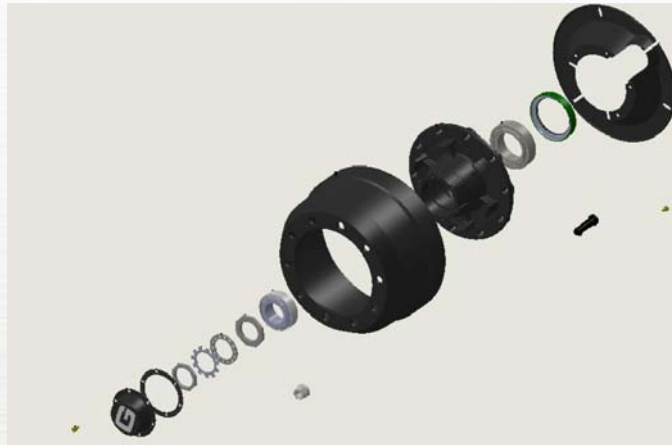


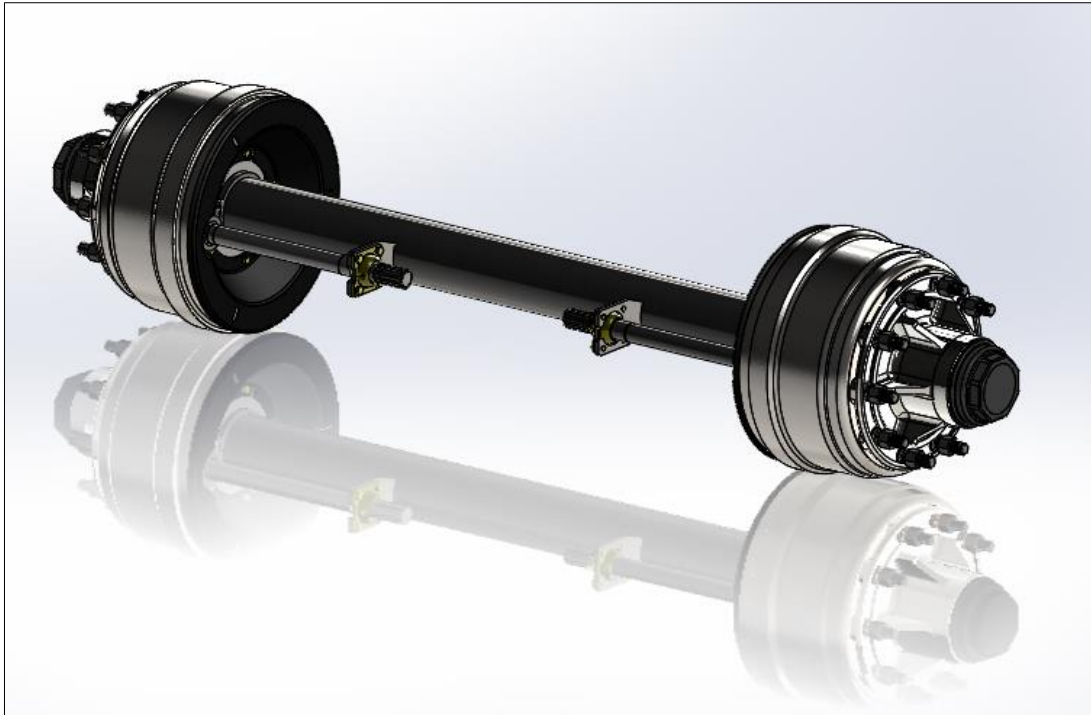


Axle Bill Of Materials

960 F Series 420x180 10 Spline

80292 Rev C April 2023

420X 180 – 960 SERIES AXLE



960 series axle is TUV tested to 11000Kg, please see website for test report.

335mm PCD, 10 stud M22 hub and drum. 280.8mm hub pilot.

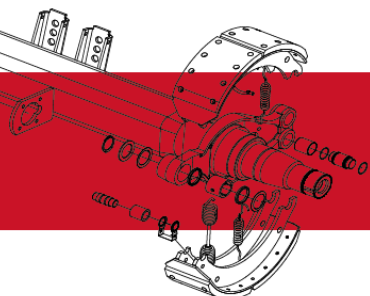
Available in single and twin wheel stud.

Internal and External Drum Arrangements

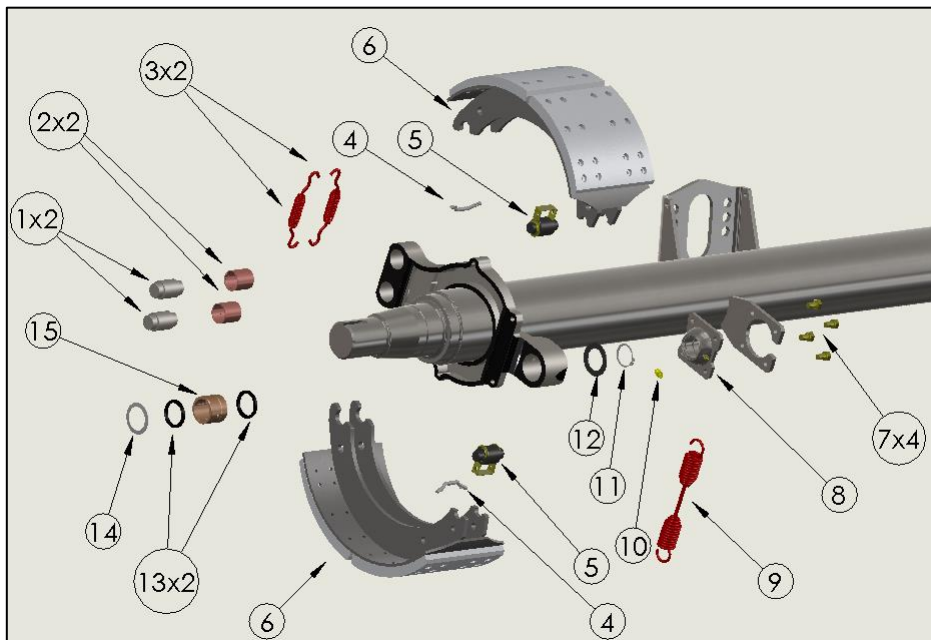
10 spline camshaft. Available in ø127mm Round or 150mm Square Beam.

Service manual available on website

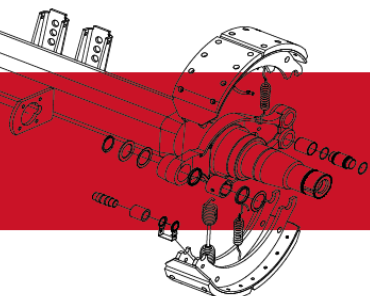
Please see following pages for part identification



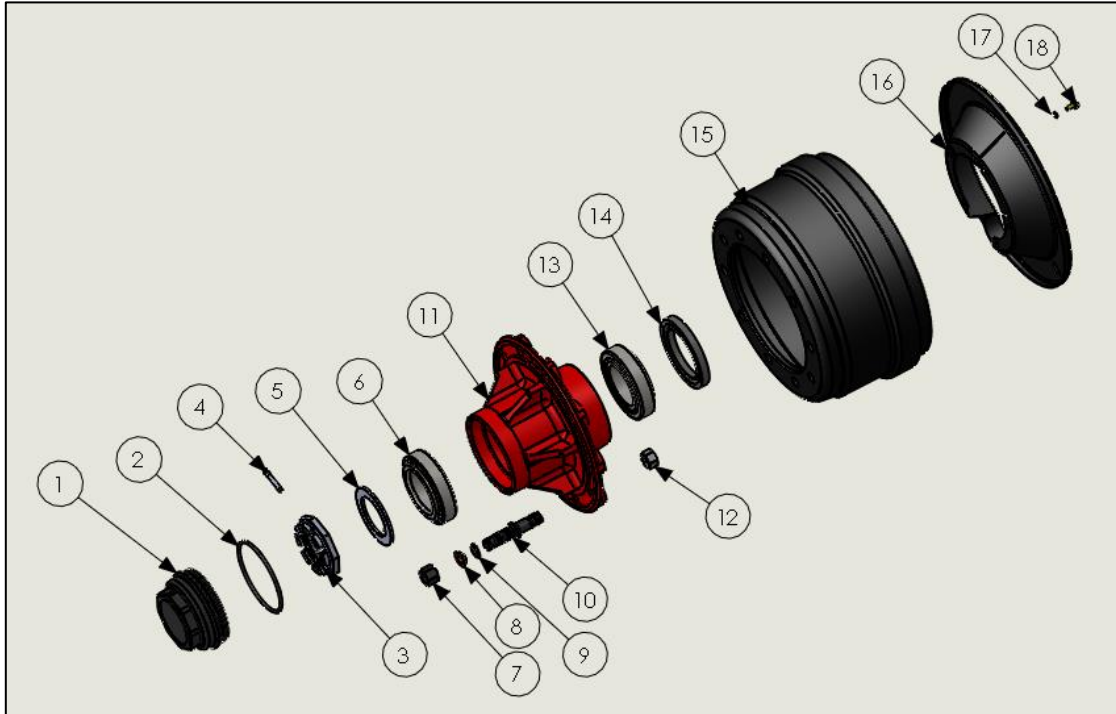
420 x 180 – 960 Series Brake Shoe Assembly



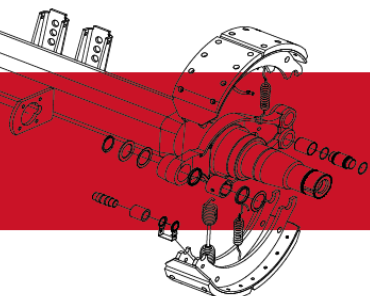
Item	Description	Part No.	QTY per Axle.
1	Anchor Pin	61171	4
2	Anchor Pin Bush	20067	4
3	Brake Shoe Retaining Spring	61141	4
	Brake Shoe Assembly	61157FA	4
(4)	Spring Anchor Bar	61150	4
(5)	Retainer Cam Roller	61220	4
	One Piece Cam Roller	61235	4
(6)	Brake Shoe	61157F	4
7	Hex Bolt M10x20	61359	8
7b	M10 lock nut	20052	8
8	Spherical bearing	61080	2
9	Return Spring	61140	2
10	Grease Nipple	61110	2
11	Circlip	61120	2
12	Camshaft 1mm Washer	96365F	2
13	Camshaft Grease Seal	61056	4
14	Camshaft 2mm Washer	61058	2
15	Camshaft Sintered Bush	20110	2



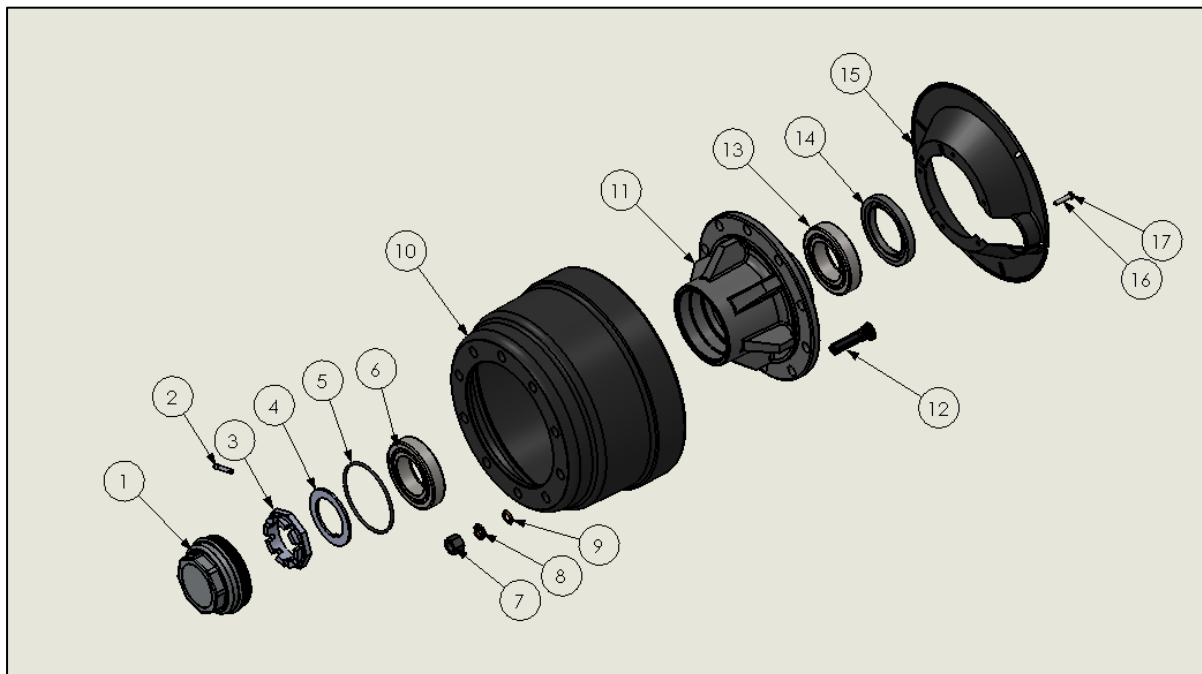
420 x 180 – 960 Series Hub/Drum Assembly **INTERNAL DRUM**



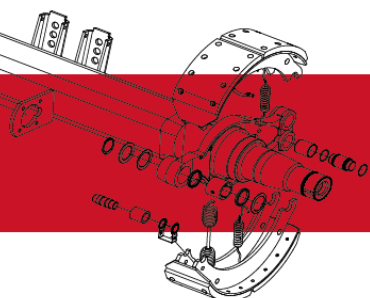
Item	Description	Part No.	QTY per Axle.
1	Hub Cap	20000	2
2	Hub Cap Seal	20001	2
3	Spindle Castle Nut	20060	2
4	Split Pin	20059	2
5	Spindle Washer	20058	2
6	Outer Bearing	20002	2
7	DIN Wheel Nut	61383	20
7.1	DIN Wheel Nut Option	61411	20
8	DIN Nut outer washer	61372	20
9	DIN Nut inner washer	61371	20
10	Wheel Stud	20099	20
11	Hub	20101	2
12	Wheel stud nut	20100	20
13	Inner Bearing	20002	2
14	Grease Seal	20013	2
15	Internal Drum	20102	2
16	Dust Cover	20105	2
17	Dust Cover Washer	20016	12
18	Dust Cover Bolt (M8x12)	61358F	12



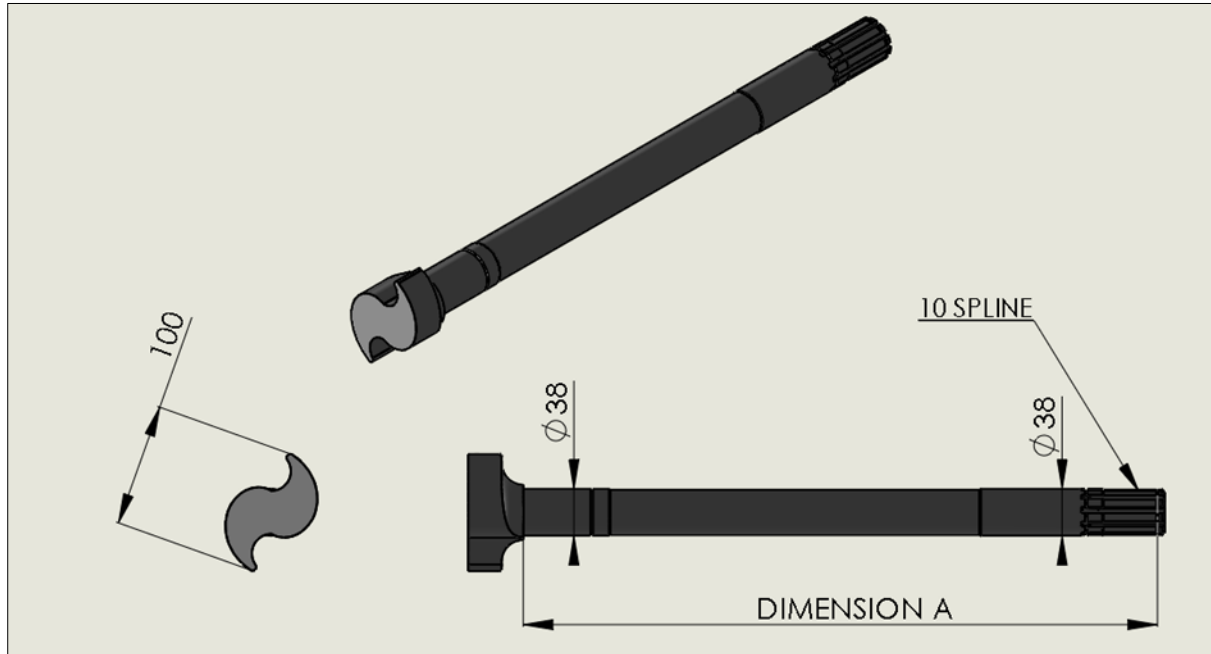
420 x 180 – 960 Series Hub/Drum Assembly **EXTERNAL DRUM**



Item	Description	Part Number	QTY per Axle
1	Hub Cap	20000	2
2	Hub Cap Split Pin	20059	2
3	Spindle Castle Nut	20060	2
4	Spindle Washer	20058	2
5	Hub Cap Seal	20001	2
6	Outer Bearing	20002	2
7.1	ISO Wheel Nut	61381Z	20
7.2	DIN Wheel Nut	61383	20
8	DIN Nut outer washer	61372	20
9	DIN Nut inner washer	61371	20
10	External Drum	20008	2
11	Hub	20010	2
12.1	Wheel Bolt – Single (82mm)	20201	20
12.2	Wheel Bolt – Twin (94mm)	20200	20
13	Inner Bearing	20002	2
14	Hub Seal	20013	2
15	Dust Cover	61390F	2
16	Dust Cover Washer	20016	12
17	Dust Cover Bolt (M8)	61358F	12



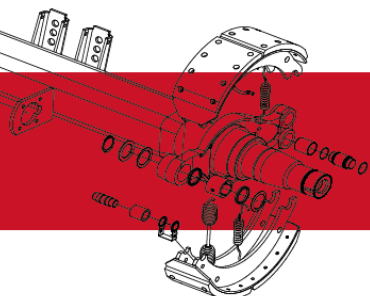
420 x 180 – 960 Series 10 Spline Camshaft Parts List



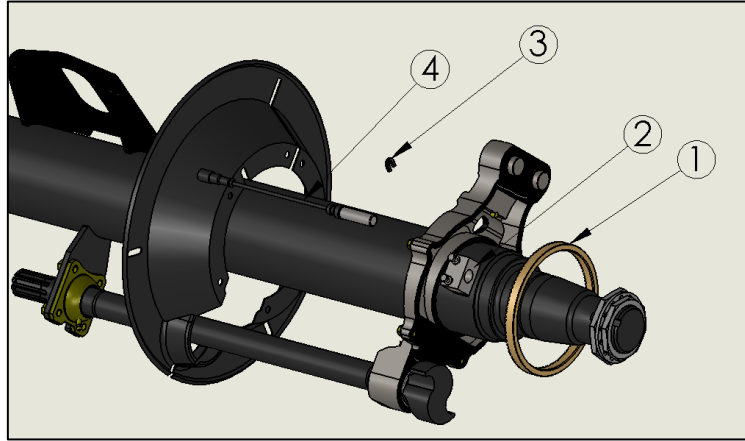
Dimension A	Part No.
700mm – Left Hand Large Head	61629
700mm – Right Hand Large Head	61628
212mm – Left Hand Large Head	61061
212mm – Right Hand Large Head	61071
519mm – Left Hand Large Head	61065
519mm – Right Hand Large Head	61075
680mm – Left Hand Large Head	61151
680mm – Right Hand Large Head	61152
189mm – Left Hand Large Head	61127
189mm – Right Hand Large Head	61147
250mm – Left Hand Large Head	61138
250mm – Right Hand Large Head	61148

Camshaft lengths are measured from under head to the centre of last circlip groove.

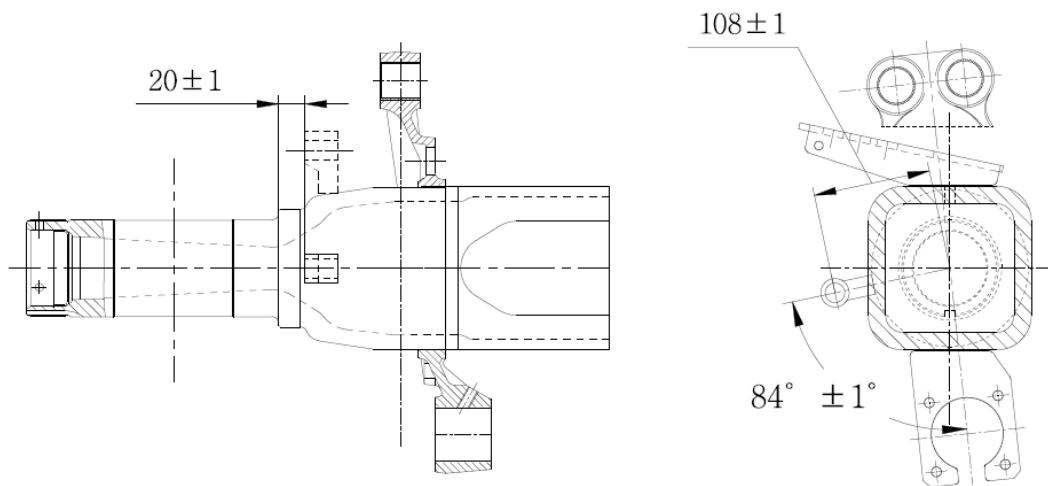
The illustrated camshaft is a left hand camshaft. When looking at the head of the camshaft a right hand cam is Z shaped and a left hand is S shaped.



ABS/Anti-Lock Assembly



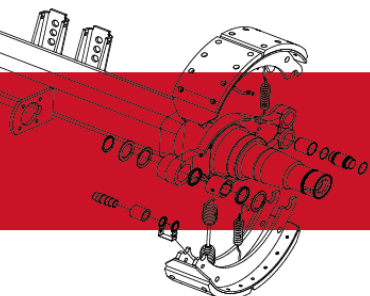
Item	Description	Part No.
1	Pole Wheel (100 tooth)	20119
2	Sensor Block	20120
3	Dust Cover Grommet	61557
4	Single Sensor Lead Kit (Sensor/Bush/Paste)	61790F



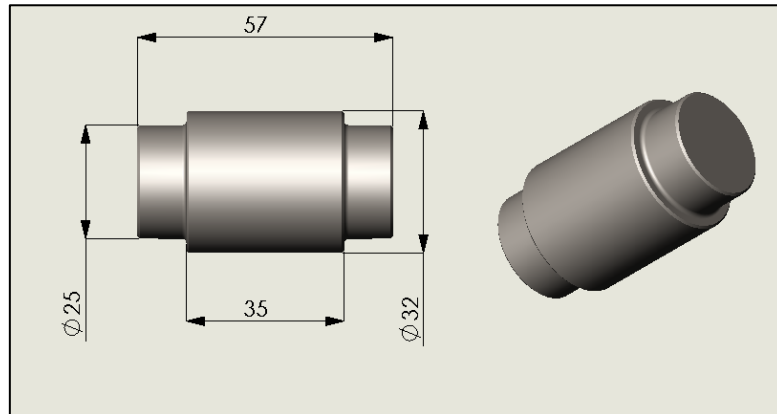
ABS sensor at 216mm PCD

Face of sensor block 20mm from large bearing shoulder

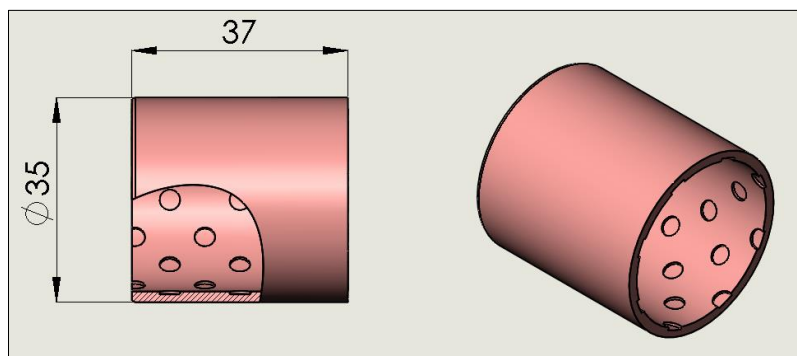
ABS Block welded 84Degrees from the camshaft axle center line. After fitting ABS sensor check the sensor is working properly.



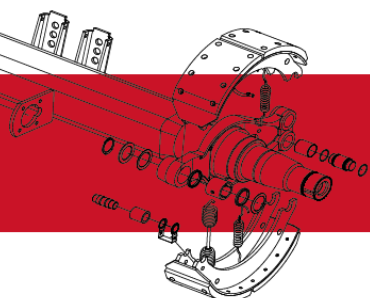
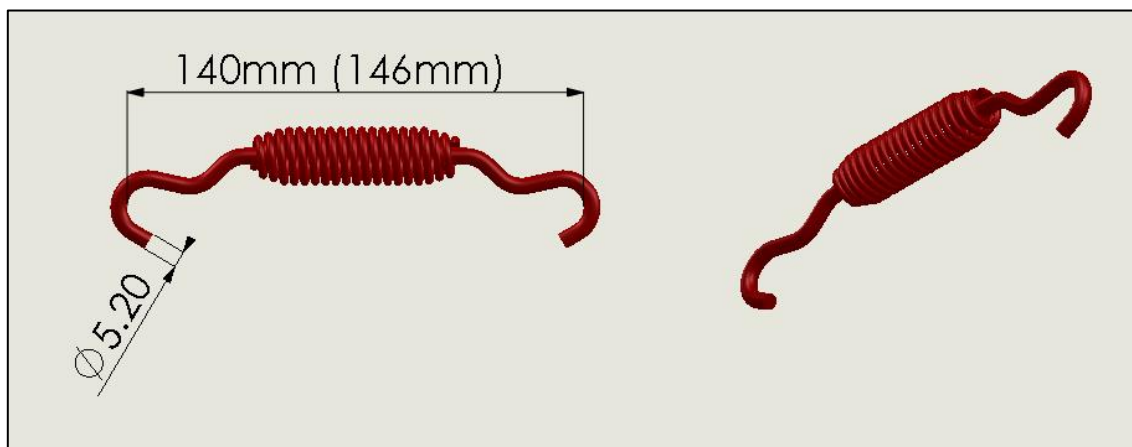
61171 – Anchor pin



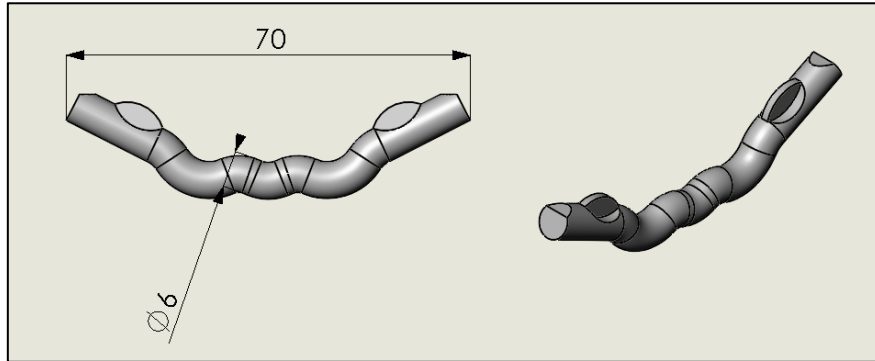
20067 (61200B) – Bush Anchor Pin



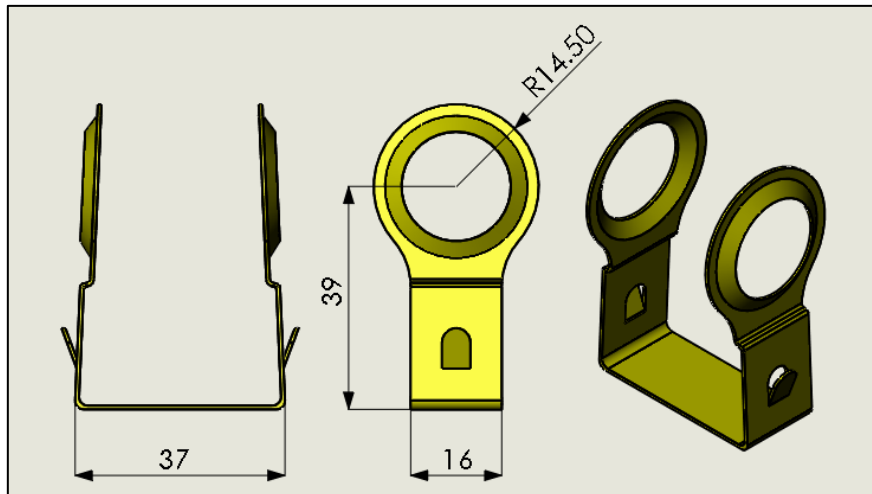
61141 – Brake Shoe Retaining Spring



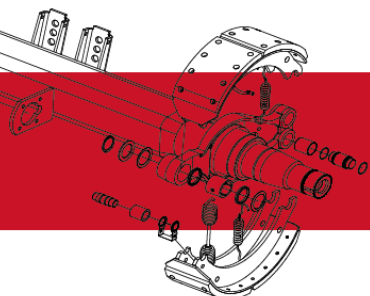
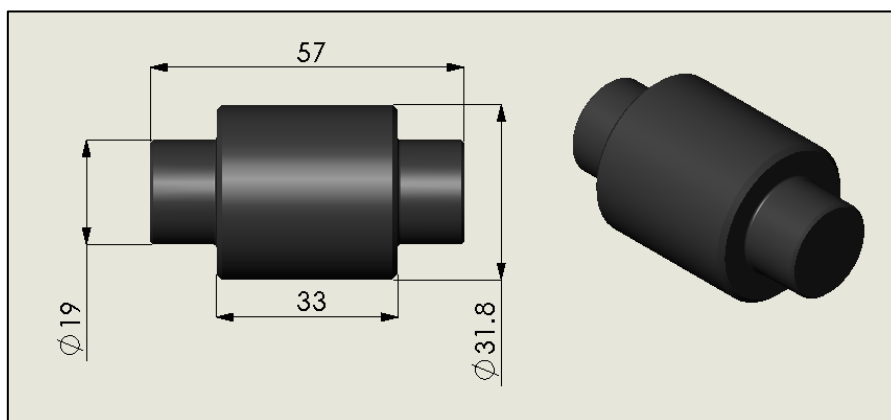
61150 – Spring Anchor Bar



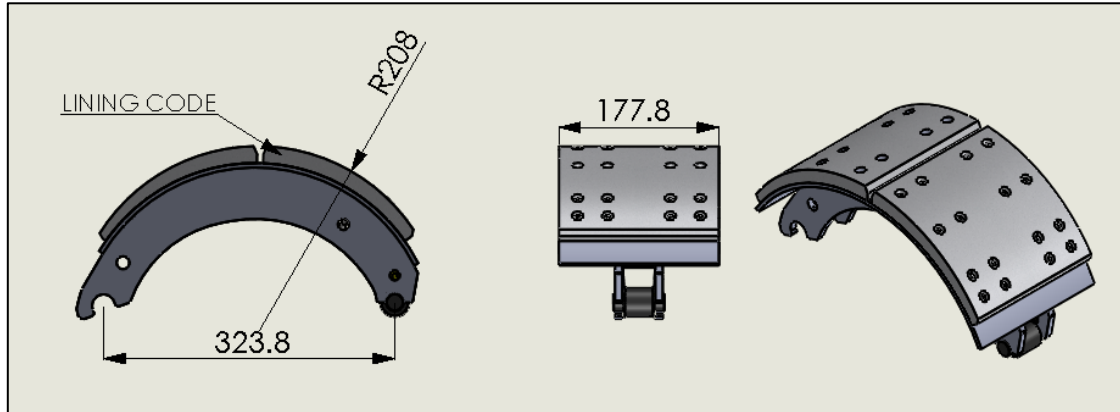
61220 – Retainer Cam Roller



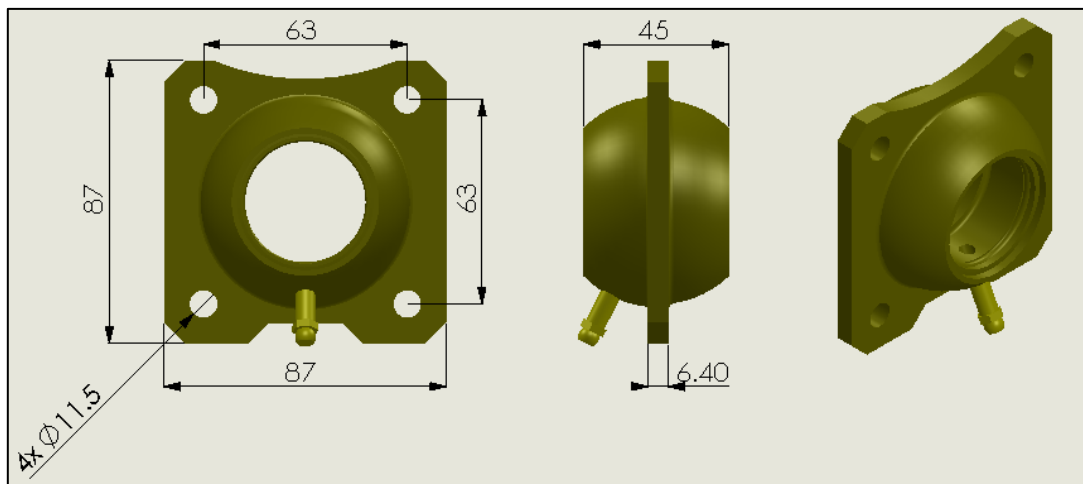
61235 – One Piece Cam Roller



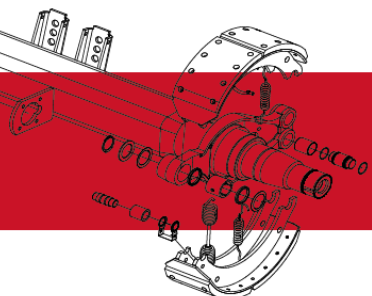
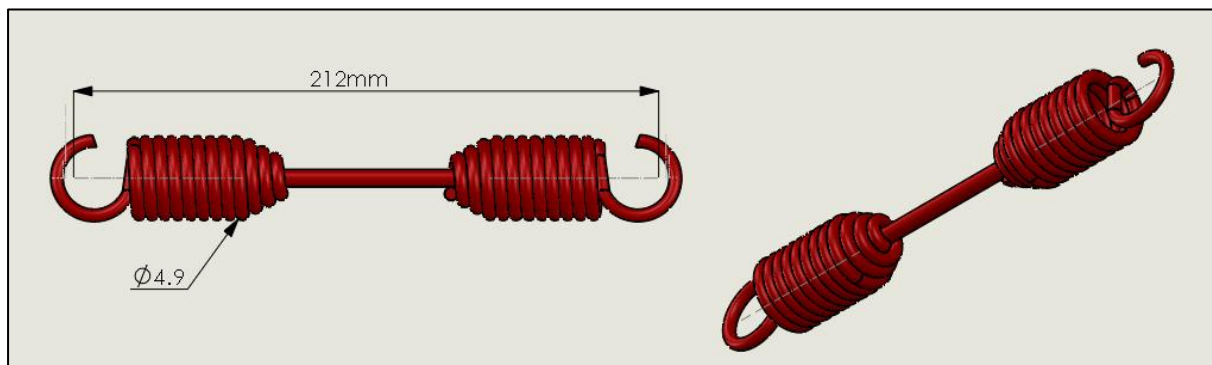
61157FA – Brake shoe with spring anchor bar and cam roller



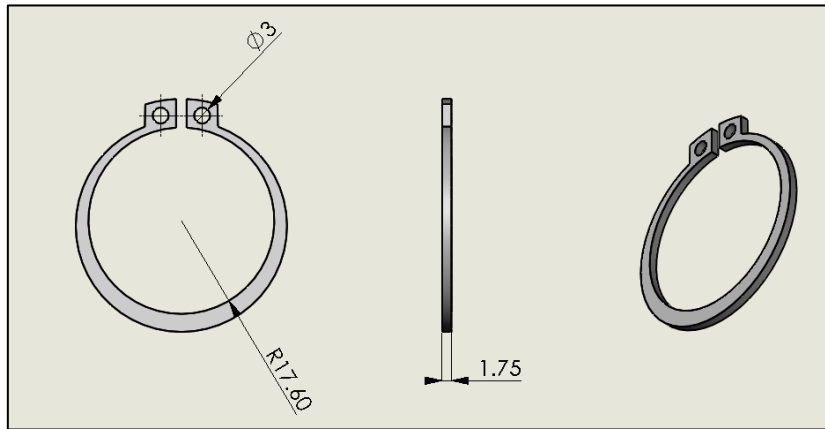
61080 (20080) – Camshaft Spherical Bearing



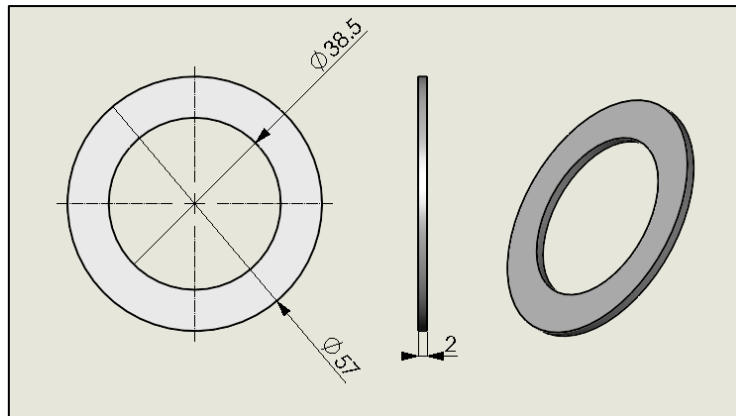
61140 – Spring Return



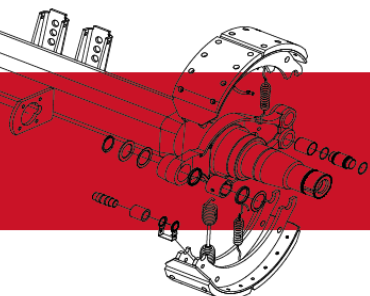
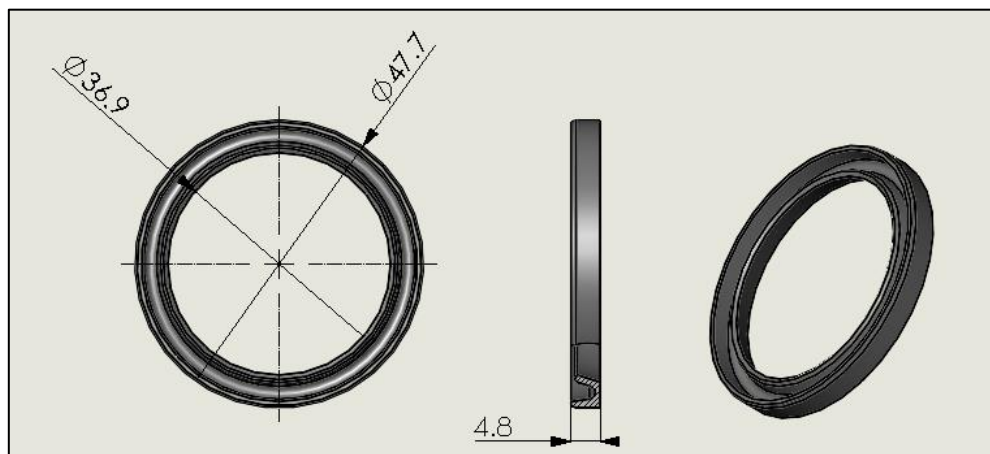
61120 - Circlip



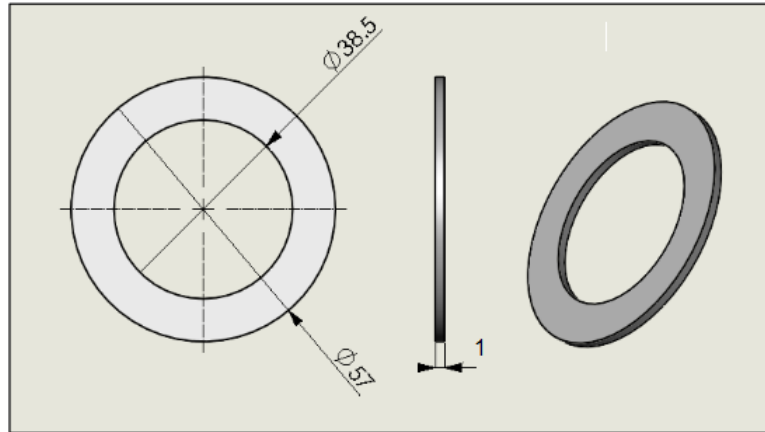
61058 - Camshaft Support Washer



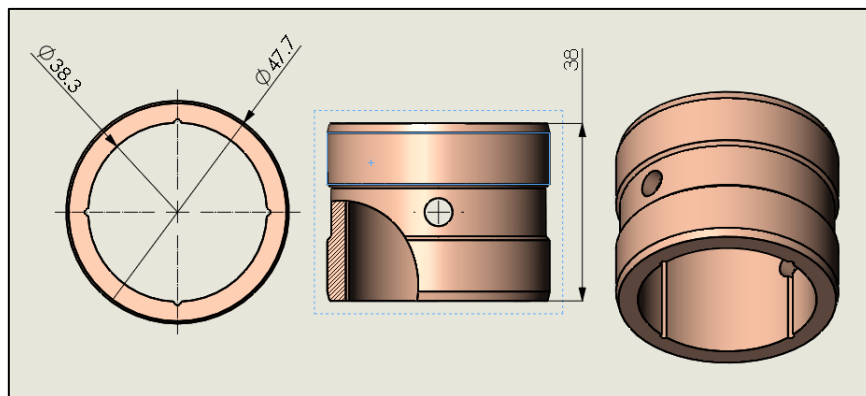
61056 - Camshaft Grease Seal



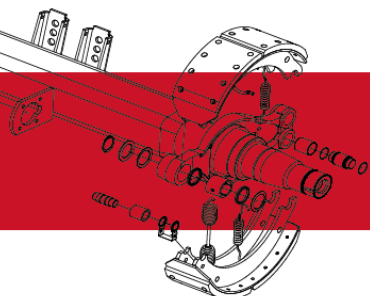
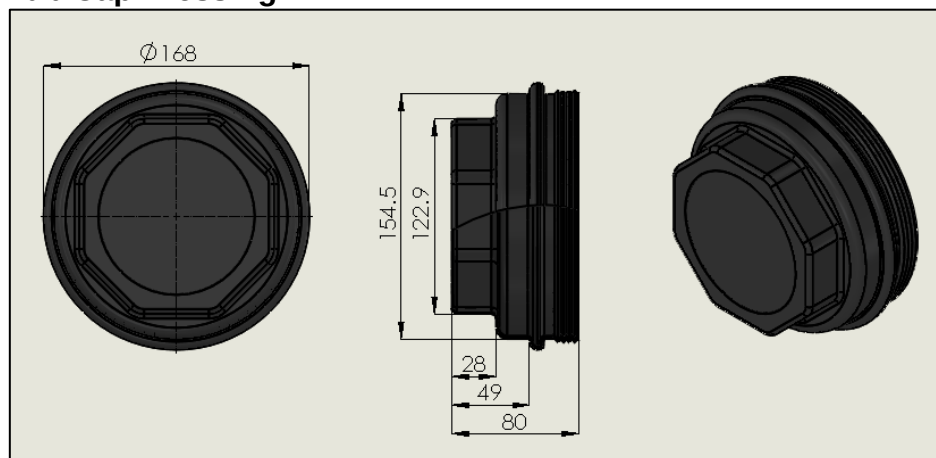
96365F – Camshaft 1mm Washer



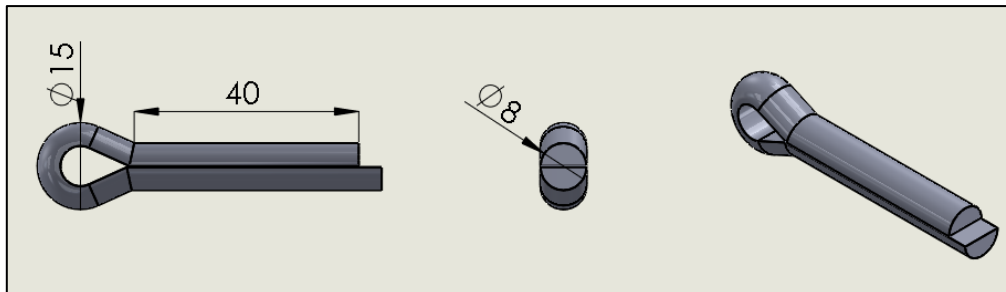
20110 – Camshaft Sintered Bush



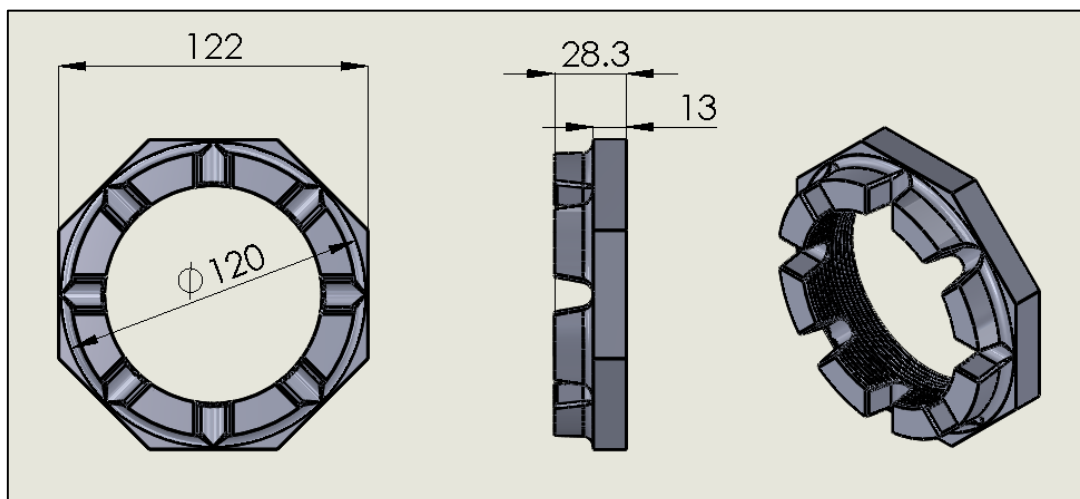
20000 – Hub Cap Pressing



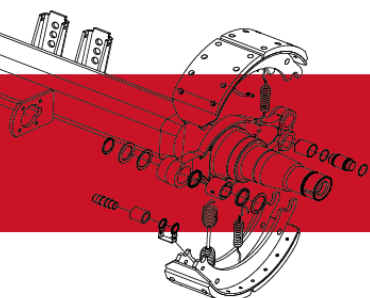
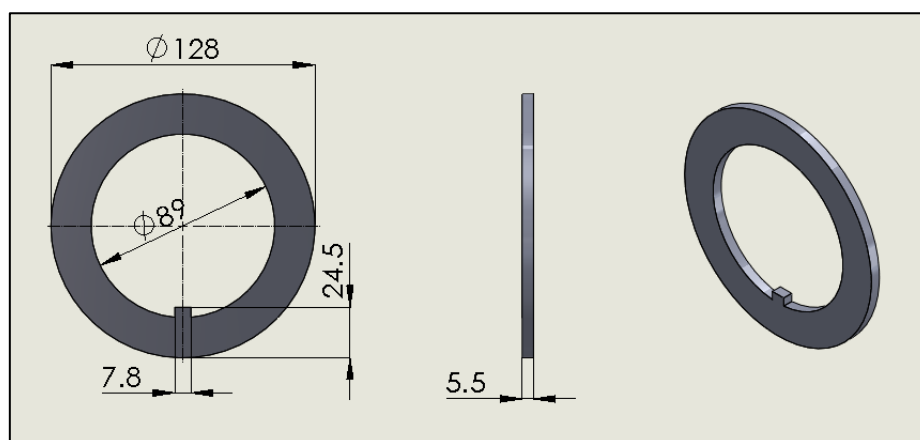
20059 – Spindle Split Pin



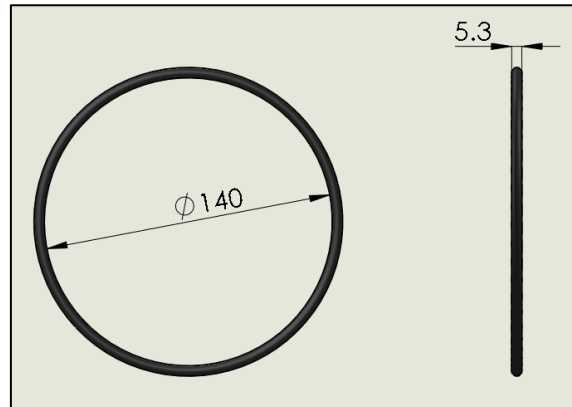
20060 – Spindle Castle Nut



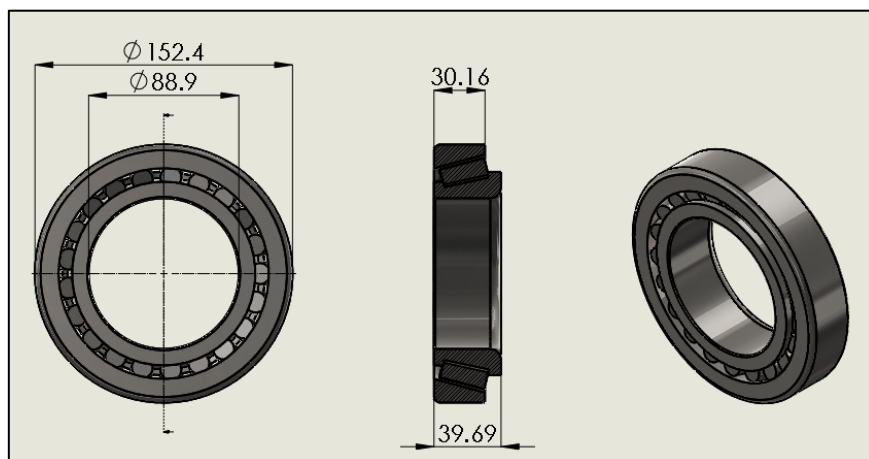
20058 – Spindle Washer



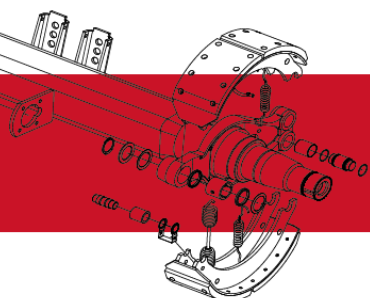
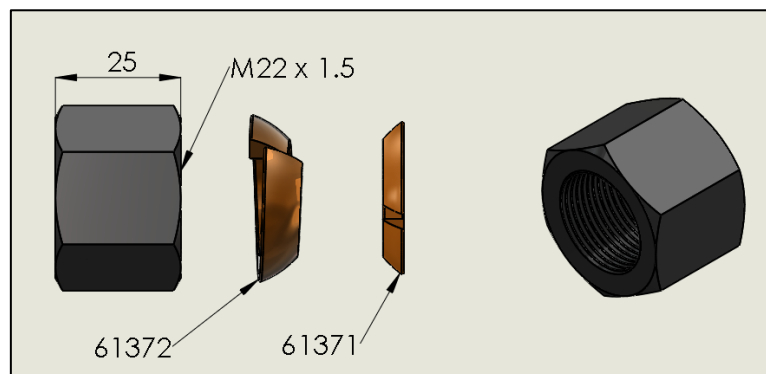
20001 – Hub Cap Seal



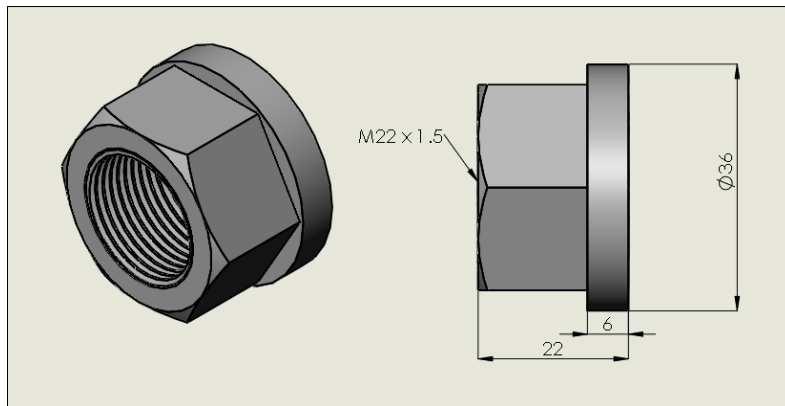
20002 – Inner and Outer Bearing



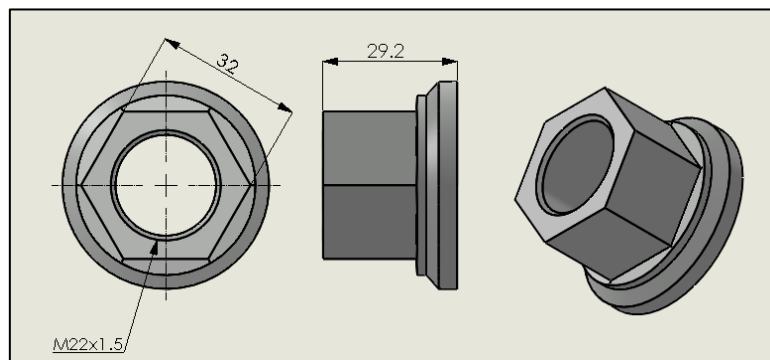
61383- M22 DIN Wheel Nut + Washers (61372 & 61371)



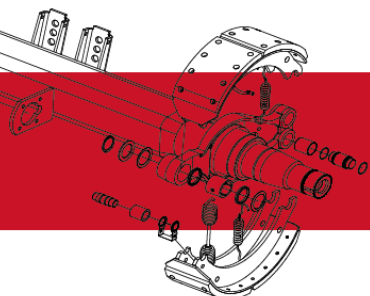
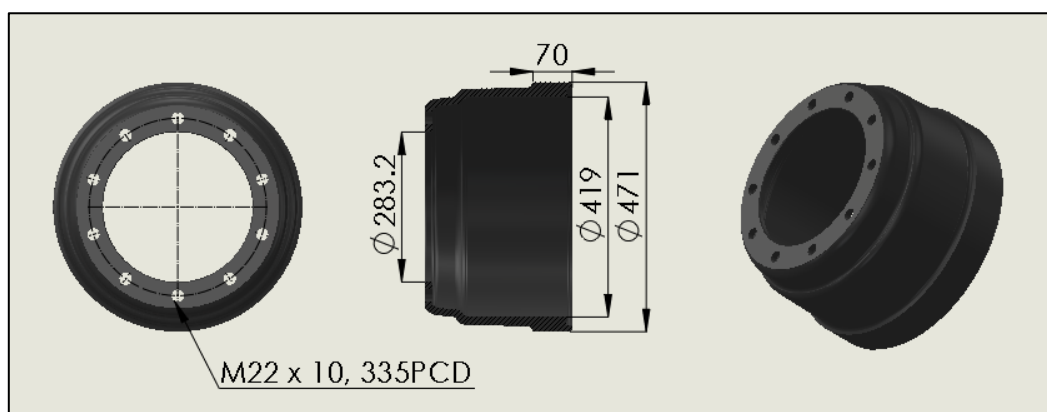
61411- M22 DIN Wheel Nut



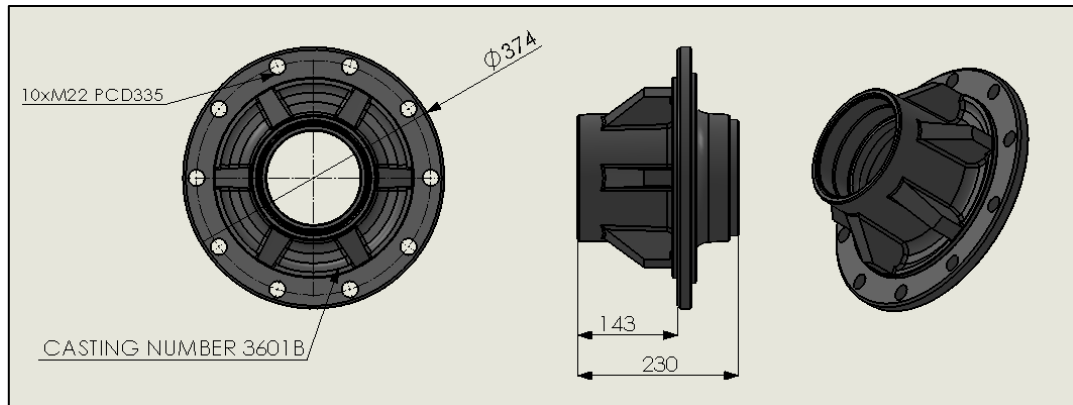
61381Z- M22 ISO Wheel Nut



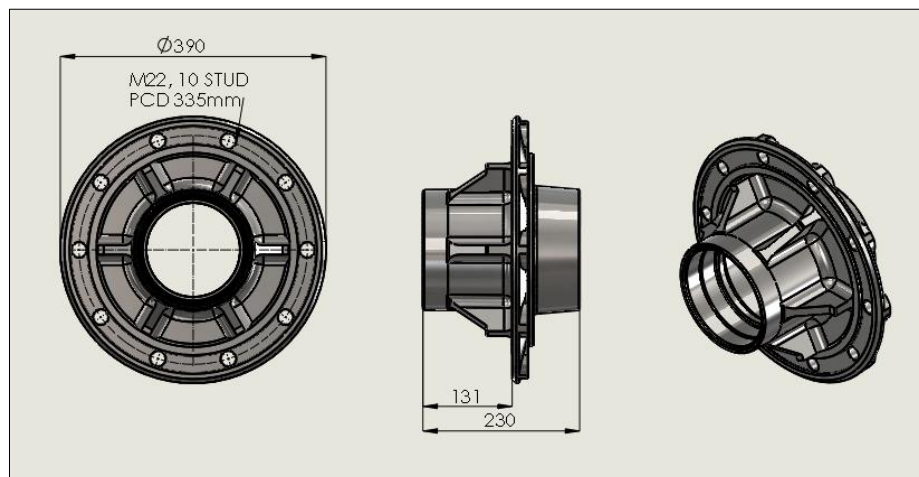
20008 –Drum **EXTERNAL DRUM**



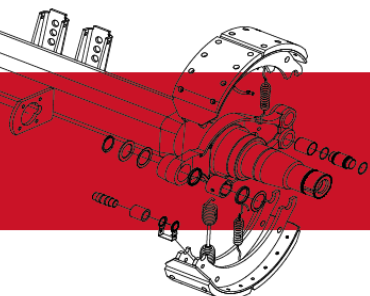
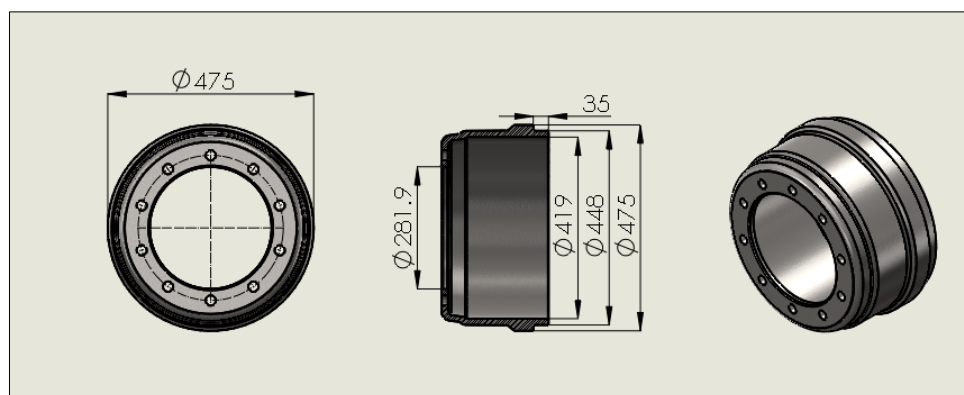
20010 –Hub **EXTERNAL DRUM**



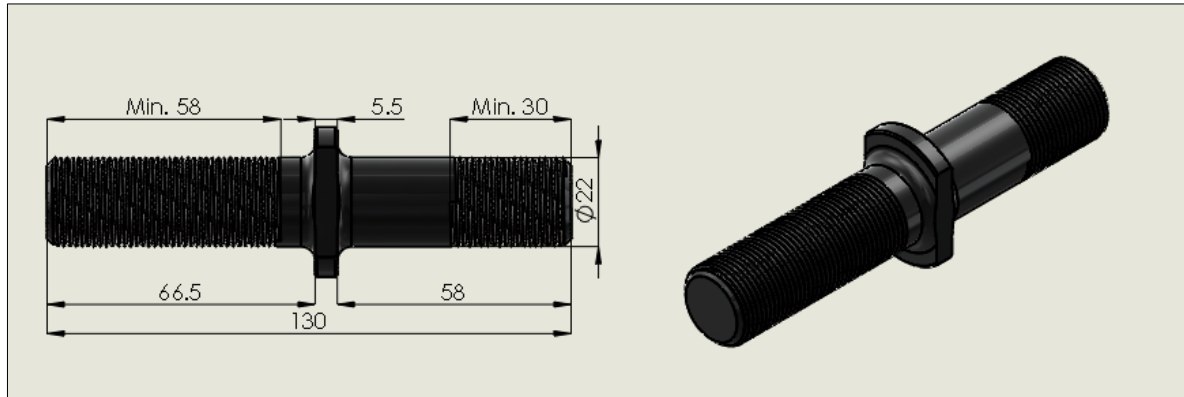
20101 –Hub **INTERNAL DRUM**



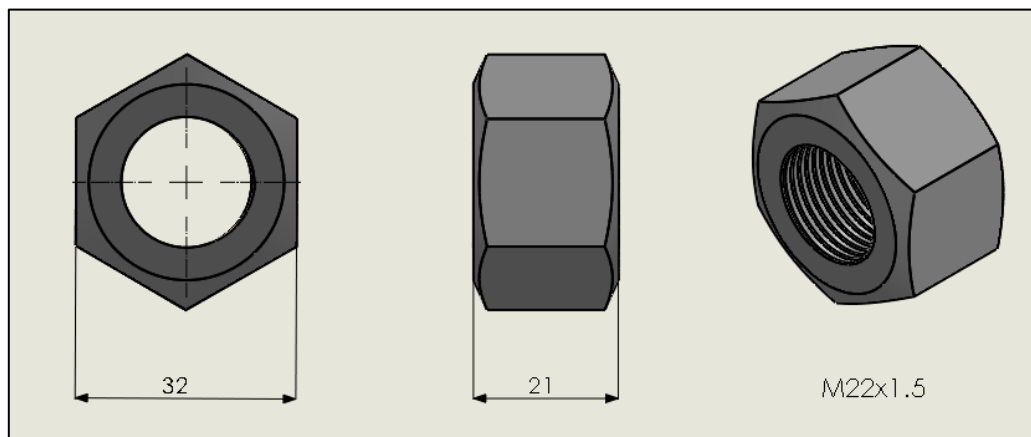
20102- Brake Drum **INTERNAL DRUM**



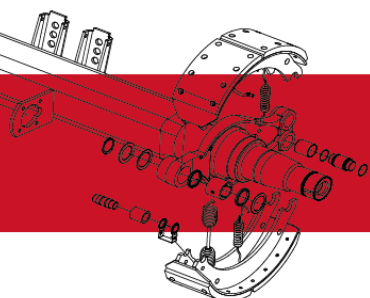
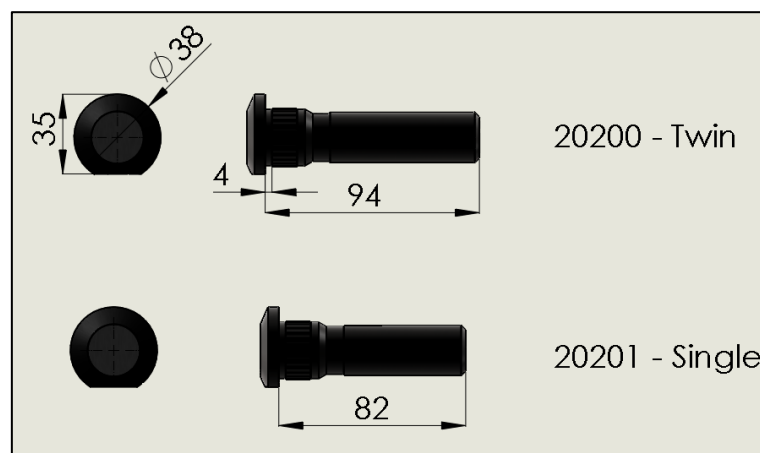
20099 – Wheel Bolt **INTERNAL DRUM**



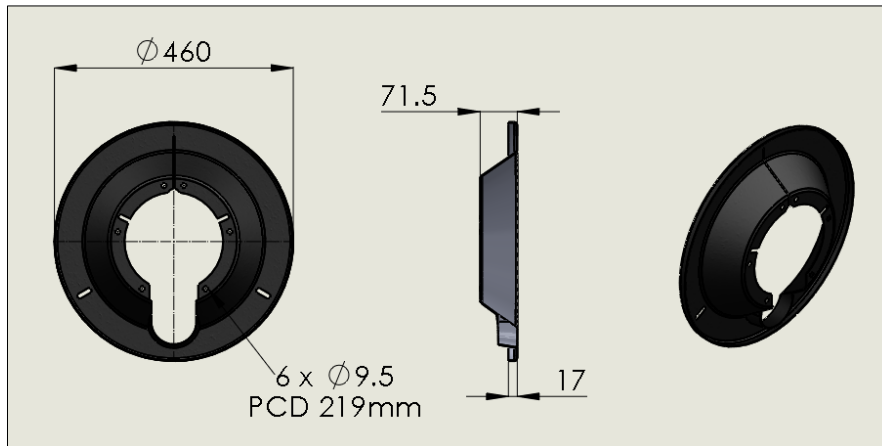
20100 –Wheel Bolt Nut **INTERNAL DRUM**



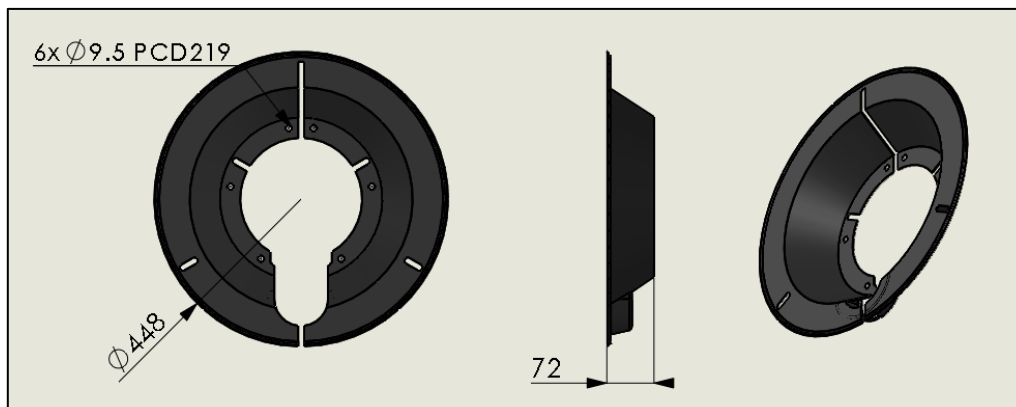
Wheel Bolt **EXTERNAL DRUM**



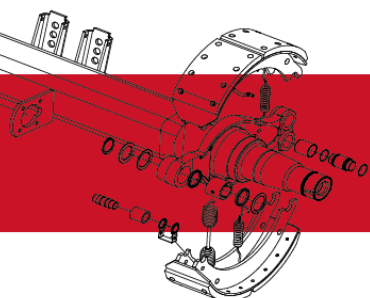
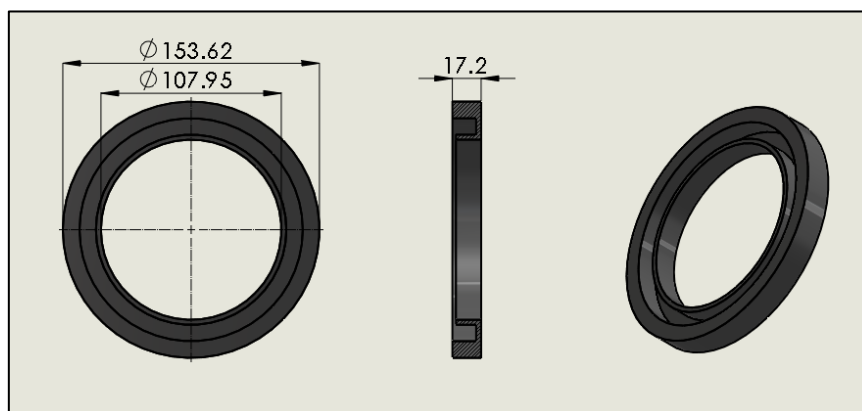
20105 - Dust Cover INTERNAL DRUM

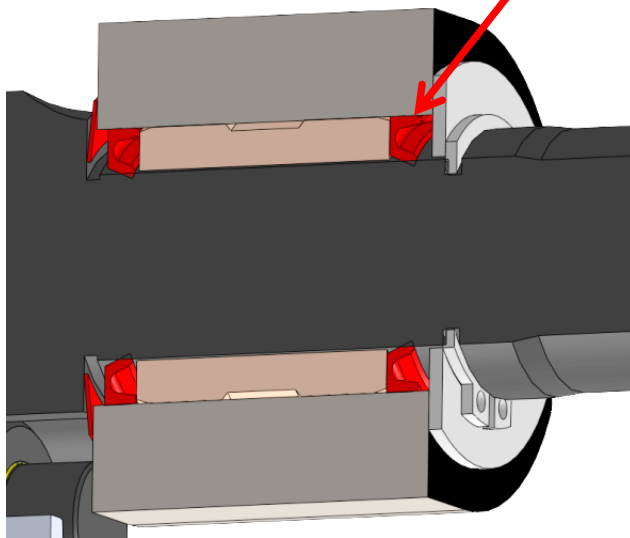
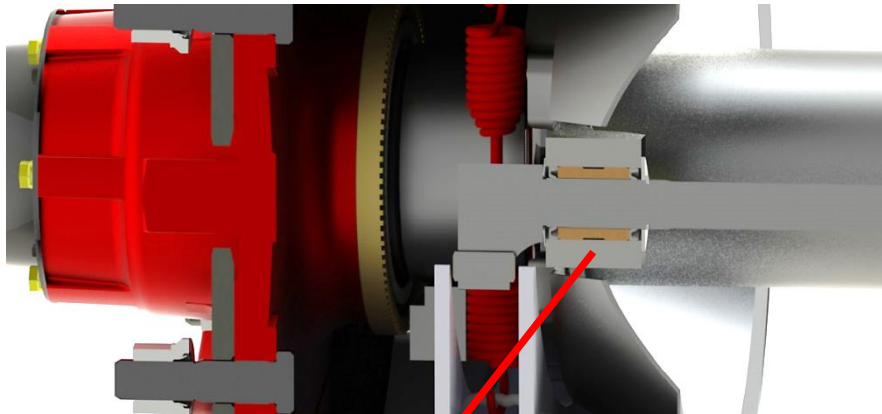


Dust Cover 61390F EXTERNAL DRUM



20013 – Hub Seal





The direction of the grease seals in the anchor bracket is important as well as the position of the beveled washer between the anchor bracket and camshaft head.

Please use the axle manual for more information or contact Granning on any queries.

We reserve the right to make changes to specifications or to make improvements to the products in this catalogue without prior notice. We are not responsible for inaccuracies or omissions.

