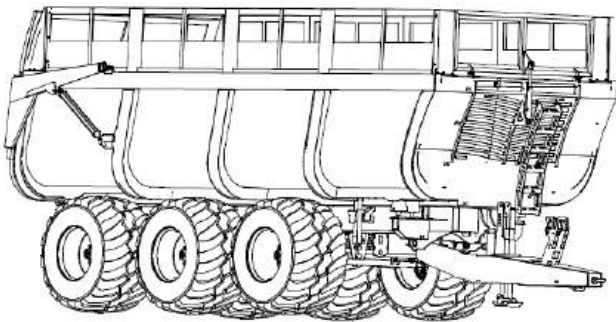
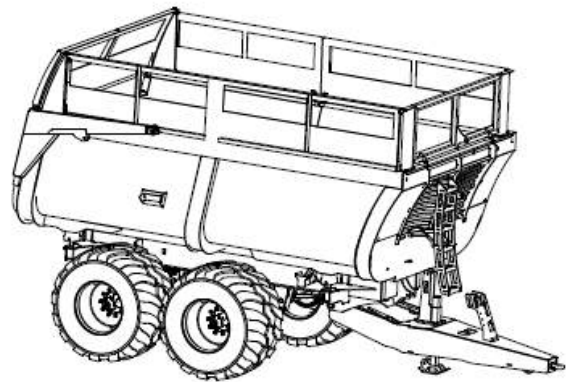




# DB30, DB40, DB50, DB70 OWNERS MANUAL



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## **INTRODUCTION**

Congratulations on the purchase of your new PENTA DUMP BOX. This equipment has been designed and manufactured to exceed the needs of you the farmer. With proper operation and preventative maintenance it will last for years.

The purpose of this manual is to assist you in operating and maintaining your DUMP BOX. Keep this manual readily available for reference and be sure to pass it on to new operators or owners. Contact Penta TMR Inc. or any of our dealers if you need assistance or additional information.

## **GENERAL INFORMATION**

Operator orientation: The directions left, right, front and rear as mentioned throughout the manual are seen from the tractor driver's seat, facing forward.

Some items in this manual may differ slightly from your dump box. Penta reserves the right to make changes to the dump box and this manual without notice. If in any doubt regarding the aspect of the design or operation contact Penta or an authorized dealer.

## **CUSTOMER REFERENCE INFORMATION**

Penta Model Number: \_\_\_\_\_

Penta Serial Number: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

Dealer Name: \_\_\_\_\_

Dealer Tel #. \_\_\_\_\_

Penta TMR Incorporated. Tel: 888-844-7788 Fax: 519-882-3359

## **IDENTIFICATION PLATE**

The Serial number is required with all orders for spare parts and technical enquires. This is necessary for correct delivery and service.

The Serial number is attached to the front left side of the main frame



**WARRANTY INFORMATION**

PENTA warrants against defects in construction or materials for a period of ONE year. We reserve the right to inspect and decide whether material or construction was faulty or whether abuse or accident voids our guarantee. Warranty service must be performed by a dealer or service center authorized by Penta.

The warranty registration form (fig. 1.0) must be filled out by the dealer and signed by both the dealer and customer at time of delivery. Reference PENTA's warranty Guidelines & Stipulations on our website [www.pentatmr.com](http://www.pentatmr.com) or Email: [warranty@pentatmr.com](mailto:warranty@pentatmr.com)

Fig. 1.0

**TECHNICAL DATA**

	DB30	DB40	DB50	DB70
<b>Axles</b>	Tandem	Tandem	Tri-Axle Tandem Axle (Optional)	Quad-Axle - Standard Tri-Axle - Optional
<b>Steering Axles</b>	N/A	N/A	2 Steering , 1 Fixed (Tri-Axle)	2 Steering, 2 fixed (Quad-Axle)
<b>Extension Height</b>	32 inch (81.3cm)	32 inch (81.3cm)	32 inch (81.3cm)	32 inch (81.3cm)
<b>Front Tilt Extension</b>	Hydraulic	Hydraulic	Hydraulic	Hydraulic
<b>Tailgate</b>	Hydraulic	Hydraulic	Hydraulic	Hydraulic
<b>Tailgate Chute</b>	Manual Hydraulic (optional)	Manual Hydraulic (optional)	Manual Hydraulic (optional)	Manual Hydraulic (optional)
<b>Tires</b>	BKT FL630 800/45R26.5 Michelin 800/45R26.5 (optional)	BKT FL630 800/45R26.5 Michelin 800/45R26.5 (optional)	BKT FL630 800/45R26.5 Michelin 800/45R26.5 (optional)	BKT FL630 800/45R26.5 Michelin 800/45R26.5 (optional)
<b>Total Length</b>	292 inch (742 cm)	336 inch (853 cm)	405 inch (1029 cm)	468 inch (1189 cm)
<b>Total Height (With Tires and 32 inch Extension)</b>	148 inch (376 cm)	148 inch (376 cm)	149 inch (376 cm)	150 inch (376 cm)
<b>Outside Width (With Tires)</b>	126 inch (322.5 cm)	127 inch (322.5 cm)	128 inch (322.5 cm)	129 inch (322.5 cm)
<b>Interior Dimensions (LxWxH)</b>	17 ft x 10.5 ft x 7.3 ft (5.18 m x 3.20 m x 2.23 m)	21 ft x 10.5 ft x 7.3 ft (6.40 m x 3.20 m x 2.23 m)	26.6 ft x 10.5 ft x 7.3 ft (8.11 m x 3.20m x 2.23m)	32.5 ft x 11.4 ft x 7.3 ft (9.91 m x 3.47 m x 2.23m)
<b>Tandem Axle Weight Capacity</b>	40,000 lbs ( 18,140kg)	40,000 lbs ( 18,140 kg)	40,000 lbs ( 18,140 kg)	N/A
<b>Tri-Axle Weight Capacity</b>	N/A	N/A	*60,000 lbs (27,200 kg)	60,000 lbs (27,200 kg)
<b>Quad-Axle Weight Capacity</b>	N/A	N/A	N/A	80,000 lbs (36,285 kg)
<b>Volume</b>	1050 cu.ft (30m <sup>3</sup> )	1400 cu.ft (40m <sup>3</sup> )	1850 cu.ft (52m <sup>3</sup> )	2475 cu.ft (70m <sup>3</sup> )
<b>Hoist Oil Volume</b>	5.55 US Gal (21 litres)	8.5 US Gal (32 litres)	12.698 US Gal (48 litres)	**26.4 US GAL (100 litres)
<b>Recommended Tractor H.P.</b>	140	160	190	240

\* Based on Hoist Cylinder Rating

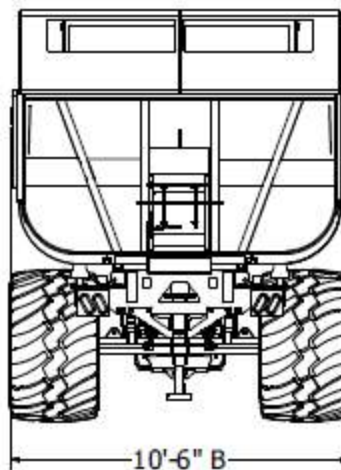
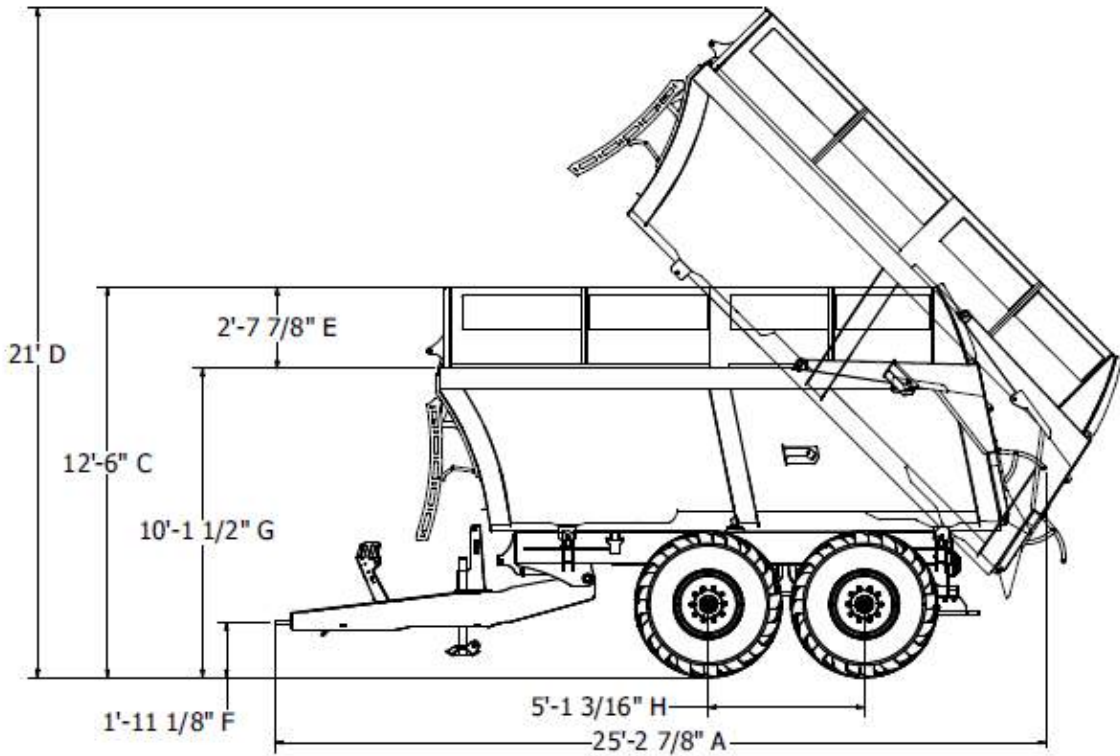
\*\* DB70 is equipped with Oil reservoir and Pump



# TECHNICAL DATA

## DB30

DB30 Dimensions			CYLINDERS		
Description	Letter	Distance	Title	Stroke	Part Number
Length	A	25'-2 7/8"	DB30 Main Cylinder	7"	774020
Width	B	10'-6"	Front Tongue Adjustment	8"	775520
Hight with Extensions	C	12'-6"	Jack	20"	775521
Tipped Hight	D	21'	Axle Stabilizer	6"	775523
Extension Hight	E	2'-7 7/8"	Tailgate	30"	775524
Hitch Hight	F	1'-11 1/8"	Grain Door	14"	775525
Hight to top of Box	G	10'-1 1/2"	Head Gate	8"	775526
Wheel Base	H	5'-1 3/16"			

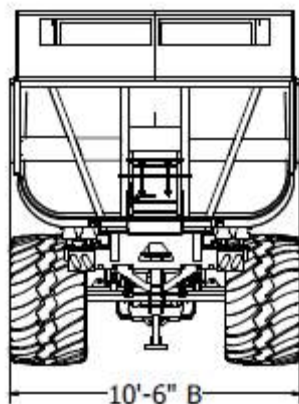
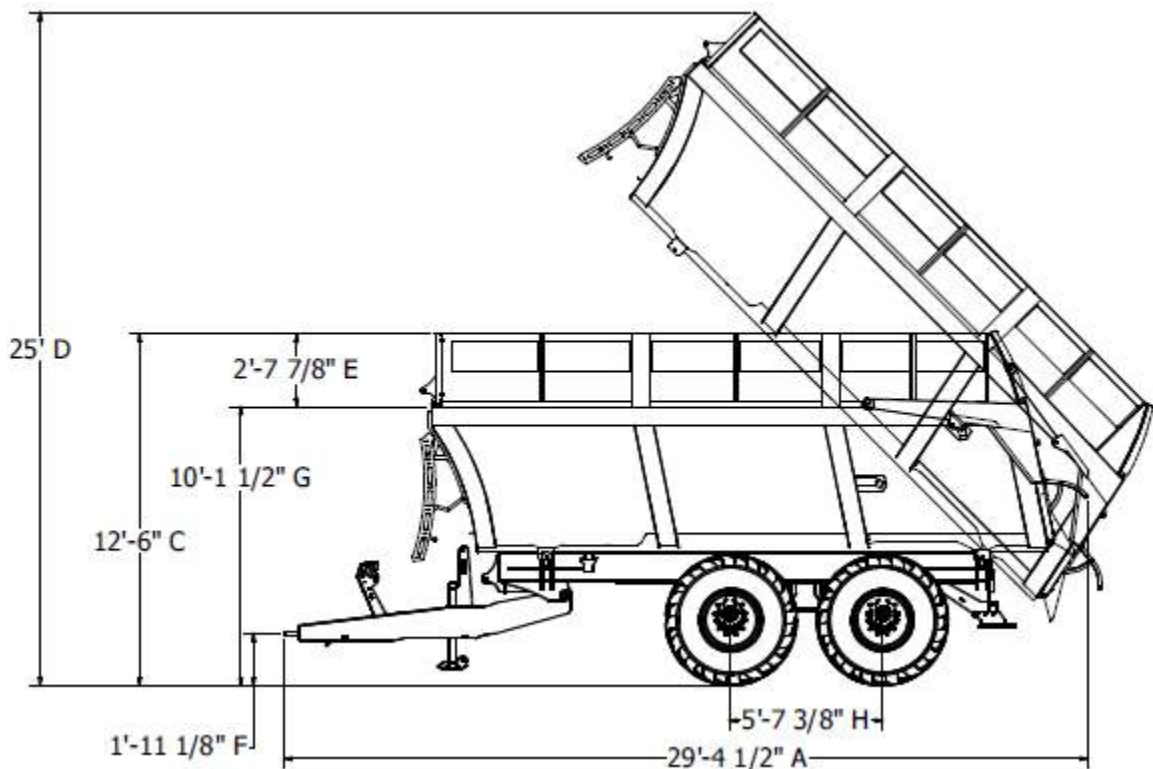


14DBP-001

# TECHNICAL DATA

## DB40

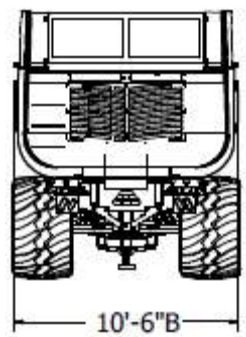
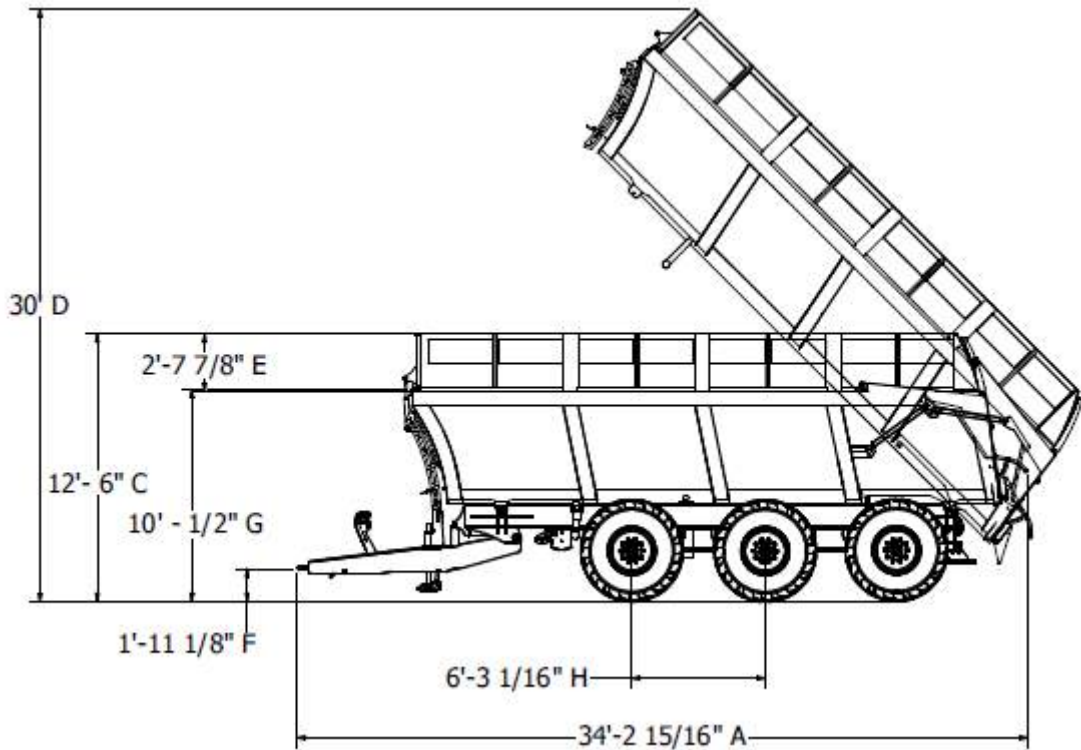
DB40 Dimensions			CYLINDERS		
Description	Letter	Distance	Title	Stroke	Part Number
Length	A	29'-4 1/2"	DB 40 Main Cylinder	10"	774616
Width	B	10'-6"	Front Tongue Adjustment	8"	775520
Hight with Extensions	C	12'-6"	Jack	20"	775521
Tipped Hight	D	25'	Axle Stabilizer	6"	775523
Extension Hight	E	2'-7 7/8"	Tailgate	30"	775524
Hitch Hight	F	1'-11 1/8"	Grain Door	14"	775525
Hight to top of Box	G	10'-1 1/2"	Head Gate	8"	775526
Wheel Base	H	5'-7 3/8"			



# TECHNICAL DATA

## DB50

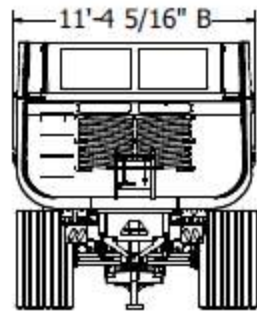
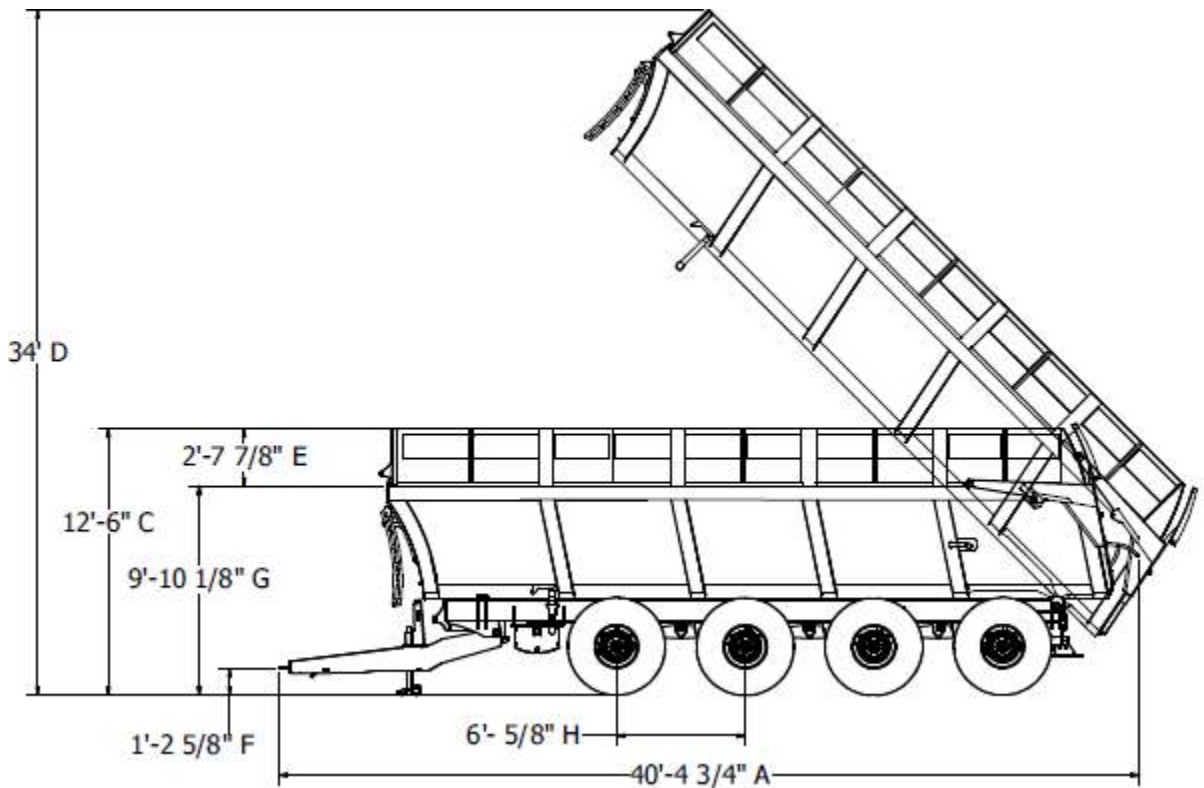
DB50 Dimensions			CYLINDERS		
Description	Letter	Distance	Title	Stroke	Part Number
Length	A	34'-2 15/16"	DB50 Main Cylinder	14'	774021
Width	B	10'-6"	Front Tongue Adjustment	8"	775520
Hight with Extensions	C	12'-6"	Jack	20"	775521
Tipped Hight	D	30'	Axle Stabilizer	6"	775523
Extension Hight	E	2'-7 7/8"	Tailgate	30"	775524
Hitch Hight	F	1'-11 1/8"	Grain Door	14"	775525
Hight to top of Box	G	10'-1 1/2"	Head Gate	8"	775526
Wheel Base	H	6'-3 1/16"			



# TECHNICAL DATA


## DB70

DB70 Dimensions			CYLINDERS		
Description	Letter	Distance	Title	Stroke	Part Number
Length	A	40'-4 3/4"	DB70 Main Cylinder	14"	774022
Width	B	11'-4 5/16"	Front Tongue Adjustment	8"	775520
Hight with Extensions	C	12'-6"	Jack	20"	775521
Tipped Hight	D	34'	Axle Stabilizer	6"	775523
Extension Hight	E	2'-7 7/8"	Tailgate	30"	775524
Hitch Hight	F	1'-2 5/8"	Grain Door	14"	775525
Hight to top of Box	G	9'-10 1/8"	Head Gate	8"	775526
Wheel Base	H	6'- 5/8"			



## **SAFETY**

For your safety and to develop better understanding of your implement, thoroughly read the operator's manual before use.

In this manual the terms **CAUTION**, **WARNING**, **DANGER** are used to identify safety messages. When you see this  , be alert to the possibility of damage and hazards that can result in personal injury or death.



**DANGER** indicates an extremely hazardous situation or action that will result in serious injury or death.



**WARNING** indicates a hazardous situation or action that could result in serious injury or death.



**CAUTION** indicates an unsafe situation or action that may result in personal injury

**IMPORTANT** indicates special instructions or procedures which, if not observed could result in damage to equipment.

**NOTE** indicates helpful information

*YOU* are responsible for the *SAFE* operation and maintenance of your implement. *YOU* must ensure that anyone who will be operating, maintaining, servicing, or working around the implement is familiar with the operating, safety and maintenance procedures and related safety information contained in this manual.

The most important safety device on the equipment is a *YOU* the *SAFE* operator.

Do not modify the equipment in any way. Unauthorized modifications may impair the function and/or safety and could affect the life and warranty of the equipment. Think SAFETY! Work SAFELY!



### **PRECAUTIONS**

Place all controls in neutral, stop the engine, set park brake, remove ignition key, and wait for all moving parts to come to a complete stop before servicing, repairing, or unplugging machinery.

Before applying pressure to the hydraulic system, make sure all components are tight and that all lines, hoses, and couplings are in good condition.

Do not operate when guards are missing or broken.

Clear the area of all bystanders, especially children, before starting.

Do not allow children to play on or around the machine.

Do not operate with leaks in the hydraulic system or lubrication system.

Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.



## **TRANSPORT**

Clean reflectors, slow moving vehicle signs, and lights before transporting.

Do not allow riders, on or in the implement.

Stay away from overhead power lines when loading. Electrocutation can occur without contact.

Use hazard flashers on tractor when transporting on roads, and follow all local laws.

Attach securely to the tractor using a retainer on the drawbar, and a safety chain.

Make sure you are in compliance with all local regulations regarding equipment on public roadways and highways.

Make sure SMV (Slow Moving Vehicle) emblem and all the lights and reflectors required by law are in place, clean, and can be seen clearly by overtaking and oncoming traffic.

Reduce speed on rough roads and surfaces.

Add extra lights or use pilot vehicle when transporting during times of limited visibility.



**DANGER** Never overload the dump box. Overloading the box is dangerous and can cause extensive damage



**CAUTION** Reduce speed when turning or travelling across uneven ground



**WARNING** Avoid extending or transporting implement on side hills or steep inclines

### Use extra caution when transporting on roadways

- Match speed to operating conditions.
- Stay away from ditches and riverbanks.
- Use caution and pay attention.
- Use front weights to promote stability.
- Start forward motion slowly and change speed gradually.
- Drive around ditches.
- Use caution when braking down a grade.

It is recommended and good practice to:

- Lock the steering axles in a straight forward and reverse motion.
- Unlock the steering while turning

\*\*\*\* It is the duty of the operator to ensure that the dump box is maintained and operated in accordance with all local and national regulations



## TIRES

Failure to follow proper procedures when mounting a tire on a wheel or rim can cause an explosion which may result in serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and are qualified to do the job.

Have a qualified tire dealer or repair service perform required maintenance.

## MODEL OPTIONS



BKT: 800/45R26.5 BKT FL-630 PLUS TL  
MICHELIN: 800/45 R26.5 174D CARGOXBIB

## REDUCE COMPACTION

Over Inflated tires cause excessive soil compaction with the formation of ruts (in damp conditions).

Make	Size	Pattern	Overall Dia	Rolling Circumference	Load Capacity					Pressure
					65 km/h (40 mph)	50 km/h (30 mph)	40 km/h (25 mph)	25 km/h (15 mph)	10 km/h (6 mph)	
BKT	800 / 45 R 26.5	FL 630 Plus	1393mm	4277mm (168.4 inch)	2815 kg (6206 lbs)	3410 kg (7518 lbs)	3780 kg (8333 lbs)	4450 kg (9810 lbs)	5070 kg (11177 lbs)	1.2bar (17 psi)
					3400 kg (7496 lbs)	4120 kg (9083 lbs)	4570 kg (10075 lbs)	5400 kg (11905 lbs)	6140 kg (13536 lbs)	1.6 bar (23 psi)
					3955 kg (87196 lbs)	4785 kg (10549 lbs)	5310 kg (11706 lbs)	6250 kg (13778 lbs)	7120 kg (15697 lbs)	2.0 bar (29 psi)
					4540 kg (10009 lbs)	5500 kg (12125 lbs)	6080 kg (13404 lbs)	7160 kg (15785 lbs)	8160kg (17990 lbs)	2.4 bar (35 psi)
					5050 kg (11133 lbs)	6100 kg (13448 lbs)	6785 kg (14958 lbs)	7985 kg (17604 lbs)	9085 kg (20029 lbs)	2.8 bar (41 psi)
					5630kg (12412 lbs)	6815 kg (15024 lbs)	7560 kg (16667 lbs)	8900 kg (19621 lbs)	10135 kg (22344 lbs)	3.2 bar (46 psi)
					6165 kg (13591 lbs)	7465 kg (16457 lbs)	8280 kg (18254 lbs)	9745 kg (21484 lbs)	11100 kg (24471 lbs)	3.6 bar (52 psi)
					6700 kg (14770 lbs)	8110 kg (17880 lbs)	9000 kg (19841 lbs)	10590 kg (23347 lbs)	12060 kg (26588 lbs)	4.0 bar (58 psi)
Make	Size	Pattern	Overall Dia	Rolling Circumference	Load Capacity					Pressure
					65 km/h (40 mph)	50 km/h (30 mph)	40 km/h (25 mph)	25 km/h (15 mph)	10 km/h (6 mph)	
MICHELIN	800 / 45 R 26.5	174D TL Cargoxbib	1395mm	4097mm (161.3 inch)	3010 kg (6640 lbs)	3640 kg (8020 lbs)	4090 kg (9020 lbs)	4755 kg (10480 lbs)	5630 kg (12410 lbs)	1.2bar (17 psi)
					3670 kg (8090 lbs)	4440 kg (9790 lbs)	4990 kg (11,000 lbs)	5800 kg (12790 lbs)	6755 kg (14890 lbs)	1.6 bar (23 psi)
					4330 kg (9550 lbs)	5240 kg (11550 lbs)	5890 kg (12,990 lbs)	6845 kg (15090 lbs)	7875 kg (17360 lbs)	2.0 bar (29 psi)
					4990 kg (11000 lbs)	6040 kg (13320 lbs)	6790 kg (14970 lbs)	7890 kg (17390 lbs)	9000 kg (19840 lbs)	2.4 bar (35 psi)
					5420 kg (11950 lbs)	6560 kg (14460 lbs)	7370 kg (16250 lbs)	8565 kg (18880 lbs)	9765 kg (21530 lbs)]	2.8 bar (41 psi)
					5845 kg (12890 lbs)	7075 kg (15600 lbs)	7650 kg (17530 lbs)	9240 kg (20370 lbs)	10530 kg (23210 lbs)	3.2 bar (46 psi)
					6270 kg (13820 lbs)	7590 kg (16730 lbs)	8530 kg (18810 lbs)	9915 kg (21860 lbs)	11295 kg (24900 lbs)	3.6 bar (52 psi)
					6700 kg (14770 lbs)	8110 kg (17880 lbs)	9110 kg (20080 lbs)	10590 kg (23350 lbs)	12060 kg (26590 lbs)	4.0 bar (58 psi)

## THE SERVICE LIFE OF YOUR TIRES

The wrong pressure may have a serious effect on the life of your agricultural tires:



**OVERINFLATION** causes excessive spin in the fields. On hard, stony soil, it causes premature wear. On the road, over inflation causes fast, irregular wear on the lugs – the footprint is too small.



**UNDERINFLATION** causes irreversible damage to tire casings: risk of failure. It also leads to excessive wear on roads: too much rolling resistance.

### **Pre- Operation Check**

- Read and understand manual carefully
- Check Tires and lugs....Torque on the wheel lugs, Tire pressure (See pg.11)
- Check fasteners
- Check Pivot points and pins
- Check Hoses and hydraulic cylinders, fittings and couplers
- Check Grease points and adequate amount of grease is applied
- Check Connections of the hoses and electrics and insure no pinch points and installed properly
- Check hitch and draw bar connection insure they are level and that the weight is distributed evenly
- Check lights and slow-moving vehicle are clear of debris

### **Tractor Requirements**

DB30 = 140Hp

DB40 = 160Hp

DB50 = 190Hp

DB70 = 240Hp

## **Connection**

Coupling to tow vehicle – Hitch

Reverse the towing vehicle until hitch is lined up with the eye  
Raise the tow hitch and lock into raised position

WARNING : Ensure all personnel are clear of danger around the dump box



WARNING : Make sure the trailer is properly secure and attached before moving

WARNING : Never park the dump box with the tub in the raised position

WARNING : Park dump box on firm and level ground

### **Coupling Hydraulic Hoses**

It is important to keep the hose connections clean.

Connect the hydraulic service line to the connection on the tractor

### **Uncoupling the tow vehicle - Hitch**

Ensure the tipping body is lowered fully

Ensure the drawbar is in the tow position

Lower the trailer onto the drawbar

Decouple all hoses and connections

When disconnected place in holder.

### **Steering Axle Connections**

Some models are equipped with steering axles, for easier turning and maneuvering.

A dual hydraulic connection from the tractor is used for this.

When traveling forward the spool valve should be moved to retract cylinders this allows the steering axle to follow the lead axle.



WARNING : When traveling in the reverse direction the spool valve should be moved to the extend the cylinders. The trailer wheels will then stay in line and locked.

### **Electrical connection**

Ensure Prongs are clean

Walk around and check that lights are working properly

## Connection



Adjustment before towing the trailer:

Adjust the drawbar and/or the hitch of the towing vehicle so that when towing the trailer body is slightly raised at the front.

Hitching the trailer so that the chassis is parallel to the road surface is acceptable, however this may cause additional wear to the trailer brakes and those of the Towing vehicle.

Hitching too low will cause unnecessary wear to the suspension and brake components of the front axle, and reduce the braking efficiency. It can also cause additional loading to be placed on the Towing vehicle.



## **OPERATION**

### **Tail Gate**

Rear tail gate is operated hydraulically and adjusted from the tractor.

### **Hitch**

Hitch is operated hydraulically (see connection)

### **LOADING**

The BOX must not be loaded more then the capacity.

**ALWAYS LOAD BY WEIGHT NOT VOLUME**

Common weights are as follows:



<b>Material</b>	<b>Kg/M3</b>	<b>lb./ft3</b>	<b>Material</b>	<b>Kg/M3</b>	<b>lb./ft3</b>	<b>Material</b>	<b>Kg/M3</b>	<b>lb./ft3</b>
Alfalfa	256	15.98	Granite, solid	2691	167.99	Silage, fresh pasture	590	36.83
Apples	641	40.02	Granite, broken	1650	103.01	Silage, maize	690	43.08
Ashes - wet	730-890	45.57-55.56	Grain - Maize	760	47.45	Slag, solid	2114	131.97
Ashes - dry	570-650	35.58-40.57	Grain - Barley	600	37.46	Slag, broken	1762	110.00
Asphalt, crushed	721	45.01	Grain - Millet	760-800	47.44-49.94	Slag, crushed 10mm	1185	73.98
Bark, wood refuse	240	14.98	Grain- Wheat	760-800	47.44-49.94	Slag, furn, granulated	961	59.99
Barley	609	38.02	Gravel, loose, dry	1522	95.02	Slate, solid	2691	167.99
Beans, soy	721	45.01	Gravel, with sand, natural	1922	119.99	Slate, broken	1290-1450	80.53-90.52
Beets	721	45.01	Gravel, dry 10 to 50mm	1682	105.00	Slate, pulverized	1362	85.03
Bran	256	15.98	Gravel, wet 10 to 50mm	2002	124.98	Soy beans, whole	753	47.01
Brewers grain	432	26.97	Gypsum, solid	2787	173.99	Stone, crushed	1602	100.01
Brick, common red	1922	119.99	Gypsum, broken	1290-1600	80.53-99.88	Stone, common	2515	157.01
Brick, fire clay	2403	150.01	Gypsum, crushed	1602	100.01	Sugarbeet pulp, dry	208	12.99
Brick, silica	2050	127.98	Lime, quick, lump	849	53.00	Sugarbeet pupl, wet	561	35.02
Buckwheat	657	41.02	Lime, quick, fine	1201	74.98	Sugarcane	272	16.98
Chalk, solid	2499	156.01	Limestone, broken	1554	97.01	Turf	400	24.97
Chalk, lumpy	1442	90.02	Limstone, pulverized	1394	87.02	Wheat	769	48.01
Chalk, fine	1121	69.98	Linseed, whole	753	47.01	Wheat, cracked	673	42.01
Cinders, furnace	913	57.00	Malt	336	20.98			
Cinders, coal, ash	641	40.02	Manure	400	24.97			
Clay, dry excavated	1089	67.98	Mud, packed	1906	118.99			
Clay, wet excavated	1826	113.99	Mud, fluid	1730	108.00			
Clay, dry lump	1073	66.99	Oats	432	26.97			
Clay, fire	1362	85.03	Oats, rolled	304	18.98			
Clay, wet lump	1602	100.01	Peat, dry	400	24.97			
Clay, compacted	1746	109.00	Peat, moist	801	50.00			
Clover seed	769	48.01	Peat, wet	1121	69.98			
Concrete, Asphalt	2243	140.03	Potash	1281	79.97			
Concrete, Gravel	2403	150.01	Potatoes, white	769	48.01			
Corn, on the cob	721	45.01	Rice, hulled	753	47.01			
Corn, chelled	721	45.01	Rice, rough	577	36.02			
Earth, loam, dry, excavated	1249	77.97		705	44.01			
Earth, moist, excavated	1442	90.02	Rye	1922	119.99			
Earth, wet, dense	1602	100.01	Sand, wet	2082	129.98			
Earth, dense	2002	124.98	Sand, wet, packed	1602	100.01			
Earth, soft loose mud	1730	108.00	Sand, dry	1442	90.02			
Earth, packed	1522	95.02	Sand, loose	1682	105.00			
Earth, fullers, raw	673	42.01	Sand, rammed	1922	119.99			
Fertilizer, acid phosphate	961	59.99	Sand, water filled	1650	103.01			
Fish, meal	593	37.02	Sand with gravel, dry	2020	126.10			
Flaxseed, whole	721	45.01	Sand with gravel, wet	2323	145.02			
Flint - silica	1390	86.77	Sandstone, broken	1370-1450	85.52-90.52			
Flour, wheat	593	37.02	Sawdust	210	13.11			
Fullers earth - raw or burnt	570-730	35.58-45.56	Sewage, sludge	721	45.01			
Garbage, household rubbish	481	30.03	Shale, solid	2675	166.99			
Glass - broken or cullet	1290-1940	80.53-121.11	Shale, broken	1586	99.01			

## **OPERATION**

### **Unloading**



**WARNING :** Some models are equipped with steering axles, for easier turning and maneuvering. When traveling in the reverse direction the spool valve should be moved to the extend the cylinders. The trailer wheels will then stay in-line and locked.

Bring the towing machine to a stop.

Always position the towing vehicle and trailer in a straight ahead position wherever possible.

Check for overhead obstructions especially when inside a building and near power lines.

Select the towing vehicles tipping control and raise the trailer body, control the speed to suit the type of material being carried.

Slowly drive forward to ensure the loaded material is fully discharged.

Stop the towing vehicle and fully lower the body and close the tailgate before driving off.

Always lower the trailer body when leaving the machine.

Take care when tipping on gradients

Avoid tipping on unconsolidated ground

Be prepared for a change in stability as the center of mass changes as the load is ejected from the trailer . Slow flowing or sticking loads can apply an upwards force to the drawbar.

Never leave the trailer raised when disconnected from the towing vehicle



## **OPERATION**

### **Grain Chute & Front Gate**



Grain Chute



Front Gate

The grain chute and front gate are operated hydraulically from controls located on the draw bar and the rear chassis. (See hydraulic diagram on page. )

### **Rear Tow Bar**

The rear tow bar is designed for light vehicle transport only.  
Do not use when the box is loaded  
Do not use tow bar for towing large equipment (i.e. dump trailers etc)

### **Steering Axles**

Controlled Hydraulically  
Must be in locked position during higher speeds strait away use,  
Must be locked during reverse and unloading  
Caution when turning on hills

## **MAINTENANCE**



**WARNING** Pressurized fluid can be extremely dangerous. Always relief hydraulic pressure before performing maintenance.

Always ensure that the machine has been properly greased

Grease Points: A - Cylinder Ball Joint (1x)

B - Cradle Bushings (Right & Left Side 2x)

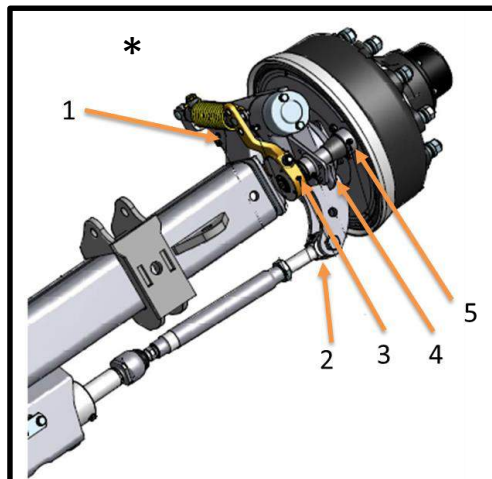
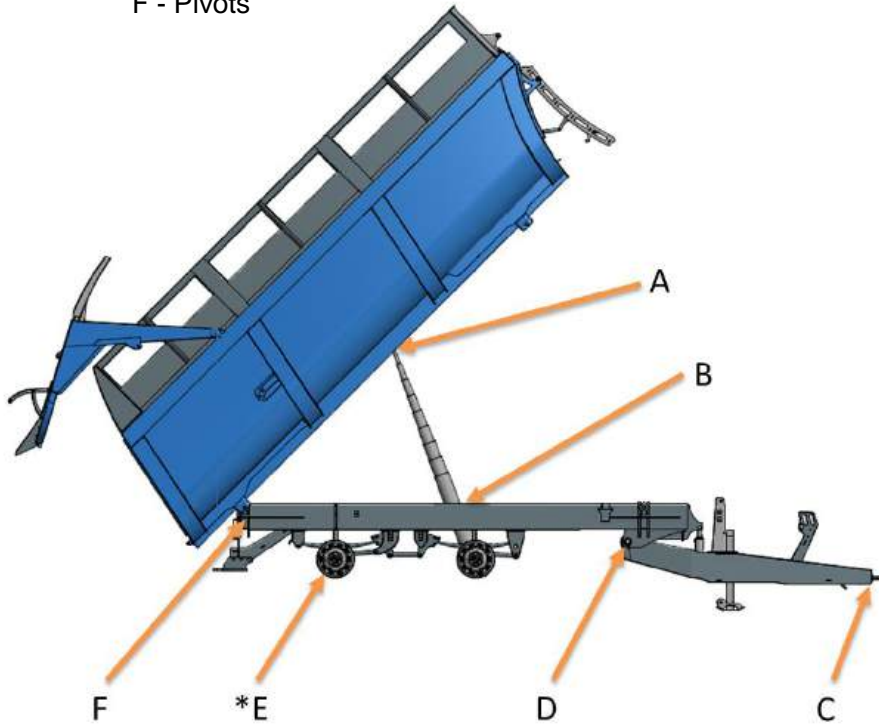
C - Front Hitch (1X)

D - Tongue Pivot Point (Right & Left Side 2x)

E - Straight Axle (Right and Left Side 4x)

\* - Steering Axle (Right & Left Side 10x) Steering Axle See Figure \_\_\_\_

F - Pivots



14DBP-001

## Maintenance supports



The supports are designed to be used to keep the body raised if service is required beneath the Tub.

Do not use safety bracket when box is loaded. Only use supports when box is empty.

Warning: A raised tub could suddenly drop and cause serious injury. Always use the supports when working beneath the raised tub.

Installing the supports into the pockets while slowly lowering the tub

Removing the supports raise the tube until it is clear of the pockets. Pivot and pin in storage location.

Warning: Never raise the tub in or around power cables or aerial obstructions



## Suspensions & Brakes



This section contains information that must be followed to ensure the correct functioning of the axles and wheel brakes.

### TIGHTENING WHEEL NUTS

Wheel lugs and nuts should be inspected: Before Use, After Refitting, & Every 6 Months

On wheels that have been replaced or refitted, the nuts can loosen after short periods of operation. It is therefore necessary to check the tightness of the nuts after the first loaded run, after refitting and again after approximately 1000 km (620 Miles) Every 6 months or 25,000km (15,500miles).

To tighten the nuts, use a suitable wheel brace, and tighten them progressively and diagonally. Check the torque using a Torque Wrench, **DO NOT OVERTIGHTEN.**

**Torque setting should be 575Nm (424lbs/ft)**

### CHECKING THE HUBCAPS - Every 6 Months

Missing or damaged hubcaps must be replaced immediately to avoid dirt penetrating into the hub which might result in damage to the bearings.

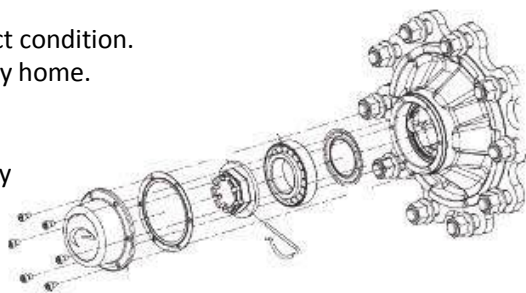
Check that the hub caps **(1)** are in place and in perfect condition.

For press fit hubcaps, check visually that they are fully home.

For hubcaps attached using screws,

fit a new gasket if necessary when the

hubcap is removed and retighten the screws regularly



### CHECKING THE WHEEL BEARING PLAY

#### Every 6 Months

Wheel bearings are subject to wear: their lifetime depends on the operating conditions, the load, the speed, the adjustment and lubrication, etc.

To check the wheel bearings:

- Use a suitable Jack and lift the wheel off the ground.
- Turn the wheel in both directions slowly to check for any rough points or friction.
- Turn the wheel at high speed to check for unusual noises, such as grating or knocking.

**If the bearing is damaged or worn, the bearing and seals should all be replaced**

### Adjusting the wheel bearings

Lift the axle until the wheel is no longer resting on the ground.

Large wheels should be removed so that the play is easier to feel and to make it easier to adjust the bearings. Remove the hubcap.

- Remove the cotter pin or hair-pin clip from the spindle.
- Tighten the castle nut (right-hand thread) to take up the internal play (the conical roller bearings should then be firmly held between the hub seatings, the pressure ring, spindle and castle nut). The rotation of the hub or wheel feels to be slightly stiff.
- Slacken the castle nut until there is no longer any friction between the castle nut and the outer bearing and the hole for the pin is aligned with a notch in the castle nut.
- Tap the hub gently using a mallet to shake down the assembly.
- Check that the hub rotates more freely.
- Always err on the side of too free rather than too tight.
- When the hub has been adjusted, fit a new split cotter pin or re-fit the hair-pin clip.
- Refit the hubcap.
- When the wheel has been refitted, turn it slightly. It should come to rest with a slow rocking movement due to the imbalance.

## Suspensions & Brakes



### LUBRICATING THE WHEEL BEARINGS

#### Every 2 Years

In normal operating conditions, lubricate the bearings every 2 years or every 50,000 km and when the brake shoes are replaced.

In harsh conditions the bearings should be lubricated more frequently.

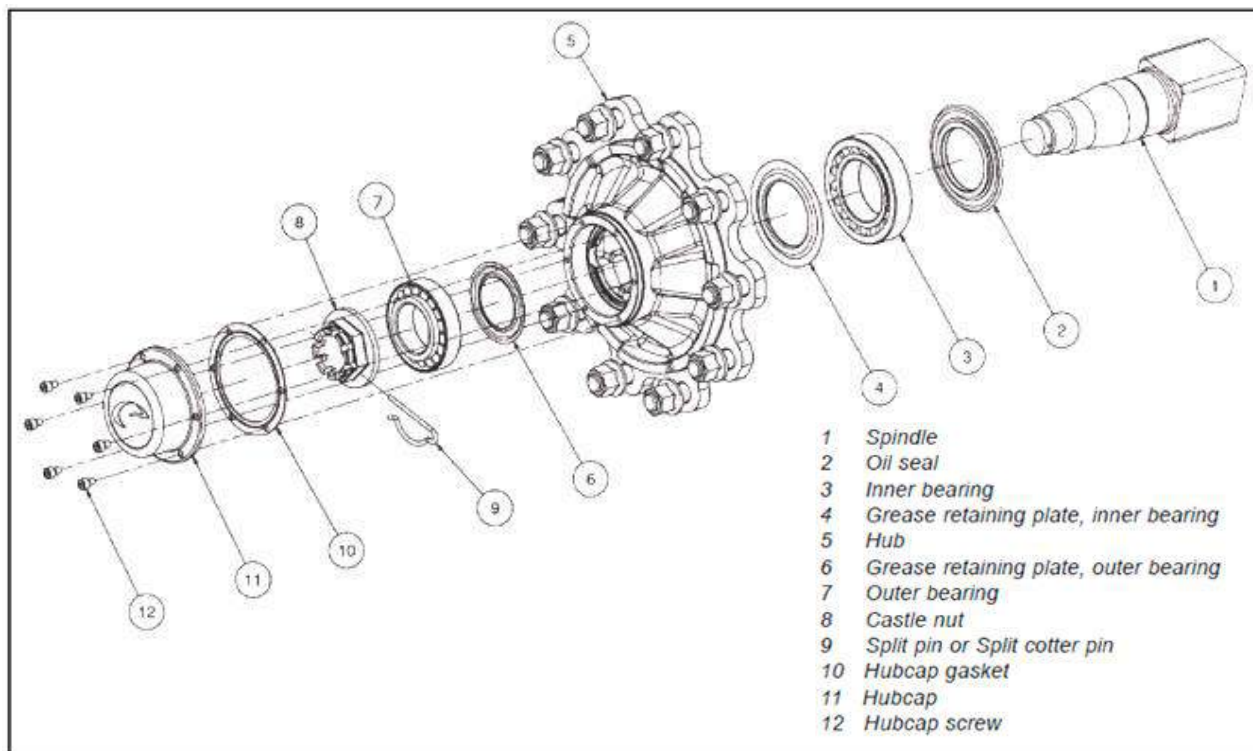
Use a general purpose EP grease formulated for lubricating plain, ball and roller bearings, subject to heavy loads and impacts typical of HGV, agricultural vehicle hubs, etc.

**All parts (hub, spindle, bearings, seals, castle nuts, hubcap, cotter pin) should be degreased and Perfectly clean before reassembly.**

The work should be carried out in a clean environment with appropriate tools as the slightest bit of dirt can

Damage the bearings or even the spindle.

When carrying out maintenance on the bearings, check the brake linings, drum and return springs, clean the brakes, clean and lubricate the brake cam shaft.



## BRAKE MAINTENANCE & ADJUSTMENT

### Initial checks

The brakes should be tested before using for the first time and after the first laden journey: Check the actuator and return spring mountings, check the actuator stroke and return travel and check that the road and parking brakes operate and release correctly.

Tighten the screws and nuts (covers, fulcrum, etc), check the cotter pins, pins, circlips, etc. Check for hydraulic fluid and air leaks.

### Every 3 Months

## Suspensions & Brakes



### Checking Clearance and wear

Check and test the brakes before intensive use and every 3 months:

Check the brake wear and the clearance between the brake linings and the drum visually.

It is probable that the linings are worn when the actuator travel has increased significantly.

Check the thickness of the brake linings

**The brake shoes should be replaced as soon as the minimum lining thickness is reached.**

Check that the brakes are clean and clean them if necessary

### ADJUSTING BRAKES (WITH FIXED LEVERS)

#### Every 3 Months

Take up the slack when the actuator stroke reaches about two thirds of the maximum travel.

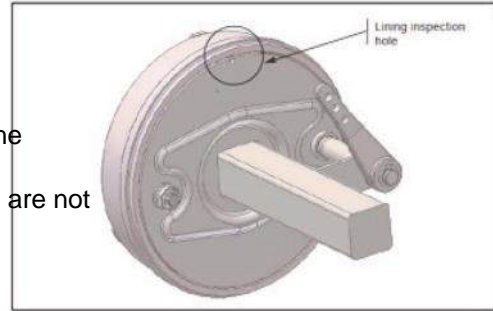
To adjust, turn the lever by one or more splines, ensuring that the brakes are not touching when released

(to prevent overheating the brakes).

*Never change the linkage position for the actuator on the lever. Always use the original hole*

For braking systems which use a yoke, the yoke must remain parallel with the axle especially when the brakes are fully applied

This means that the stroke of the levers on the brakes at each side must be identical. Otherwise, the brake slack must be adjusted.



### ADJUSTING BRAKES (WITH ADJUSTABLE LEVERS)

#### Every 3 Months

Take up the slack when the actuator stroke reaches about two thirds of the maximum stroke

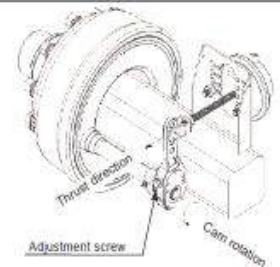
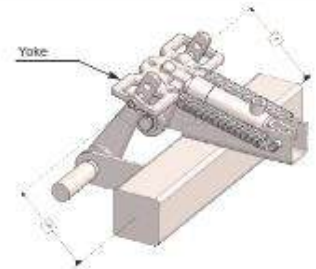
*Never change the linkage position for the actuator on the lever. Always use the original hole*

To take up the slack, turn the adjustment screw on the lever to adjust the relative position of the cam and the lever

**NB. The actuator brakes by pushing the lever to turn it in a particular direction. The screw must be adjusted so that the cam moves in this direction to take up the slack.**

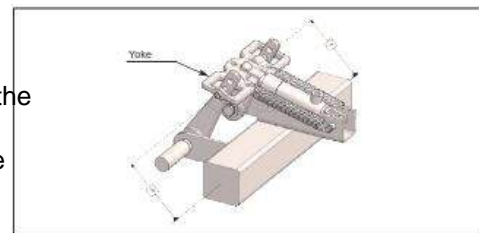
**The direction in which the screw must be turned depends on the configuration of the axle.**

Ensure that the brakes are not touching when released (to prevent overheating the brakes).



For braking systems which use a yoke, the yoke must remain parallel with the axle especially when the brakes are fully applied

This means that the stroke of the levers on the brakes at each side must be identical. Otherwise, the brake slack must be adjusted.





### ADJUSTMENTS FOR STEERING AXLES

#### Every 3 Months

Steering axles should be maintained in the same way as standard axles. The following additional maintenance is required for steering axles

Lubricate the kingpins.(1)

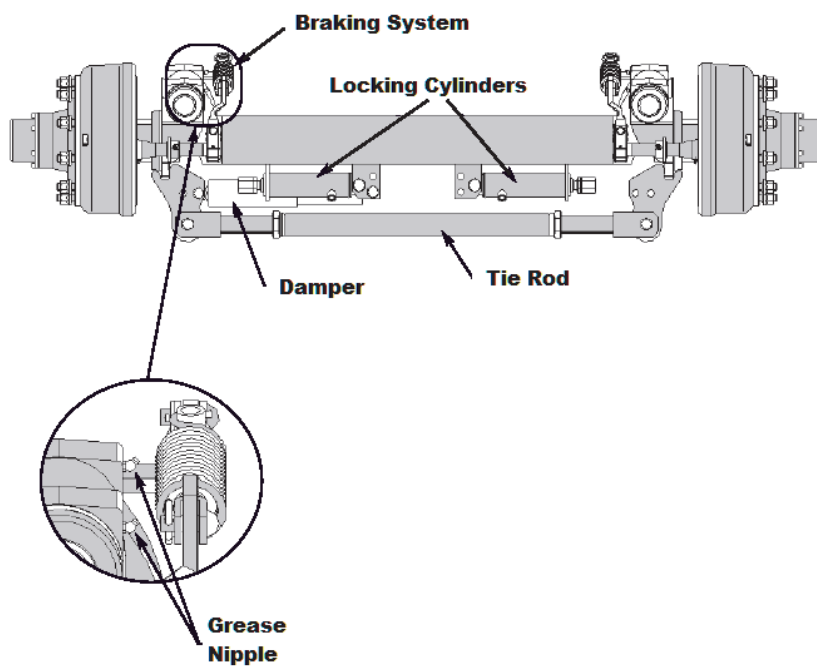
Tighten all screws and nuts and parts mounted to the axle

Tighten the blind nut and lock nut on the locking cylinders (2)

Tighten the lock nuts (3) at the end of the adjustable tie rod or the clamping screw (4) for the flexible bushing (For fixed Tie rods) depending on the model.

Check the flexible bushings on the tie rod and damper and change them if necessary.

Check that the tie rod has not been accidentally bent as this adversely affects the steer axle, in particular the wheel alignment.



**Parts Numbers and Break Downs**

**DECALS**

The safety decals are placed on the mixer at the time of manufacture. It is important that all the decals are kept clean and legible at all times. If any decals have become illegible or have been removed, replacements are available through your local dealer, or from PENTA TMR Incorporated.



PT # 774600



PT # 774601



PT # 774602



PT # 774603



PT # 774604



PT # 774605



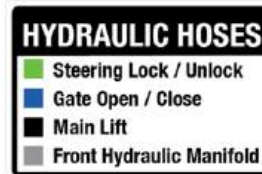
PT # 774606



PT # 774607



PT # 774608



PT # 774609

**DB 30**

PT # 774610

**DB 40**

PT # 774611

**DB 50**

PT # 774612

**DB 70**

PT # 774614



PT # 774615



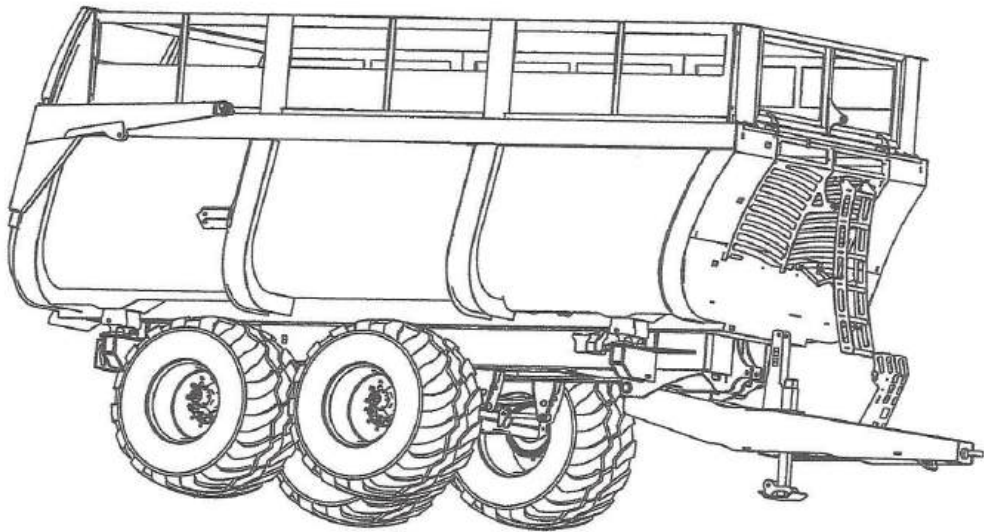
PT # 490101



PT # 490005

Diagram

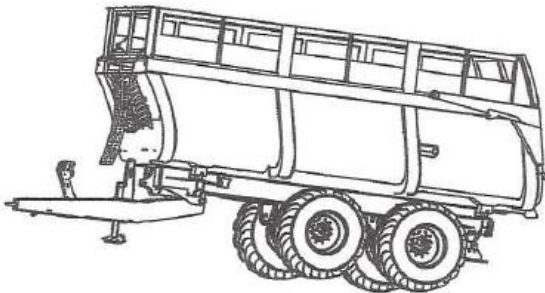
Mechanical Breakdowns



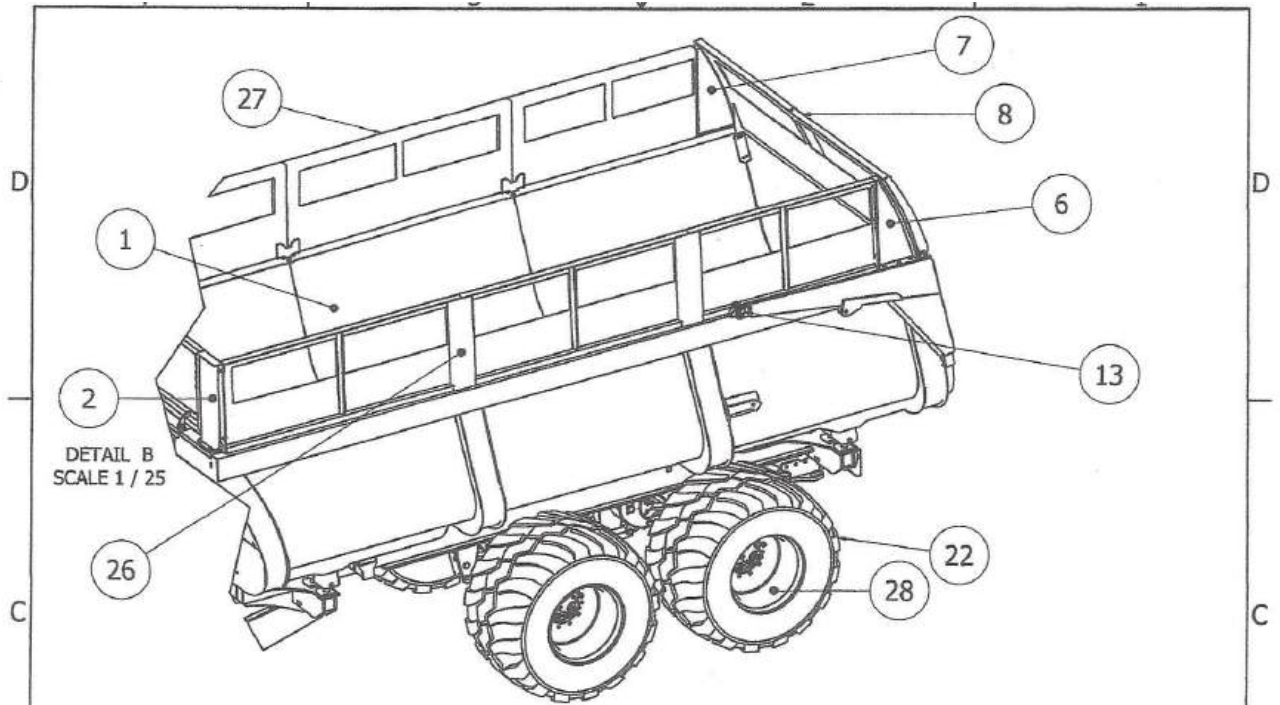
# PENTA DB-40

DRAWN	Will Atwood	24/07/2014		
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MFG			SIZE	DWG NO
APPROVED			C	710004 PART LIST
			SCALE	REV
			SHEET 1 OF 5	

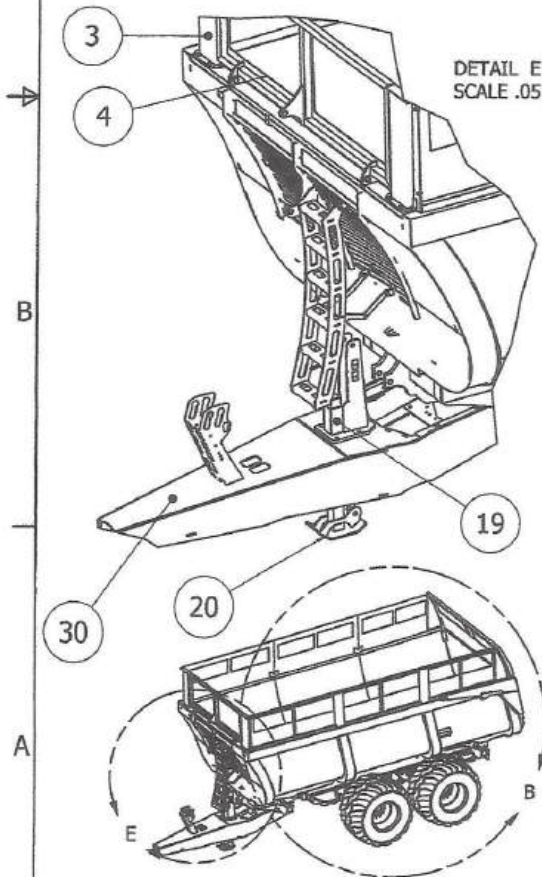
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ITEM	QTY	PART NUMBE	DESCRIPTION
1	1	720060	DB40 TUB
2	1	720012	FRONT EXTENSION, LEFT
3	1	720011	FRONT EXTENSION, RIGHT
4	1	720013	FRONT GATE
5	1	720006	TAILGATE
6	1	720009	REAR EXTENSION, LEFT
7	1	720010	REAR EXTENSION, RIGHT
8	1	720014	REAR EXTENSION
9	1	720025	CYLINDER MOUNT
10	1	720005	LADDER
11	2	732023	LADDER LOCKING LINKAGE
12	2	732022	LADDER LINKAGE
13	2	739610	TAILGATE PIN
14	1	720059	LOCKING GRAIN DOOR ASSEMBLY
15	1	720061-2	DB40 FRAME
16	1	720052	REAR HITCH MOUNT
17	1	720053	REAR HITCH
18	2	739603	2.5"OD X 8.5" LONG
19	1	720003	JACK MOUNT
20	1	720004	JACK
21	2	720024	FRONT STAND
22	4	743010	BKT 800 / 45 R 26.5
23	2	720001	MAIN CYLINDER MOUNT
24	1	731031 L	LIGHT MOUNT
25	1	731023	GRAIN DOOR CHUTE
26	1	720062	DB40 SIDE EXTENSION, LEFT
27	1	720063	DB40 SIDE EXTENSION, LEFT
28	4	420006	RIM 26.5 X 28
29	1	733009-1	LADDER LATCH
30	1	720042-2	FRONT TONGUE, EXTENDED
31	1	731079	MANIFOLD MOUNT
32	1	774024	Balancer Type 02- A50200001



DRAWN Will Attwood	24/07/2014		
CHECKED		TITLE	
QA		DB40 Parts list	
MFG		SIZE	DWG NO
APPROVED		C	710004 PART LIST
		SCALE	REV
			SHEET 2 OF 5



DETAIL B  
SCALE 1 / 25

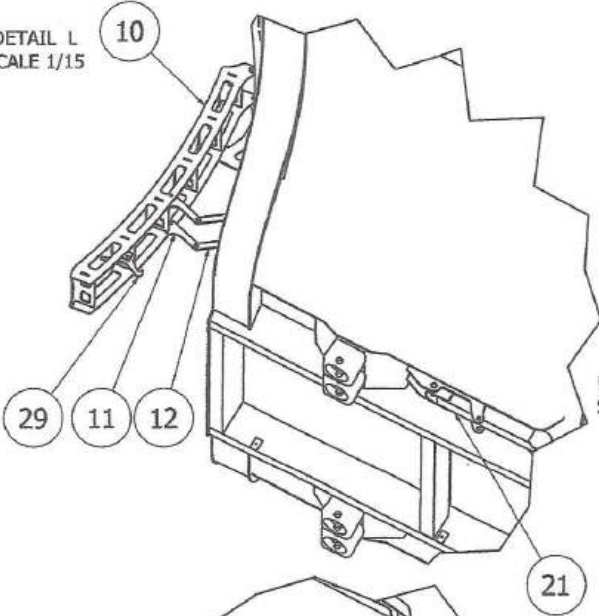


DETAIL E  
SCALE .05

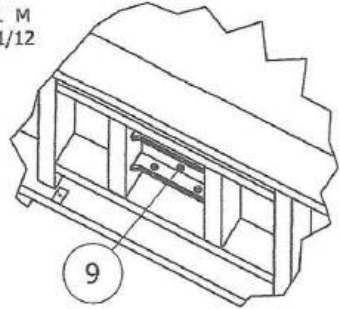
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	720060	DB40 TUB
2	1	720012	FRONT EXTENSION, LEFT
3	1	720011	FRONT EXTENSION, RIGHT
4	1	720013	FRONT GATE
6	1	720009	REAR EXTENSION, LEFT
7	1	720010	REAR EXTENSION, RIGHT
8	1	720014	REAR EXTENSION
13	2	739610	TAILGATE PIN
19	1	720003	JACK MOUNT
20	1	720004	JACK
22	4	743010	BKT 800 / 45 R 26.5
26	1	720062	DB40 SIDE EXTENSION, LEFT
27	1	720063	DB40 SIDE EXTENSION, LEFT
28	4	420006	RIM 26.5 X 28
30	1	720042-2	FRONT TONGUE, EXTENDED

DRAWN Will Attwood		24/07/2014	
CHECKED		TITLE	
QA		DB40 Parts list	
MFG		SIZE C	
APPROVED		DWG NO 710004 PART LIST	
		SCALE	
		REV	
		SHEET 3 OF 5	

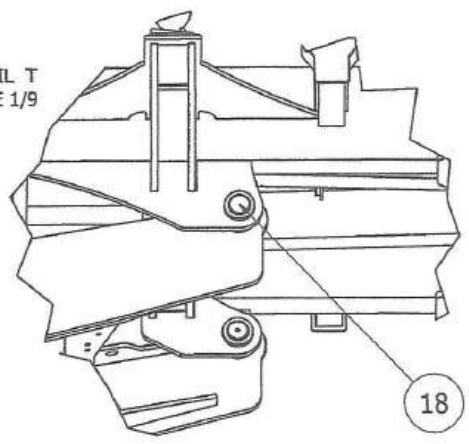
DETAIL L  
SCALE 1/15



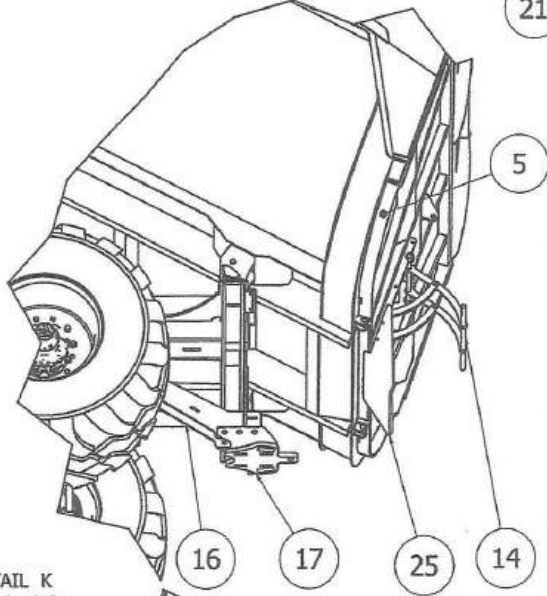
DETAIL M  
SCALE 1/12



DETAIL T  
SCALE 1/9

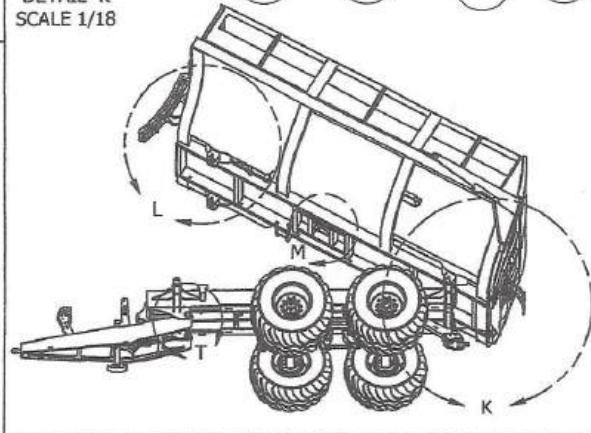


DETAIL K  
SCALE 1/18

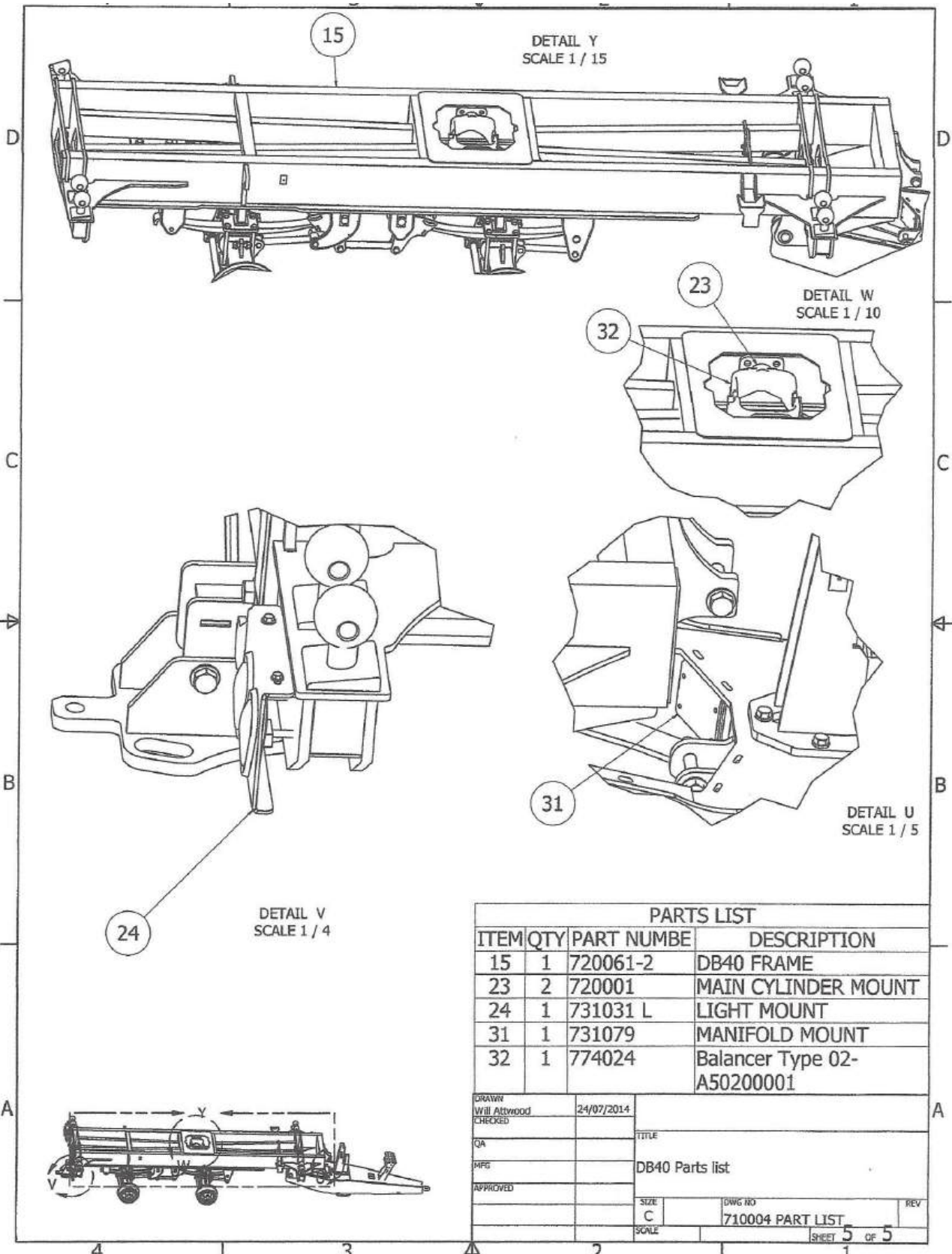


PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
5	1	720006	TAILGATE
9	1	720025	CYLINDER MOUNT
10	1	720005	LADDER
11	2	732023	LADDER LOCKING LINKAGE
12	2	732022	LADDER LINKAGE
14	1	720059	LOCKING GRAIN DOOR ASSEMBLY
16	1	720052	REAR HITCH MOUNT
17	1	720053	REAR HITCH
18	2	739603	2.5"OD X 8.5" LONG
21	2	720024	FRONT STAND
25	1	731023	GRAIN DOOR CHUTE
29	1	733009-1	LADDER LATCH



DRAWN Will Attwood		24/07/2014	
CHECKED		TITLE	
QA		DB40 Parts list	
MFG		SIZE C	DWG NO 710004 PART LIST
APPROVED		SCALE	REV
		SHEET 4 OF 5	

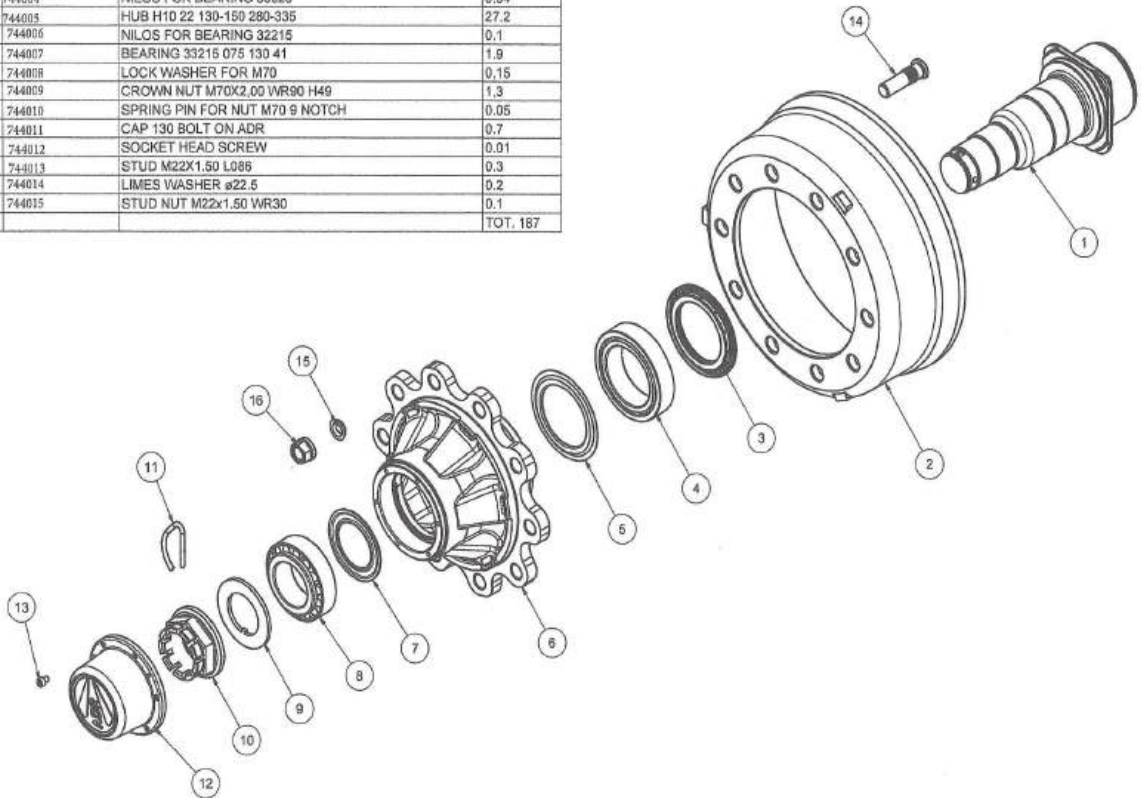


**PARTS LIST**

ITEM	QTY	PART NUMBE	DESCRIPTION
15	1	720061-2	DB40 FRAME
23	2	720001	MAIN CYLINDER MOUNT
24	1	731031 L	LIGHT MOUNT
31	1	731079	MANIFOLD MOUNT
32	1	774024	Balancer Type 02-A50200001

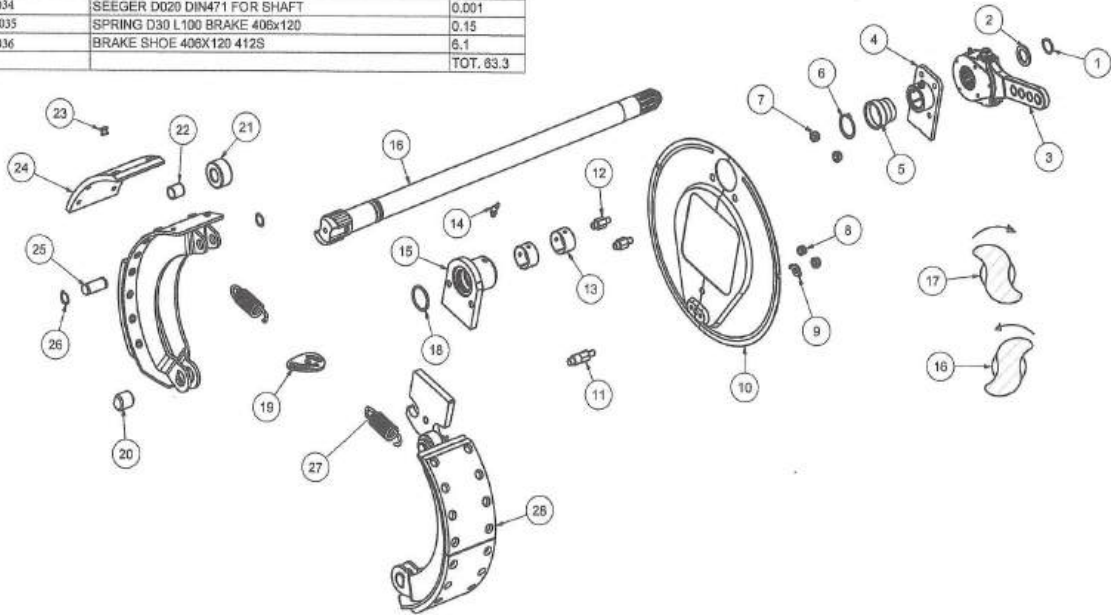
DRAWN Will Attwood		24/07/2014	
CHECKED		TITLE	
QA		DB40 Parts list	
MFG		SIZE	DNWG NO
APPROVED		C	710004 PART LIST
		SCALE	REV

Parts List				
ITEM	QTY	PART NUMBER	DESCRIPTION	WEIGHT Kg
1	2	744000	STUBAXLE BODY S150 FOR FF115 33215 - 33020 LG 0029	22.9
2	2	744001	DRUM 406X120 H10 22 335-280	31.2
3	2	744002	GREASE SEAL INDUSTRIAL 102/150	0.5
4	2	744003	BEARING 33020 100 150 39	2.1
5	2	744004	NILOS FOR BEARING 33020	0.04
6	2	744005	HUB H10 22 130-150 280-335	27.2
7	2	744006	NILOS FOR BEARING 32215	0.1
8	2	744007	BEARING 33215 075 130 41	1.9
9	2	744008	LOCK WASHER FOR M70	0.15
10	2	744009	CROWN NUT M70X2.00 WR90 H49	1.3
11	2	744010	SPRING PIN FOR NUT M70 9 NOTCH	0.05
12	2	744011	CAP 130 BOLT ON ADR	0.7
13	12	744012	SOCKET HEAD SCREW	0.01
13	20	744013	STUD M22X1.50 L086	0.3
15	20	744014	LIMES WASHER ø22.5	0.2
16	20	744015	STUD NUT M22x1.50 WR30	0.1
TOT.				187



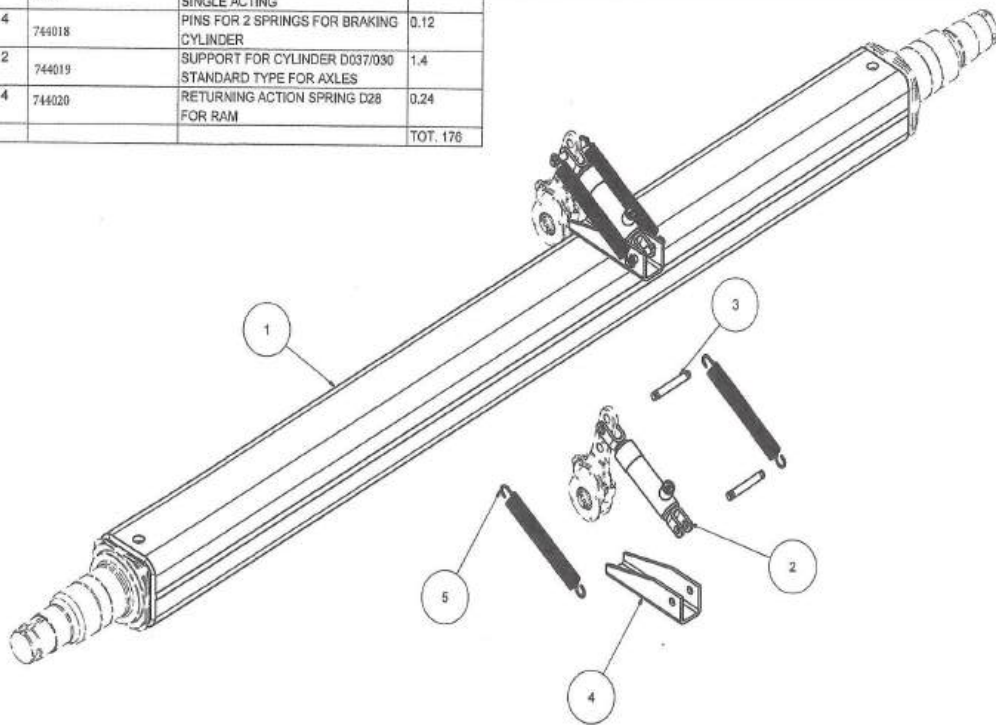
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Parts List				Parts List					
ITEM	QTY	PART NUMBER	DESCRIPTION	WEIGHT Kg	ITEM	QTY	PART NUMBER	DESCRIPTION	WEIGHT Kg
13	4	744021	BUSH D42M44.5 L026	0.032	1	2	744037	SEEGER D025 DIN471 FOR SHAFT	0.002
14	2	744022	GREASE NIPPLE 46" M08X1,25	0.008	2	2	744038	WASHER M26 D026 D036 TK 4.0 UNI 1749 ZINC PLATED	0.02
15	2	744023	SPYDER 412S S150 ALIGNED	2.75	3	2	744039	SLACK ADJUSTER SAE 1,5" Z=10	2.3
16	1	744024	CAM SHAFT D40 B=800 S LEFT SAE 1,5" Z=10 412S	8.8	4	2	744040	SUPPORT D=38 L=062 FOR CAM SHAFT	0.7
17	1	744025	CAM SHAFT D40 B=800 S RIGHT SAE 1,5" Z=10 412S	8.8	5	2	744041	RUBBER CAP FOR CAM SHAFT Ø40	0.04
18	2	744026	OR 146-353 D041,23 WIRE 3,53	0.002	6	2	744042	SEEGER D042 DIN471 FOR SHAFT	0.007
19	2	744027	SPRING EXTENDER 412S 414S	0,08	7	6	744043	NUT M10X1,50 DIN 985	0.013
20	4	744028	PIN FOR BRAKE SHOE 412S 414S	0.15	8	2	744044	RUBBER FAIRLEAD D15	0.004
21	4	744029	ROLL FOR BRAKE SHOE 412S 414S	0.31	9	2	744045	LOCK WASHER Ø10	0.008
22	4	744030	BUSH MU-P 202325 FOR ROLL FOR BRAKE SHOES	0.02	10	2	744046	PROTECTION PLATE 412S S150	1.266
23	84	744031	RIVET 8X15 FOR LINING	0.004	11	2	7474047	SPACER M12X1,75 M10X1,50 L062 LOWER SPYDER 412S	0.085
24	8	744032	LINING 406X120 BRAKE 412S	0.53	12	4	744048	SPACER M12X1,75 M10X1,50 L043 UPPER SPYDER 412S	0.055
25	4	744033	PIN BRAKE D020 L047	0.12					
26	8	744034	SEEGER D020 DIN471 FOR SHAFT	0.001					
27	4	744035	SPRING D30 L100 BRAKE 406x120	0.15					
28	4	744036	BRAKE SHOE 406X120 412S	6.1					
			TOT. 83.3						

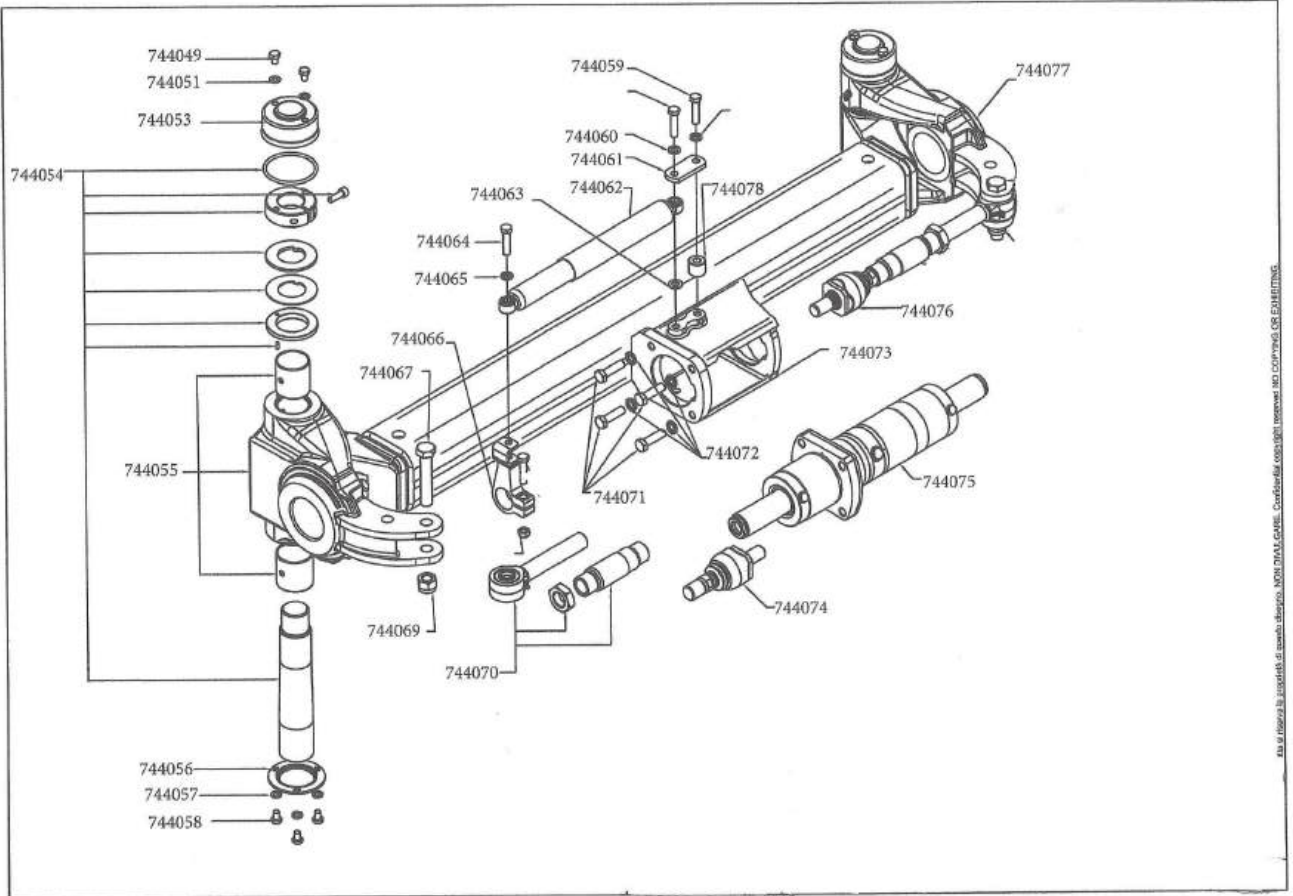


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Parts List				
ITEM	QTY	PART NUMBER	DESCRIPTION	WEIGHT Kg
1	1	744016	BODY AXLE S150X14 TRACK 2400	165,4
2	2	744017	CYLINDER D037/030 S110 BRAKING SINGLE ACTING	1,73
3	4	744018	PINS FOR 2 SPRINGS FOR BRAKING CYLINDER	0,12
4	2	744019	SUPPORT FOR CYLINDER D037/030 STANDARD TYPE FOR AXLES	1,4
5	4	744020	RETURNING ACTION SPRING D28 FOR RAM	0,24
				TOT. 176



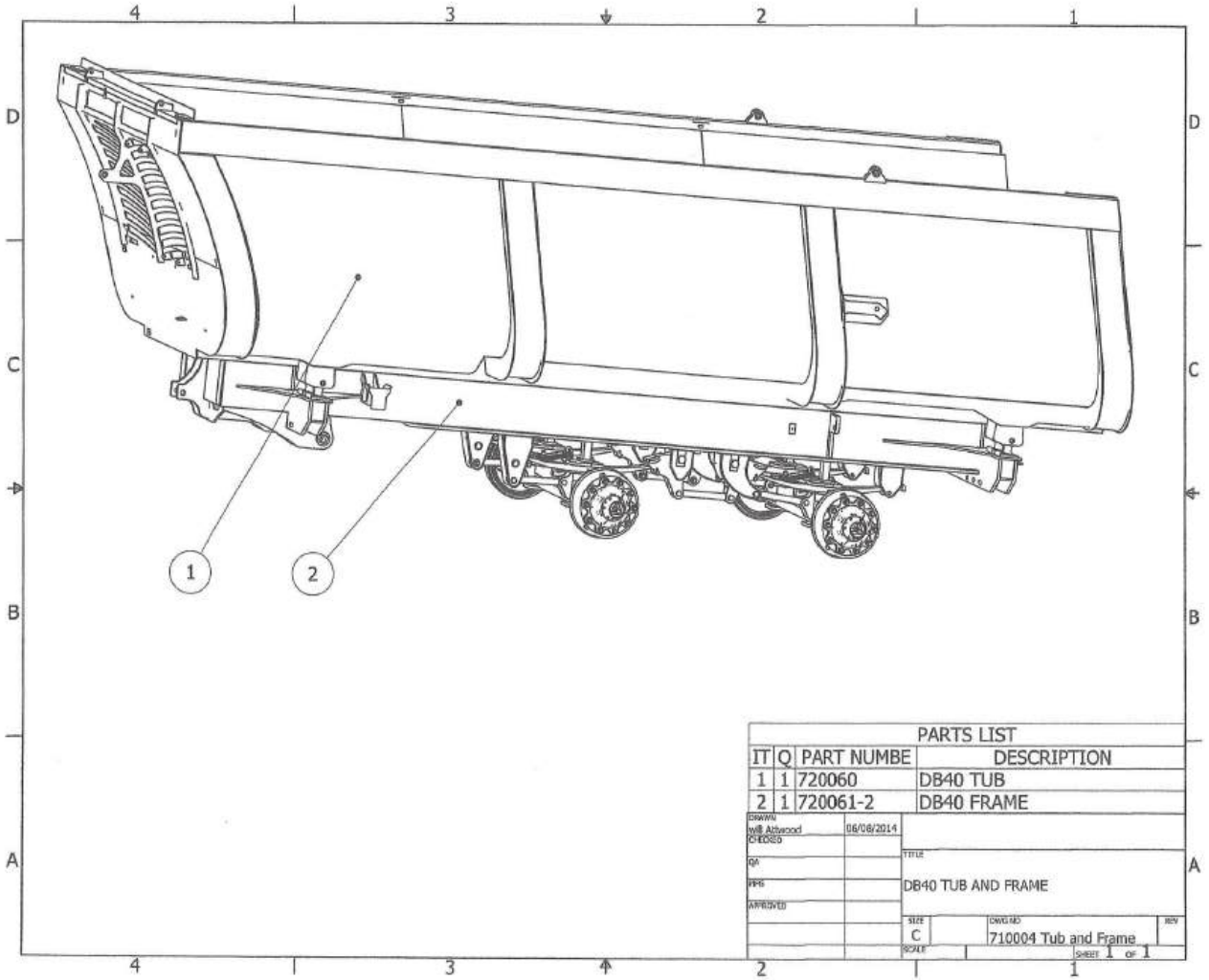
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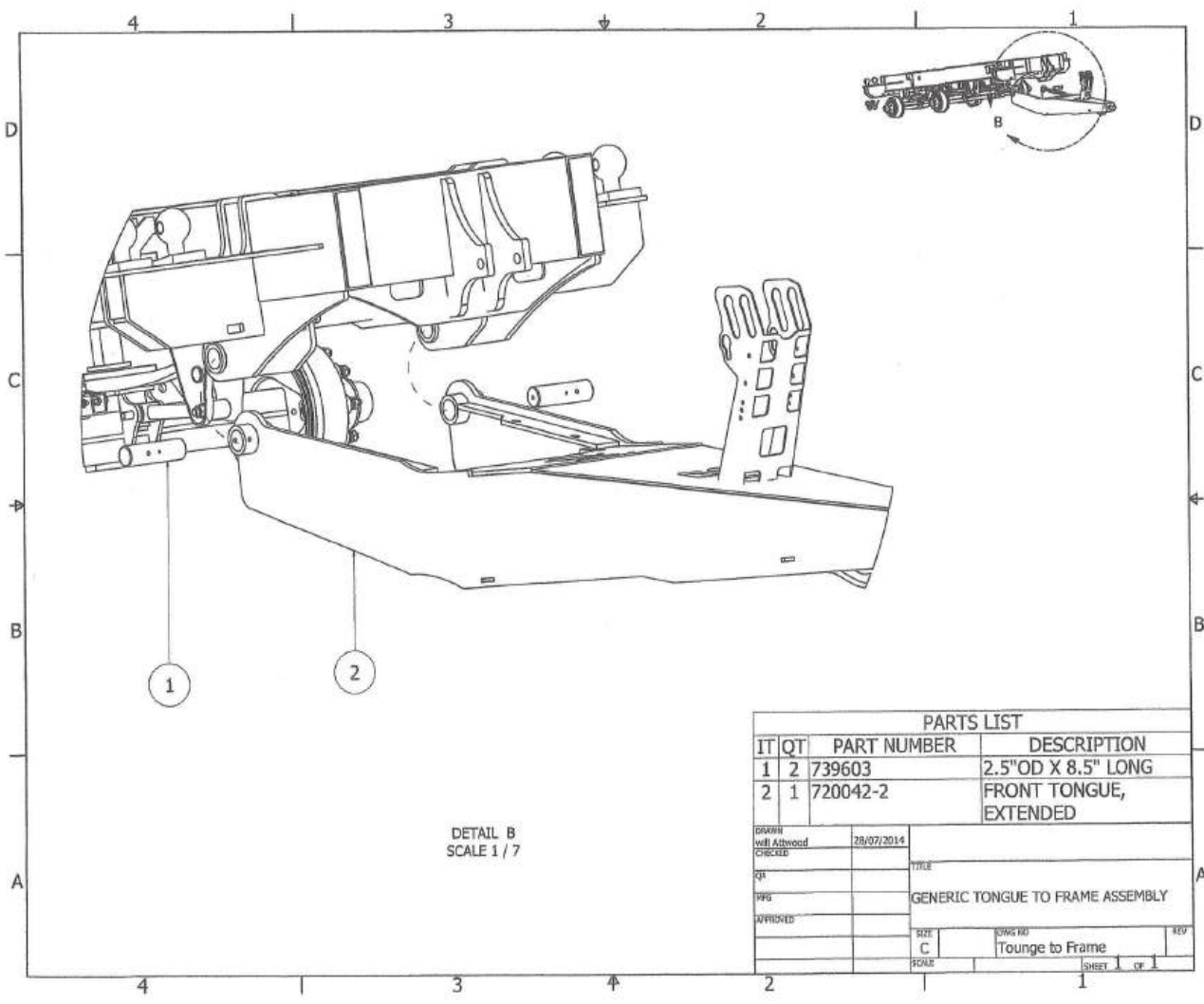
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PARTS LIST				PARTS LIST			
IT	QT	PART NU	DESCRIPTION	IT	QT	PART NU	DESCRIPTION
1	1	720060	DB40 TUB	20	1	720004	JACK
2	1	720012	FRONT EXTENSION, LEFT	21	2	720024	FRONT STAND
3	1	720011	FRONT EXTENSION, RIGHT	22	4	743010	BKT 800 / 45 R 26.5
4	1	720013	FRONT GATE	23	2	720001	MAIN CYLINDER MOUNT
5	1	720006	TAILGATE	24	1	731031 L	LIGHT MOUNT
6	1	720009	REAR EXTENSION, LEFT	25	1	731031	LIGHT MOUNT
7	1	720010	REAR EXTENSION, RIGHT	26	1	731023	GRAIN DOOR CHUTE
8	1	720014	REAR EXTENSION	27	1	720062	DB40 SIDE EXTENSION, LEFT
9	1	720025	CYLINDER MOUNT				
10	1	720005	LADDER	28	1	720063	DB40 SIDE EXTENSION, LEFT
11	2	732023	LADDER LOCKING LINKAGE				
12	2	732022	LADDER LINKAGE	29	4	420006	RIM 26.5 X 28
13	2	739610	TAILGATE PIN	30	1	733009-1	LADDER LATCH
14	1	720059	LOCKING GRAIN DOOR ASSEMBLY	31	1	720042-2	FRONT TONGUE, EXTENDED
15	1	720061-2	DB40 FRAME	32	1	731079	MANIFOLD MOUNT
16	1	720052	REAR HITCH MOUNT	33	1	774074	TONGUE CYLINDER
17	1	720053	REAR HITCH	34	2	774077	AXLE CYLINDER
18	2	739603	2.5"OD X 8.5" LONG	35	2	774618	RED LIGHT
19	1	720003	JACK MOUNT	36	2	774617	YELLOW LIGHT
				37	4	490169	RUBBER GROMET
				38	1	774043	WIRING HARNESS FOR DB40

DESIGN CHECKED	05/08/2014	TITLE
QA		FULL DB-40 SUB-ASSEMBLY PARTS LIST
APPROVED		
SIZE	C	DATE
SCALE		710004 Parts list
		SHEET 1 OF 1

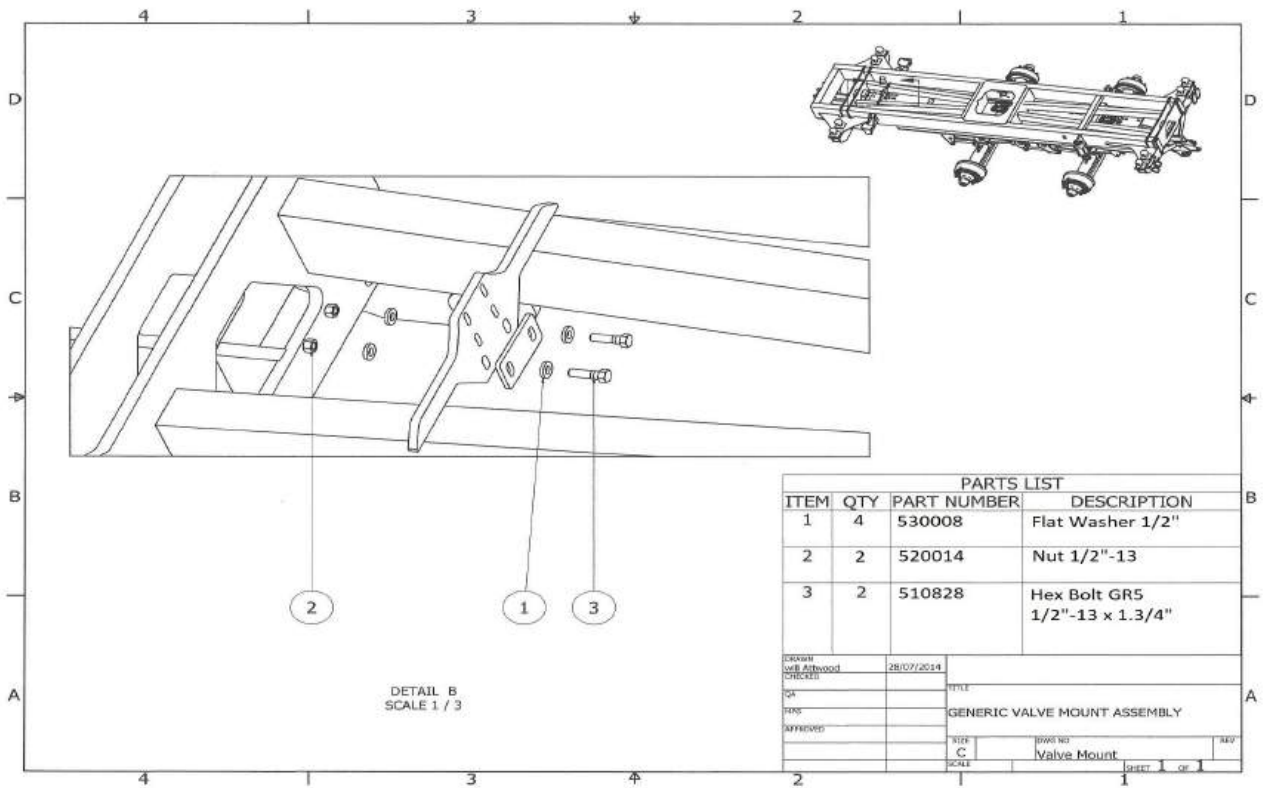


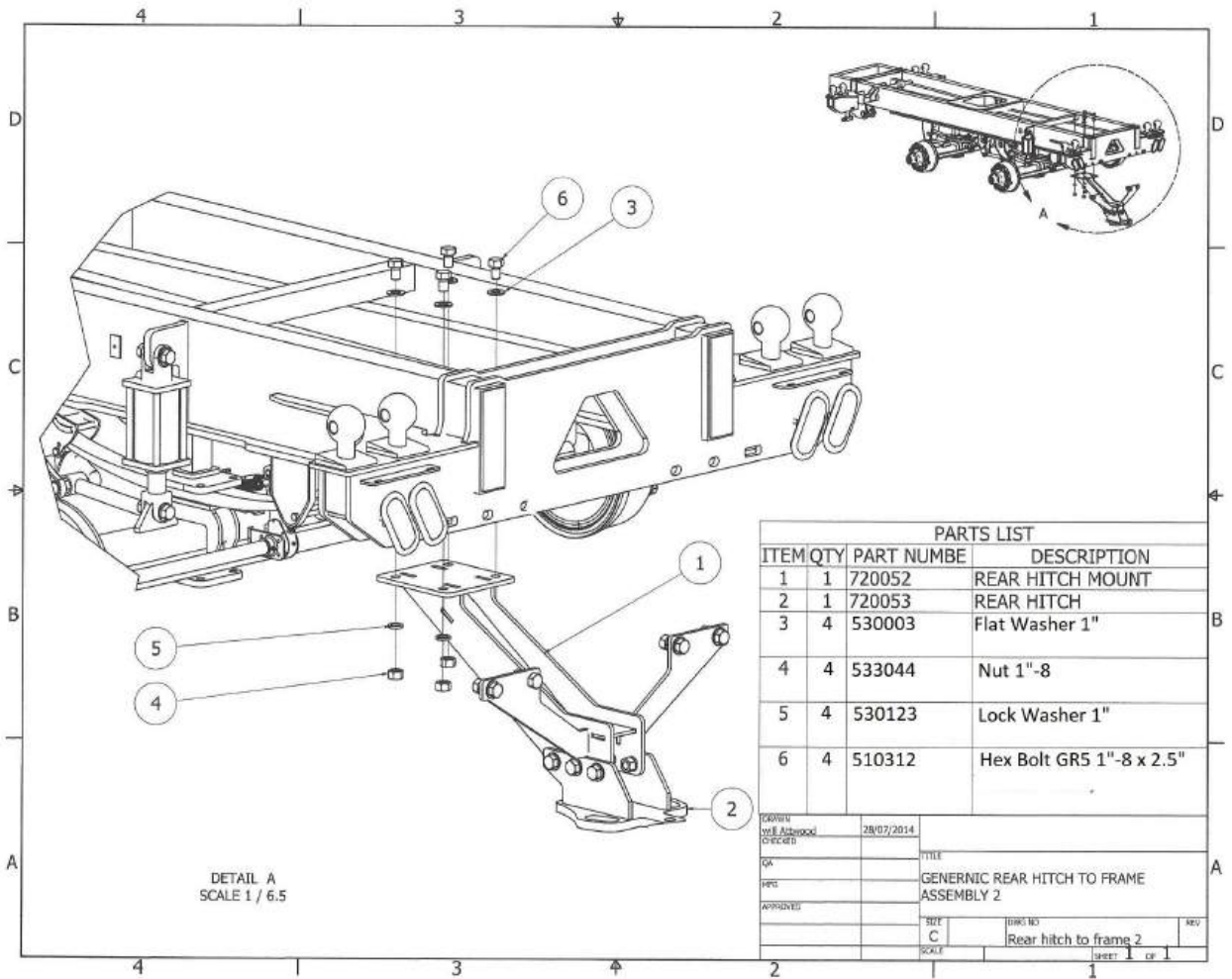
PARTS LIST			
IT	Q	PART NUMBE	DESCRIPTION
1	1	720060	DB40 TUB
2	1	720061-2	DB40 FRAME
DRAWN		06/08/2014	
BY: Anderson		CHECKED	
QA		TITLE	
PPS		DB40 TUB AND FRAME	
APPROVED		SCALE	
		SIZE	C
		DATE	710004 Tub and Frame
		SHEET 1 of 1	



DETAIL B  
SCALE 1 / 7

PARTS LIST			
IT	QT	PART NUMBER	DESCRIPTION
1	2	739603	2.5"OD X 8.5" LONG
2	1	720042-2	FRONT TONGUE, EXTENDED
DRAWN wll Ashwood		28/07/2014	
CHECKED			TITLE
QA			GENERIC TONGUE TO FRAME ASSEMBLY
VFG			
APPROVED			
		SIZE C	LONG WID Tounge to Frame
		ROLE	REV
			SHEET 1 OF 1

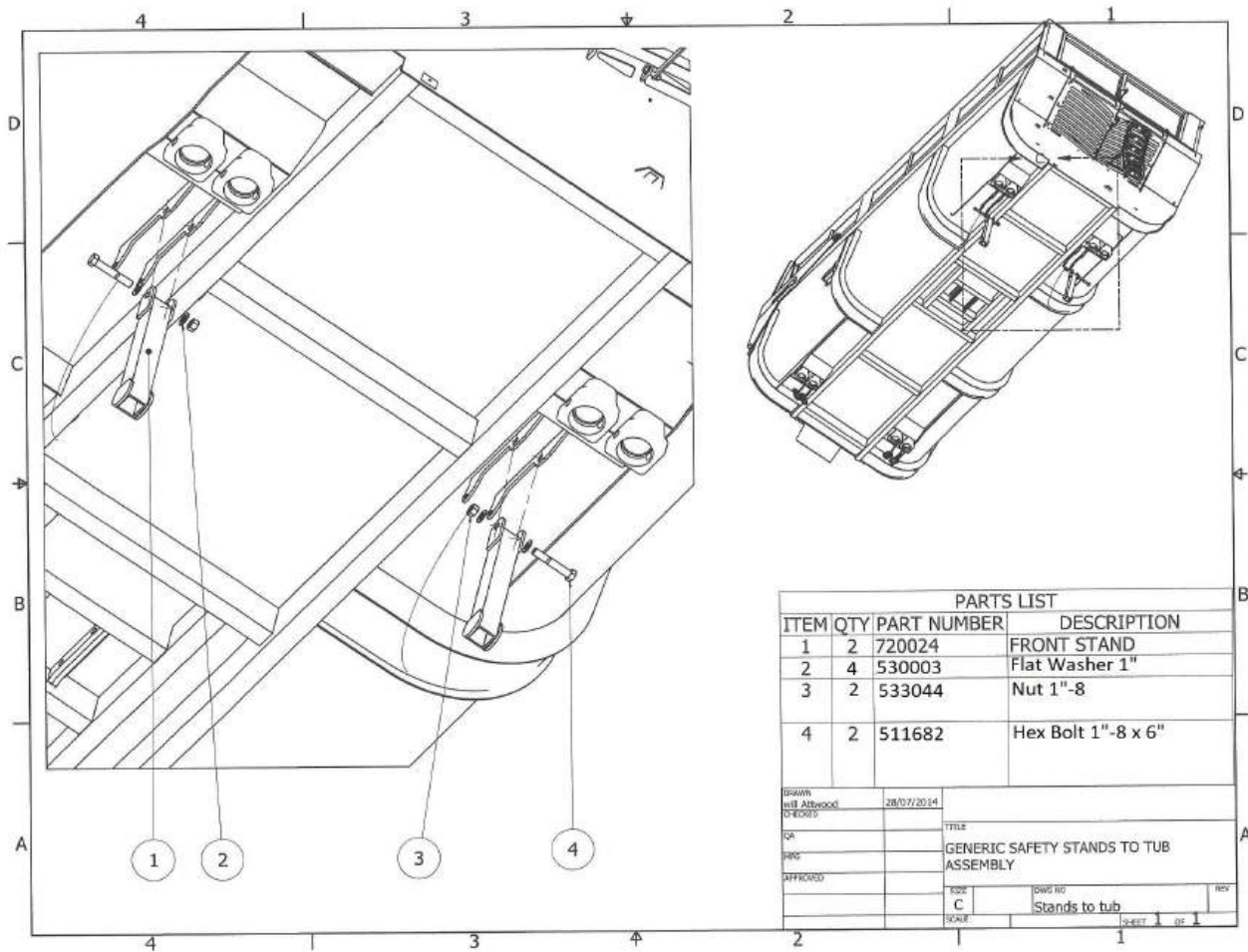




DETAIL A  
SCALE 1 / 6.5

PARTS LIST			
ITEM	QTY	PART NUMBE	DESCRIPTION
1	1	720052	REAR HITCH MOUNT
2	1	720053	REAR HITCH
3	4	530003	Flat Washer 1"
4	4	533044	Nut 1"-8
5	4	530123	Lock Washer 1"
6	4	510312	Hex Bolt GR5 1"-8 x 2.5"

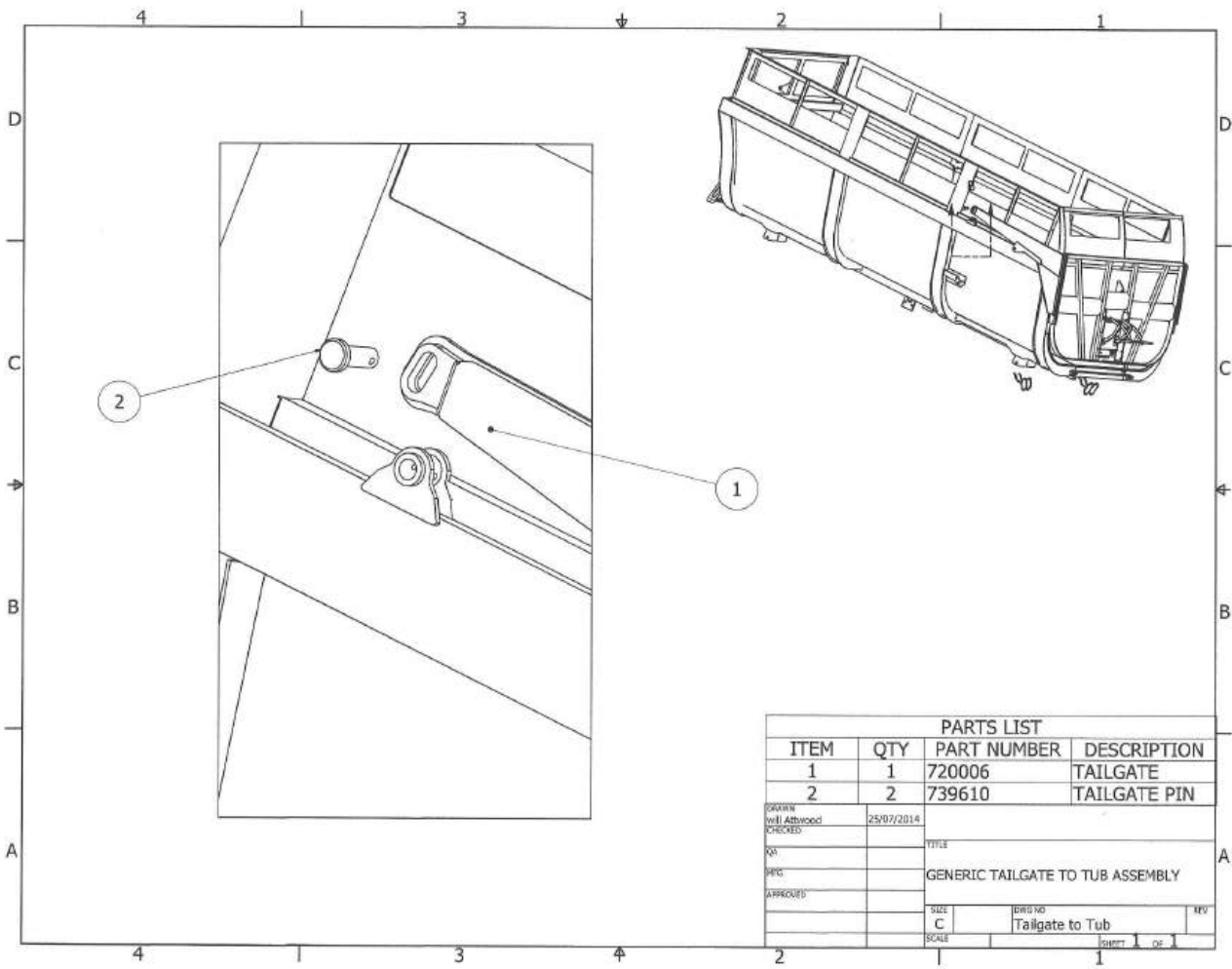
DESIGNED BY: [Redacted]	DATE: 28/07/2014	TITLE
QA		GENERIC REAR HITCH TO FRAME ASSEMBLY 2
APPROVED		REV C
		DESC: Rear hitch to frame 2
		SCALE
		SHEET 1 OF 1



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	720024	FRONT STAND
2	4	530003	Flat Washer 1"
3	2	533044	Nut 1"-8
4	2	511682	Hex Bolt 1"-8 x 6"

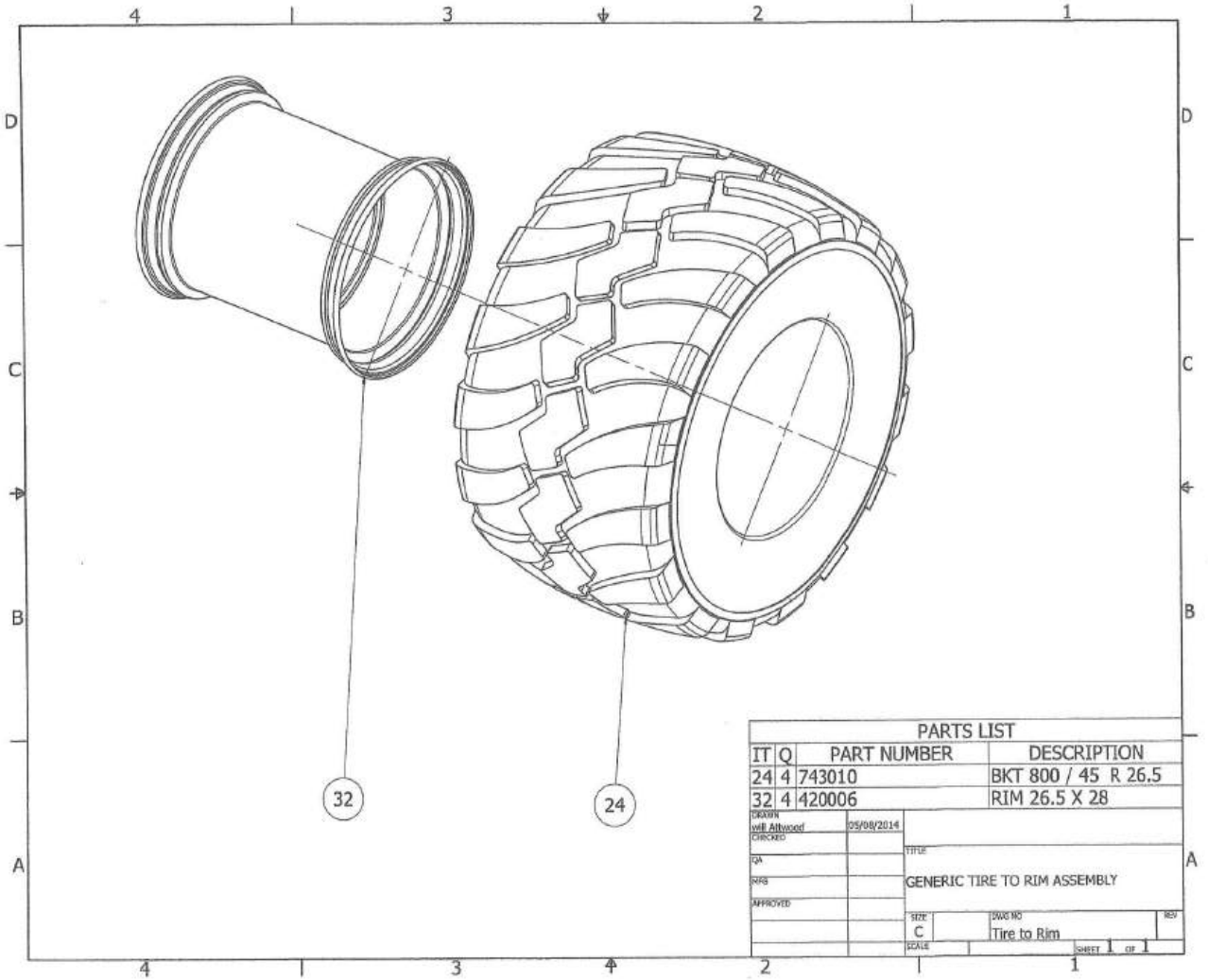
  

DRAWN	28/07/2014	TITLE	
REV	Attywood	GENERIC SAFETY STANDS TO TUB	
DATE		ASSEMBLY	
QA			
ENG			
APPROVED			
		CODE	DWG NO
		C	Stands to tub
		SCALE	SHEET 1 OF 1

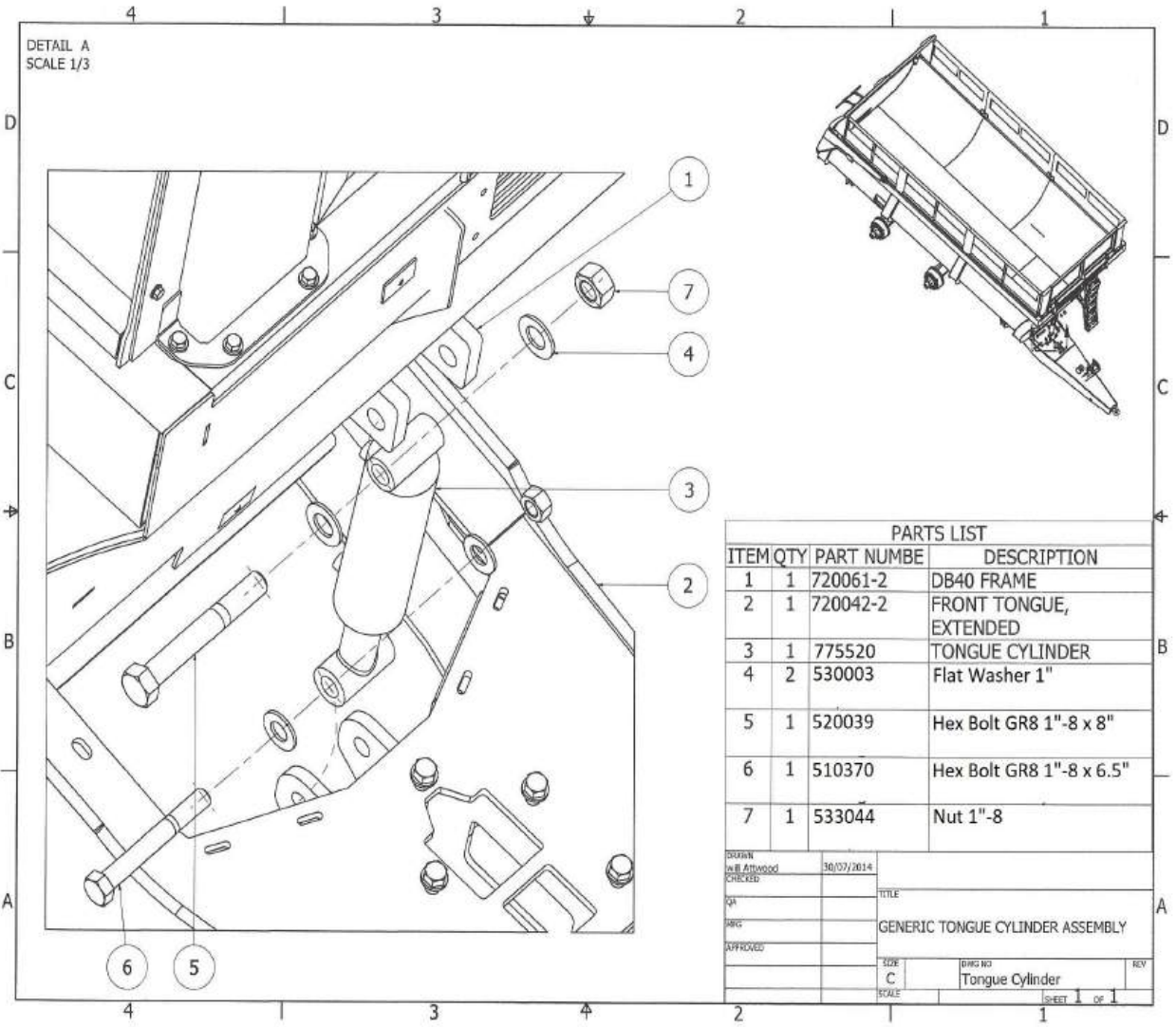


PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	720006	TAILGATE
2	2	739610	TAILGATE PIN
DRAWN WJ Atwood		25/07/2014	
CHECKED		TITLE	
APP'D		GENERIC TAILGATE TO TUB ASSEMBLY	
APPROVED		SCALE	
		SIZE C	DRG NO Tailgate to Tub
		REV	
		SCALE	
		SHEET 1 OF 1	

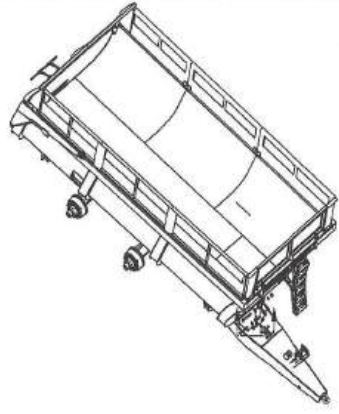




PARTS LIST			
IT	Q	PART NUMBER	DESCRIPTION
24	4	743010	BKT 800 / 45 R 26.5
32	4	420006	RIM 26.5 X 28
DRAWN		05/08/2014	
BY: <u>W.H. Alwood</u>		TITLE	
CHECKED		QA	
APPROVED		GENERIC TIRE TO RIM ASSEMBLY	
SCALE		SIZE	DWG NO
C		Tire to Rim	
SHEET		OF	
1		1	

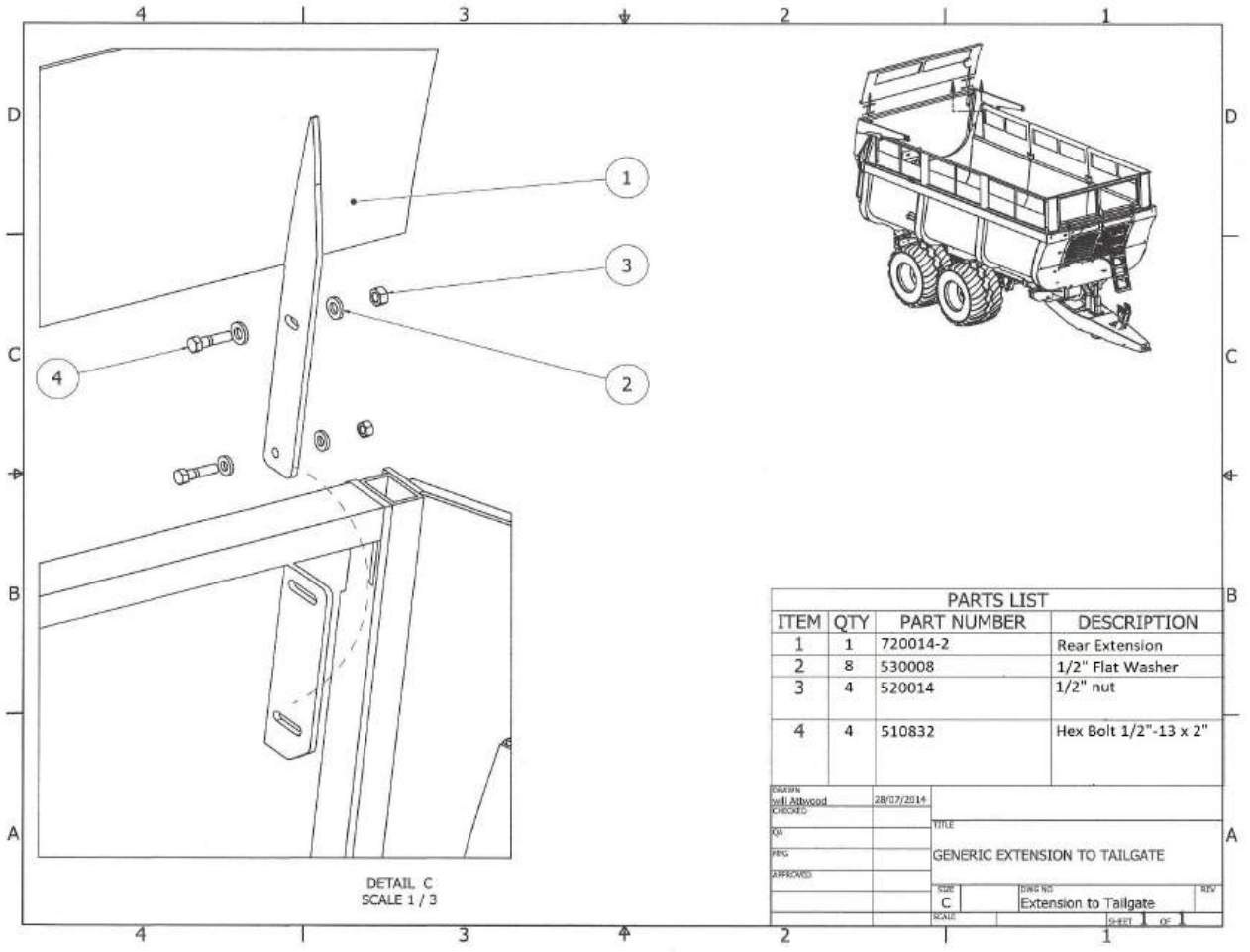


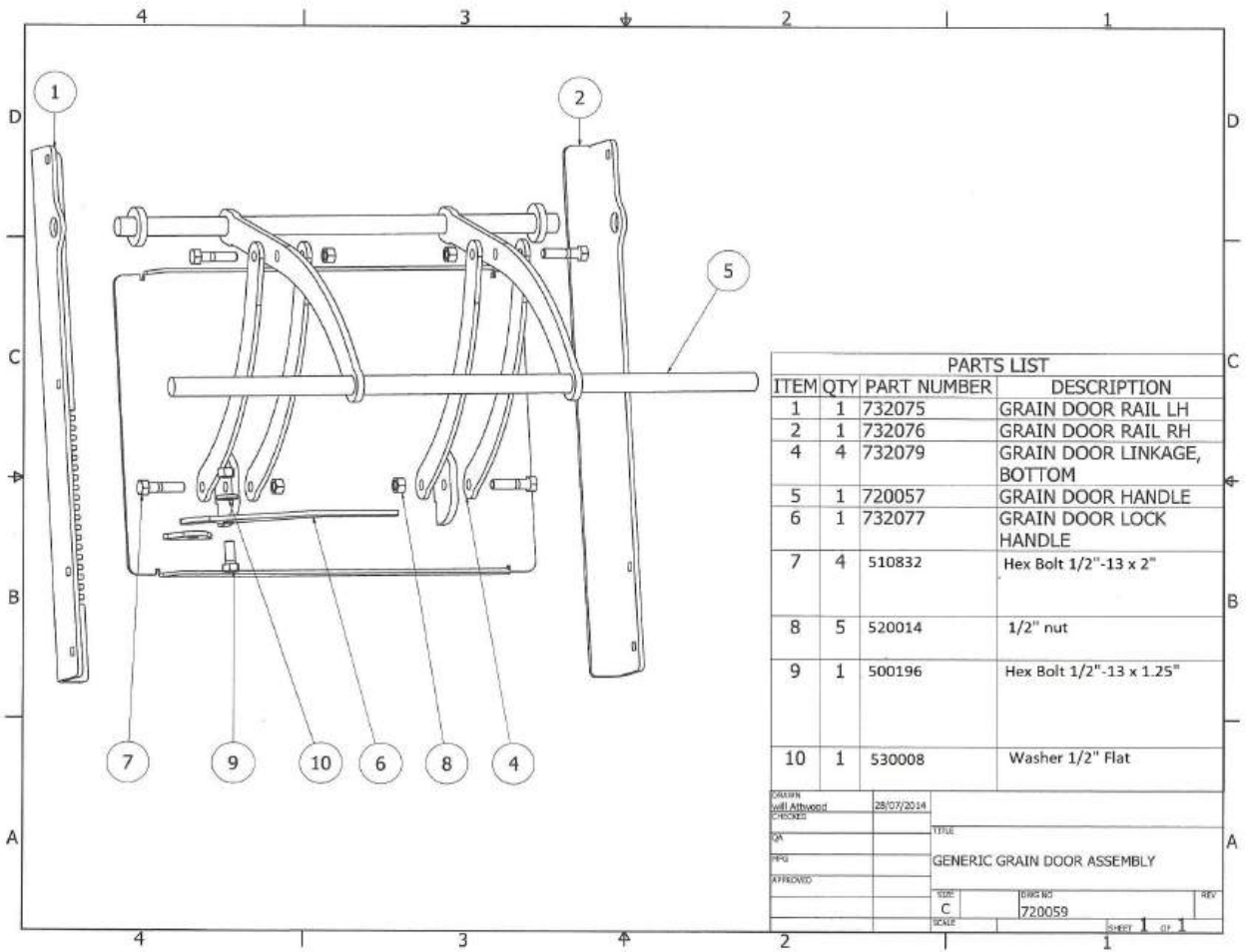
DETAIL A  
SCALE 1/3



PARTS LIST			
ITEM	QTY	PART NUMBE	DESCRIPTION
1	1	720061-2	DB40 FRAME
2	1	720042-2	FRONT TONGUE, EXTENDED
3	1	775520	TONGUE CYLINDER
4	2	530003	Flat Washer 1"
5	1	520039	Hex Bolt GR8 1"-8 x 8"
6	1	510370	Hex Bolt GR8 1"-8 x 6.5"
7	1	533044	Nut 1"-8

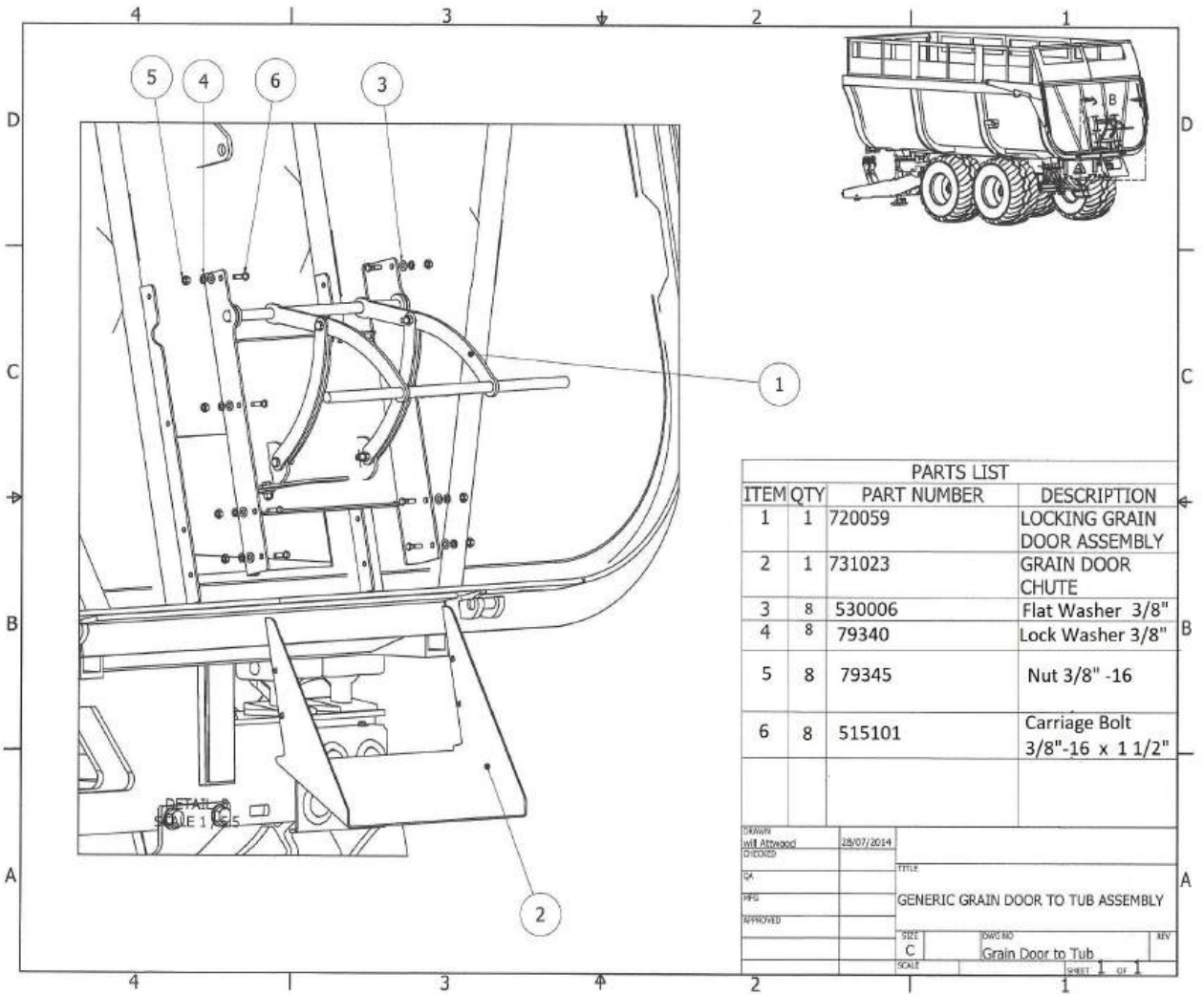
DESIGN	30/07/2014	TITLE	
IN CHARGE		GENERIC TONGUE CYLINDER ASSEMBLY	
CHECKED		APPROVED	
QA		SIZE	C
DRG		DRG NO	Tongue Cylinder
SCALE		REV	
		SHEET	1 OF 1

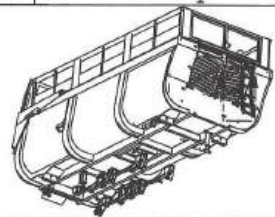
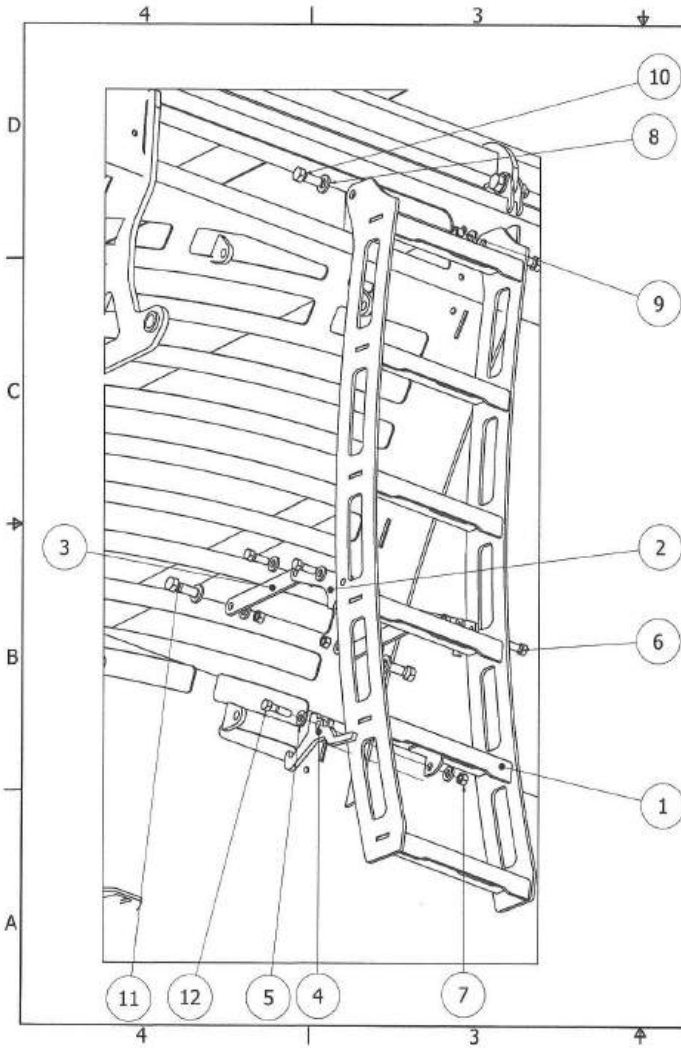




PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	732075	GRAIN DOOR RAIL LH
2	1	732076	GRAIN DOOR RAIL RH
4	4	732079	GRAIN DOOR LINKAGE, BOTTOM
5	1	720057	GRAIN DOOR HANDLE
6	1	732077	GRAIN DOOR LOCK HANDLE
7	4	510832	Hex Bolt 1/2"-13 x 2"
8	5	520014	1/2" nut
9	1	500196	Hex Bolt 1/2"-13 x 1.25"
10	1	530008	Washer 1/2" Flat

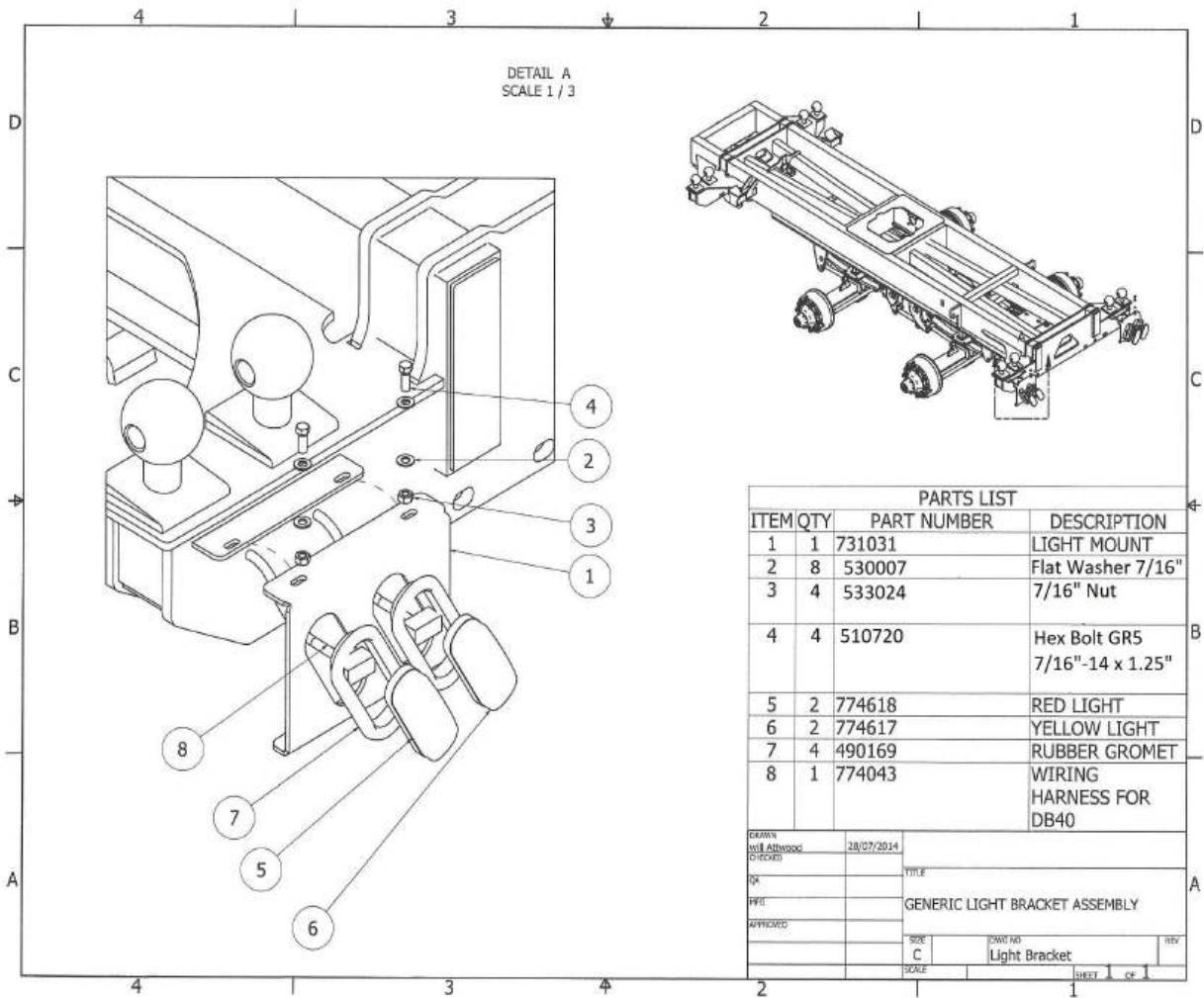
DESIGN	25/07/2014	
Checked		TITLE
QA		GENERIC GRAIN DOOR ASSEMBLY
PPG		
APPROVED		
SIZE	DWG NO	REV
C	720059	
SCALE		SHEET 1 OF 1





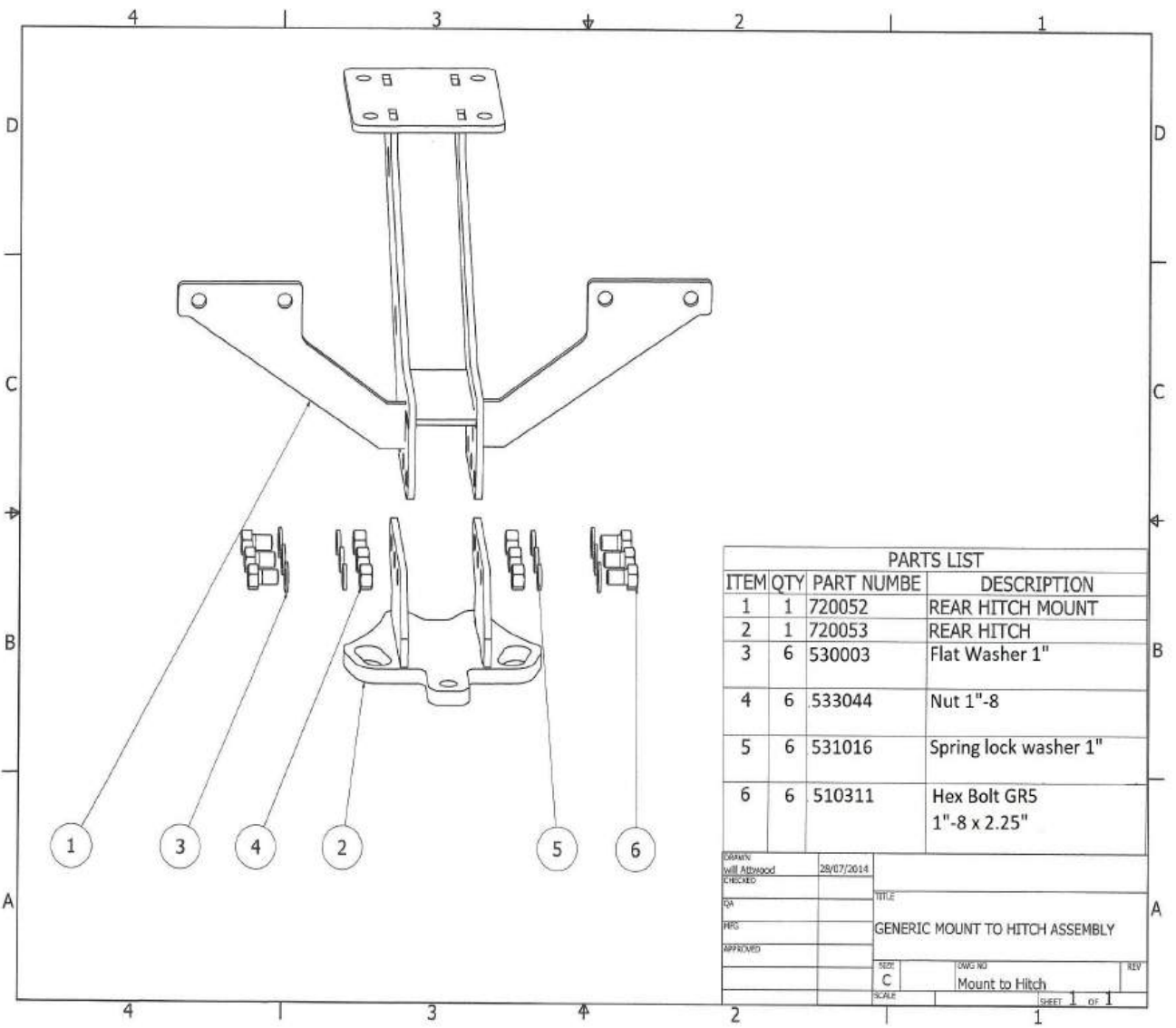
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	720005	LADDER
2	2	732023	LADDER LOCKING LINKAGE
3	2	732022	LADDER LINKAGE
4	1	733009-1	LADDER LATCH
5	3	530008	Flat Washer 1/2"
6	2	520002	Hex Bolt 1/2"-13 x 1.5"
7	3	520014	1/2"-13 Nut
8	12	530227	Flat Washer 5/8"
9	6	520010	5/8"-11 Nut
10	2	510160	Hex Bolt GR5 5/8"-11 x 1.75"
11	4	510161	Hex Bolt GR5 5/8"-11 x 2"
12	1	510832	Hex Bolt GR5 1/2"-13 x 2"

DRAWN Bill Atwood	28/07/2014	TITLE	
CHECKED		GENERIC LADDER TO TUB ASSEMBLY	
QA		SIZE C	DWG NO Ladder to Tub
WFO		SCALE	REV
APPROVED			
			SHEET 1 OF 1



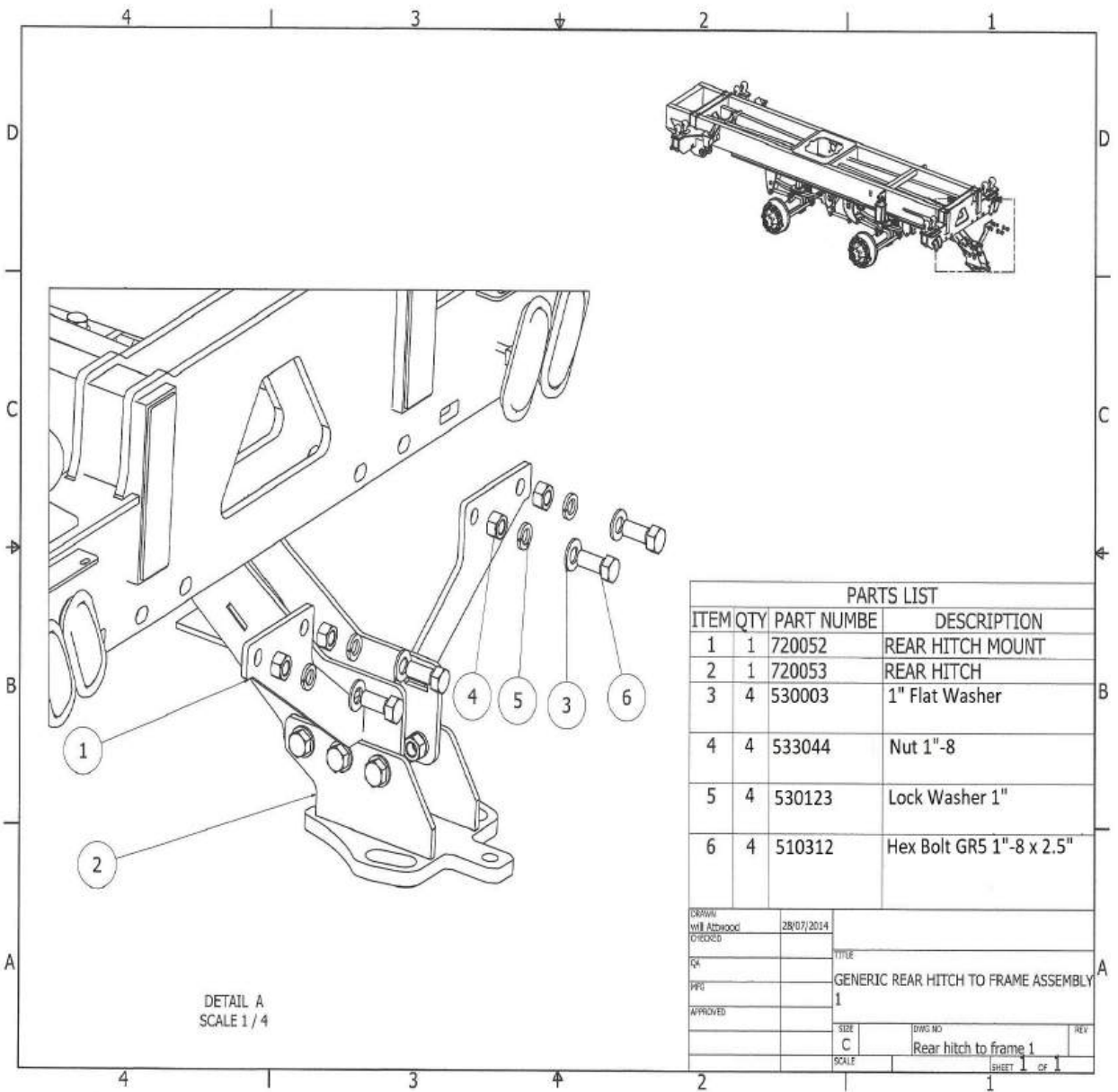
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	731031	LIGHT MOUNT
2	8	530007	Flat Washer 7/16"
3	4	533024	7/16" Nut
4	4	510720	Hex Bolt GR5 7/16"-14 x 1.25"
5	2	774618	RED LIGHT
6	2	774617	YELLOW LIGHT
7	4	490169	RUBBER GROMMET
8	1	774043	WIRING HARNESS FOR DB40

DRAWN WILL Attwood CHECKED	28/07/2014	TITLE
QA	APPROVED	GENERIC LIGHT BRACKET ASSEMBLY
SIZE C	DWG NO Light Bracket	REV
SCALE	SHEET	OF



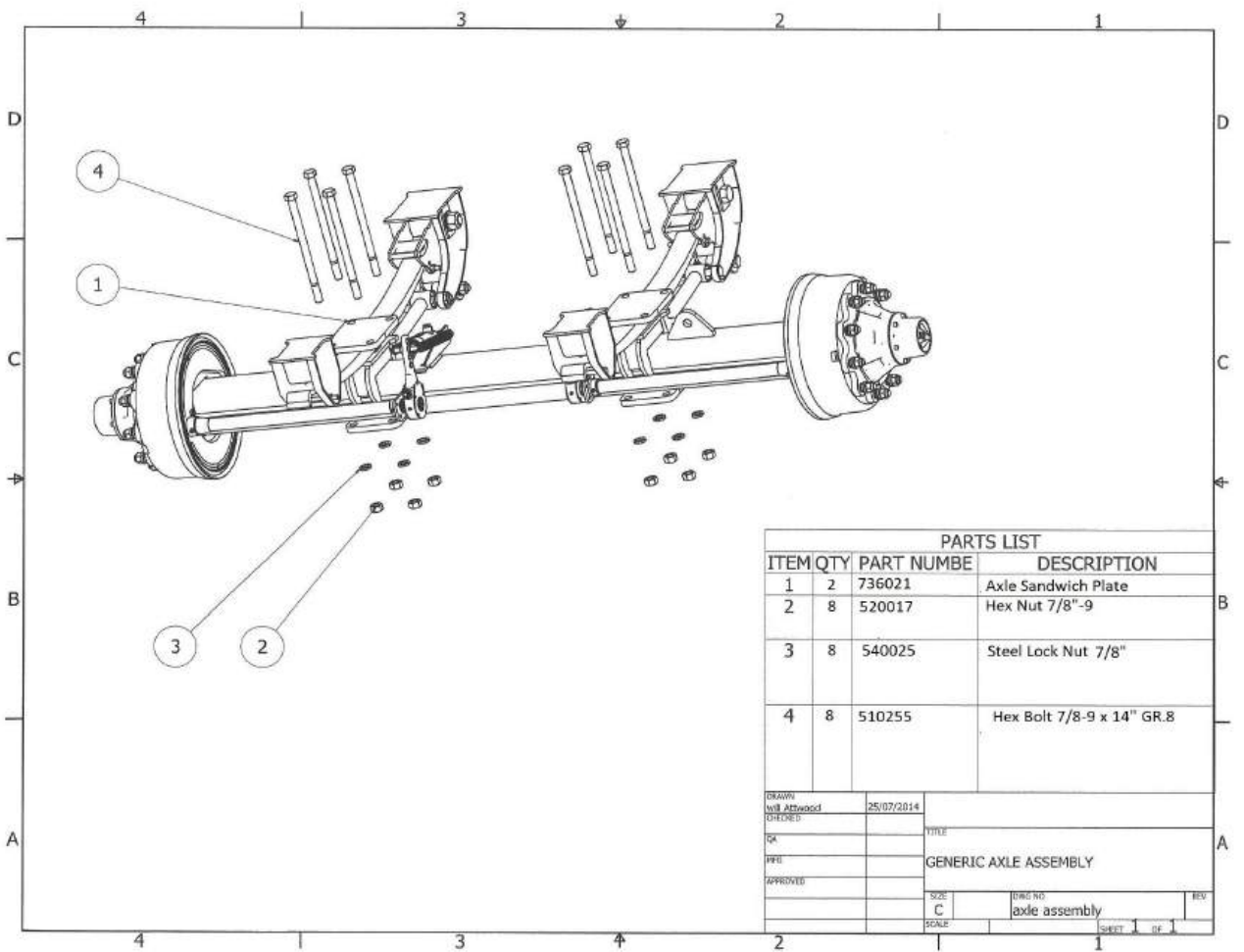
PARTS LIST			
ITEM	QTY	PART NUMBE	DESCRIPTION
1	1	720052	REAR HITCH MOUNT
2	1	720053	REAR HITCH
3	6	530003	Flat Washer 1"
4	6	533044	Nut 1"-8
5	6	531016	Spring lock washer 1"
6	6	510311	Hex Bolt GR5 1"-8 x 2.25"

DESIGNED Will Atwood	DATE 28/07/2014	TITLE	
CHECKED		GENERIC MOUNT TO HITCH ASSEMBLY	
QA		NO.	REV
FRS		C	Mount to Hitch
APPROVED		SCALE	SHEET 1 OF 1



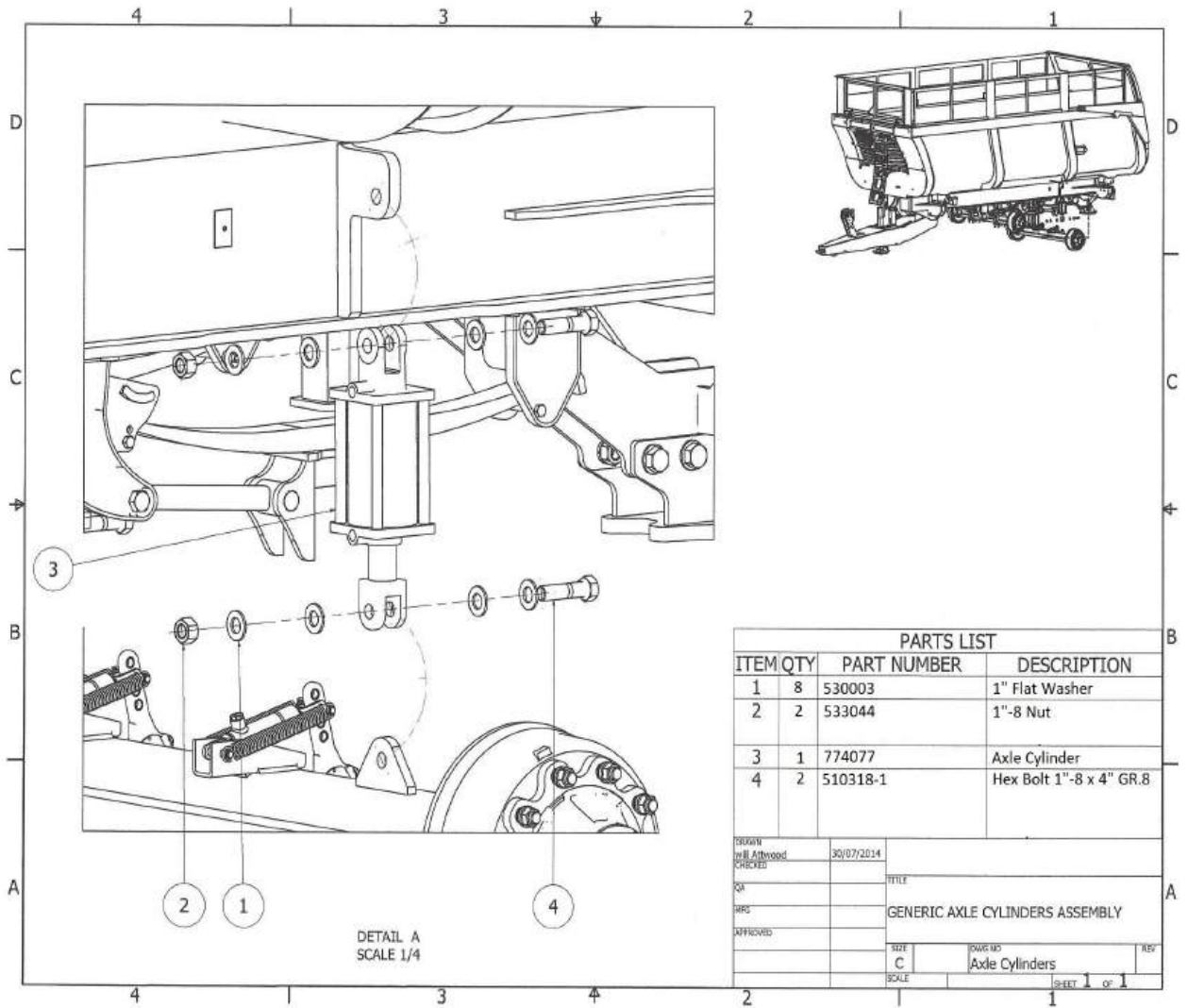
PARTS LIST			
ITEM	QTY	PART NUMBE	DESCRIPTION
1	1	720052	REAR HITCH MOUNT
2	1	720053	REAR HITCH
3	4	530003	1" Flat Washer
4	4	533044	Nut 1"-8
5	4	530123	Lock Washer 1"
6	4	510312	Hex Bolt GR5 1"-8 x 2.5"

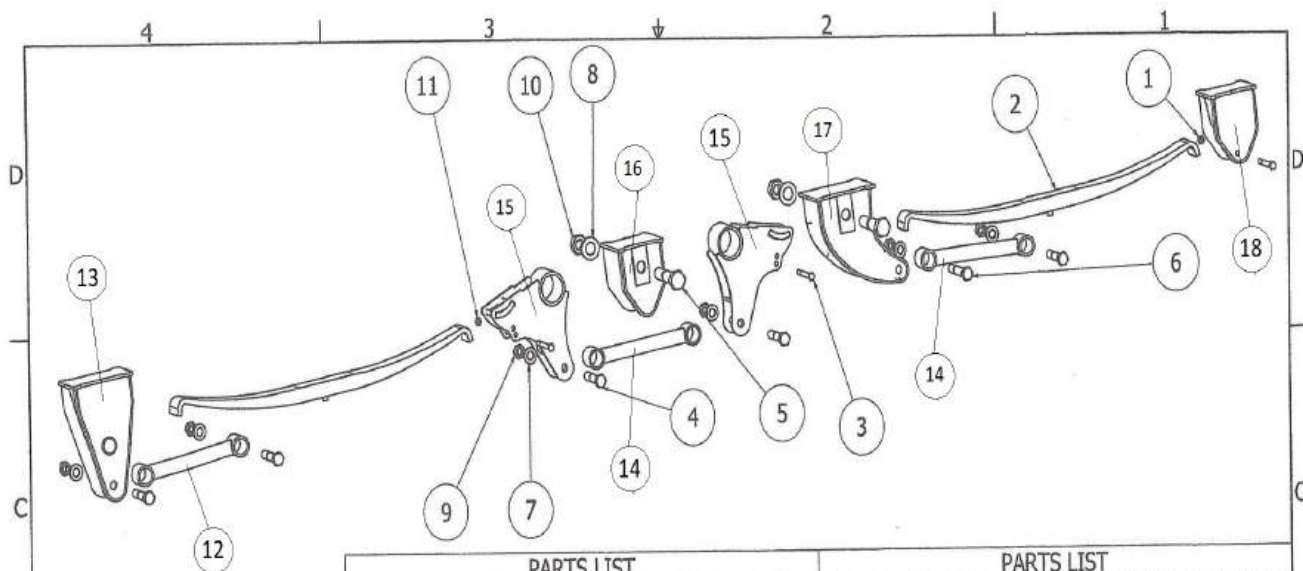
DESIGN	WJ Atwood	DATE	28/07/2014
CHECKED		TITLE	GENERIC REAR HITCH TO FRAME ASSEMBLY
QA		REV	1
PPG		SIZE	C
APPROVED		DWG NO	Rear hitch to frame 1
		SCALE	
		SHEET	1 OF 1



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	736021	Axle Sandwich Plate
2	8	520017	Hex Nut 7/8"-9
3	8	540025	Steel Lock Nut 7/8"
4	8	510255	Hex Bolt 7/8-9 x 14" GR.8

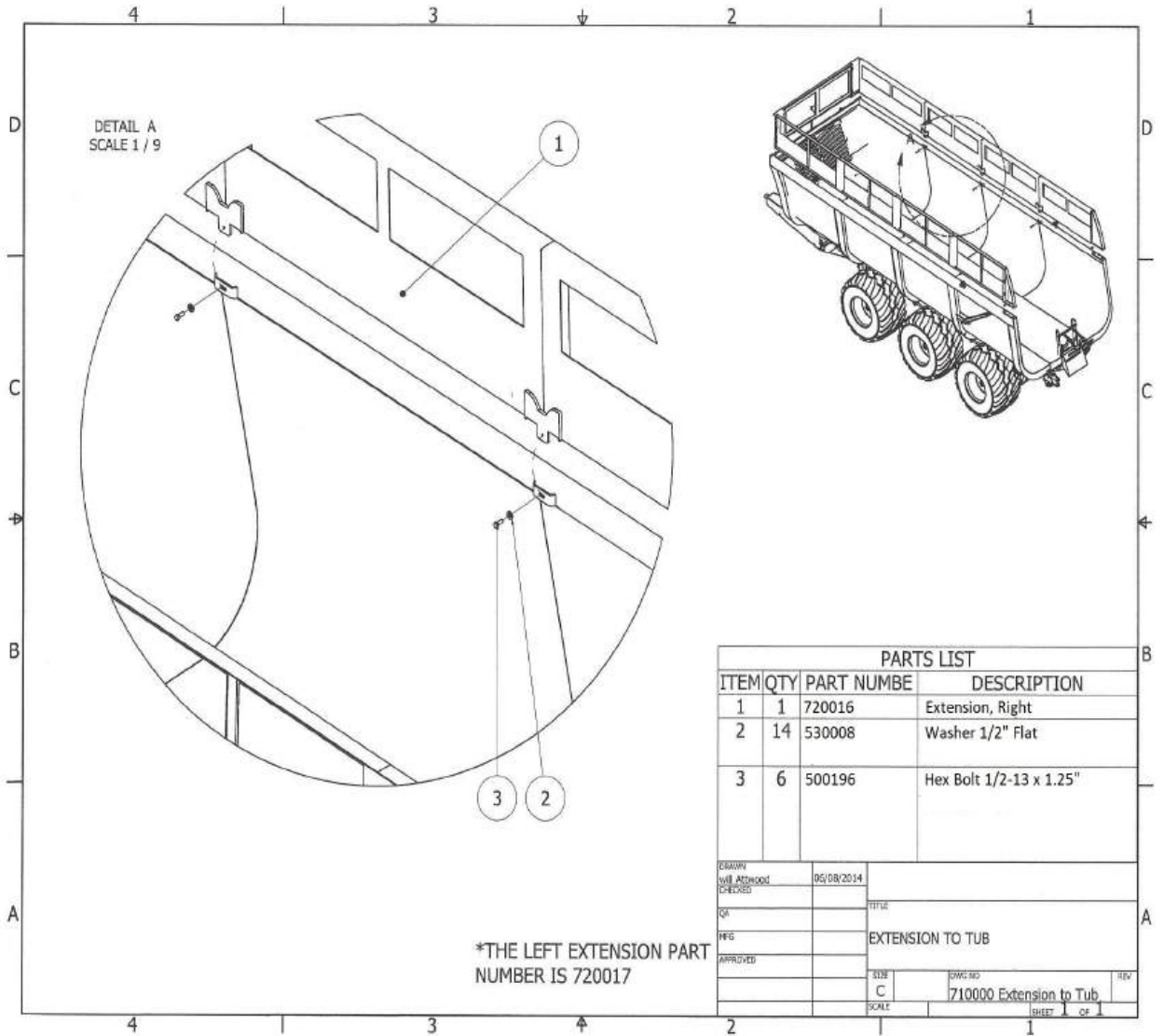
DRAWN	WJZ	DATE	25/07/2014
CHECKED		TITLE	
QA		GENERIC AXLE ASSEMBLY	
PWD		SIZE	C
APPROVED		DWG NO.	axle assembly
		SCALE	
		SHEET	1 OF 1





PARTS LIST				PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
7	6	530231	Washer 7/8"	1	2	521014	1/2"-13 Steel Lock Nut
8	2	530235	Washer 1 1/4"	2	2	774033	TRA 1150 Single Leaf Spring
9	6	520017	Hex Nut 7/8"-9	3	2	510147	Hex Bolt 1/2"-13 x 5"
10	2	520020	Hex Nut 1 1/4"-7	4	4	510242	Hex Bolt 7/8"-9 x 5"
12	1	746003	14" Rigid Torque Rod	5	2	510361	Hex Bolt 1 1/4"-7 x 7"
13	1	746000	Front Hanger	6	2	510244	Hex Bolt 7/8"-9 x 6"
14	2	746005	14.375 Rigid Torque Rod				
15	2	746002	Equalizer				
16	1	746022	Front Equalizer Hanger				
17	1	746023	Rear Equalizer Hanger				
18	1	746001	Rear Hanger				

DRAWN Will Albrecht	29/07/2014	TITLE	
CHECKED		COMPLETE SUSPENSION ASSEMBLY	
QA		SIZE C	DWG NO 710004 Complete Suspension Assembl
APPROVED		SCALE	REV
			SHEET 1 OF 1



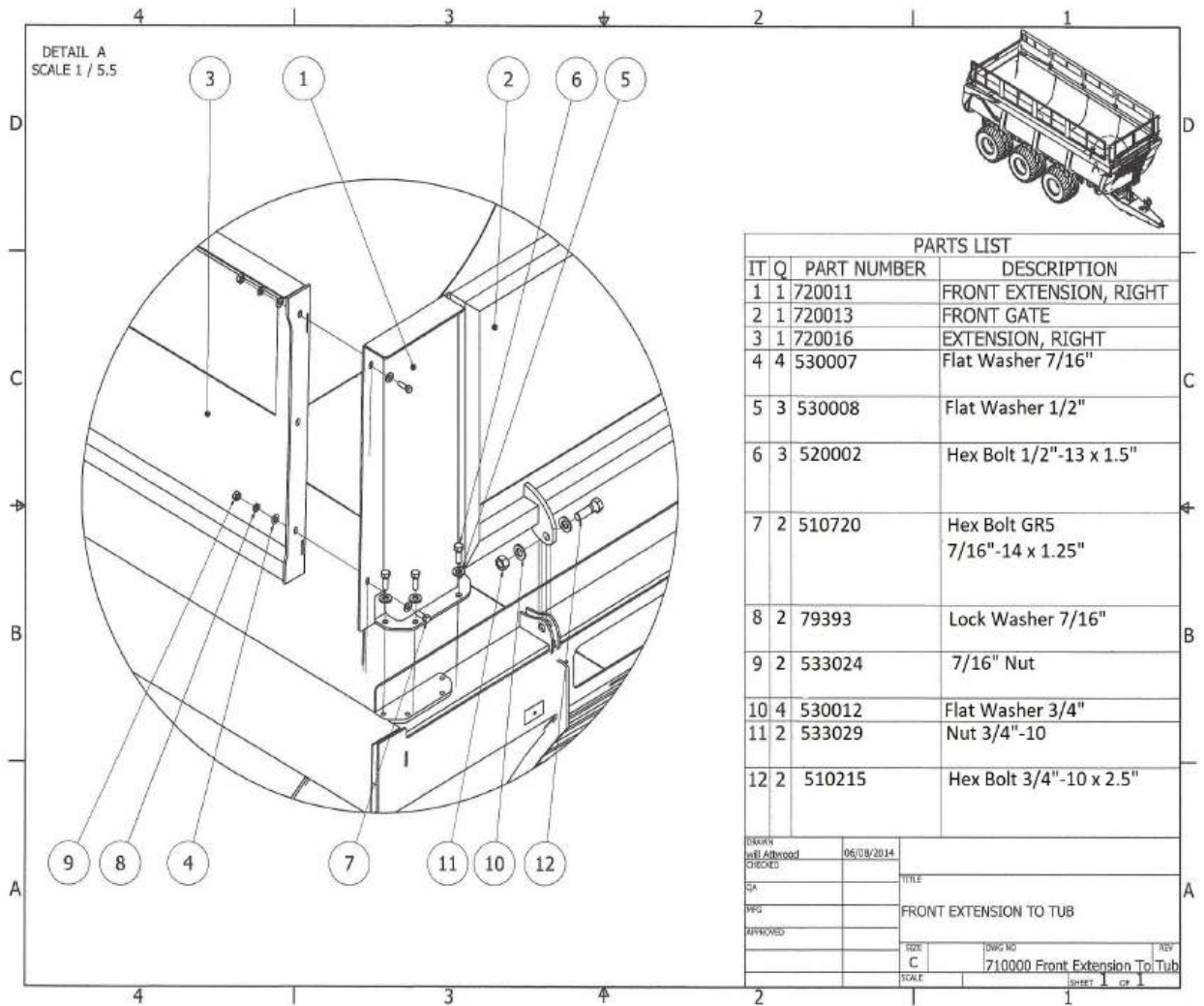
DETAIL A  
SCALE 1 / 9

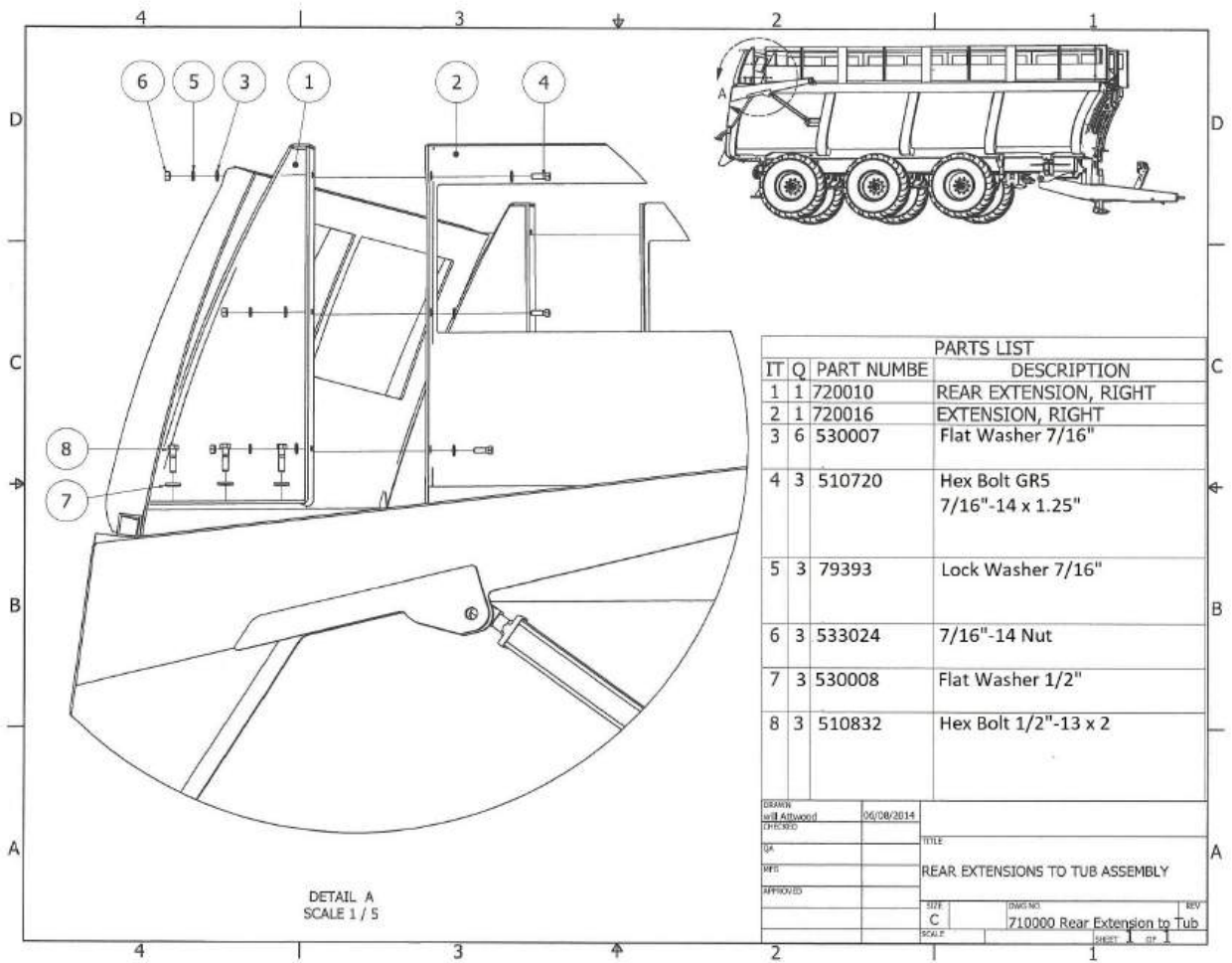
\*THE LEFT EXTENSION PART  
NUMBER IS 720017

PARTS LIST			
ITEM	QTY	PART NUMBE	DESCRIPTION
1	1	720016	Extension, Right
2	14	530008	Washer 1/2" Flat
3	6	500196	Hex Bolt 1/2-13 x 1.25"

DESIGN	WJL	DATE	05/08/2014
CHECKED		TITLE	EXTENSION TO TUB
QA		SCALE	C
FIG		DWG NO	710000 Extension to Tub
APPROVED		SHEET	1 of 1

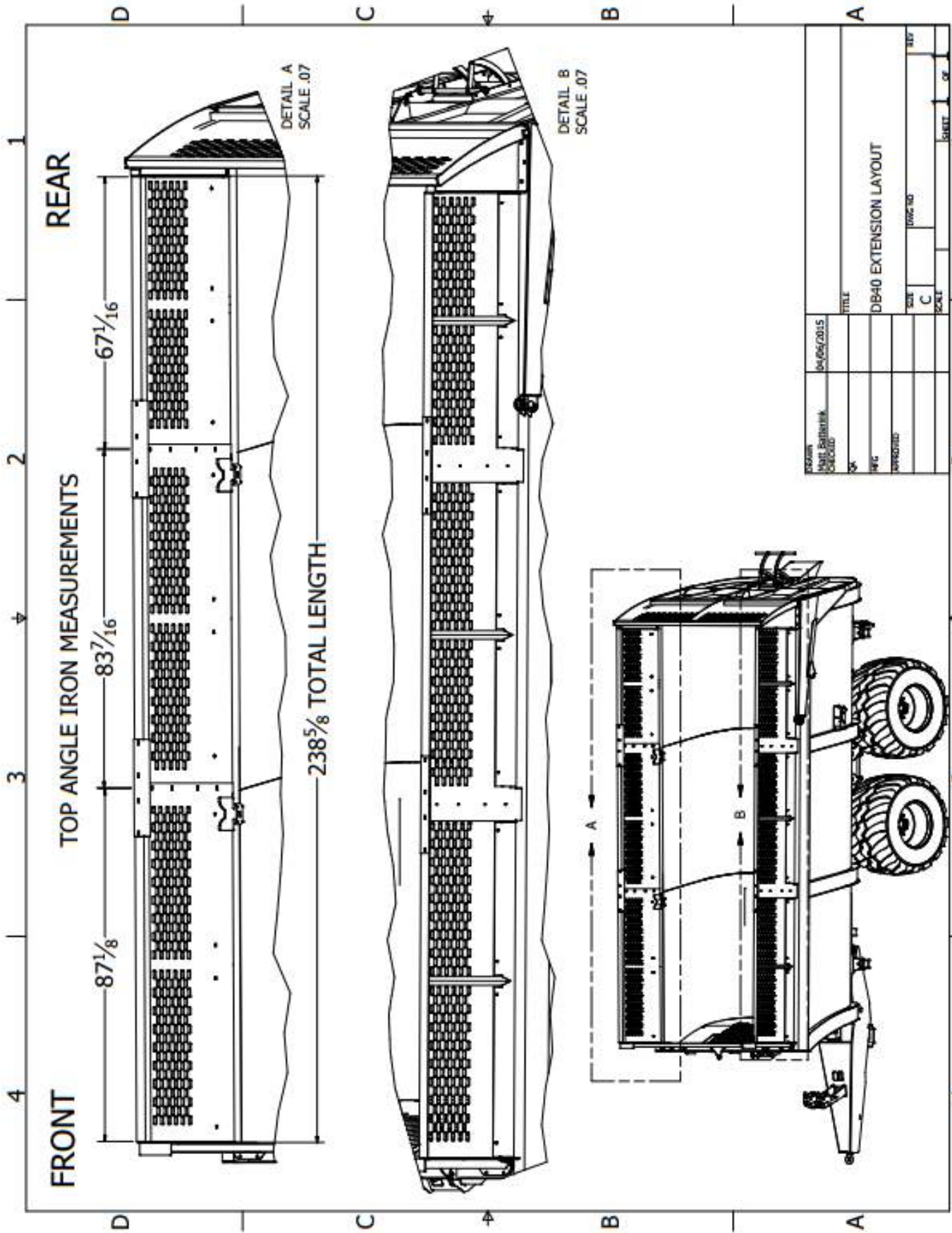




PARTS LIST			
IT	Q	PART NUMBE	DESCRIPTION
1	1	720010	REAR EXTENSION, RIGHT
2	1	720016	EXTENSION, RIGHT
3	6	530007	Flat Washer 7/16"
4	3	510720	Hex Bolt GR5 7/16"-14 x 1.25"
5	3	79393	Lock Washer 7/16"
6	3	533024	7/16"-14 Nut
7	3	530008	Flat Washer 1/2"
8	3	510832	Hex Bolt 1/2"-13 x 2

DESIGN	06/08/2014	TITLE	
BY: Bill Attwood			
CHECKED		REAR EXTENSIONS TO TUB ASSEMBLY	
QA			
APPROVED		SIZE	
		DWG NO.	
		C	710000 Rear Extension to Tub
		SCALE	REV

DETAIL A  
SCALE 1 / 5



DESIGN	DATE	SCALE	SHEET	OF
DRG. BY: BETHINK	04/05/2015		1	1
CHECKED:				
DATE:				
SCALE:				
TITLE				
DB40 EXTENSION LAYOUT				

