

**PRE-CAFE REPORT
FOR
2017 MODEL YEAR
OF
KIA MOTORS CORPORATION**

- Light Trucks -



NOTE : THIS REPORT CONTAINS [REDACTED] INFORMATION.

THE PRODUCTION VOLUME IS [REDACTED] INFORMATION
AND THIS INFORMATION IS DEEMED BY HMC TO BE EXEMPT
FROM DISCLOSURE UNDER 5 U.S.C. 552(B)(4) AND
49 U.S.C 32910(c).

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Note * : This section contains [REDACTED] information

I. Introduction

As required by 49 CFR Part 537.9, estimated fuel economy values for Sportage AWD, Sportage FE AWD, Sorento AWD, Sorento FWD, Sorento AWD FE, Sedona, Sedona SX, Sedona SXL are included in this report.

The certification emission-data and fuel economy data of the above-mentioned vehicles used to get the following fuel economy values were tested in accordance with applicable exhaust emission test procedures and complied with applicable 2017 exhaust emission standards as defined 40 CFR §86.

II. Projected Average and Required Fuel Economy

1. Projected Average Fuel Economy

- LT : **27.3** MPG (without A/C efficiency & off-cycle credits)

- LT : **27.9** MPG (with A/C efficiency & off-cycle credits)

2. Projected Required Fuel Economy

- LT : **30.4** MPG

At this point in time and based on available best present information, the above projections represent the KIA MOTORS CORPORATION (KMC) average and required fuel economy for the 2017 model year for the purpose of the Act.

II. Projected Average and Required Fuel Economy

- Projected Required Fuel Economy

Projected Required	30.4
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Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class	Base Tire	Projected sales	Track width FR (inch)	Track width RR (inch)	Average Track width (inch)	Wheelbase (inch)	footprint (sqr feet)	Target standard	ETW	IWC
Sportage 2.4 AWD	Sportage AWD	2.4	AWD	SA6	225/55R18	7,588	63.5	64.0	63.8	105.1	46.6	32.62	3,875	4,000
	Sportage AWD	2.4	AWD	SA6	225/55R18	3,252	63.5	64.0	63.8	105.1	46.6	32.62	3,875	4,000
Sportage FE 2.4 AWD	Sportage FE AWD	2.4	AWD	SA6	225/60R17	14,165	63.5	64.0	63.8	105.1	46.6	32.62	3,875	4,000
	Sportage FE AWD	2.4	AWD	SA6	225/60R17	6,071	63.5	64.0	63.8	105.1	46.6	32.62	3,875	4,000
Sportage 2.0T AWD	Sportage AWD	2.0	AWD	SA6	245/45R19	3,614	63.3	63.8	63.6	105.1	46.4	32.74	4,000	4,000
Sorento 2.4 AWD	Sorento AWD	2.4	AWD	SA6	235/65R17	347	64.3	64.7	64.5	109.5	49.0	31.28	4,250	4,000
Sorento 2.4 FWD	Sorento FWD	2.4	FWD	SA6	235/65R17	3,297	64.3	64.7	64.5	109.5	49.0	31.28	4,000	4,000
Sorento 3.3 AWD	Sorento AWD	3.3	AWD	SA6	235/55R19	8,740	64.1	64.5	64.3	109.5	48.9	31.33	4,750	4,500
Sorento 3.3 FE AWD	Sorento AWD FE	3.3	AWD	SA6	235/65R17, 235/60R18	10,280	64.1	64.5	64.3	109.5	48.9	31.33	4,500	4,500
Sorento 3.3 FWD	Sorento FWD	3.3	FWD	SA6	235/65R17, 235/60R18	10,280	64.1	64.5	64.3	109.5	48.9	31.33	4,500	4,500
	Sorento FWD	3.3	FWD	SA6	235/55R19	6,770	64.1	64.5	64.3	109.5	48.9	31.33	4,500	4,500
Sedona	Sedona	3.3	FWD	SA6	235/65R17	20,580	68.7	69.0	68.8	120.5	57.6	27.75	4,750	4,500
	Sedona	3.3	FWD	SA6	235/60R18	10,290	68.5	68.8	68.6	120.5	57.4	27.82	4,750	4,500
Sedona SX	Sedona SX	3.3	FWD	SA6	235/60R18	4,350	68.5	68.8	68.6	120.5	57.4	27.82	4,750	4,500
Sedona SXL	Sedona SXL	3.3	FWD	SA6	235/55R19	4,350	68.3	68.6	68.4	120.5	57.2	27.89	5,000	5,000

Projected Required	30.4
Total Sales Volume	113,974

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_i}}$$

III. Projected Average and Required Fuel Economy

- Projected Average Fuel Economy (without A/C efficiency & off-cycle credits)

Projected Average **27.3**

Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class	Base Tire	Projected sales	City_FE	Hwy_FE	Combined FE	IWC	Model Type Comb.FE	Model Type Vol
Sportage 2.4 AWD	Sportage AWD	2.4	AWD	SA6	225/55R18	7,588	26.5	34.9	29.7188	4,000	29.8	10,840
	Sportage AWD	2.4	AWD	SA6	225/55R18	3,252	26.5	35.6	29.9445	4,000		
Sportage FE 2.4 AWD	Sportage FE AWD	2.4	AWD	SA6	225/60R17	14,165	26.2	35.1	29.5745	4,000	29.5	20,236
	Sportage FE AWD	2.4	AWD	SA6	225/60R17	6,071	25.8	35.0	29.2612	4,000		
Sportage 2.0T AWD	Sportage AWD	2.0	AWD	SA6	245/45R19	3,614	24.9	35.1	28.6460	4,000	28.6	3,614
Sorento 2.4 AWD	Sorento AWD	2.4	AWD	SA6	235/65R17	347	26.0	35.6	29.5908	4,000	29.6	347
Sorento 2.4 FWD	Sorento FWD	2.4	FWD	SA6	235/65R17	3,297	26.8	40.4	31.5846	4,000	31.6	3,297
Sorento 3.3 AWD	Sorento AWD	3.3	AWD	SA6	235/55R19	8,740	21.0	32.4	24.9505	4,500	25.0	8,740
Sorento 3.3 FE AWD	Sorento AWD FE	3.3	AWD	SA6	235/65R17, 235/60R18	10,280	22.3	35.8	26.8575	4,500	26.9	10,280
Sorento 3.3 FWD	Sorento FWD	3.3	FWD	SA6	235/65R17, 235/60R18	10,280	22.2	36.1	26.8527	4,500	26.7	17,050
	Sorento FWD	3.3	FWD	SA6	235/55R19	6,770	22.1	35.1	26.5200	4,500		
Sedona	Sedona	3.3	FWD	SA6	235/65R17	20,580	22.3	33.9	26.3588	4,500	26.4	30,870
	Sedona	3.3	FWD	SA6	235/60R18	10,290	22.3	33.9	26.3588	4,500		
Sedona SX	Sedona SX	3.3	FWD	SA6	235/60R18	4,350	22.8	34.7	26.9606	4,500	27.0	4,350
Sedona SXL	Sedona SXL	3.3	FWD	SA6	235/55R19	4,350	20.7	31.2	24.3943	5,000	24.4	4,350

Average **27.3**

III. Vehicle Configuration Information

Model Type Description	Carline	Basic engine (kW)	Drive	TIM class	Base Tin	Engine code	LWV	ETW	Exp. Disp.	Net rated power(kW)	Net horsepower	Fuel system	Emission control system	TIM class	Number of forward speed	NO	NOx	Air rate	Combined fuel rate (kg/h)	Projected range (km)	Passenger-carrying capacity	Carrying capacity (kg)	Rated head power at 1st gear (kW)	Safety at heart of engine (3000 RPM)	Safety at heart of engine (3000 RPM)	Approved by CCS	Production start	Deployment start	Running clearance (km)	FRSIS clearance (km)	IWC	
Scorpio 2.4 AWD	Scorpio AWD	2.4	AWD	GA00	2000009	GA00CA	13.07	AW0001	2.4	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.4	4WD	GA00	2000009	GA00CA	13.07	AW0001	2.4	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.4 4WD	Scorpio 4WD	2.4	4WD	GA00	2000009	GA00CA	13.07	AW0001	2.4	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.4	4WD	GA00	2000009	GA00CA	13.07	AW0001	2.4	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 AWD	Scorpio AWD	2.0	AWD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
Scorpio 2.0 4WD	Scorpio 4WD	2.0	4WD	GA00	2000007	GA00CA	13.00	AW0001	2.0	135	185	CPFI	TWC	GA0	6	Yan 31.1	3.20	29.186	7.688	104	50	16.8	Yes	Yes	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	Yan 18.0	Yan 28.0	4,000
	Scor																															

IV. A/C Efficiency Credits

Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class (Drive, type, gear)	Base Tire	Refrigerant	A/C Drive System	Projected sales	Reduc'd Reheat with variable displ compressor	Reduced Reheat with fixed displ or pneumatic compressor	Default to Recirc with feedback sensor	Default to Recirc without feedback sensor	Efficient Blower Motor Controls	Internal Heat Exchanger	Improved Condensor and/or Evaporator (requires EPA approval)	Oil Separator (requires EPA approval)	Total Menu-based Credits	A/C Efficiency Credit	VLM
									2.2 gpm	1.4 gpm	2.2 gpm	1.4 gpm							
Sportage 2.4 AWD	Sportage AWD	2.4	AWD	SA6	225/55R18	R1234yf	V-Belt Driv	7,588	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	7,370	225,865
	Sportage AWD	2.4	AWD	SA6	225/55R18	R1234yf	V-Belt Driv	3,252	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	3,158	225,865
Sportage FE 2.4 AWD	Sportage FE AWD	2.4	AWD	SA6	225/60R17	R1234yf	V-Belt Driv	14,165	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	13,757	225,865
	Sportage FE AWD	2.4	AWD	SA6	225/60R17	R1234yf	V-Belt Driv	6,071	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	5,896	225,865
Sportage 2.0T AWD	Sportage AWD	2.0	AWD	SA6	245/45R19	R1234yf	V-Belt Driv	3,614	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	3,510	225,865
Sorento 2.4 AWD	Sorento AWD	2.4	AWD	SA6	235/65R17	R134a	V-Belt Driv	347	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	337	225,865
Sorento 2.4 FWD	Sorento FWD	2.4	FWD	SA6	235/65R17	R134a	V-Belt Driv	3,297	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	3,202	225,865
Sorento 3.3 AWD	Sorento AWD	3.3	AWD	SA6	235/65R19	R134a	V-Belt Driv	8,740	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	8,488	225,865
Sorento 3.3 FE AWD	Sorento AWD FE	3.3	AWD	SA6	235/65R17, 235/60R18	R134a	V-Belt Driv	10,280	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	9,984	225,865
	Sorento FWD	3.3	FWD	SA6	235/65R17, 235/60R18	R134a	V-Belt Driv	10,280	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	9,984	225,865
Sorento 3.3 FWD	Sorento FWD	3.3	FWD	SA6	235/65R19	R134a	V-Belt Driv	6,770	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	6,575	225,865
	Sorento FWD	3.3	FWD	SA6	235/65R17	R134a	V-Belt Driv	20,580	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	19,988	225,865
Sedona	Sedona	3.3	FWD	SA6	235/60R18	R134a	V-Belt Driv	10,290	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	9,994	225,865
	Sedona	3.3	FWD	SA6	235/60R18	R134a	V-Belt Driv	4,350	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	4,225	225,865
Sedona SX	Sedona SX	3.3	FWD	SA6	235/60R18	R134a	V-Belt Driv	4,350	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	4,225	225,865
Sedona SXL	Sedona SXL	3.3	FWD	SA6	235/55R19	R134a	V-Belt Driv	4,350	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	4,225	225,865

ACCredit	110,693
Car volume	113,974
FCIV _{AC} (Gal/mi)	0.000483849

VLM	225,865
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$$FCIV_{AC} \text{ (gal/mi)} = \frac{(ACCredit \times 1,000,000)}{(VLM \times Production \times 8807)}$$

V. Off-cycle Credits

Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class (Drive, type, gear)	Base Tire	Description	Projected sales	Off-cycle benefit per vehicle	Off-cycle credits	VLM
								gpm	megagrams	
Sportage 2.4 AWD	Sportage AWD	2.4	AWD	SA6	225/55R18	High efficiency light(low beam, high beam, rear side marker - 0.6); Glazing	6,830	0.8	1,234	225,865
	Sportage AWD	2.4	AWD	SA6	225/55R18	High efficiency light(low beam, high beam, rear side marker - 0.6); Active seat ventilation; Glazing	758	2.1	360	225,865
	Sportage AWD	2.4	AWD	SA6	225/55R18	High efficiency light(low beam, high beam, rear side marker - 0.6); Glazing	2,927	0.8	529	225,865
	Sportage AWD	2.4	AWD	SA6	225/55R18	High efficiency light(low beam, high beam, rear side marker - 0.6); Active seat ventilation; Glazing	325	2.1	154	225,865
Sportage FE 2.4 AWD	Sportage FE AWD	2.4	AWD	SA6	225/60R17	High efficiency light(low beam, high beam, rear side marker - 0.6); Glazing	12,750	0.8	2,304	225,865
	Sportage FE AWD	2.4	AWD	SA6	225/60R17	High efficiency light(low beam, high beam, rear side marker - 0.6); Active seat ventilation; Glazing	1,415	2.1	671	225,865
	Sportage FE AWD	2.4	AWD	SA6	225/60R17	High efficiency light(low beam, high beam, rear side marker - 0.6); Glazing	5,464	0.8	987	225,865
	Sportage FE AWD	2.4	AWD	SA6	225/60R17	High efficiency light(low beam, high beam, rear side marker - 0.6); Active seat ventilation; Glazing	607	2.1	288	225,865
Sportage 2.0T AWD	Sportage AWD	2.0	AWD	SA6	245/45R19	High efficiency light(low beam, high beam, parking/position, front side marker, rear side marker - 0.8); Glazing	1,807	1.2	490	225,865
	Sportage AWD	2.0	AWD	SA6	245/45R19	High efficiency light(low beam, high beam, parking/position, front side marker, rear side marker - 0.8); Active seat ventilation; Glazing	1,807	2.5	1,020	225,865
Sorento 2.4 AWD	Sorento AWD	2.4	AWD	SA6	235/65R17	High efficiency light(low beam, high beam, parking/position, front side marker, rear side marker - 0.8); Active transmission warm-up; Glazing	347	4.3	337	225,865
Sorento 2.4 FWD	Sorento FWD	2.4	FWD	SA6	235/65R17	High efficiency light(low beam, high beam, parking/position, front side marker, rear side marker - 0.8); Active transmission warm-up; Glazing	3,297	4.3	3,202	225,865
Sorento 3.3 AWD	Sorento AWD	3.3	AWD	SA6	235/55R19	High efficiency light(low beam HID, high beam, parking/position, front side marker, rear side marker - 1.0); Active transmission warm-up; Active seat ventilation; Glazing	8,740	5.8	11,450	225,865
Sorento 3.3 FE AWD	Sorento AWD FE	3.3	AWD	SA6	235/65R17, 235/60R18	High efficiency light(low beam, high beam, parking/position, front side marker, rear side marker - 0.8); Active transmission warm-up; Glazing	10,280	4.3	9,984	225,865
Sorento 3.3 FWD	Sorento FWD	3.3	FWD	SA6	235/65R17, 235/60R18	High efficiency light(low beam, high beam, parking/position, front side marker, rear side marker - 0.8); Active transmission warm-up; Glazing	10,280	4.3	9,984	225,865
	Sorento FWD	3.3	FWD	SA6	235/55R19	High efficiency light(low beam HID, high beam, parking/position, front side marker, rear side marker - 1.0); Active transmission warm-up; Active seat ventilation; Glazing	6,770	5.8	8,869	225,865
Sedona	Sedona	3.3	FWD	SA6	235/65R17	High efficiency light(low beam, high beam - 0.5); Glazing	20,580	0.8	3,719	225,865
	Sedona	3.3	FWD	SA6	235/60R18	High efficiency light(low beam, high beam - 0.5); Glazing	10,290	0.8	1,859	225,865
Sedona SX	Sedona SX	3.3	FWD	SA6	235/60R18	High efficiency light(low beam, high beam, front side marker, rear side marker - 0.7); Active seat ventilation; Glazing	4,350	2.3	2,260	225,865
Sedona SXL	Sedona SXL	3.3	FWD	SA6	235/55R19	High efficiency light(low beam HID, high beam, front side marker, rear side marker - 0.8); Active seat ventilation; Glazing	4,350	2.4	2,358	225,865

OCCredit	62,059
Car volume	113,974
FCIV _{oc} (Gal/mi)	0.000271266

VLM	225,865
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$$FCIV_{oc} \text{ (gal/mi)} = \frac{(OCCredit \times 1,000,000)}{(VLM \times Production \times 8887)}$$

VI. Projected Average Fuel Economy Adjustment

Average MPG	27.9
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P4	MPG	27.3
P6	FCIV _{AC} (Gal/mi)	0.000483849
P7	FCIV _{OC} (Gal/mi)	0.000271266
N/A	FCIV _{PU} (Gal/mi)	0

$$\text{Average MPG} = \frac{1}{\left[\frac{1}{\text{MPG}} - (\text{FCIV}_{AC} + \text{FCIV}_{OC} + \text{FCIV}_{PU}) \right]}$$