

*** SYMPTOM CHECK LIST ***

1998 Mitsubishi Montero

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.
- * 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.

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

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

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: _____

_____**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?

- ☐ Continuous ☐ Often ☐ Intermittent ☐ Just started ☐ 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#:**

50H15062

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: _____

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#:

50115063

Fig. 4: Symptom Check List - Page 3

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#:

50.115064
Fig. 5: Symptom Check List - Page 4

INDIVIDUAL SYSTEM-BASED CHECK LISTS

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

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
- ☐ Ping, detonates
- ☐ Sulphur/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 next 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 &/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°F ☐ Cold - 0 to 32°F
- ☐ Cool - 32 to 60°F ☐ Warm - 60 to 80°F
- ☐ Hot - above 80°F ☐ Any environment
- ☐ Raining ☐ Dry ☐ Humid
- ☐ Snow/Ice ☐ Wet roads
- ☐ Other (explain): _____

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 ☐ Midrange UL ☐ Premium UL
- ☐ 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 ☐ Reverse/Drive ☐ First/Second
- ☐ Second/Third ☐ Third/Overdrive

CUSTOMER NAME:

PHONE NO.:

REPAIR ORDER NO.:

SHOP USE ONLY:

VIN#:

MILES:

TECHNICIAN:

ADVISOR#:

50H15054

Fig. 6: Engine Driveability & Automatic Transmission

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		Shimmy/vibration (check box below for location)			
<input type="checkbox"/> Effort	<input type="checkbox"/> Wanders	<input type="checkbox"/> Front	<input type="checkbox"/> Rear	<input type="checkbox"/> Don't know	
<input type="checkbox"/> Steering wheel off center		<input type="checkbox"/> Seat	<input type="checkbox"/> Floor	<input type="checkbox"/> Other _____	
<hr/>					
Brake pedal					
<input type="checkbox"/> Noise	<input type="checkbox"/> Pulses	<input type="checkbox"/> Squeaks	<input type="checkbox"/> Hard	<input type="checkbox"/> Mushy	<input type="checkbox"/> 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

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#:		

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

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

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#:

50J15056

Fig. 10: Manual Transmission & Clutch

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#:

50F15060

Fig. 11: Squeak, Rattle, & Noise Conditions

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#:

50I15055

Fig. 12: Water Leak & Wind Noise

