

Smarter Infrastructure Upgrade Planning Series

Maximo for Transportation

Carey Clarke October 2, 2012





Introductions and Objectives

- Carey Clarke
 - Designer & Architect





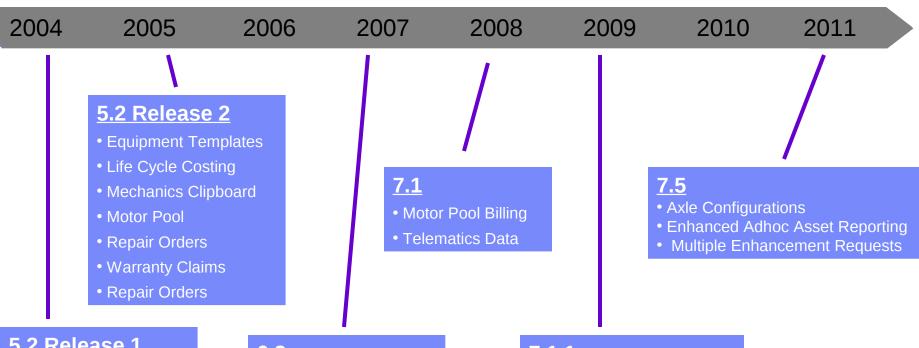


Agenda

- Release Time Line
- Upgrade Paths
- Feature Deep Dive



Release Time Line



5.2 Release 1

- Warranty Tracking
- Unlimited Meters
- Meter History
- Qualifications
- Fuels and Fluids
- Campaigns
- Count Books
- Maintenance Codes
- Maintenance Alerts

6.3

- Asset Alias
- Detailed Asset History
- Enhanced Fuel Import
- License & Insurance
- Repeat/Recent Repairs
- PM Enhancements
- Primary Meter

7.1.1

- Consist Management
- Inspections and Servicing
- Measurement Points
- Motor Pool Billing Report



Agenda

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- Upgrade Paths
- Feature Deep Dive



Upgrade Paths

- For clients on Transportation 6.3
 - 1. Run power update to get latest fixes for Transportation 6.3
 - 2. Install Maximo 7.1.1.4 and any hot fixes
 - 3. Install Transportation 7.1 and any hot fixes
 - 4. Run upgrade
- For clients on Transportation 7.1
 - Upgrade/update to Maximo >7.1.1.7 and Transportation 7.1.1
 - 2. Upgrade to Maximo 7.5 and Transportation 7.5
- For clients on Transportation 7.1.1
 - 1. Upgrade to Maximo 7.5 and Transportation 7.5



Agenda

- Release Time Line
- Upgrade Paths
- Feature Deep Dive



Feature Deep Dive

7.5



Tire and Wheel Management

- Axle configuration templates
 - Configuration definition bogies, axles, positions
 - Item rules for positions
 - Tolerance definition for asset, bogies, and/or axles
- Asset axle configurations
 - Currently installed items, readings, pressures
- Installation and removal inventory transactions
 - Record transaction against position
 - Record readings
- Rotate positions
- Validation of tolerances on all related actions
 - Asset, bogie, and axle validations



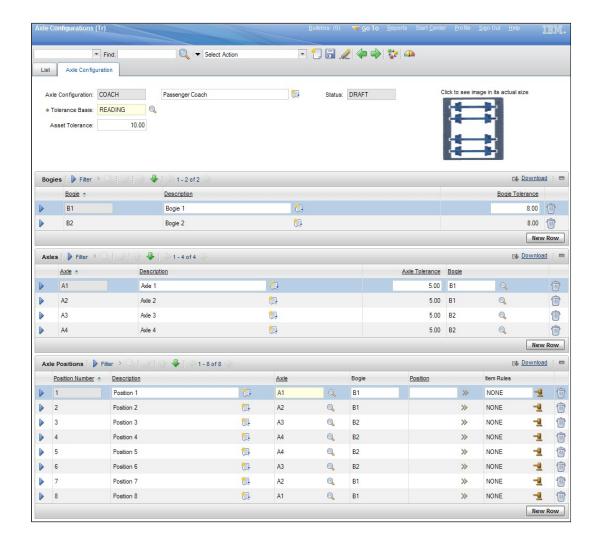




Tire and Wheel Management

Define Configuration

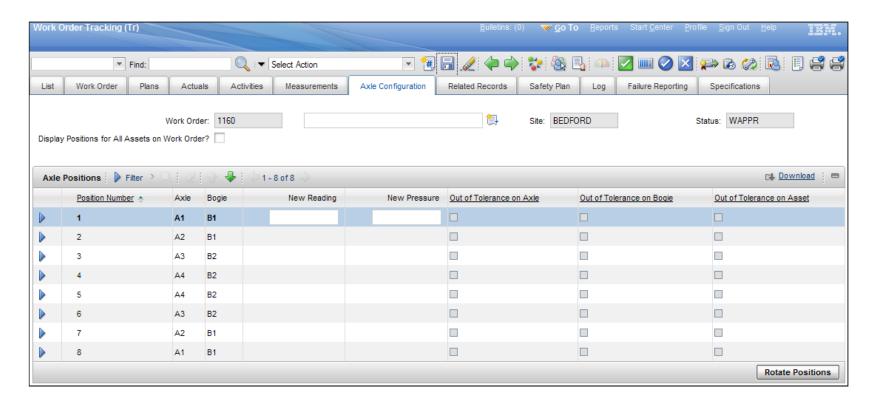
- Bogies
- Axles
- Positions
- Tolerances
- Item Rules
- Reading Basis
- Image





Tire and Wheel Management

- View current configuration details of all assets on the work order
- Record readings
- On and off inventory transactions
- Rotate positions





Asset Activity ROS

• In order to more readily accommodate extended reporting needs such as GSA FAST, the following additional source objects were added to this ROS in the Assets (Tr) application:

•PL	US	ΓΑϹʹ	TIV	ITY

•PLUSTLOGS

•PLUSTLOGENTRY

•PLUSTLOGMTR

PLUSTLOGPROB

PLUSTLOGQUAL

PLUSTMTRCHNG

PLUSTMPTRANS

•PLUSTMPCHARGEDETAIL

PLUSTTELEHIST

PLUSTCLAIM

PLUSTWARRTRANS

•PLUSTVR

•PLUSTVS

•PLUSTPMHIST

•METERREADING

PLUSTASSETSTHIST

•SERVRECTRANS

•LABTRANS



Feature Deep Dive

7.1.1

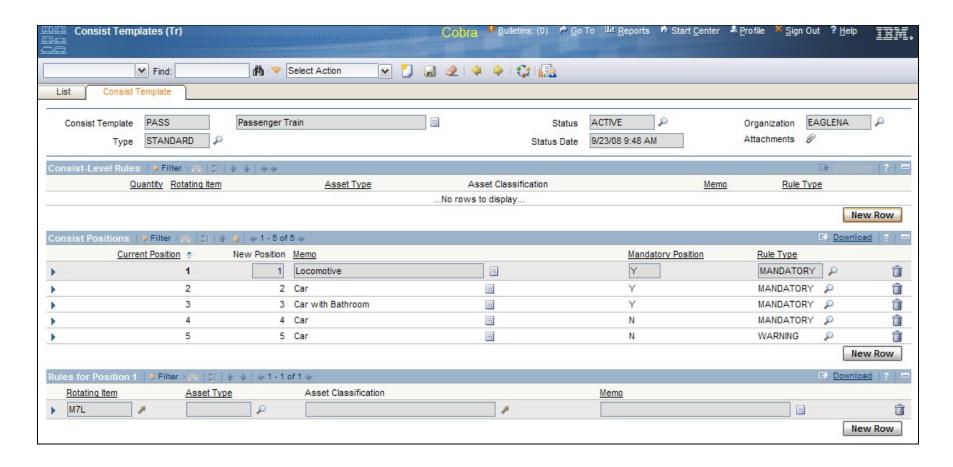


Consist Management

- Requirement to provide tools to manage rail consists (train sets)
- In the rail industry, a group of rolling stock (cars, locomotives, etc.) that are coupled together to form a train are often referred to as a 'Consist'.
- There are rules and processes required to take the individual rail assets and assemble them into a train.
- There are often rules for 'married-pairs'. These are sets of cars that are always kept coupled together and are used as a single unit.

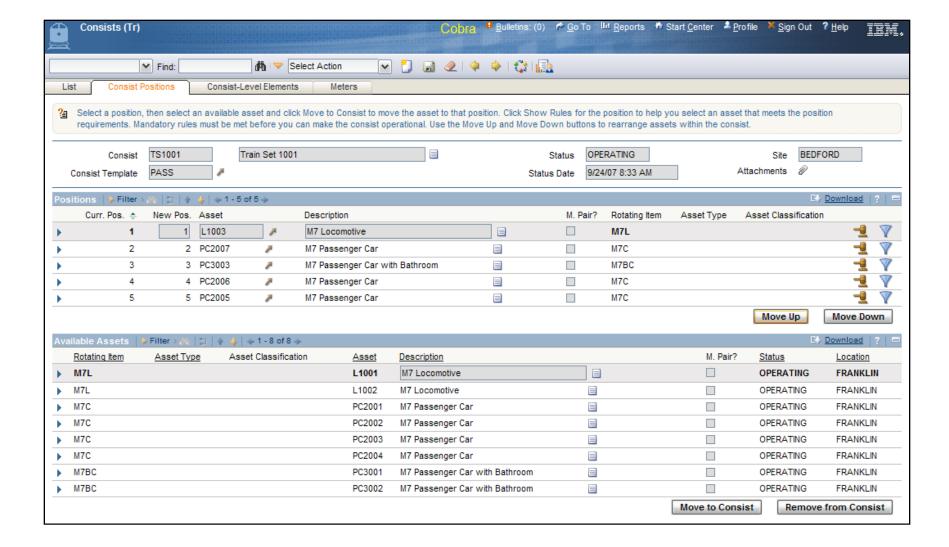


Consist Template





Consists



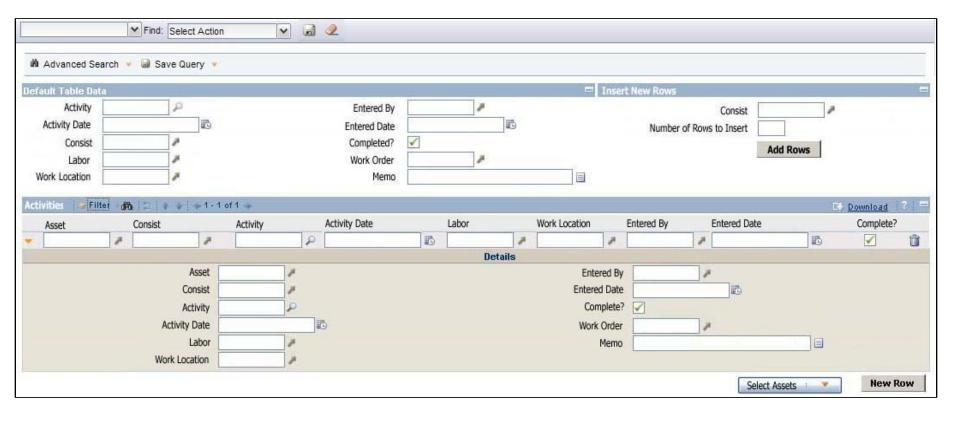


Inspections & Servicing

- Requirement to manage frequently recurring, repetitive activities
- These activities are not normally considered as PM activities or as work order tasks
 - No materials, labor, services, etc. expended to perform these activities
- Track such data as the asset, consist, activity, activity date, labor code, completion indicator, entered by, entered date, and location.
- Designed as a quick entry tool for repetitive activities
- Can be managed as part of a work order or completely independent of a work order



Inspections & Servicing Application



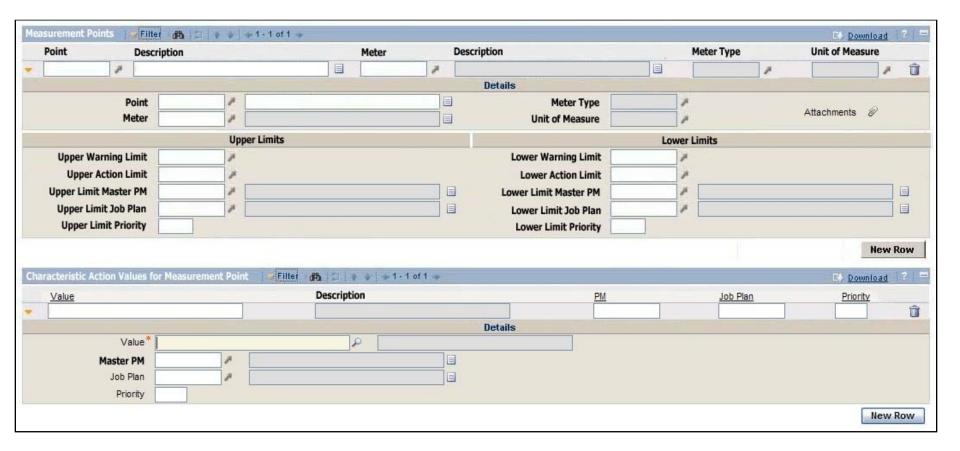


Measurements Points

- Requirement to make Maximo's Condition Monitoring better suited to transportation environments
 - Easier to create a set of measurement points for a group of assets
 - Easier to enter multiple measurements on a work order
- Define a set of Measurement Points in the Asset Template application
- A new Measurement Points tab added to the Work Order Tracking application
- This tab will list all the measure points for the work order as selected by the user.
- Choices to populate the tab are selecting individual measurements, measurements for the asset on the work order, measurements for all the assets on the work order

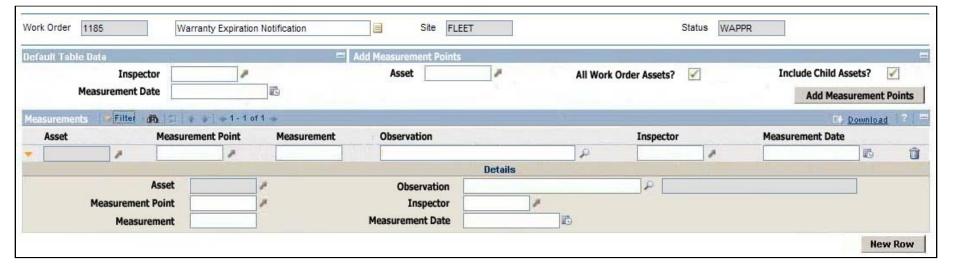


Measurements in Templates





Measurements in Work Orders



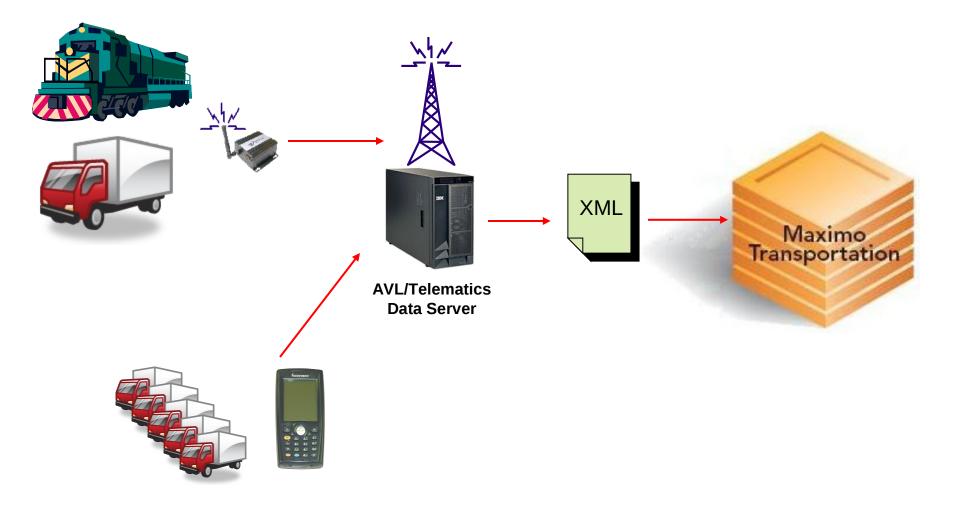


Feature Deep Dive

7.1



Telematics Data Management





Telematics Data Management

- Import Fault Codes and Health Monitoring data
- Data imported in XML format
- Fully Automated
- Fault Code handling can be configured as follows:
 - Ignore/discard
 - Store for historical purposes only
 - Store and create Work Order
- Health Monitoring data stored as meter readings
 - Engine temperature, maximum RPM, hard stop counts, etc.
 - Create readings as either continuous or gauge meters in Maximo



Motor Pool Billing

Will be discussed as part of 5.2 Release 2



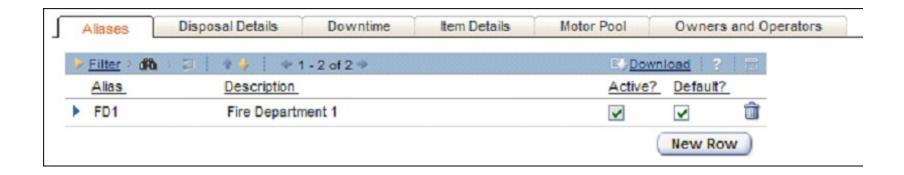
Feature Deep Dive

6.3



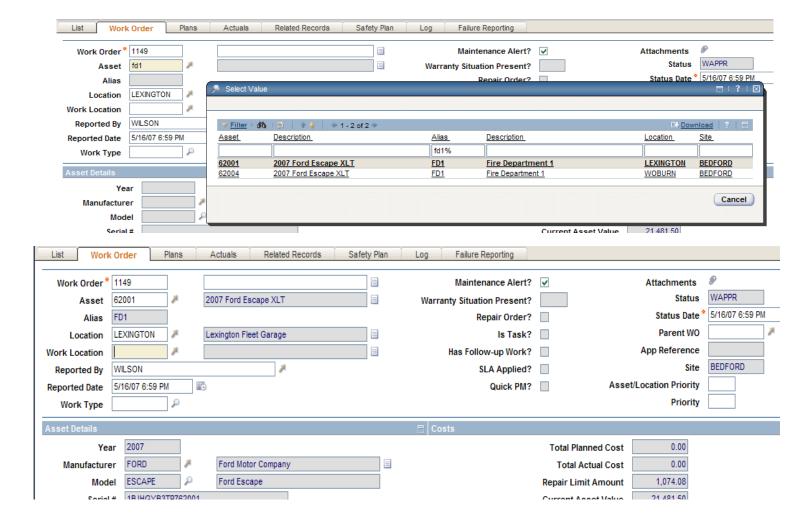
Asset Aliases

- Assets may have multiple identifiers
- An alias or an asset number can be used to identify assets in any application





Asset Aliases



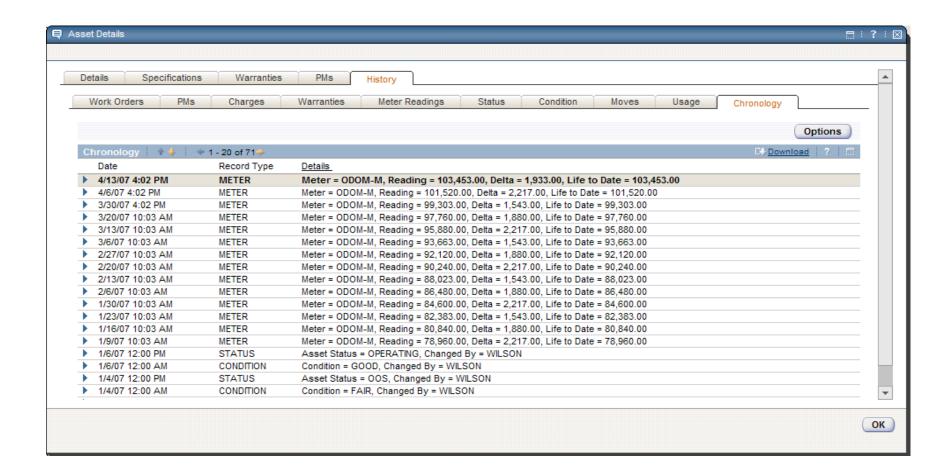


Asset History

- Asset history should be:
 - Made readily available when it is needed
 - Easily accessible without moving to multiple applications and performing manual searches
 - Organized in a usable format
- Full history in the Asset application
- Full history in the Asset Details dialog
 - Available everywhere you see an asset field



Asset History



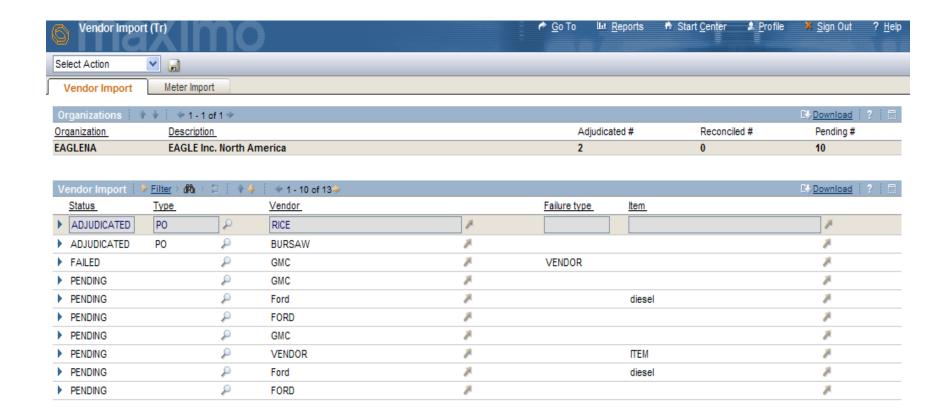


Fuel Transactions Import

- Import fuel transactions from external sources
 - Fuel Dispensing systems, Vendors
- A CSV file is used to load data into transaction table
- Import action can:
 - Update Meters
 - Update Inventory
 - Create POs or Invoices



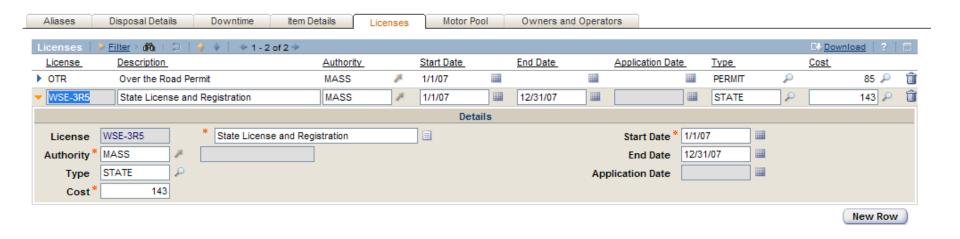
Fuel Transactions Import





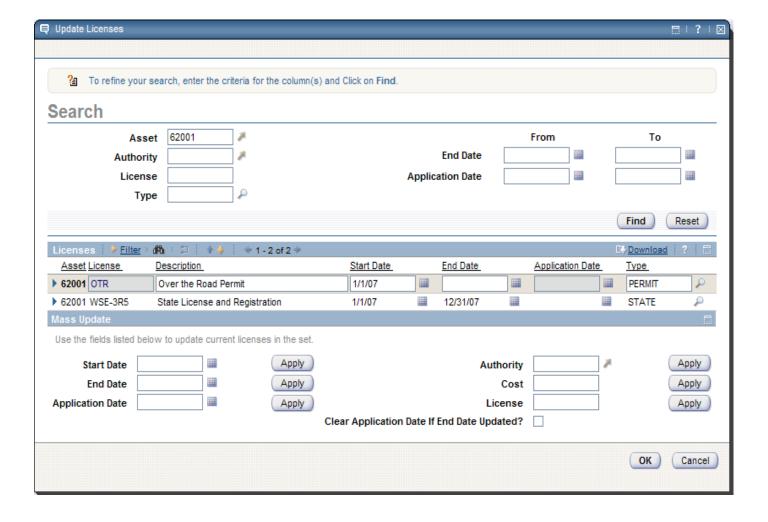
Licenses and Insurance

- Ability to manage information on assets for:
 - Licenses or Registration
 - Insurance
 - Permits
- Renewal processing for mass updates to multiple assets.





Licenses and Insurance



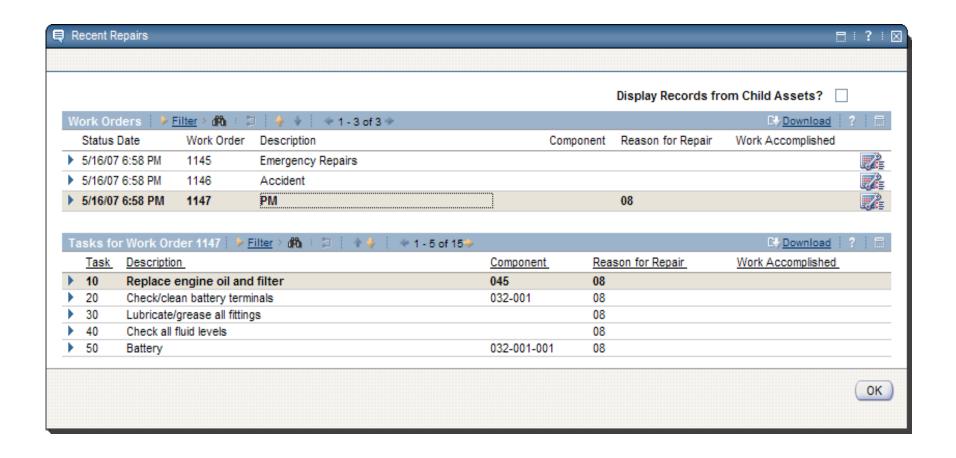


Recent and Repeat Repairs

- Similar to the problem with asset history
- Two new dialogs have been added to the work order applications
 - Repeat Repairs
 - Recent Repairs
- Clients can choose to automatically have this information displayed at key points in the process
 - entry of an asset on a work order (recent repairs)
 - approval of a work order (repeat repairs)
- Icons on the toolbar will provide easy access to this information at any point in the repair process.



Recent and Repeat Repairs



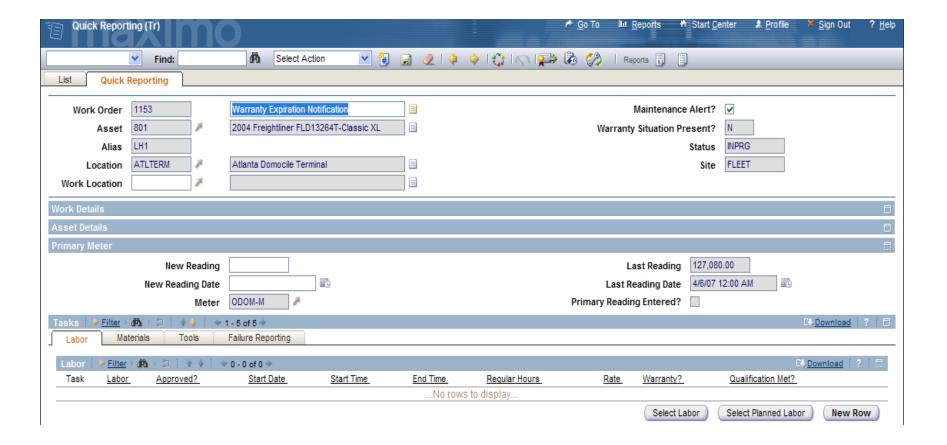


Primary Meter

- Designate a Primary Meter for an asset
- Enter Meter Readings on the main tab of
 - Work Order
 - Quick Reporting applications
- View last reading
- Optionally require a Primary Meter Reading at a defined work order status



Primary Meter





PM Enhancements

Extend Master PM and PMs

- Establish relationships between Master PMs to Activate, Inactivate, Complete
- Set Start Date, End Date, or Maximum Count for PMs.

Quick PM

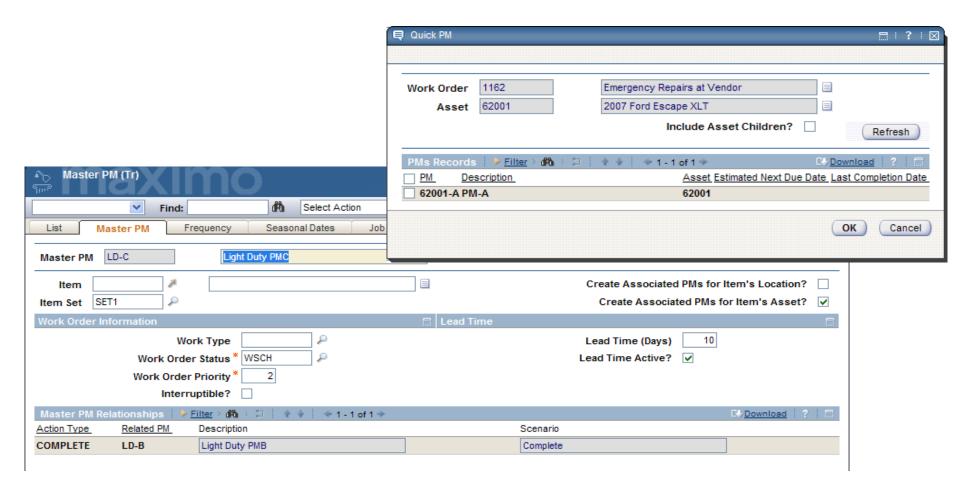
Provide Capability to associate a PM with a work order on the fly

PM Event History

History for stages of PM (due, triggered, performed)



PM Enhancements





Feature Deep Dive

■ 5.2 Release 2

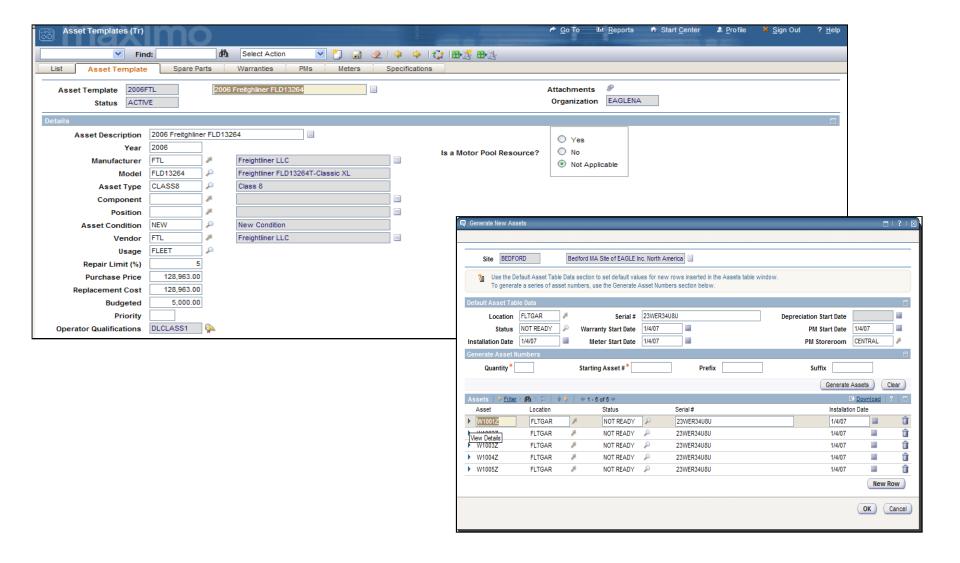


Asset Templates

- In-Servicing or In-fleeting functionality
 - Applying same or similar data to a collection of assets
- Template <u>may</u> contain:
 - Birth certificate date (year, make, model, etc)
 - Operator Qualifications
 - Spare Parts
 - Warranties
 - PMs
 - Meters
 - Specifications
 - Depreciation Schedule
- Create multiple assets or update existing assets



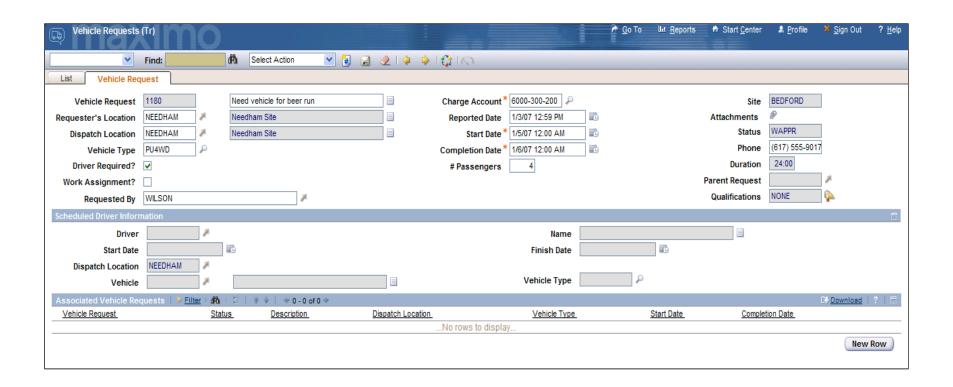
Asset Templates



Motor Pool

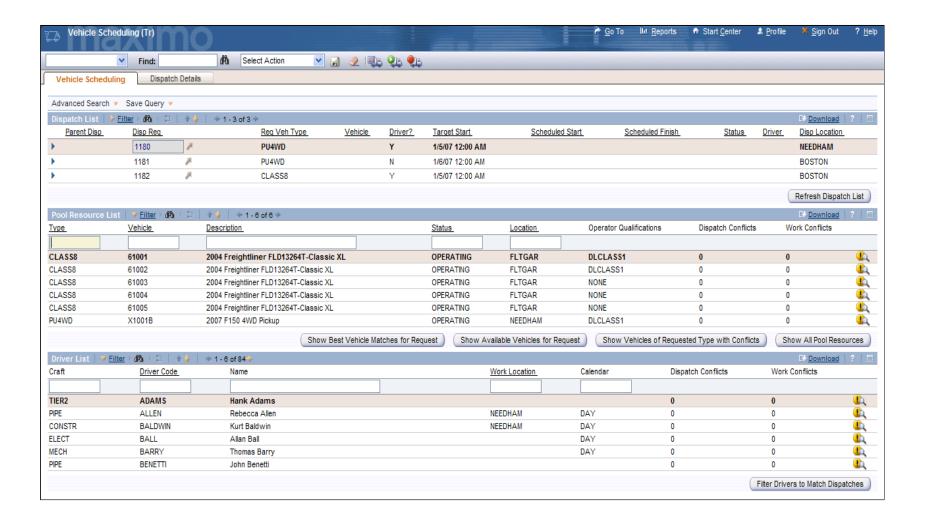
Vehicle Reservations Tool

- Reservation Requests
- Scheduling of Vehicles and Drivers





Motor Pool





Motor Pool Billing

- Supports usage tracking and billing
- Focused on internal billing for short term and long term assignments
- Rate schedules and rules

Time and\or usage rates

Date, day exemptions

Included usage

Rounding up or down

Rates for assets, asset types, classifications, dispatch location, renter's location, etc.

Billing transactions created based on schedules

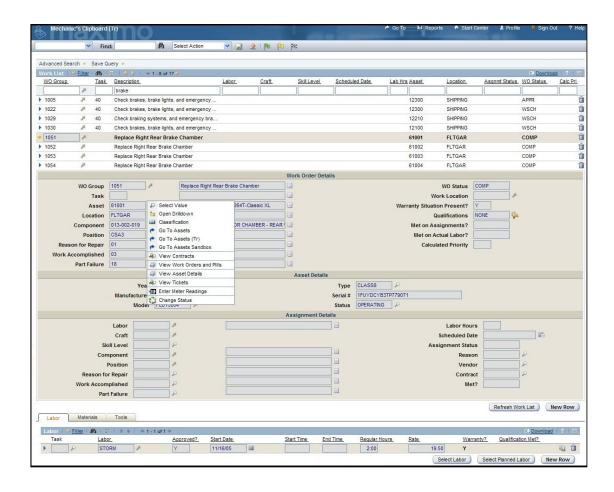


Mechanic's Clipboard

- One stop application for shop staff,
- Time clock to start, interrupt, and finish jobs,
- Record labor time, parts and materials, and tool usage,
- Record industry maintenance codes and mechanic's comments,
- Change asset condition and status, enter meter readings,
- View Asset History, Recent Repairs, and Repeat Repairs.



Mechanic's Clipboard



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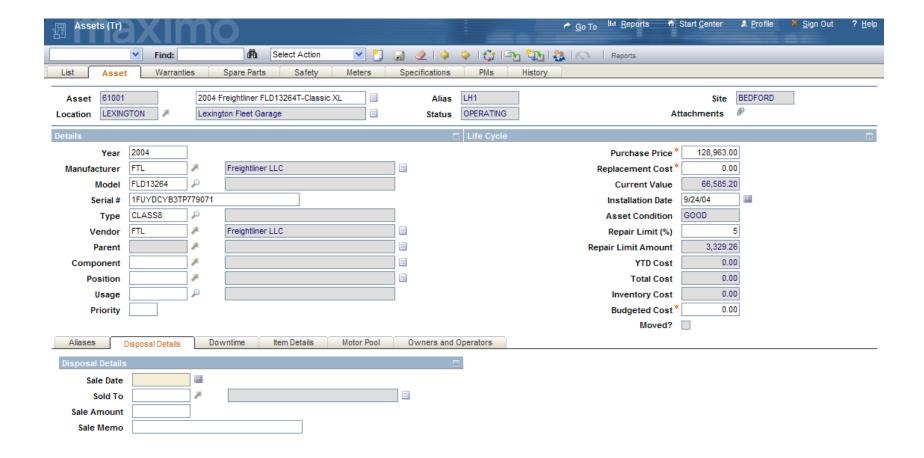


Life Cycle & Depreciation

- More complete picture of asset value and performance
- More complete life cycle tracking
 - Purchase or lease through MXES contracts and purchasing
 - In-servicing toolset to prepare asset for service
 - Details on asset's current condition and value
 - Movement and maintenance history
 - Status history
 - Maintenance Costs
 - Fuel Costs
 - Pertinent data to support the "Repair or Replace" decision
 - Disposal details



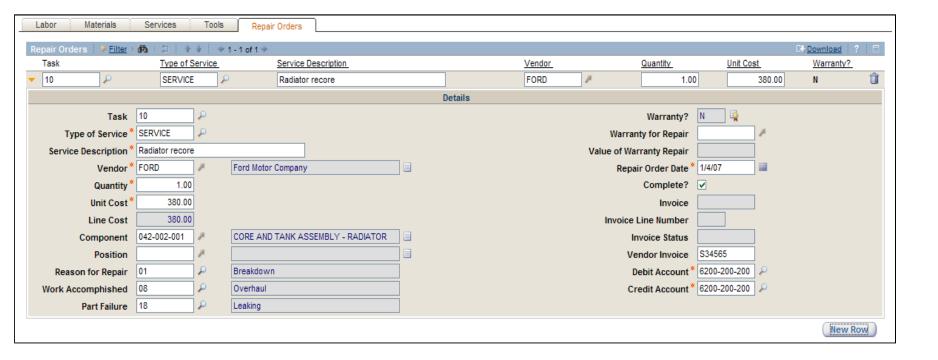
Life Cycle & Depreciation





Repair Orders

- Purchase outsourced or sublet repairs
- Full invoice processing from the work order





Warranty Claims

Will be discussed as part of 5.2 Release 1



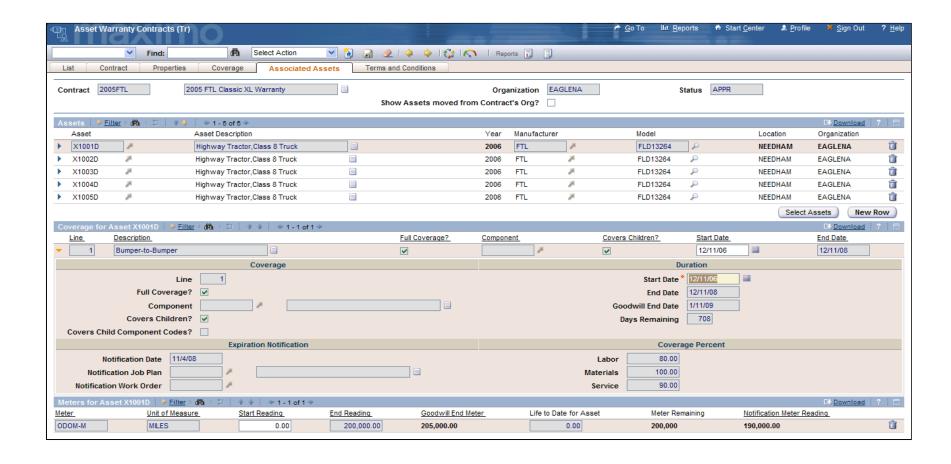
Feature Deep Dive

■ 5.2 Release 1

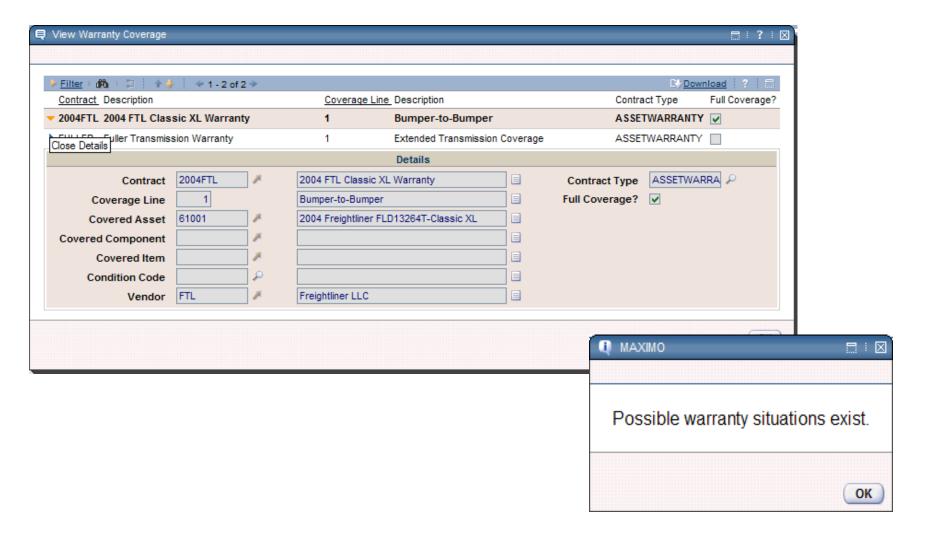


- OEM and Extended Asset Warranties
 - Bumper-to-Bumper Coverage
 - Component Coverage
 - Coverage for child assets
- Item Warranties
 - Specific Items
 - Generic Items
- Advanced Notification of Warranty Expiration
- Configurable Warranty Situation Notifications
- Warranty Claim Processing
 - Reimbursement processing for replacement items or cash

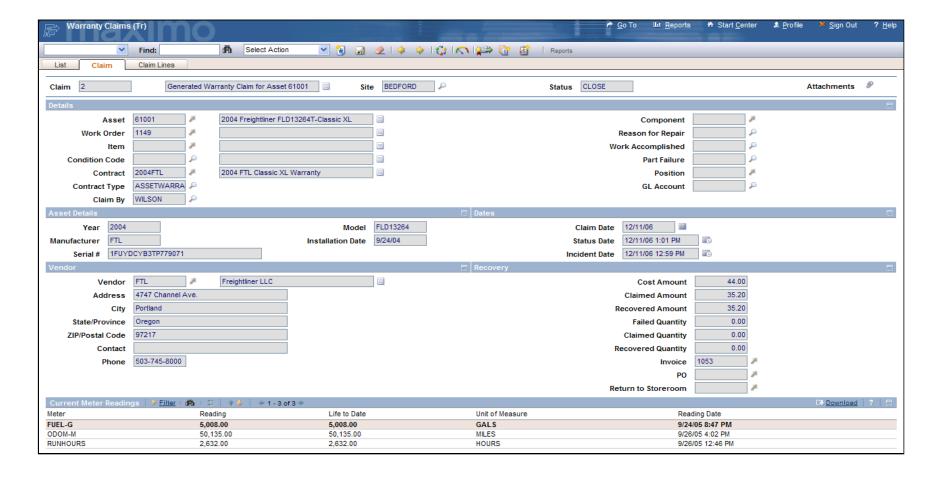








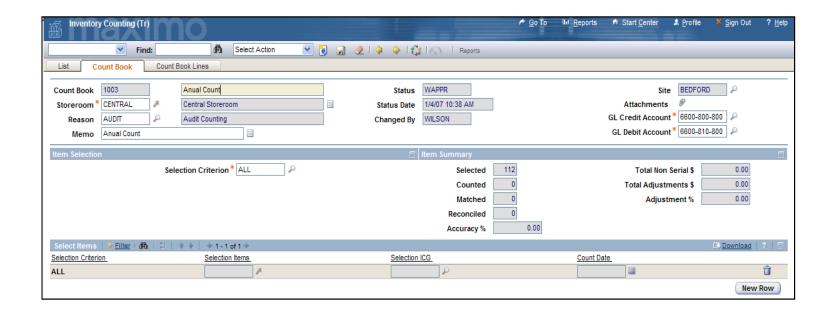






Inventory Counting

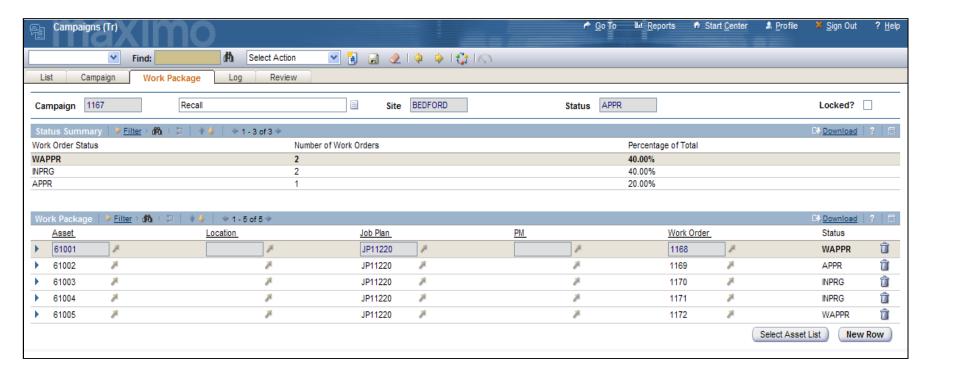
- Inventory counts as an entity
- Plan, perform, and analyze counts
- Provides statistics on accuracy
- Provides summaries of financial implications





Campaign Management

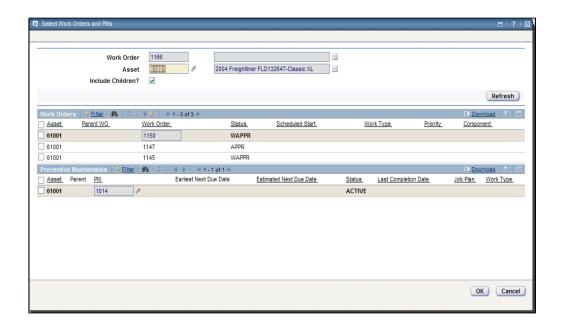
- Manage manufacturer recalls
- Manage internal engineering orders
- Manage In-Service/In-Fleeting work orders





Maintenance Alerts

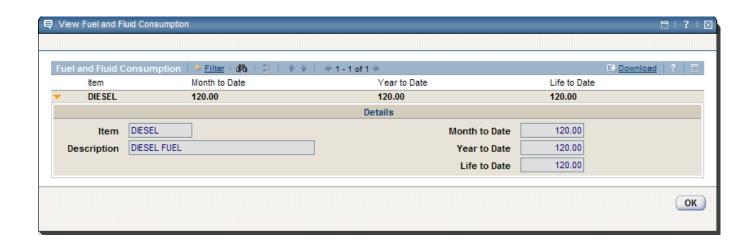
- Automatic notification of:
 - Outstanding work
 - Deferred work
 - Due or Near PMs
- Selections made are added to current work order





Fuel and Fluid Management

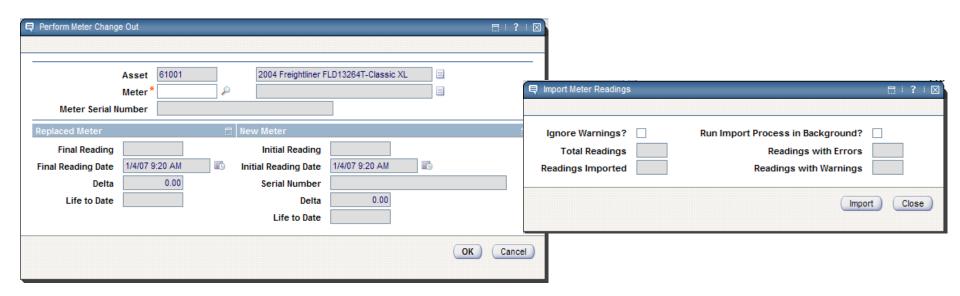
- Fuel Island Functionality
 - Fuel and fluid issues application
 - Stick/Fuel Tank readings
- Link fuel issues to meter readings
- View accumulated fuel and fluid consumptions





Extended Meter Management

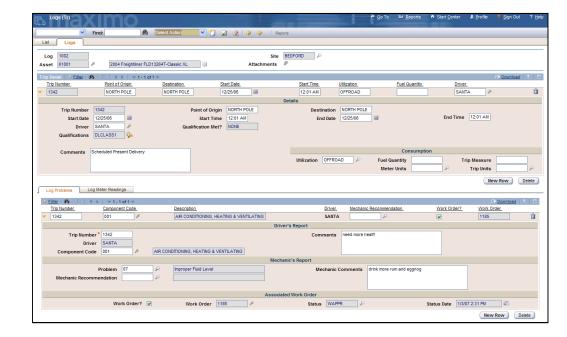
- Importing Meter Readings
- Meter Change-outs
- Linking Fuel Transactions to Meter Readings
- Add Enter Meter Readings to Asset Detail Menu





Driver's Logs

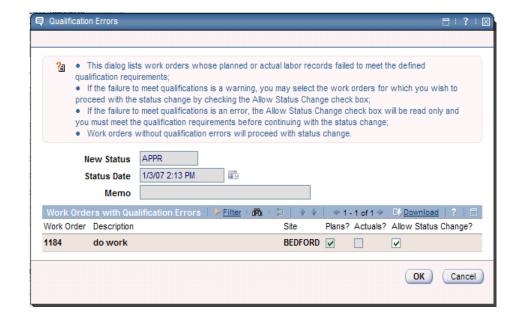
- Record Vehicle Utilization
- Report Problems Encountered During Trips
- Enter Meter Readings





Qualification Evaluations

- Define qualification requirements for:
 - Work orders
 - Assets
- Evaluation of qualification requirements on:
 - Work orders
 - Tool Issues
 - Driver's Logs
 - Vehicle Scheduling
- Configurable Alerts



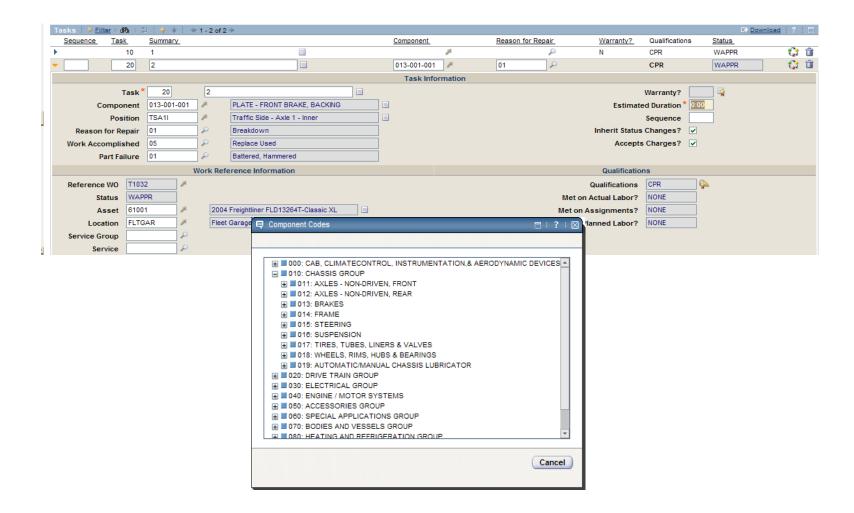


Maintenance Coding Structures

- Supports commonly used industry codes:
 - VMRS (Fleet)
 - ATA (Aviation)
 - AAR (Rail)
 - Etc.
- Also accommodates "homegrown" codes
- Used to identify the what, why, how, where
- Used to define where an item is used
- Used for identifying component or extended warranty
- Available everywhere.



Maintenance Coding Structures





Reports

- Asset Depreciation Details
- Asset Meter Change List
- Asset Meter Detail
- Asset Meter List
- Asset Status List
- Asset Utilization Detail
- Asset Utilization Summary
- Asset Value and Condition
- Asset Warranty Contract Details
- Asset Warranty Contract List
- Asset Warranty Coverage Summary
- Asset's Items Under Warranty
- Asset's Status History
- Cost By Asset Type
- Cost Per Unit

- Count Book Summary
- Count Book Detail
- Driver Utilization
- Issues and Returns Transactions
- Item Query
- Item Warranty Contract Details
- Item Warranty Contract List
- Meter Import Summary
- Motor Pool Billing
- Repair Limit Exceeded
- Repair Orders Costs
- Stick Reading
- Unclaimed Warrantable
 Transactions
- Warranty Claim Details
- Warranty Vendor Performance



Questions?











