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HYDRAULIC JACK (BOTTLE, TELESCOPIC) OPERATING MANUAL



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The hydraulic bottle jack is a hand-operated device, designed for lifting loads. Hydraulic jacks are distinguished by a compact design, ease of maintenance and reliability in operation. They allow to perform a smooth lifting of a load and its precise stop at a specified height, while applying a small operating effort, due to a high gear ratio between the cross-section areas of the cylinder and the pump piston. Unlike the other load-lifting mechanisms, during lifting, jacks are normally located under a load, thus making the use of bulky auxiliary structures, such as pulling ropes, chains etc. unnecessary. Jacks of this type can be used as an operating component in more complex devices such as presses, bending machines, hoists, etc.

IMPORTANT! Continuous improvement of the products under the "TOR" brand is a long-term policy, so, the manufacturer reserves the right to improve the design of products without notice and depicting in the "Operating manual".

1. Description and Operation

1.1 Package list

1. Pre-assembled product 1 pc.
2. Handle 1 pc.
3. Technical data sheet and operating manual 1 pc.
4. Product package 1 box.

ATTENTION! Upon the product unpacking, make sure that all the parts are available, according to the package list. If any part is not available or damaged, contact the seller immediately.

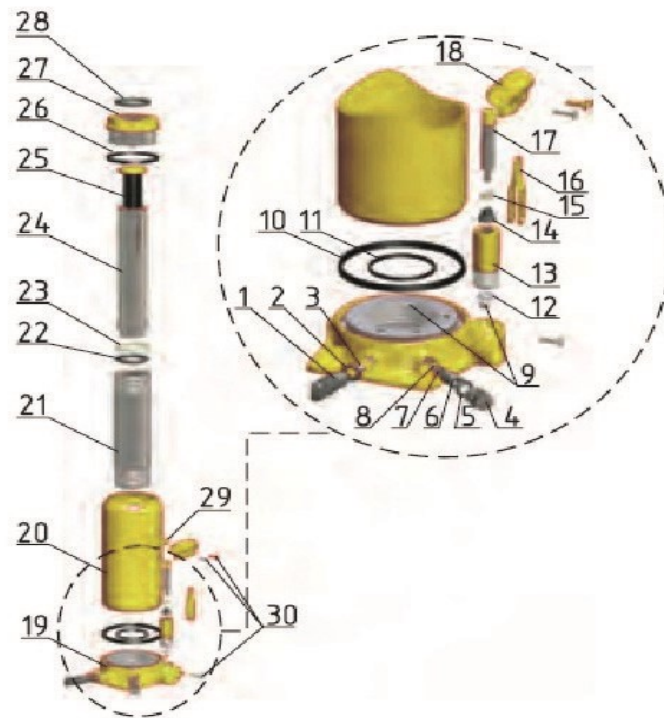


Fig.1

- | | |
|---------------------------|--------------------------|
| 1. Release valve assembly | 16. Connecting rod |
| 2. Sealing ring | 17. Pump piston |
| 3. Ball 6 mm | 18. Lever holder |
| 4. Safety valve | 19. Base |
| 5. Sealing ring | 20. Oil tank |
| 6. Spring | 21. Hydraulic cylinder |
| 7. Ball holder | 22. Rubber gasket |
| 8. Ball 5 mm | 23. Plastic seal |
| 9. Ball 6 mm | 24. Main piston |
| 10. Rubber ring | 25. Extension type screw |
| 11. Plastic ring | 26. Sealing ring |
| 12. Washer | 27. Upper nut |
| 13. Pump housing | 28. Sealing ring |
| 14. Rubber gasket nuts | |
| 15. Plastic ring | |

1.2 Technical characteristics

Characteristics of bottle jacks

Model	Item No.	Load capacity, t	Grip height, mm	Stroke, mm	Screw neck, mm	Jack dimensions, mm	Dimensions in package, mm	Weight, kg
TOR ДГ-2	1052	2	150	90	50	90x90x150	110x100x160	2
TOR ДГ-2 with case	1006112	2	150	90	50	90x90x150	110x100x160	3
TOR ДГ-3	1053	3	180	125	60	90x95x180	115x110x190	3
TOR ДГ-3 with case	1006113	3	180	125	60	90x95x180	115x110x190	4
TOR ДГ-5	1055	5	190	120	60	100x100x190	130x120x210	3,5
TOR ДГ-5 with case	1006114	5	190	120	60	100x100x190	130x120x210	5
TOR ДГ-8	1058	8	200	130	60	110x110x200	130x120x210	4,5
TOR ДГ-8 с кейсом	1006115	8	200	130	60	110x110x200	130x120x210	6
TOR ДГ-10	10510	10	200	130	60	120x110x200	150x130x210	5
TOR ДГ-12	10512	12	210	140	60	130x120x210	150x150x220	6
TOR ДГ-15	10515	15	230	150	60	140x130x230	160x150x240	7
TOR ДГ-20	10520	20	230	170	60	150x150x230	180x160x250	9,5
TOR ДГ-25	10525	25	250	170	Нет	170x160x250	180x180x260	11,5
TOR ДГ-30	10530	30	260	170	Нет	170x160x260	180x180x260	11,5
TOR ДГ-50	10550	50	250	170	Нет	180x150x250	230x190x270	18,5
TOR ДГ-100	105100	100	330	160	Нет	270x240x330	350x280x380	66
TOR ДГ-200	1006111	200	340	150	Нет	380x330x330	420x360x400	132

Characteristics of telescopic jacks

Model	Item No.	Load capacity, t	Grip height, mm	Stroke, mm	Screw neck, mm	Jack dimensions, mm	Dimensions in package, mm	Weight, kg
TOR ДГТ-2	1006104	2	165	190	55	355	110x100x160	4,5
TOR ДГТ-4	1006105	4	150	160	35	310	130x120x210	4,5
TOR ДГТ-6	1006106	6	154	160	40	314	130x120x210	5,5
TOR ДГТ-8	1006107	8	156	160	40	316	130x120x210	6,2
TOR ДГТ-10	105105	10	225	285	50	510	135x120x235	7,5
TOR ДГТ-12	1006108	12	230	285	50	515	160x150x255	10,5
TOR ДГТ-15	1006109	15	232	285	50	547	180x160x250	12
TOR ДГТ-20	105205	20	235	285	50	520	160x150x255	15
TOR ДГТ-32	1006110	32	250	280	-	530	180x180x260	21,5

1.3 Preparation for operation

1. Before using the jack, read carefully the operating manual.
2. Make sure that the weight of the load will not exceed jack's rated lifting capacity.
3. Assess the surface on which the jack will be located. It should be solid and smooth.
4. Make sure that the jack is in the relevant operational state.
5. Before lifting a vehicle, check whether it is on the handbrake and its wheels are locked.
6. If upon lifting the vehicle you will make repairs under it, prepare a special safety stands, which be placed under a load.

1.4 Operating procedure

Load lifting

1. Tightly close the release valve by inserting the handle's narrow end to the valve seat, then turning it clockwise.
2. Place the jack under the vehicle in a place, suitable for its lifting (see the vehicle operating manual). If necessary, rotate the retractable extension screw of the jack counterclockwise until it contacts the load.
3. Insert the handle into the slot and pump it for lifting a load to the required height.

Load lowering

1. Draw out the handle from the slot and insert it with the narrow end into the valve seat. Open the release valve by turning slowly the handle counterclockwise. The load

lowering speed depends on the release valve opening. When opening the release valve do not make more than one full turn.

2. Upon full lowering of the load, remove the jack. If the retractable extension screw is in the extended position, then rotate it clockwise until it completely retracts.

ATTENTION! To prevent leakage of fluid from the tank, the jack shall be transported and stored in the upright position.

2. Maintenance and repair

2.1 Care and maintenance recommendations

To ensure proper jack operation, lubricate its movable parts and retractable extension screw on a regular basis. When the jack is not in use, keep the piston, pump and retractable extension screw in a full down position. In order to avoid corrosion, prevent the jack contact with water. If it happens, wipe the jack dry and lubricate all its parts.

In order to fill oil in the hydraulic system, do the following:

1. Set the jack in the upright position.
2. Bring the pump and the piston in the lowest position.
3. Remove the rubber plug from the oil tank of the jack.
4. Fill the tank with the hydraulic oil up to the lower edge of the oil filler. Use only a special good quality spindle oil.
5. Vent the air from hydraulic system, as described in the section "Troubleshooting".
6. Close the oil filler with the plug.

Sometimes the air can get into the hydraulic system, thereby reducing the jack operating efficiency. The air should be vented from the hydraulic system of the jack as follows:

1. Open the release valve and remove the oil tank plug.
2. Quickly pump the pump handle several times to displace the air from the system.
3. Close the release valve, put the oil tank plug into its position. Now the jack should be properly operated. Otherwise, repeat all the steps of this air venting procedure.

2.2 Troubleshooting

Failure	Possible cause	Corrective action
The jack can't lift the rated load	Release valve is not completely closed	By turning the handle, close the valve tighter (but do not overturn it).
	Insufficient oil volume in the system	Remove the oil tank plug and refill hydraulic oil in the tank.
	The air got into the system	Open the release valve and pump the jack handle several times. Close the release valve and continue operation.
	Valves are closed or clogged	Unclog the valves. Move down the power rod and then close the release valve. Lift the rod manually to a few centimeters, open the release valve, and then, by pushing the rod, make it go down as quickly as possible.

Failure	Possible cause	Corrective action
Jack falls under the load	Release valve is not completely closed	By turning the handle, close the valve tighter (but do not overturn it).
	Valves are closed or clogged	Unclog the valves (see above the unclogging procedure).
Oil leaks out from under the plug	The tank may be overflown	Remove the plug and drain the excess oil.
Unstable pump operation	Insufficient oil volume in the system	Remove the oil tank plug and refill hydraulic oil in the tank.
	The air got into the system	Open the release valve and pump the jack handle several times. Close the release valve and continue operation.
The jack can't be lifted to the maximum height	Insufficient oil volume in the system	Remove the oil tank plug and refill hydraulic oil in the tank.
	The air got into the system	Open the release valve and pump the jack handle several times. Close the release valve and continue operation.

3. Precautions

The jack is designed for lifting loads only and should not be used as a support for a long period of time.

1. Never work under a vehicle without safety stands for his support, designed for its weight.
2. The jack should be used only on solid, smooth surfaces.
3. Always provide the vehicle wheels lock-up and engage the safety brake before lifting.
4. Never overload the jack with the loads, the weight of which exceeds its rated lifting capacity.
5. Do not adjust the safety valve by yourself. Please contact the maintenance service.
6. Do not disassemble the jack. This may result in its breakage or damage.

4. WARRANTY

The warranty period is 3 months from the date of sale to the end customer.

LIMITATION OF LIABILITY:

- Seller will not be liable for product failures caused by use and normal wear and tear.
- The Seller is not responsible for product malfunctions caused by non-observance of operating rules or use of the Product under unacceptable environmental conditions.
- The warranty will be voided if the Product is not regularly serviced and if it is improperly stored.
- This warranty will not be extended to any Product that has been subject to misuse, neglect or accident or which will have been altered or repaired by elements other than Seller's in such a manner as to adversely affect its performance, stability or reability.
- The warranty does not cover the Product that has suffered any mechanical damage.

- The warranty does not apply to a Product that has been altered in any way.

In order to determine the causes of failure, a technical check is carried out for a period of 10 working days from the date of receipt of the Product for diagnosis.

Claims filing:

- Claims concerning found defects can be issued by the Buyer to the Seller within the guarantee period. The Buyer may request a claim form and instructions for filing a claim from the Seller.
 - All risks associated with delivery of the Product to the dealer or service center are borne by the owner of the Product.
 - Claims related to incompleteness and appearance of the Product will not be accepted after it has been put into operation.



The information in this paragraph is current at the time of printing of this manual. Up-to-date information on warranty service rules is published on the official website of the group of companies TOR INDUSTRIES **www.tor-industries.com** ("Service" section).

PRODUCT PASSPORT

Product Information:

Model			
Serial No.			
Sale Date		/	
Warranty Period			

Seller Information:

Company			
Address			
Phone			

SERVICE MARKS

Place for Stamp	All control operations and tests have been carried out. The product is fully equipped, serviceable and ready for use.
Dated: <input style="width: 150px;" type="text"/>	

Maintenance and repair

Type of Maintenance						
Type of Maintenance						
Type of Maintenance						
Type of Maintenance						
Warranty Repair						
Repair						
Date of Maintenance						
Contractor						

The customer confirms that he has familiarized himself with the rules of use of the product. The customer received the manual in English. The customer has no claims to the serviceability, appearance and completeness of the product.

Customer
Signature _____

**Place for
Stamp**

