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Introduction

INTRODUCTION

We lcome to the Ford Special Vehicle Team family and thank you for purchasing the Ford SVT F–150 Lightning. We trust that our tremendous dedication to the automotive enthusiast's total ownership experience will provide you with many miles of exhilarating, safe, and comfortable driving in your new SVT F–150 Lightning.

SVT strives for balance between powertrain and chassis, cornering prowess and long-distance comfort, always working to build vehicles in which no one system overwhelms or overshadows any other. In the SVT F-150 Lightning, that philosophy is carried forward through a sophisticated powertrain as well as significant interior, exterior, suspension, and braking system components.

This supplement complements your F-150 Owner's Guide and provides information specific to SVT and the SVT F-150 Lightning. By referring to the pages listed in this supplement, you can identify those features, recommendations, and specifications unique to your new SVT F-150 Lightning.

If you have any questions, please call us at the Ford Special Vehicle Team hotline from 8:30 a.m. to 6:00 p.m. EST at 1–800–FORD-SVT (1–800–367–3788).

SVT HISTORY

The Ford Special Vehicle Team (SVT) was established in 1991. SVT was commissioned to create factory-produced driver's cars and trucks; vehicles that possess a balance between engine and chassis, roadholding and a supple ride, refinement and performance capability. These qualities are the core of the SVT product development philosophy.

To support SVT, Ford Motor Company created a dedicated product development group, Ford Special Vehicle Engineering (SVE). The nucleus of the Ford SVT and SVE is a small, cross-functional group of engineers, product planners, and marketing people who meet on a weekly basis to ensure SVT vehicles and their mission remain focused. In addition to Ford SVE, SVT draws heavily on the talents and knowledge of other driving enthusiasts at Ford who work in the key disciplines of design, product development, manufacturing, and marketing. The heart of the SVT philosophy is a deep commitment to skillful and enthusiastic driving. The ultimate goal of everyone at SVT and SVE is to create vehicles that speak to the needs and desires of the knowledgeable driving enthusiast. Every SVT vehicle produced has been designed and developed with four key virtues in mind: Performance, Substance, Exclusivity, and Value. These hallmarks have driven the SVT Mustang Cobra since 1993, the original SVT Lightning from 1993 to 1995, the SVT Contour introduced in early 1997 as a 1998 model, and the 1999 SVT F-150 Lightning.

SVT OWNERSHIP BENEFITS

- Dealer body of approximately 600 specially trained and certified SVT dealers who are dedicated to a culture within their dealerships that is friendly to the knowledgeable driving enthusiast.
- On-going commitment from SVT to provide its dealers with constant support from the SVT Information Center at 1–800–FORD-SVT, in-depth technical seminars, and training in SVT Owner/Enthusiast care techniques to assure outstanding quality throughout the entire SVT ownership experience.
- A Certificate of Authenticity is provided to the owner or lessee of every SVT vehicle. It includes the Vehicle Identification Number, production sequence number out of the total number of vehicles built, and the date of manufacture. These certificates are printed at the end of the vehicle's model-year production run.
- SVT-specific line of apparel and accessories available through your SVT dealer. Contact the SVT team leader at the dealership for details and ordering information or call 1–800–FORD-SVT. To order direct, call 1–888–490–6837.
- The *SVT Enthusiast*, written and published by SVT Headquarters. The *SVT Enthusiast* contains information of interest to SVT owners and prospective buyers, with the latest technical information available from SVT, interviews with members of SVT and SVE, and suggested drive routes across the United States and Canada designed to maximize your enjoyment of your SVT vehicle.
- SVT, in conjunction with The Bob Bondurant School of High Performance Driving in Phoenix, AZ, gives the owner the opportunity to attend the school at a 20% discount. The school can be contacted directly at 1–800–842–7223.

SVT F-150 Lightning specific features

F-150 LIGHTNING SPECIFIC FEATURES



- 5.4L 2V Triton Supercharged Intercooled V8 engine
- Modified 4R100 4–speed automatic transmission with OD lockout
- Limited-slip differential
- Auxiliary transmission fluid cooler
- Eaton supercharger
- Engine super cooling system
- Heavy duty battery
- Unique front fascia with integrated, round fog lamps
- Unique upper and lower grilles
- Unique front lower air deflectors
- Unique cab rocker and lower box moldings
- Unique wheels and tires
- 4-wheel ABS/4–wheel disc brakes
- Heavy duty front and rear shock absorbers

SVT F-150 Lightning specific features



- Unique electro-luminescent instrument cluster with SVT signature white-faced gauges, including vacuum/boost gauge
- Unique 60/40 leather/cloth seats
- Standard 6–way power driver's seat
- Accentuated seat back and cushion lateral bolstering
- 4-spoke leather-wrapped steering wheel
- Leather-wrapped door trim inserts
- Premium electronic AM/FM stereo/CD clock radio, including speed-compensated volume control
- Sliding rear window

Engine/Transmission

5.4L SUPERCHARGED V8 ENGINE



- 1. Engine oil dipstick
- 2. Power steering fluid reservoir
- 3. Brake fluid reservoir
- 4. Power distribution box
- 5. Engine coolant reservoir
- 6. Air filter assembly
- 7. Intercooler coolant reservoir
- 8. Windshield washer fluid reservoir
- 9. Battery
- 10. Transmission fluid dipstick
- 11. Engine oil filler cap

ENGINE

Configuration	Supercharged longitudinally	
Comiguration		
	mounted, 90-degree V8, single	
	overhead cam, cast iron cylinder	
	block and cast aluminum cylinder	
	heads	
Bore x Stroke	90.2 x 105.8 mm (3.55 x 4.17 in)	
Displacement	5409 cc (330.1 cid)	
Compression ratio	8.4:1	
Horsepower (SAE net)	269 kW @ 4750 rpm	
	(360 HP @ 4750 rpm)	
Torque	597 Nm @ 3000 rpm	
	(440 lbft. @ 3000 rpm)	
Redline	5250 rpm	
	(fuel shut-off at 5500 rpm)	
Specific output	49.7 kW/L (66.7 HP/L)	
Valvetrain	Single overhead cam, silent-design	
	chain drive, roller finger followers	
	with hydraulic lash adjustment,	
	ovate-wire valve springs, two	
	valves per cylinder	
Fuel system	Sequential electronic fuel injection	
Ignition system	Coil-on-plug electronic ignition	
Mass air sensor	80 mm (3.15 in) diameter, high	
	flow capacity	
Throttle body	Twin 57 mm (2.24 in) diameter	
	bore-simultaneously open	
Supercharger	Eaton-Model 112, Generation IV,	
	55 kPa (8 psi) mechanical boost	
Exhaust manifolds	Cast-high silicon, molybdenum iron	
Exhaust system	Dual-stainless steel	

Drivetrain

DRIVETRAIN

Rear axle	9.75 in limited-slip differential with 3.55:1 final			
	drive ratio	drive ratio		
Driveshaft	Steel with harde	Steel with hardened yoke		
Transmission	Modified 4R100 4-speed automatic with OD			
	lockout			
Gear ratios	Gear	Ratio		
	1st	2.71		
	2nd	1.53		
	3rd	1.00		
	4th (OD)	0.71		
	Reverse	2.176		

PERFORMANCE

0-100 km/h (0-60 mph)	6.2 seconds	
400 meters (quarter mile)	14.63 seconds @ 156.7 km/h	
	(97.4 mph)	
Top speed	225 km/h (140 mph)	
Braking, 100-0 km/h (60-0 mph)	41.8 meters (137 ft.)	
183 meter slalom (600 ft.)	102.4 km/h (63.6 mph)	
61 meter skid pad (200 ft.)	0.85 g	

Options, color and trim

OPTIONS, COLOR AND TRIM

- Tonneau cover
- 6-disc CD player
- Trailer tow package
- Dark tint rear sliding window

Exterior:

- Black Clearcoat
- Oxford White
- Bright Red Clearcoat

Interior:

• Medium Graphite Leather/Cloth

MOTORCRAFT PART NUMBERS

Component	5.4L Supercharged V8 engine
Air filter element	FA-1634
Fuel filter	FG-986B
Battery	BXT-65-650
Oil filter	FL-820S
PCV valve	EV-233
Spark plugs ¹	AGSF-12E or AGSF-12FM1 $^{\rm 2}$

 1 Refer to Vehicle Emissions Control Information (VECI) decal for spark plug gap information.

 2 If a spark plug is removed for inspection, it must be reinstalled in the same cylinder. Use only AGSF-12FM1 spark plugs for replacement.

Maintenance

REFILL CAPACITIES

Fluid	Ford Part Name	Capacity
Brake fluid	High Performance DOT 3 Motor Vehicle Brake Fluid	Fill to line on reservoir
Engine oil (includes filter change)	Motorcraft SAE 5W-30 Super Premium Motor Oil	5.7L (6.0 quarts)
Engine coolant ¹	Premium Engine Coolant	24.1L (25.5 quarts)
Intercooler coolant ¹	Premium Engine Coolant	4.0L (4.2 quarts)
Power steering fluid	Motorcraft MERCON [®] ATF	Fill to line on reservoir
Rear axle lubricant 2	Motorcraft SAE 80W-90 Premium Rear Axle Lubricant	3.3-3.8L (7.5-8.0 pints)
Fuel tank	N/A	94.6L (25.0 gallons)
Transmission fluid ³	Motorcraft MERCON [®] ATF	15.0L (15.9 pints) ⁴
Windshield washer fluid	Ultra-Clear Windshield Washer Concentrate	4.0L (4.25 quarts)

¹ Use Ford Premium Engine Coolant (green in color). DO NOT USE Ford Extended Life Engine Coolant (orange in color).

 2 Fill 6 mm to 14 mm (1/4 inch to 9/16 inch) below bottom of fill hole.

Add 118 ml (4 oz.) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford specification EST-M2C118–A for complete refill of Traction-Lok axles.

Your vehicle's rear axle is filled with a synthetic rear axle lubricant and is considered lubricated for life. These lubricants do not need to be checked or changed unless a leak is suspected, service is required or the axle assembly has been submerged in water. The axle lubricant should be changed any time the rear axle has been submerged in water.

³ Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick

handle. MERCON[®] and MERCON[®] V are not interchangeable. DO NOT mix MERCON[®] and MERCON[®] V. Refer to your Scheduled Maintenance Guide to determine the correct service interval.

⁴ Indicates only approximate dry-fill capacity. Some applications may vary based on cooler size and if equipped with an in-tank cooler. The amount of transmission fluid and fluid level should be set by the indication on the dipstick's normal operating range.

OCTANE RECOMMENDATIONS

Your vehicle is designed to use "Premium" unleaded gasoline with an (R+M)/2 octane rating of 91 or higher for optimum performance. The use of gasolines with lower



octane ratings may degrade performance. We do not recommend the use of gasolines labeled as "Premium" in high altitude areas that are sold with octane ratings of less than 91.

If your engine knocks under any driving conditions while you are using fuel with the recommended octane rating, see your dealer or a qualified service technician to prevent any engine damage.

Maintenance

WHEELS AND TIRES

Tires	295/45 ZR 18 BSW tires
Wheels	SVT-Signature style, 18 in x 9.5 in aluminum 5-spoke
	wheels

TIRE ROTATION

• Unidirectional tire rotation

For vehicles equipped with unidirectional tires and full-size spare, your vehicle can be driven with the unidirectional full-size spare, rotating counter to the directional arrow on the tire sidewall.

Your unidirectional full-size spare tire is rotated for wear balance. Best performance may be achieved by remounting the tire to the wheel, if necessary, to permit tire rotation with the directional arrow on the tire sidewall.



SPARE TIRE AND WHEEL

Your vehicle is equipped a 235/70R-16 spare tire on a steel wheel rim. This is for temporary use only. Replace this spare tire with a repaired road tire as soon as possible.

A WORD ABOUT WARRANTY COVERAGE

The F–150 Lightning carries the same warranty coverage as other Ford F-150 models. This information is covered in its entirety in the Ford Motor Company Warranty Guide.

The F–150 Lightning or any SVT can be serviced under warranty at any Ford-Lincoln-Mercury dealer nationwide.

SVT does not recommend modifying or racing our vehicles, as they are designed and built to be driven as delivered from the factory. The Ford Motor Company Warranty Guide discusses the installation of aftermarket parts and their effect on warranty coverage as follows:

Repairs are not reimbursable under warranty when:

- "The repairs are required because of abuse, misuse, racing, fire, negligence, accident, modification or a natural disaster."
- "The repairs are required due to installation of a non-Ford part."