



Owner's Manual



1.0 Overview

The Viper ACR is the literal fusion of Street and Racing Technology. It takes the awe inspiring performance capabilities of the Dodge Viper SRT10 to the next level.

The Viper ACR is not certified as a race car and it is not equipped with a racing safety cage, racing restraints or other racing safety equipment.

Throughout this manual there are notes of **WARNING** and **CAUTION**. Review each of them before driving this car.



WARNING: It is recommended that all customers complete a high-performance driving school prior to operating this vehicle. Speeds at the handling limits of this car are much higher than with other sports cars. Competitive driving and track outings can cause serious injury or death.

Drive safely.

This booklet is a supplement to your Viper SRT10 Owner's Manual. Please review the Owner's Manual in addition to this booklet.

2.0 Aerodynamics

The Viper ACR aerodynamics are capable of high levels of downforce which will noticeably affect the grip and handling of the vehicle at speeds as low as 50 mph.

Regularly inspect all of the aerodynamic components and attachments for damage or wear.



2.1 Front Splitter

Splitters are potent aerodynamic elements usually only found on purpose built racing cars. The Viper ACR front splitter has been specially adapted for street use with the addition of several new features.

- The leading edge has been scalloped back to reduce front overhang for day to day driving
- Toughened polymer rub strips have been added to reduce wear and abrasion on the splitter panel
- Tension cables support the front edge to allow some upward deflection in minor impacts with ramped surfaces

In spite of these enhancements, the splitter remains highly vulnerable to impact because of its position on the car.

The front splitter will not flex or compress against impacts from the front. If an impact does occur, have the splitter inspected. A cracked or delaminated splitter should be replaced.

Always leave ample room and be sure to educate anyone you allow to operate the vehicle.

CAUTION: Use care when approaching parking blocks, tall speed bumps and garage curbs. These surfaces can severely damage your splitter.

Use care when driving up to sloped surfaces or over speed bumps. Approaching a speed bump or a slope at a slight angle may improve your clearance.

CAUTION: Hard contact with steep ramps may cause damage to your splitter.

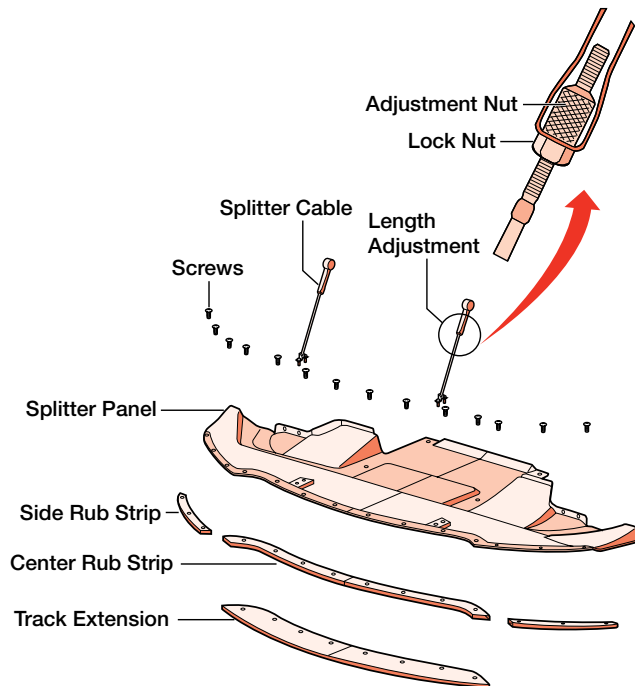


2.2 Splitter Components

The front of the ACR splitter is supported by two stainless steel cables. These cables and their attachments should be regularly inspected.

The splitter cables have an adjustment capability, however it is recommended to leave the splitter at the factory delivered settings. The splitter cables may have some slack while the vehicle is at rest. When the splitter is loaded, and the cables are under tension, the panel should be approximately parallel to the bottom of frame.

Solid polymer rub strips are attached to the leading edge of the splitter panel. Regularly inspect these rub strips to avoid damage to the carbon fiber splitter panel.



CAUTION: Replace rub strips when they are worn down to 3/8 in. (10 mm) on the front edge. This will avoid damage to the carbon fiber panel.

Regularly inspect the outboard knock-in threaded insert to avoid premature splitter wear (right and left side). Replace these fasteners as needed in order to protect the carbon fiber splitter panel.

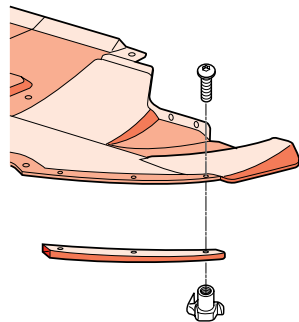
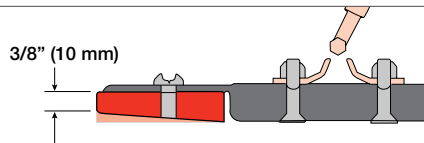
2.3 Track Extension

A splitter track extension is included in the trunk of every Viper ACR. The track extension is mounted in the same location as the center rub strip. The on-track aerodynamic balance was optimized with the track extension in place.

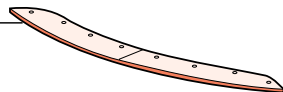
To install the track extension, remove the eight (8) screws of the center rub strip and install the extension in the same mounting locations.

Tighten fasteners to 70 in-lbs (7.9 N·m).

CAUTION: The track extension should only be used during closed circuit track events. The track extension can cause premature damage to your vehicle if used on public roads.



Track Extension



2.4 Rear Wing

The ACR rear wing generates most of the car's aerodynamic downforce.

The wing is a powerful element that will affect the handling of the car at speeds greater than 50 mph. Extreme caution should be given to any modifications to the factory settings.



WARNING: Do not operate the vehicle with the rear wing removed. The aerodynamic balance of this setup is unstable and can cause the loss of control.

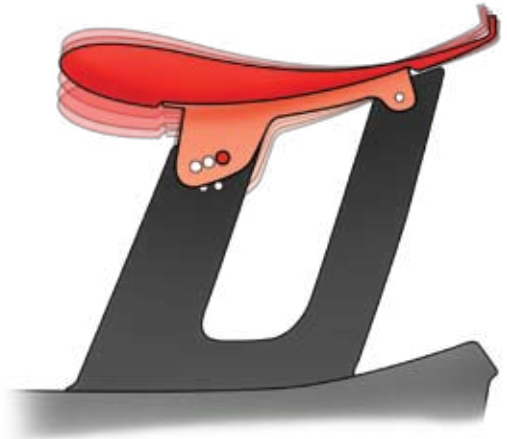
Regularly inspect the wing panel and attachment points for damage or looseness.

The Viper ACR on-track aerodynamics have been tuned and balanced for the vehicle with the track extension installed.

Wing Stanchions

The wing stanchions are designed with adjustment capability but they are delivered locked with tamper resistant fasteners.

The wing is delivered from the factory in hole position 2.



Wing setting as delivered

Wing Adjustment

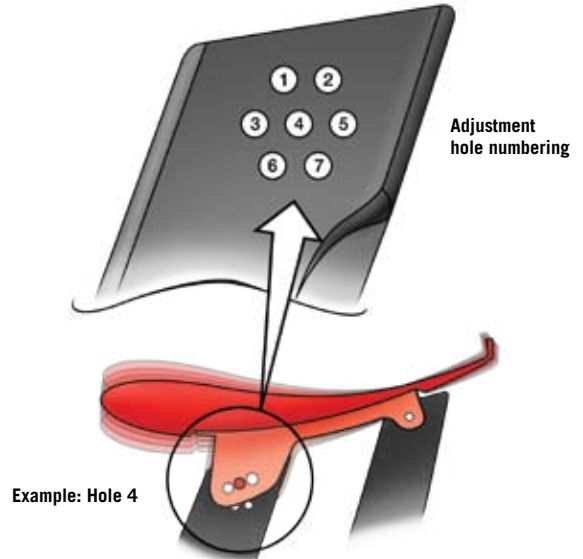
It is possible to adjust the wing using the hole pattern at the top front of the stanchion.

Note: Adjustment to the wing setting is not recommended.

The wing is attached to the lower stanchions with thread locker and tamper resistant fasteners. The warranty does not cover any modifications or removal of these wing fasteners.

In general, moving the wing up (e.g. Hole 2 to Hole 1) will decrease rear down force and decrease overall understeer. Moving the wing down (e.g. Hole 2 to Hole 3) will increase understeer.

Each successive hole increases the wing angle of attack by 1.5 degrees.



2.5 Carbon Fiber

The ACR aerodynamic components are made from prepreg autoclaved carbon fiber. Both woven and unidirectional materials are used.

The clear coated carbon fiber panels will have some variation and minor waviness in the woven pattern. This is inherent to the process and a sign of its authenticity.

All carbon fiber materials are susceptible to UV degradation during long exposure to the sun. The ACR woven carbon components use the latest technology for both the resin system and the clear coat. As with any automotive coating, storing your vehicle in a covered location will guarantee a long lasting finish.

The rear wing on the non two-tone ACR is molded completely with unidirectional carbon fiber and painted in body color. Some patterned or linear conditions may be visible in the painted carbon fiber surfaces. This is also a normal result of the carbon fiber process.



3.0 Two Piece Brake Rotors

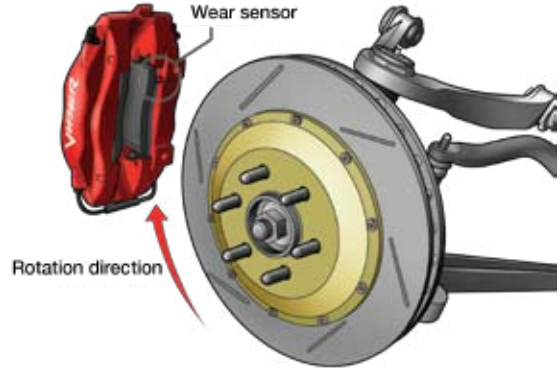
The Viper SRT10 is known for having world class brakes. The 2008 Viper ACR takes this incredible braking system to the next level with the Stop Tech two-piece lightweight slotted rotors. These brake rotors significantly reduce rotating un-sprung mass. They also improve brake cooling and reduce on-track fade.

CAUTION: The slotted rotors may increase brake pad wear depending on driving conditions. These rotors may also produce some additional brake noise due to the high performance two-piece construction.

It is normal for the brakes to make some popping or creaking noises as they cool down. This is the result of the two-piece construction.

Although the brake rotors are a two-piece construction, they should be replaced as a complete assembly.

CAUTION: During brake pad replacement the pads must be loaded so that the wear sensor is on the *inboard* side of the caliper and the trailing side of the wheel rotation (all four wheels).



3.1 Street Break-in Procedure

- Try to avoid abrupt, hard stops for the first 200 miles (300 km)
- Avoid any racing OR off-road activities for the first 200 miles (300 km)
- Avoid repeated incline/decline braking for the first 200 miles (300 km)

3.2 Alternate Break in Procedure

CAUTION: Chrysler does not endorse speeding on public roads; therefore, if a safe area cannot be used for break-in, you must perform the street break-in procedure.

Regardless of completing the “street break-in procedure,” this alternative break-in procedure is recommended before any track use of the vehicle.

In the event that the street break-in procedure can't be performed before the pads and rotors are thermally stressed, use the following procedure:

1. Read through the procedure and find a suitable, safe and legal area to perform the necessary stops.
2. BEFORE starting the break-in procedure, drive with gentle braking. Do not use brakes aggressively until performing brake-in procedure.

3. Make a series of 10 stops from 60 to 5-10 MPH. At the end of each stop, immediately accelerate to 60 again for the next stop. Run all stops continuously in one cycle.

NOTE: A moderate braking effort is needed to properly break in the rotors and pads. A stopping force of approximately 0.8G's, just short of ABS intervention, is the level of pedal effort you are trying to attain.

4. During the 60 to 5-10 MPH series of stops, the exact speed is not critical. Accelerate to approximately 60 and begin the braking cycle. As you approach 5-10 MPH, it is not necessary to watch the speedometer. Keep your eyes on the road and approximate your speed at the end of each cycle.

CAUTION: Do not come to a complete stop! This will imprint pad material onto the rotor, causing a vibration during future use.

5. Watch for the following:

- On the 8th or 9th stop, there should be a distinct smell from the brakes. Smoke may be evident during earlier stops as well.
- Also on the 8th or 9th stop, some friction materials will experience “green fade”. This is a slight fading of the brakes. The fade will stabilize, but not completely go away until the brakes have cooled.
- After the break-in cycle is finished there will be a light gray film on the rotor face. The gray film is pad material starting to transfer onto the rotor face.

6. After the final stop, drive as much as possible without using the brakes to cool off the system. Ideally, the brakes should be allowed to cool to ambient temperature before using them again.

CAUTION: Do not come to a complete stop when the system is hot and leave your foot on the pedal. Pad material will immediately transfer to the rotor causing a vibration during future use.

7. After the first break in cycle, the brakes will still not be operating at optimum capacity. A second or third heat cycle is typically necessary before the brakes start to work optimally. This will occur during everyday use.

3.3 Care and Maintenance

- Your brake calipers have a painted finish. Immediately clean off any spilled brake fluid, wiping it off with a soft, clean terry-cloth towel.
- Do not use any harsh chemicals when cleaning your calipers. Wash your calipers with soap and rinse with water.
- Do not use any harsh chemicals when cleaning your rotor hats (the anodized center part of the rotor assembly). Wash your rotor hats with soap and rinse with water.
- Breaking-in rotors and pads is critical to the optimum performance of your new brakes. When breaking-in new parts, you are not only

heat-cycling the pads, you are also depositing a layer of pad material onto the rotor face. If not broken-in properly, an uneven layer of pad material will be deposited onto the rotor, causing vibration.

- If you experience brake pedal pulsation, steering vibration, or repeatable brake noise, perform the break-in procedure again as soon as possible. This will re-condition the rotor surface and remove irregular brake pad deposits. If concerns continue, please visit your local dealer for further diagnosis.

4.0 Pilot Sport Cup Tires

Your Viper ACR comes equipped with Michelin Pilot Sport Cup competition oriented tires that are DOT approved for street use. The Pilot Sport Cup tire uses a special tread and compound which provides considerably more dry grip than normal street tires. Due to the special tread and compound of your Pilot Sport Cup Tires, the

minimum tread depth can be reached earlier depending on your driving style, resulting in reduced tire life. The special Pilot Sport Cup tread and compound may lead to performance degradation in cold climates, heavy rain or in conditions with standing water.



WARNING: Use extreme caution and drive slowly in wet situations to reduce the risk of hydroplaning. Avoid driving in any conditions of heavy rain or standing water. These conditions can cause loss of control or accident.



WARNING: The Pilot Sport Cup tires were NOT intended to be driven on snow or ice. The Pilot Sport Cup is a summer season tire and has diminished capability on cold road surfaces (below 50°F). DO NOT OPERATE THE VEHICLE DURING THESE CONDITIONS. Snow, ice and cold road surfaces can cause a loss of control or accident.

5.0 Adjustable Dampers

The Viper ACR suspension includes a set of adjustable coil-over racing dampers built by KW Suspensions. These dampers have been tuned by SRT handling engineers to provide the maximum handling performance without sacrificing reasonable road manners.

The two-way adjustable dampers include adjustments for compression (bump) and rebound dampening.

NOTE: Keep your damper settings at the street positions when operating your vehicle on the street.



WARNING: Only experienced track drivers should make adjustments to the suspension settings. Improper suspension adjustment can disrupt the balance of the vehicle and lead to a loss of control or accident.

CAUTION: Do not make any adjustments or modifications to the nitrogen pressure of the damper canisters. This will void the warranty.

The ACR suspension was designed and tuned with an uncompromising focus on handling. The ride response to road conditions may be harsher than expected from a typical sports car.

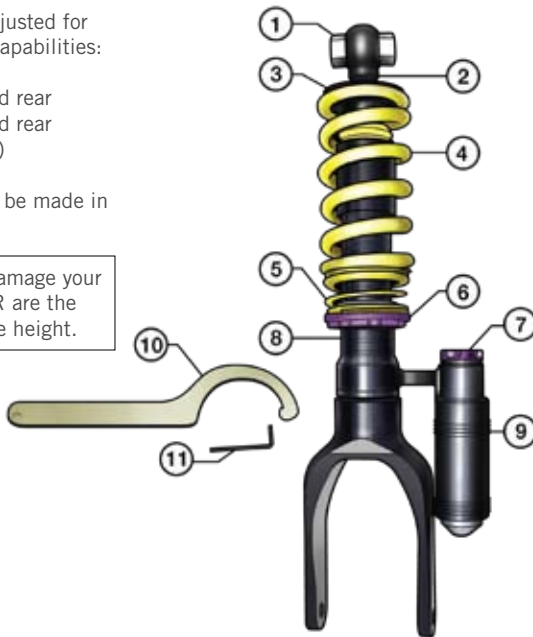
5.1 Damper Components

Your Viper ACR is delivered with the suspension adjusted for optimal street comfort. Below are the adjustment capabilities:

- Compression Damping: 14 settings front and rear
- Rebound Damping: 19 settings front and rear
- Ride Height: +/- 1 ¼ in. (32 mm)

Any adjustments to the suspension settings should be made in small increments.

CAUTION: The use of improper tools may severely damage your suspension. The tools included with your Viper ACR are the only tools that should be used for adjusting the ride height.



Components

1. Spherical Bearing Mount
2. Rebound Adjuster
3. Upper Spring Seat
4. Primary Spring
5. Helper Spring
6. Lower Spring Seat
7. Compression Adjuster
8. Threaded Main Body
9. Reservoir
10. Spanner Wrench
11. Spring Seat Hex Wrench

5.2 Ride Height Adjustment

Your ACR is delivered from the factory at a ride height that provides a good balance for drivability on the street. The adjustable suspension allows for ride height adjustment. As with all of the suspension adjustments, caution should be used when changing the ride height.

CAUTION: Only the factory ride heights should be used while operating the vehicle on the street. Low ride heights can cause damage to the vehicle.

Adjusting the ride height:

1. Raise and support the vehicle. Both left and right side wheels should be lifted off the ground to allow adjustment of the spring seats without damage. Never make ride height adjustments with the suspension loaded. The helper spring should never be fully compressed while adjusting ride heights.
2. Remove the wheel and tire assembly.
3. Loosen the set screw on the lower spring seat (approx 1 turn).
4. To lower the ride height, use the spanner wrench and rotate the lower spring seat counter-clockwise (as viewed from below the damper). Use the set screw as a reference to return to street height.
5. To raise the ride height, first turn the seat in the counter-clockwise direction and ensure the threads are clear of debris. Use the spanner wrench and reverse the direction.
6. Tighten the set screw to 22 in-lbs (2.5 N·m). DO NOT over tighten this screw.

The ride height adjustment sensitivity is as follows:

Front: One turn = 0.104 in. (2.6 mm) height change at frame

Rear: One turn = 0.134 in. (3.4 mm) height change at frame

Before any adjustments are made to your ride height, clean threaded area with soapy water to be sure it is free and clear of debris.



5.3 Compression Adjustment

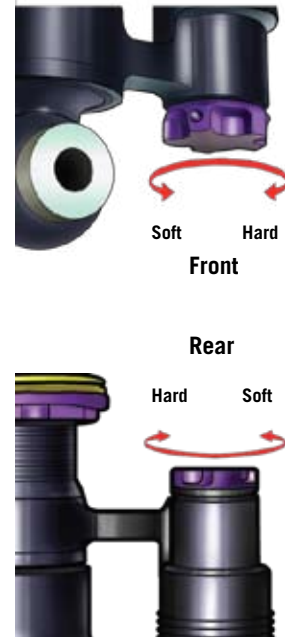
The compression adjustment (also called bump) varies the damping of the upward travel of the wheel relative to the vehicle.

The compression adjuster is located on the remote canister fixed to the damper body and has 14 damping positions. Depending on vehicle ride height, the car may need to be raised to gain access to the compression adjuster. To adjust the compression damping, turn the finger knob: clockwise stiffens; counterclockwise softens when viewed from the top surface of the finger knob.

All settings are referenced from the full stiff (position “0”). The “0” position on compression is achieved by turning the finger knob clockwise until you cannot turn it any further.

CAUTION: To avoid damage to your dampers DO NOT force the finger knob when it stops turning. Also, NEVER use any tools to adjust the finger knob.

From the “0” position, turning the adjuster counterclockwise will soften the damping. Count off the clicks and record your setting. Every “click” is a new damping position (i.e. two clicks softer from the full stiff position is position “2”).



5.4 Rebound Adjustment

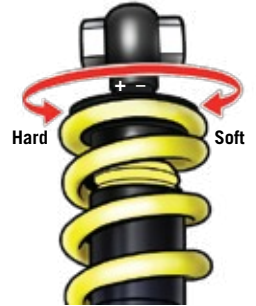
The rebound adjustment (also called droop) varies the damping of the downward travel of the wheel relative to the vehicle.

The rebound adjuster is located on top of the piston rod and has 19 damping positions. Depending on vehicle ride height, the car may need to be raised to gain access to the rebound adjuster. To adjust the rebound damping, turn the upper finger knob: clockwise stiffens; counterclockwise softens when viewed from above.

All settings are referenced from the full stiff (position “0”). The “0” position on rebound is achieved by turning the finger knob clockwise until you cannot turn it any further.

CAUTION: To avoid damage to your dampers DO NOT force the finger knob when it stops turning. Also, NEVER use any tools to adjust the finger knob.

From the “0” position, turning the adjuster counterclockwise will soften the damping. Every “click” is a new damping position (i.e. two clicks softer from the full stiff position is position “2”).



5.5 Street Set up

Best Comfort is achieved at the following damper settings and should always be used when driving on the street:

Front: Compression = Position “13”
Rebound = Position “18”
Rear: Compression = Position “13”
Rebound = Position “17”

5.6 Track Set up

Ride Height Adjustment

The factory ride height of your ACR is approximately:

Front: 5 ¼ in. (132 mm)

Rear: 6 in. (153 mm)

measured from the bottom of frame rail to ground at the axle centerline with no passengers, a full tank of fuel and tire pressures set to 29 psi.

A low ride height setting may not be optimal at all tracks. It will generally be more acceptable to run a lower ride height at a track with smoother surfaces, fewer abrupt elevation changes and fewer bumps. The optimum set up for your vehicle also varies with track, driver and ambient conditions. Below is a recommended starting point for two typical track configurations.

Smooth track set up:

Front: 4 in. (102 mm)

Rear: 5 3/8 in. (136 mm)

Adjusting lower than then smooth track set up is not recommended.

Rough track set up:

Front: 4.375 in. (111 mm)

Rear: 5 1/2 in. (140 mm)

The rake of the car (or front to rear ride height difference) may also be changed with your ACR suspension. Changing the rake may be beneficial at some tracks. Use caution when changing the rake angle.

CAUTION: Depending on your set up, driving style, and track condition, some tire to wheel liner contact may occur. To avoid excessive wheel liner wear, adjust your ride height accordingly.

5.7 Notes on Tuning

Damper Adjustment

Adjusting from the street settings should be done only at track events. A recommended starting position for the tracks is:

Front: Compression = Position "6"
Rebound = Position "6"

Rear: Compression = Position "5"
Rebound = Position "5"

- Always start from a known position (full stiff).
- Adjust in small increments (1-2 clicks)
- Record your adjustment settings at all four wheels
- Continually monitor and record your tire pressures

Remember that suspension damping, ride heights, rake angle and aerodynamic balance all work as a system. As you make changes to one end of the vehicle, it will affect the balance of the car.

Maintenance and Inspection

Regularly inspect the splitter rub strips and out board knock-in nut. Regularly inspect all attachments of the aerodynamic components (see Aerodynamics section).

Track use will greatly increase wear rates and service intervals on your Viper ACR. Repeated track use requires more frequent fluid changes.

Because of the extreme conditions encountered during track use, any damage or wear associated with track use is not covered by warranty (see Warranty section).

NOTE: Although your vehicle is shipped with OW40, it is recommended to use Mobil-1 15W50 synthetic motor oil at the track.

Always run a cool down lap at the end of a track outing. For track outings lasting longer than 25 minutes, an external rear axle cooler is recommended.

6.0 Hard Core Package

This option is for the Hard Core track enthusiast who is looking for maximum weight savings.

The Hard Core Package eliminates the Audio System (including the radio, amplifier, door speakers and subwoofer). Also deleted are the under hood silencer pad, the trunk carpet and the tire inflator. The door speakers are replaced by carbon fiber panels. The radio is replaced by a lightweight cover that can be configured to mount the included Lap Timer.

CAUTION: The tire inflator has been removed from the Hard Core package. There are no measures for flat tire repair included with this vehicle. It is recommended that drivers always bring a mobile phone in case of a flat tire.

The removal of the trunk carpeting reduces sound insulation. It is normal to hear more road and drivetrain noise.

The Lap Timer kit includes the Timer, Beacon Receiver, a power cord, download kit and the Beacon Transmitter.

The Lap Timer displays lap times on a large illuminated digital display. It continuously updates the fastest laps and acquires a running data log of all times during the track event. This data can be downloaded for analysis via a USB connection. Refer to your AiM lap timer manual for instructions.

The cables to the beacon receiver and power jack include extra long lengths. This is to provide the ability to custom fit the timer and beacon receiver depending on the track and/or driver preference.

Note on Lap Timer: For lap timer software updates and technical support contact:

www.aimsports.com/software/index.html

7.0 Tuning Record

[illegible]

8.0 Limited Warranty

The ACR offers many race-ready components that are designed for uncompromising performance. Because of this, some of the ACR components have unique warranty limitations.

Racing Not Covered:

The warranty does not cover the cost of repairing damage or conditions caused by racing, nor does it cover the repair for any defects that are found as the result of participating in a racing event. The term racing includes but is not exclusive to: wheel to wheel competition, timed competitive events, autocross or other off-road track events.

Splitter - The splitter is not covered for wear on the rub strips or damage due to contact with parking blocks, speed bumps, curbs, sloped tarmac, etc. The warranty is not valid if adjustments or modifications are made to the splitter

Wing – The warranty does not cover any adjustments or modifications are made to the wing or if the original fasteners or positions have been changed.

Tires – 12 months / 12,000 miles – Excessive tire wear due to track events, autocross, competition, etc. are not covered.

Brake Pads/Rotors – 12 months / 12,000 miles - Excessive brake pad and rotor wear due to track events, autocross, competition, etc. are not covered. No warranty for noise complaints.

Adjustable Coil-over Shocks – The factory warranty is 12 months / 12,000 miles. KW Suspensions has an extended supplier warranty up to 36 months or 36,000 miles. The warranty is not valid if modifications or improper adjustments are made to the factory settings.

KW automotive North America Inc.

1075 North Avenue

Sanger, CA 93657

Toll Free: 1-888-713-5566

Email: info@kwautomotive.com

<http://www.kw-suspension.com/en/>

9.0 Acknowledgement

The customer acknowledges that the dealer has provided him/her with basic instruction in the following areas, including the cautions, limitations and warranty coverage of this package.

Key areas:

- ☐ Overview / Limit Handling
- ☐ Aerodynamics
- ☐ Single Season Semi-Slick Tires
- ☐ Two-Piece Brake Rotors
- ☐ Brake Pads
- ☐ Adjustable Coil-over Shocks
- ☐ Warranty - Racing Not Covered

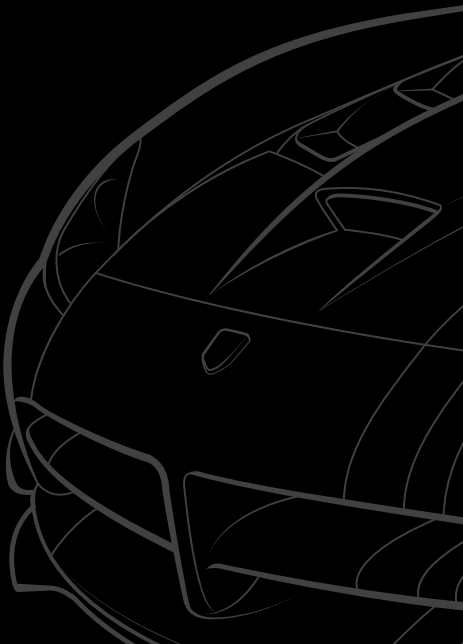
Customer Signature: _____ Dated: _____

Dealer Signature: _____ Dated: _____

Note to Dealer: Please photo copy this acknowledgement and retain a copy in your sales records.

Notes





Chrysler LLC
81-226-0801

