



MHT175-CAT777-OPS-1

SPECIALTY HAULAGE SOLUTIONS FOR CONSTRUCTION AND MINING

OPERATORS MANUAL



MEGA CORP.®
700 Osuna Rd. N.E. • Albuquerque, NM 87113 • 1-800-345-8889 • 505-345-2661 • Fax 505-345-6190
www.megacorpinc.com

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1 Aug 2012

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Definitions and Abbreviations

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DESCRIPTION

This technical manual contains information required to safely operate the MHT175-CAT777(G). See the CAT 777G Operations and Safety manual for additional information specific to the CAT 777G chassis.

WARNINGS, CAUTIONS AND NOTES

The following definitions are found throughout the manual and apply as follows:



WARNING

Operating procedures and techniques, which could result in personal injury and/or loss of life if not carefully followed.

CAUTION

Operating procedures and techniques, which could result in damage to equipment if not carefully followed.

NOTE

Operating procedures and techniques that are considered essential to emphasis.

USE OF SHALL, WILL AND MAY

Shall and Will – Used when application of a procedure is mandatory.

Should – Used when application of a procedure is recommended.

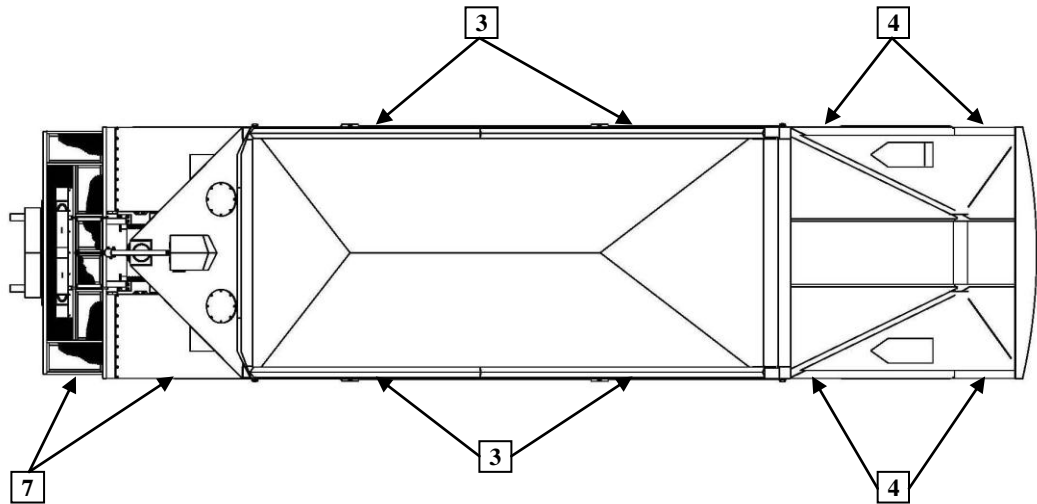
May - Used to indicate an acceptable or suggested means of accomplishment.

SECTION 1

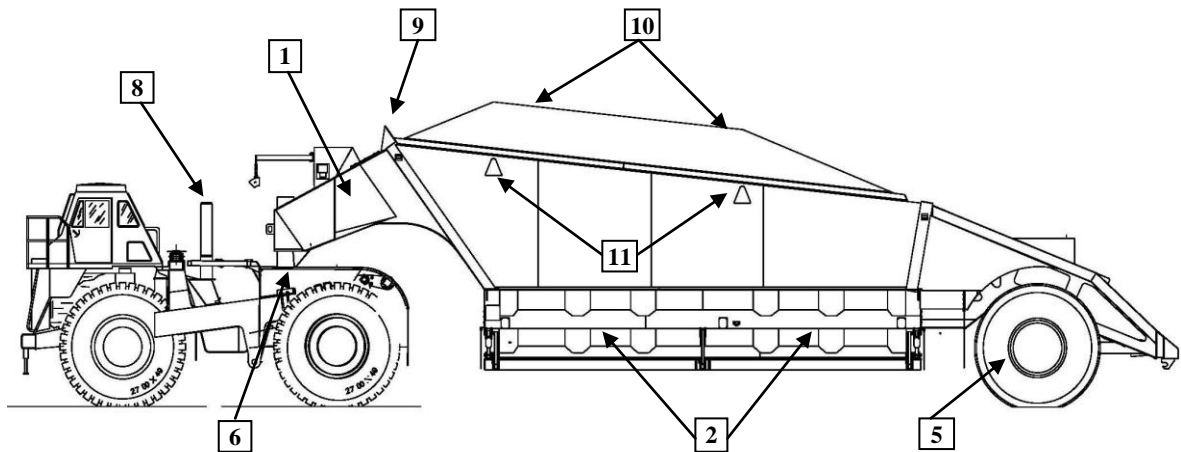
Definitions and Abbreviations

MHT175 Overview

Top
View



Side
View



- | | |
|----------------------------------|----------------------------------|
| 1 GOOSENECK | 7 DECK & FENDER |
| 2 LOWER HOPPER | 8 TURN LIMIT INDICATOR |
| 3 SIDE WALL | 9 SPILL GUARD |
| 4 REAR BOGIE | 10 SIDE BOARDS |
| 5 REAR AXLE & WHEEL GROUP | 11 END-OF-LOAD INDICATORS |
| 6 HITCH & SADDLE | |

SECTION 1

Definitions and Abbreviations

ABBREVIATIONS

ft - feet

gpm – gallons per minute

kg – kilograms

km/h – kilometers per hour

lbs – pounds

MHT – MEGA Coal Hauler

MHT – MEGA Hauler with Truck

mph – miles per hour

psi - pounds per square inch

SECTION 1
Definitions and Abbreviations

SECTION 2

System Description

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COAL HAULER BODY (MHT)

The MEGA 175 ton coal hauler is modular in construction and comprised of four major sub assemblies. The sub assemblies are the gooseneck, lower hopper, side walls and the rear bogie.

Gooseneck Assembly



The assembly is constructed of square steel tubes, plates and channels. It contains an 18” diameter hitch ball designed to be captured in the tractor hitch socket allowing the trailer to be towed. The compartment formed by the gooseneck plating is used for mounting and routing of all brake, door and electrical system components. Components can be accessed through the manhole covers mounted on the upper deck.

Lower Hopper Assembly



The assembly is constructed of square steel tubes, bolsters and plates. It provides for mounting of door assemblies, hydraulic actuators and lubrication blocks. The bolster passage ways provide for the routing and protection of hydraulic brake and door hoses as well as electrical cabling.

Side Wall Assembly



The walls are constructed of steel tubes and plates. They provide for mounting of clearance lights, side boards and load markers.

SECTION 2

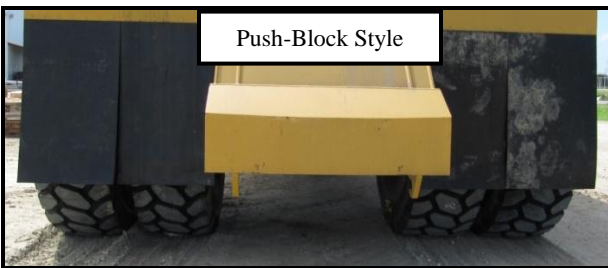
System Description

Trailing Axle Frame Assembly



The trailing bogie is constructed of square steel tubes and plates. The assembly provides mounting for the rear axle assembly associated brake system accumulators filters, manifolds, and light. The rear of the bogie also contains a push type bumper assembly.

The bumper may be configured as a push-block or wrap-around style. The design provides a pushing point to assist the MHT up a grade in low traction conditions (wet, muddy or icy haul road). The bumper assembly is designed to be pushed straight on by the pushing (boosting) machine.



Proper straight on contact between MHT and pushing (boosting) machine is shown below:



CAUTION

Routine hard bumper contacts by the pushing (boosting) machine will cause structural fatigue and result in reduced trailer service life.

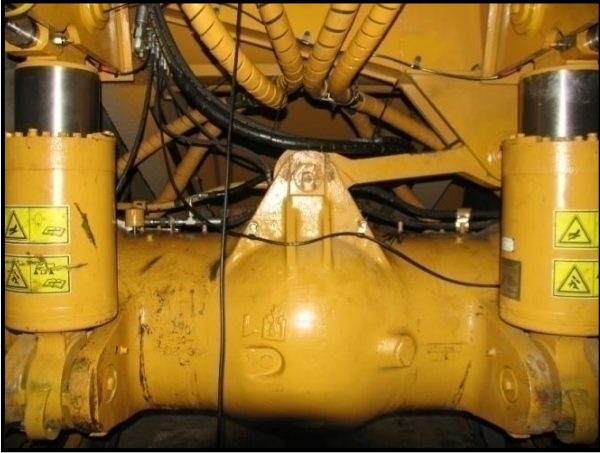
CAUTION

Angled blade contact of the **push-block style** bumper will reduce bull dozer blade to MHT wheel clearance. Extreme blade angles will cause blade/bit to wheel contact and damage MHT tires. MHT and pushing (boosting) machine operators must communicate to maintain correct contact and maximum wheel to blade/bit clearance.

SECTION 2

System Description

MHT AXLE & WHEEL GROUP



The MHT trailer axle and wheel group is the same as the tractor drive axle assembly minus drive gear. It is attached to the MHT trailing axle frame by means of the same A-frame, hard pan rod and struts. For more information see the CAT operators/service manual and brake system information contained in this manual.

HITCH DECK AND FENDER

The hitch deck and fender is modular in design and is comprised of three sub assemblies. The assemblies are the hitch and saddles, deck and fenders.

Hitch and Saddles



Constructed of steel plates and machined brass bushings. The assembly is mounted to the tractor chassis and pinned to the chassis pivot bores. The machined brass bushings capture

the MHT hitch ball and transfer loads to the tractor. Mounting is also provided for deck and fender assemblies.

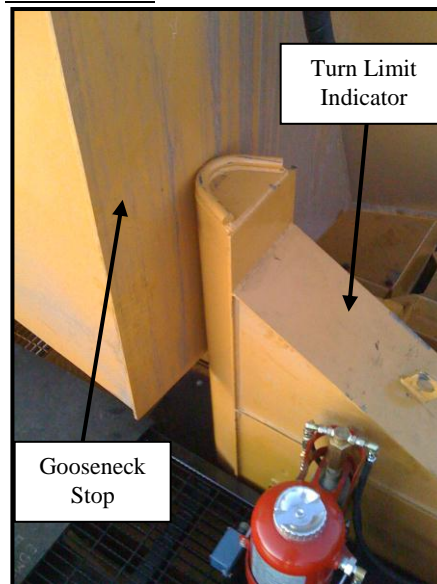
Deck and Fenders



Constructed of square steel tubes, plates, channels and grates that mounts to the hitch and saddle assembly. The assembly contains fenders, mud flaps, maintenance access doors, walkway and a work platform.

Turn Limit Indicator

Mechanical



Constructed of steel plate and mounted to the tractor chassis rails and upper deck horse collar. The turn limit indicator is designed to contact the gooseneck stops and provide visible indication of the maximum trailer rotation left or right.

SECTION 2

System Description

Electronic



Retainer Mounted Roller
Switch



In-Cab Mounted Warning
Box

The system consists of a roller switch mounted on the hitch retaining plate and a warning box located in the cab. The roller switch is activated by flags mounted on the underside of the ball skirt disc. When the trailer rotates about 85° either side of center trail, the flag will activate the switch in turn providing power to activate the amber warning light and audio horn on the warning box. The system receives 24 VDC switched power from the tractor.

MHT BRAKE SYSTEM

The MHT rear axle braking is integrated with the existing CAT 777G tractor service, secondary and parking brakes systems. MEGA has added an additional scavenge pump one additional accumulator (trailer mounted) a modified brake valve and several restrictors within the brake system to acquire a fully functional cooling and activation system.

The trailer brake activation is accomplished with existing in-cab service brake pedal, secondary brake control pedals as well as the gear shift lever for parking brake.

NOTE

Deceleration of the vehicle from running/operating speed is typically accomplished by using the retarder. Always consider road conditions (wet, icy or slick) when determining a means to decelerate or stop.

MHT Service Brakes

The tractor and MHT service brakes are activated by pressing on the brake control pedal. Pilot (signal) pressure from the tractor proportions brake valves allowing accumulator activation pressure to be routed to the slack adjusters and apply the brakes.

Accumulators



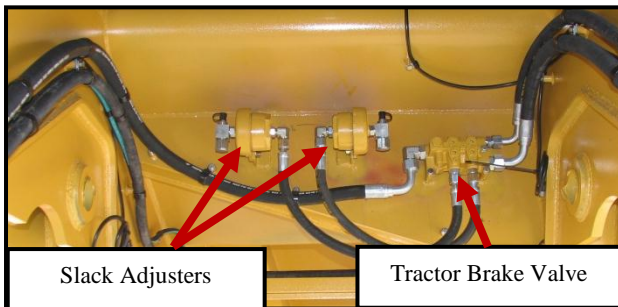
The MHT is equipped with one additional accumulators mounted on the trailing axle frame that ensure brake activation pressure is available in close proximity to the rear axle brakes

SECTION 2

System Description

Brake Valve & Slack Adjuster Groups

The MHT is configured with two different brake valve and slack adjuster groups. One is mounted in the trailer rear axle and the other is on the tractor chassis on the rear frame.



The trailer brake valve will route activation pressure to the trailer slack adjuster to apply trailer brakes. The activation should occur first in the sequencing of the three axles (trailer, tractor drive and tractor steering). This built in delay ensures the trailer stays in trail during initial brake applications.

The tractor drive axle brake valve will route activation pressure to the chassis drive axle slack adjusters to apply drive axle brakes. This activation will be slowed down by restrictors in the drive axle brake valve circuit. This delay will allow drive axle activation to occur second in the braking sequence.

Finally, the steering tire slack adjuster will receive activation pressure at a further reduced rate because of smaller restrictors feeding the steering wheel slack adjuster. This delay will ensure steering wheel activation occurs last in the braking sequence.

Secondary Brake System

The tractor and MHT secondary braking are activated by pressing on the secondary brake control pedal. This action opens the brake retract circuit allowing the spring activated

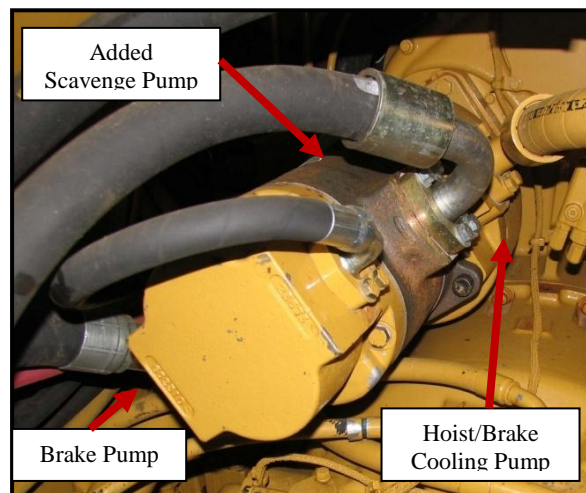
Parking Brake System

The tractor and MHT parking brake are activated by moving the gear selector lever to the park position P. This action opens the brake retract circuit allowing the spring activated parking brake to be applied.

Brake Cooling System

The MHT axles receive brake cooling oil from the tractor torque converter through the oil cooler circuit. Oil is returned to the tractor cooling circuit through the added scavenge pump.

Scavenge Pump



An additional scavenge pump was added to assist in pulling MHT brake cooling oil back into the tractor cooling circuit. This scavenge pump is mounted between the tractor brake cooling pump and the brake pump. Several restrictors were added on the steering tire cooling circuit to allow proper oil return flow from the trailer. Otherwise the tractor drive axle cooling circuit is unchanged and operates per the CAT service/operators manual.

SECTION 2

System Description

MHT DOOR SYSTEM

The system is comprised of two hinged doors, activation cylinders, hosing and a proximity switch (optional). The hydraulic door cylinders are powered hydraulics from the tractor hoist valve and controlled by the in-cab hoist control lever to open and close the doors.

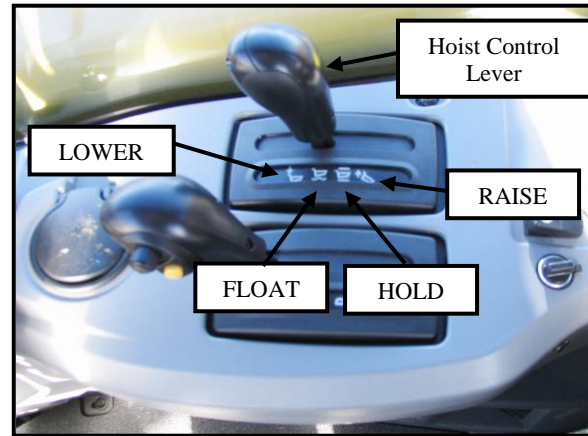


Hydraulics



Doors are opened and closed by hydraulic cylinders that are mounted on the doors ends (standard) or center (optional). These cylinders use hydraulic pressure routed from the tractor hoist valve to open and close the doors. The RAISE side of the hoist valve is used to open the doors while the LOWER side of the hoist valve is used to close the doors. Control of the doors is commanded by use of the in-cab hoist control lever.

Hoist Control Lever



Mounted in the cab and used to open and close the MHT doors. The lever is labeled for dump body operations and performs the four functions of RAISE, HOLD, FLOAT and LOWER. See the CAT 777(G) operators manual for more system information.

The MHT uses the in-cab hoist control lever functions as follows:

RAISE - Open MHT doors.

HOLD - Hold MHT doors in fixed position for transiting haul roads with or without a load.

FLOAT – Disable by ECM software for trailer MHT applications.

LOWER - Close MHT doors.

Door Indicator

A door indicator switch is normally installed on the MHT lower hopper assembly. The door switch is intended to contact the inner door swing arm when the dump doors are in the closed position and extinguish the dump body warning light. When the doors are open the switch will illuminate the dump body warning light. Under warning light conditions the ECM will only allow preprogrammed low gear operations.

SECTION 2

System Description

Intermediate Door Position Indicator (If Equipped)

A system that contains a cab mounted indicator box and an additional door position proximity switch. The indicator switch is normally installed on the MHT LH lower hopper assembly. The door switch is intended to contact the inner door swing arm when the dump doors are in a customer determined intermediate position. When doors are open to a customer determined position, the cab control box will illuminate a green light and provide an audio tone.

This system is designed to assist operators in reduce/control windrow heights when performing stockpile operations.

MHT LUBE SYSTEM

The MHT is lubricated through central lubrication blocks that may be connected to the tractor auto lube system if installed. Lubrication blocks service MHT axle A-frame, hardpan rod, axle struts, hydraulic cylinder pins and hitch ball socket assembly

MHT LIGHTING SYSTEM

The system contains brake, turn signal, backing, clearance and work lights. Some optional lighting features may include load, backing and auxiliary equipment lighting. All lighting is controlled by existing switches mounted in the cab or modified by dealers to operate at a junction box or added in-cab control box.

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System Description

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MAXIMUM ALLOWABLE WEIGHTS

1. Maximum allowable gross machine weight is 627,202 lbs/284,494 kg

2. Maximum allowable load for the MHT is:
 - a. 175 tons
 - b. 350,000lbs
 - c. 158,758kg

CAUTION

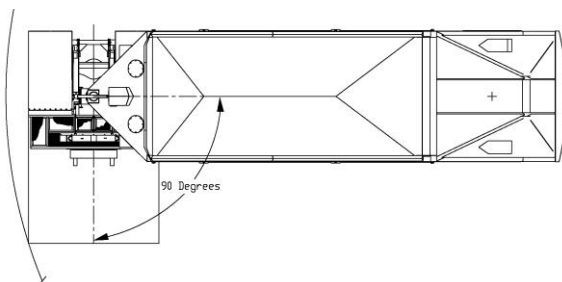
Operating the MHT above maximum load will decrease MHT structure and component service life.

MHT GOOSENECK

1. ARTICULATION

The gooseneck is limited to 90° articulation right and left of centerline trail as shown below.

MHT Top View

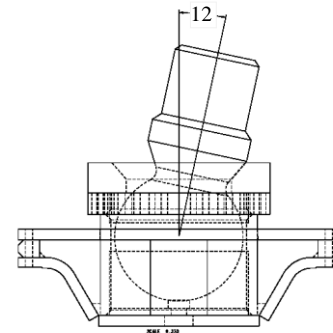


CAUTION

Gooseneck articulation beyond 90° will result in turn limit indicator to gooseneck stop contact. Repeated contact may cause damage to stops and indicators.

2. OSCILLATION

The hitch ball is limited to 12° as shown below.



CAUTION

Hitch ball oscillations greater than 12° will result in hitch ball contact with hitch socket upper retaining plate. Repeated contact may cause failure of upper hitch socket retaining plate bolts and reduce service life of the hitch ball assembly.

SECTION 3
Limitations

SECTION 4 Normal Operations

Contents

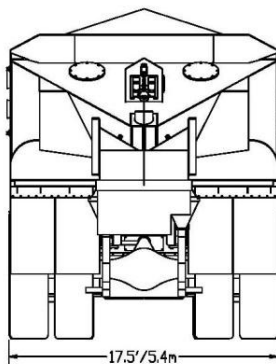
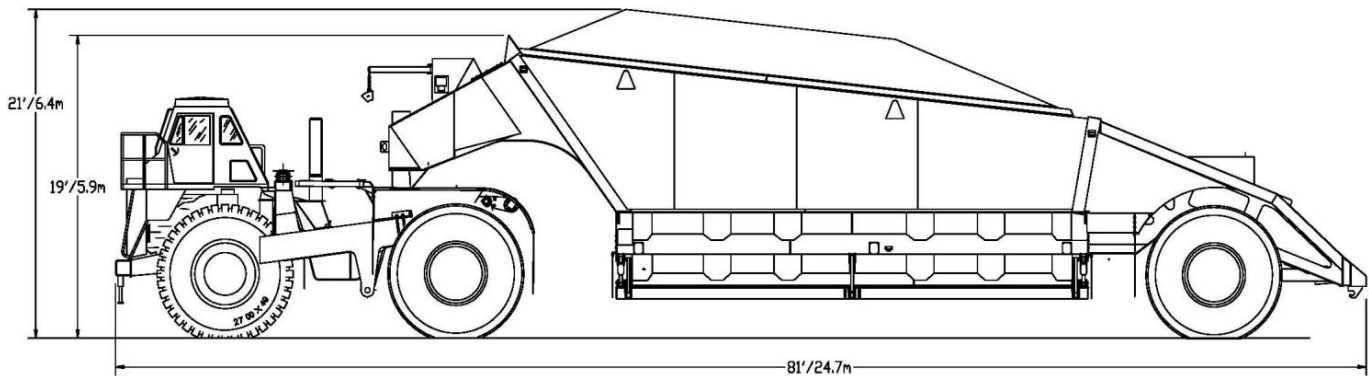
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DESCRIPTION

This section provides the vehicle operator with step by step procedures used to operate the MHT system only. See the CAT 777(G) operators' manual for specific tractor operations and system details.

The MHT normal operating procedures mirror the established CAT format of operations. The procedures are separated into before operations, operations and after operations. A pocket size checklist of all MHT procedures is contained in the Appendix for use in the vehicle cab.

WEIGHT AND DIMENSIONS



MHT175-CAT777(G)
Empty Weight = 231,517 LBS/105,015 KG

SECTION 4

Normal Operations

BEFORE OPERATIONS

These procedures are used to perform a walk-around inspection of the MHT system before use or beginning of the shift. This inspection is in addition to and does not replace the CAT 777(G) inspection requirements.

1. Vehicle Engine – AS REQUIRED
2. Chocks – INSTALLED AS REQUIRED
3. Transmission Control Lever – P (Park)
4. Hoist Control Lever – HOLD
5. Hitch Ball Retaining Plate — CHECKED FOR DAMAGE AND SECURITY (Lift ball skirt and check for loose or sheared bolt heads.)
6. Turn Limit Indicator – CHECKED FOR SECURITY AND DAMAGE
7. Upper Deck Assembly – CHECKED FOR DAMAGE AND SECURITY
8. Upper Hitch and Hydraulic Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
9. Upper Gooseneck and Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
10. Chassis Hydraulic Tank – SERVICED
11. LH Hitch Deck and Fender – CHECKED AND SECURED
12. Gooseneck, Access Panels and Mud Flaps – CHECKED AND SECURED

13. LH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS
14. Trailer Axle Frame Assembly, Axle Assembly, Manifolds and Accumulators – CHECK FOR DAMAGE, SECURITY AND LEAKS
15. Tail Light Assemblies – CHECKED FOR DAMAGE
16. RH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS
17. RH Hitch Deck and Fender – CHECKED FOR DAMAGE AND SECURED
18. **(If Equipped)** RH Consolidated Service Center – LEVELS CHECKED.

OPERATIONS

Use these procedures to safely operate the standard and optional systems installed on the MHT175-CAT777(G).

LOADING

1. Hoist Control Lever – LOWER (Doors fully closed) then immediately to HOLD

NOTE

If doors do not fully close and the body position light is on, cycle the hoist control lever to LOWER (doors closed) then immediately back to HOLD. Ensure the body position warning light is off.

2. Hoist Control Lever – HOLD
3. Body Position Warning Light – OFF

SECTION 4

Normal Operations

4. Positioned MHT for loading within the load markers.
5. Transmission Control Lever – P (Park)
6. On-Load – As Required

Once on-load is complete

7. Transmission Control Lever – As Required
8. Move away from the loading area.

TRANSITING WITH A LOAD

1. While driving periodically scan side view mirrors for evidence of doors opening.
2. Body Position Warning Light – OFF

UNLOADING (Stationary)

1. Position MHT for unloading.
2. Brakes – As Required
3. Hoist Control Lever – AS DESIRED TO DUMP LOAD

Once load is dumped

4. Hoist Control Lever – LOWER (Doors fully closed) then immediately to HOLD

NOTE

If doors do not fully close and the body position light is on, cycle the hoist control lever to LOWER (doors closed) then immediately back to HOLD. Ensure the body position warning light is off.

5. Hoist Control Lever – HOLD

UNLOADING (Moving)

NOTE

It is highly recommended a dozer be available to keep dump entry and exit paths level during stockpile operations.

1. When entering stockpile to dump, find a level area that will not require any turning once the dump has started.
2. The truck should be locked in first or second gear.
3. Determine a safe ground speed for the dump pass based on environmental/road conditions, stockpile route, and appropriate material flow to prevent trailer axle high centering or hitch over oscillation;
4. After the unit has entered the stockpile and is locked in the correct gear and is in a straight line with the desired ground speed established, the dump doors can be opened to an intermediate position.
5. When opening the dump doors they should not be opened up all the way to keep material from flowing underneath the trailer tires. The doors should be opened slowly by bumping the dump lever. (Three to four bumps on the dump lever is all that is required). Use intermediate door position system if equipped
6. The operator should string out the load so that the trailer doesn't ride up on the coal that is being dumped.

SECTION 3

Normal Operations

CAUTION

Hitch ball oscillations greater than 12° will result in hitch ball contact with hitch socket upper retaining plate. Repeated contact may cause failure of upper hitch socket retaining plate bolts and reduce service life of the hitch ball assembly.

7. Once the trailer has been dumped the operator can then allow the truck to shift as necessary while he/she is closing the doors.
8. Once the doors have reached the closed position the operator must then return the dump lever to the hold position with no hesitation in the float setting.
9. If there is any hesitation passing through the float position, the operator must reopen the doors slightly and close them again without hesitation.
10. Continue Safely back to the pit driving appropriate to the road conditions.

AFTER OPERATIONS

These procedures are used to perform a walk-around inspection after using the MHT175-CAT777(G) system. This inspection is in addition to and does not replace the CAT 777(G) inspection requirements.

1. Vehicle Engine – AS REQUIRED
2. Chocks – INSTALLED AS REQUIRED
3. Transmission Control Lever – P (Park)
4. Hoist Control Lever – HOLD

5. Hitch Ball Retaining Plate — CHECKED FOR DAMAGE AND SECURITY (Lift ball skirt and check for loose or sheared bolt heads.)
6. Turn Limit Indicator – CHECKED FOR SECURITY AND DAMAGE
7. Upper Deck Assembly – CHECKED FOR DAMAGE AND SECURITY
8. Upper Hitch and Hydraulic Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
9. Upper Gooseneck and Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
10. Chassis Hydraulic Tank – SERVICED
11. LH Hitch Deck and Fender – CHECKED AND SECURED
12. Gooseneck, Access Panels and Mud Flaps CHECKED AND SECURED
13. LH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS
14. Trailer Axle Frame Assembly, Axle Assembly, Manifolds and Accumulators – CHECK FOR DAMAGE, SECURITY AND LEAKS
15. Tail Light Assemblies – CHECKED FOR DAMAGE

SECTION 4

Normal Operations

16. RH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS

17. RH Hitch Deck and Fender – CHECKED FOR DAMAGE AND SECURED

18. **(If Equipped)** RH Consolidated Service Center – LEVELS CHECKED.

DECOUPLED OPERATIONS

The procedures are used to operate the chassis with the trailer removed (decoupled). Decoupled operations can only be attempted when the brake and associated control systems are reconfigured for decoupled operations.



WARNING

Do not operate the chassis (decoupled) from the trailer unless the brake and associated control systems are configured properly. Failure to ensure proper brake system configuration exists, may result in inoperative service, parking and secondary brake systems. Operating the chassis with inoperative brake systems may result in personal injury or death.

INSPECTION

1. Vehicle Engine – AS REQUIRED
2. Chocks – INSTALLED
3. Transmission Control Lever –P (Park)
4. Hoist Control Lever – HOLD
5. Gain access to forward hitch area by using the deck assembly. Identify the LT and RT junction manifolds.

6. Confirm with maintenance and perform actual inspection of the chassis systems to ensure the following brake and control system configuration exist.

Brake Cooling Manifold (RT Side)

- a. A jumper hose connects the brake cooling port to the brake return port (-32 fitting).

Brake Activation Manifold (LT Side)

- b. Grease port trailer supply port is capped off (-8 fitting).
- c. Brake accumulator trailer supply port is capped off (-16 fitting).
- d. Trailer service return port is capped off (-16 fitting).
- e. Trailer E-Brake/Parking brake retract supply port is capped off (-10 fitting).
- f. Trailer service brake signal in and out ports (-8 fittings).

Control System

- g. Chassis mounted junction box or Y-harness connection is configured or jumpered to allow normal tail light and backup alarm functions.
7. Ensure hitch and deck area are clear of tools and debris.
8. Vehicle Engine - Start

SECTION 3

Normal Operations

9. While machine is running and parking brake function is assured, check reconfigured manifolds for leaks.

10. Check brake lights, turn signals and back up alarm are functioning properly.

11. Chocks – REMOVED

OPERATION

12. Front Brake Activation Switch – ON

13. Ensure parking brake is functioning. Ensure parking brake advisory light illuminates when gear selector is in park (P).

WARNING

Do not operate the machine if the parking brake system is malfunctioning or inoperative.

14. Gear Selector Lever – “D” Drive.

15. At 3-5 MPH activate the service brake to ensure proper function.

WARNING

Do not operate the machine if the service brake system is malfunctioning or inoperative.

16. Once all brake and control systems are operating properly, move the machine as required.

17. Continue to monitor brake cooling temperatures to ensure brakes are not dragging or a malfunction exists in the cooling circuit.

SECTION 5 Performance Loading

MHT LOADING

Figure 5-1 illustrates correct load placement and height.

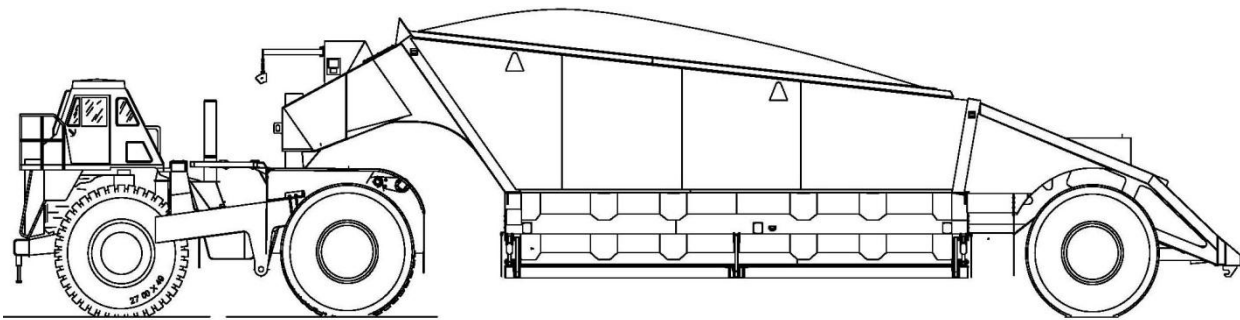


Figure 5-1 Load Placement & Height

SECTION 5
Performance Loading

SECTION 6
Appendix

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MHT175
OPERATORS
CHECKLIST



SECTION 6 Appendix

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SECTION 6

Appendix

MHT175-CAT777(G)CL-1
1 Aug 2012

BEFORE OPERATIONS

These procedures are used to perform a walk-around inspection of the MHT175-CAT777(G) system before use or beginning of the shift. This inspection is in addition to and does not replace the CAT 777(G) inspection requirements. These procedures are used to perform a walk-around inspection of the MHT system before use or beginning of the shift. This inspection is in addition to and does not replace the CAT 777(G) inspection requirements.

1. Vehicle Engine – AS REQUIRED
2. Chocks – INSTALLED
3. Transmission Control Lever – P (Park)
4. Hoist Control Lever – HOLD
5. Hitch Ball Retaining Plate – CHECKED FOR DAMAGE AND SECURITY (Lift ball skirt and check for loose or sheared bolt heads.)
6. Turn Limit Indicator – CHECKED FOR SECURITY AND DAMAGE

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SECTION 6

Appendix

MHT175-CAT777(G)CL-1

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7. Upper Deck Assembly – CHECKED FOR DAMAGE AND SECURITY
8. Upper Hitch and Hydraulic Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
9. Upper Gooseneck and Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
10. Chassis Hydraulic Tank - SERVICED
11. LH Hitch Deck and Fender – CHECKED AND SECURED
12. Gooseneck, Access Panels and Mud Flaps – CHECKED AND SECURED
13. LH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS
14. Trailer Axle Frame Assembly, Axle Assembly, manifolds and Accumulators - CHECK FOR DAMAGE, SECURITY AND LEAKS.

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SECTION 6

Appendix

MHT175-CAT777(G)CL-1
1 Aug 2012

15. Tail Lights Assemblies – CHECKED FOR DAMAGE
16. RH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS
17. RH Hitch Deck and Fender – CHECKED FOR DAMAGE AND SECURED
18. **(If Equipped)** RH Consolidated Service Center – Levels Checked.

OPERATIONS

Use these procedures to safely operate the standard and optional systems installed on the MHT175-CAT777(G).

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SECTION 6

Appendix

MHT175-CAT777(G)CL-1

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LOADING

1. Hoist Control Lever – LOWER (Doors fully closed) then immediately to HOLD

NOTE

If doors do not fully close and the body position light is on, cycle the hoist control lever to LOWER (doors closed) then immediately back to HOLD. Ensure the body position warning light is off.

2. Hoist Control Lever – HOLD
3. Body Position Warning Light – OFF
4. Positioned MHT for loading within the load markers.
5. Transmission Control Lever – P (Park)
6. On-Load – As Required

Once on-load is complete

7. Transmission Control Lever – As Required
8. Move away from the loading area.

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SECTION 6

Appendix

MHT175-CAT777(G)CL-1
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TRANSITING WITH A LOAD

1. While driving periodically scan side view mirrors for evidence of doors opening.
2. Body Position Warning Light – OFF

UNLOADING (Stationary)

1. Position MHT for unloading.
2. Brakes – As Required
3. Hoist Control Lever – AS DESIRED TO DUMP LOAD

Once load is dumped

4. Hoist Control Lever – LOWER (Doors fully closed) then immediately to HOLD

NOTE

If doors do not fully close and the body position light is on, cycle the hoist control lever to LOWER (doors closed) then immediately back to HOLD. Ensure the body position warning light is off.

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5. Hoist Control Lever – HOLD

UNLOADING (Moving)

NOTE

It is highly recommended a dozer be available to keep dump entry and exit paths level during stockpile operations.

1. When entering stockpile to dump, find a level area that will not require any turning once the dump has started.
2. The truck should be locked in first or second gear.
3. Determine a safe ground speed for the dump pass based on environmental/road conditions, stockpile route, and appropriate material flow to prevent trailer axle high centering or hitch over oscillation.
4. After the unit has entered the stockpile and is locked in the correct gear and is in a straight line with the desired ground speed established, the dump doors can be opened to an intermediate position.

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5. When opening the dump doors they should not be opened up all the way to keep material from flowing underneath the trailer tires. The doors should be opened slowly by bumping the dump lever. (Three to four bumps on the dump lever is all that is required). Use intermediate door position system if equipped.
6. The operator should string out the load so that the trailer doesn't ride up on the coal that is being dumped.

CAUTION

Hitch ball oscillations greater than 12° will result in hitch ball contact with hitch socket upper retaining plate. Repeated contact may cause failure of upper hitch socket retaining plate bolts and reduce service life of the hitch ball assembly.

7. Once the trailer has been dumped the operator can then allow the truck to shift as necessary while he/she is closing the doors.
8. Once the doors have reached the closed position the operator must then return the dump lever to the hold position with no hesitation in the float setting.

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9. If there is any hesitation passing through the float position, the operator must reopen the doors slightly and close them again without hesitation.
10. Continue safely back to the pit driving appropriate to the road conditions.

AFTER OPERATIONS

These procedures are used to perform a walk-around inspection after using the MHT175-CAT777(G) system. This inspection is in addition to and does not replace the CAT 777(G) inspection requirements.

1. Transmission Control Lever – P (Park)
2. Vehicle Engine – AS REQUIRED
3. Hoist Control Lever – HOLD
4. Turn Limit Indicator – CHECKED FOR DAMAGE AND SECURITY
5. Upper Deck Assembly – CHECKED FOR DAMAGE AND SECURITY

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6. Upper Hitch and Hydraulic Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
7. Upper Gooseneck and Hosing – CHECKED FOR DAMAGE, SECURITY AND LEAKS
8. Chocks – INSTALLED
9. Vehicle Hydraulic Tank – SERVICED
10. LH Hitch Deck and Fender – CHECKED FOR DAMAGE AND SECURED
11. Gooseneck, Access Panels and Mud Flaps – CHECKED AND SECURED
12. LH Door Hydraulic Cylinders, Structure Cavity Drain Holes and Lights – CHECKED FOR DAMAGE, SECURITY AND LEAKS
13. Rear Bogie, Axle Assembly, Filters and Accumulators – CHECK FOR DAMAGE LEAKS AND SECURITY

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14. Tail Light Assemblies – CHECKED FOR
DAMAGE

15. RH Hitch Deck and Fender – CHECKED AND
SECURED

DECOUPLED OPERATIONS

The procedures are used to operate the chassis with the trailer removed (decoupled). Decoupled operations can only be attempted when the brake and associated control systems are reconfigured for decoupled operations.



WARNING

Do not operate the chassis (decoupled) from the trailer unless the brake and associated control systems are configured properly. Failure to ensure proper brake system reconfiguration exists may result in inoperative service, parking and secondary brake systems, operating the chassis with inoperative brake systems may result in personal injury or death.

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INSPECTION

1. Vehicle Engine – AS REQUIRED
2. Chocks – INSTALLED
3. Transmission Control Lever – P (Park)
4. Hoist Control Lever – HOLD
5. Gain access to forward hitch area by using the deck assembly. Identify the LT and RT junction manifolds.
6. Confirm with Maintenance and perform actual inspection of the chassis systems to ensure the following brake and control system configuration

Brake Cooling Manifold (RT side)

- A. A jumper hose connect the brake cooling port to the brake return port (-32 fitting).

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Brake Activation Manifold (LT)

- B. Grease port trailer supply port is capped off (-8 fitting).
- C. Brake accumulator trailer supply port is capped off (-16 fitting)
- D. Trailer service return port is capped off (-16 fitting)
- E. Trailer E-Brake/Parking brake retract supply port is capped off (-10 fitting).
- F. Trailer service brake signal in and out ports (-8 fittings)

Control System

- G. Chassis mounted junction box or Y – harness connection is configured or jumpered to allow normal tail light and backup alarm functions.
7. Ensure hitch and deck area are clear of tools and debris.

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8. Vehicle Engine – Start
9. While machine is running and parking brake function is assured, check reconfigured manifolds for leaks.
10. Check brake lights, turn signals and back up alarm are functioning properly.
11. Chocks - REMOVED

OPERATION

12. Front Brake Activation Switch – ON
13. Ensure parking brake is functioning. Ensure parking brake advisory light illuminates when gear selector is in park (P).



WARNING

Do not operate the machine if the parking brake system is malfunctioning or inoperative.

14. Gear Selector Lever – “D” Drive

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15. At 3-5 MPH activate the service brake to ensure proper function.



WARNING

Do not operate the machine if the service brake system is malfunctioning or inoperative.

16. Once all brake and control systems are operating properly, move the machine as required.
17. Continue to monitor brake cooling temperatures to ensure brakes are not dragging or a malfunction exists in the cooling circuit.

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