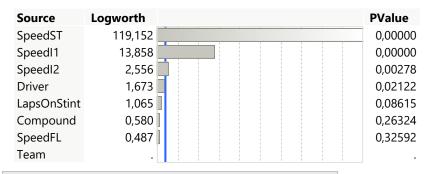
#### **Singularity Details**

Term Details

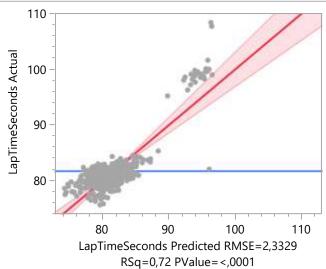
Driver[ALB] = Driver[COL] + Driver[GAS] - Driver[SAl] - Team[Alpine] = - 0,05556\*Inter...

#### **Whole Model**

## **Effect Summary**



#### **Actual by Predicted Plot**



#### **Summary of Fit**

RSquare 0,716814 RSquare Adj 0,703431 Root Mean Square Error 2,332948 Mean of Response 81,80187 Observations (or Sum Wgts) 555

#### **Analysis of Variance**

		Sum of		
Source	DF	Squares	Mean Square	F Ratio
Model	25	7287,869	291,515	53,5612
Error	529	2879,159	5,443	Prob > F
C. Total	554	10167,028		<,0001*

#### **Parameter Estimates**

Term		Estimate	Std Error	t Ratio	Prob> t
Intercept	Biased	176,13887	8,644885	20,37	<,0001*
Driver[ALB]	Biased	0,6166387	0,693065	0,89	0,3740
Driver[ALO]	Biased	-0,646029	0,40385	-1,60	0,1103
Driver[ANT]	Biased	-0,606608	0,525444	-1,15	0,2488
Driver[BEA]	Biased	1,2296608	0,433552	2,84	0,0047*
Driver[BOR]	Biased	1,0393605	0,402713	2,58	0,0101*
Driver[COL]	Biased	0,8186889	0,447869	1,83	0,0681
Driver[GAS]	Biased	-0,350507	0,391553	-0,90	0,3711
Driver[HAD]	Biased	0,3141104	0,47422	0,66	0,5080
Driver[HAM]	Biased	-0,051105	0,489742	-0,10	0,9169

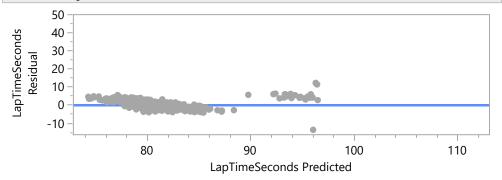
# **Whole Model**

Parameter Estimates								
Term		Estimate	Std Error	t Ratio	Prob> t			
Driver[HUL]	Biased	0,9393498	0,419109	2,24	0,0254*			
Driver[LAW]	Biased	0,8058445	0,396473	2,03	0,0426*			
Driver[LEC]	Biased	-0,294592	0,432534	-0,68	0,4961			
Driver[NOR]	Biased	-0,870098	0,387557	-2,25	0,0252*			
Driver[OCO]	Biased	0,6780732	0,439147	1,54	0,1232			
Driver[PIA]	Biased	-1,889282	0,454308	-4,16	<,0001*			
Driver[RUS]	Biased	-1,535455	0,422771	-3,63	0,0003*			
Driver[SAI]	Biased	0,6278552	0,396932	1,58	0,1143			
Driver[TSU]	Biased	0,5293874	0,412976	1,28	0,2004			
Compound[HARD]		1,3822888	0,846675	1,63	0,1031			
Compound[MEDIUM]		-0,683798	0,440404	-1,55	0,1211			
Team[Alpine]	Zeroed	0	0	·				
Team[Aston Martin]	Zeroed	0	0	•				
Team[Ferrari]	Zeroed	0	0	•				
Team[Haas F1 Team]	Zeroed	0	0	•				
Team[Kick Sauber]	Zeroed	0	0	•				
Team[McLaren]	Zeroed	0	0	•				
Team[Mercedes]	Zeroed	0	0	•				
Team[Racing Bulls]	Zeroed	0	0	•				
Team[Red Bull Racing]	Zeroed	0	0	•				
LapsOnStint		-0,030246	0,017592	-1,72	0,0861			
SpeedI1		-0,10266	0,012959	-7,92	<,0001*			
SpeedI2		-0,047593	0,015835	-3,01	0,0028*			
SpeedFL		0,0351412	0,035739	0,98	0,3259			
SpeedST		-0,202015	0,006568	-30,76	<,0001*			

## **Effect Tests**

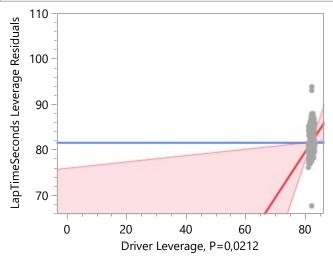
			Sum of			
Source	Nparm	DF	Squares	F Ratio	Prob > F	
Driver	18	9	107,4277	2,1931	0,0212*	LostDFs
Compound	2	2	14,5652	1,3381	0,2632	
Team	9	0	0,0000			LostDFs
LapsOnStint	1	1	16,0882	2,9560	0,0861	
SpeedI1	1	1	341,5739	62,7588	<,0001*	
SpeedI2	1	1	49,1627	9,0329	0,0028*	
SpeedFL	1	1	5,2621	0,9668	0,3259	
SpeedST	1	1	5148,5227	945,9596	<,0001*	

## **Residual by Predicted Plot**



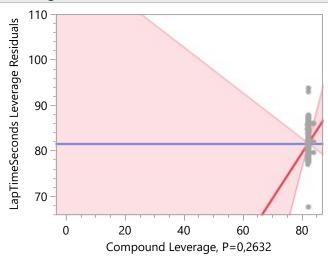
#### Driver





# Compound

## **Leverage Plot**

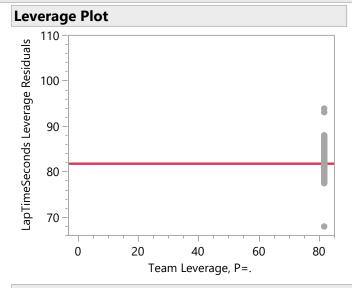


# **Least Squares Means Table**

Level	Least Sq Mean		Std Error	. 8	0	90	100	110	Mean
HARD	0	NonEstimable							78,321
MEDIUM	0	NonEstimable	•						82,065
SOFT	0	Non Estimable							81,632

## Team

#### Team

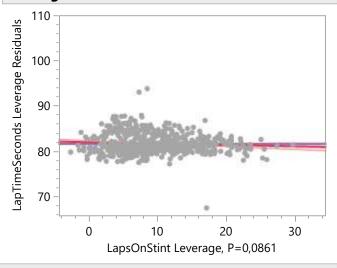


## **Least Squares Means Table**

Level	Least		Std Error	80	90	100	110	Mean
Levei	Sq Mean		Sta Error	1				iviean
Alpine	0	NonEstimable						82,427
Aston Martin	0	NonEstimable						81,825
Ferrari	0	NonEstimable						81,179
Haas F1 Team	0	NonEstimable						82,653
Kick Sauber	0	NonEstimable						82,361
McLaren	0	NonEstimable						79,890
Mercedes	0	NonEstimable						80,772
Racing Bulls	0	NonEstimable	•					82,329
Red Bull Racing	0	NonEstimable	•					81,606
Williams	0	NonEstimable						83,151

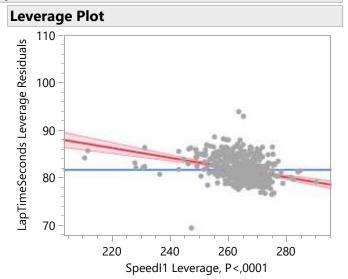
# LapsOnStint

# **Leverage Plot**



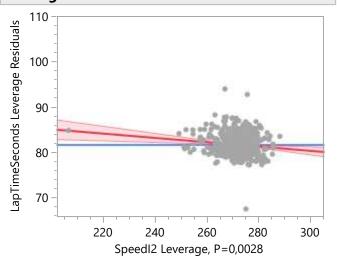
# SpeedI1

## SpeedI1



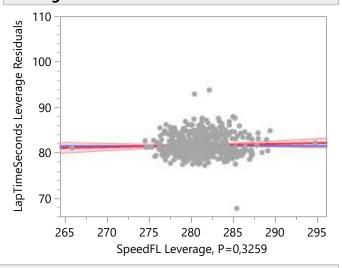
# SpeedI2

# **Leverage Plot**



# SpeedFL

## **Leverage Plot**

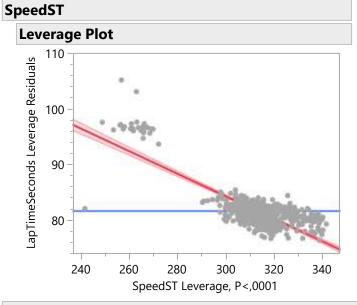


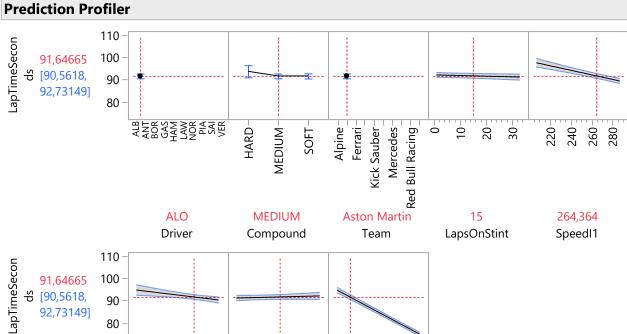
## SpeedST

80

220-240-260-280-300-

#### **Response LapTimeSeconds**





270 275 280 285 290 295 240 260 260 380 320

271,503 281,05 260 SpeedI2 SpeedFL SpeedST