

# **Operation & Maintenance Manual**

# **D375A-5**

## **RADIO CONTROL SPECIAL SMALL ELECTRIC POWER SPECIFICATION**

**This manual describes only Radio control. Please refer to this manual and D375A-5 Operation and Maintenance Manual for bulldozer.**

**This material is proprietary to Komatsu America International Company and is not to be reproduced, used, or disclosed except in accordance with written authorization from Komatsu America International Company.**

**It is our policy to improve our products whenever it is possible and practical to do so. We reserve the right to make changes or improvements at any time without incurring any obligation to install such changes on products sold previously.**

**Due to this continuous program of research and development, revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.**

**Copyright 2002 Komatsu  
DataKom Publishing Division**

# FOREWORD

# 1. FOREWORD

This manual provides rules and guidelines which will help you use this machine safely and effectively. The precautions in this manual must be followed at all times when performing operation and maintenance. Most accidents are caused by the failure to follow fundamental safety rules for the operation and maintenance of machines. Accidents can be prevented by knowing beforehand conditions that may cause hazard when performing operation and maintenance.

This manual contains important precautions to be followed when carrying out work using a bulldozer equipped with this radio control system.

Always read this manual together with the Operation and Maintenance Manual for the bulldozer equipped with radio control.

## **WARNING**

**Operators and maintenance personnel must always do as follows before beginning operation or maintenance.**

- **Always be sure to read and understand this manual thoroughly before performing operation and maintenance.**
- **Read the safety messages given in this manual and the safety labels affixed to the machine thoroughly and be sure that you understand them fully.**

**Keep this manual at the storage location for the Operation and Maintenance Manual given below, and have all personnel read it periodically.**

**If this manual has been lost or has become dirty and cannot be read, request a replacement manual immediately from Komatsu or your Komatsu distributor.**

**If you sell the machine, be sure to give this manual to the new owners together with the machine.**

**Komatsu delivers machines that comply with all applicable regulations and standards of the country to which it has been shipped. If this machine has been purchased in another country or purchased from someone in another country, it may lack certain safety devices and specifications that are necessary for use in your country. If there is any question about whether your product complies with the applicable standards and regulations of your country, consult Komatsu or your Komatsu distributor before operating the machine.**


## 2. SAFETY INFORMATION


To enable you to use this machine safely, safety precautions and labels are given in this manual and affixed to the machine to give explanations of situations involving potential hazards and of the methods of avoiding such situations.


### Signal words

The following signal words are used to inform you that there is a potential hazardous situation that may lead to personal injury or damage.

In this manual and on machine labels, the following signal words are used to express the potential level of hazard.

 **DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to most extreme situations.

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

### Example of safety message using signal word

 **WARNING**  
To avoid hitting unlocked operation levers, lower equipment to ground and move SAFETY LOCK LEVER (located near seat) to LOCK position before starting up from operator's seat.  
Sudden and unwanted machine movement can cause serious injury or death.

### Other signal words

In addition to the above, the following signal words are used to indicate precautions that should be followed to protect the machine or to give information that is useful to know.

**NOTICE** This word is used for precautions that must be taken to avoid actions which could shorten the life of the machine.

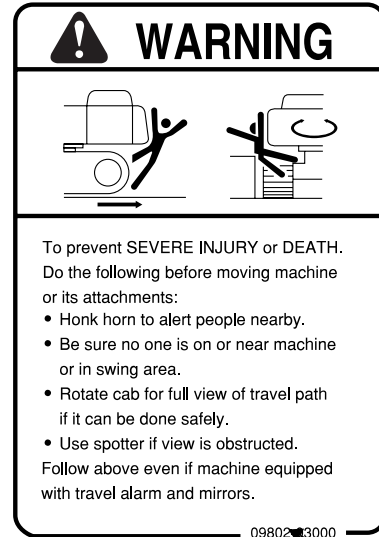
**REMARK** This gives information that is useful to know.

**Safety labels**

Safety labels are affixed to the machine to inform the operator or maintenance worker on the spot when carrying out operation or maintenance of the machine that may involve hazard.

This machine uses "Safety labels using words" and "Safety labels using pictograms" to indicate safety procedures.

**Example of safety label using words**



Part No.

**Safety labels using pictogram**

Safety pictograms use a picture to express a level of hazardous condition equivalent to the signal word. These safety pictograms use pictures in order to let the operator or maintenance worker understand the level and type of hazardous condition at all times. Safety pictograms show the type of hazardous condition at the top or left side, and the method of avoiding the hazardous condition at the bottom or right side. In addition, the type of hazardous condition is displayed inside a triangle and the method of avoiding the hazardous condition is shown inside a circle.



Part No.

Komatsu cannot predict every circumstance that might involve a potential hazard in operation and maintenance. Therefore, the safety messages in this manual and on the machine may not include all possible safety precautions. If any procedures or actions not specifically recommended or allowed in this manual are used, it is your responsibility to take the necessary steps to ensure safety.

In no event should you engage in prohibited uses or actions described in this manual.

The explanations, values, and illustrations in this manual were prepared based on the latest information available at that time. Continuing improvements in the design of this machine can lead to changes in detail which may not be reflected in this manual. Consult Komatsu or your Komatsu distributor for the latest available information of your machine or for questions regarding information in this manual.

The numbers in circles in the illustrations correspond to the numbers in ( ) in the text. (For example: ① → (1))

## 3. INTRODUCTION

This Komatsu machine is designed to be used mainly for the following work:

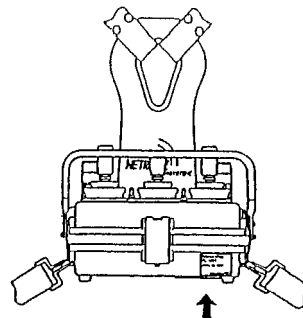
- Dozing
- Smoothing
- Ripping

For further details, see "WORK POSSIBLE USING BULLDOZER " and "RIPPER OPERATION"

## 4. PRODUCT INFORMATION

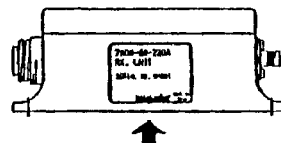
### 4.1 LOCATION OF NAMEPLATE FOR TRANSMITTER (TX. UNIT)

This is on the right side of the front face of the transmitter.



### 4.2 LOCATION OF NAMEPLATE FOR RECEIVER (RX. UNIT)

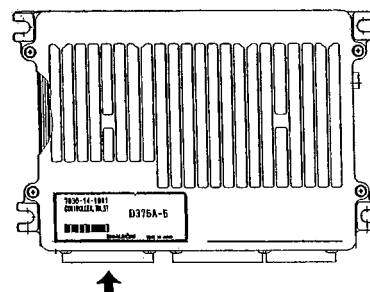
This is on the side face of the receiver.



### 4.3 LOCATION OF NAMEPLATE FOR CONTROLLER

This is on the front face\* of the controller.

(\* Remove the cover to see the nameplate.)



### 4.4 YOUR MACHINE SERIAL NUMBERS AND DISTRIBUTOR

Machine serial No.	
Engine serial No.	
Distributor name	
Address	-----
Service Personal	-----
Phone/Fax	-----



## 5. CONTENTS

### FOREWORD

1. FOREWORD .....	1-2
2. SAFETY INFORMATION .....	1-3
3. INTRODUCTION .....	1-5
4. PRODUCT INFORMATION .....	1-6
4.1 LOCATION OF NAMEPLATE FOR TRANSMITTER (TX. UNIT) .....	1-6
4.2 LOCATION OF NAMEPLATE FOR RECEIVER (RX. UNIT) .....	1-6
4.3 LOCATION OF NAMEPLATE FOR CONTROLLER .....	1-6
4.4 YOUR MACHINE SERIAL NUMBERS AND DISTRIBUTOR .....	1-7

### SAFETY

6. GENERAL PRECAUTIONS .....	2-2
7. PRECAUTIONS FOR OPERATION .....	2-12

### OPERATION

8. GENERAL VIEW .....	3-2
8.1 GENERAL VIEW OF MACHINE .....	3-2
9. EXPLANATION OF COMPONENTS .....	3-4
9.1 TRANSMITTER (TX. UNIT) .....	3-5
9.2 RECEIVER UNIT (RX. UNIT) .....	3-12
9.3 CONTROLLERS .....	3-13
9.4 CHARGER .....	3-14
9.5 ROTATING LAMPS .....	3-15
10. HANDLING RADIO CONTROL .....	3-16
10.1 FLOW CHART FOR STARTING, OPERATING USING RADIO CONTROL .....	3-17
10.2 FLOW CHART FOR STOPPING OPERATION USING RADIO CONTROL .....	3-18
10.3 DETAILS OF PROCEDURE FOR RADIO CONTROL OPERATION .....	3-19
11. PRECAUTIONS WHEN OPERATING RADIO CONTROL .....	3-25
12. Operation using radio control .....	3-26
12.1 Moving off .....	3-26
12.2 Steering (changing direction of travel) .....	3-27
12.3 Work equipment (blade RAISE/LOWER/FLOAT, tilt left/right, ripper UP/DOWN, ripper tilt in/back) .....	3-27
12.4 Acceleration/deceleration .....	3-27
12.5 Stopping (braking) .....	3-28

**13. PRECAUTIONS WHEN HANDLING RADIO CONTROL**..... 3-29

    13.1 TRANSMITTER ..... 3-29

    13.2 RECEIVER UNIT, CONTROLLER..... 3-29

    13.3 CHARGER FOR AC, DC ..... 3-29

    13.4 PRECAUTIONS WHEN OPERATING FROM OPERATOR'S SEAT ..... 3-30

**14. CHECKS AROUND MACHINE** ..... 3-31

    14.1 HYDRAULIC UNIT..... 3-31

    14.2 RECEIVER UNIT, CONTROLLER..... 3-31

    14.3 ANTENNA..... 3-31

    14.4 ROTATING LAMPS ..... 3-31

**15. IF ANY FAILURE IS SUSPECTED** ..... 3-32

    15.1 Radio control operation..... 3-32

    15.2 On-board operation (only problems related to radio control) ..... 3-32

    15.3 REPORTING FAILURE ..... 3-32

# MEMO

# SAFETY

- This safety section gives the basic precautions.
- For details of the safety precautions for the overall machine, follow the Operation and Maintenance Manual for the standard machine.

## **WARNING**

**Please read and make sure that you fully understand precautions described in this manual and the safety labels on the machine. When operating or servicing the machine, always follow these precautions strictly.**

---

## 6. GENERAL PRECAUTIONS

### SAFETY RULES

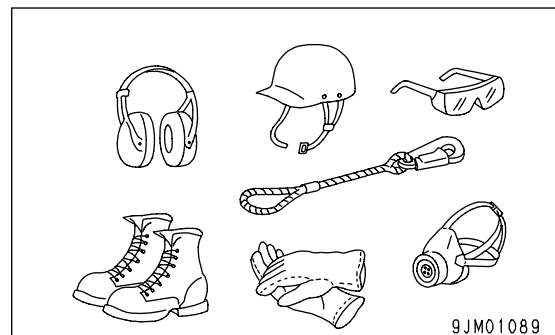
- Only trained and authorized personnel can operate and maintain the machine.
- Follow all safety rules, precautions and instructions when operating or performing maintenance on the machine.
- If you are under the influence of alcohol or medication, your ability to safely operate or repair your machine may be severely impaired putting yourself and everyone else on your jobsite in danger.
- When working with another operator or with a person on worksite traffic duty, be sure that all personnel understand all hand signals that are to be used.

### IF ABNORMALITIES ARE FOUND

If you find any abnormality in the machine during operation or maintenance (noise, vibration, smell, incorrect gauges, smoke, oil leakage, etc., or any abnormal display on the warning devices or monitor), report to the person in charge and have the necessary action taken. Do not operate the machine until the abnormality has been corrected.

### Do not wear loose clothing and accessories. There is a hazard that they may catch on control levers or other protruding parts.

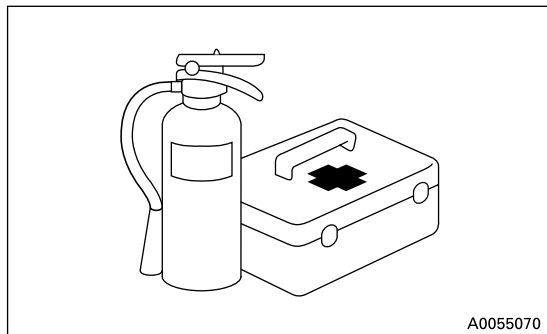
- Do not wear loose clothing and accessories. There is a hazard that they may catch on control levers or other protruding parts.
- If you have long hair and it hangs out from your hard hat, there is a hazard that it may get caught up in the machine, so tie your hair up and be careful not to let it get caught.
- Always wear a hard hat and safety shoes. If the nature of the work requires it, wear safety glasses, mask, gloves, ear plugs, and safety belt when operating or maintaining the machine.
- Check that all protective equipment functions properly before using it.
- When operating by radio control, the operator may change position while carrying out the radio control operation. Check beforehand that there are no obstacles in the surrounding area. The area on the opposite side is a blind spot, so be particularly careful to check that there are no persons or obstacles.



### FIRE EXTINGUISHER AND FIRST AID KIT

Always follow the precautions below to prepare for action if any injury or fire should occur.

- Be sure that fire extinguishers have been provided and read the labels to ensure that you know how to use them in emergencies.
- Carry out periodic inspection and maintenance to ensure that the fire extinguisher can always be used.
- Provide a first aid kit at the storage point. Carry out periodic checks and add to the contents if necessary.

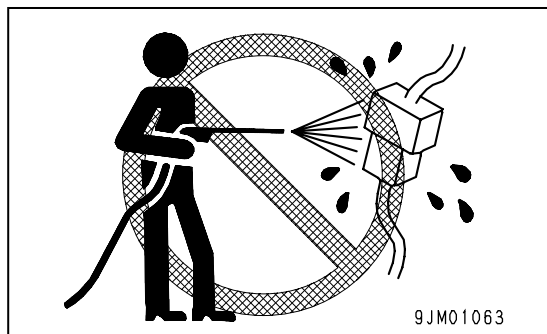


### SAFETY FEATURES

- Be sure that all guards and covers are in their proper position. Have guards and covers repaired immediately if they are damaged.
- Understand the method of use of safety features and use them properly.
- Never remove any safety features. Always keep them in good operating condition.

### KEEP MACHINE CLEAN

- If water gets into the electrical system, there is a hazard that it will cause malfunctions or misoperation. Do not use water or steam to wash the electrical system (sensors, connectors).
- If inspection and maintenance is carried out when the machine is still dirty with mud or oil, there is a hazard that you will slip and fall, or that dirt or mud will get into your eyes. Always keep the machine clean.

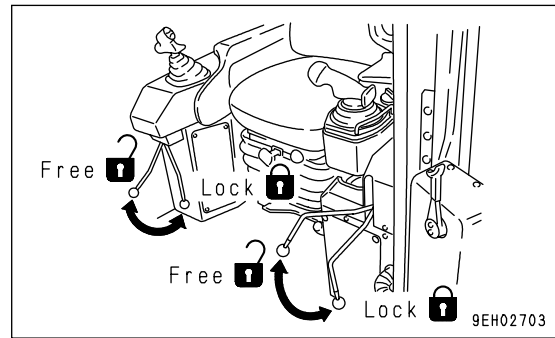


### INSIDE OPERATOR'S COMPARTMENT

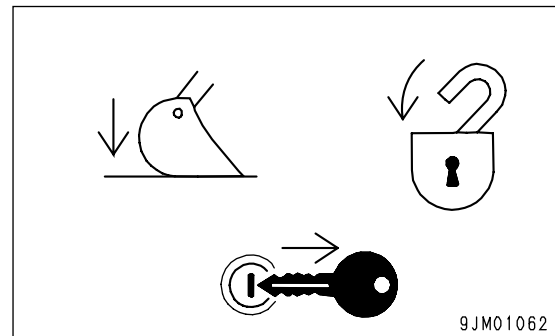
- When entering the operator's compartment, always remove all mud and oil from the soles of your shoes.
- If you operate the pedal with mud or oil affixed to your shoes, your foot may slip and this may cause a serious accident.
- Do not leave parts or tools lying around the operator's compartment.
- Do not stick suction pads to the window glass. Suction pads act as a lens and may cause fire.
- Do not use cellular telephones inside the operator's compartment when driving or operating the machine.
- Never bring any dangerous objects such as flammable or explosive items into the operator's cab.

**ALWAYS APPLY LOCK WHEN LEAVING OPERATOR'S SEAT**

- Before standing up from the operator's seat, lower the work equipment completely to the ground, set safety lock lever and parking lever securely to the LOCK position, then stop the engine.  
If you accidentally touch the levers when they are not locked, there is a hazard that the machine may suddenly move and cause serious injury or property damage.



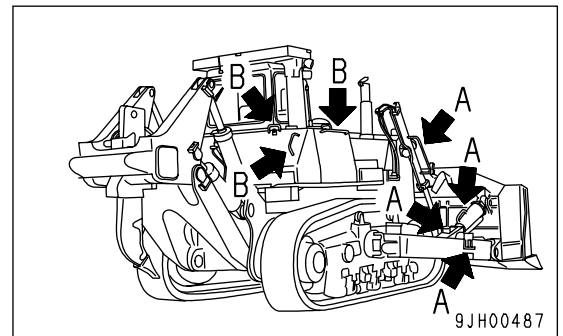
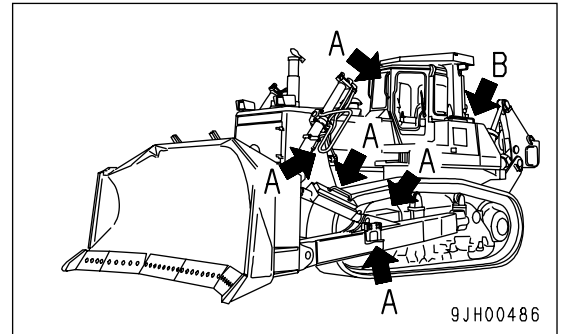
- When leaving the machine, always lower the work equipment completely to the ground, set safety lock lever and Parking lever securely to the LOCK position, then stop the engine. Use the key to lock all the equipment. Always remove the key, take it with you, and keep it in the specified place.



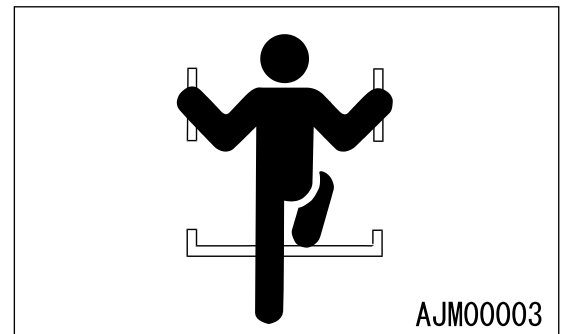
## HANDRAILS AND STEPS

To prevent personal injury caused by slipping or falling off the machine, always do as follows.

- Use the parts marked by arrow A in the diagrams when getting on or off the machine. Never use the parts marked by arrow B when getting on or off the machine. Use them only when moving along the top of the track or when checking or carrying out maintenance inside the side cover, or when filling the tank with oil.
- Never jump on or off the machine. In particular, never get on or off a moving machine. This may cause serious injury.



- To ensure safety, always face the machine and maintain three-point contact (both feet and one hand, or both hands and one foot) with the handrails and steps (including the track shoe) to ensure that you support yourself.
- Do not grip the control levers and safety lock lever when getting on or off the machine.
- Never climb on the engine hood or covers where there are no non-slip pads.
- Before getting on or off the machine, check the handrails and steps (including the track shoe). If there is any oil, grease, or mud on the handrails or steps (including the track shoe), wipe it off immediately. Always keep these parts clean. Repair any damage and tighten any loose bolts.
- Do not get on or off the machine while holding tools in your hand.



## MOUNTING AND DISMOUNTING

- Never jump on or off the machine. Never get on or off a moving machine.
- If the machine starts to move when there is no operator on the machine, do not jump on to the machine and try to stop it.

## NO PEOPLE ON ATTACHMENTS

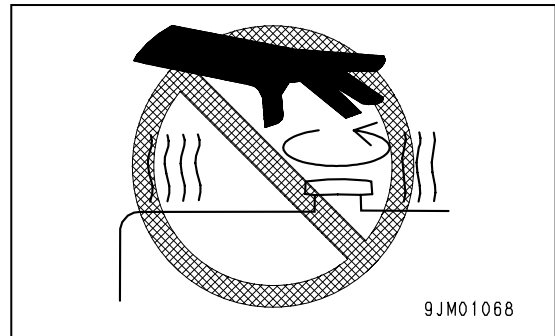
Never let anyone ride on the work equipment, or other attachments. There is a hazard of falling and suffering serious injury.



## PREVENTION OF BURNS

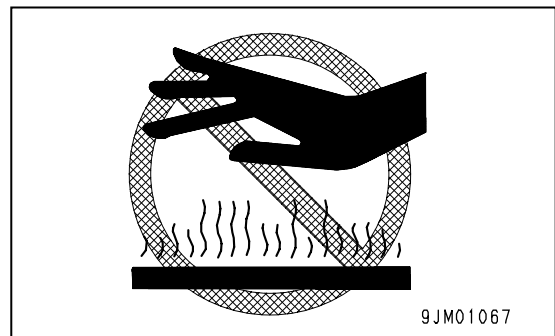
### Hot coolant

- To prevent burns from hot water or steam spurting out when checking or draining the coolant, wait for the water to cool to a temperature where it is possible to touch the radiator cap by hand before starting the operation. Even when the coolant has cooled down, loosen the cap slowly to relieve the pressure inside the radiator before removing the cap.



### Hot oil

- To prevent burns from hot oil spurting out when checking or draining the oil, wait for the oil to cool to a temperature where it is possible to touch the cap or plug by hand before starting the operation. Even when the oil has cooled down, loosen the cap or plug slowly to relieve the internal pressure before removing the cap or plug.

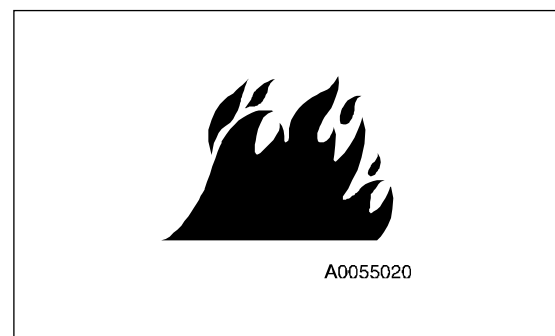


## FIRE PREVENTION

### Fire caused by fuel or oil

Fuel, oil, antifreeze, and window washer liquid are particularly flammable and can be hazardous. To prevent fire, always observe the following:

- Do not smoke or use any flame near fuel or oil.
- Stop the engine before refueling.
- Do not leave the machine while adding fuel or oil.
- Tighten all fuel and oil caps securely.
- Do not spill fuel on overheated surfaces or on parts of the electrical system.
- Use well-ventilated areas for adding or storing oil and fuel.



- Keep oil and fuel in the determined place and do not allow unauthorized persons to enter.
- After adding fuel or oil, wipe up any spilled fuel or oil.
- When carrying out grinding or welding work on the chassis, move any flammable materials to a safe place before starting.
- When washing parts with oil, use a non-flammable oil. Diesel oil and gasoline may catch fire, so do not use them.
- Put greasy rags and other flammable materials into a safe container to maintain safety at the work place.
- Do not weld or use a cutting torch to cut any pipes or tubes that contain flammable liquids.



### **Fire caused by accumulation of flammable material.**

Remove any dry leaves, chips, pieces of paper, dust, or any other flammable materials accumulated or affixed around the engine, exhaust manifold, muffler, or battery, or inside the undercovers.

### **Fire coming from electric wiring**

Short circuits in the electrical system can cause fire.

- Always keep electric wiring connections clean and securely tightened.
- Check the wiring every day for looseness or damage. Tighten any loose connectors or wiring clamps. Repair or replace any damaged wiring.

### **Fire coming from hydraulic line**

Check that all the hose and tube clamps, guards, and cushions are securely fixed in position.

If they are loose, they may vibrate during operation and rub against other parts. This may lead to damage to the hoses, and cause high-pressure oil to spurt out, leading to fire damage or serious injury.

### **Explosion caused by lighting equipment**

- When checking fuel, oil, battery electrolyte, window washer fluid, or coolant, always use lighting with anti-explosion specifications. If such lighting equipment is not used, there is danger of explosion that may cause serious injury.
- When taking the electrical power for the lighting from the machine itself, follow the instructions in this manual.

### **ACTION IF FIRE OCCURS**

If a fire occurs, escape from the machine as follows.

- Turn the start switch OFF to stop the engine.
- Use the handrails and steps to get off the machine.

### **WINDOW WASHER LIQUID**

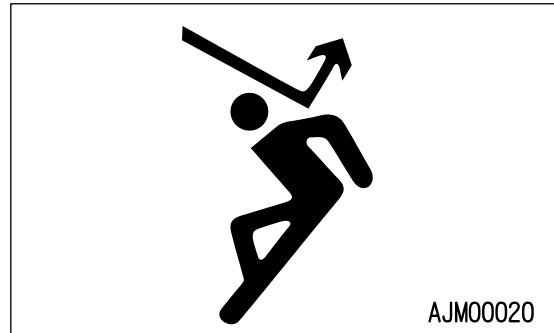
Use an ethyl alcohol base washer liquid.

Methyl alcohol base washer liquid may irritate your eyes, so do not use it.

### PRECAUTIONS WHEN USING ROPS (Roll Over Protective Structure)

Install ROPS when working in places where there is danger of falling rocks, such as in mines and quarries, or in places where there is danger of rolling over.

- If ROPS is installed, do not remove it when operating the machine.
- ROPS is installed to protect the operator when machine rolls over. When machine rolls over, ROPS supports its weight and absorbs its impact energy.
- If ROPS is modified, its strength may lower. When modifying it, consult your Komatsu distributor.
- If ROPS is deformed by falling objects or by rolling over, its strength lowers and its design functions cannot be maintained. In this case, be sure to ask your Komatsu distributor about repair method.  
Even when the ROPS is installed, if you do not fasten your seat belt securely, it cannot protect you properly. Always fasten your seat belt when operating the machine.



### PRECAUTIONS FOR ATTACHMENTS

- When installing optional parts or attachments, there may be problems with safety or legal restrictions. Therefore contact your Komatsu distributor for advice.
- Any injuries, accidents, or product failures resulting from the use of unauthorized attachments or parts will not be the responsibility of Komatsu.
- When installing and using optional attachments, read the instruction manual for the attachment, and the general information related to attachments in this manual.

### CAB WINDOW GLASSES

If the cab glass on the work equipment side is broken, there is a hazard that the work equipment may contact the operator's body directly.

Stop operation immediately and replace the glass.

### UNAUTHORIZED MODIFICATION

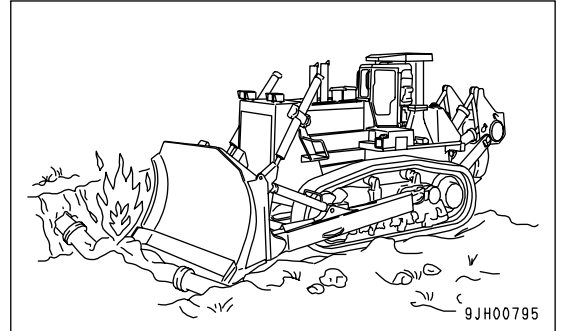
Any modification made without authorization from Komatsu can create hazards. Before making a modification, consult your Komatsu distributor.

- Komatsu will not be responsible for any injuries, accidents, or product failures resulting from modifications made without authorization from Komatsu.

### SAFETY AT WORKSITE

Before starting operations, thoroughly check the area for any unusual conditions that could be dangerous.

- When carrying out operations near combustible materials such as thatched roofs, dry leaves or dry grass, there is a hazard of fire, so be careful when operating.
- Check the terrain and condition of the ground at the worksite, and determine the safest method of operation. Do not carry out operations at places where there is a hazard of landslides or falling rocks.
- If water lines, gas lines, or high-voltage electrical lines may be buried under the worksite, contact each utility and identify their locations. Be careful not to sever or damage any of these lines.
- Take necessary measures to prevent any unauthorized person from entering the operating area.
- In particular, if you need to operate on a road, protect pedestrian and cars by designating a person for worksite traffic duty or by installing fences around the worksite.
- When traveling or operating in shallow water or on soft ground, check the shape and condition of the bedrock, and the depth and speed of flow of the water before starting operations.



### WORKING ON LOOSE GROUND

- Avoid traveling or operating your machine too close to the edge of cliffs, overhangs, and deep ditches. The ground may be weak in such areas. If the ground should collapse under the weight or vibration of the machine, there is a hazard that the machine may fall or tip over. Remember that the soil after heavy rain or blasting or after earthquakes is weak in these areas.
- When working on embankments or near excavated ditches, there is a hazard that the weight and vibration of the machine will cause the soil to collapse. Before starting operations, take steps to ensure that the ground is safe and to prevent the machine from rolling over or falling.

**DO NOT GO CLOSE TO HIGH-VOLTAGE CABLES**

Do not travel or operate the machine near electric cables. There is a hazard of electric shock, which may cause serious injury or property damage. On jobsites where the machine may go close to electric cables, always do as follows.

- Before starting work near electric cables, inform the local power company of the work to be performed, and ask them to take the necessary action.
- Even going close to high-voltage cables can cause electric shock, which may cause serious burns or even death. Always maintain a safe distance (see the table on the right) between the machine and the electric cable. Check with the local power company about safe operating procedure before starting operations.
- To prepare for any possible emergencies, wear rubber shoes and gloves. Lay a rubber sheet on top of the seat, and be careful not to touch the chassis with any exposed part of your body.
- Use a signalman to give warning if the machine approaches too close to the electric cables.
- When carrying out operations near high voltage cables, do not let anyone come close to the machine.
- If the machine should come too close or touch the electric cable, to prevent electric shock, the operator should not leave the operator's compartment until it has been confirmed that the electricity has been shut off.
- Also, do not let anyone come close to the machine.

	Voltage of Cables	Safety Distance
Low Voltage	100V-200V	2m»è,,
	6,600V	2m»è,,
Extra-high Voltage	22,000V	3m»è,,
	66,000V	4m»è,,
	154,000V	5m»è,,
	187,000V	6m»è,,
	275,000V	7m»è,,
	500,000V	11m»è,,

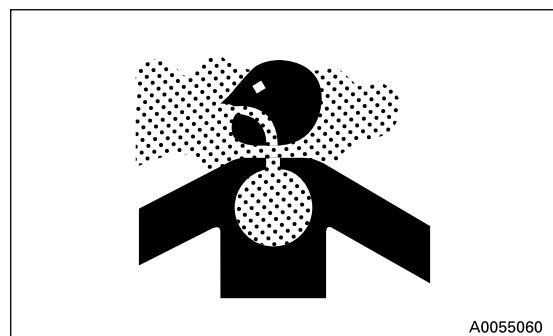
**ENSURE GOOD VISIBILITY**

Check for any persons or obstacles in the area around the machine and check the conditions of the jobsite to ensure that operations and travel can be carried out safely. Always do as follows.

- Position a signalman if there are areas at the rear of the machine where the visibility is not good.
- When working in dark places, turn on the working lamp and front lamps installed to the machine, and set up additional lighting in the work area if necessary.
- Stop operations if the visibility is poor, such as in mist, snow, rain, or dust.

**VENTILATION FOR ENCLOSED AREAS**

If it is necessary to start the engine within an enclosed area, or when handling fuel, flushing oil, or paint, open the doors and windows to ensure that adequate ventilation is provided to prevent gas poisoning.



A0055060

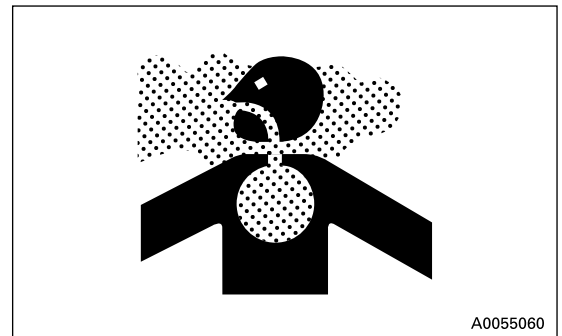
**CHECKING SIGNALMAN'S SIGNALS AND SIGNS**

- Set up signs to inform of road shoulders and soft ground. If the visibility is not good, position a signalman if necessary. Operators should pay careful attention to the signs and follow the instructions from the signalman.
- Only one signalman should give signals.
- Make sure that all workers understand the meaning of all signals and signs before starting work.

**BE CAREFUL ABOUT ASBESTOS DUST**

Asbestos dust in the air can cause lung cancer if it is inhaled. There is danger of inhaling asbestos when working on jobsites handling demolition work or work handling industrial waste. Always observe the following.

- Spray water to keep down the dust when cleaning. Do not use compressed air for cleaning.
- If there is danger that there may be asbestos dust in the air, always operate the machine from an upwind position. All workers should use an approved respirator.
- Do not allow other persons to approach during the operation.
- Always observe the rules and regulations for the work site and environmental standards.

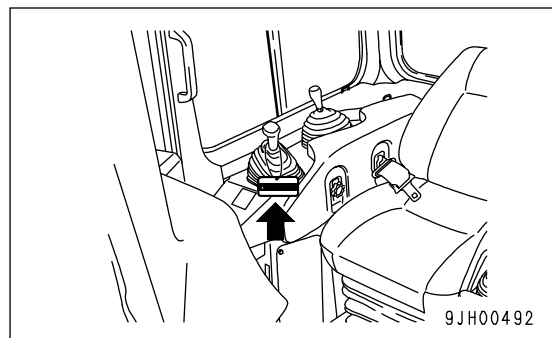
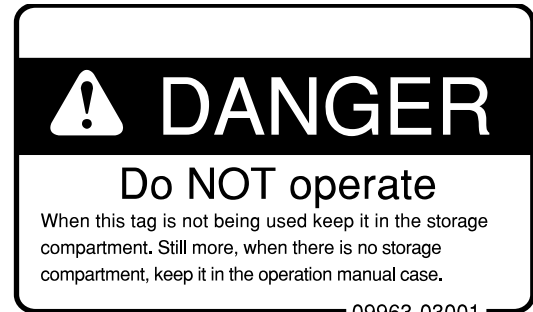


This machine does not use asbestos, but there is a danger that imitation parts may contain asbestos, so always use genuine Komatsu parts.

## 7. PRECAUTIONS FOR OPERATION

### BEFORE STARTING ENGINE

If there is a warning tag hanging from the work equipment control lever, do not start the engine or touch the levers .



### CHECKS BEFORE STARTING ENGINE

Carry out the following checks before starting the engine at the beginning of the day's work.

- Completely remove all flammable materials accumulated around the engine and battery, and remove any dirt from the windows, mirrors, handrails and steps.
- Remove all dirt from the surface of the lens of the front lamps and working lamps, and check that they light up correctly.
- Check the coolant level, fuel level, and oil level in engine oil pan, check for clogging of the air cleaner, and check for damage to the electric wiring.
- Adjust the operator's seat to a position where it is easy to carry out operations, and check that there is no damage or wear to the seat belt or mounting clamps.
- Check that the gauges work properly, check the angle of the lights and working lamps, and check that the control levers are all at the neutral position.
- When starting the engine, check that the parking lever and safety lock lever are at the LOCK position.
- Adjust the mirrors so that you can get a good rear-view from the operator's seat.
- For the details of adjustment, see "ADJUST MIRROR".
- Check that there are no persons or obstacles above, below, or in the area around the machine.

**ENSURING SAFETY AT THE JOBSITE**

- The person operating the radio control cannot see the other side of the machine, so always check beforehand that there is no danger before starting operation.
- When operating by radio control, the operating position of the operator is different from when operating from the operator's seat. Check beforehand that it is possible to move the machine safely or check on the spot that it is possible to operate safely before carrying out the operation.

**INSTALLATION, INSPECTION OF RADIO CONTROL BOX**

- Fit the chest protector securely.
- Be sure to wipe off any mud, oil, snow or anything else on the control levers and switches that may cause them to slip.  
The structure is not completely waterproof, so do not put the radio control box in water.

**PRECAUTIONS WHEN STARTING ENGINE**

- Before starting the engine, sound the horn to give a warning.
- Do not allow anyone other than the operator to come close to the machine or the operator.

**PRECAUTIONS WHEN USING RADIO CONTROL FOR TRAVEL**

- When the machine is being operated by radio control, there is no operator on the machine, and operation of the machine is carried out from a distance, so it is difficult to judge the speed accurately.
- In particular, when traveling at high speed, be extremely careful about the movement of the machine and the road surface in front of the machine.
- When the steering the machine with the engine running at high speed, operate the joystick slowly and be particularly careful not to make sharp turns.



# MEMO

# OPERATION

- This operation section gives the basic precautions.
- For details of the operation precautions for the overall machine, follow the Operation and Maintenance Manual for the standard machine.

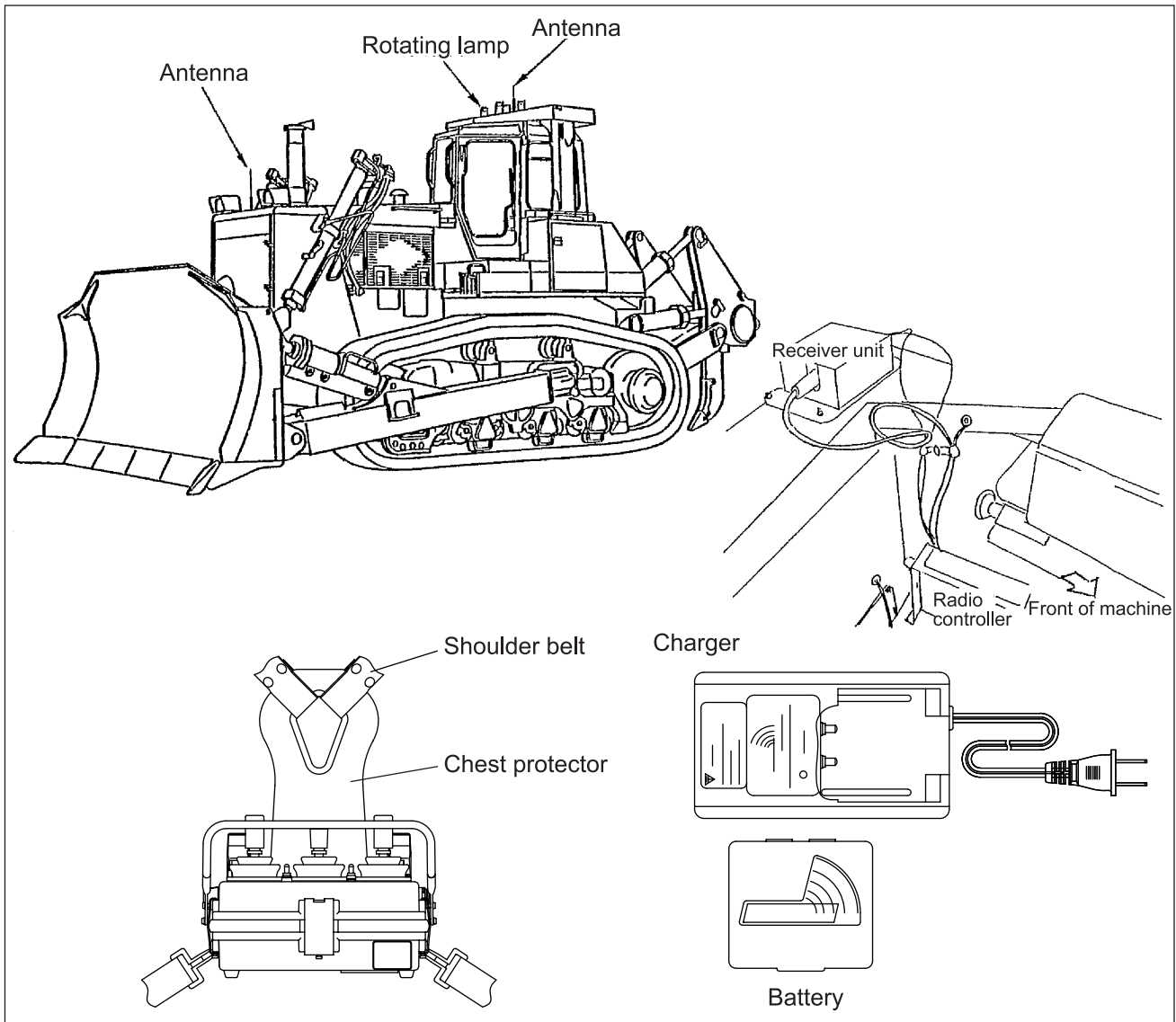
## **WARNING**

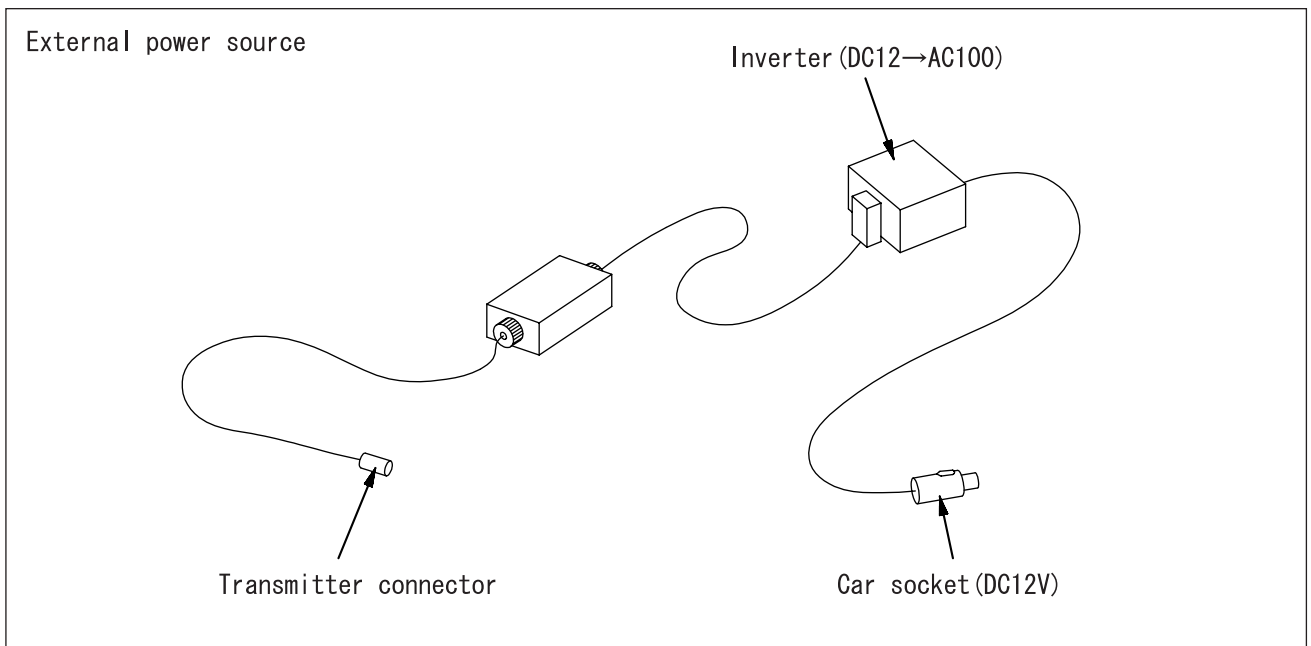
Please read and make sure that you understand the **SAFETY** section before reading this section.

---

# 8. GENERAL VIEW

## 8.1 GENERAL VIEW OF MACHINE





## 9. EXPLANATION OF COMPONENTS

The following is an explanation of the function, movement, and operation of the components needed for operation.

To carry out operations pleasantly and in safety, it is necessary to understand fully the following devices.

Transmitter, receiver unit, controller, radio control operation display explanation, charger, starting switch

The following uses the radio control operation to explain the order for operation when using the radio control to operate the machine.

The unit for order parts or replacement parts when placing orders or receiving service is by the component item unit in the component table (box or unit).

This product complies with PART 15 and PART 90 of the FCC regulations.

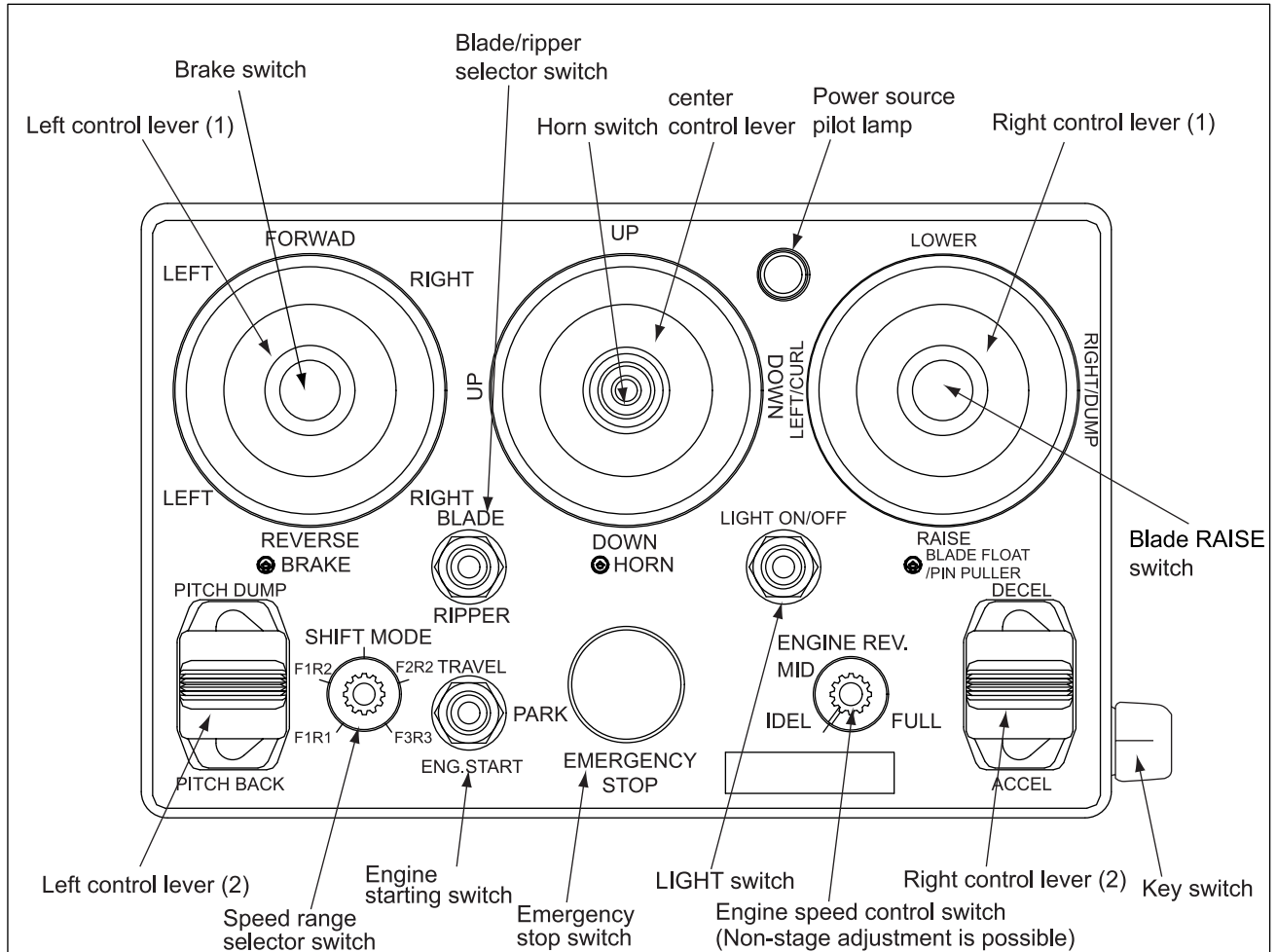
If there is any question about whether your product complies with the applicable standards and regulations of your country, please consult your Komatsu distributor.

### 9.1 TRANSMITTER (TX. UNIT)

**⚠ WARNING**

**Always check the operating pattern used on this machine before starting operations.**

This sends electric signals to the receiver unit (RX.UNIT) on the machine according to the movement of the switches and levers. The operating pattern is as follows.



### 9.1.1 CONTROL LEVERS

Proportional control is used for operation of the control levers, so it is possible to control the speed according to the amount the levers are operated. In addition, any combination of levers can be used at the same time.

#### Right control lever (1)

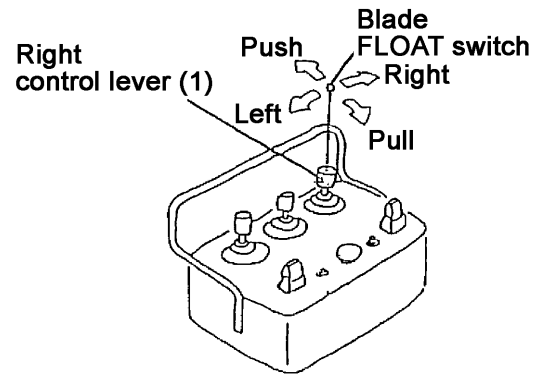
Direction of operation	Front / rear direction		Left / right direction		Push button
Right control lever (1)	Blade or ripper operation		Blade or ripper operation		Blade or ripper operation
	Push	Pull	Left	Right	※ ※2
	Blade LOWER / ripper DOWN	Blade RAISE / ripper UP	Left tilt / ripper tilt in	Right tilt / ripper tilt back	Blade FLOAT/pin-puller pull out

※ :Keep the push button pressed and operate fully to the blade LOWER position.

※2 :For details of the method of operating the pin-puller, "OPERATION METHOD FOR PIN-PULLER USING RADIO CONTROL(3-8 page)".

**REMARK**

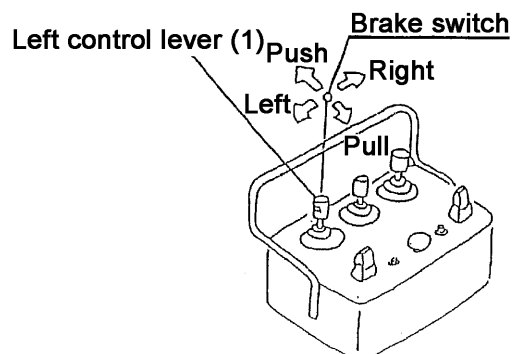
- Use the toggle switch on "SWITCHES(3-10 page)" to switch between the blade and ripper.
- When in the FLOAT condition, press the push button switch to cancel the FLOAT.
- If the blade lever is operated to the RAISE position from FLOAT, the FLOAT is canceled.



#### Left control lever (1)

Direction of operation	Front / rear direction		Left / right direction		Push button
Left control lever (1)	Travel operation		Steering operation		Brake operation
	Push	Pull	Left	Right	ON (push)
	Forward	Reverse	Left turn	Right turn	Brake

- When the push button is pressed, the brakes are applied, regardless of the position of the control levers.
- When the travel direction is set to neutral, the brakes are applied.



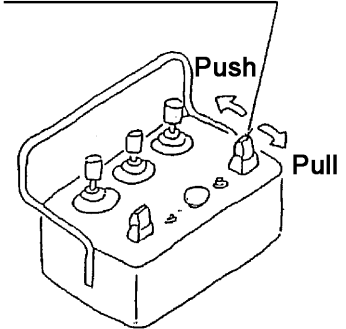
Right control lever (2)

Direction of operation	Front / rear direction	
Right control lever (2)	Push	Pull
	Deceleration	Acceleration

REMARK

Use this lever to temporarily raise or lower the speed set by the engine speed control switch described on "SWITCHES(3-10 page)".

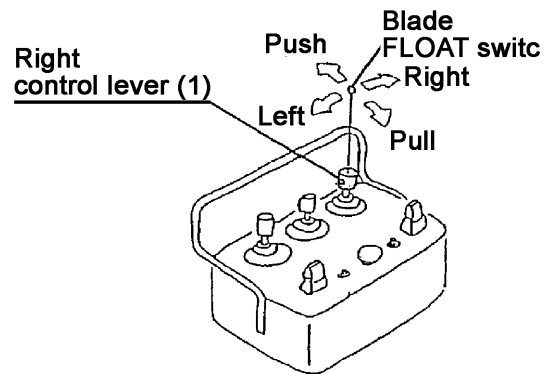
Right control lever (2)



9.1.2 OPERATION METHOD FOR BLADE, DUAL TILT, AND PITCH USING RADIO CONTROL

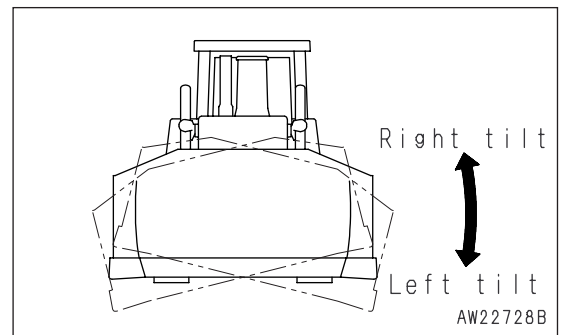
Switching between dual and single mode

1. Set the blade/ripper selector switch to the blade position.
2. Keep the blade FLOAT switch pressed, operate the lever fully to the left or right, and hold in position for approx. 2 seconds.
3. Each time the above operation in Step 2 is carried out, the mode is switched between dual mode and single mode.
4. When right control lever (1) is operated, the blade is tilted (dual tilt or single tilt).  
 Left tilt: Operate lever to left  
 Right tilt: Operate lever to right



REMARK

- When operating by radio control, it is possible to switch the mode regardless of the position of the dual tilt/single tilt selector switch on the blade lever.
- The mode when the control method is switched from on-board → radio control depends on the position of the dual tilt/single tilt selector switch on the blade lever.
- The mode when the control method is switched from radio control → on-board depends on the position of the dual tilt/single tilt selector switch on the blade lever.

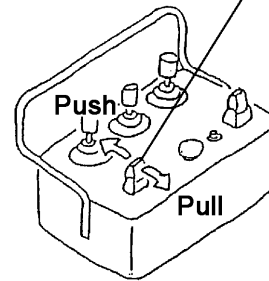




**Pitch operation**

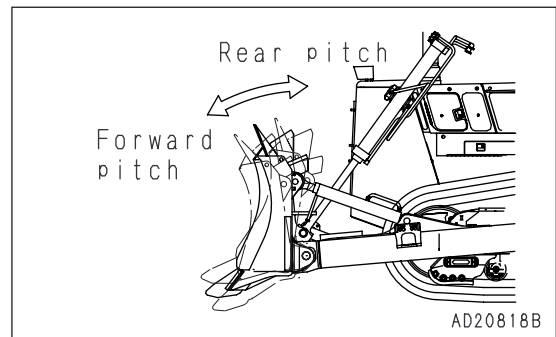
1. Push the blade/ripper selector switch towards the blade.
2. When left control lever (2) is operated, the blade is pitched.

**Right control lever (1)**



**REMARK**

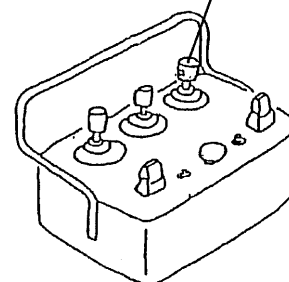
If the pitch and tilt operations (both in dual mode and single mode) are operated at the same time, priority is given to the pitch operation.



**9.1.3 OPERATION METHOD FOR PIN-PULLER USING RADIO CONTROL**

1. Set the engine starting switch to the PARKING position to apply the parking brake.
2. Operate the blade/ripper selector switch to the ripper position.
3. When the blade FLOAT switch is kept pressed, the pin-puller is pulled out.

**Blade FLOAT switch**



**REMARK**

If the parking brake is released when the pin-puller is pulled out, the pin-puller will return to the normal position. The ripper can be operated even when the parking brake is applied.

### 9.1.4 OPERATION METHOD FOR SSC MODE SELECTION USING RADIO CONTROL

#### ⚠ CAUTION

Check that the radio control can be operated (yellow rotating lamp is flashing).

#### Selecting dozing mode

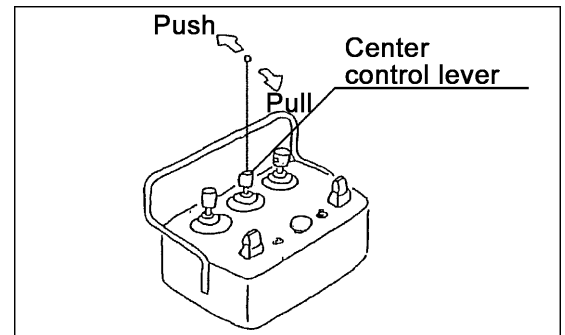
1. Each time the center control lever is pulled back fully, the mode is switched as follows.

Lock-up mode ON → lock-up mode OFF (normal) → economy mode 1 → economy mode 2

2. Each time the center control lever is pushed forward fully, the mode is switched as follows.

Economy mode 2 → economy mode 1 → lock-up mode OFF (normal) → lock-up mode ON

3. In the condition in Step 1 or Step 2, each time the horn button is pressed, the horn will sound and the reverse slow mode will be switched ON/OFF.



#### REMARK

- When carrying out the operation in Step 2, if the mode is switched lock-up mode OFF (normal) → lock-up mode ON, the reverse slow mode is automatically turned OFF.
- When each mode is switched, the horn sounds for 1 second and all the rotating lamps light up.
- For details of each mode, see the Operation and Maintenance Manual for the standard machine.

#### Selecting ripping mode

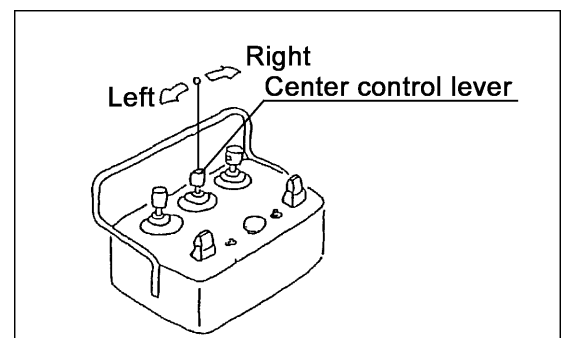
1. Each time the center control lever is operated fully to the left, the mode is switched as follows.

Mode 5 → mode 4 → mode 3 → mode 2 → mode 1 → mode OFF

2. Each time the center control lever is operated fully to the right, the mode is switched as follows.

Mode OFF → mode 1 → mode 2 → mode 3 → mode 4 → mode 5

3. In the condition in Step 1 or Step 2, each time the button at the top of the center control lever is pressed, the reverse slow mode will be switched ON/OFF.



#### REMARK

- When carrying out the operation in Step 2, if the mode is switched mode OFF → mode 1, the lock-up mode is automatically turned OFF.
- When each mode is switched, the horn sounds for 1 second and all the rotating lamps light up.
- For details of each mode, see the Operation and Maintenance Manual for the standard machine.

## 9.1.5 SWITCHES

### WARNING

When waiting to start work, set the switch to the PARKING position to apply the parking brake. Do not run the starting motor continuously for more than 20 seconds.

#### Engine starting switch

Keep this switch pushed down to start the engine. When the switch is moved to the TRAVEL position, the parking brake is turned OFF and the machine is made ready for travel. (The brake is applied.)

If the battery is low, the engine may not start even if the switch is kept pressed. In this case, use the manual operation (operate the key) to start the engine, and charge the battery.

#### Horn switch

Press the switch on top of the central lever to sound the horn.

#### Engine speed control switch

Turn this switch to adjust the engine speed.

#### Emergency stop switch

When this switch is pressed, the engine brake is applied, the engine stops, and all operations are stopped.

#### Key switch

When this switch is at the ON position, it becomes possible to output signals. When it is OFF, signals cannot be transmitted.

(When the key switch is OFF, it can be removed.)

#### Speed range selector switch

Turn this switch to select the speed range (1st, 2nd, or 3rd).

#### REMARK

Even if 2nd or 3rd are selected, the machine will start to move in 1st, and will shift up in turn.

#### Blade/ripper selector switch

Use this switch to select blade operations or ripper operations.

#### Light switch

Each time this switch is pressed, the lamps light up or go out.

#### REMARK

If the light switch on the dashboard is left ON, the lamps cannot be switched off by radio control. Turn the light switch on the dashboard OFF.

## 9.1.6 OTHERS

### **Cable connector**

This connector is used when using the cable (option) for operations.

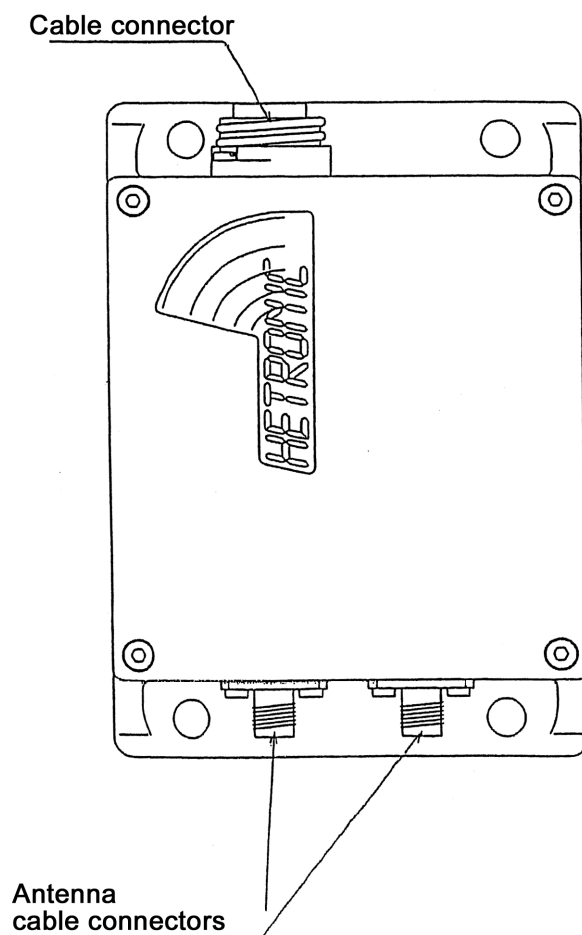
### **Power source lamp**

When the key switch is ON, the pilot lamp flashes.

### **External power source input connector**

## 9.2 RECEIVER UNIT (RX. UNIT)

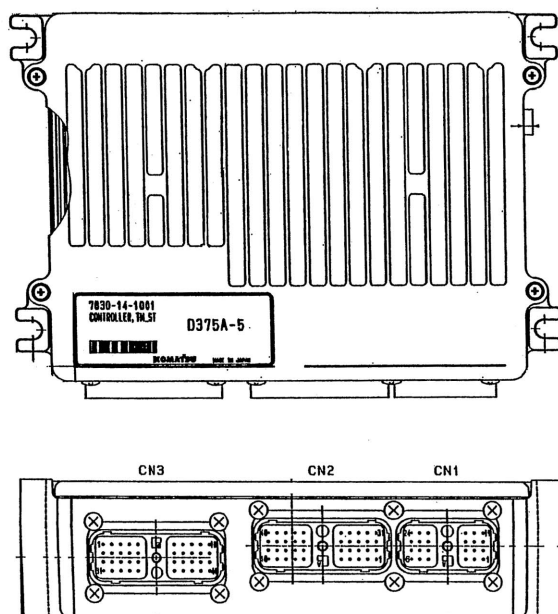
This checks the ID code of the electric signals (radio waves) sent from the TX. UNIT (transmitter) and carries out electric control and hydraulic control of the machine. It consists of the following components.



## 9.3 CONTROLLERS

This machine is equipped with three controllers.

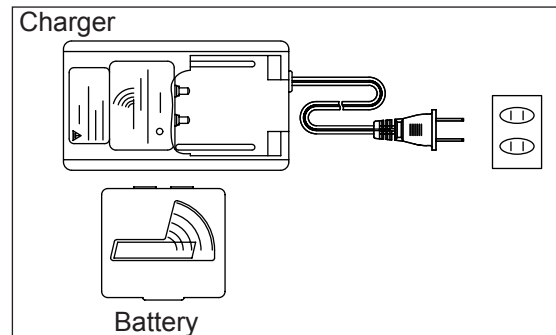
The three controllers are all the same in terms of hardware and software, but they act to control the transmission, steering, and work equipment according to the wiring harness used to connect them.



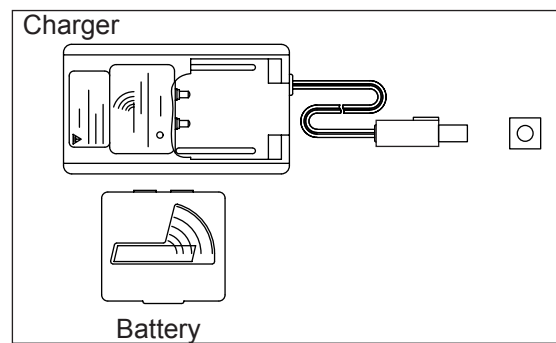
## 9.4 CHARGER

The charger is used to charge the battery for the power supply.

- When charging with AC 100V



- When charging with DC 24V (cigarette lighter on bulldozer dashboard)



The charger is equipped with an overcharge prevention function that automatically switches off the charger when the charging is completed.

### Charger power supply lamp

This lights up when power is being supplied.

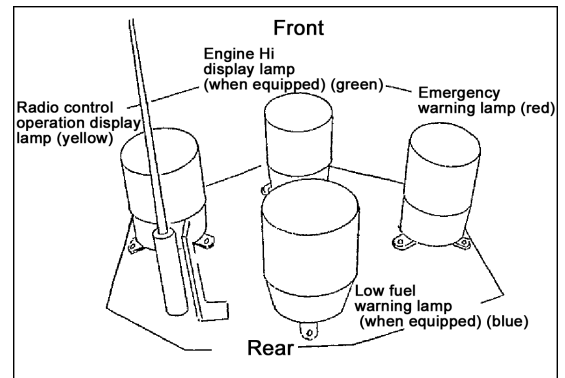
### Charger lamp

This lamp lights up during charging, and flashes when charging is completed.

## 9.5 ROTATING LAMPS

The operating condition of the machine is displayed by rotating lamps on top of ROPS.

(Standard installation: x 2; option: x 2)



### 9.5.1 STANDARD INSTALLATION

#### Radio control operation display lamp(Yellow)

When it is possible to operate the machine by radio control, the yellow operation display lamp lights up.

When there is reception error, emergency stop, or tilting of the transmitter, the lamp goes out, so check each operating condition.

If operation by radio control is possible, but the radio control operation display lamp is out, the bulb in the display lamp is probably blown, so check the lamp.

#### Emergency warning lamp(Red)

- Abnormal drop in engine oil pressure
- Abnormal rise in engine water temperature
- Abnormal drop in torque converter oil pressure

If any of the above problems occur, the alarm buzzer of the base machine will sound, and the red warning lamp will light up at the same time.

See separate page for a list of warnings  
(Warning for base machine, Warning related to radio control)

### 9.5.2 OPTION

#### Low fuel warning lamp(Blue)

If the fuel level drops (remaining fuel: less than 150 liters), the blue low fuel warning lamp lights up.  
Reference: Tank capacity 1050 liters

#### Engine high-speed rotating lamp(Green)

The green engine high-speed rotating lamp lights up when the dial has been used to set the engine speed to Hi.

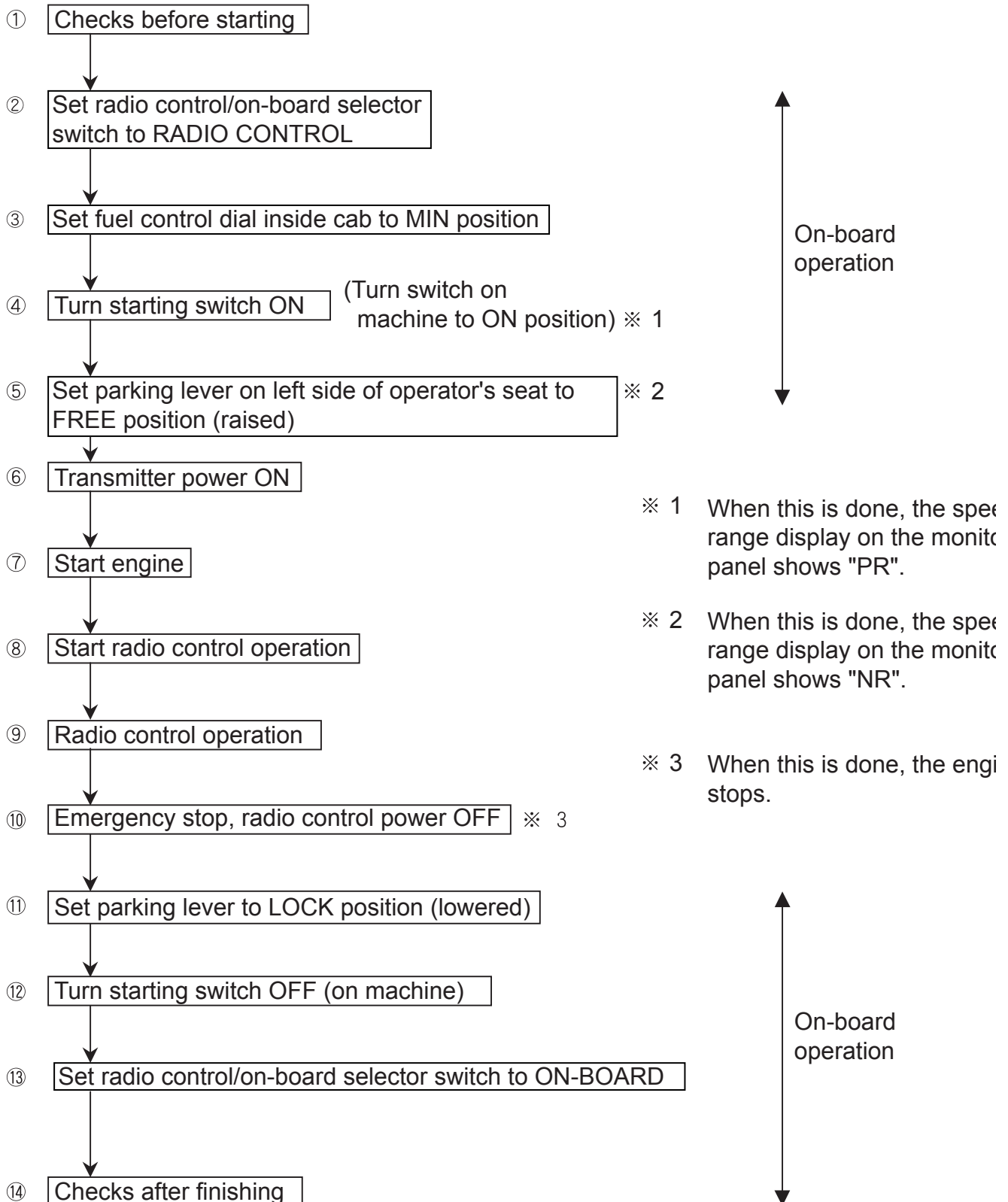
#### REMARK

It does not light up when the deceleration/acceleration lever is operated.

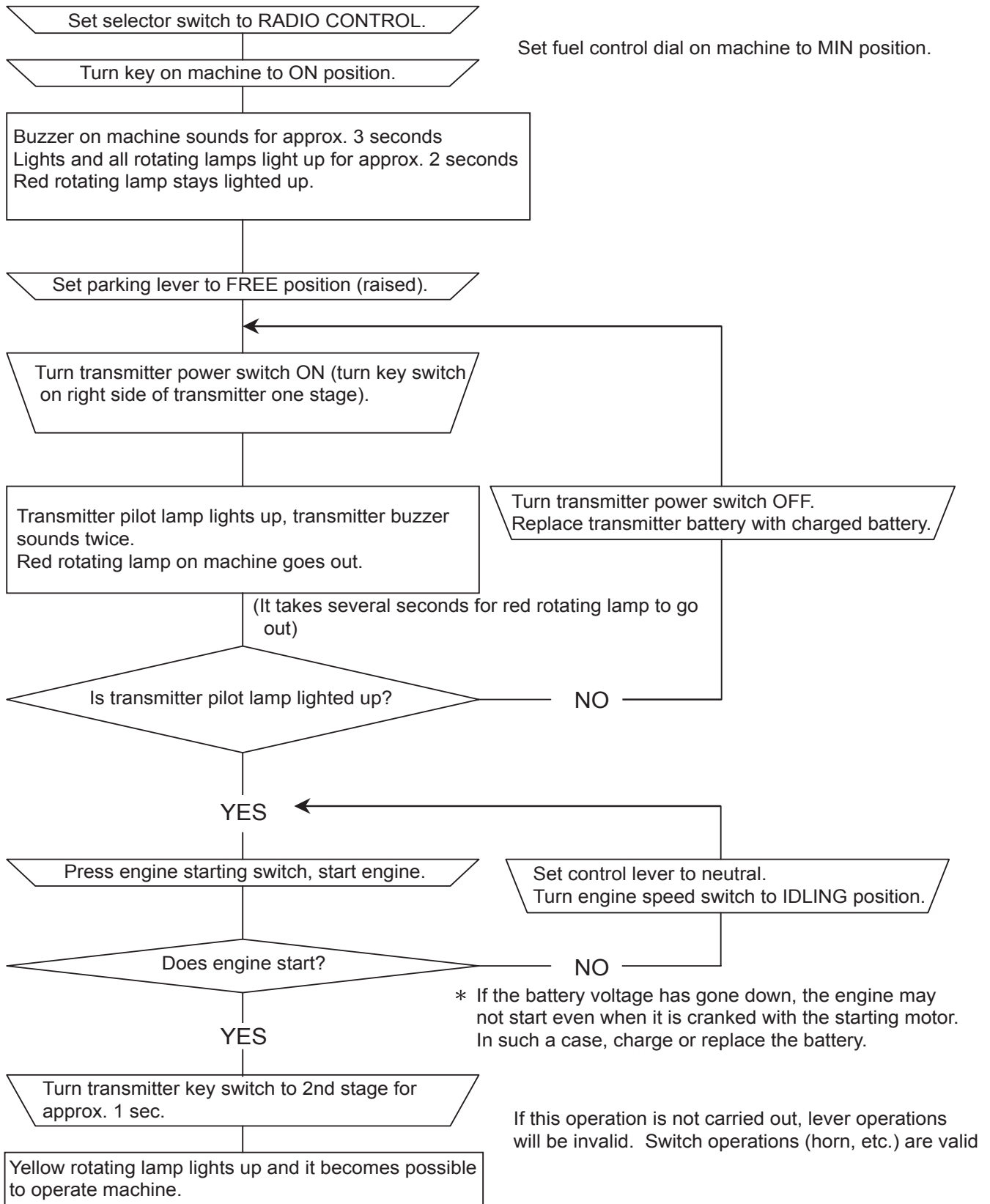


# 10. HANDLING RADIO CONTROL

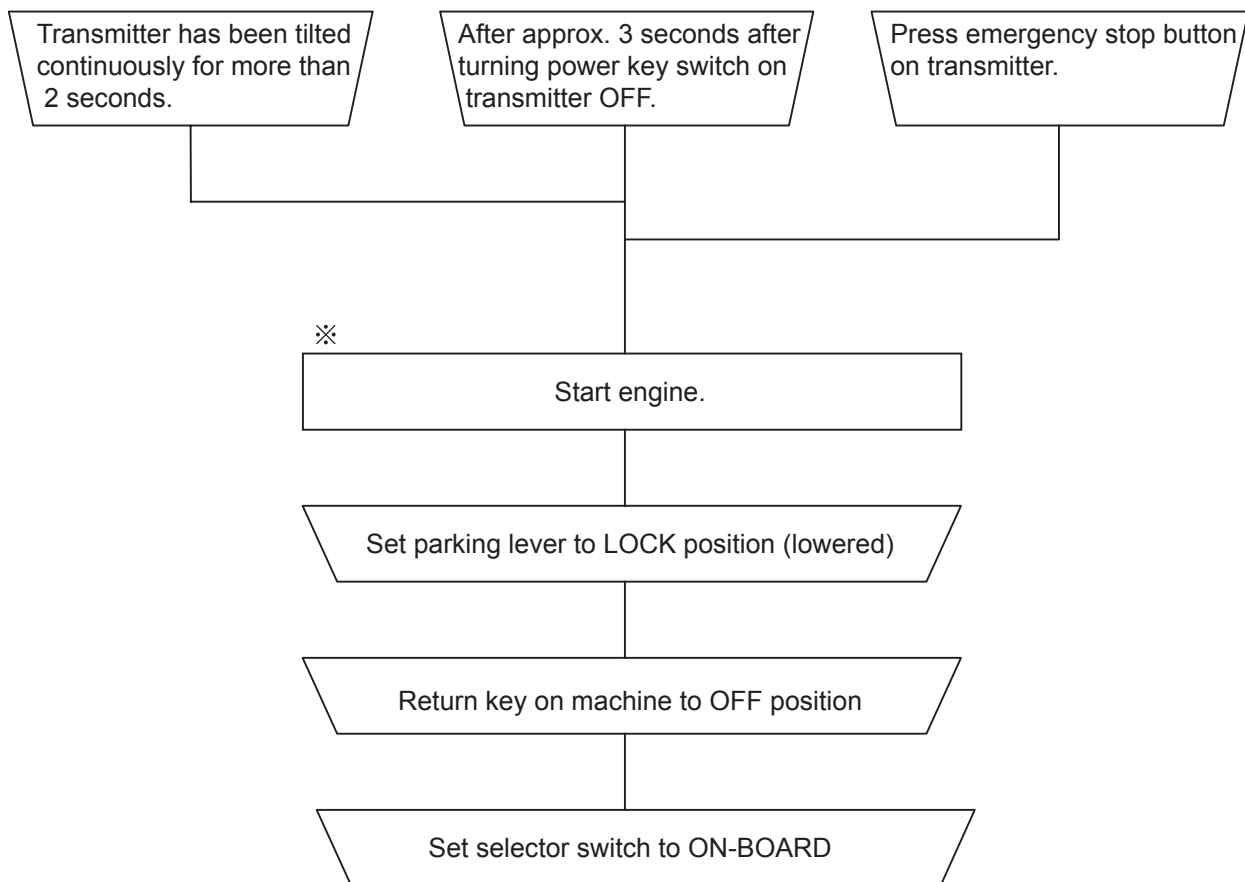
To ensure that the radio control operations can be carried out safely, they must be carried out in the following order. If this order is not followed, the radio control cannot be operated, so be sure that you fully understand the correct order before operating.



# 10.1 FLOW CHART FOR STARTING, OPERATING USING RADIO CONTROL



## 10.2 FLOW CHART FOR STOPPING OPERATION USING RADIO CONTROL



- ※ If the engine does not stop (this may happen if an error has occurred and the red rotating lamp is lighted up), stop the machine at a safe place, use the radio control operation to apply the parking brake, and check that the condition is safe. Then get on the machine, set the parking lever to the LOCK position, turn the key to the OFF position, and stop the engine.

## 10.3 DETAILS OF PROCEDURE FOR RADIO CONTROL OPERATION

### 10.3.1 CHECKS BEFORE STARTING

Before operating the radio control, carry out the checks before starting for the base machine.

For details of the checks before starting for the base machine, see the separate Operation and Maintenance Manual for the standard machine.

Check the following items on the radio control unit.

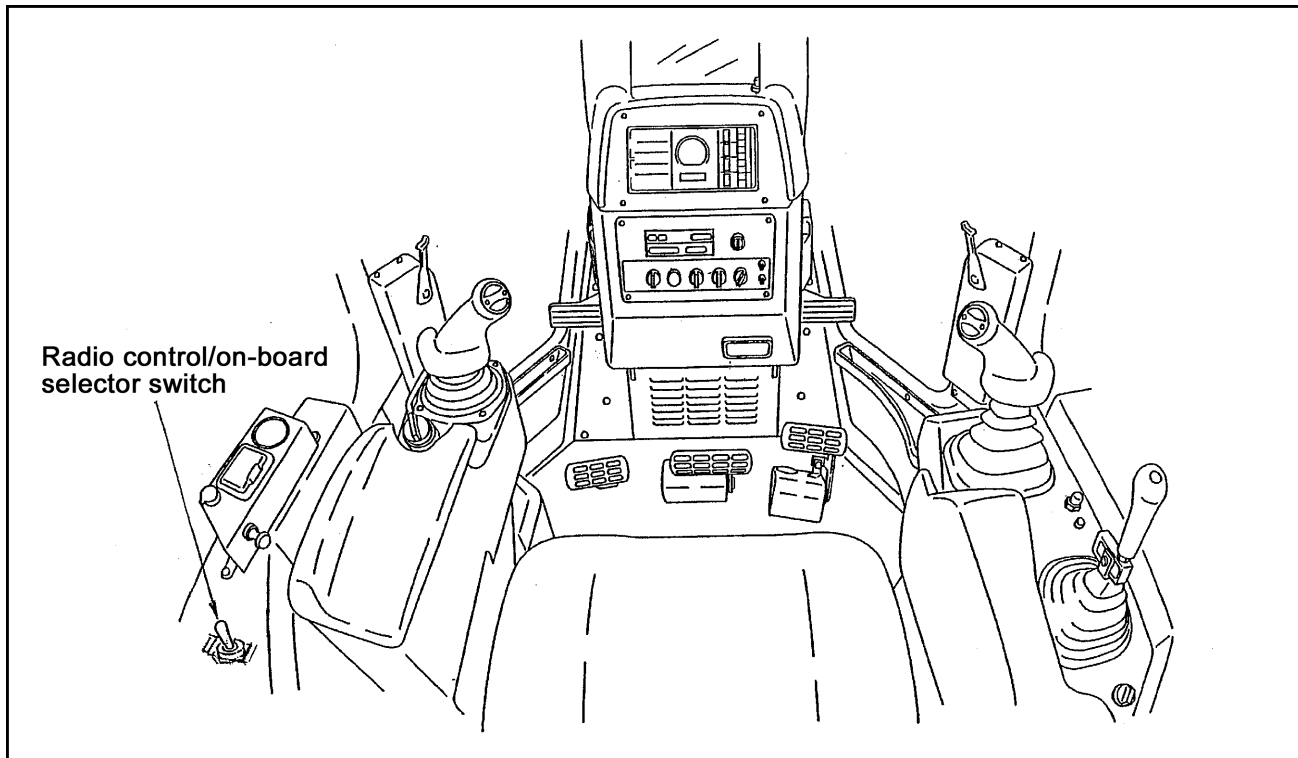
- Are all the connectors for the receiver unit and controllers securely installed?
- Are there any loose bolts?
- Are the reception antenna, mounting bracket, and connectors securely installed?
- Is there any leakage of oil from the connections of the hoses and work equipment PPC unit?
- Do the transmitter power lamps work (flash) properly? (Is the battery is fully charged?)
- Can the horn can be sounded using the radio control operation?
- Are the connectors and wiring harnesses related to the external power supply system securely installed?
- Are there any abnormalities in the connectors and wiring harnesses related to the external power supply system (wiring insulation, etc.)?

**⚠ WARNING**

If the following procedures are not followed, the machine may suddenly start on slopes.

**NOTICE**

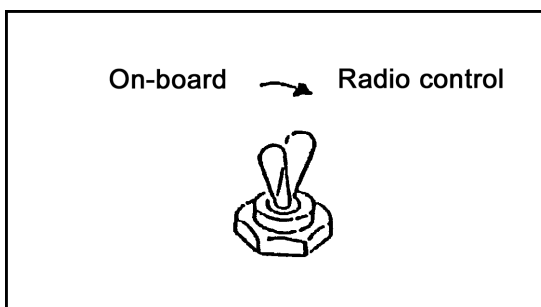
In cold weather, preheating must be carried out before the engine is started. This operation cannot be carried out by radio control, so carry out the preheating manually.



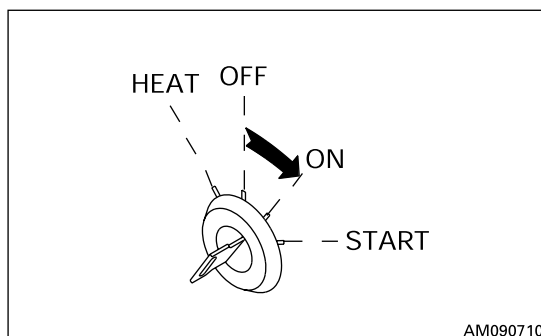
1. Set the radio control/on-board selector switch to the RADIO CONTROL position.

Radio control operation: Operate switch to inside of machine

On-board operation: Operate switch to outside of machine



2. Set the fuel control dial to the MIN position.  
Set the travel lever to the N position.
3. Turn the starting switch to the ON position.  
If any error is displayed, check the cause.

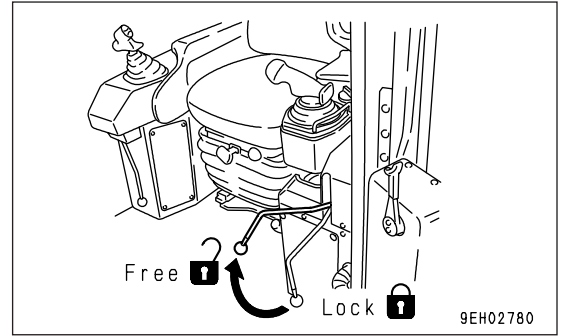


AM090710

- 4. Set the parking lever to the FREE position (raised).

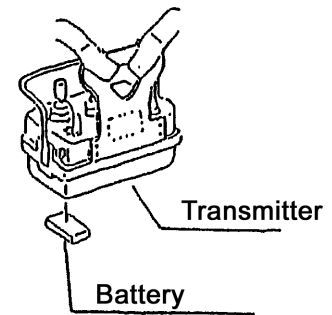
**NOTICE**

When the above procedure is followed, electricity is supplied to the radio controller, and when the radio control is operated, the parking brake is applied.



- 5. Checks before starting for transmitter, receiver unit, and controller  
When operating the radio control, even if radio control operation is a started with all the switches ON, the receiver may take this as a reception error and it may not be possible to operate the radio control. For this reason, check that the condition is as follows before starting operations.

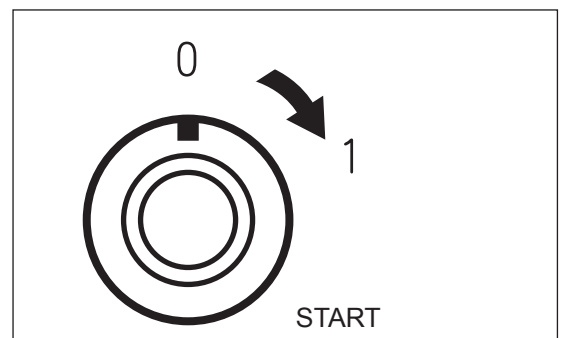
- Install a charged battery to the transmitter.



- Neutral check for transmitter

Engine speed control switch`	LOW position
Control levers	Neutral (levers at central position)
Emergency stop switch	Not pressed
Push button switch on control lever	Not pressed
Set transmitter horizontal	Transmitter must not be tilted

- 6. Turn the transmitter key switch to position 1.  
This turns the power on.  
All the machine lights and rotating lamps light up for approx. 2 seconds, then go out.



- Keep the engine starting switch on the transmitter pressed for at least 2 seconds. The engine will start.

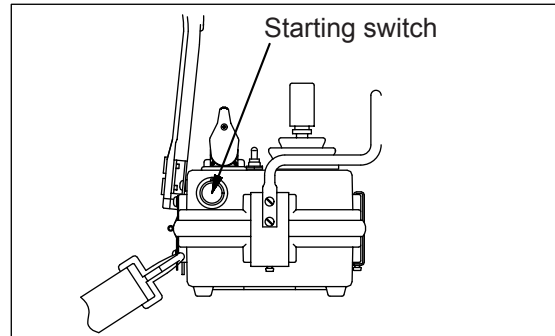
**NOTICE**

**Do not run the starting motor continuously for more than 20 seconds.**

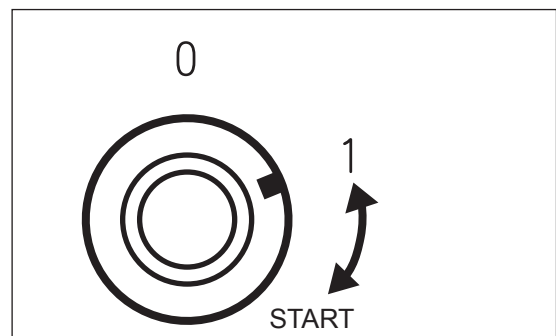
**If the engine does not start, wait for at least 2 minutes, then try again.**

**REMARK**

**If the battery is low, the engine may not start even if the starting motor turns. In this case, charge or replace the battery.**



- Turn the transmitter key switch to the START position. (Hold for approx. 1 sec)  
It becomes possible to operate the radio control and the radio control operation display lamp (yellow rotating lamp) lights up.  
Between positions 1 and START, the switch is a momentary switch, so it will return to position 1 when released.  
If this operation is not carried out, it will be impossible to remove the machine.

**REMARK**

**It is possible to operate the horn and lights even before this operation.**

- During radio control operation.  
If any of the following conditions appear during radio control operation, follow the instructions.

Reception error: Move to a position where reception is possible.

**REMARK**

**Depending on the jobsite, the antenna may be behind the work equipment. This will obstruct the radio waves and cause poor reception.**

**If this happens, the yellow rotating lamp goes out and the red rotating lamp lights up.**

Red emergency warning lamp lights up: Stop operations, check the appropriate location on the base machine monitor, then carry out inspection and maintenance.

If this problem occurs, check the situation and turn the transmitter key switch OFF or press the emergency stop switch to stop the engine completely before approaching the base machine.

(Do this because there is a serious danger of the machine moving unexpectedly.)

If there is a failure in the engine stop relay circuit or other related location, it may be impossible to stop the engine with the radio control.

In this case, check carefully that the situation is safe, then mount the machine and turn the key switch OFF to stop the engine.

If the base machine or operator are in danger, do as follows.

### Emergency stop

When this switch is pressed, the engine stops and all output matching the operation of the levers is also stopped.

(The hydraulic pressure of the valve unit is blocked, and all operations, including the horn, become ineffective.)

The parking brake is applied.

To start the engine again, pull the emergency stop switch, turn all the transmitter switches OFF, set the engine speed to idling, and return all levers to neutral.

Check that the situation is safe, then start the engine.

### Key switch OFF

The power supply for the transmitter is turned OFF, and the engine stops after approx. 3 seconds.

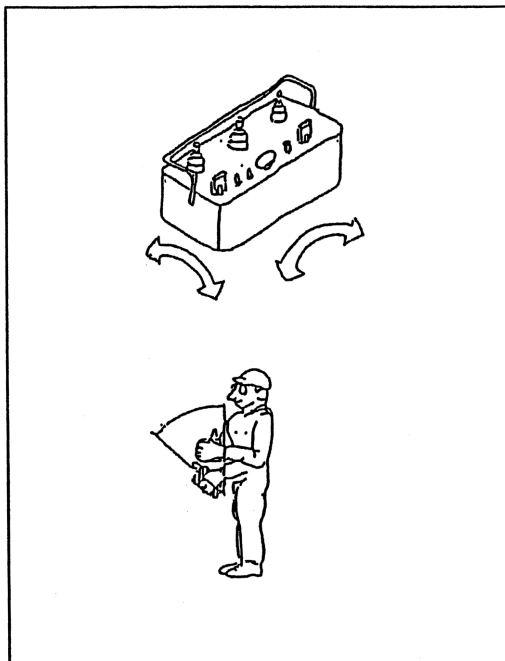
Item	Engine	All valves
Emergency stop	Stops	Stops
Transmitter power OFF	Stops	Stops
Tilt stop	Stops	Stops
Reception error	Stops	Stops
Lack of battery capacity	Stops	Stops



### 10.3.2 TILT ANGLE

**NOTICE**

During radio control operations, do not operate with the transmitter tilted more than necessary (more than 45°).

**Tilt detection**

A tilt detection switch is built into the transmitter. If the radio control transmitter is tilted more than 45° in any direction, the tilt detection switch is actuated and judges that the transmitter is tilted.

If the tilt detection switch remains actuated for more than two seconds, the transmitter is set to the emergency stop condition and the engine stops.

# 11. PRECAUTIONS WHEN OPERATING RADIO CONTROL

- The person operating the radio control cannot see the other side of the machine, so always check that operation is safe.
- To carry out operations by remote control efficiently, check beforehand that you are standing in a position where it is easy to see the overall operation (in particular the tip of the work equipment).
- When carrying out operations facing the base machine, the direction of steering is the opposite, so check the direction carefully.
- The feeling when operating the machine with remote control is different from the feeling when operating from the operator's seat. It is particularly difficult to judge the travel speed accurately. In particular, when traveling at high speed, be extremely careful about the movement of the machine and the road surface in front of the machine.
- When steering with the engine running at high speed, operate the control levers slowly and avoid sharp turns. Operation is carried out from a distance, so there are places which are difficult to see, and this creates a dangerous situation.
- When operating the travel and the work equipment simultaneously, various levers are operated at the same time, so operate extremely carefully.
- In addition to the above, when carrying out radio control operation, follow the same precautions as when operating from the operator's seat (see the Operation and Maintenance Manual for the standard machine).

## 12. OPERATION USING RADIO CONTROL

The following explains the operation of the machine using the radio control from the point where the machine starts to move to the point where it stops.

### 12.1 MOVING OFF

#### WARNING

- When starting the machine off, check that the surrounding area is safe, then give a signal before moving the machine. If necessary, sound the horn.
- Traveling over rough ground surfaces in 3rd speed brings excessive load on the machine, so use 3rd speed only when traveling on flat surfaces.

#### CAUTION

- When switching between forward and reverse, to ensure safety and to reduce the shock, stop the machine first, then change the direction of travel.
- If the engine speed is set to Hi, do not operate the steering levers suddenly. The machine will start suddenly.

1. Set in the speed range switch to the desired position.  
F1/R2 ⇔ F1/R2 ⇔ F2/R2 ⇔ F3/R3

#### REMARK

Even if 2nd or 3rd are selected, the machine will start to move in 1st, and will shift up in turn.

2. Turn the engine speed control switch to the desired position.
3. Set the engine starting switch to the TRAVEL position and release the parking brake.
4. Move left control lever (1) to the front (FORWARD), or move it back (REVERSE), and move the machine off.
5. If necessary, turn the speed range switch to shift the speed range.

## 12.2 STEERING (CHANGING DIRECTION OF TRAVEL)

### WARNING

Avoid making sudden changes in the direction of travel. In particular, it is dangerous when traveling at high speed, as it is difficult to control the machine.

### CAUTION

When carrying out steering facing the machine, the direction of steering is the opposite, so check the direction carefully.

1. When steering the machine, operate left control lever (1) in the direction that it is desired to turn.

## 12.3 WORK EQUIPMENT (BLADE RAISE/LOWER/FLOAT, TILT LEFT/RIGHT, RIPPER UP/DOWN, RIPPER TILT IN/BACK)

### WARNING











When operating the work equipment, avoid starting or stopping suddenly. Operating the work equipment suddenly makes the machine unstable and is extremely dangerous.

1. Operate right control lever (1) to carry out operations.

## 12.4 ACCELERATION/DECELERATION

1. Operate with right control lever (2).

Only when right control lever (2) is being operated, it is possible to change the engine speed temporarily from the speed set by the engine speed control switch.

Direction of lever operation Engine speed control switch		Acceleration (pull)		Deceleration (push)	
		Small	Large	Small	Large
Amount Low   High	Medium	High	No change (low)	No change (low)	
	  No change (high)	  No change (high)	  Medium	  Low	

## 12.5 STOPPING (BRAKING)

### WARNING

- **Avoid stopping suddenly. Allow ample room when stopping.**
  - **Avoid parking the machine on slopes.**  
**If it is necessary to park the machine on a slope, apply the parking brake, put blocks under the tracks, and dig the work equipment into the ground to prevent the machine from moving.**
- 
1. First, use the engine speed control switch or right control lever (2) to reduce the engine speed, then use the braking force of the engine.
  2. Return left control lever (1) to the neutral position.
  3. Press the push button switch on top of left control lever (1) to apply the brake.
  4. Set the starting switch to the PARKING position to apply the parking brake.

## 13. PRECAUTIONS WHEN HANDLING RADIO CONTROL

### 13.1 TRANSMITTER

- The structure is not fully waterproof, so do not put it in water or wash it in water. In addition, store it in a place where there is low humidity and little change in temperature.
- The case is made of ABS resin, so it may become deformed if it is left in direct sunlight for a long time or wiped with thinner or other solvent.
- Put on the shoulder belt and chest protector provided with the equipment, and be careful not to drop it or subject it to any excessive impact.
- Always keep the terminals and connectors of the battery clean and be careful not to let any rust form.

### 13.2 RECEIVER UNIT, CONTROLLER

The structure is not waterproof or bacteria proof, so close the storage box lid to prevent it from being immersed in rainwater.

### 13.3 CHARGER FOR AC, DC

- The charger structure is not waterproof or bacteria proof, so use it in a place where no water can get on it.
- Do not subject it to vibration or impact.
- Always keep the terminals and connectors of the battery clean and be careful not to let any rust form. Excessive dirt may cause defective contact.
- The charger is equipped with a circuit that detects any drop in the external voltage and stops the charging.
- The charging cut voltage is 22.5 V and the restoration voltage is 23.5 V. If the charging is cut, the timer is reset. If the power switch is turned OFF during charging, the timer is also reset. In such cases, be careful not to overcharge when starting
- the charging again.
- The applicable temperature when charging the battery is 0°C to 45°C. Always keep the temperature within this range when charging.
- (At temperatures below 0°C, the consumption rate for the gas generated during charging is reduced, so the internal pressure rises, and this causes deterioration of the battery performance. At temperatures above 45°C, the charging efficiency is reduced.)
- Store the battery within a temperature range from -20°C to 50°C. High temperatures will cause self-discharge of the battery.
- Charging is more difficult after the battery has been stored for a long time and the capacity is reduced, but after it is repeatedly charged 2 - 3 times, the condition will return to normal.
- When the battery is stored, be careful not to short circuit the terminals with coins or other metal objects.

## 13.4 PRECAUTIONS WHEN OPERATING FROM OPERATOR'S SEAT

This machine is a radio control specification machine, and some parts are different from the standard machine. Be careful of the following points when operating from the operator's seat.

- Do not place objects around the radio control/on-board selector switch.  
If any object touches the switch and switches to radio control when the machine is being operated from the operator's seat, there is danger that the engine will stop and the brake will be applied suddenly.

## 14. CHECKS AROUND MACHINE

To ensure the safety of the operator and to maintain the performance of the machine, carry out checks around the machine before starting the engine. Look around and under the machine and check for loose bolts or nuts, accumulated dust, and leakage of oil, fuel, or coolant, and check the condition of the work equipment and hydraulic systems together with the items for the base machine.

### 14.1 HYDRAULIC UNIT

Check for leakage of oil.

### 14.2 RECEIVER UNIT, CONTROLLER

Check that there are no loose or missing mounting bolts or connectors, and no disconnected cables.

### 14.3 ANTENNA

Check that the antenna is securely installed and that there are no disconnected cables.

### 14.4 ROTATING LAMPS

Check that there are no blown bulbs.



## 15. IF ANY FAILURE IS SUSPECTED

### 15.1 RADIO CONTROL OPERATION

Problem	Probable cause	Remedy
Transmitter pilot lamp does not flash	<ul style="list-style-type: none"> <li>● Dead battery</li> </ul>	<ul style="list-style-type: none"> <li>● Install charged battery</li> </ul>
Engine does not start	<ul style="list-style-type: none"> <li>● Transmitter key switch is not turned</li> <li>● Emergency stop switch has not been canceled</li> <li>● Parking lever is not released (raised)</li> <li>● Drop in battery voltage</li> </ul>	<ul style="list-style-type: none"> <li>● Turn to position 1</li> <li>● Pull switch to cancel</li> <li>● Release lever (raise)</li> <li>● Charge or replace battery</li> </ul>
Work equipment does not move, machine does not travel	<ul style="list-style-type: none"> <li>● Transmitter key switch not turned to 2nd stage</li> </ul>	<ul style="list-style-type: none"> <li>● Turn to START position (hold in position for approx. 1 sec.)</li> </ul>
Engine suddenly stopped	<ul style="list-style-type: none"> <li>● Engine has run out of fuel</li> <li>● Dead battery</li> <li>● Reception error</li> <li>● Radio control/on-board switch has changed to ON-BOARD</li> <li>● Disconnected, damaged electrical relay</li> </ul>	<ul style="list-style-type: none"> <li>● Add fuel</li> <li>● Install charged battery</li> <li>● Check location of interference</li> <li>● Check radio wave distance</li> <li>● Check around selector switch</li> <li>● Install, replace relay</li> </ul>

### 15.2 ON-BOARD OPERATION (ONLY PROBLEMS RELATED TO RADIO CONTROL)

Problem	Probable cause	Remedy
Engine suddenly stopped	<ul style="list-style-type: none"> <li>● Radio control/on-board switch has changed to ON-BOARD</li> </ul>	<ul style="list-style-type: none"> <li>● Check around selector switch</li> </ul>

### 15.3 REPORTING FAILURE

If any failure occurs on the basic machine or radio control unit, please inform the machine serial No., engine serial No., and the service meter reading.

- The machine serial No. and engine serial No. are given on the service warranty and nameplate.
- See the explanation of the components for details of the service meter.



**D375A-5 BULLDOZER (RADIO CONTROL SPECIAL SMALL ELECTRIC POWER SPECIFICATION)**

Form No. SEAM048900

©2002 **KOMATSU**  
All Rights Reserved  
Printed in Japan 09-02

---