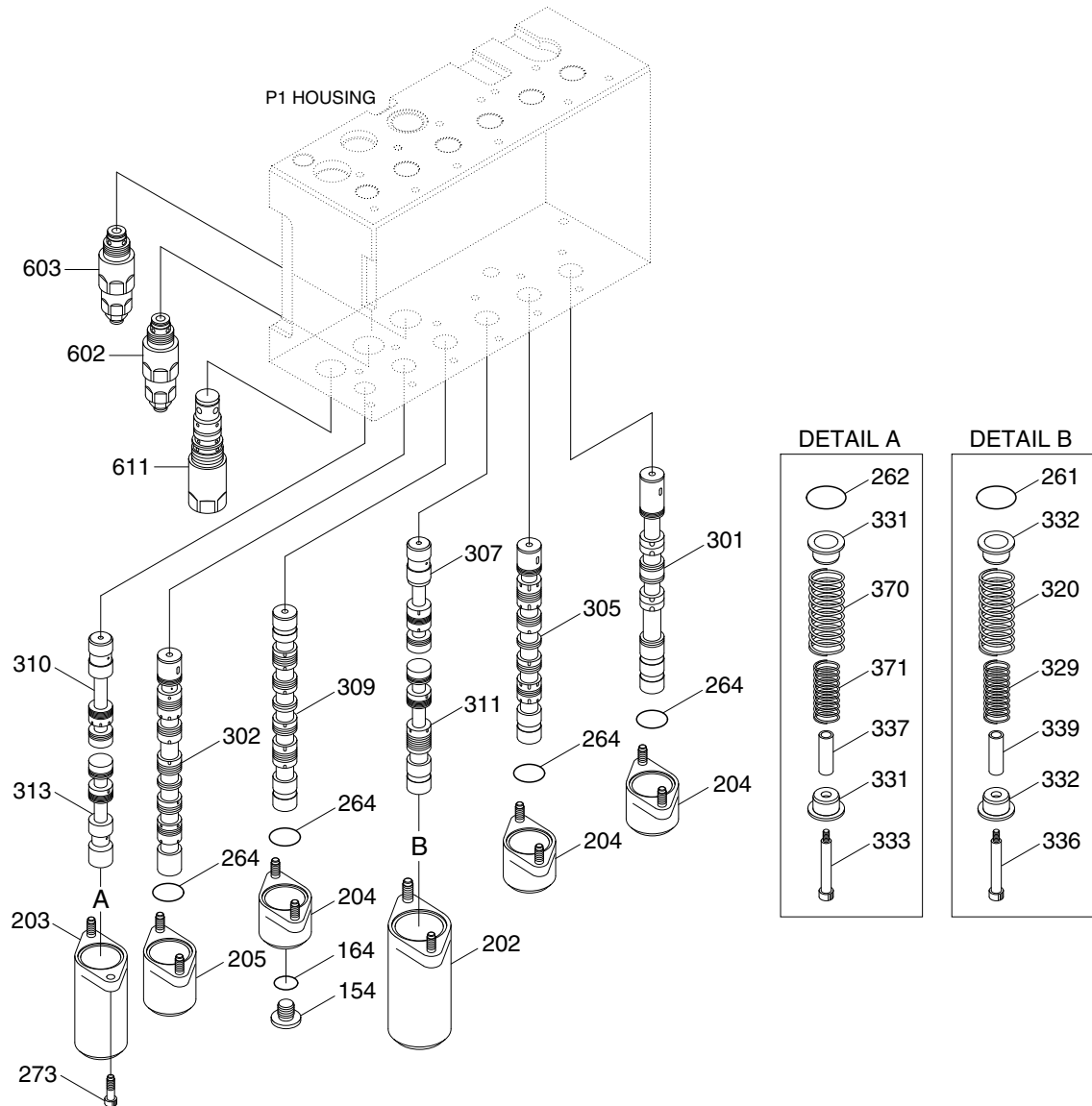


# STRUCTURE(4/4)



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- |                     |                          |                             |
|---------------------|--------------------------|-----------------------------|
| 154 Plug            | 302 Arm 1 spool          | 333 Spacer bolt             |
| 164 O-ring          | 305 Swing spool          | 336 Spacer bolt             |
| 202 Spring cover    | 307 Boom 2 spool         | 337 Stopper                 |
| 203 Spring cover    | 309 Option spool         | 339 Stopper                 |
| 204 Cover           | 310 Bypass cut spool     | 370 Spring                  |
| 205 Cover           | 311 Swing priority spool | 371 Spring                  |
| 261 O-ring          | 313 Bypass cut spool     | 602 Port relief valve       |
| 262 O-ring          | 320 Spring               | 603 Port relief valve       |
| 264 Square ring     | 329 Spring               | 611 Posi-nega control valve |
| 273 Socket screw    | 331 Seat                 |                             |
| 301 Travel spool-RH | 332 Seat                 |                             |

### 3. DISASSEMBLY AND ASSEMBLY

#### 1) GENERAL PRECAUTIONS

- (1) All hydraulic components are manufactured to a high precision. Consequently, before disassembling and assembling them, it is essential to select an especially clean place.
- (2) In handling a control valve, pay full attention to prevent dust, sand, etc. from entering into it.
- (3) When a control valve is to be removed from the machine, apply caps and masking seals to all ports. Before disassembling the valve, recheck that these caps and masking seals are fitted completely, and then clean the outside of the assembly. Use a proper bench for working. Spread a paper or rubber mat on the bench, and disassemble the valve on it.
- (4) Support the body section carefully when carrying or transferring the control valve. Do not lift by the exposed spool, end cover section etc.
- (5) After disassembling and assembling of the component it is desired to carry out various tests (for the relief characteristics, leakage, flow resistance, etc.), but hydraulic test equipment is necessary for these tests. Therefore, even when its disassembling can be carried out technically, do not disassemble such components that cannot be tested, adjusted, and so on. Additionally one should always prepare clean cleaning oil, hydraulic oil, grease, etc. beforehand.

#### 2) TOOLS

Before disassembling the control valve, prepare the following tools beforehand.

Name of tool	Quantity	Size (mm)
Vice mounted on bench (soft jaws)	1 unit	
Box wrench	Each 1 piece	24, 32, 36
Hexagon key wrench	Each 1 piece	4, 5, 6, 8, 10 and 12
Loctite #262	1 piece	-
Spanner	Each 1 piece	32 (main relief valve, 601) 32 (port relief valve, 602) 36 (port relief valve, 603)

### 3) DISASSEMBLY

The figure in ( ) shown after the part name in the explanation sentence shows its number in the structure figures (8-32~35).

- (1) Place control valve on working bench.
  - ※ Disassemble it in clean place and pay attention not to damage flange faces and plate faces.



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#### (2) Disassembling of main spools

- Travel (301), bucket (304), swing (305), option (308), arm 2 (306), boom 2 (307), swing priority (311).

- ① Loosen the hexagon the socket head bolts (273) and remove the spring cover (201, 202) and the O-ring (261).
  - Hexagon key wrench : 6 mm



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- ② Pull out the spool, spring, spring seats (322), stopper (335 or 339) and spacer bolt (336) in the spool assembly condition from the casing.

- ※ When pulling out the spool assembly from housing, pay attention not to damage the housing.



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