

## Project Files – Field Service WorkOrder Optimization

Date	24 June 2025
Team ID	LTVIP2025TMID31109
Project Name	Field Service WorkOrder Optimization

### Custom Objects

1. Technician
2. WorkOrder
3. Assignment

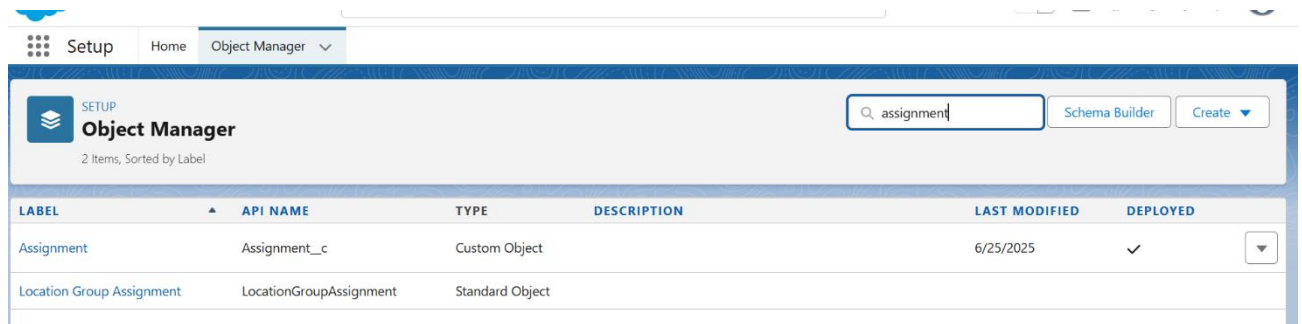
### Custom Object Tabs:

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes a search bar labeled 'Search Setup' and several utility icons. Below the navigation bar, the 'Object Manager' tab is selected. The main content area displays the 'Object Manager' header with a search bar containing 'workorder', a 'Schema Builder' button, and a 'Create' dropdown. Below this, a table lists the custom objects. The table has columns: LABEL, API NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. The table contains one row for the 'workorder' object, which is a Custom Object, last modified on 6/25/2025, and is deployed (indicated by a checkmark).

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
workorder	workorder__c	Custom Object		6/25/2025	✓

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes a search bar labeled 'Search Setup' and several utility icons. Below the navigation bar, the 'Object Manager' tab is selected. The main content area displays the 'Object Manager' header with a search bar containing 'Technician', a 'Schema Builder' button, and a 'Create' dropdown. Below this, a table lists the custom objects. The table has columns: LABEL, API NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. The table contains one row for the 'Technician' object, which is a Custom Object, last modified on 6/25/2025, and is deployed (indicated by a checkmark).

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Technician	Technician__c	Custom Object		6/25/2025	✓



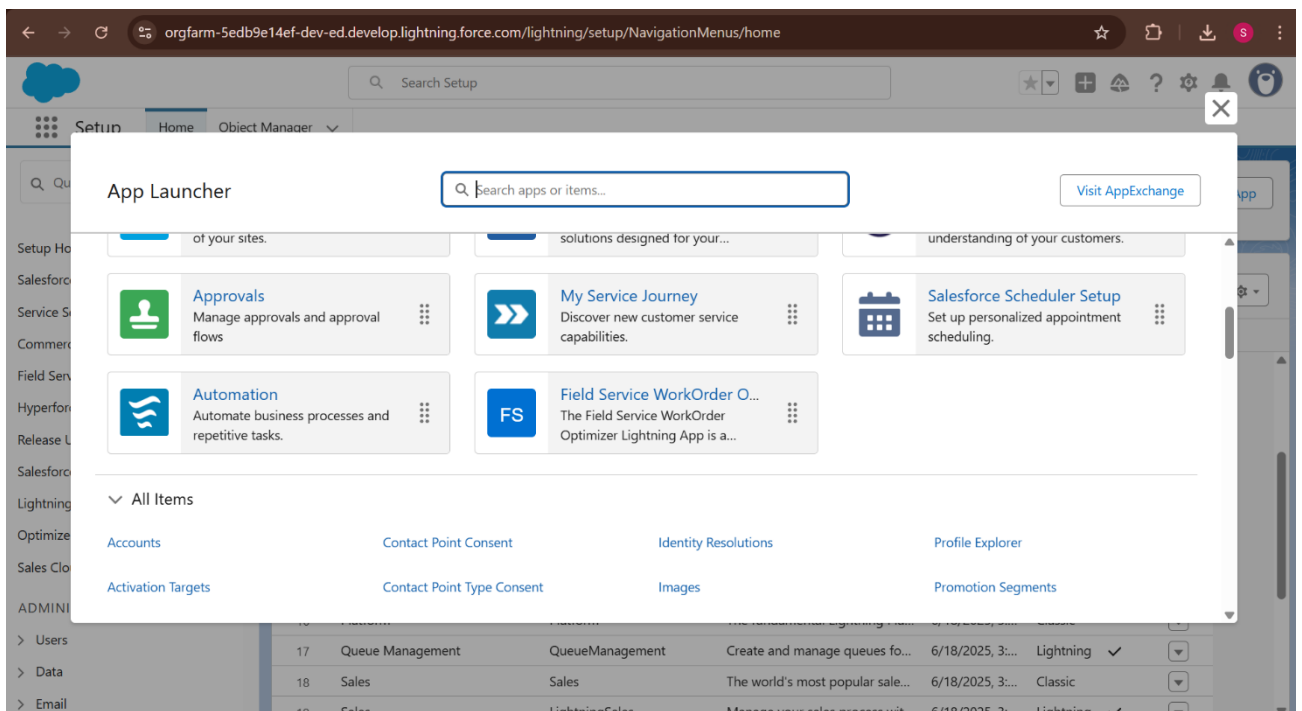
Object Manager

2 Items, Sorted by Label

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Assignment	Assignment__c	Custom Object		6/25/2025	✓
Location Group Assignment	LocationGroupAssignment	Standard Object			

## Lightning App

An app named **"Field Service WorkOrder Optimization"** was created. It includes the tabs for:



App Launcher

Search apps or items...

Visit AppExchange

of your sites.

solutions designed for your...

understanding of your customers.

Approvals  
Manage approvals and approval flows

My Service Journey  
Discover new customer service capabilities.

Salesforce Scheduler Setup  
Set up personalized appointment scheduling.

Automation  
Automate business processes and repetitive tasks.

FS  
Field Service WorkOrder O...  
The Field Service WorkOrder Optimizer Lightning App is a...

▼ All Items

Accounts

Contact Point Consent

Identity Resolutions

Profile Explorer

Activation Targets

Contact Point Type Consent

Images

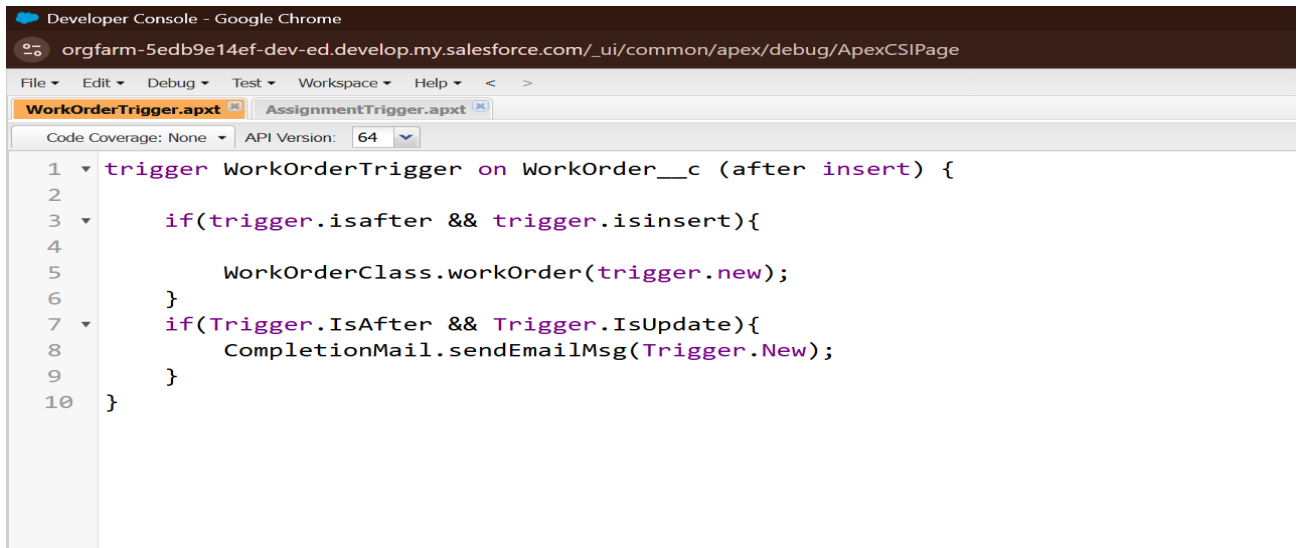
Promotion Segments

## Triggers: Apex Trigger

Two triggers were implemented:

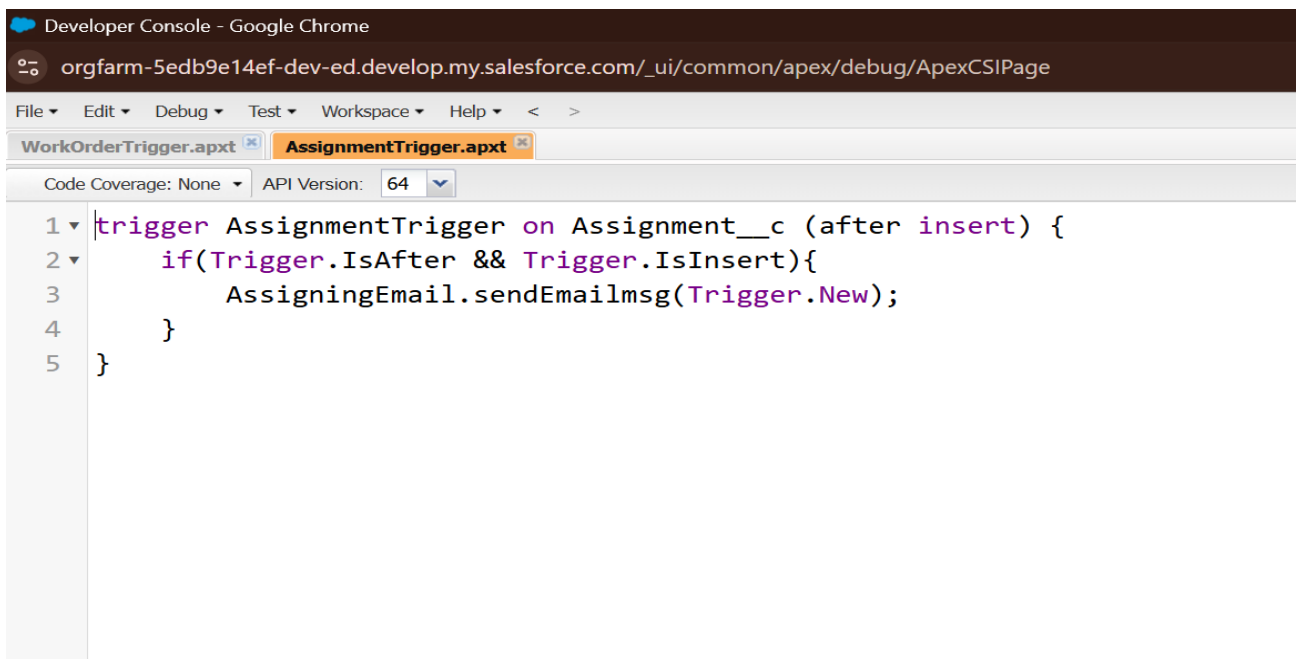
WorkOrderTrigger, which fires after insert and update to assign technicians and send resolution notifications.

AssignmentTrigger, which fires after insert to notify the technician via email.



The screenshot shows the Salesforce Developer Console with the 'WorkOrderTrigger.apxt' file open. The code is an Apex trigger that fires after an insert operation on the WorkOrder\_\_c object. It contains two conditional blocks: one for 'trigger.isafter' and 'trigger.isinsert' which calls 'WorkOrderClass.workOrder(trigger.new)', and another for 'Trigger.IsAfter' and 'Trigger.IsUpdate' which calls 'CompletionMail.sendEmailMsg(Trigger.New)'.

```
1 trigger WorkOrderTrigger on WorkOrder__c (after insert) {  
2  
3     if(trigger.isafter && trigger.isinsert){  
4  
5         WorkOrderClass.workOrder(trigger.new);  
6     }  
7     if(Trigger.IsAfter && Trigger.IsUpdate){  
8         CompletionMail.sendEmailMsg(Trigger.New);  
9     }  
10 }
```



The screenshot shows the Salesforce Developer Console with the 'AssignmentTrigger.apxt' file open. The code is an Apex trigger that fires after an insert operation on the Assignment\_\_c object. It contains a single conditional block for 'Trigger.IsAfter' and 'Trigger.IsInsert' which calls 'AssigningEmail.sendEmailmsg(Trigger.New)'.

```
1 trigger AssignmentTrigger on Assignment__c (after insert) {  
2     if(Trigger.IsAfter && Trigger.IsInsert){  
3         AssigningEmail.sendEmailmsg(Trigger.New);  
4     }  
5 }
```

## Apex Code: Apex Classes

The project includes five Apex classes:

WorkOrderClass, AssigningEmail, CompletionMail, RecordDeletions, and ScheduleClass.

These classes are used to automate assignments, send email alerts, and clean up old records through scheduled jobs.

Developer Console - Google Chrome

orgfarm-5edb9e14ef-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

WorkOrderClass.apxc AssigningEmail.apxc

Code Coverage: None API Version: 64 Go To

```
1 public class AssigningEmail {
2     public static void sendEmailmsg(List<Assignment__c> assRec){
3         List<messaging.SingleEmailMessage> myVar = new List<messaging.SingleEmailMessage>();
4         Map<id,Technician__c> technicians = new Map<id,Technician__c>([SELECT Id, Phone__c, Location__c, Skills__c, Name__c
5         + ...]);
6     }
7 }
8
9
10
11
12
13
14
15
16
17
```

Open

Entity Type	Entities	Related
Entity Type	Name Namespace	Name Extent Direction
Classes	WorkOrderClass	← Assignmen... ApexTrigger Reference...
Triggers	AssigningEmail	Phone CustomFiel... References
Pages	CompletionMail	Location CustomFiel... References
Page Components	RecordDeletions	Skills CustomFiel... References
Objects	ScheduleClass	Availability CustomFiel... References
Static Resources	Workorderobject	Name CustomFiel... References
Packages		Email CustomFiel... References
		Technician ... CustomFiel... References
		← Technician... SObject References

Open Filter Filter the repository (\* = any string) Hide Managed Packages Refresh

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
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Developer Console - Google Chrome

orgfarm-5edb9e14ef-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

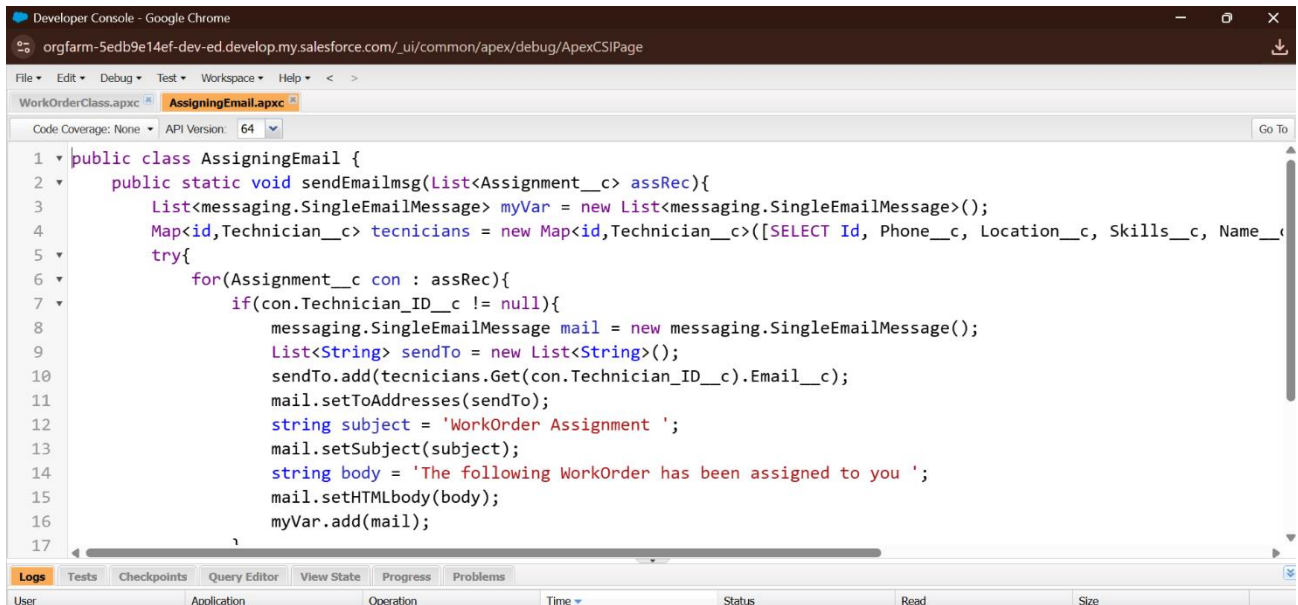
WorkOrderClass.apxc

Code Coverage: None API Version: 64 Go To

```
1 public class WorkOrderClass {
2     public static void workorder(List<Workorder__c> newListWorkOrder){
3         Map<Integer, List<String>> maptotech = new map<Integer,List<String>>();
4         integer num = 0;
5         List<WorkOrder__c> properWo = new List<Workorder__c>();
6         List<Assignment__c> lstAssignment = new List<Assignment__c>();
7         List<Technician__c> technicianToAssignment = new List<Technician__c>();
8         for(WorkOrder__c iter : newListWorkOrder){
9             List<String> lststring = new List<string>();
10            If(iter.Service_Type__c != null && iter.Location__c != null ){
11                num = num+1;
12                properWo.add(iter);
13                lststring.add(iter.Service_Type__c);
14                lststring.add(iter.Location__c);
15
16                maptotech.put(num,lststring);
17            }
18        }
19    }
20 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
------	-------------	-----------	------	--------	------	------



```
1 public class AssigningEmail {
2     public static void sendEmailmsg(List<Assignment__c> assRec){
3         List<messaging.SingleEmailMessage> myVar = new List<messaging.SingleEmailMessage>();
4         Map<id, Technician__c> technicians = new Map<id, Technician__c>([SELECT Id, Phone__c, Location__c, Skills__c, Name__c
5     try{
6         for(Assignment__c con : assRec){
7             if(con.Technician_ID__c != null){
8                 messaging.SingleEmailMessage mail = new messaging.SingleEmailMessage();
9                 List<String> sendTo = new List<String>();
10                sendTo.add(technicians.Get(con.Technician_ID__c).Email__c);
11                mail.setToAddresses(sendTo);
12                string subject = 'WorkOrder Assignment ';
13                mail.setSubject(subject);
14                string body = 'The following WorkOrder has been assigned to you ';
15                mail.setHTMLbody(body);
16                myVar.add(mail);
17            }
18        }
19    } catch (Exception e) {
20        // Handle exception
21    }
22 }
```

## Validation Rules:

### 1. Technician Email Format

plaintext

CopyEdit

NOT(

REGEX(Email\_\_c, "^[a-zA-Z0-9.\_%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}\$")  
)

### 2. WorkOrder Required Fields

plaintext

CopyEdit

OR(

ISBLANK(Status\_\_c),

ISBLANK(Location\_\_c),

ISBLANK(Service\_Type\_\_c)

)

## Permission Sets

**Permission Set Name:** TechnicianAccess

**Access:** Read-only access to Technician, WorkOrder, and Assignment custom objects.

Also includes field-level security permissions.

The screenshot shows the Salesforce Setup interface for the 'TechnicianAccess' Permission Set. The left sidebar contains navigation links for various setup areas. The main content area displays the 'TechnicianAccess' Permission Set details, including a search bar, action buttons, and a table of object permissions.

**Navigation Links (Left Sidebar):**

- Setup
- Home
- Object Manager
- Next Best Action
- Paused And Failed Flow Interviews
- Process Builder
- User Interface
  - Actions & Recommendations
  - Lightning Extension
- Custom Code
  - Custom Permissions
- Development
  - Agentforce for Developers
- Scale
  - Scale Test
  - Performance Assistant
- Security
  - Guest User Sharing Rule Access Report
- Didn't find what you're looking for? Try using Global Search.

**Permission Set Details (Main Content):**

**TechnicianAccess**

Find Settings... | Clone | Delete | Edit Properties | Manage Assignments | View Summary

Permission Set Overview > Object Settings > Technicians


**Technicians** [Edit]

**Tab Settings**

Available	Visible
<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Object Permissions**

Permission Name	Enabled
Read	<input checked="" type="checkbox"/>
Create	<input checked="" type="checkbox"/>
Edit	<input checked="" type="checkbox"/>
Delete	<input type="checkbox"/>
View All Records	<input type="checkbox"/>
Modify All Records	<input type="checkbox"/>
View All Fields	<input type="checkbox"/>

<div>  <div> <div>SETUP</div> <div>Permission Sets</div> </div> </div>				
<a href="#">Recycle Bin</a>	DeleteEvent	--	--	--
<a href="#">Reports</a>	report	--	--	--
<a href="#">Resource Preferences</a>	ResourcePreference	--	8	--
<a href="#">Salesforce Scheduler Setup Assistant</a>	LightningSchedulerSetupAssistant	--	--	--
<a href="#">Sellers</a>	Seller	No Access	12	--
<a href="#">Semantic Layer</a>	SemanticModel	--	--	--
<a href="#">Site.com</a>	Sites	--	--	--
<a href="#">Skill Requirements</a>	SkillRequirement	--	8	--
<a href="#">Social Personas</a>	SocialPersona	--	9	--
<a href="#">Streaming Channels</a>	StreamingChannel	No Access	--	--
<a href="#">Subscriptions</a>	ContentSubscriptions	--	--	--
<a href="#">Tasks</a>	Task	--	23	--
<a href="#">Technicians</a>	Technician__c	Read, Create, Edit	10	--
<a href="#">Today</a>	Today	--	--	--
<a href="#">User External Credentials</a>	UserExternalCredential	No Access	--	--
<a href="#">User Provisioning Requests</a>	UserProvisioningRequest	--	14	--
<a href="#">Users</a>	User	--	--	--
<a href="#">Voice Calls</a>	VoiceCall	--	--	--
<a href="#">Web Cart Credits</a>	WebCartCredit	--	5	--
<a href="#">workorder</a>	workorder__c	Read, Create, Edit	11	--

## Reports & Dashboards

Reports were created to monitor the system.

These include a WorkOrder Status Report and a Technician and Assignment Summary Report.

Dashboards visualize the data, showing overall WorkOrder optimization performance and comparing resolved vs unresolved work orders.

### Reports:

- WorkOrder Status Report
- Technician and Assignment Summary Report

### Dashboards:

- WorkOrder Optimization Overview
- Completed vs Pending WorkOrders (bar chart)



Search...



Field Service WorkO...

Home

workorder

Assignments

Technicians

Reports

Dashboards



Report: Technicians

### Technician and Assignment Details Report

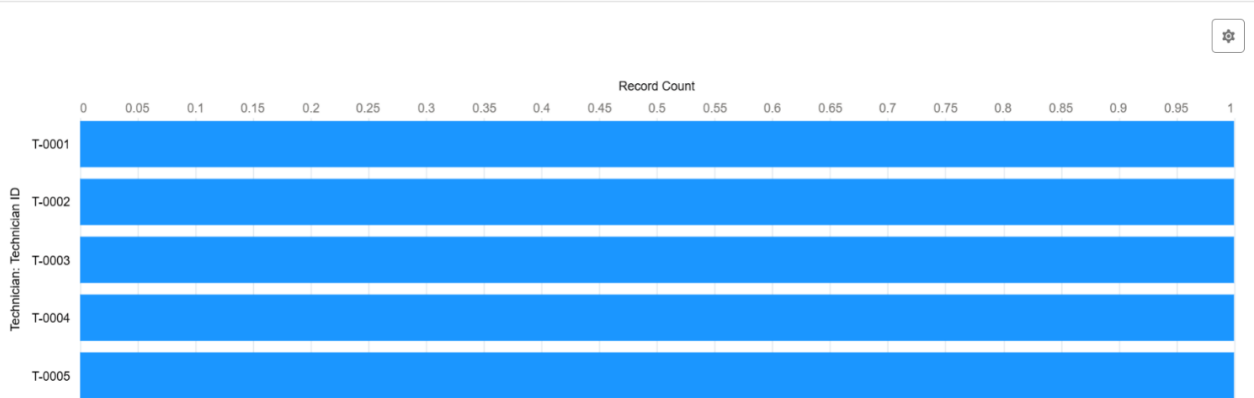
Enable Field Editing



Edit



Total Records  
5



Row Counts ☒ Detail Rows ☐ Subtotals ☒ Grand Total ☒



Report: Assignments with WorkOrder ID

### New Assignments with WorkOrder ID Report

Enable Field Editing



Edit



Total Records  
5



Row Counts ☒ Detail Rows ☐ Subtotals ☒ Grand Total ☒



