



HEAVY EQUIPMENT JACKS

OPERATOR'S MANUAL

BPJ-3-ALD

700 KG

Belly Pan Jack

Serial Number:

Scorpion Jacks International
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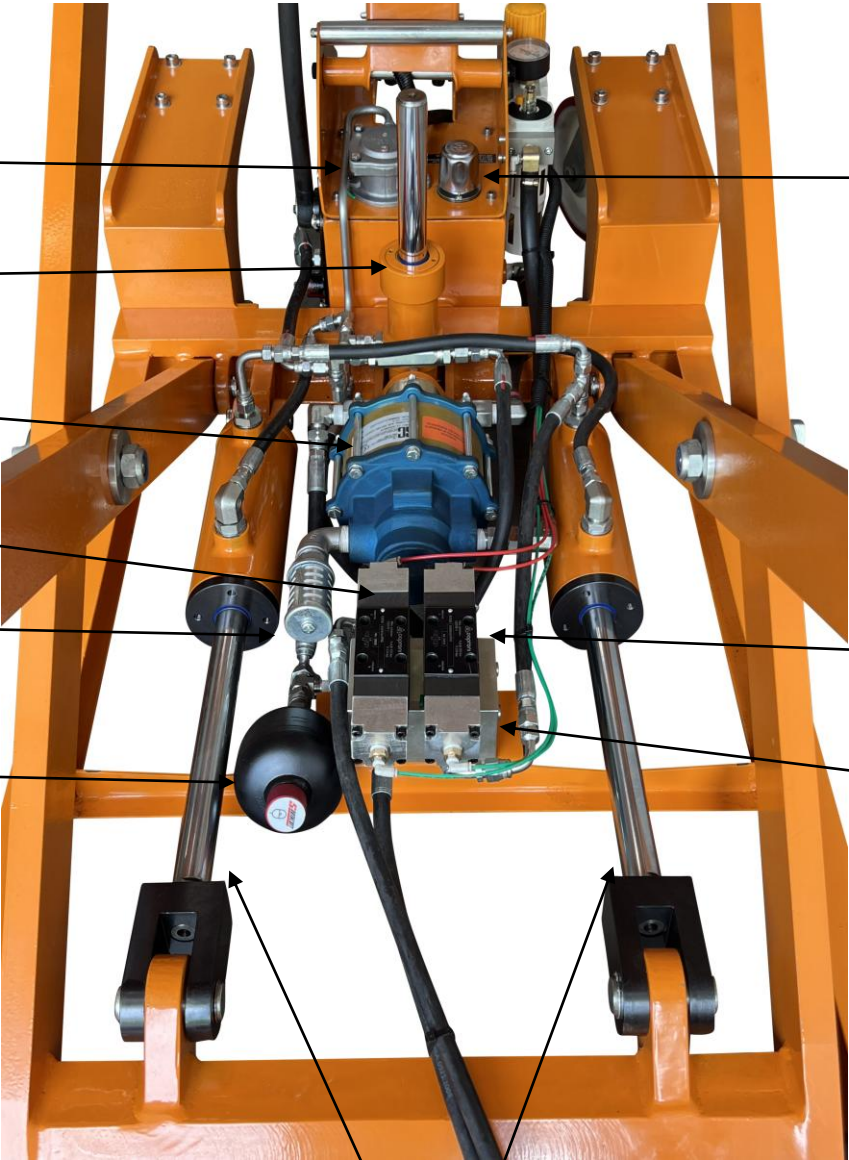
Email: enquiries@scorpionjacks.com.au

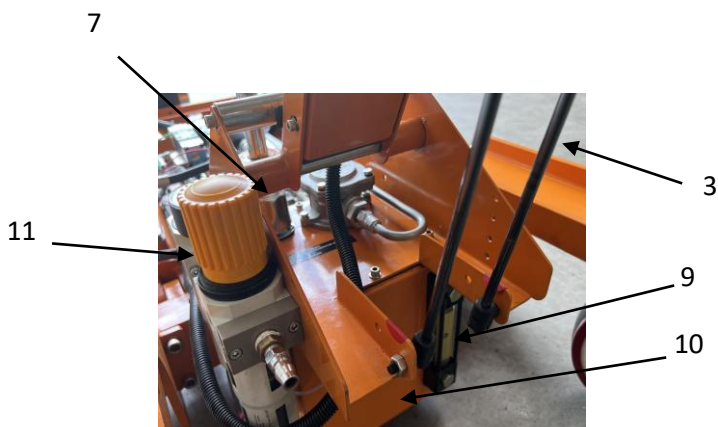
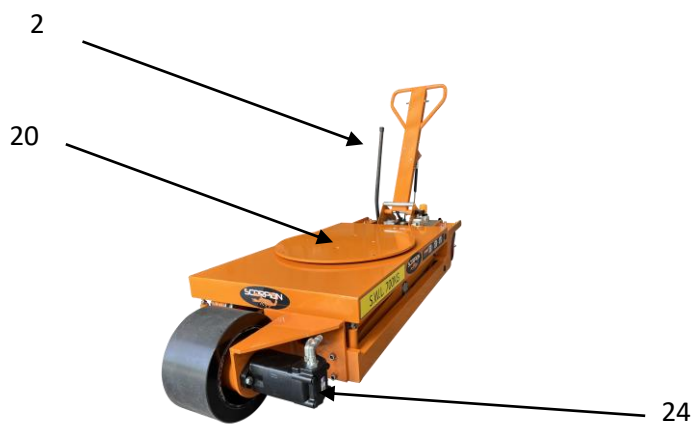
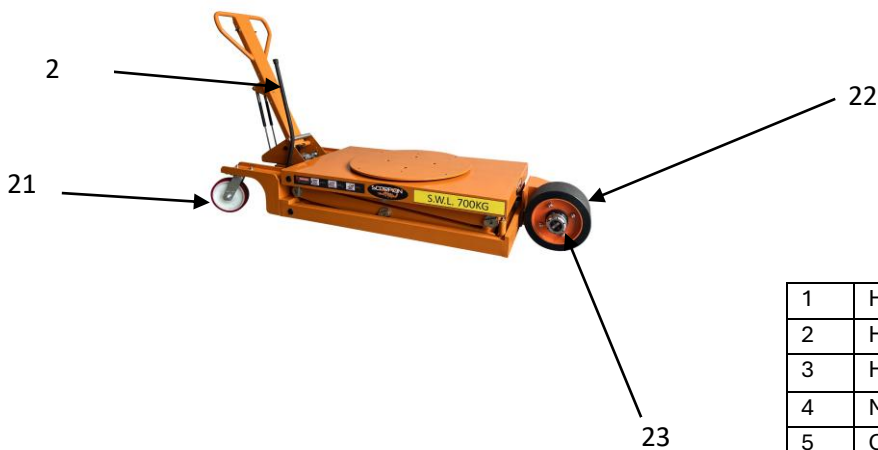
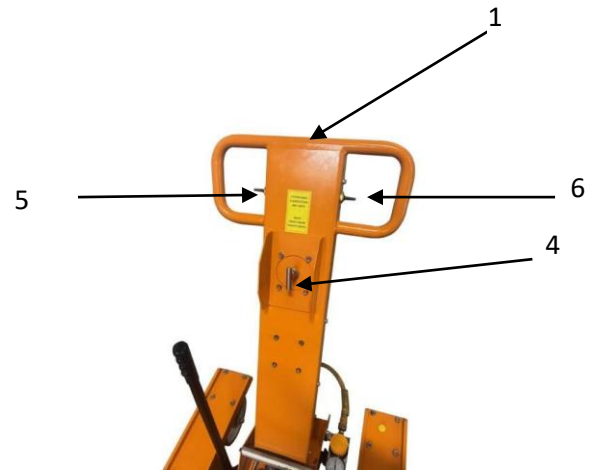
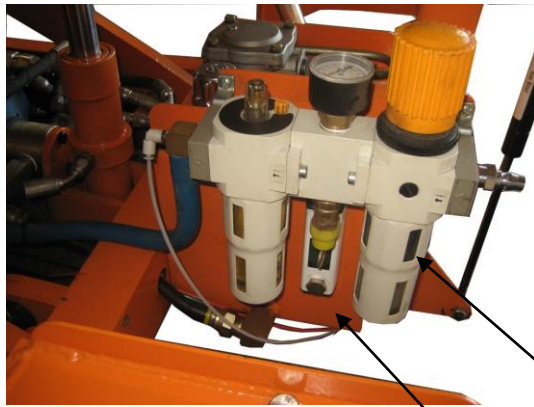
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BPJ-3-ALD





1	Handle
2	Hand Pump / Pump Handle
3	Handle Struts
4	Manual Release Valve
5	Control Switch – Up and Down
6	Control Switch – Forward and Reverse
7	Hydraulic Filler Breather
8	Hydraulic Return Line Filter
9	Hydraulic Level Guage
10	Oil Reservoir
11	FRL Assembly
12	Lift Cylinders
13	Helper Cylinder
14	Pump
15	Cetop 3 Valve – Lift/Lower
16	Cetop 3 Valve – Forward/Reverse
17	Subplate c/w Hydraulic Reliefs and CB valves
18	Accumulator
19	Pneumatic Silencer
20	Turntable
21	Swivel Castors
22	Hydraulic Drive Wheel
23	Freewheeling Hub
24	Hydraulic Motor

Description

Reciprocating air operated hydraulic pump **(14)** mounted below the turntable delivering 19,305KPA (2,800 PSI) hydraulic pressure at 550KPA (80 PSI) air pressure (Maximum recommended pressure).

Oil from the pump **(14)** is delivered to a subplate **(17)** containing a pressure relief set to 19,995KPA (2,900 PSI). 2 directional control valves **(15,16)** are mounted to this subplate. They are both double air pilot operated CETOP 3 valves with motor spools. The first valve controls the "Up/Hold/Down" functionality for the 2 X Lift Cylinders **(12)** and the Hydraulic helper cylinder **(13)** that actuate the elevating table. The second valve controls the "forward/hold/reverse" functionality for the hydraulic drive wheel **(22)**. The valves are activated with toggle type air valves **(5,6)** located either side of the top of the handle. A counterbalance valve also located in the subplate is set at 22,065KPA (3,200 PSI) and is positioned in the "up" line between the directional control and cylinders. A hydraulic accumulator **(18)** is also plumbed into the pressure line of the lift cylinders to dampen pressure spiking from the hydraulic pump **(14)**. This accumulator is charged to 350psi. A drive wheel **(22)** is attached to the front of the chassis in place of castors. It is powered by a hydraulic motor **(24)** and features a free-wheeling hub **(23)** should the BPJ-3-ALD need to be moved manually in the event of air supply unavailability.

The oil reservoir **(10)** is located between the rear castors and incorporates the handle assembly **(1)**. The filler breather **(7)** is located in one corner of Reservoir lid, and with the hydraulic return filter **(8)** located on the other side. The oil level when unit is fully retracted should be about 50 mm (2") from the lid and can be checked on the oil level gauge **(9)** which is mounted on the rear right hand side of the reservoir.

Air is supplied via the air connection at the rear left of the F/R/L assembly **(11)** which is mounted on one side of the oil reservoir. Lubricated, regulated air pressure has been set at 550KPA (80 PSI) and **should not be adjusted**.

Scorpion Jacks recommends the addition of a lockable Filter regulator cap to ensure factory settings are not tampered with. Should this pressure be exceeded the safety valve between the filter/regulator and lubricator will crack and will release air at 620 KPA (90PSI).

DO NOT TAMPER WITH THIS RELIEF.

When the air switch is engaged, the 2 lift cylinders **(12)** are activated to either raise or lower the elevating table. A hydraulic accumulator **(18)** has been fitted to ensure smooth raising or lowering of the scissor table.

If an air supply is unavailable, a manual hand pump **(2)** has been installed on one side of the oil reservoir. Operate this handpump by moving the handle forwards and backwards to raise the table to the desired height. To lower, simply open the release valve **(4)** mounted on the handle (anti-clockwise) then close again when fully retracted. Whilst there is a manual load release valve built into the handpump, Scorpion Jacks have added then additional load release valve **(4)** on the handle to remove the operator from potential pinch point situations and do not recommend the handpump valve be used.

Adjustments

New jacks should need no adjustments as all devices are factory set. Should any devices be damaged or require change or checking during a maintenance cycle please see below:

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 550 KPA (80 PSI) air pressure.
- Firstly check the shop air system will exceed 550 KPA (80 PSI) during this operation.
- If the regulator is not set to its maximum 550 KPA (80 PSI), pull up yellow adjustment knob on top of air filter/regulator.
- Turn clockwise for increased pressure, and anticlockwise for reduced air pressure.
- Once adjustment is complete, push yellow adjustment knob down again.
- Check pressure gauge after completing adjustment to confirm pressure setting is at 80PSI.

Air filter-regulator can be factory set and locked to ensure tampering does not occur. Contact Scorpion Jacks for further details.

DO NOT EXCEED 550 KPA (80 PSI) PRESSURE.

Attempting to exceed recommended input air pressure will cause pneumatic relief valve to activate.

Hydraulic Pressure Relief Valve

This valve **(15)** has been factory set and should not be tampered with. If you suspect this valve is not operating correctly, or is not set to the correct pressure, remove valve and replace with new or service exchange valve.

Contact Scorpion Jacks International to arrange this.

Counterbalance Valve

This valve **(16)** has been factory set and should not be tampered with. If you suspect this valve is not operating correctly, or is not set to the correct pressure, remove valve and replace with new or service exchange valve.

Contact Scorpion Jacks International to arrange this.

Safe Operating Procedures*

- THE BPJ-3-ALD is primarily intended for the use of changing Dozer Belly Guard Plates, and conducting these activities will never exceed a usage of over 700 kg. Any other tasks can only be performed using genuine Scorpion Tooling accessories, and adhering the WLL's prescribed to those tools.
- **Any usage outside of that prescribed above will void any warranty or liability issues assignable to Scorpion Jacks International.**
- **Never ride on the jack when it is being moved, as this can cause injury.**
- **Never place any part of your body under the platform when in the raised position, unless the table is being supported by a sling, work stands or a similar device.**

Prior to use:

- Perform a visual inspection of the jack, checking for obvious signs of damage or oil leaks.
- Attach an airline to the Filter/Regulator/Lubricator assembly and ensure air supply is reaching nominated pressure on the pressure gauge.

To move this jack:

- **Manually:** To move this jack manually, disengage the freewheeling hub on the hydraulic drive wheel and either push or pull on the handle to move the jack forward or backward as desired. Pull the handle to the left or right to move it in these directions, much as you would to move a pallet jack.
- **Hydraulically:** Ensure the freewheeling hub is engaged and activate the toggle switch on the left-hand side of the handle to move the jack forward or backward. Up for forwards, down for reverse. Again, pull the handle to the left or right to move it in these directions during movement.
- Always ensure a clear area around the jack when moving, lifting, or lowering.

To Raise:

- Ensure the belly guard jack is located directly under the belly guard.
- **Manually:** Ensure the manual release valve is firmly locked in the clockwise position.
- Pump handle backwards and forwards until the table reaches the load.
- **Pneumatically:** Switch the toggle control to "up".
- When the desired height is reached, switch to "hold".

To Lower:

- **Manually:** Turn the manual release valve on the handle in a counterclockwise direction. The speed of descent can be controlled by how much you choose to open this valve.
- **Pneumatically.** Switch the toggle control to “down”. The unit must be powered down and will lower at a fixed rate regardless of the load.

*** Actual procedures for installing or removing belly guards may vary from site to site, so please refer to your relevant site safety procedure before commencing work.**

***CAUTION:**

DO NOT WORK UNDER AN ELEVATED PLATFORM. In the event of an uncontrolled decent, this would place the worker in danger.

Maintenance

Required maintenance timelines vary from site to site based on frequency of use, and environmental conditions such as if the unit is stored outside or inside.

Accordingly, it can be difficult to accurately identify when various maintenance routines should be activated. In any event the following should be performed prior to each use:

- Check the reservoir oil level. Oil level should be no more than 1/2 way up level gauge in the "down" position. As the cylinder retracts when lifting more oil is returned during lift than that used.
- Check oil in air lubricator. Unscrew lubricator bowl, and add oil until bowl is 2/3 full.
- Check auto drain is working on Filter/Regulator

3- 6 Monthly depending on usage:

- There is a grease nipple in the turntable bearing. Access is through one of the side cut-outs in the turntable cradle. Access to this is from underneath when table is raised up.**
- There are grease nipples in every pivot and each roller (through the centre of the roller pin). Grease as required. **
- Change hydraulic return line filter every 250 hours or (preferably) every six months.
- Change pneumatic filter element

** ENSURE TABLE IS SUPPORTED WHEN GREASING THESE ITEMS

Annual Maintenance could include:

- Check hydraulic relief and CB valve pressure settings. Alternatively, replacing with pre-set service exchange valves or new factory pre-set valves.
- Check charge on accumulator. Should be charged to 350psi
- Replace all decals with new decals.

NOTES:

RECOMMENDED ON-SITE SPARE PARTS

REMOTE MINE SITES

- Lift Cylinder Seal Kits
- Hydraulic Relief Valve – pre-set
- Hydraulic Counterbalance Valve – pre-set
- Hydraulic Filter Element
- Hydraulic Suction Strainer
- Double air pilot (motor spool) control valve
- Pneumatic filter element
- Filter/Regulator/Lubricator Assembly
- Pneumatic Relief Valve
- 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
- Pre-charged accumulator

NOTE:

For specific part numbers see spare parts manuals or request a quote from Scorpion Jacks.

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 or 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.

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.

