Body System

Symptom Chart(s)

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

Dust and Water Leaks

Most dust and water leaks occur due to missing or incorrectly installed body sealer or components. The source of the leak is detected by:

- pressurizing the vehicle and testing with soapy water.
  - Locate and tape off the body vents.
  - Turn the blower motor to HI.
  - Turn the air recirculation OFF.
  - Close the windows and doors.
  - Open the hood and spray soapy water along body seams and grommets. Make sure to test the areas around the A-pillar at the fender and the hood hinge area.
  - Check for bubbles.
- inspecting for a dust pattern or water path near and above the area in question.
- removing any trim or carpet in the general area of the leak.
- road testing or water-hose testing the vehicle.
- placing a bright light under the vehicle, removing any necessary trim or carpet and inspecting the interior of the body at joints and weld lines.

Wind noise

Most wind noise leaks occur at the corners of the windows or in the doors. Wind noise is detected by driving the vehicle at highway speeds or at speeds as specified by the customer. The vehicle should be driven in 4 different directions, with all the windows closed, the radio off and the A/C blower motor off.

Squeak and Rattle

Squeak and rattle noises are generally caused by loose parts, contact or relative movement between 2 surfaces or loose wires and connectors. The source of the noise can be detected by stopping movement of the suspect part by hand or by using dampening or low friction materials.

Symptom Chart: Body System - General Information

Condition	Possible Sources	Actions
Draft/wind noise and water leak around door perimeter	Loose fit seal	PINCH seal carrier to improve retention on seal flange.
	Seal installed incorrectly	REINSTALL the seal.
	Door misaligned	REALIGN the door. CHECK door gaps and fit in door opening and ADJUST as necessary. For front door alignment, Regular Cab and Crew Cab, REFER to: Front Door Alignment - Crew Cab/Regular Cab (501-03 Body Closures, General Procedures). For front door alignment, Super Cab, REFER to: Front Door Alignment - SuperCab (501-03 Body Closures, General Procedures). For rear door alignment, Super Cab, REFER to: Rear

Condition	Possible Sources	Actions
		Door Alignment - SuperCab (501-03 Body Closures, General Procedures). For rear door alignment, Crew Cab, REFER to: Rear Door Alignment - Crew Cab (501-03 Body Closures, General Procedures).
	Scuff plate installed incorrectly	REINSTALL the scuff plate.
	Seal or seal pushpins damaged	INSTALL a new seal/pushpins.
	Sheet metal joints in door or door opening	SEAL leaks with seam sealer.
Draft/wind noise and water leak around glass run	Door glass misaligned	ADJUST door glass.
	Glass run installed incorrectly or not fully seated	REINSTALL glass run. For front door glass run and bracket, REFER to: Front Door Glass Run and Bracket (501-11 Glass, Frames and Mechanisms, Removal and Installation). For front door glass top run, REFER to: Front Door Glass Top Run (501-11 Glass, Frames and Mechanisms, Removal and Installation). For rear door glass run and bracket, Crew CabREFER to: Rear Door Glass Run and Bracket - Crew Cab (501-11) . For rear door glass top run, Crew Cab, REFER to: Rear Door Glass Top Run - Crew Cab (501-11 Glass, Frames and Mechanisms, Removal and Installation). INSERT foam in glass run carrier if necessary.
	Leak path behind glass run	INSTALL foam rope behind glass run.
	Glass run channel spread wide	PINCH glass run channel to reduce size of opening.
	Glass run damaged	INSTALL a new glass run. For front door glass run and bracket, REFER to: Front Door Glass Run and Bracket (501-11 Glass, Frames and Mechanisms, Removal and Installation). For front door glass top run, REFER to: Front Door Glass Top Run (501-11 Glass, Frames and Mechanisms, Removal and Installation). For rear door glass run and bracket, Crew CabREFER to: Rear Door Glass Run and Bracket - Crew Cab (501-11) . For rear door glass top run, Crew Cab, REFER to: Rear Door Glass Top Run - Crew Cab (501-11 Glass, Frames and Mechanisms, Removal and Installation).
	Glass run overstuffed in corners creating pucker	REINSTALL glass run. INSTALL new part as necessary. For front door glass run and bracket, REFER to: Front Door Glass Run and Bracket (501-11 Glass, Frames and Mechanisms, Removal and Installation). For front door glass top run, REFER to: Front Door Glass Top Run (501-11 Glass, Frames and Mechanisms, Removal and Installation).

Condition	Possible Sources	Actions
		For rear door glass run and bracket, Crew CabREFER to: Rear Door Glass Run and Bracket - Crew Cab (501-11) . For rear door glass top run, Crew Cab, REFER to: Rear Door Glass Top Run - Crew Cab (501-11 Glass, Frames and Mechanisms, Removal and Installation). INSERT foam in glass run carrier if necessary.
	Inner glass run reveal lip not contacting sheet metal	REINSTALL glass run. INSTALL new part as necessary. For front door glass run and bracket, REFER to: Front Door Glass Run and Bracket (501-11 Glass, Frames and Mechanisms, Removal and Installation). For front door glass top run, REFER to: Front Door Glass Top Run (501-11 Glass, Frames and Mechanisms, Removal and Installation). For rear door glass run and bracket, Crew CabREFER to: Rear Door Glass Run and Bracket - Crew Cab (501-11) . For rear door glass top run, Crew Cab, REFER to: Rear Door Glass Top Run - Crew Cab (501-11 Glass, Frames and Mechanisms, Removal and Installation). INSERT foam in glass run carrier if necessary.
	Outer glass run reveal lip on rear door not contacting sheet metal	REINSTALL fixed quarter glass run assembly. INSTALL new part as necessary.
	Door mounted B-pillar applique misaligned causing glass run twist	REINSTALL applique so that glass run fits in channel correctly.
	Inner belt overstuffed creating gap between glass and glass run	REINSTALL inner belt and INSTALL foam rope behind inner lip of glass run at belt. INSTALL new glass run as necessary.
Draft/wind noise and water leak at inner belt line	Belt line seal installed incorrectly on flange	ADJUST seal (do not bend the flange).
	No contact with side glass	ADJUST door glass.
	No contact with glass runs at both ends of belt line seal	ADJUST belt line seal or ADD foam at seal ends.
	Belt line seal damaged	INSTALL a new seal.
Draft/wind noise and water leak at outer belt line	Belt line seal installed incorrectly on flange (no glass contact)	ADJUST seal.
	Belt line seal does not contact the glass	ADJUST door glass.
	No contact with glass runs at both ends of belt line seal	ADJUST belt line seal or ADD foam at seal ends.
	Belt line seal damaged	INSTALL a new seal.
Draft/wind noise at inner door handle/speaker opening	Hole in weathershield	SEAL hole with suitable tape.
	Weathershield misaligned	REALIGN weathershield. INSTALL a new weathershield if pressure sensitive adhesive fails.

Condition	Possible Sources	Actions
	Exterior door handle seal misaligned/damaged	REALIGN or INSTALL a new seal as necessary.
	Speaker or speaker seal missing or damaged	REPAIR speaker seal or INSTALL a new door speaker.
Draft/wind noise and water leaks at floor pan and grommets	Missing or damaged plugs/grommets	CHECK plugs/grommets for correct installation or damage. INSTALL new plugs/grommets if necessary.
Road noise	Missing mastic insulators	CHECK for missing mastic insulators.
	Missing body insulators	CHECK for missing body insulators.
Rattles in body/doors and instrument panel	Loose wires/cables	CHECK that all wires/cables are correctly routed and inserted in correct retainers.
	Loose objects/components in door wells, pillars quarter trim panels	CHECK doors by carefully striking underside of doors with a rubber mallet while listening for rattles in doors and pillars. REMOVE or TIGHTEN loose objects/components.
	Buzz from instrument panel components	IDENTIFY which components of the instrument panel are buzzing. SECURE/FASTEN components as necessary, ADD foam or felt as needed if rattle persists.
Door drain holes collecting water	Holes clogged with mud or road tar	CLEAN drain holes of foreign material with a punch or screwdriver. CHECK drain holes regularly.
Wind noise from exterior rear view mirror	Exterior mirror housing misaligned	REALIGN with edges shingled to airflow, with no gaps.
	Mirror sail gasket folded/misaligned	REINSTALL with gasket unfolded and aligned correctly.
	Mirror housing trim cap installed incorrectly	REINSTALL with edges shingled to airflow.
	Air leak through mirror housing hinge	Fully ENGAGE mirror into its operating position. USE foam to block air path through hinge.
	Inner sail trim installed incorrectly	REINSTALL sail trim. ADJUST door trim.
	Inner sail gasket/barrier installed incorrectly	REINSTALL trim cover with gasket/barrier aligned correctly.
	Air path through wiring bundle/fastener access holes	BLOCK air path(s) with foam/tape.
	Exposed fastener access hole on mirror housing/sail	INSTALL a new cap if missing.
	Mirror housing trim cap under-flush to housing causing whistle	INSTALL a new exterior mirror. To install new mirror, REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
Rattle/vibration from exterior rear view mirror	Mirror mounting nuts loose	TIGHTEN mirror mounting nuts. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
	Aftermarket air deflector/stone shields	If possible, REMOVE aftermarket air deflector/stone shield, then ROAD TEST vehicle. If concern is no

Condition	Possible Sources	Actions
		longer present, ADVISE the customer the aftermarket component was causing concern.
Draft/wind noise and water leak around perimeter of all fixed glass	Air traveling up windshield molding along A-pillar.	INSTALL foam rope full length of the A-pillar.
	Gaps in sealant bead of windshield/rear glass	Install new windshield/rear glass. To install new windshield/rear glass, REFER to: Fixed Glass (501-11 Glass, Frames and Mechanisms, General Procedures).
	Windshield/rear glass misaligned or not installed correctly	Install new windshield/rear glass. To install new windshield/rear glass, REFER to: Fixed Glass (501-11 Glass, Frames and Mechanisms, General Procedures).
	Rear hood seal at base of windshield misaligned/damaged	REALIGN or INSTALL a new seal as necessary.
	High mounted stoplamp	CHECK high mounted stoplamp seal. REPAIR or INSTALL as necessary.
	A-pillar applique along windshield lifting	INSPECT attachment clips for damage and REINSTALL part. INSTALL new part as necessary.
Wind noise created by airflow over or behind body panels	Fender splash shield misaligned	REALIGN fender splash shield.
	Body panel misaligned (exposed edge)	REALIGN appropriate body panel.
	Hood misaligned (front margin)	CHECK hood gaps and fit. ADJUST hood as necessary.
	Front grille edge noise	APPLY foam in hollow areas behind louvers.
Wind noise created by grille opening panel	Grille fit to leading edge on hood	If possible, ADJUST grille opening panel forward to eliminate wind noise.
	Sharp edges due to material imperfections	REMOVE sharp edges (no visible surface damage).
Wind noise from air extractor (body vent)	Air extractor housing seated incorrectly	REINSTALL air extractor housing.
	Air extractor housing or flaps damaged	INSTALL a new air extractor.
Wind noise from bug shield/exterior windshield sun visor	Turbulence created by location and shape	DETERMINE if the component is an Original Equipment Manufacturer (OEM) part or aftermarket. If aftermarket, ADVISE customer accordingly. If Original Equipment Manufacturer (OEM), VERIFY correctly installed. If noise is abnormal REPAIR or INSTALL new as required.
Wind noise from cowl panel (leaf screen)	Leaf screen rubber lip not touching windshield	REINSTALL part. If part still does not fit, CHECK for damaged attachment clips. INSTALL new part as necessary.