



Autonomous Maintenance (AM) Checklist

06 Jul 2021 / Assembly B4 / Minnie Tae

Complete

Score	1,430 / 1,635 (87.46%)	Flagged items	17	Actions	2
Area / Team	Assembly B4				
Equip. Unit No.	07MT12				
Date requested for review	7 Jul 2021 00:00 PST				
Actual date / Time of review	6 Jul 2021 15:40 PST				
Name of reviewer	Minnie Tae				
Submission date	8 Jul 2021 00:00 PST				
Area manager	Rachel Parklett				
Team leader	Jinki O'newson				
Review type	Self				
Location	5 Co Rd 356, Lumberton, NM 87528, USA				

Flagged items & Actions

17 flagged, 2 actions

Flagged items

17 flagged, 2 actions

Step 1: Initial Cleaning (Processing Equipment) / 1. Cleanliness of main body of equipment

Looseness, play, vibration, friction and overheating eliminated (nuts, bolts, jigs, rotating and sliding parts, chutes, etc.)?

Poor



Photo 2

To do | Assignee: Alexis Delacruz | Priority: High | Due: 13 Jul 2021 16:02 PST | Created by: SafetyCulture Staff

Replace loosened nuts and bolts

Correct these visible minor defects on the equipment and update the status of this action accordingly

Step 1: Initial Cleaning (Processing Equipment) / 2. Cleanliness of peripheral apparatus

Dust, dirt, oil stains and debris all cleaned off (cylinders, solenoids, FRLs, motors, limit switches, belts, proximity switches, photocells, control panel)

Rather poor

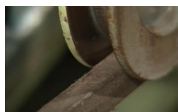


Photo 3

To do | Assignee: Howie Mann | Priority: Medium | Due: 13 Jul 2021 16:17 PST | Created by: SafetyCulture Staff

Lubricate rotating belt

Potential minor defect detected; apply appropriate oil volume and ensure the correct drip rate

Step 1: Initial Cleaning (Processing Equipment) / 6. Way in which TPM is being addressed

Do all team members have a good understanding of what TPM means, and are they all fully involved in implementing it?

Rather poor

Step 3: Provisional Autonomous Maintenance Standards (Processing Equipment) / 2. Maintenance of basic equipment conditions (action standards for cleaning, lubricating and tightening)

- Separate standards created for each equipment unit, area, etc.?

Rather poor

Step 3: Provisional Autonomous Maintenance Standards (Processing Equipment) / 2. Maintenance of basic equipment conditions (action standards for cleaning, lubricating and tightening)

- Suitable cleaning times and intervals set and observed?

Poor

Step 3: Provisional Autonomous Maintenance Standards (Processing Equipment) / 2. Maintenance of basic equipment conditions (action standards for cleaning, lubricating and tightening)

- Standards clear enough for anyone to follow?	Rather poor
Step 3: Provisional Autonomous Maintenance Standards (Processing Equipment) / 3. Awareness of role in creating standards	
- Improvements actively pursued to make checking easier and enhance visual management?	Rather poor
Step 4-1: General Inspection (Fastenings) / 1. Skills Training	
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Poor
Step 4-1: General Inspection (Fastenings) / 1. Skills Training	
- General Inspection skills mastered by all team members?	Rather poor
Step 4-1: General Inspection (Fastenings) / 4. Shop- floor review (Fastenings)	
- Same kinds of nuts, bolts, washers, etc. used in same kinds of locations?	Rather poor
Step 4- 2: General Inspection (Lubrication) / 1. Skills Training	
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Poor
Step 4- 3: General Inspection (Drives) / 1. Skills Training	
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Rather poor
Step 4- 3: General Inspection (Drives) / 2. General Inspection	
- Inspection done correctly, covering all items in category trained?	Rather poor
Step 4- 3: General Inspection (Drives) / 2. General Inspection	
- Minor equipment problems identified reliably during inspection process?	Poor
Step 4- 3: General Inspection (Drives) / 4. Shop- floor review (Drives)	
- Bearings free of overheating, vibration or strange noises due to bent or off- centre shafts, loose fixing bolts, under-lubrication, etc.?	Poor
Step 4- 3: General Inspection (Drives) / 4. Shop- floor review (Drives)	
- Irregular noise in gearboxes, speed reducers , etc.?	Rather poor
Step 4- 3: General Inspection (Drives) / 4. Shop- floor review (Drives)	
- Gearboxes, speed reducers, etc. properly lubricated? Any overheating?	Poor
Other actions	0 actions

Step 1: Initial Cleaning (Processing Equipment)

3 flagged, 2 actions, 61 / 105 (58.1%)

Pass levels :Score = total score for 'equipment' (Review Items 1-5) + score for 'people' (Review Item 6)

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Scoring key	Points		1 point / 10 points	2 points / 20 points	3 points / 30 points	4 points / 40 points	5 points / 50 points
	1-5	Equipment	Hardly implemented at all	Only implemented in obvious places	Implemented in specific locations (e.g. sliding parts, chutes)	Also implemented in more difficult and less obvious places	Full 'checking through cleaning' achieved, and difficult areas starting to be addressed
	6	People	No interest at all	Only maintenance staff and supervisors active	Operators taking part, but doing the easy tasks only	Operators doing nearly all the work	Responsibilities clearly defined, and everything being done properly

Result**Fail****1. Cleanliness of main body of equipment**

1 flagged, 1 action, 6 / 10 (60%)

Dust, dirt, oil stains and waste all cleaned off, and materials and tools put neatly in order (jigs, chucks, sliding parts, chutes, frames, beds, pipes, wires, etc.)?

Good

Photo 1

Looseness, play, vibration, friction and overheating eliminated (nuts, bolts, jigs, rotating and sliding parts, chutes, etc.)?

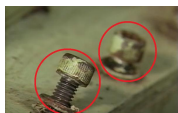
Poor

Photo 2

To do | Assignee: Alexis Delacruz | Priority: High | Due: 13 Jul 2021 16:02 PST | Created by: SafetyCulture Staff

Replace loosened nuts and bolts

Correct these visible minor defects on the equipment and update the status of this action accordingly

2. Cleanliness of peripheral apparatus

1 flagged, 1 action, 11 / 15 (73.33%)

- Hydraulic, pneumatic, and water systems
- Electrical control systems
- Other

Dust, dirt, oil stains and debris all cleaned off (cylinders, solenoids, FRLs, motors, limit switches, belts, proximity

Rather poor

switches, photocells, control panel

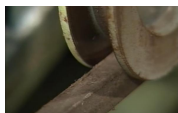


Photo 3

To do | Assignee: Howie Mann | Priority: Medium | Due: 13 Jul 2021 16:17 PST | Created by: SafetyCulture Staff

Lubricate rotating belt

Potential minor defect detected; apply appropriate oil volume and ensure the correct drip rate

Interiors/exterior, meters / gauges, etc.)?

Quite good

Looseness, play, vibration, friction, buzzing and overheating eliminated (motors, solenoids, limit switch mounting plates, relays, wires, nuts, bolts, etc.)?

Good



Photo 4

3. State of lubrication

8 / 10 (80%)

Dust, dirt and oil stains all cleaned off (lubricators, oil pumps, level gauges, filler caps, supply pipes, etc.)?

Quite good

Oil volumes and drip rates correct, and looseness, play, and vibration eliminated (contamination/degradation of oil itself, pipe joints, valves, gearboxes, oil temperature, etc.)?

Quite good

4. Cleanliness of equipment surroundings

6 / 10 (60%)

- Tools, measuring instruments, and spare parts all organised correctly?
- Guards, nameplates, labels, and other signs all displayed correctly?
- Unnecessary objects removed, and correct products and parts kept in correct places?

Fair

the area can be cleaner by removing unnecessary objects



Photo 5

- Defective products clearly separated from good ones?
- Aisles clear and tidy?
- No scattering of dust/dirt from other equipment?

Fair

5. Contamination sources and hard- to- access areas

10 / 10 (100%)

Chart drawn up plotting all sources of dirt, dust and oil stains, and areas that are hard to clean? Plan formulated for dealing with these?

Good



Photo 6

**- Improvements made to guards and cleaning tools?
`Checking through cleaning' being implemented?
- Cleaning areas clearly allocated?**

Good

6. Way in which TPM is being addressed

1 flagged, 20 / 50 (40%)

Do all team members have a good understanding of what TPM means, and are they all fully involved in implementing it?

Rather poor

Step 2: Contamination Sources and Hard-to-Access Areas(Processing Equipment)

90 / 100 (90%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Scoring key	Points		2	4	6	8	10
	1-5	Equipment	Hardly implemented at all	Only implemented in obvious places	Implemented in specific locations	Also implemented in more difficult and less obvious places	Comprehensive lubrication achieved hardly any outstanding issues
	6	People	No interest at all	Only maintenance staff and supervisors active	Operators taking part, but doing the easy tasks only	Operators doing nearly all the work	Responsibilities clearly defined, and everything being done properly

Result

Pass

1. Sustainment of Step 1

8 / 10 (80%)

- Cleaning levels achieved in Step 1 (Initial Cleaning) being properly sustained?

Quite good



Photo 7

2. Countermeasures for main body of equipment

18 / 20 (90%)

-Sources of dirt, dust, oil leaks, air leaks, etc. all plotted on a chart, and action taken to rectify them?

Quite good



Photo 8

-Hard-to-access areas all marked on a chart, and creative improvements implemented to make them more accessible (guarding improved, original cleaning tools devised, everything sorted and reorganised)?

Good

3. Countermeasures for peripheral devices

18 / 20 (90%)

- Sources of dirt, dust, oil leaks, air leaks, etc. all plotted on a chart, and action taken to rectify them?

Quite good

- Hard- to- access areas all marked on a chart, and creative improvements implemented to make them more accessible (guarding improved, original cleaning tools devised, everything sorted and reorganised)?

Good

4. Countermeasures for equipment surroundings		20 / 20 (100%)
- Sources of dirt, dust, oil leaks, air leaks, etc. all plotted on a chart, and action taken to rectify them?		Good
		
Photo 9		
- Hard- to- access areas all marked on a chart, and creative improvements implemented to make them more accessible (guarding improved, original cleaning tools devised, everything sorted and reorganised)?		Good
5. Improvement and sustainment		10 / 10 (100%)
- Lubrication points clearly labelled according to lubrication standards, so that anyone can lubricate the machines correctly?		Good
6. Status of activities		16 / 20 (80%)
- All team members actively involved?		Quite good
- Plenty of original thought going into the improvements?		Quite good

Step 3: Provisional Autonomous Maintenance Standards (Processing Equipment)

4 flagged, 71 / 100 (71%)

Self: 90 or over
Area M.: 85 or over
Senior M.: 80 or over

Result

Fail

1. Sustainment of Steps 1 and 2

15 / 15 (100%)

- Cleaning levels achieved in Step 1 (Initial Cleaning) and improvements made in Step 2 (Contamination Sources and Hard- to- Access Areas) being properly sustained?

Good

2. Maintenance of basic equipment conditions (action standards for cleaning, lubricating and tightening)

3 flagged, 38 / 55 (69.09%)

(Cleaning Standards)

- Separate standards created for each equipment unit, area, etc.?

Rather poor

- Cleaning areas, locations and work duties properly defined and allocated?

Fair

- Cleaning methods and tools specified?

Quite good

- Suitable cleaning times and intervals set and observed?

Poor

- Standards clear enough for anyone to follow?

Rather poor

(Lubrication Standards)

- Type and quantity of oil, frequency of lubrication, method and responsibilities all clearly specified?

Fair

- All lubrication points correctly labelled?

Quite good

- Required lubricants always available?

Good

- Lubricants stored neatly and systematically (lubricant storage areas clean and tidy)?

Quite good

(Tightening)

- Nuts and bolts all correctly tightened?

Good

- Any nuts and bolts missing?	Good
3. Awareness of role in creating standards	1 flagged, 18 / 30 (60%)
- Teams setting their own standards?	Quite good
- Standards being observed?	Fair
- Improvements actively pursued to make checking easier and enhance visual management?	Rather poor

Step 4-1: General Inspection (Fastenings)

3 flagged, 175 / 200 (87.5%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Result	Fail
Sustainment	100 / 100 (100%)
Steps 1 to 3 activities properly managed and sustained?) - Action against contamination sources being properly sustained? - Good improvements making hard- toaccess areas more accessible? - Cleaning and lubrication standards completed and applied rigorously?	Good
1. Skills Training	2 flagged, 3 / 10 (30%)
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Poor
- General Inspection skills mastered by all team members?	Rather poor
2. General Inspection	12 / 15 (80%)
- Inspection done correctly, covering all items in category trained?	Quite good
- Minor equipment problems identified reliably during inspection process?	Fair
- Action taken to deal with these problems?	Good
3. Safety	4 / 5 (80%)
- Progress made in identifying and fixing minor equipment problems that compromise safety?	Quite good
4. Shop- floor review (Fastenings)	1 flagged, 36 / 45 (80%)
- All nuts and bolts, etc. correctly tightened?	Fair
- Any nuts or bolts missing or damaged?	Fair
- Countermeasures against loosening (locknuts, etc.) introduced where necessary?	Good

- Flat washers used for oval holes?	Quite good
- Bolts of suitable length used?	Good
- Matchmarks inscribed on nuts and bolts susceptible to vibration?	Quite good
- Same kinds of nuts, bolts, washers, etc. used in same kinds of locations?	Rather poor
- Spanners and other tools located and arranged for easy use (marked location for each tool)?	Good
- Regularly- used fastenings improved for easy installation and removal??	Good
5. Provisional Autonomous Maintenance standards	20 / 25 (80%)
- Provisional checking standards completed?	Good
- Improvements made to reduce number of checks required?	Quite good
- Improvements done to make checks easier to carry out?	Fair
- Suitable checking methods and checking intervals adopted?	Quite good
- Ways found to ensure that all checks are done reliably, without any being omitted?	Quite good

Step 4- 2: General Inspection (Lubrication)

1 flagged, 181 / 200 (90.5%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Result	Pass
Sustainment	100 / 100 (100%)
Steps 1 to 3 activities properly managed and sustained?) - Action against contamination sources being properly sustained? - Good improvements making hard- toaccess areas more accessible? - Cleaning and lubrication standards completed and applied rigorously?	Good
1. Skills Training	1 flagged, 4 / 10 (40%)
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Poor
- General Inspection skills mastered by all team members?	Fair
2. General Inspection	12 / 15 (80%)
- Inspection done correctly, covering all items in category trained?	Quite good
- Minor equipment problems identified reliably during inspection process?	Fair
- Action taken to deal with these problems?	Good
3. Safety	4 / 5 (80%)
- Progress made in identifying and fixing minor equipment problems that compromise safety?	Quite good
4. Shop- floor review (Lubrication)	40 / 45 (88.89%)
- Lubrication points correctly and clearly labelled, with effective systems for ensuring that none is missed out?	Good
- Correct lubricant types being used?	Good
- Correct amounts of lubricant being used?	Quite good

- Lubricants clean and not degraded?	Good
- All lubrication pipes unblocked and undamaged?	Quite good
- Lubricants always available when needed?	Quite good
- Different lubricators, oil cans, etc. used for different types of lubricant?	Quite good
- All grease nipples and lubricators undamaged and free of dust and dirt?	Good
- Different lubricant types separated and arranged systematically in lubrication stations? Lids always kept on containers? Stations appropriately located and free from dust and dirt?	Quite good
5. Provisional Autonomous Maintenance standards	21 / 25 (84%)
- Provisional checking standards completed?	Good
- Improvements made to reduce number of checks required?	Quite good
- Improvements done to make checks easier to carry out?	Quite good
- Suitable checking methods and checking intervals adopted?	Quite good
- Ways found to ensure that all checks are done reliably, without any being omitted?	Quite good

Step 4- 3: General Inspection (Drives)

6 flagged, 161 / 200 (80.5%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Result	Fail
Sustainment	100 / 100 (100%)
Steps 1 to 3 activities properly managed and sustained?) - Action against contamination sources being properly sustained? - Good improvements making hard- toaccess areas more accessible? - Cleaning and lubrication standards completed and applied rigorously?	Good
1. Skills Training	1 flagged, 5 / 10 (50%)
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Rather poor
- General Inspection skills mastered by all team members?	Fair
2. General Inspection	2 flagged, 8 / 15 (53.33%)
- Inspection done correctly, covering all items in category trained?	Rather poor
- Minor equipment problems identified reliably during inspection process?	Poor
- Action taken to deal with these problems?	Good
3. Safety	5 / 5 (100%)
- Progress made in identifying and fixing minor equipment problems that compromise safety?	Good
4. Shop- floor review (Drives)	3 flagged, 25 / 45 (55.56%)
- V- belts unworn and in good condition? Pulleys unworn and properly centred?	Fair
- V- belts correctly tensioned?	Quite good
- Visual controls introduced on V- belt covers to indicate direction of rotation, belt specifications, etc.?	Quite good

- Lubricating oil penetrating fully between pins and bushes on chains?	Fair
- Chains unstretched and properly centred? Chains free of meshing problems due to worn sprockets?	Quite good
- Bearings free of overheating, vibration or strange noises due to bent or off- centre shafts, loose fixing bolts, under-lubrication, etc.?	Poor
- Shafts, keys and couplings free of play (loose bolts, etc.)?	Fair
- Irregular noise in gearboxes, speed reducers , etc.?	Rather poor
- Gearboxes, speed reducers, etc. properly lubricated? Any overheating?	Poor
5. Provisional Autonomous Maintenance standards	18 / 25 (72%)
- Provisional checking standards completed?	Quite good
- Improvements made to reduce number of checks required?	Fair
- Improvements done to make checks easier to carry out?	Fair
- Suitable checking methods and checking intervals adopted?	Quite good
- Ways found to ensure that all checks are done reliably, without any being omitted?	Quite good

Step 4- 4: General Inspection (Hydraulics and Pneumatics)

190 / 200 (95%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Result	Pass
Sustainment	100 / 100 (100%)
Steps 1 to 3 activities properly managed and sustained?) - Action against contamination sources being properly sustained? - Good improvements making hard- toaccess areas more accessible? - Cleaning and lubrication standards completed and applied rigorously?	Good
1. Skills Training	7 / 10 (70%)
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Fair
- General Inspection skills mastered by all team members?	Quite good
2. General Inspection	13 / 15 (86.67%)
- Inspection done correctly, covering all items in category trained?	Quite good
- Minor equipment problems identified reliably during inspection process?	Quite good
- Action taken to deal with these problems?	Good
3. Safety	4 / 5 (80%)
- Progress made in identifying and fixing minor equipment problems that compromise safety?	Quite good
4. Shop- floor review (Hydraulics and Pneumatics, plus water circulation systems)	41 / 45 (91.11%)
- Pipes and units free of leaks and stains?	Good
- All units effectively protected against dust?	Fair
- Motors and pumps free of irregular noise and vibration,	Good

and switchover valves, solenoid valves, etc. free of odd noises, strange smells, etc.?	
- Correct oil volume and oil temperature in hydraulic units?	Quite good
- FRLs being used correctly (correct oil volume, clean filter, etc.)?	Good
- Hoses correctly installed, clean, undamaged and free of vibration?	Good
- Pipes run above floor level, and properly supported?	Good
- Pipes easy to inspect and service?	Good
- Pressure gauges all in order (correct readings, easily- read dials)?	Quite good
5. Provisional Autonomous Maintenance standards	25 / 25 (100%)
- Provisional checking standards completed?	Good
- Improvements made to reduce number of checks required?	Good
- Improvements done to make checks easier to carry out?	Good
- Suitable checking methods and checking intervals adopted?	Good
- Ways found to ensure that all checks are done reliably, without any being omitted?	Good

Step 4- 5: General Inspection (Electrics)

198 / 200 (99%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Result	Pass
Sustainment	100 / 100 (100%)
Steps 1 to 3 activities properly managed and sustained?) - Action against contamination sources being properly sustained? - Good improvements making hard- toaccess areas more accessible? - Cleaning and lubrication standards completed and applied rigorously?	Good
1. Skills Training	9 / 10 (90%)
- Leaders and team members actively creating OPLs and compiling them into manuals to upgrade their skills?	Quite good
- General Inspection skills mastered by all team members?	Good
2. General Inspection	15 / 15 (100%)
- Inspection done correctly, covering all items in category trained?	Good
- Minor equipment problems identified reliably during inspection process?	Good
- Action taken to deal with these problems?	Good
3. Safety	5 / 5 (100%)
- Progress made in identifying and fixing minor equipment problems that compromise safety?	Good
4. Shop- floor review (Electrics)	44 / 45 (97.78%)
- Distribution panels, control panels and operating panels all clearly marked?	Good
- Temperature in distribution panels, control panels and operating panels low enough?	Good

- Distribution panels, control panels and operating panels all clean (free of water, oil, dirt, etc.?)	Good
- Door seals, filters, etc. on distribution panels, control panels and operating panels all clean and undamaged?	Quite good
- No irregularities in wiring or contacts (overheating, damage, unsafe layout)?	Good
- Motors free of overheating, strange noises, vibration?	Good
- Sensors securely installed in correct positions, and making proper contact?	Good
- Sensors all clean (free of water, oil, dirt, etc.)?	Good
- Sensors undamaged, with all lead wires correctly installed? Effectively protected against possible damage?	Good
5. Provisional Autonomous Maintenance standards	25 / 25 (100%)
- Provisional checking standards completed?	Good
- Improvements made to reduce number of checks required?	Good
- Improvements done to make checks easier to carry out?	Good
- Suitable checking methods and checking intervals adopted?	Good
- Ways found to ensure that all checks are done reliably, without any being omitted?	Good

Step 1: Initial Cleaning (Assembly Shop)

118 / 125 (94.4%)

Pass levels :Score = total score for 'equipment' (Review Items 1-5) + score for 'people' (Review Item 6)

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Scoring key	Points		1 point / 10 points	2 points / 20 points	3 points / 30 points	4 points / 40 points	5 points / 50 points
	1-5	Equipment	Hardly implemented at all	Only implemented in obvious places	Implemented in specific locations (e.g. sliding parts, chutes)	Also implemented in more difficult and less obvious places	Full 'checking through cleaning' achieved, and difficult areas starting to be addressed
	6	People	No interest at all	Only maintenance staff and supervisors active	Operators taking part, but doing the easy tasks only	Operators doing nearly all the work	Responsibilities clearly defined, and everything being done properly

Result

Pass

1. Cleanliness of surrounding area

17 / 20 (85%)

- Floors free of dirt, oil stains, sawdust, waste material, nuts, bolts, etc.?

Fair

- All unnecessary objects cleared away?

Quite good

- Cleaning tools, work tools, etc. all stored neatly in designated positions?

Good

- Floor marking standards observed?

Good

2. Cleanliness of peripheral equipment, assembly tools, etc.

19 / 20 (95%)

- Free of dirt, dust and oil stains?

Quite good

- All parts suitably tightened and free of wear?

Good

- Electric cables undamaged?

Good

- Equipment and tools kept in good condition and stored in a well-organised manner?

Good

3. Cleanliness of trolleys, carts, shelving, work benches and other items on which parts are placed

13 / 15 (86.67%)

- Trolleys, carts, shelves, work benches, etc. positioned correctly?

Quite good

- Unnecessary objects cleared away?

Quite good

- Trolleys, carts, shelves, work benches, etc. stable and in good condition, posing no safety - risks?

Good

4. Cleanliness of storage points for assembly components	10 / 10 (100%)
- Components stored neatly, in parallel and at right- angles (on shelving, pallets, trolleys, etc.)?	Good
- Components clearly labelled to show at a glance what each is used for?	Good
5. Contamination sources and hard- to- access areas	9 / 10 (90%)
- Systematic feedback of suggestions to improve precision in upstream processes? - Chart drawn up plotting all sources of dirt and dust, and areas that are hard to clean? Plan formulated for dealing with these?	Quite good
- Improved cleaning tools introduced? - Cleaning areas clearly defined and allocated?	Good
6. Way in which TPM is being addressed	50 / 50 (100%)
- Do all team members have a good understanding of what TPM means, and are they all fully involved in implementing it?	Good

Step 2: Contamination Sources and Hard- to- Access Areas (Assembly Shop)

90 / 100 (90%)

Pass levels :Score = total score for Review Items 1- 6

Self: 90 or over

Area M.: 85 or over

Senior M.: 80 or over

Scoring key	Points		2 points	4 points	6 points	8 points	10 points
	1-5	Equip- ment	Hardly implemented at all	Only implemented in obvious places	Implemented in specific locations	Also implemented in more difficult and less obvious places	Comprehensive lubrication achieved; hardly any outstanding issues
	6	People	No interest at all	Only maintenance staff and supervisors active	Operators taking part, but doing the easy tasks only	Operators doing nearly all the work	Responsibilities clearly defined, and everything being done properly

Result

Pass

1. Sustainment of Step 1

10 / 10 (100%)

- Cleaning levels achieved in Step 1 (Initial Cleaning) being properly sustained?

Good

2. Measures for achieving appropriate levels of permanent stock

18 / 20 (90%)

- Measures taken to ensure suitable stock levels are maintained?

Good

- Improvements and modifications introduced to make remaining stock levels visible at a glance?

Quite good

3. Countermeasures for peripheral equipment and assembly tools

18 / 20 (90%)

- Sources of dirt, dust, oil leaks, air leaks, etc. all plotted on a chart, and action taken to rectify them?

Good

- Improvements and modifications introduced to make remaining stock levels visible at a glance?

Quite good

4. Countermeasures for component shelves and assembly storage points

18 / 20 (90%)

- Chart drawn up plotting all sources of disruption to storage system, and appropriate action taken?

Good

- Improvements and modifications introduced to make remaining stock levels visible at a glance?

Quite good

5. Improvement and sustainment, and future plans

10 / 10 (100%)

- Systematic feedback of suggestions to improve precision in upstream processes? Strategies worked out for sustaining conditions in the future?

Good

6. Status of activities

16 / 20 (80%)

- All team members actively involved?

Quite good

- Plenty of original thought going into the improvements?

Quite good

Step 3: Sustainment Standards (Assembly Shop)

95 / 105 (90.48%)

Self: 90 or over
Area M.: 85 or over
Senior M.: 80 or over

Result	Pass
1. Sustainment of Steps 1 and 2	15 / 15 (100%)
- Cleaning levels achieved in Step 1 (Initial Cleaning) and improvements made in Step 2 (Contamination Sources and Hard- toAccess Areas) being properly sustained?	Good
2. Efficient system based on work standards, checking standards and workplace management standards	66 / 70 (94.29%)
- Precise standards created for managing assembly equipment, tools, and consumables?	Good
- Cleaning and inspection standards created for equipment, tools, assembly areas and storage areas? Standards being observed?	Good
- Inspection efficiency maximised; system allows problems or defects to be rectified quickly?	Good
- Standards for component storage and placement clearly defined, and visual controls used?	Good
- Work standards established and observed?	Fair
- Layout revised and improved to raise efficiency of assembly work?	Good
- Assembly work schedule drawn up by team itself, displayed clearly, and properly maintained?	Good
3. Status of activities	6 / 10 (60%)
- Activity boards used effectively?	Fair
- Many improvement suggestions being made, and efficiency drive being actively implemented?	Fair
4. Improvement and sustainment, and future plans	8 / 10 (80%)
- Improvements being actively pursued? Team discussing how to proceed to next step?	Quite good

- Improvements actively pursued to make checking easier and enhance visual management?

Quite good

Application for Autonomous Maintenance Review

Step No. 1, 3, 4.1 and 4.3

Review No. 2

Date 7 Jul 2021 00:00 PST

TPM Office 3707 Harry Place, Charlotte NC
28202 USA

Area Manager Rachel Parklett

Supervisor Denise Choi-Goeun

Originator N/A

Team making application

Area / Line/ Team Assembly

Team Name B4

Leader's Name Jinki O'newson

No. of members 4

Equipment to be Reviewed 8

Overall Status of Activities

Date last step passed 7 Jul 2021 00:00 PST

Preferred date for review of current step 8 Jul 2021 16:00 PST

Number of improvement suggestions 6

Status of Activities Relating to Current Step

Work Time

Total time (hr) 40

Total no. of people 10

Meeting time

Total no. of meetings 5

Total duration (hr)	8
Total no. of participants	9
Requested focus of review	
Scope	
All failed steps identified	
Key points	
Fastenings, Drives, Initial Cleaning and Provisional Autonomous Maintenance Standards of Processing Equipment	
Difficulties overcome	
Improving general inspection practices through training and involving more workers	
Other	
N/A	
Reviewer	
Reviewer's Name and Signature	
 Minnie Tae 6 Jul 2021 17:33 PST	
Duration of review	Q4 FY 2020-2021
Conclusion	
Date	6 Jul 2021 00:00 PST
Chief Reviewer's Comments	
Approved	
TPM Office's Comments	N/A

Autonomous Maintenance Activities Report

Date 8 Jul 2021 00:00 PST

TPM Office 3707 Harry Place, Charlotte NC
28202 USA

Area Manager Rachel Parklett

Supervisor Denise Choi-Goeun

Originator N/A

Step No. 1, 3, 4.1 and 4.3

Area / Line/ Team Assembly

Team Name B4

Leader's Name Jinki O'newson

No. of members 4

Topic Fastenings, Drives, Initial Cleaning
and Provisional Autonomous
Maintenance Standards of
Processing Equipment

- Meetings held
- Action taken
- Training received
- Results achieved

Meetings = M
Action = A
Teaching = T
Practice = P

Tap on '+' to add new Maintenance Log

No. of problems Total time identified 17

No. taken on by team 11

No. taken on by other departments 6

Completed in current month 7

Carried over to next month 10

Results	
Meetings	
No.	3
No. of People	10
Total time	15
Action	
No.	11
No. of People	4
Total time	25
Teaching	
No.	12
No. of People	25
Total time	36
Practice	
No.	20
No. of People	10
Total time	40

Schedule of Activities for Next Month

1. Track OEE (including Availability, Performance, and Quality) for the target equipment for one month. Make sure to compile the results by shift.
2. Review every shift result, keeping track of the best individual result for Availability, Performance, and Quality across all shifts (i.e. the highest Availability score across all shifts, the highest Performance score across all shifts, etc.).
3. Multiply the best individual results together to calculate a "Best of the Best" OEE score.

Focused Improvement Progress Check

9 Assess results and benefits	10 Review	8 Confirm and consolidate
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Manager's views and advice (comments from review, etc.)

Engaging employees is important for both short-term and long-term success of initiatives.

TPM Minutes of Meeting/Action Items	
Team	Area Committee
TPM Office	3707 Harry Place, Charlotte NC 28202 USA
Area Manager	Rachel Parklett
Supervisor	Denise Choi-Goeun
Team Leader	N/A
Date (of Issue)	7 Jul 2021 00:00 PST
Step No.	1, 3, 4.1 and 4.3
Area / Line/ Team	Assembly
Team Name	B4
Leader's Name	Jinki O'newson
Recorder	Minnie Tae
Topic or agenda	How to set an effective "stretch" goal for OEE
Participants	7
Absentees	3
Details of Activities	
Meeting Date & Time:	6 Jul 2021 09:00 PST
Action Date & Time	26 Jul 2021 14:00 PST
Teaching Date & Time	20 Jul 2021 11:00 PST
Training Date & Time	14 Jul 2021 08:00 PST
Practice Date & Time	8 Jul 2021 17:00 PST
Total time(hr.) x (people)=person- hrs.	14
Next topic or agenda	OEE loss categories (Availability Loss, Performance Loss, and Quality Loss)

Next scheduled meeting; Date and Time

29 Jul 2021 16:00 PST

Place

5 Co Rd 356, Lumberton, NM
87528, USA

Supervisor's comments

I think a powerful technique for engaging employees is creating a shared vision of the future "improved" state of the company – and clearly outlining how it will benefit employees.

Area Manager's comments

I feel like if an initiative is perceived as having been tried and failed, it will be much harder to successfully implement that initiative in the future. So we have to provide active leadership by regularly demonstrating the importance of TPM activities through our words and actions.

TPM Office's comments

Support and other resources
available upon request.

Sign Off

Report Completed By (Name and Signature)



Minnie Tae
6 Jul 2021 17:34 PST

Media summary



Photo 1

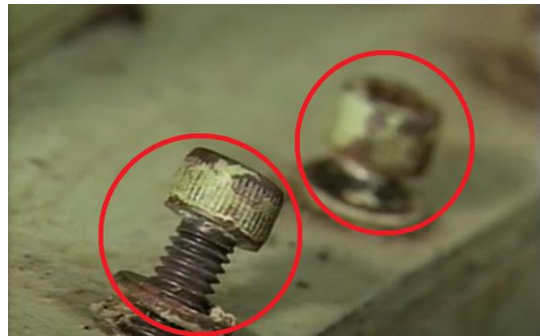


Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

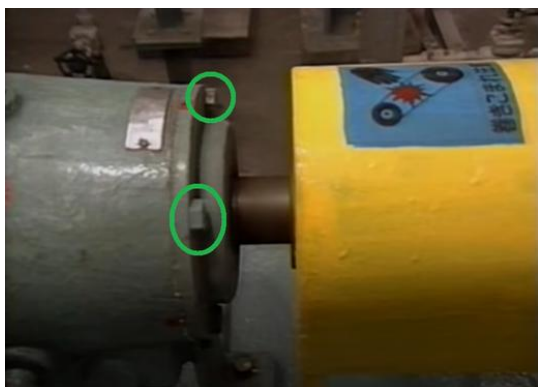


Photo 7



Photo 8



Photo 9