OWNERS MANUAL

1990 CONSULIER GTP

Consulier Industries, Inc.

2391 Old Dixie Highway

Riviera Beach, FL 33404

(407) 842-2492

This manual should be kept in the car at all times. It should stay with the vehicle to provide the next owner with important operating, safety and maintenance information.

All information, illustrations and specifications are based on the latest product information available at the time of printing. Consulier Industries, Inc. reserves the right to make changes at any time without notice.

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INTRODUCTION

The Consulier GTP is an automobile built specifically to meet the requirements of those who demand and appreciate high performance capabilities. It combines modern materials and construction techniques with proven mechanical components, resulting in a distinctive motor vehicle apart from the norm.

The purpose of this manual is to help acquaint Consulier owners with the various systems and controls incorporated in the vehicle, and to help them obtain maximum service life and enjoyment from it. A thorough reading of the material contained herein should provide most of the information needed for normal operation and maintenance.

Should additional information or technical assistance be required, owners are encouraged to contact one of Consulier's authorized dealers, listed in the Service and Maintenance section of this manual, or to call Consulier's headquarters in Riviera Beach, Florida, at (407) 842-2492. The company expects that this unique opportunity for Consulier owners to interact directly with the factory should greatly enhance the ownership experience.

The Consulier features a unitized body/chassis structure constructed using layers of foam, carbon fibers, S-glass and other space-age materials laminated together to produce a unit of exceptional strength with very low weight.

Attached to the body/chassis structure is a fully independent suspension system utilizing inboard-mounted, rocker arm-actuated springs and shock absorbers at all four wheels. The chassis also features four-wheel, power-assisted disc brakes.

Motivation is provided by a midship-mounted 2.2-liter Chrysler Turbo II inline, four-cylinder engine. The engine is turbocharged and uses an intercooler to maximize power and efficiency. It delivers power to the rear wheels via a Chrysler Getrag 5-speed manual transaxle.

Inside, the Consulier carries luxury appointments for two, including Recaro sport seats, air conditioning, stereo, tilt steering column, power windows and door locks and wool carpeting.

BEFORE DRIVING YOUR CONSULIER

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KEYS

The ignition and door keys supplied with the Consulier GTP come with a small metal ring attached bearing a stamped key code number. This number should be recorded in a safe place as it can be used to obtain duplicates for your vehicle from Consulier. A qualified locksmith can also make duplicate keys for the Consulier GTP using Chrysler Motors key blanks.

Ignition and Steering Lock

All Consulier automobiles are equipped with an ignition and steering column lock. The ignition key can be inserted or withdrawn only when the ignition switch is in the LOCK position. In order to return the ignition to the LOCK position, it is necessary to depress the small lever on the steering column adjacent to the ignition switch while turning the key.

Key Reminder

The Consulier is equipped with a key reminder feature which emits an audible signal when the driver's door is opened with the key in the ignition lock.

A WORD ABOUT SECURITY

Ownership of a Consulier GTP automobile is a major investment. Therefore, it is highly advisable to protect that investment by never leaving the keys in the ignition and by securely locking the vehicle when it is unattended.

DOOR LOCKS AND WINDOWS

The doors can be locked from outside the car using the key supplied with the vehicle or from inside by pushing in the forward portion of the rocker lever built into each inside door release. Note that if the door is closed with the rocker lever in the locked position, the door will lock. Be sure to remove the keys from inside the car before closing the doors.

Power door locks are standard equipment on many Consulier automobiles. These are actuated by rocker switches mounted vertically on each inside door panel. Pushing either switch will lock both doors. Likewise, either switch will unlock both doors from inside the cockpit.

Power Windows

Many Consuliers are equipped with power window lifts for the side door windows. A pair of rocker switches for raising and lowering the windows is mounted on the center console, aft of the gearshift lever.

SEATS

All Consulier GTP cars have cloth upholstered Recaro sport seats as standard equipment. (Leather covered Recaros are optional.) The seats are supplied with the owner's choice of either a solid headrest or a recessed net headrest.

To slide either seat forward or backward, turn the lever located at the front of the seat cushion and move the seat to desired position.

To adjust the seatback angle, turn the knob located on the side of the seat at the junction of the seatback and the seat cushion.

It is also possible to extend the thigh support pad at the front of the seat cushion for additional thigh support.

To extend it, grasp the pad and pull it forward from its normal position.

To tilt the seat back forward for access to the space behind, lift the lever mounted high on the side of the seat back and tilt the seat back forward.

SAFETY BELTS

When properly utilized, automotive safety belts greatly enhance survivability in a crash and can prevent or greatly reduce occupant injuries. It is, therefore, highly recommended that safety belts always be worn by both driver and passenger when traveling in a car.

Consulier GTP automobiles are equipped with three-point safety belts for both the driver and passenger. (A four-point competition harness is available as an option.) The system consists of a continuous belt with one end firmly anchored below the door sill and the other end attached to an inertia-sensitive retractor mechanism behind the seat, a movable buckle, and an inboard mounted stationary buckle anchor. The belt, which carries a movable buckle, is free to extend or retract to allow freedom of movement to the wearer. The buckle is designed to attach to the anchor inboard of the seat when in use.

In the event of a sudden stop or impact, the retractor mechanism is designed to lock, preventing extension of the belt and thus restraining the wearer. The belt will not lock when jerked sharply by hand.

Belt Use Instructions:

1. Upon entering the vehicle, sit firmly back in the seat with erect posture. With the seat comfortably adjusted, the belt buckle will be found hanging at about shoulder height, just behind the door opening.

2. Grasp the metal buckle and pull the belt out as far as necessary to reach around you to the fixed anchor inboard of the seat. Pull the belt webbing across the lap and over across the shoulder and insert the buckle into the fixed anchor. A "click" should be heard indicating the belt is secure.

3. The shoulder belt should NOT be worn under the arm or otherwise out of position as this increases the chance of injury in a crash. Position the belt across the thighs and snug against hips, with the upper portion of the belt across the shoulder. The retractor mechanism will automatically take up any slack. Pulling up on the shoulder strap will snug the lap belt and reduce the chances of the wearer "submarining" beneath the belt in the event of an accident. The shoulder belt should be positioned comfortably on the chest, but not resting on the neck.

The shoulder belt should be pulled out just enough to allow your closed fist to rest between the belt and your chest. The retractor will allow this small amount of slack to remain in the belt. Leaving excess slack in the shoulder belt should be avoided as this will reduce the belt's effectiveness in restraining the wearer in a crash. When properly adjusted, the shoulder belt should permit unrestricted movement of the upper body.

4. To release the safety belt, push the button on the fixed anchor inboard of the seat. The belt will automatically be retracted to its stored position when the door is opened.

MIRRORS

Inside Rearview Mirror

The Consulier GTP is equipped with an inside, windshield mounted day/night rearview mirror. Headlight glare from following vehicles can be reduced by moving the small control on the mirror to the night position after the mirror is adjusted for clear rearward vision in the daylight position.

Outside Door Mirrors

Consulier automobiles are equipped with remotely controlled outside mirrors, one on each door. The mirrors are controlled by a small joystick control mounted on a short panel extending from the lower edge of the instrument cluster just below the stereo unit.

To adjust the lefthand mirror, rotate the small tab at the base of the joystick toward the left side of the car and move the joystick to set the left mirror. Likewise, to adjust the righthand mirror, rotate the small tab to the right and position the right mirror using the joystick.

For maximum effectiveness, the left (driver's side) mirror should be adjusted for a field of vision centered on the adjacent traffic lane, with a slight overlap of the view from the inside mirror.

The right side mirror has a convex lens to give a wider view to the rear and of the lane to the right of the vehicle. It should be noted, however, that objects seen in a convex lens appear smaller and further away than they actually are, so extra caution is called for in judging maneuvering distances. This mirror should be adjusted so that the side of the car is just visible at the inside edge of the lens when seated in a comfortable driving position.

FUEL USAGE

ALWAYS TURN OFF THE ENGINE WHEN REFUELING YOUR VEHICLE.

The Consulier GTP uses a Chrysler turbocharged engine which is designed for optimum performance and efficiency when operated on unleaded gasoline. For best results, it is recommended that fuel be purchased only from reputable suppliers.

All Consuliers are equipped with a catalytic converter to help reduce engine exhaust emissions. Use of gasolines containing lead not only renders the catalyst inoperative over a period of time, but can also be detrimental to the fuel system and reduce fuel economy. Therefore, Consulier

automobiles are equipped with a fuel filler neck containing a built-in restrictor. The restrictor is sized to accept fuel only from an unleaded fuel nozzle. The restrictor includes a spring-loaded "trap door" designed to prevent pumping fuel past the restrictor using a leaded pump nozzle. Should it be necessary to fuel the car from a gasoline can, a funnel or other device will be needed to hold the "trap door" open while the fuel is dispensed.

As federal law requires all vehicles equipped with catalytic exhaust systems, Consulier automobiles also carry UNLEADED FUEL ONLY labels on the instrument panel fuel gauge and at the fuel filler. Strict adherence to this requirement will help ensure the longevity and proper operation of fuel system and exhaust components.

Turbocharging allows the engine used in the Consulier to produce more power per cubic inch than it otherwise would, but it also places extra demands on fuel. It is recommended that unleaded gasoline with a minimum octane rating of 91 [(R+M)/2] be used whenever possible to assure optimal performance and fuel economy and to prevent detonation. Alternatively, unleaded fuel with an octane rating of 87 [(R+M)/2] may be used, but lower performance can be expected and detonation may occur. Should prolonged, heavy engine knocking (audible pinging) occur even when operating with premium fuel, the vehicle should be checked by a qualified technician.

In addition to octane rating, another important consideration in choosing an appropriate gasoline is detergency. It is beneficial to use a gasoline with a high level of detergent additives. These detergents reduce the buildup of deposits on the engine's fuel injectors and in the intake tract, and thereby help to maintain good driveability. Premium unleaded gasolines, in addition to satisfying the octane requirements of the Consulier's powerplant, generally contain more of these beneficial detergents than do lower grades of gasoline.

Using fuels with excessively high volatility can cause hard starting, stalling, and driveability problems. If these problems are experienced, the owner should try a different brand or higher grade of fuel. If after doing so the problem persists, it may be necessary to consult qualified service personnel.

Alcohol Blends

Although the Chrysler engine used in the Consulier GTP is designed for optimum performance on pure unleaded gasoline, owners should be aware that some fuel suppliers blend their gasoline with various types and percentages of alcohol. If in doubt, it is advisable to consult the service station operator about the alcohol content of the fuel being sold.

There are two types of alcohol generally in use in gasoline blends: Ethanol (ethyl or grain alcohol) and methanol (methyl or wood alcohol).

Ethanol blends, usually found as a mixture of 10 percent ethanol and 90 percent unleaded gasoline, and commonly referred to as "gasohol" or "ethanol enhanced" fuel, can be used in the Consulier. Due to their generally higher volatility, however, their use may result in hard starting, driveability problems and loss of fuel economy.

Gasoline blends containing methanol may result in starting and driveability problems as well, and can damage fuel system components. FUEL BLENDS CONTAINING METHANOL SHOULD NOT BE USED IN CONSULIER AUTOMOBILES.

Fuel Additives

Consistent use of a high grade of detergent-rich, unleaded gasoline should eliminate any need for use of additional fuel system additives. Indeed, some of these products contain solvents and other materials which may be harmful to the fuel system, and their indiscriminate use should be avoided.

A Final Word on Fuel

In general, the most satisfactory results will likely be obtained by always using pure unleaded gasoline having recommended octane rating and detergency.

Fuel Filler

The fuel filler is recessed into the side of the Consulier, just behind the righthand door. The recess holding the filler cap is equipped with a drain to allow water to escape. Care should be taken to prevent the drain from clogging, as a clogged drain could result in water entering the fuel tank.

The filler cap is designed to thread tightly into the filler neck and seal the tank against fuel vapor loss. When the cap is seated firmly on the filler neck, pressure may

build up inside the fuel tank and neck, especially during warm weather. To prevent the possibility of being splashed by fuel forced out when this pressure is released, always loosen the filler cap slowly, allowing any pressure to vent before the cap is removed.

OPENING THE ENGINE COVER AND FRONT HATCH

The louvered hatch at the rear of the Consulier which covers the engine bay is opened by pushing the hatch release mounted on the extreme lefthand side of the dash, below the air conditioning vent, then lifting the finger hook at the center of the hatch. A prop rod will be found mounted below the radiator at the back of the engine bay. When in use, it fits into a hook on the underside of the engine lid to hold the lid open. A clip on the body holds the prop when it is not in use.

To secure the hatch, close it firmly and check to see that it is latched by lifting the finger hook.

Front Hatch

The front hatch is secured with anchors requiring the use of a large Phillips screwdriver to release them. Turn the Phillips-head anchors one-quarter turn counterclockwise to release; push the anchors in and turn clockwise to secure.

The battery, brake booster/master cylinder unit and spare tire and jack are accessible through the front hatch.

BREAK-IN RECOMMENDATIONS

The Chrysler engine utilized in the Consulier GTP does not require a lengthy break-in period. However, moderate driving is in order for the first 300 miles (500 km).

After the first 60 miles (100 km), speeds of 50 to 55 mph (80 to 90 km/h) are desirable, and brief periods of full throttle acceleration will contribute to good break-in. It should be noted, however, that wide-open throttle acceleration in low gear can be harmful and should be avoided.

It is not uncommon for a new engine to consume some oil during its first few thousand miles of operation. This is a normal occurrence during break-in and does not indicate a problem.

The oil level should be checked regularly and the oil changed in accordance with the guidelines provided in the Service and Maintenance sections of this manual. Be sure to use only oil which satisfies the SAE viscosity and API quality requirements listed. NEVER USE A NON-DETERGENT OR

STRAIGHT MINERAL OIL IN THE CONSULIER'S ENGINE.
Caution: Turbocharged engines, such as the one used in the Consulier, are very sensitive to exhaust backpressure for proper operation. Any modification to the exhaust system which reduces backpressure may lead to lean fuel mixtures and excessive spark advance, resulting in serious engine damage.

SAFETY TIPS

Carbon Monoxide Warning

Engine exhaust gas contains carbon monoxide, an odorless and colorless gas which is extremely toxic. Breathing this gas is very dangerous. The following precautions should always be observed:

--Never run the engine in a closed garage or confined area.

--If it should be necessary to sit in a parked vehicle with the engine running, it is advisable to use the car's ventilation system to force fresh air into the cockpit. Set the blower on high speed.

Inside The Vehicle

Seat Belts--The seat belt system should be inspected periodically for cuts, frayed belt webbing and loose or damaged parts. The belt system should never be modified, and any parts found to be damaged should be replaced immediately.

The belt assemblies must be replaced after an accident if: (1) They have been subjected to stress loads, even if no damage is apparent; such loading can weaken the belt and lessen its effectiveness in future use. (2) Accident damage to the belt components is evident in the form of a bent retractor, torn belt webbing, damaged buckles, etc. If there is any question as to the belt system's condition, it should be replaced.

Defroster--Defroster operation can be checked by switching the ventilation system to the defrost mode and turning the blower to its highest setting. With the engine running, air should be felt exiting the dash vents at the base of the windshield.

Outside The Vehicle

Tires--It is advisable to inspect the tires on a regular basis. They should be checked for excessive or uneven tread wear (the latter may indicate a suspension system problem), foreign objects lodged in the thread or sidewalls. It is a good idea to check the wheel lug for tightness and to check

tire pressures (including the spare tire) regularly as well.

Lights--With the aid of an observer, periodically check the function of all exterior lights on the vehicle, including headlights, taillights, turn signals, side marker lights, and brake lights and lights on the instrument panel.

Fluid Leaks--Any evidence of fluid leakage visible after the vehicle has been parked for a period of time should be investigated as soon as possible, and the source of any leakage repaired promptly by a qualified technician. Also, a strong fuel odor inside or around the vehicle may indicate a potentially hazardous fuel leak. Should such an odor be detected, the vehicle should be checked at once by qualified service personnel.

Brake System

The Consulier GTP is equipped with a dual braking system which can still provide stopping power even in the event of a failure in one part of the system. Should one of the two hydraulic systems fail (lose pressure), greater pedal force will be required to stop the car, increased pedal travel will be noted, and the dash-mounted brake warning lamp will be activated during braking. STOPPING DISTANCES WILL BE INCREASED. Should any of these conditions be encountered, the car should be inspected immediately by a qualified technician. DO NOT CONTINUE TO DRIVE THE VEHICLE WITH THE BRAKING SYSTEM PARTIALLY DISABLED.

In order to function properly, the braking system must always be well filled with brake fluid. The brake fluid level in the master cylinder reservoir should be checked each time the vehicle is serviced, and the reservoir should be kept full at all times.

Consulier automobiles have a vacuum booster which utilize engine vacuum to reduce the pedal effort required for braking. The booster stores a small amount of vacuum so that assist can be maintained when the engine is off; the brakes will still function, but increased pedal effort will be required to stop the car. If braking effort remains abnormally high with the engine running, the problem should be referred to service personnel at once.

Driving on Slippery Surfaces

Rapid acceleration on wet, snowy or otherwise slippery surfaces may cause the drive wheels to pull erratically with uneven traction, which can result in partial or complete loss of vehicle control.

When driving quickly on wet or slushy roads, a wedge of

water can build up between the tire and the road, actually lifting the car off the road surface. This phenomenon is known as "hydroplaning," and can result in loss of steering control and/or stopping ability. To reduce the risk from hydroplaning, the following precautions are suggested:

1. Reduce speed when driving in rainstorms or on wet, slippery pavement.

2. Slow down before traversing standing water on the road.

3. Replace the tires when the tread wear bars become visible.

4. Maintain proper tire inflation.

5. Maintain sufficient following distance to permit emergency maneuvers and safe stops.

Parking On A Hill

When parking on an upgrade next to a curb, turn the front wheels away from the curb; if there is no curb, turn the front wheels toward the edge of the road. If parking on a downgrade, with or without a curb, turn the front wheels toward the edge of the road.

The parking brake should always be engaged before leaving the vehicle, especially when parking on an incline.

Catalytic Converter

Damage to the catalytic converter may result if the Consulier's engine is not kept in proper operating condition. In the event of an engine malfunction, particularly an engine misfire or apparent loss of performance, the vehicle should be serviced promptly by trained personnel. Continued operation of a vehicle having a sericus malfunction may result in converter overheating and possible damage to the converter and the vehicle.

The converter operates at very high temperature and can ignite combustible material which comes in contact with it. Care should be taken not to drive or park the vehicle where grass or leaves are likely to make contact with the exhaust system.

A severe engine malfunction can result in extraordinary overheating of the catalyst, as evidenced by a scorching odor. Should this occur, the engine should be shut off and the vehicle allowed to cool. Service, including a tune-up to manufacturer's specifications, should be sought immediately.

To minimize the possibility of catalytic converter

damage, the following precautions are suggested:

1. Do not shut off engine or interrupt the ignition when the transmission is in gear and the car in motion.

2. Do not attempt to start the engine by pushing or towing the vehicle.

3. Do not idle the engine with any spark plug wire disconnected or removed, as for diagnostic testing, or for long periods when the engine is malfunctioning or running poorly.

A Final Caution

It is never advisable to leave the vehicle unattended with the engine running. Doing so not only invites tampering or theft, but prolonged engine idling can result in engine overheating.

VEHICLE IDENTIFICATION DATA

Identification numbers can be found at various locations on the Consulier. The engine serial number can be found on an aluminum tag affixed to the thermostat housing at the front of the engine. Identification numbers for the transaxle are located on the top of the transaxle housing. A Consulier production sequence number, identifying each vehicle, can be found stamped into the top rail of the engine subframe at the rear of the engine compartment, left side of the car.

STARTING AND OPERATING

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A WORD ABOUT PERFORMANCE DRIVING

Although the Consulier GTP is designed for comfortable operation, it is an automobile capable of delivering superior performance when in the hands of a skilled driver. Owners who are unfamiliar with high-performance driving techniques may find their proficiency in driving the Consulier, as well as their overall enjoyment of the vehicle, greatly enhanced by obtaining instruction from a qualified performance driving instructor or performance driving school.

STARTING PROCEDURE

When starting the engine, it is recommended that the gearshift lever be placed in NEUTRAL, the clutch pedal should be depressed to the floor, and the parking brake should be applied. If the gearshift is not in neutral and the clutch is not fully depressed, the car will lurch forward or backward when the starter is engaged.

Normal Starting

It is not necessary to pump or depress the accelerator pedal to start the engine, whether it is warm or cold. Just turn the ignition key to the START position and release it when the engine starts. Should the engine fail to start in about three seconds, slightly depress the accelerator while continuing to crank. If the engine has not started after ten seconds, turn the ignition OFF position, wait five seconds, then repeat the normal starting procedure.

Cold Weather/High Altitude

When starting with the engine cold at temperatures below 32 degrees F. (0 degrees C.), or at altitudes above 5000 feet at all temperatures, slightly depress and hold the accelerator while cranking. When the engine starts, first release the key, then the accelerator pedal. Should the engine fail to start after ten seconds of cranking, turn the ignition OFF, then repeat the procedure.

If The Engine Fails to Start

Should the engine fail to start after following the Normal Starting or the Cold Weather/High Altitude starting procedure, the engine may be flooded. Push the accelerator to the floor and hold it down while cranking the engine. This will help to clear any excess fuel if the engine is flooded.

If the engine has been flooded, it may start but have insufficient power to continue running when the ignition key is released. Should this happen, hold the accelerator pedal

to the floor and continue cranking. Release the accelerator and the key when the engine is running smoothly.

If the engine still has not started after two 15-second attempts at cranking with the accelerator held to the floor, pause for a few seconds, then repeat the Normal Starting or the Cold Weather/High Altitude starting procedure.

Warning

To avoid damaging the starter, do not continuously crank the engine for more than 15 seconds at a time. Pause for 10 to 15 seconds and try again. Also, NEVER POUR GASOLINE OR OTHER FLAMMABLE LIQUID INTO THE ENGINE AIR INTAKE! Doing so can result in a flash fire causing serious injury.

After Starting

Idle speed is electronically controlled on the Consulier's fuel-injected engine and will automatically decrease as the engine warms up.

PARKING BRAKE

The parking brake is applied by pulling firmly upward on the pivoting lever mounted between the seats. A ratcheting sound will be heard as the brake is applied. To release the brake, push in on the button end of the brake lever and lower the lever. It may be necessary to pull upward slightly on the lever in order to depress the release button.

When the parking brake is applied with the ignition on, the brake warning lamp on the instrument panel will light.

SHIFTING

Consulier GTP automobiles are equipped with Getrag 5-speed manual transaxle. By practicing proper techniques when using this gearbox, the driver will be rewarded with good performance and long service life.

Fully depress the clutch pedal when shifting gears. Slip the gearshift lever into the desired gear position and apply throttle smoothly as the clutch is released.

When accelerating, use each gear in numerical order; do not skip gears. Use FIRST gear for starting from rest and progress through SECOND, THIRD, FOURTH and FIFTH as speed increases. For city driving at moderate speeds, best performance will be obtained by using only the lower three or four gears. FIFTH gear is recommended for steady highway driving requiring only moderate acceleration. To engage fifth gear, push the gearshift to the far right past the

spring pressure and forward. When downshifting from fifth to fourth, pull the gearshift straight back; spring pressure will guide the lever into the fourth gear slot. Pulling the lever sharply to the left may result in inadvertent engagement of second gear, causing damage to the engine and/or transaxle.

Never drive with your foot resting on the clutch pedal when not using the clutch, or attempt to hold the vehicle on a hill by partially engaging the clutch. Either action can cause greatly accelerated clutch wear.

To engage REVERSE from neutral, pull up on the reverse lockout ring below the shifter knob and move the gearshift to the far left and forward. Never attempt to engaged reverse until the car has come to a complete stop.

Shift Speed Recommendations

Maximum acceleration will be obtained by holding the transaxle in each successive gear until the engine approaches the speed at which it produces its maximum power output, 5200 rpm. Fuel economy will be greatly enhanced, however, by upshifting at considerably lower engine speeds, provided they are not so low as to "lug" the engine. The most satisfactory results in normal driving will likely be obtained by selecting gears so that engine speed is maintained in the 2000-4000 rpm range. NEVER EXCEED THE MAXIMUM SAFE SPEED OF 5750 RPM.

Downshifting

Proper downshifting will enhance fuel economy and help ensure the longevity of driveline components. Downshifting at too great a velocity can severely damage the engine. CARE SHOULD BE TAKEN NEVER TO EXCEED THE MAXIMUM SAFE ENGINE SPEED OF 5750 RPM WHEN DOWNSHIFTING.

Downshifting to a lower gear when descending a steep grade will help to slow the vehicle and will help relieve the strain on the brakes. Also, downshifting before rounding corners or sharp curves, or before climbing steep grades, will help the engine to develop adequate power to more efficiently accelerate away from the curve or up the incline.

Cold Weather

At low ambient temperatures, it may be difficult to shift gears in the Consulier GTP until the transaxle lubricant has reached its normal operating temperature. This is a normal occurrence and is not harmful to the transaxle.

INSTRUMENT PANEL FEATURES

The instrument display in the Consulier GTP consists of a speedometer and tachometer, and individual gauges for engine oil temperature, fuel level, electrical system voltage, engine oil pressure, turbocharger boost and engine operating hours. A clock is also included.

Also located on the instrument panel are controls for the lights and the heating and air conditioning system, along with the standard equipment Alpine stereo unit. Located on a small extension below the instrument cluster are controls for the outside mirrors (explained in Chapter 1 under MIRRORS) and for the windshield defrosters.

1. Speedometer

The speedometer is located directly in front of the driver, to the left of the steering column. It indicates the vehicle speed in miles per hour (MPH) and kilometers per hour (kph). The speedometer also contains the vehicle odometer, which indicates the total number of miles the vehicle has been driven since new, and a resetable trip odometer. The trip odometer may be reset to "0" mileage by pushing in on the button extending from it.

Note: Federal law requires the seller of a vehicle to certify to the buyer the correct total vehicle mileage at the same time of title transfer. Thus, should the odometer reading be changed during repair, or the odometer be replaced during the life of the vehicle, a record should be kept of the correct total vehicle mileage.

2. Tachometer

The tachometer, located in front of the driver to the right of the steering column, indicates engine operating speed in revolutions per minute (RPM x 100). The yellow pointer shows the maximum safe speed, 5750 rpm. THIS SPEED SHOULD NEVER BE EXCEEDED IN ANY GEAR.

3. Headlight Switch

The Consulier's headlights and all exterior lights are activated by pulling the switch at the far left of the instrument panel. Also, the brightness of the instrument

lighting can be adjusted by rotating the switch knob when the lights are on. (Further explanation may be found in the next section of this chapter entitled **LIGHTS.**)

4. Brake System Warning Lamp

Located at the top of the instrument panel between the speedometer and the tachometer is the brake system warning lamp. A loss of hydraulic pressure in either half of the dual braking system will result in the warning lamp lighting when the brake pedal is depressed. Should this occur, the car should be inspected immediately by a qualified technician. DO NOT CONTINUE TO DRIVE THE VEHICLE WITH THE BRAKING SYSTEM PARTIALLY DISABLED.

The brake warning lamp is also activated when the parking brake is applied with the ignition on. This serves as a reminder to release the parking brake before driving and provides a means for the driver to check the function of the brake warning lamp.

5. High Beam Indicator

Situated just below the brake system warning lamp, between the speedometer and tachometer, is the high beam indicator lamp. This lamp will be lit when the high beam headlights are on and it helps remind the driver to dim the headlights when approaching oncoming traffic.

6. Seat Belt Reminder Lamp

Immediately below the high beam indicator, between the speedometer and the tachometer, is the seat belt reminder lamp. If the ignition is turned on with the driver's safety belt unfastened, the lamp will light for several seconds or until the belt is secured. Along with the lamp, an audible warning signal will be activated.

7. Turn Signal Indicators

Located below the speedometer and tachometer, respectively, are the left and right signal indicators. These indicator lamps will flash in unison with their respective exterior turn signals when the turn signals are actuated.

8. Engine Oil Temperature Gauge

At the upper left of the central instrument grouping is the engine oil temperature gauge. It allows the driver to monitor the temperature of the engine oil while driving. When the engine is fully warmed up, the oil temperature should average approximately 200 degrees F.

9. Oil Pressure Warning Lamp

The oil pressure warning lamp is located to the immediate right of the engine oil temperature gauge. When lit, it indicates low engine oil pressure. Ordinarily, the lamp should light only momentarily when the engine is started and remain out while the engine is running. Should the lamp light while the engine is running, shut off the engine and determine the cause of the low oil pressure (such as a dangerously low oil level) before continuing to operate. CONTINUED OPERATION OF THE ENGINE WITH LOW OIL PRESSURE CAN RESULT IN SEVERE ENGINE DAMAGE.

10. Water Temperature Gauge

The second gauge from the left in the central instrument grouping upper row is the water temperature gauge. It shows the temperature of the engine coolant. Normal temperature range for the engine coolant is 190-210 degrees F with the engine fully warmed up. During hot weather or while climbing mountain grades or driving in heavy traffic, a higher temperature may be observed. Should a significantly higher temperature reading occur, it is advisable to stop the engine and investigate the cause of the overheating. CONTINUED OPERATION OF THE ENGINE WITH COOLANT LOW OR SIGNIFICANTLY OVERHEATED CAN RESULT IN SEVERE ENGINE DAMAGE.

NEVER REMOVE THE PRESSURIZED RADIATOR CAP FROM THE ENGINE COOLANT TANK WHEN THE ENGINE IS HOT. DOING SO MAY RESULT IN A SEVERE BURN. WAIT UNTIL THE ENGINE COOLS BEFORE CHECKING.

The Consulier's cooling system is equipped with a thermostatically controlled electric cooling fan which is automatically activated when the coolant reaches a predetermined temperature. The water temperature gauge may fluctuate as the fan is engaged and disengaged.

11. Transmission Oil Temperature Gauge

The center gauge in the top row of the central instrument cluster is the transmission oil temperature gauge. It allows the driver to monitor the temperature of the transaxle lubricant while driving. This temperature will vary depending on operating conditions, but normal readings should remain near the bottom of the scale and should never exceed 200 degrees F.

12. Check Engine Lamp

Immediately to the right of the transmission oil temperature gauge is the check engine lamp. It monitors the condition of the Consulier's engine control system. Should the lamp light and remain on while driving, it indicates a

potential problem with the engine electronics, and the vehicle should be checked as soon as possible by a qualified technician. In most cases, the car will remain driveable, but prolonged operation in this condition can cause damage to the emission control system and adversely affect fuel economy and driveability.

The check engine lamp may also appear during full-throttle acceleration. This indicates excessive turbocharger boost or engine overspeed. Should the light appear during hard acceleration, ease up on the acceleration; fuel supply will be interrupted until boost pressure drops in order to prevent engine damage.

The lamp should also light briefly when the engine is started to indicate it is working properly. If it does not light during starting, the warning lamp should be repaired.

13. Fuel Gauge

The fuel gauge is located second from the right on the top row of the central instrument cluster. When the ignition is on, it indicates the level of fuel in the fuel tank.

14. Voltage Gauge

With the engine running, the voltage gauge, located at the far right of the upper row of gauges, will show the electrical system voltage. In normal operation, the pointer should remain in the 12-14 volt range. Should the gauge read consistently much higher or lower than this range, the electrical system should be checked by service personnel.

15. Oil Pressure Gauge

At the lower left of the central instrument cluster is the oil pressure gauge. The gauge should always show some oil pressure when the engine is running; the reading will vary depending on engine temperature and oil viscosity. The reading with the engine idling will be lower, while a higher pressure should be evident as engine speed increases. A reading which is consistently very high or low may indicate a problem with lubrication system and should be investigated at once to avoid engine damage.

16. Turbocharger Boost Gauge

The second gauge from the left on the bottom of the central instrument grouping indicates turbocharger boost condition. As engine speed increases, or during acceleration, boost pressure should be seen to increase up to a maximum of about 13.5 pounds per square inch (psi).

Sustained full-throttle acceleration under these conditions will result in interruption of fuel flow to prevent engine damage.

17. Clock

The second instrument from the far right on the bottom row of gauges is the electric clock. To set the clock, push in on the stem and turn.

18. Engine Hour Meter

At the far right of the lower row of instruments is an engine hour meter. It indicates the total number of hours the engine has operated since installation.

LIGHTS

When the headlight switch located at the extreme left end of the instrument panel is pulled out to its first stop, the front parking lights, taillights, side marker lamps, license plate lamp and instrument panel lights will be turned on. The headlights will be turned on when the switch is pulled all the way out. Rotating the switch in either direction will adjust the brightness of the instrument panel lights.

Interior Lights

The interior of the Consulier is equipped with two courtesy lights, one mounted on each side of the center console forward of the seats. These lights are turned on when either door is opened or by turning the headlight switch fully counterclockwise.

MULTI-FUNCTION CONTROL LEVER

The lever mounted on the left side of the steering column just ahead of the steering wheel performs a number of control functions in the Consulier: Turn signals, headlight dimming, headlight flashing, windshield wiping and washing, and cruise control.

Turn Signals

To engage the left turn signal, push the control lever down; raise the lever to activate the right turn signal. The left and right turn signal indicators mounted on the instrument panel ahead of the driver will flash in unison with their respective signals. If the indicator lights but does not flash, check the car for defective turn signal bulb. If the indicators fail to light when the turn signals are turned on, check for a bad fuse or the possibility of a burned-out bulb in the dash indicator lamp.

Headlight Dimmer Switch

To switch the headlights from low to high beam, pull the multi-function lever toward the steering wheel. The high beams will stay on until the lever is released.

Windshield Wiper and Washer

Controls for the Consulier's windshield wiper and washer are incorporated into the multi-function lever on the steering column.

Wiper speed is controlled by rotating the lever handle to the desired speed position as marked on the lever. By setting the wiper switch to DEL, the wiper can be made to operate in a delay or intermittent mode. The time interval between wiper strokes can be varied from about two seconds to approximately 15 seconds by turning the knob at the end of the control lever.

The windshield washer is actuated by pressing in on the knob at the end of the lever. The washer will continue to discharge fluid on the windshield for as long as the knob is depressed. When the washer is used with the wiper in the delay mode, the wiper will operate continuously for several seconds after the washer knob is released, then return to its delayed operation. If the washer is activated with the wiper in the OFF position, the wiper control will rotate to the maximum delay position and remain engaged until turned off again.

When driving in cold weather, always turn off the wiper and allow it to return to its parked position before turning off the engine. If the wiper is left on and it freezes to the windshield, the wiper motor may sustain damage when the engine is restarted. It is a good practice to warm the windshield with defroster before using the washer when ambient temperatures are very low. This will prevent the washer fluid from icing the windshield and obscuring the driver's view.

Electronic Speed Control

All Consulier GTP automobiles are equipped with electronic speed control (cruise control) as standard equipment. When engaged, this system takes over accelerator control at speeds above 30 mph (48 km/h) to permit steady speed cruising without the need for constant throttle application by the system and is located on the multi-function lever, ahead of the steering wheel.

To Activate--When the vehicle is traveling at the desired speed, push the SET button toward the steering column to move the slide to the ON position. This will activate the

system and enter the speed into the system memory. Foot pressure on the accelerator pedal may now be released and the set speed will be maintained. Moving the slide from OFF to ON while the vehicle is in motion registers the current vehicle speed in the control system's memory, but does not activate the speed control. The slide may be left in the ON position when the vehicle is parked, but turning off the ignition erases the speed from memory.

To Deactivate--Applying pressure to the brake pedal or depressing the clutch will deactivate the speed control without erasing the system's memory. Moving the control slide to the OFF position clears the memory, as does turning off the engine.

To Resume Speed--After slowing the vehicle by depressing the brake or the clutch, the preset speed may be resumed by pushing the control slide to the RESUME position. Take care that the slide does not "pop" back after using the RESUME feature. It may overshoot the ON position and deactivate the system.

Note: Depressing the clutch pedal while the speed control is engaged may result in a sudden increase in engine rpm. This is a normal occurrence and will not harm the engine.

To Alter Speed Setting--The set cruising speed may be varied by accelerating or slowing to a different speed, then moving the slide to the SET position again. Tapping the button to the SET position will increase the speed setting by two mph. Holding the set button depressed will allow the vehicle to coast to a lower speed setting.

To Accelerate for Passing--Depressing the accelerator in the normal manner with the speed control engaged will cause the vehicle to accelerate. When the accelerator is released, the preset speed will be resumed.

USE OF THE ELECTRONIC SPEED CONTROL IS NOT RECOMMENDED UNDER CONDITIONS WHICH DO NOT PERMIT CONSTANT SPEED CRUISING, SUCH AS WHEN DRIVING IN HEAVY TRAFFIC, ON WINDING ROADS, OR ON SLIPPERY SURFACES.

TILT STEERING COLUMN

All Consulier GTP cars are supplied with a tilt steering column to assure a comfortable driving position affording maximum vehicle control.

Pulling the small release lever located on the left side of the steering column will cause the steering wheel to pivot to its highest position, easing driver ingress and egress. To position the wheel, pull the lever, tilt the steering

wheel to the desired angle, then release the lever to lock the wheel at the selected angle.

VENTILATION/HEATER/AIR CONDITIONER

Forced flow of heated, cooled or ambient air can be supplied to the Consulier's interior and windshield area via a built-in ventilation system. The air supplied by the system is a mixture of fresh air from outside the car and recirculated air from inside the cockpit. While operating the fan alone will circulate ambient air, a heater and an air conditioner are also provided.

Ventilation

Air is distributed through the vents located at the outboard ends of the dash panel, under the dash in the footwells, and through defroster vents built into the top of the dash. The volume of air delivered through the various vents is regulated by the three-speed fan built into the system.

Fan speed is controlled by the knob located to the left of the engine oil temperature gauge on the instrument panel. Turning the knob clockwise to its first stop will engage the fan at its lowest speed; turning the knob to its second and third stops will boost fan speed to medium and high, respectively. Turning the knob fully counterclockwise will turn the fan off.

It is possible to direct air flow through either of the footwell vents individually. This function is performed by the two vent control knobs located just below the stereo unit. The lefthand knob controls air flow to the left side defroster and footwell vents; likewise, the righthand knob, the right side defroster and footwell vents.

Pull the knobs all the way out to direct air to the defroster vents and shut off flow to the footwell vents. To direct air to the footwell vents only, push the knobs all the way in. Positioning the knobs only part-way out will permit flow through both the defroster and footwell vents simultaneously.

The round "eyeball" vents located at the extreme ends of the dash panel are not affected by the vent control knobs, but each "eyeball" can be closed manually by turning the ball inside the vent sideways to block air flow from the vent. Also, each defroster vent has a folding "door" which can be opened and closed manually, and the defroster and "eyeball" vents can be swiveled to direct the air flow as desired.

To completely shut off the flow of air into the passenger compartment, pull both vent control knobs out fully, close the "doors" on each of the defroster vents and turn the ball in each "eyeball" vent sideways. Be sure the fan is turned off.

Heater

The Consulier's ventilation system includes a heater which can be used to warm the air supplied to the cabin through the various vents. By adjusting the vents, vent control knobs and fan speed as described above, warm air can be directed to the defroster vents to help clear ice from the windshield and/or to the passenger area for increased comfort.

The heater is engaged by pulling out the dash-mounted HEAT knob located to the right of the steering column. To increase the heat, pull the knob out farther; to reduce the heat, push the knob in. Pushing the knob in all the way turns the heat off.

During very cold weather, air supplied to the interior of the car will warm up faster if the fan is run only at its lowest speed during the first few minutes of heater operation. Comfort will be enhanced if air flow is directed away from the occupants during this initial warm-up period.

AIR CONDITIONER

The air conditioner incorporated in the Consulier's ventilation system will operate only when the fan is switched on. By opening or closing the various vents, using the vent control knobs to direct air flow, and adjusting the fan speed as described earlier, cooled air can be distributed to the windshield for demisting or to the passenger area.

To engage the air conditioner, set the fan speed as desired and turn the air conditioner knob located below the fan control. Turning the knob progressively clockwise will cause the system to supply cool air. Conversely, turning the knob counterclockwise will result in warmer air being delivered. Turning the knob fully counterclockwise turns the air conditioner off.

To rapidly cool the cockpit after the car has been parked during the hot weather, turn the air conditioner knob fully clockwise, switch the fan to its highest speed setting, and drive with the windows partially lowered until the hot air is expelled from the interior. Then close the windows and adjust the air conditioner knob and the fan speed to maintain a comfortable temperature inside the car.

With the air conditioner engaged, slight variations in engine speed and power may be noted as the air conditioning compressor cycles on and off to maintain the selected temperature. NOTE: Increasing engine speed above idle with the vehicle standing still and the air conditioner engaged may cause the system to overload during hot weather. This can result in refrigerant being lost from the system.

It is important to keep the Consulier's engine cooling system properly filled with high-quality antifreeze coolant when operating the air conditioner in warm weather. Such coolant raises the boiling point of the fluid in the cooling system and provides needed protection against engine overheating. A 50/50 mixture of coolant and water is recommended.

STEREO SYSTEM

An Alpine digital AM/FM compact disc player system is installed in some Consulier GTP automobiles as standard equipment. The player unit is mounted in the dash panel just below the central instrument cluster and can be removed from the car for security.

Components of the system include the Model 7903 Alpine AM/FM compact disc player and an 18 watt Alpine model 3501 power amplifier (mounted behind the dash on the right side of the car) driving a pair of Alpine Model 6368 6-1/2 inch speaker units, one in each door panel.

Full details on the features and operation of the system may be found in the Alpine owner's literature provided to each Consulier owner.

The Alpine components are covered by a separate warranty established by the manufacturer and described in the Alpine owner's literature.

CELLULAR PHONE

Some models of the Consulier GTP are equipped with an Alpine model 9511 cellular telephone which is tied into the Alpine stereo system. The tie-in is designed so that the stereo's volume is automatically lowered when the phone is in use.

The telephone handset is mounted on the center console between the driver and passenger seats. The electronic control module for the phone is located behind the carpeted panel behind the driver's seat. In addition to the handset, the phone includes a separate speaker mounted on the panel behind the passenger seat and a tethered microphone which can

be attached to clothing or various items in the cockpit, permitting hands-free use of the telephone.

As with the stereo system discussed above, complete information on the Alpine phone system is included in the Alpine owner's literature supplied with Consulier vehicles so equipped.

SUN ROOF

One of the advantages of Consulier ownership is the opportunity for buyers to work closely with the factory in tailoring their cars to their individual tastes and desires. Thus, a Consulier purchaser may opt for installation of a glass sun roof during construction of his or her vehicle. The glass panel can be tilted up at the rear to enhance cockpit ventilation, can be removed completely for open-air driving, or can be secured in the closed position.

TIRES

All Consulier GTP automobiles are equipped with high-performance, radial-ply tires which provide road hazard resistance combined with optimum handling and high-speed capabilities.

Maintaining proper tire inflation pressure is essential for safe and satisfactory operation of the vehicle. Three key factors are affected by tire pressure: Safety, operating economy, vehicle stability and comfort.

Safety--Underinflation results in excessive flexing and heat build-up within the tire which can lead to tire failure. Conversely, an overinflated tire has less capacity for cushioning shocks due to road hazards. The tire is thus more prone to damage and possible failure from such hazards. Extreme overinflation can cause sudden tire failure, especially at high speeds. Sustained high-speed driving heats the tires and causes tire pressures to rise, increasing the stress on the tire structure. If the tire is substantially overinflated, its designed-in margin of safety may be exceeded.

Economy--Substantial underinflation or overinflation can cause abnormal tire wear by distorting the tire's contact patch with the road surface. This can result in substantially reduced tire tread life. Also, underinflated tires have greater rolling resistance which can result in reduced fuel economy.

Stability and Comfort--The Consulier will ride and handle most comfortably when the tires are properly inflated. As noted above, overinflation reduces the shock-absorbing capability of the tires and produces a harsh ride. Vehicle

handling is also affected by tire pressure. Underinflation can produce sluggish, unstable handling; overinflation, on the other hand, can result in "twitchy" behavior.

Recommended Vehicle Loading and Tire Pressures

Information on maximum vehicle loading and recommended tire inflation pressures can be found on a placard affixed to the left door hinge pillar. The maximum recommended load-carrying capacity for the Consulier GTP is two occupants or 400 lbs (181 kg), including occupants and baggage.

Recommended inflation pressure for the front tires (size 205/50-15) is 34 pounds per square inch (psi). Recommended inflation pressure for the rear tires (size 225/50-15) is 36 psi.

Tire pressures vary with ambient temperatures and should be checked at least once a month, more often if outdoor temperatures fluctuate widely. The recommended inflation pressures are "cold" settings, meaning pressure after the vehicle has not been driven for at least three hours or driven less than a mile after being parked for a three-hour period, thus assuring that tire temperature is close to ambient temperature. AT NO TIME SHOULD COLD INFLATION PRESSURE EXCEED THE MAXIMUM ALLOWABLE PRESSURE RATING MOLDED INTO THE TIRE SIDEWALL. It should be noted that tire pressures may increase from two to six psi while driving. If cold tire pressure is set correctly, it is NOT necessary to bleed off pressure to allow for this increase. Doing so will result in underinflation when the tires cool.

High-Speed Driving

Tire condition and inflation pressure become especially critical at high speeds because high-speed driving puts extra stress on tires. For high-speed service, it is essential that tires be in good order, free from road hazard damage, not excessively worn, and inflated to the recommended pressures. NEVER ATTEMPT TO TRAVEL AT HIGH SPEEDS ON WORN, DAMAGED OR IMPROPERLY INFLATED TIRES!

Replacement Tires

The original equipment tires supplied on the Consulier GTP are selected to provide a combination of ride comfort, handling, and high-speed capability which is commensurate with the car's performance. The tires are speed rated, meaning they have been tested and proven durable at sustained speeds in excess of 100 mph. When selecting replacement tires for the Consulier, always be sure to buy tires matching the performance characteristics of the car. The tires should have a speed rating of V or Z, meaning they are approved for speeds in excess of 130 mph. FAILURE TO EQUIP THE CONSULIER

WITH TIRES HAVING AN ADEQUATE SPEED RATING COULD RESULT IN SUDDEN TIRE FAILURE AND LOSS OF VEHICLE CONTROL.

Also, be sure that replacement tires are the same size as the original equipment tires being replaced. It should be noted that the Consulier is equipped with two different tire sizes, 205/50-15 and 225/50-15 for the front and rear, respectively.

New Tire Precaution

When installed, new tires are stiff and require a brief break-in period. It is, therefore, advisable to drive at speeds at or below 55 mph for the first 50 to 100 miles after installing new tires.

Directional Tread Pattern

Some Consulier automobiles come equipped with tires having a directional tread pattern which is designed to give optimum performance when rolling in only one direction. The intended direction of rotation is indicated by arrows molded into the sidewalls of these tires. Extra care should be taken in removing and replacing directional tires to ensure that they are mounted so as to rotate in the intended direction while driving.

Tire Maintenance

Tire life can be maximized by observing a few simple precautions. As noted earlier, tire pressures should be checked and set to the recommended cold inflation pressures at least once a month. Remember to include checking the spare tire in this routine. While checking the pressures, it is a good idea to check each tire for road hazard damage and abnormal tread wear patterns. Cut or damaged tires should be repaired or replaced immediately. A tire exhibiting uneven tread wear may indicate the tire is improperly balanced or that suspension components may be misaligned or worn. Such a condition should be checked by trained service personnel as soon as possible before further, more severe damage occurs.

Because the Consulier utilizes radial tires of different sizes on the front and rear, it is not feasible to rotate the tires to different positions on the car. Also, as noted above, tires with directional tread patterns should be mounted so that they rotate in the indicated direction.

When tires become worn to the point that the tread wear indicator bars are visible on the tread, the tires should be replaced. The indicator bars are molded into the bottom of the tire grooves and will become clearly visible when the tread is worn down to about 1/16 inch in depth.

Compact Spare Tire

The Consulier is equipped with a compact spare tire designed for temporary use in conjunction with the original equipment tires. Because the spare has a tread life of only about 2,000 miles, it is advisable to replace or repair and reinstall the original tire as soon as possible. The spare is designed for high-pressure operation and should be inflated to 60 psi. Maximum safe driving speed with the spare tire in use is 50 mph. The wheel on which the spare is mounted is designed specifically for that tire. Do not attempt to mount a conventional tire on this wheel or to install a wheel cover on it.

Also note that road clearance will be reduced with the spare installed on the car, so extra care should be taken to avoid striking obstacles with the undercarriage of the car.

The spare tire is size 110/70-14 and is mounted on a 14-inch steel wheel.

APPEARANCE CARE

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CLEANERS AND PRESERVATIVES

Consulier Industries utilizes quality materials in the construction of the Consulier GTP automobile in an effort to ensure beauty and durability in the finished product. Due to the vehicle's unique structure, some maintenance procedures may vary from those used for conventional steel-bodied cars.

Care should be exercised in selecting various cleaners, preservatives and supplies to ensure their compatibility with the Consulier's construction materials. ALL SUCH PRODUCTS SHOULD BE USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S LABEL DIRECTIONS. Some commercially available products may contain chemicals which are toxic or flammable, and using them improperly can result in serious personal injury or death. Since overexposure to the vapors from some of these products can result in health problems, be sure to open both car doors and work outdoors or in a well-ventilated area when using cleaners and preservatives inside the car.

NEVER USE MATERIALS SUCH AS ACETONE, LACQUER THINNER, CARBON TETRACHLORIDE, GASOLINE, BENZENE OR NAPHTHA FOR CLEANING PURPOSES.

In selecting cleaners and preservatives for use on the car's interior trim, keep in mind that the Consulier's door panels and dash are covered with genuine leather hides and that some products intended for use on vinyl trim may not be compatible with leather and may damage or discolor the hides. Be sure the products selected are acceptable for use on leather.

Also, note the difference between "waxes" and "polishes" for use on the car's exterior. Products which are sold as car wax generally contain substances which will help to preserve and protect painted surfaces by creating a barrier to shield against weather and chemicals. A car polish, on the other hand, is intended to brighten and provide luster, but may provide little or no protection, and may actually damage the finish with prolonged use. This is because some polishes contain microscopic abrasives which produce a shine by cutting away a very fine layer of paint to expose new pigment beneath. With continual use of such abrasive polishes, the paint finish can actually be worn away.

Products billed as "poly" or "polymer" usually contain chemicals which form a hard, protective barrier on painted surfaces. Some of these products may be professionally applied by automotive aftermarket firms and are quite durable, but others may be of lesser quality and require more frequent re-application to maintain a level of protection. Caution is advised if use of these products is considered.

ALWAYS READ PRODUCT LABELS CAREFULLY AND CHOOSE A PRODUCT FORMULATED TO DO THE INTENDED JOB.

INTERIOR CARE

Leather Trim

Most dirt which may accumulate on the Consulier's leather trim and upholstery during normal use can be removed by cleaning the leather surfaces with a soft, moist cloth. For stubborn dirt, a small amount of mild soap or a leather cleaner may be used on the cleaning cloth. Apply the soap solution or leather cleaner and allow it to soak for a few minutes to loosen the dirt; remove the dirt and soap/cleaner residue by rubbing briskly with a clean, damp cloth.

Materials such as tar, asphalt, shoe polish or grease may stain if allowed to remain on the leather; they should be removed as quickly as possible to avoid permanent damage.

In selecting a leather cleaner, be sure it does not contain any solvents which may damage the leather. Once the leather is cleaned, it is a good idea to periodically apply a quality leather preservative to keep it from drying and cracking.

Dash Panel and Instrument Cluster

To clean the metal dash panel and instrument cluster, wipe with a soft cloth using a nonabrasive household cleaner. The lenses of the instruments may be cleaned by applying household cleaner with a tissue or cotton swab. Be sure not to use any cleaner which can scratch the lenses.

Fabric Upholstery

NOTE: WHEN MOISTENED BY PERSPIRATION OR RAIN, CERTAIN NON-COLORFAST MATERIALS LIKE DENIM, CORDUROY, DYED LEATHERS AND DECORATIVE PAPER MAY FADE AND PERMANENTLY STAIN UPHOLSTERY FABRIC.

To clean the Consulier's fabric-upholstered Recaro seats, first vacuum them thoroughly to remove loose dirt. Over a period of time, sand and dirt accumulated in the fabric can cut fibers and accelerate deterioration of the upholstery material.

Removal of heavier soilage may require the use of an upholstery cleaner, following label directions. To remove encrusted material, first gently scrape as much of the material off the fabric as possible using a dull knife or similar tool, then if necessary, complete the cleaning task with upholstery cleaner. Certain stains may require the use of a spot lifter or stain remover; but again, caution

should be exercised so as not to damage the fabric. Read the label carefully and follow the manufacturer's instructions.

If an odor lingers in the fabric after stain removal, treat the area with a solution of baking soda and water (one teaspoon baking soda to one cup water), then clean the area again with upholstery cleaner. Do not soak the affected area with the soda solution, but apply it with a cloth or sponge.

Always make certain there is adequate ventilation when using cleaners inside the car; some produce vapors which may be harmful.

Safety Belts

NEVER ATTEMPT TO BLEACH, DYE OR USE CHEMICAL SOLVENTS OR ABRASIVE CLEANERS ON THE CONSULIER'S SAFETY BELTS; DOING SO WILL WEAKEN THEM AND REDUCE THEIR EFFECTIVENESS. Should the belts need cleaning, use a mild solution of soap and water, wiping them with a cloth or sponge. DO NOT ATTEMPT TO REMOVE THE BELTS FROM THE CAR TO CLEAN THEM. If the belts appear worn or frayed, or if the buckles do not operate properly, the belts should be replaced with new ones.

Carpeting

As with upholstery fabric, accumulated sand and dirt in the carpeting can cut its fibers and hasten the need for replacement. Carpeting should be vacuumed on a regular basis to remove loose dirt. To remove heavier soil, apply carpet shampoo and work it into the carpet fiber with a sponge or soft bristle brush. After allowing the carpet to dry, vacuum thoroughly to remove the soil and remaining shampoo.

Headliner

Should it be necessary to clean the headliner, follow the procedures outlined above for cleaning the fabric upholstery.

EXTERIOR CARE

The Consulier GTP's body/chassis structure is a composite sandwich of various foam, fiber and resin materials. It is painted using materials chosen to provide the best combination of beauty, durability and compatibility with the structure beneath.

While the Consulier's structure--with the exception of the front and rear steel subframes--is not susceptible to rust or corrosion, extended exposure to the effects of weather, salt and chemicals can dull the finish and lead to its eventual deterioration.

The best way to minimize the effects of these elements is to keep the car as clean as possible. This should be done by washing the car frequently using cold or lukewarm water and a mild soap. Avoid using hot water or strong chemical detergents; these can dull the finish. Do not allow the soap to dry on the finish, but wash the body in sections and rinse thoroughly. Avoid washing the vehicle in direct sunlight since doing so will cause the soap to dry on the finish rapidly, leaving a residue.

In so far as possible, try to clean mud and debris from the wheelwells and the undercarriage. If mud and dirt has entered the engine bay, this area can also be washed and rinsed, but care should be taken to keep water out of the engine air intake and the ignition components.

While high-pressure car washing equipment is often effective for removing dirt and grease, caution should be exercised with automatic car washes. Some of these devices can damage the car's body, and the high pressures produced can force soap and water into the interior.

After the car is washed and thoroughly rinsed, wiping down the exterior surfaces with a quality chamois will help to prevent water spotting.

If thoroughly washing the car fails to remove deposits such as tar and bugs from the finish, it may be necessary to use a commercial cleaner for this purpose. Many of these products contain solvents and should be used sparingly, in strict accordance with the manufacturer's directions.

Waxing and Polishing

Once the car is clean and dry, the finish should be protected with a good grade of car wax. As noted earlier, **CLEANERS AND PRESERVATIVES**, waxes provide a protective barrier against dirt and the elements. Wax should be applied regularly (several times a year) to maintain this protective barrier. Polishes may be used occasionally to brighten the finish, but some of these products contain abrasives which are aggressive to the paint finish and thus should be used cautiously.

GLASS CARE

Glass surfaces, including window glass, the windshield, mirrors and glass sun roof (if so equipped), may be cleaned using a liquid household glass cleaner. Never use abrasive cleaners; these may scratch the glass.

To remove wax or film from the outside of the windshield, use Bon-Ami, a nonabrasive cleaner. When the windshield is clean and free of film, rinse water will not bead on it.

The windshield wiper blade may be cleaned by wiping it with a cloth soaked with a solution of one-half water, one-half methanol alcohol. Then rinse the blade with water.

ALLOY WHEEL CARE

Alloy road wheels like those used on the Consulier have a thin, transparent coating applied at the factory to preserve their finish and prevent corrosion. Abrasive cleaners and stiff brushes like those used in some automatic car washes can scratch or damage this coating. Also, car wash guide rails can scar and damage the wheels and undercarriage.

To clean the wheels, wash them with soap and water along with the rest of the car. To remove heavy soil, use a soft-bristled brush. Should stains or road deposits remain after washing, use mag wheel cleaner, taking care to follow the manufacturer's instructions.

SERVICE AND MAINTENANCE

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WHERE TO SEEK SERVICE

Consulier Industries, manufacturer of the Consulier GTP, has named a number of authorized dealers and factory representatives at various locations around the United States who can provide service for Consulier vehicles, answer maintenance questions and supply replacement parts.

Consulier Dealers and Representatives

Lake Forest Sports Cars, Lake Forest, IL	(312) 295-6560
Euro Car, Red Bank, NJ	(201) 741-1384
Tequesta Motorcars, Tequesta, FL	(407) 575-9902
Automotive Liaison Services, Enfield, CT	(203) 749-8014
Racine Volkswagen-Mazda, Racine, WI	(414) 886-2886
Mosler Motors, Hendersonville, NC	(704) 692-7713
Motorsports Complex, Los Angeles, CA	(714) 373-1761
The Kern Group, Denver, CO	(303) 678-1539

Owners may also contact Consulier Industries directly at 2391 Old Dixie Highway, Riviera Beach, FL 33404, (407) 842-2492.

Emergency Repairs and Parts

Although the design and construction of the Consulier automobile is unique, every effort was made to utilize common off-the-shelf components wherever possible. Thus, a substantial number of the vehicle's major mechanical parts are standard production items provided by Chrysler Motors, while others are components which have been specially modified by Consulier Industries for use on the Consulier GTP.

Should replacement parts or emergency repairs be required in a location where there is no Consulier dealer or representative available, in many cases a qualified Chrysler technician will be able to diagnose and repair the problem or install required Chrysler replacement parts. This is particularly true of problems relating to the drivetrain (engine, clutch and transaxle) as these components are standard Chrylser production items. The Consulier's engine is the 2.2-liter Chrysler Turbo II; the transaxle, a Chrysler Getrag 5-speed manual. Many other Chrysler components are used throughout the vehicle.

In instances where additional technical information is needed or where parts exclusive to the Consulier GTP are required, factory assistance is available directly from Consulier Industries at the phone number listed above.

Other appropriate off-the-shelf replacement parts which meet Consulier's specifications will be noted in the following sections of this chapter under individual system headings.

MAINTENANCE SCHEDULES

By taking care to perform all service functions as prescribed in this chapter, the owner can help to assure that the Consulier will continue to deliver optimal performance and reliability. More frequent maintenance may be in order for cars used under severe conditions, such as in very dusty areas or where frequent short-trip driving does not allow the engine to fully warm up.

In addition to the scheduled maintenance procedures, service should be sought any time a vehicle malfunction is suspected.

All service receipts should be retained to protect the Consulier's vehicle warranty.

SCHEDULED MAINTENANCE PROCEDURES

Maintenance Service for Proper Vehicle Performance

Component/Procedure	Service Interval Miles/km
Check Engine Oil Level	Weekly
Check Windshield Washer Fluid Level	Weekly
Check Engine Coolant Level (In Overflow Bottle)	Monthly
Check Tire Pressures (Including Spare Tire)	Monthly
Change Engine Oil and Oil Filter	6 Months or 7,500/12,000
Inspect Brake and Fuel System Hoses for Leaks and Deterioration	7,500/12,000
Check Brake Fluid Level in Master Cylinder Reservoir	7,500/12,000
Check Transaxle Oil Level	6 Months or 7,500/12,000
Lubricate Tie Rod Ends and Ball Joints	6 Months or 7,500/12,000
Inspect Axle Shaft Boots for Deterioration, Damage or Leakage (Replace as necessary)	7,500/12,000
Inspect and Adjust Tension of Drive Belts (Replace as necessary)	15,000/24,000
Replace High-Pressure (Metal) Fuel Filter	30,000/48,000
Replace Engine Air Filter	30,000/48,000
Replace PCV Filter	30,000/48,000
Replace Oxygen Sensor	52,500/84,000
Replace Vacuum Operated Emission Components	60 Months or 52,500/84,000
Replace In-line (Plastic) Fuel Filter	15,000/24,000
Inspect Front and Rear Brakes for Wear	22,500/36,000
Replace Spark Plugs	30,000/48,000
Cooling System	
Check and Service Every 12 Months	
Drain, Flush and Refill After 36 Months or	52,500/84,000
Thereafter, Every 24 Months or	30,000/48,000
Check Ignition Timing (Adjust to Specifications as necessary)	60,000/96,000
Replace Ignition Cables, Distributor Cap, Rotor	60,000/96,000
Replace PCV Valve and Check PCV Hoses	60,000/96,000
Replace Alternator Brushes	75,000/120,000

Where both time and mileage are indicated, follow the interval which occurs first.

Severe Service Maintenance Schedule

Vehicles subjected to constant stop-and-go driving, a dusty driving environment, extensive idling, frequent short trips of less than five miles, or sustained high-speed driving at speeds over 70 mph during hot weather (above 90 degrees F, 32 degrees C) require more frequent service, as follows:

Component/Procedure	Service Interval Miles/km
Change Engine Oil and Oil Filter	3 Months or 3,000/4,800
Check Engine Coolant Level (In Overflow Bottle)	Weekly
Inspect Engine Air Filter (Replace as necessary)	9,000/14,400
Inspect Front and Rear Brakes for Wear	9,000/14,400

Where both time and mileage are indicated, follow the interval which occurs first.

GENERAL VEHICLE MAINTENANCE

Checking Engine Oil

It is the owner's responsibility to check the engine oil level at regular intervals--at least weekly or at each fuel stop when traveling--to ensure proper lubrication. ALLOWING THE ENGINE OIL LEVEL TO REMAIN BELOW THE SAFE OPERATING RANGE CAN RESULT IN MAJOR ENGINE DAMAGE. It is never wise to overfill the engine with oil. Add oil only when the oil level showing on the dipstick is at or below the ADD OIL mark.

(See additional oil information later in this chapter.)

Checking Windshield Washer Fluid

The windshield washer fluid reservoir is located in the front compartment and is accessible through the Consulier's front hatch. When checking the engine oil, it is a good idea to also check the fluid level in the washer reservoir. The washer will function properly when the reservoir is filled with clean water or with a commercial windshield washer solution (or a mixture of both).

When very cold weather (below freezing) is anticipated, it is advisable to flush the water out of the washer system by operating the washer until the reservoir is empty.

Refill the reservoir with a windshield antifreeze solution (NOT RADIATOR ANTIFREEZE) and operate the washer to fill the system with the antifreeze solution.

Checking Engine Coolant

The engine coolant level may be checked visually by looking at the plastic overflow reservoir bottle located in the engine bay. With the engine running at idle and warmed to normal operating temperature, the coolant level in the overflow reservoir should be between the upper and lower indicator marks on the bottle.

Since the cooling system will normally remain full when operating properly, there is no need to remove the pressurized radiator cap except to check the freeze protection provided by the coolant or to replace the coolant. NEVER ATTEMPT TO REMOVE THE PRESSURIZED RADIATOR CAP WHEN THE ENGINE IS WARM. THE SUDDEN RELEASE OF PRESSURE MAY CAUSE THE SYSTEM TO SPEW OUT HOT COOLANT RESULTING IN A SEVERE BURN.

As long as the engine operating temperature remains in the safe range and the cooling system is functioning satisfactorily, the only routine check necessary is a monthly inspection of the coolant level in the overflow reservoir. When the coolant level in the overflow bottle is below the lower indicator mark, add additional coolant directly to the bottle. Do not fill above the upper indicator mark.

(See additional coolant information later in this chapter.)

Checking Tire Pressures

At least once a month, check the air pressure in all the tires, including the spare. Check and set the pressures with the tires cold. Inflate the front tires to 34 pounds per square inch (psi) of pressure; the rears to 36 psi. The space-saver spare tire should be inflated to 60 psi.

For additional detailed information on tires, consult the Starting and Operating section of this manual.

Changing Engine Oil and Oil Filter

To maintain proper engine operation and maximize engine life, the engine oil must be changed every six months or 7,500 miles (12,000 km), whichever comes first. Vehicles operated under severe conditions, as noted earlier under Maintenance Schedules, require more frequent oil changes every three months or 3,000 miles. Always replace the oil filter whenever the engine oil is changed.

Selecting the Right Oil

Consulier GTP automobiles are delivered from the factory with the engine crankcase filled with quality petroleum motor oil. During the first 10,000 miles (16,000 km) of operation, a petroleum motor oil with an American Petroleum Institute (API) Quality Level of SG/CD or SF/CD should always be used.

After the first 10,000 miles of engine operation, Consulier Industries recommends switching to a quality synthetic motor oil such as Mobil 1 when the engine oil and oil filter are changed. Make certain the synthetic oil selected also meets the SG/CD or SF/CD Quality Level standard.

Use of synthetic lubricant is not recommended during the first 10,000 miles of operation because petroleum oil will more readily facilitate engine break-in. After the initial break-in period, use of a high-grade synthetic offers several advantages: Reduced internal friction for longer engine life and improved fuel economy, excellent low temperature characteristics providing easier cold starting with less battery and starter strain, and reduced oil breakdown for enhanced engine protection.

Oil Viscosity--After selecting the brand of motor oil to be used, choose the appropriate SAE viscosity grade based on the anticipated ambient temperature range. Very low ambient temperatures require a low viscosity oil which will continue to flow and to lubricate in extremely cold conditions. Very high temperatures demand a high viscosity oil which will maintain its lubrication and antiwear properties during extreme heat.

Use the following chart as a guide.

Recommended SAE Viscosity Grades

```
                         I----15W-50 Synthetic>
              I-------------30----------------->
         I-----------15W-40------------------->
   I--------10W-30----------------------------->
<-------5W-30-------------------I
```

Degrees F	-20	0	10	20	32	60	80	100
Degrees C	-29	-18	-12	-7	0	16	27	38

Temperature range anticipated before next oil change.

Oil with a viscosity grade of SAE 5W-30 is preferred within the designated ambient temperature range shown above and its use is encouraged during low temperatures to aid cold

starting and fuel economy.

Chrysler Motors does not recommend the use of SAE 10W-40 or SAE 10W-50 viscosity petroleum oils in the Turbo II engine used in the Consulier GTP.

During very warm temperatures, a quality synthetic motor oil with a viscosity grade of SAE 15W-50 may provide improved lubrication and protection from wear.

After the initial break-in period (10,000 miles/ 16,000 km), Consulier Industries recommends using a synthetic motor oil such as Mobil 1 SAE 5W-30 during months when ambient temperatures remain below 60 degrees F and Mobil 1 SAE 15W-50 or a comparable synthetic oil for summer driving, when temperatures are consistently above 60 degrees F.

In all cases, it is best to select a quality brand of oil which meets the API SG/CD or SF/CD quality level requirements and to consistently use that brand of oil throughout the life of the car, changing only the SAE viscosity grade to compensate for variations in climate.

Oil Additives

In most cases, it is unnecessary to add any additional materials to engine oil. However, in cars driven infrequently or used for short trips only, or during break-in after a major engine overhaul, an additive possessing anti-rust and anti-scuff properties is beneficial. In general, when using a synthetic motor oil, no oil additives are called for.

Disposing of Used Motor Oil

Indiscriminate disposal of used motor oil is illegal and contributes to environmental pollution. Many service stations will accept used oil for recycling or proper disposal. Government environmental agencies in most areas can provide information on proper disposal.

Oil Filter

The engine oil filter should be replaced each time the engine oil is changed. The Turbo II engine used in the Consulier recommends the use of a Chrysler Direct Connection replacement filter, Part No. P4349744, for enhanced engine protection. These filters are available from Chrysler Motors dealers or directly from Consulier Industries.

Inspecting Brake and Fuel System Hoses

Each time maintenance service is performed on the Consulier GTP, the car's brake and fuel system hoses should be inspected for leakage or deterioration. Be sure to check

the connections of all fuel lines at the fuel tank, under the car and at the engine. Any connection or hose which is found to be leaking or worn should be attended to at once.

Inspect the hoses for evidence of heat or mechanical damage. Hard or brittle rubber, cracking, tears, cuts, abrasions or excessive swelling indicate deterioration of the hose. Pay particular attention to those hoses exposed to heat in the engine bay, such as the fuel supply and fuel return hoses. Be sure these hoses are not routed so as to come into contact with hot components or moving parts on the engine.

Note that the fuel supply hoses carry gasoline under pressure to the electronic fuel injection system. These hoses are specially constructed to meet the necessary pressure requirements. Should replacement of any of these hoses be necessary, be sure to use E.F.I. hose which is designed for use with unleaded gasoline in a pressurized system.

Check the rubber brake hoses at each wheel for cracking, scuffing or wear. Worn or damaged hoses should be replaced immediately, as neglecting to do so can result in brake failure.

Checking Master Cylinder Brake Fluid Level

The fluid level in the brake system master cylinder reservoir should be checked each time maintenance services are performed, at an interval of every six months or 7,500 miles. The master cylinder is mounted in the front compartment and is accessible through the front hatch.

Should the dash-mounted brake warning lamp light while driving, the brake system should be checked immediately by a qualified technician. THE WARNING LIGHT MAY INDICATE A PROBLEM WITH THE BRAKING SYSTEM WHICH, IF NEGLECTED, COULD LEAD TO SUDDEN BRAKE FAILURE.

The master cylinder reservoir should be kept filled to the bottom of the split rings, which are visible when the cap is removed. It should be noted that the fluid level in the reservoir will fall as the brake pads wear. This is a normal occurrence and does not indicate a problem with the brake system. However, a low fluid level in the reservoir may also be the result of a brake system leak. If a significant drop in reservoir fluid level is noted, the entire braking system should be carefully inspected for fluid leaks.

Whenever adding fluid to the reservoir, always use only a brake fluid conforming to the DOT 3 or DOT 4 standard. USE OF SUBSTANDARD BRAKE FLUID CAN LEAD TO SUDDEN BRAKE FAILURE

DURING HARD, PROLONGED BRAKING. Since the braking system is highly sensitive to dirt and foreign materials, always be sure to only use fluid which has been stored in a tightly closed container to avoid contamination. Never put any petroleum-based products into the braking system; petroleum is aggressive to the seals used in the system.

Checking the Transaxle Oil Level

Check the oil level in the transaxle each time the engine oil and oil filter are changed. The transaxle oil is checked by removing a plug in the end of the transaxle case, accessible through the Consulier's left rear wheelwell. The transaxle should be filled with oil up to the level of the plug.

Use regular SAE 10W-30 motor oil in the transaxle. The oil should have the same SG/CD or SF/CD quality grade as the engine oil.

Lubricating Tie Rod Ends and Ball Joints

The Consulier's suspension and steering system incorporates several ball joints and tie rod ends which require lubrication each time engine service is performed, at intervals of six months or 7,500 miles.

All suspension ball joints and tie rod ends along with the links for the front suspension anti-roll bar should be lubricated with regular chassis grease. All the Consulier's ball joints and tie rod ends have grease fittings installed to facilitate lubrication with a conventional grease gun.

The front suspension has six lubrication sites in addition to the anti-roll bar links: Two upper and two lower ball joints, and two tie rod ends.

The rear suspension incorporates 10 sites requiring regular lubrication: Two upper and two lower ball joints, four tie rod ends, and a ball joint at the front of each lower A-arm.

All ball joints and tie rod ends should be inspected for damaged grease seals at the time of each lubrication. Also, ball joints should be checked for lateral movement, indicating wear. Any parts found to be damaged or worn should be replaced.

Inspecting Axle Shaft Boots

Each of the Consulier's rear drive axles incorporates two constant velocity universal joints which are permanently held in place by metal clamps. Although the joints require no lubrication, the protective boots should be inspected at

each vehicle service interval, every six months or 7,500 miles. If leakage or damage is evident, the joint should be re-greased using the CV grease and the boot replaced immediately. Continued operation of the vehicle with torn or leaking CV boots may result in failure of the constant velocity joints due to water or dirt contamination.

Checking Drive Belt Tension

At least annually or every 15,000 miles, all engine drive belts should be inspected for condition and proper tension. Improper belt tension can lead to slippage resulting in belt failure or possible bearing damage in the belt driven accessories.

Belts should be examined for cuts, cracks and glazing and should be replaced if damage or deterioration is evident. Also check the routing of the belts to be sure there is no interference with objects which could become entangled in the belts and pulleys.

Special tools are required to accurately measure belt tension. Qualified service personnel should check the tension of the drive belts for compliance with Chrysler's specifications for the Turbo II engine and should make any necessary adjustments.

Replacing Fuel Filters

Over a period of time, fuel filters can become plugged by contaminants in the fuel. This can limit vehicle speed, cause hard starting or result in stalling.

The Consulier GTP is equipped with two fuel filters: A small, plastic, in-line filter located between the fuel pump and the fuel tank; a larger, high-pressure filter which is attached to the engine subframe, downstream of the fuel pump.

To maintain proper engine performance, the plastic in-line filter should be replaced every 15,000 miles/24,000 km. The metal high-pressure filter should be replaced every 30,000 miles/48,000 km.

Caution should be exercised in replacing the high-pressure filter because it contains gasoline under pressure even when the engine is not running. It is best to pinch the fuel line hose while loosening the hose clamp, then safely release the pressure in the hose and filter.

The plastic in-line fuel filter is a Fram brand part, No. G6399. The metal high-pressure filter is a Chrysler part, Nos. 4279898 or 4443455 may be used.

Inspecting the Brakes for Wear

The disc brakes used on the Consulier do not require adjustment, but the brake linings (pads) should be inspected for wear at least every 22,500 miles/36,000 km; more frequently if the vehicle is driven constantly in stop-and-go traffic or is often subjected to heavy braking from high speeds. When the friction material is worn down to a thin layer, the pads should be replaced. CONTINUING TO DRIVE WITH WORN-OUT BRAKE PADS CAN LEAD TO REDUCED BRAKING EFFECTIVENESS AND CAN SEVERELY DAMAGE THE BRAKE ROTORS.

The Consulier's front brakes are Chrysler Motors components. Replacement front brake pads are Chrysler Part No. 4313968. The rear brake components are General Motors parts adapted from the Pontiac Fiero; replacement rear brake pads are GM Part No. 12321445.

Replacing the Spark Plugs

The Consulier's Chrysler Turbo II engine comes with Champion brand spark plugs installed as original equipment. In normal service, these plugs should last 30,000 miles/ 48,000 km. Consulier Industries recommends installing a fresh set of Champion Copper Plus resister spark plugs, Part No. RN12YC, every 30,000 miles/48,000 km. The proper plug gap is 0.9mm (0.035").

Replacing the Engine Air Filter and PCV Filter

Proper airflow into the engine must be maintained for satisfactory engine performance. A dirty or clogged air filter can restrict the flow of air into the engine and cause rough running and erratic performance, as well as excessive fuel consumption. Therefore, the air filter element should be replaced at least every 30,000 miles/48,000 km. In cars operated in dusty conditions, inspect the air filter every 9,000 miles/14,400 km, and replace the filter element as necessary.

The positive crankcase ventilation (PCV) filter is located on the air filter housing. It traps impurities emitted from the crankcase during engine operation. This filter, also should be replaced every 30,000 miles/48,000 km.

Replacing the Vacuum Operated Emission Components

As required by federal law, the Consulier GTP is equipped with an emission control system designed to limit the emission of various pollutants into the atmosphere. Several components of this system are operated via engine vacuum. These components should be replaced by a qualified

technician after 60 months of operation or every 52,500 miles/84,000 km, whichever occurs first. As part of this emission control system service, all vacuum lines and hoses should be inspected for cracking, abrasion or heat damage. Any line or hose which shows evidence of damage or deterioration should be replaced and all lines and hoses should be carefully routed to prevent contact with hot engine components or moving parts.

Servicing the Cooling System

THE CONSULIER'S COOLING SYSTEM USES A THERMOSTATICALLY CONTROLLED RADIATOR COOLING FAN WHICH CAN START AT ANY TIME WHILE THE IGNITION IS ON. USE CAUTION WHEN WORKING AROUND THE RADIATOR. NEVER REMOVE THE PRESSURE CAP FROM THE COOLING SYSTEM HEADER TANK WHEN THE ENGINE IS HOT. THE COOLING SYSTEM BUILDS UP INTERNAL PRESSURE WHEN HOT AND CAN SUDDENLY RELEASE VERY HOT COOLANT WHEN THE CAP IS REMOVED, RESULTING IN A SEVERE BURN.

The entire cooling system should be inspected at least every 12 months. Check the condition of all coolant hoses. Any hoses showing signs of cracking or swelling should be replaced. Check for coolant leaks and make certain all hose clamps are tight. Inspect the header tank pressure cap to ensure that it fits tightly and seals properly on the tank. The sealing surfaces of the cap and the tank must be clean to ensure a good seal and to prevent coolant loss. Check the condition of the coolant for adequate temperature protection. (This should be done prior to the onset of freezing winter weather in northern climates.) If the coolant appears dirty or rusty, or shows an insufficient freeze protection range, the system should be drained, flushed clean and refilled with fresh coolant.

In all cases, Consulier Industries recommends the cooling system be drained, flushed and refilled with fresh coolant after 36 months or 52,500 miles/84,000 km, whichever occurs first, then every 24 months or 30,000 miles/48,000 km thereafter.

The Consulier's radiator does not include a drain cock. To drain and flush the cooling system, it is necessary to disconnect one end of the lower radiator hose.

Collect the old coolant in a suitable container. USED ENGINE COOLANT IS A HAZARDOUS MATERIAL, AND IT IS ILLEGAL TO DRAIN COOLANT ONTO THE GROUND OR INTO A SEWER. Information on proper disposal is available from local government environmental agencies.

Coolant Selection

The Consulier GTP requires a high-quality ethylene glycol base antifreeze which is compatible with aluminum cooling system components. Failure to use a suitable coolant can result in radiator plugging and engine overheating. Do not mix antifreeze brands or use plain water alone or alcohol base antifreeze products.

A solution of at least 50 percent ethylene glycol antifreeze and water should be used in the Consulier's cooling system. A higher antifreeze concentration (not to exceed 70 percent) is required if ambient temperatures below -37 degrees F. are anticipated. IT IS THE OWNER'S RESPONSIBILITY TO KEEP THE COOLING SYSTEM FILLED WITH AN ANTIFREEZE SOLUTION WHICH WILL PROVIDE ADEQUATE PROTECTION FOR THE CLIMATE IN WHICH THE VEHICLE IS OPERATED. Remember to add antifreeze to the cooling system overflow reservoir to prevent its contents from freezing.

Cooling System Tips

Never overfill the overflow reservoir bottle.

Remember to check the freeze point of coolant in both the cooling system and the overflow reservoir before freezing weather arrives, and add enough antifreeze for adequate protection.

If frequent coolant additions are required, pressure test the cooling system for possible leaks.

Maintain coolant with at least a 50 percent concentration of quality ethylene glycol aluminum-compatible antifreeze to ensure proper engine protection.

Make sure radiator and overflow reservoir hoses are not kinked or obstructed.

Keep leaves and other debris cleared from the front of the radiator to ensure adequate air flow for cooling.

Do not change the engine thermostat for summer and winter operation. In the event that thermostat replacement is ever required, be sure to use ONLY a standard Chrysler thermostat designed for the Turbo II engine.

Remember, the Consulier's radiator cooling fan is not engine-driven; increasing engine speed at idle will not reduce coolant temperature and will, in fact, increase engine temperature. It is best to avoid running the engine for long periods with the car standing still.

NEVER ATTEMPT TO REMOVE THE PRESSURE CAP FROM THE COOLING SYSTEM HEADER TANK WHEN THE ENGINE IS WARM. Doing so can result in serious injury as well as coolant loss.

Checking the Ignition Timing

The Consulier's engine ignition system is properly timed during assembly. Under normal operating conditions, the timing should not require adjustment. However, the timing should be checked after 60,000 miles/96,000 km of engine operation. If it is found not to be accurate, the timing should be reset by a qualified technician. Correct ignition timing for the Consulier's 2.2-liter engine is 12 degrees before top dead center (BTDC).

SERVICE STATION INFORMATION

CONTENTS

Battery
Brakes
Engine Oxygen Sensor
Filters
Fluids
Fuel
Fuses
Hoses
Lights
Lubricants
Shock Absorbers
Spark Plugs
Tire sizes and Pressures
Windshield Wiper

BATTERY

Maintenance free
Pulsar 12V-10P
or
Pulsar 12V-15P

These batteries are available directly from Consulier Industries and through designated factory representatives.

BRAKES

Front Brakes

Right Caliper Assy:	Chrysler part no. 4383622
Left Caliper Assy:	Chrysler part no. 4383623
Rotors:	Chrysler part no. 4313633
Front Brake Pad Set:	Chrysler part no. 4313968

Rear Brakes

Right Caliper Assy:	General Motors (Pontiac Fiero) part no. 3487477
Left Caliper Assy:	General Motors (Pontiac Fiero) part no. 3487476
Rotors:	General Motors (Pontiac Fiero) part no. 10046489
Rear Brake Pad Set:	General Motors (Pontiac Fiero) part no. 12321445

ENGINE OXYGEN SENSOR

Chrysler part no. 5227368

FILTERS

Air Filter
Chrysler Direct Connection, part no. P4452073
or
Chrysler part no. 4342801

Fuel Filters
High-Pressure Filter: Chrysler part no. 4279898 or 4443455
In-Line Fuel Filter: Fram part no. G6399

Oil Filter
Chrysler Direct Connection Performance Oil Filter, part no. P4349744

FLUIDS

Brake Fluid
DOT 3
or
DOT 4

Engine Coolant
Solution of at least 50 percent ethylene glycol antifreeze (aluminum-compatible type) and water

Windshield Washer
Commercial windshield washer solution and water (add windshield washer antifreeze in winter)

FUEL

ALWAYS TURN OFF THE ENGINE WHEN REFUELING THE VEHICLE. LOOSEN THE FILLER CAP SLOWLY, ALLOWING ANY PRESSURE INSIDE TO VENT BEFORE THE CAP IS REMOVED.

Required Fuel
Unleaded gasoline, 91 octane [(R+M)/2] (preferred)
or
Unleaded gasoline, 87 octane [(R+M)/2]

FUSES

The Consulier's fuse panel is located below the dash panel on the left (driver's) side of the cockpit, adjacent to

the door hinge.

WHEN REPLACING A BLOWN FUSE, IT IS IMPORTANT TO REPLACE IT WITH A NEW ONE HAVING THE CORRECT AMPERAGE RATING. USING A FUSE WITH TOO HIGH AN AMPERAGE RATING CAN RESULT IN A DANGEROUS ELECTRICAL SYSTEM OVERLOAD. IF PROPERLY RATED FUSES BLOW REPEATEDLY WHEN INSTALLED, THE CIRCUIT SHOULD BE CHECKED AND REPAIRED.

The Consulier's fuse circuits are arranged as listed below.

Fuse No.	Amperage	Fuse Color	Circuit
1	20	Yellow	Hazard Flasher
2	20	Yellow	Back-up Lamps
3	30 (circuit breaker)		Power windows
4	30	Green	A/C and Heater Blower Motor
5	20	Yellow	License Plate Lamp, Side Marker Lamps, Taillights, Parking Lamps
6	20	Yellow	Power Mirrors, Brake Lights, Interior Courtesy Lamps
7	20	Yellow	Cigarette Lighter, Chimes, Stereo
8	30 (circuit breaker)		Power Door Locks, Horns, and Horn Relay
9	10	Red	Stereo Amplifier Coil, Power Antenna Relay
10	10	Red	Turn Signals
11	20	Yellow	Windshield Wiper
12	5	Tan	Stereo Lamp
13	5	Tan	Cockpit Instruments and Warning Lamps, Radiator Fan Relay

Located on the fuse panel just below the numbered fuses, from left to right, are the Hazard Flasher Unit, the Ignition Time Delay Relay and the Horn Relay Unit.

Note: The cockpit headlight switch assembly has a built-in circuit breaker.

HOSES

Radiator
Upper: NAPA part no. 602
Lower: NAPA part no. 7670

Additional Cooling System Hoses
"S"-Shaped Hose: NAPA part no. 8228
Coolant Hose: NAPA part no. 8019/21308

LIGHTS

Headlights

The headlights used are unique to the Consulier GTP. Replacement units are available directly from Consulier Industries by specifying the needed light position (such as left inner, right outer, etc.).

Taillight/Back-up Light Assys.
Right: General Motors part no. 915930
Left: General Motors part no. 915929

Side Marker Lights
Red: Ford Motor Co. part no. D3TZ 15A201A
Amber: Ford Motor Co. part no. D3TZ 15B201B

LUBRICANTS

Engine Oil
Motor oil with a quality grade of SG/CD or SF/CD
For proper viscosity grade, see chart under **SCHEDULED MAINTENANCE PROCEDURES** in the preceding chapter.

Manual Transaxle
SAE 10W-30 motor oil with a quality grade of SG/CD or SF/CD

Tie Rod Ends and Ball Joints
Chassis grease

SHOCK ABSORBERS

Carrera three-way, adjustable coil-over shock absorbers,

front and rear

SPARK PLUGS

Champion Copper Plus RN12YC resister plugs
Plug Gap: 0.9mm (.035")

TIRE SIZES AND PRESSURES

Front Tires
205/50-15VR
Cold inflation pressure: 34 psi

Rear Tires
225/50-15VR
Cold inflation pressure: 36 psi

Spare Tire
110/70-14
Cold inflation pressure: 60 psi

WINDSHIELD WIPER

Wiper Arm
BMW (3-Series) part no. 61611372551

Wiper Blade
BMW (3-Series) part no. 61611372555

Replacement Wiper Blade
Robert Bosch part no. 40714

SPECIFICATIONS

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Engine Specifications

FLUID CAPACITIES

Fuel (approx.):	17.5 U.S. gal.
Manual Transaxle Lubricant:	2.3 qt/2.1 liters
Cooling Systems (approx.):	2.0 U.S. gal.
Engine Oil:	4.0 qt/3.8 liters

GENERAL VEHICLE SPECIFICATIONS

Curb Weight: 1,950 lbs.
Weight Distribution, front/rear: 37%/63%
Wheelbase: 100.0 in.
Track, front/rear: 60.5 in./60.5 in.
Overall Length: 172.0 in.
Overall Width: 72.0 in.
Overall Height: 44.5 in.
Ground Clearance(recommended setting for road use): 6.0 in.
Overhang, front/rear: 28.0 in./44.0 in.
Engine: Chrysler Turbo II inline, 4-cylinder
Transaxle: Getrag 5-speed manual
Suspension: Inboard 4-wheel independent with upper rocker arms; lower A-arms; coil-over, 3-way, adjustable Carrera shock absorbers; front anti-roll bar.

ENGINE SPECIFICATIONS

General: Chrysler Turbo II intercooled, turbocharged, SOHC inline 4-cylinder, aluminum head, cast iron block, remote oil cooler.

Displacement:	2213 cc
Bore:	87.5 mm
Stroke:	92.0 mm
Compression Ratio:	8.1:1
Cooling System Pressure:	15 psi
Thermostat:	195 degrees F (90 degrees C)
Spark Plugs:	Champion Copper Plus, RN12YC
Spark Plug Gap:	0.9 mm (0.035")
Firing Order:	1-3-4-2
Ignition Timing:	12 degrees BTDC
Induction System:	Bosch-Holley K-Jetronic fuel injection
Turbo Boost:	12 psi (maximum)

WARRANTY

The Consulier GTP carries a 12-month, bumper-to-bumper warranty covering parts and labor, except tires, brake pads and other normal wear items subject to separate warranty by their manufacturers. There is also a five-year/50,000 mile warranty on the vehicle drivetrain.