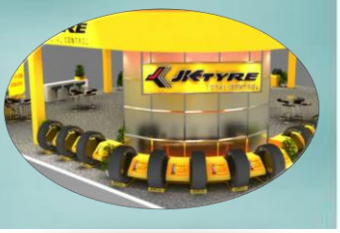
JK TYRE & INDUSTRIES LIMITED

UDGHOSH QUALITY CIRCLE WELCOMES YOU



Desh Ka Tyre
JAB HINDUSTAN MILE HINDUSTAN SE

Juggilal Singhania

Kamlapat Singhania

JK Organization owes its name to
late Sri Lala Juggilal Singhania and his illustrious son
late Sri Lala Kamlapat Singhania, a dynamic personality with a broad vision.

HISTORY OF JK TYRE INDS.

1977 | 1991 | 1996 | 2008 | 2012 | 2016

- Location-Kankroli
- Founded-1977

- Location-Banmore
- Founded-1991

- Location-Mysore
- Acquired- 1996

- Location-Mexico
- Acquired-2008

- Location- Chennai
- Founded-2012

- Location- Haridwar
- Acquired-2016

9 plant in India at 5 Manufacturing locations

3 plant in Mexico

JK OEM CUSTOMERS

TATA

TVS

Mahindra

HONDA

FORCE

BAJAJ

VOLVO

MARUTI SUZUKI

Way of Life!

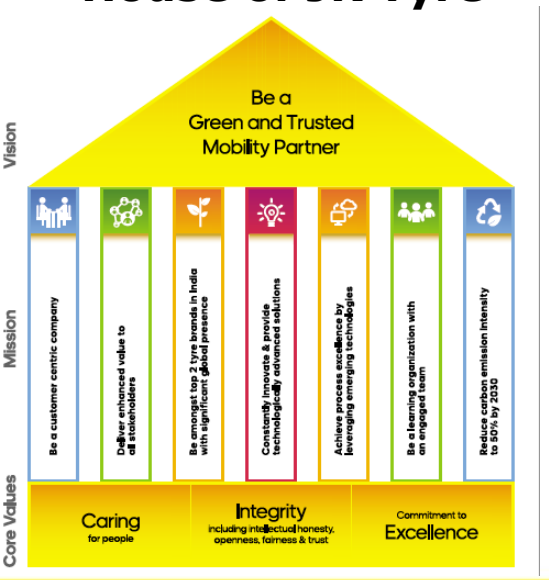
JKTIL : Vision, Mission, Values

Vision: Be a Green and Trusted mobility partner

Mission:

- Be a customer centric company
- Deliver enhanced value to all stakeholders
- Be amongst Top 2 tyre brands in India with significant global presence
- Constantly innovate & provide technologically advanced solutions
- Achieve Process excellence by leveraging emerging technologies
- Be a learning organization with an engaged team
- Reduce carbon emission intensity to 50% by 2030

House of JK Tyre



INTRODUCTION OF UDGHOSH QUALITY CIRCLE

❖ Quality Circle Name	: UDGHOSH
❖ UDGHOSH QCC Foundation	: 2018
❖ Working Place	: TYRE UNIFORMITY
❖ Registration Number	: JKTIL/BTP/QC/20/2018
❖ Meeting day	: Saturday
❖ Date of Problem selection	: 30-12-2023
❖ Date of completion of trial Implementation	: 02-03-2024
❖ Date of Approval by the Management	: 03-03-2024
❖ Date of Project completion	: 06-04-2024

TEAM DETAILS

Mr. Anil Jha — Facilitator

Mr. Neeraj Saxena — Leader

Mr. Sushil Kumar — Member

Mr. Piyush Tiwari — Member

Mr. Sanjeev Gurjar — Member

TEAM ACHEIVEMENTS

NCQC-23 (Nagpur)

NCQC-24 (Gwalior)

Chairman trophy (JKO internal)

Step-1

IDENTIFICATION OF PROBLEMS

Tools/Techniques used:

1.Brainstorming

Identification of Problem- Brainstorming Session

Step-2

SELECTION Of PROBLEM

Tools/Techniques used:

1.BrainStorming

2.Stratification

3.Pie Chart

STEP-2 : SELECTION OF PROBLEM

A ,B & C Type problem Analysis

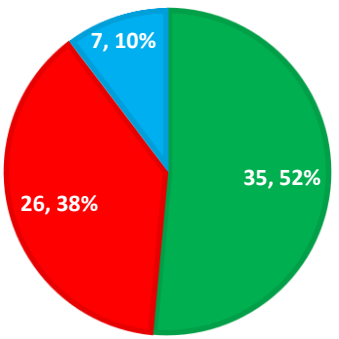
We have solved 10 problems of A-Type by KAIZEN during yr (2024)

A CATEGORY — Problem to be solved with help of Circle members.

B CATEGORY — Problem to be solved with help of other teams and departments.

C CATEGORY — Problem to be solved by management approval and support

A Type	=	35
B Type	=	26
C Type	=	07
Total	=	68



STEP-2 : SELECTION OF PROBLEM

DATE: 02.01.2024

J K Tyre & Industries Limited

Document No.: UTQM.00.SQ-66

Location: Tyre uniformity	Function: SSU2(QA)	Area / Equipment: 9908

Kaizen — FY23-24

Kaizen Title: To avoid tyre stuckup in inlet conveyor — Kaizen No: 01

Problem:
During the tyres feeding from inlet conveyor to 9908 uniformity machine tyre stuckup in inlet conveyor and flow of tyres disturb & machine output affected

Solution through idea:
Railing provided in inlet conveyor for tyres feeding in center of feeding conveyor so that flow of tyres in even condition.

Remarks: Benefit of fixing side railing in tyre feeding conveyor is that we can avoid Uniformity output loss and tyre stuckup

Cost Impact (If Any)	Saving (If Any) : no	Standardization:

Contributors: Mr. D.K.Tripathi , Mr. Rajendra Majhi

S	Q	P	C	D	E	M

Prepared By: Piyush Tiwari	Reviewed By: Abhinav Srivastava	Approval By: N.M.Roy
Signature:	Signature:	Signature:

Form No: UTQM.00.DWM.15

STEP-2 : SELECTION OF PROBLEM

We have got the problem of "Output target not met in Tyre Uniformity machine"

Minimum Number implies Maximum Priority

TEAM RATING

"Minimum Number implies Maximum Priority"

S.No.	PROBLEM	Sushil	Sanjeev	Piyush	Total
1	Marking not proper in solid shape	3	3	1	7
2	High Lube consumption	2	1	3	6
3	Output target not met in Tyre Uniformity machine	1	2	2	5

Selected Problem: "Output target not met in Tyre Uniformity machine "

Step-3

DEFINITION OF THE PROBLEM

Tools/Techniques used:
1.BRAINSTORMING
2.MILESONE CHART
3.FLOW DIAGRAM

QUALITY CIRCLE NAME :- UDGHOSH
Project Title: Output target not met in Tyre Uniformity machine
Project Start : 30.12.2023
Project Completed : 06.04.2024
Regn no.:JKTIL/BTP/QC/20/2018
Department : SSU#2 QA
Project Category: A

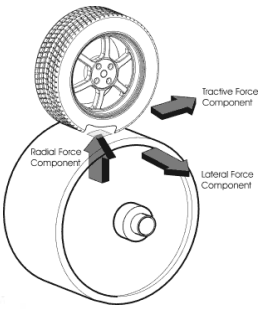
Milestone Chart

Step.No	Step Description	Week-->	06-01-2024	13-01-2024	20-01-2024	27-01-2024	03-02-2024	10-02-2024	17-02-2024	24-02-2024	02-03-2024	09-03-2024	16-03-2024	23-03-2024	30-03-2024	06-04-2024
3	Defining the Problem	Plan														
		Actual														
4	Analysis of problem	Plan														
		Actual														
5	Identification of causes	Plan														
		Actual														
6	Finding out of the root cause	Plan														
		Actual														
7	Data analysis of root cause	Plan														
		Actual														
8	Developing Solutions	Plan														
		Actual														
9	Foreseeing probable resistance	Plan														
		Actual														
10	Trial implementation & check performance	Plan														
		Actual														
11	Regular implementation	Plan														
		Actual														
12	Follow-up & Review	Plan														
		Actual														

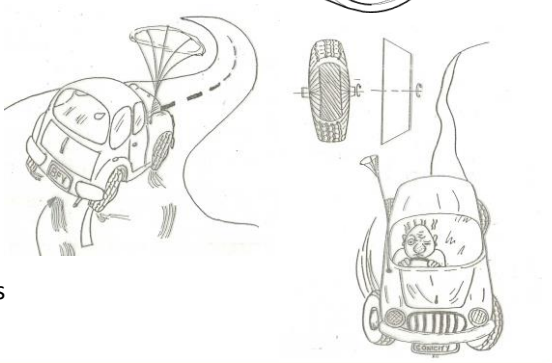
Definition of the Problem:

What is Tyre Uniformity Test:

A tyre uniformity test is used to measure the consistency of a tyre's performance, It checks for variations in size, mass, and force that can affect ride quality and tyre life.



- **Radial Force Variation (RFV):** Measures changes in the force exerted by the tyre as it rotates
- **Lateral Force Variation (LFV):** Assesses side-to-side force changes
- **Conicity:** Evaluates the tyre's tendency to roll in a conical path
- **Run-out:** Measures deviations in the tyre's roundness
- **Balancing Test:** It ensure that the weight of the tyre and wheel assembly is evenly distributed to prevent vibrations and uneven wear.



These tests are conducted under controlled conditions, such as specific pressure, load, and speed, to ensure accurate results

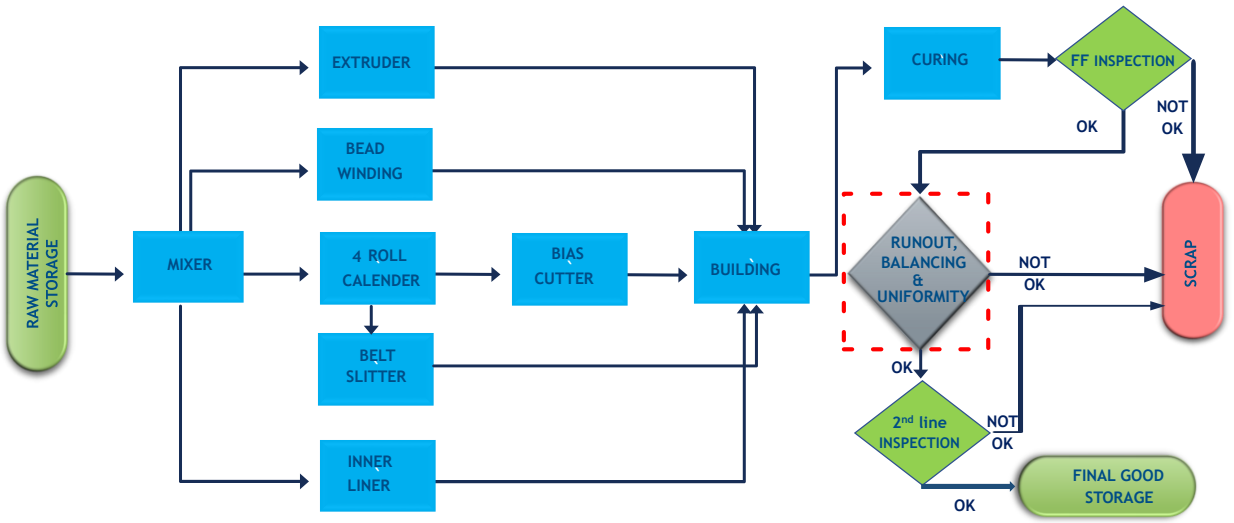
Definition of the Problem:

What is the Output of Tyre uniformity Machine:
Out put of TUO machine depends on following factors-
1- Feeding of tyre
2- lubing of tyre
3-The cycle time of tyre uniformity - it is time required to test the one tyre on the uniformity machine.
4 marking on tyre

Specific Problem Statement:

"Output target not met in Tyre Uniformity machine "

PROCESS FLOW DIAGRAM



Area under red box is our pain area with problem of "Output target not met in Tyre Uniformity Machine ".

Definition of the Problem:

Impact of the Problem

- ❑ Loss of productivity
- ❑ TUO process Bottle neck
- ❑ Increases complexity
- ❑ Customer complaint
- ❑ Increases the waste

Objectives

- ❑ Improve Productivity
- ❑ Improve delivery
- ❑ Complexity reduction
- ❑ Customer Satisfaction
- ❑ Reduce waste

Definition of the Problem:

Specific Problem Statement:

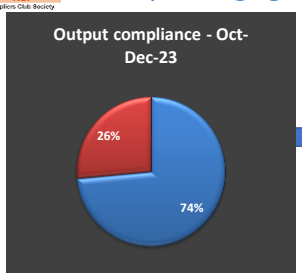
"Output target not met in Tyre Uniformity machine" Our target to achieve 90% output compliance.

Step-4

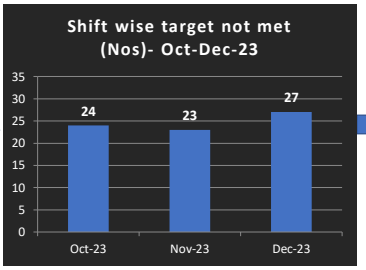
ANALYSIS OF PROBLEM

Tools/Techniques used:
1.4 W+1 H
2. Bar chart

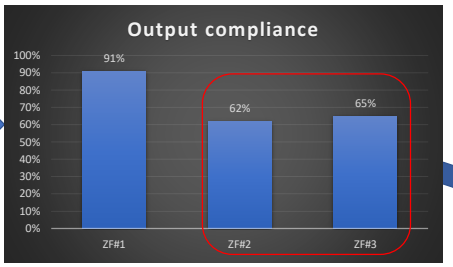
ANALYSIS OF THE PROBLEM



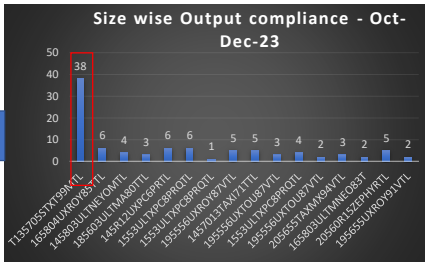
TUO Total OUTPUT



Shift wise target not met



Machine wise target not met



Size wise target not met

- Tyre uniformity total output compliance 74% from Oct.-Dec'23
- Shift wise target not met from Oct.-Dec'23
- TUO machine wise analysis revealed that ZF#2 & ZF#3 not meeting their output
- Size wise output not met in T135/70R15 STAR XT 38 times these machine

Step-5

IDENTIFICATION OF CAUSES

Tools/Techniques used:
1.4M CONDITION
2.GEMBA OBSERVATION
3.BRAINSTORMING
4.FISHBONE DIAGRAM

IDENTIFICATION OF CAUSES

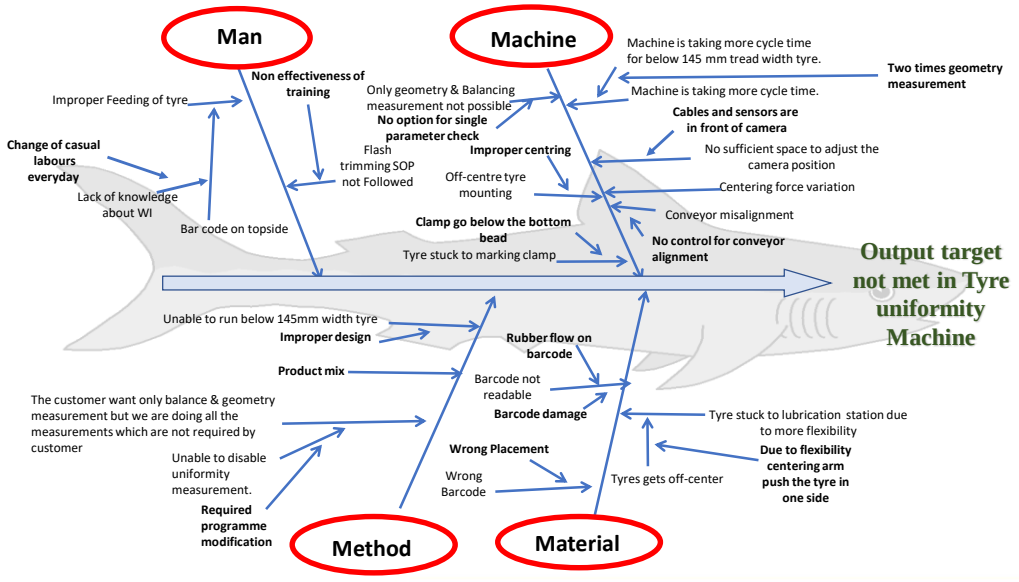
Gemba observation of team members

Possible causes through Brainstorming

Man	1. Improper Feeding of tyre 2. Flash trimming SOP not Followed	Method	1. The customer want only balance & geometry measurement but we are doing all the measurements which are not required by customer 2. Unable to run below 145mm width tyre 3. Product mix
Machine	1. Machine is taking more cycle time for below 145 mm tread width tyre. 2. No sufficient space to adjust the camera position 3. Conveyor misalignment 4. Tyre stuck to marking clamp 5. Off-centre tyre mounting 6. Only geometry & Balancing measurement not possible 7. Centering force variation	Material	1. Tyre stuck to lubrication due to more flexibility 2. Wrong Barcode 3. Barcode not readable

Total 15 Possible causes were noted in brainstorming with the team Members

IDENTIFICATION OF CAUSES



Step-6

Root causes & Validation of Root Causes

Tools/Techniques used:
1. BRAINSTORMING

Finding out the Root causes

Sl.no	Main category	Possible Cause	Probable Root Cause
1	Man	Improper Feeding of tyre	Change of casual labours everyday
2		SOP not Followed	Non effectiveness of training
3	Machine	Machine is taking more cycle time	Two times geometry measurement
4		No sufficient space to adjust the camera position	Improper alignment of cable
5		Conveyor misalignment	No control for conveyor alignment
6		Tyre stuck to marking clamp	Clamp go below the bottom bead
7		Off-centre tyre mounting	Improper centering
8		Only geometry & Balancing measurement not possible	No option for single parameter check
9		Centering force variation	Inflation valve not working properly
10	Method	Product Mix	Non adequacy in SOP
11		The customer want only balance & geometry measurement but we are doing all the measurements which are not required by customer	Unable to disable uniformity measurement.
12		Complexity to run below 145mm width tyre	Issue in machine logic
13	Material	Tyre stuck to lubrication due to more flexibility	Due to flexibility centering arm push the tyre in one side
14		Wrong Barcode	Wrong measurement
15		Barcode not readable	Rubber flow on barcode

Finding out the Root causes

Sl.no	Main category	Possible Cause	Probable Root Cause	Validation method	Valid/Invalid
1	Man	Improper Feeding of tyre	Change of casual labors everyday	Operator skill matrix	Valid
2		SOP not Followed	Non effectiveness of training	Operator skill matrix	Invalid
3	Machine	Machine is taking more cycle time	Two times geometry measurement	MES	Valid
4		No sufficient space to adjust the camera position	Improper alignment of cable	Gemba visit	Valid
5		Conveyor misalignment	No control for conveyor alignment	Gemba visit	Valid
6		Tyre stuck to marking clamp	Clamp go below the bottom bead	Log & breakdown data	Valid
7		Off-centre tyre mounting	Improper centering	Log & breakdown data	Invalid
8		Only geometry & Balancing measurement not possible	No option for single parameter check	Simulation	Valid
9		Centering force variation	Inflation valve not working properly	Stimulation	Valid
10	Method	Product Mix	Same inch sizes running with higher OD	Stimulation	Valid
11		The customer want only balance & geometry measurement but we are doing all the measurements which are not required by customer	Unable to disable uniformity measurement.	Gemba visit	Valid
12		Complexity to run below 145mm width tyre	Issue in machine logic	MES	Valid
13	Material	Tyre stuck to lubrication due to more flexibility	Due to flexibility centering arm push the tyre in one side	Log & breakdown data	Invalid
14		Wrong Barcode	Wrong measurement	Simulation	Invalid
15		Barcode not readable	Rubber flow on barcode	Tyre get bypassed by machine	Invalid

Finding out the Root causes

After fish bone analysis we have 15 probable root causes, but after validation we have 10 root cause, which is shown below.

Sr. No	Root Cause
1	Change of casual labors everyday
2	Two times geometry measurement
3	Improper alignment of cable
4	No control for conveyor alignment
5	Clamp go below the bottom bead
6	No option for single parameter check
7	Unable to disable uniformity measurement.
8	Non adequacy in SOP
9	Inflation valve not working properly
10	Issue in machine logic

Step-7

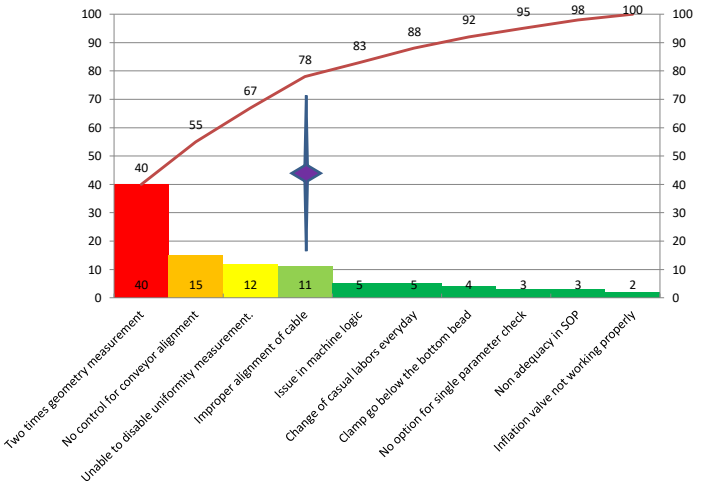
DATA ANALYSIS

Tools/Techniques used:
1. PARETO ANALYSIS

DATA ANALYSIS

We have prioritized the root cause for given the priority of impact the problem.

S.No.	Root Cause	Percentage productivity loss	Cum. (%)
1	Two times geometry measurement	40	40
2	No control for conveyor alignment	15	55
3	Unable to disable uniformity measurement.	12	67
4	Improper alignment of cable	11	78
5	Issue in machine logic	5	83
6	Change of casual labors everyday	5	88
7	Clamp go below the bottom bead	4	92
8	No option for single parameter check	3	95
9	Non adequacy in SOP	3	98
10	Inflation valve not working properly	2	100
	Total	100	



Step-8

DEVELOPING SOLUTIONS

Tools/Techniques used:
1.BRAINSTORMING
2. GEMBA

DEVELOPING SOLUTIONS

Root Causes	Developing Solutions	Status	Remark
Two times geometry measurement	Modify the marking clamp as per the requirement.	Rejected	Modified clamp will not suitable for higher inch sizes
	Set tread width height more than actual	Accepted	We can set tread width height in machine program easily.
No control for conveyor alignment	Fix sensor for auto control	Rejected	It's cost very high.
	Implement the visual control for conveyor adjustment.	Accepted	We can made easily In-house.
Unable to disable uniformity measurement.	Install separate machine for one parameter checking	Rejected	It's cost very high.
	Modify the logic so specifically any one of the parameter can be run	Accepted	With OE support we can modify logic
Improper alignment of cable	Take separate geometry measurement for top & bottom side..	Rejected	We can align cable and sensor with the help mech.
	Align the cables & sensor which are comes across the geometry assemble moment.	Accepted	It will increase the cycle time by 10-12 sec.

DEVELOPING SOLUTIONS

S.No.	Root Causes	Developing Solutions	Responsibility	By Whom	Target Date
1	Two times geometry measurement	Set tread width height more than actual	Piyush Tiwari	Instrumentation	25-02-2024
2	No control for conveyor alignment	Implement the visual control for conveyor adjustment.	Neeraj Saxena	Mechanical	28-02-2024
3	Unable to disable uniformity measurement.	Modify the logic so specifically any one of the parameter can be run	Sanjeev Gurjar	Instrumentation	29-02-2024
4	Improper alignment of cable	Align the cables & sensor which are comes across the geometry assemble moment	Sushil Kumar	Mechanical	25-02-2024

Step-9

FORESEEING PROBABLE RESISTANCE

Tools/Techniques used:
1. BRAINSTORMING

FORESEEING PROBABLE RESISTANCE

S.No.	Solutions	Resistance	Idea
1	Set tread width height more than actual	How much tread width height should be increase ?	We discussed with our engineering team and after trial decided 15-20 mm tread width height more than actual .
2	Implement the visual control for conveyor adjustment.	What type of control should to installed ?	We discussed with our engineering team and decided metallic scale fix conveyor adjustment.
3	Modify the logic so specifically any one of the parameter can be run	Single process to check both bulge and runout parameter and system control by OE?	We discussed with our team and decided Modify the program and logic .
4	Align the cables & sensor which are comes across the geometry assemble moment	Cable length short ?	We discussed with our engineering team cable change with increase length.

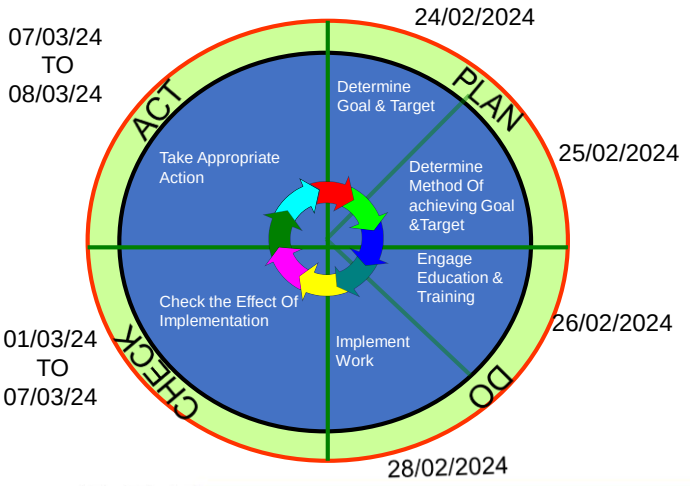
Step-10

TRIAL IMPLEMENTATION & CHECK PERFORMANCE

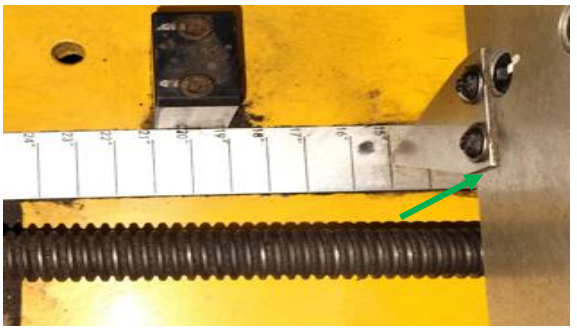
Tools/Techniques used:
1.DATA COLLECTION
2.LINE GRAPH

TRIAL IMPLEMENTATION & CHECK PERFORMANCE

PDCA CYCLE

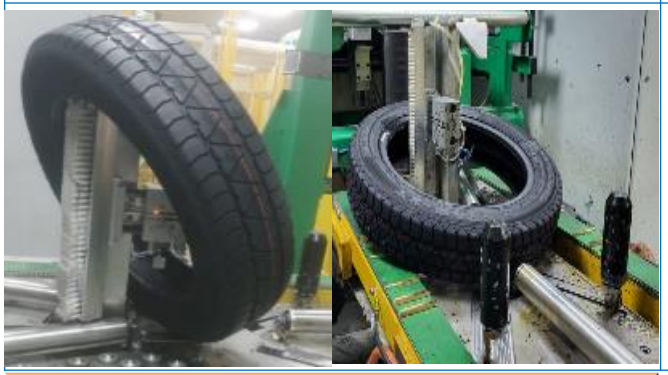


TRIAL IMPLEMENTATION & CHECK PERFORMANCE

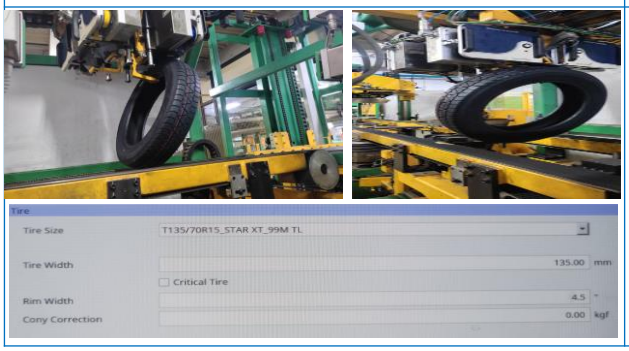
BEFORE	AFTER
	

CAUSE:	Solution:
No visual control for adjust the conveyor width according to the rim size.	Implemented visual control to adjust the conveyor width according to the rim size.

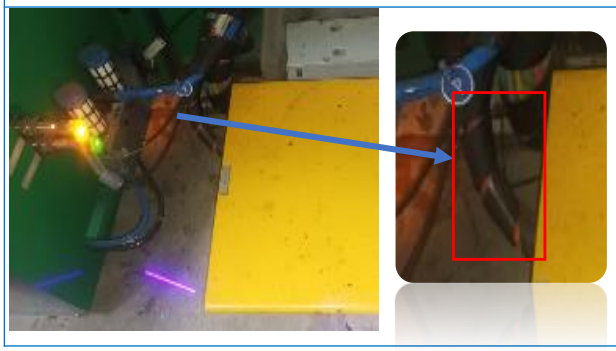
TRIAL IMPLEMENTATION & CHECK PERFORMANCE

BEFORE	AFTER
	
CAUSE: The tyre is very flexible & it is frequently getting stuck in to the conveyor so the speed of conveyor reduced to 50%.	**Solution:** Adjust the conveyor width & run with 100% speed

TRIAL IMPLEMENTATION & CHECK PERFORMANCE

BEFORE	AFTER
	
CAUSE: Below 145 mm of tread width marking clamp goes below bottom bead.	**Solution:** Set the tread width 162 mm at M- Conf program

TRIAL IMPLEMENTATION & CHECK PERFORMANCE

BEFORE	AFTER
	

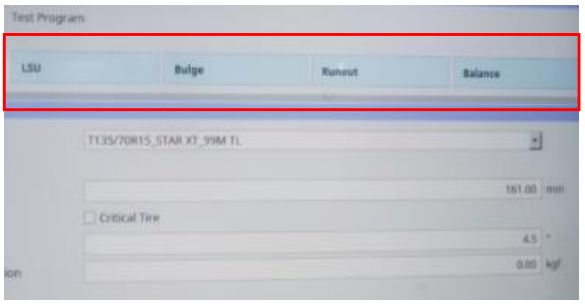
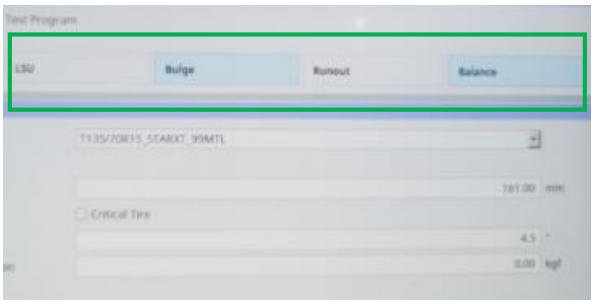
CAUSE:

No sufficient space to camera forward position

Solution:

All cables are fixed below the geometry assembly.

TRIAL IMPLEMENTATION & CHECK PERFORMANCE

BEFORE	AFTER
	

CAUSE:

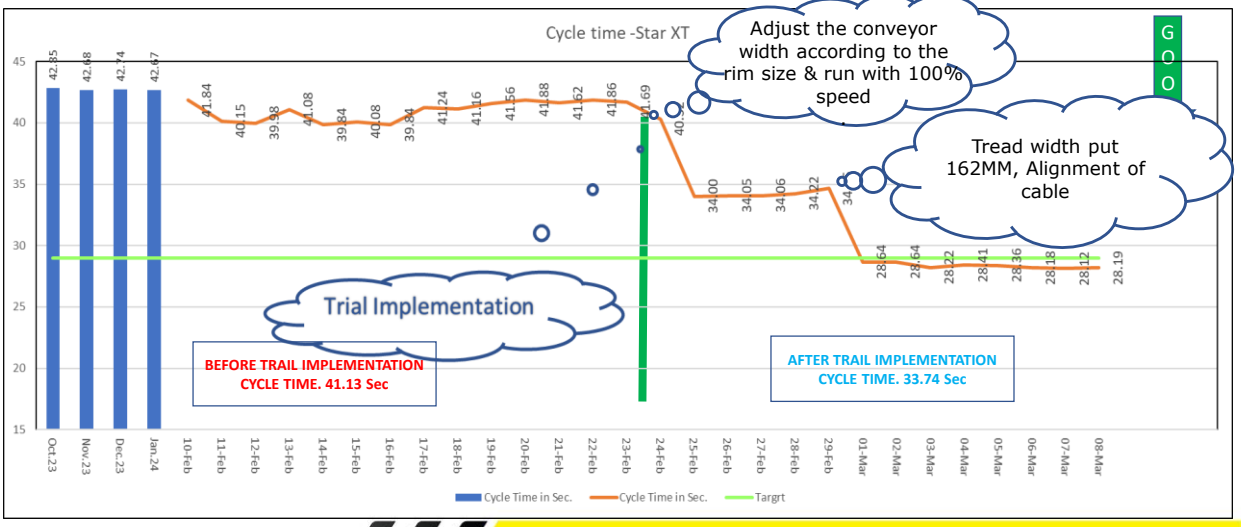
Logic in to the system is not testing the single parameter during uniformity testing

Solution:

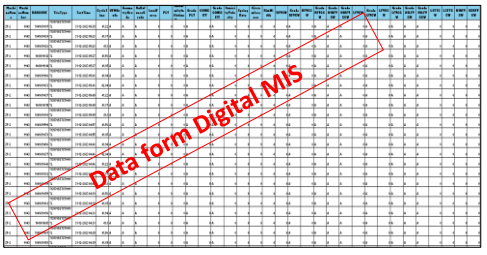
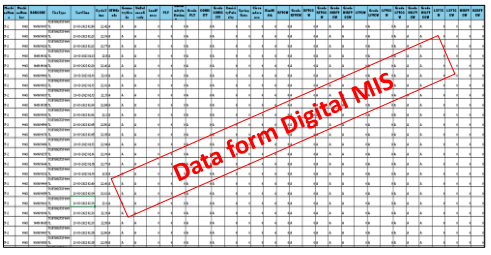
Modify the program so specifically any one of the parameter can be run.

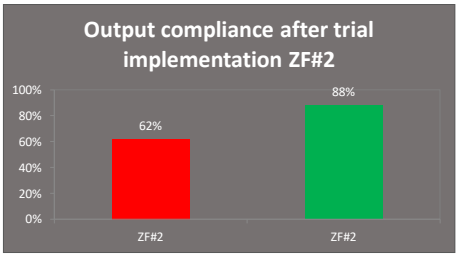
TRIAL IMPLEMENTATION & CHECK PERFORMANCE

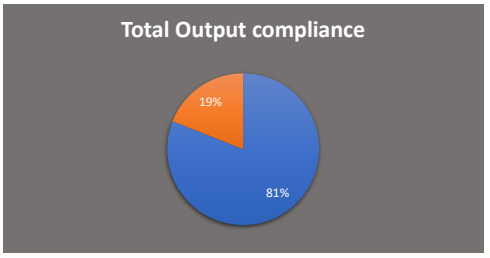
Firstly we have been taken trial on ZF#2 machine and after trial implementation We have collected cycle time data



TRIAL IMPLEMENTATION & CHECK PERFORMANCE

BEFORE	AFTER
	





Step-11

REGULAR IMPLEMENTATION

Tools/Techniques used:

1. DATA COLLECTION
2. LINE GRAPH

REGULAR IMPLEMENTATION

- We have discussed with our Seniors, HOD about the suggestions. They appreciated the suggestions and given permission to continue the work.
- We have discussed with engineering department, they also appreciate the work and told to maintain it in future.
- We have Solutions horizontal deployed at TUO machine ZF#2 & 3.

JK TYRE & INDUSTRIES LTD.

PERMISSION LETTER CERTIFICATE

Date: 09 March 2024

To,
The Department Head,
SSUK2 QA
JK Tyre Ind. Ltd.
Banmore Tyre Plant

Sub: - For permission of doing Modification

Respected Sir,

I want to state that, during previous month our Quality Circle Team [JOGHOSH] observed that Output target not meet in T-spare size during Uniformity Checking, for this QC Team make several meetings and found solution in direction of increasing productivity of T-spare Size. Our QC team want to make some modification. This QC project can increase the productivity of T-spare Size.

So, please give us permission for implementing the same for all Machine.

For permission,

SSUK2 BU HEAD

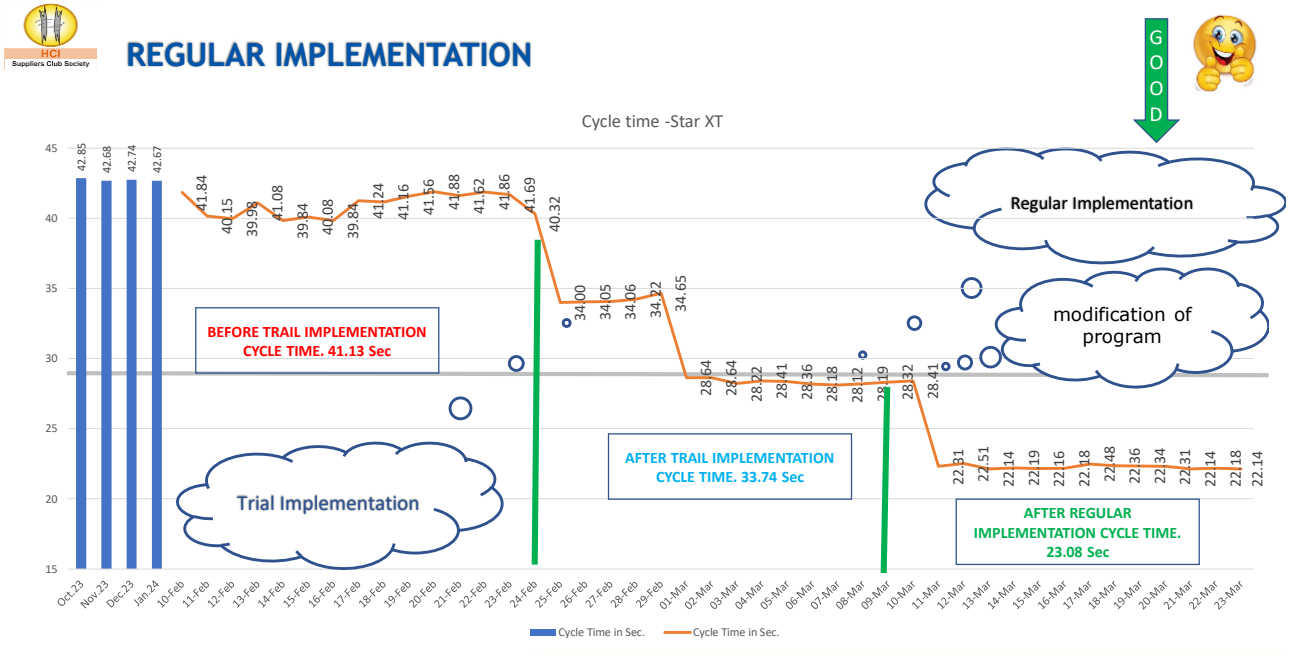
CC: All BU Heads & SSU Heads

VIKRANT

REGULAR IMPLEMENTATION

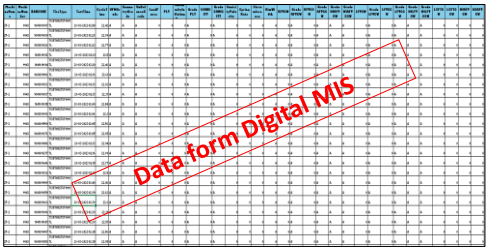
S.No.	Root Causes	Developing Solutions	Responsibility	By Whom	Target Date
1	Two times geometry measurement	Set tread width height more than actual	Piyush Tiwari	Instrumentation	09-03-2024
2	No control for conveyor alignment	Implement the visual control for conveyor adjustment.	Neeraj Saxena	Mechanical	10-03-2024
3	Unable to disable uniformity measurement.	Modify the logic so specifically any one of the parameter can be run	Sanjeev Gurjar	Instrumentation	11-03-2024
4	Improper alignment of cable	Align the cables & sensor which are comes across the geometry assemble moment	Sushil Kumar	Mechanical	11-03-2024

REGULAR IMPLEMENTATION

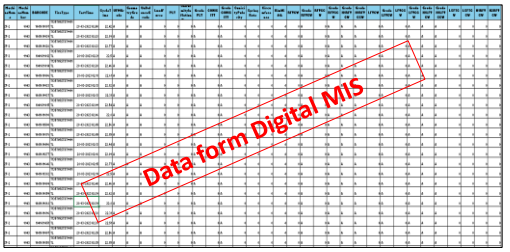


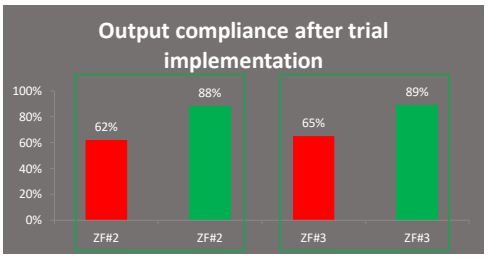
REGULAR IMPLEMENTATION

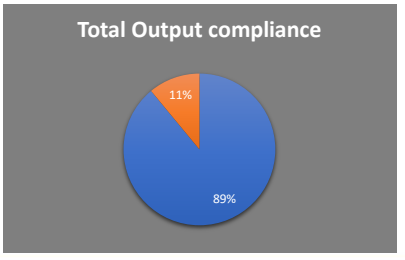
Data Of ZF#2 Machine



Data Of ZF#3 Machine







REGULAR IMPLEMENTATION

TANGIBLE BENEFITS

	Before	After
Cycle Time (Sec.)	42	22
Impact on TUO out put (Tyres/Month) Avg tyre/month-25000 nos	-13500	6034

Target Cycle Time	**29 Sec**
Total Productivity Improvement	**19534 Tyres/Month**

Benefits of Company

Labour cost saving per month- Rs. 45,000

Saving (productivity) per month- Rs. 1,50,000

Total Saving per Month - Rs. 1,95,000

Saving per Annual - Rs. 23,40,000

REGULAR IMPLEMENTATION

Appreciation Letter

Appreciation letter from GM (Commercial)

JK TYRE & INDUSTRIES LTD.

Customer Satisfaction Certificate

CONGRATULATIONS

Date: - 6th April 2024

Our Quality Team **UDGHOSH** in SSU#2 QA has done excellent job through Quality Circle Project in "**Output Target not met in Tyre Uniformity Machine**".

For this we have saved amount as given below:-

Saving: - Rs. 23, 40,000 per Annum

Once again we heartily congratulates Our Quality Circle Team **"UDGHOSH".**

With Best Wises,
Thanks & Regards

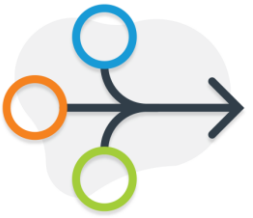
GM (Commercial)
CC: All BU Heads & SSU Heads

Offices: C1, Banmore Industrial Area, Dist. Morena – 476 444(M.P.) Fax: 07652-266501 Phone: 7602-500011,266400

VIKRANT

REGULAR IMPLEMENTATION

INTANGIBLE BENEFITS



- *Increased employee morale*
- *Complexity Reduction*
- *Customer satisfaction*
- *Reduce waste (waiting time)*
- *Knowledge increased*

HONDA

Honda Cars India Ltd.
Plot No. A-1,Sector 40/41, Surajpur-Kasna Road,
Greater Noida Industrial Development Area,
Distt. Gautam Budh Nagar (U.P.) Pin - 201306
Tel. : +91-120-2341313 / 321 / 327/ 801 / 806
Fax : +91-120-2341261

5J07 Dated:- 16-Jan-25
M/S. JK TYRE & INDUSTRIES LIMITED
C -1 INDUSTRIAL AREA,
M BANMORE
DISTT MORENA
MADHYA PRADESH

KIND ATTN. : Mr.Srinivasu Allaphan (Director-Sales & Marketing)

Sub: Delivery & Quality Data for Dec'24

Dear Sir,

We appreciate your services to HCIL

Kindly note the Quality & Delivery performance of your company vis-à-vis our targets :

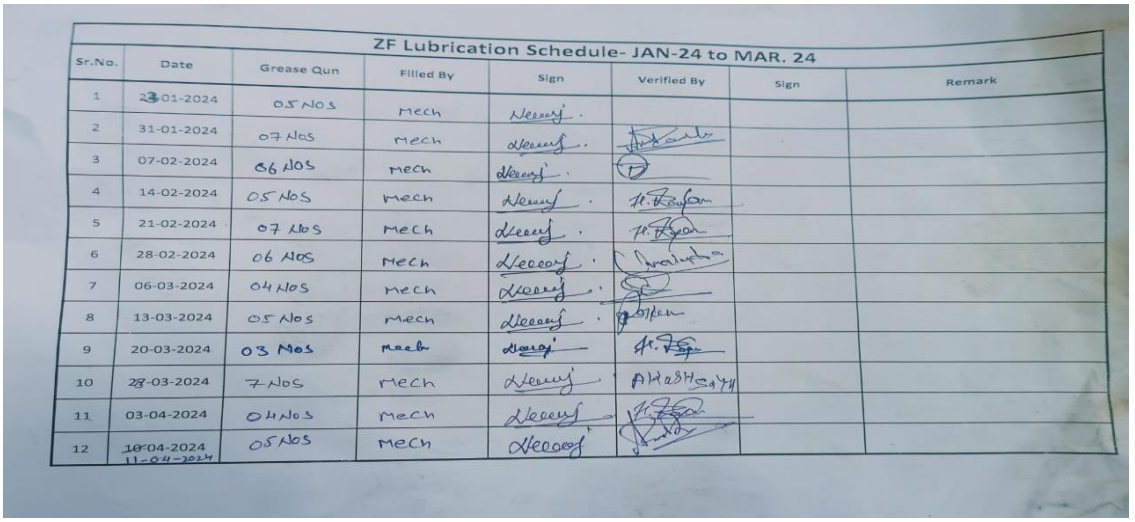
DELIVERY			QUALITY			MARKET FAILURE	
No. of Problems	GDI Score	RANK	No. of Problems	GQI Score	RANK	Market Failures Data	
(Based on No of problems reported)	(Based on weightage of defects)	Rank / Out of	(Based on No of problems reported)	(Based on weightage of defects)	Rank / Out of	No. of Claim's	No. of Part's
0	0	1 / 200	0	0	1 / 200	0	0

Step-12
FOLLOW-UP & REVIEW

Tools/Techniques used:
1.DATA COLLECTION

FOLLOW-UP & REVIEW

Lubrication schedule to ensure timely lubrication



ZF Lubrication Schedule- JAN-24 to MAR. 24

Sr.No.	Date	Grease Qun	Filled By	Sign	Verified By	Sign	Remark
1	23-01-2024	05 Nos	Mech				
2	31-01-2024	07 Nos	Mech				
3	07-02-2024	06 Nos	Mech				
4	14-02-2024	05 Nos	Mech				
5	21-02-2024	07 Nos	Mech				
6	28-02-2024	06 Nos	Mech				
7	06-03-2024	04 Nos	Mech				
8	13-03-2024	05 Nos	Mech				
9	20-03-2024	03 Nos	Mech				
10	28-03-2024	7 Nos	Mech				
11	03-04-2024	04 Nos	Mech				
12	10-04-2024 11-04-2024	05 Nos	Mech				

Star XT running instruction has been monitored in DWM

Daily Work Management consolidate sheet - March 24

Sl.no	MP/CP No	Parameter	Primary Person	Secondary Person	Graph	Target	Average	Daily 1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	5.1.1	Safety	All		OPEN	0	0.0667	0	0	0	0	0	0	0	0	1	0	0	0	0	1
5		Less than 90 % Sizes- TUO	Saleem	Datta			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16		TUO Tyre damage	Saleem	Datta	OPEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17		Star XT at TUO (Should run in batch)	Saleem	Datta			#DIV/0!	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
18		TUO Left over	Saleem	Datta	OPEN	100	1073.8	375	610	770	700	1350	863	1350	1400	1350	1178	1400	980	1050	2500

MachineName	Press Name	Mould Name	Barcode	Sapcode	Tyre Type	Date	Shift	CycleTime	UniformityGrade	Lo
ZF-1	4922	B13570R15STRXTSX01	1036438966	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 06:59:16	C	23.7	A	0
ZF-1	4922	B13570R15STRXTSX01	1036438544	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:54:07	C	22.7	A	0
ZF-1	4923	B13570R15STRXTSX03	1036438634	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:53:44	C	22.85	A	0
ZF-1	4915	B13570R15STRXTHM01	1036438783	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:53:21	C	24.65	A	0
ZF-1	4922	B13570R15STRXTHM03	1036437962	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:52:59	C	21.96	A	0
ZF-1	4922	B13570R15STRXTHM03	1036461434	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:52:35	C	25.17	A	0
ZF-1	4922	B13570R15STRXTHM03	1036438207	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:52:09	C	22.73	A	0
ZF-1	4922	B13570R15STRXTHM03	1036438556	1325213615099MSXT0	T135705STXT99MTL	06-03-2024 05:51:47	C	25.69	A	0

Digital MS TUO Report

FOLLOW-UP & REVIEW

SSU4.01-FR.02A

Training Attendance Record
(for Class Room Training)

Programme Title :- New Set-up of T- Steel tyre.
Date: From :- 13 20/03/24 To :- 22/03/24
Time: To:
Venue :- on Job Training
Faculty : Mr. D. Arun, Mr. Himanshu, Mr. Raj, Mr. Roshan
Programme Coordinator :

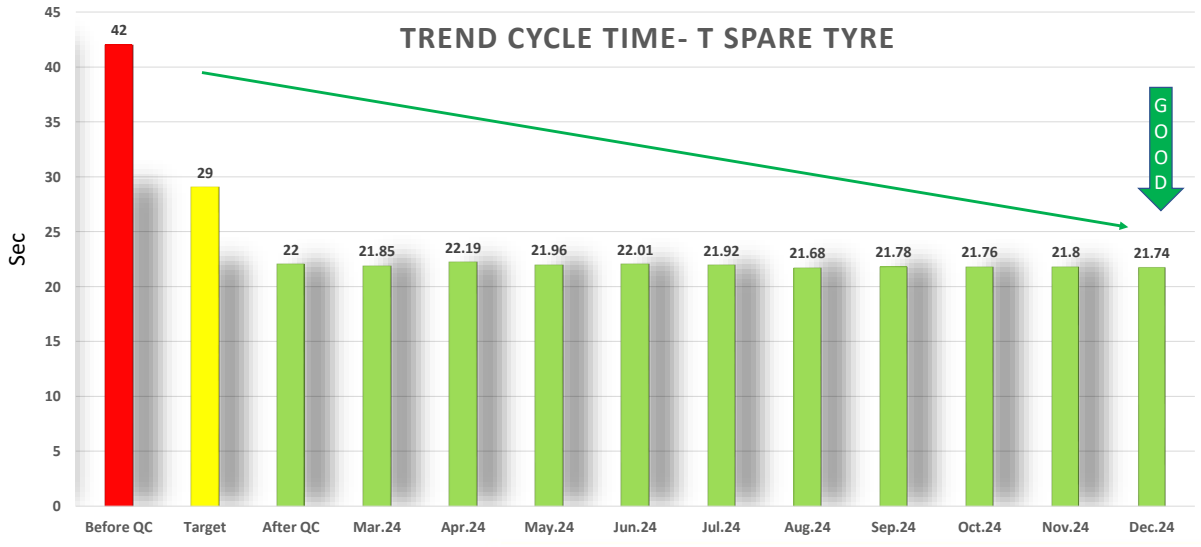
S.No	Sap Code	Name	Designation	Deptt&Location	Signature
1	78791	Akash Tiwari	DAT	SSU#2A1	
2	78798	Shivagan Chauhan	"	"	
3	26304	Manikant Thakur	DET	"	
4	26514	Aman Dwivedi	"	"	
5	86212	Akash Sahu	"	"	
6	25038	HIMANSHU RANJAN	"	"	
7	78899	Gajendra Singh	DAT	"	
8	78970	Shivam Tiwari	DAT	"	
9	78888	Gagan Sharma	DAT	"	
10	25997	Roshan Kumar	DAT	"	
11	26003	RAKESH K	DET	"	
12	26304	Ram baby sharma	DET	SSU#2A1	
13	26514	Aman Dwivedi	DET	"	
14	24307	Ravi Kr	OE	"	
15	78792	Shivagan Chauhan	DAT	"	
16	26211	Raj Gurjar	DET	"	
17	25792	Manik sharma	DET	"	
18	26535	Ganesh Das	OE	"	
19	26514	AMAN DWIVEDI	DET	2A1	
20	78918	Arun Khan	DAT	"	

All the inspectors & Operators have been communicated regrading the modification/Changes in 135/70R15 STAR XT TL size set up.

Step.No.	Step Description	QUALITY CIRCLE NAME :- UDGHOSH Project Title: Output target not met in Tyre Uniformity machine Project Start : 30.12.2023 Project Completed : 06.04.2024	Regn no.:JKTIL/BTP/QC/20/2018 Milestone Chart	Department : SSU#2 QA Project Category: A

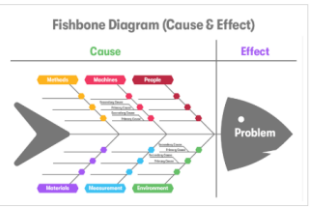
		Week→	06-01-2024	13-01-2024	20-01-2024	27-01-2024	03-02-2024	10-02-2024	17-02-2024	24-02-2024	02-03-2024	09-03-2024	16-03-2024	23-03-2024	30-03-2024	06-04-2024
3	Defining the Problem	Plan														
		Actual														
4	Analysis of problem	Plan														
		Actual														
5	Identification of causes	Plan														
		Actual														
6	Finding out of the root cause	Plan														
		Actual														
7	Data analysis of root cause	Plan														
		Actual														
8	Developing Solutions	Plan														
		Actual														
9	Foreseeing probable resistance	Plan														
		Actual														
10	Trial implementation & check performance	Plan														
		Actual														
11	Regular implementation	Plan														
		Actual														
12	Follow-up & Review	Plan														
		Actual														

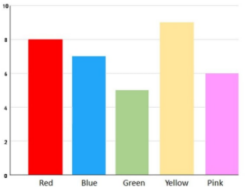
FOLLOW-UP & REVIEW

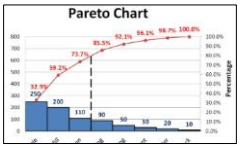


TOOLS & TECHNIQUES USED IN THIS PROJECT

- *CAUSE & EFFECT DIAGRAM*
- *BAR GRAPH*
- *DATA COLLECTION*
- *PDCA CYCLE*
- *PARETO DIAGRAM*
- *STRATIFICATION*
- *BRAIN STROMING*
- *4W + 1H*







QC Challenges

Quality
- Poor dot marking
- Improper id line
- High bay rejection

Productivity
- High breakdown
- High MTTR & Low MTBF

Cost
- Rework
- High consumption of lube & marking tape

Next Project

Reduction Lube consumption by 30%.

Thank You

Question and Suggestion please