NEW HOLLAND

# COMPACT CRAWLER EXCAVATOR

# E18SR

## REPAIR MANUAL

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## 3.1 BOOM

### 3.1.1 BOOM DIMENSIONAL DRAWINGS

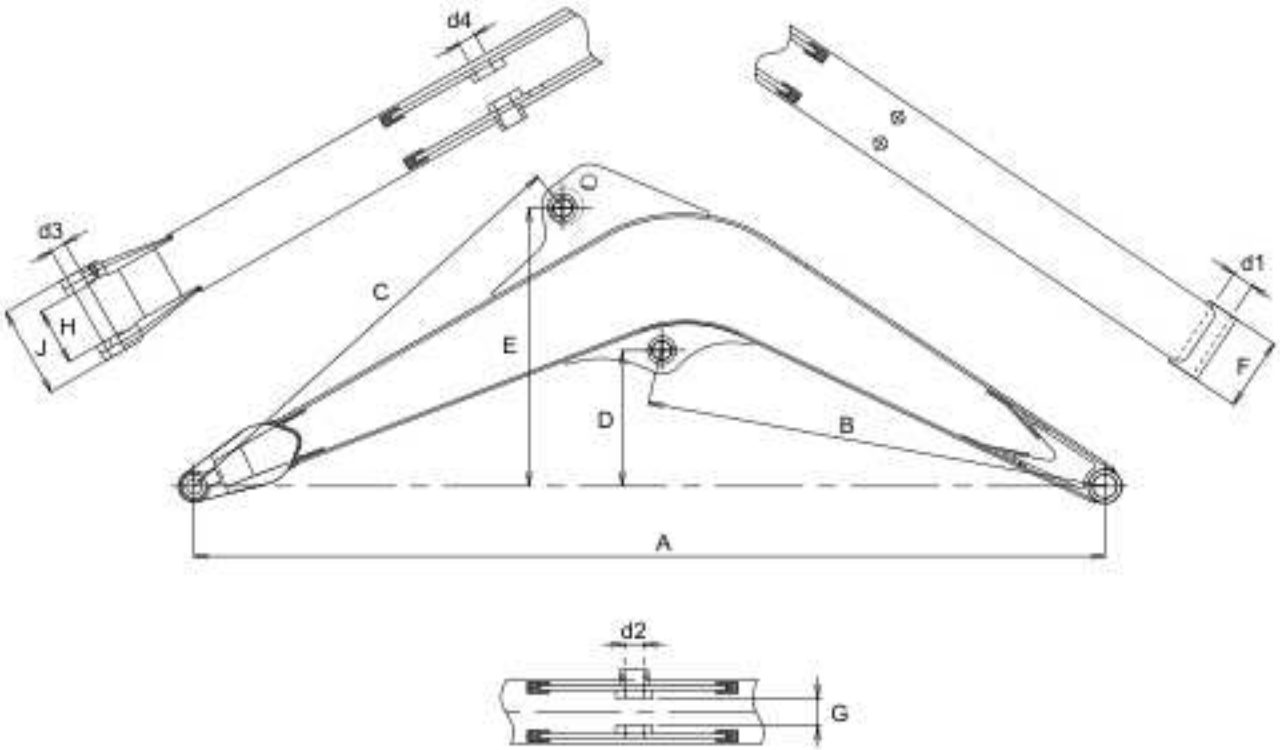



**Fig. 3-1 Boom Dimensional Drawings**

**Table 3-1**

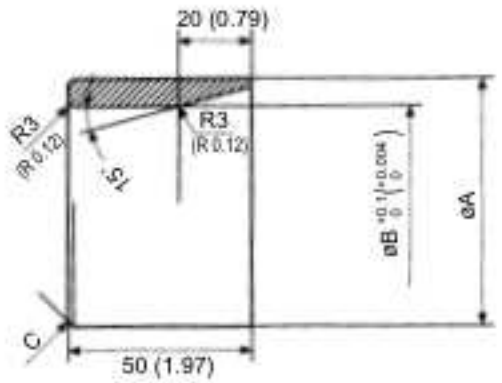
Unit: mm(ft-in)

| No. | NAME | DIMENSIONS |
|---|---|---|
| A | Boom length | 1750 (5'8.90") |
| B | Distance between pins of boss | R890.5 (R2'11.06") |
| C | Distance between pins of bracket | R887.5 (R2'10.94") |
| D | Height of boom cylinder rod pin | 261 (10.28") |
| E | Height of arm cylinder (head side) pin | 535 (1'9.06") |
| F | Boom foot width | 140 (5.51") |
| G | Inner width of bracket for boom cylinder (rod side) mounting | 51 (2.01") |
| H | Boom end inner width | 110 (4.33") |
| J | Boom end outer width | 176 (6.93") |
| K | Inner width of bracket for arm cylinder (head side) | 51 (2.01") |
| d1 | Boom foot pin diameter<br>[Bushing outer diameter] | ø35 (ø1.38")<br>[ø45 (1.77")] |
| d2 | Boom cylinder (rod side) pin diameter | ø35 (1.38") |
| d3 | Pin diameter of arm end | ø30 (1.18") |
| d4 | Arm cylinder (head side) pin diameter. | ø35 (1.38") |



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(5) Reforming Jig (E) for Seal Ring (18)




Material : STKM13C or carbon steel tube

Unit : mm (in)

| Applicable Cylinder | Dimension | |
|---|---|---|
| (Tube dia ; ø50 (1.97)) Bucket | A | 65.0 (2.32) |
| | B | 50.0 (1.79) |
| (Tube dia ; ø55 (2.17)) Crawler width | A | 70.0 (2.50) |
| | B | 55.0 (2.17) |
| (Tube dia ; ø60 (2.36)) Boom Arm Dozer | A | 75.0 (2.68) |
| | B | 60.0 (2.36) |
| (Tube dia ; ø65 (2.56)) Swing | A | 80.0 (2.86) |
| | B | 65.0 (2.56) |

### 32.2.1.8 POSSIBLE CAUSES FOR TROUBLE AND REMEDY

| Trouble Conditions | Major Possible Causes | Remedy |
|---|---|---|
| Oil leakage from sliding face of piston rod. (A ring shape oil is formed on piston rod and enlarged resulting dripping down of oil) | • Foreign matter is caught by U-ring or wiper ring at its inside periphery. | • Remove foreign matter. |
| | • Scuffing or fault on U-ring or wiper ring at its inside periphery. | • Replace each part with new one. |
| | • Scuffing on sliding face of piston rod. | • Grind sliding face with a fine oil stone. (less than 1.6S) |
| | | • If leakage is not stopped by grinding, replace seals such as U-ring, etc. with new ones. |
| | | • If leakage is not stopped by replacing seals, replace piston rod. |
| | • Peeling off of hard chrome plating. | • Re-plating of hard chrome on piston rod. |
| Oil leakage from outer periphery of cylinder head. | • Damages on O-ring. | • Replace. |
| | • Damages on back-up ring. | • Replace. |
| Oil leakage from welded portion. | • Damages on welded portion on tube. | • Replace. |
| Piston movement due to leakage. (For the case when static load that is equivalent to product of multiplication of max. working pressure and cylinder area, is applied to rod, max. movement of piston is larger than 0.5mm (0.02 in)) per 10 minutes. | • Foreign matter is caught by sliding face of slide ring. | • Remove foreign matter. |
| | • Scuffing or faulty condition on sliding face of slide ring. | • Replace. |
| | • Scuffing on sliding face of seal ring assembly. | • Replace. |
| | • Damages on O-ring. | • Replace. |



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(4) Disconnecting harness

See Fig. 48, Fig. 49 and Fig. 50 to disconnect the harness connected to the electrical equipment and main harness.

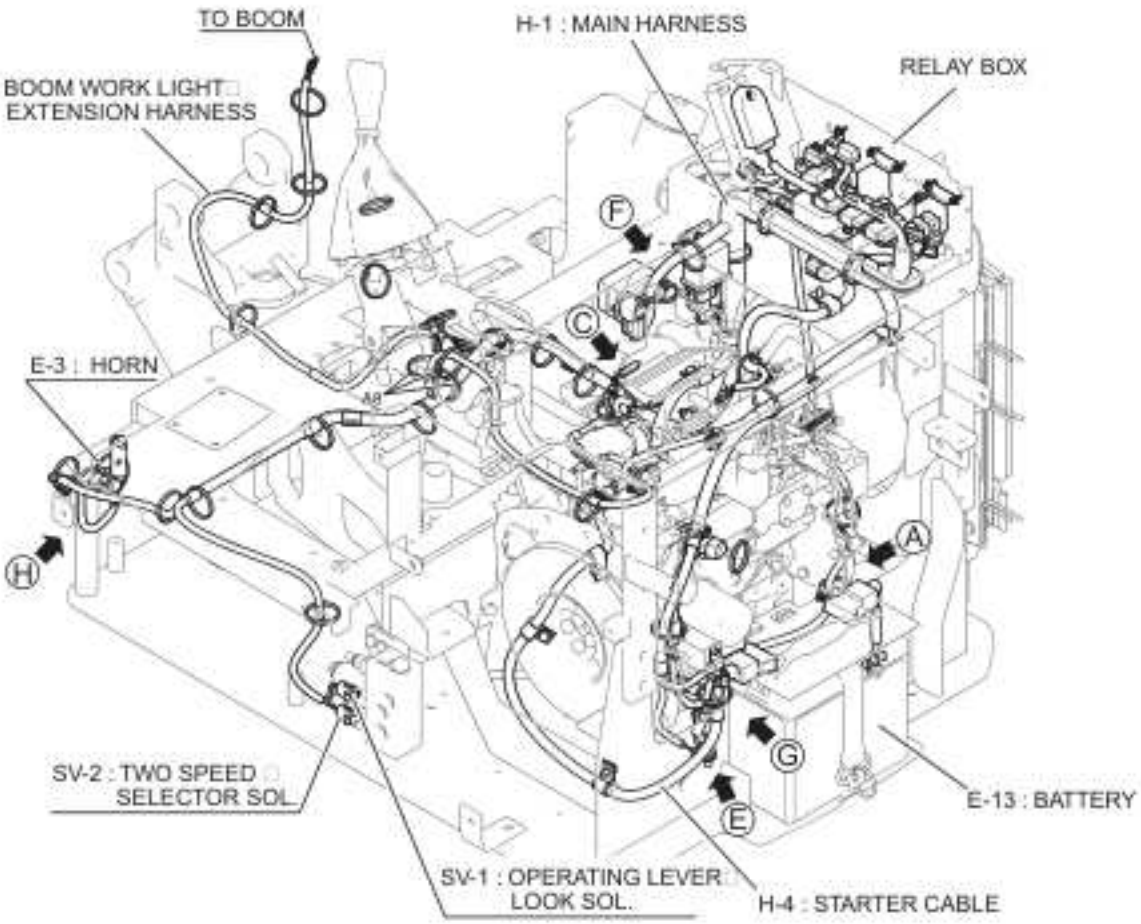



**Fig. 33-48 Disconnecting harness**

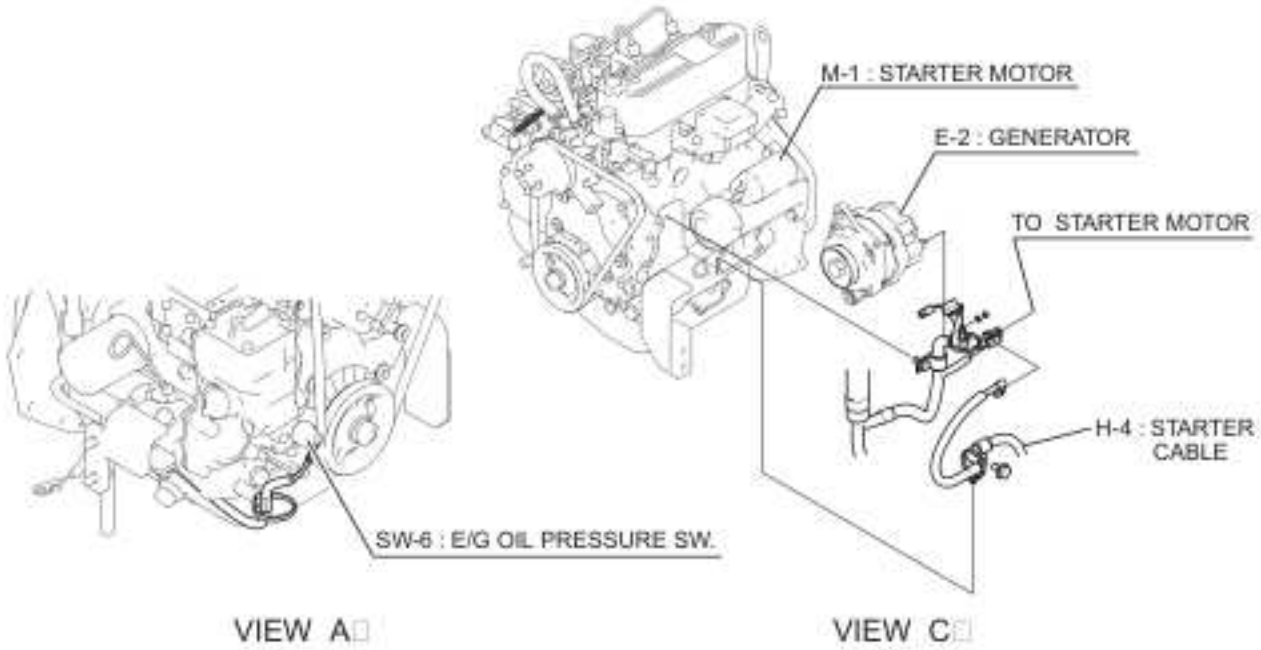



**Fig. 33-49 Disconnecting harness (1/2)**



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**⚠ CAUTION**

# About warning labels

## Maintenance of warning labels

Make sure all warning/caution labels are legible.

Clean or replace the warning/caution labels the description and/or illustration of which cannot be seen clearly.

For cleaning the warning/caution labels, use a cloth, water and soap. Do not use cleaning solvents, gasoline or other chemicals to prevent the letters from getting blurred or the adhesion from being weakened.

Replace damaged or fractured labels with new ones.

If any engine part on which a warning label is attached is replaced with a new one, attach a new identical warning label to the new part.

To obtain replacement warning labels, contact a Mitsubishi dealer.

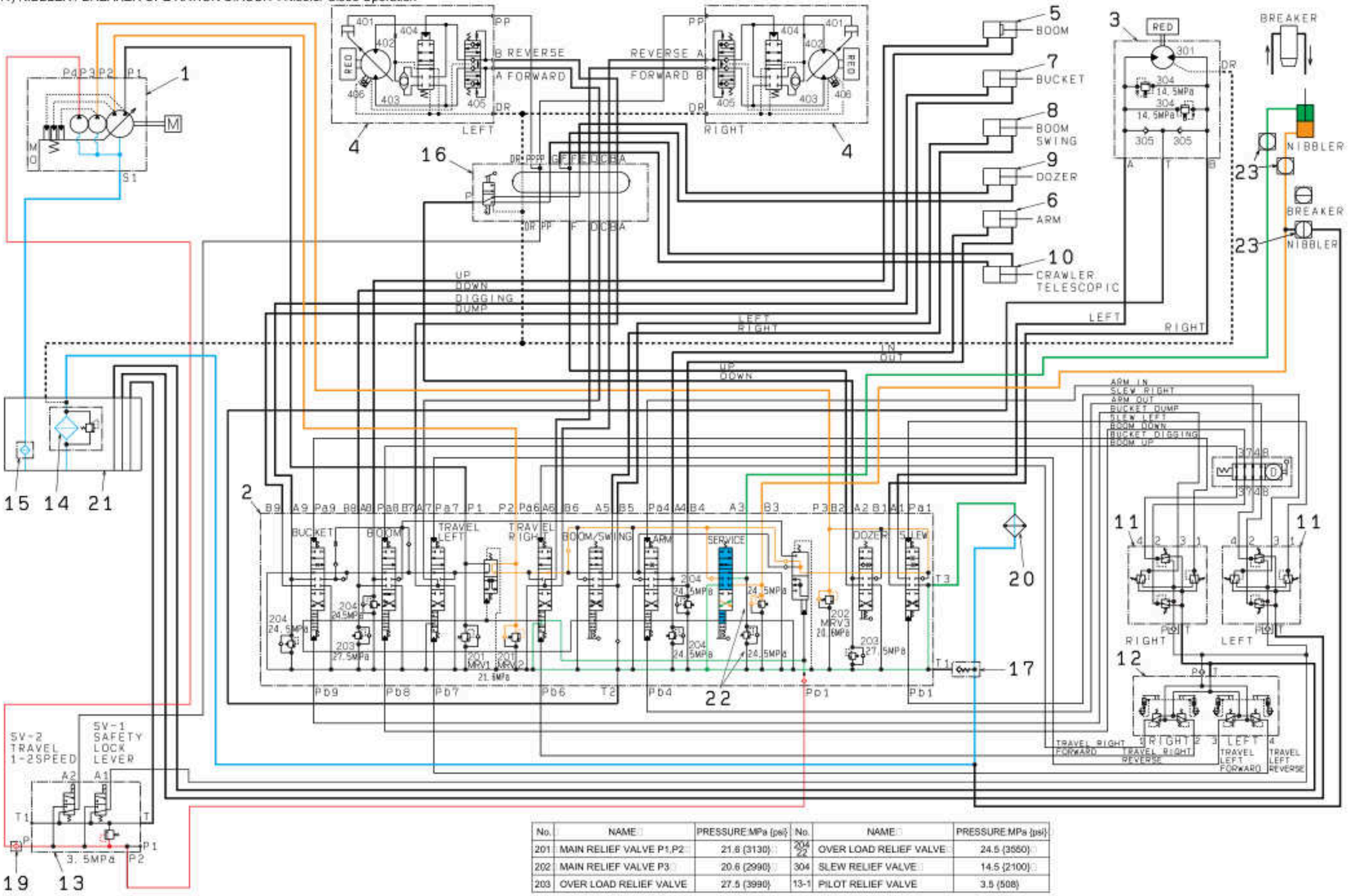



Warning labeles

X

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(11) NIBBLER / BREAKER OPE RATION CIRCUIT : Nibbler Close Operation




| No. | NAME | PRESSURE MPa {psi} | No. | NAME | PRESSURE MPa {psi} |
|---|---|---|---|---|---|
| 201 | MAIN RELIEF VALVE P1,P2 | 21.6 {3130} | 204 22 | OVER LOAD RELIEF VALVE | 24.5 {3550} |
| 202 | MAIN RELIEF VALVE P3 | 20.6 {2990} | 304 | SLEW RELIEF VALVE | 14.5 {2100} |
| 203 | OVER LOAD RELIEF VALVE | 27.5 {3990} | 13-1 | PILOT RELIEF VALVE | 3.5 {508} |

Fig. 71-12



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