

NOTE: FLAG ITEMS ▶
REFER TO INSTRUCTION DRAWINGS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	MFG20004	LS2/LS3 12v Alternator Relocation LH	1
2	MFC20019	6pk Alternator Pulley - 90 O.D x 17 I.D	1
3	MFC20020	Bracket - AUX Alternator Setup Coil Relocation	1
4	MFG20033	LS2/LS3 24v 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	MFC651	Spacer 10 x 20 x 51 L P/ST	2
9	6PK2705	Drive Belt - Poly Rib (2705mm)	1
10	16-25-9W2	Hose Clamp - 16 to 25mm	2
11	BT-2270	BOLT - M10 X 1.5 X 80mm - H/T - Z/P	2
12	BT-2130	M6 x 1.25 x 20 - Capture Bolt	3
13	SHCS-2125	SHCS - M6 x 1 x 12mm - SS	1
14	FW-2010	Flat Washer - M10 x 22 x 2mm	2
15	SW-2005	Spring Washer - M10 - S/S	2

INSTRUCTION DRAWINGS

MFK50150-SHT-1

MFK50150-SHT-2

1: MFG20004

4: MFG20033

A: LS - ACCMOD - 01

B: LS - ACCMOD - 03

C/3: LS - ACCMOD - 05

D: LS - ACCMOD - 09

E: LS - ACCMOD - 11

F: LS - ACCMOD - 13

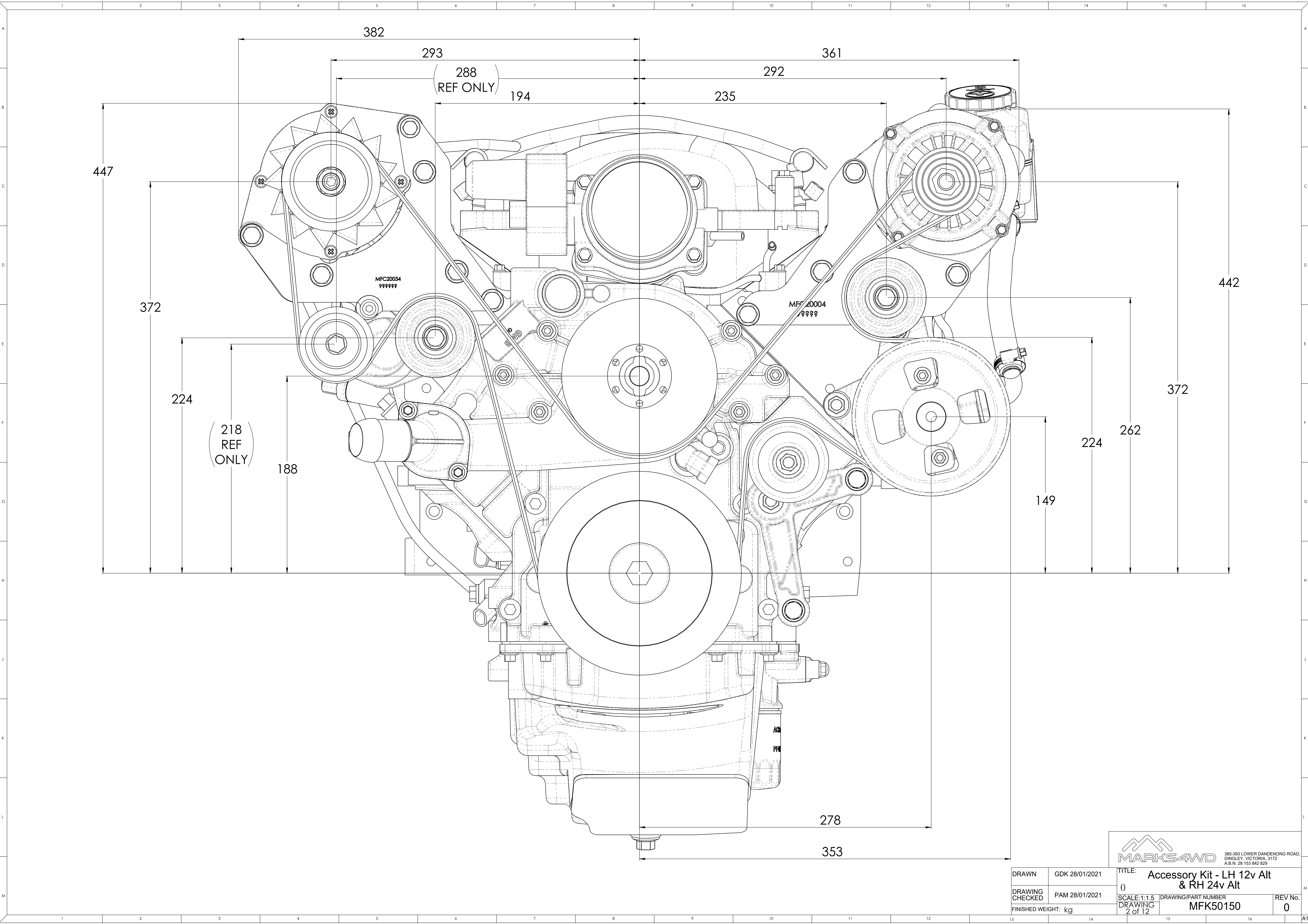
G: LS - INFO - 02

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



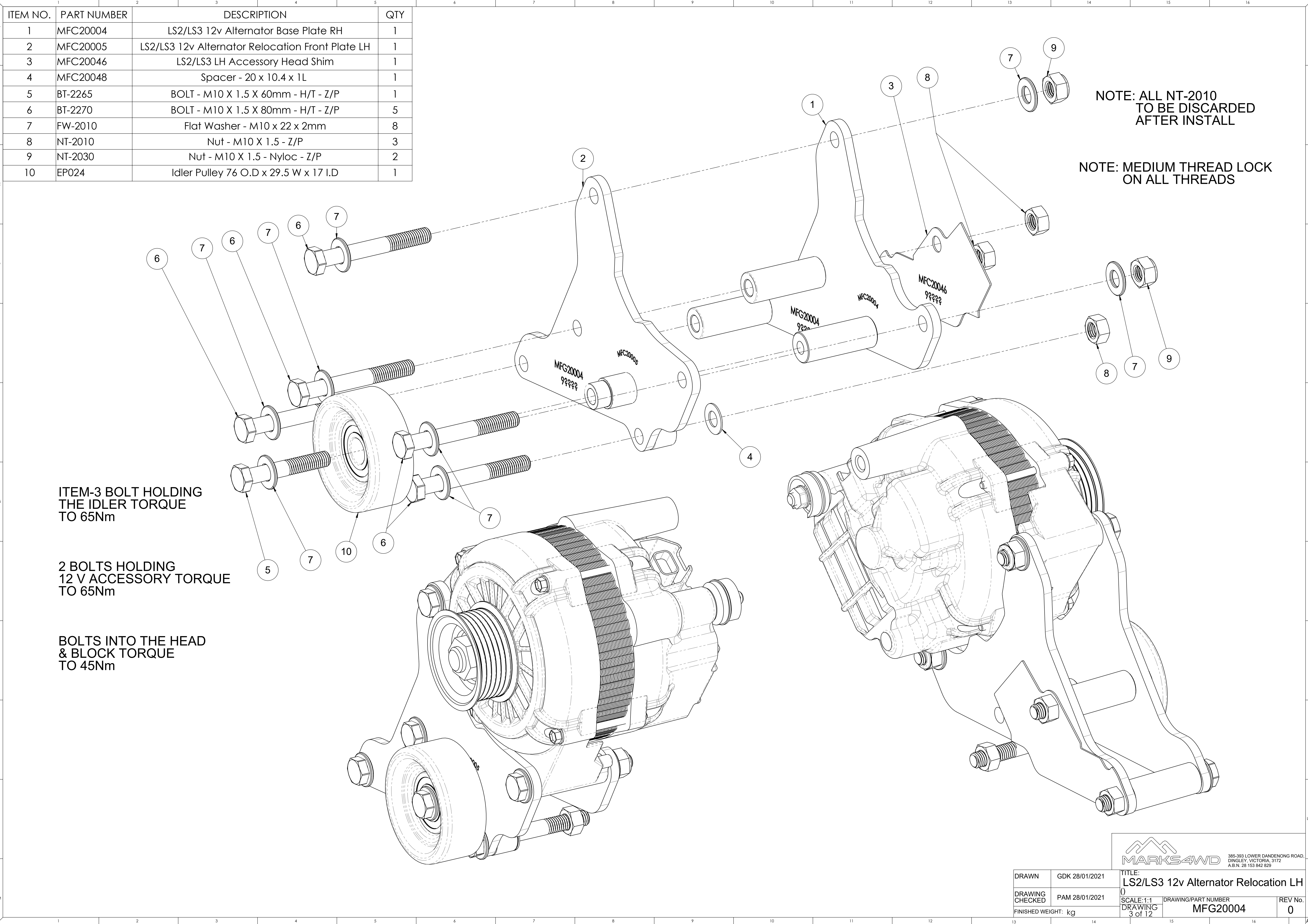
DRAWN	GDK 28/01/2021	TITLE:	Accessory Kit - LH 12v Alt & RH 24v Alt
DRAWING CHECKED	PAM 28/01/2021	SCALE: 1:2.5	DRAWING/PART NUMBER
FINISHED WEIGHT: kg		DRAWING 1 of 12	MFK50150
			REV No. 0



MARKS4WD
385-393 LOWER DANDENONG ROAD,
DINGLEY, VICTORIA, 3172
A.B.N. 28 153 842 829

DRAWN	GDK 28/01/2021	TITLE: Accessory Kit - LH 12v Alt & RH 24v Alt		
DRAWING CHECKED	PAM 28/01/2021	()		
FINISHED WEIGHT: kg		SCALE:1:1.5 DRAWING 2 of 12	DRAWING/PART NUMBER MFK50150	REV No. 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

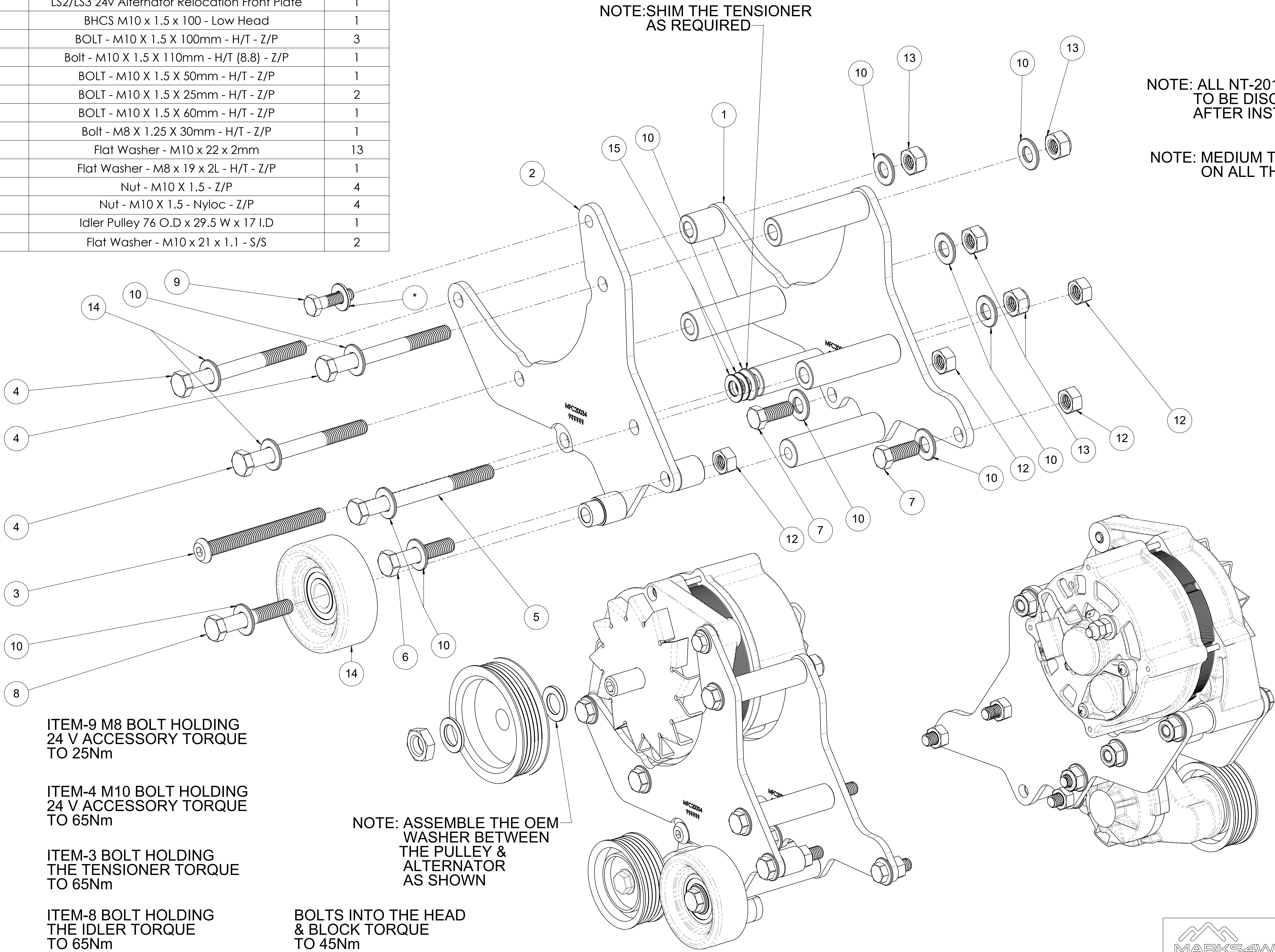
ITEM-3 BOLT HOLDING
THE IDLER TORQUE
TO 65Nm

2 BOLTS HOLDING
12 V ACCESSORY TORQUE
TO 65Nm

BOLTS INTO THE HEAD
& BLOCK TORQUE
TO 45Nm

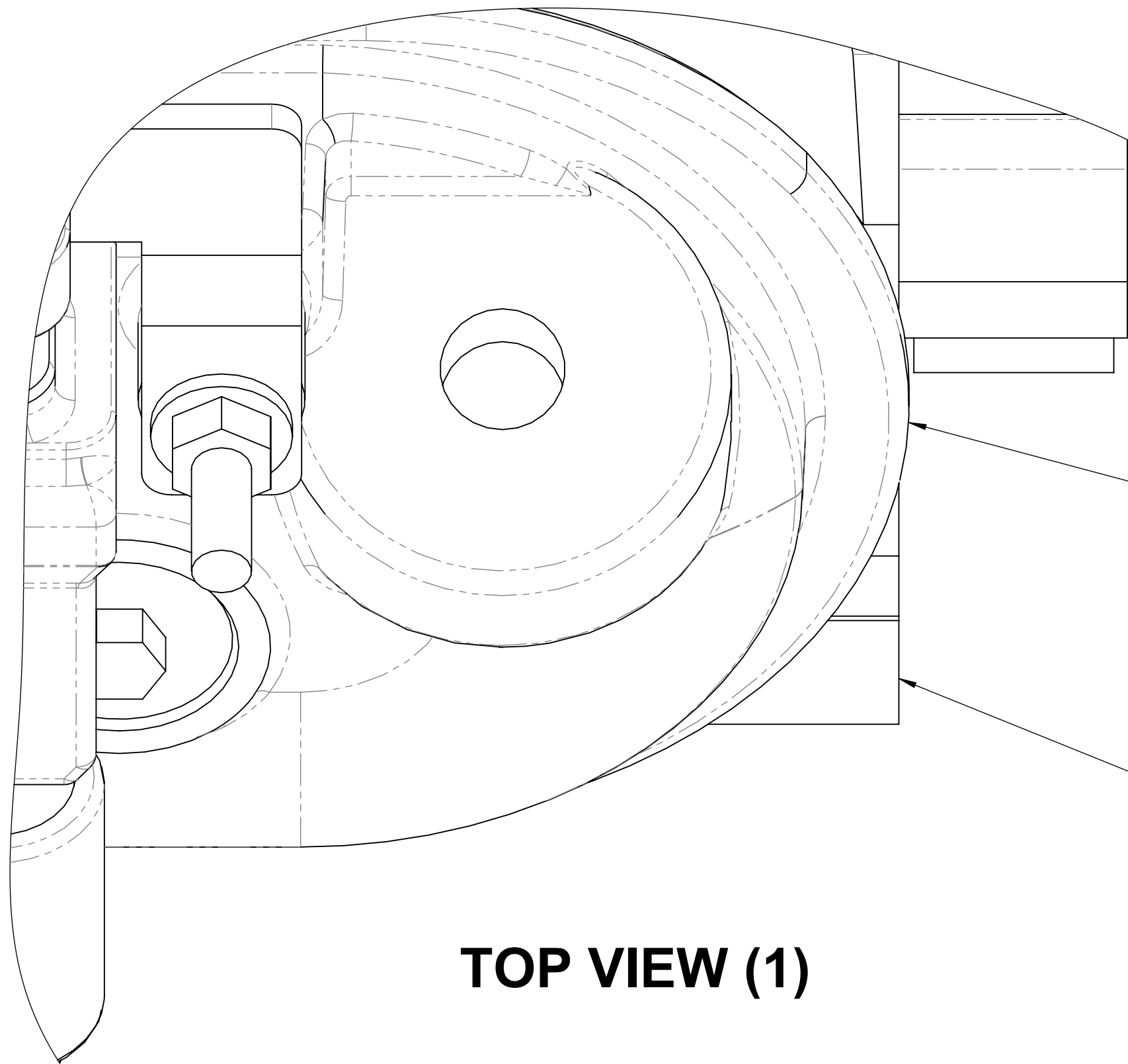
DRAWN	GDK 28/01/2021	TITLE:	LS2/LS3 12v Alternator Relocation LH	
DRAWING CHECKED	PAM 28/01/2021	SCALE:1:1	DRAWING/PART NUMBER	REV No.
FINISHED WEIGHT: kg		DRAWING 3 of 12	MFG20004	0

ITEM NO.	PART NUMBER	DESCRIPTION	
1	MFC20033	LS2/LS3 24v AUX Alternator Relocation Base Plate	1
2	MFC20034	LS2/LS3 24v Alternator Relocation Front Plate	1
3	MFC20030	BHCS M10 x 1.5 x 100 - Low Head	1
4	BT-2180	BOLT - M10 X 1.5 X 100mm - H/T - Z/P	3
5	BT-2185	Bolt - M10 X 1.5 X 110mm - H/T (8.8) - Z/P	1
6	BT-2260	BOLT - M10 X 1.5 X 50mm - H/T - Z/P	1
7	BT-2240	BOLT - M10 X 1.5 X 25mm - H/T - Z/P	2
8	BT-2265	BOLT - M10 X 1.5 X 60mm - H/T - Z/P	1
9	BT-2267	Bolt - M8 X 1.25 X 30mm - H/T - Z/P	1
10	FW-2010	Flat Washer - M10 x 22 x 2mm	13
11	FW-2050	Flat Washer - M8 x 19 x 2L - H/T - Z/P	1
12	NT-2010	Nut - M10 X 1.5 - Z/P	4
13	NT-2030	Nut - M10 X 1.5 - Nyloc - Z/P	4
14	EP024	Idler Pulley 76 O.D x 29.5 W x 17 I.D	1
15	FW-2005	Flat Washer - M10 x 21 x 1.1 - S/S	2



LS - SERIES ROCKER COVER LIP MODIFICATION

STANDARD ROCKER COVER



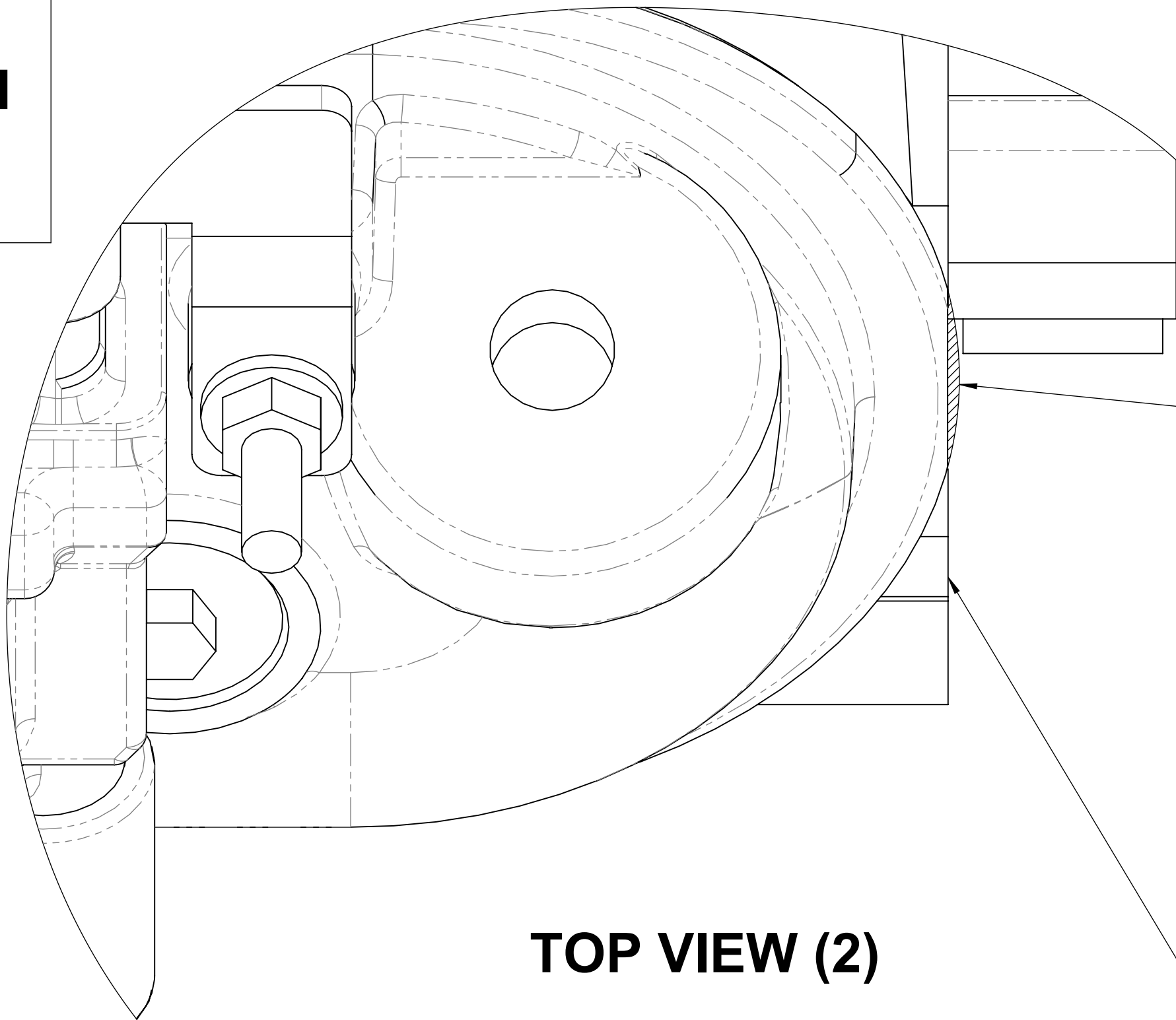
TOP VIEW (1)

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



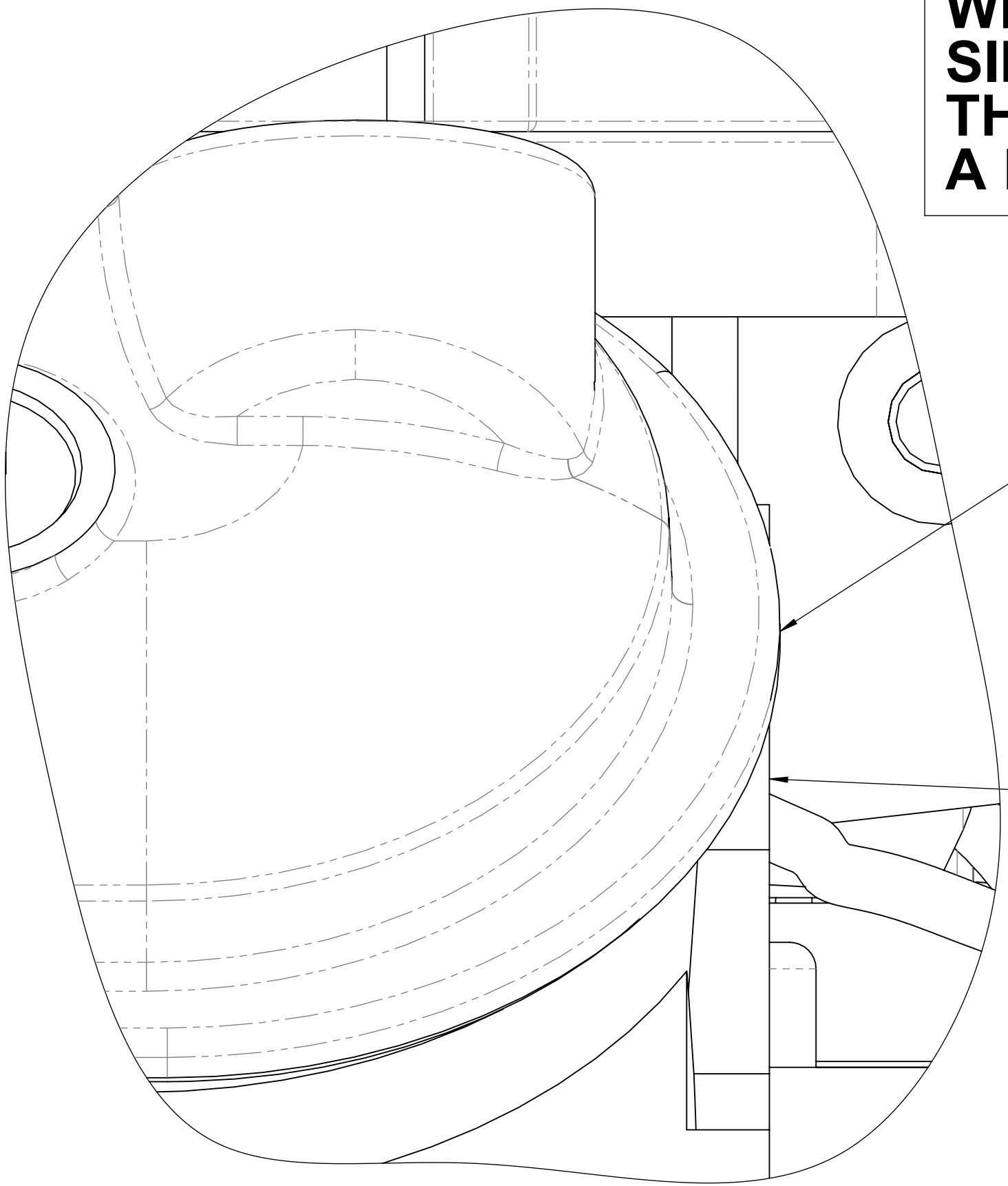
TOP VIEW (2)

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

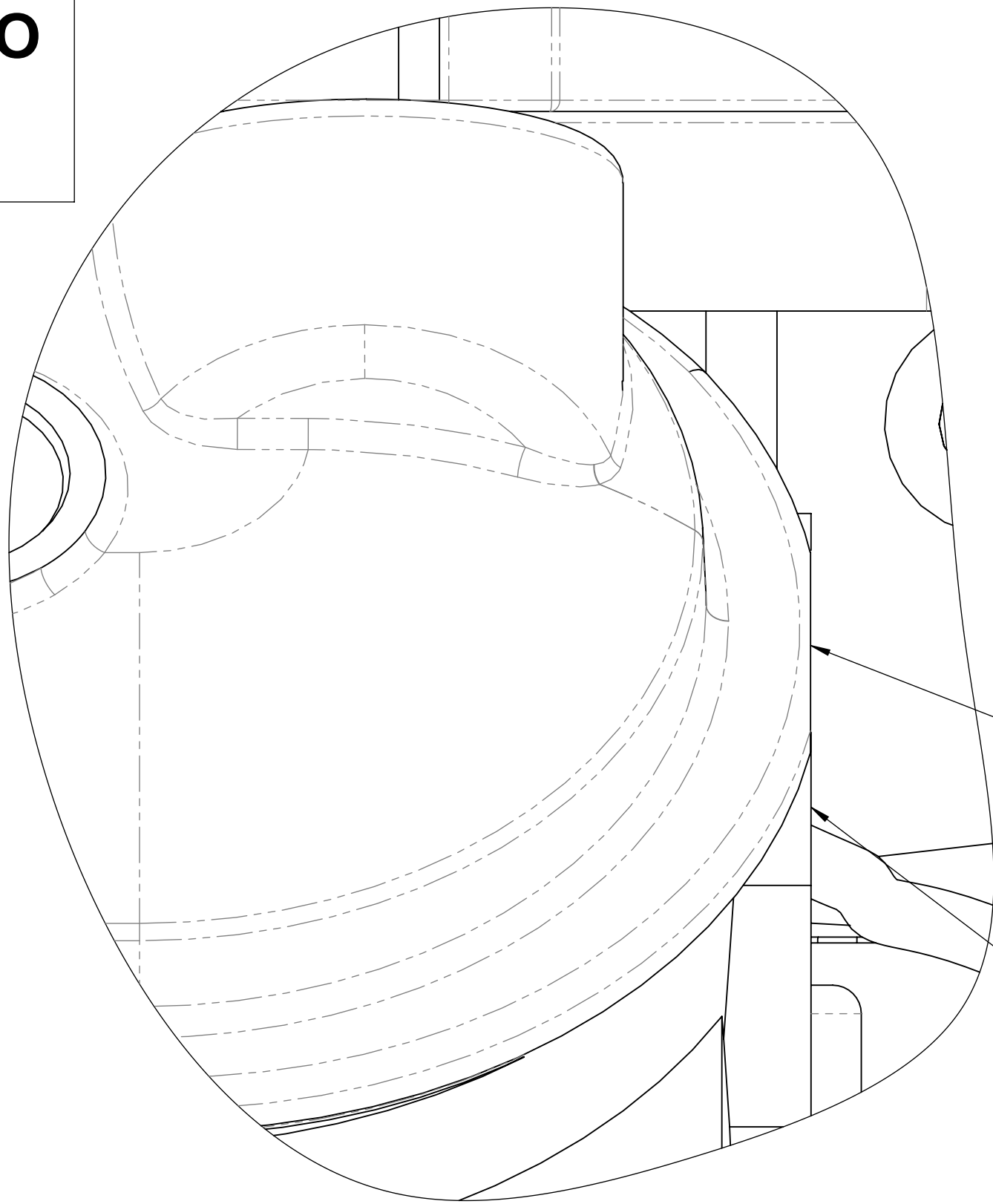
THE ROCKER COVER LIP MODIFICATION WILL ALSO BE REQUIRED FOR THE DRIVER SIDE ROCKER COVER WHEN IT IS FITTED TO THE PASSENGER SIDE CYLINDER HEAD IF A LH ACCESSORY KIT IS TO BE FITTED



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

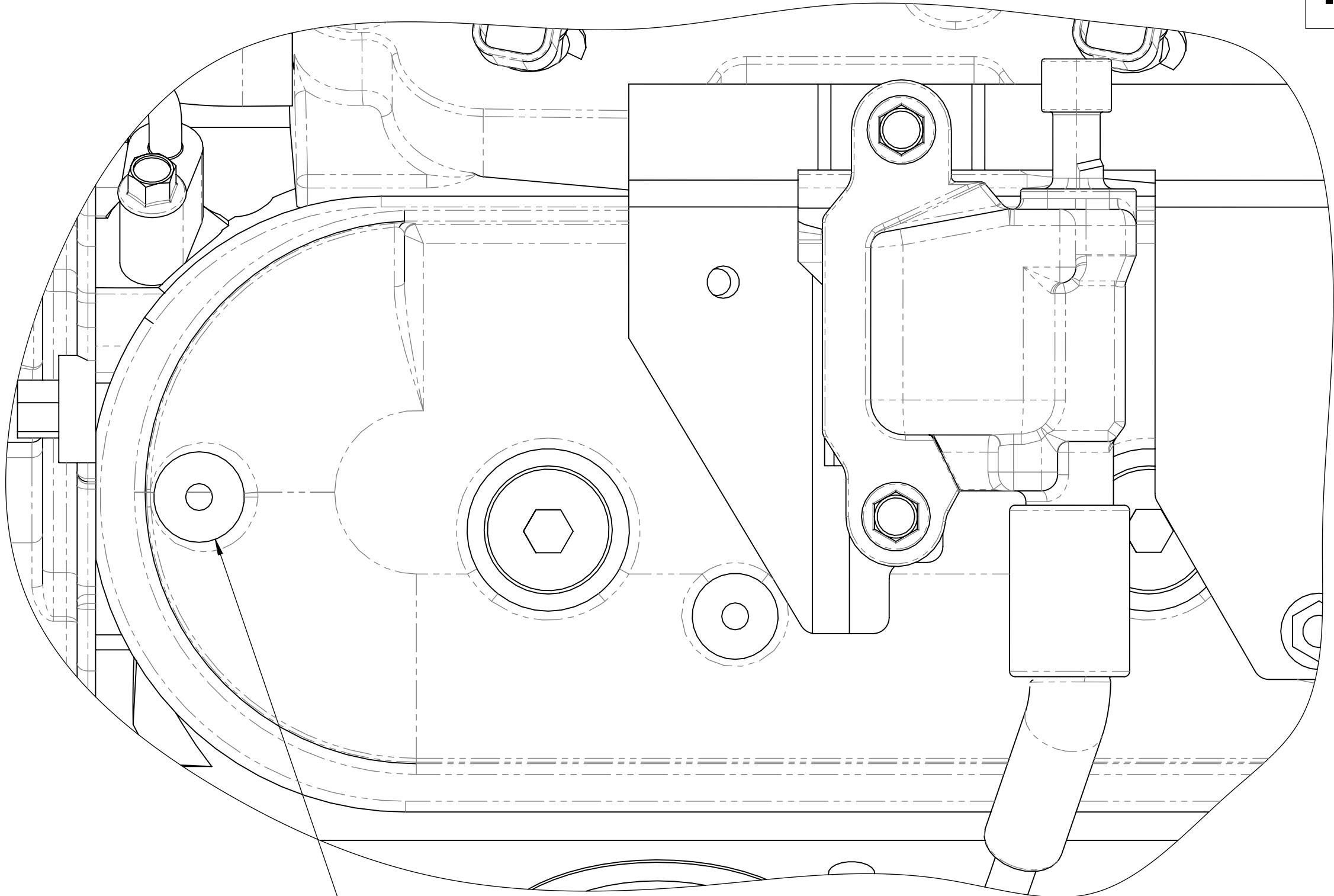
PASSENGER SIDE ROCKER COVER LIP SHAVED

DRIVER SIDE CYLINDER HEAD FACE SHOWN

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

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

STANDARD ROCKER COVER

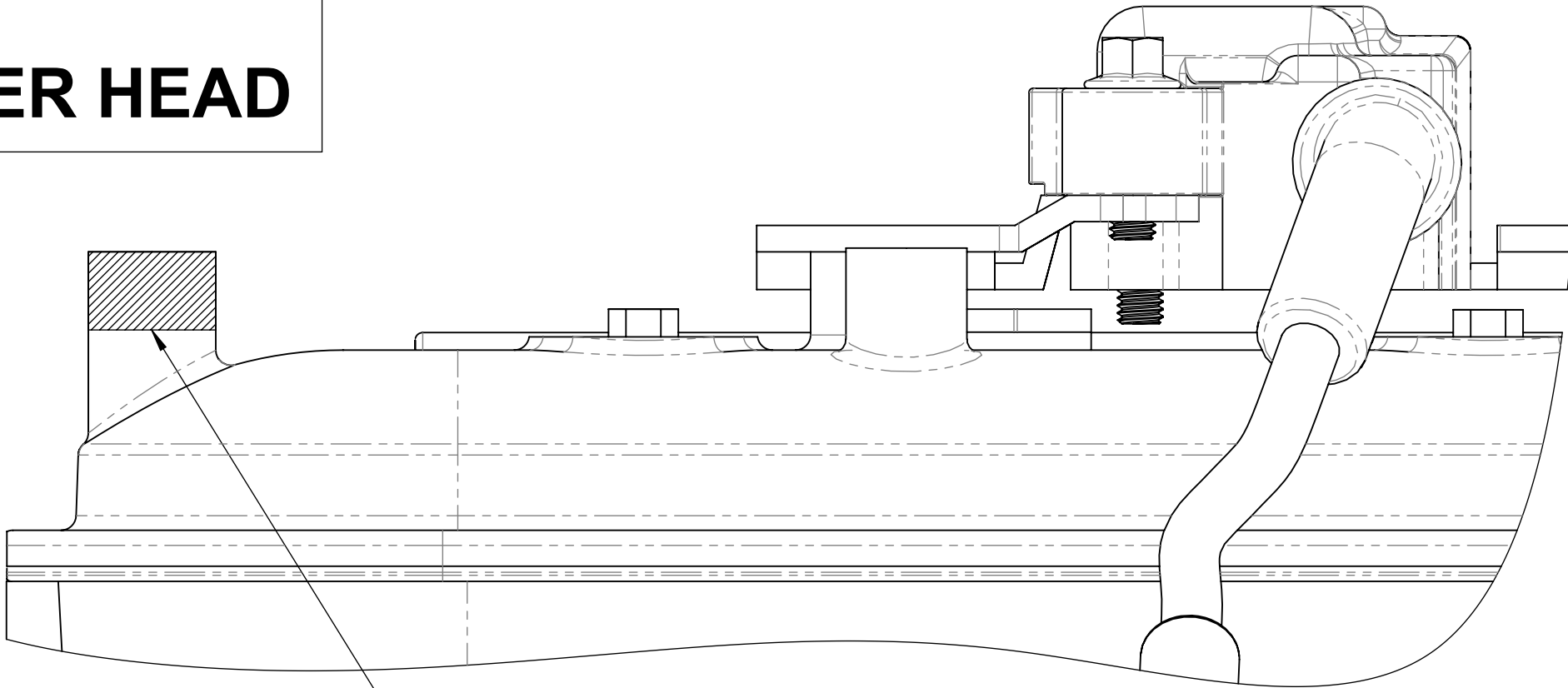


TOP VIEW (1)

MOUNTING
BOSS TO
BE MODIFIED

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

MODIFIED ROCKER COVER
(OPTION-1)



SIDE VIEW (2)

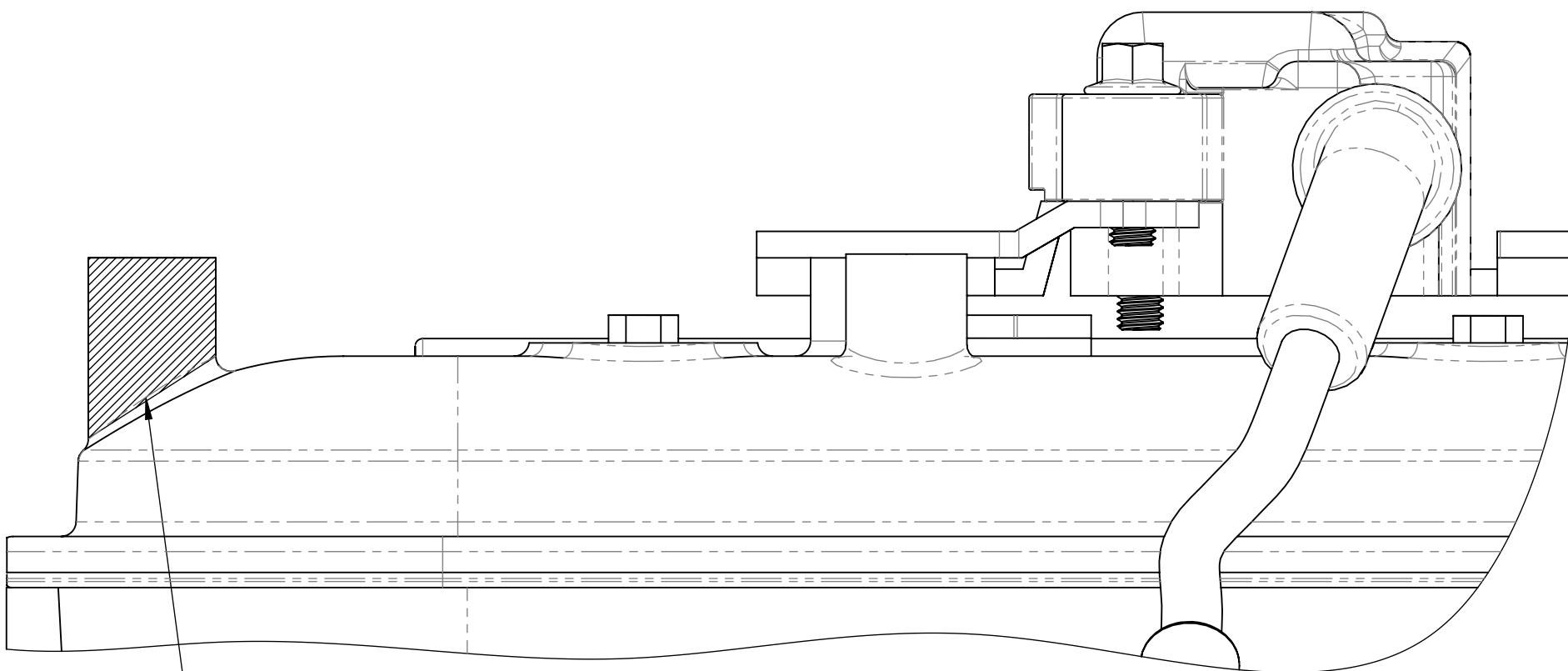
PASSENGER SIDE ROCKER COVER

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

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

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

MODIFIED ROCKER COVER
(OPTION-2)

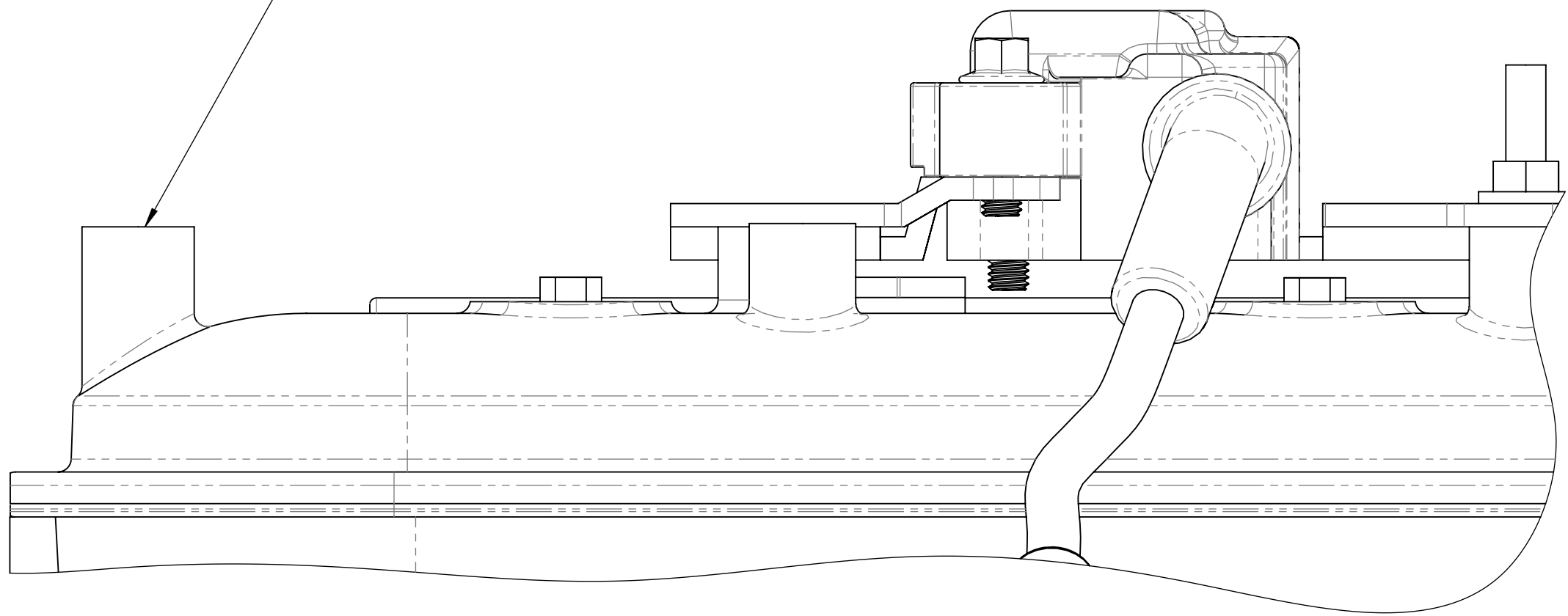


SIDE VIEW (3)

PASSENGER SIDE ROCKER COVER

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

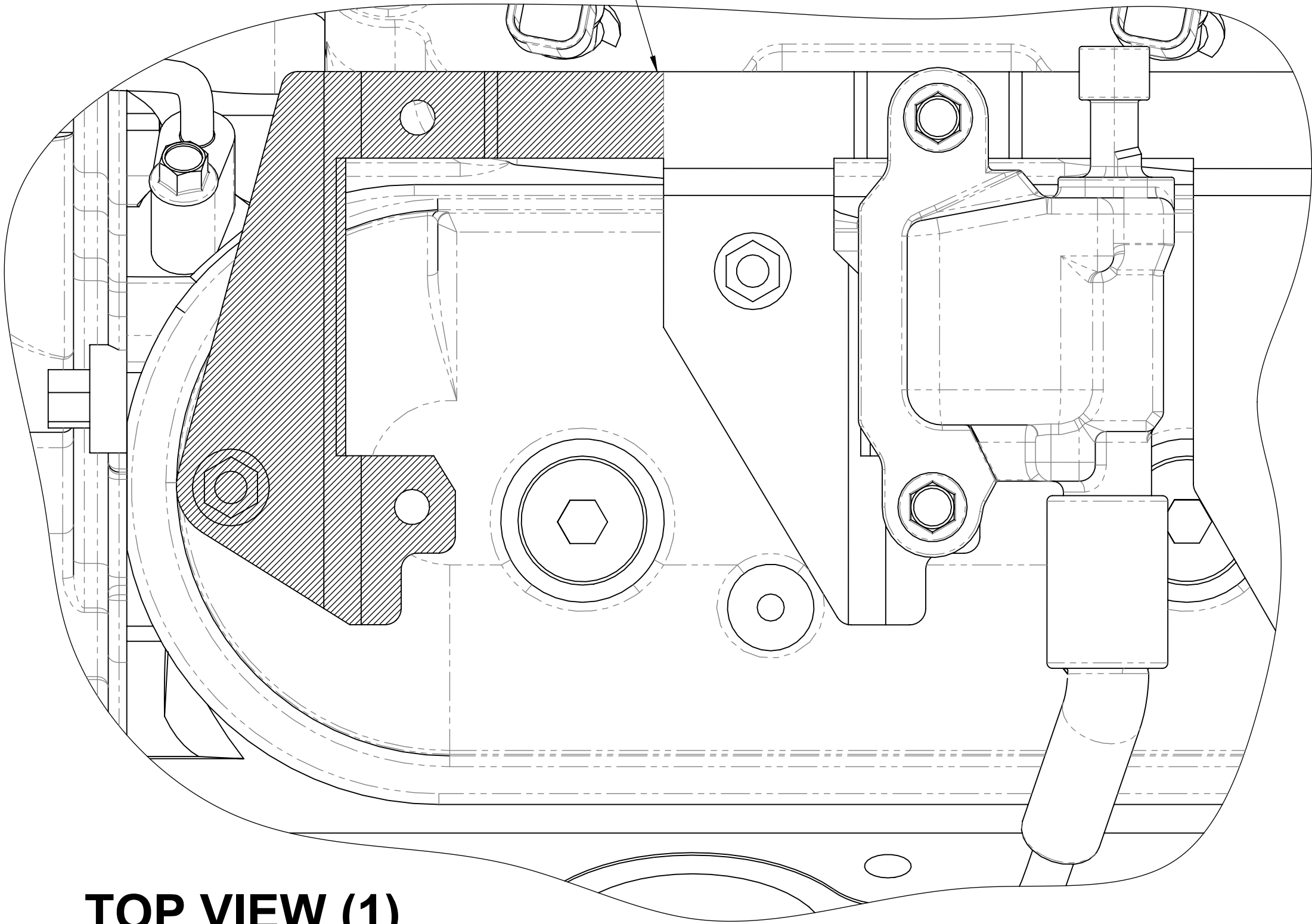
SIDE VIEW (1)



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

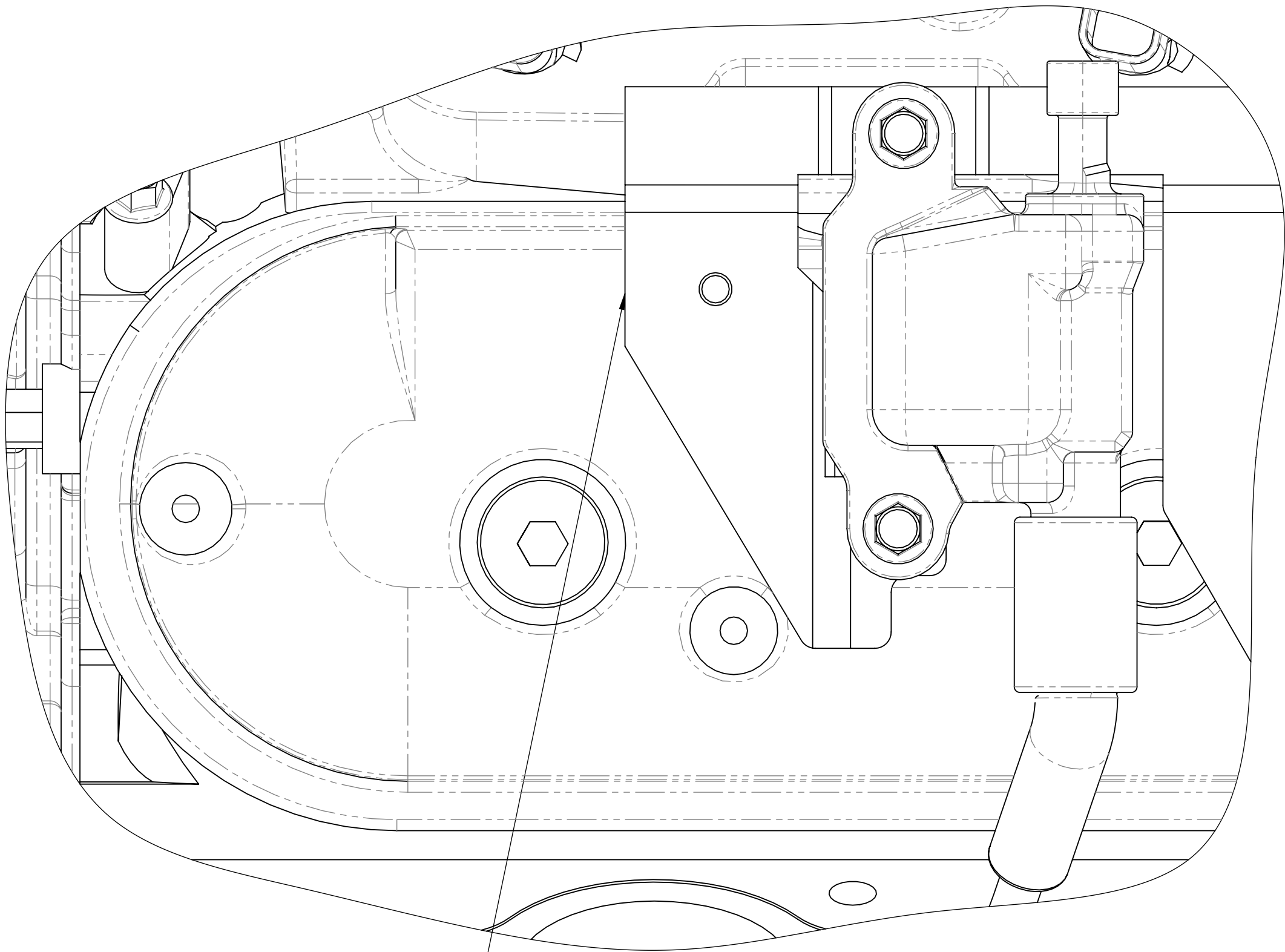
REMOVE THE HATCHED AREA
AS SHOWN TO ALLOW
FITMENT OF THE COIL
RELOCATION BRACKET

STANDARD PASSENGER SIDE
COIL BRACKET



TOP VIEW (1)

MODIFIED PASSENGER SIDE
COIL BRACKET



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

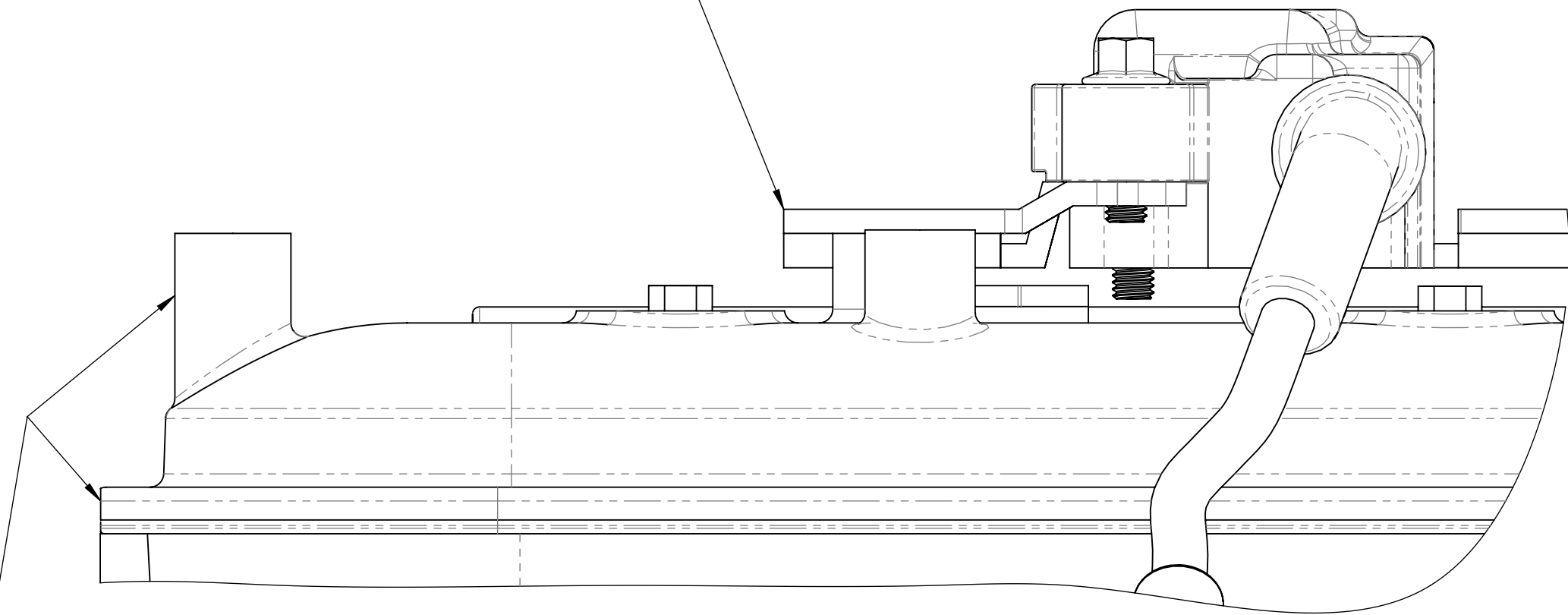
ROCKER COVER
MODIFICATION
IS REQUIRED BEFORE
COIL RELOCATION

REFER TO DRAWING:-

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

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

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



SIDE VIEW (2)

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

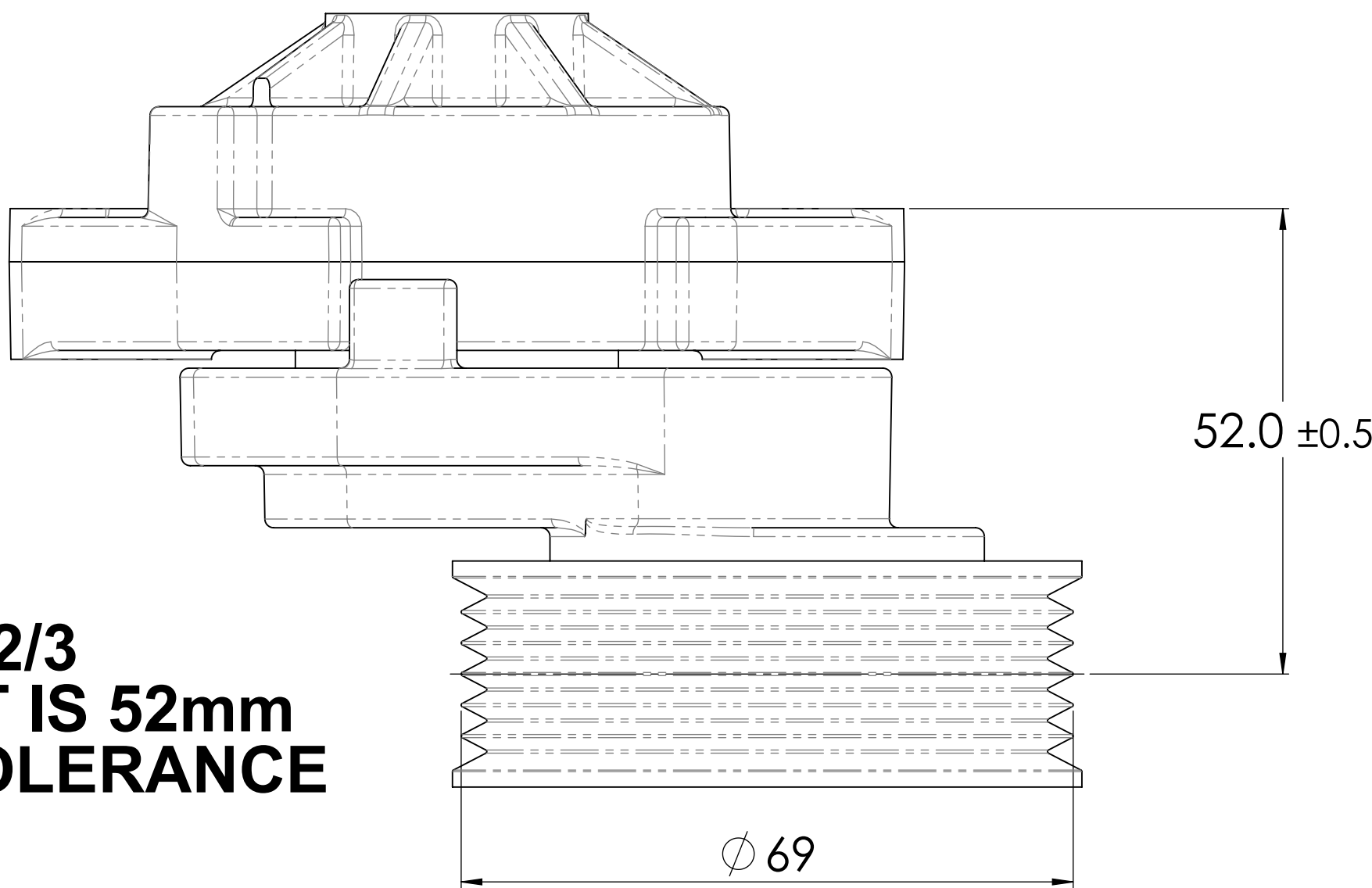
MFC20020

EXPLODE VIEW

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
FINISHED WEIGHT: kg		DRAWING 1 of 1	LS - ACCMOD - 05
			REV No. 0

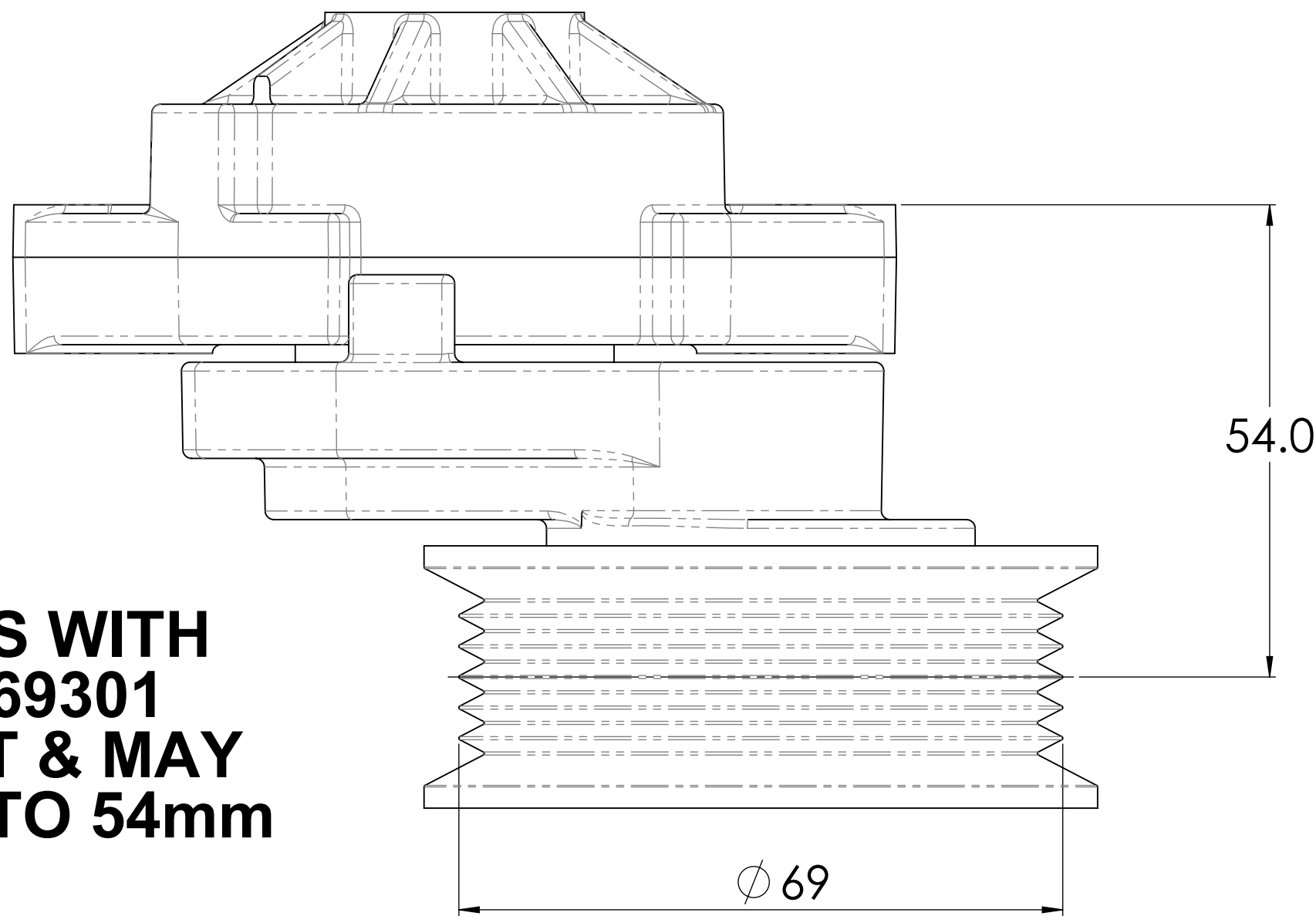
LS2/3 TENSIONER PULLEY OFFSETS

CORRECT OFFSET



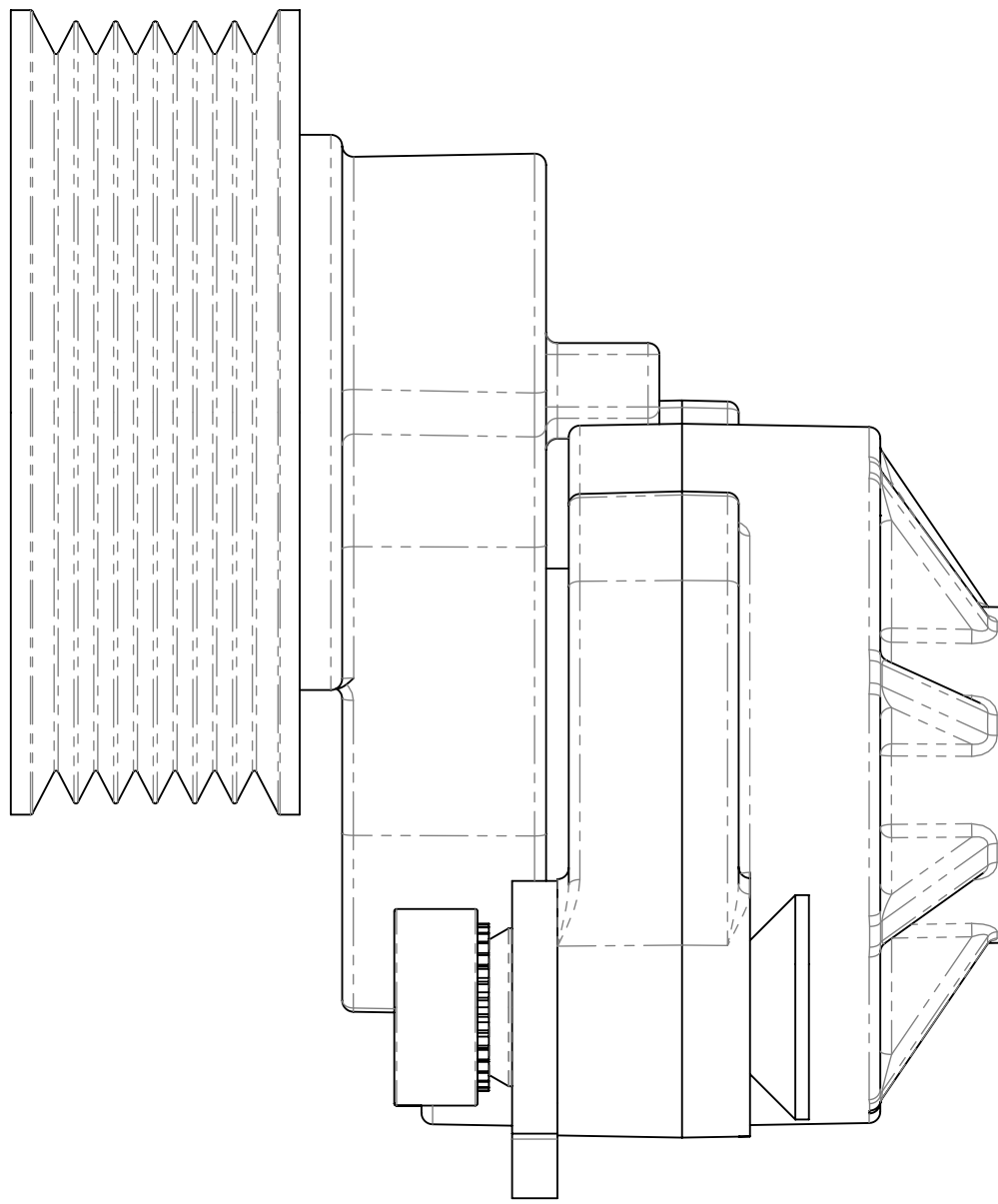
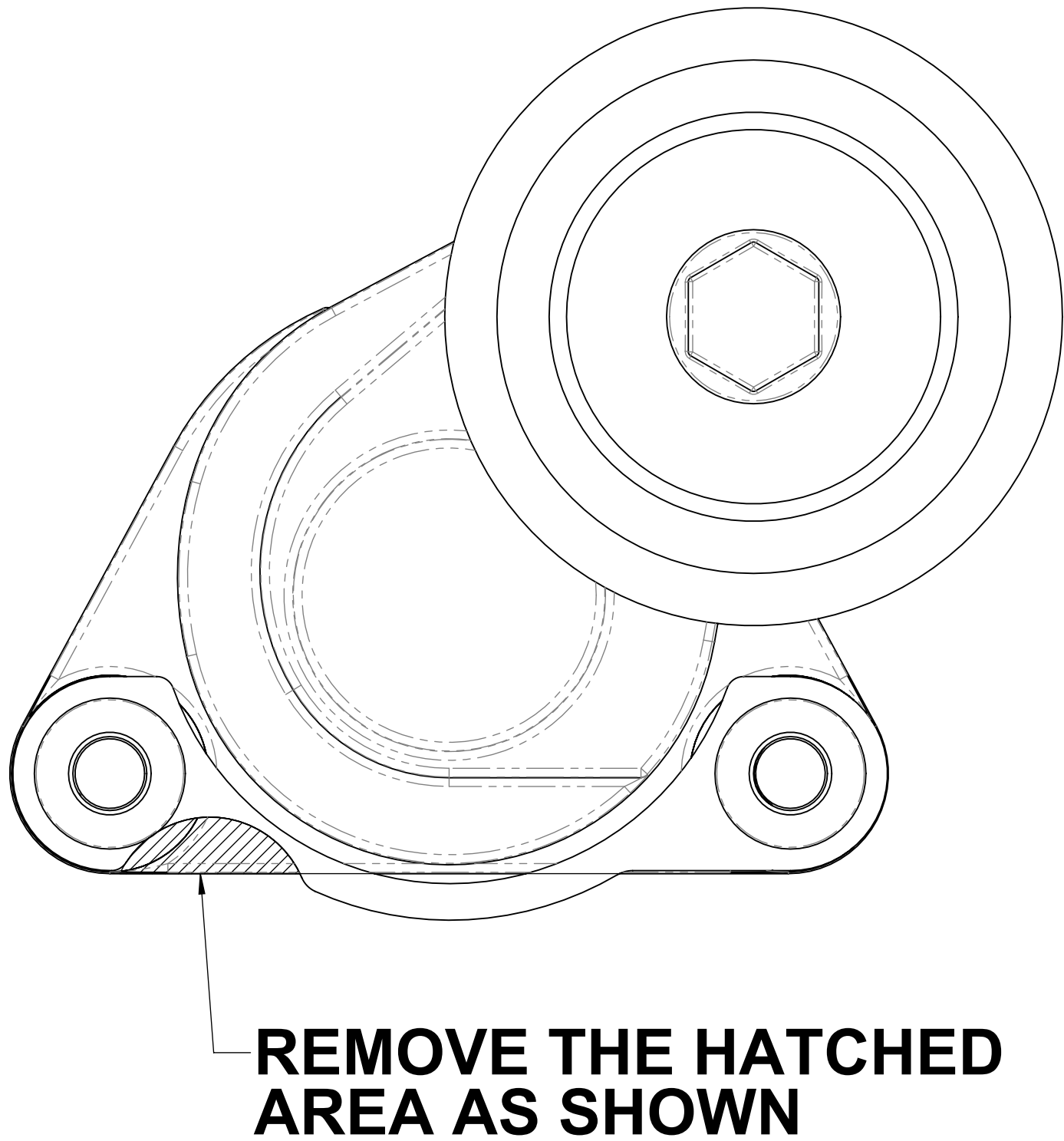
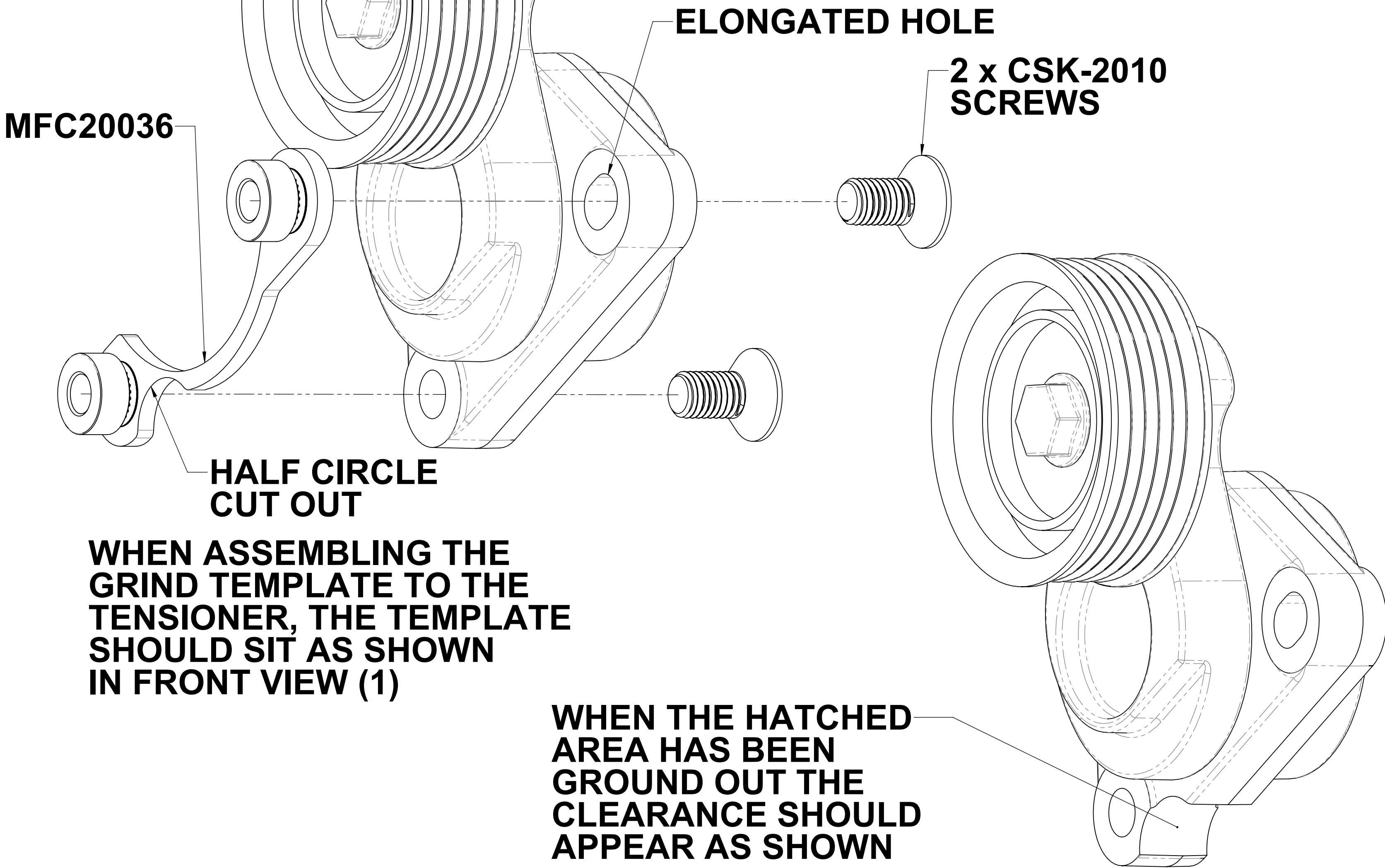
STANDARD OEM LS2/3
TENSIONER OFFSET IS 52mm
WITHIN +/- 0.5mm TOLERANCE

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



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

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

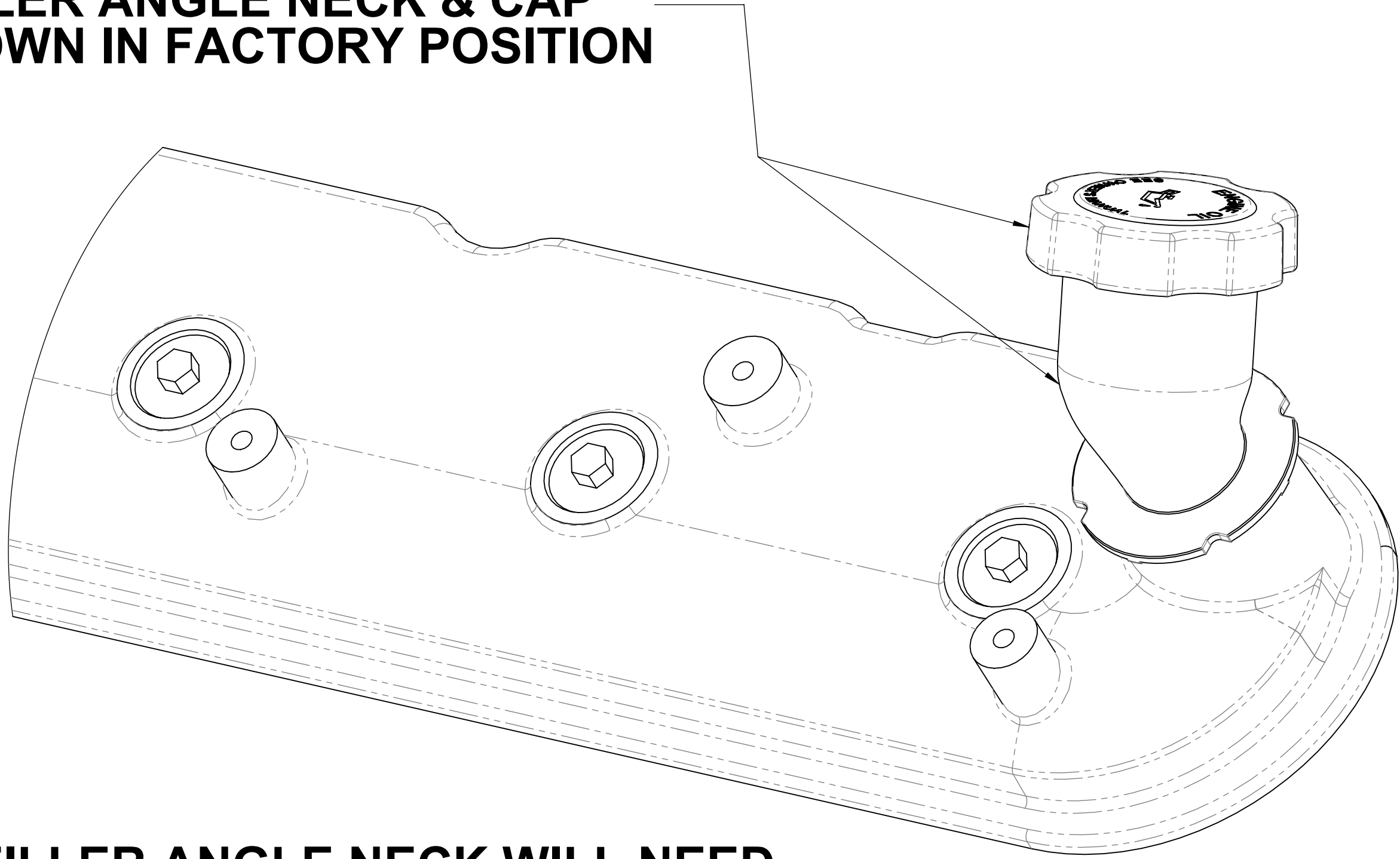
REMOVE THE HATCHED AREA AS SHOWN

FRONT VIEW (1)

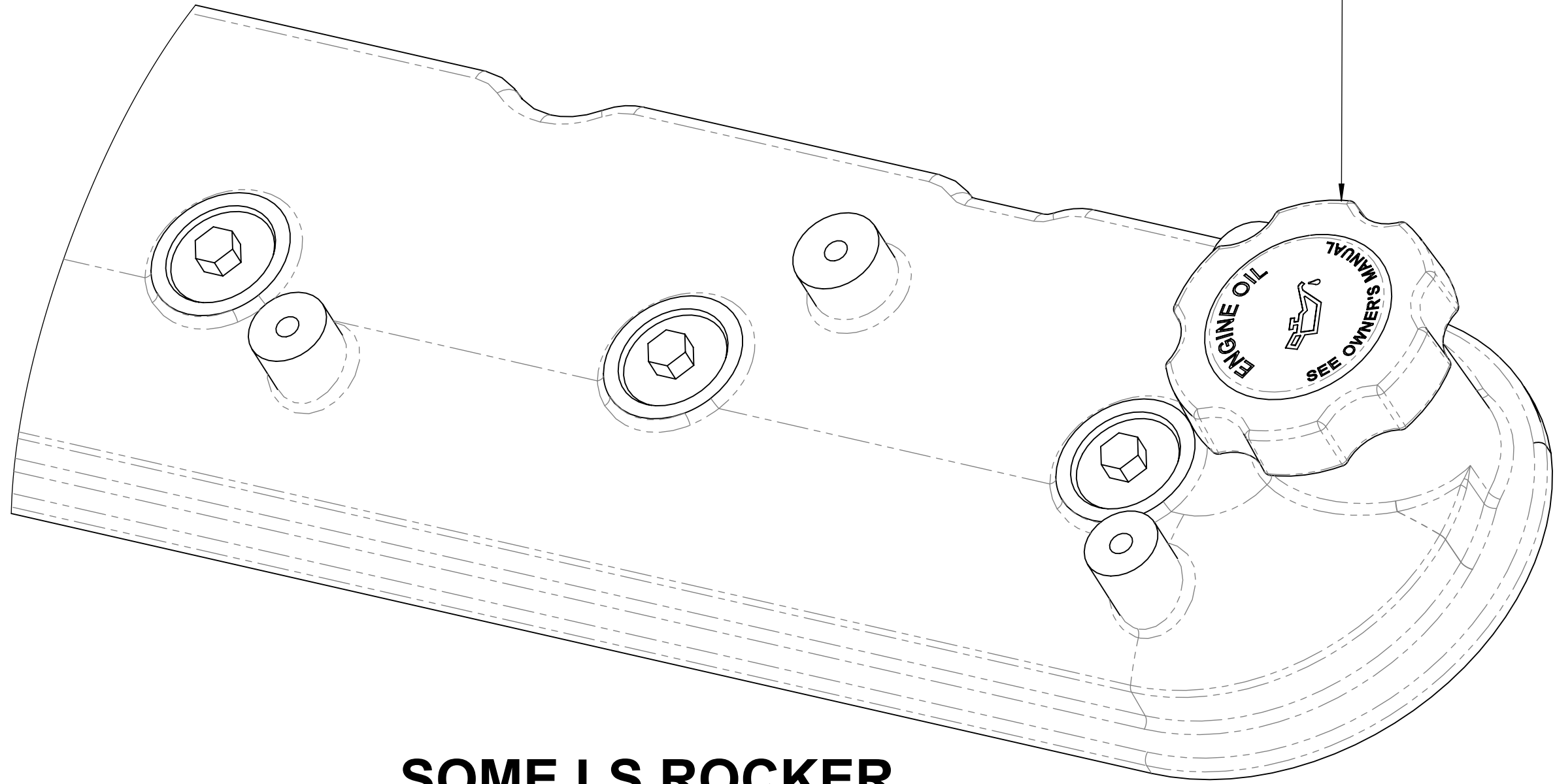
DRAWN	GDK 28/01/2021	TITLE: LS1/2/3 Water Pump Grind Template		
DRAWING CHECKED	PAM 28/01/2021	SCALE:1:1 DRAWING 1 of 1	DRAWING/PART NUMBER LS - ACCMOD - 11	REV No. 0
FINISHED WEIGHT: kg				

LS2/3 OIL FILLER NECK MODIFICATION

OIL FILLER ANGLE NECK & CAP
AS SHOWN IN FACTORY POSITION



OIL FILLER CAP AFTER
MODIFICATION



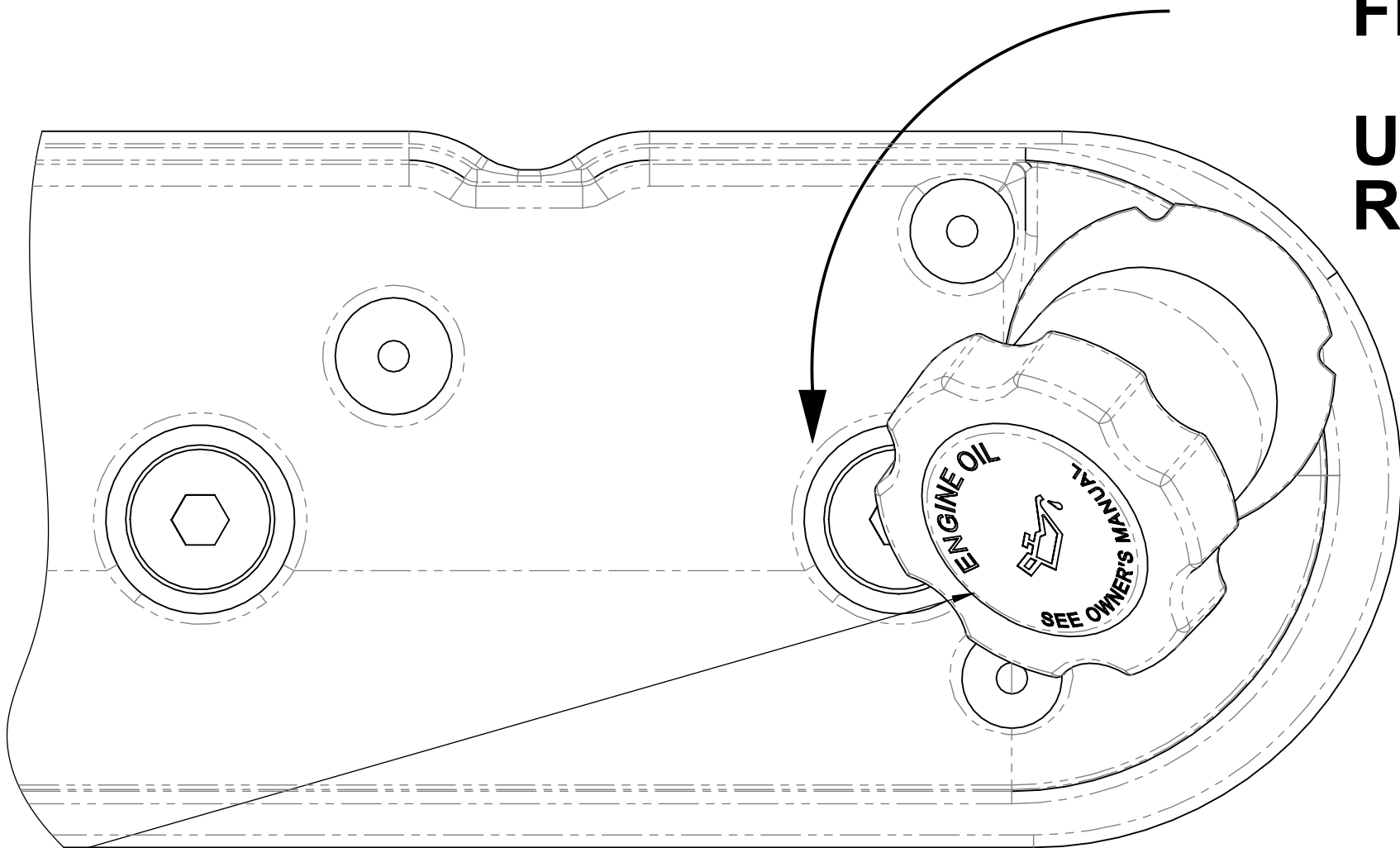
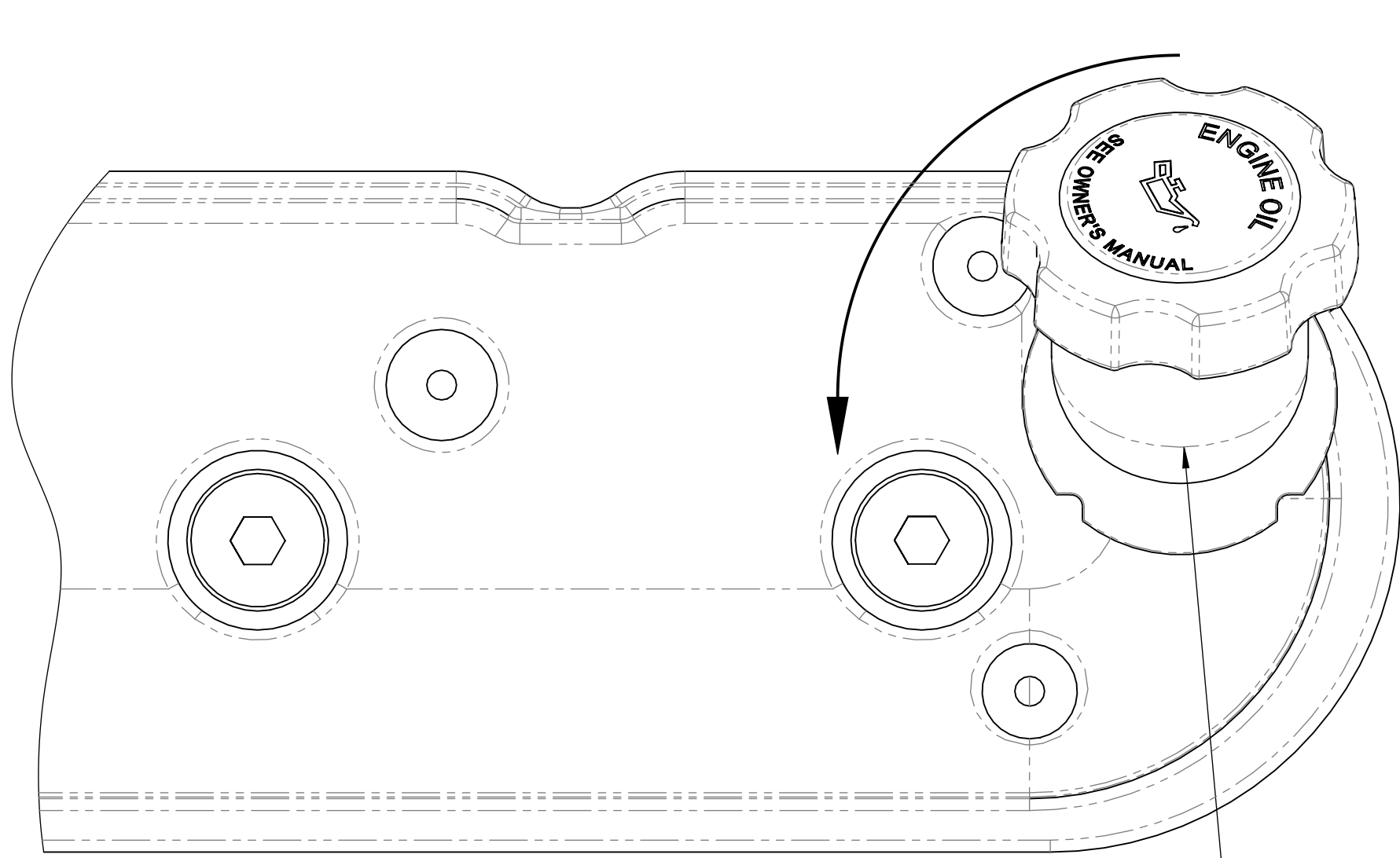
THE OIL FILLER ANGLE NECK WILL NEED
TO BE REMOVED AS IN SOME CARS THE
NECK SITS IN FRONT OF THE HEATER
HOSE OUTLET/INLET

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

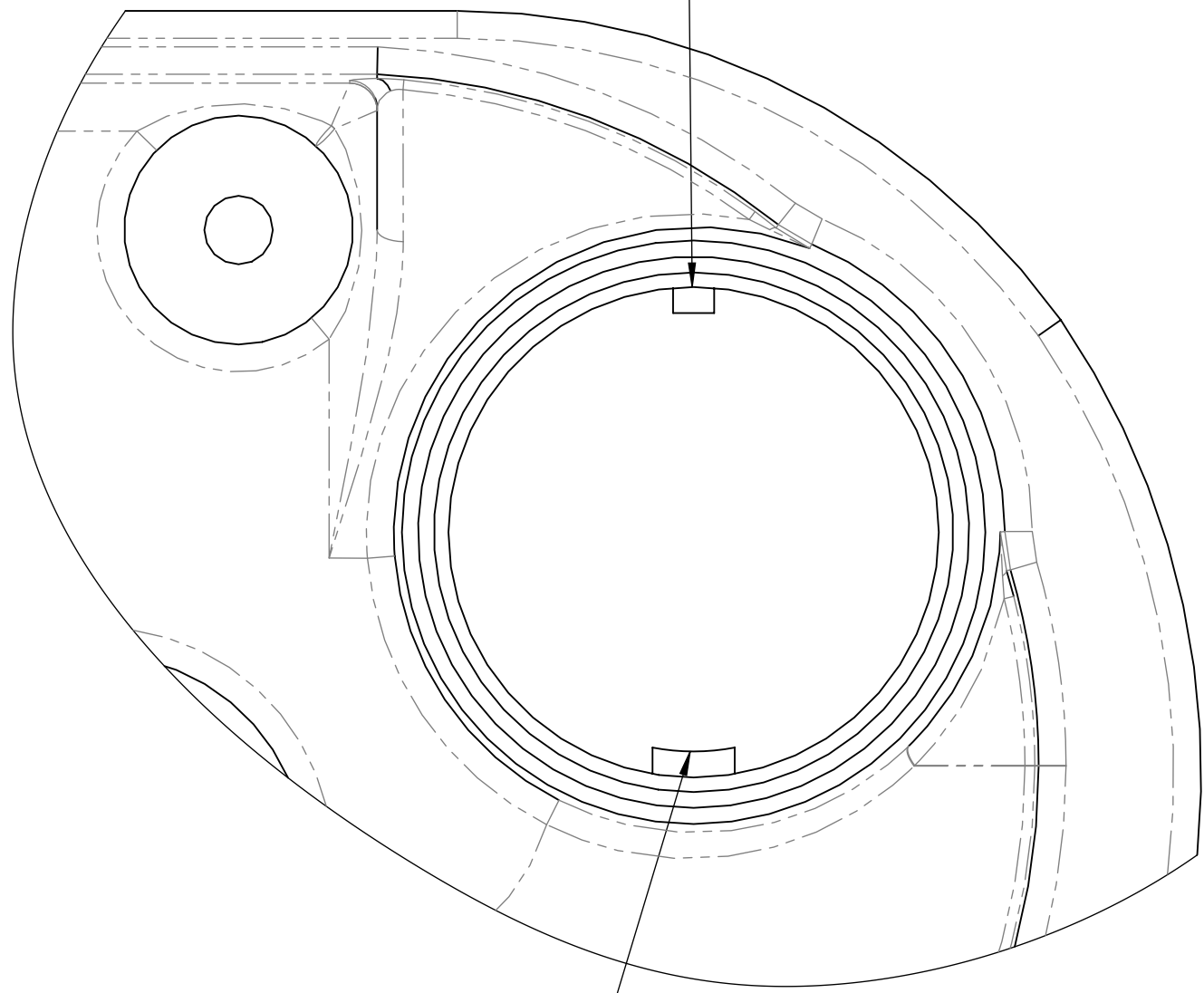
VERY IMPORTANT:

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

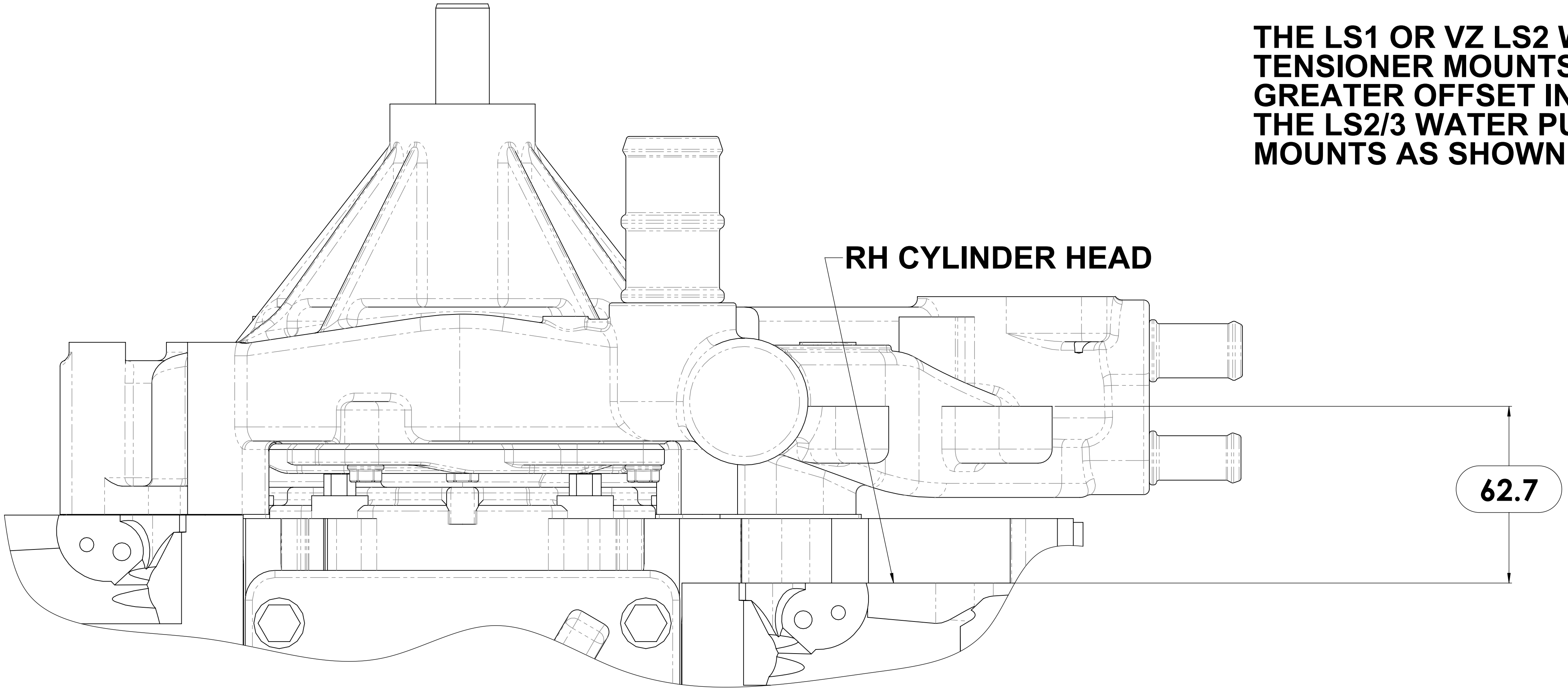


DO NOT REMOVE
THIS TAB

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

LS WATER PUMP TENSIONER MOUNT OFFSETS

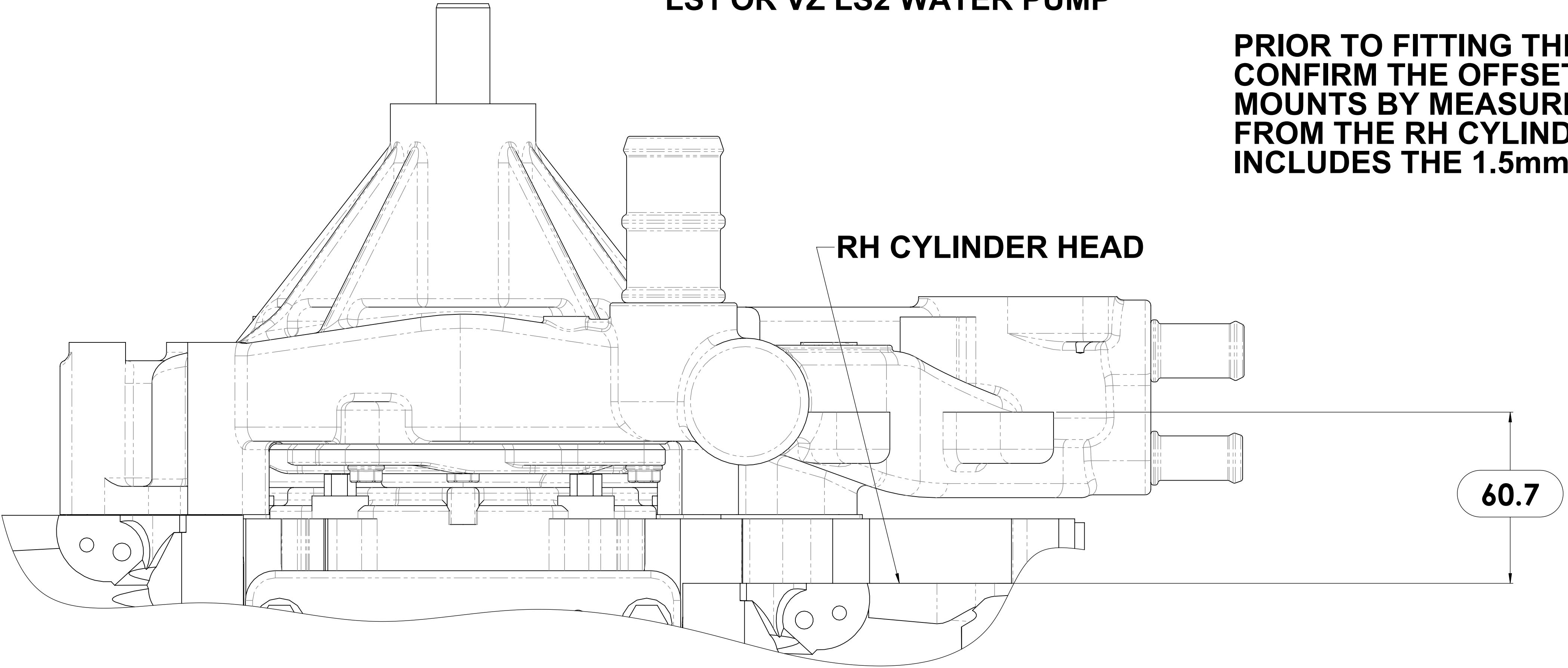
THE LS1 OR VZ LS2 WATER PUMP TENSIONER MOUNTS WILL HAVE A 2mm GREATER OFFSET IN RELATION TO THE LS2/3 WATER PUMP TENSIONERS MOUNTS AS SHOWN



LS1 TENSIONER MOUNT OFFSET (mm)

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 TENSIONER MOUNT OFFSET (mm)

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 1 of 1	DRAWING/PART NUMBER LS - INFO - 02	REV No. 0
FINISHED WEIGHT: kg				

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

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

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

DETAIL A SCALE 3 : 1

ELONGATED SLOT OF THE TENSIONER

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

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