2019 CORVETTE TRACK PREPARATION

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Corvette has been designed and engineered to be a world-class sports car for the track. But before unleashing its acceleration, cornering and braking capability, there are several key procedures and steps that must be taken in order to properly experience its track prowess during sanctioned racing events. For full details and information, see the vehicle Owner's Manual.

Please Note: The Corvette ZR1, Corvette Z06, Corvette Grand Sport and Corvette Stingray with the Z51 Performance Package are the recommended models for track use. A manual transmission is recommended for extended track usage at higher ambient temperatures. It is the driver's responsibility to obey all applicable traffic laws at all times. This supplement is for the purpose of racing enthusiasts for sanctioned racing events. Track events or competitive driving may affect the vehicle warranty. See the warranty manual before using the vehicle for racing or other competitive driving.

1. ATTAIN THE RIGHT MILEAGE

NEW VEHICLE BREAK-IN

All Corvette models have a recommended break-in period during the first 1,500 miles (2414 km).

PART/DRIVING BEHAVIOR	TIME PERIOD	RECOMMENDED ACTION
Tires	First 200 miles (322 km)	Drive at moderate speeds and avoid hard cornering
Brake linings	First 200 miles (322 km)	Avoid making hard stops (recommended every time brake linings are replaced)
Full-throttle starts and abrupt stops	First 500 miles (800 km)	Avoid full-throttle starts and abrupt stops
Exceeding 4000 rpm	First 500 miles (800 km)	Avoid exceeding 4000 rpm
Cruise control or driving at one constant speed	First 500 miles (800 km)	Avoid cruise control or driving at one constant speed
Letting the engine labor or lugging the engine	First 500 miles (800 km)	Avoid letting the engine labor or lugging the engine. With a manual transmission, shift to the next lower gear (this rule applies at all times, not just during the break-in period)
Oil and filter change	First 500 miles (800 km)	The initial oil and filter change must be performed at 500 miles
Track or competitive driving	First 1,500 miles (2414 km)	Do not participate in track events, sport driving schools or similar activities
Engine oil maintenance	First 1,500 miles (2414 km)	Check engine oil with every refueling and add if necessary (oil and fuel consumption may be higher than normal during the first 1,500 miles) *Please Note:* It is recommended the first oil change occur at 500 miles.

For full details and information, see the vehicle Owner's Manual.

2. SEASON THE BRAKES

BRAKE BURNISH PROCEDURE

Models: Stingray with Z51 Performance Package, Grand Sport with J56 Brakes and Z06 with J56 Brakes

1. Apply the brakes 25 times starting at 60 mph (100 km/h) to 30 mph (50 km/h) while decelerating at 0.4 g. This is a medium brake application. Drive for at least 0.6 miles (1 km) between applying the brakes. This first step may be skipped if there are more than 200 miles (320 km) on the brake pads.
2. Repeatedly apply the brakes from 60 mph (100 km/h) to 15 mph (25 km/h) while decelerating at 0.8 g. This is a hard brake application, without activating the Antilock Brake System (ABS). Drive for at least 0.6 miles (1 km) between stops. Repeat until the brake pedal travel starts to increase. Depending on conditions, this should take no longer than 25 brake applications.
3. Cool down: Drive at 60 mph (100 km/h) for approximately 10 miles (15 km) without using the brakes.
4. Apply the brakes 25 times from 60 mph (100 km/h) to 30 mph (50 km/h) while decelerating at 0.4 g. This is a medium brake application. Drive for at least 0.6 miles (1 km) between applications.

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2. SEASON THE BRAKES CONTINUED

STREET HIGH-PERFORMANCE BRAKE BURNISHING PROCEDURE

Models: Grand Sport with J57 Brakes, Z06 with J57 Brakes and ZR1

This procedure should only be run on a track or other non-public area, and only on dry pavement.

1. From a stop, accelerate as rapidly as possible without activating traction control to a speed of 60 mph (100 km/h).
2. Use enough pedal force to completely stop the vehicle in four to five seconds. If ABS activates, braking is too hard.
3. Repeat Steps 1 and 2 – 20 times. This should take about 5 minutes.
4. After completing the 20 stops, cool the brakes by driving for 5 miles (8 km) at 60 mph (100 km/h). As with all high-performance brake systems, some amount of brake squeal is normal.

RACING/TRACK BRAKE BURNISHING PROCEDURE

Models: Grand Sport with J57 Brakes, Z06 with J57 Brakes and ZR1

This procedure should only be run on a track and only on dry pavement. Brake pedal fade will occur during this track burnish

1. Laps 2 and 3 should be gradually driven faster and more aggressively, while allowing for reduced brake output and increased stopping distance due to brake fade.
2. Drive Lap 4 near full speed, while allowing for reduced brake output and increased stopping distance due to brake fade.
3. Laps 5 and 6 should be cool-down laps.
4. Lap 7 should be normal driving or an easy out lap.

For full details and information, see the vehicle Owner's Manual.

Please Note: New brake pads must be burnished before racing or other competitive driving. Performing the brake burnish procedure on a base brake system can result in brake damage. The new vehicle break-in period should be completed before performing the brake burnish procedure, otherwise damage may occur to the powertrain/engine. Brake pedal fade will occur during any track burnish procedure and can cause brake pedal travel and force to increase. This could extend stopping distance until the brakes are fully burnished. When this procedure is performed as instructed, it will not damage the brakes. The brake pads will smoke and produce an odor. The braking force and pedal travel may increase. After the procedure, the brake pads may appear white at the rotor contact. Perform this procedure only on dry pavement, in a safe manner and in compliance with all local and state ordinances/laws regarding motor vehicle operation.

WARNING: Braking above 200 mph: Applying and sustaining full-force braking at speeds exceeding 200 mph (322 km/h) can cause serious damage to the braking system. At any speed, braking must be performed in a smooth and controlled manner, but at these speeds specifically, lower initial brake pedal efforts are recommended.

3. ADJUST THE FOUR CORNERS AND VEHICLE COMPONENTS

This procedure should only be run on a track and only on dry pavement.

TIRE PRESSURE AND WHEEL ALIGNMENT

For all models, review the cautions and warnings regarding safe tire operation in the Vehicle Care section of the Owner's Manual. The tires on Corvette require inflation and pressure adjustment when driving at high speeds on a track (where legal).

- Corvette Stingray (with the Z51 Performance Package): Limit the vehicle load to the driver only, with no other cargo and inflate the tires to 26 psi (180 kPa); drive at a maximum speed of 174 mph (280 km/h)
- Grand Sport, Z06 and ZR1 only: Limit vehicle load to the driver only, with no other cargo. Inflate tires to 180 kPa (26 psi) and drive at a maximum speed of 296 km/h (184 mph). Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended

Prior to each track event and again before returning to public roads, tighten the wheel nuts with a torque wrench to the proper torque specification. See Capacities and Specifications in your Owner's Manual for wheel nut torque specifications. Corvette Stingray (with the Z51 Performance Package), Grand Sport, Z06 and ZR1 wheel alignment settings should be set as follows for track use (and returned to normal when high-speed driving has ended):

Front (per corner)
- Caster: +7.0 degrees
- Camber: -2.0 degrees
- Toe: 0.05 degrees toe in

Rear (per corner)
- Caster: 0 degrees
- Camber: -2.0 degrees
- Toe: 0.05 degrees toe in

Thrust Angle: 0 degrees

Please Note: For Corvette Stingray with the Z51 Performance Package, you should remove one washer from each UCA-to-body bolt attachment (both front and rear). For Grand Sport, Z06 and ZR1 models, you should not remove washers from front or rear upper control arm bolts. After track use, you should reinstall all washers and reset to factory alignment settings.

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3. ADJUST THE FOUR CORNERS AND VEHICLE COMPONENTS CONTINUED

FRONT LICENSE BRACKET/AERO PANEL

The aero panel or license plate holder should be removed for track events and competitive driving to improve engine performance.

FRONT COMPARTMENT AIR DEFLECTOR PANEL

Prior to a track event, when ambient temperatures are above 27°C (80°F), the panel between the front fascia extension and the front cradle can be removed to maximize cooling airflow to the steering gear power assist motor. See vehicle Track Events and Competitive Driving in the vehicles Owner's Manual for instructions.

STINGRAY WITH PERFORMANCE PACKAGE – CARBON FIBER (CFZ)

Corvette Stingray models with Performance Package – Carbon Fiber (CFZ) have an installed aero package, which consists of a front splitter with short end caps, rocker panel extensions and a rear spoiler. A center transparent wickerbill for the rear spoiler is delivered but not installed. This is intended to be installed for track use only.

Z06 WITH Z07 PERFORMANCE PACKAGE (STAGE 2 AERO PACKAGE)

The Z07 Performance Package includes installed Stage 2 Aero Package components (front splitter with short end caps, rocker panel extensions and a rear spoiler). Stage 3 Aero components are delivered with the vehicle but not installed. They are intended to be installed for track use and include front splitter tall end caps (to replace the front splitter short end caps) and a center transparent wickerbill for the rear spoiler.

Z06 WITH Z07 PERFORMANCE PACKAGE (STAGE 3 AERO PACKAGE)

Changing the following track settings could reduce tire traction and could cause a crash. Do not change the track settings. The track settings for the Z07 Performance Package with the Stage 3 Aero Package are:

- The front splitter tall end caps installed
- The center transparent wickerbill installed all the way up on the rear spoiler
- The Driver Mode Selector in Track Mode

For full details and information, see the vehicle Owner's Manual.

FRONT BRAKE COOLING DUCT KIT (Z06 AND ZR1)

Cooling ducts should be installed prior to any track events or high-speed straight runs. For full details and information, see the vehicle Owner's Manual.

ZR1 EXHAUST COOLING HARDWARE

Exhaust cooling hardware (closeout plates and deflectors) should be installed prior to any track event. These components will help cool the exhaust system. For full details on how to install closeout plates and deflectors, see the vehicle Owner's Manual. When the track event is complete, remove the closeout plates and deflectors.

ZR1 REAR ADJUSTABLE PERFORMANCE WING (ZTK PERFORMANCE PACKAGE)

The rear adjustable performance wing on ZR1 models equipped with the ZTK Performance Package can be adjusted up for greater downforce during a track event. To change the angle of the rear wing, remove the rear attaching bolts and move them to the upper hole. Tighten the bolts to 6.6 lb.-ft. (9 Nm). Return the wing to the factory location following the track event. Every time the wing is adjusted, reapply threadlocker to the attachment bolts. For more information, see Recommended Fluids and Lubricants in the vehicle Owner's Manual.

ZR1 SUSPENSION (ZTK PERFORMANCE PACKAGE)

The suspension on ZR1 models with ZTK Performance Package can be lowered 12 mm in the front for optimal track performance. Lowering the vehicle should be completed prior to the track suspension alignment. The front spring outboard ends must be unloaded from the front control arms in order to adjust the spring cushion adjuster screws upward by approximately 6 mm to 9 mm to achieve the lowered condition.

Please Note: Driving on public roads in this condition is not recommended. Failure to unload the front spring outboard ends before adjusting the spring cushion adjuster screws could damage the spring.

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4. CHECK YOUR FLUID LEVELS

FLUIDS AND LUBRICANTS

Be sure to follow all service procedures before driving Stingray with Z51 Performance Package, Grand Sport, Z06 with Z07 Performance Package and ZR1 on the track or competitively. Any fluids that are changed should be restored back to normal before returning to street driving.

FLUID/LUBRICANT	TO DO	WHEN
Oil For LT1 and LT4 engines only, 0W-40 dexos2™ engine oil is approved for both track and street use. 15W-50 full synthetic engine oil may also be used for track use, but after track use must be changed back to 0W-40 dexos2 for street use. If 0W-40 dexos2 oil is not available, 5W-30 dexos1™ full synthetic engine oil may be used for street use. If 5W-30 dexos1 is used, it must be changed to 0W-40 dexos2 or 15W-50 full synthetic engine oil for track use. LT5 engine, for maximum track performance SAE 15W-50 full synthetic engine oil is required. SAE 15W-50 full synthetic engine oil is not recommended for street use.	Check the oil level and keep it at or near 0.5 qt (0.5L) above the upper mark that shows the proper operating range on the engine oil dipstick *Please Note:* Stingray without Z51 Performance Package: Additional oil fill above the upper mark on the dipstick is not recommended for track events or other competitive driving.	Often (before, during and after every track event or competitive driving session) *Please Note:* After competitive driving, remove excess oil so that the level on the dipstick is not above the upper mark that shows the proper operating range.
Brake Fluid (DOT-4 Recommended for Track/ Competitive Driving)	Replace existing brake fluid with a qualified high-performance brake fluid from a sealed container (brake fluid with a dry boiling point >590°F [310°C] is qualified)	If high-performance brake fluid is in the vehicle and the age of the brake fluid is over a month old or unknown, replace the brake fluid before track events or competitive driving (if high-performance brake fluid is used, replace it with GM-approved brake fluid before driving on public roads) *Please Note:* Do not use silicone or DOT-5 brake fluids.
Rear Axle Fluid	Because fluid temperatures may be higher, it is necessary to change the rear axle fluid	After the first event and every 24 hours of track events or competitive driving
Automatic Transmission Fluid	Have the transmission fluid set to the track-specific oil level prior to track usage. Replace fluid after track usage *Please Note:* Any transmission level set or change should be performed at your dealer.	After every 15 hours of track events or competitive driving

For full details and information, see the vehicle Owner's Manual.

LT1 Engine	93-octane (or higher) unleaded gasoline is required.
LT4 Engine	93-octane (or higher) unleaded gasoline is required. 100-octane (or higher) unleaded gasoline is recommended at the track when temperatures are above 86°F (30°C) to maximize powertrain performance and improve longevity of components within the powertrain.
LT5 Engine	93-octane (or higher) unleaded gasoline is required. 100-octane (or higher) unleaded gasoline is recommended to maximize powertrain performance and improve longevity of components within the powertrain.

Caution: Some high-octane fuels contain additives and compounds that may damage the vehicle and void the vehicle warranty. See Prohibited Fuels.

For full details and information, see the vehicle Owner's Manual.

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5. TURN UP THE PRECISION

DRIVER MODE SELECTOR

Track mode should be selected for track use or competitive driving. The outer ring of the Driver Mode Selector is located on the console behind the shift lever. It rotates to change the modes, which display in the instrument cluster.

Please Note: Tracking the vehicle while in Stealth Exhaust Sound Management mode could cause damage to the exhaust valve actuators.

PERFORMANCE TRACTION MANAGEMENT

Corvette models that have Magnetic Selective Ride Control™ incorporate Performance Traction Management (PTM), which integrates the Traction Control, StabiliTrak® and Selective Ride Control systems to provide consistent performance when cornering in track situations.

To utilize PTM:

- The vehicle must be in Track mode
- Then, quickly press the TCS/StabiliTrak button on the center console two times
- To select a mode, turn the Selective Ride Control/Performance Traction Management MODE SELECT knob on the center console

PTM contains five modes. Mode 5 is race with active handling off. It is for use by experienced drivers who are familiar with the track, requires the most driving skill and should be used in dry conditions only. StabiliTrak is off and engine power is available for maximum cornering speed.

For full details and information, see the vehicle Owner's Manual.

Please Note: Participating in track events or other competitive driving without following the instructions provided may affect the vehicle warranty. See the warranty manual before using the vehicle for racing or other competitive driving.

AFTER THE TRACK

After driving your Stingray with Z51 Performance Package, Grand Sport, Z06 with Z07 Performance Package and ZR1 on the track, it is important to return the vehicle back to the original factory settings with the proper fluids before normal street driving.

- Replace the front compartment air deflector panel
- Return the tire pressure settings to factory
  (see the Tire and Loading Information label located below the door latch with the door open)
- Return the wheel alignment settings to factory
- Reattach the front license plate bracket/aero panel (if removed)
- Replace oil (use only engine oil licensed to the dexos1 specification of the proper SAE-viscosity grade)
- Replace brake fluid (DOT-4 Hydraulic Brake Fluid)
- Replace rear axle fluid (Dexron® LS Gear Oil)
- Rotate the Driver Mode Selector out of Track mode
- Remove ZR1 Exhaust Cooling Hardware (closeout plates and deflectors)
- Remove the front brake cooling ducts
- ZR1 models should be returned to production trim height

For full details and information, see the vehicle Owner's Manual.