

1. General information

QAS/CPG Overcurrent Device OL1 Change

Publication Number	:	HOP 1093
Priority	:	3
Applicable to	:	QAS/CPG Single Breaker Cubicle Applications
PGC	:	420-42X
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3. Subject

HOP began to incorporate single breaker cubicle designs initially with the QAS/CPG 150 - 330 size machines; ultimately all portable generators will have this design. The early single breaker cubicle designs had the Siemens 3 phase over current monitoring device, Atlas Copco part number 1310 0734 77 monitor & 1310 0734 78 base. This has since been replaced with a Siemens single phase overcurrent monitoring device, Atlas Copco part number 1310 0742 22.

4. Reason for this bulletin

In certain portable generator applications, the 3 phase monitoring device proved to be too sensitive, causing intermittent and unexpected main breaker tripping. Without compromising any machine or personnel integrity or safety, a decision was made to only monitor 1 phase for over current protection. This change resolved the intermittent nuisance main breaker tripping.

5. Description

SAFETY FIRST! Ensure the machine is not running and all potential for any electrical hazard has been isolated by ensuring the E-Stop button is depressed and by then removing the negative battery lead from the battery post prior to starting any work.

If retrofitting an existing cubicle, the old OL1 device utilizes 3 current transformers. The CT's or donuts are located in the voltage selector switch housing on top of the alternator end. The only CT used in the retro fit will be CT4, identified on Atlas electrical schematic 1310 3200 29 on the T7 winding lead off of the alternator, the other 2 will need to be completely removed as well as their associated wiring.

CAUTION – leaving the unused CT's installed in the voltage selector switch housing and just disconnecting their leads at the over current device can present a serious electrical shock hazard causing machine damage and or bodily injury. Remove the unused CT's and their associated wiring.

Once all devices have been removed and new devices installed and wired according to the electrical schematic, the OL1 device will need to be programmed for proper functionality. The machine will need to be powered up for this, but not started. Reconnect the negative battery lead to the battery post & reset the E-Stop button. Programming steps are as follows:

- Set the OL1 amp trip set point according to the machine size. These set points are identified in the chart on Atlas Copco electrical schematic drawing 1310 3200 29.
- Scroll to the next parameter, Amp Under current, identified by an "I and down arrow". This setting needs to be turned OFF by pressing and holding the down arrow button until "OFF" is displayed.
- Once the two parameter values have been set, press & hold the enter button for 3 seconds until the programming is complete. Once this has completed, the device will default prompt to the following parameters that also need to be set.
- HYST set to 0.1A, press enter to scroll to the next parameter.
- On Delay is set to 0.1sec, press enter to scroll to the next parameter.
- High current delay (I with up arrow DEL) is set to 10secs; press enter to scroll to the next parameter.
- Mem ? is set to no, press enter to scroll to the next parameter.
- Us=on, is set from NC to NO. Press and hold the enter button for three seconds or until all previously mentioned parameters are programmed.
- The device is now fully programmed and the machine is ready for operation.

6. Application

All HOP QAS/CPG portable generators with single breaker cubicles with machine serial number HOP102117 onwards.

7. Required parts

1310 0742 22 OVERCURRENT RELAY: OL1 SINGLE PHASE

8. Planning ordering parts

Part number, vendor and pricing info is in place and available for any spares ordering needs at the NSC.

9. Reimbursement criteria

Fix as fail, warranty reimbursement will be given for any machine still under the terms of standard warranty coverage.

10. Reporting

When filing a warranty claim in the WAnT database, reference HOP ECB 1093 in the failure category.

11. Safety precautions

The operator must employ safe working practices and observe all related local work safety requirements and regulations, also the technical documentation (such as operators manual and safety instructions) has to be followed.

- Maintenance must only be performed by authorized, trained and specialized personnel.
- Before maintenance, repair work, adjustment or any other non-routine checks, stop the equipment, switch off the voltage, press the emergency button and depressurize the compressor/ equipment. In addition, the power insulating switch must be opened and locked or removed.
- Use only the correct tools for maintenance and repair work.
- All maintenance work shall only be undertaken when the machine has cooled down.
- A warning sign bearing a legend such as 'Work in progress; do not start' shall be attached to the starting equipment.
- Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote start equipment.
- For compressors, close the compressor air outlet valve before connecting or disconnecting a pipe. Hydraulic attachments connecting hoses has to be disconnected before service will be provided.
- Pneumatic hoses have to be disconnected before any service/maintenance/repair work is done on Pneumatic driven Machines.
- For generators in parallel and when working on the electrical system, ensure that voltage from other units is not reaching the unit, or that adequate and protection material for working under voltage is used.

- Before removing any pressurized component, effectively isolate the machine from all sources of pressure and relieve the entire system of pressure.
- Scrupulously observe cleanliness during maintenance and repair. Keep dirt away by covering the parts and exposed openings with a clean cloth, paper or tape.
- Make sure that no tools, loose parts or rags are left in or on the machine.
- All regulating and safety devices shall be maintained with due care to ensure that they function properly. They may not be put out of action.
- Always wear the following personal protective equipment: Work clothing, safety shoes, safety goggles, ear protection and safety gloves when there is a cutting risk or a risk for a heat injury.