1997 ford expedition starter

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Bad Starter Solenoid Symptoms Although you may have heard of a starter solenoid, you might not know what the part actually does. Basically, the starter solenoid is an electromechanical device that engages the starter motor. Most starter solenoids are mounted directly on top of the starter. The Starting System Because batteries emit hydrogen gas while charging, the battery case cannot be completely sealed. Years ago there was a vent cap for each cell and we had to replenish the cells when the electrolyte evaporated. If your engine cranks normally but does not start, the starter motor is not to blame. Automotive professionals break down no-start situations into two separate categories: crank-no-start and no-crank-no-start. Contact Us. Phone Number Shop with Confidence. All Rights Reserved. Terms of Use. Privacy Policy. California Supply Chain Disclosure. Accessibility Statement. Here is the section for the 1st generation Expedition owners. Log in or Sign up. Ford Expedition Forum. This site uses cookies. By continuing to use this site, you are agreeing to our use of cookies. Learn More. Replies: 30 Views: 36, Punisher6 Aug 24, Replies: 91 Views: , Replies: 55 Views: 4, Rear diff covers and oil Machete , Feb 22, at PM. Replies: 1 Views: LAexpy Feb 22, at PM. Replies: 4 Views: Tommie Feb 21, at PM. Ford make aluminum wheels 1st gens? Machete , Feb 10, Replies: 5 Views: LAexpy Feb 19, at PM. Can you fit 35" tall tires on your 1st Gen? Starkman , Feb 11, Another slow Build Thread Replies: 23 Views: 1, Engine stutter during slow acceleration Richard Gross , Feb 16, Machete Feb 17, at PM. Aftermarket rims and tires? Sal Minella Feb 13, Replies: 11 Views: 2, ExplorerTom Feb 12, Replies: 10 Views: Is a Expedition the right truck for us? JumpCut , Feb 3, Replies: 13 Views: Replies: 3 Views: JamaicaJoe Feb 11, Wheel bearings? Rear diff? AZShawn , Jan 28, Replies: 7 Views: AZShawn Feb 9, JamaicaJoe , Feb 3, Replies: 9 Views: Frank Swygert Feb 9, Showing threads 1 to 15 of 5, Sort threads by: Last message time Thread creation time Title alphabetical Number of replies Number of views First message likes. Order threads in: Descending order Ascending order. You must log in or sign up to post here. Show Ignored Content. Your name or email address: Do you already have an account? No, create an account now. Yes, my password is: Forgot your password? A bad starter relay on your Ford vehicle will prevent the necessary electrical power from reaching the starter motor; fail to cut off power; or keep the motor from starting at all. Fortunately, all Ford models have a remote relay near the battery, which makes it easy and convenient for troubleshooting. This guide will help you determine whether the starter relay on your Ford has gone bad, using a jumper wire and a multimeter. Disable the ignition system. If your Ford comes equipped with a distributor, unplug the ignition coil from the distributor, and ground it to the engine with a jumper wire. If your vehicle is not equipped with a distributor, you can remove the fuel pump relay or fuse for these tests. Have a helper turn the ignition key to "Start. If not, make sure there is a good connection at the control circuit wire on the relay; this is the small wire on the terminal marked with an "S. If you hear a good click, skip to Step 4. Connect a jumper wire from the positive battery terminal to the "S" terminal on the relay. Ask your assistant to turn the ignition key to "Start. If there is a weak or chattering click, or no sound at all, make sure all the connections on the relay are clean and tight. The relay mounting bracket should make good contact with the vehicle body. If all the connections are clean and tight, yet the starter relay still does not work, then replace the relay. Check the voltage drop on each cable connection at the starter relay. Touch the probes of a multimeter on both sides of the same connection at the relay. The positive probe on your meter should always be on the side of the connection leading to the positive side of the electrical current. Ask your helper to again turn the ignition key to "Start. If you still read a high voltage drop, replace the relay. Unplug the wire at the "S" terminal on the relay. Check the resistance between the terminal and the relay mounting bracket using the multimeter. If there is more than 5 ohms between these two points, clean the mounting bracket. If you still read a high resistance, replace the relay. Check for incoming voltage at the relay "S" terminal. Connect the red probe of your multimeter to the relay terminal and the black probe to a good ground such as a metal bracket or bolt attached to the engine block or cylinder head. Ask your helper to turn the ignition key to "Start. If your voltmeter still registers no voltage, replace the relay. Since Dan Ferrell has contributed general and consumer-oriented

news to television and the Web. His work has appeared in Texas, New Mexico and Miami and on various websites. Step 1 Disable the ignition system. Step 2 Have a helper turn the ignition key to "Start. Step 3 Connect a jumper wire from the positive battery terminal to the "S" terminal on the relay. Step 4 Check the voltage drop on each cable connection at the starter relay. Step 5 Unplug the wire at the "S" terminal on the relay. Haynes; Jumper wire An assistant Multimeter. Quick Links. Table of Contents. Before driving. Controls and features. Seating and safety restraints. Roadside emergencies. Maintenance and care. Capacities and specifications. Reporting safety defects. Automobile Ford Contour Manual pages. Ford motor company ford contour owner's guide 16 pages. Ford motor company ford e owner's guide pages. Ford motor company ford f owner's guide pages. Ford motor company ford f owner's guide 14 pages. Read the following section on Warnings for a full explanation of them. Indicates that vehicle information related to recycling and other environmental concerns will follow. We must all play our part in protecting the environment. Ford may change the contents without notice and without incurring obligation. Page 4 Introduction Using your vehicle as a snowplow Do not use this vehicle for snowplowing. Page 5: Instrumentation Instrumentation Engine oil pressure gauge Engine pg. Page 6 Vents pg. Engine coolant temperature Illuminates briefly when the ignition key is turned to On. Illuminates when the engine coolant temperature is high. Page 8 Instrumentation Low washer fluid Illuminates briefly when the ignition is turned to On. Also illuminates when the windshield WASH washer fluid is low. Oil pressure Illuminates briefly when the ignition key is turned to On. Illuminates when the oil pressure is low. Page 9 Instrumentation Brake system warning Extinguishes when the parking brake is released. Safety belt Illuminates when the ignition is switched on to remind you to fasten your safety belts. For more information, refer to Using the safety restraints properly in the Seating and safety restraints Page 11 Instrumentation Anti-lock brake system ABS Momentarily illuminates when the ignition is turned on and the engine is off. If the light stays on or continues to flash, the ABS needs to be serviced. The light also illuminates when the air suspension system requires servicing. Page 14 Tachometer Indicates the engine speed in revolutions per minute. Engine coolant temperature gauge Indicates the temperature of the engine coolant. At normal operating temperature, the needle remains within the normal zone. If it enters the red section, the engine is overheating. Switch off the engine and allow it to cool. Page 15 Instrumentation The fuel gauge indicator may vary slightly when the vehicle is in motion. The most accurate reading is obtained with the vehicle on level ground. Refer the Ignition information in the Controls and features chapter for more information on the Page Trip Odometer checked by your dealer or qualified service technician. Odometer Registers the total number of miles the vehicle has traveled. Trip odometer Registers thenumber of miles traveled on individual journeys. To reset, depress the control. Page 17 Instrumentation refer to trip computer information in the Controls and features chapter. Compass Press the mode control once for compass only display. Press the mode control to display the instantaneous fuel economy of your running vehicle. Distance to empty display may be inaccurate if the vehicle is started while parked on an incline. Page Controls And Features Autolamp control if equipped The autolamp system provides light sensitive automatic on-off control of the exterior lights normally controlled by the headlamp control. The autolamp system also keeps the lights on for a preselected period of time after the ignition switch is turned to Off. Turn on your headlamps at dusk. Failure to do so may result in a collision. Panel dimmer control Turn the control up to brighten the panel. Refer to Control trac system in the Driving chapter for more information. Auxiliary power point This 12V power point is an additional power source for electrical accessories. Do not plug optional electrical accessories into the cigarette lighter. Fuel pump shut-off switch Refer to the Roadside emergencies chapter for information on operating the fuel pump shut-off switch. Refer to Air suspension load leveling in the Driving chapter for more information. Page 25 Controls and features Rear window defroster Press the defroster control to clear the rear window of thin ice and fog. The small LED will illuminate when the defroster is activated. The ignition must be in the ON position to operate the rear window defroster. Page Parking Brake Parking brake For information on the parking brake, refer to Preparing to start the vehicle in the Driving chapter. Page 27 Controls and features Instrument panel vents There are four vents on the instrument panel. These vents are equipped with dials to adjust the amount and direction of air passing through them. Temperature Turn temperature control to the desired temperature. Page 28 Fan speed Turn the fan speed control to the desired speed. Airflow and air conditioning Turn the mode control to the desired airflow position. The outside inlet door will close and the fan is shut off. Defrosting windshield Set mode control to DEF, turn temperature control to maximum heat red and set fan speed control to HI. Besides the overhead control panel for the front seat occupants,the auxiliary air conditioning controls allow the rear passengers to control the temperature in the rear of the vehicle through a second control panel above the second Page 35 Controls and

features The instrument panel climate controls must be on in order for the auxiliary air conditioning to operate. Page 36 Turn the temperature control to the desired temperature. Turn the mode control to the desired airflow position: Far left for airflow to the overhead panel registers. Far right for airflow to the rear floor vent. Page 37 Controls and features Turn the fan speed dial to the desired position. Once speed control is switched off, the previously programmed set speed will be erased. Page 41 Controls and features your vehicle speed is faster than the set speed while driving on a downhill in Overdrive, you may want to shift to the next lower gear to reduce your vehicle speed. Each press will decrease the set speed by 1. Page 44 Controls and features Front washer For front window washer fluid operation, push and hold as desired the front washer control on the end of the stalk. Rear wipers For rear wiper operation, rotate the rear window wiper and washer control to the desired position. Turn signals Push the stalk down to activate the left turn signal; push the stalk up to activate the right turn signal. Page 47 Controls and features Overdrive control Activating overdrive Overdrive is the normal drive position for the best fuel economy. The overdrive function allows automatic upshifts to second, third and fourth gear. If this condition persists, damage to the transmission could occur. Page 49 Controls and features Tilt steering Pull the lever to adjust the steering column angle. Push the lever back up to lock the steering wheel into position. Never adjust the steering wheel when the vehicle is moving. Page 51 Controls and features Compass zone adjustment 1. Determine which time zone you are in by referring to the zone map. Locate compass sensor mounted at base of mirror. Turn ignition to the On position. Insert a paperclip into the small hole on the bottom of the compass sensor. Page 52 Controls and features 1. Start the vehicle. Page 53 Controls and features Overhead lamps Map lamps if equipped Press the left or right control to turn the lamp on. Press again to turn the lamp off. Courtesy lamps if equipped Press the right portion of the lamp control to turn on. Press the left portion of the control to turn off. Page 54 they have been turned on with the dimmer control or any door is open. Forward storage bin if equipped Press the release control to open the storage compartment. The door will open slightly and can be moved to full open. The storage compartment may be used to secure sunglasses or a like object. Page 55 Controls and features Place Velcro hook onto back side of aftermarket transmitter opposite of actuator control. Place transmitter into storage compartment, control down. Place the provided height adaptors onto the back of the storage bin door as needed. Press the storage compartment door to activate the transmitter. Page 56 Power quarter rear windows if equipped Press the portion of the VENT control to open the power rear quarter windows. Press the portion of the VENT control to close the power rear quarter windows. Page 57 Controls and features Power windows Driverâ€"side window control Press rear of switch to open window. Press front of switch to close window. The driverâ€"side power window has a one-touch down feature. When AUTO is fully pressed and released two clicks will be heard , the driver-side window will move completely down. Page 58 Passenger-side window controls Press rear of switches to open passenger window. Press front of switches to close passenger window. Accessory delay With accessory delay, the window switches may be used for up to ten minutes after the ignition switch is turned to the Off position or until either door is opened. Page 59 Controls and features Power door locks Driver and passenger controls Press L to lock all doors. Press U to unlock all doors. Childproof locks The rear doors can be set to prevent children from opening the doors from the inside. The childproof locks must be set separately for each door. Page 60 Controls and features Power mirrors To adjust the power outside mirrors: 1. Move the mirror control in the desired direction. Lock the mirror by moving the control to the center position. Page 61 Controls and features Rear liftgate To open the rear window, turn the liftgate handle to the right. To open the liftgate, turn the liftgate handle to the left. Do not open the liftgate or liftgate glass in a garage or other enclosed area with a low ceiling. Auxiliary power point The first auxiliary power point is located on the instrument panel, next to the cigar lighter. Page 63 Controls and features A second auxiliary power point is located on the left side of the rear console at the rear of the driver seat. The power point is accessible from the rear seats. Page 64 Controls and features Replacing the tissue box To replace the center console tissue box: 1. Lift the console door lid. Slide out the empty tissue box by pulling it up and out. Slide in the new tissue box. Hooking floor mat Installing the floor mats 1. Page 65 Controls and features Removing the floor mat 1. To remove mat, pull up on rear of mat to release from locator post. Page 66 Additional spare keys can be purchased through your dealer or selected retailers. Be sure to purchase coded keys with the Ford logo to ensure proper functionality. If both supplied keys are lost or stolen, the vehicle and any other keys must be reinitialized by the dealer. Page 67 Controls and features Insert a coded key into the ignition and turn to the On position. Within 15 seconds, insert a new key into the ignition and turn the ignition to On or Start. The interior lamps will illuminate. To confirm that all doors are closed and locked, press the LOCK control a second time. Page 69 Controls and

features Replacing the batteries The transmitter is powered by two coin type three-volt lithium batteries. A decrease in operating range can be caused by: battery failure weather conditions structures around the vehicle To replace the batteries: 1. Twist a thin coin between the two halves of the transmitter. Page 70 Controls and features cause harmful interference, and 2 This device must accept any interference received, including interference that may cause undesired operation. Replacement batteries for the remote entry transmitters may be purchased at pharmacies, watch stores or at authorized dealers. If a transmitter is lost, a new one may be programmed by your dealer. Lift the bar in front of the seat cushion to move the seat forward or backward. Page Seating And Safety Restraints Seating and safety restraints Using the armrest if equipped Pull the strap to move the armrest down. To move the armrest up, lift until it latches in the upright position. Press to raise or lower the rear portion of the seat cushion. Press the control to move the seat forward, backward, up or down. Page 74 Seating and safety restraints Rear fold seat if equipped Folding down the rear seats Insure that no objects such as books, purses or briefcases are on the floor in front of the second row seats before actuating them down. Move front passengers seat forward so that the second row seat headrest clears the front seat. Page 75 Seating and safety restraints 3. Pull on the seatback while lifting the handle to lift the seat into the upright position. The levers mounted to your second row seats have multiple functions which, if the seat levers are used while the vehicle is in motion, could cause a condition where the seat is not properly latched. Page 76 Seating and safety restraints To minimize the risk of personal injury, the EZ entry seat should not be left in the forward, stowed position while the vehicle is in motion. Please ensure that the seat is in the upright, fully latched position before putting the vehicle in motion. Page 77 Seating and safety restraints 2. Before removing the seat, be sure that the seatbelt anchor is stowed flat into the vehicle floor. Use the black plastic clip located just above the buckle to stow the loose seat belt up at the top, near of the shoulder belt take off point. Page 78 6. With assistance, lift the seat out of the vehicle. Installing the third row seat Before installing your thrid row seat, ensure that the seat belt anchors are stowed into the floor and the loose belts are stored out of the way. For proper latching, ensure that the floor tubs are clear of debris. Page 79 Seating and safety restraints 4. Push up on the seat to verify that it is latched into the floor. Verify that the safety belts can move freely on either side of the seat. Page 80 It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Page 81 Seating and safety restraints Vehicle sensitive emergency locking mode The vehicle sensitive mode is the normal retractor mode which locks the belts in response to vehicle movement. Page 82 Seating and safety restraints Using automatic locking mode The automatic locking mode must be used when installing a child safety seat in any outboard passenger seat. Buckle the combination lap and shoulder belt. Grasp the shoulder belt portion and pull downward until the entire belt is extracted. Page 83 Seating and safety restraints To shorten the belt: Buckle the belt. Pull the loose end of the belt until snug. To lengthen the belt: Tip and pull the tongue. Do not wear the lap belt around your waist, keep it low around your hips. Page 84 To raise the height of the shoulder belt: Slide up. Pull down on the height adjuster to make sure that it is locked in place. Safety belt maintenance Check the safety belt systems periodically to make sure that they work properly and are not damaged. Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety See your Ford or Lincoln-Mercury dealer. Children and air bags For additional important safety information, read all information on safety restraints in this guide. Page 88 How does the air bag supplemental restraint system work? The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Page 89 Seating and safety restraints If the air bag is inflated, the air bag will not function again and must be replaced immediately. If the air bag is not replaced, the unrepaired area will increase the risk of injury in a collision. The SRS consists of: driver and passenger air bag modules which include the Page 90 A difficulty with the system is indicated by one or more of the following: The readiness light will either flash or stay lit. The readiness light will not illuminate immediately after ignition is turned on. A group of five beeps will be heard. Page 91 Seating and safety restraints safety seats made especially for children. Check your local and state laws for specific requirements regarding the safety of children in your vehicle. Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision. Page 92 To improve the fit of lap and shoulder belts on children who have outgrown child safety seats, Ford recommends use of a belt-positioning booster seat that is labelled as conforming to all Federal motor vehicle safety standards. Page 93 Seating and safety restraints way back on the seat cushion when the lower legs hang over the edge of the seat cushion. You may wish to discuss

the special needs of your child with your pediatrician. Page 94 Installing child safety seats in combination lap and shoulder belt seating positions 1. Position the child safety seat in a seat with a combination lap and shoulder belt. If you choose to install a child safety seat in the front passenger seat, move the seat as far back as possible. Page 95 Seating and safety restraints 3. Be sure the belt webbing is not twisted. Insert the belt tongue into the proper buckle for that seating position until you hear and feel the latch engage. Page 96 Seating and safety restraints 7. Pull the lap belt portion across the child seat toward the buckle and pull up on the shoulder belt while pushing down with knee on the child seat. Allow the safety belt to retract to remove any slack in the belt. Page 97 Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position which is capable of providing a tether anchorage. Page 98 The anchor bracket must be installed using the instructions provided with the kit. Contact your Ford dealer for a free tether anchor kit D Carefully follow the instructions provided with the kit. When the engine starts, the idle RPM runs faster to warm the engine. If the engine idle speed does not slow down automatically, have the vehicle checked. Page If you smell exhaust fumes inside your vehicle, have your dealer inspect your vehicle immediately. Do not drive if you smell exhaust fumes. Preparing to start the vehicle Engine starting is controlled by the spark ignition system. This system meets all Canadian Interference-Causing Equipment standard requirements regulating the impulse electrical field strength Page Starting 2. Make sure the headlamps and vehicle accessories are off. Make sure the parking brake is set. Make sure the gearshift is in P Park. If a light fails to illuminate, have the vehicle serviced. Turn the key to 5 Start without pressing the accelerator. Release accelerator when engine starts. After idling for a few seconds, apply the brake and release the parking brake. Using the engine block heater if equipped An engine block heater warms the engine coolant, which improves Page Starting Important ventilating information If the engine is idling while the vehicle is stopped in an open area for long periods of time, open the windows at least 2. Page Starting Guarding against exhaust fumes Although odorless and colorless, carbon monoxide is present in exhaust fumes. Take precautions to avoid its dangerous effects. If you ever smell exhaust fumes of any kind inside your vehicle, have your dealer inspect and fix your vehicle immediately. Anti-lock brake system ABS if equipped The ABS operates by detecting the onset of wheel lock up during brake applications and compensating for this tendency. The front wheels are prevented from locking even when the brakes are firmly applied. The ABS automatically releases and reapplies the front and rear brakes independently whenever the wheels start to lock. When this happens, you will feel the brake pedal pulse. Page Parking brake To engage the parking brake: To disengage the parking brake: Always set the parking brake fully and make sure that the gearshift is securely latched in P Park automatic transmission or in 1 First manual transmission. Page Driving Never hold the steering wheel to the extreme right or the extreme left for more than a few seconds when the engine is running. This action could damage the power steering pump. Speed sensitive steering The steering in your vehicle is speed sensitive. Extended use of other than matching size tires on a Traction-Lok rear axle could result in a permanent reduction in effectiveness. Page Driving and selection of two or four-wheel drive modes. The air suspension system places the vehicle at its lowest height to provide easy entry and exit when the vehicle is parked, the ignition is turned off and all doors are closed. Page An on board air compressor and solenoids are used to raise and lower the vehicle. It is normal to occasionally hear a buzz or clicking from the vehicle even when the ignition is turned off. The system stays energized for 40 minutes after the ignition is turned off to compensate for any load changes made after the vehicle is parked. Page Driving If the light is displayed while driving and the air suspension system service switch is not turned off, safely pull off the road at your earliest convenience. Turn the ignition switch from 4 On to 3 Off and 4 On again. If the warning light reappears, turn the air suspension switch off and have the vehicle serviced by your dealer Page Pull the gearshift lever towards you and downward to move the automatic gearshift. P Park â€" Always come to a complete stop before shifting into or out of P Park. When you leave your vehicle, place the gearshift lever in P Park. Set the parking brake fully, and shut off the engine. Page Driving Overdrive â€" The normal driving position for the best fuel economy. Transmission operates in gears one through four. Overdrive can be deactivated by pressing the transmission control switch on the end of the gearshift lever. Page Driving 2 Second â€" Use 2 Second to start-up on slippery roads or to provide additional engine braking on downgrades. Transmission operates in first and second gears. Upshifts can be made by shifting to 2 Second or to Overdrive. Page Driving 3. Turn ignition key to Lock 2 and remove the key. Re-insert the ignition key and turn it to Off 3. Shift the transmission to N Neutral. If you need to use the above procedure, it is possible that a fuse has blown and your brakelamps may not be functioning. Coupled with a center-disconnected front axle, this unique system is interactive with the road, continually monitoring and adjusting torque delivery to the front and

rear wheels to optimize vehicle control. Page Driving Utility and four-wheel drive vehicles are not designed for cornering at speeds as high as passenger cars any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions. Avoid sharp turns or abrupt maneuvers in these vehicles. Bring the vehicle to a stop. Depress the brake. Place the gearshift in N Neutral. Move the 4WD control to the 4H or 4L position. Page Driving Driving off-road with 4WD Your vehicle is specially equipped for driving on snow, sand, mud or other rough terrain and has operating characteristics that differ from those of other conventional vehicles. When using 4WD, maintain steering wheel control at all times, especially in rough terrain. Page Driving Rating : Carrying capacity for each axle system front and rear. GCWR Gross combined weight rating : Maximum combined weight of the towing vehicle including passengers and cargo and the trailer. Page Driving Using the luggage rack if equipped Load luggage at the front crossbar and adjust the rear crossbar as necessary. Do not exceed Do not exceed 68 kg lb of luggage if the weight is resting on the roof itself. For your safety and to maximize vehicle performance, be sure to use the proper equipment while towing. Page with all of the vehicle wheels on the ground. Towing trailers beyond the maximum recommended gross trailer weight exceeds the limit of the vehicle and could result in engine damage, transmission damage, structural damage, loss of control and personal injury. Preparing to tow Use the proper equipment for towing a trailer and make sure that Page Driving Weigh your vehicle as you customarily operate the vehicle without cargo. Subtract the total weight of passengers, driver and aftermarket equipment and the obtained weight in the step above from the GCWR to determine the trailer weight your vehicloe can tow. Trailer weight range The trailer weight range is the specified range by weight that the Page not the bumper. Make sure there is enough slack to allow the vehicle to turn corners. Using trailer lamps See your local trailer retailer or When connecting a trailer hitch: 1. Turn off the air suspension switch. Page Servicing while towing If you tow a trailer for long distances, your vehicle requires more frequent service than a vehicle not used for towing. Using a step bumper The rear bumper is equipped with an intregal hitch and requires only a ball with a 1 inch shank Depress to activate all indicators simultaneously. Depress again to switch off. The warning lights can be operated when the ignition is off. Page 1. Turn the ignition switch to the OFF position. Check fuel system for leaks. If no fuel leak is apparent, reset the fuel pump shut-off switch by pushing in the button on the switch. Turn the ignition switch to the ON position. Page Roadside emergencies Even after a fuse is replaced, it will continue to blow if the cause of the overload is not identified and corrected. Fuse ratings Fuse rating 5 amp Page Roadside emergencies Slot number amperage 30 amp 60 amp 50 amp 40 amp 30 amp 30 amp 20 amp 50 amp 50 amp 50 amp 40 amp 30 amp 30 C. Page Roadside emergencies Primary battery fuses Location Amperage Description Power network box megause Alternator megafuse Alternator field minifuse Page Roadside emergencies Slot number Amperage 5 amp 5 amp 5 amp 30 amp 5 amp 15 amp 15 amp 5 amp 20 amp 10 amp 5 amp 10 amp 5 amp 15 amp Description Generic electronic module GEM , shift interlock, air suspension module, heated backlite HBL relay, steering sensor, trip Page Slot number Slot number Roadside emergencies Amperage 10 amp 10 amp 10 amp 5 amp 10 amp 5 amp 10 amp 5 amp 30 amp Amperage Description Airbag diagnostic monitor Electronic flasher, 4WD vacuum solenoids, trailer tow battery charge relay, console climate door actuator, auxiliary blend and mode door actuators, Instead, gradually decrease your speed. Hold the steering wheel firmly and slowly move to a safe place on the side of the road: Park on a level spot. Page Removing the jack handle 1. Open the hood. Un-snap the end of the handle that is retained by the clip on the top of the windshield washer bottle. Un-snap the shaft of the handle from the two retaining clips attached to the top of the radiator shroud. Page Roadside emergencies 4. Remove the end of the cable from the wheel and slide the spare out from under the vehicle. To re-install the spare tire or tools, reverse the removal procedure. Page Removing flat tire and installing spare 6. Use the tip of the lug wrench to remove any wheel trim. Insert the tapered end of the lug wrench behind the wheel covers or hubcaps and twist off. Loosen the wheel nuts with the lug wrench. Remove the lug nuts with the lug nut wrench. Replace the flat tire with the spare tire. Thread the lug nuts on the wheel studs with the beveled face toward the wheel. Page Roadside emergencies wrench to screw the lug nut snug against the wheel, but do not tighten. Lower the vehicle by turning the jack handle counterclockwise. Remove the jack and fully tighten the lug nuts to the proper torque specifications in the order shown. Page On vehicles equipped with air suspension, turn ON the air suspension switch. Retighten the wheel lug nuts to the specified torque at km miles of new vehicle operation, after any wheel change or any time the lug nuts are loosened. Page Roadside emergencies Connecting the jumper cables 1. Position the vehicles so that they do not touch one another. Switch off the engine. Switch off any unnecessary electrical equipment. Page 3. Once the engine has been started, run both vehicles for a further three minutes before disconnecting the leads. Removing the jumper cables 1. Remove the

jumper cables in reverse order. Take the cable off the metallic surface 1 first, followed by the cable on the negative - booster battery terminal 2. Page If towing is necessary, it is recommended that your vehicle be towed with wheel lift or flatbed equipment. Do not tow with slingbelt equipment. Ford Motor Company has not developed or approved a slingbelt towing procedure. On 4x2 vehicles, it is acceptable to Page Precautions when servicing your vehicle Be especially careful when inspecting or servicing your vehicle. Here are some general precautions for your safety: Do not work on a hot engine. If you must work with the engine running, avoid wearing loose clothing or jewelry that could get caught in moving parts. If your vehicle requires professional service, your dealership can provide necessary parts and service. Page Maintenance and care 1. Inside the vehicle, pull the hood release handle located under the bottom left corner of the instrument panel. Outside the vehicle, release the auxiliary latch located under the center of the hood. Lift the hood. Page Maintenance and care Working with the engine on 1. Set the parking brake fully and ensure the gearshift is securely latched in P Park. Block the wheels to prevent your vehicle from moving unexpectedly. Do not start your engine with the air cleaner removed and do not remove it while the engine is running. Engine oil dipstick For more information on the engine oil dipstick location and maintenance, refer to Checking and adding engine oil in this chapter. Brake fluid reservoir 5. Engine compartment fuse panel 6. Engine coolant reservoir 7. Air cleaner filter 8. Page Maintenance and care are never needed and could, under certain conditions, lead to engine damage which is not covered by your Ford warranty. Page 4. Locate and carefully remove the engine oil dipstick. Wipe the dipstick clean. Insert the dipstick fully, then remove it again. The oil level should be in the range shown on the dipstick. If the oil level is below the minimum line, add engine oil as necessary. Page Ford production and aftermarket Motorcraft oil filters are designed for added engine protection and long life. If a replacement oil filter is used that does not meet Ford material and design specifications, startup engine noises or knock may be experienced. Page Visually inspect the fluid level. If necessary, add brake fluid until the level reaches MAX. Do not fill above this line. Use only a DOT 3 brake fluid certified to meet Ford specifications. Refer to Lubricant specifications in the Capacities and specifications chapter. Lift the washer fluid reservoir cover. Add washer fluid until the level reaches the FULL line. Use only fluid that meets Ford Specifications. Refer to Capacities and specifications. The addition of a bug shield to the front of the vehicle may adversely affect the washer system from delivering fluid to the windshield. Page Washer fluid in the liftgate reservoir Washer fluid for liftgate wiper and washer operation is supplied by the washer fluid reservoir located in the engine compartment. For information on adding fluid to this main reservoir, refer to Washer fluid in the windshield reservoir in this chapter. Ford Premium Engine Coolant is an optimized formula that will protect all metals and rubber elastomers used in Ford cooling systems for 4 years or 80, km 50, miles. Recycled engine coolant Ford Motor Company recommends that Ford and Lincoln-Mercury dealers use recycled engine coolant produced by Ford-approved processes. Not all coolant recycling Refer to the chart on the coolant container to ensure the coolant concentration in your vehicle is such that the coolant will not freeze at the temperature level in which you Page deterioration leaks loose hose clamps What you should know about fail-safe cooling Vehicles equipped with 4. If the engine coolant supply is depleted, this feature allows the vehicle to be driven temporarily before incremental component damage is incurred. Page Maintenance and care How fail-safe cooling works If the engine overheats, the engine will automatically switch from eight to alternating four cylinder operation. Each disabled cylinder acts as an air pump and cools the engine. When this occurs, the engine coolant temperature gauge will move into the red area and the light illuminates. Visually inspect the fluid level in the power steering fluid reservoir. Add power steering fluid until the fluid level reaches MAX. Use only fluid that meets Ford specifications. Maintenance and care Before adding any fluid, make sure the correct type will be used. This information is indicated on the dipstick. Page Maintenance and care approximately 32 km 20 miles of driving. If your vehicle has been operated for an extended period at high speeds, in city traffic during hot weather or pulling a trailer, the vehicle should be turned off for Page Maintenance and care For 4R70W transmissions, the fluid level should be within the crosshatched area, or if the vehicle has not been driven, between the holes near the bottom of the indicator. If necessary, add fluid in. Page Batteries contain sulfuric acid which burns skin, eyes, and clothing. Servicing your battery A low-maintenance replacement battery has removable vent caps for checking the electrolyte level and adding water. Page Maintenance and care treatments used by commercial car washes can reduce the effectiveness of wiper blades. To make reaching the wiper blades easier, simply: 1. Turn the ignition to the 3 On position. Turn the wipers on. Wait for the wipers to reach a vertical position and turn the ignition to 2 Lock. Page To replace the wiper blades: 1. Pull the wiper arm away from the windshield and lock into service position front wiper only. Turn the blade at an angle from the wiper arm. Push the lock

pin with a screwdriver to release the blade and pull the wiper blade down toward the windshield to remove it from the wiper arm. Department of Transportation-Tire quality grades: The U. Department of Transportation requires Ford to give you the following information about tire grades exactly as the government has written it. Treadwear The treadwear grade is a Page Maintenance and care The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate. Page Maintenance and care performance on the laboratory test wheel than the minimum required by law. The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure. Page Four tire rotation Five tire rotation Replacing the tires Replace the tires when the wear band is visible through the tire treads. Page Make sure that all replacement tires are of the same size, type, load-carrying capacity and tread design e. Failure to follow these Page Ford recommends only tires of this type and size for your vehicle. When purchasing replacement tires for your vehicle, consult your dealer or qualified service technician to ensure that the correct tire types are used. Using snow tires and traction Consult your dealer for information on other Ford approved methods of traction control. Page Important safety precautions Do not overfill the fuel tank. The pressure in an overfilled tank may cause leakage and lead to fuel spray and fire. If you do not use the proper fuel cap, the pressure in the fuel tank can damage the fuel system or cause it to work improperly in a collision. Page Maintenance and care apparent. The toxic affects of fuel may not be visible for hours. Fuels can also be harmful if absorbed through the skin. If fuel is splashed on the skin, promptly remove contaminated clothing and wash skin thoroughly with soap and water. If fuel is splashed in the eyes, remove contact lenses, flush with water for 15 minutes and Page Maintenance and care vehicle can be operated on non-California fuels. However, even though your engine will perform adequately on other gasolines, the performance of the emission control devices and systems may be adversely affected. Repair of damage caused by using a fuel that your vehicle was not designed for may not be covered by your warranty. Page The help reduce early nozzle shut offs and fuel spillage, park your vehicle so that the fuel filler door is level. Avoid excessively fast fuel dispensing rates over 38 L [10 gallons] per minute. If you spill any fuel on the body of your vehicle, clean it off immediately. Page Maintenance and care 3. After at least three to five fuel tank fill-ups, fill the fuel tank and record the current mileage reading. Use one of the following equations to calculate fuel economy. Liters used x kilometers traveled Total miles traveled gallons used Keep a record for at least one Page Do not turn off the ignition while your vehicle is in motion. If you notice one or more of the following, the emission system may not be functioning properly; have the vehicle serviced as soon as possible: Fluid leaks Page Maintenance and care Important emission control information By law, anyone who manufacturers, repairs, services, leases, trades vehicles or supervises a fleet of vehicles is not permitted to intentionally remove an emission control device or prevent it from working. Do not make any unauthorized changes to the vehicle or engine. Page specifies that additional city and highway driving is necessary to complete the check of the OBD II system. The driving modes required to reach the ready condition consist of a minimum of 30 minutes of city and highway driving: At least 20 minutes driving in stop and go city-type traffic with at least four idle periods. If a bulb is removed for an extended period of time, contaminants may enter the lamp housings and affect lamp Grasp the bulb only by its plastic base and do not touch the glass. The oil from your hand could cause the bulb to break the next time the headlamps are operated. Slide headlamp assembly forward and off of guide ribs to expose the back of the bulb and wiring connector. Straighten alignment pins, making them parallel with the outer edges of the attachment standoff. Carefully insert the headlamp assembly into the vehicle making sure the alignment pins are inserted into the proper holes and into the guide ribs. Remove the electrical connector from the bulb by grasping the wire and pulling it rearward. Without turning, carefully pull bulb assembly out of parking lamp assembly. Page Maintenance and care Replacing foglamp bulbs 1. Disconnect the electrical connector from the back of the foglamp assembly. Twist, then pull the bulb from the foglamp assembly. Install the new bulb. Connect the electrical connector to the back of the foglamp assembly. Follow the same steps to replace either bulb: 1. Open the liftgate to expose the lamp assemblies. The headlamps do not seem to provide enough light for clear night vision. Page Minor scratches or paint damage from road debris may be repaired with touch-up paint, paint repair foil or aerosol paint spray from the Ford accessory line. Observe the application instructions on the products. Remove particles such as bird droppings, tree sap, insect remains, tar spots, road salt and industrial fallout immediately. Page Maintenance and care Cleaning the wheels Wash the wheels with the same detergent you use to clean the body of your vehicle. Do not use acid-based wheel cleaners,

steel wool, fuel or strong detergents. Never use abrasives that will damage the finish of special wheel surfaces. Page Cover the highlighted areas to prevent water damage when cleaning the engine. Never wash or rinse the engine while it is running; water in the running engine may cause internal damage. Cleaning plastic exterior parts Use a vinyl cleaner for routine cleaning of plastic. Page Maintenance and care Cleaning the exterior lamps Wash the exterior lamps with the same detergent you used to wash the exterior of your vehicle. Use glass cleaner or tar remover if necessary. To avoid scratching the lamps, do not use a dry paper towel, chemical solvents or abrasive cleaners to clean the lamps. Page Maintenance and care Cleaning the instrument panel Clean instrument panel with a damp cloth, then dry with a dry cloth. Any cleaner or polish that increases the gloss of the upper portion of the instrument panel should be avoided. The dull finish in this area is to help protect the driver from undesirable windshield reflection. Page slide bar if equipped , child safety seat tether bracket assemblies if equipped and attaching hardware should be inspected after any collision. Ford recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision Refer to the Engine data chart for spark plug gap specifications. Page Capacities And Specifications 5. DIS 5. This tag bears technical information on your vehicle and identifies various components. The VIN tag may be seen by looking through the windshield from the outside of the vehicle. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. Page Index Index Air bag supplemental restraint system Page Idle relearning Page Index Trailer towing calculating maximum trailer weight Print page 1 Print document pages. Cancel Delete. Sign In OR. Don't have an account? Sign up! Restore password. Upload from disk. Upload from URL. When troubleshooting a Ford Expedition for a no-start condition, the first objective is to determine in which system the failure lies. Looking at the problem from a technician's point of view is the most expeditious method. A technician will immediately go for the most common problems first. The possibilities are unlimited when taken into context--the electrical system, the ignition system, fuel system, computer or components within its sphere of influence of which there are many , the security system and a mechanical failure in the engine. Check the starting circuit. The starter must engage the flexplate gears and rotate the engine in order for it to start. This happens when the key is in the full, forward start position. If no noise is emitted when the key is in the start position, the problem area has been located. If this is not the case and the starter operates, the testing procedures for the starter circuit can be ignored. Lift the hood and inspect the battery for any irregularities such as corrosion, loose or broken terminals and repair as necessary. If any of the problems to be covered are found defective, repair and retry the starter. Continue only if the problem has not been corrected. Check the battery voltage with the voltmeter. Connect the red voltmeter lead to the positive terminal and the black lead to the negative terminal. The voltage should read If the voltage is one or more volts lower, the battery is discharged or has a bad cell. Charge the battery and retest. If the voltage rises to the appropriate numbers, try the starter once more by having a helper turn the key to start while you watch the voltmeter. If the engine starts or if it doesn't, the important thing is the reading on the voltmeter when the key is in start. If the voltage drops to below If the voltage does not drop and the engine starts, check the voltmeter again. The voltage should now be If the voltage is wrong, replace the alternator. If the battery voltage is correct and the engine still does not try to start, the starter circuit is at fault. Check the fuse and the relay in the fuse relay box on the driver's fenderwell. If the fuse and relay are OK, check the power to the starter solenoid by connecting the voltmeter's black lead to a good ground and using the red lead to probe the terminal where the large diameter red wire is attached on the starter solenoid. If there is no voltage, the wire between the solenoid and battery is bad. If there is voltage, pull the small wire off the solenoid. Probe this wire connector as the helper turns the key to start. If there is voltage, the starter is bad. If there is no voltage, the ignition switch is bad. Check to see if there is a computer system failure by turning the key to the run position with the engine off. Plug the code scanner into the OBD port on the left underside of the steering column. Press the key marked "Read" and the scanner will display any failure codes for the faults it has recognized. The code is a letter followed by four numbers. The letter designates the location and the numbers the fault. Cross-reference the code with the accompanying code sheet and a description of the fault will be presented. Correct the fault and try again. Check the fuel system. Open the fuel cap and have the helper cycle the key all the way on for three seconds and off for four seconds. If the fuel pump cannot be heard, try one more test for accuracy. Remove the air intake duct to the throttle body. Hold the throttle linkage open. Squirt a good shot of carburetor cleaner into the intake manifold and retry. If the engine starts and runs for a few seconds, the fuel pump has failed. If it still does not start, check the ignition. Pull a spark plug wire off a spark plug. Insert the test spark plug and lay it on the intake or block where it will be grounded.

Have

1976 civic
mazda rx8 engine coolant
1998 suzuki grand vitara

the helper try to start the engine and watch the spark plug. A good spark indicates a problem internally in the engine. No spark means the ignition system is at fault. Don Bowman has been writing for various websites and several online magazines since He has owned an auto service facility since and has over 45 years of technical experience as a master ASE tech. Bowman has a business degree from Pennsylvania State University and was an officer in the U. Army aircraft maintenance officer, pilot, six Air Medal awards, two fours Vietnam. Step 1 Check the starting circuit. Step 2 Lift the hood and inspect the battery for any irregularities such as corrosion, loose or broken terminals and repair as necessary. Step 3 Check the battery voltage with the voltmeter. Step 4 Check the fuse and the relay in the fuse relay box on the driver's fenderwell. Step 5 Check to see if there is a computer system failure by turning the key to the run position with the engine off. Step 6 Check the fuel system.