

Workplace Resources

On-Site Seminars

“Focus on results and change the culture along the way.” Our seminars, for groups of 25 to 500, include lecture and demonstration on subjects related to **your** needs in **your** workplace. Content is based on breakthrough strategies with proven work culture change achieving measurable bottom-line results. Here are some examples:

- The People Side of TPM/Lean Equipment Management
- NASCAR: A Model for Improving Equipment Reliability & Teamwork
- Designing & Developing Multi-Skilled Maintenance Programs or Pay-for-Applied Skills Programs

In-Plant Workshops

Our three- or four-day applied-learning workshops are a blend of lecture, demonstration, and hands-on experience using simulation and actual in-plant equipment for groups of 10 to 20. While our workshop subjects evolve to fit our clients’ needs, here are a few examples:

- Improving Equipment Reliability Using TPM Methods
- Equipment Improvement Pit Stop
- Equipment Maintenance and Reliability Kaizen

On-Site Education & Consulting

Our real strength is knowing our way around plant, facility, and mobile equipment. Our experience on virtually all types of equipment in all kinds of manufacturing work cultures allows us to teach by example and consult for results. Here is a partial list of our specialties:

- Maintenance and operations training/qualification systems
- Operator-performed maintenance
- Applied visual systems for improving equipment effectiveness
- Defining TPM roles and responsibilities
- Lean equipment management breakthrough strategies

For more information on our training and consulting services, call (828) 894-5338 or email robertmw2@cs.com.

To order our supplies, go to www.swspitcrew.com.
phone/fax (864) 862-0446 • sharonwputman@cs.com.

Visual Systems Supplies that Help Deliver Results ... Fast!

How can visual systems improve your equipment effectiveness?

Visual systems used on equipment will help you communicate operating and maintenance information at the point of use, not tucked away in a manual on a shelf. Visuals such as marking and tagging remove much of the guesswork often associated with operations and maintenance, making equipment easier to operate, maintain, inspect and troubleshoot. We at Strategic Work Systems have assembled some of the most popular and effective visual tools and are pleased to be...
your one-stop visual systems shop.



Tagging Problem Tags

These two-part, day-glo orange, card-stock tags (#001) are used to identify equipment problems. Numbered on both parts for easy tracking, they measure 3" x 9". The top part is about 3" long when separated at the perforation. Also available in Tyvek (#015) and in Spanish (#039).

Opportunity Tags

These day-glo green tags (#014) are used to identify equipment improvement opportunities. They are the same size as our Problem Tags and are also available in Tyvek (#056) and in Spanish (#040).

Tagging

Reclosable Baggies

These slick little baggies (#002) are just the right size (4" x 4") to enclose the top half of our Problem or Opportunity Tag so it can be hung on equipment that is prone to getting wet or oily.

Nylon Ties

These 5" nylon ties (#003) can be punched through the plastic above the zipper lock of our reclosable baggies and pulled tight to the equipment. Perfect for hanging our tags in harsh environments.

Red Move Tags

MOVE TAG ©2003 SWIS, Inc. - Mill Spring, NC 28758 USA

Today's Date _____ Red Tag File # _____

1 - Where was it found? _____

2 - What is it? _____ Quantity? _____

3 - What to do with it? _____ (additional notes on reverse side)

Move to _____

Dispose per Company policy

Other _____

4 - Approved to move or dispose: _____

_____ Date _____

_____ Date _____

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5S efforts require a "red-tagging" activity to indicate excess items on the plant floor and in storage areas. Fill in the information on our bright Red

Move Tags (#055) and attach to the item to be moved.

Plastic Tag Pockets

These high-impact plastic tag pockets are ideal for holding the bottom parts of our Problem and Opportunity Tags. The pockets can be attached to your action boards or walls with Velcro, screws, or the included double-stick tape. Choose between a set of five (#046)



with labels (Tags, Mechanical To Do, Electrical To Do, In Progress, and Done) or individual pockets without labels (#047).

Reference Materials

NASCAR: a Model for Equipment Reliability and Teamwork Facilitator's Kit



Now you can use one of the most powerful examples of NASCAR champions as shown in the video *Uptime Excellence in Action*. See how a championship team prepares to win not only a race, not just one championship, but four championships. See how the DuPont #24 car, driven by Jeff Gordon, became a

NASCAR dynasty. See the role of teamwork and how it is essential for equipment performance and reliability. Witness the effects of leadership on keeping the team focused, engaged, and on the track to win. This kit (#051) includes: the *Uptime Excellence in Action* video (29 minutes, VHS or DVD), a facilitator's guide with two-hour and four-hour session outlines, PowerPoint slides linking NASCAR to the six elements of equipment reliability improvement, and participant handout masters.

Visual Systems for Improving Equipment Effectiveness CD-ROM Presentation

We have produced a PowerPoint presentation entitled *Visual Systems for Improving Equipment Effectiveness* (#008-2) in an easy-to-use CD-ROM format that includes more than 100 slides, which have been used and continually updated by the author, Robert M. Williamson, for more than six years in his in-plant workshops and seminars. Now you too can have access to the many different full-color examples of visual systems applied in actual industrial settings. Handout materials and facilitator's notes can also be printed from the CD for your classroom use. Licensed for your single-location use.

Reference Materials

Lean Machines for World-Class Manufacturing and Maintenance

by Robert M. Williamson

This powerful update to *Visual Systems for Improving Equipment Effectiveness (#008-1)* is a definitive guide for improving equipment operability and maintainability through applied visuals and minor modifications based on more than 30 years of experience in hundreds of plants. Topics include a variety of visual systems applications plus many examples of minor modifications to address ease of operation, inspection, and maintenance issues.

Visual Systems for Improving Equipment Effectiveness (Spanish only)

by Robert M. Williamson

This is a TPM-specific guide (#041) to the types of visual communications that work. Included are detailed "how-to" sections on using problem tags, operator checklists, equipment marking, TPM action boards, and more. (Spanish only; English version is out of print.)

TPM in America

by Society of Manufacturing Engineers, foreword by Robert Williamson

Stop fighting fires. Achieve zero downtime. The benefits of preventive and predictive maintenance are undeniable. You know it, but how do you convince skeptics? This book (#011) is a great first step. Read it, talk about it, share it with supervisors and operators, and get extra copies for management. Sometimes, it's just plain difficult to share what you've learned, what your instincts tell you can work. Sometimes you need examples from other companies. Topics include "Getting TPM Going", "Building TPM Teams", "TPM in a Union Environment", "CMMS", and much more. 116 pages.

Proven Tips for Equipment Troubleshooting

by John Robertson

While troubleshooting is the first level of improving equipment performance, we hope this 150-page, graphic-intensive book (#030) will truly be used to eliminate many problems. The convenient format allows users to carry it in a pocket or keep it handy in a tool box. Use this book to help maintenance personnel, operators, reliability technicians, and others understand the many factors that contribute to improved equipment performance and reliability and ultimately lower operating costs.

Preventive Maintenance

Grease Fitting Caps

These plastic caps fit over SAE J534 grease fittings (Zerk fittings) to seal out dirt and moisture. The retaining ring holds the cap during greasing. Colors can represent lube types, greasing frequencies, or lube



amounts. Large caps (#012) are heavy duty with a 1" strap. Small caps (#013) are lighter weight with a 1/4" strap. Available in red, green, yellow and blue. Large caps also come in white and black.

Temperature Indicating/Recording Strips



Monitor bearings and other temperature-sensitive parts with these stick-on temperature strips. White heat-sensitive areas are calibrated to specific temperature levels that turn permanently black when exceeded, with an accuracy of $\pm 1\%$. Comes in ranges of 170°–240°F (#006-1) and 130°–190°F (#006-2).

Visual Oil Inspection Cards

Oil Cards (#023) provide a quick way to determine the cleanliness of engine, compressor, and gear box lubricants. Place a drop of oil from a clean dipstick onto the card and wait 5 minutes to see the amount of solids in the oil. This test does not replace a thorough oil analysis program but serves as a general supplemental indicator. A single spot test shows the condition of the oil. A series of tests over time shows the rate of change in the important properties of engine lubricating oils.

Preventive Maintenance

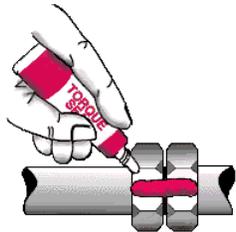
Motor Shaft Targets

Vibrations in your plant's storage area floor can cause indentations in the bearing race of motors, gearboxes, and fans. These indentations, known as false brinelling, ruin bearings before they are ever put into use. This can be avoided by regularly rotating the shafts. Stick these targets



(#024) to the ends of the shafts, rotate a few times, and stop with the next number at the top. Now it's easy to spot the same color on all rotating devices in storage.

Torque Seal



These squeeze tubes (#026) of bright inspection lacquer allow you to visually detect vibration loosening on fittings, nuts, parts, baseplates, and assemblies. Apply the compound when everything is in the proper position, and the seal will become brittle and crack when it moves. Half-ounce tubes are available in orange, red, lemon, green, yellow-orange, and pink. This product has a shelf life of 6 months. Store in a dark place.

Preventive Maintenance Labels

Let people know when the PM was done and when it is next due with these write-on 2¼" x 1" labels (#058) made of durable vinyl with a strong but removable adhesive.

Not Sure Where to Start? Try Our Kits!

Visual Systems Sample Kit

Not sure which visual supplies to use? We have assembled an assortment of our most popular supplies. This kit (#045) allows you to demonstrate the "visual" possibilities in your training sessions.

The kit includes: 5 Problem Tags, 5 Opportunity Tags, 5 Tyvek® Problem Tags, 5 Tyvek® Opportunity Tags, 5 Move Tags, 1 paint pen, a sample of our vinyl tapes, 1 temperature strip, 6 large grease fitting caps, 4 small grease fitting caps, a sample of our gauge labels, a sample of our Zebra Card, 5 Visual Oil Test Cards, 1 Vibration Analysis Target Label, 1 Vibration Analysis Pickup Disc, a sample of our numbering labels, 1 Spanish Problem Tag, 1 Spanish Opportunity Tag, 1 tube of torque seal, and 1 copy of *Proven Tips for Equipment Troubleshooting*.

Visual Systems Starter Kit

Just beginning with visual systems on your equipment? We have assembled some basics to get you started. Our Starter Kit (#052) contains plenty of basic supplies for you to begin marking, tagging, labeling and color-coding your equipment, making it easier to inspect and easier to maintain. Comes in a handy plastic carrying case.

This kit includes: 10 Tyvek Problem Tags, 10 Tyvek Opportunity Tags, 10 nylon ties, 25 Problem Tags, 25 Opportunity Tags, 10 Move Tags, 10 reclosable baggies for tags, 2 paint pens, 1 roll of colored vinyl tape, ANSI color codes, 2 Sharpie® permanent markers, 4 ballpoint pens for tags, 4 temperature strips, 60 large grease fitting caps, 40 small grease fitting caps, 3 sheets of gauge marking labels, 1 tube of torque seal, 10 visual oil test cards, 1 Zebra card, 1 copy of *Proven Tips for Equipment Troubleshooting*, 5 Vibration Analysis Pickup Discs with labels, and 30 lube labels.

Vibration Analysis

Vibration Analysis Target Labels

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These handy labels (#031) are used to properly identify each vibration analysis point on the surface of your equipment. Our label provides a space for labeling the point with a permanent felt-tip pen and comes with a clear protective overlay. Both labels are made of thin, harsh-condition material that withstands weather, oil, grease, chemicals, solvents, and

temperatures from -50° to 275° .

Vibration Analysis Pickup Discs

These corrosion-resistant discs (#032) can be attached to motors, gear boxes, bearing housings, and other equipment to provide flat, positive mounting locations for magnetic pickups (transducers and accelerometers).



Our stainless steel discs, which are .082" thick and 1.06" in diameter, should be glued with a high-strength, hard-setting epoxy such as Loctite 330 ("Depend").

Vibration Analysis Pickup Discs and Mounting/ Labeling Starter Kit

The ultimate vibration analysis pickup disc starter kit includes target labels, pickup discs, Loctite 330 adhesive, and complete instructions. The small kit (#033) includes enough items for 30 vibration analysis points, and the large kit (#035) includes enough for 300 points.

Preventive Maintenance

Lube Point Labels



These 1" self-adhesive colored vinyl dots (#048) are weather, water, chemical, and traffic resistant. Write on them with a fine-point permanent marker, and place them next to grease fittings, filler caps, containers, and reservoirs. Want more durability? Try our two-part lube point labels (#049), which come

with a clear vinyl overlay. Available in red, green, yellow, white, blue, orange, and black.

Grease Gun Sleeves

Label your grease gun with our Lube Point Labels, then cover with our harsh-condition shrink tubes (#050) to protect your labeling and provide an easy-to-grip surface. These .050"-thick polyolefin sleeves are 10" x 3" to fit most grease guns. They resist chemicals, oils, sunlight,



moisture, and fungus. Heat gun ($>121^{\circ}\text{C}$) required to shrink.

Cooling Fan Indicators

Avoid overheating PLC's! These clever devices (#057) are attached near electronic/control cabinet fans to show when the fan is running. The attachment wire is long enough to show fan intake or exhaust draft. Helps prevent overheating due to fan failure. Made with stainless steel wire and durable weatherproof flagging.

Marking



Paint Pens

One of our most popular items, these paint pens (#004) can be used for marking gauges, bolts, nuts, and lube points. These fast-drying, permanent, high-gloss felt-tip markers will write on almost any surface, even if it is slightly wet or oily. Available in white, yellow, red, orange, green, black, and blue.

Vinyl Tape

Mark travel limits, parts, or gauges with this heavy-duty tape (#005). Available in red, green, yellow, white, blue, and orange.

Clear Overlay Tape

Tired of labels that get damaged by moisture or oil? Clean the surfaces with alcohol and apply this crystal-clear, harsh-condition protective tape (#059) over your lube point labels, machine or component labels, and temperature strips. Comes in a pack of 10 2" x 6" strips.

Zebra Cards

Fluid levels inside discolored sight tubes can be hard to read, but a Zebra Card (#022) cut to size (only about 1/8" is needed) and placed behind the gauge makes levels stand out. The fluid in the tubes can be seen easily and quickly from a distance. In many cases, flashlights are no longer needed to see the fluid in old, discolored tubes! 9" x 12"



Marking

Numbering Labels

These peel-off sets have black numbers on a yellow background with three cards each 0 through 4 and two cards each 5 through 9. Available in 5/8" (#036), 1" (#037), and 2" (#038).



Gauge Marking Labels

Our best-selling item! Normal gauges show a range of measures; but to the person reading the gauge, it is not always obvious what the correct reading should be. Our labels (#016) help you identify



acceptable or dangerous ranges. These 9" x 10" transparent, adhesive sheets can be cut to fit any gauge. Comes in red, yellow, or green.