

1995 ENGINE PERFORMANCE**Service & Adjustment Specifications - 3.8L****INTRODUCTION**

Use this article to find specifications related to servicing and on-vehicle adjustments. Use this article as a quick reference when you are familiar with proper adjustment procedures but need a specification.

CAPACITIES**BATTERY SPECIFICATIONS**

Application & Group	Cold Cranking Amps
3.8L	650

COOLING SYSTEM CAPACITIES

Application	Qts. (L)
Windstar	12.1 (11.5)

CRANKCASE CAPACITIES

Application	⁽¹⁾ Qts. (L)
3.8L	5.0 (4.70)

(1) Add 1/2 qt. if equipped with oil cooler.

TRANSMISSION & TRANSFER CASE CAPACITIES

Application	Specification	Quantity
AX4S Auto.	Mercon	12.25 Qts. (11.6L)

AXLE CAPACITIES

Application	Pts. (L)
Windstar	NA

QUICK-SERVICE**SERVICE INTERVALS & SPECIFICATIONS****REPLACEMENT INTERVALS**

Component	Interval (Miles)
Air Filter	30,000
Cam Timing Belt	60,000
Coolant	30,000
Crankcase Ventilation Filter	30,000

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Oil & Filter	7500
PCV Valve	60,000
Spark Plugs (Standard)	30,000
Spark Plugs (Platinum)	60,000
Spark Plug Wires	60,000
Transfer Case Oil	60,000
Transmission Oil	
Automatic Transmission	30,000
Manual Transmission	60,000

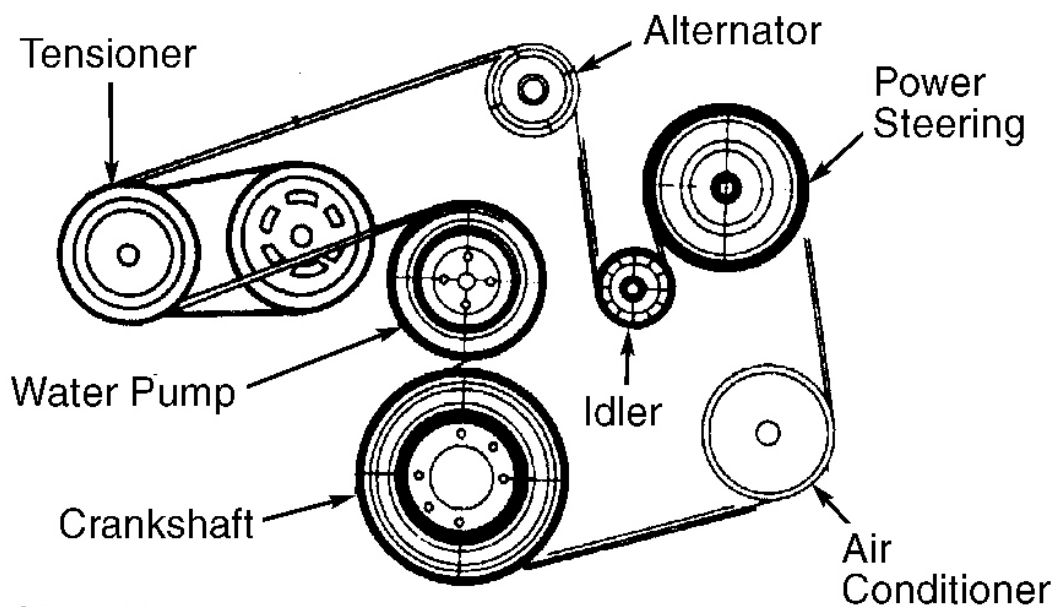
BELT ADJUSTMENT

Application ⁽¹⁾	New Belt: Lbs. (kg)	⁽²⁾ Used Belt: Lbs. (kg)
Windstar	(3)	(3)

(1) When checking belt routing and tension, refer to appropriate illustration. See **Fig. 1**.

(2) Any belt operated for 10 minutes.

(3) Tension is correct if indicator is within limit marks.



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Fig. 1: Checking Belt Routing & Tension (Windstar)

Courtesy of FORD MOTOR CO.

MECHANICAL CHECKS

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ENGINE COMPRESSION

Check engine compression with engine at normal operating temperature, all spark plugs removed (on dual plugs, remove exhaust side only), and throttle wide open. Ensure crankcase is full and oil is of correct viscosity. With compression gauge installed, use remote starter to crank engine.

Crank engine at least 5 revolutions, and record highest reading. Repeat procedure for all cylinders, using approximately same number of revolutions. Lowest compression reading should not be less than 75 percent of highest compression reading. No cylinder compression reading should be less than 100 psi (7 kg/cm²).

COMPRESSION RATIO SPECIFICATIONS

Application	Compression Ratio
3.8L	9.0:1

VALVE CLEARANCE

NOTE: All models are equipped with hydraulic valve lifters; valve adjustment is not required. If incorrect valve clearance is suspected, collapse lifter before checking clearance.

COLLAPSED VALVE LIFTER CLEARANCE

Application	In. (mm)
3.8L	.088-.189 (2.23-4.77)

IGNITION SYSTEM

HIGH TENSION WIRE RESISTANCE

HIGH TENSION WIRE RESISTANCE

Application	Ohms
Windstar	7000 Per Foot

SPARK PLUGS

SPARK PLUG TYPE

Application	Motorcraft No.
3.8L	AWSF-44PP

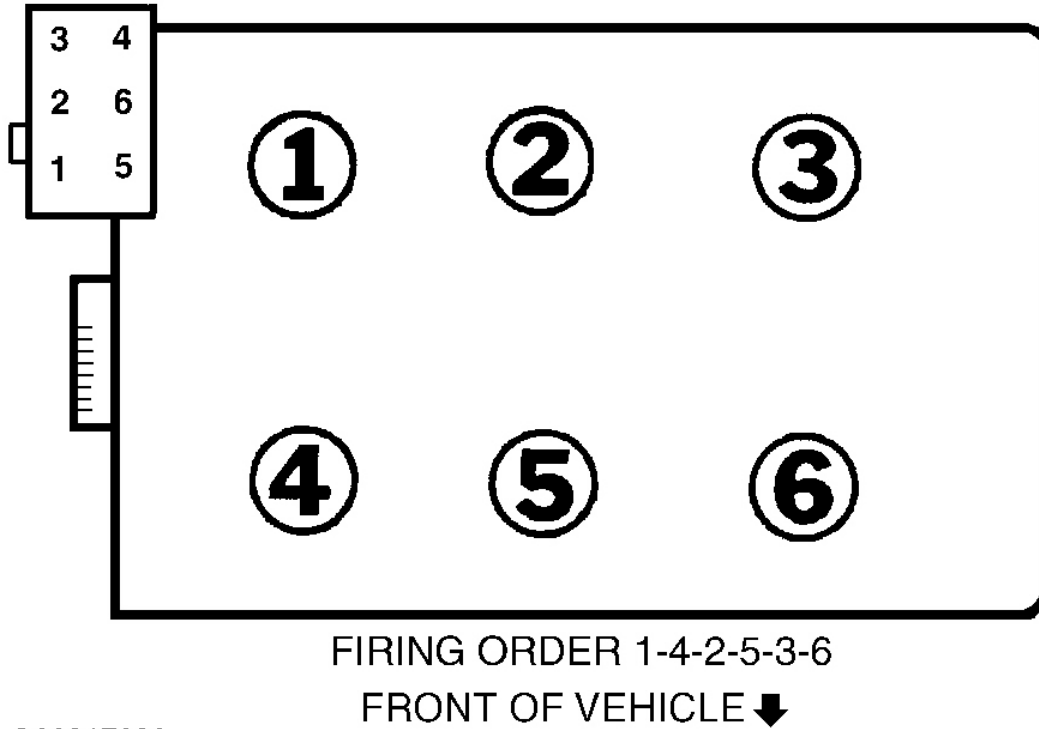
SPARK PLUG SPECIFICATIONS

Application	⁽¹⁾ Gap In. (mm)	Torque Ft. Lbs. (N.m)
3.8L	0.052-0.056 (1.3-1.4)	7-15 (9-20)

(1) If Vehicle Emissions Information decal contradicts spark plug gap specification in table, use information on decal.

FIRING ORDER & TIMING MARKS

NOTE: For firing order and timing marks, See Fig. 2 .

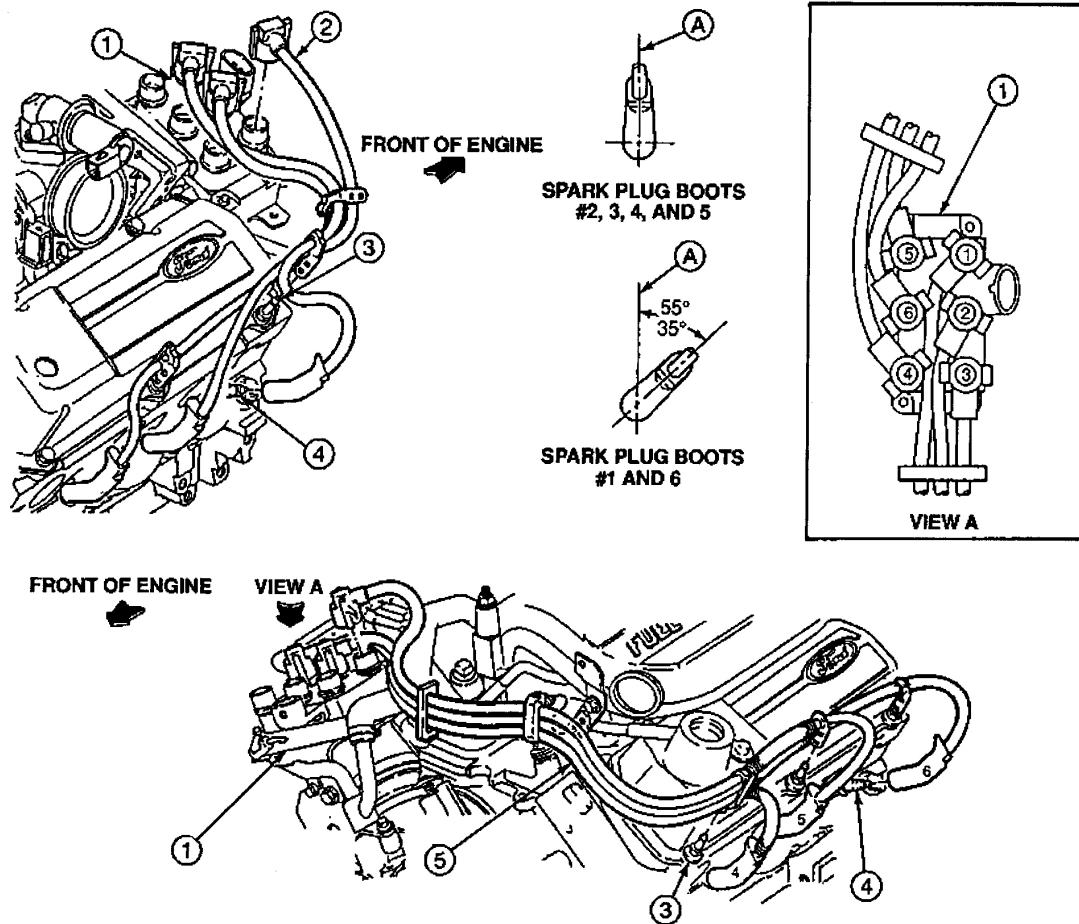


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Fig. 2: Identifying Firing Order & Timing Marks

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Item	Description
1	Ignition
2	Ignition Wire and Bracket, RH
3	Rocker Cover Stud
4	Spark Plug
5	Ignition Wire and Bracket, LH
A	Perpendicular to Centerline of Crankshaft

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Fig. 3: Identifying Spark Plug Wire Routing
 Courtesy of FORD MOTOR CO.

IGNITION TIMING

BASE IGNITION TIMING

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Application	Degrees BTDC
Windstar	(1) 10

(1) With SPOUT in-line connector unplugged.

DISTRIBUTOR SPECIFICATIONS

NOTE: All models use computed timing advance. No adjustment is possible.

FUEL SYSTEM

FUEL PUMP

NOTE: Fuel pump performance is a measurement of fuel pressure and volume availability, not regulated fuel pressure. For fuel pressure specifications, see **FUEL PRESSURE SPECIFICATIONS** article.

FUEL PUMP PERFORMANCE

Application	Specification
Pressure	(1)
Volume	(2)

(1) For fuel pressure specifications, see **FUEL PRESSURE SPECIFICATIONS** article.
(2) Volume is 1 pt. (.5L) in 30 seconds.

IDLE SPEED & MIXTURE

NOTE: Idle mixture is not adjustable. If idle mixture is incorrect, see **TESTS W/CODES - EEC-V (3.8L)** article in the **ENGINE PERFORMANCE** section.

IDLE RPM SPECIFICATION

Application	RPM
3.8L	(1)

(1) Idle speed is computer controlled and is not adjustable.

THROTTLE POSITION (TP) SENSOR

TP SENSOR VOLTAGE SPECIFICATIONS ⁽¹⁾

Application	Idle	Wide Open Throttle
3.8L	0.20	4.84

(1) Minimum idle and maximum wide open throttle specifications are given.