KOBELCO

SAFETY MANUAL

HYDRAULIC EXCAVATOR

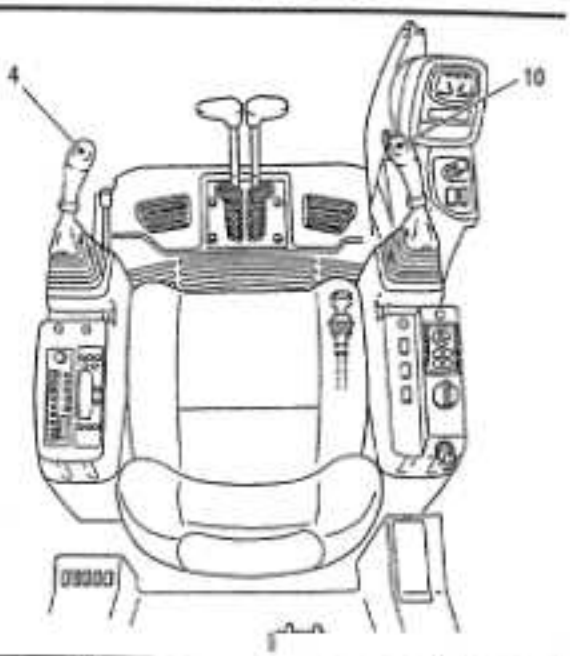
SR SERIES

KSRTMREV.02,12/01 03/04

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Control levers - 4 & 10



⚠ WARNING

- Before beginning works, operate each lever slowly taking care of the surrounding safety, and make certain that the actual operation of machine accords with operation pattern shown on label.
- The operation of machine in an unauthorized manner may cause a severe accident resulting in injury or death.

Left control lever - Item #4.

This lever is used to operate upper structure and arm.

Swing operation	Arm operation
① ... Swing right	③ ... Arm out
② ... Swing left	④ ... Arm in

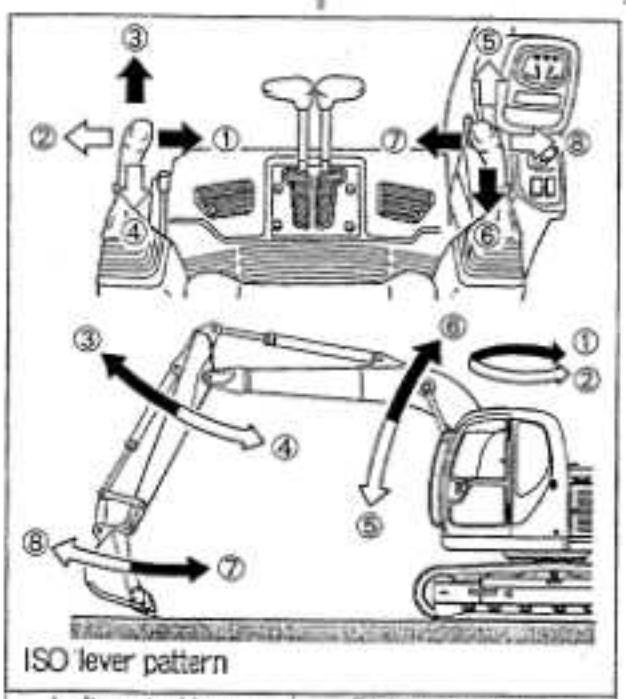
N (neutral): Upper structure and arm are held as they were.

Right control lever - Item# 10.

This lever is used to operate boom and bucket.

Boom operation	Bucket operation
⑤ ... Boom lower	⑦ ... Bucket digging
⑥ ... Boom raise	⑧ ... Bucket dump

N (neutral): Boom and bucket are held as they were.



ISO lever pattern

Left control lever		Right control lever	
①	Swing right	⑤	Boom lower
②	Swing left	⑥	Boom raise
③	Arm out	⑦	Bucket digging
④	Arm in	⑧	Bucket dump

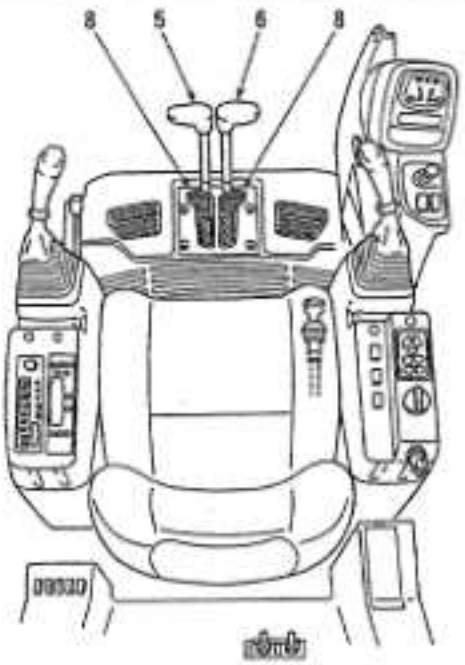
Warning - Notice:

The standard control lever pattern is ISO form, but it may be shipped in any other forms as desired or when directly delivered to user.

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Travel lever and Travel pedal - 5, 6, 8.

Traveling of machine is controlled with manual lever and travel pedal.



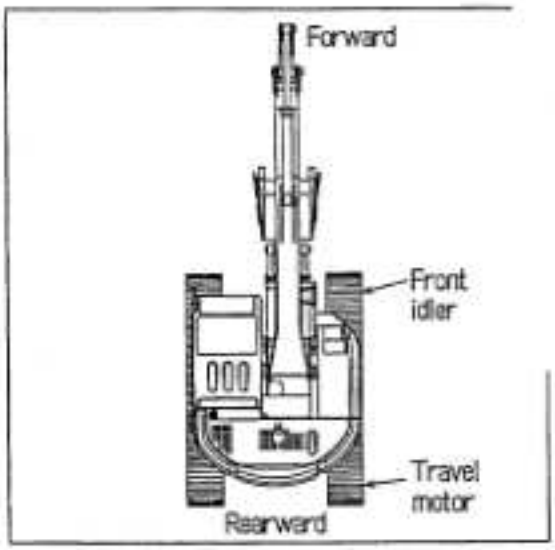
⚠ WARNING

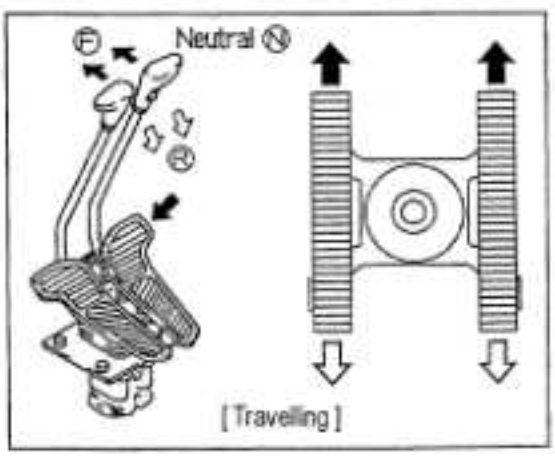
Before operating travel lever, check travel motor position.
When travel motor is placed on front position, the travel lever operation is reversed.

Ⓕ Forward ..... Position lever is pushed forward.

Ⓡ Rearward ..... Position lever is pulled to the near side.

Ⓝ Neutral ..... Machine stops.

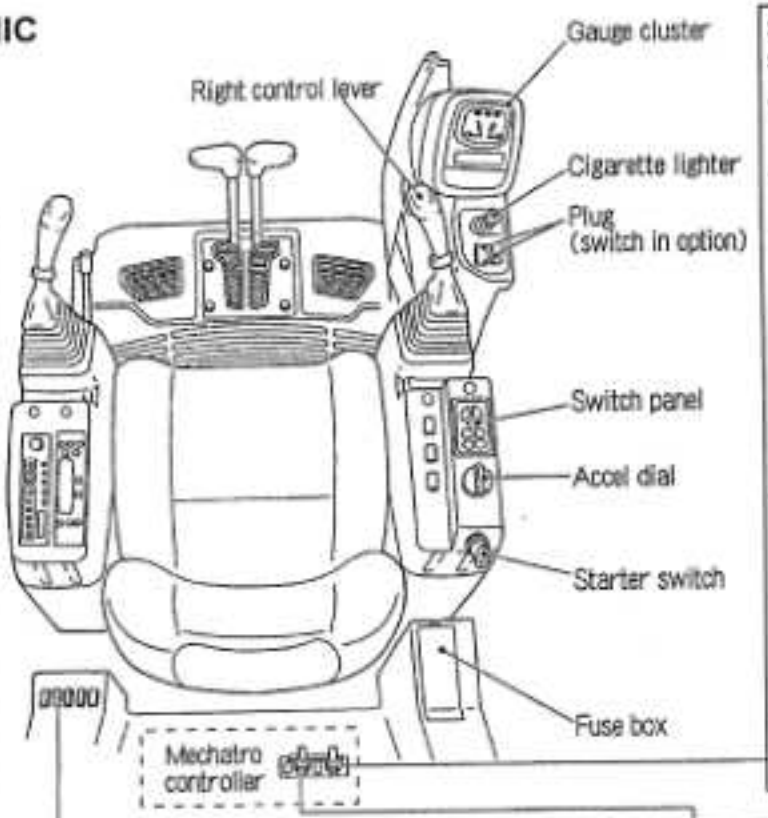




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8a. LOCATION OF MECHTRONIC FUNCTIONS



Pressure release switch

- Press the switch with symbol mark for 5 seconds or more, and the E/G speed reduces to the low idle rpm or lower, and the message "DRAINING HYD. PRESS" is displayed on the multidisplay and buzzer sounds intermittently.
- Operate the ATT and travel control levers used to release the pressure, and the pressure in the hydraulic system is released.
- Turn the starter switch off, and the pressure release mode is released and buzzer stops sounding.
- Then, after bleeding air in the hydraulic tank, carry out the inspection and repair.

Supplementary Explanation

- When it has failed to release the pressure, the message "FAIL DRAIN HYD. PRESS" is displayed on the multidisplay, buzzer sounds continuously, but it is impossible to stop the buzzer sounding.
- Turn the starter switch off, the buzzer stops sounding.
- Carry out the pressure releasing again.

Slewing parking brake release switch

- The switch is set to the normal operation position.
- With the slewing arm-in operation, the brake is released.
- If it is impossible to release due to the failure of electric system, turn the toggle switch in the controller box on the rear side of the operator seat to the "RELEASE LOCK" side, and buzzer sounds intermittently and stops sounding in 5 seconds, enabling to release the braking.
- Place the machine on the safe area immediately, contact KOBELCO distributor.
- To turn the toggle switch to "RELEASE LOCK" side, switch it toward the machine rear side.
- Usually turn the toggle switch to "NORMAL" side, that is, toward the machine front side.

Note:

1. **The mechatro controller, etc. are located in the control box behind the operator seat.**
2. **How to take out the mechatro controller, etc.**
   - ① **Fully pull front seat forward, bring seatback frontward.**
   - ② **Turn five screws 90° on plastic cover rear side with (+) driver.**
   - ③ **After removal of plastic cover, you will find mechatro controller, etc.**

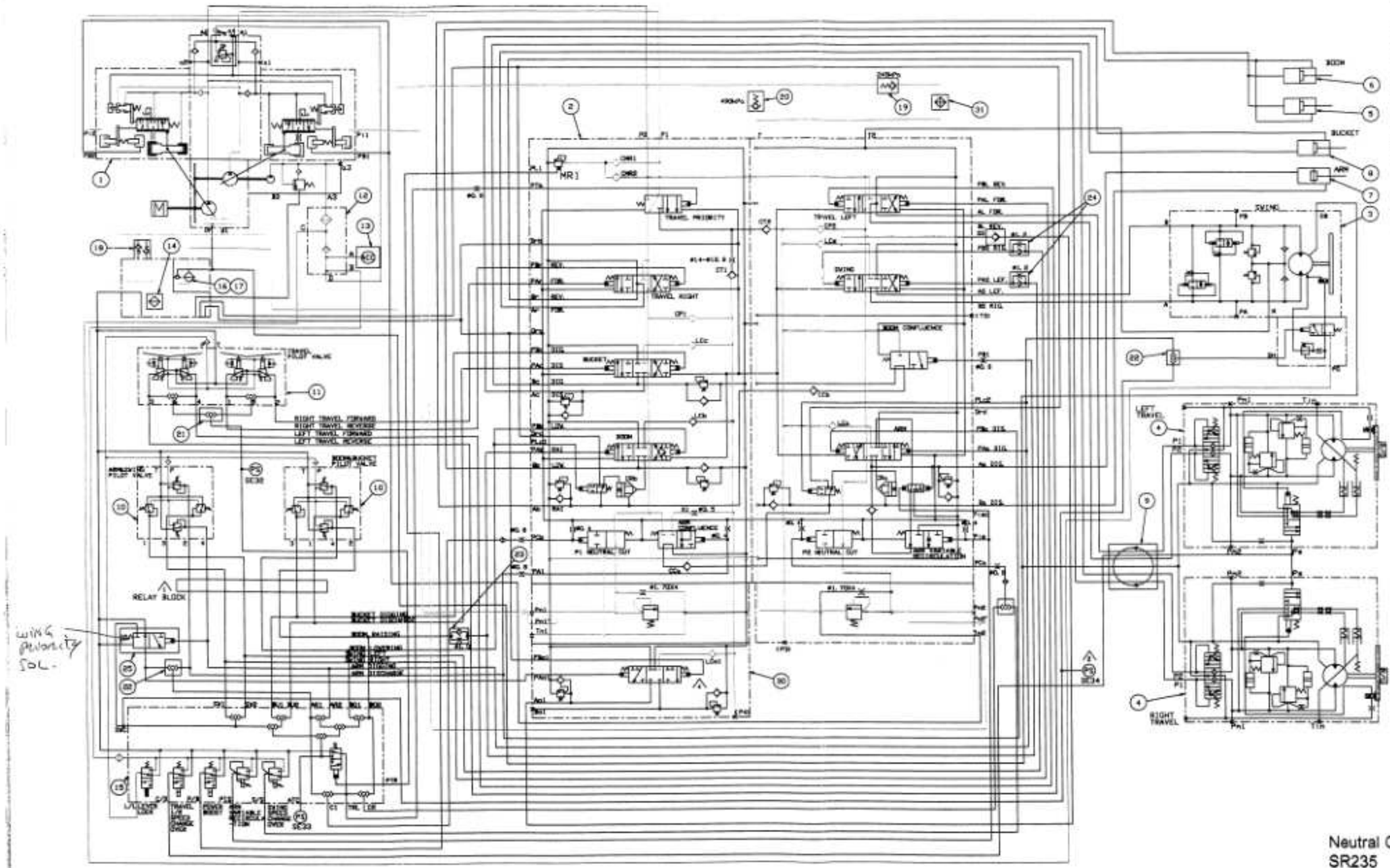
KPSS work mode release switch

- The switch is set to the normal work mode position.
- If the message "MECHATRO CONT FAIL" is displayed on the multidisplay, turn the toggle switch in the controller box on the rear side of the operator seat to "RELEASE" side, and the buzzer sounds and stops sounding in 5 seconds. It is operable in this condition, but contact KOBELCO distributor immediately.
- To turn the toggle switch to "RELEASE" side, switch it toward the machine rear side.
- Usually turn the toggle switch to "KPSS" side, that is, toward the machine front side.

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3. HYDRAULIC CIRCUIT DIAGRAM (KAI SPEC.)

SK235SR



1	Main Hydraulic Pump
2	Main Control Valve
3	Swing Motor
4	LH & RH Travel Motors
5	Boom Cylinders
6	
7	Arm Cylinder
8	Bucket Cylinder
9	Swivel Joint
10	LH & RH Joysticks
11	LH & RH Travel Foot Valves
12	Pilot Manifold
13	Accumulator
14	Suction Strainer
15	Multi-Function Solenoid Block
16	Return Filter
17	Check Valve
18	Hyd Tank Breather
30	Swing Priority/Option Valve

Neutral Circuit
SR235

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