



#### OUR VALUED CUSTOMER

Cori Nastro

Service Consultant

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Certified Technician

### YOUR VEHICLE

<b>Year</b> 2009		Make Cadillac	Model CTS				Engine Type 6.2L V8 P OHV (MFI)
<b>51.00</b> 0		VIN : 1G6DN57P09		License #	<b>Date</b> 8/30/2016		

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## Original Customer Requests

The following is what you requested we perform or investigate regarding your vehicle:



A. 108 POINT INSPECTION



# Package Results

## Multi Point Inspection Pre Owned

Failed Task	Observation	Recommendation	Done
Inspect catalytic converter	Found catalytic converter to be damaged	Replace catalytic converter	
Inspect/measure left front tire tread depth	<ul><li>4/32" (3.175 MM)</li><li>Found abnormally worn front tires</li></ul>	<ul><li> Mount and balance one new front tire</li><li> Perform alignment</li></ul>	
Inspect rims for damage	FOUND ALL 4 WHEELS BENT/DAMAGED	REPLACE 4 WHEELSFOUND ALL 4 WHEELS BENT/DAMAGED	
Inspect accessory drive belts	Found serpentine belt to be in poor condition	Replace serpentine belt	
Inspect windshield wiper blades	Found wiper blades to be worn out	Replace windshield wiper blades	
Check taillight, turn signal, side marker, and license plate lights	Found burned out license plate bulb	Replace license plate bulb	
Inspect onboard diagnostics system (check engine light)	Found check engine light to be on	Scan vehicle for codes	

Failed Task	Observation	Recommendation	Done
Scan vehicle computer for fault	<ul> <li>Found check engine light on</li> </ul>	• Diagnose cause of check engine	
codes	• DTC P0036 HEATED O2	light	
	SENSOR BANK 1 SENSOR 2	• VEHICLE HAS	
	CIRCUIT MALFUNCTION	AFTERMARKET ENGINE	
	• DTC P0054 HEATED O2	TUNING, HIGH FLOW	
	SENSOR BANK 1 SENSOR 2	CATALYTIC CONVERTERS,	
	CIRCUIT HIGH RESISTANCE	HEADERS AND EXHAUST.	
	• DTC P1400 COLD START	• REMOVE ALL	
	EMISSIONS CONTROL	AFTERMARKET EQUIPMENT,	
	SYSTEM MALFUNCTION	TUNE ENGINE BACK TO OEM	
		SPECS	
		• DTC P1400 COLD START	
		EMISSIONS CONTROL	
		SYSTEM MALFUNCTION	
		• DTC P0054 HEATED O2	
		SENSOR BANK 1 SENSOR 2	
		CIRCUIT HIGH RESISTANCE	
		• REPLACE O2 SENSOR BANK	
		1 SENSOR 2	
		• DTC P0036 HEATED O2	
		SENSOR BANK 1 SENSOR 2	
		CIRCUIT MALFUNCTION	
Check automatic transmission for	• Found automatic transmission to	Diagnose automatic	
normal operation/shifting	slip	transmission problem	
	• Found automatic transmission to		
	shift abnormally		
	·		

Cautioned Task	Observation	Recommendation	Done
Inspect under car splash shields	<ul> <li>Found splash shield to be damaged</li> <li>FRONT BUMPER LOWER AIR DEFLECTORS ARE DAMAGED</li> </ul>	<ul> <li>Replace splash shield</li> <li>REPLACE(3PCS)FRONT</li> <li>BUMPER LOWER AIR</li> <li>DEFLECTORS ARE</li> <li>DAMAGED</li> </ul>	
Check engine for oil leaks	Found engine oil leak	REPLACE/RESEAL OIL PAN GASKET	
Check idle speed	Found throttle body to be dirty	Clean and service throttle body	
Inspect air cleaner element	Found air cleaner element to be dirty	Replace air filter element	
Inspect cabin air/HEPA filter (if equipped)	Found cabin air/HEPA filter to be dirty	Replace cabin air/HEPA filter	
Inspect rear shocks and struts; check operation	Found worn out rear shock absorbers	Replace rear shock absorbers	

Cautioned Task	Observation	Recommendation	Done
Inspect front shocks and struts;	Found worn out front struts	• Replace front struts	
check operation		Perform alignment	
Check starter/starting system	FOUND REMOTE START	FOUND REMOTE START	
	INOPERATIVE	INOPERATIVEDISABLED	
		DUE TO CHECK ENGINE	
		LAMP BEING ILLUMINATED	

Passed Task	Observation	Recommendation	Done
Inspect/measure left rear tire tread depth	8/32" (6.35 MM)		
Inspect/measure right rear tire tread depth	8/32" (6.35 MM)		
Inspect/measure right front tire tread depth	10/32" (7.937 MM)		
Inspect/measure left rear brake pads/shoes	8/32" (6.35 MM)		
Inspect/measure right rear brake pads/shoes	8/32" (6.35 MM)		
Inspect/measure left front brake pads/shoes	9/32" (7.142 MM)		
Inspect/measure right front brake pads/shoes	9/32" (7.142 MM)		

Passed Tasks						
Visually inspect EVAP system	Inspect exhaust system heat shields	Inspect exhaust system for leaks, damage, and loose parts				
Inspect inner fenders and mud guards	Inspect frame and chassis	✓ Inspect/measure left rear tire tread depth				
Inspect/measure right rear tire tread depth	Inspect/measure right front tire tread depth	Inspect lug nuts/wheel studs				
Check tire pressure	Inspect/measure left rear brake pads/shoes	Inspect/measure right rear brake pads/shoes				
Inspect/measure left front brake pads/shoes	Inspect/measure right front brake pads/shoes	Inspect brake calipers and wheel cylinders				
Inspect brake hoses and lines	Inspect rear brake drums/rotors	Inspect front brake drums/rotors				
Check rear sway-bar links and bushings	Check rear suspension bushings	✓ Check rear strut/shock mounts				
Check steering gear assembly	Check front strut/shock mounts	✓ Check front sway-bar links and bushings				
Check control arm bushings	✓ Check pitman arm	✓ Check idler arm				
Check/lubricate tie-rod ends	✓ Check/lubricate ball joints	✓ Check rear wheel bearings for noise/play				
Check front wheel bearings for noise/play	Inspect u-joints and driveline slip-joints	Inspect front axle CV joints and boots				
Inspect rear axle CV joints and boots	✓ Inspect torque mounts	✓ Inspect engine mounts				
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Inspect manual transmission mounts for damage	Inspect automatic transmission mounts for damage	Check transfer case fluid level/condition
Check front differential fluid level/condition	Check rear differential fluid level/condition	Check manual transmission fluid level and condition
Check front axle seals for leaks	Check front differential for leaks	✓ Check rear axle seals for leaks
Check rear differential for leaks	✓ Inspect fuel tank, lines, and connections	Check power steering system for leaks
Check cooling system for leaks	✓ Check brake system for leaks	Check clutch hydraulic system for leaks
Check automatic transmission cooler hoses for damage or leaks	Check automatic transmission for leaks	Visually inspect AIR system
✓ Visually inspect PCV system	✓ Visually inspect EGR system	Check alternator/charging system
Check battery fluid level	Inspect battery terminals/cables	Inspect wiring harness and connections
Inspect fuel hoses, lines, and connections	Inspect carburetor and choke	Inspect fuel injection system
Inspect ignition wires (spark plug wires)	Inspect distributor cap and rotor	Check distributor advance and ignition timing
Inspect timing belt/balance shaft belts	Inspect ABS diagnostic system (ABS warning light)	Inspect brake booster
Inspect radiator cap	Check electric cooling fan operation	/ Inspect fan hub
Inspect cooling system hoses	Check condenser cooling fan operation	Inspect heater hoses
Check windshield washer fluid level/condition	Check power steering fluid level/condition	Check engine oil level/condition
Check engine coolant level/condition	Check brake fluid level/condition	Check clutch hydraulic fluid level/condition
Check automatic transmission fluid level	Inspect convertible top	Inspect/lubricate door latches and
and condition	V	mechanisms
	Inspect body for damage, dings, and dents	mechanisms Check hazard light operation
and condition  Inspect/lubricate sunroof and check for		
<ul><li>and condition</li><li>Inspect/lubricate sunroof and check for leaks</li></ul>	dents	Check hazard light operation  Inspect taillight, turn signal, and side
and condition  Inspect/lubricate sunroof and check for leaks  Check brake light operation	dents Check back-up light operation Inspect headlight assemblies for	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal
and condition  Inspect/lubricate sunroof and check for leaks  Check brake light operation  Check headlight low and bright beam	dents Check back-up light operation  Inspect headlight assemblies for cracks/damage	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal operation/condition
and condition  Inspect/lubricate sunroof and check for leaks  Check brake light operation  Check headlight low and bright beam  Inspect SRS system  Check windshield wiper/washer	dents Check back-up light operation  Inspect headlight assemblies for cracks/damage Check power seat operation	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal operation/condition  Check power antenna operation
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and condition  Inspect/lubricate sunroof and check for leaks  Check brake light operation  Check headlight low and bright beam  Inspect SRS system  Check windshield wiper/washer operation  Check power locking system operation  Check blower motor operation (all	dents Check back-up light operation  Inspect headlight assemblies for cracks/damage Check power seat operation Check horn operation  Inspect rear window defroster operation	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal operation/condition  Check power antenna operation  Check power window operation  Check air flow switching control (floor, dash vent, and defroster outlets)
and condition  Inspect/lubricate sunroof and check for leaks Check brake light operation  Check headlight low and bright beam  Inspect SRS system Check windshield wiper/washer operation Check power locking system operation  Check blower motor operation (all speeds)	dents Check back-up light operation  Inspect headlight assemblies for cracks/damage Check power seat operation Check horn operation  Inspect rear window defroster operation Check air conditioning operation	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal operation/condition  Check power antenna operation  Check power window operation  Check air flow switching control (floor, dash vent, and defroster outlets)  Check brake pedal travel/free-play
and condition  Inspect/lubricate sunroof and check for leaks  Check brake light operation  Check headlight low and bright beam  Inspect SRS system  Check windshield wiper/washer operation  Check power locking system operation  Check blower motor operation (all speeds)  Check clutch/start switch  Inspect SRS diagnostic system (SRS)	dents Check back-up light operation  Inspect headlight assemblies for cracks/damage Check power seat operation Check horn operation  Inspect rear window defroster operation Check air conditioning operation  Check clutch adjustment Inspect ABS diagnostic system (ABS	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal operation/condition  Check power antenna operation  Check power window operation  Check air flow switching control (floor, dash vent, and defroster outlets)  Check brake pedal travel/free-play  Check dash and interior lights  Inspect parking brake
and condition  Inspect/lubricate sunroof and check for leaks  Check brake light operation  Check headlight low and bright beam  Inspect SRS system  Check windshield wiper/washer operation  Check power locking system operation  Check blower motor operation (all speeds)  Check clutch/start switch  Inspect SRS diagnostic system (SRS warning light)  Check front differential for abnormal	dents Check back-up light operation  Inspect headlight assemblies for cracks/damage Check power seat operation Check horn operation  Inspect rear window defroster operation Check air conditioning operation  Check clutch adjustment Inspect ABS diagnostic system (ABS warning light) Check rear differential for abnormal	Check hazard light operation  Inspect taillight, turn signal, and side marker assemblies for cracks/damage  Check seatbelts for normal operation/condition  Check power antenna operation  Check power window operation  Check air flow switching control (floor, dash vent, and defroster outlets)  Check brake pedal travel/free-play  Check dash and interior lights  Inspect parking brake adjustment/operation  Check for abnormal engine

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Additional Observations	Recommendation
HARSH VIBRATION AT HIGHER SPEEDS	SEE WHEEL/TIRE REPLACEMENT
AFTERMARKET WHEELS	AFTERMARKET WHEELS
AFTERMARKET LONG TUBE HEADERS INSTALLED	AFTERMARKET LONG TUBE HEADERS INSTALLED
AFTERMARKET HIGH FLOW CATALYTIC CONVERTERS INSTALLED	AFTERMARKET HIGH FLOW CATALYTIC CONVERTERS INSTALLED
AFTERMARKET CHARGE AIR COOLER INSTALLED	AFTERMARKET CHARGE AIR COOLER INSTALLED
EXHAUST RUBS REAR DIFFERENTIAL LEFT SIDE	REPAIREXHAUST RUBS REAR DIFFERENTIAL LEFT SIDE
VEHICLE SUSPENSION HAS BEEN LOWERED	VEHICLE SUSPENSION HAS BEEN LOWERED
RIGHT FRONT BRAKE ROTOR HAS A DEEP GROOVE IN CENTER OF ROTOR	REPLACE FRONT BRAKE ROTORSRIGHT FRONT BRAKE ROTOR HAS A DEEP GROOVE IN CENTER OF ROTOR
VEHICLE HAS AFTERMARKET	VEHICLE HAS AFTERMARKET
ENGINE/TRANSMISSION TUNING	ENGINE/TRANSMISSION TUNING
FRONT BUMPER HAS MINOR DAMAGE	FRONT BUMPER HAS MINOR DAMAGE
PAINT IS PEELING OFF RIGHT FRONT FENDER	PAINT IS PEELING OFF RIGHT FRONT FENDER
AFTERMARKET HOOD INSTALLED	AFTERMARKET HOOD INSTALLED
REAR FENDERS HAVE BEEN ROLLED/MODIFIED/WIDE BODY FENDERS INSTALLED	REAR FENDERS HAVE BEEN ROLLED/MODIFIED/WIDE BODY FENDERS INSTALLED
VEHICLE PREVIOUSLY HAD AFTERMARKET AIR SUSPENSION INSTALLED. AIR GUAGE/SWITCH PANEL INSTALLED IN CENTER CONSOLE.	VEHICLE PREVIOUSLY HAD AFTERMARKET AIR SUSPENSION INSTALLED. AIR GUAGE/SWITCH PANEL INSTALLED IN CENTER CONSOLE.
SPARE TIRE WELL IN TRUNK HAS BEEN CUT OUT AND FILLED IN/WELDED WITH SHEET METAL TO ACCOMMODATE AIR SUSPENSION COMPRESSOR, TANK AND VALVES. POOR QUALITY WORK PERFORMED	SPARE TIRE WELL IN TRUNK HAS BEEN CUT OUT AND FILLED IN/WELDED WITH SHEET METAL TO ACCOMMODATE AIR SUSPENSION COMPRESSOR, TANK AND VALVES. POOR QUALITY WORK PERFORMED
AFTERMARKET/NON OEM TIRE SIZES INSTALLED WITH AFTERMARKET WHEELS	AFTERMARKET/NON OEM TIRE SIZES     INSTALLED WITH AFTERMARKET WHEELS     REPLACE TIRES WITH OEM SIZE WHEN     REPLACING WHEELSSEE RECOMMENDED     WHEEL REPLACEMENT



# Recommended Services

Our technicians recommend the following services for your vehicle.

Original Customer Requests		Status	Cost	Deferred	Approved
A. 108 POINT INSPECTION					X
Inspection & Additional Recommendations	Insp	Status	Cost	Deferred	Approved
Replace catalytic converter (Found catalytic converter to be damaged)	X	Fail	\$331.88		
REPLACE 4 WHEELSFOUND ALL 4 WHEELS BENT/DAMAGED (FOUND ALL 4 WHEELS BENT/DAMAGED)	x	Fail			
VEHICLE HAS AFTERMARKET ENGINE TUNING, HIGH FLOW CATALYTIC CONVERTERS, HEADERS AND EXHAUST. (DTC P0036 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT MALFUNCTION, DTC P0054 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT HIGH RESISTANCE, DTC P1400 COLD START EMISSIONS CONTROL SYSTEM MALFUNCTION)	x	Fail			
REMOVE ALL AFTERMARKET EQUIPMENT, TUNE ENGINE BACK TO OEM SPECS (DTC P0036 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT MALFUNCTION, DTC P0054 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT HIGH RESISTANCE, DTC P1400 COLD START EMISSIONS CONTROL SYSTEM MALFUNCTION)	х	Fail			
DTC P1400 COLD START EMISSIONS CONTROL SYSTEM MALFUNCTION (DTC P1400 COLD START EMISSIONS CONTROL SYSTEM MALFUNCTION)	х	Fail			
DTC P0054 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT HIGH RESISTANCE (DTC P0054 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT HIGH RESISTANCE)	х	Fail			
REPLACE O2 SENSOR BANK 1 SENSOR 2 (DTC P0036 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT MALFUNCTION, DTC P0054 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT HIGH RESISTANCE)	х	Fail	\$249.87		
DTC P0036 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT MALFUNCTION (DTC P0036 HEATED O2 SENSOR BANK 1 SENSOR 2 CIRCUIT MALFUNCTION)	x	Fail			
Diagnose automatic transmission problem (Found automatic transmission to shift abnormally, Found automatic transmission to slip)	X	Fail			
REPLACE TRANSMISSION (Found automatic transmission to shift abnormally)	х	Fail	\$1,879.96		

Inspection & Additional Recommendations	Insp	Status	Cost	Deferred	Approved
Mount and balance one new front tire (Found abnormally worn front tires)	x	Fail			See AI-15
Replace license plate bulb (Found burned out license plate bulb)	х	Fail			See AI-17
Replace serpentine belt (Found serpentine belt to be in poor condition)	х	Fail			See AI-20
Replace windshield wiper blades (Found wiper blades to be worn out)	X	Fail			See AI-24
Scan vehicle for codes (Found check engine light to be on)	Х	Fail			See AI-60
Diagnose cause of check engine light (Found check engine light on)	х	Fail			See AI-60
Replace splash shield (Found splash shield to be damaged)	x	Caution	\$91.88		
REPLACE(3PCS)FRONT BUMPER LOWER AIR DEFLECTORS ARE DAMAGED (FRONT BUMPER LOWER AIR DEFLECTORS ARE DAMAGED)	x	Caution	\$91.88		
REPLACE/RESEAL OIL PAN GASKET (Found engine oil leak)	X	Caution	\$2,448.88		
Clean and service throttle body (Found throttle body to be dirty)	х	Caution			
FOUND REMOTE START INOPERATIVEDISABLED DUE TO CHECK ENGINE LAMP BEING ILLUMINATED (FOUND REMOTE START INOPERATIVE)	X	Caution			
Replace cabin air/HEPA filter (Found cabin air/HEPA filter to be dirty)	x	Caution			See AI-13
Perform alignment (Found abnormally worn front tires, Found worn out front struts)	x	Caution			See AI-29
Replace air filter element (Found air cleaner element to be dirty)	х	Caution			See AI-31
Replace front struts (Found worn out front struts)	X	Caution	\$331.88		See AI-48
Replace rear shock absorbers (Found worn out rear shock absorbers)	x	Caution	\$331.88		See AI-56
VEHICLE SUSPENSION HAS BEEN LOWERED (VEHICLE SUSPENSION HAS BEEN LOWERED)		Caution			
VEHICLE PREVIOUSLY HAD AFTERMARKET AIR SUSPENSION INSTALLED. AIR GUAGE/SWITCH PANEL INSTALLED IN CENTER CONSOLE. (VEHICLE PREVIOUSLY HAD AFTERMARKET AIR SUSPENSION INSTALLED. AIR GUAGE/SWITCH PANEL INSTALLED IN CENTER CONSOLE.)		Caution			
VEHICLE HAS AFTERMARKET ENGINE/TRANSMISSION TUNING (VEHICLE HAS AFTERMARKET ENGINE/TRANSMISSION TUNING)		Caution			

Inspection & Additional Recommendations	Insp	Status	Cost	Deferred	Approved
SPARE TIRE WELL IN TRUNK HAS BEEN CUT OUT AND FILLED IN/WELDED WITH SHEET METAL TO ACCOMMODATE AIR SUSPENSION COMPRESSOR, TANK AND VALVES. POOR QUALITY WORK PERFORMED (SPARE TIRE WELL IN TRUNK HAS BEEN CUT OUT AND FILLED IN/WELDED WITH SHEET METAL TO ACCOMMODATE AIR SUSPENSION COMPRESSOR, TANK AND VALVES. POOR QUALITY WORK PERFORMED)		Caution			
REPLACE FRONT BRAKE ROTORSRIGHT FRONT BRAKE ROTOR HAS A DEEP GROOVE IN CENTER OF ROTOR (RIGHT FRONT BRAKE ROTOR HAS A DEEP GROOVE IN CENTER OF ROTOR)		Caution			
REAR FENDERS HAVE BEEN ROLLED/MODIFIED/WIDE BODY FENDERS INSTALLED (REAR FENDERS HAVE BEEN ROLLED/MODIFIED/WIDE BODY FENDERS INSTALLED)		Caution			
PAINT IS PEELING OFF RIGHT FRONT FENDER (PAINT IS PEELING OFF RIGHT FRONT FENDER)		Caution			
SEE WHEEL/TIRE REPLACEMENT (HARSH VIBRATION AT HIGHER SPEEDS)		Caution			
FRONT BUMPER HAS MINOR DAMAGE (FRONT BUMPER HAS MINOR DAMAGE)		Caution			
REPAIREXHAUST RUBS REAR DIFFERENTIAL LEFT SIDE (EXHAUST RUBS REAR DIFFERENTIAL LEFT SIDE)		Caution	\$149.00		
AFTERMARKET WHEELS (AFTERMARKET WHEELS)		Caution			
AFTERMARKET LONG TUBE HEADERS INSTALLED (AFTERMARKET LONG TUBE HEADERS INSTALLED)		Caution			
AFTERMARKET HOOD INSTALLED (AFTERMARKET HOOD INSTALLED)		Caution			
AFTERMARKET HIGH FLOW CATALYTIC CONVERTERS INSTALLED (AFTERMARKET HIGH FLOW CATALYTIC CONVERTERS INSTALLED)		Caution			
AFTERMARKET CHARGE AIR COOLER INSTALLED (AFTERMARKET CHARGE AIR COOLER INSTALLED)		Caution			
AFTERMARKET/NON OEM TIRE SIZES INSTALLED WITH AFTERMARKET WHEELS (AFTERMARKET/NON OEM TIRE SIZES INSTALLED WITH AFTERMARKET WHEELS)		Caution			
REPLACE TIRES WITH OEM SIZE WHEN REPLACING WHEELSSEE RECOMMENDED WHEEL REPLACEMENT (AFTERMARKET/NON OEM TIRE SIZES INSTALLED WITH AFTERMARKET WHEELS)		Caution			

Totals, Taxes and Fees	Cost	Deferred	Approved			
Estimate Subtotal	\$5,907.10	\$0.00	\$0.00			
shop fees			\$0.00			
Tax			\$0.00			
Estimate Total			\$0.00			
For "See AI-" items see the "Additional Information" section						



## **Additional Information**

Below is information we feel would help you better understand some of the reasons for taking preventive maintenance steps -- steps that help to ensure the reliability and safety of your vehicle for you and your family.

\*\* The following section may contain instructions for servicing various components of your vehicle. These are an overview of the process that will be performed by a skilled technician in our shop. They are not intended to be a guide for a "do-it-yourself" operation.

#### Replace Pollen Filter

## possible Description

#### **Operation Description:**

Access the pollen filter according to the vehicle manufacturer's service information. Remove the pollen filter from its housing. Clean the housing of all dust and debris. Install the new pollen filter into its housing.

#### Significance:

The pollen filter is designed to filter out dust, pollen and other particles that would normally make their way into your vehicle through the Heating, Ventilation and Air Conditioning systems. Pollen filters work very well, but need to be replaced as part of a scheduled maintenance program. Restricted/dirty pollen filters put a strain on the blower motor, which can cause it to be excessively noisy and fail prematurely. This kind of strain on a blower motor also can cause problems with the vehicle wiring and electrical system, due to the excessive amperage required for the blower motor to function. Replacing the blower motor can be very expensive on some vehicles.



A clean pollen filter can be very effective at keeping dust, pollen, and other unwanted particles from entering the interior of your car. Also, your blower motor will generate a higher volume of airflow, boosting the efficiency and effectiveness of your Heating and Air Conditioning systems.



**AI-13** 

Dirty Pollen Filter



New Pollen Filter

#### **Operation Description:**

Carefully raise the vehicle using an approved automotive lift. Remove the rim/tire assembly from the vehicle. Remove the tire from the rim using the proper tire dismount/mounting equipment. Install a new valve stem assembly in the rim. Install a new tire on the rim using the tire dismount/mounting equipment. Inflate the tire to the vehicle manufacturers recommended pressure. Balance the tire/rim assembly on a computer aided dynamic tire balancing machine. Reinstall the tire/rim assembly onto the vehicle. Torque the wheel retaining nuts to the vehicle manufacturer's specifications.



Signs of irregular tire wear.



New Tire.

#### Significance:

Your vehicles tires are the only connection between your vehicle and the road. Safe vehicle operation depends on your tires being in good condition. If your tires are neglected, the tread can wear completely away, leaving the tire bald and often exposing the steel cords. Not only is condition dangerous, it is also unlawful in many states. Tires with an abnormal tread wear pattern can cause the vehicle to shimmy and vibrate, and can adversely affect the manner in which your vehicle performs. A tire with an abnormal tread wear pattern will no longer contact the road the way that it was designed to, and this condition can be dangerous, especially during adverse road conditions.

#### Advantage:

Replacing worn tires is part of vehicle maintenance that is necessary to ensure that your driving experience is as safe as possible. Besides the obvious safety benefits, tires that are in good condition and properly inflated to the correct air pressure can increase the overall fuel economy, and help provide a comfortable ride.

#### Replace Burned Out Bulbs

#### **Operation Description:**

Perform a function test of entire lighting system. Visually inspect the headlamps, high and low beams, hazard signals, turn indicators, parking lights and brake lights. Remove and install new light bulbs as needed to repair inoperative vehicle lamps.

#### Significance:

All vehicles have lighting systems for safety, and to adhere to State and Federal traffic laws. These important components allow you to see the road in front of you at night and allow other vehicles to see you coming. Replacing burned out light bulbs is an important service task. The cost is normally less than the inconvenience and can help prevent you from receiving a traffic citation.



The vehicle lighting system is an important safety feature of your car. Replacing burned out light bulbs is an inexpensive way to ensure that your driving experience is a safe one.



**AI-17** 

Examples of Burned Out Bulbs



New Light Bulb

#### **Operation Description:**

Loosen the drive belt tensioner and remove the old belt. Repeat this step for any other belts that require replacement. Inspect the tensioner and idler pulley bearings for noise or signs of wear. Replace any tensioner or idler pulleys that require replacement. Install the new belt and tensioner to factory specifications. Repeat this step for any additional belts that require replacement. Start the engine, and after a minute or so, shut the engine off. Recheck the belt tension and make final adjustments as necessary.

Cracked/Worn Accessory Drive Belt



New Accessory Drive

#### Significance:

The accessory drive belt(s) on your vehicle performs many functions. The Power Steering System, Alternator (charging system), and Air conditioning System are all driven by accessory drive belts. On some vehicles, accessory drive belts also drive the water pump, engine cooling fan, and Air Injection Pump (emission control). Accessory drive belts wear during normal engine operation, and need to be checked and replaced periodically. Keep this point in mind, as you can lose one or more systems if a belt is broken. For example, a broken fan or waterpump belt can cause severe overheating which could result in expensive repairs, or even total engine failure. A broken power steering belt can result in the loss of your vehicle's power steering system, which could make your vehicle very difficult to steer. This condition could be dangerous if a quick steering maneuver is necessary. A broken alternator belt could cause your vehicle to lose all of its electrical power, and could eventually result in a dead battery. This condition could cause the engine to shut off and not restart.

#### Advantage:

Make sure that the drive belt(s) on your vehicle are in good condition. This is an important point to keep in mind as you attempt to keep your vehicle reliable and safe. Drive belt replacement is recommended at certain mileage intervals, This step can also save you money by avoiding possible engine damage and costly engine repairs. Don't wait, have your drive belts inspected and replaced whenever it is recommended by the vehicle manufacturer!

#### Replace Windshield Wiper Blades

#### **Operation Description:**

Remove the wiper blades from the wiper arms following the vehicle manufacturer's instructions (found in the owner's guide). Install new wiper blade assemblies onto the wiper arms. Thoroughly clean the windshield.

#### Significance:

The ability to drive safely interests all of us. Having a clean windshield is a necessity for safe driving. Most driving decisions are dependent on the driver having a clear view of the road ahead. Worn or torn wiper blades do not effectively clean the windshield, and a dirty windshield can obstruct the drivers view, possibly resulting in an accident.

#### Advantage:

Most wiper blade manufacturers recommend replacing your wiper blades every 6 months or 6,000 miles. Something as simple and as inexpensive as replacing your windshield wiper blades will make your driving experience for you and your family a safer one.



Impaired View From Worn Wiper Blades



New Wiper Blades.

AI-29

#### Perform Wheel Alignment

#### **Operation Description:**

Inspect the front and rear suspension components for any signs of wear or damage. Using wheel alignment equipment, adjust the suspension and wheels to the vehicle manufacture's specifications.

#### Significance:

Vehicle suspensions can wear with age and repeated heavy use. Rough road surfaces and an occasional pothole can change the vehicle's wheel alignment. A wheel alignment can improve your steering control and overall vehicle handling. It can also help prevent abnormal tire wear by bringing the vehicle suspension components back to the vehicle manufacturer's specifications. This important step will keep your vehicle driving the way it was designed to. Keep in mind that a vehicle alignment is necessary any time a worn suspension part is replaced.



A Wheel alignment being Performed.

#### Advantage:

Even slightly worn suspension components can affect the vehicle's wheel alignment. This can lead to premature wear of tires and reduce overall vehicle comfort and safety. A vehicle with worn out suspension parts can be unsafe to drive. Maintaining your vehicle suspension and performing regular wheel alignments along with tire rotation can help keep your vehicle safe and reliable.



Abnormal Tire wear

#### Replace Air Filter Element

#### **AI-31**

#### **Operation Description:**

Remove the Air Filter Element from the air filter housing. Clean the air filter housing and inspect the fresh air duct hose for damage, dirt or obstructions. Inspect the warm air intake hose for signs of deterioration. Replace as necessary. Install a new filter element, and then reinstall the air filter housing access panel.



Extremely Dirty/Restricted Air Filter



New Air Filter

#### Significance:

A dirty or clogged air filter can affect the fuel economy and overall vehicle performance. Both Diesel and Gasoline powered engines are designed to maintain a specific air/fuel ratio. A restricted air filter can affect the way the engine maintains the correct air/fuel mixture. If the air filter is restricted, the fuel mileage and overall vehicle drivability can deteriorate rapidly.

#### Advantage:

Replacing your air filter element is a quick and effective way to keep your engine running at its peak performance.

#### Replace Worn-out Macpherson Struts

#### AI-48

#### **Operation Description:**

Note: McPherson Struts should always be replaced in pairs. Carefully lift the vehicle using an approved automotive lift. Remove the wheel that corresponds with the strut that is going to be replaced. Follow the vehicle manufacturer's service information and remove the strut/spring assembly from the vehicle. Using a strut spring compressor, carefully compress the coil spring and disassemble the strut assembly. Remove the strut cap and bearing, and inspect them for damage or wear. If the bearing or cap is damaged or worn, it must be replaced. Remove the strut insert from the strut assembly. Install the new strut insert. Reinstall the coil spring and cap and bearing. Carefully decompress the coil spring. Install the strut/spring assembly back onto the vehicle. Reinstall the wheel and torque the lug nuts to the correct torque specification. Perform a complete wheel alignment.



Worn out struts damage tires.

### Significance:

When a strut wears out, your vehicle will bounce too much when going over bumps. It will also sway excessively while moving through a turn. Worn out struts can lead to serious handling problems with your vehicle, and this presents a safety issue. Your vehicle may even handle in an unpredictable manner. Worn out struts can also cause your tires to wear unevenly, greatly reducing the life of your tires. You should replace your struts before they get to this point.



New Struts

#### Advantage:

Replacing your worn out struts can greatly improve how your vehicle handles, making your vehicle more predictable and safer to drive. It will also prevent premature tire wear that is associated with worn out McPherson struts.

#### **Operation Description:**

Note: Shock absorbers should always be replaced in pairs. Carefully lift the vehicle using an approved automotive lift. Remove the wheel that corresponds with the shock that is going to be replaced. Follow the vehicle manufacturer's service information and remove the shock absorber from the vehicle. Inspect the shock mounting points on the vehicle for wear or damage and make repairs as necessary. Install the new shock absorber. Reinstall the wheel and torque the lug nuts to the correct torque specification.



Uneven tire wear due to worn shock absorbers.



New Shock Absorber.

AI-60

#### Significance:

When a shock absorber wears out, your vehicle will bounce too much when going over bumps. It will also sway excessively when you go into a turn. Worn out shocks can lead to serious handling problems with your vehicle, and this presents a safety issue. Additionally, your vehicle may handle in an unpredictable manner. Worn out shocks will also cause your tires to wear unevenly, greatly reducing the life of your tires. You should replace your shock absorbers before they get to this point.

#### Advantage:

Replacing your worn out shock absorbers can greatly improve how your vehicle handles, making your vehicle more predictable and safer to drive. It will also prevent the premature tire wear that is associated with worn out shock absorbers.

#### Check Engine Light Is On

#### **Operation Description:**

Locate the vehicle's data link connector under the dash area. Turn the key on and follow the Scan Tool instructions to "read" any Powertrain or Transmission diagnostic trouble codes stored in memory. If any codes are stored, follow the vehicle manufacturer's service information to troubleshoot the cause of the trouble code or codes. Then make the necessary repairs as discussed in the service information. When the repair is completed, clear the Powertrain or Transmission controller of all stored codes, and then drive the vehicle under the correct conditions to verify the problem has been repaired.



Check Engine Light is "On" Service is Required

#### Significance:

When a vehicle's Check Engine light is "on", this is an indication that a significant problem with the emission control system has been detected by one or more of the vehicle controllers. In many states, your vehicle will fail the vehicle emissions inspection if the Check Engine light is "on". The Check Engine light is your vehicle's way of telling you that it has detected a problem that is affecting the level of emissions released from your vehicle. If problems associated with the Check Engine light are not diagnosed and repaired in a timely fashion, expensive repairs may result. You may also run the risk of your car not starting, or stalling under various conditions.



Scanning vehicle for trouble codes.

#### Advantage:

When your Check Engine light is "on", it indicates a problem that needs to be addressed immediately. Repairing the problem right away can ensure that your vehicle continues to be reliable, and can help to avoid costly repairs in the future.

# Vehicle Care Commitment

## It's about "Peace of Mind..."

**Thank you** for choosing our service department to handle your vehicle's service needs. In order to provide the quality service you deserve, we have invested in the latest diagnostic equipment and information systems. These help us fully understand your vehicle's service and maintenance requirements so that we can service your vehicle in the most comprehensive and economical way possible.



We are pleased to present to you a "Know Your Vehicle<sup>TM</sup>" report today. It's important to us that you leave our dealership with peace of mind, so we take the extra time necessary to analyze your vehicle's health to make sure it is operating at its optimum levels. This complete bumper-to-bumper inspection report will help you better understand your vehicle's performance and health. Staying on top of your vehicle's wellness is vitally important to ensuring your safety on the road.



Thank you for this opportunity to assist you. We appreciate your business. Please feel free to contact your service advisor if you have any questions or concerns. We will do all in our power to put your mind at ease and keep you and your family safe on the road.



## How we give you "Peace of Mind..."

#### To help you understand what your vehicle needs to stay in top operating condition, we:

- Perform a world class visual inspection on your vehicle every visit
- Review your vehicle's maintenance schedules and search our extensive database to uncover anything we believe you should know about your vehicle based on its odometer reading and time on the road
- Make recommendations and complete a Estimate for your vehicle

and need to be repaired immediately

Offer a complete easy to read and understand report that enables you to make an educated decision for your vehicle's service needs. Items on the report will be classified as follows:
 Pass- Items are new or "like new" and do not require service at this time
 Caution- Items that are dirty or showing signs of wear and would benefit from being serviced soon
 Fail- Items that have either worn below minimum specifications or are no longer doing what it was designed to do

<sup>\*</sup>Addressing any identified issues listed by the report, should improve the safety and performance of your vehicle. However, please remember that the inspection is limited to a visual inspection of the items listed on the report without disassembling or test driving your vehicle. Therefore, it is not possible for the technician to see or identify all potential defects, especially those that are internal to the engine, transmission, driveline, electrical system or other components. The cleanliness of the vehicle both inside and out at the time of the actual inspection may reduce the accuracy of the inspection. Your vehicle may have conditions that are not evident at the time of the inspection or otherwise not presented or noticed during the inspection process. Therefore, the inspection and condition report does not provide any guarantee or warranty that the vehicle will not break down in the future, or have conditions that were undetected during the inspection or were omitted from the report.