ME2503, ME3003, ME3503 & ME3703

Compact Excavator

OPERATOR'S MANUAL

Revision G - 12/11

PART #909773

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Mustang ME2503, ME3003, ME3503 and ME3703 Compact Excavator Operator Manual (909773G)

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Sample pages follow. Full manual: machinecatalogic.com

Excavator Component Identification

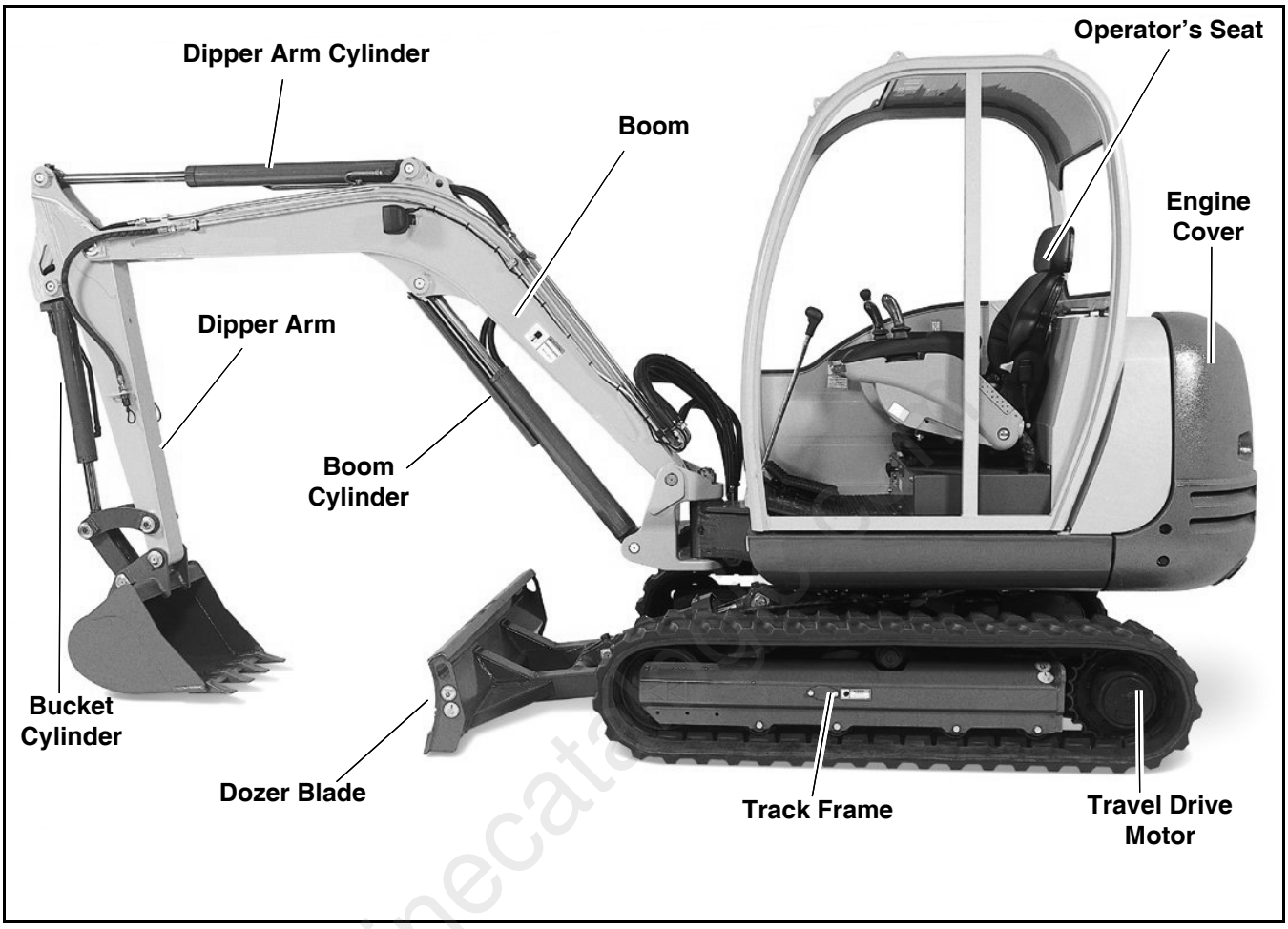

Figure 1-3 Component Names (3503 canopy model shown)

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Stay away from ditches and other weak support surfaces. Be sure the surrounding ground has adequate strength to support the weight of the machine and the load.

If temperatures are changing, be cautious of dark and wet patches when working or traveling over frozen ground.

Stay away from ditches, overhangs and other weak support surfaces. Halt work and install support mats or blocking if work is required in an area of poor track support.

Overhangs are hazardous. Digging under an overhang is dangerous. Know the height and reach limits of the excavator and plan ahead while working. Avoid creating dangerous situations caused by moving around the work site while making excavations. Move to another digging area before large overhangs are formed. Working around deep pits or along high-walls or trenches may require support blocks, especially after heavy rainfalls or during spring thaws. Park the excavator away from overhangs.

Exposed hydraulic hoses could react with explosive force if struck by falling or overhead items. NEVER allow hoses to be hit, bent or interfered with during operation. Extra guards may be required. Replace any damaged hoses.

To avoid tipping, travel with the bucket or attachment as low as possible: 8–12 inches (200–300 mm) from the ground. In an emergency, lower the attachment immediately to the ground to aid stopping the machine.

Sloping terrain requires caution. Dig evenly around the work site whenever possible, trying to gradually level any existing slope. If it is not possible to level the area or avoid working on a slope, reduce the size and cycling rate of the load.

On sloping surfaces, use caution when positioning the excavator prior to starting a work cycle. Stay alert for instability situations. For example, always avoid working the bucket over the downhill crawler tracks when parked perpendicular to the slope. Slow all downhill swing movements and avoid full extensions of the bucket in a downhill direction. Lifting the bucket too high, too close to the machine, while the excavator is turned uphill can also be hazardous.

If the machine becomes unstable and starts to tip, keep the seat belt fastened, hold on firmly and brace yourself. Lean away from the point of impact and stay with the machine. If tipping occurs, DO NOT jump from the machine. The machine is equipped with rollover protection, which can only protect the operator while in the operator's seat. Trying to escape from a tipping machine can result in death or serious personal injury.

Stay alert for people moving through the work area. When loading a truck you should always know where the driver is.

Avoid loading over the cab of a truck, even if the driver is in a safe spot, because someone else could have gone inside.

Slow down the work cycle and use slower travel speeds in congested or populated areas. Use commonly understood signals so that other members of the work crew can warn the operator to slow or halt work in a potentially hazardous situation.

Use a signal person if you can't see the entire work area clearly.

Use a spotter and hand signals to keep away from power lines not clearly visible to the operator.

All personnel at the work site should be aware of assigned individual responsibilities. Communication and hand signals used should be understood by everyone.

Terrain and soil conditions at the job site, approaching traffic, weather-related hazards and any above-or below-ground obstacles or hazards should be observed and monitored by all work crew members.

Be aware that attachments affect the handling and balance of the machine. Adjust the operation of the machine as necessary when using attachments.

Before coupling or uncoupling the hydraulic lines for the attachment, stop the engine and release the pressure in the hydraulic system by moving the joysticks in all directions a couple of times.

DO NOT raise or lower a loaded bucket suddenly. Abrupt movements under load can cause serious instability.

Make sure that no one comes inside the swing radius of the machine. Anyone standing near the track frames, swing frame or the attachment is at risk of being caught between moving parts of the machine.

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Forward Travel

Push both travel control levers or pedals forward. The farther these are moved, the faster the machine will travel. See Figure 3-6.

Reverse Travel

Pull both travel control levers or pedals back. The farther these are moved, the faster the machine will travel. See Figure 3-6.

Turning During Travel

Move one control lever or pedal farther than the other one. To turn left while moving forward, move the right control lever farther forward; to turn right while moving forward, move the left control lever farther forward. See Figure 3-6.

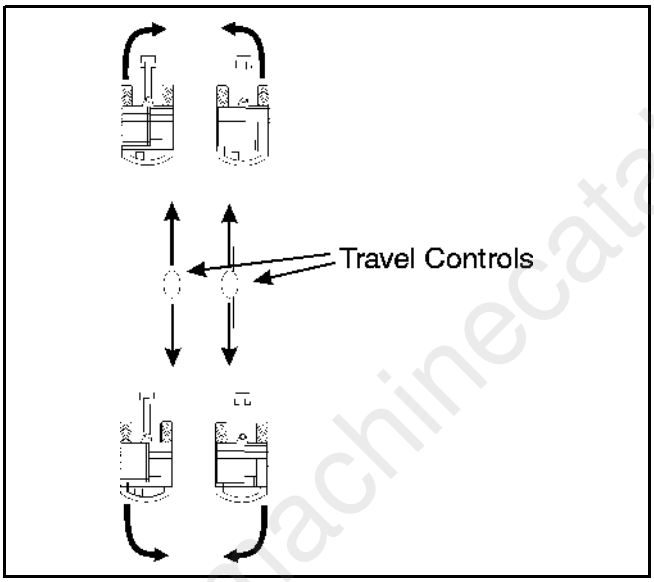

Figure 3-6 Travel Controls

Spin Turn

Move the levers in opposite directions to spin the machine on its axis. To spin turn left, move the right control lever forward while pulling the left control lever to the rear; to spin turn right, move the left control lever forward while pulling the right control lever to the rear. See Figure 3-6.

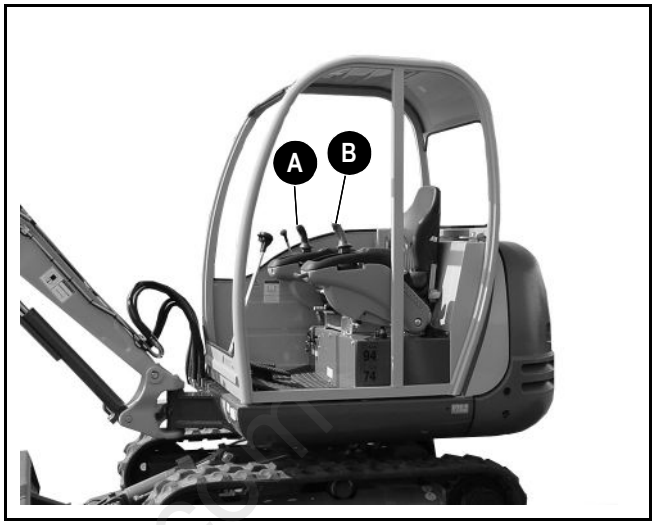

Figure 3-7 Operator's Seat and Joystick Controls

ISO/SAE Selector Valve

Underneath the floor mat is the SAE/ISO-pattern joystick controls. This machine has been set at the factory for SAE-pattern standard operation. If the machine does not function according to the decals and instructions in this manual, move the selector valve to the other position. See Figure 3-8.



Figure 3-8 SAE/ISO Control Selector Valve

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Proper Digging Techniques

Proper Bucket Position

Move the flat side of the bucket so it is parallel to the ground (1, Figure 3-37).

IMPORTANT

Positions 2 and 3 in Figure 3-37 show improper positions for using the bucket. Position 2 forces the bucket downward into the ground, slowing down work and subjecting the engine and hydraulic pump to overloading.
Position 3 forces the bucket upward toward the ground surface, reducing productivity because of smaller loads being dug.

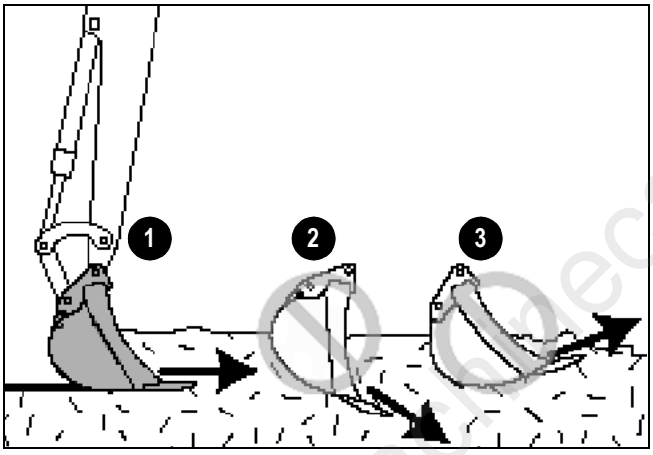

Figure 3-37 Proper Bucket Position

Proper Digging Technique

1. Lower the bucket into the ground (4, Figure 3-38).
2. After the bucket penetrates the ground, adjust it so the flat side of the bucket is parallel to the ground (5, Figure 3-38).
3. Pull the bucket towards the excavator by:
   a. Moving the dipper arm toward the excavator, and...
   b. Lowering the boom.
4. After the bucket is sufficiently filled:
   a. Continue moving the dipper arm toward the excavator,
   b. Extend the dipper arm cylinder so the bucket is tilted upward (6, Figure 3-38), and...
   c. Raise the boom.

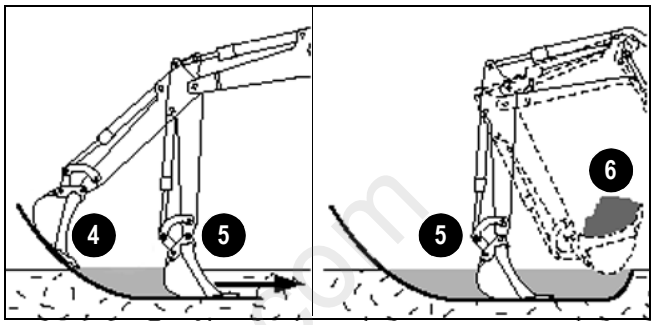

Figure 3-38 Proper Digging Technique

Trench Excavating

Trench excavating is most efficient when the machine tracks are parallel to the line of the trench (Figure 3-39). For larger trenches, excavate each side first and then the center.

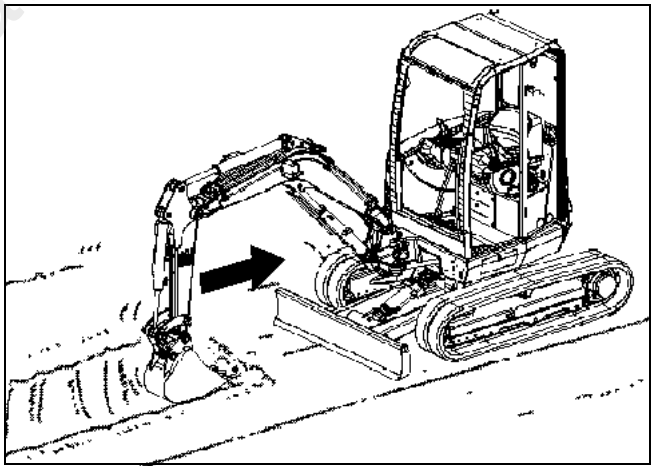

Figure 3-39 Efficient Trench Excavating

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CHAPTER 4 – MAINTENANCE

GENERAL INFORMATION

⚠ WARNING

Read and understand this entire manual before operating and/or servicing the machine. Follow warnings and instructions for operation and maintenance. Check for correct function after adjustments or maintenance. Failure to follow instructions can result in injury or death.

⚠ WARNING

Be sure you are familiar with all safety devices and controls before operating or servicing the machine. Know how to stop before starting. The machine is designed for use only with approved accessories or referral attachments. Manitou Americas, Inc. cannot be responsible for safety if the machine is used with non-approved attachments.

⚠ WARNING

The hydraulic reservoir is under pressure. Avoid contact with leaking hydraulic fluid and diesel fuel under pressure because they can penetrate the skin and eyes.

Care and Servicing

Care and servicing have a significant influence on the operational condition and the service life of the machine.

Use of lubricants not corresponding to the manufacturer's recommendations may invalidate warranty claims.

More frequent servicing, other than the recommended intervals, may be required under extreme conditions (extremely dusty or hot conditions).

Always dispose of waste lubrication oils and hydraulic fluids according to environmental laws or take to a recycling center for proper disposal. **DO NOT** pour fluids onto the ground or down a drain.

DO NOT power-wash the main hydraulic pumps and controls, throttle solenoids and sealed bearings. High pressure water can be forced through seals and trapped within these components, causing premature failure.

The operating pressure settings of the hydraulic system should only be adjusted by trained, qualified personnel. If malfunctions are caused by unauthorized alteration of operating pressure settings, all warranty responsibilities of the manufacturer are invalidated.

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Windshield Washer Fluid

1. Turn off the engine.
2. Pull the valve cover latch handle and open the hydraulic valve cover.
3. Open the windshield washer tank cover (1, Figure 4-22) and fill the tank with windshield washer fluid.
4. Close the windshield washer tank cover securely.
5. Close and latch the hydraulic valve cover.

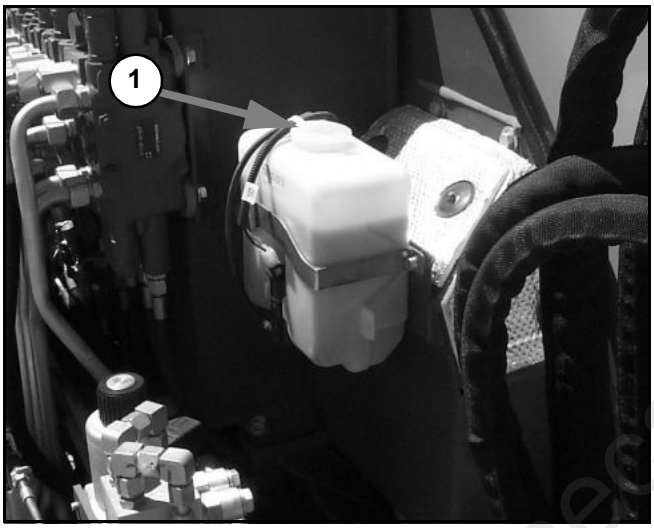

Figure 4-22 Windshield Washer Tank

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