

**State:** Pennsylvania **First Filing Company:** State Farm Fire and Casualty Company, ...  
**TOI/Sub-TOI:** 19.0 Personal Auto/19.0001 Private Passenger Auto (PPA)  
**Product Name:** PV-32338  
**Project Name/Number:** PV-32338/PV-32338

## Filing at a Glance

Companies: State Farm Fire and Casualty Company  
State Farm Mutual Automobile Insurance Company

Product Name: PV-32338

State: Pennsylvania

TOI: 19.0 Personal Auto

Sub-TOI: 19.0001 Private Passenger Auto (PPA)

Filing Type: Rate/Rule

Date Submitted: 10/20/2015

SERFF Tr Num: SFMA-130284904

SERFF Status: Assigned

State Tr Num:

State Status: Received Review in Progress

Co Tr Num: PV-32338

Effective Date: 03/21/2016

Requested (New):

Effective Date: 03/21/2016

Requested (Renewal):

Author(s): Julie Davis, Mary Holmes

Reviewer(s): Bojan Zorkic (primary), Michael McKenney

Disposition Date:

Disposition Status:

Effective Date (New):

Effective Date (Renewal):

State Filing Description:

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## General Information

Project Name: PV-32338 Status of Filing in Domicile: Not Filed  
Project Number: PV-32338 Domicile Status Comments:  
Reference Organization: N/A Reference Number: N/A  
Reference Title: N/A Advisory Org. Circular: N/A  
Filing Status Changed: 10/21/2015  
State Status Changed: 10/26/2015 Deemer Date:  
Created By: Mary Holmes Submitted By: Mary Holmes  
Corresponding Filing Tracking Number:

### Filing Description:

We respectfully request your approval of a revision to our independent Private Passenger Auto program, which results in a rate level decrease of 0.7% for State Farm Mutual and a rate level decrease of 0.1% for State Farm Fire and Casualty Company. The details of and support for the change are outlined in the attached Filing Memorandum and supporting exhibits.

The rate level changes contained in this filing specifically consider the expected effect that any prior changes in policy language will have on our future underwriting experience. The changes detailed in this filing reflect our best efforts to recognize our actuarially suggested income needs and have premiums that are as competitive as possible.

We do not rely solely on rate activity to achieve our objective of continued financial stability. We also concentrate on continued improvements in the way we service the business we write. These improvements range from internal expense controls to ongoing enhancements in the loss settlement process. We also invest and participate in many loss prevention and control activities. Attached is an exhibit that outlines some of these activities.

We request your approval of this filing to be effective on new and renewal policies dated March 21, 2016 and later.

Sincerely,

Sara Frankowiak, FCAS, MAAA, CPCU  
Actuary and Assistant Secretary-Treasurer  
(309) 766-5902  
sara.frankowiak.g4eb@statefarm.com

Ken Doss, F.C.A.S., MAAA  
Pricing Manager  
(309) 763-3083  
ken.doss.nndc@statefarm.com

## Company and Contact

### Filing Contact Information

Ken Doss, Pricing Manager ken.doss.nndc@statefarm.com  
P & C Actuarial, D-4 309-763-3083 [Phone]  
One State Farm Plaza 309-766-0225 [FAX]  
Bloomington, IL 61710

**State:** Pennsylvania **First Filing Company:** State Farm Fire and Casualty Company, ...  
**TOI/Sub-TOI:** 19.0 Personal Auto/19.0001 Private Passenger Auto (PPA)  
**Product Name:** PV-32338  
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**Filing Company Information**

State Farm Fire and Casualty Company 1 State Farm Plaza Bloomington, IL 61710 (309) 766-6341 ext. [Phone]	CoCode: 25143 Group Code: 176 Group Name: State Farm Insurance Cos. FEIN Number: 37-0533080	State of Domicile: Illinois Company Type: State ID Number:
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State Farm Mutual Automobile Insurance Company One State Farm Plaza Bloomington, IL 61710 (309) 766-6341 ext. [Phone]	CoCode: 25178 Group Code: 176 Group Name: State Farm Insurance Cos. FEIN Number: 37-0533100	State of Domicile: Illinois Company Type: State ID Number:
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**Filing Fees**

Fee Required? No  
 Retaliatory? No  
 Fee Explanation:

**State Specific**

\*Filing Fee Amount: Not Applicable  
 \*Date Filing Fee Mailed: Not Applicable  
 \*Filing Fee Check Number: Not Applicable  
 \*Filing Fee Check Date: Not Applicable  
 \*NAIC Number: 0176-25178 & 0176-25143

State: Pennsylvania First Filing Company: State Farm Fire and Casualty Company, ...  
TOI/Sub-TOI: 19.0 Personal Auto/19.0001 Private Passenger Auto (PPA)  
Product Name: PV-32338  
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### Post Submission Update Request Processed On 10/27/2015

Status: Allowed  
Created By: Mary Holmes  
Processed By: Bojan Zorkic  
Comments:

#### Company Rate Information:

Company Name:State Farm Fire and Casualty Company

Field Name	Requested Change	Prior Value
Maximum %Change (where required)	0.000%	
Minimum %Change (where required)	-5.900%	

Company Name:State Farm Mutual Automobile Insurance Company

Field Name	Requested Change	Prior Value
Maximum %Change (where required)	0.000%	
Minimum %Change (where required)	-10.800%	

SERFF Tracking #:

SFMA-130284904

State Tracking #:

Company Tracking #:

PV-32338

State: Pennsylvania

First Filing Company: State Farm Fire and Casualty Company, ...

TOI/Sub-TOI: 19.0 Personal Auto/19.0001 Private Passenger Auto (PPA)

Product Name: PV-32338

Project Name/Number: PV-32338/PV-32338

### Rate Information

Rate data applies to filing.

Filing Method: Prior Approval

Rate Change Type: Decrease

Overall Percentage of Last Rate Revision: 2.800%

Effective Date of Last Rate Revision: 12/21/2015

Filing Method of Last Filing: Prior Approval

### Company Rate Information

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:	Maximum % Change (where req'd):	Minimum % Change (where req'd):
State Farm Fire and Casualty Company	0.000%	-0.100%	\$-113,000	99,748	\$113,277,000	0.000%	-5.900%
State Farm Mutual Automobile Insurance Company	0.000%	-0.700%	\$-9,662,000	1,860,750	\$1,380,216,000	0.000%	-10.800%

**SERFF Tracking #:**

SFMA-130284904

**State Tracking #:****Company Tracking #:**

PV-32338

**State:** Pennsylvania**First Filing Company:** State Farm Fire and Casualty Company, ...**TOI/Sub-TOI:** 19.0 Personal Auto/19.0001 Private Passenger Auto (PPA)**Product Name:** PV-32338**Project Name/Number:** PV-32338/PV-32338

## Rate/Rule Schedule

Item No.	Schedule Item Status	Exhibit Name	Rule # or Page #	Rate Action	Previous State Filing Number	Attachments
1		Manual Pages	See Attached	Replacement		PA AT 2016-03-21 Changed Pages.pdf PA AT 2016-03-21 Compare Changed Pages Only.pdf

## RULES

The rules in this section govern the writing of all auto policies.

### CUSTOMER RATING INDEX (CRI)

The base premiums for the bodily injury and property damage liability, medical payments, funeral benefits, loss of income, combined benefits, comprehensive, and collision coverages, applicable to a private passenger automobile as defined in Rule 201 - Private Passenger Automobile Defined or motorcycle as defined in Rule 404 - Motorcycles, Motorscooters, and Motorized Bicycles shall be adjusted by the CRI Factor in accordance with the following provisions:

#### A. New Business and Subsequent Rating

A CRI will be used to determine the CRI Factor at the inception of each policy term. That CRI will continue to be used in determination of the CRI Factor for the entire policy term. Assignment of the New Business CRI is based on mutually exclusive underwriting criteria on file at the home office. The assignment of the CRI for subsequent rating is as follows:

1. Private Passenger Automobiles
  - a. The early renewal model will be used at the first renewal on or after the six month anniversary of the new business effective date until the renewal model CRI first applies.
  - b. The renewal model will be used at each renewal beginning two years from the new business effective date of the automobile (or the vehicle it replaces).
2. Motorcycles
  - a. The CRI initially assigned will continue to be used in determination of the CRI Factor until a renewal CRI first applies.
  - b. The renewal model will be used at each renewal beginning two years from the new business effective date of the motorcycle (or the vehicle it replaces).

Application of the CRI Factor does not result in a duplicative rating effect in its consideration of characteristics used by any other rating variable.

**NOTE:** Requests to use an updated CRI with current Underwriting Tier information to determine the CRI Factor must be made by the named insured. The updated CRI Factor will be applied to the policy at the next renewal. Such requests may not be made more than once within a twelve-month period.

#### B. Factors

The CRI Factor is determined by the following formula:  $1.003^{(1600 - \text{CRI})}$ . The CRI Factor shall be rounded to 3 decimal places and is subject to minimum and maximum factors as outlined below:

<b>Private Passenger Automobile</b>	
<b>Maximum</b>	<b>Minimum</b>
6.033	0.600

<b>Motorcycle</b>	
<b>Maximum</b>	<b>Minimum</b>
6.033	0.600

- C. **Exception:** The following vehicles are not eligible for the Customer Rating Index (CRI):
1. Motor homes as defined in Rule 401(A) - Motor Homes, Truck or Van Campers (Recreational Use)
  2. Trailers insured under Rule 402 - Trailers Designed for Use with Private Passenger Automobiles
  3. Automobiles insured under Rule 406 - Antique and Classic Automobiles and Replicas
  4. Policies insured under Rule 502 - Use of Non-Owned Cars (Broad Form)
  5. Fleets insured under Rule 801 - Fleet Rating Plan (SFM Only)
  6. Vehicles insured under Rule 901 - Recreational Vehicles (SFM Only)

**ACTUARIAL RESTRICTED**

The rules, rates and premiums in this section are available to the Home Office Actuarial Department only.

**MOTORCYCLE RENEWAL CRI MODEL**

**Instructions for calculating a CRI for a vehicle**

Step 1: Determine the value for the vehicle of each variable listed in Motorcycle Renewal CRI Model Variable Definitions.

Step 2: For each variable in the Motorcycle Renewal CRI Model Scoretable, find the points assigned to the value determined in Step 1.

Step 3: Add the points for the constant shown in the Motorcycle Renewal CRI Model Scoretable to the points for each variable determined in Step 2 except for Tenure, Age, State, and Underwriting Tier.

Step 4: Using the logic in Motorcycle Renewal CRI Model Scaling, determine the CRI using the value from Step 3.

Step 5: Add the points for Age, State, and Tenure from the Motorcycle Renewal CRI Model Scoretable. Limit the total to be between 1000 and 1999. This is the non-tier adjusted CRI for the vehicle.

Step 6: Find the Underwriting Tier Adjustment, associated with the Underwriting Tier determined in Step 1 from the Motorcycle Renewal CRI Model Scoretable.

Step 7: If the Underwriting Tier Adjustment from step 6 is higher than the previously used Underwriting Tier Adjustment, then set step 6 as the final Underwriting Tier Adjustment. If the Underwriting Tier Adjustment from step 6 is less than or equal to the previously used Underwriting Tier Adjustment then set the final Underwriting Tier Adjustment to the previously used Underwriting Tier Adjustment. If this is the first time the vehicle is on a full renewal model, calculate the previously used Underwriting Tier Adjustment as New Business CRI - 1600.

Step 8: Sum the non-tier adjusted CRI from Step 5 and the Underwriting Tier Adjustment from step 7. Limit this sum to be between 1000 and 1999 to get a final CRI.

**MOTORCYCLE RENEWAL CRI MODEL SCALING**

raw\_score\_L3 = CONSTANT + BIUP\_NUM\_BIN13 + HH\_PREF\_CNT\_CAP8 +  
 TRANS\_CNCL\_NON\_PAY\_CAR\_Y5\_IND + HH\_AFDREF\_10Y\_CNT\_CAP3 +  
 PR\_AFS1000\_ALL\_OHH\_Y3\_NUM\_CAP2

```
select;
when (raw_score_L3 le 4.6072788802) CRI =1721;
when (raw_score_L3 gt 4.6072788802 and raw_score_L3 le 4.6076235602) CRI =1721+(raw_score_L3-
4.6072788802)*(1716-1721)/(4.6076235602-4.6072788802);
when (raw_score_L3 gt 4.6076235602 and raw_score_L3 le 4.6077358242) CRI =1716+(raw_score_L3-
4.6076235602)*(1710-1716)/(4.6077358242-4.6076235602);
when (raw_score_L3 gt 4.6077358242 and raw_score_L3 le 4.6079081642) CRI =1710+(raw_score_L3-
4.6077358242)*(1702-1710)/(4.6079081642-4.6077358242);
when (raw_score_L3 gt 4.6079081642 and raw_score_L3 le 4.6080204282) CRI =1702+(raw_score_L3-
```

$4.6079081642) * (1693 - 1702) / (4.6080204282 - 4.6079081642);$   
 when (raw\_score\_L3 gt 4.6080204282 and raw\_score\_L3 le 4.6080805042) CRI =1693+(raw\_score\_L3-4.6080204282)\*(1684-1693)/(4.6080805042-4.6080204282);  
 when (raw\_score\_L3 gt 4.6080805042 and raw\_score\_L3 le 4.6081927682) CRI =1684+(raw\_score\_L3-4.6080805042)\*(1665-1684)/(4.6081927682-4.6080805042);  
 when (raw\_score\_L3 gt 4.6081927682 and raw\_score\_L3 le 4.6082528442) CRI =1665+(raw\_score\_L3-4.6081927682)\*(1656-1665)/(4.6082528442-4.6081927682);  
 when (raw\_score\_L3 gt 4.6082528442 and raw\_score\_L3 le 4.6083651082) CRI =1656+(raw\_score\_L3-4.6082528442)\*(1641-1656)/(4.6083651082-4.6082528442);  
 when (raw\_score\_L3 gt 4.6083651082 and raw\_score\_L3 le 4.6084773722) CRI =1641+(raw\_score\_L3-4.6083651082)\*(1629-1641)/(4.6084773722-4.6083651082);  
 when (raw\_score\_L3 gt 4.6084773722 and raw\_score\_L3 le 4.6085374482) CRI =1629+(raw\_score\_L3-4.6084773722)\*(1624-1629)/(4.6085374482-4.6084773722);  
 when (raw\_score\_L3 gt 4.6085374482 and raw\_score\_L3 le 4.6086497122) CRI =1624+(raw\_score\_L3-4.6085374482)\*(1615-1624)/(4.6086497122-4.6085374482);  
 when (raw\_score\_L3 gt 4.6086497122 and raw\_score\_L3 le 4.6087097882) CRI =1615+(raw\_score\_L3-4.6086497122)\*(1611-1615)/(4.6087097882-4.6086497122);  
 when (raw\_score\_L3 gt 4.6087097882 and raw\_score\_L3 le 4.6087470072) CRI =1611+(raw\_score\_L3-4.6087097882)\*(1609-1611)/(4.6087470072-4.6087097882);  
 when (raw\_score\_L3 gt 4.6087470072 and raw\_score\_L3 le 4.6088220522) CRI =1609+(raw\_score\_L3-4.6087470072)\*(1608-1609)/(4.6088220522-4.6087470072);  
 when (raw\_score\_L3 gt 4.6088220522 and raw\_score\_L3 le 4.6088640283) CRI =1608+(raw\_score\_L3-4.6088220522)\*(1608-1608)/(4.6088640283-4.6088220522);  
 when (raw\_score\_L3 gt 4.6088640283 and raw\_score\_L3 le 4.6089943922) CRI =1608+(raw\_score\_L3-4.6088640283)\*(1607-1608)/(4.6089943922-4.6088640283);  
 when (raw\_score\_L3 gt 4.6089943922 and raw\_score\_L3 le 4.6090885563) CRI =1607+(raw\_score\_L3-4.6089943922)\*(1607-1607)/(4.6090885563-4.6089943922);  
 when (raw\_score\_L3 gt 4.6090885563 and raw\_score\_L3 le 4.6091486323) CRI =1607+(raw\_score\_L3-4.6090885563)\*(1606-1607)/(4.6091486323-4.6090885563);  
 when (raw\_score\_L3 gt 4.6091486323 and raw\_score\_L3 le 4.6091667322) CRI =1606+(raw\_score\_L3-4.6091486323)\*(1605-1606)/(4.6091667322-4.6091486323);  
 when (raw\_score\_L3 gt 4.6091667322 and raw\_score\_L3 le 4.6092039512) CRI =1605+(raw\_score\_L3-4.6091667322)\*(1604-1605)/(4.6092039512-4.6091667322);  
 when (raw\_score\_L3 gt 4.6092039512 and raw\_score\_L3 le 4.6093209723) CRI =1604+(raw\_score\_L3-4.6092039512)\*(1603-1604)/(4.6093209723-4.6092039512);  
 when (raw\_score\_L3 gt 4.6093209723 and raw\_score\_L3 le 4.6093762912) CRI =1603+(raw\_score\_L3-4.6093209723)\*(1601-1603)/(4.6093762912-4.6093209723);  
 when (raw\_score\_L3 gt 4.6093762912 and raw\_score\_L3 le 4.6094332363) CRI =1601+(raw\_score\_L3-4.6093762912)\*(1598-1601)/(4.6094332363-4.6093762912);  
 when (raw\_score\_L3 gt 4.6094332363 and raw\_score\_L3 le 4.6095257742) CRI =1598+(raw\_score\_L3-4.6094332363)\*(1595-1598)/(4.6095257742-4.6094332363);  
 when (raw\_score\_L3 gt 4.6095257742 and raw\_score\_L3 le 4.6095874764) CRI =1595+(raw\_score\_L3-4.6095257742)\*(1591-1595)/(4.6095874764-4.6095257742);  
 when (raw\_score\_L3 gt 4.6095874764 and raw\_score\_L3 le 4.6096608952) CRI =1591+(raw\_score\_L3-4.6095874764)\*(1587-1591)/(4.6096608952-4.6095874764);  
 when (raw\_score\_L3 gt 4.6096608952 and raw\_score\_L3 le 4.6097581902) CRI =1587+(raw\_score\_L3-4.6096608952)\*(1582-1587)/(4.6097581902-4.6096608952);  
 when (raw\_score\_L3 gt 4.6097581902 and raw\_score\_L3 le 4.6098332352) CRI =1582+(raw\_score\_L3-4.6097581902)\*(1578-1582)/(4.6098332352-4.6097581902);  
 when (raw\_score\_L3 gt 4.6098332352 and raw\_score\_L3 le 4.6099305302) CRI =1578+(raw\_score\_L3-4.6098332352)\*(1573-1578)/(4.6099305302-4.6098332352);  
 when (raw\_score\_L3 gt 4.6099305302 and raw\_score\_L3 le 4.6100055752) CRI =1573+(raw\_score\_L3-

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4.6099305302)\*(1569-1573)/(4.6100055752-4.6099305302);  
when (raw\_score\_L3 gt 4.6100055752 and raw\_score\_L3 le 4.6100427942) CRI =1569+(raw\_score\_L3-  
4.6100055752)\*(1566-1569)/(4.6100427942-4.6100055752);  
when (raw\_score\_L3 gt 4.6100427942 and raw\_score\_L3 le 4.6102151342) CRI =1566+(raw\_score\_L3-  
4.6100427942)\*(1562-1566)/(4.6102151342-4.6100427942);  
when (raw\_score\_L3 gt 4.6102151342 and raw\_score\_L3 le 4.6103273982) CRI =1562+(raw\_score\_L3-  
4.6102151342)\*(1560-1562)/(4.6103273982-4.6102151342);  
when (raw\_score\_L3 gt 4.6103273982 and raw\_score\_L3 le 4.6103874742) CRI =1560+(raw\_score\_L3-  
4.6103273982)\*(1557-1560)/(4.6103874742-4.6103273982);  
when (raw\_score\_L3 gt 4.6103874742 and raw\_score\_L3 le 4.6104997382) CRI =1557+(raw\_score\_L3-  
4.6103874742)\*(1552-1557)/(4.6104997382-4.6103874742);  
when (raw\_score\_L3 gt 4.6104997382 and raw\_score\_L3 le 4.6106720782) CRI =1552+(raw\_score\_L3-  
4.6104997382)\*(1543-1552)/(4.6106720782-4.6104997382);  
when (raw\_score\_L3 gt 4.6106720782 and raw\_score\_L3 le 4.6108444182) CRI =1543+(raw\_score\_L3-  
4.6106720782)\*(1530-1543)/(4.6108444182-4.6106720782);  
when (raw\_score\_L3 gt 4.6108444182 and raw\_score\_L3 le 4.6110167582) CRI =1530+(raw\_score\_L3-  
4.6108444182)\*(1512-1530)/(4.6110167582-4.6108444182);  
when (raw\_score\_L3 gt 4.6110167582 and raw\_score\_L3 le 4.6114556023) CRI =1512+(raw\_score\_L3-  
4.6110167582)\*(1489-1512)/(4.6114556023-4.6110167582);  
when (raw\_score\_L3 gt 4.6114556023) CRI=1489;  
otherwise CRI=1600;  
end;

MOTORCYCLE RENEWAL CRI MODEL SCORETABLE

Unscaled Points		
Variable	Group	Points
Constant		4.6118556012
BIUP_NUM_BIN13	0-99	-0.0008388430
	100-299	-0.0016776860
	300+	-0.0025165290
HH_AFDREF_10Y_CNT_CAP3	0	0.0000000000
	1	-0.0002846040
	2	-0.0005692080
	3 or more	-0.0008538120
TRANS_CNCL_NON_PAY_CAR_Y5_IND	Yes	0.0017617346
	No	0.0000000000
HH_PREF_CNT_CAP8	0	0.0000000000
	1	-0.0001723400
	2	-0.0003446800
	3	-0.0005170200
	4	-0.0006893600
	5	-0.0008617000
	6	-0.0010340400
	7	-0.0012063800
8 or more	-0.0013787200	
PR_AFS1000_ALL_OHH_Y3_NUM_CAP2	0	0.0000000000
	1	0.0007835241
	2 or more	0.0015670482

Scaled Points		
Variable	Group	Points
Age of Principal Operator of the Vehicle	16 or under	-5
	17	-5
	18	-5
	19	-5
	20	-1

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Scaled Points		
Variable	Group	Points
	21	3
	22	6
	23	11
	24	13
	25	16
	26	17
	27	17
	28	17
	29	17
	30	17
	31	16
	32	15
	33	13
	34	12
	35	11
	36	9
	37	7
	38	5
	39	4
	40	2
	41	0
	42	-2
	43	-3
	44	-5
	45	-7
	46	-8
	47	-10
	48	-11
	49	-13
	50	-14
	51	-15
	52	-16
	53	-17
	54	-18
	55	-19
	56	-20
	57	-21
	58	-21
	59	-22

Scaled Points		
Variable	Group	Points
	60	-23
	61	-23
	62	-24
	63	-24
	64	-25
	65	-26
	66	-26
	67	-26
	68	-27
	69	-27
	70	-27
	71	-27
	72	-27
	73	-27
	74	-27
	75	-27
	76	-27
	77	-27
	78	-27
	79	-27
	80 or older	-27
State Adjustment	PENNSYLVANIA	-15

Tenure	Points
2 or less	-13
3	-11
4	-9
5	-8
6	-5
7	-2
8	7
9	18
10	26
11	37
12	49
13	58
14	67

Tenure	Points
15 or more	82

Underwriting Tier	CRI Adjustment
N250	-250
N249	-249
N248	-248
N247	-247
N246	-246
N245	-245
N244	-244
N243	-243
N242	-242
N241	-241
N240	-240
N239	-239
N238	-238
N237	-237
N236	-236
N235	-235
N234	-234
N233	-233
N232	-232
N231	-231
N230	-230
N229	-229
N228	-228
N227	-227
N226	-226
N225	-225
N224	-224
N223	-223
N222	-222
N221	-221
N220	-220
N219	-219
N218	-218
N217	-217

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<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N216	-216
N215	-215
N214	-214
N213	-213
N212	-212
N211	-211
N210	-210
N209	-209
N208	-208
N207	-207
N206	-206
N205	-205
N204	-204
N203	-203
N202	-202
N201	-201
N200	-200
N199	-199
N198	-198
N197	-197
N196	-196
N195	-195
N194	-194
N193	-193
N192	-192
N191	-191
N190	-190
N189	-189
N188	-188
N187	-187
N186	-186
N185	-185
N184	-184
N183	-183
N182	-182
N181	-181
N180	-180
N179	-179
N178	-178

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<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N177	-177
N176	-176
N175	-175
N174	-174
N173	-173
N172	-172
N171	-171
N170	-170
N169	-169
N168	-168
N167	-167
N166	-166
N165	-165
N164	-164
N163	-163
N162	-162
N161	-161
N160	-160
N159	-159
N158	-158
N157	-157
N156	-156
N155	-155
N154	-154
N153	-153
N152	-152
N151	-151
N150	-150
N149	-149
N148	-148
N147	-147
N146	-146
N145	-145
N144	-144
N143	-143
N142	-142
N141	-141
N140	-140
N139	-139

ACTUARIAL RESTRICTED

Underwriting Tier	CRI Adjustment
N138	-138
N137	-137
N136	-136
N135	-135
N134	-134
N133	-133
N132	-132
N131	-131
N130	-130
N129	-129
N128	-128
N127	-127
N126	-126
N125	-125
N124	-124
N123	-123
N122	-122
N121	-121
N120	-120
N119	-119
N118	-118
N117	-117
N116	-116
N115	-115
N114	-114
N113	-113
N112	-112
N111	-111
N110	-110
N109	-109
N108	-108
N107	-107
N106	-106
N105	-105
N104	-104
N103	-103
N102	-102
N101	-101
N100	-100

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N099	-99
N098	-98
N097	-97
N096	-96
N095	-95
N094	-94
N093	-93
N092	-92
N091	-91
N090	-90
N089	-89
N088	-88
N087	-87
N086	-86
N085	-85
N084	-84
N083	-83
N082	-82
N081	-81
N080	-80
N079	-79
N078	-78
N077	-77
N076	-76
N075	-75
N074	-74
N073	-73
N072	-72
N071	-71
N070	-70
N069	-69
N068	-68
N067	-67
N066	-66
N065	-65
N064	-64
N063	-63
N062	-62
N061	-61

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N060	-60
N059	-59
N058	-58
N057	-57
N056	-56
N055	-55
N054	-54
N053	-53
N052	-52
N051	-51
N050	-50
N049	-49
N048	-48
N047	-47
N046	-46
N045	-45
N044	-44
N043	-43
N042	-42
N041	-41
N040	-40
N039	-39
N038	-38
N037	-37
N036	-36
N035	-35
N034	-34
N033	-33
N032	-32
N031	-31
N030	-30
N029	-29
N028	-28
N027	-27
N026	-26
N025	-25
N024	-24
N023	-23
N022	-22

State Farm Mutual Automobile Insurance Company  
 State Farm Fire and Casualty Company  
 Auto  
 Pennsylvania

Effective 3/21/2016

Underwriting Tier	CRI Adjustment
N021	-21
N020	-20
N019	-19
N018	-18
N017	-17
N016	-16
N015	-15
N014	-14
N013	-13
N012	-12
N011	-11
N010	-10
N009	-9
N008	-8
N007	-7
N006	-6
N005	-5
N004	-4
N003	-3
N002	-2
N001	-1
Z000	0
P001	1
P002	2
P003	3
P004	4
P005	5
P006	6
P007	7
P008	8
P009	9
P010	10
P011	11
P012	12
P013	13
P014	14
P015	15
P016	16
P017	17

Underwriting Tier	CRI Adjustment
P018	18
P019	19
P020	20
P021	21
P022	22
P023	23
P024	24
P025	25

Underwriting Tier	CRI Adjustment
P026	26
P027	27
P028	28
P029	29
P030	30
P031	31
P032	32
P033	33
P034	34
P035	35
P036	36
P037	37
P038	38
P039	39
P040	40
P041	41
P042	42
P043	43
P044	44
P045	45
P046	46
P047	47
P048	48
P049	49
P050	50
P051	51
P052	52
P053	53
P054	54

Underwriting Tier	CRI Adjustment
P055	55
P056	56
P057	57
P058	58
P059	59
P060	60
P061	61
P062	62
P063	63
P064	64
P065	65
P066	66
P067	67
P068	68
P069	69
P070	70
P071	71
P072	72
P073	73
P074	74
P075	75
P076	76
P077	77
P078	78
P079	79
P080	80
P081	81
P082	82
P083	83
P084	84
P085	85
P086	86
P087	87
P088	88
P089	89
P090	90
P091	91
P092	92
P093	93

Underwriting Tier	CRI Adjustment
P094	94
P095	95
P096	96
P097	97
P098	98
P099	99
P100	100
P101	101
P102	102
P103	103
P104	104
P105	105
P106	106
P107	107
P108	108
P109	109
P110	110
P111	111
P112	112
P113	113
P114	114
P115	115
P116	116
P117	117
P118	118
P119	119
P120	120
P121	121
P122	122
P123	123
P124	124
P125	125
P126	126
P127	127
P128	128
P129	129
P130	130
P131	131
P132	132

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
P133	133
P134	134
P135	135
P136	136
P137	137
P138	138
P139	139
P140	140
P141	141
P142	142
P143	143
P144	144
P145	145
P146	146
P147	147
P148	148
P149	149
P150	150
P151	151
P152	152
P153	153
P154	154
P155	155
P156	156
P157	157
P158	158
P159	159
P160	160
P161	161
P162	162
P163	163
P164	164
P165	165
P166	166
P167	167
P168	168
P169	169
P170	170
P171	171

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
P172	172
P173	173
P174	174
P175	175
P176	176
P177	177
P178	178
P179	179
P180	180
P181	181
P182	182
P183	183
P184	184
P185	185
P186	186
P187	187
P188	188
P189	189
P190	190
P191	191
P192	192
P193	193
P194	194
P195	195
P196	196
P197	197
P198	198
P199	199
P200	200
P201	201
P202	202
P203	203
P204	204
P205	205
P206	206
P207	207
P208	208
P209	209
P210	210

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
P211	211
P212	212
P213	213
P214	214
P215	215
P216	216
P217	217
P218	218
P219	219
P220	220
P221	221
P222	222
P223	223
P224	224
P225	225
P226	226
P227	227
P228	228
P229	229
P230	230
P231	231
P232	232
P233	233
P234	234
P235	235
P236	236
P237	237
P238	238
P239	239
P240	240
P241	241
P242	242
P243	243
P244	244
P245	245
P246	246
P247	247
P248	248
P249	249

Underwriting Tier	CRI Adjustment
P250	250

**MOTORCYCLE RENEWAL CRI MODEL VARIABLE DEFINITIONS**

Variable	Definition*
BIUP_NUM_BIN13	BI per occurrence limit on the motorcycle policy (in 1,000s)
HH_PREF_CNT_CAP8	Count of household car policies in the mutual company
TRANS_CNCL_NON_PAY_CAR_Y5_IND	Indicator of motorcycle policy cancellation (nonpayment) in the last five years
HH_AFDREF_10Y_CNT_CAP3	Number of cars in the household with the 10-Year Accident-Free Discount
PR_AFS1000_ALL_OHH_Y3_NUM_CAP2	The number of at-fault surchargeable claims on other vehicles in the household in the last 36 months
Tenure	Tenure of the motorcycle policy
Age	The age (in years) of the principal driver of the vehicle
State	State where the vehicle will be principally garaged
Underwriting Tier	Underwriting Tier

**\*Notes:**

- A. Tenure - The length of time the vehicle (or the one it replaced) has been insured with State Farm.
- B. At-fault surchargeable claims - Claims which meet the definition of Chargeable Accident.
- C. The CRI factor cannot increase due to the underwriting tier.
- D. Tier placement is based on mutually exclusive underwriting criteria on file at the home office.
- E. The characteristics used in underwriting tier placement may be used in other rating variables, but do not result in a duplicative rating impact.

## PRIVATE PASSENGER RENEWAL CRI MODEL

### Instructions for calculating a CRI for a vehicle

Step 1: Determine the value for the vehicle of each variable listed in the Private Passenger Renewal CRI Model Variable Definitions.

Step 2: For each variable shown in the Private Passenger Renewal CRI Model Scoretable except for Underwriting Tier, find the points assigned to the value determined in Step 1 for the D601 model.

Step 3: For each claim on the vehicle in the last six years, determine the appropriate number of points for that claim in the D601 model from the Private Passenger Renewal CRI Model Claim Matrix Points.

Step 4: For each claim on another vehicle in the household in the last six years, determine the appropriate number of points for that claim in the D601 model from the Private Passenger Renewal CRI Model Claim Matrix Points.

Step 5: Add the points for the constant shown in the Private Passenger Renewal CRI Model Scoretable for the D601 model to the points for the variables Tenure, D\_VEH\_CANC\_NON\_PAY\_CNT\_ZE5, HH\_ANTQ\_CLSC\_CNT, HH\_RECVEH\_CNT, OHH\_WORST\_TIER, HH\_BI\_MAX\_LIM, OHH\_Max\_Veh\_Age, OHH\_Min\_Veh\_Age, Number of Drivers in household & hh\_cri\_eli\_cnt Interaction, HH\_CAR\_CNT & ohh\_yrs\_sf\_21to25\_cnt Interaction, hh\_cri\_eli\_cnt & OT\_HH\_AFDREF\_10Y Interaction, HH\_CAR\_CNT & ohh\_yrs\_sf\_gt\_25\_cnt Interaction, HH\_CAR\_CNT & OHH\_YRS\_SF\_LE\_2\_CNT Interaction, Presence of youthful driver on this car & Household Minimum driver age Interaction, Tenure & Tier Interaction, and all claims in Step 3 and Step 4.

Step 6: If the total number of drivers in the household exceeds five, then subtract 12 points from the value determined in Step 5. If the number of other cars with Comprehensive coverage in the household exceeds five, then subtract 2 points. If the number of other cars with ERS coverage in the household exceeds five, then subtract 1 point. Limit this value to be between 1334 and 1754.

Step 7: Calculate an intermediate CRI factor for the D601 model as  $1.003^{(1600 - (\text{Step 6}))}$ . Round to the nearest 0.001. Subtract 1.000 from this value.

Step 8: Multiply the result of Step 7 by the CRI spread factor for the D601, found in the Private Passenger Renewal CRI Model Scoretable, and add 1.000.

Step 9: Convert the result of Step 8 back to a CRI, by taking  $1600 - [\log(\text{Step 8})/\log(1.003)]$ . Round to the nearest whole number.

Step 10: Add to the CRI from Step 9 the Age Adjustment for the D601 model, found in the Private Passenger Renewal CRI Model Scoretable, to get a non-tier adjusted D601 CRI.

Step 11: Repeat Steps 2-5 for the L301 model.

Step 12: If the total number of drivers in the household exceeds five, then subtract 3 points from the value determined in Step 11. Limit this value to be between 1449 and 1708.

Step 13: Starting from the value in Step 12, repeat Steps 7-10 for the L301 model.

Step 14: Find the Underwriting Tier Adjustment, associated with the Underwriting Tier determined in Step 1 from the Private Passenger Renewal CRI Model Scoretable.

Step 15: If the Underwriting Tier Adjustment from step 14 is higher than the previously used Underwriting Tier Adjustment, then set step 14 as the final Underwriting Tier Adjustment. If the Underwriting Tier Adjustment from step 14 is less than or equal to the previously used Underwriting Tier Adjustment then set the final Underwriting Tier Adjustment to the previously used Underwriting Tier Adjustment. If this is the first time the vehicle is on a full renewal model, calculate the previously used Underwriting Tier Adjustment as New Business CRI - 1600.

Step 16: Add to the D601 CRI from Step 10 the Underwriting Tier Adjustment from step 15. Limit this sum to be between 1000 and 1999 to get a final D601 CRI.

Step 17: Repeat step 16 for the L301 model.

Step 18: Determine the final CRI based on the D601 CRI from Step 16 and the L301 CRI from Step 17, using the following logic:

If D601 CRI <= Prior Term CRI and L301 CRI <= Prior Term CRI, then Final CRI = L301 CRI

Else if D601 CRI >= Prior Term CRI and L301 CRI >= Prior Term CRI, then Final CRI = min(D601 CRI, L301 CRI)

Else Final CRI = Prior Term CRI

**PRIVATE PASSENGER RENEWAL CRI MODEL SCORETABLE**

Variables	Group	D601 Value	L301 Value
Constant		1777	1718
Tenure	2 or less	0	0
	3	2	2
	4	4	4
	5	6	6
	6	6	6
	7	6	6
	8	6	6
	9	8	8
	10	10	10
	11	12	12
	12	14	14
	13	16	16
	14	18	18
	15	20	20
	16	23	23

ACTUARIAL RESTRICTED

Variables	Group	D601 Value	L301 Value
	17	25	25
	18	27	27
	19	29	29
	20+	31	31
D_VEH_CANC_NON_PAY_CNT_ZE5	No	0	0
	Yes	-71	-71
HH_ANTQ_CLSC_CNT	0	0	0
	1+	17	17
HH_BI_MAX_LIM	0 or None	-7	-7
	1-299000	-21	-21
	300000+	0	0
HH_RECVEH_CNT	0	0	0
	1+	13	13
OHH_Max_Veh_Age	1 or fewer other CRI eligible vehicles	-14	-14
	<=0	0	0
	1	-1	-1
	2	-2	-2
	3	-3	-3
	4	-4	-4
	5	-5	-5
	6	-7	-7
	7	-8	-8
	8	-9	-9
	9	-10	-10
	10	-11	-11
	11	-12	-12
	12	-14	-14
	13	-15	-15
	13	-15	-15
	14	-16	-16
	15	-17	-17
	16	-18	-18
	17	-19	-19

ACTUARIAL RESTRICTED

Variables	Group	D601 Value	L301 Value
	18	-20	-20
	19	-21	-21
	>=20	-22	-22
OHH_Min_Veh_Age	No other CRI eligible vehicles	-21	-21
	<=0	0	0
	1	-4	-4
	2	-7	-7
	3	-11	-11
	4	-15	-15
	5	-19	-19
	6	-23	-23
	7	-27	-27
	8	-31	-31
	9	-34	-34
	10	-38	-38
	11	-41	-41
	12	-45	-45
	13	-48	-48
	14	-51	-51
	15	-54	-54
	16	-57	-57
	17	-60	-60
	18	-63	-63
	19	-66	-66
	>=20	-69	-69
OHH_WORST_TIER	No other ARRP/STAR eligible vehicles	-5	-5
	1 STAR	-20	-20
	2 STAR Discount	-20	-20
	3 STAR Discount	-14	-14
	SFM Accident Surcharge	-14	-14
	SFM Base	-13	-13

ACTUARIAL RESTRICTED

Variables	Group	D601 Value	L301 Value
	Good Driving Discount	-5	-5
	3 Year AFD	-6	-6
	6 Year AFD	-3	-3
	10 Year AFD	0	0
OHH_BEST_TIER	1 or fewer other ARRP/STAR eligible vehicles	-2	-2
	1 STAR	-23	-23
	2 STAR Discount	-23	-23
	3 STAR Discount	-9	-9
	SFM Accident Surcharge	-18	-18
	SFM Base	-13	-13
	Good Driving Discount	-6	-6
	3 Year AFD	-7	-7
	6 Year AFD	-6	-6
	10 Year AFD	0	0

	Number of Drivers in household	hh_cri_eli_cnt	D601 Value	L301 Value
Number of Drivers in household & hh_cri_eli_cnt Interaction	0	*	-16	-16
	1	*	-16	-16
	2	1	-23	-23
	2	2+	0	0
	3	1	-30	-30
	3	2	-30	-30
	3	3+	-23	-23
	4+	1	-30	-30
	4+	2	-30	-30
	4+	3	-30	-30
	4+	at least 4, and less than Number of Drivers in household	-30	-30

ACTUARIAL RESTRICTED

	Number of Drivers in household	hh_cri_eli_cnt	D601 Value	L301 Value
	4+	at least 4, and not less than Number of Drivers in household	-23	-23

Variable	HH_CAR_CMT	ohh_yrs_sf_21to25_cnt	D601 Value	L301 Value
HH_CAR_CNT & ohh_yrs_sf_21to25_cnt Interaction	1	*	-10	-10
	2	0	-11	-11
	2	1+	-1	-1
	3+	0	-12	-12
	3+	1+	0	0

Variables	Tenure	Tier	D601 Value	L301 Value
Tenure & Tier Interaction	Less than 10	*	0	0
	10+	6 Year AFD	-42	0
	10+	Other than 6 Year AFD	0	0

Variable	hh_cri_eli_cnt	OT_HH_AFDREF_10Y	D601 Value	L301 Value
hh_cri_eli_cnt & OT_HH_AFDREF_10Y Interaction	1	*	-16	-16
	2	0	-24	-24
	2	1	-8	-8
	2	2	-8	-8
	2	3+	-8	-8
	3	0	-28	-28
	3	1	-13	-13
	3	2	0	0
	3	3+	0	0
	4+	0	-28	-28
	4+	1	-17	-17
	4+	2	-11	-11
	4+	3+	0	0

ACTUARIAL RESTRICTED

Variable	HH_CAR_CNT	ohh_yrs_sf_gt_25_cnt	D601 Value	L301 Value
HH_CAR_CNT & ohh_yrs_sf_gt_25_cnt Interaction	1	*	-24	-24
	2	0	-28	-28
	2	1+	0	0
	3+	0	-28	-28
	3+	1	-10	-10
	3+	2+	-1	-1

Variables	HH_CAR_CNT	OHH_YRS_SF_LE_2_CNT	D601 Value	L301 Value
HH_CAR_CNT & OHH_YRS_SF_LE_2_CNT Interaction	1	*	-2	-2
	2	0	-1	-1
	2	1+	-12	-12
	3+	0	0	0
	3+	1	-3	-3
	3+	2+	-11	-11

Variables	Presence of youthful driver on this car	Household Minimum driver age	D601 Value	L301 Value
Presence of youthful driver on this car & Household Minimum driver age Interaction	Yes	*	0	0
	No	16 or less	-60	-60
	No	17	-56	-56
	No	18	-50	-50
	No	19	-45	-45
	No	20	-39	-39
	No	21	-34	-34
	No	22	-27	-27
	No	23	-20	-20
	No	24	-14	-14
	No	25+	0	0

Variable	Group	D601 Value	L301 Value
CRI Spread Factor		0.896	1.028
Age Adjustment	16 or less	-18	-8
	17	-8	1

**ACTUARIAL RESTRICTED**

Variable	Group	D601 Value	L301 Value
	18	1	6
	19	8	10
	20	14	12
	21	18	13
	22	20	13
	23	21	13
	24	19	13
	25	17	12
	26	13	11
	27	10	9
	28	6	8
	29	3	6
	30	3	5
	31	1	4
	32	0	3
	33	-1	2
	34	-2	2
	35	-2	2
	36	-1	3
	37	-1	3
	38	0	4
	39	1	5
	40	2	6
	41	3	7
	42	4	7
	43	5	8
	44	6	8
	45	7	9
	46	8	9
	47	8	9
	48	8	8
	49	8	8
	50	7	7
	51	6	5
	52	5	4
	53	3	2
	54	1	1
	55	-2	-1
	56	-5	-4
	57	-9	-6

**ACTUARIAL RESTRICTED**

Variable	Group	D601 Value	L301 Value
	58	-13	-8
	59	-18	-10
	60	-18	-12
	61	-18	-14
	62	-18	-16
	63	-18	-18
	64	-18	-19
	65	-18	-20
	66	-18	-21
	67	-18	-21
	68	-18	-21
	69	-18	-21
	70	-18	-20
	71	-18	-20
	72	-18	-19
	73	-18	-18
	74	-18	-17
	75	-18	-16
	76	-18	-15
	77	-18	-14
	78	-18	-14
	79	-18	-14
	80+	-18	-14

Underwriting Tier	CRI Adjustment
N160	-160
N159	-159
N158	-158
N157	-157
N156	-156
N155	-155
N154	-154
N153	-153
N152	-152
N151	-151
N150	-150
N149	-149

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N148	-148
N147	-147
N146	-146
N145	-145
N144	-144
N143	-143
N142	-142
N141	-141
N140	-140
N139	-139
N138	-138
N137	-137
N136	-136
N135	-135
N134	-134
N133	-133
N132	-132
N131	-131
N130	-130
N129	-129
N128	-128
N127	-127
N126	-126
N125	-125
N124	-124
N123	-123
N122	-122
N121	-121
N120	-120
N119	-119
N118	-118
N117	-117
N116	-116
N115	-115
N114	-114
N113	-113
N112	-112
N111	-111
N110	-110

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N109	-109
N108	-108
N107	-107
N106	-106
N105	-105
N104	-104
N103	-103
N102	-102
N101	-101
N100	-100
N099	-99
N098	-98
N097	-97
N096	-96
N095	-95
N094	-94
N093	-93
N092	-92
N091	-91
N090	-90
N089	-89
N088	-88
N087	-87
N086	-86
N085	-85
N084	-84
N083	-83
N082	-82
N081	-81
N080	-80
N079	-79
N078	-78
N077	-77
N076	-76
N075	-75
N074	-74
N073	-73
N072	-72
N071	-71

**ACTUARIAL RESTRICTED**

<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N070	-70
N069	-69
N068	-68
N067	-67
N066	-66
N065	-65
N064	-64
N063	-63
N062	-62
N061	-61
N060	-60
N059	-59
N058	-58
N057	-57
N056	-56
N055	-55
N054	-54
N053	-53
N052	-52
N051	-51
N050	-50
N049	-49
N048	-48
N047	-47
N046	-46
N045	-45
N044	-44
N043	-43
N042	-42
N041	-41
N040	-40
N039	-39
N038	-38
N037	-37
N036	-36
N035	-35
N034	-34
N033	-33
N032	-32

State Farm Mutual Automobile Insurance Company  
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Auto  
Pennsylvania

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<b>Underwriting Tier</b>	<b>CRI Adjustment</b>
N031	-31
N030	-30
N029	-29
N028	-28
N027	-27
N026	-26
N025	-25
N024	-24
N023	-23
N022	-22
N021	-21
N020	-20
N019	-19
N018	-18
N017	-17
N016	-16
N015	-15
N014	-14
N013	-13
N012	-12
N011	-11
N010	-10
N009	-9
N008	-8
N007	-7
N006	-6
N005	-5
N004	-4
N003	-3
N002	-2
N001	-1
Z000	0
P001	1
P002	2
P003	3
P004	4
P005	5
P006	6
P007	7

Underwriting Tier	CRI Adjustment
P008	8
P009	9
P010	10
P011	11
P012	12
P013	13
P014	14
P015	15
P016	16
P017	17
P018	18
P019	19
P020	20
P021	21
P022	22
P023	23
P024	24
P025	25
P026	26
P027	27
P028	28
P029	29
P030	30
P031	31
P032	32
P033	33
P034	34
P035	35
P036	36
P037	37
P038	38
P039	39
P040	40
P041	41
P042	42
P043	43
P044	44
P045	45
P046	46

Underwriting Tier	CRI Adjustment
P047	47
P048	48
P049	49
P050	50
P051	51
P052	52
P053	53
P054	54
P055	55
P056	56
P057	57
P058	58
P059	59
P060	60
P061	61
P062	62
P063	63
P064	64
P065	65
P066	66
P067	67
P068	68
P069	69
P070	70
P071	71
P072	72
P073	73
P074	74
P075	75
P076	76
P077	77
P078	78
P079	79
P080	80
P081	81
P082	82
P083	83
P084	84
P085	85

Underwriting Tier	CRI Adjustment
P086	86
P087	87
P088	88
P089	89
P090	90
P091	91
P092	92
P093	93
P094	94
P095	95
P096	96
P097	97
P098	98
P099	99
P100	100
P101	101
P102	102
P103	103
P104	104
P105	105
P106	106
P107	107
P108	108
P109	109
P110	110
P111	111
P112	112
P113	113
P114	114
P115	115
P116	116
P117	117
P118	118
P119	119
P120	120
P121	121
P122	122
P123	123
P124	124

Underwriting Tier	CRI Adjustment
P125	125

PRIVATE PASSENGER RENEWAL CRI MODEL VARIABLE DEFINITIONS

Variables	Definitions*
Tenure	The number of years the policy has been in force
HH_BI_MAX_LIM	Maximum BI per occurrence limit for any vehicle in the household
D_VEH_CANC_NON_PAY_CNT_ZE5	Indicator for a cancellation for non-payment of premium on this policy in the last 60 months
OHH_Min_Veh_Age	Minimum age of other private passenger vehicles in the household
OHH_Max_Veh_Age	Maximum age of other private passenger vehicles in the household
OHH_YRS_SF_LE_2_CNT	Number of other vehicles in household with less than 3 years of tenure
OHH_WORST_TIER	The highest-rated tier for other cars in the household
OHH_Best_TIER	The lowest-rated tier for other cars in the household
HH_ANTQ_CLSC_CNT	Number of antique/classic vehicles in the household
HH_RECVEH_CNT	Number of recreational vehicles in the household
Tier	The rating tier for the policy
OT_HH_AFDREF_10Y	Number of other vehicles in household with a 10-year Accident-Free Discount
hh_cri_eli_cnt	Total number of cars in the household eligible for CRI
Number of Drivers in household	Total number of drivers in the household
ohh_yrs_sf_21to25_cnt	The number of other cars with tenure between 21 and 25 in the household
HH_CAR_CNT	Total number of vehicles in the household
OHH_CMP_CNT	Number of other cars with Comprehensive coverage in the household
OHH_ERS_CNT	Number of other cars with ERS coverage in the household
ohh_yrs_sf_gt_25_cnt	The number of other cars with tenure greater than 25 in the household
Presence of youthful driver on this car	Indicator for a youthful driver (age < 25) assigned to this car
Household Minimum driver age	Minimum driver age in the household
Age	The age in years of the principal operator of the vehicle
PR_AFSXXXX_NOMPP_CAR	Number of at-fault surchargeable claims excluding MPC and PIP on this car in the last 6 years
PR_AFNXXXX_NOMPP_CAR	Number of at-fault non-surchargeable claims excluding MPC and PIP on this car in the last 6 years
PR_AFTXXXX_MPP_CAR	Number of at-fault MPC or PIP claims on this car in the last 6 years
PR_NAFXXXX_MPP_CAR	Number of not-at-fault MPC and PIP claims on this car in the last 6 years
PR_NAFXXXX_OTH_CAR	Number of not-at-fault claims on this car other than not-at-fault Comprehensive or ERS claims on this car in the last 6 years
PR_NAFXXXX_CMP_CAR	Number of not-at-fault Comprehensive claims on this car in the last 6 years
PR_NAFXXXX_ERS_CAR	Number of not-at-fault ERS claims on this car in the last 6 years
PR_AFSXXXX_NOMPP_OHH	Number of at-fault surchargeable claims excluding MPC and PIP on other cars in the household in the last 6 years
PR_AFNXXXX_NOMPP_OHH	Number of at-fault non-surchargeable claims excluding MPC and PIP on other cars in the household in the last 6 years
PR_AFTXXXX_MPP_OHH	Number of at-fault MPC or PIP claims on other cars in the household in the last 6 years

Variables	Definitions*
PR_NAFXXXX_MPP_OHH	Number of not-at-fault MPC and PIP claims on other cars in the household in the last 6 years
PR_NAFXXXX_OTH_OHH	Number of not-at-fault claims on other cars in the household other than not-at-fault Comprehensive or ERS claims on other cars in the household in the last 6 years
PR_NAFXXXX_CMP_OHH	Number of not-at-fault Comprehensive claims on other cars in the household in the last 6 years
PR_NAFXXXX_ERS_OHH	Number of not-at-fault ERS claims on other cars in the household in the last 6 years
PR_AFSXXXX_NOMPP_CAR_Y3	Number of at-fault surchargeable claims excluding MPC and PIP on this car in the last 3 years
PR_AFSXXXX_MPP_CAR_Y3	Number of at-fault surchargeable MPC or PIP claims on this car in the last 3 years
PR_AFSXXXX_NOMPP_OHH_Y3	Number of at-fault surchargeable claims excluding MPC and PIP on other cars in the household in the last 3 years
PR_AFSXXXX_MPP_OHH_Y3	Number of at-fault surchargeable MPC or PIP claims on other cars in the household in the last 3 years
Underwriting Tier	Underwriting Tier

**\*Notes:**

- A. At-fault claims - Claims are considered to be at-fault if the company has made payment under collision coverage (for a single vehicle accident), or under property damage liability coverage. The claim will not be considered at-fault if the Company is furnished sufficient evidence that the driver involved in the accident was less than 50% at fault.
- B. Not-at-fault ERS claims - Claims which are not at-fault (as defined in part A), for which the incurred loss under Emergency Road Service (ERS) coverage is greater than \$0.
- C. Not-at-fault claims - Claims which are not at-fault, as defined in part A, which have a total incurred loss greater than \$0.
- D. Not-at-fault Comprehensive or ERS claims - Claims which are not at-fault (as defined in part A), for which the incurred loss under either Emergency Road Service (ERS) or Comprehensive coverage is greater than \$0.
- E. Tenure - The length of time the vehicle (or the one it replaced) has been insured with State Farm.
- F. At-fault surchargeable claims - Claims which meet the definition of Chargeable Accident.
- G. The CRI factor cannot increase due to the underwriting tier.
- H. Tier placement is based on mutually exclusive underwriting criteria on file at the home office.
- I. The characteristics used in underwriting tier placement may be used in other rating variables, but do not result in a duplicative rating impact.



**CUSTOMER RATING INDEX (CRI)**

The base premiums for the bodily injury and property damage liability, medical payments, funeral benefits, loss of income, combined benefits, comprehensive, and collision coverages, applicable to a private passenger automobile as defined in Rule 201 - Private Passenger Automobile Defined or motorcycle as defined in Rule 404 - Motorcycles, Motorscooters, and Motorized Bicycles shall be adjusted by the CRI Factor in accordance with the following provisions:

**A. New Business and Subsequent Rating**

A CRI will be used to determine the CRI Factor at the inception of each policy term. That CRI will continue to be used in determination of the CRI Factor for the entire policy term. Assignment of the New Business CRI is based on mutually exclusive underwriting criteria on file at the home office. The assignment of the CRI for subsequent rating is as follows:

- 1. Private Passenger Automobiles
  - a. The early renewal model will be used at the first renewal on or after the six month anniversary of the new business effective date until the renewal model CRI first applies.
  - b. The renewal model will be used at each renewal beginning two years from the new business effective date of the automobile (or the vehicle it replaces).
- 2. Motorcycles
  - a. The CRI initially assigned will continue to be used in determination of the CRI Factor until a renewal CRI first applies.
  - b. The renewal model will be used at each renewal beginning two years from the new business effective date of the motorcycle (or the vehicle it replaces).

Application of the CRI Factor does not result in a duplicative rating effect in its consideration of characteristics used by any other rating variable.

**NOTE:** Requests to use an updated CRI with current Underwriting Tier information to determine the CRI Factor must be made by the named insured. The updated CRI Factor will be applied to the policy at the next renewal. Such requests may not be made more than once within a twelve-month period.

**B. Factors**

The CRI Factor is determined by the following formula:  $1.003^{(1600 - CRI)}$ . The CRI Factor shall be rounded to 3 decimal places and is subject to ~~minimum and maximum factor of factors 6.033 and a minimum factor~~ as outlined below:

Private Passenger Automobile	
Category	Maximum Minimum
SFM 10-Year Accident-Free Discount	0-600

<del>6.033SFM 6-Year Accident-Free Discount</del>	0.600
<del>SFM 3-Year Accident-Free Discount</del>	<del>0.600</del>
<del>SFM Good Driving Discount</del>	<del>0.600</del>
<del>SFM No-Accident-Free Discount or Good Driving Discount</del>	<del>0.600</del>
<del>SFF&amp;C 3-STAR</del>	<del>0.600</del>
<del>SFF&amp;C 2-STAR</del>	<del>0.600</del>
<del>SFF&amp;C 1-STAR</del>	<del>0.600</del>

<b>Motorcycle</b>	
<del>Category</del> <b>Maximum</b>	<b>Minimum</b>
<del>SFM 6.033</del>	0.600
<del>SFF&amp;C</del>	<del>0.600</del>

**C. Exception:** The following vehicles are not eligible for the Customer Rating Index (CRI):

1. Motor homes as defined in Rule 401(A) - Motor Homes, Truck or Van Campers (Recreational Use)
2. Trailers insured under Rule 402 - Trailers Designed for Use with Private Passenger Automobiles
3. Automobiles insured under Rule 406 - Antique and Classic Automobiles and Replicas
4. Policies insured under Rule 502 - Use of Non-Owned Cars (Broad Form)
5. Fleets insured under Rule 801 - Fleet Rating Plan (SFM Only)
6. Vehicles insured under Rule 901 - Recreational Vehicles (SFM Only)

## MOTORCYCLE RENEWAL CRI MODEL

### Instructions for calculating a CRI for a vehicle

Step 1: Determine the value for the vehicle of each variable listed in Motorcycle Renewal CRI Model Variable Definitions.

Step 2: For each ~~unscaled points~~ variable in the Motorcycle Renewal CRI Model Scoretable, find the points assigned to the value determined in Step 1.

Step 3: Add the ~~unscaled~~ points for the constant shown in the Motorcycle Renewal CRI Model Scoretable to the points for each variable determined in Step 2 except for Tenure, Age, State, and Underwriting Tier.

Step 4: Using the logic in Motorcycle Renewal CRI Model Scaling, determine the CRI using the value from Step 3.

Step 5: Add the ~~scaled~~ points for Age, State, and Tenure from the Motorcycle Renewal CRI Model Scoretable. Limit the total to be between 1000 and 1999. This is the ~~final~~ non-tier adjusted CRI for the vehicle.

Step 6: Find the Underwriting Tier Adjustment, associated with the Underwriting Tier determined in Step 1 from the Motorcycle Renewal CRI Model Scoretable.

Step 7: If the Underwriting Tier Adjustment from step 6 is higher than the previously used Underwriting Tier Adjustment, then set step 6 as the final Underwriting Tier Adjustment. If the Underwriting Tier Adjustment from step 6 is less than or equal to the previously used Underwriting Tier Adjustment then set the final Underwriting Tier Adjustment to the previously used Underwriting Tier Adjustment. If this is the first time the vehicle is on a full renewal model, calculate the previously used Underwriting Tier Adjustment as New Business CRI - 1600.

Step 8: Sum the non-tier adjusted CRI from Step 5 and the Underwriting Tier Adjustment from step 7. Limit this sum to be between 1000 and 1999 to get a final CRI.

## MOTORCYCLE RENEWAL CRI MODEL SCALING

raw\_score\_L3 = CONSTANT + BIUP\_NUM\_BIN13 + HH\_PREF\_CNT\_CAP8 +  
TRANS\_CNCL\_NON\_PAY\_CAR\_Y5\_IND + HH\_AFPREF\_10Y\_CNT\_CAP3 +  
PR\_AFS1000\_ALL\_OHH\_Y3\_NUM\_CAP2

select;

when (raw\_score\_L3 le 4.6072788802) CRI =1721;  
 when (raw\_score\_L3 gt 4.6072788802 and raw\_score\_L3 le 4.6076235602) CRI =1721+(raw\_score\_L3-  
 4.6072788802)\*(1716-1721)/(4.6076235602-4.6072788802);  
 when (raw\_score\_L3 gt 4.6076235602 and raw\_score\_L3 le 4.6077358242) CRI =1716+(raw\_score\_L3-  
 4.6076235602)\*(1710-1716)/(4.6077358242-4.6076235602);  
 when (raw\_score\_L3 gt 4.6077358242 and raw\_score\_L3 le 4.6079081642) CRI =1710+(raw\_score\_L3-  
 4.6077358242)\*(1702-1710)/(4.6079081642-4.6077358242);  
 when (raw\_score\_L3 gt 4.6079081642 and raw\_score\_L3 le 4.6080204282) CRI =1702+(raw\_score\_L3-  
 4.6079081642)\*(1693-1702)/(4.6080204282-4.6079081642);  
 when (raw\_score\_L3 gt 4.6080204282 and raw\_score\_L3 le 4.6080805042) CRI =1693+(raw\_score\_L3-  
 4.6080204282)\*(1684-1693)/(4.6080805042-4.6080204282);  
 when (raw\_score\_L3 gt 4.6080805042 and raw\_score\_L3 le 4.6081927682) CRI =1684+(raw\_score\_L3-  
 4.6080805042)\*(1665-1684)/(4.6081927682-4.6080805042);

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when (raw\_score\_L3 gt 4.6081927682 and raw\_score\_L3 le 4.6082528442) CRI =1665+(raw\_score\_L3-4.6081927682)\*(1656-1665)/(4.6082528442-4.6081927682);  
 when (raw\_score\_L3 gt 4.6082528442 and raw\_score\_L3 le 4.6083651082) CRI =1656+(raw\_score\_L3-4.6082528442)\*(1641-1656)/(4.6083651082-4.6082528442);  
 when (raw\_score\_L3 gt 4.6083651082 and raw\_score\_L3 le 4.6084773722) CRI =1641+(raw\_score\_L3-4.6083651082)\*(1629-1641)/(4.6084773722-4.6083651082);  
 when (raw\_score\_L3 gt 4.6084773722 and raw\_score\_L3 le 4.6085374482) CRI =1629+(raw\_score\_L3-4.6084773722)\*(1624-1629)/(4.6085374482-4.6084773722);  
 when (raw\_score\_L3 gt 4.6085374482 and raw\_score\_L3 le 4.6086497122) CRI =1624+(raw\_score\_L3-4.6085374482)\*(1615-1624)/(4.6086497122-4.6085374482);  
 when (raw\_score\_L3 gt 4.6086497122 and raw\_score\_L3 le 4.6087097882) CRI =1615+(raw\_score\_L3-4.6086497122)\*(1611-1615)/(4.6087097882-4.6086497122);  
 when (raw\_score\_L3 gt 4.6087097882 and raw\_score\_L3 le 4.6087470072) CRI =1611+(raw\_score\_L3-4.6087097882)\*(1609-1611)/(4.6087470072-4.6087097882);  
 when (raw\_score\_L3 gt 4.6087470072 and raw\_score\_L3 le 4.6088220522) CRI =1609+(raw\_score\_L3-4.6087470072)\*(1608-1609)/(4.6088220522-4.6087470072);  
 when (raw\_score\_L3 gt 4.6088220522 and raw\_score\_L3 le 4.6088640283) CRI =1608+(raw\_score\_L3-4.6088220522)\*(1608-1608)/(4.6088640283-4.6088220522);  
 when (raw\_score\_L3 gt 4.6088640283 and raw\_score\_L3 le 4.6089943922) CRI =1608+(raw\_score\_L3-4.6088640283)\*(1607-1608)/(4.6089943922-4.6088640283);  
 when (raw\_score\_L3 gt 4.6089943922 and raw\_score\_L3 le 4.6090885563) CRI =1607+(raw\_score\_L3-4.6089943922)\*(1607-1607)/(4.6090885563-4.6089943922);  
 when (raw\_score\_L3 gt 4.6090885563 and raw\_score\_L3 le 4.6091486323) CRI =1607+(raw\_score\_L3-4.6090885563)\*(1606-1607)/(4.6091486323-4.6090885563);  
 when (raw\_score\_L3 gt 4.6091486323 and raw\_score\_L3 le 4.6091667322) CRI =1606+(raw\_score\_L3-4.6091486323)\*(1605-1606)/(4.6091667322-4.6091486323);  
 when (raw\_score\_L3 gt 4.6091667322 and raw\_score\_L3 le 4.6092039512) CRI =1605+(raw\_score\_L3-4.6091667322)\*(1604-1605)/(4.6092039512-4.6091667322);  
 when (raw\_score\_L3 gt 4.6092039512 and raw\_score\_L3 le 4.6093209723) CRI =1604+(raw\_score\_L3-4.6092039512)\*(1603-1604)/(4.6093209723-4.6092039512);  
 when (raw\_score\_L3 gt 4.6093209723 and raw\_score\_L3 le 4.6093762912) CRI =1603+(raw\_score\_L3-4.6093209723)\*(1601-1603)/(4.6093762912-4.6093209723);  
 when (raw\_score\_L3 gt 4.6093762912 and raw\_score\_L3 le 4.6094332363) CRI =1601+(raw\_score\_L3-4.6093762912)\*(1598-1601)/(4.6094332363-4.6093762912);  
 when (raw\_score\_L3 gt 4.6094332363 and raw\_score\_L3 le 4.6095257742) CRI =1598+(raw\_score\_L3-4.6094332363)\*(1595-1598)/(4.6095257742-4.6094332363);  
 when (raw\_score\_L3 gt 4.6095257742 and raw\_score\_L3 le 4.6095874764) CRI =1595+(raw\_score\_L3-4.6095257742)\*(1591-1595)/(4.6095874764-4.6095257742);  
 when (raw\_score\_L3 gt 4.6095874764 and raw\_score\_L3 le 4.6096608952) CRI =1591+(raw\_score\_L3-4.6095874764)\*(1587-1591)/(4.6096608952-4.6095874764);  
 when (raw\_score\_L3 gt 4.6096608952 and raw\_score\_L3 le 4.6097581902) CRI =1587+(raw\_score\_L3-4.6096608952)\*(1582-1587)/(4.6097581902-4.6096608952);  
 when (raw\_score\_L3 gt 4.6097581902 and raw\_score\_L3 le 4.6098332352) CRI =1582+(raw\_score\_L3-4.6097581902)\*(1578-1582)/(4.6098332352-4.6097581902);  
 when (raw\_score\_L3 gt 4.6098332352 and raw\_score\_L3 le 4.6099305302) CRI =1578+(raw\_score\_L3-4.6098332352)\*(1573-1578)/(4.6099305302-4.6098332352);  
 when (raw\_score\_L3 gt 4.6099305302 and raw\_score\_L3 le 4.6100055752) CRI =1573+(raw\_score\_L3-4.6099305302)\*(1569-1573)/(4.6100055752-4.6099305302);  
 when (raw\_score\_L3 gt 4.6100055752 and raw\_score\_L3 le 4.6100427942) CRI =1569+(raw\_score\_L3-4.6100055752)\*(1566-1569)/(4.6100427942-4.6100055752);  
 when (raw\_score\_L3 gt 4.6100427942 and raw\_score\_L3 le 4.6102151342) CRI =1566+(raw\_score\_L3-4.6100427942)\*(1562-1566)/(4.6102151342-4.6100427942);

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when (raw\_score\_L3 gt 4.6102151342 and raw\_score\_L3 le 4.6103273982) CRI =1562+(raw\_score\_L3-4.6102151342)\*(1560-1562)/(4.6103273982-4.6102151342);  
when (raw\_score\_L3 gt 4.6103273982 and raw\_score\_L3 le 4.6103874742) CRI =1560+(raw\_score\_L3-4.6103273982)\*(1557-1560)/(4.6103874742-4.6103273982);  
when (raw\_score\_L3 gt 4.6103874742 and raw\_score\_L3 le 4.6104997382) CRI =1557+(raw\_score\_L3-4.6103874742)\*(1552-1557)/(4.6104997382-4.6103874742);  
when (raw\_score\_L3 gt 4.6104997382 and raw\_score\_L3 le 4.6106720782) CRI =1552+(raw\_score\_L3-4.6104997382)\*(1543-1552)/(4.6106720782-4.6104997382);  
when (raw\_score\_L3 gt 4.6106720782 and raw\_score\_L3 le 4.6108444182) CRI =1543+(raw\_score\_L3-4.6106720782)\*(1530-1543)/(4.6108444182-4.6106720782);  
when (raw\_score\_L3 gt 4.6108444182 and raw\_score\_L3 le 4.6110167582) CRI =1530+(raw\_score\_L3-4.6108444182)\*(1512-1530)/(4.6110167582-4.6108444182);  
when (raw\_score\_L3 gt 4.6110167582 and raw\_score\_L3 le 4.6114556023) CRI =1512+(raw\_score\_L3-4.6110167582)\*(1489-1512)/(4.6114556023-4.6110167582);  
when (raw\_score\_L3 gt 4.6114556023) CRI=1489;  
otherwise CRI=1600;  
end;

Final CRI = round(CRI,1) + (Age Adjustment) + (State Adjustment) + (Tenure Adjustment)

MOTORCYCLE RENEWAL CRI MODEL SCORETABLE

Unscaled Points		
Variable	Group	Points
Constant		4.6118556012
BIUP_NUM_BIN13	0-99	-0.0008388430
	100-299	-0.0016776860
	300+	-0.0025165290
HH_AFDREF_10Y_CNT_CAP3	0	0.0000000000
	1	-0.0002846040
	2	-0.0005692080
	3 or more	-0.0008538120
TRANS_CNCL_NON_PAY_CAR_Y5_IND	Yes	0.0017617346
	No	0.0000000000
HH_PREF_CNT_CAP8	0	0.0000000000
	1	-0.0001723400
	2	-0.0003446800
	3	-0.0005170200
	4	-0.0006893600
	5	-0.0008617000
	6	-0.0010340400
	7	-0.0012063800
8 or more	-0.0013787200	
PR_AFS1000_ALL_OHH_Y3_NUM_CAP2	0	0.0000000000
	1	0.0007835241
	2 or more	0.0015670482

Scaled Points		
Variable	Group	Points
Age of Principal Operator of the Vehicle	16 or under	-5
	17	-5
	18	-5
	19	-5
	20	-1

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Scaled Points		
Variable	Group	Points
	21	3
	22	6
	23	11
	24	13
	25	16
	26	17
	27	17
	28	17
	29	17
	30	17
	31	16
	32	15
	33	13
	34	12
	35	11
	36	9
	37	7
	38	5
	39	4
	40	2
	41	0
	42	-2
	43	-3
	44	-5
	45	-7
	46	-8
	47	-10
	48	-11
	49	-13
	50	-14
	51	-15
	52	-16
	53	-17
	54	-18
	55	-19
	56	-20
	57	-21
	58	-21
	59	-22

Scaled Points		
Variable	Group	Points
	60	-23
	61	-23
	62	-24
	63	-24
	64	-25
	65	-26
	66	-26
	67	-26
	68	-27
	69	-27
	70	-27
	71	-27
	72	-27
	73	-27
	74	-27
	75	-27
	76	-27
	77	-27
	78	-27
	79	-27
	80 or older	-27
State Adjustment	PENNSYLVANIA	-15

Tenure	Points
2 or less	-13
3	-11
4	-9
5	-8
6	-5
7	-2
8	7
9	18
10	26
11	37
12	49
13	58
14	67

Tenure	Points
15 or more	82

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N250</u>	<u>-250</u>
<u>N249</u>	<u>-249</u>
<u>N248</u>	<u>-248</u>
<u>N247</u>	<u>-247</u>
<u>N246</u>	<u>-246</u>
<u>N245</u>	<u>-245</u>
<u>N244</u>	<u>-244</u>
<u>N243</u>	<u>-243</u>
<u>N242</u>	<u>-242</u>
<u>N241</u>	<u>-241</u>
<u>N240</u>	<u>-240</u>
<u>N239</u>	<u>-239</u>
<u>N238</u>	<u>-238</u>
<u>N237</u>	<u>-237</u>
<u>N236</u>	<u>-236</u>
<u>N235</u>	<u>-235</u>
<u>N234</u>	<u>-234</u>
<u>N233</u>	<u>-233</u>
<u>N232</u>	<u>-232</u>
<u>N231</u>	<u>-231</u>
<u>N230</u>	<u>-230</u>
<u>N229</u>	<u>-229</u>
<u>N228</u>	<u>-228</u>
<u>N227</u>	<u>-227</u>
<u>N226</u>	<u>-226</u>
<u>N225</u>	<u>-225</u>
<u>N224</u>	<u>-224</u>
<u>N223</u>	<u>-223</u>
<u>N222</u>	<u>-222</u>
<u>N221</u>	<u>-221</u>
<u>N220</u>	<u>-220</u>
<u>N219</u>	<u>-219</u>
<u>N218</u>	<u>-218</u>
<u>N217</u>	<u>-217</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N216</u>	<u>-216</u>
<u>N215</u>	<u>-215</u>
<u>N214</u>	<u>-214</u>
<u>N213</u>	<u>-213</u>
<u>N212</u>	<u>-212</u>
<u>N211</u>	<u>-211</u>
<u>N210</u>	<u>-210</u>
<u>N209</u>	<u>-209</u>
<u>N208</u>	<u>-208</u>
<u>N207</u>	<u>-207</u>
<u>N206</u>	<u>-206</u>
<u>N205</u>	<u>-205</u>
<u>N204</u>	<u>-204</u>
<u>N203</u>	<u>-203</u>
<u>N202</u>	<u>-202</u>
<u>N201</u>	<u>-201</u>
<u>N200</u>	<u>-200</u>
<u>N199</u>	<u>-199</u>
<u>N198</u>	<u>-198</u>
<u>N197</u>	<u>-197</u>
<u>N196</u>	<u>-196</u>
<u>N195</u>	<u>-195</u>
<u>N194</u>	<u>-194</u>
<u>N193</u>	<u>-193</u>
<u>N192</u>	<u>-192</u>
<u>N191</u>	<u>-191</u>
<u>N190</u>	<u>-190</u>
<u>N189</u>	<u>-189</u>
<u>N188</u>	<u>-188</u>
<u>N187</u>	<u>-187</u>
<u>N186</u>	<u>-186</u>
<u>N185</u>	<u>-185</u>
<u>N184</u>	<u>-184</u>
<u>N183</u>	<u>-183</u>
<u>N182</u>	<u>-182</u>
<u>N181</u>	<u>-181</u>
<u>N180</u>	<u>-180</u>
<u>N179</u>	<u>-179</u>
<u>N178</u>	<u>-178</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N177</u>	<u>-177</u>
<u>N176</u>	<u>-176</u>
<u>N175</u>	<u>-175</u>
<u>N174</u>	<u>-174</u>
<u>N173</u>	<u>-173</u>
<u>N172</u>	<u>-172</u>
<u>N171</u>	<u>-171</u>
<u>N170</u>	<u>-170</u>
<u>N169</u>	<u>-169</u>
<u>N168</u>	<u>-168</u>
<u>N167</u>	<u>-167</u>
<u>N166</u>	<u>-166</u>
<u>N165</u>	<u>-165</u>
<u>N164</u>	<u>-164</u>
<u>N163</u>	<u>-163</u>
<u>N162</u>	<u>-162</u>
<u>N161</u>	<u>-161</u>
<u>N160</u>	<u>-160</u>
<u>N159</u>	<u>-159</u>
<u>N158</u>	<u>-158</u>
<u>N157</u>	<u>-157</u>
<u>N156</u>	<u>-156</u>
<u>N155</u>	<u>-155</u>
<u>N154</u>	<u>-154</u>
<u>N153</u>	<u>-153</u>
<u>N152</u>	<u>-152</u>
<u>N151</u>	<u>-151</u>
<u>N150</u>	<u>-150</u>
<u>N149</u>	<u>-149</u>
<u>N148</u>	<u>-148</u>
<u>N147</u>	<u>-147</u>
<u>N146</u>	<u>-146</u>
<u>N145</u>	<u>-145</u>
<u>N144</u>	<u>-144</u>
<u>N143</u>	<u>-143</u>
<u>N142</u>	<u>-142</u>
<u>N141</u>	<u>-141</u>
<u>N140</u>	<u>-140</u>
<u>N139</u>	<u>-139</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N138</u>	<u>-138</u>
<u>N137</u>	<u>-137</u>
<u>N136</u>	<u>-136</u>
<u>N135</u>	<u>-135</u>
<u>N134</u>	<u>-134</u>
<u>N133</u>	<u>-133</u>
<u>N132</u>	<u>-132</u>
<u>N131</u>	<u>-131</u>
<u>N130</u>	<u>-130</u>
<u>N129</u>	<u>-129</u>
<u>N128</u>	<u>-128</u>
<u>N127</u>	<u>-127</u>
<u>N126</u>	<u>-126</u>
<u>N125</u>	<u>-125</u>
<u>N124</u>	<u>-124</u>
<u>N123</u>	<u>-123</u>
<u>N122</u>	<u>-122</u>
<u>N121</u>	<u>-121</u>
<u>N120</u>	<u>-120</u>
<u>N119</u>	<u>-119</u>
<u>N118</u>	<u>-118</u>
<u>N117</u>	<u>-117</u>
<u>N116</u>	<u>-116</u>
<u>N115</u>	<u>-115</u>
<u>N114</u>	<u>-114</u>
<u>N113</u>	<u>-113</u>
<u>N112</u>	<u>-112</u>
<u>N111</u>	<u>-111</u>
<u>N110</u>	<u>-110</u>
<u>N109</u>	<u>-109</u>
<u>N108</u>	<u>-108</u>
<u>N107</u>	<u>-107</u>
<u>N106</u>	<u>-106</u>
<u>N105</u>	<u>-105</u>
<u>N104</u>	<u>-104</u>
<u>N103</u>	<u>-103</u>
<u>N102</u>	<u>-102</u>
<u>N101</u>	<u>-101</u>
<u>N100</u>	<u>-100</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N099</u>	<u>-99</u>
<u>N098</u>	<u>-98</u>
<u>N097</u>	<u>-97</u>
<u>N096</u>	<u>-96</u>
<u>N095</u>	<u>-95</u>
<u>N094</u>	<u>-94</u>
<u>N093</u>	<u>-93</u>
<u>N092</u>	<u>-92</u>
<u>N091</u>	<u>-91</u>
<u>N090</u>	<u>-90</u>
<u>N089</u>	<u>-89</u>
<u>N088</u>	<u>-88</u>
<u>N087</u>	<u>-87</u>
<u>N086</u>	<u>-86</u>
<u>N085</u>	<u>-85</u>
<u>N084</u>	<u>-84</u>
<u>N083</u>	<u>-83</u>
<u>N082</u>	<u>-82</u>
<u>N081</u>	<u>-81</u>
<u>N080</u>	<u>-80</u>
<u>N079</u>	<u>-79</u>
<u>N078</u>	<u>-78</u>
<u>N077</u>	<u>-77</u>
<u>N076</u>	<u>-76</u>
<u>N075</u>	<u>-75</u>
<u>N074</u>	<u>-74</u>
<u>N073</u>	<u>-73</u>
<u>N072</u>	<u>-72</u>
<u>N071</u>	<u>-71</u>
<u>N070</u>	<u>-70</u>
<u>N069</u>	<u>-69</u>
<u>N068</u>	<u>-68</u>
<u>N067</u>	<u>-67</u>
<u>N066</u>	<u>-66</u>
<u>N065</u>	<u>-65</u>
<u>N064</u>	<u>-64</u>
<u>N063</u>	<u>-63</u>
<u>N062</u>	<u>-62</u>
<u>N061</u>	<u>-61</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N060</u>	<u>-60</u>
<u>N059</u>	<u>-59</u>
<u>N058</u>	<u>-58</u>
<u>N057</u>	<u>-57</u>
<u>N056</u>	<u>-56</u>
<u>N055</u>	<u>-55</u>
<u>N054</u>	<u>-54</u>
<u>N053</u>	<u>-53</u>
<u>N052</u>	<u>-52</u>
<u>N051</u>	<u>-51</u>
<u>N050</u>	<u>-50</u>
<u>N049</u>	<u>-49</u>
<u>N048</u>	<u>-48</u>
<u>N047</u>	<u>-47</u>
<u>N046</u>	<u>-46</u>
<u>N045</u>	<u>-45</u>
<u>N044</u>	<u>-44</u>
<u>N043</u>	<u>-43</u>
<u>N042</u>	<u>-42</u>
<u>N041</u>	<u>-41</u>
<u>N040</u>	<u>-40</u>
<u>N039</u>	<u>-39</u>
<u>N038</u>	<u>-38</u>
<u>N037</u>	<u>-37</u>
<u>N036</u>	<u>-36</u>
<u>N035</u>	<u>-35</u>
<u>N034</u>	<u>-34</u>
<u>N033</u>	<u>-33</u>
<u>N032</u>	<u>-32</u>
<u>N031</u>	<u>-31</u>
<u>N030</u>	<u>-30</u>
<u>N029</u>	<u>-29</u>
<u>N028</u>	<u>-28</u>
<u>N027</u>	<u>-27</u>
<u>N026</u>	<u>-26</u>
<u>N025</u>	<u>-25</u>
<u>N024</u>	<u>-24</u>
<u>N023</u>	<u>-23</u>
<u>N022</u>	<u>-22</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N021</u>	<u>-21</u>
<u>N020</u>	<u>-20</u>
<u>N019</u>	<u>-19</u>
<u>N018</u>	<u>-18</u>
<u>N017</u>	<u>-17</u>
<u>N016</u>	<u>-16</u>
<u>N015</u>	<u>-15</u>
<u>N014</u>	<u>-14</u>
<u>N013</u>	<u>-13</u>
<u>N012</u>	<u>-12</u>
<u>N011</u>	<u>-11</u>
<u>N010</u>	<u>-10</u>
<u>N009</u>	<u>-9</u>
<u>N008</u>	<u>-8</u>
<u>N007</u>	<u>-7</u>
<u>N006</u>	<u>-6</u>
<u>N005</u>	<u>-5</u>
<u>N004</u>	<u>-4</u>
<u>N003</u>	<u>-3</u>
<u>N002</u>	<u>-2</u>
<u>N001</u>	<u>-1</u>
<u>Z000</u>	<u>0</u>
<u>P001</u>	<u>1</u>
<u>P002</u>	<u>2</u>
<u>P003</u>	<u>3</u>
<u>P004</u>	<u>4</u>
<u>P005</u>	<u>5</u>
<u>P006</u>	<u>6</u>
<u>P007</u>	<u>7</u>
<u>P008</u>	<u>8</u>
<u>P009</u>	<u>9</u>
<u>P010</u>	<u>10</u>
<u>P011</u>	<u>11</u>
<u>P012</u>	<u>12</u>
<u>P013</u>	<u>13</u>
<u>P014</u>	<u>14</u>
<u>P015</u>	<u>15</u>
<u>P016</u>	<u>16</u>
<u>P017</u>	<u>17</u>

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P018</u>	<u>18</u>
<u>P019</u>	<u>19</u>
<u>P020</u>	<u>20</u>
<u>P021</u>	<u>21</u>
<u>P022</u>	<u>22</u>
<u>P023</u>	<u>23</u>
<u>P024</u>	<u>24</u>
<u>P025</u>	<u>25</u>

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P026</u>	<u>26</u>
<u>P027</u>	<u>27</u>
<u>P028</u>	<u>28</u>
<u>P029</u>	<u>29</u>
<u>P030</u>	<u>30</u>
<u>P031</u>	<u>31</u>
<u>P032</u>	<u>32</u>
<u>P033</u>	<u>33</u>
<u>P034</u>	<u>34</u>
<u>P035</u>	<u>35</u>
<u>P036</u>	<u>36</u>
<u>P037</u>	<u>37</u>
<u>P038</u>	<u>38</u>
<u>P039</u>	<u>39</u>
<u>P040</u>	<u>40</u>
<u>P041</u>	<u>41</u>
<u>P042</u>	<u>42</u>
<u>P043</u>	<u>43</u>
<u>P044</u>	<u>44</u>
<u>P045</u>	<u>45</u>
<u>P046</u>	<u>46</u>
<u>P047</u>	<u>47</u>
<u>P048</u>	<u>48</u>
<u>P049</u>	<u>49</u>
<u>P050</u>	<u>50</u>
<u>P051</u>	<u>51</u>
<u>P052</u>	<u>52</u>
<u>P053</u>	<u>53</u>
<u>P054</u>	<u>54</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P055</u>	<u>55</u>
<u>P056</u>	<u>56</u>
<u>P057</u>	<u>57</u>
<u>P058</u>	<u>58</u>
<u>P059</u>	<u>59</u>
<u>P060</u>	<u>60</u>
<u>P061</u>	<u>61</u>
<u>P062</u>	<u>62</u>
<u>P063</u>	<u>63</u>
<u>P064</u>	<u>64</u>
<u>P065</u>	<u>65</u>
<u>P066</u>	<u>66</u>
<u>P067</u>	<u>67</u>
<u>P068</u>	<u>68</u>
<u>P069</u>	<u>69</u>
<u>P070</u>	<u>70</u>
<u>P071</u>	<u>71</u>
<u>P072</u>	<u>72</u>
<u>P073</u>	<u>73</u>
<u>P074</u>	<u>74</u>
<u>P075</u>	<u>75</u>
<u>P076</u>	<u>76</u>
<u>P077</u>	<u>77</u>
<u>P078</u>	<u>78</u>
<u>P079</u>	<u>79</u>
<u>P080</u>	<u>80</u>
<u>P081</u>	<u>81</u>
<u>P082</u>	<u>82</u>
<u>P083</u>	<u>83</u>
<u>P084</u>	<u>84</u>
<u>P085</u>	<u>85</u>
<u>P086</u>	<u>86</u>
<u>P087</u>	<u>87</u>
<u>P088</u>	<u>88</u>
<u>P089</u>	<u>89</u>
<u>P090</u>	<u>90</u>
<u>P091</u>	<u>91</u>
<u>P092</u>	<u>92</u>
<u>P093</u>	<u>93</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P094</u>	<u>94</u>
<u>P095</u>	<u>95</u>
<u>P096</u>	<u>96</u>
<u>P097</u>	<u>97</u>
<u>P098</u>	<u>98</u>
<u>P099</u>	<u>99</u>
<u>P100</u>	<u>100</u>
<u>P101</u>	<u>101</u>
<u>P102</u>	<u>102</u>
<u>P103</u>	<u>103</u>
<u>P104</u>	<u>104</u>
<u>P105</u>	<u>105</u>
<u>P106</u>	<u>106</u>
<u>P107</u>	<u>107</u>
<u>P108</u>	<u>108</u>
<u>P109</u>	<u>109</u>
<u>P110</u>	<u>110</u>
<u>P111</u>	<u>111</u>
<u>P112</u>	<u>112</u>
<u>P113</u>	<u>113</u>
<u>P114</u>	<u>114</u>
<u>P115</u>	<u>115</u>
<u>P116</u>	<u>116</u>
<u>P117</u>	<u>117</u>
<u>P118</u>	<u>118</u>
<u>P119</u>	<u>119</u>
<u>P120</u>	<u>120</u>
<u>P121</u>	<u>121</u>
<u>P122</u>	<u>122</u>
<u>P123</u>	<u>123</u>
<u>P124</u>	<u>124</u>
<u>P125</u>	<u>125</u>
<u>P126</u>	<u>126</u>
<u>P127</u>	<u>127</u>
<u>P128</u>	<u>128</u>
<u>P129</u>	<u>129</u>
<u>P130</u>	<u>130</u>
<u>P131</u>	<u>131</u>
<u>P132</u>	<u>132</u>

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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P133</u>	<u>133</u>
<u>P134</u>	<u>134</u>
<u>P135</u>	<u>135</u>
<u>P136</u>	<u>136</u>
<u>P137</u>	<u>137</u>
<u>P138</u>	<u>138</u>
<u>P139</u>	<u>139</u>
<u>P140</u>	<u>140</u>
<u>P141</u>	<u>141</u>
<u>P142</u>	<u>142</u>
<u>P143</u>	<u>143</u>
<u>P144</u>	<u>144</u>
<u>P145</u>	<u>145</u>
<u>P146</u>	<u>146</u>
<u>P147</u>	<u>147</u>
<u>P148</u>	<u>148</u>
<u>P149</u>	<u>149</u>
<u>P150</u>	<u>150</u>
<u>P151</u>	<u>151</u>
<u>P152</u>	<u>152</u>
<u>P153</u>	<u>153</u>
<u>P154</u>	<u>154</u>
<u>P155</u>	<u>155</u>
<u>P156</u>	<u>156</u>
<u>P157</u>	<u>157</u>
<u>P158</u>	<u>158</u>
<u>P159</u>	<u>159</u>
<u>P160</u>	<u>160</u>
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<u>P194</u>	<u>194</u>
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<u>P197</u>	<u>197</u>
<u>P198</u>	<u>198</u>
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<u>P202</u>	<u>202</u>
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<u>P226</u>	<u>226</u>
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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
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**MOTORCYCLE RENEWAL CRI MODEL VARIABLE DEFINITIONS**

Variable	Definition*
BIUP_NUM_BIN13	BI per occurrence limit on the motorcycle policy (in 1,000s)
HH_PREF_CNT_CAP8	Count of household car policies in the mutual company
TRANS_CNCL_NON_PAY_CAR_Y5_IND	Indicator of motorcycle policy cancellation (nonpayment) in the last five years
HH_AFDREF_10Y_CNT_CAP3	Number of cars in the household with the 10-Year Accident-Free Discount
PR_AFS1000_ALL_OHH_Y3_NUM_CAP2	The number of at-fault surchargeable claims on other vehicles in the household in the last 36 months
Tenure	Tenure of the motorcycle policy
Age	The age (in years) of the principal driver of the vehicle
State	State where the vehicle will be principally garaged
<u>Underwriting Tier</u>	<u>Underwriting Tier</u>

**\*Notes:**

- A. Tenure - The length of time the vehicle (or the one it replaced) has been insured with State Farm.
- B. At-fault surchargeable claims - Claims which meet the definition of Chargeable Accident.
- C. The CRI factor cannot increase due to the underwriting tier.
- D. Tier placement is based on mutually exclusive underwriting criteria on file at the home office.
- E. The characteristics used in underwriting tier placement may be used in other rating variables, but do not result in a duplicative rating impact.

-

## PRIVATE PASSENGER RENEWAL CRI MODEL

### Instructions for calculating a CRI for a vehicle

Step 1: Determine the value for the vehicle of each variable listed in the Private Passenger Renewal CRI Model Variable Definitions.

Step 2: For each variable shown in the Private Passenger Renewal CRI Model Scoretable except for Underwriting Tier, find the points assigned to the value determined in Step 1 for the D601 model.

Step 3: For each claim on the vehicle in the last six years, determine the appropriate number of points for that claim in the D601 model from the Private Passenger Renewal CRI Model Claim Matrix Points.

Step 4: For each claim on another vehicle in the household in the last six years, determine the appropriate number of points for that claim in the D601 model from the Private Passenger Renewal CRI Model Claim Matrix Points.

Step 5: Add the points for the constant shown in the Private Passenger Renewal CRI Model Scoretable for the D601 model to the points for the variables Tenure, D\_VEH\_CANC\_NON\_PAY\_CNT\_ZE5, HH\_ANTQ\_CLSC\_CNT, HH\_RECVEH\_CNT, OHH\_WORST\_TIER, HH\_BI\_MAX\_LIM, OHH\_Max\_Veh\_Age, OHH\_Min\_Veh\_Age, Number of Drivers in household & hh\_cri\_eli\_cnt Interaction, HH\_CAR\_CNT & ohh\_yrs\_sf\_21to25\_cnt Interaction, hh\_cri\_eli\_cnt & OT\_HH\_AFDPRF\_10Y Interaction, HH\_CAR\_CNT & ohh\_yrs\_sf\_gt\_25\_cnt Interaction, HH\_CAR\_CNT & OHH\_YRS\_SF\_LE\_2\_CNT Interaction, Presence of youthful driver on this car & Household Minimum driver age Interaction, Tenure & Tier Interaction, and all claims in Step 3 and Step 4.

Step 6: If the total number of drivers in the household exceeds five, then subtract 12 points from the value determined in Step 5. If the number of other cars with Comprehensive coverage in the household exceeds five, then subtract 2 points. If the number of other cars with ERS coverage in the household exceeds five, then subtract 1 point. Limit this value to be between 1334 and 1754.

Step 7: Calculate an intermediate CRI factor for the D601 model as  $1.003^{(1600-(\text{Step 6}))}$ . Round to the nearest 0.001. Subtract 1.000 from this value.

Step 8: Multiply the result of Step 7 by the CRI spread factor for the D601, found in the Private Passenger Renewal CRI Model Scoretable, and add 1.000.

Step 9: Convert the result of Step 8 back to a CRI, by taking  $1600 - [\log(\text{Step 8})/\log(1.003)]$ . Round to the nearest whole number.

Step 10: Add to the CRI from Step 9 the Age Adjustment for the D601 model, found in the Private Passenger Renewal CRI Model Scoretable, to get a final non-tier adjusted D601 CRI.

Step 11: Repeat Steps 2-5 for the L301 model.

Step 12: If the total number of drivers in the household exceeds five, then subtract 3 points from the value determined in Step 11. Limit this value to be between 1449 and 1708.

Step 13: Starting from the value in Step 12, repeat Steps 7-10 for the L301 model.

Step 14: Find the Underwriting Tier Adjustment, associated with the Underwriting Tier determined in Step 1 from the Private Passenger Renewal CRI Model Scoretable.

Step 15: If the Underwriting Tier Adjustment from step 14 is higher than the previously used Underwriting Tier Adjustment, then set step 14 as the final Underwriting Tier Adjustment. If the Underwriting Tier Adjustment from step 14 is less than or equal to the previously used Underwriting Tier Adjustment then set the final Underwriting Tier Adjustment to the previously used Underwriting Tier Adjustment. If this is the first time the vehicle is on a full renewal model, calculate the previously used Underwriting Tier Adjustment as New Business CRI - 1600.

Step 16: Add to the D601 CRI from Step 10 the Underwriting Tier Adjustment from step 15. Limit this sum to be between 1000 and 1999 to get a final D601 CRI.

Step 17: Repeat step 16 for the L301 model.

Step 18: Determine the final CRI based on the D601 CRI from Step 16 and the L301 CRI from Step 17, using the following logic:

If D601 CRI <= Prior Term CRI and L301 CRI <= Prior Term CRI, then Final CRI = L301 CRI

Else if D601 CRI >= Prior Term CRI and L301 CRI >= Prior Term CRI, then Final CRI = min(D601 CRI, L301 CRI)

Else Final CRI = Prior Term CRI

**PRIVATE PASSENGER RENEWAL CRI MODEL CLAIM MATRIX POINTS**

**Claims Points for D601 Model**

Claims	Points
PR_AFSXXXX_NOMPP_CAR	-67
PR_AFNXXXX_NOMPP_CAR	-77
PR_AFTXXXX_MPP_CAR	-77
PR_NAFXXXX_MPP_CAR	-29
PR_NAFXXXX_OTH_CAR	-61
PR_NAFXXXX_CMP_CAR	-27
PR_NAFXXXX_ERS_CAR	-27

	Number of Drivers in household					
	1 or fewer	2	3	4	5	6+
PR_AFSXXXX_NOMPP_OHH	-39	-33	-22	-14	-6	0
PR_AFNXXXX_NOMPP_OHH	-34	-28	-22	-20	-19	0
PR_AFTXXXX_MPP_OHH	-39	-36	-28	-22	-19	0
PR_NAFXXXX_MPP_OHH	-36	-23	-13	-6	-4	0
PR_NAFXXXX_OTH_OHH	-33	-27	-19	-14	-11	0

## PRIVATE PASSENGER RENEWAL CRI MODEL SCORETABLE

Variables	Group	D601 Value	L301 Value
Constant		1777	1718
Tenure	2 or less	0	0
	3	2	2
	4	4	4
	5	6	6
	6	6	6
	7	6	6
	8	6	6
	9	8	8
	10	10	10
	11	12	12
	12	14	14
	13	16	16
	14	18	18
	15	20	20
	16	23	23
	17	25	25
	18	27	27
	19	29	29
	20+	31	31
D_VEH_CANC_NON_PAY_CNT_ZE5	No	0	0
	Yes	-71	-71
HH_ANTQ_CLSC_CNT	0	0	0
	1+	17	17
HH_BI_MAX_LIM	0 or None	-7	-7
	1-299000	-21	-21
	300000+	0	0
HH_RECVEH_CNT	0	0	0
	1+	13	13

ACTUARIAL RESTRICTED

Variables	Group	D601 Value	L301 Value
OHH_Max_Veh_Age	1 or fewer other CRI eligible vehicles	-14	-14
	<=0	0	0
	1	-1	-1
	2	-2	-2
	3	-3	-3
	4	-4	-4
	5	-5	-5
	6	-7	-7
	7	-8	-8
	8	-9	-9
	9	-10	-10
	10	-11	-11
	11	-12	-12
	12	-14	-14
	13	-15	-15
	13	-15	-15
	14	-16	-16
	15	-17	-17
	16	-18	-18
	17	-19	-19
18	-20	-20	
19	-21	-21	
>=20	-22	-22	
OHH_Min_Veh_Age	No other CRI eligible vehicles	-21	-21
	<=0	0	0
	1	-4	-4
	2	-7	-7
	3	-11	-11
	4	-15	-15
	5	-19	-19
	6	-23	-23
	7	-27	-27
	8	-31	-31
	9	-34	-34
10	-38	-38	

ACTUARIAL RESTRICTED

Variables	Group	D601 Value	L301 Value
	11	-41	-41
	12	-45	-45
	13	-48	-48
	14	-51	-51
	15	-54	-54
	16	-57	-57
	17	-60	-60
	18	-63	-63
	19	-66	-66
	>=20	-69	-69
OHH_WORST_TIER	No other ARRP/STAR eligible vehicles	-5	-5
	1 STAR	-20	-20
	2 STAR Discount	-20	-20
	3 STAR Discount	-14	-14
	SFM Accident Surcharge	-14	-14
	SFM Base	-13	-13
	Good Driving Discount	-5	-5
	3 Year AFD	-6	-6
	6 Year AFD	-3	-3
	10 Year AFD	0	0
OHH_BEST_TIER	1 or fewer other ARRP/STAR eligible vehicles	-2	-2
	1 STAR	-23	-23
	2 STAR Discount	-23	-23
	3 STAR Discount	-9	-9
	SFM Accident Surcharge	-18	-18
	SFM Base	-13	-13

ACTUARIAL RESTRICTED

Variables	Group	D601 Value	L301 Value
	Good Driving Discount	-6	-6
	3 Year AFD	-7	-7
	6 Year AFD	-6	-6
	10 Year AFD	0	0

	Number of Drivers in household	hh_cri_eli_cnt	D601 Value	L301 Value
Number of Drivers in household & hh_cri_eli_cnt Interaction	0	*	-16	-16
	1	*	-16	-16
	2	1	-23	-23
	2	2+	0	0
	3	1	-30	-30
	3	2	-30	-30
	3	3+	-23	-23
	4+	1	-30	-30
	4+	2	-30	-30
	4+	3	-30	-30
	4+	at least 4, and less than Number of Drivers in household	-30	-30
	4+	at least 4, and not less than Number of Drivers in household	-23	-23

Variable	HH_CAR_CMT	ohh_yrs_sf_21to25_cnt	D601 Value	L301 Value
HH_CAR_CNT & ohh_yrs_sf_21to25_cnt Interaction	1	*	-10	-10
	2	0	-11	-11
	2	1+	-1	-1
	3+	0	-12	-12
	3+	1+	0	0

Variables	Tenure	Tier	D601 Value	L301 Value
Tenure & Tier Interaction	Less than 10	*	0	0
	10+	6 Year AFD	-42	0
	10+	Other than 6 Year AFD	0	0

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Variable	hh_cri_eli_cnt	OT_HH_AFDPREF_10Y	D601 Value	L301 Value
hh_cri_eli_cnt & OT_HH_AFDPREF_10Y Interaction	1	*	-16	-16
	2	0	-24	-24
	2	1	-8	-8
	2	2	-8	-8
	2	3+	-8	-8
	3	0	-28	-28
	3	1	-13	-13
	3	2	0	0
	3	3+	0	0
	4+	0	-28	-28
	4+	1	-17	-17
	4+	2	-11	-11
	4+	3+	0	0

Variable	HH_CAR_CNT	ohh_yrs_sf_gt_25_cnt	D601 Value	L301 Value
HH_CAR_CNT & ohh_yrs_sf_gt_25_cnt Interaction	1	*	-24	-24
	2	0	-28	-28
	2	1+	0	0
	3+	0	-28	-28
	3+	1	-10	-10
	3+	2+	-1	-1

Variables	HH_CAR_CNT	OHH_YRS_SF_LE_2_CNT	D601 Value	L301 Value
HH_CAR_CNT & OHH_YRS_SF_LE_2_CNT Interaction	1	*	-2	-2
	2	0	-1	-1
	2	1+	-12	-12
	3+	0	0	0
	3+	1	-3	-3
	3+	2+	-11	-11

Variables	Presence of youthful driver on this car	Household Minimum driver age	D601 Value	L301 Value
	Yes	*	0	0

ACTUARIAL RESTRICTED

Variables	Presence of youthful driver on this car	Household Minimum driver age	D601 Value	L301 Value
Presence of youthful driver on this car & Household Minimum driver age Interaction	No	16 or less	-60	-60
	No	17	-56	-56
	No	18	-50	-50
	No	19	-45	-45
	No	20	-39	-39
	No	21	-34	-34
	No	22	-27	-27
	No	23	-20	-20
	No	24	-14	-14
	No	25+	0	0

Variable	Group	D601 Value	L301 Value
CRI Spread Factor		0.896	1.028
Age Adjustment	16 or less	-18	-8
	17	-8	1
	18	1	6
	19	8	10
	20	14	12
	21	18	13
	22	20	13
	23	21	13
	24	19	13
	25	17	12
	26	13	11
	27	10	9
	28	6	8
	29	3	6
	30	3	5
	31	1	4
	32	0	3
	33	-1	2
	34	-2	2
	35	-2	2
	36	-1	3
	37	-1	3

**ACTUARIAL RESTRICTED**

Variable	Group	D601 Value	L301 Value
	38	0	4
	39	1	5
	40	2	6
	41	3	7
	42	4	7
	43	5	8
	44	6	8
	45	7	9
	46	8	9
	47	8	9
	48	8	8
	49	8	8
	50	7	7
	51	6	5
	52	5	4
	53	3	2
	54	1	1
	55	-2	-1
	56	-5	-4
	57	-9	-6
	58	-13	-8
	59	-18	-10
	60	-18	-12
	61	-18	-14
	62	-18	-16
	63	-18	-18
	64	-18	-19
	65	-18	-20
	66	-18	-21
	67	-18	-21
	68	-18	-21
	69	-18	-21
	70	-18	-20
	71	-18	-20
	72	-18	-19
	73	-18	-18
	74	-18	-17
	75	-18	-16
	76	-18	-15
	77	-18	-14

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Variable	Group	D601 Value	L301 Value
	78	-18	-14
	79	-18	-14
	80+	-18	-14

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<u>N160</u>	<u>-160</u>
<u>N159</u>	<u>-159</u>
<u>N158</u>	<u>-158</u>
<u>N157</u>	<u>-157</u>
<u>N156</u>	<u>-156</u>
<u>N155</u>	<u>-155</u>
<u>N154</u>	<u>-154</u>
<u>N153</u>	<u>-153</u>
<u>N152</u>	<u>-152</u>
<u>N151</u>	<u>-151</u>
<u>N150</u>	<u>-150</u>
<u>N149</u>	<u>-149</u>
<u>N148</u>	<u>-148</u>
<u>N147</u>	<u>-147</u>
<u>N146</u>	<u>-146</u>
<u>N145</u>	<u>-145</u>
<u>N144</u>	<u>-144</u>
<u>N143</u>	<u>-143</u>
<u>N142</u>	<u>-142</u>
<u>N141</u>	<u>-141</u>
<u>N140</u>	<u>-140</u>
<u>N139</u>	<u>-139</u>
<u>N138</u>	<u>-138</u>
<u>N137</u>	<u>-137</u>
<u>N136</u>	<u>-136</u>
<u>N135</u>	<u>-135</u>
<u>N134</u>	<u>-134</u>
<u>N133</u>	<u>-133</u>
<u>N132</u>	<u>-132</u>
<u>N131</u>	<u>-131</u>
<u>N130</u>	<u>-130</u>
<u>N129</u>	<u>-129</u>

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<u>N128</u>	<u>-128</u>
<u>N127</u>	<u>-127</u>
<u>N126</u>	<u>-126</u>
<u>N125</u>	<u>-125</u>
<u>N124</u>	<u>-124</u>
<u>N123</u>	<u>-123</u>
<u>N122</u>	<u>-122</u>
<u>N121</u>	<u>-121</u>
<u>N120</u>	<u>-120</u>
<u>N119</u>	<u>-119</u>
<u>N118</u>	<u>-118</u>
<u>N117</u>	<u>-117</u>
<u>N116</u>	<u>-116</u>
<u>N115</u>	<u>-115</u>
<u>N114</u>	<u>-114</u>
<u>N113</u>	<u>-113</u>
<u>N112</u>	<u>-112</u>
<u>N111</u>	<u>-111</u>
<u>N110</u>	<u>-110</u>
<u>N109</u>	<u>-109</u>
<u>N108</u>	<u>-108</u>
<u>N107</u>	<u>-107</u>
<u>N106</u>	<u>-106</u>
<u>N105</u>	<u>-105</u>
<u>N104</u>	<u>-104</u>
<u>N103</u>	<u>-103</u>
<u>N102</u>	<u>-102</u>
<u>N101</u>	<u>-101</u>
<u>N100</u>	<u>-100</u>
<u>N099</u>	<u>-99</u>
<u>N098</u>	<u>-98</u>
<u>N097</u>	<u>-97</u>
<u>N096</u>	<u>-96</u>
<u>N095</u>	<u>-95</u>
<u>N094</u>	<u>-94</u>
<u>N093</u>	<u>-93</u>
<u>N092</u>	<u>-92</u>
<u>N091</u>	<u>-91</u>
<u>N090</u>	<u>-90</u>

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<u>N089</u>	<u>-89</u>
<u>N088</u>	<u>-88</u>
<u>N087</u>	<u>-87</u>
<u>N086</u>	<u>-86</u>
<u>N085</u>	<u>-85</u>
<u>N084</u>	<u>-84</u>
<u>N083</u>	<u>-83</u>
<u>N082</u>	<u>-82</u>
<u>N081</u>	<u>-81</u>
<u>N080</u>	<u>-80</u>
<u>N079</u>	<u>-79</u>
<u>N078</u>	<u>-78</u>
<u>N077</u>	<u>-77</u>
<u>N076</u>	<u>-76</u>
<u>N075</u>	<u>-75</u>
<u>N074</u>	<u>-74</u>
<u>N073</u>	<u>-73</u>
<u>N072</u>	<u>-72</u>
<u>N071</u>	<u>-71</u>
<u>N070</u>	<u>-70</u>
<u>N069</u>	<u>-69</u>
<u>N068</u>	<u>-68</u>
<u>N067</u>	<u>-67</u>
<u>N066</u>	<u>-66</u>
<u>N065</u>	<u>-65</u>
<u>N064</u>	<u>-64</u>
<u>N063</u>	<u>-63</u>
<u>N062</u>	<u>-62</u>
<u>N061</u>	<u>-61</u>
<u>N060</u>	<u>-60</u>
<u>N059</u>	<u>-59</u>
<u>N058</u>	<u>-58</u>
<u>N057</u>	<u>-57</u>
<u>N056</u>	<u>-56</u>
<u>N055</u>	<u>-55</u>
<u>N054</u>	<u>-54</u>
<u>N053</u>	<u>-53</u>
<u>N052</u>	<u>-52</u>
<u>N051</u>	<u>-51</u>

State Farm Mutual Automobile Insurance Company  
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 Auto  
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Effective 3/21/2016

ACTUARIAL RESTRICTED

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N050</u>	<u>-50</u>
<u>N049</u>	<u>-49</u>
<u>N048</u>	<u>-48</u>
<u>N047</u>	<u>-47</u>
<u>N046</u>	<u>-46</u>
<u>N045</u>	<u>-45</u>
<u>N044</u>	<u>-44</u>
<u>N043</u>	<u>-43</u>
<u>N042</u>	<u>-42</u>
<u>N041</u>	<u>-41</u>
<u>N040</u>	<u>-40</u>
<u>N039</u>	<u>-39</u>
<u>N038</u>	<u>-38</u>
<u>N037</u>	<u>-37</u>
<u>N036</u>	<u>-36</u>
<u>N035</u>	<u>-35</u>
<u>N034</u>	<u>-34</u>
<u>N033</u>	<u>-33</u>
<u>N032</u>	<u>-32</u>
<u>N031</u>	<u>-31</u>
<u>N030</u>	<u>-30</u>
<u>N029</u>	<u>-29</u>
<u>N028</u>	<u>-28</u>
<u>N027</u>	<u>-27</u>
<u>N026</u>	<u>-26</u>
<u>N025</u>	<u>-25</u>
<u>N024</u>	<u>-24</u>
<u>N023</u>	<u>-23</u>
<u>N022</u>	<u>-22</u>
<u>N021</u>	<u>-21</u>
<u>N020</u>	<u>-20</u>
<u>N019</u>	<u>-19</u>
<u>N018</u>	<u>-18</u>
<u>N017</u>	<u>-17</u>
<u>N016</u>	<u>-16</u>
<u>N015</u>	<u>-15</u>
<u>N014</u>	<u>-14</u>
<u>N013</u>	<u>-13</u>
<u>N012</u>	<u>-12</u>

State Farm Mutual Automobile Insurance Company  
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<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>N011</u>	<u>-11</u>
<u>N010</u>	<u>-10</u>
<u>N009</u>	<u>-9</u>
<u>N008</u>	<u>-8</u>
<u>N007</u>	<u>-7</u>
<u>N006</u>	<u>-6</u>
<u>N005</u>	<u>-5</u>
<u>N004</u>	<u>-4</u>
<u>N003</u>	<u>-3</u>
<u>N002</u>	<u>-2</u>
<u>N001</u>	<u>-1</u>
<u>Z000</u>	<u>0</u>
<u>P001</u>	<u>1</u>
<u>P002</u>	<u>2</u>
<u>P003</u>	<u>3</u>
<u>P004</u>	<u>4</u>
<u>P005</u>	<u>5</u>
<u>P006</u>	<u>6</u>
<u>P007</u>	<u>7</u>
<u>P008</u>	<u>8</u>
<u>P009</u>	<u>9</u>
<u>P010</u>	<u>10</u>
<u>P011</u>	<u>11</u>
<u>P012</u>	<u>12</u>
<u>P013</u>	<u>13</u>
<u>P014</u>	<u>14</u>
<u>P015</u>	<u>15</u>
<u>P016</u>	<u>16</u>
<u>P017</u>	<u>17</u>
<u>P018</u>	<u>18</u>
<u>P019</u>	<u>19</u>
<u>P020</u>	<u>20</u>
<u>P021</u>	<u>21</u>
<u>P022</u>	<u>22</u>
<u>P023</u>	<u>23</u>
<u>P024</u>	<u>24</u>
<u>P025</u>	<u>25</u>
<u>P026</u>	<u>26</u>
<u>P027</u>	<u>27</u>

ACTUARIAL RESTRICTED

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P028</u>	<u>28</u>
<u>P029</u>	<u>29</u>
<u>P030</u>	<u>30</u>
<u>P031</u>	<u>31</u>
<u>P032</u>	<u>32</u>
<u>P033</u>	<u>33</u>
<u>P034</u>	<u>34</u>
<u>P035</u>	<u>35</u>
<u>P036</u>	<u>36</u>
<u>P037</u>	<u>37</u>
<u>P038</u>	<u>38</u>
<u>P039</u>	<u>39</u>
<u>P040</u>	<u>40</u>
<u>P041</u>	<u>41</u>
<u>P042</u>	<u>42</u>
<u>P043</u>	<u>43</u>
<u>P044</u>	<u>44</u>
<u>P045</u>	<u>45</u>
<u>P046</u>	<u>46</u>
<u>P047</u>	<u>47</u>
<u>P048</u>	<u>48</u>
<u>P049</u>	<u>49</u>
<u>P050</u>	<u>50</u>
<u>P051</u>	<u>51</u>
<u>P052</u>	<u>52</u>
<u>P053</u>	<u>53</u>
<u>P054</u>	<u>54</u>
<u>P055</u>	<u>55</u>
<u>P056</u>	<u>56</u>
<u>P057</u>	<u>57</u>
<u>P058</u>	<u>58</u>
<u>P059</u>	<u>59</u>
<u>P060</u>	<u>60</u>
<u>P061</u>	<u>61</u>
<u>P062</u>	<u>62</u>
<u>P063</u>	<u>63</u>
<u>P064</u>	<u>64</u>
<u>P065</u>	<u>65</u>
<u>P066</u>	<u>66</u>

State Farm Mutual Automobile Insurance Company  
 State Farm Fire and Casualty Company  
 Auto  
 Pennsylvania

Effective 3/21/2016

ACTUARIAL RESTRICTED

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P067</u>	<u>67</u>
<u>P068</u>	<u>68</u>
<u>P069</u>	<u>69</u>
<u>P070</u>	<u>70</u>
<u>P071</u>	<u>71</u>
<u>P072</u>	<u>72</u>
<u>P073</u>	<u>73</u>
<u>P074</u>	<u>74</u>
<u>P075</u>	<u>75</u>
<u>P076</u>	<u>76</u>
<u>P077</u>	<u>77</u>
<u>P078</u>	<u>78</u>
<u>P079</u>	<u>79</u>
<u>P080</u>	<u>80</u>
<u>P081</u>	<u>81</u>
<u>P082</u>	<u>82</u>
<u>P083</u>	<u>83</u>
<u>P084</u>	<u>84</u>
<u>P085</u>	<u>85</u>
<u>P086</u>	<u>86</u>
<u>P087</u>	<u>87</u>
<u>P088</u>	<u>88</u>
<u>P089</u>	<u>89</u>
<u>P090</u>	<u>90</u>
<u>P091</u>	<u>91</u>
<u>P092</u>	<u>92</u>
<u>P093</u>	<u>93</u>
<u>P094</u>	<u>94</u>
<u>P095</u>	<u>95</u>
<u>P096</u>	<u>96</u>
<u>P097</u>	<u>97</u>
<u>P098</u>	<u>98</u>
<u>P099</u>	<u>99</u>
<u>P100</u>	<u>100</u>
<u>P101</u>	<u>101</u>
<u>P102</u>	<u>102</u>
<u>P103</u>	<u>103</u>
<u>P104</u>	<u>104</u>
<u>P105</u>	<u>105</u>

State Farm Mutual Automobile Insurance Company  
 State Farm Fire and Casualty Company  
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Effective 3/21/2016

ACTUARIAL RESTRICTED

<u>Underwriting Tier</u>	<u>CRI Adjustment</u>
<u>P106</u>	<u>106</u>
<u>P107</u>	<u>107</u>
<u>P108</u>	<u>108</u>
<u>P109</u>	<u>109</u>
<u>P110</u>	<u>110</u>
<u>P111</u>	<u>111</u>
<u>P112</u>	<u>112</u>
<u>P113</u>	<u>113</u>
<u>P114</u>	<u>114</u>
<u>P115</u>	<u>115</u>
<u>P116</u>	<u>116</u>
<u>P117</u>	<u>117</u>
<u>P118</u>	<u>118</u>
<u>P119</u>	<u>119</u>
<u>P120</u>	<u>120</u>
<u>P121</u>	<u>121</u>
<u>P122</u>	<u>122</u>
<u>P123</u>	<u>123</u>
<u>P124</u>	<u>124</u>
<u>P125</u>	<u>125</u>

PRIVATE PASSENGER RENEWAL CRI MODEL VARIABLE DEFINITIONS

Variables	Definitions*
Tenure	The number of years the policy has been in force
HH_BI_MAX_LIM	Maximum BI per occurrence limit for any vehicle in the household
D_VEH_CANC_NON_PAY_CNT_ZE5	Indicator for a cancellation for non-payment of premium on this policy in the last 60 months
OHH_Min_Veh_Age	Minimum age of other private passenger vehicles in the household
OHH_Max_Veh_Age	Maximum age of other private passenger vehicles in the household
OHH_YRS_SF_LE_2_CNT	Number of other vehicles in household with less than 3 years of tenure
OHH_WORST_TIER	The highest-rated tier for other cars in the household
OHH_Best_TIER	The lowest-rated tier for other cars in the household
HH_ANTQ_CLSC_CNT	Number of antique/classic vehicles in the household
HH_RECVEH_CNT	Number of recreational vehicles in the household
Tier	The rating tier for the policy
OT_HH_AFDREF_10Y	Number of other vehicles in household with a 10-year Accident-Free Discount
hh_cri_eli_cnt	Total number of cars in the household eligible for CRI
Number of Drivers in household	Total number of drivers in the household
ohh_yrs_sf_21to25_cnt	The number of other cars with tenure between 21 and 25 in the household
HH_CAR_CNT	Total number of vehicles in the household
OHH_CMP_CNT	Number of other cars with Comprehensive coverage in the household
OHH_ERS_CNT	Number of other cars with ERS coverage in the household
ohh_yrs_sf_gt_25_cnt	The number of other cars with tenure greater than 25 in the household
Presence of youthful driver on this car	Indicator for a youthful driver (age < 25) assigned to this car
Household Minimum driver age	Minimum driver age in the household
Age	The age in years of the principal operator of the vehicle
PR_AFSXXXX_NOMPP_CAR	Number of at-fault surchargeable claims excluding MPC and PIP on this car in the last 6 years
PR_AFNXXXX_NOMPP_CAR	Number of at-fault non-surchargeable claims excluding MPC and PIP on this car in the last 6 years
PR_AFTXXXX_MPP_CAR	Number of at-fault MPC or PIP claims on this car in the last 6 years
PR_NAFXXXX_MPP_CAR	Number of not-at-fault MPC and PIP claims on this car in the last 6 years
PR_NAFXXXX_OTH_CAR	Number of not-at-fault claims on this car other than not-at-fault Comprehensive or ERS claims on this car in the last 6 years
PR_NAFXXXX_CMP_CAR	Number of not-at-fault Comprehensive claims on this car in the last 6 years
PR_NAFXXXX_ERS_CAR	Number of not-at-fault ERS claims on this car in the last 6 years
PR_AFSXXXX_NOMPP_OHH	Number of at-fault surchargeable claims excluding MPC and PIP on other cars in the household in the last 6 years
PR_AFNXXXX_NOMPP_OHH	Number of at-fault non-surchargeable claims excluding MPC and PIP on other cars in the household in the last 6 years
PR_AFTXXXX_MPP_OHH	Number of at-fault MPC or PIP claims on other cars in the household in the last 6 years

Variables	Definitions*
PR_NAFXXXX_MPP_OHH	Number of not-at-fault MPC and PIP claims on other cars in the household in the last 6 years
PR_NAFXXXX_OTH_OHH	Number of not-at-fault claims on other cars in the household other than not-at-fault Comprehensive or ERS claims on other cars in the household in the last 6 years
PR_NAFXXXX_CMP_OHH	Number of not-at-fault Comprehensive claims on other cars in the household in the last 6 years
PR_NAFXXXX_ERS_OHH	Number of not-at-fault ERS claims on other cars in the household in the last 6 years
PR_AFSXXXX_NOMPP_CAR_Y3	Number of at-fault surchargeable claims excluding MPC and PIP on this car in the last 3 years
PR_AFSXXXX_MPP_CAR_Y3	Number of at-fault surchargeable MPC or PIP claims on this car in the last 3 years
PR_AFSXXXX_NOMPP_OHH_Y3	Number of at-fault surchargeable claims excluding MPC and PIP on other cars in the household in the last 3 years
PR_AFSXXXX_MPP_OHH_Y3	Number of at-fault surchargeable MPC or PIP claims on other cars in the household in the last 3 years
<u>Underwriting Tier</u>	<u>Underwriting Tier</u>

**\*Notes:**

- A. At-fault claims - Claims are considered to be at-fault if the company has made payment under collision coverage (for a single vehicle accident), or under property damage liability coverage. The claim will not be considered at-fault if the Company is furnished sufficient evidence that the driver involved in the accident was less than 50% at fault.
- B. Not-at-fault ERS claims - Claims which are not at-fault (as defined in part A), for which the incurred loss under Emergency Road Service (ERS) coverage is greater than \$0.
- C. Not-at-fault claims - Claims which are not at-fault, as defined in part A, which have a total incurred loss greater than \$0.
- D. Not-at-fault Comprehensive or ERS claims - Claims which are not at-fault (as defined in part A), for which the incurred loss under either Emergency Road Service (ERS) or Comprehensive coverage is greater than \$0.
- E. Tenure - The length of time the vehicle (or the one it replaced) has been insured with State Farm.
- F. At-fault surchargeable claims - Claims which meet the definition of Chargeable Accident.
- G. The CRI factor cannot increase due to the underwriting tier.
- H. Tier placement is based on mutually exclusive underwriting criteria on file at the home office.
- I. The characteristics used in underwriting tier placement may be used in other rating variables, but do not result in a duplicative rating impact.



**SERFF Tracking #:**

SFMA-130284904

**State Tracking #:****Company Tracking #:**

PV-32338

**State:** Pennsylvania**First Filing Company:** State Farm Fire and Casualty Company, ...**TOI/Sub-TOI:** 19.0 Personal Auto/19.0001 Private Passenger Auto (PPA)**Product Name:** PV-32338**Project Name/Number:** PV-32338/PV-32338

## Supporting Document Schedules

<b>Bypassed - Item:</b>	Authorization to File (PC)
<b>Bypass Reason:</b>	Not Applicable
<b>Attachment(s):</b>	
<b>Item Status:</b>	
<b>Status Date:</b>	

<b>Satisfied - Item:</b>	Actuarial Explanatory Memorandum & Supporting Exhibits (PC)
<b>Comments:</b>	
<b>Attachment(s):</b>	PA Filing.pdf Auto Cost Containment Exhibit 2015.pdf
<b>Item Status:</b>	
<b>Status Date:</b>	

<b>Satisfied - Item:</b>	Cover Letter
<b>Comments:</b>	
<b>Attachment(s):</b>	PA PV-32338 Initial Filing Letter.pdf
<b>Item Status:</b>	
<b>Status Date:</b>	

# STATE FARM MUTUAL AUTOMOBILE INSURANCE COMPANY PENNSYLVANIA AUTO INSURANCE PROGRAM Filing Memorandum

Effective March 21, 2016 for New and Renewal Business

Our last general rate change in Pennsylvania will be effective December 21, 2015 for New and Renewal Business, and produces a 2.8% all coverages change.

With this filing, we are proposing an overall change of -0.7% effective March 21, 2016 for New and Renewal Business.

## **PRIVATE PASSENGER RATES AND RATING RELATIVITIES**

**Customer Rating Index** – We propose an adjustment to our renewal CRI model. The CRI will be calculated using the latest version of a model that includes State Farm auto policy information and claim data, and will now include an Underwriting Tier adjustment. Support for the inclusion of Underwriting Tier is included in a separate confidential submission.

Please note that Underwriting Tier placement is based on mutually exclusive underwriting criteria kept on file at our home office. No insured will be moved to a higher-rated Underwriting Tier at renewal (as described on rate manual page 25). The characteristics used in Underwriting Tier placement are not duplicative of characteristics used by other rating variables.

A CRI stabilization element is included which mitigates fluctuation in rates for individual policies. Though the stabilization is not changing with this filing, the current stabilization for Private Passenger is included below:

<b>Indicated CRI Factor Change</b>	<b>Actual CRI Factor Change</b>
Less than -10%	-3.0%
-10% to 10%	0.0%
Greater than 10%	3.0%

We propose making similar changes to the renewal CRI model for Motorcycles.

**Drive Safe and Save Mobile** – We propose to expand our Drive Safe and Save program by adding a mobile option. The mobile option allows policyholders with an eligible Android or iPhone smartphone to participate in the program and earn discounts based on their annual mileage and driving characteristics. This program will only result in a discount to a customer's premium.

## **SUMMARY**

The changes in this filing will produce an overall decrease of -0.7% in our Pennsylvania premium income level.

We are submitting the revised rate manual pages and a marked-up version of the rate manual that outlines the proposed changes.

**STATE FARM FIRE AND CASUALTY COMPANY  
PENNSYLVANIA AUTO INSURANCE PROGRAM  
Filing Memorandum**

**Effective March 21, 2016 for New Business and Renewal Business**

This is a companion filing to the one being forwarded this date on behalf of the State Farm Mutual Automobile Insurance Company. The overall effect of this filing is a decrease to our automobile insurance premium income level of -0.1% effective March 21, 2016 for new business and renewal business.

The changes in this filing will produce an overall decrease of -0.1% in our Pennsylvania premium income level.

We are submitting the revised rate manual pages and a marked-up version of the rate manual that outlines the proposed changes.

## **STATE FARM INSURANCE COMPANIES**

### **Auto Cost Containment**

State Farm continues to support extensive initiatives that encourage safer vehicles and roads, fight insurance fraud, assure quality and cost-effective medical services delivery and vehicle repairs, and maintain efficiency while providing quality service. The following lists some of these efforts:

1. Celebrate My Drive® was developed by State Farm to be the annual signature auto safety program that changes the conversation with teens from scaring them with potential negative outcomes to sharing positive safety messages to help prevent crashes, reduce injuries, and save lives. In 2014, more than 3,200 schools registered for Celebrate My Drive® and 400 agents were engaged throughout the country and Canada. Two schools have been selected for a \$100,000 grant and a The Band Perry concert. Eight additional schools will receive \$100,000 grants and 90 schools will receive \$25,000 grants.
2. Supporting the Insurance Institute for Highway Safety, a scientific organization devoted to reducing human and economic loss from vehicle crashes.
3. Worked with The Children's Hospital of Philadelphia to research the number one killer of teens – automobile crashes – with a goal of developing effective, evidence based interventions aimed at saving young lives.
4. State Farm is the presenting sponsor of Mothers Against Drunk Driving (MADD) Power of You(th) programs and activities. The goals are to empower teens to take a stand against drinking under age 21 in their schools, homes, and communities, to educate teens about the importance of the 21 minimum drinking age law, and to engage new and life-long supporters to carry on MADD's life-saving work.
5. Provided grants to the Governors' Highway Safety Association (GHSA) to produce a series of reports aimed at bringing awareness to various auto safety issues. The reports include:
  - Speeding-Related Fatal Crashes Among Teen Drivers and Opportunities for Reducing the Risks
  - Promoting Parent involvement in Teen Driving: An In-Depth Look at the Importance and the Initiatives
  - Curbing Teen Driver Crashes: An In-Depth Look at State Novice Driver Initiatives
  - Distracted Driving: What Research Shows and What States Can Do
6. Researching factors that contribute to child injuries in crashes through support of The Center for Child Injury Prevention Studies, a National Science Foundation Industry-University Cooperative Research Center.
7. Supporting the Inter-Industry Conference on Auto Collision Repairs, a non-profit, educational organization of auto manufacturers, collision repair shops, insurance companies and others dedicated to improving the quality, safety and efficiency of auto collision repairs.
8. Partnering with the Advocates for Highway and Auto Safety, the National Safety Council and others to promote primary enforcement seatbelt legislation and booster seat legislation on federal and state levels as well as supporting Graduated Driver Licensing laws and laws designed to control chemically-impaired driving.
9. Supporting the Insurance Research Council, an organization that conducts research on a broad range of insurance topics.

## **STATE FARM INSURANCE COMPANIES**

### **Auto Cost Containment**

10. Supporting the National Insurance Crime Bureau (NICB), an organization that fights insurance fraud and vehicle theft. NICB looks for patterns of potential fraud and theft and assists law enforcement in solving insurance crimes and helps insurance companies reduce fraudulent claims.
11. Supporting state and federal legislation to address auto theft and fraud, including support for state anti-fraud bureaus.
12. Training State Farm claim representatives to use a computer application called "Frequency Search" that detects patterns symptomatic of potential insurance fraud.
13. Reporting claims to The Insurance Services Office, Inc. (ISO) database.
14. Initiating civil litigation against unscrupulous medical providers and others to stop the submission of/recover payments made on non-meritorious claims.
15. Employing sophisticated analytics to identify overbilling trends by medical providers.
16. Providing grants to Safe Kids Worldwide to support Child Passenger Safety Technicians, the Certification Website and twelve reunions to celebrate the work being done by trained CPS technicians to ensure certified instructors stay engaged in the work.
17. Advocating National Teen Driver Safety Week to promote the importance of teen driver safety issues.
18. Providing evidenced-based safety programs to the public to assist novice drivers as they learn to drive.
19. Informing auto manufacturers about the implications that vehicle design on the repair process and costs incorporating damage and theft-resistance elements into the design helps manage repair costs.
20. Collaborating with auto manufacturer's and the University of Michigan on a research effort to build some fully autonomous vehicles that may lead to more safe and efficient vehicles.
21. Helping State Farm claims representatives identify crash damage due to defective auto parts. The internal Claims Research Auto Support Hotline (CRASH) provides a method for tracking auto trends that may influence automakers to take action on defective parts and issue automobile recalls. This effort also supports increased subrogation recoveries.
22. Using alternative dispute resolution as a more efficient and timesaving alternative to lawsuits in disputed claims.
23. Implementing new Auto and Fire Claims operating models to promote consistency and efficiency in claims handling.
24. Effectively managing expenses by purchasing data processing and office equipment through a competitive bidding process.
25. Reviewing and reorganizing corporate and operations center departments in the ongoing effort to streamline processes, promote process consistency, eliminate duplication and provide continued quality service.

## **STATE FARM INSURANCE COMPANIES**

### **Auto Cost Containment**

26. Providing convenient, cost effective, 24 hour service 365 days a year through our Customer Response Centers.
27. Using the Internet and mobile technology to efficiently communicate with both current and prospective policyholders.
28. Annually conducting a media outreach communicating the magnitude of damage produced each year in the United States by deer-vehicle collisions and offering tips on how drivers can improve their chances of avoiding such collisions.
29. Implemented an electronic parts ordering platform to increase efficiency and promote more competitive parts pricing.
30. Supporting emergency responder training by donating salvage vehicles for temporary use.
31. Supporting the National Auto Body Council (NABC), a not-for-profit organization committed to the goal of improving the image of all dedicated collision industry professionals. Continue to donate vehicles to families in need through the Recycled Rides™ Program and fire department training through the First Responders Emergency Extrication Program.
32. Supporting the Collision Industry Conference (CIC), a forum where collision industry stakeholders come together to discuss issues, build broad understanding, find common ground and communicate findings and possible solutions broadly to industry participants.
33. State Farm conducts an annual survey regarding distracted driving focusing on the use of electronic devices while driving. We publish the results in the form of a news release that is designed to focus media attention on the issue.
34. State Farm is participating in the leadership circle for the Michigan Mobility Transformation Center (MTC). The MTC's stated vision is "to develop the foundations of a commercially viable ecosystem of connected and automated vehicles for moving people and goods. Such a system has the potential to dramatically improve safety, sustainability, and accessibility."



October 20, 2015

Bureau of Property and Casualty Insurance  
Pennsylvania Insurance Department  
Bureau of Rates and Policies  
1311 Strawberry Square  
Harrisburg, PA 17120

**Corporate Headquarters**  
One State Farm Plaza, D-4  
Bloomington, IL 61710  
Fax 309 766 0225

IN REPLY PLEASE REFER TO: PV-32338

RE: State Farm Mutual Automobile Insurance Company  
State Farm Fire and Casualty Company  
Private Passenger Automobile Insurance  
Revised Rates and Rules

We respectfully request your approval of a revision to our independent Private Passenger Auto program, which results in a rate level decrease of 0.7% for State Farm Mutual and a rate level decrease of 0.1% for State Farm Fire and Casualty Company. The details of and support for the change are outlined in the attached Filing Memorandum and supporting exhibits.

The rate level changes contained in this filing specifically consider the expected effect that any prior changes in policy language will have on our future underwriting experience. The changes detailed in this filing reflect our best efforts to recognize our actuarially suggested income needs and have premiums that are as competitive as possible.

We do not rely solely on rate activity to achieve our objective of continued financial stability. We also concentrate on continued improvements in the way we service the business we write. These improvements range from internal expense controls to ongoing enhancements in the loss settlement process. We also invest and participate in many loss prevention and control activities. Attached is an exhibit that outlines some of these activities.

We request your approval of this filing to be effective on new and renewal policies dated March 21, 2016 and later

In an effort to work with you as promptly as possible, please direct any questions to:

Sara Frankowiak	(309) 766-5902	sara.frankowiak.g4eb@statefarm.com
Ken Doss	(309) 763-3083	ken.doss.nndc@statefarm.com

Please send paper correspondence to the attention of the State Filings Unit at the address shown above.

Sincerely,

A handwritten signature in cursive script that reads "Sara Frankowiak".

Sara Frankowiak, F.C.A.S., MAAA  
Pricing Director and Assistant Secretary-Treasurer

JD/mh  
Attachment