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HEAVY EQUIPMENT JACKS

## SPARE PARTS MANUAL

# BPJ-3-AL

700 KG

Belly Pan Jack

**Serial Number: \*\*\*\*\***

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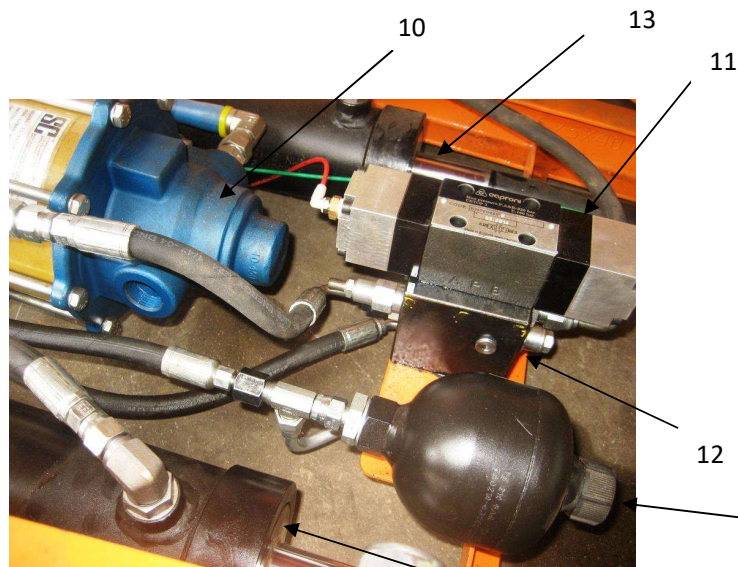
Web: [www.scorpionjacks.com.au](http://www.scorpionjacks.com.au)

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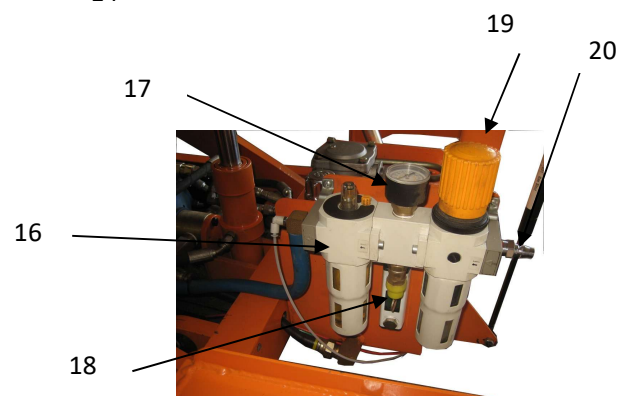
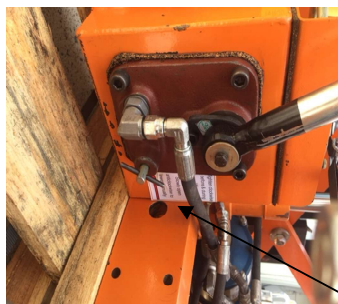
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# BPJ-3-AL

|   |                                      |
|---|--------------------------------------|
| 1 | Air Switch Control for raise & lower |
| 2 | Hand Pump / Handle                   |
| 3 | Return Line Filter                   |
|   |                                      |
| 6 | Oil Reservoir                        |
| 7 | Handle Gas Struts                    |
| 8 | Swivel Castors                       |
| 9 | Fixed Castors                        |



|    |                                |
|----|--------------------------------|
| 10 | Pump                           |
| 11 | Control valve                  |
| 12 | Relief / CB Valve and Manifold |
| 13 | Lift Cylinders                 |
| 14 | Accumulator                    |
| 15 | Manual Load Release            |
| 16 | Air Filter                     |
| 17 | Air Pressure gauge             |
| 18 | Air Relief Valve               |
| 19 | Air Filter Regulator           |
| 20 | Air Inlet                      |



## Description

Reciprocating air operated hydraulic pump **(10)** 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 **(10)** is delivered to a subplate **(12)** containing a pressure relief set to 19,995KPA (2,900 PSI). The directional control **(11)** is mounted to this subplate; it is a double air pilot operated with motor spool. The valve is activated with a toggle type air valve **(1)** located in the handle. A counterbalance valve also located in the subplate is set at 17,925KPA (2,600 PSI) and is positioned in the "up" line between the directional control and cylinder.

Oil reservoir **(6)** is located between the rear castors. The filler breather **(4)** 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 **(20)** at the rear of the Filter/Regulator **(19)** which is mounted on one side of the oil reservoir. There is also an air lubricator **(16)** which supplies lubricated oil to the air system. Air pressure can be adjusted, **but should not exceed 550KPA (80 PSI)**. Should this pressure be exceeded the safety valve **(18)** 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 2 lift cylinders **(13)** are activated to either raise or lower the turntable. A hydraulic accumulator **(14)** 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. A manual load release valve **(15)** is also fitted in this hand pump.

# Adjustments

## Lubrication

With full airflow adjust the airline lubricator (14) by rotating the small screwdriver slot in the top of the unit. 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 ten seconds.

## AirPressure

The air filter/regulator should be set to 550 KPA (80PSI) air pressure. To adjust pull down and rotate the knob located on the bottom of the air regulator. Be sure the shop air system exceeded 550KPA (80 PSI) during this operation.

*DO NOT EXCEED 550KPA (80 PSI) PRESSURE.*

## HydraulicPressureReliefValve

This valve has been factory set and should not need adjusting. If adjustment is required, remove valve and replace, with new or service exchange valve. Contact Scorpion Jacks International to arrange this.

## CounterbalanceValve

This valve has been factory set and should not need adjusting. If adjustment is required, remove valve and replace, with new or service exchange valve. Contact Scorpion Jacks International to arrange this.

## Safe Operating Procedures

- To move this jack, either push or pull on the handle to move the jack forwards or backwards. Pull the handle to the left or right to move it in these directions.
- Always ensure a clear area around the jack when moving, lifting or lowering.
- Never ride of 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 stand or similar device.
- 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.

### To Raise:

- Ensure the belly guard jack is located directly under the belly guard.
- Attach airline 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 AN ELEVATED PLATFORM.** In the event of an uncontrolled decent this would place the worker in danger.

## Maintenance

- 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.
- There is a grease nipple in the turntable bearing. Access is through one of the side cut-outs in the turntable cradle. Assess to this is from underneath when table is up.
- There are grease nipples in every pivot and each roller (through the centre of the roller pin).
- Check oil in air lubricator. Remove filler cap located on top of lubricator, and add oil until bowl is 2/3 full.
- Check auto drain is working on Filter/Regulator
- Change return line filter every 250 hours or six months.

NOTES:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

# SERVICE NOTES

## Daily/Weekly:

- Ensure there is oil in the pneumatic lubricator... This is perhaps the most critical regular maintenance item and is vital to prolonging the life of the air equipment, (specifically the air over hydraulic pump), and reducing the possibility of premature failure. Oil should be filled to 2/3 full in the bowl.
- Visual Inspection – Check for external oil leaks around the cylinder wiper seals. Check for damaged or bent steel tubes and hydraulic hoses.

## Every 6 months:

- Change the air filter element
- Change the hydraulic filter element
- Check Air Relief Setting
- Check Hydraulic Relief Setting
- Check Hydraulic Counterbalance Setting

## Annually:

- Replace hydraulic cylinder seal kits (Optional – if cylinder is not leaking externally and holding load during test, it may not be required)
- Replace ID Stickers/decals if damaged or faded\*

NOTE: A permanent aluminium compliance plate should be visible on the top of the oil reservoir. This plate notes model no, maximum tonnage and serial number. If this is not present, contact Scorpion Jacks for replacement.

## Generally:

- Check the hydraulic oil level in the reservoir periodically. Oil level should be halfway up the sight gauge when unit is fully retracted.

## NOTES:

- The above are suggested frequencies only, and specific on-site requirements or operating conditions may warrant variations on the above frequencies.

## **RECOMMENDED ON-SITE SPARE PARTS**

### **REMOTE MINE SITES**

- Cylinder Seal Kits
- Hydraulic Relief Valve – pre-set
- Hydraulic Counterbalance Valve – pre-set
- Hydraulic Filter Element
- Hydraulic Suction Strainer
- Double air pilot 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

#### **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 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.

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.*

