



Havarikommissionen

Accident Investigation Board Denmark

Safety Alert

During the safety investigation of the train accident on the Great Belt Bridge at 02-jan-2019, safety deficiencies in the railcar trailer hitch model FW6170 mounted on the pocket wagon litra sdggmrs have been discovered.

The hitch locking mechanism used to lock the trailer king pin onto the pocket wagon, was tested and on several occasions found to be unlocked, when following the procedures from the manufacturer of the railcar trailer hitch.

The railcar trailer hitch model FW6170 owners manual (see additional pages) describes on page 2 section B, that the trailer is locked to the hitch, when the retaining notch is no longer visible.

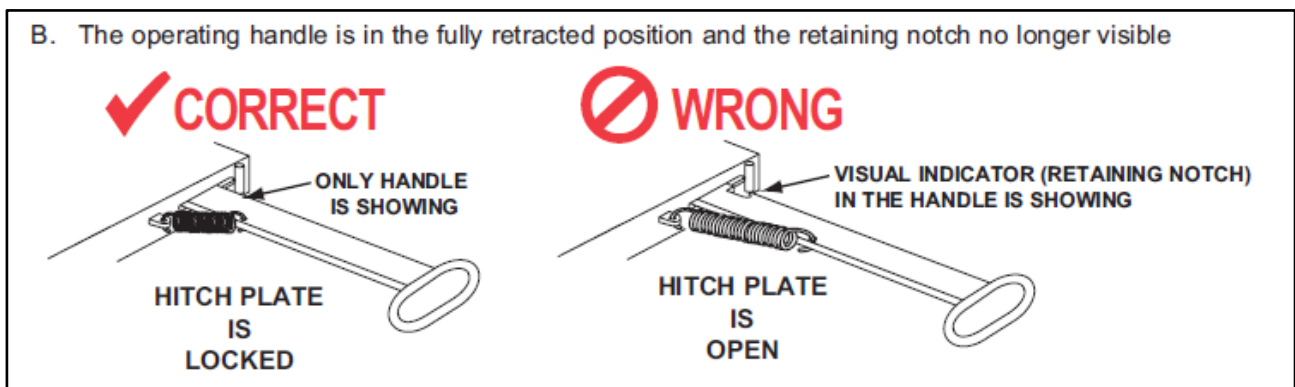


Figure 1. Extract from FW6170 owners manual page 2.

Testing of the hitch involved in the accident, showed that the king pin could be pulled out of the hitch lock with a small amount of force, when a gap of 8,66 mm existed between the hitch plate and the operating handle recess. However, in this position, the retaining notch was not visible, and the hitch therefore appeared to be locked.

No damages existed neither to the locking mechanism of the hitch nor to the king pin.



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Figure 2. Operating handle position after king pin has been lowered into the hitch. Gap is 8,66 mm.

On above photo the retaining notch is not visible, even though the hitch is not securely locked. The retaining notch is normally not visible even with the operating handle recess pulled more than 20 mm away from the hitch plate.

The Danish AIB considers the described procedure in the FW6170 owners manual to be inadequate to ensure secure locking of the king pin to the hitch. This potentially affects any operator using the FW6170 railcar trailer hitch and the procedure described in the FW6170 owners manual for railway transportation of trailers.

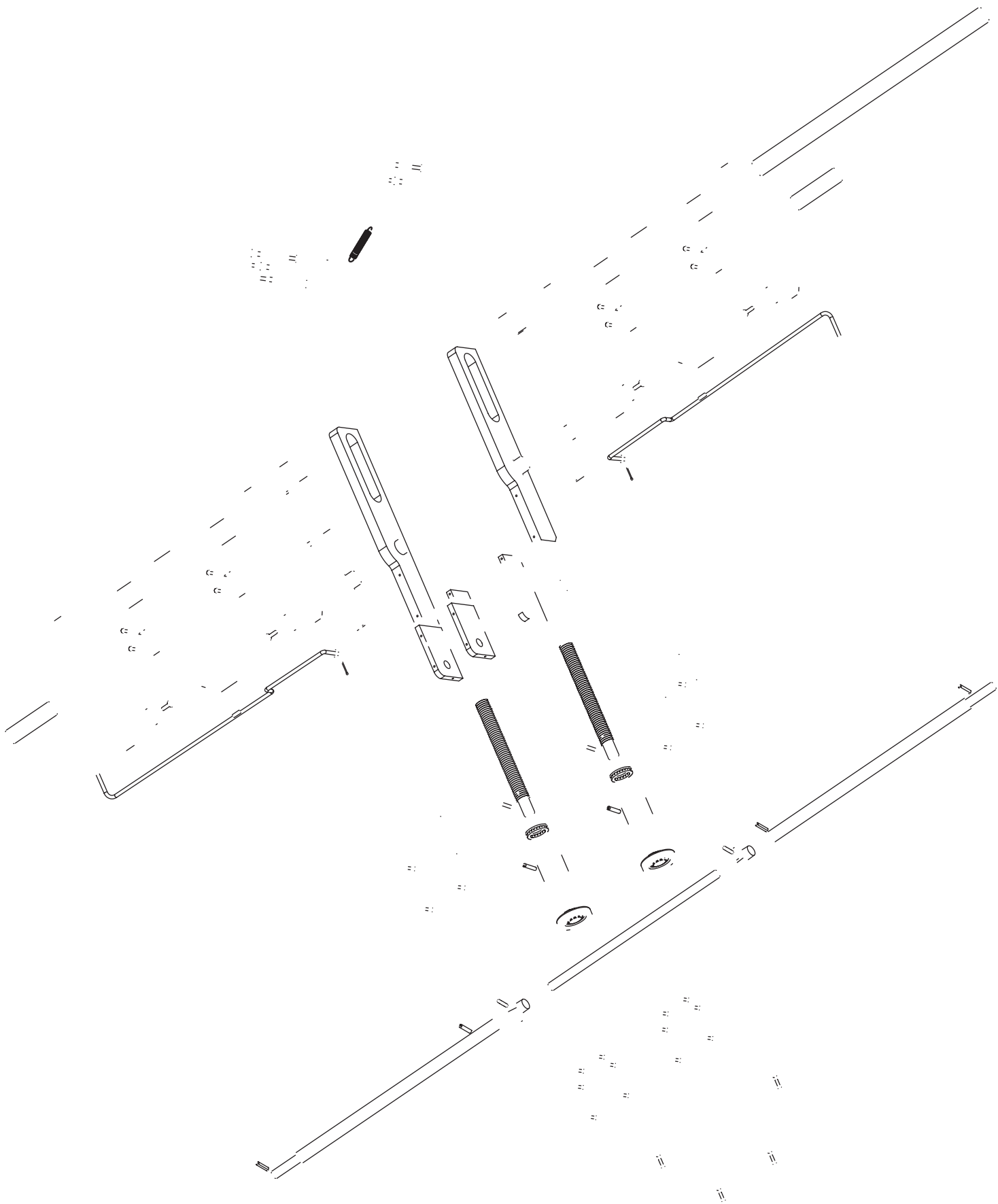
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SAF-HOLLAND Group

PARTS LIST FOR BASE PLATE XA-76100

ITEM	PART NO.	NO. REQ'D.	DESCRIPTION
1	XA-76109-A	1	Mounting Base
2	XA-76123	1	Drive Shaft
3	XB-E-61135	4	Spring Pin, 10 x 45
4	XA-76121	1	Guide Shaft
5	XA-76135	1	Handle Link
6	33023	4	Washer, Plain M10
7	XA-76141	5	Bushing
8	XA-76182	1	Handle Link
9	XA-76140	1	Pull Handle
10	XA-76125	2	Spindle
11	XA-76137-1	2	Lock
12	XA-76134	2	Gear, Bevel Pinion
13	XA-76232	2	Gear, Bevel
14	XA-76103	2	Lifting Arm, Inner
15	XA-76105-R	2	Outer Arm, Right
16	XA-76105-L	2	Outer Arm, Left
17	XA-76119	4	Washer
18	XB-76023	4	HCSCS, M10 x 25
19	XB-60129	4	Ring, Shim (40 x 50 x 0,5)
20	XA-76122	2	Centre Bolt
21	34011	2	Spring Pin, 10 x 70
22	XA-CRP-V-06635	2	Pin, 3/8" x 2"
23	XB-76705	2	Pin, Grooved 10 x 35
24	XA-76131	2	Release Handle
25	XA-76126	1	Sliding Frame
26	XA-76177	2	Spindle Nut
27	XA-76144	4	Clamping Ring
28	XA-76040	1	Spring, Extension
29	XA-76179	2	Extension Shaft
30	XA-76181	2	Bushing
31	XA-76173-A	2	Cover Plate
32	XB-76060	22	HHCS, M6 x 12
33	31008	2	HHCS, M10 x 25
34	XB-60137	1	HHCS, M10 x 30
35	32008	3	Nut, Lock, M10
36	XB-76038	1	FHSCS, M10 x 45
37	XA-76185	4	Spacer Bush
38	XB-76102	8	SBHCS, M8 x 20
39	XB-76038	1	FHSCS, M10 x 45
40	XB-76061	22	Washer
41	XB-76103	2	Ring, Shim (25 x 35 x 0,5)
42	XB-76044-1	2	Pin, Split, 3.2 x 32
43	XB-76041-1	2	Bearing
44	XB-76173-B	2	Cover Plate
45	XA-76139	1	Square Block
46	XB-76118	1	Roll Pin, 10 x 45
47	XA-76173-C	1	Cover Plate



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