

### EMISSION CONTROL SYSTEM

Your vehicle is equipped with various emission control components and a catalytic converter which will enable your vehicle to comply with applicable exhaust emission standards. To make sure that the catalytic converter and other emission control components continue to work properly:

- Use only the specified fuel listed.
- Avoid running out of fuel.
- Do not turn off the ignition while your vehicle is moving, especially at high speeds.
- Have the items listed in *scheduled maintenance information* performed according to the specified schedule.


The scheduled maintenance items listed in *scheduled maintenance information* are essential to the life and performance of your vehicle and to its emissions system.

If parts other than Ford, Motorcraft, or Thoroughbred Motorsports are used, such parts must be equivalent in performance and durability.



Do not park, idle, or drive your vehicle in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system; which can start a fire.

## Maintenance and Specifications

Illumination of the  indicator, charging system warning light, temperature warning light, fluid leaks, strange odors, smoke, or loss of engine power could indicate the emission control system is not working properly.

Do not make any unauthorized changes to your vehicle or engine. By law, vehicle owners and anyone who manufactures, repairs, services, sells, leases, trades vehicles, or supervises a fleet of vehicles are not permitted to intentionally remove an emission control device or prevent it from working. Information about your vehicle's emission system is on the Vehicle Emission Control Information Decal located on the inside of the hood. This decal identifies engine displacement and gives some tune up specifications.

Please consult your *Warranty Guide* for complete emission warranty information.

### On board diagnostics (OBD-II)

Your vehicle is equipped with a computer that monitors the engine's emission control system. This system is commonly known as the On Board Diagnostics System (OBD-II). This OBD-II system protects the environment by ensuring that your vehicle continues to meet government emission standards. The OBD-II system also assists your authorized dealer in properly servicing your vehicle. When the indicator illuminates, the OBD-II system has detected a malfunction. Temporary malfunctions may cause the indicator to illuminate.


Examples are:

1. The vehicle has run out of fuel - the engine may misfire or run poorly.
2. Poor fuel quality or water in the fuel - the engine may misfire or run poorly.
3. The fuel cap may not have been securely tightened. See *Fuel filler cap* in this chapter.

These temporary malfunctions can be corrected by filling the

## Maintenance and Specifications

fuel tank with good quality fuel and/or properly tightening the fuel cap. After three driving cycles without these or any other temporary malfunctions present, the indicator should turn off. A driving cycle consists of a cold engine startup followed by mixed city/highway driving. No additional vehicle service is required.

If the  indicator remains on, have your vehicle serviced at the first available opportunity.

## Maintenance and Specifications

### BRAKE FLUID

The fluid level will drop slowly as the brakes wear, and will rise when the brake components are replaced. Fluid levels below the "MAX" line that do not trigger the brake system warning lamp are within the normal operating range, there is no need to add fluid. If the fluid levels are outside of the normal operating range, the performance of your brake system could be compromised, seek service from your authorized dealer immediately.



### TRANSMISSION FLUID

#### Checking automatic transmission fluid

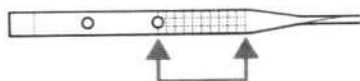
- Refer to *scheduled maintenance information* for scheduled check and change intervals.
- Transmission does not consume fluid.
- Check fluid when transmission is not operating properly or if you see a leak.
- Fluid level must be checked at normal operating temperature, 20 miles (30 km) of driving.

To check and add fluid:

1. Drive the vehicle 20 miles (30 km) to reach normal operating temperatures.
2. If driven in hot weather, city traffic, pulling a trailer, allow transmission to cool for 30 minutes before checking.
3. Engage parking brake, start engine.
4. Put your foot on the brake pedal and move the gearshift lever slowly through all of the gear ranges.
5. Shift to P (Park) and leave the engine running.
6. Remove the dipstick, wipe clean with a dry lint free rag.
7. Install and fully seat the dipstick into the filler tube.

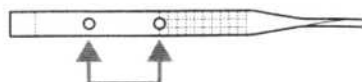
## Maintenance and Specifications

8. Remove the dipstick and inspect the fluid level. Level should be in the cross-hatched area.



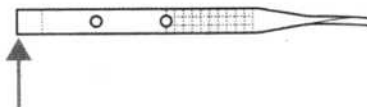
9. If necessary, add fluid in 1/2 pint (250ml) increments through the filler tube until the level is correct at normal operating temperatures. Refer to the *Maintenance product specifications and capacities* section in this chapter for the correct fluid type. The use of any other non-approved fluid may cause internal transmission damage.

10. Fluid can be checked at ambient temperatures between 50-95°F (10-30°C). DO NOT ADD fluid until the transmission is at normal operating temperatures or the transmission will be overfilled.



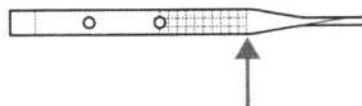
### **Low fluid level**

Do not drive the vehicle if the fluid level is at or below the bottom of the dipstick.



### **High fluid level**

Fluid levels above the safe range may cause overheating, shift and/or engagement concerns and internal transmission damage. If an overfill condition occurs, excess fluid should be removed by an authorized dealer.



## Maintenance and Specifications

### AIR FILTER

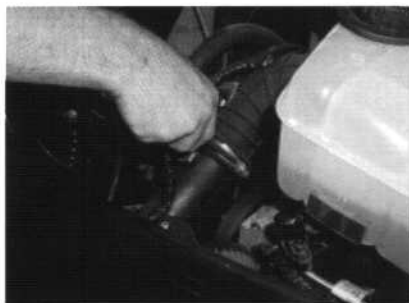
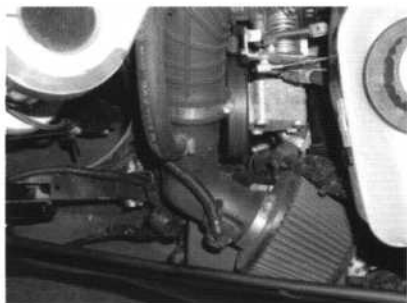
Refer to *scheduled maintenance information* for the appropriate intervals for changing the air filter element.

When changing the air filter element, use only the Thoroughbred Motorsports air filter element listed. Refer to *Thoroughbred Motorsports Part Numbers* in this chapter.



To reduce the risk of vehicle damage and/or personal burn injuries do not start your engine with the air cleaner removed and do not remove it while the engine is running.

1. Loosen the clamp that secures the air inlet tube to the engine air filter cover and disconnect the tube from the cover.



## Maintenance and Specifications

2. Carefully separate the air inlet tube from the rubber filter tubing.
3. Wipe the air filter housing clean to remove any dirt or debris and to ensure good sealing.
4. Install a new air filter element. Be careful not to crimp the filter element. This could cause filter damage and allow unfiltered air to enter the engine if not properly seated.
5. Replace the air inlet tube and secure the clamp.

**Note:** Failure to use the correct air filter element may result in severe engine damage. The customer warranty may be void for any damage to the engine if the correct air filter element is not used.

### THOROUGHbred MOTORSPORTS PART NUMBERS

Component	2.3L I4 engine
Air filter element	R-1380 (K&N)
Fuel filter	FG-1036 (Motorcraft)
Battery	60-51R (Interstate Batteries)
Oil filter	FL910 (Motorcraft)
PCV valve	1
Spark plugs	2

The PCV valve is a critical emission component. It is one of the items listed in *scheduled maintenance information* and is essential to the life and performance of your vehicle and to its emissions system.

For PCV valve replacement, see your authorized dealer. Refer to *scheduled maintenance information* for the appropriate intervals for changing the PCV valve.

**Replace the PCV valve with one that meets Ford material and design specifications for your vehicle, such as a Motorcraft or equivalent replacement part. The customer warranty may be void for any damage to the emissions system if such a PCV valve is not used.**

## Maintenance and Specifications

<sup>2</sup>For spark plug replacement, see your authorized dealer. Refer to *scheduled maintenance information* for the appropriate intervals for changing the spark plugs.

**Replace the spark plugs with ones that meet Thoroughbred Motorsports material and design specifications for your vehicle, such as Motorcraft or equivalent replacement parts. The customer warranty may be void for any damage to the engine if such spark plugs are not used.**



## Maintenance and Specifications

### MAINTENANCE PRODUCT SPECIFICATIONS AND CAPACITIES

Item	Capacity	Part name or equivalent	Part number / specification
Brake fluid	Fill to line on reservoir	Motorcraft High Performance DOT 3 Motor Vehicle Brake Fluid	PM-1 or PM-1-C / ESA-M6C25-A or WSS-M6C62-A
Hinges, latches, striker plates, fuel filler door hinge.	---	Multi-Purpose Grease	XG-4 or XL-5 / ESB-M1C93-B
Transmission / steering / parking brake linkages and pivots, brake pedal shaft	---	Motorcraft Premium Long-Life Grease	XG-1-C or XG-1-K / ESA-M1C75-B
Engine coolant	10.2 quarts	Motorcraft Premium Gold Engine Coolant (yellow colored)	XO-5W20-QSP (US) CXO-5W20-LSP12 (Canada) / WSS-M2C930-A and API Certification Mark
Cooling system stop leak pellets	---	Motorcraft Cooling System Stop Leak Pellets	VC-6 / WSS-M99B37-B6
Engine oil	4.0 quarts	Motorcraft SAE 5W-30 Premium Synthetic Blend Motor Oil (US) Motorcraft SAE 5W-20 Super Premium Motor Oil (Canada)	XT-5-QM / MERCON V
Automatic Transmission fluid	9.9 quarts	Motorcraft MERCON V ATF	XT-2-QDX / MERCON
Fuel tank	9.5 gallons	---	---

## Maintenance and Specifications

### ENGINE DATA

Engine	2.3L I4 engine
Cubic inches	138
Required fuel	87 octane
Firing order	1-3-4-2
Ignition System	EDIS
Spark plug gap	0.049 – 0.053 inch
Compression ration	9.7:1