# SECTION I - GENERAL RULES

## RULE 1. ELIGIBILITY

All individually owned vehicles registered under the Massachusetts Compulsory Motor Vehicle Law that are eligible for private passenger motor vehicle insurance under the rules of the Massachusetts Automobile Insurance Plan (MAIP) may be rated in accordance with this manual and written on the Massachusetts Automobile Insurance Policy.

# RULE 2. COVERAGES AND LIMITS

The types of coverages available in the CAR Massachusetts Automobile Insurance Policy are:

## Compulsory Insurance Coverages

### Part 1 - Bodily Injury to Others

The basic limits are \$20,000 each person and \$40,000 each accident.

### Part 2 - Personal Injury Protection

The basic limit is \$8,000 for each person. Refer to Rule 30 for available deductibles.

### Part 3 - Bodily Injury Caused By an Uninsured Auto

The basic limits are \$20,000 each person and \$40,000 each accident. Increased limits are available. The limits may not exceed the limits of Part 5, or if Part 5 is not purchased, Part 1 of this policy. This coverage is excess over Personal Injury Protection.

### Part 4 - Damage to Someone Else's Property

The basic limit is \$5,000 each accident. Increased limits are available.

### **Optional Insurance Coverages**

### Part 5 - Optional Bodily Injury to Others

The basic limits are \$20,000 each person and \$40,000 each accident. Increased limits are available.

### Part 6 - Medical Payments

The basic limit is \$5,000 each person. Higher limits are available for all motor vehicles rated in this manual. Motorcycle limits are available from \$500 to \$25,000. This coverage is excess over Personal Injury Protection.

#### Part 7 - Collision

This coverage is subject to a basic deductible of \$500. A deductible of \$300 is available subject to underwriting requirements established by the insurer, as permitted by law. Higher deductibles are available at the option of the insured. Waiver of Deductible is available at the option of the insured. Endorsement MPY-0016-S must be attached. This coverage is written on an actual cash value or stated amount basis.

#### Part 8 - Limited Collision

This coverage is subject to a basic deductible of \$500. Other deductibles or full coverage are available at the option of the insured. This coverage is written on an actual cash value or stated amount basis.

#### Part 9 - Comprehensive

This coverage is subject to a basic deductible of \$500. A deductible of \$300 is available subject to underwriting requirements established by the insurer, as permitted by law. Higher deductibles are available at the option of the insured. A separate \$100 glass deductible is also available at the option of the insured. Endorsement MPY-0039-S, titled \$100 Glass Deductible, must be issued with the policy. This glass deductible is in addition to the otherwise applicable deductible for Part 9. This coverage is written on an actual cash value, stated amount or agreed amount basis.

#### Part 10 - Substitute Transportation

This coverage pays for loss of use to a motor vehicle as a result of an accident or loss. Refer to the Miscellaneous Rating factors page for applicable limits and premiums.

### Part 11 - Towing and Labor

This coverage will pay up to \$50 or up to \$100 for towing and labor costs for each auto disablement. It is available only for private passenger motor vehicles, as defined in Rule 27, and motorcycles.

### Part 12 - Bodily Injury Caused By an Underinsured Auto

The basic limits are \$20,000 each person and \$40,000 each accident. Increased limits are available. The limits may not exceed the limits of Part 5, or if Part 5 is not purchased, Part 1 of this policy. This coverage is excess over Personal Injury Protection.

### Other Coverages Available Are For:

Fire, Theft and Combined Additional Coverage subject to a basic deductible of \$500; higher deductibles are available at the option of the insured.

Theft coverage may be granted only in connection with Fire Coverage, and for a like amount in both cases.

These coverages are written on an actual cash value basis or stated amount basis.

Endorsement MPY-0031-S, titled Other Optional Insurance – Combined Additional Coverage, must be issued with the policy when this coverage is afforded.

Endorsement MPY-0028-S, titled Other Optional Insurance – Fire, Lightning and Transportation, must be issued with the policy when this coverage is afforded.

Endorsement MPY-0029-S, titled Other Optional Insurance – Theft, must be issued with the policy when this coverage is afforded.

# RULE 3. COVERAGE AVAILABILITY

Massachusetts law and the provisions of Rule 27 of the MAIP Rules of Operation require insurers to make the following levels of coverage available at the insured's request for policies assigned through the MAIP:

- 1. Limits up to \$250,000 each person and \$500,000 each accident for Parts 3, 5 and 12. Limits above \$250,000 each person and \$500,000 each accident may be provided at the option of the insurer.
- 2. \$8,000 each person for Part 2
- 3. \$25,000 each person for Part 6.
- 4. Actual cash value subject to a \$500 deductible for Parts 7, 8 and 9, including fire, theft, and combined additional coverage.

Insurers must charge an extra-risk rate or refuse Collision and Comprehensive coverages under certain circumstances as required by law. Refer to Rule 24 for extra-risk rating procedures.

### RULE 4. STANDARD PROCEDURES

#### A. Renewals

1. The insurer shall provide the coverage selections page not less than twenty days prior to policy expiration. The coverage selections page may be accompanied by the Massachusetts renewal form.

If the Massachusetts renewal form is sent to the policyholder, it is not necessary for the policyholder to return this form to the producer or company representative unless the information contained on the coverage selections page or the Massachusetts renewal form is inaccurate or obsolete.

- 2. The insurer may elect to secure payment of a deposit premium. The premium quotation shall be based on the latest classification information and premium charges established for the renewal policy.
- 3. Failure to pay the deposit premium may result in cancellation of the policy. The specific reason for cancellation is non-payment of any required premium.

The Cancellation Notice must also contain the following statement:

"This cancellation will not take effect if the full amount due shown above is paid on or prior to the effective date of cancellation."

## B. Expiration of Assignment

 An insurer may refuse to renew a policy assigned to it through the MAIP only at the expiration of the second renewal as described in Rule 29 of the MAIP Rules of Operation. If the producer fails to replace coverage for the expiring policy as provided in Rule 29.D.2. of the Rules of Operation, the insurer shall issue a Notice of Expiration of Policy Assignment form MP 00 02 to the named insured at least 45 days and no sooner than 59 days prior to the policy expiration date with a copy sent to the producer.

The insurer's notice of the assignment's expiration stating its intent not to renew the policy should be electronically transmitted in accordance with procedures prescribed by the Registry of Motor Vehicles.

#### C. New Business

- 1. The producer is required to submit a new business application for the applicant.
- 2. The producer must verify that there is no automobile insurance premium owed to the former insurer or producer.
- 3. The producer of record must provide the information necessary for an insurer to transmit data to the Registry of Motor Vehicles for each vehicle insured.

In addition to reporting the necessary information to the insurer, the producer shall prepare a Registration and Title Application (RTA), accompanied by the appropriate fee, for processing by the Registry of Motor Vehicles.

4. At the same time this information is provided to the assigned insurer, the producer of record shall notify the former producer of record, if known, and the former insurer, that a certificate of coverage has been issued for the policy. The notice must meet the following minimum standards:

The notice must be signed by the producer of record for the newly assigned policy or issued on the assigned insurer's letterhead; and

The notice must bear the registry stamp of the new insurer. The stamp may be in electronic format.

Such notice may be made in hard copy or electronic format, and copies are acceptable.

- 5. The notification of coverage transfer shall not be issued to the prior producer or insurer before the insurer or agent of the replacement policy has actually received the required down-payment or first payment. The notification of coverage transfer shall be issued no later than 10 days after the day the agent or the replacement insurer receives the down-payment or first payment for the replacement policy.
- 6. Upon receipt of the notice of coverage, the former insurer, if any, shall:
  - a. Notify the Registry that coverage has been discontinued as of the date shown in the notice;
  - b. Compute the return premium, if any, as of the date shown on the notice in accordance with Massachusetts law.

### D. Cancellation

 Cancellation must be given in accordance with Massachusetts law and the MAIP Rules of Operation. Any notice of cancellation shall include the specific reason(s) for cancellation. Any return premium owed the policyholder shall be made in accordance with provisions of Rule 18 of this manual. The insurer must electronically notify the Registry of Motor Vehicles in accordance with the procedures established by the Registry.

# RULE 5. RESIDENCE AND LOCATION

The proper rate schedules and rules are those effective in the city or town where the automobile is principally garaged. Motor vehicles used by salesmen or solicitors, or those with similar duties, requiring the operation of the motor vehicle in more than one rating territory in Massachusetts, shall be assigned to the territory determined by the place of principal garaging, or, if there is no specific city or town of principal garaging, then, by the residential address of the operator, or, if the residential address of the operator cannot be determined, then, by the Massachusetts business address of the operator. No adjustment of the premium shall be made by reason of a change in the place of principal garaging during the policy period unless such change is permanent.

Massachusetts registration is required of non-residents in accordance with reciprocal agreements with the various states as determined by the Registrar of Motor Vehicles.

Any motor vehicle owned by a non-resident of Massachusetts for which Massachusetts registration is required, regularly garaged inside the Commonwealth, shall be charged the rate for the territory in which the motor vehicle is principally garaged by such non-resident during the period of Massachusetts registration.

# RULE 6. OUT-OF-STATE GARAGING

Any motor vehicle, whether owned by a resident or non-resident of Massachusetts for which Massachusetts registration is required, principally garaged outside of Massachusetts shall be written at limits of liability at least equal to the financial responsibility limits of the state of principal garaging, and shall be charged the rates for vehicles garaged in Territory 9.

# RULE 7. POLICY PERIOD

- A. Policies issued by assignment through the MAIP shall be for 12 month terms.
- **B.** Policies insuring individually owned motorcycles, trailers and other recreational-type vehicles shall, at the option of the insured, be issued for a period of less than one year with policy expiration to be coterminous with the registration. Endorsement M-0103-S, titled Non-Renewal of Policy (Motorcycles, Recreational Vehicles & Trailers), must be issued with the policy.

"Recreational-type vehicle" means a land motor vehicle subject to a motor vehicle registration which expires November 30 or December 31, and is principally used for vacation travel or leisure-time activity. Registration for motorcycles expires December 31. Registration for all other recreational vehicles expires November 30.

The premium for such policies shall be determined by applying the appropriate percentage to the annual rate based on policy inception date as shown in the table below.

If a short term policy is cancelled at the request of the insured later than thirty days from the effective date or later than thirty days from the receipt of the policy, whichever is later, the return premium shall be calculated on a short rate basis using the appropriate short rate table applicable to short term policies found in Rule 18.

Percentages for Short Term Policies Date Interval* Percent of								
All	Other	Annual Rates						
Dec.	1-31	Jan.	1-31	100				
Jan.	1-31	Feb.	1-28	98				
Feb.	1-28	Mar.	1-31	94				
Mar.	1-31	Apr.	1-30	90				
Apr.	1-30	May	1-31	88				
May	1-31	Jun.	1-30	86				
Jun.	1-30	Jul.	1-31	80				
Jul.	1-15	Aug.	1-15	75				
Jul.	16-31	Aug.	16-31	68				
Aug.	1-15	Sep.	1-15	60				
Aug.	16-31	Sep.	16-30	53				
Sep.	1-15	Oct.	1-15	45				
Sep.	16-30	Oct.	16-31	38				
Oct.	1-15	Nov.	1-15	30				
Oct.	16-31	Nov.	16-30	27				
Nov.	1-15	Dec.	1-15	20				
Nov.	16-30	Dec.	16-31	14				

\*All dates inclusive

# RULE 8. CHANGES

**A.** All mid-term changes to the policy requiring adjustments of premium shall be computed pro rata based on the rates in effect on the policy inception date.

### B. Minimum Premiums

- 1. If an outstanding policy is amended and results in a premium adjustment of less than \$5, such adjustment may be waived, or it may be made subject to a minimum adjustment of \$5 except that the actual return premium of less than \$5 shall be allowed at the request of the insured.
- 2. A minimum premium of \$5 shall apply if an additional premium results because a coverage is added, or the limits of liability are increased, or a deductible is reduced, at the request of the insured during the policy period.
- 3. If a return premium of less than \$5 results because a coverage is cancelled, or limits of liability are reduced, or a deductible is increased at the request of the insured, no refund need be made except at the request of the insured, in which case the actual return premium shall be allowed.
- 4. If the limits of liability are increased because of a change in the limits prescribed under any financial responsibility law, the additional premium charge shall be the actual difference in premium charges; if less than \$5, it may be charged or waived.

## RULE 9. MOTOR VEHICLE REGISTRATION CERTIFICATES

The specific insurance certification requirements under the Massachusetts Compulsory Motor Vehicle Insurance Law are included in Section 1A of General Laws Chapter 90. Motor vehicles not subject to the Compulsory Law do not require insurance certification.

Every insurance carrier issuing a motor vehicle liability insurance policy covering a motor vehicle or trailer subject to the Compulsory Law must issue the prescribed Motor Vehicle Registration Certificate indicating a policy or binder has been issued covering such motor vehicle or trailer. No form or certificate shall be used other than that which is a part of the Massachusetts motor vehicle application for registration.

Certificates shall be executed in the name of the insurance carrier only by individuals authorized to sign in the prescribed Authorization To Sign Motor Vehicle Registration Certificates form filed with the Commissioner of Insurance.

Section 34 B of General Laws Chapter 90 provides penalties for unlawful use of the Motor Vehicle Registration Certificate.

# RULE 10. CERTIFIED RISKS - FINANCIAL RESPONSIBILITY LAWS

### A. Application

If a certificate of insurance is necessary to comply with the requirements of a financial responsibility Law of any state or province of Canada, the insurance company must issue evidence of financial responsibility upon request of the insured.

In the event that evidence of financial responsibility is required as the result of a motor vehicle violation, a policy affording Damage To Someone Else's Property (Part 4) and Optional Bodily Injury To Others (Part 5) shall be construed to have the necessary limits of liability of the state or province.

**NOTE:** A charge shall be made for any filing required because of a motor vehicle accident.

In the event that a certificate of insurance for the future is required as the result of a conviction of a motor vehicle violation, the policy limits shall be increased to afford limits of liability not less than that required by the financial responsibility laws of the state or province requesting certification and premium shall be increased accordingly.

The filing of a financial responsibility certificate of insurance as the result of a conviction of a motor vehicle violation requires the following rate adjustments to be allocated evenly between the Part 4 and Part 5 premiums computed as follows:

### **Owners**

- 1. If an owner is required to file evidence of financial responsibility for owned automobiles and for the operation of automobiles which he does not own, the additional premium shall be computed by applying the applicable rate adjustment in Section B to the sum of the total of Parts 1, 2, 4 and 5 premium for the highest rated automobile owned by the insured.
- 2. In all other cases, the additional premium shall be computed by applying the applicable rate adjustment in Section B to the total premium for Parts 1, 2, 4 and 5 for the highest rated automobile owned by the insured, modified in accordance with this rating plan.

### B. Rate Adjustments

- 1. A 50% rate adjustment is applicable if the certificate is required for a conviction listed below. This surcharge is to be applied for the period of time a certificate is required, but in no event for a period in excess of three years following conviction. Thereafter, a 5% rate adjustment applies.
  - a. Driving a motor vehicle while intoxicated or under the influence of marijuana or a narcotic drug.
  - b. Failing to stop and report when involved in an accident.
  - c. Homicide or assault arising out of the operation of a motor vehicle.
- 2. A 25% rate adjustment is applicable if the certificate is required for a conviction listed below. This surcharge is to be applied for the period of time a certificate is required, but in no event for a period in excess of three years following conviction. Thereafter, a 5% rate adjustment applies.
  - Driving a motor vehicle at an excess rate of speed where an injury to a person or damage to property a. actually results therefrom.
  - b. Driving a motor vehicle in a reckless manner where an injury to person or damage to property actually results therefrom.
- 3. A 5% rate adjustment is applicable if the certificate is required for any other cause whatsoever.
- 4. Rate adjustments are to be multiplied by the final premium as developed for Parts 1, 2, 4 and 5.

## RULE 11. PREMIUM CALCULATION RULE

The following sequence shall be used in rating the policy.

- 1. Determine the premium for parts 1-6 and 12 as follows:
  - a. Identify the manual rate for the appropriate driver rating class, territory, and coverage limit from the Rate Section.
  - b. Adjust the manual rate for part 2 for the appropriate deductible level using the factors from the Miscellaneous Rating Factor page in the Rate Section.
- 2. Determine the premium for parts 7 and 9 as follows:
  - a. Determine the model year as described in Rule 20.b. Determine the VRG as described in Rule 22.

  - c. Identify the manual rate for the applicable driver rating class and territory from the Rate Section.
  - d. Multiply the applicable manual rate times the applicable model year/VRG relativity for Parts 7 and 9.
  - Determine the appropriate deductible charges and factors from the Miscellaneous Rating Factor e. Page in the Rate Section.
  - Apply the appropriate High-Theft Vehicle and Extra-Risk Rating factors per Rules 23 and 24, if f. appropriate, using rating factors from the Miscellaneous Rating Factor page in the Rate Section.
- 3. If limited collision coverage (part 8) is selected, adjust the part 7 premium determined in step 2 by the applicable rating factor in the Miscellaneous Rating Factor page.
- 4. Apply the appropriate discount(s) to the premium developed in steps 1-3 as follows:
  - Refer to Rule 19 for a definition of the available discounts. Refer to the Miscellaneous Rating Factor a. page in the Rate Section to identify the discount rates.

- b. Parts 1-9 and 12 may be subject to more than one discount. In such case, the order of the discounts shall be (1) annual mileage, (2) multi-car, (3) continuous coverage, (4) low frequency, and (5) class 15. The discount shall be rounded to the nearest dollar after each application.
- 5. Apply the appropriate merit rating adjustment in accordance with Rule 56 to the premium developed in steps 1-4.
- 6. Determine premium for parts 10 and 11, if applicable, using appropriate limits and premiums reflected on the Miscellaneous Rating Factors page (RS-2).

# RULE 12. WHOLE DOLLAR PREMIUM RULE

The premium for "each exposure" means the premium developed for each coverage for each automobile after the application of all applicable discounts. The premium for each exposure shall be rounded at each step to the nearest whole dollar, separately for each coverage provided by the policy.

A premium involving \$0.50 or more shall be rounded to the next whole dollar at the end of each step. This does not apply to Part 5, 20/40 limits and Part 6, \$5,000 limit where rates displayed in the manual may be used or rounded to the lower whole dollar.

This procedure shall apply to all interim premium adjustments, including endorsements or cancellations at the request of the insured. In the case of cancellation by the company, the return premium may be carried to the next higher whole dollar.

# RULE 13. INSTALLMENT PAYMENT OF PREMIUMS

The installment payment plans offered to policyholders insured through the MAIP are governed by the MAIP Rules of Operation. All motor vehicle insurance policy premium charges are due and payable on the effective date of the policy, subject to the provisions of the Deposit Premium Rule (Rule 14), unless an installment payment plan is used.

# RULE 14. DEPOSIT PREMIUM RULE

A company, its producer or any broker may require deposit premium prior to the issuance of a policy provided the per vehicle deposit does not exceed 25% for new business or 20% for renewal business of the applicable annual premium for the insurance requested in accordance with the MAIP Rules of Operation. If the applicant has been in default in the payment of any premium for automobile insurance or merit rating adjustment during the preceding 24 months which resulted in the cancellation of that policy, the applicant will be required to provide a premium deposit of 80% of the MAIP premium, or if known, 100% of the insurer's voluntary premium.

### RULE 15. EMPLOYERS SUBJECT TO MASSACHUSETTS WORKERS' COMPENSATION ACT

Motor vehicles owned by an employer subject to the Massachusetts workers' compensation law not used at any time to transport persons other than employees of the named insured shall be eligible for a 25% reduction in the Personal Injury Protection premium otherwise applicable. A vehicle which qualifies for this reduction is not eligible for any Personal Injury Protection deductible.

# RULE 16. DEDUCTIBLES - PARTS 7, 8 and 9

Deductibles, higher than the standard deductible, are available for Collision, Limited Collision and Comprehensive Coverages including Fire, Theft and Combined Additional Coverages. Refer to the Miscellaneous Rating Factors page for applicable factors.

## RULE 17. SUBSTITUTE TRANSPORTATION

The charges for this coverage are on a per vehicle/per year basis for automobiles. Refer to the Miscellaneous Rating Factors page for applicable limits and premiums.

## RULE 18. TERMINATION OF INSURANCE

### A. Cancellations

The following provisions apply when a policy is cancelled:

- If a policy is cancelled by the insurer at any time, or by the insured within thirty days of the effective date or within thirty days of the receipt of the policy, whichever is later, the return premium shall be computed pro rata. "Policy" in this instance includes the copy of the coverage selections page.
- 2. If the policy is cancelled at the request of the insured later than thirty days from the effective date or later than thirty days from the receipt of the policy, whichever is later, the return premium shall be calculated on a short rate basis except that in the following cases the return premium shall be computed pro rata:
  - a. If the insured has disposed of the automobile, provided the insured takes out a new policy in the same company on another automobile to become effective within thirty days of the date of cancellation.
  - b. If the insured automobile is repossessed under terms of a financing agreement.
  - c. If an automobile is cancelled from a policy, the policy remaining in force on other automobiles, or if there remains in force in the name of the insured or spouse, if a resident of the same household, and in the same company, a concurrent automobile policy covering another automobile.
  - d. If the insured enters the military service of the United States of America.
  - e. If the insured deletes or reduces any coverage and the policy remains in effect for other coverage.
  - f. If the policyholder requests cancellation of a policy because coverage has been replaced in the voluntary market, and provides the ARC written confirmation of the replacement coverage. [Consistent with current MAIP rules].
- 3. Except as otherwise provided by law, no cancellation of the policy, or any of its parts, whether by the company or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party at least twenty days in each case prior to the intended effective date thereof. Notice of cancellation sent by the company to the insured and the loss payee at the addresses stated in the policy by regular mail for which a certificate of mailing receipt has been obtained from the United States Postal Service, shall be a sufficient notice and that an affidavit of any officer, producer, or employee of the company, duly authorized for the purpose that he has so sent such addressed as aforesaid, shall be prima facie evidence of the sending thereof as aforesaid. When the cancellation becomes effective, the company shall electronically transmit the pertinent data to the Registry of Motor Vehicles in the manner prescribed by the Uninsured Motorists System (UMS). The written notice to the insured shall specify the reason or reasons for cancellation. If the reason for cancellation is non-payment of premium, the Notice of Cancellation shall state the amount that must be paid to the company to avoid cancellation for all the insurance provided and shall state in substance that the cancellation will not be effective if the insured pays the full amount of such deficiency on or prior to the effective date of the cancellation. If a cancellation of the policy results in a return premium of less than \$5.00, no refund need be made except at the request of the insured, in which case the actual return premium shall be allowed.

No policy in effect prior to a rate level revision shall be endorsed or cancelled and rewritten to take advantage of such a revision or to avoid the application of such a revision.

### B. Theft of Vehicle or Plates

- 1. If the insured automobile is stolen or destroyed (total or constructive total loss) and cancellation is requested by the insured within thirty days following the date the automobile is stolen or destroyed, the return premium for all coverages (including the premium for the coverages under which loss was paid) shall be calculated on a pro rata basis from the day following the date of such loss.
- 2. If the insured registration plates are stolen or destroyed, a lost plate affidavit is to be issued to the Registry of Motor Vehicles canceling only coverage with respect to such plates effective the day following the date of such loss, and the policy shall continue to provide coverage with respect to any replacement plates.

3. If the insured files a lost plate affidavit with the Registry of Motor Vehicles, the company may cancel the policy.

### C. Sale or Transfer of Motor Vehicle, Surrender of Registration Plates, or Filing of a New Certificate

The policy shall terminate upon:

- 1. The sale or transfer of title by the owner of the motor vehicle or trailer thirty (30) days after the transfer unless the owner has registered a replacement motor vehicle.
- The surrender to the Registry of Motor Vehicles of the registration plates issued to the owner of the motor vehicle by the Registrar of Motor Vehicles under Chapter 90, with a written statement, in such form as the Registrar may require, that they are surrendered to cancel the registration of, and the insurance under, the policy for such motor vehicle or trailer.
- The filing with the Registry a certificate of insurance of another company as of the effective date of such certificate.
   NOTE: If more than one motor vehicle or trailer is described in the policy, the termination of coverage applies only to the motor vehicle or trailer involved in one of the situations described above.

### D. Reinstatement

If a policy has been cancelled by an insurance company, and such policy is later reinstated by the Board of Appeal on Motor Vehicle Liability Policies and Bonds or by a court of competent jurisdiction, the premium charge for the unexpired term of the policy shall be calculated pro rata based on the premium applicable to the policy when originally issued.

### E. Plates Returned Receipt

In the event that a policy has been terminated by (a) sale or transfer of the motor vehicle, or (b) surrender of the registration plates by the owner of the motor vehicle with a written statement in such form as the Registrar may require, that they are surrendered to cancel the registration of, and the insurance under, the policy for such motor vehicle or trailer, a receipt from the Registry of Motor Vehicles stating that the registration plates have been surrendered must be furnished to the insurance company.

### F. Leased Vehicles Under Long Term Contract

In the event a policy on a leased vehicle under a long-term contract is cancelled, the cancellation notice is to be issued in the name of the person or organization to which the policy was issued. A copy of the cancellation notice must be sent to the owner/registrant also, if it is other than the person to whom the policy was issued.

Upon the intended effective date of cancellation, a notice issued in the name of the actual owner/registrant must be electronically transmitted to the Registry by the company.

### G. Instructions For Use of Pro Rata or Short Rate Table

- 1. Express the date of cancellation by year and decimal part of a year by combining the calendar year with the decimal appearing opposite the month and day in the Pro Rata Table, e.g., March 7, 2011, is designated as 2011.181.
- 2. In like manner express the effective date of the policy by year and decimal part of a year and subtract from the cancellation date.
- 3. The difference, in the case of one year policies, represents the percentage of the annual premium which is to be retained by the carrier.

Examples:	
Cancellation date September 22, 2011	2011.726
Effective date July 6, 2011	<u>2011.512</u>
	.214

Earned premium for one year policy term will therefore be .214 times the annual premium.

Cancellation date March 7, 2011	2011.181
Effective date December 15, 2010	<u>2010.956</u>
	.225

Earned premium for one year policy term will therefore be .225 times the annual premium.

**NOTE:** As it is not customary to charge for the extra day (February 29) which occurs one year in every four years, this table shall also be used for each such year.

Instructions for Short Rate Table:

- 1. Determine the pro rata earned premium in accordance with the previous instructions.
- 2. Add that factor to the following factor:

Polic: Months		
in	but	
excess of	less than	Factors
0	1	.000
1	2	.055
2	3	.050
3	4	.045
4	5	.040
5	6	.035
6	7	.030
7	8	.025
8	9	.020
9	10	.015
10	11	.010
11	12	.005

3. Apply the factor determined in 2 above to the annual premium to compute the percentage of the annual premium which is to be retained by the company.

### Example:

Pro rata premium in example	.214
Short rate factor (policy in effect 2-3 months)	.050
	.264

Earned premium for annual policy cancelled on a short rate basis is .264 times the annual premium.

# MASSACHUSETTS PRIVATE PASSENGER RESIDUAL MARKET AUTOMOBILE INSURANCE MANUAL

								D RATA	TABLE								
	January			ebruary	/	Dav	March		Davi	April		Dev	May		Davi	June	
Day Of	Day of		Day of	Day of		Day of	Day of		Day of	Day of		Day of	Day of		Day of	Day of	
Month	Year	Ratio	Month	Year	Ratio	Month	Year	Ratio	Month	Year	Ratio	Month	Year	Ratio	Month	Year	Ratio
1	1	.003	1	32	.088	1	60	.164	1	91	.249	1	121	.332	1	152	.416
2	2 3	.005 .008	2 3	33 34	.090 .093	2 3	61 62	.167 .170	2 3	92 93	.252 .255	2 3	122 123	.334 .337	2 3	153 154	.419 .422
4	4	.008	4	34 35	.093	4	63	.170	4	93 94	.255	4	123	.340	4	154	.422
5	5	.014	5	36	.099	5	64	.175	5	95	.260	5	125	.342	5	156	.427
6	6	.016	6	37	.101	6	65	.178	6	96	.263	6	126	.345	6	157	.430
7	7	.019	7	38	.104	7	66	.181	7	97	.266	7	127	.348	7	158	.433
8	8	.022	8	39	.107	8	67	.184	8	98	.268	8	128	.351	8	159	.436
9 10	9 10	.025 .027	9 10	40 41	.110 .112	9 10	68 69	.186 .189	9 10	99 100	.271 .274	9 10	129 130	.353 .356	9 10	160 161	.438 .441
11	10	.030	10	42	.115	10	70	.192	10	100	.277	10	131	.359	11	162	.444
12	12	.033	12	43	.118	12	71	.195	12	102	.279	12	132	.362	12	163	.447
13	13	.036	13	44	.121	13	72	.197	13	103	.282	13	133	.364	13	164	.449
14	14	.038	14	45	.123	14	73	.200	14	104	.285	14	134	.367	14	165	.452
15 16	15 16	.041 .044	15 16	46 47	.126 .129	15 16	74 75	.203	15 16	105 106	.288 .290	15 16	135 136	.370 .373	15 16	166 167	.455 .458
10	10	.044 .047	10	47 48	.129	10	75	.205	17	106	.290	10	130	.375	10	167	.456
18	18	.049	18	49	.134	18	77	.211	18	108	.296	18	138	.378	18	169	.463
19	19	.052	19	50	.137	19	78	.214	19	109	.299	19	139	.381	19	170	.466
20	20	.055	20	51	.140	20	79	.216	20	110	.301	20	140	.384	20	171	.468
21 22	21 22	.058 .060	21 22	52 53	.142 .145	21 22	80 81	.219 .222	21 22	111 112	.304 .307	21 22	141 142	.386 .389	21 22	172 173	.471 .474
22	22	.060	22	53 54	.145	22	81	.222	22	112	.307	22	142	.389 .392	22	173	.474 .477
24	24	.066	24	55	.151	24	83	.227	24	114	.312	24	144	.395	24	175	.479
25	25	.068	25	56	.153	25	84	.230	25	115	.315	25	145	.397	25	176	.482
26	26	.071	26	57	.156	26	85	.233	26	116	.318	26	146	.400	26	177	.485
27 28	27 28	.074 .077	27 28	58 59	.159 .162	27 28	86 87	.236 .238	27 28	117 118	.321 .323	27 28	147 148	.403 .405	27 28	178 179	.488 .490
20	20	.079	20	39	.102	20	88	.230	20	119	.325	20	140	.403	20	180	.490
30	30	.082				30	89	.244	30	120	.329	30	150	.411	30	181	.496
50	00	.002				00	03	.477	00	120							
31	31	.085				31	90	.247				31	151	.414			
31	31 July			August		31 <b>S</b> e	90 eptemb	.247		October		31 N	151 ovembe	.414		ecembe	
	31		Day of	August Day of		31	90	.247 er			,	31	151	.414	Day of		
31 Day of Month	31 <b>July</b> Day of Year	.085 Ratio	Day of Month	Day of Year	Ratio	31 Day of Month	90 eptembe Day of Year	.247 er Ratio	Day of Month	<b>October</b> Day of Year	Ratio	31 Day of Month	151 ovembe Day of Year	.414 er Ratio	Day of Month	ecembe Day of Year	er Ratio
31 Day of Month 1	31 July Day of Year 182	.085 Ratio .499	Day of <u>Month</u> 1	Day of Year 213	Ratio .584	31 Day of Month	90 eptembe Day of Year 244	.247 er Ratio .668	Day of Month 1	Day Day of Year 274	Ratio .751	31 Day of Month	151 ovembe Day of Year 305	.414 er Ratio .836	Day of <u>Month</u> 1	ecembe Day of Year 335	er Ratio .918
31 Day of Month	31 <b>July</b> Day of Year	.085 Ratio	Day of Month	Day of Year	Ratio .584 .586	31 Day of Month	90 eptembe Day of Year	.247 er Ratio	Day of Month	<b>October</b> Day of Year	Ratio	31 Day of Month	151 ovembe Day of Year	.414 er Ratio	Day of Month	ecembe Day of Year	Ratio .918 .921
31 Day of Month 1 2	31 July Day of Year 182 183 184 185	.085 Ratio .499 .501 .504 .507	Day of <u>Month</u> 1 2	Day of Year 213 214	Ratio .584 .586 .589 .592	31 Day of Month 1 2 3 4	90 Day of Year 244 245 246 247	.247 er Ratio .668 .671	Day of Month 1 2 3 4	Dctober Day of Year 274 275	Ratio .751 .753 .756 .759	31 Day of Month 1 2 3 4	151 ovembe Day of Year 305 306 307 308	.414 er Ratio .836 .838	Day of Month 1 2 3 4	ecembe Day of Year 335 336 337 338	Ratio .918 .921 .923 .926
31 Day of Month 1 2 3 4 5	31 July Day of Year 182 183 184 185 186	.085 Ratio .499 .501 .504 .507 .510	Day of Month 1 2 3 4 5	Day of Year 213 214 215 216 217	Ratio .584 .586 .589 .592 .595	31 Day of Month 1 2 3 4 5	90 Day of Year 244 245 246 247 248	.247 er .668 .671 .674 .677 .679	Day of Month 1 2 3 4 5	Dctober Day of Year 274 275 276 277 278	Ratio .751 .753 .756 .759 .762	31 Day of Month 1 2 3 4 5	151 <b>ovembe</b> Day of Year 305 306 307 308 309	.414 Ratio .836 .838 .841 .844 .844 .847	Day of Month 1 2 3 4 5	ecembe Day of Year 335 336 337 338 339	Ratio .918 .921 .923 .926 .929
31 Day of Month 1 2 3 4 5 6	31 July Day of Year 182 183 184 185 186 187	.085 Ratio .499 .501 .504 .507 .510 .512	Day of Month 1 2 3 4 5 6	Day of Year 213 214 215 216 217 218	Ratio .584 .586 .589 .592 .595 .597	31 Day of Month 1 2 3 4 5 6	90 Day of Year 244 245 246 247 248 249	.247 er Ratio .668 .671 .674 .677 .679 .682	Day of Month 1 2 3 4 5 6	Dctober Day of 274 275 276 277 278 279	Ratio .751 .753 .756 .759 .762 .764	31 Day of Month 1 2 3 4 5 6	151 <b>ovembe</b> Day of Year 305 306 307 308 309 310	.414 Ratio .836 .838 .841 .844 .844 .847 .849	Day of Month 1 2 3 4 5 6	ecembe Day of Year 335 336 337 338 339 340	Ratio .918 .921 .923 .926 .929 .932
31 Day of Month 1 2 3 4 5 6 7	31 July Day of Year 182 183 184 185 186 187 188	.085 Ratio .499 .501 .504 .507 .510 .512 .515	Day of Month 1 2 3 4 5 6 7	Day of Year 213 214 215 216 217 218 219	Ratio .584 .586 .589 .592 .595 .597 .600	31 Day of Month 1 2 3 4 5 6 7	90 Day of Year 244 245 246 247 248 249 250	.247 er Ratio .668 .671 .674 .677 .679 .682 .685	Day of Month 1 2 3 4 5 6 7	Day of Year 274 275 276 277 278 279 280	Ratio .751 .753 .756 .759 .762 .764 .767	31 Day of Month 1 2 3 4 5 6 7	151 Day of Year 305 306 307 308 309 310 311	.414 Ratio .836 .838 .841 .844 .844 .847 .849 .852	Day of Month 1 2 3 4 5 6 7	ecembe Day of Year 335 336 337 338 339 340 341	Ratio .918 .921 .923 .926 .929 .932 .934
31 Day of Month 1 2 3 4 5 6	31 July Day of Year 182 183 184 185 186 187	.085 Ratio .499 .501 .504 .507 .510 .512	Day of Month 1 2 3 4 5 6	Day of Year 213 214 215 216 217 218	Ratio .584 .586 .589 .592 .595 .597	31 Day of Month 1 2 3 4 5 6	90 Day of Year 244 245 246 247 248 249	.247 er Ratio .668 .671 .674 .677 .679 .682	Day of Month 1 2 3 4 5 6	Dctober Day of 274 275 276 277 278 279	Ratio .751 .753 .756 .759 .762 .764	31 Day of Month 1 2 3 4 5 6	151 <b>ovembe</b> Day of Year 305 306 307 308 309 310	.414 Ratio .836 .838 .841 .844 .844 .847 .849	Day of Month 1 2 3 4 5 6	ecembe Day of Year 335 336 337 338 339 340	Ratio .918 .921 .923 .926 .929 .932
31 Day of Month 1 2 3 4 5 6 7 8 9 10	31 July Day of Year 182 183 184 185 186 185 186 187 188 189 190 191	.085 Ratio .499 .504 .507 .510 .512 .515 .518 .521 .523	Day of Month 1 2 3 4 5 6 7 8 9 10	Day of Year 213 214 215 216 217 218 219 220 221 222	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608	31 Day of Month 1 2 3 4 5 6 7 8 9 10	90 Day of Year 244 245 246 247 248 247 248 249 250 251 252 253	.247 er .668 .671 .674 .677 .679 .682 .685 .688 .690 .693	Day of Month 1 2 3 4 5 6 7 8 9 10	Detober Day of 274 275 276 277 278 279 280 281 282 283	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775	31 Day of Month 1 2 3 4 5 6 7 8 9 10	151 Day of Year 305 306 307 308 309 310 311 312 313 314	.414 Pr .836 .836 .836 .841 .844 .847 .849 .852 .855 .858 .858 .860	Day of Month 1 2 3 4 5 6 7 8 9 10	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11	31 July Day of Year 182 183 184 185 185 186 187 188 189 190 191	.085 Ratio .499 .504 .507 .510 .512 .515 .518 .521 .523 .526	Day of Month 1 2 3 4 5 6 7 8 9 10 11	Day of Year 213 214 215 216 217 218 219 220 221 222 223	Ratio .584 .589 .592 .595 .597 .600 .603 .605 .608 .611	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11	90 Day of Year 244 245 246 247 248 247 248 249 250 251 252 253 254	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696	Day of Month 1 2 3 4 5 6 7 8 9 10 11	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315	.414 Pr Ratio .836 .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863	Day of Month 1 2 3 4 5 6 7 8 9 10 11	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	31 July Day of Year 182 183 184 185 185 186 187 188 189 190 191 192 193	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .515 .521 .523 .526 .529	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316	.414 Pr Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .515 .521 .523 .526 .529 .532	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .616	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256	.247 er .668 .671 .674 .677 .679 .682 .685 .685 .688 .690 .693 .696 .699 .701	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 12 13	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .784	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .858 .860 .863 .866 .868	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13	Ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 347	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948 .951
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	31 July Day of Year 182 183 184 185 185 186 187 188 189 190 191 192 193	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .515 .521 .523 .526 .529	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	90 Day of Year 244 245 246 247 248 247 248 249 250 251 252 253 254 255	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316	.414 Pr Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948 .951 .953
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197	.085 Ratio .499 .501 .504 .507 .510 .512 .518 .521 .523 .523 .523 .529 .532 .534 .537 .540	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .619 .622 .625	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259	.247 er .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 283 284 285 286 287 288 288 289	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .775 .775 .778 .781 .781 .784 .784 .789 .792	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 316 317 318 319 320	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .868 .871 .874 .877	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	ecembe Day of Yeas 335 336 337 338 339 340 341 342 343 344 345 345 345 345 345 345 345 345	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948 .951 .953 .956 .959
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .521 .523 .526 .529 .532 .534 .537 .540 .542	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .614 .619 .622 .625 .627	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 255 256 257 258 259 260	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .693 .701 .704 .707 .710 .712	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 283 284 285 286 287 288 286 287 288 289 290	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .784 .784 .786 .789 .792 .795	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .863 .863 .868 .871 .874 .877 .879	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	ecembe Day of Year 3336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .945 .945 .945 .945 .951 .953 .956 .959 .962
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .521 .523 .526 .529 .532 .534 .537 .540 .542 .545	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .614 .619 .622 .625 .627 .630	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 255 255 255 255 255 255 255 255	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .693 .701 .704 .707 .710 .712 .715	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 285 286 287 288 288 289 290 291	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .781 .781 .786 .789 .792 .795 .797	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .863 .866 .863 .866 .863 .866 .863 .871 .874 .877 .879 .882	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .945 .945 .945 .945 .951 .953 .956 .959 .962 .964
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .521 .523 .526 .529 .529 .529 .526 .529 .534 .537 .540 .542 .545 .548	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231	Ratio .584 .589 .592 .595 .597 .600 .603 .605 .608 .611 .614 .619 .622 .625 .627 .630 .633	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 255 255 255 255 255 255 255 255	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710 .712 .715 .718	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 284 285 284 285 284 285 284 285 284 285 284 285 288 289 290 291 292	Ratio .751 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .784 .784 .789 .792 .795 .797 .800	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .863 .866 .868 .871 .874 .877 .879 .882 .885	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 345 346 347 348 349 350 351 352 353	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948 .951 .948 .951 .953 .956 .959 .962 .964 .967
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .521 .523 .526 .529 .532 .534 .537 .540 .542 .545	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .614 .619 .622 .625 .627 .630	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 255 255 255 255 255 255 255 255	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .693 .701 .704 .707 .710 .712 .715	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 285 286 287 288 288 289 290 291	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .781 .781 .786 .789 .792 .795 .797	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .863 .866 .863 .866 .863 .866 .863 .871 .874 .877 .879 .882	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .945 .945 .945 .945 .951 .953 .956 .959 .962 .964
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .515 .521 .523 .526 .529 .532 .534 .527 .540 .542 .545 .548 .551 .553 .556	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234	Ratio .584 .589 .592 .595 .597 .600 .603 .605 .608 .611 .614 .616 .619 .622 .625 .627 .630 .633 .636 .638 .641	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265	.247 Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 286 287 288 289 290 291 292 293 294 295	Ratio .751 .753 .756 .759 .762 .764 .767 .773 .775 .778 .775 .778 .781 .784 .781 .784 .789 .795 .795 .795 .795 .800 .803 .805 .808	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 320 321 322 323 324 325 326	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .863 .866 .863 .866 .868 .871 .874 .877 .879 .882 .885 .888 .880 .890 .893	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 343 344 345 346 347 348 349 350 351 352 353 354 355 356	Ratio .918 .921 .923 .926 .929 .934 .937 .940 .942 .945 .948 .951 .948 .951 .953 .956 .959 .962 .962 .967 .970 .973 .975
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .515 .521 .523 .526 .529 .532 .534 .527 .540 .542 .545 .545 .545 .555 .556 .559	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235	Ratio .584 .589 .592 .595 .597 .600 .603 .605 .608 .611 .614 .616 .619 .622 .627 .627 .630 .633 .636 .638 .641 .644	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266	.247 Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .784 .781 .784 .781 .784 .789 .795 .795 .795 .797 .800 .803 .805 .808 .811	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 320 321 322 323 324 325 326 327	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .855 .855 .856 .860 .863 .866 .868 .871 .874 .877 .879 .825 .885 .885 .885 .888 .890 .893 .896	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 344 345 346 347 348 349 350 351 352 353 354 355 356 357	Ratio .918 .921 .923 .926 .929 .934 .937 .940 .945 .945 .948 .951 .948 .951 .948 .951 .953 .956 .959 .962 .964 .967 .970 .973 .975 .978
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 201 202 203 204 205	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .523 .526 .529 .532 .534 .527 .540 .545 .545 .545 .545 .555 .555 .555	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236	Ratio .584 .589 .592 .595 .600 .603 .603 .605 .608 .611 .614 .619 .622 .625 .627 .630 .633 .636 .638 .641 .644 .647	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 264 265 266 267	.247 Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729 .732	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 284 285 286 287 288 289 290 291 292 293 294 295 296 297	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .775 .778 .781 .784 .781 .784 .789 .792 .795 .797 .800 .803 .805 .808 .811 .814	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .868 .871 .874 .877 .879 .882 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .890 .899	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 345 346 347 348 349 350 351 352 353 354 355 356 357 358	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948 .951 .953 .956 .959 .964 .959 .962 .964 .967 .970 .973 .975 .978 .981
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 200 201 202 203 204 205 206	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .523 .526 .529 .532 .534 .527 .540 .542 .545 .545 .548 .551 .553 .556 .559 .562 .564	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	Day of Year 213 214 215 216 217 218 219 220 221 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237	Ratio .584 .589 .592 .595 .597 .600 .603 .605 .608 .614 .616 .619 .622 .625 .627 .630 .633 .636 .638 .641 .644 .647 .649	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	90 Day of Yeat 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 261 263 264 265 264 265 266 267 268	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729 .732 .734	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .778 .781 .784 .781 .784 .786 .789 .792 .795 .797 .800 .803 .803 .803 .808 .811 .814 .816	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .868 .871 .874 .877 .879 .882 .885 .885 .885 .885 .885 .890 .890 .890	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	Ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 345 346 347 348 349 350 351 352 353 354 355 356 355 356 357 358 359	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .942 .945 .948 .951 .953 .956 .959 .964 .959 .964 .967 .970 .973 .975 .978 .981 .984
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 201 202 203 204 205	.085 Ratio .499 .501 .504 .507 .510 .512 .515 .518 .523 .526 .529 .532 .534 .527 .540 .545 .545 .545 .545 .555 .555 .555	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236	Ratio .584 .589 .592 .595 .600 .603 .603 .605 .608 .611 .614 .619 .622 .625 .627 .630 .633 .636 .638 .641 .644 .647	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 264 265 266 267	.247 Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .699 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729 .732	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 284 285 286 287 288 289 290 291 292 293 294 295 296 297	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .775 .778 .781 .784 .781 .784 .789 .792 .795 .797 .800 .803 .805 .808 .811 .814	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .866 .868 .871 .874 .877 .879 .882 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .885 .890 .899	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 345 346 347 348 349 350 351 352 353 354 355 356 357 358	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .948 .951 .953 .956 .959 .964 .959 .962 .964 .967 .970 .973 .975 .978 .981
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 194 195 194 195 194 195 200 201 202 203 204 205 206 207 208 209	.085 Ratio .499 .501 .504 .507 .510 .512 .518 .521 .523 .526 .529 .532 .534 .537 .540 .542 .545 .548 .551 .548 .551 .553 .556 .559 .562 .562 .564 .570 .570 .573	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 232 233 234 235 236 237 238 239 240	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .616 .619 .622 .625 .627 .630 .633 .636 .638 .641 .647 .644 .647 .655 .658	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 256 257 258 259 260 261 262 263 264 265 265 266 265 266 267 268 269 270 271	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .693 .696 .693 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729 .737 .740 .742	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 286 287 288 289 290 291 292 293 294 295 295 295 295 297 298 299 300 301	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .784 .786 .789 .792 .795 .797 .800 .803 .805 .808 .811 .814 .814 .819 .822 .825	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .874 .877 .879 .882 .885 .888 .890 .893 .890 .901 .904 .907 .910	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 347 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .945 .945 .945 .945 .945 .951 .955 .959 .952 .964 .959 .962 .964 .967 .970 .973 .975 .978 .975 .978 .984 .988 .989 .992
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210	.085 Ratio .499 .501 .504 .507 .510 .512 .518 .521 .523 .526 .529 .532 .534 .537 .540 .542 .545 .548 .551 .548 .551 .553 .556 .559 .562 .562 .564 .570 .573 .575	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 231 232 233 234 235 236 237 238 239 240 241	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .619 .622 .625 .627 .630 .633 .636 .638 .641 .644 .647 .649 .655 .658 .660	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 263 264 265 266 267 268 269 270 271 272	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .693 .696 .693 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729 .734 .737 .740 .742 .745	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 286 287 288 289 290 291 292 293 294 292 293 294 295 296 297 298 299 300 301 302	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .784 .786 .789 .792 .795 .797 .800 .803 .805 .808 .811 .816 .819 .822 .825 .827	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .863 .863 .863 .863 .863 .863 .863 .871 .874 .877 .879 .882 .885 .888 .890 .893 .896 .893 .901 .904 .907 .910 .912	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 21 22 23 24 25 26 27 28 29	Ecembe Day of Year 3336 337 338 339 340 341 342 343 344 345 346 347 348 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .945 .945 .948 .953 .956 .959 .962 .964 .957 .964 .967 .970 .973 .975 .978 .975 .978 .984 .984 .986 .989 .992 .995
31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	31 July Day of Year 182 183 184 185 186 187 188 189 190 191 192 193 194 195 194 195 194 195 194 195 200 201 202 203 204 205 206 207 208 209	.085 Ratio .499 .501 .504 .507 .510 .512 .518 .521 .523 .526 .529 .532 .534 .537 .540 .542 .545 .548 .551 .548 .551 .553 .556 .559 .562 .562 .564 .570 .570 .573	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Day of Year 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 232 233 234 235 236 237 238 239 240	Ratio .584 .586 .592 .595 .597 .600 .603 .605 .608 .611 .614 .616 .619 .622 .625 .627 .630 .633 .636 .638 .641 .647 .644 .647 .655 .658	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	90 Day of Year 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 256 257 258 259 260 261 262 263 264 265 265 266 265 266 267 268 269 270 271	.247 er Ratio .668 .671 .674 .677 .679 .682 .685 .688 .690 .693 .696 .693 .696 .693 .701 .704 .707 .710 .712 .715 .718 .721 .723 .726 .729 .737 .740 .742	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Detober Day of Year 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 286 287 288 289 290 291 292 293 294 295 295 295 295 297 298 299 300 301	Ratio .751 .753 .756 .759 .762 .764 .767 .770 .773 .775 .778 .781 .781 .784 .786 .789 .792 .795 .797 .800 .803 .805 .808 .811 .814 .814 .819 .822 .825	31 Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	151 Day of Year 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332	.414 Ratio .836 .838 .841 .844 .847 .849 .852 .855 .858 .860 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .863 .874 .877 .879 .882 .885 .888 .890 .893 .890 .901 .904 .907 .910	Day of Month 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	ecembe Day of Year 335 336 337 338 339 340 341 342 343 344 345 346 347 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362	Ratio .918 .921 .923 .926 .929 .932 .934 .937 .940 .942 .945 .945 .945 .945 .945 .945 .951 .955 .959 .952 .964 .957 .964 .967 .970 .973 .975 .978 .975 .978 .984 .984 .989 .992

## MASSACHUSETTS PRIVATE PASSENGER RESIDUAL MARKET AUTOMOBILE INSURANCE MANUAL

(Rule 18)

#### SHORT RATE CANCELLATION OF SHORT TERM POLICIES Percentages of Policy Premiums to be Retained by Insurance Company Policy Effective Date

									Effectiv								
No. of Days in force	Jan.	Feb.	Mar.	Apr.	May	June	July	<u>Auc</u> 1-15	<u>ust</u> 16-	<u>Septe</u> 1-15	mber 16-	<u>Octe</u> 1-15	<u>ober</u> 16-	<u>Nove</u> 1-15	<u>mber</u> 16-	<u>Dece</u> 1-15	<u>mber</u> 16-
				-	-		-	-	31		30		31	-	30		31
1-10 11-15	9 11	9 12	10 13	11 15	13 16	15 17	16 18	17 19	18 20	19 21	20 23	22 26	25 29	29 35	37 45	54 65	73 100
16-20 21-25	15 17	16 17	16 18	17 19	18 20	19 22	21 24	22 26	24 28	26 30	28 34	31 37	37 44	44 53	59 70	83 100	
26-30	18	19	20	21	20	24	24	20	32	35	39	43	51	62	81	100	
31-35	19	20	21	23	24	27	30	33	36	39	44	49	59	70	91		
36-40 41-45	21 22	22 24	23 25	25 27	27 29	29 32	33 35	36 40	40 43	43 48	49 54	55 61	65 71	77 85	100 100		
46-50	24	25	27	29	31	34	38	43	47	52	59	66	76	92			
51-55 56-60	25 27	27 28	28 30	30 32	33 35	37 39	41 44	47 50	51 55	57 61	63 67	71 76	82 88	100 100			
61-65	28	30	32	34	37	42	47	53	59	64	71	80	94				
66-70 71-75	30 31	31 33	33 35	36 38	40 42	44 47	50 53	57 60	62 65	68 71	76 80	85 90	100 100				
76-80	32	35	37	40	44	49	56	63	68	75	84	94					
81-85 86-90	34 35	36 38	39 40	42 44	46 48	52 54	59 62	66 69	71 75	78 82	88 92	99 100					
91-105	38	41	44	48	53	59	66	74	81	89	100						
106-120 121-135	42 47	45 50	49 54	54 59	59 65	65 71	74 81	82 91	90 100	100							
136-150	51	55	59	64	70	78	88	100	100								
151-165 166-180	55 59	60 63	63 68	69 72	75 80	84 90	95 100										
181-195	63	67	72	78	85	96											
196-210 211-225	67 70	71 75	76 80	83 87	91 94	100											
226-240	73	78	84	92	100												
241-255 256-270	77 80	82 86	88 92	94 100													
271-285	84	90	96											TAB			
286-300 301-315	87 90	93 97	100											rcycles w ration of [			
316-330	94	100														,	
331-360 361-365	99 100																
No. of Days								<u>Jı</u>	ıly	Aug	lust	Septe	mber	Octo	ber_	Nove	mber
in force	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	1-15	16- 31	1-15	16- 31	1-15	16- 30	1-15	16- 31	1-15	16- 30
in force	9 11	9 12	10 13	11 15	13 16	15 17	16 18	<b>1-15</b> 17 19	<b>16-</b> <b>31</b> 18 20	<b>1-15</b> 19 21	<b>16-</b> <b>31</b> 20 23	<b>1-15</b> 22 26	<b>16-</b> <b>30</b> 25 29	<b>1-15</b> 29 35	<b>16-</b> <b>31</b> 37 45	<b>1-15</b> 54 65	16-
in force 1-10 11-15 16-20	9 11 15	9 12 16	10 13 16	11 15 17	13 16 18	15 17 19	16 18 21	<b>1-15</b> 17 19 22	<b>16-</b> <b>31</b> 18 20 24	<b>1-15</b> 19 21 26	<b>16-</b> <b>31</b> 20 23 28	<b>1-15</b> 22 26 31	<b>16-</b> <b>30</b> 25 29 37	<b>1-15</b> 29 35 44	<b>16-</b> <b>31</b> 37 45 59	<b>1-15</b> 54 65 83	<b>16-</b> <b>30</b> 73
in force	9 11	9 12	10 13	11 15	13 16	15 17	16 18	<b>1-15</b> 17 19	<b>16-</b> <b>31</b> 18 20	<b>1-15</b> 19 21	<b>16-</b> <b>31</b> 20 23	<b>1-15</b> 22 26	<b>16-</b> <b>30</b> 25 29	<b>1-15</b> 29 35	<b>16-</b> <b>31</b> 37 45	<b>1-15</b> 54 65	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35	9 11 15 17 18 19	9 12 16 17 19 20	10 13 16 18 20 21	11 15 17 19 21 23	13 16 18 20 22 24	15 17 19 22 24 27	16 18 21 24 27 30	<b>1-15</b> 17 19 22 26 29 33	<b>16-</b> <b>31</b> 18 20 24 28 32 36	<b>1-15</b> 19 21 26 30 35 39	<b>16-</b> <b>31</b> 20 23 28 34 39 44	<b>1-15</b> 22 26 31 37 43 43 49	<b>16-</b> <b>30</b> 25 29 37 44 51 59	<b>1-15</b> 29 35 44 53 62 70	<b>16-</b> <b>31</b> 37 45 59 70 81 91	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45	9 11 15 17 18 19 21 22	9 12 16 17 19 20 22 24	10 13 16 18 20 21 23 25	11 15 17 19 21 23 25 27	13 16 18 20 22 24 27 29	15 17 19 22 24 27 29 32	16 18 21 24 27 30 33 35	<b>1-15</b> 17 19 22 26 29 33 36 40	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43	<b>1-15</b> 19 21 26 30 35 39 43 48	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54	<b>1-15</b> 22 26 31 37 43 49 55 61	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71	<b>1-15</b> 29 35 44 53 62 70 77 85	<b>16-</b> <b>31</b> 37 45 59 70 81	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50	9 11 15 17 18 19 21 22 24	9 12 16 17 19 20 22 24 25	10 13 16 18 20 21 23 25 27	11 15 17 19 21 23 25 27 29	13 16 18 20 22 24 27 29 31	15 17 19 22 24 27 29 32 34	16 18 21 24 27 30 33 35 38	1-15 17 19 22 26 29 33 36 40 43	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47	1-15 19 21 26 30 35 39 43 48 52	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59	<b>1-15</b> 22 26 31 37 43 49 55 61 66	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76	<b>1-15</b> 29 35 44 53 62 70 77 85 92	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45	9 11 15 17 18 19 21 22	9 12 16 17 19 20 22 24	10 13 16 18 20 21 23 25	11 15 17 19 21 23 25 27	13 16 18 20 22 24 27 29	15 17 19 22 24 27 29 32	16 18 21 24 27 30 33 35	<b>1-15</b> 17 19 22 26 29 33 36 40	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43	<b>1-15</b> 19 21 26 30 35 39 43 48	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54	<b>1-15</b> 22 26 31 37 43 49 55 61	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71	<b>1-15</b> 29 35 44 53 62 70 77 85	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65	9 11 15 17 18 19 21 22 24 25 27 28	9 12 16 17 19 20 22 24 25 27 28 30	10 13 16 18 20 21 23 25 27 28 30 32	11 15 17 19 21 23 25 27 29 30 32 34	13 16 18 20 22 24 27 29 31 33 35 37	15 17 19 22 24 27 29 32 34 37 39 42	16 18 21 24 27 30 33 35 38 41 44 47	<b>1-15</b> 17 19 22 26 29 33 36 40 43 47 50 53	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59	<b>1-15</b> 19 21 26 30 35 39 43 48 52 57 61 64	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75	9 11 15 17 18 19 21 22 24 25 27 28 30 31	9 12 16 17 19 20 22 24 25 27 28 30 31 33	10 13 16 18 20 21 23 25 27 28 30 32 33 35	11 15 17 19 21 23 25 27 29 30 32 32 34 36 38	13 16 18 20 22 24 27 29 31 33 35 37 40 42	15 17 19 22 24 27 29 32 34 37 39 42 44 47	16 18 21 24 27 30 33 35 38 41 44 47 50 53	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 55 59 62 65	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 84	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40	11 15 17 19 21 23 25 27 29 30 32 32 34 36 38	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 84 88 92	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75 81	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82 89	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 80 84 88	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105 106-120 121-135	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38 42 47	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41 45 50	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44 49 54	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48 59	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53 59 65	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59 65 71	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66 74 81	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74 82 91	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 84 88 92	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105 106-120	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38 42	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41 45	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44 49	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48 54	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53 59	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59 65	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66 74	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74 82	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75 81 90	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82 89	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 84 88 92	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105 106-120 121-135 136-150 151-165 166-180	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38 42 47 51 55 59	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41 45 55 60 63	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44 49 59 63 68	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48 54 69 64 69 72	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53 59 65 70 75 80	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59 65 71 78 84 90	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66 74 81 88	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74 82 91	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75 81 90	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82 89	16-           31           20           23           28           34           39           44           49           54           59           63           67           71           76           80           84           82	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105 106-120 121-135 136-150 151-165 166-180 181-195	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38 42 47 55 59 63	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41 45 55 60 63 67	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44 49 54 59 63 68 72	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48 59 64 69 72 78	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53 59 65 70 75 80 85	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59 65 71 78 84 90 96	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66 74 81 88 95	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74 82 91	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75 81 90	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82 89	16-           31           20           23           28           34           39           44           49           54           59           63           67           71           76           80           84           82	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105 106-120 121-135 136-150 151-165 166-180 181-195 196-210 211-225	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38 42 47 51 55 59 63 67 70	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41 45 50 55 60 63 67 71 75	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44 49 54 59 63 68 72 76 80	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48 54 59 64 69 72 78 83 87	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53 59 65 70 75 80 85 91 94	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59 65 71 78 84 90	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66 74 81 88 95	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74 82 91	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75 81 90	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82 89	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 84 88 92	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
in force 1-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85 86-90 91-105 106-120 121-135 136-150 151-165 166-180 181-195 196-210 211-225 226-240 241-255	9 11 15 17 18 19 21 22 24 25 27 28 30 31 32 34 35 38 42 47 55 59 63 67 70 73 77	9 12 16 17 19 20 22 24 25 27 28 30 31 33 35 36 38 41 45 55 60 63 67 71 75 78 82	10 13 16 18 20 21 23 25 27 28 30 32 33 35 37 39 40 44 49 54 59 63 68 72 76 80 84 88	11 15 17 19 21 23 25 27 29 30 32 34 36 38 40 42 44 48 59 64 69 72 78 83 87 92 94	13 16 18 20 22 24 27 29 31 33 35 37 40 42 44 46 48 53 59 65 70 75 80 85 91	15 17 19 22 24 27 29 32 34 37 39 42 44 47 49 52 54 59 65 71 78 84 90 96	16 18 21 24 27 30 33 35 38 41 44 47 50 53 56 59 62 66 74 81 88 95	1-15 17 19 22 26 29 33 36 40 43 47 50 53 57 60 63 66 69 74 82 91	<b>16-</b> <b>31</b> 18 20 24 28 32 36 40 43 47 51 55 59 62 65 68 71 75 81 90	1-15 19 21 26 30 35 39 43 48 52 57 61 64 68 71 75 78 82 89	<b>16-</b> <b>31</b> 20 23 28 34 39 44 49 54 59 63 67 71 76 80 84 88 92	<b>1-15</b> 22 26 31 37 43 49 55 61 66 71 76 80 85 90 94 99	<b>16-</b> <b>30</b> 25 29 37 44 51 59 65 71 76 82 88 94 100	<b>1-15</b> 29 35 44 53 62 70 77 85 92 100	<b>16-</b> <b>31</b> 37 45 59 70 81 91 100	<b>1-15</b> 54 65 83 100	<b>16-</b> <b>30</b> 73
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## RULE 19. DISCOUNTS

#### A. Multi-Car

A policyholder who owns two or more automobiles and purchases coverage from the same company for at least two such automobiles, shall be entitled to a reduction of the premium applicable to Coverage Parts 1, 2, 4, 5, 7, 8 and 9. At least two of the automobiles must be private passenger vehicles as defined in Rule 27, except that vehicles classified as specialty and classic cars are not eligible. The premium reduction applies only to private passenger vehicles as defined in Rule 27. Refer to Miscellaneous Rating Factors page for applicable discount.

### B. Class 15

Premiums otherwise applicable to class 10 automobiles shall be reduced by 25% for insureds age 65 or older. If the principal operator becomes age 65 during the policy year, the class 10 premium shall be adjusted as of that date but no later than the next policy renewal date. A notice of this classification change must be sent to the policyholder either prior to or with the proposed adjustment. The policyholder is required to notify the company of any change in operator usage which would affect entitlement to the discount.

#### C. Annual Mileage Discount

A discount of the premium paid for Parts 1, 2, 3, 4, 5, 6, 7, 8 and 12 will be given to eligible policyholders on request, when the annual mileage of the vehicle falls into one of two categories. The discount will be based on the actual mileage driven in the previous policy year as determined by a comparison of two odometer readings, at least six months apart, from Registry of Motor Vehicle information or the Annual Mileage Discount Form and other standard automobile insurance forms available to the company. Refer to the Miscellaneous Rating Factors page for the applicable categories and discounts.

## 1. Eligibility

The vehicle must be a private passenger vehicle as defined in Rule 27, except that vehicles classified as specialty and classic cars are not eligible. The company may request that the applicant for the discount complete the Annual Mileage Discount Form for the verification of eligibility for the discount.

#### 2. Verification

The company may use the odometer readings provided by the applicant on the Annual Mileage Discount Form or other standard forms available to the company, in order to verify the mileage driven in the past year. The company shall compute the annualized difference between the odometer reading at the time of application and the previous odometer reading to determine eligibility. If a vehicle replaces a vehicle which is receiving the discount, the annual mileage of the prior vehicle will be attributed to the replacement vehicle.

The company may use information from the Vehicle Inspection System of the Registry of Motor Vehicles to verify annual mileage. The difference in the two most recent odometer readings reported by the Registry, if at least six months apart, shall be annualized to determine eligibility for the discount. If the Registry reports only one reading, which is more than six months before the application for the discount, the applicant may provide a current odometer reading on the Annual Mileage Discount Form, and the difference shall be annualized to determine eligibility.

If two odometer readings, at least six months apart, are not available to the company through the Registry of Motor Vehicles, the Annual Mileage Discount Form or other standard forms, the vehicle is not eligible for the annual mileage discount.

### 3. Application of Discount

The applicable discount applies to rates otherwise determined for each insured vehicle by coverage, limits purchased, territory, driver class, and model year and vehicle rating group prior to the application a merit rating adjustment.

### **D.** Continuous Coverage

The MAIP premium for Parts 1, 2, 4 and 5 will be reduced following the assigned company's verification of a rated operator's eligibility for the continuous coverage discount. The discount shall apply to each rated operator that has been insured without a lapse in coverage under an automobile insurance policy for the 12 month period preceding the effective date of the policy. A rated operator is considered continuously insured if the operator was the named, listed, or rated insured on an automobile insurance policy for the 12 month period preceding the effective date of the policy.

### 1. Eligibility

The vehicle must be a private passenger vehicle as defined in Rule 27.

To be eligible for the discount when the policy is first assigned to a company, a copy of the coverage selections page confirming coverage up to the effective date of the new policy for any or all of the operator(s) listed on the application must be attached to the new business application submitted to the assigned company in accordance with CAR Rule 31.B.5.Rated operators that are not eligible for the continuous coverage discount are:

- a. Operators that have been licensed less than 12 months;
- b. Operators that are new to Massachusetts who cannot demonstrate proof of licensing for the previous 12 months and are assigned to Class 20 or 21 in accordance with rule 28.B.3 of this manual are not eligible for the continuous coverage discount;
- c. Operators assigned as the rated operator on a vehicle according to Rule 28 of this manual when the policy is first assigned to the company for whom a copy of the prior policy coverage selection page(s) indicating that the operator was insured up to the effective date of the new policy has not been furnished; and
- d. Any operators insured under a policy assigned to a company that is cancelled due to nonpayment of premium and results in a lapse in coverage at any time during the policy's three year assignment to the company.

### 2. Verification

Upon timely receipt of the prior policy coverage selections page for an operator that will be a rated operator under the policy when first assigned to the company, the company shall verify that operator's eligibility for the continuous coverage discount using the Uninsured Motorist System of the Registry of Motor Vehicles, direct confirmation of continuous coverage with the prior insurer shown on the prior policy coverage selection page, or other reputable vendors of automobile insurance coverage information.

For rated operators who are new to Massachusetts that can demonstrate licensure for the 12 months preceding the policy effective date, the assigned company shall attempt to verify the operator's eligibility for the discount through direct confirmation of continuous coverage with the prior insurer, or other vendors of automobile insurance coverage information.

If eligibility for the discount cannot be confirmed through any of the verification processes described above, the discount shall not apply.

Continued eligibility for the discount at renewal shall be based on the assigned company's internal policy records for the previous 12 months.

Refer to the Miscellaneous Rating Factor page for the applicable discount factor.

### E. Low Frequency

The MAIP premium for Parts 1, 2, 4 and 5 will be reduced following the assigned company's verification of a rated operator's eligibility for the low frequency discount. The discount shall apply to each rated operator that has 4 or less merit rating points as defined in Rule 56 – Merit Rating Plan, and where a claim payment under any or all of the above coverage parts has not been made to or on behalf of the rated operator in connection with more than one accident during the three years preceding the effective date of the policy.

## 1. Eligibility

The vehicle must be a private passenger vehicle as defined in Rule 27.

### 2. Verification

The assigned company shall verify each rated operator's eligibility for the low frequency discount. The company shall verify eligibility using information from reputable vendors of operators' automobile insurance claim payment histories and traffic violations and its own claim payments.

An assigned company may optionally elect a "short form" verification process instead of the verification process described above. Under the short form option, an assigned company agrees to verify each rated operator's eligibility for the low frequency discount for each policy assigned to it solely on the basis of the information used to compute the rated operator's merit rating adjustment under Rule 56 of this manual and the claim payments it makes under the provisions of the assigned policy.

Companies who use the short form verification option must utilize this procedure for all assigned risks, and must notify CAR of their intent to do so least 20 days prior to implementation. When a policy is assigned by the MAIP to such a company, CAR will notify the producer of the company's short form verification requirements at the time the producer is notified of the company assignment. Companies may rescind the short form verification option at any time provided CAR receives notice at least 20 days in advance of implementation. An assigned company that changes its verification process may not subsequently reassess a rated operator's eligibility for the low frequency discount on an in-force policy until the policy renews.

Refer to the Miscellaneous Rating Factor page for the applicable discount factor.

## Rule 20. MODEL YEAR DEFINITION

The model year of an auto is used in rating physical damage coverage on an actual cash value basis.

The model year of the auto is the year assigned by the auto manufacturer. The model year of rebuilt or structurally altered autos is determined by the model year of the chassis.

Refer to Rule 22 for more information on Model Year/VRG relativities for model years subsequent to those shown on the rate tables

### Rule 21. FIRE, THEFT AND COMBINED ADDITIONAL COVERAGES

## A. Actual Cash Value

Refer to Miscellaneous Rating Factors section for the applicable factors.

#### **B. Stated Amount**

Refer to the Rate Section for any specified peril.

### Rule 22. VEHICLE RATING GROUP (VRG) PROGRAM

The Vehicle Rating Group program assigns vehicles to groups in order to reflect expected cost differences arising from the type of vehicle insured. Vehicles are assigned to groups with each new model year and may be grouped differently depending on the type of coverage.

### A. Assignment to Vehicle Rating Groups

The Vehicle Rating Groups (VRGs) are used for the physical damage coverages to determine a vehicle's premium. VRGs are assigned to vehicles as new model years are introduced, and once a vehicle has been assigned to a VRG, it is not subject to change.

- 1. Coverages rated using VRGs: collision, limited collision, and comprehensive.
- 2. Coverage groupings: there are two sets of VRG definitions one for the collision coverage and one for the comprehensive coverage.
- 3. VRG Codes: the forty VRGs are represented by codes 11 through 50.

Refer to the AIB Vehicle Rating Group Program for the VRG assigned to vehicles. Refer to the Rate Section of this manual for Model Year/Vehicle Rating Group relativities for use in premium determination. For rating vehicles that do not have a VRG assignment, see part B (below).

### B. Vehicles not Assigned to Vehicle Rating Groups

Use the following procedure to rate vehicles that have not been assigned to a VRG:

- 1. Existing models: for rating of the newly announced models that have not been assigned to a VRG, use the VRG of the latest corresponding model year.
- 2. New models: for rating of vehicles which have no prior corresponding model, determine the appropriate VRG based on (1) the base list price and (2) the vehicle type. (refer to the VRG Assignment by Price table in the Rate Section).
- 3. Model years prior to 1985: the auto shall be rated on a Stated Amount Basis in accordance with Rule 41. If an auto is appraised for stated amount or agreed amount coverage, the appraised value must be used to determine the VRG. (Refer to the VRG Assignment by Price table in the Rate Section).

(The base list price is the manufacturer's suggested retail price, or MSRP, for a vehicle with no additional options included.)

### C. Vehicle Rating Group/Model Year Rating

Premium for Parts 7 or 9 is determined as follows:

- 1. Determine the model year as described in Rule 20.
- 2. Determine the VRG as described in section A or B above.
- 3. Identify the manual rate for the applicable driver rating class and territory from the Rate Section.
- 4. Identify the applicable model year/VRG relativity for Part 7 or 9 from the Rate Section.
- 5. Multiply the applicable base rate times the applicable model year/VRG relativity for Part 7 or 9.
- 6. Determine appropriate deductible charges and factors from the Rate section of the manual.

### D. Calculation of Rate Relativities for Model Years Not Shown on the Rate Tables

For model years subsequent to those shown on the rate pages, determine the model year/VRG relativity by multiplying the factor shown on the Miscellaneous Rating Factor page to the relativity for the latest model year shown for every subsequent model year up to the model year of the vehicle being rated.

### E. Calculation of Rate Relativities for Physical Damage Vehicle Rating Group 50

When the base list price is less than or equal to the maximum price shown in the table below, the rate relativity for VRG 50 is used without adjustment. (The base list price is the MSRP for a vehicle with no additional options included.

When the base list price exceeds the maximum price shown in the table below, rate relativities for VRG 50 are subject to adjustment. Calculate the VRG 50 collision and comprehensive rate relativities for each coverage as follows:

- 1. Subtract the maximum price in the table below from the base list price and divide by \$1000.
- 2. Multiply the amount from Step 1 by the factor in the table below.
- 3. The adjusted VRG 50 relativity is determined by adding the amount from Step 2 to the unadjusted VRG 50 rate relativity.

	Coll	Comprehensive	
	Van/Wagon/	All Other PP	
	Pick-up*	Vehicles **	All Vehicles
Max Price	\$145,000	\$110,000	\$75,000
Factor	0.02	0.025	0.035

- \* The Van/Wagon/Pick-up group in the table above consists of private passenger vehicles with the following styles: vans, wagons, pick-up trucks, sport utility vehicles (SUV), and wagon/SUV-styled crossover vehicles.
- \*\* The All Other group consists of all other private passenger vehicles with body styles such as: sedans, convertibles, coupes, luxury cars, hatchbacks, performance cars, and sedanstyled crossover vehicles.

### RULE 23. HIGH-THEFT VEHICLES

For certain model years, some makes and models are designated high-theft vehicles by the Commissioner of Insurance. Refer to the MA Division of Insurance Filing Guidance Notices for most recent High Theft vehicle listing.

The insurer may, at its option, charge an extra-risk rate, refuse to write, or cancel coverage under parts 7, 8, or 9 if a vehicle designated as a high-theft vehicle is not equipped with a category III, IV or V anti-theft device or vehicle recovery system as follows:

#### 1. Definitions

As used in this regulation, the following words shall mean:

"Passive device or system" describes an anti-theft device or system which is activated automatically when the operator turns the ignition key to the off position.

"Alarm," except where otherwise specified, means horn, bell, siren or other sounding device which is audible at 300 feet.

"Tubular" describes a type of lock whose key is cylindrically shaped and which has at least 50,000 combinations.

"Electronic lock or keyless device" is an electronic coding device that has more than 10,000 combinations. The combination used to unlock the device can be entered through a keyboard or similar data entry device or by means of a remote control device.

#### 2. General

Stickers identifying the particular anti-theft system installed may not be attached to the car unless specifically permitted in these rules.

#### **Categories Defined**

### **Category III**

- (a) Passive Alarm System This is an alarm system meeting the following criteria:
  - (1) Ignition must be cut off automatically, or starter must be disabled automatically.
  - (2) Alarm must be triggered by entry of doors, hood or trunk.

(3) Hood must not open unless unlocked from inside the vehicle by a key, or by an electronic keyless device.

(4) Alarm must sound for no more than eight minutes, and upon ceasing to sound, must reset itself.

(5) Alarm must not emit a pulsating, whooping, or yelping sound which would cause it to be mistaken for the modern police, fire or other emergency vehicle siren.

(6) Alarm must be installed in the engine compartment so as to be inaccessible without opening the hood.

(7) The system must be engaged passively by turning the ignition key to the off position. To disarm the system a tubular lock or electronic keyless device must be used. The maximum time delay permitted to disarm the system after re-entry is twenty seconds.

#### (b) Passive Fuel Cut-Off Device

This fuel cut-off device is engaged by turning the ignition key to the off position. The driver must trip a switch to open the fuel line each time the car is started. This device must meet the following criteria:

(1) The fuel line must be blocked when the power is off.

(2) The switch to open the fuel line must be well hidden from view, but accessible to the driver from the driver's seat. In the alternative a tubular key or an electronic keyless device may be used.

(3) A parking/service attendant override switch may be provided. It must be well hidden from view. It must not be accessible from the passenger compartment; alternatively, if the override switch is accessible from the passenger compartment, a warning buzzer must sound (or the operator must be distracted in some other way) while the engine is running and the override switch engaged. If the buzzer is disconnected, it must result in disconnection of the entire anti-theft system.

(4) Any under-the-dash wiring installed in connection with this device must blend in color with factory-installed wiring.

### (c) Armored Ignition Cut-Off Switch

This device is a kill switch designed to resist tampering. To prevent hot-wiring of the auto, a protective cap is attached to the coil or starter solenoid. Such devices must meet the following criteria:

(1) Armored cable must run from a separate key to the coil, starter solenoid, or other engine component. Such cable must be similar to that used in outdoor telephone booths, collapse when cut, and preclude quick reconnection of the cut wire inside; alternatively, some other effective means of preventing defeat of the system by cutting the armored cable must be employed.

(2) The device must prevent hot-wiring of the car.

(3) A separate lock must be of tubular type and must be installed inside the auto so as to facilitate use by the driver; alternatively, an electronic keyless device may be used in lieu of a lock if it does not take significantly longer to engage the device than it takes to remove a key from a lock, and use of the system is otherwise facilitated.

### (d) Passive Multi-Component Cut-Off Switch

This device is a kill switch activated when the ignition key is turned to the off position. It is designed to prevent hot-wiring of the auto. Such device must meet the following criteria:

- (1) The primary wire to the ignition coil must be disconnected.
- (2) The device must disconnect the starter.

(3) One or more wires to the electronic ignition system, or to the points and condenser must be disconnected and grounded to the chassis.

(4) The wiring must blend with factory-installed wiring, and the disconnecting/grounding wires must be routed to random points in the electrical system away from the components they affect.

(5) The control module, if separate from the electronic locking mechanism, must be hidden in the engine compartment or other part of the car so that it is not easily detectable.

(6) In order to start the car, a lock or electronic device must be used to deactivate the system. The lock must be of tubular type and must be installed inside the auto so as to facilitate use by the driver; alternatively, an electronic keyless device may be used in lieu of a lock if it does not take significantly longer to engage the device than it takes to remove a key from a lock, and use of the system is otherwise facilitated.

#### (e) Passive Time Delay Ignition System

This is a device which allows the car to start only if the operator waits a prescribed time, which must vary from device to device in a range of three to twenty seconds, before moving the ignition key from "On" to "Start". If the auto does not start, the operator must be required to wait at least ninety seconds before the device can be operated successfully on a subsequent try.

The device must be resistant to tampering; for example, if it is forcibly removed, reconnection of the electrical system must not be possible with a hot-wire device. Alternatively, the device must be installed with a hood lock operated by a tubular key.

### (f) Armored Cable or Electrically Operated Hood Lock and Ignition Cut-Off Switch

This is a supplemental hood lock operated from within the auto which also cuts off the ignition when engaged. Such devices must meet the following criteria:

## (1) Armored Cable Hood Lock

(a) The hood lock cable must be armored by case hardened solid steel tubing designed to resist cutting; tubing must extend through firewall and be secured so as to prevent retraction. Otherwise, an alarm meeting the criteria of Section (5.3)(a) must be installed.

(b) The system must be engaged by a push button or other device which facilitates use. The push button or other device must be installed within reach of driver when seated.

(c) No portion of the hood lock cable may be accessible so that it could be grasped from underneath the car; and, if accessible through the grillwork, armor must extend to the locking mechanism.

### (2) Electrically Operated Hood Lock

(a) The hood lock is electrically operated and functions so that it remains locked even if the wiring operating the hood lock is cut.

(b) The system must be engaged passively by turning the ignition key to the off position. To disarm the system a separate key or electronic keyless device must be used.

(c) If the hood lock can be reached through the grillwork or from underneath the car, the hood lock must be shielded or armored so that it cannot be manually operated. The locks controlling the devices must be of tubular type or operate electronically.

### (g) Passive, Delayed Ignition Cut-Off System

This electronic system disables the ignition circuit at a preset engine speed such that the engine cannot be restarted or hot-wired. Such device must meet these criteria:

(1) The ignition must cut off automatically as soon as the engine reaches a speed in the range of 1,500 to 2,000 RPM.

(2) The system must be automatically armed when the ignition key is turned to the off position.

(3) A push button or other type of disarm switch must be well hidden from view. The wiring must blend with factory-installed wiring if placed under the dash. In the alternative, a tubular key or an electronic keyless device may be used.

(4) An alarm or horn shall be actuated at the same time the ignition is disabled.

(5) If a parking/service attendant switch is provided, a buzzer must sound all the time the engine is running. The switch must be hidden in a remote place.

#### (h) Passive Ignition Lock Protective system

This is a case hardened steel, protective cap which fits over the ignition lock so as to prevent extraction of the ignition lock cylinder. The cap fastens to a steel collar which fits around the steering post and over the ignition lock. The ignition key fits through a slot in the cap. A sticker may identify the presence of this system.

### (i) High Security Ignition Replacement Lock

This is a high security, case hardened steering column ignition lock, conforming to NHTSA Standard No. 1141, which cannot be removed using a conventional slide hammer or lock puller equipment.

A sticker may identify the presence of this system.

### (j) Hydraulic Brake Lock

This is a dash-mounted device which, when activated and pressurized with the brake pedal, maintains hydraulic pressure on the brakes at two or more of a vehicle's wheels so that the vehicle cannot be driven. The device must have a high security locking system with at least 50,000 combinations and a lock which cannot be pulled using a conventional slide hammer or lock puller equipment.

#### (k) Chip Key

This device allows only the correct ignition key(s) to start the engine. The system prevents the motor vehicle from being started unless the key to the ignition enables the correct signal. The three types of systems that gualify are:

- (1) Transponder immobile system: system must detect the proper transponder value from the chip in the key in order to start the engine
- (2) VATS/PASS-Key system: system must detect the proper resistance value in the key in order to start the engine
- (3) Passlock system: system must detect the proper R-code within the ignition lock or ignition switch to start the engine; this system does not have a chip in the key; the key turns the passlock cylinder which provides the R-code.

### **Category IV**

#### Vehicle Recovery System

This is an electronic unit installed in a vehicle that is activated after that vehicle is stolen. When activated, the device provides information to law enforcement officials or another public or private entities regarding the vehicle's location. The system provides for the routine delivery of the information to the appropriate law enforcement organization to assist in the recovery of the vehicle.

### Category V

#### Vehicle Recovery System with Unauthorized Movement Notification

This is an electronic unit installed in a vehicle that is activated after that vehicle is moved without authorization. When activated, the device provides information to law enforcement officials or another public or private entity regarding the vehicle's location. The system provides for the routine delivery of the information to the appropriate law enforcement organization to assist in the recovery of the vehicle. Additionally, the device must provide personalized notification to the owner of a vehicle (or his or her authorized user) in the event of a potentially unauthorized movement of the owner's vehicle. Personalized notification shall mean notification delivered directly to the owner or his or her authorized user

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via automated communication, which is available beyond the proximity of the vehicle itself, to one or more devices designated in advance by the owner or his or her authorized user, such as to the owner's home telephone, mobile phone, electronic mail service, or wireless text messaging service. If maintaining the system in effect requires the payment of a service fee, insureds must provide the insurer reasonable confirmation of the coverage.

#### New Business Rule

Any high-theft vehicle listed on a New Business Application which does not have an appropriate anti-theft device or vehicle recovery system shall be written at the extra-risk rate. If an appropriate device is installed within thirty days of the policy effective date, the extra-risk premium will be waived. If an appropriate device is not installed within thirty days of policy inception, the company, at its election, may cancel coverage under parts 7, 8, and 9 or continue such coverage at the extra-risk rate.

A category III, IV, or V device installed more than thirty days after the policy effective date, any premium charged for an extra-risk rate shall be earned on a pro-rata basis.

### RULE 24. EXTRA-RISK RATING (COLLISION AND COMPREHENSIVE)

The following circumstances require the application of the extra-risk rate if the insurer elects to write coverage under parts 7, 8, and 9, and the insurance to be provided is on a vehicle:

- 1. customarily driven by or owned by persons who within the five years preceding the policy effective date have been convicted of vehicular homicide, auto insurance related fraud, or auto theft.
- 2. customarily driven or owned by persons who within the three years preceding the policy effective date have been convicted of any category of driving under the influence of alcohol or drugs.
- customarily driven by or owned by persons who, within three years preceding the policy effective date, have been involved in four or more at-fault auto accidents. An at-fault auto accident is one in which the owner or any person who customarily drives the auto was more than 50% at fault.
- 4. designated as a "high-theft vehicle" which does not have at least a minimum anti-theft or auto recovery device as prescribed by the Commissioner of Insurance. (Refer to Rule 23.)
- 5. customarily driven by or owned by persons who have two or more total auto theft or fire insurance claims within the three years immediately preceding the policy effective date.
- customarily driven by or owned by persons who have within the five years preceding the policy effective date made an intentional and material misrepresentation in making claim under Collision or Comprehensive coverage.
- for which a salvage title has been issued by the Registrar of Motor Vehicles unless a new certificate of title has been issued in accordance with Massachusetts law. (Coverage cannot be written on a vehicle which has been issued a salvage title.)

The factors for the extra-risk rate are multiplied by the manual rate as follows:

	Collision	Comprehensive
Vehicular Homicide	1.5	1.0
Auto Insurance Related Fraud	1.5	1.5
Auto Theft	1.5	1.5
Driving Under the Influence of Alcohol or Drugs	1.1	1.0
Four or More At-Fault Accidents	1.1	1.0
High-Theft Vehicle	1.0	1.5
Two or More Total Fire or Total Theft Losses	1.0	1.5
Material Misrepresentation	1.5 (1.2)	1.5 (1.2)
Salvage Title	Coverage	not available

**NOTE:** For the first instance of a material misrepresentation in the application for insurance, the lower indicated factor may be used, at the option of the insurer.

### **Application of Factors**

#### A. Single Vehicle Policies

Where more than one category applies to the same operator or vehicle, the highest applicable factor shall be used respectively for Collision and Comprehensive. For example, if a listed operator is convicted of vehicular homicide and also has a high-theft vehicle, the factor for both Collision and Comprehensive is 1.5. The factors do not compound. In cases where separate policies are issued by the same insurer to the common owner of two or more vehicles, the highest applicable factors for Collision and Comprehensive shall be assigned to the vehicle with the highest premium for Collision and Comprehensive respectively. For each subsequent vehicle, the next highest applicable factor shall be assigned to the next highest premium for Collision and Comprehensive respectively. For each subsequent vehicle, the next highest applicable factor shall be assigned to the next highest premium for Collision and Comprehensive respectively. If one or more of the extra-risk categories of insurance fraud, auto theft or material misrepresentation apply to such common owner, the applicable factor shall be used for both Collision and Comprehensive for each insured vehicle.

### B. Multi-Vehicle Policies

The highest applicable factors for Collision and Comprehensive shall be assigned to the vehicle with the highest premium for Collision and Comprehensive respectively. Each subsequent vehicle shall be assigned the next highest applicable factor and so forth. If one or more of the extra-risk categories of insurance fraud, auto theft or material misrepresentation apply to the insured owner, the applicable factor shall be used for both Collision and Comprehensive for each insured vehicle.

## RULES 25 & 26. RESERVED FOR FUTURE USE