



VERIFICATION OF THE GROSS MASS OF PACKED CONTAINERS BY SEA

UK National FAQ 1 June 2016

This document serves as a companion to, and expands upon, the Industry FAQ on this subject published in conjunction with TT Club, ICHCA International Limited, World Shipping Council and ICHCA International Limited, World Shipping Council and Global Shippers' Forum and Global Shipper' Forum, and provides information on the UK approach to these issues

Contents

UK National FAQ 22 nd March 2016	3
Section A - General	3
Industry FAQ A6 - The requirement is for accurate gross mass; is there a margin of error defined for this 'accuracy'?.....	5
Industry FAQ A9 – Will governments apply an enforcement tolerance threshold for determining compliance with the SOLAS requirements?.....	6
Industry FAQ A10 – How will this be enforced and what will be the level of penalties imposed by an Administration if a container is delivered by a shipper to a carrier with a mis-declared gross mass or if a shipper does not provide the verified gross mass for a packed container?	6
Industry FAQ A12 - Should a 'pilot' scheme be set up by a carrier, shippers, port and competent authority to test the system?	7
Section B – Method 1.....	8
Industry FAQ B1 - Where can we find a list of publically available weighbridges? -	8
Industry FAQ B3 - Where a third party (including potentially a port terminal) starts weighing freight containers (i.e. under Method 1) will it have to become a 'verified weigher' in order to issue a valid weight ticket?	8
Industry FAQ B4 - Port container handling equipment generally has onboard weighing technology ('PLCs') typically accurate to within 5% and designed to prevent overloading of the equipment. If such data are integrated into other relevant systems (including those used for ship stowage planning) is this likely to be acceptable for determining verified gross mass under Method 1?.....	9
Section C: Method 2	10
General questions.....	12
Annex 1	14
Examination and Testing of Automated Weighing Instruments (AWI)(Equipment) for the Verification of Gross Mass of Shipping Containers - A guide for UK organisations.....	14
1. Introduction.....	14
2. Definitions	14
3. Non-trade use.....	16
4. Automated weighing instruments.....	17
4.1. Maximum Permissible Error (automated weighing instrument)	17
4.2. Certification on installation for an automated weighing instrument	17
4.3. Examination, calibration and maintenance (automated weighing instrument).....	18
4.4. Maintenance	18
4.5. Competent Person(s)	18
4.6. Record keeping – examination and calibration.....	19
4.7. Record keeping – Verified Gross Mass Data	19
4.8. Defects	19

Annex 2	20
Weighbridges – Guidance document developed by Ports, Skills and Safety for UK Ports	20
1.1. Weighbridge operation in ports.....	20
1.2. Weigh and subtract - calculating a VGM by subtracting vehicle mass	20
Annex 3	22
UK Method 2 - Weighing equipment requirements	22

UK National FAQs 3rd May 2016

The below is a summary of a question and answer session held between the MCA and members of industry on the 22nd March 2016 and post meeting additions. We hope that the information provided below will be of use to those who were unable to be present, in assisting with the implementation of the upcoming amendments to SOLAS VI Regulation 2

The questions and answers below refer to and build upon the information given in the Industry FAQ document compiled by the MCA, TT Club, World Shipping Council, ICHCA International Limited and Global Shippers forum. You can download this document here; http://www.worldshipping.org/industry-issues/safety/faqs/SOLAS_VGM_Industry_FAQs_Dec_2015_US_letter_WEB.pdf

Where appropriate and to assist the reader, the Industry Question and paragraph number are provided before the UK Q &A.

Section A - General

Q. Will the regulation come into force on 1st July 2016 or could it be delayed? In recent weeks, there have been a number of press articles suggesting that some countries would be seeking a one year delay.

A. IMO explained that the SOLAS provides for objections to be raised before the adoption of amendments, and no objections had been made by any Administration before the deadline on 1st January 2016. Following this deadline there is a six month window before the regulation comes into force.

There remains an option for any member state to write to the Secretary General of the IMO and request a delay of implementation in that state for up to 12 months. This option remains open up until one day before the deadline. It was noted that no Administration had written to the Secretary General as at 28 April.

Q. It was discussed how a container would be considered that had been packed for shipping with an intended loading date prior to 1st July 2016 but, for whatever operational reason, could not make the intended sailing. The container was then required to be loaded aboard a vessel after 1st July, would that container then require a VGM?

A. Strictly speaking, the regulation would apply, however it was noted that the MCA (UK) would seek to enforce the SOLAS regulations with a “light touch” for a period of three months from 1st July 2016 in order to permit any such containers to be shipped and allow a smooth transition. This would also apply to transhipped containers, as well as containers presented prior to 1st July where the intended date of original export loading was prior to 1st July.

Q. It was asked whether this position was internationally agreed.

A. It was confirmed at this time that this was solely the UK position. However, following this session the updated FAQ’s and comments would be circulated amongst other member states and NGOs.

Q. It was asked whether the regulator would be checking on carriers for compliance to the regulations.

A. It was noted that the MCA as regulator in the UK would have the power to check whether carriers were compliant with the SOLAS regulations.

Q. It was raised as to whether the checking of SOLAS VGM compliance could or would become part of the port state checks and, if so, what powers could they exert if non-compliance was identified?

For example, if a container was loaded on board a ship in the UK destined for Japan, then called in Germany, if a German port state inspector boarded the ship and discovered that the container loaded in the UK was not compliant, could the inspector hold the container in Germany? Or would the inspector only be interested in checking what was actually being loaded in Germany?

A. Since this regulation relates to export containers only, there would be no direct requirement for the German inspector to make such enquiries. It has already been suggested that this type of issue is raised at the next meeting on the Paris MOU. However, it was noted that there was no stakeholder interest to disrupt trade.

Q. Where a terminal tractor was carrying two containers on top of each other would both be considered Ro-Ro and therefore fall outside of the SOLAS regulation?

A. Yes, if they were “driven” on to the ship then they would fall outside of the SOLAS regulation. Effectively, the VGM is required at the point of lifting the packed container onto a ship type regulated under the SOLAS VI amendment. Since MAFIs and cassettes are driven on and off Ro-Ros on short international voyages the UK interpretation is that they are not subject to the SOLAS VI amendment however the carrier (ship) would have to ensure the carriage of such units is allowed under the ship’s cargo securing manual.

Q Can the shipper contract with third party service providers to obtain VGM either using Method 1 or Method 2?

A. As a general comment the Shipper remains legally liable under the regulation to obtain the VGM. Therefore such operational tasks could be contracted out, however it was recommended that any shipper doing so should ensure that they perform due diligence on the 3rd party service provider to ensure that they are compliant with the regulation and are able to carry out the services. Ultimately, the shipper remains responsible that an accurate VGM is obtained.

Organisations should refer to the draft MSC Circular “Due diligence checklist in identifying providers of CTU-related services”, <https://www.gov.uk/government/publications/due-diligence-checklist-in-identifying-providers-of-ctu-related-services> which is expected to be adopted by the IMO at MSC 96 in May 2016. Whilst this document is not directly related to the provisions of the SOLAS amendments it does provide some relevant guidance in terms of performing due diligence. MGN 534, Annex 2, sections A2.3 and A2.4 provides a useful checklist that is applicable equally to Method 1 and Method 2 service providers.

Q. Should the 3rd party service provider simply become accredited to comply directly with Method 1 and/ or Method 2? If so what would they require?

A.No, if the 3rd party uses Method 1 to weigh the packed container, they do not need to be approved by the MCA. However the weighing equipment must be in compliance with MCA/NMRO standards.

The shipper is ultimately responsible for obtaining the VGM by whichever method is chosen. The use of Method 2 is a commercial decision, including which party, shipper or 3rd party, seeks to become a MCA approved Method 2 user. Both options are possible.

Q. Do empty containers need to be weighed?

A. No, refer to MSC Circular 1475 paragraph 12.1. Stakeholders are not required to weigh empty containers, but are encouraged to have robust processes in place to ensure that empty containers are in fact empty.

Tank containers were considered and whether empty dirty was considered empty. It was noted that empty dirty tank containers would need to be weighed and VGM provided.

Where shipper-owned containers are concerned, the position and responsibilities appear clear. When the shipping line's own containers are concerned, in those cases the carrier would be responsible for having robust processes in place to address this issue.

Q. Do break bulk and project cargoes need to be taken into account when planning ship stability?

A. The SOLAS Regulations apply to containerised cargo only. Thus, where cargo is stowed on a single flat rack then SOLAS Regulations would require a VGM. Where a number of flat racks are used to create a false deck for large items of cargo to be stowed, then the SOLAS Regulations in relation to VGM would not be applicable. Of course, ship planning should take account of the tare mass of any such flat racks used, together with the mass of the cargo itself.

Industry FAQ A6 - The requirement is for accurate gross mass; is there a margin of error defined for this 'accuracy'?

UK Position;

General comment was made that accuracy was the target.

It was noted that non-automatic weighing instruments (NAWI), e.g. static weighbridges, would be considered differently than automatic [catch] weighing instruments (ACWI), e.g. dynamic load sensors on lifting equipment.

NAWI would need to be certified by trading standards, be type approved and would need to be regularly calibrated in line with the relevant regulation.

ACWI would need to be certified upon installation by either Trading Standards or the manufacturer/installer, but may not fall under the jurisdiction of trading standards for future calibration or certification. This equipment, once installed and initially certified, would fall under the jurisdiction of the MCA as regulator. The expectation after installation would be for the owner/ operator of that equipment to have a QMS in place to ensure it remained "calibrated/ certified" (fit for purpose).

The principle of non-trade use was discussed. It was noted that verifying the gross mass of containers under the SOLAS Regulations was considered non-trade use, since any charge is for the process only. However, it was further noted that the use of NAWI may fall under the jurisdiction of Trading Standards since such equipment is used to establish weight for broader trade purposes. It was recommended that operators of such equipment contact their local Trading Standards for further clarification

Industry FAQ A9 – Will governments apply an enforcement tolerance threshold for determining compliance with the SOLAS requirements?

The UK has articulated $\pm 5\%$ or $\pm 500\text{kgs}$ enforcement tolerance strictly for guidance purposes only. It was noted that this will be used and considered on a case by case basis. It was also considered that where certain equipment was noted to be capable of $\pm 5\%$ accuracy, then operators were effectively on the edge of acceptability and that taking such a position was not recommended or feasible from an operational perspective. It was also stressed that government enforcement threshold should not be confused with the issue of accuracy and the underlying issue of the VGM being as accurate as possible (see also Method 1 and Method 2).

Industry FAQ A10 – How will this be enforced and what will be the level of penalties imposed by an Administration if a container is delivered by a shipper to a carrier with a mis-declared gross mass or if a shipper does not provide the verified gross mass for a packed container?

It was outlined that in the UK, any fines or penalties in connection with non-compliance under the SOLAS Regulations would be considered under the existing framework of the Merchant Shipping (Carriage of Cargoes) Regulations 1999. These regulations provide for:-

*Unlimited fines.

*Up to 2 year's imprisonment.

Q. Are operators throughout the supply chain (carriers and terminals) obligated to “whistle blow” where non-compliant shippers are identified through either check weighing or through provision of other services.

A. There is no obligation under the SOLAS Regulation to whistle blow. However there may be a circumstances when it is appropriate to do so. It was considered that each case would have to be considered and a judgement call made, perhaps where there was a repeat offender or there was a large variation between the declared VGM and the check-weighing.

It was discussed that the terminal and carrier were not obligated to check-weigh, therefore such issues may not arise.

It was also considered that if a service is provided or a check was made, then knowledge may attract liability if no remedial action was taken. Obviously, where the gross mass results in the container being ‘overweight’ (for road or rail carriage), or ‘overloaded’ (exceeding the rated capability of the unit), liability may attach for any stakeholder allowing the unit to continue in the supply chain.

Q. Where a discrepancy is discovered either through the provision of a weighing service or through spot checking then, under the SOLAS regulation, the terminal is able to use the newly verified weight as the VGM, replacing the original value, therefore would the MCA/ regulator be aware of any non-compliance, unless the terminal did whistle blow?

A. If a large variation is found between the VGM provided by the shipper and a VGM obtained by a subsequent weighing by the terminal or elsewhere, the latter VGM may be used in the stow plan and it is recommended that there should be dialogue between the shipper, terminal and carrier in such situations. In such a case, the container may be loaded and there is no requirement to notify the MCA/ regulator. However, the MCA would be empowered to perform checks on documentation which would highlight non-compliances on the shippers' part. The importance of accurate and detailed record keeping was highlighted.

Q. How would the MCA satisfy itself that compliance was being achieved?

A. The MCA would perform audit checks of documentation and procedures. Initially they may request to audit the document trail, for example, of 10 containers. From the information provided the MCA would be empowered, if required, to trace back to the shipper and interrogate their procedures and calculations. It was also noted that the MCA may perform random spot checks. Whilst not confirmed, it was considered that there may be some merit in joining such checks to the existing dangerous goods inspections which the MCA carry out.

Q. Theoretically, could fines be imposed on all three stakeholders (shipper, terminal and carrier)?

A. Yes, the MCA as regulator could impose fines on all three, if required.

Industry FAQ A12 - Should a 'pilot' scheme be set up by a carrier, shippers, port and competent authority to test the system?

A. The MCA recognises that this will be an evolving situation. There will be no formal pilot scheme, however the MCA will continue to work with industry to achieve compliance.

Section B – Method 1

Industry FAQ B1 - Where can we find a list of publically available weighbridges? -

A. This is available on the [.gov.uk](http://www.gov.uk) website. It was generally considered that, in reality, this is not an exhaustive list and operators of such equipment were under no obligation to feature on the list. It was noted that there were other websites who held directories, however they were neither frequently updated nor reliable.

Industry FAQ B3 - Where a third party (including potentially a port terminal) starts weighing freight containers (i.e. under Method 1) will it have to become a 'verified weigher' in order to issue a valid weight ticket?

A. No, the term “verified weigher” is only used in MGN534 in the context of Method 2. There is no requirement for Method 1 users to become approved by the MCA but this situation may lead to some further commercial and contractual considerations to ensure that the shippers’ position is protected. Reference is again made to the draft MSC Circular on due diligence checklist <https://www.gov.uk/government/publications/due-diligence-checklist-in-identifying-providers-of-ctu-related-services> for service providers.

Q. In relation to the weight ticket, is there a prescribed format in terms of documentation?

A. There is no prescribed format. MSC 1475 at paragraph 6 states that the shipper must communicate the VGM within a shipping document, but is silent on exactly which type of document must be used. There is an expectation that the value entered as VGM is specifically denoted as VGM to ensure that it is absolutely clear.

It was noted that if paper documentation was used, the Freight Transport Association (FTA) and GSF had created a stamp which could be used on any documentation retrospectively to denote clearly the VGM value and responsible entity.

Q: The MCA posed a question to the shipping lines, how are you expecting to receive the VGM data?

A The VGM data is likely to be received electronically. To that end, carriers will be able to receive VGM EDI messages (e.g. VERMAS or 304), VGM information via carrier portals or third party portals; additional transmission methods may be available. It is understood that VGM information can be provided using tablets, laptops or mobile phones so existing communication technologies may be used by shippers for this purpose. In addition, there are two main port community systems in the UK and both are currently looking to develop their message standards to incorporate a VGM field. Other EDI message standards are similarly being revised. It was noted that most operations in the UK are now paperless.

It was noted that if a paper document is used to avoid any confusion, the VGM value should be specifically denoted as being the VGM.

Q. Will the VGM need to be entered onto the face of the bill of lading?

A. SOLAS does not require VGM to be identified on the bill of lading. It was noted that the weight shown on the face of a bill of lading is primarily linked to the contractual liability regime and therefore relates to the weight of the cargo alone. Thus, VGM being the total weight of the packed container is necessarily a different value.

For containers containing consolidated cargoes, there may be several bills of lading. Equally, there are situations where multiple containers are consigned under a single ocean bill of lading. While there may be

merit in stipulating VGM on the face of the bill of lading (for example as part of the cargo description), this is a matter for the commercial parties.

Q. Where a shipper exporting scrap metal is concerned, typically the weight of the vehicle and empty container is established at the "in" gate. The container is then loaded and the container and vehicle weighed again on exit to establish a cargo weight. Where this practice exists, could the shipper then simply add the tare weight of the container to the known cargo weight under Method 1?

A. It was confirmed that such circumstances would fall under Method 1.

Note: In the UK Method 1 users are not required to register with the MCA, however shippers must be able upon request by the MCA or other body, to provide the following;

- Evidence that the weighing equipment has been supplied/maintained for the purpose of determining the VGM of a packed container and is capable of producing a 'ticket' (physical or electronic record). Each 'ticket' must include the container number, the VGM of the container, and be supported by procedures for, and records of, any calculations which have been made. If this information is produced as an electronic record, it is essential itemised records are able to be provided for audit purposes without delay and able to be produced as a paper document, if requested.
- Records kept of maintenance and verification (calibration) procedures, including any corrective / remedial actions taken.

Industry FAQ B4 - Port container handling equipment generally has onboard weighing technology ('PLCs') typically accurate to within 5% and designed to prevent overloading of the equipment. If such data are integrated into other relevant systems (including those used for ship stowage planning) is this likely to be acceptable for determining verified gross mass under Method 1?

Q. In the UK will lifting equipment modified with load cells be an acceptable means of weighing through Method 1?

A. Yes, through industry consultation the MCA have provided for two options:-

±2% above 20MT or ±400kgs below 20MT

±2% above 15MT or ±300kgs below 15MT

The MCA leaves the choice as to which of the two is to be used as a commercial one, although recommends adoption of option 2. The operator will need to be able to demonstrate certification, calibration and maintenance procedures to attain approval.

As this equipment is considered automated (ACWI), it will not fall under the jurisdiction of Trading Standards. The MCA will therefore regulate the use of this equipment and when auditing operators will look to interrogate their Quality Management Systems (QMS's) to determine compliance.

Port Skills and Safety with the assistance of member UK port stakeholders, have coordinated and developed a standard operating procedure (S.O.P) in relation to this type of equipment, which will highlight the minimum expected standards for the compliant operation of this equipment. The MCA believes that this SOP will provide compliance to the SOLAS regulations. See Annex 1 of this document.

Note: Annex 2 of this document provides a copy of Weighbridges – Guidance document developed by Ports, Skills and Safety for UK Ports which may also offer guidance to other industry sectors

Section C: Method 2

UK implementation of Method 2 was discussed in general terms. It was noted that it is not anticipated that there would be site visits by the regulator in order to certify a shipper to use Method 2. However, the regulator may carry out spot checks in addition to any enforcement actions.

It was indicated that the application process would be a paper audit and that applicants would submit the completed form to the MCA for assessment. Organisations may provide consultancy services to assist in the process; FTA/GSF confirmed their intention to offer such a service.

The details of the application process will be given on the MCA website.

It was noted that the cost of assessment would be based on the standard hourly rate of the MCA and could be expected to be in the order of UK £100.00.

It was again noted that applicants under Method 2 may, in addition to shippers who are traders (buyers/sellers of cargo), manufacturers and others with an ownership interest in the cargo, including freight forwarders and other 3rd party service providers. In this way, it may be possible for a Method 2 certified entity identified as 'shipper' on the ocean bill of lading to rely on information provided by other Method 2 certified entities. The relevant procedures will need to demonstrate the due diligence processes undertaken between the parties. Annex 3 of this document provides further guidance on the requirements for Method 2 weighing equipment.

Q. Will there be a publically available database identifying all certified Method 2 shippers?

A. Yes, the MCA will host a database/ spreadsheet online which will identify all certified Method 2 shippers.

There is a question as to whether all shippers would be content to have their details made publically available in this way, this would need to be addressed beforehand however, the intention would be to host a database or spreadsheet.

Q. In practice, how will the electronic signature work and are the MCA looking for an individual's name or that of the operator?

A. The SOLAS Regulation requires a signature. The MCA as regulator is looking for industry to establish a procedure to demonstrate that a "signature equivalent" has been used and can be provided on request. Given the MCA would be prosecuting the organisation rather than the individual, it was suggested that the electronic signature could therefore be the name of the business/ organisation rather than the individual.

Q. If I have an operation which is certified for Method 2 weighing and then wish to add another location to my certification, how would that work in practice?

A. In principle, a separate application would need to be made for each new location.

It was suggested by Chris Welsh (GSF) that there may be an opportunity to amend the application form to denote that ALL locations/ operations operating to the same procedural standards are fully compliant and therefore all would be certified in any event. It was pointed out that this could create an additional burden on shippers and unless there was a substantive change, for example shippers' company name changed etc, was not necessary. The MCA believed that it was the responsibility of the shipper approved under Method 2 to ensure that common written procedures are evidenced and used at each new site and the approval document updated as appropriate or when renewed.

Following the issuance on a MCA approval additional sites may be added to an existing approval on the basis that the procedures used for determining the VGM of the packed container are substantially the same

as that declared for the principal site. A declaration to this effect should be sent to container.weight@mca.gov.uk, and a fee may be charged for this service.

Q. Under Method 2, there is a likelihood that the packer and the shipper may be two different entities. In such circumstances, would the shipper still be the ultimately liable party?

A. Yes, that is what the regulation states. It is expected that the shipper named on the ocean bill of lading would perform due diligence on the 3rd party and potentially impose contractual obligations to ensure compliance.

General questions.

Q. When will UK ports/ terminals clarify whether they are to offer weighing services and if they are going to, exactly what services and at what cost?

A. Hutchinson will be offering a service, FAQ to be published next week.

A. DPW will be offering a service and have already written to all customers. DPW will accept containers with and without VGM, will await the shipper's confirmation of the same and, if required, will be able to weigh and verify at a cost.

A. Peel Ports will be offering a service, FAQ document sent out to customers last week.

A. ACT will have a service available, already written to all customers.

A. ABP will have a service available.

A. Port of Tyne will have a service available, weighing equipment being installed.

A. Bristol will have a service available.

A. Grangemouth will have access to an off-site service.

A. Greenock will have access to an off-site service.

No schedule of costs was discussed as this was a commercial matter, so it was outside the scope of this meeting.

It was suggested that where a number of ports / terminals offer different procedures or levels of service this could lead to further confusion for shippers.

Q. There is a need to establish which ports / terminals are not going to offer weighing services.

A. It was agreed that it would be helpful to shippers and other stakeholders to establish if any other ports / terminals are going to offer weighing services. It was also the case that the above list was only compiled from those who were present at the meeting and there should be an opportunity for others not present to add to the list.

UK Port Trade bodies will encourage their members not mentioned above to publicise, if appropriate what, if any, service they may be offering

Q. How should the vehicle mass / running order be established where a weighbridge is used to obtain VGM under Method 1?

A. Clearly, an accurate figure is critical in ensuring that the correct weight value can be deducted to provide the VGM of the packed container. However, this essentially falls as a commercial issue and not one for the Regulator to determine. It would be expected that weighbridge providers set out auditable procedures that take into account the potential variability of vehicle mass/running order value and other operational issues. From a regulatory perspective, liability remains with the shipper, who should perform due diligence.

Q. Retention of records. For how long should VGM records be retained?

A All parties (shippers, carriers and ports/terminals) are urged to retain all appropriate records, e.g. for shippers Method 1 or 2 results, for at least three months following the conclusion of each packed container movement, this only applies to VGM records. Reference should be made to any other relevant national requirements (e.g. HM Revenue and Customs) and the need to support any investigation that might be undertaken into an individual or series of container movements for a reasonable period in

relation to each packed container movement. Inevitably, contractual terms will need to oblige 3rd party service providers to retain records in a similar manner.

Annex 1

Examination and Testing of Automated Weighing Instruments (AWI) (Equipment) for the Verification of Gross Mass of Shipping Containers - A guide for UK organisations

1. Introduction

If you are operating Weighing Equipment for the Verification of Gross Mass of Shipping Containers or if you have control of the use of such equipment, you must make sure that the equipment is:

- safe¹
- certified on installation
- calibrated
- examined
- maintained

This guidance provides advice on the options you have for certification on installation; calibration; examination and maintenance. It does not address the operational safety of such equipment.

The guidance has been approved by the MCA. Operators following it will normally be doing enough to meet the requirements of the MCA with respect to provision of weighing equipment for the Verification of Gross Mass of Containers in compliance with the relevant parts of SOLAS Chapter VI

2. Definitions

Accuracy

SOLAS VI Regulation 2 provides that verified gross mass shall be obtained under both Method 1 and 2 by using weighing equipment that meets the applicable accuracy standards and requirements in the State in which the equipment is being used. Those national standards and requirements determine the acceptable level of accuracy of the weighing equipment used. There is no provision in SOLAS for any margin of error; this is a physical weighing requirement, not a system of estimation.

¹ The main safety requirements for you as a 'duty holder' are in the Health and Safety at Work etc. Act 1974, Provision and Use of Work Equipment Regulations 1998 (PUWER) and the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER). Other regulations may also apply

Automatic weighing instrument (AWI)	an automatic weighing instrument is a weighing instrument that determines the mass without the intervention of an operator during the weighing process. An instrument capable of performing consecutive weighing cycles without any intervention of an operator is always regarded to be an AWI. If an instrument needs the intervention of an operator, it is regarded to be a NAWI only if the operator is required to determine or verify the weighing result.
Container Weight Range	for calculation purposes the assumption is that the loaded container weight range is between 2 tonnes and 40 tonnes
Equipment supplier	the manufacturer or supplier of the equipment to be used in the verification of gross mass
Load cells or other approved equipment	a device fitted to lifting equipment for purposes of obtaining verified gross mass; typically an automatic weighing instrument includes cells, hydraulic pressure sensors or strain gauges
MCA Enforcement Tolerance	operational margin between the shipper declared verified gross mass and the value of +/- 500kg or +/-5% whichever is the greater, which is for enforcement purposes only
Non-automatic weighing instrument (NAWI)	<p>an instrument that needs the intervention of an operator to determine or verify the weighing result:</p> <p>determining the weighing result includes any intelligent action of the operator that affects the result, such as deciding when an indication is stable or adjusting the weight of the weighed product</p> <p>verifying the weighing result means making a decision regarding the acceptance of each weighing result on observing the indication</p> <p>the weighing process allows the operator to take an action which influences the weighing result in the case where the weighing result is not acceptable</p>
Provider	<p>the entity providing the verified gross mass</p> <p>this can be the shipper directly themselves or a port, terminal or other service provider who is delivering a verified gross mass service to a shipper or other party</p>

SOLAS VI Regulation 2 amendment	into force 1 July 2016; requires the verification of an accurate gross mass of cargo (contents) carried in transport containers including the tare weight of the container
Verified Gross Mass	the gross mass obtained through Method 1 or Method 2
Weighbridges	Non-automatic weighing instruments. For the purposes of Verification of Gross Mass for SOLAS provision the UK accuracy class for weighbridges is Class IV.

3. Non-trade use

The [National Measurement and Regulation Office](#) and Trading Standards have confirmed that weighing equipment used for the purposes of gross mass verification of containers are considered to be for 'non-trade use'.

Non-trade use means that:

- For automatic weighing instruments UK trade use Regulations do NOT apply. There is no requirement for type approval certification or initial verification. The MCA as the competent authority is able to specify equipment tolerances
- For non-automatic weighing instruments (e.g. weighbridges): Type approval certification and initial verification by a Notified Body (Trading Standards) are required, however the accuracy and scale interval can be specified by the MCA (suitable for the intended use) - the MPE ('Maximum Permitted Error') must comply with Directive 2014/31/EU (fixed % not allowed)

If a weighbridge (non-automatic instrument) is used for trade purposes in addition to VGM determination, the scale interval specified for trade purposes must be used for VGM (parameter sealed at initial verification)

	automatic weighing instruments	non-automatic weighing instruments
Type approval	Not required	Required
Initial Verification by a Notified Body	Not required	Required
Maximum Permissible Error	See paragraph 4	Specified in 2014/31/EU
Accuracy Class	See paragraph 4	Specified by MCA
Scale Interval	Specified by MCA	Specified by MCA

Figure 1 - Non-Trade Use Weighing Equipment

4. Automated weighing instruments

4.1. Maximum Permissible Error (automated weighing instrument)

For purposes of determining verified gross mass in compliance with SOLAS VI Regulation 2 the MCA approved maximum permissible error is:

- 2% above 20 tonnes and +/- 400kg below 20 tonnes
or
- 2% above 15 tonnes and +/- 300kg below 15 tonnes

Noting the above UK enforcement levels, the MCA recommend the use of the higher standard of 2% above 15 tonnes and + or - 300kg below 15 tonnes as that will provide a greater margin of variance, to take into account any operational differences which may arise. However, the choice to use either option is a commercial decision for the users of such equipment to determine.

Notes:

- Must be as an automatic instrument
- Can be in dynamic or static operations
- Applies to both Max Permissible Error at initial verification and in service

This is a standard for the UK that has been derived from EU Automatic Catchweighing Instrument (ACWI) Class Y(b). An instrument certified as a ACWI against the directive [2004/22/EC] as class Y(b) would comply with either of the above standards. EC certification is not required because it is for 'non-trade use'

It is the responsibility of the Provider of the automated weighing instrument to have a Quality Management System in place for maintenance and calibration to attain approval for its use.

4.2. Certification on installation for an automated weighing instrument

On installation, the Provider should obtain from the equipment supplier written confirmation of the following:

- Supplier Full Company name and head office address
- Addresses where verified weighing will be undertaken
- Name(s) of responsible person(s)
- Type of Equipment actually used to determine the VGM [Make/Part No – the actual device fitted]
- Certificate of compliance/conformity by the supplier [as set as expected within latest Draft Minutes and aligned as an instrument certified as a ACWI against the directive [2004/22/EC]² as class Y(b)]
- Manufacturer's standards for examination, inspection, calibration and maintenance

² (note: to be replaced by 2014/32/EU – Official Journal of the European Union 29/3/2014 <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1459952710542&uri=CELEX:32014L0032>) annex VIII/Mi006 in both relates.

4.3.Examination, calibration and maintenance (automated weighing instrument)

Once the equipment has been installed and handed over, the Provider should put into place a programme of examination, maintenance and calibration. The programme should be documented in a scheme of work and address the following:

- type of Equipment actually used to determine the VGM [Make/Part No – the actual device fitted]
- how the equipment is to be calibrated and how frequently
- how the equipment is to be examined and how frequently
- what Maintenance procedures will be applied to the equipment, how will it be conducted and at what frequency
- how faulty equipment is to be reported and the steps to correct faults
- what records will be maintained and how they will be audited

The frequency of examination, maintenance and calibration should be identified by a competent person via risk assessment and taking into account:

- manufacturer standards and guidance
- potential exposure to conditions that could cause equipment deterioration

Examination and calibration are likely to be required:

- before using the equipment for the first time
- after assembly/installation at a new location
- routinely in service
- following 'exceptional circumstances', e.g. if it: is damaged, fails, is out of use for long periods, or if there is a major change in how it is used
- components are changed or replaced

4.4.Maintenance

Routine maintenance typically involves checking and replacing worn or damaged parts, lubrication, replacing time-expired components, topping up fluid levels, and making routine adjustments. This is to ensure the equipment continues to operate as intended, and risks associated with wear or deterioration are avoided.

Examination may indicate areas of poor maintenance, but is not intended to replace it.

4.5.Competent Person(s)

- examination, maintenance and calibration should be undertaken by competent persons
- all supplementary inspections and tests recommended by a competent person should be carried out within the recommended timescale
- the competent person will determine the scope of the examination, maintenance and calibration and they may use a number of sources to help them do this, such as industry guidance
- the competent person should have enough appropriate practical and theoretical knowledge and experience of the equipment so that they can detect defects and assess how important they are in relation to the continued use of the equipment
- the competent person should not be the same person for examination, maintenance and calibration as they would be responsible for assessing their own work

- the competent person should be sufficiently independent and impartial to make objective decisions
- the competent person may be employed by a separate company, or selected by an employer from members of their own staff

4.6. Record keeping – examination and calibration

You should keep records of examination and calibration for equipment used to determine VGM. The competent person should provide you with a written report of examination and any inspections or tests they do. The report will identify if there are defects and what you must do to put them right.

Records should be kept until 12 months after the Provider ceases to use the equipment.

4.7. Record keeping – Verified Gross Mass Data

The Provider should keep records of verified gross mass for at least 6 months after export.

4.8. Defects

If the competent person finds a defect with the equipment, which in their opinion means that it could give rise to an inaccurate VGM they must notify the Provider. The Provider must then take action to rectify the defect and where necessary take the equipment out of service until the defect has been put right. For defects that need to be rectified within a certain timescale, the Provider must repair or replace the defective equipment within the specified time, and not use it after that time unless the defect has been satisfactorily put right.

Annex 2

Weighbridges – Guidance document developed by Ports, Skills and Safety for UK Ports

Weighbridges used for this purpose should meet Class III (Non-automatic weighing instruments (2014/31/EU) and if appropriate, any additional UK requirements specified by NMRO and Trading Standards. They must be compliant as a non-automatic instrument including having a Type Approval certificate, initial verification and meet requirements for Maximum Permissible Error.

1.1. Weighbridge operation in ports

There are a number of ways that a weighbridge might be used to provide VGM.

	Weigh Container	Weigh HGV before & after	Weigh and subtract
Method	lifting the container off the lorry, weigh it on the weighbridge, then returning it to the lorry	weigh an HGV with the container on way in and then without container	weigh a HGV + container; then subtract the weight of cab, trailer, driver, fuel, etc. by calculation to give container VGM
Advantages	most accurate VGM	accurate VGM for single container consignments	most practical solution for most ports
Disadvantages	not a viable option in most ports, where the scale of operation, space, requirement for lifting equipment and/or the timeliness of road deliveries make it impractical	does not work for single loads of more than one container most HGVs do not leave the port unloaded and exit with a new container similar time, space, resource problems to weighing the container	difficult to accurately estimate a weight for the HGV, for example there will be a significant difference in HGV weight if the fuel tank is full or empty

1.2. Weigh and subtract - calculating a VGM by subtracting vehicle mass

There are different definitions found in road vehicle Regulations relating to the mass of the vehicle. The MCA believe that of the available definitions, "Mass in running order"³ is likely to give the best approximation of the vehicle weight in the absence of direct weighing. However, it is for those using weighbridges to develop their own procedures (which may be subject to MCA auditing) on how the

³ Commission Regulation (EU) no 1230/2012 and is used in the UK in vehicle type approvals and certificates of conformity

mass in running order of the individual motor vehicles and the trailers is determined and used to determine the VGM of the loaded container.

'Mass in running order' means

(a) in the case of a motor vehicle:

the mass of the vehicle, with its fuel tank(s) filled to at least 90 % of its or their capacity/ies, including the mass of the driver, of the fuel and liquids, fitted with the standard equipment in accordance with the manufacturer's specifications and, when they are fitted, the mass of the bodywork, the cabin, the coupling and the spare wheel(s) as well as the tools;

(b) in the case of a trailer:

the mass of the vehicle including the fuel and liquids, fitted with the standard equipment in accordance with the manufacturer's specifications, and, when they are fitted, the mass of the bodywork, additional coupling(s), the spare wheel(s) and the tools;

Annex 3

UK Method 2 - Weighing equipment requirements

Method 2 users would meet the SOLAS and MCA requirements for weighing instruments if they:-

- Weigh the cargo to be packed into the container using scales that comply with accuracy class III of Non-automatic Weighing Instruments (NAWI) directive and current UK Regulations.
- Use equipment that is compliant with the EU directive on weighing will have a CE mark on it.
- Use a supplier or maintenance/calibration service provider with certification to a recognised Quality Management Systems such as ISO9001 and/or ISO17025 (UKAS).
- Ensure their weighing instruments have a periodic calibration and maintenance programme provided by the certified organisation.
- Ensure that all test equipment used during calibration by the service provider is traceable to national standards.