Chrysler

Smart Part Tracking

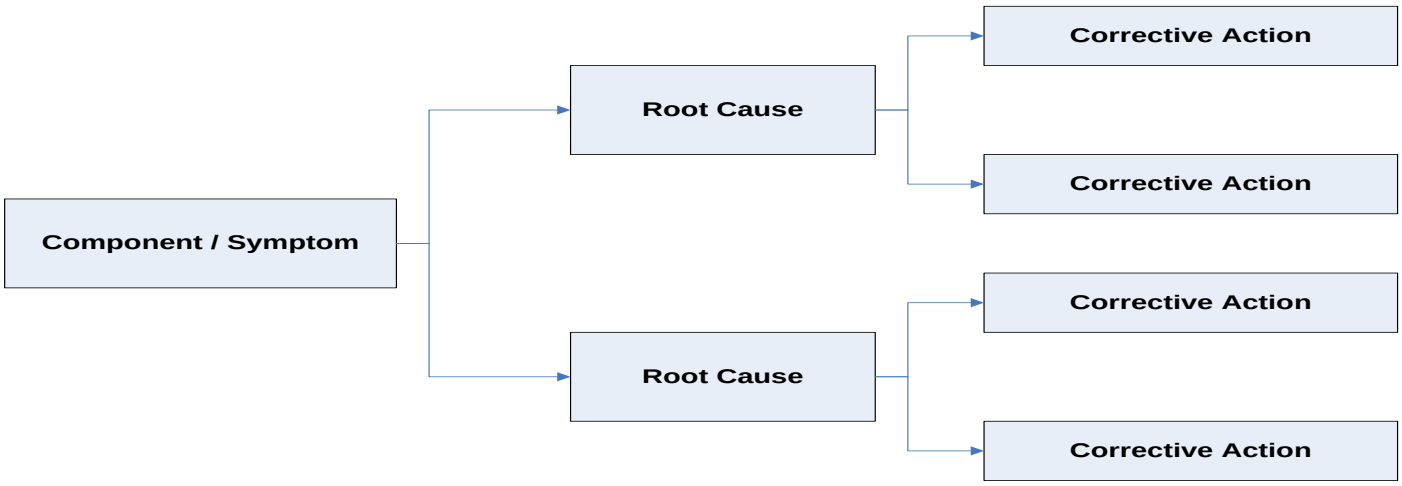
Next Generation Manufacturing Parts Tracking System

Root Cause Analysis

RCA Operators Manual
Repair Matrix Addendum

RCA-SPT Repair Matrix Maintenance Screen

The RCA Maintenance screen can be used to Add or Update the records in your RCA Repair Matrix. The repair matrix structure follows the following data hierarchy:



Entries updated at the component/symptom level

- If you change the component, the change will be reflected across all similar component/symptoms.
  - In this example if we changed **OP020 Block** to **Block OP020.1** on the first record in the display, then that change would impact four records since the component/symptom combination are the same for the first four rows.

Existing Components And Symptoms For Selected Station Type

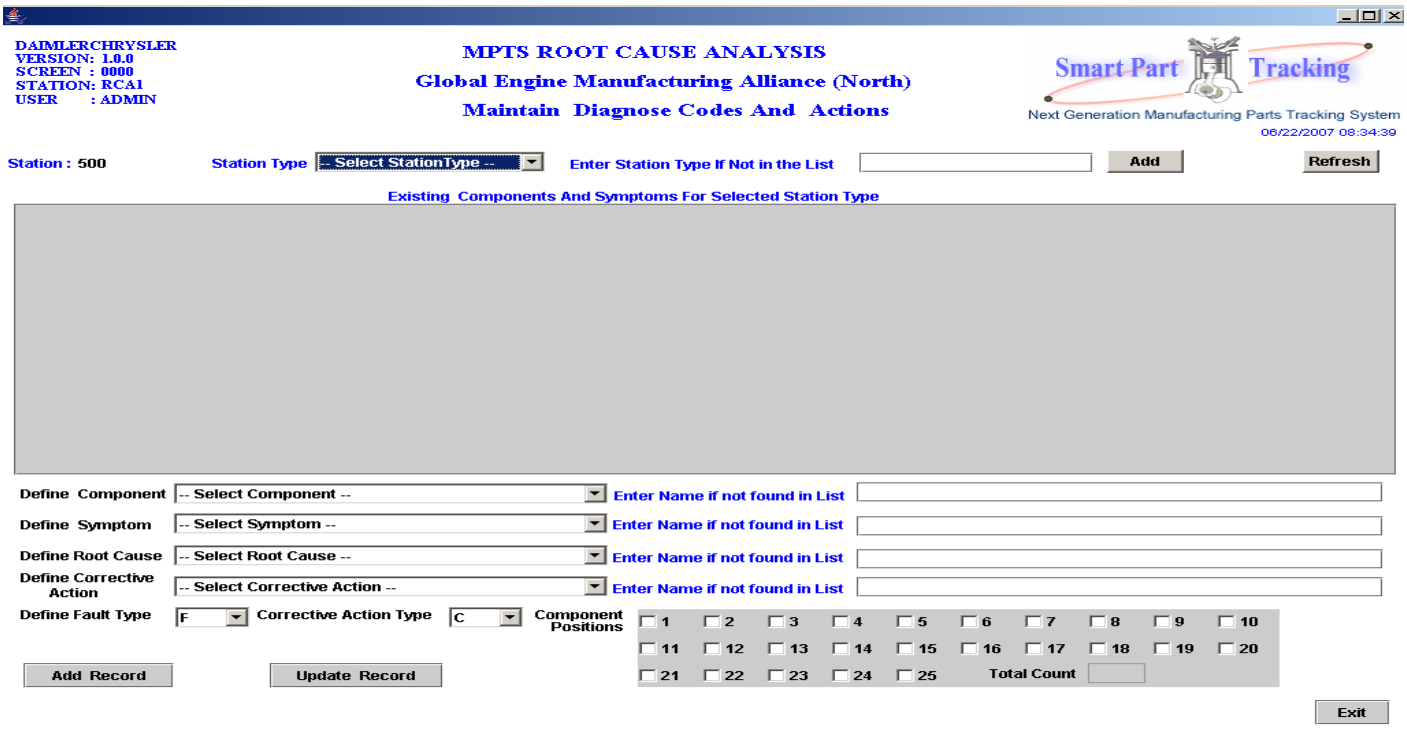
Component	Symptom	RootCause	CorrectiveAction
OP020 BLOCK	UNABLE TO READ BLOCK 2D CODE	NO STAMP/MISSING	A50-REPAIR
OP020 BLOCK	UNABLE TO READ BLOCK 2D CODE	NO STAMP/MISSING	A50-TEARDOWN
OP020 BLOCK	UNABLE TO READ BLOCK 2D CODE	UNABLE TO READ EXISTING STAMP	A50-REPAIR
OP020 BLOCK	UNABLE TO READ BLOCK 2D CODE	UNABLE TO READ EXISTING STAMP	A50-TEARDOWN
OP020 BLOCK	UNABLE TO READ HUMAN READABLE CD ON LD...	OP20 STAMP NOT MADE OR ILLEGIBLE	A51-REPAIR/ACCEPT
OP020 BLOCK	UNABLE TO READ HUMAN READABLE CD ON LD...	OP20 STAMP NOT MADE OR ILLEGIBLE	A51-TEARDOWN

- If you change the Symptom, the change will be reflected across all similar component/symptoms.
  - In the above example, if we changed **UNABLE TO READ BLOCK 20 CODE** to **UNABLE TO READ OP020 BLOCK CODE** on the first record in the display, then that change would impact four records since the component/symptom combination are the same for the first four rows.

- If you change the Root Cause, the change will be reflected across all similar component/symptom.
  - In this example, if we changed **NO STAMP/MISSING** to **PINSTAMP MISSING** on the first record in the example, then that change would impact two records since the component/symptom/root casue combination are the same for the first two rows.

- If you change the Corrective Action, the change will only be reflected across the corrective action selected.

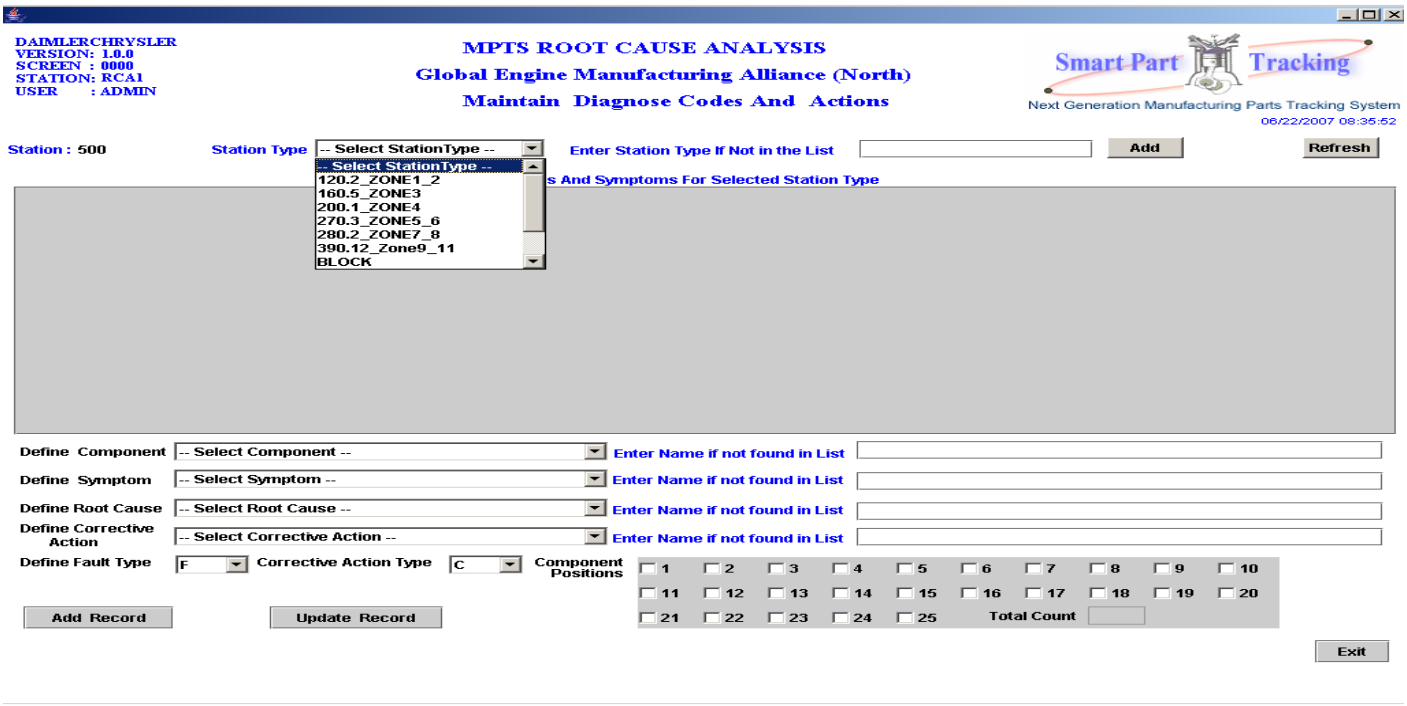
Note: The data entered are labels, and changes made will be reflected in 'all' existing repair data collected, so caution must be taken when making changes.

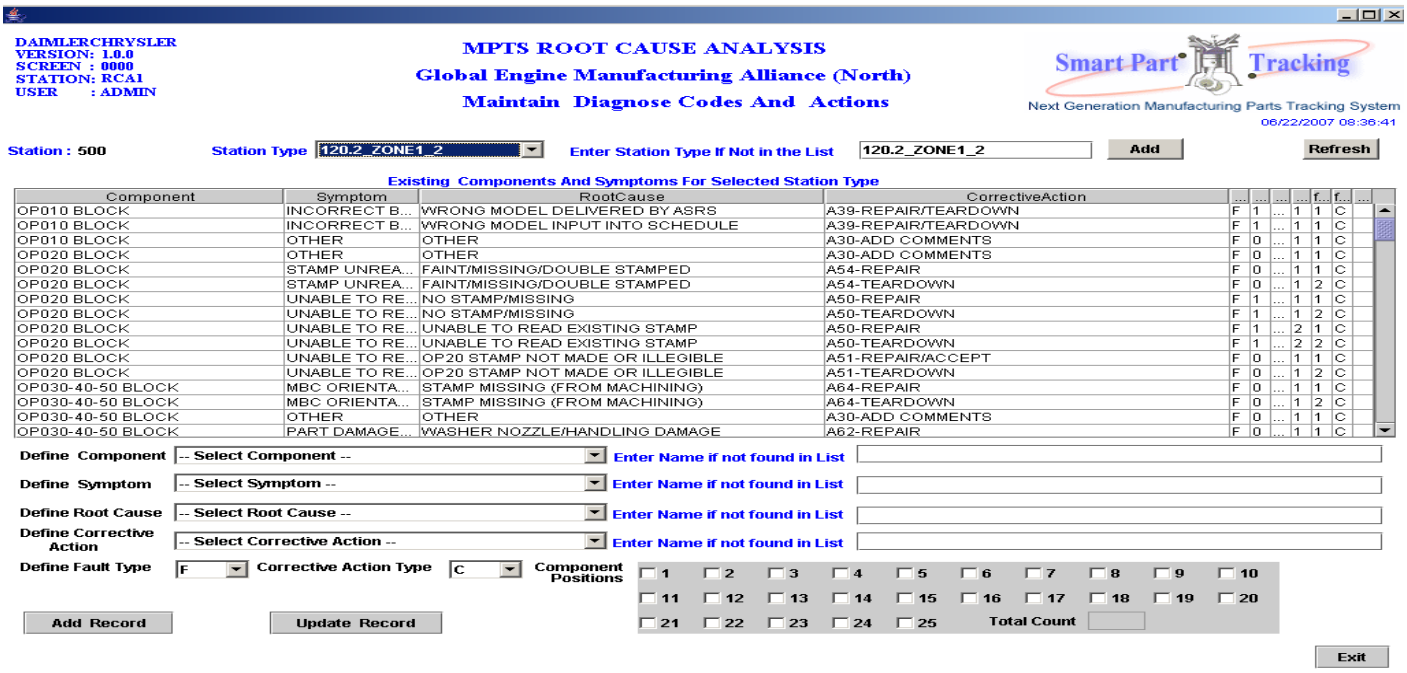


To begin entering data into the "Maintain Diagnose Codes and Action" screen, you must first define your **Station Types**. Station Type can be an Operation/Station, Zone, Team, etc. designation for the repair location.

To add new **Station Types**, enter the information in the area defined for "Station Types "**If Not in the List**" and Click Add.

If you're adding to or modifying an existing Station Type, select from the Station Type drop down and all existing information for your selection will be displayed.



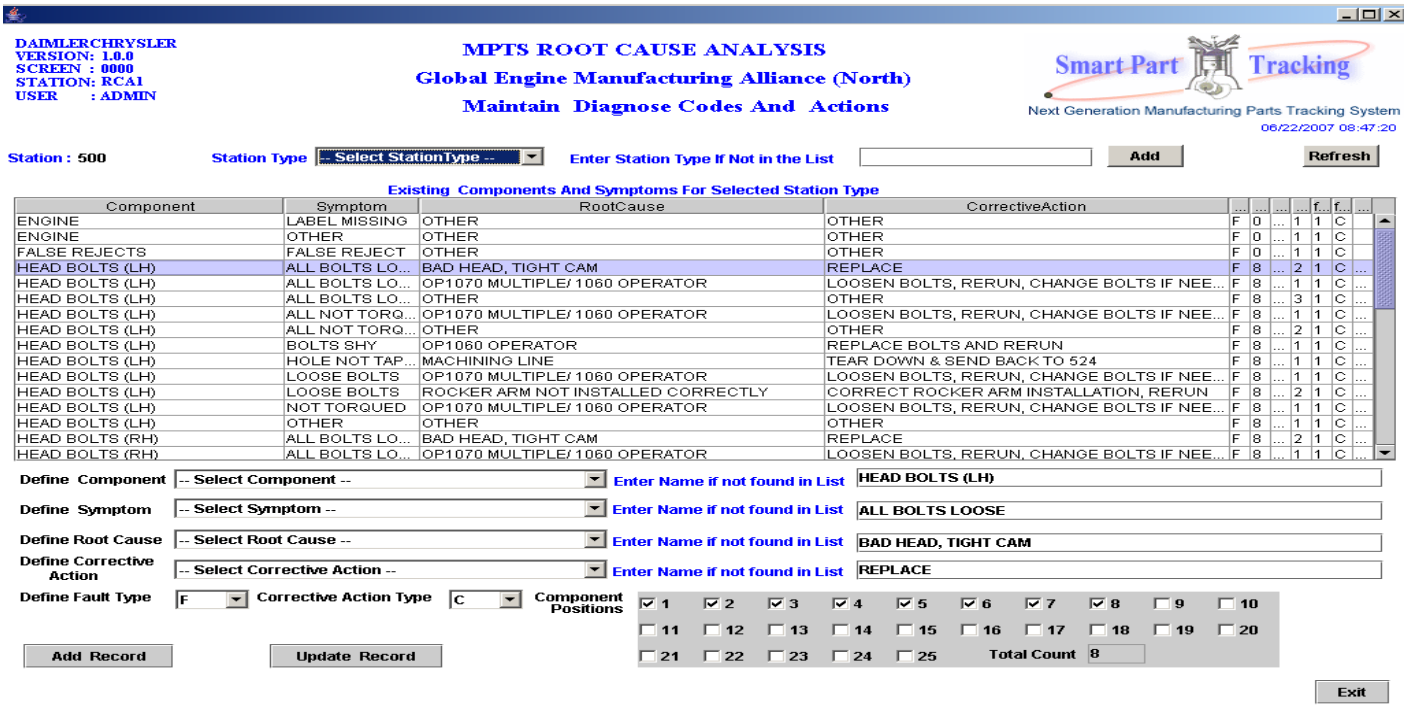


Once you have defined your **Station Types**, you can begin defining the Components, Symptoms, Root Cause, and Corrective Actions for each Station type.

Your **Component** entry addresses the high level/primary or major part identified for repair.

- As an example, If your component has multiple parts such as Head Bolts, Pistons, Spark Plugs, you can also identify there position and total in the setup.

To define a **Component**, enter the information in the area define for Component "**Name if not found in the List**". If the Component already exists, just select from the Define Component drop down and it will fill in the entry. ***Click Add Record***

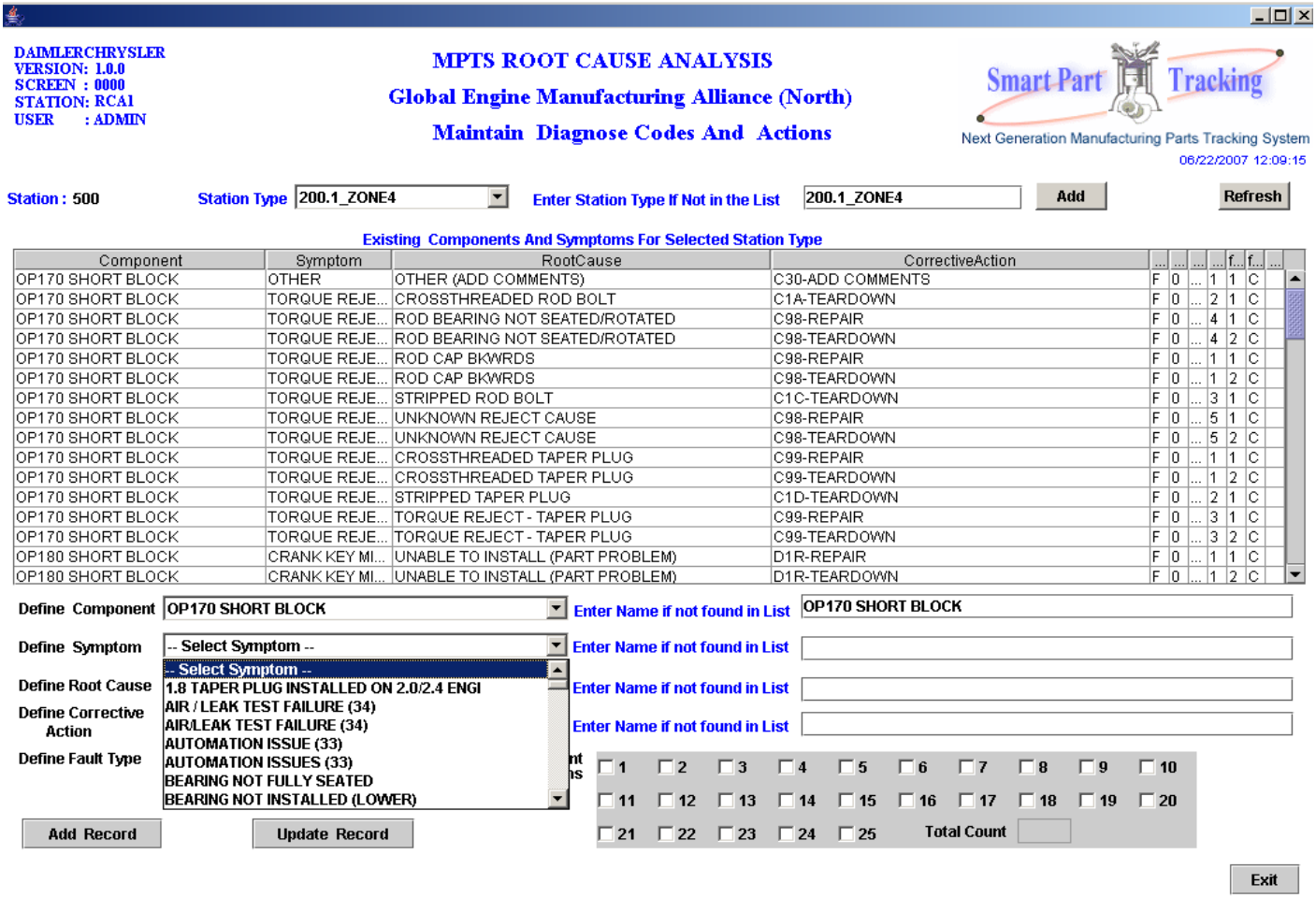


If you want to identify the number of Bolts, Pistons, Spark Plugs, etc, and their location, for a component, just check the number of the item in **Component Position** box. This information will appear in the comment section of the diagnostic report. If you want to individually identify each item, then you will have to define each under symptom.

Existing Components And Symptoms For Selected Station Type

Component	Symptom	RootCause	CorrectiveAction	...	...	...	...	f...	f
SPARK PLUG	SPRAK PLUG #1 BROKEN	BAD PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	1	1	C
SPARK PLUG	SPRAK PLUG #1 BROKEN	DAMAGED PART	OTHER	F	0	...	2	2	C
SPARK PLUG	SPRAK PLUG #1 BROKEN	DAMAGED PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	2	1	C
SPARK PLUG	SPRAK PLUG #1 BROKEN	OTHER	OTHER	F	0	...	3	1	C
SPARK PLUG	SPRAK PLUG #1 CRACKED	BAD PART	OTHER	F	0	...	1	2	C
SPARK PLUG	SPRAK PLUG #1 CRACKED	BAD PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	1	1	C
SPARK PLUG	SPRAK PLUG #1 CRACKED	DAMAGED PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	2	1	C
SPARK PLUG	SPRAK PLUG #1 CRACKED	OTHER	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	3	1	C
SPARK PLUG	SPRAK PLUG #1 HEAD REJECTED	BAD PART	OTHER	F	0	...	1	2	C
SPARK PLUG	SPRAK PLUG #1 HEAD REJECTED	BAD PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	1	1	C
SPARK PLUG	SPRAK PLUG #1 HEAD REJECTED	DAMAGED PART	OTHER	F	0	...	2	1	C
SPARK PLUG	SPRAK PLUG #1 HEAD REJECTED	DAMAGED PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	2	2	C
SPARK PLUG	SPRAK PLUG #1 HEAD REJECTED	OTHER	OTHER	F	0	...	3	1	C
SPARK PLUG	SPRAK PLUG #1 HEAD REJECTED	OTHER	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	3	2	C
SPARK PLUG	SPRAK PLUG #2 BROKEN	BAD PART	REPLACE SPARK PLUG, RE-EUN THR...	F	0	...	1	1	C

If you want to update an existing **Component**, select from the list of displayed records for the desired Station Type, the Component you want to change. When selected, all parameters for your selection will be filled in below. Modify the Component description and ***Click Update Record***. **If this component has multiple records, you will have to repeat the change for each unless they belong to the same component/symptom group.**



Once you have defined your **Component**, you can begin defining the various Symptoms, Root Cause, and Corrective Actions.

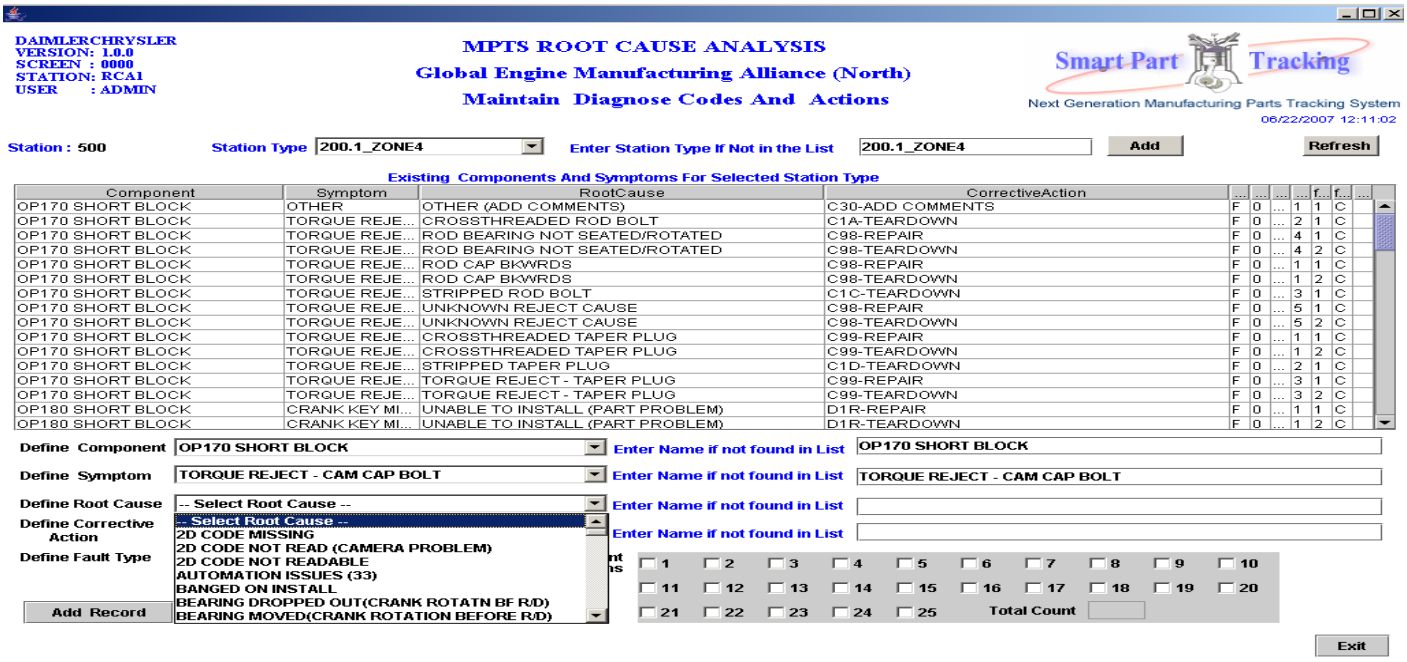
Your **Symptom** entry addresses what the operator sees as the problem with the Component identified in the part being repaired.

- As an example, If your component has multiple parts, it could be a loose #2 Head Bolt.

To define a **Symptom**, enter the information in the area define for Symptom "**Name if not found in the List**". If the Symptom already exists, just select from the Define Symptom drop down and it will fill in the entry.

- If you're not sure of all the possible Symptoms, define an "**OTHER**" entry. The operator will be asked to provide **Comments** to better identify the problem.

If you want to update an existing **Symptom**, select from the list of displayed records for the desired Station Type, the Symptom of Component you want to change. When selected, all parameters for your selection will be filled in below. Modify the Symptom description and ***Click Update Record***. **If this symptom has multiple records, you will have to repeat the change for each unless they belong to the same component/symptom group**.



Once you have defined your **Symptom**, you can begin defining the various Root Causes, and Corrective Actions.

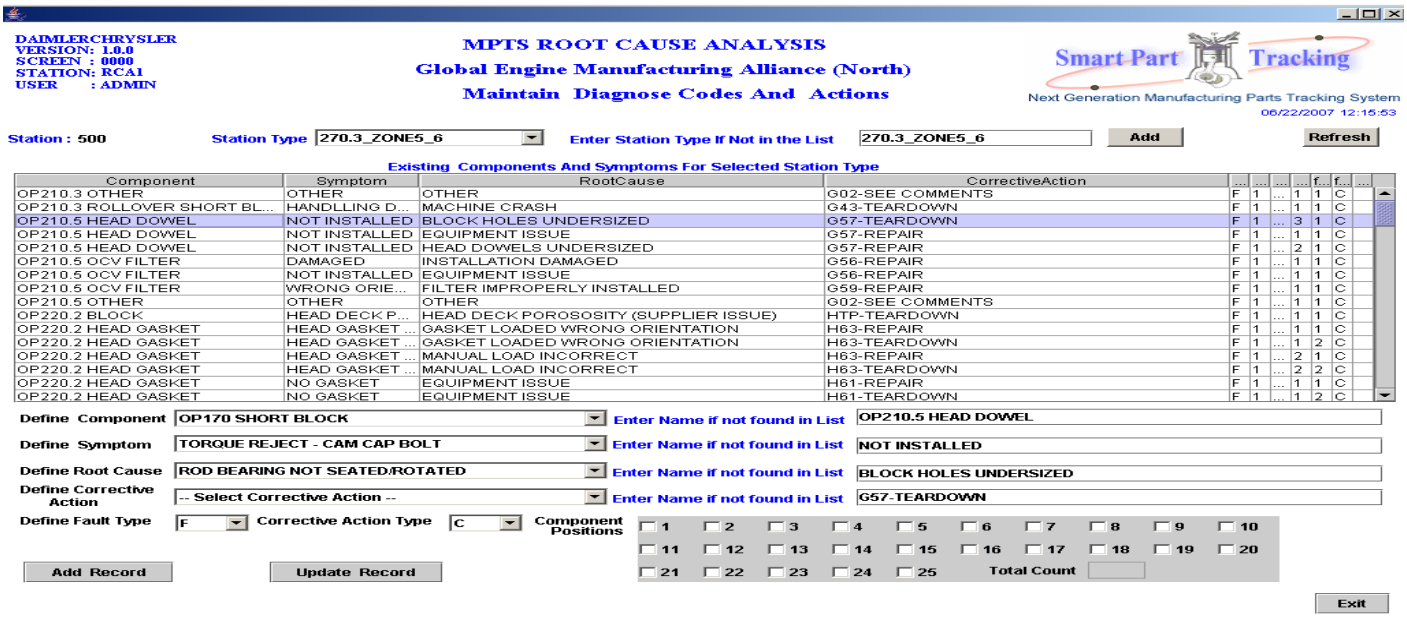
Your **Root Cause** entry addresses what the operator sees as the cause of the problem with the Component identified in the part being repaired.

- As an example, this could be a missing, broken, or loose part.

To define a **Root Cause**, enter the information in the area define for Root Cause "**Name if not found in the List**". If the Root Cause already exists, just select from the Define Root Cause drop down and it will fill in the entry.

- If you're not sure of all the possible Root Causes, define an "**OTHER**" entry. The operator will be asked to provide **Comments** to better identify the problem.

If you want to update an existing **Root Cause**, select from the list of displayed records for the desired Station Type, the Root Cause of the Symptom you want to change. When selected, all parameters for your selection will be filled in below. Modify the Root Cause description and ***Click Update Record***. **If this Root Cause has multiple records, you will have to repeat the change for each unless they belong to the same component/symptom group**.



Once you have defined your **Root Cause**, you can begin defining your Corrective Actions.

Your **Corrective Action** entry addresses what the operator does in correcting the problem with the Component identified in the part being repaired.

- As an example, this could be replacing or tightening a bolt or spark plug.

To define a **Corrective Action**, enter the information in the area define for Corrective Action "**Name if not found in the List**". If the Corrective Action already exists, just select from the Define Corrective Action drop down and it will fill in the entry.

- If you're not sure of all the possible Corrective Actions, define an "**OTHER**" entry. The operator will be asked to provide **Comments** to better identify the repair.

If you want to update an existing **Corrective Action**, select from the list of displayed records for the desired Station Type, the Corrective Action of the Root Cause you want to change. When selected, all parameters for your selection will be filled in below. Modify the Corrective Action description and ***Click Update Record***.

Once you have defined your **Corrective Actions**, your Repair matrix is ready for use.

Additional Parameters

There are other parameters you can set to enhance your repair matrix, Fault Type and Corrective Action Type. Fault Type has 3 options: F, T, and V. F is the default value, and it stands for Fault Code, T stands for Test Code, and V for Validation Engine Code. T and V are considered rejects.

Corrective Action Type has 3 options: C, H and O. These options are related to the repair Corrective Actions. C is the default value, and it stands for regular Fix, and once an operator select this type of corrective Action, Open Issue will be closed.

O means that this corrective action is not a complete Fix, and once this Corrective Action is selected another new Open record is created for that Engine. For Instance, an Engine is Offloaded from Station 390.12 and it is subjected to Strip Back at Station 270.3. Now when the operator offloads that engine from 390.12 he will enter Diagnose Information and Enter Corrective Action (Strip Back to 270.3). Now if this Corrective Action is of Type O then immediately an open record will be created and when this engine is sent to 270.3 the operator will finally repair that Engine by selection Corrective action that will actually close the record.

Option H, when this kind of corrective Actions is selected, a message is displayed at the *End Of the Line* PC that this Engine should go for "HOT RUN ". (GEMA does not currently have the End Of Line Module implemented).