

Testing Earth-Neutral Bonded Portable Generators with Primetest Elite/PRO Testers and PRO-GTA Adapter

Testing portable generators with a PAT tester is problematic because there is no mains plug on generator to plug into an appliance tester. The PRO-GTA adapter allows us to test the generator with the Primetest Elites Point to Point measurement feature by using the black and red inlet sockets on the tester.

For the continuity tests we need both red and black test leads (ELT-LEAD) and the PRO-GTA Adapter and for the RCD test we need the Primetest's mains lead and red IEC adapter lead



Generator testing is covered in AS/NZS3012 Electrical Installations – Construction and demolition sites. The inspection and RCD tests are as per AS3760.

The procedure outlined below is for **Earth-Neutral bonded** portable generators with RCD only.

Tests required with the generator OFF (NOT running):

- 1) Continuity measurements between socket earth and
 - a. Socket Neutral
 - b. Frame
 - c. Stator

Tests required with the generator ON(running):

- 2) RCD tests
 - a. Push button test
 - b. Triptime test

Test Procedure with Primetest Elite Elite Autosequence “ GenTest with RCD EN Bonded”

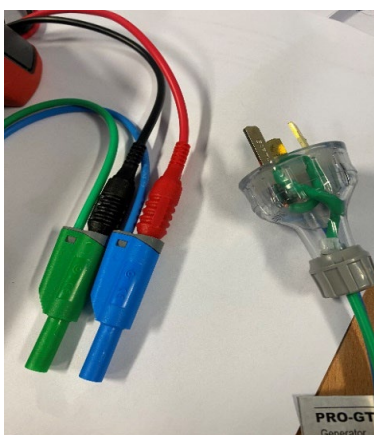
Equipment required:

- 1) Primetest Elite or Primetest Pro
- 2) PRO-GTA-15 Adapter
- 3) ELT-LEAD red and black lead set
- 4) Primetest Mains Lead
- 5) IEC LEAD (RED)

- 1) Connect the Primetest’s red and black test leads to tester



- 2) Connect the red and black lead to the PRO GTA adapter



- 3) Select “GenTest with RCD EN Bonded test” on Primetest Elite
Please note Generator should **NOT** be running
- 4) Conduct visual inspections

5) Connect PRO-GTA Plug to Generator mains outlet and start the test



The tester will make a point to point continuity measurement between **socket earth** and **neutral** the result should be less than 1 ohm.

Repeat the test for every socket otherwise select skip on last (if only 1 outlet press skip after 1st test)

6) Remove red lead from GTA adapter attach red probe tip and attach probe to **FRAME** or Earth Point on Frame



Tester will conduct a Point to Point Continuity measurement between socket earth and Frame the result should be less than 1 ohm

7) Connect the red probe to stator



Tester will conduct a Point to Point Continuity measurement between socket earth and stator the result should be less than 1 ohm

8) Disconnect all leads from Generator

9) Start the generator.

10) Then conduct a push button test on RCD. The RCD should trip without undue delay.

11) Restart generator

12) Connect both ends of the red IEC lead to tester and the Mains lead of tester to black inlet of tester



13) connect mains lead of the tester to generator socket protected by RCD. Tester will conduct a Fixed RCD 30 mA test the result should be less than 300mS.

14) Restart Generator the tester will conduct a 180degree RCD test.

The result should be less than 300mS