



CHAIN HOIST MANUAL



WARNING:
Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

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The HS Series Chain Block is designed with a transmission mechanism of symmetrically arranged two-step spur gears. It comprises the following principal parts: hand chain, hand wheel, brake, driving gear shaft, disc gear, pinion shaft, spline gear, chain sprocket and load chain. (See figure, Construction of Body)

On pulling the hand chain (15), the hand wheel (9) rotates in clockwise direction, presses the friction plates (11) and ratchet disc (14) tightly against the brake seat (10) and causes these parts to rotate in unison. The driving gear shaft (5) turns the disk gear (8), pinion shaft (7) and spline gear (6) to rotate. Hence the load chain sprocket (4) which is mounted on the spline gear actuates the load chain (1) to lift the load smoothly and stably.

The brake used is a ratchet disc with a set of single-acting friction plates. It holds up itself on load, and the pawl (17) smeshed with the ratchet disc by force of the spring (16), thus ensuring the brake to work safely.

APPLICATION

The HS Series Chain Block is a portable lifting device easily operated by hand chain. It is suitable for use in factories, mines, farms, construction sites, wharves, docks and warehouses for installation of equipment, as well as for loading and unloading goods. It is specially advantageous for lifting work in open air grounds and places where no power supply is available. The chain block can be attached to a trolley of any type as a travelling chain block. It is suitable to monorail overhead conveying system, hand travelling crane and jid crane.

OPERATION INSTRUCTIONS

1. Judge the weight of the load to be lifted and make sure if the weight is over the rated capacity of the chain block. Never overload the block on any occasion.
2. Careful inspection should be made to the parts, such as hooks, load chain, braking device, etc. and the lubrication of the block. The chain block can only be put into operation when it is found to be in good condition.
3. Before lifting, inspect the hooks to see whether they are securely attached. Obliquity of the hooks and load suspension at hook tip are not permissible. For perfect performance of the block, the load chain should be kept vertically straight without and twist so as to prevent it from tangling.
4. During operation, the operator should stand in the plane of the handwheel (9). To lift the load, pull the hand chain (15) to rotate the handwheel in clockwise direction. When pulling the hand chain in the reverse direction, the handwheel will be separated from brake seat (10), the ratchet disc (14) checked by pawl (17) will be released, and the load will be lowered down smoothly.

Do not pull the hand chain in a position oblique to the plane of the handwheel to prevent tangling of the hand chain and turning of the block.

5. For the sake of safety passing or working under a lifting load is strictly forbidden.
6. While lifting or lowering a load, the hand chain should be pulled steadily so as to prevent it from jerking or tangling.
7. Stop operation immediately in case the hand chain cannot be pulled any further. Don't ask more hands for pulling Proceed inspection as follows:

- (1) If there is anything entangled with the load.
- (2) Whether there is any trouble with the parts of the block.
- (3) Whether the load weight is over the rated capacity of the block.

FEATURES

Five prominent features in design and in service are inherent in HS Series Chain Block:

1. Safety in operation with minimum maintenance.
2. High efficiency and small handpull.

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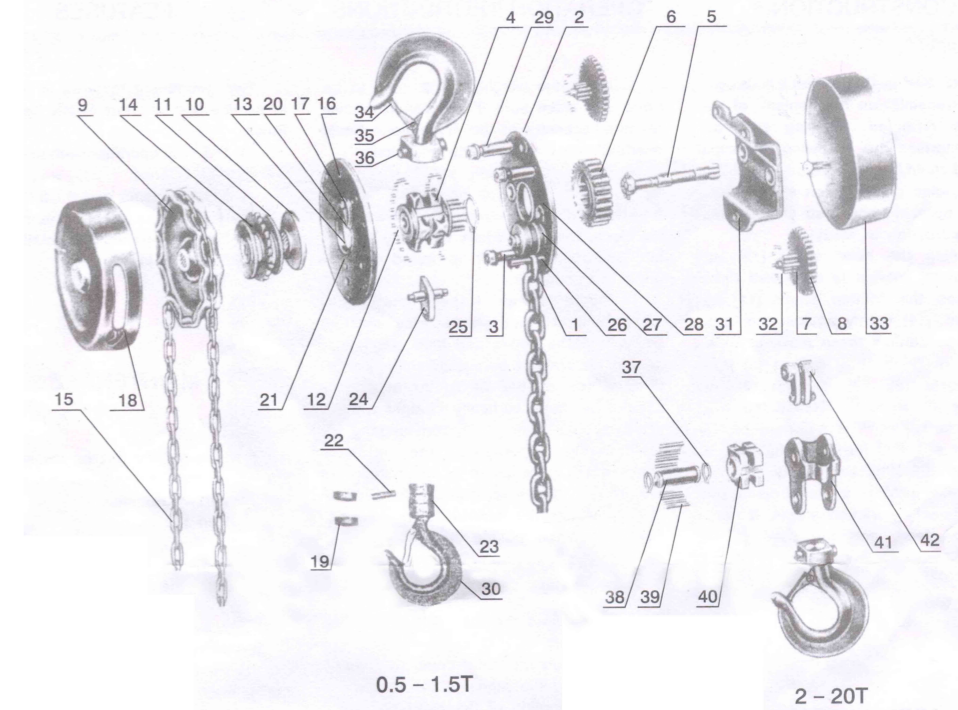
3. Light weight and easy handling.
4. Fine appearance with small size.
5. Durability in service.

MAINTENANCE

1. Clean off the dirt on the chain block after use and store it in a dry place to keep it from getting rusty and corrosive.
2. Clean the parts with kerosene and smear the gears and bearings with grease once a year by a skilled hand.
3. Align the "0" marks of the two gears (8) while assembling, as shown in Section View C-C
4. The rollers (12) of the chain sprocket bearing may be stuck with grease to the journal of the chain sprocket (4) before fitting them into the outer race of the bearing (13) on the side plate.
5. While assembling the brake mechanism, care should be taken to mesh the slanting teeth of the ratched disc and he pawl. Make sure that the pawl is controlled by the spring sensitively and reliable. Then turn the hand wheel clockwise after screwing it onto the driving shaft, and it must press the disc and the plates on the brake seat. Turning it counterclockwise, there should be clearances between the disc and the plates.
6. Transition fit is applied to the stay (3) and the right side plate (2). Don't dismantle them, or they will get loose.
7. Never allow any layman to disassemble the block.
8. After cleaning and repairing the block should be subjected to no-load test and heavy load test. A chain block can be put into operation after it has been tested and found in good condition.
9. Keep clean the friction surfaces of the brake while lubricating or operating the block. Brake mechanism should be inspected regularly for prevention of faulty braking and falling of the load.

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Details of Spare Parts for HS Series Chain Blocks



1	load chain	12	roller	23	bottom hook block	34	Latch clamp
2	right side plate	13	bearing race	24	stripper	35	Headless Yivet
3	stay A	14	ratchet disc	25	snap ring	36	Hook holder
4	chain sprocket	15	(3M) hand-chain	26	pin	37	Snapping(2-20T)
5	driving shaft	16	pawl spring	27	guide roller	38	Shaft(2-20T)
6	splined gear	17	pawl	28	bearing race	39	Needle(2-20T)
7	pinion shaft	18	hand wheel cover	29	stay B	40	Idle sheave(2-20T)
8	disk gear	19	ring	30	hook	41	Hook hanger(2-20T)
9	hand wheel	20	pawl pin	31	bent plate	42	Suspension Plate(2-20T)
10	brake seat	21	left side plate	32	roller		
11	friction plate	22	chain pin	33	Sheet cover		



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