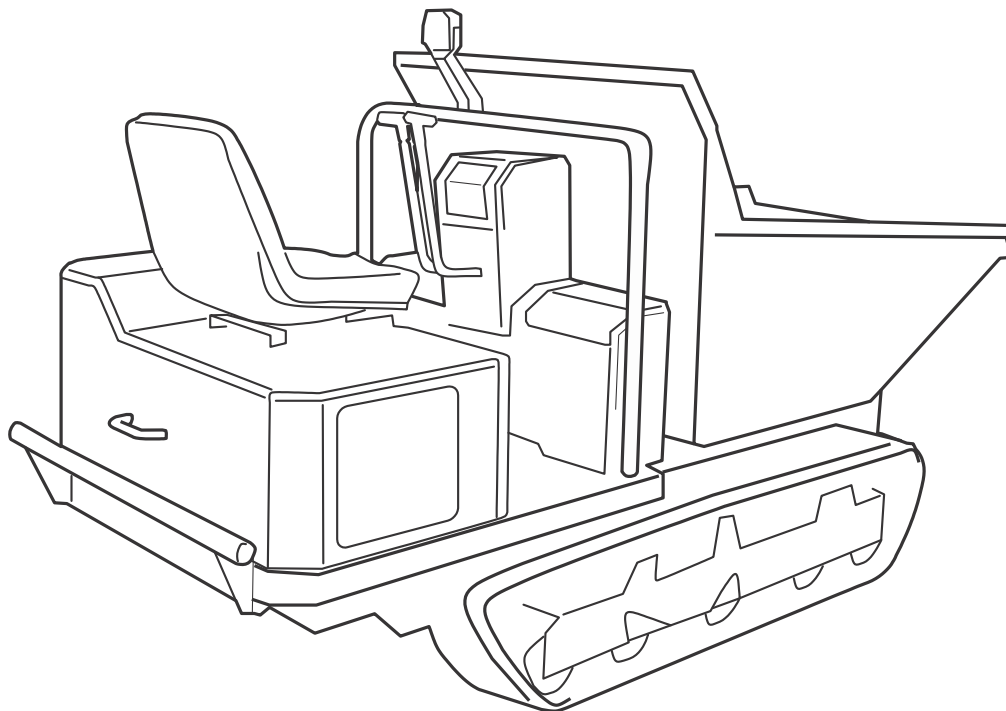


Off-road Rubber Track Dumper **S100**

OPERATOR'S MANUAL



⚠ WARNING




Read this manual completely before operating or maintaining this machine. Failure to follow safety precautions could result in serious injury or death. Keep this manual for future reference for you and for all those who operate and maintain this machine.

Feb. 2004, 3677 5101 001

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Ukihagun, Fukuoka, Japan 839-1396
Tel.(0943)75-2195 Fax.(0943)75-4396

Warning Words Used in This Manual

To indicate the level of danger (or the degree of the failure), the following four signal words are used to identify the safety messages in this manual. Their meanings are as follows.

| Signal word | Meaning |
|--|--|
|  DANGER | Indicates an imminently hazardous situation which, if not avoided by following these instructions and precautions, will result in death or serious injury. |
|  WARNING | Indicates a potentially hazardous situation which, if not avoided by following these instructions and precautions, could result in death or injury. |
|  CAUTION | Indicates a potentially hazardous situation which, if not avoided by following these instructions and precautions, may result in minor or moderate injury. |
| NOTICE | This word is used for precautions that are recommended or to emphasize the importance of information. |

Notice to Users and Maintenance Personnel

Thank you for purchasing this machine.

Always be sure to read and understand this manual thoroughly before using your machine. This will enable you to use it correctly.

 **WARNING**

The machine can be very dangerous if the safety precautions in this manual and on the labels attached to this machine are not followed. Always follow the instructions and safety precautions, or serious injury or death could result.

This machine should only be used for its intended purpose: hauling and dumping.

Any other use could be dangerous.

Also driving this machine on a public road or a road regarded as a public road may be illegal.

 **WARNING**

Do not modify this machine. Also do not remove the safety cover of the body before running. A serious accident could result.

Notice to Owner

Be sure that everyone who uses this machine, including those who rent or lease this machine, receives a copy of the Operator's Manual and understands the importance of reading and following the information in this manual.

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< Guarantee Certificate >

Attached to the end of this manual.

* Receive the guarantee certificate together with a receipt after you have received instructions for handling this machine.

< Appendix >

"Instruction manual for engine"

* Be sure to read it together with this manual.

1. Introduction

1.1 Purpose of This Manual

The purpose of this manual is to provide detailed information needed for the safe and effective use of this machine to those who operate or maintain the machine.

1.2 Structure of This Manual

This manual contains the following chapters.

1. Introduction

This section explains the purpose and structure of the manual and the warnings used in the manual. It also describes the warning labels attached to the machine.

2. Warranty and After-sales Service

This section covers items related to the warranty and after-sales service for this machine.

3. Rules of Safe Operation and Maintenance

This section covers general safety items that must be followed when operating or using this machine.

4. Component Names and Functions

This section explains the names and functions of the parts of the machine.

5. Product Specifications

This section gives the specifications of this machine. It also gives details about the tool bag.

6. Operation

This section explains the preparations before operating the machine, the order of operation, and the method of operation.

7. Maintenance

This section gives information about periodic inspection, use of coolant, lubricants, and grease, and cleaning, replacing, adjusting, and maintenance of the machine after use.

8. Storage (Long-term Storage)

This section gives information about storage (long-term storage) of the machine.

9. Troubleshooting

This section describes the action to take if any problem occurs.

10. Transporting Machine

This section explains the methods and precautions when transporting the machine.

1.3 Warning Labels Attached to This Machine

NOTICE

Replace these labels immediately if they have been removed, fallen off, or have become illegible. Use the part numbers on the label to order replacement labels from dealer.

One-way dump

① 3667 5073 000

| Vorsicht ATTENTION CAUTION | | |
|--|---|---|
| <p>Beim Anschluß der Batteriep... ...sicherstellen, daß das Massekabel mit dem (+) Minuspol der Batterie, und das Pluskabel mit dem (+) Pluspol der Batterie verbunden werden. S'assurer que lors de la connexion du câble d'accélérateur, les bornes (+) et (-) soient bien connectées aux bornes (+) et (-) de la batterie. Des mauvais branchements peuvent causer, lors de la mise en route du moteur, des dommages au système électrique entraînant le feu ou une explosion.</p> <p>Make sure that when connecting Booster Cables that positive (+) goes to positive (+) and negative (-) goes to negative (-) terminals on the batteries. Insecure leads may cause difficulty in starting engine, damage of electrical system possibly resulting in a fire or explosion.</p> | <p>Zu lockere Kabelverbindungen können Startprobleme oder Schäden im Elektriksystem nach sich ziehen, die im Extremfall zu Kabelbränden oder zur Explosion der Batterie führen könnten. Toujours connecter en premier le câble (+) et le déconnecter en dernier. Un mauvais branchement peut entraîner des dommages au système électrique.</p> <p>Always connect the positive (+) cable first and disconnect last. Misconnection of the terminal may result in damage of electrical system.</p> | <p>Immer das (+) Pluskabel zuerst anschließen, und zuletzt abklemmen. Eine Verwachsung der Pole kann zu Schäden der Elektrik führen. Beim Anschluß das (+) Pluskabel oder den (+) Pluspol niemals mit Metallteilen oder dem (-) Minuspol in Kontakt bringen, Kurzschlußgefahr! Lors de la connexion du câble d'accélérateur (+), ne pas le fait entrer en contact avec le câble (-) ou toute autre partie métallique.</p> <p>When connecting Booster Cables do not allow the positive (+) terminal of the Booster Cables to come into contact with negative (-) terminal or Booster Cable or any other metal parts.</p> |

② 3667 5061 000

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③ 3667 5068 000

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④ 3667 5066 000

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⑤ 3667 5062 000

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⑥ 3667 5063 000

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⑦ 5305 5326 000

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⑧ 3667 5064 000

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⑨ 3667 5065 000

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3677M0104010

Swivel dump

① 3667 5073 000

Vorsicht!
ATTENTION
CAUTION

Baum Anschluß der Batteriepo-
sklemmen sicherstellen, daß
das Massekabel mit dem (-)
Minuspole der Batterie, und das
Pluskabel mit dem (+) Pluspol
der Batterie verbunden werden.

S'assurer que lors de la connexion
du câble d'accélérateur, les bornes
(+) et (-) soient bien connectées aux
bornes (+) et (-) de la batterie.
Des mauvais branchements peuvent
causer, lors de la mise en route
du moteur, des dommages au
système électrique entraînant le feu
ou une explosion.

Make sure that when connecting
Booster Cables that positive (+) goes
to positive (+) and negative (-) goes to
negative (-) terminals on the batteries.
Insecure leads may cause difficulty
in starting engine, damage of electrical
system possibly resulting in a fire or
explosion.

Zu lockere Kabelverbindungen
können Startprobleme oder
Schäden im Elektriksystem
nach sich ziehen, die im Extre-
mfall zu Kabelbränden oder zur
Explosion der Batterie führen
könnten.

Toujours connecter en premier
le câble (+) et le déconnecter
en dernier. Un mauvais branchement
peut entraîner des dommages au
système électrique.

Immer das (+) Pluskabel zuerst
anschießen, und zuletzt abk-
emmen. Eine Verwechslung
der Pole kann zu Schäden der
Elektrik führen. Beim Anschluß
das (+) Pluskabel oder den
(+) Pluspol niemals mit Meta-
llteilen oder dem (-) Minuspole in
Kontakt bringen, Kurzschluß-
gefahr!

Lors de la connexion du câble
d'accélérateur (+), ne pas le
fait entrer en contact avec le
câble (-) ou toute autre partie
métallique.

When connecting Booster Cables
do not allow the positive (+)
terminal of the Booster Cables to
come into contact with negative
(-) terminal or Booster Cable or
any other metal parts.

② 52295104000

③ 52295107000

④ 36775068000

⑤ 36775064000

⑥ 36775066000

⑦ 36705114000

⑧ 36775007300

⑨ 36675062000

⑩ 36775065000

⑪ 36775063000

⑫ 53055326000

3677M0103050

- 3 -

2 Warranty and After-sales Service

2. Warranty and After-sales Service

Warranty

Chikusui Canycom, Inc. provides a warranty to you through their local dealers. Consult your local dealer regarding the details of warranty.

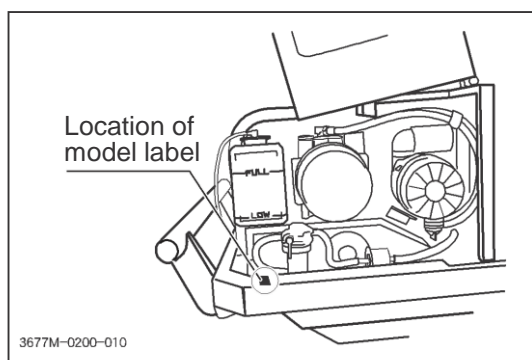
After-sales Service

Please contact your Canycom distributor from whom you purchased your machine or our Service Center regarding service orders or any questions or problems that may arise when using the Off-road Rubber Track Dumper.

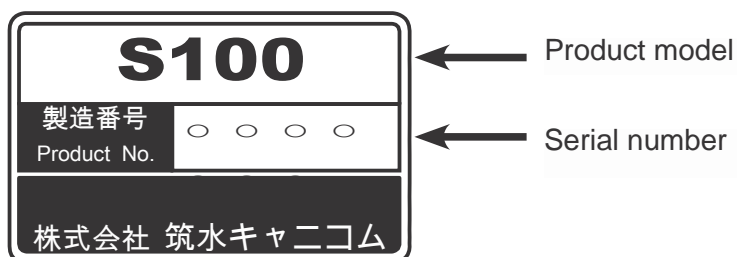
Please inform us of the product model that you own or use and the product serial number specified on the model label (See illustration below for location of the label).

Please refer to the "Specifications" in Chapter 5 for the name of the manufacturer of the engine installed in your machine, as well as the engine model.

< Location of Model Label >



< Model Label >



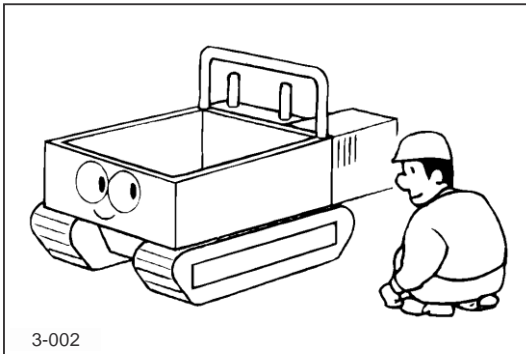
Availability of Repair Parts

Repair parts for this product will be available for seven years after manufacturing of this machine is discontinued.

3. Rules for Safe Operation and Maintenance

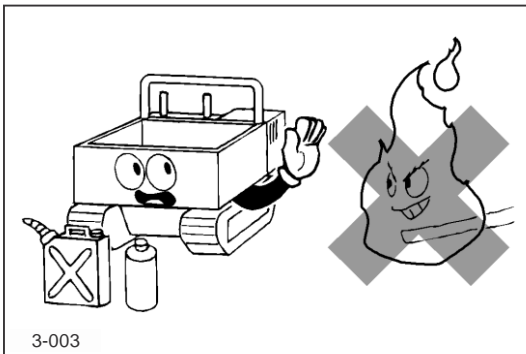
This chapter describes general safety precautions that must be followed during operation and maintenance. Be sure that all users and maintenance personnel are familiar with these rules and that they follow them.

Safety Precautions before Operation



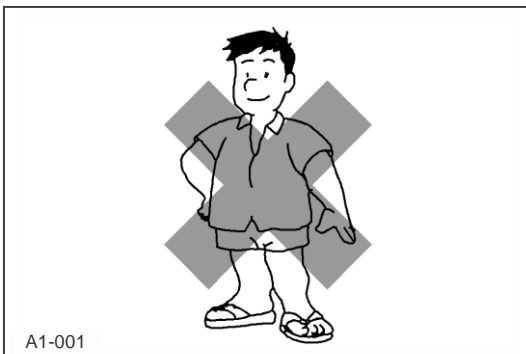
Pre-work Check

Perform the daily pre-operation check before starting the machine. Repair or replace damaged parts before starting the machine.



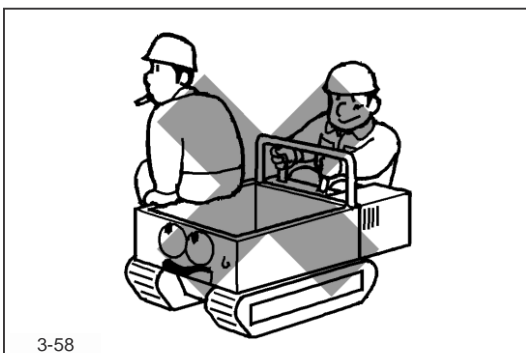
Fuel Handling

Do not handle fuel or grease, service the engine, or recharge the battery while smoking or when near an open flame.



Protective Clothing

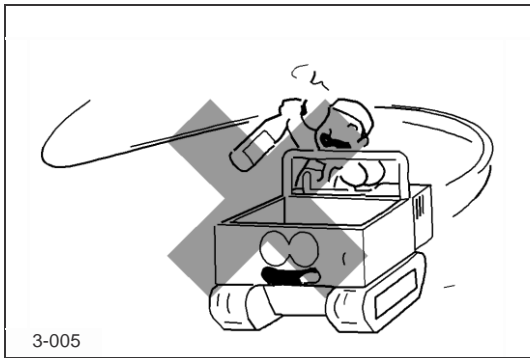
Wear clothes suitable for the operation of heavy equipment. Protective footwear, long pants, and long-sleeved shirts are recommended.



Do Not Carry Passengers on This Machine

Driving the Off-Road Rubber Track Dumper with a passenger or passengers can change the center of gravity and make the machine difficult to handle. This product was designed to be operated carrying only one person the driver. Driving with passenger is extremely dangerous.

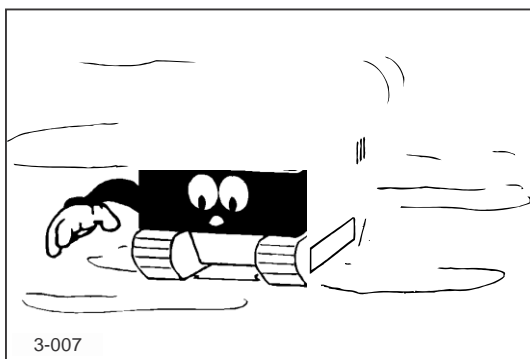
3 Rules for Safe Operation and Maintenance



⚠ Do Not Drive Recklessly

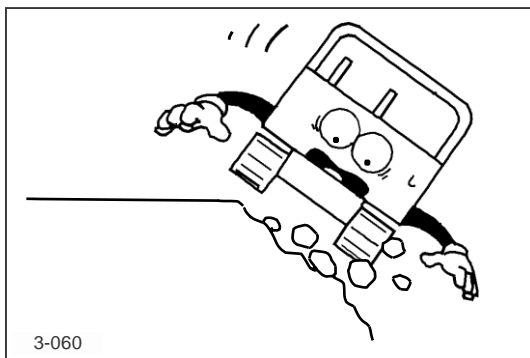
Do not operate this machine when under the influence of alcohol or when fatigued. No one under age 18 should operate this machine.

Do Not Start, Accelerate, Turn, or Brake Quickly



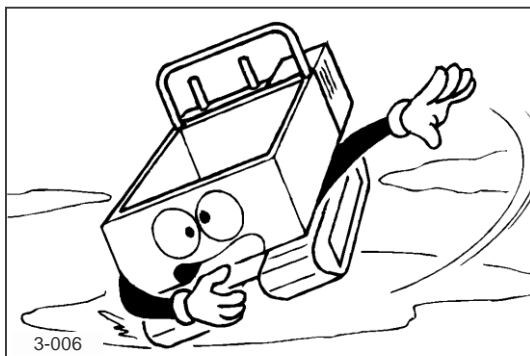
⚠ Maintain Safe Speed

When driving the machine, always drive at a safe speed suitable for the load in the dump body and the conditions of the road surface and grade of the road.



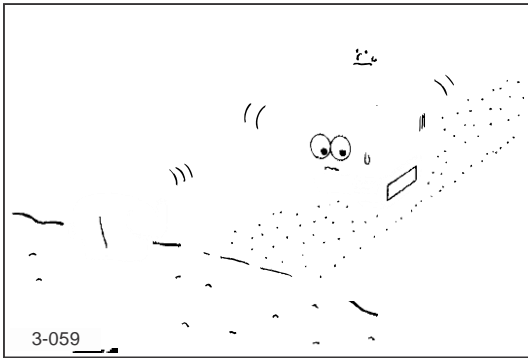
⚠ Precautions of Crumbling Ground

Beware of driving trenches and banks. There is a danger of the ground crumbling due to the machine weight. If travelling on soft ground, drive slowly and safely.



⚠ No Quick Starting Acceleration, Turning or Braking

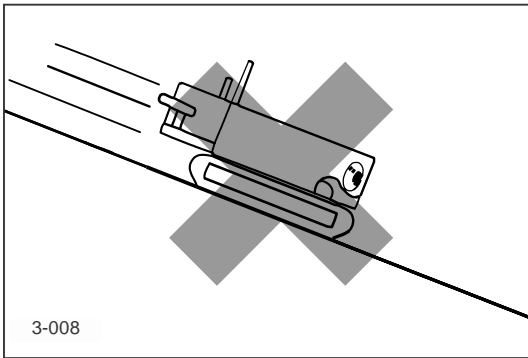
Drive safely and avoid sudden changes of speed or direction. Make sure the area around the machine is safe for driving. Do not make sudden maneuvers or turn sharply when driving on soft or wet ground; this can cause the machine to lose traction or turn over.



⚠ Work with an Observer in Dangerous Situations

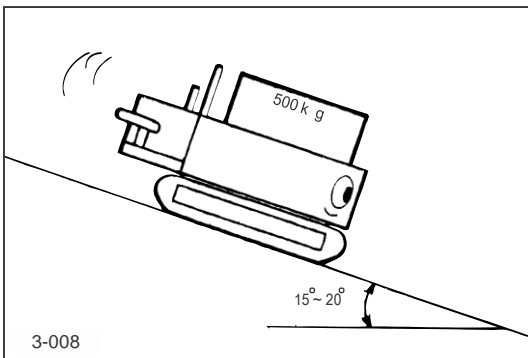
When operating the machine where there is poor visibility, rugged terrain, hills, or limited maneuvering room, use an observer to help direct the machine's movement. The observer should be able to see the machine and its immediate surroundings, and should use pre-arranged signals to direct the driver's actions.

Precautions on Slopes



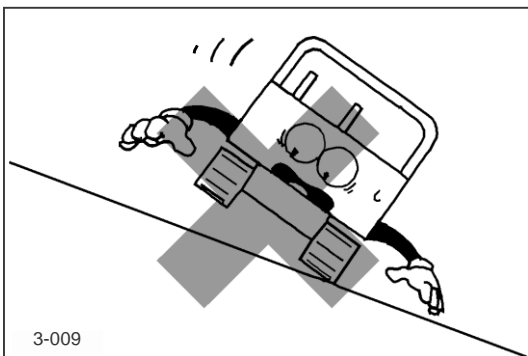
⚠ Use the Engine Speed to Help Brake when Driving Down a Slope

Before driving down a slope, stop the machine temporarily and lower the speed of the engine, and drive down the slope at a low speed. Let the engine speed help decelerate the machine. Travel at a low speed on wet steel plates and in muddy places. The machine may slip even on a gentle slope, causing a serious accident. Stopping suddenly when driving down a slope can throw the operator from the machine or make the machine turn over, causing serious injury or death.



⚠ Observe the Machine's Load Limit on a Slope

Driving on slopes can be dangerous. This is particularly true when you are driving with a load. Do not exceed 500kg, when traveling on slopes of 15° to 20°. If you must drive on slopes of more than 20°, the machine must not carry a load.



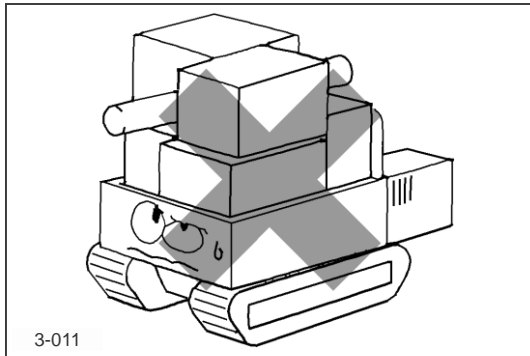
⚠ Do Not Drive Across a Slope to Drive on the Slope

Always travel straight up and down a slope. Never travel across a slope or along a contour line. Driving across a steep slope or along a contour line is dangerous and may cause the machine to tip over causing serious injury or death.

Never perform turning operation on a slope. If a route must be changed unavoidably, move the machine to level ground temporarily before turning.

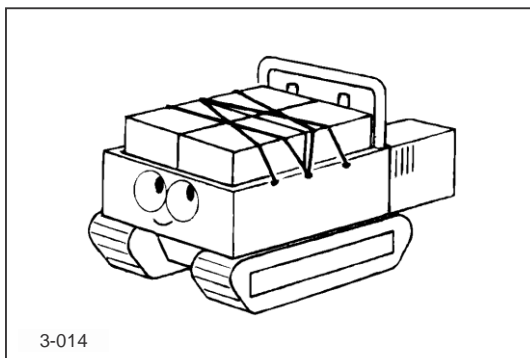
3 Rules for Safe Operation and Maintenance

Precautions When Carrying a Load



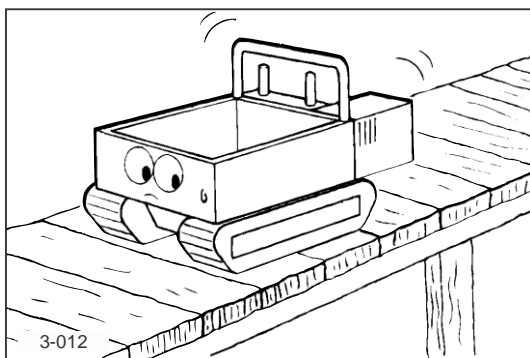
Never Overload

Do not load the machine in excess of the working capacity of 1000kg.



Load Vehicle Properly

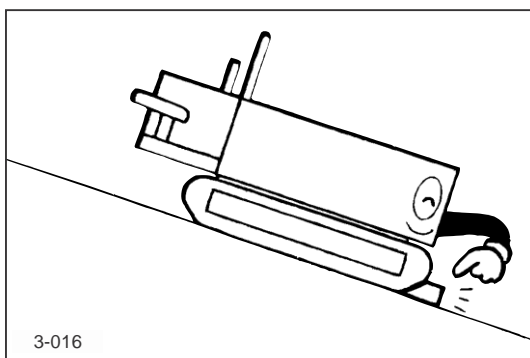
Load cargo on the load deck so it is evenly distributed and strap the cargo to the load deck to avoid cargo weight imbalance and shifting. Do not load cargo on the load deck to a height that obstructs the operator's field of view.



Observe Weight Limit of a Bridge or Overpass

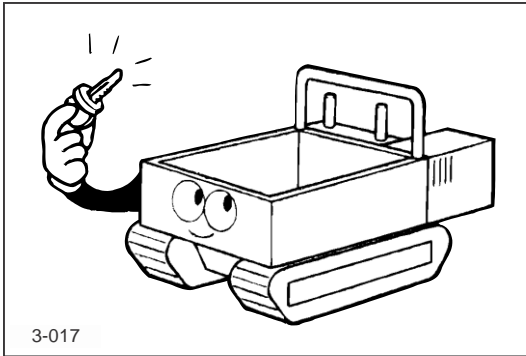
Before crossing a bridge or overpass, be sure that the total combined weight of the machine and the load does not exceed the stated weight limit for the bridge or overpass. Then cross the bridge or overpass carefully at a constant speed.

Precautions When Parking



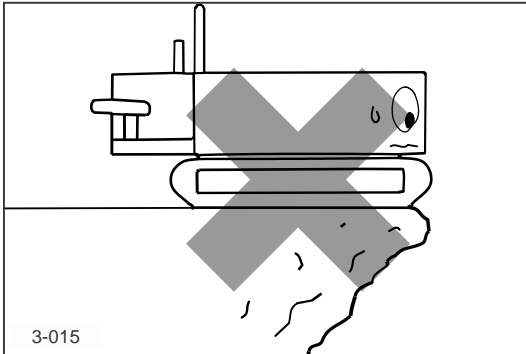
Do Not Park on Unstable or Inclined Surfaces

Do not park the machine on a slope. If it has to be parked on a slope, apply the parking brake securely and block the rubber tracks at the lower end .



Safely Leaving the Machine Unattended

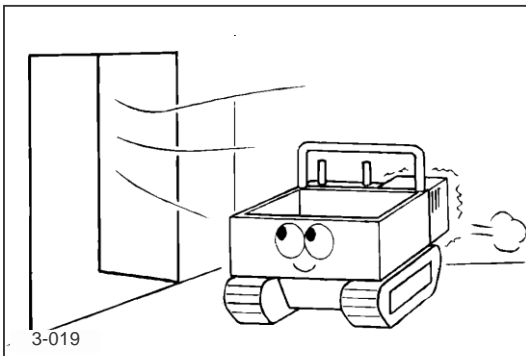
Whenever you park the machine, be sure to turn the parking brake switch to the [P] position to apply the parking brake, and stop the engine. Remove the key whenever you leave the machine unattended.



Do Not Park on Unstable or Inclined Surfaces

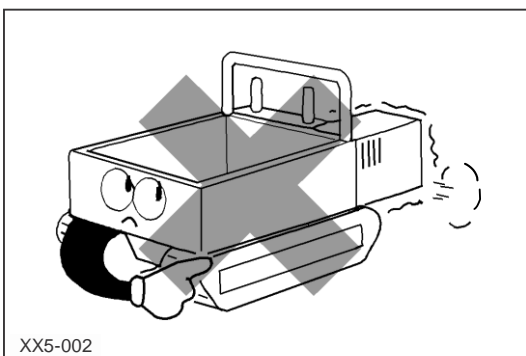
Park the machine on a stable, level, flat surface. If parking on a slope is unavoidable, apply the parking brake and block the rubber tracks at the lower end of the machine. Observe all precautions for driving and operating the machine and transporting a load on a slope.

Precautions When Performing Maintenance



Ventilate Properly When Operating Indoors

When operating engine indoors, always ensure that there is adequate ventilation to prevent poisoning by exhaust gas.



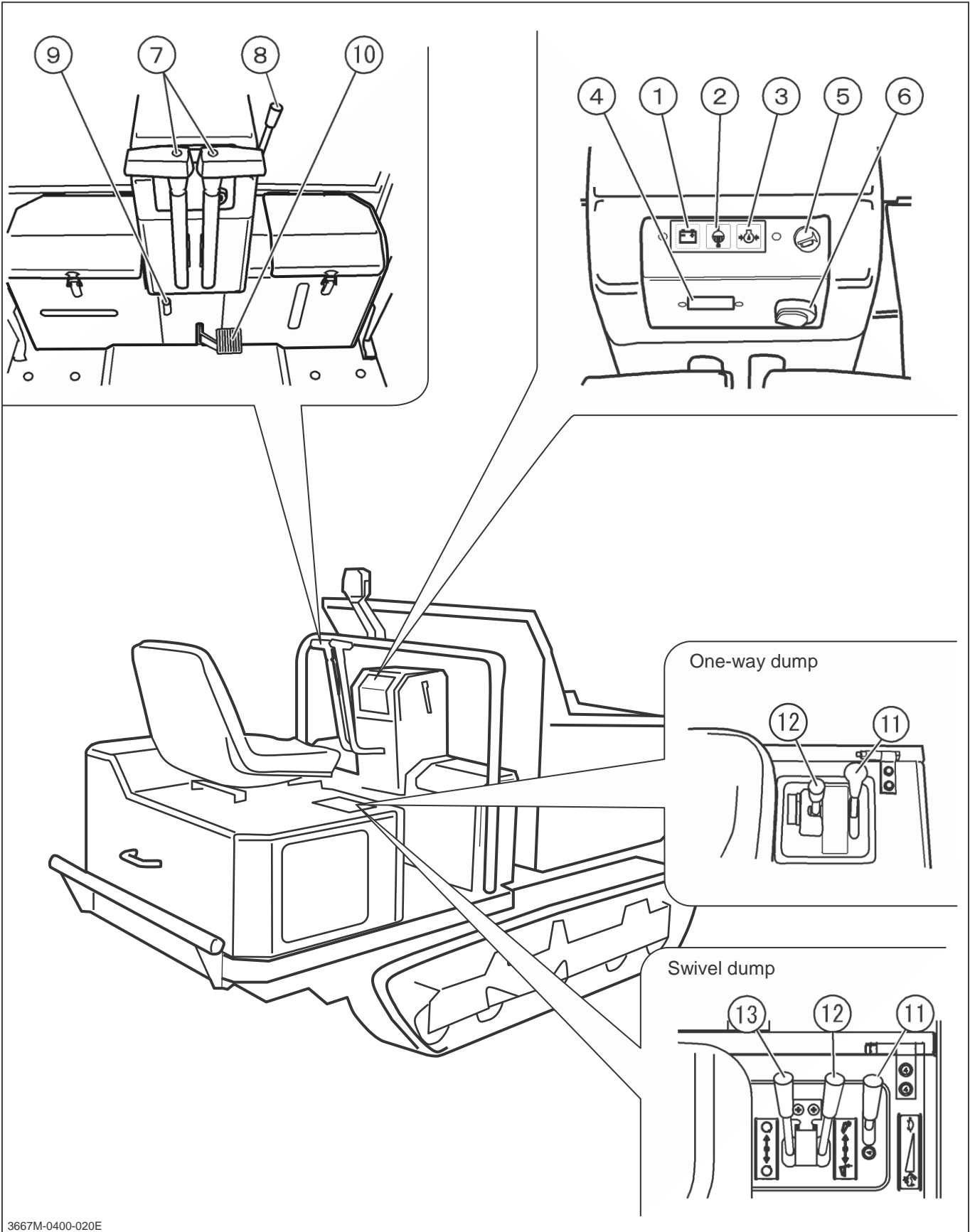
Never Carry Out Maintenance with Engine Running

Do not carry out maintenance with the engine running. Always stop the engine before starting maintenance.

4 Component Names and Functions

4. Component Names and Functions

Locations



3667M-0400-020E

Component Names and Functions

- | | |
|----------------------------------|---|
| ① Charge lamp | This displays the condition of the battery charge. When the ignition switch is turned to the [I] position, it lights up, and if the condition is normal, it will go out after the engine starts. |
| ② Cooling water temperature lamp | This lights up when the engine cooling water temperature rises abnormally (overheats). |
| ③ Oil lamp | This shows if the engine oil pressure is normal. When the engine-starting switch is turned to the [I] position, it lights up, and if the conditions are normal, it will go out after the engine starts. |
| ④ Hour meter | This displays the total number of hours that the machine has been working in units of 0.1 hour. |
| ⑤ Horn switch | Press this button to sound the horn. This is used when warning during traveling and signaling during operation. |
| ⑥ Ignition switch | Turn this key to start and stop the engine. |
| ⑦ Steering lever | This is used to switch the traveling direction of the machine (to forward or backward) and turns the machine. |
| ⑧ Clutch lever | This is used when the stability of the engine is poor in winter or in cold areas. |
| ⑨ Parking brake lock lever | To lock the brake pedal, pull this lever toward you with the brake pedal depressed when the machine is at a standstill. |
| ⑩ Parking brake pedal | This is used to safely park the machine. |
| ⑪ Throttle lever | This is used to increase or decrease the speed of the engine. |
| ⑫ Dump lever | This is used to raise or lower the dump body. |
| ⑬ Turn lever | This is used to rotate a bed. |

5

Product Specifications

5. Product Specifications

5.1 Specifications of This Product

NOTICE

Read and understand the specifications of this machine to use maintain the machine properly.

| Machine model, type | | | S100 | | |
|--------------------------|----------------------------------|------------------------------------|-----------------------------|-------------|-------------|
| | | | One-way dump | Swivel ump | |
| Weight | kg | | 835 | 910 | |
| Maximum payload capacity | kN(kg) | | 9.8 (1000) | | |
| Dimensions | Overall length | mm | 2570 | 2595 | |
| | Overall width | mm | 1000 | 980 | |
| | Overall height | mm | 1360 [1465] | 1265 [1465] | |
| | Ground contact length of crawler | mm | 1160 | | |
| | Crawler tread | mm | 750 | | |
| | Minimum ground clearance | mm | 145 | | |
| | Load deck floor height | mm | 540 | 620 | |
| Load deck dimensions | Inside dimensions | Length | mm | 1315 | 1340 |
| | | Width | mm | 890 | |
| | | Height | mm | 490 | |
| | Payload | Struck | m ³ (kg) | 0.42 (920) | 0.39 (860) |
| | | Heaped | m ³ (kg) | 0.54 (1080) | 0.50 (1000) |
| Engine | Model | | Kubota D 722 | | |
| | Type | | Water-cooled 4-cycle diesel | | |
| | Cylinder (bore x stroke) | mm | 67 x 68 | | |
| | Total displacement | cm ³ (cc) | 719 (719) | | |
| | Maximum output | kW/min ¹ (PS/rpm) | 11.0 / 3000 (15.0 / 3000) | | |
| | Maximum torque | N·m/min ¹ (kg·m/rpm) | 37.0 / 2200 (3.77 / 2200) | | |
| | Starting system | | Electric starter | | |
| | Fuel used | | Light oil | | |
| | Fuel consumption | g/kW·h (g/PS·h) | 312.7 (230) | | |
| | Fuel tank capacity | liters | 15.0 | | |
| | Lubricating oil capacity | liters | 3.15 | | |

*[] The bracketed figure above indicates that obtained when the working lamp is mounted.

| Machine model, type | | | S100 | | | |
|----------------------|--------------------------|--------------------------|-------------------------------|------------------------------------|----------------------------|-----------|
| | | | One-way dump | Swivel dump | | |
| Electrical equipment | Battery type | | 75D23R | | | |
| | Battery capacity | V/AH | 12 / 52 | | | |
| | Working lamp | [V/W] | [12 / 18.4] | | | |
| Travel Performance | Travel speed | km/h | 0.0 ~ 5.4 | | | |
| | Minimum turning radius | m | 1.55 | | | |
| | Gradeability | deg | 25 (unloaded) | | | |
| | HST fluid capacity | liters | 20 | | | |
| Power train | Main gearshifting method | | Twin HST | | | |
| | Steering system | | Twin HST two levers | | | |
| | Brake system | | Internal expanding type brake | | | |
| | Crawler | | 230 x 48 x 72 | | | |
| Dump system | Dump system | | Front dump | Swivel dump | | |
| | Hydraulic pump | Type | | Gear pump | | |
| | | Maximum rotational speed | rpm | 2700 | | |
| | | Maximum discharge | ℓ/min | 11.0 | | |
| | | Relief setting pressure | MPa(kg/cm ²) | 14.7 (150) | | |
| | Cylinder (bore x stroke) | | mm | 60 x 400 | | |
| | Performance | Maximum lifting angle | | deg | 90 | |
| | | Lifting time | | sec | About 6.0 | About 6.3 |
| | | Lowering time | | sec | About 4.0 | About 5.1 |
| | Hydraulic fluid capacity | | liters | 1.6 | Combination with HST fluid | |
| Rotating device | Rotating system | | — | Hydraulic pressure (twin cylinder) | | |
| | Maximum rotating angle | | deg | — | Right: 90 ~ Left: 90 | |
| | Rotating time | | sec | — | About 3.0 (90°) | |
| | Cylinder (bore x stroke) | | mm | — | 50 x 160 | |

* These specifications are subject to change without notice, for product improvement.

5.2 Details of Tool Bag

| No. | Part name | Quantity | Remarks |
|-----|--|----------|---------|
| 1 | Operation and maintenance manual (This manual) | 1 | |
| 2 | Instruction manual for engine | 1 | |
| 3 | Grease fitting | 1 | M6 |

6

Operation

6. Operation

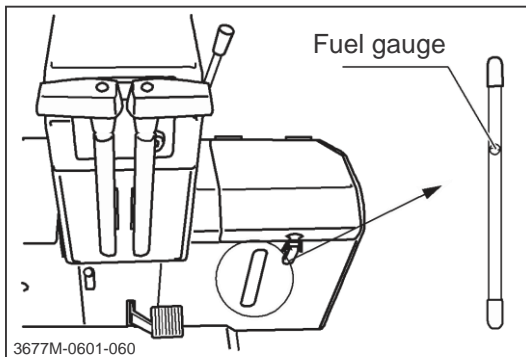
- Before reading this section, be sure to read Section 3 "Rules for Safe Operation and Maintenance" (see pages 5 to 9).
- When operating the machine, always follow the instructions in this section. Do not operate the machine unless you are familiar with the operation of all controls and safety devices.

6.1 Preparation Before Operation

6.1.1 Adding Fuel

⚠ DANGER

- When adding fuel, keep open flames (lighted cigarettes, etc.) away from fuel and engine. Flames will cause the fuel to ignite.
- Always stop the engine before adding fuel.
- Do not overfill so that fuel spills out of filler cap. Wipe up any spillt before starting engine.

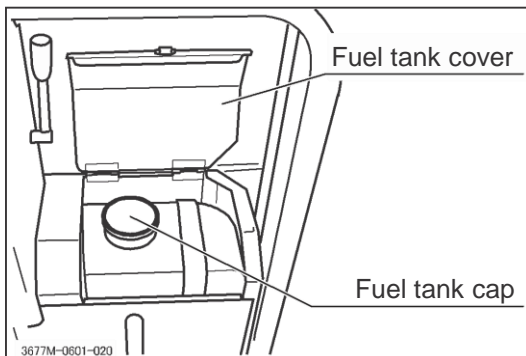


Checking fuel level

Visually check the fuel level gage. If fuel is low, open the fuel tank cap, and add fuel.

Adding fuel

1. Open the fuel tank cover.
2. Open the fuel tank cap, and add fuel.
3. Replace the fuel tank cap.
4. Replace the fuel tank cover.



Fuel to use: Light oil
Fuel tank capacity: 15.0 liters

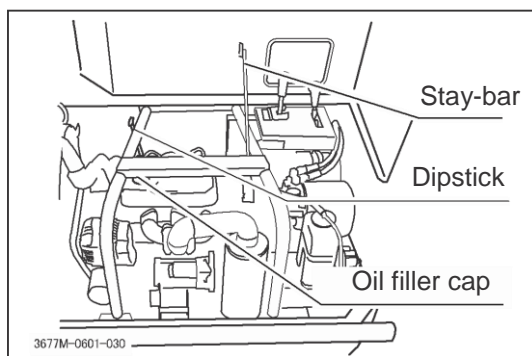
⚠ CAUTION

Take extreme care so that a hand is not caught by the fuel tank cover.

6.1.2 Checking Engine Oil Level and Adding Oil

⚠ CAUTION

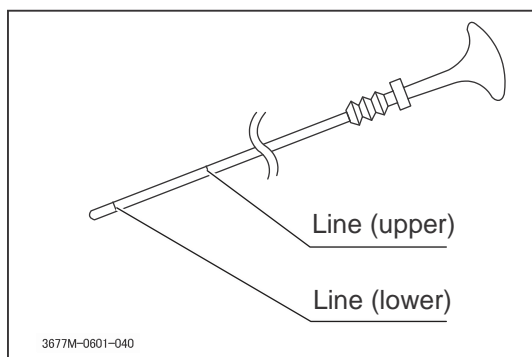
If the oil filler cap is opened during operation or immediately after stopping the engine, hot engine oil may spurt out and cause burns since the parts inside the engine cover are heated. Always wait for the engine oil to cool down before opening the cap (about 10 minutes after stopping the engine).



NOTICE

Inspect and replenish engine oil on a firm level ground at all times.

1. Open the engine cover manually using the handle.
2. Insert the stay-bar into the holding hole to hold open the engine cover.
3. Pull out the dipstick.



⚠ CAUTION

- Carefully insert the stay-bar in the holding hole. If the stay-bar comes out of the hole, the engine cover may close, causing serious personal injury.
- Carefully remove and replace dipstick. If it is pulled out too strongly, personal injury may result, or parts may be damaged.

4. Check the engine oil level. If the engine oil is not at the specified level, open the oil filler cap, and add engine oil.

Proper engine oil level: Between [UPPER] and [LOWER] lines on dipstick

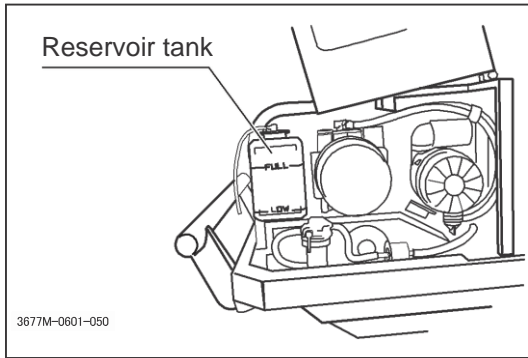
6.1.3 Checking Engine Cooling Water Level and Adding Water

⚠ CAUTION

If the radiator cap is opened during operation or immediately after stopping the engine, boiling water may spurt out and cause burns. Always wait for the cooling water to cool down before opening the cap (about 10 minutes after stopping the engine).

6

Operation



1. Open the engine cover, and fix it firmly with the stay-bar.
2. Check the level of the engine cooling water in the reservoir tank. It should be between the [FULL] and [LOW] lines. If the level is low, add water.

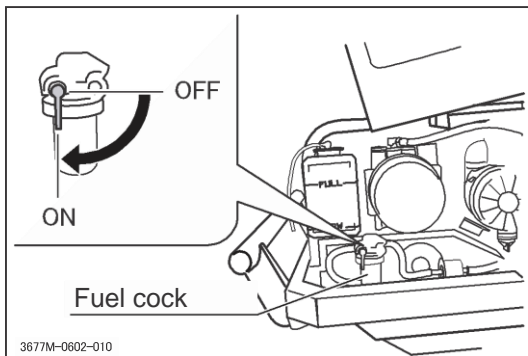
Cooling water amount: 1.8 liters
Reservoir tank capacity: 0.7 liters
Mixing of antifreeze (See page 37)

6.2. Method of Starting

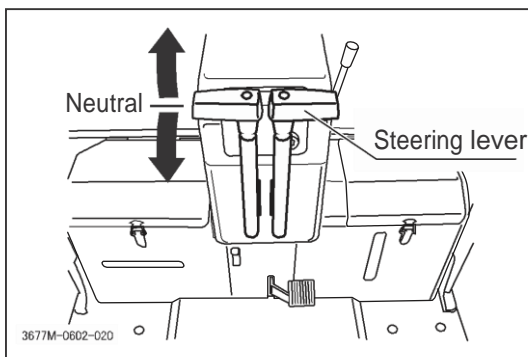
⚠ DANGER

Before starting the engine, check that there is no flammable material around the engine, and that the area around the engine has good ventilation.

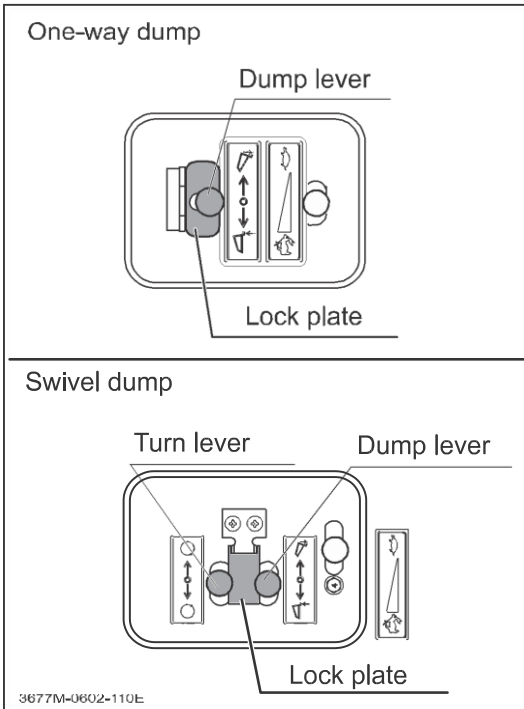
6.2.1 Preparation for Starting



1. Open the engine cover, and lock it with the stay-bar. (See page 15)
2. Turn the fuel cock to ON.

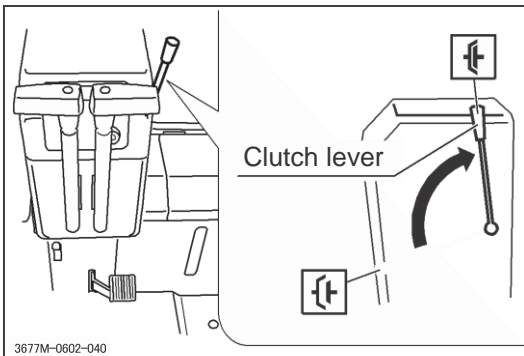


3. Check that the steering lever is in the [NEUTRAL] position.

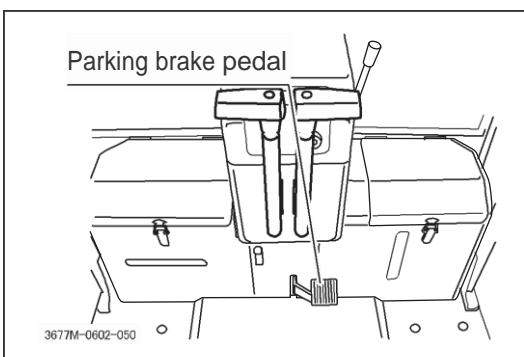


4. Check that the dump lever is in the [NEUTRAL] position, and lock it with the lock plate.

6.2.2 Normal Starting



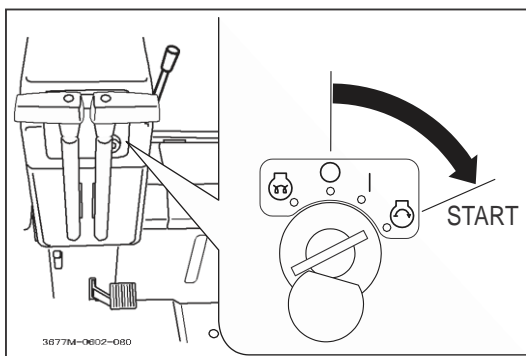
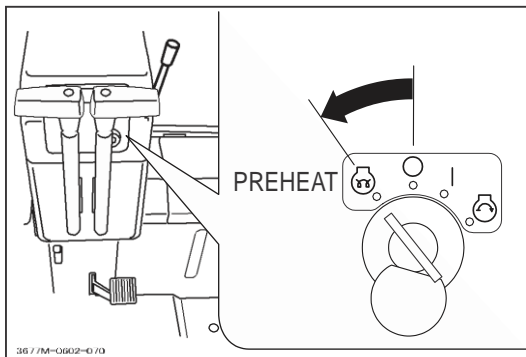
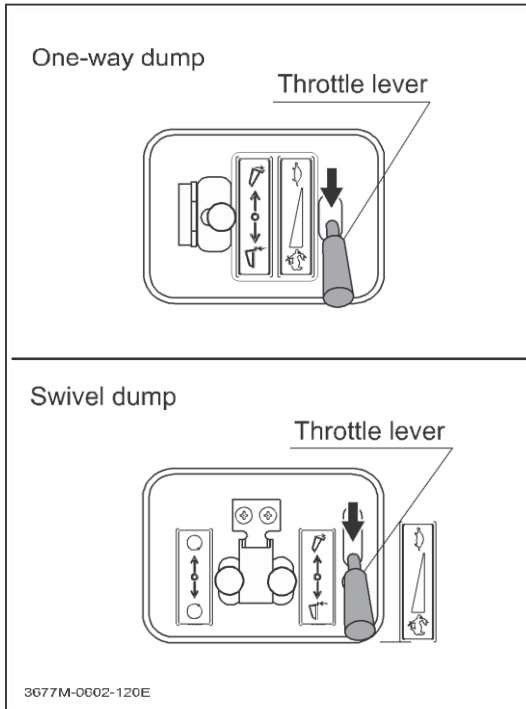
1. Push the clutch lever to the [ON] position.





2. Depress the parking brake pedal.

NOTICE

When the steering lever is in the "NEUTRAL" position and the parking brake pedal is in lock, a safety switch is engaged and engine will not start.




3. Push the throttle lever to the [ (HIGH SPEED)] position.

4. Turn the key in the ignition switch to the [ (PREHEAT)] position and perform the warming-up operation.

NOTICE

- Preheat engine for about 10 seconds when starting in normal temperature and for about 20 to 30 seconds when starting in cold weather (ambient temperature below -5°C).
- There is no need to preheat if the engine is already warm.

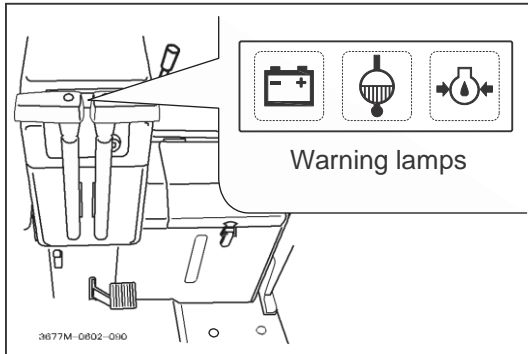
5. Turn the key in the ignition switch to the [ (START)] position and start the engine. (When the engine starts, release the key immediately. The key will automatically return to the [| (ON)] position.)

NOTICE

- If the engine does not start, do not crank the starting motor continuously for more than 15 seconds. Return the key to the ON position, wait for 30 seconds, then try to start the engine again.
- Avoid frequent starting of the starting motor. Once the starting motor starts, run it continuously for a short time to charge the battery.

⚠ CAUTION

Never turn the ignition switch to the [START] position when the engine is running. This will damage the starting motor or cause failure of the engine.



6. Check that the warning lamps (oil lamp, cooling water temperature lamp and charge lamp) are off.

NOTICE

If the conditions these warning lamps monitor are normal, lamps will go out when the engine starts. If they remain lit after the engine has started, go to Section 9 "Troubleshooting" and take the appropriate action.

(Reference: See pages 54 to 57)

7. Continue the warming-up operation for about 5 minutes under no load.

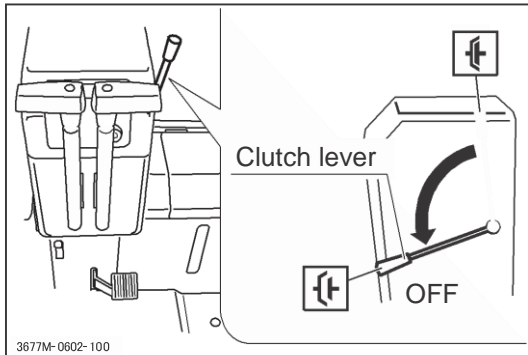
NOTICE






- Always perform the warming-up operation in winter or in cold areas. If the machine is operated before the engine is properly warmed up, the life of the engine and hydraulic equipment will be reduced.
- The first week (about 40 to 50 hours use time) after purchasing the machine is the breaking in period. Do not apply excessive loads, to the machine when operating during this period.

6.2.3 Starting in Winter or in Cold Areas

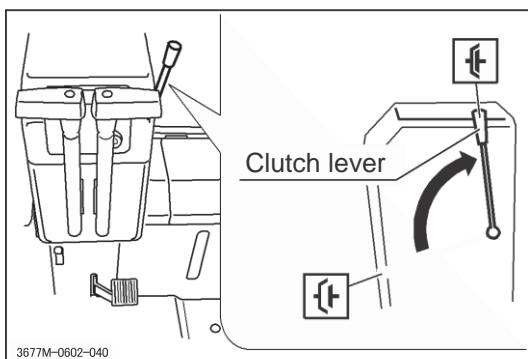
NOTICE


If the engine is hard to start in winter or in cold areas (at an atmospheric temperature of 0°C or below), start the engine following the procedure below. The load on the battery will be reduced.



1. Push the clutch lever to the [ (OFF)] position.
2. Depress the parking brake pedal.
3. Push the throttle lever to the [ (HIGH SPEED)] position.
4. Insert the engine key in the ignition switch, and turn it to the [ (PREHEAT)] position to warm-up the engine.
5. Turn the key in the ignition switch to the [ (START)] position to start the engine. (When the engine starts, release the key immediately. The key will automatically return to the [ (ON) position.]
6. Check that the warning lamps (oil lamp, charge lamp, and cooling water temperature lamp) are off.

(Reference: See page 19)

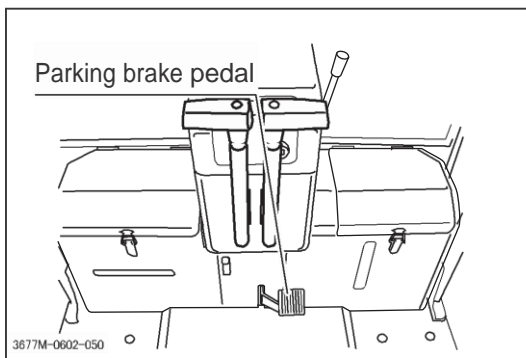


7. Push the clutch lever to the [ (ON)] position.
8. Continue the warming-up operation for about 5 minutes under no load.

6.3 Method of Operating

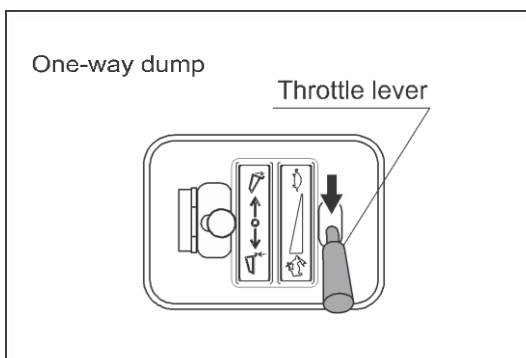
⚠ DANGER

- Do not allow anyone to come near the machine.
- The front lower and rear areas of the machine are dead zones. Before operating the machine, remove all obstacles and personnel from these areas.
- Always check areas around the machine when turning.
- Do not make sudden turns when driving the machine. The operator may be thrown from the machine or the machine may also turn over, resulting in serious injury or death of the operator or bystanders.

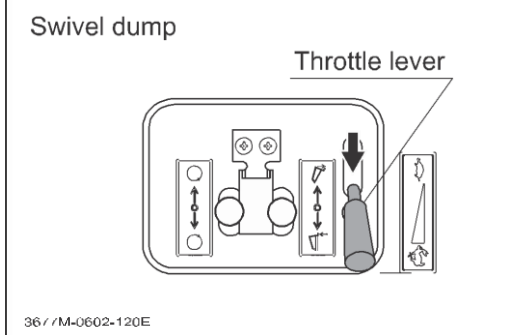


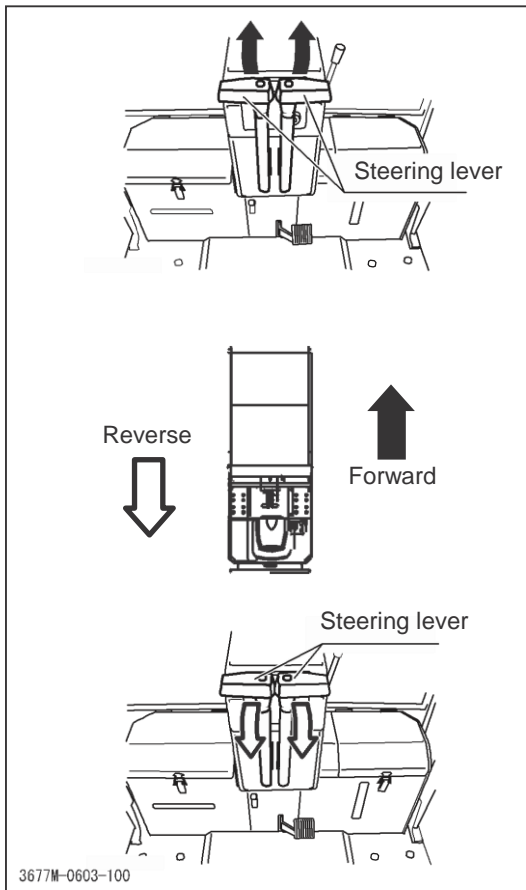
Preparation for Moving

1. Check that all areas around the machine are safe.
2. Check that parking brake is unlocked.



3. Push the throttle lever to the [👉 (HIGH SPEED)] position to increase the speed of the engine.



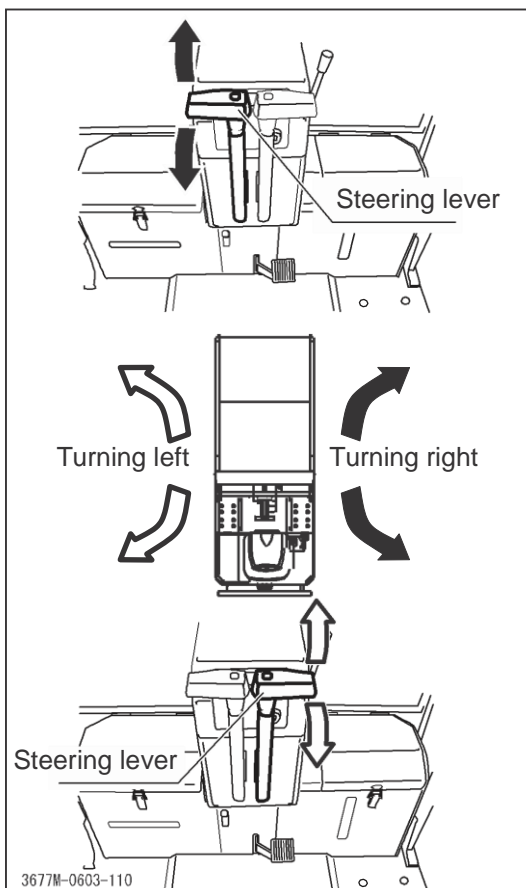


When Traveling Forward

- Push both steering levers gradually to the front to move the machine slowly forward. The machine travel speed can be adjusted by moving the steering levers.

When Traveling in Reverse

- Push both steering levers gradually to the rear to move the machine slowly in reverse. The machine travel speed can be adjusted by moving the steering levers.

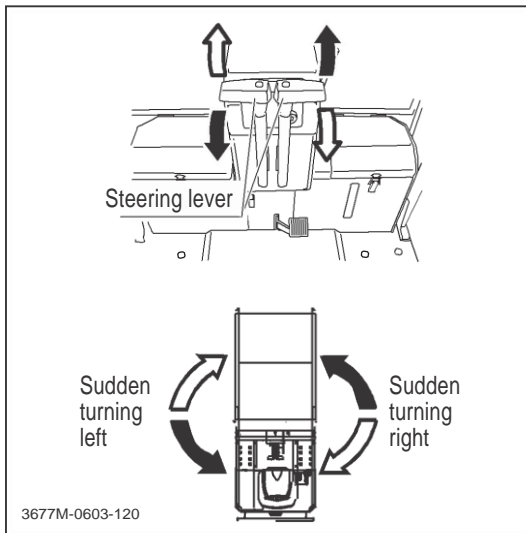


Normal Right Turn

- To turn right when traveling forward, push the left steering lever slowly to the front.
- To turn right when traveling backward, push the left steering lever slowly to the rear.

Normal Left Turn

- To turn left when traveling forward, push the right steering lever slowly to the front.
- To turn left when traveling backward, push the right steering lever slowly to the rear.



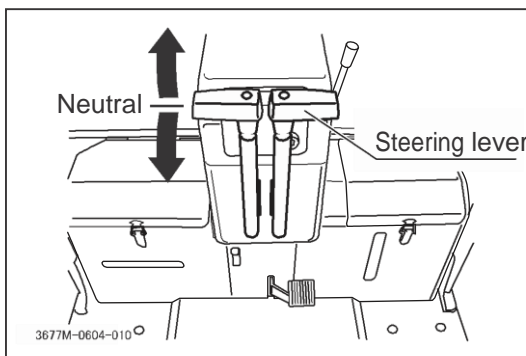
Sudden Turn

- To suddenly turn left, push the left steering lever to the rear and the right steering lever to the front.
- To suddenly turn right, push the right steering lever to the rear and the left steering lever to the front.

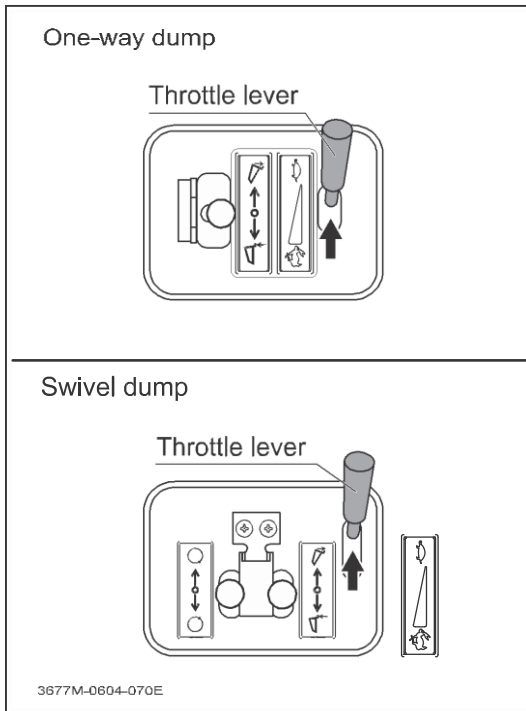
NOTICE


- Do not operate the steering levers with the brake pedal depressed.
- Always release the steering levers at the neutral position.
- Do not turn the engine key to the [○ (OFF)] position while moving. The balance of the machine may be upset, and the front or rear of the machine may rise.

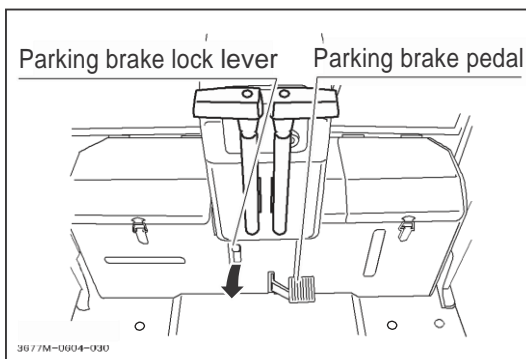
6.4 Stopping



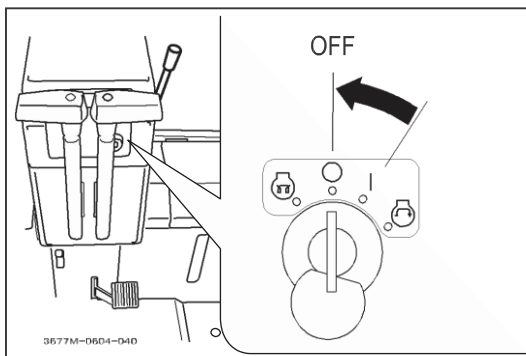
1. Return both steering levers to the neutral [N] position and stop the machine.
2. Depress the parking brake pedal.




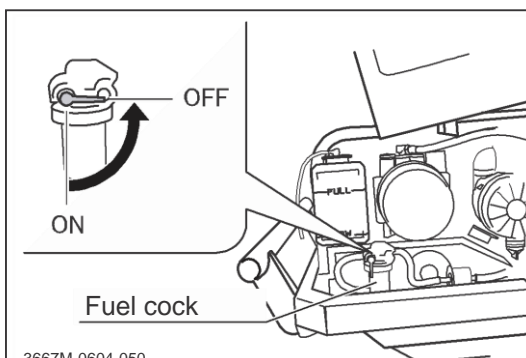
3. Push the throttle lever to the [ (LOW SPEED)] to lower the speed of the engine.



4. With the parking brake pedal depressed, pull out the parking brake lock lever to lock the brake.

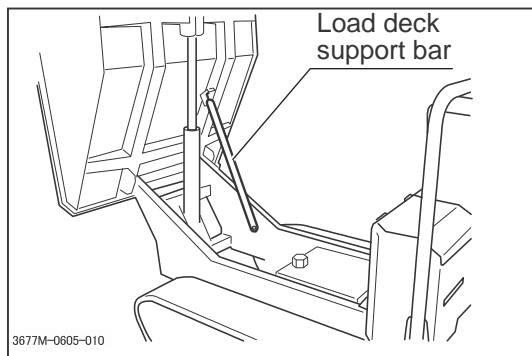


5. Turn the key in the ignition switch to the [ (OFF)] position, then remove the key.



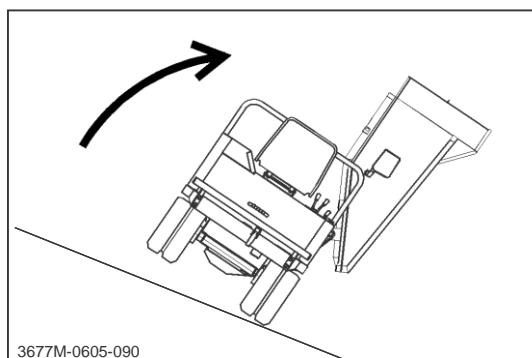
6. Open the engine cover, and lock it with the stay-bar. (See page 15)
7. Turn the fuel cock to the [OFF] position.

6.5 Operating Dump



⚠ DANGER

- Falling load deck can cause injury or death.
- Always fix load deck support bar before doing any work under the load deck.
- Do not raise or lower load deck or dump load when anybody is standing near load deck.



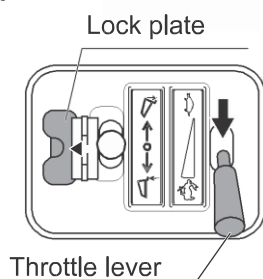
⚠ DANGER

Do not discharge load to the slope valley side by tilting the bed sideways. The vehicle may be turned over, resulting in a serious accident.


⚠ WARNING

- Do not perform dumping operation on a sharp slope. The body becomes unstable, and it may cause a serious accident. If the dumping operation must be performed unavoidably on the slope, operate the vehicle carefully.
- Do not perform the tilting operation of the bed on a slope. The body becomes unstable, and it may cause a serious accident.

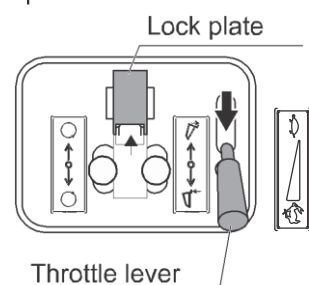
One-way dump

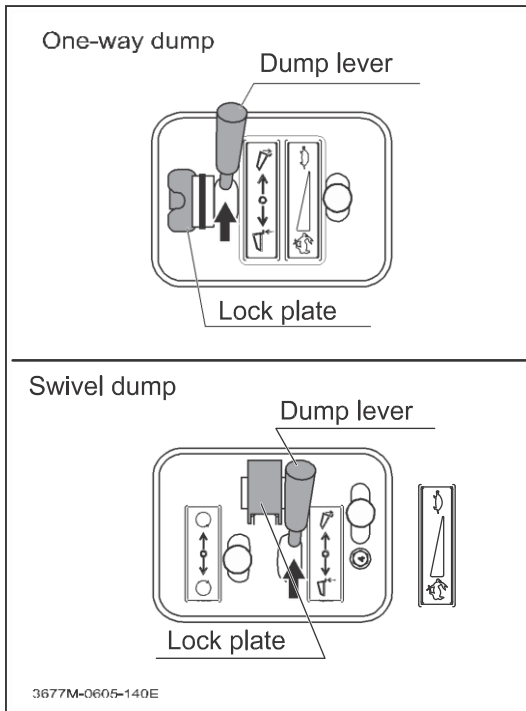




Raising Dump Body

1. Start the engine, move the throttle lever to the [ (HI)] position, and increase the engine speed.
2. Remove the lock plate from the dump lever.

Swivel dump

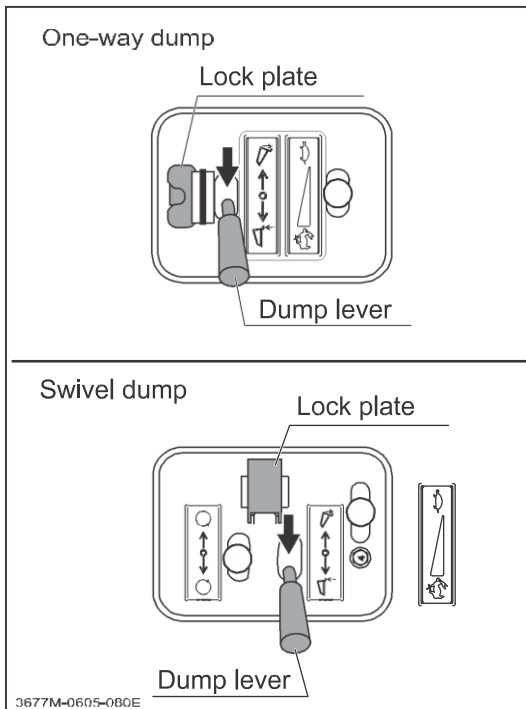






3. Move the dump lever slowly to the [ (RAISE)] position.
4. When the dump body is raised to the upper limit, a "hiss" sound is heard. Quickly return the dump lever to the [ (HOLD)] position.

CAUTION

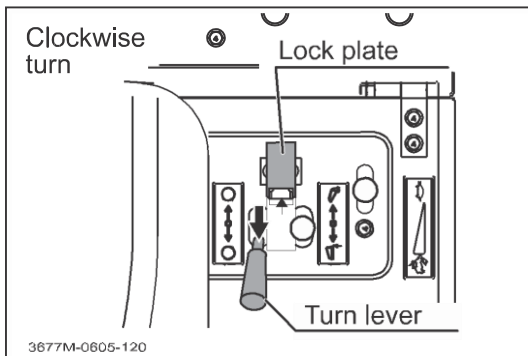
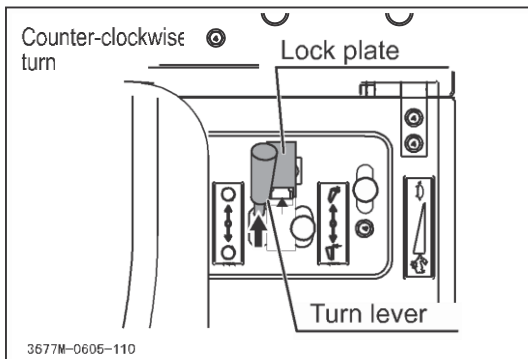
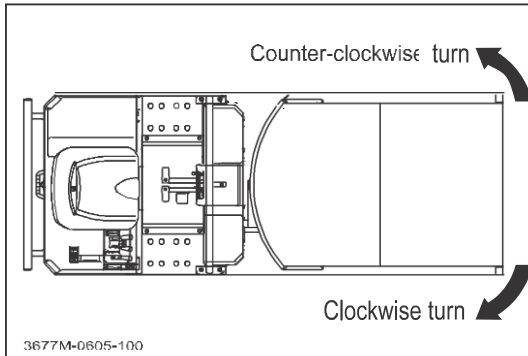
Lowering the load deck suddenly with a load can damage the machine chassis. Always lower the load deck slowly to prevent damage to the machine chassis.



Lowering Dump Body

1. Remove the lock plate from the dump lever.
2. Move the dump lever gradually to the [ (LOWER)] position.
3. When the dump body is lowered to the lower limit, a "hiss" sound is heard. Quickly return the dump lever to the [ (HOLD)] position.

Swivel Dump



When turning the load deck body counter-clockwise

1. Unlock the lock plate.
2. Tilt the turn lever in the direction of forward [○ (counter-clockwise turn)].
Maximum angle of rotation: 90°
3. When the load deck body is turn to the maximum angle of rotation, a "hiss" sound is heard. Quickly return the turn lever to the [○ (HOLD)] position.

When turning the load deck clockwise

1. Unlock the lock plate.
2. Tilt the turn lever in the direction of reverse [○ (clockwise turn)].
Maximum angle of rotation: 90°
3. When the load deck body is turn to the maximum angle of rotation, a "hiss" sound is heard. Quickly return the turn lever to the [○ (HOLD)] position.

7. Maintenance

7.1 Periodic Inspection Table

Failure to carry out inspection and maintenance properly will cause machine failure. Refer to the following table for inspection procedures and frequency.

NOTICE

Some inspection and maintenance procedures in the table below require technical knowledge or specific tools and measuring instruments. If you have difficulty performing these procedures, or do not have the correct tools or instruments, contact your dealer or a Canycom service center.

| Item | Content of inspection | Inspection interval | | | Remarks | | |
|-------------------------|---|--|--|-----------------------|-----------------------|---|---|
| | | Checks starting | Monthly | Annually | | | |
| Engine Engine proper | Ease of starting | • Investigate starting condition of engine check for abnormal noise. | Check that engine starts smoothly and makes no abnormal noises. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | | • Check if glow plug works properly. | Must work properly. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | Condition of rotation | • Check speed at low idling at high idling. | Must be at specified speed. | | <input type="radio"/> | <input type="radio"/> | Please contact your Canycom distributor for inspection. |
| | | • Check that rotation is smooth. | Must rotate smoothly. | | | | |
| | Exhaust gas condition | • Check for catching of accelerator lever when accelerating engine, stall, or knocking. | There must be no catching, stalling of engine, or knocking. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | | • Warm up engine thoroughly, then check for abnormal exhaust gas color or exhaust sound, low idling to high idling. | Exhaust gas color and exhaust sound must be normal. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | Air cleaner | • Check for gas leakage from exhaust pipe or muffler. | There must be no gas leakage. | | <input type="radio"/> | <input type="radio"/> | |
| | | • Check for cracks, deformation of case, looseness of cover or connecting piping. | There must be no cracks, deformation of case, looseness of cover or connecting piping. | | <input type="radio"/> | <input type="radio"/> | |
| | Tightening | • Check for dirty or damaged element. | There must be no noticeable dirt or damage. | | <input type="radio"/> | <input type="radio"/> | Cleaning / replacement: See page 41 |
| | | • Check for looseness of nuts and bolts at tightening portion of cylinder head and manifold. * If no leakage of gas or water is found from these portions, this check can be omitted. | If gas or water leaks have found, check cylinder head and manifold retaining nuts and bolts for looseness. | | | <input type="radio"/> | |
| Valve clearance | • Check the valve clearance * When noise due to abnormal valve clearance is absent and the engine is running smoothly, this inspection may be omitted. | The valve clearance must be normal. | | | <input type="radio"/> | Please contact your Canycom distributor for inspection. | |

| Item | | Content of inspection | | Inspection interval | | | Remarks | |
|---|--|---|--|---|---------|----------|---|---|
| | | | | Check before starting | Monthly | Annually | | |
| Engine | Engine proper | Engine compression | <ul style="list-style-type: none"> If the engine is operating abnormally, or if the exhaust condition at idle or at high RPM is abnormal, check the engine compression. | If you hear valve noise or the engine is not running smoothly, check valve clearance. | | | ○ | Please contact your Canycom distributor for inspection. |
| | | Engine mount | <ul style="list-style-type: none"> Check engine base for cracks or deformities. | No cracks or deformities. | ○ | ○ | ○ | |
| | <ul style="list-style-type: none"> Check for loose or missing mounting bolts or nuts. | | There must be no loose or missing mounting bolts or nuts. | ○ | ○ | ○ | | |
| | Lubrication system | <ul style="list-style-type: none"> Check oil level and dirt in oil. | Oil level must be correct. There must be no marked dirt. | ○ | ○ | ○ | Inspection / replacement: See page: 34 | |
| | | <ul style="list-style-type: none"> Check for oil leakage from head cover, oil pan, pipes, etc. | There must be no marked oil leakage. | ○ | ○ | ○ | | |
| | | <ul style="list-style-type: none"> Check for dirty or clogged filter. | There must be no dirt or clogging. | | | ○ | Replacement: See page: 43 | |
| | Fuel system | <ul style="list-style-type: none"> Check for fuel leakage from fuel tank, injection pump, hoses, pipes. | There must be no fuel leakage. | ○ | ○ | ○ | | |
| | | <ul style="list-style-type: none"> Check for damage or deteriorated fuel hoses. | There must be no damage or deterioration. | ○ | ○ | ○ | | |
| | | <ul style="list-style-type: none"> Check for dirty or clogged fuel filter cartridge. | There must be no dirt or clogging. | | ○ | ○ | Cleaning: See page: 43 | |
| | | <ul style="list-style-type: none"> Check for any abnormality in injection pressure or spray condition of injection nozzle. * If there is no abnormality in the exhaust or rotation condition when idling or accelerating, this inspection can be omitted. | Must be specified injection pressure, and spray must be normal. | | | ○ | Please contact your Canycom distributor for inspection. | |
| | Cooling system | <ul style="list-style-type: none"> Check for cooling water level, dirty water. | Water level must be correct, there must be no marked dirt. | ○ | ○ | ○ | Inspection: See page: 38 | |
| | | <ul style="list-style-type: none"> Check for any water leakage from radiator, engine, water pump, hoses. Check for clogged radiator fins. | There must be no water leakage or clogging. | ○ | ○ | ○ | | |
| | | <ul style="list-style-type: none"> Check for damage or deteriorated fuel hoses. | There must be no damage or deterioration. | ○ | ○ | ○ | | |
| | | <ul style="list-style-type: none"> Check that radiator cap valve functions properly. | Must function properly. | | | ○ | | |
| | | <ul style="list-style-type: none"> Check for damaged valve seat surface of radiator cap. | There must be no damage. | | | ○ | | |
| | | <ul style="list-style-type: none"> Check the fan belt for tension. | Must be within a standard value. | | | ○ | Inspection / Adjustment: See page: 46 | |
| | | <ul style="list-style-type: none"> Check the belt for wear and damage. | Must not be worn remarkably nor damaged. | | | ○ | | |
| | | <ul style="list-style-type: none"> Check for cracks, damage, or deformation of cooling fan, cover, duct. | There must be no cracks, damage, or deformation. | | | ○ | | |
| <ul style="list-style-type: none"> Check for loose mounting bolts or nuts of cooling fan, cover. | | There must be no loose outing bolts or nuts. | | | ○ | | | |

| Item | | Content of inspection | | Inspection interval | | | Remarks | |
|-----------------|---------------------------------------|--|---|---|---------|----------|---------|---|
| | | | | Checks starting | Monthly | Annually | | |
| Engine | Electrical system | Charging system | • Use Ammeter to check for any abnormality in function. | Must work properly. | | | ○ | Please contact your Canycom distributor for inspection. |
| | | Battery | • Check that electrolyte level is within specified range. | Must be within specified range. | | ○ | ○ | Inspection / adding: See page: 39 |
| | | | • Check for loose or corroded terminals. | There must be no looseness or marked corrosion. | | ○ | ○ | |
| Wiring | • Check for loose connections. | There must be no loose connections. | | ○ | ○ | | | |
| | • Check for damaged wiring | There must be no damage. | | ○ | ○ | | | |
| Power train | V-belt | • Check for damage and contamination visually. | There must be no damage nor abhorrence of lubricant. | | ○ | ○ | | |
| | | • Check the V-belt for tension. | Must be tensed properly. | | ○ | ○ | | |
| | HST pump | • Drive machine in "FORWARD", "REVERS", and turn left and right using travel levers, check actuation, check for abnormal noise or abnormal generation of heat. | Must work normally, there must be no abnormal noise or abnormal generation of heat. | | ○ | ○ | ○ | |
| | | • Check oil level inside hydraulic tank. | Oil level must be correct. | | | ○ | ○ | Inspection / replacement: See page: 36 |
| | | • Check for dirty oil. | There must be no marked dirt. | | | ○ | ○ | Inspection / replacement: See page: 36 |
| | | • Check for oil leakage from around hydraulic tank. | There must be no oil leakage. | | | ○ | ○ | |
| Traction system | Sprocket, Idler, Roller, Upper roller | • Check for cracks, deformities, wear. | No cracks, deformities, or noticeable wear. | | ○ | ○ | ○ | |
| | | • Drive machine and check for abnormal noise or abnormal generation of heat from shaft area. | No abnormal noise or heat. | | ○ | ○ | ○ | |
| | | • Check for loose or missing mounting bolts and nuts. | There must be no loose or missing bolts and nuts. | | ○ | ○ | ○ | |
| | | • Check for oil leakage from around axle. | There must be no oil leakage. | | ○ | ○ | ○ | |
| | Crawler | • Check for cuts or damage in steel cord. | There must be no cuts or marked damage. | | ○ | ○ | ○ | |
| | | • Check for cuts, deteriorated, or worn rubber. | There must be no marked cutting, deterioration, or wear. | | ○ | ○ | ○ | |
| | | • Check for missing or broken core. | There must be no missing core. | | ○ | ○ | ○ | |
| | | • Check track tension. | Tension must not be too loose or too tight. | | ○ | ○ | ○ | Adjustment: See page: 46 |
| | Crawler tension bolt | • Check for deformation and corrosion. | There must be no deformation and corrosion. | | | ○ | ○ | |
| | Body | • Check for cracks, deformation, and damage. | There must be no crack, deformation, or damage. | | | ○ | ○ | |
| Brake system | Parking brake | • With the brake pedal locked with the parking brake lock lever, check that machine does not move when stopped unloaded on a slope. | Must be proper parking effect. | | ○ | ○ | ○ | |
| | Rods, link, and wires | • Check the rods, links, and wires for damage and the mounting parts for looseness. | There must be no damage or looseness. | | | ○ | ○ | |

| Item | Content of inspection | Inspection interval | | | Remarks | |
|------------------|---|---|---------|----------|---------|--|
| | | Checks starting | Monthly | Annually | | |
| Hydraulic system | Hydraulic pump | • Check the pipe joint and hose joint parts and seal parts for oil leakage. | ○ | ○ | ○ | |
| | | • Operate the hydraulic pump, and check the pump for abnormal vibration and noise and abnormal heating in unload and loaded states. | | ○ | ○ | |
| | | • Apply a load onto the hydraulic pump. Then check the hydraulic pump under load for discharge and discharge pressure. This check may be eliminated when any abnormality does not occur in the inspections for abnormal vibration and noise and abnormal heating specified above. | | | ○ | |
| | Piping (hoses, high-pressure pipes) | • Check the piping for cracking, damage, aging, and twist. | ○ | ○ | ○ | |
| | | • Check the pipe joint sections for oil leakage. | ○ | ○ | ○ | |
| | | • Check the piping for mounting state, and bolts and nuts for looseness and falling. | ○ | ○ | ○ | |
| | Hydraulic cylinder | • Check for operating condition. | ○ | ○ | ○ | |
| | | • Operate the cylinder by extending and retracting several time. Then check the seal sections for oil leakage. | | ○ | ○ | |
| | | • Stop the cylinder by applying a load. Then check the cylinder for extension amount. | | | ○ | |
| | | • Check the cylinder tube and the cylinder rod for dents, cracking, bend, and scratch. | | ○ | ○ | |
| | | • Check the cylinder mounting pins for wear and damage. | ○ | ○ | ○ | |
| | Control valve | • By moving the spool, check that the spool is operated smoothly. | ○ | ○ | ○ | |
| | | • Check that the control valve is installed appropriately. | | ○ | ○ | |
| | | • Apply a load to the control valve, for example, by operating the hydraulic cylinder. Then check the control valve for correct operation. | ○ | ○ | ○ | |
| | | • Check the body, piping, and joint sections for oil leakage. | ○ | ○ | ○ | |
| Loading system | • Check that the bed of the truck can be raised and lowered smoothly. | ○ | ○ | ○ | | |
| | • Check each part for cracks, deformation, and wear. | ○ | ○ | ○ | | |
| | • Check the mounting bolts for looseness and falling. | ○ | ○ | ○ | | |
| | • Check the frame to truck bed mounting pins and dump cylinder mounting pins for clearance by moving the bed of the truck vertically. | | ○ | ○ | | |
| | • Check for cracks, deformation, and corrosion. | ○ | ○ | ○ | | |

| Item | Content of inspection | Inspection interval | | | Remarks | | |
|--|---|---|---|-----------------------|-----------------------|-----------------------|------------------------------|
| | | Checks after starting | Monthly | Annually | | | |
| Machine safety system | Machine frame and body | • Check for cracks, deformities, or corrosion. | No cracks, noticeable deformities, or corrosion. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | | • Check for missing or loose bolts or nuts. | There must be no loose or missing mounting bolts or nuts. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | Cover | • Check for abnormality in lock opening or closing condition of covers. | There must be no abnormality in lock or opening. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | Display plate (mark) | • Check that display plates specified for structural regulations and other precaution or instruction plates are installed without damage. | Must be installed without damage. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | Horn | • Operate the switch to check that the horn operates correctly. | Must operate correctly. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | Lubrication | • Check lubrication at all parts. | Must be properly lubricated. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Lubrication: See page: 37 |
| | Load deck support bar | • Raise load deck and check condition of support bar when fixed. | Must be installed securely. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| | | • Check for curvature or deformities. | No noticeable curvature or deformities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |
| • Check for cracks or damage in mount of load deck support bar. Use a flow detector to check for cracks. | | There must be no cracks or damage. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | |
| Overall test | • Operate travel and loading system and check function. | All system must work correctly, there must be no abnormal noise, abnormal vibration, or abnormal generation of heat. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | |

7.2 Fuel, Lubricant, and a Cooling Water Chart

| Item | Interval | Recommended product | Capacity | Page |
|----------------------|---|--|-------------|-------------|
| Fuel | Whenever needed | Light oil | 15.0 liters | See page 14 |
| Engine oil | Filling: Check every day, add when level is low. Change: 1st time: 50 hours. 2nd time on: every 100 hours. | API category: CD class or higher SAE category: 10W - 30 | 3.15 liters | See page 34 |
| Transmission oil | 1st time: 50 hours. 2nd time on: every 100 hours. | Gear oil API category: GL4 or 5 SAE category: # 80 | 2.0 liters | See page 35 |
| HST fluid | 1st time: 50 hours. 2nd time on: every 500 hours. | High viscosity index hydraulic fluid VG46 | 20.0 liters | See page 36 |
| Oil filling points | Every 6 months. * For half a year after purchasing, filling is not required. | Gear oil API category: GL4 or 5 SAE category: # 80 | — | See page 37 |
| Greasing points | Every 6 months. * For half a year after purchasing, greasing is not required. | Chassis grease | — | See page 37 |
| Engine cooling water | Check every day, add when level is low. Change: Every 2 years. | Antifreeze and water mix | 1.8 liters | See page 38 |
| Battery electrolyte | Check every day, add when level is low. | Distilled water | — | See page 39 |

7.3 Consumable (Replacement Parts) Chart

| Item | | Part number | Replacement interval | Quantity | Page |
|---|----------------|----------------------------|--|---------------------------------|---|
| Air cleaner element | | — | Every year (or after cleaning 600 hours). | 1 | See page 41 |
| Fuel filter | | 3714 0051 400 | Check every 100 hours, replace if necessary. | 1 | See page 43 |
| Engine oil filter cartridge | | — | 1st time: 50 hours 2nd time on: every 150 hours | 1 | See page 42 |
| Suction filter | One-way dump | 3663 6014 000 | Every year (or every 500 hours). | 1 | See page 43 |
| | Swivel dump | 3663 6029 000 | | 1 | See page 43 |
| Line filter | | 3676 6121 200 | | 1 | See page 43 |
| V-belt | Traveling | 0853 1500 060 | Replace if defective. | 1 | See page 43 |
| | One-way dump | Hydraulic 0852 1300 029 | Replace if defective. | 1 | See page 45 |
| | Swivel dump | | | | |
| Brake lining | | 7301 4007 000 | Replace if defective. | 2 (Replace it with an assembly) | |
| Hydraulic hose | For HST | See the Parts List. | Every 2 years (Replace if a defect occurs) | 1 | Please contact your Canycom distributor for replacements. |
| | For oil cooler | | | 1 | |
| | For dump | | | 1 | |
| | For rotation | | | 1 | |
| Crawler | OHTSU-make | 3677 2012 000 | Replace if defective. | 2 | See page 46 |
| | B.S.-make | 3677 2013 000 | Replace if defective. | 2 | See page 46 |
| Battery | | 3673 0655 000 | Replace if defective. | 1 | |
| * Special replacement parts ► Please contact your Canycom distributor (or our Service Center). | | | | | |

NOTICE

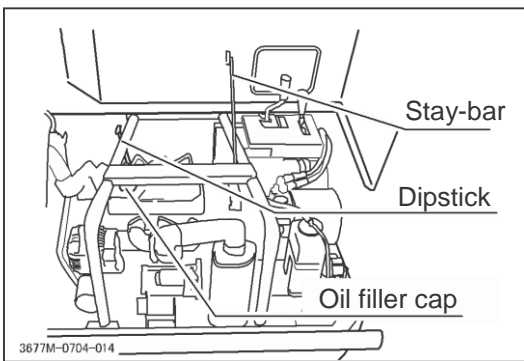
Rubber parts such as hydraulic hoses will deteriorate even when not used. Replace them every 2 years, or whenever damaged.

7.4 Adding Oil

NOTICE

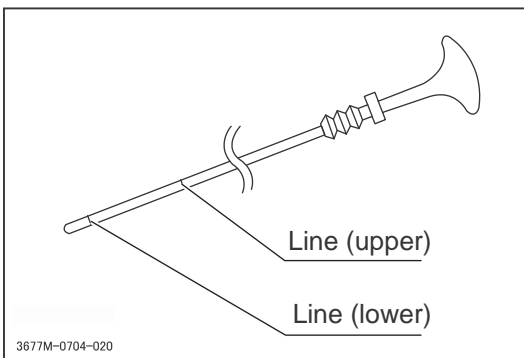
- Insufficient or improper lubrication reduces performance and may cause the machine to break down, shortening the life of the machine. Always keep machine filled with the right amount of designated good quality oil.
- Always check remove and add oils on a horizontal surface after stopping the engine.

7.4.1 Engine Oil



Inspection / Adding

1. Open the engine cover, and lock it with the stay-bar . (See page 15).
2. Extract the oil dipstick, and wipe off oil with clean cloth.
3. Insert the oil dipstick, and pull it again.
4. Check the oil level. If it is low, add oil to between the upper limit and lower limit positions on the oil dipstick.
5. Visually check oil for amount and dirt. If oil level is low or dirty, change all oil.

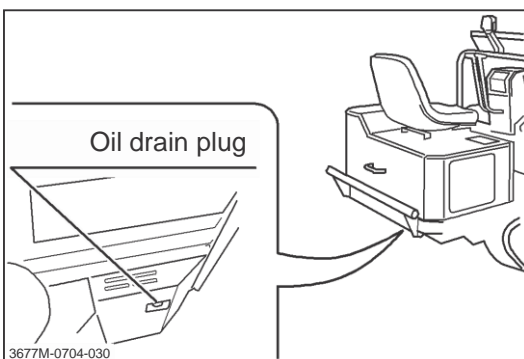


CAUTION

Avoid contact with high temperature oil to avoid burns.

NOTICE

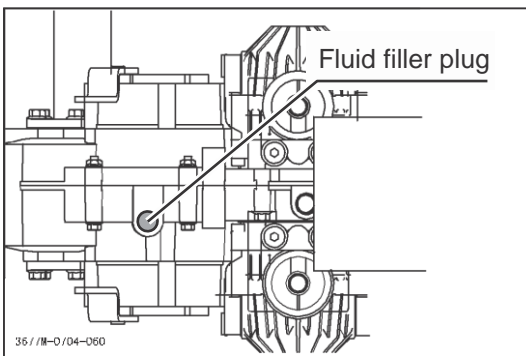
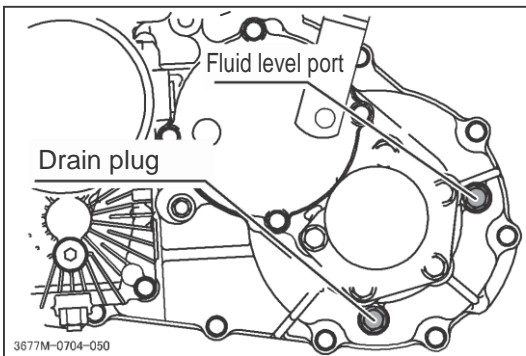
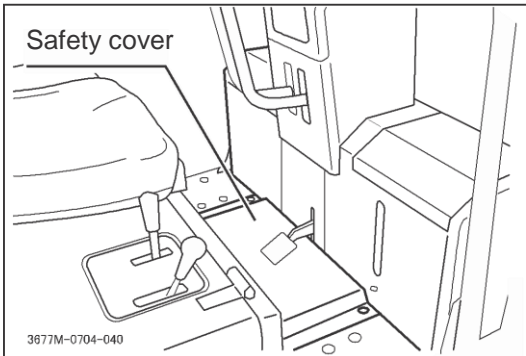
Dispose of the drained oil properly.



Replacement

1. Prepare a suitable container to collect drain oil.
2. Remove oil drain plug and drain oil from crankcase.
3. Replace the drain plug firmly.
4. Open the oil cap and add proper amount of designated oil.
5. Replace the oil cap firmly.

7.4.2 Transmission Fluid



Inspection / Adding

1. Remove the safety cover.
2. Remove the fluid level port bolt, and check that the fluid level is at the fluid level port.
3. Visually check the transmission fluid level and the condition of dirt in the fluid. If the level is low (fluid level does not reach the fluid level port), add transmission fluid. If the fluid is extremely dirty, change the fluid.
4. Remove the fluid filler plug, and add the specified fluid.
5. Check the fluid level, and install the fluid filler plug.

Fluid to use: See page 32.

6. Install the safety cover.

Replacement

1. Prepare a suitable container to collect drain fluid.
2. Remove the drain plug, and drain fluid from crankcase.

CAUTION

Avoid contact with high temperature oil to avoid burns.

NOTICE

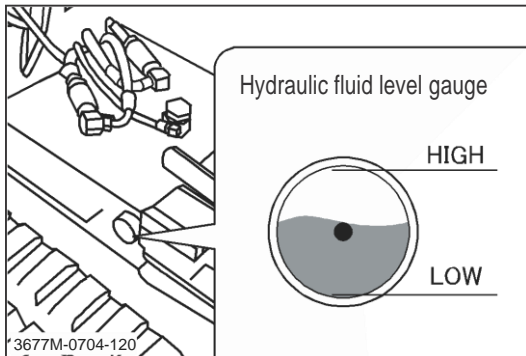
Dispose of the drained oil properly.

3. Replace the drain plug firmly.
4. Remove the fluid filler plug, and add proper amount of designated fluid.
5. Replace the fluid filler plug firmly.

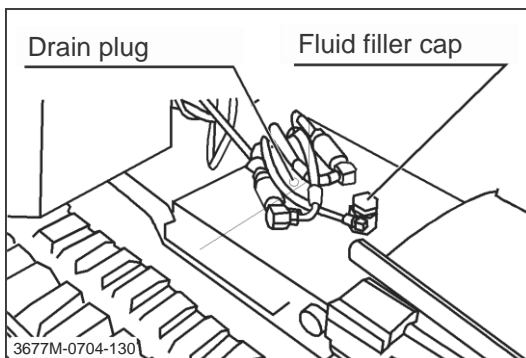
7.4.4 HST Fluid (Hydraulic Fluid)

NOTICE

- Low fluid levels may decrease hydraulic performance, periodically check the fluid level and add fluid if the level is low.
- The HST fluid is also used as the hydraulic fluid. Add the fluid to the hydraulic tank.

**Inspection / Adding Fluid**

1. Place the machine on level ground, and raise the load deck. Lock the dumper lever with the lock plate, and support the load deck with the support bar.
2. Check the hydraulic fluid level gauge. If the fluid level is low, add fluid.

**Replacement**

1. Prepare a suitable container to catch the drained fluid.
2. Remove the drain plug to drain the fluid.

CAUTION

Avoid contact with high temperature oil to avoid burns.

NOTICE

Dispose of the drained fluid properly.

3. Replace the drain plug.
4. Open a hydraulic fluid cap.
5. Add the specified fluid into the hydraulic fluid tank.
6. Replace the hydraulic fluid cap.
7. Start the engine to circulate the fluid.
8. Check the hydraulic fluid level gauge.

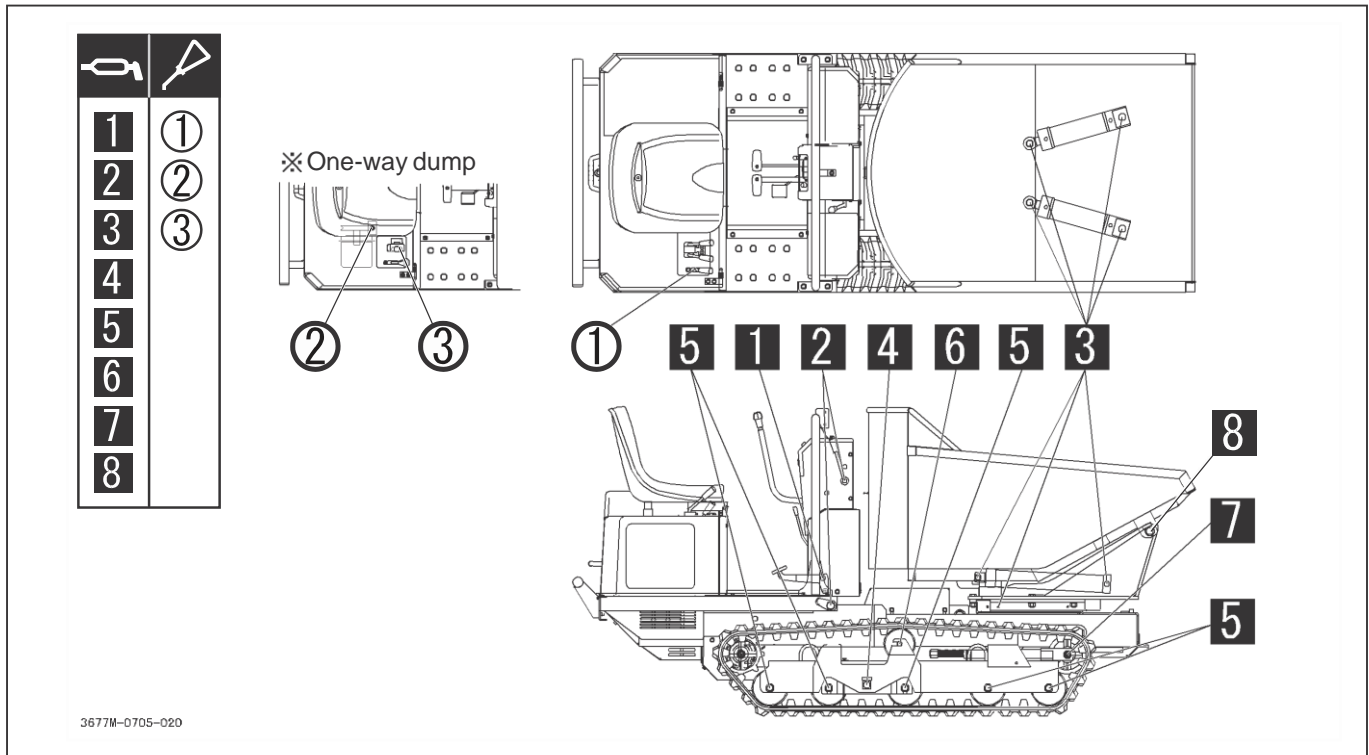
Fluid to use: See page 32.

7.5 Lubricating

NOTICE

Proper lubrication will prevent seizures and rust, and ensure smooth operation. Lubricate every 6 months.

Lubricate the illustrated points.



3677M-0705-020

| No. | Lubrication area | Lubrication points | Type of lubrication |
|-----|---|--------------------|---------------------|
| 1 | Parking brake pedal link section | 1 | Grease |
| 2 | Clutch lever pivot | 2 | |
| 3 | Hydraulic cylinder pivot • (Slewing ring) | 2 (7) | |
| 4 | Swing roller pivot | 2 | |
| 5 | Roller shaft* | 10 | |
| 6 | Upper roller | 2 | |
| 7 | Idler | 2 | |
| 8 | Bessel pivot | 1 | |
| ① | Throttle lever pivot | 1 | Oil |
| ② | Hydraulic V-belt tension arm | 1 | |
| ③ | Dumper lever pivot | 1 | |

*Reference: To lubricate the roller shaft, remove the outside nut, tighten the furnished grease fitting with a spanner, and apply grease to the rollers through the grease fitting. After greasing, remove the grease fitting, and tighten the nut firmly to the shaft.

7.6 Adding Water

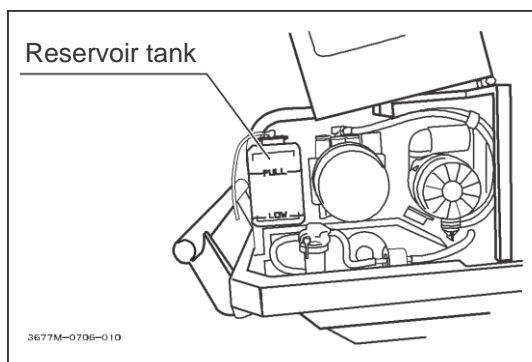
7.6.1 Engine Cooling Water

⚠ CAUTION

- Wait for engine to cool after operation (about 10 minutes) before opening radiator cap. Opening cap too soon may release boiling water and cause burns.
- Take extreme care not to approach it to a fire because anti-freezing solution is inflammable. Also, take extreme care when handling it because anti freezing solution is toxic. If it is caught in eyes, wash clean the eyes with water and see a doctor.

NOTICE

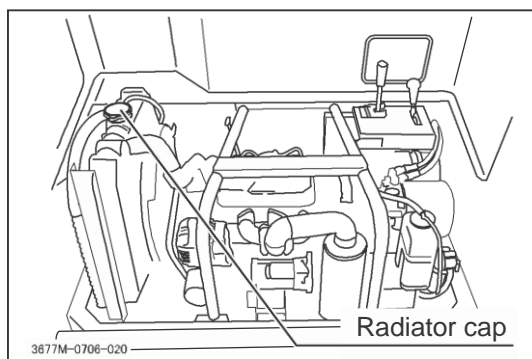
Engine cooling water is low when cooling water lamp is lit.
Immediately inspect and add water.



Inspection / Adding

1. Open the engine cover, and lock it firmly with the stay-bar.
(See page 15)
2. When the engine is cold, check the engine cooling water level in the reservoir tank. If the level is below the [FULL] mark, add water.
Reservoir tank capacity: 0.7 liters.
3. Open the radiator cap.
4. Check the engine cooling water level. If the level is low, add water.

Cooling water amount: 1.8 liters.

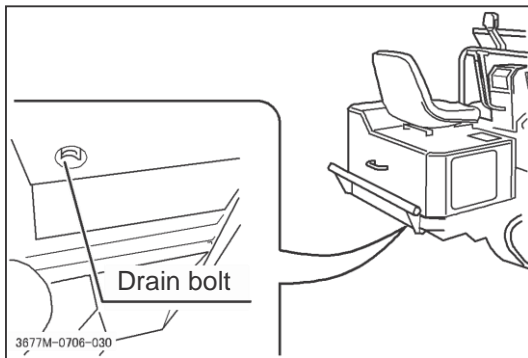


Antifreeze Mixture (Reference)

When this machine is shipped from the factory, it is filled with a mixture of 40% antifreeze and 60% water. To prevent the cooling water from freezing, use a mixture of water and anti-freeze determined by the minimum temperature in the operation area using the table below.

| Ambient temperature | Proportion antifreeze |
|---------------------|-----------------------|
| -10°C | 30% |
| -15°C | 35% |
| -20°C | 40% |
| -25°C | 45% |

* The value for the ambient temperature is 5°C lower than the actual minimum temperature.



Replacement

1. Prepare a suitable container to catch drained cooling water.
2. Remove the drain bolt located at the bottom of the radiator.
3. Drain cooling water and clean the inside of the radiator.

Reference: When the radiator cap is removed, cooling water can be drained more easily.

4. Replace the drain bolt and supply cooling water.

NOTICE

Treat the cooling water properly.

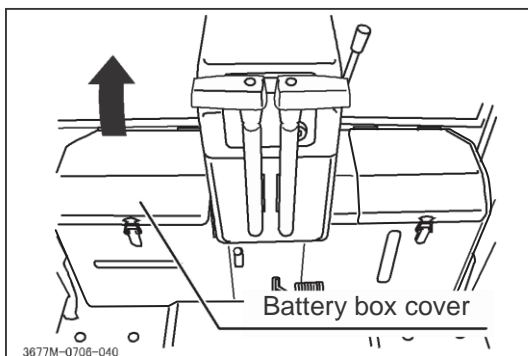
7.6.2 Battery Electrolyte

⚠ DANGER

Keep open flames away from battery. Battery gases can easily ignite.

⚠ CAUTION

- **Avoid skin or clothing contact with battery electrolyte to avoid burns.**
- **Always stop engine and turn the ignition switch to the [O (OFF)] position when inspecting or removing the battery.**



Inspection / Adding Electrolyte

1. Open the battery box cover.
2. Check the electrolyte level. If the level is low, add electrolyte.

Proper battery electrolyte amount:
Between UPPER LEVEL and
LOWER LEVEL line

Battery electrolyte: Distilled water

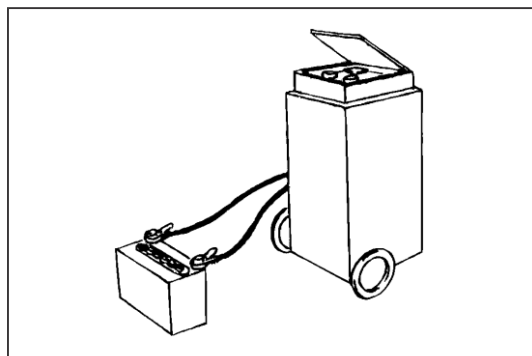
Charging

⚠ CAUTION

- Always remove the battery from the machine before charging it. Failure to do this will cause damage to electrical components and to the wiring.
- When connecting cables to the battery, use the correct (+) and (-) terminals. Reversing connections will blow the fuse and prevent charging.
- For safety, always disconnect the (-) terminal first, and connect the (+) terminal first. Disconnecting or connecting in the opposite order may cause a short circuit.
- When reinstalling the battery, connect the (+) and (-) to their original positions. Avoid contact between terminals and other surrounding parts.

NOTICE

The rapid charging method is a method of charging with a large current in a short time to partially compensate for battery discharge. This method is used in emergencies. After completing operations, perform compensation charging quickly and correctly. If compensation charging is not performed, the battery life will be greatly reduced.



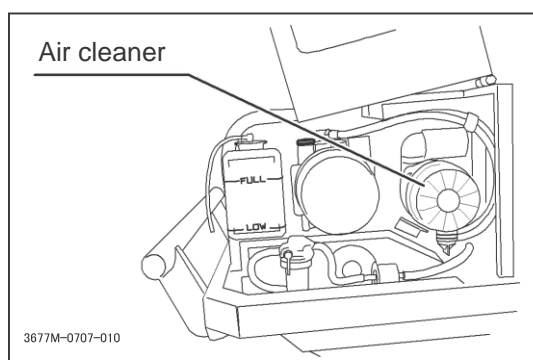
1. Remove the battery.
2. Charge the battery according to the instructions given in the operation manual for the charger.

7.7 Cleaning and Replacement

7.7.1 Air Cleaner Element

NOTICE

- Dirty air cleaner element will reduce engine performance and life. Clean every 100 hours of operation.
- Handle the air cleaner element taking care not to break or deform it.



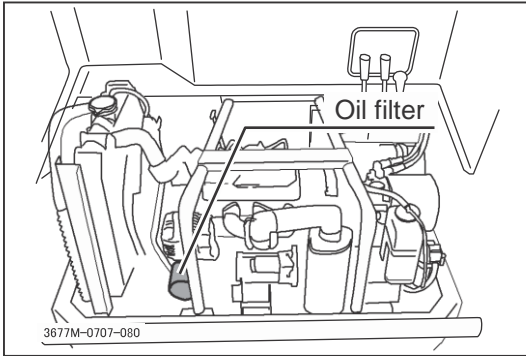
Cleaning

1. Open the engine cover, and lock it firmly with the stay-bar.
(See page 15)
2. Remove the air cleaner element.
3. Hit the air cleaner element lightly to remove the dust, or blow the element with compressed air while rotating it.

NOTICE

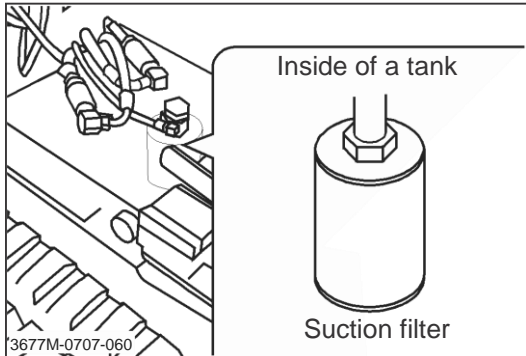
- If the air cleaner element is contaminated with carbon and oil, immerse it in water with solvent for about 30 minutes, and then wash it clean, rinse it with fresh water, and let it dry in the air.
- Replace the element every year or every 600 hours.
- If the element is damaged, replace it.

7.7.2 Engine Oil Filter Cartridge



1. Prepare a suitable container to catch the drained oil.
2. Drain the engine oil. (See page 34)
3. Open the engine cover, and lock it with the stay-bar.
(See page 15)
4. Using the oil filter wrench, turn the oil filter cartridge to the left and remove it.
5. Clean the filter housing base on the engine side.
6. Coat the seal portion of the new oil filter cartridge thinly with clean engine oil.
7. Install the new oil filter and tighten it fully.
Do not use a filter wrench; tighten by hand only.
8. Add engine oil.
(See page 34)
9. After starting the engine, check that there is no leakage of oil from the base of the filter.

7.7.3 Suction Filter and Line Filter

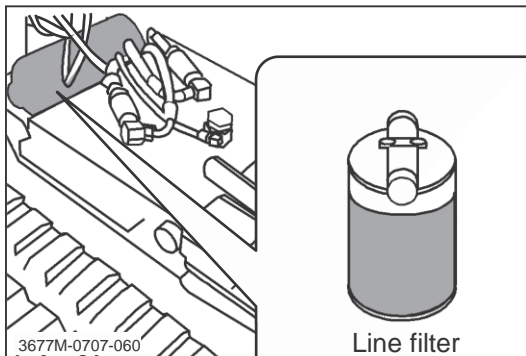


NOTICE

Replace suction filter and line filter element whenever changing hydraulic oil.

Replacement

1. Remove the suction filter (use a filter wrench to remove the line filter).



CAUTION

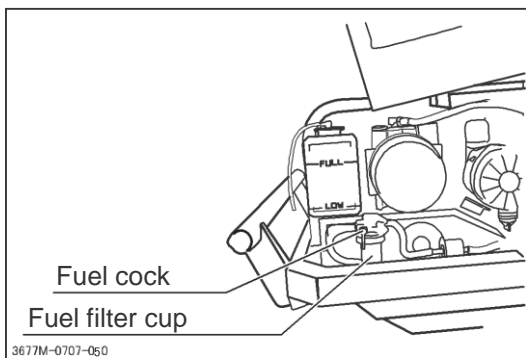
Avoid contact with high temperature oil to avoid burns.

2. Install a new suction filter cartridge.

NOTICE

Coat the filter cartridge seal thinly with clean engine oil when installing.

7.7.4 Fuel Filter



1. Open the engine cover, and lock it with the stay-bar. (See page 15)
2. Tune the fuel cock to the [OFF] position.
3. Remove the fuel filter cap.
4. Remove dirt and water accumulated at the bottom of the fuel filter cup.
5. Slowly pull down the fuel filter element to remove it.
6. Clean the fuel filter with new light oil.

NOTICE

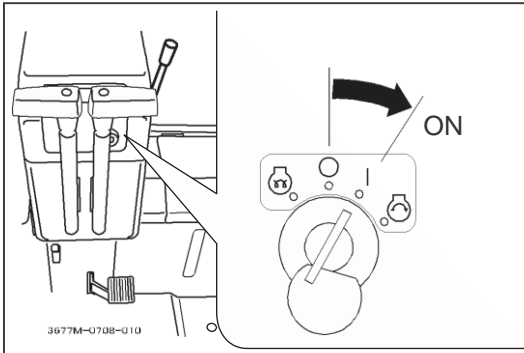
If the fuel filter is damaged, replace it.

7.8 Adjustments

7.8.1 Bleeding Air from Fuel System

NOTICE

To avoid engine starting malfunction, bleed air from fuel system after fuel filter or fuel pipe replacements, or after any operation when fuel tank was completely emptied.

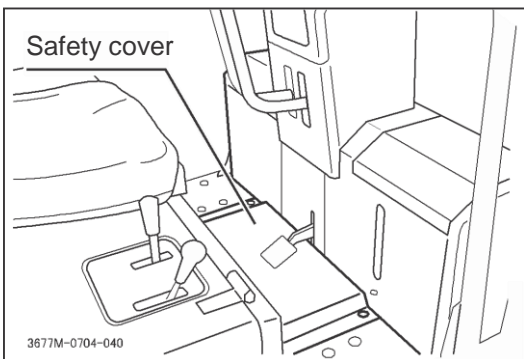


1. Fill the fuel tank with fuel.
2. Turn the starting switch to the [|] (ON) position to start the fuel pump for about 5 seconds (automatic air bleeding system).

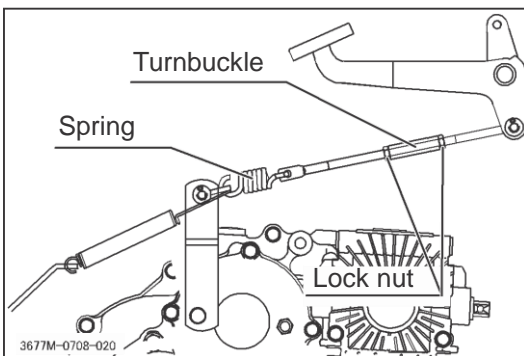
7.8.2 Parking Brake

NOTICE

- Proper brake performance is critical for safety. Always keep brake adjusted for maximum performance.
- Use the brake with the steering lever in the neutral position.

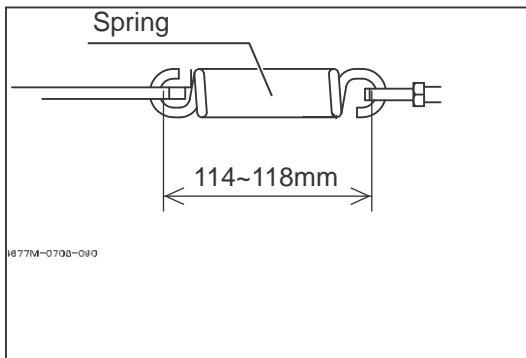
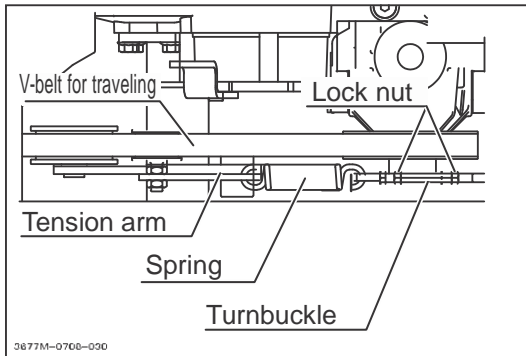


1. Remove the safety cover.
2. Surely lock the parking brake pedal.




3. Loosen the lock nut, and adjust the spring hook inner dimension to 67 to 68 mm by turning the turnbuckle.
4. After adjustment, tighten the lock nut firmly.

7.8.3 V-belt for Traveling



Inspection

1. Push the clutch lever to the [ (ON)] position.
2. Remove the safety cover. (See page 42)
3. Visually check the traveling V-belt for damage. If it is damaged, replace.

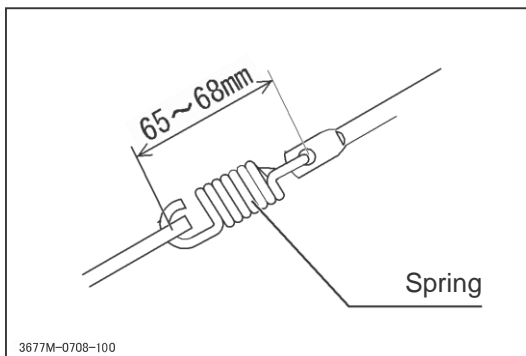
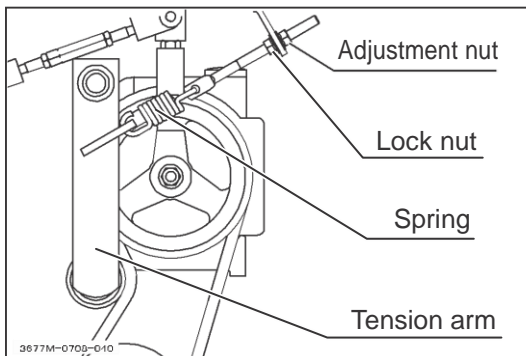
Slippage of V-belt

After loosening the lock nut, and adjust the spring hook inner dimension to 114 to 118 mm by turning the turnbuckle.

Replacement

Contact your Canycom distributor.

7.8.4 hydraulic pressure V-belt



Inspection

1. Open the engine cover, and lock it with the stay-bar. (See page 15)
2. Visually check the hydraulic pressure V-belt for damage. If it is damaged, replace.

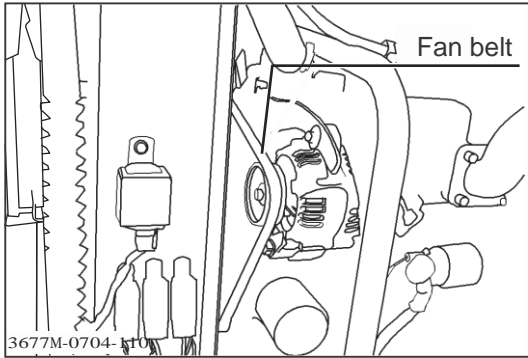
Slippage of V-belt

After loosening the lock nut, and adjust the spring hook inner dimension to 65 to 68 mm by turning the adjustment nut.

Replacement

Contact your Canycom distributor.

7.8.5 Fun Belt Tension



NOTICE

If the tension of the cooling fan belt is small, the belt is slipped and not only the cooling capacity of the engine is lowered but also the service life of it is shortened.

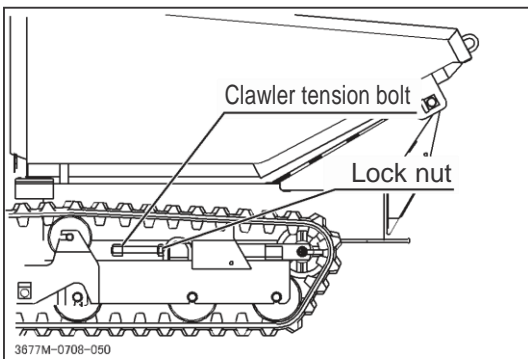
CAUTION

Inspect the tension after the engine is stopped.

Inspection / Adjustment

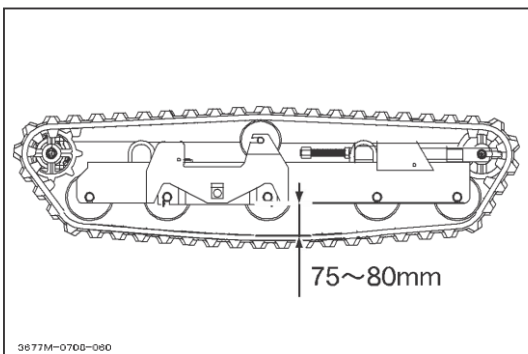
1. Open the engine cover.
2. Press the center of the cooling fan belt by finger to check for the tension of the belt.
Deflection: About 7 mm at force of about 5 kg
3. If the deflection does not come within a reference value specified above, loosen the mounting bolt, and move the alternator to adjust the tension of the belt.

7.8.5 Track Tension



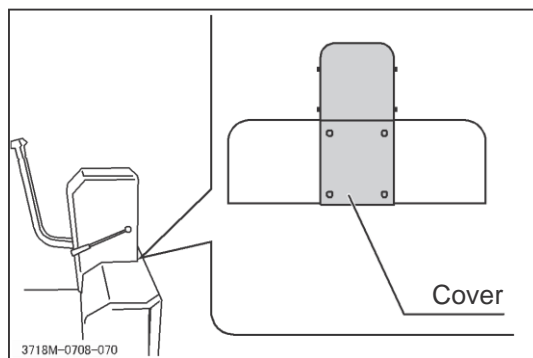
NOTICE

Loose track tension can cause the tracks to come off the machine, causing damage to the machine and possibly serious injury or death to the operator or bystanders. During the first 100 hours of use, the tracks stretch and the track tension loosens. Check track tension during the pre operation inspection and as part of monthly inspection, as specified in the Regular Inspection Chart.




1. Stop the machine on level ground.
2. Jack up the front and rear of the chassis to raise the crawler on one side and make it horizontal to the ground surface.
3. Loosen the lock nut of the crawler tension bolt.
4. Rotate the crawler tension bolt to adjust the clearance between the crawler and the frame to 75 to 80 mm.

7.8.6. Steering Lever



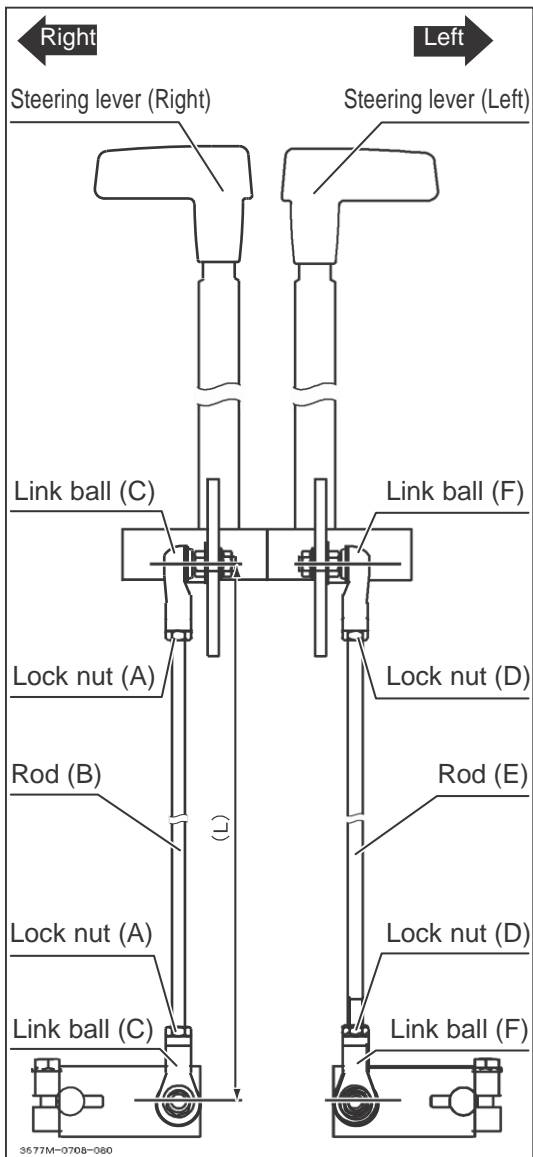
NOTICE

The steering lever is properly adjusted when the machine is properly shipped from the factory, so normally there is no need to adjust it. If the steering lever and links have been replaced, the steering lever must be adjusted.

1. Start the engine, and push the throttle lever to the [ (HIGH SPEED)] position to increase the speed of the engine.
2. On level ground, tilt the steering lever for movement. If the right and left crawlers move forward or backward when the steering lever is released, the crawlers must be adjusted.

Before Adjustment

1. Raise the load deck of the truck, and lock the dump lever to the lock plate.
2. Secure the load deck with the support bar. (See page 25)
3. Remove the cover.



If Right Crawler Moves

1. Loosen two lock nuts (A).
2. Rotate rod (B) slowly until crawler does not move.
 - If the crawler moves forward, adjust the rod so the distance (L) between two link balls (C) becomes shorter.
 - If the crawler moves backward, adjust the rod so the distance (L) between two link balls (C) becomes longer.
3. Tighten two lock nuts (A).

If Left Crawler Moves

1. Loosen two link ball lock nuts (D).
2. Rotate rod (E) slowly until crawler does not move.
3. Tighten two lock nuts (D).

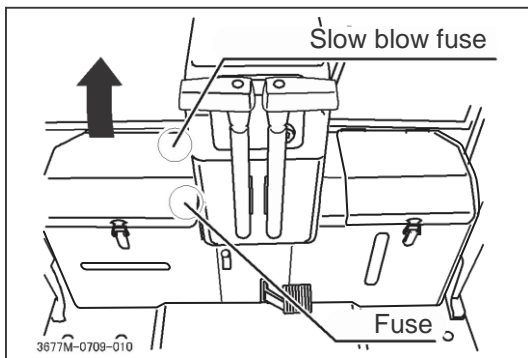
7.9 Electrical System

7.9.1 Fuses

Inspection

NOTICE

Fuses in the wiring circuits will prevent damage to electrical systems.
Check fuses whenever electrical problems occur.



Open the battery box cover, and check that no fuse is blown.

Slow Blow Fuse

- 30A : Main glow
- 40A : Alternator

Fuse

- 5A : Hour meter, alarm monitor, fuel pump
- 5A : Horn

Replacement

CAUTION

If a fuse is blown, investigate the cause, then replace the fuse with another correct capacity fuse. Correct capacity fuse must be used for warranty to apply.

7.10 Maintenance After Use

Maintenance After Use in Normal Conditions

- After using the machine, remove any mud, water, or other foreign matter stuck to the machine. Do not wash the engine or control panel with water. This will allow water to enter and lead to rust.
- When leaving the machine outdoors, cover it with a waterproof cover.

Maintenance After Use in Cold Weather

- After using the machine, remove any mud, water, or other foreign matter stuck to the machine. Then park the machine on concrete or firm dry ground, or set it on blocks. If water or mud stuck to the machine freezes, it may cause failure. (In extremely cold areas, put wooden blocks under the crawlers at right angles to the machine.)
- When leaving the machine outdoors, cover it with a waterproof cover.

NOTICE

If the machine freezes and it is impossible to operate it, do not try to move it by force. Use warm or hot water to melt the frozen parts or wait for the ice to melt. Be careful when moving the machine. If the machine is moved by force, Canycom does not take responsibility for damage or failure.

8. Storage (Long-term Storage)

When storing for a long time, it is necessary to take suitable action to prepare for the next time that the machine is used. When preparing for long-term storage, carry out "Maintenance after use" (see page 50), then do as follows.

⚠ DANGER

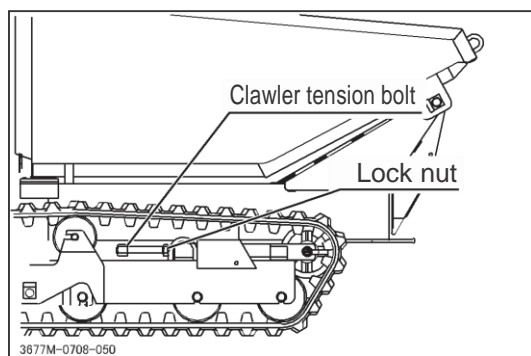
Do not store this machine, the battery, or fuel in a place where there is a flame or where the temperature is high. There is a danger of fire.

NOTICE

Avoid storing the machine in a place where there is high humidity or excessive dust. When storing, wait for the engine to cool down, then cover the machine with a waterproof sheet.

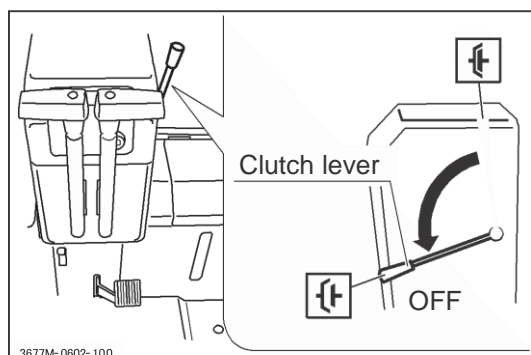
8.1 Machine

8.1.1 Crawler



1. Loosen the lock nut of the crawler, and loosen the tension bolt. (See page 46)
2. Clean the outside surface of the machine with an oily cloth, then lubricate the rotating and sliding parts.
3. Place a board under the crawler.
4. Remove the engine starting key.

8.1.2 Clutch



1. Operate the clutch lever to the [⊣ (OFF)] position.

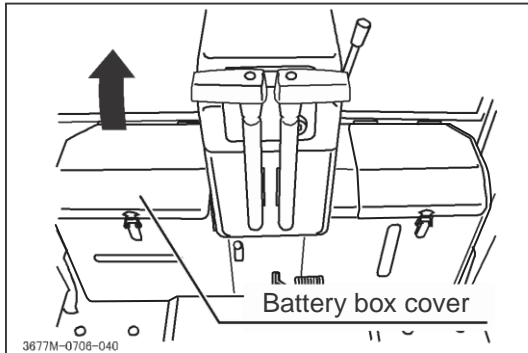
8

Storage (Long-term Storage)

8.2 Battery

CAUTION

When disconnecting the cables from the battery, disconnect the (-) terminal first, and the (+) terminal last; when connecting the cables, connect the (+) terminal first, and the (-) terminal last.



1. Remove the battery from the machine.
2. Check the battery electrolyte level. If the level is low, add electrolyte.
3. Store the battery in a cool, dry place.

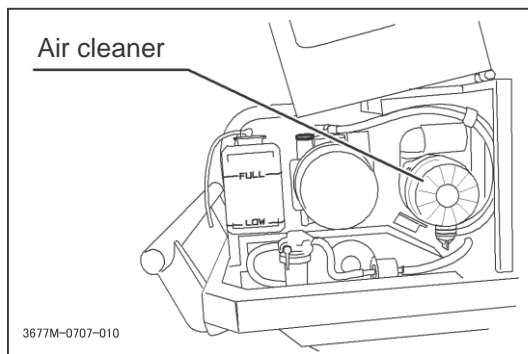
Reference: When the battery is not being used, it will remain charged for about 6 months, but if it is charged before it has been removed, it is possible to extend the life of the battery.

8.3 Engine

NOTICE

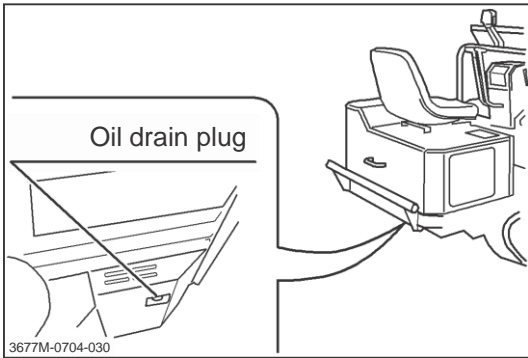
Refer to the engine operation manual for more details about long term storage of the engine.

8.3.1 Cleaning Air Cleaner Element



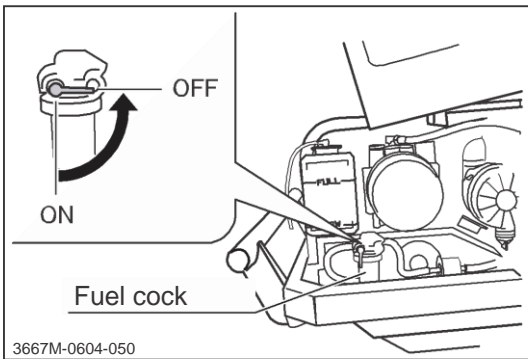
Remove the air cleaner element and clean it.
(See page 41)

8.3.2 Changing Engine Oil



Drain the engine oil, then fill with fresh engine oil.
(See page 32)

8.3.3 Fuel Cock



Turn the fuel cock to the [OFF] position to cut off the fuel supply.

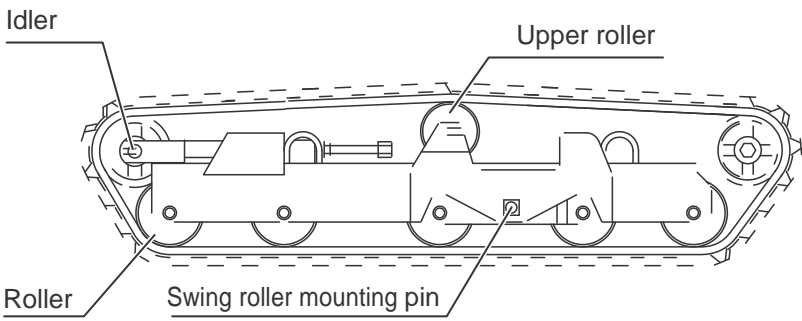
9. Troubleshooting

Some repairs require specialized service knowledge or equipment, as indicated in the Troubleshooting Chart. In these case, contact your dealer for repair, adjustment, or part replacement.

9.1 Troubleshooting Chart

| Location | Problem | Main causes | Remedy |
|----------------|--|---|--|
| Engine related | Engine dose not start or is difficult to start | <ul style="list-style-type: none"> · Parking brake pedal not depressed (The safety device functions) · Battery over-discharged · Battery cable has separated · Fuse blown · Defective contact or disconnection in electric wiring · No fuel · Air leak in fuel system · Excessive intake of fuel · Defective oil quality or engine oil is low · Low battery capacity (defective starting of motor) · Defective operation of starting switch, motor, relay · Foreign matter trapped in fuel system | <ul style="list-style-type: none"> → Depress the parking brake pedal → Charge battery (See page 40) → Replace battery → Connect cable → Replace → Repair (Please contact your Canycom distributor) → Add fuel (See page 14) → Bleed air (See page 44) → Wait for a while before re-starting → Add or change oil (See page 31) → Add battery electrolyte → Charge battery (See page 40) → Please contact your Canycom distributor → Clean the fuel stop valve |
| | Engine stops immediately | <ul style="list-style-type: none"> · No fuel · Air in fuel hose · Insufficient warming up | <ul style="list-style-type: none"> → Add fuel (See page 14) → Bleed air (See page 42) → Warm up thoroughly |
| | Engine suddenly stopped | <ul style="list-style-type: none"> · Out of fuel · Seizure caused by lack of engine oil or by deterioration of oil | <ul style="list-style-type: none"> → Add fuel (See page 14) → Inspect and add oil (See page 31) |
| | Engine dose not stop | <ul style="list-style-type: none"> · Defective electrical system | <ul style="list-style-type: none"> → Close the fuel cock to stop the engine Please contact your Canycom distributor |
| | Defective idling (variation in engine speed) | <ul style="list-style-type: none"> · Defective function of injection pump · Improper injection timing · Insufficient compression pressure · Insufficient air intake (clogged air cleaner) | <ul style="list-style-type: none"> → Please contact your Canycom distributor → Please contact your Canycom distributor → Please contact your Canycom distributor → Clean or replace (See page 39) |

| Location | Problem | Main causes | Remedy |
|----------------|---|---|--|
| Engine related | Lack of output or acceleration | <ul style="list-style-type: none"> · Improper fuel · Improper viscosity of engine oil · Defective adjustment of accelerator · Insufficient air intake (clogged air cleaner) · Overload · Defective function of injection pump · Improper injection timing · Insufficient compression pressure | <ul style="list-style-type: none"> → Change fuel → Change to suitable oil → Please contact your Canycom distributor → Clean or replace (See page 41) → Reduce load → Please contact your Canycom distributor → Please contact your Canycom distributor → Please contact your Canycom distributor |
| | Abnormal noise or vibration from engine or around engine | <ul style="list-style-type: none"> · Loose engine mounting bolt · Other | <ul style="list-style-type: none"> → Tighten → Please contact your Canycom distributor |
| | Excessive consumption of engine oil | <ul style="list-style-type: none"> · Leakage of engine oil · Wear of cylinder, piston ring | <ul style="list-style-type: none"> → Check and repair → Check and repair (Please contact your Canycom distributor) |
| | Engine overheats | <ul style="list-style-type: none"> · Lack of engine oil · Lack of engine cooling water · Leakage of engine cooling water · Clogged radiator | <ul style="list-style-type: none"> → Add oil (See page 34) → Add water (See page 38) → Inspect and repair (Please contact your Canycom distributor) → Clean |
| | Excessive consumption of fuel | <ul style="list-style-type: none"> · leakage of fuel from fuel system · Clogged radiator · Defective function of injection pump · Improper injection timing · Insufficient engine compression | <ul style="list-style-type: none"> → Check and repair (Please contact your Canycom distributor) → Clean or replace (See page 41) → Please contact your Canycom distributor → Please contact your Canycom distributor → Please contact your Canycom distributor |
| | Large amounts of black smoke is emitted (defective exhaust condition) | <ul style="list-style-type: none"> · Defective compression · Improper fuel · Clogged air cleaner | <ul style="list-style-type: none"> → Check and repair (Please contact your Canycom distributor) → Change fuel → Clean or replace (See page 41) |
| | White smoke or blue smoke are emitted (defective exhaust condition) | <ul style="list-style-type: none"> · Engine oil level is too high · Viscosity of oil is too low · Worn cylinder, piston ring | <ul style="list-style-type: none"> → After inspecting, adjust oil level (See page 34) → Change to suitable oil → Check and repair (Please contact your Canycom distributor) |
| | Accelerator lever is catching | <ul style="list-style-type: none"> · Deformed, rusty accelerator rod and wire | <ul style="list-style-type: none"> → Replace (Please contact your Canycom distributor) |

| Location | Problem | Main causes | Remedy |
|--|---|--|--|
| Power train related | Machine does not move even when steering levers are placed in FORWARD or REVERSE positions Defective turning | <ul style="list-style-type: none"> · Parking brake is applied · Problem in hydraulic system · Failure inside HST · Overloaded · Insufficient or deteriorated hydraulic circuit · Clogged oil cooler · Dirt in hydraulic circuit · Clogged filter element · Fluid leaks from hydraulic system · Insufficient discharge from hydraulic pump · Other | <ul style="list-style-type: none"> → Release parking brake → See Hydraulic related (See page 56) → Please contact your Canycom distributor → Reduce load → Add or change fluid (See page 36) → Clean → Remove dirt → Replace (See page 41) → Check and repair → Please contact your Canycom distributor → Please contact your Canycom |
| Brake | Poor braking | <ul style="list-style-type: none"> · Adjustment nut loosened · Brake lining worn · Water in brake drum · Overload | <ul style="list-style-type: none"> → Adjust (See page 44) → Replace the lining (Please contact your Canycom distributor) → Apply the brake several times to eliminate water → Reduce load |
| Crawler | Crawler does not rotate smoothly | <ul style="list-style-type: none"> · Improper adjustment | <ul style="list-style-type: none"> → Adjust (See page 46) |
| Safety device related | Lamp does not light | <ul style="list-style-type: none"> · Defective wiring · Blown bulb · Blown fuse | <ul style="list-style-type: none"> → Connect → Replace → Replace (See page 49) |
| | Warning lamp lights up after engine is started (1) Charge lamp (2) Oil lamp | <ul style="list-style-type: none"> · Disconnected coupler, wiring · Lack of engine oil or abnormality in lubricating system | <ul style="list-style-type: none"> → Connect → Add oil (See page 34) |
| Safety device | Horn does not sound | <ul style="list-style-type: none"> · Disconnected terminal for horn wiring, broken wiring · Blown fuse | <ul style="list-style-type: none"> → Connect or repair → Replace (See page 49) |
| Roller, Idler, Upper roller, Swing roller mounting pin | Discontinuous noise | — | → Replace the defective part (Please contact your Canycom distributor) |
| | Abnormal heating | — | → Replace the defective part (Please contact your Canycom distributor) |
| |  | | |

| Location | Problem | Main causes | Remedy |
|-----------------|----------------------------------|---|---|
| Dump device | Dump device does not operate | <ul style="list-style-type: none">· Oil leakage from hydraulic system· Foreign matter clogged in control valve | <ul style="list-style-type: none">→ Inspect and repair→ Inspect and repair |
| Rotating device | Rotating device does not operate | <ul style="list-style-type: none">· Oil leakage from hydraulic system· Foreign matter clogged in control valve | <ul style="list-style-type: none">→ Inspect and repair→ Inspect and repair |

10

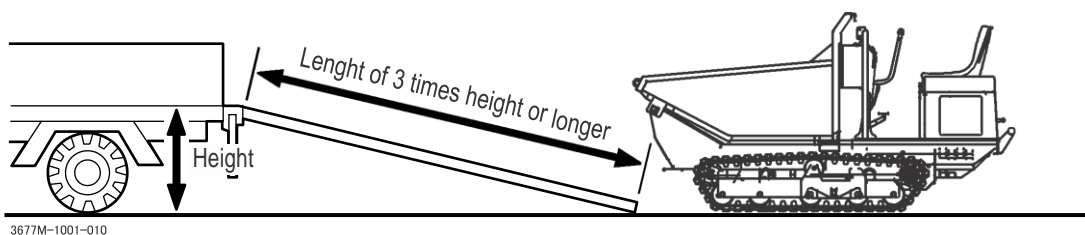
Transporting Machine

10. Transporting Machine

When loading and unloading this machine onto a truck for transportation, follow these safety precautions.

10.1 Truck Loading and Unloading

1. Use ramps that have ample strength (that can hold the total weight of the machine and operator), width (at least 1.2 times the width of the crawler), and length (at least 3 times the height of the bed of the truck), and are fitted with no-slip pads. Choose a place where the ramps will not bend under the weight of the machine.
2. Fit the hooks of the ramps to the bed of the truck so that they do not slip and so that there is no height difference from the bed of the truck.
3. When unloading the machine, operate the machine from the outside of the machine.



⚠ DANGER

- When loading and unloading the machine, do not allow anyone to come near the machine or the ramps.
- Do not change direction on the ramps. There is a danger that the machine will fall off.
- When driving up the ramps, shift the gear shift lever to the forward 1st position, and when driving down, shift it to the reverse 1st position, then travel slowly.

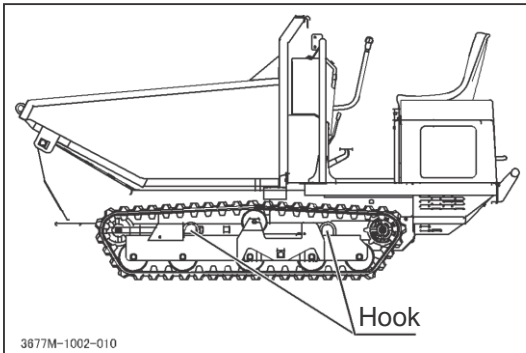
⚠ CAUTION

The gravity center of the machine may suddenly shift, when crossing from the ramps into the bed of the truck

10.2 Lifting by Crane

⚠ WARNING

Always unload machine before lifting.



1. Hitch the wire rope to the lifting hooks (4 places) attached to the frame at right and left side front and rear positions, and lift the machine from the lateral center of the machine.
2. Slings work attachments (wire rope, chain, etc.) should have sufficient strength and equal lengths.

CHIKUSUI CANYCOM, INC.

- | | | | |
|------------------------|---------------------------------|--------------------|--------------------------------|
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| ■ Foreign Trade Center | TEL 03(3552)6277 FAX (3552)6288 | ■ Hiroshima Center | TEL 0824(34)5996 FAX (34)5997 |
| ■ Tokyo Center | TEL 03(3552)6255 FAX (3552)6288 | ■ Matsuyama Center | TEL 089(983)2701 FAX (983)5749 |
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| ■ Saitama Center | TEL 0495(77)4511 FAX (77)1561 | ■ Kagoshima Center | TEL 0995(58)3011 FAX (58)2344 |

Memo of address and telephone number
(Name of dealer)