1750RT/1750RT NXT2

Tier 4i Engines – SN 30981 - 131000
Tier 4 Engines – SN 131201 and Up

2100RT/2100RT NXT2

Tier 4i Engines – SN 40501 - 241000
Tier 4 Engines – SN 241101 and Up

2500RT

Tier 4 Engines – SN 80251 and Up

Compact Track Loaders

OPERATOR'S MANUAL

PART #50940361

Revision B - 11/15

(English - Original Instructions)

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Mustang 1750RT, 2100RT and 2500RT (incl. NXT2) Compact Track Loader Operator Manual (50940361B)

Document type: Operator Manual (operation, controls, safety and routine maintenance)

Brand: Mustang

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Machine: Compact Track Loader

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Language: English

Main contents

- Delivery Checklists
- Introduction
- Safety
- Specifications
- Controls
- Operation
- Maintenance
- Troubleshooting
- Schematics
- Index
- EC Declaration of Conformity
- Torque Specifications

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Sample pages follow. Full manual: machinecatalogic.com

- Exhaust fumes can kill. Do not operate the machine in an enclosed area without adequate ventilation. Internal combustion engines deplete the oxygen supply within enclosed spaces and may create a serious hazard.
- Operators should also be aware of any open windows, doors or duct work into which exhaust gases may be carried, exposing others to danger.
- Never allow anyone under a raised lift arm. Lowering the lift arm or a falling load can result in death or serious personal injury.
- Avoid slowing suddenly while carrying a load. Sudden slowing can cause the load to fall off the attachment, or cause the machine to tip over.
- Slow down the work cycle and use slower travel speeds in congested or populated areas. Use commonly understood signals so 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 cannot see the entire work area clearly, in high traffic areas and whenever the operator's view is not clear.
- Stay alert for people moving through the work area. When loading a truck, the operator should always know where the driver is.
- To cross railroad tracks, ditches, curbs or similar surfaces, cross perpendicularly and drive slowly.
- 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.
- Do not move the lift arm or attachment during transport. Lock out the lift arm controls during transport.
- Do not use the machine in an environment where the hot muffler could present a fire hazard, such as hay or straw storage facilities.
- Machine stability is affected by:
  - Load being carried
  - Height of the load
  - Machine speed
  - Abrupt control movements
  - Driving over uneven terrain

  DISREGARDING ANY OF THESE FACTORS CAN CAUSE THE MACHINE TO TIP OR CAN THROW THE OPERATOR OUT OF THE SEAT OR MACHINE, WHICH COULD RESULT IN DEATH OR SERIOUS INJURY. Therefore, ALWAYS operate the machine only with the seat belt fastened. Do not exceed the machine's rated operating capacity (see "Payloads/Capacities" on page 38). Carry the load low. Move the controls smoothly and gradually, and operate at speeds appropriate for the conditions.
- 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.
- Do not drive into materials at high speeds to avoid being thrown forward and injured.
- To avoid tipping, travel with the bucket or attachment as low as possible: 200–300 mm (8–12 in.) from the ground.
- Never travel over obstacles or slopes that will cause the machine to tilt severely. Travel around any slope or obstacle that would cause a tilt greater than 10°.
- Avoid steeps slopes. Do not make sharp turns on slopes. Drive up and down slopes, not across them. Drive slowly on slopes. Keep the heavy end of the machine pointed uphill.

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Checks During Operation

Complete these checks after starting the engine and during operation:

Table 32: Checks During Operation

Check	Refer To:
Always after Starting the Engine / During Operation	
Engine oil pressure and charge indicator lights not on?	"Multi-Function Display" on page 48
Park brake operating properly?	"Travel Drive Operation" on page 87
Coolant temperature within specification?	"Multi-Function Display" on page 48
Track drive/steering operating properly?	"Travel Drive Operation" on page 87
Engine exhaust excessively smoky?	
Anyone hazardously close to the machine?	
Visually check if automatic track tensioning is operating correctly.	
Hydraulic functions sluggish or too sensitive?	Adjust control function sensitivity according to "Joystick Control Sensitivity" on page 58
Travel drive operation sluggish or too fast?	If equipped, adjust travel speed limit according to "Travel Speed Limit (Option)" on page 64
When Driving on Public Roads	
Attachments in transport position?	"Attachment Transport Position" on page 95
Machine work hydraulics locked-out?	"Parking Brake/Work Hydraulics Lock-out" on page 60

Parking Checks

Complete these checks when parking the machine:

Table 33: Parking Checks

Check	Refer To:
Always when Parking	
Mandatory Safety Shutdown Procedure performed?	"Mandatory Safety Shutdown Procedure" on page 20
Attachments lowered to the ground?	
Parking brake applied?	"Parking Brake/Work Hydraulics Lock-out" on page 60
Machine cab locked (especially if the machine will not be supervised).	
When Parking on Public Sites	
Machine adequately secure/cab locked?	

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Auxiliary Hydraulics Operation

Standard-Flow Auxiliary Hydraulics Control

The toggle and trigger switches (A and B, Fig. 102) on the right joystick controls standard-flow auxiliary hydraulics.

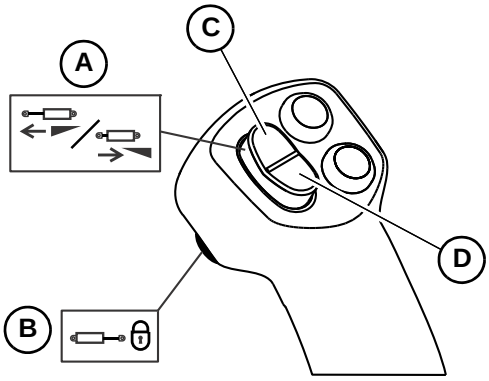


Fig. 102 – Auxiliary Flow Control (Regular-Flow)

Press the top (C) of toggle switch (A) to activate auxiliary hydraulics flow in one direction. Flow control is proportional: the flow rate increases as the toggle switch is moved further. Release the switch to stop the flow.

Press the bottom (D) of toggle switch (A) to activate auxiliary hydraulics flow in the opposite direction. Flow control is proportional: the flow rate increases as the toggle switch is moved further. Release the switch to stop the flow.

For continuous flow:

1. Move toggle switch (A) as far as it will go either forward or back – depending upon what direction flow is required.
2. While holding the toggle switch (A) at the full forward or full reverse position, press trigger button (B). Release trigger button first (B), then release toggle switch (A).

   NOTE: *Standard flow auxiliary hydraulics continuous flow can only be activated if toggle switch (A) is held in either the FULL forward or FULL reverse position.*

To stop continuous standard-flow, press and release trigger switch (B).

NOTE: *Standard flow auxiliary hydraulics will remain in continuous flow with the safety bars/arm rests the raised position, the operator's seat unoccupied and the cab door open.*

NOTE: *When ignition power is interrupted, auxiliary hydraulic function is reset to OFF.*

High-Flow Auxiliary Hydraulics Control (Option)

The optional high-flow hydraulics connections are located on the right side of the machine. See Fig. 101 on page 105.

Press and release the top (G, Fig. 103) of the high-flow toggle switch (K) to activate high-flow auxiliary hydraulics flow in one direction.

Press and release the bottom (J) of the high-flow toggle switch (K) to activate high-flow auxiliary hydraulics flow in the opposite direction.

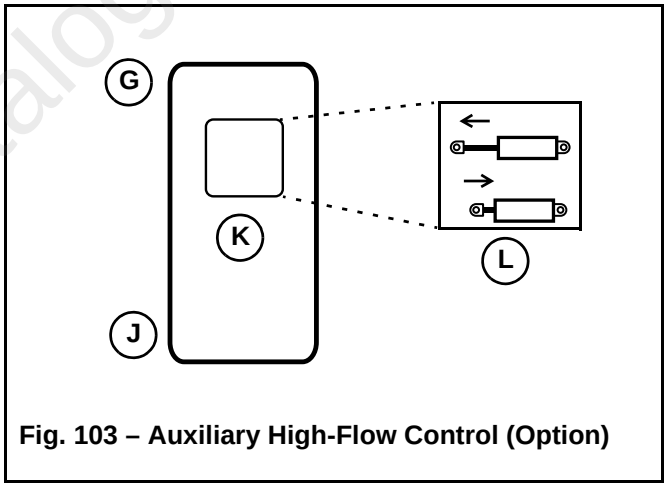


Fig. 103 – Auxiliary High-Flow Control (Option)

NOTE: *Indicator (L) in the high-flow toggle switch (K) is lit when auxiliary hydraulics high-flow is activated.*

To stop continuous high-flow, press and release switch (K)

NOTE: *Continuous high-flow will stop if the safety bars/arm rests are raised, if the operator's seat is unoccupied, or if the cab door is opened.*

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Hydraulic System Maintenance

⚠ WARNING

Never use your hands to search for hydraulic fluid leaks; use a piece of paper or cardboard to find leaks. Escaping fluid under pressure can be invisible and can penetrate the skin, causing serious injury. If any fluid is injected into your skin, see a doctor at once. Injected fluid MUST be surgically removed, or gangrene may result.

Checking Hydraulic Oil Level

Check the hydraulic oil level daily before starting the machine, or after every ten hours of use.

1. Park the machine on a level surface. Fully retract all hydraulic cylinders (lift arm down; bucket flat).
2. Perform the "Mandatory Safety Shutdown Procedure" on page 20.
3. Wait until the engine has cooled. See "Maintenance and Service Safety Practices" on page 25.
4. Open the engine cover "Engine Access" on page 123.
5. Check the level of the hydraulic oil in the sight gauge (Y, Fig. 139) located in the right engine compartment wall. The oil level be in the middle of the sight gauge (A).

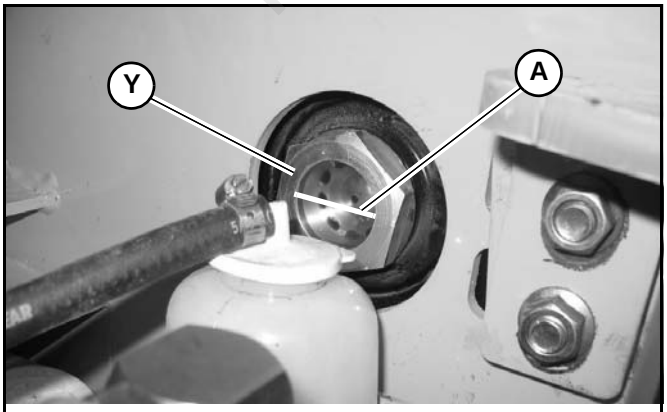


Fig. 139 – Hydraulic Oil Level Sight Gauge

6. If the hydraulic oil level is low, use the accessory key (supplied with the ignition key) to unlock and open the hydraulic tank cover (H, Fig. 140), located on the top right of the machine next to the top engine cover. Lock tank cover open using pin (D).

⚠ CAUTION

Always prop the hydraulic tank cover open using pin (D). Severe injuries can result if the battery compartment cover falls on hands and/ or fingers.

Later Machines

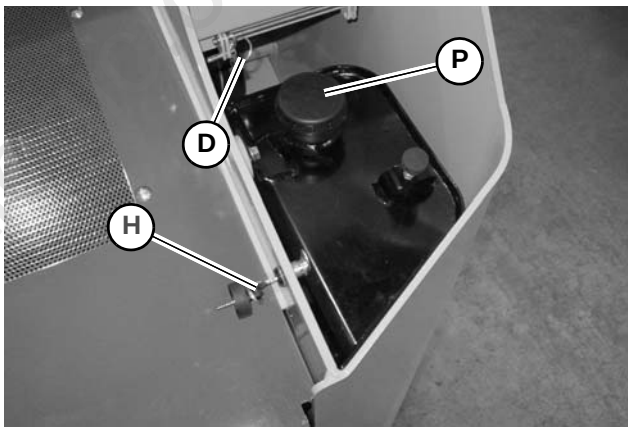


Fig. 140 – Hydraulic Oil Fill

7. Remove the hydraulic tank breaker/oil fill cap (P).

NOTE: *On early machines, fill the hydraulic tank through oil filler (B). Slowly remove the hydraulic oil fill cap (B). Allow the pressure to escape before completely removing the cap.*

8. Add hydraulic fluid if required. See "Fluids/ Lubricants Types and Capacities" on page 35 for proper hydraulic oil grade and type.

IMPORTANT: *Do not mix different types/grades of hydraulic fluids.*

Reinstall and tighten the oil fill cap. Close and lock the hydraulic tank cover.

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Table 25: Drive and Valve Error Codes

Error Code	Error Description	Fault Cause	Fault Action	Corrective Action
6 (2) (4)	Pump left sensor out-of-range fault	Rear pump swash sensor does not follow command to solenoid valves. Failure of one or both of the rear solenoid valves, wiring fault or rear sensor ground wire shorted or open. May be accompanied by codes 2 and/or 4.	Both pumps will be disabled at first. Then both pumps could be run in open loop mode (See "Travel Drive Error Condition Operation (Limp Mode)" on page 93).	Check rear sensor and rear solenoid valve wiring and connectors. Check correct harness connections between front and rear sensors and forward and reverse solenoid valves. Check controller2 wiring and connectors. Check resistance of rear solenoid valves. Refer to the Service Manual. Replace front sensor or rear solenoid valves.
7	Left forward drive pump solenoid wiring or coil fault	Left top solenoid valve coil and/or wiring connection is shorted or open.	Both pumps will be disabled at first. Then both pumps could be run in limp mode with no forward movement on left track.	Check left/top solenoid valve coil wiring and connector. Check resistance of left/top solenoid valve coil. Refer to the Service Manual. Check controller2 connector and wiring.
8	Left reverse drive pump solenoid wiring or coil fault	Left bottom solenoid valve coil and/or wire connection is open or short.	Both pumps will be disabled at first. Then both pumps could be run in limp mode with no reverse movement on left track.	Check left/bottom solenoid valve coil wiring and connector. Check resistance of left/bottom solenoid valve coil. Refer to the Service Manual. Check controller2 connector and wiring.
9	Right reverse drive pump solenoid wiring or coil fault	Right top solenoid valve coil and/or wire connection is open or short.	Both pumps will be disabled at first. Then both pumps could be run in limp mode with no reverse movement on right track.	Check rear/top solenoid valve coil wiring and connector. Check resistance of rear/top solenoid valve coil. Refer to the Service Manual. Check controller2 connector and wiring.
10	Right forward drive pump solenoid wiring or coil fault	Right bottom solenoid valve coil and/or wire connection is open or short.	Both pumps will be disabled at first. Then both pumps could be run in limp mode with no forward movement on right track.	Check right/bottom solenoid valve coil wiring and connector. Check resistance of right/bottom solenoid valve coil. Refer to the Service Manual. Check controller2 connector and wiring.

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Schematics

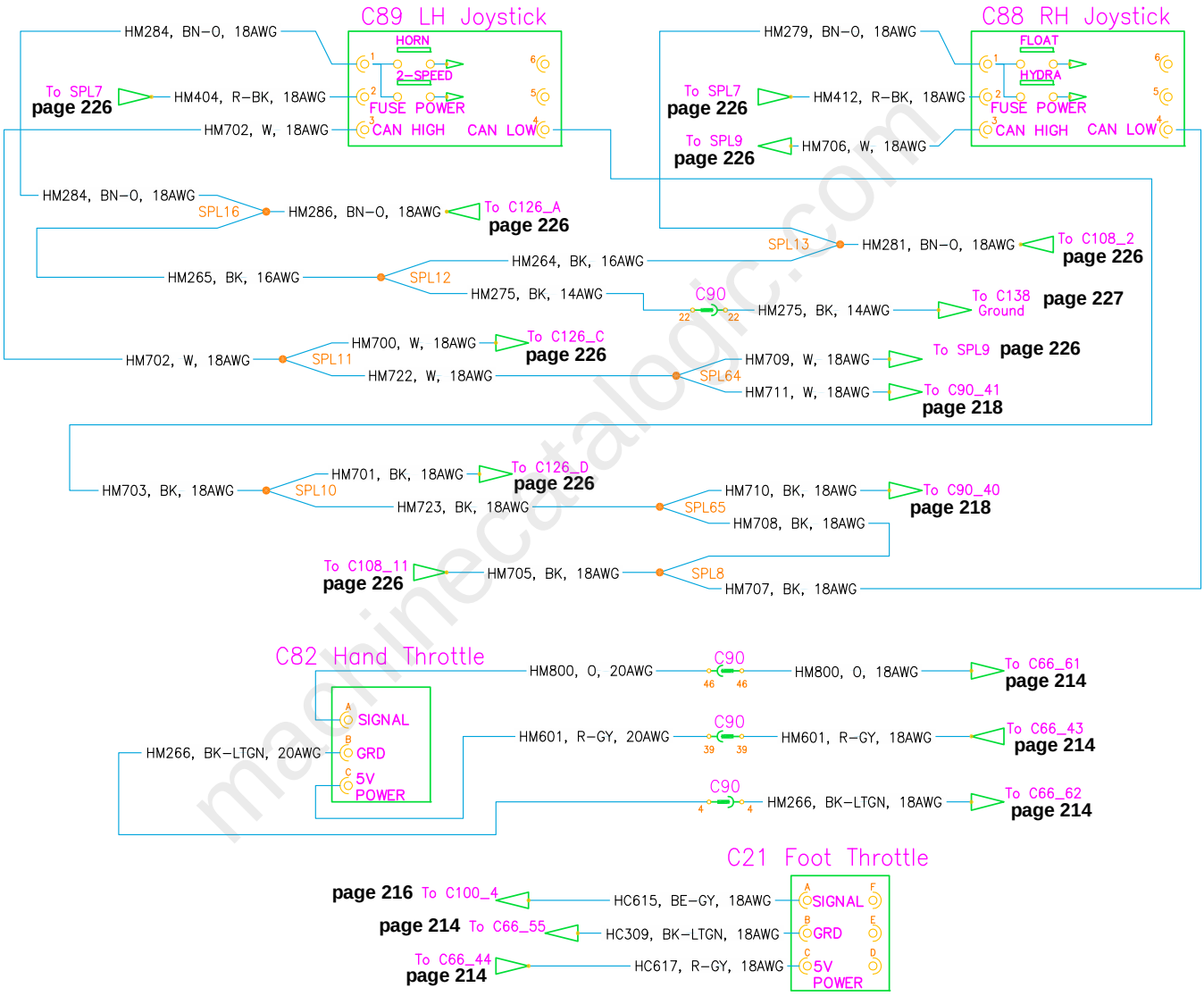
Schematic Conventions

Table 26: Harness Names / Circuit No. Sets - Circuit Types Within Sets / Wire Colors

Harness Naming Conventions	Circuit Sets		Wire Color Abbreviations	
Harness Name	Circuit No. Sets	Circuit Types Within Set	Wire Color	Abbreviation
HC = Harness/Chassis	1 – 299	12 Volt Grounds	Red	R
HE = Harness/Engine	300 – 399	Low Voltage Grounds	Pink	PK
HM = Harness/Operator (Controls)	400 – 599	12V Power	Orange	O
HR = Harness/ROPS	600 – 699	5V Power	Yellow	Y
HD = Harness/Rear Door	700 – 799	CAN, Data Link	White	W
HL = Harness/European Lighting	800 – 999	Engine, Engine ECU	Gray	GY
HA = Harness/Power-A-Tach	1000 – 1199	Hydraulic Controls	Light Blue	LTBE
HP = Harness/High-Flow Attachments	1200 – 1399	Lights	Blue/Dark Blue	DKBE
BC = Battery Cable	1400 – 1499	Emission Controls	Violet	V
HJ = Jumper Lead	1500 – 1599	Safety Systems	Light GreeN	LTGN
FLY = Flying Leads & Device	1600 – 1699	Auxiliary Circuits	Green	GN
BBAR = Buss Bar	1700 –	Un-Defined at this time	Dark Green	DKGN
			Tan	T
			Brown	BN
			Black	BK

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Operator/Drive Controls – Models 1750RT / 2100RT with Tier 4 Engines



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Mustang 1750RT, 2100RT and 2500RT (incl. NXT2) Compact Track Loader Operator Manual (50940361B)

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