

NOTE: FLAG ITEMS ▶

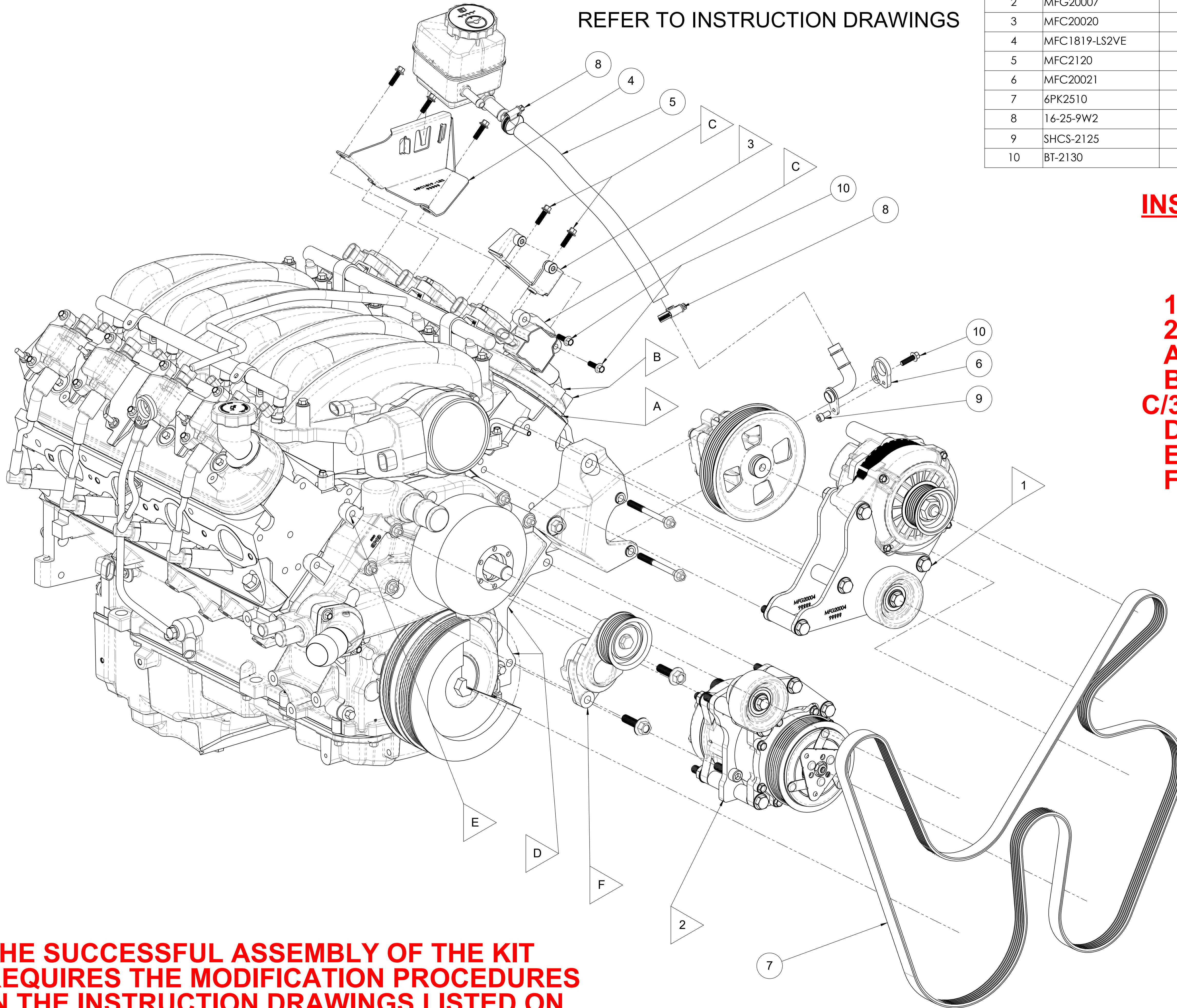
REFER TO INSTRUCTION DRAWINGS

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	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	6PK2510	Drive Belt - Poly Rib (2510mm)	1
8	16-25-9W2	Hose Clamp - 16 to 25mm	2
9	SHCS-2125	SHCS - M6 x 1 x 12mm - SS	1
10	BT-2130	M6 x 1.25 x 20 - Capture Bolt	3

**INSTRUCTION DRAWINGS**

**MFK50120-SHT-1**  
**MFK50120-SHT-2**

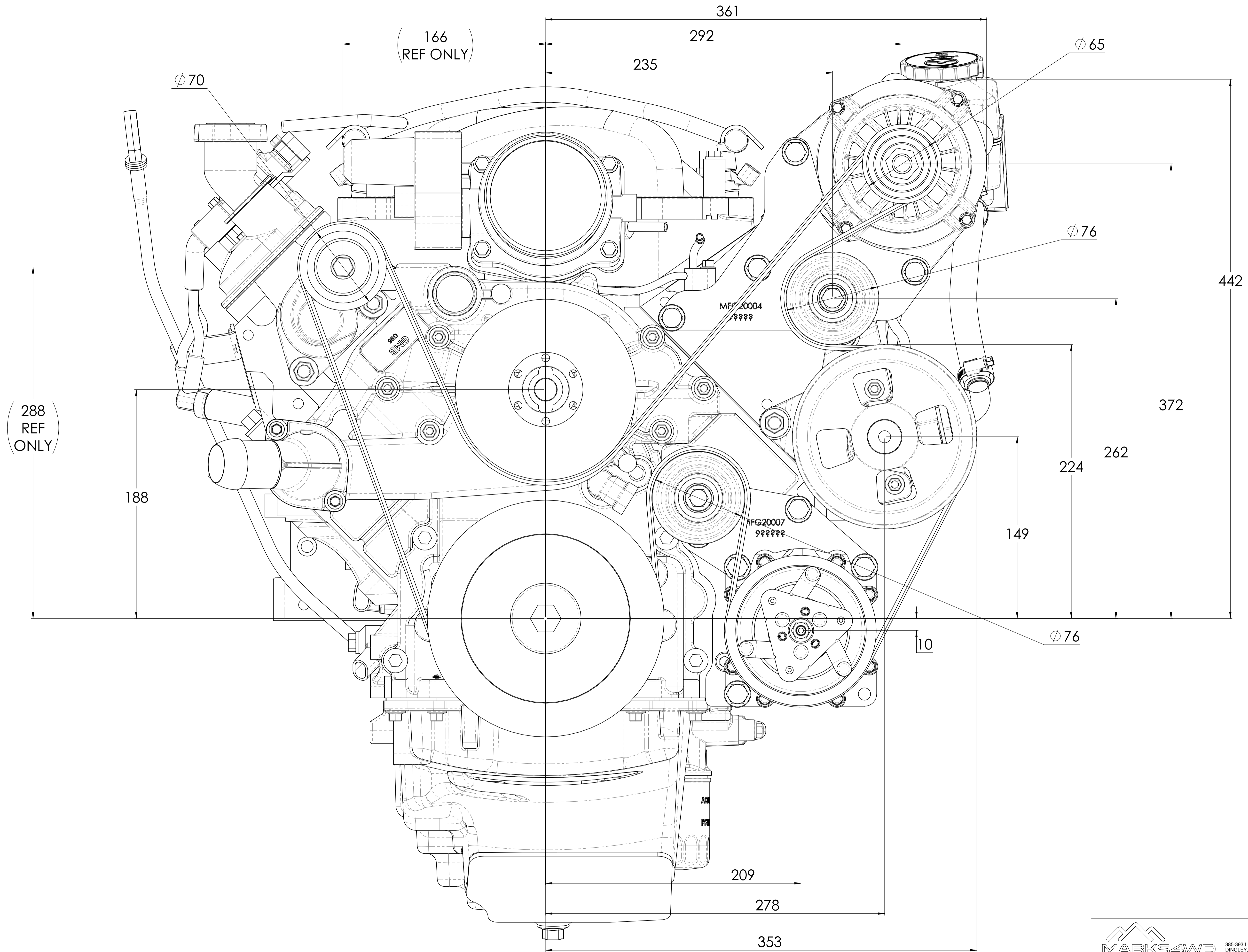
- 1: MFG20004**
- 2: MFG20007**
- A: LS - ACCMOD - 01**
- B: LS - ACCMOD - 02**
- C/3: LS - ACCMOD - 04**
- D: LS - ACCMOD - 12**
- E: LS - INFO - 02**
- F: LS - INFO - 03**



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

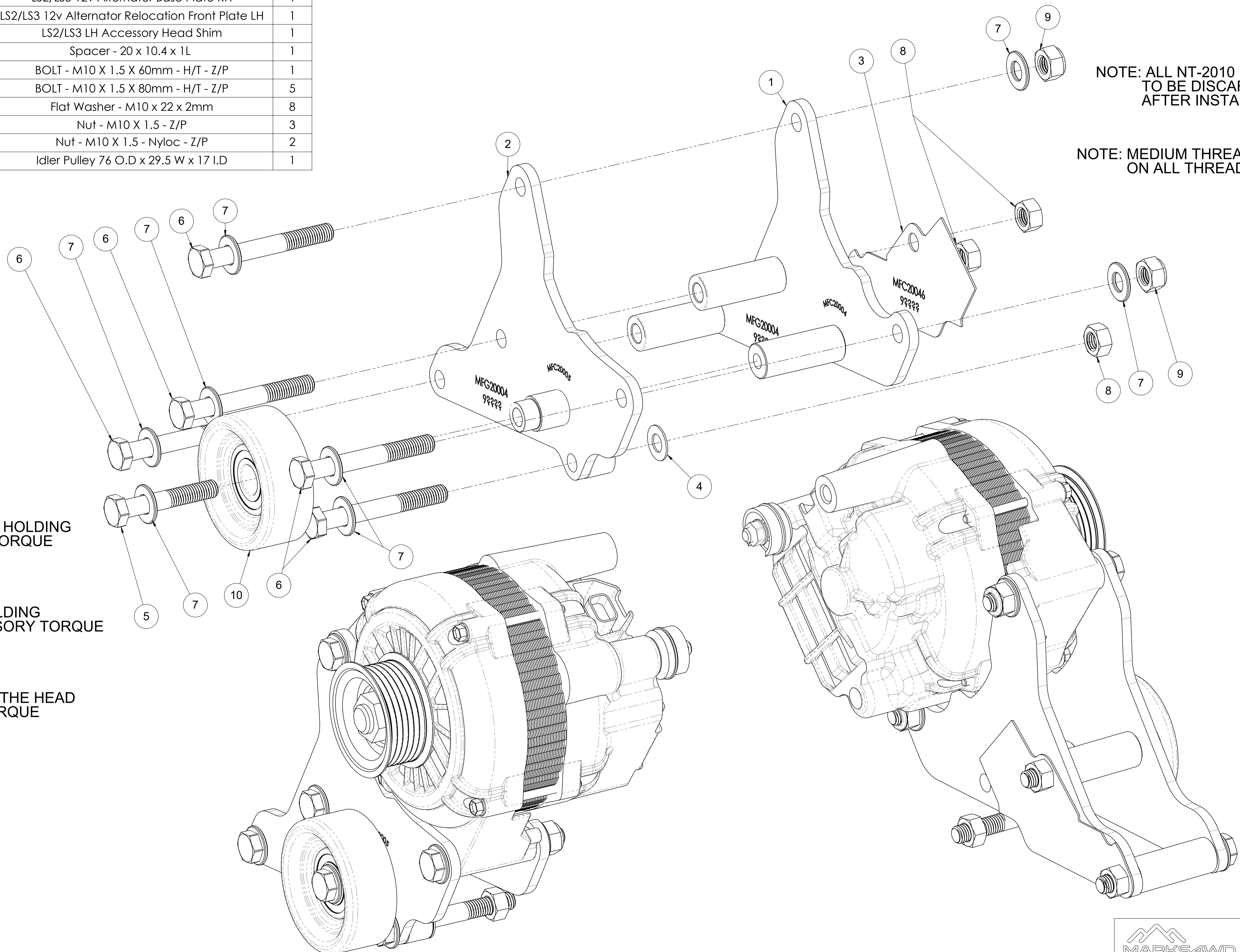


DRAWN	GDK 14/12/2020	TITLE:	Accessory Kit - LH 12v Alt & Low LH Comp
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:2.5	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 1 of 10	REV No. 0
			MFK50120



DRAWN	GDK 14/12/2020	TITLE:	Accessory Kit - LH 12v Alt & Low LH Comp	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:1.5	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 2 of 10	MFK50120	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

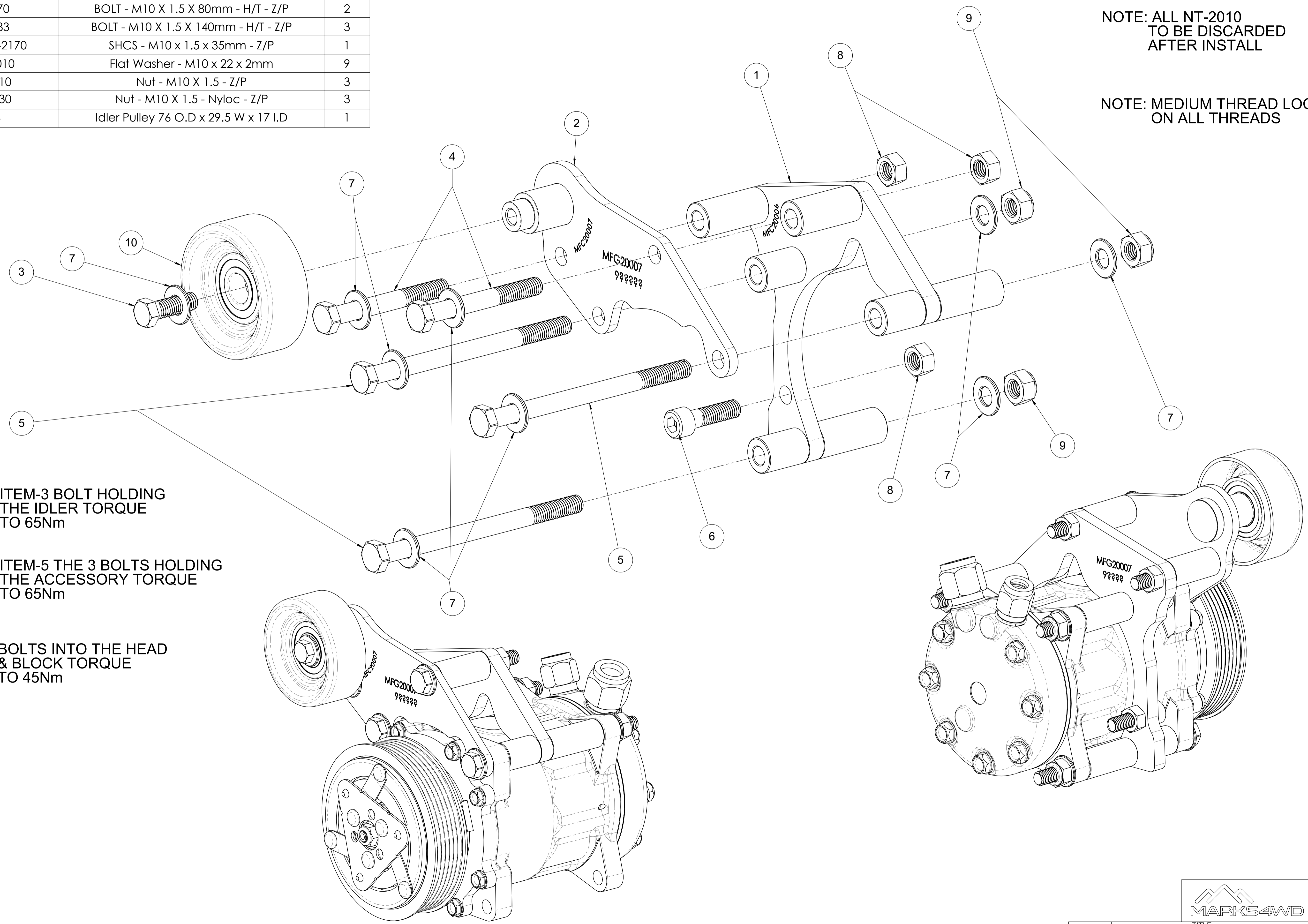


DRAWN	GDK 14/12/2020	TITLE:	LS2/LS3 12v Alternator Relocation LH
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:1	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING	3 of 10
		REV No.	0
			MFG20004

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

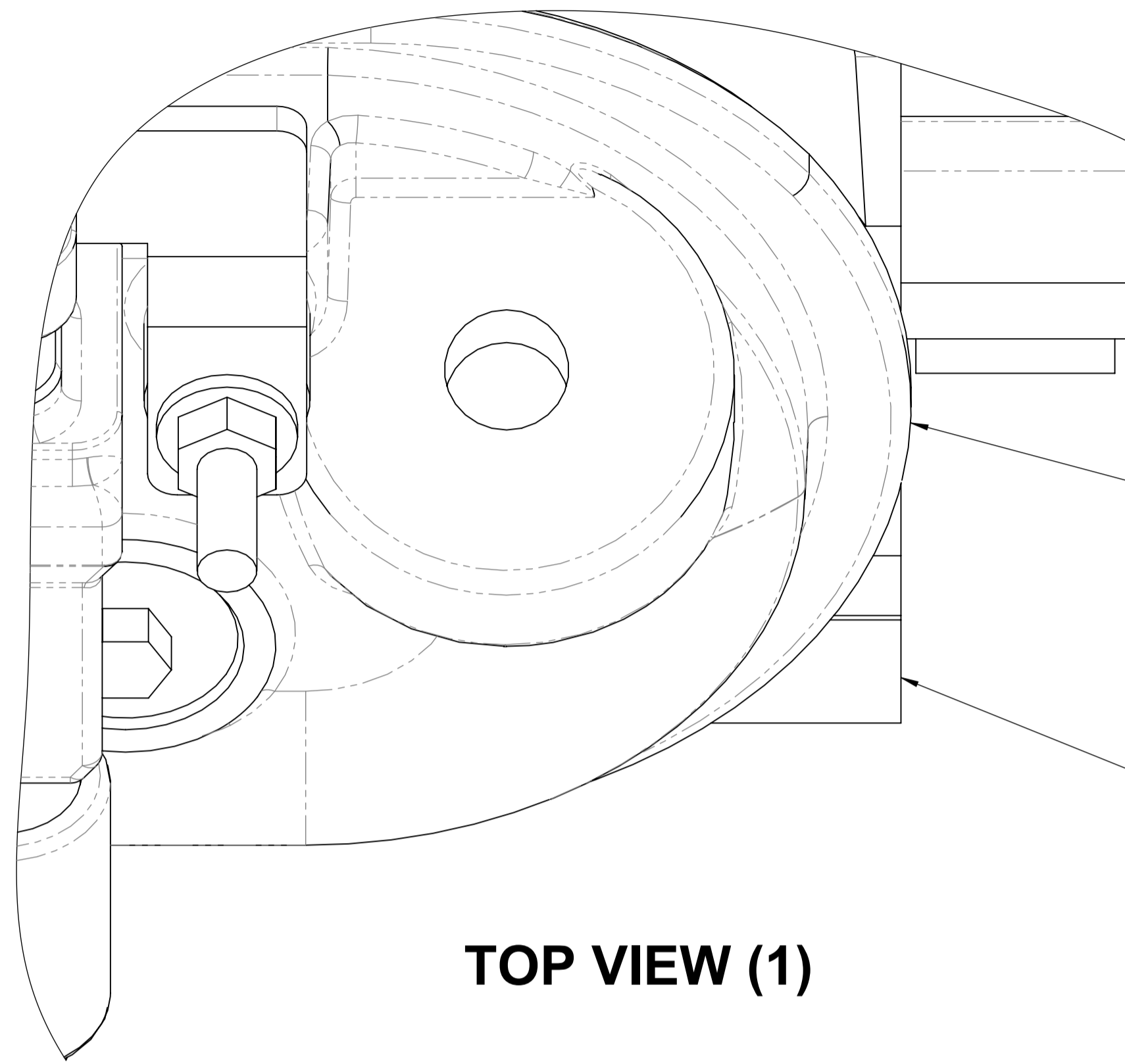
BOLTS INTO THE HEAD  
& BLOCK TORQUE  
TO 45Nm



DRAWN	GDK 14/12/2020	TITLE	LS2/LS3 Sanden Compressor (Low LH)	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 4 of 10	MFG20007	0

# LS - SERIES ROCKER COVER LIP MODIFICATION

## STANDARD ROCKER COVER



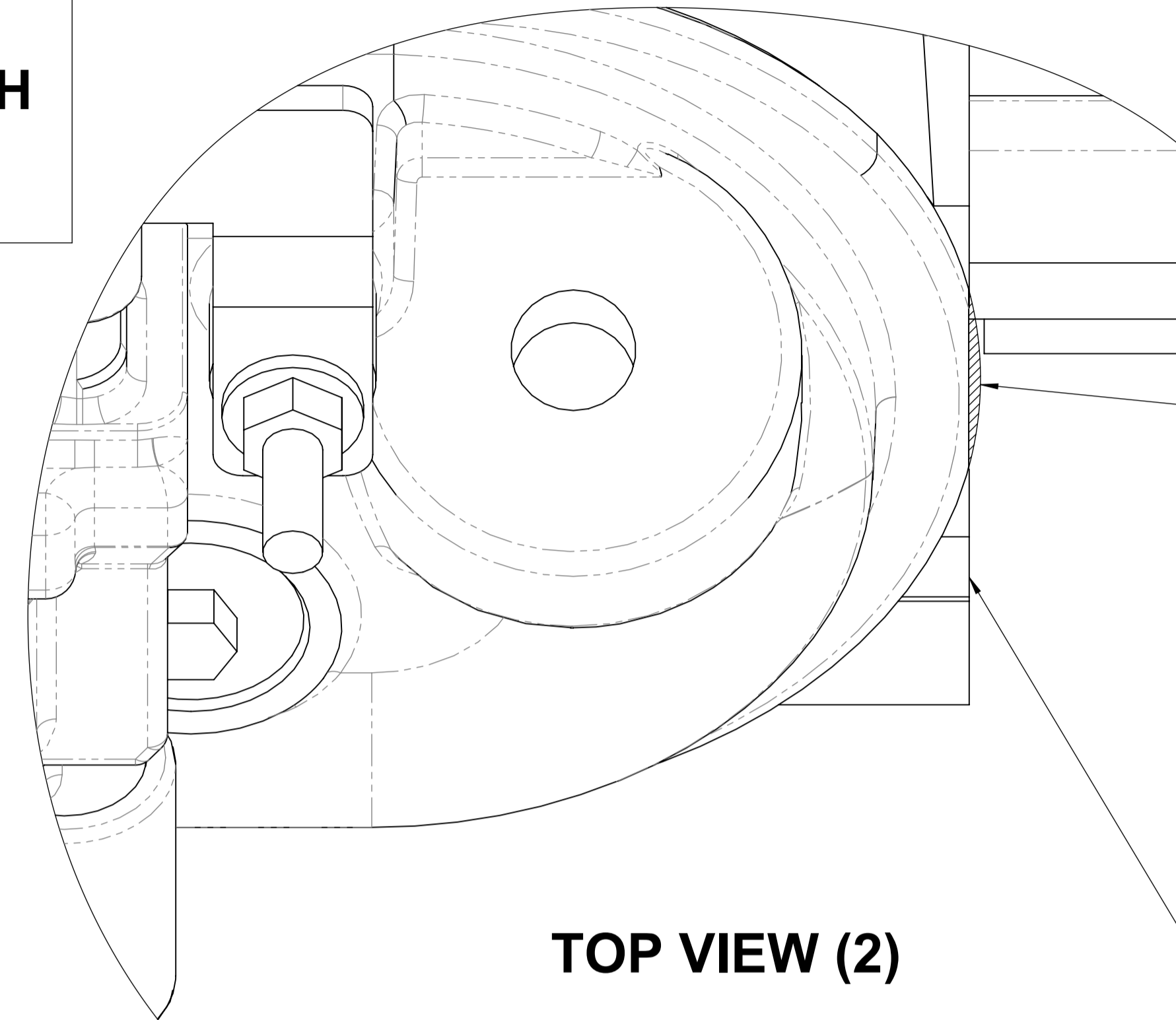
TOP VIEW (1)

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



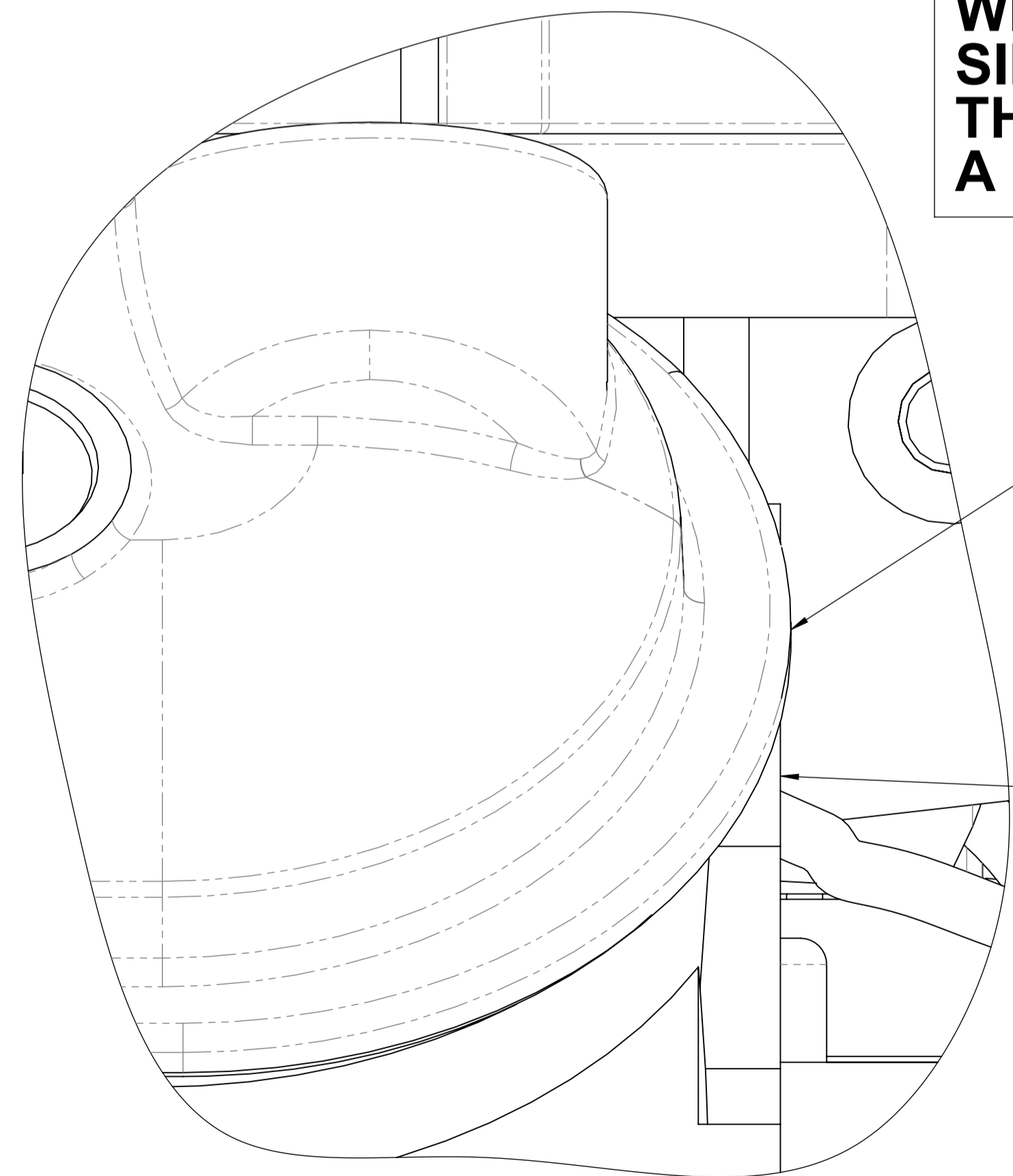
TOP VIEW (2)

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

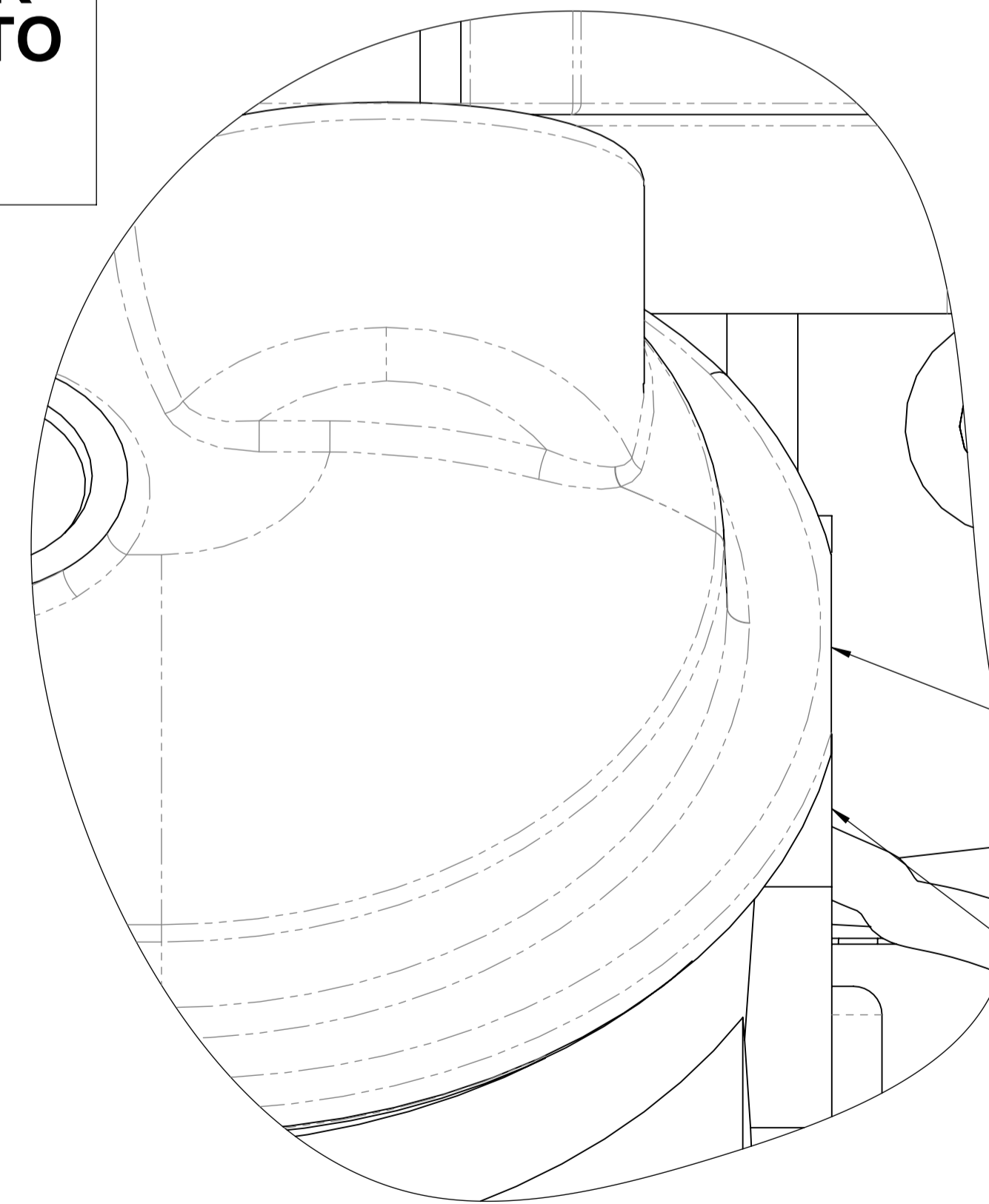
THE ROCKER COVER LIP MODIFICATION WILL ALSO BE REQUIRED FOR THE DRIVER SIDE ROCKER COVER WHEN IT IS FITTED TO THE PASSENGER SIDE CYLINDER HEAD IF A LH ACCESSORY KIT IS TO BE FITTED



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

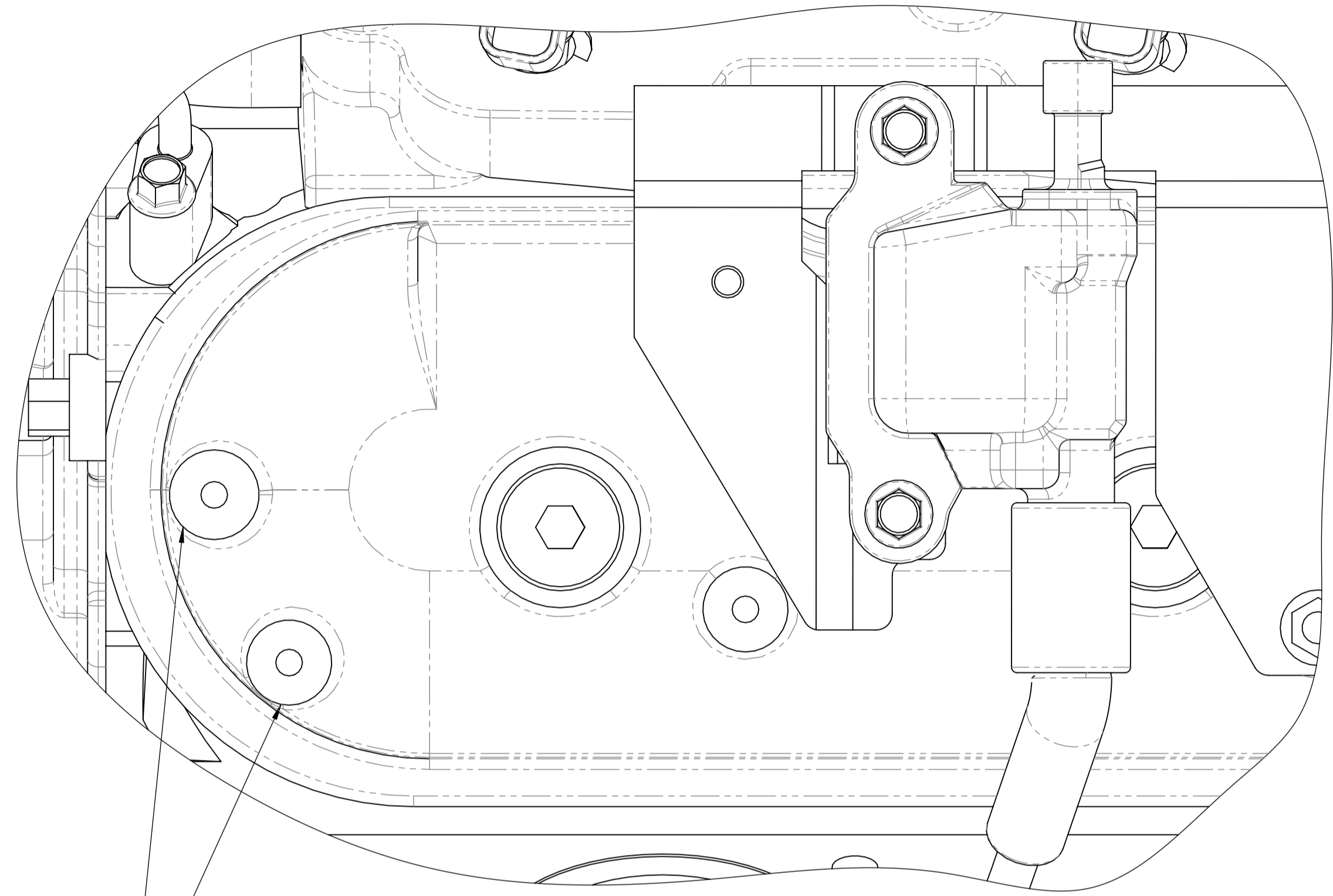


DRAWN	GDK 14/12/2020	TITLE:	LS - Series Rocker Cover Lip Modification	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 2:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 01	0

# LS - SERIES ROCKER COVER COIL BOSS MODIFICATION (ROCKER COVERS IN FACTORY POSITION)

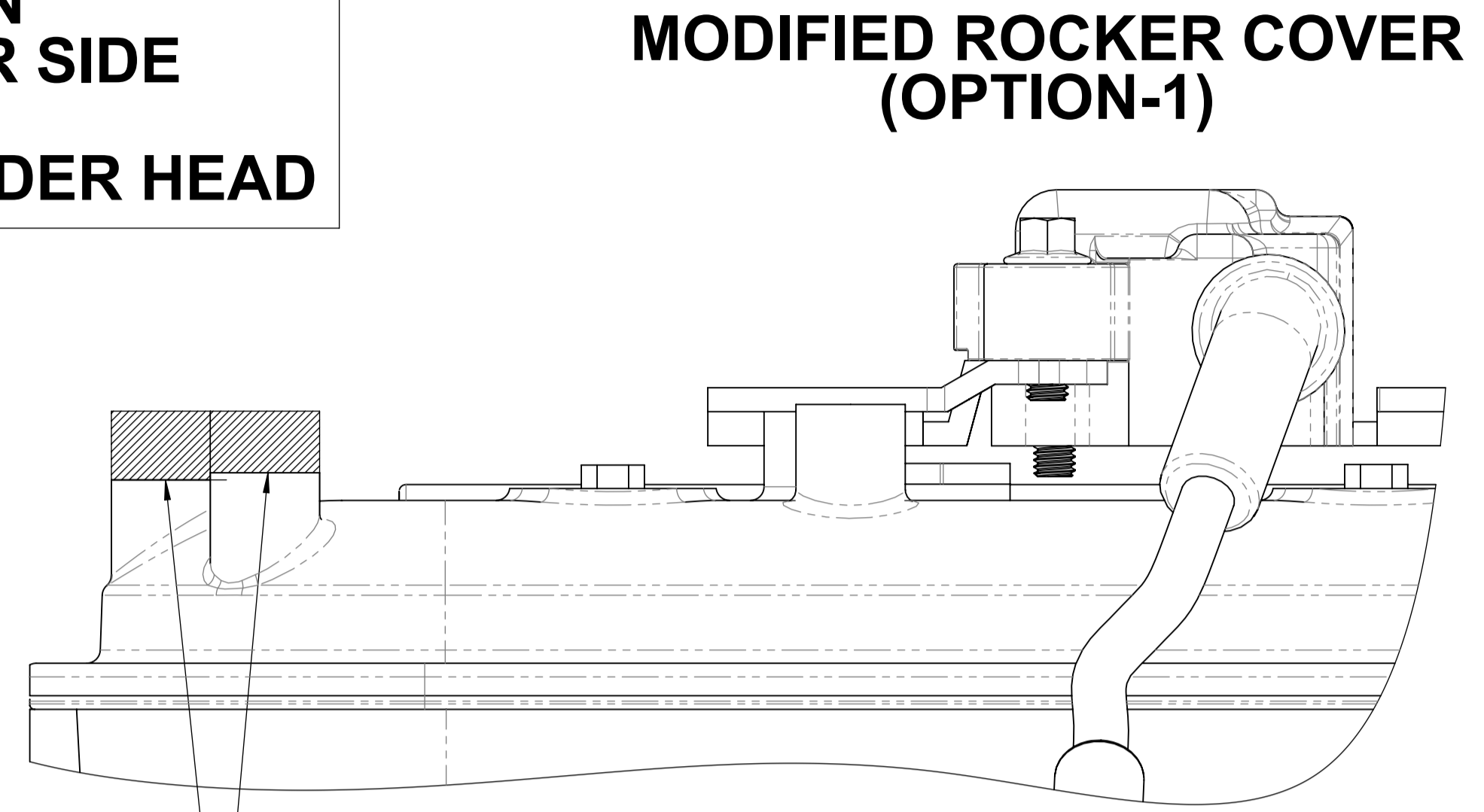
**STANDARD ROCKER COVER**

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



**MOUNTING BOSSES TO BE MODIFIED**

**TOP VIEW (1)**



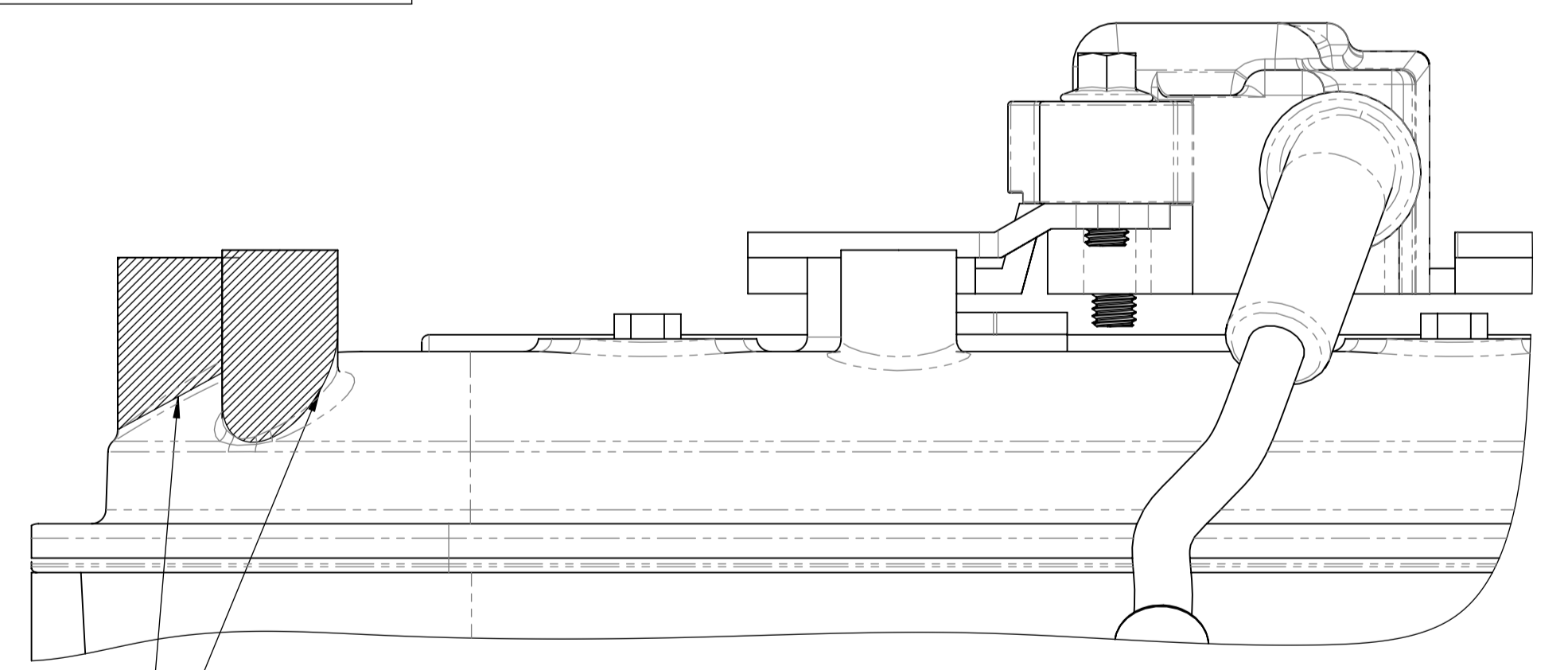
**MODIFIED ROCKER COVER (OPTION-1)**

**SIDE VIEW (2)**

**PASSENGER SIDE ROCKER COVER**

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

THE STANDARD HEIGHT OF THE 2 MOUNTING BOSSES NEED TO BE MODIFIED  
DECIDE FROM EITHER (OPTION-1) OR (OPTION-2)

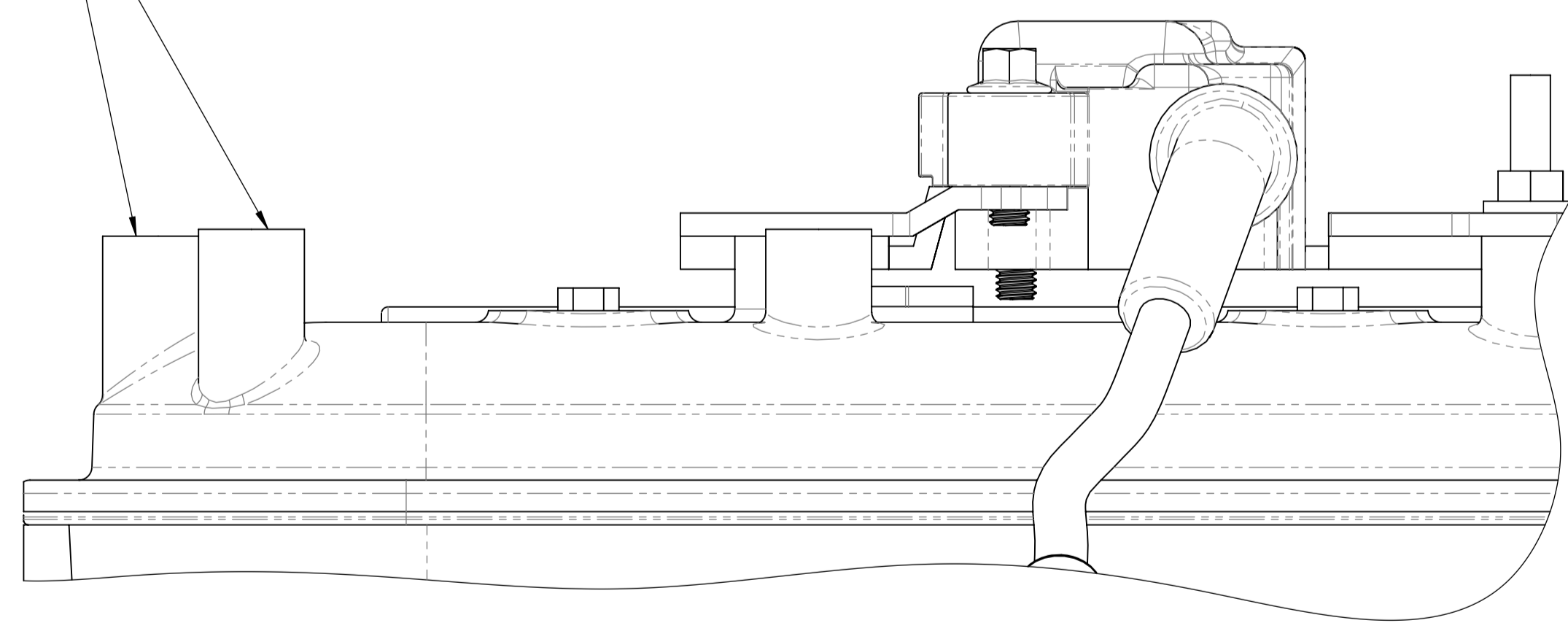


**MODIFIED ROCKER COVER (OPTION-2)**

**SIDE VIEW (3)**

**PASSENGER SIDE ROCKER COVER**

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



**SIDE VIEW (1)**



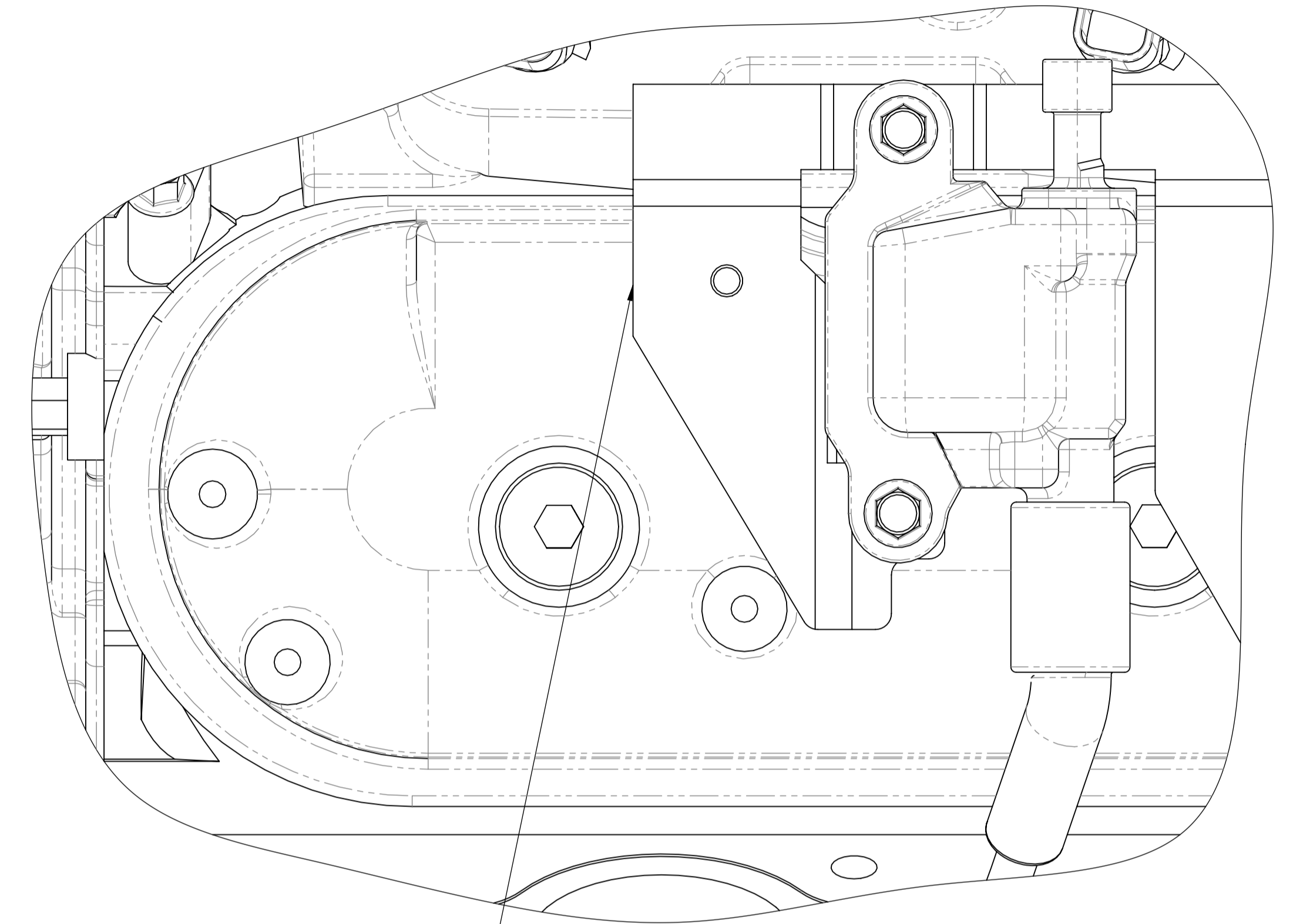
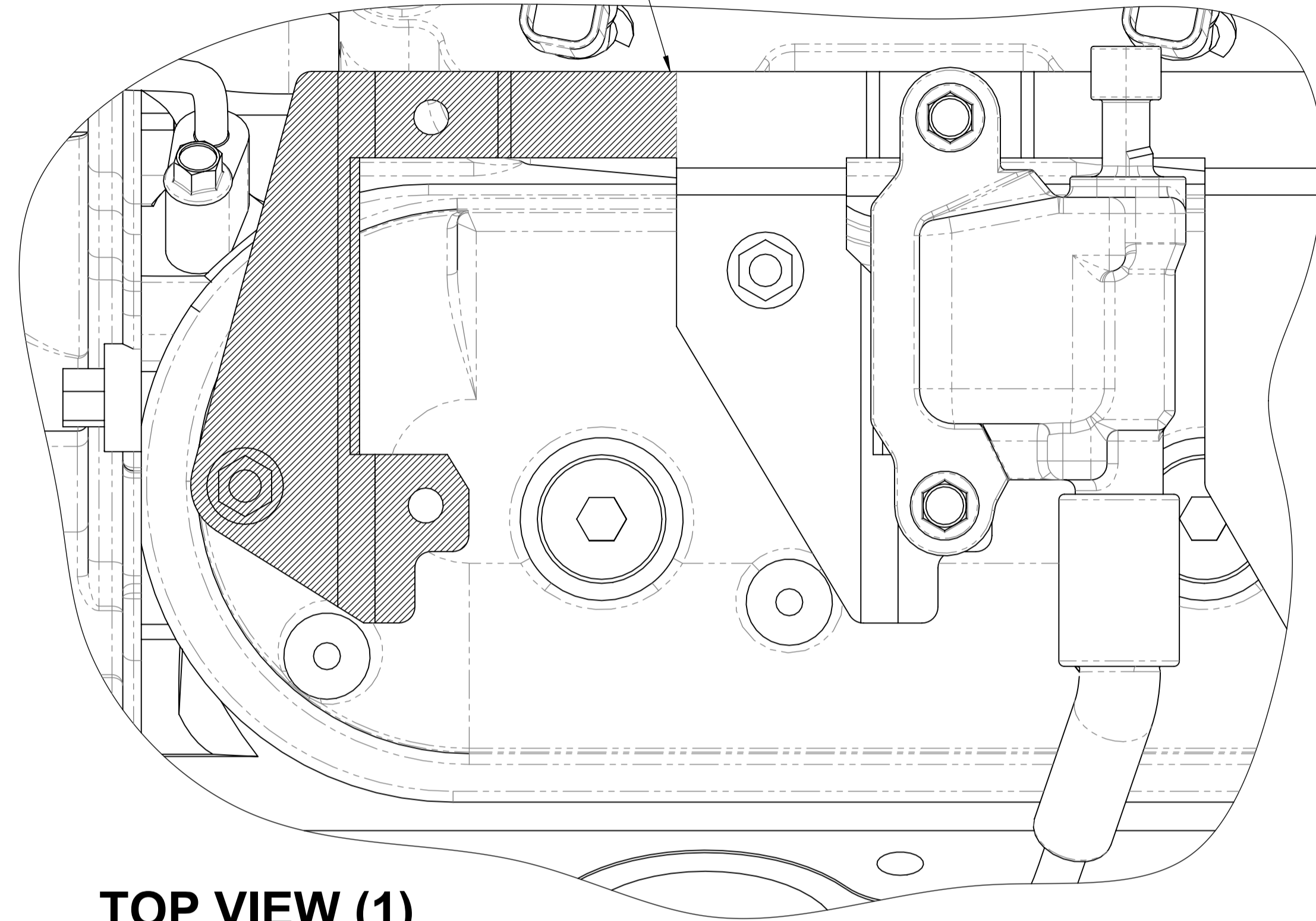
DRAWN	GDK 14/12/2020	TITLE	LS - Series Rocker Cover Coil Boss Modification	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:2:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 02	0

# LS - SERIES PASSENGER SIDE COIL BRACKET MODIFICATION FOR COIL RELOCATION BRACKET MFC20020 (ROCKER COVERS IN FACTORY POSITION)

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

STANDARD PASSENGER SIDE  
COIL BRACKET

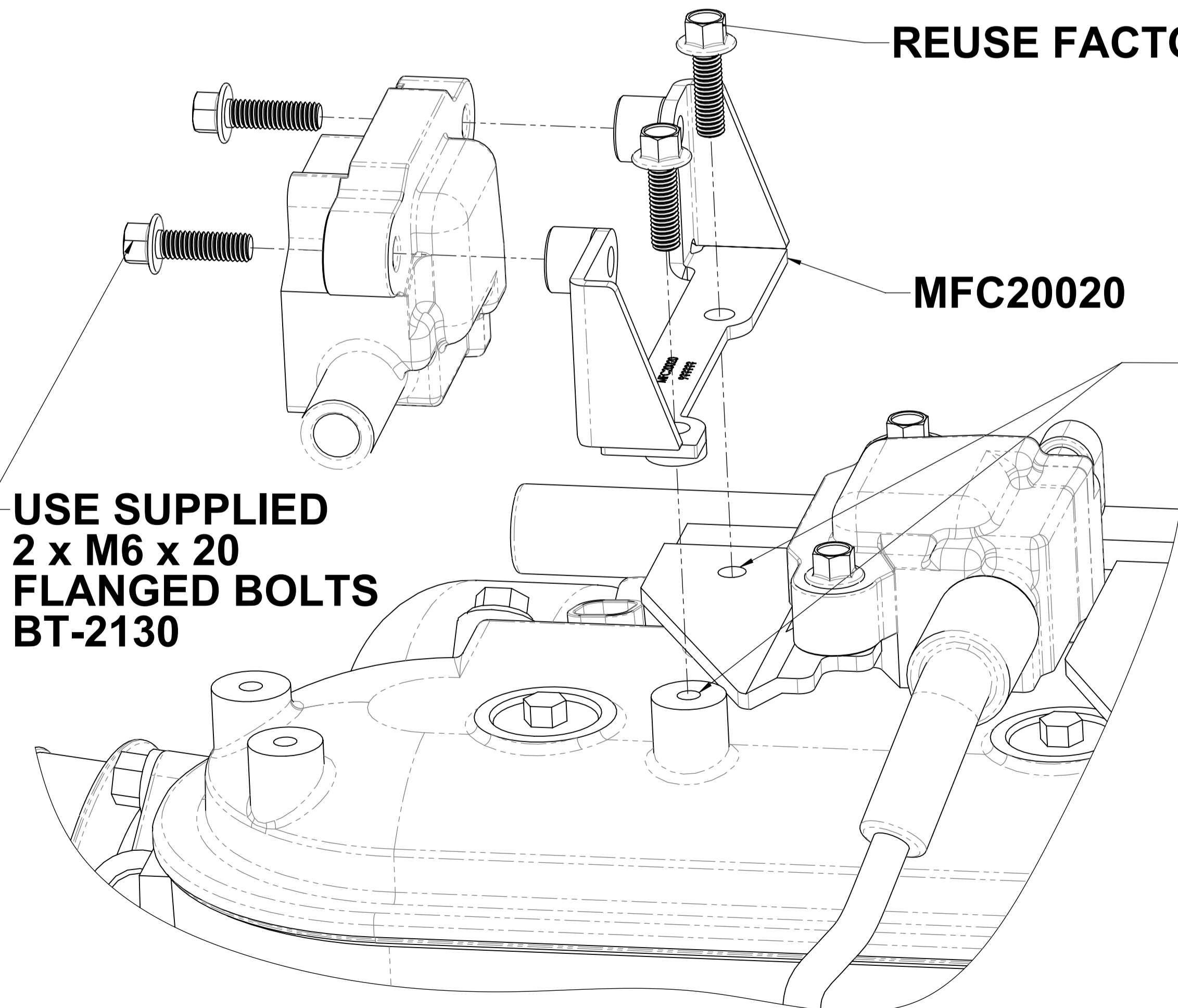
MODIFIED PASSENGER SIDE  
COIL BRACKET



TOP VIEW (1)

TOP VIEW (2)

REUSE FACTORY BOLTS



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

MFC20020

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

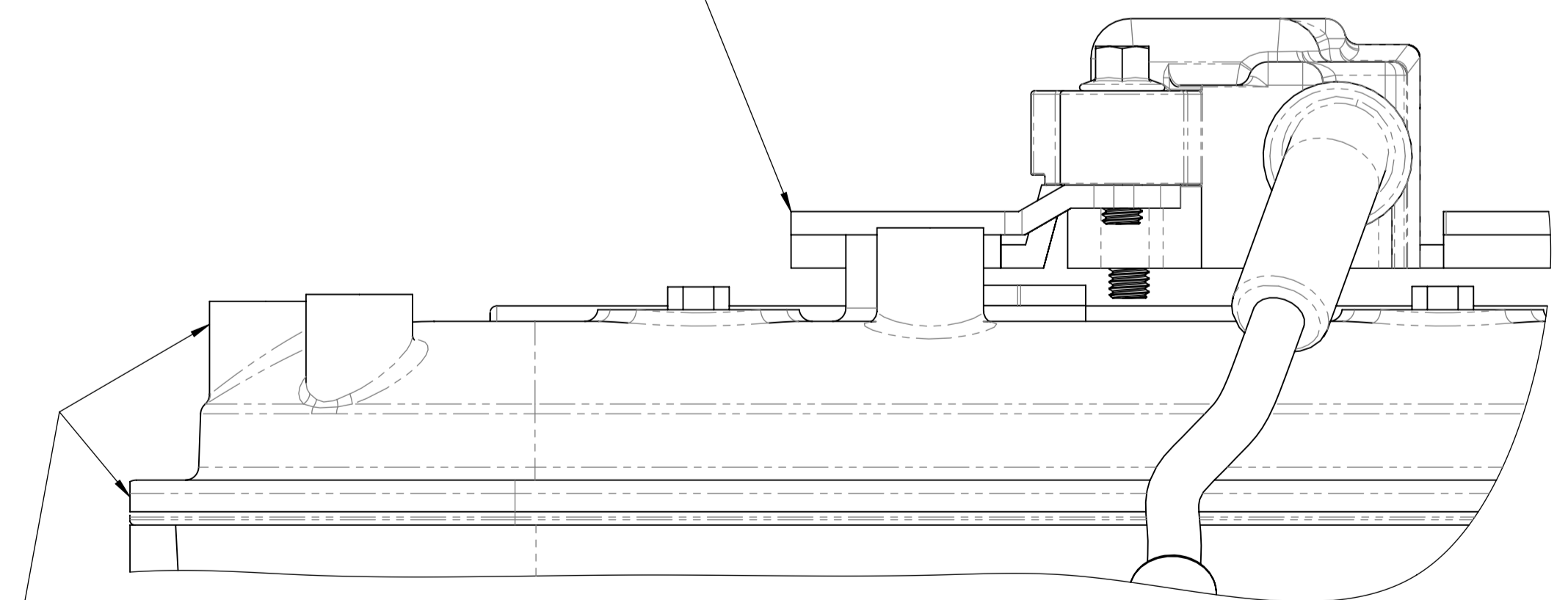
ROCKER COVER  
MODIFICATION  
IS REQUIRED BEFORE  
COIL RELOCATION

REFER TO DRAWING:-

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

**(LS - ACCMOD - 02)**  
LS - SERIES ROCKER COVER  
COIL BOSS MODIFICATION

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



SIDE VIEW (2)

EXPLODE VIEW

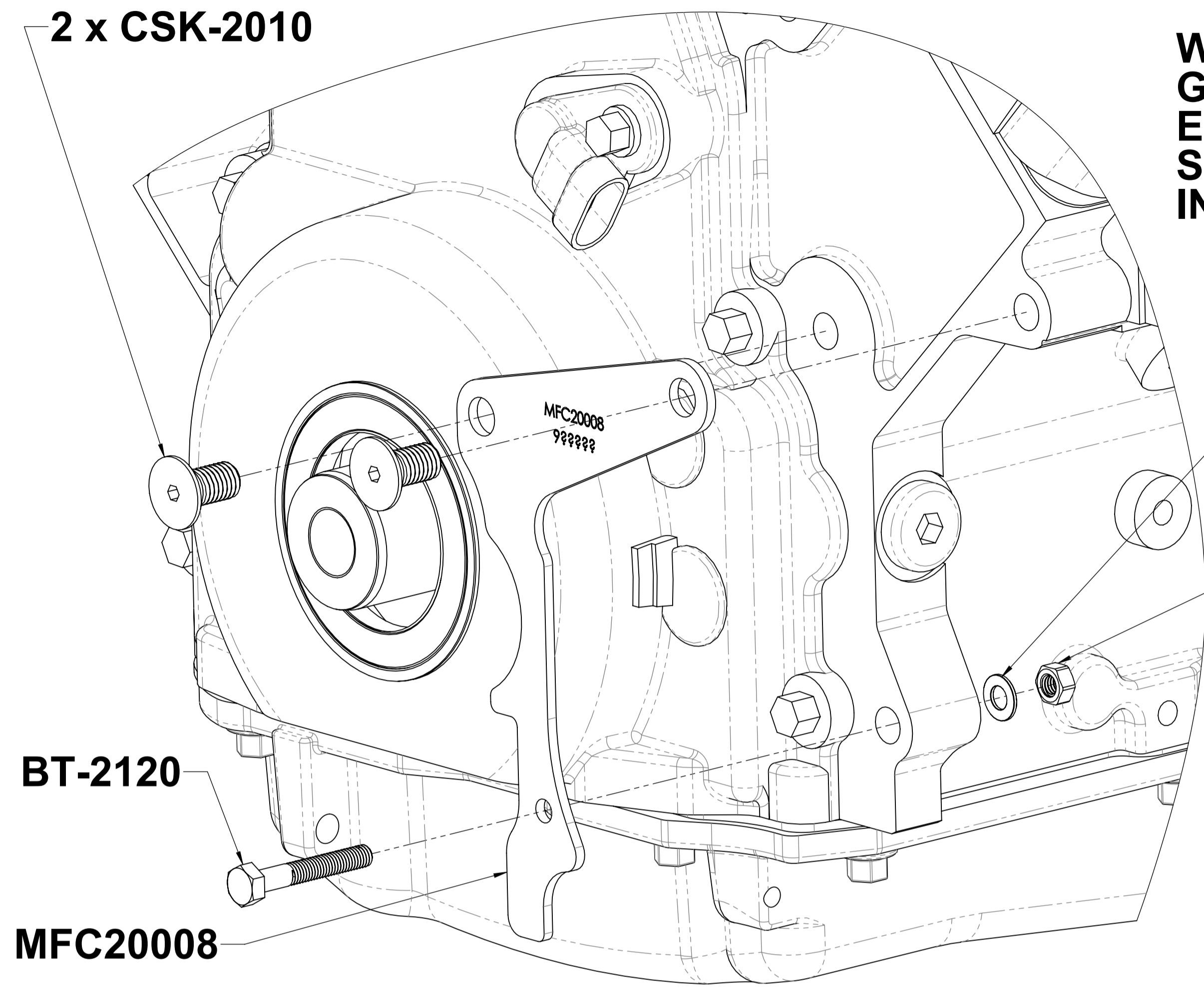


DRAWN	GDK 14/12/2020	TITLE	LS - Series Passenger Side Coil Bracket Modification	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:2:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 04	0

# LS2/3 SANDEN LOW GRIND TEMPLATE

## EXPLODED VIEW

2 x CSK-2010



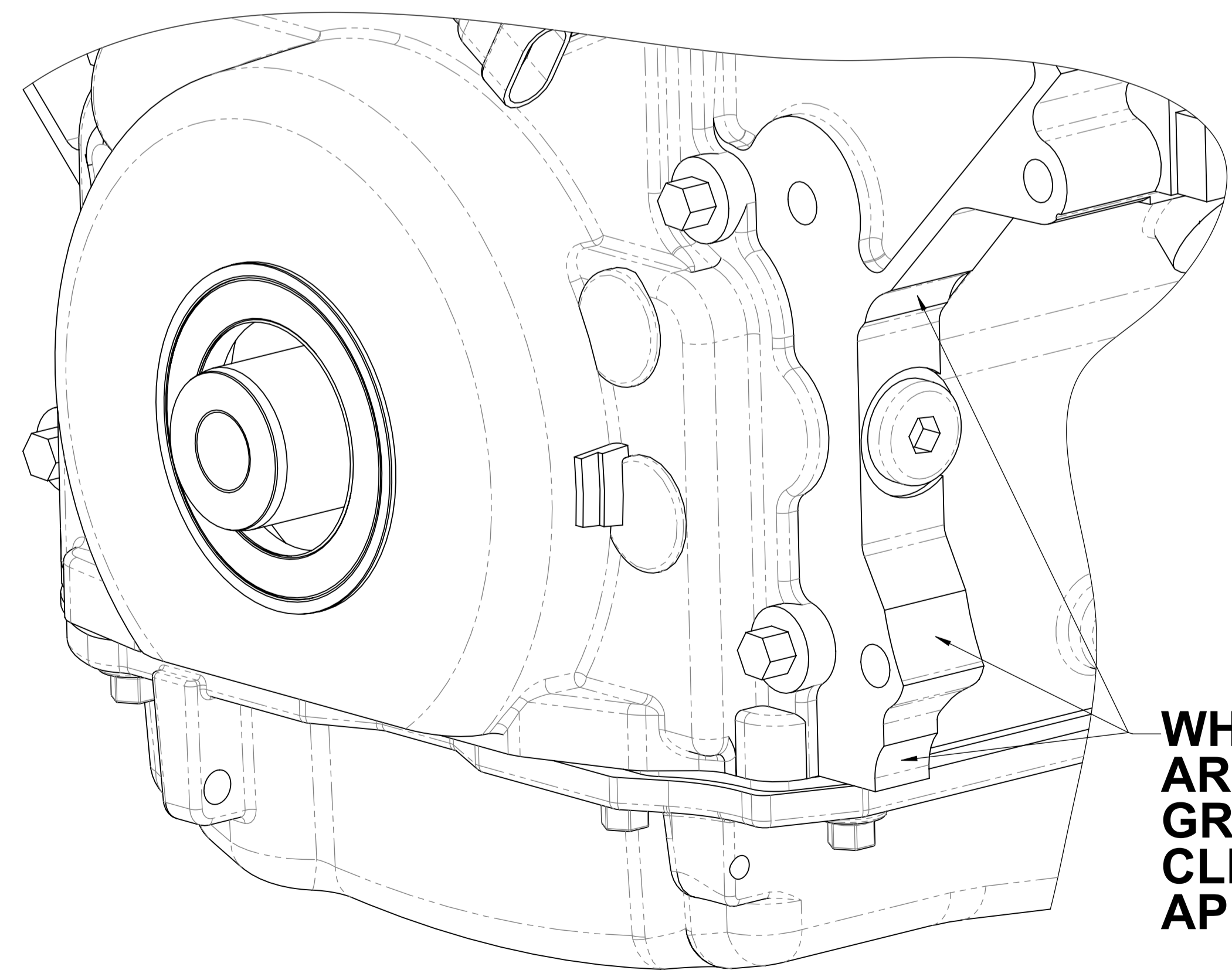
WHEN ASSEMBLING THE GRIND TEMPLATE TO THE ENGINE, THE TEMPLATE SHOULD SIT AS SHOWN IN FRONT VIEW (1)

FW-2045

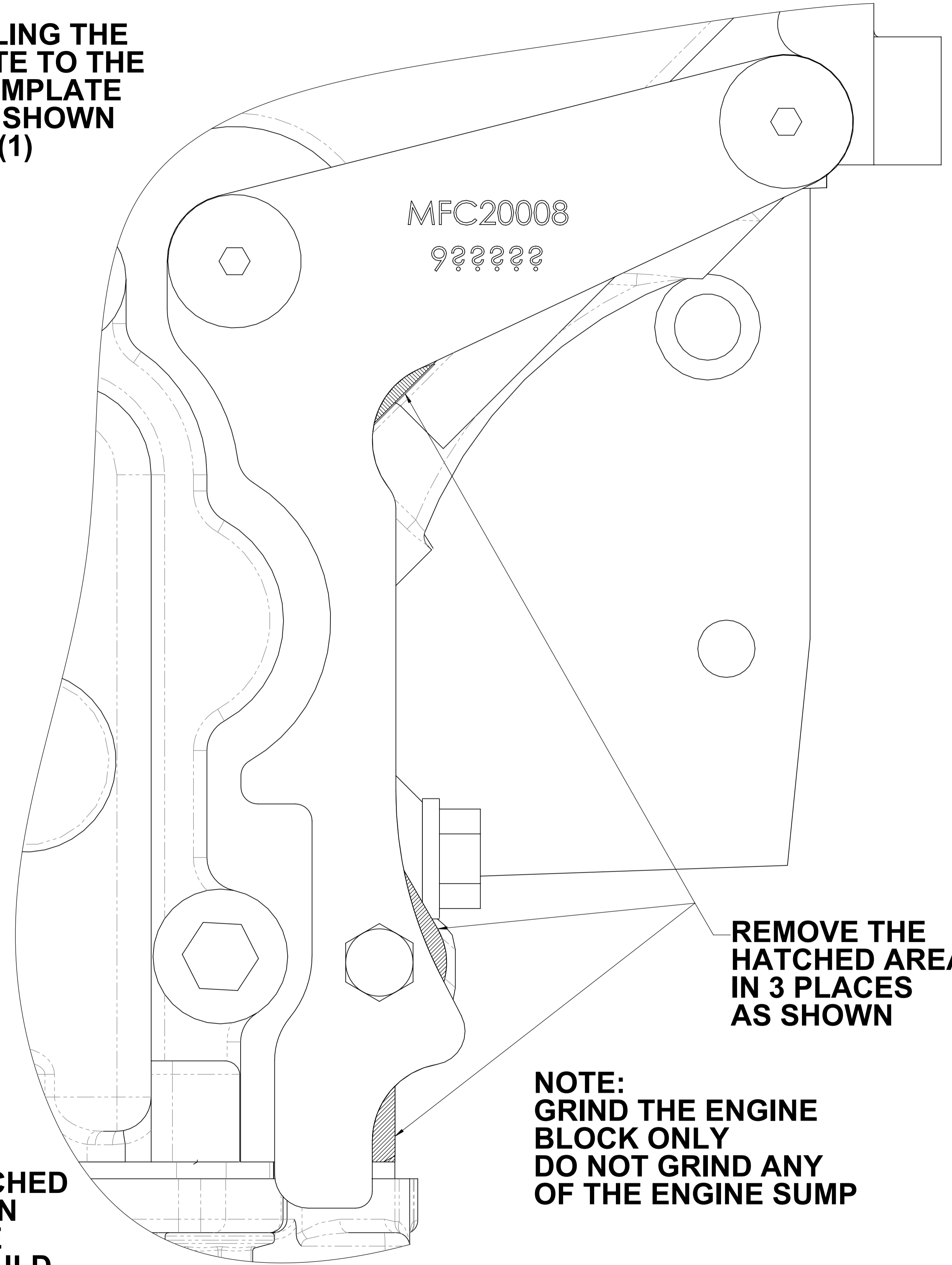
NT-2090

BT-2120

MFC20008



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



MFC20008  
999999

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)

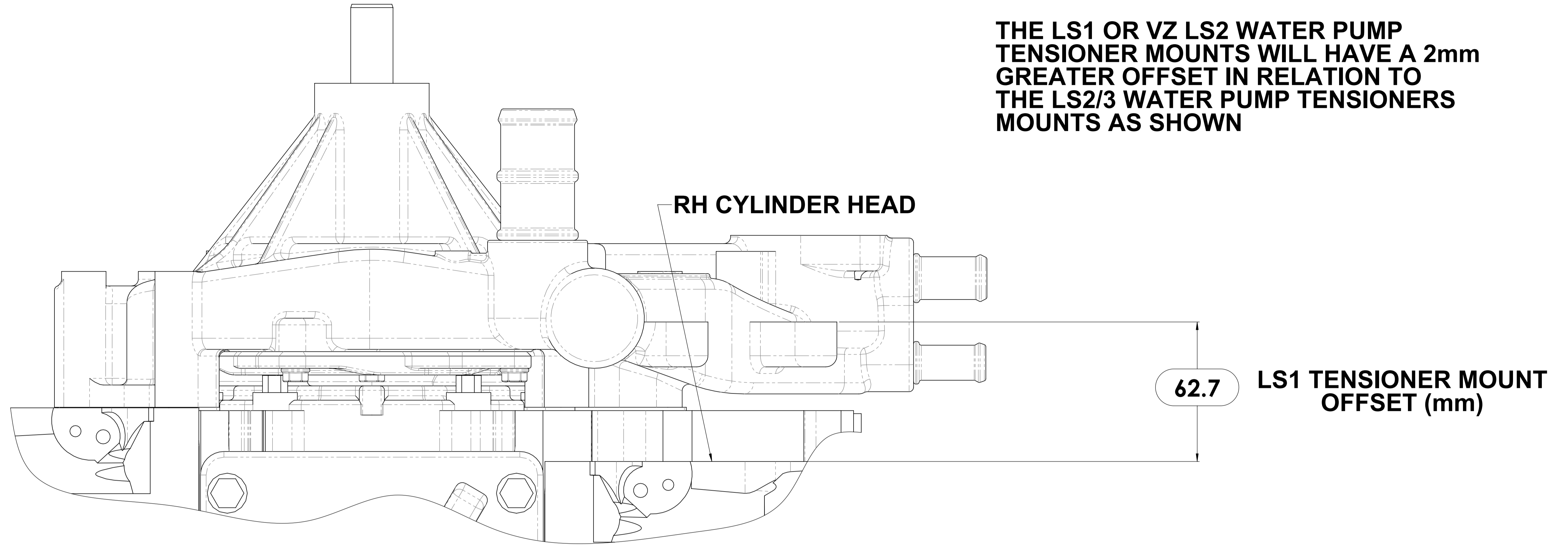


DRAWN	GDK 14/12/2020	TITLE:	LS2/3 Sanden Low Grind Template	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 12	0



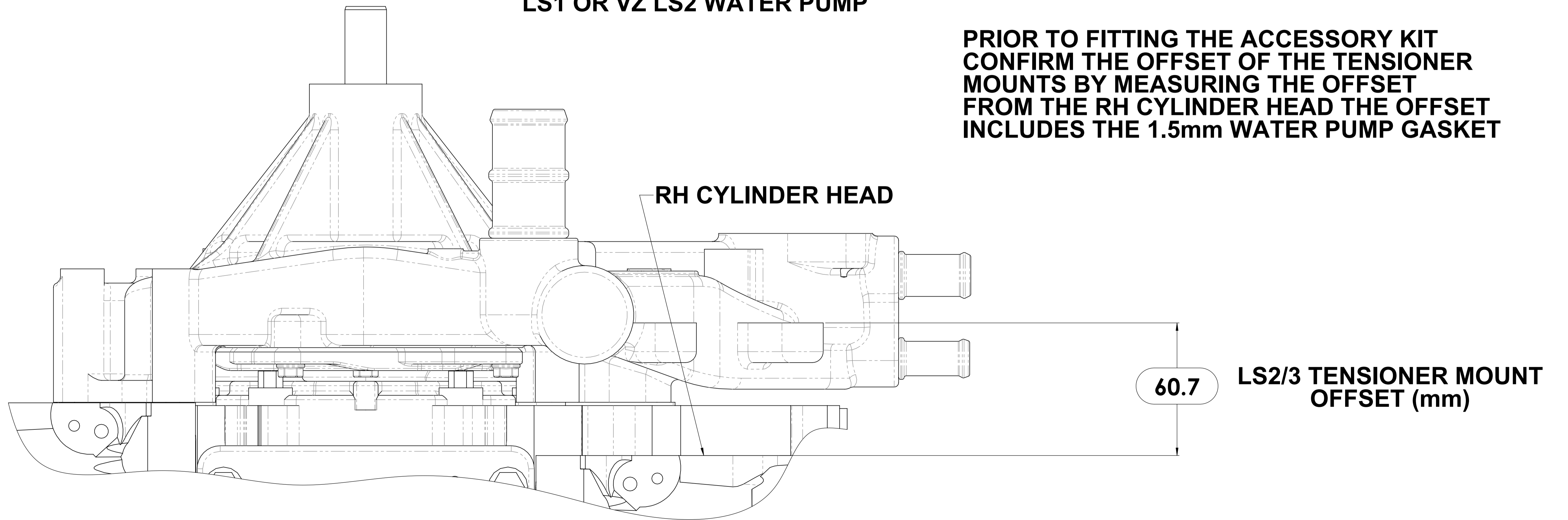
# LS WATER PUMP TENSIONER MOUNT OFFSETS

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 14/12/2020	TITLE	LS Water Pump Tensioner Mount Offsets	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - INFO - 02	0

# LS2/3 TENSIONER ASSEMBLY OEM POSITION

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

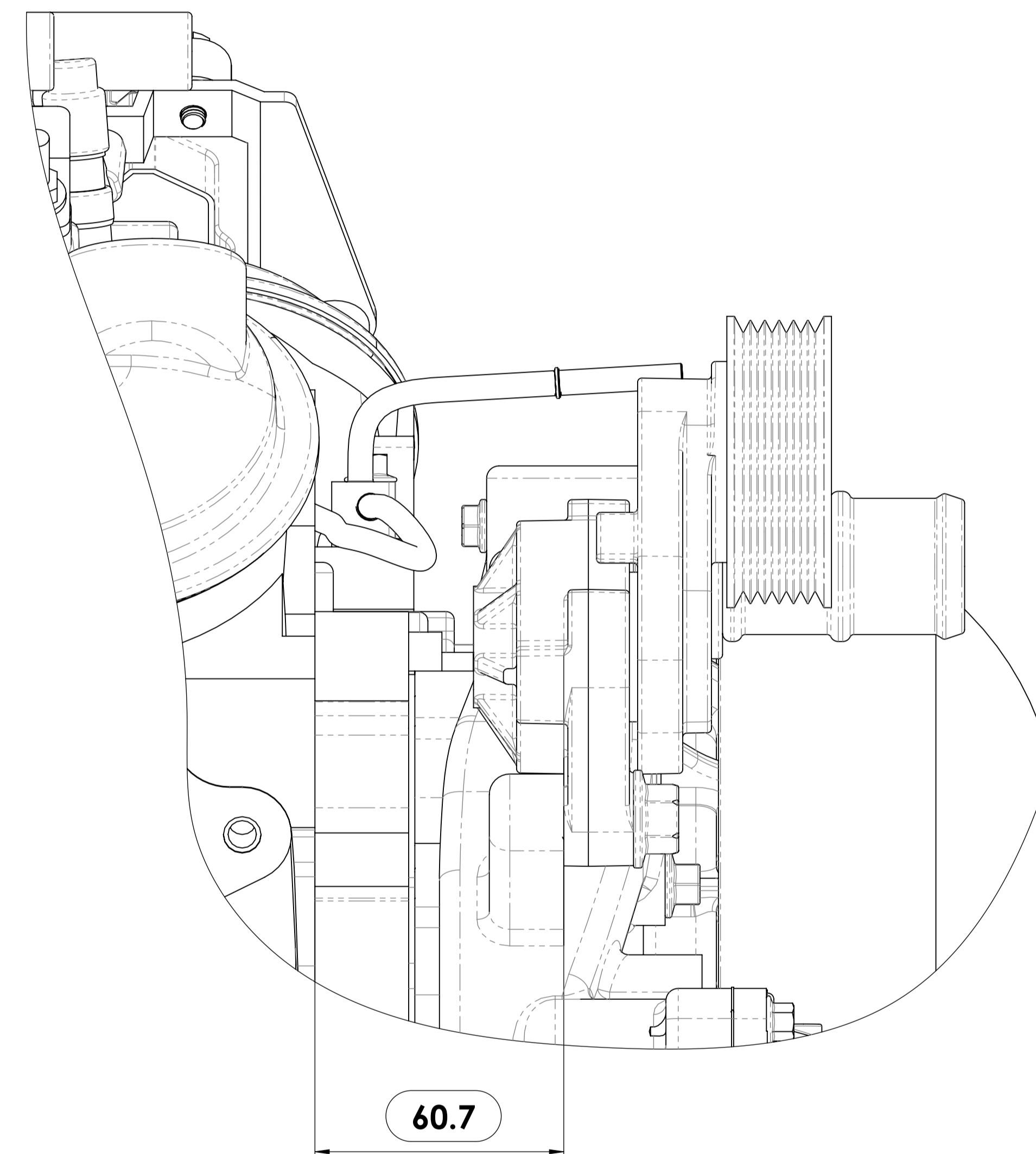
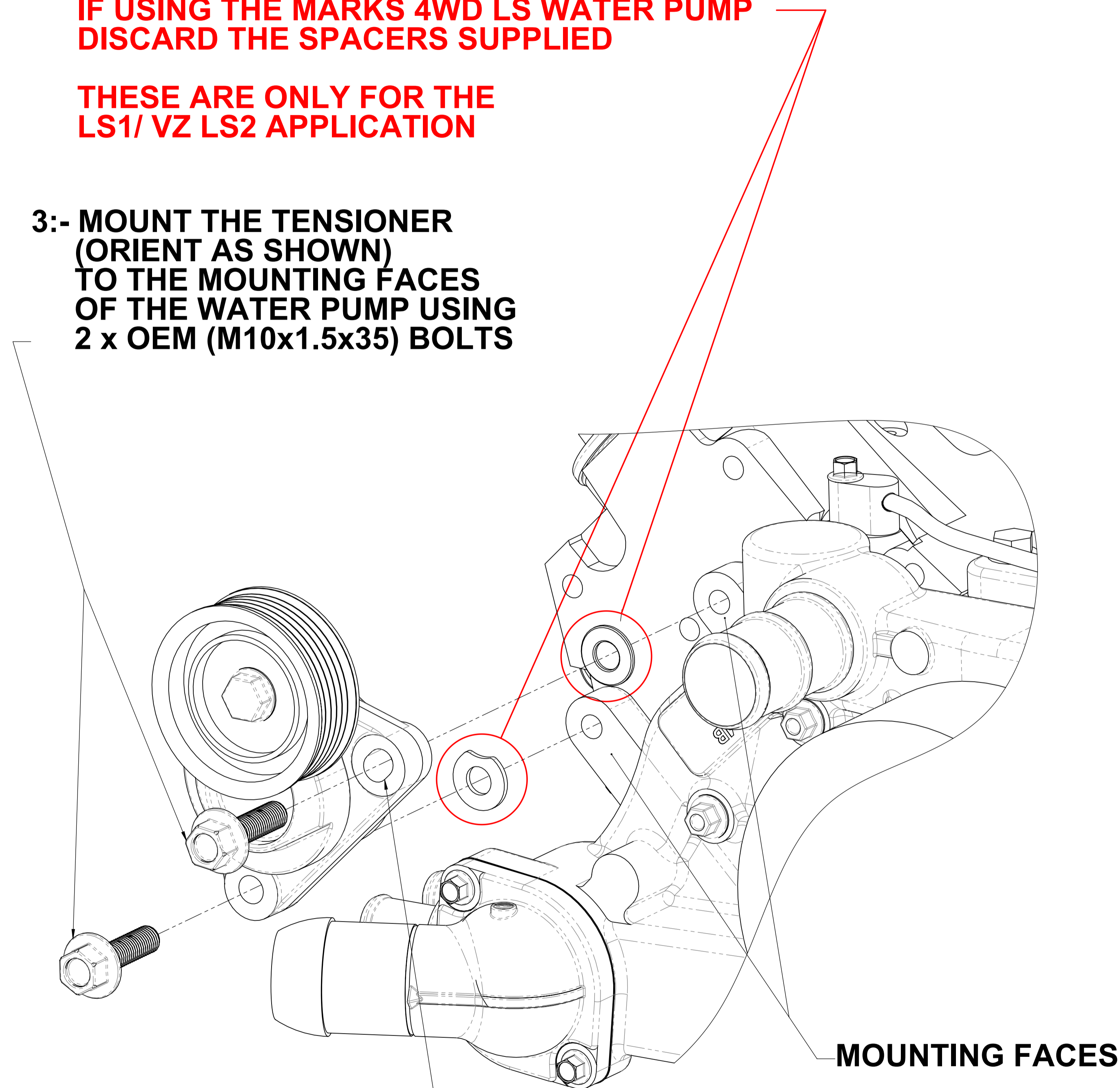
**1:- SET THE TENSIONER MOUNT OFFSET**

**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:- MOUNT THE TENSIONER (ORIENT AS SHOWN) TO THE MOUNTING FACES OF THE WATER PUMP USING 2 x OEM (M10x1.5x35) BOLTS**



**1:-TENSIONER OFFSET IS IN (mm)  
(LS - INFO - 02)**

**ELONGATED SLOT OF THE TENSIONER**

**MOUNTING FACES**



DRAWN	GDK 14/12/2020	TITLE:	LS2/3 Tensioner Assembly OEM Position	
DRAWING CHECKED	PAM 14/12/2020	SCALE: 1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - INFO - 03	0