Tigercat®

TH568 HARVESTING HEAD
OPERATOR'S MANUAL
SERIAL NUMBER 5680101–5681000

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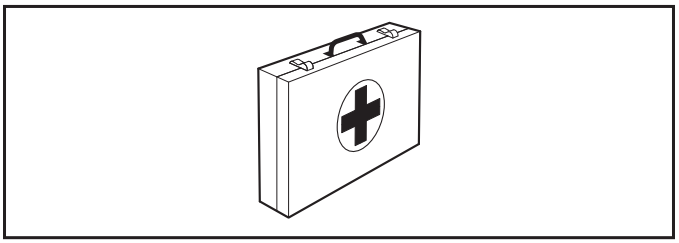
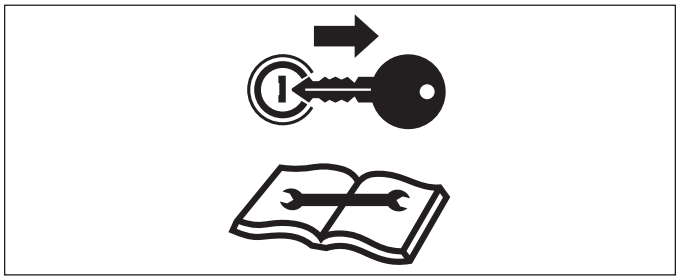
- To reduce risk of fire, completely clean machine of debris daily, particularly around the engine exhaust components. Eliminate hydraulic oil leaks, excess grease, fuel and oil accumulation (including spillage) immediately. Always turn OFF the engine and remove the ignition key before cleaning the machine.
- Maintain a clean cab interior, clear away trash or debris.
- Wash machine completely at every major service.
- Inspect the machine daily for signs of damage or unusual wear, to structures.
- Check for fluid leaks, or faulty operation. Repair or replace malfunctioning parts and systems immediately.
- Check windows and door guards for damage.
- Check protective windows for cracks. A damaged window has reduced strength to stop flying objects. All damaged windows must be replaced with original equipment.
- Check windows for scratching, crazing and cloudiness that could impair clear visibility all around the machine.
- Do not operate the machine with any defective or inoperable components.
- Check all fluid levels.
- Do not operate the machine with any of the exhaust system, safety covers, oil shields, or other devices removed.



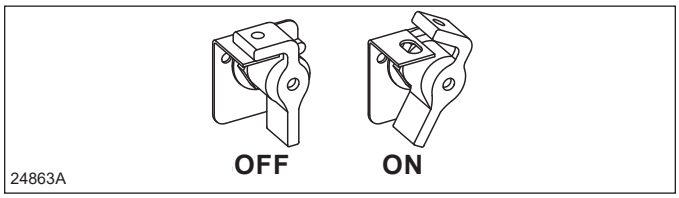
- Keep a first aid kit in an easily accessible location on the vehicle at all times.

SERVICING SAFETY PRECAUTIONS

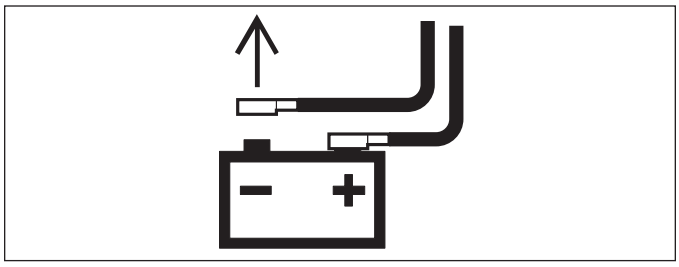
- Conduct maintenance inspections at least as frequently as recommended in SECTION 3.



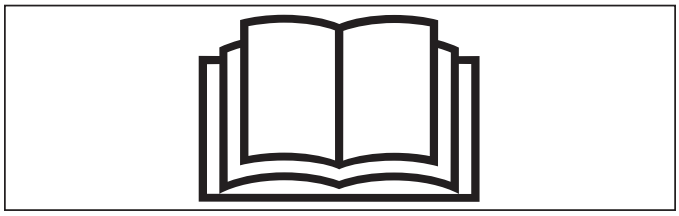
- Read, understand and follow all operating safety precautions specified in THIS MANUAL.



- When servicing or repairing equipment, turn OFF the engine, turn OFF the battery disconnect switch and lock out the switch in accordance with local regulations.



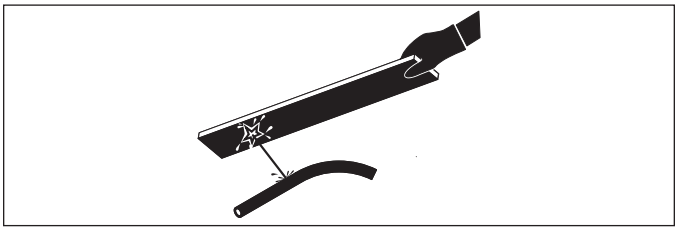
- Before servicing the electrical system, remove the negative (−) battery terminal cable (to the starter motor) from the battery.
- Install a **'DO NOT START ENGINE'** sign on the operator cab door and in the engine compartment when making repairs to the machine.



- Before performing maintenance or repair work on any equipment, consult the manufacturer's instruction manual and follow recommended procedures.
- Release hydraulic pressure on all accumulators on the harvesting head. Follow the specific safety, maintenance, and operating procedures provided by the harvesting head manufacturer.
- Never place any part of your body between the roll 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 rolls. 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 roll arms, delimbing arms, or rolls 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.

⚠ WARNING

Diesel fuel or hydraulic oil under pressure can penetrate the skin and cause serious personal injury, blindness, or death. If any fluid is injected under the skin, it must be surgically removed within a few hours by a doctor familiar with treating this type of injury.



- Never use your bare hand to check for fluid leaks.
- Fluid leaks, under pressure, may not be visible. When searching for leaks, wear work gloves and use a wrench or piece of wood to move hydraulic hoses. Do not grab hold of hydraulic hoses. Wear safety goggles for eye protection.

When fighting a fire:

1. If possible, use a dry chemical fire extinguisher or fire suppression system first.
2. Immediately afterwards use the pressurized water hose supplied with the machine (if applicable) or a pressurized water extinguisher (if available). A fire suppressed by dry chemical may re-ignite from the heat retained by debris or hot machine components in the area. Water cools the area, reducing the chances of re-ignition.
3. Use the fire extinguisher PASS method:

   Pull the safety pin at the top of the extinguisher that prevents the discharge lever from being depressed. Break the plastic seal as the pin is pulled.

   Aim the nozzle at the base of the fire. Do not aim the nozzle at the flames. To put out the fire, the fuel must be extinguished, not the flames. Hose nozzles are often clipped to the extinguisher body. Release the hose before taking aim.

   Squeeze the discharge lever to release the pressurized extinguishing agent. The handle can be released at any time to stop the discharge.

   Sweep from side to side at the base of the fire until the fire is completely out or the fire extinguisher is empty.

Typical Fire Extinguisher Access Port

4. Insert the fire extinguisher nozzle into the appropriate access port and discharge the extinguisher.
5. If it is safe to do so, open the access panels in the area of the fire and aim the extinguisher directly at the base of the flames.
6. If it is impossible to reach an access port or to open a panel or door, discharge the extinguisher through mesh screening or any available opening.
7. Monitor the machine after extinguishing a fire in case of re-ignition; remain until help arrives.

AFTER A MACHINE FIRE

Before returning a machine to operations:

1. Determine the cause of the fire.
2. Complete all necessary repairs.
3. Service and recharge the fire suppression and detection systems as applicable.
4. Report the fire to your dealer and/or Tigercat Industries Inc. by completing an incident report (Tigercat form 5101).

NOTE: Fire detection systems are offered as optional installations on some Tigercat product lines. Please disregard any references made to fire detection systems if not installed on your machine.

NOTE: Dry and wet chemical fire suppression systems are offered as optional installations on some Tigercat product lines. Please disregard any references made to fire suppression systems if not installed on your machine.

CONTROL SYSTEM COMPONENTS

A. CAB ELECTRICAL CONTROL BOX

The electrical control box mounted on the cab wall behind the operator's seat houses the main controller and the joystick input module.

The electrical terminal assembly (E) contains fuses for various circuits, and wiring connections for the main controller and joystick modules.

There are two primary switches on the electrical control box. A red locking switch (F) on the top left of the box, and a black switch (C) with a green LED on the bottom right of the box. The red locking switch is a service disconnect, which must not be switched unless the system has been shut down for over 90 seconds and only power # 8 LED on the main controller is on. The only case for switching the service disconnect is when welding work is required or for long term storage. The switch will isolate the valuable measuring system components. The black switch controls initialization of the system and display.

IMPORTANT !

If welding must be done, shut down the Tigercat D5 measuring system fully as described below. Failure to follow this procedure will result in irreparable damage to valuable measuring system components.

PROCEDURE FOR FULL SYSTEM SHUTDOWN

1. Turn the ignition off.
2. Turn off the battery disconnect (if equipped).
3. Turn off the system switch (C).
4. Wait at least 90 seconds for the computer to back up.
5. Turn off the service disconnect switch (F).

B. D5MC-F (AG060) MAIN CONTROLLER

The main controller is the computer for the complete Tigercat D5 measuring system. The main controller communicates with all other modules via the CAN-BUS, interfaces with the display via DVI and USB cables, and has USB interface for the printer, license key, and memory stick transfers.

D. D5IO48 (AG054) CONTROL HANDLE INPUT MODULE

The control handle input module is located in the electrical control box. This module accepts input from the control handles and communicates with the main controller via CAN 2.

G. PRINTER (OPTIONAL)

This is an optional device for typically printing harvesting related details. It is located in the cab to the right of the operator's seat. The printer connects to the main controller through one of the USB ports.

H. CONTROL HANDLES

Two control handles are used for operator control of machine and harvesting head functions. Control handles and button arrangement vary depending on option selected. See CONTROL HANDLES in this section.

IMPORTANT !

Prior to operating the machine, navigate to the "Keypad Status/Test" page to check the keypad layout and familiarize yourself with the button functions for the current operator.

I. D5 PRIO DISPLAY

The computer display is located in the cab typically on the left side facing the operator. It has a multifunction colour display with touch screen functionality.

J. D5 PRIO PC/OPTIMIZATION DISPLAY

This computer display is located in the cab and used with the Prio PC/Optimization operating system. It has a multifunction colour display with touch screen functionality.

K. HEAD ELECTRICAL BOX

The head electrical box is located on the harvesting head and contains fuses for each module and a terminal strip for making connections between the modules and solenoids on the head.

L. D5IO12 (AG046) INPUT-OUTPUT MODULES

Two input-output modules are attached to the head electrical box that control output to coils for all functions. The modules receive instructions from the main controller via CAN 1. They are active only when the carrier pilot system is active.

M. D5CI12 (AG055) HEAD CONTROLLER

The head controller has inputs for all head sensors and communicates with the main controller and input-output modules via CAN 1. The head controller is active only when the carrier pilot system is active

N. KEYBOARD (OPTIONAL)

This is an optional item used for navigation and data entry into the measuring system. Requires the USB receiver of the keyboard to be installed into one of the USB ports of the measuring system computer.

O. CALIPERS (OPTIONAL)

This is an optional item used for completing control measurements and calibrations. By comparing measurement information recorded by the Tigercat D5 system with measurements made with the calipers, recommendations are made for adjusting the calibration of the harvesting head. Requires the Tigercat D5 Prio PC / Optimization system.

PRESET -

Selects the next lower priority preset selection (generally shorter length). This button can also be assigned as a start key (see Settings > Operating > Feed Start Keys). In this case, pressing the button will select the next lower preset and start the automatic feeding.

PRESET

Selects a specific preset length number. This overrides the current selected preset and only applies to the current feeding cycle (reset when a saw cut is made). This button can also be assigned as a start key (see Settings > Operating > Feed Start Keys). In this case, pressing the button will select the preset and start the automatic feeding.

SPECIES

Selects a specific species number. This button can also be assigned as a start key (see Settings > Operating > Feed Start Keys). In this case, pressing the button will select the species and start the automatic feeding.

SCHEDULED MAINTENANCE

FREQUENTLY

- Check main and top saw bar, chain, and sprocket for excessive wear, cracking, broken teeth, or other damage, sharpness of chain, proper tension, integrity of mounting hardware, etc. Replace saw bar, chain, or sprocket as necessary. Repair or replace any damaged saw-component mounts or hardware.
- Check chain lubrication oil level. Refill as necessary.
- Clean the harvesting head. Remove potentially damaging limbs or sticks, dirt, ice, packed snow, and any other debris.

EVERY 8 HOURS

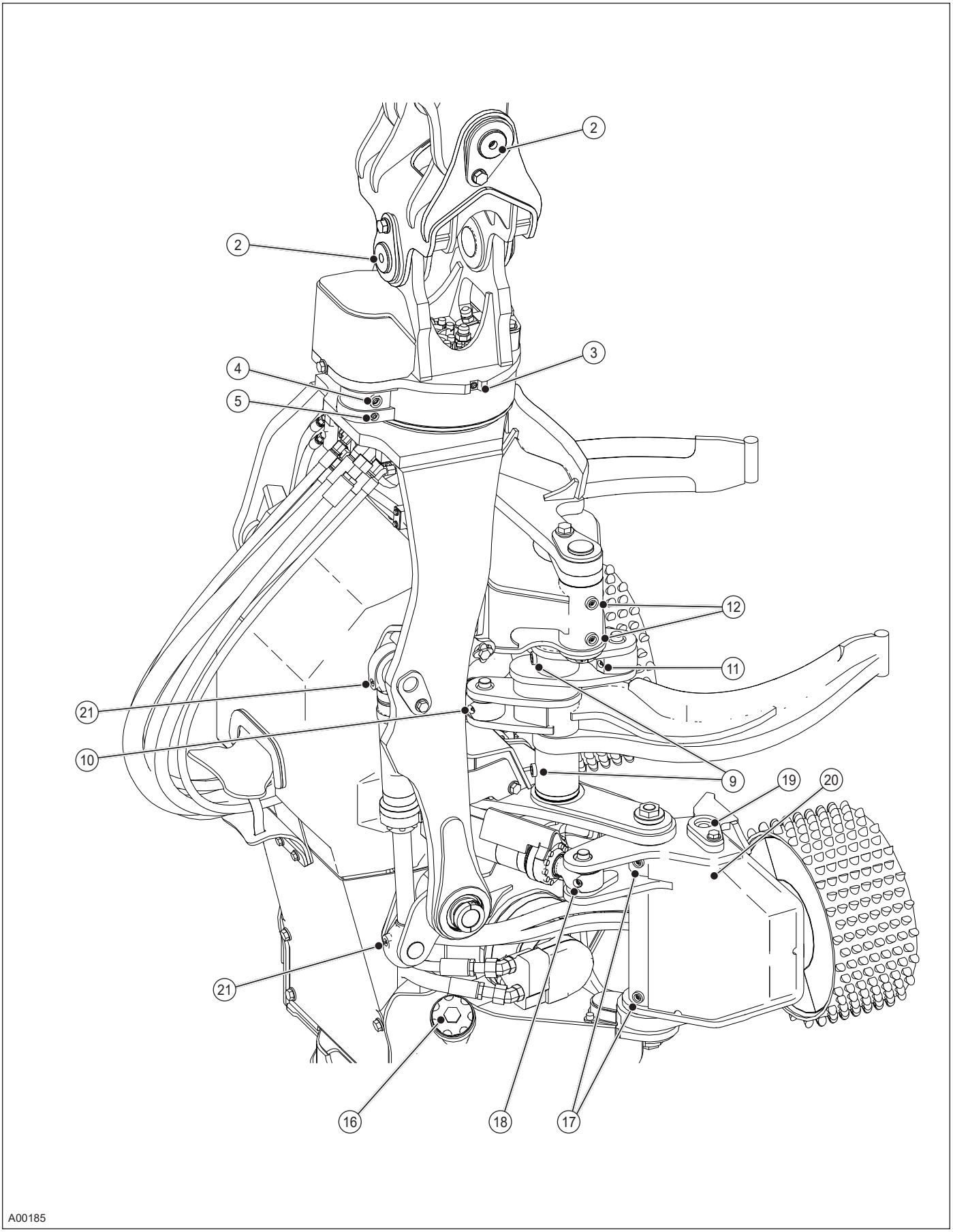
- Perform FREQUENTLY maintenance
- Fill the chain lubrication tank completely with chain oil per the recommended chain oil chart. Clean the area around the fill cap of all debris and dirt.
- Replace main saw chain with a new or sharpened chain if not done in previous 8 hours. Top saw chain replacement depends on frequency of usage or damage. Sharp chains are less likely to break and improve cutting performance. Slightly worn chains require minimal material removal when sharpening and extend chain service life. Excessive material removal when sharpening is an indicator the chain was in service too long before sharpening. Refer to OREGON® MECHANICAL TIMBER HARVESTING HANDBOOK for saw maintenance information.

Check

- For loose nuts, bolts, and fittings and fix as required.
- Knife arms for excessive wear, cracking, or broken parts. Repair or replace components if necessary.
- Measuring equipment and sensors, visually. Ensure they are clean, clear and free of obstacles.
- Valves, motors, cylinders, and all hoses, visually for leaks or wear. Tighten or replace fittings and hoses as necessary.
- Floating front knife to ensure free movement and spring pre-load is positive.
- For any other signs of damage.

Lubricate all grease fittings

- Link / yoke: 3 / 4 fittings – purge
- 360° rotator:
  - Bearing: 2 fittings – 2 shots every 45°.
    NOTE: Overgreasing may cause premature seal failure.
  - Pinion: 1 fitting – 2 shots every 45°
  - Pinion pilot bearing: 1 fitting – 2 shots
- 310° rotator:
  - Bearing: 3 fittings – 2 shots every 45°.
    NOTE: Overgreasing may cause premature seal failure.
  - Hose swivel: 3 fittings – 1 shot
- Knife arm pivots: 4 fittings – purge
- Knife arm cylinder: 2 fittings – purge
- Knife arm timing link: 2 fittings – purge
- Floating front knife pivots: 2 fittings – purge
- Floating front knife spring: 1 fitting – purge
- Measuring wheel arm:
  - Pivot: 2 fittings – purge
  - Cylinder pin: 1 fitting – 2 shots
- Feed wheel arm pivots: 4 fittings – purge
- Feed wheel cylinders: 4 fittings – purge
- Feed wheel arm timing link: 3 fittings – purge
- Feed wheel motor seals: 2 fittings – 4 shots
- Tilt frame cylinder pins: 4 fittings – purge
- Tilt frame pivot pins: 4 fittings – purge
- Main/top saw bearing: 1 fitting each – 4 shots
- Main/top saw cylinder: 2 fittings each – purge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