

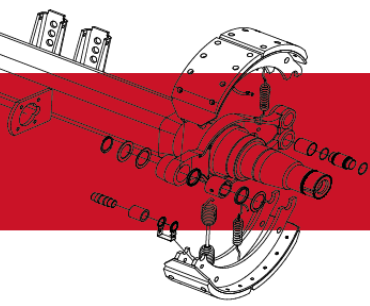
Steer Axle Spare Parts

100/300/860 Series Steer axle Parts

- **Steer Axle Identification – “F” and “A” Series**
- **Track Rod Bush Kits**
- **Shock Absorber Kits**
- **Hydraulic Rams**
- **Air-Locking/Unlocking Cylinders**
- **Torpress Bags**
- **Steer Angle Adjusting Bolts**
- **Kingpin Kits**
- **Standard Air Chamber Brackets**

980 Series Steer axle Parts

TIS System Parts



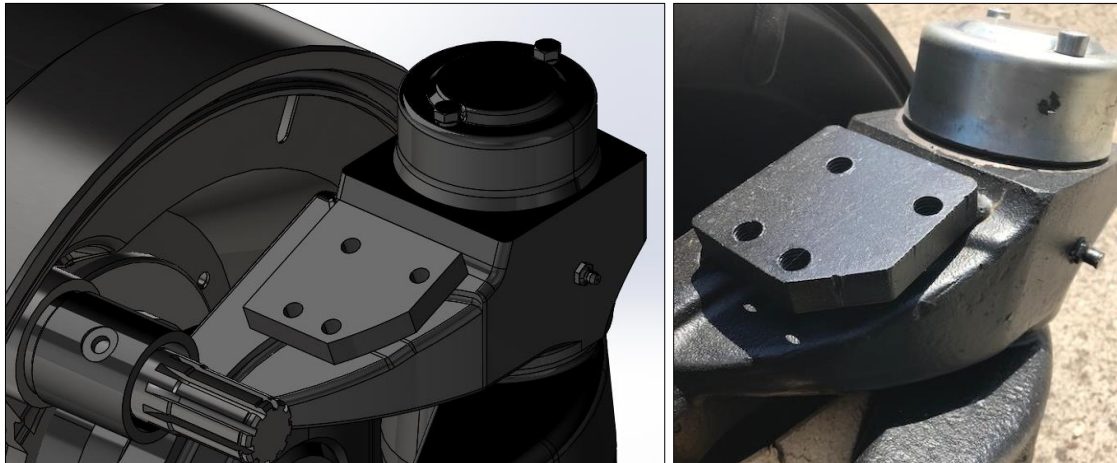
We supply two styles of steer axle beams, “F” Series and “A” series. They are easily identifiable by the type of Air Chamber Bracket (ACB) mounting.

On 100 & 300 Series steer axles:

- If the ACB is mounted to the steer axle through tapped holes directly into the knuckle it is an “F” series.
ACB bolt 63163 – M12x1.75x25
- If the ACB is mounted to the steer axle through a 16mm block welded to the knuckle it is an “A” series.
ACB bolt allen head cap bolt 37089 – M12x1.25x25

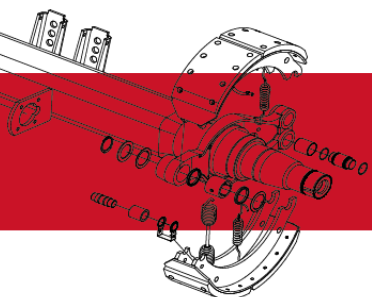
On 860 Series steer axles:

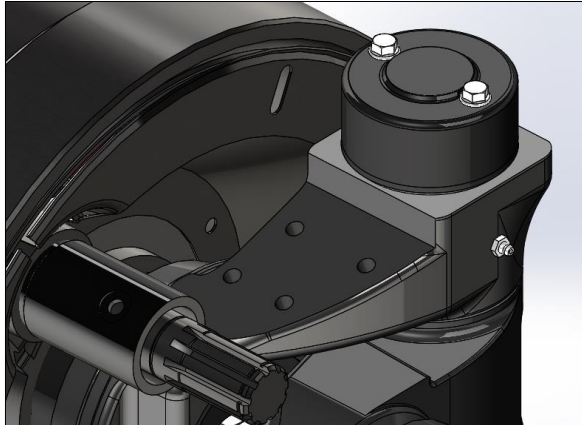
- The ACB is mounted on the bottom. If the Track Rod bolt has a grease nipple in the track rod bolt it is an “F” series. Also the steer angle limiting bolt is threaded into the spindle.
- The ACB is mounted on the bottom. If the Track Rod bolt has no grease nipple in the track rod bolt it is an “A” series. Also the steer angle limiting bolt is threaded into the beam knuckle.



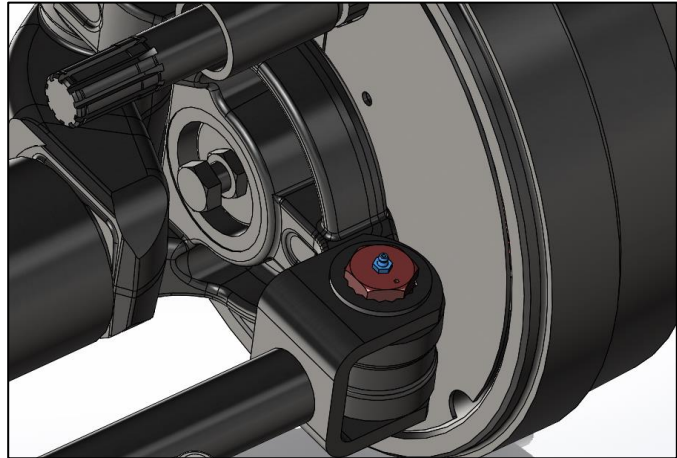
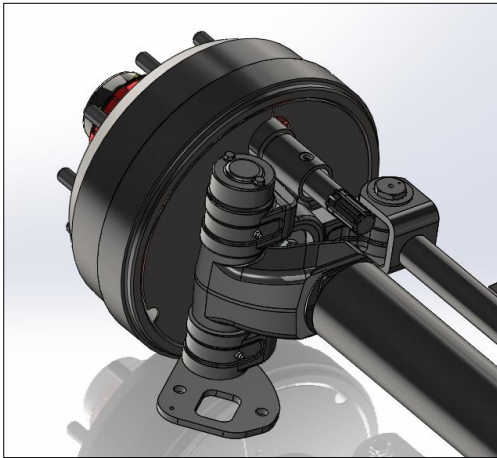
100 & 300 “A” Series

16mm block welded to steer axle knuckle for ACB mounting.

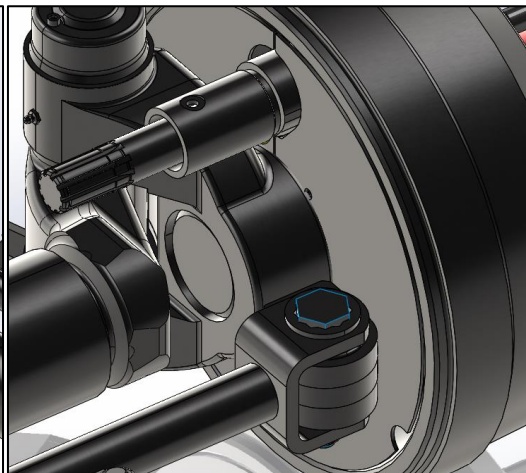
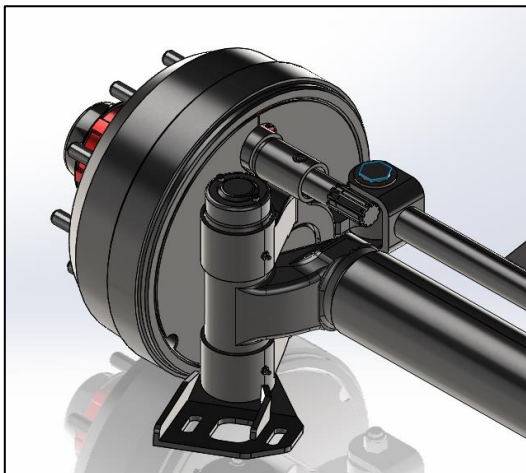




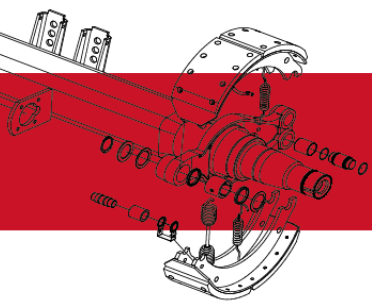
100 & 300 "F" Series – ACB holes tapped directly into steer axle knuckle.



860 "F" Series – Grease nipple shown in the track rod bolt and steer angle limiting bolt threaded into the spindle.



860 "A" Series – No grease nipple in the track rod bolt and steer angle limiting bolt threaded into the beam knuckle.

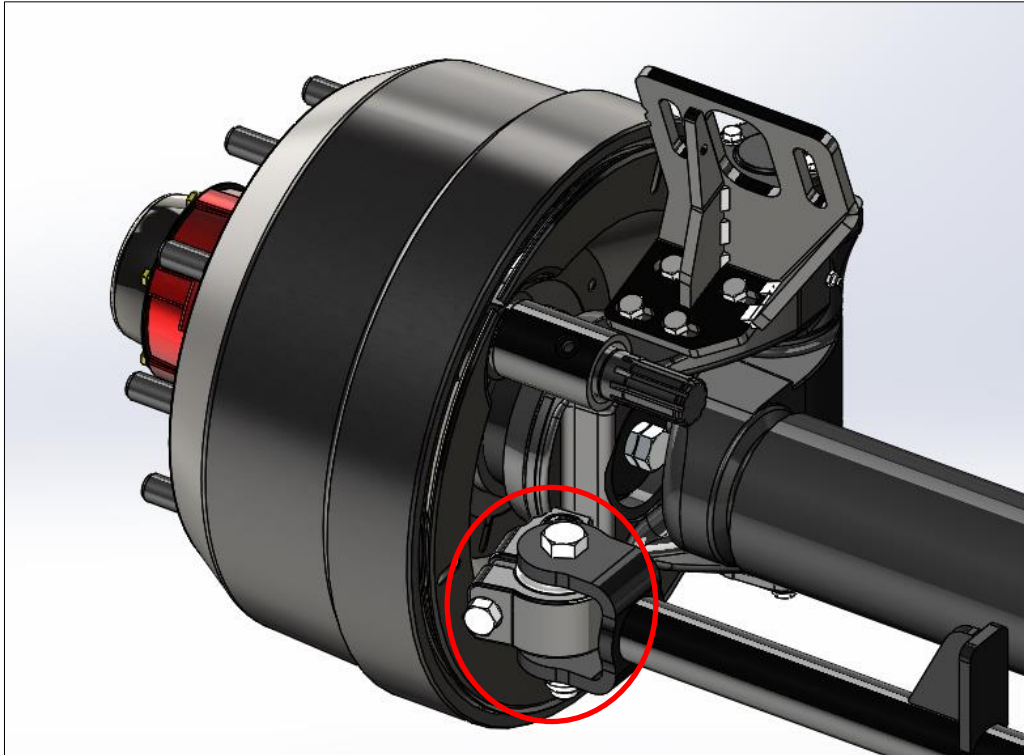




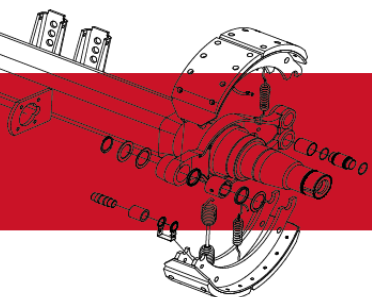
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100/300/900 – “F” Series Spare parts

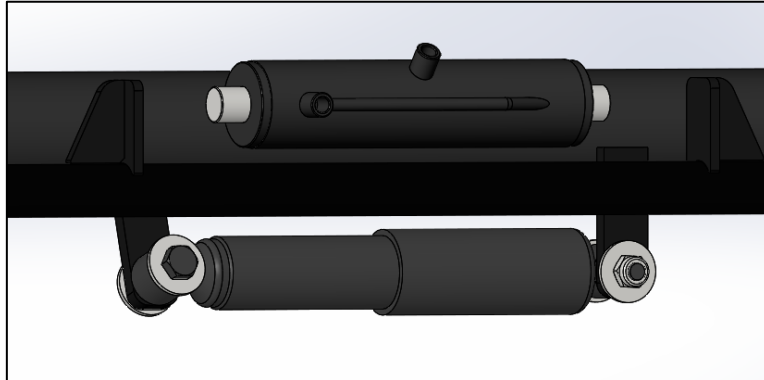
Track Rod Bush Components



Part No.	Description	QTY per Steer Axle
37039	Track Rod Bush Bolt M20x130x1.5	2
37040	Track Rod Eccentric Bush	2
37041	Track Rod Bush Washer	2
37150	Track Rod Bush Nut M20x1.5	2
63152	Track Rod Bush Pinch Bolt M16x60x1.5	2
63153	Track Rod Bush Pinch Bolt SpringWasher	2

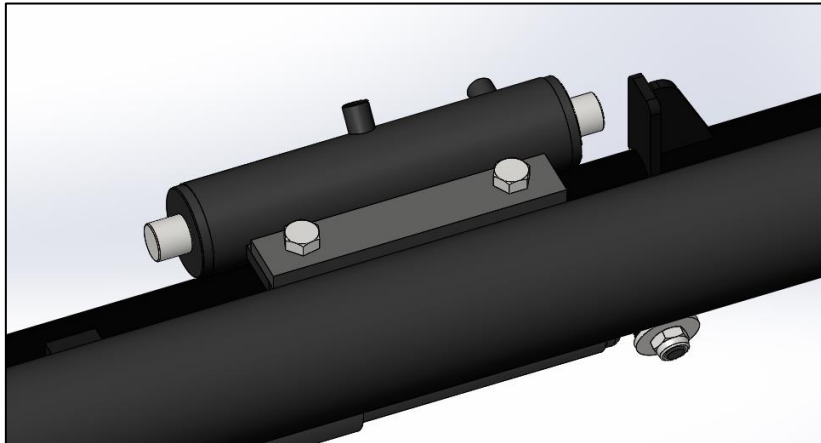


Shock Absorber Components (Hydraulic & Air-To-Unlock)

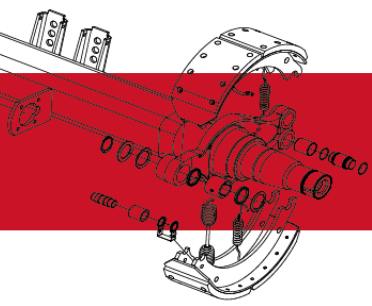


Part No.	Description	QTY per Steer Axle
37002	Shock Absorber	1
37029	Shock Absorber Bolt M20x90	2
37030	Shock Absorber Washer (24x37x3)	2
37031	Shock Absorber Locknut M20	2

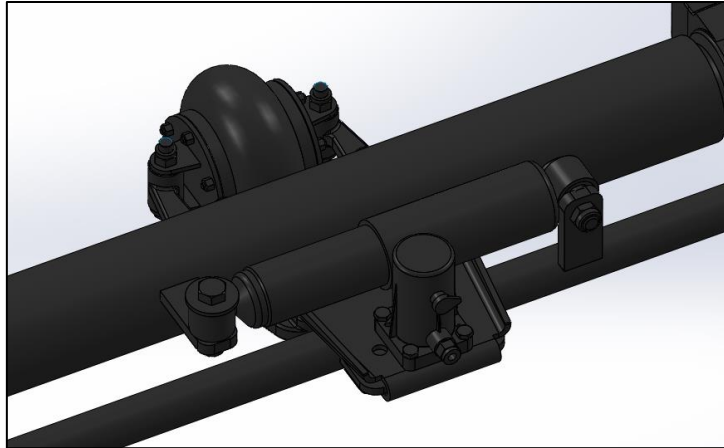
Hydraulic Locking Ram Components



Part No.	Description	QTY per Steer Axle
37179	Hydraulic Ram	1
37155	Hydraulic Ram Mounting Bolt M20x60	2
37031	Hydraulic Ram Bolt Locknut M20	2

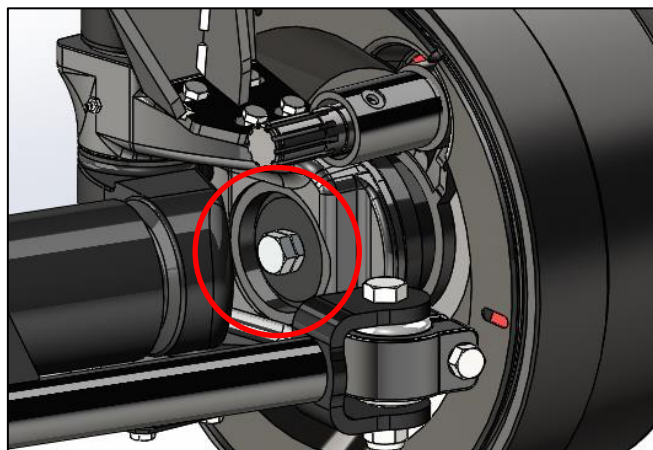


Air-To-Unlock/Lock Components

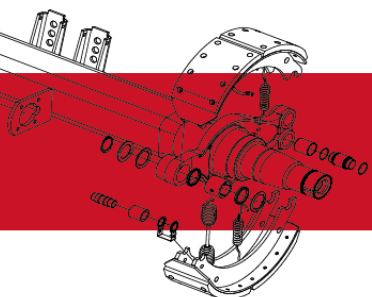


Part No.	Description	QTY per Steer Axle
37110	Torpress Bag	1
37007	Torpress Bag Kit	1
40058	Air-To-Unlock Cylinder	1
40059	Air-To-Lock Cylinder	1
63161	Air-To-Unlock/Lock Cylinder Bolts M10x25	4

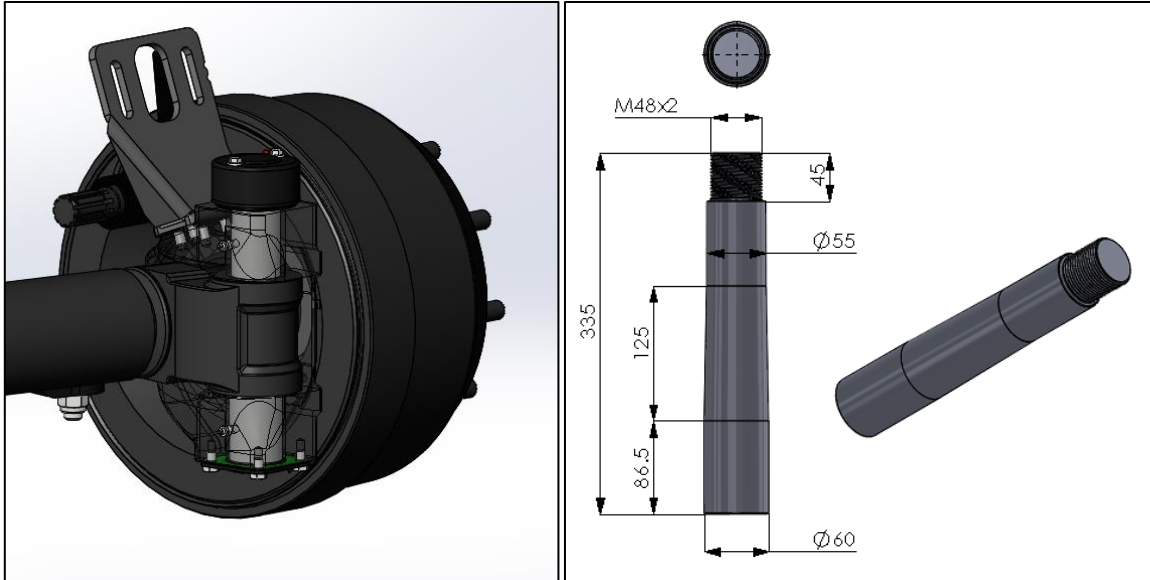
Steer Angle Limiting Bolt & Nut



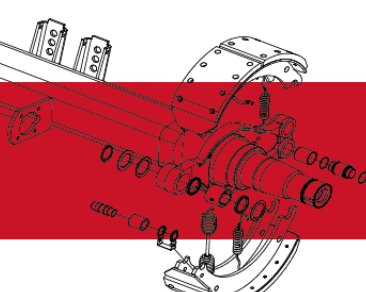
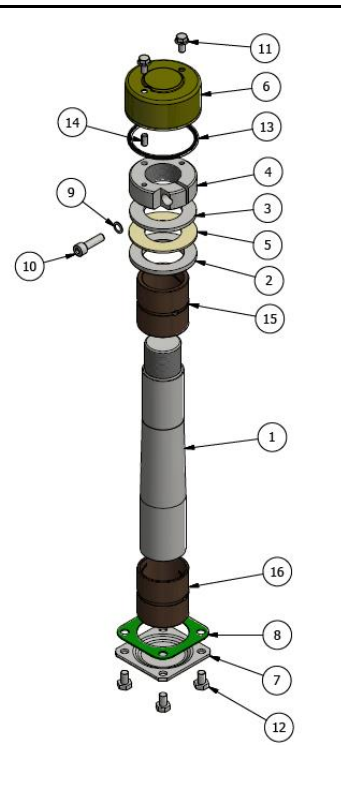
Part No.	Description	QTY per Steer Axle
37027	Steer Angle Limiting Bolt M20x40	2
37028	Steer Angle Limiting Nut M20	2



Kingpin Replacement Components



Item No.	Part No.	Description	QTY per Steer Axle
1	37132	Kingpin	2
2	37134	Lower Washer	2
3	37136	Upper Washer	2
4	37139	Kingpin Clamp Ring	2
5	37135	Plastic Washer	2
6	37034	Kingpin Cap	2
7	37130	Kingpin Bottom Cap	2
8	37131	Kingpin Bottom Cap Gasket	2
9	72021	Kingpin Pinch Bolt Washer	2
10	37138	Kingpin Pinch Bolt M10x35	2
11	37140	Kingpin Cap Bolt M8x16	4
12	37129	Kingpin Bottom Cap Bolt M10x16	8
13	37133	Kingpin O-Ring	2
14	37137	Lock Washer Pin	2
15	37166	Kingpin Bush Small – Nylon	2
16	37167	Kingpin Bush Large – Nylon	2
	SK150	Kingpin Kit (Includes all of the above)	1



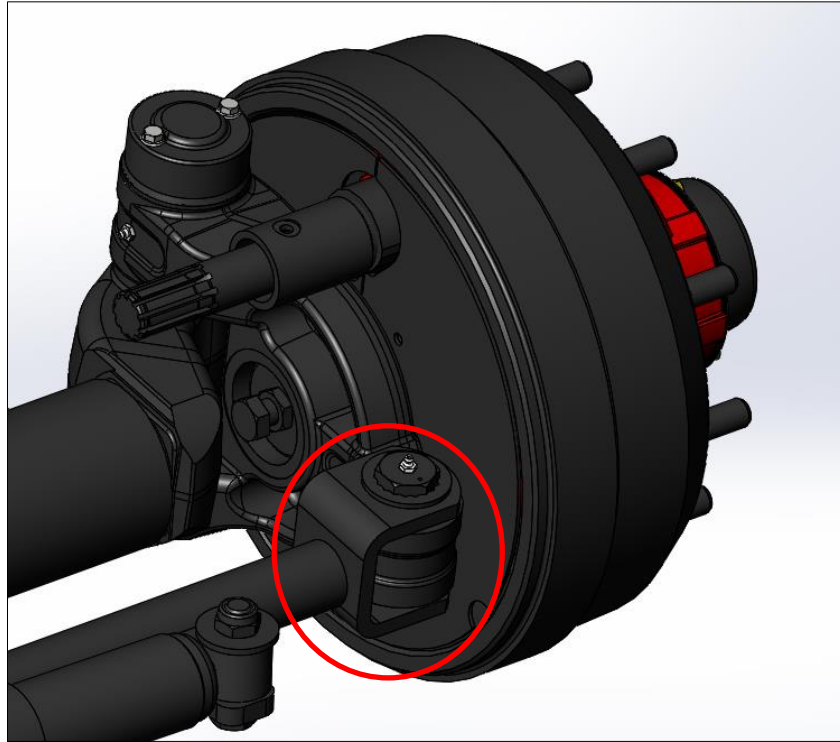


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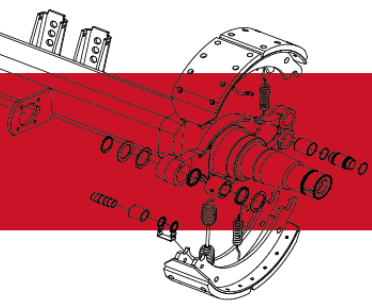
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200/860 – “F” Series Spare parts

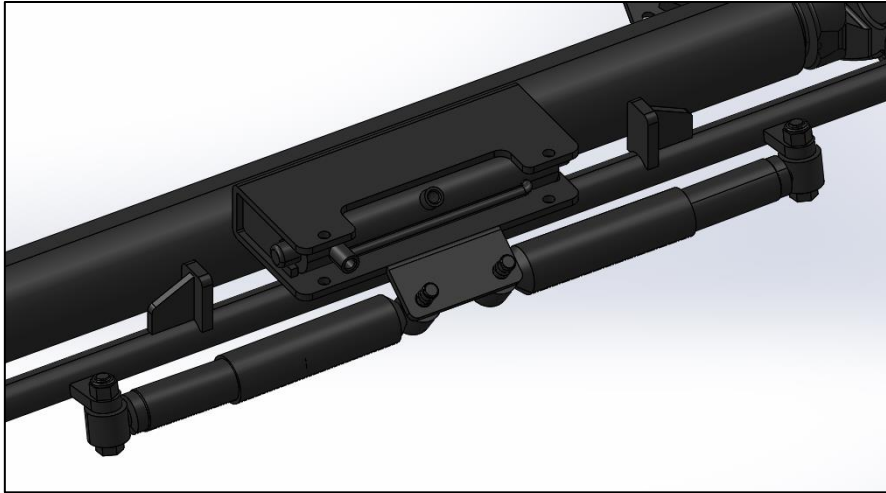
Track Rod Bush Components



Part No.	Description	QTY per Steer Axle
37151	Track Rod Concentric Bush	2
37152	Track Rod Bush Bolt M22x116x1.5	2
37153	Track Rod Bush Castle Nut M22x1.5	2
37154	Track Rod Bush Cotter Pin	2

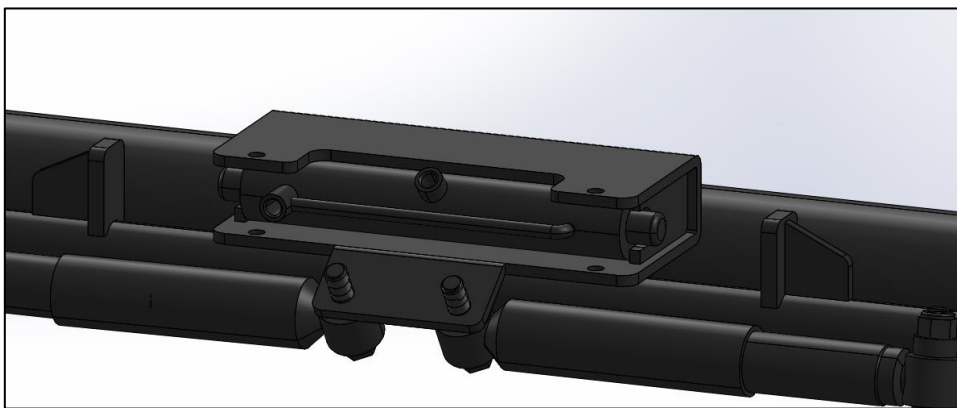


Shock Absorber Components

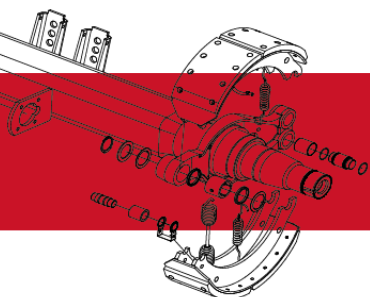


Part No.	Description	QTY per Steer Axle
37002	Shock Absorber	2
37029	Shock Absorber Bolt M20x90	4
37030	Shock Absorber Washer (24x37x3)	4
37031	Shock Absorber Locknut M20	4

Hydraulic Locking Ram Components (860 Series)



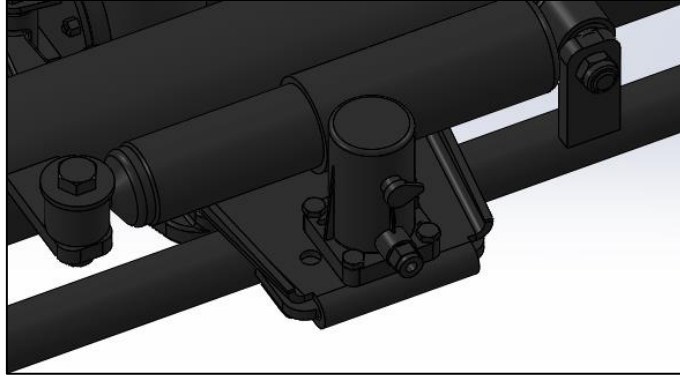
Part No.	Description	QTY per Steer Axle
37046	Hydraulic Ram	1
37156	Hydraulic Ram Mounting Bolt M14x100	2
37157	Hydraulic Ram Bolt Locknut M14	2





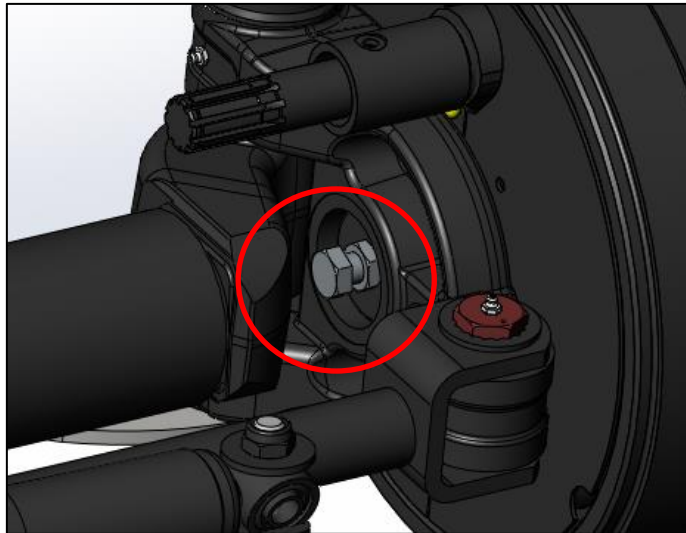
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Air-To-Unlock/Lock Components (200 Series)

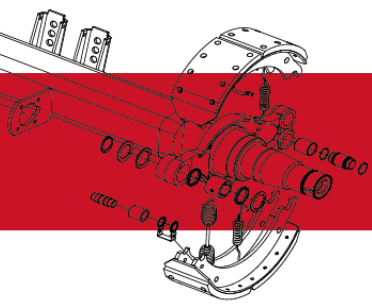


Part No.	Description	QTY per Steer Axle
40058	Air-To-Unlock Cylinder	1
40059	Air-To-Lock Cylinder	1
63161	Air-To-Unlock/Lock Cylinder Bolts M10x25	4

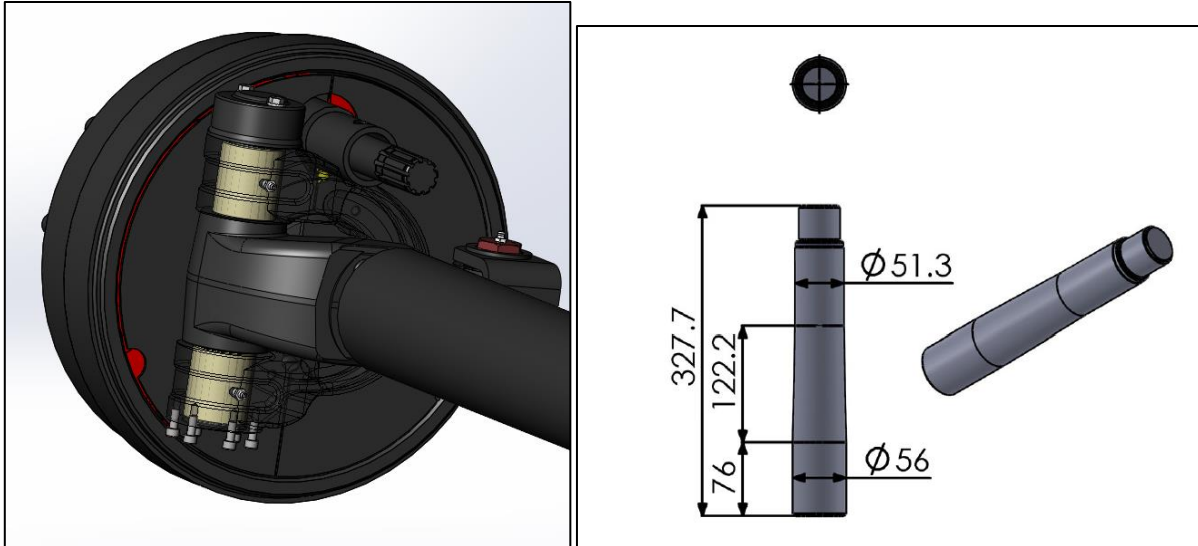
Steer Angle Limiting Bolt & Nut



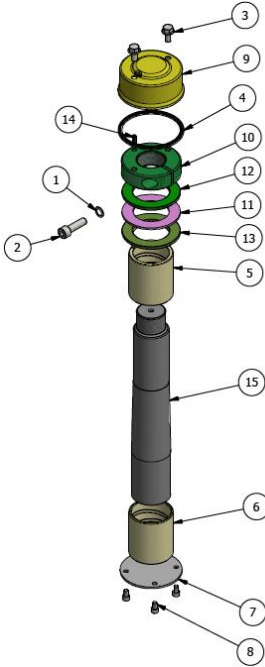
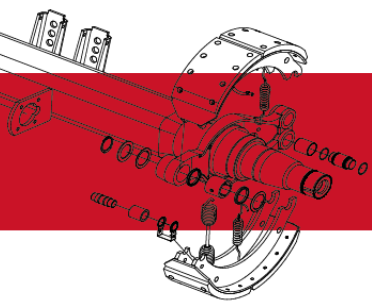
Part No.	Description	QTY per Steer Axle
37027	Steer Angle Limiting Bolt M20x40	2
37028	Steer Angle Limiting Nut M20	2



Kingpin Replacement Components



Item No.	Part No.	Description	QTY per Steer Axle
1	72021	Kingpin Pinch Bolt Washer M10	2
2	37138	Kingpin Pinch Bolt M10x40	2
3	37140	Kingpin Cap Bolt M8x16	4
4	37133	Kingpin O-Ring	2
5	37159	Kingpin Bush Small – Nylon	2
6	37160	Kingpin Bush Large – Nylon	2
7	-	Kingpin Bottom Cap/ACB	2
8	37141	Kingpin Bottom Cap Bolt M8x20	12
9	37149	Kingpin Cap	2
10	37148	Kingpin Clamp Ring	2
11	37145	Seal Washer	2
12	37146	Lock Washer	2
13	N/A	-----	-
14	37147	Lock Washer Pin	2
15	37143	Kingpin	2
	SK151	Kingpin Kit (Includes all of the above)	1

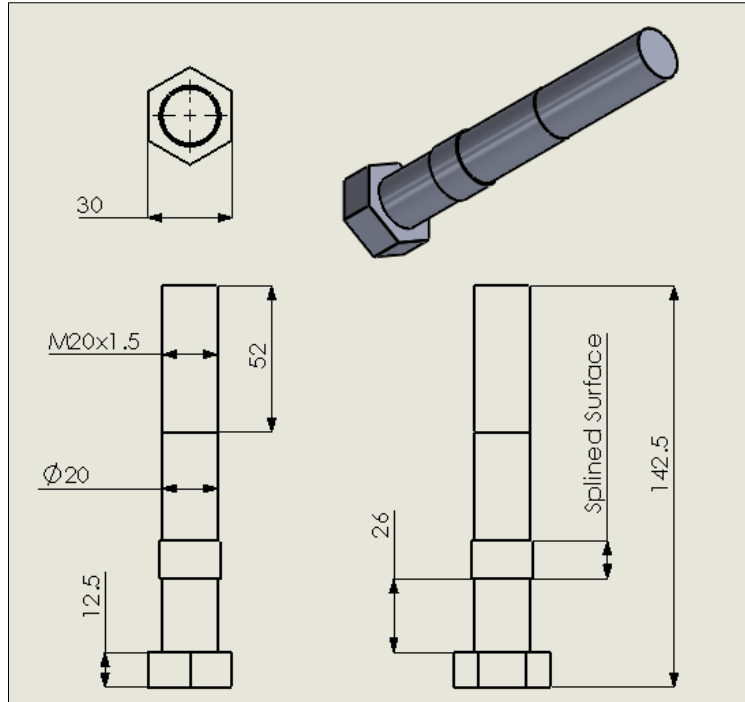


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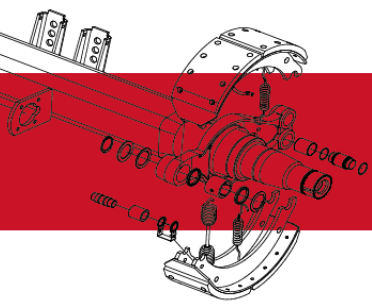
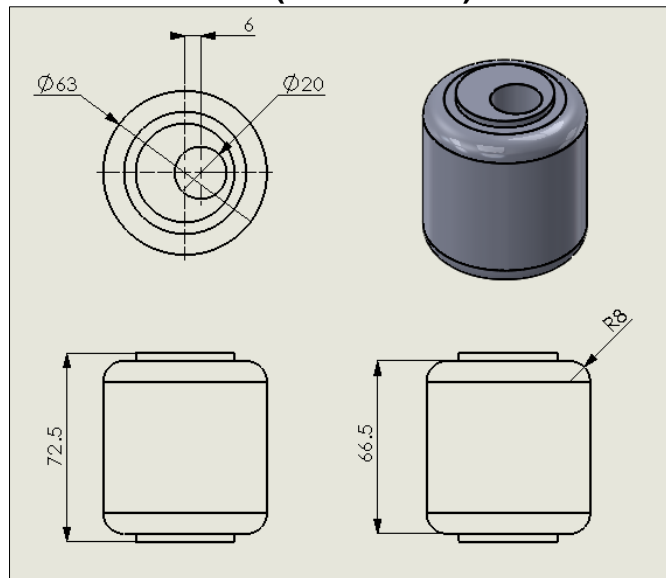
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Spare Parts "F" Series Drawings

37039 – Track Rod Bush Bolt M20 (100/300/900)



37040 – Track Rod Eccentric Bush (100/300/900)

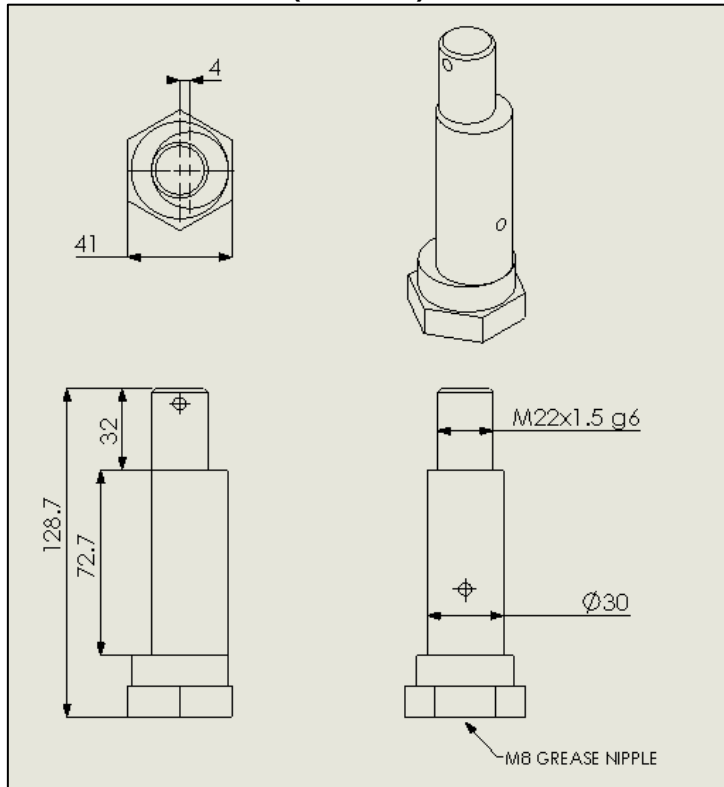




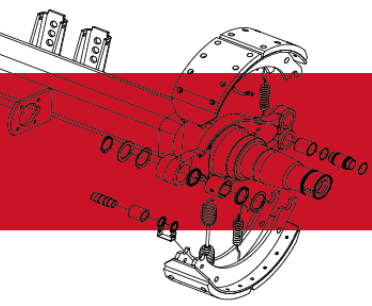
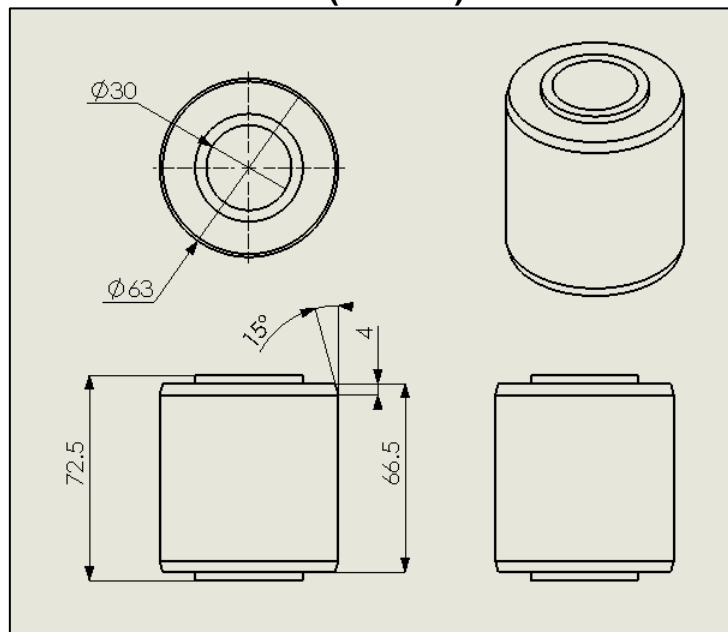
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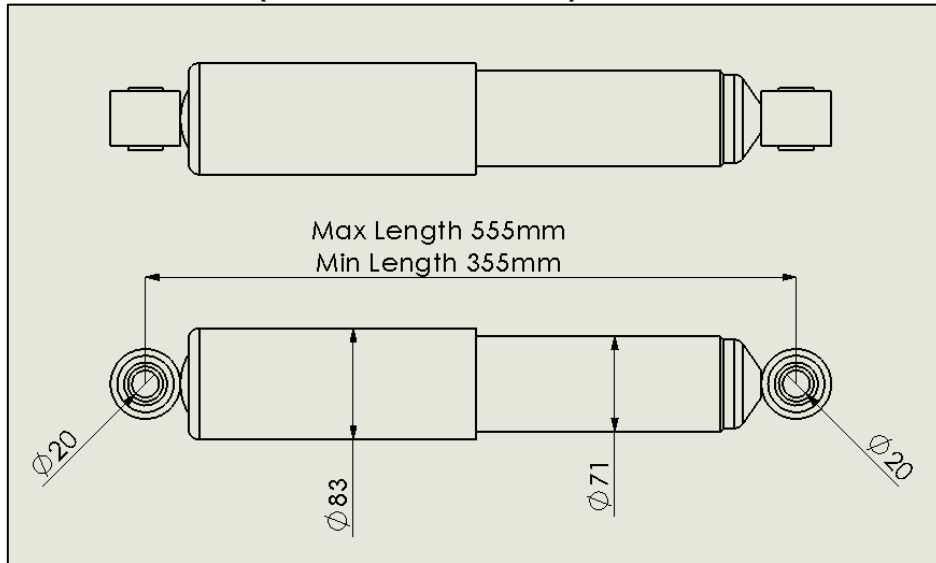
37152 – Track Rod Bush Bolt M22 (200/860)



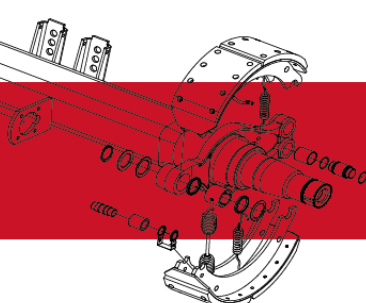
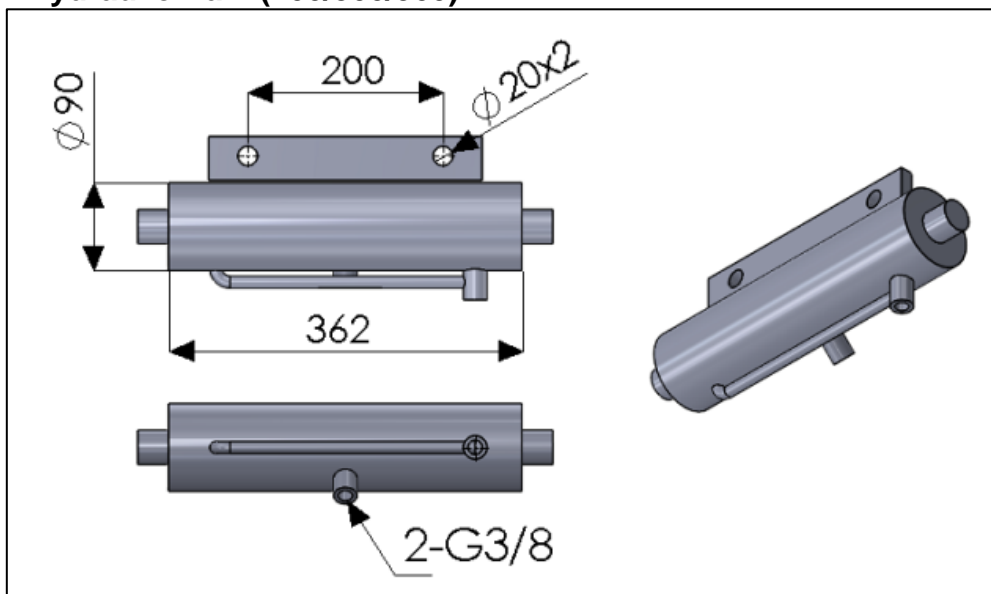
37151 – Track Rod Concentric Bush (200/860)



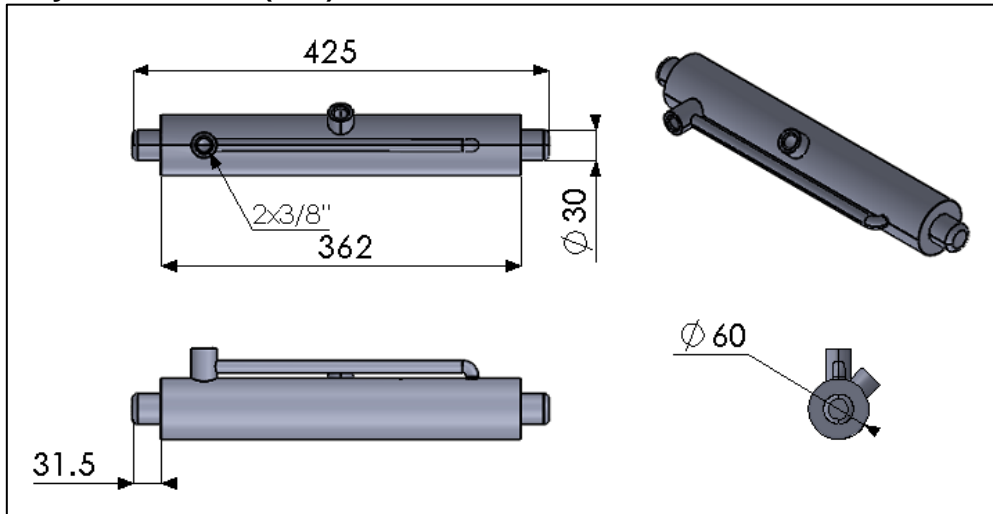
37002 – Shock Absorber (100/200/300/860/900)



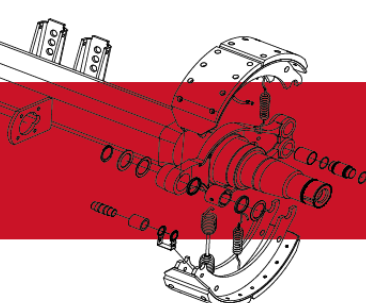
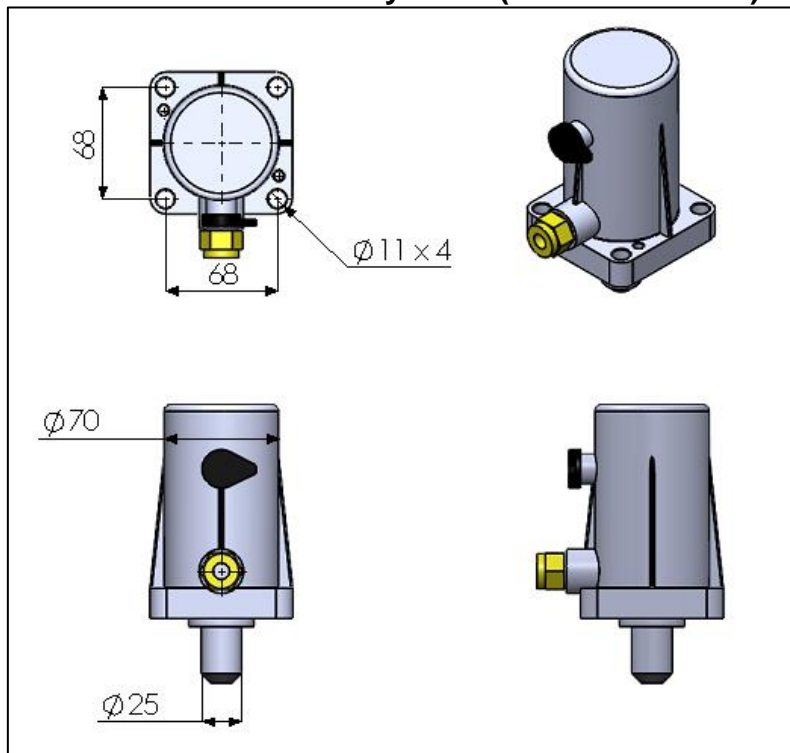
37179 – Hydraulic Ram (100/300/900)



37046 – Hydraulic Ram (860)



40058 & 40059 – Air-To-Unlock/Lock Cylinder (100/200/300/900)

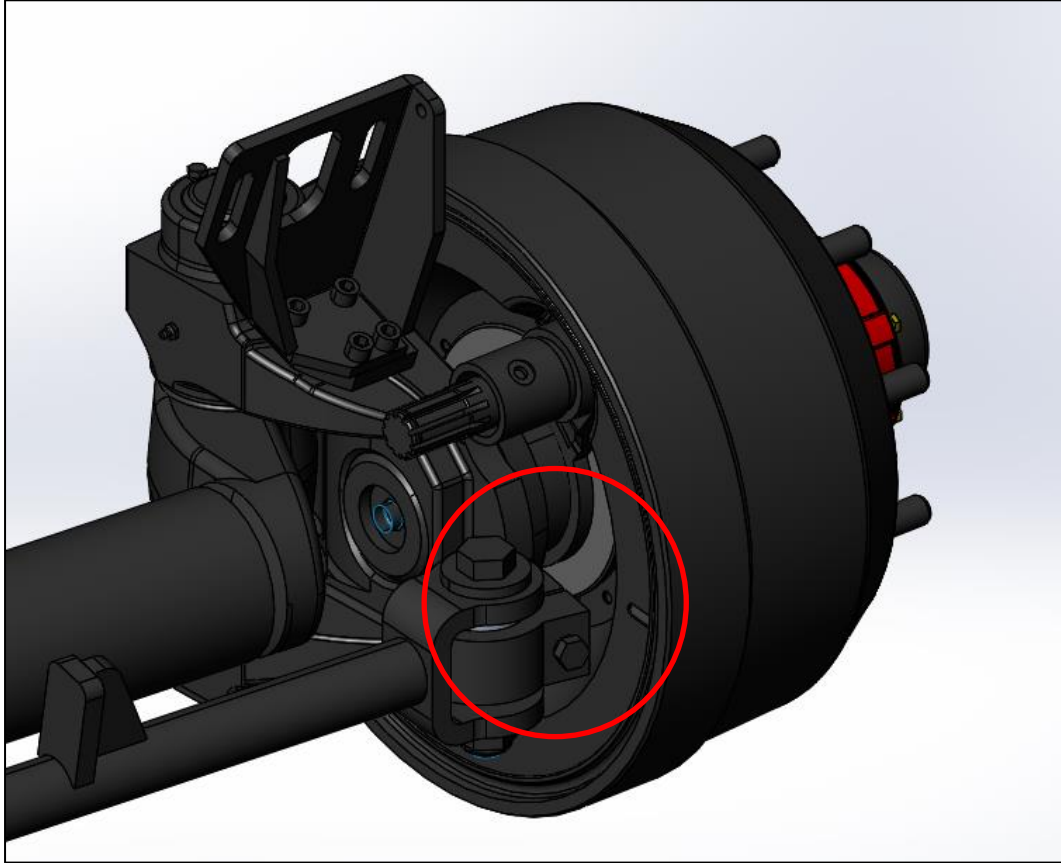




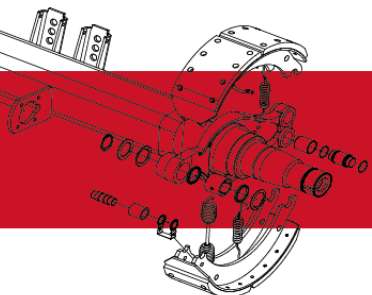
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100/300 – “A” Series Spare parts

Track Rod Bush Components



Part No.	Description	QTY per Steer Axle
37092	Track Rod Bush Bolt M24x104x2.0	2
37096	Track Rod Eccentric Bush	2
37094	Track Rod Bush Nut M24x2.0	2
37098	Track Rod Bush Pinch Bolt M14x55	2
37099	Track Rod Bush Pinch Bolt Spring Washer	2
SK200	Track Rod Bush Kit (includes all of the above)	1

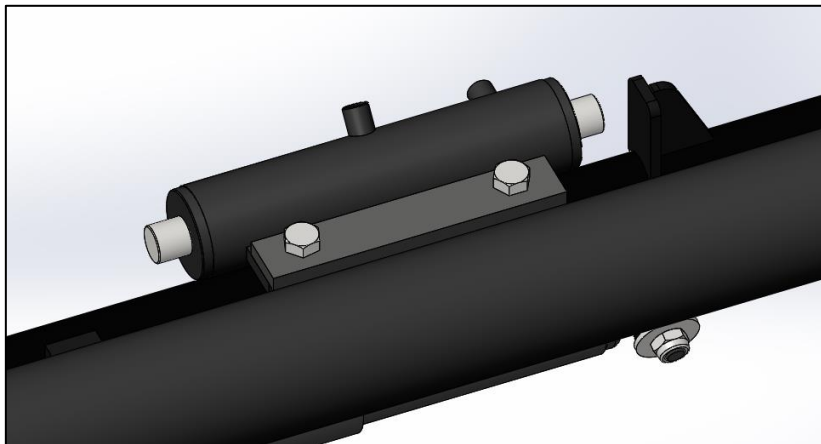


Shock Absorber Components

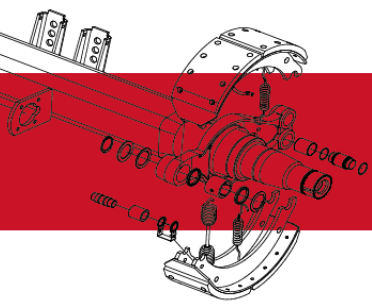


Part No.	Description	QTY per Steer Axle
37051	Shock Absorber	1
37100	Shock Absorber Bolt M20x90	2
37101	Shock Absorber Washer (21x37x3)	2
37102	Shock Absorber Locknut M20	2
SK500	Shock Absorber Kit (includes all of the above)	1

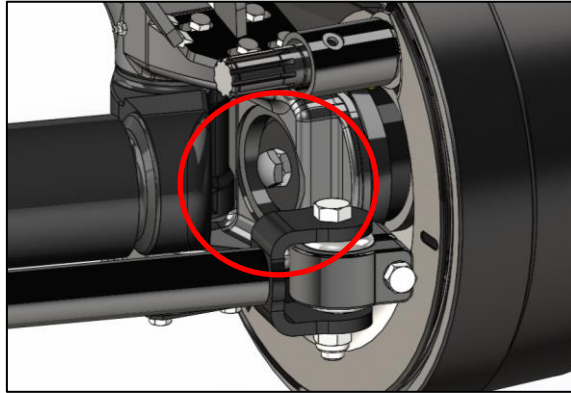
Hydraulic Locking Ram Components



Part No.	Description	QTY per Steer Axle
37179	Hydraulic Ram	1
37105	Hydraulic Ram Mounting Bolt M20x60	2
37102	Hydraulic Ram Bolt Locknut M20	2
SK300	Hydraulic Ram Kit (Includes all of the above)	1

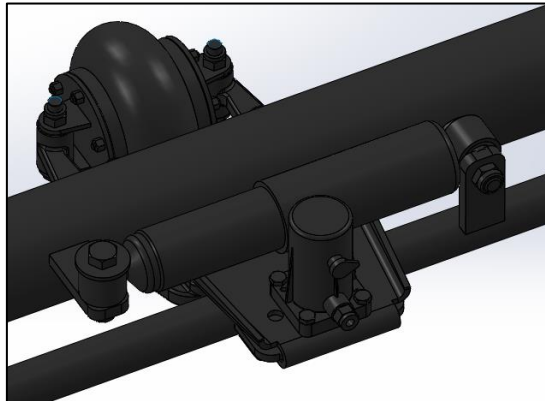


Steer Angle Limiting Bolt & Nut (100 Series Only)

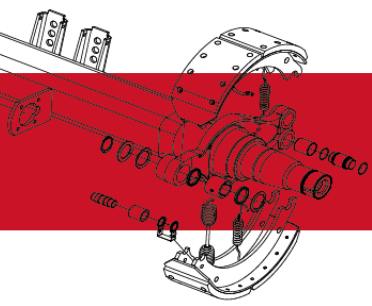


Part No.	Description	QTY per Steer Axle
37084	Steer Angle Limiting Bolt M20x40	2
37083	Steer Angle Limiting Nut M20	2

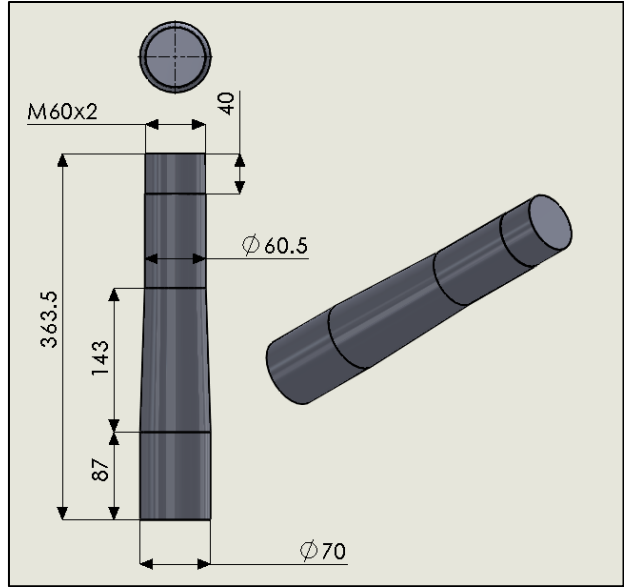
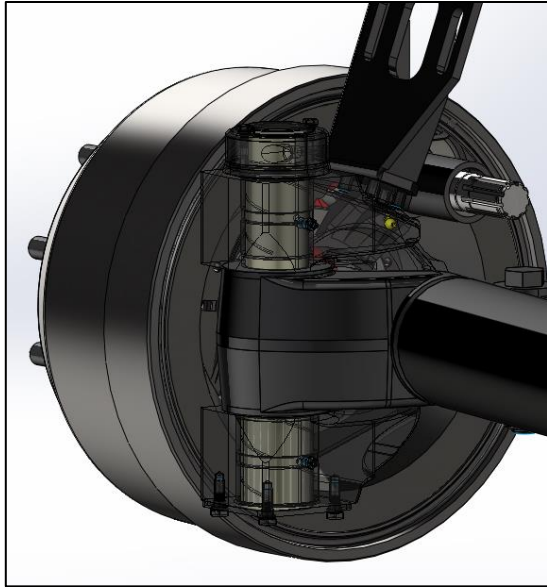
Air-To-Unlock/Lock Components



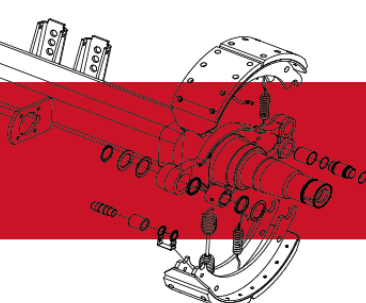
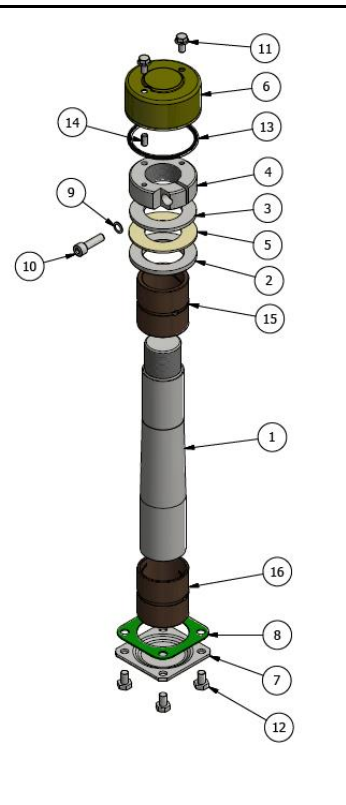
Part No.	Description	QTY per Steer Axle
37090	Air-To-Unlock/Lock Cylinder Bolts M10x25	4
37111	Air-To-Unlock Cylinder	1
SK400	Air-To-Unlock Cylinder Kit (includes all of the above)	1
40059	Air-To-Lock Cylinder	1
37112	Track Rod Locking Plate	1
37114	Shock Bracket and Locking Plate Bolt M12x25	5
37115	Shock Bracket and Locking Plate Nut M12	5
37113	Track Rod Shock Bracket	1
37109	Torpress Bag Assembly (includes brackets)	1
37110	Torpress Bag	1



Kingpin Replacement Components (100 Series Only)



Item No.	Part No.	Description	QTY per Steer Axle
1	37071	Kingpin	2
2	37065	Seal Washer	2
3	37063	Lock Washer	2
4	37058	Kingpin Clamp Ring	2
5	N/A	-----	-
6	37054	Kingpin Cap	2
7	37073	Kingpin Bottom Cap	2
8	37291	Square Cap Gasket	2
9	N/A	-----	-
10	37060	Kingpin Pinch Bolt M10x35	2
11	37052	Kingpin Cap Bolt M8x16	4
12	37075	Kingpin Bottom Cap Bolt M10x16	8
13	37056	Kingpin O-Ring	2
14	37061	Lock Washer Pin	2
15	37067	Kingpin Bush Small – Nylon	2
16	37069	Kingpin Bush Large – Nylon	2
	SK100	Kingpin Kit (Includes all of the above)	1

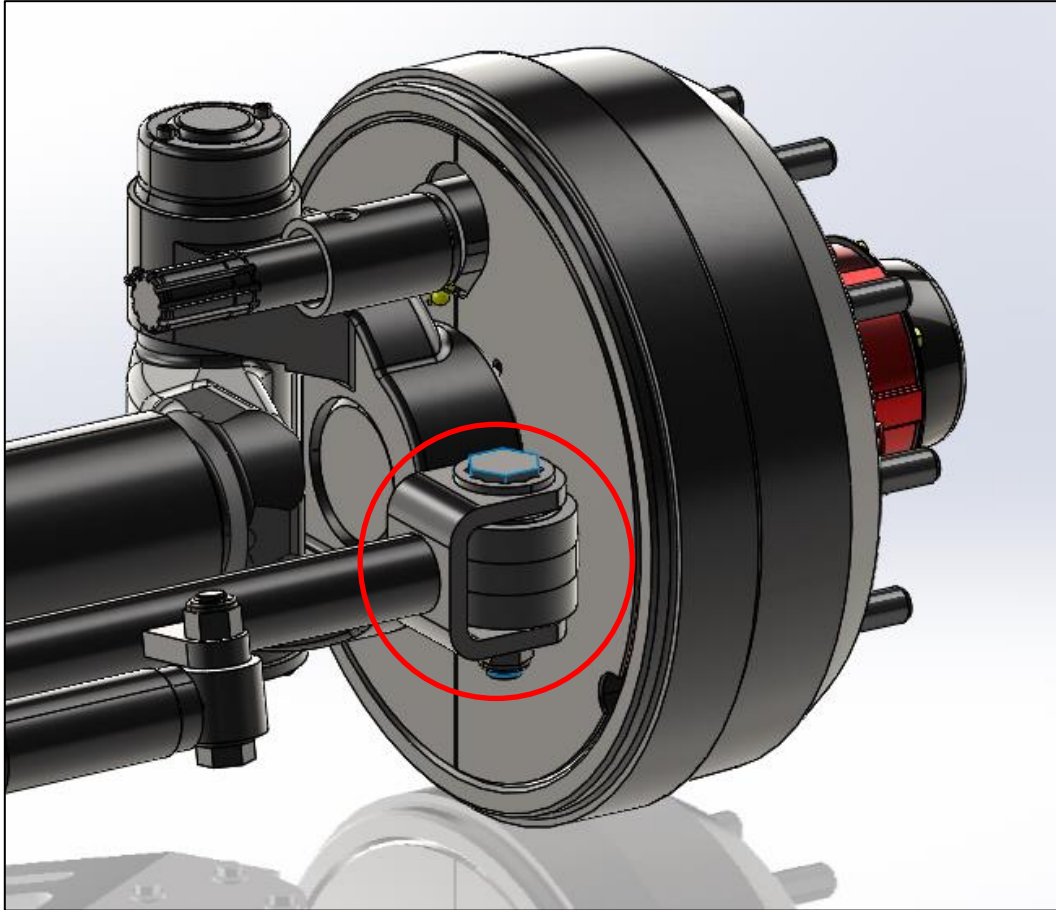




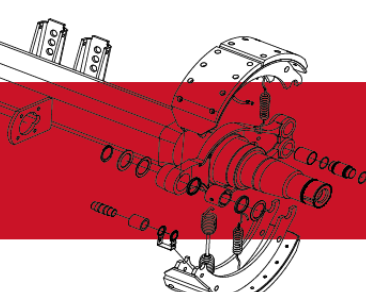
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300/860 – “A” Series Spare parts

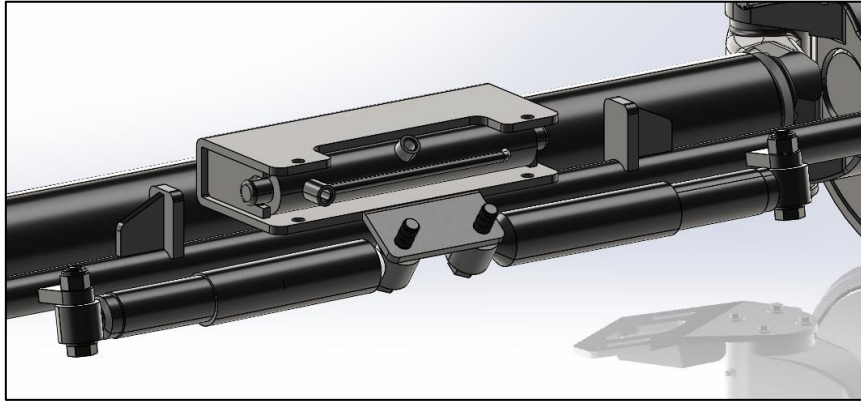
Track Rod Bush Components (860 Series Only)



Part No.	Description	QTY per Steer Axle
37093	Track Rod Bush Bolt M20x124x1.5	2
37097	Track Rod Concentric Bush	2
37095	Track Rod Bush Nut M20x1.5	2
SK201	Track Rod Bush Kit (includes all of the above)	1

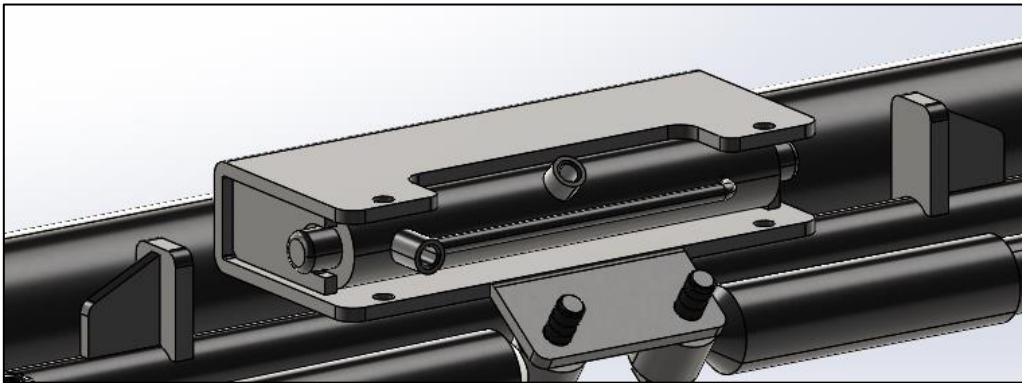


Shock Absorber Components (860 Series Only)

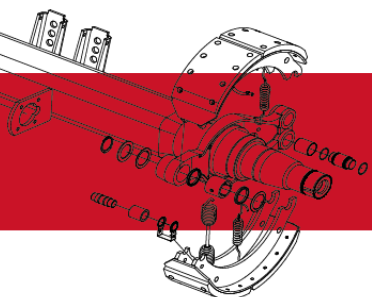


Part No.	Description	QTY per Steer Axle
37050	Shock Absorber	2
37100	Shock Absorber Bolt M20x90	4
37101	Shock Absorber Washer (21x37x3)	4
37102	Shock Absorber Locknut M20	4
SK501	Shock Absorber Kit (includes all of the above)	1

Hydraulic Locking Ram Components (860 Series Only)



Part No.	Description	QTY per Steer Axle
37104	Hydraulic Ram	1
37107	Hydraulic Ram Housing Bolt M14x100	2
37108	Hydraulic Ram Bolt Locknut M14	2
SK301	Hydraulic Ram Kit (Includes all of the above)	1

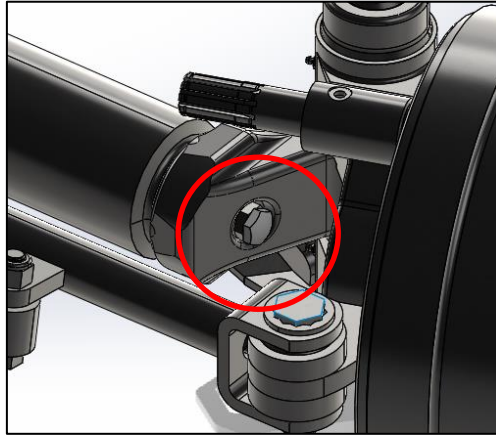




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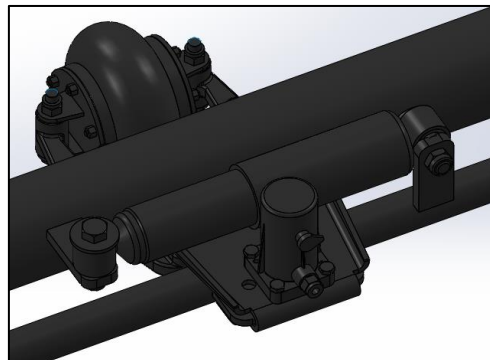
axle and suspension solutions

Steer Angle Limiting Bolt & Nut (300/860)

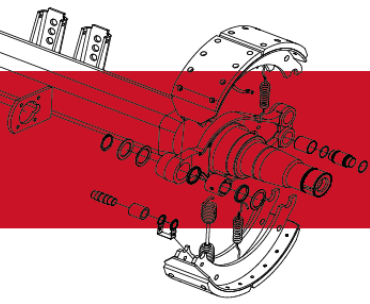


Part No.	Description	QTY per Steer Axle
37084	Steer Angle Limiting Bolt M20x40	2
37083	Steer Angle Limiting Nut M20	2

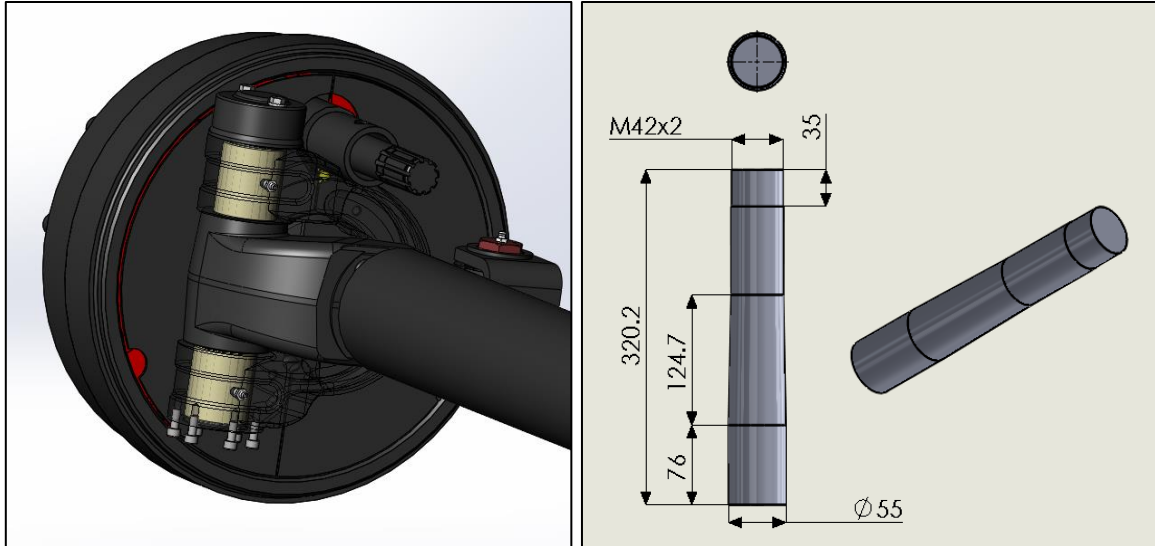
Air-To-Unlock/Lock Components (300 Series)



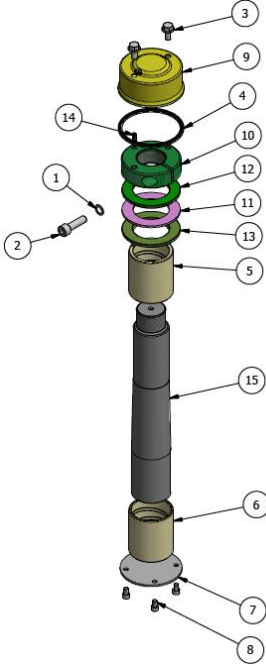
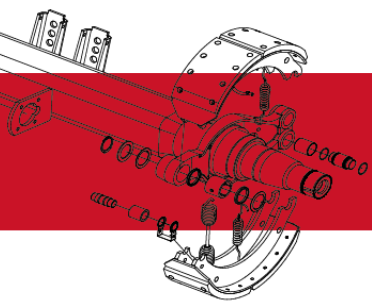
Part No.	Description	QTY per Steer Axle
37090	Air-To-Unlock/Lock Cylinder Bolts M10x25	4
37111	Air-To-Unlock Cylinder	1
SK400	Air-To-Unlock Cylinder Kit (includes all of the above)	1
40059	Air-To-Lock Cylinder	1
37112	Track Rod Locking Plate	1
37114	Shock Bracket and Locking Plate Bolt M12x25	5
37115	Shock Bracket and Locking Plate Nut M12	5
37113	Track Rod Shock Bracket	1
37109	Torpress Bag Assembly (includes brackets)	1
37110	Torpress Bag	1



Kingpin Replacement Components (300/860)

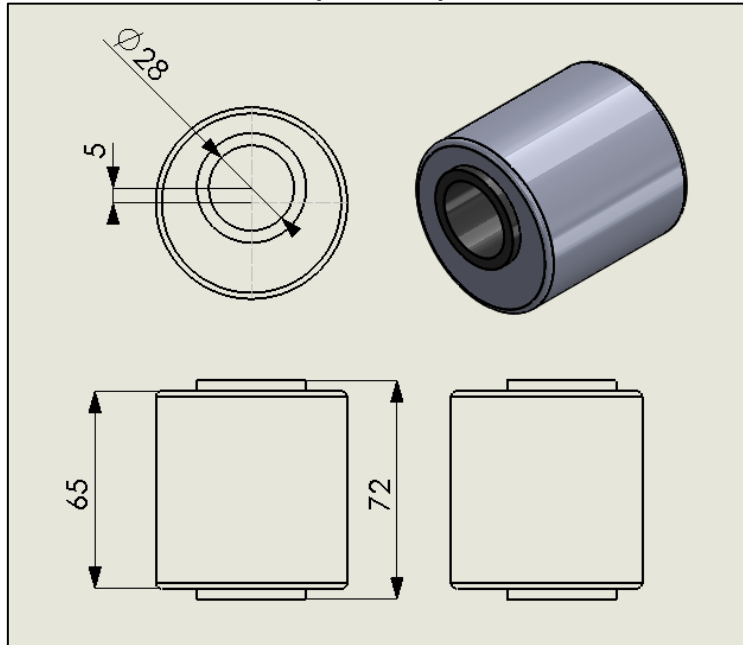


Item No.	Part No.	Description	QTY per Steer Axle
1	N/A	-----	-
2	37060	Kingpin Pinch Bolt M10x40	2
3	37053	Kingpin Cap Bolt M8x16	4
4	37057	Kingpin O-Ring	2
5	37068	Kingpin Bush Small – Nylon	2
6	37070	Kingpin Bush Large – Nylon	2
7	37074	Kingpin Bottom Cap	2
7a	37292	Round Cap Gasket	2
8	37075	Kingpin Bottom Cap Bolt M10x16	8
9	37055	Kingpin Cap	2
10	37059	Kingpin Clamp Ring	2
11	37066	Seal Washer	2
12	37064	Lock Washer	2
13	N/A	-----	-
14	37062	Lock Washer Pin	4
15	37072	Kingpin	2
	SK101	Kingpin Kit (Includes all of the above)	1

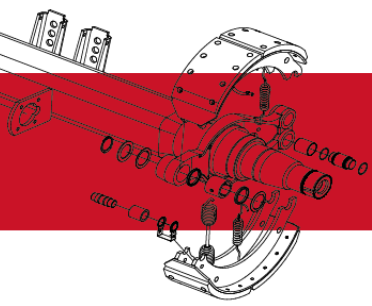
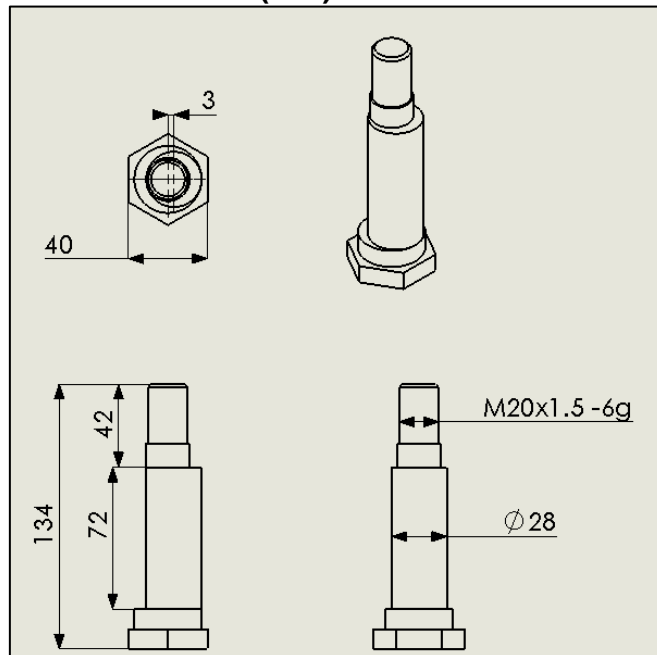



Spare Parts "A" Series Drawings

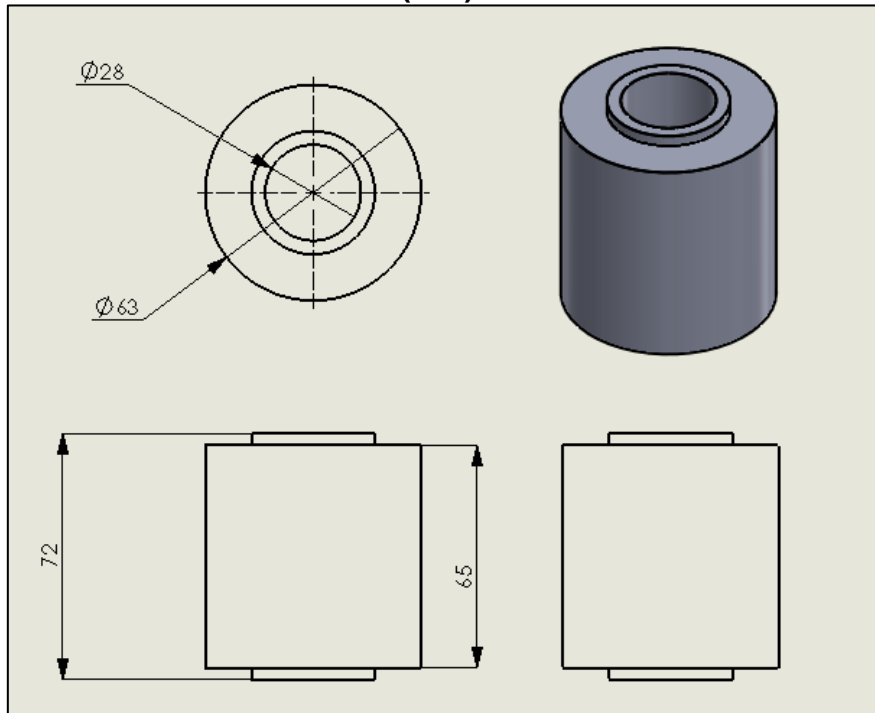
37096 – Track Rod Eccentric Bush (100/300)



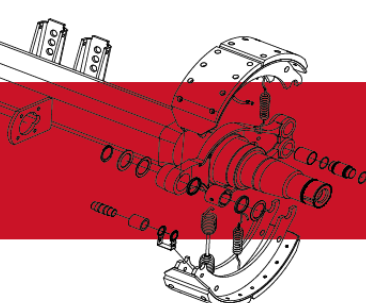
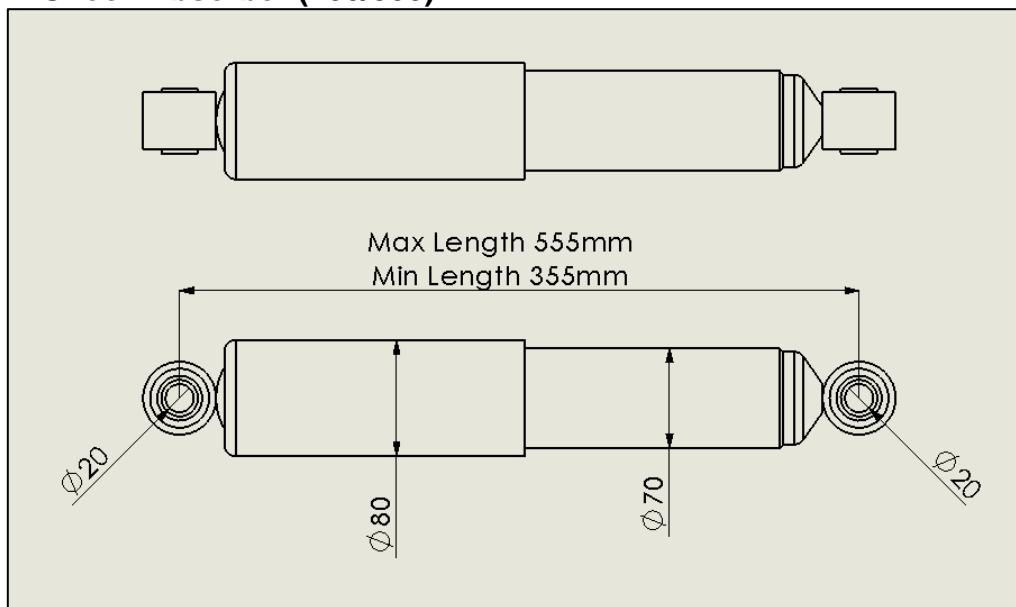
37093 – Track Rod Bush Bolt M20 (860)



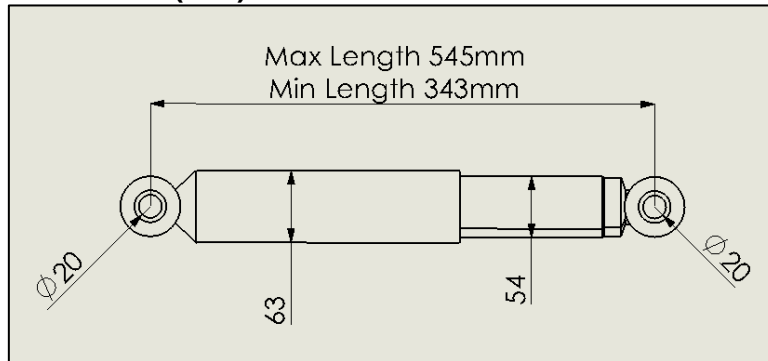
37097 – Track Rod Concentric Bush (860)



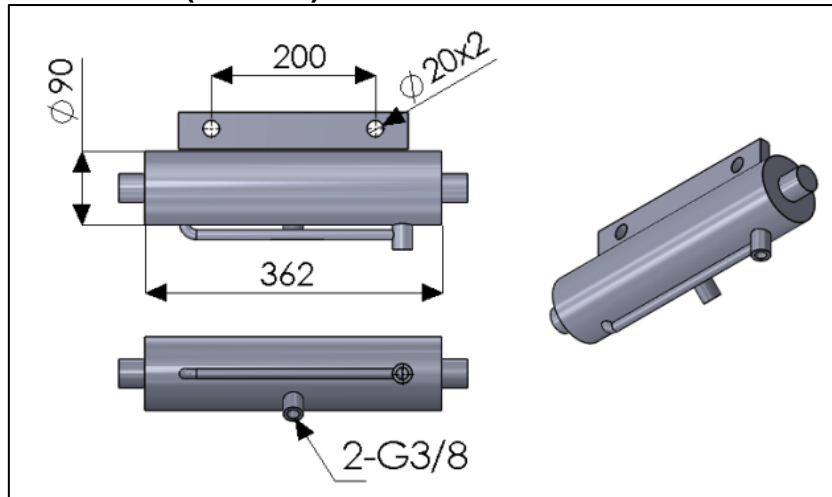
37051 – Shock Absorber (100/300)



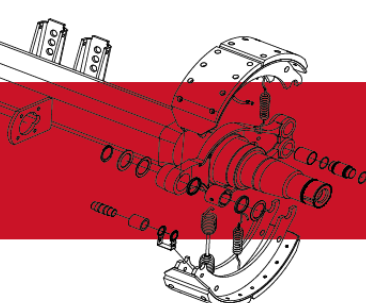
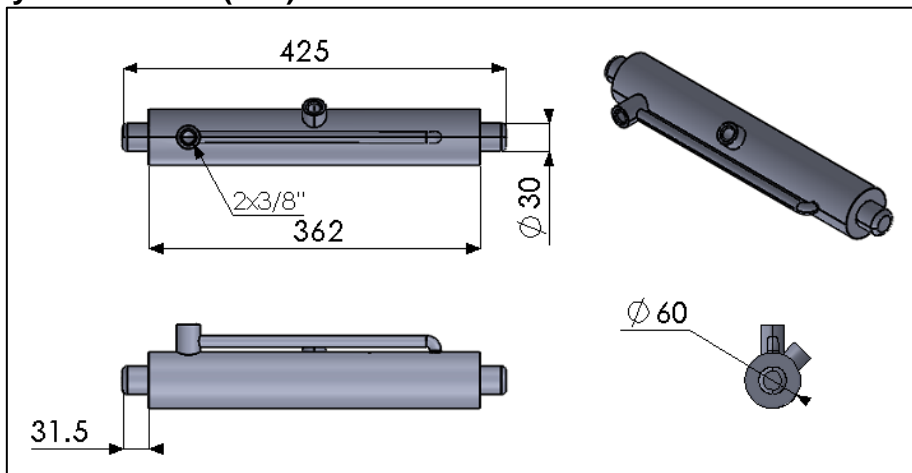
37050 – Shock Absorber (860)



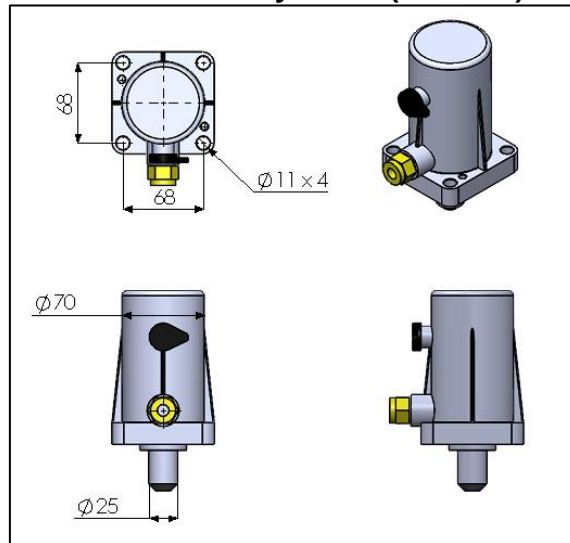
37179 – Hydraulic Ram (100/300)



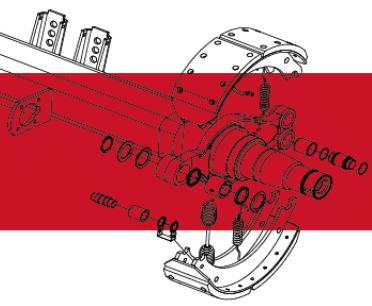
37104 – Hydraulic Ram (860)



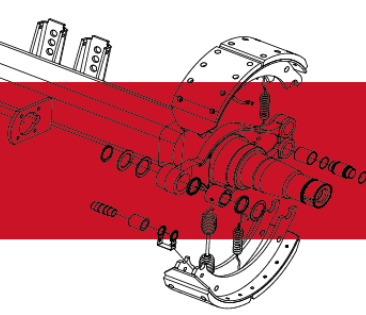
37111 & 40059 – Air-To-Unlock/Lock Cylinder (100/300)



37158 – Hydraulic ram (37103) replacement seals

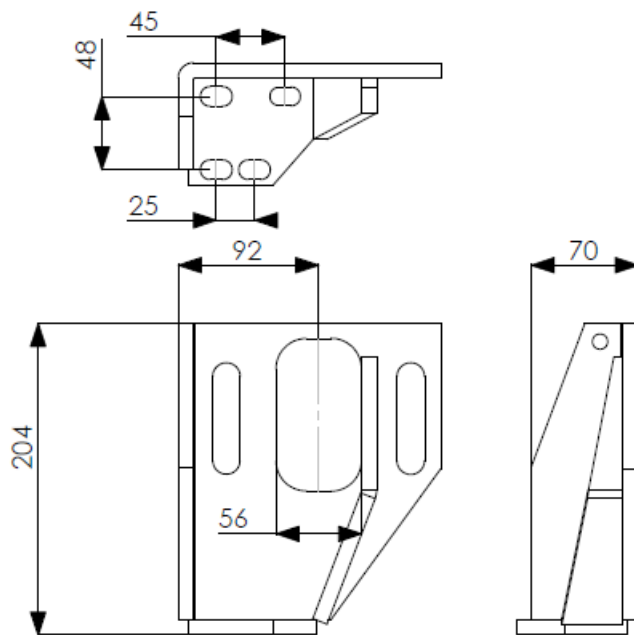


37217 – Hydraulic ram (37179) replacement seals

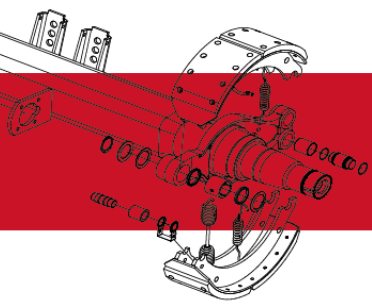


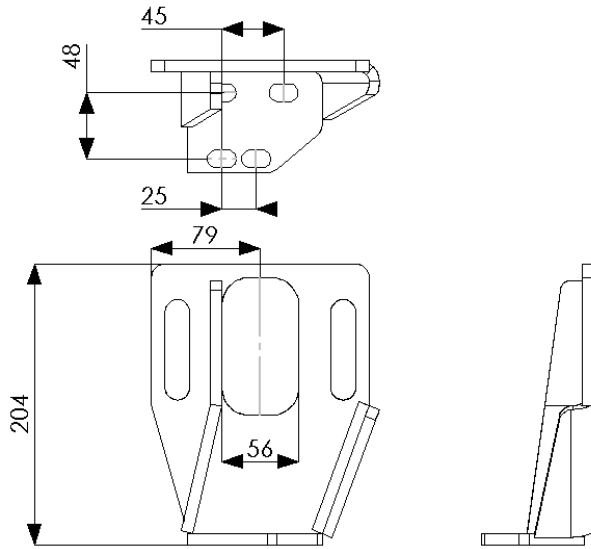
Air Chamber Brackets

37085 Left shown below (37086 right) – Standard A ACB (100/300)

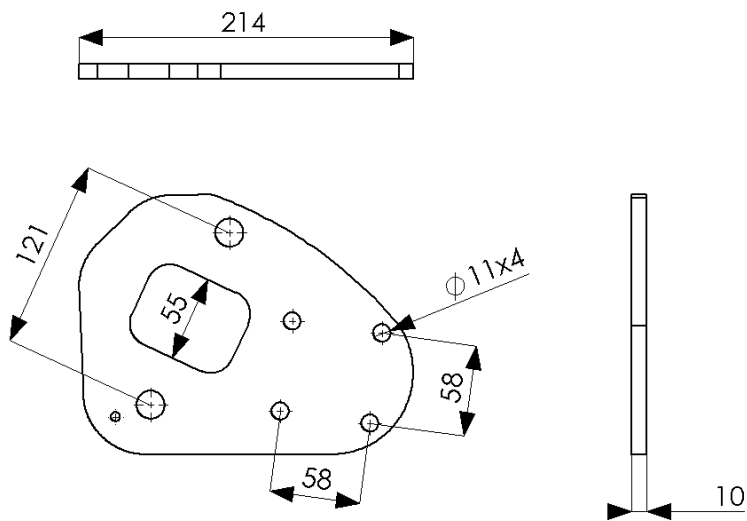


37249L Left shown below (37249R right) – Straight slack A ACB (300 series)

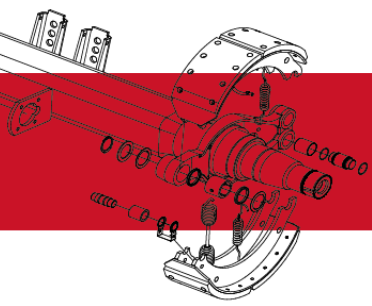


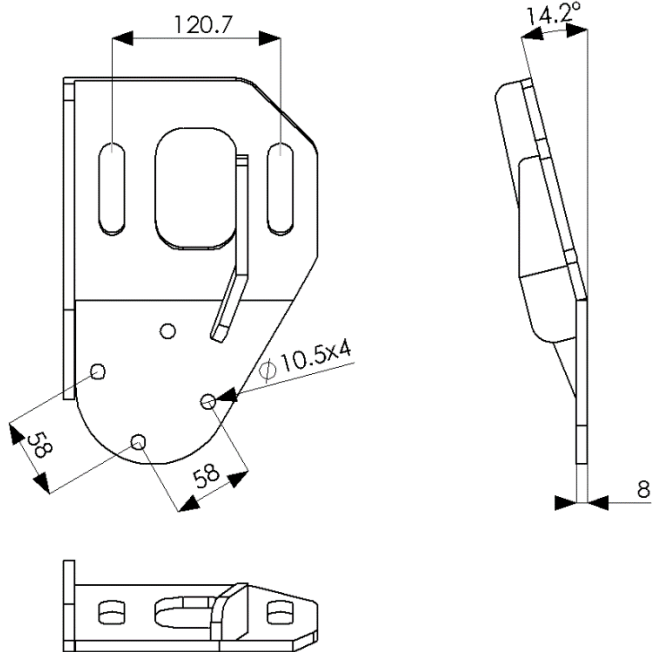


15308 860 Series ACB bottom 250mm camshaft

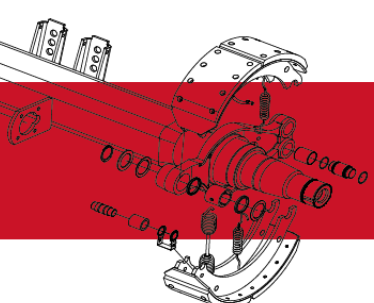
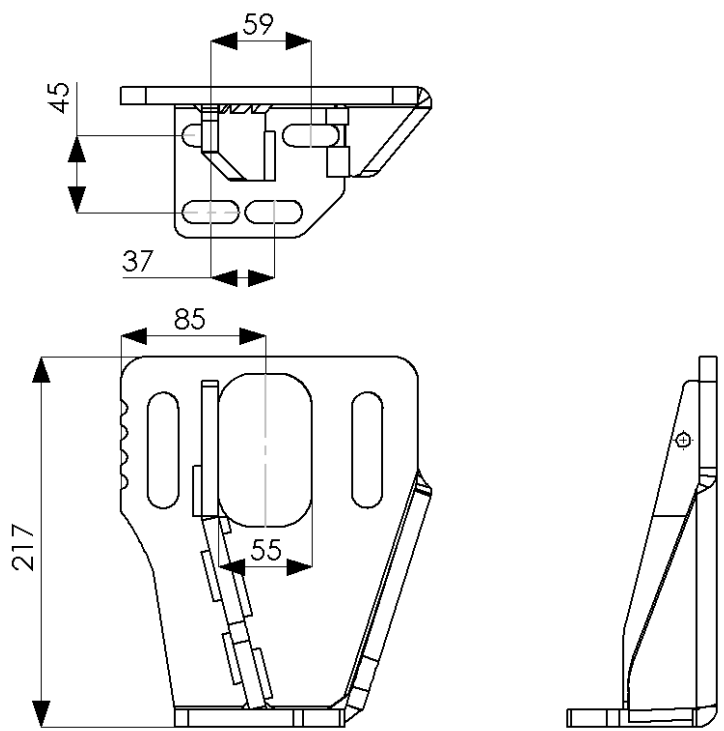


37087 Left shown below (37088 right) 860 Series ACB bottom





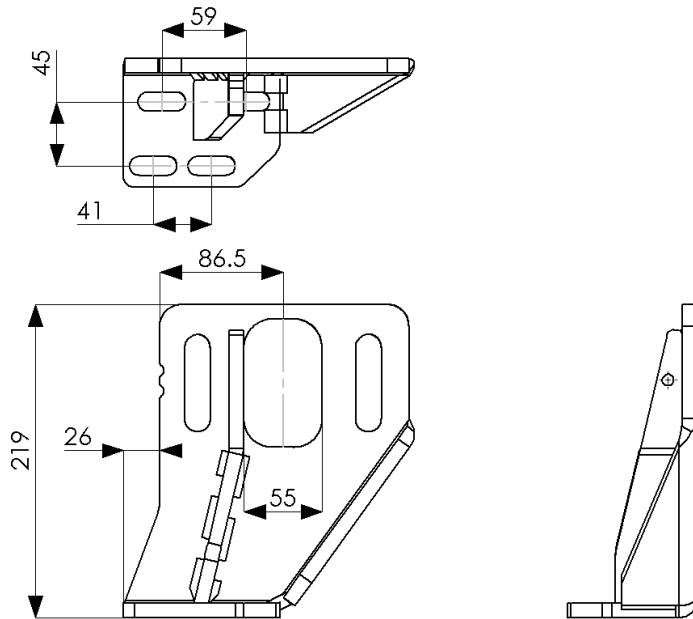
37127 Left 4 notch F 420x180 ACB shown below (37128 right)



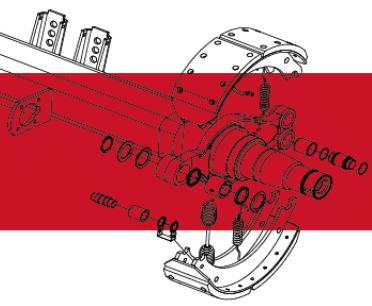
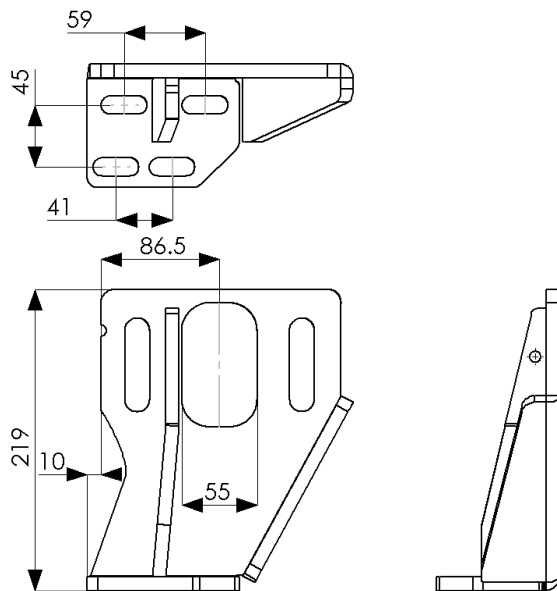


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37171 Left 2 notch F 420x180 ACB shown below (37172 right)



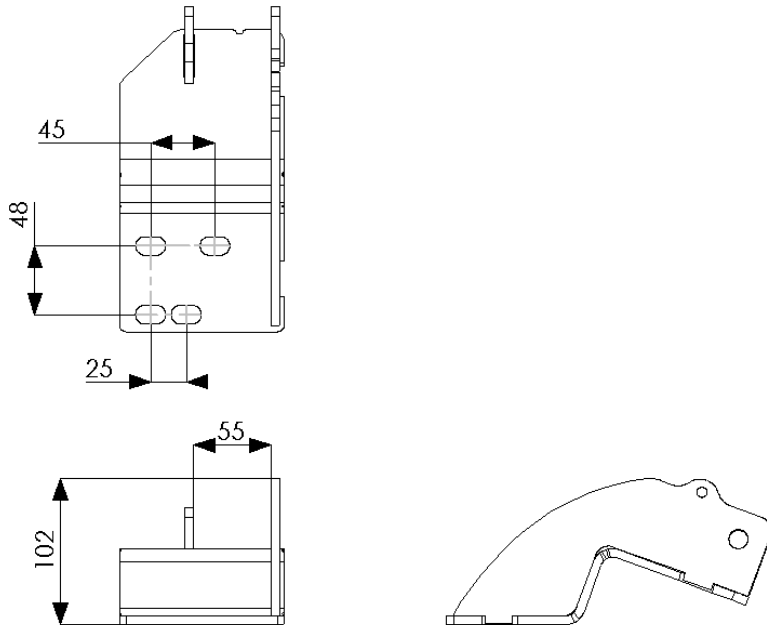
37116 Left 1 notch F ACB shown below (37117 right)



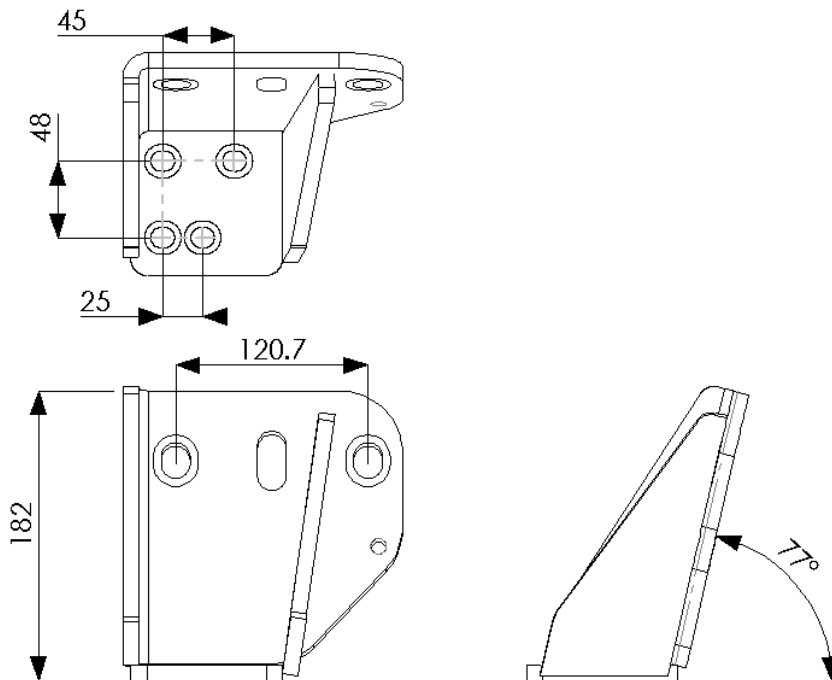


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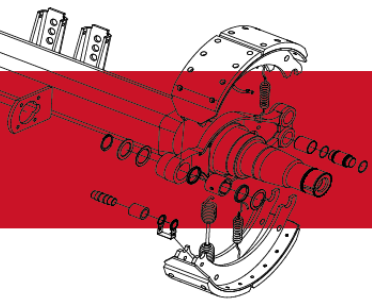
37215 Left A Hydraulic ACB shown below (37216 right)

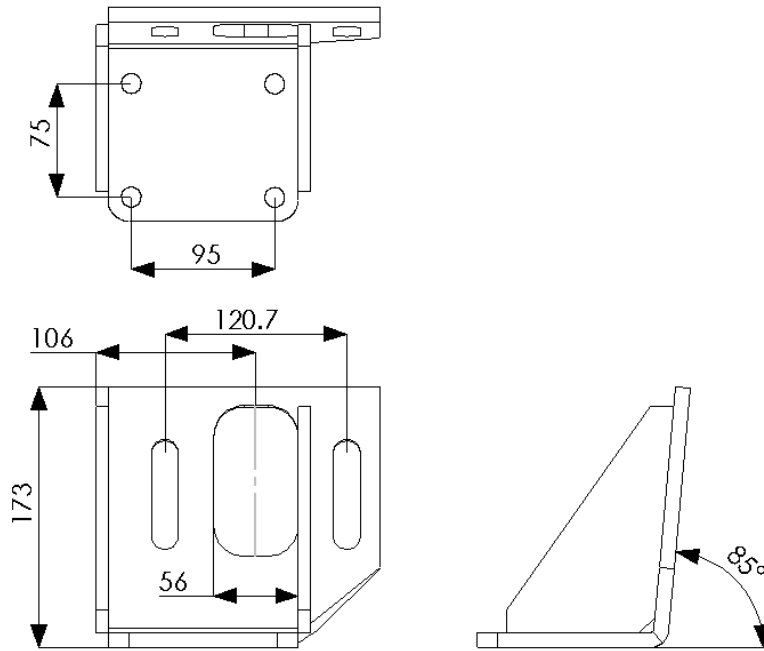


37218 Left A Hydraulic ACB shown below (37219 right)

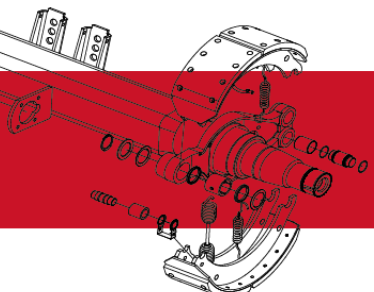
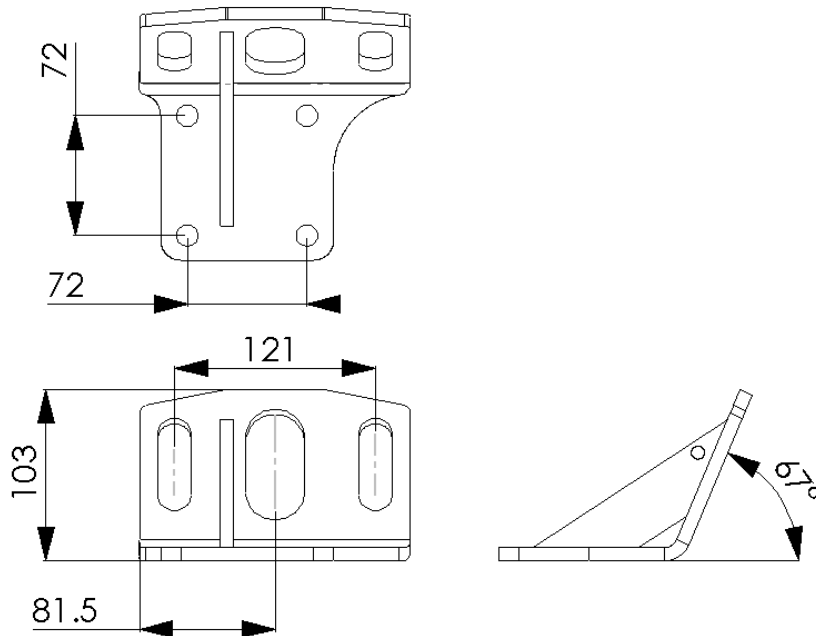


37243 Left A 980 series ACB shown below (37243 right)



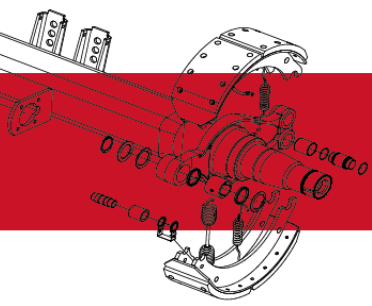
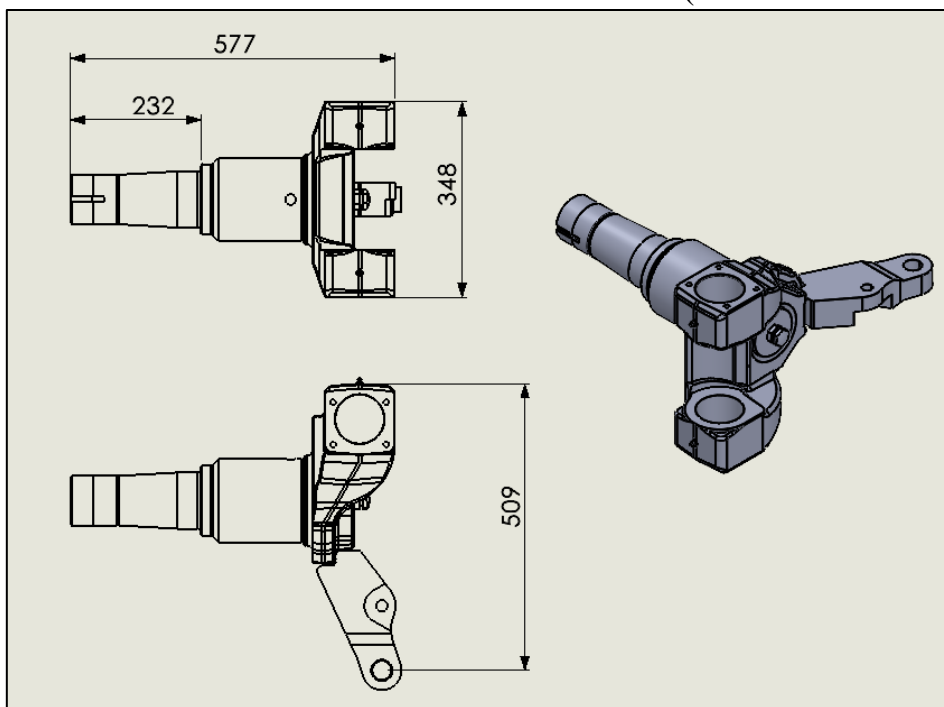


37121 ACB Bottom Pair



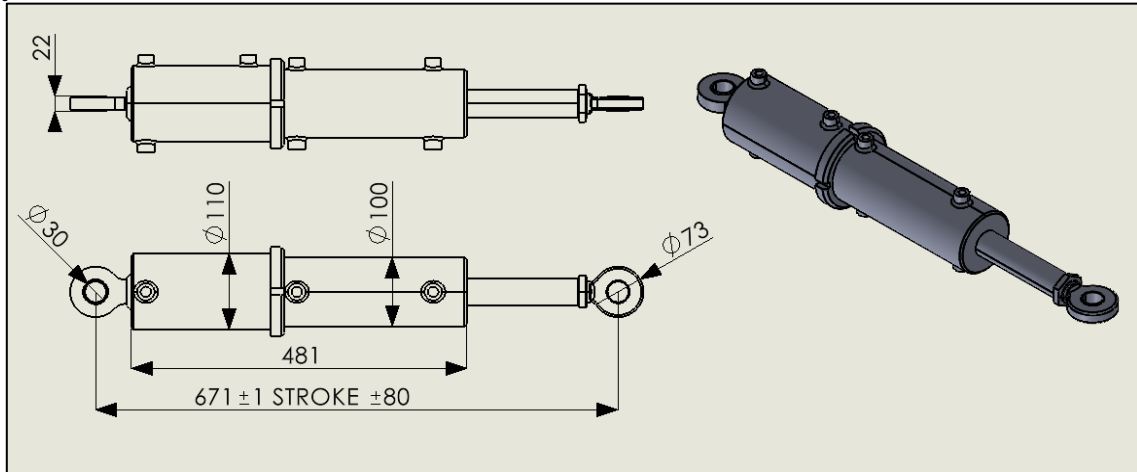
980 Series Steer Axles

Left hand steer axle knuckle shown below – SA104L (includes bronze bushes)

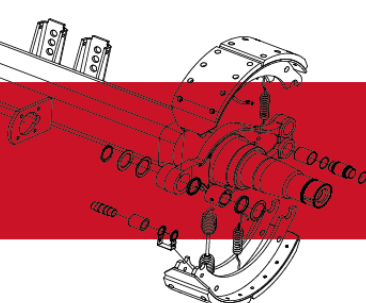
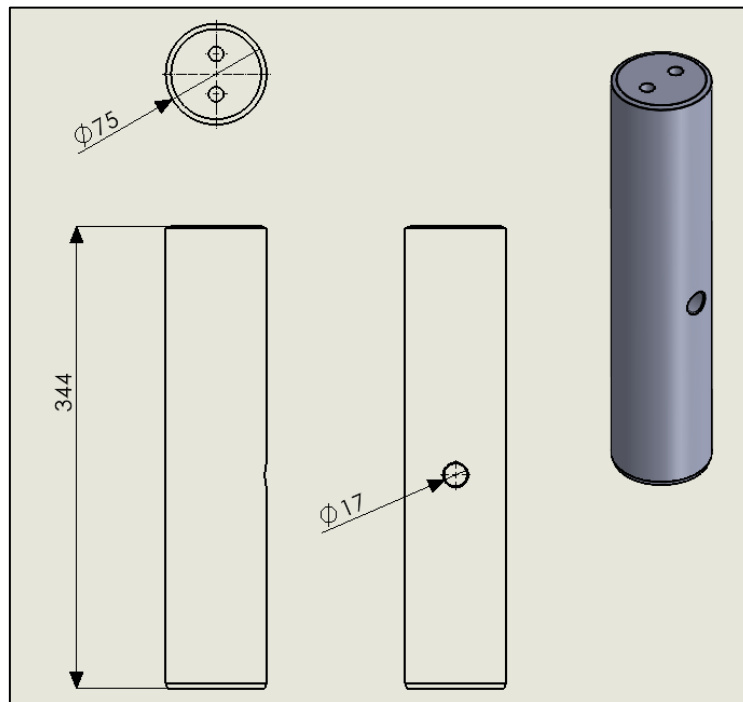


Right hand version of the above SA104R

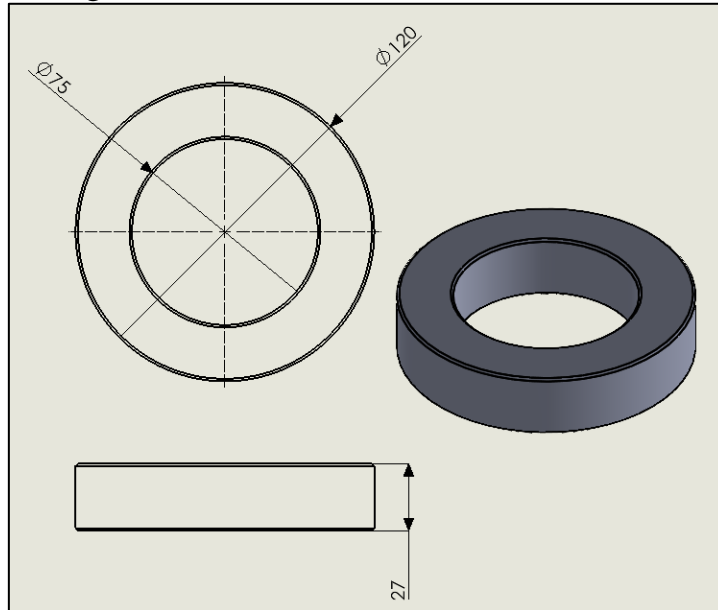
Hydraulic ram 37178



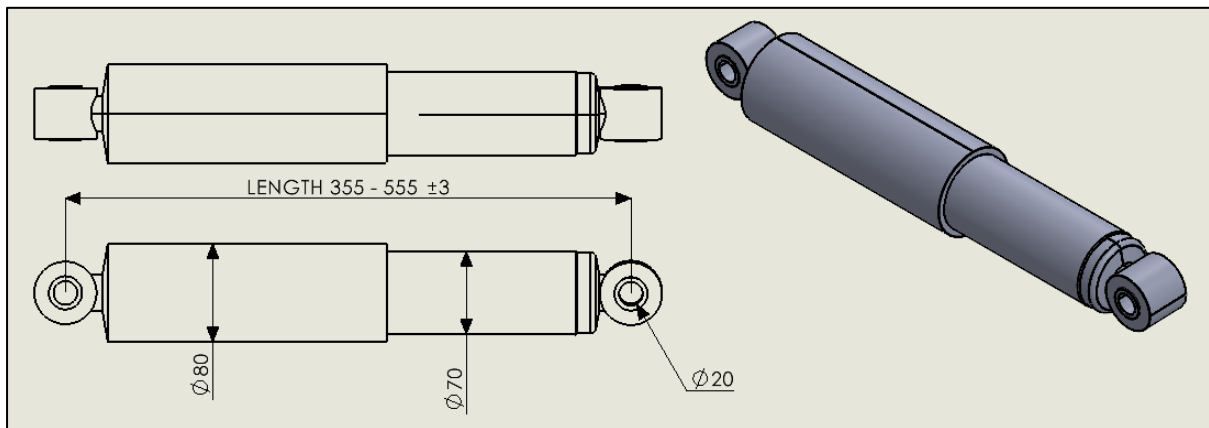
Parallel Kingpin 37229



Kingpin thrust bearing 37232



Shock Absorber 37051



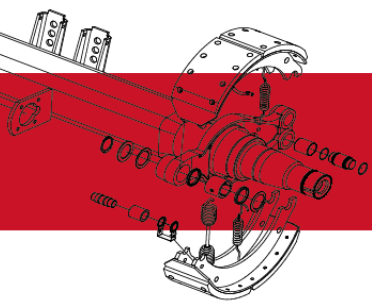
Shock Absorber bolt for centre bracket M20 x 100 – 37234

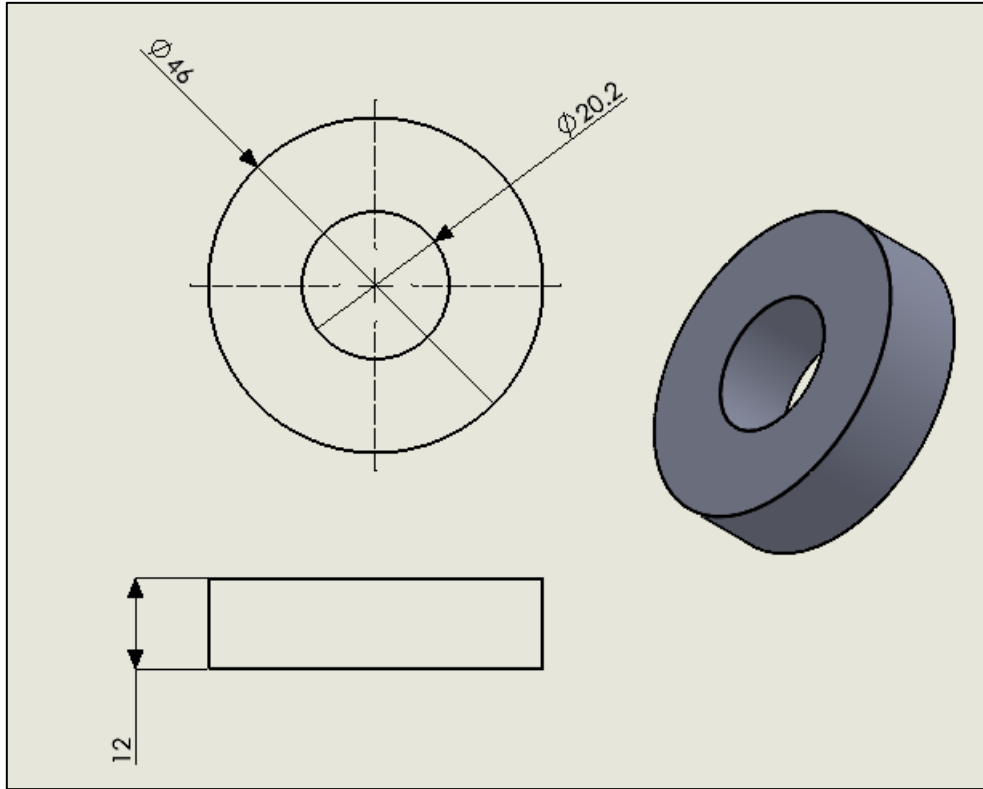
Shock Absorber bolt for knuckle bracket M20 x 110 – 37240

Shocker Absorber washer & Ram bolts - 37101

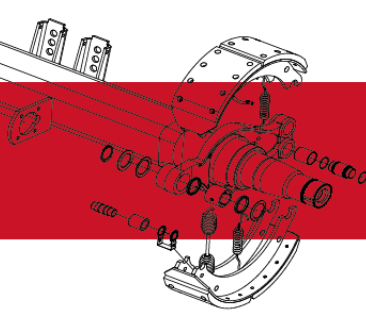
Shock Absorber nut M20 - 37102

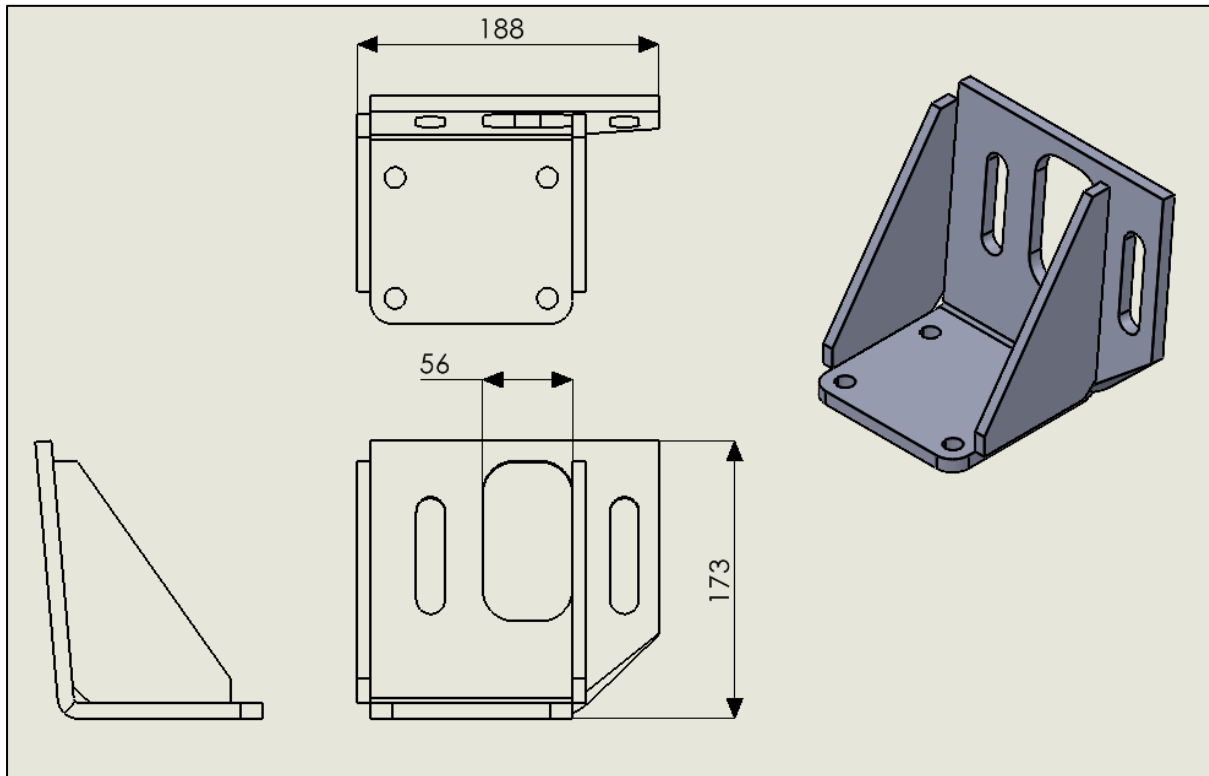
Shock Absorber spacer for centre mount - 37241





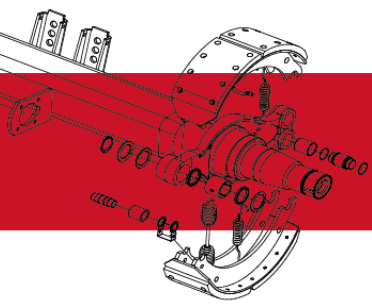
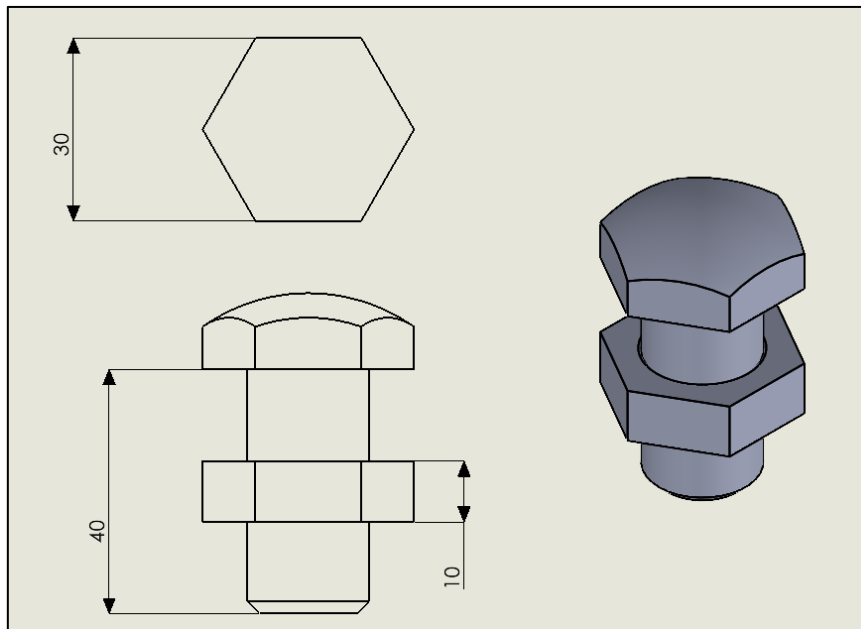
Left hand ACB shown below 37243



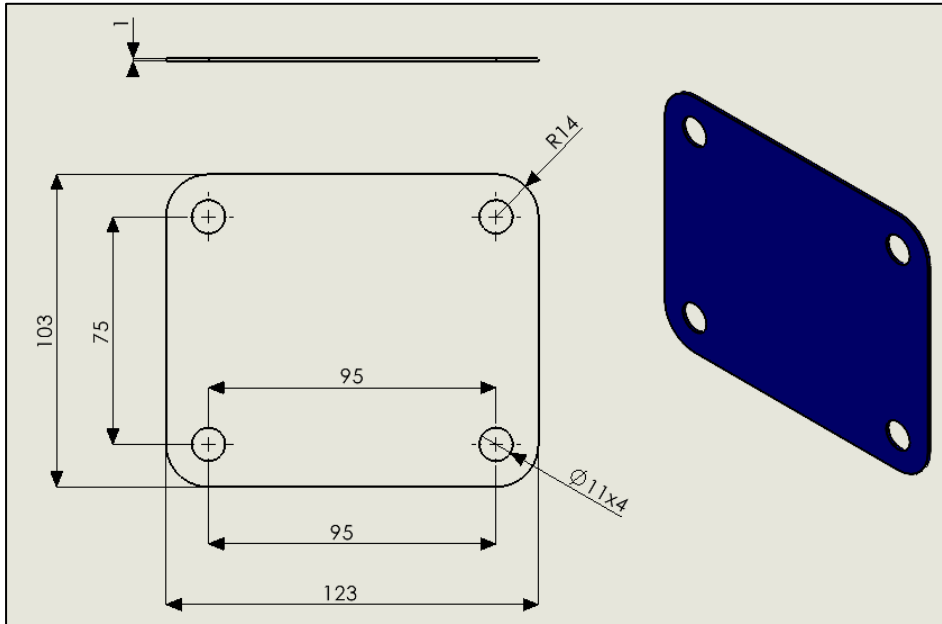


Right hand ACB 37244

Steer angle limit bolt M20x1.5x50 37226 and nut 37225

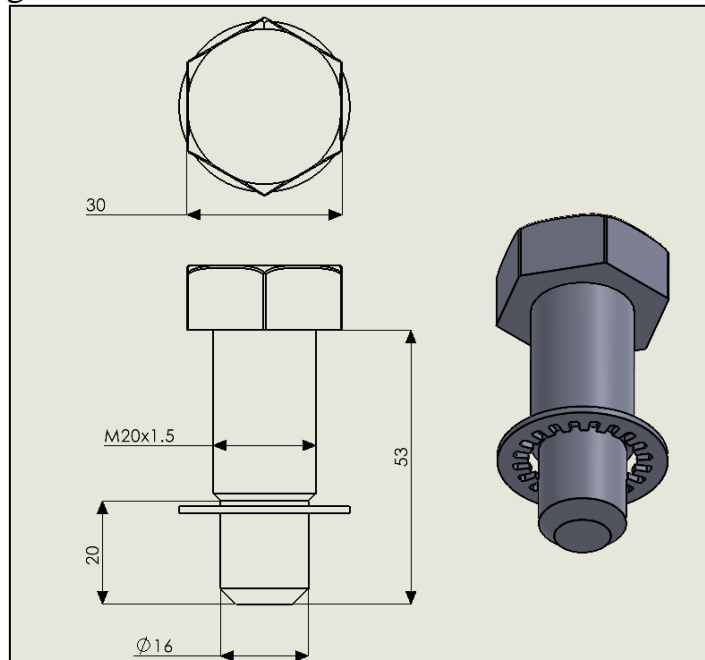


Kingpin Gasket 37227

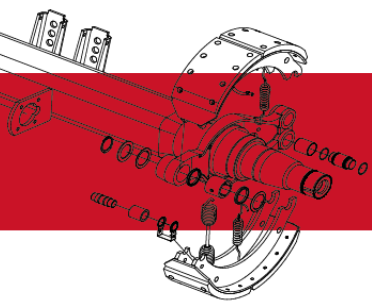


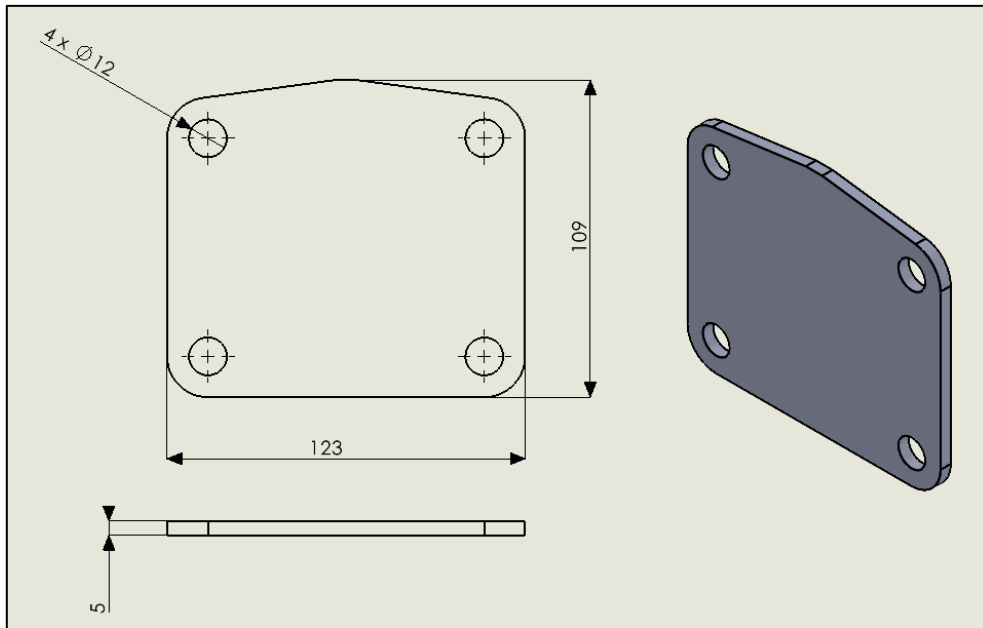
Kingpin cap and ACB spring washer 37091
Kingpin cap bolt M10x25 37090

Kingpin retaining bolt 37230 and washer 37231

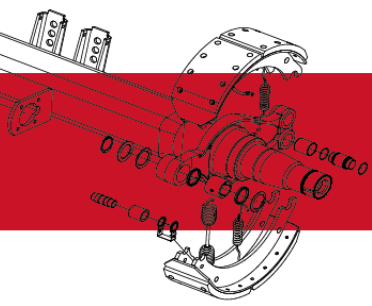
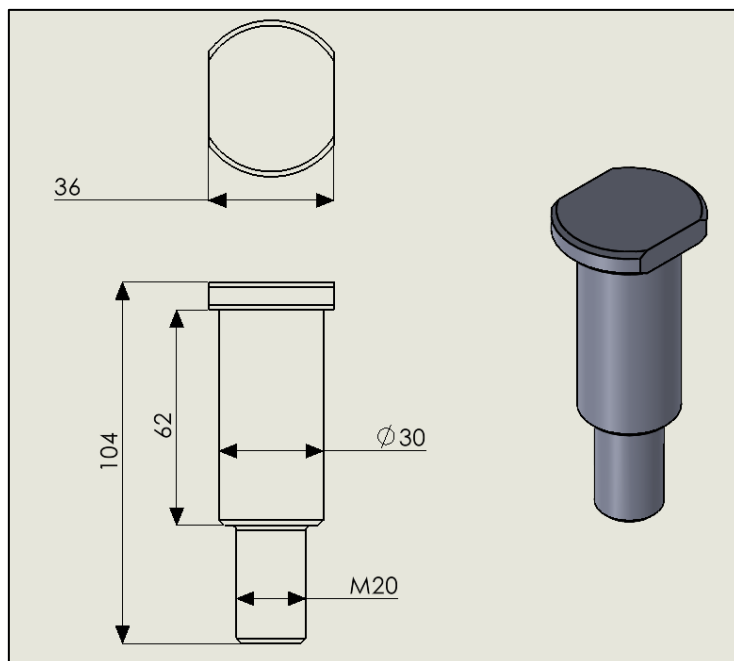


Kingpin bottom plate 37228

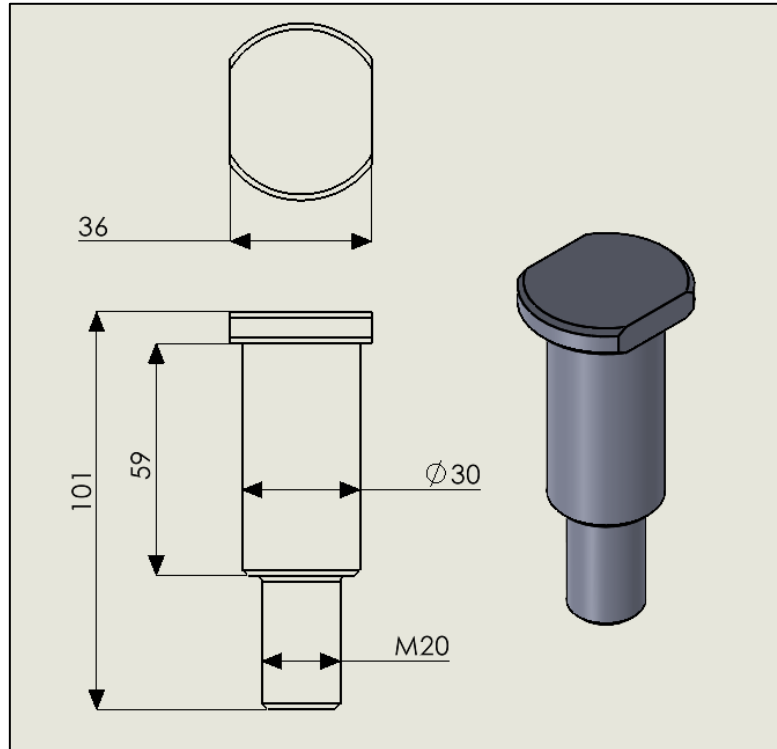




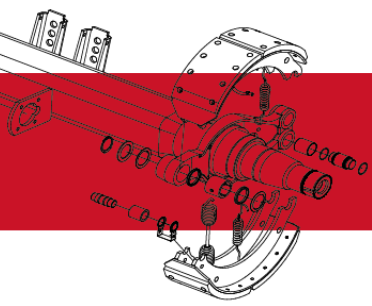
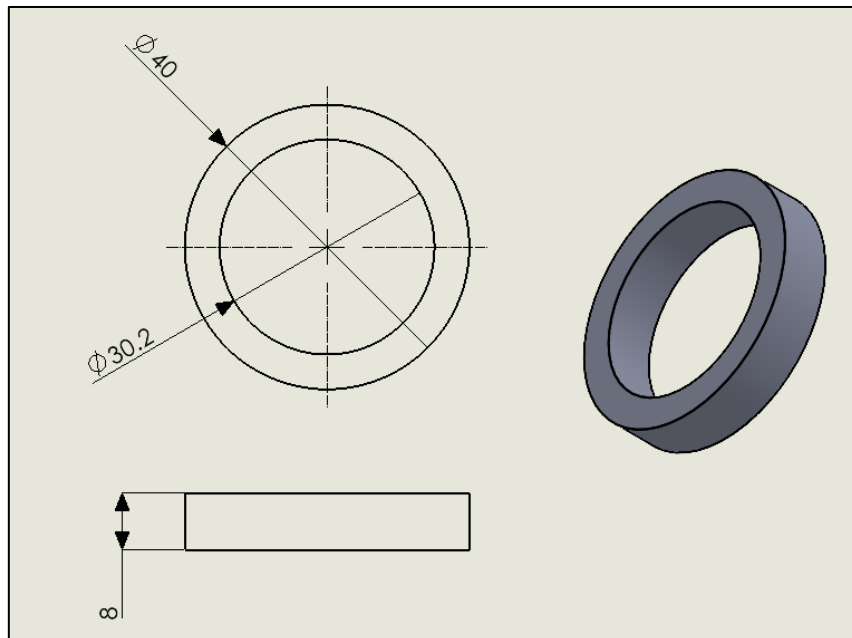
Ram pin for beam bracket 37235



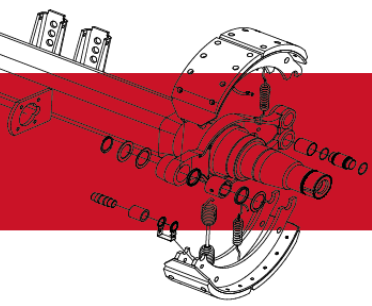
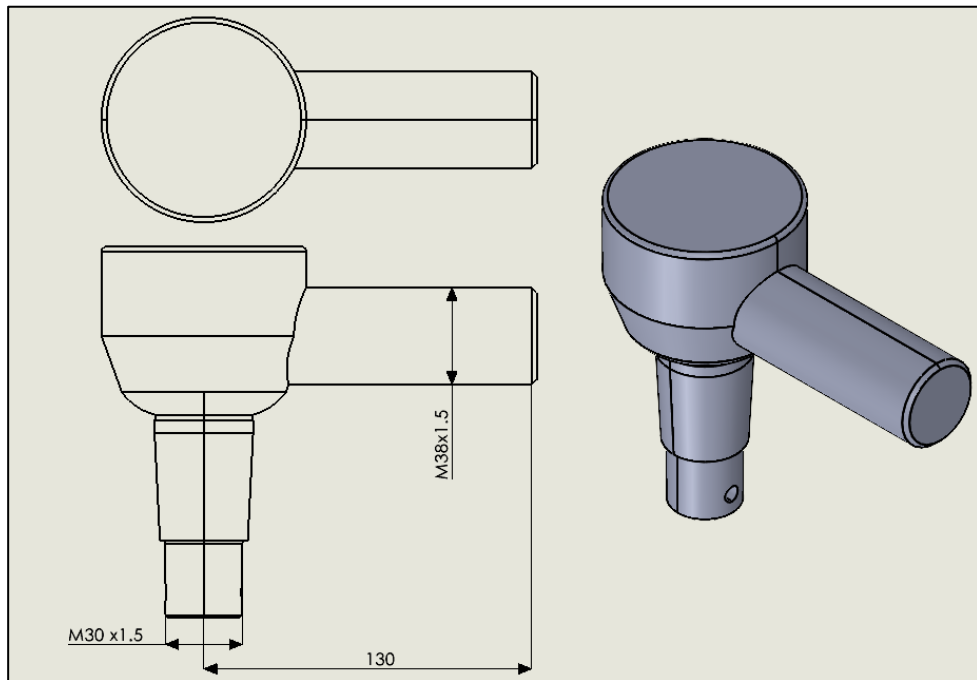
Ram pin for Knuckle bracket 37236



Ram spacer for centre mount - 37242

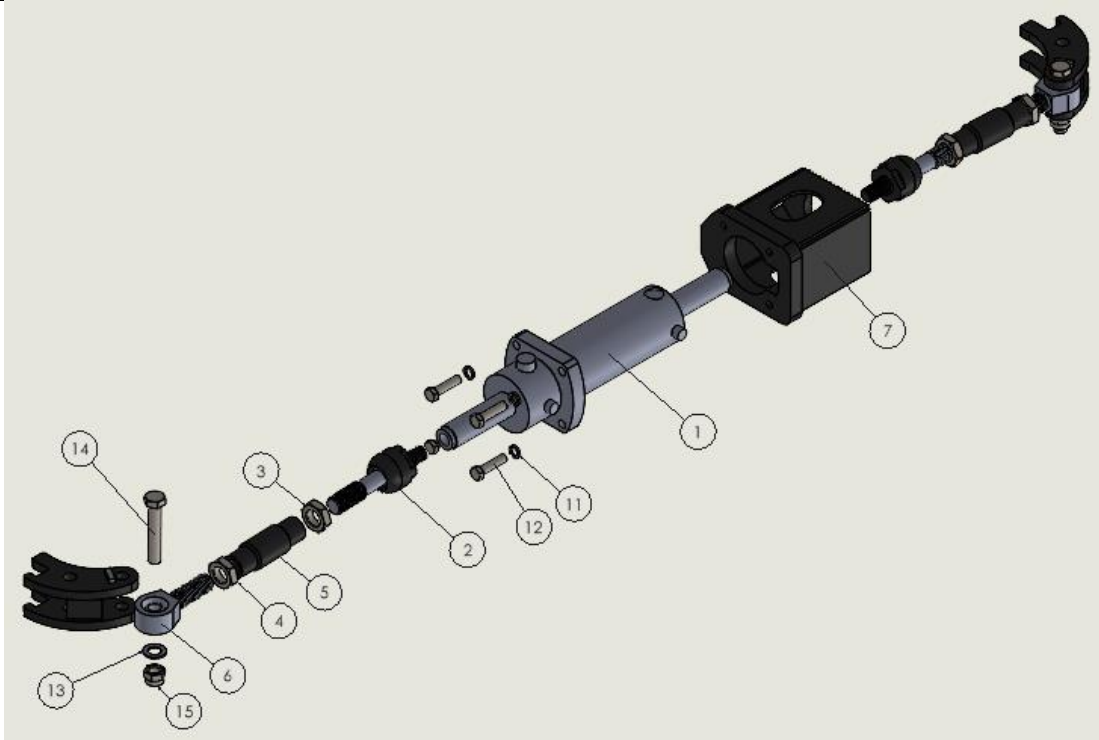


Ball Joint including castle nut - 37238

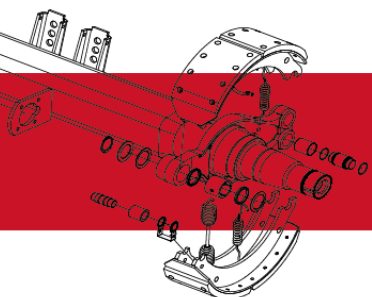


TIS Series Spare parts

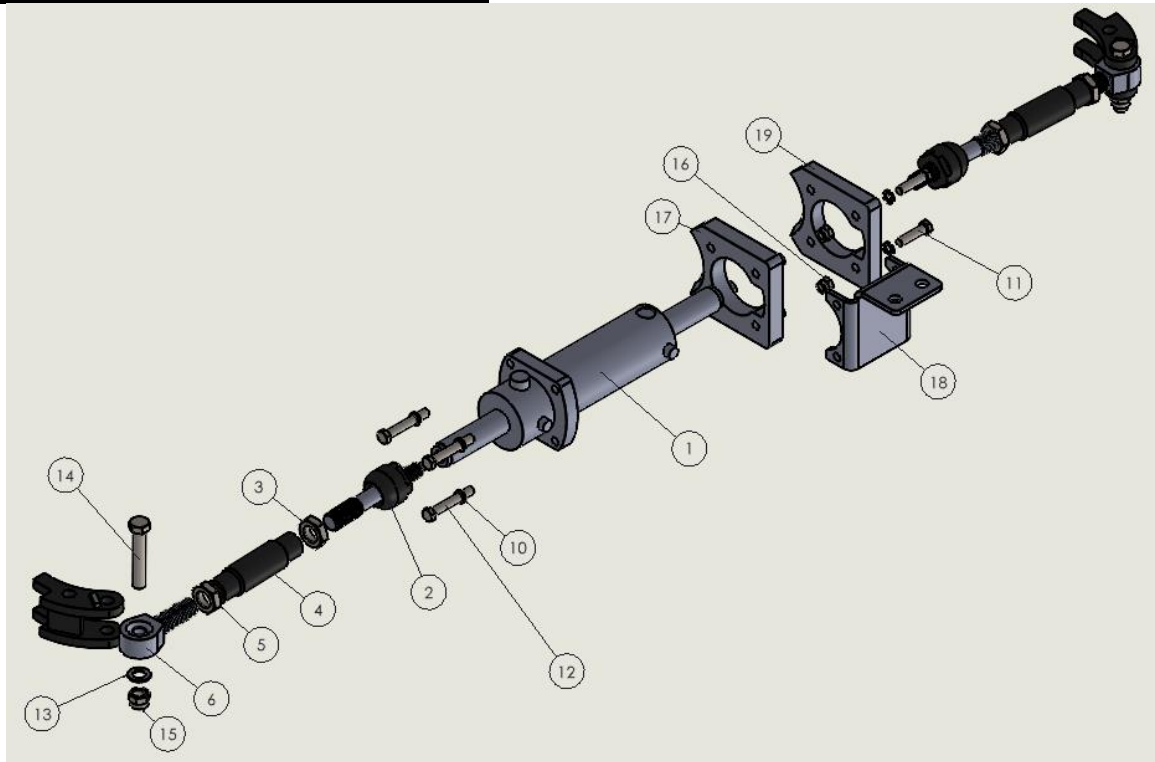
150SQ axle (420x180)



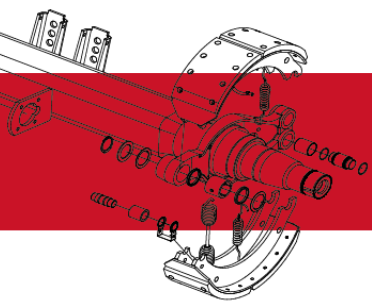
Item No.	Part No.	Description	QTY per Steer Axle
1	37253	HYD. STEER CYLINDER (100mm)	1
2	37254	BALL JOINT	2
3	37275	THIN NUT M30X2 LH	2
4	37276	THIN NUT M30X2	2
5	37282	CONNECTING ROD (110mm)	2
	37255	CONNECTING ROD (145mm)	
	37266	CONNECTING ROD (180mm)	2
6	37256	ROD END BEARING	2
7	37264	CYLINDER BRACKET 150SQ AXLES	1
11	61349	WASHER - M14	4
12	37274	BOLT M14x55	4
13	37277	WASHER - 21x37x3	2
14	37273	BOLT - M20 x110	2
15	37278	LOCK NUT - M20	2



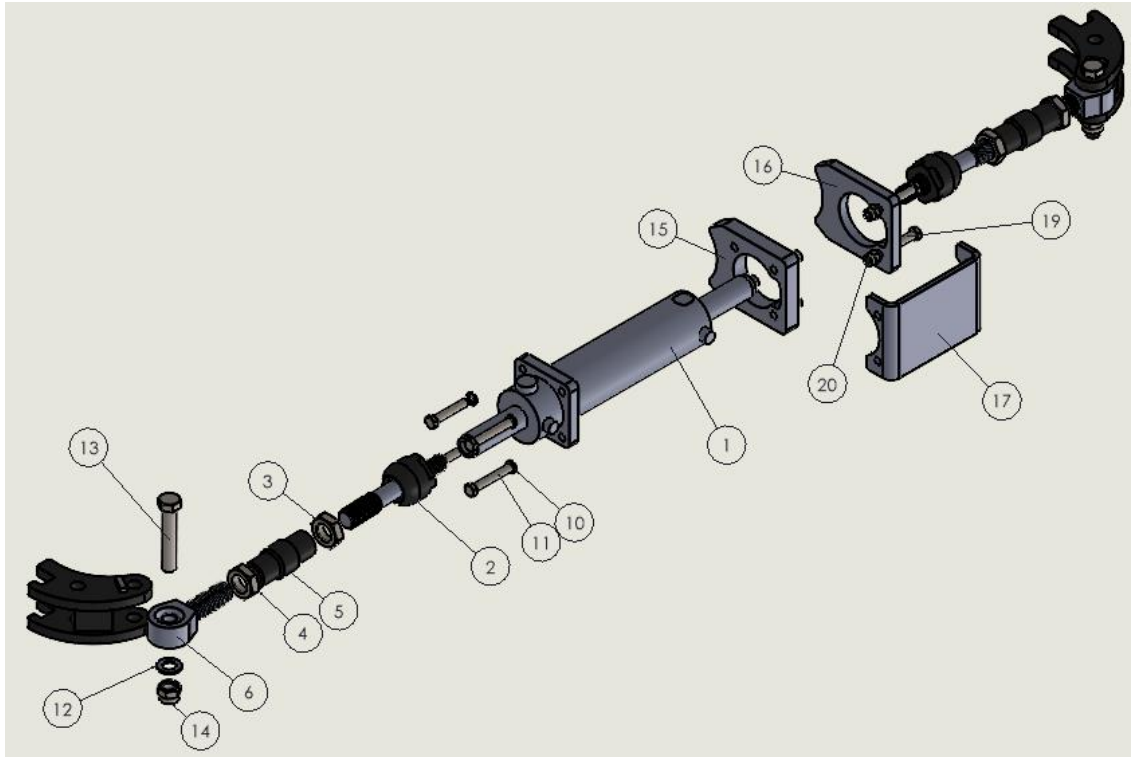
Ø127 axle (420x180)



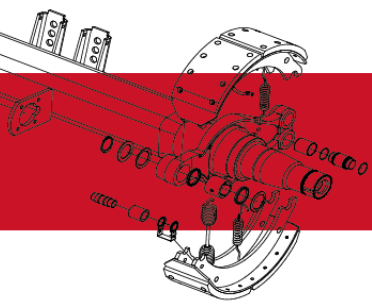
Item No.	Part No.	Description	QTY per Steer Axle
1	37253	HYD. STEER CYLINDER (100mm)	1
2	37254	BALL JOINT	2
3	37275	THIN NUT M30X2 LH	2
4	37282	CONNECTING ROD (110mm)	2
	37255	CONNECTING ROD (145mm)	2
	37266	CONNECTING ROD (180mm)	2
5	37276	THIN NUT M30X2	2
6	37256	ROD END BEARING	2
10	61349	WASHER - M14	6
11	37274	BOLT M14x55	2
12	37289	BOLT M14x90	4
13	37277	WASHER - 21x37x3	2
14	37273	BOLT - M20 x110	2
15	37278	LOCK NUT - M20	2
16	71668	LOCK NUT - M14	6
17	37268	CYLINDER BRACKET (30mm)	1
18	37283	SUPPORT BRACKET	1
19	37267	CYLINDER BRACKET (25mm)	1

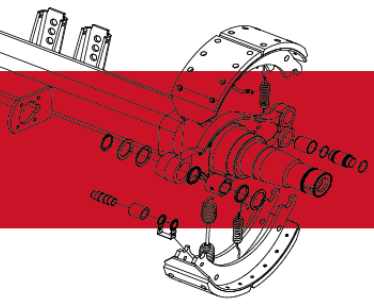


Ø127 axle (310x190)



Item No.	Part No.	Description	QTY per Steer Axle
1	37261	HYD. STEER CYLINDER (85mm)	1
2	37254	BALL JOINT	2
3	37275	THIN NUT M30X2 LH	2
4	37276	THIN NUT M30X2	2
5	37282	CONNECTING ROD (110mm)	2
	37255	CONNECTING ROD (145mm)	2
	37266	CONNECTING ROD (180mm)	2
6	37256	ROD END BEARING	2
10	72012	WASHER - M12	6
11	31686	BOLT M12x80	2
12	37277	WASHER - 21x37x3	2
13	37273	BOLT - M20 x110	2
14	37278	LOCK NUT - M20	2
15	37286	CYLINDER BRACKET (25mm)	1
16	37287	CYLINDER BRACKET (16mm)	1
17	37285	CYLINDER BRACE	1
18	31698	BOLT M12X65	2
19	31617	BOLT M12X50	2
20	31632	LOCK NUT - M12	6





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Part No. 80294 REV H