | - | - |
| 15.5x38 | 7.50x16 | - | - |
| 18.4x34 | 14.9x24 | - | - |

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