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10 of the Most Frequently Asked Questions About the Final FQA

The Fastener Quality Act (FQA), Public Law 101-592, (as amended in 1999) has finally passed and will be implemented officially on December 6, 1999. There are no efforts being made to further delay its implementation or to further amend it. What the fastener industry has now is what will have to be complied with.

Below are the most frequently asked questions asked since this final law was passed on June 8, 1999. The answers provided here are the IFI's Technical Staff's understanding of the law and its compliance rules. There are NO OFFICIAL ANSWERS from any government agency today and none are planned for in the future. Each fastener supplying company should read the law and review any matters that will directly affect its business with their own legal counsel.

Question #1. What is now covered by the FQA?

Answer #1. A "fastener" is defined in Section 3 (6) of the FQA. This is where we find what is covered and what is exempt from the FQA.

For a product to be a "fastener," that product must have ALL of the following elements. If any element is missing, a product is NOT a "fastener" according to the FQA.

a) It must be metallic.
b) It must have internal or external threads 1/4 inch or 6 millimeters or larger or it must be a load-indicating washer.
c) It must be through hardened as required by a consensus standard.
d) It must be made to a consensus standard that requires the parts to be marked with a grade identification.

If a product meets ANY of the following conditions, that product is NOT a "fastener" for purposes of the FQA.

a. It is part of an assembly.
b. It is a spare or repair part and is packaged in quantities of 75 or less.
c. It is made according to ASTM A307 Grade A.
d. It is made to ASTM F432.
e. It is manufactured under the oversight and/or requirements of the Federal Aviation Administration.
f. It is manufactured according to a "fastener quality assurance system" such as ISO 9001, ISO 9002, QS 9000, AS 9000, TS16949, or VDA 6.1 standard.
g. It is a part made to proprietary standard. A proprietary standard is a document or drawing provided by a fastener end user to describe a part. The document or print may make direct or indirect reference to a consensus standard and still is considered a proprietary standard.
h. It was manufactured before December 6, 1999.

Fortunately, the final definition of a "fastener" is much simpler and less ambiguous than previous definitions. This definition also greatly reduces the scope of the coverage of the FQA.

Below is a list of the most widely used screws, bolts, and studs that are covered by the final FQA if they are SOLELY made to these consensus standards:

SAE
J429 grades 5 and higher
J1199 grades 8.8 & 10.9

ASTM
A325, A325M, A354, A449, A490, A490M
A193 grades B5, 6, 7, and 16
A574M (metric SHCS only)
F738M grades C1, C3, & C4 (condition H or HT only)

ISO, DIN, and JIS
Property classes 8.8, 10.9. 12.9, & F1 (410 stainless steel)

Below is a list of the most widely used nuts that are covered by the final FQA if they are SOLELY made to these consensus standards:

SAE
J995 grade 8

ASTM
A194 grades 2H, 2HM, 3, 4, 6, 6F, 7,7M, 16
A563 grades DH, DH3, C, C3, & D
F836M grades C1, C3, & C4 (conditions H & HT only)

ISO, DIN, and JIS
Property classes 10 & 12

It is important to note that special parts with configurations that are not those of a consensus standard are NOT covered even if the print or customer's specifications refer to some of the standards listed above.

Question #2. What does a manufacturer have to do to comply with the FQA if their factory is registered to ISO 9001, ISO 9002, QS 9000, or a similar formal quality assurance system (QAS)?

Answer #2. Nothing! Every part made in a factory that is registered to a formal quality assurance program such as those stated above is exempt from having to meet any of the requirements of the FQA. This includes the exemption of the requirement of the manufacturer's insignia registration.

Furthermore, the IFI and NFDA state in their recently published "Comprehensive FQA Compliance Guide" that they believe it is Congress's intent that parts produced in a facility that is registered with an approved QAS are to be considered "compliant" with the FQA.

It is suggested that the containers and/or container labels that hold parts are exempt from the FQA, because they are produced in a QAS registered facility, include the logo of the QAS registrar and the facility's registration number. This could head off a lot of questions and concerns about the FQA status of these types of parts.

Question #3. Are inch hex socket products really exempt from the FQA?

Answer #3. Yes. Even though all inch alloy steel socket products are through hardened as required by consensus standards, they are not required by those same standards to be grade marked and are therefore, NOT COVERED.

It should be noted, however, metric socket head cap screws are covered by the FQA because their applicable consensus standards do require grade marking in addition to through hardening. No stainless steel socket products made to inch or metric standards are covered by the FQA.

Question #4. Can I sell my grade marked, through hardened bolts I have in stock now after December 6, 1999, and if so, can I sell them as "FQA compliant?"

Answer #4. (a) It is legal to sell all products that were made before the enactment of the FQA. These products are all exempt from the coverage of the FQA. (b) If a fastener supplier wants to sell grade marked, through hardened parts as "FQA compliant" it can do so if it creates an "FQA record of conformance." It should be noted that a legitimate record of conformance can be prepared only on products that bear a manufacturer's insignia that is registered on the FQA registry list at the US Patents and Trademark Office. The parts should also be directly traceable to their original raw material certificate.

Question #5. If parts are a "fastener" under the FQA definition and are NOT produced in a registered QAS facility, do they have to be tested in an ISO 17025 accredited laboratory?

Answer #5. These parts will have to be tested before creating the record of conformance, but they will not have to be tested in an accredited laboratory until June 8, 2001. The FQA specifically provides this two year grace period for the use of accredited laboratories.

It is strongly suggested that all testing be performed in accredited laboratories starting December 6, 1999, even though this grace period exists. Doing so will eliminate many potential challenges to the FQA conformance of these types of parts by end users in the future.

Question #6. What is required to be on the "record of conformance" and how long must these be kept?

Answer #6. Manufacturers must create a "record of conformance" that includes the following:

a. Name and address of manufacturer
b. Fastener description
c. Lot number
d. Nominal dimensions (example: 3/8-16 X 4)
e. Applicable consensus standards
f. Chemistry and material grade
g. Coating or plating and applicable consensus standards
h. Results or summaries of the tests and inspections performed

There is no longer a requirement for "original signatures" on these records or reports. Documents can be stored on paper, photographically, or electronically.

It is the IFI/NFDA interpretation that the only testing that is required for preparing the record of conformance are those tests related to the physical testing requirements contained in the applicable consensus standards, such as the hardness, tensile, and proof load tests. The chemical analysis indicated on the material's mill certificate is adequate for the record of conformance. Chemistry never has to be tested in an accredited laboratory. Dimensional measurements are not required for the preparation of the FQA record of conformance.

Records of conformance must be kept for a minimum of five years. It should be noted, however, that an FQA violation can be investigated for up to ten years. The practical approach for manufacturers and importers is to actually keep all records of conformance and associated documentation for ten years instead of five.

Question #7. What do I have to do if I plate or otherwise alter an FQA covered part after December 6, 1999?

Answer #7. The FQA says absolutely nothing about alterations! If you alter a covered part, it will not then be identical to its original record of conformance. It is suggested you attach a notice to the record of conformance simply stating that the parts may not now be identical to their original record of conformance due to the alteration and state the alteration that was performed on the parts.

Question #8. Does a distributor have to receive and keep copies of the FQA records of conformance?

Answer #8. No! The distributor does not have to do anything relative to the FQA unless a customer asks them for a copy of the FQA record of conformance. If this happens, the distributor can request a copy from the manufacturer or importer and provide it to the end user.

Not only are there no document requirements for the distributors, but there are no packaging or package labeling requirements as existed in previous versions of the FQA. There are also no specific prohibitions against commingling parts as there were previously.

The IFI strongly recommends that lots not be comingled because doing so destroys traceability. Comingled lots cannot be certified a single lot. If one of the lots in the mix lot is found to be non-compliant, in most cases the entire mixed lot will have to be scrapped because it is usually impossible to effectively sort out one lot from another.

Question #9. Exactly what are the activities that are prohibited by the final FQA?

Answer #9. The following acts are specifically prohibited:

1. Falsification of “record of conformance”
2. Falsification of the identification, characteristics, properties, mechanical performance marks, chemistry, or strength of the lot of fasteners
3. Falsification of the manufacturer’s insignia
4. Failure to maintain required records

Fastener suppliers who do not comply with the requirements of PL 101-592 are subject to civil and/or criminal penalties, depending on the nature of the violations. Civil penalties of up to $25,000 can be levied for each offense. Those convicted of criminal offenses can be sent to prison for up to 5 years for each offense.

Question #10. Who can be contacted in the government to provide “official” FQA interpretations?

Answer #10. The Patent and Trademark Office will provide clarification on matters related specifically to registering manufacturer’s insignias on the FQA registry list.

The Bureau of Export Administration will discuss what constitutes an FQA prohibited act and the procedures related in investigating and prosecuting offenders.

There is NO government organization that will provide any interpretations beyond these two areas. No one will tell you whether a given part is covered or not. No one will tell you exactly how to deal with altered FQA parts. Congress advised those who worked on this final version of the FQA that they would NOT provide regulations as in the past. They are leaving it to the fastener industry to interpret the FQA for itself.

Unfortunately, what this means is that if serious disagreements arise between parties over issues related to the FQA, they will have to be settled in the federal courts. Those having to go this route will probably have a very expensive and grueling experience.

The Fastener Quality Act journey has been a long, frequently frustrating one going all the way back to the mid-1980s. It ended up with a much more practical, workable law than feared. The final law did not end up covering only 1% of all fasteners sold in commerce as was originally proposed to Congress, but it has ended up closer to that than to the 50% or so that would have probably been covered under the act as it was before this final version was published on June 8, 1999.

FQA Requirements Applicability Decision Chart; PL 101-592 (1999)