



Hydraulic In-Line Bottle Jacks

Operating Instructions & Parts Manual

Model	Capacity
BH2023	2 Ton
BH2043	4 Ton
BH2063	6 Ton
BH2083	8 Ton
BH2123, BH2124	12 Ton
BH2203, BH2204	20 Ton



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

ADVERTENCIA

- Leer, comprender, y seguir las instrucciones antes de utilizar el aparato.
- El manual de instrucciones y la información de seguridad deben estar comunicado en lengua del operador antes del uso.
- No seguir estas indicaciones puede causar daños personales o materiales.

WARNING

To avoid **crushing and related injuries**:



NEVER work on, under or around a load supported only by a hydraulic jack. **ALWAYS** use adequately rated jack stands.

SFA Companies
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Read this manual and follow all the Safety Rules and Operating Instructions before using this product.

Made in PRC
BH2023-M0 11/07

SAFETY and GENERAL INFORMATION

Save these instructions. For your safety *read, understand, and follow* the information provided with and on this jack. The owner and operator of this equipment shall have an understanding of this jack and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this jack is authorized. If any doubt exists as to the safe and proper use of this jack, remove from service immediately.

Inspect before each use. Do not use if broken, bent, cracked, or damaged parts (including labels) are noted. Any jack that appears damaged in any way, operates abnormally or is missing parts, shall be removed from service immediately and the manufacturer notified. If you suspect that the jack was subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until the jack has been checked by a factory authorized service center (contact distributor or manufacturer for list of Authorized Service Centers). It is recommended that an annual inspection be done by qualified personnel. Replace worn or damaged parts with Blackhawk authorized replacement parts only. Labels and owner's manuals are available from manufacturer.

PRODUCT DESCRIPTION

Blackhawk Automotive Hydraulic Bottle Jacks are designed to lift, not support, rated capacity loads consisting of one end of a vehicle. Immediately after lifting, the load must be supported by a pair of appropriately rated jack stands.



Never use hydraulic jack as a stand alone device. After lifting, **immediately** support the lifted load with a pair of appropriately rated jack stands.

SPECIFICATIONS

Model	Capacity	Base Size (L x W)	Min. Height	Max. Height	Extension Screw	Volume Hyd. Oil	Effective Area
BH2023	2 Ton	5 3/4" x 3"	7 1/4"	14 1/2"	2 1/8"	85 mL	0.69 in ²
BH2043	4 Ton	6 1/4" x 3 1/2"	8 1/2"	18"	3 1/2"	145 mL	1.15 in ²
BH2063	6 Ton	6 5/8" x 4 1/4"	9"	19 1/4"	4"	200 mL	1.56 in ²
BH2083	8 Ton	6 7/8" x 4 1/2"	9"	19 1/2"	4 1/4"	245 mL	1.94 in ²
BH2123	12 Ton	7 3/8" x 4 3/4"	9"	17 3/4"	3 1/4"	305 mL	2.79 in ²
BH2124			6 1/2"	9 1/2"	N/A	190 mL	
BH2203	20 Ton	8 3/8" x 5 3/4"	10 3/4"	18 1/2"	N/A	600 mL	4.07 in ²
BH2204			7"	10 3/4"	N/A	330 mL	

PREPARATION

Before Use

1. Verify that the product and the application are compatible, if in doubt contact Customer Support (816)891-6390.
2. Before using this product, read the operator's manual completely and familiarize yourself thoroughly with the product, its components and recognize the hazards associated with its use.
3. Assemble handle, ensure spring clips align with slots.
4. To familiarize yourself with basic operation, use the notched end of provided handle to engage and turn the release valve:
 - a. Clockwise until firm resistance is felt to further turning. This is the '**CLOSED**' release valve position used to **raise** the ram plunger.
 - b. Counter-clockwise, but no more than 1/2 turn from the closed position. This is the '**OPEN**' release valve position used to **lower** the ram plunger.
5. With ram plunger fully retracted, locate and remove the oil filler plug. Insert the handle into the handle sleeve, then pump 6 to 8 strokes. This will help release any pressurized air, which may be trapped within the reservoir. Ensure the oil level is just below the oil filler hole. Reinstall the oil filler plug.
6. Check that the pump operates smoothly and that the extension screw will thread up/down easily before putting into service. Replace worn or damaged parts and assemblies with Blackhawk Automotive authorized replacement parts only.

Bleeding / Venting Trapped Air

With the release valve in the OPEN position (4b above) and with ram plunger fully lowered, locate and remove the oil filler plug. Insert the handle into the handle sleeve; then pump 6 to 8 full strokes. This will help release any pressurized air which may be trapped within the reservoir. Oil level should be even with the bottom of the oil filler hole. Reinstall the oil filler plug.

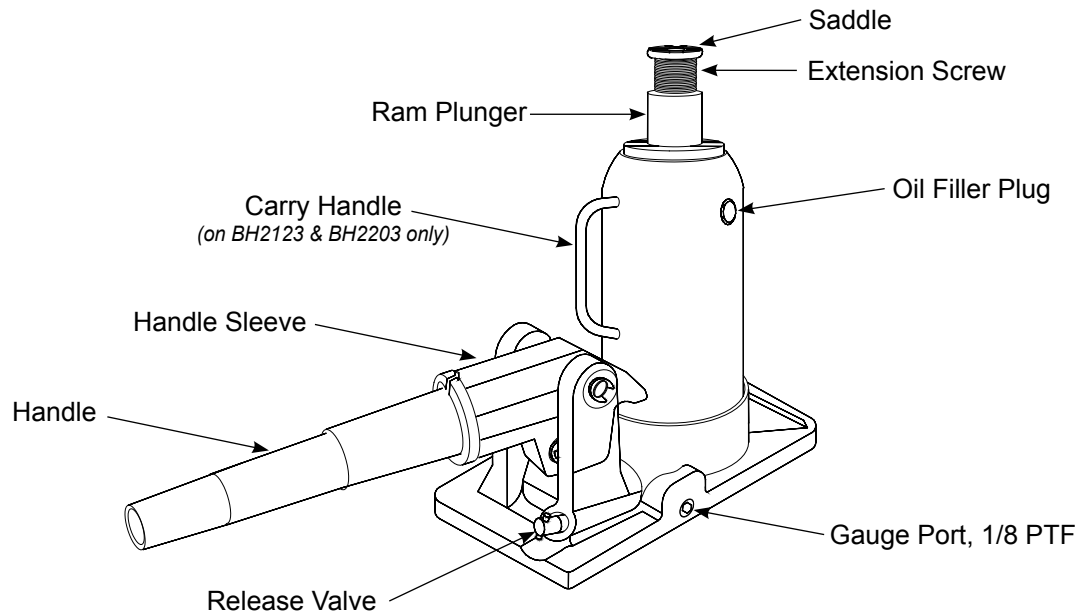
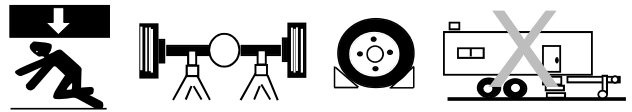


Figure 1 - Typical Bottle Jack Nomenclature (BH2123 shown)

WARNING


- **Study, understand, and follow** all printed materials provided with/on this product before use.
- **Do not** exceed rated capacity.
- **This is a lifting device only!**
- **Immediately** after lifting, support the load with **a pair** of appropriately rated jack stands.
- Use only on hard, level surface.
- Do not use adapters or accessories that are not provided initially.
- Lift only on areas of the vehicle as specified by the vehicle manufacturer.
- No alterations shall be made to this product.
- Failure to heed these markings may result in personal injury and/or property damage.

WARNING



To avoid **crushing and related injuries**:


- **Never** work on, under or around a load supported only by hydraulic jack.
- **Always** use adequately rated jack stands.
- Chock each unlifted tire in both directions.
- **Do not** use this device to lift, level, lower, support nor move a house, mobile home, travel trailer, camper or any building structure.
- **Be alert and sober** when using this product. Do not operate under the influence of drugs or alcohol.

 *Only attachments and/or adapters supplied by the manufacturer shall be used. Use **ONLY** on vehicles whose lift points are compatible with the saddle of the jack! Lift only on areas of the vehicle as specified by the vehicle manufacturer.*


OPERATION

Raising the Ram Plunger

1. Assemble handle, ensure that spring clips align with slots.
2. Place vehicle in the park, with emergency brake on and wheel securely chocked to prevent inadvertent vehicle movement.
3. Locate and close release valve by turning handle clockwise until firm resistance is felt to further thread engagement.
4. Verify lift point, center jack saddle under lift point.
5. Insert handle into handle sleeve and pump to contact lift point. To lift, continue pumping until load reaches desired height.
6. **Immediately** transfer the lifted load to a pair of appropriately rated jack stands.

 *Use only handle provided by jack manufacturer. The handle provided with this jack will safely engage the release valve and operate the handle sleeve. If handle is worn, operates abnormally, or will not positively engage the release valve, **STOP**, discontinue use of the jack until a factory replacement handle can be acquired.*

Lowering

 *Make certain that all personnel are clear of the load before lowering. **Control** the rate of descent of the load **at all times**. The **more** you open the release valve, the **faster** the load descends.*

1. Raise load high enough to clear the jack stands, then carefully remove jack stands (**always** used in pairs).
2. Slowly turn the handle counter-clockwise, but no more than 1/2 turn. If the load fails to lower:
 - a. Use another jack to raise the vehicle high enough to reinstall jack stands.
 - b. Remove the affected jack and then the stands.
 - c. Lower the load by turning the release valve counter-clockwise, but no more than 1/2 turn.
3. After removing jack from under the load, push ram and handle sleeve down to reduce exposure to rust and contamination.

MAINTENANCE

Important: Use only a good grade hydraulic jack oil. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load. We recommend Hein-Werner HW93291 or equivalent.

Adding oil

1. With ram plunger fully lowered and pump piston fully depressed, set jack in its upright, level position. Remove oil filler plug.
2. Fill with oil until just below the rim of the oil filler hole. Reinstall the oil filler plug.

Changing oil

For best performance and longest life, replace the complete fluid supply at least once per year.

1. With ram plunger fully lowered and pump piston fully depressed, remove the oil filler plug.
2. Lay the jack on its side and drain the fluid into a suitable container.

Note: Dispose of hydraulic oil in accordance with local regulations.

3. Fill with oil until just below the rim of the oil filler hole. Reinstall the oil filler plug.

Lubrication

A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that pump assemblies move freely.

Cleaning

Periodically check the pump piston and ram plunger for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

Note: Never use sandpaper or abrasive material on these surfaces!

Storage

When not in use, store the jack with pump piston and ram plunger fully retracted and air supply disconnected.

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	<ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition 	<ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition
Jack will lift, but not maintain pressure	<ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition • Hydraulic unit malfunction 	<ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition • Contact Blackhawk Tech. Service
Jack will not lower after unloading	<ul style="list-style-type: none"> • Reservoir overfilled 	<ul style="list-style-type: none"> • Ensure load is removed, then drain fluid to proper level
Poor lift performance	<ul style="list-style-type: none"> • Fluid level low • Air trapped in system 	<ul style="list-style-type: none"> • Ensure proper fluid level • With ram fully retracted, remove oil filler plug to let pressurized air escape, then reinstall oil filler plug
Will not lift to full extension	<ul style="list-style-type: none"> • Fluid level low 	<ul style="list-style-type: none"> • Ensure proper fluid level

REPLACEMENT PARTS

Not all components of the jack are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence. When ordering parts, give Model number, serial number and parts description. Call or write for current pricing: SFA Companies Inc. 10939 N. Pomona Ave. Kansas City, MO 64153, U.S.A. Tel: (816)891-6390 Fax: (816)891-6599 E-Mail: sales@blackhawk-automotive.com

Item	Part#	Description	Qty
1	B02B-20000-000	Handle	1
2	B02B-16100-000	Release Valve	1
3	5905-00100-200	Oil Filler Plug	1
3~11	B02B0S-031 (for BH2023) B04B0S-031 (for BH2043) B06B0S-031 (for BH2063) B08B0S-032 (for BH2083)	Repair Kit (includes all soft seals & oil filler plug)	-
3~13	B12B0S-033 (for BH2123 & BH2124) B20B0S-033 (for BH2203 & BH2204)		

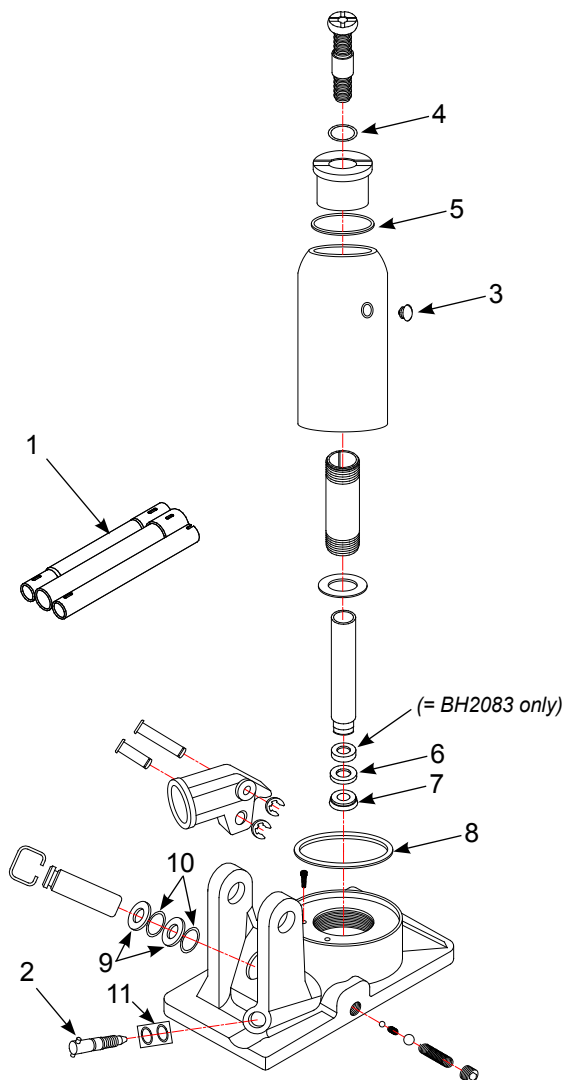


Figure 2 - Illustration for Model BH2023, BH2043, BH2063 & BH2083

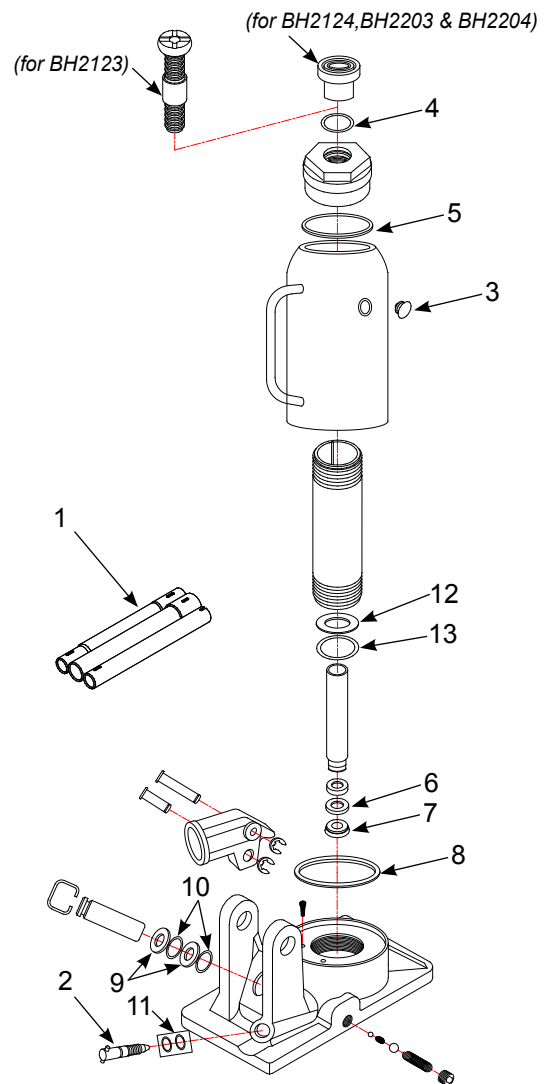


Figure 3 - Illustration for Model BH2123, BH2124, BH2203 & BH2204

ONE YEAR LIMITED WARRANTY

For a period of one (1) year from date of purchase, SFA Companies will repair or replace, at its option, without charge, any of its products which fails due to a defect in material or workmanship under normal usage. This limited warranty is a consumer's exclusive remedy.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, to SFA Companies Warranty Service Department, 10939 N. Pomona Ave., Kansas City, MO 64153.

Except where such limitations and exclusions are specifically prohibited by applicable law,

(1) THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS DESCRIBED ABOVE.

(2) SFA Companies SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE OR LOSS WHATSOEVER.

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Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.



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