

22. Assemble cover (123) and ring gear (127).

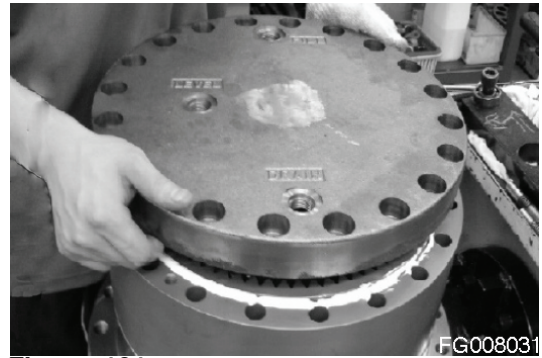


Figure 101

23. Assemble socket bolts (124 , 24 ea) by jointing at specified torque.

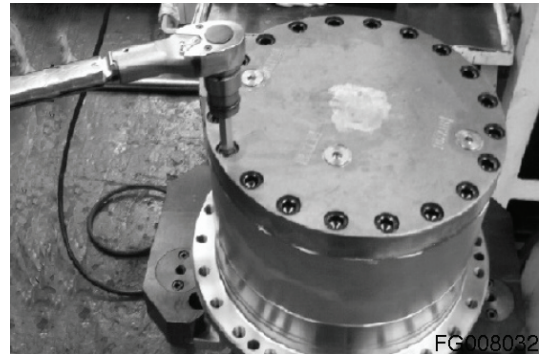


Figure 102

24. Assemble O-ring (38) and plug (128).

25. Connect plug (128) to cover (123) at specified torque.

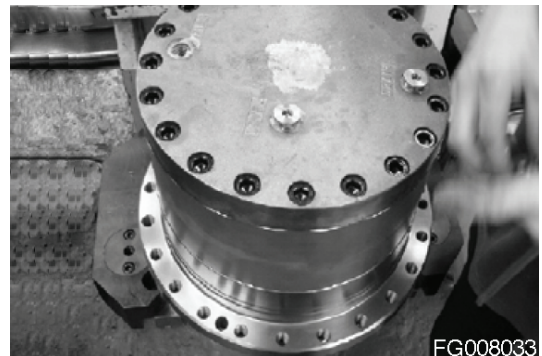


Figure 103

Check after Assembling

1. Air Testing of Gear Reducer

Disassemble one of the plugs (128) of the gear reducer. Inject compressed air (0.3 kg/cm^2) for 2 minutes under water. No air bubble should be identified.

- Inject 3.0% of gear oil

2. Air Testing of Motor

Close all but one piping port of the motor. Inject compressed air (3 kg/cm^2) for 2 minutes under water. No air bubble should be identified

- Inject 1.0% of gear oil

PERFORMANCE TESTING

Be sure to inject a sufficient quantity of hydraulic oil into the motor case before the performance test.

After maintenance work on the TM-motor, be sure to carry out the following performance test.

1. When testing apparatus is available

When any internal part has been replaced, operate in accordance with the following conditions and conduct performance testing prior to preparatory operation.

Conditions for preparatory operation :

- A. Left-right revolution for 0.5 minutes at 110 rpm, without load
- B. Left-right revolution for 0.5 minutes at 10 rpm, 200kgf/cm²
- C. Left-right revolution for 2 minutes at 20 rpm, without load pressure

Testing Conditions :

- Hydraulic Oil: ISO VG #46 or equivalent wear-resistant hydraulic oil
- Lubricant: gear oil
- Temperature
 - ambient temperature room temperature
 - Operating oil temperature : 50±5°C
 - Gear Reducer Case temperature : 40 - 80°C
- Back Oil Pressure : 0.8 kg/cm² max.

1) Efficiency Testing (at single speed)

Volumetric Efficiency	Mechanical Efficiency	External Drain	Remarks
90% min.	83% min.	2 l/min. max.	

2) Volumetric Efficiency Testing at Two Speed

At 2-speed Conversion	Volumetric Efficiency
Pressure Difference : 80 kg/cm ²	96% min.
Rotation : 25 rpm	

3) 2-Speed Operation Testing

Under the conditions for preparatory operation outlined in (A) and (B) above, when oil pressurized at 20 kg/cm² or higher is applied to the 2-speed conversion pilot port (port D) in no-load testing, check that the speed changes from low to high.

Also, check that the speed changes from high to low at a pressure of 10 kg/cm² or lower.

2. Field Performance Test without Testing Apparatus

Install the TM-Motor on the equipment and connect the piping without shoe. Carry out preparatory running under the following conditions before testing.

Conditions for preparatory running :

- A. Left-right revolution for 1 minute at 10rpm, no load pressure
- B. Left-right revolution for 1 minute at 20rpm, no load pressure

Testing conditions :

- Temperature :
 - hydraulic oil - 50±5°C
 - Case : 40 - 80°C
- 1) No-load drive pressure 9 pressure difference)

1st Speed	10 rpm	20 kg/cm ²
2nd speed	20 rpm	30 kg/cm ²

2) Motor Drain

1st, 2nd Speed	10 rpm	2 l/min max.
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Main Pump

Edition 1

MEMO

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