

| for MITSUI—MAN B&W engines,<br><br><b>Introduction of N2 gas booster</b>   |  | <b>No.106</b>                                   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
|--|--|---|--|--|----------------|---------------|-----------------------|---------|---------|--------------|--|--|--------------|---|------------------|------------------------|---------|---------|--|--|--|---------------------------|--------------|--------------|---------------------------|--------------|---------------|-------------------------------|------|--------|-----------------------------|---------------|-----------|----------------|-------------------|-------------------|------------------|--------------|-------------|-------------------------------|--|--|
|  |  | <b>APPROVED</b>                                 | <b>H.Sakamoto</b>                      |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
|  |  | <b>CHECKED</b>                                  | <b>J.Shiki</b>                         |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
|  |  | <b>PREPARED</b>                                 | <b>T.Yahagi</b>                        |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| <b>ENGINE TYPE</b>   | <b>All ME engines</b>  | <b>DATE</b>                                     | <b>2020.6.2</b>                        |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| <p>Maintaining the standard pressure of the N2 accumulators installed on ME engine is important for normal operation of the engine and also preventing personnel injury by rupture trouble.</p> <p>To fill the accumulator with gas, it is necessary to prepare many N2 gas cylinders. To reduce waste of N2 gas, we have released two types of N2 gas boosters to utilize effectively the remaining gas in the cylinder.</p> <table border="1"> <thead> <tr> <th></th> <th>Automatic type</th> <th>Assembly type</th> </tr> </thead> <tbody> <tr> <td>Parts Information No.</td> <td>MPI0042</td> <td>MPI0048</td> </tr> <tr> <td>Outside view</td> <td></td> <td></td> </tr> <tr> <td>Drive system</td> <td>Electric<br/>(Single phase 220V or Three phase 440V)</td> <td>Air (0.6~1.0MPa)</td> </tr> <tr> <td>Minimum inlet pressure</td> <td>1.0 MPa</td> <td>1.0 MPa</td> </tr> <tr> <td colspan="3">Filling time (Accumulator volume=4L, Pressure 0→13.6MPa)</td> </tr> <tr> <td>Cylinder pressure=6.0 MPa</td> <td>about 6 min.</td> <td>about 7 min.</td> </tr> <tr> <td>Cylinder pressure=2.0 MPa</td> <td>about 6 min.</td> <td>about 90 min.</td> </tr> <tr> <td>Stopping method after filling</td> <td>Auto</td> <td>Manual</td> </tr> <tr> <td>Assembly work for first use</td> <td>Not necessary</td> <td>Necessary</td> </tr> <tr> <td>Equipment size</td> <td>about 85×45×70 cm</td> <td>about 40×40×25 cm</td> </tr> <tr> <td>Equipment weight</td> <td>about 100 kg</td> <td>about 15 kg</td> </tr> <tr> <td>Application other than N2 gas</td> <td colspan="2">Can be used for dry air only (Not available for other gases)</td> </tr> </tbody> </table> <p>* It is possible to operate the equipment far away from the accumulator by using extension hoses available as optional parts.</p> |  |   |  |  | Automatic type | Assembly type | Parts Information No. | MPI0042 | MPI0048 | Outside view |  |  | Drive system | Electric<br>(Single phase 220V or Three phase 440V) | Air (0.6~1.0MPa) | Minimum inlet pressure | 1.0 MPa | 1.0 MPa | Filling time (Accumulator volume=4L, Pressure 0→13.6MPa) |  |  | Cylinder pressure=6.0 MPa | about 6 min. | about 7 min. | Cylinder pressure=2.0 MPa | about 6 min. | about 90 min. | Stopping method after filling | Auto | Manual | Assembly work for first use | Not necessary | Necessary | Equipment size | about 85×45×70 cm | about 40×40×25 cm | Equipment weight | about 100 kg | about 15 kg | Application other than N2 gas | Can be used for dry air only (Not available for other gases) |  |
|  | Automatic type   | Assembly type                                   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Parts Information No.  | MPI0042  | MPI0048   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Outside view   |  |   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Drive system   | Electric<br>(Single phase 220V or Three phase 440V)          | Air (0.6~1.0MPa)                                |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Minimum inlet pressure   | 1.0 MPa  | 1.0 MPa   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Filling time (Accumulator volume=4L, Pressure 0→13.6MPa)   |  |   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Cylinder pressure=6.0 MPa  | about 6 min.   | about 7 min.                                    |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Cylinder pressure=2.0 MPa  | about 6 min.   | about 90 min.                                   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Stopping method after filling  | Auto   | Manual  |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Assembly work for first use  | Not necessary  | Necessary                                       |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Equipment size   | about 85×45×70 cm  | about 40×40×25 cm                               |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Equipment weight   | about 100 kg   | about 15 kg                                     |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| Application other than N2 gas  | Can be used for dry air only (Not available for other gases) |   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| <b>PRIORITY</b>  |  |   |  |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |
| <b>IMMEDIATELY</b> <input type="checkbox"/>  | <b>AT FIRST OPPORTUNITY</b> <input type="checkbox"/>         | <b>WHEN CONVENIENT</b> <input type="checkbox"/> | <b>OTHERS</b> <input type="checkbox"/> |  |                |               |                       |         |         |              |  |  |              |   |                  |                        |         |         |  |  |  |                           |              |              |                           |              |               |                               |      |        |                             |               |           |                |                   |                   |                  |              |             |                               |  |  |

Mitsui E&amp;S Machinery Co., Ltd.

Technical Group / Diesel Engine Service Department

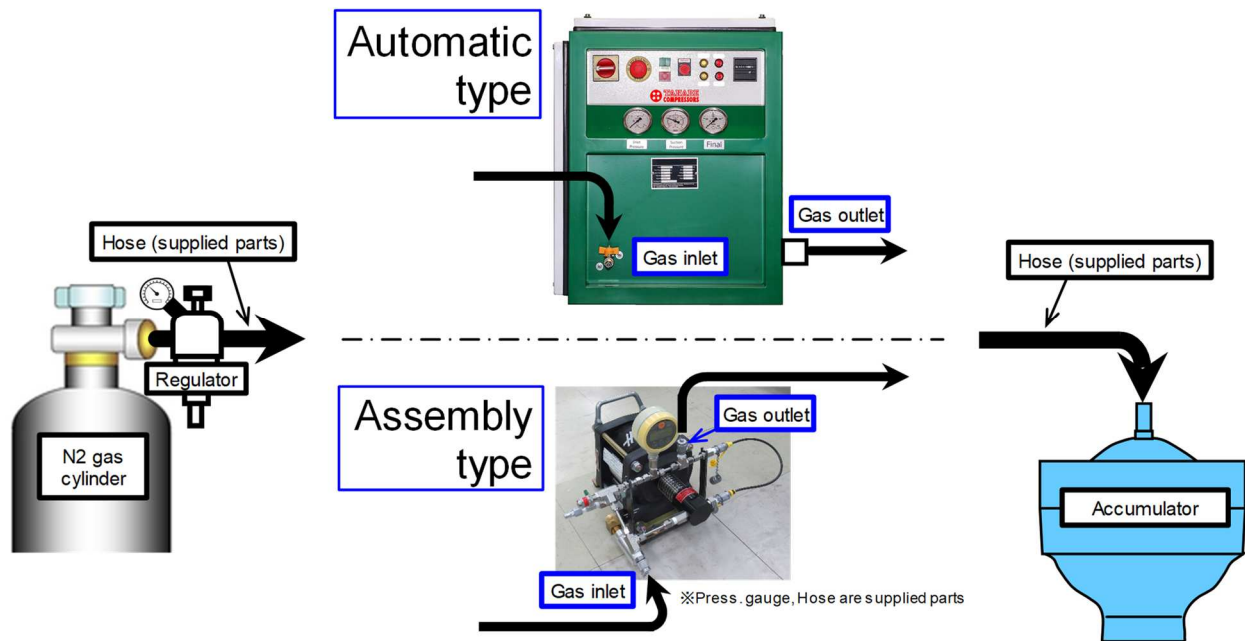
Technoservice Division

1-1, Tama 3-chome, Tamano, Okayama 706-8651, Japan

TEL +81-863-23-2385 / FAX +81-863-23-2349

E-mail: tech\_de@mes.co.jp





Important notes regarding the N2 gas pressure of the accumulator:

- + We recommend to check the N2 gas pressure once a month, and overhaul every 5 years.

Gas pressure drop less than 0.5 MPa per month is normal.  
If pressure has dropped significantly, overhaul is necessary.

- + When filling N2 gas, refer to the following table to fill with proper pressure according to the accumulator temperature.

(Maximum hydraulic oil pressure depends on the engine specification. Please check the instruction book and select accordingly.)

| Maximum hydraulic oil press. (MPa) | 20                      | 30   |
|------------------------------------|-------------------------|------|
| Accumulator temp. (deg C)          | N2 gas press. (±0.5MPa) |      |
| 0                                  | 8.9                     | 12.4 |
| 10                                 | 9.2                     | 13.0 |
| 20                                 | 9.5                     | 13.6 |
| 30                                 | 9.8                     | 14.2 |
| 40                                 | 10.1                    | 14.8 |
| 50                                 | 10.5                    | 15.4 |
| 60                                 | 10.8                    | 16.0 |
| 70                                 | 11.1                    | 16.6 |
| 80                                 | 11.4                    | 17.2 |
| 90                                 | 11.8                    | 17.8 |
| 100                                | 12.1                    | 18.5 |

- + Minimum N2 gas pressure necessary for accumulator with 20 degC temperature.

| Maximum hydraulic oil press. (MPa) | 20  | 30   |
|------------------------------------|-----|------|
| Minimum N2 gas press. (MPa)        | 6.5 | 10.6 |

For any inquiries please contact your regional sales representative by referring to Service Note No. 111.