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Operator's Manual & Safety Information

CRANE FORK MODEL 660

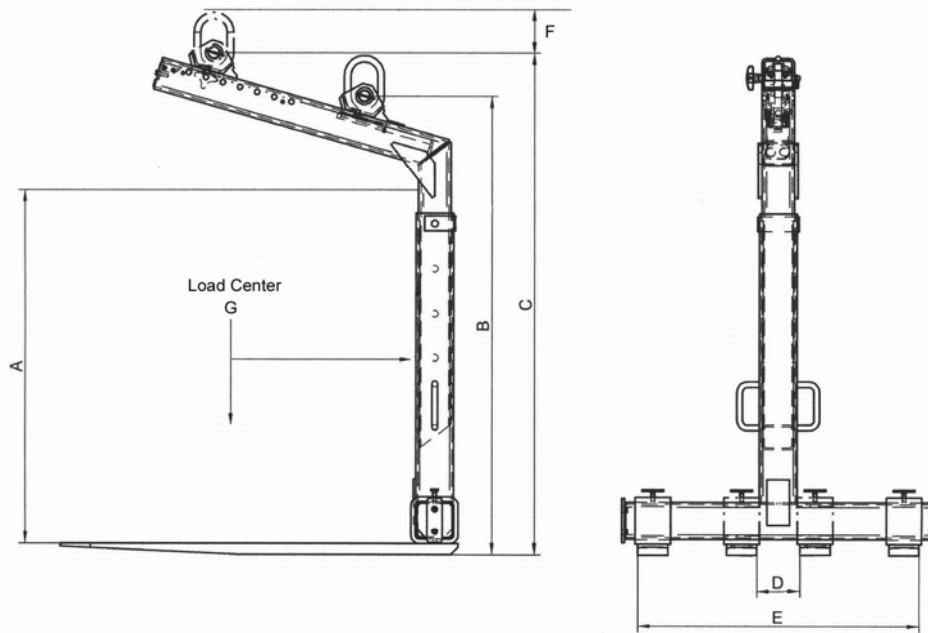
See Page 10 for Model 560Gp & BL Crane Forks



Model 660
With 660-02 Block Forks



Model 660
With 660-01 General Purpose Forks
(660-03 brick forks similar)



Dimension A	Dimension B	Dimension C	Dimension D	Dimension E	Dimension F	Dimension G
48" TO 68"	62" TO 80"	68" TO 86"	7"	39"	6.5"	23.6"

General Safety Precautions

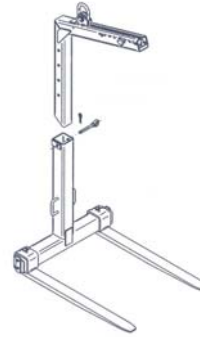
- Under no circumstances should personnel be elevated with Crane Forks.
- Users should review the Operator's Manual & Safety Information and understand all operations of the crane forks before using it.
- Materials to be elevated with the crane fork must be adequately secured to prevent material from falling from pallets or packages.
- Never allow personnel to stand under the load.
- Use the handles on the king post to guide the crane fork into the pallet/package to prevent injury to fingers or other parts of the hand.
- Make sure the lifting equipment is capable of handling the weight of the loaded crane fork.

Certification

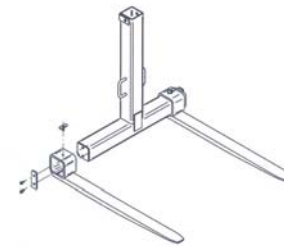
Star Crane forks have been engineered and tested in accordance with A.N.S.I. Standards and the model 660 is rated at 6000 lbs capacity at a 23.6" load center with an equally balanced load, however with the smaller 660-03 Brick Tines the capacity is reduced to 4500 lbs.

Assembly and Adjustment

The King post can be adjusted for greater load height from 48" to 68" by removing the locking pin and raising the upper arm section for load heights - Make sure personnel raising the post have sufficient strength to handle the weight.



Tines are installed on the bottom square horizontal tube and are secured with the end plates and locked into position with the T-Bolts. Adjust the tines to allow for even load distribution.



Fitting to crane

The crane fork should be connected to the crane by means of a universal joint type suspending element via the crane hook or rotator.

How it works

The crane fork is equipped with a spring loaded trolley that keeps the forks level with or without a load. The trolley is designed so that when tension is relieved on the hoist line, the spring returns the trolley to the empty fork position. When the load is lifted and tension is applied, the trolley travels out to a predetermined stop set at the load center of the loaded crane fork. A trolley end stop pin is provided to adjust the travel of the trolley for various pallet/package sizes.

Operation

When picking a new load check to see that the load is being carried with the forks level or slightly tipped up. If not, immediately lower the load to the ground and relieve the tension on the hoist line. Then reposition the Trolley End Stop Pin in the top arm to adjust the travel of the trolley so that it stops at the crane fork's loaded vertical load center. You may have to move the pin several times to find the position where the forks hang level or slightly tipped up with the load.

For proper operation of the trolley, the load must be greater than 1,100 lbs otherwise the trolley will not travel properly. **When lifting the load, the hoist line should lead the load slightly to ensure that the trolley moves out to the loaded stop position.**

Operation continued

The maximum load capacity of the Crane Fork must not be exceeded. The maximum load capacities are based on a 23.6" load center on the forks.

Use handles to guide the crane fork into the pallet/package. Keep hands off other parts of the crane fork during use to prevent getting fingers mashed between the crane fork and the load.

Never stand under the load.

Transporting the pallet fork

When in transit, the pallet fork must be properly secured and if it is carried on a boom truck make sure the boom and crane fork cannot swing out in an uncontrolled manner. In addition make sure the boom does not exert any extreme compression force on the crane fork.

Maintenance and Repair

General notes

Thorough regular maintenance of the crane fork is essential to prevent down-time and prolong its life. Strict cleanliness must be observed in all maintenance operations.

Grease

Chevron Delo #2 or

Any multi-purpose high-melting-point lithium-based grease of consistency category 2

Maintenance every 50 hours of operation

(Depending on conditions more frequent maintenance may be required)

Check screw connections, tighten if necessary

Apply grease thru Zerk fittings on top of top arm

Remove any rust or corrosion and Lubricate tine adjustment T-bolts

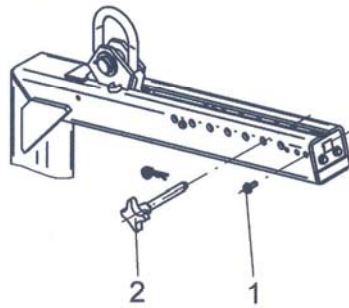
Annual Maintenance

Check for cracks, wear, corrosion and functional safety (to be carried out by qualified specialist).

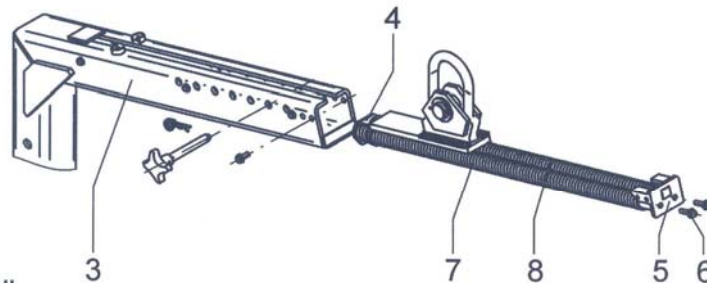
Repair and Disassembly

Upper part - Changing springs, spring guide, slide, cover plate and sliding rails

Remove four hexagon screws (1) and pin (2).



Pull complete spring guide (4) forwards out of upper part (3) .
Slacken off the two hexagon screws (6) on the cover plate (5) .
Squeeze together the first spring (7) on the cover plate (5) (maintain preload).
Remove corresponding hexagon screw (6) .
Swing cover plate (5) to one side. Relieve pressure on spring.
Remove second spring (8) in the same way.



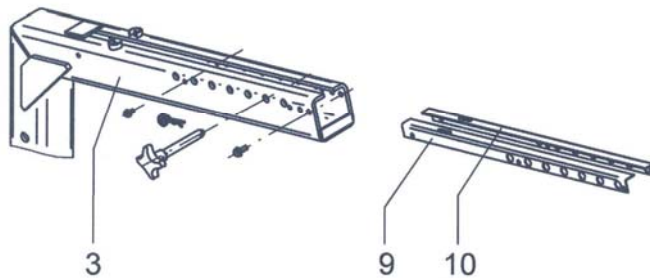
WARNING !!

Always relieve pressure on springs slowly and one at a time to avoid risk of injury !!

Remove sliding rails (9 and 10) .

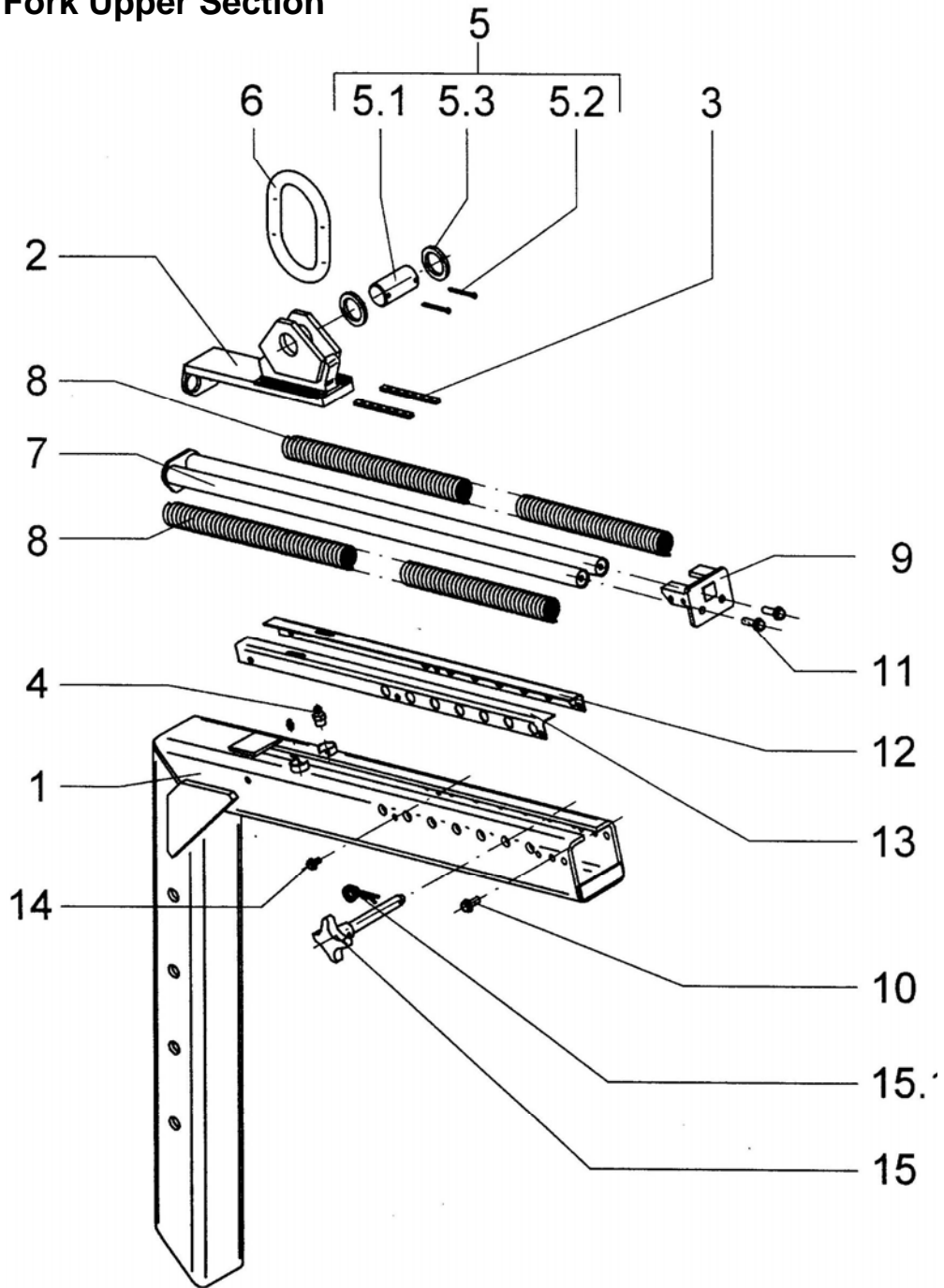
Install in the reverse order.

For load capacities above 2000 kg / 4400 lbs, a second person is needed to relieve the load on the spring slowly.



Parts Manual

Crane Fork Upper Section



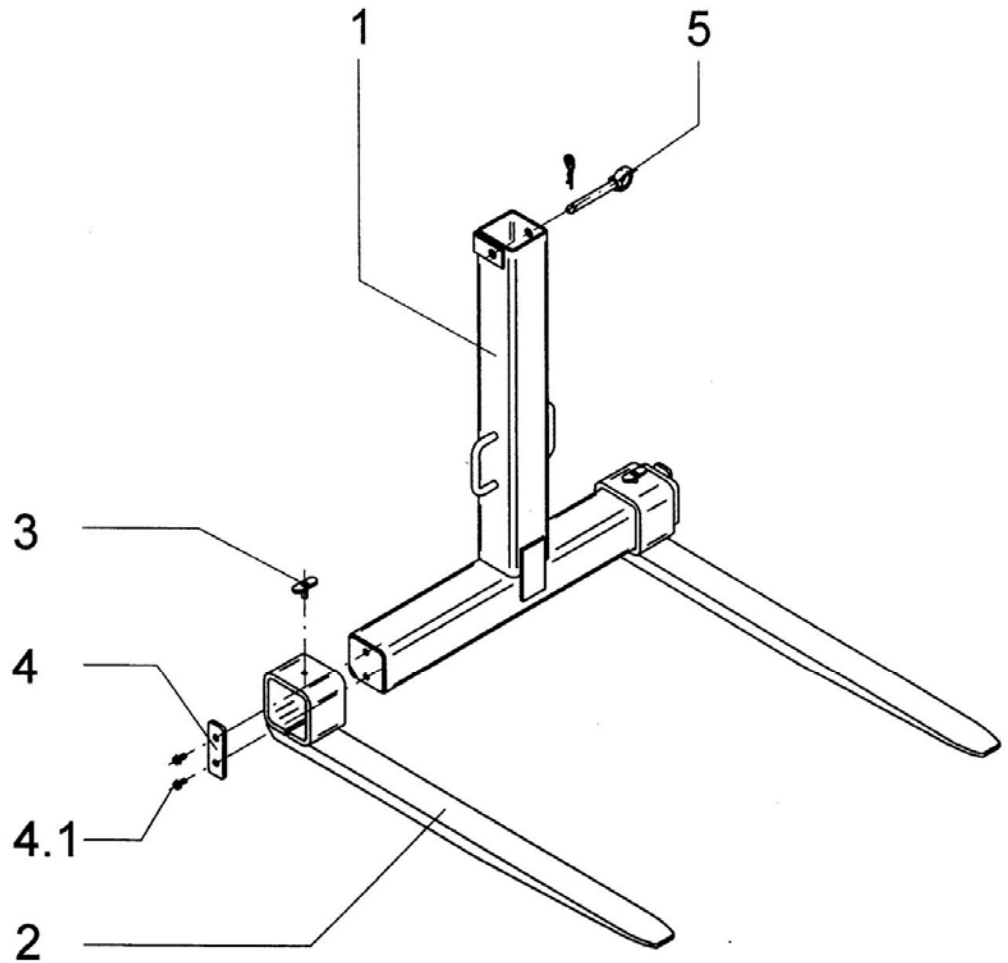
Parts List

Crane Fork – Upper Section

Item No.	Qty	Description	Part Number
1	1	upper section complete	660-A
2	1	trolley slide	660-12
3	2	trolley slide wear pads	660-13
4	2	Grease Zerks	660-14
5	1	trolley pin assy.	660-15
5.1	1	Trolley pin	660-151
5.2	2	Cotter pins	660-152
5.3	2	trolley pin washers	660-153
6	1	Trolley pick ring	660-16
7	1	Spring guide tube	660-17
8	2	Compression springs	660-18
9	1	Upper arm cover plate	660-19
10	4	Hex head screw – m10x25	660-20
11	2	Hex head screw – m10x35	660-21
12	1	Left slide rail	660-22
13	1	right slide rail	660-23
14	6	Locking screw – m8x16	660-24
15	1	Trolley stop pin	660-25
15.1	1	Hairpin for trolley stop pin	660-251

Parts Manual

Crane Fork Lower Section



Parts List

Item No.	Qty	Description	Part Number
1	1	Lower Section Assy.	660-B
2	1	Set of 2 Pallet tines 1.5"x4"x46"	660-01
	1	Set of 6 block tines 1.5"x2"x47"	660-02
	1	Set of 2 brick tines 1.5"x3"x39"	660-03
3	2/6	Tine T-Bolt	660-33
4	2	End Plate	660-34
4.1	4	End plate screw	660-341
5	1	King post pin w/ locking ring	660-35
5.1	1	King post pin only	660-351
5.2	1	locking ring only	660-352



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CRANE FORKS

Warranty – 12 months

On exclusion of further claims and rights of the customer, irrespective of the legal reason, we will be liable only for material and workmanship defects for a period not to exceed 12 months from the date the product leaves our premises. We are not liable for any consequential damages.

Claims concerning defects must be made in writing within two weeks after equipment was received at its destination with the following exception. In the event the defect is not visible even to careful inspection at delivery then the defect must be reported in writing within two weeks of discovery.

Warranty claims can only be made if the crane fork has been properly maintained and used in accordance with instructions in this manual.

No liability will be assumed for incorrect or negligent treatment or excessive loads.

Liability will not be assumed if the crane fork has been modified in any way or when defects are caused by work done by unauthorized personnel.

If a warranty claim is found worthy and made within the warranty period we reserve the right at our discretion to repair existing defects or to replace it with the same or current model free of charge or to issue a credit for the reasonable cost of repair or take possession of the equipment and issue reimbursement for the calculated value.

When a warranty claim is made we must be given unrestricted access to inspect the defect and run any necessary test to determine the cause of the defect.



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Operating Instructions & Safety Information

For model 560GP & BL Crane Forks

Certification

Star Crane forks have been engineered and tested in accordance with A.N.S.I. Standards and are rated at 6000 lbs capacity at 24" load center with an equally balanced load.

Assembly instructions

Fitting to crane

The pallet fork can be connected to the crane by means of a suitable suspending element via the crane hook or rotator. The connection to the crane must always be of a universal joint type.

If the rotator or unit is prevented from hanging freely, impermissibly high forces could be applied.

A stop is provided which can be preset to limit the travel of the pickup trolley.

A spring-tension-system retracts the pickup trolley when load weight is taken off the fork.

Tines should be adjusted for different size packages, allowing for even load distribution on all tines.

Safety notes for operation

To ensure that the load is raised safely, the point of suspension must be above and ahead of the loads center of gravity. When the load is raised, the fork arms must be horizontal or pointing slightly upwards. The position of the lifting ring (to find the CofG) depends on the load and is altered by horizontal adjustment of the stop in the crane arm. The maximum stated load capacity is 6000 lbs and must not be exceeded. The maximum load capacities apply only when the center of gravity of the load is at the 24" load center on the forks.

**Use handles to guide the fork into the stack, never touch other parts while operating the fork.
Do not stand under the load.**

Transporting the pallet fork

When the vehicle is in transit, the pallet fork must be set down on the vehicle in such a way that it cannot swing out in an uncontrolled manner. Prevent the crane boom from causing any extreme centrifugal or compression forces.

Maintenance and Repair

General notes

Thorough regular maintenance is essential if the "down" time of the Crane fork is to be kept as low as possible, and to prolong its life. Strict cleanliness must be observed in all maintenance operations.

Grease

Any multi-purpose high-melting-point lithium-based grease of consistency category 2 in accordance with DIN 51818.

Maintenance intervals

Maintenance operation 50 operating hours yearly

Check screw connections, tighten if necessary **every 50 hours**

Lubricate clamping devices and check for free movement **every 50 hours**

Check for cracks, wear, corrosion and functional safety (to be carried out by approved specialist)

Yearly