

*** SYMPTOM CHECK LIST ***

Article Text

1993 Volkswagen EuroVan
For Volkswagen Technical Site
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Saturday, March 18, 2000 10:18PM

ARTICLE BEGINNING

SYMPTOM CHECK LIST WORKSHEETS

*** PLEASE READ THIS FIRST ***

NOTE: This article is intended for general information purposes only. It does not apply specifically to one make or model.

PURPOSE

Why Use the Symptom Check List Worksheets?

One of the most difficult and critical lines of communication is between the service customer and the technician. The clearer the technician understands the customer's concerns, the more likely the problem will be "fixed right the first time".

The Symptom Check List Worksheets in this article are designed to improve this communication. When used consistently, they can be helpful in reducing shop comebacks, increasing technician productivity, and producing satisfied customers. They also provide other benefits:

- * Reduce "No Trouble Found" problems
- * Increase customer involvement
- * Customer perceive that "they really care and listen"
- * Save time during peak write-up periods
- * Reduce recontacting customers for additional information
- * Improve night drop information
- * Insure all the right questions are asked at write-up

Making the Worksheets a Part of Your Normal Routine

The following information contains ideas that may be helpful in forming habits that promote daily use of the Symptom Check Lists:

- * HAVE THE SERVICE ADVISER FILL OUT THE FORM(S) WITH THE CUSTOMER WHENEVER POSSIBLE.
- * Place them in your night drop for the customer to fill out, along with an instruction sheet to help them understand what to do.
- * Hand out the worksheets to customers while they wait in line during the peak morning rush and ask them to fill it out. It will save time for all concerned and improve the quality of information received from the customer.
- * Make sure it is attached to the hard copy when it goes to the technician.
- * Place a copy with the final repair papers and review it with the customer at delivery.
- * Put a new worksheet in the glovebox of all departing customers.
- * Require that you personally see a copy of all worksheets filled out for shop comebacks.

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- * Hold a shop meeting to get employee buy-in and their ideas on how to make it effective in your shop.

There are many other ways to utilize the concept, but as with every other idea, successful implementation depends on employee involvement and buy-in.

SYMPTOM CHECK LIST WORKSHEETS

CONDENSED VERSION - ALL ON ONE PAGE

NOTE: Have the service adviser fill out this form with the customer whenever possible.

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DRIVEABILITY WORKSHEET (To Be Filled Out By Vehicle Owner)	
Name: _____ Date: _____ Make: _____ Model: _____ Year: _____ Engine: _____ Mileage: _____	
FAULT CHARACTERISTICS - SYMPTOMS - DESCRIPTION OF PROBLEM (Please Check All That Apply In All Categories)	
Starting Problems	<input type="checkbox"/> Will Not Crank <input type="checkbox"/> Cranks, But Won't Start <input type="checkbox"/> Starts, But Takes A Long Time
Engine Quits/Running Problems	Quits: <input type="checkbox"/> Right After Starting <input type="checkbox"/> When Put Into Gear <input type="checkbox"/> Right After Vehicle Comes To A Stop <input type="checkbox"/> During Steady Speed Driving <input type="checkbox"/> While Idling <input type="checkbox"/> During Acceleration <input type="checkbox"/> When Parking
Poor Idling Conditions	Idle Speed: <input type="checkbox"/> Is Too Slow At All Times <input type="checkbox"/> Is Too Slow With A/C On <input type="checkbox"/> Is Too Fast <input type="checkbox"/> Is Rough Or Uneven <input type="checkbox"/> Fluctuates Up and Down
Poor Running Conditions	<input type="checkbox"/> Runs Rough <input type="checkbox"/> Lacks Power <input type="checkbox"/> Hesitates Or Stumbles On Acceleration <input type="checkbox"/> Bucks and Jerks <input type="checkbox"/> Engine Knocks, Pings, Rattles <input type="checkbox"/> Backfires <input type="checkbox"/> Poor Fuel Economy <input type="checkbox"/> Misfires or Cuts Out <input type="checkbox"/> Surges and/or Chuggles <input type="checkbox"/> Dieseling or Run-On <input type="checkbox"/> Engine Light Always On <input type="checkbox"/> Engine Light On Sometimes <input type="checkbox"/> Fuel, Gas, or Sulfur Smell
Auto. Transmission Problems	<input type="checkbox"/> Improper Shifting (early/late) <input type="checkbox"/> Changes Gear Randomly On Its Own <input type="checkbox"/> Vehicle Does Not Move When In Gear
Poor Handling	<input type="checkbox"/> Pulls To One Side <input type="checkbox"/> Hard Steering <input type="checkbox"/> Vehicle Shakes and/or Vibrates While Moving
Noise Problems	Explain: _____
Odor Problems	Explain: _____
Problem Frequency	<input type="checkbox"/> Always <input type="checkbox"/> Often <input type="checkbox"/> Occasionally
Usually Occurs	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Anytime
Engine Temp.	<input type="checkbox"/> Cold <input type="checkbox"/> Warm <input type="checkbox"/> Hot
Vehicle Speed	<input type="checkbox"/> Low <input type="checkbox"/> Cruising <input type="checkbox"/> High
Driving Conditions During Occurrence	<input type="checkbox"/> Short - Less Than 2 Miles <input type="checkbox"/> 2-10 Miles <input type="checkbox"/> Long - More Than 10 Miles <input type="checkbox"/> Stop & Go <input type="checkbox"/> While Turning <input type="checkbox"/> While Braking <input type="checkbox"/> At Gear Engagement <input type="checkbox"/> With A/C Operating <input type="checkbox"/> With Headlights On <input type="checkbox"/> During Acceleration <input type="checkbox"/> During Deceleration <input type="checkbox"/> Mostly Downhill <input type="checkbox"/> Mostly Uphill <input type="checkbox"/> Mostly Level <input type="checkbox"/> Mostly Curvy <input type="checkbox"/> Rough Road
Driving Habits	<input type="checkbox"/> Drive Hard Before Engine Is Warmed <input type="checkbox"/> Allow Engine To Warm <input type="checkbox"/> Mostly City Driving <input type="checkbox"/> Highway <input type="checkbox"/> Park Vehicle Inside <input type="checkbox"/> Outside Drive Per Day: <input type="checkbox"/> Less Than 10 Miles <input type="checkbox"/> 10-50 <input type="checkbox"/> More Than 50 Fuel Octane: <input type="checkbox"/> 87 <input type="checkbox"/> 89 <input type="checkbox"/> 91 <input type="checkbox"/> More Than 91 Brand: _____ <input type="checkbox"/> Gasohol <input type="checkbox"/> Propane Conversion
Outside Weather	<input type="checkbox"/> Cold <input type="checkbox"/> Warm <input type="checkbox"/> Hot <input type="checkbox"/> Wet/Rainy <input type="checkbox"/> Fog <input type="checkbox"/> Snow/Hail <input type="checkbox"/> Dust/Dirt <input type="checkbox"/> Dry <input type="checkbox"/> Humid

Fig. 1: Entire Vehicle - Symptom Check List For Customer

FULL VERSION - ALL ON FOUR PAGES

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NOTE: Have the service adviser fill out these forms with the customer whenever possible.

Dear Valued Customer:

Our goal is to fix your problem correctly and get you back on the road as soon as possible in the unlikely event you experience a problem with your vehicle. Help us identify the exact nature of the concern by taking a few moments to complete the appropriate section of this diagnostic worksheet. Thank you.

CUSTOMER NAME: _____ PHONE NO.: _____ REPAIR ORDER NO.: _____

DIAGNOSTIC WORKSHEET

DRIVEABILITY - ENGINE - AUTOMATIC TRANSMISSION

SYMPTOM (CHECK ALL THAT APPLY)
ENGINE

- "Service Engine Soon"/"Malfunction Indicator Light" on
- Hard start/no start (cranks OK)
- Won't crank
- Engine stalls
- Engine miss
- Miss while driving
- Hesitates, stumbles or sags
- Rough idle
- Idle is too high Idle is too low
- Poor power/performance
- Surge or chuggle, buck - jerk - skip
- Poor gas mileage Highway City
- Pings, detonates
- Suphur, rotten egg odor
- Backfires (popping noise) - underhood/tailpipe
- Exhaust smoke Increased oil consumption
- Runs on after key is turned off
- Speed fluctuates without moving accelerator
- Engine noise (explain): _____

_____ (whine, rattle, groan, clunk, etc.)
 Other: _____

TRANSMISSION

- Does not shift properly Hard shift
- Will not shift Up Down
- Will not shift into overdrive
- Engine starts in other than "P" or "N"
- Noise (describe): _____

_____ (whine, rattle, groan, clunk, buzz, etc.)
 Shifts into gear too early- Overdrive doesn't work with speed control, but is otherwise OK
- Highway speed - shudder, surge, etc.
- Other: _____

EXPLAIN: _____

OPERATING CONDITIONS (CHECK ALL THAT APPLY)
HOW OFTEN DOES IT OCCUR? (Engine and/or Transmission)

- Always Few seconds Few minutes
- Few hours Few days Few weeks
- Few months Variable Only during event
- Every _____ to _____ miles Unknown
- Other (explain): _____
- Just started Getting better Getting worse
- Since new

WHEN DOES IT OCCUR? (Engine and/or Transmission)
When Engine Temperature is:

- Cold Warm Hot
- All the time Only during warmup

Weather Conditions:

- Very cold - below 0 degrees F Cold - 0 to 32 degrees F
- Cool - 32 to 60 degrees F Warm - 60 to 80 degrees F
- Hot - Above 80 degrees F Any environment
- Raining Dry Humid
- Snow/Ice Wet roads Other (explain below)

Driving Conditions:

- Light throttle Medium throttle Hard throttle
- Starting At idle Decelerating
- Over bumps When shifting While turning
- Cruising steady at _____ MPH While braking
- Anytime Uphill Downhill
- Highway City/town Stop and go
- Between _____ MPH and _____ MPH
- Only with A/C or Defrost on

What Type of Fuel?

- Regular UL Mid range UL Premium Unleaded
- Gasohol Ethanol Methanol
- Diesel #1 Diesel #2 Various brands

What Brand? _____

When Gear Selector is in:

- Park/Neutral Reverse Overdrive
- Drive/3 Drive/2 Drive/1

Between Gears:

- Park to R or D Rev/Drive First/Second
- Second/Third Third/Overdrive

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BRAKES - STEERING - SUSPENSION

SYMPTOM

- Vehicle pulls right - When _____
- Vehicle pulls left - When _____
- Steering wheel vibrates at ____ MPH
- Excessive play in steering
- Erratic steering when braking
- Poor steering wheel return after cornering
- Suspension bottoms out
- Leans or sways in corners
- Brake light on
- Traction control light on
- Uneven tire wear
- Sits uneven
- "Dog" tracks
- ABS light on
- Soft ride

Hard to steer

- Effort
- Wanders
- Steering wheel off center

Shimmy/vibration (check box below for location)

- | | | |
|--------------------------------|--------------------------------|--------------------------------------|
| <input type="checkbox"/> Front | <input type="checkbox"/> Rear | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Seat | <input type="checkbox"/> Floor | <input type="checkbox"/> Other _____ |

Brake pedal

- Noise
- Pulses
- Squeaks
- Hard
- Mushy
- Excessive travel

WHEN DOES IT OCCUR?

- Cold days
- Hot days
- Wet/rain
- All the time
- Intermittent
- Parking maneuvers
- At road speed
- Accelerating
- Decelerating

EXPLAIN: _____

SQUEAK - RATTLE - NOISE CONDITIONS

AREA OF NOISE

- | | | | | |
|--|----------------------------------|--------------------------------------|---------------------------------|-------------------------------------|
| <input type="checkbox"/> Engine Compartment | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Front Suspension | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Rear Suspension | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Passenger Compartment | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Instrument Panel | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Doors | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Rear seat area | <input type="checkbox"/> Console | <input type="checkbox"/> Other _____ | | |

NOISE SOUNDS LIKE

- Knocks
- Hard metal
- Light metal
- Roars
- Ticking
- Whine
- Squeaks
- Rattles
- Scraping
- Other _____

HOW OFTEN DOES IT OCCUR?

- Continuous
- Often
- Intermittent
- Just started
- Since new

WHEN DOES IT OCCUR?

- All the time
- Speed
- RPM
- Only moving
- On turns
- Braking
- Hard throttle
- Light throttle
- Decelerate
- Steady speed
- Idle in gear
- Idle out of gear
- Hot days
- Cold days
- Humid or rainy
- Temperature _____
- Heavy bumps
- Light bumps
- Smooth pavement

EXPLAIN: _____

CUSTOMER NAME: _____

PHONE NO.: _____

REPAIR ORDER NO: _____

SHOP USE ONLY:

VIN#: _____

MILES: _____

TECHNICIAN: _____

ADVISOR#: _____

50H15062

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AIR CONDITIONING - HEATER - VENTILATION

SYSTEM OR AREA AFFECTED

- | | | | | | |
|--|--|------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> Air conditioner | <input type="checkbox"/> Heater | <input type="checkbox"/> Defroster | <input type="checkbox"/> Vent | <input type="checkbox"/> Bi-Level | <input type="checkbox"/> Fan/blower |
| <input type="checkbox"/> Max A/C | <input type="checkbox"/> Automatic Temperature Control | | <input type="checkbox"/> Mix/blend | <input type="checkbox"/> Economy | <input type="checkbox"/> All |

SYMPTOM

- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Does not work | <input type="checkbox"/> Blows wrong temperature air | <input type="checkbox"/> No air comes out of vents | <input type="checkbox"/> Rapid cycling |
| <input type="checkbox"/> Noisy (explain) | <input type="checkbox"/> Broken | <input type="checkbox"/> Odor | <input type="checkbox"/> Air comes from wrong outlets |
| <input type="checkbox"/> Leaks | <input type="checkbox"/> Insufficient heat or cool | <input type="checkbox"/> Other (explain below) | <input type="checkbox"/> Blows fuse |

WHEN DOES IT OCCUR?

- | | | | | |
|--|------------------------------|--|---------------------------------------|--|
| <input type="checkbox"/> All the time | <input type="checkbox"/> Hot | <input type="checkbox"/> Cold | <input type="checkbox"/> Intermittent | <input type="checkbox"/> Right after startup |
| <input type="checkbox"/> When change controls only | | <input type="checkbox"/> Other (explain below) | | <input type="checkbox"/> Fan blower speed High / Med / Low |

EXPLAIN: _____

ELECTRICAL - RADIO - TAPE/CD PLAYER

SYMPTOM - MUSIC SYSTEM

- | | | | | | |
|---|--------------------------------|-------------------------------------|--|--------------------------------------|---|
| <input type="checkbox"/> Does not work | <input type="checkbox"/> Noisy | <input type="checkbox"/> Static | <input type="checkbox"/> Won't load | <input type="checkbox"/> Won't eject | <input type="checkbox"/> Poor reception |
| <input type="checkbox"/> Controls do not work | | <input type="checkbox"/> Blows fuse | <input type="checkbox"/> Other (explain below) | | |

SYSTEM AFFECTED

- | | | | | |
|--------------------------------------|------------------------------------|---|---|---|
| <input type="checkbox"/> Radio only | <input type="checkbox"/> AM | <input type="checkbox"/> FM | <input type="checkbox"/> FM stereo | <input type="checkbox"/> Graphic equalizer |
| <input type="checkbox"/> Tape player | <input type="checkbox"/> CD player | <input type="checkbox"/> Whole system | <input type="checkbox"/> Steering wheel buttons | <input type="checkbox"/> Phone |
| <input type="checkbox"/> Speakers | <input type="checkbox"/> Front | <input type="checkbox"/> Rear | <input type="checkbox"/> Left | <input type="checkbox"/> Right |
| <input type="checkbox"/> Antenna | <input type="checkbox"/> Clock | <input type="checkbox"/> Radio or player controls | | <input type="checkbox"/> Rear seat controls |

ALL OTHER ELECTRICAL ITEMS OR ACCESSORIES

Please list the complaint accessory or item and check any applicable symptom(s) from the list that follows:

- | | | | | |
|-------|---|---------------------------------------|--|----------------------------------|
| _____ | <input type="checkbox"/> Inoperable | <input type="checkbox"/> Noisy | <input type="checkbox"/> No control | <input type="checkbox"/> Erratic |
| | <input type="checkbox"/> Check light on or flashing | | <input type="checkbox"/> Works improperly (explain below) | |
| | <input type="checkbox"/> Blows fuse | <input type="checkbox"/> Intermittent | <input type="checkbox"/> Related system affected (explain below) | |

- | | | | | |
|-------|---|---------------------------------------|--|----------------------------------|
| _____ | <input type="checkbox"/> Inoperable | <input type="checkbox"/> Noisy | <input type="checkbox"/> No control | <input type="checkbox"/> Erratic |
| | <input type="checkbox"/> Check light on or flashing | | <input type="checkbox"/> Works improperly (explain below) | |
| | <input type="checkbox"/> Blows fuse | <input type="checkbox"/> Intermittent | <input type="checkbox"/> Related system affected (explain below) | |

- | | | | | |
|-------|---|---------------------------------------|--|----------------------------------|
| _____ | <input type="checkbox"/> Inoperable | <input type="checkbox"/> Noisy | <input type="checkbox"/> No control | <input type="checkbox"/> Erratic |
| | <input type="checkbox"/> Check light on or flashing | | <input type="checkbox"/> Works improperly (explain below) | |
| | <input type="checkbox"/> Blows fuse | <input type="checkbox"/> Intermittent | <input type="checkbox"/> Related system affected (explain below) | |

WHEN DOES IT OCCUR?

- | | | | |
|--|---|-------------------------------|---|
| <input type="checkbox"/> All the time | <input type="checkbox"/> Hot | <input type="checkbox"/> Cold | <input type="checkbox"/> Just after starting - malfunctions for a while |
| <input type="checkbox"/> Intermittent | <input type="checkbox"/> After runs for _____ minutes | | <input type="checkbox"/> Rough roads or bumps only |
| <input type="checkbox"/> Other (explain below) | | | |

EXPLAIN: _____

CUSTOMER NAME: _____

PHONE NO.: _____

REPAIR ORDER NO: _____

SHOP USE ONLY:

VIN#: _____

MILES: _____

TECHNICIAN: _____

ADVISOR#: _____

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WATER LEAK - WINDNOISE

WATER LEAK

Leak Occurs When?

- Setting level Any time it rains While driving in the rain Car wash only
 Back lower than front (facing uphill) Front lower than back (facing downhill)

Location of Leak (where water appears):

- LF Door RF Door LR Door RR Door Windshield Rear window
 LF window RF window LR window RR window Side door Sunroof/T-Top
 Under instrument panel Rear door/rear hatch

WINDNOISE:

Location:

- LF Door RF Door LR Door RR Door Windshield Rear window
 LF window RF window LR window RR window Side door Sunroof/T-Top
 Under instrument panel Rear door/rear hatch

EXPLAIN: _____

MANUAL TRANSMISSION - CLUTCH

SYMPTOM - MANUAL GEAR SHIFT

- Hard to shift Doesn't shift
 Grinds going into _____ gear
 Noisy when in _____ gear or neutral _____
 Slips/pops out of gear
 Noise (describe): _____

- Upshift light stays on
 Upshift light doesn't light

WHEN DOES IT OCCUR?

- All the time Light load
 Heavy load

EXPLAIN: _____

SYMPTOM - CLUTCH

- Hard to push Fail to release
 Noise when pressing pedal down (describe): _____

- Slips Chattering (grabbing)
 Odor present Pedal stays on the floor
 Squealing sound

WHEN DOES IT OCCUR?

When Engine Temperature is:

- Cold Hot
 Accelerating Decelerating

COMMENTS:

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO.:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

Fig. 5: *50.115064* Symptom Check List - Page 4

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NOTE: Have the service adviser fill out these forms with the customer whenever possible.

DRIVEABILITY - ENGINE - AUTOMATIC TRANSMISSION			
<p style="text-align: center;">SYMPTOM (CHECK ALL THAT APPLY) ENGINE</p> <p><input type="checkbox"/> "Service Engine Soon"/Malfunction Indicator Light" on</p> <p><input type="checkbox"/> Hard start/no start (cranks OK)</p> <p><input type="checkbox"/> Won't crank</p> <p><input type="checkbox"/> Engine stalls</p> <p><input type="checkbox"/> Engine miss</p> <p><input type="checkbox"/> Miss while driving</p> <p><input type="checkbox"/> Hesitates, stumbles or sags</p> <p><input type="checkbox"/> Rough idle</p> <p><input type="checkbox"/> Idle is too high <input type="checkbox"/> Idle is too low</p> <p><input type="checkbox"/> Poor power/performance</p> <p><input type="checkbox"/> Surge or chuggle, buck - jerk - skip</p> <p><input type="checkbox"/> Poor gas mileage <input type="checkbox"/> Highway <input type="checkbox"/> City</p> <p><input type="checkbox"/> Ping, detonates</p> <p><input type="checkbox"/> Sulphur/rotten egg odor</p> <p><input type="checkbox"/> Backfires (popping noise) - underhood/tailpipe</p> <p><input type="checkbox"/> Exhaust smoke <input type="checkbox"/> Increased oil consumption</p> <p><input type="checkbox"/> Runs on after key is turned off</p> <p><input type="checkbox"/> Speed fluctuates without moving accelerator</p> <p><input type="checkbox"/> Engine noise (explain): _____</p> <p>_____</p> <p>_____</p> <p style="text-align: center;">(whine, rattle, groan, clunk, etc.)</p> <p><input type="checkbox"/> Other: _____</p> <p>_____</p> <hr/> <p style="text-align: center;">TRANSMISSION</p> <p><input type="checkbox"/> Does not shift properly <input type="checkbox"/> Hard shift</p> <p><input type="checkbox"/> Will not shift <input type="checkbox"/> Up <input type="checkbox"/> Down</p> <p><input type="checkbox"/> Will not shift into overdrive</p> <p><input type="checkbox"/> Engine starts in other than "P" or "N"</p> <p><input type="checkbox"/> Noise (describe): _____</p> <p>_____</p> <p>_____</p> <p style="text-align: center;">(whine, rattle, groan, clunk, buzz, etc.)</p> <p><input type="checkbox"/> Shifts into next gear too early</p> <p><input type="checkbox"/> Overdrive doesn't work with speed control, but is otherwise OK</p> <p><input type="checkbox"/> Highway speed - shudder, surge, etc.</p> <p><input type="checkbox"/> Other: _____</p> <p>_____</p> <p>EXPLAIN: _____</p> <p>_____</p> <p>_____</p>	<p style="text-align: center;">OPERATING CONDITIONS (CHECK ALL THAT APPLY) HOW OFTEN DOES IT OCCUR? (Engine &/or Transmission)</p> <p><input type="checkbox"/> Always <input type="checkbox"/> Few Seconds <input type="checkbox"/> Few minutes</p> <p><input type="checkbox"/> Few hours <input type="checkbox"/> Few days <input type="checkbox"/> Few weeks</p> <p><input type="checkbox"/> Few months <input type="checkbox"/> Variable <input type="checkbox"/> Only during event</p> <p><input type="checkbox"/> Every _____ to _____ miles <input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Other (explain): _____</p> <p><input type="checkbox"/> Just started <input type="checkbox"/> Getting better <input type="checkbox"/> Getting worse</p> <p><input type="checkbox"/> Since new</p> <p style="text-align: center;">WHEN DOES IT OCCUR? (Engine and/or Transmission) When Engine Temperature is:</p> <p><input type="checkbox"/> Cold <input type="checkbox"/> Warm <input type="checkbox"/> Hot</p> <p><input type="checkbox"/> All the time <input type="checkbox"/> Only during warmup</p> <p>Weather Conditions:</p> <p><input type="checkbox"/> Very cold - below 0°F <input type="checkbox"/> Cold - 0 to 32°F</p> <p><input type="checkbox"/> Cool - 32 to 60°F <input type="checkbox"/> Warm - 60 to 80°F</p> <p><input type="checkbox"/> Hot - above 80°F <input type="checkbox"/> Any environment</p> <p><input type="checkbox"/> Raining <input type="checkbox"/> Dry <input type="checkbox"/> Humid</p> <p><input type="checkbox"/> Snow/Ice <input type="checkbox"/> Wet roads</p> <p><input type="checkbox"/> Other (explain): _____</p> <p>_____</p> <p>_____</p> <p>Driving Conditions:</p> <p><input type="checkbox"/> Light throttle <input type="checkbox"/> Medium throttle <input type="checkbox"/> Hard throttle</p> <p><input type="checkbox"/> Starting <input type="checkbox"/> At idle <input type="checkbox"/> Decelerating</p> <p><input type="checkbox"/> Over bumps <input type="checkbox"/> When shifting <input type="checkbox"/> While turning</p> <p><input type="checkbox"/> Cruising - steady at _____ MPH <input type="checkbox"/> While braking</p> <p><input type="checkbox"/> Anytime <input type="checkbox"/> Uphill <input type="checkbox"/> Downhill</p> <p><input type="checkbox"/> Highway <input type="checkbox"/> City/town <input type="checkbox"/> Stop and go</p> <p><input type="checkbox"/> Between _____ MPH and _____ MPH</p> <p><input type="checkbox"/> Only with A/C or Defrost on</p> <p>What Type of Fuel? What Brand?</p> <p><input type="checkbox"/> Regular UL <input type="checkbox"/> Midrange UL <input type="checkbox"/> Premium UL</p> <p><input type="checkbox"/> Gasohol <input type="checkbox"/> Ethanol <input type="checkbox"/> Methanol</p> <p><input type="checkbox"/> Diesel #1 <input type="checkbox"/> Diesel #2 <input type="checkbox"/> Various brands</p> <p>When Gear Selector is in:</p> <p><input type="checkbox"/> Park/Neutral <input type="checkbox"/> Reverse <input type="checkbox"/> Overdrive</p> <p><input type="checkbox"/> Drive/3 <input type="checkbox"/> Drive/2 <input type="checkbox"/> Drive/1</p> <p>Between Gears:</p> <p><input type="checkbox"/> Park to R or D <input type="checkbox"/> Reverse/Drive <input type="checkbox"/> First/Second</p> <p><input type="checkbox"/> Second/Third <input type="checkbox"/> Third/Overdrive</p>		
<p>CUSTOMER NAME: _____</p> <p>SHOP USE ONLY:</p> <p>VIN#: _____</p>	<p>PHONE NO.: _____</p> <p>TECHNICIAN: _____</p>	<p>REPAIR ORDER NO.: _____</p> <p>ADVISOR#: _____</p>	<p>MILES: _____</p>

Fig. 6: Engine Driveability & Automatic Transmission

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BRAKES - STEERING - SUSPENSION

SYMPTOM

- | | | |
|---|--|---------------------------------------|
| <input type="checkbox"/> Vehicle pulls right - When _____ | <input type="checkbox"/> Suspension bottoms out | <input type="checkbox"/> Sits uneven |
| <input type="checkbox"/> Vehicle pulls left - When _____ | <input type="checkbox"/> Leans or sways in corners | <input type="checkbox"/> "Dog" tracks |
| <input type="checkbox"/> Steering wheel vibrates at _____ MPH | <input type="checkbox"/> Brake light on | <input type="checkbox"/> ABS light on |
| <input type="checkbox"/> Excessive play in steering | <input type="checkbox"/> Traction control light on | <input type="checkbox"/> Soft ride |
| <input type="checkbox"/> Erratic steering when braking | <input type="checkbox"/> Uneven tire wear | |
| <input type="checkbox"/> Poor steering wheel return after cornering | | |

Hard to steer

- Effort Wanders
 Steering wheel off center

Shimmy/vibration (check box below for location)		
<input type="checkbox"/> Front	<input type="checkbox"/> Rear	<input type="checkbox"/> Don't know
<input type="checkbox"/> Seat	<input type="checkbox"/> Floor	<input type="checkbox"/> Other _____

Brake pedal

- Noise Pulses Squeaks Hard Mushy Excessive travel

WHEN DOES IT OCCUR?

- | | | | | |
|--|--|---------------------------------------|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> Cold days | <input type="checkbox"/> Hot days | <input type="checkbox"/> Wet/rain | <input type="checkbox"/> All the time | <input type="checkbox"/> Intermittent |
| <input type="checkbox"/> Parking maneuvers | <input type="checkbox"/> At road speed | <input type="checkbox"/> Accelerating | <input type="checkbox"/> Decelerating | |

EXPLAIN: _____

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

50C15059
 Fig. 7: Brakes, Steering, & Suspension

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AIR CONDITIONING - HEATER - VENTILATION

SYSTEM OR AREA AFFECTED

- | | | | | | |
|--|--|------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> Air conditioner | <input type="checkbox"/> Heater | <input type="checkbox"/> Defroster | <input type="checkbox"/> Vent | <input type="checkbox"/> Bi-Level | <input type="checkbox"/> Fan/blower |
| <input type="checkbox"/> Max A/C | <input type="checkbox"/> Automatic Temperature Control | | <input type="checkbox"/> Mix/blend | <input type="checkbox"/> Economy | <input type="checkbox"/> All |

SYMPTOM

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> Does not work | <input type="checkbox"/> Blows wrong temperature air | <input type="checkbox"/> No air comes out of vents | <input type="checkbox"/> Rapid cycling |
| <input type="checkbox"/> Noisy (explain) | <input type="checkbox"/> Broken <input type="checkbox"/> Odor | <input type="checkbox"/> Air comes from wrong outlets | <input type="checkbox"/> Blows fuse |
| <input type="checkbox"/> Leaks | <input type="checkbox"/> Insufficient heat or cool | <input type="checkbox"/> Other (explain below) | |

WHEN DOES IT OCCUR?

- | | | | | |
|--|------------------------------|--|---------------------------------------|--|
| <input type="checkbox"/> All the time | <input type="checkbox"/> Hot | <input type="checkbox"/> Cold | <input type="checkbox"/> Intermittent | <input type="checkbox"/> Right after startup |
| <input type="checkbox"/> When change controls only | | <input type="checkbox"/> Other (explain below) | | <input type="checkbox"/> Fan blower speed High / Med / Low |

EXPLAIN: _____

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

Fig. 8: ^{50A15057} Air Conditioning, Heater & Ventilation

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ELECTRICAL - RADIO - TAPE/CD PLAYER

SYMPTOM - MUSIC SYSTEM

- Does not work Noisy Static Won't load Won't eject Poor reception
 Controls do not work Blows fuse Other (explain below)

SYSTEM AFFECTED

- Radio only AM FM FM stereo Graphic equalizer
 Tape player CD player Whole system Steering wheel buttons Phone
 Speakers Front Rear Left Right
 Antenna Clock Radio or player controls Rear seat controls

ALL OTHER ELECTRICAL ITEMS OR ACCESSORIES

Please list the complaint accessory or item and check any applicable symptom(s) from the list that follows:

- _____
- Inoperable Noisy No control Erratic
 Check light on or flashing Works improperly (explain below)
 Blows fuse Intermittent Related system affected (explain below)
- _____
- Inoperable Noisy No control Erratic
 Check light on or flashing Works improperly (explain below)
 Blows fuse Intermittent Related system affected (explain below)
- _____
- Inoperable Noisy No control Erratic
 Check light on or flashing Works improperly (explain below)
 Blows fuse Intermittent Related system affected (explain below)

WHEN DOES IT OCCUR?

- All the time Hot Cold Just after starting - malfunctions for a while
 Intermittent After runs for _____ minutes Rough roads or bumps only
 Other (explain below)

EXPLAIN: _____

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

50B15058
 Fig. 9: Electrical, Radio & Tape/CD Player

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MANUAL TRANSMISSION - CLUTCH

SYMPTOM - MANUAL GEAR SHIFT

- Hard to shift Doesn't shift
- Grinds going into _____ gear
- Noisy when in _____ gear or neutral _____
- Slips/pops out of gear
- Noise (describe): _____

- Upshift light stays on
- Upshift light doesn't light

WHEN DOES IT OCCUR?

- All the time Light load
- Heavy load

EXPLAIN: _____

SYMPTOM - CLUTCH

- Hard to push Fail to release
- Noise when pressing pedal down (describe): _____

- Slips Chattering (grabbing)
- Odor present Pedal stays on the floor
- Squealing sound

WHEN DOES IT OCCUR?

When Engine Temperature is:

- Cold Hot
- Accelerating Decelerating

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

Fig. 10: *50.115056* Manual Transmission & Clutch

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SQUEAK - RATTLE - NOISE CONDITIONS

AREA OF NOISE

- | | | | | |
|--|----------------------------------|--------------------------------------|---------------------------------|-------------------------------------|
| <input type="checkbox"/> Engine Compartment | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Front Suspension | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Rear Suspension | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Passenger Compartment | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Instrument Panel | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Doors | <input type="checkbox"/> Left | <input type="checkbox"/> Right | <input type="checkbox"/> Center | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Rear seat area | <input type="checkbox"/> Console | <input type="checkbox"/> Other _____ | | |

NOISE SOUNDS LIKE

- | | | | | | |
|----------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|----------------------------------|--------------------------------|
| <input type="checkbox"/> Knocks | <input type="checkbox"/> Hard metal | <input type="checkbox"/> Light metal | <input type="checkbox"/> Roars | <input type="checkbox"/> Ticking | <input type="checkbox"/> Whine |
| <input type="checkbox"/> Squeaks | <input type="checkbox"/> Rattles | <input type="checkbox"/> Scraping | <input type="checkbox"/> Other _____ | | |

HOW OFTEN DOES IT OCCUR?

- | | | | | |
|-------------------------------------|--------------------------------|---------------------------------------|---------------------------------------|------------------------------------|
| <input type="checkbox"/> Continuous | <input type="checkbox"/> Often | <input type="checkbox"/> Intermittent | <input type="checkbox"/> Just started | <input type="checkbox"/> Since new |
|-------------------------------------|--------------------------------|---------------------------------------|---------------------------------------|------------------------------------|

WHEN DOES IT OCCUR?

- | | | | | | |
|--|---|--|--|---------------------------------------|---|
| <input type="checkbox"/> All the time | <input type="checkbox"/> Speed | <input type="checkbox"/> RPM | <input type="checkbox"/> Only moving | <input type="checkbox"/> On turns | <input type="checkbox"/> Braking |
| <input type="checkbox"/> Hard throttle | <input type="checkbox"/> Light throttle | <input type="checkbox"/> Decelerate | <input type="checkbox"/> Steady speed | <input type="checkbox"/> Idle in gear | <input type="checkbox"/> Idle out of gear |
| <input type="checkbox"/> Hot days | <input type="checkbox"/> Cold days | <input type="checkbox"/> Humid or rainy | <input type="checkbox"/> Temperature _____ | | |
| <input type="checkbox"/> Heavy bumps | <input type="checkbox"/> Light bumps | <input type="checkbox"/> Smooth pavement | | | |

EXPLAIN: _____

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

Fig. 11: *50F15060*
 Squeak, Rattle, & Noise Conditions

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WATER LEAK - WINDNOISE

WATER LEAK

Leak Occurs When?

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Setting level | <input type="checkbox"/> Any time it rains | <input type="checkbox"/> While driving in the rain | <input type="checkbox"/> Car wash only |
| <input type="checkbox"/> Back lower than front (facing uphill) | | <input type="checkbox"/> Front lower than back (facing downhill) | |

Location of Leak (where water appears):

- | | | | | | |
|---|------------------------------------|------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> LF Door | <input type="checkbox"/> RF Door | <input type="checkbox"/> LR Door | <input type="checkbox"/> RR Door | <input type="checkbox"/> Windshield | <input type="checkbox"/> Rear window |
| <input type="checkbox"/> LF window | <input type="checkbox"/> RF window | <input type="checkbox"/> LR window | <input type="checkbox"/> RR window | <input type="checkbox"/> Side door | <input type="checkbox"/> Sunroof/T-Top |
| <input type="checkbox"/> Under instrument panel | | | <input type="checkbox"/> Rear door/rear hatch | | |

WINDNOISE:

Location:

- | | | | | | |
|---|------------------------------------|------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> LF Door | <input type="checkbox"/> RF Door | <input type="checkbox"/> LR Door | <input type="checkbox"/> RR Door | <input type="checkbox"/> Windshield | <input type="checkbox"/> Rear window |
| <input type="checkbox"/> LF window | <input type="checkbox"/> RF window | <input type="checkbox"/> LR window | <input type="checkbox"/> RR window | <input type="checkbox"/> Side door | <input type="checkbox"/> Sunroof/T-Top |
| <input type="checkbox"/> Under instrument panel | | | <input type="checkbox"/> Rear door/rear hatch | | |

EXPLAIN: _____

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

Fig. 12: *50115055* Water Leak & Wind Noise

END OF ARTICLE