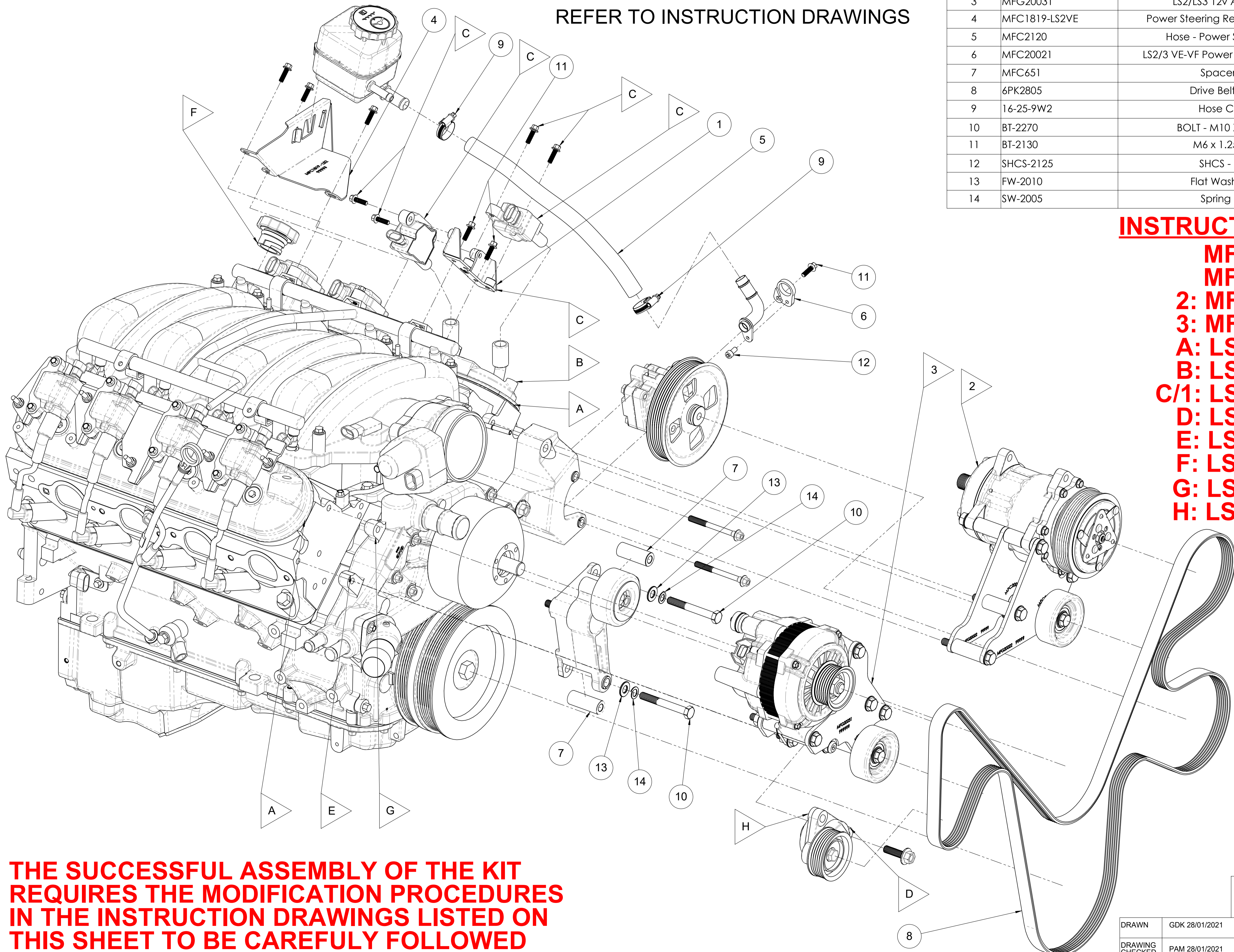


NOTE: FLAG ITEMS ▶
REFER TO INSTRUCTION DRAWINGS

ITEM NO.	PART NUMBER	DESCRIPTION	
1	MFC20028	Bracket - High Mount Sanden Setup Coil Relocation	1
2	MFG20022	LS2/LS3 Sanden Compressor (High LH)	1
3	MFG20031	LS2/LS3 12v Alternator Relocation RH	1
4	MFC1819-LS2VE	Power Steering Reservoir Bracket - LS2/3 VE - VF	1
5	MFC2120	Hose - Power Steering - 16mm x 400mm	1
6	MFC20021	LS2/3 VE-VF Power Steering Barb Rotate Adaptor	1
7	MFC651	Spacer 10 x 20 x 51 L P/ST	2
8	6PK2805	Drive Belt - Poly Rib (2805mm)	1
9	16-25-9W2	Hose Clamp - 16 to 25mm	2
10	BT-2270	BOLT - M10 X 1.5 X 80mm - H/T - Z/P	2
11	BT-2130	M6 x 1.25 x 20 - Capture Bolt	3
12	SHCS-2125	SHCS - M6 x 1 x 12mm - SS	1
13	FW-2010	Flat Washer - M10 x 22 x 2mm	2
14	SW-2005	Spring Washer - M10 - S/S	2

INSTRUCTION DRAWINGS

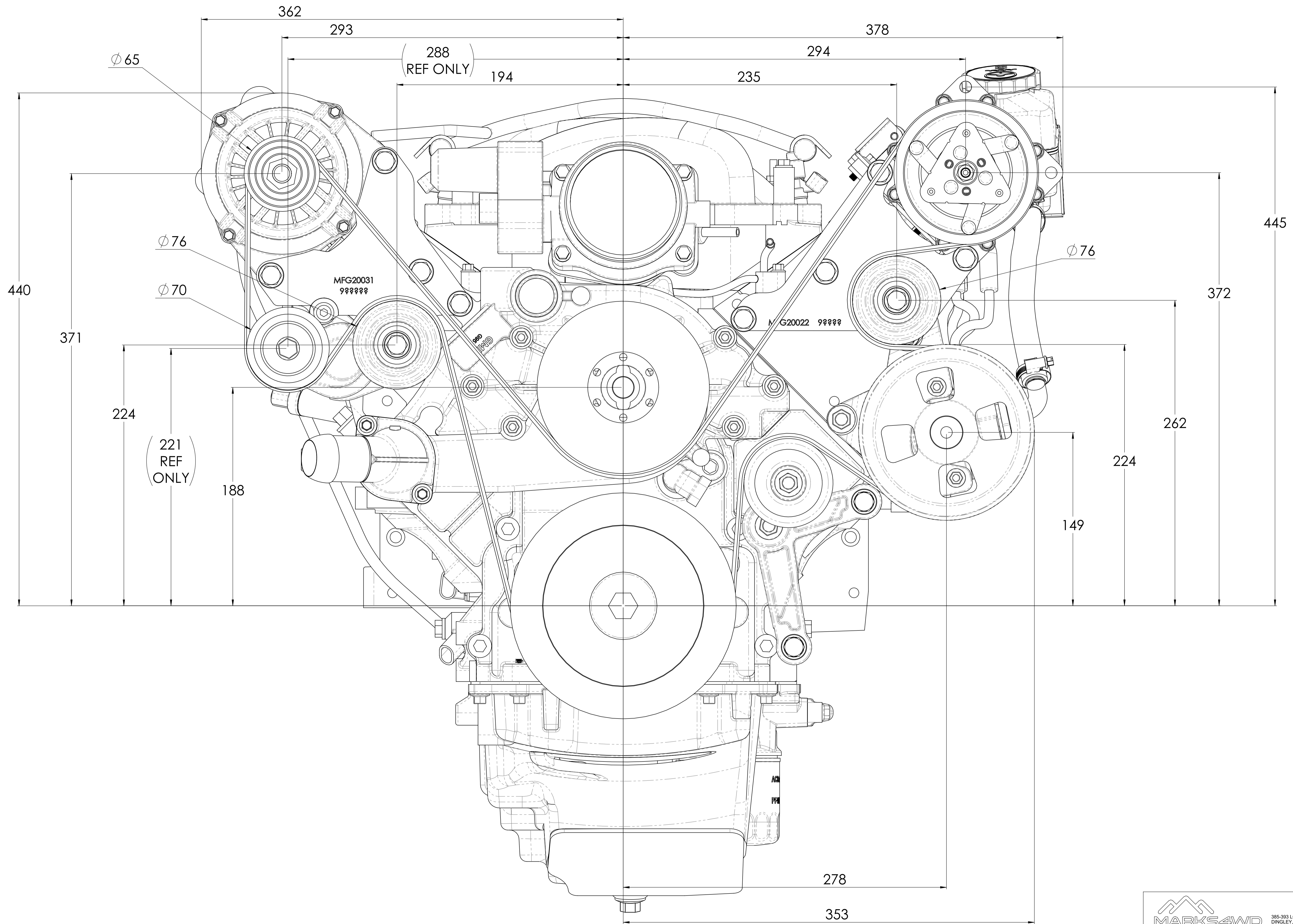
- MFK50145-SHT-1**
- MFK50145-SHT-2**
- 2: MFG20022**
- 3: MFG20031**
- A: LS - ACCMOD - 01**
- B: LS - ACCMOD - 03**
- C/1: LS - ACCMOD - 07**
- D: LS - ACCMOD - 09**
- E: LS - ACCMOD - 11**
- F: LS - ACCMOD - 13**
- G: LS - INFO - 02**
- H: LS - INFO - 04**



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

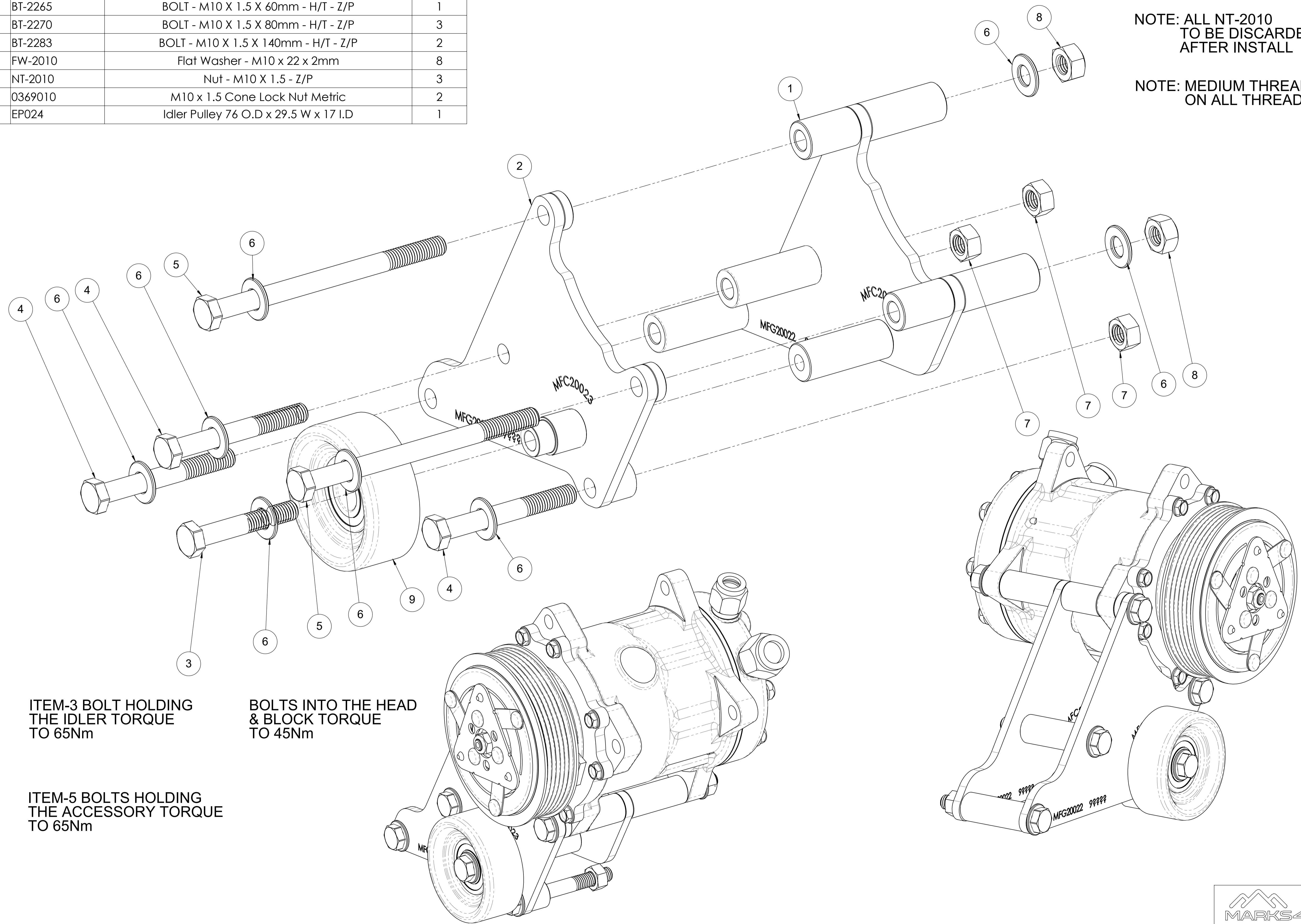
DRAWN	GDK 28/01/2021	TITLE:	Accessory Kit - RH 12v Alt & High LH Comp
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:2.5	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 1 of 12	MFK50145
		REV No.	0





DRAWN	GDK 28/01/2021	TITLE:	Accessory Kit - RH 12v Alt & High LH Comp	
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:1.5	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 2 of 12	MFK50145	0

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MFC20022	LS2/LS3 Sanden Compressor Base Plate (High LH)	1
2	MFC20023	LS2/LS3 Sanden Compressor Front Plate (High LH)	1
3	BT-2265	BOLT - M10 X 1.5 X 60mm - H/T - Z/P	1
4	BT-2270	BOLT - M10 X 1.5 X 80mm - H/T - Z/P	3
5	BT-2283	BOLT - M10 X 1.5 X 140mm - H/T - Z/P	2
6	FW-2010	Flat Washer - M10 x 22 x 2mm	8
7	NT-2010	Nut - M10 X 1.5 - Z/P	3
8	O369010	M10 x 1.5 Cone Lock Nut Metric	2
9	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

BOLTS INTO THE HEAD
& BLOCK TORQUE
TO 45Nm

ITEM-5 BOLTS HOLDING
THE ACCESSORY TORQUE
TO 65Nm



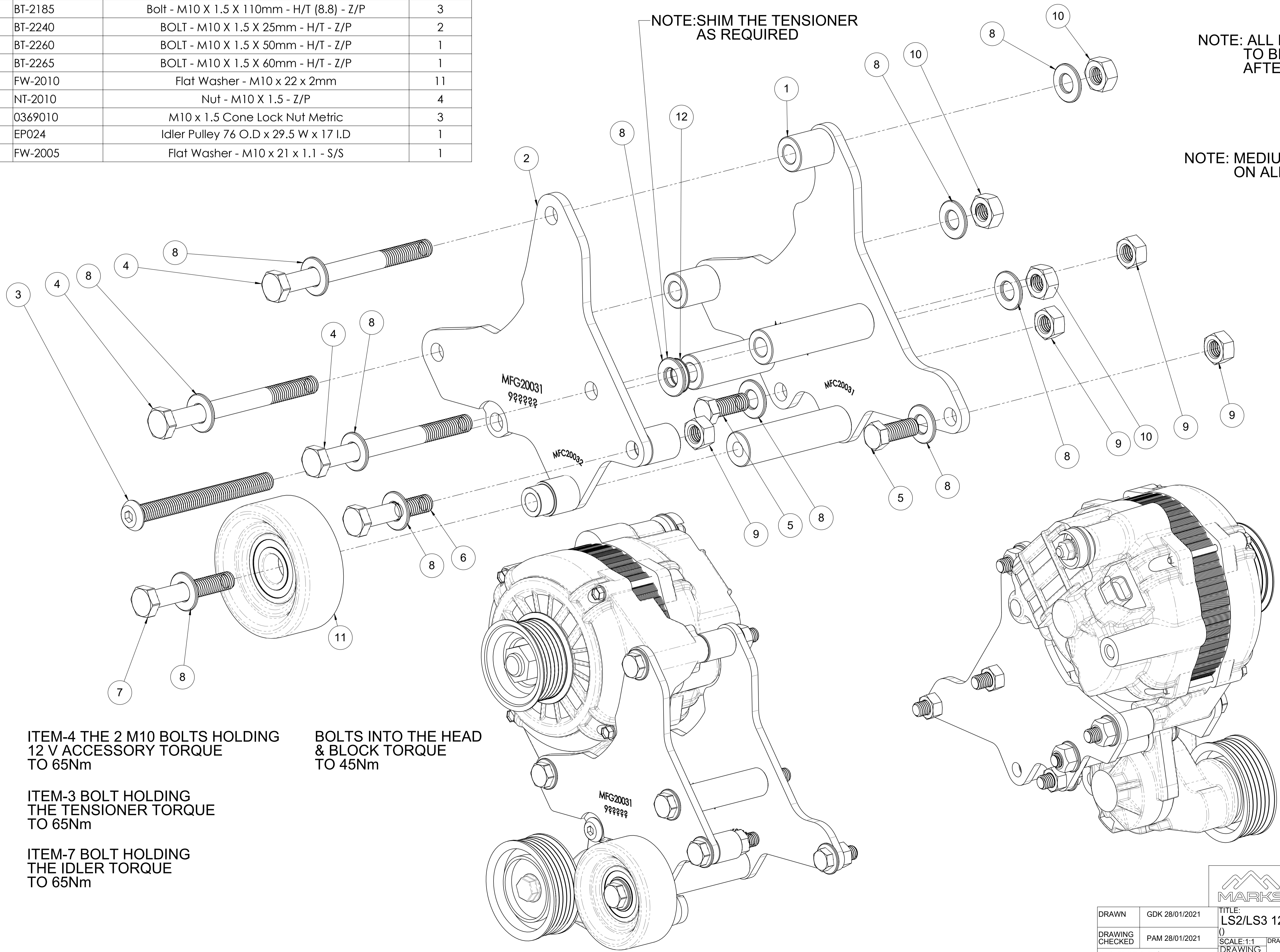
DRAWN	GDK 28/01/2021	TITLE:	LS2/LS3 Sanden Compressor (High LH)
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:1.1	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 3 of 12	REV No. 0
			MFK20022

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

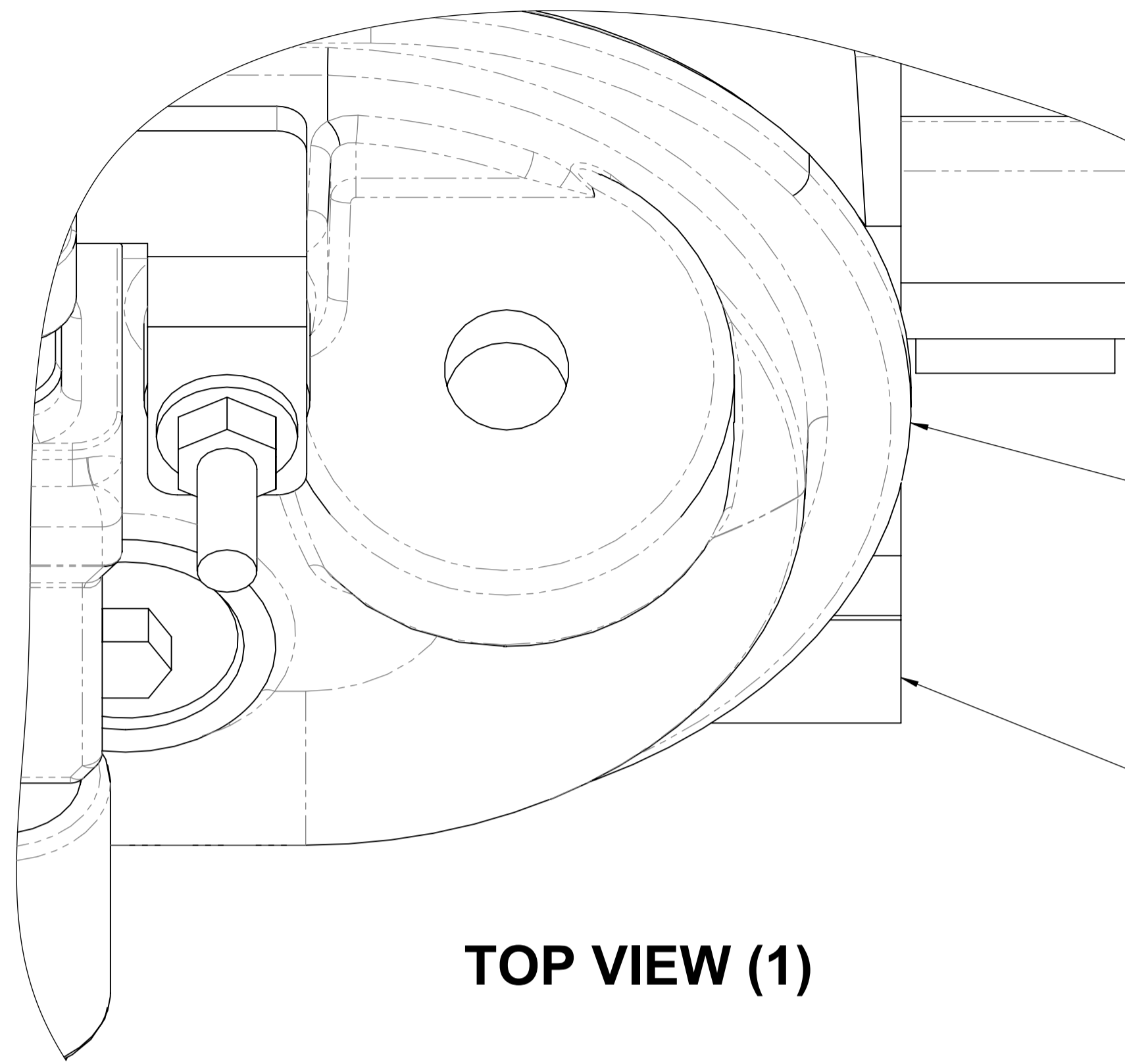
ITEM-7 BOLT HOLDING THE IDLER TORQUE TO 65Nm



DRAWN	GDK 28/01/2021	TITLE:	LS2/LS3 12v Alternator Relocation RH
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:1	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 4 of 12	REV No. 0
		MFG20031	

LS - SERIES ROCKER COVER LIP MODIFICATION

STANDARD ROCKER COVER



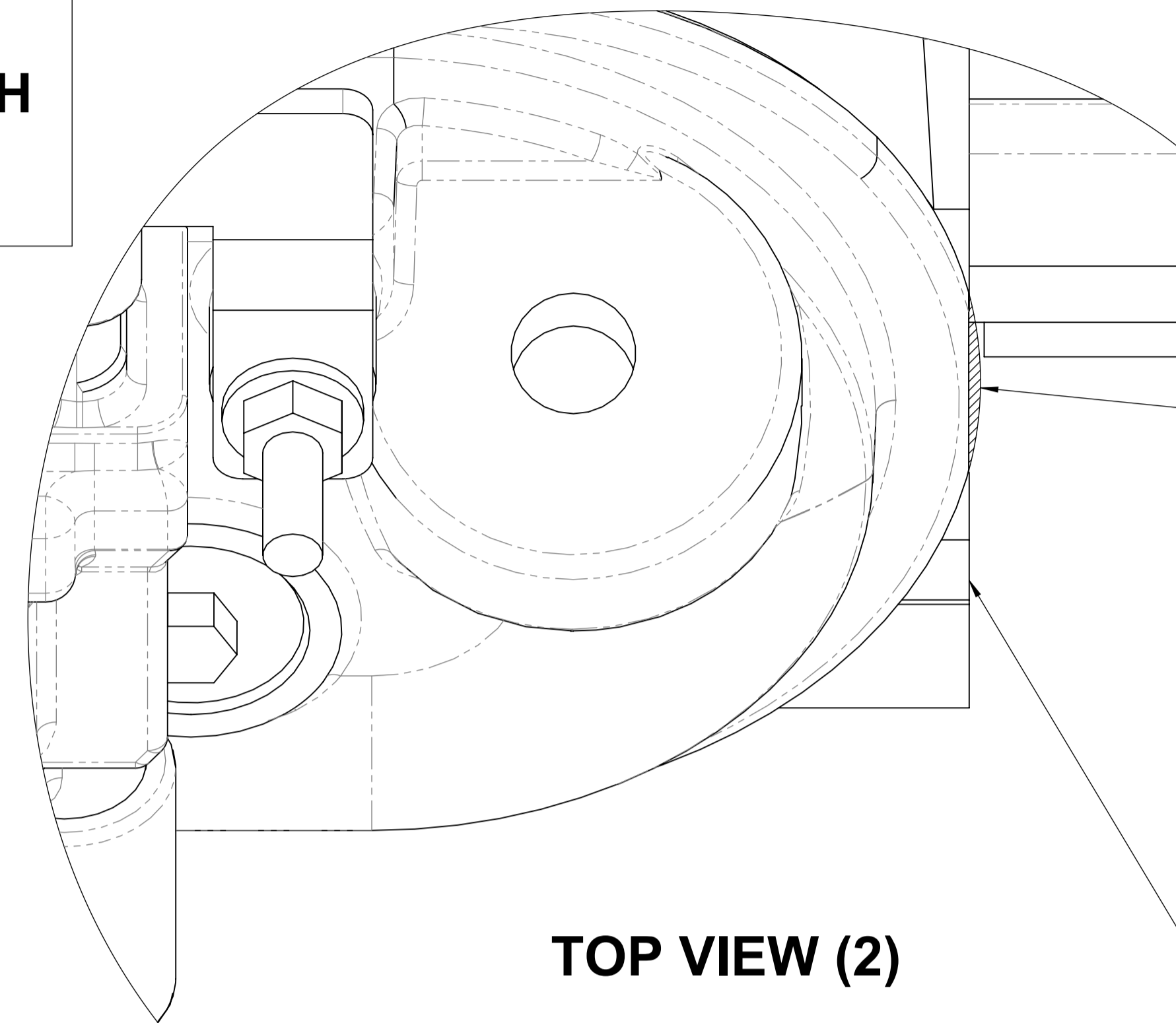
TOP VIEW (1)

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



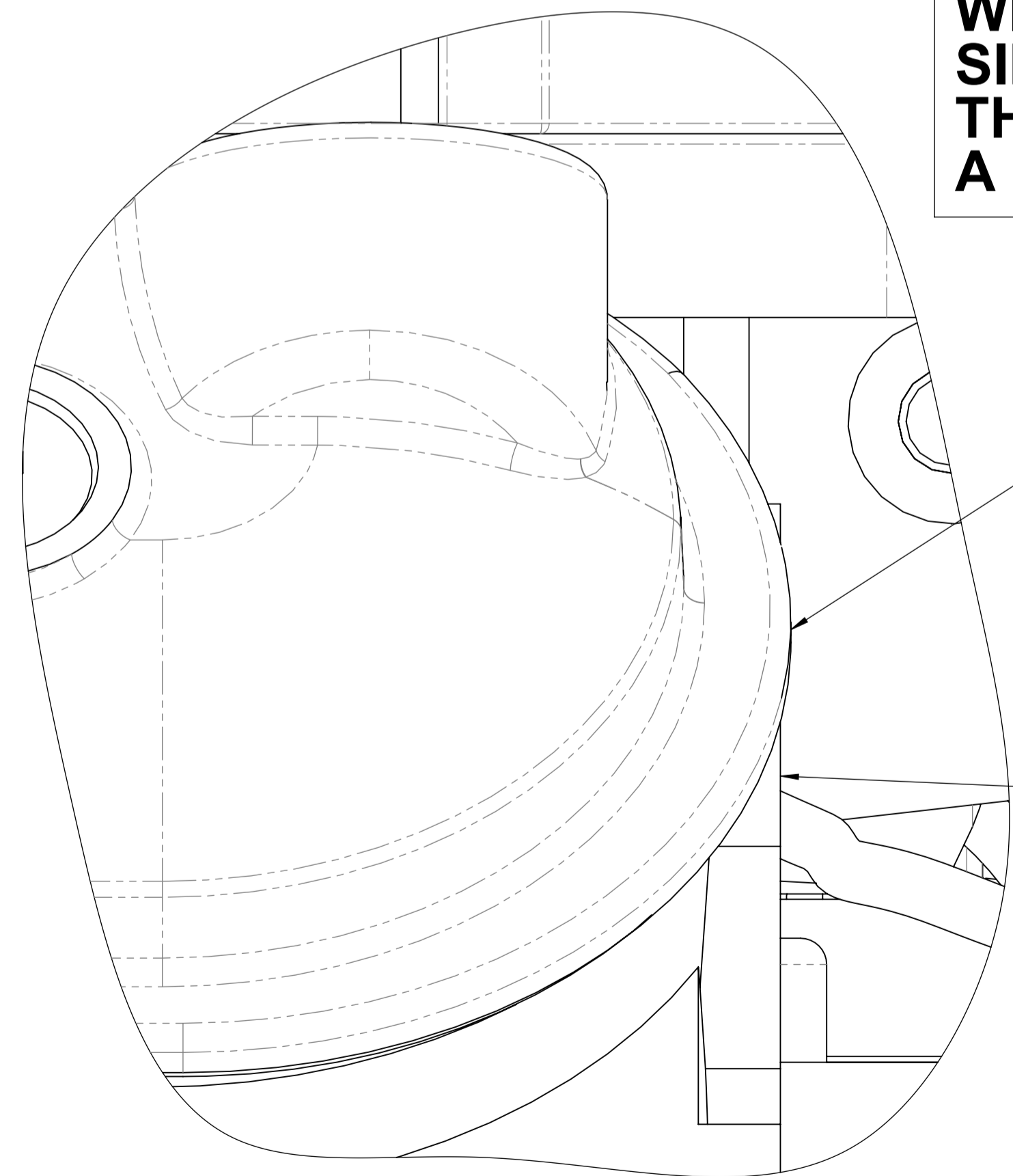
TOP VIEW (2)

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

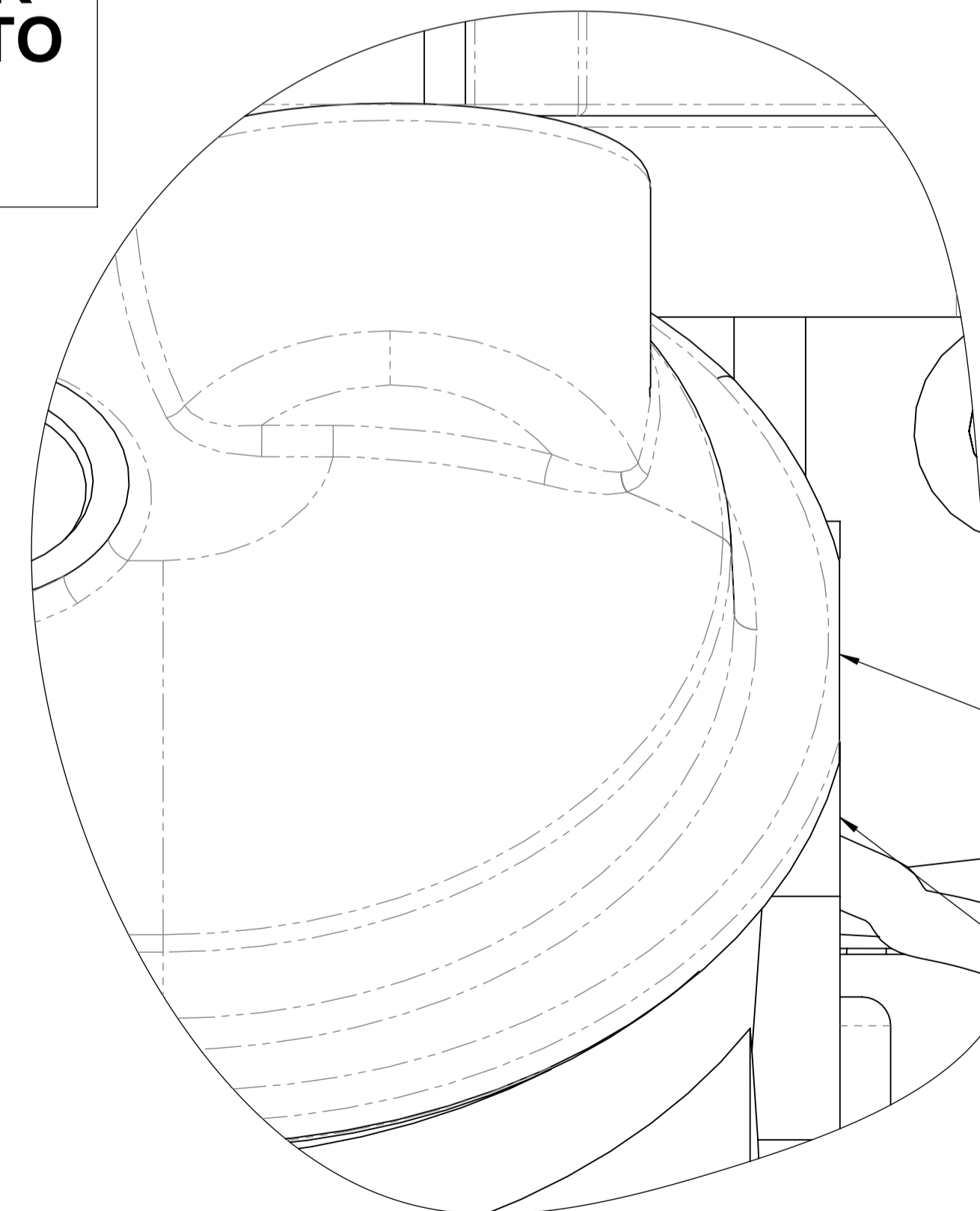
THE ROCKER COVER LIP MODIFICATION WILL ALSO BE REQUIRED FOR THE DRIVER SIDE ROCKER COVER WHEN IT IS FITTED TO THE PASSENGER SIDE CYLINDER HEAD IF A LH ACCESSORY KIT IS TO BE FITTED



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

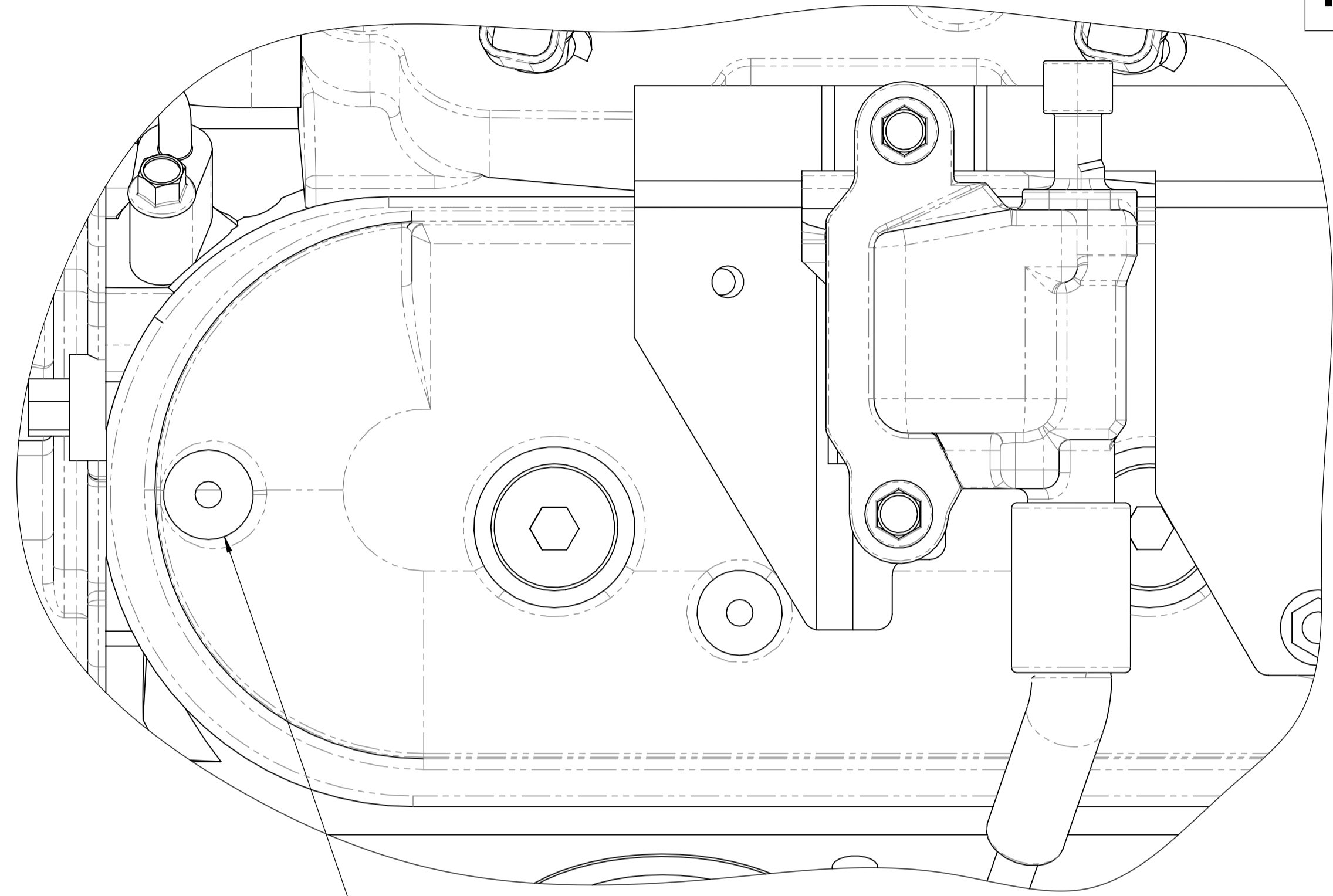


DRAWN	GDK 28/01/2021	TITLE:	LS - Series Rocker Cover Lip Modification	
DRAWING CHECKED	PAM 28/01/2021	SCALE: 2:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 01	0

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



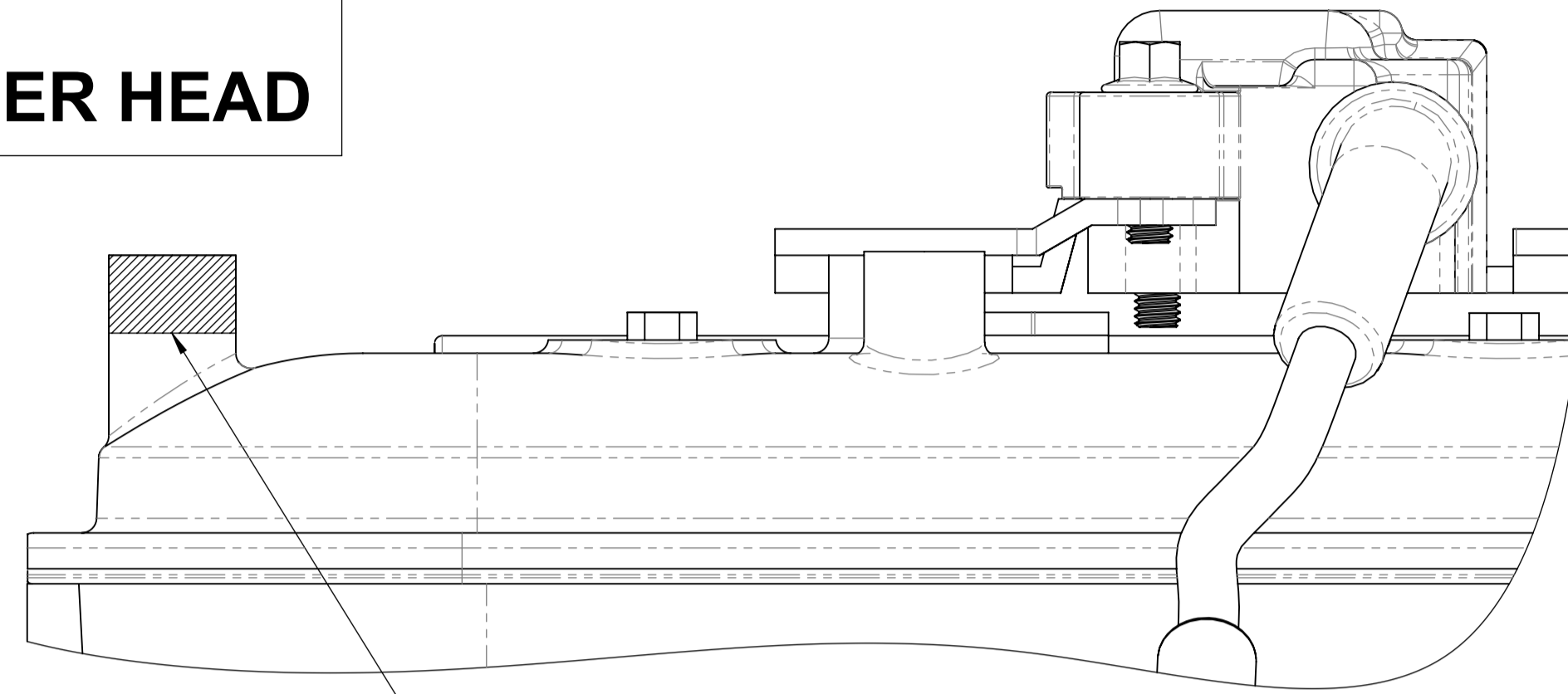
TOP VIEW (1)

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)

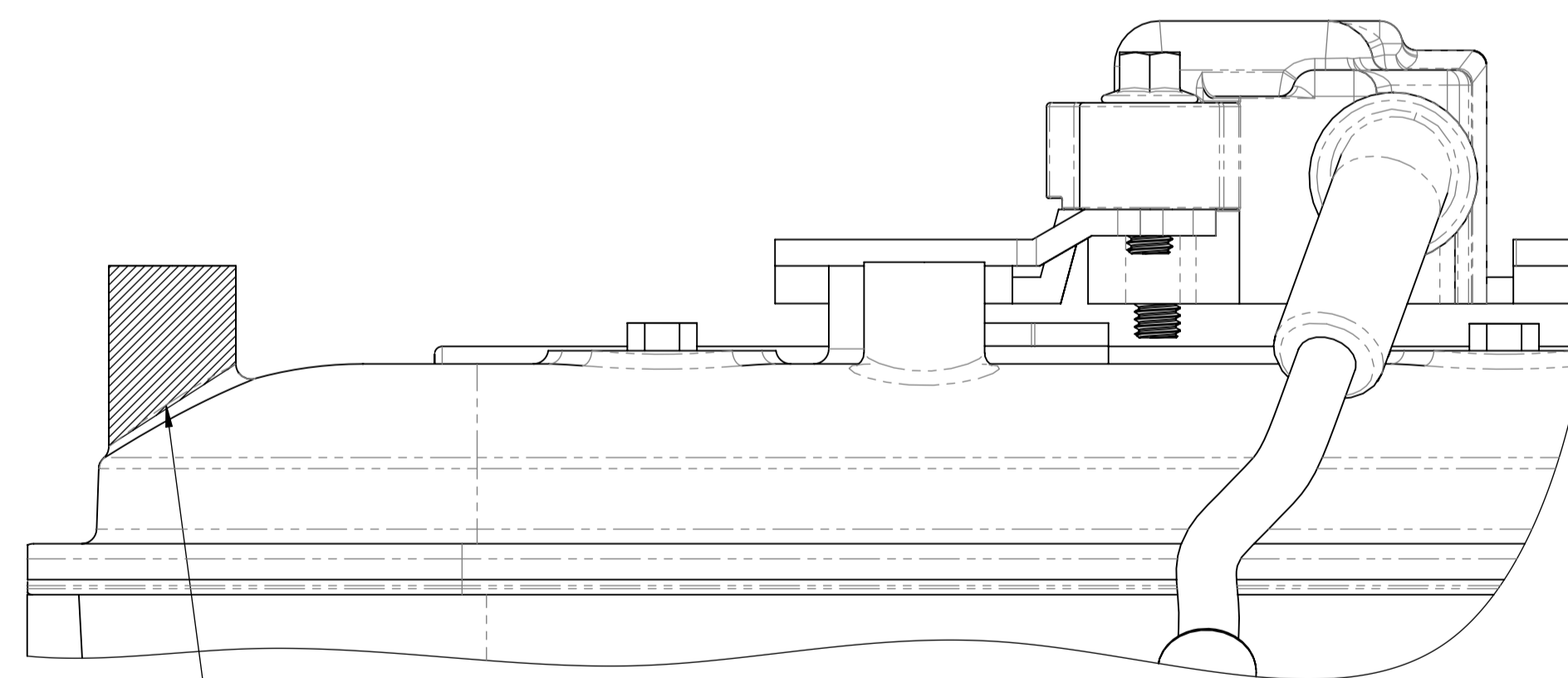


SIDE VIEW (2)

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)

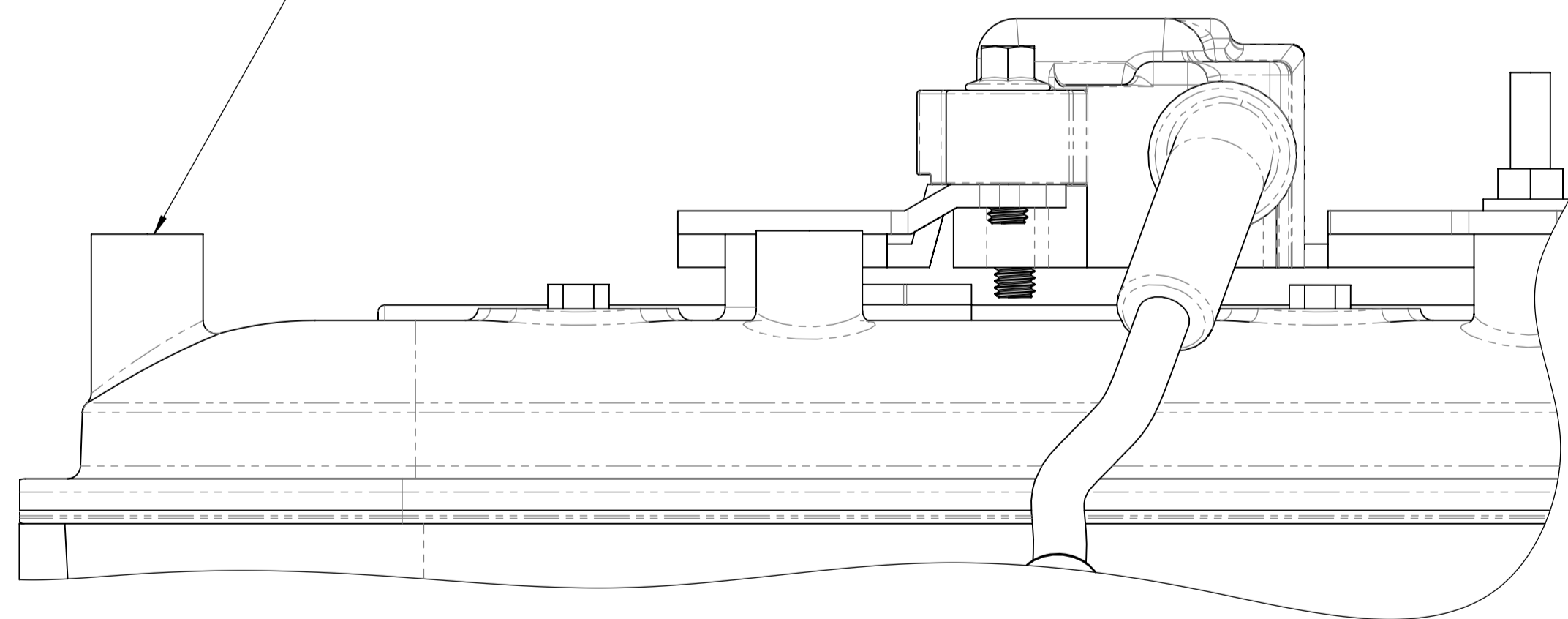


SIDE VIEW (3)

PASSENGER SIDE ROCKER COVER

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

SIDE VIEW (1)

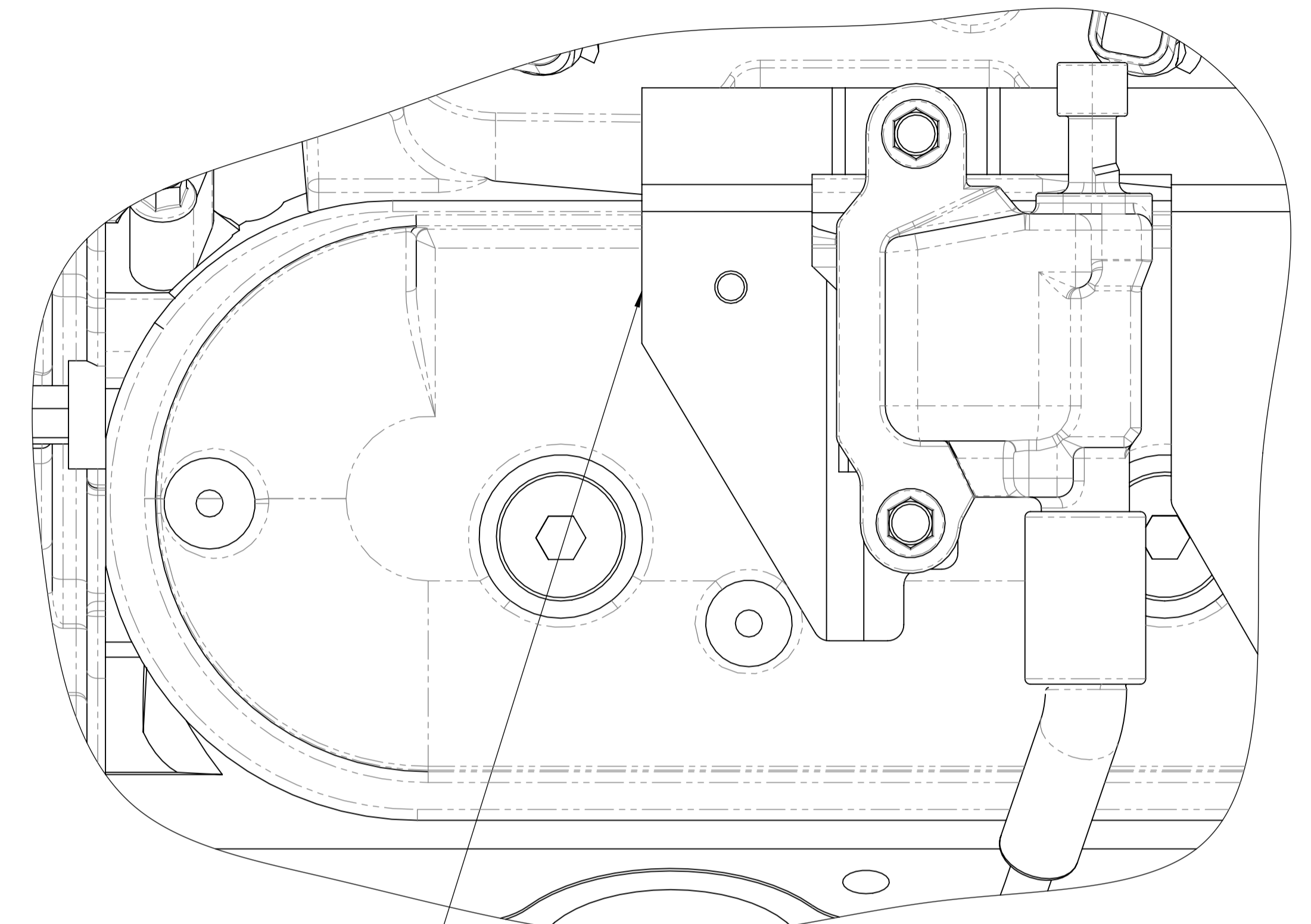
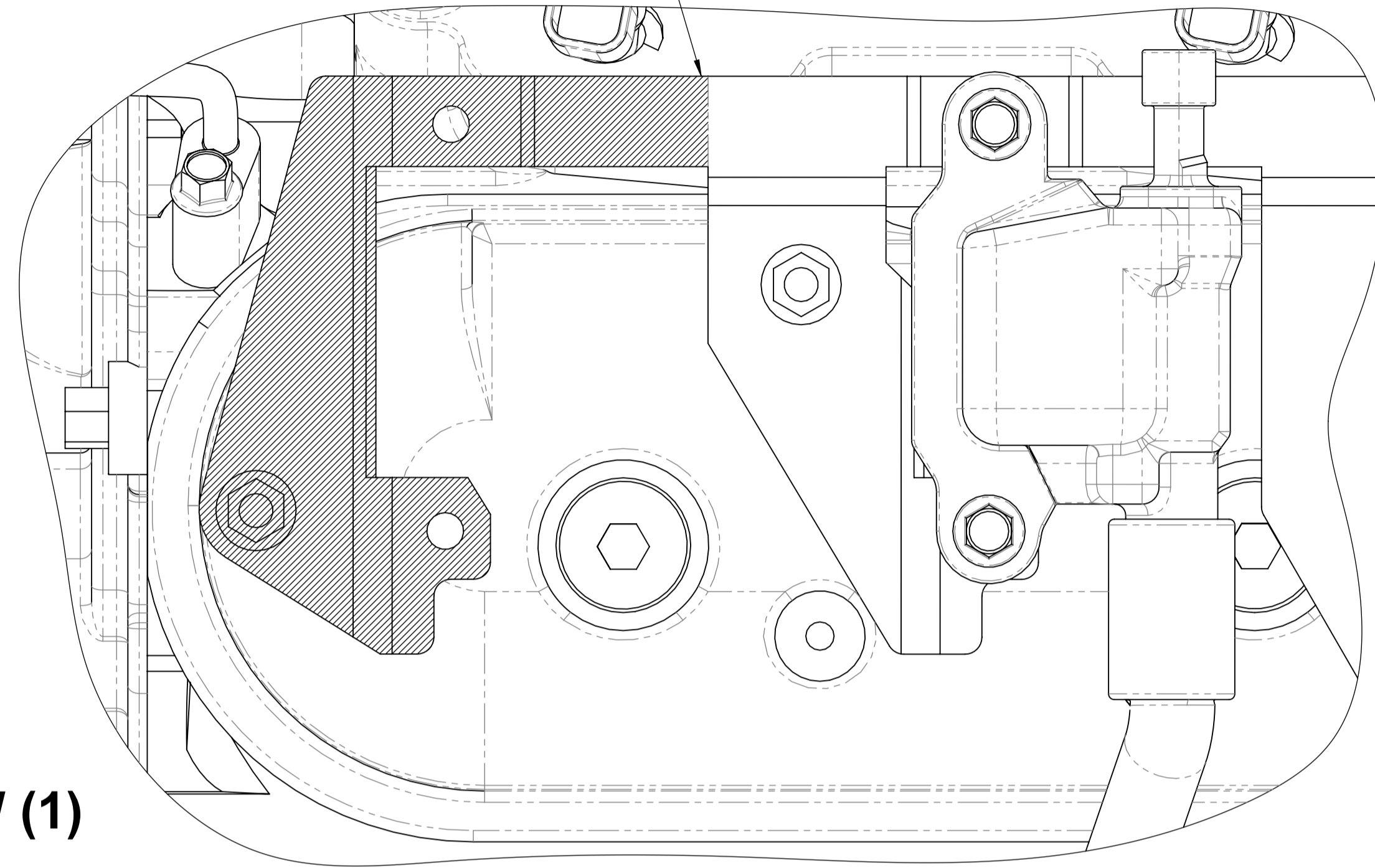


LS - SERIES PASSENGER SIDE COIL BRACKET MODIFICATION FOR COIL RELOCATION BRACKET MFC20028 (ROCKER COVER SWAP)

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

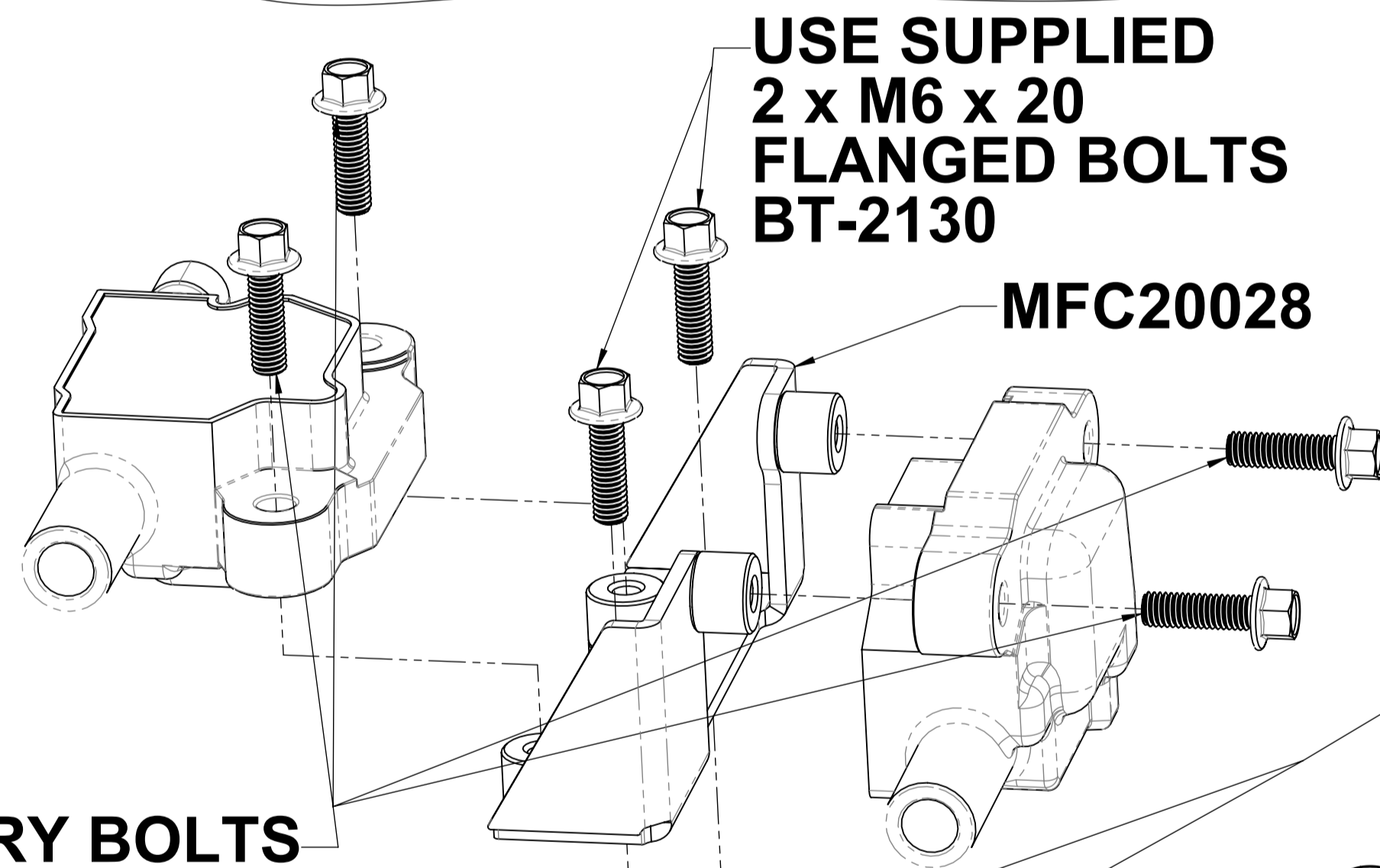
STANDARD PASSENGER SIDE
COIL BRACKET

MODIFIED PASSENGER SIDE
COIL BRACKET



TOP VIEW (1)

TOP VIEW (2)



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

MFC20028

REUSE FACTORY BOLTS

REASSEMBLE THE LS COILS TO
MFC20028 IN THE ORIENTATION
SHOWN THEN FASTEN MFC20028
TO THE MODIFIED COIL BRACKET
ON THE ROCKER COVER AS SHOWN
IN THE EXPLODED VIEW

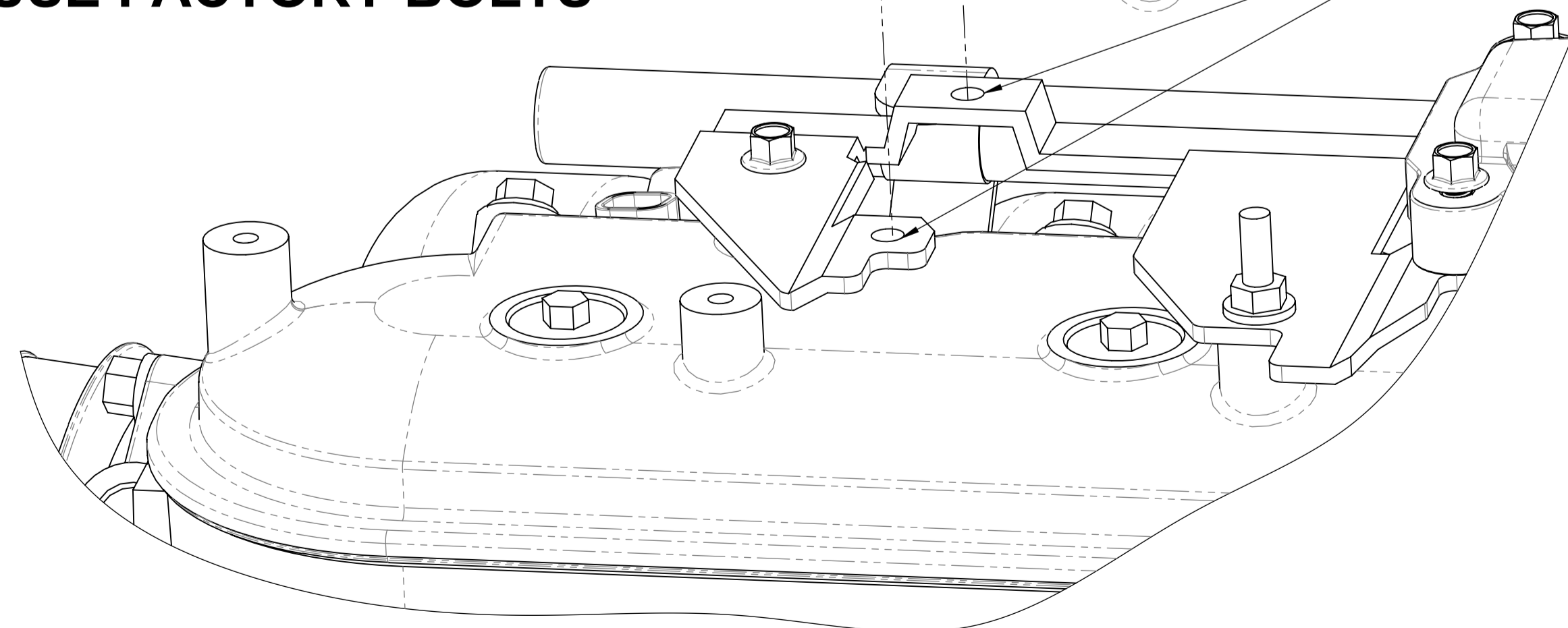
ROCKER COVER
MODIFICATION
IS REQUIRED BEFORE
COIL RELOCATION

REFER TO DRAWINGS:-

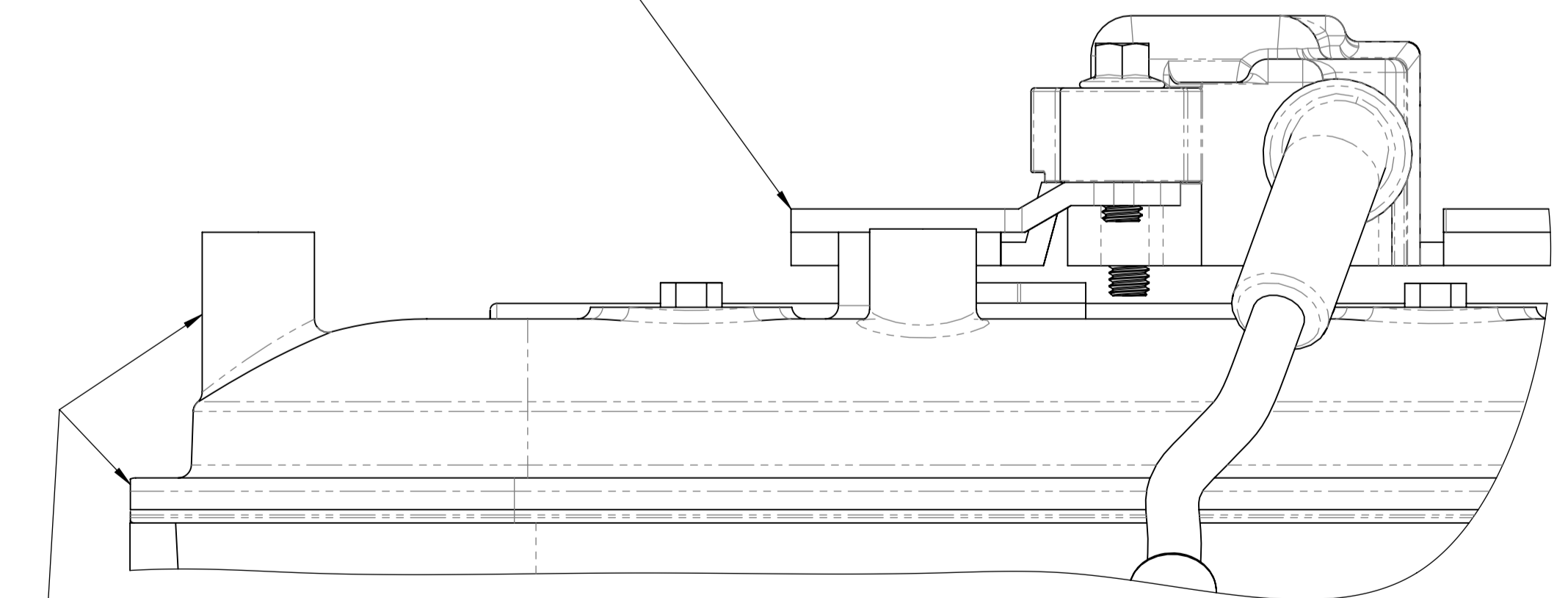
(LS - ACCMOD - 01)
LS - SERIES ROCKER COVER
LIP MODIFICATION

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

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



EXPLODE VIEW

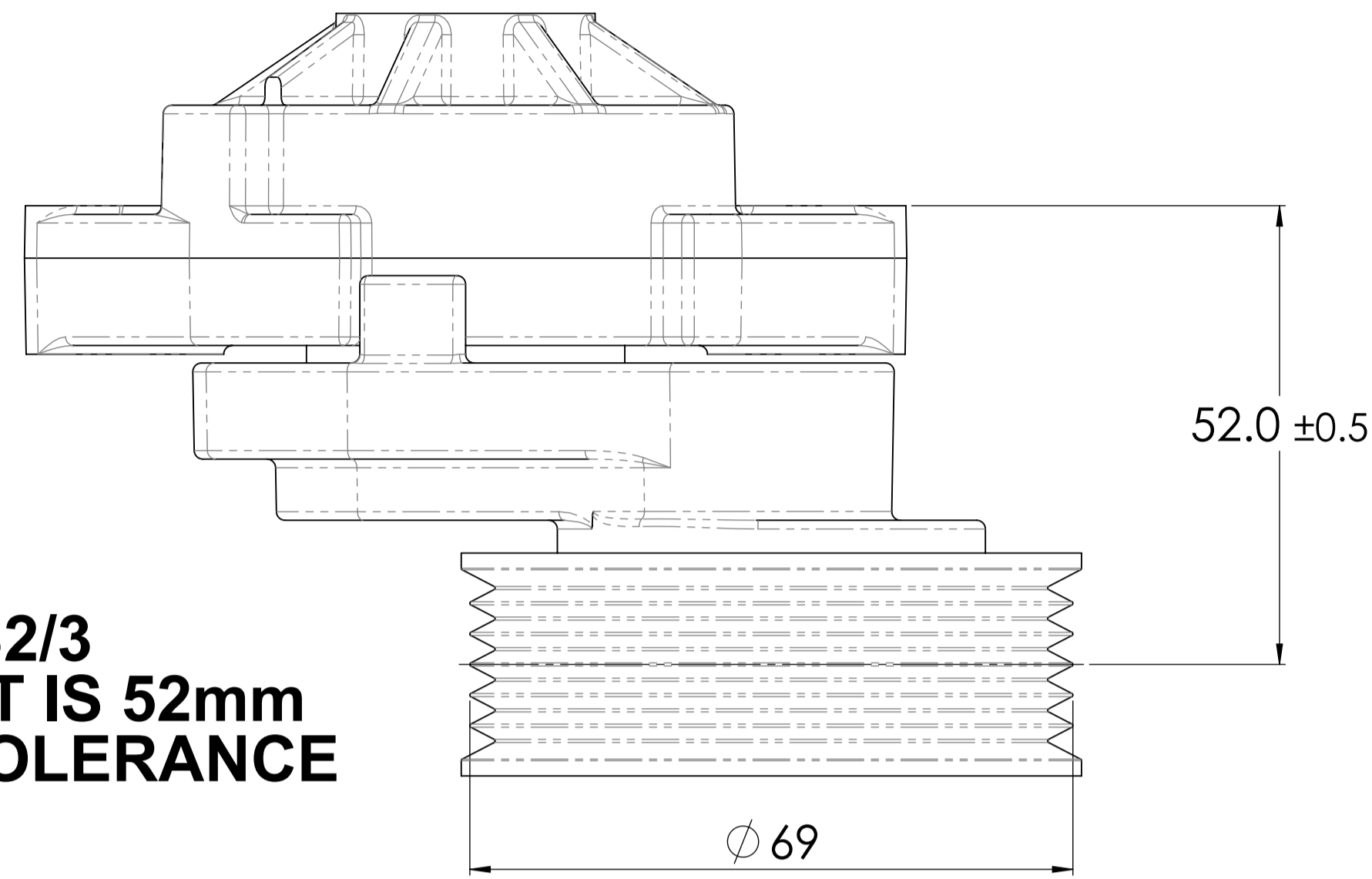


SIDE VIEW (2)

DRAWN	GDK 28/01/2021	TITLE	LS - Series Passenger Side Coil Bracket Modification	
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:2:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 07	0

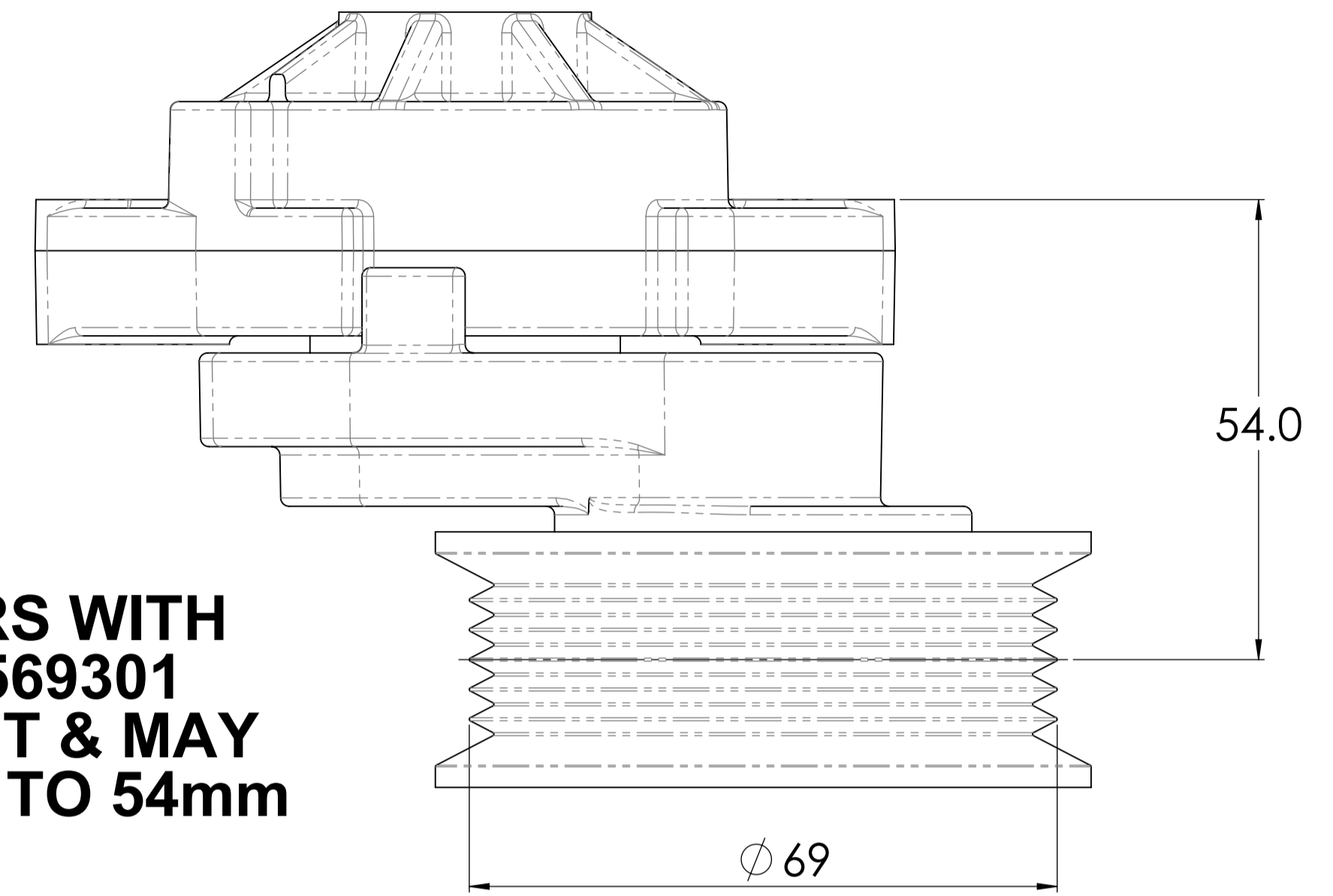
LS2/3 TENSIONER PULLEY OFFSETS

CORRECT OFFSET



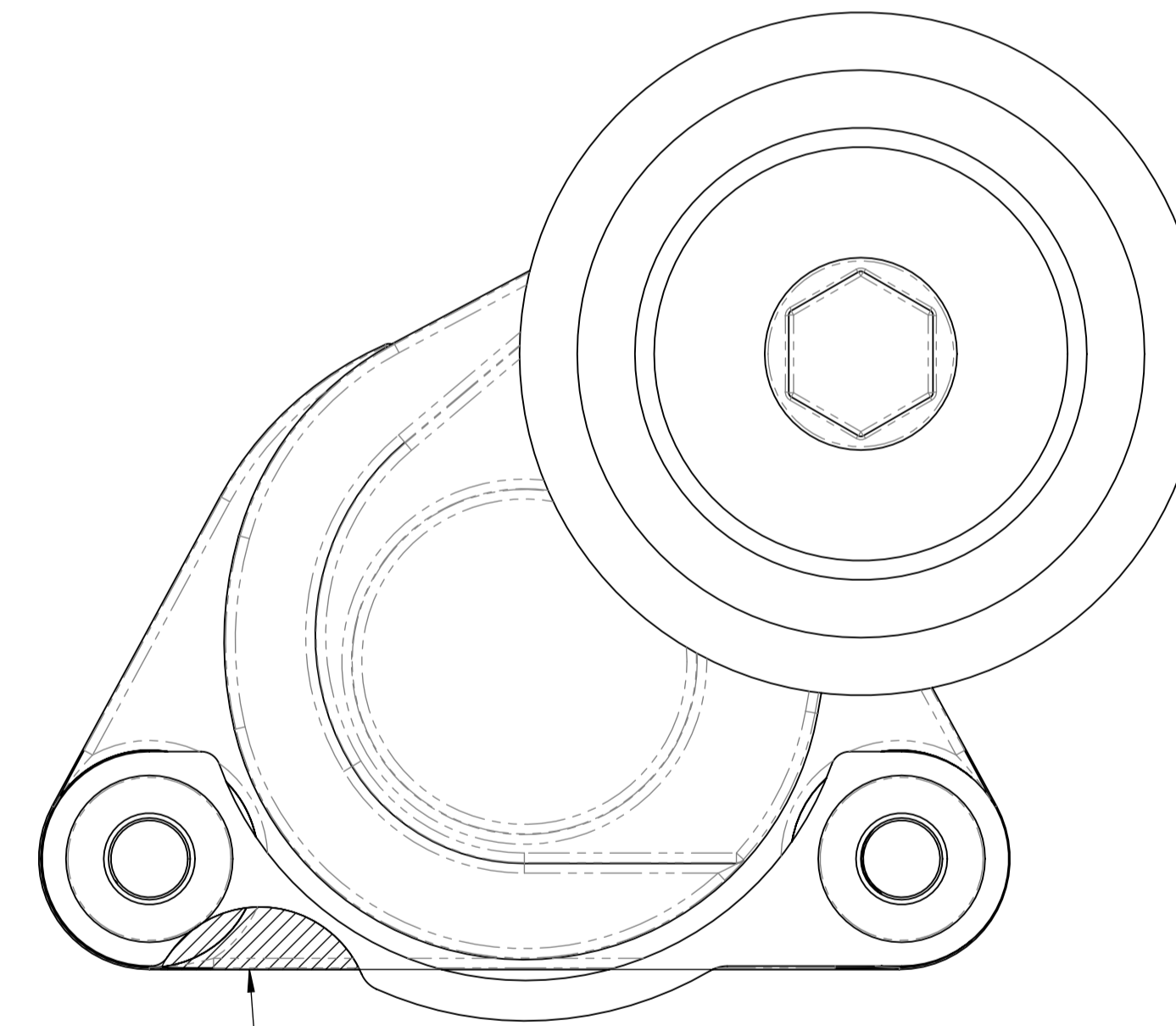
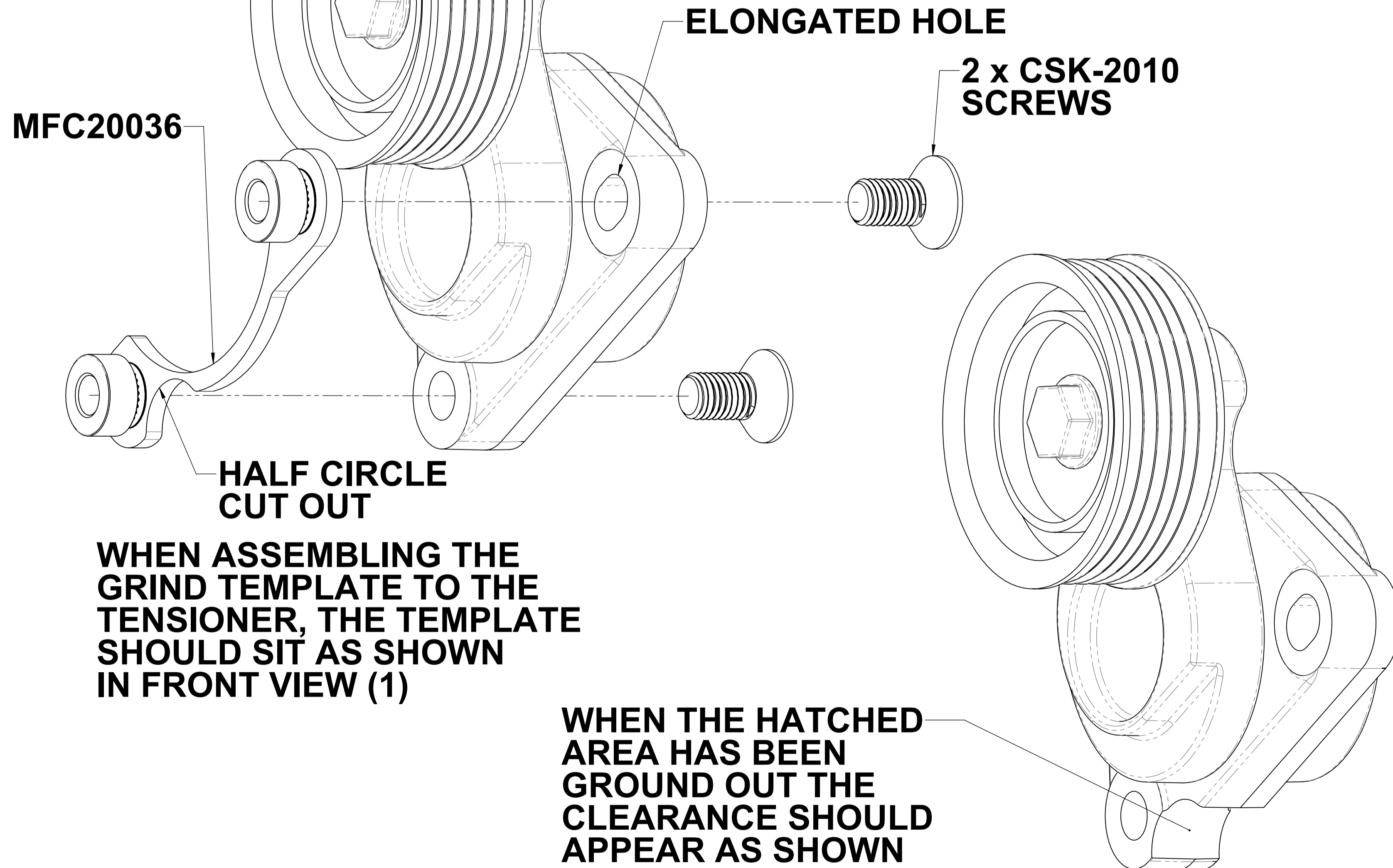
STANDARD OEM LS2/3 TENSIONER OFFSET IS 52mm WITHIN +/- 0.5mm TOLERANCE

INCORRECT OFFSET



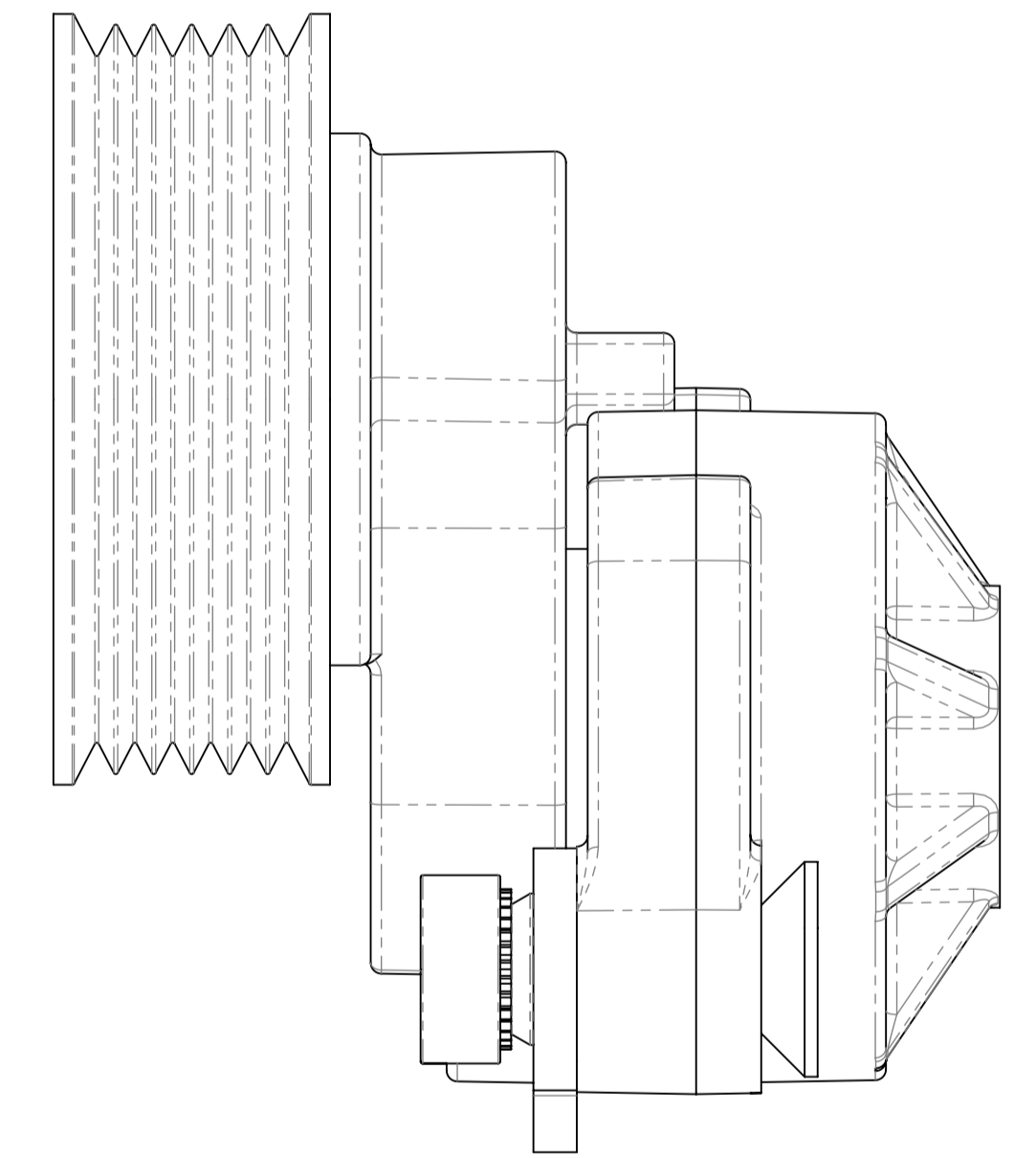
SOME LS2/3 TENSIONERS WITH THE SAME PART No. 12569301 HAVE A LARGER OFFSET & MAY RANGE FROM 52mm UP TO 54mm

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

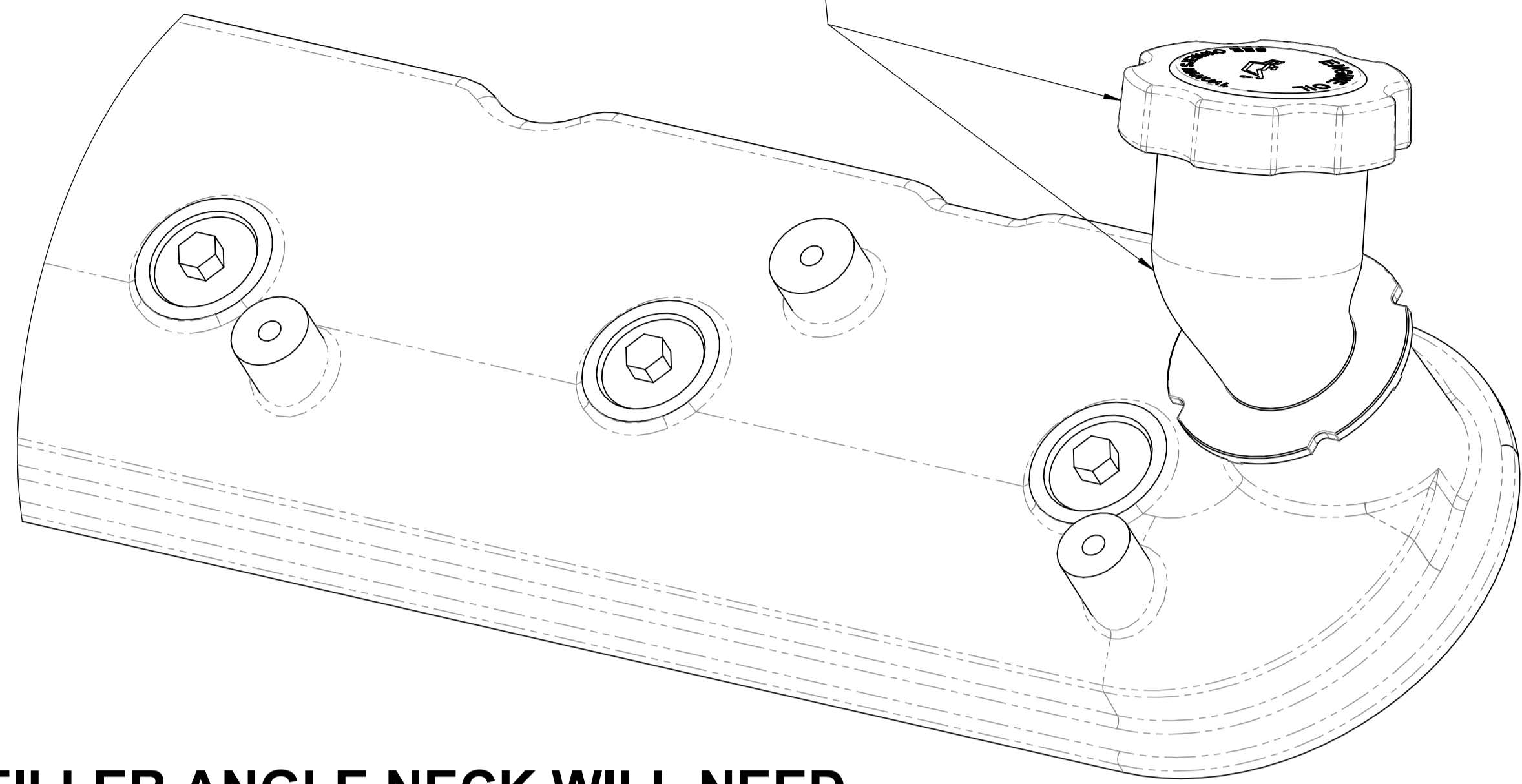
FRONT VIEW (1)



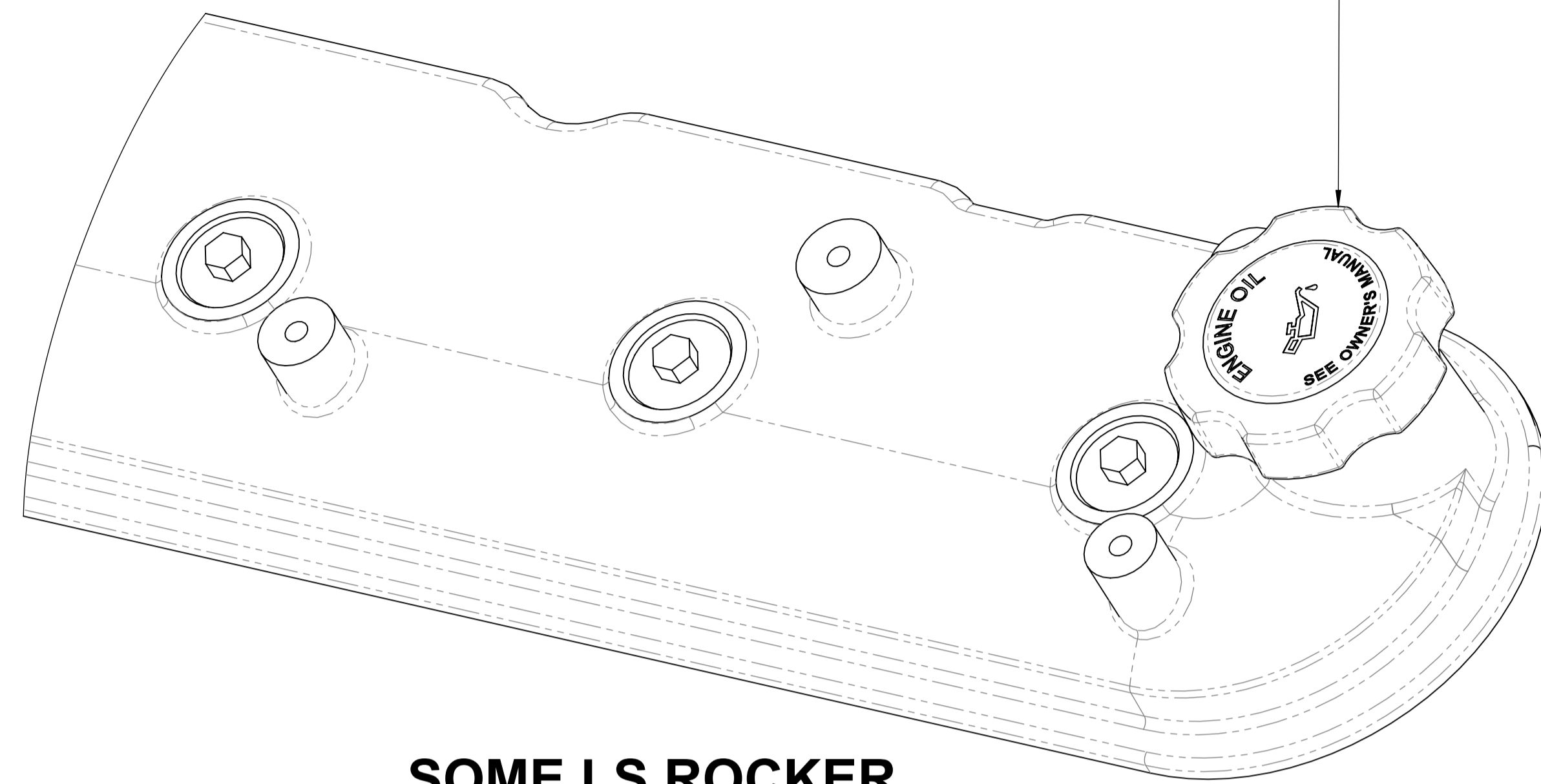
DRAWN	GDK 28/01/2021	TITLE:	LS1/2/3 Water Pump Grind Template	
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 11	0

LS2/3 OIL FILLER NECK MODIFICATION

OIL FILLER ANGLE NECK & CAP AS SHOWN IN FACTORY POSITION



OIL FILLER CAP AFTER MODIFICATION



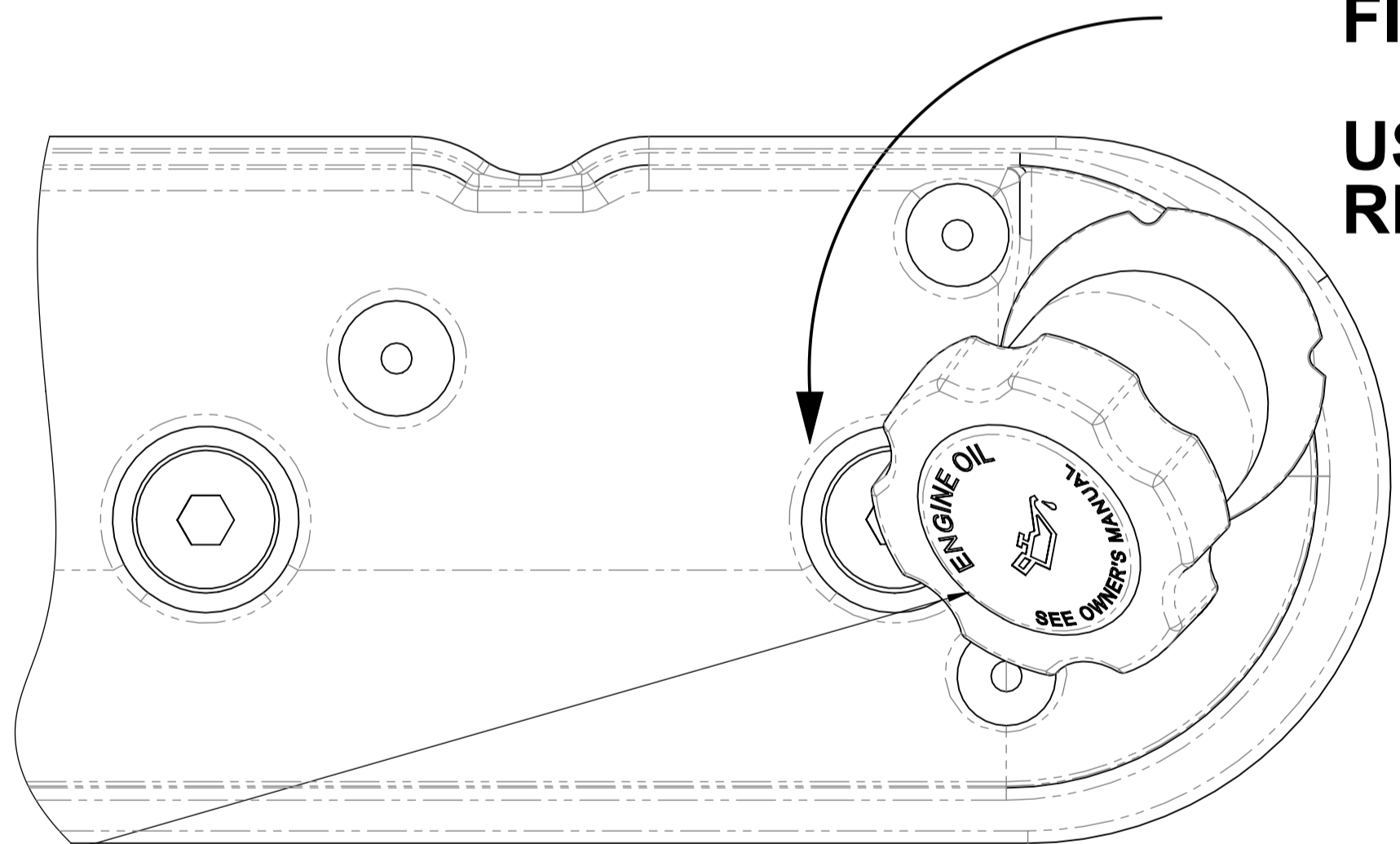
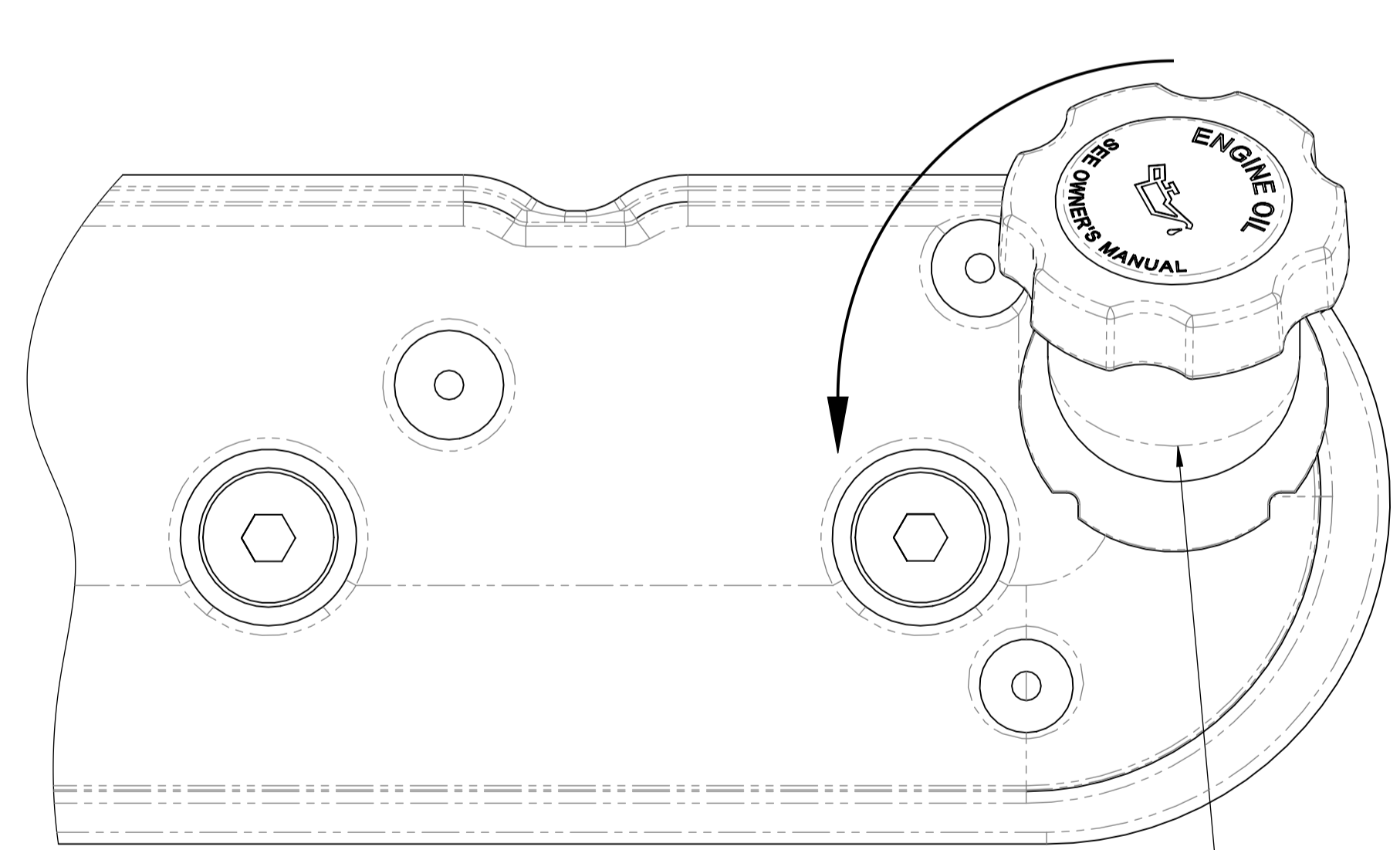
THE OIL FILLER ANGLE NECK WILL NEED TO BE REMOVED AS IN SOME CARS THE NECK SITS IN FRONT OF THE HEATER HOSE OUTLET/INLET

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:

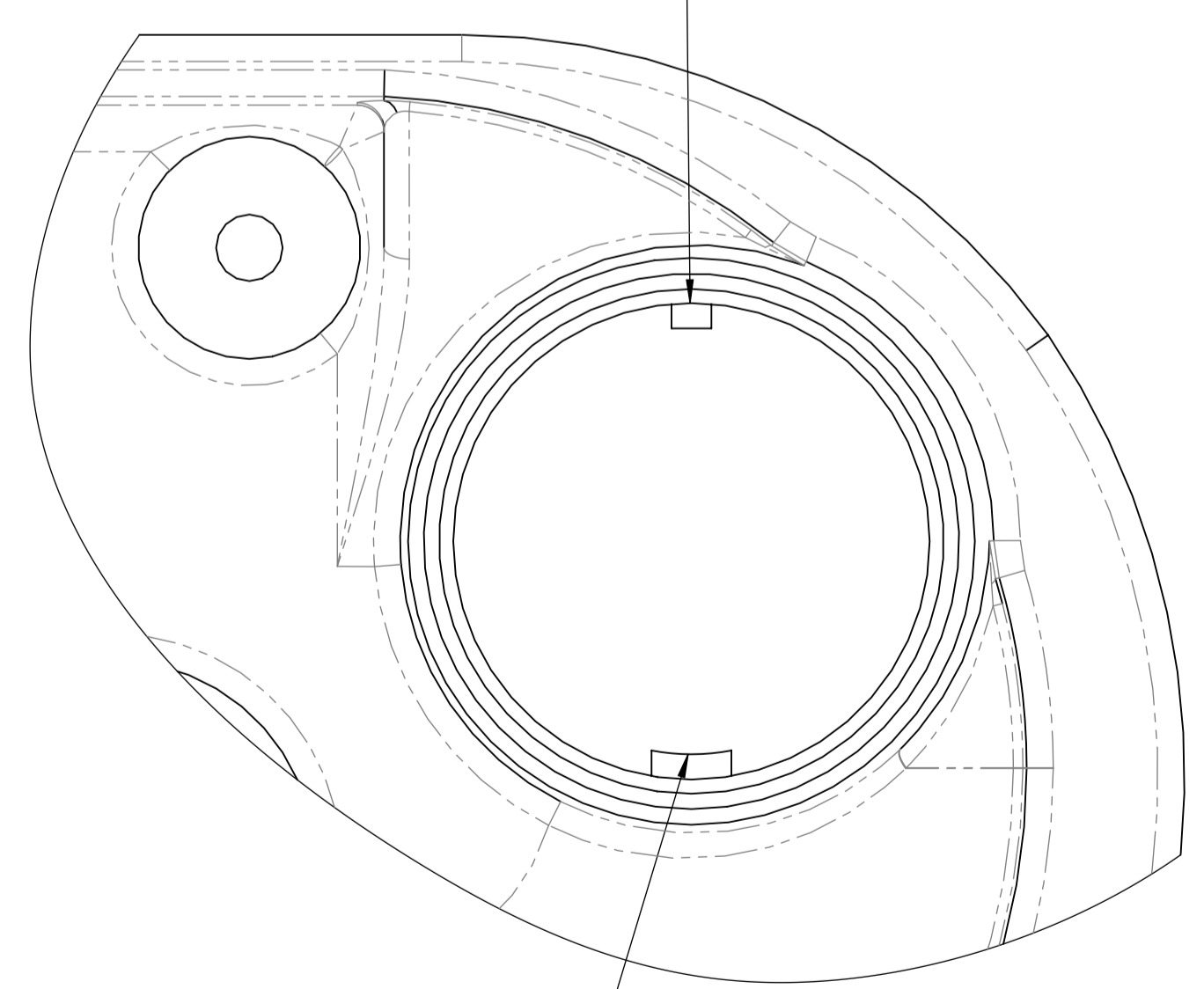
BEFORE FILING THIS TAB REMOVE THE COVER FROM THE ENGINE TO PREVENT METAL CHIPS ENTERING THE ENGINE

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

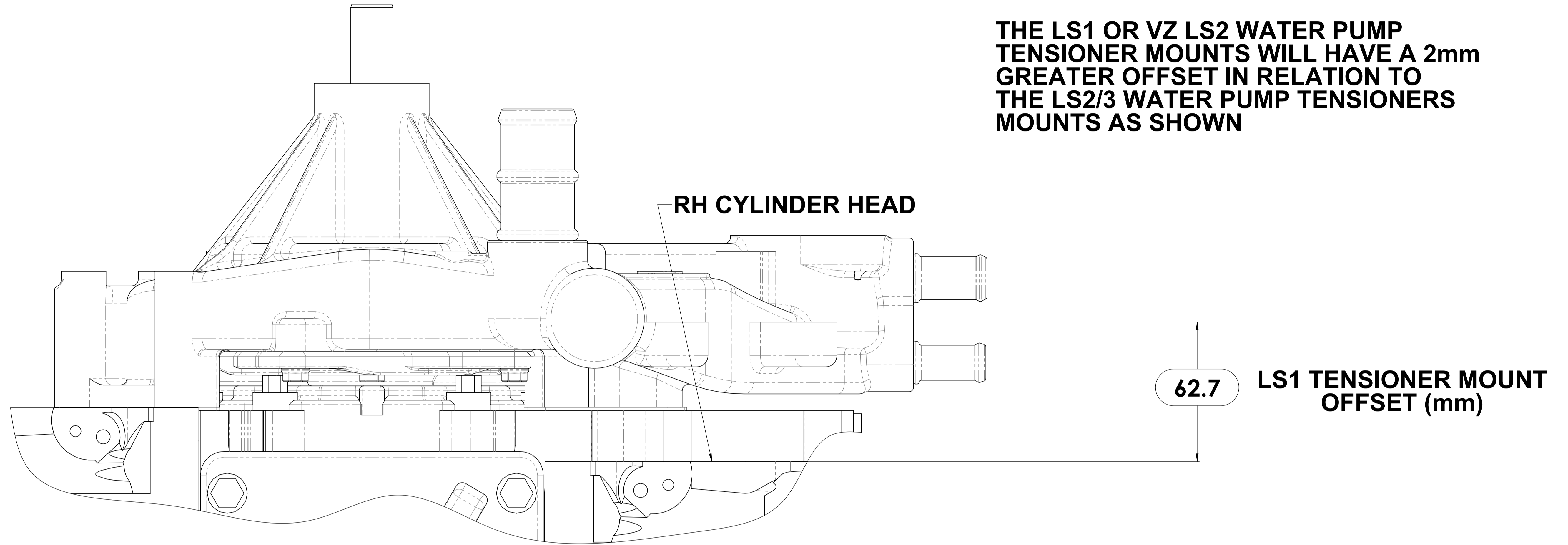
DO NOT REMOVE THIS TAB



DRAWN	GDK 28/01/2021	TITLE:	LS2/3 Oil Filler Neck Modification	
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 13	0

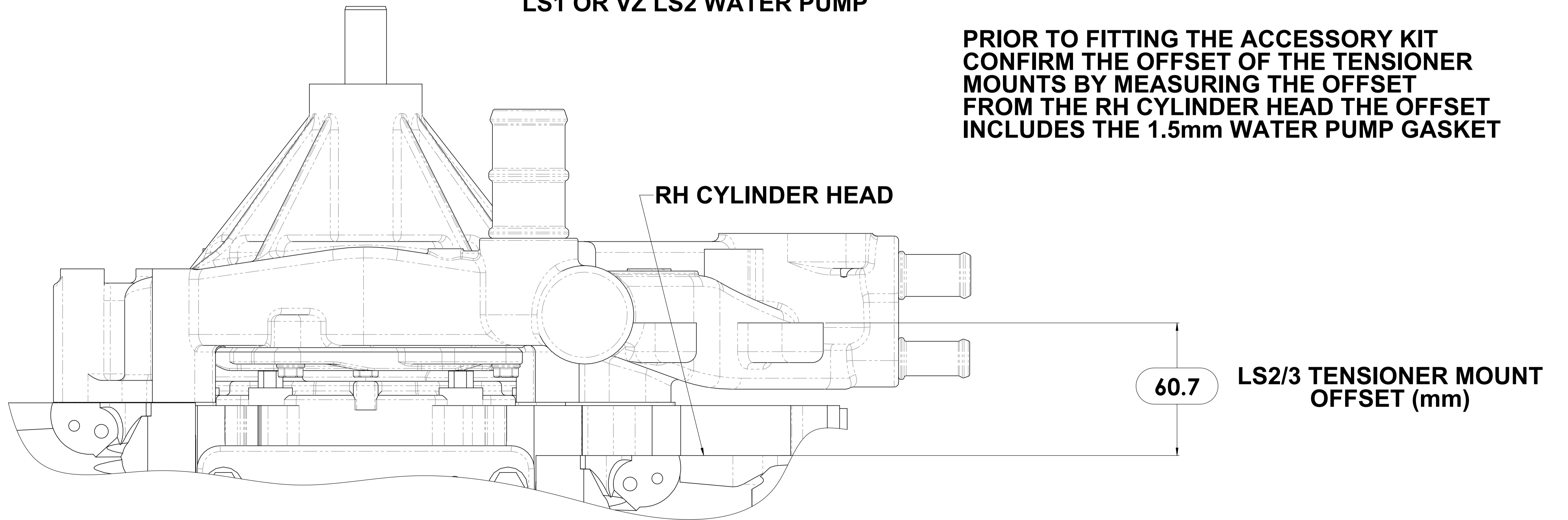
LS WATER PUMP TENSIONER MOUNT OFFSETS

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 28/01/2021	TITLE:	LS Water Pump Tensioner Mount Offsets	
DRAWING CHECKED	PAM 28/01/2021	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

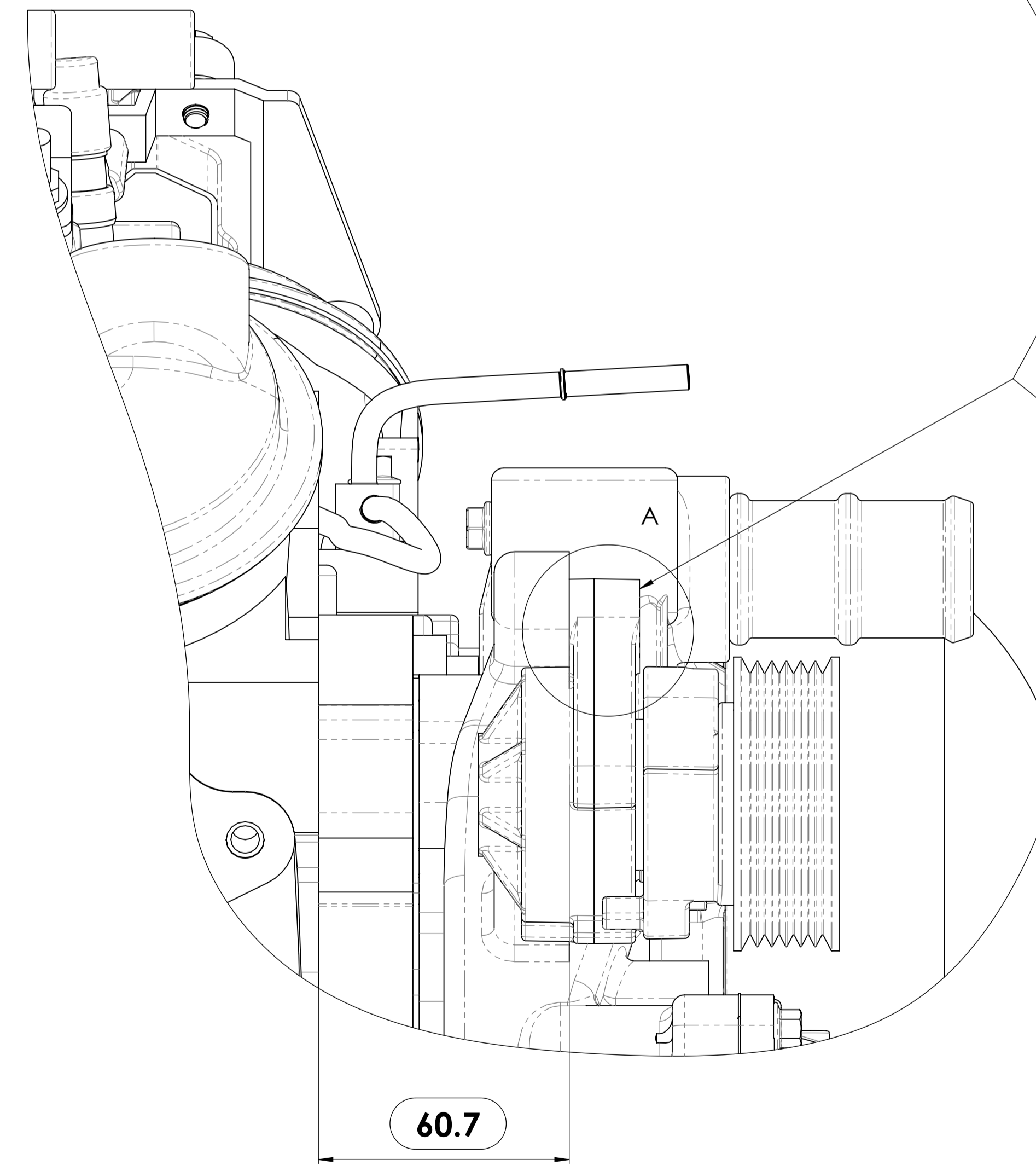
1:- GRIND CLEARANCE (LS - ACCMOD - 11)

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 28/01/2021	TITLE:	LS2/3 Tensioner Assembly For RH Kit	
DRAWING CHECKED	PAM 28/01/2021	SCALE:1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - INFO - 04	0