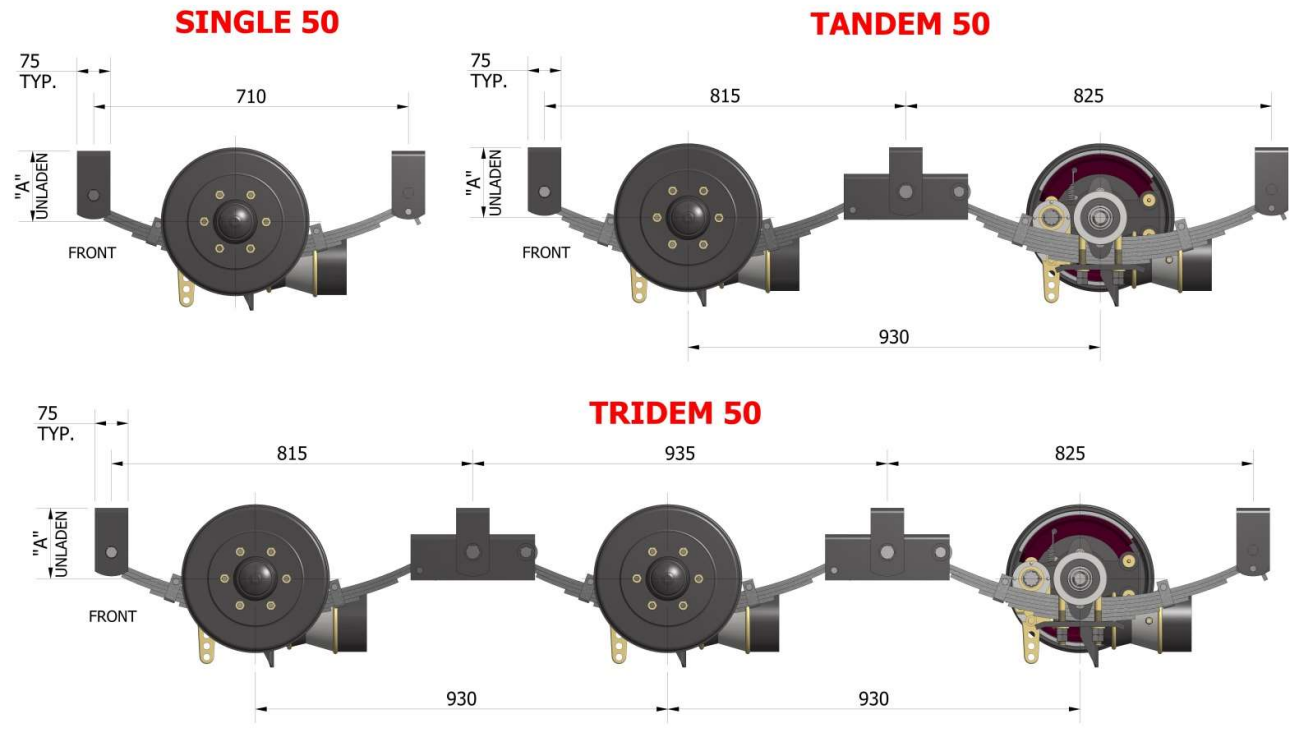
INSTALLATION & MAINTENANCE GUIDE – 03/2024

50 Series Suspensions



ABOVE DIMENSIONS ARE NOMINAL ONLY AND SUBJECT TO MANIFACTURING TOLERENCES AND CHANGES WITHOUT NOTICE

NOTE: When ordering suspension kits, specfy axle size & shape. Kits supplied underslung as standard configuration. Consult with Rogers Axle & Spring Works' technical staff for overslung configuration.

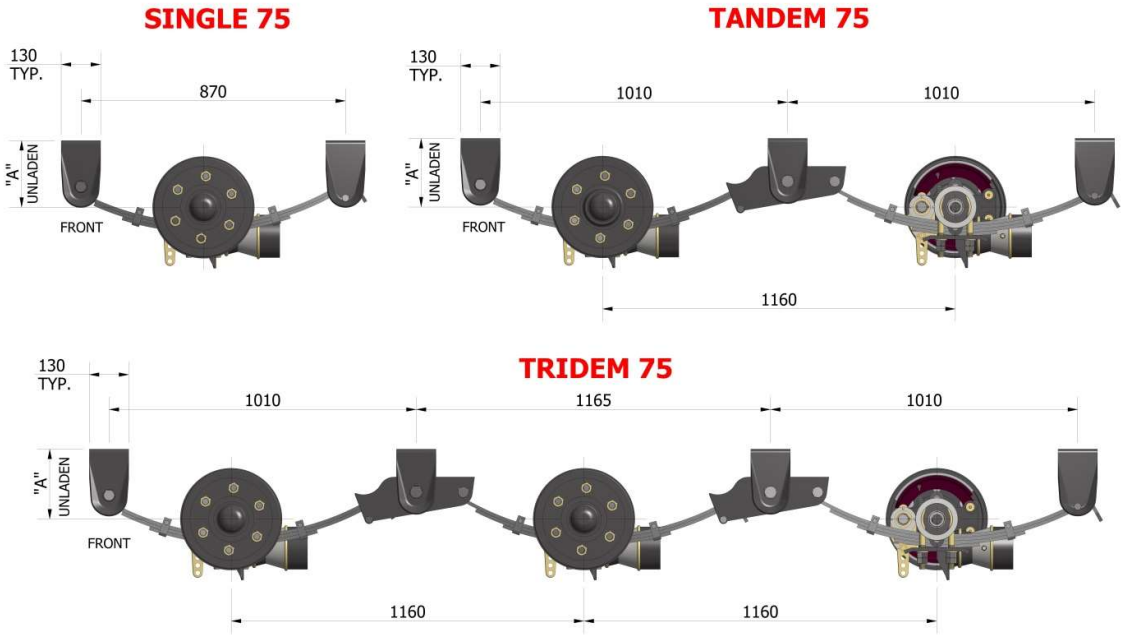
AXLE DIA.	"A"
50 sq	165
56	162
60	160
65	158

Shackle bolts and rocker pivot bolts fitted with Nyloc type nuts must be tightened firmly allowing for rotational movement of bushed components. All suspensions are supplied with the axle saddles supplied loose for fitment between the axle & springs.

The axle saddles comprise a piece of flat rectangular steel with a single hole in the centre. Tighten the u-bolts to the correct torque (recommended 105Nm (77ft.lbs.) for 16mm) after axles are fitted.

Spare Parts		
PART NUMBER	**DESCRIPTION**	
SPR-5940	50x9x4lf Spring	
SPR-5960	50x9x6lf Spring	
SPR-5970	50x9x7lf Spring	
SS-TM503	50mm Rocker	
SS-TM5001	Single Axle Pin & Bush Kit	
SS-TM5002	Tandem Axle Pin & Bush Kit	
SS-TM5003	Tri Axle Pin & Bush Kit	
UBK-5016S-4	U-bolt kit suit 50 series 4LF suspension, U-Bolts: 16mm ø Comprising: 2 x COMTM505, 2 x COMTM508, 4 x GENUR16N	
UBK-5016R	U-bolt kit suit 50 series suspension, U-Bolts: 16mm ø Comprising: 2 x COMTM505, 2 x COMTM508, 4 x GENUR16N	
UBK-5016S	U-bolt kit suit 50 series suspension, U-Bolts: 16mm Sq Comprising: 2 x COMTM505, 2 x COMTM508, 4 x GENUS16N	

75 Series Suspensions



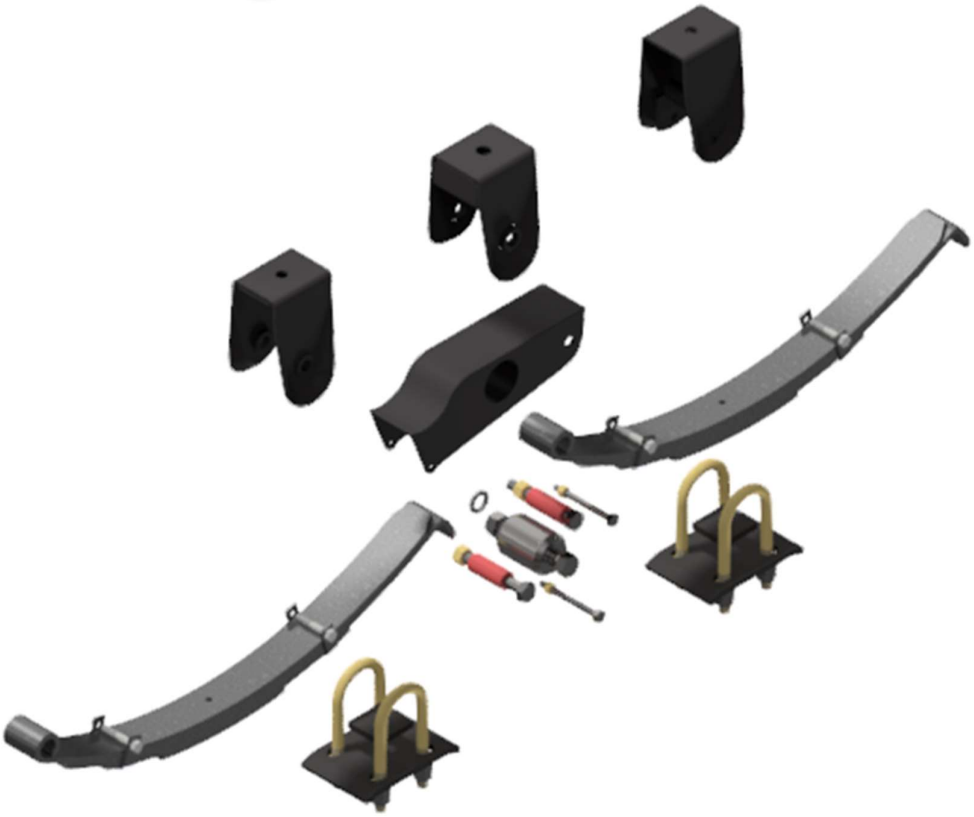
ABOVE DIMENSIONS ARE NOMINAL ONLY AND SUBJECT TO MANIFACTURING TOLERENCES AND CHANGES WITHOUT NOTICE

NOTE: When ordering suspension kits, specfy axle size & shape. Kits supplied underslung as standard configuration. Consult with Rogers Axle & Spring Works' technical staff for overslung configuration.

AXLE DIA.	"A"
56	230
65	225
75	220
80	218
90	213

Shackle bolts fitted with Nyloc type nuts must be tightened firmly allowing for rotational movement of bushed components. Tandem & tri axle suspensions comprise equaliser rockers fitted with large polyurethane bushes with a steel inner. The bushes rely on the shear strength of the polyurethane for operation. Hence, the rocker bolt & nut MUST be tightened fully with the rocker set in the horizontal position (recommended 395- 410Nm (290-300ft.lbs.)). All suspensions are supplied with the axle saddles supplied loose for fitment between the axle & springs.

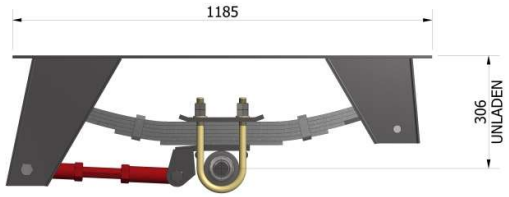
The axle saddles comprise a piece of flat square steel with a single hole in the centre. Tighten the u-bolts to the correct torque (recommended 105Nm (77ft.lbs.) for 16mm & 205Nm (150ft.lbs.) for 20mm u-bolts) after axles are fitted.



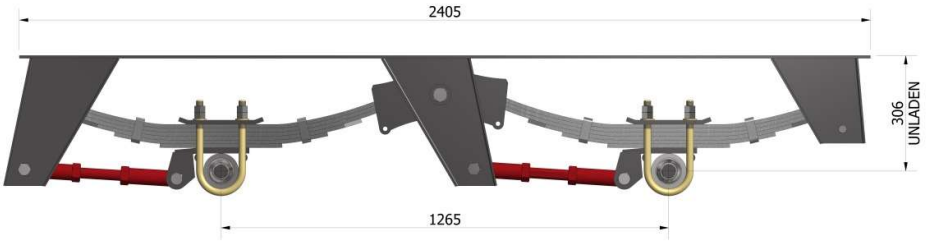
Spare Parts		
PART NUMBER	**DESCRIPTION**	
SPR-7040	75x11x4lf Spring	
SPR-7050	75x11x5lf Spring	
SPR-7060	75x11x6lf Spring	
SS-TM703	75mm Rocker with bush	
SS-BUSH10	75mm Rocker Bush	
SS-TM7001	Single Axle Pin & Bush Kit	
SS-TM7002	Tandem Axle Pin & Bush Kit **– LESS ROCKER BUSH**	
SS-TM7003	Tri Axle Pin & Bush Kit **– LESS ROCKER BUSH**	
UBK-7516R	U-bolk kit suit 75 series suspension, U-Bolts: 16mm øComprising: 2 x COMTM705, 2 x COMTM708, 4 x GENUR16N	
UBK-7520R	U-bolk kit suit 75 series suspension, U-Bolts: 20mm øComprising: 2 x COMTM706, 2 x COMTM708, 4 x GENUR20N	

75 Series Radius Rod

SINGLE RADIUS ROD

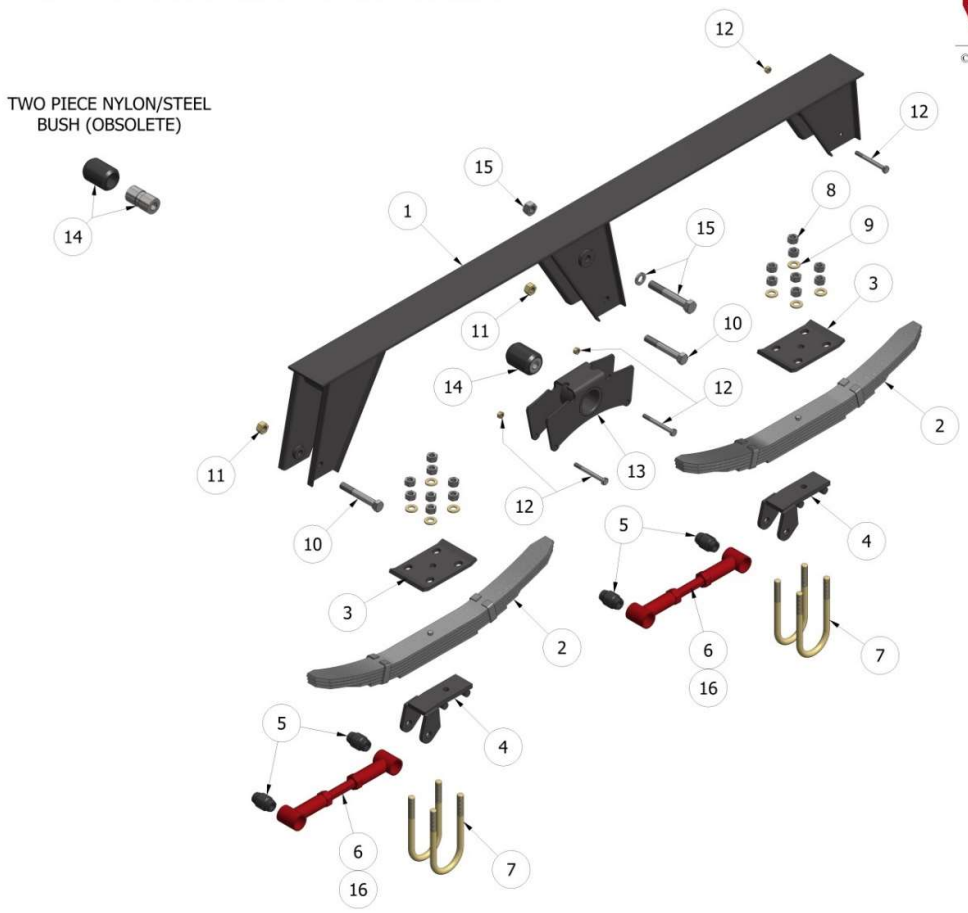


TANDEM RADIUS ROD



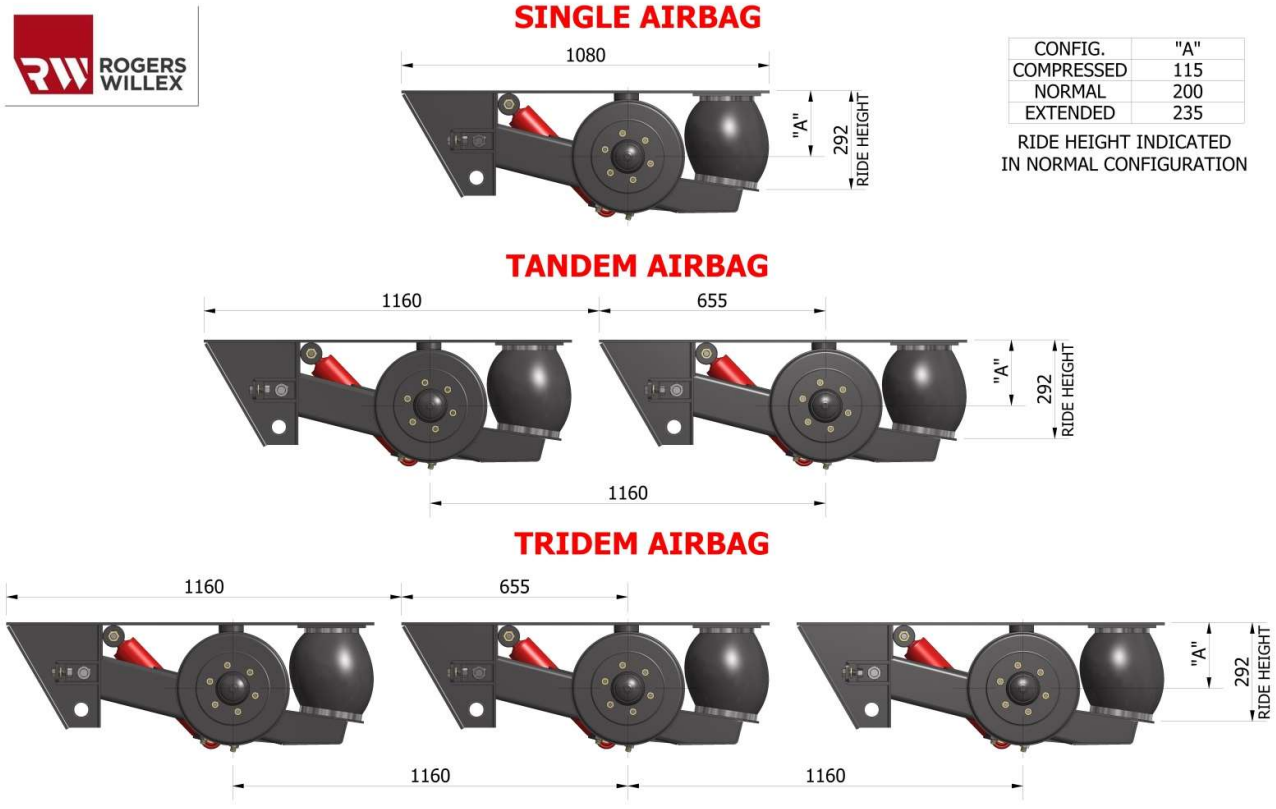
Shackle bolts fitted with Nyloc type nuts must be tightened firmly allowing for rotational movement of bushed components. Tandem suspensions comprise equaliser rockers fitted with large polyurethane bushes with a steel inner. The bushes rely on the shear strength of the polyurethane for operation. Hence, the rocker bolt & nut MUST be tightened fully with the rocker set in the horizontal position (recommended 395- 410Nm (290-300ft.lbs.)). All suspensions are supplied with the axle saddles supplied loose for fitment between the axle & springs.
The axle saddles comprise a piece of flat square steel with a single hole in the centre. Tighten the u-bolts to the correct torque (recommended 205Nm (150ft.lbs.) for 20mm u-bolts) after axles are fitted.

75 SERIES RADIUS ROD SPARE PARTS

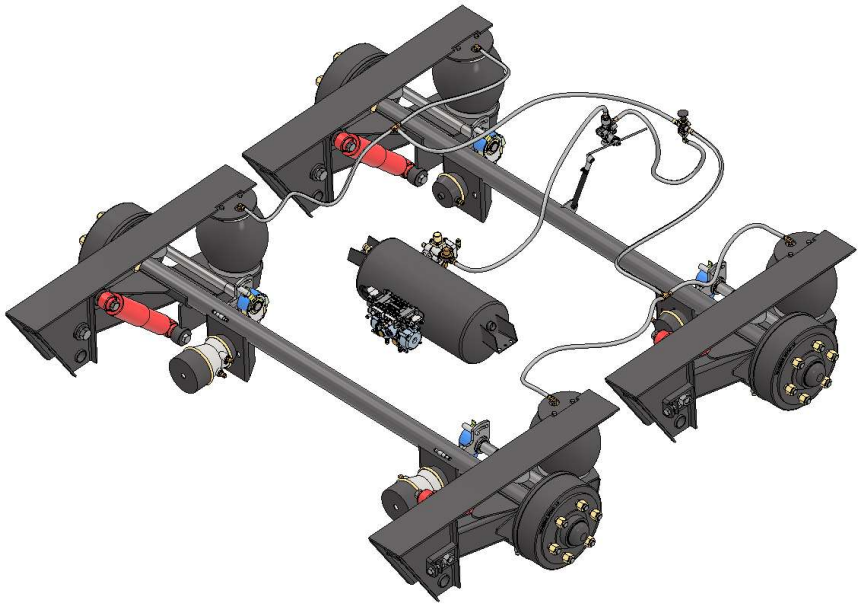


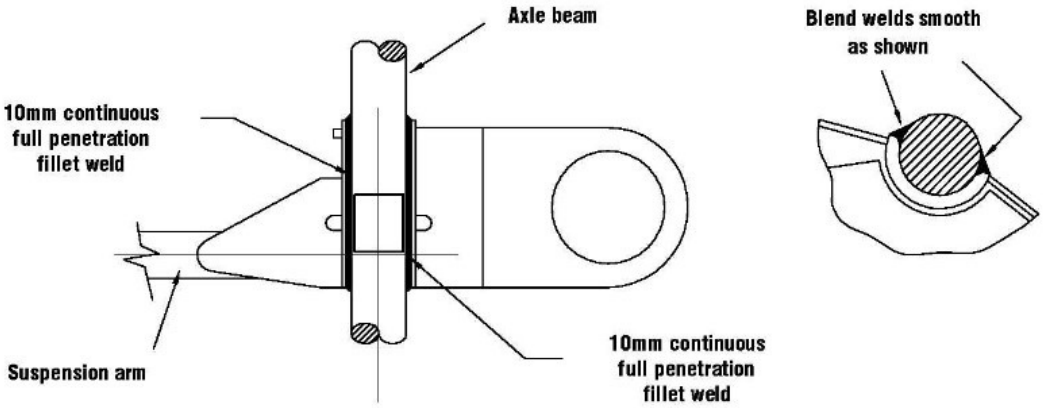
ITEM	PART NUMBER	DESCRIPTION	QTY
1	COM-TR1-7000	SINGLE HANGER BRACKET ASSEMBLY	1
1	COM-TR2-7000	TANDEM HANGER BRACKET ASSEMBLY	1
2	SPR-7250	SPRING - 75mm x 11 mm x 5 LEAF	2
2	SPR-7260	SPRING - 75mm x 11 mm x 6 LEAF	2
3	COM-TR706	20mm U-BOLD PLATE	2
4	COM-TR708	AXLE PAD	2
5	GEN-BUSH15	RADIUS ROD BUSH	4
6	COM-TR704-A	ADJUSTABLE RADIUS ROD ASSEMBLY	2
7,8,9	GEN-UR20N	20mm U-BOLT WITH NUTS & WASHERS	4
10	GEN-B8F14096	RADIUS ROD BOLT	4
11	GEN-NNF14	NYLOC NUT	4
12	GEN-BBW08080N	REBOUND BOLT & NUT	3
13	COM-TR703	ROCKER WITH BUSH (ONE PIECE)	1
14	GEN-BUSH10	REPLACEMENT ROCKER BUSH	1
15	COM-TM725	ROCKER PIVOT BOLT & NUT	1
15	GEN-WBS10	1" SPRING WASHER	1
16	COM-TR704-F	FIXED RADIUS ROD ASSEMBLY	2

Airbag Suspensions

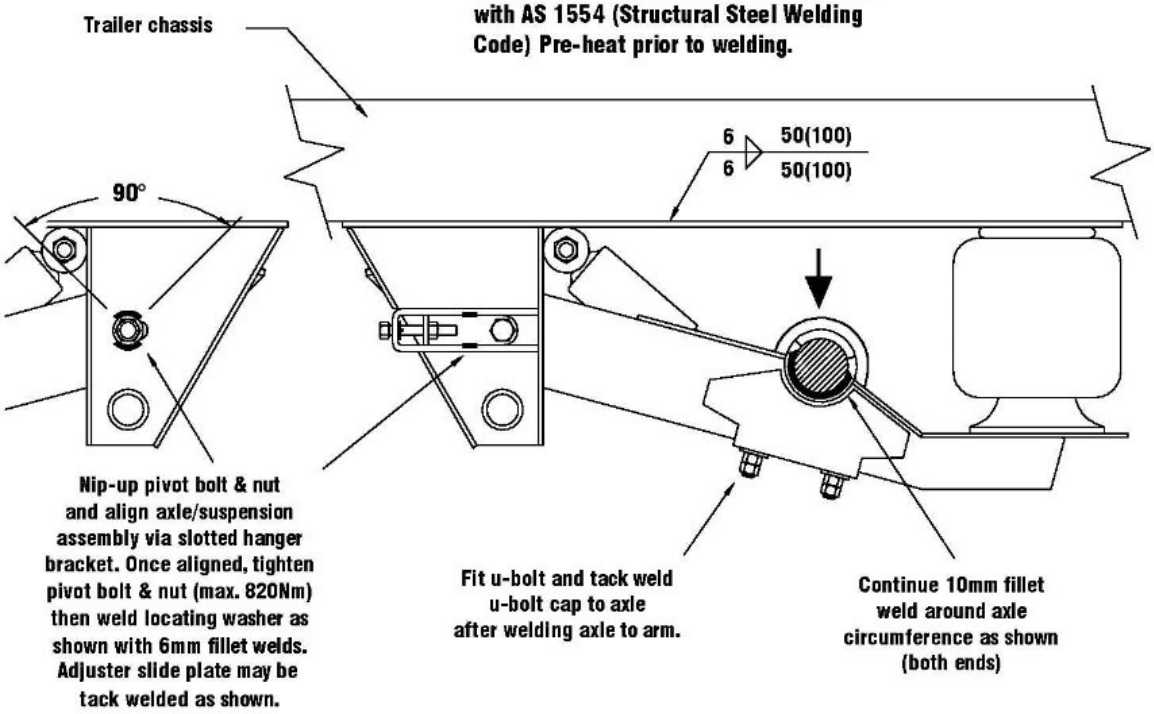


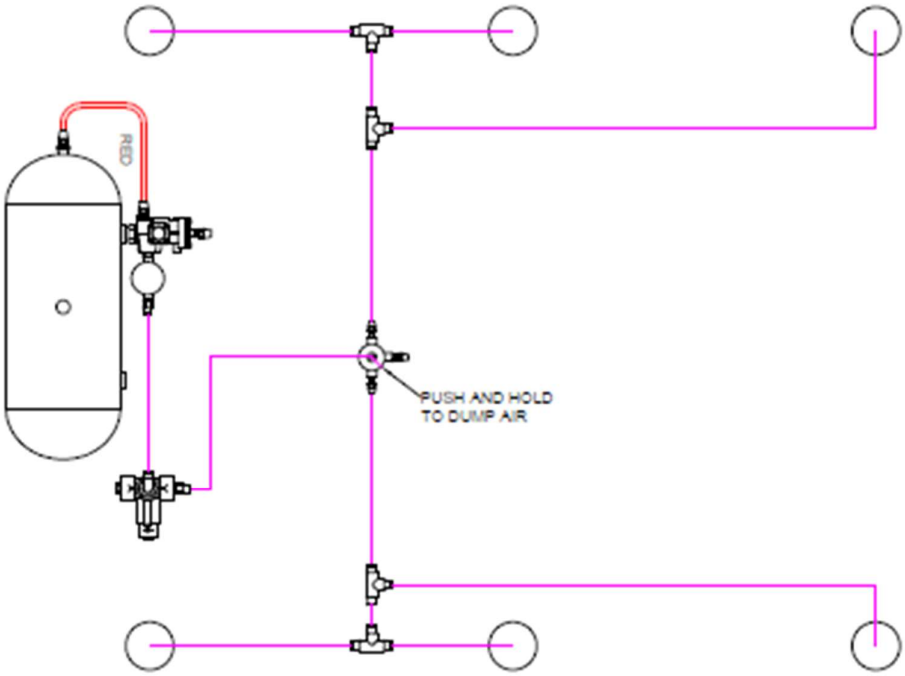
Shock absorber bolts fitted with Nyloc type nuts must be tightened firmly allowing for rotational movement of bushed components. Airbag arms are fitted with large polyurethane bushes with a steel inner. The bushes rely on the shear strength of the polyurethane for operation. Hence, the bolt & nut MUST be tightened fully (recommended 395- 410Nm (290-300ft.lbs.)).



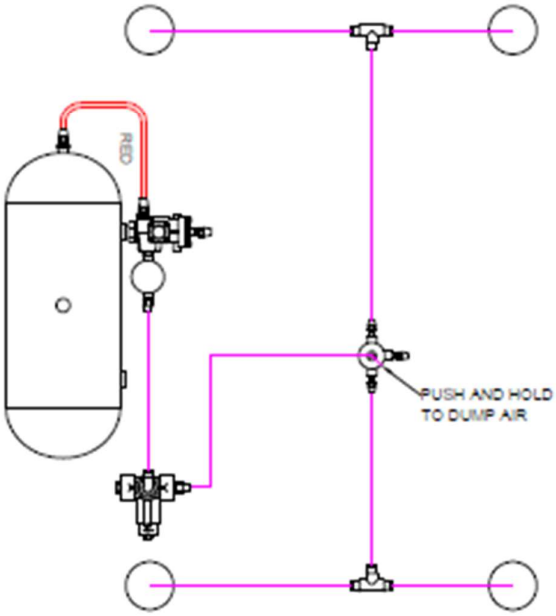


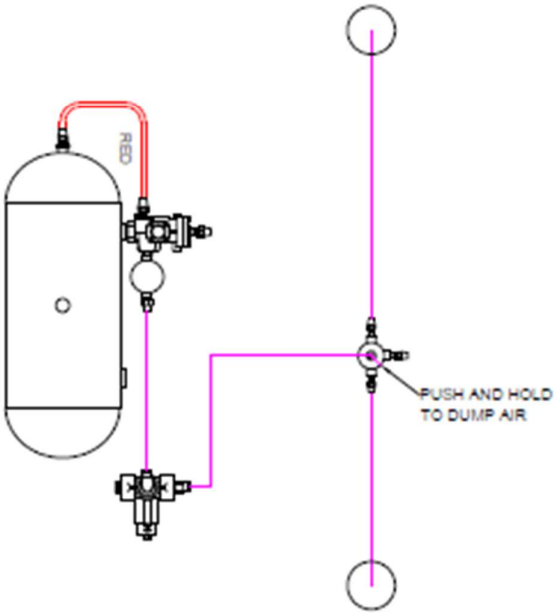
NOTE: Use low hydrogen welding processes. Welding procedures to be in accordance with AS 1554 (Structural Steel Welding Code) Pre-heat prior to welding.

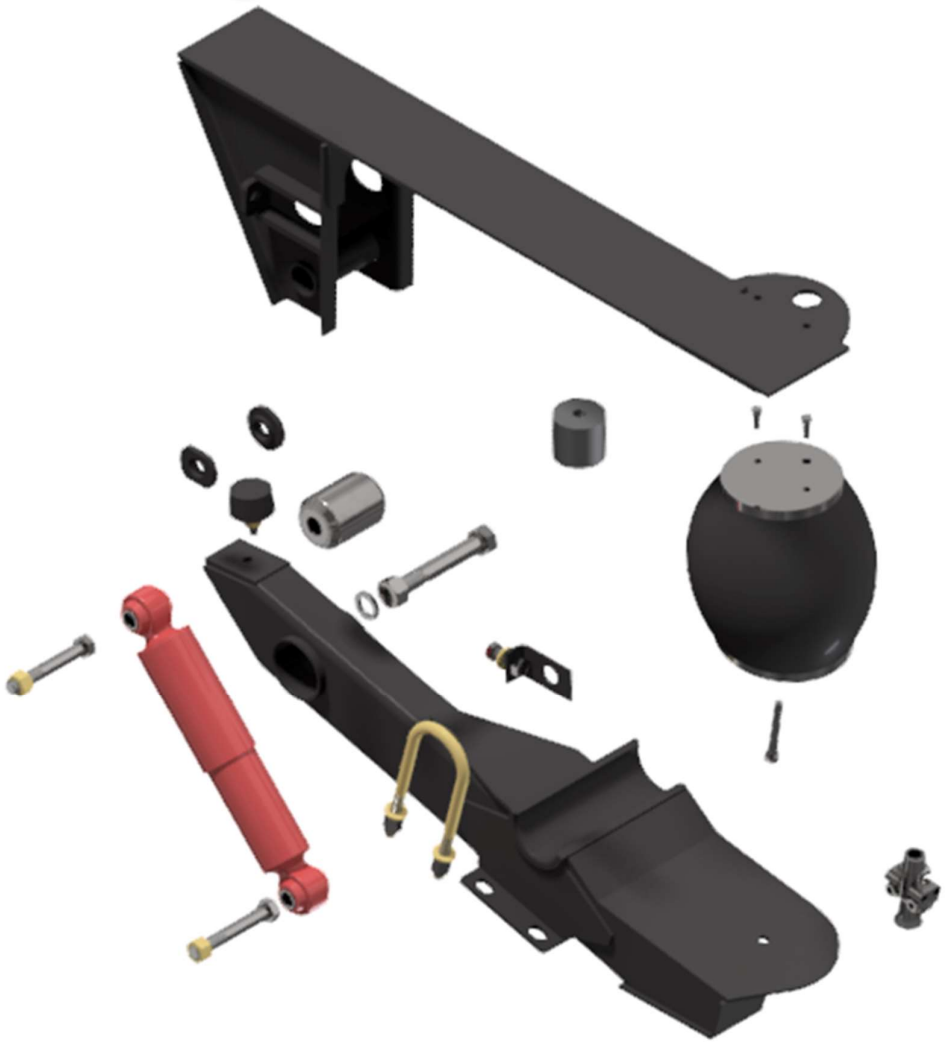




NO AIR SUPPLY TO THE AIR TANK
BEFORE AIRBAGS CAN BE EXHAUSTED







Spare Parts		
PART NUMBER	**DESCRIPTION**	
SS-TA100	Airbag Suspension Arm Assembly	
SS-TA100-T	Airbag Suspension Top Module	
SS-TA100-B	Airbag Suspension Bottom Arm	
SS-TA007	Replacement Airbag	
SS-TA1001	Bolt, Washer & Bush Kit	
SS-BUSH10	75mm Rocker Bush	
SS-PKRASW5100	Single Suspension Control Kit	
SS-PKRASW5200	Tandem Suspension Control Kit	
SS-PKRASW5300	Tri-axle Suspension Control Kit	
SS-TA012	Shock Absorber	
SS-TA038	Height Control Valve	

Axles

Once the suspension is fitted to the trailer chassis, rest the axle/s on top of the springs and place the axle saddles between the axle and springs, with the hole over the spring centre bolt. When fitting axles ensure camshaft rotation direction follows wheel rotation direction.
Fit the U-bolts and nip-up the U-bolt nuts such that the axle is held firmly in position, though being able to be moved with the tap of a hammer. Ensure flat washers are fitted between plate & nuts.

For over slung suspension (axle underneath the spring) arrangements ensure that the spring centre bolt is fitted with the bolt head to the underside of the spring. Hold the axle loosely in position under the springs with the U-bolt assemblies. Place the axle saddles in gap between the axle & springs with the axle saddle hole placed over the spring centre bolt. Nip-up the U-bolts as above. Please note that over slung configurations reduce the capacity of the spring and an extra leaf may need to be added to the spring pack.

Align the axle perpendicular and equally spaced either side of the chassis centre by tapping in place with a hammer. Once aligned, weld the axle saddles longitudinally both sides with full penetration 10mm fillet welds using low hydrogen electrodes or automatic welding processes. This process is necessary to prevent the axle assembly from rotating as a result of applied brake torque. Hence, good quality welds produced by sound welding practices are essential.

Tighten the U-bolts to the correct torque as per above suspension details.

3t CAPACITY 'S' CAM AIR BRAKE AXLE – "LAND CRUISER"

CTA-030846

Complete Axles						
PART NUMBER	**CAPACITY**	**SECTION**	**STUD PATTERN**	**BRAKE**	**LENGTH**	
AXL-65-00-BNGC	3.0t	65rd	6 Stud 139.7mm PCD	305x50	2280mm F/F	
AXL-75-00-BNGC	3.0t	75rd	6 Stud 139.7mm PCD	305x50	ALL	
Replacement Beams						
PART NUMBER	**CAPACITY**	**SECTION**	**STUD PATTERN**	**BRAKE**	**LENGTH**	
AXL-65-00-BOG	3.0t	65rd	6 Stud 139.7mm PCD	305x50	2280mm F/F	
AXL-75-00-BOG	3.0t	75rd	6 Stud 139.7mm PCD	305x50	ALL	
Spare Parts						
PART NUMBER	**DESCRIPTION**					
HUB-5051-12GFC-P	Studded 305x50 Hub-Drum 6 Stud 139.7mm PCD					
HUB-5051-12GCC-P	Studded 305x50 Hub-Drum 6 Stud 139.7mm PCD with Pole Wheel					
FB-CAP03	3" Dust Cap					
FB-ANK01	Standard Axle Nut Kit: Axle Nut, Washer & Split Pin					
FB-B041	Bearing Kit with: 102949/10 Bearings, Seals					
FB-B042	Bearing Kit with: 501349/14 Bearings, Seals					
FB-B001N	Pair 305x50 Brake Shoes					
FB-A008	LH Camshaft (S)					
FB-A009	RH Camshaft (Z)					
FB-CAMK01	Camshaft Kit: Roller Retainer, Bolt, Spring Washer, Shims, Circlips & O-Rings					
FB-A015-95	Manual Slack Adjuster 95mm, 5"-7" – (OBSOLETE – Not Shown)					
FB-A017-102	Automatic Slack Adjuster 5" & 6", Drilled 4" position					
FB-A017-PIN	Automatic Slack Adjuster Pin					
FB-A012K	Brake Spider Pin & Bush Kit – Anchor Pins, Grease Nipple & Spider Cam Bush					
FB-A012A	Brake Spider Bracket Kit – Keeper Plate, 1" Circlip,					
FB-A020S	Camshaft Bush					
FB-ASK01	Brake Shoe Kit with: Rollers, Return Spring					

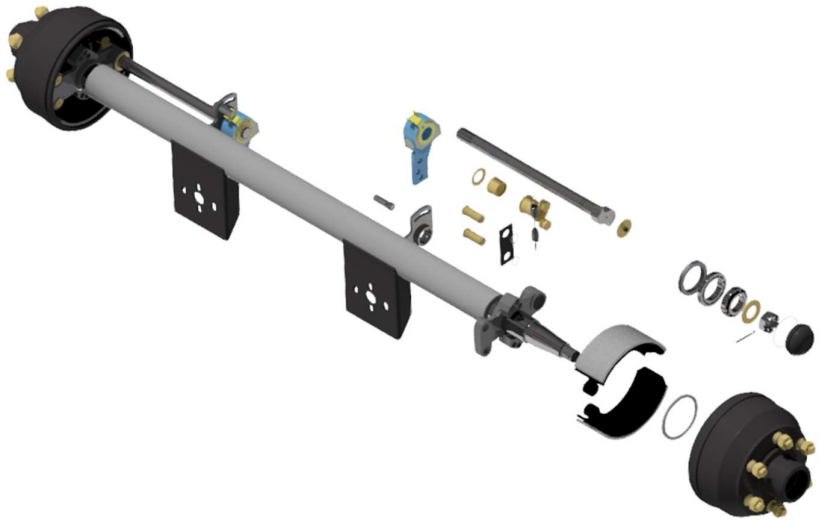
3t-5t CAPACITY 'S' CAM AIR BRAKE AXLE – "BEDFORD"

CTA-030847

Complete Axles					
PART NUMBER	**DESCRIPTION**	**STUD PATTERN**	**BRAKE**	**LENGTH**	
AXL-65-00-ANVB	3.0t Capacity, 65rd	6 Stud 205mm PCD	305x80	2330mm F/F	
AXL-75-00-ANVB	5.0t Capacity, 75rd	6 Stud 205mm PCD	305x80	2330mm F/F	
AXL-75-00-ANVB	5.0t Capacity, 75rd	6 Stud 205mm PCD	305x80	2308mm F/F	
AXL-75-00-ANVB	5.0t Capacity, 75rd	6 Stud 205mm PCD	305x80	2140mm F/F	
Replacement Beams					
PART NUMBER	**DESCRIPTION**	**STUD PATTERN**	**BRAKE**	**LENGTH**	
AXL-65-00-AOB	3.0t Capacity, 65rd	6 Stud 205mm PCD	305x80	2330mm F/F	
AXL-75-00-AOB	5.0t Capacity, 75rd	6 Stud 205mm PCD	305x80	ALL STD LENGTHS	
Spare Parts					
PART NUMBER	**DESCRIPTION**				
HUB-8040HBS-P	Studded 305x80 Hub-Drum 6 Stud 205mm PCD with Pole Wheel				
HUB-8040HBC-P	Complete 305x80 Hub-Drum 6 Stud 205mm PCD with Pole Wheel				
FB-CAP05	90mm Dust Cap				
FB-ANK01	Standard Axle Nut Kit: Axle Nut, Washer & Split Pin				
FB-A041	Bearing Kit with: 32210 Bearings, Seals				
FB-A001N	Pair 305x80 Brake Shoes				
FB-A008	LH Camshaft (S)				
FB-A009	RH Camshaft (Z)				
FB-CAMK01	Camshaft Kit: Roller Retainer, Bolt, Spring Washer, Shims, Circlips & O-Rings				
FB-A015-95	Manual Slack Adjuster 95mm, 5"-7" – (OBSOLETE – Not Shown)				
FB-A017-102	Automatic Slack Adjuster 5" & 6", Drilled 4" position				
FB-A017-PIN	Automatic Slack Adjuster Pin				
FB-A012K	Brake Spider Pin & Bush Kit – Anchor Pins, Grease Nipple & Spider Cam Bush				
FB-A012A	Brake Spider Bracket Kit – Keeper Plate, 1" Circlip,				
FB-A020S	Camshaft Bush				
FB-ASK01	Brake Shoe Kit with: Rollers, Return Spring				

5t-6t CAPACITY 'S' CAM AIR BRAKE AXLE – "JAP" & "JAPFORD"

CTA-009359



Complete Axles						
PART NUMBER	**CAPACITY**	**SECTION**	**STUD PATTERN**	**BRAKE**	**LENGTH**	
AXL-80-00-CXJ-B	5.0t	80rd	6 Stud 205mm PCD	305x110	ALL	
AXL-100-00-CXJ	6.4t	100rd	6 Stud 222.25mm PCD	305x110	ALL	
Replacement Beams						
PART NUMBER	**CAPACITY**	**SECTION**	**STUD PATTERN**	**BRAKE**	**LENGTH**	
AXL-80-00-COJ	5.0t	80rd	6 Stud 205mm PCD	305x110	ALL	
AXL-100-00-COJ	6.4t	100rd	6 Stud 222.25mm PCD	305x110	ALL	
Spare Parts						
PART NUMBER	**DESCRIPTION**					
HUB-7001XJS-B	Studded 305x110 Hub-Drum 6 Stud 205mm PCD					
HUB-7001XJS	Studded 305x110 Hub-Drum 6 Stud 222.25mm PCD					
HUB-7001XJC-B	Complete 305x110 Hub-Drum 6 Stud 205mm PCD					
HUB-7001XJC	Complete 305x110 Hub-Drum 6 Stud 222.25mm PCD					
FB-CAP05	90mm Dust Cap					
FB-ANK02	Jap Axle Nut Kit: Axle Nut, Washer & Split Pin					
FB-C041	Bearing Kit with: 32210 & 710949/10 Bearings, Seals					
FB-C003	Pole Wheel suit 7001 Hub-Drum					
FB-C001	Pair 305x110 Brake Shoes					
FB-A008	LH Camshaft (S)					
FB-A009	RH Camshaft (Z)					
FB-CAMK01	Jap Camshaft Kit: Roller Retainer, Bolt, Spring Washer, Shims, O'Rings & Circlips					
FB-A015-95	Manual Slack Adjuster 95mm, 5"-7" – (OBSOLETE – Not Shown)					
FB-A017-102	Automatic Slack Adjuster 5" & 6", Drilled 4" position					
FB-A017-PIN	Automatic Slack Adjuster Pin					
FB-C012K	Brake Spider Hardware Kit: Pins, Bush, Keeper Plate, Circlips, Grease Nipple					
FB-A020S	Camshaft Bush					
FB-CSK01	Brake Shoe Kit with: Rollers, Return Springs					

PERIODIC INSPECTION, MAINTENANCE & REPAIR

Safety First

To ensure safe operation and optimum component life, the following is recommended:
Match all running gear components: i.e. axles, wheels, tyres, brakes & suspensions must ALL be rated for the specified load.
Do not overload axle assembles, wheels or tyres.
Ensure wheel nut taper and wheel nut countersink match. Incorrect wheel nut seating may result in wheel failure or broken axle components.
Wheel Nuts must be tightened to correct torque (recommended 147Nm (108ft.lbs.) for 1/2 UNF wheel studs and recommended 395-410Nm (290-300ft.lbs.) for 7/8 BSF wheel studs).
Wheel nut torque to be checked after the first 160km of operation, re-checked after 5000km or 6 months (whichever occurs first) then periodically thereafter every 10000km or 12 months, whichever occurs first.
Care must be taken to ensure equal side to side loading of axle assemblies.
It is recommended that maximum speed & payload, correct tyre inflation pressure, wheel nut torque & bearing maintenance information be displayed along with other safety information in a conspicuous place on the completed trailer.

Suspension

To ensure trailer stability and safety, regular maintenance of suspension components is essential Check spring eye and rocker (if fitted) bushes and pins for wear or damage every 10000 km or 6 months whichever occurs first.
Failure to maintain suspension bushes and shackle pins will result in elongation of spring hanger mounting holes resulting in premature/increased maintenance costs.
U-bolts must be checked for tightness (recommended 105Nm (77ft.lbs.) for 16mm & 205Nm (150ft.lbs.) for 20mm U-bolts) after the first 1000km of operation and periodically thereafter every 10000km or 6 months whichever occurs first. *** LOOSE U-BOLTS MAY RESULT IN BROKEN SPRING LEAVES.***

Bearings

Proper maintenance of tapered roller bearings results in optimum bearing life. Bearings should be removed & repacked in grease every 6 months or 10,000 km whichever occurs first.

Bearing Removal

Remove wheel & tyre.
Remove grease cap & split pin.
Loosen adjusting nut and remove from axle.
Pull the hub assembly and remove it from the axle spindle.
Knock out inner bearing cone & grease seal.

Bearing Inspection

Inspect existing grease for dust & grime. If dust is evident, the seal must be replaced.
Clean existing grease from bearing.
Inspect bearings for wear and cup scouring. Ensure roller cage on bearing cone is intact. Replace bearing if necessary.
NOTE: When replacing bearings, replace both cup & cone.

Bearing Lubrication

Pack bearing cones with grease and install into wheel hub. Inner bearing cone is held in place with grease seal.
Repack bearings with grease every 6 months or 10,000 km whichever occurs first.
Recommended Grease: FUCHS RENOLIT LX2 or equivalent.

Hub Fitting & Adjustment

Ensure the washer is fitted between the adjusting nut and the outer bearing cone.
Tighten the adjusting nut while rotating the wheel hub in the opposite direction to the nut rotation until there is a slight bind (approx. 170 Nm (125ft.lbs.) torque) to be sure that all bearing surfaces are in contact.
Then, back off the adjusting nut 1/16 to 1/4 turn to the nearest locking slot or sufficiently to allow the hub to rotate freely within the limits on .025mm (0.001) to .25mm (.010) end play.
Lock adjusting nut into position with new split pin.
WARNING: Failure to back off adjusting nut will cause bearings to run hot and be damaged. Wheel may lock or come off during operation.

Wheel Nuts

Wheel nuts play an important role in the safety of any vehicle, as they secure the wheel in position. For wheel nuts to function properly; the taper on the nut must match the countersink in the wheel, the taper on both the nut and wheel must not be damaged, and the seating force of the nut must be sufficient to hold the nut in place.
Inspect wheel nut taper and wheel counters ink for damage every 10000km or 6 months, whichever occurs first. If wheel mounting holes become elongated, this may be the result of mismatched wheel & nut tapers and/or incorrect wheel nut torque.
Wheel Nuts must be tightened to correct torque (recommended 147Nm (108ft.lbs.) for 1/2 UNF wheel studs and recommended 395-410Nm (290-300ft.lbs.) for 7/8 BSF wheel studs).
Wheel nut torque to be checked after the first 160km of operation, re-checked after 5000km or 6 months (whichever occurs first) then periodically thereafter every 10000km or 6 months, whichever occurs first.

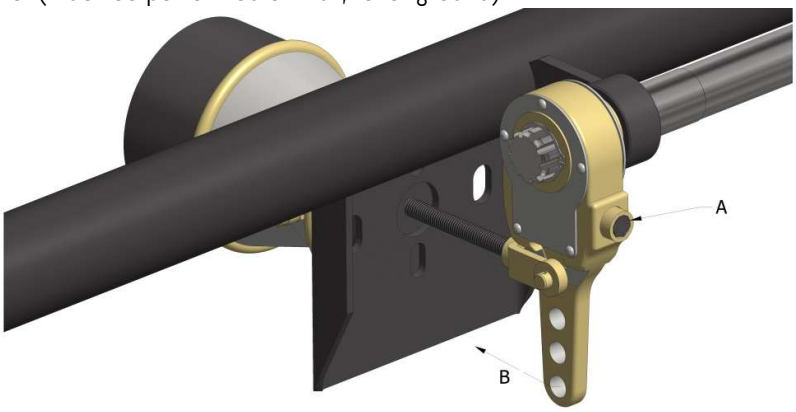
Brakes

Ensure all brake components are always in good repair. Brake performance relies upon proper lining material and thickness. Hence, use only genuine replacement parts.
Trailermaster 'S' cam foundation brakes comprise fixed upper pivots with removable roller type cam followers.
Worm type camshaft slack adjusters are fitted to air operated actuators. Brake Return springs are to be fitted as follows.

Failure to maintain brake components and adjustment may result in loss of brake efficiency and possible dislodgment of roller cam followers.
Check all brake components including shoes/linings & drums for wear or damage every 10,000 km or 6 months whichever occurs first.
Replace worn or damaged components if necessary.

Manual Slack Adjusters

Adjustment Procedure: (Must be performed on flat, level ground)



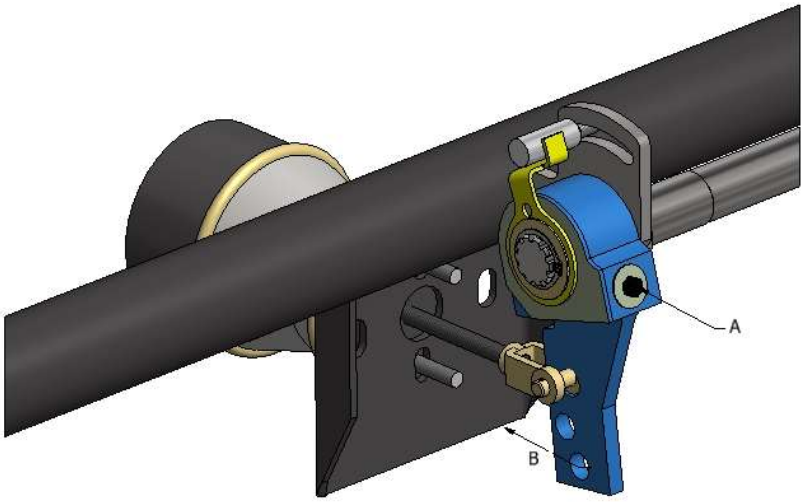
If adjusting brakes with spring brakes fitted, insert the spring brake release tool, washer & nut and wind back the spring to release the park brakes.

WARNING: Only release park brakes from one wheel at a time.

1. Raise wheel that is to have brake adjusted, off the ground.
2. Use 9/16" spanner, depress locking collar and rotate adjuster screw on slack adjuster 'A' so that the rod inside the booster is pulled in towards 'B' the booster until the wheel can no longer rotate.
3. Back off adjuster screw on the slack adjuster until wheel rotates freely (approx. 1/4 turn).
4. Lower wheel back to the ground.
5. For brakes fitted with spring brakes, remove release tool from the back of the spring brake T slot to apply park brake and secure release tool in place on spring brake housing.

Automatic Slack Adjusters

Adjustment Procedure: (Must be performed on flat, level ground)



If adjusting brakes with spring brakes fitted, insert the spring brake release tool, washer & nut and wind back the spring to release the park brakes.

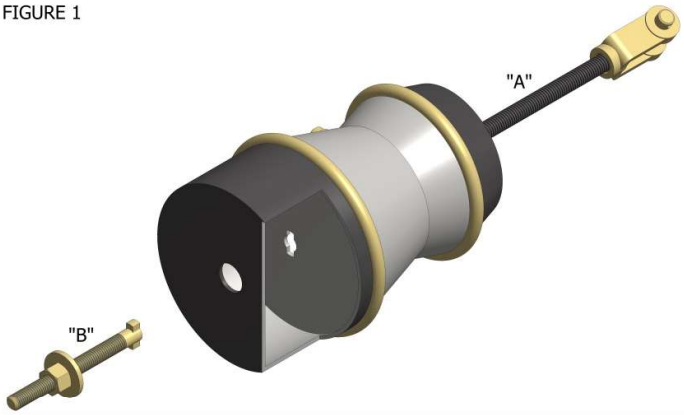
WARNING: Only release park brakes from one wheel at a time.

1. Raise wheel that is to have brake adjusted, off the ground.
2. Use 12mm spanner, rotate adjuster screw on slack adjuster 'A' clockwise so that the rod inside the booster is pulled in towards 'B' the booster until the wheel can no longer rotate.

3. Back off adjuster screw on the slack adjuster until wheel rotates freely (approx. 1/4-1/2 turn).
4. A ratchet sound will be heard
5. Lower wheel back to the ground.
6. For brakes fitted with spring brakes, remove release tool from the back of the spring brake T slot to apply park brake and secure release tool in place on spring brake housing.

Spring Brake & Boosters Installation

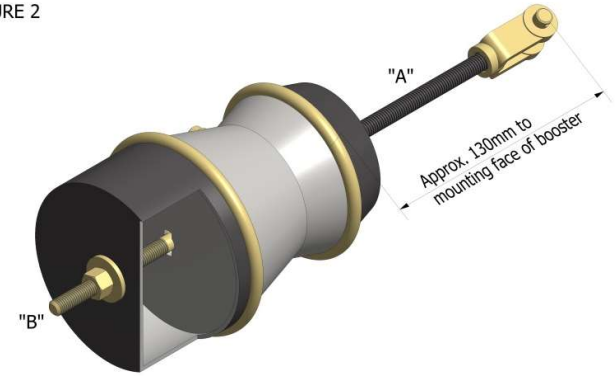
FIGURE 1



The brake actuator/spring brake shaft "A" must be trimmed on assembly to ensure that at mid stroke with the yoke fitted to the appropriate slack adjuster position, the shaft "A" is perpendicular to the slack adjuster arm.
Ensure that the emergency release tool "B" is fitted to the spring brakes and that the spring is wound back prior to trimming the shaft length, otherwise the shaft "A" may be to short.
A ¾" AF Spanner must be located in an inconspicuous position forward of the leading axle to suit the spring brake emergency release tool nut. A combination ring/open end spanner attached to the inside chassis member via a bolt & wing nut to the ring end will suffice.

To install spring brakes correctly use spring brake tool "B" and remove dust plug (if fitted) from the bottom of spring brake to reveal T slot as per figure 1.

FIGURE 2



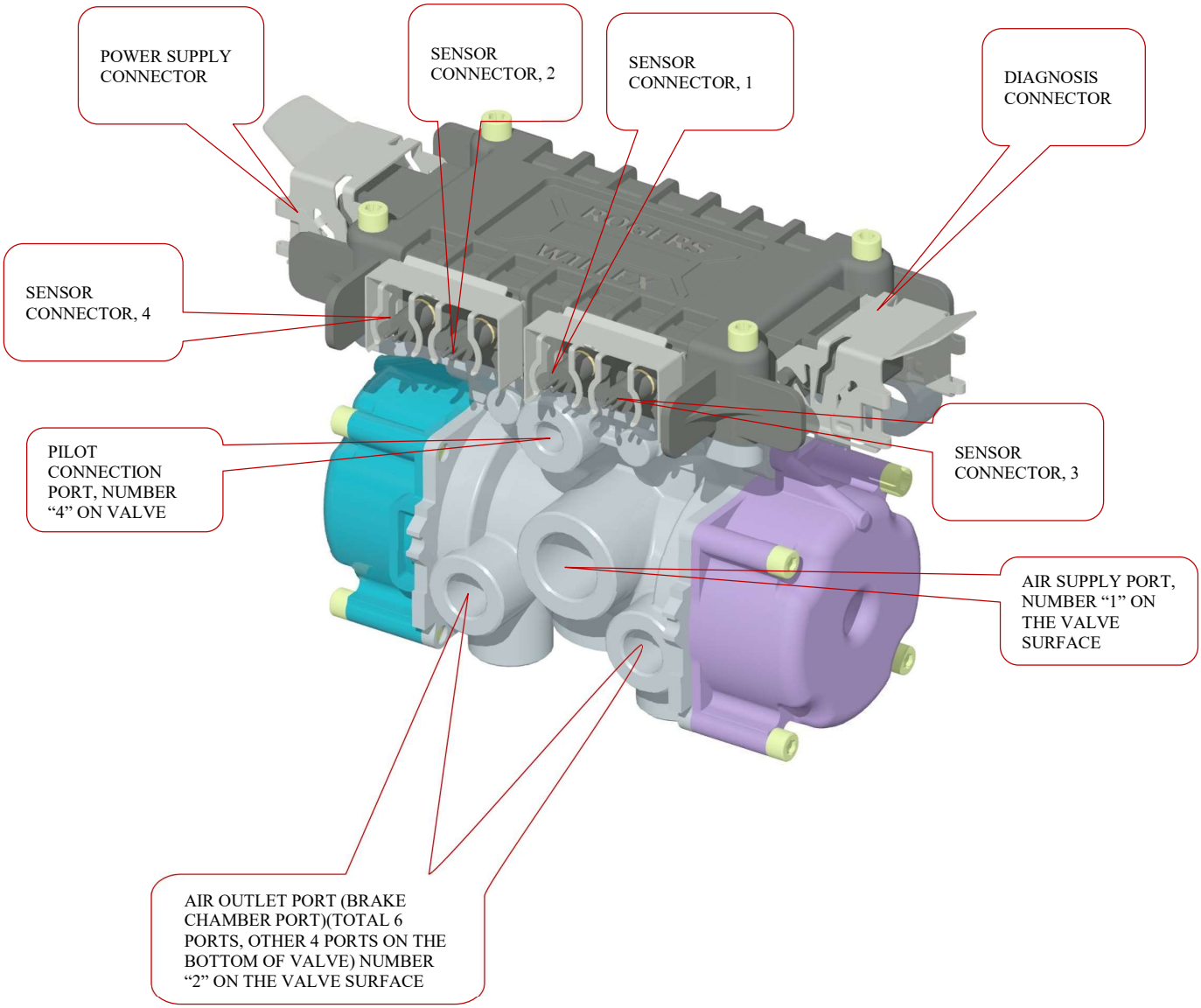
Insert spring brake tool "B" into rear of spring brake and rotate at 90° so tool cannot be pulled out. Place washer and nut onto spring brake tool "B" and tighten until the nut can't be tightened anymore as per figure 2. Trim the spring brake shaft "A" to length to ensure when at mid stroke with the clevis fitted the spring brake shaft "A" is perpendicular to the slack adjuster. Once shaft "A" is cut retain the spring brake release tool "B" in place for fitting the axle assembly and brake adjustment. After assembly and adjustment remove the spring brake tool "B" from rear of the spring brake and replace to original position in socket on side of housing.

When installing the air booster, cut the shaft as per above. No spring brake tool is required for or fitted to boosters.

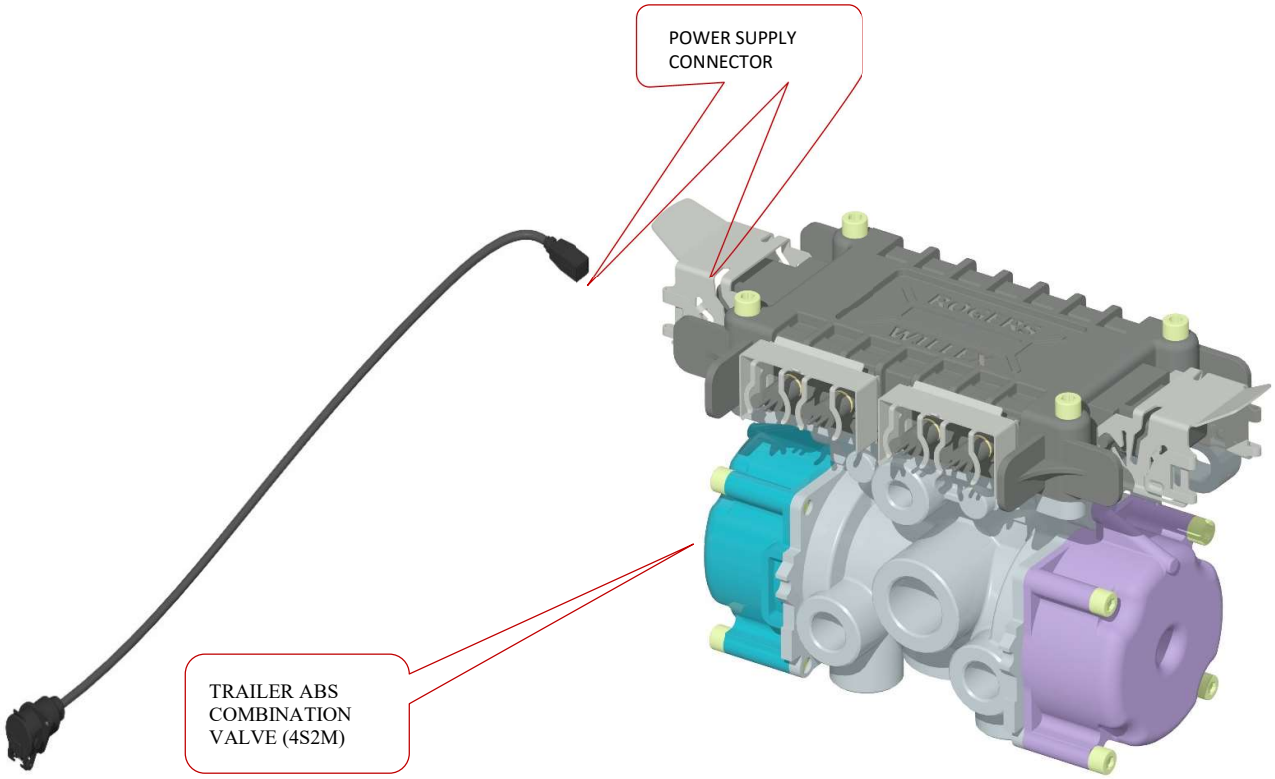
Installation of Trailer ABS

Thank you for purchasing a Rogers-Willex ABS system. To enable you install and use the system as easy as possible, please note the following installation instructions:

1. Interface diagram of trailer combination valve assembly (4S/2M)



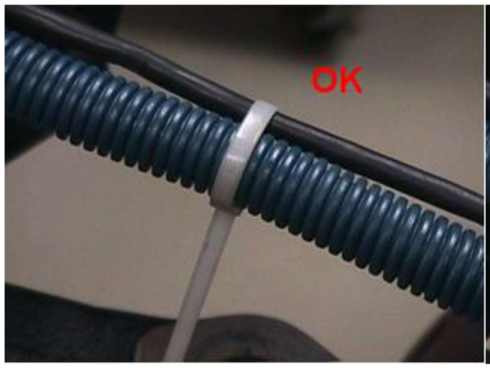
2. Connection diagram of trailer combination valve and ISO7638 power cable



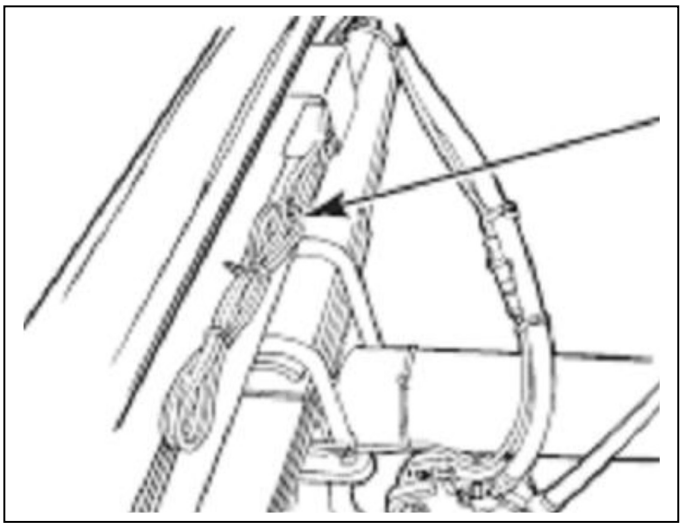
3. Air pipe connection please see drawing named “trailer ABS air pipe connection diagram”.
4. Wire harness connection please see drawing named “circuit connection diagram”.
5. Pin definition of ISO7638 power cable please see drawing named “ISO7638 power cable diagram”.
6. Cable installation instructions

The plugs for the electrical power supple and diagnosis have devices to protect against wrong connection. All plug connections are fitted with special locking clips. To connect a cable, it is necessary to open the locking clip, push in the plug and then close the locking clip again. If a locking clip Is hard to move after a lengthy operating time, it is possible to use a screwdriver to lift the locking clip carefully in order not to damage ECU. The cables are fixed in the trailer frame or cable clamp by cable tie. Make sure the cable length between the two cable ties is no longer than 30cm to avoid cable vibration. We suggest fixing sensor cable and braking air pipe together and assure cables out of tension, to avoid internal wiring harness snapping. All cable ties should not be too tight, so long as they can fix wire harness, as shown in the following picture:

After all the connections are finished, please make the cable as shape "Z", not in coil. Please see the following picture.



CABLE DAMAGE CAUSED BY BEING TOO TIGHT TOO TIGHT



IF THE CABLE IS TOO LONG
TIE IN A Z SHAPE

Note: Always ensure sensors are plugged into ports 1 & 2 on the ABS valve. Check valve for locations of ports 1, 2, 3, 4.

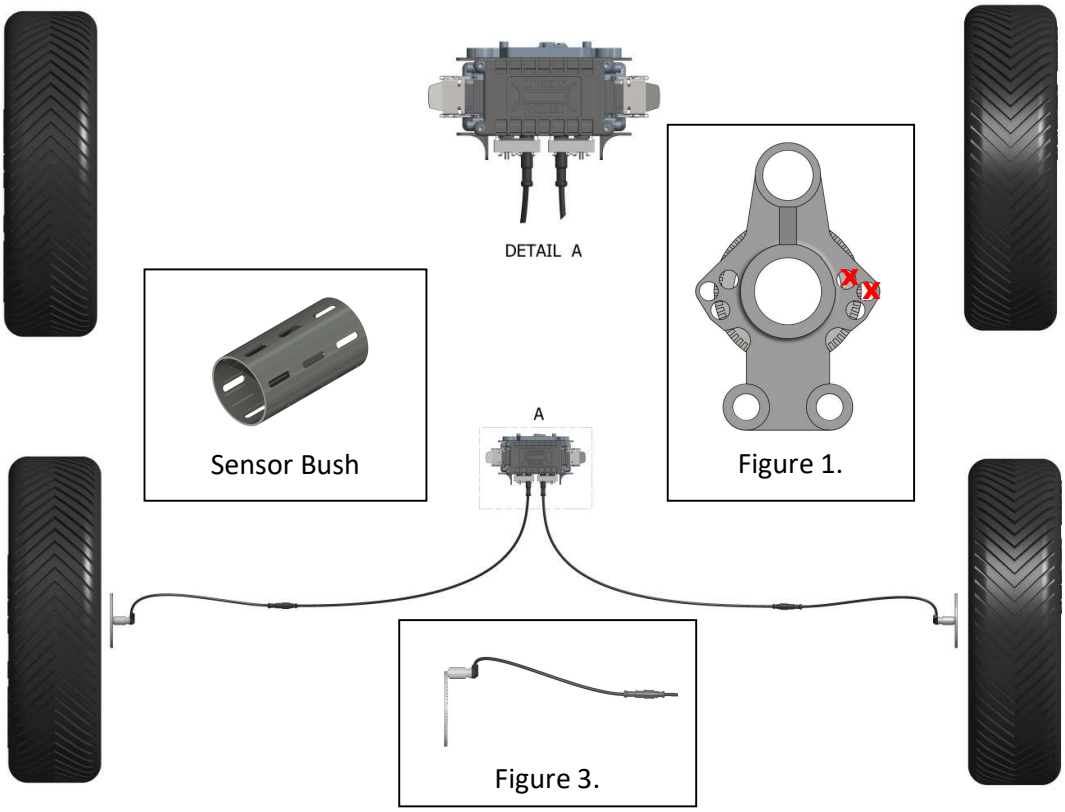
Sensor Installation.

In tandem configurations sensors are installed to the front axle only. In tri-axle sensors are installed to the front and rear axles.

Install Sensors as follows:

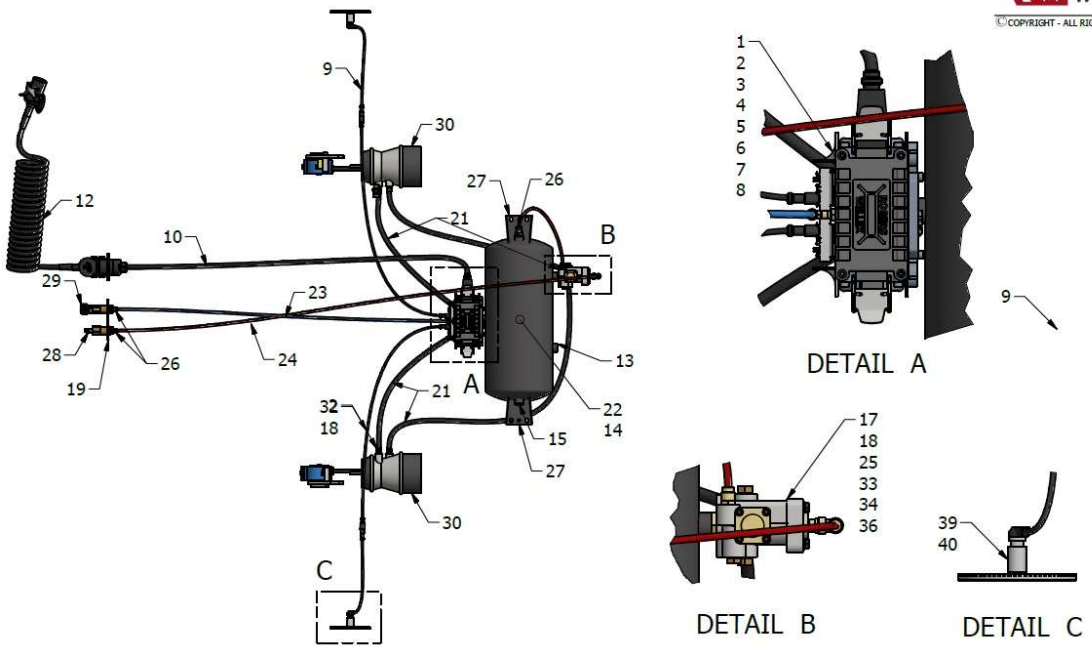
1. Install Sensor Bush Spring into the sensor location, that is central to the pole wheel teeth as shown in Figure 1, so the tabs are firm to be back of the brake spider
2. Push in sensor so the tip touches the pole wheel as per Figure 3.
3. Rotate hub to confirm pole wheel is straight and hub is tight

Loose hubs or pole wheel not being straight may result in an ABS fault warning for improper clearance



SINGLE-AXLE ABS AIR CONTROL KITS

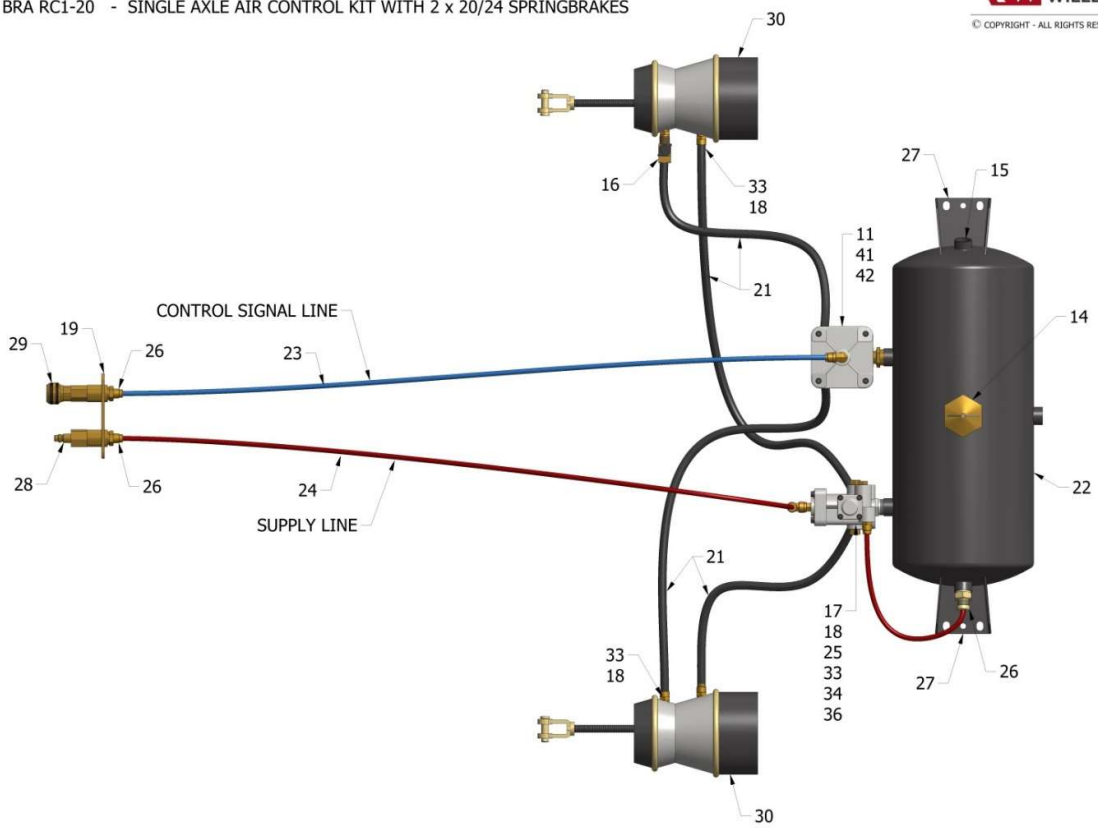
BRA RC1-ABS - SINGLE AXLE AIR CONTROL KIT WITH 2 x 12/16 SPRINGBRAKES



Only Use ABS ports 1 & 2 on ABS valve – Check Valve for Port Numbers

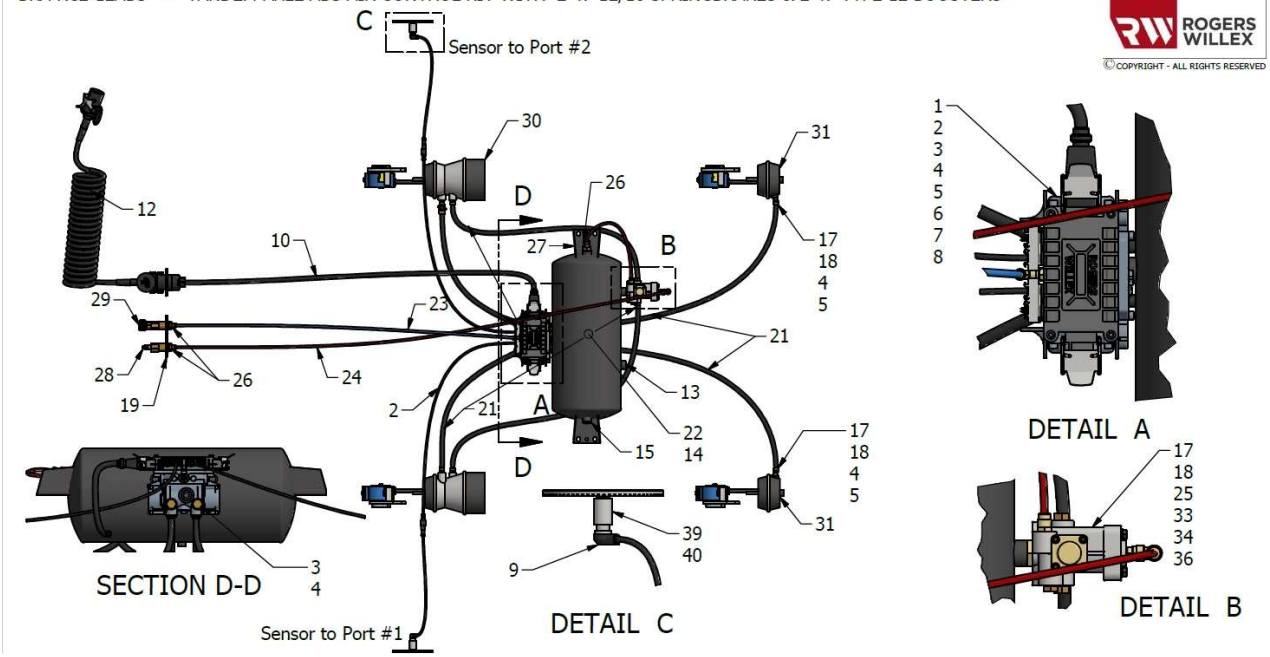
SINGLE AXLE AIR CONTROL KITS

BRA RC1 - SINGLE AXLE AIR CONTROL KIT WITH 2 x 12/16 SPRINGBRAKES
BRA RC1-20 - SINGLE AXLE AIR CONTROL KIT WITH 2 x 20/24 SPRINGBRAKES



TANDEM-AXLE ABS AIR CONTROL KITS

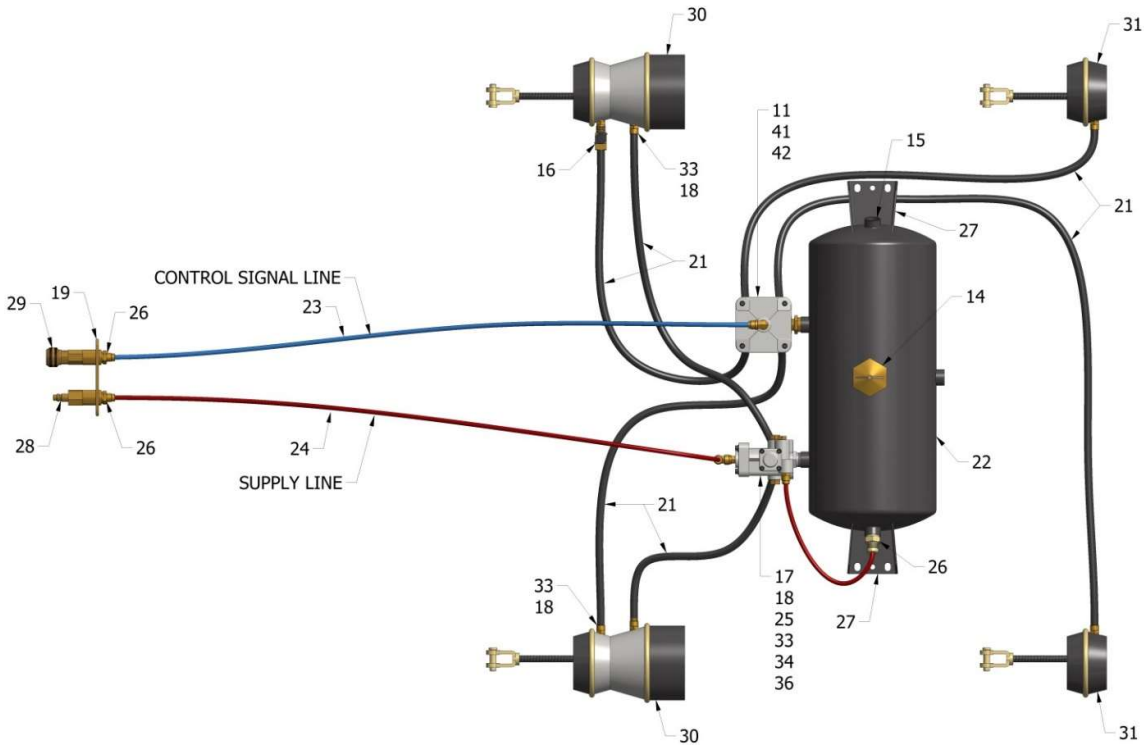
BRA RC2-12ABS - TANDEM-AXLE ABS AIR CONTROL KIT WITH 2 x 12/16 SPRINGBRAKES & 2 x TYPE 12 BOOSTERS



Only Use ABS ports 1 & 2 on ABS valve – Check Valve for Port Numbers

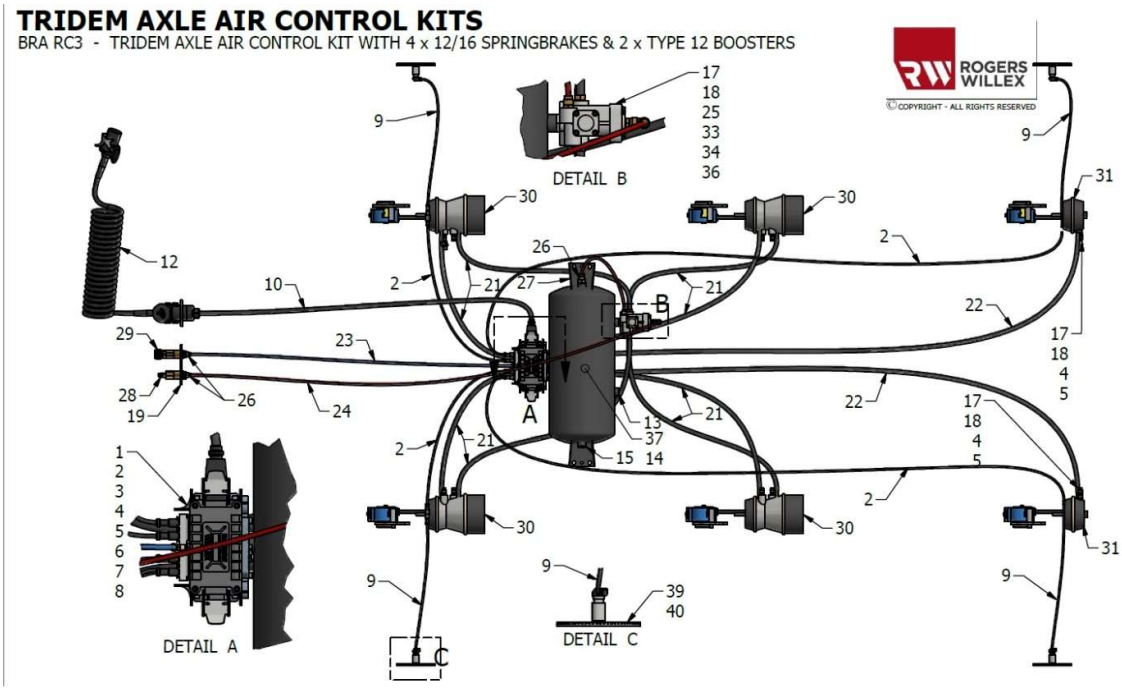
TANDEM AXLE AIR CONTROL KITS

BRA RC2-12 - TANDEM AXLE AIR CONTROL KIT WITH 2 x 12/16 SPRINGBRAKES & 2 x TYPE 12 BOOSTERS
BRA RC2-20 - TANDEM AXLE AIR CONTROL KIT WITH 2 x 20/24 SPRINGBRAKES & 2 x TYPE 20 BOOSTERS



TRIDEM AXLE AIR CONTROL KITS

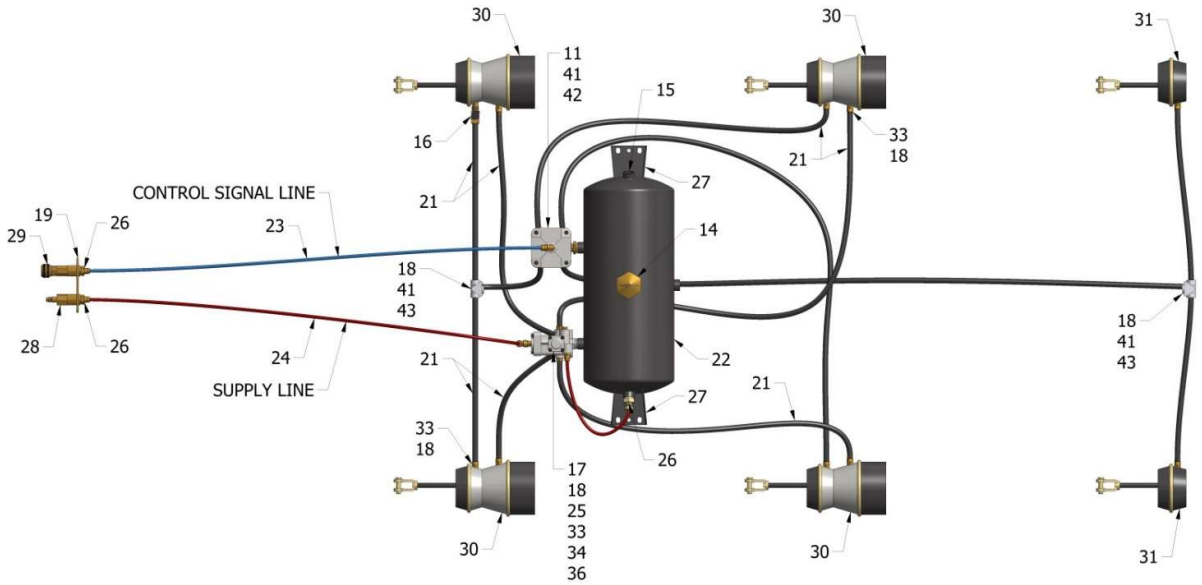
BRA RC3 - TRIDEM AXLE AIR CONTROL KIT WITH 4 x 12/16 SPRINGBRAKES & 2 x TYPE 12 BOOSTERS

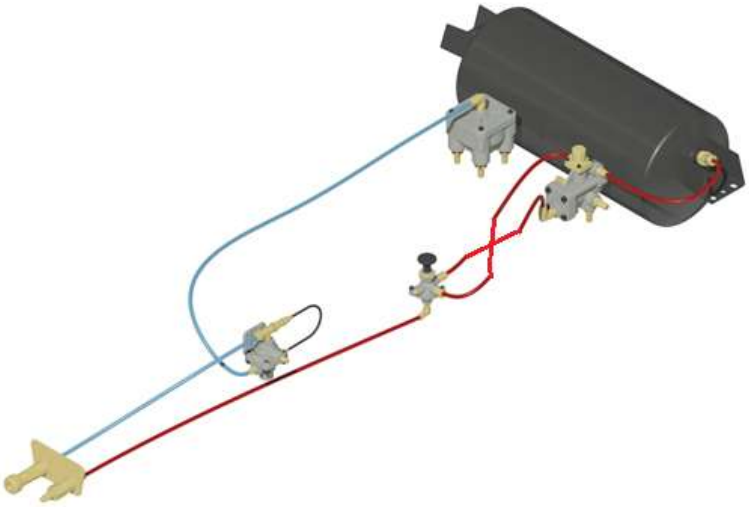


Use ABS ports 1 & 2 for Front Axle and 3 & 4 for Rear Axle on ABS valve – Check Valve for Port Numbers

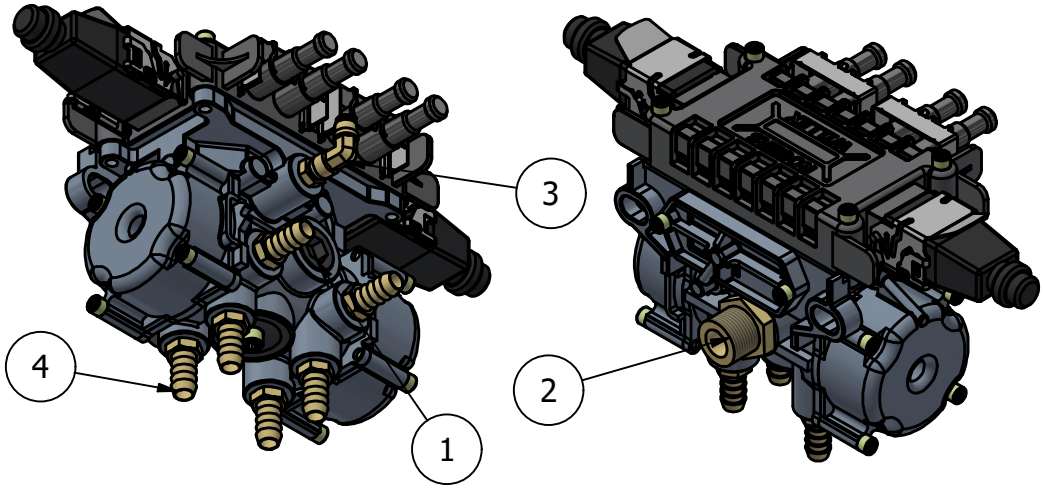
TRIDEM AXLE AIR CONTROL KITS

BRA RC3 - TRIDEM AXLE AIR CONTROL KIT WITH 4 x 12/16 SPRINGBRAKES & 2 x TYPE 12 BOOSTERS

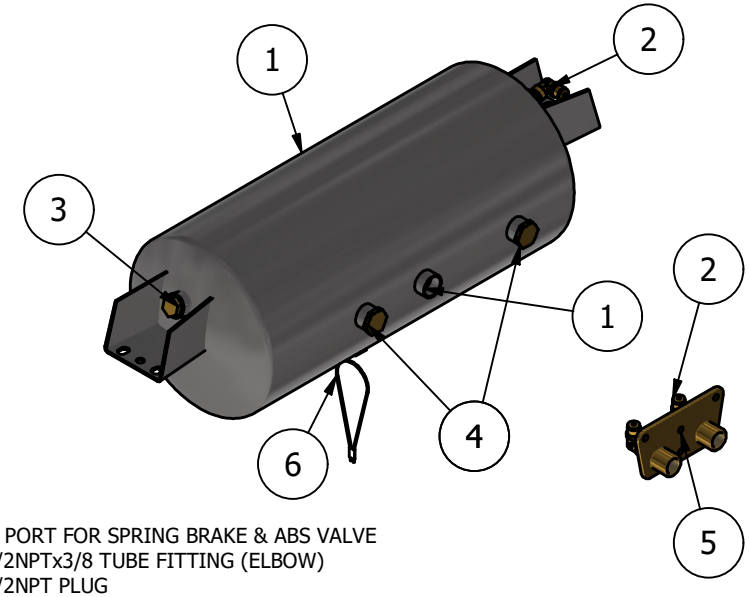




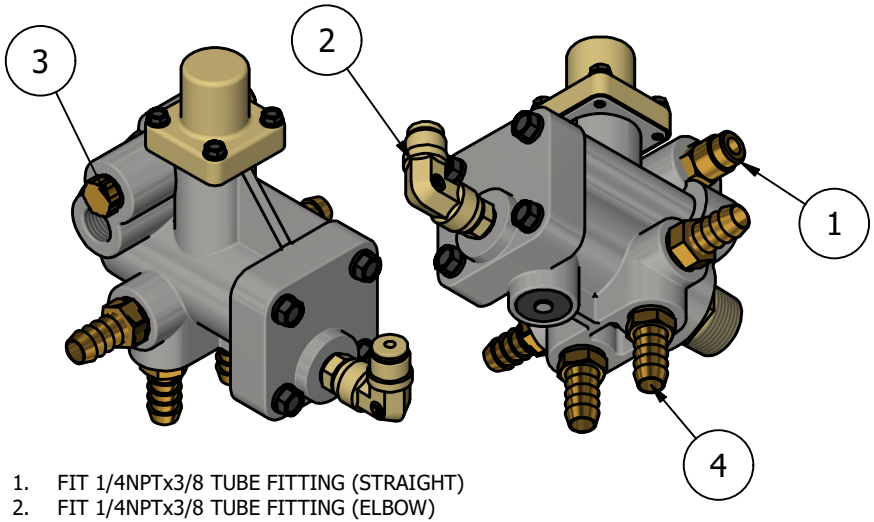
Yard Release is installed into Red Supply line and the Pressure Reduction Valve into Blue Service Line



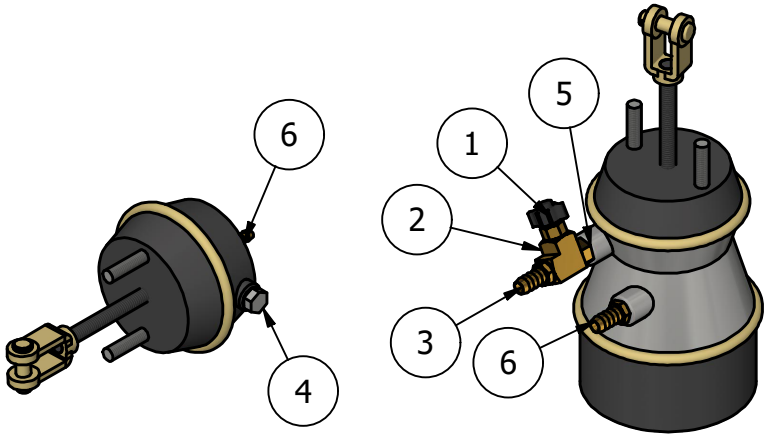
1. REMOVE M26 PLUG FROM REAR OF VALVE AND FIT TO FRONT OF VALVE AS SHOWN
2. FIT M26x3/4NPT INTO VALVE WITH SHORTER M26 THREAD AND O-RING INTO VALVE
3. FIT M16x3/8 TUBE FITTING
4. FIT M16 PLUG OR HOSE BARB
   - SINGLE: 4 x PLUG & 2 x HOSE BARB
   - TANDEM: 2 x PLUG & 4 x HOSE BARB
   - TRI AXLE: 6 x HOSE BARB



1. OPEN PORT FOR SPRING BRAKE & ABS VALVE
2. FIT 1/2NPTx3/8 TUBE FITTING (ELBOW)
3. FIT 1/2NPT PLUG
4. FIT 3/4NPT PLUG
5. COUPLING MANIFOLD PLATE
6. FIT DRAIN PLUG



1. FIT 1/4NPTx3/8 TUBE FITTING (STRAIGHT)
2. FIT 1/4NPTx3/8 TUBE FITTING (ELBOW)
3. FIT 1/4NPT PLUG (IF YARD RELEASE FIT ADDITIONAL 1/4NPTx3/8 TUBE FITTING (STRAIGHT)
4. FIT M16 PLUG OR 3/8NPTx1/2 HOSE BARB
   - SINGLE: 4 x PLUG & 2 x HOSE BARB
   - TANDEM: 2 x PLUG & 2 x HOSE BARB
   - TRI AXLE: 4 x HOSE BARB



1. PRESSURE TEST FITTING 3/8NPT - ONLY TO 1 SPRING BRAKE
2. 3/8NPT MxFxF TEE - ONLY TO 1 SPRING BRAKE
3. 3/8NPTx1/2 HOSE BARB IF FITTED TO MxFxF TEE, REFER ITEM 6 IF NO TEE
4. 3/8NPT (IF T20) OR M16 (IF T12) PLUG
5. M16Mx3/8NPTF ADAPTOR (ONLY IN 12/16)
6. 3/8NPTx1/2 (IF T20/24) OR M16x1/2 (IF T12/16) HOSE BARB

REV.	DETAILS	DATE

ROGERS WILLEX

Rogers Axle & Spring Works Pty. Ltd.

3 ANTIMONY STREET, CAROLE PARK. QLD
PH: (07) 3271 1744

DRAWN: RogersWillex
DATE:
CHK'D:
CHK'DATE: 6/02/2023

3rd ANGLE PROJECTION

DRAWING No.: Air Control Kit Fitment

SHEET: 1 OF 1 REV

No.	PART NUMBER	DESCRIPTION
1	CS-A01-24	ROGERS 24V ABS ECU
	CS-A01-12	ROGERS 12V ABS ECU
2	CS-A02	ABS Sensor Extension Cable 3m
3	CS-A03	M16 PLUG
4	CS-A04	M16 FIBRE WASHER/O RING
5	CS-A05	M16 x 1/2" HOSE BARB
6	CS-A06	M16 x 3/8" TUBE
7	CS-A07	M26 x 3/4" NPT (HOSE ADAPTER)
8	CS-A08	M26 O-RING
9	CS-A09	ABS Sensor,speed, elbow
10	CS-A13-6	24V x 6M ECU POWER CABLE
	CS-A13-13	24V x 13M ECU POWER CABLE
	CS-A13-6-12V	12V x 6M ECU POWER CABLE
	CS-A13-13-12	12V x 13M ECU POWER CABLE
11	CS-002	RELAY VALVE
12	CS-A12	24V ABS/EBS SUZI COIL
	CS-A12-12	12V ABS/EBS SUZI COIL
13	CS-032	3/4” PLUG
14	CS-023P	1/4” DRAIN COCK w/ PULL CABLE
	CS-023	1/4” DRAIN COCK
15	CS-026	1/2” PLUG
16	CS-C053	TEST POINT ISO 3/8" NPT
17	CS-A05	M16 x 1/2" HOSE BARB
18	CS-022	1/2” HOSE CLAMP
19	CS-006	COUPLING PLATE
20	CS-056	STREET TEE 3/8" M x F x F
	CS-A010	M16 MALE x 3/8” NPT FEMALE ADAPTER
21A	CS-033	1/2” ID SAE J1402C HOSE – 6.5m
21B	CS-033	1/2” ID SAE J1402C HOSE – 7.5m
22	CS-033	1/2” ID SAE J1402C HOSE – 8.5m
23	CS-059	3/8" O.D. NYLON TUBE BLUE
24	CS-060	3/8" O.D. NYLON TUBE RED
25	CS-003M	SPRING BRAKE VALVE
26	CS-014	PTC CONNECTOR 3/8" x 1/2" NPT
28	CS-028	FEMALE THREAD BAYONET ADAPTER
29	CS-029	FEMALE THREAD BAYONET COUPLING
30	CS-004	12/16 SPRING BRAKE
30	CS-039	20/24 SPRING BRAKE
31	CS-005	TYPE 12 AIR BOOSTER
31	CS-038	TYPE 20 AIR BOOSTER
32	CS-021	3/8" NPT x 1/2" HOSE BARB
	CS-A05	M16 x 1/2" HOSE BARB
33	CS-016	1/4" NPT x 3/8" TUBE
34	CS-025	3/8" NPT PLUG
35	CS-036	1/4" NPT PLUG
36	CS-015	1/4" NPT x 3/8" TUBE 90°
37	CS-001	STD AIR TANK - 1488 CI
37	CS-001-J	JUMBO AIR TANK - 2850 CI
38	CS-090	PRESSURE REDUCTION VALVE
41	CS-012	1/2" NPT x 1/2" HOSE BARB
42	CS-013A	3/4" X 1/2" REDUCING NIPPLE

TRAILER DETAILS INFORMATION

ROGERS-WILLEX to complete	
ROGERS-WILLEX PART NUMBER	
AXLE JOB NUMBER / HUB FACE TO FACE (mm)	/
RW INV # / DATE SUPPLIED	/
Trailer Manufacturer to complete	
TRAILER MANUFACTURERS NAME	
VEHICLE IDENTIFICATION NUMBER (VIN)	
DATE OF TRAILER MANUFACTURE	
TRAILER TYPE	
TRAILER MODEL	
Customer to complete	
CUSTOMER NAME	
CUSTOMER EMAIL	
CUSTOMER POSTCODE	
TRAILER REGISTRATION NUMBER	
Please complete and return via email to admin@rogerswillex.com.au. Failure to provide may result in warranties being void.	

CHANGE OF OWNERSHIP DETAILS

Customer to complete	
CUSTOMER NAME	
CUSTOMER EMAIL	
CUSTOMER POSTCODE	
TRAILER REGISTRATION NUMBER	
VEHICLE IDENTIFICATION NUMBER (VIN)	
Please complete and return via email to admin@rogerswillex.com.au. Failure to provide may result in warranties being void.	