

**DS Golf and Utility
Gasoline Vehicles**

Fuel Tank Kit Installation Instructions

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These instructions apply to the following kits:

1016003

1016004



GENERAL INFORMATION AND PRECAUTIONS

This publication provides detailed instructions and warranty information for the installation of the fuel tank kit on DS Golf and Utility vehicles. Ensure that all necessary replacement parts, the appropriate maintenance and service manual(s), and this document are available before this kit is installed.

CCI P/N 1016003: Fuel Tank Kits for vehicles without a fuel gauge.

CCI P/N 1016004: Fuel Tank Kits for vehicles equipped with a fuel gauge.

Thoroughly review this document before any installation procedures are performed. Statements labeled NOTE provide additional information that is essential for the proper installation of this kit.

The following safety statements relate to specific safety issues and must be read, understood, and heeded before a kit is installed. Failure to do so could result in personal injury and/or property damage.

⚠ DANGER

- **Battery – Explosive gases! Do not smoke. Keep sparks and flames away from the vehicle and service area. Ventilate when charging or operating vehicle in an enclosed space. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Battery – Poison! Contains acid! Causes severe burns. Avoid contact with skin, eyes, or clothing. Antidotes:**
 - **External: Flush with water. Call a physician immediately.**
 - **Internal: Drink large quantities of milk or water. Follow with milk of magnesia or vegetable oil. Call a physician immediately.**
 - **Eyes: Flush with water for 15 minutes. Call a physician immediately.**
- **Gasoline – Flammable! Explosive! Do not smoke. Keep sparks and flames away from the vehicle and service area. Service only in a well-ventilated area.**
- **Do not operate gasoline vehicle in an enclosed area without proper ventilation. The engine produces carbon monoxide, which is an odorless, deadly poison.**

⚠ WARNING

- **Follow the procedures exactly as stated in this instruction, and heed all DANGER, WARNING, and CAUTION statements in this instruction as well as those on the vehicle and battery charger.**
- **Only trained technicians should service or repair the vehicle or battery charger. Anyone doing even simple repairs or service should have knowledge and experience in electrical and mechanical repair. The appropriate instructions must be used when performing maintenance, service, or accessory installation.**
- **Prior to servicing the vehicle or leaving the vehicle unattended, turn the key switch OFF, remove the key, and place the Forward/Reverse handle in the NEUTRAL position. Chock the wheels when servicing the vehicle.**

⚠ WARNING

Gasoline vehicles only:

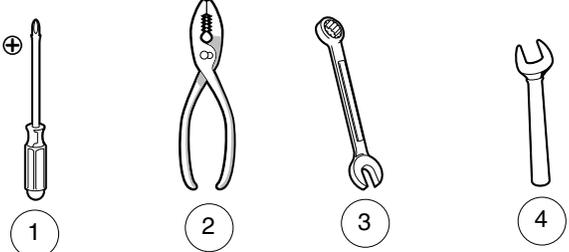
- **To avoid unintentionally starting the vehicle:**
 - **Disconnect battery cables, negative (–) cable first (Figure 1, Page 5).**
 - **Disconnect the spark plug wire from the spark plug.**
- **Frame ground – Do not allow tools or other metal objects to contact frame when disconnecting battery cables or other electrical wiring. Do not allow a positive wire to touch the vehicle frame, engine, or any other metal component.**

⚠ WARNING

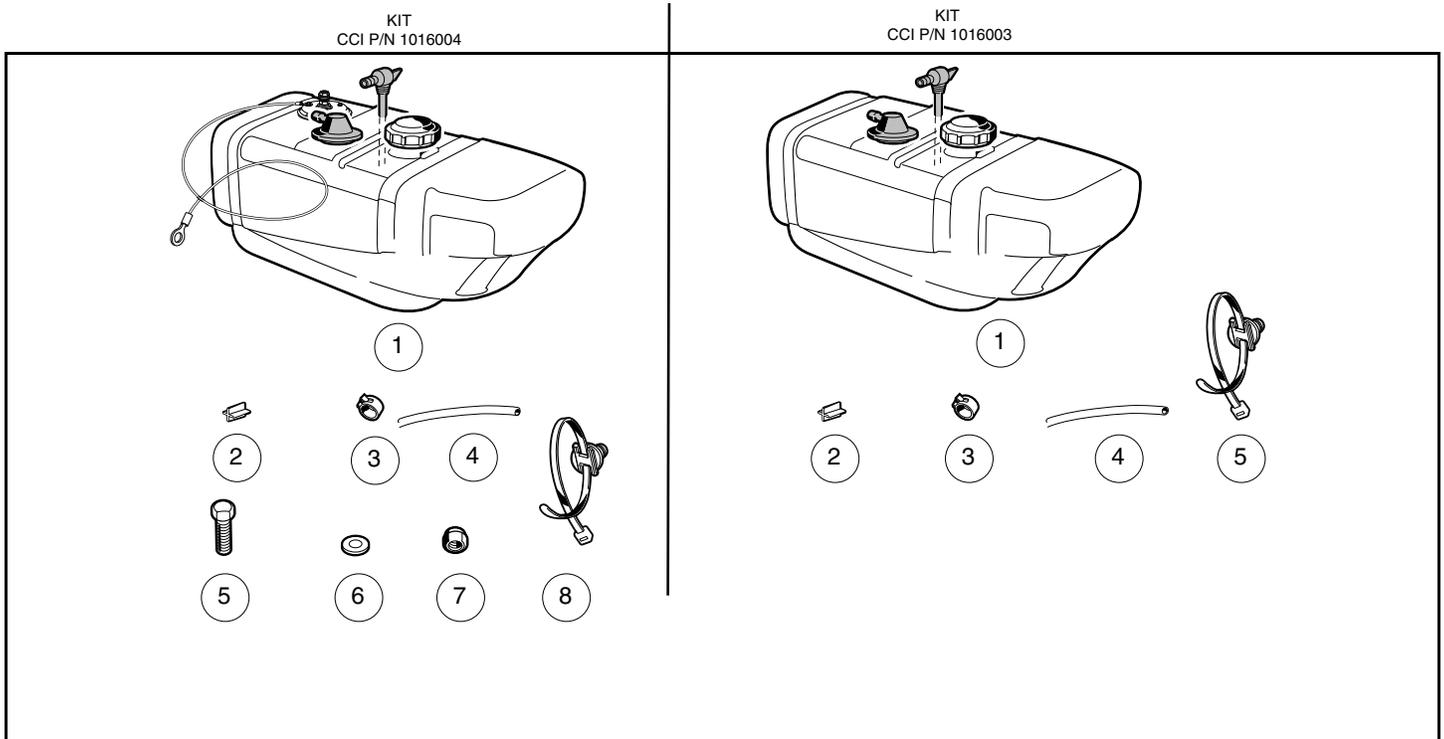
All vehicles:

- Wear safety glasses or approved eye protection when servicing the vehicle or battery charger. Wear a full face shield and rubber gloves when working on or near batteries.
- Do not wear loose clothing or jewelry such as rings, watches, chains, etc., when servicing the vehicle or battery charger.
- Moving parts! Do not attempt to service the vehicle while it is running.
- Hot! Do not attempt to service hot engine, exhaust system, or motor. Failure to heed this warning could result in severe burns.
- Use insulated tools when working near batteries or electrical connections. Use extreme caution to avoid shorting of components or wiring.
- Lift only one end of the vehicle at a time. Use a suitable lifting device (chain hoist or hydraulic floor jack) with 1000 lb. (454 kg) minimum lifting capacity. Do not use lifting device to hold vehicle in raised position. Use approved jack stands of proper weight capacity to support the vehicle and chock the wheels that remain on the floor. When not performing a test or service procedure that requires movement of the wheels, lock the brakes.
- If wires are removed or replaced, make sure wiring and wire harness are properly routed and secured. Failure to properly route and secure wiring could result in vehicle malfunction, property damage, personal injury, or death.
- For vehicles with cargo beds, remove all cargo before raising the bed or servicing the vehicle. If the vehicle is equipped with a prop rod, ensure that it is securely engaged while bed is raised. Do not close bed until all persons are clear of cargo bed area. Keep hands clear of all crush areas. Do not drop cargo bed; lower gently and keep entire body clear. Failure to heed this warning could result in severe personal injury or death.

TOOLS REQUIRED

			
1	#3 Phillips Screwdriver	3	1/2-IN Wrench
2	Pliers	4	9/16-IN Insulated Wrench

PARTS IN THIS KIT



Item	CCI P/N	Description	Qty	Item	CCI P/N	Description	Qty
	1016004	Fuel Tank w/ Sending Unit Kit			1016003	Fuel Tank w/o Sending Unit Kit	
1	103963601	Fuel Tank Assembly w/ Sending Unit (NANO)	1	1	103963602	Fuel Tank Assembly w/o Sending Unit (NANO)	1
2	101824401	Vent Barb	1	2	101824401	Vent Barb	1
3	1012649	Hose Clamp	2	3	1012649	Hose Clamp	2
4	103896603	Vent Hose, 1/4-in x 22-in long	1	4	103896603	Vent Hose, 1/4-in x 22-in long	1
5	7173	5/16–18 x 3/4 Hex Head Screw	1	5	102787101	Cable Tie, Tree Mount	1
6	1241	5/16-IN Flat Washer	1				
7	7473	5/16–18 Nylon Locknut	1				
8	102787101	Cable Tie, Tree Mount	1				

1. PREPARE FUEL TANK FOR REMOVAL

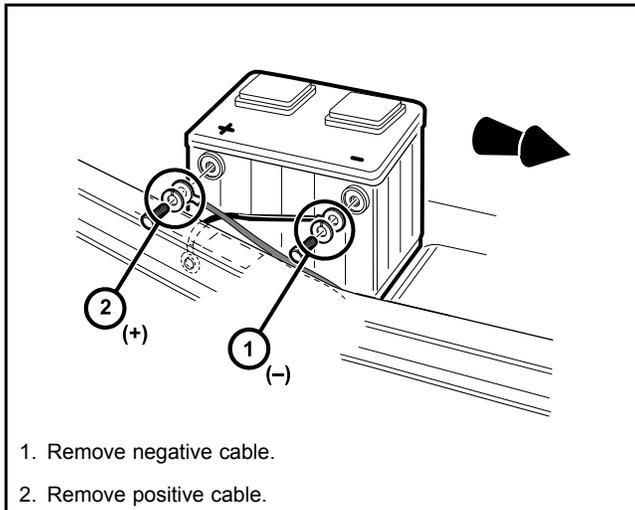
- 1.1. Place the Forward/Reverse handle in the NEUTRAL position and the neutral lockout cam in the MAINTENANCE position. **See following NOTE.**

NOTE: If returning the old fuel tank under a warranty claim, check the fuel tank pressure by removing the fuel cap slowly and listen for escaping air from the fuel tank. This will determine if the fuel tank is pressurized or not pressurized. Report your findings on the warranty claim.

- 1.2. Turn the fuel shut-off valve (15) to the closed (OFF) position and run the engine until fuel remaining in the carburetor, fuel pump, and fuel lines is used up and the engine stalls (**Figure 2**).

- 1.3. Return the neutral lockout cam to the OPERATE position.

2. DISCONNECT THE BATTERY CABLES



1 **Figure 1 Battery Disconnect – Gasoline Vehicle**

- 2.1. Disconnect the battery cables as instructed. **See WARNING "To avoid unintentionally starting..." on page 2.**
- 2.2. Disconnect the spark plug wire from the spark plug.

3. FUEL TANK REMOVAL

- 3.1. Access the engine compartment.
- 3.2. Remove the rear body (DS vehicle) or the seat back support (Carryall vehicle). **See Section 4 – Body and Trim in the appropriate maintenance and service manual.**
- 3.3. Loosen, but do not remove, the carburetor drain screw and drain fuel remaining in the carburetor bowl into an approved container. Retighten carburetor drain screw.
- 3.4. Using a siphon with a suction device, siphon all fuel out of the tank and into an approved container. **See following DANGER and WARNING.**

⚠ DANGER

- **Gasoline – Flammable! Explosive! Do not smoke. Keep sparks and flames away from the vehicle and service area. Service only in a well-ventilated area.**

⚠ WARNING

- **Do not attempt to siphon fuel using a hose that does not have a built-in suction device.**
- **Do not attempt to siphon fuel using your mouth.**

- 3.5. If the vehicle is equipped with a fuel gauge:
- 3.5.1. Disconnect the sending unit black ground wire (22) from the frame ground stud (**Figure 2**).
 - 3.5.2. Disconnect the orange wire (21) from the sending unit (20) on the fuel tank. Do not remove the lower nut on the center stud of the sending unit. **See following WARNING.**

WARNING

- **Make sure the key switch is OFF before disconnecting wiring.**

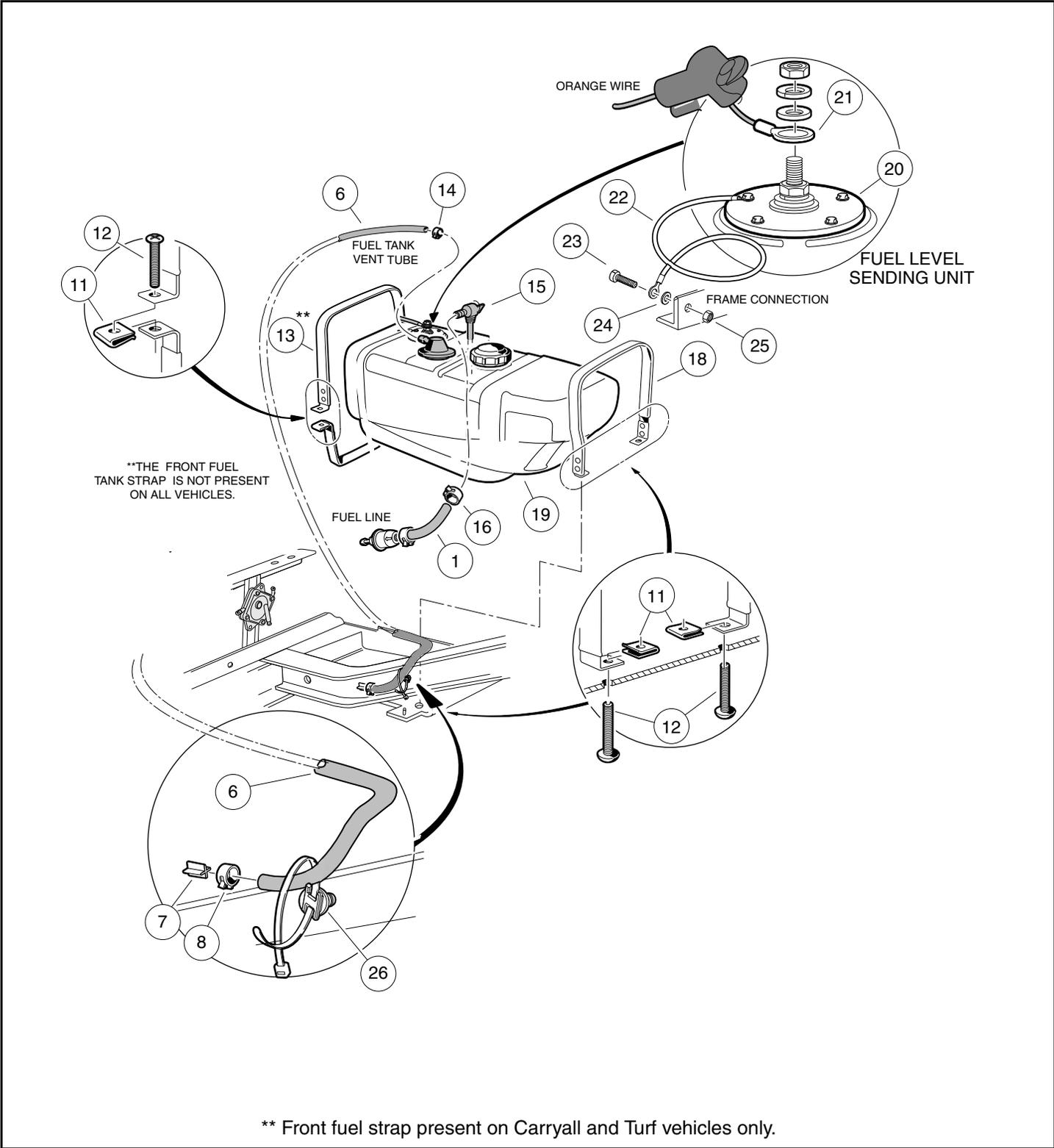
- 3.6. Remove the vent tube (6) from the fuel tank (**Figure 2**). **See following NOTE.**

NOTE: *If returning the old fuel tank under a warranty claim, do not remove the vent tube (6) from the fuel tank. Vent tube with the vent barb installed must be returned with the fuel tank.*

- 3.7. Remove the fuel line (1) from the fuel tank. Retain the hose clamp for later use.
- 3.8. Loosen the retaining strap(s) (13 and 18) by removing the screws (12) from the speed nuts (11). Retain the strap(s) and hardware for later use. **See following NOTE.**

NOTE: *The front fuel tank strap is not present on all vehicles.*

- 3.9. Lift the fuel tank out of the vehicle.



K-00266

Figure 2 Fuel Tank

4. PREPARE FUEL TANK FOR DISPOSAL OR WARRANTY RETURN

- 4.1. Remove the cap from the tank and thoroughly rinse it with water.
- 4.2. In a well-ventilated area, flush the fuel tank with water to remove any remaining fuel.
- 4.3. In a well-ventilated area, set the tank upside down so that the water can drain out of it. To make sure that the tank dries completely, allow the tank to sit for 24 hours. **See following CAUTION.**

⚠ CAUTION

- **Dispose of wastewater and fuel tank in accordance with local, state, and federal laws and ordinances.**

- 4.4. Store the tank upside down, with the cap installed, in a well-ventilated area.
- 4.5. If returning the old fuel tank under a warranty claim, appropriately package the fuel tank with cap and vent hose to ensure safe shipment.

5. FUEL TANK STORAGE

- 5.1. Remove the cap from the tank and thoroughly rinse it with water.
- 5.2. In a well-ventilated area, flush the fuel tank with water to remove any remaining fuel.
- 5.3. In a well-ventilated area, set the tank upside down so that the water can drain out of it. To make sure that the tank dries completely, allow the tank to sit for 24 hours.
- 5.4. Store the tank upside down, with the cap installed, in a well-ventilated area.

6. FUEL TANK INSTALLATION

- 6.1. Route the lower end of the vent tube (6) to the vehicle frame (**Figure 2**). Trim length of vent tube as necessary.
- 6.2. Secure the vent barb (7) into the end of the vent tube (6) and secure with a new hose clamp (8).
- 6.3. Insert a cable tie tree mount (26) into the hole in the frame where the previous vent hose was inserted. Secure the vent tube (6) to the frame with one cable tie tree (26).
- 6.4. With the retaining strap(s) correctly positioned, install the fuel tank in the vehicle.
- 6.5. Secure the tank with the retaining strap(s) (13 and 18) (**Figure 2**).
 - 6.5.1. Position the retaining strap(s) in the indentions on the tank.
 - 6.5.2. Install the screws (12) into the speed nuts (11). Tighten the hardware to 25 in-lb (2.8 N·m) (**Figure 2**).
- 6.6. Install the rear body (DS vehicle) or the seat back support (Carryall vehicle) on the vehicle. **See Section 4 – Body and Trim in the appropriate maintenance and service manual.**
- 6.7. Connect the new vent tube (6) with a new clamp (14) to the fuel tank vent.
- 6.8. Connect the fuel line (1) with a hose clamp (16) to the fuel tank shut-off valve (15).

- 6.9. If the vehicle is equipped with a fuel gauge:
 - 6.9.1. Connect the sending unit black ground wire (22) to the vehicle frame with a 5/16-18 x 3/4-inch hex-head screw (23), 5/16-inch washer (24), and 5/16-18 nylon lock nut (25). Tighten to 10 ft-lb (13.6 N·m).
 - 6.9.2. Connect the orange wire (21) from the fuel gauge to the center stud of the sending unit and install the flat washer, lock washer, and hex nut. Tighten to 18 in-lb (2.0 N·m).
 - 6.9.3. Slide the rubber boot on the orange wire over the center stud.
- 6.10. Add fuel to the fuel tank. **See following CAUTION.**

CAUTION

- **Add only unleaded fuel to the fuel tank. Do not put oil in the fuel tank.**

7. CONNECT BATTERY CABLES

- 7.1. Connect the battery cables, positive (+) cable first, and tighten hardware to 80 in-lb (9 N·m) (**Figure 1**). Coat terminals with Battery Terminal Protector Spray (CCI P/N 1014305) to minimize corrosion.
- 7.2. Connect the spark plug wire to the spark plug.

8. INSPECT FUEL SYSTEM FOR LEAKS

- 8.1. Ensure that the wheels are chocked, the Forward/Reverse handle is in the NEUTRAL position, and that the neutral lockout cam is in the MAINTENANCE position.
- 8.2. Check to be sure the fuel shut-off valve on top of the fuel tank is in the open (ON) position.
- 8.3. Turn the key switch to the ON position and press the accelerator pedal to start the engine. **See following DANGER.**

DANGER

- **Do not operate gasoline vehicle in an enclosed area without proper ventilation. The engine produces carbon monoxide, which is an odorless, deadly poison.**
 - **After installing the fuel tank and adding fuel, carefully check all fuel lines and connections for leaks. Repair any fuel leaks before operating the vehicle.**
- 8.4. Allow the engine to run for a few minutes to ensure that the fuel lines are full of fuel.
 - 8.5. Inspect each fuel line for leaks.
 - 8.5.1. Check all of the fuel line clamps at the carburetor, fuel filters, fuel pump, and fuel tank for leaks.
 - 8.5.2. Inspect each fuel line to ensure that the lines are not cracked, cut, or worn.
 - 8.6. Turn the key switch to the OFF position, and return the neutral lockout cam to the OPERATE position.

QUESTIONS

Questions or comments regarding these kit instructions should be referred to your local Club Car dealer or distributor. Please know your vehicle model and have these kit instructions available when you call.

