

OPERATOR'S MANUAL

Tigercat 1045/1055 FORWARDER

Issue 1.0, JUNE, 2006

TABLE OF CONTENTS

	SECTION
INTRODUCTION	iii
SAFETY	1
CONTROLS AND OPERATION	2
LUBRICATION AND MAINTENANCE	3

1045/1055-SM00

1045/1055 Available Literature

Operator's Manual (10550101 to 10550200)	Part No. 25900A
Operator's Manual (10450101 and 10550201 and up) (This Manual)	Part No. 29767A
Service Manual (10550101 to 10550200)	Part No. 25901A
Service Manual (10450101 and 10550201 and up)	Part No. 29768A
Parts Catalog	Part No. 25902A

Tigercat®

Tigercat Industries Inc.
P.O. Box 544
Paris, Ontario
Canada N3L 3T6
Tel: (519) 442-1000
Fax: (519) 442-1855

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

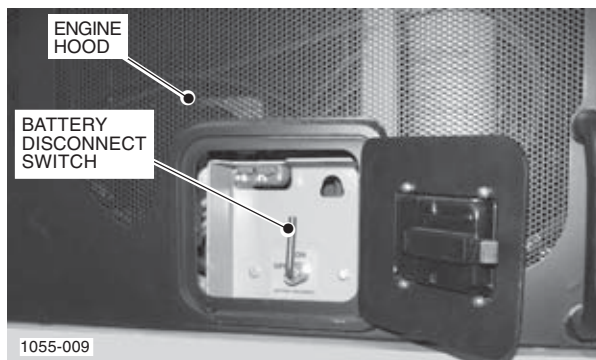
OPERATING SAFETY PRECAUTIONS continued

Before leaving operator's cab, place the crane in the park position or on the ground and lower the snow blade (if equipped) to the ground.

If out of the operator's cab for an extended period shut the machine off.

When parking the machine:

- Park on level ground **ONLY**.
- **Do not park on a hillside or incline.**
- Place the crane in the park position or on the ground and lower the snow blade (if equipped) to the ground.
- Stop the engine and release pilot system pressure by performing the following steps:
 1. Close both doors. Turn key switch to the **ON** position. **Do not start the engine.** Press pilot reset switch.
 2. **Fully apply** brake foot pedal **50 times** or more.
 3. **Pressure may remain in the system** after completing all of the above steps. Use caution when loosening hydraulic connections.



- Turn the battery disconnect switch off if the vehicle is to be parked for an extended period of time (Example - overnight).



When the engine is running, **DO NOT** allow anyone in areas of the machine where they may be crushed by moving components.



Maintain a safe operating distance between the machine and workers and all other personnel. It is the duty of the operator to ensure that no person approach the machine while in use, the risk zone is 60 m (200 feet).

Never operate the crane or grapple over the heads of bystanders.

Use only prearranged and approved signalling practices.

Obey flagger's signal and signs

Operate the machine only from a seated position in the operator's seat.

Do not carry passengers either in the cab or anywhere else on the machine.

If vision is limited by dust, smoke, fog or snow, stop the machine until visibility is restored.

Do not work below or behind a forwarder parked on a grade.

When working on slopes, travel straight up or down the slope to prevent roll-over.

NEVER travel across a **STEEP** slope or side hill:

- If you travel across a **MODERATE** slope, **NEVER** make an uphill turn as this could cause a tip-over situation.
- When loading, keep load in grapple low and close to the forwarder for best stability.
- A load of logs will change the handling and stability of the forwarder.
- Always be prepared to dump the load in the grapple in case of emergency.
- Never approach an unstable log from the downhill side.
- Do not overload your forwarder as this can create an unstable condition and cause a roll-over.

CAUTION

Do not open cab doors or window screens (if equipped) when machine is on a slope. The doors and screens are heavy and could swing out with considerable force.

SECTION 2 - CONTROLS & OPERATION

LADDER DOWN/UP SWITCH	2.8
LEFT JOYSTICK CRANE OPERATION	2.9
LIGHTS	
CAB INTERIOR-SWITCH	2.46
CAB WORKING-SWITCH	2.46
CHASSIS WORKING-SWITCH	2.46
ROAD-SWITCH (OPTIONAL)	2.46
LOADING / UNLOADING OPERATIONS	2.63
LOW BRAKE PRESSURE WARNING	2.44
MACHINE MODEL	2.38
MAXIMUM TRAVEL SPEED (CM)	2.43
MEASURE MENU DESCRIPTION	2.24
MINIMUM CURRENT	2.30
MODE MENU	2.23
MODE MENU DESCRIPTION	2.23
MODE MENU OPERATION	2.24
MOTOR BEGIN DISP	2.39
MOTOR MAX ACCE TIME	2.38
NO GEAR ENGAGED WARNING	2.41
NO MOTOR SPEED (CM)	2.43
OPERATING MACHINE	2.57
OPERATOR'S SEAT	2.50, 2.51
OPTIONAL EQUIPMENT	
FUEL HEATER SWITCH	2.16
HIGH BEAM INDICATOR	2.17
TURN SIGNAL SWITCH	2.16
TURN SIGNAL INDICATOR	2.16
OSCILLATION LOCK	2.12
PARK BRAKE/LADDER DOWN WARNING	2.40
PILOT	
RESET SWITCH	2.10
SYSTEM SHUT OFF	2.10
POWER OUTLETS	
12 VOLT POWER	2.47
24 VOLT POWER	2.47
PRE-START CHECKS	2.57
PROPERTIES MENU	2.29
PROPERTIES MENU OPERATION	2.29
PUMP CAB TILT	2.54
PUMP DISP	2.39
R.H. CONTROL PANEL	2.13
RADIO/CD PLAYER	2.46
REAR WINDSHIELD WIPER/WASHER	2.13
RESTARTING AN ENGINE THAT HAS RUN OUT OF FUEL	2.61
RIGHT JOYSTICK BLADE OPERATION	2.8
RIGHT JOYSTICK CRANE OPERATION	2.8

continued...

R.H. CONTROL PANEL

1A. L.H. SIDE WINDOW WIPER (OPTIONAL)

This three position (OFF/LOW/HIGH) wiper switch (1A) controls the L.H. side window wiper.

1B. R.H. SIDE WINDOW WIPER (OPTIONAL)

This three position (OFF/LOW/HIGH) wiper switch (1A) controls the R.H. side window wiper.

2A. FRONT WINDSHIELD WIPER/WASHER

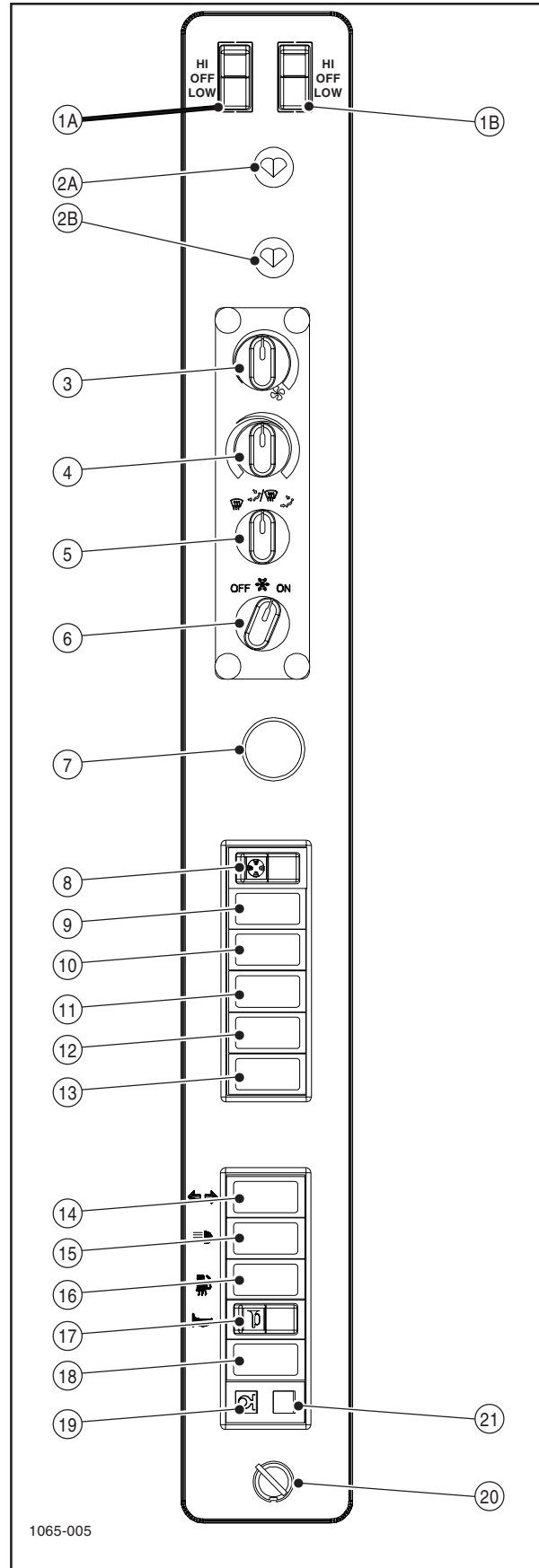
The wiper/washer dial (2A) controls the front windshield wiper. Turning the dial one setting clockwise, operates wiper on a variable delay. The delay is determined by how far the dial is turned, the further clockwise it is adjusted the more frequent the wiper will cycle. The dial can also be set to the low position, which is one setting further clockwise of the delay setting. Turning the dial a setting further clockwise sets the wiper to high. To slow or turn off the wiper, turn the dial counterclockwise until the desired setting is reached.

To operate the washer function, press the dial down. This function sprays washer fluid on the windshield and cycles the wiper, regardless of the dial setting. The fluid reservoir is located in the engine compartment on the left side.

2B. REAR WINDSHIELD WIPER/WASHER

The wiper/washer dial (2B) controls the rear windshield wiper. Turning the dial one setting clockwise, operates wiper on a variable delay. The delay is determined by how far the dial is turned, the further clockwise it is adjusted the more frequent the wiper will cycle. The dial can also be set to the low position, which is one setting further clockwise of the delay setting. Turning the dial a setting further clockwise sets the wiper to high. To slow or turn off the wiper, turn the dial counterclockwise until the desired setting is reached.

To operate the washer function, press the dial down. This function sprays washer fluid on the windshield and cycles the wiper, regardless of the dial setting. The fluid reservoir is located in the engine compartment on the left side.

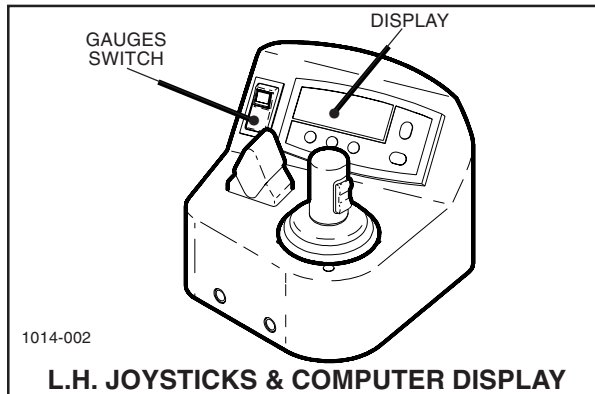




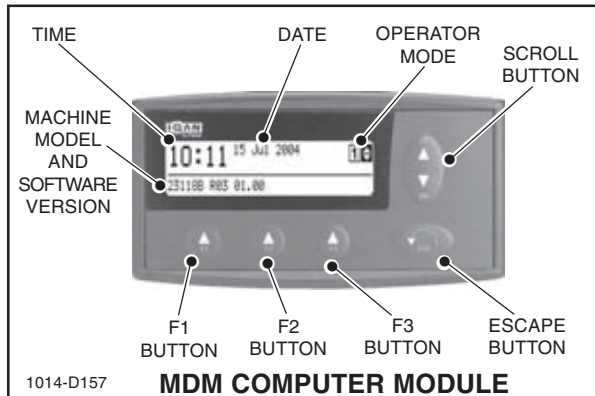
14. COLD IDLE ENGINE SPEED

Press the F1 function button on the display for ENGINE to display Engine Speed, Press F3 COLD IDLE, engine speed will increase to 1200 rpm. This function is to provide a higher idle speed to assist in faster warm up of the engine during cold weather start-up operation.

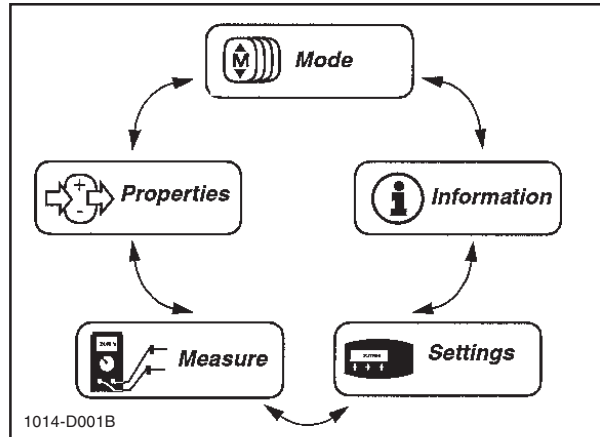
SYSTEM DIAGNOSTICS AND FUNCTION ADJUSTMENT MENUS



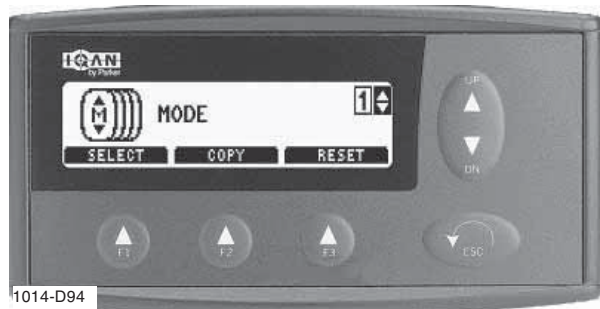
Press the bottom of the GAUGES switch to display the IQAN-MDM system diagnostics and function adjustment menus.



The display should show the current date, time, operator mode, machine model number and software version identification.



Press the ESCAPE button to display one of 5 menus (MODE, INFORMATION, SETTINGS, MEASURE AND PROPERTIES) that access system diagnostics and function adjustment menus. Use the up and down arrow buttons to scroll through the menus. Use the “F1, F2, and F3 buttons to select the highlighted boxes located above the buttons in the LCD display.



1. MODE MENU DESCRIPTION

- A. One of 4 operator modes can be selected. Each operator mode can be djusted by the individual operator.
- B. Operator modes can be copied from one mode to another.
- C. Operator modes can also be reset to factory defaults in this menu.

MIN CURRENT SETTING



1. Use the UP/DN buttons to scroll to the MIN CURRENT adjustment menu. Press F1 SELECT.



2. Use UP/DN buttons to adjust the MIN CURRENT to a value of 250ma.
3. Slowly operate BOOM UP joystick to full on position. The boom should not move.



4. While holding the BOOM UP function ON, use the UP/DN button to increase the MIN CURRENT value until the Boom function just begins moving.



5. While holding the BOOM UP function ON, use the UP/DN button to decrease the MIN CURRENT value until the Boom function just stops moving.
6. Press OK (F1) to save and return to previous menu.

Pressing CANCEL (F2) or ESC returns the display to the previous menu without saving any changed value.

The MIN CURRENT value has now been saved.

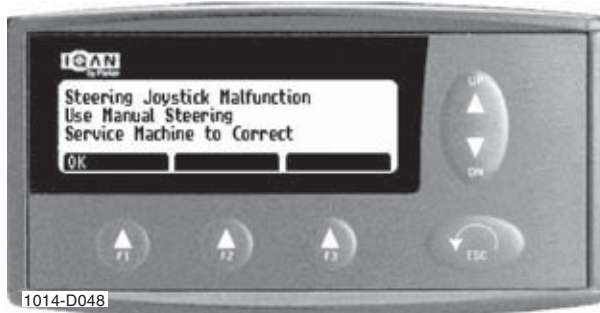
CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- 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

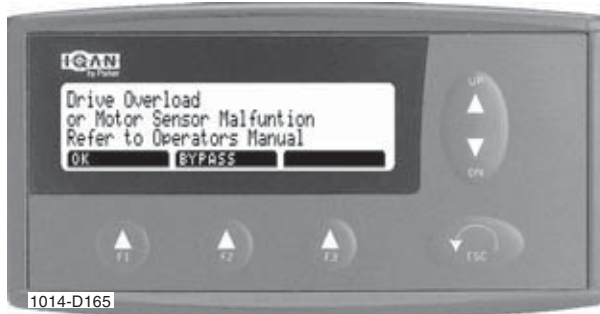


4. STEER CHECK ERROR (CM)

This warning will be displayed, warning light will activate and alarm will sound if dual steering joystick outputs don't match.

This condition has no bypass option. Alarm and message will remain on display and steering function will be disabled until fault is fixed.

When this alarm is activated investigate the cause immediately. Refer to the Electrical and Computer Section of the Service Manual.



5. NO MOTOR SPEED (CM)

This warning will be displayed, warning light will activate and alarm will sound when the drive pump has an output, but the drive motor speed measures 0 RPM.

If the machine is in motion, this condition can be bypassed by holding the pilot reset switch on momentarily to allow machine to be driven temporarily so fault can be fixed. See FUNCTION PARAMETERS SETTINGS earlier in this section to turn alarm OFF.

When this alarm is activated investigate the cause immediately. Refer to the Service Manual Drive Section.



6. ENGINE OVERSPEED (CM)

This warning will be displayed, warning light will activate and alarm will sound if the engine speed exceeds the maximum desired speed.

When this alarm is activated apply the brakes to slow the machine down.



7. MAXIMUM TRAVEL SPEED (CM)

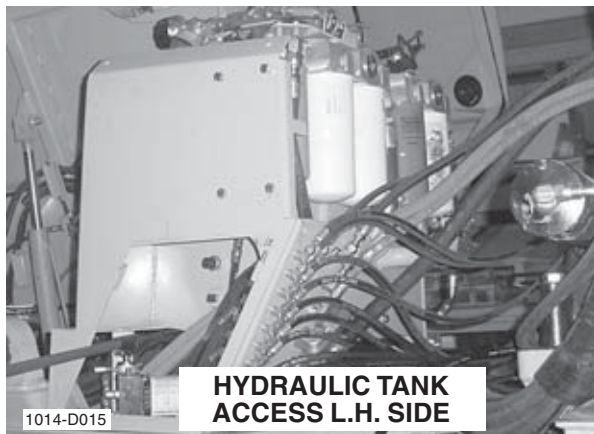
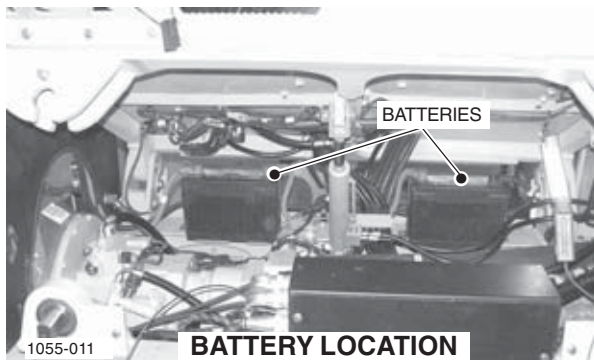
When adjusting the maximum travel speed of the machine, a bar graph appears indicating the current percent of maximum travel speed setting.

This adjustment is used for Travel Crawl Speed setting to control maximum travel speed when travelling over uneven and rough terrain.

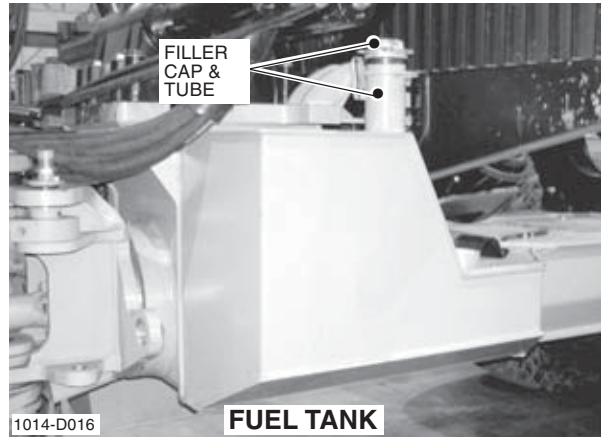
Note: Refer to TRAVEL SPEED SETTING in THIS SECTION.

HYDRAULIC TANK COMPARTMENT

The hydraulic tank is located on the front chassis behind the cab (shown with covers removed).

**BATTERIES**

Two 12 Volt batteries are located in the front chassis under the operator's cab. The batteries are wired in series to make a 24 volt circuit. Access to the batteries can be gained by tilting the cab or through the R.H. access panel. See **TILTING CAB** procedure later in this section.

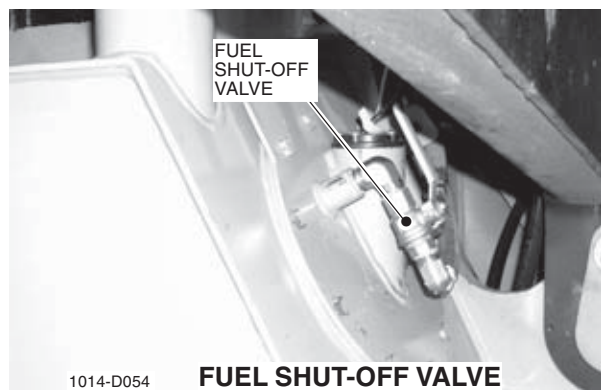
FUEL TANK

The fuel tank is located on the left side of the rear chassis. The filling location is at the top of the tank with a dipstick under the filler cap.

The filler tube also contains a fuel tank filler screen. The dipstick slides through a hole in the side of the filler screen. **DO NOT** drop the dipstick into the filler tube or it will punch a hole in the bottom of the filler screen.

The filler screen should be removed and cleaned every 125 Hours (reach in and lift it out). Replace the screen if it is damaged.

A sending unit is installed and connected to the MDM display unit. The fuel level can be viewed on the MDM display terminal. Tank capacity is 189 liters (50 US gallons).

FUEL SHUT-OFF VALVE

A fuel shut-off valve is installed in the fuel supply line. Turn the handle up to open the valve. Turn the handle counterclockwise 90° to shut the fuel supply off when servicing fuel filter or fuel system. See **Fire Prevention Instructions** in Section 1.

TRAVELLING WITHOUT A LOAD:

Place the crane in the park position and raise the snow blade (if equipped).

1. Set the CRANE/BLADE switch to OFF.
2. Set the TRAVEL DIRECTION switch to FORWARD or REVERSE. Set the TRAVEL SPEED switch to TRAVEL or CRAWL speed setting as required.
3. Set TRANSMISSION GEAR SELECTION switch to First Gear.
4. Operate the drive foot pedal to move the machine.
5. This machine is equipped with a single-axis proportional steering control lever. The speed that the vehicle responds to the steering control lever input will vary, depending on the distance that the steering control lever is moved. When operating on the road, a short movement of the steering control lever will not overcorrect and will steer a reasonably straight course. Operating in the woods requires quick steering changes and this is produced by a larger movement of the steering control lever, which will quickly change the vehicle's direction.
6. Use differential locks sparingly and ONLY when additional traction is required. Never continuously drive the machine with the differential locks on. Serious damage to the axles can result from using the differential locks when they are not needed for additional traction.

**IMPORTANT**

Use differential locks sparingly. Never drive the machine with the differential locks on continuously. Serious damage to the axles can result from using the differential locks when they are not needed for additional

LOADING / UNLOADING OPERATIONS:

Crane and grapple operations should always be performed while seated in the operator's seat.

All crane and grapple controls will return to neutral automatically when released.

**DANGER**

DO NOT operate this machine to lift or move any objects other than what it is designed to lift or move.

Failure to follow the above instructions could result in serious injury or death.

1. Once the machine has been positioned near the loading/unloading site, set the TRAVEL DIRECTION switch to OFF.
2. Rotate the seat (if needed) to get full view of the loading/unloading operation.
3. Set the CRANE/BLADE switch to WORKING RPM position. Engine speed will increase to WORKING SPEED 1450 RPM. The working speed range is adjustable (1250 RPM to 1800 RPM).
4. Operate crane, rotator, and grapple functions to pick up the load, and place it where desired. Refer to LEFT and RIGHT JOYSTICK instructions in THIS SECTION for specific information on crane, rotator, and grapple operating controls. Note that it is most suitable, for balance purposes to grip logs near the middle.
 - A) If the logs loaded in the bunk are accumulating to the top of the load gate extend the load gate by pressing the GATE switch to the UP position. Refer to GATE DOWN/UP in THIS SECTION.
 - B) If the logs are dispersing to the lower portion of the bunks, be sure to retract the load gate by pressing the GATE switch to the DOWN position. This reduces the risk of damage caused by contact between the crane and the load gate. Refer to GATE DOWN/UP in THIS SECTION.

**WARNING**

Do not load logs above the top of the load gate!

5. A) When loading is complete, park the crane on top of the load in such a way that the load restricts the crane from moving side to side.
 - B) When unloading is complete, return the crane in the park position.
6. Set the CRANE/BLADE switch to OFF position.

Tigercat 1045/1055 Forwarder

SECTION 3 - LUBRICATION & MAINTENANCE

JUNE, 2006

Read and understand the entire manual including Safety section prior to operating any equipment.
Read and understand all manuals for any attachments or accessories.

CONTENTS - SECTION 3

- AIR CLEANER
 - CHANGING FILTER ELEMENTS 3.17
 - MAINTENANCE 3.16
 - SERVICING 3.17
 - UNLOADER VALVE 3.16
- AIR CONDITIONING 3.18
- ARTICULATION JOINT 3.15
- AXLE LUBRICATION 3.25
- BELT - ENGINE SERPENTINE 3.26
- CAB
 - LOWERING THE CAB 3.21
 - RAISING THE CAB 3.20
- CAB AIR FILTERS
 - FRESH AIR 3.19
 - RECIRCULATING AIR - A/C UNIT 3.19
- CENTRE JOINT 3.14, 3.15
- CHARGE PRESSURE FILTER-DRIVE PUMP 3.13
- CONTROL POD ON ARMREST, R.H.
- CRANE, ROTATOR AND GRAPPLE MAINTENANCE 3.27
- DRAINING AND REFILLING BOGIE HOUSING 3.26
- DRAINING AND REFILLING DIFFERENTIAL 3.25
- ENGINE HOOD 3.22
- ENGINE SERPENTINE BELT 3.26
- FILTERS
 - CHARGE PRESSURE 3.13
 - FUEL FILTER/WATER SEPARATOR 3.10
 - HYDRAULIC OIL 3.12
 - REMOVE AND REPLACE 3.10
 - RETURN OIL STRAINER 3.14
 - SERVICING GUIDELINES FOR OIL FILTERS 3.13
- FIRE PREVENTION 3.4
- FUEL TANK STRAINER 3.11
- GENERAL 3.4
- HOT WATER SHUT OFF VALVE 3.18
- HYDRAULIC OILS 3.7
- INITIAL PRE-DELIVERY INSPECTION 3.3
- LINK SNUBBER MAINTENANCE 3.27
- MACHINE STARTUP 3.24
- NEW MACHINE MAINTENANCE 3.3
- OSCILLATION JOINT 3.15
- PREVENTIVE MAINTENANCE SCHEDULE 3.3

continued...

IMPORTANT

Filters that are an integral part of the engine (fuel and lubricating oil) should be serviced and replaced according to the engine manufacturer's operation and maintenance manual.

Tier III engines typically use filters with a very fine micron rating. If the fuel supply is dirty, the fuel filter must be replaced more frequently than recommended in the owner's manual. Operating the machine with a clogged fuel filter will result in low engine power. It is also recommended that the fuel/water separator bowl be drained daily.

When installing a new fuel filter, **DO NOT** pre-fill with diesel fuel, or engine fuel pump damage will result. This type of failure is not warrantable by the engine manufacturer.

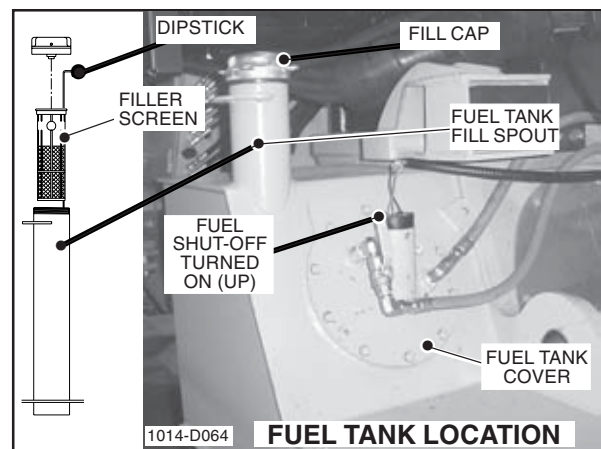
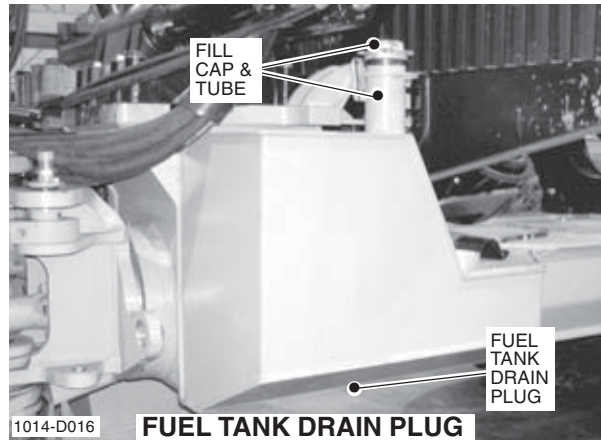
To prolong the operating life of the fuel filter, ensure that the fuel supply storage tank is clean and free of water and that the fuel is pre-filtered prior to adding it to the machine.

FUEL TANK STRAINER

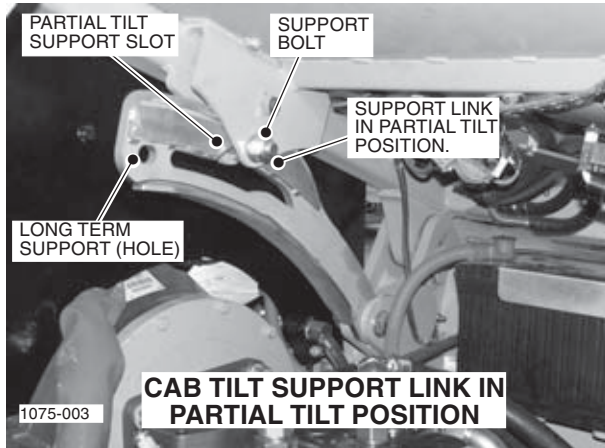
This is a stainless steel fuel strainer, screwed on to the inlet pipe of the engine fuel feed line inside at the bottom of the fuel tank.

Changing or cleaning the strainer:

1. Park machine on level ground, install articulation lock bar, lower the blade (if equipped) and place the crane in the park position, stop engine, remove key, then switch battery disconnect off, and block wheels.
2. Remove filler cap. Install a suitable container below fuel tank, remove drain plug and drain the fuel tank.
3. Remove the cover from the fuel tank and "O" ring from the access hole.
4. Clean any debris from the bottom of the tank and wipe it clean.
5. Remove the fuel strainer using the hex on the end of strainer. Carefully clean the strainer (it may be damaged by rough handling).
6. Check for a buildup of foreign materials where the strainer threads on to the pipe and elbow.



7. Reinstall the strainer using the hex on end.
8. Reinstall fuel tank cover plate with new "O" ring.
9. Reinstall drain plug.
10. Refuel and check for leaks. Start the engine and check for leaks again.



11. For partial tilt, lower cab until the support bolt bottoms in the partial tilt slot of the support link.

NOTE: When using the support link for partial tilt, the support bracket bolt must be bottomed in the partial tilt slot position of the support link.

LOWERING THE CAB

1. Clear the area under the cab and cab path of obstructions and secure all lines and wires.



CAUTION

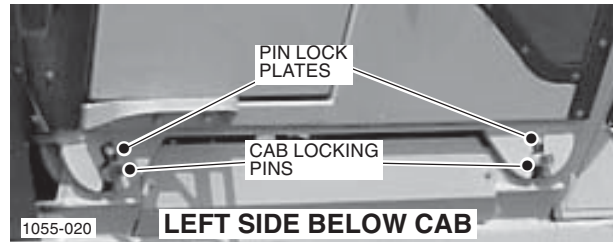
Keep hands away from the locking pin area as the cab is being lowered.

2. Place tilt pump control lever in LOWER position.

NOTE: If the cab is in the partial tilt position, the cab must first be raised to the full tilt position to release the support link. Then it can be lowered. (Otherwise it will lock in the partial tilt position.)

3. Operate pump until the cab is all the way over in the ride position onto the locking pins.

NOTE: When the cab locking lugs are just over the locking pins, rotate the pins so the flat surfaces of the locking pins are horizontal.



4. Place the locking plates back in the slots on the locking pins and tighten the cap screws.
5. Place the cab tilt control lever in the LOWER position and remove tilt pump handle.
6. Place the pump handle back in the storage location in the cab.
7. Close the left side hydraulic tank access door.

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