

# DESIGN / DRAWING CHANGE NOTICE

DISTRIBUTION	QMS	QC	PD1	PD2	PD3	PD4	PD5	PD6	PE	PC&L	PU	S&M	P&C	AC&F	R&D	QA	CE	TBK
DCN	-	1	1	1	-	-	-	-	1	1	1	1	-	-	1	1	1	1
DWG/STD	-	1	-	-	-	-	-	-	-	-	1	-	-	-	1	1	1	1

TITLE: **CHANGE OF CUSTOMER'S DRAWING**
**TBK : CHANGED DRAWING OF CASE ASSY, TIMING CHAIN  
BY ELIMINATE O-RING GROOVE FOR COST REDUCTION(MZK)**

 TYPE :  A:PRODUCTION DWG  F: PROTOTYPE DWG  
 C:CUSTOMER'S/APPROVED DWG.  STANDARD/SPEC  
 D:SUPPLIER/RM DWG 

APPROVED

CHECKED

ISSUED

DATE 15-Jan-20

## REASON OF NOTICE

- |  |   |
|--|---|
| <input type="checkbox"/> NEW RELEASE/ISSUE                 | <input checked="" type="checkbox"/> COST REDUCTION    |
| <input checked="" type="checkbox"/> CHANGE OF PRODUCT/SPEC | <input type="checkbox"/> ERROR CORRECTION             |
| <input type="checkbox"/> TO MEET PROCESS CAPABILITY        | <input checked="" type="checkbox"/> UPDATE/COLLECTION |
| <input type="checkbox"/> MANUFACTURING REQUEST             | <input type="checkbox"/>                              |

## DETAIL OF REASON

**TBK HAS CHANGED THE DRAWING OF CASE ASSY, TIMING CHAIN  
COVER OIL PUMP.**

NOTE : COST REDUCTION.

PART NO.: 1060A196, 1060A217,

**1060A363, 1060A364**

PART NAME :

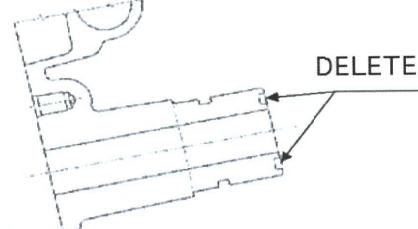
**CASE ASSY, TIMING CHAIN**CUSTOMER: **MITSUBISHI**

## DESCRIPTION:

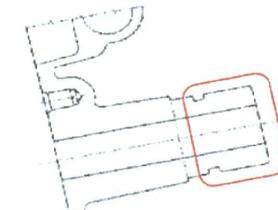
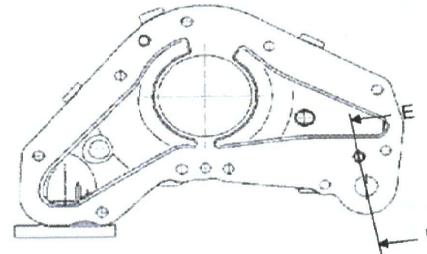
&lt;1&gt; DWG NO. 1211A167 COVER, OIL PUMP (P/No.1211A166)

## 1.1 DELETE GROOVE OF O-RING.

WAS



IS


**ISSUED**  
**17 JAN 2020**  
**R&D Department**  
**TBKK (Thailand)Co.,Ltd.**

INTERCHANGE ABILITY	<input type="checkbox"/> INTERCHANGEABLE	INFORMATION OF STOCK	<input type="checkbox"/> REWORK AND USE	EFFECT POINT	<input type="checkbox"/> DONE	PART NO.	<input checked="" type="checkbox"/> NO CHANGE	TYPE	SIZE	REV	DWG NO./STD NO.	PART NO.	MARK
	<input type="checkbox"/> NOT INTERCHANGEABLE		<input type="checkbox"/> USE FOR SERVICE		<input checked="" type="checkbox"/> RUNNING CHANGE		<input type="checkbox"/> DECIDED PLAN						
						Model : <b>4N15 (SU)</b>		DRAWING NAME <b>COVER, OIL PUMP</b>  DCN NO. : <b>DCN20-003</b> PAGE <b>1/4</b>  Other : <b>EO NO. YP2089</b>					
						POS No. :							
						TBK No. : <b>TS-34256</b>							

REVIEW DOC.     PROCESS DESIGN     CONTROL PLAN     INSPECTION STANDARD     OS/WI     OTHER.....

# DESIGN / DRAWING CHANGE NOTICE

DISTRIBUTION	QMS	QC	PD1	PD2	PD3	PD4	PD5	PD6	PE	PC&L	PU	S&M	P&C	AC&F	R&D	QA	CE	TBK
DCN	-	1	1	1	-	-	-	1	1	1	1	-	-	1	1	1	1	
DWG/STD	-	1	-	-	-	-	-	-	-	1	-	-	-	1	1	1	1	

TITLE: CHANGE OF CUSTOMER'S DRAWING

TBK : CHANGED DRAWING OF CASE ASSY, TIMING CHAIN  
BY ELIMINATE O-RING GROOVE FOR COST REDUCTION(MZK)

TYPE :  A:PRODUCTION DWG     F: PROTOTYPE DWG  
 C: CUSTOMER'S APPROVED DWG.     STANDARD/SPEC  
 D: SUPPLIER/RM DWG   

APPROVED

CHECKED

ISSUED

DATE

*M.Tokada**Chonwaly*

PRAPHAN CH.

15-Jan-20

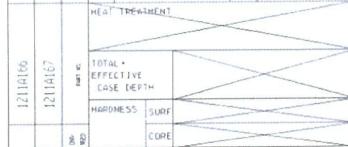
DESCRIPTION :

1.2 ADD SPEC OF ROUGHNESS.

WAS

*		MS82-5000-1	* CONTROL CRITERIA OF SUBSTANCES OF CONCERN
*		MS81-1332-3	* EXPORT TRADE CONTROL ORDER
*		ES-X56901	* CONTROLLED SUBSTANCES FOR USE
*		ES-X09013-1	- GENERAL DIMENSION TOLERANCES AND MACHINING ALLOWANCES (CA...)
*		ES-X09001	- GENERAL DIMENSION TOLERANCES (MACHINE CUT)
		SPEC NO.	CL
			SPEC. NAME

O		1211A166	C	COVER,OIL PUMP	0.451	E
O		1211A167	C	COVER,OIL PUMP		
→ QTY	PT	SYN	PART NO.	CL	PART NAME	MASS ID



IS

*		MS82-5000-	* CONTROL CRITERIA OF SUBSTANCES OF CONCERN
*		MS81-1332-3	* PROCEDURE FOR DETERMINATION TO LIST CONTROL UNDER SECURIT...
*		ES-X56901	* CONTROLLED SUBSTANCES FOR USE
*		ES-X09506	- SURFACE TEXTURE AND INDICATION METHOD IN DRAWING
*		ES-X09013-1	- GENERAL DIMENSION TOLERANCES AND MACHINING ALLOWANCES (CA...)
*		ES-X09001	- GENERAL DIMENSION TOLERANCES (MACHINE CUT)
		SPEC NO.	CL
			SPEC. NAME

O		1211A166	-0	COVER,OIL PUMP	0.452	m
O		1211A167	-04	COVER,OIL PUMP		
→ QTY	PT	SYN	PART NO.	ALLIANCE PART NO.	CL	PART NAME
			1211A166	1211A167		MASS ID
						MASS(kg)

INTERCHANGEABILITY	INFORMATION OF STOCK	EFFECT POINT	PART NO.	REFER DOC	A	A1	-	1211A167	1211A166	<1>								
					<input type="checkbox"/> INTERCHANGEABLE	<input type="checkbox"/> NOT INTERCHANGEABLE	<input type="checkbox"/> REWORK AND USE	<input type="checkbox"/> USE FOR SERVICE	<input type="checkbox"/> NOT AVAILABLE TO USE	<input type="checkbox"/> USE UNTIL STOCK FINISH	<input type="checkbox"/> DONE	<input checked="" type="checkbox"/> RUNNING CHANGE	<input type="checkbox"/> DECIDED PLAN	<input type="checkbox"/> ONLY SERVICE PART	<input checked="" type="checkbox"/> NO CHANGE	<input type="checkbox"/> CHANGE	TYPE	SIZE
REVIEW DOC.		<input checked="" type="checkbox"/> PROCESS DESIGN		<input checked="" type="checkbox"/> CONTROL PLAN		<input checked="" type="checkbox"/> INSPECTION STANDARD		<input checked="" type="checkbox"/> OS/WI		<input checked="" type="checkbox"/> OTHER.....		Model :	4N15 (SU)		DRAWING NAME			
												POS No.:			COVER, OIL PUMP			
												TBK No.:	TS-34256		DCN NO.:	DCN20-003		
												Other:	EO NO. YP2089		PAGE	2/4		

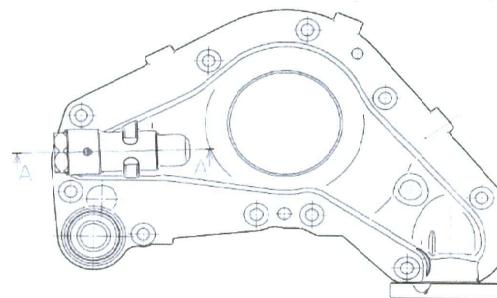
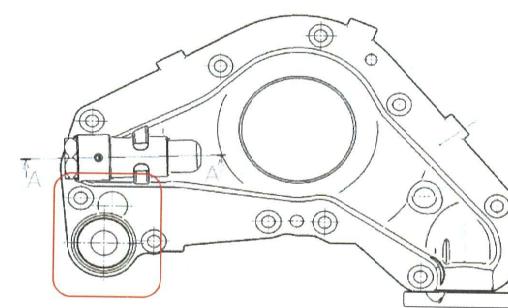
# DESIGN / DRAWING CHANGE NOTICE

**TITLE: CHANGE OF CUSTOMER'S DRAWING**

**TBK : CHANGED DRAWING OF CASE ASSY, TIMING CHAIN  
BY ELIMINATE O-RING GROOVE FOR COST REDUCTION(MZK)**

**DESCRIPTION :**

<2> DWG NO. 1211A169 COVER ASSY, OIL PUMP (P/No.1211A168)

**2.1 CHANGE SHAPE OF COVER , OIL PUMP.**
**WAS**

**IS**

**2.2 CHANGE OF MASS.**
**WAS**

1	1211A166	COVER,OIL PUMP	<input checked="" type="checkbox"/>
0	1211A168	- COVER ASSY,OIL PUMP	0.501 F
0	1211A169	- COVER ASSY,OIL PUMP	
→	QTY PI SYM	PART NO.	CL PART NAME MASS ID MASS(FQ)
HEAT TREATMENT			
FINISH NATURE			
TOTAL EFFECTIVE CASE DEPTH SURFACE FEATURE SURFACE FINISH NATURE			
HARDNESS SURF CORE TOLERANCE-UNLESS SP DATE:2014			
*	1211A168	1211A169	1211A168

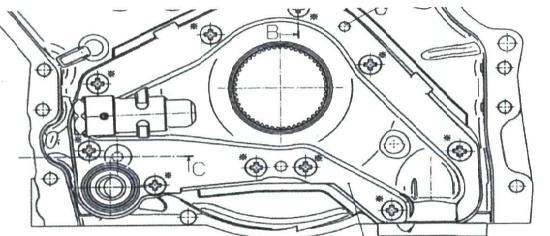
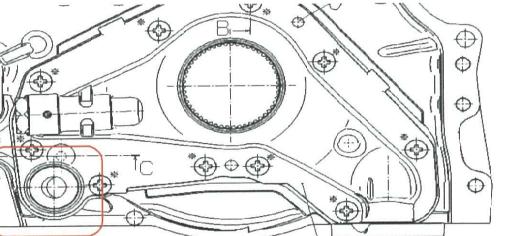
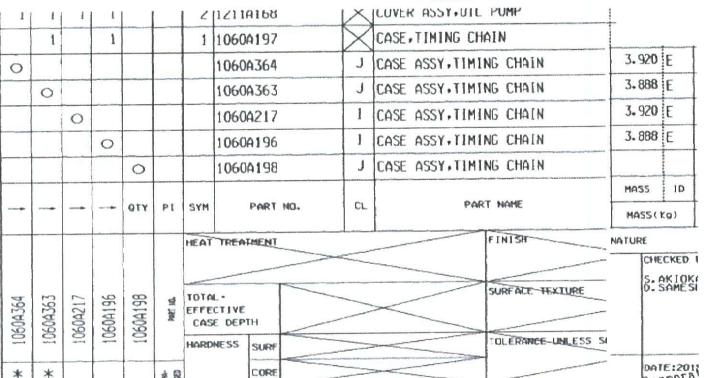
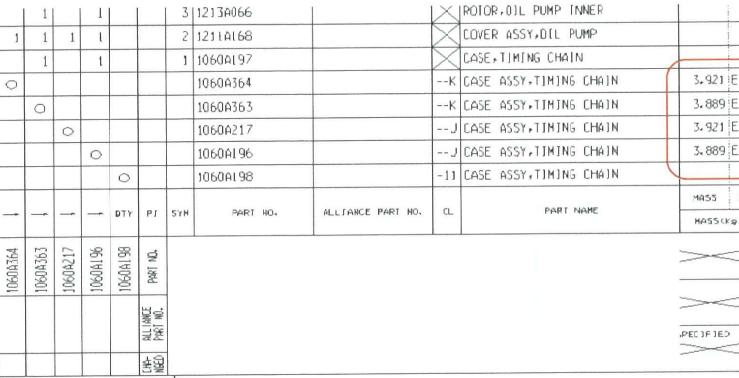

**IS**

1	1211A166	COVER,OIL PUMP	<input checked="" type="checkbox"/>
0	1211A168	-D COVER ASSY,OIL PUMP	0.501 E
0	1211A169	-D4 COVER ASSY,OIL PUMP	
→	QTY PI SYM	PART NO.	ALLIANCE PART NO. CL PART NAME MASS ID MASS(FQ)
HEAT TREATMENT			
FINISH NATURE			
TOTAL EFFECTIVE CASE DEPTH SURFACE FEATURE SURFACE FINISH NATURE			
HARDNESS SURF CORE TOLERANCE-UNLESS SP DATE:2014			
*	1211A168	1211A169	1211A168

INTERCHANGEABILITY	INFORMATION OF STOCK	EFFECT POINT	PART NO.	A	A1	1211A169	1211A168	<2>				
				INTERCHANGEABLE	NOT INTERCHANGEABLE	REWORK AND USE	USE FOR SERVICE	DONE	NO CHANGE	TYPE	SIZE	REV
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CHANGE	Model :	4N15 (SU)	DRAWING NAME			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	REF ID	POS No.:	COVER ASSY, OIL PUMP				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	REFER DOC	TBK No.:	TS-34256	DCN NO.:			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other:	EO NO. YP2089	DCN20-003			PAGE	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	REVIEW DOC.	PROCESS DESIGN	CONTROL PLAN	INSPECTION STANDARD	OS/WI	OTHER.....	3/4

## DESIGN / DRAWING CHANGE NOTICE

DISTRIBUTION	QMS	QC	PD1	PD2	PD3	PD4	PD5	PD6	PE	PC&L	PU	S&M	P&C	AC&F	R&D	QA	CE	BK
DCN	-	1	1	1	-	-	-	-	1	1	1	1	-	-	1	1	1	
DWG/STD	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1

TITLE: CHANGE OF CUSTOMER'S DRAWING TBK : CHANGED DRAWING OF CASE ASSY, TIMING CHAIN BY ELIMINATE O-RING GROOVE FOR COST REDUCTION(MZK)		TYPE : <input checked="" type="checkbox"/> A:PRODUCTION DWG <input type="checkbox"/> F: PROTOTYPE DWG <input type="checkbox"/> C:CUSTOMER'S/APPROVED DWG. <input type="checkbox"/> STANDARD/SPEC <input type="checkbox"/> D:SUPPLIER/RM DWG <input type="checkbox"/>		APPROVED <i>M. Zahid</i> <i>Chomrat</i>		CHECKED PRAPHAN CH.		ISSUED DATE 15-Jan-20	
DESCRIPTION :  <3> DWG NO. 1060A198 CASE ASSY, TIMING CHAIN (P/No.1060A364,1060A363,1060A217,1060A196)				APPLICABLE ASSY PART NO. : 1060A196, 1060A217, 1060A363, 1060A364		PART NAME : CASE ASSY, TIMING CHAIN		CUSTOMER : MITSUBISHI	
3.1 CHANGE OF COVER, OIL PUMP.  WAS		IS							
									
3.2 CHANGE MASS.  WAS		IS							
									
INTERCHANGEABILITY		INFORMATION OF STOCK		EFFECT POINT		PART NO.		REFER DOC.	
<input type="checkbox"/> INTERCHANGEABLE <input type="checkbox"/> NOT INTERCHANGEABLE		<input type="checkbox"/> REWORK AND USE <input type="checkbox"/> USE FOR SERVICE <input type="checkbox"/> NOT AVAILABLE TO USE <input type="checkbox"/> USE UNTIL STOCK FINISH		<input type="checkbox"/> DONE <input checked="" type="checkbox"/> RUNNING CHANGE <input type="checkbox"/> DECIDED PLAN <input type="checkbox"/> ONLY SERVICE PART		A    A1    1    1060A198		TYPE SIZE REV Model : 4N15 (SU) DRAWING NAME CASE ASSY, TIMING CHAIN	
REVIEW DOC.		<input checked="" type="checkbox"/> PROCESS DESIGN <input checked="" type="checkbox"/> CONTROL PLAN <input checked="" type="checkbox"/> INSPECTION STANDARD <input checked="" type="checkbox"/> OS/WI <input checked="" type="checkbox"/> OTHER.....				DCN NO. : DCN20-003 PAGE 4/4			

FM-R&D-011 / 11 / 3-OCT-2018

## ROUTE: R&D → CONCERN DEPARTMENTS

## 再発行変更歴/Reissue change history

発行日/Date of issue	修正内容/Modified content	承認/Approve	作成/Making
△ / /			
△ / /			

## 図面変更通知書

/CHANGE NOTICE FOR DRAWING

配 布 外 先	T	T	B	B	T	D	T	雷 用 T B K K A I K
図面	○							
通知書	○							

件名/TITLE  
4N15 COVER, OIL PUMP DELETE O-RING GROOVE.

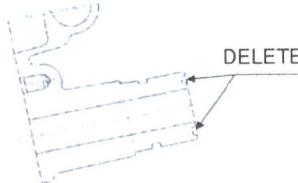
VA査定依頼書の管理No. /ASSESSMENT REQUEST NO.	製造指示書No. /PRODUCTION REQUEST NO.	図面管理受付 /RECEIPT	20.1.13	図面枚数 /NUMBER OF PRINT
設計変更提案書の受付No. /DESIGN CHANGE PROPOSAL NO.	設計指示書No. /DESIGN REQUEST NO.	設計FMEA改訂 /DESIGN FMEA REVISION	要/IMPORTANT POINT 不要/NEEDLESSNESS	設計FMEA番号 /DESIGN FMEA NO.

## (内容・経過・背景)/(DESCRIPTION)

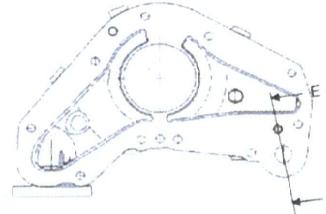
&lt;1&gt; DWG NO. 1211A167 COVER, OIL PUMP (P/No.1211A166)

1.1 DELETE GROOVE OF O-RING.

&lt;WAS&gt;



&lt;IS&gt;



1.2 ADD SPEC OF ROUGHNESS.

&lt;WAS&gt;



&lt;IS&gt;

M582-5000-1	CONTROL CRITERIA OF SUBSTANCES OF CONCERN
M581-132-3	PROCEDURE FOR DETERMINATION TO LIST CONTROL UNDER SECURITY...
E5-156901	CONTROLLED SUBSTANCES FOR USE
E5-109506	SURFACE TEXTURE AND INDICATION METHOD IN DRAWING
E5-109012-1	GENERAL FINISHES, TOLERANCES AND ALLOWANCES (MACHINED SURFACE)
E5-109001	GENERAL DIMENSION TOLERANCES (MACHINE CUT)

1211A166	-O COVER,OIL PUMP	0.452 E
1211A167	-O4 COVER,OIL PUMP	
211 PI SH	PART NO.	ALLIANCES PART NO.
211A166	EL	EL
211A167	PART NAME	PART NAME
	REV. NO.	REV. NO.
	NET WT.	NET WT.
	NET WT.	NET WT.

互換性/INFORMATION OF EFFECT POINT	A 新旧共有/INTCHG NEW FOR OLD AND V.V	1 実施済 /IN EFFECT	1 目標品質の変更 /CHG OF PROD SPEC	(A) 同番変更/NO PART NO CHANGE	品目番号(代表)/PART NO. (KEY NO.) 1060A196..  品目名称/NAME CASE ASSY, TIMING CHAIN	-	-	-
	B 新旧共無 /NOT INTCHG.	2 即時 /IMMEDIATELY	2 目標品質との不適合 /IMPROVEMENT TO MEET SPEC	(B) 異番変更/PART NO. CHANGE		A2 判 SIZE	1211A167	-
	C 新は旧に有 /NEW CAN BE USE	3 試作当初より /PROTOTYPE	3 工程能力との不適合 /MANUFACTURING REQUEST	4N15 型式・車型/MODEL AUTOMOBILE TYPE				設変前変更番號/PREVIOUS DWG. NO.
		4 量産時より /MASS PRODUCTION	4 原価低減 /COST REDUCTION	5 誤記・追加 /ERROR-CORRECTION				設変前変更番號/PREVIOUS DWG. NO.
		5 即時手配仕掛品完了次第 /IN PRODUCTION COMPLETE	5 関連変更 /RELATED CHG	6 生管指示による/PRODUCTION CONTROL DIV. REQUEST				設変前変更番號/PREVIOUS DWG. NO.
		6 生管指示による/PRODUCTION CONTROL DIV. REQUEST	7 集合図化 /COLLECTIVE DWG	7 得意先指示による(生産検討会) /CUSTOMER'S INSTRUCTION (PRODUCTION REVIEW)				設変前変更番號/PREVIOUS DWG. NO.
		7 得意先指示による(生産検討会) /CUSTOMER'S INSTRUCTION (PRODUCTION REVIEW)	9 その他 /OTHERS	9 その他 /OTHERS				設変前変更番號/PREVIOUS DWG. NO.
		9 その他 /OTHERS						設変前変更番號/PREVIOUS DWG. NO.
								設変前変更番號/PREVIOUS DWG. NO.

株式会社TBK/TBK CO., Ltd

経路: 設計→開発管理

2018-07

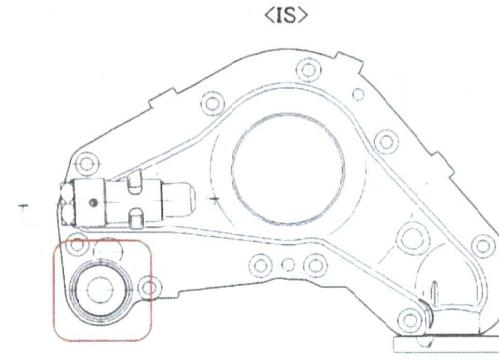
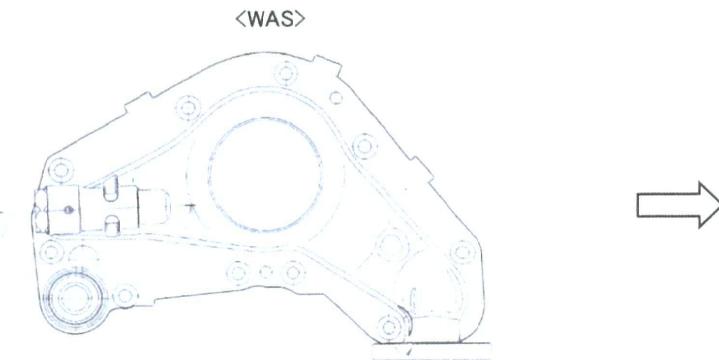
# 図面変更通知書 /CHANGE NOTICE FOR DRAWING

件 名/TITLE

4N15 COVER, OIL PUMP DELETE O-RING GROOVE.

### (内容・経過・背景)/(DESCRIPTION)

<2> DWG NO. 1211A169 COVER ASSY, OIL PUMP (P/No.1211A168)  
2.1 CHANGE SHAPE OF COVER , OIL PUMP.



## 2.2 CHANGE OF MASS.



-	-	-
A0 判 /SIZE	1211A169	-
設変前対象図番 / PREVIOUS DWG. NO		設変前要勘 PREVI- OUS ENGINEERING CHANCE NO
図面名称 / DWG. NAME		
COVER ASSY, OIL PUMP		
通知 NO. /NOTICE NO.	頁 / PAGE	
TS-34256	2	3

# 図面変更通知書 /CHANGE NOTICE FOR DRAWING

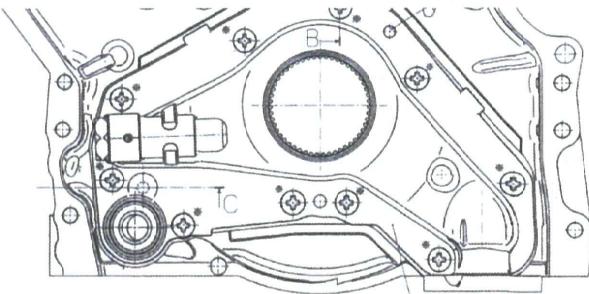
件名/TITLE

4N15 COVER, OIL PUMP DELETE O-RING GROOVE.

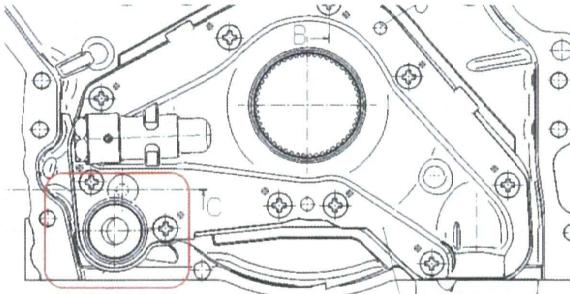
(内容・経過・背景)/(DESCRIPTION)

- <3> DWG NO. 1060A198 CASE ASSY, TIMING CHAIN (P/No.1060A364,1060A363,1060A217,1060A196)  
3.1 CHANGE OF COVER, OIL PUMP.

<WAS>



<IS>



3.2 CHANGE MASS.

<WAS>

				4N15 COVER, OIL PUMP	
				1060A197	CASE, TIMING CHAIN
O				1060A364	J CASE ASSY, TIMING CHAIN
O				1060A363	J CASE ASSY, TIMING CHAIN
O				1060A217	J CASE ASSY, TIMING CHAIN
O				1060A196	J CASE ASSY, TIMING CHAIN
O				1060A198	J CASE ASSY, TIMING CHAIN
---	PT	S/N	PART NO.	CL	PART NAME
					MATERIAL
					HEAT TREATMENT
					FINISHES
					NOTES
					TOTAL EFFECTIVE CASE DEPTH
					10.5MM
					MAXIMUM SURF CORP
					10.5MM MAX
					MIN. SURF CORP
					10.5MM MIN
					NOTES
					10.5MM



<IS>

				ROTOR, OIL PUMP TOWER	
				311211406	CASE, TIMING CHAIN
O				2112114168	1060A197
O				1060A364	1060A363
O				1060A217	1060A217
O				1060A196	1060A198
---	PT	S/N	PART NO.	CL	PART NAME
					MATERIAL
					HEAT TREATMENT
					FINISHES
					NOTES
					TOTAL EFFECTIVE CASE DEPTH
					10.5MM
					MAXIMUM SURF CORP
					10.5MM MAX
					MIN. SURF CORP
					10.5MM MIN
					NOTES
					10.5MM

A0 判 SIZE	1060A198	1
設変前対象図番 /PREVIOUS DWG. NO		
図面名称 /DWG. NAME		
CASE ASSY, TINING CHAIN		
通知 NO. /NOTICE NO		頁 /PAGE
TS-34256		3 / 3