

# Retread Plant Tour

# Goodyear CT&SC Uses Goodyear's "Authorized Retreading" Process

- ✓ Exclusive Goodyear Authorized Tread Designs and Compounds - *New tire technology and performance in a retread!*
- ✓ Exclusive Goodyear CT&SC Retread Production Control & Performance Reporting System - *Tracks retreads from pick-up to delivery using unique barcode labeling, and, provides meaningful use and cost reports to our trucking customers, including out-of-service tire reports!*
- ✓ Goodyear CT&SC's "Fleetwise" internet-based reporting system - *Provides the Goodyear CT&SC customer via discrete customer security access codes with new, retread and service purchase information and trends, and, current retread processing data including production, inventory and scrap reports.*
- ✓ Goodyear Approved Retreading Process - Unicircle & Precure Methods - *Goodyear manufacturing quality assurance standards & process auditing assured uniform and high standards of finished retreading!*
  - Goodyear's retread training programs for production associations
  - Goodyear's Retread Process Manual Standards and for Quality Assurance Audits of Goodyear CT&SC retread plant for conformance to standards
  - The Goodyear retreading process - production steps and parameters for:
    - Casing Inspection
    - Casing Repair
    - Casing Buffing and Building procedures
    - Retread Curing and Finishing Procedures
- State-of-the-Art Retreading Equipment for Retreading Consistency - *Precision retreading equipment capable of highest level of efficiency and accuracy!*
  - Hawkinson NDT-II Electro-mechanical casing inspection
  - Matteuzzi RAS-98E Buffers and/or RAS-90
  - AZ Cushion Strip Extruder
  - UNICIRCLE Type 2 or Type 1 Tread Applicator
  - Matteuzzi RAS 502 Precure Tread Builders
  - 25-Tire Curing Chambers
  - Matteuzzi G100 3-stage Air Pressure Final Inspector
- Nationwide Goodyear Authorized Retreader Retreading Warranty & *Extended Goodyear Casing Warranty for G300 series casings! And Goodyear's warranty for all other Goodyear Brand, Dunlop Brand, and Kelly Brand all-steel radial tires and casings.*

# Goodyear CT&SC's Computerized Reporting and Control Systems

Retread Plant Entry Station  
with Barcode Reader



All casings brought into retread production system are tagged – the tag is affixed to tire, to Plant Work order, and is part of finished tire label

- Worn Tire (“Casing”) is identified with a barcode label when picked up.
- Same barcode is used on the production work order
- The barcode is the link for controlling the casing in production & reporting all data to the customer on Fleetwise
- Barcoding eliminates manual keyboard errors
- Each retreading step has the customer’s building spec’s and instructions at the work station terminal.
- Customer spec’s are controlled by:
  - Casing DOT# for age allowed for retreading
  - Customer tread design preferences by type of casing or intended service
  - Special nail hole repair or section repair instructions
- Fleetwise Internet reporting available by
  - Purchases by category
  - Inventory levels
  - Work-in progress reports
  - Scrapped Tire and “RAR” tire reports

# Goodyear CT&SC's Internet Reporting Capabilities - "Casing Reject," "Purchase" & Other Reports

**WINGFOOT**  
COMMERCIAL TIRE SYSTEMS, LLC

Home > Fleetwise > Retread > Retread Summary Fleetwise

Enter the following information to obtain a summary of tires processed through Wingfoot Commercial Tire Systems.

**Retread Summary**

Wingfoot Location: All Wingfoot Locations

Location Type:  Retread Location  Work Order Location

Finished Month: May 2005 to May 2005

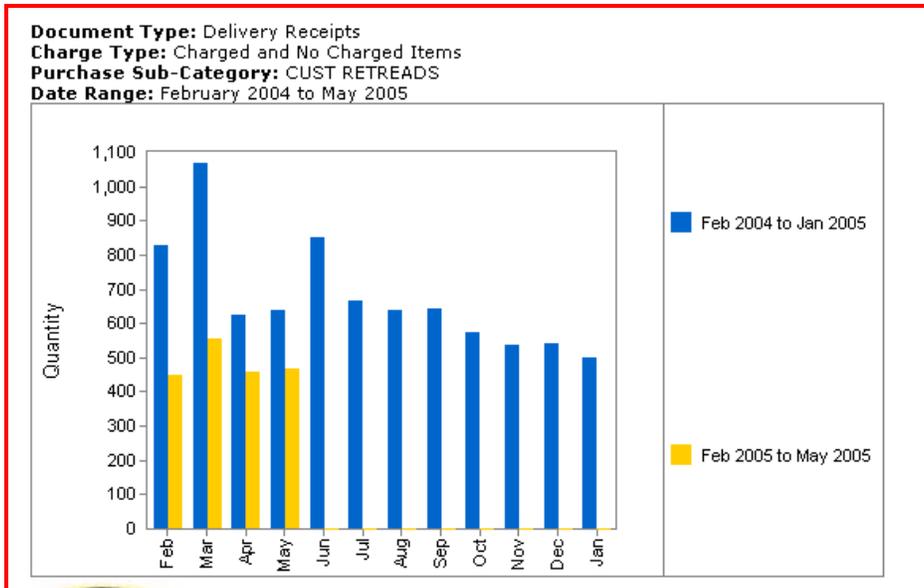
Report Data:  Retread Tires  Used Tires (Repair Only)  RAR/Scrap

Report Type: Retread Location

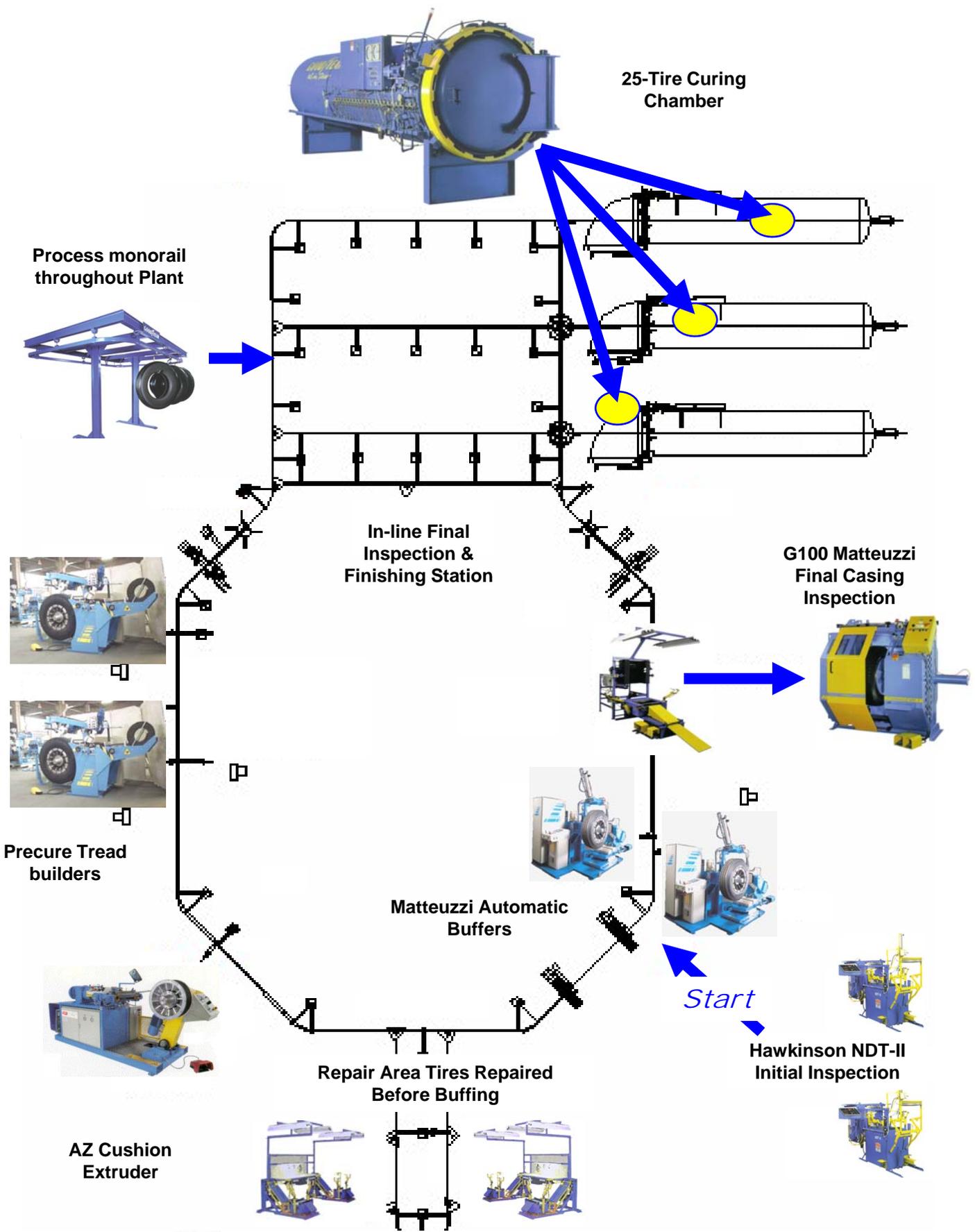
*Reports prepared online by \*casing brand or \*type of out of service condition, in either "table" or "Graph-Chart" style*

**Retread Location:** All Wingfoot Locations  
**Finished Month:** May 2005  
**Report Data:** Retread Tires / Used Tires (Repair Only) / RAR / Scrap

Wingfoot Location	Retread Tires	Retread Tire %	Used Tires (Repair Only)	Used Tire (Repair Only) %	RAR	RAR %	Scrap	Scrap %	Total Tires
AR - FORT SMITH/062 - 6201 S 29 ST	96	83.4%	0	0.0%	19	16.5%	0	0.0%	115
AR - LITTLE ROCK/001 - 7510 FLUID DR	4	100.0%	0	0.0%	0	0.0%	0	0.0%	4
MI - HOWELL/156 - 147 MORGAN DR	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1
NC - SALISBURY/220 - 1405 JAKE ALEXANDER BLVD W	28	82.3%	1	2.9%	5	14.7%	0	0.0%	34
OH - AKRON/069 - 1266 STARLIGHT DR	1	50.0%	0	0.0%	1	50.0%	0	0.0%	2
OH - COLUMBUS(OH)/007 - 1950 HENDRIX DR	38	67.8%	2	3.5%	16	28.5%	0	0.0%	56
PA - AVOCA/207 - 698 ROCKY GLENN RD	21	60.0%	0	0.0%	14	40.0%	0	0.0%	35
PA - HARRISBURG/078 - I-81 & RT 39	0	0.0%	0	0.0%	0	0.0%	14	100.0%	14
TN - JACKSON/060 - 328 BELLEVUE ST	84	83.1%	0	0.0%	17	16.8%	0	0.0%	101
TX - DALLAS/169 - 960 DRAGON ST	2	100.0%	0	0.0%	0	0.0%	0	0.0%	2
TX - SAN ANTONIO/017 - 8477 NE LOOP 410	30	93.7%	0	0.0%	2	6.2%	0	0.0%	32
TX - TYLER/015 - 2801 S SOUTHWEST LOOP 323	47	85.4%	0	0.0%	8	14.5%	0	0.0%	55
<b>Totals</b>	<b>352</b>	<b>78.0%</b>	<b>3</b>	<b>0.7%</b>	<b>82</b>	<b>18.2%</b>	<b>14</b>	<b>3.1%</b>	<b>451</b>



# The Goodyear CT&SC Plant Layout



# Goodyear CT&SC's Retread Processing Systems

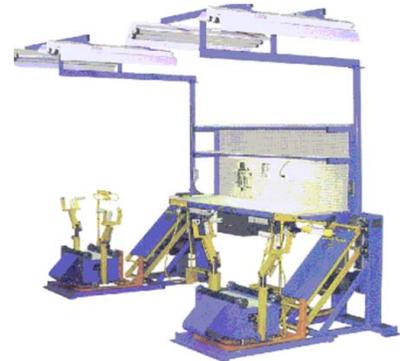
## NDT-II CASING INSPECTION SYSTEM

- Casing is electrically charged in crown area & sidewalls
- Punctures are revealed when electrical charge is grounded to metal roller
- Capacity for all LT/MCT truck sizes
- Total visual inspection as casing is rotated
- High degree of reliability & accuracy
- Radial and bias-ply casing inspection capability Detects flaws from holes through the casing
- Detects hole through liner to casing body
- Detects flaws from penetration to the belts



## DOUBLE POSITION REPAIR STATION

- Motorized forward/reverse rotation control
- Built-in worktable and ready-tool storage
- 3 foot-valves enable full operator concentration on repairs



## MATEUZZI COMPUTER ASSISTED BUFFING MACHINE

- 1,000 casing buffed specifications pre-programmed to control buffed casing profile accuracy
- Computer controlled complete top shoulder finished buffing for new tire appearance
- A steel belt detector is programmable for underbase thickness for each tire
- Automatic sidewall brush for shoulder texture
- Rasp water spray system to prolong blade life and maintain texture
- Narrow convex rasp for higher speed capacity
- Tire inflation pressures vary from 21PSI to 36PSI - depending upon optimum buff requirements by tire size



# Goodyear CT&SC's Retread Processing Systems

## PRECURE TREAD BUILDING MACHINE

- PLC – controlled semi-automatic builder
- Works with or without cushion gum
- Automatic build cycle
- Tread lift to load tread rubber
- Enclosed area for poly collection
- Adjustable cutting cycle for small treads
- Totally automatic stitching to do all tires and tread with or without wing



**MONORAIL – ALL TIRES  
MOVED BETWEEN WORK  
STATIONS USING  
MONORAIL - prevents tire  
contamination from  
excessive handling and  
allows improved work  
flow between the work  
stations**



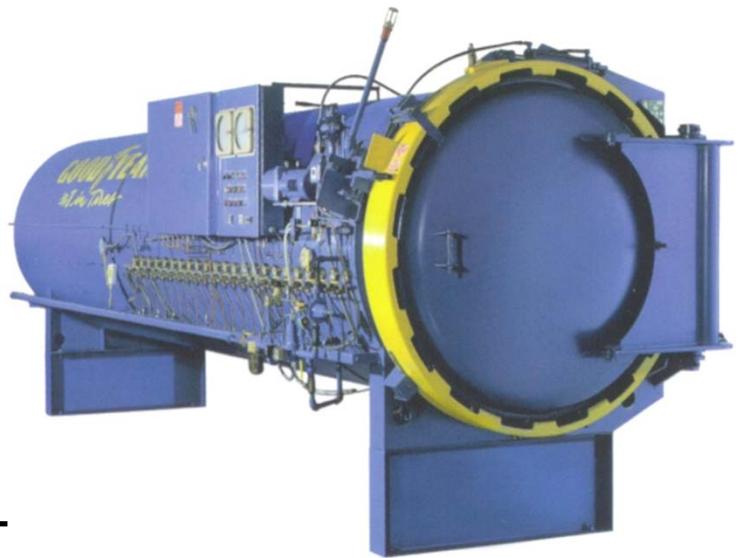
# Goodyear CT&SC's Retread Processing Systems

## 23-TIRE CURING CHAMBERS

- Uniform vulcanizing
- Equipped with Envelope Pressurization System (EPS) to improve vulcanizing of highly detailed modern tread designs by increasing curing pressure)
- Surelock Sealing Ring System used to clamp envelope to bead - System permits uniform, effective temperatures for each casing
- Extended length vacuum and curing tube hoses to improve efficiency of moving tires in and out of chamber
- Crown-seal door lock to permit safe operation
- High volume, overhead ducted air flow over finned - tubes steam lines for temperature consistency
- Fully vulcanizes tread and all repairs to casing with equal or improved strength compared to the new tire



*Sure Lock  
Sealing Rings*



# Goodyear CT&SC's Retread Processing Systems

## G-100 MATTEUZZI HIGH PRESSURE CASING INSPECTION

- Final step in retread inspection process
- Enclosed system provides operator with safe, visual inspection of finished retread at three stages of inflation
  - 30 PSI
  - 60 PSI
  - 120 PSI
- The inspection process helps locate undiscovered nail holes, deformations in the casing, and out-of-spec repairs
- The inspection process has the capability of successfully identifying tires with potential for weakened steel cords failure in radial tires (the result of a prior impact injury)

