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	-0.395	-0.127	0.177	-0.112	-0.183	0.357

Trend and Correlation Analysis for sales(1)
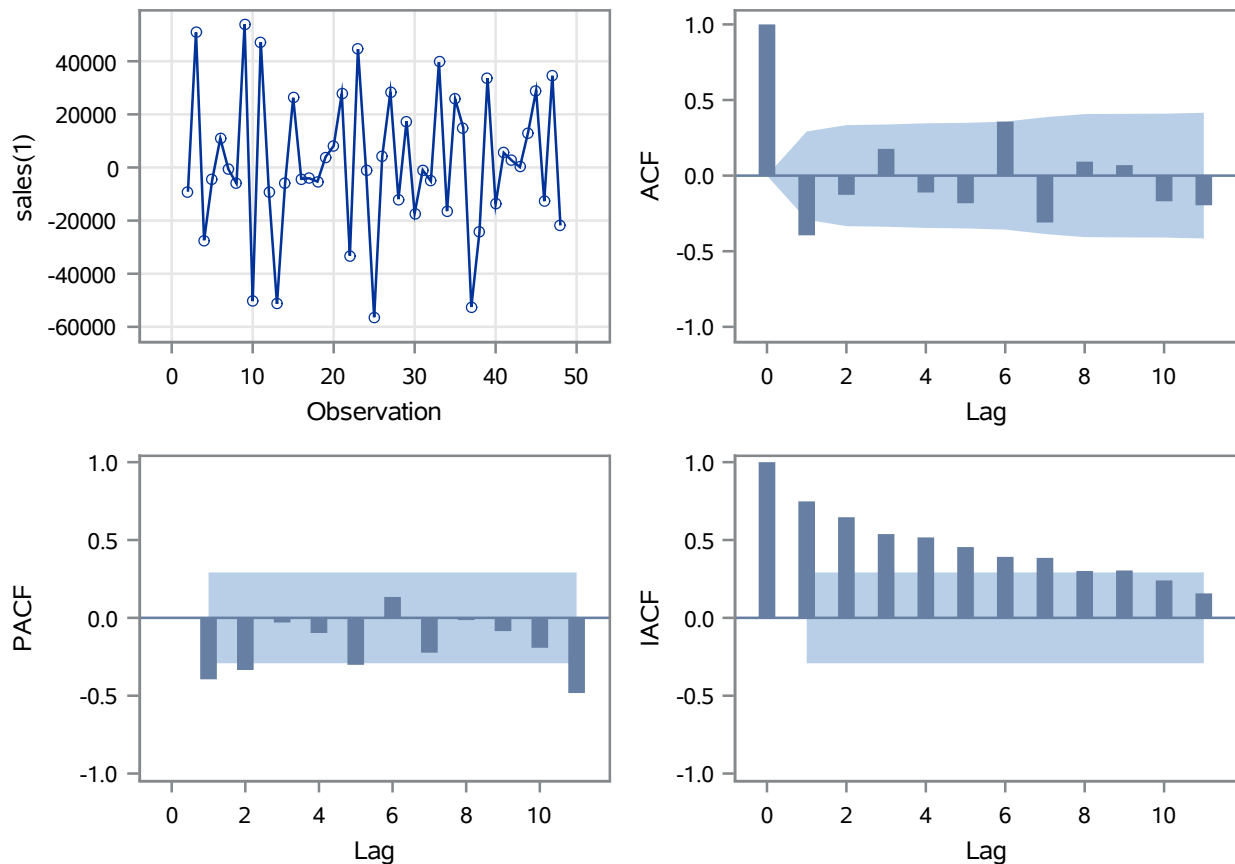
Warning: The model defined by the new estimates is unstable. The iteration process has been terminated.

Warning: Estimates may not have converged.

ARIMA Estimation Optimization Summary	
Estimation Method	Maximum Likelihood
Parameters Estimated	2
Termination Criteria	Maximum Relative Change in Estimates
Iteration Stopping Value	0.001
Criteria Value	28.01659

ARIMA Estimation Optimization Summary	
Maximum Absolute Value of Gradient	12957351
R-Square Change from Last Iteration	0.112162
Objective Function	Log Gaussian Likelihood
Objective Function Value	-537.818
Marquardt's Lambda Coefficient	1E-12
Numerical Derivative Perturbation Delta	0.001
Iterations	17
Warning Message	Estimates may not have converged.

Maximum Likelihood Estimation					
Parameter	**Estimate**	**Standard Error**	**t Value**	**Approx Pr > |t|**	**Lag**
MU	841.74937	312.54137	2.69	0.0071	0
MA1,1	0.99986	38.44316	0.03	0.9793	1

Constant Estimate	841.7494
Variance Estimate	4.8967E8
Std Error Estimate	22128.56
AIC	1079.636
SBC	1083.336
Number of Residuals	47

Correlations of Parameter Estimates		
Parameter	**MU**	**MA1,1**
MU	1.000	-0.706
MA1,1	-0.706	1.000

Autocorrelation Check of Residuals									
To Lag	**Chi-Square**	**DF**	**Pr > ChiSq**	**Autocorrelations**					
6	7.60	5	0.1798	0.230	0.034	0.070	-0.177	-0.231	0.018
12	33.28	11	0.0005	-0.279	-0.109	-0.057	-0.147	0.047	0.535
18	38.09	17	0.0024	0.117	-0.034	-0.014	-0.148	-0.163	0.034
24	56.05	23	0.0001	-0.199	-0.060	-0.041	-0.139	-0.004	0.353

Residual Correlation Diagnostics for sales(1)
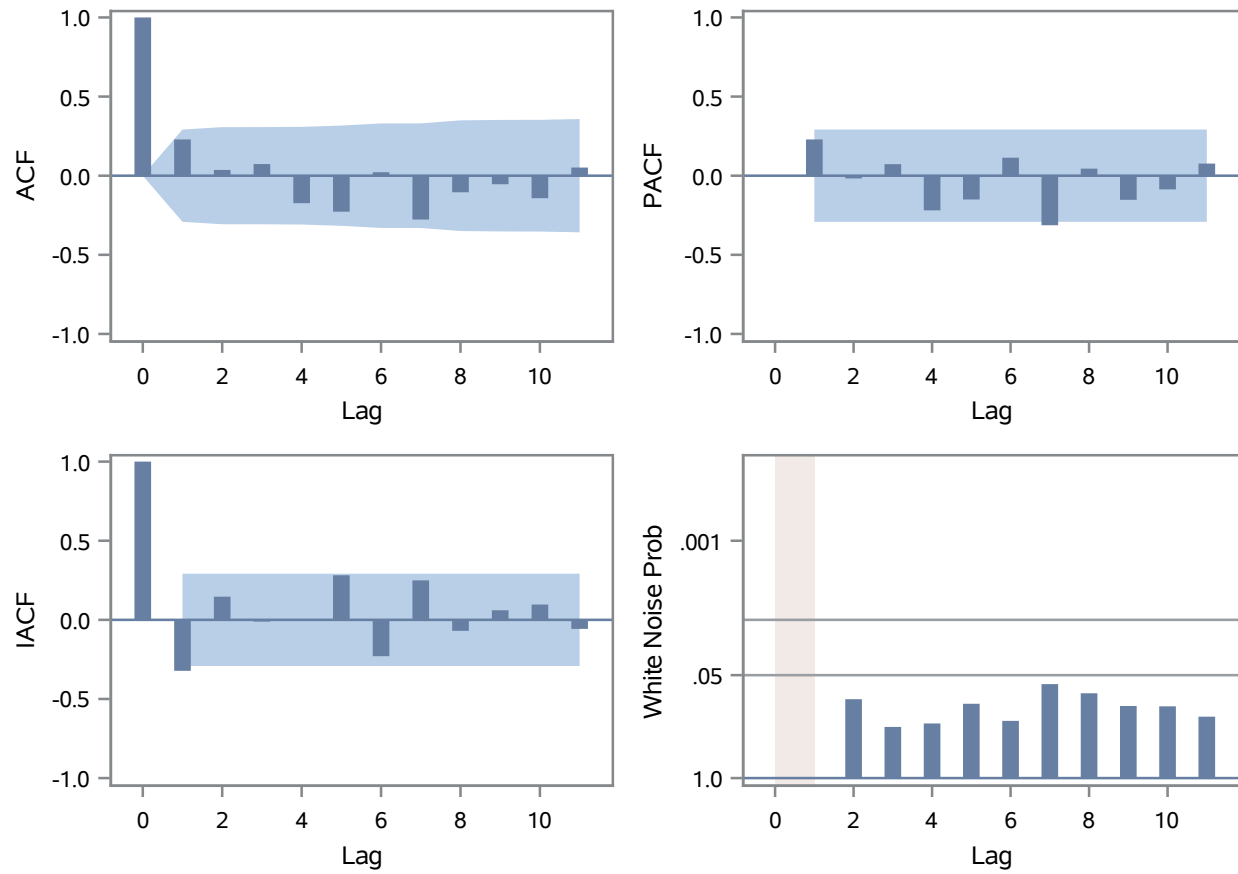
Residual Normality Diagnostics for sales(1)

Distribution of Residuals for sales(1)

Residual Q-Q Plot for sales(1)
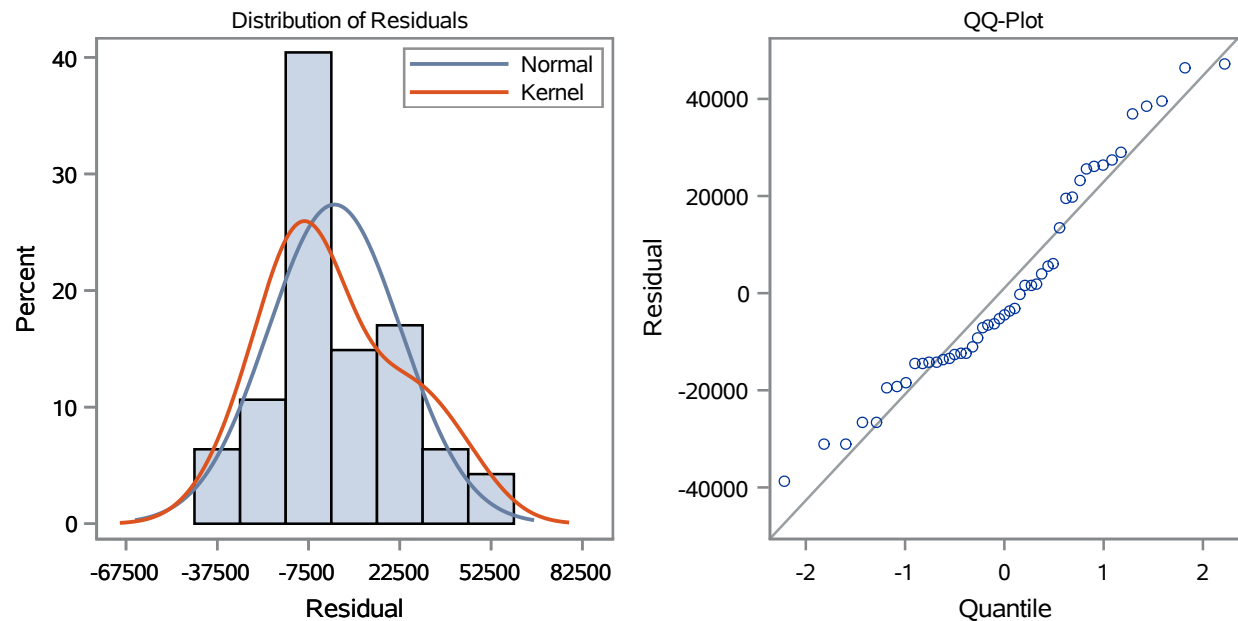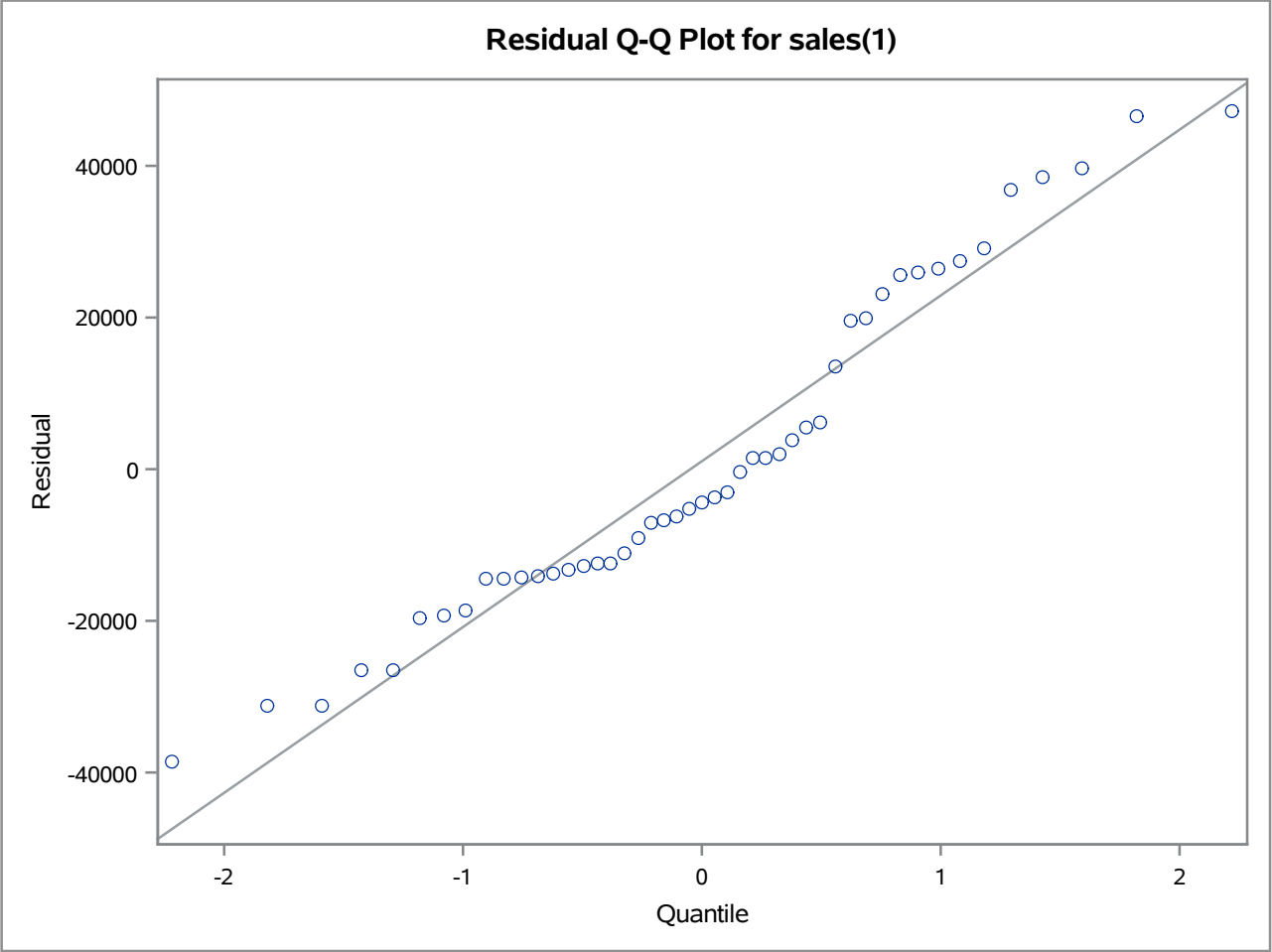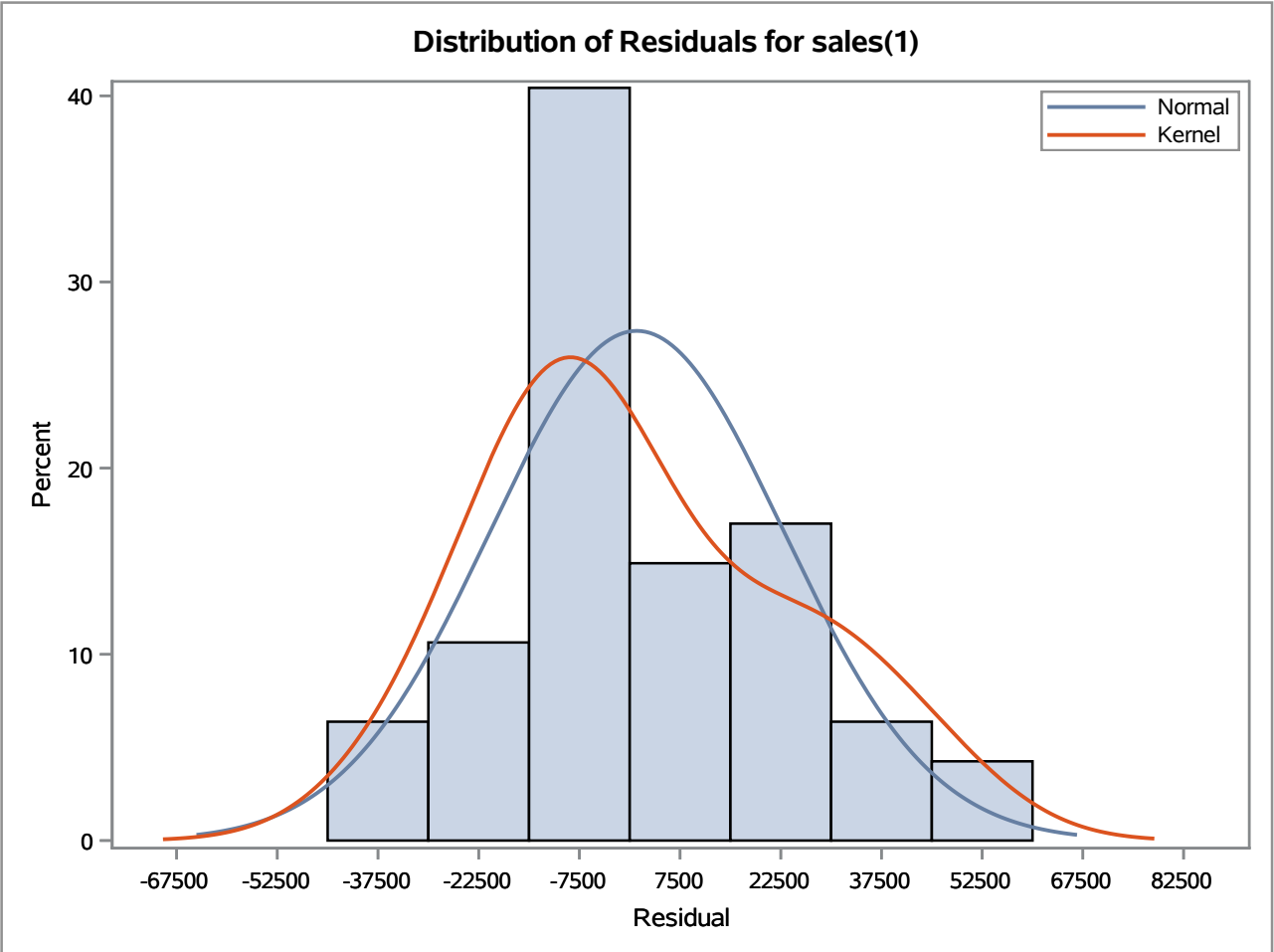
Model for variable sales	
Estimated Mean	841.7494
Period(s) of Differencing	1

Moving Average Factors	
Factor 1:	1 - 0.99986 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% Confidence Limits		Actual	Residual
37	58996.0877	22128.560	15624.9070	102367.2684	44703.1420	-14292.9457
38	59837.8371	22128.560	16466.6559	103209.0182	20283.5134	-39554.3237
39	60679.5864	22128.560	17308.4048	104050.7680	53908.9620	-6770.6244
40	61521.3358	22128.561	18150.1537	104892.5178	40112.4209	-21408.9149
41	62363.0852	22128.561	18991.9027	105734.2676	45651.2362	-16711.8490
42	63204.8345	22128.561	19833.6516	106576.0175	48259.7487	-14945.0858
43	64046.5839	22128.561	20675.4005	107417.7673	48428.3650	-15618.2189
44	64888.3333	22128.562	21517.1494	108259.5171	61516.0860	-3372.2473
45	65730.0826	22128.562	22358.8983	109101.2669	90488.7220	24758.6394
46	66571.8320	22128.562	23200.6472	109943.0168	77793.7552	11221.9232
47	67413.5814	22128.562	24042.3961	110784.7666	112326.4710	44912.8896
48	68255.3307	22128.563	24884.1450	111626.5164	90474.6008	22219.2701

Forecasts for sales

Legend: Actual · Predicted · 95% Confidence Limits
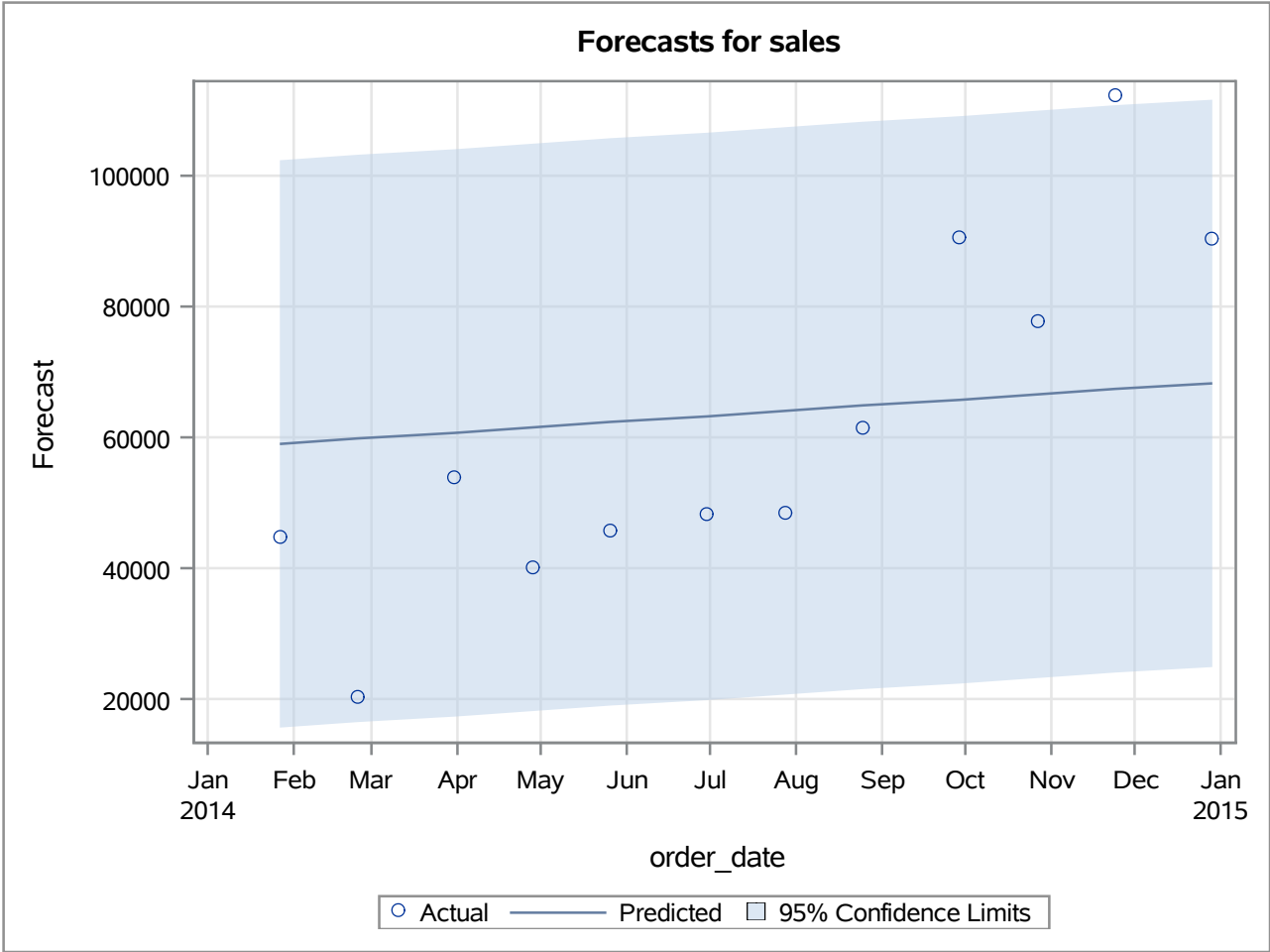
Outlier Detection Summary	
Maximum number searched	1
Number found	1
Significance used	0.05

Outlier Details				
Obs	**Type**	**Estimate**	**Chi-Square**	**Approx Prob>ChiSq**
45	Shift	28793.5	6.69	0.0097

Obs	rmse	mae	mape
1	22475.77	18448.25	51.0189