TELEHANDLERS

638 Telehandler Operator's Manual

#908469

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Mustang Manufacturing Company, Inc., a Gehl® Company

Mustang 638 Telehandler Operator Manual

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Machine: Telehandler

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Main contents

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- Specifications
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Sample pages follow. Full manual: machinecatalogic.com

Chapter 3

CHECKLISTS

PRE-DELIVERY

The following Checklist is an important reminder of valuable information and inspections that MUST be made before delivering the Telehandler to the Customer. Check off each item after prescribed action is taken.

✔ Check that:

- ❑ NO parts of machine have been damaged in shipment. Check for such things as dents and loose or missing parts; correct or replace components as required.
- ❑ Battery is securely mounted and not cracked. Cable connections are tight. Electrolyte at proper level.
- ❑ Cylinders, hoses and fittings are not damaged, leaking or loosely secured.
- ❑ Oil, fuel and air filters are not damaged, leaking or loosely secured.
- ❑ All grease fittings have been properly lubricated and no fittings are missing; see LUBRICATION chapter of this manual.
- ❑ Wheel nuts are torqued to 450 ft-lbs (610 Nm).
- ❑ Tires are inflated to 70 psi (480 kPa) cold.
- ❑ Hydraulic system reservoir, engine crankcase, engine coolant, transmission and axles are filled to the proper operating fluid levels.
- ❑ All adjustments have been made to comply with the settings given in this manual and in the separate engine manual.
- ❑ All guards, shields and decals are in place and securely attached.
- ❑ Model and Serial Numbers for this unit are recorded in space provided on this page and page 1.

Start the machine and test-run the unit while checking that proper operation is exhibited by all controls.

✔ Check that:

- ❑ All indicators (lamps, switches, etc.) function properly.
- ❑ All hand and foot controls operate properly.
- ❑ Boom, Quickattach System with attachment tool and frame level control all function properly.
- ❑ No hydraulic system leaks when under pressure.
- ❑ Listen for abnormal noises or vibrations; if detected, determine their cause and repair as necessary.

I acknowledge that pre-delivery procedures were performed on this unit as outlined above.

_____
Dealership's Name

_____
Dealer Representative's Name

_____
Date Checklist filled-out

_____
Machine Model# Machine Serial # Engine Serial #

DELIVERY

✔ Check that:

The following Checklist is an important reminder of valuable information that MUST be passed on to the Customer at the time the unit is delivered. Check off each item as you explain it to the Customer.

- ❑ Review with the Customer the contents of the EMI SAFETY MANUAL and this manual for the following:
- ❑ The *Index* at the back, for quickly locating topics;
- ❑ The SAFETY; INDICATORS AND CONTROLS; and OPERATION AND ADJUSTMENTS chapters for information regarding safe use of the machine.
- ❑ The LUBRICATION, SERVICE AND STORAGE chapters for information regarding proper maintenance of the machine. Explain that regular lubrication and maintenance are required for continued safe operation and long life.
- ❑ Give this Operator's Manual and the EMI Safety Manual to the Customer and instruct them to be sure to read and completely understand its contents BEFORE operating the unit.
- ❑ Explain that the Customer MUST consult the Engine Manual (provided) for related specifications, operating adjustments and maintenance instructions.
- ❑ Completely fill out the Owner's Registration, including Customer's signature, and return it to the Company.

_____
Customer's Signature

_____
Date Delivered

(Dealer's File Copy - Remove at Perforation)

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SAFETY



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WARNING

BEFORE STARTING ENGINE

FASTEN SEAT BELT

UNSTABLE TERRAIN OR MISUSE OF THE MACHINE CAN CAUSE A ROLLOVER. DO NOT JUMP, HOLD TIGHT AND LEAN AWAY FROM FALL, KEEP SEAT BELT FASTENED AT ALL TIMES.

FAILURE TO HEED WARNING COULD RESULT IN DEATH OR SERIOUS INJURY.

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WARNING

RIDER INJURY HAZARD.

ABSOLUTELY NO RIDERS ALLOWED.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

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WARNING

- REARWARD TILT AND TRANSPORT HAZARD.
- DO NOT TILT TRUSS BOOM OR WINCH REARWARD MORE THAN 45° WHEN MAIN BOOM IS ELEVATED ABOVE 45°.
- DO NOT TRANSPORT MATERIAL WITH TRUSS BOOM OR WINCH. SEE OPERATOR'S MANUAL.
- FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

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WARNING

BEFORE OPERATING READ AND FULLY UNDERSTAND THE OPERATOR'S MANUAL AND LOAD CHARTS.

ALWAYS START AND OPERATE THIS MACHINE SEATED ON THE SEAT.

BE SURE ATTACHMENT IS IN LOCKED POSITION BEFORE OPERATING MACHINE.

SET PARK BRAKE AND PUT TRANSMISSION IN NEUTRAL BEFORE RAISING OR EXTENDING BOOM.

USE ONLY FRONT WHEEL STEER FOR HIGH SPEED TRAVEL.

IF BRAKE FAILURE LAMP ILLUMINATES DURING NORMAL OPERATION, FOLLOW MANDATORY SAFETY SHUTDOWN PROCEDURE.

NEVER LEAVE OPERATOR'S SEAT WITH BOOM IN ELEVATED POSITION.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

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DANGER

PERSONAL INJURY HAZARD.

DO NOT USE THIS MACHINE AS A PERSONLIFT, OR FIT MACHINE WITH ANY FORM OF PERSONNEL WORK PLATFORM.

FAILURE TO HEED WILL RESULT IN DEATH OR SERIOUS INJURY.

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PARKING BRAKE

WARNING

AN UNATTENDED MACHINE CAN MOVE OR ROLL.

SET PARKING BRAKE, LOWER CARRIAGE OR ATTACHMENT TO GROUND BEFORE LEAVING MACHINE.

FAILURE TO HEED COULD RESULT IN DEATH OR SERIOUS INJURY.

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Parking Brake: Functions as both a parking brake and emergency brake. The parking brake handle is linked by a cable to a brake assembly on the transmission output shaft.

To adjust the tension, turn the knob on the top of the brake lever until a pull effort on the hand lever of 20 lbs. (89 N) is achieved.

⚠ WARNING

Unattended machine hazard.

Set parking brake and lower attachment tool to ground before leaving machine. An unattended machine can move or roll and cause death or serious injury to operator or bystanders.

Periodically check the parking brake tension and adjust, if required, to maintain adequate holding power. Always be sure the parking brake lever is off when resuming machine operation.

The parking brake may be used as an emergency stopping system on relatively level terrain should the service brakes fail. When properly adjusted and maintained it meets ANSI test requirements providing 35% of service brake performance at 20 lb (89 N) hand lever effort.

Travel Direction Selector: This lever is used to change travel direction (forward or reverse). The selector MUST be in N (Neutral) position before the engine will start.



Position **"F"** (FORWARD)
Position **"N"** (NEUTRAL)
Position **"R"** (REVERSE)

NOTE: *Backup alarm automatically sounds with travel lever in reverse.*

IMPORTANT: *Care should be taken when downshifting or reversing, because damage to the transmission can occur if shifting is forced or attempted at too high a speed. Allow engine RPM to slow before any downshift or directional change is attempted.*

Speed Range Selector: This lever, located to the left end of the dash panel area, is used to change the transmission speeds between low and travel range.

Position **"3"** TRAVEL RANGE
Position **"2"** MEDIUM RANGE
Position **"1"** LOW RANGE

FLOOR AND SEAT AREA

Throttle Pedal: This is right-foot operated and controls the engine RPM to match increased power requirements. Pushing down on the pedal increases the RPM. Letting up on the pedal decreases RPM.

Service Brake Pedal: Depressing this pedal hydraulically activates the internal braking mechanism of the front and rear axles to all four wheels.

Brake Fluid Reservoir: The reservoir is located under the hinged seat mounting section. With rear bolts removed, this section may be tilted forward to check fluid level.

Seat Positioning: The seat is mounted on rails for forward or rearward repositioning to accommodate operator's size and comfort. A spring-loaded latch handle under the front of the seat activates the adjustment mechanism.

RIGHT SIDE PANEL

These controls and indicators are used to position the frame, boom, and attachment. Graphic symbols on the side panel illustrate the control actions.

Frame Leveling Joystick: This may be tilted slowly 10º to the left or right to level the frame and boom in relation to the ground. Position the lever to the left to tilt to the left. Position the lever to the right to tilt to the right.

⚠ WARNING

DO NOT attempt to correct the frame level condition with the boom raised or extended. Only level the machine while a complete stop with the boom fully retracted and the attachment raised just enough to clear the ground.

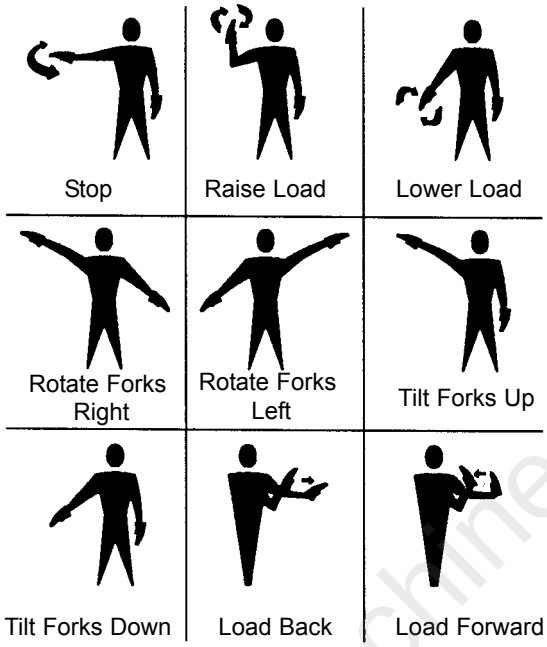
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⚠ WARNING

DO NOT level the frame with the boom raised or extended. Only level the frame while stopped, and with the boom fully retracted and the attachment tool raised just enough to clear the ground.

Traffic Flow Patterns

Know and understand the traffic flow patterns of your jobsite and also know all Telehandler hand signals for safety. Utilize signalmen and make sure you can see the signalman and acknowledge the signals given.



Safety Hand Signals

The backup alarm automatically sounds with the direction lever in reverse. Care should be taken when downshifting or reversing as damage to the transmission can occur if shifting is forced or attempted while traveling.

When ramps must be utilized in transporting loads with the machine, the following are the minimum widths for safe travel:

Compacted dirt, gravel, etc.	12 ft. (3.6 m)
Woodboard, concrete, etc.	10 ft. (3.0 m)

Permanent aisles, roadways or passageways, floors and ramps should be defined in some fashion or marked. Permanent or temporary protrusion of loads, equipment, material and construction facilities into the usual operating area should be guarded, clearly and distinctively marked, or clearly visible.

Maintain a safe distance from the edge of ramps, platforms or other similar working surfaces.

Controlled lighting of adequate intensity should be provided in operating areas. Where operating conditions indicate, the operator/user is responsible for having the machine equipped with lights.

Provision shall be made to prevent trucks, semi-trailers and railroad cars from being moved during loading and unloading.

Wheel stops, parking brakes, or other recognized positive means are to be used to prevent movement during loading and unloading.

DO NOT move railroad cars or trailers with the Telehandler.

DO NOT use the boom and attachment for leverage to push the machine out of mud.

IMPORTANT: *DO NOT lower boom at high engine RPM when attachment tool is at maximum rearward tilt. Damage to slave cylinders may result.*

GENERAL LOAD HANDLING

NEVER attempt to work controls except from the operator's seat. NEVER jerk or use fast movements. Avoid sudden stops, starts or changes in direction.

Operation of the hydraulic system depends on engine speed and the distance the controls are moved. When operating these controls it is important to develop a technique called "feathering." Feathering the control means you start the desired motion by moving the control away from neutral a small amount. After movement has started, the control can be eased to full power. Use the same technique to stop the motion.

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⚠ WARNING

DO NOT smoke or allow any open flames in the area while checking or servicing hydraulic, battery or fuel systems; all contain highly flammable liquids or explosive gases which can cause an explosion or fire if ignited.

Wear a face shield when you disassemble spring-loaded components or work with battery acid. Wear a helmet or goggles with special lenses when you weld or cut with a torch.

When working beneath a raised machine, always use blocks, jack-stands or other rigid and stable supports. Wear appropriate protective clothing, gloves, shoes. Keep feet, clothing, hands and hair away from moving parts.

Always wear safety glasses or goggles for eye protection from electric arcs from shorts, fluids under pressure, and flying debris or loose material when the engine is running or tools are used for grinding or pounding.

NEVER weld on bucket, forks, boom, support frame or ROPS/FOPS without the consent of the manufacturer. These components may be made with metals that require special welding techniques, or with designs that do not allow weld repairs. NEVER cut or weld on fuel lines or tanks.

If repair welding is ever required, BE SURE to attach the ground (-) cable from the welder as close as possible to the area to be repaired. Also, remove battery positive (+) terminal connection before welding.

Choose a clean, level work area. Make sure you have sufficient room, clearances, and adequate ventilation. Clean the walking and working surfaces. Remove oil, grease and water to eliminate slippery areas. Utilize sand or oil absorbing compound, as necessary, while servicing the Telehandler.

Before starting inspection and repair, move the machine onto a level surface, shut down engine, and release all hydraulic pressure. Always block the boom securely, or lower it to full ground contact. Place all controls in neutral.

Block the wheels. Remove the ignition key. Remove only guards or covers that provide needed access. Wipe away excess grease and oil.

Excessively worn or damaged parts can fail and cause injury or death. Replace any cracked or damaged parts. Care should be taken to assure that all replacement parts are interchangeable with original parts and of equal quality.

Use care not to damage machined and polished surfaces. Clean or replace all damaged or painted-over plates and decals that cannot be read.

⚠ WARNING

NEVER leave guards off or access doors open when the machine is unattended. Keep bystanders away if access doors are open.

Service Every 10 Hours or Daily

After servicing, check the work performed, no parts left over, etc. Install all guards and covers.

CHECK FUEL TANK LEVEL

After operation each day, the fuel tank should be filled to prevent water from condensing in the tank. To fill, remove the filler cap and add fuel.

A drain plug is provided in the bottom of the fuel tank for removing condensation and other foreign materials. Open the plug and allow water and fuel to drain into a container until only clear fuel is flowing from the tank.

CHECK FUEL FILTER

NOTE: *The fuel filter will require occasional replacement to maintain a clean and adequate fuel flow for maximum engine horsepower. The frequency of filter replacement will be determined by the cleanliness of available fuel, the care used in storing fuel supplies and the operating conditions in which the machine is used.*

Small amounts of water can be drained from the fuel filter. The drain plug should be removed weekly to drain off water accumulation until clear fuel is flowing from the outlet.

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CHECK WHEEL NUT TORQUE

On new machines, or any time a wheel has been removed, re-torque until 450 ft-lbs (610 Nm) is maintained.

⚠ WARNING

Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should service and mount tires. To avoid possible death or serious injury, follow the safety precautions below:

1. BE SURE the rim is clean and free of rust.

2. Lubricate both the tire beads and rim flanges with a soap solution. DO NOT use oil or grease.

3. DO NOT place your fingers on the tire bead or rim during inflation. Use a clip-on tire chuck with a remote hose and gauge, which allows you to stand clear of the tire while inflating it.

4. NEVER inflate beyond 35 PSI (240 kPa) to seat the beads. If the beads have NOT seated by the time the pressure reaches 35 PSI (240 kPa), deflate the assembly, reposition the tire on the rim, relubricate both parts and re-inflate. Inflation pressure beyond 35 PSI (240 kPa) with unseated beads may break the bead or rim with explosive force sufficient to cause death or serious injury.

5. After seating the beads, adjust the inflation pressure to the recommended operating pressure listed.

6. DO NOT weld, braze, or otherwise attempt to repair and use a damaged rim.

CHECK INSTRUMENTS OPERATION

Allow the engine to warm up for about five minutes before beginning operation. Indicator lamps should be OFF and gauges should register normal readings. Tilt the frame from side to side with the frame leveling control and note the angle indicator movement.

CHECK GENERAL MACHINE OPERATION AND CONDITION

Are any decals missing or damaged? Are all guards, shields and covers in place? Do all controls function smoothly and properly? Are there any abnormal vibrations or noises? Are any hose or fitting connections leaking? Is the engine exhaust color normal (light grey)?

Service Every 50 Hours or Weekly

LUBRICATE GREASE POINTS

Refer to the LUBRICATION chapter of this manual for weekly grease fitting locations and other related details.

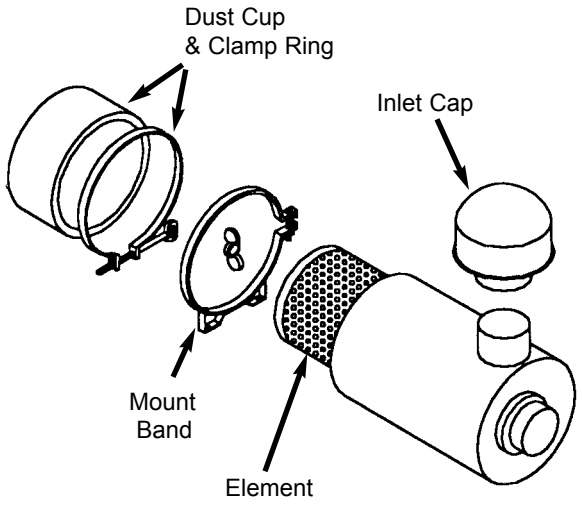
100 Hours (New Machine Only)

The following initial oil and filter changes should be made at this time on a new machine. Thereafter these changes should be made at the regular maintenance schedule listed. Refer to those schedules for the necessary procedures.

Engine Oil & Filter	(250 Hours)
Transmission Oil & Filter	(1000 Hours)
Hydraulic Oil Filter	(1000 Hours)

Service Every 250 Hours

NOTE: *Perform all other service requirements up to this point, as well as the following:*



Air Cleaner Assembly

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Chapter 9

DECAL LOCATIONS

GENERAL INFORMATION

CAUTION

ALWAYS read and follow the safety precautions on decals. Replace decals if they are damaged, or if the unit is repainted. If repainting, BE SURE that all applicable decals are affixed in their proper locations.

Decal locations information is provided to assist in the proper selection and application of new decals, in the event the original decals become damaged or the machine is repainted.

For correct replacement of decals compare the location illustrations to your machine before starting to refinish the unit. Check off each required decal using the illustration reference number to find the part number, description and quantity in the list. Refer to the appropriate illustrations for replacement locations.

NEW DECAL APPLICATION

Before applying the new decals, surfaces must be free from dirt, dust, grease and other foreign material. To apply a solid-formed decal, remove the smaller portion of the decal backing paper and apply this part of the exposed adhesive backing to the clean surface while maintaining proper position and alignment. Slowly peel off the other portion of the backing paper while applying hand pressure to smooth out decal surface. To apply a die-cut decal, first remove the backing paper. Then, properly orient and position the decal onto the clean mounting surface. After the decal is firmly applied and smoothly pressed down, remove the front covering paper.

PAINT FINISH

Use this list to order paint for refinishing:

420-35479	1 (12 oz. Spray Can) Yellow
420-35480	One Quart Yellow
420-35498	One Gallon Yellow
420-36117	1 (12 oz. Spray Can) Gray
420-36229	One Quart Gray
420-36230	One Gallon Gray

Decal Kits

L500588	Model 638

NOTE: *Decals may be purchased in kits or individually.*

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Torque Specifications

Use these torque values when tightening Mustang hardware (excluding: locknuts and self-tapping, thread-forming and metal screws) unless otherwise specified.

Unified National Thread	Grade 2		Grade 5		Grade 8	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
8-32	19*	14*	30*	22*	41*	31*
8-36	20*	15*	31*	23*	43*	32*
10-24	27*	21*	43*	32*	60*	45*
10-32	31*	23*	49*	36*	68*	51*
1/4-20	66*	50*	9	75*	12	9
1/4-28	76*	56*	10	86*	14	10
5/16-18	11	9	17	13	25	18
5/16-24	12	9	19	14	25	20
3/8-16	20	15	30	23	45	35
3/8-24	23	17	35	25	50	35
7/16-14	32	24	50	35	70	55
7/16-20	36	27	55	40	80	60
1/2-13	35	35	75	55	110	80
1/2-20	40	40	90	65	120	90
9/16-12	55	55	110	80	150	110
9/16-18	60	60	120	90	170	130
5/8-11	75	75	150	110	220	170
5/8-18	85	85	180	130	240	180
3/4-10	130	130	260	200	380	280
3/4-16	150	150	300	220	420	320
7/8-9	125	125	430	320	600	460
7/8-14	140	140	470	360	660	500
1-8	190	190	640	480	900	680
1-14	210	210	710	530	1000	740

Metric Course Thread	Grade 8.8		Grade 10.9		Grade 12.9	
	Dry	Lubed	Dry	Lubed	Dry	Lubed
M6-1	8	6	11	7	13.5	10*
24M8-1.25	19	14	27	20	32.5	24*
M10-1.5	37.5	28	53	39	64	47
M12-1.75	65	48	91.5	67.5	111.5	82
M14-2	103.5	76.5	145.5	108	176.5	131
M16-2	158.5	117.5	223.5	165.5	271	200

* *All torque values are in lb-ft except those marked with an * which are in lb-in.*
For metric torque value (Nm) multiply lb-ft x 1.355 or lb-in value x 0.113.

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