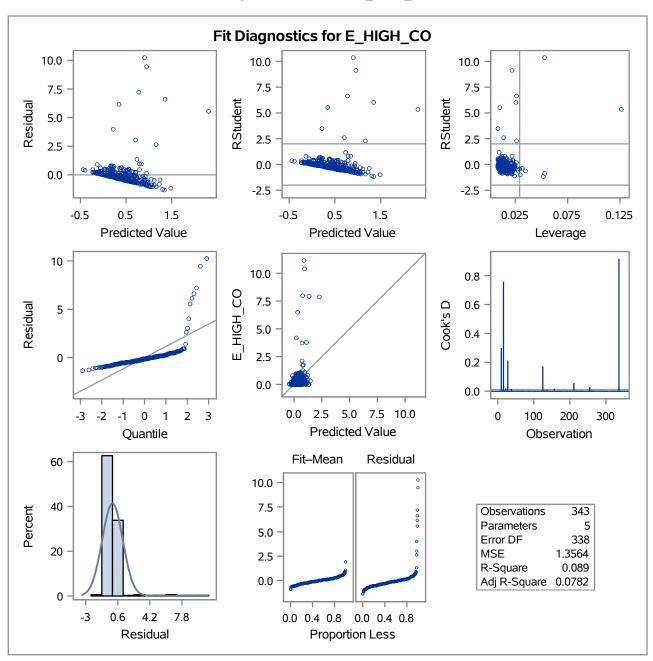
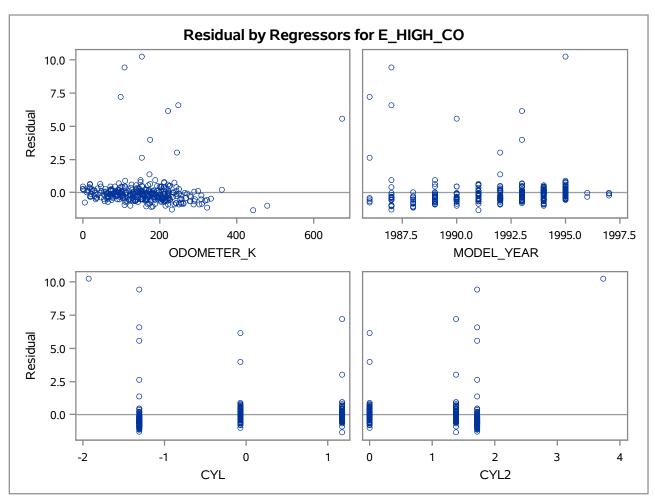
Number of Observations Read	343
Number of Observations Used	343

Analysis of Variance							
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F		
Model	4	44.80248	11.20062	8.26	<.0001		
Error	338	458.47649	1.35644				
Corrected Total	342	503.27896					

Root MSE	1.16466	R-Square	0.0890
Dependent Mean	0.41875	Adj R-Sq	0.0782
Coeff Var	278.13084		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t			
Intercept	1	160.23545	49.68420	3.23	0.0014			
ODOMETER_K	1	0.00282	0.00077196	3.66	0.0003			
MODEL_YEAR		-0.08054	0.02494	-3.23	0.0014			
CYL	1	-0.06440	0.06461	-1.00	0.3196			
CYL2	1	0.21269	0.08399	2.53	0.0118			





The GLMSELECT Procedure

Data Set	WORK.EMISSIONS_HIGHSTD
Dependent Variable	LNP_E_HIGH_CO
Selection Method	None

Number of Observations Read	343
Number of Observations Used	289

Class Level Information						
Class	Levels	Values				
TRANS_TYPE	2	АМ				
DUAL_EXHAUST	2	NY				

Dimensions			
Number of Effects	7		
Number of Parameters	7		

The GLMSELECT Procedure

Least Squares Summary						
Step	Effect Entered	Number Effects In	SBC			
0	Intercept	1	307.7757			
1	ODOMETER_K	2	291.4818			
2	MODEL_YEAR	3	287.9742*			
3	CYL	4	292.5197			
4	CYL*CYL	5	297.7196			
5	TRANS_TYPE	6	300.0099			
6	6 ODOMETER_*TRANS_TYPE		302.5635			
* Optimal Value of Criterion						

The GLMSELECT Procedure Least Squares Model (No Selection)

Analysis of Variance							
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F		
Model	6	104.29659	17.38277	6.83	<.0001		
Error	282	717.74201	2.54518				
Corrected Total	288	822.03860					

Root MSE	1.59536
Dependent Mean	-2.03012
R-Square	0.1269
Adj R-Sq	0.1083
AIC	567.89853
AICC	568.41282
SBC	302.56352

Parameter Estimates								
Parameter	DF	Estimate	Standard Error	t Value	Pr > t			
Intercept	1	225.303582	74.111869	3.04	0.0026			
ODOMETER_K	1	0.003900	0.001735	2.25	0.0254			
MODEL_YEAR	1	-0.114324	0.037205	-3.07	0.0023			
CYL	1	0.173491	0.101397	1.71	0.0882			
CYL*CYL	1	0.109740	0.126471	0.87	0.3863			
TRANS_TYPE A	1	-1.033001	0.426749	-2.42	0.0161			
ODOMETER_*TRANS_TYPE A	1	0.004013	0.002296	1.75	0.0816			

Number of Observations Read	343
Number of Observations Used	289
Number of Observations with Missing Values	54

Analysis of Variance						
Source DF Squares Square F Value Pr > 1						
Model	6	104.29659	17.38277	6.83	<.0001	
Error	282	717.74201	2.54518			
Corrected Total	288	822.03860				

Root MSE	1.59536	R-Square	0.1269
Dependent Mean	-2.03012	Adj R-Sq	0.1083
Coeff Var	-78.58459		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	225.30358	74.11187	3.04	0.0026
ODOMETER_K	ODOMETER_K	1	0.00390	0.00173	2.25	0.0254
MODEL_YEAR	MODEL_YEAR	1	-0.11432	0.03720	-3.07	0.0023
CYL	CYL	1	0.17349	0.10140	1.71	0.0882
CYL*CYL	CYL*CYL	1	0.10974	0.12647	0.87	0.3863
TRANS_TYPE A	TRANS_TYPE A	1	-1.03300	0.42675	-2.42	0.0161
ODOMETER_*TRANS_TYPE A	ODOMETER_*TRANS_TYPE A	1	0.00401	0.00230	1.75	0.0816

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
1	-0.0305	-1.9290	1.8985		
2	-0.5798	-2.2142	1.6344		
3	-4.6052	-1.8103	-2.7949		
4	-1.8326	-3.0073	1.1747		
5		-2.1206			
6		-2.2785			
7	-2.3026	-2.2502	-0.0524		
8	-3.5066	-2.4117	-1.0949		
9		-1.7609			
10	2.3408	-2.0761	4.4170		
11	-2.5257	-2.1996	-0.3261		
12		-3.5439			
13		-2.7188			
14	-0.5621	-2.1320	1.5699		
15	0.0488	-0.6224	0.6712		
16	2.0643	0.3869	1.6774		
17	-0.5621	-2.6048	2.0427		
18	-0.6349	-2.4775	1.8426		
19	-0.6162	-2.0395	1.4233		
20	-1.1712	-1.4563	0.2851		
21	-3.9120	-2.9111	-1.0010		
22	1.4375	-2.2057	3.6432		
23	-1.0498	-1.4610	0.4112		
24	-4.6052	-1.4771	-3.1281		
25	-4.6052	-3.0408	-1.5643		
26	-0.0305	-2.2722	2.2418		
27	-0.6931	-1.5790	0.8859		
28	2.0769	-1.6388	3.7157		
29	-1.0788	-2.6259	1.5471		
30	-0.7765	-2.2750	1.4984		
31	-1.8326	-1.6447	-0.1879		
32	-3.5066	-2.6004	-0.9062		
33	-3.9120	-2.1993	-1.7127		
34	-2.0402	-2.3124	0.2722		

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
35	-0.7340	-0.8799	0.1460		
36	-0.7985	-1.7231	0.9246		
37	-1.0217	-2.1005	1.0788		
38		0.5038			
39	-4.6052	-2.4410	-2.1641		
40	-1.4697	-2.4407	0.9710		
41		-3.0721			
42	-3.2189	-3.1241	-0.0947		
43	-1.5606	-2.5769	1.0162		
44	-3.5066	-1.3607	-2.1459		
45	-0.1054	-2.0929	1.9875		
46	-0.5798	-2.2592	1.6793		
47		-1.4333			
48		-1.4332			
49		-1.1605			
50	-1.2040	-1.7125	0.5086		
51	-3.5066	-1.4183	-2.0883		
52		-1.3434			
53	-0.9676	-1.5595	0.5919		
54	-2.9957	-2.1240	-0.8717		
55		-2.7240			
56	-3.5066	-2.1844	-1.3222		
57	-2.5257	-2.2848	-0.2409		
58	-2.3026	-1.5724	-0.7302		
59		-2.1174			
60	-2.3026	-2.3869	0.0843		
61	-2.6593	-1.8257	-0.8336		
62	-1.5141	-2.2483	0.7342		
63	-2.0402	-1.9419	-0.0983		
64	-1.5141	-3.1653	1.6512		
65	-3.2189	-2.7375	-0.4814		
66	-1.9661	-1.8063	-0.1598		
67	-1.7720	-2.4690	0.6971		
68	-3.9120	-3.2307	-0.6813		

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
69		-2.8121			
70	-0.2485	-2.0303	1.7818		
71	-1.4697	-3.3401	1.8704		
72	-0.1393	-2.2051	2.0659		
73	-0.3425	-2.0286	1.6861		
74	-3.9120	-3.2126	-0.6994		
75		-1.6720			
76	-0.2485	-2.9466	2.6982		
77		-1.6867			
78	-2.1203	-2.2649	0.1446		
79	-1.7148	-1.7198	0.004985		
80	-3.9120	-3.4509	-0.4612		
81	-3.5066	-1.8237	-1.6829		
82	-0.7985	-2.1371	1.3386		
83	-0.3857	-1.9081	1.5224		
84	-2.0402	-1.8137	-0.2266		
85	-4.6052	-2.3368	-2.2684		
86	-2.2073	-2.0769	-0.1304		
87	-3.9120	-2.5287	-1.3833		
88	-0.4620	-1.8903	1.4282		
89	-0.1863	-1.0850	0.8987		
90	-3.9120	-2.1562	-1.7559		
91	-0.8675	-2.1839	1.3164		
92		-1.9558			
93		-1.9762			
94	-1.8971	-1.3402	-0.5570		
95	-0.1393	-1.8323	1.6930		
96	-2.8134	-2.3568	-0.4566		
97	-2.9957	-2.8787	-0.1170		
98	-1.8326	-1.8323	-0.000315		
99	-4.6052	-1.9711	-2.6340		
100	-1.1394	-2.2486	1.1091		
101		-1.8681			
102	-3.9120	-2.2147	-1.6973		

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
103	-1.5606	-2.2940	0.7333		
104	-4.6052	-3.2126	-1.3926		
105	-4.6052	-3.2126	-1.3926		
106	-1.6094	-1.2346	-0.3748		
107	-1.6607	-2.3072	0.6465		
108	-4.6052	-3.0454	-1.5598		
109	-0.4308	-2.7141	2.2834		
110	-4.6052	-2.7141	-1.8911		
111	-0.3285	-0.9560	0.6275		
112	0.2070	-1.7048	1.9118		
113	-1.7720	-1.6899	-0.0821		
114		-2.0396			
115		-3.2876			
116	-2.2073	-1.4900	-0.7173		
117	-4.6052	-1.2452	-3.3600		
118		-2.4940			
119	-3.5066	-2.3960	-1.1106		
120	-3.9120	-2.6807	-1.2313		
121	-3.9120	-3.0898	-0.8222		
122	-1.6094	-1.6100	0.000611		
123	-1.1712	-1.8422	0.6710		
124		-2.4230			
125	2.0732	-0.9304	3.0036		
126	-4.6052	-1.9165	-2.6886		
127	-1.7148	-2.9360	1.2212		
128	-4.6052	-1.7331	-2.8720		
129	-0.3425	-2.4484	2.1059		
130	-0.9163	-2.0979	1.1816		
131	-1.1394	-0.4912	-0.6482		
132	-1.1712	-1.9617	0.7906		
133	-2.6593	-2.1406	-0.5187		
134	-4.6052	-1.9559	-2.6493		
135	-1.7720	-1.1821	-0.5898		
136	0.0198	-2.0327	2.0525		

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
137	-4.6052	-0.8005	-3.8047		
138		-1.8496			
139	-0.1165	-1.4581	1.3416		
140	-1.5141	-2.0661	0.5520		
141	-0.9416	-1.5650	0.6234		
142	-2.2073	-1.6743	-0.5330		
143	-2.9957	-2.5838	-0.4120		
144	-3.9120	-2.4033	-1.5087		
145	-4.6052	-2.4033	-2.2018		
146	-3.9120	-2.8232	-1.0889		
147	-0.6733	-2.0843	1.4109		
148	-2.8134	-2.4440	-0.3694		
149	-3.9120	-1.8671	-2.0449		
150	-0.9416	-1.4769	0.5353		
151	-1.5606	-1.2489	-0.3117		
152	-0.0619	-1.2270	1.1652		
153	-0.4463	-0.2521	-0.1942		
154	-0.1393	-0.8483	0.7090		
155	-0.9416	-2.2944	1.3527		
156		-2.1797			
157	1.3164	-1.1678	2.4842		
158	-2.9957	-1.9507	-1.0451		
159	-0.4463	-1.9568	1.5105		
160	-3.9120	-2.7966	-1.1155		
161	-2.6593	-1.9017	-0.7576		
162	-1.2379	-2.4263	1.1884		
163	-0.9416	-1.0945	0.1529		
164	-4.6052	-2.3612	-2.2440		
165	-1.8971	-1.2278	-0.6693		
166	-0.0834	-1.5608	1.4775		
167	-4.6052	-1.7952	-2.8100		
168	-0.6733	-1.5691	0.8958		
169	-1.0498	-2.1662	1.1164		
170	-3.5066	-3.0862	-0.4203		

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
171		-2.2898			
172	-3.9120	-2.3114	-1.6006		
173	-4.6052	-2.7818	-1.8234		
174	-0.6931	-1.6189	0.9258		
175		-3.3758			
176	-0.6162	-1.7990	1.1829		
177	-4.6052	-2.7115	-1.8936		
178	-1.0217	-2.3817	1.3600		
179	-3.2189	-2.3663	-0.8526		
180	0.5481	-1.2726	1.8207		
181	-2.2073	-1.1880	-1.0193		
182		-1.0927			
183	-2.2073	-1.0165	-1.1908		
184		-1.4589			
185	-0.0726	-1.8247	1.7521		
186	-2.2073	-1.8869	-0.3204		
187	-1.8971	-2.8832	0.9861		
188	-2.3026	-2.3124	0.009845		
189	-3.9120	-2.6032	-1.3088		
190		-2.7111			
191	-3.9120	-2.0705	-1.8415		
192	-2.1203	-2.3098	0.1895		
193	-1.1394	-1.5275	0.3881		
194	-3.2189	-1.6596	-1.5593		
195	-1.8326	-2.4414	0.6088		
196	-4.6052	-2.6031	-2.0020		
197	-4.6052	-2.3266	-2.2786		
198	-1.4697	-1.4058	-0.0639		
199	-0.4155	-1.8247	1.4092		
200	-2.4079	-1.7434	-0.6645		
201	-3.2189	-1.6409	-1.5780		
202	-1.4697	-2.3442	0.8745		
203	-1.6607	-2.1646	0.5039		
204		-3.0860			

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
205	-2.6593	-2.0928	-0.5665		
206	-4.6052	-1.6617	-2.9435		
207	0.0296	-2.4034	2.4329		
208		-1.7013			
209	-1.2040	-2.2591	1.0551		
210	-1.8326	-2.2099	0.3774		
211	1.8703	-1.6932	3.5635		
212	-0.0619	-1.4108	1.3489		
213	-0.8675	-1.1125	0.2450		
214	-0.5447	-2.0215	1.4768		
215		-2.0093			
216		-1.9420			
217	-4.6052	-1.9420	-2.6631		
218		-3.1381			
219		-2.0661			
220	-2.6593	-0.7915	-1.8678		
221	-0.7985	-1.4045	0.6060		
222	-1.3863	-1.4265	0.0402		
223	-4.6052	-2.1584	-2.4467		
224	-4.6052	-2.5150	-2.0901		
225	-3.9120	-2.5150	-1.3970		
226	-1.8971	-1.4043	-0.4928		
227	-1.8326	-1.8104	-0.0222		
228	-1.1394	-2.2061	1.0667		
229	-0.5978	-2.2591	1.6612		
230	-1.0788	-1.3922	0.3134		
231	-2.8134	-1.8201	-0.9933		
232		-2.8121			
233	-3.5066	-1.1042	-2.4024		
234	-1.8326	-1.9832	0.1506		
235	-0.9163	-2.5876	1.6714		
236	-4.6052	-2.7177	-1.8874		
237	-2.0402	-1.9939	-0.0463		
238	-1.0498	-1.6227	0.5729		

	Output Statistics				
Obs	Dependent Variable	Predicted Value	Residual		
239	-4.6052	-1.3272	-3.2780		
240	-0.7550	-2.8206	2.0656		
241	-4.6052	-3.0064	-1.5988		
242	-3.9120	-3.4509	-0.4612		
243	-2.9957	-1.8237	-1.1721		
244	-3.9120	-3.4509	-0.4612		
245	-4.6052	-1.6203	-2.9848		
246	-1.1712	-1.8705	0.6993		
247		-1.7837			
248	-1.8326	-2.4074	0.5748		
249	-1.8326	-2.2715	0.4389		
250	-4.6052	-2.7179	-1.8873		
251	-1.3093	-2.2651	0.9557		
252	-0.6931	-2.1267	1.4336		
253	-3.9120	-3.2126	-0.6995		
254		-3.2126			
255	1.3350	-1.1886	2.5236		
256	-2.1203	-2.1397	0.0194		
257	-3.9120	-2.0760	-1.8360		
258	-1.5606	-2.3723	0.8116		
259	-3.5066	-1.6092	-1.8974		
260	-0.7340	-1.7453	1.0113		
261		-2.2147			
262		-2.3776			
263	-2.4079	-1.8501	-0.5578		
264	-1.2040	-1.2346	0.0307		
265		-1.9079			
266	-4.6052	-3.8179	-0.7873		
267	-0.6733	-2.3072	1.6338		
268	-0.4005	-1.6994	1.2989		
269		-1.6361			
270	-0.0513	-2.1396	2.0883		
271	-0.1165	-2.1396	2.0231		
272	-1.4697	-2.0031	0.5335		

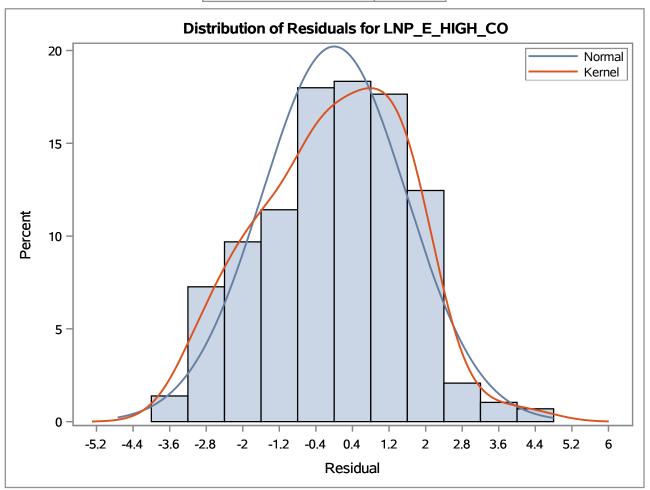
Output Statistics					
Obs	Dependent Variable	Predicted Value	Residual		
273	-4.6052	-1.6791	-2.9260		
274	-0.4943	-1.2946	0.8003		
275	-0.6733	-1.8445	1.1711		
276	-4.6052	-1.4028	-3.2024		
277		-1.9496			
278		-1.8387			
279	-4.6052	-1.5292	-3.0760		
280	-0.2877	-1.9366	1.6490		
281	-3.9120	-2.3155	-1.5965		
282	-3.9120	-1.4184	-2.4937		
283	-1.7720	-2.0250	0.2530		
284	-0.4463	-1.8802	1.4339		
285	-0.6349	-1.4197	0.7848		
286	-0.0834	-2.0170	1.9336		
287	-0.5447	-2.1394	1.5947		
288	-3.9120	-3.2126	-0.6995		
289		-0.9978			
290	-4.6052	-2.4880	-2.1171		
291	-4.6052	-2.0872	-2.5179		
292	-4.6052	-1.6199	-2.9853		
293	-1.0217	-2.2037	1.1821		
294	-2.0402	-1.7709	-0.2693		
295	-1.2730	-2.9707	1.6977		
296	-0.4005	-2.0987	1.6982		
297	-2.1203	-1.5882	-0.5321		
298	-1.3093	-1.6870	0.3776		
299	-3.9120	-2.5091	-1.4029		
300		-2.6877			
301	0.5766	-1.3489	1.9255		
302	-0.4308	-1.6843	1.2535		
303	-0.1393	-2.4905	2.3512		
304	-3.5066	-3.1176	-0.3890		
305	0.0000	-1.7049	1.7049		
306	-3.2189	-1.3412	-1.8777		

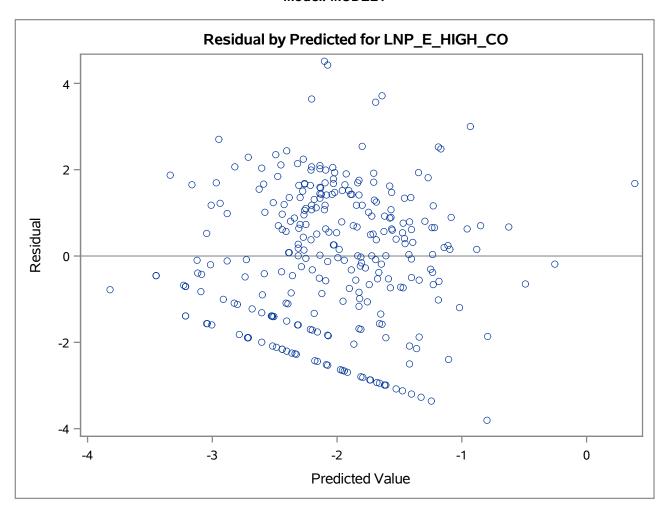
Output Statistics					
Obs	Dependent Variable	Predicted Value	Residual		
307	-4.6052	-2.0732	-2.5320		
308	-1.2379	-1.7328	0.4950		
309		-2.6237			
310	-0.9416	-1.1407	0.1991		
311	-2.0402	-1.6647	-0.3756		
312	-1.7720	-2.0306	0.2586		
313	-0.1744	-2.3154	2.1410		
314	-0.5621	-1.2166	0.6545		
315	-2.9957	-1.6477	-1.3481		
316	-4.6052	-1.7365	-2.8687		
317	-2.5257	-3.0473	0.5216		
318		-2.4615			
319		-1.5357			
320	-3.5066	-1.8099	-1.6966		
321		-1.5083			
322		-1.7135			
323		-1.7767			
324	0.7372	-1.7975	2.5346		
325	-4.6052	-2.1797	-2.4254		
326		-2.9764			
327	-1.4697	-2.0933	0.6236		
328	-2.8134	-2.7289	-0.0845		
329	-0.7133	-1.4710	0.7577		
330	-2.2073	-1.4710	-0.7363		
331	-3.2189	-3.0152	-0.2037		
332	-3.9120	-2.5245	-1.3875		
333	-4.6052	-1.6094	-2.9958		
334	0.0488	-1.5755	1.6243		
335	-0.5798	-1.2398	0.6600		
336	2.4114	-2.1019	4.5134		
337	-1.2730	-2.5112	1.2383		
338	-0.6931	-2.1367	1.4436		
339	-0.4943	-1.5692	1.0749		
340	-2.3026	-2.3847	0.0821		

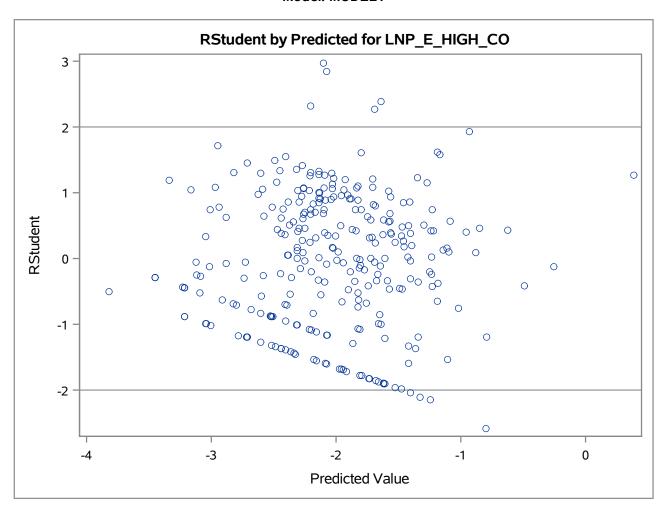
The REG Procedure Model: MODEL1 Dependent Variable: LNP_E_HIGH_CO

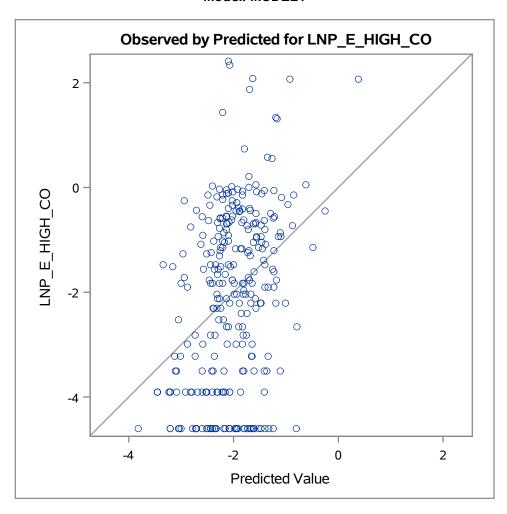
Output Statistics						
Obs Dependent Predicted Value Residu						
341	-0.2231	-2.2083	1.9852			
342	-2.8134	-1.7559	-1.0575			
343	-4.6052	-2.4422	-2.1630			

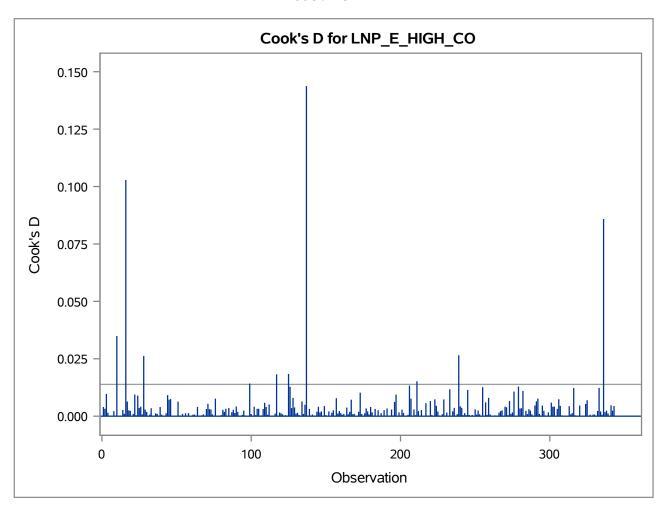
Sum of Residuals	-6.0915E-12
Sum of Squared Residuals	717.74201
Predicted Residual SS (PRESS)	759.47494

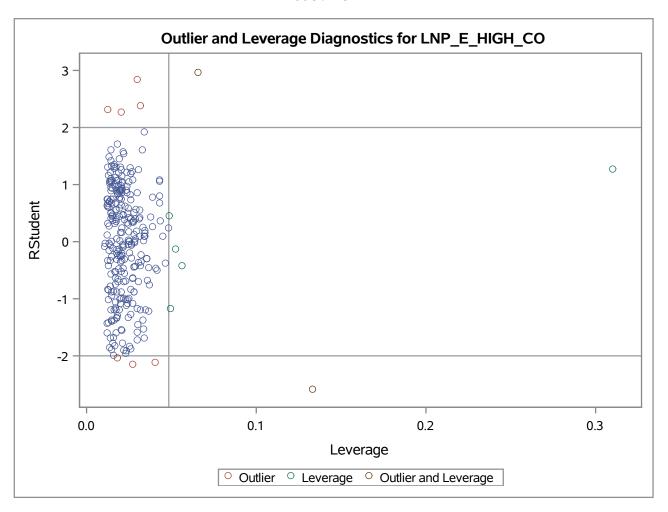


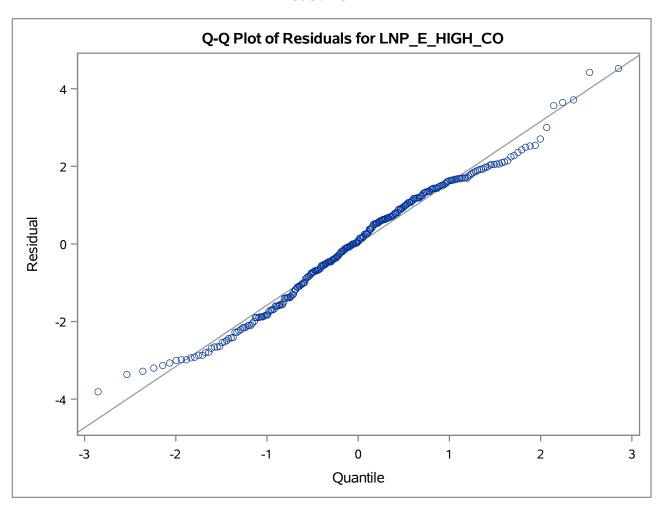


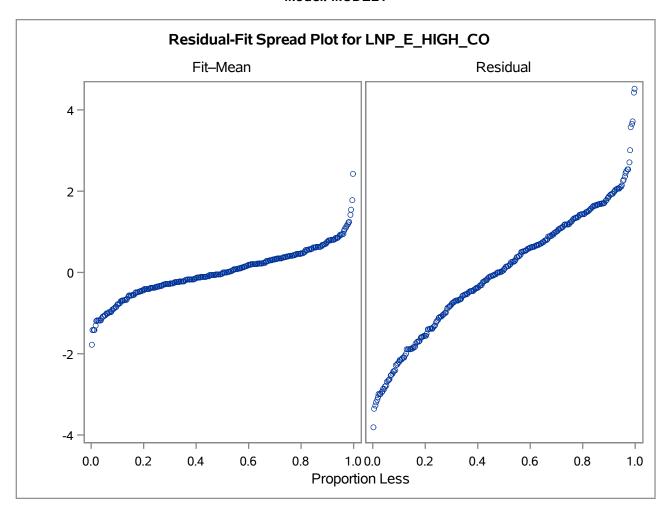


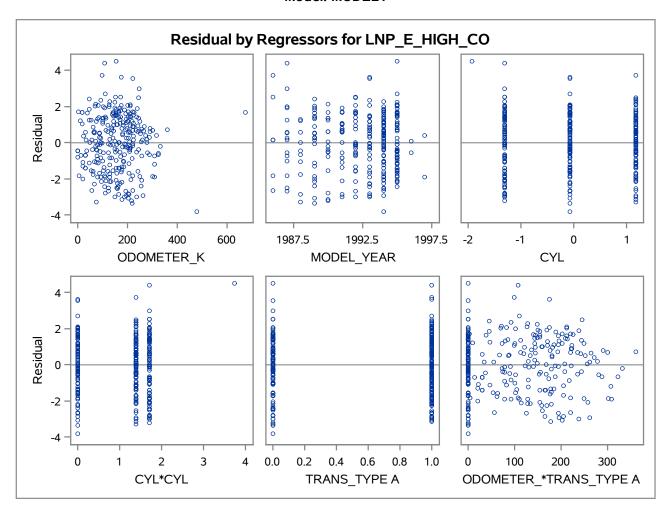












Monday, March 4, 2024 02:32:32 PM **27 Stepwise Selection Analysis of Variance and Regression Table**

The GLMSELECT Procedure

Data Set	WORK.EMISSIONS_HIGHSTD	
Dependent Variable	LNP_E_HIGH_CO	
Selection Method S		
Select Criterion	Significance Level	
Stop Criterion	Significance Level	
Entry Significance Level (SLE)	0.005	
Stay Significance Level (SLS)	0.005	
Effect Hierarchy Enforced	Single	

Number of Observations Read	343
Number of Observations Used	289

Class Level Information					
Class Levels Values					
TRANS_TYPE	2	АМ			
DUAL_EXHAUST	2	NY			

Dimensions			
Number of Effects 14			
Number of Parameters	14		

The GLMSELECT Procedure Stepwise Selection: Step 0

Effect Entered: Intercept

Analysis of Variance					
Source DF Sum of Mean Square F Value					
Model	0	0			
Error	288	822.03860	2.85430		
Corrected Total	288	822.03860			

Root MSE	1.68947
Dependent Mean	-2.03012
R-Square	0.0000
Adj R-Sq	0.0000
AIC	595.10923
AICC	595.15119
SBC	307.77566

Parameter Estimates						
Parameter	Standard Error	t Value				
Intercept	1	-2.030122	0.099380	-20.43		

The GLMSELECT Procedure Stepwise Selection: Step 1

Effect Entered: E_HIGH_HC

Analysis of Variance						
Source DF Sum of Mean Square F Value						
Model	1	135.94704	135.94704	56.87		
Error	287	686.09156	2.39056			
Corrected Total	288	822.03860				

Root MSE	1 54614
ROOL WISE	1.54014
Dependent Mean	-2.03012
R-Square	0.1654
Adj R-Sq	0.1625
AIC	544.86489
AICC	544.94910
SBC	261.19775

Parameter Estimates						
Parameter DF Estimate Standard Error t Value						
Intercept	1	-2.423082	0.104820	-23.12		
E_HIGH_HC	1	0.006767	0.000897	7.54		

Best 10 Entry Candidates						
Rank	Effect	Log pValue	Pr > F			
1	E_HIGH_HC	-28.1148	<.0001			
2	E_HIGH_CO2	-15.0728	<.0001			
3	ODOMETER_K	-12.6930	<.0001			
4	TRANS_TYPE	-3.3678	0.0345			
5	MODEL_YEAR	-3.1456	0.0430			
6	E_HIGH_O2	-2.6653	0.0696			
7	E_HIGH_DCF	-1.2526	0.2858			
8	E_HIGH_HC_LIMIT	-1.2050	0.2997			
9	DUAL_EXHAUST	-0.3428	0.7098			
10	E_HIGH_RPM	-0.2347	0.7908			

The GLMSELECT Procedure Stepwise Selection: Step 2

Effect Entered: E_HIGH_CO2

Analysis of Variance							
Source DF Squares Square F Value							
Model	2	170.57394	85.28697	37.44			
Error	286	651.46466	2.27785				
Corrected Total	288	822.03860					

Root MSE	1.50925
Dependent Mean	-2.03012
R-Square	0.2075
Adj R-Sq	0.2020
AIC	531.89818
AICC	532.03902
SBC	251.89746

Parameter Estimates						
Parameter DF Estimate Standard Error t Value						
Intercept	1	0.739646	0.817608	0.90		
E_HIGH_CO2	iH_CO2 1 -0.224092		0.057475	-3.90		
E_HIGH_HC	1	0.005927	0.000902	6.57		

Entry Candidates						
Rank	Effect	Log pValue	Pr > F			
1	E_HIGH_CO2	-9.0243	0.0001			
2	ODOMETER_K	-6.1404	0.0022			
3	E_HIGH_O2	-2.4324	0.0878			
4	TRANS_TYPE	-2.4204	0.0889			
5	E_HIGH_DCF	-1.5163	0.2195			
6	MODEL_YEAR	-0.8957	0.4083			
7	DUAL_EXHAUST	-0.2835	0.7532			
8	E_HIGH_HC_LIMIT	-0.2375	0.7886			
9	E_HIGH_RPM	-0.0271	0.9733			
10	CYL	-0.0061	0.9939			

The GLMSELECT Procedure **Stepwise Selection: Step 3**

Effect Entered: E_HIGH_DCF

Analysis of Variance						
Source DF Sum of Mean Square F Value						
Model	3	322.83354	107.61118	61.44		
Error 285		499.20507	1.75160			
Corrected Total	288	822.03860				

Root MSE	1.32348
Dependent Mean	-2.03012
R-Square	0.3927
Adj R-Sq	0.3863
AIC	456.96459
AICC	457.17660
SBC	180.63030

Parameter Estimates							
Parameter DF Estimate Standard Error t Value							
Intercept	1	20.576288	2.245169	9.16			
E_HIGH_CO2	1	-0.934358	0.091344	-10.23			
E_HIGH_HC	1	0.003369	0.000837	4.02			
E_HIGH_DCF	1	-9.000818	0.965399	-9.32			

Entry Candidates						
Rank	Effect	Log pValue	Pr > F			
1	E_HIGH_DCF	-40.2716	<.0001			
2	E_HIGH_O2	-14.2432	<.0001			
3	ODOMETER_K	-5.8541	0.0029			
4	TRANS_TYPE	-1.7779	0.1690			
5	DUAL_EXHAUST	-0.3332	0.7166			
6	E_HIGH_HC_LIMIT -0.2407		0.7861			
7	CYL	-0.2177	0.8044			
8	E_HIGH_RPM	-0.1596	0.8525			
9	MODEL_YEAR	-0.0870	0.9167			

The GLMSELECT Procedure

	Stepwise Selection Summary							
Step	Effect Effect Removed Effects In F Value Pr >							
0	Intercept		1	0.00	1.0000			
1	E_HIGH_HC		2	56.87	<.0001			
2	E_HIGH_CO2		3	15.20	0.0001			
3	E_HIGH_DCF		4	86.93	<.0001			

Selection stopped because the candidate for entry has SLE > 0.005 and the candidate for removal has SLS < 0.005.

Stop Details						
Candidate Compare Significance Significance						
Entry	ODOMETER_K	0.0227	>	0.0050	(SLE)	
Removal	E_HIGH_HC	0.0001	<	0.0050	(SLS)	

The GLMSELECT Procedure **Selected Model**

The selected model is the model at the last step (Step 3).

Effects: Intercept E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF

Analysis of Variance							
Source DF Squares Square F Value							
Model	3	322.83354	107.61118	61.44			
Error	285	499.20507	1.75160				
Corrected Total	288	822.03860					

Root MSE	1.32348
Dependent Mean	-2.03012
R-Square	0.3927
Adj R-Sq	0.3863
AIC	456.96459
AICC	457.17660
SBC	180.63030

Parameter Estimates						
Parameter DF Estimate Standard Error t Value						
Intercept	1	20.576288	2.245169	9.16		
E_HIGH_CO2	1	-0.934358	0.091344	-10.23		
E_HIGH_HC	1	0.003369	0.000837	4.02		
E_HIGH_DCF	1	-9.000818	0.965399	-9.32		

Monday, March 4, 2024 02:32:32 PM **34 Stepwise Selection Analysis of Variance and Regression Table**

The GLMSELECT Procedure

Data Set	WORK.EMISSIONS_HIGHSTD
Dependent Variable	LNP_E_HIGH_CO
Selection Method	None

Number of Observations Read	343
Number of Observations Used	289

Class Level Information					
Class	Levels	Values			
TRANS_TYPE	2	АМ			
DUAL_EXHAUST	2	NY			

Dimensions	
Number of Effects	14
Number of Parameters	14

Monday, March 4, 2024 02:32:32 PM **35 Stepwise Selection Analysis of Variance and Regression Table**

The GLMSELECT Procedure

Least Squares Summary					
Step	Effect Entered	Number Effects In	SBC		
0	Intercept	1	307.7757		
1	ODOMETER_K	2	291.4818		
2	MODEL_YEAR	3	287.9742		
3	CYL	4	292.5197		
4	CYL*CYL	5	297.7196		
5	TRANS_TYPE	6	300.0099		
6	ODOMETER_*TRANS_TYPE	7	302.5635		
7	DUAL_EXHAUST	8	306.7759		
8	E_HIGH_RPM	9	311.6778		
9	E_HIGH_CO2	10	302.4180		
10	E_HIGH_O2	11	266.9131		
11	E_HIGH_HC	12	253.6981		
12	E_HIGH_DCF	13	202.5246*		
13	E_HIGH_HC_LIMIT	14	206.9892		
	* Optimal Value of Criterion				

The GLMSELECT Procedure **Least Squares Model (No Selection)**

Analysis of Variance							
Source DF Sum of Square F Value Pr > 1							
Model	13	372.53047	28.65619	17.53	<.0001		
Error	275	449.50813	1.63458				
Corrected Total	288	822.03860					

Root MSE	1.27850
Dependent Mean	-2.03012
R-Square	0.4532
Adj R-Sq	0.4273
AIC	446.65918
AICC	448.41742
SBC	206.98915

Parameter Estimates						
Parameter	DF	Estimate	Standard Error	t Value	Pr > t	
Intercept	1	71.242435	67.662003	1.05	0.2933	
ODOMETER_K	1	-0.001011	0.001470	-0.69	0.4920	
MODEL_YEAR	1	-0.025926	0.033951	-0.76	0.4457	
CYL	1	0.118305	0.090875	1.30	0.1941	
CYL*CYL	1	-0.073039	0.105456	-0.69	0.4891	
TRANS_TYPE A	1	-1.357828	0.347665	-3.91	0.0001	
ODOMETER_*TRANS_TYPE A	1	0.006907	0.001881	3.67	0.0003	
DUAL_EXHAUST Y	1	-1.325431	1.302002	-1.02	0.3096	
E_HIGH_RPM	1	0.000066741	0.000696	0.10	0.9236	
E_HIGH_CO2	1	-0.933906	0.091831	-10.17	<.0001	
E_HIGH_O2	1	-0.095003	0.041382	-2.30	0.0224	
E_HIGH_HC	1	0.002614	0.000854	3.06	0.0024	
E_HIGH_DCF	1	-8.255263	1.055956	-7.82	<.0001	
E_HIGH_HC_LIMIT	1	0.003362	0.003140	1.07	0.2853	

The REG Procedure Model: R2 Dependent Variable: LNP_E_HIGH_CO

R-Square Selection Method

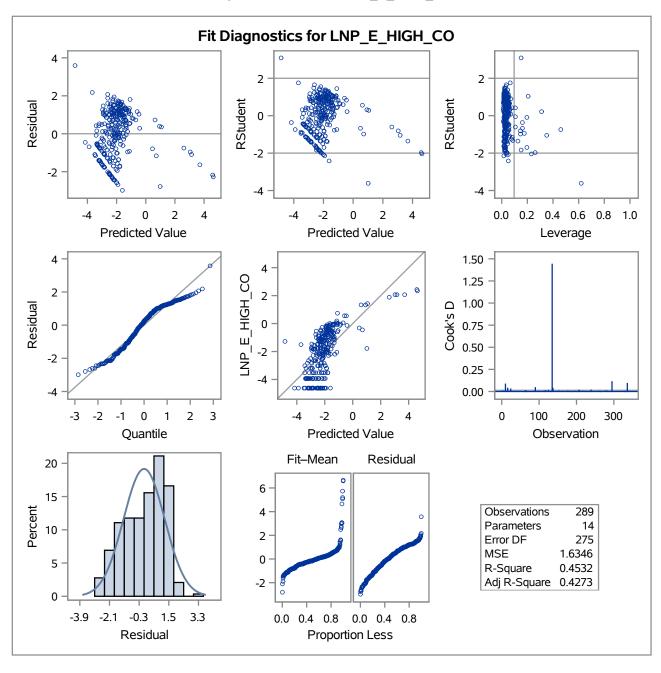
Number of Observations Read	343
Number of Observations Used	289
Number of Observations with Missing Values	54

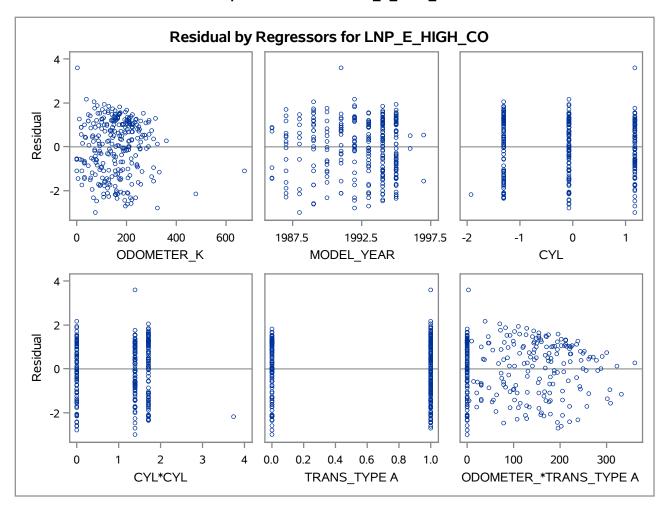
Number in Model	R-Square	Variables in Model				
1	0.1654	E_HIGH_HC				
1	0.0879	E_HIGH_CO2				
1	0.0732	ODOMETER_K				
2	0.3582	E_HIGH_CO2 E_HIGH_DCF				
2	0.2075	E_HIGH_CO2 E_HIGH_HC				
2	0.1924	ODOMETER_K E_HIGH_HC				
3	0.3927	E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF				
3	0.3784	ODOMETER_K E_HIGH_CO2 E_HIGH_DCF				
3	0.3687	E_HIGH_CO2 E_HIGH_O2 E_HIGH_DCF				
4	0.4037	ODOMETER_K E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF				
4	0.4007	E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
4	0.4000	TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_DCF				
5	0.4264	TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF				
5	0.4137	TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_DCF				
5	0.4135	ODOMETER_K E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF				
6 0.4372 TRANS_TYPE A ODOMETER_*T		TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
6 0.4341 CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_C		CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF				
6 0.4335 TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2		TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT				
7	0.4447	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
7	0.4437	TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT				
7	0.4393	MODEL_YEAR TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
8	0.4477	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT				
8	0.4474	MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
8	0.4463	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
9	0.4496	MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF				
9	0.4496	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT				
9	0.4491	ODOMETER_K CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT				

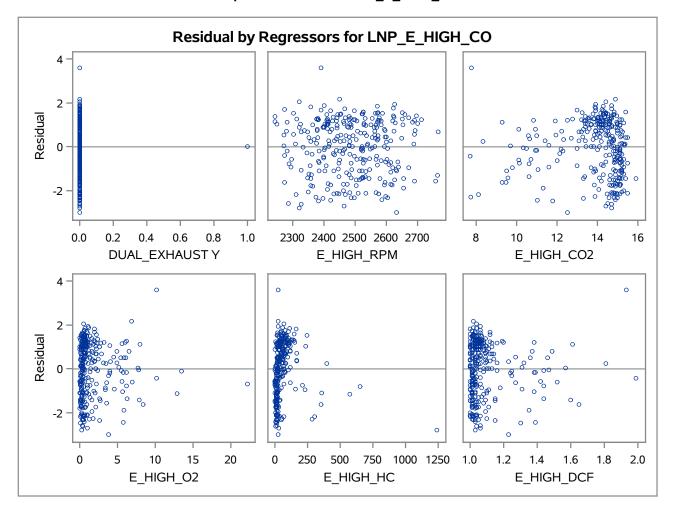
The REG Procedure Model: R2 Dependent Variable: LNP_E_HIGH_CO

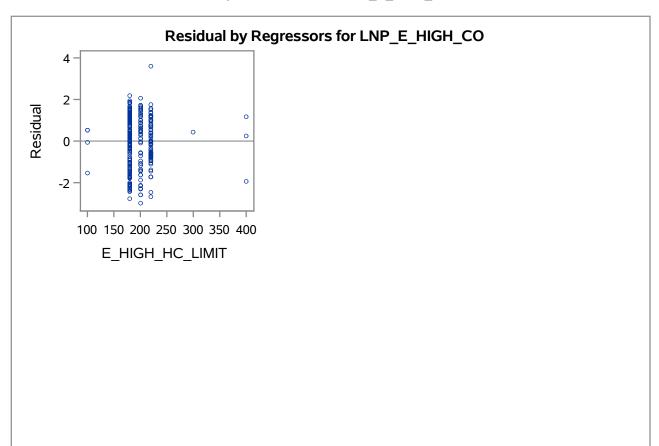
R-Square Selection Method

Number in Model	R-Square	Variables in Model
10	0.4513	MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
10	0.4509	ODOMETER_K CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
10 0.4506 CYL CYL*CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_DCF E_HIGH_HC_LIMIT		
11	0.4522	MODEL_YEAR CYL CYL*CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_HC_LIMIT
11	0.4522	ODOMETER_K MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
11	0.4520	ODOMETER_K CYL CYL*CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
		ODOMETER_K MODEL_YEAR CYL CYL*CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
12	0.4522	MODEL_YEAR CYL CYL*CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_RPM E_HIGH_CO2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
12	0.4522	ODOMETER_K MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_RPM E_HIGH_CO2 E_HIGH_DCF E_HIGH_HC_LIMIT
13	0.4532	ODOMETER_K MODEL_YEAR CYL CYL*CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_RPM E_HIGH_CO2 E_HIGH_DC E_HIGH_DCF E_HIGH_HC_LIMIT







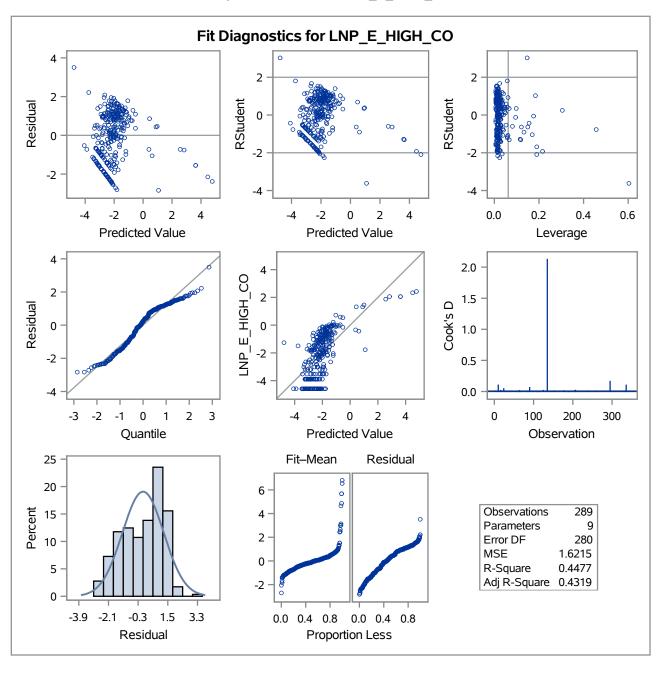


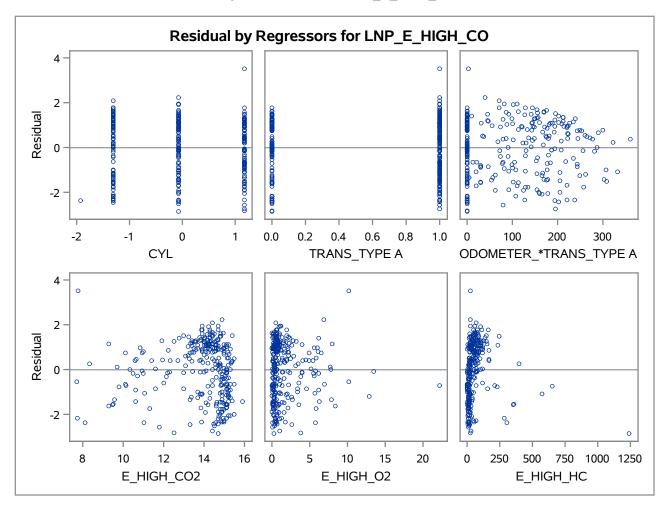
The REG Procedure Model: AR2 Dependent Variable: LNP_E_HIGH_CO

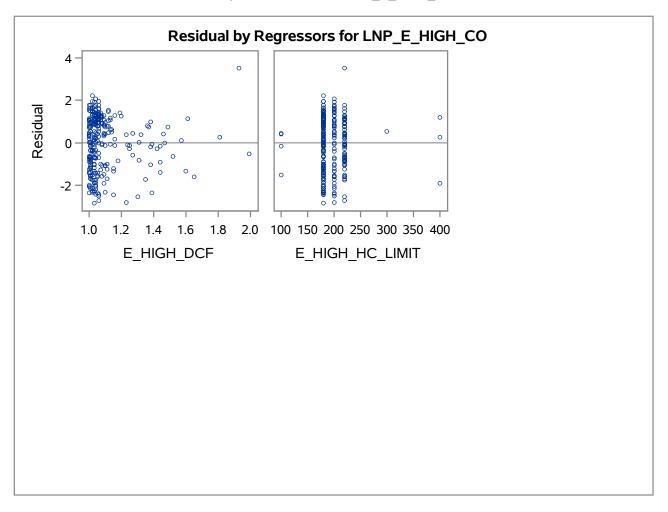
Adjusted R-Square Selection Method

Number of Observations Read			
Number of Observations Used			
Number of Observations with Missing Values	54		

Number in Model	Adjusted R-Square	R-Square	Variables in Model
8 0.4319 0.4477 CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC_LIMIT		CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT	
9 0.4319 0.4496 MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_E_HIGH_DCF		MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF	
9	0.4318	0.4496	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT





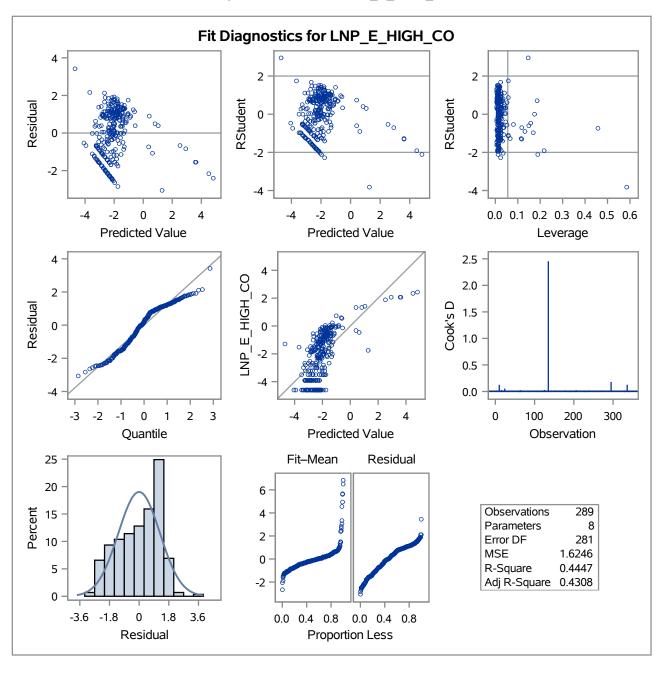


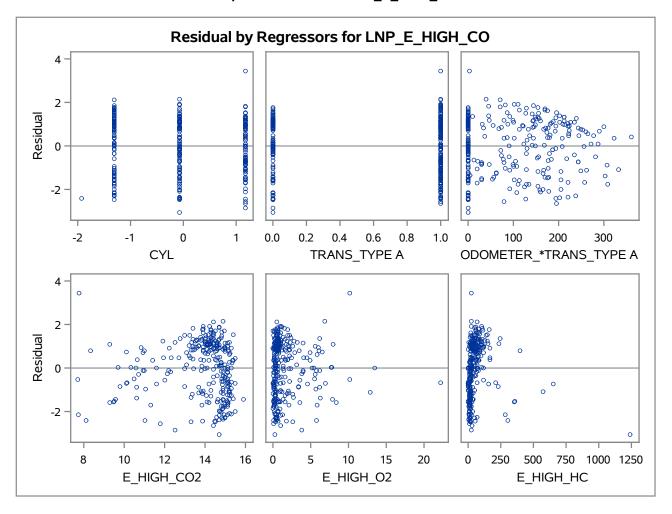
The REG Procedure Model: Cp Dependent Variable: LNP_E_HIGH_CO

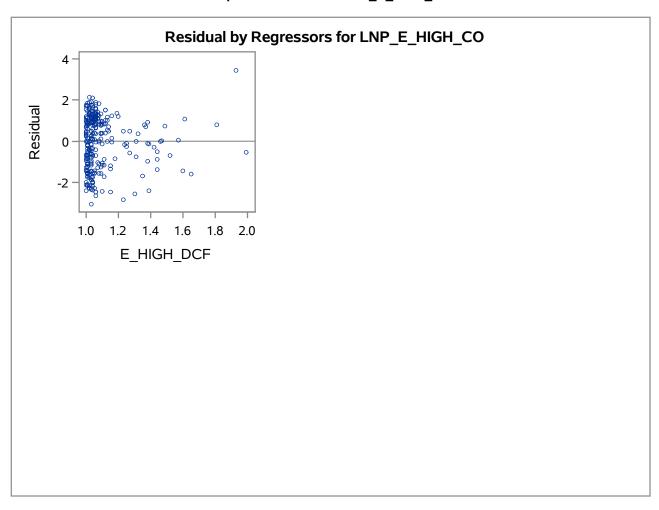
C(p) Selection Method

Number of Observations Read			
Number of Observations Used			
Number of Observations with Missing Values	54		

Number in Model	C(p)	R-Square	Variables in Model
7	6.2837	0.4447	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF
8	8 6.7662 0.4477 CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DO E_HIGH_HC_LIMIT		CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
7	6.7859 0.4437 TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_H		TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
8	6.8850	0.4474	MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF
8	7.4556	0.4463	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF





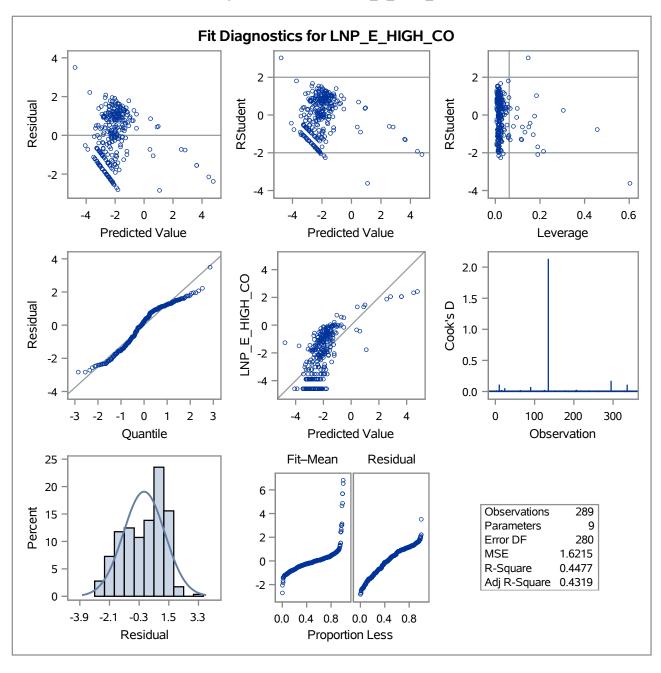


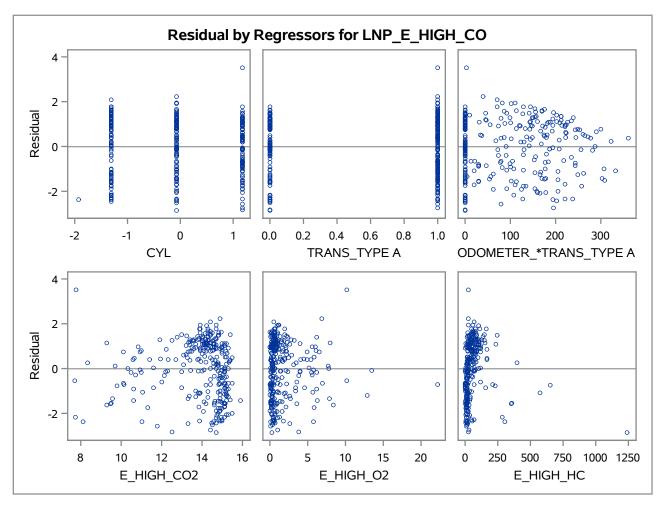
The REG Procedure Model: AR2 Dependent Variable: LNP_E_HIGH_CO

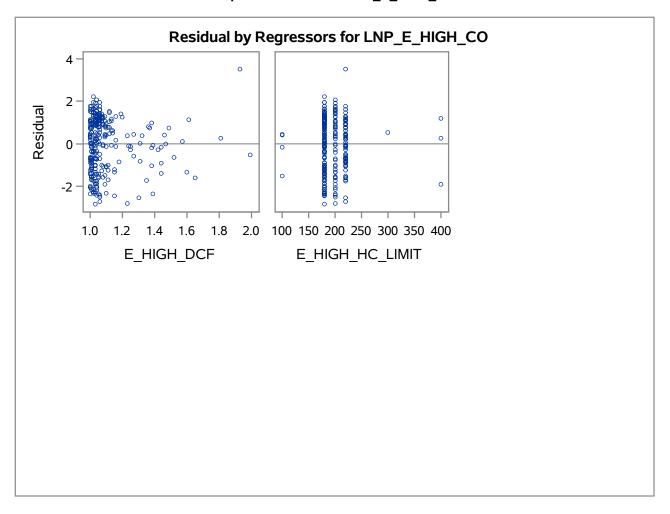
Adjusted R-Square Selection Method

Number of Observations Read			
Number of Observations Used	289		
Number of Observations with Missing Values	54		

Number in Model	Adjusted R-Square	R-Square	Variables in Model
		0.4477	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT
9 0.4319 0.4496 MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHALE_HIGH_HC E_HIGH_DCF		MODEL_YEAR CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF	
		0.4496	CYL TRANS_TYPE A ODOMETER_*TRANS_TYPE A DUAL_EXHAUST Y E_HIGH_CO2 E_HIGH_O2 E_HIGH_HC E_HIGH_DCF E_HIGH_HC_LIMIT







	Number of Observations Read	295
Ì	Number of Observations Used	295

		Analysis of V	ariance		
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	239.81300	239.81300	3.00	0.0845
Error	293	23455	80.05011		
Corrected Total	294	23694			

Root MSE	8.94707	R-Square	0.0101
Dependent Mean	120.00758	Adj R-Sq	0.0067
Coeff Var	7.45542		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	
Intercept	1	121.57454	1.04449	116.40	<.0001	
day	1	-0.01059	0.00612	-1.73	0.0845	

The REG Procedure Model: MODEL1 **Dependent Variable: close**

Durbin-Watson D	0.103
Pr < DW	<.0001
Pr > DW	1.0000
Number of Observations	295
1st Order Autocorrelation	0.948

Note: Pr<DW is the p-value for testing positive autocorrelation, and Pr>DW is the p-value for testing negative autocorrelation.

