

## Here's your 21st Century Tune-Up Interview Checklist

Customer Interview	Customer Comments			
Have you noticed poor performance?				
Are you planning a long vacation trip?				
Are you aware of any specific problem?				
When and how does the problem occur?				
How confident are you in your vehicle?				
Has the check engine light ever been on?				
What services have been done recently?				
When was your last emissions inspection?				
Have the fuel injectors ever been cleaned?				
Have the oxygen sensors ever been replaced?				
<b>Battery, Charging &amp; Starting System</b>	Technician Comments	Good	Marginal	Fail
Visual inspection of parts		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check no load battery voltage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check cranking voltage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check charging voltage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Load test battery		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Engine Mechanical</b>				
Check idle vacuum		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check 2000 RPM vacuum		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check for gauge fluctuations		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check coolant level		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check coolant flow		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check coolant condition		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Powertrain Control</b>				
Check for technical service bulletins		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check for computer recalibration updates		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check for diagnostic trouble codes		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check for history codes		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check for snap shot data		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check OBD II readiness monitors		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check scan tool sensor data		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Fuel System</b>				
Check fuel pressure		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check fuel volume		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perform injector balance test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check fuel trim specification		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Ignition System</b>				
Check primary circuit voltage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check primary circuit current draw		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check secondary circuit voltage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check base timing at idle		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check knock sensor operation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Emission System</b>				
Check oxygen sensor operation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check EGR system operation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check PCV system operation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check EVAP system operation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check catalytic converter efficiency		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perform exhaust gas analysis		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This sheet is for customer review only. Actual repair quote will be provided separately.

Times are changing...  
Cars are changing...

*So are Tune-Ups!*

Keep your shop on the cutting edge and customer cars in your bays!

The 21st Century Tune-Up program will

- Improve reliability
- Reduce air pollution
- Improve performance
- Improve fuel economy
- Create customer confidence

**Increase product & service sales**

**And...Develop an annual Tune-Up program for your customers!**

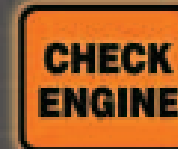


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# 21st Century TUNE-UP STANDARD

The 21st Century Tune-Up consists of a customer interview followed by a series of vehicle inspections. The customer interview gives you the opportunity to find out how the customer feels about the vehicle's performance, how the vehicle is treated and a sense of the vehicle's history. The inspections are designed to be done in about 30 minutes.

## Customer Interview

- Have you noticed poor performance?
- Are you planning a long vacation trip?
- Are you aware of any specific problem?
- When and how does the problem occur?
- How confident are you in your vehicle?
- Has the check engine light ever been on?
- What services have been done recently?
- When was your last emissions inspection?
- Have the fuel injectors ever been cleaned?
- Have the oxygen sensors ever been replaced?



The vehicle owner is concerned with the reliability of the vehicle. He may have a wife and small children or they may be older couples who want to minimize the chance of a breakdown occurring. Whether preparing for a change of seasons, a vacation or handing the car down to a child, investing a reasonable cost to ensure family safety is easily accepted by the vehicle owner.

After the interview, the following vehicle checks will give you a complete report on the vehicle health and allow you to explain all options to your customer.

## Battery, Charging & Starting System

- Visual inspection of parts
- Check no load battery voltage
- Check cranking voltage
- Check charging voltage
- Load test battery



## Engine Mechanical

- Check idle vacuum
- Check 2000 RPM vacuum
- Check for gauge fluctuations
- Check coolant level
- Check coolant flow
- Check coolant condition

Often a poorly maintained base system will cause significant problems in the electronic control systems. Low engine vacuum can point to mechanical problems in the engine. Poor cooling system performance will affect the computer controls on the engine.

## Powertrain Control

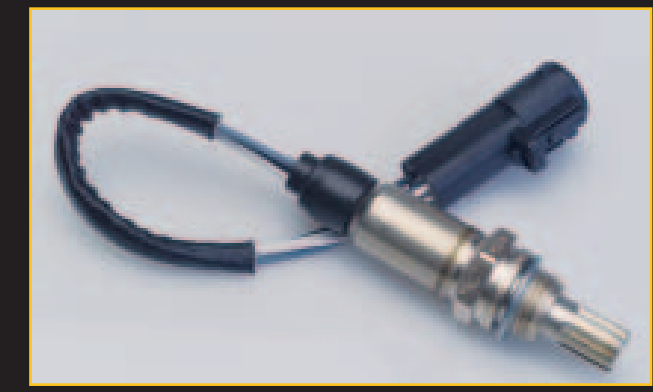
Computer recalibration will often correct what seems to be a mechanical problem and is often called for in technical service bulletins. Using the history codes and readiness monitors will help you determine overall powertrain conditions.



- Check for technical service bulletins
- Check for computer recalibration updates
- Check for diagnostic trouble codes
- Check for history codes
- Check for snap shot data
- Check OBD II readiness monitors
- Check scan tool sensor data

## Emission System

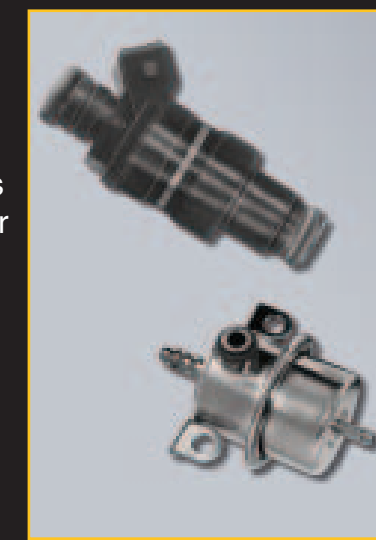
Worn or "lazy" oxygen sensors can cost your customer up to six percent fuel economy! The emissions systems check can be performed on your inspection machine at the same time as the exhaust gas analysis.



- Check oxygen sensor operation
- Check EGR system operation
- Check PCV system operation
- Check EVAP system operation
- Check catalytic converter efficiency
- Perform exhaust gas analysis

## Fuel System

Long term fuel trim will point you to possible mechanical fuel system problems causing the computer to compensate by adjusting fuel delivery. Unequal fuel distribution can cost up to six percent in fuel economy before tripping the check engine light.



- Check fuel pressure
- Check fuel volume
- Perform injector balance test
- Check fuel trim specification

## Ignition System

Inadequate primary system voltage will always lead to poor performance. A secondary ignition misfire can cause up to a five percent loss in fuel economy.



- Check primary circuit voltage
- Check primary circuit current draw
- Check secondary circuit voltage
- Check base timing at idle
- Check knock sensor operation