

Work Order Closing Utility User Manual

Formerly Variance Report Writer

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work order closing utility

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Work Order Closing Utility Features

Variance Reporting:

- * **Powerful selection options - choose which work orders to report based upon:**
 - if the work order variance you select exceeds a dollar amount or percentage you specify, eliminating the task of searching thru reports to find problem work orders
 - if the work order dollar amount exceeds the value you specify, allowing you to eliminate small unmeaningful work orders
 - the class codes (1,2,3, or 4) of the assembly part number, allowing you to isolate and summarize production and variance data in the product families you already have set up
 - if the work order went thru a selected work center, allowing you to track work center performance
 - if the work order used a selected component part number, allowing you to analyze work orders for a problem plagued component part
 - the work order's project number
 - specific assembly part numbers
 - the work order account number
 - date ranges

- * **Sorting and totaling features**
 - sort by selected variance amount descending to list top variance offenders first
 - sort and total by the class code (1,2,3, or 4) of the assembly
 - sort by work order dollar amount
 - sort and total by project number, work order account number, work order number, or assembly part number
 - option to list subtotals and grand totals only

- * **Displays standard and actual unit cost of each assembly produced**

- * **All selection options and sort options are printed on the report for clear explanation of the source**

Update Options:

- * **Performs the equivalent of MG,UT,301 or MG,UT,302 or MG,UT,303**

Benefits:

- * **Produce meaningful, easy to read, summary reports with just two lines of text per work order**
- * **Find which work orders to analyze by screening out small value**

and small variance orders.

- * Save time by performing work order closes automatically

New Features of Release 4.5

New Selection Criteria

Four new selections have been added to the RE,795 and UT,795 programs.

10. WORK ORDER PART ZERO COST
11. WORK ORDER COMPONENT ZERO COST
12. INCOMPLETE MOVE WORK ORDERS
13. WORK ORDER QUANTITY - COMPLETED QUANTITY UNEQUAL

This will allow you to find, report, and prohibit closing work orders of these types.

New Features of Release 4.0

New Closing Utility

A new program has been added to the product (UT,795) which will update the work order close status on the work orders selected. This utility is designed to free the users from performing the work order close transactions UT,301/302/303 on individual order numbers, and perform a mass work order close instead.

New Features of Release 3.0

Work Order Number Prefix option

A ninth selection option has been added to the RE,795 for users that have meaningful work order numbers. This option allows the user to enter the first few characters of the work order number followed by the '@' sign. All work orders that match the work order number prefix specified will be selected.

New Features of Release 2.1

Display Work Order Hours

The total of the setup and actual labor hours is now displayed underneath the efficiency and rate variance columns. The purpose of this is to allow the user to measure labor performance by referencing both dollars and hours.

New Features of Release 2.0

A. Display Work Order Status

The work order status is now displayed as a single character

between the work order number and the assembly part number.
The codes are as follows:

O = Open
M = Closed for Material
L = Closed for Labor
A = Closed for Accounting

B. Display Work Order Close Date

The date the work order was closed is now displayed underneath the description of the assembly part number. For open work orders, this will be the date of last operation performed.

C. New Sort Sequence

A new (eighth) sort sequence has been added to your sort selection options:

8. SORT ON VARIANCE (ABSOLUTE VALUE) DESCENDING

This option is similar to sort option 6, 'sort on variance descending' but sort option 6 sorted the most unfavorable variances at the top of the report and the most favorable variances (negative variances) at the bottom of the report. This new sort option will show the largest variances, favorable or unfavorable, on the first page of the report.

D. Performance Improvements

The number of data base calls have been evaluated and cut by 10% and the number of rounding routines within the program have been curtailed. This has shown to reduce the processing time by over 35%. A possible downside to this is that you will sometimes see totals that are a few cents off from the supporting detail. We felt the performance gains achieved outweighed any potential rounding issues.

E. Revised Status Messages

The user will now receive a message for every 5000 work orders selected from the work order file (OWOF). Once those are extracted, the variances will be calculated for each work order and the user will receive a message for every 25 work orders processed.

RE,795 Variance Report Writer

UT,795 Work Order Close utility

The Variance Report Writer and Work Order Close utility are identical programs with one exception. The Work Order Close Utility will update the data base by performing the equivalent of an MG, UT, 301 MG, UT, 302 or MG, UT, 303 transaction.

The RE,795 Variance Report Writer is designed to isolate the work orders you specify and to generate meaningful reports for your manufacturing environment. You are given the opportunity to specify up to two unique selection options, and the ability to choose between several primary and secondary sort options.

Prompts

Displays output options.
OPTION (3)?

WORK ORDER STATUS OPTION?

1. OPEN WORK ORDERS ONLY
 2. WORK ORDERS CLOSED FOR MATERIAL ONLY
 3. WORK ORDERS CLOSED FOR MATERIAL AND LABOR ONLY
 4. WORK ORDERS CLOSED FOR ACCOUNTING ONLY
 5. ALL CLOSED WORK ORDERS
- OPTION(5)?

Option 1 will select only open work orders. Options 2, 3, and 4 will select closed work orders depending on their close status. Option 5 will select work orders closed for material, labor, and accounting.

If you are running UT,795 the following prompt appears:

UPDATE OPTION:

1. DO NOT UPDATE - VARIANCE REPORT ONLY
 2. SET OPEN WORK ORDERS TO CLOSED FOR MATERIAL
 3. SET OPEN AND CLOSED WO TO CLOSED FOR LABOR
 4. SET OPEN AND CLOSED WO TO CLOSED FOR ACCOUNTING
- OPTION(1)? 4

If you select option 2, the work orders will be closed for material (UT,301). If you select option 3, the work orders selected will be closed for material and labor (UT,302). If you select option 4, the work orders selected will be closed for accounting (UT,303). The UT,795 program will only update work orders to the 'next' closed status. For example, if you selected a group of work orders that were closed for material and labor, and then selected option 2 to close the

work order for material, the work orders will not be updated since they are in a lesser closed status.

If you select closed work orders, the following date prompts will appear:

BEGINNING WORK ORDER CLOSED DATE?
ENDING WORK ORDER CLOSED DATE?

Enter the date range for work orders to select.

You are now prompted for your first selection option:

FIRST SELECTION OPTION:

1. SELECTED WORK ORDER ACCOUNT NUMBER
 2. SELECTED CLASS CODE (1, 2, 3, OR 4)
 3. SELECTED PROJECT NUMBER
 4. SELECTED ASSEMBLY PART NUMBER
 5. WO'S EXCEEDING A SELECTED VARIANCE AMOUNT OR %
 6. WO'S EXCEEDING A SELECTED DOLLAR AMOUNT
 7. WO'S USING A SELECTED COMPONENT PART NUMBER
 8. WO'S THAT WENT THRU A SELECTED WORK CENTER
 9. SELECTED WORK ORDER NUMBER PREFIX
 10. WORK ORDER PART ZERO COST", /,
 11. WORK ORDER COMPONENT ZERO COST", /,
 12. INCOMPLETE MOVE WORK ORDERS", /,
 13. WORK ORDER QUANTITY - COMPLETED QUANTITY UNEQUAL", /,
- OPTION (C/R = CONTINUE)?

If you press return, this will select all work orders in the date range you had specified, and you will be prompted for your primary sort sequence.

If you selected option 1, you will be prompted for:
WORK ORDER ACCOUNT NUMBER?

If you selected option 2, you will be prompted for:
CLASS CODE GROUP(1)?
CLASS CODE?

Enter the class code group, and class code of the assembly part numbers whose work orders you wish to select.

If you selected option 3, you will be prompted for:
PROJECT NUMBER?

Enter the project number of the work orders you wish to select

If you selected option 4, you will be prompted for:
ASSEMBLY PART NUMBER?

Enter the assembly part number of the work orders you wish to select

If you selected option 5, 'Work orders whose variance amount

exceed a given dollar amount or %, you will receive the following prompts:

ENTER WHICH VARIANCE:

1. EFFICIENCY
2. RATE
3. MATERIAL USAGE
4. CONFIGURATION
5. METHODS CHANGE
6. LOT SIZE
7. ASSEMBLY SCRAP
8. RESIDUAL
9. SUM OF ALL VARIANCES

OPTION(9)?

Enter which variance you would like to select to see if it exceeds a given dollar amount or percent. Option 9, totals all of the variances.

SELECT BY:

1. VARIANCE DOLLAR AMOUNT
2. PERCENT OF TOTAL WORK ORDER VALUE

OPTION(1)?

Enter 1 if you want to select variances over a specific dollar amount. You will receive this prompt:

ENTER THE DOLLAR AMOUNT VARIANCE MUST EXCEED?

Enter 2 if you want to select variances as a percent of the total work order value. You will receive this prompt:

PERCENT OF TOTAL WO VALUE VARIANCE MUST EXCEED (1-100)?

For example if the total work order value is \$1000, and you entered 10%. Then the variance(s) must exceed \$100 to have this work order selected.

You will then be prompted if you want to see favorable, unfavorable, or both, variances that exceed the dollar limit or percentage you entered:

REPORT VARIANCES THAT EXCEED THAT ARE:

1. UNFAVORABLE
2. FAVORABLE
3. BOTH

OPTION(1)?

If you selected option number 6, you will be prompted for:
ENTER THE DOLLAR AMOUNT THE WORK ORDER MUST EXCEED?

This selection option will allow you to select only large dollar value work orders based on the 'actual cost total' of the work order.

If you selected option number 7, you will be prompted for:
COMPONENT PART NUMBER?

This selection option will select work orders that contain the component you select. The purpose of this will be to isolate and measure work orders of a problem plagued component. Please note that the variances reported will be the total of all components on the work order, not just for this component

If you selected option number 8, you will be prompted for:
WORK CENTER?

This selection option will choose only work orders that utilize this work center. The purpose of this will be to isolate and measure the performance of a given work center. Please note that if there is more than one work center on the work order, the variances reported will reflect the sum of all work centers.

If you selected option number 9, you will be prompted for:
WORK ORDER NUMBER PREFIX?

For users which have meaningful part numbers you can enter a string of characters followed by an '@' to specify a work order number prefix. For example, entering 123@ to this prompt would select all work orders that begin with work order number 123.

If you selected option number 10, work orders whose Assembly part number has a unit cost of zero will be selected.

If you selected option number 11, if any of the components on the work order have a unit cost of zero, the work order will be selected.

If you selected option number 12, an operation that has had had the fully quantity completed 'moved' through it, will be selected.

If you selected option number 13, work orders whose work order quantity does not match the quantity completed plus the quantity scrapped will be selected.

If you choose a selection option between 1 and 9, you will then be prompted for a second selection option. The prompts remain the same as above. Once your selection options are made, you are prompted for the primary sort sequence:

FIRST REPORT SORT SEQUENCE:

1. WORK ORDER ACCOUNT NUMBER (SUBTOTAL OPTION)
2. CLASS CODE (SUBTOTAL OPTION)
3. PROJECT NUMBER (SUBTOTAL OPTION)
4. WORK ORDER NUMBER
5. ASSEMBLY PART NUMBER

6. VARIANCE AMOUNT DESCENDING
 7. WORK ORDER AMOUNT DESCENDING
 8. VARIANCE AMOUNT (ABSOLUTE VALUE) DESCENDING
- OPTION (C/R = CONTINUE)?

If you selected sort option 2 (class code), you will receive the following prompt:
CLASS CODE GROUP(1)?

The sort will use the class code of the assembly part number from the class code 1, 2, 3, or 4 that you specify.

If you selected sort option 6 (variance amount), you will be prompted for which variance to sort on:

SORT ON WHICH VARIANCE:

1. EFFICIENCY
2. RATE
3. MATERIAL USAGE
4. CONFIGURATION
5. METHODS CHANGE
6. LOT SIZE
7. ASSEMBLY SCRAP
8. RESIDUAL
9. SUM OF ALL VARIANCES

OPTION(9)?

This sort option will allow you to put the 'most unfavorable' variance orders on the first pages of your report. You can choose a specific variance you want to highlight by selected sort options 1 thru 8, or all variances by selecting option 9.

If you selected sort options 1, 2, or 3 (account number, class code, or project number) you will be prompted if you want to print a subtotal at each new account number, class code or project (grand totals are always printed).
PRINT SUBTOTALS(Y)?

If you print subtotals, you are also given the option of not printing any detail for each work order and simply generating a summary report of subtotals and grand totals only.

REPORT SUMMARY OPTION:

1. SHOW SUBTOTALS AND GRAND TOTALS ONLY?
2. SHOW DETAIL AND TOTALS

OPTION(2)?

If you enter a primary sort sequence you are given the option of entering a second report sort sequence. The prompts remain the same from above.

The selection and sort options specified are now

displayed, and you are asked if you want to continue:
CORRECT(Y)?

The report now begins gathering data. A message is printed for each 5000 work orders read, listing the number of work orders that matched the selection criteria you specified. Once the work orders have been selected, variance data is gathered, and a message is printed for every 25 work orders processed.

Once the report is completed, you return to 'WORK ORDER STATUS OPTION'.

Special Considerations

When gathering work order information, several data base files are accessed to total the actual material and labor used compared to the standard material and labor required. In doing so, the user must be aware that they should be specific in the work orders they select. If I were to run this report for every work order in 1993 whose variances exceeded \$100, then the program will extract and calculate all of the variances for every work order made in 1993. In most ASK environments, that would result in thousands of data base lookups.

Thus, when generating a report, it is important to use the date range, account number, project, or class code selection whenever possible. RE,795 was designed to be fully compatible with the ASK stream job and submission capability to accommodate those broader types of inquiries. Secondly, the program generates update messages on every 500 work orders read, to keep you abreast of its progress.

Files Accessed

IM	Item master file
WOSHT	Work order allocation file
OWOF	Open Work Order file
WCFIL	Work Center file
TRFIL	Tracking file
LDFIL	Labor distribution file

Report Format

First Line:

Work Order number

Work Order Status (WOSTATUS - OWOF)

O = Open M = Closed for Material
L = Closed for Labor A = Closed for Accounting

Assembly Part Number

Work order quantity ordered (WOQ - OWOF)

Transfers out at standard - number of parts sent to stock at standard cost

Material usage variance - the cost of the components issued less the cost of the components scheduled. Generally used to measure over and under issues of components.

Configuration variance - the value of the components used less the value of the assemblies ordered. Generally used to monitor changes made to the work orders bill of material versus the standard bill of material.

Methods Change variance - the value of labor and overhead in the cost of the components, less the value of labor and overhead in the cost of the assemblies. Generally used to pick up the value of a non-standard routing being used to manufacture the part.

Lot size variance - the cost of work order being set up for a lot size different than that of the parts A00.

Assembly scrap - the value of partially completed assemblies that were scrapped in process.

Total in at standard - the value of the components issued, plus the labor value added to the components from assembly.

Efficiency variance - the difference between the actual set-up and run hours minus the earned set up and run hours. Generally, used to measure the actual units/hr produced versus the standard units/hr in the routing.

Rate variance - the employees labor rate minus the standard work center rate times the actual hours worked.

Actual cost - The sum of the total in at std, plus the efficiency and rate variances. This yields the total cost associated with manufacturing the assemblies

Second Line:

Description of the assembly (DESC-IM)

Work order quantity completed (WOCQ - OWOF)

Unit cost of transfers out at standard - The standard cost of the assembly part number.

Residual - the value of components in at standard, less all variances and the value of assemblies out at standard. Usually caused by the work order quantity ordered and completed, being unequal

Actual labor hours - the sum of the set up hours and labor hours for all operations of the work order

Actual cost per unit - The Actual cost total of the work order divided by the assemblies completed to stock.

Third Line:

Work Order Closed Date (WODLO - OWOF)
This will be the date of last operation for open work orders.

Work order quantity scrapped (WOQS - OWOF)
this appears only if there have been scrapped assemblies

* Example of a variance report for a selected account number and whose unfavorable efficiency *
* variances exceed \$100. Sorted on efficiency variance descending. *

Work Order Production and Variance Report Writer

ENTER DESIRED OUTPUT OPTION:

- 2. VIEW PROMPTS, NO ACTION
 - 1. STREAM JOB FILE
 - 0. LINE PRINTER
 - 1. TERMINAL, 132 COLUMNS
 - 2. ENTER LOGICAL DEVICE/DISC FILE, 132 COLUMNS
- OPTION (0)? 1

WORK ORDER STATUS OPTION?

- 1. OPEN WORK ORDERS ONLY
 - 2. WORK ORDERS CLOSED FOR MATERIAL ONLY
 - 3. WORK ORDERS CLOSED FOR MATERIAL AND LABOR ONLY
 - 4. WORK ORDERS CLOSED FOR ACCOUNTING ONLY
 - 5. ALL CLOSED WORK ORDERS
- OPTION(5)? 5

BEGINNING WORK ORDER CLOSED DATE? 5/1/92 *

ENDING WORK ORDER CLOSED DATE? 5/31/92 *

FIRST SELECTION OPTION:

- 1. SELECTED WORK ORDER ACCOUNT NUMBER
 - 2. SELECTED CLASS CODE (1,2,3, OR 4)
 - 3. SELECTED PROJECT NUMBER
 - 4. SELECTED ASSEMBLY PART NUMBER
 - 5. WO'S EXCEEDING A SELECTED VARIANCE AMOUNT OR %
 - 6. WO'S EXCEEDING A SELECTED DOLLAR AMOUNT
 - 7. WO'S USING A SELECTED COMPONENT PART NUMBER
 - 8. WO'S THAT WENT THRU A SELECTED WORK CENTER
- OPTION (C/R = CONTINUE)? 1

WORK ORDER ACCOUNT NUMBER? CMIP *

SECOND SELECTION OPTION:

- 1. SELECTED WORK ORDER ACCOUNT NUMBER
 - 2. SELECTED CLASS CODE (1,2,3, OR 4)
 - 3. SELECTED PROJECT NUMBER
 - 4. SELECTED ASSEMBLY PART NUMBER
 - 5. SELECTED VARIANCE EXCEPTION AMOUNT (\$ OR %)
 - 6. WO'S EXCEEDING A SELECTED DOLLAR AMOUNT
 - 7. WO'S USING A SELECTED COMPONENT PART NUMBER
 - 8. WO'S THAT WENT THRU A SELECTED WORK CENTER
- OPTION (C/R = CONTINUE)? 5

ENTER WHICH VARIANCE:

- 1. EFFICIENCY
 - 2. RATE
 - 3. MATERIAL USAGE
 - 4. CONFIGURATION
 - 5. METHODS CHANGE
 - 6. LOT SIZE
 - 7. ASSEMBLY SCRAP
 - 8. RESIDUAL
 - 9. SUM OF ALL VARIANCES
- OPTION(9)? 1

SELECT BY:

1. VARIANCE DOLLAR AMOUNT
 2. PERCENT OF TOTAL WORK ORDER VALUE
- OPTION(1)? 1

ENTER THE DOLLAR AMOUNT VARIANCE MUST EXCEED? 100

REPORT VARIANCES THAT EXCEED THAT ARE:

1. UNFAVORABLE
2. FAVORABLE
3. BOTH

OPTION(1)? 1

FIRST REPORT SORT SEQUENCE:

1. WORK ORDER ACCOUNT NUMBER (SUBTOTAL OPTION)
 2. CLASS CODE (SUBTOTAL OPTION)
 3. PROJECT NUMBER (SUBTOTAL OPTION)
 4. WORK ORDER NUMBER
 5. ASSEMBLY PART NUMBER
 6. VARIANCE AMOUNT DESCENDING
 7. WORK ORDER AMOUNT DESCENDING
 8. VARIANCE AMOUNT (ABSOLUTE VALUE) DESCENDING
- OPTION (C/R = CONTINUE)? 6

SORT ON WHICH VARIANCE?

1. EFFICIENCY
2. RATE
3. MATERIAL USAGE
4. CONFIGURATION
5. METHODS CHANGE
6. LOTSIZE
7. ASSEMBLY SCRAP
8. RESIDUAL
9. SUM OF ALL VARIANCES

OPTION(9)? 1

SECOND REPORT SORT SEQUENCE:

1. WORK ORDER ACCOUNT NUMBER (SUBTOTAL OPTION)
 2. CLASS CODE (SUBTOTAL OPTION)
 3. PROJECT NUMBER (SUBTOTAL OPTION)
 4. WORK ORDER NUMBER
 5. ASSEMBLY PART NUMBER
 6. VARIANCE AMOUNT DESCENDING
 7. WORK ORDER AMOUNT DESCENDING
 8. VARIANCE AMOUNT (ABSOLUTE VALUE) DESCENDING
- OPTION (C/R = CONTINUE)?

FIRST SELECTION OPTION - WORK ORDER ACCOUNT NUMBER: CMI P

SECOND SELECTION OPTION - EFFICIENCY EXCEEDING 100.00 DOLLARS OR 0%

PRIMARY SORT EFFICIENCY VARIANCE DESCENDING

IS THIS CORRECT(Y)? Y *

GATHERING WORK ORDERS...

36 WORK ORDERS SELECTED, GATHERING VARIANCE DATA.....

25 WORK ORDERS PROCESSED 9 WORK ORDERS SELECTED...

TOTAL WORK ORDERS SELECTED: 13

=====

ALL CLOSED ORDERS CLOSED 05/01/92 THRU 05/31/92

WORK ORDER NUMBER	ASSEMBLY PART NUMBER	QUANTITY ORD/COMP /SCRAP	TRANSFERS OUT AT STD TOTAL/UNIT	MATRL USAGE	CONFIG	VARIANCES METHOD CHANGE	LOT SIZE	ASMBLY SCRAP	IN AT STANDARD /RESIDUAL	LABOR VARIANCES EFFCNCY RATE	ACTUAL COST TOTAL/UNIT	
2235	A 853760	2220	4278.47	264.53	.00	72.46	.00	.00	4615.46	481.81	.00	5097.27
	BASE 40 PLN	2220	1.93						.00			2.30
2437	A 854862	5700	5635.62	.00	.00	.00	.00	.00	5635.62	451.44	.00	6087.06
	4.5 IN COLLAR PIERCE PLN	5700	.99						.00			1.07
2241	A 853778	1518	3086.94	35.97	.00	9.15	.00	.00	3132.06	395.33	.00	3527.39
	BASE 40 BLK	1518	2.03						.00			2.32
2404	A 852015-12	154	9517.04	-111.98	.00	-7.58	.00	.00	9397.48	383.84	.00	9781.32
	999N/AP ROOF FLSHNG PITCH	154	61.80						.00			63.52
2237	A 853766	2220	2921.05	.00	.00	.00	.00	.00	2921.05	324.89	.00	3245.94
	DOME 40 PLN	2220	1.32						.00			1.46
2502	A 853880	5000	11664.80	.00	.00	.00	.00	.00	11664.80	301.55	.00	11966.35
	NAP FORM 666/999	5000	2.33						.00			2.39
2251	A 851044-06	315	15249.39	.00	.00	.00	.00	.00	15249.39	283.70	.00	15533.09
	1044 LVR, ASTRO 64 PLN	315	48.41						.00			49.31
2449	A 854796	2800	3043.64	.00	.00	.00	.00	.00	3043.64	258.63	.00	3302.27
	4.5 IN COLLAR PIERCE BRN	2800	1.09						.00			1.18
2495	A 852125-12	50	4430.97	.00	.00	.00	.00	.00	4430.97	218.58	.00	4649.55
	999 N/AF HI DOME ROOF FLS	50	88.62						.00			92.99
2409	A 850710	1650	1842.38	.00	.00	.00	.00	.00	1842.38	185.98	.00	2028.36
	4.5 IN COLLAR PIERCE BLACK	1650	1.12						.00			1.23
2483	A 855332	5400	2298.89	.00	.00	.00	.00	.00	2298.89	165.90	.00	2464.79
	CROWN PLATE PLN	5400	.43						.00			.46

05/12/92

* Example of a variance summary report listing all work orders for a selected account *
* number. Sorted and subtotaled by group 2 class code showing subtotals only. *

COMMAND (MG,60)? RE,795 *

Work Order Production and Variance Report Writer

ENTER DESIRED OUTPUT OPTION:

- 2. VIEW PROMPTS, NO ACTION
 - 1. STREAM JOB FILE
 - 0. LINE PRINTER
 - 1. TERMINAL, 132 COLUMNS
 - 2. ENTER LOGICAL DEVICE/DISC FILE, 132 COLUMNS
- OPTION (0)? 1

WORK ORDER STATUS OPTION?

- 1. OPEN WORK ORDERS ONLY
 - 2. WORK ORDERS CLOSED FOR MATERIAL ONLY
 - 3. WORK ORDERS CLOSED FOR MATERIAL AND LABOR ONLY
 - 4. WORK ORDERS CLOSED FOR ACCOUNTING ONLY
 - 5. ALL CLOSED WORK ORDERS
- OPTION(5)? 4

BEGINNING WORK ORDER CLOSED DATE? 1/1/92 *

ENDING WORK ORDER CLOSED DATE? 5/31/92 *

FIRST SELECTION OPTION:

- 1. SELECTED WORK ORDER ACCOUNT NUMBER
 - 2. SELECTED CLASS CODE (1,2,3, OR 4)
 - 3. SELECTED PROJECT NUMBER
 - 4. SELECTED ASSEMBLY PART NUMBER
 - 5. WO'S EXCEEDING A SELECTED VARIANCE AMOUNT OR %
 - 6. WO'S EXCEEDING A SELECTED DOLLAR AMOUNT
 - 7. WO'S USING A SELECTED COMPONENT PART NUMBER
 - 8. WO'S THAT WENT THRU A SELECTED WORK CENTER
- OPTION (C/R = CONTINUE)? 1

WORK ORDER ACCOUNT NUMBER? CMIP *

SECOND SELECTION OPTION:

- 1. SELECTED WORK ORDER ACCOUNT NUMBER
 - 2. SELECTED CLASS CODE (1,2,3, OR 4)
 - 3. SELECTED PROJECT NUMBER
 - 4. SELECTED ASSEMBLY PART NUMBER
 - 5. SELECTED VARIANCE EXCEPTION AMOUNT (\$ OR %)
 - 6. WO'S EXCEEDING A SELECTED DOLLAR AMOUNT
 - 7. WO'S USING A SELECTED COMPONENT PART NUMBER
 - 8. WO'S THAT WENT THRU A SELECTED WORK CENTER
- OPTION (C/R = CONTINUE)?

FIRST REPORT SORT SEQUENCE:

- 1. WORK ORDER ACCOUNT NUMBER (SUBTOTAL OPTION)
 - 2. CLASS CODE (SUBTOTAL OPTION)
 - 3. PROJECT NUMBER (SUBTOTAL OPTION)
 - 4. WORK ORDER NUMBER
 - 5. ASSEMBLY PART NUMBER
 - 6. VARIANCE AMOUNT DESCENDING
 - 7. WORK ORDER AMOUNT DESCENDING
 - 8. VARIANCE AMOUNT (ABSOLUTE VALUE) DESCENDING
- OPTION (C/R = CONTINUE)? 2

CLASS CODE GROUP(1)? 2

PRINT SUBTOTALS (Y)? Y *

SECOND REPORT SORT SEQUENCE:

1. WORK ORDER ACCOUNT NUMBER (SUBTOTAL OPTION)
 2. CLASS CODE (SUBTOTAL OPTION)
 3. PROJECT NUMBER (SUBTOTAL OPTION)
 4. WORK ORDER NUMBER
 5. ASSEMBLY PART NUMBER
 6. VARIANCE AMOUNT DESCENDING
 7. WORK ORDER AMOUNT DESCENDING
 8. VARIANCE AMOUNT (ABSOLUTE VALUE) DESCENDING
- OPTION (C/R = CONTINUE)?

REPORT SUMMARY OPTION:

1. SHOW SUBTOTALS AND GRAND TOTALS ONLY
 2. SHOW DETAIL AND TOTALS
- OPTION(2)? 1

FIRST SELECTION OPTION - WORK ORDER ACCOUNT NUMBER: CMIP
PRIMARY SORT CLASS CODE GROUP: 2
IS THIS CORRECT(Y)? Y *

GATHERING WORK ORDERS....

76 WORK ORDERS SELECTED,	GATHERING VARIANCE DATA.....
25 WORK ORDERS PROCESSED	25 WORK ORDERS SELECTED...
50 WORK ORDERS PROCESSED	50 WORK ORDERS SELECTED...
75 WORK ORDERS PROCESSED	75 WORK ORDERS SELECTED...

TOTAL WORK ORDERS SELECTED: 76

WORK ORDER VARIANCE REPORT

=====

ALL CLOSED ORDERS CLOSED 01/01/92 THRU 05/31/92

WORK ORDER NUMBER	ASSEMBLY PART NUMBER	QUANTITY ORD/COMP /SCRAP	TRANSFERS OUT AT STD TOTAL/UNIT	MATRL USAGE	CONFIG	VARIANCES METHOD CHANGE	LOT SIZE	ASMBLY SCRAP	IN AT STANDARD /RESIDUAL	LABOR VARIANCES EFFCNCY RATE	ACTUAL COST TOTAL/UNIT
CLASS CODE TOTAL:	6001	1050	36087.14	.00		.00		.00	36087.14	.00	
ASTRO 40' S		1050			.00		.00		.00	-133.95	35953.18
CLASS CODE TOTAL:	6003	600	29297.78	.00		.00		.00	29297.77	.00	
ASTRO 64' S		600			.00		.00		.00	424.51	29722.28
CLASS CODE TOTAL:	6016	1000	29585.93	.00		.00		.00	29585.93	.00	
TURBINES		1000			.00		.00		.00	-168.97	29416.96
CLASS CODE TOTAL:	6030	736	51517.16	-111.98		-7.58		.00	51397.59	.00	
ROOF FLASHINGS		736			.00		.00		.00	1658.39	53055.98
CLASS CODE TOTAL:	6215	6134	36624.36	.00		.00		.00	36624.35	.00	
TURBINE COMPONENTS		6134			.00		.00		.00	.00	36624.35
CLASS CODE TOTAL:	6220	27948	61179.24	.00		.00		.00	61179.24	.00	
ROOF FLASHING COMPONENT		27948			.00		.00		.00	-79.24	61100.00
CLASS CODE TOTAL:	6601	6240	1243.76	.00		.00		.00	1243.76	.00	
8X12 WIP		6240			.00		.00		.00	-52.79	1190.98
CLASS CODE TOTAL:	6602	1476	2853.55	.00		.00		.00	2853.55	.00	
8X16 WIP		1476			.00		.00		.00	391.08	3244.64
CLASS CODE TOTAL:	6614	5100	3065.68	.00		.00		.00	3065.68	.00	
CAP/CNTR WIP BLK		5100			.00		.00		.00	-288.94	2776.73
CLASS CODE TOTAL:	6615	7300	4388.12	.00		.00		.00	4388.12	.00	
CAP/CNTR WIP BROWN		7300			.00		.00		.00	-470.51	3917.61
CLASS CODE TOTAL:	6616	8000	4072.11	.00		.00		.00	4072.11	.00	
CENTER CAPS PLAIN		8000			.00		.00		.00	-589.87	3482.24
CLASS CODE TOTAL:	6619	3800	2442.03	.00		.00		.00	2442.03	.00	
TURBINE MILL FINISH		3800			.00		.00		.00	78.87	2520.90
CLASS CODE TOTAL:	6620	29500	35222.86	.00		.00		.00	35222.86	.00	
TURBINE PLAIN WIP		29500			.00		.00		.00	717.36	35940.21
CLASS CODE TOTAL:	6621	8010	6655.79	.00		.00		.00	6655.79	.00	
TURBINE BROWN WIP		8010			.00		.00		.00	417.99	7073.78

CLASS CODE TOTAL: 6622	6150	16914.46	.00	.00	.00	.00	.00	16914.46	.00	
TURBINE BLACK WIP	6150			.00		.00		.00	232.08	17146.54
CLASS CODE TOTAL: 26000	59448	92607.96	300.49		81.61		.00	92990.07	.00	
ALUMINUM SHEET STOCK	59448			.00		.00		.00	1888.76	94878.83
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*** GRAND TOTALS ***:	172492	413757.91	188.51		74.03		.00	414020.45	.00	
	172492			-.01			.00	.00	4024.78	418045.22

FIRST SELECTION OPTION - WORK ORDER ACCOUNT NUMBER: CMIP
 PRIMARY SORT CLASS CODE GROUP: 2