



GT Refresh

Overview of Product Changes



GMI Sales Awareness 8th October 2020

History of the GT Series

- The original GT Series (blue /yellow) designed in 2006
- Developed as an alternative to traditional GMI 'brick' products (GS500)
- Used in leak detection applications
- GT allows single-handed leak detection – favoured by gas utility engineers in USA
- GT Series is an established product with a strong track record
- GT has been continually improved since launch
- Developments helped improve robustness, functionality and ease of use
 - All of which have been included in the GT Refresh



1. GT Refresh

GT Refresh – Overview of Changes

Cosmetics modernised and now consistent with other GMI products

Instrument upgrades to improve performance

Manufacturing reduce test / calibration time

Quick Op Guide redesigned to improve usability

Handbook completely restructured

Carry case is updated and modernised

3D animation has been created to aid training and product presentation

GT Fire Combined into standard GT Series (removed Scott Safety branding)



GT Refresh – Cosmetics

- Colour now Black / Blue
- Aligns with the GMI portable colour scheme and branding
- Rubber boot (blue) fitted to all instruments as standard
- 'Old' Blue plastic parts available while stocks last



GT Refresh – Instrument Changes

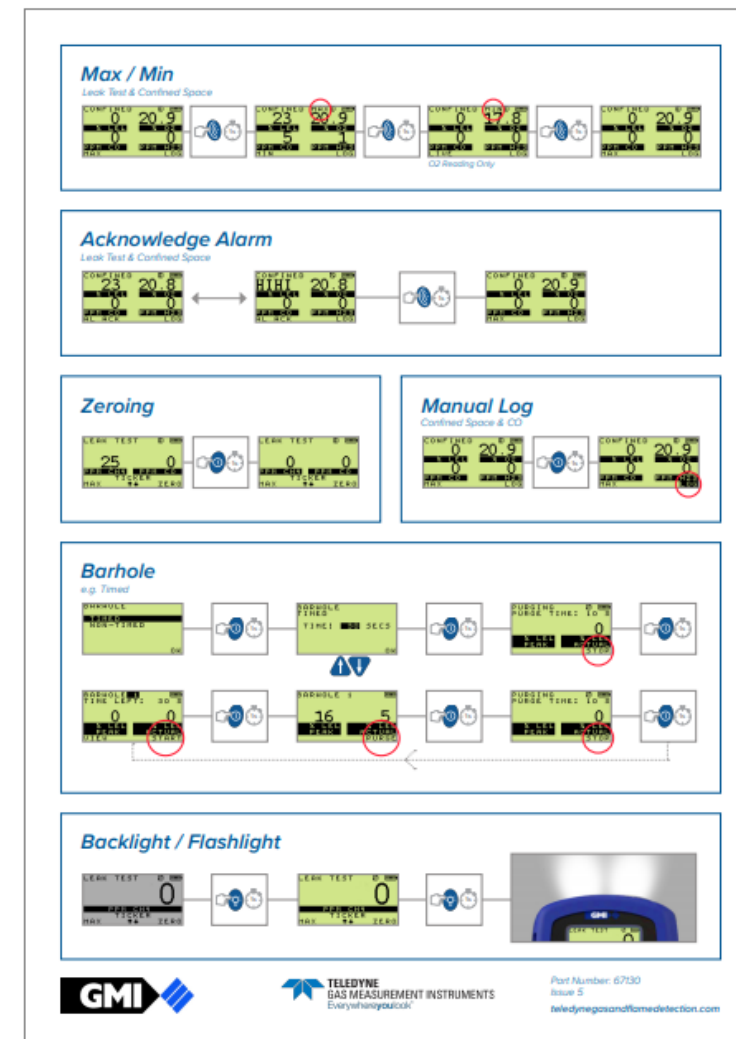
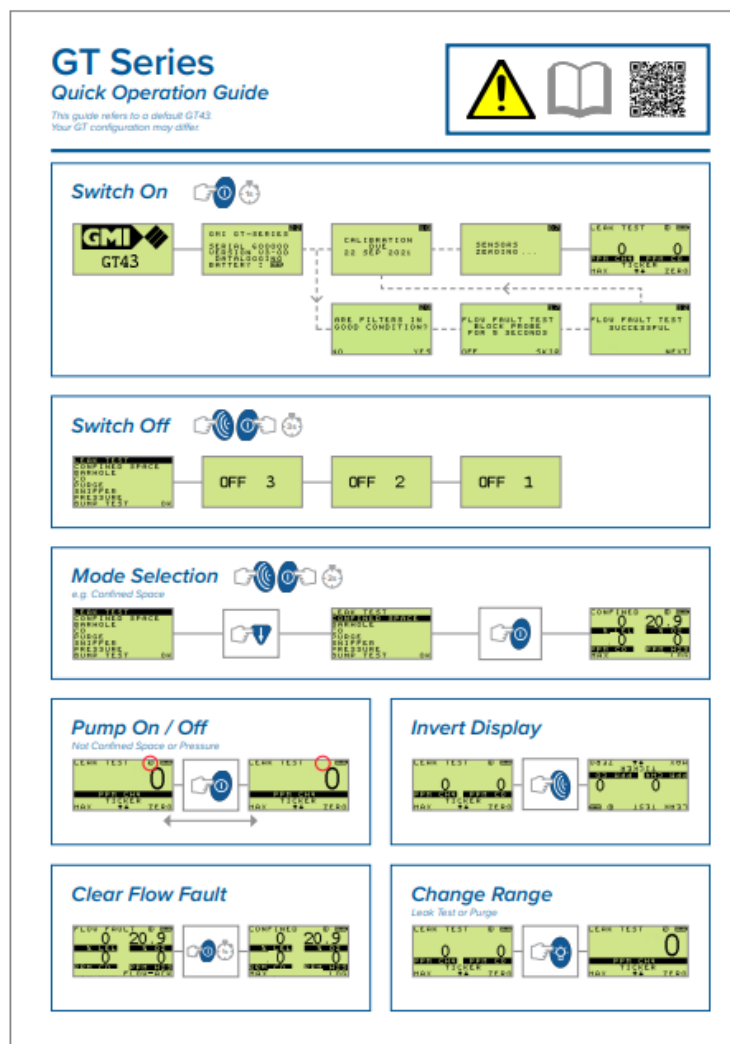
- *O2 Deadband now $\pm 0.5\%$ Vol*
GT now in line with other GMI products
- *Datalogging capacity*
1 week of logging at 1 minute intervals (Assuming 7hrs operation / day)
- *PPM zero limits updated at the end of warm-up*
Will reduce the occurrence of a wrench / spanner at the end of warm-up
- *Figaro Sensor switch off*
The Figaro sensor is switched off when VOL methane is detected
Will improve sensor performance and stability
GS700 learning



GT Refresh – Quick Op Guide

7

- Minimal words
- Image based
- QR code – links to handbook



GT Refresh – Handbook

- Handbook will now be online only
 - Reduces BOM costs
- Completely restructured and rewritten (100 pages removed)
- Two handbooks combined into 1 (CSA / RoW)
- Structure similar to the PS200 handbook
- Easier to translate



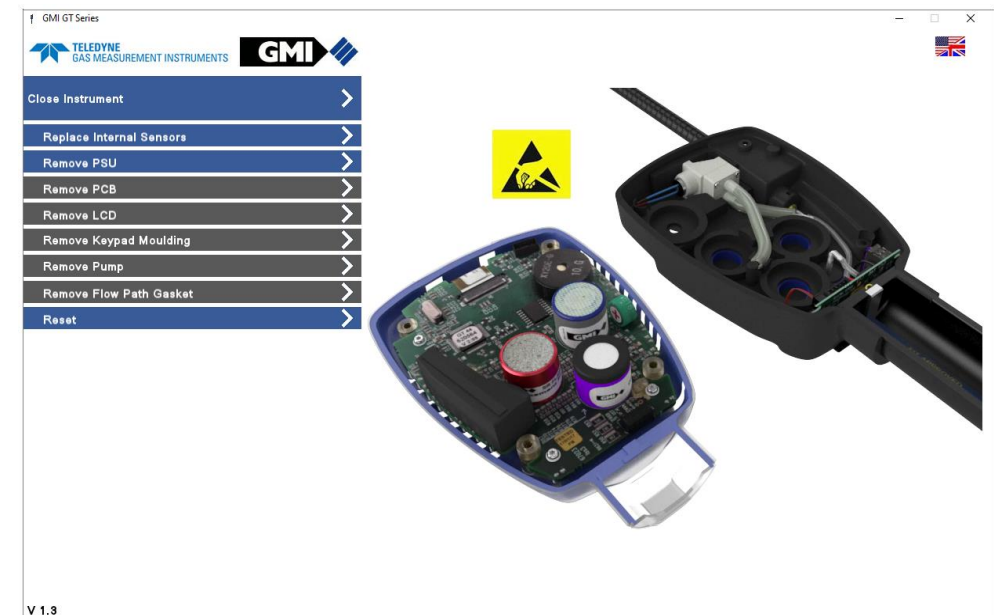
GT Refresh – Carry Case

- Carry case label updated with GMI colour scheme of blue and black
- Clear GMI Teledyne branding
- Updated documentation
 - Calibration certificate
 - Configuration report
 - Shipping list
 - Declaration of conformity
 - Dual Toxic safety information sheet



GT Refresh – 3D Animation

- New 3D animation developed
- Similar structure as the GS700 animation
- Both user and maintenance options available
- Used to compliment instrument training
- All part numbers listed during the animation



GT Refresh – Part Number Updates

Front Cover

PN: 67806

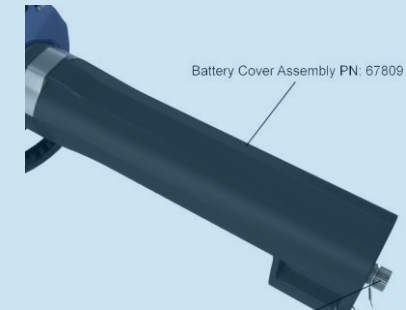
(Was GT Fire part number)



Battery Cover

PN: 67809

(Was GT Fire part number)



Probe and Rear Cover Assembly

PN: 67396

(NEW)



GT Refresh – Software packages available

GT SETUP

- Create a new configuration file / Send to instrument
- View / Edit existing configuration file
- Download instrument configuration
- Version TBD



GT DATALOGGING

- User can view timed, session, bump and calibration logs
- Data is downloaded to the PC
- Version TBD






GT CAL

- Allows the user to calibrate the GT and create certificates
- Stores test results and certificates
- Allows the creation of calibration gas setups (ease of use)
- Version TBD



GT Series Certification

The GT series has the following approvals:

ATEX 	SIRA 05ATEX II 2 G EEx iad IIB T3
	Ex ia T3 C22.2 No.152
	UL 913 Class I, Div 1 Groups C and D.
IECEX	SIR05.0006X Ex ia d IIB T3
<p>This equipment is designed and manufactured to protect against other hazards as defined in paragraph 1.2.7 of Annex II of the ATEX Directive 2014/ 34/ EU.</p>	

All the above certification will now include GT5x (GT Fire) variants.



2. Pricing / Part Numbers / Delivery

GT Series Refresh – Pricing / Ordering / Spares

- Pricing

No change

- Ordering

Order entry system – ready

No change to product part numbers

Internal sales – aware of changes

- Spares

Blue plastic parts available while stocks last (~300)

- Delivery

Black/Blue product will ship from w/c 19th October



3. Marketing

GT Series Refresh – Marketing

Details	Status:
Brochure	Complete – 7 languages
TGFD Website	Homepage banner presence for 2 months post launch
Partner Portal	Will be updated on 19 th October
Outlook Banners	Will be sent to sales leads for distribution / use as applicable
Launch / Awareness Webinars: <ul style="list-style-type: none">- Internal Sales- Sales- Heath (Targeted)	<ul style="list-style-type: none">• Internal Sales / Operations / MK : Delivered on 6th October• Sales – PowerPoint to be distributed 8th October to sales leads for distribution as applicable• Heath – Targeted webinar. To be delivered w/c 19th October 2020
LinkedIn	General post to advertise Content will include video

4. GT Improvements (since launch)

Corrective Actions – Flow Path

Problem:

Pumps failing in the field. Pump line blocked with dust and debris.

Root Cause:

Bulb filtering did not provide a satisfactory seal. It allowed dust/debris particles to bypass the filter. This resulted pump performance degradation or failure.

Corrective action: CN6084/6157

Redesigned bulb assembly to improve filtering to prevent dust/debris entering the flowpath.

Implemented Oct 2012



Old design



New design

Corrective Actions – Flexible probe fails

Problem:

Loose probes, broken probe wires.

Root Cause:

Probe held by a grub screw. Grub screw is not sufficient to hold the probe with repeated movement. Causes the probe to come loose and can cause the internal wires to break.

Correction:

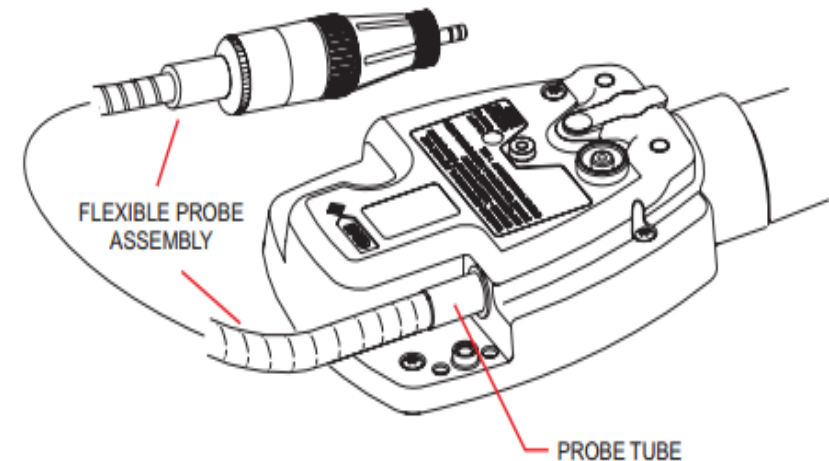
As part of maintenance regime probe glued in position on existing instruments

Corrective action: CN6363/6381

Probe glued in position on new builds.

A new spare rear assembly made with probe glued in position.

Implemented March 2014



Corrective Actions - PSU

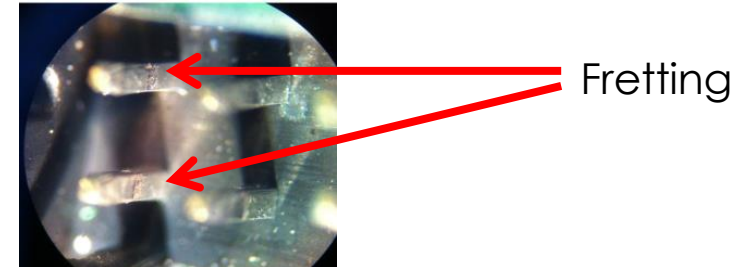
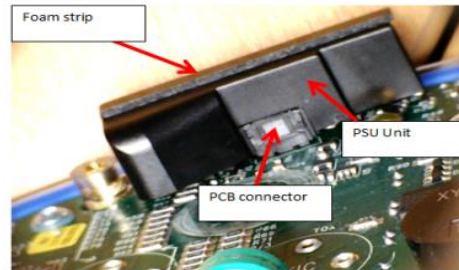
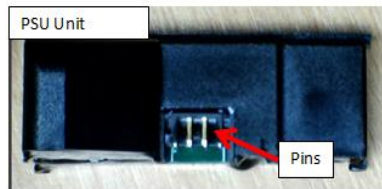
Problem:

Various power failures would appear or disappear depending how tightly the housings were pressed or screwed together.

Root Cause:

Signs of fretting between mating connectors of PSU.

Pump causing movements/vibrations resulting in fretting on tin plated contacts



Correction:

PSU contact cleaning process implemented

Corrective action: CN6366

Gold connectors less prone to fretting. PSU connectors updated to gold plated parts.
Implemented foam strip to immobilise the PSU.

Implemented Sep 2014

Corrective Actions – Flammable gas range fails

Problem:

Bead Fault/Wrench on LEL range. The failure would appear or disappear depending how strongly the housings were pressed or screwed together.

Root Cause:

Brass insert in position but is not needed. Brass insert was flush and could result in a short circuit across PCB tracks when the instrument is compressed/assembled.

The tracks at risk of being shorted are "BEAD SENSE" to GND. This would imply the sensor is faulty where it is not.

Corrective action: CN6390

Removed insert at position shown on below. **Implemented May 2014**



Corrective Actions – Pump fails

Problem:

Variation in pump performance.

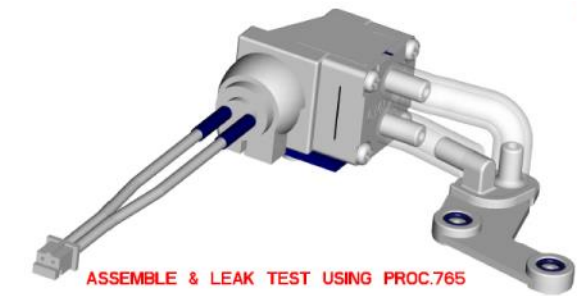
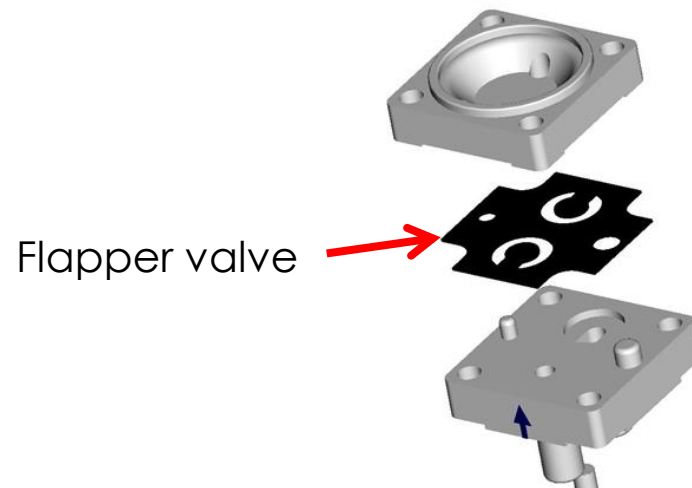
Root Cause:

Rubber pump flapper valve is chlorinated. The chlorination is intended to make the rubber more robust. However, the chlorination process is not easily controlled, results in variation in the rubber flexibility affecting the pump performance.

Corrective action:

- Pump flapper valve changed to unchlorinated material. Long term testing showed no deterioration in pump performance.
- Assembly methods reviewed.
- Production visual management tools implemented to monitor pump yield.

Implemented June 2014



Questions