



GOAT BUILT ALTERNATOR-CBR/TC-PUMP RELOCATION BRACKET

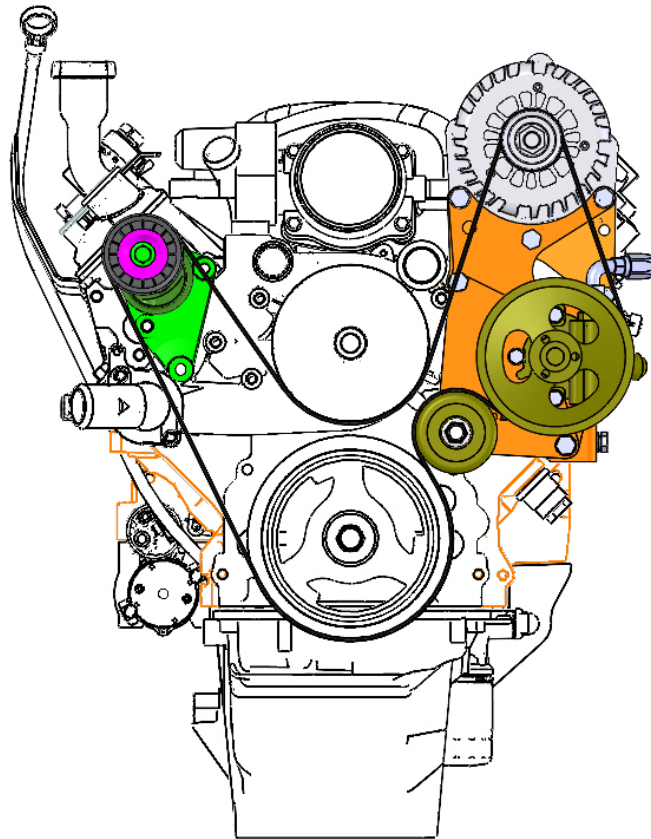
Thank you for purchasing Goat Built components, before starting your installation, we recommend that you read through these instructions to familiarize yourself with the steps and parts so you can plan and prepare for your install accordingly.

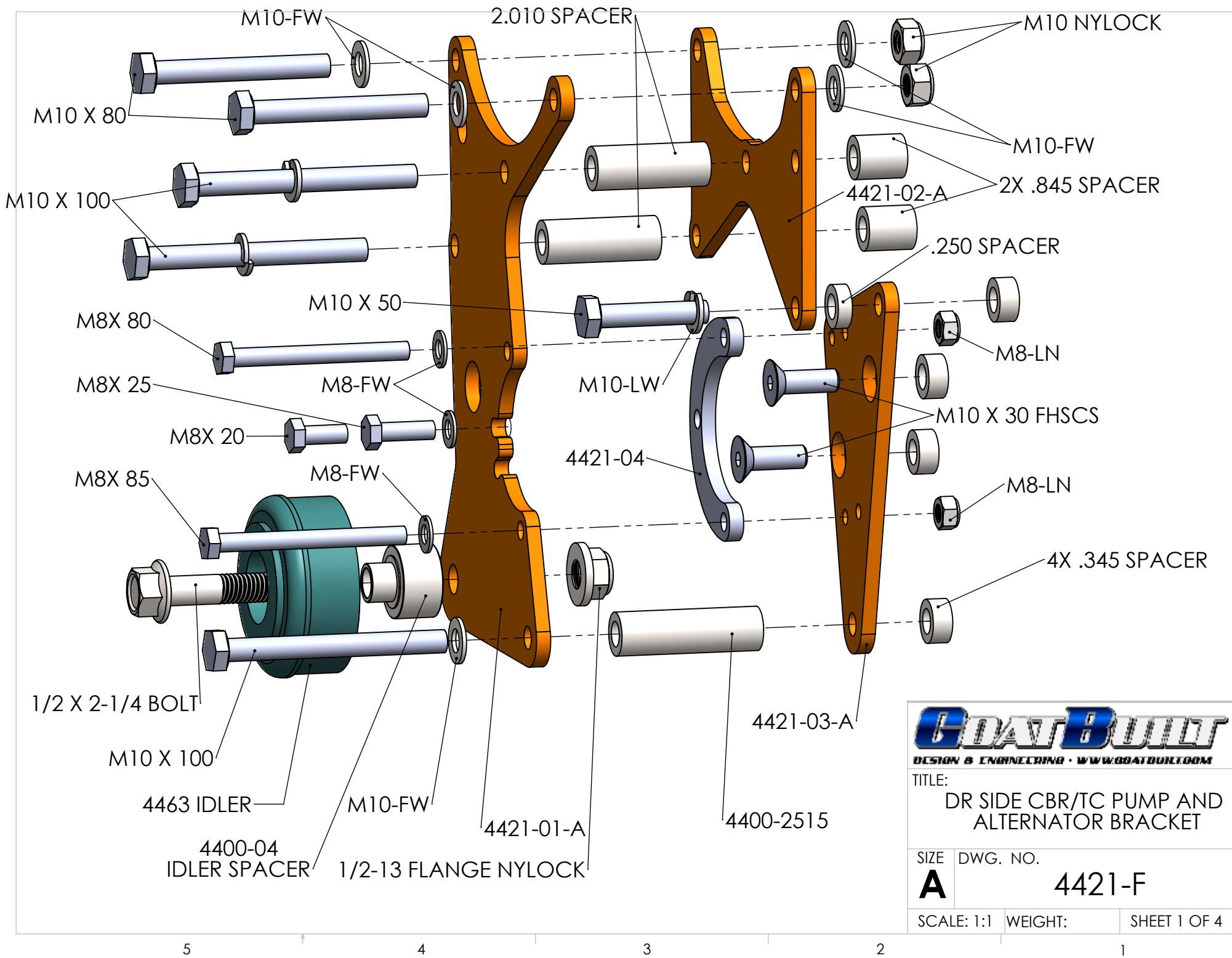
A few notes about the 4421-F CBR/TC pump bracket:

- This bracket kit is made for what's commonly called F-body belt spacing, used on 98-02 Camaro and Firebird LS1 engines. You will need the matching balancer, water pump, tensioner, and idler. You will re-use your tensioner that is mounted to the water pump
 - This kit fits a CBR or TC pump, this shim goes behind a CBR pump or in front of a TC pump
 - The pump has two different clocking positions so use which one works best for your application
 - A 90 degree pressure fitting is required at the top of the pump
 - This fit will fit the 99-02 F-body alternator or 99-2015 truck alternators, there is a 105-amp small case or a 145-amp large case truck alternator. This does not fit the later 2016 and up Truck alternators or 2010 and up Camaro alternators or any of the Corvette alternators.
1. Loosely install all the brackets, pump, and bolts before you fully tighten any of the bolts.
 2. Install the 4421-03 rear lower bracket to the head using the two M10 x 30 flat head allen head bolts with the four .345" spacers between the bracket and the head. Loosely install the M10x50 bolt in the upper hole and M10 x 100 bolt in the lower hole just to align the spacer. Go ahead and tighten the two flat head bolts to 40 ft-lbs then remove the M10x50 and M10x100 bolt.
 3. The aluminum LS blocks have a M10 tapped hole on the front that aligns with the lower hole where the M10x100, 2.515 spacer and .345 spacer line up. The iron blocks do not have this threaded hole, if you have an iron block, you will need to drill and tap this hole, you can use the 4421-03 bracket as a guide to correctly locate this hole.
 4. Install the M10 x 50 bolt in the lower right hole of 4421-02 bracket, .250 spacer, 4421-03 bracket and the .345 spacer into the head.
 5. Install the 4421-01 bracket to the head using the two M10x100 bolts, 2.010 spacers, 4421-02 bracket and .845 spacers.
 6. Install the M10 x 100 bolt and flat washer through the bottom hole of the 4421-01 bracket, 2.515 spacer, 4421-03 bracket, .345 spacer and into the block.
 7. Install the pump using the 8mm bolts, use a flat washer under the bolt heads and under the nuts. The 4421-06 shim normally goes behind a CBR pump or in front of a TC pump. Use the shorter M8 x 20 bolt if you are installing the shim on the back of the pump. Use the longer M8x25 bolt if you are installing the shim at the front of the pump. The pump has two clocking options. Only one of longer M8 bolts will go through the 4421-01 bracket. There are not washers on the back under the nut, not enough room between the bracket and the head.
 8. Install the alternator between the 4421-01 and 4421-02 brackets using an M10x80 bolt and nylock nut, use a flat washer under the bolt head and nut.

9. Torque the 10 MM bolts to 40 ft-lbs, 8 mm bolts to 15 ft-lbs
10. The idler has two possible mounting locations, you should only use one idler. If you are using a truck water pump and tensioner, mount the idler in the upper hole under the alternator. If you are using a LS1 or LS3 water pump and tensioner mount the idler in the lower hole under the pump. Install the idler to the 4421-01 bracket using the 4400-04 spacer, 1/2" flange bolt and flange lock nut. Torque the idler nut to 70 ft-lbs

Belt routing is shown below, at this time we do not have an exact belt length so you will need to measure for your exact length. You should be in the 76"-77" range. The common part numbers are the lengths. The last four numbers is the length up to one decimal. For example, a K060854 belt number will be 085.4" long. The CBR pump and pulley we normally sell has a 6" pulley, the TC pump has a 5.5" pulley. If you need a different length belt.





TITLE:
 DR SIDE CBR/TC PUMP AND
 ALTERNATOR BRACKET

SIZE DWG. NO.
A 4421-F

SCALE: 1:1 WEIGHT: SHEET 1 OF 4

ALTERNATE IDLER LOCATON
FOR USING TRUCK WATER PUMP
AND BELT ROUTING

2X M10 X 80 BOLT
THRU ALTERNATOR
2X FLAT WASHER
M10 NYLOCK

2X M10 X 100 BOLT
M10 LOCK WASHER
2.010 SPACER
.845 SPACER
INTO HEAD

M10 X 50 BOLT
LOCK WASHER
.250 SPACER
.345 SPACER
INTO HEAD

M8 X 25 BOLT FOR
TC PUMP WITH SHIM
IN FRONT OF PUMP
OR
M8 X 20 BOLT FOR
CBR PUMP WITH SHIM
BEHIND PUMP

M8 X 80 BOLT
M8 FLAT WASHER
M8 NYLOCK
THRU PUMP

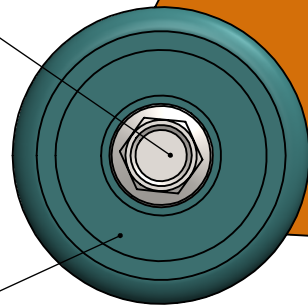
2X M10 X 30 FLAT HEAD BOLT
1.095.395 INTO HEAD

1/2 BOLT
4400-04 IDLER SPACER
1/2 NYLOCK

M8 X 85 BOLT
M8 FLAT WASHER
M8 NYLOCK
THRU PUMP

DAYCO 89007
76 MM IDLER
**USE THIS IDLER
LOCATION FOR CAR
WATER PUMP/TENSIONER

M10 X 100 BOLT
M10 FLAT WASHER
2.510 SPACER
.345 SPACER
INTO HEAD



TITLE:

SIZE DWG. NO.
A 4421-F

SCALE: 1:1 WEIGHT: SHEET 2 OF 4

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	4421-01-A	FRONT BRACKET	1
2	4421-02-A	REAR BRACKET	1
3	4421-03-A	LS ALT PS BRACET, REAR PUMP PLATE	1
4	4421-04	LS ALT PS BRACKET, PUMP SHIM	1
5	M10-LN	M10 LOCK NUT	2
6	M10-LW	M10 LOCK WASHER	3
7	M10-FW	M10-FLAT WASHER	5
8	M8-LN	M8 LOCK NUT	2
9	M8-FW	M8-FLAT WASHER	3
10	M8X 20	M8 X 20 BOLT	1
11	M8X 25	M8 X 25 BOLT	1
12	M8X 80	M8 X 80 BOLT	1
13	M8X 85	M8 X 85 BOLT	1
14	M10 X 50	M10 X 50 BOLT	1
15	M10 X 80	M10 X 80 BOLT	2
16	M10 X 100	M10 X 100 BOLT	3
17	M10 X 30 FHSCS	M10X30 FLAT HEAD ALLEN BOLT	2
18	4400-0250	.250" SPACER	1
19	4400-0345	.345" SPACER	4
20	4400-0845	.845" SPACER	2
21	4400-2010	2.010" SPACER	2
22	4400-2515	2.515" SPACER	1
23	1-2 X 2-1-4 FB	1/2 X 2-1/4 IDLER FLANGE BOLT	1
24	1-2-13FLN	1/2-13 IDLER NUT	1
25	4400-04	IDLER SPACER, .73"	1
26	4463	76 MM IDLER, 89007	1



TITLE:

SIZE DWG. NO.

A

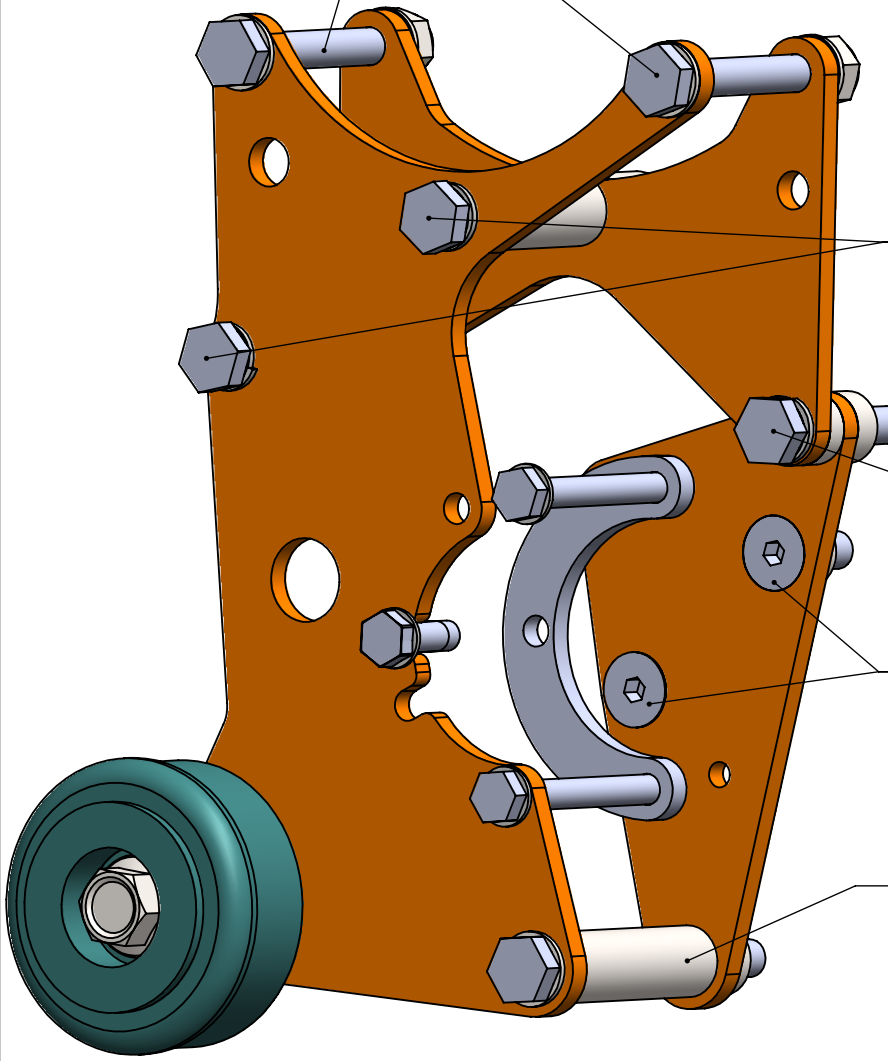
4421-F

SCALE: 1:1

WEIGHT:

SHEET 3 OF 4

2X M10 X 80 BOLT
 THRU ALTERNATOR
 1.595 SPACER
 2X FLAT WASHER
 M10 NYLOCK

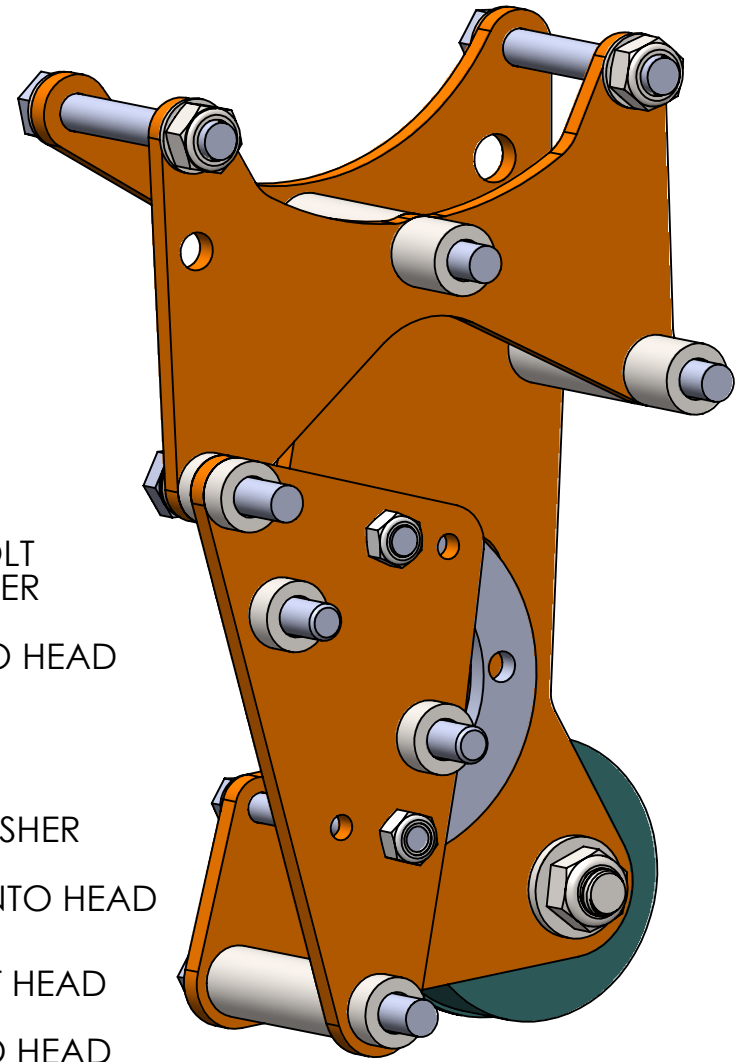


2X M10 X 100 BOLT
 M10 LOCK WASHER
 2.010 SPACER
 .345 SPACER INTO HEAD

M10 X 50 BOLT
 M10 LOCK WASHER
 .250 SPACER
 .345 SPACER INTO HEAD

2X M10 X 30 FLAT HEAD
 BOLT
 .345 SPACER INTO HEAD

2X M10 X 100 BOLT
 M10 LOCK WASHER
 2.510 SPACER
 .345 SPACER INTO HEAD



TITLE:

SIZE DWG. NO.
A 4421-F

SCALE: 1:1 WEIGHT: SHEET 4 OF 4