

MODEL 135  
SERIES Spin Ace Tier III  
BOOK NO. 1207  
SERIAL NO. \_\_\_\_\_

# 135 SPIN ACE TIER III

## OPERATOR'S MANUAL



### LINK-BELT TECHNICAL MANUALS

Manuals are available from the Distributor for the operation, service, and repair of the excavator. For prompt convenient service, contact the Distributor for assistance in obtaining the manuals for the excavator.

The Distributor can expedite orders for Operator's Manuals, Parts Manuals, Service Manuals, and Maintenance records.

Always give the model number, excavator serial number, and manufacturer's number of your excavator so your Distributor can provide the correct manuals for your excavator.

**NOTE:** *LBX COMPANY LLC reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.*

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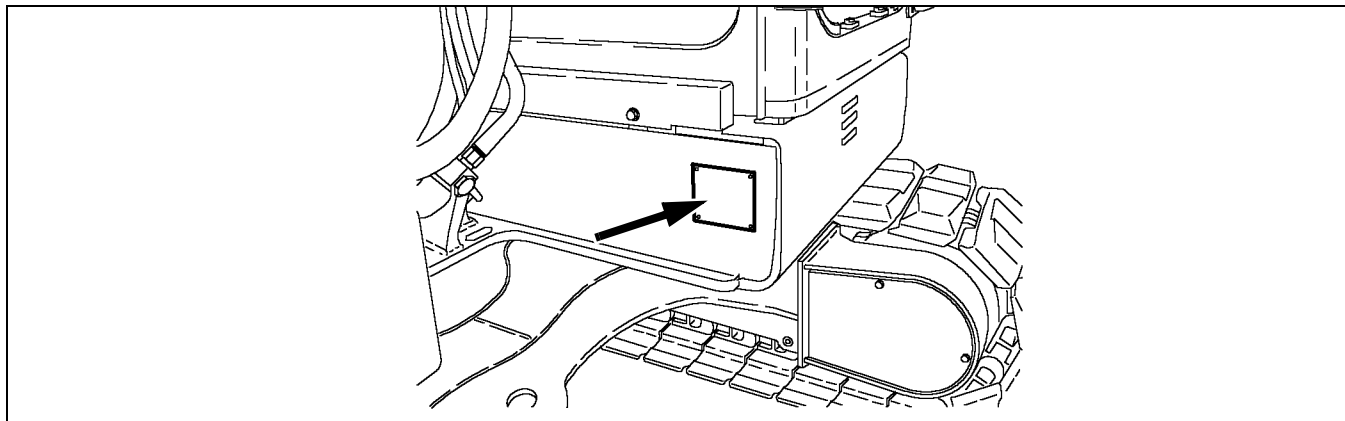
## IDENTIFICATION NUMBERS

### TYPE, SERIAL NUMBER AND YEAR OF MANUFACTURE

When ordering parts, obtaining information or assistance, always supply your LBX Link-Belt dealer with the type and serial number of your excavator or accessories.

Write the following in the spaces below: The type, serial number and year of manufacture of your excavator, accessories and the serial numbers of the various hydraulic and mechanical components.

#### Excavator

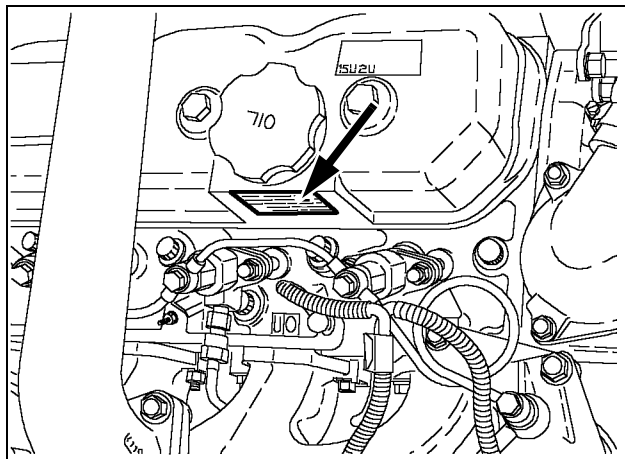


CT02C036

Figure 4

Model Number	
Serial Number	
Manufacturer's Number	

#### Engine



CT02C050

Figure 5

<b>Spin Ace 135 Engine</b>	
▶	_____
	Make and Model
▶	_____
	Serial Number

## SEAT BELT PRECAUTIONS



LBX002

Figure 4

1. RIGHT BELT STRAP
2. LATCH MECHANISM
3. RELEASE LEVER

1. To latch the seat belt, pull the right belt strap to the latch mechanism.
2. Insert the metal end into the latch mechanism on the left side of the seat.
3. To unlatch the seat belt, press the release lever on the right belt strap.
4. The seat belt will come apart.



**WARNING:** Before starting the engine ensure seat belts are securely fastened. The seat belt can help ensure your safety if it is used and properly maintained. Never wear a seat belt loosely or with slack in the belt system. Never wear the belt in a twisted condition or pinched between the seat structural members.

M422A

## QUICK COUPLER PRECAUTIONS

- Always follow the safety procedures of the quick coupler manufacturer if you have one on your machine. See Quick Coupler Operation.

## ENGINE PRECAUTIONS

- The fuel system on the engine is under heavy PSI. Do Not open the high pressure fuel lines with the engine running.

## SPECIFIC PRECAUTIONS TO THIS EXCAVATOR

- Keep the load or tool as low as possible while moving the excavator around the jobsite.
- Never smoke while refueling.
- With the 9' 4" (2.85 m) arm, there are two pin locations: transport position (1) and working position (2). Always ensure the machine is in the working position (2) before beginning any task.

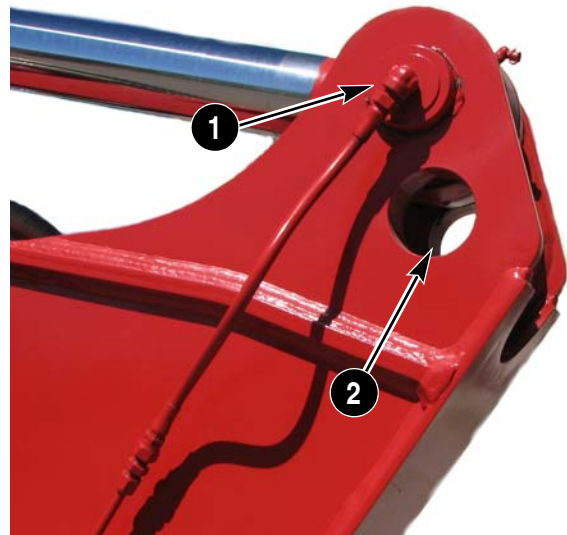
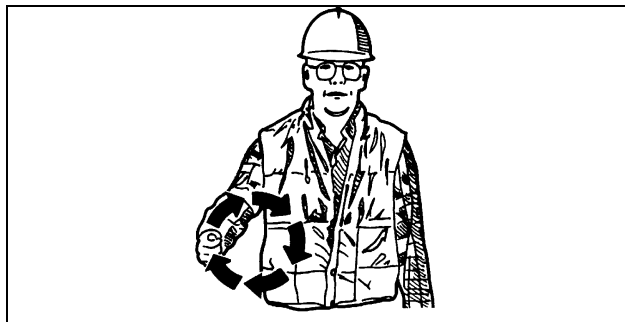


Figure 5

### HAND SIGNALS

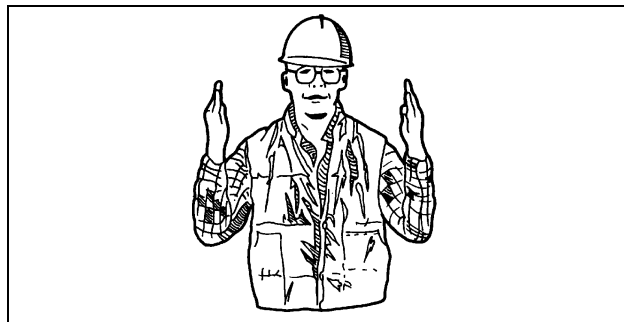
When operating the excavator, never attempt to carry out tasks calling for fine control or to work in areas where visibility is poor or impaired without seeking the assistance of a signalman. Make perfectly sure that you and the signalman understand the signals to be used.



PDE0002A

Figure 35

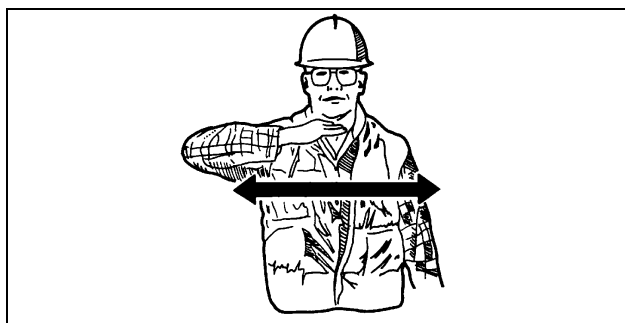
**START THE ENGINE**



PDE0004A

Figure 39

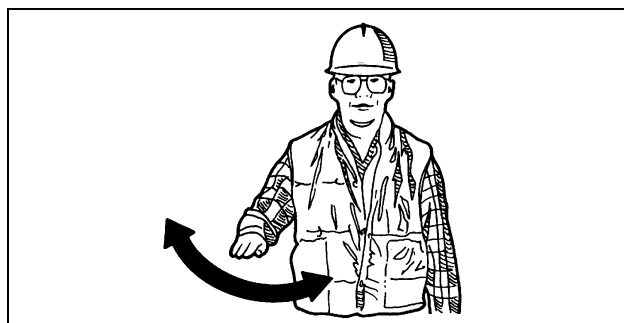
**GO THIS FAR**



PDE0002

Figure 36

**SHUT DOWN THE ENGINE**

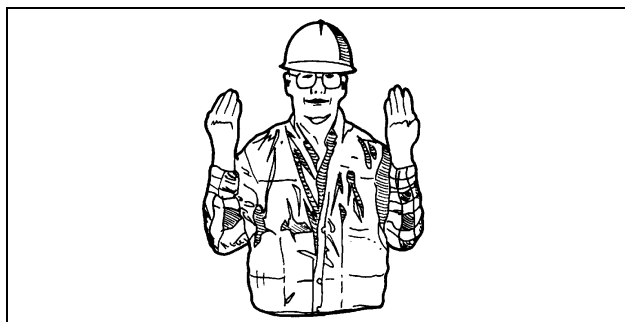


PDE0005A

Figure 40

**RAISE LOAD OR TOOL**

Wave hands back and forth.

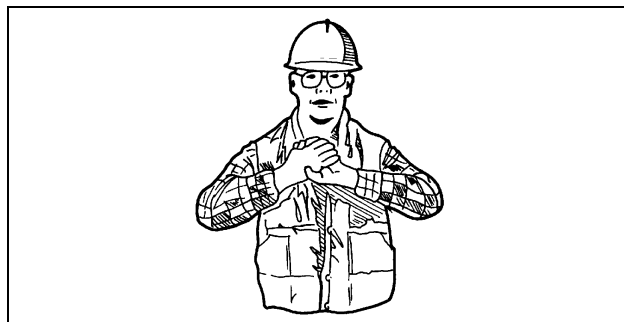


PDE0003A

Figure 37

**COME TO ME**

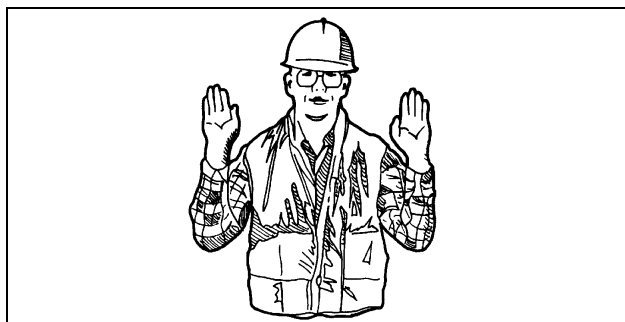
Wave hands back and forth (palms inwards).



PDE0004

Figure 41

**ALL STOP AND HOLD**

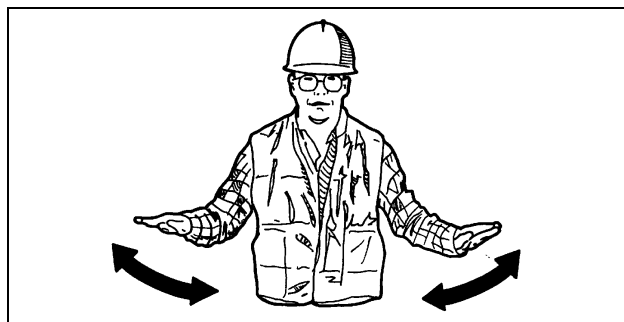


PDE0003

Figure 38

**MOVE AWAY FROM ME**

Wave hands back and forth (palms outwards).



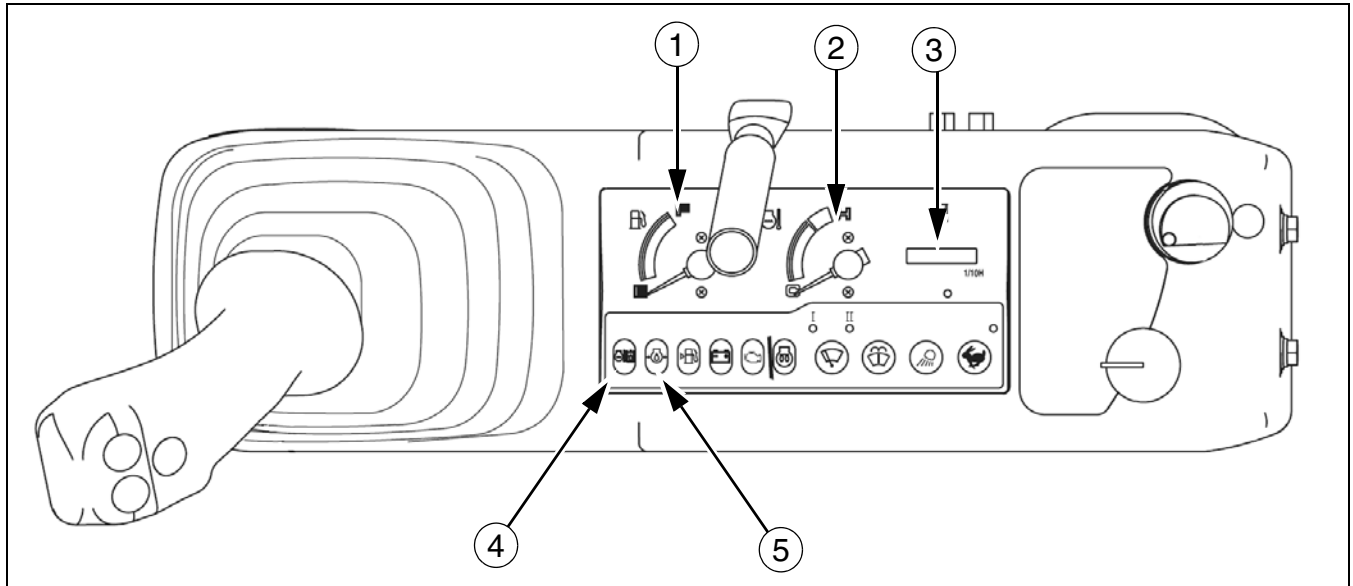
PDE0005

Figure 42

**EMERGENCY STOP**

Wave hands back and forth.

**INSTRUMENT PANEL**



CT02C046

Figure 8

**WARNING:** *The role of the instrument panel is to indicate the state of the excavator and quickly warn the operator in case of any malfunction, through alarms. It should not be used for checking or maintenance.*

*The instrument panel is not waterproof. Make sure that it does not get wet*

**1. FUEL LEVEL INDICATOR**

When the indicator needle moves closer to the E zone, fuel needs to be added in the reservoir. The indicator functions when the key switch is in the ON position.

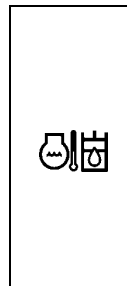
**2. ENGINE COOLANT TEMPERATURE INDICATOR**

This indicator is divided into two zones: white zone, normal operating temperature and red zone: hot. The indicator functions when the key switch is in the ON position.

**IMPORTANT:** *If the needle is in the red zone, move the excavator to a safe location, lower the attachment to the ground, shut down the engine, remove the ignition key and check the cooling system to determine the source of the malfunction.*

**3. HOURMETER**

The hourmeter enables service operations to be scheduled. Its indications are similar to those of a watch when the engine is running. Its operation is indicated by the blinking of a green indicator lamp. See section Servicing intervals.

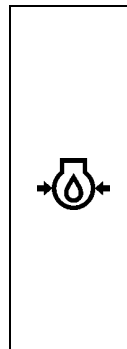


135\_TBD7

**4. OVERHEATING INDICATOR LAMP**  
The audible warning device will sound

This indicator lamp shows that the engine coolant or hydraulic fluid temperature is abnormally high. Bring the engine to idle mode and reduce the water or fluid temperature. Check and clean the radiator.

Figure 9



135\_TBD8

**5. ENGINE OIL PRESSURE INDICATOR LAMP**

The audible warning device will sound

This indicator lamps up when the engine oil pressure is too low. If the indicator lamps up during operation, move the excavator to a safe location, lower the attachment to the ground, shut down the engine, remove the ignition key and determine the source of the malfunction.

Figure 10

## DOZER BLADE CONTROL LEVER (IF EQUIPPED)

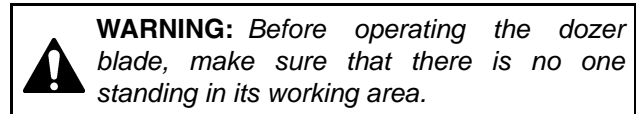
This lever is used to operate the dozer blade.

Pull the lever, the dozer blade rises.

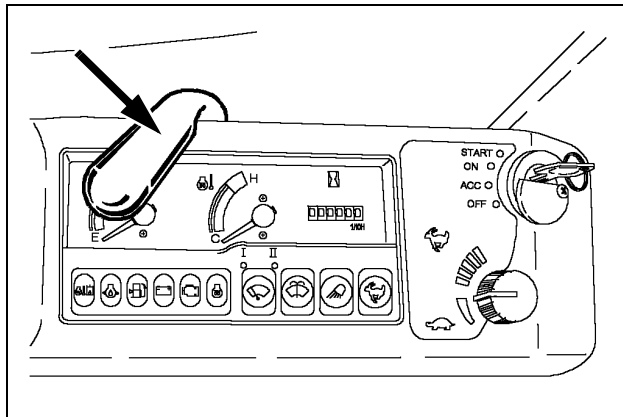
Push the lever, the dozer blade lowers.

The operation of the dozer blade stops when the lever is released. The lever returns to the neutral position.

With the engine stopped, if the dozer blade is in the raised position, it is still possible to lower it using the control lever until it touches the ground.



**WARNING:** Before operating the dozer blade, make sure that there is no one standing in its working area.



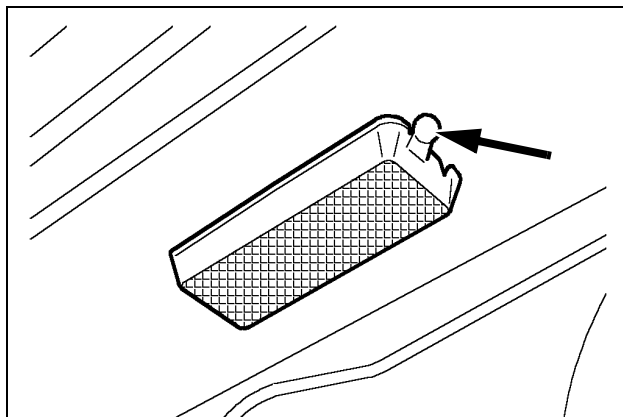
CT02C041

Figure 36

## CAB LIGHT

Located on top of the cab on the left-hand side, the lighting is controlled by a switch built into the lamp bracket.

**NOTE:** To replace bulbs, see *Replacing a bulb in the Electrical system section.*

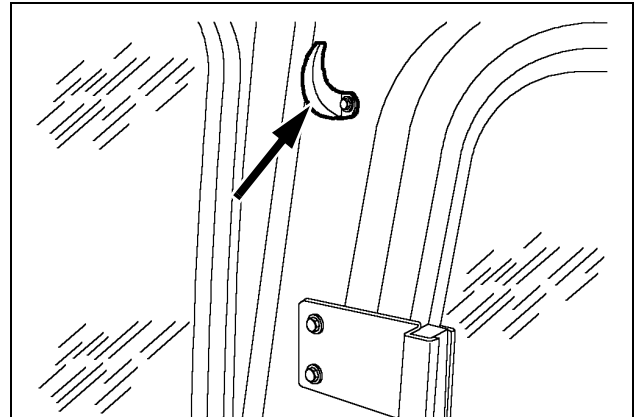


CT02C058

Figure 37

## COAT HANGER HOOK

The coat hanger hook is located on the rear left-hand cab upright.

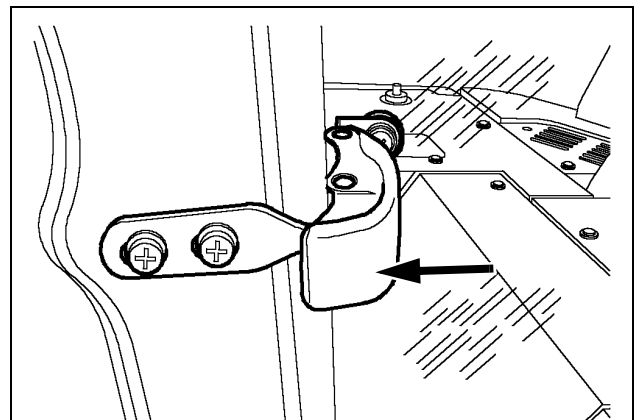


CT02C059

Figure 38

## REAR RIGHT-HAND SIDE WINDOW

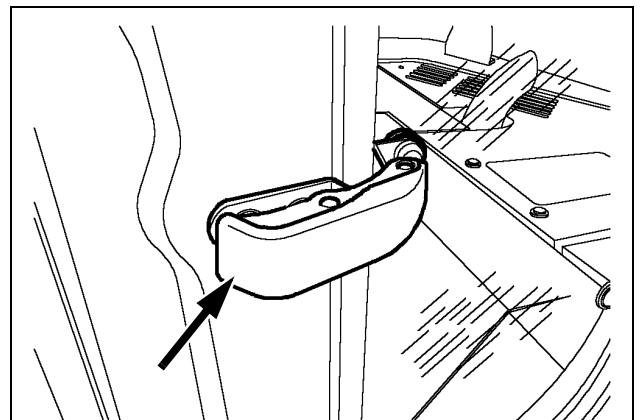
To open the window, pull the handle backwards.



CT02C060

Figure 39

To close the window, bring the handle back towards the inside of the cab.



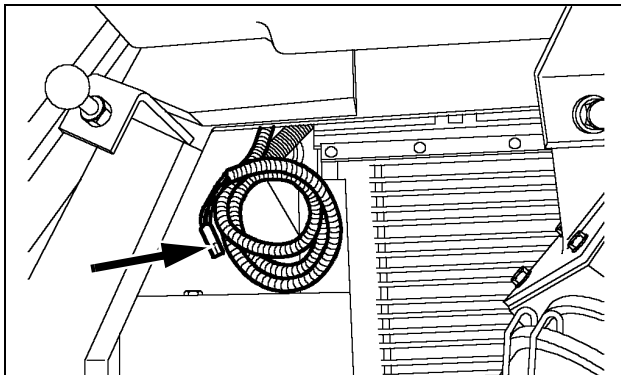
CT02C061

Figure 40

### ROTATING BEACON CABLE

Located in the battery compartment, this cable is designed to connect a rotating beacon (Optional).

For 24-volt rotary light.



CT02C118

Figure 79

### TOWING POINT

Located behind the undercarriage.

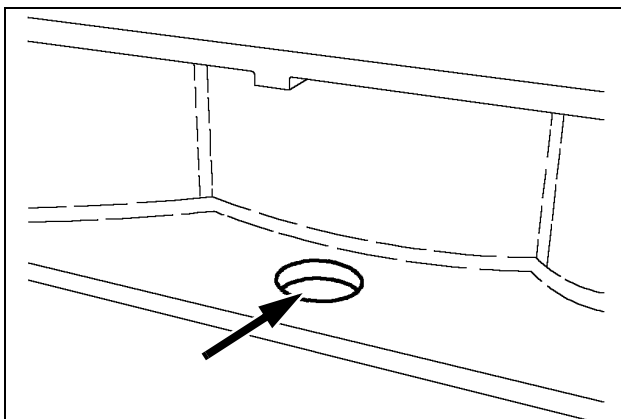
This point is to be used for towing the excavator, see Towing the excavator in section Operating instructions.

Make sure that the slings, chains and accessories are in perfect condition and can bear the load to be moved.

**WARNING:** Towing is a delicate manoeuvre which is always carried out at the risk of the user. The manufacturer's warranty does not apply to incidents or accidents, which occur during towing.

**WARNING:** It is forbidden to use this point for towing another vehicle.

**WARNING:** The excavator must be towed very slowly, over a short distance and only if it is really unavoidable.



CT02C183

Figure 80

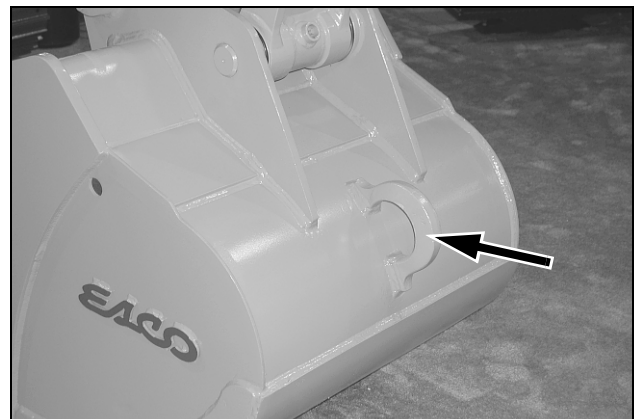
### LIFTING EYES

When lifting loads, the slings and chains must be attached to the load handling eye on the bucket. (Figure 94)

See Load handling in the Operating Instructions section.

**IMPORTANT:** This attachment point will only carry the load indicated in the maximum lift capacities table. See Maximum lift capacities tables in the Operating Instructions section.

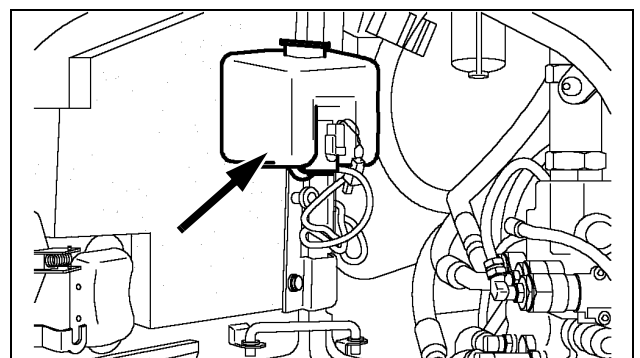
**WARNING:** Never weld hooks or lugs on the bottom plate of the bucket for handling operations. The only attachment point which may be used is the bucket eye.



CT02C184

Figure 81

### WINDSHIELD WASHER RESERVOIR



CT02C120

Figure 82

Located inside the front right-hand side door, this reservoir is equipped with an electric pump controlled by the windshield wiper, windshield washer control.

In cold weather, add anti-freeze to the windshield washer water.

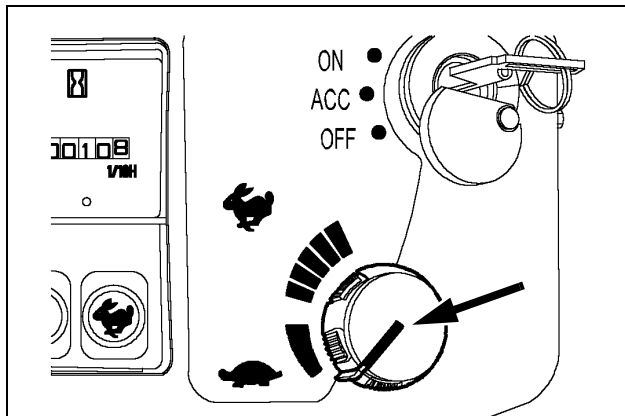
Never operate the windshield washer control when the reservoir is empty. This could cause damage to the electric pump.

## STOPPING THE ENGINE

1. Turn the engine throttle button to low idle position and let the engine run for a minute or so.

**IMPORTANT:** *In cold weather, let the engine run for about five minutes at idle speed.*

**IMPORTANT:** *Always let the engine run at idle before switching off completely, except in emergency situations.*

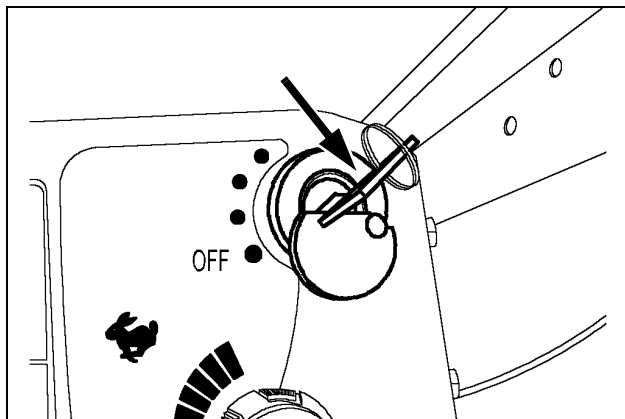


CT02C194

Figure 9

2. Turn the starter switch key to the OFF position.

**IMPORTANT:** *When the engine is to be shut down for a considerable length of time, see Parking the excavator.*



CT02C195

Figure 10

## IN THE EVENT OF AN EMERGENCY

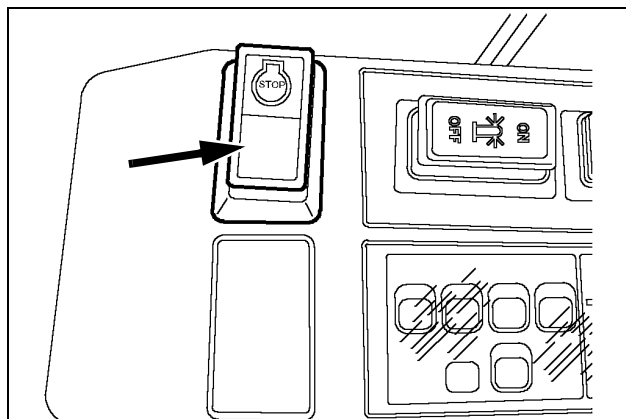
**IMPORTANT:** *This switch should only be used in case of an emergency. Do not use it on a day-to-day basis.*

In case of an emergency or when it is not possible to shut down the engine using the starter switch key, press the emergency STOP switch located on the left-hand control arm.

The engine shuts down, the audible alarm device sounds and the engine oil pressure, battery charge and engine electrical circuit indicators light up. Bring the starter switch key back to the OFF position.

To restart the engine, press again on the STOP switch then turn the starter switch key.

This switch should only be used in case of an emergency. Do not use it on a day-to-day basis.



CT02C225

Figure 11

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## TOWING THE EXCAVATOR

Towing is only authorized when the excavator has broken down.

First, make sure that it can be towed without risk of further damage.

As far as possible try to carry out repairs on spot or contact your LBX Link-Belt dealer.



**WARNING:** *Towing is a delicate manoeuvre which is always carried out at the risk of the user. The manufacturer's warranty does not apply to incidents or accidents which occur during towing. Where possible, carry out the repairs at the site.*



**WARNING:** *The excavator must be towed very slowly, over a short distance and only if it is really unavoidable.*



**WARNING:** *The operator must be the only person on the excavator when towing. Make sure that nobody else is on the excavator or within its working range.*

LUBRICATION CHART FOR 135 SPIN ACE WITH BLADE

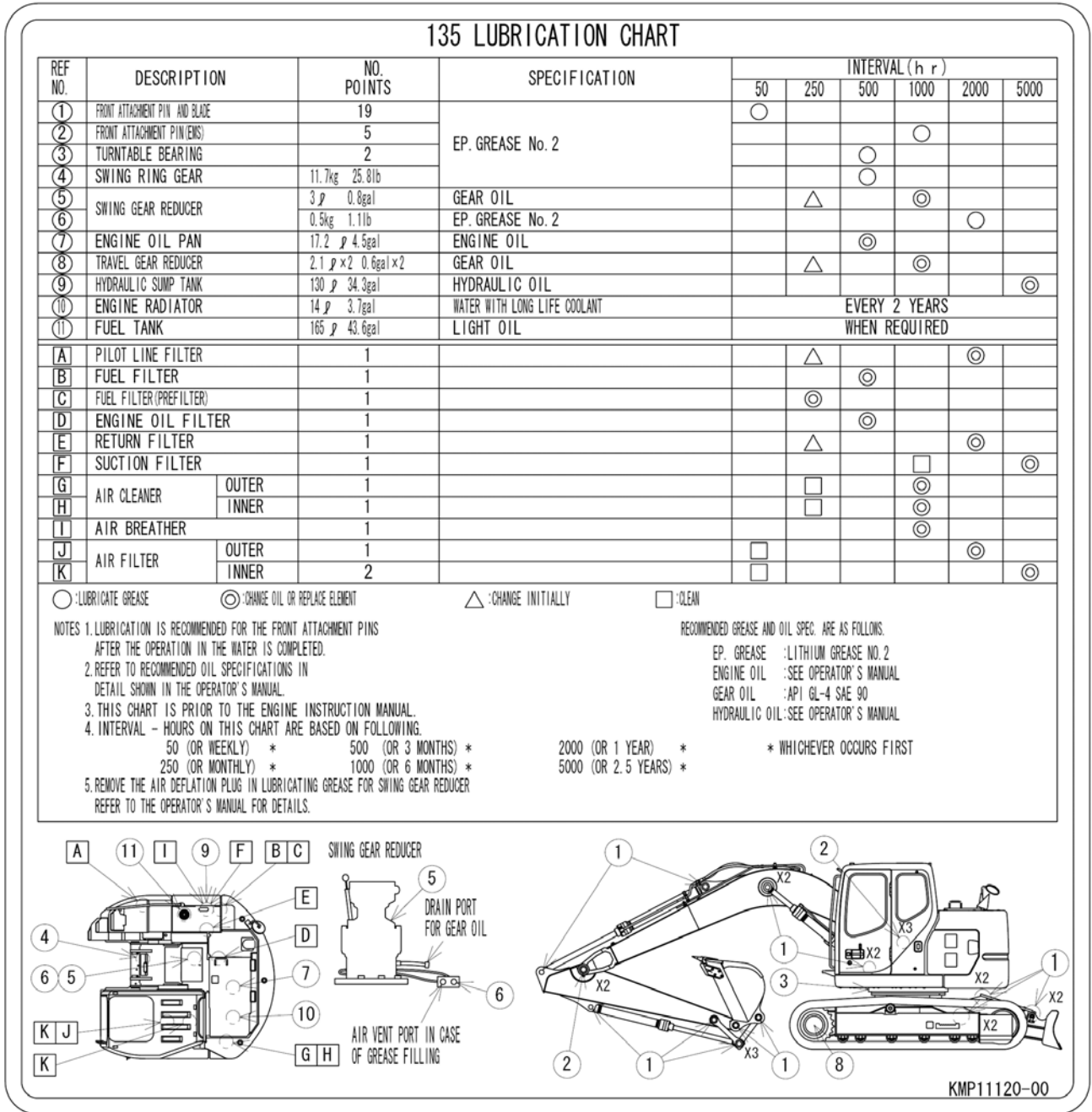


Figure 2


Commonly Replaced Filters

Filter	Part Number	Service Interval	Filter	Part Number	Service Interval
Engine Oil Filter	KHH0533	500 Hours	Outer Air Filter	KMH0781	1000 Hours
Fuel Main Filter	KHH0534	500 Hours	Inner Air Filter	KMH0830	1000 Hours
Fuel Pre-filter	KHH12030	250 Hours	Air Breather Filter	KRJ3461	1000 Hours
Pilot Oil Filter	KHJ17730	2000 Hours	Air Breather Packing	KRJ3463	
Return Filter	KHJ14680	2000 Hours	Suction Filter	KMJ2671	5000 Hours


## COOLING SYSTEM

### SERVICE SPECIFICATIONS

Expansion tank reservoir check.....	Every 10 hours or every day
Checking the tightening of clamps, of radiator hoses.....	Every 250 hours or every 6 months
Draining the system (long duration).....	Every 1000 hours or every 2 years
Draining the system (with anti-freeze) (spring and autumn).....	Twice a year
System capacity .....	3.7 gal (14 liters)



**WARNING:** *Boiling coolant solution can spray out if the radiator cap is removed while the system is still hot. To remove the cap, allow the system to cool down, turn the cap to the first notch and wait until there is no more pressure. Then remove the cap.*



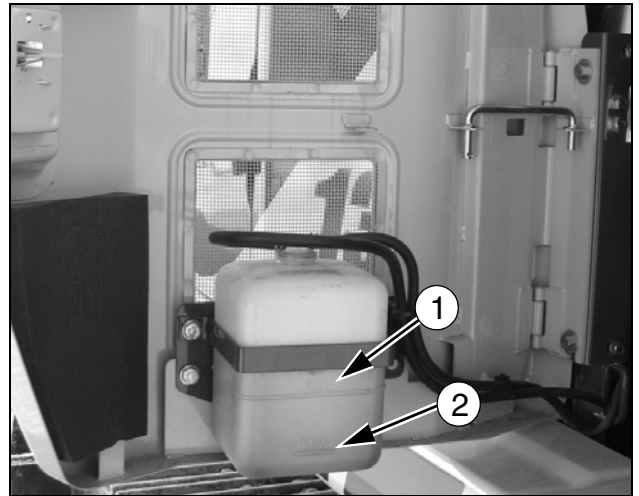
**WARNING:** *Check and service the cooling system according to the instructions given in this manual.*

### COOLANT SOLUTION

Put only ethylene-glycol coolant solution in the cooling system. Use good quality ethylene-glycol that has a high boiling point, with no additives to prevent leakage. Do not use non-approved anti-rust additives. Anti-rust additives and ethylene-glycol can mix and work against each other, thereby reducing anti-corrosion protection, forming deposits in the cooling system and causing damage to the cooling system and radiator.

### LEVEL

The level of coolant solution should be checked when the engine is cold. On flat, level ground the level in the expansion reservoir should be between the Full (1) and Low (2) marks. If not, see Filling.



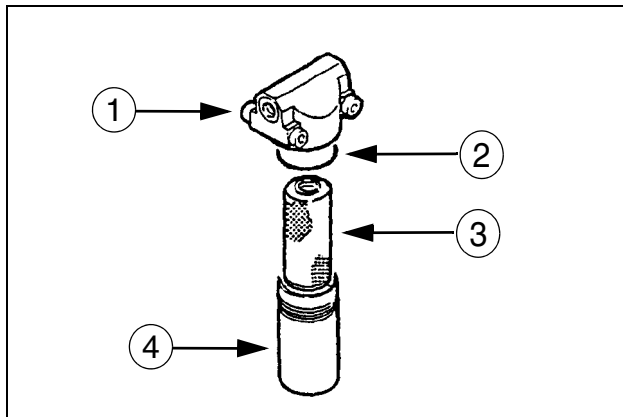
LBX123

Figure 22

**PILOT FILTER REPLACEMENT**

To access the filter, open the front right-hand side door.

1. Release all pressure in the hydraulic system. See Releasing Pressure in the Hydraulic System.
2. Use a wrench on the bottom of the filter body (4) to unscrew and remove it.
3. Remove the old filter (3) and O-ring (2).
4. Clean the filter body (4) in solvent and wipe dry with a cloth.
5. Coat the new filter (3) and the new O-ring (2) with clean hydraulic fluid and install the filter on the head (1).
6. Install the filter body (4) and tighten with a wrench. Do not overtighten.

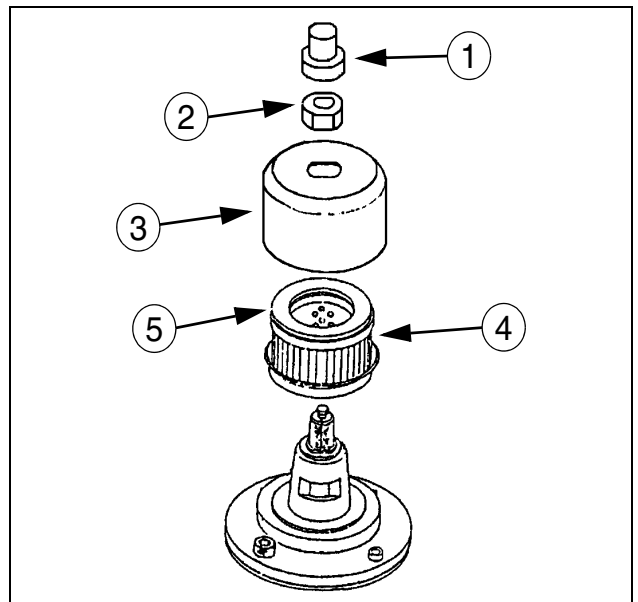


CS98M619

Figure 44

**REPLACING THE RESERVOIR BREATHER**

1. Press the button (1) to release all pressure in the hydraulic reservoir.
2. Remove the nut (2) and the cover (3) from the breather.
3. Remove and discard the used filter (4).
4. Install a new element, making sure the seal (5) is facing upwards.
5. Install the cover (3) as well as the nut (2).



CS00E528

## Chapter 6 MAINTENANCE AND ADJUSTMENTS

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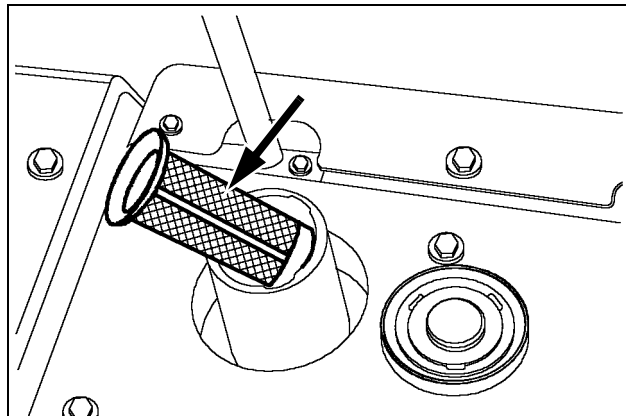
## FUEL TANK FILTER

### MAINTENANCE SPECIFICATION

Clean filter ..... Periodically

**NOTE:** To refill the fuel tank, see *Fluids and lubricants in the Lubrication/Filters/Fluids section.*

Remove the filter and clean it in diesel oil.



CT02D228

Figure 25

## INSPECTING AND CLEANING THE EXCAVATOR

### MAINTENANCE SPECIFICATIONS

Inspect and clean ..... Periodically

Or whenever oil or grease has been spilled on the excavator. Clean off with steam or a high pressure water jet.

Look for any leaks and check the condition of all pipes and hoses.

Take the opportunity during this operation to make a visual check of all the welded components (in case of appearance of cracks), the attachment linkages and check the teeth and tooth tips for correct retention and for wear.

## CHECKING FOR CYLINDER LEAKAGE

ROD APPEARANCE	TEST	CONCLUSION
Dry	Slight traces of oil when a piece of paper is wiped over 20 cm of the rod.	Normal
Slightly greasy	Paper remains stuck to rod when run over rod.	Normal
Oily	Paper remains stuck when placed on rod.	Normal
Very oily or weeping	Each time the cylinder rod is extended, a ring of oil can be seen on the rod.	See your LBX Link-Belt dealer
Leakage	Each time the rod retracts, the excess oil drips from the gland.	

A cylinder rod should be slightly oily. Check that there are no leaks after a period of work, when the whole hydraulic system is at normal operating temperature.

1. Wipe clean the rod and bearing on the cylinder to be cleaned.
2. Operate normally for five or ten minutes.
3. Extend the cylinder rod.
4. Carry out the leak test.

**CHECKING A BATTERY**

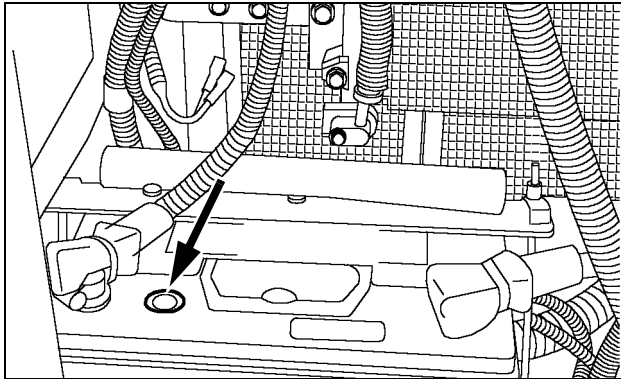
Make sure the battery terminals are clean and coated with grease and that the cables are properly tightened.

Checking the charging state and the electrolyte level is carried out using the indicator:

Green: Normal.

Black: Recharge the battery.

White: Change the battery.



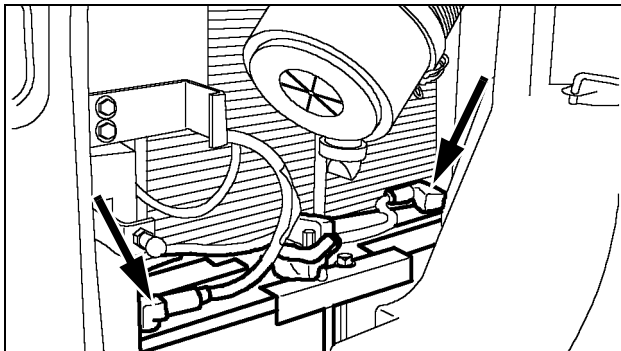
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Figure 4

**REPLACING THE BATTERIES**

**REMOVAL**

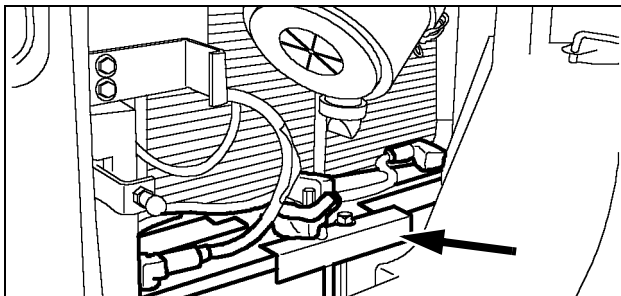
1. Remove the terminal sleeves, disconnect the cables (negative terminal) then the cables (positive terminal).



CT02D254

Figure 5

2. Remove the nuts, the washers and the holding frame.

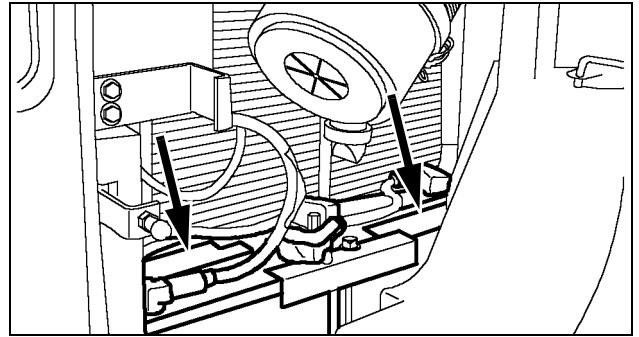


CT02D254

Figure 6

3. Remove the batteries using the handles.

4. Clean the battery compartment, remove all foreign bodies, clean any spilled electrolyte.



CT02D254

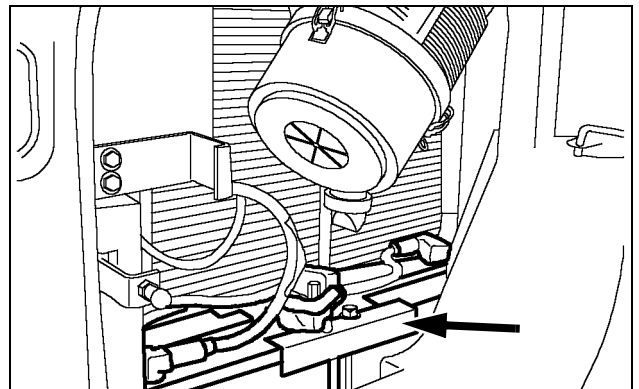
Figure 7

**INSTALLATION**

1. Install new batteries. Clean the cables and battery terminals and coat them with grease.
2. Install the holding frame, the washers and tighten the nuts.
3. Connect the cables (positive terminal), the cables (negative terminal) then install the terminal sleeves.

**WARNING:** Do not reverse battery terminals. Connect positive cable ends to positive terminals (+) and negative cable ends to negative terminals (-).

**WARNING:** Always store batteries in a safe place, out of the reach of children.



CT02D254

Figure 8

WORKING RANGE

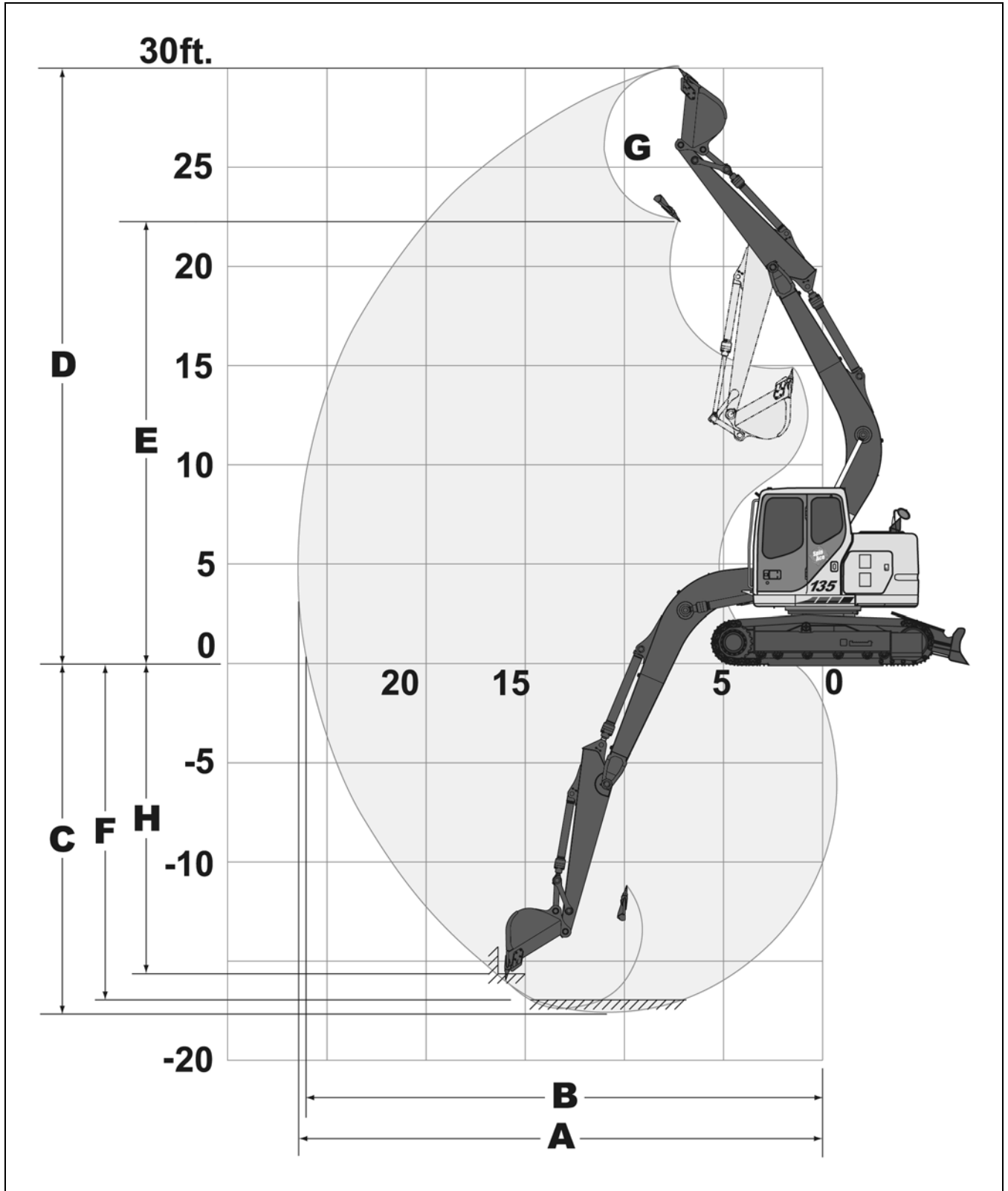


Figure 2

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