Operator's Manual

Applicator Chassis

RG900C
AGCC0900xKxxx1001-

RG1100C
AGCC1100xKxxx1001-

RG1300C
AGCC1300xKxxx1001-

North America
4205 River Green Parkway, Duluth GA 30096 USA

Original Operator's Manual

November 2019
607992D1B
NA
English

1.2 Operate the machine

Procedure

1. Make sure the operator and the ladder areas are clean and dry to prevent personal injuries.
2. Make sure all wheel bolts are torqued to correct specifications before operation.
3. Never permit any people on or in the machine when in operation.
4. Engage park brake and put drive lever in neutral before starting engine.
5. Stop the machine, turn off the engine, and set the park brake if an accident occurs. Remove the key and take the key with before inspecting any damage.

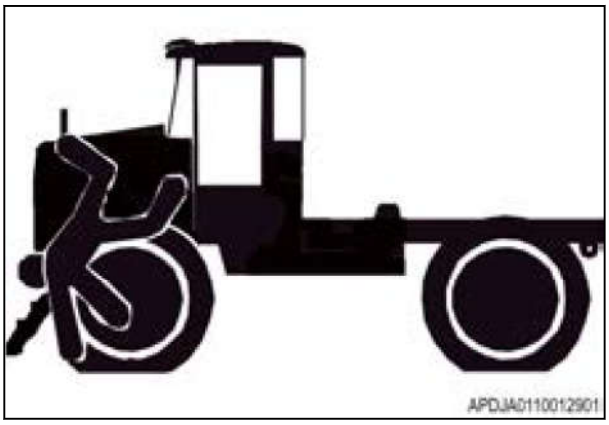


Fig. 8

6. Stop machine immediately if there is an engine, hydraulic system or any failure. Do not turn the key off until the machine stops and turned off correctly.
7. The operator must not exceed the recommended speeds, loads, or tire inflation. These recommendations are on the tires and the tire chart located in the operator manual.
8. Never get off a moving machine.
9. When leaving machine unattended, set park brake, turn off the engine, remove the key and take the key with.

Fig. 9

1.3.6 Support machine correctly

Never support the machine on cinder blocks, hollow tiles and or supports that can crumble.

Never work under a machine only supported by a jack. Use wheel chocks to prevent machine from moving.

Fig. 28

1.3.7 High pressure fluids

WARNING:
Avoid contact with high-pressure fluids. Escaping fluid under pressure can penetrate skin causing serious injury

WARNING:
Machine must be stopped and cooled before checking fluids. Use caution when removing radiator caps, plugs, grease fittings or pressure taps

WARNING:
Never open pressure lines under pressure. Release all pressure before doing maintenance or repairs on any pressurized system

WARNING:
Tighten all connections before applying pressure.

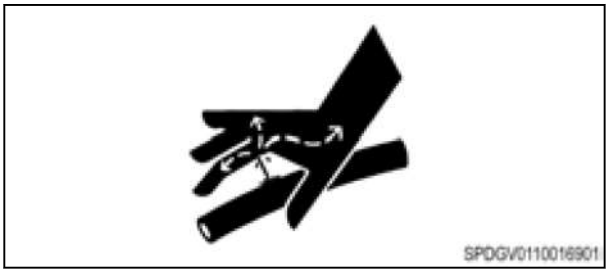


Fig. 29

- Search for leaks with a piece of wood or cardboard. Protect hands and body from high pressure fluids. Do not use hands;
- Never open hydraulic or fuel lines when under pressure. Hydraulic fluid or diesel fuel under pressure can cut skin, cause bad burns, eye injury or skin irritation;
- If an accident does occur, get medical help immediately if any personnel are injured by hydraulic fluid or fuel;

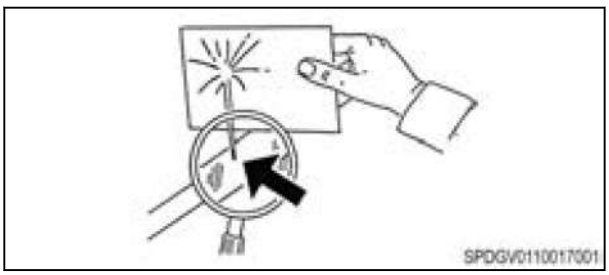
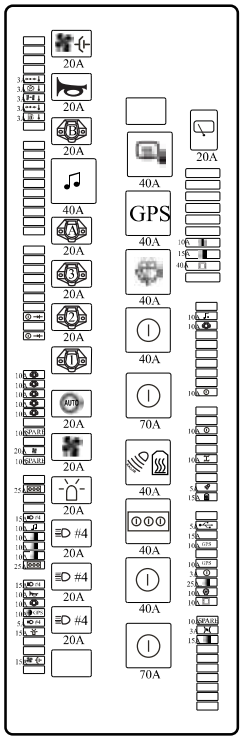


Fig. 30

1.5.5 Cab fuse/relay sign - ACW7145660

Cab fuse/relay	
	The information sign is found on the inner surface of the fuse panel cover on the left in the cab. The functions for fuses and relays and their locations are shown.

1.8.7 Run over hazard

Run over	
	Never bypass start the engine by making a connection across the starter terminals. The engine can start and the machine can move if the normal circuits are bypassed. Never start the engine while standing on the ground. Start the engine only from the operator's seat with the seat belt on. The drive lever must be in neutral and the park brake engaged.

1.8.8 Ether

Ether	
	Do not use ether (starting fluids) at any time to start the engine. This can cause engine damage and personal injury. This machine has a starting aid. Do not use ether or starting fluids on the engine. This can cause an explosion and or injury to the operator or the bystanders.

1.8.9 Diesel exhaust fluid filter

Diesel exhaust fluid (DEF) filter	
	DEF filter sign indicates the location of the DEF filter.

1.8.10 Fuel filter

Fuel filter	
	The decal is located on the fuel filter housing.

(1) Charge filter

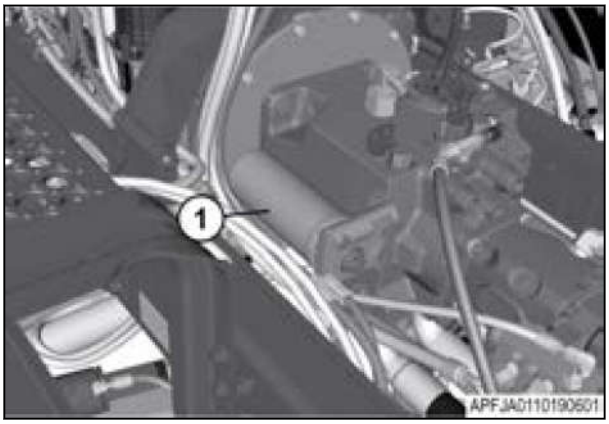


Fig. 12

2.5.2 Main fuses

Fuse/ relay location	Fuse/relay size	Description
1	250 amp	Main fuse
2	100 amp	Main fuse

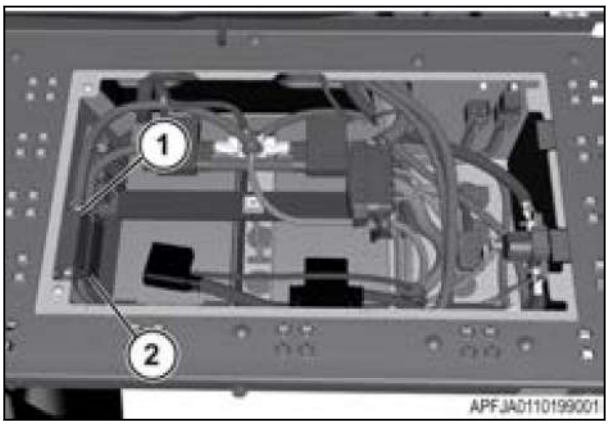


Fig. 18

2.5.3 Chassis harness fuses

Fuse/ relay location	Fuse/relay size	Description
1	70 amp	Starter relay
2	25 amp	Taillight fuse
3	25 amp	Tank light and boom light fuse

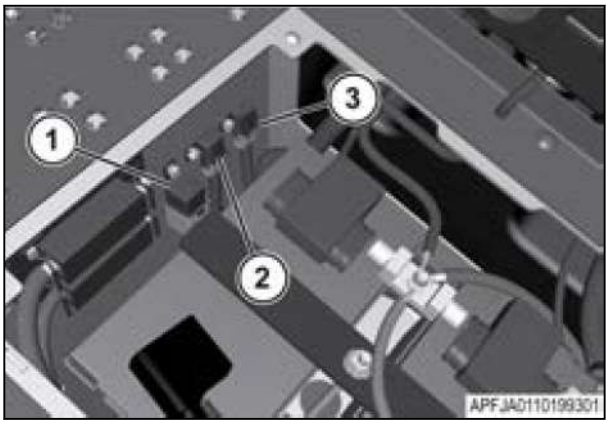


Fig. 19

2.5.4 Power distribution module

Location of power distribution module (1).

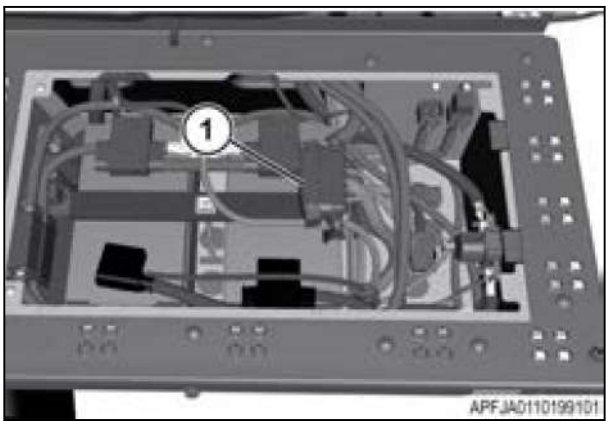


Fig. 20

- Travel Time and Mileage
- Freight, (shipping and handling)
- Unless mandated by State or Provincial laws.
- Neither AGCO nor any AGCO authorized dealer will be liable for incidental or consequential damages.

OBTAINING WARRANTY SERVICE

To obtain warranty service, owner should take the engine to the nearest Dealer or service center authorized by AGCO or the equipment manufacturer. If available, the original purchase receipt (showing the initial date of purchase) and all available maintenance records should be presented.

The authorized AGCO dealer will contact AGCO Warranty Department for confirmation of coverage.

The authorized Dealer or service center may perform the necessary repairs or adjustments within a reasonable time and furnish owner with a copy of the repair order. AGCO wants to assist in providing the services applicable under this warranty. If you need assistance in locating the nearest authorized Dealer or service center, or have any questions about your warranty rights and responsibilities, you should contact AGCO Answers at **1-877-525-4384** or email agcoanswers@agcocorp.com .

You can also contact AGCO technical services and support.

AGCO Corporation

Technical Services and Support

P.O. Box 4300

Hesston

KS 67062-2002

1-406-890-6000

3. Push the up arrow (1), down arrow (2), enter (3), and escape (4) buttons at the **same time** to clear the fault code.

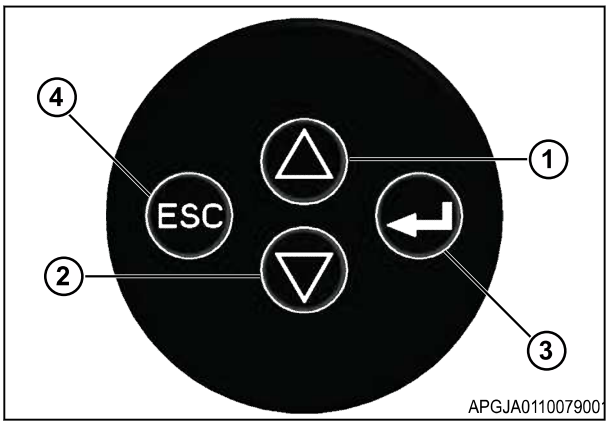


Fig. 9

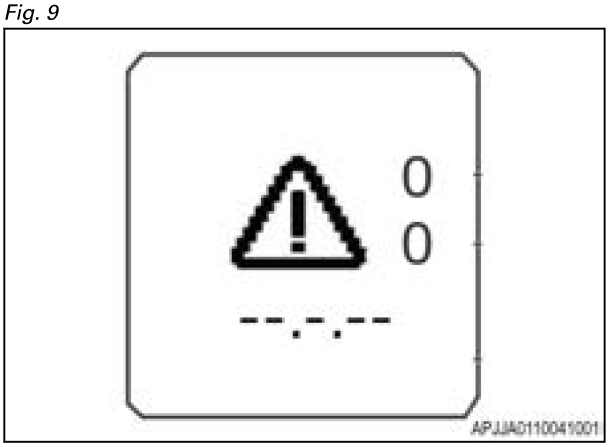


Fig. 10

3.1.5 Console keypad

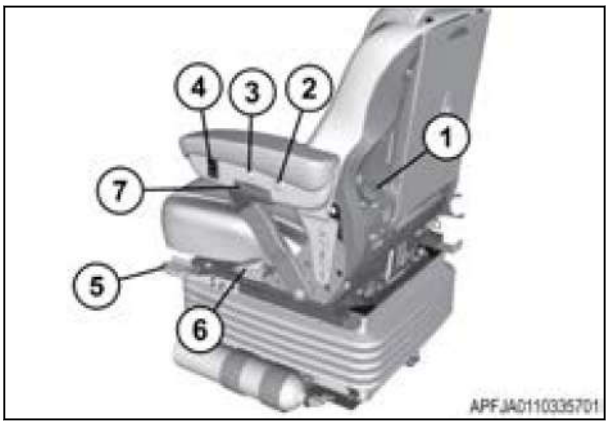
The console keypad (1) is located on the lower left side of the center console.

Fig. 11

(1)	Mirror defrost switch - Push the switch to energize the mirror defrost function.
(2)	Hazard warning lamp switch (amber flashing warning lamps) - Push to illuminate the hazard warning lamps. When the key is off, push the hazard button to energize the electrical system. Press the button a second time to turn off the hazard lamps.
(3)	Work lamp switch 1 - Push to illuminate the middle bulb of each front nose work lamps.
(4)	Work lamp switch 2 - Push to illuminate the front, forward pointing work lamps on the boom rest/lamp bar.
(5)	Work lamp switch 3 - Push to illuminate the lamps on top of the fresh water tank and rear of the boom tree, if equipped.
(6)	Work lamp switch 4 - Push switch to illuminate the front, rear-pointing work lamps on the front lamp bar, and the reload station lamp, if equipped.
(7)	Auxiliary switch 1 - Connector for the auxiliary switches in the fuse panel behind the right side of the cab.
(8)	Auxiliary switch 2 - Connector for the auxiliary switches in the fuse panel behind the right side of the cab.
(9)	Auxiliary switch 3 - Connector for the auxiliary switches in the fuse panel behind the right side of the cab.
(10)	Beacon lamp switch - Push the switch to illuminate the beacon. **IMPORTANT:** *Operation of the beacon lamp must follow state and local regulations.*
(11)	Lamp time delay switch - With the key on, push to illuminate the work lamps for a set time after the machine is off. Set the time delay using the AccuTerminal. **NOTE:** *Push the lamp delay switch when you return to the machine to stop the function.*
(12)	Programmable lighting switch - The operator can set a preferred lighting configuration using this switch. Push all the lamps that you want to illuminate with the programmable lighting switch. When you push the programmable lighting switch, all the lights that were selected will illuminate or turn off.
(13)	Head lamps - Push to illuminate the outer bulb of each front head lamps.

3.3.4 Deluxe vented operator seat

The deluxe vented operator seat has ten adjustment controls and a seat belt with retractor.



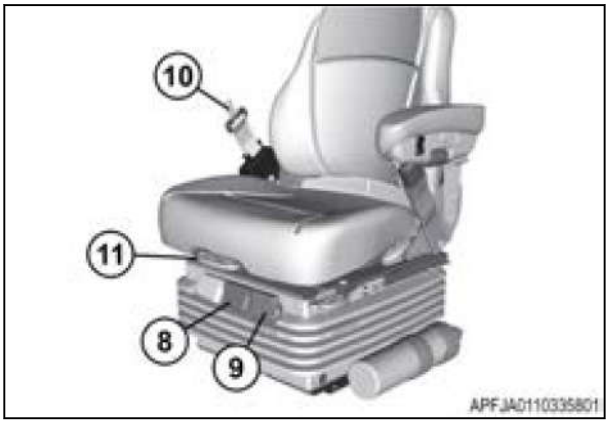


Fig. 41

(1) Lumbar adjustment control

(2) Ride firmness control

(3) Heat/vent control

(4) Height adjustment control

(5) Fore-aft slide control

(6) Backrest tilt control

(7) Armrest tilt control

(8) Lateral isolation lock-out

(9) Fore - aft isolation lock-out

(10) Seat belt and retractor

(11) Cushion extension/Tilt/Swivel

The lumbar adjustment control (1) turns clockwise to increase the lumbar support and counterclockwise to decrease the lumbar support.

The ride firmness control (2) adjusts the ride stiffness. Press the top of the switch to increase the stiffness level. Press the bottom of the switch to decrease the stiffness level.

The seat and back cushion heat control (3) activates the heated seat and back cushion.

Press and hold the top of the height adjustment control (4) to raise the seat. Release the switch at the desired height. Press and hold the bottom of the height adjustment control to lower the seat. Release the switch at the desired height.

Pulling the fore-aft slide control (5) up moves the seat forward or rearward. The seat moves in 10 mm (0.39 in) increments. Release the control to lock the seat in position.

2. Select the date, hours, minutes, or seconds (1), and change the values with the scroll wheel.
3. Press the back icon (2) to go to the previous screen.
4. Press the check mark to accept the changes to the time/date settings.

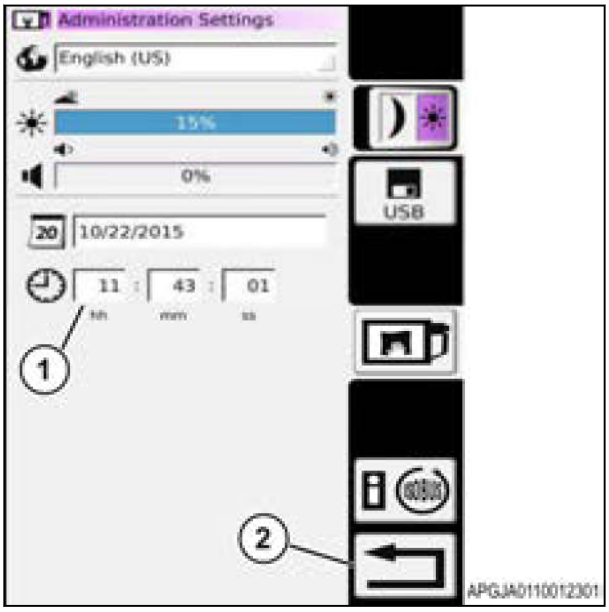


Fig. 51

3.5.6 Set the audio level

Procedure

1. Select  two times.
2. Select the audio level box (1).

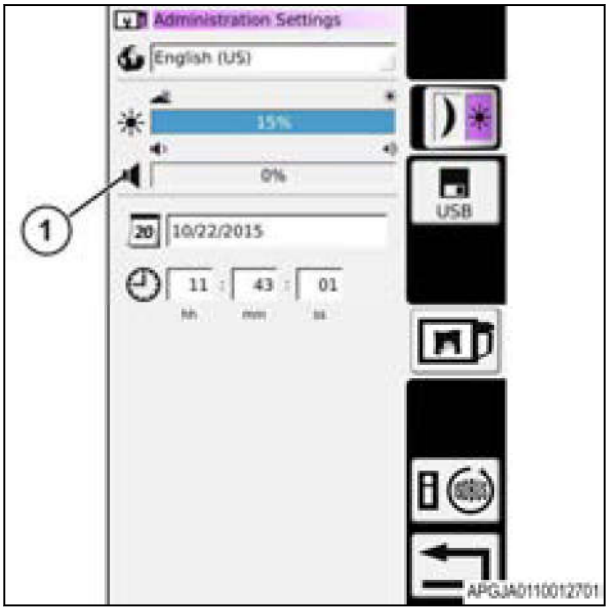


Fig. 52

3. Select or .

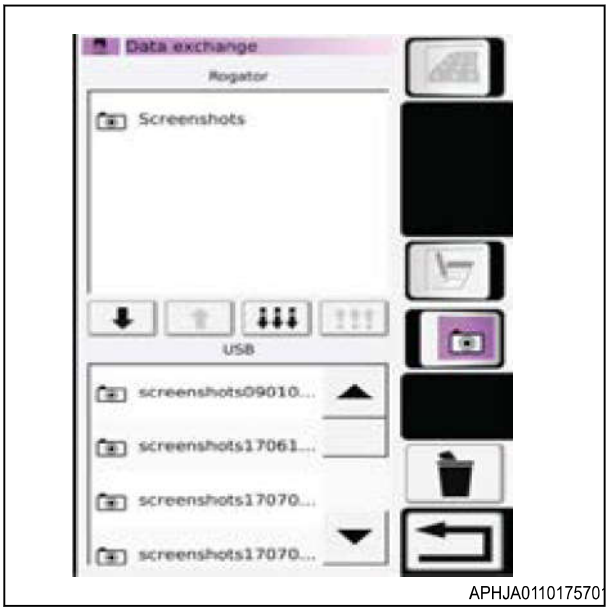


Fig. 72

4. Select the transfer all data icon (1).

NOTE: *If there is a duplicate on the terminal, a dialog box shows and asks if the existing file must be replaced or renamed.*

NOTE: *The transferred data can be seen in the bottom display.*

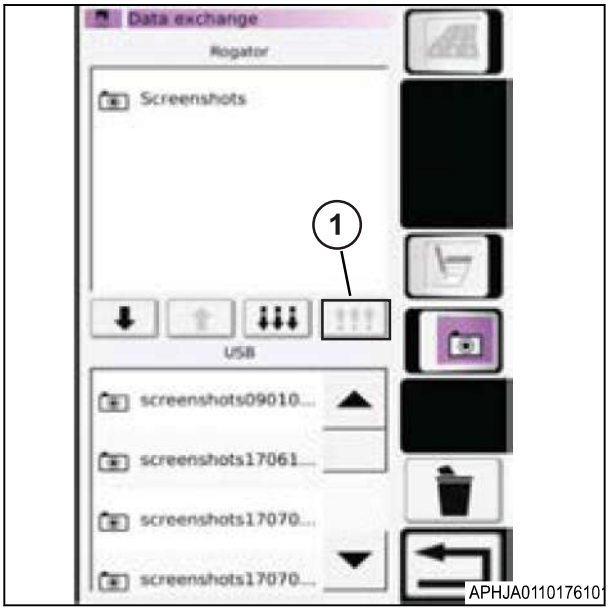


Fig. 73

3.5.14 Clean the terminal screen

Procedure

1. Select two times.

3.5.25 Calibrate the lever

Procedure

1. Select the icons in this sequence:

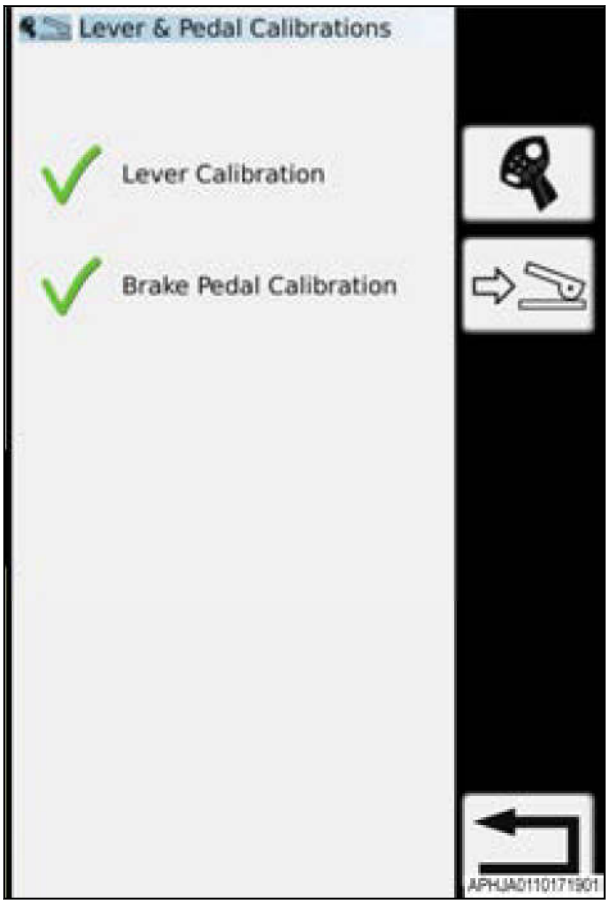


Fig. 95

2. Do the on-screen instructions.

Fig. 96

3. Select  to go back a screen. Select  on the external control panel to go to the home screen.

3. This page shows the current status of the track width.
4. Select the padlock to unlock the necessary preset box to change the track width.
5. Select the preset 1 box (1) or the preset 2 box (2).
6. Enter the width value on to the calculator and select the green check mark.
7. Select the padlock to lock the preset track width.
8. Press the back icon (3) to return to the previous page.

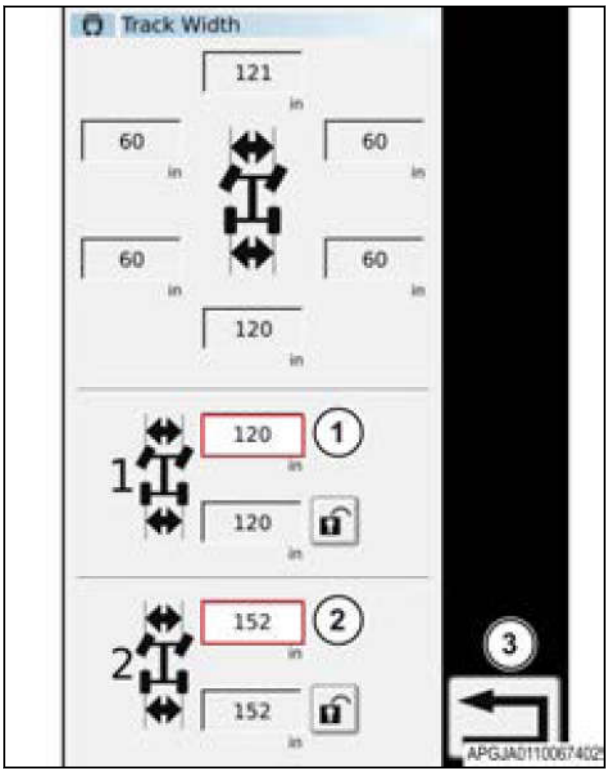


Fig. 111

3.5.32 View the fuel consumption screen

Procedure

1. Select the icons in this sequence:

2. Select the necessary icon.

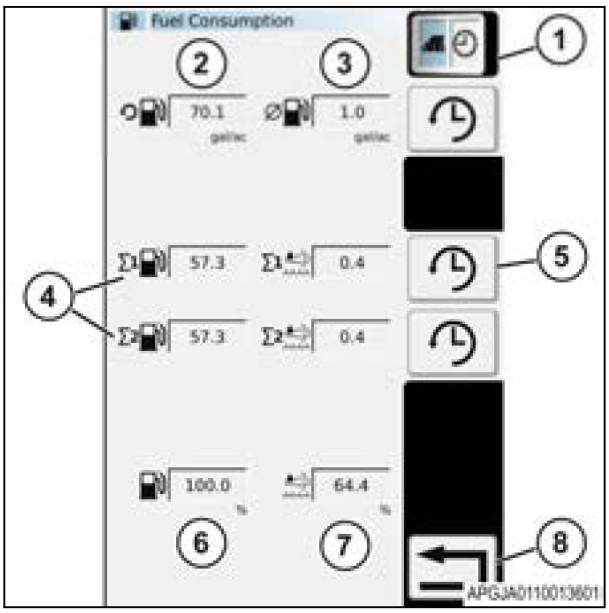


Fig. 112

Procedure

1. Select to expand the map to full screen.
2. Select .
3. Select .
4. Select to add a boundary.
5. Select **Recording >** .

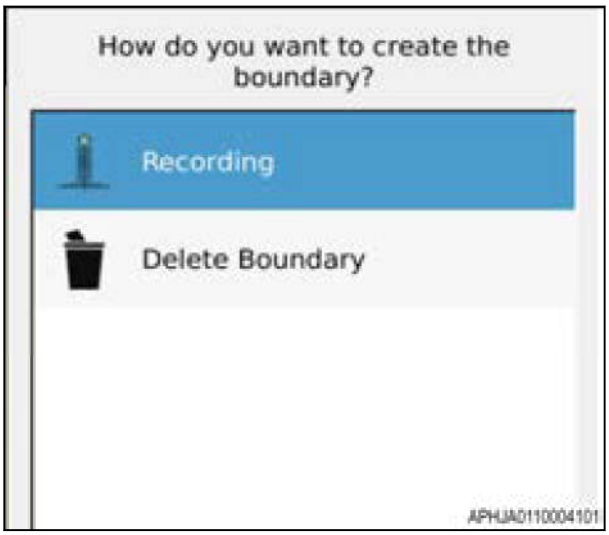


Fig. 131

6. Select the **Recording side >** .
7. Select to start the recording.

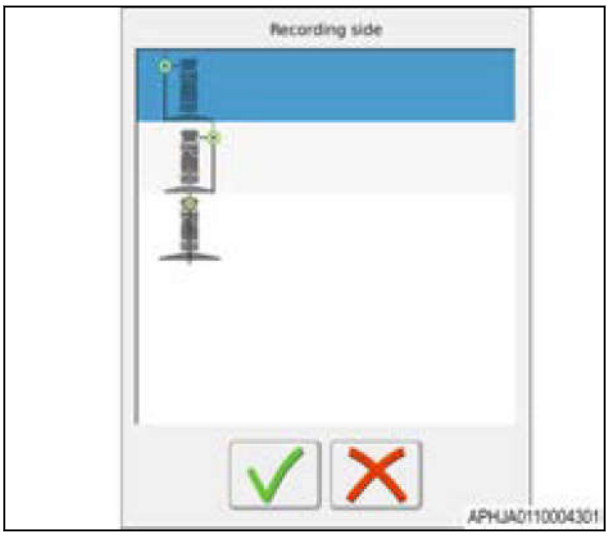


Fig. 132

8. Select if it is necessary to pause.
9. Select to start recording again.

Result

When you resume recording, a straight line shows between your location and the last point recorded.

10. Operate the machine until your boundary is complete.

2. Wait for the grid heater to operate the cycle.

When the cycle is complete, the grid heater lamp (1) on the instrument panel will go out.

This cycle will increase the temperature of the intake air to more than 37° C (100° F).

3. Make sure the drive lever is in the neutral position.

Fig. 144

4. Turn the ignition key to the start position.

IMPORTANT: *Do not turn the engine for more than 10 seconds. If the engine does not start, let the starter cool for two minutes before the engine is turned again. The ignition key must be turned back to the off position before the engine is turned again.*

IMPORTANT: *Be sure sufficient engine oil pressure occurs in 3-4 seconds after the engine starts.*

5. If necessary, (in colder temperatures), start a second grid heater cycle.

6. Warm the engine with a light load for a short time.

IMPORTANT: *Engine wear is at the highest point when the engine operates cold.*

IMPORTANT: *Do not load the engine heavy, or go more than 2000 rpm if the engine temperature is less than 50° C (122° F).*

Conditions	RG900C (7.4L)	RG1100C (8.4L)	RG1300C (8.4L)
Road - preset (locked)	1000	1000	1000
Mid-to-low product application rates, firm soil, standard conditions (typical use)	1500	1500	1500
Soft soil, peat/muck, steep hills	1800		
Maximum product application rates	1650	1650	1650

NOTE: *The engine rpm guidelines will supply full system functionality. The guidelines do not consider power requirements to run the system and chassis in the field. More engine rpm can be necessary.*

3.8.8 Set the cruise control speeds

Procedure

1. Select the cruise control box (1).

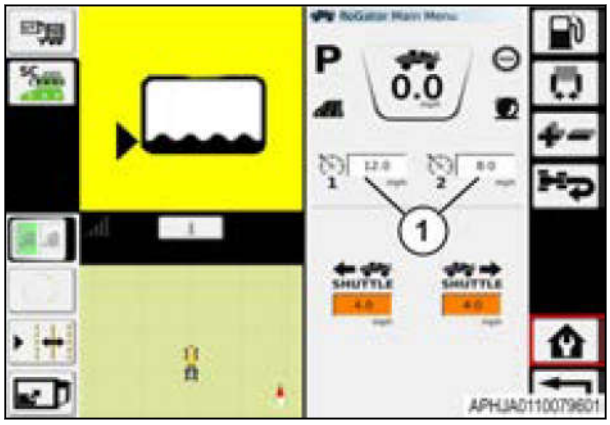


Fig. 158

3. Push the AccuField Command button (1) on the joystick to start to record with the physical buttons and switches.

Fig. 173

4. Push the master apply (1) on.

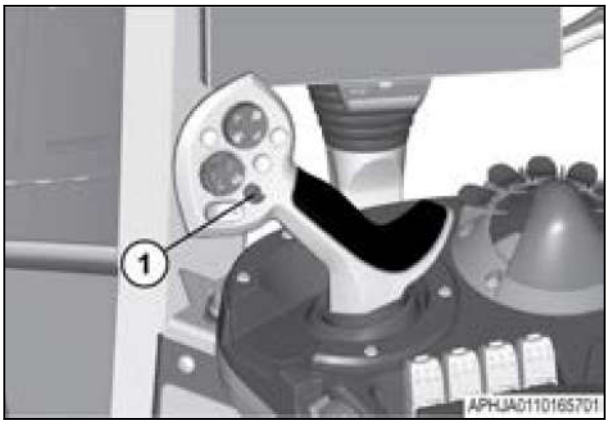


Fig. 174

5. Push the necessary foam marker switches (1) on.

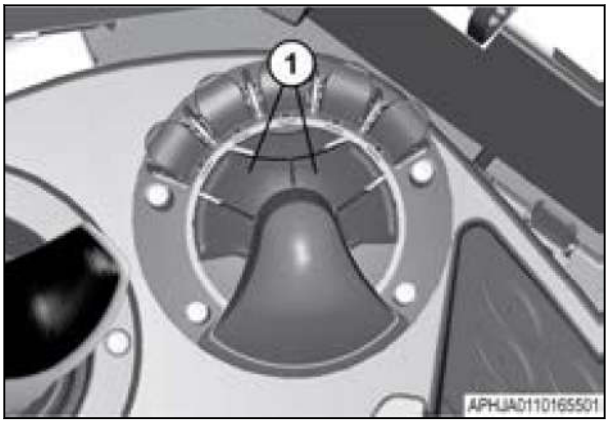


Fig. 175

6. **End the recording.** Push Stop (1) on the joystick to end the recording.

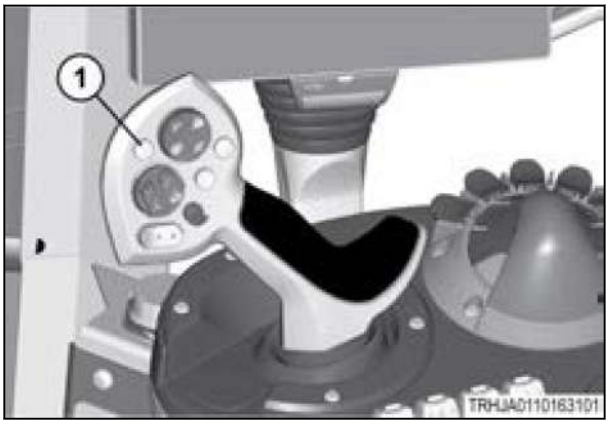


Fig. 176

3. Press the switches on the keypad one at a time to retract the left front (1), right front (2), left rear (3) and right rear (4) track width as necessary.

4. Press the keypad switches to adjust the rear track with while monitoring the track width on the AccuTerminal.

   The track width decals on the rear axle are not seen from the operator seat.

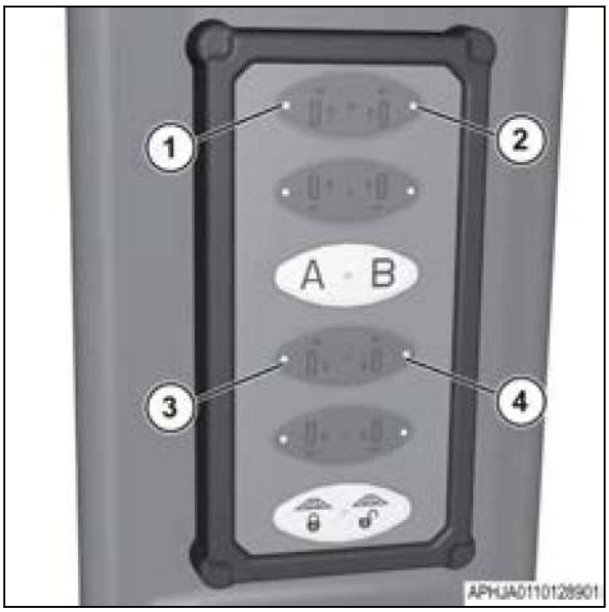


Fig. 191

3.11.4 Set the automatic track width

The automatic track width has an option to offset the axle widths on either the front or rear axles.

Procedure

1. Push the chassis icon  .

Fig. 192

2. Select  to access track width screen.

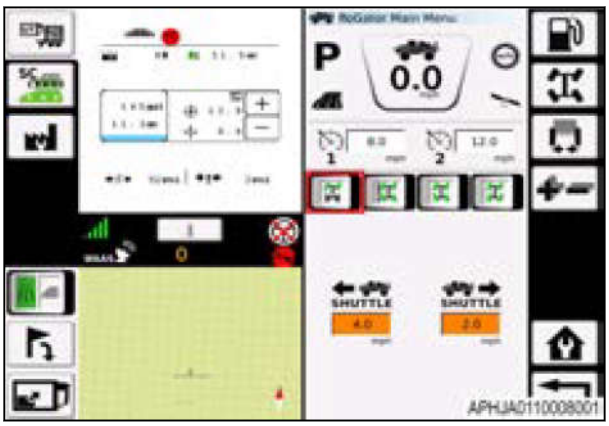


Fig. 193

3.13 Camera settings

3.13.1 Camera options and connections

Procedure

1. Install the camera (1) to the chassis where necessary.

NOTE: *The machine can have up to 6 cameras.*

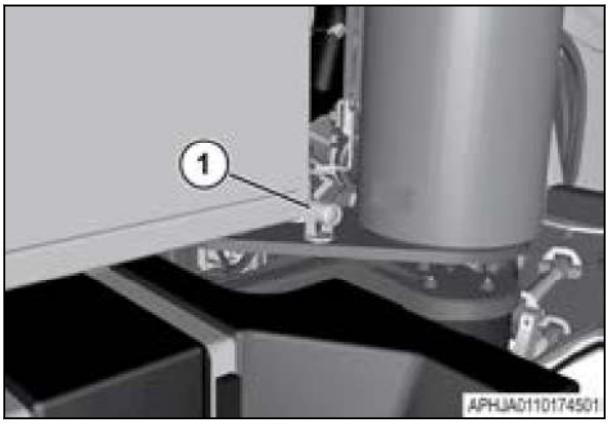


Fig. 213

2. Connect the camera harness to the to the right rear corner of the cab for the chassis camera.

3. Install the camera harnesses to the correct connector (1-4) as necessary.

4. Connect the camera cable (5) and (6) to see on the AccuTerminal.

5. Attach the camera harness with cable ties.

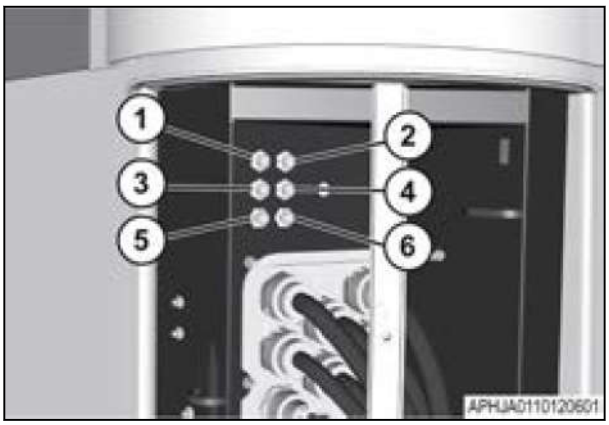


Fig. 214

6. Install the camera (1) where necessary.

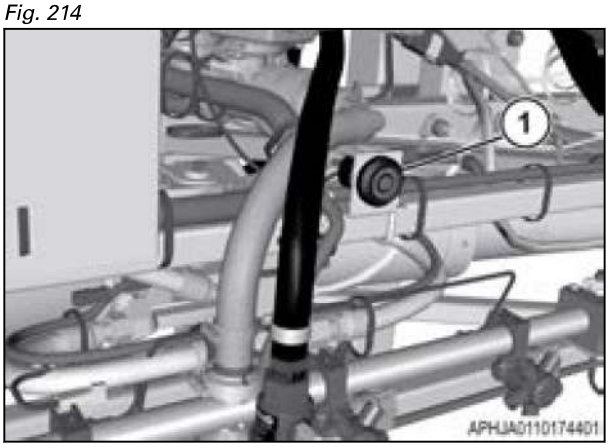


Fig. 215

If equipped with the Raven weather station option, the electrical harness (1) connects to the cab electrical harness below the armrest and behind the panel.

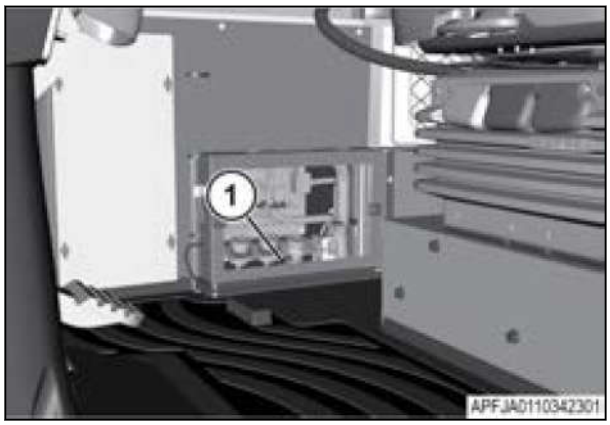


Fig. 236

Item	Option
1	Wind direction
2	Wind speed
3	Wind gust
4	Atmospheric temperature
5	Dew point
6	Humidity
7	Atmospheric pressure

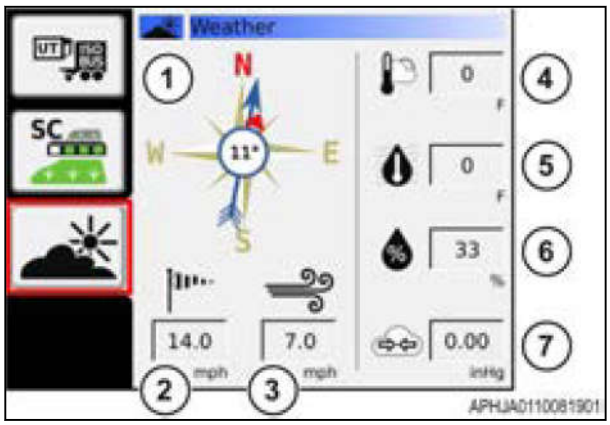


Fig. 237

3.15.3 Install the mini SIM card for Global System for Mobile communication (GSM)

NOTE: *The SIM card is only necessary for a TaskDoc Pro™ with GSM. With TaskDoc Pro, a data connection (GPRS) is used to connect to the TaskDoc server. A SIM card is necessary for this connection. Please speak to your dealer.*

CAUTION: Damage to the equipment is possible.

The SIM card slot and its mechanisms are very easily damaged and not necessarily recognized by the manufacturer.

Do not put the adapter in the SIM card slot with force. Make sure that the SIM card is put in correctly.

40. Remove the hardware (1), and the left and right side boom tree brackets (2). Install the frame bolts into the frame again, and tighten.

NOTE:
Tighten the frame bolts to 305 Nm (225 lbf ft). Torque the nut side of the joint if possible, if not, tighten the bolt side of the joint.

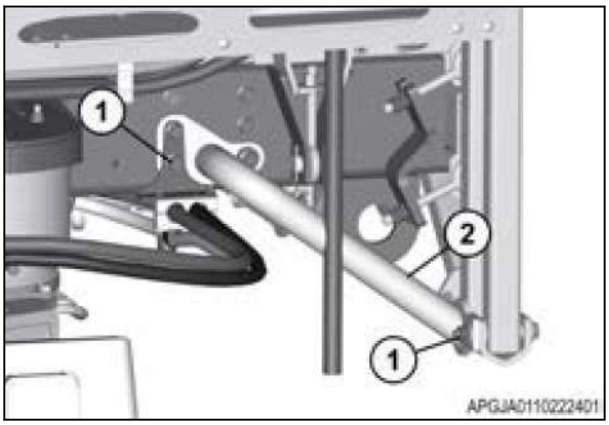


Fig. 265

41. Loosen the nuts (1) on the boom tree eye bolts.

42. Move the boom tree eye bolt out of the bracket (2).

43. Do this again for the opposite side of the machine.

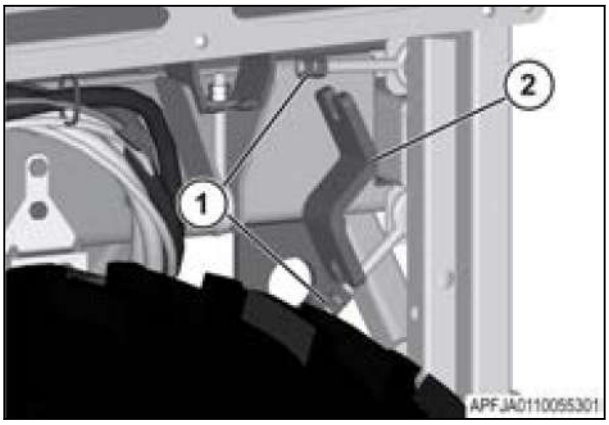


Fig. 266

44. Loosen the nuts on the chassis eye bolts (1).

45. Move the chassis eye bolt out of the bracket (2).

46. Do this again for the opposite side of the machine.

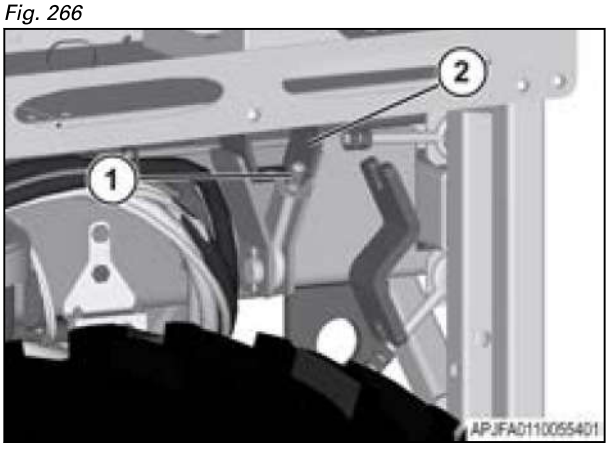


Fig. 267

47. Loosen the nuts (1) on the chassis eye bolt.

48. Move the chassis eye bolt out of the bracket (2).

49. Do this again for the opposite side of the machine.

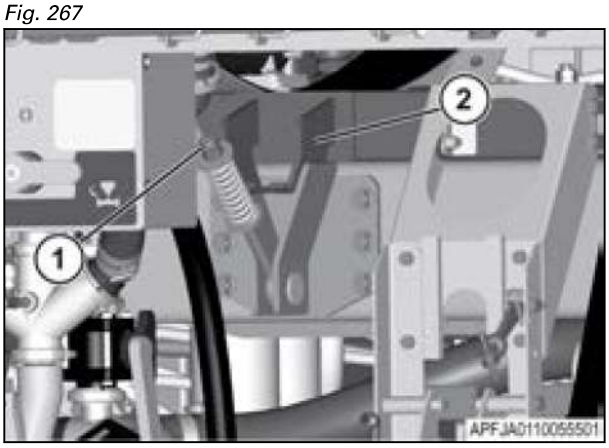


Fig. 268

7. Tighten the bottom jam nut (1) until the space between the spring coils (2) is approximately 3.81 mm (0.15 in). The overall compressed spring length (3) is approximately 108 mm (4.25 in).

Tighten the top jam nut to the bottom jam nut. Repeat for the opposite side tie down.

IMPORTANT: *Use a feeler gauge to measure the space between the coils. Make sure to keep the space between the spring coils the same on both sides.*

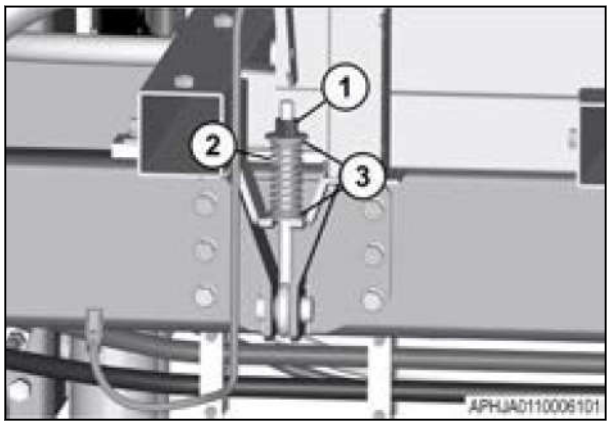


Fig. 297

8. Remove the lifting equipment.

9. The system pump removal/install tool (1) (604816D1) is 373 mm (15 in) wide, by 786 mm (31 in) long. Use the pump tool with a jack to install the pump.

10. Install the hydraulic pump.

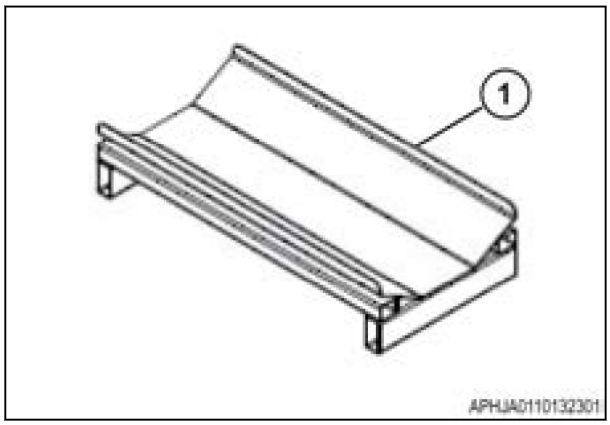


Fig. 298

11. Use the hardware (1) to install the hydraulic pump (2).

NOTE: *View is from the top.*

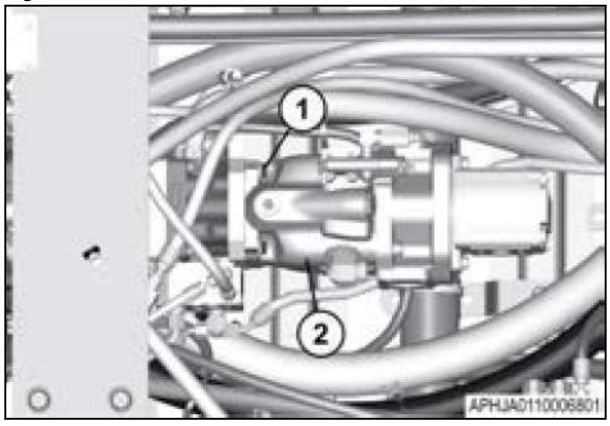


Fig. 299

12. Remove the caps and plugs from the ports and hoses. Connect the hydraulic hoses (1) to the hydraulic pump.

NOTE: *View is from the top.*

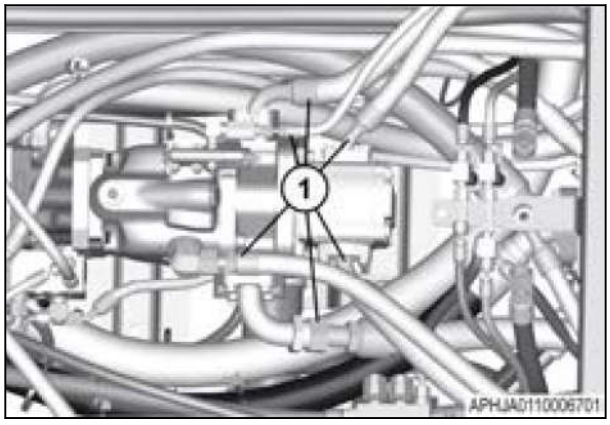


Fig. 300

WARNING: Components can be heavy.

Severe injury can result from improper lifting technique.

Use appropriate lifting equipment for heavy components.

CAUTION: Loose fasteners and components can be a hazard.

Personal injury or machine damage can occur.

Correctly tighten all fasteners to the correct torque before operating the machine.

NOTE: *Special tool ACX2749820 is used in this procedure.*

Procedure

1. Move the front wheel legs fully out.

NOTE:
This is done to get more area around the hoses to install the pumps.

2. Park the machine on a solid, level surface.

3. Apply the parking brake, stop the engine, and take the key with you.

4. Relieve all pressure from the hydraulic system.

5. Block the wheels.

6. Turn the air dump valve switch (1) to lower the machine.

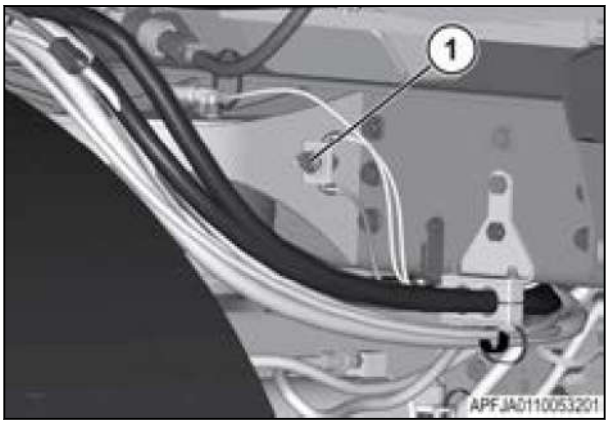


Fig. 325

7. Use the correct lift equipment to lift and install the boom lift support (1) to the front tank band.

Fig. 326

59. Do a check for leaks. Repair as necessary.

IMPORTANT:
At initial machine operation, the oil level in the reservoir will decrease. Keep the correct oil level in the hydraulic tank at all times.

WARNING: Hydraulic fluid under pressure can penetrate the skin or eyes.

Serious personal injury, blindness, or death can occur.

Relieve the pressure from the system or component before disconnecting components. Wear personal protective gear while working on the machine or equipment. Use a piece of cardboard to check for leaks. Never use your hand.

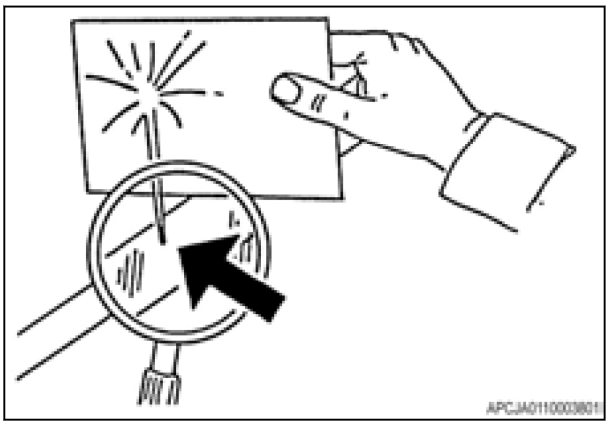


Fig. 358

60. Make sure that the console product control is set accurately for product application.

61. Make sure the system is calibrated again after installation.

Low Diesel Exhaust Fluid (DEF) level				
Diesel Exhaust Fluid (DEF) tank level on CAN message:	**10%**	**5%**	**0%**	**0% + after 1/2 hour**
Audible warning 	• Duration 2 seconds • Repeats every restart	• Duration 2 seconds • Repeats every 15 minutes	• Duration 2 seconds • Repeats every 5 minutes	• Duration 2 seconds • Repeats every 5 minutes
Diesel Exhaust Fluid (DEF) injection	Yes	Yes	Yes	No
IMPORTANT: *Ignoring the operator warning signals will lead to the activation of the operator inducement system, resulting in an effective disablement of non-road mobile machinery operation.* *The ECU decreases the engine power.* *Read and obey the operator warning signals.*				

[1] Malfunction indicator lamp.

4.8 Cooling system

(1) Coolant pump
(2) Thermostats
(3) By-pass pipe
(4) Radiator
(5) Expansion tank
(6) Oil cooler

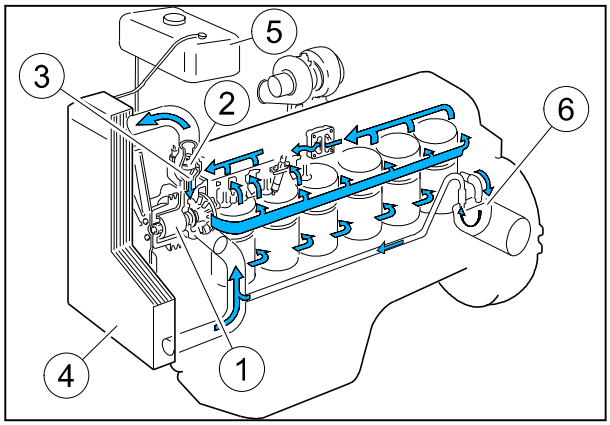


Fig. 13

The coolant pump is attached to the front face of the cylinder block and the thermostat housing is mounted above it.

The system has the internal liquid circulation via the by-pass pipe. The circulation is regulated by the 2- way thermostat. This arrangement ensures a steady warming-up of the engine under all conditions.

NOTE:
Use only coolant that is a mixture of 40-60% water and antifreeze. Refer to the engine specification for the machine, for the specified ratio and the quantities necessary. Do not use water only for the coolant.

4.8.1 Engine heater

Most engines of this generation have a coolant pre-heater as standard equipment. It is installed on the left side of the cylinder block on the same side as the fuel filters (fitting hole ∅ 40 mm). Connecting wires and mains supply cables are also available in different lengths to help connecting the heater.

Install the coolant pre-heater according to the instructions of the manufacturer.

4.15 Start the engine with an auxiliary battery

DANGER: Risk of explosion!

Sparks can cause ignition of the gases released from the battery.

Do not connect a cable to the negative battery terminal of a battery in a low charge condition.

- Connecting the battery cables to the wrong poles will damage the systems.
- Never open the charging circuit while the engine is running.
- Disconnect the alternator and battery wires before undertaking any electrical welding.
- Disconnect the battery wires before charging the battery.

Procedure

1. Do a check that the auxiliary battery has the same voltage as the standard battery (12V / 24V).
2. Open the battery plugs to avoid risk of explosion.
3. Connect the positive pole (+) of the auxiliary battery to the positive pole of the starter or to the positive pole of the discharged battery.
   a) Make sure that the connection points of the positive cable are clean, that the electrical current flows freely.
   b) Make sure that the connections of the positive cable are tight and the cable cannot fall to the ground.
4. Connect the negative pole (-) of the auxiliary battery for example to the fastening screw of the starter or to the engine body.
5. When the engine starts, first remove the negative cable between the auxiliary battery and the engine body. Then remove the positive cable.

Permitted sulphur quantities				
Emission level	**Fuel injection system**	**Aftertreatment system (Diesel Oxidation Catalyst (DOC), Selective Catalyst Reduction (SCR), Exhaust Gas Recirculation (EGR))**	**Diesel Particulate Filter (DPF)**	**Maximum permitted sulphur content**
Stage V	Common rail	Yes	Yes	10 mg/kg [1]
Tier 4 Final, Stage IV	Common rail	Yes	No	15 mg/kg
Tier 4 Interim, Stage IIIB	Common rail	Yes	No	15 mg/kg
Tier 3, Stage IIIA	Common rail	Yes	No	15 mg/kg or 500 mg/kg[2]
	Mechanical	Yes	No	
Tier 2, Stage II	Common rail	Yes	No	15 mg/kg or 500 mg/kg[2]
	Common rail	No	No	2000 mg/kg
	Mechanical	No	No	2000 mg/kg
Tier 0, Stage 0	Common rail	No	No	2000 mg/kg
	Mechanical			

[1] Within the European Union fuel with sulphur content not greater than 10 mg/kg (20 mg/kg at point of final distribution) shall be used.

[2] If the engine does not have a Selective Catalyst Reduction (SCR) system or a cooled external Exhaust Gas Recirculation (EGR) system, the maximum permitted sulphur quantity is 500 mg/kg.

Cetane number

The cetane number must be a minimum 43. We recommend a cetane number more than 47, specially for temperatures less than -20°C (-4°F) and elevations above 1500 m (5000 ft) from the sea level.

5.1.3 Coolant quality requirements

AGCO Power Inc. recommends to use coolants that follow in all AGCO POWER engines:

- Arteco, Havoline XLC
- BASF, Glysantin G30

In addition, coolants under other brand names, which can be proved to use exactly the same inhibitor package as Arteco Havoline XLC or BASF Glysantin G30, are recommended to be used.

If Arteco Havoline XLC, BASF Glysantin G30 or coolant which uses the same inhibitor package is used, the coolant change interval can be extended from two years up to five years. If any other coolant is used, the coolant change interval is two years.

Procedure

1. Check the belt visually.

Change a worn, oily or damaged belt.

2. Replace a belt, if needed

Before removing the old belt check its routing to make sure that the new belt is fitted the same way.

Turn the tensioner against the direction of tightening until the belt is loosened. Loosen belts of possible accessories (e.g. compressor).

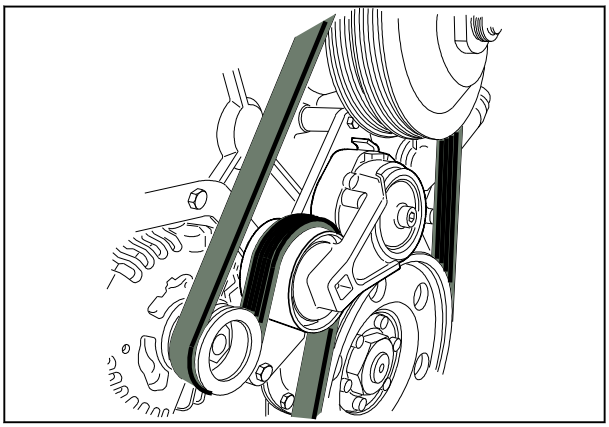


Fig. 4

- using a 3/8 in square drive inserted into the square hole in the tensioner.
- pay attention to free rotation of tensioner roller and also the right tightness of fixing screw 48 Nm.
- fit the new belt and other loosened parts.

5.3.4 Maintenance to be made at 300 - 600 hours intervals

5.3.4.1 Change engine oil

See the instructions of the machine manufacturer.

Regarding oil grade, see **Lubricating oil quality requirements**.

Procedure

1. Run the engine until it is warm.

2. Stop the engine.

3. Remove the draining plug and drain the oil into a suitable container.

The engine may be equipped with an oil draining pump (e.g. marine engines), in that case use the pump to drain the oil.

4. When the oil sump is empty, refit the plug with a new washer.

5. Clean the oil filler plug and the surroundings.

6. Fill new oil to the prescribed level (upper mark line on dipstick) through the filler hole. Note the capacity of the oil filter.

7. Take used oil to a proper disposal point.

5.3.4.2 Oil sump capacity

Number of cylinders	Oil sump part number	Minimum oil capacity	Maximum oil capacity
6 cylinders	V836347308	20,0	25,5
	V836336229	21,5	25,5
	V837074007	17	22
	V837084152	19	24
	V837084394	16	19
	V836873817	16	19
	V836874808	17	20

Object	Nm
Coolant pump pulley screw, M10	50
Coolant pump pulley screw, M12	80
Coolant pump pulley nut, M16	120
Belt tightener screw	48
Exhaust manifold screws	50
Injector retaining screw	See the correct tightening procedure from the work instructions.
Injector wire nuts, M4	1,5
High pressure pump gear nut	80
Pre-filter water detector	6
Compressor gear nut (1 and 2 cylinder)	160 (LH thread)

Self carrying oil sump screws and engine bracket screws	
Thread	**Nm**
M8	35
M10	80
M12	140
M14	200
M16	300
M20	700
M22	700

General torque values

Always use the torque values listed in the following table when specific torque values are not available.

Thread	Strength class		
	8.8	10.9	12.9
M8	25 Nm	35 Nm	40 Nm
M10	50 Nm	75 Nm	85 Nm
M12	85 Nm	125 Nm	145 Nm
M14	135 Nm	200 Nm	235 Nm
M16	210 Nm	310 Nm	365 Nm

Use a washer with the aluminum parts.

5.3.10.3 Coolant quality requirements

AGCO Power Inc. recommends to use coolants that follow in all AGCO POWER engines:

- Arteco, Havoline XLC
- BASF, Glysantin G30

In addition, coolants under other brand names, which can be proved to use exactly the same inhibitor package as Arteco Havoline XLC or BASF Glysantin G30, are recommended to be used.

5.5 Chassis maintenance

5.5.1 Lubricate the axles

The figure below shows the top and bottom of the front axle only.

Procedure

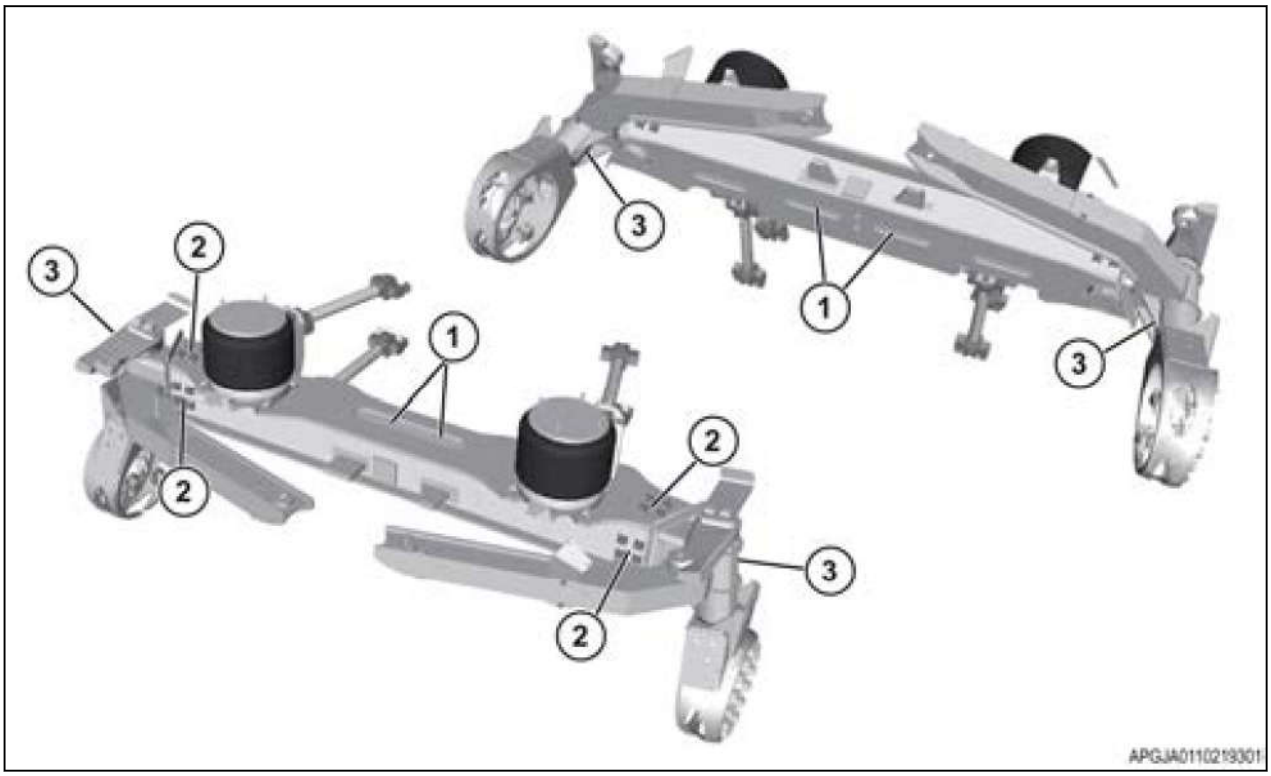


Fig. 28

1. Park the machine on a level surface.
2. Track the inner axles in completely before you lubricate the axles.
3. Add two injections of grease daily to the wear pad fittings (1) near the center of the axle. There are two fittings on top, and two fittings below.

   NOTE: *Use a hand grease gun only.*
4. Add two injections of grease daily to the wear pads fittings (2) near the outer edges of the axles.
5. Do steps 3 and 4 for the rear axle.
6. Add 2 grease injections to the king pin fittings (3) daily.

5.7.4 Engine belts

Inspect all of the engine belts for wear and damage after the first 50 hours or operation and every 100 hours after that.

The illustration shows the routing of the serpentine belt (1).

The spring loaded belt tensioner (2) tightens the serpentine belt automatically during operation.

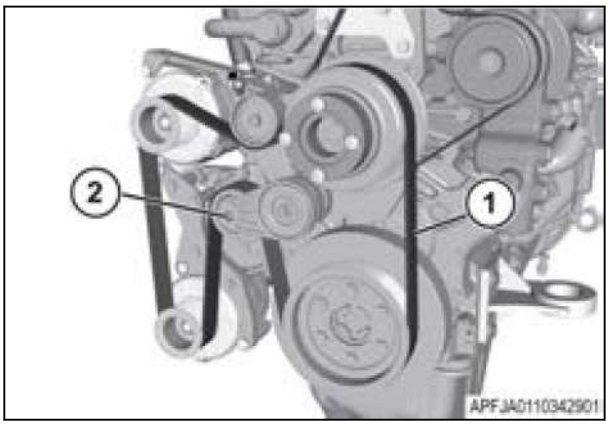


Fig. 47

The illustration shows the routing of the water pump/air conditioner compressor belt (1).

The spring loaded belt tensioner (2) tightens the belt automatically during operation.

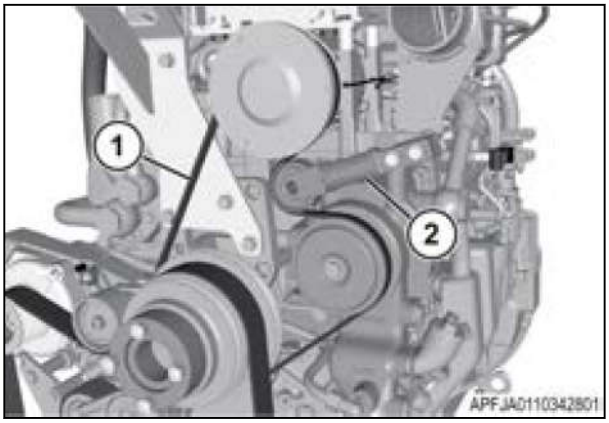


Fig. 48

5.7.5 Replace the main serpentine belt

Procedure

1. Park the machine on a solid, level surface.
2. Apply the parking brake, stop the engine, and take the key with you.
3. Turn the battery disconnect switch to the off position. Remove the key from the battery disconnect switch.
4. Push the button (1) and open the engine cover (2).

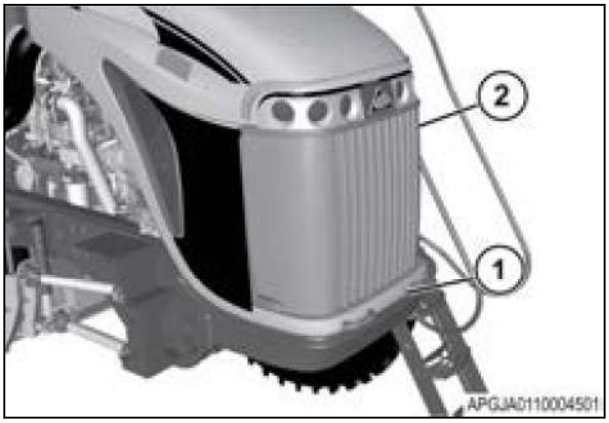


Fig. 49

Permitted sulphur quantities				
Emission level	**Fuel injection system**	**Aftertreatment system (Diesel Oxidation Catalyst (DOC), Selective Catalyst Reduction (SCR), Exhaust Gas Recirculation (EGR))**	**Diesel Particulate Filter (DPF)**	**Maximum permitted sulphur content**
	Mechanical	No	No	2000 mg/kg
Tier 0, Stage 0	Common rail	No	No	2000 mg/kg
	Mechanical			

[1] Within the European Union fuel with sulphur content not greater than 10 mg/kg (20 mg/kg at point of final distribution) shall be used.

[2] If the engine does not have a Selective Catalyst Reduction (SCR) system or a cooled external Exhaust Gas Recirculation (EGR) system, the maximum permitted sulphur quantity is 500 mg/kg.

Cetane number

The cetane number must be a minimum 43. We recommend a cetane number more than 47, specially for temperatures less than -20°C (-4°F) and elevations above 1500 m (5000 ft) from the sea level.

5.8.3 Fuel tank

NOTE: *The two fuel tanks on the machine are connected by a fuel cross-over tube. Tanks can be filled from either side.*

Fuel tank cap (1). The machine engine takes advantage of high energy content and lower cost of No. 2 diesel fuel. Engine will also operate using No. 1 fuel or a mixture of both. (See engine operation and maintenance manual for complete specifications).

Every 250 hours of operation, remove the plug (1) from the bottom of the fuel tank (LH/RH) and let a small amount of fuel flow into a container to remove sediment from the tanks.

Every 800 hours or annually remove the plug (1) from the bottom of each fuel tank and let the water drain from the tanks.

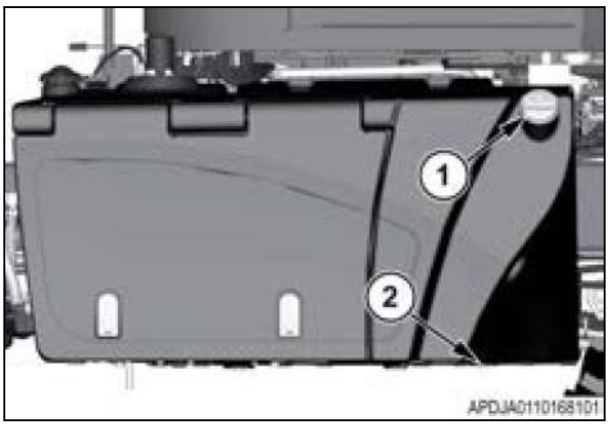


Fig. 72

WARNING: Fire hazard. Fuel safety.

Personal injury, death, or machine damage can occur.

Stop the engine and let the engine cool before fueling. Never smoke while fueling the machine.

5.10.3 Replace the hydraulic fluid

Hydraulic tank fill level sight-gauge (1)

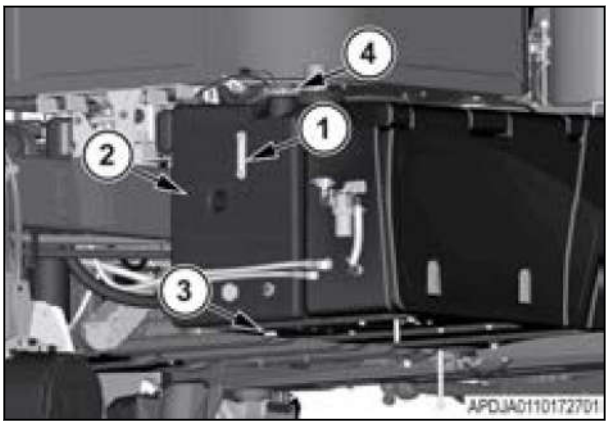


Fig. 92

Procedure

1. Insert original drain plug (3) into hydraulic tank (2).
2. Appropriate hydraulic fluid must be added to the fill opening (4) of the tank until the hydraulic fluid is level with the full mark on the decal located right of the sight-gauge (1).
3. Check the sight-gauge located on the hydraulic reservoir, adding fluid as required until the hydraulic fluid level is within the operating range on the sight gauge (1).

   NOTE:
   Operating range is between the black lines on the sight gauge, or between the text on the tank.

   NOTE:

   Do not overfill.

Fig. 93

4. Correctly discard filters and fluid in accordance with local environmental regulations.

   Full and add markings are on the tank to the right hand side of the sight gauge.

3. Use the hardware (1), to install the power module (2).

4. Connect the positive and negative battery cables.

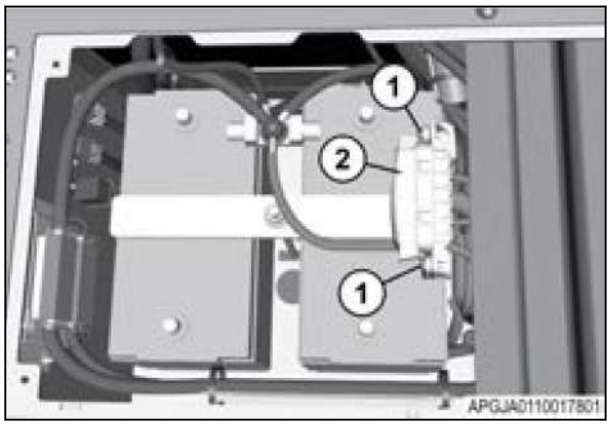


Fig. 113

5. Tighten the battery clamps (2), and close the terminal covers (1).

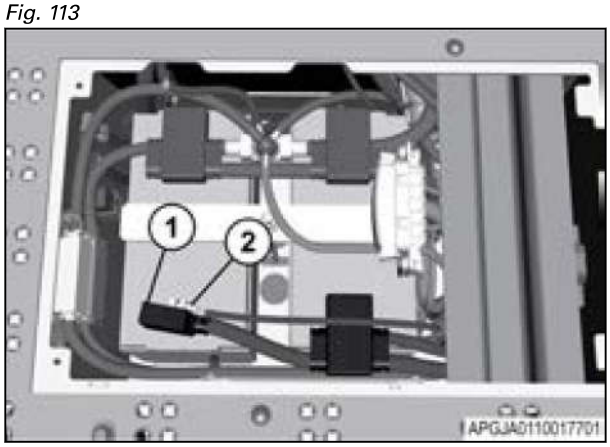


Fig. 114

6. Use the two screws (1) to install the battery access panel (2).

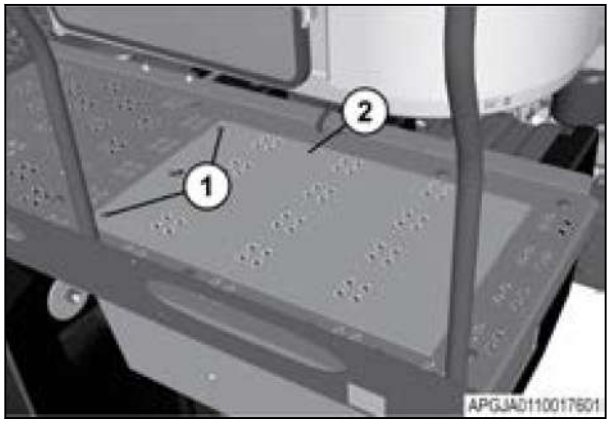


Fig. 115

Procedure

1. Remove the strainer bowl (1) from strainer head (2).
2. Remove the metal screen from the strainer bowl and replace with new one.
3. Inspect condition of the gasket on the strainer head and replace if necessary to prevent leakage.
4. Install the strainer bowl into the strainer head.
5. When operating pressure washer, check for leaks.

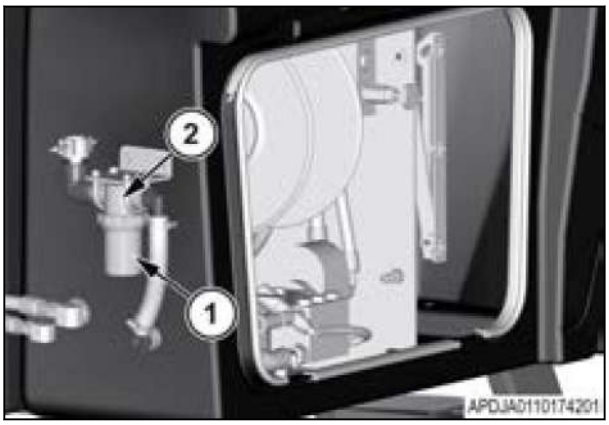


Fig. 140

5.13.4 Winterize the pressure washer system

Procedure

1. Drain the tank and strainer completely of all water.
2. Put 2 or 3 gallons of RV antifreeze in tank and open supply valve to the pump.
3. Uncoil the hose and lay it on the ground.
4. Start the system and allow pump to circulate antifreeze through system by intermittently pulling trigger on spray wand. Any water trapped in relief valve and by pass line will be removed.
5. Recoil the hose and stow the spray wand.
6. The high-pressure wash system is now winterized.

2. **WARNING: Components can be heavy.**

   Severe injury can result from improper lifting technique.

   Use appropriate lifting equipment for heavy components.

   Use the correct lifting equipment to move the wheel (1) into position.

   IMPORTANT:
   Each wheel will weigh as much as 420 kg (926 lb).

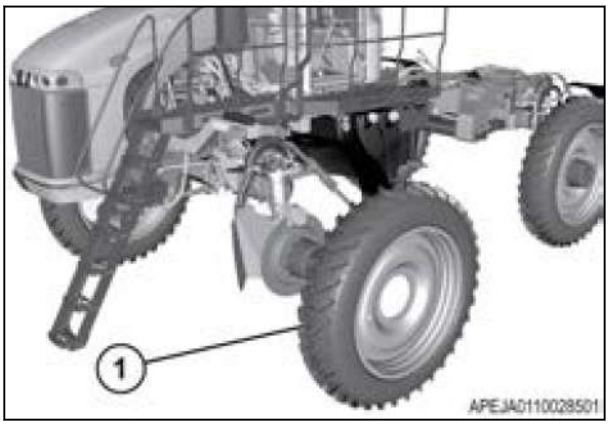


Fig. 147

3. Install the wheel (2) with the wheel mounting hardware (1).

4. Tighten the wheel mounting hardware using the wheel tightening procedure.

Fig. 148

5.15.10 Tighten the wheel mounting hardware

IMPORTANT: *Do not use an impact wrench to tighten the nuts. This can cause damage to the gear box.*

Procedure

1. Hardware tightening sequence.

2. After the first 50 hours of operation, loosen each wheel mounting nut 1/4 turn, and then tighten per sequence to 624 Nm (460 lbf ft). Repeat the procedure every 50 hours of operation there after.

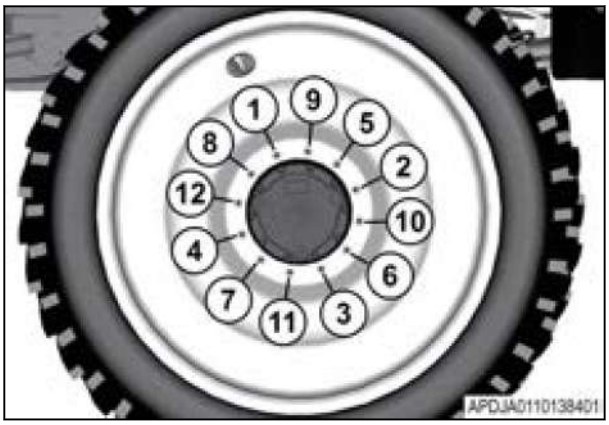


Fig. 149

5.15.11 Adjust the two wheel steer toe-in

Procedure

1. Machine oil must be at operating temperature.

2. Park brake must be off.

6 Troubleshooting

6.4 Fault code reference

Fault code	Description
01.1.00	Engine Speed Control parameters checksum fail
01.1.01	Engine Speed Control settings checksum fail
02.1.00	There is a communication/supply error with the dash. Please contact your dealer.
02.1.01	There is a communication/supply error with the engine speed module. Please contact your dealer.
02.1.02	There is a communication/supply error with the terminal. Please contact your dealer.
02.1.03	There is a communication/supply error with the multifunction armrest. Please contact your dealer.
02.1.04	There is a communication/supply error with the drive control module. Please contact your dealer.
02.1.0D	There is a communication/supply error with the VD03. Please contact your dealer.
02.1.0F	There is a communication/supply error with the central electrical system. Please contact your dealer.
02.1.11	There is a communication/supply error with the lighting control panel. Please contact your dealer.
02.1.14	There is a communication/supply error with the machine information module. Please contact your dealer.
02.1.18	There is a communication/supply error with the steering control task. Please contact your dealer.
02.1.19	There is a communication/supply error with the CAN bridge module. Please contact your dealer.
02.1.1A	There is a communication/supply error with the system brightness level module. Please contact your dealer.
02.1.1B	There is a communication/supply error with the track adjust module. Please contact your dealer.
02.1.1E	There is a communication/supply error with the RoGator specific module. Please contact your dealer.
02.1.1F	There is a communication/supply error with the error management module. Please contact your dealer.
02.1.20	There is a communication/supply error with the guidance module. Please contact your dealer.
02.1.33	There is a communication/supply error with the fan control module. Please contact your dealer.
02.1.37	There is a communication/supply error with the four wheel steer module. Please contact your dealer.
02.3.40	Internal storage has almost reached the maximum storage capacity.

19.1.3B	There is an error with the diesel engine (outlet NOx sensor). Please contact your dealer.
19.1.3C	There is an error with the diesel engine (outlet NOx sensor). Please contact your dealer.
19.1.3D	There is an error with the diesel engine (outlet NOx sensor). Please contact your dealer.
19.1.3E	There is an error with the diesel engine (CAN communication error between engine control units). Please contact your dealer.
19.1.3F	There is an error with the diesel engine (SCR injection). Please contact your dealer.
19.1.40	There is an error with the diesel engine (SCR tank heater). Please contact your dealer.
19.1.41	There is an error with the diesel engine (engine controller). Please contact your dealer.
19.1.42	There is an error with the diesel engine (engine controller). Please contact your dealer.
19.1.43	There is an error with the diesel engine (engine controller). Please contact your dealer.
19.1.44	There is an error with the diesel engine (crankshaft speed sensor). Please contact your dealer.
19.1.45	There is an error with the diesel engine (SCR system). Please contact your dealer.
19.1.46	There is an error with the diesel engine (DEF pressure sensor). Please contact your dealer.
19.1.47	There is an error with the diesel engine (DEF suction line heater). Please contact your dealer.
19.1.48	There is an error with the diesel engine (DEF backflow line heater). Please contact your dealer.
19.1.49	There is an error with the diesel engine (DEF supply module heater). Please contact your dealer.
19.1.4A	There is an error with the diesel engine (DEF pressure line heater). Please contact your dealer.
19.1.4B	There is an error with the diesel engine (catalyst inlet temperature). Please contact your dealer.
19.1.4C	There is an error with the diesel engine (catalyst inlet temperature). Please contact your dealer.
19.1.4D	There is an error with the diesel engine (supply of AdBlue DEF). Please contact your dealer.
19.1.4E	There is an error with the diesel engine (supply of AdBlue DEF). Please contact your dealer.
19.1.4F	There is an error with the diesel engine (supply of AdBlue DEF). Please contact your dealer.
19.1.50	There is an error with the diesel engine (DOC Einlasstemperatur). Please contact your dealer.
19.1.51	There is an error with the diesel engine (SCR system). Please contact your dealer.

	650/65R42 R1W Goodyear 170 A8/B
Ground Clearance	127.0 cm (50 in)
Shipping Length - RG900C / RG1100C - for 90 ft/ 100 ft booms	792.5 cm (312 in)
Shipping Length - RG1100C / RG1300C - for 120 ft booms	918.21 cm (361.5 in)
Shipping Height - Top of the cab	385.22 cm (151.7 in)
Shipping Height - Top of the beacon	396.63 cm (156.2 in)
Shipping Height - Top of the AutoGuide	405.22 cm (160 in)
Machine Weight	
RG900C	17132 kg (37769 lb) laden with water - 13381 kg (29500 lb) unladen
RG1100C	18901 kg (41670 lb) laden with water - 14184 kg (31270 lb) unladen
RG1300C	19886 kg (43840 lb) laden with water - 14465 kg (31890 lb) unladen
Machine Speeds *	
Field mode	
In field mode driving speed	0 km/h - 30 km/h (0 mph - 26 mph)
Road mode	
In road mode driving speed	0 km/h - 53 km/h (0 mph - 33 mph for the RG900 and RG1100
In road mode driving speed	0 km/h - 57 km/h (0 mph - 36 mph) for the RG1300
Extreme Hill Climb Package option for RG1300 only	
In field mode driving speed	0 km/h - 30 km/h (0 mph - 26 mph)
In road mode driving speed	0 km/h - 46 km/h (0 mph - 29 mph)
The reverse speed in field and road mode	0 km/h- 20 km/h (0 mph - 12.4 mph)
Machine field spraying speed	19 kph to 37 kph (12 mph to 23 mph)
Machine spreading speed will be up to	42 kph (26 mph)
Desired road speed	
RG900C / RG1100C	53 kph (33 mph) Unladen
RG1300C	58 kph (36 mph) Unladen