LeakDAS Version 4 – The Complete Guide

SECTION 4 – LEAKDAS MOBILE

Second Edition - 2014

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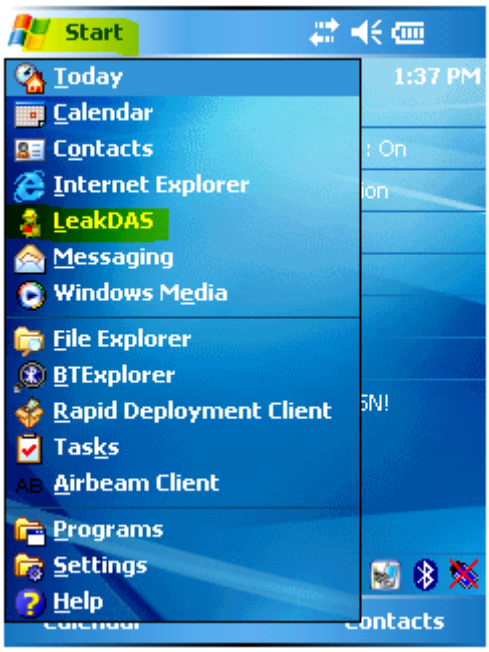
LeakDAS Mobile collects information, both visual and method 21inspections. You can also do tagging and tag editing in the device. There is no real limit to how many routes or how many components a LeakDAS Mobile device can hold. About the only limitation is how much memory the physical device has. Keep in mind, though, that the more data you send down, the longer the synchronization will take and as you navigate from component to component the tiny bit slower it is. But LeakDAS Mobile works on the Windows Mobile Operating System and is a very robust and stable tool.

To log in to the LeakDAS mobile software, turn on the handheld device, click on the Start menu and select LeakDAS from the list.



CONNECTING LEAKDAS MOBILE TO AN ANALYZER VIA BLUETOOTH

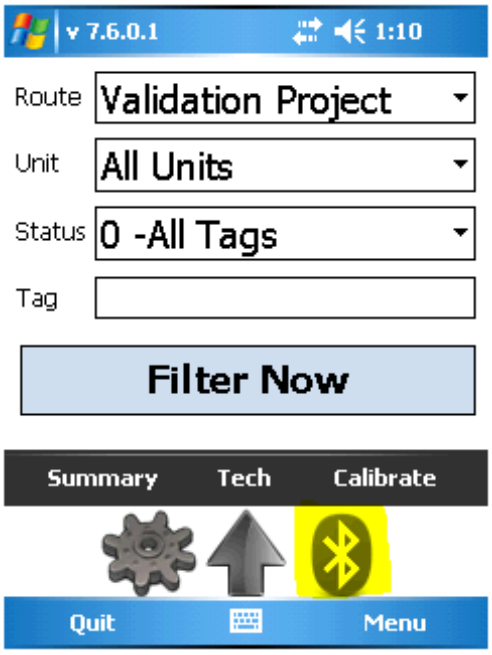
One of the first things that we need to talk about when we talk about LeakDAS Mobile is how it connects to an analyzer and also, how it connects to the LeakDAS database. So let's start with the question about how it connects to an analyzer. If you're going to use this for monitoring purposes, and you want to use it for direct read, in other words, the analyzer reports to the handset the PPM reading that it's gathered, then you do have to have what's called a Bluetooth Dongle.

Bluetooth Devices

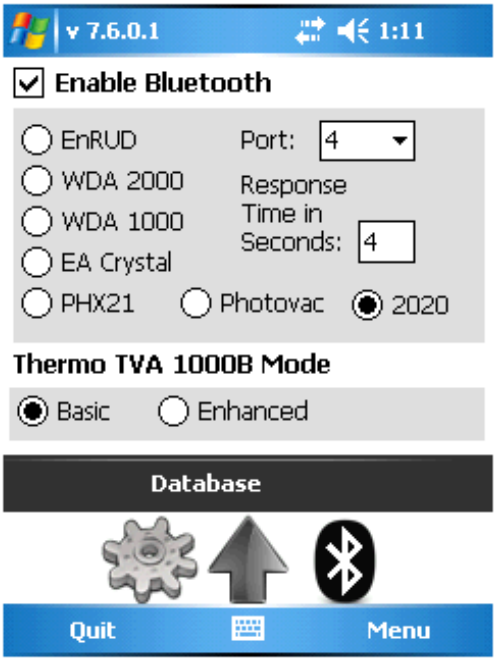
There are a couple different companies that make those Bluetooth Dongles, so you have some choices, as far as which device you want to connect to. Each of those Bluetooth devices is different. And so what I would encourage you to do, if you're brand new and you don't know how to connect the Bluetooth devices, you can contact our support team. Or you could contact the person who sold you the Bluetooth device and they should know or have documentation on how to establish what's called a partnership. Once the partnership is established, it's established. You don't have to worry about it again.

So every day, when the technician goes to the field, he should be using the same Bluetooth device. He should be using the same handset, so the partnership is always established. Some of the devices are easier to establish a partnership than others. But again, once the partnership is established, you're locked in. An important part of establishing that partnership is to tell the handset, not LeakDAS Mobile, but the handset itself what port it's going to be pumping the data out on.

To do this on your handset, you will click the B icon which will open the form to select all of the connection settings needed to communicate with the LeakDAS software.



Use the drop list to select the com port needed. You will also check the box to enable Bluetooth and also select which Bluetooth device you're using from the list provided. And populate the Response Time in Seconds field.



Scan Seconds when using a TVA

The only other thing we have here on this Bluetooth screen that we need to talk about is what's called the response time in seconds. Has little to do with Bluetooth, but rather it has to do with the analyzer that's being used. Let me tell you why that's important. A TVA1000 has a response time of roughly three to four seconds. The response time is one of the required tasks when you do your precision calibration. Before you put the device in the field, every quarter, you have to do this precision calibration. And response time, literally, is you take your known gas sample. Let's say 10,000 PPM gas. We apply the 10,000 PPM gas and we time how long does it take the needle or the digital display to get to 90 percent of that 10,000 PPM value. That's called the response time. In other words, how quickly does the device respond when a gas sample is introduced?

Scan Seconds when using Method 21

Method 21 is pretty clear. When you do your monitoring, you're supposed to monitor all the potential leaking interfaces on a component. And then wherever you find the highest value, then you stay on that highest value for two times response time. If you have assigned minimum scan times to the individual components then LeakDAS Mobile is going to obey that minimum scan time and if during the minimum scan time, we get needle deflection, in other words, we actually get a real PPM reading, then we're going to

add in two times the response time, which is the value you've entered on the Bluetooth form.

So you've got minimum scan time coming from the component and you've got response time stored in the handset, based on the analyzer that you're using. The two of them work together to make sure you spend the correct amount of time on a component. If there is no needle deflection, when the min. scan time elapses, you just move on to the next component.

CONNECTING LEAKDAS MOBILE TO THE DATABASE

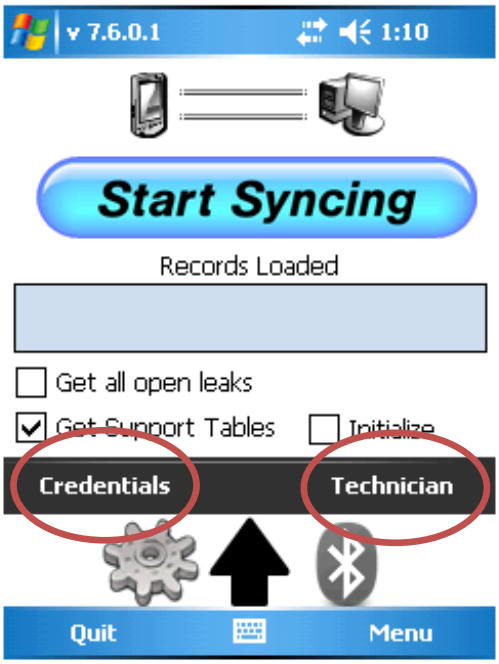
Active Sync Connection

This credential information only has to be entered once to make a connection to your database. LeakDAS Mobile does not talk to your desktop. It does not talk to the LeakDAS installed on your desktop. LeakDAS Mobile talks directly to the SQL server database where LeakDAS resides. It's very important that you know that. LeakDAS does not have to be running. LeakDAS itself does not have to even be installed on a PC for LeakDAS Mobile to go through and connect to a database. LeakDAS Mobile typically uses what's called an Active Sync connection to make its connection back to the database. In other words, you're either putting the handheld into a cradle or you're connecting it to a cable that's connected to the back of your PC. That's what we call an Active Sync connection.

Wireless Connections

LeakDAS does not have to have an Active Sync connection though. As long as LeakDAS Mobile can connect to your network, it can talk to this database. What I mean by that is if you've got a wireless network in your facility, or just a wireless access point in your office, you can use that wireless connection to get to the database as well. One of our largest clients, down in Texas, puts something like 20 to 25 technicians a day out into the field. Their facility is set up with a wireless connection so that the technicians don't even have to come into the office or come back to the data center to sync their handsets. They're actually able to synchronize from out in the field, just by opening up the sync tab and making sure they're connected to a Wi-Fi point and hitting sync button.

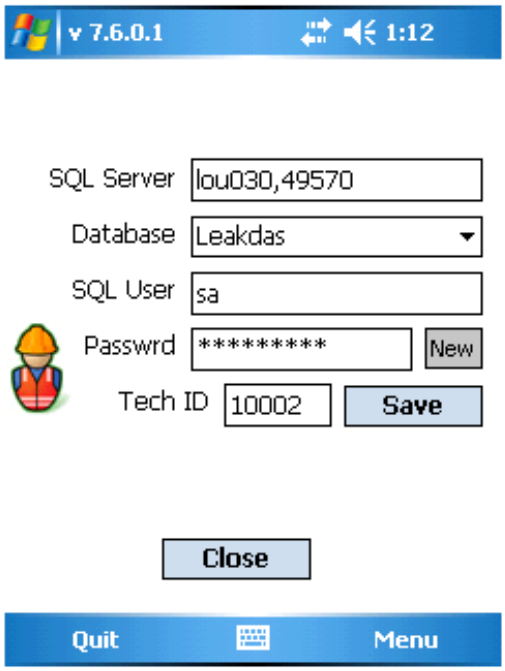
You can access the Communications form from multiple tables. Just click on the arrow icon located at the bottom of the screen. From this form you can sync data to and from the LeakDAS database. Set up the credentials and technician information needed to sync with a specific database.



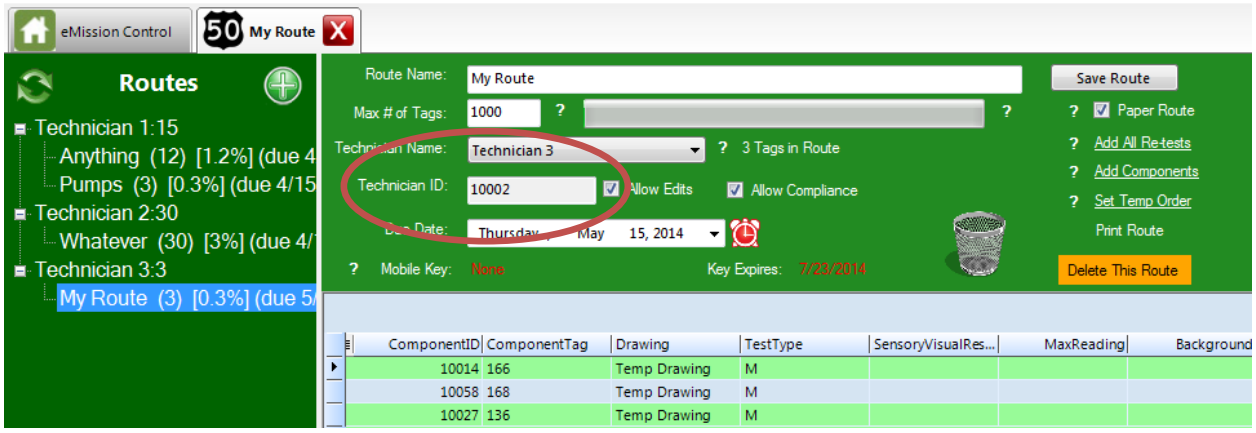
Credential Information (a.k.a – Sync Settings)

We're storing the name of the SQL server itself. In other words, what's the name of the server where the database is installed? We're storing the name of the database itself and the SQL user account that has permission to see the database. And then we're storing the password itself to get us to the database. We usually have to get with your IT department to help you get this information. Some of it, we can get directly from LeakDAS, such as the server name, the database name. Once it's stored, it's stored. It doesn't change. You don't have to worry about it.

The tech ID is another piece of information. The tech ID is the specific technician whose data I want to sync when I sync LeakDAS Mobile. The Tech ID is stored in the Route Manager table. Any route assigned to a technician will have the same ID number. By using this ID number all routes assigned to that specific technician will come down to the handset when it's synced.



There is some real advantage to a wireless connection, or just having the ability to do an Ethernet connection from somewhere else in the facility. A lot of people are doing that as well. These types of connections allow the technician to sync without having to come back to the office. There's much time to be saved by this. So again, that goes into the technicians folder in the Route Manager table is going to come down to this handset.



****Important Note about changing credentials****

Very importantly, if you've done monitoring or if you've done any work at all, edits on components, adding new components, you don't want to change the credentials here until you've synced the completed work. You have the potential to lose data if you're not careful. There are warning screens in LeakDAS to keep you from doing this. If you try to change the settings before syncing the work already completed you will get a message warning you of the fact. And you will have to click through information messages before it would actually throw the data away. We've tried to do everything possible to minimize the opportunity for data loss but you do not read the messages provided it is still possible to do so.

"The Version of LDM you are running does not match the DB Version"

A very common question we get in our tech support world, somebody hits the sync button, and they get a little pop-up message box right here inside LeakDAS that says the version of LeakDAS Mobile you're running does not match the master database version. We give you the ability in LeakDAS to identify what your approved version of LDM is. And anybody who syncs on an unapproved version will get the message inside LeakDAS that their versions don't match. That's just a red flag to let you know that a handset didn't get updated or that the handset got updated to a newer version that LeakDAS is not expecting. Either way, you've got to make them match. And the way you make that match is to log in as the IT administrator and tell LeakDAS the approved version for your database.

Get Support Tables – What does that mean?

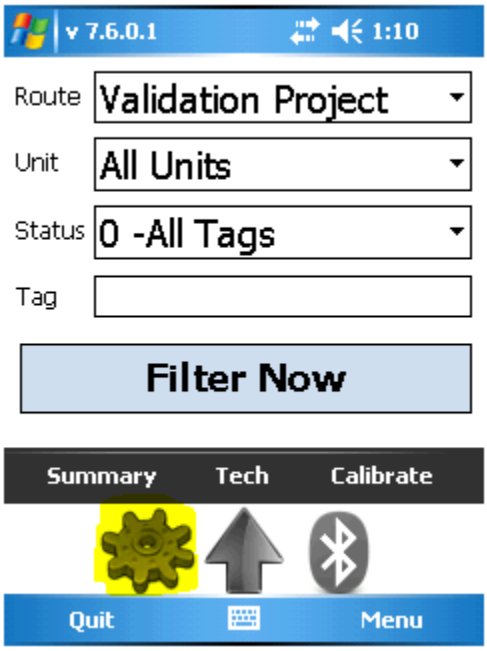
There is a check box for Get Support Tables located on the syncing form. Those support tables are the pick lists used by the LeakDAS software. Some of those pick lists can be pretty extensive. If you're in a big facility, the process stream list can be several hundred or even several thousand records long. The unit list or area list may be 100 or more records long. Those different pick lists, if they haven't changed, you don't necessarily need to sync them every single time, so you can speed up the sync process if you tell it not to get the support tables. So if you know that those pick lists haven't changed, you can just uncheck that box.

Now, if you know that the values in the pick lists have been updated then you would need to check that box to pull the fresh pick list down to the handset. So if you are going to go out and do tagging or tag maintenance you would want to make sure you have updated information. The syncing of data is never slow in LeakDAS but it will take a few seconds longer when pulling all of the support tables.

MONITORING

If you're not already on the route filtering screen the gear icon will take you back to the main control panel where you can decide which set of components you want to monitor. You have the ability to select which route you want to monitor as well as the specific unit.

Under the Route menu you will have a select for a route called New Tags. If the technician adds new components to the handset they will automatically go in the this New Tags route so they will be available if monitoring needs to be entered.



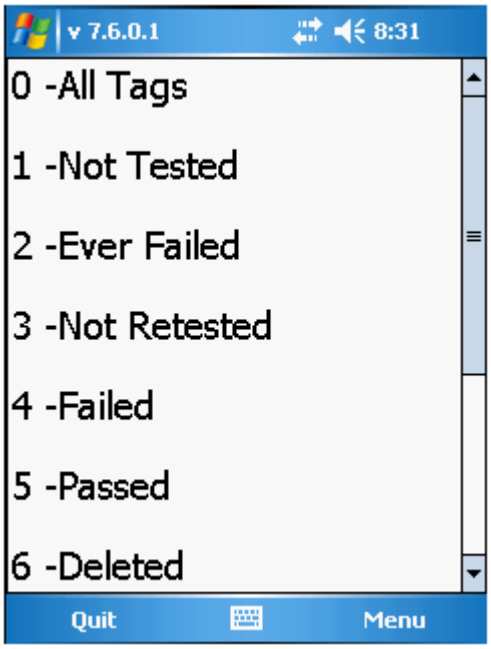
Status

The Status drop list will allow some very specific filtering. By selecting All Tags you will get a list of every component in the route whether it's been monitored or not. But Monitored Still To Do will filter down and only show you the list of components that does not have an inspection. That way your list is only what you have not done within the route.

Selecting All Leaks Found will show you a list of every leak whether it has been repaired or not. The Need Repair Attempt will show you all leaks that have not had their first attempt made. Still Leaking will show all leaks that are still actively leaking. They may or may not have had the first attempt at repair done.

The Passed Inspection will show you a list of components that have a passing reading. Deleted will show you all components that you have changed the status from active to inactive. Out of Service will provide a list of the components you have marked as OOS.

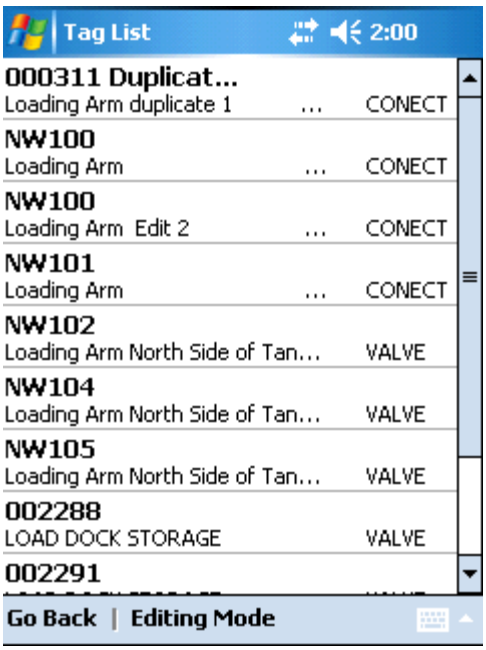
There is also a selection for Edited and Un-edited. The Edited will provide a list of all components where the technician has make a change. And the Un-edited will show all components where no change has been made.



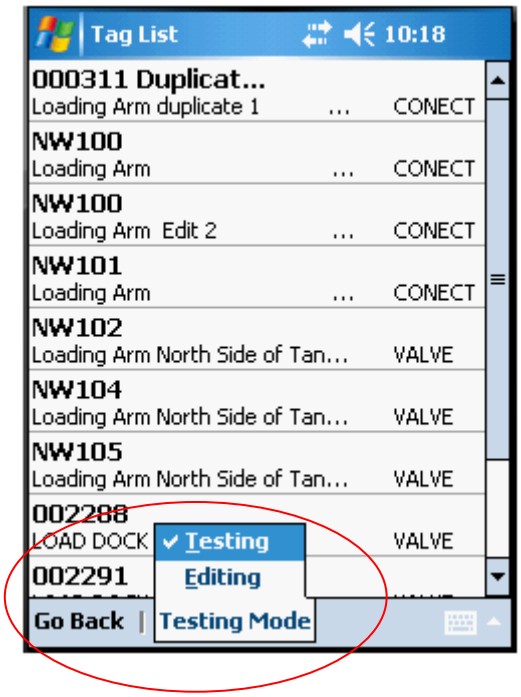
The Filtered Components

Once you have made the filter selections needed you click the Filter Now button and LeakDAS will return all of the components that match the criteria selected. The grid will show details for each individual component. The grid is finger friendly so that allows you to scroll through the provided list by touch..

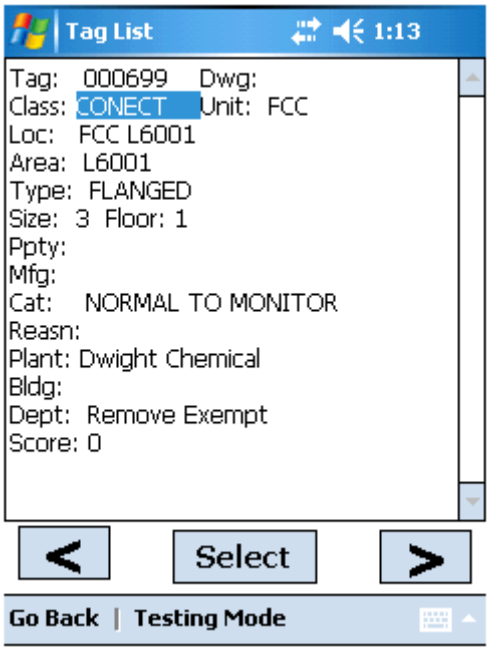
Here's what you need to know about this grid. Screen real estate on a LeakDAS Mobile device is kind of limited, so we can't show you just a huge amount of information about this component. You can see the basics like tag, drawing, class, and part of the location description.



You also have some navigation buttons at the bottom of the screen. The Go Back link will take you back to the filtering screen. If you click on Testing Mode you will have the option for Testing or Editing. Select which mode you want then click on the component needed.



Now if the grid does not provide enough information for you to find the component you can click on the tag number and it will open an individual form for that tag number. This is a read only form but it tells you everything about the component including the entire location description field.



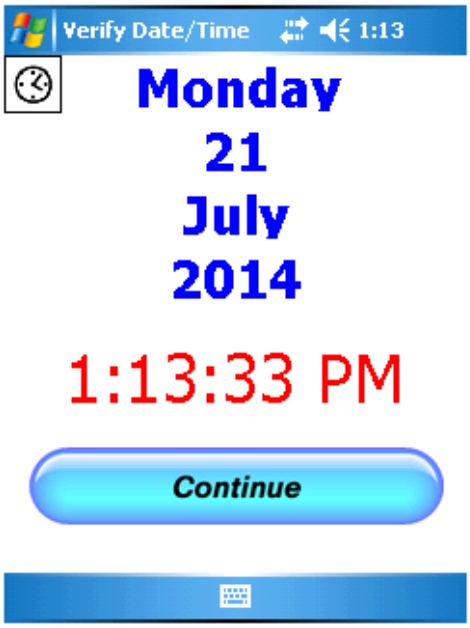
Now, a common mistake at this point is that people think they need to hit the back button to go back to the list of components. This back button doesn't take you back to the grid. Remember, this back button takes you back to the filtering form. So don't make that mistake. In order to get back to the grid just touch anywhere on the screen and it will move you back

MONITORING INFORMAITON

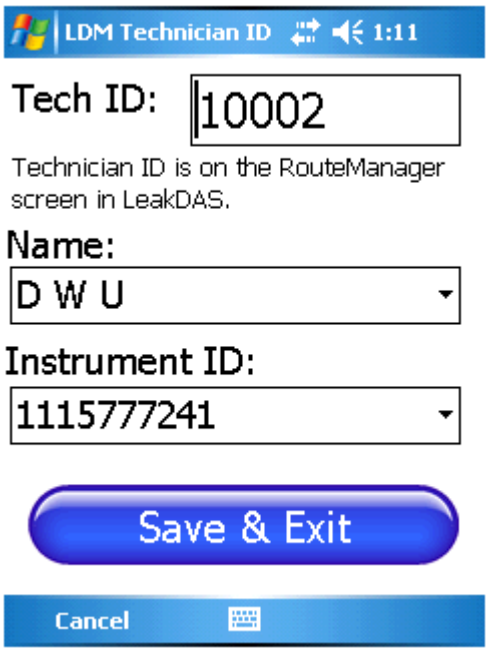
Verifying the Technician, Instrument and Signature Capture

LeakDAS Mobile does not have a clock or calendar built inside of it. The mobile software is trusting the Windows mobile operating system to know the date and time. So whatever date and time is in the physical handset, that's the clock that LeakDAS Mobile is going to use. So if the operating system is wrong then the mobile software is going to be wrong.

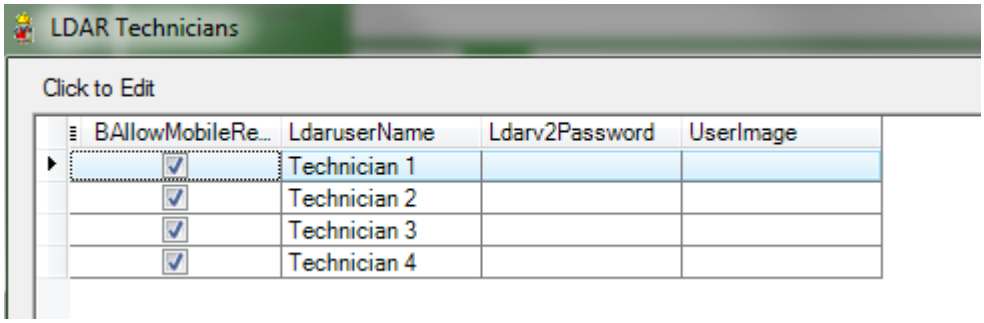
If the date and time are not correct, all the technician has to do is click on the clock and that will open up the date and time from the handset where he can make the needed changes.



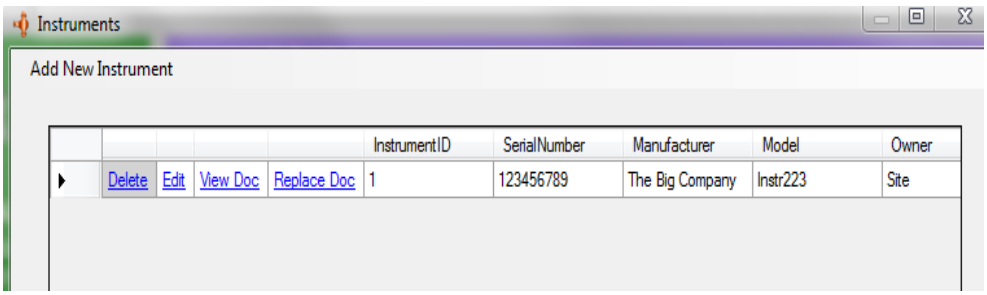
The next form that appears allows you to verify the technician ID. You will use the drop lists to select the correct technician name and instrument that will be used during the monitoring. Once you click the Save and Exit button the information will be stored in memory and will be attached to all inspections.



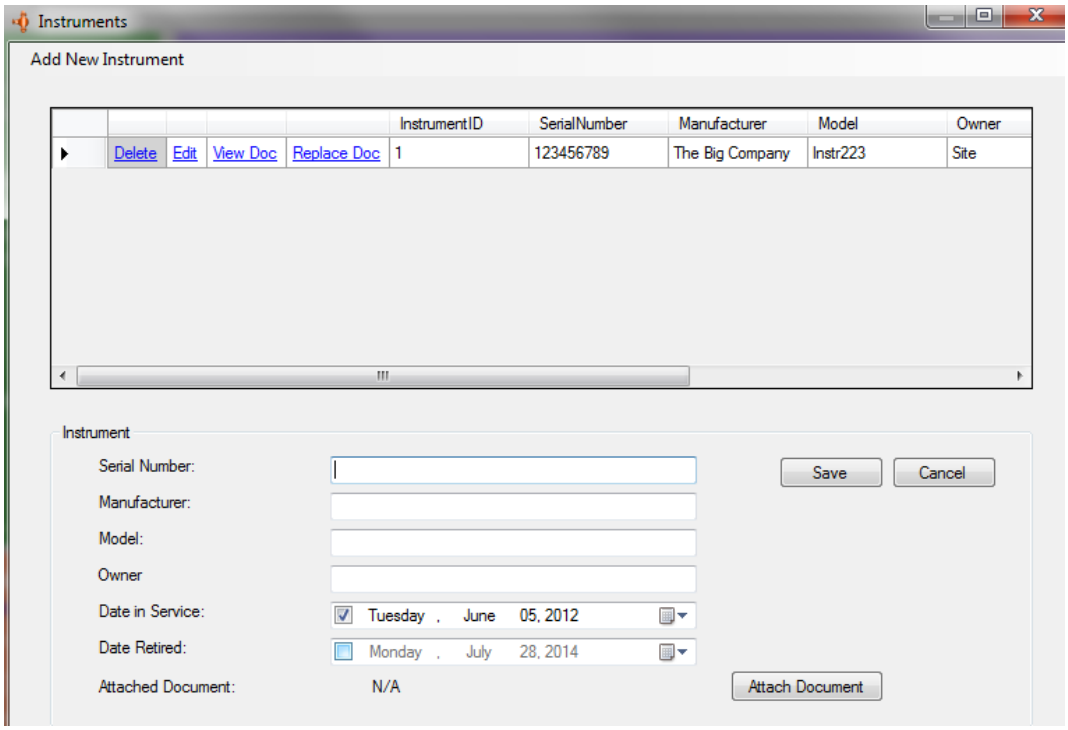
Both of the drop list menus come from the LeakDAS database. The technician list comes directly from the Route Manager table. While in Route Manager, right click on the left side of the screen and select Users from the list.



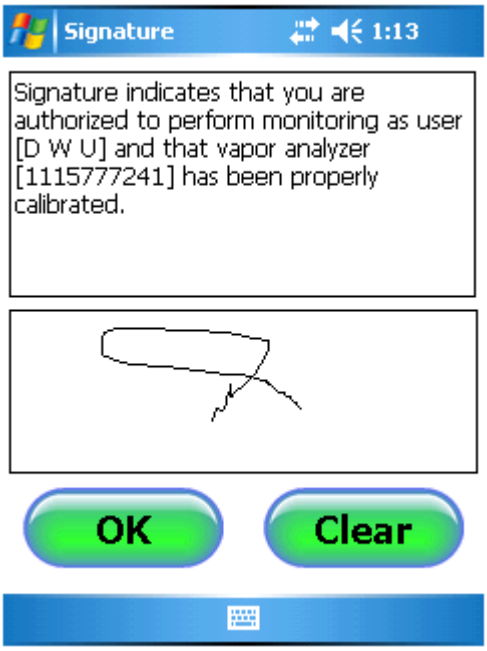
The instrument list comes from the Pick List section of the database. Right click on the key icon in the Admin panel. Select Adminitration, Pick Lists, and Instrument. This is the list of all approved instruments for that facility.



If a new instrument needs to be added to the list you click on the Add New Instrument button in the top left corner of the form. You can give it the serial number, the manufacturer, the monitor, model, very importantly, the date in service, in other words, what date is it showing up at my facility, and also very importantly, date retired. If you have an instrument that has been retired, not going to be use any more, all you have to do is populate that field and it will not go down to LeakDAS Mobile anymore. So a technician can't accidentally choose a retired instrument.



Next is the Signature form. By inputting a signature the technician is stating that he did calibrate the machine or that he knows it was calibrated and he's an authorized technician to the monitoring.



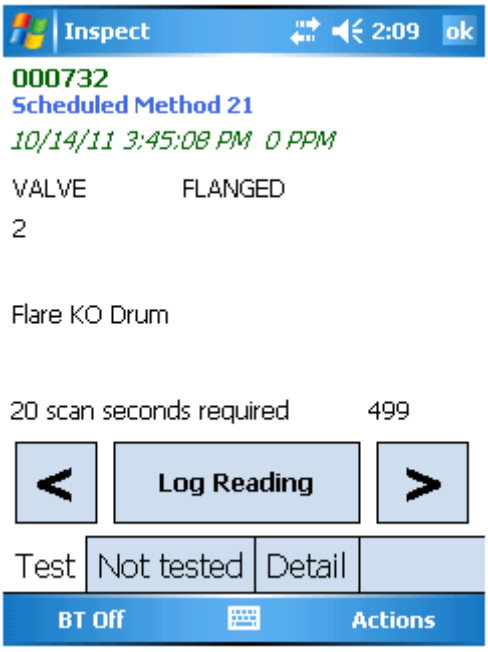
Importantly, when the synchronization takes place at the end of the day to send the data back to LeakDAS, that signature gets attached through our mobile sync log to the inspections that were performed. So you could go through the mobile sync log and see the signature captures and double-click on them and see the inspections the guy did.

The forms where you have to select the technician, the instrument and the signature capture, you only have to do those once as long as the technician keeps working. If you take more than an hour long break, or you sync the handset then you have to input that information again.

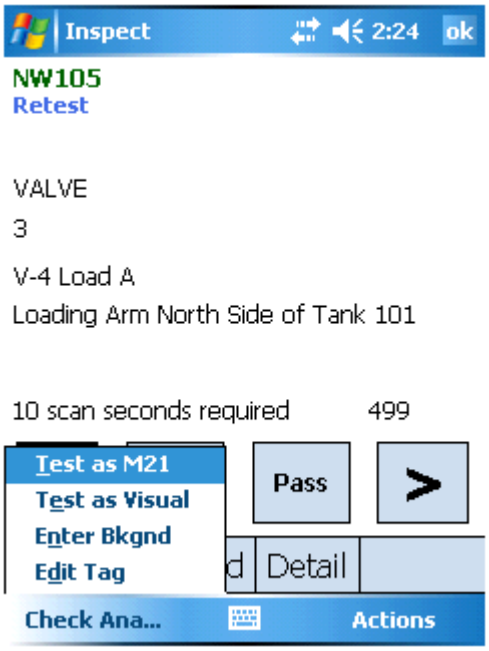
The Inspection Form

On this form you can see the tag, drawing, class, and the location description. The type of inspection needed is highlighted in blue at the top left of the form. It will show either Method21, Visual, or Retest. This allows the technician to know exactly what needs to be done on the component. You also see the required scan seconds and the leak limit.

We also provide you the date, time, and ppm reading of the last monitoring event for the specific tag. The reason is so the technician has information to make a knowledgeable decision on how to handle a reading that is close to the leak limit. For example, he got a reading of 492ppm and the last time it was monitored the ppm was 416. He can see that it's climbing upwards toward the 500ppm leak limit. He can now see this and make a decision to tighten the packing before it turns in to a reportable leak.



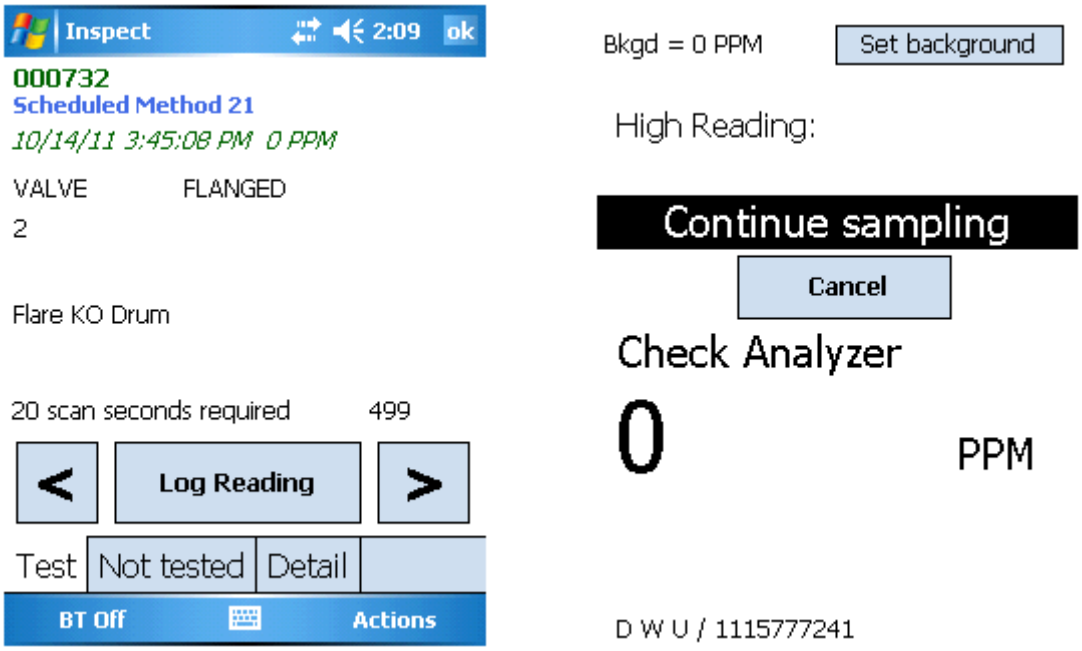
To log a visual inspection on a component that is listed as only needing a Method21 monitoring event just click in the bottom left corner of the form and select Test as Visual from the list provided. This will change the bottom of the screen and allow you to select either Fail or Pass for the visual inspection.



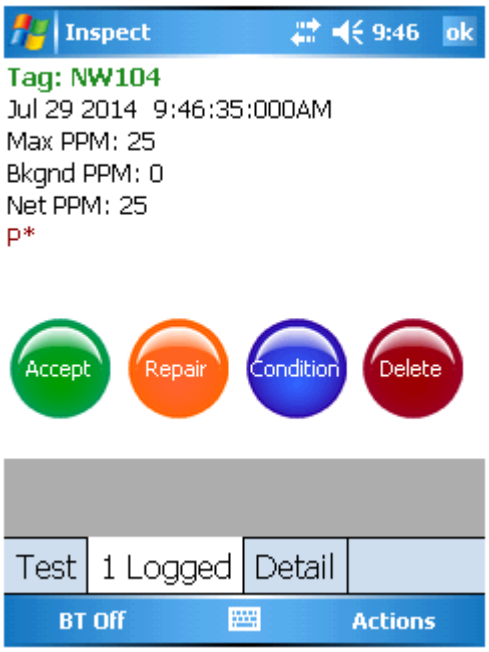
Log Mode

Clicking the Log Reading button will open the monitoring screen. On this screen you have the saved Background ppm. There is also a Set Background button. This button will allow you to change the background to be the current reading coming from the analyzer. For example if the ppm reading coming from the analyzer is 11 and you click the button it will change the current background to 11ppm.

When an analyzer is connected you will see the Current PPM Reading in the middle of the screen. The High Reading will change to represent the highest reading that comes from the monitoring instrument.

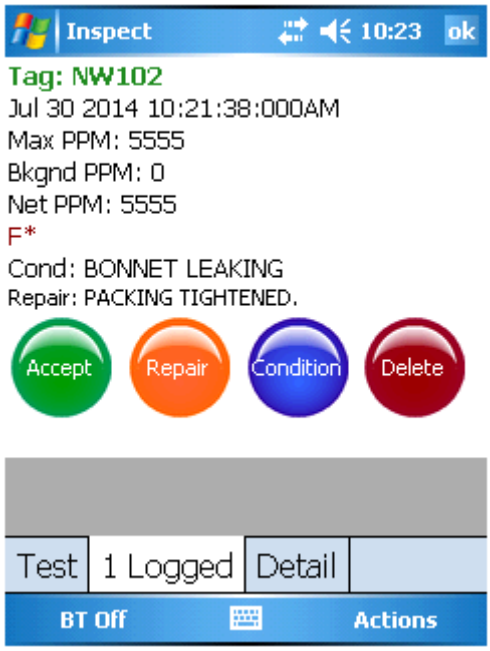


After the technician has monitored the component for the required amount of time the Log button will then be available to use. On the reading has been logged you will then be able to confirm and accept the monitoring results. On this form you have about the monitoring event. The component tag number, date and time of the inspection, the PPM reading, the background, and a P or F for pass or fail.



You can select Accept to keep the reading you've taken. You can use the Repair button to enter the repair method used to fix the leak. Click the Condition button to log a specific note about the component. For example, you can log a note about the tag missing or an open ended line. Both the repair and condition lists are pre-filtered for the specific component class. So if you are monitoring a pump then the items on the lists will belong to pumps and no other classes. If you select Delete, the reading will not be saved and you will need to take it again.

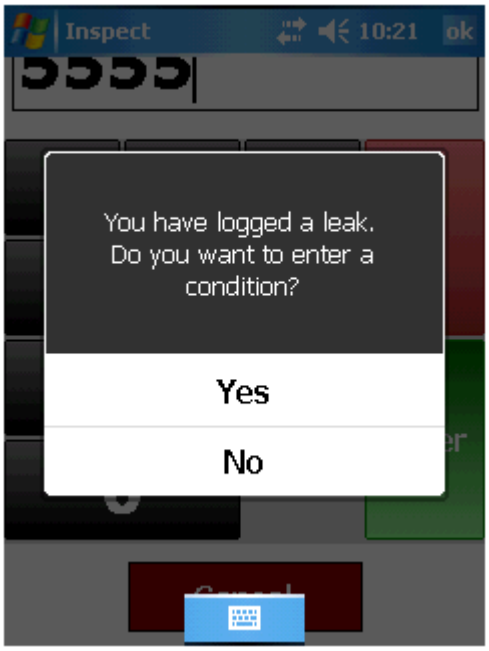
The repair or condition note you add will be seen directly on the form. So you can see exactly what will be accepted once the button is clicked. There's no reason for a technician to accidentally put the wrong note or monitor with the wrong date because he's got to the accept button before he can continue on to the next tag.



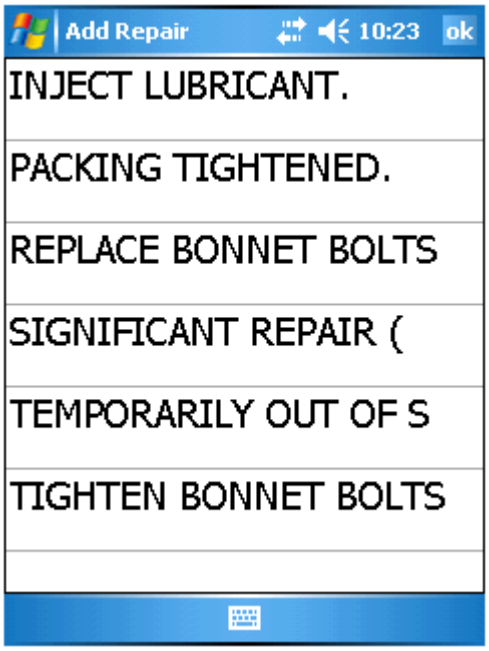
Logging a Leak

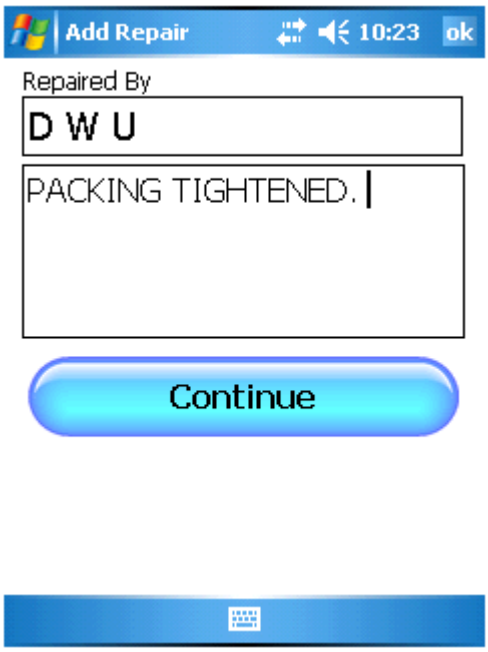
The LDM software knows what the lowest leak definition is that's allowed for each individual component in the handset. It knows this based off of the regulations you assigned to the component in the LeakDAS software.

Once you log a leaking reading, you will receive a message which states, "You have found a leak. Do you want to enter an initial repair attempt?"

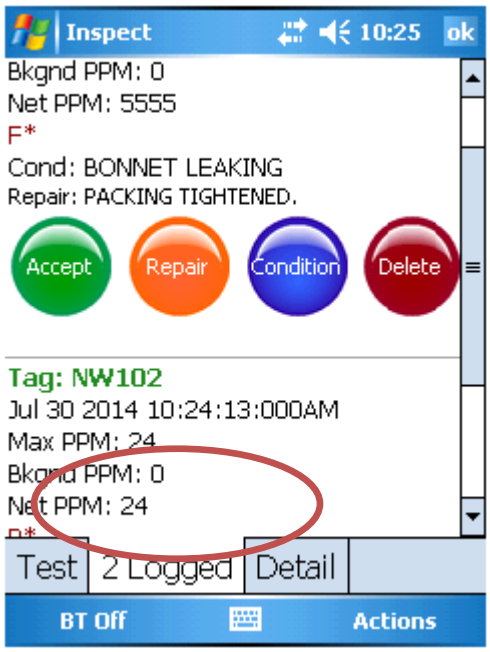


Clicking yes to the message will immediately take you to the repair form. You will get a list of repairs that are specific to the leaking component class. If the repair method you want to log is not on the list just click on any item and that will open a text box where you change edit your selection. You populate the repair information along with who did the repair. It assumes the technician who is doing the monitoring also did the repair. If this is not the case you need to just edit the Repaired By field so it reflects the correct name of the person who actually did the repair attempt.



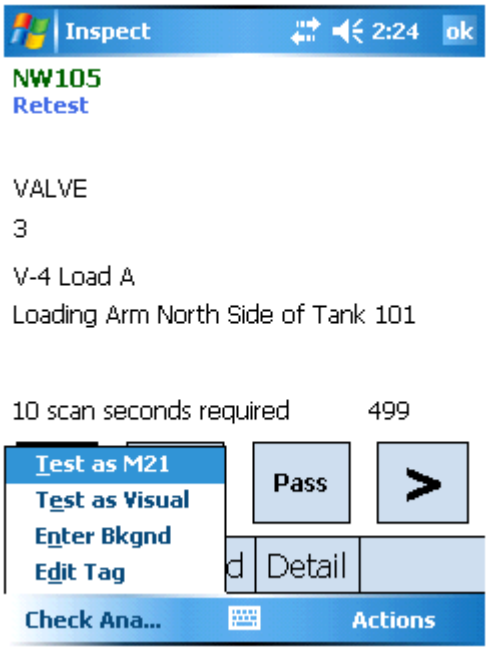


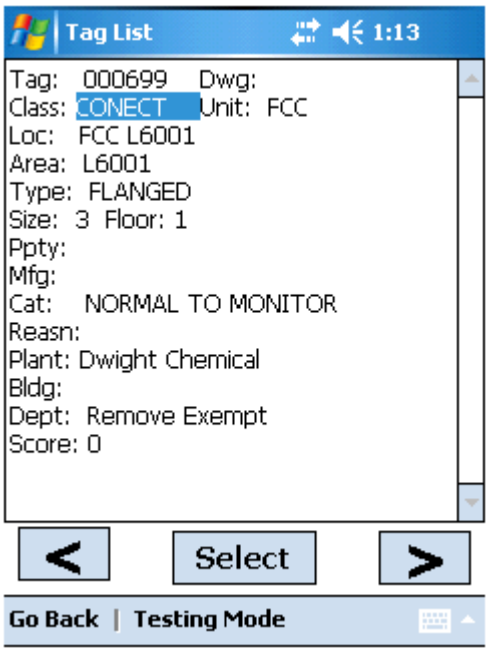
After completing the form, click the Continue button move back to the verification screen. You can now select Test as M21 from the left corner menu and enter the retest inspection for the repair that was done. If you notice, down at the bottom of the form you see the number of inspections that have been logged for this component. All of the inspections can be seen by using the scroll bar on the right side of the form. Again, the technician can see the date/time stamp, the PPM reading, all repair or condition notes that have been assigned, as well as all additional inspections made before he clicks on the Accept button.



EDITING EXISTING TAGS

Let's say that the technician is in the field monitoring and he has just spent 20 minutes looking for a specific component. It was very difficult to find because it had a really bad location description. The technician can correct that location while out in the field. Using the menu in the left corner of the form select Edit Tag from the list. That opens the component form and allows editing for the specific component.

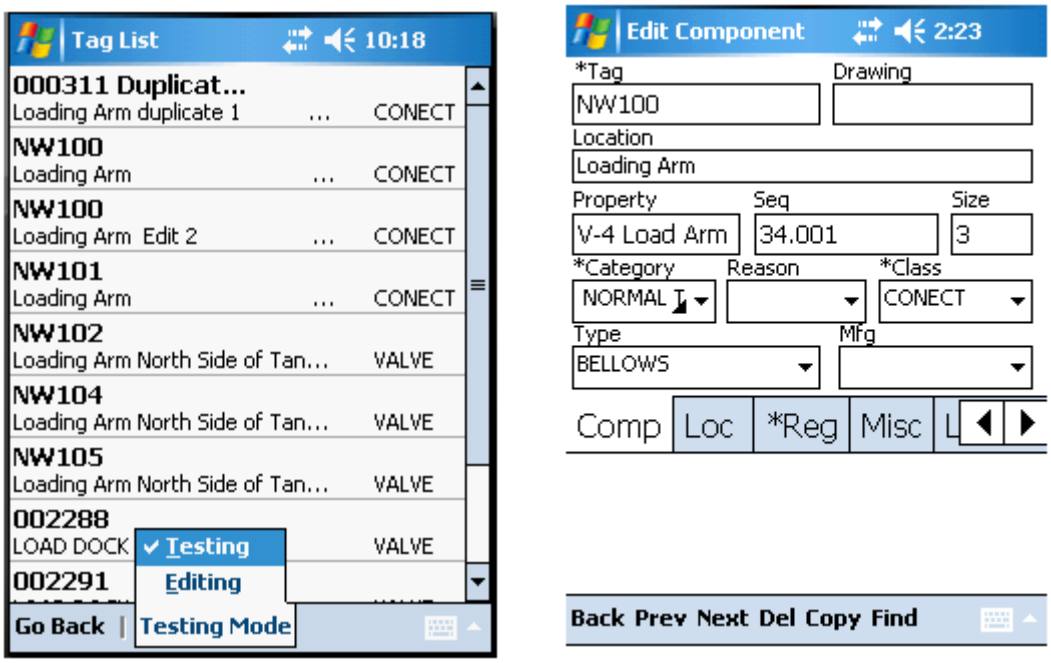




Now the technician can change the location field and make any other edits he is authorized to make. Remember, in the Route Manager table you have the ability to allow the technician to make edits to the component information and/or make compliance edits while in the field. If he is not allowed to make such changes then he can't get to the edit form. If he does not have permission to do compliance edits, then he can't change any of the compliance fields, such as category, class or any of the regulatory information.

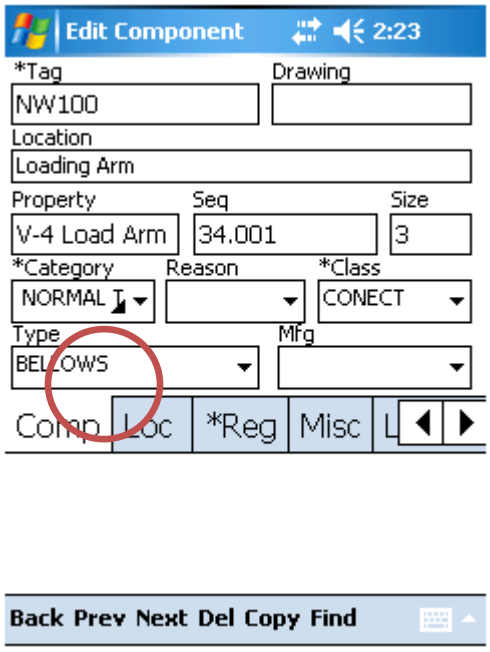
After making the changes, just click back and you will be asked to confirm the edits that have been made. And now, in addition to the monitoring that you gathered, it's going to also send to LeakDAS the edit that you made so that the component gets updated when the information is processed through Quarantine

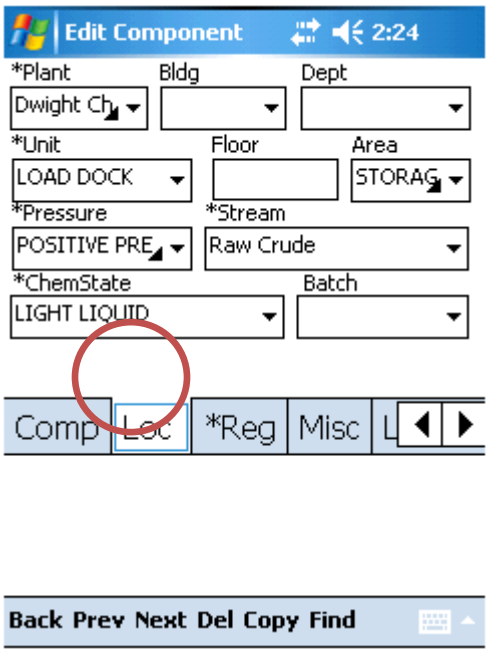
If, however, you're actually going to the field to do tag maintenance job, then you would use the drop lists and select the specific route and click the Filter Now button. This will bring you to the grid where you can use the menu at the bottom of the form to select the Editing which will open the component form.

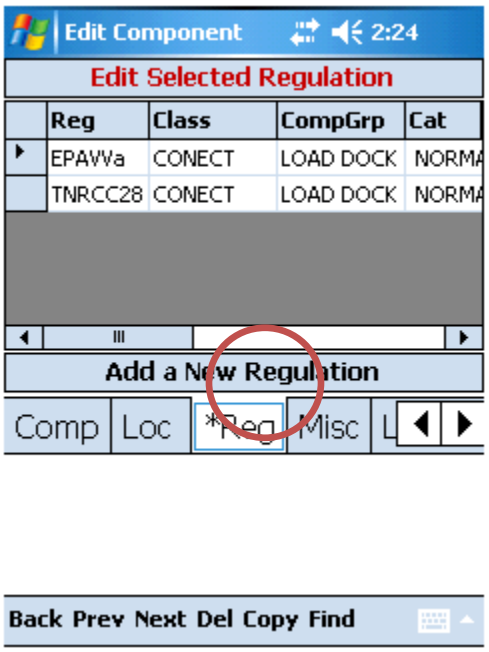


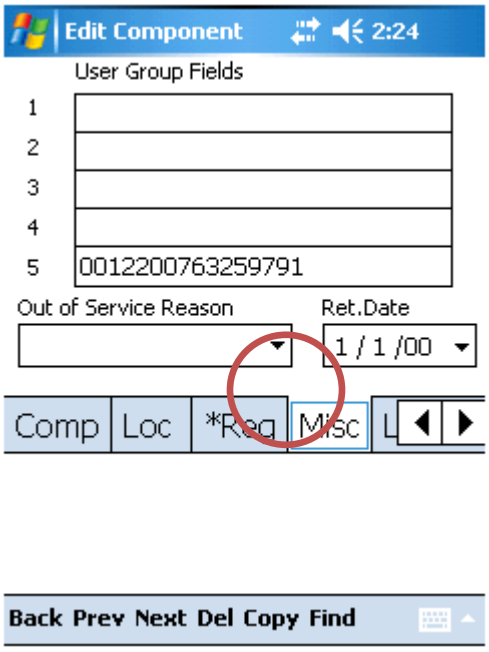
Now you can make the changes needed. Once the edits have been made and you're ready to move to the next component just click the Next button which will move you to the next component in the list. Based on the permissions that I have, again, determines whether I can edit and also whether I can edit compliance fields.

You have far less screen real estate than you do in the LeakDAS database itself. So we have to spread things out a little bit differently. You have four tabs on the form. The component information tab shows the type of tag and the component tag number. The location tab provides information about where to find the component. It gives the different plant, building departments, all those different pick lists. Also, we had to put the chemical information on this location tab as well, so we know the stream, the chemical state and so forth. The Reg tab is the regulations that are assigned to the component. And then the miscellaneous tab is the five user group fields and also the ability to flag it as out of service.





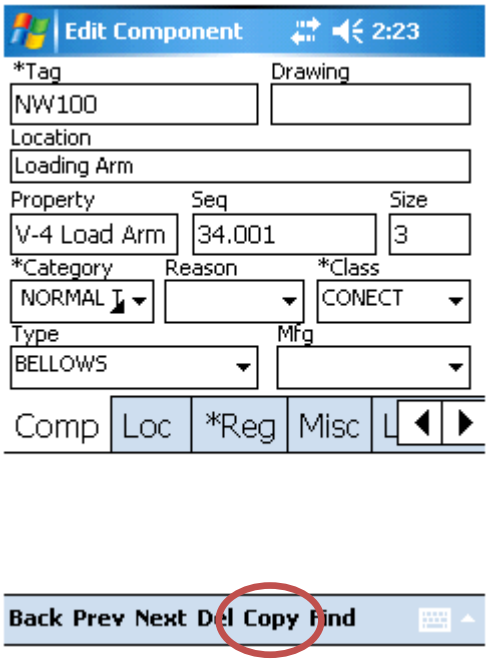


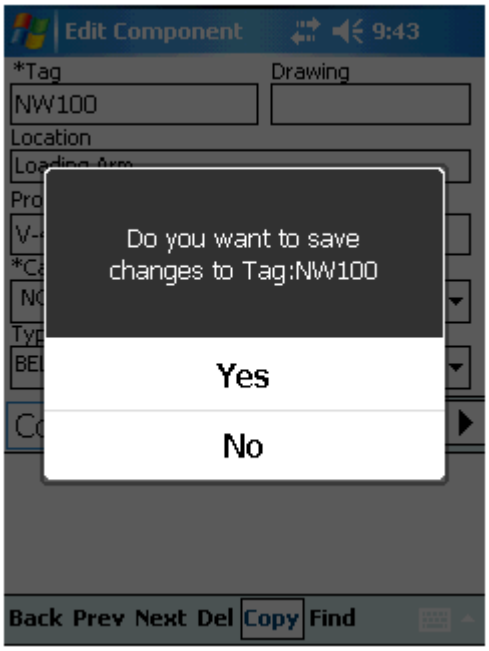


Marking a component as out of service is as simple as populating the Out of Service Reason field and providing a return to service date. And when that goes back to the LeakDAS software, the out of service will get documented.

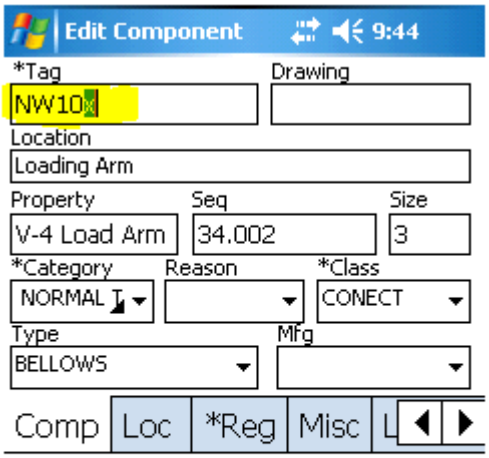
ADDING A NEW COMPONENT WHILE MONITORING

Basically, there's nothing on the component record that you cannot edit as long as you have the permissions to do so. Now, sometimes this is going to happen to you. The technician is out in the field doing some monitoring or he's out there doing tag maintenance, and he comes across a new component that's been added in the field that needs to be added to the database. The best way to do that is by using the Copy feature on the component form. Once you click on the Copy button you will be asked if you want to save changes to the existing component.





This feature will copy all information about the component and populated it in a new component form. Notice that the last digit of the tag number is now an X. This is a visual clue that you have made a copy of a component. You will then edit any field needed so that the information will reflect of that of the component you need to add to the database. If you have multiple components to enter you will continue to use the copy feature until you've populated the last tag. Once you have finished just click on the Back button and select yes to save the information.



NEW TAGGING

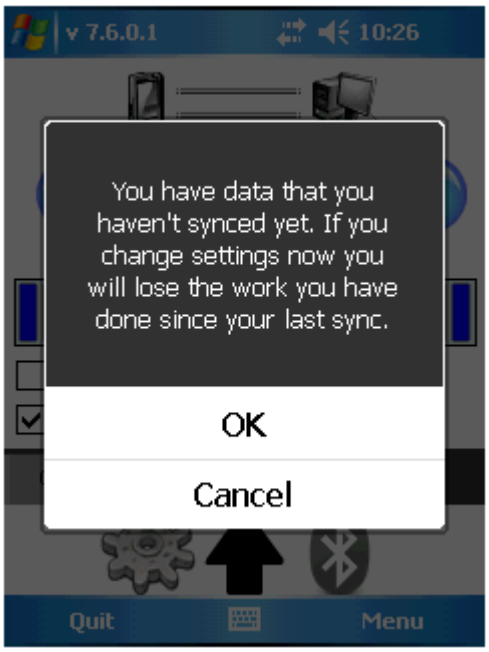
If you want to send a technician out to do nothing but work on a new tagging job, you will still need to sync the handset so that he would have access to all of the pick lists. So you would create a route with just a single component so that all the pick lists come down to the handset. This will give the technician a starting point and allow him to use the copy feature to start adding in the new tags. As the new components get added they will go into their own route called New Tags.

Having these components in the automatically go into a route makes it easier for you if you have to go back and make any edits along the way. It also allows you to go back and monitor the new components.

One thing about monitoring a new tag, we don't yet know for sure what the regulation is going to say. We don't yet know what the leak definition is going to be. So these new tags, in the handset, as they're copied go in with a 500 PPM leak definition and a Method 21 test type. So when you send that to LeakDAS, when we process those through, then the right rule gets assigned. The right leak definition gets assigned. And if you exceeded the leak definition on your monitoring, it would call it a leak.

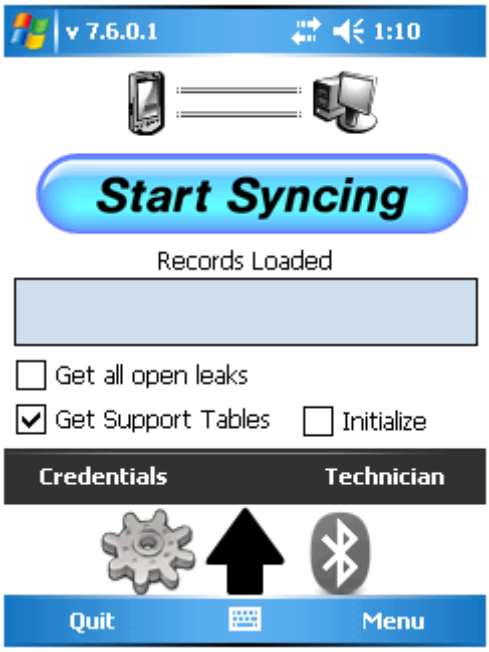
SYNCING THE HANDHELD

Remember, if the technician tries to change the credential settings before he syncs the work he has completed in the handset he will get the warning message stating he has data that he has not synced to the LeakDAS software. . If you change settings now, you will lose the work you have done since your last sync. This is one of two warnings the technician is going to get if he tries to change his credentials before doing a synchronization event.



When you do a sync event, it sends all the completed work to the quarantine table in LeakDAS. And once it gets confirmation back from LeakDAS that it has received that work does it turns around and pulls what routes are left back down to the handset. That's very important. Again, we're trying to minimize the opportunity for data loss. So we want to make sure we get the data off the handset, get it to quarantine. We get

confirmation and then we pull the route back down. To sync, click on the Arrow icon and then click on the Start Syncing button.

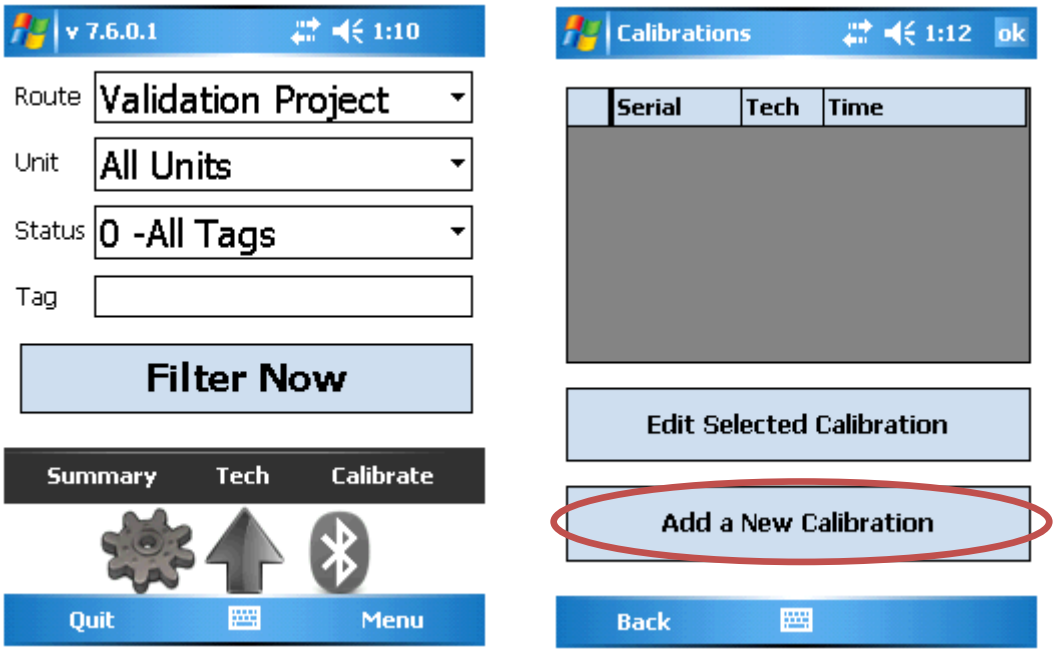


Now, very importantly, if during your synchronization you lose connection, for some reason the handset fails or the network goes down. If the synchronization is not successful, then just sync again. You will be uploading the same components again, but that is okay. LeakDAS isn't going to process those duplicates through.

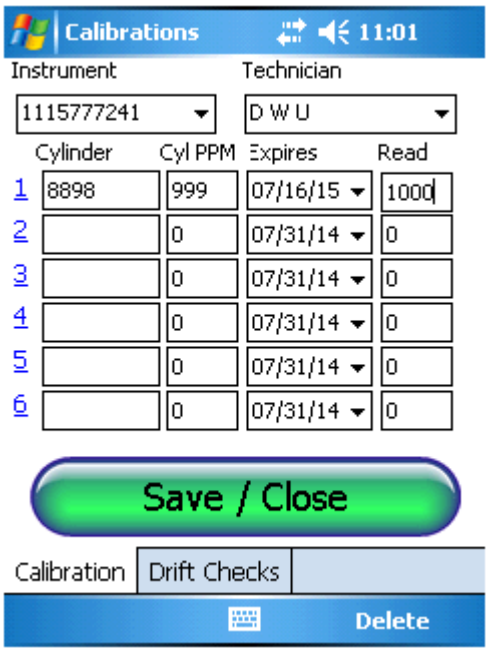
LeakDAS doesn't get that confirmation, yes I've received the components and so it doesn't delete those from the handset. When you sync again, it sends them back up again. There are provisions in LeakDAS to take care of those duplicates, so you don't have to worry too much about that. But if you are getting duplicates in quarantine, duplicate inspections in quarantine, you need to check with your technicians and find out are they getting error messages when they do the sync. Are they getting networking errors? It's pretty rare, but it does happen, so I want you to be aware of it.

CALIBRATION FORM

If you go into Calibrate from the main screen, you have the ability, in LeakDAS Mobile to view your existing calibration records.

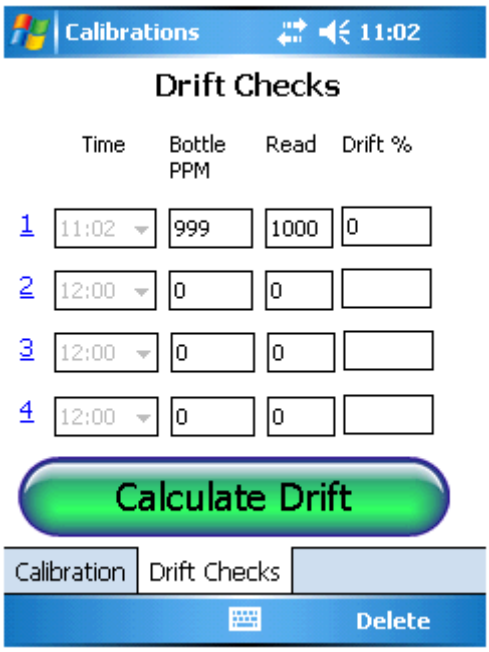


From this form you can add a new calibration record by selecting the Add a New Calibration button. This will open the form needed to input the cylinder numbers, ppm's, and the expiration dates. You can also log the instrument number, who did the calibration, and the calibration ppm reading.



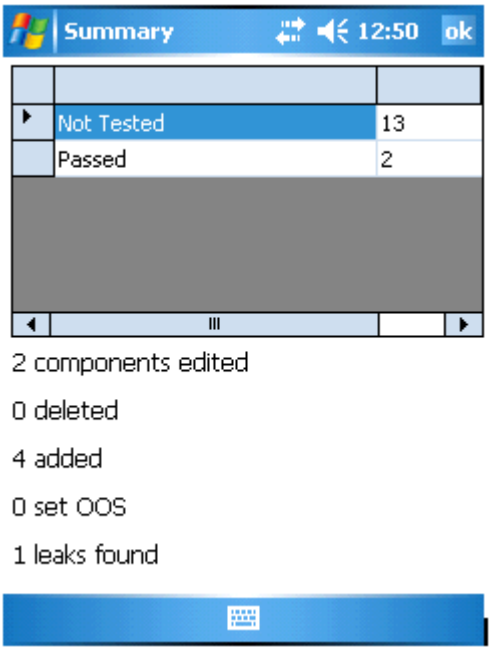
Drift Checks

At the bottom of the calibration form you have a button for Drift Checks. You choose the cylinder of gas you want to use and apply the gas to the analyzer. It stores the value. And then you are able to click on this Calculate Drift button to get the drift check number. So LDM allows you to store your calibration record and store multiple drift checks off those calibrations as you do your monitoring through the day. When the technician syncs his work all calibration records will upload into the LeakDAS software and be stored in the Calibration History table.



SUMMARY FORM

By clicking on the Menu button on the main form, you will be able to view the LDM Summary form. This will give you the total count of how many have been tested, haven't been tested, how many leaks have been found, how many have been set out of service, how many were added as new, and how many were marked for deletion. You will have all of that information on one screen so the technician can see what all was done before he syncs that data.



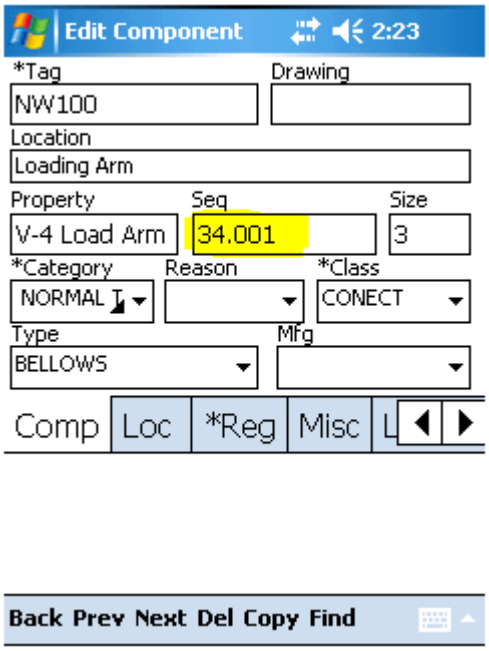
FREQUENTLY ASKED QUESTIONS

We have three techs with one mobile unit. How do we handle tech ID's properly when sharing the mobile unit?
In this case you want to control what goes to the handset, not what goes to the technician. So in Route Manager, instead of having a folder for each of your technicians, just have a single folder for the handset. And then you're going to sync the components to the handset and give it to whichever technician that will be doing the work at the time.

What is needle deflection and what would trigger that above background?
A needle defliection would be ten PPM above background reading. So if I've stored a background reading of ten, it would be a reading of 20. If I've stored a background reading of five, it would be a reading of 15.

If the tech completely, 100 percent, finishes taking the reading, can he go back and delete it? What if it is a leak?
Yes. You can navigate back to the component by use the Search selection under Menu on the main screen of LDM. Once you are on the component just use the Delete button to remove the inspection not needed

Can you edit the route sequence with the mobile unit?
Yes, route sequence is right on the component tab when you have component open in edit mode.



If you're doing documenting and you copy an existing tag, does the route sequence change?
Yes, if you copy an existing tag that has a sequence number assigned, the new component will get a route sequence number with a point off the end. So if the route sequence number was 4287 then on the new component it will be 4287.001. So it's going to be in the right sequence after the one that you copied. The next one should be a zero, zero, two and so on.

If you're stuck on a LeakDAS concept and still confused about something covered here, send an e-mail to support@inspectionlogic.com