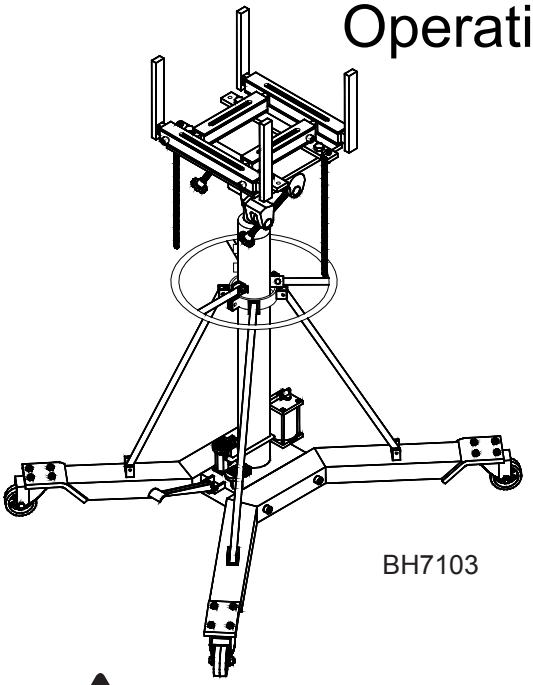
# Telescopic Hydraulic Transmission Jacks

## Operating Instructions & Parts Manual



BH7103

| Model | Capacity |
|---|---|
| BH7101 | 1 Ton |
| BH7103 *(air option)* | 1 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 instrucciónes antes de utilizar el aparato.*
- *El manual de instrucciónes y la información de seguridad deben estar comunicado en lengua del operador antes del uso.*
- *No seguir estas indicaciónes 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.*

⚠ **WARNING:** Cancer and Reproductive Harm.
⚠ **AVERTISSEMENT:** Cancer et dommages au système reproducteur.
⚠ **ADVERTENCIA:** Cáncer y daño reproductivo.
**www.P65Warnings.ca.gov**

SFA Companies
10939 N. Pomona Ave. Kansas City, MO 64153
Tel: (888) 332-6419 Fax: (816) 891-6599
sales@blackhawk-automotive.com

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

Made in Taiwan
BH7101-M0_082018

## SAFETY and GENERAL INFORMATION

**Save these instructions.** For your safety, read, understand, and follow the information provided with and on this jack before using. 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 are noted. Any jack that appears damaged in any way, or operates abnormally shall be removed from service immediately. If the jack has been or suspected to have been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until 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. Labels and Operator's Manuals are available from manufacturer.

## PRODUCT DESCRIPTION

Telescopic Hydraulic Transmission Jack is designed to be used as an aid in the removal and installation of automotive and light truck transmissions, transfer cases and transaxles. This Telescopic Hydraulic Transmission Jack is for use under an overhead lift or in a garage pit. On air option model BH7103, ensure that your air source can dedicate 7.8 CFM @ 110-175 psi to each jack operated.

***NEVER** use for any purpose other than those uses outlined above!*

## SPECIFICATIONS

| Model | Capacity | Min. Height | Max. Height | Saddle Base | Extended Saddle Area | Jack Size | Volume of Hyd. Oil |
|---|---|---|---|---|---|---|---|
| BH7101 | 2000 lb | 48 5/8" | 77 3/8" | 15 1/2" x 12 5/8" | 24 1/2" x 18 7/8" | 42 1/2" x 39 1/2" | 2 liters |
| BH7103 | | | | | | | |

# PREPARATION

**Assembly** *(refer to Figure 1)*

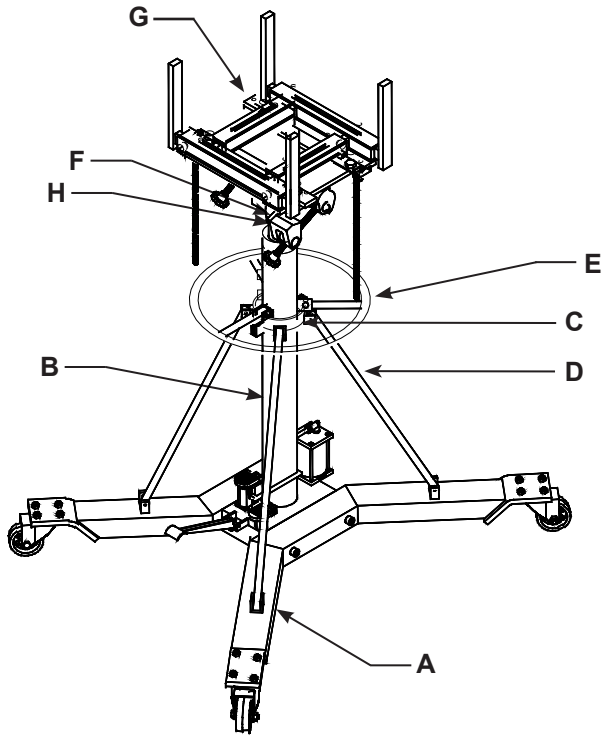
Tools required: 1/4" allen key, 3/8" hex socket & torque wrench.

1. Three major parts should be included in the package:
   (a) Hydraulic unit Assembly;
   (b) Saddle Assembly;
   (c) 2 pieces of base half with hardware.
2. Attach either one of the two base halves (A) to the base of the hydraulic unit (B), then secure using bolts *(1/2"Dx3.5"L)* and washers provided. Apply the same procedure to the other base half (A). Use torque wrench to tighten to 30 lb.ft. Do not overtighten.
3. Attach the brackets (C) to hydraulic unit (B), then attach one end of the support bar (D) to base half (A) and the other end to the bracket (B). Secure with bolts and nuts provided. Repeat for all other three support bars (D).
4. Slide the handle (E) to hydraulic unit (C) from top, then secure with bolts and nuts provided.
5. Place the socket (F) of the saddle assembly (G) onto the ram piston (H). Tighten set screw on the socket (F).

**Before Use**

1. Verify that the product and application are compatible, if in doubt call Blackhawk Customer Service (888) 332-6419.
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. Press the release valve pedal, ensure that saddle is fully lowered. Remove shipping screw and ***replace with*** provided ***vent screw*** *(shipping screw is located above the oil filler screw)*.
4. Remove the oil filler screw. Ensure oil level is just below the rim of oil filler hole. Reinstall the oil filler screw.
5. For air option model BH7103, pour a teaspoon of good quality, air tool lubricant into the air supply inlet of the lift control valve. Connect to air supply and operate for 3 seconds to evenly distribute lubricant.

   **Note:** This unit is equipped with the popular 1/4” NPT air coupler. When installing a different air coupler of your choice, ensure that thread tape or compound is used when servicing connections. To ensure dependable, trouble free operation an inline air dryer and oiler is recommended.
6. Ensure that jack rolls freely. Raise and lower the unloaded jack throughout the lifting range before putting into service to ensure the pump operates smoothly. Replace worn or damaged parts and assemblies with Blackhawk authorized replacement parts only.




| Ref | Description | Qty |
|---|---|---|
| A | Base Half | 2 |
| B | Hydraulic Unit | 1 |
| C | Brackets | 2 |
| D | Support Bar | 4 |
| E | Handle | 1 |
| F | Socket | 1 |
| G | Saddle Assembly | 1 |
| H | Ram Piston | 1 |

Figure 1- Telescopic Hydraulic Transmission Jack Components (BH7103 shown)

## ⚠WARNING

- **Read, understand, and follow** all printed material provided with and on this product **before use**.
- **Do not** exceed rated capacity.
- Use **only** on hard, level surface capable of supporting the load.
- **Adequately support the vehicle before starting repairs.**
- If loaded jack must be moved, make certain that load is secured by appropriate means, is stable, is in the **lowest possible position**, is moved over a smooth, hard level surface and that the l**ifting platform is level**.
- Use of this product is **limited to removal, installation, and transportatio**n of **automotive and light truck transmissions, transfer cases and transaxles**.
- Use only adapters / accessories provided by the manufacturer of this transmission jack.
- Use only adapters / accessories whose **rated capacity is greater** than the rated capacity of this jack.
- Ensure the center of gravity is **center loaded** on the saddle.
- Never use this device as a work/repair station. **Transfer** the **load immediately** to a suitable work station.
- No alteration 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.
- **Be alert** and **sober** when using this product. Do not operate under the influence of drugs or alcohol.

## OPERATION

Follow the instruction for removal and installation of transmission, transfer case or transaxle according to the vehicle manufacturer's service manual.

**Raise saddle assembly:**

Pump foot pedal or press air pump pedal *(Model BH7103)* until saddle reaches desired position.Secure load with provided chains.

**Note:** DO NOT OPERATE BY AIR AND BY HAND PUMPING AT THE SAME TIME.

*Ensure center gravity of load is centered on the saddle and load is stable before moving jack. An off-center transmission could cause the jack to tip or flip over .*

**Lower saddle:**

*Be sure all tools and personnel are clear before lowering load.* ***Slowly engage release valve pedal! Maintain control*** *of the rate of speed at which the load lowers at all times!*

Slowly, gently apply downward pressure to the release valve pedal.

***Never*** *use this jack as a workstation!*

## MAINTENANCE

Important: Use only 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.

**Adding oil**

1. With saddle fully lowered, set jack in its upright, level position. Remove oil filler screw.
2. Fill until oil is level with the oil filler screw hole, reinstall oil filler screw.

**Changing oil**

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

1. With saddle fully lowered, remove oil filler screw.
2. Lay the jack on its side and drain the fluid into a suitable container.

   **Note.** Dispose of hydraulic fluid in accordance with local regulations.
3. Set jack in its level position. Fill until oil is level with the oil filler screw hole, reinstall oil filler screw.

**Lubrication**

1. A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that casters and pump assemblies move freely.
2. For air option models BH7103: When used on a daily basis, air pump model should be internally lubricated before each use. Use only good quality air tool lubricant. If no inline oiler is used, pour a teaspoon of air tool oil into the inlet of the air supply inlet. Simply operate the jack using the air feature in order to fully distribute the oil.

**Cleaning**

Periodically check the pump piston and ram 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 saddle fully lowered.

## TROUBLESHOOTING

| Symptom | Possible Causes | Corrective Action |
|---|---|---|
| Jack will not lift load | • Release valve not tightly closed<br>• Load is too heavy | • Ensure release valve tightly closed<br>• Consider higher capacity jack |
| Jack will lift, but not maintain pressure | • Release valve not tightly closed<br>• Hydraulic unit malfunction | • Ensure release valve tightly closed<br>• Discontinue use, Contact Blackhawk Customer Service |
| Jack will not lower after unloading | • Reservoir overfilled<br>• Linkage binding | • Ensure load is removed, then drain fluid to proper level<br>• Clean and lubricate moving parts |
| Poor lift performance | • Fluid level low<br>• Hydraulic unit malfunction | • Ensure proper fluid level<br>• Discontinue use, Contact Blackhawk Customer Service |
| Jack will not lift to full extension | • Fluid level low | • Ensure proper fluid level |

## REPLACEMENT PARTS *(page 6 & 7)*

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, 10939 N. Pomona Ave. Kansas City, MO 64153, U.S.A.
Tel: (888) 332-6419 Fax: (816) 891-6599 E-Mail: sales@blackhawk-automotive.com

**Replacement Parts Illustration for Models BH7101 & BH7103**

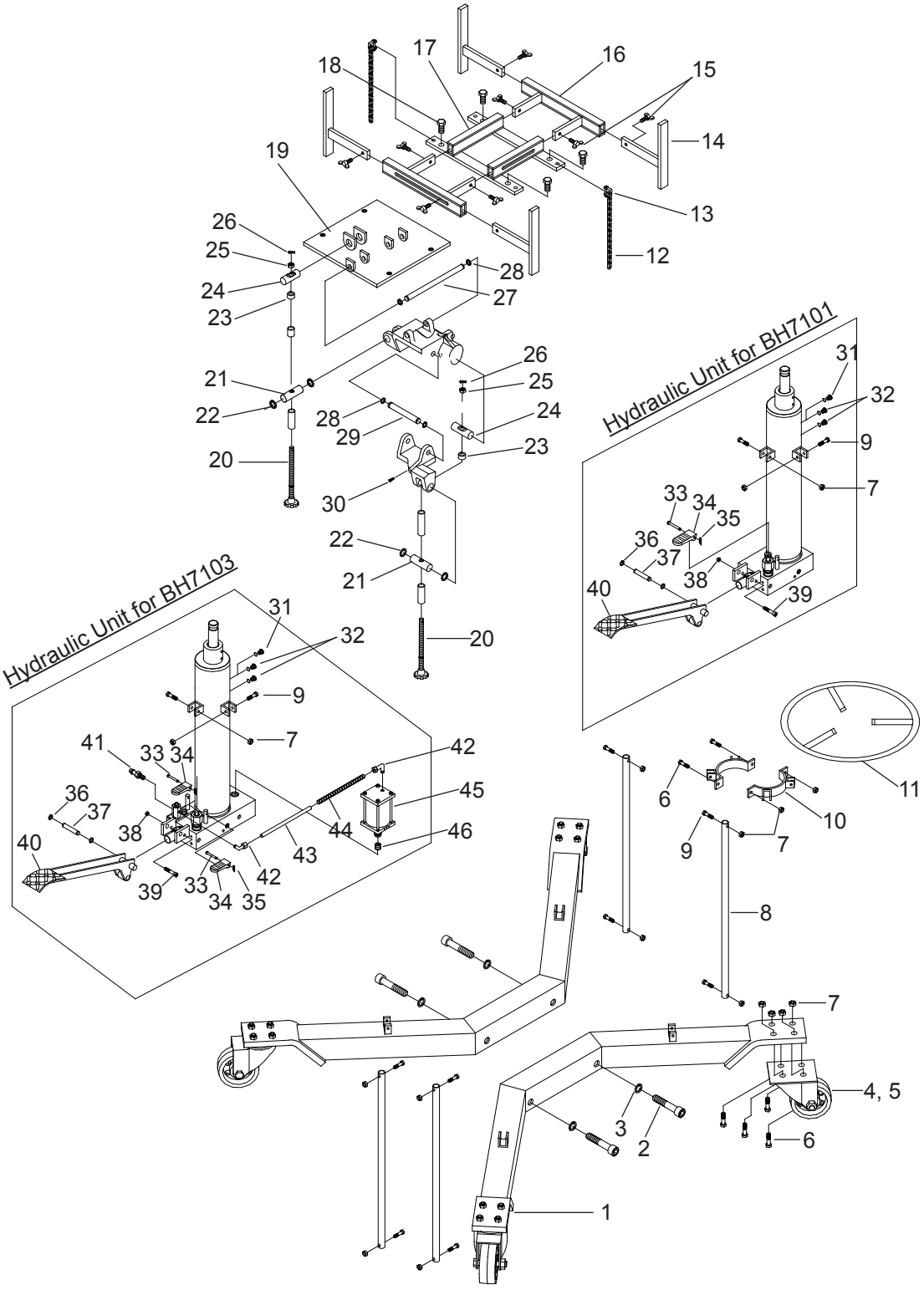



Figure 2 - Replacement Parts Illustration for Models BH7101 & BH7103

**Replacement Parts List for Models BH7101 & BH7103:**

| Item | Part No. | Description | Qty. |
|---|---|---|---|
| 1 | G37-3-3300-103 | Base Half | 2 |
| 2 | 651-1-0127-100 | Socket Head Bolt, 1/2"D x 3 1/2"L | 4 |
| 3 | 605-3-0127-405 | Lock Washer | 4 |
| 4 | G37-4-5200-105 | Caster, 4"D | 2 |
| 5 | G37-4-5201-107 | Caster w/ Brake, 4"D | 2 |
| 6 | 653-1-0080-02511 | Bolt | 18 |
| 7 | 661-2-0080-023 | Nut | 28 |
| 8 | G37-6-1319-102 | Support Bar | 4 |
| 9 | 653-1-0080-045 | Bolt | 10 |
| 10 | G37-3-1320-109 | Bracket | 2 |
| 11 | G37-3-1806-105 | Handle | 1 |
| 12 | G36-6-7000-102 | Chain | 2 |
| 13 | G52-4-4102-101 | Shackle | 4 |
| 14 | G37-3-2903-209 | Saddle Bracket | 4 |
| 15 | 657-1-0095-107 | Wing Screw | 8 |
| 16 | G37-3-2902-207 | Adjustable Bracket | 2 |
| 17 | G37-3-2901-205 | Support Seat | 1 |
| 18 | 653-1-0159-109 | Hex Bolt | 4 |
| 19 | G37-3-4200-104 | Saddle Plate | 1 |
| 20 | G36-3-2300-101 | Til Screw | 2 |
| 21 | G36-6-4204-103 | Support Pin | 2 |
| 22 | 667-5-0250-004 | C-clip | 4 |
| 23 | G36-3-5100-108 | Trust Bearing | 2 |
| 24 | G36-6-4205-105 | Pin | 2 |
| 25 | 661-2-0100-014 | Nut | 2 |
| 26 | 602-4-0025-017 | Retaining Pin | 2 |
| 27 | G37-6-3304-109 | Pin | 1 |
| 28 | 667-5-0160-003 | C-clip | 4 |
| 29 | G37-6-3305-101 | Pin | 1 |
| 30 | 649-1-0079-105 | Socket Head Bolt, 5/16"D x 3/4"L | 2 |
| 31 | G36-6-1804-102 | Vent Screw Assemly | 1 |
| 32 | 324-4-1900-208 | Screw Assembly | 2 |
| 33 | 566-4-0070-202 | Pin *(2pc. for BH7103)* | 1 |
| 34 | G36-6-1809-102 | Pedal *(2pc. for BH7103)* | 1 |
| 35 | 513-5-0016-018 | Retaining Pin *(2pc. for BH7103)* | 1 |
| 36 | 677-5-0127-005 | C-clip | 2 |
| 37 | G37-6-1603-109 | Axle | 1 |
| 38 | 661-2-0079-101 | Nut | 1 |
| 39 | 649-1-0079-114 | Bolt | 1 |
| 40 | G36-3-1900-100 | Lift Pedal | 1 |
| 41 | A20060-0016 | Coupler, Male 1/4NPT | 1 |
| 42 | G36-6-2302-103 | Hose Connector | 2 |
| 43 | G36-6-2300-109 | Air Hose | 1 |
| 44 | 524-2-0123-108 | Spring | 1 |
| 45 | A27010-0001 | Air Motor | 1 |
| 46 | G36-3-1500-104 | Hyd. Cartridge | 1 |
| - | G37-3-9901-109 | Repair Kit for Hydraulic Unit | - |

# 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.

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