MITSUBISHI TURBOCHARGER AND ENGINE EUROPE

MITSUBISHI
ENGINE

FACTORY & SITE ACCEPTANCE MANUAL

Issued: August 17th, 2026

Doc. No. MTEEEDSE2026-0037

Revision: 1.0

Contents

1. Responsibility

1.1 Dealer / OEM

- Commissioning according to MTEE Factory and Site acceptance Manual.

1.2 Installer responsibility

- Installing the engine according to the applicable Installation Manual.
- All fluid and air systems, connected to the Engine, are clean and free of weld slag, debris, rust or corrosion. All fluid systems are filled and bleed and that, in principle, it is possible to start the engine.
- Foundation and Alignment report is present.
- Engine ready for commissioning at appointed commissioning date.
- Engine accessible for commissioning.

2 Test Summary

Commissioning or Installation start-up test (on-site test) means to comprehensively confirm that all equipment is installed, that all equipment is functioning properly and that it has equivalent performance based on the results of the factory tests.

In addition, the dealer/OEM option attached to the installation should be checked at the dealer's/OEM's responsibilities.

3 Preparation for Test

Create a witness test procedure prior to witness test.
After completing the test preparation, please arrange with the customer and decide the schedule and the scope of the test. Once the test schedule and contents have been clarified with the customer, begin the test preparation work.

Please clarify at least the following items.

3.1 Test Content and Scope

Basically, the contents of the factory test are mainly confirmed, but the test environment is different from the manufacture. The test will focus on the engine, and generator if applicable, protection device and the ability to power the customer's load.

3.2 Test Equipment and Materials

Prepare in advance the preparation and operation check of the measuring instruments (vibration meter, tachometer, stopwatch, insulation resistance meter, voltmeter, ammeter, etc.) necessary for the test.

3.3 Load device

The test load determines whether a specific load setup must be prepared, or whether the actual load potentially applicable by the customer must be confirmed.

3.4 Safety Procedure

If you need to notify relevant authorities such as governments, official bodies, classification societies, etc., please deliver without delay. For fuels and exhaust gases in particular, check in advance the local government, firefighting and other regulations.

Next, to prevent problems with nearby residents, make sure that noise and smoke do not flow beyond the specified level.

3.5 Pre-Commissioning

Before initial startup verify, check and confirm the engine and installation condition is according the applicable installation and operation & maintenance manuals.

- Verify cooling water system drawing and check cooling water system, piping and expansion tank.
- Verify fuel system drawing and check fuel system and piping.
- Verify lubrication oil system drawing and check system and piping.
- Verify intake air system.
- Verify exhaust system and check exhaust system and piping.
- Check engine or installation supports and alignment.
- Check the result of the torsional vibration calculations(1).
- Visual check the complete installation.
- Check that engine air intake, exhaust outlet, fuel system and cooling water is free of weld slag, debris and rust.
- Check and test engine control electric wiring and alarm and stop settings of local and remote control.
- Check connections of engine starting system, starting batteries and or air starting system.
- Check engine cooling water system is not leaking and bleed.
- Verify correct specification of coolant.
- Check engine lubrication oil system and oil sump level.
- Verify correct specification of lubrication oil.
- Check engine fuel system is not leaking and bleed.
- Verify correct specification of fuel.

(1) Applicable for power transmission systems using rotating shafts or couplings.

4. Commissioning or Installation Start-up Test Procedure

4.1 Commissioning or Installation Start-up test

Please review the test procedure according to the Mitsubishi factory test report and local conditions.

Please consult with the customer and ask for cooperation so that testing can be performed with load capacity according to the factory test as much as possible.

Please review the contents appropriately in accordance with the regulations, local authorities, firefighting, etc. of each country, and make sure that you do not violate the law.

4.2 Commissioning or Installation Start-up Report

Fill-out a full test report. A standard installation & startup report is available at MTEE.
An own company commissioning or installation test report is accepted provided the following topics are included in the report.

- Installation data/details.
- Confirmation of correct alignment.
- Test of all minimal required alarm and safety sensors and devices.
- Engine and or generator set performance at 25%, 50%, 75% and 100% load, including overload conditions if possible.
- Confirmation of installation vibration levels at 25%, 50%, 75% and 100% load are within specified levels.

Review the test report according to the test procedure.

4.3 Commissioning or Installation Start-up

The test will proceed while checking one by one according to the test procedure at which the inspector will:

- Start the engines one by one and run on low idle to check; general functioning, noise, vibrations and leakage.
- Increase load step by step, continuously checking general functioning, noise, vibration and leakage.
- Monitor and report engine and installation performance data in the test report for each load step. Performance data will be compared with the manufactures test record.
- Generator sets will be tested in parallel running.
- Class Engines will be checked again in attendance of class surveyor, who will be invited by the Installer.

4.4 Test Completed

Once the test is complete, aggregate the test results to get the customer's signature.
At this time, if there are pointed matters out by the customer, keep a record and complete them before handover.
Also, be sure to remove the temporary wiring and equipment that were used for test, and make sure to restore the normal state.

5. Commissioning or Installation Start-up Test Procedure

5.1 Briefing on Operation and Maintenance

If all items pointed out by the customer are cleared after the test, follow the applicable operation & maintenance manual to explain:

- how to operate the engine or generator set.
- how to check and replace coolant, lubricant and grease etc.
- the required maintenance for the engine or generator set.

5.2 Hand Over

After the operation and maintenance briefing, hand over the applicable operating & maintenance manual, parts list, keys, accessory tool, test report, and warranty certificate/card to the customer.

6. Registration (warranty)

Register the engine or generator set before the expiration date of register period by submitting to MTEE:

- completed and signed installation & startup report (standard installation & startup report is available at MTEE).
- completed and signed warranty certificate (For non-MEeS registered customer available at MTEE).