Correct Maintenance and Inspection Procedures

Learn how to service your machine correctly. Follow the correct maintenance and inspection procedures shown in this manual. Refer to page 3-1 for walk around inspection list.



SA-005

Inspect machine daily before starting.

- Check controls and instruments.
- Check coolant, fuel and oil levels.
- Check for leaks, kinked, frayed or damaged hoses and lines.
- Walk around machine checking general appearance, noise, heat, etc.
- Check for loose or missing parts.

If there is any problem with your machine, repair it before operating or contact your authorized dealer.

IMPORTANT:

- **Use only recommended fuel and lubricants.**
- **Be sure to use only genuine KCM/Hitachi parts. Failure to do so may result in serious injury or death and/or machine breakdown.**
- **Use only genuine KCM/Hitachi parts.**
- **Failure to use recommended fuel, lubricants, and genuine KCM/Hitachi parts will result in loss of KCM product warranty.**
- **Never adjust engine governor or hydraulic system relief valve.**
- **Protect electrical parts from water and steam.**
- **Never disassemble electrical components such as main controller, sensors, etc.**

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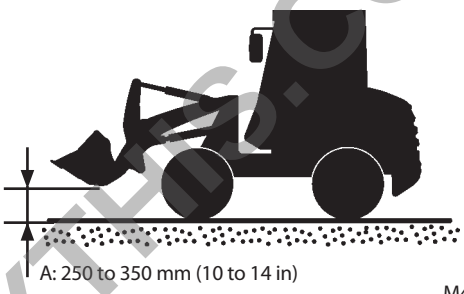
Driving Machine

Driving

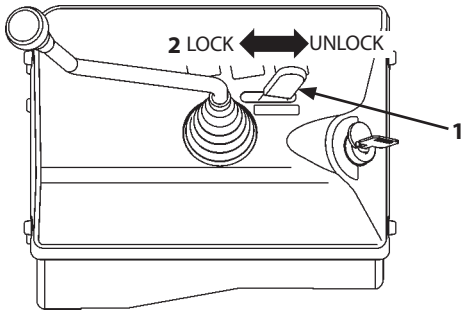
Correct operation will result in extending the service life of each part and component as well as saving fuel and oil. Always be sure to safely and efficiently operate the machine while paying attention to the following points.

Precautions for Starting to Move

1. While checking the tires for abnormal air pressure and any obvious damage, make sure that there is no hazardous and/or obstacles in and around the vicinity of the machine.
2. After raising the lift arm set the machine to the driving attitude, ground, fully tilt the bucket backward.
3. Before driving on public roads, set the machine to the driving attitude as illustrated to the right. Be sure to place loader control lever lock (1) in the LOCK position (2) so that the machine will not move even if the control levers are accidentally operated.



M4EK-04-001

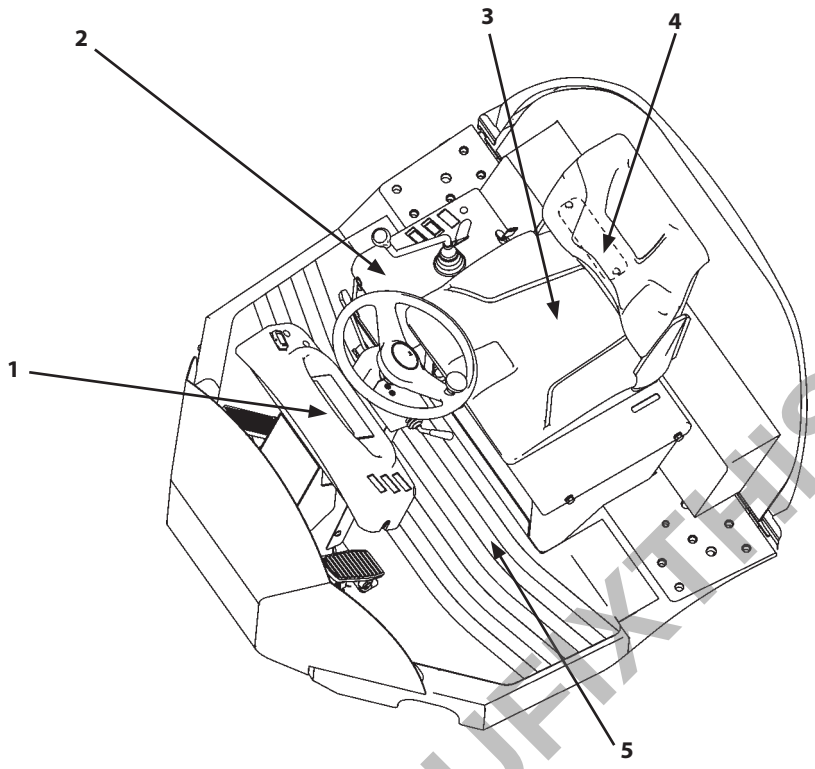


M4EK-01-061

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Features



M4EK-01-003A

1- Front Console
2- Right Console
3- Operator's Seat
4- Fuse Box
5- Floor Mat

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Operating Quick Coupler (Mechanical Type)

WARNING: During work, keep other persons away from the machine. Apply the parking brake.

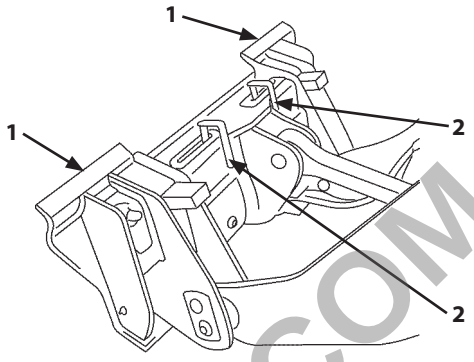
The quick coupler is a system with which a front attachment work tool such as a bucket can be easily replaced with other work tool.

1- Coupler frame

2- Indicators

3- Coupler Lock pins

4- Coupler switch



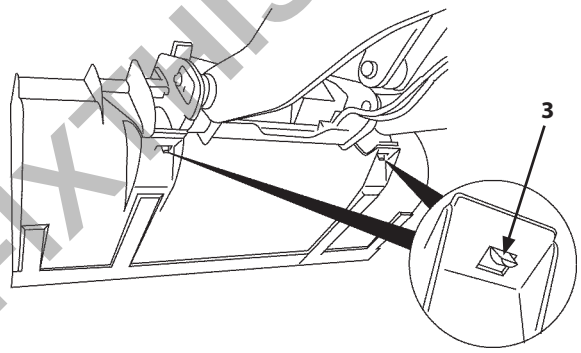
ME804-13-001

Coupler Switch

WARNING: Should the attachment come off during operation, there is a danger of causing serious injury or death.

Make sure the coupler switch (4) is in the LOCK position (6) before starting operation.

Do not operate the coupler switch (4) during operation.

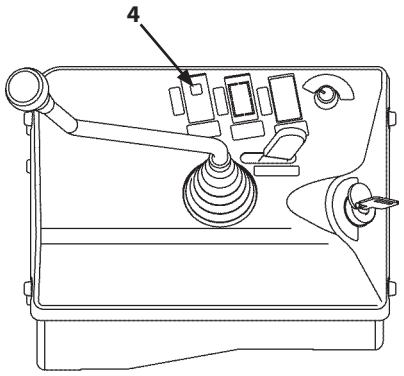


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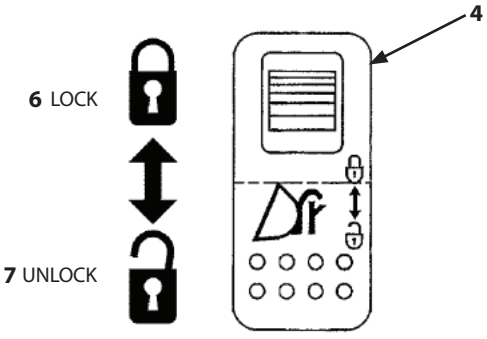
The coupler switch (4) is used to engage or disengage the coupler lock pins (3).

6- LOCK: Coupler pin engaged

7- UNLOCK: Coupler pin disengaged



ME804-13-003



ME804-13-04KC

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Transporting by Road

When transporting the machine on public roads, be sure to first understand and follow all local regulations.

- For transporting using a trailer, check the width, height, length and weight of the trailer when the machine is loaded.
- Investigate beforehand the conditions of the route to be traveled, such as dimensional limits, weight limits, and traffic regulations. In some cases, getting approval from the authority concerned, disassembling the machine to bring it within dimensional limits or weight limits of local regulations may become necessary.

Transporting by Trailer

Provide an appropriate trailer while referring to the weight and dimensions shown in the specifications. When transporting the machine within the weight and dimensions shown in the specifications by a trailer, it is possible to transport the machine without disassembling.

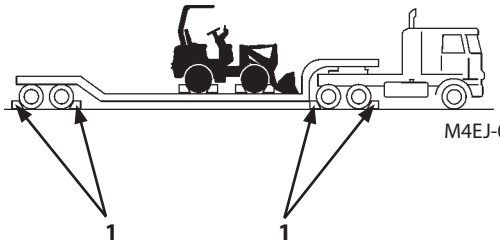
Loading/Unloading on Trailer

WARNING: Be sure to use a loading dock or a ramp for loading/unloading.

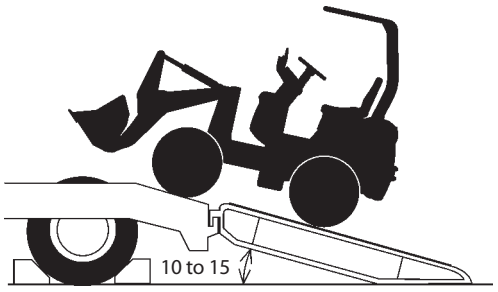
Always load and unload the machine on a firm, level surface.

Ramp/Loading Dock

1. Before loading, thoroughly clean the ramps, loading dock and flatbed. Dirty ramps, loading docks, and flatbeds with oil, mud, or ice on them are slippery and dangerous.
2. Place blocks (1) against the trailer wheels so that the trailer does not move while using a ramp or loading dock.
3. Ramps must be sufficient in width, length, and strength. Be sure that the incline of the ramp is less than 15 degrees.
4. Loading docks must be sufficient in width and strength to support the machine and have an incline of less than 15 degrees.



M4EJ-06-001

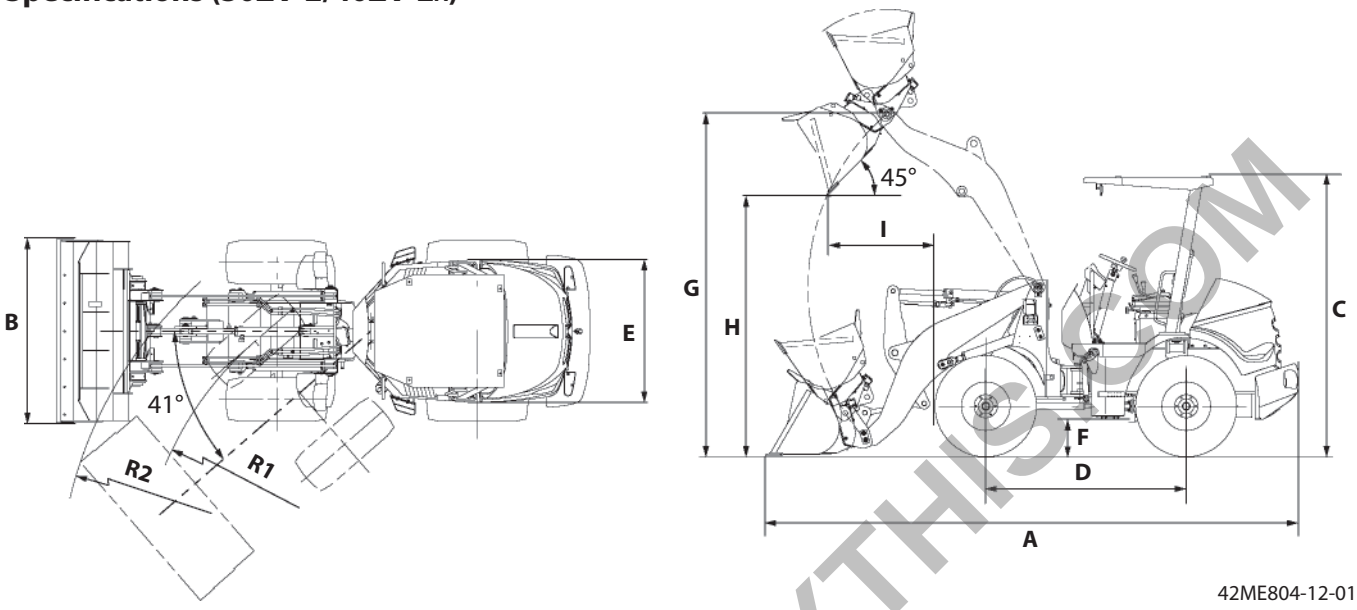


M4EJ-06-002

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Specifications (30ZV-2/40ZV-2A)



42ME804-12-01

Model	—	30ZV-2	40ZV-2A
Bucket Capacity: heaped	m^3 (Yd^3)	0.4 (0.52) (BOC)	0.5 (0.65) (BOC)
Operating Weight (Canopy/Cab)	kg (lb)	3085/3245 (6800/7150)	3810/3970 (8390/8750)
Rated Loading Weight	kg (lb)	700 (1540)	860 (1890)
Engine Model	—	Kubota D1803-M-DI	Kubota V2403-M-DI
Engine Flywheel Power (SAE J1995 Gross)	—	22.8 kW/2200 rpm (30.6 HP/2200 rpm)	34.1 kW/2400 rpm (45.7 HP/2400 rpm)
A: Overall Length	mm (in)	4410 (173.6)	4620 (182.0)
B: Overall Width (Bucket)	mm (in)	1570 (61.8)	1690 (66.5)
C: Overall Height	mm (in)	2485 (97.8)/2480 (97.6)	2565 (101.0)/2560 (100.7)
D: Wheel Base	mm (in)	1780 (70.1)	1850 (72.8)
E: Tread	mm (in)	1180 (46.5)	1260 (49.6)
F: Ground Clearance	mm (in)	255 (10.0)	295 (11.6)
G: Bucket Hinge Height	mm (in)	2685 (105.7)	3030 (119.2)
H: Dumping Clearance (45°)	mm (in)	2025 (79.7)	2325 (91.5)
I: Dumping Reach (45°)	mm (in)	880 (34.7)	930 (36.6)
R1: Minimum Rotation Radius	mm (in)	3610 (142.2)	3820 (150.4)
R2: Minimum Rotation Radius	mm (in)	3550 (139.8)	3740 (147.2)
Travel Speed Forward/Reverse	km/h (mph)	15/15 (9.3/9.3)	17/17 (10.5/10.5)
Transmission Speeds (F/R)	—	2/2	2/2
Articulation Angle (Left/Right) deg	(°)	41	41
Tire Size	—	12.5/70-16 8PR (L2)	15.5/60-18 8PR (L2)

NOTE: The specifications can change at any time.

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Troubleshooting

If any machine trouble has occurred, immediately repair it. Make certain the cause of the trouble and take necessary measures to prevent the reoccurrence of the same trouble. In case troubleshooting is difficult, or measures marked with * must be taken, consult the nearest authorized dealer. Never attempt to adjust, disassemble, or repair the hydraulic and/or electrical/electronic parts/components.

1. Engine

Consult the nearest authorized dealer for the engine troubleshooting.

2. Engine Auxiliaries

Problem	Cause	Solution
Batteries will not be charged.	Broken battery separator	Replace
	Faulty regulator	* Adjust and replace
	Faulty ground line	* Repair
	Faulty alternator	* Repair and replace
Batteries discharges quickly after being charged.	Shorted cable	* Repair and replace
	Shorted battery separator	* Replace
	Increased sediment in battery	* Replace
Coolant temperature is too high.	Low coolant level	Add
	Loose engine fan V-belt	* Adjust
	Damaged rubber hose	* Replace
	Faulty thermostat	* Replace
	Faulty coolant temperature gauge	* Replace
	Cooling system passages dirty	Flush cooling system
	Radiator core or oil cooler core plugged	Clean radiator and oil cooler
	Radiator screen plugged	Clean screen

3. Engine does not Start.

Symptom	Cause	Solution
The starter does not rotate.	Reduced battery voltage	Charge the batteries. Replace.
	High resistance in the starter circuit	* Clean and/or retighten the battery terminals and starter terminals
	Faulty key switch	* Replace
	Damaged wire harness	* Repair or replace
	Faulty battery relay	* Replace
	Blown slow blow fuse link	* Replace
	The forward/reverse selector lever is in either the forward or reverse position.	Return to neutral.
	Faulty starter	* Repair or replace
Although the starter rotates, the engine does not start.	Use of poor quality fuel, insufficient fuel, lack of fuel	Change fuel. Refill tank with good quality fuel
	Faulty glow plug	* Replace glow plug
	Air mixed in the fuel supply line	Bleed air
	Faulty injection pump or nozzle	* Repair or replace
	Reduced compression pressure	* Repair or replace
Engine speed does not increase.	The accelerator pedal function is abnormal.	Replace accelerator pedal or parts.
Although the engine cranks, running speed is low and easy to stall.	Deteriorated engine oil	Change engine oil
	Contaminated injection nozzle	* Replace
	Clogged fuel filter	Replace
	Clogged feed pump strainer	Clean
	Air mixed in the fuel supply line	Bleed air
	Poor fuel quality.	Replace

Items with * mark: Consult your nearest authorized dealer.

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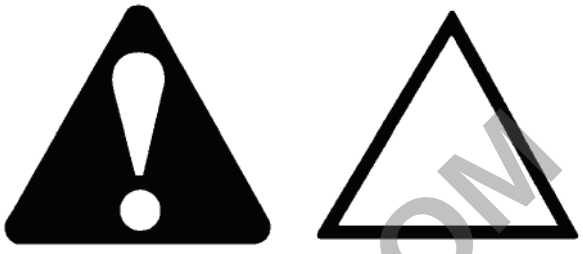
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Recognize Safety Information

- These are the **SAFETY ALERT SYMBOLS**.
  - When you see these symbols on your machine or in this manual, be alert to the potential for personal injury.
  - Follow recommended precautions and safe operating practices.



SA-2644

Understand Signal Words

- On machine safety signs, signal words designating the degree or level of hazard - DANGER, WARNING, or CAUTION - are used with the safety alert symbol.
  - **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
  - **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
  - **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
  - **DANGER or WARNING safety signs** are located near specific hazards. General precautions are listed on **CAUTION safety signs**.
  - Some safety signs do not use any of the designated signal words above after the safety alert symbol has been used on this machine.
- To avoid confusing machine protection with personal safety messages, a signal word **IMPORTANT** indicates a situation which, if not avoided, could result in damage to the machine.
- ***NOTE*** indicates an additional explanation for an element of information.



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Loading

IMPORTANT: Always maintain the a clean driving surface. Cleaning of materials such as soil spilled on the driving surface will reduce wear and/or damage on tires.

IMPORTANT: When carrying loads in the bucket, pay attention to the travel surface conditions. Travel at such speed so that the load will not spill out of the bucket, while positioning the bucket at the lowest possible height.

IMPORTANT: Refrain from banging the bucket with the bucket stopper as much as possible when removing stuck material, like clay, from the bucket. Failure to do so may result in damage to the front attachment. Remove material stuck to the bucket by washing with water.

Loading is dumping the handling material onto a truck or into a hopper. Loading work is performed in either the load and carrying method or loader and dump truck method. Select either method depending on the work site conditions while taking the merits in cost and safety into account.

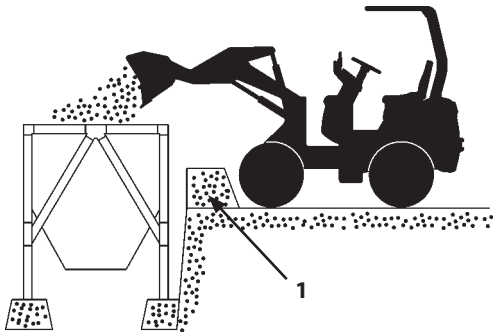
Load and Carrying Method

WARNING: Be sure to provide tire stopper (1) in front of the dumping port.

WARNING: Before raising the lift arm, slightly tilt the bucket back and forth to stabilize the load in the bucket to avoid personal injury or damage to the machine due to falling of the load.

WARNING: When approaching the machine to a hopper with the lift arm raised to a high enough position, travel slowly. Never rapidly operate the machine while approaching a hopper to prevent turning over.

A wheel loader performs work process of loading, carrying, and dumping in sequence. Generally, when the carrying distance is 30 to 100 m (33 yd to 109 yd), this method is employed. Make an upgrade slope of approx. 3 ° around a hopper when dumping into the hopper. Be sure to provide a level area 10 m apart from the dumping port and tire stopper (1) at the hopper edge. Reduction in travel speed will assist operator's braking effort.



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