



Understanding Nordco's Niche

The Oversight Process and Niche

Nordco's Cyl-Sonic special permit mandates ultrasonic examination of compressed gas cylinders. Nordco achieves this through several means, such as:

Annual on-site audits, assessments, and surveillances which include the following:

- Witness operators/processes, conducting duties and UE (surveillance, observations)
- Assess compliance to regulatory requirements, in particular, the processes required by the special permit
- Confirm UE system performance
- Document the audit results. Audit results are given to the client and the DOT, as required.

In addition, our proprietary Niche oversight software is used to complete various administrative functions, screen customer testing data for specific criteria, and generate audit summary reports. Acquired test data and summary reports are retained on file electronically for 10 years, even if your oversight contract is less than 10 years.

Using Niche, Cyl-Sonic oversight staff can perform the following administrative functions:

- Set up users and monitor operator certification, expiration dates, and unauthorized users
- Set up authorized test locations and systems for the purposes of monitoring performance objectives

Using Niche, Cyl-Sonic oversight staff can also screen the customer's acquired cylinder test data for the following:

- Operator errors and system performance
- Test accuracy and correctness, including serial or date errors, or 3AL or LER errors

Finally, using Niche, Cyl-Sonic oversight staff can generate the following required and optional evaluative audit reports:

- Monthly/annual production reports
- Monthly failure summary reports
- Shift reports and shift detail analysis
- DOT annual reports

Administrative Functions

Niche includes multiple administrative functions:

- **Welcome:** The welcome function creates a custom welcome message that is seen when users sign into the system, for example, housekeeping reminders.
- **User Administration:** The user administration function adds new users, monitors the active status of current users, and confirms certification levels and exam dates.
- **Unit Administration:** The unit administration function monitors test location units, checks upcoming expiration dates, and contains contacts, equipment models on-site, and calibration/audit expiration dates.
- **Cylinder Owners Administration:** The cylinder owners' administration function allows entry of cylinder owners' information and can be used to facilitate billing.
- **Manufacturers:** The manufacturers function contains the name and assigned manufacturer number of known cylinder manufacturers to our system, creating richer, more nuanced final reports.

Cylinder Information

Niche includes multiple cylinder information functions:

- **Operator/Location Data:** The operator/location data function creates on-demand reports for specific operators located at each testing facility. These reports show the following:
 - Shift date and test times
 - Cylinder number
 - Final test disposition
- **Cylinder Reports:** The cylinder reports function searches for specific cylinder reports by operator. These reports show the following:
 - Serial number, test date, manufacturer, manufacturing date, and owner
 - Cylinder type, pressure rating, and size
 - Final test disposition code
- **UE Maps:** The UE maps function searches for specific cylinder ultrasonic examination (UE) maps by cylinder serial number. These maps show the on-screen data obtained from the actual completed test, with each flaw indication marked where it appeared (shown below).

Data Errors

Niche allows searching for pending expirations and potential data errors:

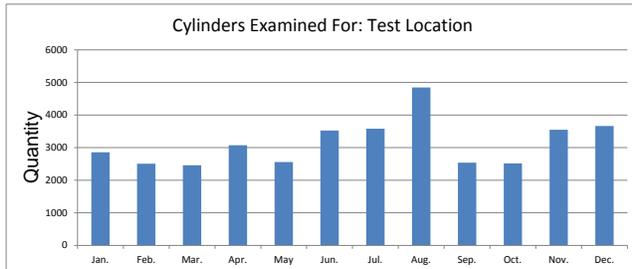
- **Pending Expirations:** The pending expirations function searches for expirations that will occur during a specified timeframe. The following information is displayed:
 - Operator expirations, including UE certification, eye exam, surveillance, and other certification dates.
 - Location expirations, including regulatory approval, annual unit calibration, and annual audit.
- **Serial/Date Errors:** The serial/date error function lists cylinders, by serial number, that contain an incorrect manufacturing date entered into the system.
- **3AL and LER Notification:** The 3AL and LER notification function identifies specific cylinders, by serial number, that require additional testing:
 - Type 6351 aluminum alloy cylinders must be monitored for the need of eddy current testing and internal visual inspection.
 - Cylinders that are rejected for poor coupling, otherwise known as Lack of Expected Response (LER) and must be retested.



Reports

Niche includes multiple report functions:

- Monthly Production Report Summary (Location):** The monthly production report summary creates a yearly production report (quantity by month) for a specific location (as shown below):



- Annual Production Report (Location):** The annual production report creates an ad-hoc report for a specific location and year that lists the number of cylinders tested each month by cylinder type.
- Monthly Failure Report (Location):** The monthly failure report creates an ad-hoc failure report for a specific location and month that lists rejected cylinders by the following failure types. The report also lists the cylinder owner and DOT ratings.
 - Pitting flaw
 - Wall thinning
 - SBT flaw
 - Circumference flaw
 - Longitudinal flaw
 - LER rejection
- Failure Summary:** The failure summary (shown below) creates an ad-hoc failure report for a specific location and month that lists rejected cylinders by the main failure types. This report is similar to the monthly failure report, except that the cylinder owner, DOT ratings, and LER rejects are not shown.

Serial #	Pit Reject	Thin Reject	SBT Reject	Circ Reject	Long Reject
11T240060	5	6	7	7	8
11T426135	8	0	0	1	0
4042678Y	1	0	1	1	1
412255	1	0	0	3	0
11T240060	0	0	0	0	1

- Shift Detail Analysis:** The shift detail analysis report creates an ad-hoc report for a specific location and month that gives a snapshot of each operator's work during each daily shift in that month. Efficiency percentages (testing and shift) are shown as stoplight states (red, yellow, and green), quickly identifying operators that are working below accepted efficiency standards.

In addition, the shift detail analysis report displays the individual shift reports for that operator (see next section). The report shows the following details:

- Cylinders tested per hour and per shift
- Tests run per hour and per shift
- Number and percentage of invalid exams
- LER and LER percentage
- Testing and shift efficiency percentages
- Number and percentage of rejected cylinders
- Hours up and hours run
- Shift Reports:** The shift reports are testing summary reports for a specific operator at a testing location. These reports show the following:
 - Shift date and testing times
 - Tests run per hour and per shift
 - Number and percentage of invalid exams
 - LER and LER percentage
 - Testing and shift efficiency percentages
 - Number and percentage of rejected cylinders
 - Hours up and hours run
- Shipping Documents:** The shipping documents function creates a cylinder testing record that is sent with the cylinder to the owner, listing the same cylinder information as the shift reports.

Reports (continued)

Adhoc Reporting

Start Date **End Date**

Apr ▼ 1 ▼ 2014 📅 Apr ▼ 30 ▼ 2014 📅

Locations **Operators** **Dispositions** **Cylinder Owners**

ALL <i>Benchmark Units</i> Haun Coastal Hydro Cody-BT Gas Innovations Midwest Cylinders <i>Industrial Units</i> Roberts_LC Coastal_LC AirLiquide_LaPorte_LC Cody_LC AirLiquide_Cornwall_LC AirLiquide_Edmonton_LC Midwest-LC HiPressure_LC	ALL Adam Archambault Administrator Alex Liaw Alfredo Barajas Andrew Lecours Bill Berthelot Bob Besket Bradley Berryhill Brian Bergeron Chris Shaw Christopher Brandt Dan Dudak Dana Michaels David Ojeda David Reeves Eric Betts Gary Kellmeyer	ALL P F I C	ALL MW VISRI #5 . 1 100 11 13 17 2 2000 2005 2007 2-18 26D 26DPW 271
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Generate Report

- **Ad-hoc Reporting:** The ad-hoc reporting function creates a custom report based on the user's selected criteria, using any combination of the following options:
 - Testing start and end dates
 - Location
 - Operators
 - Disposition codes
 - Cylinder owners
 - LER reject
- **DOT Annual Reports:** The DOT annual report function creates a yearly failure report for a specific location, broken down by cylinder types, listing rejected cylinders by the following failure types:
 - Pitting
 - Wall thinning
 - SBT flaw
 - Circumference flaw
 - Longitudinal flaw
 - LER rejection

The report also lists the following yearly cylinder testing totals:

 - Total cylinders tested
 - Total cylinders failed UE
 - Total cylinders failed visual
 - Total cylinders failed
 - Total cylinders passed

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