

Maintenance Terms We Use

The world of maintenance and reliability is like most other professions with unique words, phrases, and terminology. Many of us grew up with the language of maintenance making some of the jargon and acronyms second nature – “**maintenance-speak**.” But when we encounter the uninitiated in the “outside world,” sometimes they think we are speaking a foreign language. In fact, maintenance terminology differs from industry to industry and geographic region to region. In my travels around the world, all over North America, in more than 400 plants, across some 45 different industries, I admit that I too have been confused by some of the words and phrases used in maintenance and reliability discussions. When a “raw recruit” enters the mysterious world of maintenance and reliability, you can imagine the communications gaps, the confusion, and the errors that can be attributed to the words we use as second nature. My own daughter developed her own “glossary of jargon” when she came to work with me years ago just to be able to communicate. And what about others, especially decision makers in our own plants and facilities, who listen with frustration as we baffle them with a language of our own? To borrow a quote from the 1967 movie *Cool Hand Luke*: “What we’ve got here is a failure to communicate.”

Sometimes, we use “maintenance-speak” to communicate something really important about why something happened, but the listener just isn’t listening.

“What we have here is a failure to communicate!”

“What?”

“What we have here is a failure to communicate!”

“Huh? I’m sorry. I wasn’t listening.”

That was the disconnected dialogue between the prison warden and Johnny in the 1997 movie *Johnny Bravo*. OK. Go ahead, make my day! Tell me you haven’t had similar situations in your routine communications about maintenance and reliability issues where you work. We are a jargon and acronym-rich business. For example, we often have to determine what caused a problem with a critical piece of equipment. What happens next can begin the confusion. We can talk about root cause analysis, RCA, root cause failure analysis, RCFA, failure analysis, FA, failure modes and effects analysis, FMEA, finite element analysis, FEA ... only to hear the words of frustration uttered: “*I don’t care what the hell you call what you’re about to do. I just want to know what caused this thing to stop in the middle of the day!*”

And then we also have an alphabet soup of three-letter acronyms (TLAs). You know them. They range from CBM and PdM to RCM and TPM, TQM and SPC to LCC and MDT. The list continues with two- and four-letter variants such as PM, BM, MTTR, MTBF, MTBM and CMMS. And we arrange these clever TLAs so there are no vowels so they cannot be easily pronounced – so we spell them out like PLC and DCS. Then the vowels occasionally creep in with CAD, CAM, OEE, and ERP. (Excuse me. It’s best not to pronounce those last two.)

Sometimes, we mix letters and numbers in an attempt to communicate something that must be really big and important such as ISO 9000, TS 16949, QS 9000, ISO 14000, and OSHA 1910.

In the past 20 years, Lean Manufacturing (LM), Japanese, and German words have crept into many companies offering us even more ways to baffle ourselves and others with “lean-speak” mixed with our own “maintenance-speak.” We start with the basics of 5S, KAIZEN and TPS. Then comes KANBAN, TAKT, JIDOKA, HEIJUNKA, POKA-YOKE (it’s not polite to use BAKA-YOKE). And, the scientific Greek language creeps in with SIX SIGMA (the lower-case Greek letter σ) which leads into ANSI/ISA 88, IEC 62264. Then these have to be followed up with Champions, Master Black Belts, Black Belts, and Green Belts. At this point, we cannot overlook six sigma tools of DMAIC and DMADV or DFSS plus SIPOC or PARETO (named after Italian economist Vilfredo Pareto).

As the business of maintenance is connected to the business of the business, we often hear (and sometimes actually speak) RONA, ROFA, RAV, ROCA, ROA, ROTA and other real and made up terms to describe a financial return on assets of sorts.

This discussion of our terminology would not be complete without our professional associations: SMRP, AFE, APICS, and SME to name a few and, their respective certifications: CMRP, CPMM, CPE, CPS, CPIM, CSCP, CIRM, CFPIM, CMfgT, Cmfge, CEM. Put those certifications on your resume along with the colleges and universities attended and you get to add UTK, UofM, MSU, A&M, UCLA, MIT, UGA, AU, USC, ISU, UT, FSU, and so on with BA, BS, AS, MS, and/or PhD degrees. We are a society of acronyms!

Most of us have experienced an encounter with someone who did not speak our language – American English – and know what it’s like not to understand or be understood. We are awash with so many unique utterances and spoken shorthand that come to our lips as second nature when we speak. If you notice a bewildered look on the face of others as you speak the language of maintenance and reliability take a step back and think about what you are really trying to communicate. As a younger generation begins exploring careers in maintenance and reliability, they will have an overwhelming amount of skills and knowledge to learn – let alone some of the utterly confusing jargon, but otherwise straight forward concepts.

Near the climax of the movie *Cool Hand Luke*, Paul Newman, the reprobate inmate, repeats the famous lines he learned from the guard: “What we’ve got here is a failure to communicate.” Let’s be careful not to be forced to utter or to hear those words spoken in our plants and facilities.

PS: I have included a crossword puzzle as a little test of our readers’ familiarity with some of the more common maintenance terms we use. Have fun with it!

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Clues

Across

2. Cooling tower method of cooling
6. Maintenance job role
11. Determine the ____ cause of the problem
12. Total _____ maintenance (TPM)
14. The name of this column
15. Pipe or tube for wire runs
16. Society of Maintenance & Reliability _____ (SMRP)
17. Uneven motor or gearbox hold-downs
20. Defining duration & when a job should be performed
23. Aka infrared inspection
24. Type of refrigerant
27. Overall equipment effectiveness
28. Condition-based maintenance tasks
29. Maintenance job role
34. One of the elements of OEE
36. Maintenance trainee
37. Reliability centered maintenance
40. A word in the banner of this magazine
41. One half of the title of this magazine
42. Robert's last name
44. Environmental _____ Agency
45. A measure of oil ``thickness"
47. Maintenance management system
48. Web site of this magazine

Down

1. A mover of liquids and semi-liquids
3. Frequency and amplitude measures what
4. Common on V-belt drives
5. One of the elements of OEE
7. A word in the banner of this magazine
8. Proactive maintenance tasks
9. Motor _____ Center
10. Tribology or fluid condition monitoring
13. Actual machine operating time
18. Teach new skills and knowledge
19. A transmission or mechanical speed changing device
20. Occupational _____ and Health (OSHA)
21. One of the elements of OEE
22. Sustaining a level of performance
23. Properly tightens threaded fasteners
25. Time between failures metric
26. Publishing company of this magazine (first word)
30. Common on roller chain drives
31. Alternating and direct _____ (electrical)
32. Master crafts person
33. Defining what it takes to accomplish a job
35. Runs right every time
38. Programmable _____ controller
39. Dial indicator or laser method for shaft _____
43. Time to repair metric
46. Measurement of electrical resistance

Answers

Across

2. Cooling tower method of cooling [EVAPORATIVE]
6. Maintenance job role [MECHANIC]
11. Determine the [ROOT] cause of the problem
12. Total [PRODUCTIVE] maintenance (TPM)
14. The name of this column [UPTIME]
15. Pipe or tube for wire runs [CONDUIT]
16. Society of Maintenance & Reliability [PROFESSIONALS]
17. Uneven motor or gearbox hold-downs [SOFTFOOT]
20. Defining duration & when a job should be performed [SCHEDULING]
23. Aka infrared inspection [THERMOGRAPHY]
24. Type of refrigerant [AMMONIA]
27. Overall equipment effectiveness [OEE]
28. Condition-based maintenance tasks [PDM]
29. Maintenance job role ELECTRICIAN]
34. One of the elements of OEE [PERFORMANCE]
36. Maintenance trainee [APPRENTICE]
37. Reliability centered maintenance [RCM]
40. A word in the banner of this magazine [ASSURANCE]
41. One half of the title of this magazine [TECHNOLOGY]
42. Robert's last name [WILLIAMSON]
44. Environmental [PROTECTION] Agency
45. A measure of oil ``thickness" [VISCOSITY]
47. Maintenance management system [CMMS]
48. Web site of this magazine [MT-ONLINE]

Down

1. A mover of liquids and semi-liquids [PUMP]
3. Frequency and amplitude measures what [VIBRATION]
4. Common on V-belt drives [PULLEY]
5. One of the elements of OEE [AVAILABILITY]
7. A word in the banner of this magazine [CAPACITY]
8. Proactive maintenance tasks [PREVENTIVE]
9. Motor [CONTROL] Center
10. Tribology or fluid condition monitoring [OILANALYSIS]
13. Actual machine operating time [UTILIZATION]
18. Teach new skills and knowledge [TRAINING]
19. A transmission or mechanical speed changing device [GEARBOX]
20. Occupational [SAFETY] and Health (OSHA)
21. One of the elements of OEE [QUALITY]
22. Sustaining a level of performance [MAINTENANCE]
23. Properly tightens threaded fasteners [TORQUEWRENCH]
25. Time between failures metric [MTBF]
26. Publishing company of this magazine [APPLIED]
30. Common on roller chain drives [SPROCKET]
31. Alternating and direct [CURRENT] (electrical)
32. Master crafts person [JOURNEYMAN]
33. Defining what it takes to accomplish a job [PLANNING]
35. Runs right every time [RELIABILITY]
38. Programmable [LOGIC] controller
39. Dial indicator or laser method for shaft [ALIGNMENT]
43. Time to repair metric [MTTR]
46. Measurement of electrical resistance [OHMS]

Maintenance Terms We Use

The world of industrial maintenance and reliability is full of words and terms that quite often we are the only ones who understand them. Have fun!



