

HX50

Kubota® D1803-CR-TE4B

Operator's Manual



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**HX50/HXT50
Operator's Manual**

Kubota® D1803-CR-TE4B

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Part number 053-3103

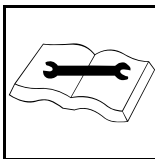
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⚠ WARNING High pressure. Impact can cause death or serious injury. Exercise and clean relief valve before each use.

5



⚠ CAUTION Thrown objects. Impact can cause injury. Wear hard hat and safety glasses.

6



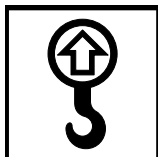
⚠ CAUTION High noise levels. Exposure can cause hearing loss. Wear hearing protection.

7



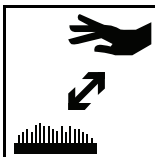
⚠ WARNING Pre-heater. Fire or explosion can cause death or serious injury. Never use starter fluid.

8



Lift point. See Transport chapter for more information.

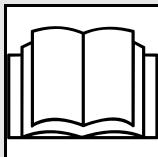
9



⚠ CAUTION Hot parts. Contact can cause burns. Only touch when cool or wear gloves.

Position trailer load for proper tongue weight by following procedure below to enhance towing stability and safety.

1. Select appropriate size tow vehicle based on trailer gross vehicle weight rating (GVWR).
2. Adjust hitch on trailer so that hitch is about 2" (51mm) higher than level when coupled to tow vehicle.
3. Load trailer.
4. Pull trailer onto scale. Ensure tow vehicle wheels are off scale.
5. Unhitch trailer from tow vehicle and lower jack to remove all tongue weight from vehicle.
6. Record total unhitched weight of trailer and load. This is gross trailer weight (GTW) and must not exceed trailer GVWR or tow vehicle GTW.
7. Multiply GTW by 0.9 and record this number as 90% GTW.
8. Hitch trailer to tow vehicle. Raise and stow jack.
9. Watch scale readout while helper positions load. When scale displays 90% GTW value, the load is positioned properly with at least 10% of GTW on hitch.



⚠ WARNING

Misuse of machine can cause death or serious injury. Read and understand operator's manual and all other safety instructions before use. Know how to use all controls.

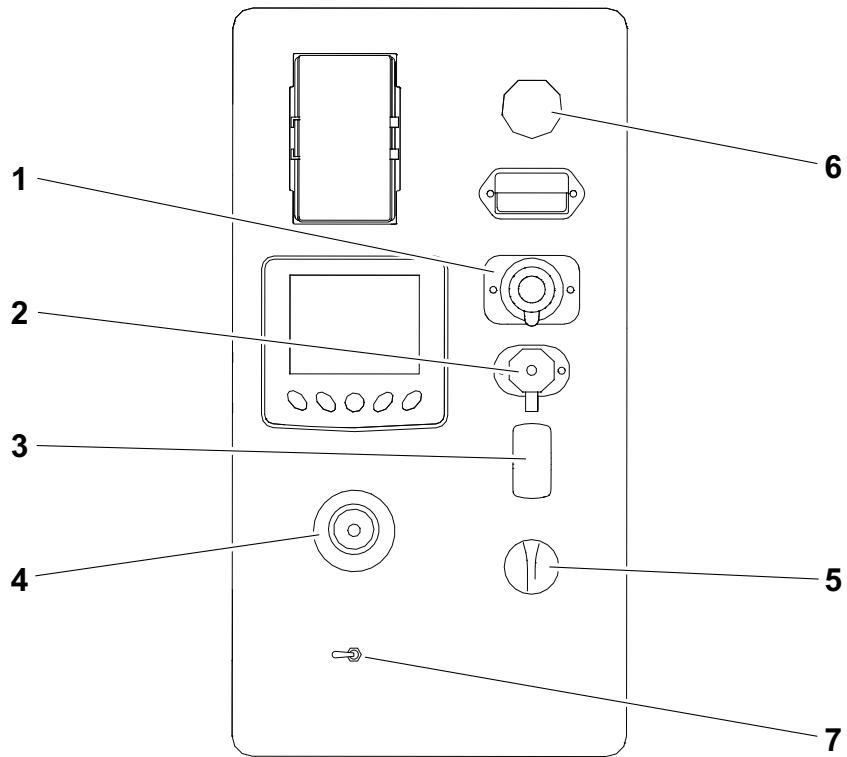
To help avoid injury:

- At least ten to fifteen percent of total trailer weight (equipment plus trailer) must be on tongue to help prevent trailer sway.
- Do not exceed tow vehicle capacities. See tow vehicle manual.
- Do not exceed maximum trailer tongue load specifications or hitch capabilities.

10. Tie down load. See equipment manual.
11. Mark positions of all equipment that will be unloaded at jobsite to allow correct loading when work is finished.

Assemble Accessories

Controls

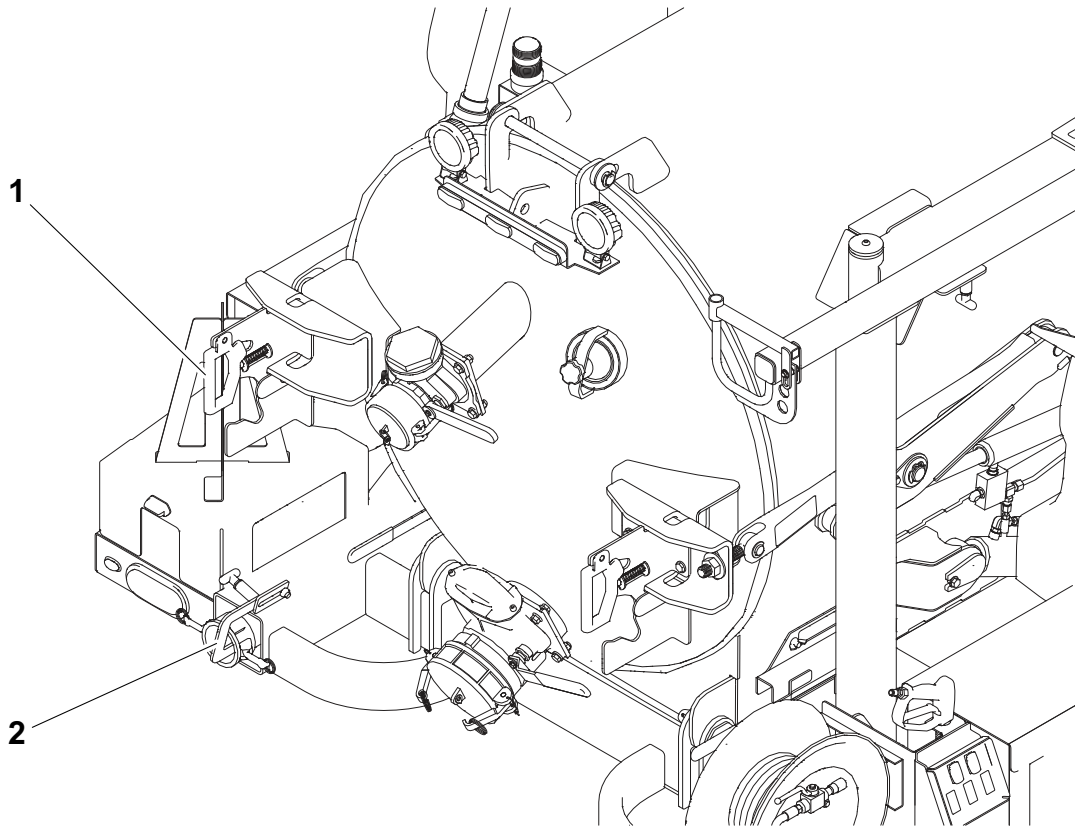


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- | | |
|---------------------------|------------------------|
| 1. USB port | 5. Ignition switch |
| 2. Auxiliary outlet | 6. EDT port |
| 3. Work light switch | 7. Air pressure switch |
| 4. Water pressure control | |












Item	Description	IMPORTANT
1. USB port	Provides power for mobile devices.	Dual USB 12VDC 2.1A
2. Auxiliary outlet	Provides power for other equipment.	DC12V, 10A

Tool Controls



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Item	Description	IMPORTANT
1. Tool rack handle	Pull handle and turn 90° to access tool.	Lock or other security device can be attached to handle.
2. Hose storage handle	Pull handle to release restraining arm and access hose.	

Item	Description	IMPORTANT
<p>2. Tank screen</p>	<p> To toggle tank shaker on and off, press.</p> <p> To open tank dump valve, press.</p> <p> To close tank dump valve, press.</p> <p> To raise tank, press.</p> <p> To lower tank, press.</p>	
<p>3. Boom screen</p>	<p> To retract boom, press.</p> <p> To extend boom, press.</p> <p> To open boom valve, press.</p> <p> To close boom valve, press.</p> <p> To lift tank a few inches to break suction/flow, press.</p> <p> To toggle water pump on and off, press.</p>	

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Wireless Remote Control

Check batteries. Replace if needed. See "Battery, Wireless Remote Control" on page 107.

EMERGENCY STOP: Press engine stop on wireless remote control.



WARNING Remote-controlled equipment. Impact can cause death or serious injury. Stay away.

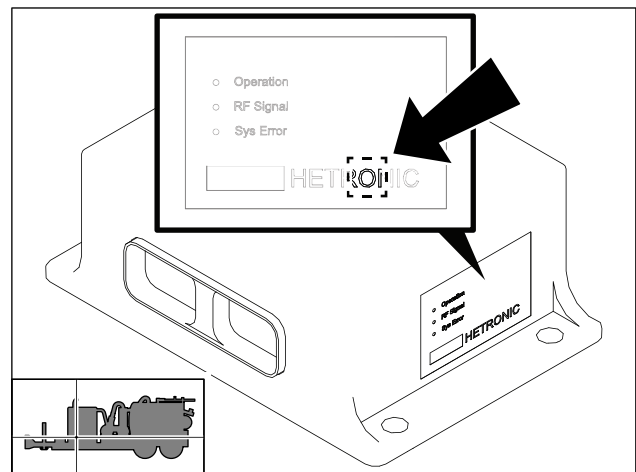
To help avoid injury:

- Keep machine in sight at all times when using wireless remote control.
- Keep a safe distance away from machine when operating wireless remote control.
- Remove strap from around neck when using wireless remote control near moving parts.

NOTICE: Place wireless remote control in storage box after use. Take care not to store with neck strap on top of switches.

Wireless remote control should be paired to receiver at factory. If paired connection is lost, re-pair control to receiver.

1. Activate accessories using ignition switch.
2. Locate wireless receiver box inside power pack.
3. Press and hold "O" (shown) in the word "HETRONIC" to engage pairing button.
4. While holding down pairing button, turn on remote control.
5. Release pairing button.
6. Turn off remote control.
7. Shut off machine.
8. Activate accessories using ignition switch.
9. Turn remote control on and test for function.



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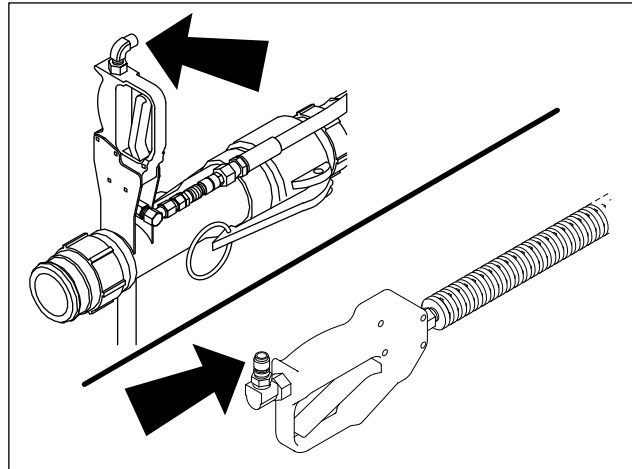
With Water

Set Up

1. Remove 2-in-1 potholing tool or digging lance from storage.

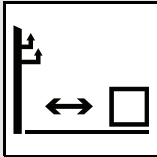
IMPORTANT: Do not use wash wand for digging tasks.

2. Connect water pressure hose to 2-in-1 potholing tool or digging lance where shown.



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Operate



⚠ DANGER Overhead electrical lines. Contact will cause death or serious injury. Know location of lines. Stay away.

To help avoid injury: Never direct water at overhead lines.



⚠ WARNING Pressurized fluid or air. Contact can cause death or serious injury. Refer to operator's manual for correct use.

To help avoid injury:

- Never use high pressure when using wash wand.
- When exposing utilities, only use rotating nozzle.
- Never point or aim nozzle at yourself or anyone else.
- Keep nozzle low to the ground but never allow tip to touch ground or utility.
- Keep tool moving over area to be potholed. Never point nozzle at utility continuously.
- Test water pressure on a sample of utility line material to be exposed. Adjust pressure until no damage occurs to the material. High pressure water can cut utility lines.

1. Open water tank supply valve.
2. Open tank inlet valve.
3. Start engine.
4. Turn on water pump.

Disconnect

Disconnect and store all hoses.

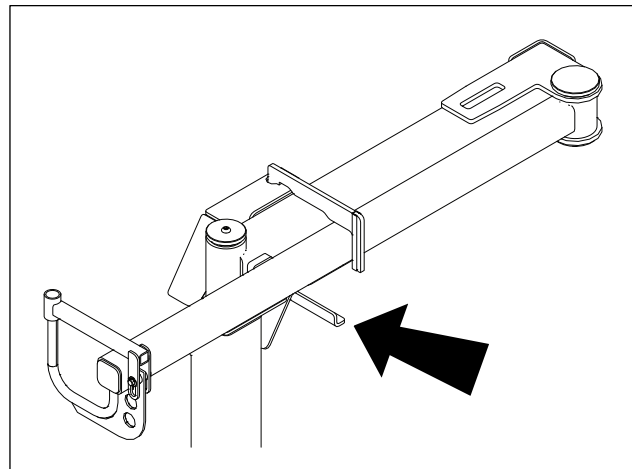
Stow Tools

Ensure hoses and tools are properly stowed.

Stow Boom

Jib Boom

1. Ensure hoses are removed and in frame rail.
2. Ensure retaining pin (shown) is engaged.



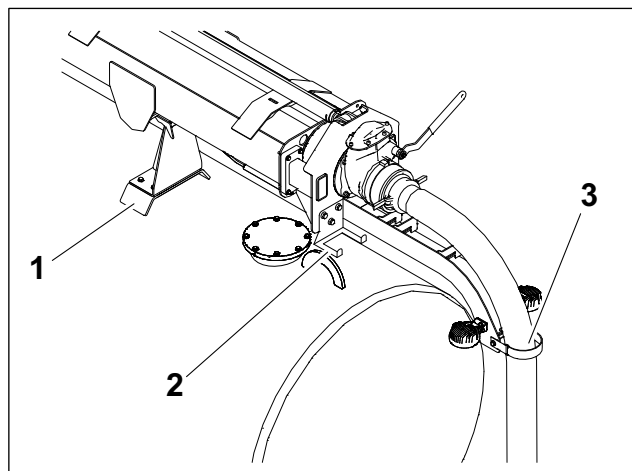
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Power Boom

1. Settle boom in place on cradle (1).

NOTICE: On 500 gallon tanks, extend boom for stowing and transport. Leaving boom retracted will cause hose to interfere with power pack.

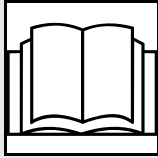
2. Stow hose end on retaining plate (2).
3. Secure hose with retaining strap (3).



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Approved Fuel

HRC (Highly Regulated Countries)



⚠ WARNING

Ultra Low Sulfur Diesel (ULSD) poses a greater static ignition hazard than earlier diesel formulations with higher sulfur content. Avoid death or serious injury from fire or explosion; consult with your fuel or fuel system supplier to ensure the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

This engine is designed to run on diesel fuel. Use only high quality fuel meeting ASTM D975 No. 2D, EN590, or equivalent. At temperatures below 32°F (0°C) winter fuel blends are acceptable. See the engine operation manual for more information.

NOTICE: Use only Ultra Low Sulfur Diesel (less than 15ppm sulfur content in the US and Canada or 10mg/kg in EU and Japan) in this machine. Operating with higher sulfur content will damage the engine and aftertreatment device.

Biodiesel blends up to 5% (B5) are approved for use in this machine. The fuel must meet the specifications for diesel fuel shown above. In certain markets, higher blends may be used if certain steps are taken. Extra attention is needed when using biodiesel, especially when operating in cold weather or storing fuel. Contact your Ditch Witch dealer or the engine manufacturer for more information.

LRC (Less Regulated Countries)

This engine is designed to run on diesel fuel. Use only high quality fuel meeting ASTM D975 No. 2D, EN590, or equivalent. At temperatures below 32°F (0°C) winter fuel blends are acceptable. See the engine operation manual for more information.

NOTICE: Worldwide, fuel sulfur regulations vary widely. Fuel used should always comply with local regulations. Prior to shipping, LRC machines were filled with API CJ-4 DEO. If using fuel with sulfur content above 15ppm (15mg/kg), change oil initially at 250 hours.

Biodiesel blends up to 5% (B5) are approved for use in this machine. The fuel must meet the specifications for diesel fuel shown above. In certain markets, higher blends may be used if certain steps are taken. Extra attention is needed when using biodiesel, especially when operating in cold weather or storing fuel. Contact your Ditch Witch dealer or the engine manufacturer for more information.

Belt, Hydraulic Pump

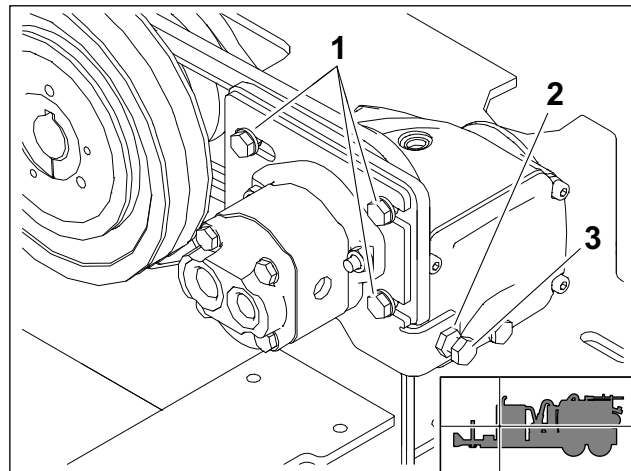
Check every 10 hours. Adjust as needed. Change every 500 hours.

Check

Check belt for excessive slack, damage, or wear. Belt is properly tensioned when it moves about 1/8-1/4" (3-6mm) when pushed where shown.

Adjust

1. Loosen three bolts (1) on pump mount.
2. Loosen jam nut (2).
3. Rotate adjustment screw (3) to properly tension belt.
4. Tighten jam nut.
5. Tighten bolts to secure pump on mount.



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Change

IMPORTANT: Water pump belt must be removed before changing blower belt.

1. Loosen three bolts on pump mount.
2. Loosen jam nut.
3. Replace belt.
4. Rotate adjustment screw to properly tension belt.
5. Tighten jam nut.
6. Tighten bolts to secure pump on mount.

Fluid, Hydraulic

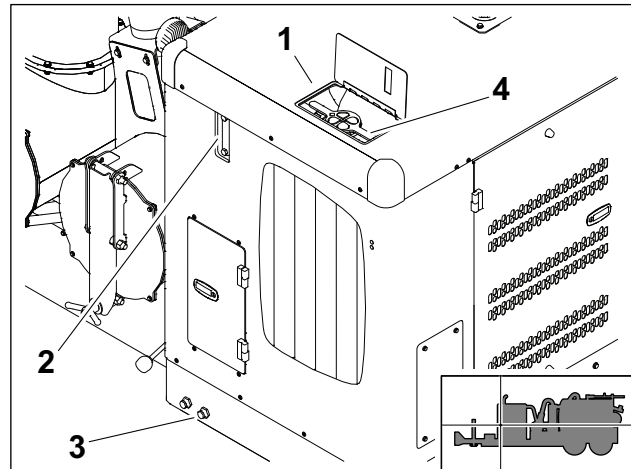
Check every 10 hours. Change at 100 hours and every 1000 hours thereafter.

Check

1. Check level at sight glass (2).
2. Use provided tool (4) to open fill (1).
3. Add THF at fill as needed to keep level at halfway point on sight glass.

Change

1. Remove plug (3) to drain.
2. Install plug.
3. Use provided tool to open fill.
4. Add THF at fill to keep level at halfway point on sight glass.



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Fuel Water Separator

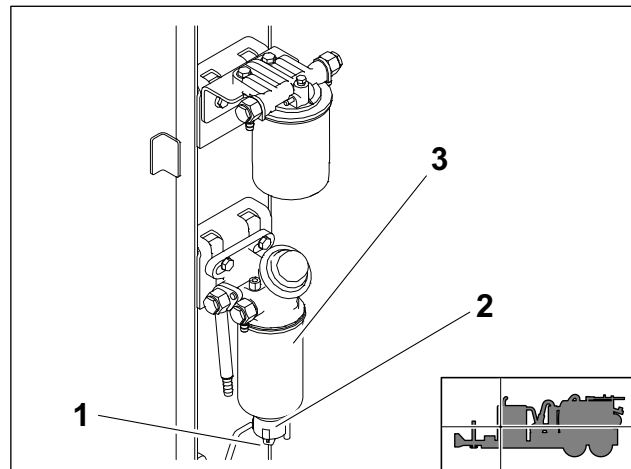
Check every 50 hours. Change every 500 hours.

Check

1. Disconnect wire (1).
2. Remove sensor (2) and allow water to drain.
3. Install sensor.
4. Reconnect wire.

Change

1. Disconnect wire.
2. Remove sensor and allow water to drain.
3. Thinly apply fuel over seal on new fuel water separator (3).
4. Install new fuel water separator.
5. Install sensor.
6. Reconnect wire.

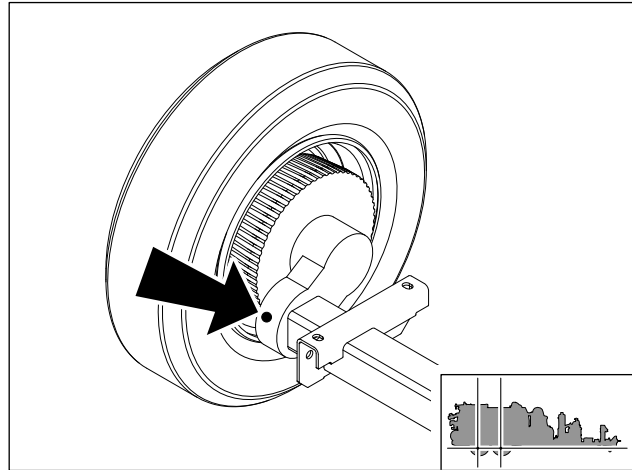


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Trailer Procedures

Axle Bushings

Lube VT24 axle bushing zerks (two per axle) with MPG every 3000 miles (5000km).

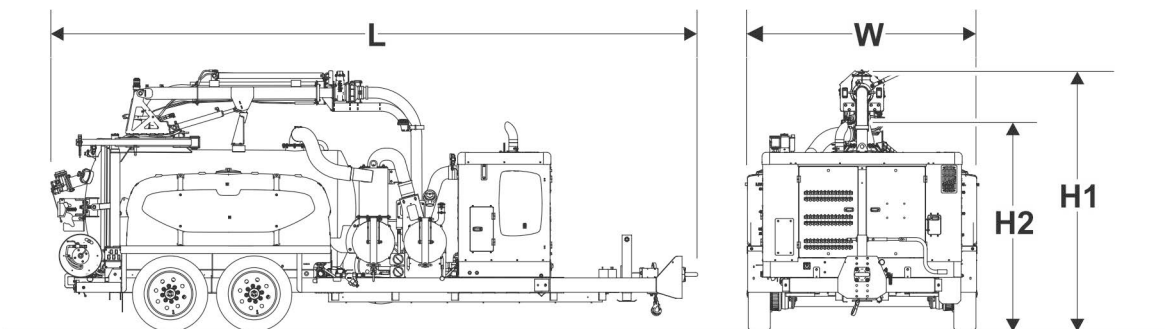


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Bearings

Lube and adjust bearings every 12,000 miles (20 000km). See Dexter® trailer manual for more information. Visit www.dexteraxle.com.

HX50-800 VT24



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Dimensions		US	Metric
H1	Height, with boom	110.2in	2.8m
H2	Height, without boom	89in	2.25m
L	Length	269.4in	6.84m
W	Width	96in	2.44m

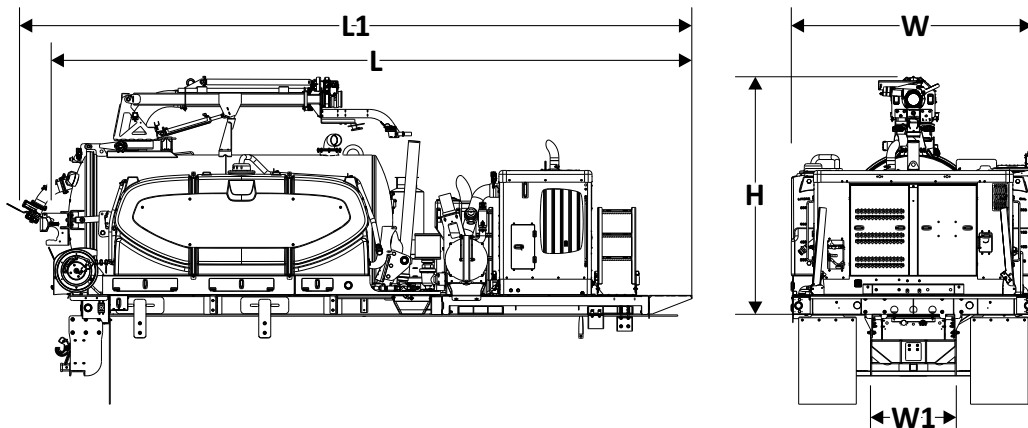
Debris Tank		US	Metric
Capacity		800gal	3028L
Diameter		48in	1219mm
Drain valve size		6in	152mm
Dump angle		45°	45°
Inlet valve size		4in	102mm

Operation		US	Metric
Weight*		10,443lb	4737kg
Weight, with debris tank full*		16,838lb	7638kg
Weight, with all tanks full*		19,924lb	9037kg

*Options included in weight calculation: reverse flow

Water System		US	Metric
Tank capacity		370gal	1401L
Hose reel capacity, locking		50ft	15.2m

HXT50-1200



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Dimensions		US	Metric
H	Height, with boom	100in	2.54m
L	Length, overall	260in	6.60m
L1	Length, sitting on truck frame to hitch/bumper	279in	7.09m
W	Width, overall	101.8in	2.59m
W1	Width, sitting on truck frame	34in	0.86m

Debris Tank		US	Metric
Capacity		1200gal	4542L
Diameter		54in	1372mm
Drain valve size		6in	152mm
Dump angle		45°	45°
Inlet valve size		4in	102mm

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