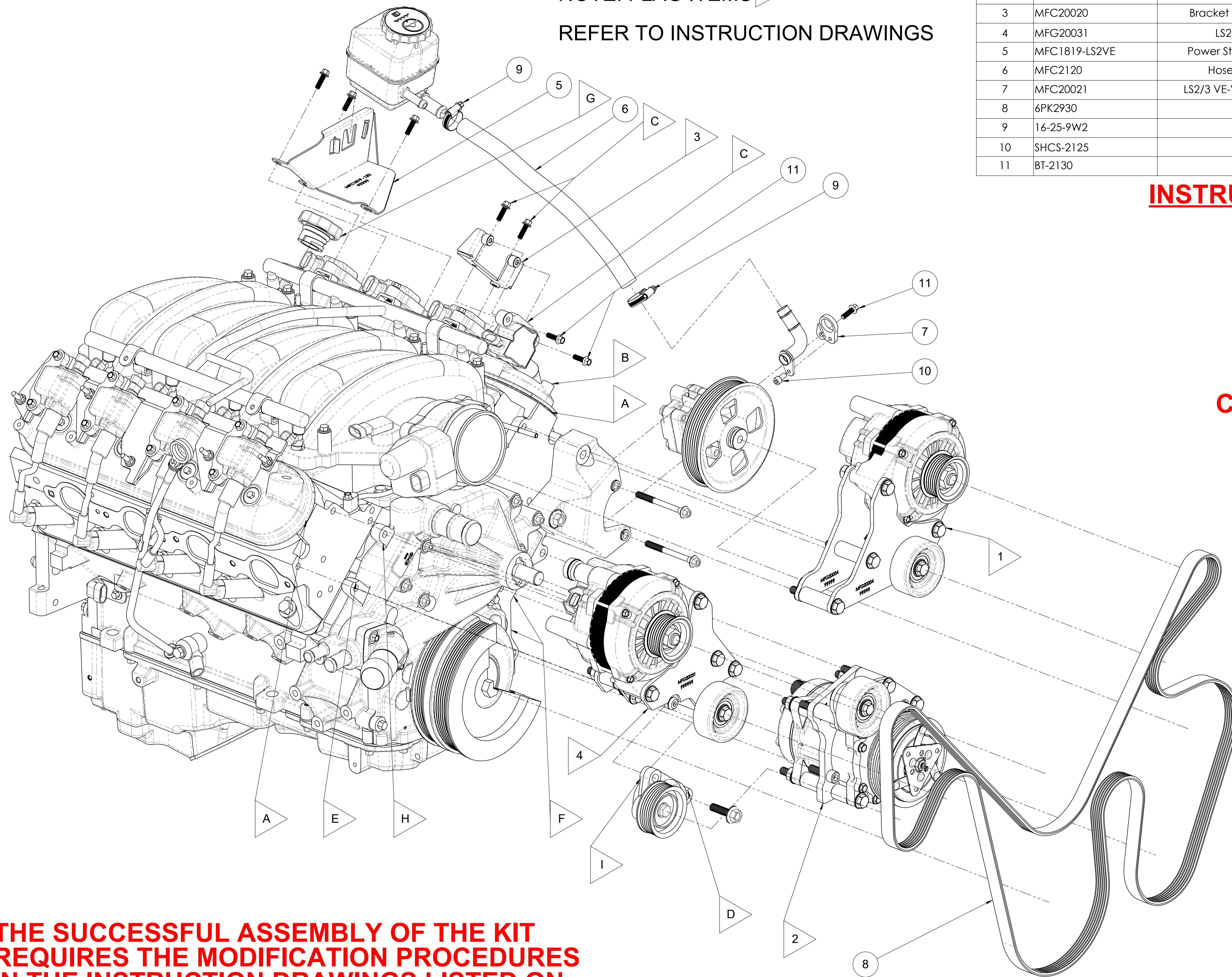


NOTE: FLAG ITEMS ▶

REFER TO INSTRUCTION DRAWINGS



ITEM NO.	PART NUMBER	DESCRIPTION	
1	MFG20004	LS2/LS3 12v Alternator Relocation LH	1
2	MFG20007	LS2/LS3 Sanden Compressor (Low LH)	1
3	MFC20020	Bracket - AUX Alternator Setup Coil Relocation	1
4	MFG20031	LS2/LS3 12v Alternator Relocation RH	1
5	MFC1819-LS2VE	Power Steering Reservoir Bracket - LS2/3 VE - VF	1
6	MFC2120	Hose - Power Steering - 16mm x 400mm	1
7	MFC20021	LS2/3 VE-VF Power Steering Barb Rotate Adaptor	1
8	6PK2930	Drive Belt - Poly Rib (2665mm)	1
9	16-25-9W2	Hose Clamp - 16 to 25mm	2
10	SHCS-2125	SHCS - M6 x 1 x 12mm - SS	1
11	BT-2130	M6 x 1.25 x 20 - Capture Bolt	3

**INSTRUCTION DRAWINGS**

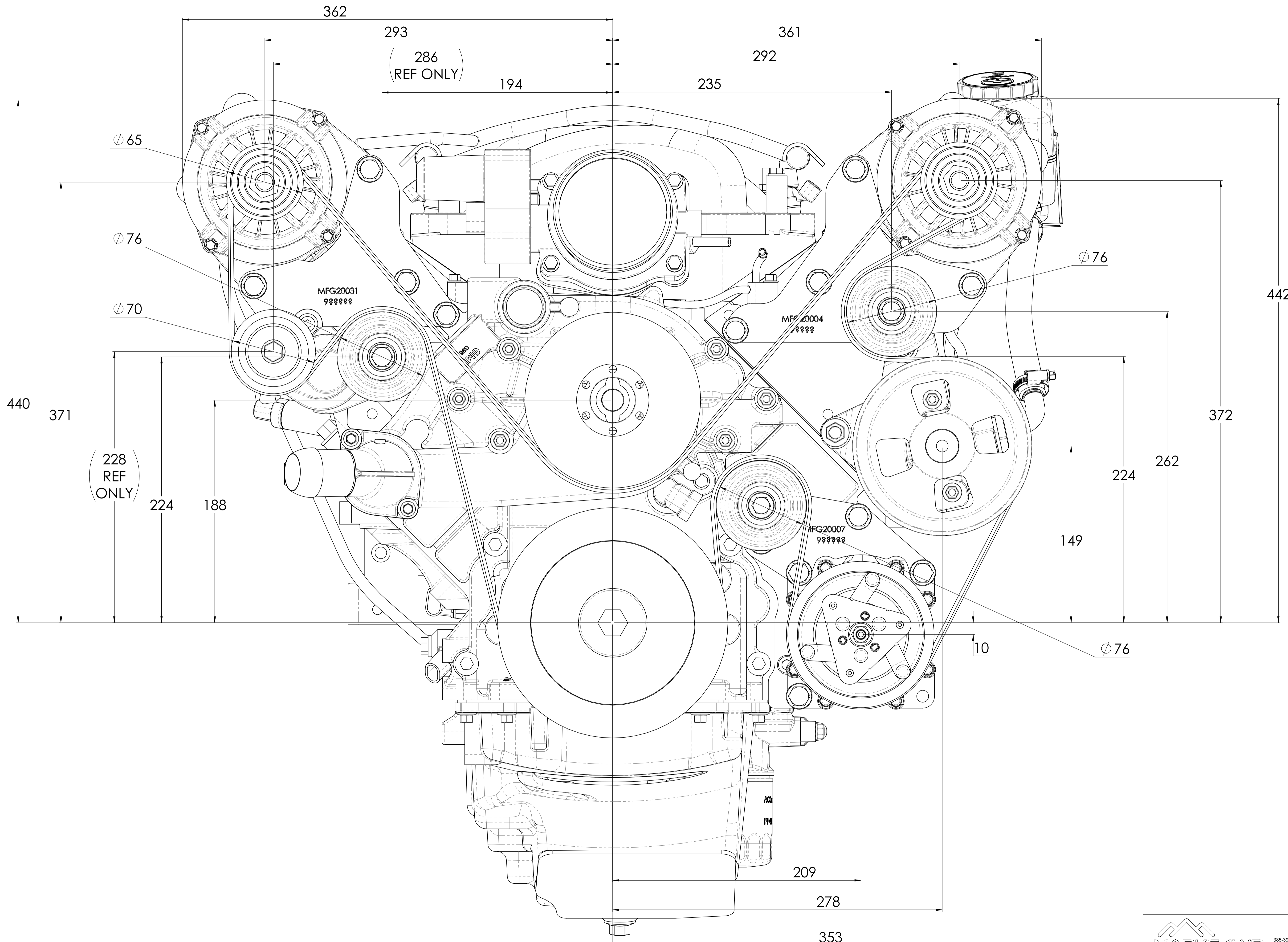
- MFK50130-SHT-1**  
**MFK50130-SHT-2**  
**1: MFG20004**  
**2: MFG20007**  
**4: MFG20031**  
**A: LS - ACCMOD - 01**  
**B: LS - ACCMOD - 03**  
**C/3: LS - ACCMOD - 05**  
**D: LS - ACCMOD - 09**  
**E: LS - ACCMOD - 11**  
**F: LS - ACCMOD - 12**  
**G: LS - ACCMOD - 13**  
**H: LS - INFO - 02**  
**I: LS - INFO - 04**

**THE SUCCESSFUL ASSEMBLY OF THE KIT  
REQUIRES THE MODIFICATION PROCEDURES  
IN THE INSTRUCTION DRAWINGS LISTED ON  
THIS SHEET TO BE CAREFULLY FOLLOWED**

DRAWN	GDK 09/12/2020	TITLE:	Accessory Kit - LH/RH 12v Alt & LH Comp
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:2.5	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 1 of 14	MFK50130
			REV No. 0



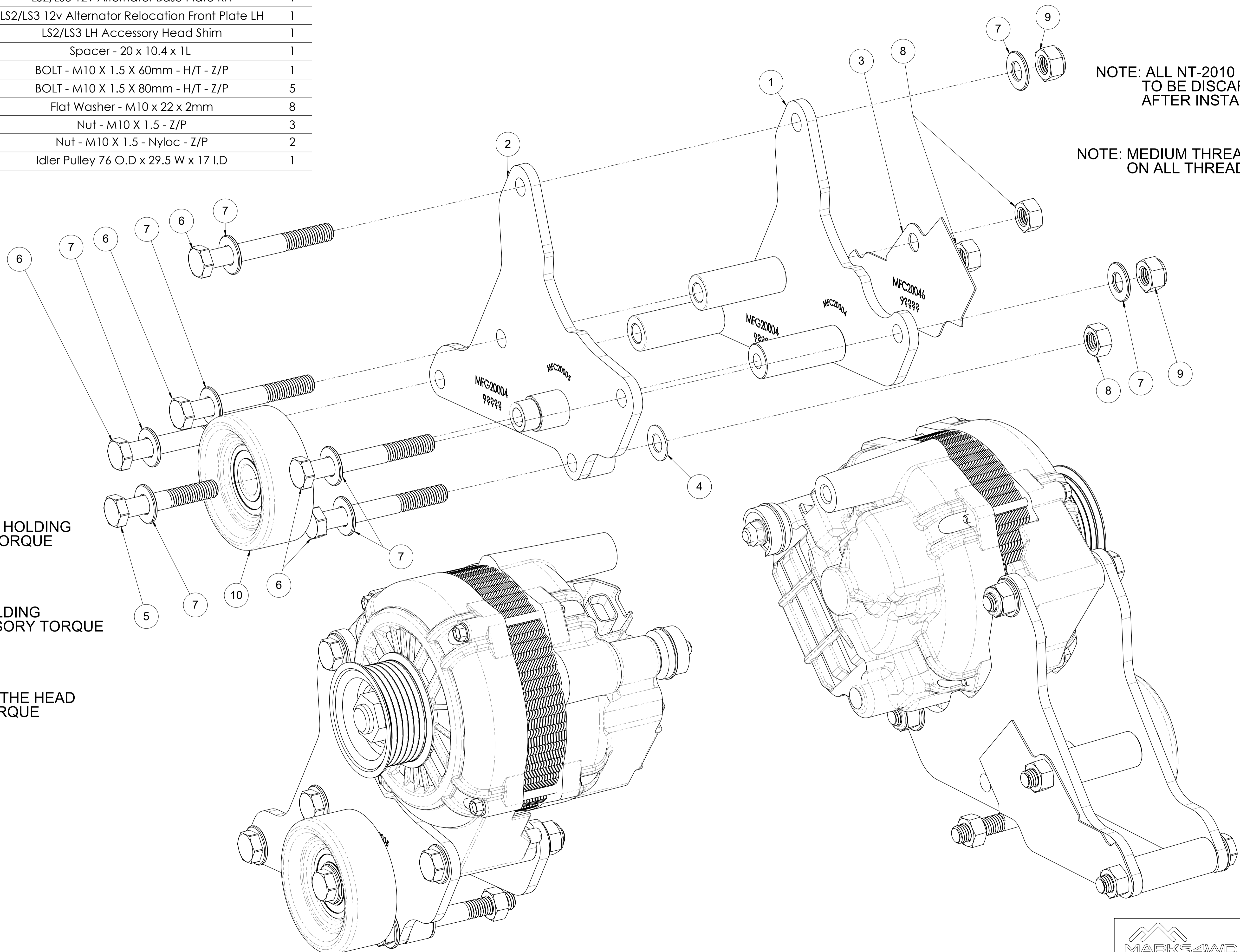




MARKS4WD  
 365-393 LOWER DANDENONG ROAD,  
 DINGLEY, VICTORIA, 3172  
 A.B.N. 28 153 842 829

DRAWN	GDK 09/12/2020	TITLE:	Accessory Kit - LH/RH 12v Alt & LH Comp	
DRAWING CHECKED	PAM 09/12/2020	SCALE:	1:1.5	DRAWING/PART NUMBER
FINISHED WEIGHT:	kg	DRAWING	2 of 14	REV No.
			MFK50130	0

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MFC20004	LS2/LS3 12v Alternator Base Plate RH	1
2	MFC20005	LS2/LS3 12v Alternator Relocation Front Plate LH	1
3	MFC20046	LS2/LS3 LH Accessory Head Shim	1
4	MFC20048	Spacer - 20 x 10.4 x 1L	1
5	BT-2265	BOLT - M10 X 1.5 X 60mm - H/T - Z/P	1
6	BT-2270	BOLT - M10 X 1.5 X 80mm - H/T - Z/P	5
7	FW-2010	Flat Washer - M10 x 22 x 2mm	8
8	NT-2010	Nut - M10 X 1.5 - Z/P	3
9	NT-2030	Nut - M10 X 1.5 - Nyloc - Z/P	2
10	EP024	Idler Pulley 76 O.D x 29.5 W x 17 I.D	1



NOTE: ALL NT-2010  
TO BE DISCARDED  
AFTER INSTALL

NOTE: MEDIUM THREAD LOCK  
ON ALL THREADS

ITEM-3 BOLT HOLDING  
THE IDLER TORQUE  
TO 65Nm

2 BOLTS HOLDING  
12 V ACCESSORY TORQUE  
TO 65Nm

BOLTS INTO THE HEAD  
& BLOCK TORQUE  
TO 45Nm



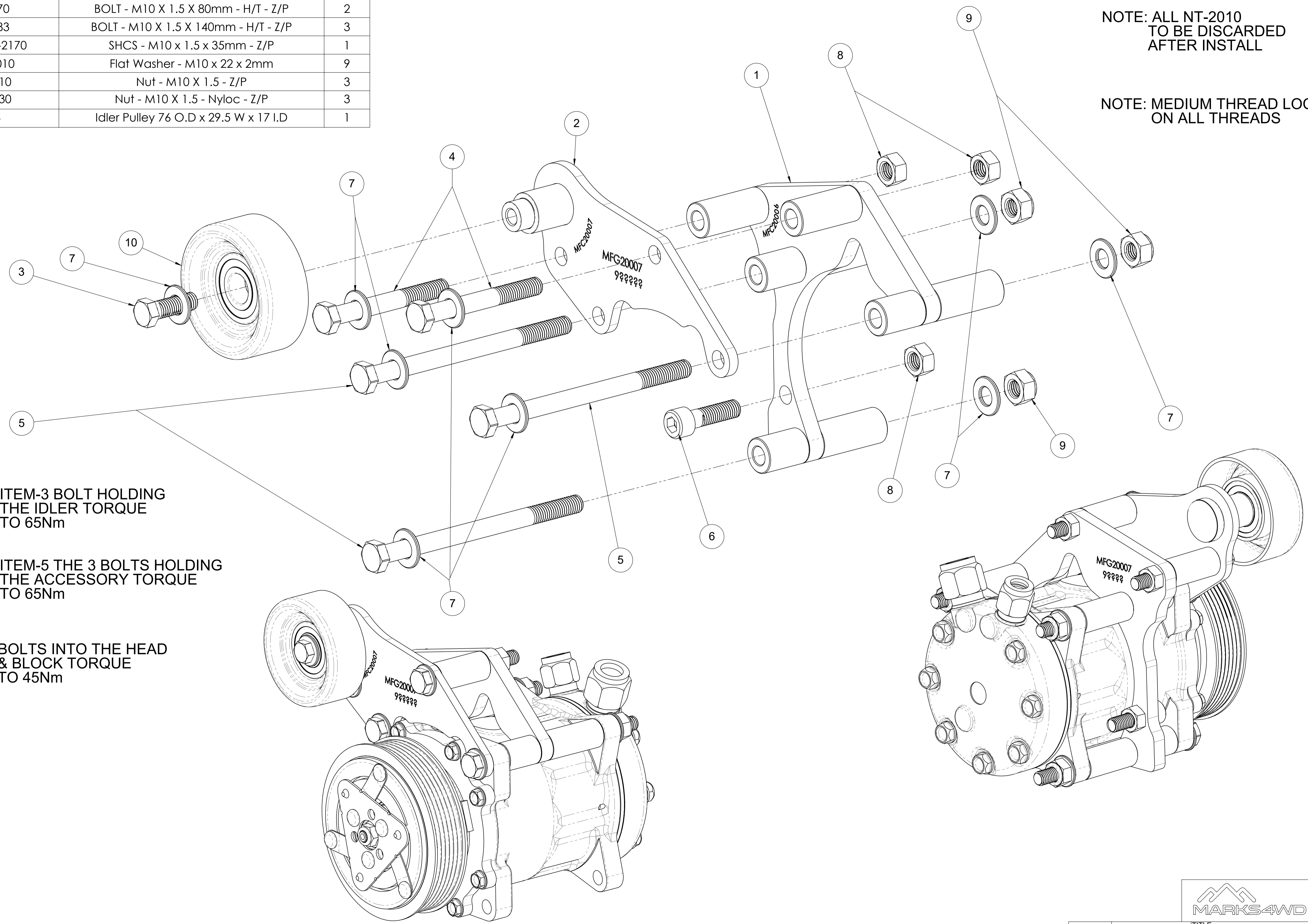
DRAWN	GDK 09/12/2020	TITLE:	LS2/LS3 12v Alternator Relocation LH
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING	3 of 14
		REV No.	0
			MFG20004



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MFC20006	LS Sanden Compressor Base Plate	1
2	MFC20007	LS2/LS3 Sanden Compressor Front Plate	1
3	BT-2245	Bolt - M10 x 1.5 x 30mm - H/T - Z/P	1
4	BT-2270	BOLT - M10 X 1.5 X 80mm - H/T - Z/P	2
5	BT-2283	BOLT - M10 X 1.5 X 140mm - H/T - Z/P	3
6	SHCS-2170	SHCS - M10 x 1.5 x 35mm - Z/P	1
7	FW-2010	Flat Washer - M10 x 22 x 2mm	9
8	NT-2010	Nut - M10 X 1.5 - Z/P	3
9	NT-2030	Nut - M10 X 1.5 - Nyloc - Z/P	3
10	EP024	Idler Pulley 76 O.D x 29.5 W x 17 I.D	1

NOTE: ALL NT-2010  
TO BE DISCARDED  
AFTER INSTALL

NOTE: MEDIUM THREAD LOCK  
ON ALL THREADS



ITEM-3 BOLT HOLDING  
THE IDLER TORQUE  
TO 65Nm

ITEM-5 THE 3 BOLTS HOLDING  
THE ACCESSORY TORQUE  
TO 65Nm

BOLTS INTO THE HEAD  
& BLOCK TORQUE  
TO 45Nm



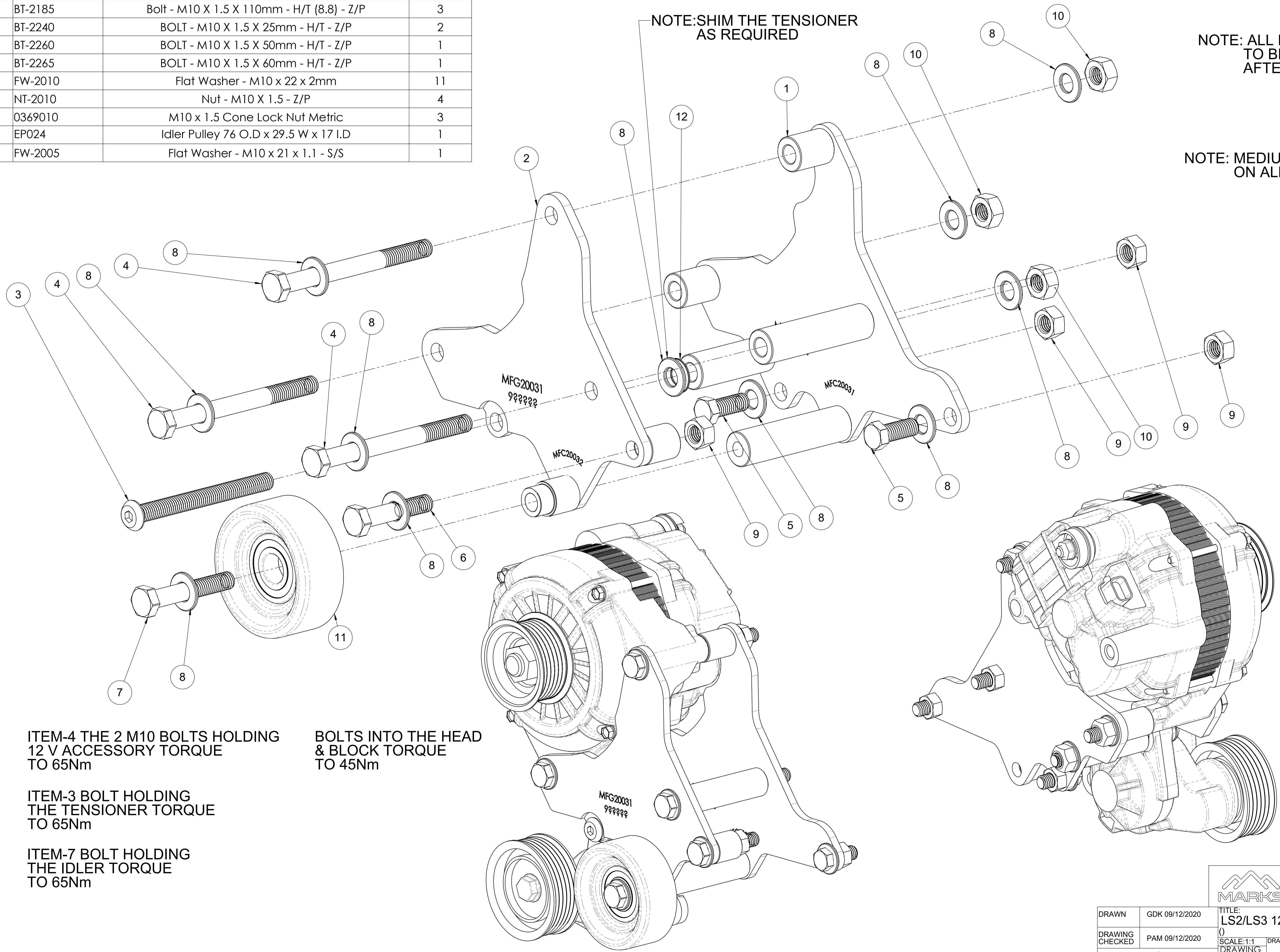
DRAWN	GDK 09/12/2020	TITLE	LS2/LS3 Sanden Compressor (Low LH)	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 4 of 14	MFG20007	0

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MFC20031	LS2/LS3 12v Alternator Relocation Base Plate RH	1
2	MFC20032	LS2/LS3 12v Alternator Relocation Front Plate RH	1
3	MFC20030	BHCS M10 x 1.5 x 100 - Low Head	1
4	BT-2185	Bolt - M10 X 1.5 X 110mm - H/T (8.8) - Z/P	3
5	BT-2240	BOLT - M10 X 1.5 X 25mm - H/T - Z/P	2
6	BT-2260	BOLT - M10 X 1.5 X 50mm - H/T - Z/P	1
7	BT-2265	BOLT - M10 X 1.5 X 60mm - H/T - Z/P	1
8	FW-2010	Flat Washer - M10 x 22 x 2mm	11
9	NT-2010	Nut - M10 X 1.5 - Z/P	4
10	0369010	M10 x 1.5 Cone Lock Nut Metric	3
11	EPO24	Idler Pulley 76 O.D x 29.5 W x 17 I.D	1
12	FW-2005	Flat Washer - M10 x 21 x 1.1 - S/S	1

NOTE: SHIM THE TENSIONER AS REQUIRED

NOTE: ALL NT-2010 TO BE DISCARDED AFTER INSTALL

NOTE: MEDIUM THREAD LOCK ON ALL THREADS



ITEM-4 THE 2 M10 BOLTS HOLDING 12 V ACCESSORY TORQUE TO 65Nm

BOLTS INTO THE HEAD & BLOCK TORQUE TO 45Nm

ITEM-3 BOLT HOLDING THE TENSIONER TORQUE TO 65Nm

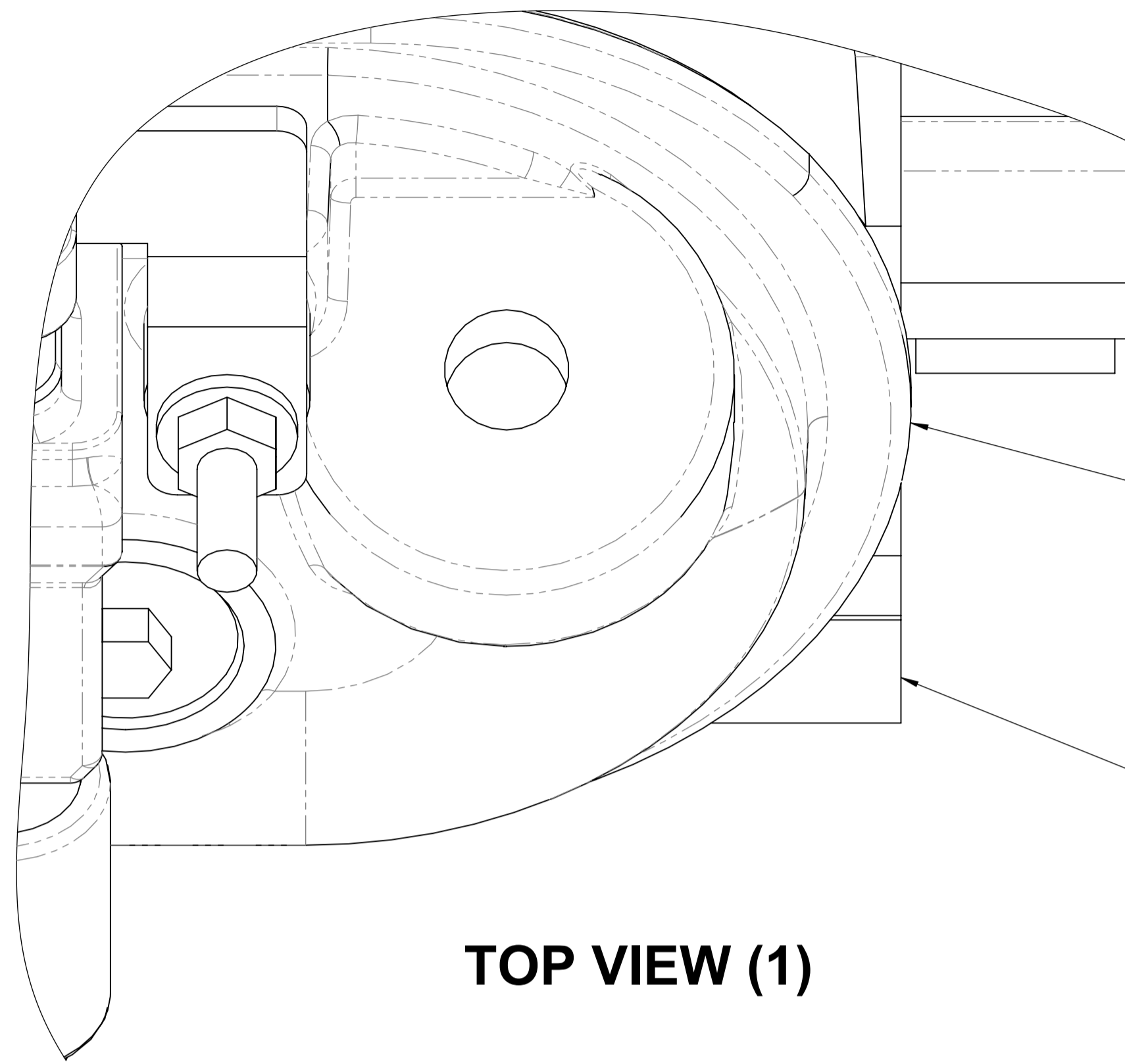
ITEM-7 BOLT HOLDING THE IDLER TORQUE TO 65Nm



DRAWN	GDK 09/12/2020	TITLE:	LS2/LS3 12v Alternator Relocation RH
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 5 of 14	REV No. 0
		MFG20031	

# LS - SERIES ROCKER COVER LIP MODIFICATION

## STANDARD ROCKER COVER



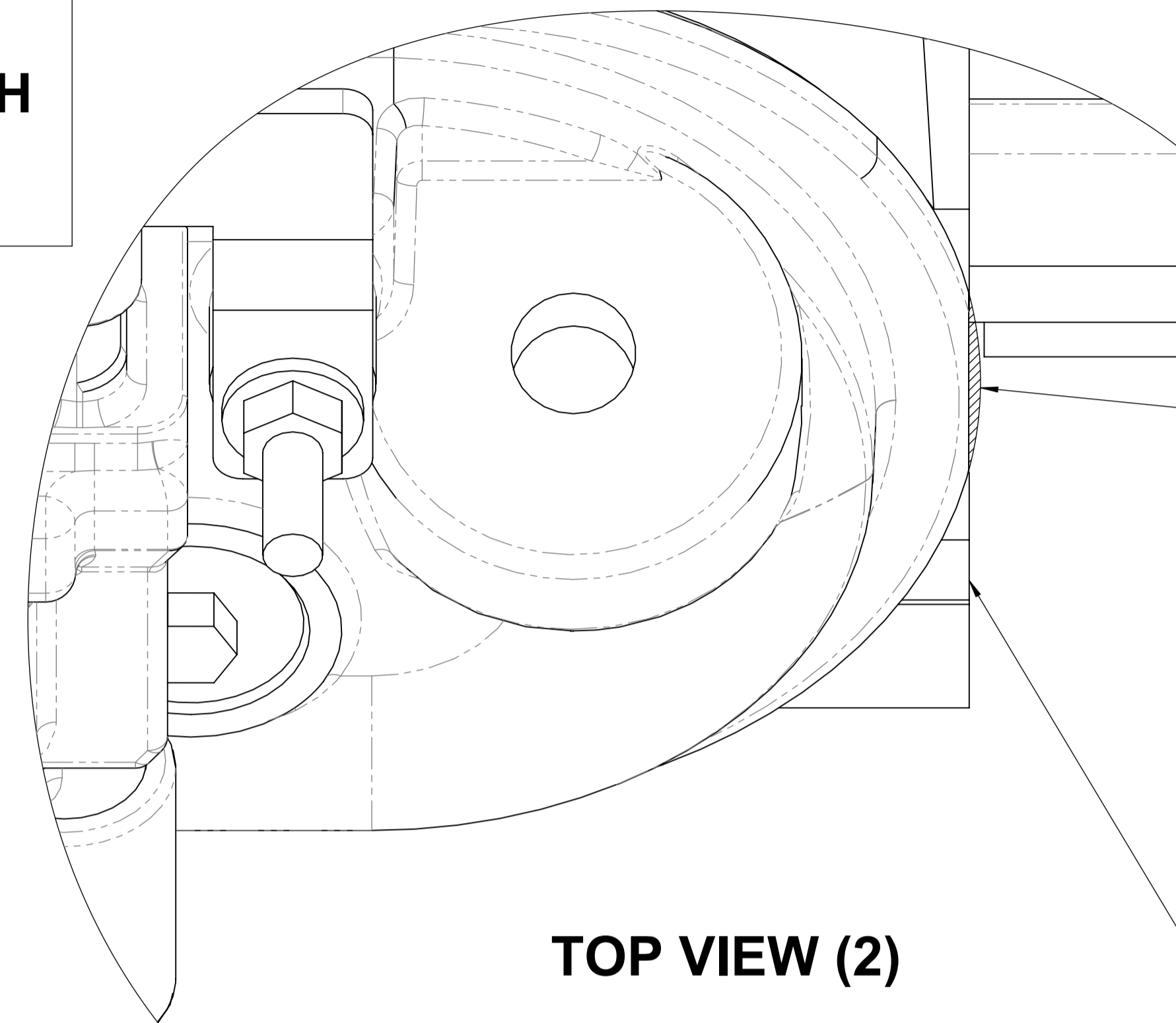
TOP VIEW (1)

THE LIP MODIFICATION SHOWS THE DRIVER SIDE CYLINDER HEAD FITTED WITH THE PASSENGER SIDE ROCKER COVER

PASSENGER SIDE ROCKER COVER LIP SITS ABOVE THE CYLINDER HEAD

DRIVER SIDE CYLINDER HEAD FACE SHOWN

## MODIFIED ROCKER COVER



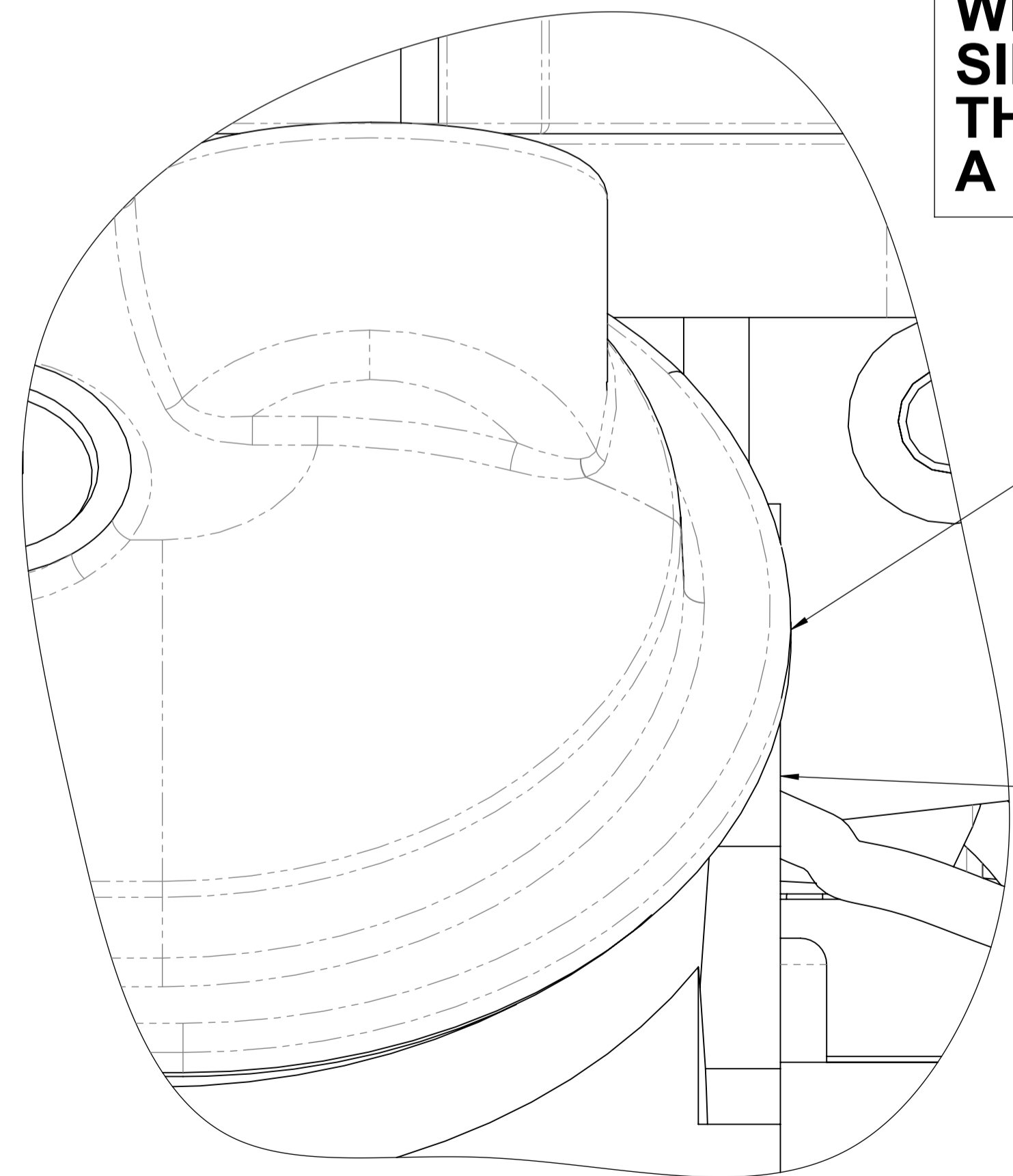
TOP VIEW (2)

DRIVER SIDE ROCKER COVER LIP REMOVE THE HATCHED AREA AS SHOWN

SHAVED ROCKER LIP SHOULD LOOK LIKE THE SIDE VIEW (2) BELOW

DRIVER SIDE CYLINDER HEAD FACE SHOWN

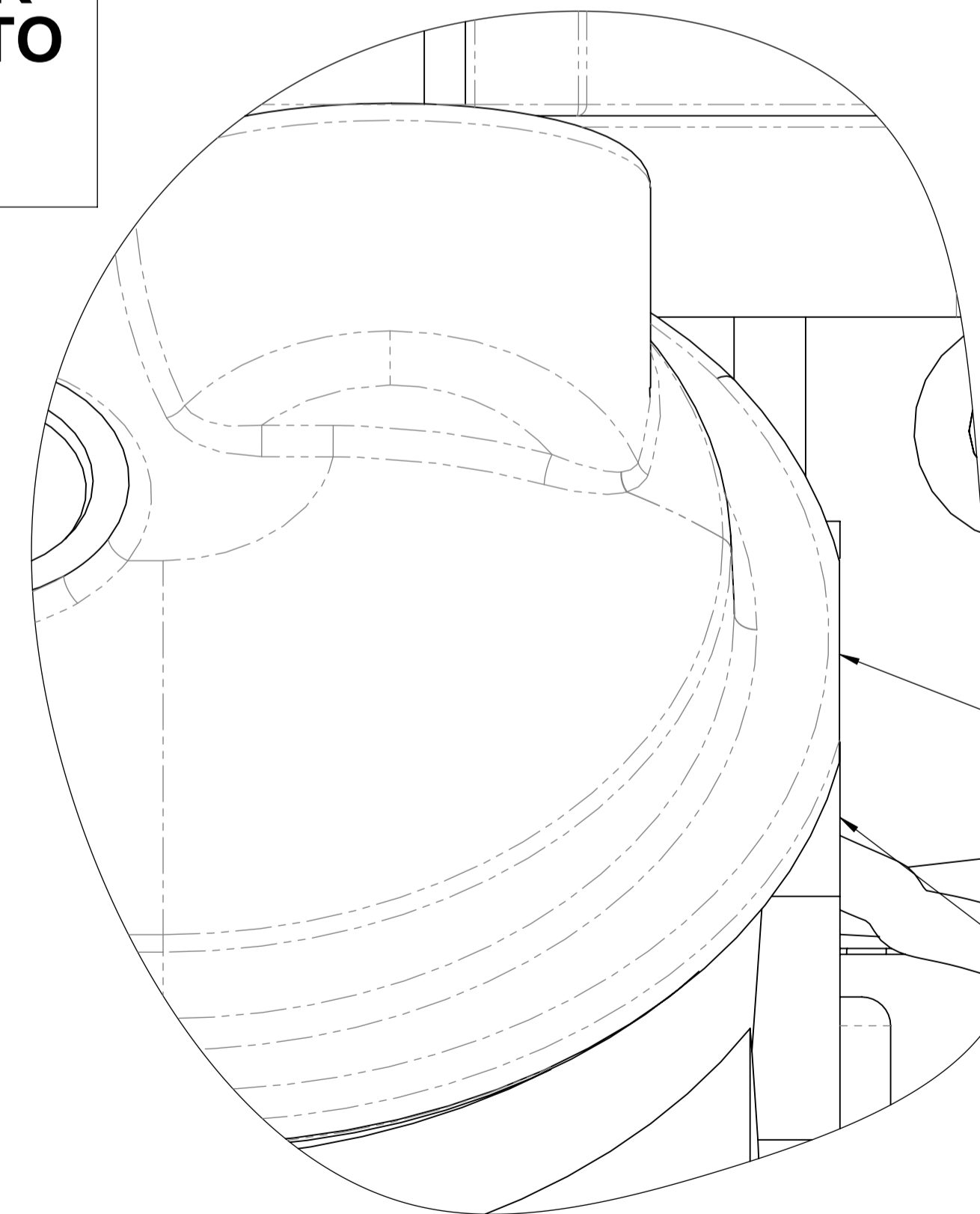
THE ROCKER COVER LIP MODIFICATION WILL ALSO BE REQUIRED FOR THE DRIVER SIDE ROCKER COVER WHEN IT IS FITTED TO THE PASSENGER SIDE CYLINDER HEAD IF A LH ACCESSORY KIT IS TO BE FITTED



SIDE VIEW (1)

PASSENGER SIDE ROCKER COVER LIP SITS ABOVE THE CYLINDER HEAD

DRIVER SIDE CYLINDER HEAD FACE SHOWN



SIDE VIEW (2)

THE LIP OVER HANG MUST BE SHAVED BACK TO THE CYLINDER HEAD FACE

CAUTION: DO NOT SHAVE PAST THE CYLINDER HEAD & ENCROACH INTO THE O RING GROOVE

PASSENGER SIDE ROCKER COVER LIP SHAVED

DRIVER SIDE CYLINDER HEAD FACE SHOWN



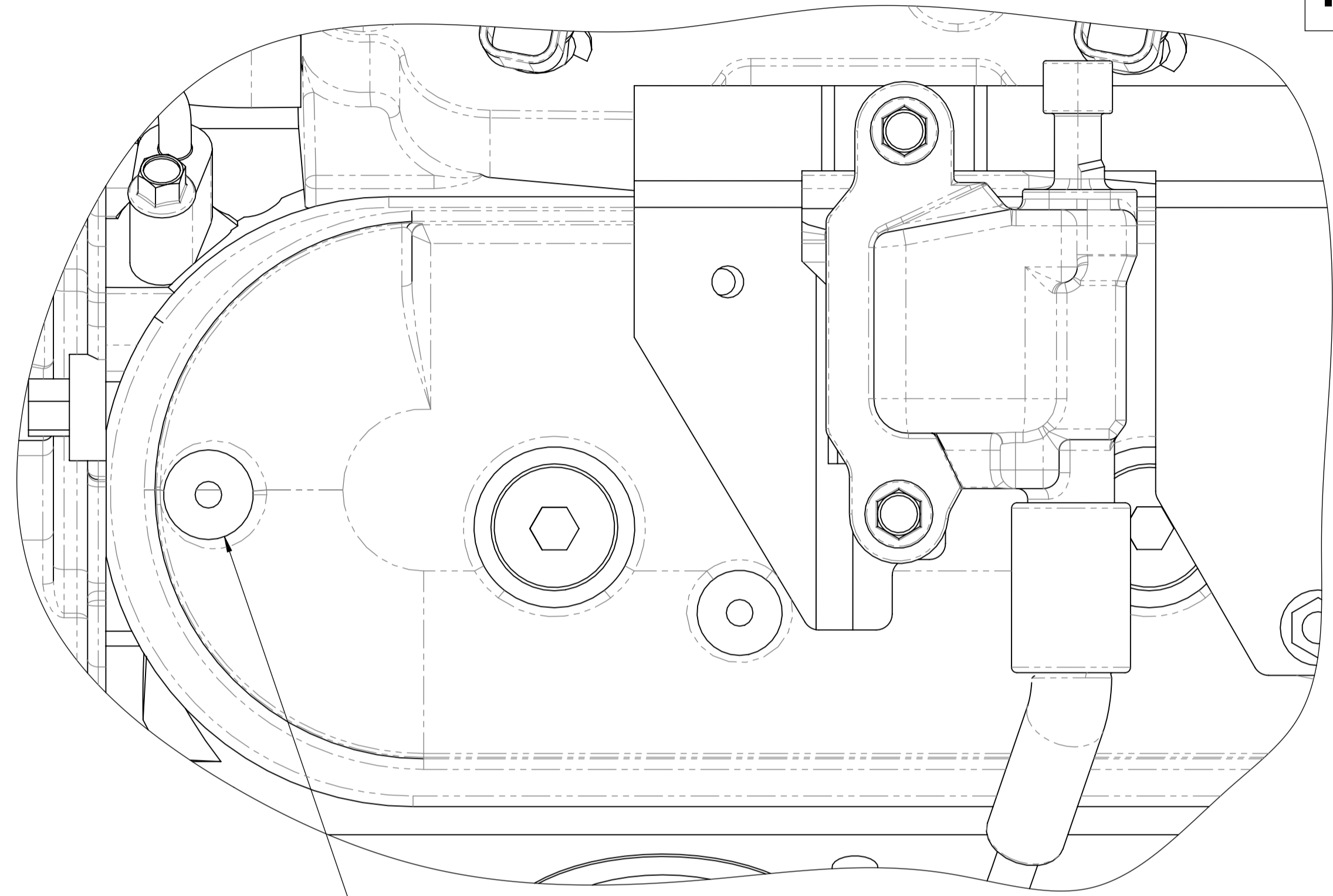
DRAWN	GDK 09/12/2020	TITLE:	LS - Series Rocker Cover Lip Modification	
DRAWING CHECKED	PAM 09/12/2020	( )	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		SCALE:2:1	LS - ACCMOD - 01	0
		DRAWING 1 of 1		



# LS - SERIES ROCKER COVER COIL BOSS MODIFICATION (ROCKER COVER SWAP)

**STANDARD ROCKER COVER**

THE BOSS MODIFICATION SHOWS THE DRIVER SIDE ROCKER COVER ON THE PASSENGER SIDE CYLINDER HEAD



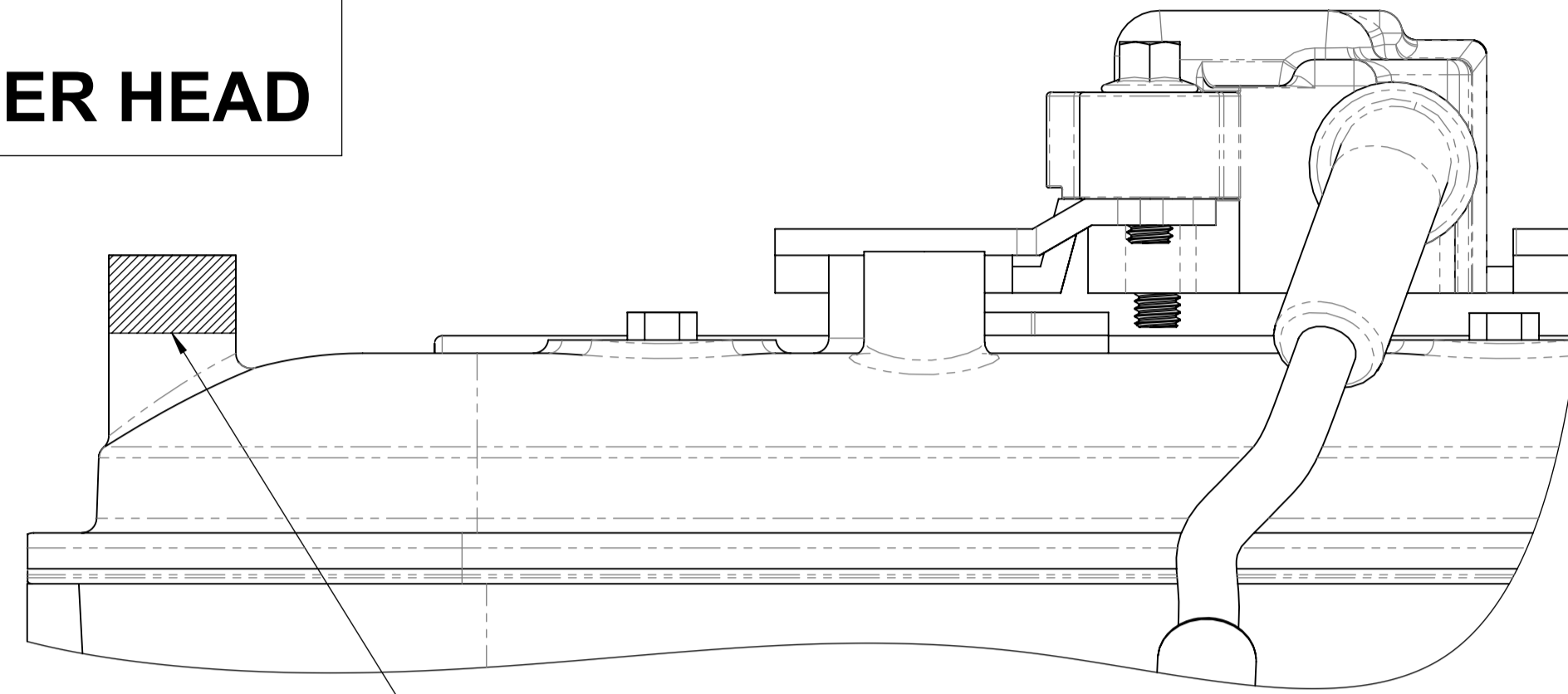
**TOP VIEW (1)**

MOUNTING BOSS TO BE MODIFIED

THE STANDARD HEIGHT OF THE MOUNTING BOSS WILL NEED TO BE MODIFIED

DECIDE FROM EITHER (OPTION-1) OR (OPTION-2)

**MODIFIED ROCKER COVER (OPTION-1)**

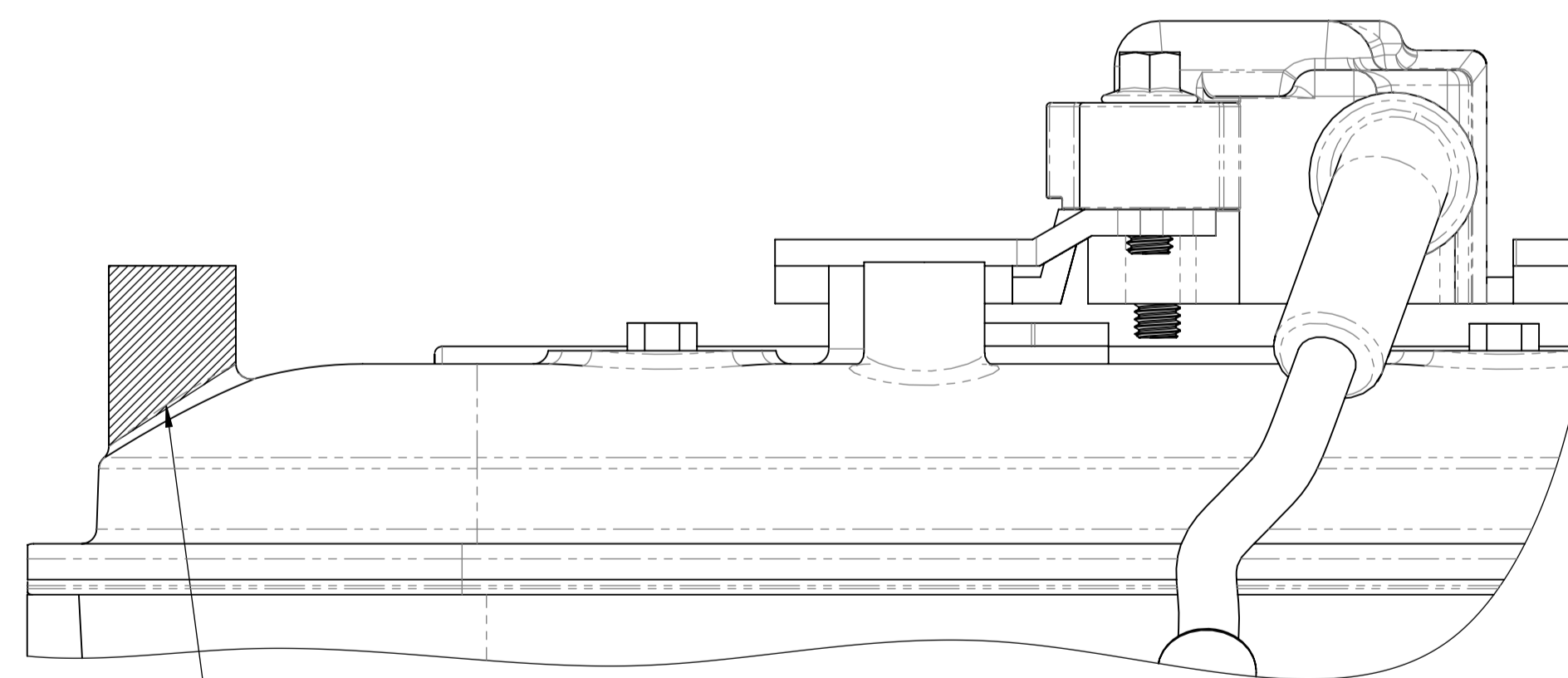


**SIDE VIEW (2)**

PASSENGER SIDE ROCKER COVER

REMOVE THE HATCHED AREA AS SHOWN ABOVE UNTIL THE CLEARANCE FOR THE ACCESSORY KIT IS ACHIEVED

**MODIFIED ROCKER COVER (OPTION-2)**

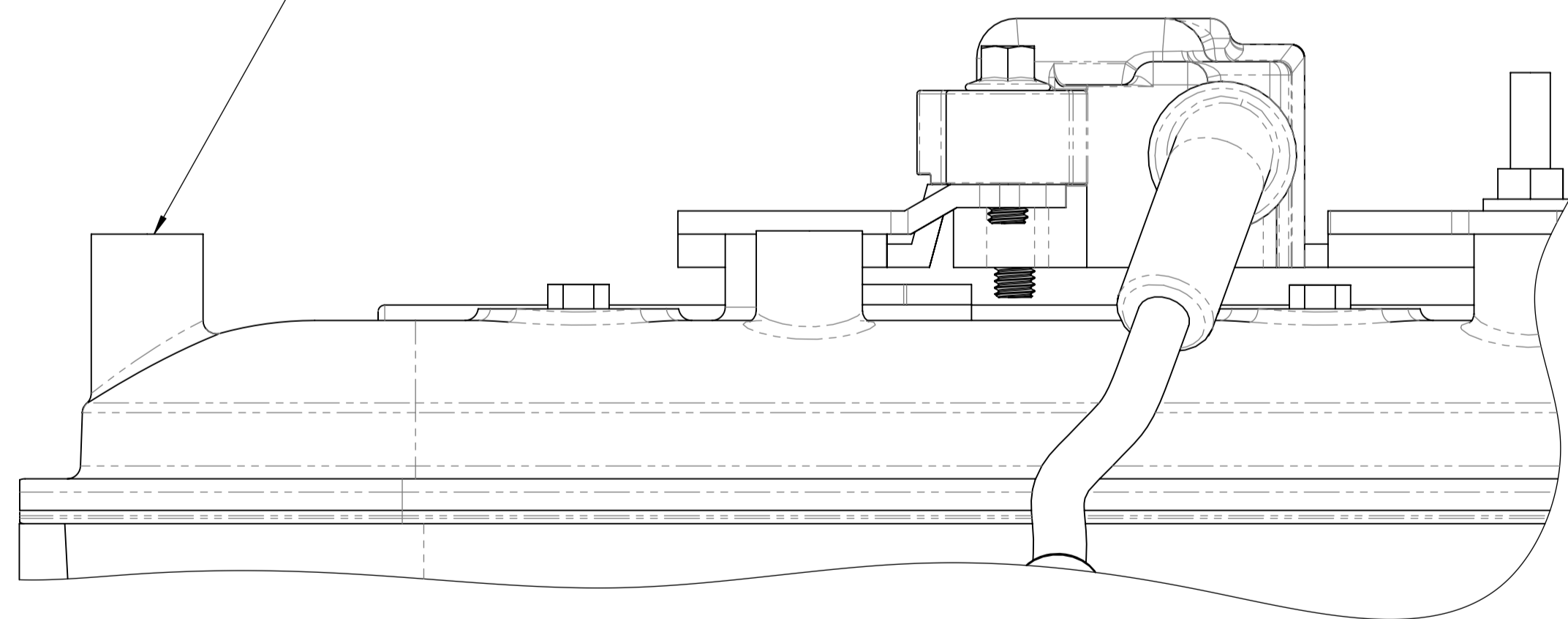


**SIDE VIEW (3)**

PASSENGER SIDE ROCKER COVER

REMOVE THE HATCHED AREA AS SHOWN ABOVE & SMOOTH OFF TO MATCH SHAPE OF COVER

**SIDE VIEW (1)**



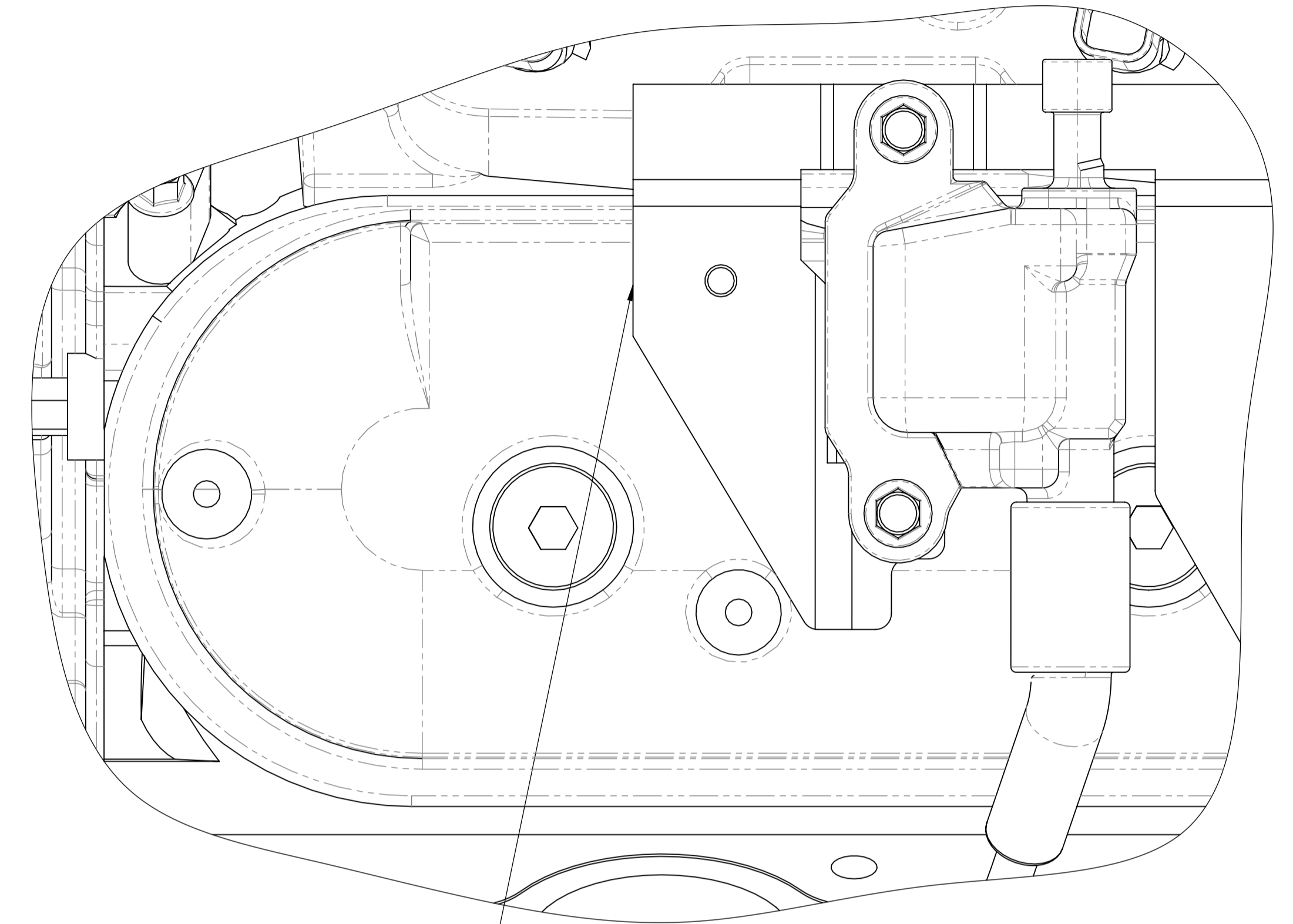
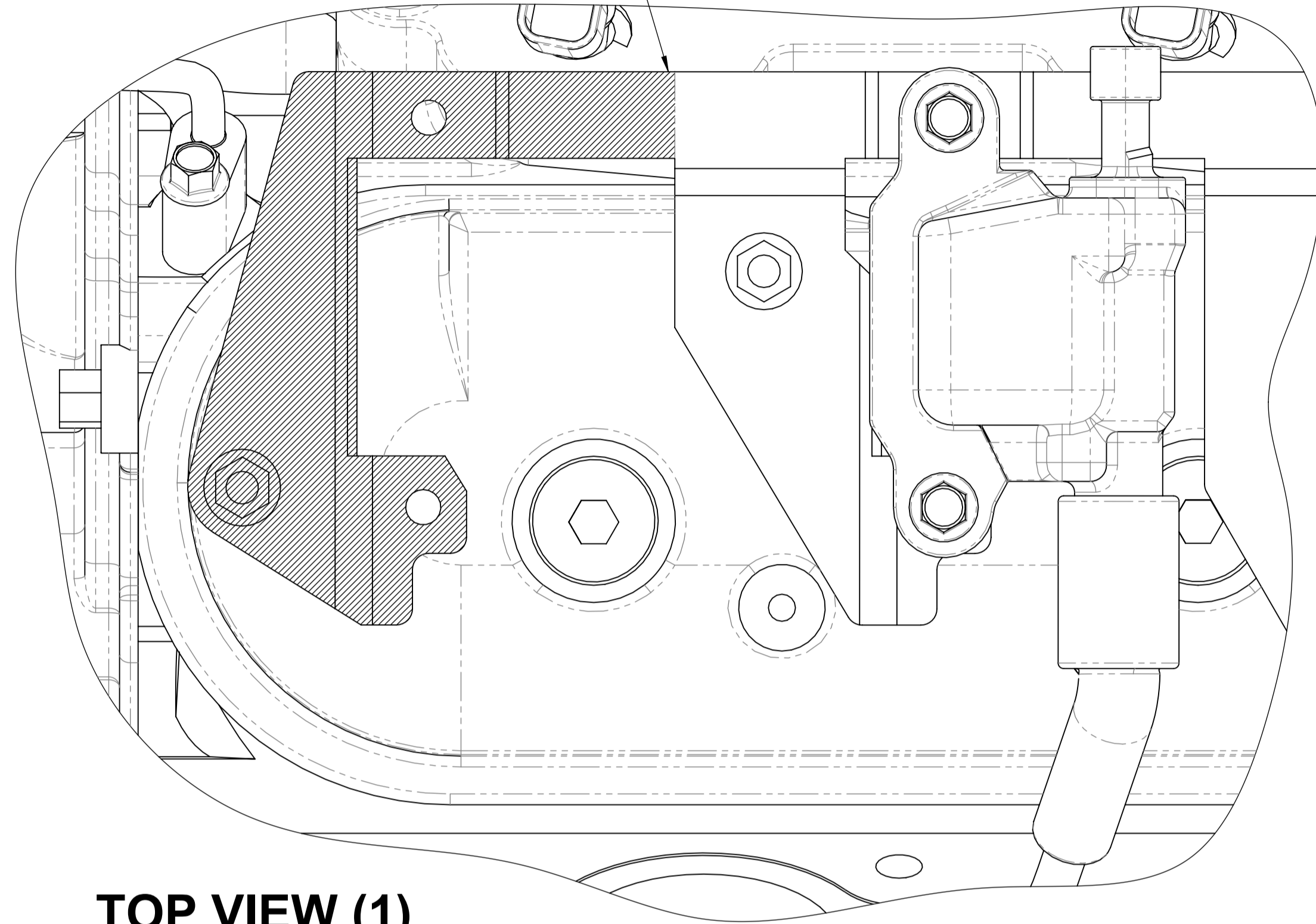
DRAWN	GDK 09/12/2020	TITLE:	LS - Series Rocker Cover Coil Boss Modification	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:2:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 03	0

# LS - SERIES PASSENGER SIDE COIL BRACKET MODIFICATION FOR COIL RELOCATION BRACKET MFC20020 (ROCKER COVER SWAP)

REMOVE THE HATCHED AREA  
AS SHOWN TO ALLOW  
FITMENT OF THE COIL  
RELOCATION BRACKET

STANDARD PASSENGER SIDE  
COIL BRACKET

MODIFIED PASSENGER SIDE  
COIL BRACKET



TOP VIEW (1)

TOP VIEW (2)

REUSE FACTORY BOLTS

REASSEMBLE THE LS COIL TO  
MFC20020 IN THE ORIENTATION  
SHOWN THEN FASTEN MFC20020  
TO THE MODIFIED COIL BRACKET  
& MOUNTING BOSS ON THE ROCKER  
COVER AS SHOWN IN THE  
EXPLODED VIEW

MODIFIED PASSENGER SIDE  
COIL BRACKET AS SHOWN IN  
TOP VIEW (2) & SIDE VIEW (2)

MFC20020

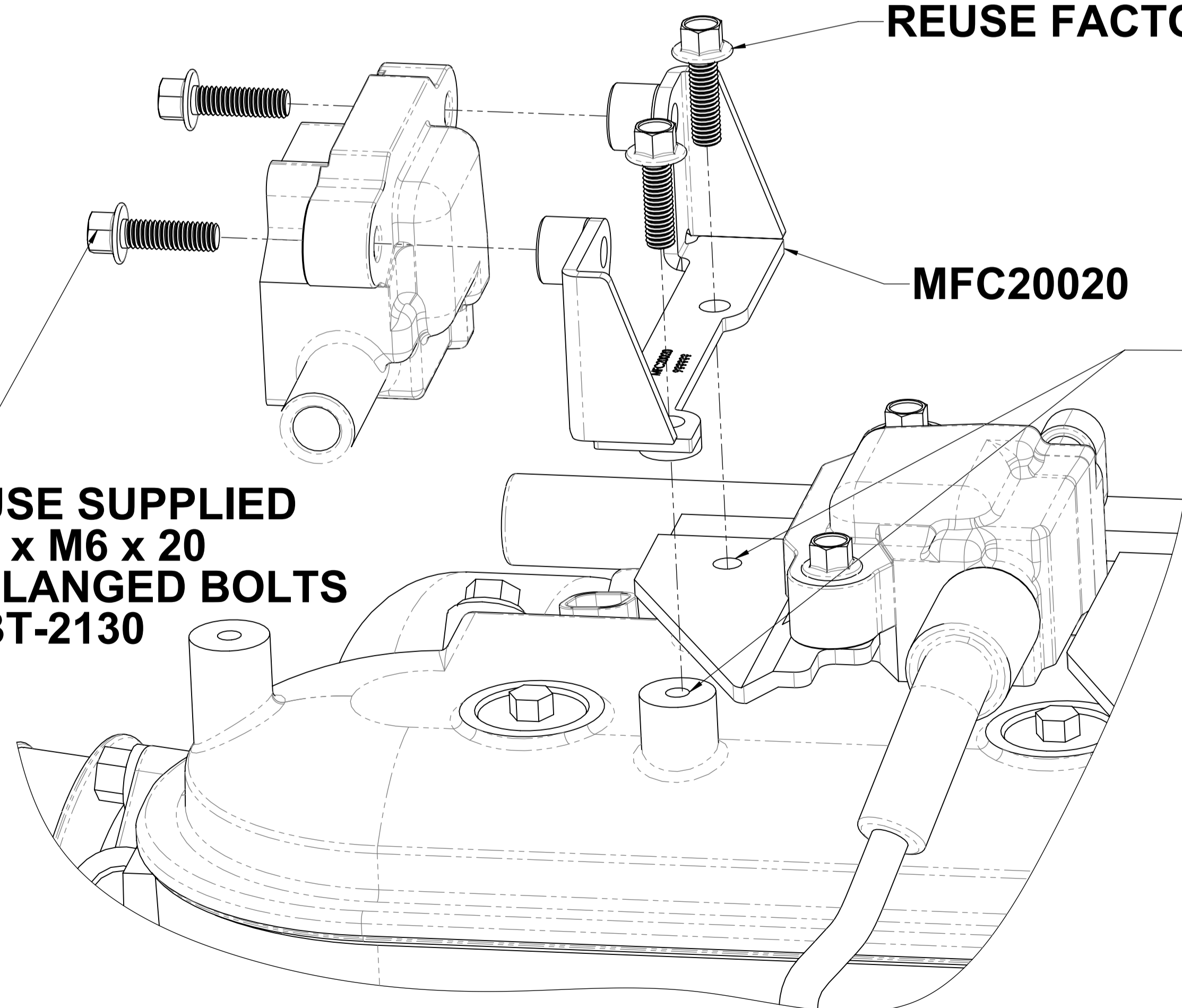
ROCKER COVER  
MODIFICATION  
IS REQUIRED BEFORE  
COIL RELOCATION

REFER TO DRAWING:-

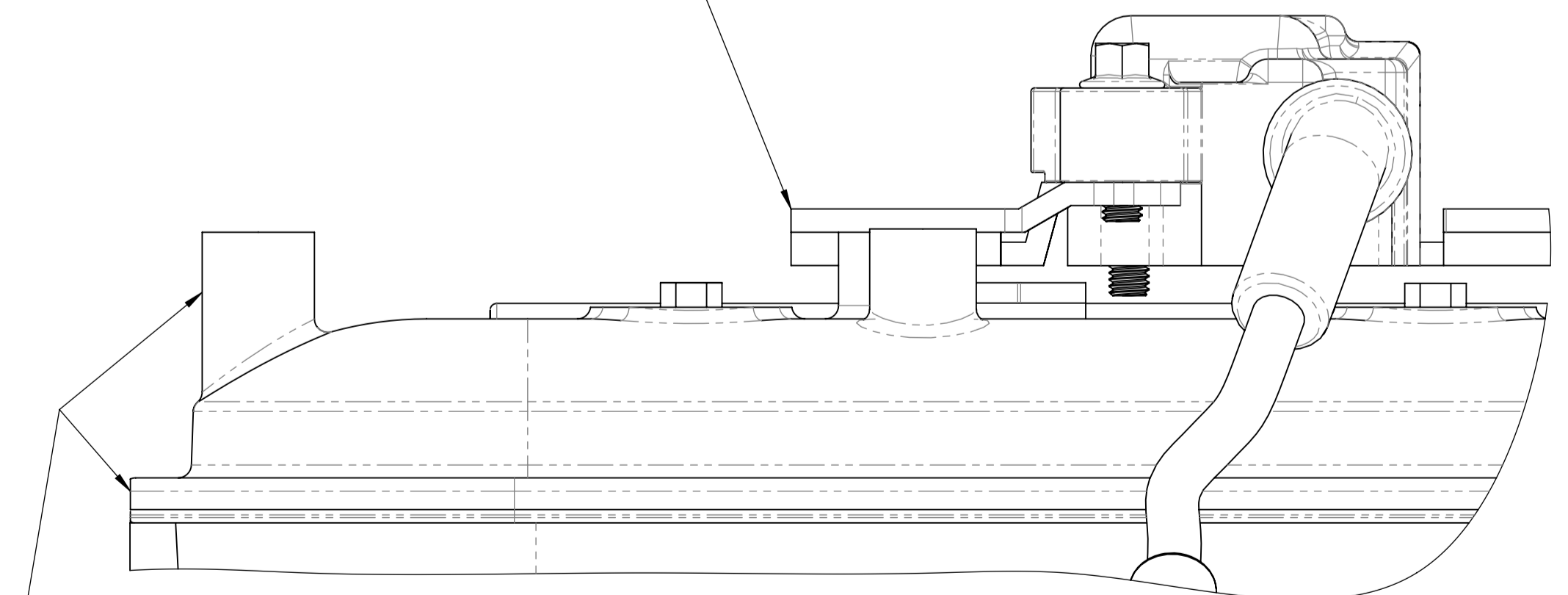
**(LS - ACCMOD - 01)**  
LS - SERIES ROCKER COVER  
LIP MODIFICATION

**(LS - ACCMOD - 03)**  
LS - SERIES ROCKER COVER  
COIL BOSS MODIFICATION

USE SUPPLIED  
2 x M6 x 20  
FLANGED BOLTS  
BT-2130



EXPLODE VIEW



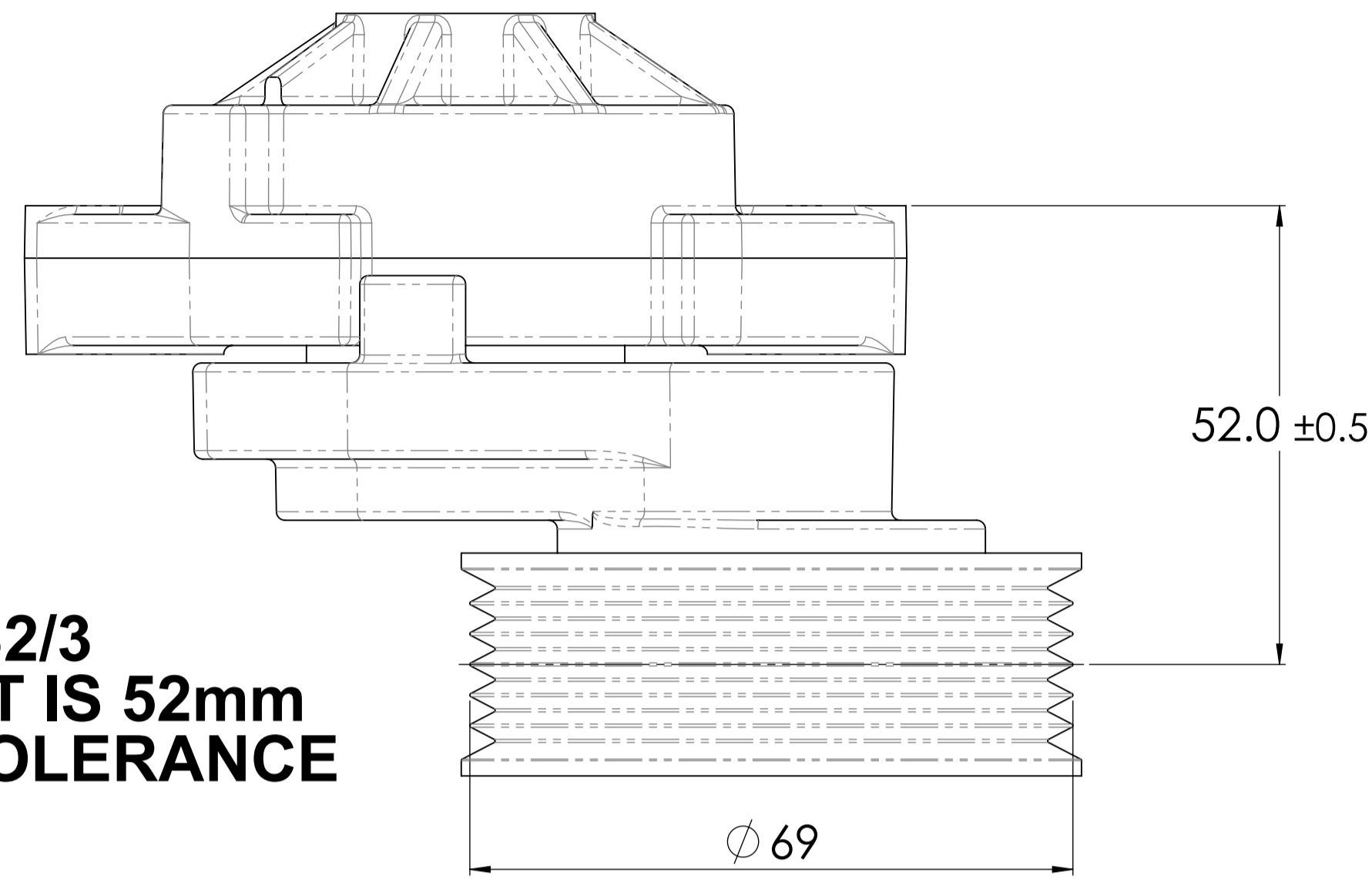
SIDE VIEW (2)

DRAWN	GDK 09/12/2020	TITLE:	LS - Series Passenger Side Coil Bracket Modification	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:2:1	DRAWING/PART NUMBER	REV. No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 05	0



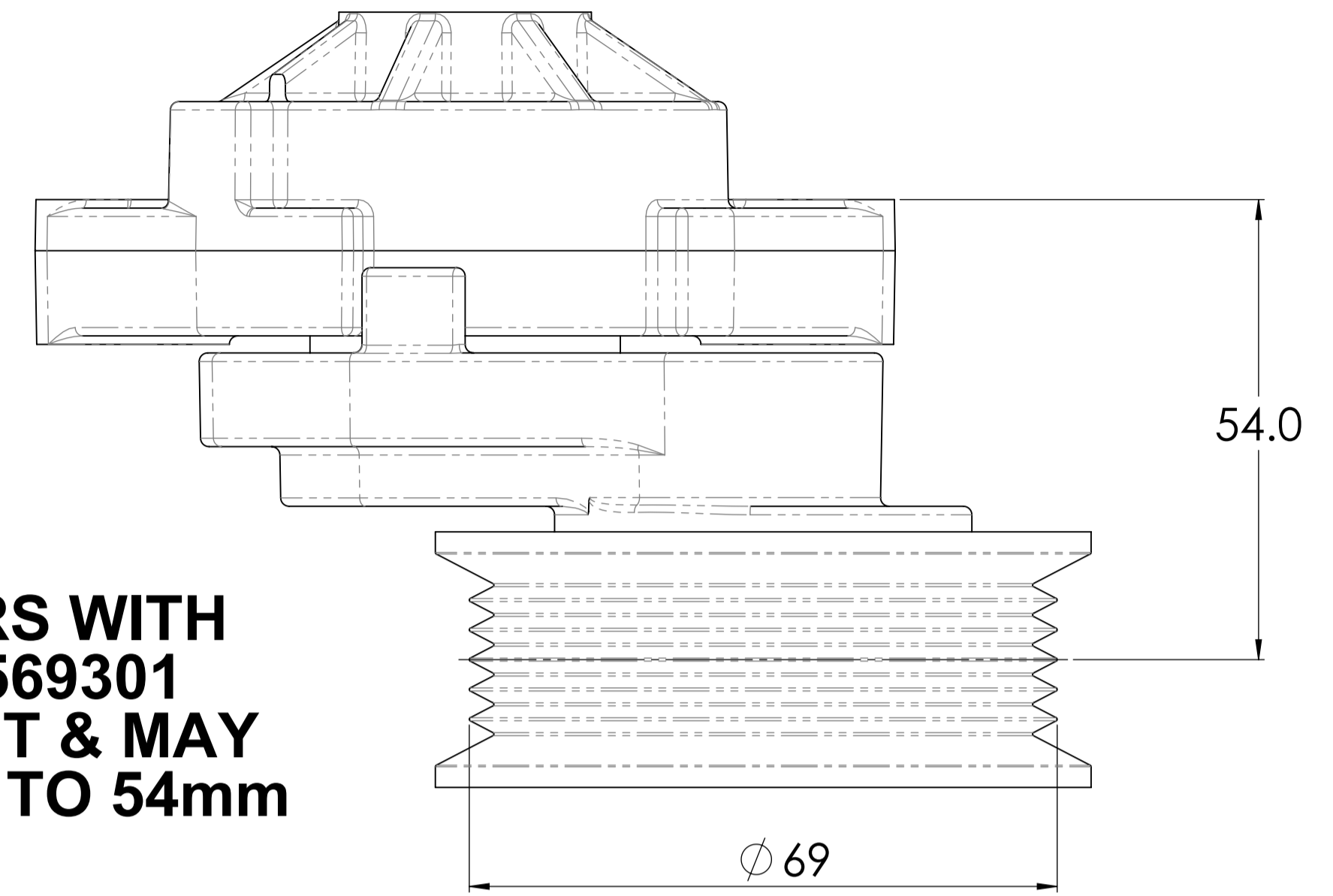
# LS2/3 TENSIONER PULLEY OFFSETS

## CORRECT OFFSET



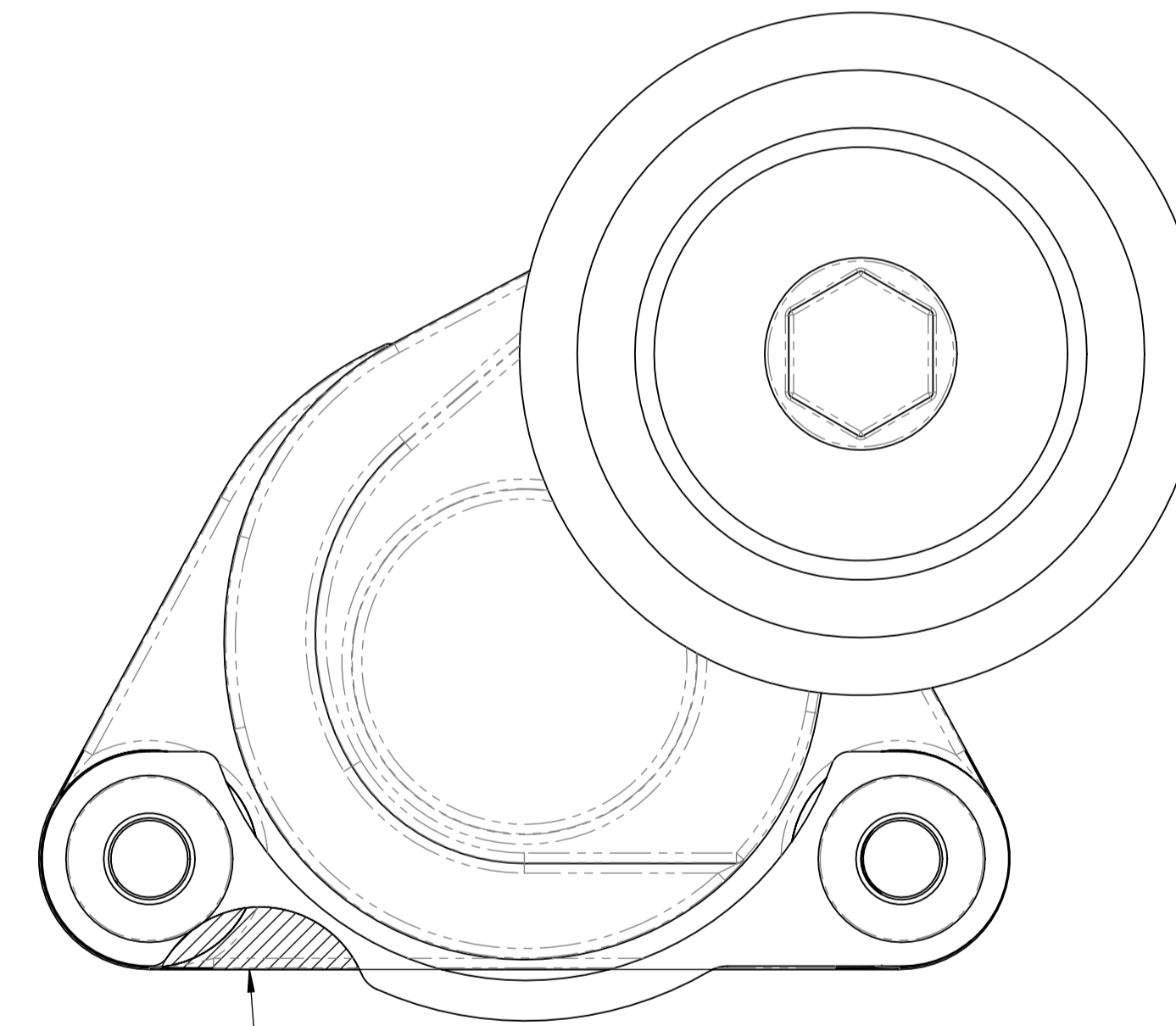
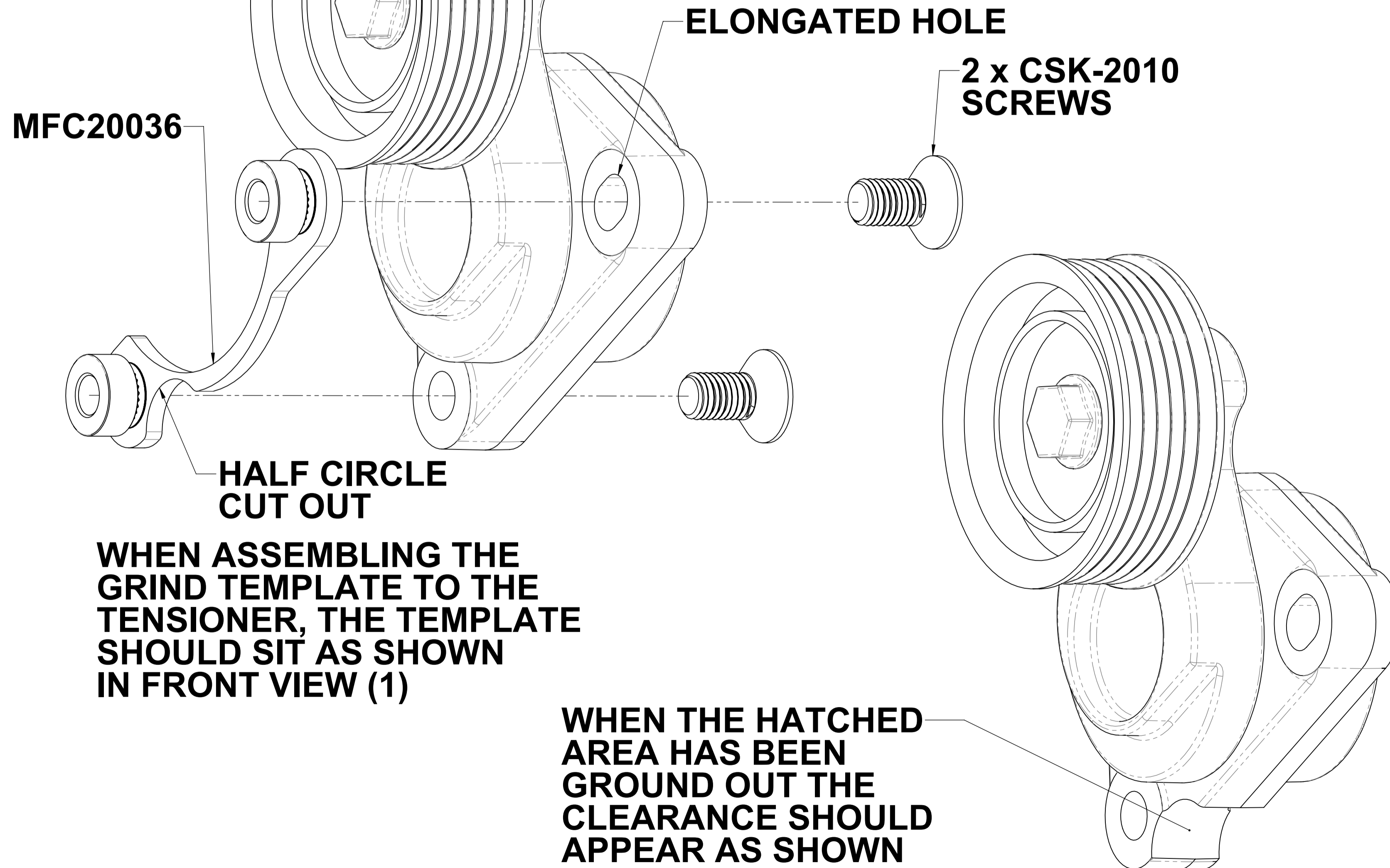
**STANDARD OEM LS2/3 TENSIONER OFFSET IS 52mm WITHIN +/- 0.5mm TOLERANCE**

## INCORRECT OFFSET



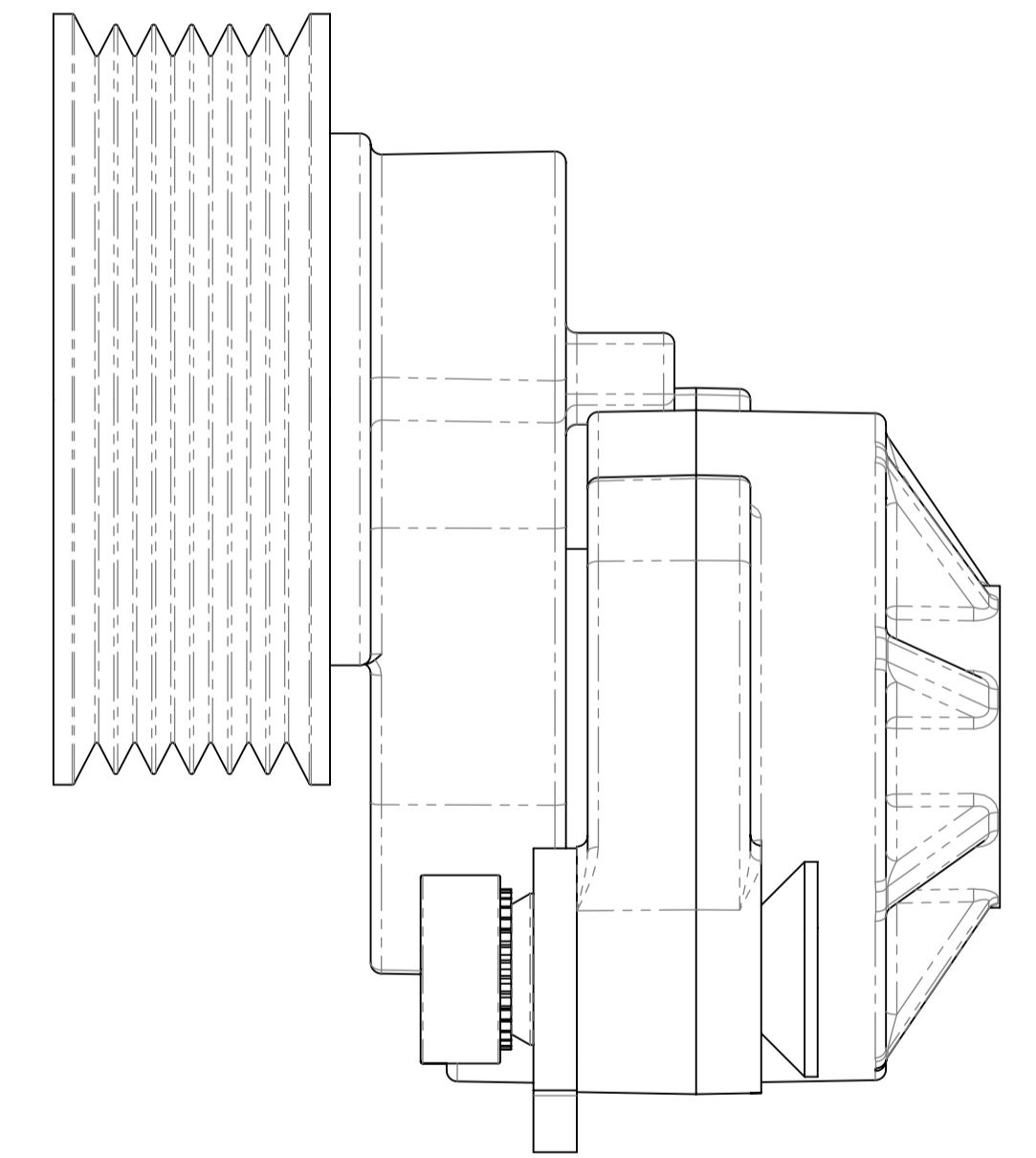
**SOME LS2/3 TENSIONERS WITH THE SAME PART No. 12569301 HAVE A LARGER OFFSET & MAY RANGE FROM 52mm UP TO 54mm**

# LS2/3 TENSIONER GRIND TEMPLATE



**REMOVE THE HATCHED AREA AS SHOWN**

**FRONT VIEW (1)**



**SIDE VIEW (1)**

# LS1/2/3 WATER PUMP GRIND TEMPLATE

WHEN ASSEMBLING THE GRIND TEMPLATE TO THE WATER PUMP, THE TEMPLATE SHOULD SIT AS SHOWN IN FRONT VIEW (1)

HALF CIRCLE CUT OUT

MFC20037

2 x CSK-2010 SCREWS

REMOVE THE HATCHED AREA AS SHOWN

WHEN THE HATCHED AREA HAS BEEN GROUND OUT THE CLEARANCE SHOULD APPEAR AS SHOWN

FRONT VIEW (1)



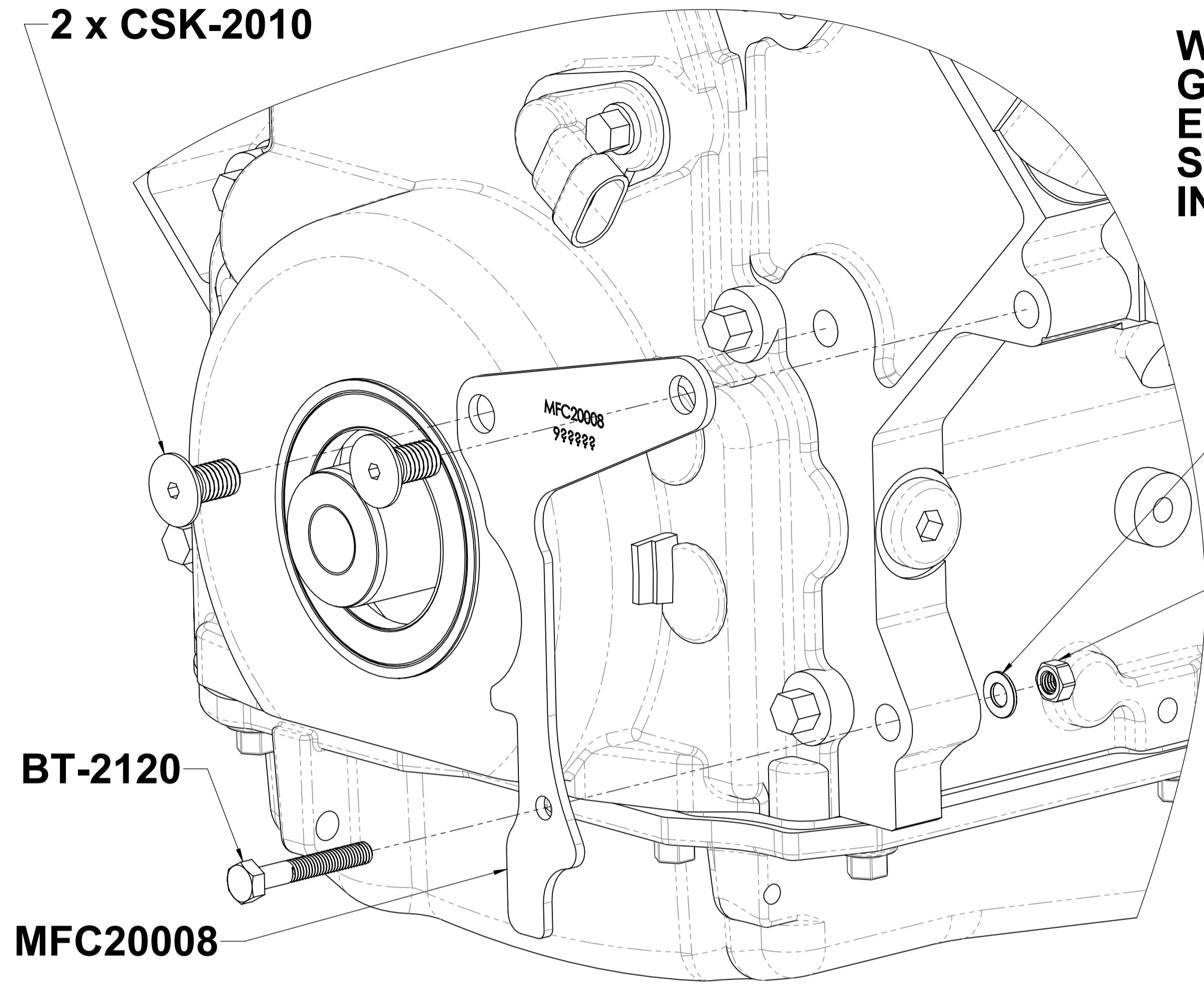
DRAWN	GDK 09/12/2020	TITLE:	LS1/2/3 Water Pump Grind Template	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 11	0



# LS2/3 SANDEN LOW GRIND TEMPLATE

## EXPLODED VIEW

2 x CSK-2010



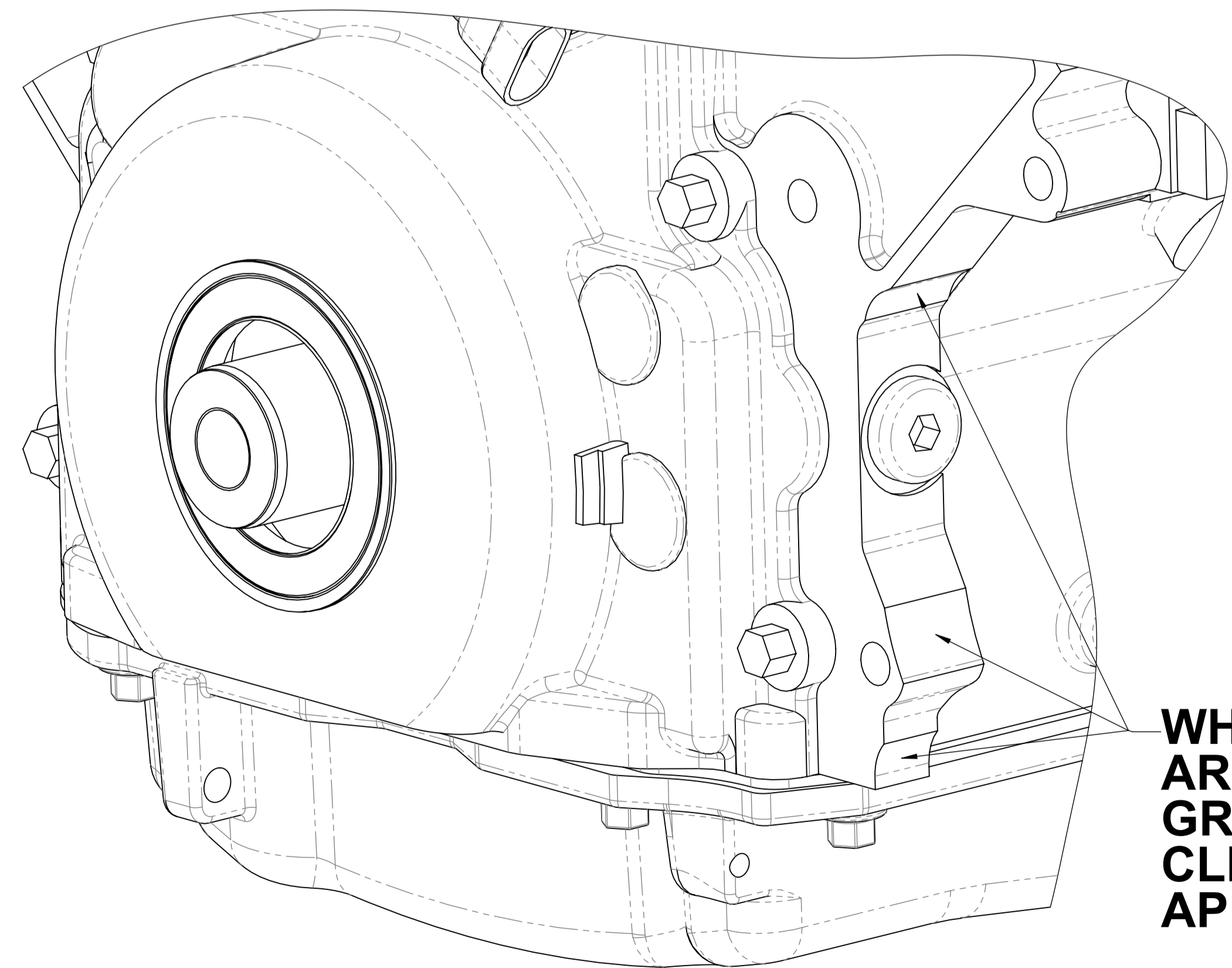
WHEN ASSEMBLING THE GRIND TEMPLATE TO THE ENGINE, THE TEMPLATE SHOULD SIT AS SHOWN IN FRONT VIEW (1)

FW-2045

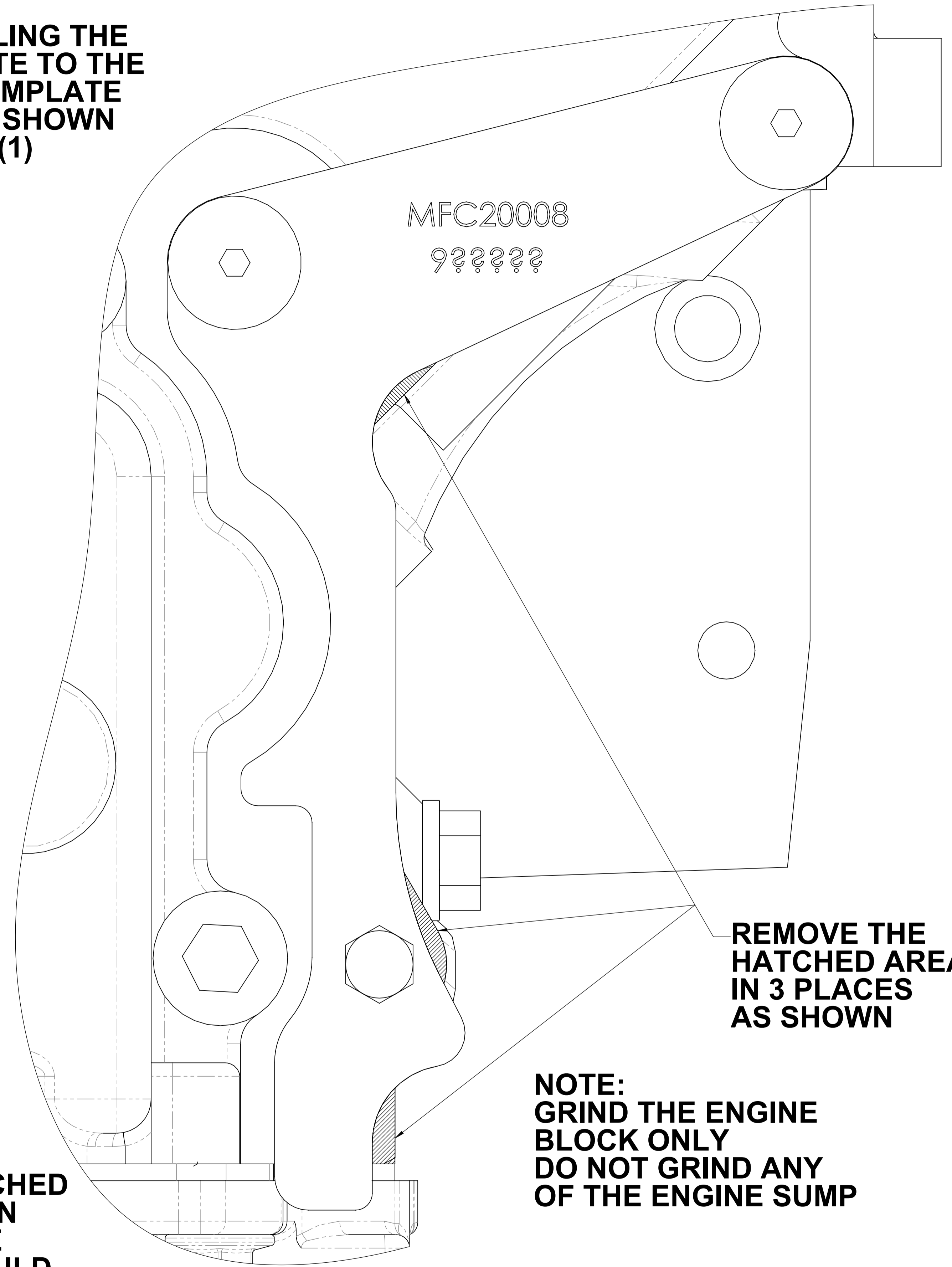
NT-2090

BT-2120

MFC20008



WHEN THE 3 HATCHED AREAS HAVE BEEN GROUND OUT THE CLEARANCE SHOULD APPEAR AS SHOWN



MFC20008  
9??????

REMOVE THE HATCHED AREAS IN 3 PLACES AS SHOWN

NOTE:  
GRIND THE ENGINE BLOCK ONLY  
DO NOT GRIND ANY OF THE ENGINE SUMP

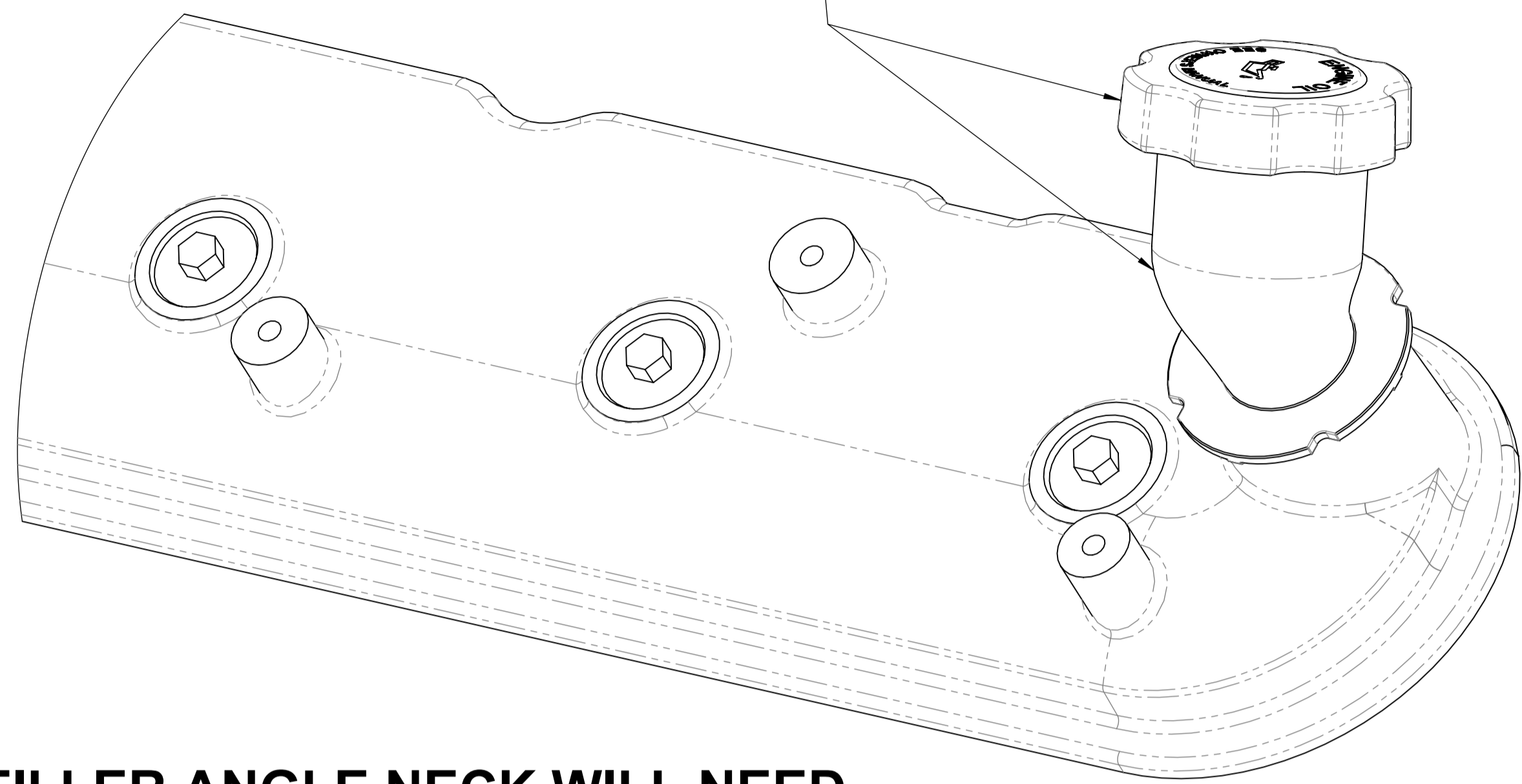
FRONT VIEW (1)



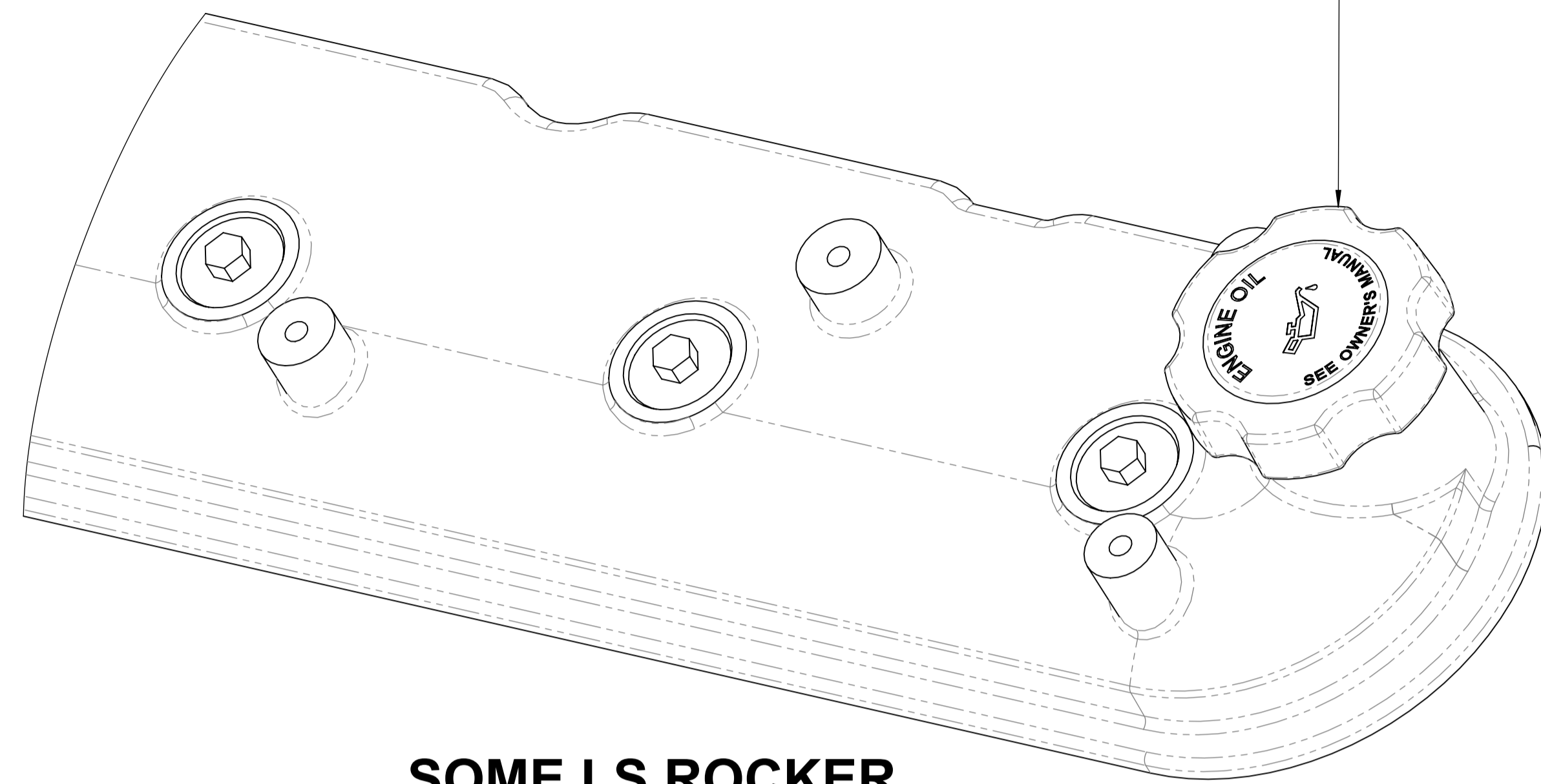
DRAWN	GDK 09/12/2020	TITLE:	LS2/3 Sanden Low Grind Template	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 12	0

# LS2/3 OIL FILLER NECK MODIFICATION

**OIL FILLER ANGLE NECK & CAP AS SHOWN IN FACTORY POSITION**



**OIL FILLER CAP AFTER MODIFICATION**

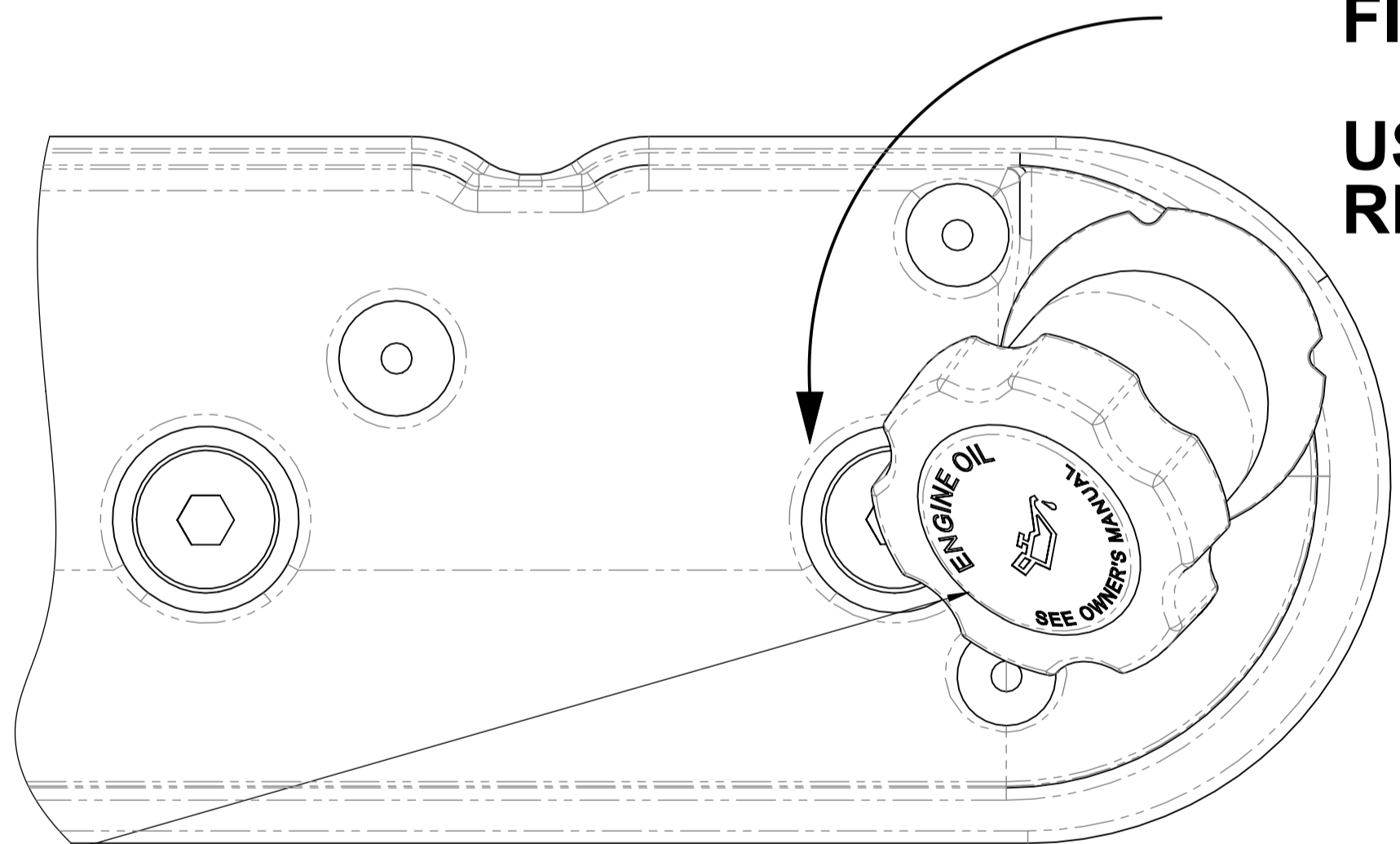
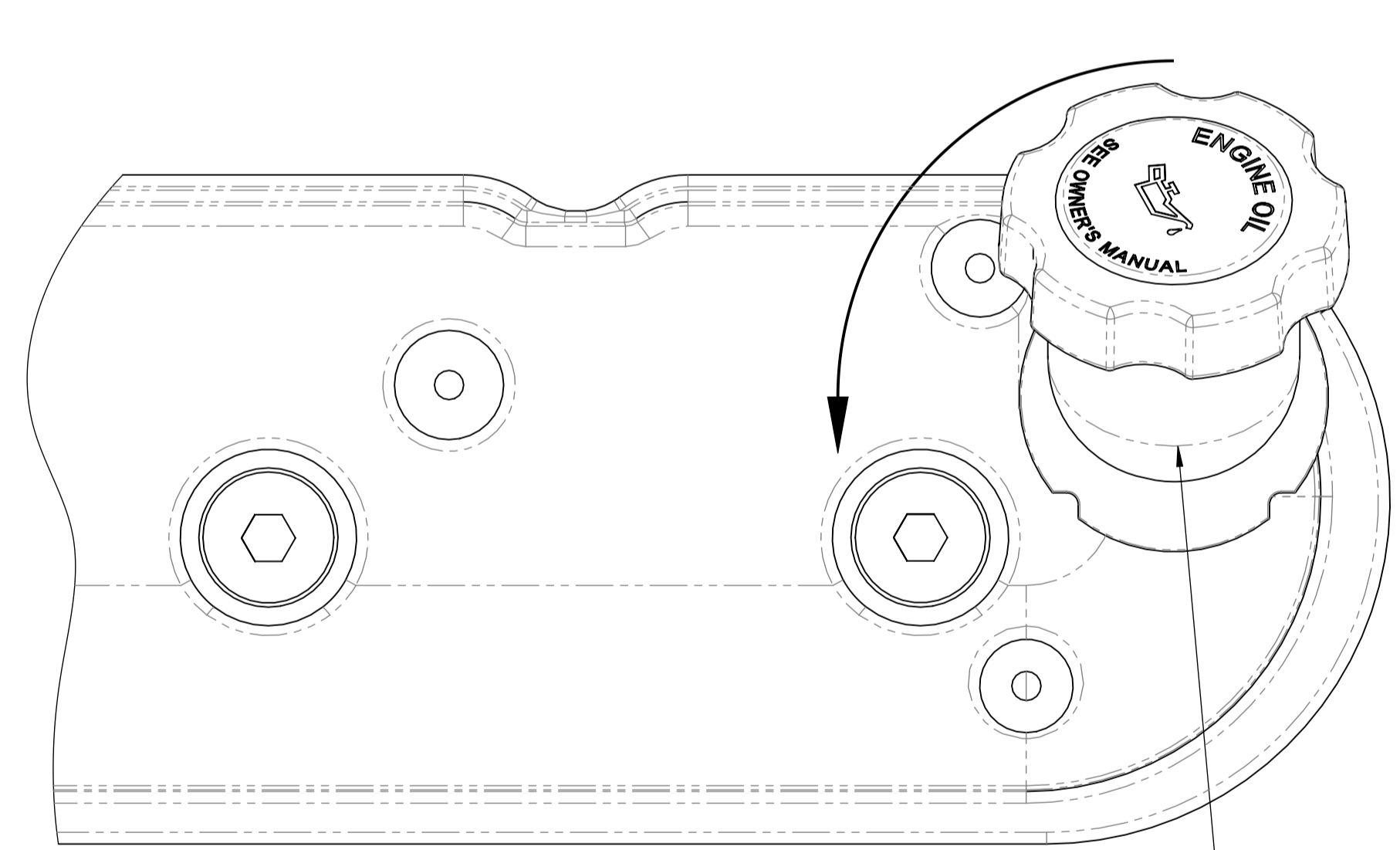


**THE OIL FILLER ANGLE NECK WILL NEED TO BE REMOVED AS IN SOME CARS THE NECK SITS IN FRONT OF THE HEATER HOSE OUTLET/INLET**

**SOME LS ROCKER COVERS HAVE AN EXTRA TAB INSIDE THE FILLER NECK HOLE WHICH CAN MAKE IT HARDER AGAIN TO TWIST THE FILLER NECK OFF**

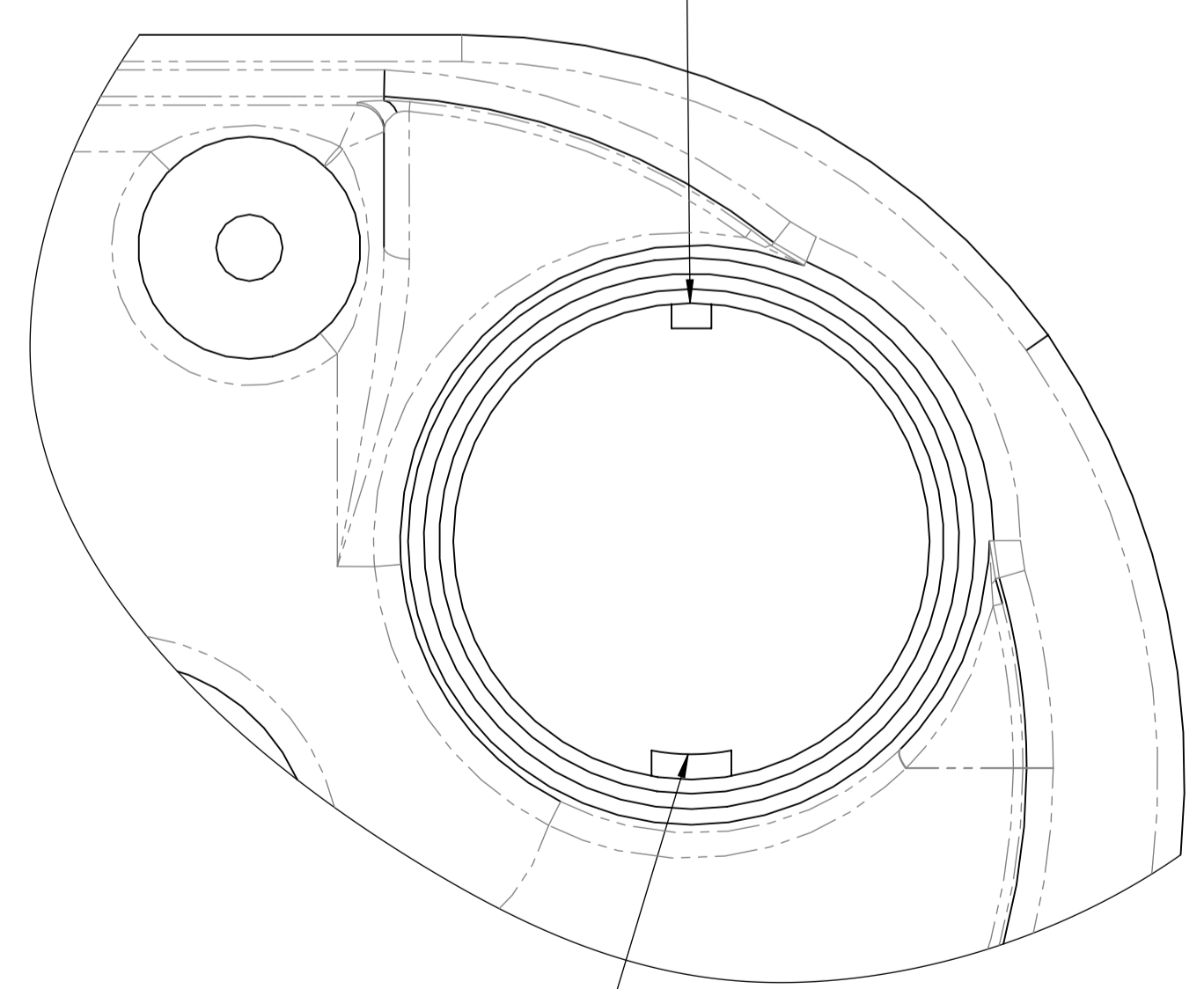
**VERY IMPORTANT:**  
**BEFORE FILING THIS TAB REMOVE THE COVER FROM THE ENGINE TO PREVENT METAL CHIPS ENTERING THE ENGINE**

**USE A CONCAVE FILE TO REMOVE THIS TAB ONLY**



**TWIST THE NECK ANTI-CLOCKWISE THE NECK MAY BE TIGHT TO TWIST THEREFORE A FIRM ROTATION IS REQUIRED TO REMOVE**

**DO NOT REMOVE THIS TAB**



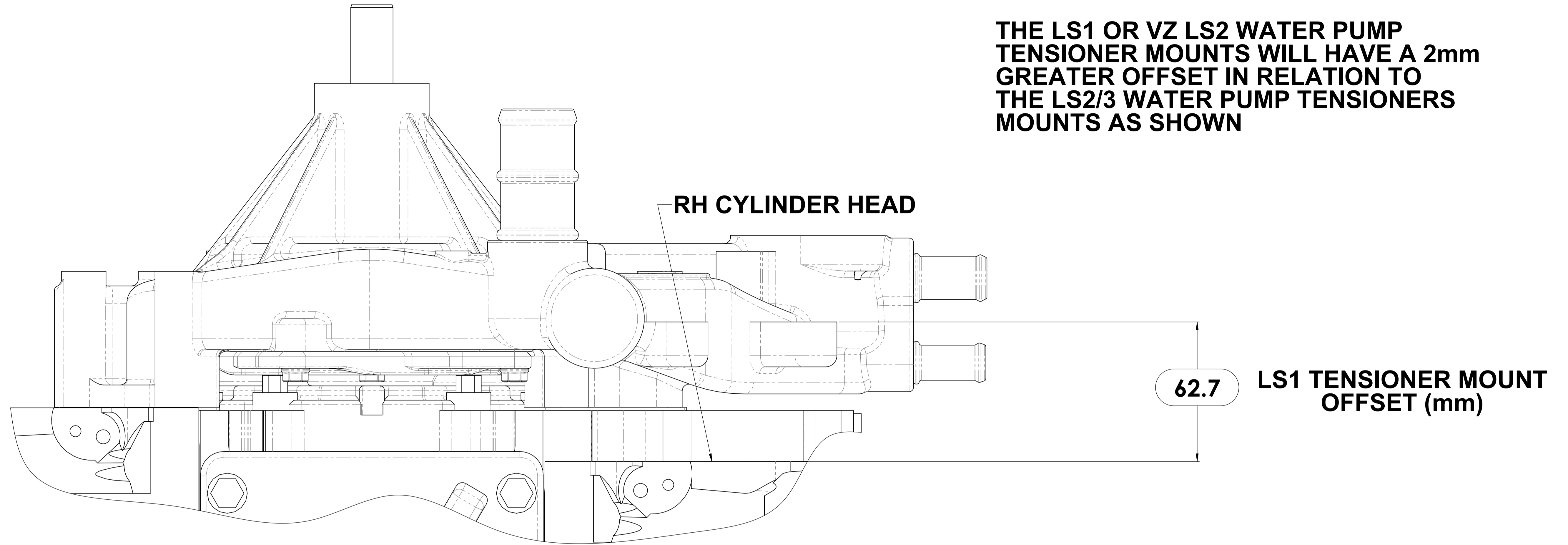
DRAWN	GDK 09/12/2020	TITLE:	LS2/3 Oil Filler Neck Modification	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 13	0

**MARKS4WD**  
365-369 LOWER DANDENONG ROAD,  
DINGLEY, VICTORIA, 3172  
A.B.N. 28 153 842 829



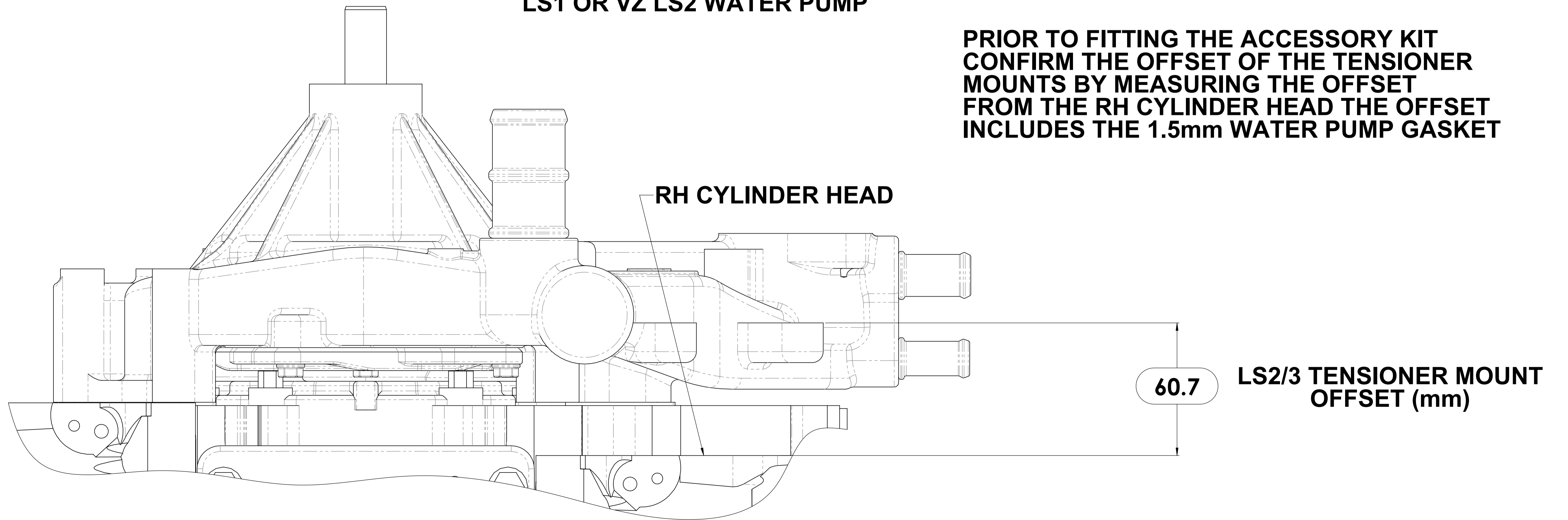
# LS WATER PUMP TENSIONER MOUNT OFFSETS

THE LS1 OR VZ LS2 WATER PUMP TENSIONER MOUNTS WILL HAVE A 2mm GREATER OFFSET IN RELATION TO THE LS2/3 WATER PUMP TENSIONERS MOUNTS AS SHOWN



LS1 OR VZ LS2 WATER PUMP

PRIOR TO FITTING THE ACCESSORY KIT CONFIRM THE OFFSET OF THE TENSIONER MOUNTS BY MEASURING THE OFFSET FROM THE RH CYLINDER HEAD THE OFFSET INCLUDES THE 1.5mm WATER PUMP GASKET



LS2/3 WATER PUMP



DRAWN	GDK 09/12/2020	TITLE:	LS Water Pump Tensioner Mount Offsets	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - INFO - 02	0

**1:-THE GRIND CLEARANCE FOR THE WATER PUMP & LS2/LS3 TENSIONER & MOUNT OFFSET MUST BE DONE PRIOR TO ASSEMBLING THE ACCESSORY KIT**

**2:- IF USING OEM LS2/LS3 WATER PUMP GO TO STEP 3:-**

**IF USING THE MARKS 4WD LS WATER PUMP DISCARD THE SPACERS SUPPLIED**

**THESE ARE ONLY FOR THE LS1/ VZ LS2 APPLICATION**

**3:- ONCE THE GRIND CLEARANCE IS DONE MOUNT THE RH BASE PLATE OF THE KIT TO THE RH CYLINDER HEAD WITH THE SUPPLIED BOLTS**

**4:- MOUNT THE TENSIONER (ORIENT AS SHOWN) TO THE MOUNTING FACE OF THE WATER PUMP USING AN OEM (M10x1.5x35) BOLT BEFORE ASSEMBLING THE KIT**

**ELONGATED SLOT OF THE TENSIONER**

**1:- GRIND CLEARANCE (LS - ACCMOD - 09)**

**MOUNTING FACE**

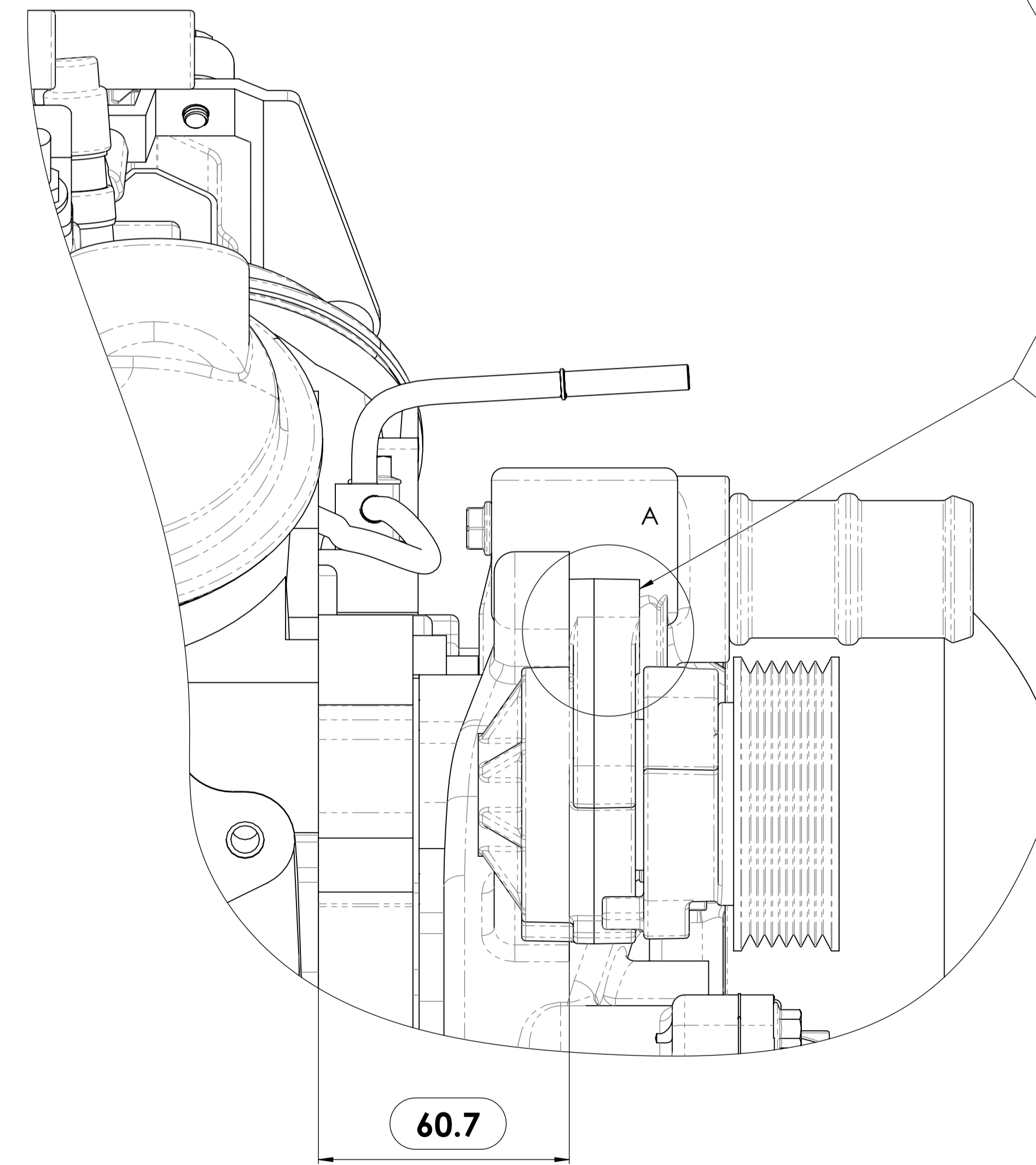
**1:- GRIND CLEARANCE (LS - ACCMOD - 11)**

# LS2/3 TENSIONER ASSEMBLY FOR RH KIT

**THE PROCEDURES OUTLINED WILL APPLY TO THE OEM LS2/LS3 WATER PUMP & THE MARKS 4WD LS WATER PUMP FOLLOW STEPS 1,2,3,4,5,6 IN THAT ORDER**

**5:- THE ELONGATED SLOT OF THE TENSIONER WILL SIT DIRECTLY ONTO THE RH BASE PLATE SPACER OF THE KIT (NO SHIM REQUIRED)**

**6:- ONCE THE KIT IS ASSEMBLED SHIM ANY GAP BETWEEN THE FRONT PLATE OF THE KIT & THE TENSIONER**



**ELONGATED SLOT OF THE TENSIONER**

DETAIL A  
SCALE 3 : 1



DRAWN	GDK 09/12/2020	TITLE:	LS2/3 Tensioner Assembly For RH Kit	
DRAWING CHECKED	PAM 09/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - INFO - 04	0