



IMPAX TSS Screens & Features - Data

The IMPAX Time Saver System provides many features designed to increase productivity, save time, and help your shop run more efficiently. TSS monitors automatically collect information on production totals, machine efficiency, and accumulated machine uptime and downtime. All occurrences of downtime, and the corresponding reasons, are tracked and archived. This document gives an overview of the TSS's main features.

Uptime/Downtime Minutes

Tracks daily uptime and downtime minutes for each shift

- Automatically tracks uptime/downtime data, resulting in a true picture of machine usage, instead of estimates
- Identifies previously-unreported lost time or idle periods
- Provides timely and accurate data for productivity initiatives

| RUN | | DAILY UPTIME & DOWNTIME | | | | 12:00 PM 01/01/06 | |
|------------|--------|-------------------------|------|----------|---------|----------------------|-----|
| SHIFT 1 | UP 150 | 0 | 30 % | 100 | DOWN 30 | 0 | 6 % |
| SHIFT 2 | 0 | 0 | 0 % | 100 | 0 | 0 | 0 % |
| SHIFT 3 | 0 | 0 | 0 % | 100 | 0 | 0 | 0 % |
| TOTAL | 150 | 0 | 30 % | 100 | 30 | 0 | 6 % |
| START MENU | | DATA | | COUNTERS | | USER MENU | |

64 Downtime Reasons

Tracks daily occurrences and durations for each downtime reason

- Tracks reasons for downtime electronically, eliminating the need for operator self-reporting or data entry
- Identifies part, tooling, material, and operator issues
- Provides cost-justification for upgrades and other corrective actions
- Helps focus managers and operators on problems causing the most downtime

| STOP | RESPONDED | | DOWNTIME MENU |
|----------------|----------------------------------|----------------------|----------------------|
| MACHINE SETUP | SMASHUP | SAMPLES | MEETING/ TRAINING |
| MAINTENANCE | BREAKDOWN | FEED PROBLEMS | WAITING FOR OPERATOR |
| PART CHANGE | TOOL ADJUST | MATERIAL QUALITY | SCHEDULED SHUTDOWN |
| ORDER COMPLETE | TOOL CHANGE | WAITING FOR MATERIAL | QC IN INSPECTION |
| < MORE REASONS | PRESS TO ENTER ADDITIONAL REASON | | MORE > REASONS |

Downtime Occurrence Log

Tracks each downtime occurrence's date and time, response time, total downtime, and reason

- Identifies common time-consuming problems, so that bottleneck issues can be addressed
- Identifies insufficient manpower situations, by tracking operator response time
- Provides operators and managers with information of recent problems or situations

| RUNNING | | DOWNTIME LOG OCCURRENCES 1-4 | | | | 03:14 PM 02/08/12 | |
|---------|----------|------------------------------|--------|----------|----------------------|----------------------|--|
| DATE | DT START | DT END | RT MIN | DT MIN | REASON | | |
| 0207 | 1102 | 1105 | 0 | 3 | MACHINE | | |
| 0207 | 1026 | 1027 | 0 | 1 | WAITING FOR MATERIAL | | |
| 0207 | 1025 | 1026 | 1 | 2 | FEED PROBLEMS | | |
| 0207 | 1019 | 1023 | 2 | 3 | MACHINE ADJUSTMENT | | |
| < | | DATA | | COUNTERS | | > | |



Downtime Events & Minutes

Tracks the number of daily occurrences and total minutes for each downtime reason

- Helps managers and operators identify their most time consuming downtime reasons
- Helps managers and operators identify their most common downtime reasons
- Provides accurate times for each downtime reason
- Shows manager and operators where specific improvement efforts could be spent

| RUN | DAILY DT EVENTS & MINUTES 1 | | 12:00 PM 01/01/06 | | |
|----------------|-----------------------------|------|-------------------|--------|------|
| | EVENTS | MINS | | EVENTS | MINS |
| MACHINE SETUP | 2 | 42 | SMASHUP | 0 | 0 |
| MAINTENANCE | 1 | 34 | BREAKDOWN | 1 | 97 |
| PART CHANGE | 0 | 0 | TOOL ADJUST | 1 | 6 |
| ORDER COMPLETE | 4 | 13 | TOOL CHANGE | 2 | 19 |
| < | | DATA | COUNTERS | > | |

Efficiencies & OEE

Tracks real time efficiencies based on production, feed, and time

- Helps operators reach a productivity target, and know when a process is running poorly
- Identifies machine problems in real-time, resulting in increased productivity
- Identifies feed issues on certain machines
- Shows productivity loss due to speed, feed, or downtime
- Motivates operators to work more efficiently

| RUNNING | SHIFT OEE: OVERALL EQUIPMENT EFFECTIVENESS | 03:24 PM 02/08/12 | | | |
|----------------------------|--|---------------------------|----------|---|--|
| SHIFT AVAILABILITY PERCENT | | SHIFT PERFORMANCE PERCENT | | | |
| 98.6% | | 76.9% | | | |
| SHIFT QUALITY PERCENT | | SHIFT OEE | | | |
| 99.8% | | 75.6% | | | |
| < | | DATA | COUNTERS | > | |

Part and Operator Information

Tracks job number, part number, operator ID, and scrap

- Provides optimum running rates to the operator along with other useful information
- Provides up to 4 pending part jobs for the operator to begin, saving data entry time
- Tracks uptime and downtime by part, job, and operator
- Tracks response times by operator
- Tracks production counts and efficiencies by part, by job, and by operator

| RUN | PART AND OPERATOR HISTORY MENU PAGE 1 | | 12:00 PM 01/01/06 | |
|-------------------|---------------------------------------|----------------------|-------------------|--|
| PART BUTTON | PART NUMBER | START TIME | START DATE | |
| | OPERATOR ID | END TIME | END DATE | |
| CURRENT SESSION | PART B OPER 2 | 12:30 (STILL ACTIVE) | 1 / 1 | |
| 1ST PRIOR SESSION | PART A OPER 2 | 12:00 12:30 | 1 / 1 | |
| 2ND PRIOR SESSION | PART A OPER 1 | 10:05 12:00 | 1 / 1 | |
| < | | HISTORY MENU | > | |

Pending Parts

- Identifies upcoming parts to the operator
- Eliminates operator entry of most job information
- Provides optimum machine speeds for the part
- Can be directly loaded from a manufacturing system or entered by the production scheduler

| RUN | PENDING PART 1 DETAILS | | 12:00 PM 01/01/06 | |
|--------------------|------------------------|---------------------------------------|-------------------|--|
| JOB NUMBER | JOB 123 | IDEAL RPM | 60 | |
| PART NUMBER | PART ABC | IDEAL PPM | 60 | |
| PARTS PER CYCLE | 1 | PRESS BUTTON BELOW TO START THIS PART | | |
| ORDER QUANTITY | 5000 | START PART | | |
| PENDING PARTS MENU | | | | |



IMPAX TSS Screens & Features - Counts

The IMPAX Time Saver System provides many features designed to increase productivity, save time, and help your shop run more efficiently. TSS monitors automatically collect information on production totals, machine efficiency, and accumulated machine uptime and downtime. All occurrences of downtime, and the corresponding reasons, are tracked and archived. This document gives an overview of the TSS's main features.

Production Counts

Tracks daily production, cycles, and scrap counts for each shift and the day's total

- Provides true production counts without weighing, hand-counting, or other human intervention
- Automatically provides accurate counts for each shift and eliminates tedious count paperwork
- Parts made during a particular shift are always credited to that shift's counts for the machine and session

| STOPPED 2 MINS | DAILY PRODUCTION COUNTS | | 03:21 PM 02/08/12 |
|------------------------|----------------------------|----------|----------------------|
| SHIFT 1 DAILY COUNT | PRODUCTION | CYCLES | SCRAP |
| | 28803 | 28803 | 0 |
| SHIFT 2 DAILY COUNT | 26281 | 26281 | 42 |
| SHIFT 3 DAILY COUNT | 0 | 0 | 0 |
| TOTAL DAILY COUNT | 55084 | 55084 | 42 |
| START MENU | DATA | COUNTERS | USER MENU |

Order Counter

Tracks order quantity, parts made, parts-to-go, minutes remaining, RPM, and PPM

- Eliminates job overruns with machine stop relay
- Encourages operators to prepare upcoming jobs in advance, reducing downtime between jobs
- Provides accurate machine speed and shows when a machine is running too slow or fast
- Provides accurate cycle and part rates and shows rate inconsistencies to the operator
- Provides managers with expected time of job completion

| RUNNING | ORDER COUNTER ORDER QUANTITY REACHED | | 03:11 PM 02/08/12 |
|----------------------|---|---|----------------------|
| ORDER QUANTITY | 100000 | 100% -100 -75 -50 -25 0 TIME LEFT 0 MINS | JOB NUMBER Miami |
| PARTS MADE | 101491 | | PART NUMBER HS 97 |
| PARTS TO GO | 0 | | RPM 60 |
| TIME SINCE LAST DOWN | 1686 MINS | | PPM 60 |
| START MENU | DATA | COUNTERS | USER MENU |

Tool Counters

Tracks the planned cycles, actual cycles, remaining cycles for each of nine tools

- Reveal each tool's true life
- Inform the operator of expected life of each tool
- Encourages the use of each tool to its full life
- Proves cost justifications for tooling purchases, repairs, and design changes
- Alerts tool room when new tools are needed at machines and alerts operator when to change tool

| RUNNING | TOOL COUNTERS 1 | | | 05:23 PM 02/08/12 |
|------------------|--------------------|-----------|---------------|----------------------|
| | Station 1 | Station 2 | Station 3 | |
| CYCLES PLANNED | 120000 | 125000 | 115000 | |
| CYCLES USED | 116747 | 116737 | 116727 | |
| CYCLES REMAINING | 3254 | 8264 | COUNT REACHED | |
| < | DATA | COUNTERS | > | |



Maintenance Counters

Tracks the planned cycles, actual cycles, remaining cycles for each of nine maintenance items

- Alerts operators and maintenance personnel to upcoming service issues
- Allows PM and service to be scheduled when they are needed, not on a weekly/monthly schedule that doesn't reflect machine usage
- Encourages the correct order rate and parts needed in spare parts inventories
- Allows the best use of maintenance personnel

| | | | |
|-------------------------|-------------------------------|-----------------|----------------------|
| RUNNING | MAINTENANCE COUNTERS 1 | | 05:10 PM 02/08/12 |
| | oil | filter | Belts |
| CYCLES PLANNED | 500000 | 500000 | 5000000 |
| CYCLES USED | 115922 | 115913 | 660927 |
| CYCLES REMAINING | 384078 | 384087 | 4339073 |
| | DATA | COUNTERS | > |

Part Scrap Counter

- Identifies material waste
- Tracks scrap generation by job, identifying parts that cause excessive waste
- Justifies process improvement to reduce scrap
- Is used in OEE calculations

| | | | |
|--|--------------------|----------------------------|----------------------|
| RUNNING | SCRAP ENTRY | | 03:16 PM 02/08/12 |
| JOB NUMBER | Miami | PART NUMBER | HS 97 |
| CURRENT JOB SCRAP | 62 | CURRENT SHIFT SCRAP | 42 |
| ADD SCRAP: | | | |
| ENTER SCRAP TO ADD, THEN PRESS BUTTON | 0 | PRESS TO ADD SCRAP | |
| USER MENU | | | |

Machine data by day, week, and month

Tracks counts, uptime, and downtime for each day, week, and month historically

- Tracks historical data and displays current day, week, and month
- Identifies trends in performance and production
- Shows which machines run well and which may need service

| | | | |
|-----------------------------|-----------------------------|----------------------------|----------------------|
| RUN | MACHINE HISTORY MENU | | 12:00 PM 01/01/06 |
| DAILY MACHINE DATA | | WEEKLY MACHINE DATA | |
| MONTHLY MACHINE DATA | | YEARLY MACHINE DATA | |
| HISTORY MENU | | | |