TEN00705-04

# Operation & Maintenance Manual

WHEEL LOADER **WA470-8**

SERIAL NUMBERS 100010 and up

**WARNING**

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept near the machine for reference and periodically reviewed by all personnel who will come into contact with it.

**NOTICE**

Komatsu has Operation & Maintenance Manuals written in some other languages. If a foreign language manual is necessary, contact your local distributor for availability.

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## PRECAUTIONS FOR TRANSPORTATION

When the machine is transported on a trailer, serious personal injury or death may result because of the accident during transportation. Always observe the following.

- Always check the machine dimensions carefully. Depending on the work equipment installed, the machine weight, transportation height, and overall length differ.
- Check beforehand that all bridges and other structures on the transportation route are strong enough to withstand the combined weight of the transporter and the machine being transported.
- This machine needs to be divided into components for transportation depending on the regulation. When transporting the machine, consult your Komatsu distributor.
- Lock the frame with the frame lock bar to prevent the machine from articulating.
- Fit chains to the front frame and the rear frame to hold the machine securely in position.
- For details of the transportation procedure, see "TRANSPORTATION (3-258)".

## PRECAUTIONS WHEN LOADING AND UNLOADING

If handling is improper when loading or unloading the machine, it is dangerous that the machine may tip over or fall. It requires particular attention. Always observe the following.

- Perform loading and unloading on a firm, level ground only. Avoid road edge or place near the cliff.
- Always use ramps of adequate strength. Be sure that the ramps are wide, long, and thick enough to provide a safe loading slope. Take suitable steps to prevent the ramps from moving out of position or coming off.

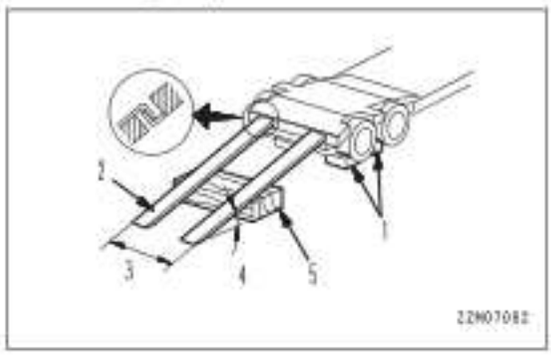
  (1) Chocks

  (2) Ramp

  (3) Width of ramps: Same width as tires

  (4) Angle of ramp: Max. 15 °

  (5) Block



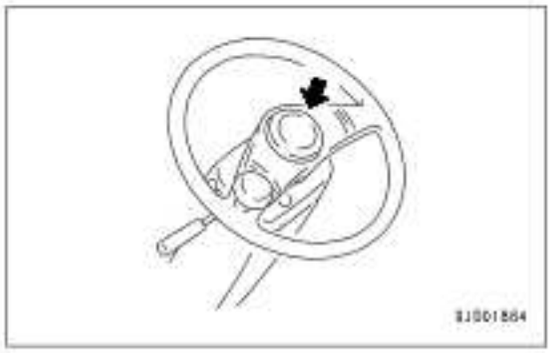

- Be sure the ramp surface and the platform of trailer are clean and free of grease, oil, ice, water and other loose materials. If any, remove them. Remove dirt around the undercarriage of the machine. On a rainy day, in particular, be extremely careful since the ramp surface is slippery.
- Run the engine at low idle and drive the machine slowly at low speed.
- Never correct your steering on the ramps. If necessary, drive off the ramps onto the ground, correct the direction, then enter the ramps again.
- When loading or unloading to an embankment or platform, make sure that it has suitable width, strength, and grade.
- For machines equipped with a cab, always lock the door after loading the machine. To prevent the door from opening during transportation.
  For detail, see "TRANSPORTATION (3-258)".
- When it is necessary to remove handrails and steps, take care not to lose removed handrails and steps. Install the removed handrails and steps securely.



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## HORN SWITCH

If you press the horn switch, the horn sounds.





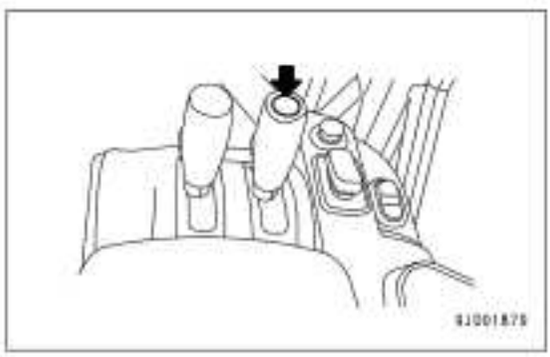
## KICKDOWN SWITCH

The kickdown switch is located at the top of the boom control lever.

In the manual shift mode, each time the kickdown switch is pressed while the machine is traveling in forward 2nd (F2) or higher gear speed, the transmission is downshiftted by one gear speed.

Use this switch to increase the rim pull during scooping.

While the shift range is in forward 1st (F1) in E mode, the working mode can be changed to P mode by pressing the kickdown switch.



Use this switch to increase the rim pull further during scooping or for scrape-up work.

In E mode

2nd E mode → 1st E mode → 1st P mode

In P mode

2nd P mode → 1st P mode

In the auto-shift mode, if the travel speed is 12 km/h {7.5 MPH} or slower, the kickdown switch operates and the gear speed can be shifted down to 1st from any gear speed of the forward or reverse travel.

This function facilitates the load-and-carry operation.

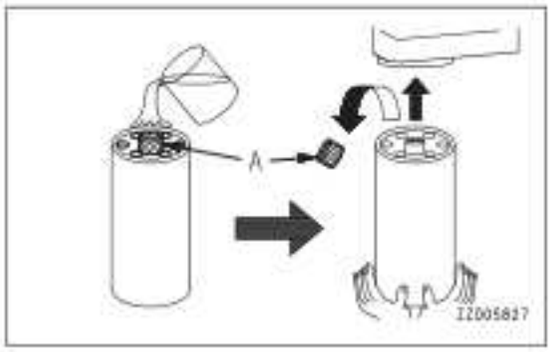
When the travel speed is higher than 12 km/h {7.5 MPH}, the gear speed is shifted down by one gear speed each time the kickdown switch is pressed in the order F4, F3, and F2.



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7. Clean the filter holder and apply thin film of oil to the packing surface.

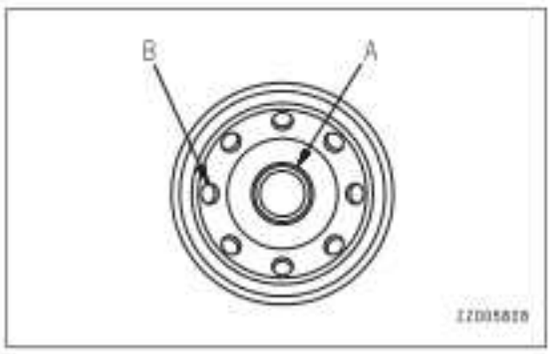
   Remove filter cartridge cap (A) and install to the filter holder.




8. Clean the filter head, fill the new filter cartridge with clean fuel, thinly apply oil to the packing surface, then install it to the filter head.

   **NOTICE**

   - **When filling the filter cartridge with fuel, do not remove cap (A) at the center. Always fill with fuel from small holes (B) (8 places) on the dirty side.**
   - **After filling with fuel, remove cap (A) and install the fuel filter.**
   - **Always fill with clean fuel. Be careful not to let any dirt or dust get into the fuel. In particular, center portion is the clean side, so do not remove cap (A) when filling with fuel. Be careful not to let dirt or dust get into the center portion on the clean side.**




9. When installing the cartridge, tighten it until the packing surface contacts the sealing surface of the filter head, then tighten it 1/2 to 3/4 turn.

   **REMARK**

   If the filter cartridge is fastened too much, the packing will be damaged and this leads to leakage of fuel. If the filter cartridge is too loose, fuel will also leak from the packing. Therefore, be sure to observe the tightening angle.
   When tightening with a filter wrench, be extremely careful not to dent or damage the filter.

10. Install drain hose.
11. Check that drain valve (1) is closed securely.
12. After replacing the filter cartridge, start the engine and run it at low idle for 10 minutes.
13. Check for leakage of fuel from the filter seal surface and transparent cup mounting face.

    If there is any leakage, check the tightening condition of the filter cartridge.

    If there is still fuel leakage, perform steps 1 to 5 to remove the filter cartridge, and if any damage or pinched foreign material on the packing surface is found, replace it with a new cartridge and repeat steps 6 to 12.



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