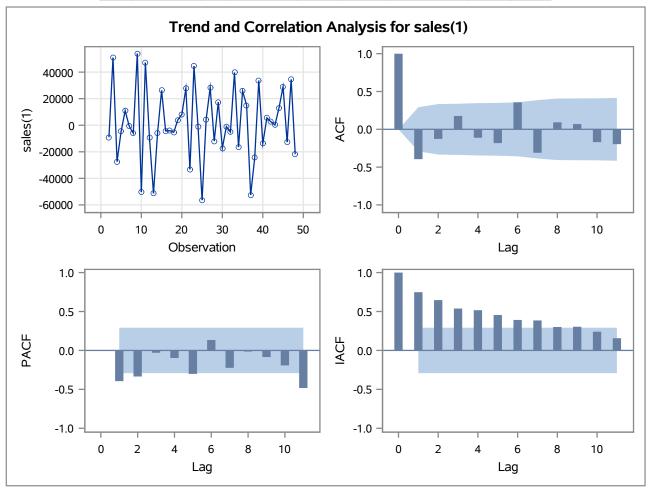
| Name of Variable = sales | | | |
|---|----------|--|--|
| Period(s) of Differencing | 1 | | |
| Mean of Working Series | 1628.263 | | |
| Standard Deviation | 26754.34 | | |
| Number of Observations | 47 | | |
| Observation(s) eliminated by differencing | 1 | | |

| | Autocorrelation Check for White Noise | | | | | | | | |
|--|---------------------------------------|---|--------|-------------------------------|--|--|--|--------|-------|
| To Lag Chi-Square DF Pr > ChiSq Autocorrelations | | | | | | | | | |
| 6 | 19.93 | 6 | 0.0029 | 29 -0.395 -0.127 0.177 -0.112 | | | | -0.183 | 0.357 |

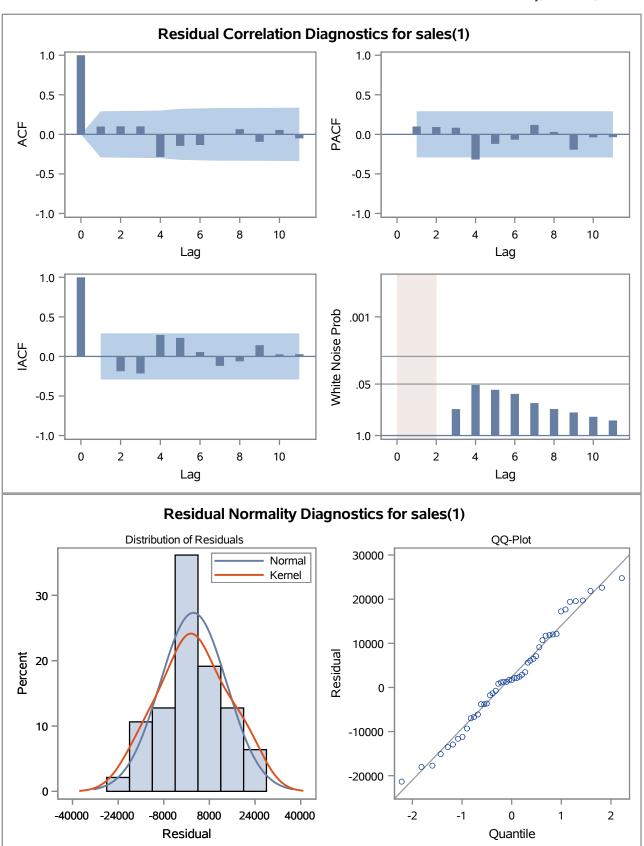


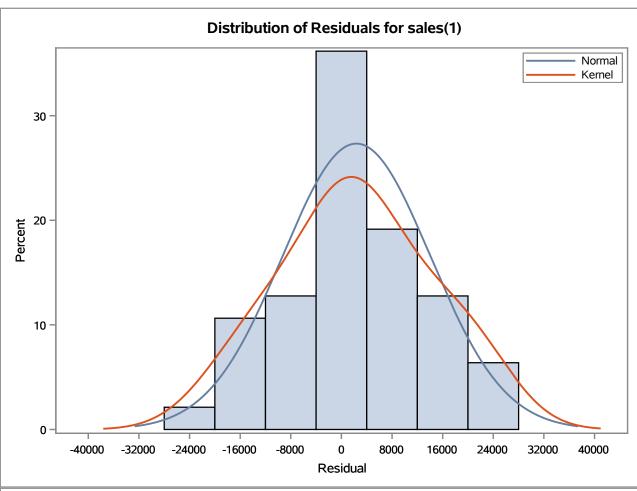
| Maximum Likelihood Estimation | | | | | | |
|-------------------------------|-----------|-------------------|---------|-------------------|-----|--|
| Parameter | Estimate | Standard Error | t Value | Approx Pr > t | Lag | |
| MU | 629.90503 | 697.38167 | 0.90 | 0.3664 | 0 | |
| MA1,1 | 0.88119 | 0.06552 | 13.45 | <.0001 | 1 | |
| AR1,1 | 0.86890 | 0.05400 | 16.09 | <.0001 | 12 | |

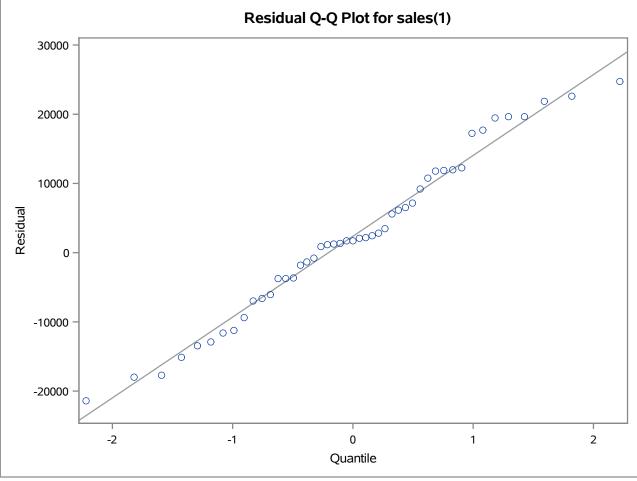
| Constant Estimate | 82.57937 |
|---------------------|----------|
| Variance Estimate | 1.4854E8 |
| Std Error Estimate | 12187.75 |
| AIC | 1038.603 |
| SBC | 1044.153 |
| Number of Residuals | 47 |

| Correlations of Parameter Estimates | | | | | | |
|--|-------|-------|-------|--|--|--|
| Parameter MU MA1,1 AR | | | | | | |
| MU | 1.000 | 0.295 | 0.162 | | | |
| MA1,1 | 0.295 | 1.000 | 0.114 | | | |
| AR1,1 | 0.162 | 0.114 | 1.000 | | | |

| | Autocorrelation Check of Residuals | | | | | | | | |
|-----------|------------------------------------|----|------------|----------------------|--------|--------|--------|--------|--------|
| To Lag | Chi-Square | DF | Pr > ChiSq | Autocorrelations | | | | | |
| 6 | 7.47 | 4 | 0.1130 | 0.143 | 0.131 | 0.126 | -0.247 | -0.120 | -0.111 |
| 12 | 12.90 | 10 | 0.2292 | 0.2292 0.013 0.081 - | -0.067 | 0.073 | -0.026 | -0.258 | |
| 18 | 19.04 | 16 | 0.2665 | 0.068 | -0.117 | -0.083 | 0.001 | 0.210 | 0.111 |
| 24 | 23.91 | 22 | 0.3518 | -0.039 | 0.190 | -0.050 | 0.011 | 0.100 | 0.070 |







| Model for variable sales | | | |
|---------------------------|---------|--|--|
| Estimated Mean | 629.905 | | |
| Period(s) of Differencing | 1 | | |

Autoregressive Factors 1 - 0.8689 B**(12) Factor 1:

Moving Average Factors Factor 1: 1 - 0.88119 B**(1)

Warning: The ID value for observation 3 is the same as the ID value for the last observation according to ID variable ORDER DATE.

Warning: There are gaps in the interval for observation 5 according to ID variable ORDER DATE.

Warning: The ID value for observation 6 is the same as the ID value for the last observation according to ID variable ORDER_DATE.

Warning: There are gaps in the interval for observation 8 according to ID variable ORDER_DATE.

Warning: The ID value for observation 9 is the same as the ID value for the last observation according to ID variable ORDER DATE.

Warning: There are gaps in the interval for observation 10 according to ID variable ORDER DATE.

Warning: The ID value for observation 12 is the same as the ID value for the last observation according to ID variable ORDER_DATE.

Warning: There are gaps in the interval for observation 13 according to ID variable ORDER DATE.

Warning: The ID value for observation 15 is the same as the ID value for the last observation according to ID variable ORDER DATE.

Warning: There are gaps in the interval for observation 16 according to ID variable ORDER DATE.

Warning: The ID value for observation 18 is the same as the ID value for the last observation according to ID variable ORDER DATE.

Warning: There are gaps in the interval for observation 19 according to ID variable ORDER DATE.

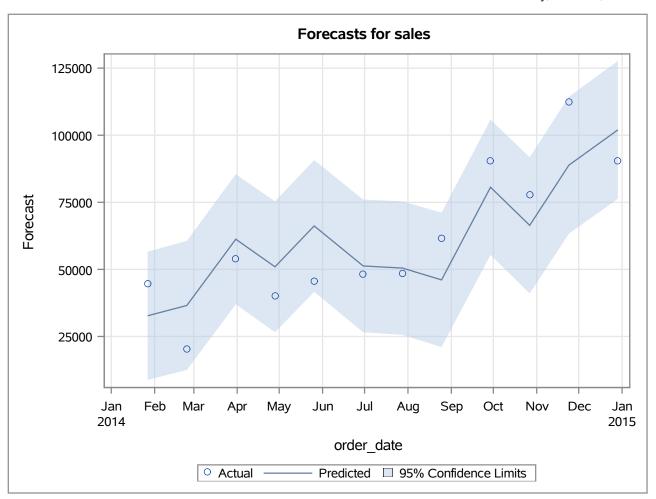
Note: Further warnings will not be printed.

Warning: The ID value for observation 21 is the same as the ID value for the last observation according to ID variable ORDER_DATE.

Warning: The ID value for observation 27 is the same as the ID value for the last observation according to ID variable ORDER_DATE.

Warning: The ID value for observation 30 is the same as the ID value for the last observation according to ID variable ORDER DATE.

| | Forecasts for variable sales | | | | | | | |
|-----|------------------------------|-----------|------------|--------------|-------------|-------------|--|--|
| Obs | Forecast | Std Error | 95% Confid | lence Limits | Actual | Residual | | |
| 37 | 32714.3310 | 12187.745 | 8826.7896 | 56601.8724 | 44703.1420 | 11988.8110 | | |
| 38 | 36555.1021 | 12273.464 | 12499.5556 | 60610.6486 | 20283.5134 | -16271.5887 | | |
| 39 | 61243.6843 | 12358.587 | 37021.2980 | 85466.0705 | 53908.9620 | -7334.7223 | | |
| 40 | 50953.6398 | 12443.129 | 26565.5551 | 75341.7246 | 40112.4209 | -10841.2189 | | |
| 41 | 66192.0262 | 12527.100 | 41639.3612 | 90744.6911 | 45651.2362 | -20540.7900 | | |
| 42 | 51276.8084 | 12610.512 | 26560.6591 | 75992.9577 | 48259.7487 | -3017.0597 | | |
| 43 | 50499.4460 | 12693.376 | 25620.8866 | 75378.0054 | 48428.3650 | -2071.0810 | | |
| 44 | 46085.2925 | 12775.702 | 21045.3764 | 71125.2086 | 61516.0860 | 15430.7935 | | |
| 45 | 80613.3530 | 12857.501 | 55413.1133 | 105813.5926 | 90488.7220 | 9875.3690 | | |
| 46 | 66406.8594 | 12938.784 | 41047.3098 | 91766.4091 | 77793.7552 | 11386.8958 | | |
| 47 | 88845.5825 | 13019.558 | 63327.7174 | 114363.4477 | 112326.4710 | 23480.8885 | | |
| 48 | 102000.8724 | 13099.835 | 76325.6680 | 127676.0768 | 90474.6008 | -11526.2716 | | |



| Outlier Detection Summary | | | | |
|---------------------------|------|--|--|--|
| Maximum number searched | 1 | | | |
| Number found | 1 | | | |
| Significance used | 0.05 | | | |

| Obs | Туре | Estimate | Chi-Square | Approx Prob>ChiSq |
|-----|----------|----------|------------|----------------------|
| 29 | Additive | 20677.9 | 7.18 | 0.0074 |

Sunday, October 8, 2023 04:46:06 PM **7**

| Obs | rmse | mae | mape |
|-----|----------|----------|---------|
| 1 | 16023.74 | 11673.00 | 29.2295 |