PART NO. W18P-E-00

HITACHI

# Workshop Manual

# EX 8000-6

## Hydraulic Excavator

Service Manual consists of the following separate Part No.

| | |
|---|---|
| Technical Manual (Operational Principle) | : Vol. No.TO18P-E |
| Technical Manual (Troubleshooting) | : Vol. No.TT18P-E |
| Workshop Manual | : Vol. No.W18P-E |

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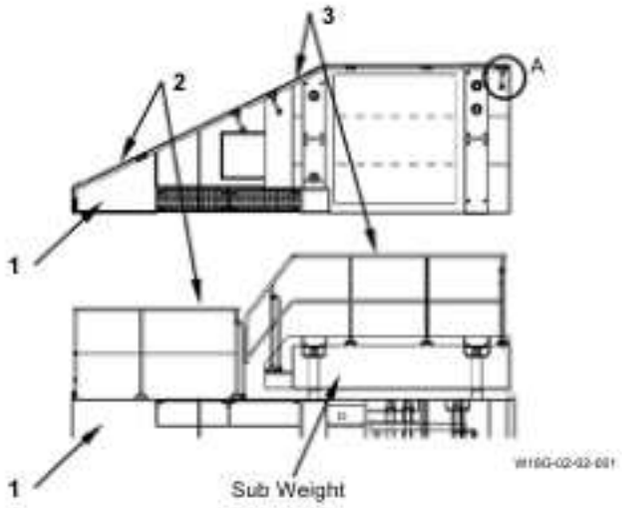

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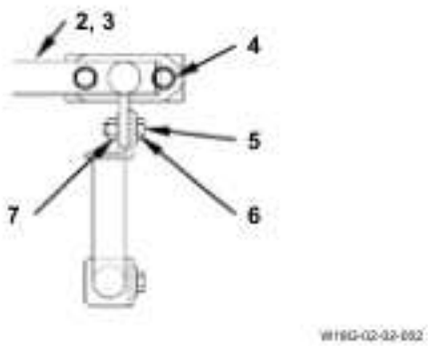
**CAUTION: Right handrail (2) weight: 20 kg (44 lb)**
**Right handrail (3) weight: 28 kg (62 lb)**

9. Install right handrails (2, 3) to right counterweight (1) with bolts (4) (14 used).
   : 19 mm
   : 90 N·m (9.2 kgf·m, 66 lbf·ft)

10. Secure right handrails (2, 3) to right counterweight (1) with bolts (5) (3 used), washers (6) (6 used), and nuts (7) (3 used).
    : 19 mm
    : 90 N·m (9.2 kgf·m, 66 lbf·ft)

11. Install the left handrail in the same way as steps 9 to 10.






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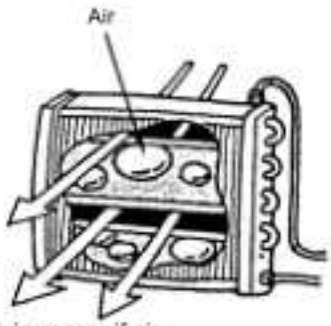
## CHARGE AIR CONDITIONER WITH REFRIGERANT

### Necessity of Purging

Be sure to purge the air conditioner circuit with a vacuum before charging with refrigerant (R134a) because the following problems can arise if air or other gases remain in the A/C circuit.

1. Pressure rise in the high pressure side

   If air remains in the air conditioner circuit, this disturbs the heat exchange between refrigerant and air in the condenser, causing pressure to rise in the high pressure side (compressor side). Usually, refrigerant gas is easily liquefied; however, air cannot be liquefied and remains as a gas in the condenser because the temperature at which air liquefies is low. That is, liquidation of the refrigerant gas in the condenser decreases by the amount of air in the circuit, and the gas pressure in the high pressure side increases accordingly.




Pressure increases if air remains in the air conditioner circuit

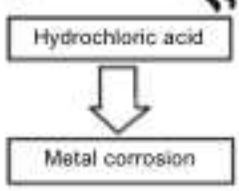
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2. Metal corrosion

   If air remains in the air conditioner circuit, a chemical reaction between refrigerant and moisture in the air takes place, and as a result, hydrochloric acid, that corrodes metals such as aluminum, copper and iron, is produced.



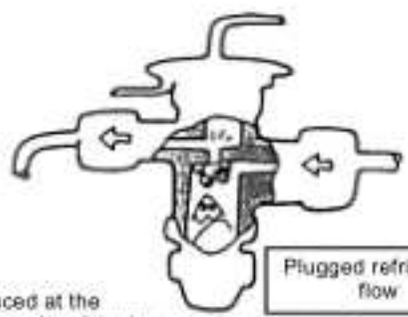
Hydrochloric acid corrodes metals if moisture exists



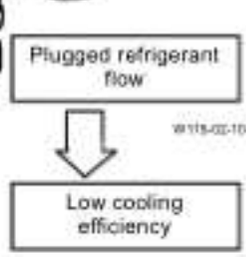

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3. Plugging of the expansion valve by moisture

   When high pressure refrigerant gas passes through the expansion valve, gas pressure decreases and temperature drops. Moisture included in high pressure refrigerant gas in the air conditioner circuit freezes at the expansion valve orifice, plugging refrigerant flow. Operation of the air conditioner becomes unstable and cooling efficiency lowers.



Ice produced at the expansion valve disturbs refrigerant flow, lowering cooling efficiency



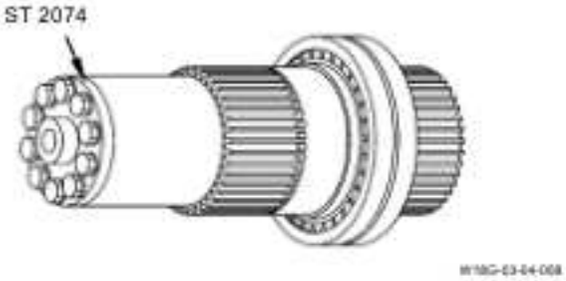

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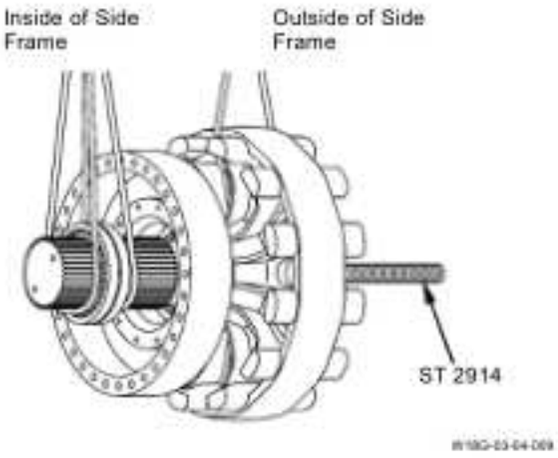
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**CAUTION: The shaft (9) assembly weight: 2047 kg (4520 lb)**
**Flange (ST 2074) weight: 65 kg (150 lb)**

6. Cool the shaft (9) assembly by using dry ice. Install the flange (ST 2074) to the shaft (9) assembly with bolts (16) (10 used). Apply gear oil onto shaft (9) after removing the frost on shaft (9).

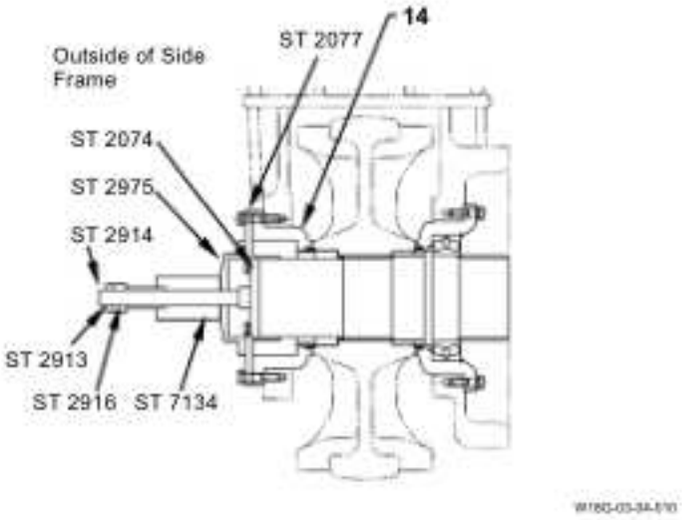



7. Install spacer (8) to the shaft (9) assembly. Hoist the shaft (9) assembly. Insert the shaft (9) assembly into drive tumbler (1) from the inside of the side frame.




8. Install the base (ST 2075), the nut (ST 2913), and the hydraulic jack (ST 7134) to the bolt (ST 2914). Install shaft (9) to drive tumbler (1) by using the hydraulic jack (ST 7134).

*NOTE: If the stroke of the hydraulic jack (ST 7134) is not long enough, install the spacer (ST 2916) between the nut (ST 2913) and the hydraulic jack (ST 7134), and try again.*




9. Install retaining ring (6) to cartridge (3).

10. Remove bolts (25) (4 used) from the dummy base (ST 2077). Remove the dummy base (ST 2077) from cartridge (14).
: 65 mm

*NOTE: If the dummy base (ST 2077) cannot be removed, install a pulling-out bolt (M16, Pitch 2.0 mm) to the hole and remove the dummy base (ST 2077).*

11. Apply grease onto shaft (9). Install spacer (13) to shaft (9).



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## PREVENT PARTS FROM FLYING

- Grease in the track adjuster is under high pressure. Failure to follow the precautions below may result in serious injury, blindness, or death.
  - Do not attempt to remove GREASE FITTING or VALVE ASSEMBLY.
  - As pieces may fly off, be sure to keep body and face away from valve.
- Travel reduction gears are under pressure.
  - As pieces may fly off, be sure to keep body and face away from AIR RELEASE PLUG to avoid injury.
  - Wait for GEAR OIL to cool, then gradually loosen AIR RELEASE PLUG to release pressure.



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## STORE ATTACHMENTS SAFELY

- Stored attachments such as buckets, hydraulic hammers, and blades can fall and cause serious injury or death.
  - Securely store attachments and implements to prevent falling. Keep children and bystanders away from storage areas.



SA-034



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