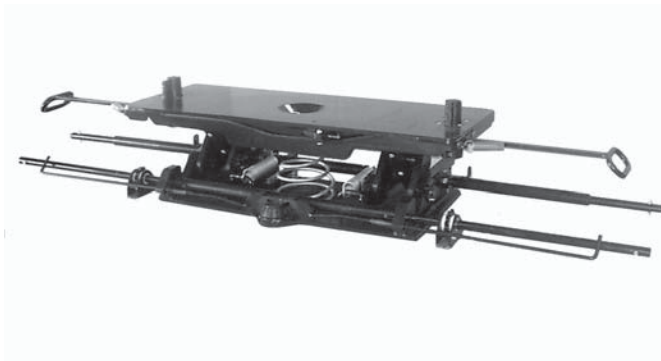




FW6160-A

MAINTENANCE AND OPERATING INSTRUCTIONS



FW6160-A Railcar Trailer Hitch



WARNING

Failure to read, understand and follow the important information contained herein may result in a hazardous condition, or cause a hazardous condition to develop.

Relative to piggyback operations, there are other checks, inspections and procedures not listed here which are necessary, prudent and /or required by law. The following is in

addition to these and pertain to the hitch only.

Perform these procedures with the area clear of obstacles and other personnel.

This product is designed and intended for use only with a "reach stacker" or crane type trailer loading and unloading.

OPERATING INSTRUCTIONS:

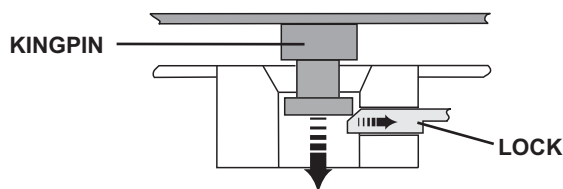
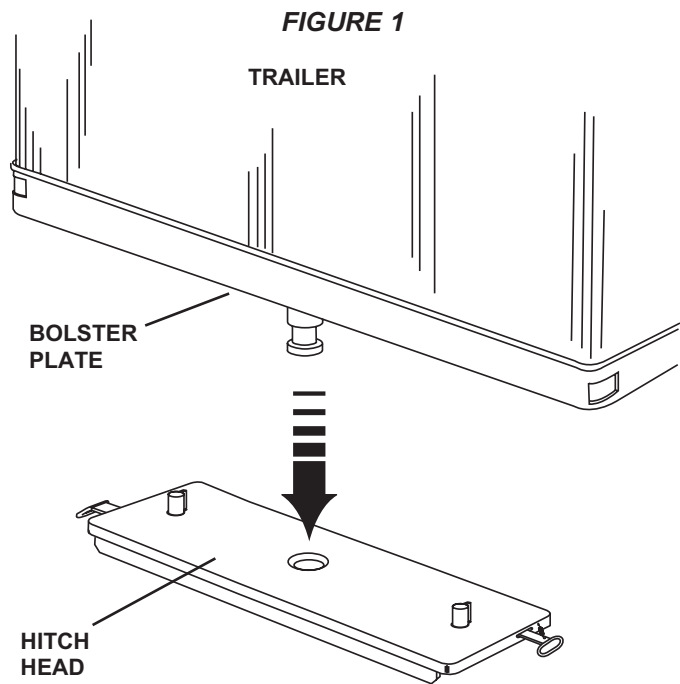
COUPLING PROCEDURES (Loading):

1. **Check out the hitch plate before coupling.**
 - A. Check the hitch plate and mounting base for a secure mount. If not secure, correct before using.
 - B. The hitch plate must be properly lubricated.
 - C. The hitch plate is in closed position before loading and does not have to be opened.

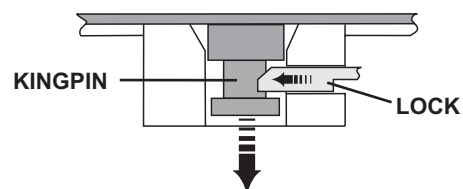
2. Coupling operation.

- A. The wheels of the trailer must be exactly over the pockets in the railcar. Lower the trailer on the railcar while centering the kingpin over the hitch plate lock area.
- B. Continue to lower the trailer until the kingpin engages and the trailer bolster plate rests flat on the hitch plate and supports the trailer. (See Figure 1.)

NOTE: The hitch plate lock automatically retracts to allow the kingpin to enter, then automatically closes as the kingpin enters the lock. (See Figure 2.)



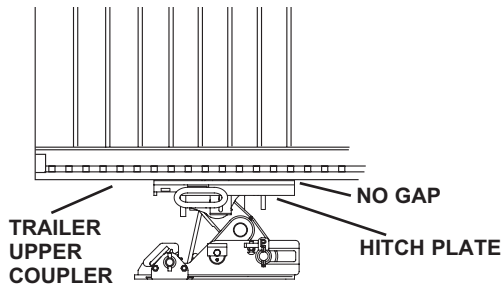
Kingpin automatically retracts lock upon entering "lock opening"



Lock automatically engages as kingpin is lowered into "lock opening"

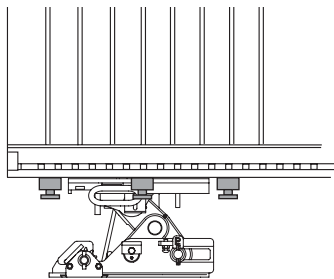
FIGURE 2

✓ CORRECT



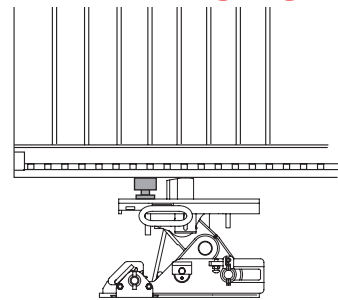
Kingpin is properly engaged.

✗ WRONG



Kingpin is in front of, behind, or to the side

✗ WRONG



Kingpin is on the top.

FIGURE 3

1. Check the hitch plate after coupling.

- A. The kingpin must be in the lock and there must not be a gap between the trailer upper coupler and the hitch plate. (See Figure 3.)
- B. The release handle must be fully engaged. No portion of the visual indicator should be showing. If the visual indicator is showing the hitch plate is **NOT PROPERLY LOCKED** and the coupling procedure must be repeated. (See Figure 4.)

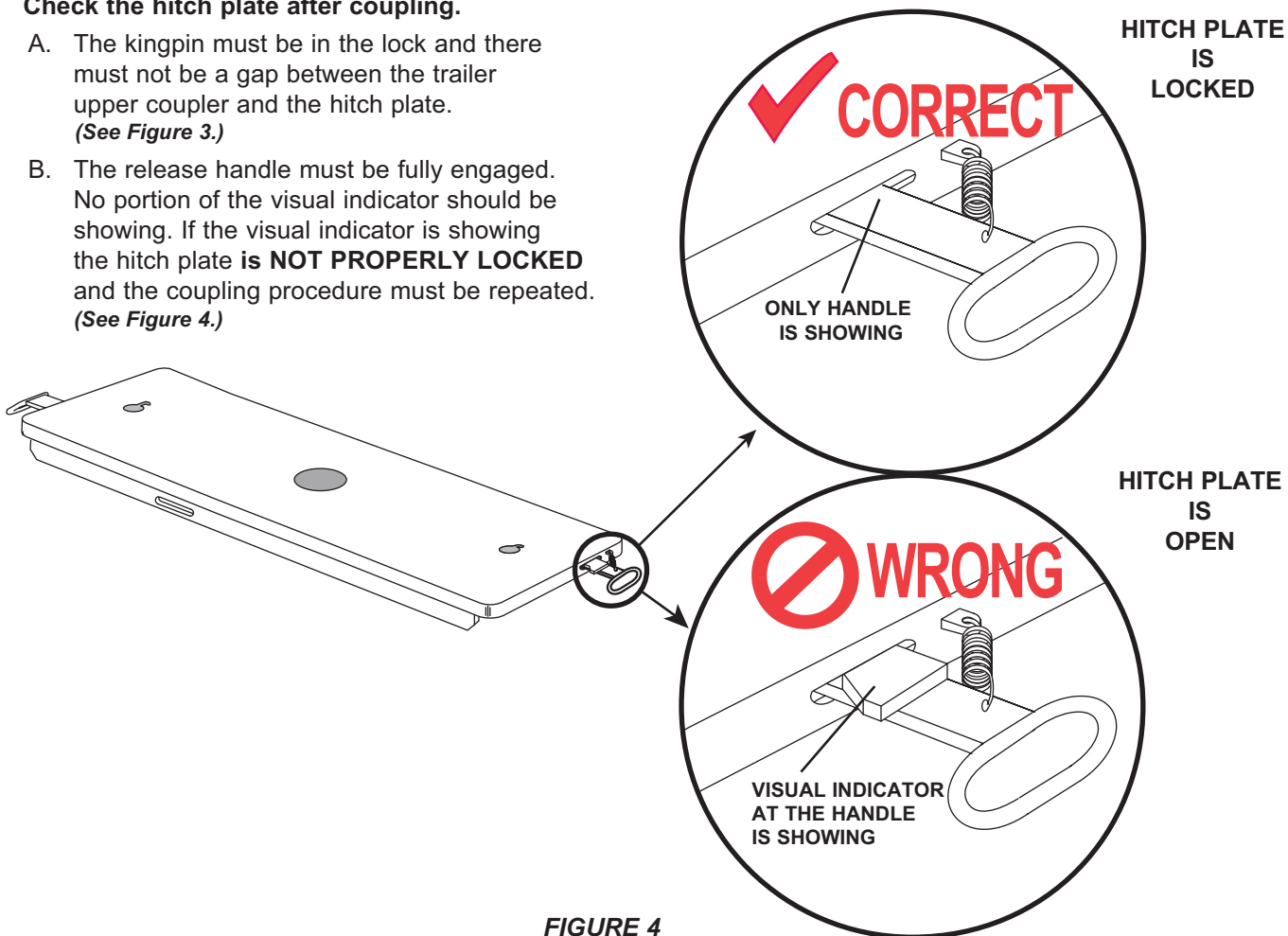


FIGURE 4



WARNING

If any portion of the visual indicator is showing, the hitch plate is not properly locked.

If you do not obtain a proper coupling, repeat the coupling procedure. Do not use any hitch plate which fails to operate properly.



UNCOUPLING PROCEDURE (Unloading):

1. Pull the handle out and toward buffer side and hook it at the sensor.
(See Figure 5.)
2. Raise the trailer until the kingpin clears the hitch plate.

NOTE: When the trailer is approx. 60 mm lifted off of the hitch plate, the release handles will automatically return to the fully closed position.

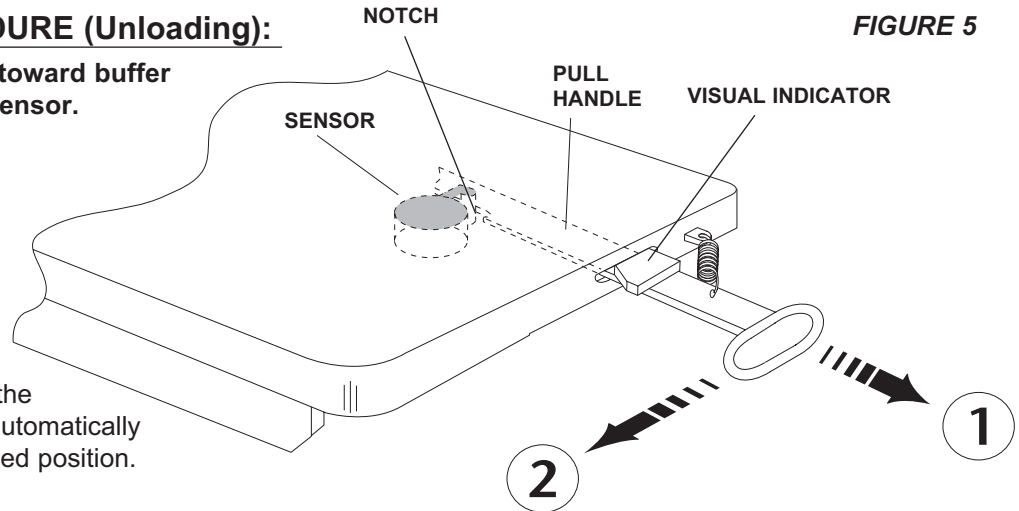


FIGURE 5

LOCKING AND UNLOCKING THE VERTICAL ADJUSTMENT:

NOTE: The lock and unlock of the vertical adjustment can only be carried out in the *unloaded condition*.

1. A special key for locking and unlocking the vertical adjustment is located on the railcar.
2. Place the key onto the shaft nearest to the buffers of the railcar (see fig. 6) and turn through 90° to lock or unlock.
3. With the spring pin in the vertical position the adjustment is locked, with the pin in the horizontal position the adjustment is unlocked.

NOTE: When the vertical adjustment is unlocked the hitch head will be pushed down by the weight of the trailer during the next loading operation, when unloading the hitch head is automatically raised into the upper position by spring action.

4. After adjustment of the vertical position re-lock the adjuster using the special key provided.

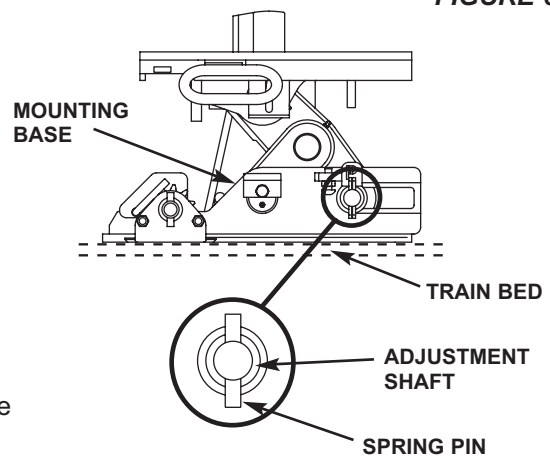


FIGURE 6

FORWARD AND REWARD MOVEMENT OF THE TRAILER HITCH:

NOTE: If necessary to move the hitch along the trailer to accommodate different lengths of trailer and/or different king pin positions on the trailer. In addition if the railcar is to be used for container transport the hitch must be moved up to the end of the railcar. In this position it is secured by an automatic end lock.
The hitch can be moved only in the *unloaded condition*.

1. The same special key used for the vertical adjustment is also used for forward and reward movement of the hitch.
2. Place the key onto the shaft nearest to the centre of the railcar (see fig. 7).
3. The gearwheels on this shaft mesh into a track on the railcar and the hitch can be moved forwards or rewards by rotating the shaft in the direction required.

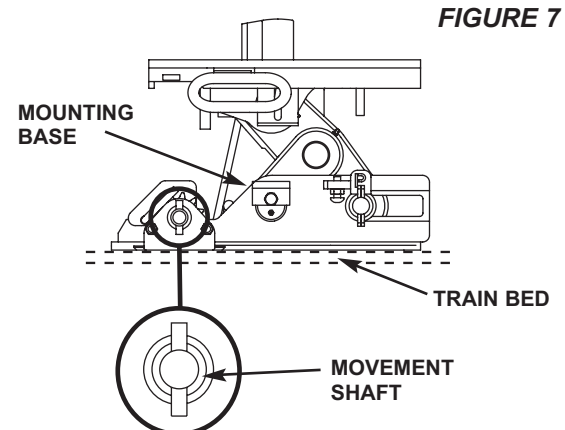


FIGURE 7



RELEASE OF THE END LOCK:

NOTE: If the hitch has been moved to the end of the railcar it will be secured by an automatic lock. This will need to be manually released if the hitch is to be moved from this end position.

1. Release of the automatic lock is by a link bar across the end of the hitch. This is bent through 90° at the end to provide a handle (see item 2 + 3 on page 8). The link bar should be pushed or pulled (both is possible) to release the lock.
2. Move the hitch away from the end stop using the special key as described above. The link bar will need to be held until the hitch has moved approximately 10 cm away from the end stop and is clear of the automatic lock.
3. Once clear of the automatic lock the link bar can be released and the hitch moved in the normal way.

NOTE

All functions of the hitch, vertical adjustment, forward and rearward movement and release of the end lock can be carried out from both sides of the railcar.



MAINTENANCE PROCEDURE:

The following is a description of the required lubrication and periodic inspection procedures for the railcar trailer hitch FW6160-A. These procedures are normally completed every four months, but this frequency may need to be adjusted depending upon its usage. Rebuilding should be considered after approximately 10,000 couplings and uncouplings. Individual components are referred to by item number and are illustrated in the exploded view drawing found on page 6 - 9.

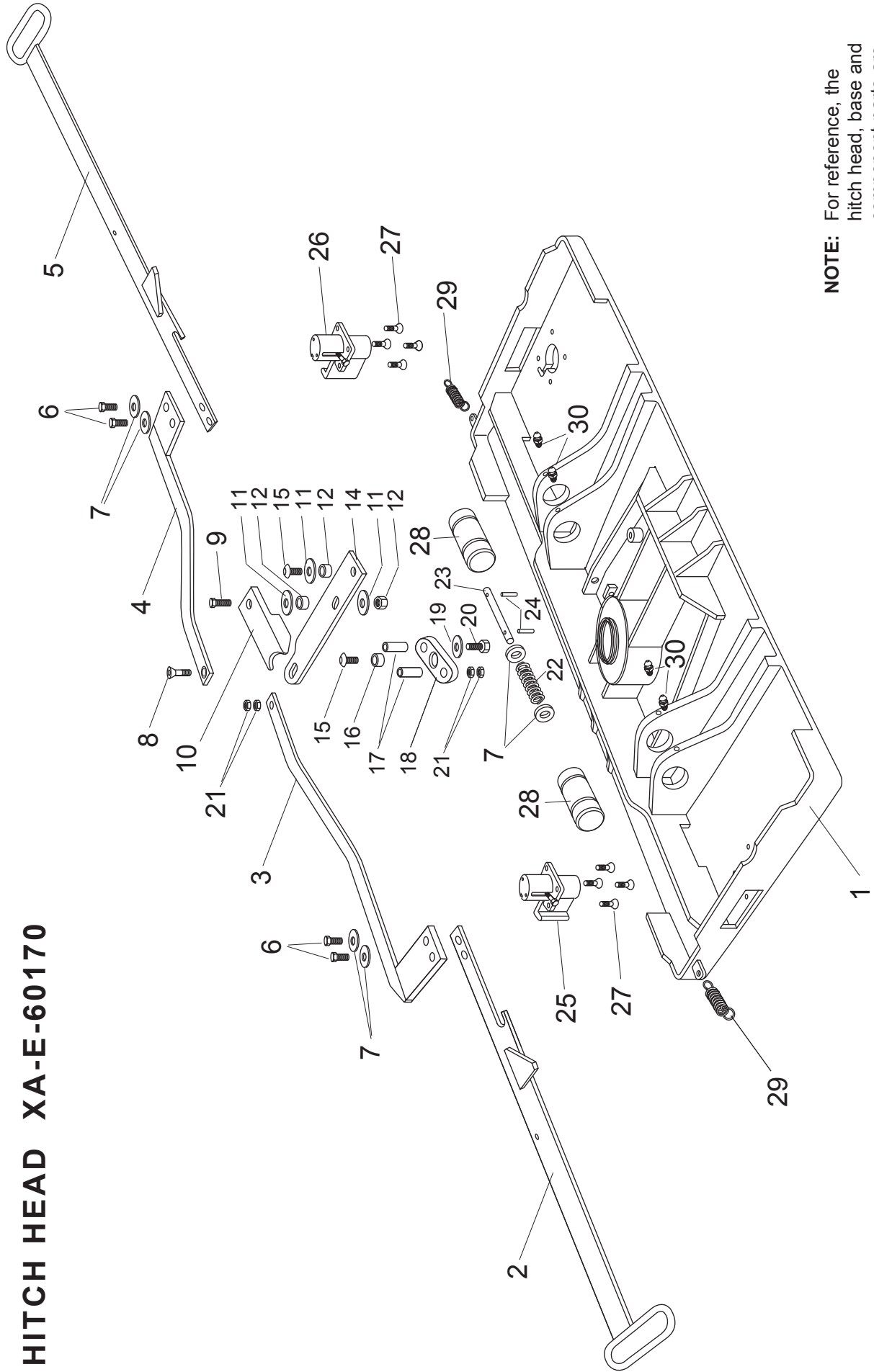
LUBRICATION

- 1. Be sure to thoroughly lubricate all moving parts (e.g. lock, coupling sensor, etc.) with a water-resistant, lithium-based grease.**
- 2. Clean the lock shaft guide before each lubrication.**
- 3. Keep a water-resistant, lithium-based grease applied to all moving parts as well as the trailer contact surface of the hitch plate.**

INSPECTION

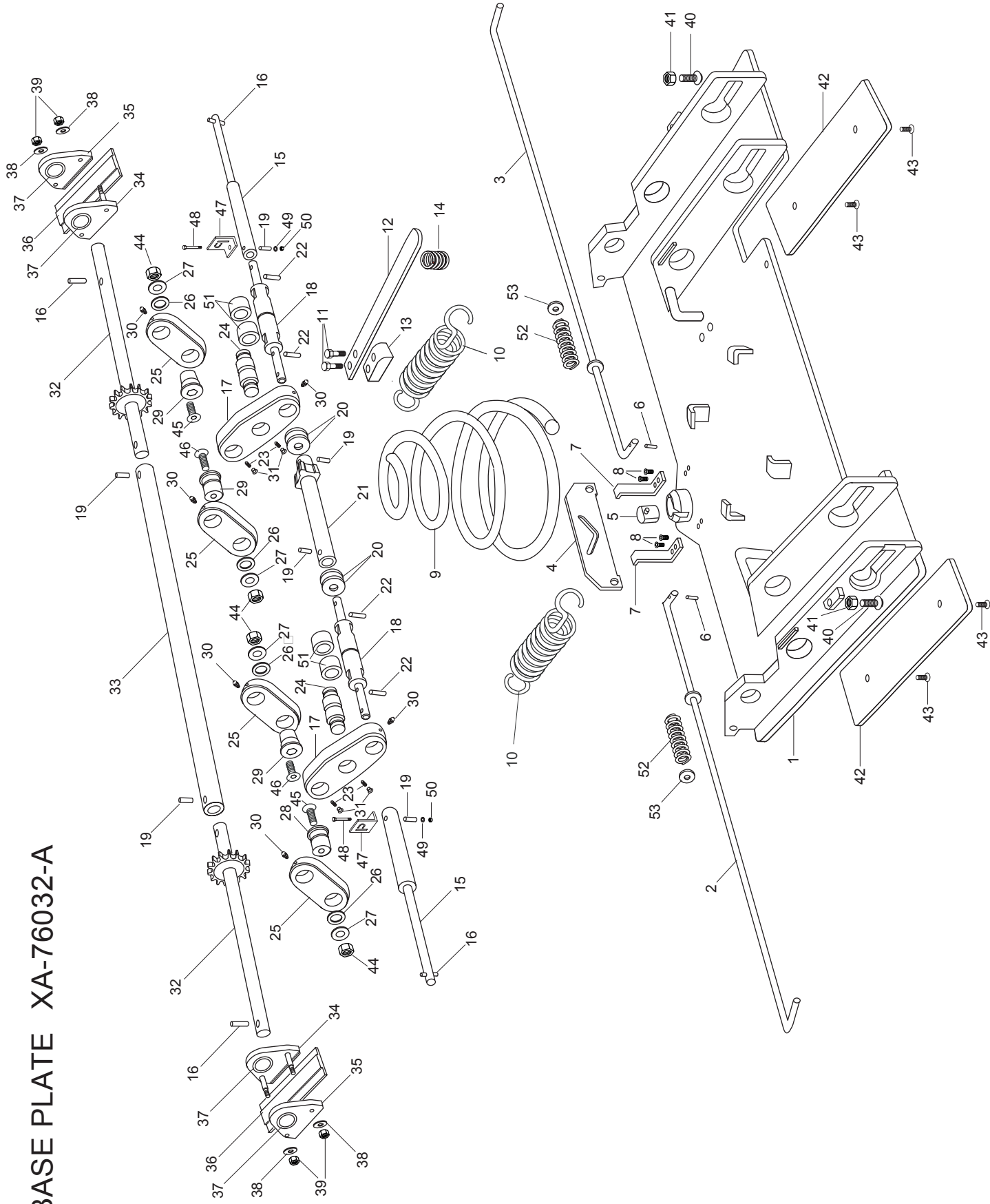
- 1. Closely inspect the hitch plate and vertical adjusting mounting base. Replace any missing or damaged bolts and nuts.**
- 2. Visually inspect the hitch plate lock for damage or excessive corrosion. Replace if necessary.**
- 3. Check coupling sensors for proper vertical movement and spring action. If the sensors are damaged or the spring action is not operating properly, the sensor must be replaced.**
- 4. Inspect the release handles for damage. Make sure handles are not bent and that the handles function.**
- 5. Check the release handle springs. Missing or damaged springs must be replaced.**

HITCH HEAD XA-E-60170



NOTE: For reference, the hitch head, base and component parts are shown upside down

BASE PLATE XA-76032-A



PARTS LIST FOR BASE PLATE XA-76032-A

ITEM	PART NO.	NO. REQ'D.	DESCRIPTION
1	XA-76033-A	1	Mounting base
2	XA-76040	1	Pull linkage bar
3	XA-76039	1	Push linkage bar
4	XA-76038	1	Lock Release Plate
5	XA-76037	1	Locking Bolt
6	XB-E-60151	2	Roll Pin DIN 7343 4 x 20
7	XA-76048	2	Guide Bracket
8	31045	4	Countersunk Bolt DIN 7991 M6 x 16
9	XB-E-61091-KTL	1	Compression spring
10	XB-E-60128	2	Extension spring
11	XB-E-60132	2	Hex head cap screw DIN 933 M10 x 40
12	XB-76007	1	Leaf spring
13	XA-E-60200	1	Spring bracket
14	XB-E-60141	1	Compression spring
15	XA-E-61110	2	Shaft extension
16	XB-E-61135	4	Spring pin DIN 7343 10 x 45
17	XA-E-60162-1	2	Lever arm, long
18	XA-E-60194	2	Lock shaft
19	XB-76105	6	Roll pin DIN 7344 10 x 36
20	XB-E-60130	4	Washer ISO8738 45 x 60 x 6
21	XA-E-60216	1	Cross shaft, short cpl.
22	XB-21-S-10M-70M	4	Roll pin DIN 7343 10 x 70
23	XB-76011	4	Hex socket set screw DIN 915 M10 x 25
24	XA-E-60164	2	Mounting pin, middle
25	XA-E-60171	4	Lever arm, short
26	XB-E-61090	4	Shim ring DIN 988 45 x 55 x 0,5
27	XA-76072	4	Washer, DIN 9021 17 vz
28	XA-76205	2	Mounting pin, below, outside
29	XA-76206	2	Mounting pin, below, inside
30	38025	8	Grease fitting DIN 71412 M6 x 1 Form A
31	XB-76021	4	Plastic cap, yellow
32	XA-E-60197	2	Drive shaft, cpl.
33	XA-E-61112	1	Cross shaft, long
34	XA-E-60258	2	Chain guide, inside
35	XA-E-60259	2	Chain guide, outside
36	XB-E-60149	2	Glide pad
37	XA-E-60198	4	Bushing
38	33023	4	Washer DIN 125 M10
39	32024	4	Lock nut DIN 980 M10
40	XB-E-60124	2	Button head socket screw ISO 7380 M12 x 30
41	32001	2	Lock nut DIN 980 M12
42	XB-E-61036	2	Pads
43	XB-E-61063	4	Hex socket countersunk head screw DIN 7991 M10 x 12
44	XB-76073	4	Lock nut, DIN 980 V M16-8 vz
45	XB-76070	4	Hex socket countersunk head screw DIN 7991 M16-80 vz
46	XB-76071	4	Hex socket countersunk head screw DIN 7991 M16-70 vz
47	XA-76077-KTL	2	Lock Indicator
48	XB-76014	2	Bolt DIN 931 M5 x 45
49	XB-76016	2	Washer DIN 125 A5
50	XB-76015	2	Nut DIN 980 M5
51	XA-76208	4	Spacer bushing
52	XB-76008	2	Compression spring
53	33023	2	Washer DIN 125 A10



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