MICHELIN RETREAD TECHNOLOGIES

TRAINING CATALOG

Michelin Retread Technologies (MRT) Training Catalog

Recommended Curriculums (Learning Programs)

Plant Management

- Build a Retread Training (BAR)
- New Plant Manager Training
  - BibTread Next (APP)
  - Power BI Reporting *(in POC)*
  - Maintenance Relationship

Office

- BibTread Next 101
- BibTread Next Shop Floor

Machine Operators

- Post Readiness (LMS Videos)
- Post Certification

Maintenance

- Preventative Maintenance Pre-Mold
- Preventative Maintenance Custom-Mold
- Troubleshooting Level 1
- Troubleshooting Level 2
- 1 Point Lesson/Coaching

On-Demand

- Retread 101
- Michelin Plant Tour

Course Descriptions

Post Readiness

Description	Audience
A manufacturing environment is different than retail or service work. Our Post Readiness program provides a video introduction to the operator's specific post operations and safety to prepare them for their hands-on training. Our online instructional videos are available in English, Spanish, and French.	Post Operators

Objective	Competencies Gained	Learning Delivery
The learner will be able to explain the basic operations and safety procedures for the one post they are assigned. Employees return to this module each time they take on a new post.	• Post Safety • Post Operations	• Location: MRT LMS • On-Demand Video

Outcomes

- Employee is ready to start to start post training with certified operator

Measurements

- Evaluation of understanding from the certified operator

Area	Skill Behavior	Specific Training
General Safety and Site Onboarding are prerequisites.		
Initial Inspection	Inspect casings identified for retread, repair, or further X-ray inspection.	Video (15 Mins.)
Buffing	Setup and monitor machine that removes the old tread.	Video (40 Mins.)
CIA	Detect any anomalies in the casing.	Video (15 Mins.)
Skive	Fix and casing issues.	Video (11 Mins.)
Repair	Fix any casing issues.	Video (18 Mins.)
Fill	Fill skives.	Video (11 Mins.)
Tread Building	Application of new tread.	Video (40 Mins.)
Enveloping	Wrap the tire to prepare for curing.	Video (17 Mins.)
Chamber	Load, cure, and unload the new tire.	Video (30 Mins.)
Final Inspection	Inspect tire for any anomalies and customer specifications.	Video (15 Mins.)
Trainer Tracking	Tracking of progress – safety for example.	Training Log/Focus

Owner - mike.widmyer@michelin.com

Post Certification

Description	Audience
Making quality products does not happen by accident. This training teaches the operator of a specific post how to safely operate that post to produce a quality retread. Each post is a separate course with the same learning/agenda: • Initial Inspection • Buffing • Casing Integrity Analysis® (CIA) – Shearography • X-Ray • Skive • Repair • Fill • Tread Building • Double-enveloping • Curing • Final Inspection	Post Operators

Objective	Competencies Gained	Learning Delivery
To safely produce quality retreads "Right the First Time" and can operate their post unsupervised. Employees come back to this module each time they take on a new post.	• Post Safety • Post Operations	• Location: On-Site • Classroom/Shop floor • 3 Days • Min Class Size: 1 • Max Class Size: 10

Outcomes

- Good Retreads
- Efficiency is 70%-80% (will increase with time)

Measurements

- Right the First Time (RFT)
- Safety Incidences
- Efficiency (Output compared to standard)

Area	Skill Behavior	Specific Training
Shop Overview Training (LMS Videos) is a prerequisite.		
Safety	Operator is trained to operate the post and carry out tasks in a safe manner.	Hands-On Training
Work Method	Step by step procedures to perform the task with all required PPE.	Hands-On Training (of the operation of the post/machine)
Specifications	Training of the MRT tolerances related to the given post.	Verbal Instruction and Document Review
Evaluation	Evaluation of the operator performing the job.	Observation
Certification	Confirmation of knowledge.	Written and Verbal Test

Owner – mike.widmyer@michelin.com

Training Blitz (3 to 5 trainers)

Description	Audience
Making quality products does not happen by accident. This training teaches the operator of a specific post how to safely operate that post to produce a quality retread. Each post is a separate course with the same learning/agenda: • Initial Inspection • Buffing • Casing Integrity Analysis® (CIA) – Shearography • X-Ray • Skive • Repair • Fill • Tread Building • Double-enveloping • Curing • Final Inspection	Post Operators

Objective	Competencies Gained	Learning Delivery
To safely produce quality retreads "Right the First Time" and can operate their post unsupervised. Employees come back to this module each time they take on a new post.	• Post Safety • Post Operations	• Location: On-Site • Classroom/Shop floor • 4 Days • Min Class Size: 3 • Max Class Size: 15

Outcomes

- Good Retreads
- Efficiency is 70%-80% (will increase with time)

Measurements

- Right the First Time (RFT)
- Safety Incidences
- Efficiency (Output compared to standard)

Area	Skill Behavior	Specific Training
Shop Overview Training (LMS Videos) is a prerequisite.		
Safety	Operator is trained to operate the post and carry out tasks in a safe manner.	Hands-On Training
Work Method	Step by step procedures to perform the task with all required PPE.	Hands-On Training (of the operation of the post/machine)
Specifications	Training of the MRT tolerances related to the given post.	Verbal Instruction and Document Review
Evaluation	Evaluation of the operator performing the job.	Observation
Certification	Confirmation of knowledge.	Written and Verbal Test

Owner – mike.widmyer@michelin.com

Michelin Retread Technologies (MRT) Training Catalog

Build a Retread Training (BAR)

Description	Audience
This hands-on training provides a participant the opportunity to take one tire completely through the retreading process, operating on every post.	• New Plant Manager (Day 1) • Or pull from any position

Objective	Competencies Gained	Learning Delivery
Participant will have a good overview of the entire retreading process. They will also have operated and/or run every post from start to finish. This provides a clear understanding of what goes into making a retread.	• Appreciation of equipment operation • Understanding of work methods	• Location: Fountain Inn, Sc • Workshop • 1 Day (8 hours) • Min Class Size: 5 • Max Class Size: 25

Outcomes

- Knowledge of operating each post (with assistance)
- Completed the entire retreading process

Measurements

- Will physically operate at all posts within the retreading process with assistance from MRT trainer
  - However, will not be certified to operate post without supervision

Area	Skill Behavior	Specific Training
Shop Overview Training (LMS Videos) is a prerequisite.		
Post Ready Videos	Operator gets a foundational overview of each work post.	Videos for each Post in the retreading process
Safety	Operator is trained to operate the post and carry out tasks in a safe manner.	Hands-On Training – taking a tire through the entire process
Work Method	Step by step procedures to perform the task with all required PPE.	Hands-On Training of the operation of the post/machine
Specifications	Training of the MRT tolerances related to the given post.	Verbal Instruction and Document Review

Owner – mike.widmyer@michelin.com

Michelin Retread Technologies (MRT) Training Catalog

New Plant Manager Training

Description	Audience
Training to teach new Plant Managers lean manufacturing concepts and how they apply to retreading. Topics include capacity, inventory, productivity, operating expense, etc... (IE). Training also involves how Retread Business Managers (RBMs) can support new Plant Managers, and how they can assist with Velocity and MyShop tools and quality-control plans (RBM). Finally, New Plant Manager Appreciation is also incorporated as a part of this training (Maintenance).	• New Plant Managers • Existing Plant Managers

Objective	Competencies Gained	Learning Delivery
The new Plant Manager will have a better understanding of how to manage retread plant operations effectively.	• Understanding of MRT Process and flow • BTN overview • Maintenance overview • Understanding of cost analysis and Michelin IE principles	• Location: Fountain Inn, SC • 3 Days • Min Class Size: 2 • Max Class Size:10

Outcomes

- Completed BAR Training
- Completed sessions with RBM, BTN, Maintenance, and IE groups

Measurements

- Will receive useful information via in-person instruction, presentation and document review

Area	Skill Behavior	Specific Training
Build A Retread (BAR) Training	Participant takes 1 tire completely through the process operating every post	Hands-On Training (see Build a Retread Training)
RBM Support	Participant understands how the RBM role supports a new plant manager	Verbal Instruction and Document Review
Velocity/MRT Quality Control	Participant understands the process of quality control and monthly inspections	Verbal Instruction and Document Review
MyShop	Participant gains competency of the MyShop tool	Verbal Instruction and Document Review
IE Training	Participant gains understanding of IE principles	Verbal Instruction and Document Review
BibTread Next 101	Participant gains competency of BTN tool	Verbal Instruction and Document Review
New Plant Manager Appreciation	Participant is given an overview of MRT equipment	Verbal Instruction and Document Review

Owner – mike.widmyer@michelin.com

Controlled Flow System (CFS)

Description	Audience
The purpose of this training is to teach plant managers and operators the theory of constraints from The Goal book. The training includes the simulation of balanced and unbalanced manufacturing systems to demonstrate flow management. Basic statistical concepts are taught (expected value, variance, standard deviation). Using the plant's production data, a Controlled Flow System is designed for the plant and implementation instructions are provided. Additionally, a preliminary custom Controlled Flow Model is built with detailed staffing recommendations. This training includes playing the Dice game.	Plant Managers

Objective	Competencies Gained	Learning Delivery
The plant manager will have a better understanding of how to manage retread plant operations effectively. This training provides a strategic plan for the plant to achieve target production and productivity goals.	• Calculate expected value, variance, standard deviation	• Location: On-Site • Classroom • Field Study • 3 Days

Outcomes

- Manager will be able to discuss CFS for IE visit/consult
- Identify bottlenecks based on queue size
- Identify what is affecting capacity
- Identify balanced and unbalanced systems

Measurements

- Posts operating at or above MRT standard
- Calculate plant capacity

Area	Skill Behavior	Specific Training
Dice Game	Participant gains a comprehensive understanding of Pull Flow principle	Verbal instruction and presentation
Controlled Flow System Presentation	Participant learns Controlled Flow System, concept of theory of constraints	Verbal instruction and presentation
Controlled Flow System Plan	Participant applies CFS concepts to their shop/plant using the Controlled Flow model (scheduling, operator assignments, and queue management)	Hands-On Training

Owner – charles.ludlow@michelin.com

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Cost/Unit Training

Description	Audience
Training to each new plant managers how to manage their cost/unit using the Cost Analysis spreadsheet. Each subcategory of the Labor and Overhead cost structure is explained as well as strategies for cost mitigation. The plant's Labor and Overhead costs are benchmarked against other plants in the MRT network.	Plant Managers

Objective	Competencies Gained	Learning Delivery
The participant can analyze retread plant cost data and determine ways to reduce their cost/unit.	• MS Excel spreadsheet usage • Calculate cost/unit via spreadsheet	• Virtual Training (2 hours)

Outcomes

- Effectively use the Cost Analysis Spreadsheet
- Create different scenarios to compare labor and overhead costs
- Create reasonable goals to improve cost/unit
- Identify problem areas where costs could be improved

Measurements

- Reduced cost/unit

Area	Skill Behavior	Specific Training
Cost Analysis	Effective use of Cost Analysis spreadsheet	Verbal Instruction and Document Review

Owner – charles.ludlow@michelin.com

Flow Optimization

Description	Audience
An IE visit to determine opportunities for improvement in plant production. Queue sizes are analyzed at each post, and continuous observations are completed on the bottleneck posts to determine root causes. Results of the study are communicated to the plant manager. This involves a detailed custom Controlled Flow Model with detailed staffing recommendations, and adjustments can be made based on continuous observations.	• Plant Manager • Operators • Retread Business Manager (RBM)

Objective	Competencies Gained	Learning Delivery
Identifies the plant's bottlenecks and provides actions and focus points for improvement.	• Continuous observation study • Queue analysis • MS spreadsheet usage • Calculate optimized flow with target production and operator productivity goals	• Location: On-Site • Field Study • 2 Days

Outcomes

- Identify actions to improve bottlenecks
- Use and application of Controlled Flow Model

Measurements

- Plant production
- Operator productivity
- Time studies for desired posts
- Queue sizes

Area	Skill Behavior	Specific Training
Flow Optimization Session	IE consults with plant manager to elaborate on results from Continuous Observation and references Controlled Flow Model to identify bottlenecks and methods of improvement to attain production/productivity goals	Verbal Instruction and Document Review

Owner – charles.ludlow@michelin.com

Manager Shop Appreciation (Maintenance)

Description	Audience
Provide MRT Equipment Overview for retread Managers.	Plant Managers

Objective	Competencies Gained	Learning Delivery
One-day class planned to provide the Retread shop manager with the knowledge needed to evaluate the effectiveness of their Maintenance Tech. Provide them with the terminology and understanding of what components/ key items they should focus on during a shop floor tour or 1-on-1 with their Tech.	• Machine Component Identification • Machine Vocabulary • PM Structure • Key Point Failure Identification	• Location: Fountain Inn, SC • Classroom • 4 hours • Min Class Size: 1 • Max Class Size: 4

Outcomes

- Ability to effectively manage plant maintenance team

Measurements

- Improved Equipment Uptime

Area	Skill Behavior	Specific Training
My Shop	Participant gains competency of the MyShop tool	Verbal Instruction and Document Review
Work Method	MyShop Access	
	PM Manual Overview	

Owner – allen.crowe@michelin.com

Preventative Maintenance Pre-Mold

Description	Audience
Hands-On Equipment Preventative Maintenance (PM) training. Review the PM plans for each piece of equipment, perform PM on one of each type of machine, review machine safety, MyShop overview, and overview all tools and supplies needed for PMs.	Maintenance Techs & Plant Managers who are performing the role of Maintenance

Objective	Competencies Gained	Learning Delivery
The Franchise or Licensee Maintenance Tech is fully capable of performing PMs on their own to MRT standards. This includes the knowledge of proper safety techniques, knowledge of tools and equipment required, how to document completed PMs, how to perform the PM, and the key components to identify during the PM.	• Ability to perform Preventive Maintenance Tasks on all Pre-Mold Equipment	• Location: On-Site • Classroom/Tutoring • 2-4 hours Classroom – future CBT • 20-30 hours on-equipment tutoring • Min Class Size: 1 • Max Class Size: 3

Outcomes

- Ability to perform Preventive Maintenance Tasks on all Pre-Mold Equipment

Measurements

- PM Audit Scores > 90%

Area	Skill Behavior	Specific Training
LOTOTO is a prerequisite – training must be provided by Dealer		
MyShop Access is a prerequisite		
Attendee should review PM Manuals before training		
Demonstrated Mechanical and Electrical Aptitude		
Safety	Technician is trained to carry out tasks in a safe manner.	Hands-On Training – perform full PM with MRT oversight on each type of post
Work Method	Step by step procedures to perform the task with all required PPE.	Hands-On Training of the PM on each post/machine
Specifications	Training of the specific steps pointed out in the PM manual	Verbal Instruction and Document Review

Owner – allen.crowe@michelin.com

Preventative Maintenance Custom Mold

Description	Audience
Hands-On Equipment Preventative Maintenance (PM) training. Review the PM plans for each piece of equipment, perform PM on one of each type of machine, review machine safety, MyShop overview, and overview all tools and supplies needed for PMs.	Maintenance Techs & Plant Managers who are performing the role of Maintenance

Objective	Competencies Gained	Learning Delivery
The Franchisee or Licensee Maintenance Tech is fully capable of performing PMs on their own to MRT standards. This includes the knowledge of proper safety techniques, knowledge of tools and equipment required, how to document completed PMs, how to perform the PM, and the key components to identify during the PM.	• Ability to perform Preventive Maintenance Tasks on all Custom-Mold Equipment	• Location: On-Site • Classroom/Tutoring • 24 hours • Min Class Size: 1 • Maximum Class Size: 3

Outcomes

- Ability to perform Preventive Maintenance Tasks on all Custom-Mold Equipment

Measurements

- PM Audit Scores > 90%

Area	Skill Behavior	Specific Training
LOTOTO is a prerequisite – training must be provided by Dealer		
Preventative Maintenance Pre-Mold is a prerequisite		
MyShop Access is a prerequisite		
Attendee should review PM Manuals before training		
Demonstrated Mechanical and Electrical Aptitude		
Safety	Technician is trained to carry out tasks in a safe manner.	Hands-On Training – perform full PM with MRT oversight on each type of post
Work Method	Step by step procedures to perform the task with all required PPE.	Hands-On Training of the PM on each post/machine
Specifications	Training of the specific steps pointed out in the PM manual	Verbal Instruction and Document Review

Owner – allen.crowe@michelin.com

Troubleshooting Level 1

Description	Audience
Hands-On MRT Equipment troubleshooting class.	Maintenance Techs & Plant Managers who are performing the role of Maintenance

Objective	Competencies Gained	Learning Delivery
The Trainee will spend the week learning an overview of MRT equipment, Print reading, parts identification, equipment and component troubleshooting, and basic learning on meter usage.	• Machine Component Identification • Machine Vocabulary • Key Point Failure Prevention • Troubleshooting Basics • Help Desk Basics • Electrical, Mechanical and Pneumatic Print Reading	• Location: Fountain Inn, SC • Classroom/Tutoring • 24-32 hours (40% classroom) • Min Class Size: 2 • Max Class Size: 6

Outcomes

- Improved ability to self-diagnose and troubleshoot MRT retreading equipment

Measurements

- Improved Machine Up-Time

Area	Skill Behavior	Specific Training
LOTOTO is a prerequisite – training must be provided by Dealer		
Preventative Maintenance Pre-Mold is a prerequisite		
MyShop Access is a prerequisite		
Attendee should review PM Manuals before training		
Demonstrated Mechanical and Electrical Aptitude		
Safety	Technician is trained to carry out tasks in a safe manner.	Hands-On Training – LOTOTO points are identified
Work Method	Best practices for troubleshooting MRT equipment	Hands-On Troubleshooting Training on each post/machine
Specifications	Training of the specific technology on each piece of equipment	Verbal Instruction and Document Review

Owner – allen.crowe@michelin.com

Troubleshooting Level 2

Description	Audience
More advanced follow-up to the Level 1 training with more time spent on troubleshooting.	Personnel that have successfully completed Troubleshooting Level 1

Objective	Competencies Gained	Learning Delivery
The Trainee will spend the week learning an in-depth overview of MRT equipment parts identification, equipment and component troubleshooting, and more basic learning on meter usage.	• Advanced Troubleshooting Skills	• Location: Fountain Inn, SC • Classroom/Tutoring • 24-32 hours (10% classroom) • Min Class Size: 1 • Max Class Size: 4

Outcomes

- Improved Troubleshooting Skills

Measurements

- Improved Equipment Up-Time

Area	Skill Behavior	Specific Training
LOTOTO is a prerequisite – training must be provided by Dealer		
Troubleshooting Level 1 is a prerequisite.		
Preventative Maintenance Pre-Mold is a prerequisite		
MyShop Access is a prerequisite		
Attendee should review PM Manuals before training		
Demonstrated Mechanical and Electrical Aptitude		
Safety	Technician is trained to carry out tasks in a safe manner.	Hands-On Training – LOTOTO points are identified
Work Method	Best practices for troubleshooting MRT equipment	Hands-On Troubleshooting Training on each post/machine
Specifications	Training of the specific technology on each piece of equipment	Verbal Instruction and Document Review
Specifications	Training of specific techniques used in troubleshooting	Use of simulation of problems/faults of the most common faults/machines.

Owner – allen.crowe@michelin.com

BibTread Next 101

Description	Audience
This training covers a variety of facets that relate to the BTN platform. This involves work order creation and BTN mobile app, where the participant will gain a better understanding of work order anatomy, MRT Mobile solutions (BTM), work order search and the audit trail, and reporting in BTN. The participant will also learn about BTN referentials and plant tread assignment, product data (referential) data in BTN, Pre-Mold tread table, tread/casing referentials and assigning treads to plants, and finished products table and dealer part numbers for point-of-sale system. Lastly, the participant will be given an overview of shop floor operations and workflow, plant post set up, adjustments, workflow, and handling rejects and reruns/reworks.	Plant Manager or designated employee

Objective	Competencies Gained	Learning Delivery
• Obtain competence in the day-to-day administration of BibTread functionality		• Location: Fountain Inn, SC • Classroom/Tutoring • 1 Day • Min Class Size: 2 • Max Class Size: 10

Outcomes

- Basic competencies in all areas of BTN covered

Measurements

- Ability to perform work order creations and searches
- Ability to carry out basic reporting
- Ability to process adjustments, rejects, reruns, and reworks

Area	Skill Behavior	Specific Training
Reporting	Ability to pull reports from both BTN and Qlik in support of the Retreader's business	Reports training module/hands on
Work Order Creation	Understand the work-order creation process	Work Order training module/hands on
Basic Search Func.	Ability to search casing/workorder/pack list in BTN	Back Office administration training module/hands on
Casing Grading	Understand and apply basic casing grade ruled in BTN	Casing Grade training module/hands on
User Management	Ability to Create new and modify existing users	User management training module/hands on

Owner – alan.schmeelk@michelin.com

BibTread Next Shop Floor

Description	Audience
Understanding Shop Floor operations / workflow within Bib Tread Next	Machine Post Operators and New Plant Managers

Objective	Competencies Gained	Learning Delivery
Participant can log in to BTN (BIBTREAD NEXT) successfully and navigate the Shop Floor Application to complete their required tasks/responsibilities.	• Understand the structure of the BTN application • Understand the importance of using the Application properly (data collection) • Understand how a Customer Cam Spec affects their Casing • Understand the Casing reject process	• Location: Fountain Inn, SC • Train the Trainer + job aids • 1 Day • Min Class Size: 4 • Max Class Size: 8

Outcomes

- Participant understands how to access their individual Shop Floor accounts
- Knows how to start up and shut down the Post Thin Client
- Knows how to utilize the Log Me In remote program when BTN support is provided
- Knows how to access the correct Post from the Home screen
- Can use the Application efficiently in the execution of their post responsibilities

Measurements

- Observe start-up/shut down of Thin Client
- Observe successful log in and Post selection
- Observe use of and navigation within a given post
- Observe cooperative use of Log Me In rescue to fix an issue with BTN Support

Area	Skill Behavior	Specific Training
Basic literacy is a prerequisite.		
Start-up/Shift Start	Log in/Log out – using their credentials	BTN Shop Floor Training Module and hands on
App utilization	App Navigation – selecting posts Navigation within the selected post	BTN Shop Floor Training Module and hands on
Post utilization	Data Entry for their posts	BTN Shop Floor Training Module and hands on
'Log Me In Rescue' App	Cooperative use of Support App	BTN Shop Floor Training Module and hands on
Shift End/Shut Down	Logging out/shutting down Thin Client	BTN Shop Floor Training Module and hands on
	Make part of Certification and Audit	

Owner – alan.schmeelk@michelin.com

Michelin Retread Technologies (MRT) Training Catalog

Retread 101

Description	Audience
• PowerPoint provided on LMS platform with MRT overview and differentiators • Video provided on LMS platform with MRT overview and differentiators	Plant Managers

Objective	Competencies Gained	Learning Delivery
• Detailed explanation of each retread post and what sets MRT apart from the Industry Standard	• Differentiators between the MRT process and our competitors	• Location: MRT LMS • PowerPoint/Video

Outcomes

- Understanding of process differentiators
- Understanding of equipment upgrades and improvements

Measurements

- Ability to present this knowledge while providing shop tours

Area	Skill Behavior	Specific Training
		MRT Process Power Point
		Video

Owner – mike.widmyer@michelin.com

Michelin Retread Technologies (MRT) Training Catalog

Costs

Training	Cost per Event			
Post Readiness				E-learning
Post Certification (per Additional Visit)	$2,000			
Training Blitz 3 trainers (4 full days)	$5,000			
Training Blitz 5 trainers (4 full days)	$8,000			
Build a Retread (BAR)	$150			
New Plant Manager Training				$2,000
Controlled Flow System			$7,000	
Cost/Unit Training			E-learning	
Flow Optimization			$3,000	
Manager Shop Appreciation		$1,000		
Preventative Maintenance (Pre-Mold)		$4,200		
Preventative Maintenance (Custom Mold)		$2,500		
Troubleshooting Level 1		$1,200		
Troubleshooting Level 2		$900		
BibTread Next 101				$500
BibTread Next Shop Floor				$500
Retread 101				E-learning

*Yellow highlight indicates cost per person; training taking place at FTN.

Cancellations received in under 3 weeks of scheduled training will be charged a 10% fee.

CHART