

Instructions for use and maintenance, part 4

(Translation of the original instructions for use and maintenance (AWA), part 4)

Mounting of pins with clamping sleeves onto connectors for EN 1677 fittings



EC Machinery Directive 2006/42/EC
§ 1 (1) d), annex I, art. 1.7, 1.7.4, 1.7.4.2

EASA CS-27./29.865 / EC Decision 2014/018/R, C1⊗ AMC/GM to Part-SPO - Amendment 9, ⊗ AMC1 SPO.SPEC.HESLO.100

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Revision – what is new or has been modified? Watch this symbol: C⊗ ⊗, C1⊗ editorial changes ⊗

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Use

Correct use

Pins with clamping sleeves are an integral part of connectors and serve to provide a reliable and secure connection with chains, hooks and other accessories.

Due to their specific construction type, pins with clamping sleeves can be considered fail-safe.

These components are designed to be used only and exclusively in the above mentioned way, that is, as connectors during the lifting of loads in conformity with EN 1677.

Note

The present instructions (AWA) were compiled as a result of an incident involving GUNNEBO SKA clamping sleeves.

⊗ For AWA part 2, MRO steel, check www.air-work.com, A&H EQU

⊗ For the occurrence report see www.air-work.com, A&H ENG

User training



Personnel assigned to using this device must have adequate instruction and training prior to its first use. During the introduction to its use and subsequent in-depth training, particular stress should be placed on gaining a good knowledge of the present instructions for its use and maintenance.

Training has to be repeated at least once a year and proof of this must be demonstrable. Please document the type, amount and the date of training in an appropriate way.

Description of the single components

Illustration



Pin with clamping sleeve by Gunnebo; several accessories equipped with pins and clamping sleeves. Steel quality grade 8 (yellow) or 10 (lemon yellow) conforming to EN 1677-A1.

Pin with clamping sleeve by pewag austria; several types of accessories. Steel quality grade 10 (orange) and 12 (blue).

Construction and technical data



Left: Gunnebo G-coupler (or 2 x SKT) with clamping sleeve and SKA bolt. Fittings varnished in dark yellow are usually grade 8 steel, light yellow indicates grade 10. Pins are only available in grade 10 steel.

Right: pewag austria CW connector with CBHW pin and clamping sleeve. Grade 10 fittings are orange, grade 12 are blue.

EN 1677-A1, capacity as described in catalogue, depending on size.



In the case of the PEWAG CBHW model (components of similar manufacturing are also made by other producers), the pin is secured by an inner and an outer clamping sleeve. The inner sleeve clasps the notch of the pin and the outer sleeve provides secure fastening.

In the case of the GUNNEBO SKA model, the clamping sleeve is perforated and equipped with a spring. The spring is held in place by a washer which in turn is retained by means of the sleeve's curved edge. The spring clasps the notch of the pin.

Both models entail the risk of failure of a component without, however, compromising the functionality or safety of the connection:

- ☞ Gunnebo SKA system:
 - spring breakage: no risk of spring rotation or dropping out of the sleeve.
 - sleeve breakage: the spring nevertheless holds the pin in place.
- ☞ pewag austria CBHW system:
 - breakage of inner sleeve: the sleeve is held in place and cannot drop out.
 - breakage of outer sleeve: the inner sleeve nevertheless holds the pin in place.

The evaluation and choice of pins with clamping sleeves is the users' responsibility.

Buildup of the Gunnebo clamping sleeve and pin



Left: Buildup of sleeve with drilled hole for pin ① spring ② and washer ③, curved edge (flattened rim) of the sleeve ④.

Centre: Notch on the pin retaining the spring.

Right: Positioning of sleeve between the bearing components.

Buildup of the pewag austria clamping sleeve and pin



The sleeve consists of 2 clamps made of spring steel. Compared to the Gunnebo model, a striking feature is the identical width of notch and sleeve.



Special properties:

- ☞ Pins with clamping sleeves are reusable.
- ☞ Due to their specific type of construction, pins with clamping sleeves can be considered fail-safe.



Gunnebo and pewag austria fittings are not interchangeable (different geometry and capacity).

Be careful with fittings manufactured by other producers featuring the same geometrical shape but which might be of a different steel grade and/or have a different WLL.



It is forbidden to alter accessories by drilling, cutting-off parts mechanically (filing them off) or applying embossments.

Parameters, limit conditions, interfaces

Configurations allowed

Only use original components.

The combined use of components made by different manufacturers is forbidden.



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Helicopter service for professional load transport

Start-up procedures

Flying/lifting operations can be started immediately after correct assembly of the components.

End of operation procedure

As a daily check or in the event of particular incidents (e.g. very hard impacts), the mobility of the clamping sleeve (must be able to rotate freely), the bolt (free to move) and of other components must be verified.



- **All components must be able to move freely.**
- **The components must not scrape against each other, jam or move sluggishly.**

Loads allowed; usable limits;

See specifications in the producer's catalogue (payloads [WLL] are not indicated on the components).

Interfaces to other systems and/or components of lifting accessories

Only use original components.



For more information, also check AWA part 1, technical definitions

Assembly

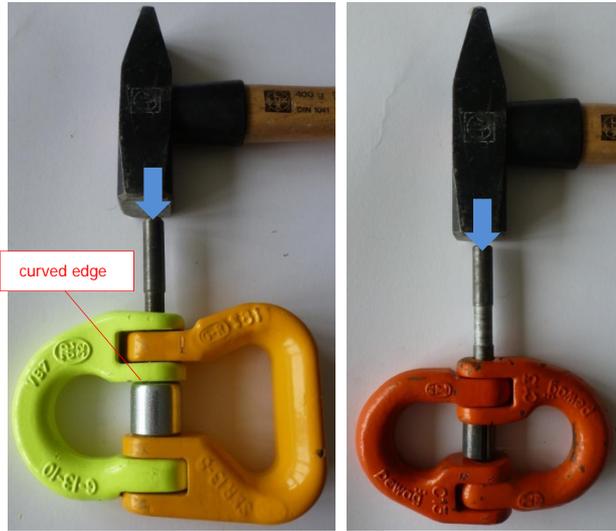
The components must be assembled by a competent person.

Before mounting, the pin should be lubricated with grease or oil on one end to enhance gliding ability.

Assembly

Gunnebo system

pewag austria system



Mounting of pin in a vertical direction on a solid support; check the pin's position in the sleeve's entrance. Gunnebo: the sleeve's curved edge must be ABOVE; pewag: sleeve can be used in both directions.

Disassembly

Gunnebo system

pewag austria system



Driving out of the pin with the help of a pin punch of proper size (Ø slightly smaller than sleeve's). Use a solid support with an aperture in the middle: aperture depth = pin length + 5 mm. Gunnebo: the sleeve's curved edge must be ABOVE.

After assembly, please check if all components are fully functional:

1. The clamping sleeve must be able to rotate freely.
2. All components must be able to move freely.
3. The bolt must be free to move.

Lubricate the pin with WD40 on one end and let the oil be absorbed. Then use a cloth and rub excess lubricant over the entire fitting to create a thin oil sheen.

Restoration / repackaging

Regularly lubricate pins and clamping sleeves with penetrating oil.



Pins and clamping sleeves must always be protected against dry running (without lubricant).

Transport / Storage

n/a

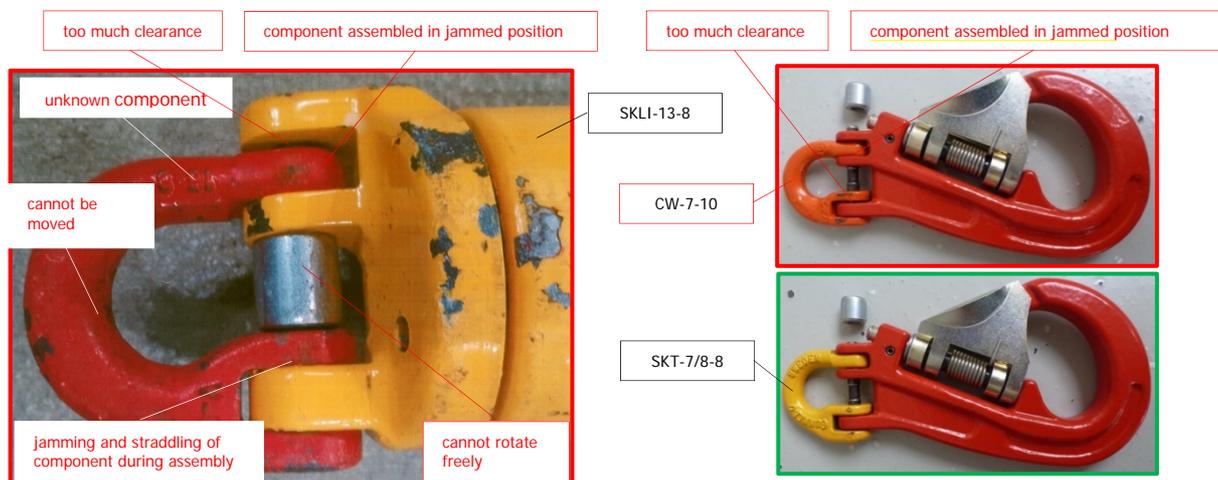
Possible inappropriate uses

(Ways of using the components that are inappropriate and for which these are not designed)

Any use of the components that is not in conformity with the regulations (inappropriate use) can lead to evident or hidden damages and, therefore, compromise their safety characteristics. In the event of inappropriate use, the producer disclaims all responsibility.

Several examples of inappropriate uses:

Assembly of components made by different manufacturers and/or with different geometrical shape.



Example: SKLI-13 with a dissimilar chain connecting link, assembly done by use of force.

Example: HUB-7/8-8, 2000 kg WLL (rescue hook). Above: WRONG connector (CW-7-10), too small and only 1900 kg WLL, wrong pin (SKA-7/8-10), sleeve not suitable. Below: correct assembly with SKT-7/8-8 and SKA-7/8-10



In the case of connecting links, such as CW, CARW, G-coupler, SKT, SKR, SKL, etc., which must be assembled using pins with clamping sleeves, it is forbidden to assemble components made by different manufacturers.

Be careful to avoid other possible risks

The following factors could lead to dangerous situations and, therefore, must absolutely be avoided or supervised by a marshaller or another skilled person:

Fittings produced by Gunnebo and pewag austria are not intermateable (geometry, performance)
Be careful when using accessories made by other manufacturers, since their geometrical shape might be suitable but their steel quality grade and/or the maximum payload could be different.



- ⚠️ Technically speaking, it is possible to combine Gunnebo grade 10 links (G-coupler) with grade 8 components (SKLI low-torque swivel) → in this case, the carrying capacity and steel grade of the lower quality class (8) apply.
- ⚠️ Technically speaking, it is possible to use Gunnebo grade 10 links (G-coupler) to attach a rope to a pewag austria grade 10 component (LHW safety hook) → in this case, the carrying capacity of the weaker component applies.
- ⚠️ Please note that whenever you modify the original delivery condition of AirWork products or whenever you use components of different steel quality grades and/or components made by different producers, you yourself are considered manufacturer and thus subject to all legal consequences. .



For more information, also check AWA part 1

Residual risk

All types of ropes (textile and steel) run the residual risk of internal damage that cannot be seen from the outside. Hence, handling of such devices requires special attention.

Maintenance and repair



For all general rules, please check and read AWA part 2 (maintenance: steel) and 3 (maintenance: textiles).

Engineering & manufacturer
AirWork & Heliseilerei GmbH (A&H)
A&H Equipment

Bahnhofweg 1, CH-6405 Immensee
 FON ++41 +41 420 49 64, FAX ++41 +41 420 49 62
 E-Mail: office@air-work.com, Internet: www.air-work.com
 ISO 9001:2008, SQS n° 32488
 EASA Part 21 G POA (CH.21.G.0022)



Conditions for product use

This product has been manufactured in compliance with EC-machinery directive 2006/42/EC, § 1 (1) d) and e).

These instructions (AWA), in accordance with machinery directive 2006/42/EC, annex I, sections 1.7.4.1 and 1.7.4.2, as well as the EC declaration of conformity in accordance with 2006/42/EC, annex II, are an integral part of this product and must be compiled in the user's or a generally accepted common language. However, only the original German version is legally binding.

In absence of valid instructions for use and maintenance (AWA) or without adequate training prior to use of the product, the latter cannot be considered safe.

Gaining a good knowledge of the present AWA must be part of user training carried out by the producer, its authorised representative (qualified person) and the person responsible for training in the user's company.



In the case of lending, demonstration, display, sale, discount trading or user training, these instructions for use and maintenance (AWA) must be enclosed/attached.

Picture credits

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Question to the persons responsible for training and work materials:

Have you read, understood and given instructions on parts 1 to 4?



A&H Services offers an extensive inspection and testing service for all its in-house products.



C1 Appeal

If you have questions, if a component is damaged, seems to have changed or might be damaged, whenever you have any observations or suggestions to make, please take a photograph and send it to us via email, MMS or SMS (no messages via WhatsApp, Facebook or similar).

In 90% of all cases we can answer immediately, thus saving you time and postal charges. Having an image will help us greatly and, together with your short description of the problem, it can usually be identified very quickly.