

To: Ms. Angie Cestina

Supplier Control No.: 106

CC: Ms. Icy Flores

Date: 2/12/2019

CC: Ms. Cecille Marce

Supplier: OB KOGYO PH

☐ Support for the RoHS

S U P P L I E R	Section	Engineering Section
	Person in charge	J. SOZALES
	Approval	K. Takahashi

4 M Change notification (変更通知書)

Part number	X0KD04486-Y180 REV. NO. 03	Part name	GEAR Z42 M08
Model	GPP II	Presence of attached datum and sample	<input checked="" type="radio"/> Appending <input type="radio"/> unappending

■Content of change]

☒ Man (Worker's change) NEW TECHNICIAN☒ Machine (Equipment change)☐ Material (Division of material change)☐ Support for the RoHS
(Certificate with a data must be attached) 【 Cr(VI) , Cd, Hg, Pb, PBB, PBDE 】☐ Material change☐ End of life (EOL)☐ Method (Work method change)☐ Others ()

■Change reason]

PARTS LOCALIZATION (OBSZ-OBPH)

F D T P	Purchasing Section	
	Control Number	PUR-EX-19-111-0009
	Person in charge	N.B. Langato
	Approval	M.A. CAPAN

[Change time]	Feb-2019	Evaluation result before hand	<input checked="" type="radio"/> Appending <input type="radio"/> unappending
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FDTP Evaluation and Result

FDTP QC Control No.:

Date:

Section	FDTP QC/QA
Person in charge	
Approval	

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Section	FDTP PE
Person in charge	
Approval	

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Section	FTEC PE/QA
Person in charge	
Approval	

4 M Change answer

[Conclusion] Judgment : 4 M Content of change request

☐ Acceptable ☐ Not acceptable

■ [Matters in request]

■ [Opinion and evaluation result]

FUNCTION TEST CONFIRMATION REQUEST FORM FOR 4M, SUPPLIER CHANGED AND DIE RENEWAL

(To be filled-out by the Purchasing)

Supplier	OB KOGYO PHILIPPINES INC.	Request Date	2/13/2019	Control No.	FT-19-007
Part Number	KD04486-Y180	Revision No.	03	Requestor	N.B. Lanza
Part Name	GEAR Z4Z M08	Model	GIPP II	Approval	M. TORIA

Details of Request

<input type="checkbox"/> 4M CHANGED <input type="checkbox"/> EXTERNAL CONTENT OF CHANGE/S: _____ <input type="checkbox"/> INTERNAL	<input type="checkbox"/> SUPPLIER CHANGED FROM: _____ TO: _____ REASON: _____	<input checked="" type="checkbox"/> DIE RENEWAL CURRENT PARTS SUPPLIER: OB PH DIE FABRICATOR FOR THE NEW DIE OB SHENZHEN
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(To be filled-out by FDTP-QC Inspection)

Evaluation Result			Judgement Date	
			Person In - Charge	Approval

Function Test (QC Evaluation)			Judgement Date	
			Person In - Charge	Approval

(To be filled-out by FDTP-PE)

Evaluation Result			Judgement Date	
			Person In - Charge	Approval

(To be filled-out by QA Section)

Function Test (QA Evaluation)			Judgement Date	
			Person In - Charge	Approval

TO: Fujitsu Die Tech Corp. of the Phils.

CERTIFICATE FOR MATERIAL USED

D.R./P.O. No. :

QUANTITY : 5 PCS

PART NUMBER X0KD04486-Y180 REV. NO. 03

PART NAME : GEAR Z42 M08

MATERIAL USED

MATERIAL GENERIC NAME : POM

MATERIAL DESIGNATION : M90-44

MANUFACTURE OF MATERIAL : POLYPLASTICS

UL94 FLAME CLASS : UL-94 HB

UL FILE No. :

The amount of this product of the regrind materials used is weighth ratio 0% or less according to UL 746 regulations.

We certify the above description.

DATE 12-Feb-19

KAZUNORI TAKAHASHI
PRESIDENT

COMPANY NAME : OB KOGYO PHILIPPINES INC. SIGN : 12 FEB 2019

Supervisor or Manager
(Signature over printed name)

Note: PART NAME can be written as per the drawing
MATERIAL USED shall be stated as per the Yellow Book contents

To be filled by supplier 依頼元記入欄

Requesting Supplier
依頼元名

Date

12-Feb

OB KOGYO PH

QUALIFICATION APPROVAL INSPECTION REQUEST FOR PLASTIC MOLDING

DIE AND THE FIRST LOT PARTS

モールド型適用品・初回品 検査依頼票 兼 サンプル送付票

Part No. 図番	X0KD04486-Y180 REV. NO. 03		Part Name 品名	GEAR Z42 M08		Rev. 版数	Rev. 03 → 版数	P.O. number 型組工製番	
Molding die classification 区分	New <input type="checkbox"/> DIE MAKE 新規 <input type="checkbox"/> 2ND DIE	or Revision up 改版	Transfer 移管、転注	or Others その他	No. of cavity キャビティ数	1 pcs. 個		※The number of samples to be submitted must be 5pcs. or more every each cavity. ※各キャビティ毎に5ヶ以上提出の事	

Application description at the inspection request

検定依頼時の申請内容

① The purpose of inspection request 検定依頼目的	fill out from the 2nd trial TRY2以降について記入 RE-TRIAL			
② location of the die remodeling 型改造箇所	fill out a detail for die remodeling location 型工事箇所を具体的に記入 IMPROVE NG Outside Diameter			
③ Number of the samples サンプル数	5 pcs. 個	If lacking of samples, fill out its reason 不足の場合理由を記入		
self check	④ Attached inspection data 自主検査データ添付	Yes <input checked="" type="checkbox"/> 有り	No <input type="checkbox"/> 無し	
	⑤ Measurement environment 測定環境	Temperature 温度	Humidity 湿度	
	⑥ Change of the molding condition 成形条件変更有無	Yes <input checked="" type="checkbox"/> 有り	No <input type="checkbox"/> 無し	
	⑦ additional working/remedy 追加工／矯正有無	Yes <input type="checkbox"/> 有り	No <input checked="" type="checkbox"/> 無し	
⑧ Molding condition slip 成形条件票添付	Yes <input checked="" type="checkbox"/> 有り	No <input type="checkbox"/> 無し	⑨ remarks 備考	If change the condition, submit the new molding condition 条件変更の場合は新条件提出の事

※ If the Qualification Approval Request Form have incomplete data, the trial sample will not be accepted/inspected.

To be filled by FDTP FDTP記入欄

- ☐ (FDTP) PURCHASE SEC.MANAGER
☐ (FDTP) TOOL&DIE DEPT. MANAGER
☐ (FDTP) MECH&MANUFACTURING DEPT. MANAGER
☐ (FTEC) INSPECTION SEC.MANAGER
☐
☐
☐
☐

QUALIFICATION APPROVAL INSPECTION RESULT FOR PLASTIC MOLDING DIE AND THE FIRST LOT PARTS
モールド型適用品・初回品 検査結果連絡票

FDTP)INSPECTION SECTION



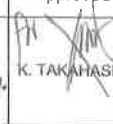
Part No. 図番			Rev. 版数			Supplier 依頼元		
Part name 品名						Attached data メ-カデータ	Yes 有り	No 無し
Die classification 区分	New <input type="checkbox"/> DIE MAKE 新規 <input type="checkbox"/> 2ND DIE	or Revision up 改版	or Transfer 移管、転注	Others その他		Molding condition slip 成形条件票	Yes 有り	No 無し
TRY No.	Inspection date 検査年月日	Judgement 判定	Defective part 不良箇所	Remarks 備考	Inspector 検査担当	Checked 調査	Approved 承認	
1st trial 第1回トライ		GOOD 合格	Dimension 寸法不良	location 箇所				
		NO GOOD 不合格	Appearance 外観不良					
		others その他						
2nd trial 第2回トライ		GOOD 合格	Dimension 寸法不良	location 箇所				
		NO GOOD 不合格	Appearance 外観不良					
		others その他						
3rd trial 第3回トライ		GOOD 合格	Dimension 寸法不良	location 箇所				
		NO GOOD 不合格	Appearance 外観不良					
		others その他						
4th trial 第4回トライ		GOOD 合格	Dimension 寸法不良	location 箇所				
		NO GOOD 不合格	Appearance 外観不良					
		others その他						

Article 記事

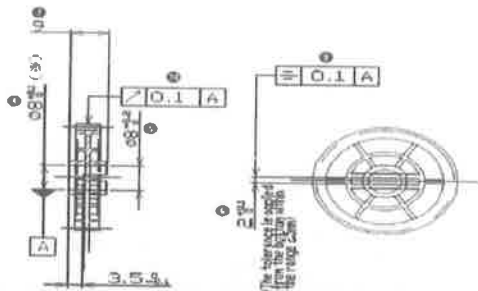
measurement instrument 測定器

Unit Name 機種名	1. Digital calipers デジタルノギス	7. Block gauge ブロックゲージ
P.O. Number 型組工製番	2. Digital Micrometer デジタルマイクロメーター	8. Protractor プロトラクター
	3. Digital height gauge デジタルハイトゲージ	9. Projector 工具顕微鏡
	4. Pin gauge ピンゲージ	10. CMM 三次元測定器
	5. Screw gauge ネジゲージ	11. Gear rolling tester 噛合い試験機
	6. R gauge Rゲージ	12. Laser scan micrometer レーザーマイクロメーター

Trial Inspection Record

Supplier Name	OB KOGYO		Quantity	5 PCS		Temperature	24.1℃		Measuring Equipment N : Nonius Calliper M : Micrometer PG : Pin Gauge D : Dial Gauge GT : Gear Tester TM : Tool Microscope	Prepared	Checked	Approved
Part name	GEAR Z42 M08		Delivery Day	02/12/2019		Humidity	47%			 G. JIMENEZ  M. JOZZILA  K. TAKAHASHI		
Part No.	X0KD04486-Y180 REV. NO. 03		Trial Day	02/01/2019		Resin Grade	POM M90-44					
	(4)			(5)			(6)				(6)	
Measurement Items	I.D.			I.D.			GROOVE WIDTH (LEFT)		GROOVE WIDTH (RIGHT)		NO BURR SCRATCHES DEFORMATION	
Specification	8			8			2		2			
Tolerance	+0.1/0			+0.2/0			+0.1/0		+0.1/0			
	8.000~8.100			8.000~8.200			2.000~2.100		2.000~2.100			
Measuring Equipment	PG			PG			PG		PG		E	
	PASSS	STOP		PASS	STOP		PASS	STOP	PASS	STOP		
1#1	8.060	8.080		8.170	8.190		2.060	2.090	2.050	2.090	OK	
1#2	8.060	8.080		8.170	8.190		2.060	2.090	2.050	2.090	OK	
1#3	8.065	8.085		8.170	8.190		2.065	2.085	2.055	2.090	OK	
1#4	8.065	8.080		8.175	8.185		2.060	2.085	2.050	2.090	OK	
1#5	8.060	8.085		8.170	8.190		2.065	2.090	2.055	2.085	OK	
Judgement	OK	OK		OK	OK		OK	OK	OK	OK	OK	
											OK	
	(7)		(8)	(9)			(10)		(11)	(12)	(13)	
Measurement Items	LENGTH		O.D.	SYMMETRY			RUN OUT		GEAR ACCURACY		TOOTH DISPLACEMENT (5 TEETH)	
Specification	9		35.2	UNDER 0.1			UNDER 0.1		JGMA CLASS 6		11.09824	
Tolerance	+0.3/-0.3		0/-0.1						T-T	TOTAL	0/-0.103	
	8.70~9.30		35.10~35.20						50um	160um	10.99524~11.09824	
Measuring Equipment	N		M	TM			DG		GT		M	
									T-T	TOTAL		
1#1	9.00		35.167	0.011			0.024		41.6	91.6	11.027	
1#2	9.00		35.167	0.011			0.024		41.6	91.6	11.027	
1#3	9.01		35.166	0.013			0.023		41.6	91.6	11.025	
1#4	9.00		35.167	0.011			0.024		41.6	91.6	11.027	
1#5	9.02		35.168	0.012			0.025		41.6	91.6	11.026	
Judgement	OK		OK	OK			OK		OK	OK	OK	

Sketch:



The Dimension tolerance shall be applied to the area marked with *

Spur gear (Standard)	
Outside diameter	$\phi 35.2 \pm 0.04$
Displacement over a given number of teeth	(1.09824 ± 0.005)
Meshing accuracy	JGMA grade 6

Note :

Appearance : QTY. INSPECTED
Dimension : 5 SHOTS/CAV.

RoHS Pass

Molding Parameter Sheet

Part Name:		GEAR Z42 M08			Customer:		FUJITSU							
Part No.:		X0KD04486-Y180			No. of Cavity: 1		Mold No.:				Color:		BLACK	
Date (mm / dd / yy)		02/01/19												
Time (military time)		20:00												
Person In-Charge		M. MAYO												
Machine No. / Name		D12-30												
Screw Diameter (mm)		-												
Hopper Dryer Temp. (°C)		80												
Qty of Good Cavities		1												
Raw Material / Grade/ Color		POM/M90-44/M8												
VALIDATION DATA		Min	Center	Max										
Nozzle temperature:	°C		-		S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
Nozzle temperature:	°C	185	195	205	S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
Cylinder temperature: F	°C	180	190	200	S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
Cylinder temperature: M	°C	180	190	200	S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
Cylinder temperature: R	°C	175	185	195	S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
Injection Time: T1	sec	2.7	3.0	3.30										
Injection Pressure: P1	kg/cm² Mpa	1260	1400	1540										
Injection Speed: V1	mm/s	40	45	50										
Injection Speed: V2	mm/s	5	10	15										
Injection Speed: V3	mm/s		-											
Injection Speed: V4	mm/s		-											
Holding Speed:	mm/s	9.0	10	11										
Injection Position: S4	mm	7.0	8.0	9.0										
Injection Position: S5	mm		-											
Injection Position: S6	mm		-											
VP Change-over Position	mm	6.0	7.0	8.0										
Holding Pressure: P2	kg/cm² Mpa	680	800	920.0										
Holding Pressure: P3	kg/cm² Mpa	595	700	805.0										
Holding Pressure: P4	kg/cm² Mpa		-											
Holding Time: T3	sec	2.0	3.0	4.0										
Holding Time: T4	sec	2.0	3.0	4.0										
Holding Time: T5	sec		-											
Cooling Time: T2	sec	5.4	6.0	6.6										
The setting temperature of cavity	°C	60	70	80	S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
The setting temperature of core	°C	60	70	80	S =	A =	S =	A =	S =	A =	S =	A =	S =	A =
REFERENCE DATA														
Shot Size: S1	mm	26.0												
Suck Back Position	mm	3.0												
Back Pressure: P6	kg/cm² Mpa	90.0												
Back Pressure: P7	kg/cm² Mpa	80.0												
Back Pressure: P8	kg/cm² Mpa	-												
Screw Rotation 1	rpm	100.0												
Screw Rotation 2	rpm	80.0												
Screw Rotation 2	rpm	-												
Back Pressure Position: S10	mm	24.0												
Back Pressure Position: S10	mm	-												
Mold Opening Limit: S1	mm	207.0												
Closing Position 1	mm	180.0												
Closing Position 2	mm	60.0												
Mold Protect	%	4.0												
Closing Speed: V1	mm/s	150												
Closing Speed: V2	mm/s	150												
Closing Speed: V3	mm/s	120												
Clamping Force	ton KN	25.0												
Opening Position 1	mm	80.0												
Opening Position 2	mm	180.0												
Opening Speed: V4	mm/s	150												
Opening Speed: V5	mm/s	150												
Opening Speed: V6	mm/s	120												
Eject position	mm	15.0												
Eject Speed	mm/s	40.0												
Ejector Mode		1ST												
MONITOR														
cycle time	sec	15.9	17.7	19.5										
Injection Time	sec	0.6	0.61	0.7										
Plasticization time	sec	5.0	5.56	6.1										
Peak pressure	kg/cm² Mpa	906.3	1007	1107.7										
V→P pressure	kg/cm² Mpa	627.3	697	766.7										
Cushion	mm	2.9	3.2	3.5										
OTHERS														
Airflow Installed	OK NA	NA												
Limit Switch	OK NA	NA												
Robot Alignment	OK NA	OK												
Conveyor/ Shooter Set up	OK NA	OK												
No. Of Ejection		2.0												
Causes of Condition Change		TRIAL												
Quality situations (note)		OK												
Confirmed by / Date		J. C. MAYO 2/1/19												
Approved by / Date		M. MAYO												

Note: Recording must be done one time within the day of operation. Also verify the actual temperature of the mold temperature controller by the use of thermoscope.

*Always check the validation data if within the tolerance. When the molding conditions is change especially on the validated range, causes of condition change must be recorded.