Tigercat®

H855D/LH855D Harvester

OPERATOR'S MANUAL

SERIAL NUMBER 85532001 TO 85533000
SERIAL NUMBER 85582001 TO 85583000



ISSUE 3.0, FEBRUARY 2020

Tigercat Industries Inc.

P.O. Box 637
Brantford, Ontario
Canada N3T 5P9
Tel: (519) 753-2000
Fax: (519) 753-8272

CLICK HERE TO DOWNLOAD THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO DOWNLOAD THE COMPLETE MANUAL

6750	Earth-moving machinery – Operation and maintenance -- Format and content of manuals
6814	Machinery for forestry -- Mobile and self-propelled machinery -- Terms, definitions and classification
8082	Self-propelled machinery for forestry --Roll-over protective structures -- Laboratory tests and performance requirements
8083	Machinery for forestry -- Falling object protective structures-- Laboratory tests and performance requirements
8084	Machinery for forestry -- Operator protective structures -- Laboratory tests and performance
9244	Earth-moving machinery – Safety signs and hazard pictorials -- General principles
9533	Earth-moving machinery -- Machine-mounted forward and reverse audible warning alarm -- sound test method
10532	Earth-moving machinery – Machine mounted retrieval device -- Performance requirements
10533	Earth-moving machinery -- Lift-arm support devices
10570	Earth-moving machinery – Articulated frame lock – Performance requirements
11112	Earth-moving machinery -- Operator's seat –Dimensions and requirements
11512	Machinery for forestry -- Tracked special machines – Performance criteria for brake systems
11684	Tractors and machinery for agriculture and forestry, powered lawn and garden equipment -- Safety signs and hazard pictorials – General principles
13766	Earth-moving machinery -- Electromagnetic compatibility
13852:1996	Safety of machinery-- Safety distances to prevent danger zones being reached by the upper limbs
14269-4	Tractors and self-propelled machines for agriculture and forestry -- Operator enclosure environment -- Part 4: Air filter element test method
14982	Agricultural and forestry machinery -- Electromagnetic compatibility -- Test methods and acceptance criteria
15078	Machinery for forestry -- Log Loaders --Log loaders – Location and method of operation of two-lever operator controls

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications and is in accordance with the requirements of the Directive(s)

Signed by: .....

Name: Anthony Iarocci

Position: President

Done at

Brantford Ontario

On December 16, 2014

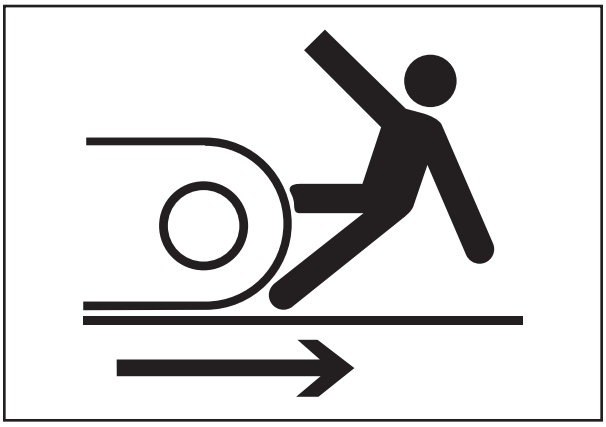
Document ref. No.: 5354-H855D

The technical documentation for the machinery is available from:

Name: Stewart Booth

Address: Darnleyhill
Tullynessle
Alford, Aberdeenshire
Scotland, AB33 8AX

AVOID INJURY FROM BACKOVER ACCIDENTS



Before moving machine, be sure all persons are clear of the area.

Be alert for bystanders moving into the work area. Use horn to warn bystanders before moving the machine.

When using a signal person, keep the person in view at all times. Be sure the signal person is clear before backing up.

To avoid backover accidents:

- Look around before you back up. Be sure that everyone is clear.
- Keep motion warning alarm in working condition. The motion warning alarm must sound when the machine is moving in forward or reverse.
- Use a signal person when backing up if view is obstructed. Keep the signal person in view.
- Learn the meaning of all flags, signs and markings on the job site and who is responsible for signalling.
- Keep windows, mirrors and lights in good condition.
- Dust, heavy rain, fog, snow etc. can reduce visibility. As visibility decreases, reduce speed and use proper lighting.

Turn off the engine when refuelling. Do not refuel the machine or work on the fuel system while smoking or near open flame or sparks.

⚠ WARNING

Avoid the risk of chain shot. Never operate the harvesting head so that the saw bar is directly in line with the cab or any personnel!

- Do not process trees with the saw guide (bar) aligned with the operator's cab. The hydraulically driven saw chain reaches high speeds and is an extreme hazard if the chain breaks.
- Operate so that the chip discharge area of the harvesting head is not directed at people, livestock, houses, buildings, roads or other machines.
- Be particularly observant with the zone in line with the chain saw.



SERVICING AND REPAIR

Before beginning any service work on the harvesting head, place the machine on level ground, place the harvesting head on the ground and properly support the boom (FIG. 5).

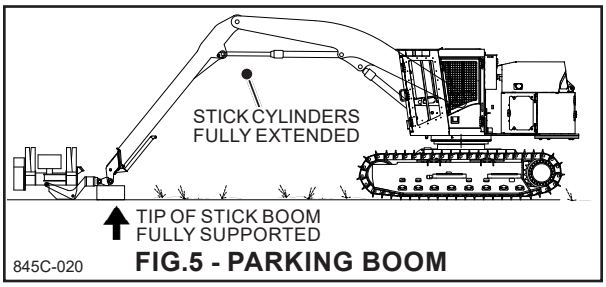


FIG.5 - PARKING BOOM

Stop the machine engine and turn the battery disconnect switch to the OFF position. Install any safety chains or locking parts required by the harvesting head manufacturer. Ensure that any accumulators on the harvesting head are completely relieved of hydraulic pressure. follow the specific safety, maintenance, and operating procedures provided by the harvesting head manufacturer.

- Never place any part of your body between the drive wheel arms or delimbing arms. This area is a crush zone. Keep clear to avoid personal injury or death.
- Never place any part of your body near the drive wheels. Avoid the risk of entanglement in moving parts. Keep clear to avoid personal injury or death.
- Never place any part of your body in front of the saw guide (bar). Avoid the risk of dismemberment. Keep clear to avoid personal injury or death.
- When working in the area of the drive wheel arms, delimbing arms, or drive wheels and when changing the saw guide (bar) or saw chain the machine must be completely shut down, with the battery disconnect switch to the OFF position.
- Do not change the pressure settings of any hydraulic valves or make structural modifications to the harvesting head without obtaining authorized instructions from the harvesting head manufacturer.

MACHINE MODELS EQUIPPED WITH AN ER BOOM SYSTEM

⚠ WARNING

This machine is equipped with an ER boom system. Because of this, it may behave in an unexpected manner compared to a conventional boom system.

Pay attention to the following when servicing the ER Boom System. Certain hydraulic circuits on this machine are inter-connected in order to provide level head-travel and to recirculate hydraulic oil to reduce heat generation and fuel consumption. As a result, disconnecting hydraulic lines from one cylinder may release pressure in a different cylinder at the same time. Before attempting to disconnect hydraulic hoses or perform work on the boom system, ensure that:

1. The machine is parked on level ground with the harvesting head on the ground (FIG. 1).
2. The stick cylinders are fully extended (FIG. 1) or the hoist cylinder fully retracted (FIG. 2).
3. The telescopic boom (if equipped) is fully retracted and the tip of the stick boom is supported at the rotator pin.

   Do not rely on the harvesting head to support the boom system during servicing. Slow leakage in the hydraulic components can cause the harvesting head to move unexpectedly.

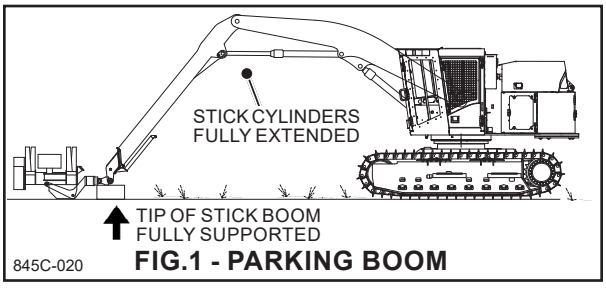


FIG.1 - PARKING BOOM

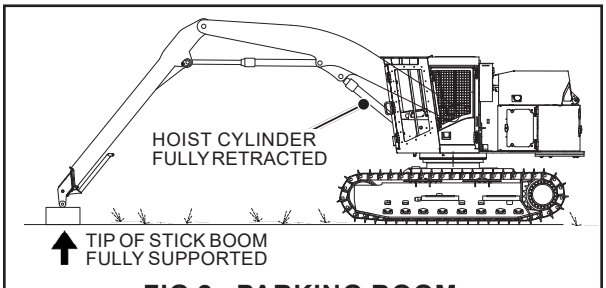


FIG.2 - PARKING BOOM

SWITCHABLE ER BOOM FUNCTION

These machines are equipped with a switchable ER valve to provide ER boom function or non-ER boom function. This function is switched on or off by a button switch and the Computer Controller. For complete details refer to ER BOOM SYSTEM, SPECIAL OPERATING INSTRUCTIONS in SECTION 2 of THIS MANUAL.



Dry chemical extinguishers should be rated **ABC** and pressurized water extinguishers should be rated **A**.

Class **A** fires involve ordinary combustibles such as wood, cloth, paper, rubber and many plastics, Class **B** fires occur with flammable liquids such as diesel fuel, oil and grease and Class **C** fires apply to energized electrical equipment.

- Ensure the nozzle of any hand held extinguisher and pressurized water system available on the machine and at the work site fits within the fire extinguisher access holes in the doors of the machine.
- Ensure that your fire detection system***** is in working order. Refer to FIRE DETECTION SYSTEM in SECTION 2 of THIS MANUAL.
- Ensure that your fire suppression system****** is charged and in working order. Refer to FIRE SUPPRESSION SYSTEM in SECTION 2 of THIS MANUAL.
- Ensure that you are familiar with the recommended procedures for fire contained in the emergency action plan of your company.
- Ensure that you follow all national, state/ provincial and local regulations dealing with fire fighting in effect in your specific geographic region. Regulations will vary from region to region but most will usually require that:
  1. Workers assigned to fire fighting duties must be physically capable of performing them safely and effectively.
  2. Workers designated to use fire fighting equipment as part of an emergency action plan must receive full and proper training from a qualified instructor.
  3. Whenever portable fire extinguishers are provided for use in the workplace, training must be provided to familiarize workers with the general principles of fire extinguisher use and the hazards involved with fire fighting.
  4. Training must be provided upon initial employment and at least annually thereafter.
- Ensure that after you have received the training as outlined above, that you know how to use the fire extinguisher, the pressurized water system (if applicable) and the fire suppression system on your machine. There is not enough time available to read instructions during a fire emergency******.
- Ensure that all information necessary for you to immediately contact all sources of help (local fire department, etc) in the event of a fire emergency is recorded and readily available at all times.

WHAT TO DO <u>WHEN</u> A MACHINE FIRE OCCURS

If operating the machine when a fire occurs:

1. Lower all working attachments to the ground.
2. Turn OFF the engine.
3. Activate the fire suppression system******.
4. Radio or call for help. Be certain to report a fire immediately.
5. Exit the machine taking fire extinguisher and pressurized water system hose (if applicable) with you.
6. At all times ensure your own personal safety and the safety of anyone that may be in the area. Approach any fire with extreme caution. All fires can be very dangerous and life threatening.
7. Only if you can safely do so, turn OFF the battery disconnect switch.

Before deciding to fight the fire, be certain that:

1. The fire is small and not rapidly spreading.
2. There is a clear, safe escape route to your back.
3. You have received training in the use of the available fire extinguishing systems and are confident that you can operate them effectively.
4. If in any doubt about whether or not to fight the fire – DON'T. Instead stand well clear of the fire and wait for help to arrive.
5. Be aware that engine coolant, diesel fuel or hydraulic hoses could fail during a fire. If this happens, hot coolant, fuel or oil could possibly be ignited by the fire.
6. If possible a dry chemical fire extinguisher or fire suppression system should be used first to fight a machine fire. Then immediately afterwards use the pressurized water hose supplied with the machine (if applicable) or a

NO RIDERS



No riders inside or outside of the machine. Do not carry passengers either in the cab or anywhere else on the machine. The vehicle seating accommodation is for one operator only. Persons riding on the outside of the machine are subject to hazards such as falling off the machine, crush hazards, thrown object hazards and many other hazards which could result in death or serious injury.

If any person attempts to climb onto the machine during operation, stop the machine immediately. Do not operate the machine until other personnel are a safe distance away from the machine.

THROWN OBJECTS HAZARD



This label informs you of the thrown objects hazard that exists when operating this harvesting head. Warn all personnel to stay 150 m (500 ft) away when operating the machine and head. During operation objects can be thrown or ejected at high speed and can travel long distances. Ejection of chain saw parts or other objects can cause serious injury or death.

Never operate or position the head with the chain saw bars in line with any bystanders, other machines or facing towards the operator's cab.

Orient the bar and chain so high velocity parts are thrown away from any bystanders and equipment. Follow chain manufacturer's guidelines for proper use and maintenance.

Be aware of the location of other machines and personnel who are working in the harvesting area and be prepared to stop operations if they enter your working area without warning. Be prepared for this potential hazard and take appropriate action if required!

Should this harvesting head be purchased loose without a machine, one of these labels will be sent along with the head to be affixed to the inside of the cab at a future date.

SWING BRAKE – SWITCH WITH LIGHT 2.18
SWING CONTROL, JOYSTICK 2.11, 2.12

TRACK DRIVE, FOOT PEDALS 2.13
TRAVELLING (BOOM RAISED) 2.110

USB PORT - COMPUTER DISPLAY 2.16

VACUUM SWITCH, HYDRAULIC OIL TANK 2.30

WINDOWS
CARE OF POLYCARBONATE WINDOWS
CAUTIONS 2.114
CLEANING INSTRUCTIONS 2.114
CONCEALING HAIRLINE SCRATCHES 2.114
FIRE PRECAUTIONS 2.115
GRAFFITI REMOVAL 2.115
INSPECTION AND MAINTENANCE 2.113
RESISTANCE TO CHEMICALS 2.113
RESISTANCE TO WATER 2.113
WORK LIGHTS SWITCH 2.22

The power roof is operated by an Electric Pump Hydraulic System.

The electric pump assembly is located in the compartment behind the cab beside the hydraulic tank and filter compartment. This system is self contained, in which it has its own hydraulic oil (Dexron III) tank.

The machine is also equipped with a hydraulic hand pump in the event that the roof needs to be opened manually. For more information refer to DOORS, SERVICE ACCESS in THIS SECTION.6.

SERVICE LIGHTS – SWITCH (B)

This is a two position switch labeled ON – OFF. Use to turn ON the service lights located in the roof and pump area.

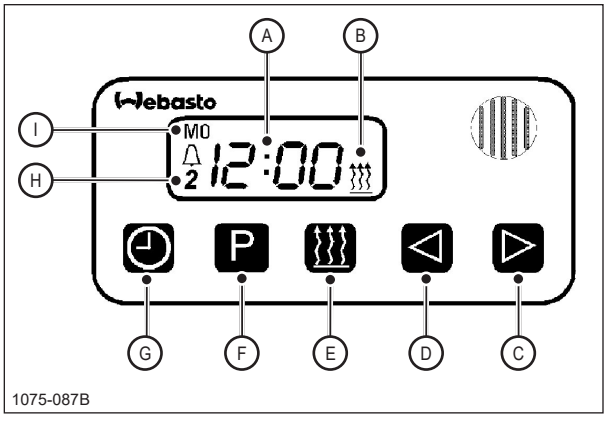
MASTER ALARM (C) AND MASTER ALARM LIGHT (D)

The computer displays messages activate the master alarm and alarm light whenever a system fault occurs.

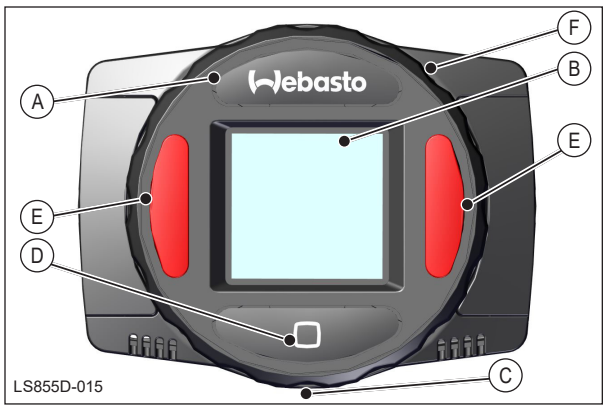
NOTE: The computer automatically performs a bulb test at engine start up to ensure that master alarm and alarm light are functioning. Refer to COMPUTER – MESSAGES in THIS SECTION.

ENGINE COOLANT HEATER CONTROL PANEL – OPTIONAL (E)

This digital control panel is used on machines equipped with the optional diesel-operated engine coolant heater.



855*2001–855*2020	
A	Time Display
B	Heater ON Indicator
C	Forward
D	Reverse
E	Instant Heating
F	Program Selection
G	Time/Day
H	Memory Location
I	Day of Week



855*2021 to 855*3000	
A	ON/OFF Button
B	LCD Screen
C	Micro USB Service Port
D	Selection Button
E	Status Indicator Light(s)
F	Rotary Knob

The heater, heats and circulates engine coolant through the engine to heat up the engine oil and through the hydraulic tank to heat up the hydraulic oil.

There is a solenoid valve controlling the flow of coolant to the Hydraulic oil tank heater. This solenoid valve is controlled directly by the heater unit. The programming of the heater unit in the cab will determine when the heater is ON and when it will turn OFF.

Consult the manufacturer's operation manual for additional information.

IMPORTANT!
During warm weather when the engine coolant heater is not in use operate the heater for a period of 20 minutes monthly. This will circulate engine coolant to all components of the heater system.

NOTICE

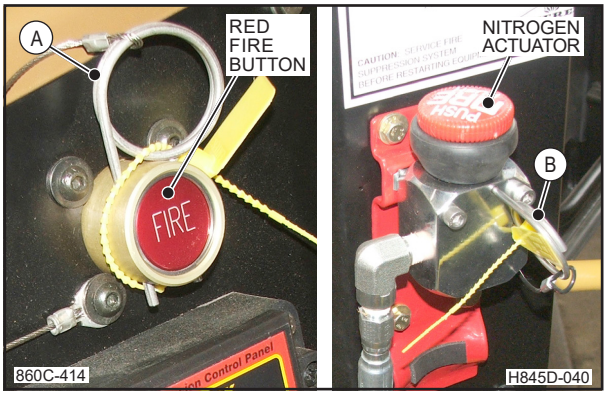
Open the engine coolant hot water shut-off valves before operating the coolant heater. Damage to the engine coolant heater pump may result if the valve is closed.

Refer to ENGINE COOLANT SHUT-OFF VALVE in THIS SECTION for more information.

AUTOMATIC OPERATION

There are seven thermostats mounted in the engine and hydraulic enclosures which are wired to the control panel. The thermostats are automatic heat detection devices and are set to close at 177°C (350°F). When a thermostat closes it sends an electrical signal to the control panel which activates the fire suppression system.

MANUAL OPERATION



Manual Actuation Switches	
A	Pull Locking Pin

The fire suppression system can also be activated manually using the manual actuation switch.

To manually operate the system:

1. Safely lower the boom to the ground.
2. Pull locking pin (A).
3. Press red FIRE button.

An electrical signal is sent to the control panel from the manual actuation switch which activates the system.

NOTE: In the event of a power failure the system can be activated by the Nitrogen Actuator located on the front left post of the cab.

1. Remove Locking Pin (B).
2. Strike down hard on actuator knob.

DISCHARGE OF THE SYSTEM

When an electrical signal (automatic or manual) is received by the control panel it sends a discharge signal to the electrical actuator located on top of the pressurized cylinder. When activated the electrical/pneumatic actuator extends a control shaft which mechanically opens the agent cylinder valve. This releases the dry chemical in the discharge area protected by the system. The control panel will also automatically shut down the engine and all electrical power.

NOTE: The engine does not shut down automatically when the fire suppression system is activated using the nitrogen actuator. When using the nitrogen actuator to activate the fire suppression system the operator must shut the engine off manually.

The automatic engine shutdown feature will either shutdown the engine immediately when the fire suppression system is discharged (non-leveling machines) or will delay the shutdown for a period of between 10 to 15 seconds for leveling machines. The time delay period is a factory setting. This delay feature allows the operator to lower the load or move the machine to a safer location before the engine shuts down. The operator can extend the engine shutdown delay feature by pressing the RELAY RESET button on the control panel to repeat the preset delay period. This button can be pressed repeatedly until the operator has brought the machine to a safe stop. The RELAY RESET button does not delay the discharge of the fire suppression system.

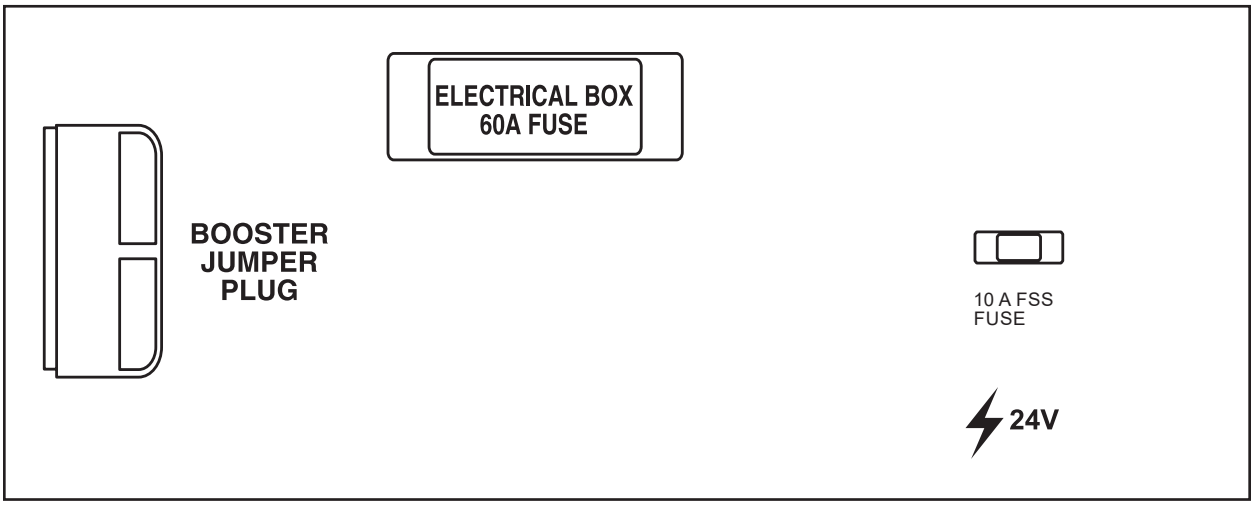
FUSES AND RELAYS, ENGINE COMPARTMENT

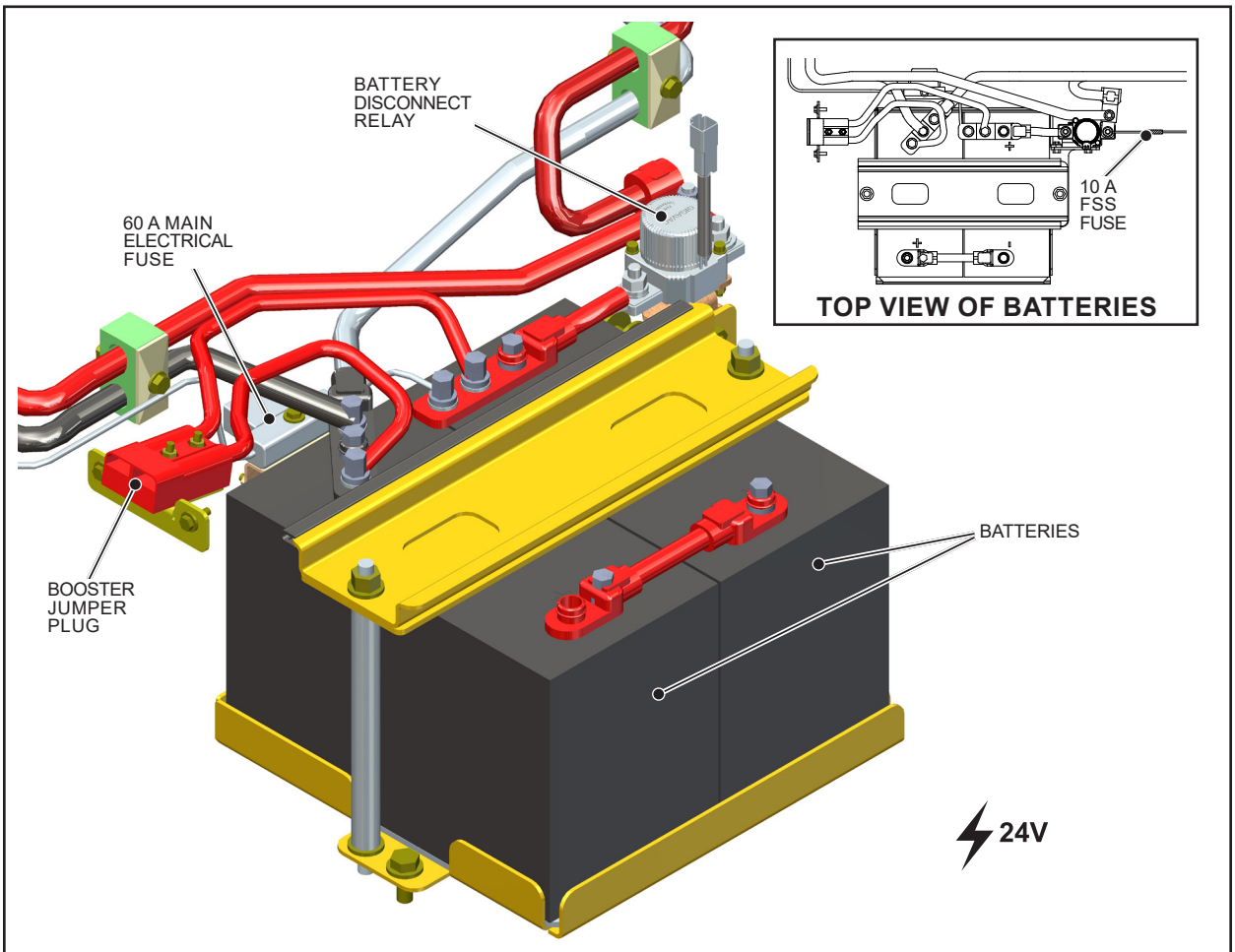
There are three areas where Fuse and Relay Electrical Components are mounted as follows:

- Main Electrical Fuse, Battery Disconnect Relay and Amerex (FSS) 10 A Fuse, located in the engine compartment beside the battery box.

IMPORTANT
24 VOLT ELECTRICAL SYSTEM

- Fuse and Relay Rear Panel. Located in the engine compartment behind the cab.

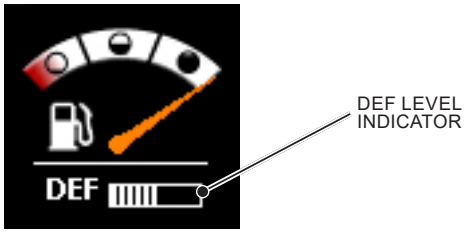


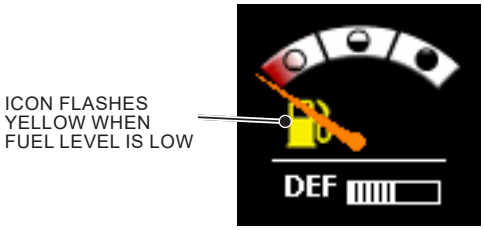


860C-225A
H845D-003 **BATTERY COMPARTMENT, MAIN FUSES AND BATTERY DISCONNECT RELAY**

FUEL GAUGE

NOTE: DEF level indicator applicable to TIER 4f machines only.





The fuel level gauge is shown on the main menu.

The fuel level icon will flash yellow when the fuel level falls below 10% of full.

Refer to FUEL TANK in SECTION 3 of THIS MANUAL for tank capacities.

DEF GAUGE

NOTE: DEF level indicator applicable to TIER 4f machines only.



A DEF level indicator is shown on the main menu of the computer display, below the fuel gauge.

When DEF levels are low information messages will be shown on the computer display.

Refer to DIESEL EXHAUST FLUID (DEF) TANK of THIS MANUAL for tank capacities.



NOTE: See the description of MIN/MAX CURRENT, START/STOP RAMP and Plus and Minus on previous page.

Min Current is the first choice that can be adjusted. The range is 0 to 469 mA. Scroll UP/DOWN to change the value, then press OK.

The selection will move to the next adjustment, Max Current.



Max current adjustment range is 0 to 750 mA. Scroll UP/DOWN to change the value, then press OK.

The selection will move to the next adjustment. In this example Start/Stop Ramp adjustments are locked as they do not apply to cylinders.

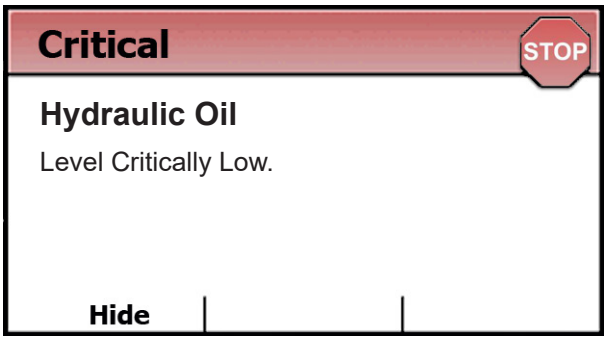


NOTE: To reset the value back to default setting, scroll up or down to the setting you want to reset then press F2 and the Reset Confirmation dialogue box will turn on with the choice Yes F2 or No F3 to reset the value.

Press OK, the selection will return to the Leveling page, Scroll UP/DOWN to next function and repeat the previous procedure.

When completed, press the back button twice to return to the Adjust menu..

HYDRAULIC OIL LEVEL CRITICALLY LOW

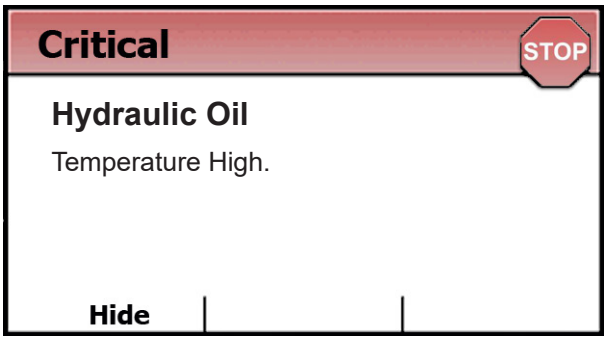


This message will be displayed, alarm light will flash and alarm will sound when the main hydraulic tank oil level is low.

Stop the engine immediately when this alarm is activated. Operating machine with a low hydraulic oil level can cause hydraulic pumps to fail.

When this alarm is activated stop the engine and look for signs of broken hoses or other leaks. Repair leaks and refill the main hydraulic tank to FULL mark on the monitor display gauge. Restart engine and inspect for leaks.

HYDRAULIC OIL TEMPERATURE HIGH



This message will be displayed, alarm light will flash and alarm will sound when the oil temperature exceeds the recommended operating range for the type of hydraulic oil in use.

If the temperature rises above the recommended operating range for the type of hydraulic oil in use check the following:

- Plugged oil cooler
- Malfunction in a hydraulic system
- High loads on the hydraulic system
- Malfunction of the cooling fan
- Low hydraulic oil level
- Correct Hydraulic Oil Grade Selection

If hydraulic oil temperature rises above the recommended operating range Do not continue to operate the machine.

This alarm must not be used to monitor the hydraulic oil. The operator must use the hydraulic oil temperature gauge on the main menu, together with the operating range chart in SECTION 3 of THIS MANUAL to prevent damage to the hydraulic system.

Hydraulic oil grade information is shown on the main menu below the hydraulic oil temperature gauge.

Operating outside the recommended operating range will shorten hydraulic component life.

Refer to COMPUTER – ADJUSTMENT MENU – OIL GRADE SELECTION in THIS SECTION for hydraulic oil grade selection settings information.

Refer to APPROVED HYDRAULIC OILS in SECTION 3 of THIS MANUAL for hydraulic oil operating range information.

Refer to COMPUTER – INFORMATION MODE SELECTION in THIS SECTION for hydraulic oil temperature information display.

CLICK HERE TO DOWNLOAD THE COMPLETE MANUAL

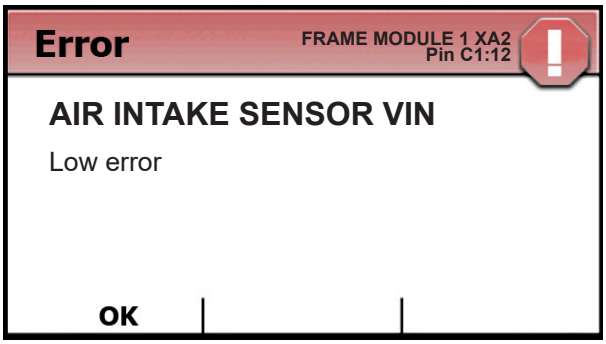
- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO DOWNLOAD THE COMPLETE MANUAL

VOLTAGE INPUT ERROR (VIN)



Voltage input error messages will be displayed to indicate a problem with a voltage input signal to a computer system module.

The module and pin number are identified on the display screen.

The heading identifies the signal source and the text indicates the type of error.

An example of a voltage input error message is shown above.

DIGITAL INPUT ERROR (DIN)

Digital input error messages will be displayed to indicate a problem with a digital input signal to a computer system module.

The module and pin number are identified on the display screen.

The heading identifies the signal source and the text indicates the type of error.

The display is similar to the voltage input error message shown above.

DIGITAL OUTPUT ERROR (DOUT)

Digital output error messages will be displayed to indicate a problem with a digital output signal from a computer system module.

The module and pin number are identified on the display screen.

The heading identifies the signal destination and the text indicates the type of error.

The display is similar to the voltage input error message shown above.

CURRENT OUTPUT ERROR (COUT)

Current output error messages will be displayed to indicate a problem with a current output signal from a computer system module.

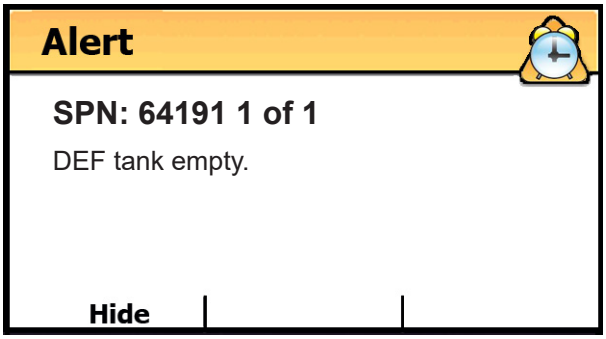
The module and pin number are identified on the display screen.

The heading identifies the signal destination and the text indicates the type of error.

The display is similar to the voltage input error message shown above.

Once acknowledged these message will be replaced with a hardware failure message for the corresponding module when active faults recalled to the screen. Refer to COMPUTER – MESSAGES – ALERT – HARDWARE FAILURE in THIS SECTION.

DIESEL EXHAUST FLUID LEVEL EMPTY



This message will be displayed, alarm light will flash and alarm will sound when diesel exhaust fluid level empty is detected. Action to correct DEF levels should be taken immediately to avoid affecting engine performance and damage to the diesel oxidation catalyst /selective catalytic reduction (DOC/SCR) aftertreatment system components.

- Beginning immediately after a DEF level empty message, the engine is de-rated to idle within 30 minutes.

Fill DEF tank and restart engine to clear the message.

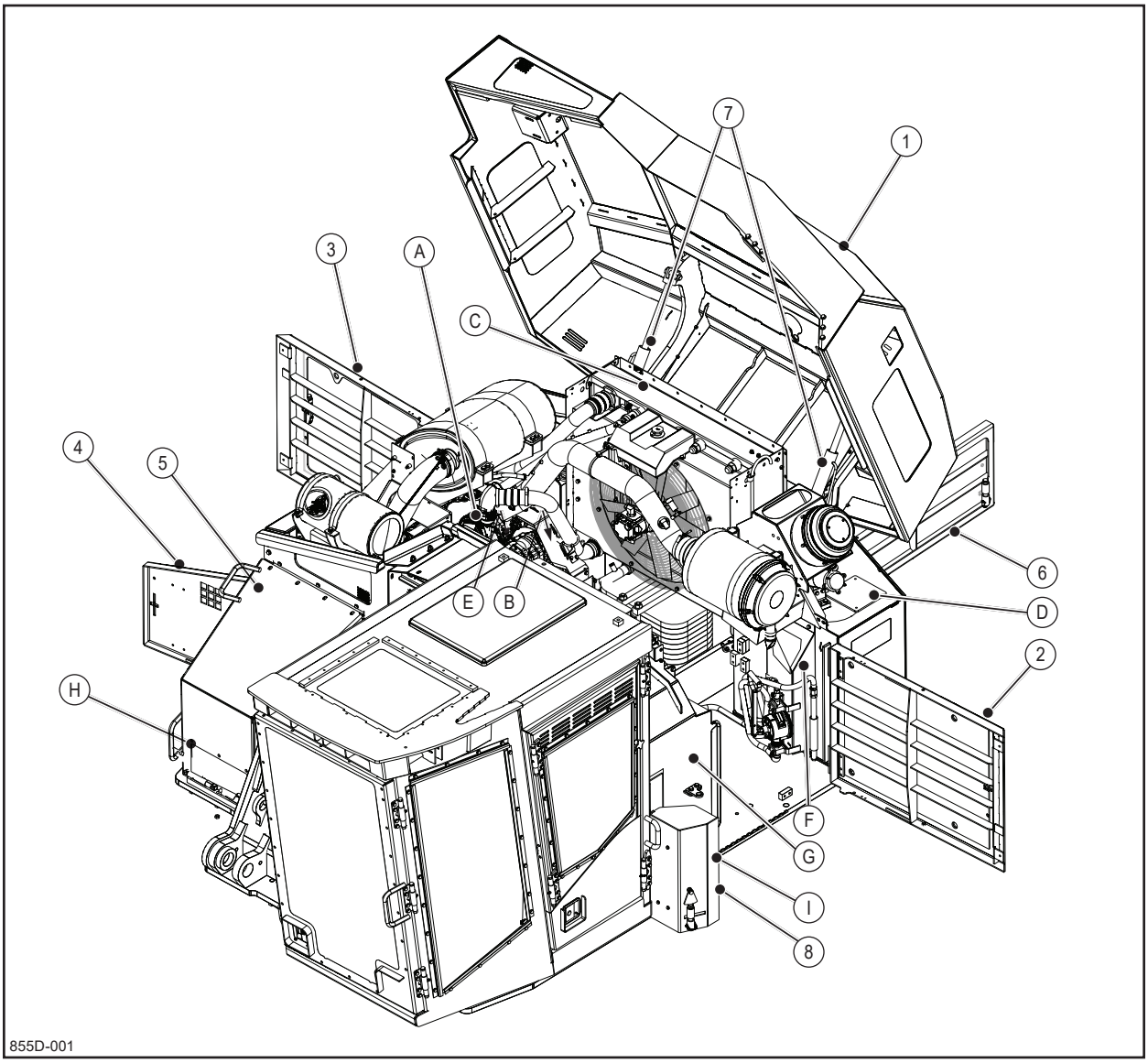
Note that an Engine Torque Derate Active message will also be triggered as the engine begins to derate. Refer to COMPUTER – MESSAGES - CRITICAL – ENGINE TORQUE DERATE ACTIVE.

SERVICE ACCESS DOORS

1. Power Roof
2. Left Access Door
3. Right Access Door
4. Pump Compartment Access Door
5. Pump Compartment Cover
6. Radiator Clean-out Door
7. Power Roof Cylinders
8. Fire extinguisher storage locker

Provide access to the:

A. Engine Compartment
B. Battery Compartment
C. Radiator/Oil Cooler/Charge Air Cooler
D. Fuel Tank
E. Hydraulic Valves
F. DEF Tank
G. Hydraulic Oil Tank
H. Hydraulic Pump Compartment
I. Fire extinguisher



COLD WEATHER STARTING

NOTICE

To prevent damaging the starter, do not engage the starter motor for more than 15 to 20 seconds. Wait two minutes between each attempt to start the engine.

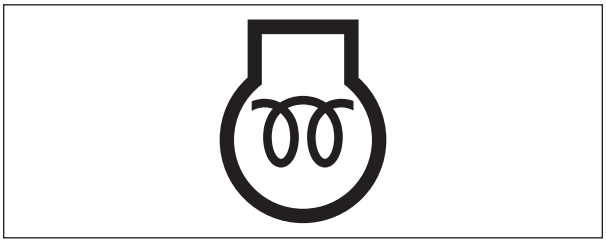
NOTICE

Cold startups can result in pump failure. For recommended oil viscosities and temperature ranges refer to APPROVED HYDRAULIC OILS in SECTION 3.

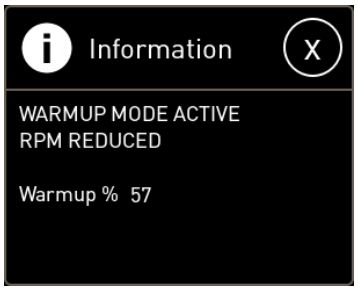
In cold temperatures, cold weather starting may require using the engine coolant heater, the electric hydraulic oil heater (if equipped), or self-warmup mode.



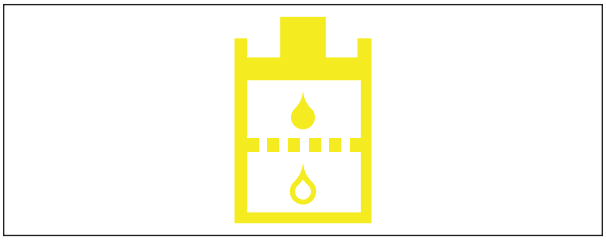
The engine is equipped with an intake air heater with a grid element. The intake air heater is primarily a cold temperature starting aid, used when the engine is cold to allow quicker starts. Refer to ENGINE COOLANT HEATER CONTROL PANEL (OPTIONAL) in THIS SECTION.



Attempting to start an engine in cold temperatures will result in the 'wait to start' icon appearing on the computer display. Only when this icon is gone will the engine be allowed to start.



After the engine has been started, engine speed is restricted by the computer while warmup mode is active.



During the warmup period, a hydraulic filter bypass warning icon may be shown on the computer display. The hydraulic filter bypass icon will be displayed in yellow when the filter is bypassing. This is due to the system temporarily interpreting the thick oil as a restriction. Do not operate any machine functions when the hydraulic filter bypass icon is displayed.

GRAFFITI REMOVAL

For removal of paints, marking pen inks, etc., the use of Butyl Cellosolve is generally effective. The use of masking tape, adhesive tape or lint removal tools works well for lifting off old weathered paints.

To remove labels, stickers, etc., the use of kerosene, VM&P Naphtha, or petroleum spirits is generally effective. When the solvent will not penetrate sticker material, apply heat (hair dryer) to soften the adhesive and promote removal.

Refer to WINDOWS – RESISTANCE TO CHEMICALS for a list of chemicals which should not be permitted to come into contact with polycarbonate windows.

FIRE PRECAUTIONS

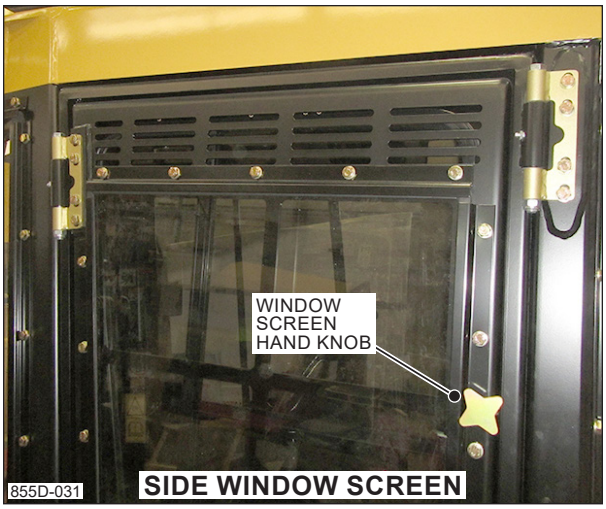
Polycarbonate window material will ignite when exposed to an ignition source in excess of 427°C (800°F). When working around polycarbonate windows, observe similar fire precautions to those in place for wood.

REMOVAL OF ANTI-CORROSION SPRAY (IF APPLICABLE)

Some machines, particularly machines shipped outside North America, are shipped with an optional anti-corrosion spray to protect the machine from corrosion during shipment.

This anti-corrosion spray should be removed when the machine reaches its destination as it may cause debris to stick to the treated surfaces of the machine.

The anti-corrosion can be removed with a pressure washer, a sponge and soap.



SIDE WINDOW SCREEN

SIDE WINDOW SCREENS

The side window screens (if equipped) can be removed to clean the windows. Screens are provided for the personal protection of the operator and must be reinstalled immediately after cleaning the windows.

A hand knob is provided on both the inside and the outside. By unscrewing either (not both) of these knobs, the screen will be free to swing out on the hinges. Be aware that the screen will swing outwards with considerable force, if the door is open.

All hand knobs should be hand tightened only at all times.



TIGERCAT FLUID ANALYSIS PROGRAM

Using the Tigercat Advanced Fluid Analysis Program on a regular basis is an excellent preventative maintenance tool.

Studies have shown that it is possible to receive a 10 to 1 payback when looking at the amount saved on repair costs in relation to the amount invested in a scheduled fluid analysis program. Some of the benefits of a sampling program include:

- Detecting problems early and before they become major catastrophic failures.
- Better ability to schedule downtime and forecast cost of repairs.
- Monitoring maintenance schedules and practices and confirming the required maintenance is being done on time.
- Increase used equipment value by providing proof of proper maintenance.

This Program uses the most modern technology available to analyze all fluid samples. Most test results are available within 24 hours after receipt of the sample and are supplied in an easy to understand report, which calls for specific action and makes detailed recommendations. The report is available as a mailed or faxed hardcopy, sent via e-mail or it can be viewed on the Internet.

This program will provide Tigercat machine owners access to an Advanced Fluid Analysis Program for all major machine components including Engines, Hydraulic Circuits, Axles, Final Drives, Gearboxes, etc.

Tigercat Fluid Analysis Kits are available from your Tigercat dealer parts department. If required, arrangements can also be made with your Tigercat dealer to supply and perform all of the required follow-up fluid samples.

Refer to Fluid SAMPLING PROGRAM in THIS SECTION for sample valve and drain plug locations.

TIGERCAT FLUID ANALYSIS KITS

Each kit includes a Prepaid Sample Bottle and Sample Information Form. Preprinted mailing labels are also included to ensure all samples are quickly returned directly to the lab for immediate analysis and results within 24 hours of receipt.

The same type of sample bottle can be used for all types of fluid testing including Hydraulic Circuits, Final Drives, Axles, Gearboxes, Engines, etc.

To ensure accurate and meaningful results are obtained, each kit also includes detailed instructions on how to properly collect, prepare and ship the fluid samples.

Contact your Tigercat Dealer Parts Department to order Kits.

800 Series Models Recommended Testing Schedule

Location	First Sample	Follow-up Samples
Hydraulic Oil	125 Hours	Every 1000 Hours or 6 Months
Swing Drive Gearbox (if applicable*)	125 Hours	Every Oil Change (250 Hours or 1.5 Months)
Track Drive Gearboxes	125 Hours	Every 1000 Hours or 6 Months
Pump Drive Gearbox (if applicable)	125 Hours	Every 1000 Hours or 6 Months

* Note that swing drive gearbox oil sampling applies only to machines that use gear oil in the swing drive gearbox.

SCHEDULED MAINTENANCE

ER BOOM SYSTEM

⚠ WARNING

This machine is equipped with an ER boom system. Because of this, it may behave in an unexpected manner compared to a conventional boom system.

When performing maintenance procedures or setting up a machine equipped with an ER boom system, the following points must be noted:

The hoist and stick cylinders circuits are connected hydraulically. Thus, disconnecting a hydraulic line to a boom cylinder may cause either boom to move unexpectedly. The booms may also move unexpectedly if a port relief adjusting screw is unscrewed (counterclockwise) too far and the pressure drops below that which is required to hold the weight of the booms and attachment. Ensure that the attachment is resting squarely on a solid footing and the stick cylinders are fully extended, tank pressure is relieved and engine is shut off before disconnecting any hydraulic lines.

Before attempting to disconnect hydraulic hoses or perform work on the boom system, ensure that:

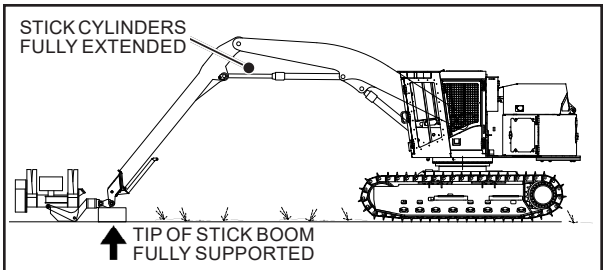


FIG.1 - PARKING BOOM

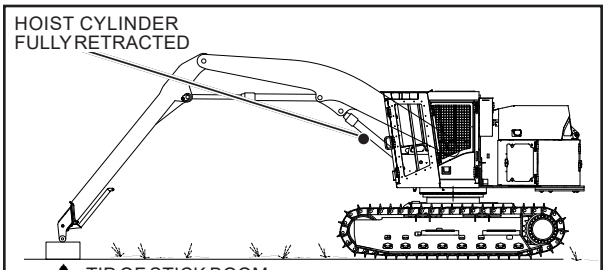


FIG.2 - PARKING BOOM

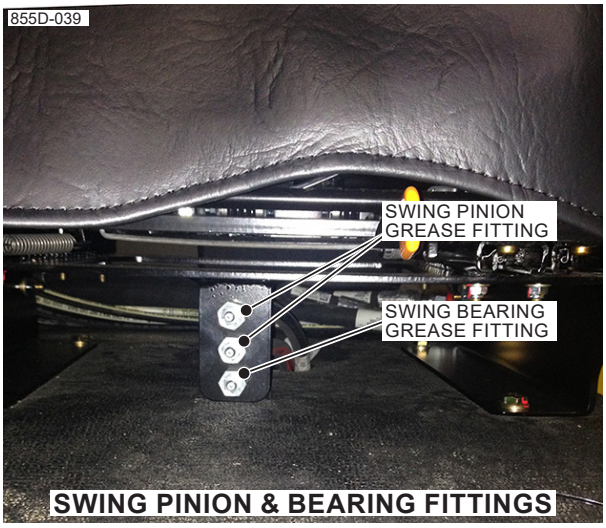
1. The machine is parked on level ground with the attachment on the ground (FIG. 1).
2. The stick cylinders are fully extended (FIG. 1) or the hoist cylinders fully collapsed (FIG. 2).
3. The telescopic boom fully retracted (if equipped) and the tip of the stick boom supported at the rotator pin.

Do not rely on harvester attachment to support the boom system during servicing. Slow leakage in the hydraulic components can cause the attachment to move unexpectedly.

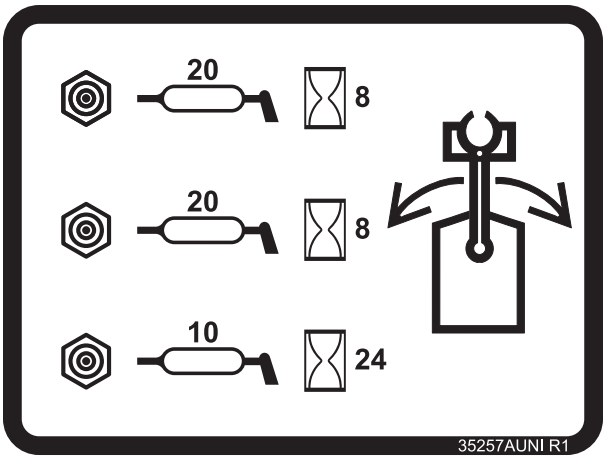
For additional safety precautions refer to ER BOOM SYSTEM PRECAUTIONS in SECTION 1 OF THIS MANUAL.

NOTE: Because of the hydraulic connection between the hoist and stick cylinders, the hoist cylinders can overpower the stick cylinders under certain conditions, causing the stick boom to move unexpectedly. This most often occurs when setting the hoist boom UP relief valve, causing the stick cylinders to extend, but it may also happen at other times if the relief settings are not correct. Ensure that all personnel and equipment are clear of the boom path and that there is sufficient overhead clearance for the head to rise before making any adjustments.

LUBRICATION OF SWING PINION AND SWING BEARING



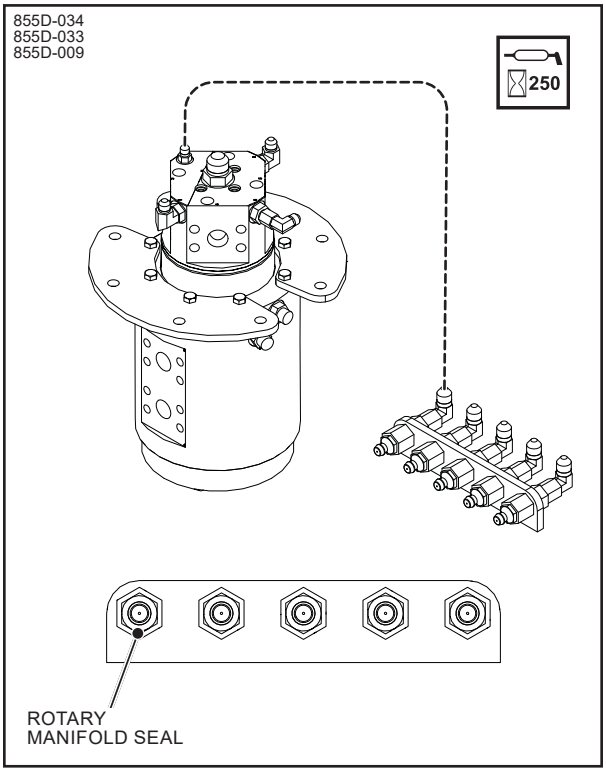
To lubricate the swing bearing, apply 10 shots of grease while swinging every 24 hours to the lower grease fitting located on the seat pedestal in the operator's cab. To lubricate the swing pinions (or teeth) apply 20 shots of grease every 8 hours while swinging, to the upper grease fitting located on the seat pedestal. The grease fittings are clearly labeled.



For lubrication schedule, refer to SCHEDULED MAINTENANCE in THIS SECTION.

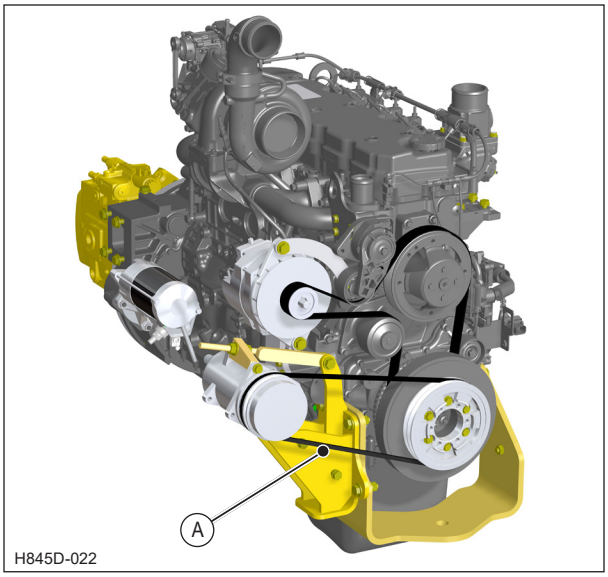
For additional information refer to SECTION 15 in the SERVICE MANUAL.

ROTARY MANIFOLD SEAL



To lubricate the rotary manifold seal, apply 2 shots grease every 250 hours.

NOTE: During cold weather applications the swing and machine functions must operate for several hours to achieve operating temperature. Warm the lubricating grease to 22°C (72°F) before lubricating the rotary manifold seal. **Do not over grease!**

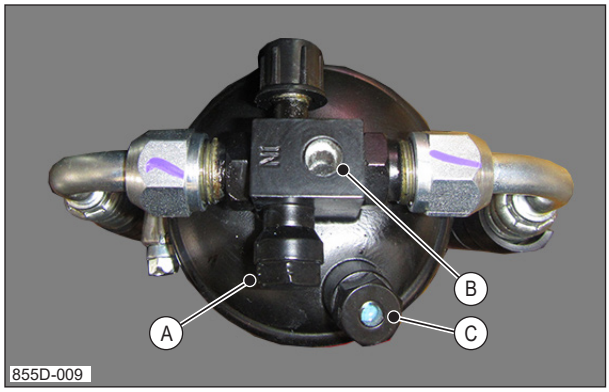


A	Compressor Drive Belt

8. With engine turned OFF, check and adjust compressor drive belt tension.

   NOTE: Belt tension specifications are 55 ± 2 kgf (121 ± 5 lb).

9. Check all A/C hoses for kinks*.
10. Run air conditioning system for 3 to 5 minutes.
11. Check to see that compressor clutch will engage*.
12. Listen to the compressor and blower motor for abnormal noises.
13. Check air temperatures exiting the vents in the cab.



A/C Receiver/Drier (Top View)	
A	High Pressure Relief Valve
B	Sight Glass
C	Moisture Indicator

14. Inspect the sight glass on the receiver drier when the A/C system is ON. A constant stream of bubbles indicates the system requires charging*.
15. Check the colour of the moisture indicator;

    Blue = normal

    Pink = moisture in the system

    NOTE: If the moisture indicator is pink, replace receiver/drier, evacuate and recharge system with both refrigerant and PAG oil*.

*Indicates that these repairs must only be carried out by a **certified A/C technician.**

For additional SERVICE information refer to the Tigercat A/C SERVICE MANUAL, part number 18795A, available from Tigercat parts department.

IMPORTANT!
It is recommended that during cold weather when the A/C system is not in use, that it be run for a period of five minutes every two weeks. This will circulate oil to all components of the A/C system.

For additional SERVICE information refer to the Tigercat A/C SERVICE MANUAL part number 18795A, available from Tigercat parts department.

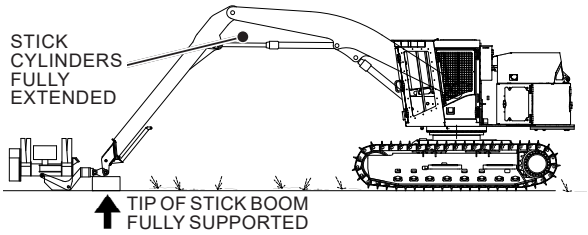
REFUELLING PROCEDURE

NOTE: Regularly inspect and repair all fuel fill system components to reduce the risk of spillage or fire.

NOTICE

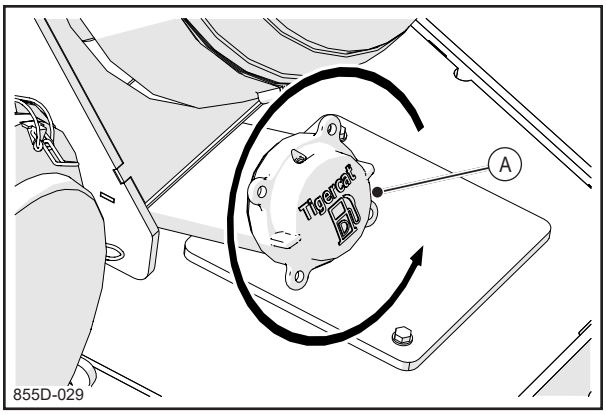


Use only Ultra Low Sulfur Diesel (ULSD) fuel in Tigercat FPT engines equipped with Tier 4 aftertreatment systems. Using fuel with sulfur levels greater than 15 ppm (S≤15 mg/kg) maximum will permanently damage the engine and aftertreatment system within a short period of time.



845C-020 **PARKING BOOM**

1. Park the machine on level ground with the attachment resting firmly on the ground.
2. Apply the swing brake.
3. Turn OFF the engine.
4. Remove the ignition key.
5. Open engine enclosure roof and doors.
6. Turn OFF the battery disconnect switch.
7. Clear obstructions from steps and handles needed to access fuel tank.
8. Clear any debris from around the fuel fill cap.
9. Remove fuel fill cap slowly to allow pressure to escape from the tank.



A	Fuel Fill Cap

10. Inspect the fuel fill cap gasket.
11. Inspect fuel tank strainer located under the fuel fill cap for debris or damage.
12. Attach a grounding strap to an unpainted metal surface on the machine if the refuelling tank or nozzle is so equipped.
13. Fill the fuel tank until the fuel level reaches the fuel tank strainer or the full mark on the fuel level gauge if equipped.

    Do not leave the nozzle unattended or spillage may occur.
14. Remove the nozzle and the ground strap (if applicable).

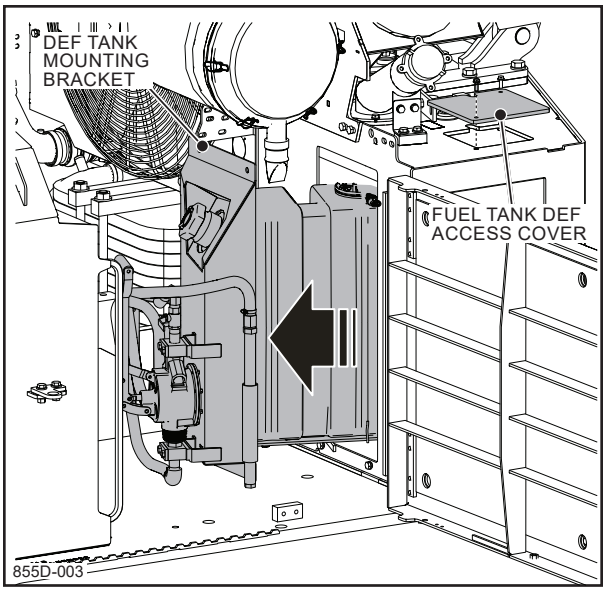
⚠ CAUTION



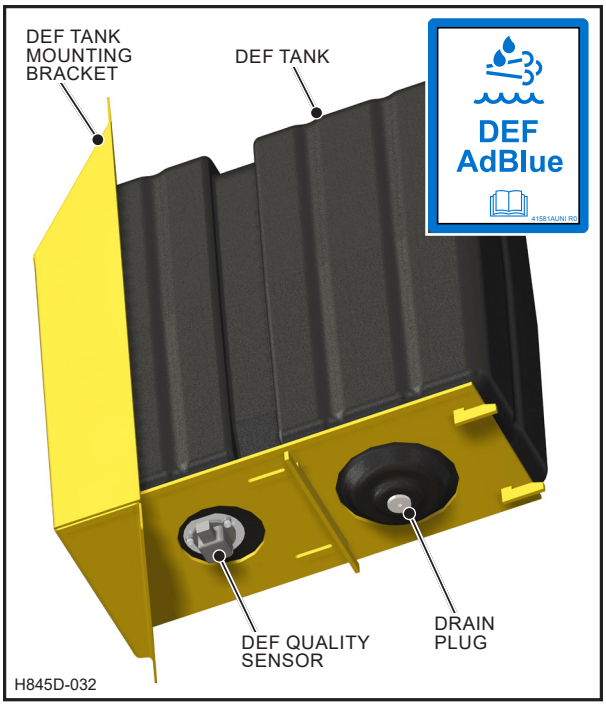
Do not fill the fuel tank while smoking or near an open flame or sparks.

If the engine is hot or running, do not fill the fuel tank.

15. Install the fuel fill cap hand tight
16. Turn ON the battery disconnect switch.
17. Close the engine enclosure roof and doors..



8. Remove the four bolts securing the DEF tank mounting bracket.
9. Slide the DEF tank out completely
10. Support the DEF tank to gain access to the drain plug.
11. Remove the DEF tank fill cap for venting purposes during draining.
12. Remove the drain plug and drain the DEF solution into a suitable container. Dispose of the waste DEF according to local regulations.



13. Once the fluid has been drained, clean the inside of the tank with distilled/demineralized water or DEF, if required.
14. Replace the drain plug and fill cap.
15. If any DEF has spilled rinse well with distilled/ demineralized water.
16. Slide the DEF tank back into place.
17. Reattach all connections to the top and bottom of the tank and replace access covers.

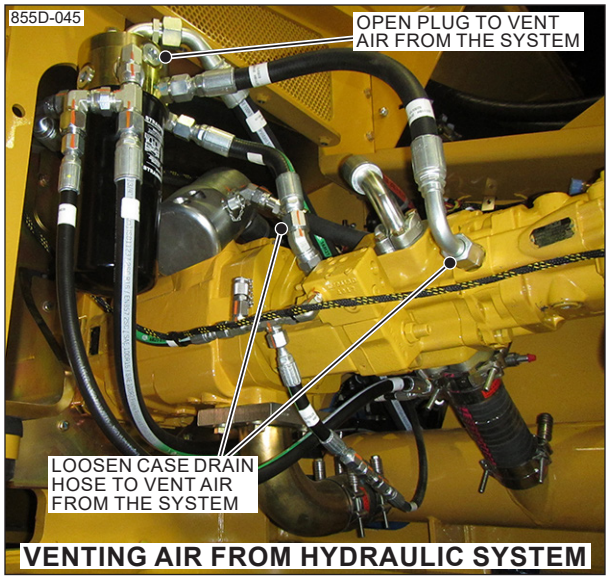
NOTE: To avoid contamination and ensure clean fluid, do not re-use DEF. Re-fill tank with new DEF only.

REFILLING THE HYDRAULIC SYSTEM

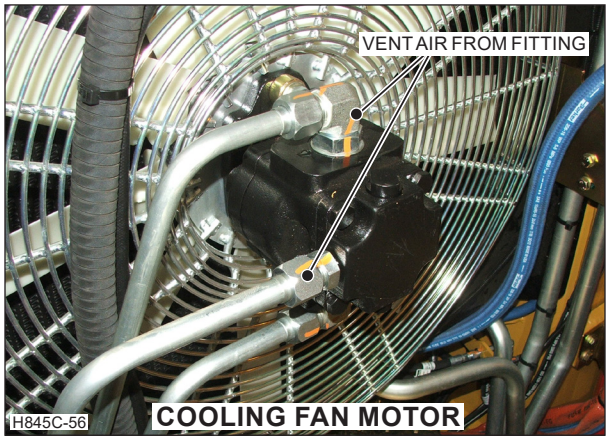
Changing strainers, filters and replacing the hydraulic oil tends to aerate the oil. For maximum pump life, the machine should sit for one hour after servicing to allow entrained air to escape from the oil prior to applying working pressures to the pumps.

When refilling the hydraulic system, vent pumps, motors and valves of air by opening a plug or hose fitting located near or on top of the pumps, motors and valves until oil free of air is seen flowing out of the plug or hose fitting. Failure to vent air from the hydraulic system could cause serious damage to hydraulic components. Tighten plugs or fittings and clean up any spilled oil when completed.

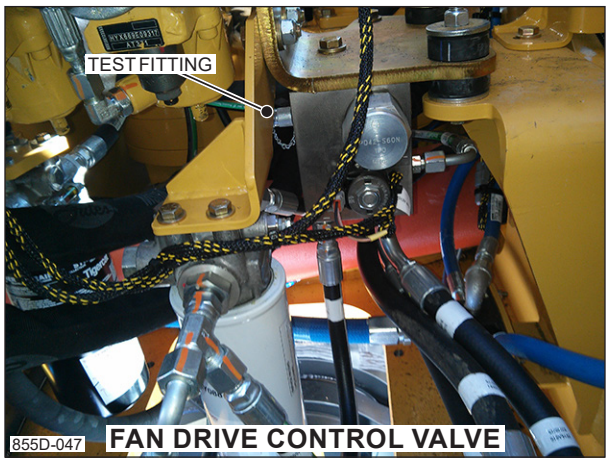
Check all hydraulic system components especially cooling fan for proper operation after hydraulic oil has been replaced.



VENTING AIR FROM HYDRAULIC SYSTEM



COOLING FAN MOTOR



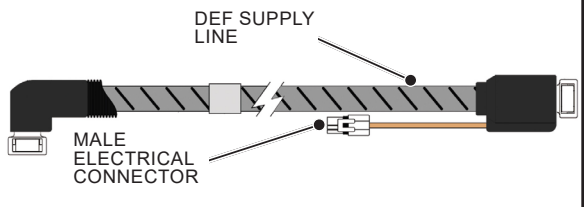
FAN DRIVE CONTROL VALVE

HEATED DEF SUPPLY LINES

The DEF supply lines to the SCR and DEF tank require heating along the entire path. The three supply lines are each heated by an electrical wire element.

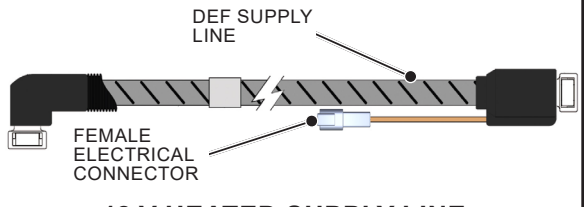
Heating is switched on when:

- Ambient temperature < 0° C (32°F)



T250D-117 **24 V HEATED SUPPLY LINE**

The DEF supply line from the supply module to the SCR is 24 V and is characterized by the male electrical connector located at the supply module.



T250D-118 **12 V HEATED SUPPLY LINE**

The two DEF supply lines from the supply module to the DEF tank are 12 V and are characterized by female electrical connector located at the supply module. These two lines are connected electrically in series. If one of the lines fail, the element in the other line will not function.

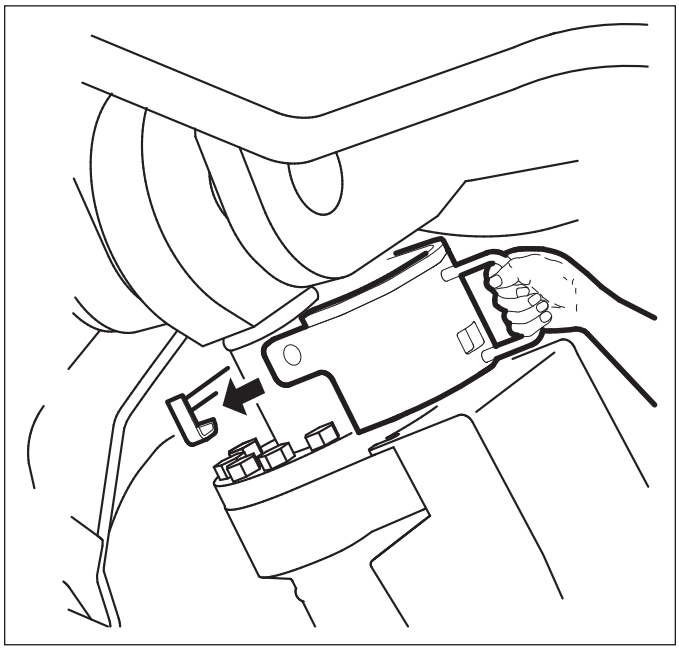
Refer to ELECTRICAL SCHEMATIC in SECTION 6 of THIS MANUAL for complete machine electrical schematics.

LEVELER CYLINDER TAPERED LOCK PINS RE-TORQUING

To ensure the leveler cylinder tapered sleeves have been properly seated, re-torque the leveler cylinder tapered lock pin bolts during the break in period at the regular service intervals. The tapered expansion sleeves are seated when attempts to re-torque the bolts result in the bolts no longer turning. The leveler cylinder tapered lock pin bolts then no longer require re-torquing until the pin joint requires service.

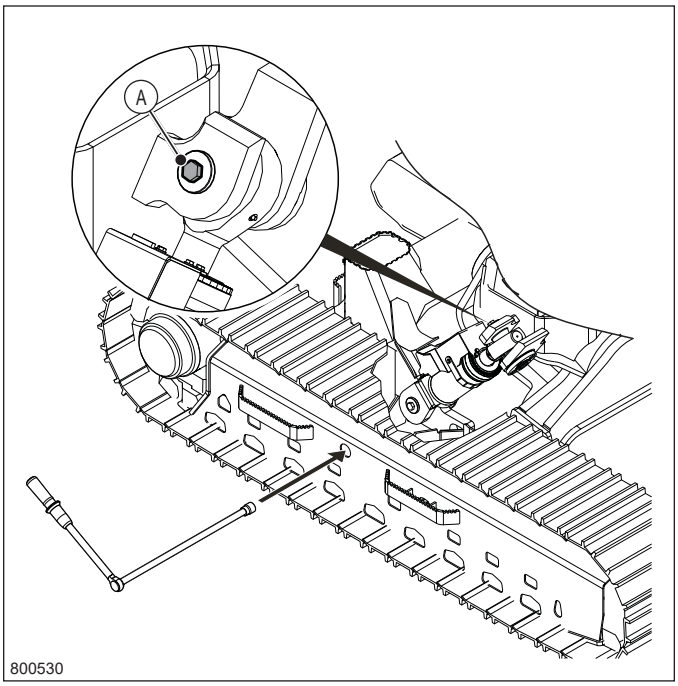
To ensure the leveler cylinder tapered lock pin bolts are tightened to the correct torque, do the following:

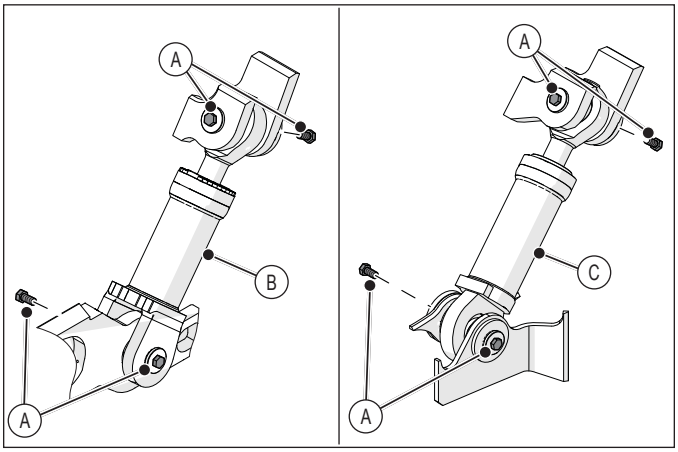
1. Park the machine on level ground with the attachment and boom in a relaxed state in front of the machine. Refer to PARKING THE MACHINE in SECTION 1.
2. Apply the swing brake.
3. Turn OFF the engine.
4. Remove the ignition key.
5. Turn OFF the battery disconnect switch.
6. Close and latch the front door.



7. Install the cylinder locks in the leveling mechanism. Refer to LEVELER CYLINDER LOCKS in THIS SECTION.
8. Check the tapered lock pin gap between:
   a. Pin cap washer and sleeve retaining cap.
   b. Cylinder pin washer and lug.

   Refer to TAPERED LOCK PIN GAP in THIS SECTION.





A Leveler Cylinder Tapered Lock Pin End Bolts (QTY 8)
B Double Clevis Style Cylinder
C Single Clevis Style Cylinder

9. Using a torque wrench, torque the leveler cylinder tapered lock pin end bolts (QTY 8). For leveler cylinder tapered lock pin end bolt torque values, refer to TORQUE CHART in THIS SECTION.

⚠ CAUTION

Torque wrenches should be regularly checked for accuracy to ensure that all fasteners are tightened to the correct torque.

CLICK HERE TO DOWNLOAD THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO DOWNLOAD THE COMPLETE MANUAL