



HEAVY EQUIPMENT JACKS

OPERATOR'S MANUAL

HEJ150-16 (V2)

150 TONNE, Single Stage
Heavy Equipment Jack

Serial Number:

Scorpion Jacks International

Ph: +61 7 47552114

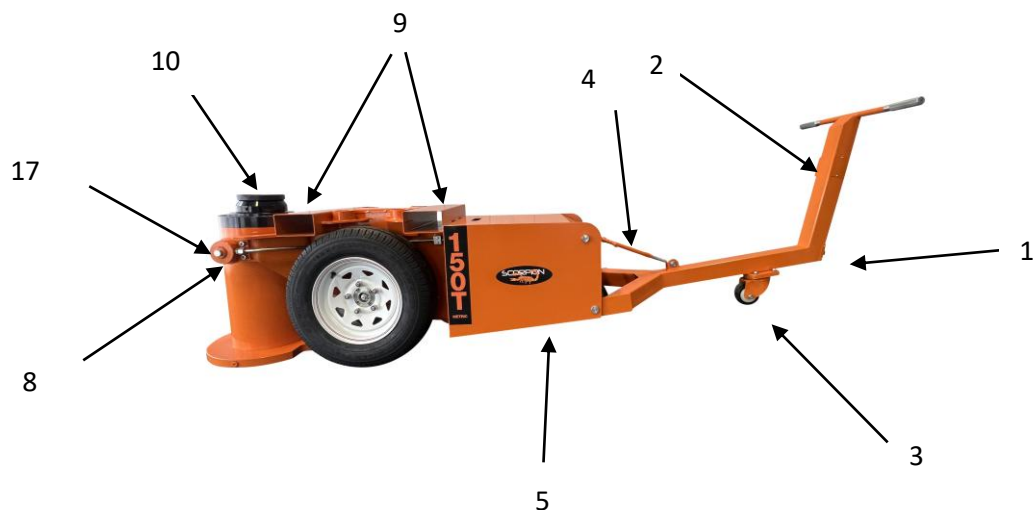
Email: enquiries@scorpionjacks.com.au

Web: www.scorpionjacks.com.au

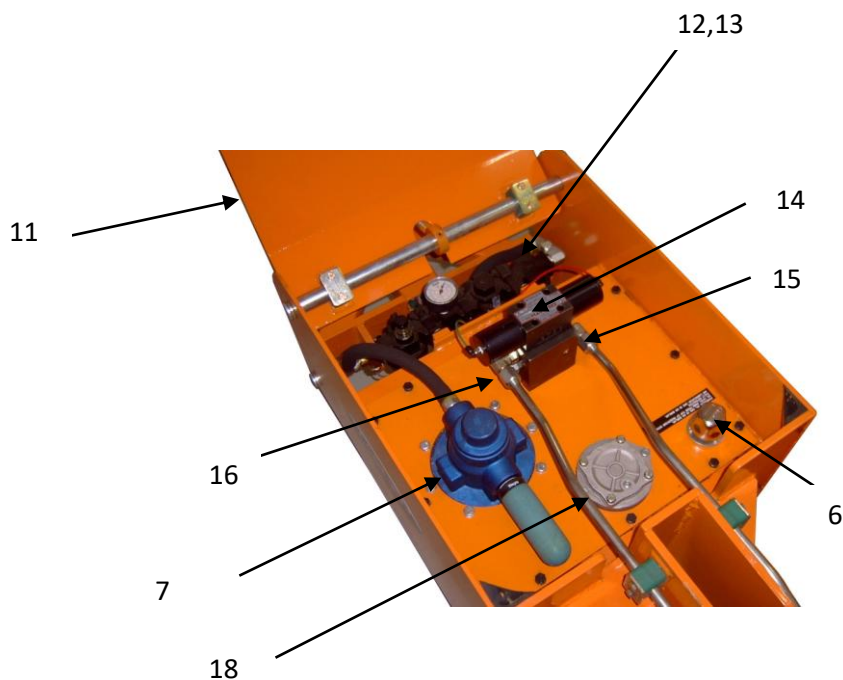
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HEJ150-16



1	Air Connection
2	"UP", "HOLD", "DOWN" Control
3	Castor
4	Handle Adjustment
5	Oil Reservoir
6	Filler/Breather
7	Pump
8	Test Point
9	Lifting Point
10	Load Cap
11	Hinged Cover
12	Air Filter / Regulator
13	Air Lubricator
14	Directional Control
15	Hydraulic Relief Valve
16	Counterbalance Valve
17	Trunnion
18	Hydraulic Return Filter



Cylinder Max. Lift	150 tonne
Max. Air Pressure	660 kpa (95 psi)
Air Pressure Safety Relief	755 kpa (110 psi)
Hydraulic Pressure Relief	24,150 kpa (3,5000 psi)
Counterbalance Valve	25,510 kpa (3,700 psi)
Tyre Pressure	447 kpa (65 psi)
Hydraulic Oil	SAE 20 Hydraulic oil/equivalent
Air Lubrication	SAE 20 Hydraulic oil/equivalent

Description

Reciprocating air operated hydraulic pump **(7)** mounted through lid delivering 23,100 KPA (3,350 PSI) hydraulic pressure at 660 KPA (95 PSI) air pressure (max. recommended pressure).

Oil from the pump **(7)** is delivered to a subplate containing a pressure relief **(15)** set to 24,150 KPA (3,500 PSI). The directional control **(15)** is mounted to this subplate; it is a double air pilot operated with closed centre. The valve is activated with a toggle type air valve **(2)** located in the handle. A counterbalance valve **(16)** set at 25,510 KPA (3,700 PSI) is positioned in the "up" line between the directional control and cylinder.

Oil reservoir **(5)** is located behind the wheels, under the hinged lid **(11)**.

The filler breather **(6)** is located in one corner of Reservoir lid. Oil level when unit is fully retracted should be about 50 mm (2") from the lid.

Air is supplied via the air connection **(1)** at the rear base of the handle, down the inside of the handle to the Air Filter/Regulator **(12)**, and Lubricator **(13)**. Air pressure regulator has been capped and padlocked and cannot be adjusted. Air pressure **should not exceed 660 KPA (95 PSI)**. Should this pressure be exceeded the safety valve between the regulator and lubricator will crack and will release air at 755 KPA (110PSI).

DO NOT TAMPER WITH THIS RELIEF.

Assembly

Your Scorpion Jack has been freighted with its handle removed. Refit by removing pins **(19)**, position handle and refit pins.

The Air hose protruding from the inside of the handle attaches to the inlet of the air filter.

The small white nylon tube "plugs into" the fitting on the outlet of the lubricator (white paint dot). The coloured nylon tubes "plug into" either end of the black directional control. A coloured dot on each fitting will again match the colour of the tubes.

Operate the unit and check for air leaks.

Adjustments

Lubrication

- With full airflow adjust the airline lubricator **(13)** by rotating the small yellow screw on the top of the sight bowl.
- Observe the oil drops forming in the sight dome (also on top of the lubricator).
- Rotate the adjustment clockwise for less, anti-clockwise for more, until you have approximately one drop every 30-60 seconds.

Air Pressure

- The air filter/regulator **(12)** should be set to 660 KPA (95PSI) air pressure.
- This device has been factory set, capped and locked to ensure the device cannot be tampered with on site.
- If the jack is not making full system air pressure, contact Scorpion Jacks for further assistance.

Hydraulic Pressure Relief Valve

- This valve **(15)** has been factory set to 24,150 KPA (3,500PSI) hydraulic pressure.
- This valve has been factory set, and press-fit capped to ensure the valve cannot be tampered with on-site.
- If the jack is not making full system hydraulic pressure, contact Scorpion Jacks for further assistance.

Counterbalance Valve

- This valve (16) has been factory set to 25,510 KPA (3,700PSI) hydraulic pressure.
- This valve has been factory set, and press-fit capped to ensure the valve cannot be tampered with on-site.
- If the jack is not making full system hydraulic pressure, contact Scorpion Jacks for further assistance.

Safe Operating Procedures

- To move this jack, first adjust the handle, using the Turnbuckle **(4)** to a convenient height for the operator. By pushing on the handle the self-levelling cylinder will be lifted clear of the floor for easy moving of the unit.
- For forklift lifting of the unit, box sections **(9)** are provided between the chassis just forward of the wheel axles.
- Select a solid level area on which to jack. Position the jack using the correct load cap, **(10)** or extension dolly.

DO NOT JACK DIRECTLY ON THE END OF THE ROD, as this could cause damage to the rod

- Ensure the dolly or load cap cannot slip on the surface to be jacked
- Attach air line to jack
- Switch the toggle control to "up"
- When desired height is reached, switch to "hold"

To Lower:

- Switch the toggle control to "down". The unit must be powered down and will lower at a fixed rate regardless of the load.

*CAUTION:

DO NOT WORK UNDER EQUIPMENT SUPPORTED ONLY BY A JACK. Place stands under the equipment and lower onto the stands before working under machine.

EXTENSION DOLLIES ARE DESIGNED FOR USE WITH A LOAD CAP. Do not jack directly onto the dollies without having the correct load cap in place.

DO NOT STACK DOLLIES. Scorpion Jacks International has designed their range so that only one dolly can be used safely at a time with a jack. SJI believes this represents the highest level of safety achievable whilst jacking under load.

Maintenance

- Check the reservoir oil level. Fill out about 50 mm (2") from top of reservoir.
- Check oil in air lubricator. **(13)** Release pressure on bowl by turning yellow bleed screw on top of cap. Remove threaded bowl from the bottom of lubricator, and add oil until 2/3 full, in lubricator bowl.

This is vital for prolonged service life of all air system components.

- Check air filter/regulator **(12)** bowl. If auto-drain model, ensure bowl is empty or is at least below "MAX" line on filter bowl. If manual drain, drain water etc. on a regular basis. A small drain tap is located at the base of the filter. Open this valve while air is connected to the jack closing after all the moisture is exhausted
- Check tyre pressure. Low tyre pressure will make the unit difficult to move. SJI recommend maintaining tyre pressure at 65psi.
- Change return line filter **(18)** every 500 hours or 3-6 months in harsh service environments. (See attached schedule)

NOTES:

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Service Notes – Harsh Environments

Daily/Weekly:

- Ensure there is oil in the pneumatic lubricator... This is vital to prolonging the life of the air equipment, and reducing the possibility of premature failure. Oil should be filled to 2/3 full in the bowl.
- Ensure turnbuckle is greased and operating freely.
- Ensure folding hinge mechanism (ELP Series) is greased and hinge pin can be removed and replaced easily.

Every 3-6 months:

- Change the air filter
- Change the hyd filter
- Change the suction strainer

Every 6 months:

- Ensure wheel bearings are greased

Generally:

- Check the hydraulic oil level in the reservoir periodically. Oil level should be approx. 50mm below the level of the filler cap.
- Ensure tyres are inflated to 50PSI.
- Ensure no dirt/dust build up occurs in rod spigot
- Ensure all I.D. Stickers are visible and undamaged.
- Return to Scorpion Jacks or nominated service agent periodically for thorough inspection.

RECOMMENDED ON-SITE SPARE PARTS

REMOTE MINE SITES

- Cylinder Seal Kit
- Hydraulic Relief Valve – Preset
- Hydraulic Counterbalance Valve – Preset
- Hydraulic Filter Element
- Hydraulic Suction Strainer
- Double air pilot control valve
- Pneumatic filter element
- Filter/Regulator/Lubricator Assembly - Preset
- Pneumatic Relief Valve – Preset
- Air/Hyd Pump Service kit
- Air/Hyd Pump Air seal kit
- Air/Hyd Pump Hyd seal kit
- Air/Hyd Pump APA valve
- Air/Hyd Pump O-Rings suit APA Valve (not part of soft seal kit)
- Air/Hyd Pump Bumper seal (not part of soft seal kit or repair kit)
- Air/Hyd Pump (Optional)
- Sticker/I.D. Kit
- Wheel Bearing Kits
- Thread Sealing Washers

NOTE:

For specific part numbers see the spare parts manual or contact Scorpion Jacks for a quote.

Some items may have recommended replacement timelines – see service notes in operators manuals.

SCORPION JACKS INTERNATIONAL WARRANTY

Scorpion Jacks International guarantees for 12 months from date of purchase, to correct by repair of parts replacement, without charge, any defects arising from faulty workmanship or material. A Scorpion Jack subject to claim under this guarantee should be returned as a complete unit to Scorpion Jacks International, 7/66 Pilkington Street, Garbutt Qld 4814, Australia.

The Scorpion Jacks International Warranty set forth in the previous paragraph above does not apply...

- To any defect of failure attributable to accident, misuse, abuse, negligence, or non-observance of local regulations on the part of the user
- If the Jack has been serviced by a person not authorised by Scorpion Jacks International to do so, or with non-approved parts
- To freight costs to and from Scorpion Jacks International

NOTE: While Scorpion Jacks International believes our Scorpion Jacks are amongst the safest built worldwide, *all normally accepted work and safety practices must be followed.*

