

## Operating Instructions

# HYDRAULIC GARAGE JACK

WFN-150

### IMPORTANT

Users are requested to carefully  
read this Manual before putting  
Garage Jacks in use.

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### **SALES & MANUFACTURING CO.**

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## SPECIFICATIONS

Model	Capacity (tons)	Min. Saddle Height inches	Max. Saddle Height inches	Overall Height inches	Overall Length inches	Overall Width inches	Max. Frame Height inches	Frame Length inches	Net Weight lbs.
WFN-150	1.5	5	19	10	49 $\frac{1}{2}$	26	6	25	84

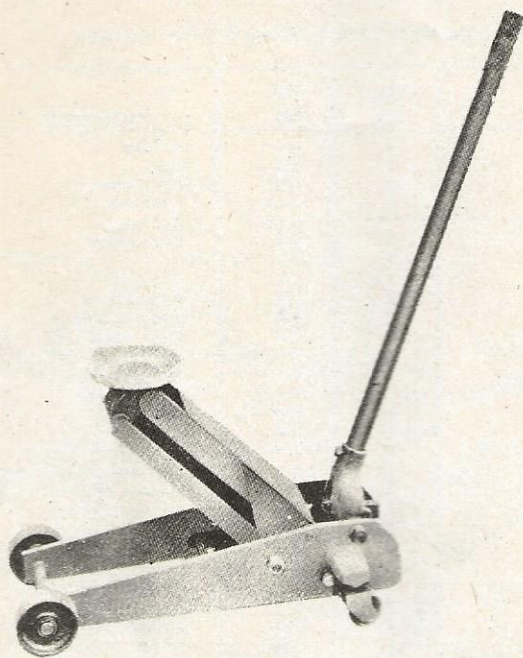
The types and specifications may be changed with or without notice

## PARTS LIST

When Ordering Parts Specify Model & Serial Number

Ref. No.	Parts Name	Qty/ set	Ref. No.	Parts Name	Qty/ set
1-1	Front wheel shaft	1	6-1	Oil box	1
1-2	Washer	2	6-2	Bolt	1
1-3	Front wheel	2	6-3	Oil strainer	1
1-4	Snap ring	2	6-4A	Steel ball	1
			6-4B	Steel ball	1
2-1	Saddle	1	6-5	Seal washer	1
2-2	Saddle base	1			
2-3	Link rod pin (A)	1	7-1	Oil tank	1
2-4	Arm pin (A)	1	7-2	Fiber gasket	1
2-5	Link rod	2	7-3	Air vent plug	1
2-6	Link rod pin (B)	2	7-4	Fiber gasket	1
2-7	Nut	2			
2-8	Spring washer	2	8-1	Pump plunger	1
3-1	Arm pin	1	8-2	Back-up ring	1
3-2	Washer	1	8-3	O-ring	1
3-3	Arm	1	8-4	Oil seal	1
3-4	Grease nipple	1			
3-5	Piston connecting joint	1	9-1	Cap plug for safety valve	1
3-6	Snap ring	1	9-2	Rubber packing	1
3-7	Cotter pin	1	9-3	Spring retainer	1
3-9	Tension rod	2	9-4	Safety valve	1
3-10	Tension rod pin	2	9-5	Spring	1
3-11	Snap ring	2			
4-1	Caster fork	2	10-1	Release valve	1
4-2	Rear wheel	2	10-2	O-ring	1
4-3	Rear wheel shaft	2	10-3	Release valve gear (B)	1
4-4	Caster bracket	2	10-4	Collar	1
4-5	Ring race	2	10-5	Release valve lock nut	1
4-6	Set screw	2	10-6	Release valve connecting rod	1
4-7	Spring washer	4	10-8	Copper packing	1
4-8	Bolt	2			
4-9	Bolt	2	11-1	Plunger connecting pin	1
5-1	Tank nut	1	11-2	Rivet	1
5-2	By-pass bar	1	11-3	Handle fork	1
5-3	By-pass rod	1	11-4	Handle shaft (A)	1
5-4	Cylinder	1	11-5	Handle shaft (B)	1
5-5	Piston rod	1	11-6	Spring washer	2
5-6	Piston packing retainer	1	11-7	Spring	1
5-7	By-pass screw	1			
5-9	Spring	1	12-1	Handle	1
5-10	Snap ring	1	12-2	Handle set screw	1
5-11	Steel ball	1	12-3	Release valve gear (small)	1
5-12	U-type packing	1	12-4	Release valve connecting	1
5-13	Spring retainer	1	12-5	Cotter pin bar (B)	1
5-14	Oil seal	1	12-6	Spring pin	1
5-15	Washer	1	12-7	Nut	1
			13-1	Frame	2
			13-2	Oil box stopper (A)	2
			13-3	Spring	1
			13-4	Oil box stopped (B)	1





WFN-150



## 1. WFN-150 DESIGN

- \*compact and light, and highly maneuverable within a limited area.
- \*highly quality bearings makes the casters highly maneuverable and safe.
- \*the wide frame feature for better distribution of loading forces for additional strength.
- \*larger diameter and depth of the saddle for ease handling, maneuverability and stability of load.
- \*filler cap plug moisture proof, and dirt proof during operation.
- \*design with dust seals in the plunger and piston rod, for extra protection and dust proof against any foreign materials and moisture.
- \*the ram is treated and finely polished and chromed piston rod and plunger for extreme durability and long life.
- \*design with fast hydraulic mechanism with a large diameter plunger to lift the saddle and load to the maximum height faster.

## 2. SPECIFICATIONS

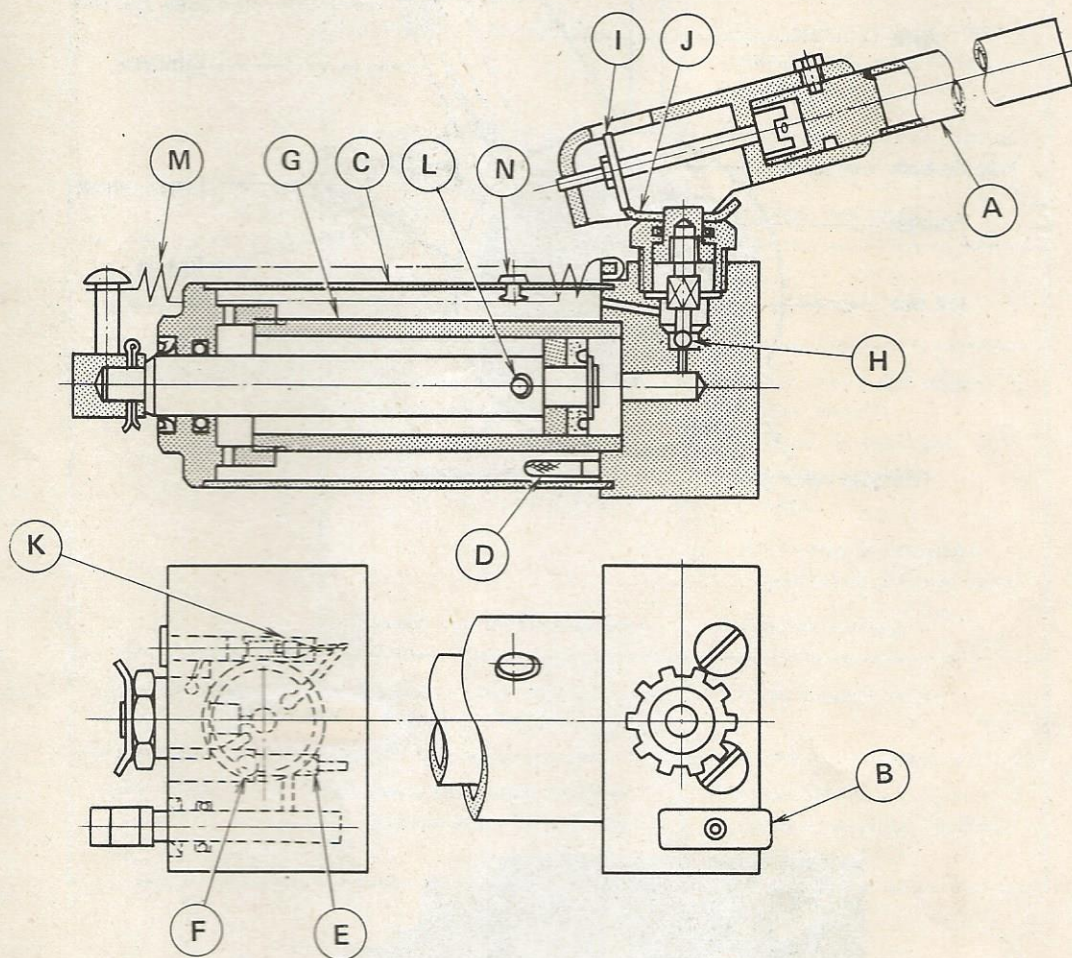
Capacity	1.5 tons	1.5 k/tons
Min. saddle height	5in.	130 mm
Max. saddle height	19 $\frac{1}{4}$ in.	490 mm
Saddle lifting height	14in.	360 mm
Frame height	6in.	150 mm
Front wheel width	9 $\frac{3}{4}$ in.	247 mm
Overall length	26in.	660 mm
Overall height	49 $\frac{1}{2}$ in.	1,260 mm
Overall width	13 $\frac{1}{4}$ in.	340 mm
Frame inside width	6 $\frac{1}{4}$ in.	155 mm
Net weight	83.6 lbs.	38 kg



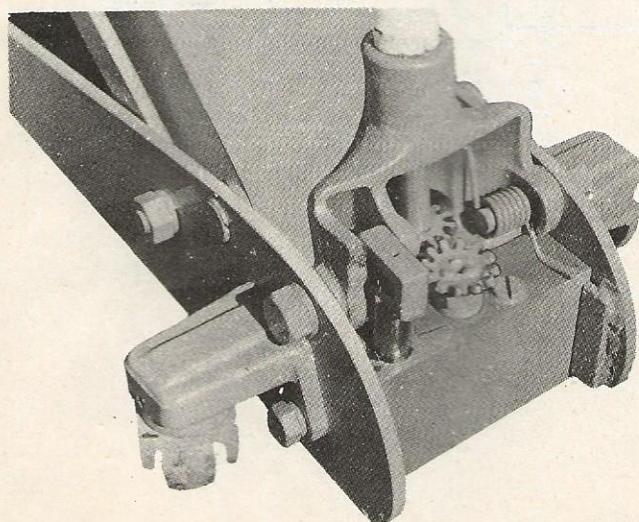
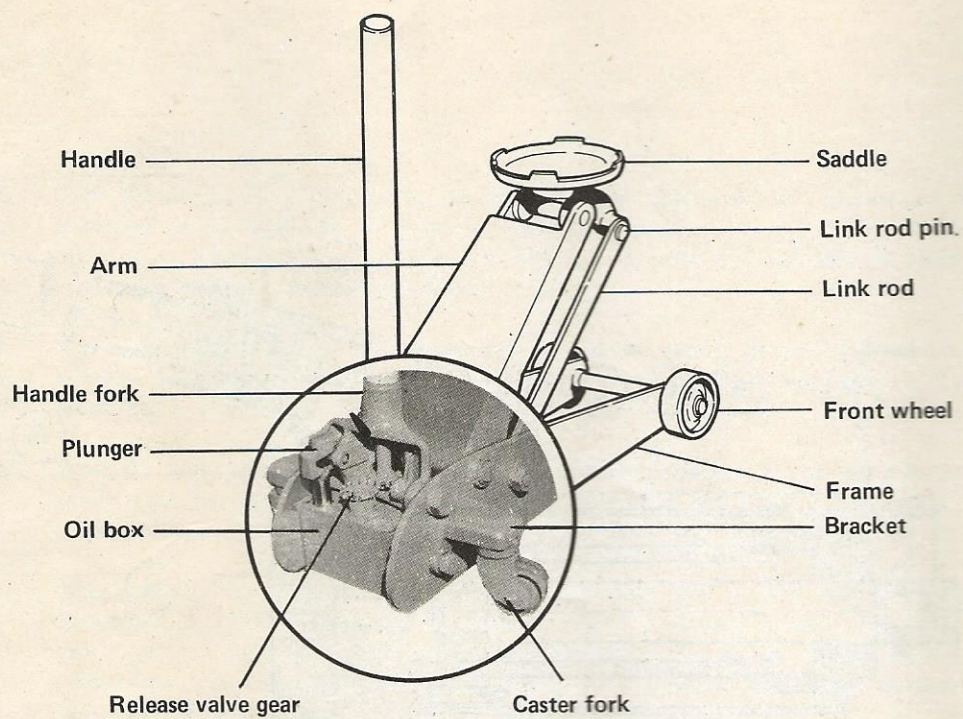
### 3. GENERAL INFORMATION AND OPERATION

1. Turn the handle (A, Figure 1) to the right direction (clockwise) and operate the handle up and down in the hydraulic oil reservoir tank (C) the oil is pressurized by the plunger (B) and is delivered through oil strainer (D), suction valve (E) and delivery valve (F) to cylinder (G), and then lift the saddle.
2. When the saddle reaches to the maximum height, the safety device (L)-by-pass valve-installed in hydraulic cylinder (G) begins to by-pass the pressurized oil, so that the saddle can not be and lift higher.
3. When the load against the saddle exceeds the capacity indicated in the specification, the safety valve (K) operates and excessive stress against the jack itself is eliminated.  
Note: Do not attempt to disassemble the safety valve as it is set at factory.
4. When lowering the saddle, turn the handle (A) with care to left direction (counter-clockwise). Hydraulic oil returns to hydraulic tank (C) through release valve (H), and then begins to lower the saddle. Opening and closing of the release valve is directed by special gear (I and J) connected with the handle (A) that moves in the range of vertical to horizontal position.
5. When a vehicle is lifted by the jack for repair, it is always requested to put rigid stack jack or use adequate supports under the vehicle to ensure the safety. It does not require special efforts, but requires special attention. Also be sure the saddle is centered under the load.
6. When operating on the uneven and soft ground, the jack may sink in the ground and irregular forces and uneven loading can damage the jack.
7. The jack construction with the high tensile coil spring (M, Figure 1) is installed to assist quick return, but the tension of this back spring will be gradually weakened if the saddle is left at a raised position for long time. Therefore, be sure again to put adequate supports instead of the jack after lifted to insure longer jack spring life.











## 5. TROUBLE SHOOTING

Trouble	Possible Cause	Remedy
Will not lift	1)no hydraulic oil 2)release valve opened  3)mal-functioned delivery and/or by-pass valve 4)packings defective	1)fill hydraulic oil 2)try again to rotate the handle and sure closed  3)check for dust or foreign material, and clean 4)replace packings
lifting only half way	5)lack of hydraulic oil (in most cases)	5)fill with hydraulic oil.
load will not hold	6)improper contact of suction valve, delivery valve, release valve and/or by-pass valve  7)worn out position packing	6)clean valves and adjust valves contact. a)lifting is improper contact of suction valve b)lowering is improper contact of delivery valve 7)replace packing
does not lower	8)release valve will not open. caused by foreign material dirt	8)clean release valve
poor lifting	9) )defective pump packings and/or incorrect valving	9)clean valves. replace packings. replace hydraulic oil

CONSULT YOUR NEAREST DEALER DISTRIBUTOR OR FACTORY REPRESENTATIVE FOR REPAIR IF TROUBLE IS STILL EXISTS



## 6. MAINTENANCE

- 1) Drain and refill hydraulic oil once a year.  
Use clean hydraulic oil for change. If hydraulic oil is not available, use clean spindle oil or turbine oil or alike that should be free from contamination and moisture. Use good grade hydraulic oil to avoid possible deterioration of jack oil due to mixing different kinds of oil.

Note: Do not refill heavy viscosity oil such as auto mobile oil or brake fuel.

- 2) Fill the oil from filler cap (N, Figure 1) located on the top of the hydraulic tank and maintain the oil level approximate  $\frac{3}{16}$  in below the filler cap. Clean around the filler cap and then remove the cap.  
After refilled, install the cap securely to prevent possible oil overflow during operation.
- 3) Lubricate the grease nipple located on the upper part of arm at every 3 months. Lubricant should be of the high quality such as chassis grease.





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