GRAM ACCOUNT AND MACHINE HEALTH FOR THE GOLD AND JEWELLERY INDUSTRY

Where the grams went. What every machine is telling you.

CARI-Gold reads the weighings on your job cards and the machine records you load. For cast jobs it shows the grams not accounted for at each weighed step. For any of the fifteen machine kinds, load its records to see the result; where a possible fault is found, the page names it.

FOR CAST JOBS

The gram account

Every cast job in three steps. Grams not accounted for at each; melt and pour and finishing against a usual range.

Entries to check, marked

Weighings that do not add up are marked separately from steps above their usual range.

Jobs, months, value

Totals per job and month, in grams and at the rate you type. Files for accounts.

FOR MACHINE RECORDS · AND WHERE THE TWO MEET

The machine floor

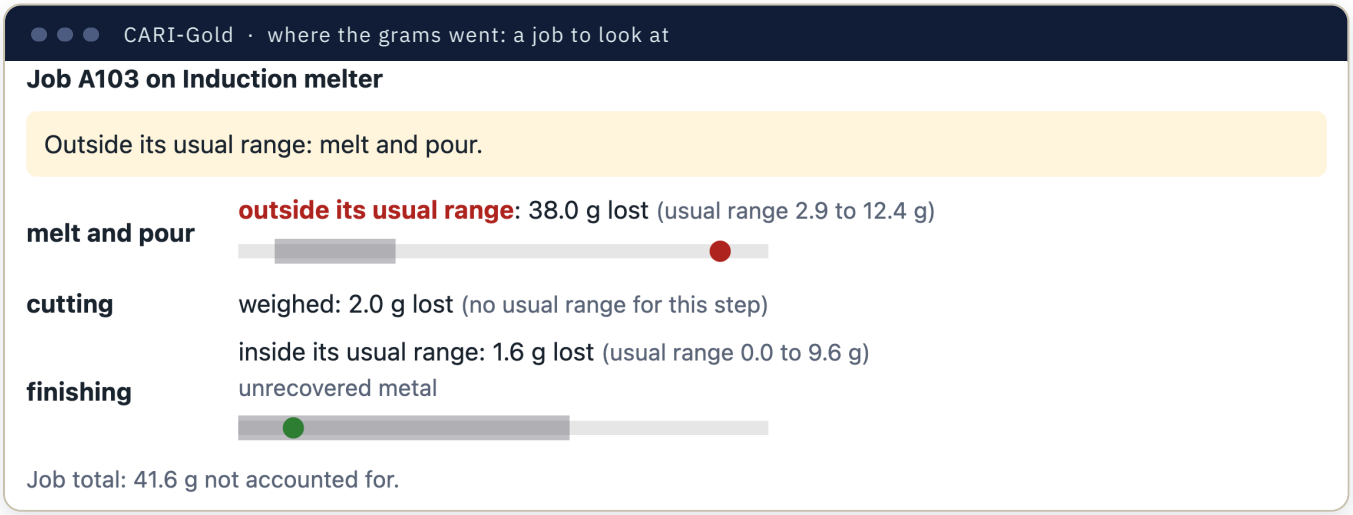
Fifteen kinds of machine in one table. One row and one plain answer for each.

Faults named, urgency graded

A named fault: Fix at next stop. A change with no fault named: Keep watching.

Fault next to grams

A fault named on a machine of a kind linked to the flagged step appears beside the grams. A link, not a cause.



The gram account of one job. Dot: grams not accounted for at the step. Band: the usual range. Green: inside. Red: above. Amber: below. Cutting: grams only.

Built for jewellery workshops and factories, casting houses, refineries, bullion and mints, and chain makers. No new sensors and no new network: CARI-Gold runs on your own PC from the records you load, and never writes to a machine. Machine records alone are enough for a floor walkthrough, so a refinery or a mint can start with the floor page.

THE WHOLE FLOOR

Fifteen kinds of machine, each with its findings named.

START WITH A WALKTHROUGH ON YOUR OWN PC

Bring cast-job weighings, or a good run and a run to review for each machine you choose. We read the page for the records you bring. Your records stay with you.

WRITE TO US

contact@carimo.tech
carimotech.com

One of four answers for every machine

ANSWER	WHAT IT MEANS	URGENCY GRADE
A reason to look	A possible fault is named, with where to look.	**Fix at next stop**
Change seen	A change from the machine's own normal; no fault is named.	**Keep watching**
Could not judge	The page identifies a missing or invalid reading, or a problem with the records.	
Nothing raised	No fault or change was flagged in these records.	

The findings for each machine

MACHINE	WHAT THE FLOOR PAGE CAN SHOW
1 **Induction melter**	lining worn; capacitor bank fault; coil cooling water flow low; ground leak current high; melt taken hotter than its target; dip probe reading low.
2 **Continuous caster**	cooling-water flow low; die worn; die cooling impaired; withdrawal force up; protective gas low; melt held hot / held cold; strand slipping in the drive; melt level low; withdrawal programme differs from the recipe.
3 **Investment mixer**	vacuum pump weak; vacuum leak.
4 **Burnout furnace**	heat loss high; heating power low; thermocouple failed; firing did not follow the approved programme; control fault; heavier load than usual; less heat needed than usual (change seen).
5 **Vacuum caster**	pump slow; slow pump-down; leak; damp flask; flask colder than the recipe; argon below the recipe; melt poured colder than the recipe.
6 **Rolling mill**	roll eccentricity; stand less stiff; roll gap opened.
7 **Annealing furnace**	work thermocouple drifting from the reference.
8 **Enamel kiln**	thermocouple failed; thermocouple slow; more heat lost; heating power low; heater switch stuck; programme run is not the approved one.
9 **CNC engraving**	chatter; loose workholding; front spindle bearing worn; ball-screw backlash; axis position loop poorly tuned; chipped tool; worn tool still cutting; tools wearing out fast; spindle or holder out of balance; tool run-out.
10 **Laser marker**	laser source weak; laser output above its setting; scanner drifting; work height wrong; window or lens dirty; mark not legible.
11 **Diamond laser cutter**	pump diodes ageing; laser cannot reach its setting; chiller flow low; stage error; fume extraction low; Q-switch unstable; optics dirty; beam quality or focus to check.
12 **Electro-polisher**	voltage set low; voltage set high; bath hotter than usual; bath cold; bath metal-loaded, or a poor contact.
13 **Mass finisher**	media worn; rinse water blocked; drive weak; drive set high; bowl overloaded.
14 **Plating bath**	contact resistance up at the rack or busbar; anode passivation; bath hotter / colder than its set point; filter loop flow low; bath level low; free acid high.
15 **Gold refining**	scrubber performance down; slow or incomplete dissolving; scrubber fan pressure low; scrubber pH low; scrubber liquid flow low; too little nitric acid in the mix; vessel colder than its set point; agitator current low.

Every finding with what to check, and the records each machine needs: technical annexe, pages 5 to 8.