TOYOTA
INDONESIA
PT.Toyota Motor Manufacturing Indonesia

QUALITY CONTROL CIRCLE

PAPRES

AKTIFITAS MEMPERCEPAT UCHI DANDORI PART NO 61732 – KK020 DI LINE H

PT. TOYOTA MOTOR MANUFACTURING INDONESIA
PRESS WELDING PRODUCTION DIVISION SUNTER 2

PT. TOYOTA MOTOR MANUFACTURING INDONESIA

PRESS WELDING PRODUCTION DIVISION SUNTER 2

GROUP QCC

"PAPRES"

PRESS PROD. SUNTER

LINE

SHIFT RED

3

RISALAH GROUP QCC - PAPRESS

TOYOTA INDONESIA
PT.Toyota Motor Manufacturing Indonesia

GROUP

Shift Red

[redacted]

PT. TMMIN → SUNTER 2 → Press Prod. Dept → Line H

ADVISOR — SUBADAR

FACILITATOR — AGUNG W

CIRCLE LEADER — ADE CANDRA

THEMA LEADER — MADI

NOTULEN — GUNTUR

MEMBER :

HIDAYAT, BUDI, PURNAWAN, ARIF P, SUPRIONO, RANGGA

GROUP ACHIEVEMENT :

2017
Juara 3
INNOVASTRA

2016
TAPQCF
Participant

2017
Juara 3
TAM TMMIN

TARGET :
JUARA 1
TAM - TMMIN

STEP 0-1 : ALASAN PEMILIHAN THEMA

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Thema Leader
MADI

Member Voice	KPI	Evaluation Point				Total	Rank
		Urgent	Cost	Time	Diffc.		
HIDAYAT — REPAIR SHIWA SULIT DAN LAMA NP.53311 - OKO30	QLTY.	3	1	2	3	9	II
GUNTUR — UCHI DANDORI 61732-KKO20 LAMA	PROD.	3	3	3	2	11	I ✓
ARIF — PART 64111 BY DI LAP SEBELUM MASUK PALET	QLTY.	2	2	3	1	8	III
RANGGA — MENARUH DIE DI BOLSTER LAMA	PROD.	2	1	1	2	6	IV

THEMA :

MENANGGULANGI PROBLEM UCHI DANDORI 61732

Urgent :
1. Problem Biasa
2. Problem Sedang
3. Problem Sangat mendesak

Cost :
1. Biaya improve tinggi
2. Biaya improve Sedang
3. Biaya improve rendah

Time :
1. 6 Bulan Lebih
2. 4 – 6 Bulan
3. 1 – 4 Bulan

Difficult :
1. Dikerjakan Vendor
2. Kolaborasi Supporting
3. Dikerjakan Internal Line

STEP 0-2 : RENCANA AKTIVITAS

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CIRCLE ACTIVITY :

Circle Leader ADE C

No	Aktifitas	PIC	2022 Mei	Juni	Juli	Agustus	Sept	Oct
1	Assesment Group	ADE.C						
2	Setting Target Assesment	ADE.C						
3	Self Development	ADE.C						
4	Development member	ADE.C						
5	Development group	ADE.C						
6	Evaluasi Development Member	ADE.C						

: Planing
: Actual

No	AKTIVITAS QCC	PIC	2022 Mei	Juni	Juli	Agustus	September	Oktober
1	Step 0 - 1 Alasan Pemilihan Tema	Madi						
2	Step 0 - 2 Schedule Activity	Arif						
3	Step 1. Klarifikasi Masalah	Ade C						
4	Step 2. Analusa Situasi Yang Ada	Purnawan						
5	Step 3. Penetapan Target	Rangga						
6	Step 4. Analisa Sebab Akibat	Supriono						
7	Step 5. Rencana Penanggulangan	Guntur						
8	Step 6. Penanggulangan	Madi						
9	Step 7. Evaluasi Hasil	Ade C						
10	Step 8. Standarisasi Tindak Lanjut	Rangga						

: Planing
: Actual

THEMA ACTIVITY :

Thema Leader MADI

STEP 1 : KLARIFIKASI MASALAH

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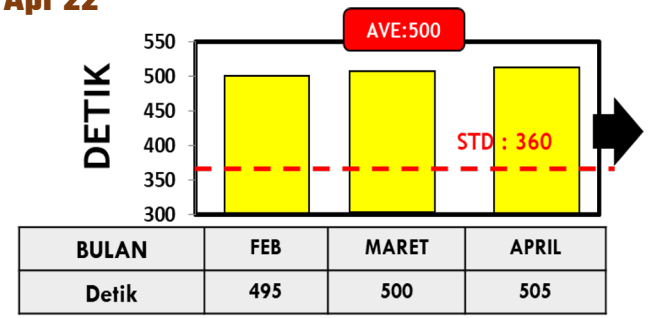
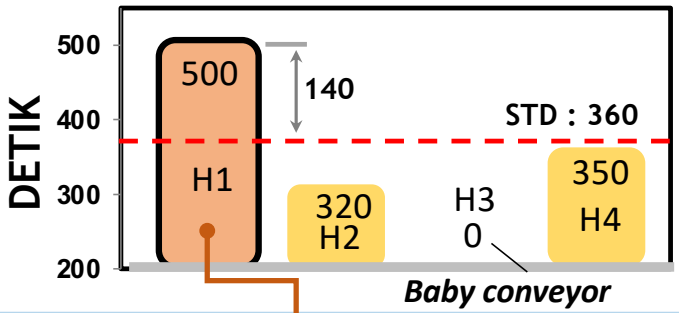
Waktu Uchi Dandori 61732 – KK020 Feb – Apr 22



BULAN	FEB	MARET	APRIL
Detik	495	500	505

Data Uchi dandori per MC



Gap Waktu Uchi Dandori

Standard : 360 dtk

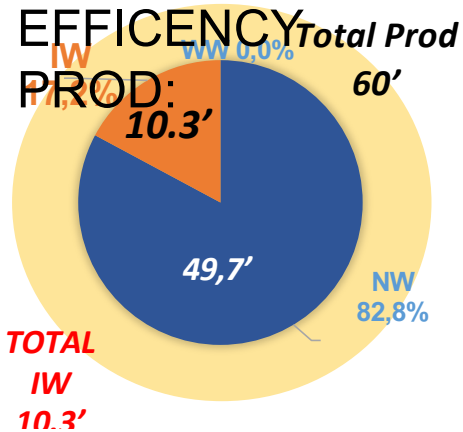
GAP 140 dtk

Actual : 500 dtk

MEMPERCEPAT WAKTU UCHI DANDORI NO PART 61732 – KK020 DI MESIN H -1

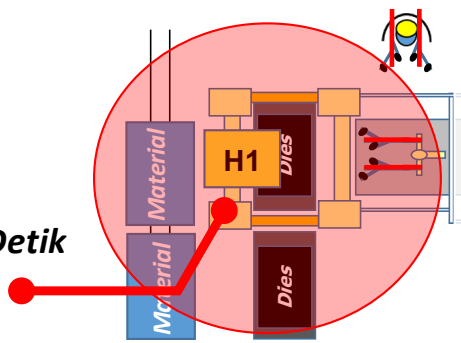
PRIORITY PROBLEM :

DATA EFFICENCY PROD:



Apa itu "UCHI DANDORI":

*Waktu yg dihitung untuk melakukan proses **Ganti Material → Ganti Dies → Ganti Jaw (Alat ambil)***



Dampak Delay "UCHI DANDORI"

- DELAY PROSES PRODUKSI
- WAITING PART
- LINE STOP

STEP 2 : ANALISA KONDISI YANG ADA

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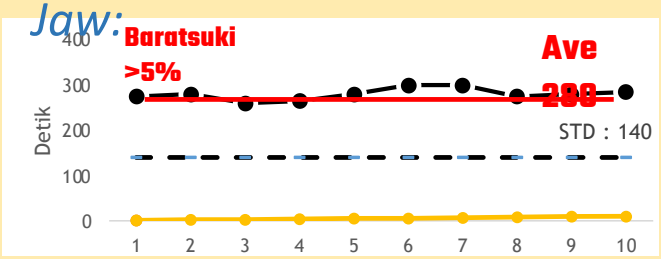
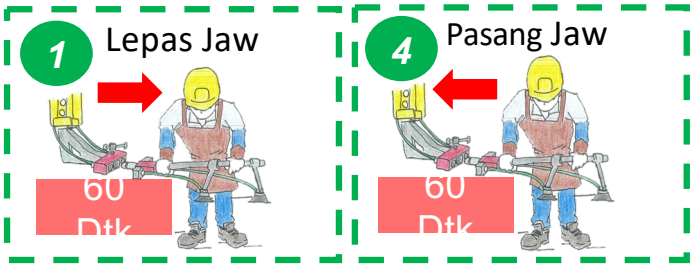
PROCESS UCHI DARI ITEM 61732 – KK020

Proses Ganti Material	Proses Ganti Dies	Proses Ganti Jaw
STD : 30 Detik Act : 30 Detik	STD : 180 Detik Act : 180 Detik	STD : 140 Detik Act : 280 Detik

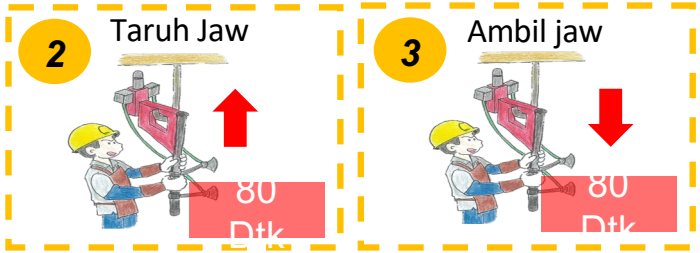
Baratsuki Ganti Jaw:



FLOW PROCESS GANTI JAW



- *Real Problem 1 : Lepas & Pasang Jaw*



- *Real Problem 2 : Ambil & Taruh Jaw*

STEP 3 : PENETAPAN TARGET

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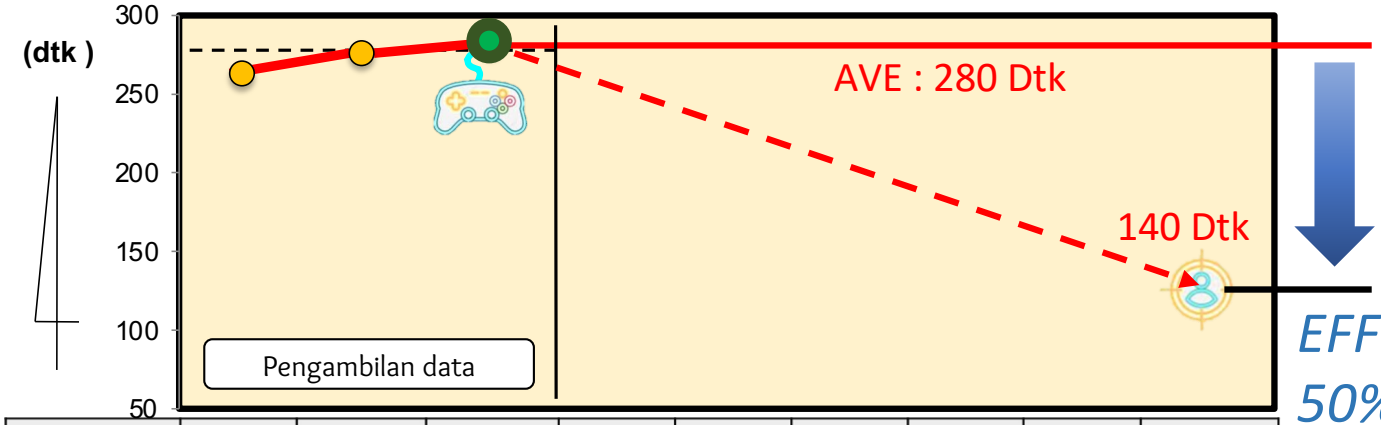
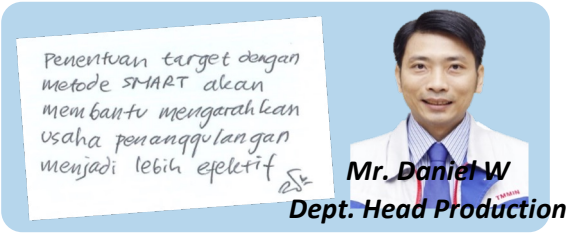
Grafik target mempercepat waktu uchi dandori ganti jaw no part 61732-kko20 di mesin H1 periode Mei s/d Oct 22



BULAN	FEB	MRT	APR	MEI	JUNI	JULI	AGST	SEPT	OKT
DETIK	275	280	285						140

EFF : 50%



Mr. Daniel W
Dept. Head Production

Group Papres berkomitmen dengan kuat untuk mempercepat waktu uchi dandori no part 61732 – KK020

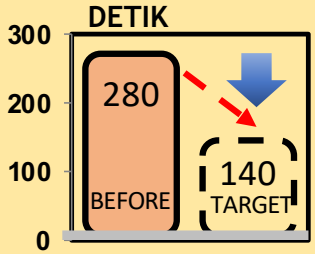
Spesifik:

Memepercepat waktu Uchi Dandori Ganti Jaw 61732 - kk020 Di Mesin H 1

Measurable

Satuan ukuran : (dtk) Detik & Target Penurunan : *280 detik .* menjadi *140 detik*

Achievable



Potensial Reduce *140 dtk /waktu uchi dandori Dengan Efisiensi 50%*

Reasonable

Target waktu uchi dandori ganti jaw no part 61732 – kko20
140 detik

Time Base :

Penanggulangan dilakukan sampai dengan Bulan ***OKTOBER 2022***

ROOTCAUSE

2 Konstruksi Jaw 61732 KK020
Panjang & Berat

10

STEP 5 : RENCANA PENANGGULANGAN

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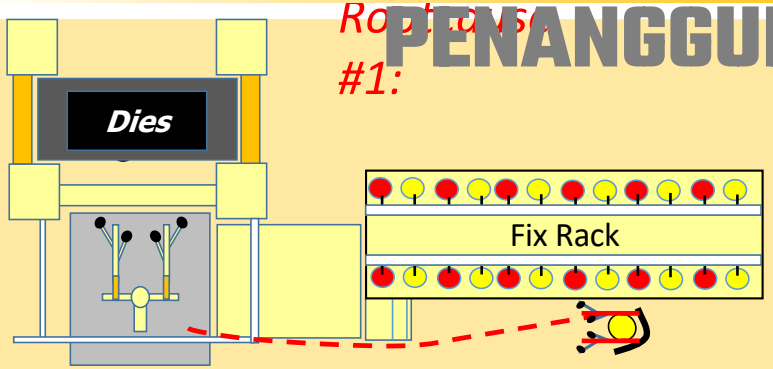
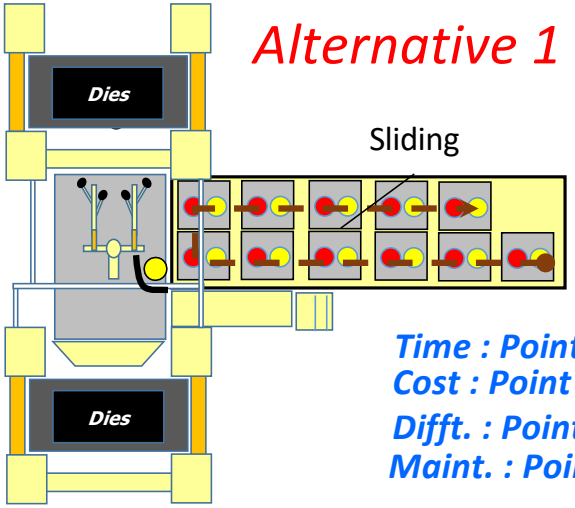
Root Cause #1:



Operator harus naik & turun step up saat pergantian jaw.

ALTERNATIVE PENANGGULANGAN :

Alternative 1

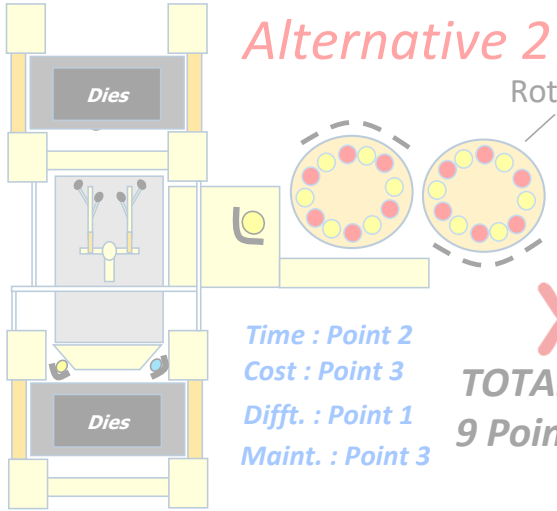


Modifikasi rack jaw model sliding dengan mendekatkan jaw ke mesin

Time : Point 3
Cost : Point 3
Difft. : Point 3
Maint. : Point 3

TOTAL 12 Point ✓

Alternative 2



Time : Point 2
Cost : Point 3
Difft. : Point 1
Maint. : Point 3

TOTAL 9 Point ✗

Modifikasi rack jaw dengan sytem rotary

STEP 5 : RENCANA PENANGGULANGAN

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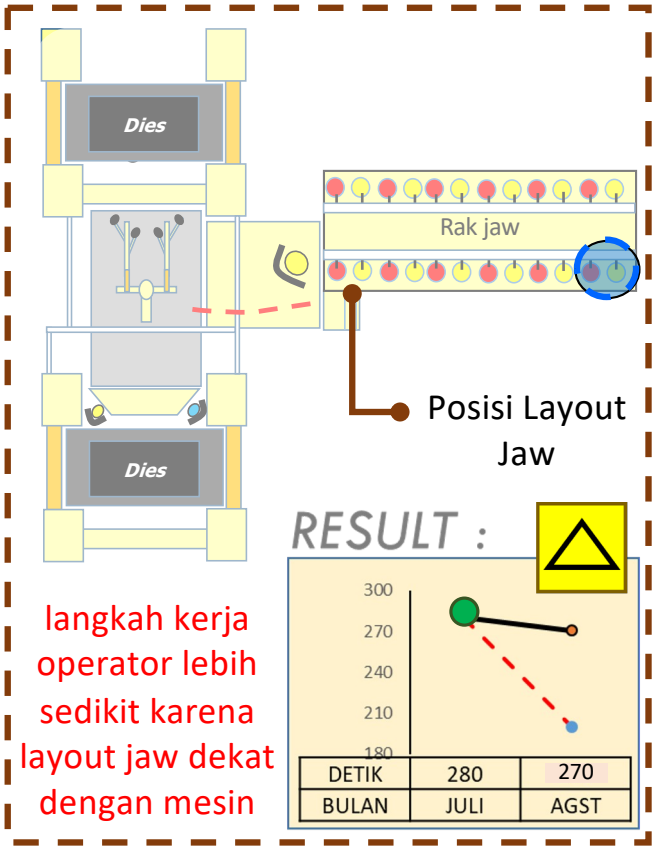
Rootcause #1:

Operator harus naik & turun step up saat persiapan jaw.

Temporary Action:

Menempatkan Jaw 61731.32 Urutan paling depan agar lebih dekat Saat pengambilan jaw.

ILUSTRASI:



langkah kerja operator lebih sedikit karena layout jaw dekat dengan mesin

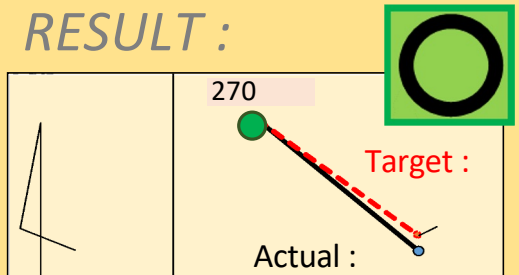
STEP 6 : PENANGGULANGAN

TOYOTA INDONESIA
PT.Toyota Motor Manufacturing Indonesia

Penanggulangan : *Modifikasi rack jaw model sliding dengan mendekatkan jaw ke mesin*

Jaw jadi lebih mudah diambil

RESULT :



Detik	280	190
Minggu	#2	#3
Bulan	SEPTEMBER	

STEP 5 : RENCANA PENANGGULANGAN

TOYOTA INDONESIA
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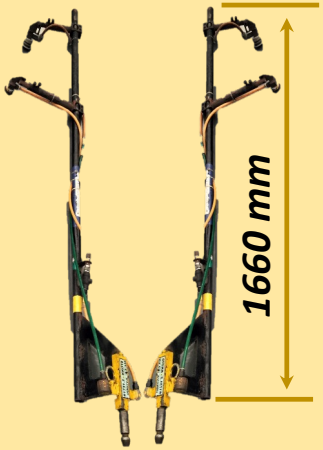
Rootcause #2:



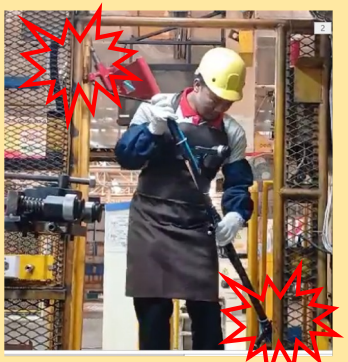
Kontruksi jaw 61732-KK020 panjang & Berat

Berat Jaw 11 Kg

REBA SCORE 15

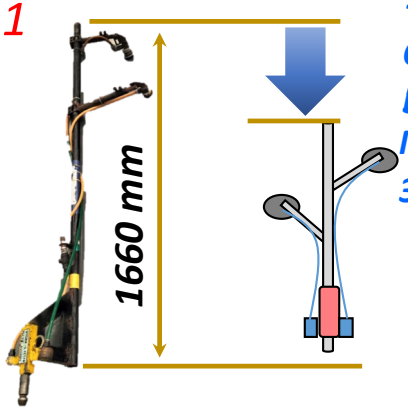
RESIKO BERAT
Perlu perbaikan segera

Jaw terbentur saat pemasangan di mesin



ALTERNATIVE PENANGGULANGAN :

Alternative 1



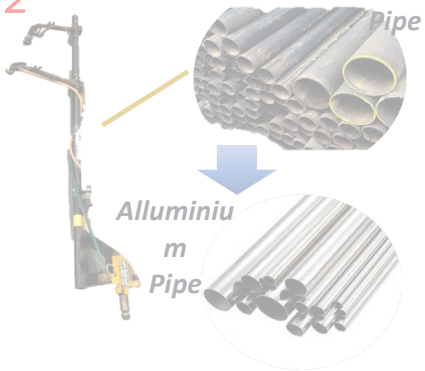
Time : Point 3
Cost : Point
Difft. : Point 3
Maint. : Point 3

TOTAL 12 Point

Modifikasi kontruksi jaw,

lebih ringan / pendek

Alternative 2



Time : Point 3
Cost : Point 1
Difft. : Point 2
Maint. : Point 3

TOTAL 9 Point

Ganti material body jaw dari besi pipa ke aluminium (Lebih Ringan)

STEP 6 : PENANGGULANGAN

TOYOTA INDONESIA
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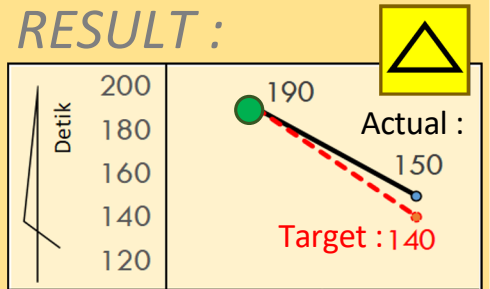
Penanggulangan: *Modifikasi kontruksi jaw □ lebih ringan & pendek*

RESULT :

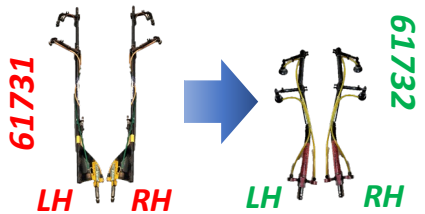


Detik	190	150
Minggu	3	4
Bulan	SEPTEMBER	

Waktu uchi dandori **berkurang**, tapi waktu uchi dandori **belum mencapai target**

REASON :

Masih ada proses ganti jaw proses 61731 □ 61732



STEP 6 : PENANGGULANGAN

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PT.Toyota Motor Manufacturing Indonesia

IMPLEMENTASI PDCA :

Part 61731

Part 61732

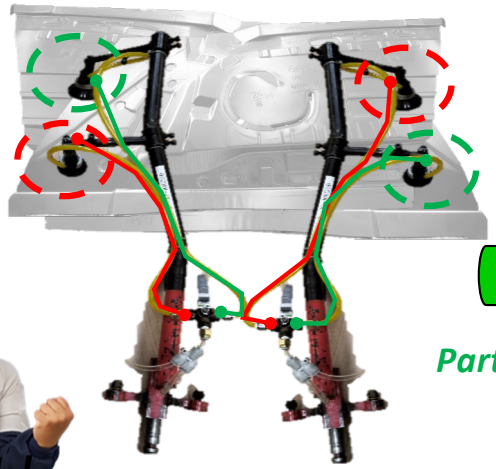
Secara dimensi part untuk item 61731 & 32 sama,

1 jaw untuk 2 model

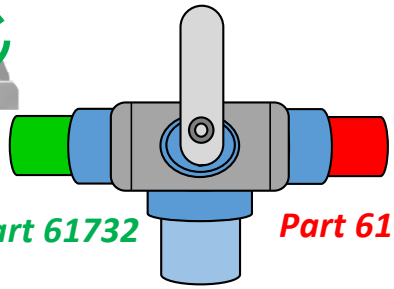
RESULT :

	Target :	Actual :
Detik	150	30
Minggu	4	1
Bulan	SEPT	OKT

BERHASIL !



Request Pemasangan
Valve Switch



Part 61732 ***Part 61731***

Facilitator Koordinasi dengan supporting

Operator tidak perlu bongkar pasang jaw & hanya memutar Valve switch untuk ganti model jaw

STEP 6 : PENANGGULANGAN

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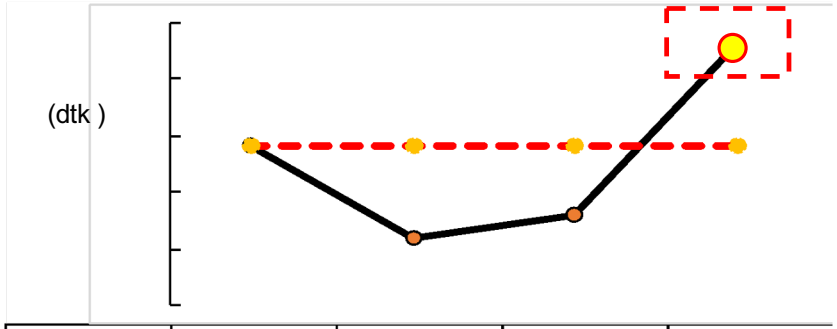
EVALUASI WAKTU UCHIDANDORI H1 PART 61731 & 32 :



frek	1	2	3	4
waktu	140	60	80	230

Di pengecekan waktu uchidandori berkala, kenapa waktunya masih ada yg tinggi ya ?

MEMBER VOICE:

Operator sering lupa untuk memutar valve switch, sehingga muncul ***JAW FAULT***

THIS IS OUR BREATROUGH IDEA

QUICK RESPON MEMBER VOICE :

STEP 6 : PENANGGULANGAN

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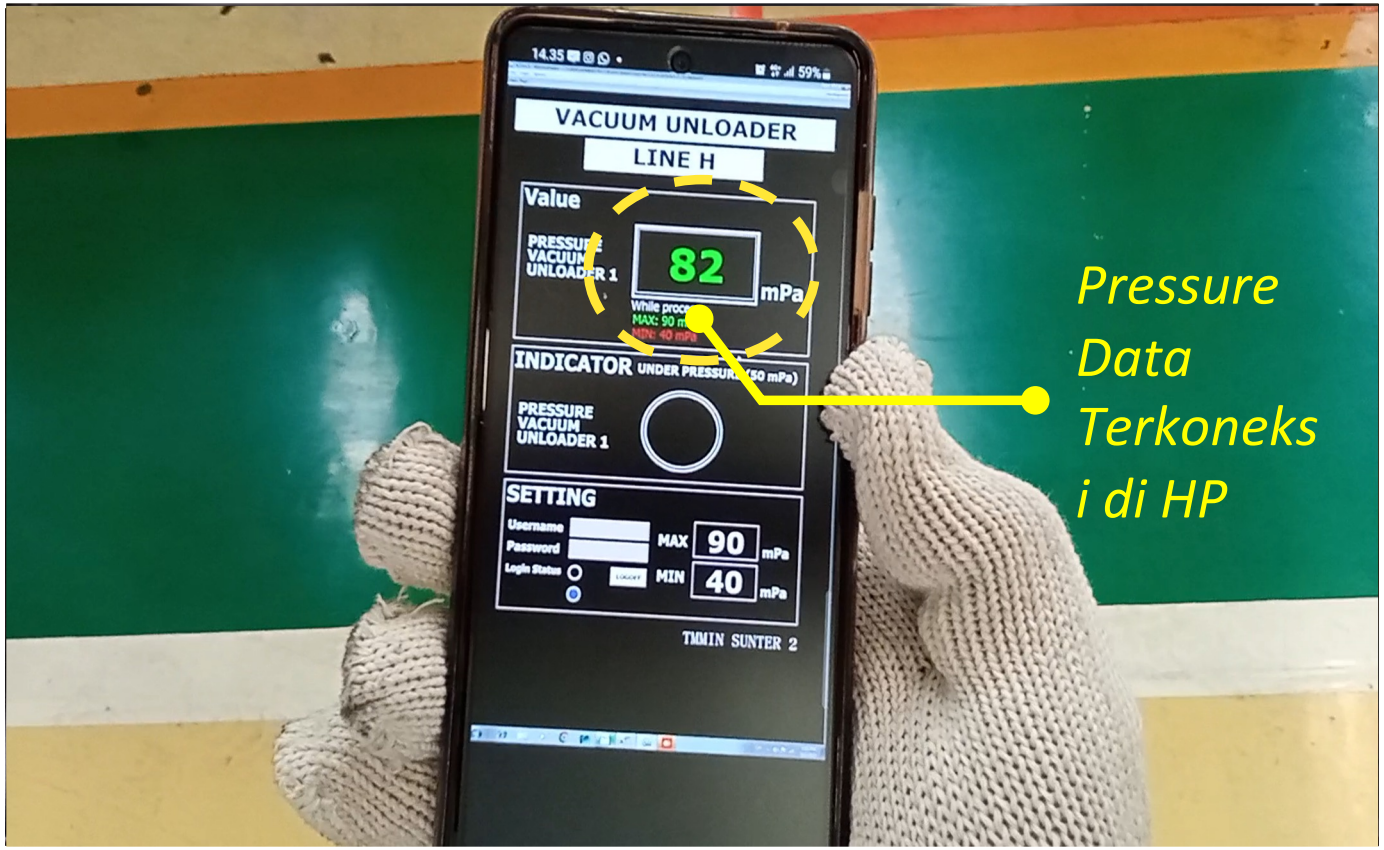
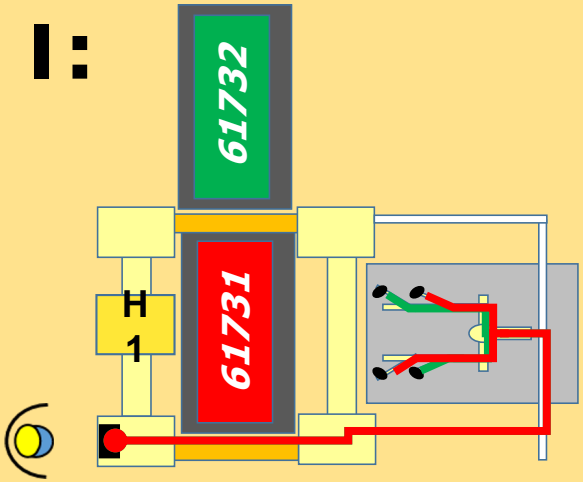
INNOVASI



ILUSTRASI :



STEP 7 : EVALUASI & HASIL

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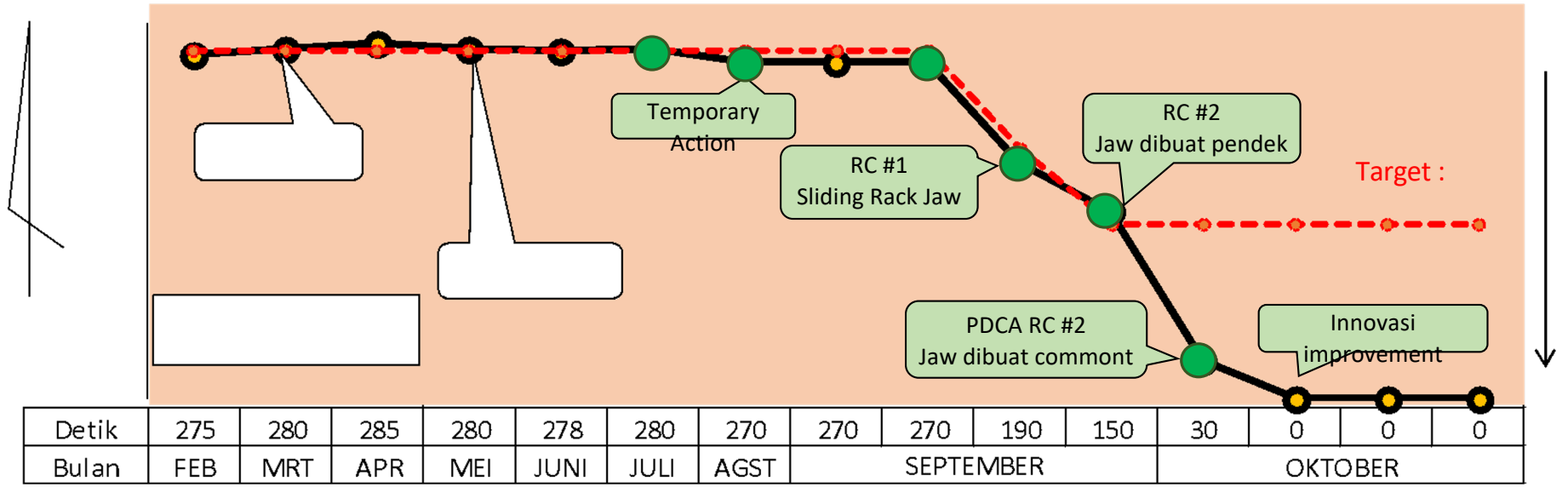
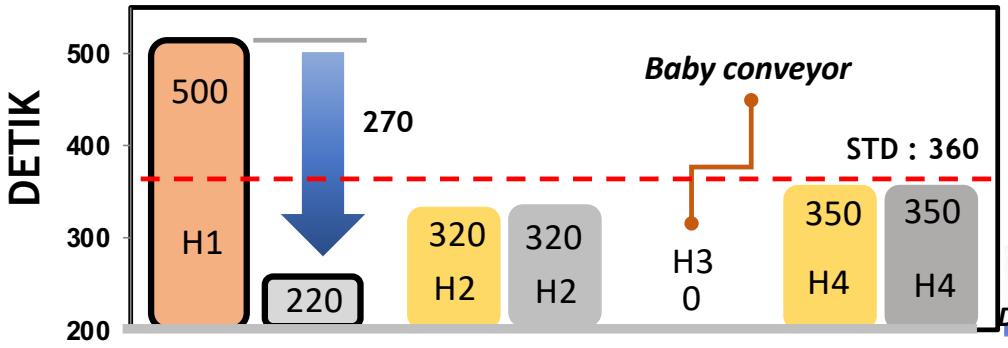
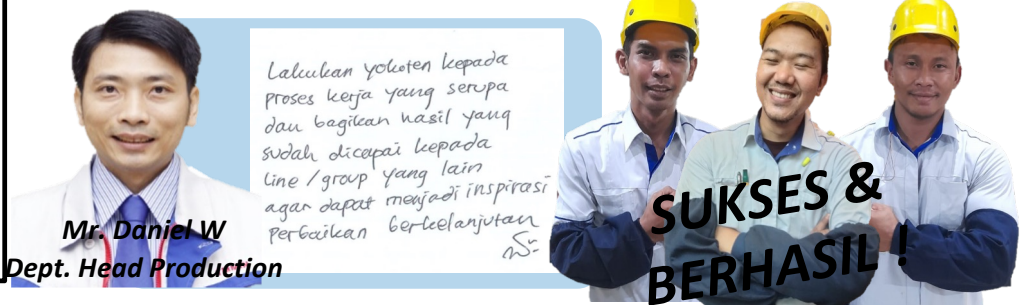
GRAFIK PENURUNAN WAKTU MONITORING/ANDORI PROSES GANTI JAW NO PART 61732 KK020 DI MESIN H 1



Detik	275	280	285	280	278	280	270	270	270	190	150	30	0	0	0
Bulan	FEB	MRT	APR	MEI	JUNI	JULI	AGST	SEPTEMBER				OKTOBER			



Arahan Dept. Head Produksi :



STEP 7 : EVALUASI & HASIL

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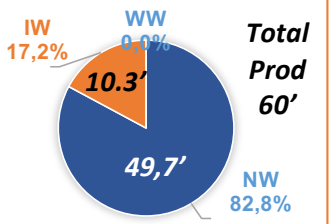
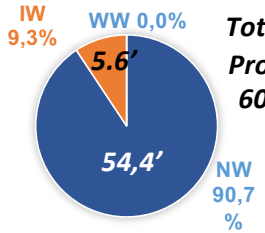
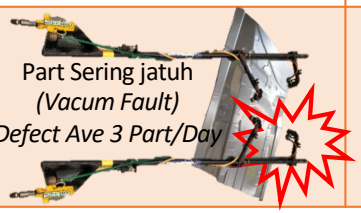
DAMPAK QCC TERHADAP SAFETY, QUALITY, PRODUCTIVITY, HR, & COST:

Faktor	Sebelum & Sesudah		Judge
SAFETY	 Operator membungkuk saat ganti jaw	Penurunan Rank *Ba → Cc* *(Tidak ada proses ganti jaw)*	✓
PRODUCTIVITY	 *Incidential Work (IW):* *Qlty Check → 120"* *Uchi Dandori → 500"* **TOTAL IW 10.3'**	 *Incidential Work (IW):* *Qlty Check → 120"* *Uchi Dandori → 220"* **TOTAL IW 5.6'**	✓
QUALITY		 Auto Change jaw *(Pressure control)* *No Defect Part*	✓

Faktor	Sebelum & Sesudah		Judge
COST	***A. COST SAVING MENGHILANGKAN PROSES GANTI JAW*** ***AFTER :*** ***Cost saving 1 year : 34.918.680 /Year*** ***Cost Saving up to model life (8 Year) : Rp 279.349.440*** ***B. COST SAVING PENGGANTIAN NEPEL JAW*** ***AFTER :*** ***Cost saving 1 year : 1.920.000 /Year*** ***Cost Saving up to model life (8 Year) : Rp 15,360,000*** **COST SAVING :** **CR** **Rp 36.838.680 /Years**		✓
HR	***SS atau Idea Berkonsep (Ave 1 /Month)***	***SS atau Idea Berkonsep (Ave 3/Month)***	✓

STEP 8 : STANDARISASI & TINDAK LANJUT

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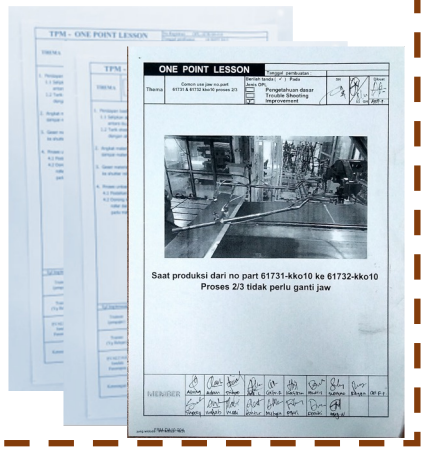
STANDARD DRAWING

SOP

OPL



SOSIALISASI PIHAK TERKAIT

YOKOTEN ACTIVITY :

1

Implementasi sliding rack jaw di setiap proses line H

2

Pemakaian Jaw Kecil dari H1 – H4

3

On progress implementasi DX ke next MC H Line

STEP 8 : STANDARISASI & TINDAK LANJUT

TOYOTA INDONESIA
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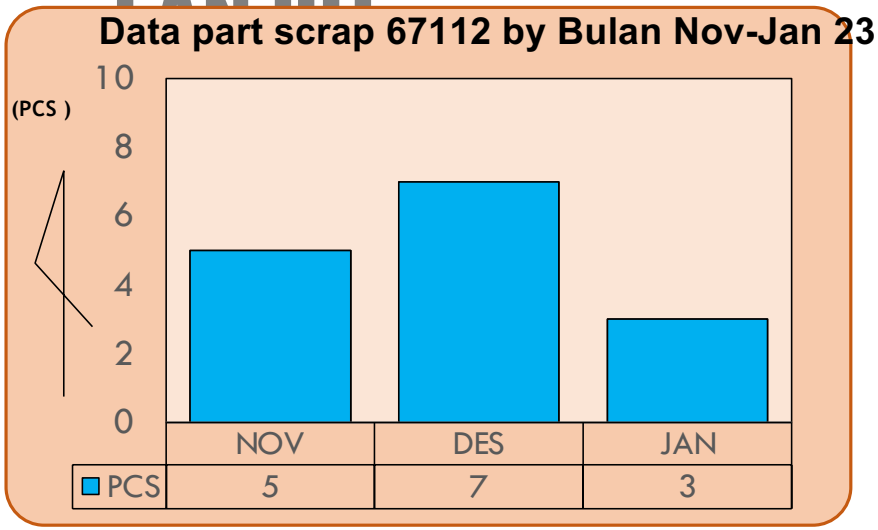
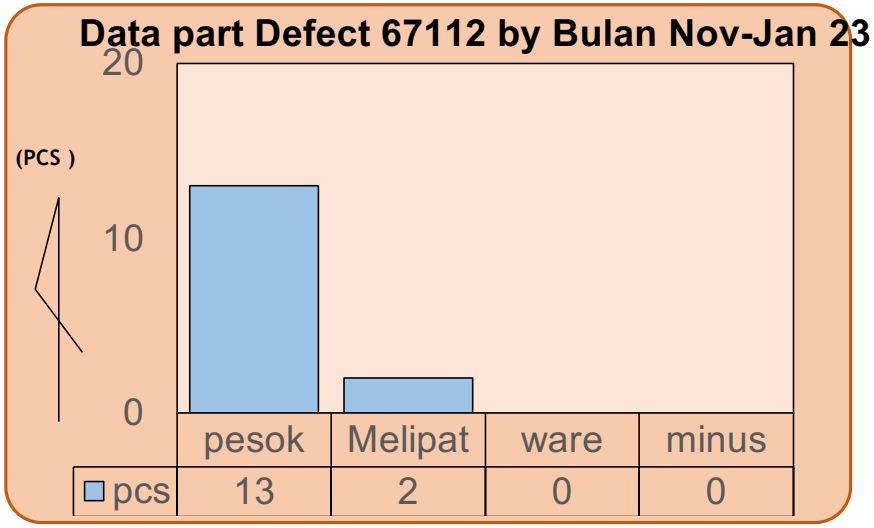
SAFETY ✓
QUALITY ✗
PROD ✓
COST ✓
HR ✓





Proses Permesin

Defect part Pesok 13 PCS

- H1
- H2
- H3
- **H4**

Standart : 0 pcs

Actual : 13 pcs

GAP 13 pcs

TEMA QCC :

Berdasarkan Data Diatas Group Papres Sepakat Mengangkat Tema :

MENANGGULANGI PART PESOK DI PROSES MESIN H4

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QC – MANAGING
PAPRE
S

TERIMA KASIH

PT. TOYOTA MOTOR MANUFACTURING INDONESIA
PRESS WELDING PRODUCTION DIVISION SUNTER 2