



**Operating Manual:  
12 & 20 Tonne Commercial Pit Jacks**

PJ012 - 12 Tonne - Chrome Rods

PJ011 - 20 Tonne - Chrome Rods

PJ013 - 20 Tonne - Threaded Rods with Locking Nuts

PJ014 - 12 Tonne - Threaded Rods with Locking Nuts



Picture Shows 20 Tonne Chrome Rodded Jack (PJ011)

**ABCo Engineering Hydraulics Mill Park, Southwell  
Nottinghamshire NG25 0ET Tel: 01636 812674**

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[www.abcohydraulics.com](http://www.abcohydraulics.com)**

# INSTALLING AND COMMISSIONING THE PIT JACK

## GENERAL

1. After the jack has been delivered and unpacked it should be checked for damage and completeness, any damage or shortages must be reported immediately.
2. The pit jack will be secured to the shipping pallet, remove the fixing screws.
3. The jack will be supplied to you adjusted to the minimum pit width stated on your pit survey form. Using a suitable lift, raise the pit jack and remove the shipping legs taking care not to damage the cylinder isolation valves and the pump release valve, lower the jack into the pit.
4. Once in the pit, offer it to the pit rails. The rollers may need adjusting. Under each axle housing there is a grub screw. Loosen the screws (do not remove), this will allow rollers to be repositioned. Pull rollers out to suit pit rails and lower jack on to the rails. Run the jack along the pit length and adjust the rollers to suit. When satisfied rollers are in correct position tighten screws to secure, rollers are locked in position. Finally lower and position jack onto the rails.

## AIR OPERATED PIT JACKS

1. Once the jack is in position in the pit, you will need to fit a suitable air line connector, this should be fitted to the water trap. The water trap has a 1/4" BSP female thread.
2. Before connecting the air supply check all air and hydraulic pipes for any signs of damage. The air operated pit jack will operate at pressures from 75 to 110psi, if your air line pressure is above 110psi a pressure reducing valve must be fitted and the line pressure reduced to 110psi, failure to do so will invalidate your warranty.
3. Move the pit jack to an open space in the pit. **DO NOT LIFT ANY LOAD UNTIL THE JACK HAS BEEN CYCLED.** Check the oil level and top up if required as some oil may be lost in transit (only use ISO grade 32 hydraulic oil as other fluids may damage the pump and cylinder seals). Connect the air line, and extend the cylinders fully, then fully retract the cylinders, this should be repeated three to four times (you may experience oil leakage from the control valves, this is normal and will stop after several repetitions). Extend the cylinders once again, when the cylinders are at the top of their lift, hold the raise button, this will keep the air pump running. After a short time, the pump will slow down to a constant pace. Release the button. Check all round the jack to ensure there are no oil or air leaks.
4. Retract the cylinders and the jack is ready to use.

# OPERATING INSTRUCTIONS PJ012 + PJ011 ONLY

1. Position the jack in a suitable lifting point in the pit and space the cylinders to equally spread the load across the jack width.
2. Connect the air supply.  
Operating pressure: Max 7.5 bar (110psi) Min 5 bar (75psi).
3. Fit a suitable lifting adaptor to the cylinder rod(s), use the extension adaptors to gain extra height.
4. Release the isolation valve(s) at the bottom of the cylinder(s), the cylinders will not move if the isolation valves are closed.
5. Before operating the jack, ensure that the area is clear and there is no danger to other personnel.
6. Press the raise button, this will extend the cylinder rod(s), once the vehicle has starting lifting, the air pump will slow down, this is normal and due to the increase in pressure.
7. Once the vehicle is at the required height release the button.
8. **IMPORTANT: Once the vehicle is at the required height the isolation/safety valve(s) at the bottom of the cylinder(s) MUST BE CLOSED and Axle Stands used before working on the vehicle.**
9. To lower the jack, ensure that there are no obstacles beneath the vehicle, release the cylinder isolation valve(s) slowly as some movement can occur as the load levels. Slowly turn the release valve on the pump to control the rate of descent. Once the vehicle is on the ground hold the release valve open and press the lower button to retract the cylinder(s). **Note.** If the release valve is opened too quickly the cylinder(s) may lock in position due to an internal safety valve. If this happens simply raise the vehicle slightly and open the release valve slowly.

**NEVER WORK UNDER AN UNSUPPORTED  
VEHICLE!**

## OPERATING INSTRUCTIONS PJ013 ONLY

1. Position the jack in a suitable lifting point in the pit and space the cylinders to equally spread the load across the jack width.
2. Connect the air supply.  
Operating pressure: Max 7.5 bar (110psi) Min 5 bar (75psi).
3. Fit a suitable lifting adaptor to the cylinder rods, use the extension adaptors to gain extra height.
4. Release the isolation valve(s) at the bottom of the cylinder(s), the cylinders will not move if the isolation valves are closed.
5. Before operating the jack, ensure that the area is clear and there is no danger to other personnel.
6. Press the raise button, this will extend the cylinder rod(s), once the vehicle has starting lifting, the air pump will slow down, this is normal and due to the increase in pressure.
7. Once the vehicle is at the required height release the button.
8. **IMPORTANT: Once the vehicle is at the required height the isolation/safety valves at the bottom of the rams MUST BE CLOSED Wind the knurled locking nut down to the bottom of the ram to ensure it locks off the cylinder to securely hold the load.**
9. To lower the jack, open the isolation valves at the bottom of the cylinders and wind the knurled locking nuts back up to the top of the cylinders. Slowly turn the release valve on the pump to control the rate of decent. Once the vehicle is on the ground the spring on the inside of the cylinder will bring it back to resting point, fully retracted.

**NEVER WORK UNDER AN UNSUPPORTED  
VEHICLE!**

# WEEKLY MAINTENANCE

**NOTE: Disconnect air supply before any maintenance is carried out.**

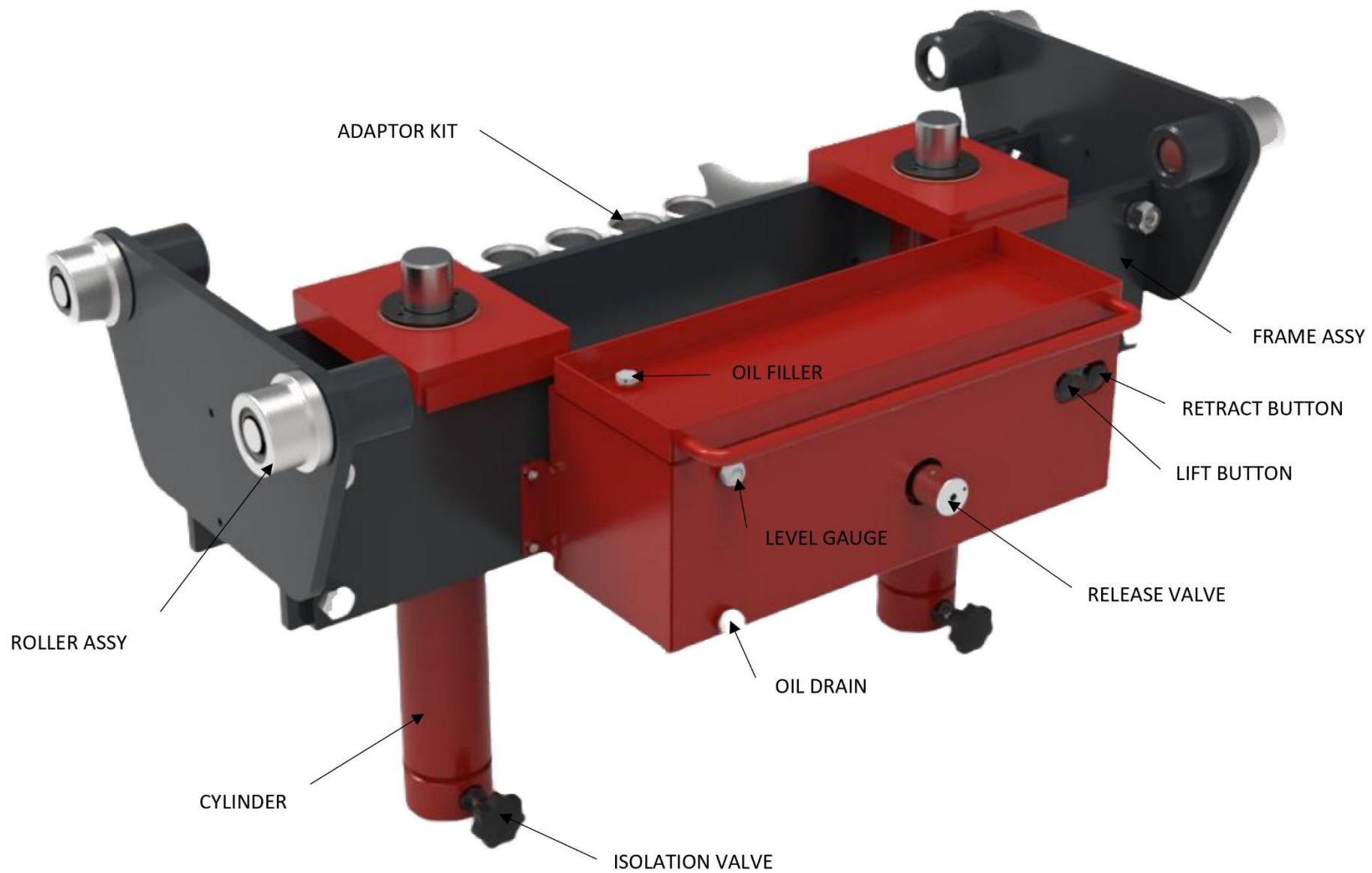
1. Clean all dirt and debris away from the cylinder rod(s) and the air pump, keeping the pit jack clean will prolong the life of your pit jack.
2. Ensure the rollers run freely.
3. Check all hoses, any hose that shows sign of damage, wear or aging must be replaced immediately. Failure to do so could result in a serious accident.
4. Check the pit jack frame to ensure that all connecting bolts are tight. Check and top up oil level, the oil should be visible in the centre of the sight gauge when the cylinder(s) are retracted, only use ISO grade 32 hydraulic oil as other fluids may cause damage to the pump and cylinder seals.

The above checks should be carried out on a weekly basis to keep your pit jack in good working order. Please find the enclosed maintenance record for you to keep a record of the weekly checks. The maintenance record should be filled in, with reference to the above weekly maintenance instructions.

## MAINTENANCE RECORD

[illegible]

PLEASE COPY THIS SHEET FOR YOUR RECORDS





DO NOT SCALE

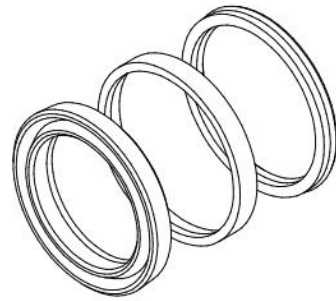
IF IN DOUBT ASK

REMOVE ALL SHARP EDGES 0.5 X 45°

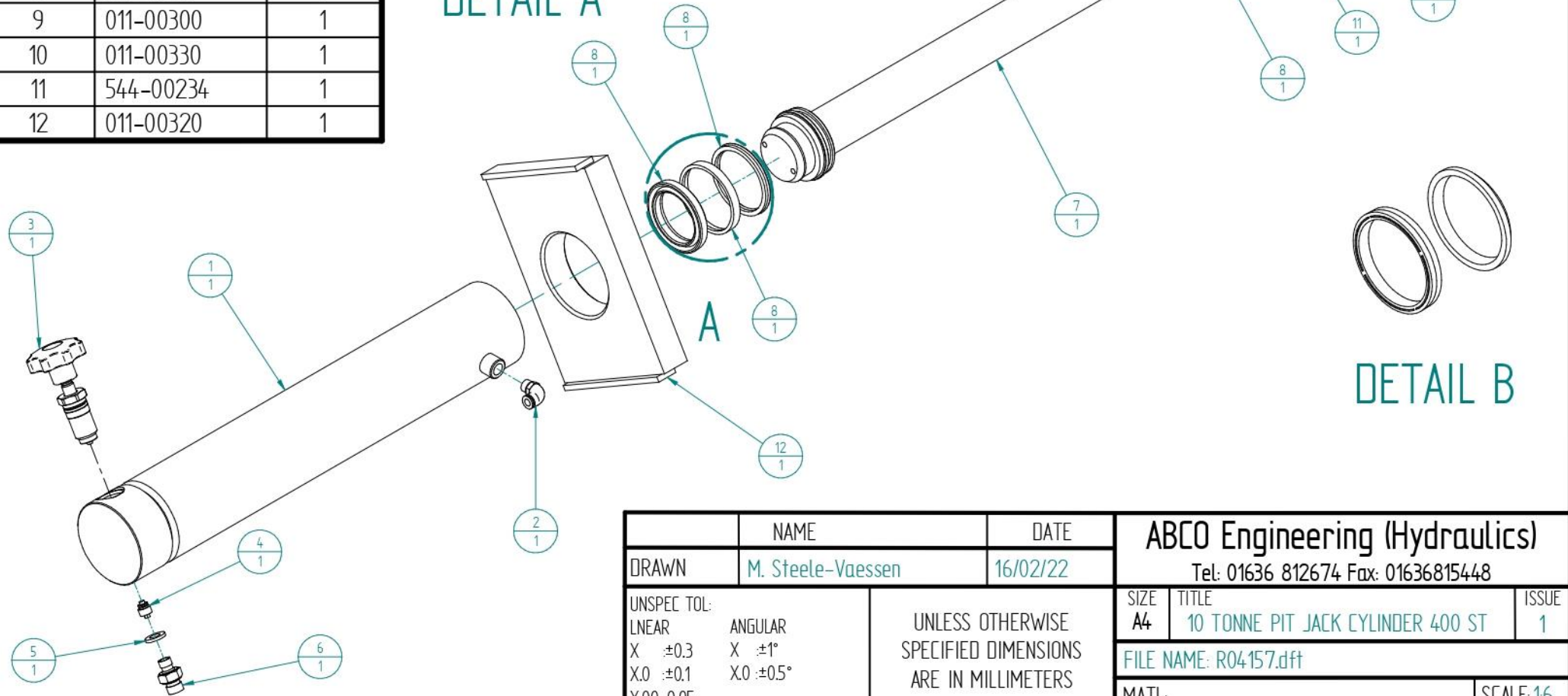
DWG  
No

R04157

Item No.	Part No.	Quantity
1	011-00392	1
2	295-00082	1
3	567-00174	1
4	295-00610	1
5	892-00131	1
6	950-40048	1
7	011-00312AA	1
8	R03212SK	1
9	011-00300	1
10	011-00330	1
11	544-00234	1
12	011-00320	1



DETAIL A



DETAIL B

NAME		DATE	ABCO Engineering (Hydraulics)		
DRAWN		M. Steele-Vaessen	16/02/22		Tel: 01636 812674 Fax: 01636815448
UNSPEC TOL:		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE	ISSUE
LINEAR		ANGULAR	A4		10 TONNE PIT JACK CYLINDER 400 ST
X ±0.3		X ±1°	FILE NAME: R04157.dft		1
X.0 ±0.1		X.0 ±0.5°	MATERIAL:		SCALE: 16
X.00 ±0.05					





R03774

		NAME	DATE	<b>ABCO Engineering (Hydraulics)</b> Tel: 01636 812674 Fax: 01636815448		
DRAWN		M. Steele-Vaessen	15/02/22	SIZE	TITLE	ISSUE
UNSPEC TOL: LINEAR      ANGULAR X    ±0.3    X    ±1° X.0   ±0.1   X.0   ±0.5° X.00 ±0.05		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		A4	10 TONNE PIT JACK CYLINDER	1
				FILE NAME: R03774.dft		
				MATL:		SCALE: 1:6



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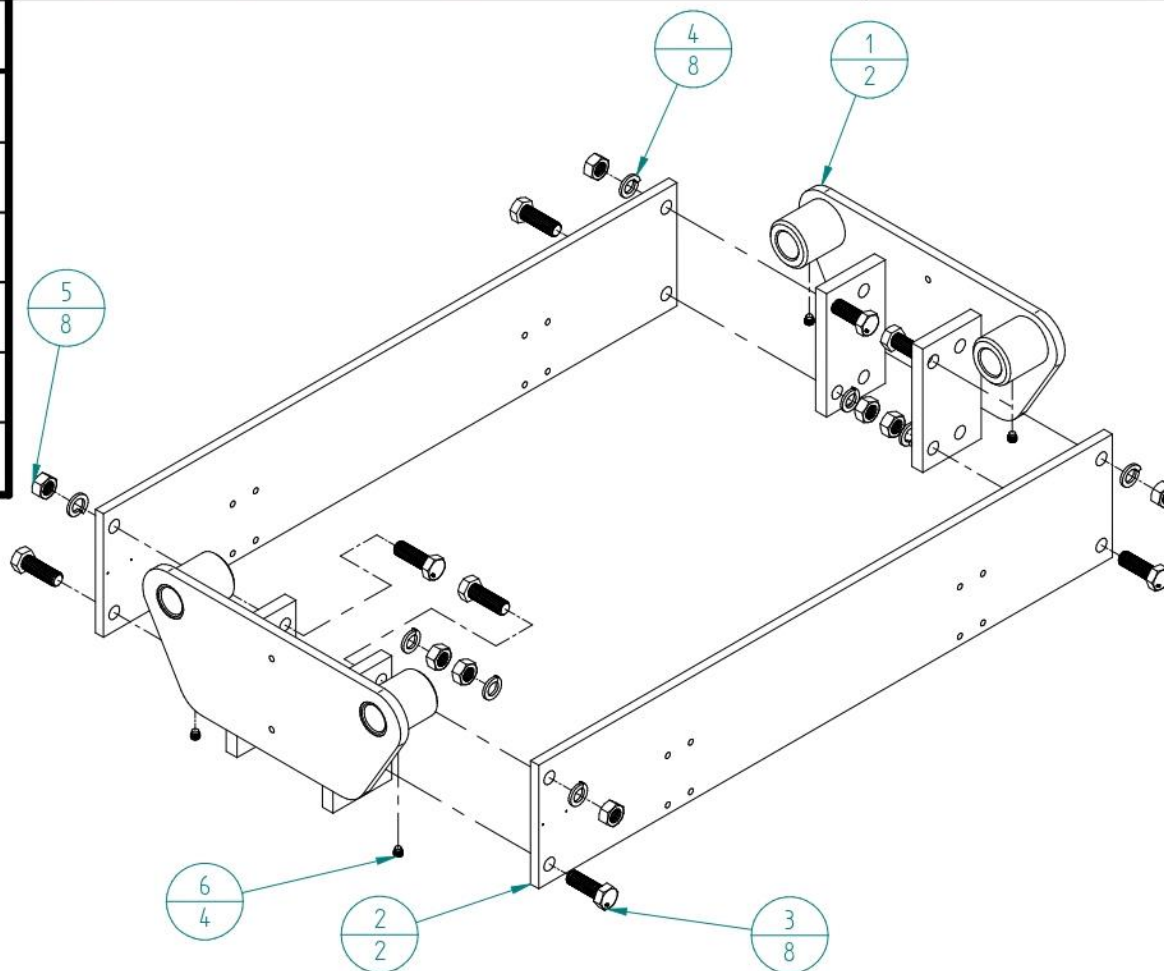
IF IN DOUBT ASK

REMOVE ALL SHARP EDGES 0.5 X 45°

DWG  
No

011-30000AA

Item No.	Part No.	Description	Quantity
1	011-00755	END PLATE ASSY	2
2	011-00650	SIDE PLATE	2
3	670-02060	M20 x 60 BOLT	8
4	890-00200	M20 SPRING WASHER	8
5	500-00200	M20 NUT	8
6	681-01212	M12 x 12 GRUB SCREW	4



	NAME	DATE	ABCO Engineering (Hydraulics)		
DRAWN	M. Steele-Vaessen	15/02/22	Tel: 01636 812674 Fax: 01636815448		
UNSPEC TOL:		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	SIZE	TITLE	ISSUE
LINEAR			A4	PIT JACK FRAME ASSY	1
ANGULAR			FILE NAME: 011-30000AA.dft		
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X.0 :±0.1			SCALE:110		
X.00 :0.05					



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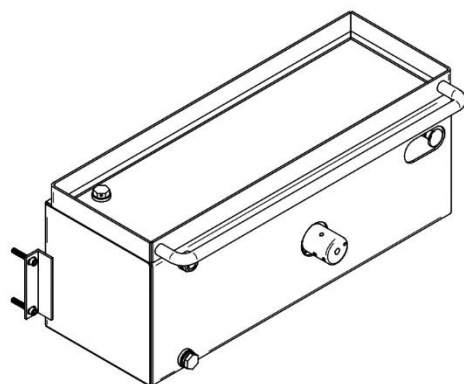
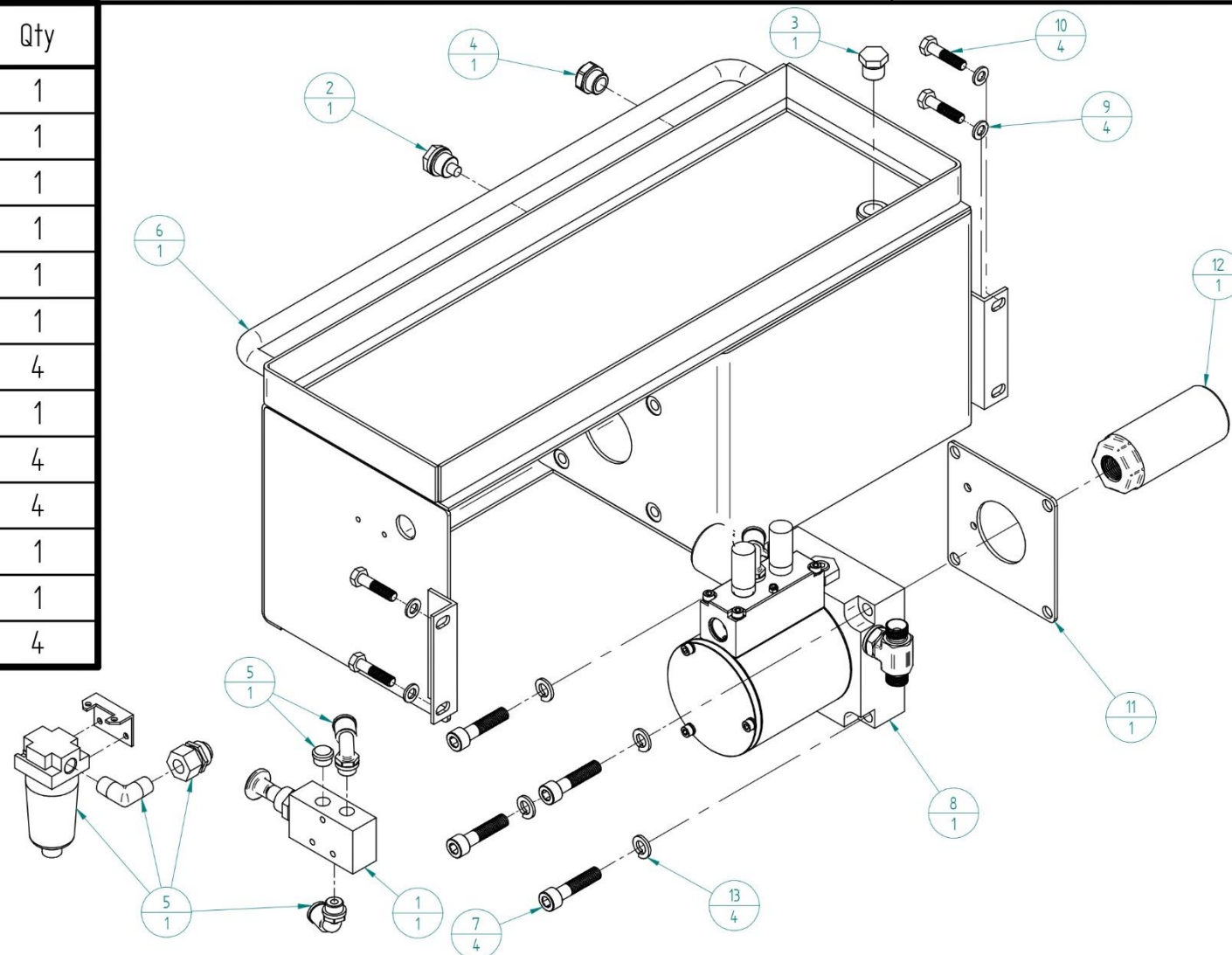
IF IN DOUBT ASK

REMOVE ALL SHARP EDGES 0.5 X 45°

DWG  
No

013-20005

Item No.	Part No.	Description	Qty
1	011-00070	PNEUMATIC VALVE	1
2	295-01502	DRAIN PLUG	1
3	150-00096	3/8BSP BREATHER	1
4	295-00310	LEVEL GAUGE	1
5	013-00900	AIR FITTING KIT	1
6	011-10010AB	TANK WELDMENT	1
7	650-01045	M8 x 45 BOLT	4
8	565-00740	PUMP ASSY	1
9	890-00080	M8 WASHER	4
10	670-00835	M8 x 35 BOLT	4
11	011-00052	AIR PUMP GASKET	1
12	290-00600	SUCTION FILTER	1
13	890-00101	M10 WASHER	4



	NAME	DATE	ABC0 Engineering (Hydraulics)		
DRAWN	M. Steele-Vaessen	18/07/23	Tel: 01636 812674 Fax: 01636815448		
UNSPEC TOL:		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	SIZE	TITLE	ISSUE
LINEAR			A4	013 PIT JACK TANK ASSEMBLY	1
ANGULAR			FILE NAME: 013-20005.dft		
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X.0 ±0.1			SCALE: 1:5		
X.00 ±0.05					





DO NOT SCALE

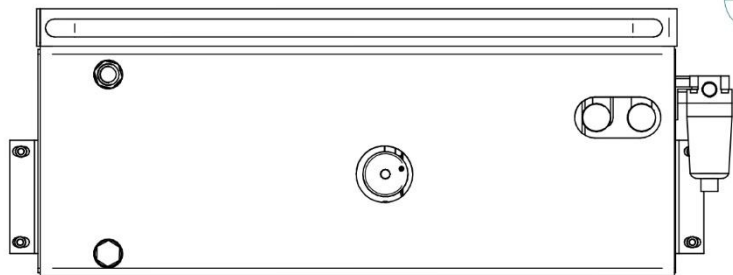
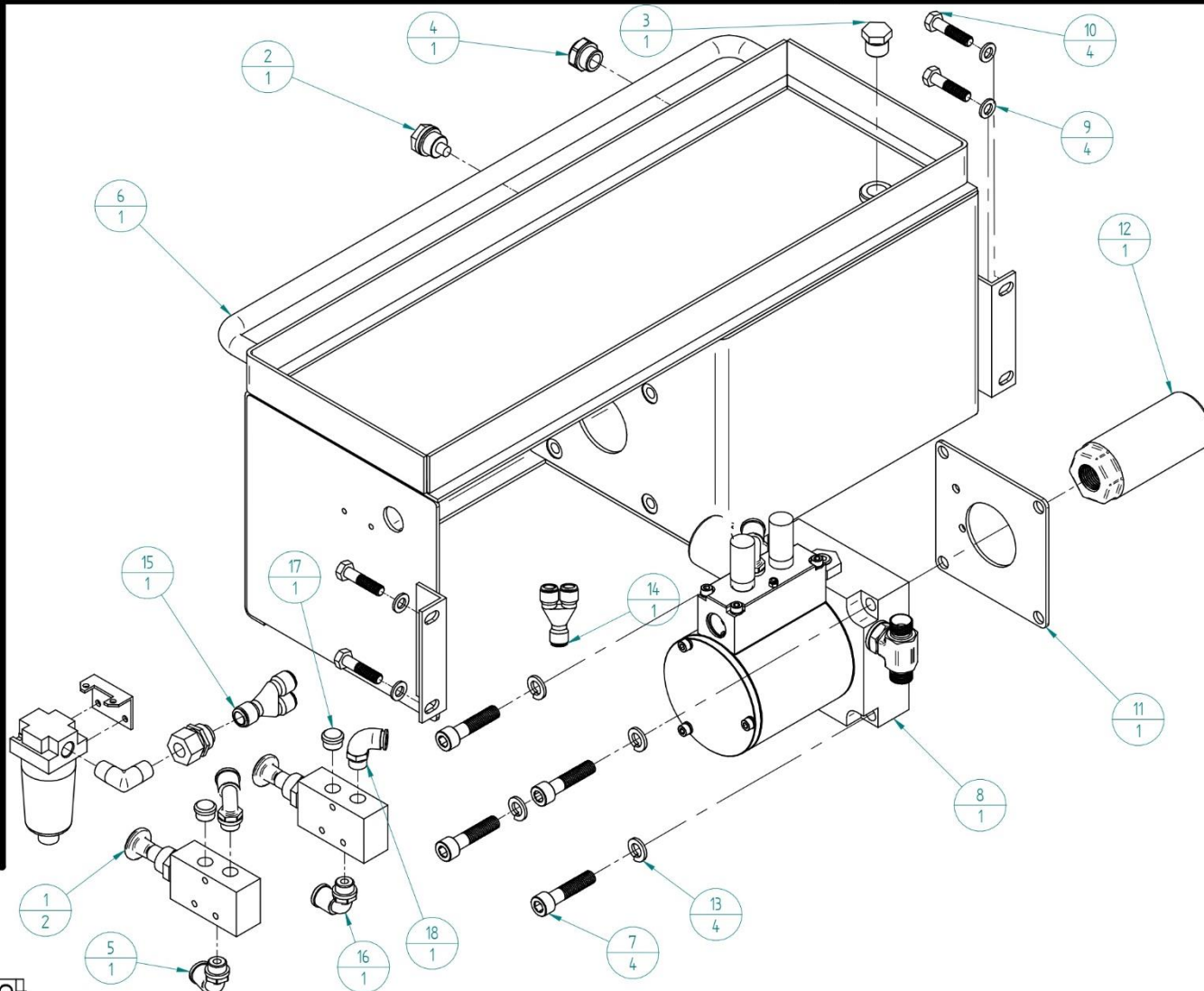
IF IN DOUBT ASK

REMOVE ALL SHARP EDGES 0.5 X 45°

DWG  
No

011-20005

Item No.	Part No.	Description	Qty
1	011-00070	PNEUMATIC VALVE	2
2	295-01502	DRAIN PLUG	1
3	150-00096	3/8BSP BREATHER	1
4	295-00310	LEVEL GAUGE	1
5	013-00900	AIR FITTING KIT	1
6	011-10010AB	TANK WELDMENT	1
7	650-01045	M8 x 45 BOLT	4
8	565-00740	PUMP ASSY	1
9	890-00080	M8 WASHER	4
10	670-00835	M8 x 35 BOLT	4
11	011-00052	AIR PUMP GASKET	1
12	290-00600	SUCTION FILTER	1
13	890-00101	M10 WASHER	4
14	011-00145	'Y' ADAPTOR 8mm	1
15	011-00120	'Y' ADAPTOR 10mm	1
16	011-00100	1/4BSP ELBOW 10mm	1
17	290-00250	1/4BSP FILTER	1
18	295-00082	1/4BSP ELBOW 8mm	1



		NAME	DATE	ABC0 Engineering (Hydraulics)		
DRAWN		M. Steele-Vaessen	18/07/23	Tel: 01636 812674 Fax: 01636815448		
UNSPEC TOL:		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS		SIZE	TITLE	ISSUE
LINEAR				A4	011 PIT JACK TANK ASSEMBLY	1
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X.00 :0.05						



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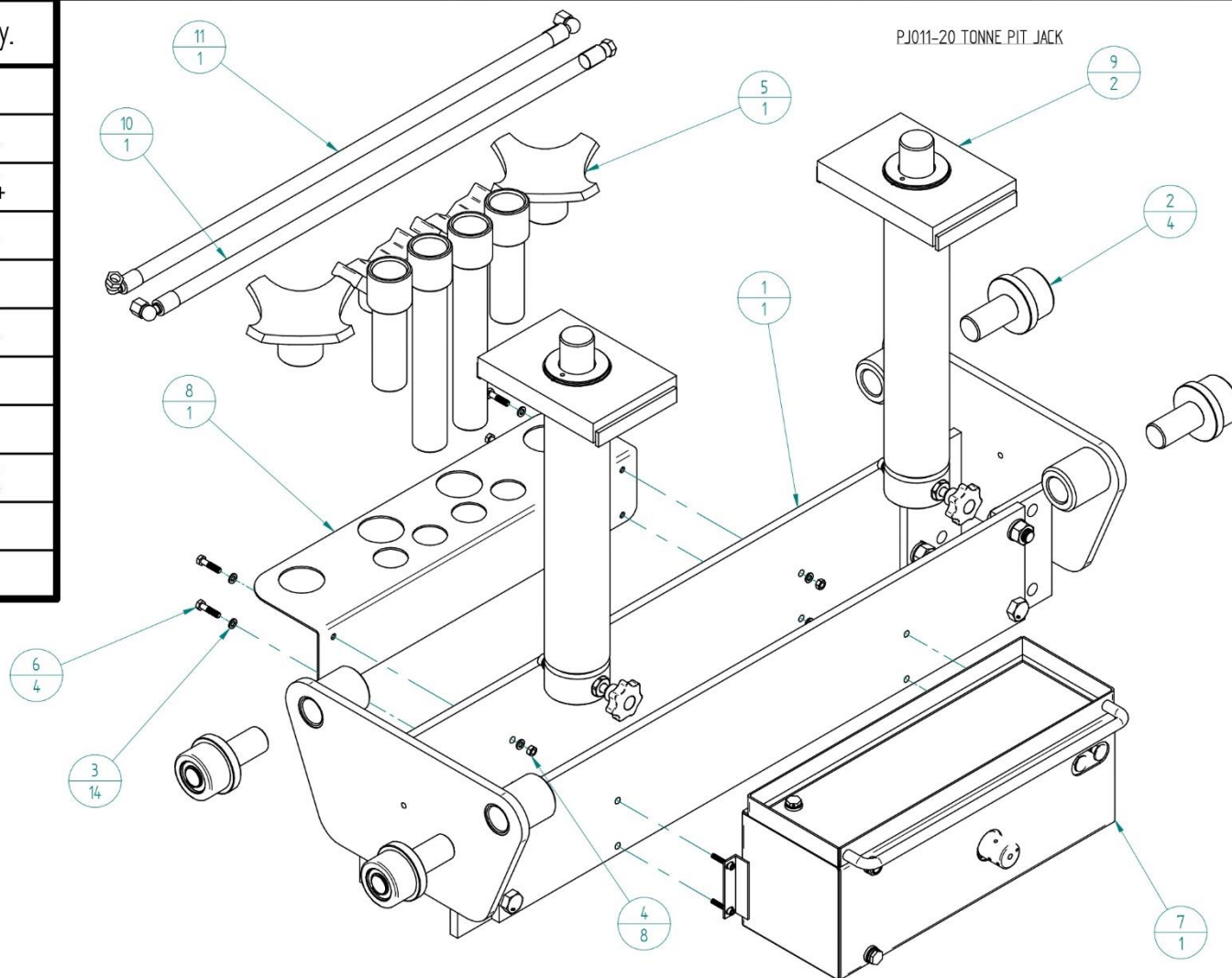
IF IN DOUBT ASK

REMOVE ALL SHARP EDGES 0.5 X 45°

DWG  
No

011-90000AA

Item No.	Part No.	Description	Qty.
1	011-30000AA	PIT JACK FRAME	1
2	565-00754P	ROLLER ASSY	4
3	890-00080	M8 WASHER	14
4	500-00080	M8 NUT	8
5	565-00703	ADAPTOR KIT	1
6	670-00835	M8 X 35 BOLT	4
7	011-20005	TANK ASSY	1
8	013-50016	ADAPTOR CARRIER	1
9	R04157	RAM ASSY	2
10	011-00802	L/H HOSE	1
11	011-00803	R/H HOSE	1



	NAME	DATE	ABCO Engineering (Hydraulics)		
DRAWN	M. Steele-Vaessen	17/07/23	Tel: 01636 812674 Fax: 01636815448		
UNSPEC TOL:		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	SIZE	TITLE	ISSUE
LINEAR			A4	AIR OP PIT JACK CHROME ROD	1
ANGULAR			FILE NAME: 011-90000AA EX.dft		
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X.0 ±0.1			SCALE:1:10		
X.00 ±0.05					



DO NOT SCALE

IF IN DOUBT ASK

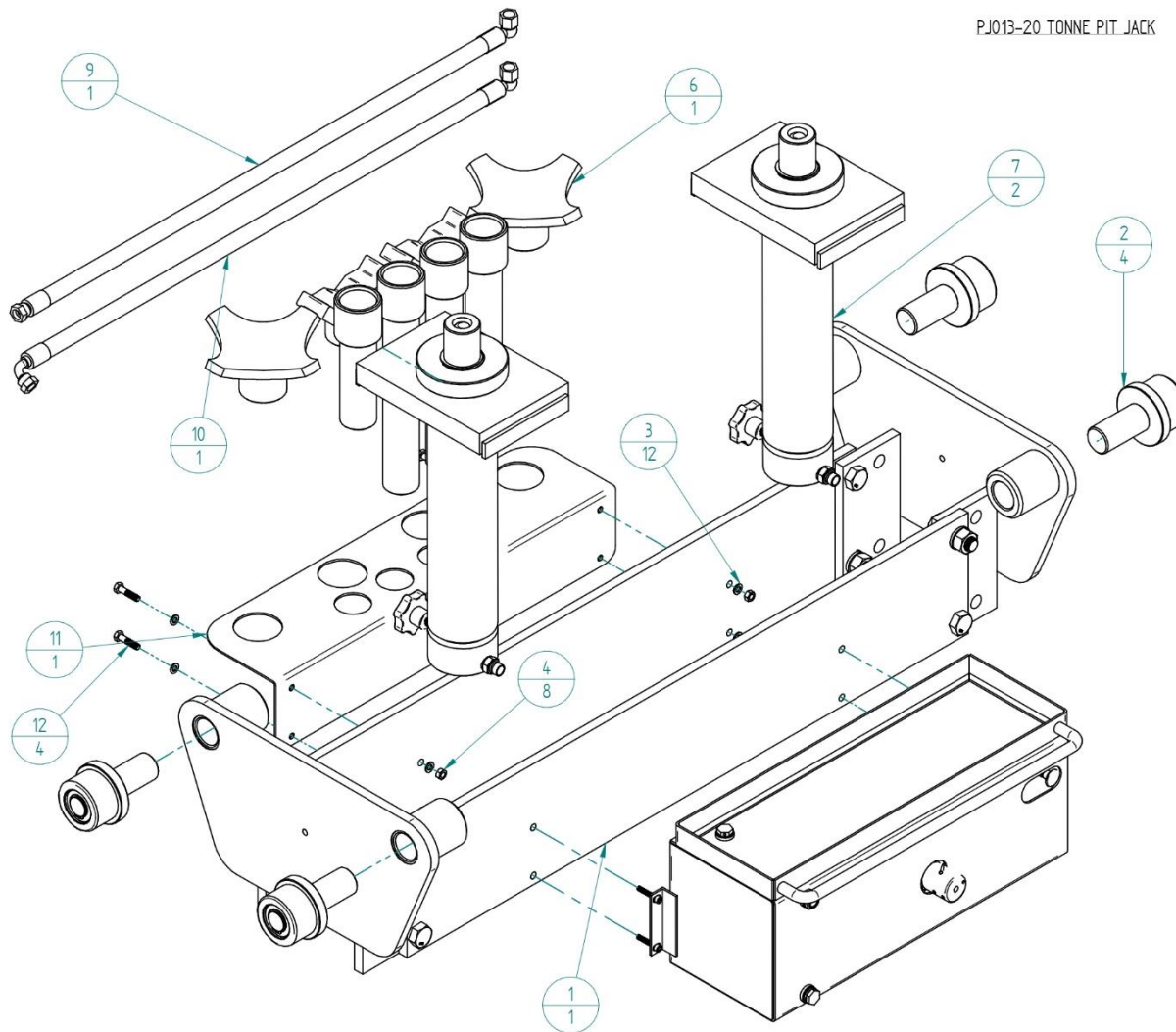
REMOVE ALL SHARP EDGES 0.5 X 45°

DWG  
No

013-90000AA

Item No.	Part No.	Description	Quantity
1	011-30000AA	PIT JACK FRAME	1
2	565-00754P	ROLLER ASSY	4
3	890-00080	M8 WASHER	12
4	500-00080	M8 NUT	8
6	565-00703	ADAPTOR KIT	1
7	R03774	RAM ASSY	2
8	013-20005	TANK ASSY	1
9	011-00802	R/H HOSE	1
10	011-00803	L/H HOSE	1
11	013-50016	ADAPTOR CARRIER	1
12	670-00835	M8 x 35 BOLT	4

PJ013-20 TONNE PIT JACK



	NAME		DATE		ABC0 Engineering (Hydraulics)			
DRAWN	M. Steele-Vaessen		17/07/23		Tel: 01636 812674 Fax: 01636815448			
UNSPEC TOL:			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE	TITLE	ISSUE
LINEAR		ANGULAR				A4	PIT JACK THREADED ROD	1
X ±0.3	X ±1°							
X.0 ±0.1	X.0 ±0.5°							
X.00 ±0.05								
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DO NOT SCALE

IF IN DOUBT ASK

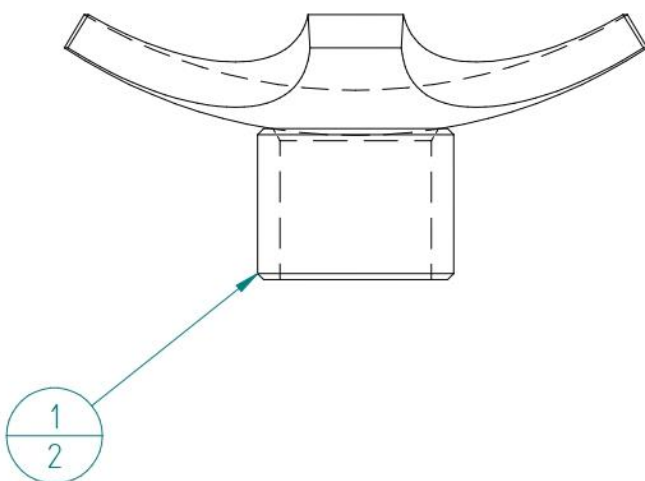
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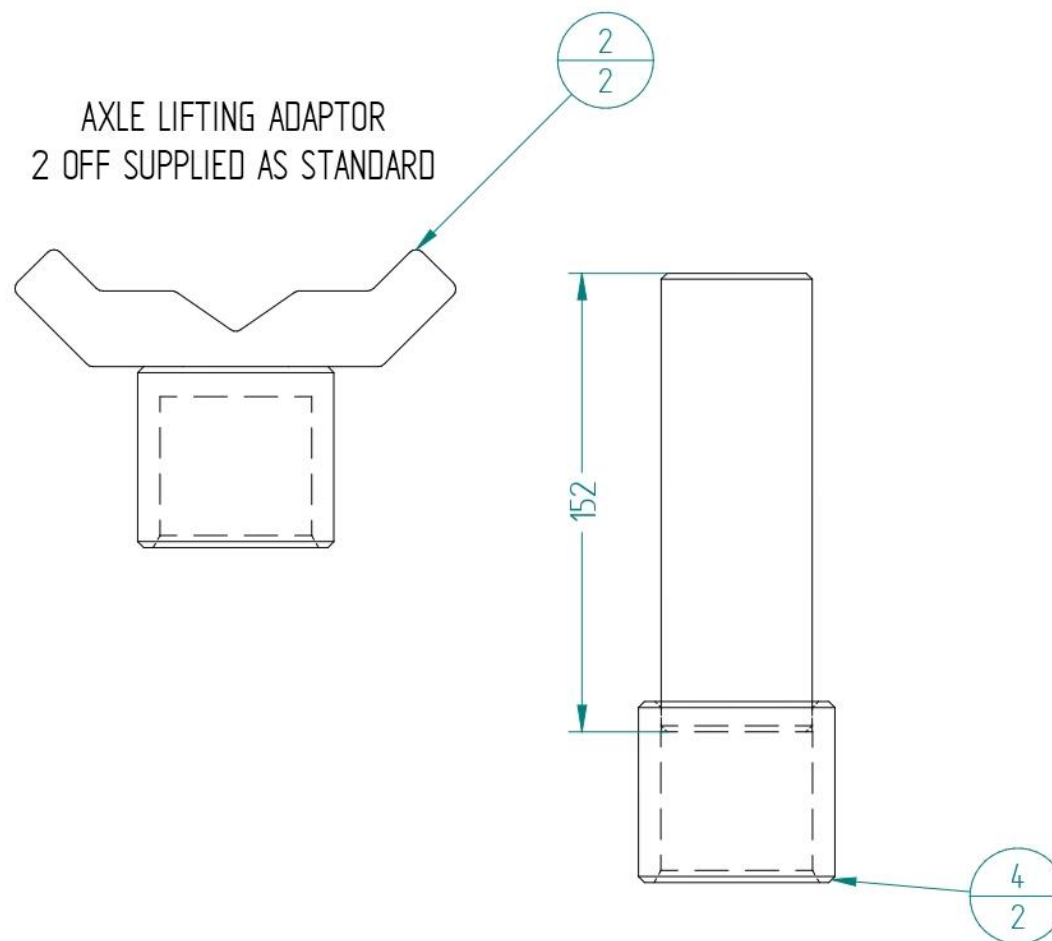
565-00702

SUPPLIED AS KIT ONLY – NOT INDIVIDUAL ITEMS  
ALL ABCO PIT JACKS

DISHED CRUTCH LIFTING ADAPTOR  
2 OFF SUPPLIED AS STANDARD



AXLE LIFTING ADAPTOR  
2 OFF SUPPLIED AS STANDARD



Item No.	Part No.	Description	Qty
1	081-00174	DISHED CRUTCH	2
2	081-00175	V CRUTCH	2
4	081-00171	6" EXTENSION	2

	NAME		DATE						
DRAWN	M. Steele-Vaessen		15/02/22						
UNSPEC TOL:  LINEAR            ANGULAR  X    ±0.3        X    ±1° X.0 ±0.1       X.0 ±0.5° X.00 ±0.05			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS			SIZE	TITLE	ISSUE	
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						FILE NAME: 565-00702.dft			
						MATL:			SCALE: 1:2.5

DO NOT SCALE

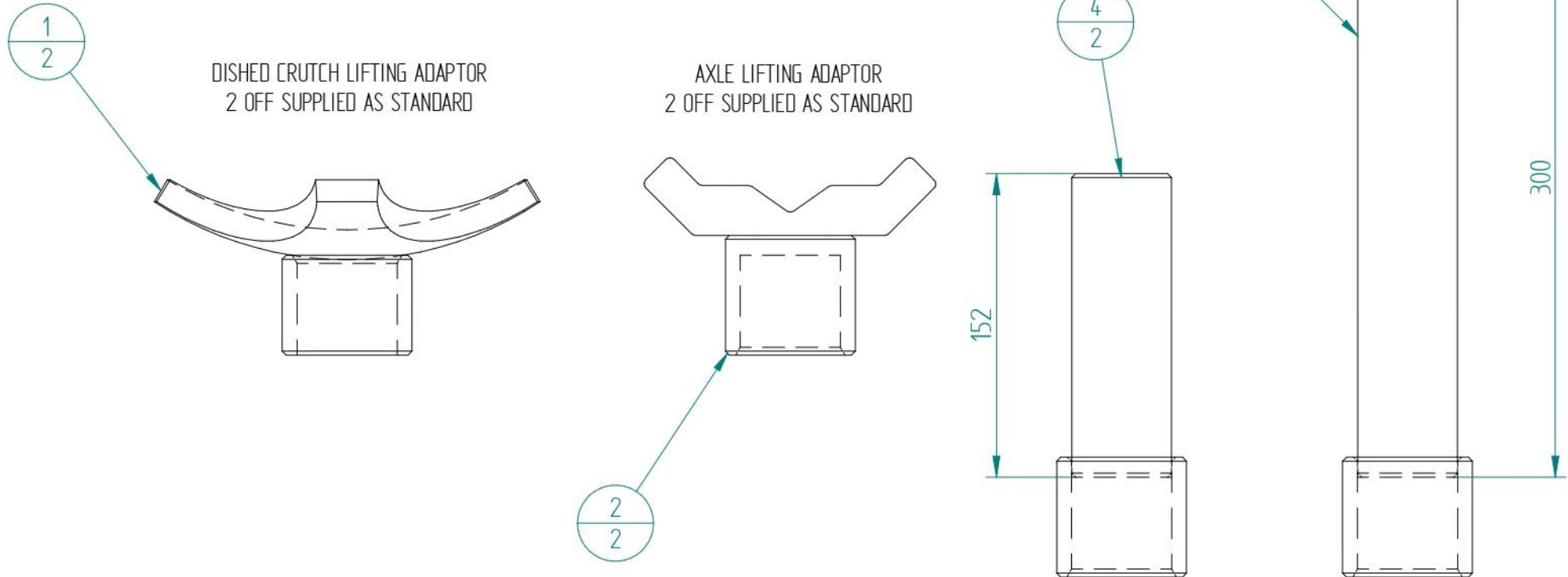
IF IN DOUBT ASK

REMOVE ALL SHARP EDGES 0.5 X 45°

DWG  
No

565-00703

SUPPLIED AS KIT ONLY – NOT INDIVIDUAL ITEMS  
ALL ABCO PIT JACKS



Item No.	Part No.	Description	Quantity
1	081-00174	DISHED CRUTCH	2
2	081-00175	V CRUTCH	2
3	081-00179	300MM EXTENSION	2
4	081-00171	6" EXTENSION	2

	NAME	DATE	ABCO Engineering (Hydraulics)		
DRAWN	M. Steele-Vaessen	16/02/22	Tel: 01636 812674 Fax: 01636815448		
UNSPEC TOL: LINEAR		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	SIZE A4	TITLE LIFTING ADAPTORS	ISSUE 1
X ±0.3	X ±1°		FILE NAME: 565-00703.dft		
X.0 ±0.1	X.0 ±0.5°		MATL:		
X.00 ±0.05			SCALE: 1:3		



# Pit Jack Extended 5 Year Limited Warranty

## Year 1

### **Full parts cover**

Any part failing from faulty materials or workmanship within the first 12 months from date of purchase will be replaced/repaired free of charge. Accidental and water damage of any component will not be covered by the warranty and will be fully chargeable (all repairs will be quoted before being carried out) e.g. damaged cylinder rods, internal water damage, damaged isolation/release valves etc.

## Year 2-5

### **Limited parts cover**

Any part failing from faulty materials or workmanship, between month 13 to 60 from date of purchase will be replaced/repaired free of charge. Excluded from the above statement are consumable wearing parts: seals (cylinder, pump and valve), bearings, lifting adaptors, internal air pump components, air pipes, hydraulic hoses, any part suffering from accidental or water damage.

In order to ensure a long service life and continued warranty support on your jack, it must be kept in good working order and all operating parameters must be adhered to e.g. water trap intact and drained, correct operating air pressure and the jack kept clean, etc.

Details of weekly maintenance are included in the operating manual. **Failure to comply with the operating parameters and weekly maintenance instruction may invalidate your warranty.**

Please see our Terms & Conditions for further information.



## DECLARATION OF CONFORMITY

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ABCo Engineering Hydraulics  
Mill Park  
Southwell  
Nottinghamshire  
NG25 0ET  
01636 812674

**ABCo Engineering Hydraulics hereby declare that products:**

PJ011 - ABCo 20 Tonne Chrome Rod Commercial Pit Jack

PJ012 - ABCo 12 Tonne Chrome Rod Commercial Pit Jack

PJ013 - ABCo 20 Tonne Threaded Rod with Locking Collar Commercial Pit  
Jack

Comply with the following Directives:

**2006/42/EC MACHINERY DIRECTIVE**

The undersigned declares, on the behalf of ABCo Engineering Hydraulics that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The products comply with all the applicable Essential Health and Safety Requirements of the Directive.

**Mike Would – Managing Director**