John Deere 1010D Forwarder From Serial number WJ1010D003800-

OPERATOR'S MANUAL
John Deere 1010D Fowarder

OMF069353 Issue 01JUN05 (ENGLISH)

CALIFORNIA
Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Worldwide Construction And Forestry Division
LITHO IN Finland

Warranty

Standard warranty clauses

The machine is covered by manufacturer's guarantee in compliance with the standard warranty clauses accepted by the John Deere Forestry Group.

The manufacturer will not assume responsibility for the machines delivered should the following conditions be violated:

- The machine is exclusively operated and maintained by experienced personnel who have been trained by the manuafacturer or by a dealer authorized by the manufacturer.
- The machine must be operated and maintained in accordance with the instructions provided in this manual.
- Only fuels, lubricants and washing fluids specified in this manual are used.
- Only genuine spare parts are used

EL62757,000015D –19–04MAY05–1/1

Standard Warranty

12 Months Warranty Full Machine Coverage to 2000 hr. on all John Deere forestry machines.

The warranty given by manufacturer will be valid provided that the machine is handed over for following maintenances at the service shop authorized by John Deere:

❒ Pre Delivery Inspection (PDI)
❒ 250 hours maintenance
❒ 1000 hours maintenance.

From here after we recommend *service every 1000 hours*, done by authorized workshop.

EL62757,000015E –19–19APR02–1/1

Machines with Extended Coverage (For specified machines only!)

EXTENDED COVERAGE is a purchased coverage program sold by authorized dealers. It provides additional coverage beyond the Standard Warranty provided with the new machine.

The Extended Coverage will be valid provided that the machine is handed over for following maintenances at the service shop authorized by John Deere:

❒ Pre Delivery Inspection (PDI)[1]
❒ 250 hours maintenance[1]
❒ 1000 hours maintenance[1].

There after service every 1000 hours, done by authorized workshop, *as long as the coverage period lasts*.

[1]*the same as in Standard Warranty*

EL62757,0000001 –19–04MAY05–1/1

Secondary exit

There is a secondary exit through the front right hand side window.

IMPORTANT: While operating unlock the lever to be able to open the window from outside if necessary.

IMPORTANT: Lock the lever when leaving the cab. That is to prevent unauthorised access to the cab through the window.

EL62757,0000165 –19–19APR02–1/1

Handle Starting Fluid Safely

CAUTION: Never use a liquid starting aid, if engine is equipped with the pre-heat device. The use with the pre-heat device will cause an explosion in the intake manifold.

TS1356 –UN–18MAR92

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.

OUTJ003,000068F –19–14MAY01–1/1

Use Proper Tools

TS779 –UN–08NOV89

Use appropriate and correct size tools tools. Makeshift tools and procedures can create safety hazards or cause machine damages.

Illuminate your work area and service points adequately. Secure that portable light has a bulb enclosed by a wire cage. The hot filament of an accidentally broken bulb can cause a risk of fire.

Use power tools only to loosen threaded parts and fasteners. DO NOT use U.S. measurement tools on metric fasteners.

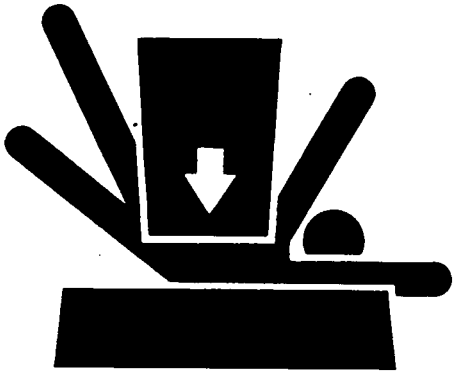
Keep tools clean. Avoid bodily injury caused by slipping wrenches.

Repair or replace worn or damaged tools, before initiating repair work on your machine.

Use only service parts meeting manufacturer's specifications.

OUTJ003,00005AB –19–09MAY01–1/1

Support Machine Properly



TS229 –UN–23AUG88

Use proper lifting equipment. Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual. Make sure that jack stands and lifting equipment are in good condition and of adequate capacity.

Do not work under a machine that is supported solely by a jack. If left in a raised position, hydraulically supported devices can settle or leak down.

AK12300,000004F –19–28FEB02–1/1

Warning lights and alarms

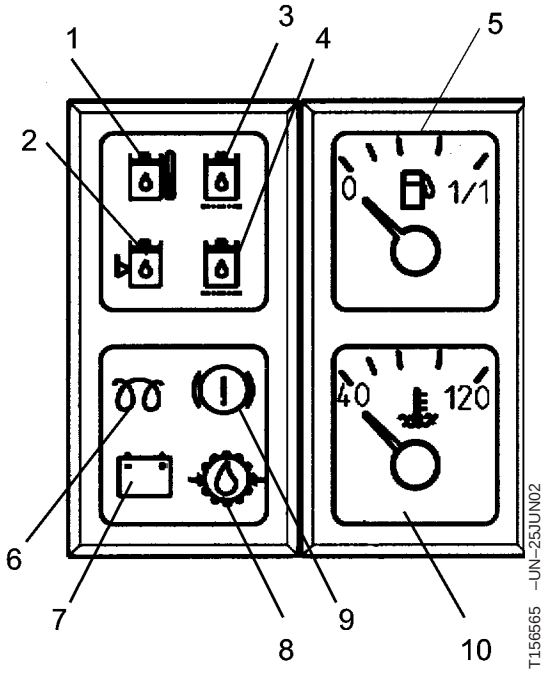
Warning lights on the dashboard

Warning indicator lights on the dashboard will be lit when certain conditions arise. Some of these warnings also activate the central warning light and buzzer.

CAUTION: If a warning light is lit, shut down the machine. Do not operate the machine until the problem has been remedied.

Continued operation of the machine may lead to equipment damage and, in some cases, risk of injury.

Qualified personnel can refer to the Operations and Test Manual for procedures to troubleshoot and repair the machine.



1. Hydraulic Oil Temperature. Alarms*, if the temperature exceeds 75 °C (167 °F).
2. Hydraulic Oil Level. Alarms*, if level drops below minimum (min. = 72 l /19 gal))
3. No use
4. Warning light will be lit when the pressure exceeds 0,13 MPa (18,8 psi). Replace the filter.
5. Fuel level
6. Glow.
7. Battery charge
8. Hydrostatic Drive Pressure. Alarms*, when the pressure drops below 1,5 MPa (217 psi).
9. Brake Charge Pressure. Alarms*, when the pressure drops below 10 MPa (1450 psi)
10. Coolant temperature. Alarms*, if the temperature exceeds 100 °C (212°F) .

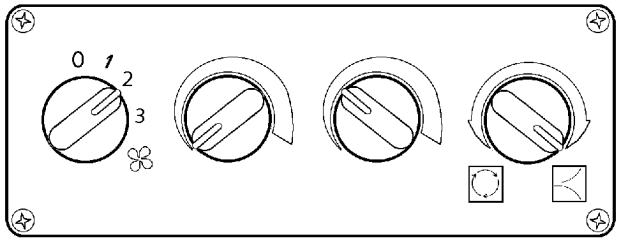
Besides the warning light also warns with the central warning light and buzzer.

Continued on next page

Control Settings

A) In the summer, when the weather is warm and the humidity is normal:

1. Open the outside air circulation (4).
2. Disengage heating and select the temperature you wish through the cooling system (3).
3. Direct the air flow to the vents you wish.

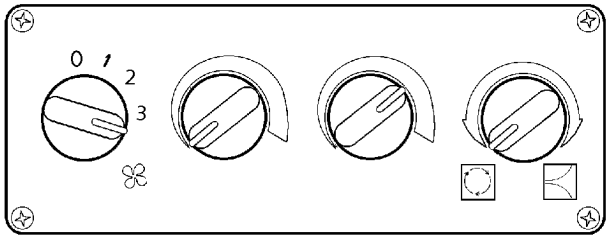


T157104 –UN–04JUL02

OUTJ003,00005D9 –19–10MAY01–2/6

B) In the summer, when the weather is hot and the humidity is high:

1. Open the inside air recirculation (4).
2. Disengage heating and select the temperature you wish through the cooling system (3).
3. Turn the fan switch to the maximum speed.



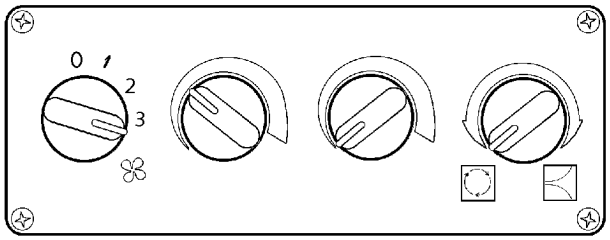
T157105 –UN–04JUL02

OUTJ003,00005D9 –19–10MAY01–3/6

IMPORTANT: The inside air recirculation of the cooling system must not be obstructed. Make sure that the protective mesh is not clogged.

C) In the autumn or early winter, when the weather is damp, there is rain or wet snow or the windshield is fogging:

1. Turn the fan switch to the maximum speed, switch on the cooling system and adjust the heating as necessary.
2. Open the inside air recirculation (4).
3. Direct the air to the window vents.
4. When the air inside the cab has dried up, close the inside air recirculation or adjust it to a lower level, switch off the cooling system and select the temperature you wish.



T157106 –UN–04JUL02

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OUTJ003,00005D9 –19–10MAY01–4/6

Door Safety Switch

Cabin door is equipped with a door safety switch.

When the door is opened the parking brake comes on and the machine's functions cease.

When the door is open, the steering, the transmission and the boom do not function.

After closing the door the boom functions are switched on when the seat is turned face back and and the park brake button is switched off.

EL62757,0000001 –22–04MAY05–1/1

Before Starting the Engine for the First Time in a Working Day

❒ Take an overall look at the machine (joints, hoses, etc).
- Check the engine oil level.
- Check the coolant level.
- Check the hydraulic oil level.
- Check the fuel level.

❒ Turn on the main switch
❒ Unlock the lever of the emergency exit.

EL62757,0000212 –19–28NOV02–1/1

Towing the Machine

As a result of a system failure, it may be necessary to tow the forwarder to proper repair facilities The machine cannot be towed unless some or all of the following actions are taken:

1. Release the parking brake.
2. Release the driving power transmission system.
3. Release the service brake
4. Release the steering

Continued on next page

NOTE: If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times.

EL62757,0000151 –19–18APR02–3/3

Cleaning the Cab Windows

1. General cleaning

   Wash the windows with lukewarm water and a mild, neutral, liquid detergent. Rinse well with clean water. Dry thoroughly to avoid water marks, using a soft and clean cloth

2. Cleaning vehicle windows during operation

   Always spray the window before wiping. Thoroughly spray the window so that the wipers do not run dry. Ensure that the window washer bottle is topped up frequently with a mixture of water and window wash fluid.

3. Removing stains

   Remove stains of resin, paint, grease, oil, etc, before the stain has time to dry.

   Use a soft cloth moistened with one of the following approved solvents.

   - Pure isopropyl alcohol, IPA
   - White spirit
   - Heptane
   - Light petroleum
   - Butyl ethyl glycol
   - Methanol
   - Hexane
   - Butanol

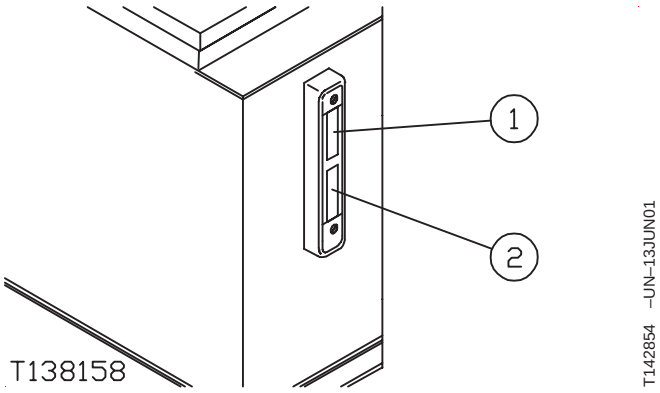
   After removing stains, wash the window as described above

EL62757,00000A7 –22–19OCT02–1/1

Check Hydraulic Oil Level

IMPORTANT: To prevent pump damage, DO NOT start engine without oil in hydraulic tank.

1. Park machine on level surface. When checking oil level, always lower the decking blade to the ground and retract the loader main and jib boom cylinders.
2. Check the hydraulic oil level in the sight glass on the tank. When the oil is cold, the oil level must be to the middle of the sight glass.
3. Add oil when oil level is at or MIN marks on sight glass.



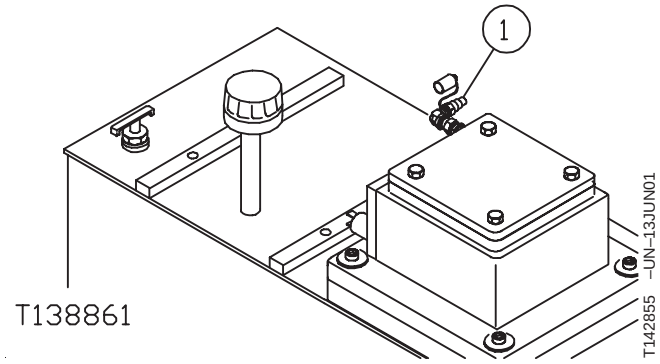
1—Hydraulic Oil Level Sight Glass
2—Hydraulic Oil Temperature

OUTJ003,0000696 –19–15MAY01–1/2

4. Oil is added through the quick coupler. See Section 6-1, Fuels and Lubricants, for recommended hydraulic oils.

NOTE: Do not exceed the MAX oil level. The air space in the tank is required because the hydraulic fluid level will vary during operation.

1—Hydraulic Oil Fill Port



OUTJ003,0000696 –19–15MAY01–2/2

Check Transfer Case Oil Level

The dipstick (1) is under the hydraulic oil tank, at the rear edge.

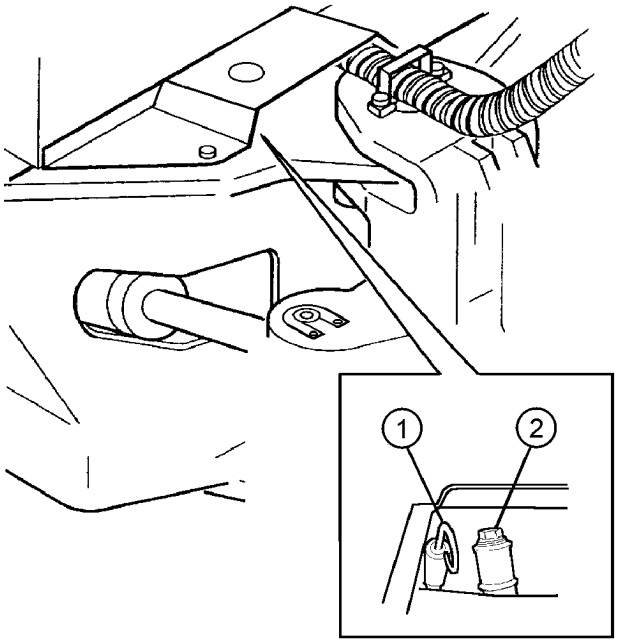
1. Park machine on a level surface. Lower decking blade to the ground and secure grapple to rear frame.
2. Engage park brake. Turn key switch OFF.

CAUTION: Prevent possible injury from unexpected machine movement. Install frame locking bar before working in frame pivot area.

3. Install frame locking bar.
4. Check oil level on dipstick. Oil level must be at the FULL notch.
5. If necessary, remove fill plug and add oil. See Section 6-1, Fuels and Lubricants, for recommended Transfer Case Oil.

NOTE: To vent transfer case while adding oil, pull up dipstick.

6. Install fill plug.



T142882 –UN–13JUN01

1—Dipstick
2—Filler Plug

OUTJ003,00006A6 –19–15MAY01–1/1

Change the fuel filters

1. Clean dirt and debris from and around the fuel filter assembly

2. Open drain plug (1) in the bottom of the filter and vent screw (2) on the filter. Drain the fuel into a container.

NOTE: Lifting up on retaining ring as it is rotated helps to get it past raised locators.

3. Firmly grasp the retaining ring (3) and rotate it counterclockwise 1/4 turn. Remove ring with filter element.

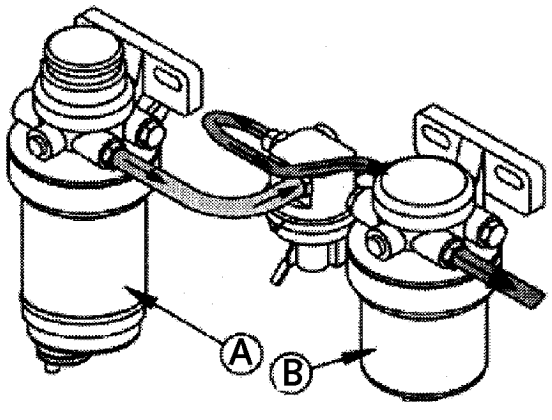
4. Inspect filter mounting base for cleanliness. Clean as required.

5. Remove filter element from water separator bowl (4). Drain and clean separator bowl. Dry with compressed air. Check also O-ring; change if needed. Install water separator bowl onto new element. Tighten securely.

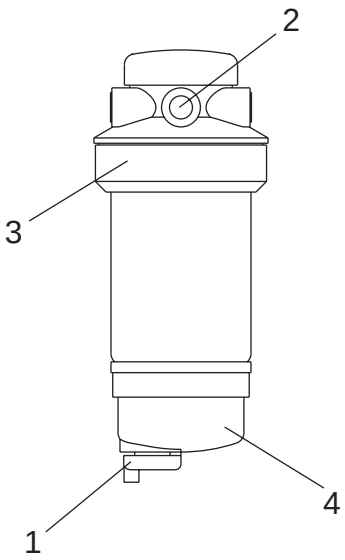
6. Fill the new filters with clean fuel. Fit the filters back.

7. Install retaining ring onto mounting base making certain dust seal is in place on filter base. Hand tighten ring (about 1/3 turn) until it “snaps” into the detent. DO NOT overtighten retaining ring.

8. Bleed the fuel system. See chapter: Maintenance as required.



T162349 –UN–02DEC02



T160019 –UN–01OCT02

A—Primary Fuel Filter
B—Final Fuel Filter
1—Drain plug
2—Vent screw
3—Retaining ring
4—Water bowl

EL62757,0000060 –67–16OCT02–1/1

IMPORTANT: The filter and the canister must be lifted together from the tank to prevent the contamination to flow into the tank.

4. Put the filter element and the canister into an oil collecting sump

5. Unlock the filter element by twisting it counterclockwise

6. Remove the filter element and clean the canister

7. Replace the filter element and put it inside the canister.

   Twist the filter element clockwise and check that it is locked inside the canister! You maybe need to press the filter while twisting it.

8. Place the filter assembly in the tank together with the spring (6). Screw the cover (8) on.

9. Start the engine and run for 5 minutes. Stop the engine

10. Check for any leakage at filter cover.

11. Close the vent screw.

12. Check oil level in tank. Add oil if necessary.

The filter is equipped with a pressure guard for clogging. If the pressure guard sets off an alarm, renew the filter. Otherwise, stick to maintenance periods.

OUTJ003,0000346 –19–22JAN01–2/2

8. After cleaning the cooling system, drain cleaner and fill with water to flush the system. Run the engine about 10 minutes, then drain out flushing water.

9. Close all drain valves on engine and radiator. Install thermostats using a new gasket.

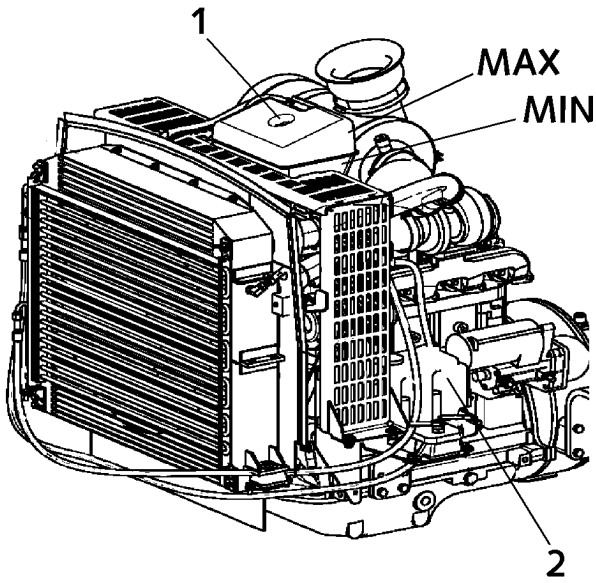
IMPORTANT: Never pour cold liquid into a hot engine, as it may crack cylinder head or block.

IMPORTANT: Air must be expelled from cooling system when system is refilled. Loosen temperature sending unit fitting in cylinder head or plug in thermostat housing to allow air to escape when filling system. Retighten fitting or plug when all the air has been expelled.

10. When adding coolant to the system, use the appropriate coolant solution. For coolant specifications see group Maintenance — Lubricants and Fluids/Coolant Add coolant via expansion tank (1). Ensure that the coolant level stays between the “MIN” and “MAX” marks.

11. Run engine until it reaches operating temperature 82°- 94°C (180° - 202°F). This mixes the solution uniformly and circulates it through the entire system.

12. After running the engine, check coolant level and entire cooling system for leaks.



T161476 –UN–08NOV02

OUTJ003,00005BD –19–10MAY01–3/3

Maintain the Boom

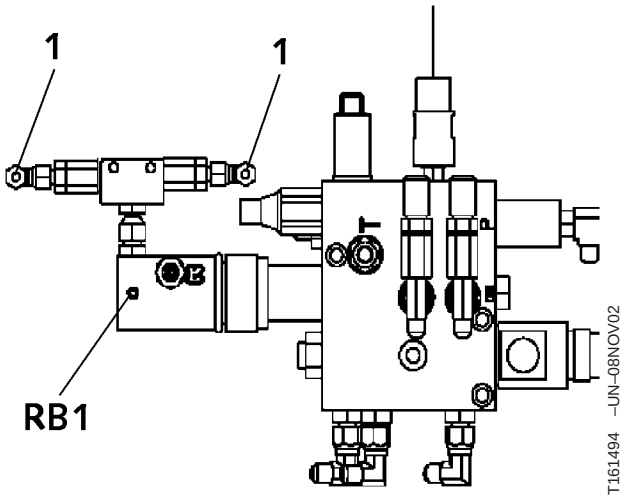
Adjust the Rotator Link Brakes

EL62757,000022D –19–29NOV02–1/1

Filling the brake pedal circuit

If needed, the brake pedal circuit is filled as followed:

1. Connect an external pump to a T-connector (1) near the shuttle valve.
2. Pump oil until the oil level starts to rise in the brake fluid container.
3. Repeat the procedure in another brake pedal.
4. After filling both of the pedal fluid circuits, open the bleed screw RB1 and bleed as an ordinary fluid circuit brake.



EL62757,00001F1 –19–26NOV02–4/4

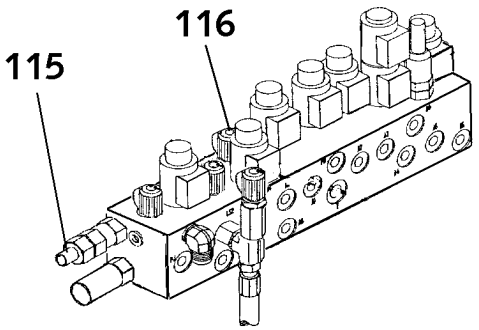
Checking and Adjusting Auxiliary Function Pressure

- Differential locks.
- High/low gear.
- Rear-wheel drive engage when the high gear is used.

The functions listed above operate with a reduced pressure of 3.0 MPa (435 psi). The pressure is measured at measuring point (116).

If necessary, the pressure is adjusted from adjusting screw (115). This can be done while the engine is idling.

NOTE: Though the pressure is lower than the delta pressure of the pump, the adjustment should be checked by increasing the pressure up to the maximum by engaging the 'extension in' movement, for instance. The pressure at measuring point (116) must remain the same.



T161480 –UN–21JAN04

EL62757,00001FD –19–26NOV02–1/1

1010D Drive Pedal Adjustment

1. The pedals are delivered ready-adjusted. If necessary adjust the high limit of the pedals' move range by changing the length of the control lever (through the floor, from the bottom of the pedal) to 42° angle.

   a. Adjust the stop screw of the lever (situated in the adapter plate of the potentiometer) so that potentiometer's control voltage of the engine is 1 ± 0.2 V in pin X19/2, supply voltage 5.0 V in pin X19/1 and minus pin X19/3.

   b. Check that the roll of the potentiometer doesn't touch the counterpart during the adjustment. Finaly adjust the clearance of the potentiometer's counterpart from the roll to approximately 2 mm (0,08 in) during the pedal is in the upper position.

2. Limit the movement of the pedal (pedal down), using a adjustment screw of the frame piece, so that the engine pilot voltage, coming from the potentiometer, is 4 ± 0,2 V (charge voltage = 5,0 V).

   Pedal's nominal angle is then 17°.

3. Alternatively the potentiometer can be adjusted by mesuring the total resistance between the pins X19/1 and X19/3.

   a. Keeping the pedal up, adjust the potentiometer's stop screw so that the recistance between the pins X19/2 and X19/3 is 1/5 from the total recistance which was measured earlier.

   b. Pedal's down-position is adjusted so that the recistance between pins X19/1 and X19/2 is between 1/5 from the total recistance which was measured earlier.

EL62757,000022F –19–29NOV02–1/1

CAUTION: A load that is stacked too high can cause the machine to overturn, or the topmost logs may slide over the headboard and cause a fatal injury to the driver.

- ❒ Maintain the safety distances required between the machine or boom and power lines.
- ❒ For transport, the boom must be properly secured in the appropriate position.
- ❒ Do not leave the cab before you have securely placed the grapple onto the ground or in transport position.

CAUTION: Approach an area where overhanging electrical powerlines are present with extreme caution.

Safety distances for powerlines:

Rated voltage kV	Min. distance (m) under	on the side
1	2 (6,5 ft)	2 (6,5 ft
1...45	2 (6,5 ft	3 (9,8 ft)
110	3 (9,8 ft)	5 (16 ft)
220	4 (13 ft)	5 (16 ft)
400	5 (16 ft)	5 (16 ft)

IMPORTANT: If you come into contact with a powerline, stay in the cab.

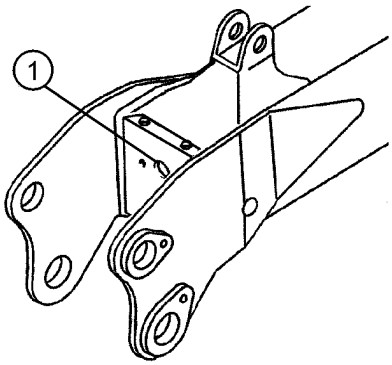
EL62757,00001C5 –19–22APR02–2/2

4. Remove the jib end cover. With the boom extended, lubricate the lower inside surfaces of the jib and the first extension boom. With the boom retracted, lubricate the upper inside surfaces of the jib and the first extension boom.

5. Lubricate the chains. Add oil to the chain lubricating device through the filler port in the jib end cover.

NOTE: Chains are used to extend the second extension boom on CF585 and CF510 Loaders only. The CF572 boom does not use extension chains.

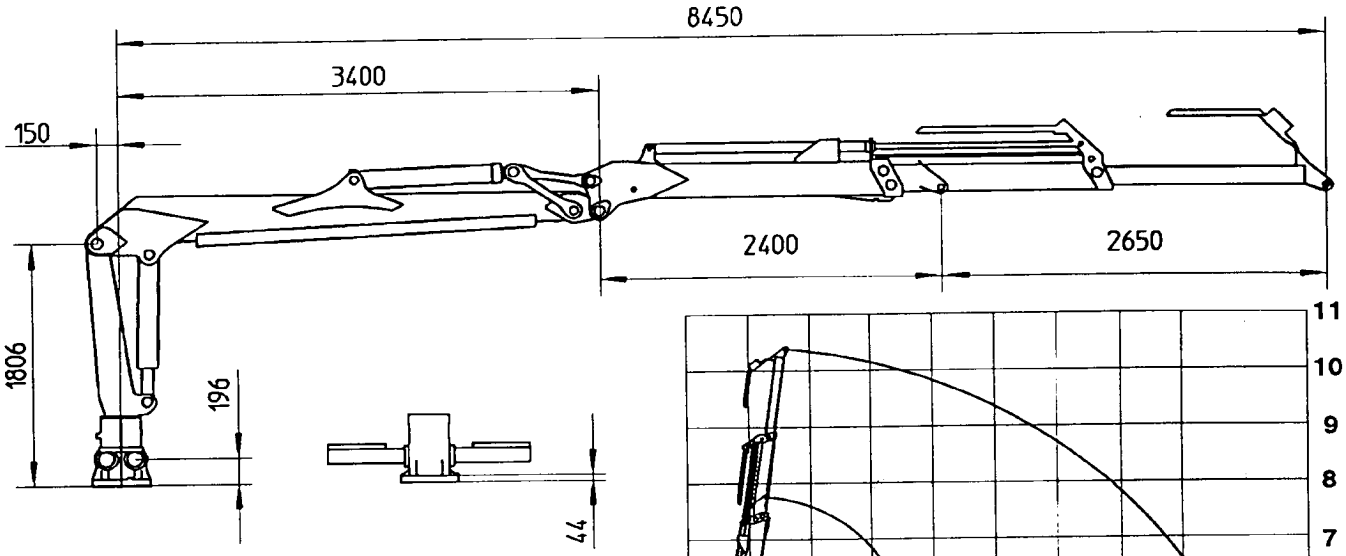
NOTE: While lubricating, inspect the loader's structural members. If any cracks are discovered, stop using the boom and contact an authorized service representative for repair instructions.

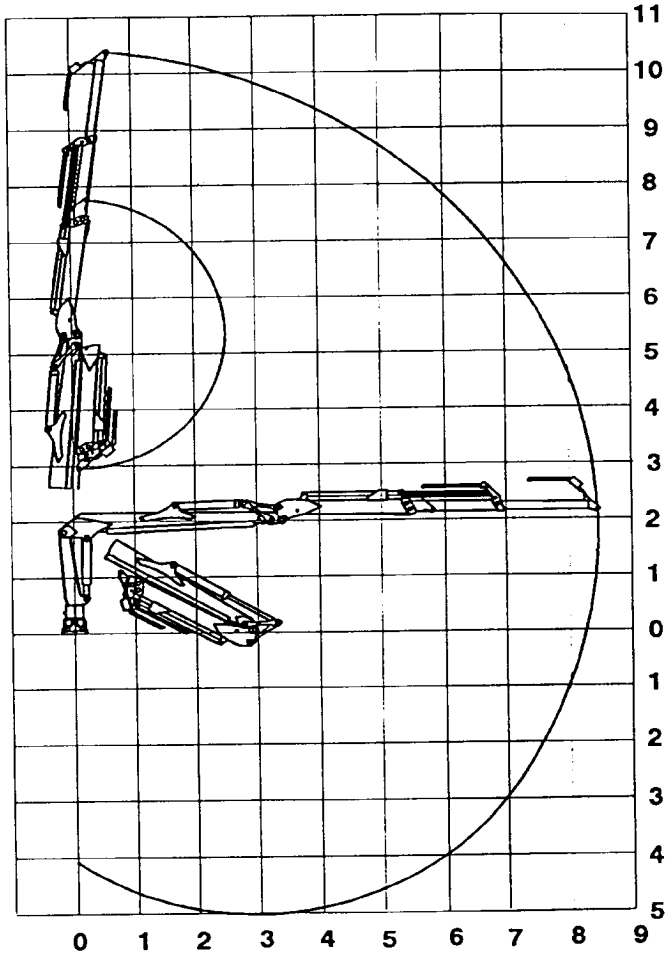


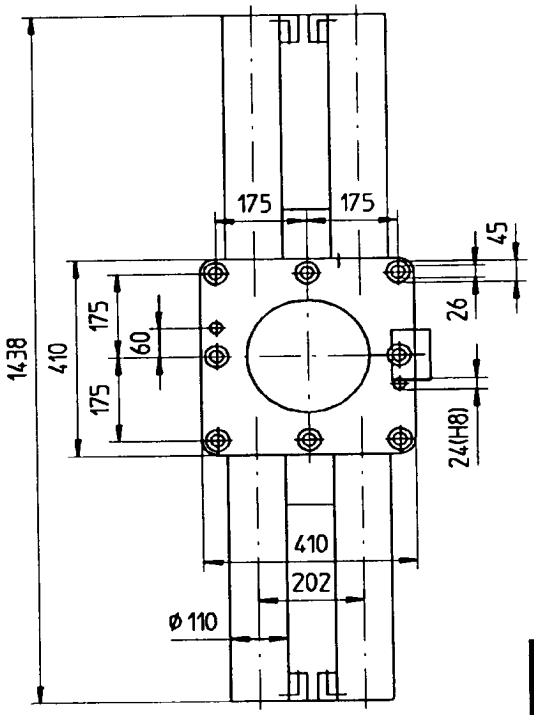
Jib Boom End Cover

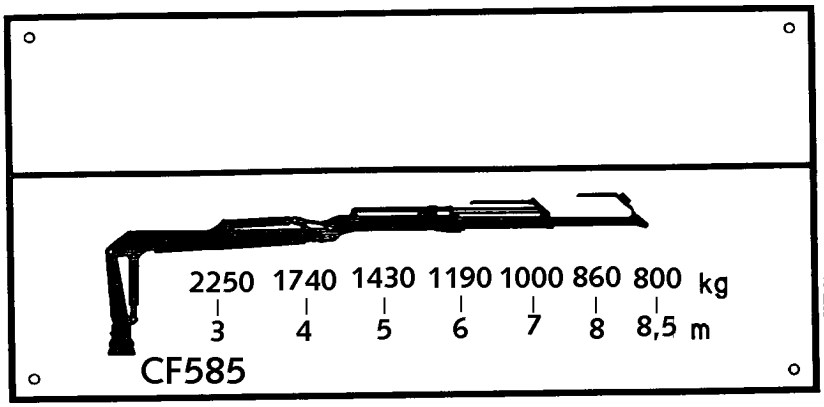
1—Extension Chain Lubrication Port

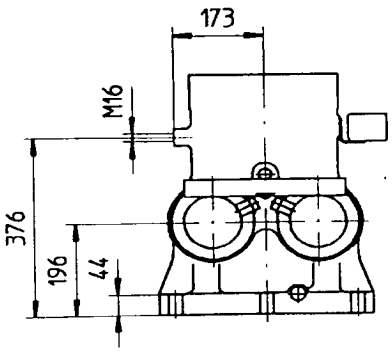
OUTJ003,0000621 –19–10MAY01–2/2











T161842 –UN–30MAY05

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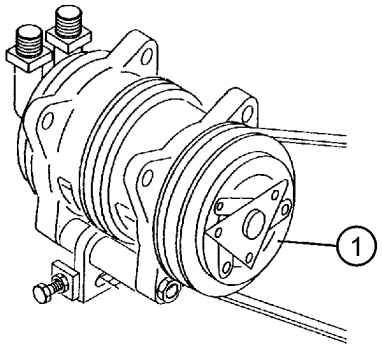
Compressor plate

There must be a clearance of 0.3 ... 0.6 mm (0.012...0.02 inc) between the compressor belt pulley and plate. If there is dirt between the pulley and plate, clean immediately.

1—Compressor plate



T142890 –UN–13JUN01

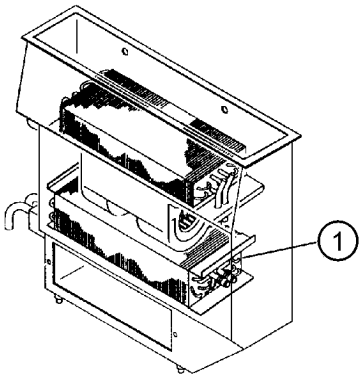
EL62757,00001E1 –19–22APR02–2/2

Maintenance - every 1000 hours: Service the evaporator element

The evaporation element must be clean.

Make sure that the condensation water outlet is open.

1—Evaporator



T142892 –UN–13JUN01

EL62757,00001E2 –19–22APR02–1/1

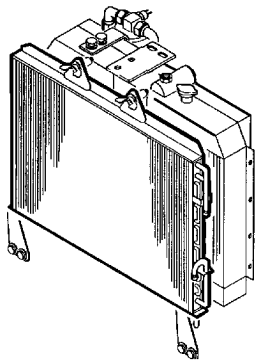
Maintenance - every 1000 hours: Service the condenser element

Ensure that the condenser gets enough air.

The element must be regularly cleaned by blowing lightly with compressed air.

Blow through the condenser, in the opposite direction if compared with the ordinary flow of air.

IMPORTANT: Carefully clean the ends of the condenser element with compressed air. Blowing direction: away from the condenser. If the compressed air used is too strong, the condenser fins may be damaged.



T144037 –UN–18JUL01

EL62757,00001E3 –19–22APR02–1/1

Engine Troubleshooting

Symptom	Problem	Solution
Engine cranks but will not start	Incorrect starting procedure.	Verify correct starting procedure.
	No fuel.	Check fuel in tank and shut-off valve in tank.
	Exhaust restricted.	Check and correct exhaust restriction.
	Fuel filter plugged or full of water.	Replace fuel filter or drain water from filter.
	Injection pump not getting fuel or air in fuel system.	Check fuel flow at supply pump or bleed fuel system.
	Faulty injection pump or nozzles.	Consult authorized John Deere dealer for repair or replacement.
Engine hard to start or will not start	Improper starting procedure.	Review starting procedure.
	No fuel.	Check fuel tank.
	Air in fuel line.	Bleed fuel line.
	Cold weather.	Use cold weather starting aids.
	Slow starter speed.	See “Starter Cranks Slowly”.
	Crankcase oil too heavy.	Use oil of proper viscosity.
	Improper type of fuel.	Consult fuel supplier; use proper type fuel for operating conditions.
	Water, dirt, or air in fuel system.	Drain, flush, fill, and bleed system.
	Clogged fuel filter.	Replace filter element.
	Dirty or faulty injection nozzles.	Have authorized John Deere dealer check injectors.
	Injection pump shut-off not reset.	Turn key switch to “OFF” then to “ON”.

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Diagnose Hydrostatic Drive Pump

Symptom	Problem	Solution
'Neutral' is difficult or impossible to find.	Control signal fault.	See authorized dealer.
	Faulty direction selection solenoids.	See authorized dealer.
	Faulty swashplate positioning control.	See authorized dealer.
System overheating.	Insufficient hydraulic fluid.	Check the supply of oil to the pump. Low oil level in the tank or a blocked or kinked suction hose will not provide sufficient oil to meet system cooling demands.
	Low charge pressure.	Check the charge pressure filter for clogs.
		See authorized dealer.
	High drive pressures.	See authorized dealer.
	Low drive pressures.	See authorized dealer.
Drive operates normally in one direction only.	Fault in control line or pilot signal.	See authorized dealer.
	Faulty direction selection solenoids	See authorized dealer.
	Faulty swashplate positioning control.	See authorized dealer.
	Faulty drive pressure relief valves.	See authorized dealer.
	Faulty control module.	See authorized dealer.

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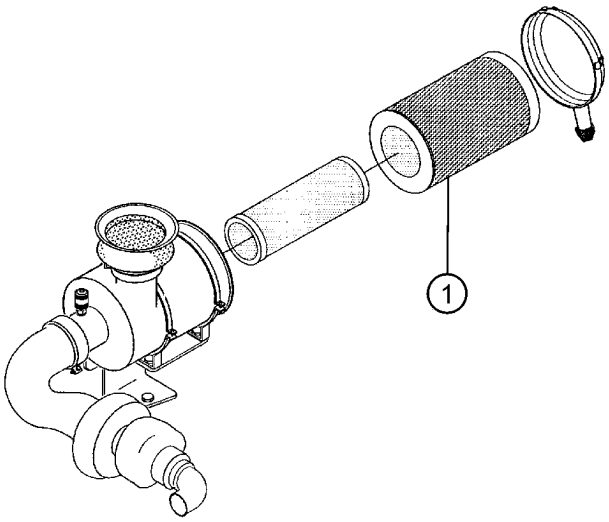
Prepare Machine for Storage

1. Repair worn or damaged parts. Install new parts, if necessary, to avoid needless delays later.
2. Clean primary air cleaner element.

1—Primary Air Filter



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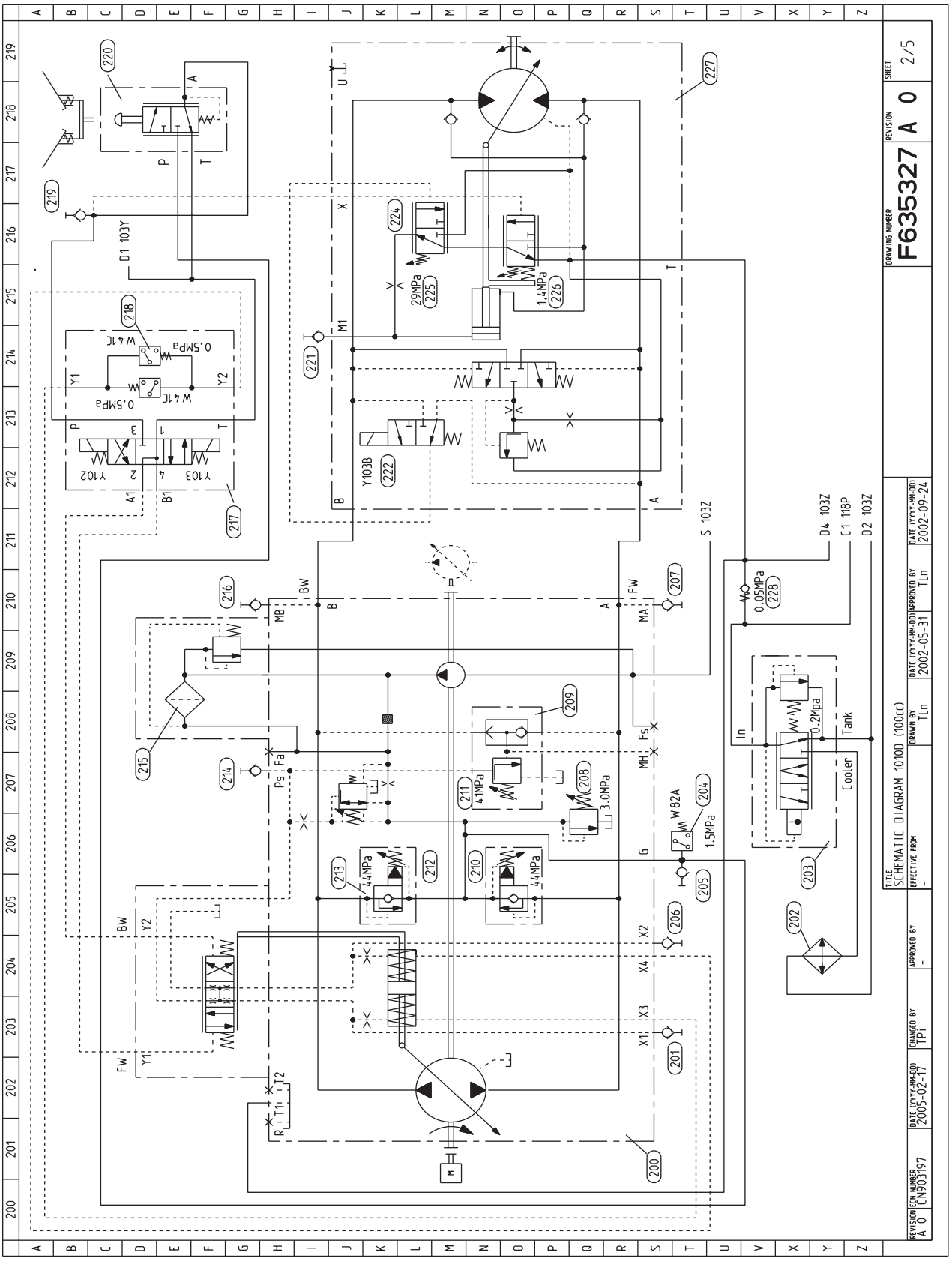

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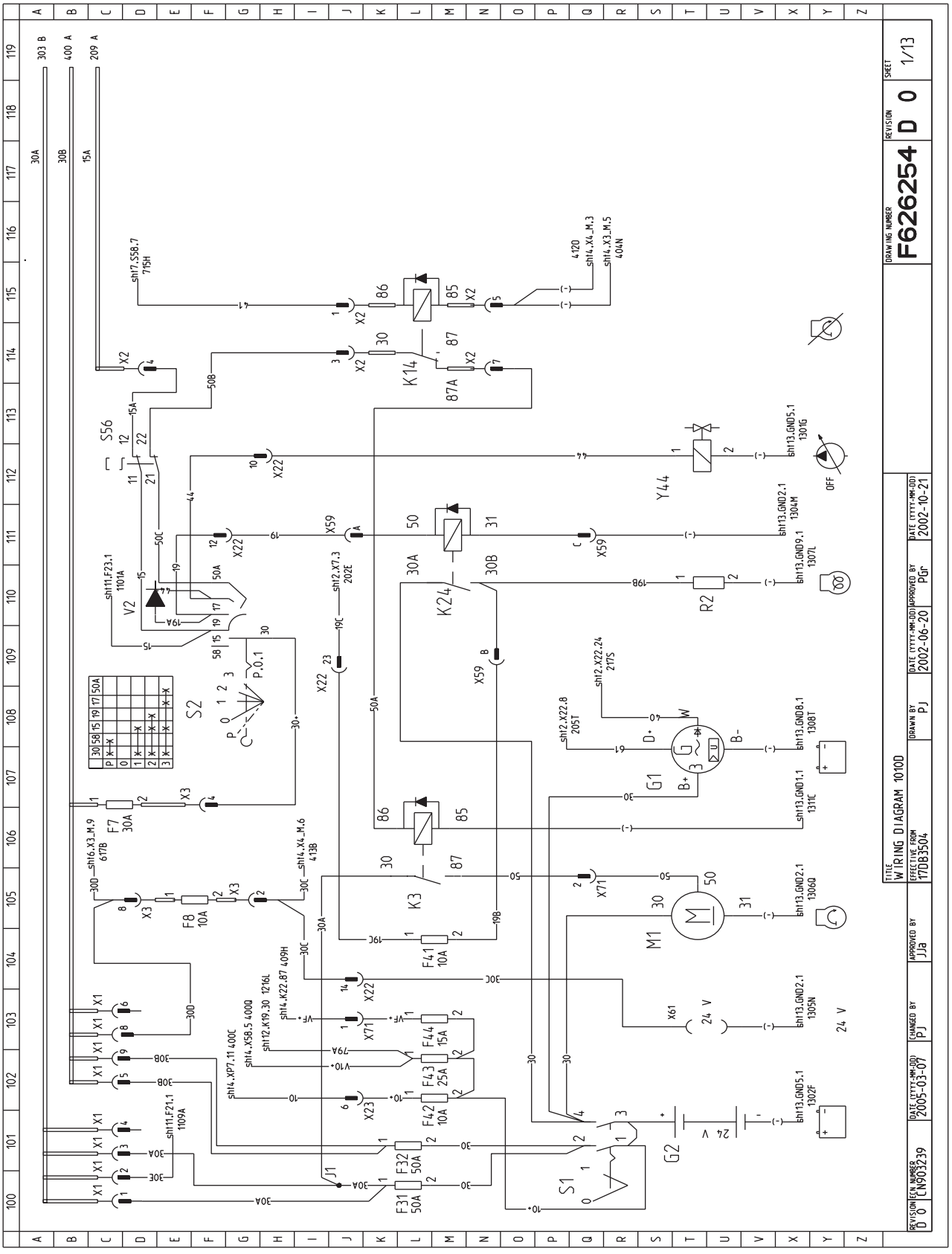

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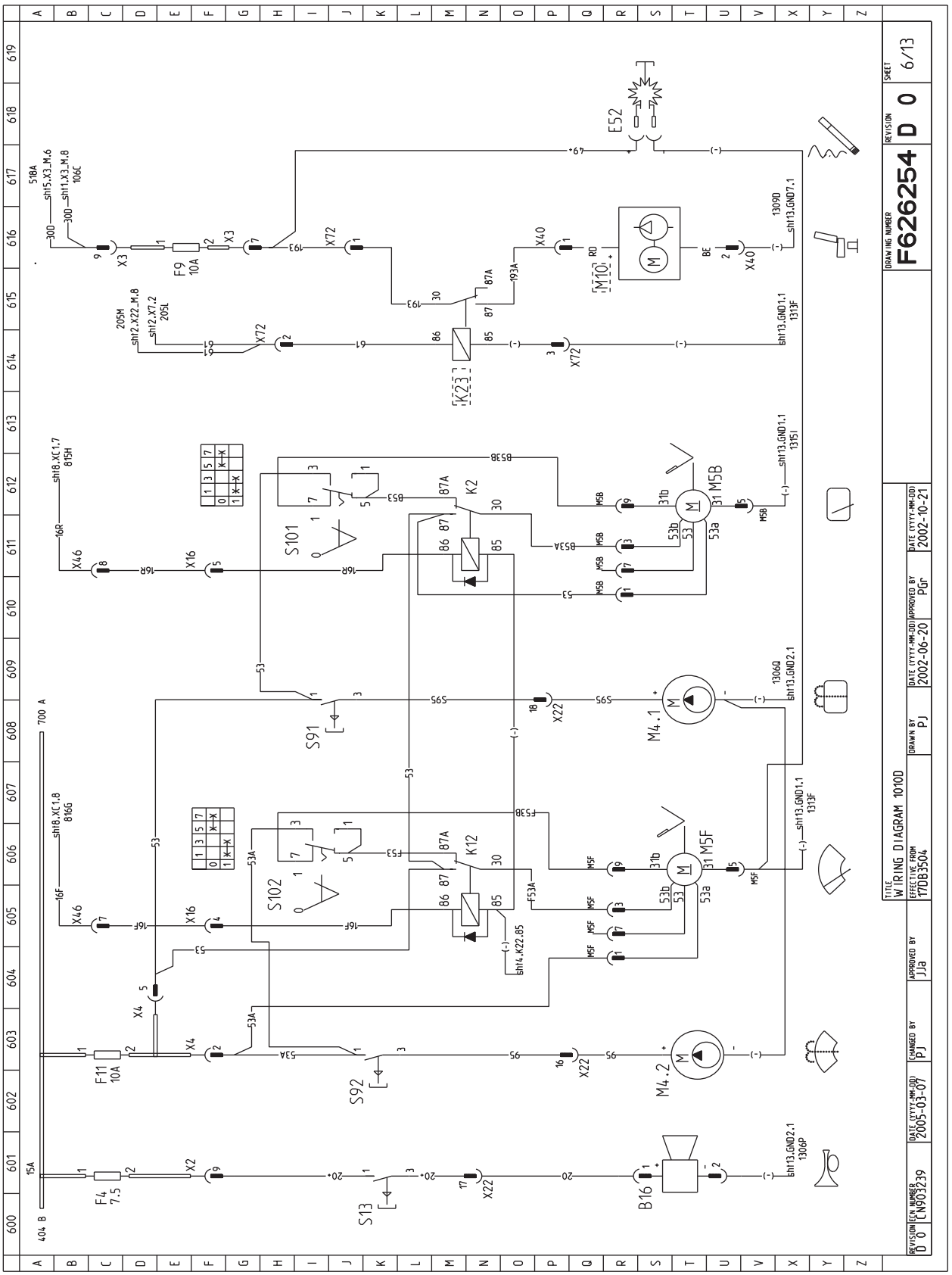

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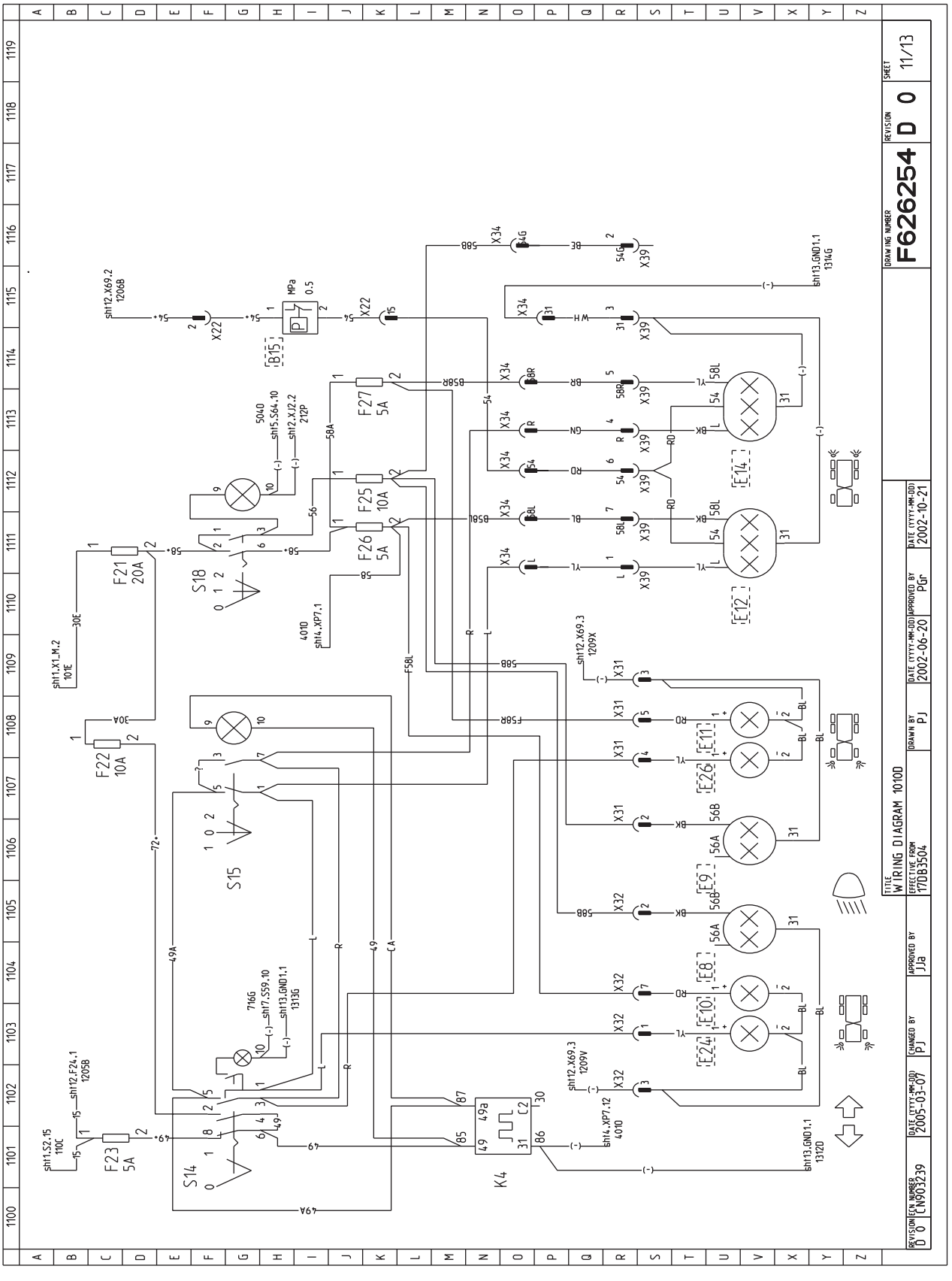

T191992 –UN–02MAY05

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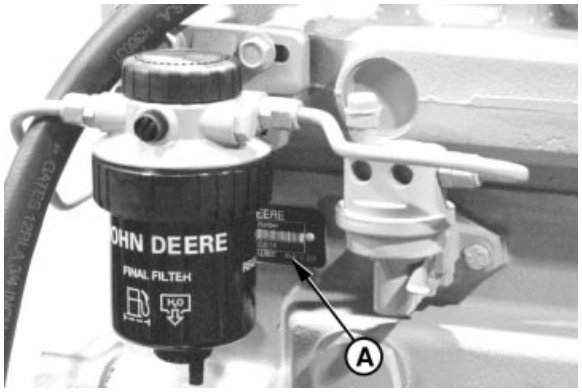
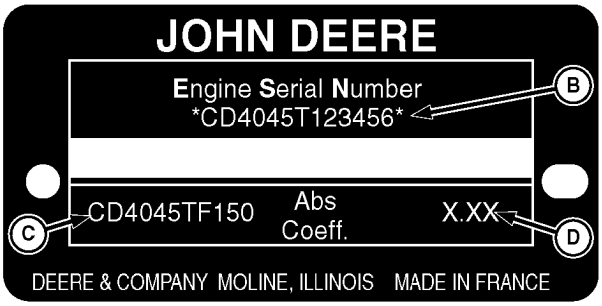
Engine

John Deere,JD4045 HTJ76 water-cooled and turbocharged 4-cylinder diesel engine with intercooler.



RG7778 –UN–11NOV97



RG9061 –UN–16MAR98

Saran Engine Serial Number Plate

A—Serial Number Plate
B—Engine Serial Number
C—Engine Application Data
D—Coefficient of Absorption (Saran Engines Only)

Item	Measurement	Specification
Engine John Deere JD4045 HTJ76	Max. output	85 kW (114 hp)/ 1500 r/min
	Torsional moment	498 Nm (367 lbt-ft)/ 1400 r/min

EL62757,0000003 –19–06FEB02–1/1

Steering

Articulated frame steering with two steering cylinders. Proportional stick steering.

Item	Measurement	Specification
Frame steering	Steering angle	± 42°

EL62757,0000006 –19–06FEB02–1/1