

## **Labor Charge from OEE (ARC 6407)**

### **Preface**

Customer has a system called SimTech OEE that captures labor hours performed on Work Orders on some of machines on the production floor. SimTech OEE will contains information such as Work Order, Start Time, End Time, Employee, Completed Quantity, Scrap Quantity, etc.

Project 6407 will integrate the SimTech OEE data into OEE without requiring user to manually input the data again in GSS through Shop Floor Control > Transactions > Manual Time Card Input.

### **Technical Specification**

GSS needs this information to process the labor data:

- Work Order Number
- Work Order Sequence
- Transaction Date
- Workcenter/Workgroup
- Employee No
- Start Time
- End Time
- Hours Worked (optional – can be calculated from Start Time and End Time)
- Flag to close the Work Order
- Good Quantity
- Bad Quantity
- Scrap Codes (optional)

SimTech OEE uses Microsoft SQL Server database and the data needs to be accessible through a SQL View containing the information mentioned above.

Since GSS is using Pervasive/Zen database, the data needs to be pulled directly from Microsoft SQL Server database and processed into Pervasive/Zen database.

### **Design Specification**

A GAB script will be attached to the Online Update hook to connect to the SimTech OEE database and pulled the newest data that has not been processed. The script will run according to the Online Update interval time.

The script will perform the following validation:

- Work Order Number is valid and is not closed
- Work Order Sequence is valid, is a Labor sequence, and is not closed
- Transaction Date is a valid date
- Workcenter/Workgroup is valid
- Employee is valid
- Start Time is a valid datetime
- End Time is a valid datetime

- The duration between Start Time & End Time cannot surpass 24 hours
- Flag Closed is either 'Y', 'N', or blank
- Direct or Setup indicator will be based on the Setup Flag in Job Operations table
- Always use Rate Type of Regular (R)
- Scrap Code is ignored

Transaction records that pass validation will be compiled into a text file. Callwrapper JB0455 will process the data into GSS using the text file. The data will be written into JOBS\_IN\_PROCESS table. Those records are processed into JOB\_DETAIL when the Online Update runs.

Transaction records that fail validation will be inserted into GAB\_6407\_FAILED\_TRAN table.

The last End Time processed will be stored in GAB\_6407\_LAST\_TRAN table so that the script knows where to start pulling the next transaction records.

For those failed transaction records, user needs to investigate why they failed. User remedies the data then processes the data into GSS again. To accommodate this, another GAB script is created. User can see all the transaction run batches ran from the Online Update and modify the failed transaction records from this script.

### User Manual

1. Run Shop Floor Control > Transactions > Labor Charge from OEE (6407)
2. The top part will show all the transaction run batches.
3. The bottom part will show the detail of the transaction records inside each batch and the message why the record failed.

**Labor Charge from OEE (6407) (PLA)**

Trans Date	Last End Time Proce...	Username	Failed Record				
→ 2021-07-14 14:02:59.000	2021-06-11 07:18:22.983	ONLINE	57	Show	Process	Restore	Delete
2021-07-14 14:05:07.000	2021-06-12 11:42:19.147	ONLINE	63	Show	Process	Restore	Delete
2021-07-14 14:06:16.000	2021-06-14 08:30:22.620	ONLINE	65	Show	Process	Restore	Delete
2021-07-14 14:12:00.000	2021-06-15 10:01:03.273	ONLINE	64	Show	Process	Restore	Delete
2021-07-14 15:38:06.000	2021-06-16 13:14:51.983	SUPERVSR	59	Show	Process	Restore	Delete

**Trans Date - Batch Run Date**  
**Last End Time Processed - The last End Time processed from OEE**  
**Username - User who runs the transaction batch**  
**Failed Record - Total failed records in the batch**

**SHOW** - show the detail transaction records in the batch  
**PROCESS** - process the detail transaction records into GSS  
**RESTORE** - restore the original detail transactional records pre modification  
**DELETE** - delete the detail transaction records in the batch

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2021-07-14 14:12:00.000			64	Show	Process	Restore	Delete
2021-07-14 15:38:06.000			59	Show	Process	Restore	Delete

Delete - Delete the detail transaction record  
Restore - Restore the original transaction record pre modification

Yellow CellBackColor indicates that the column can be modified

Detail transaction records in the batch

Trans Date	Line	Work Order (JobNo-JobS...	Part No	Seque...	Date Tra...	Work	Empl...	Start Time (YYYY-MM-DD HH:N...	End Time (YYYY-MM-DD HH:N...	Hours W...	Flag	Delete	Restore
→ 2021-07-14 14:05:07.000	1	000008-001	01234567890123456789	000100	1/14/2021	M24	pe001	2021-01-14 16:33:39.513	2021-06-12 07:02:50.723	3,566.49	Y	Delete	Restore
2021-07-14 14:05:07.000	2	P-21030073	A-62543-001REVC	070	6/10/2021	T10	00093	2021-06-10 19:53:59.987	2021-06-11 07:25:51.937	11.53	Y	Delete	Restore
2021-07-14 14:05:07.000	3	000109-002	A-0041-97934REV06	000095	6/10/2021	M8	00064	2021-06-10 21:00:05.970	2021-06-11 07:35:44.487	10.59	Y	Delete	Restore
2021-07-14 14:05:07.000	4	000008-007	A-0041-58752REV09	0125	6/10/2021	M15	00046	2021-06-10 21:44:01.263	2021-06-11 07:37:23.273	9.89	Y	Delete	Restore
2021-07-14 14:05:07.000	5	000166-004	A-82723-001A	000065	6/10/2021	T8	00038	2021-06-10 19:43:40.287	2021-06-11 07:58:28.943	12.25	Y	Delete	Restore
2021-07-14 14:05:07.000	6	000085-002	U67873A001REVE	000125	6/10/2021	M12	00046	2021-06-10 20:08:34.783	2021-06-11 20:21:57.140	24.22	Y	Delete	Restore
2021-07-14 14:05:07.000	7	000012	APSM17224316REVC	000020	6/11/2021	T4	00093	2021-06-11 00:39:50.220	2021-06-11 07:25:30.783	6.76	Y	Delete	Restore

The message of why the transaction record failed validation

Tra...	Work...	Empl...	Start Time (YYYY-MM-DD HH:N...	End Time (YYYY-MM-DD HH:N...	Hours W...	Flag Cl...	Good Pie...	Bad Pieces	Scrap Code [(0)ScrapCode1,(0)S...	Error Message	Delete
→ 14/2021	M24	pe001	2021-01-14 16:33:39.513	2021-06-12 07:02:50.723	3,566.49	Y	0	0		Invalid Employee.	Delete
10/2021	T10	00093	2021-06-10 19:53:59.987	2021-06-11 07:25:51.937	11.53	Y	10	0		Invalid Job, Suffix, Seq combination.	Delete
10/2021	M8	00064	2021-06-10 21:00:05.970	2021-06-11 07:35:44.487	10.59	Y	10	0		Invalid Workcenter.	Delete
10/2021	M15	00046	2021-06-10 21:44:01.263	2021-06-11 07:37:23.273	9.89	Y	5	0		Invalid Job, Suffix, Seq combination.	Delete
10/2021	T8	00038	2021-06-10 19:43:40.287	2021-06-11 07:58:28.943	12.25	Y	17	0		Invalid Workcenter.	Delete
10/2021	M12	00046	2021-06-10 20:08:34.783	2021-06-11 20:21:57.140	24.22	Y	3	0		Total Hours Worked is more than or equal to 24 hours.	Delete
11/2021	T4	00093	2021-06-11 00:39:50.220	2021-06-11 07:25:30.783	6.76	Y	11	0		Invalid Job, Suffix, Seq combination.	Delete

- Once user modifies the transaction records, process the transaction batch again by clicking on the Process button.

When the automatic data extraction from OEE runs through the Online Update, the screen below will appear showing the progress of the data extraction and analysis.

**Labor Charge From OEE (6407) - Online Update (PLA)**

Step 1: Processing Record 200 of 200. Completed.

Step 2: Uploading 200 Records. Completed