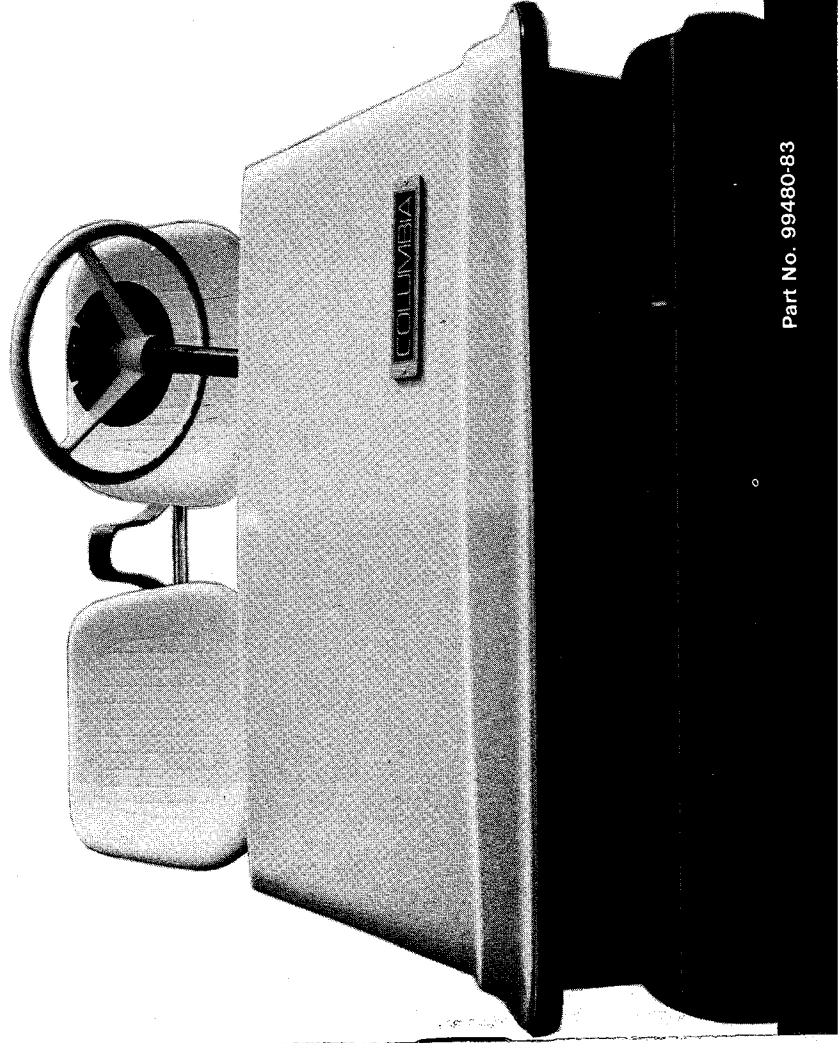


COLUMBIA
CAR CORPORATION

Owner's Manual

1983 • DX4
Gasoline Golf Car

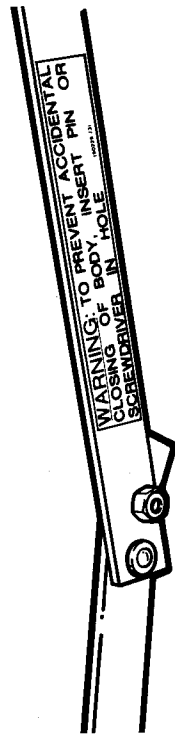


COLUMBIA
CAR CORPORATION

320 Industrial Park Road
P.O. Box 25
Deerfield, Wisconsin 53531
(608) 764-5473

Part No. 99480-83

To secure the body upright and avoid possible personal injury, install a 3/8 x 1 bolt and nut into body hinge hole to prevent accidental closing of body.



INTRODUCTION

This manual contains important safety information, operating instructions, model specifications and maintenance instructions for the model DX4 Gasoline Golf Car.

The service information in this manual is limited to care and maintenance information only. Information covering repairs is provided in a detailed service manual available from Columbia Car dealers. Such major repairs require the attention of a skilled mechanic and the use of special tools and equipment. Your Columbia Car dealer has the facilities, experience and genuine Columbia Car parts and accessories to properly service Columbia Cars.

For convenience, the SAFE OPERATING RULES and CONTROLS AND OPERATIONS are printed side by side in the manual and are of particular importance for operator safety. These pages should be copied or reprinted and given to anyone operating the golf car.

MODEL IDENTIFICATION

The golf car vehicle identification number is located on a metal tag above the left rear tire on the rear frame cross brace. The engine serial number is located on the top of the engine crankcase.

IMPORTANT! Always give these numbers when ordering parts or making inquiries about your Columbia Golf Car.

Statements in this manual preceded by the following words are of special significance:

WARNING

Means there is the possibility of personal injury to yourself or others.

CAUTION

Means there is the possibility of damage to the vehicle.

We recommend you take special notice of these items.

WARNING

The modification of Columbia golf cars for use in other than golf play is not recommended. Exceeding golf car load capacities, recommended speed or altering the golf car for other than golf play may result in possible injury or property damage.

PATENT NOTICE

Columbia Car products are manufactured under one or more of the following: U.S. Patents — 2986162, 2987934, 2998809, 3116089, 3144631, 3144860, 3226994, 3229792, 3434887, 3559773, 3673359, 3680403, 3683716, 3709317, Des. 225 626.

To the best knowledge of Columbia Car Corporation, the material contained herein is accurate as of the date this publication was approved for printing. Columbia Car Corporation reserves the right to change specifications, equipment, or designs at any time without notice and without incurring obligation.

COLUMBIA CAR CORPORATION

SAFE OPERATING RULES

Before operating the Columbia Golf Car, it is the operator's responsibility to read and follow the safety, operating and maintenance instructions in this manual for personal safety. If you are responsible for the use or rental of the golf car, it is your responsibility to inform the person or persons using the golf car about the following basic rules of operation for their personal safety.

- Vehicles designed as golf cars should be used for that purpose only.
- It is hazardous to use golf cars anywhere other than on designated car paths and car areas.
- Golf cars are designed for transporting no more than two golfers and their equipment. Never exceed load capacity, or vehicle stability and control will be endangered.
- Always drive vehicle straight up and down inclines to avoid overturning vehicle or losing vehicle stability and control. Be cautious while turning or backing up vehicle.
- Personal injury may result if arms, legs, or other parts of body are not kept inside vehicle while it is moving.
- Do not start vehicle until all occupants are seated. Remain seated while vehicle is in motion.
- **Before leaving your seat, bring vehicle to a complete stop and lock parking brake to prevent vehicle from moving.** If vehicle is to be left unattended, switch key OFF and remove key.
- Do not use accelerator to hold car on an incline — use the brake.
- Make sure key is in position for desired direction of travel before depressing accelerator. **DO NOT CHANGE DIRECTION OF CAR WHILE MOVING!**

WARNING

Failure to comply with the above instructions may result in bodily injury and property damage.

These basic rules of operation, combined with courtesy and common sense will help to make driving the Columbia Golf Car a safe and pleasant experience.

CONTROLS AND OPERATION

Simple controls make it easy to operate the Columbia Golf Car. To drive, move directional key switch to desired position and depress accelerator with right foot. Depress brake pedal to slow or stop car.

WARNING

Be sure directional key switch is in desired direction of travel before depressing accelerator.

DIRECTIONAL KEY SWITCH

The switch requires key to operate. Turn to FORWARD position to run car forward. Turn to REVERSE position to run car in reverse. Warning buzzer sounds when in reverse. Key can only be removed when in the OFF position. Switch locks automatically when key is removed. **DO NOT CHANGE DIRECTION UNTIL CAR HAS COME TO A COMPLETE STOP.**

ACCELERATOR

Accelerator pedal starts the engine automatically when depressed. Further movement of pedal operates car at desired speed. The engine stops running when pedal is released. To slow or stop vehicle depress brake.

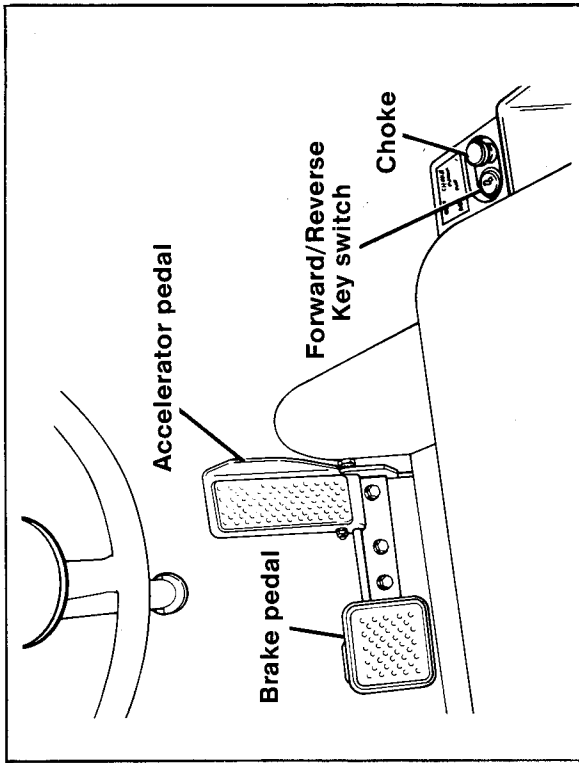
BRAKE

Depress brake pedal to slow or stop vehicle. To lock brake for parking, depress pedal and tilt forward. **Always apply parking brake when leaving vehicle.** Parking brake remains applied until automatically released by depressing accelerator pedal. Parking brake can also be released by tilting brake pedal backward.

CHOKE

Choke knob is located between seats next to directional key switch. Use choke knob when starting a cold engine. Pull knob outward to choke and move inward gradually as engine warms up. It will probably not be necessary to use choke again unless the engine has completely cooled off.

DX4 STEERING AND CONTROLS



TRAILERING GOLF CAR

WARNING

When trailering golf car observe the following safety precautions:

- Use trailer specifically designed to carry golf cars.
- Secure golf car to trailer following trailer manufacturer's instructions.
- On golf cars equipped with windshields or suntop, be certain windshield or suntop is secured properly to golf car to prevent loss or damage while trailering. Also secure golf car body to chassis as it may raise as a result of airflow on suntop while trailering. Increased trailering speed adds stress to windshield or suntop and subsequently increases chance of loss or damage.

SERVICING DX4 GOLF CAR

Performance and quality has been designed into every Columbia Car. Continued dependable and trouble free service depends primarily on the care and attention given.

Special attention must be given to the maintenance requirements of golf cars in fleets or rental use. Consult your Columbia Car dealer for maintenance requirements of fleet operation.

ENGINE LUBRICATION AND FUEL

The DX4 Golf Car is equipped with a 2-cycle gasoline engine which requires oil to be mixed with the gas. It is essential to use Columbia Car Lubricant in the gas for smokeless, clean, trouble free operation. Use 1-1/2 oz. of lubricant per U.S. gallon (1.2cc lubricant per liter) of regular grade leaded or unleaded gasoline. If necessary to use other than Columbia Car Lubricant, use a good quality 2-cycle BIA certified TCWoil. Thoroughly pre-mix lubricant with gasoline in separate container before placing in tank.

Use of lubricant other than Columbia Car Oil, or other lubricants which DO NOT meet this standard may cause damage to the engine and void the warranty.

WARNING

Gasoline is extremely flammable and highly explosive under certain conditions. Do not fill fuel tank while engine is running. Do not smoke or allow open flames or sparks near car when refueling. Mix fuel in well ventilated area.

FUEL MIXTURE TABLE — 85 Parts Gas to 1 Part Columbia Car Oil

U.S. Gal. Gas	1/2	1	2	3	4	5	6	7	8	9	10	25	50	85	100
Columbia Car Oil	3/4	1 1/2	3	4 1/2	6	7 1/2	9	10 1/2	12	13 1/2	15	37 1/2	75	128	150
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.
1 U.S. pint = 16 oz.	1 U.S. quart = 32 oz.											1 qt. 2 qt. 1 gal. 1 gal.			
1 liter = 33.82 oz.	1 Imp. gal. = 153.7 oz.											1 Imp. gal. = 1.2 U.S. gal.			
												1 qt.	2 qt.	1 gal.	1 gal.
												4 1/2	11	22	oz.
												oz.	oz.	oz.	oz.

SERVICE CHART

Use the following service check chart as a guide for maintaining your Columbia Golf Car in top operating condition.

AS NECESSARY OR EVERY WEEK

Cooling Air

- Remove debris from cooling air intake screen in front of engine, particularly after operating car through clippings, dry dandelions, weeds, etc.

CAUTION

If cooling air is restricted, the engine will overheat, causing damage to piston, cylinder and other parts.

EVERY MONTH, 24 HOURS OPERATING TIME OR 32 ROUNDS

Brake

- Adjust brake as follows when brake pedal free travel becomes excessive. Remove brake cable from front brake shoe. Adjust lever adjusting bolt until brake pads bear lightly on brake disc. Apply force to brake cam lever engaging the brake pads tightly against the disc. Adjust pivot bolt until the brake shoes are parallel to the disc. Release brake cam, remove cotter pin and adjust the castle nut on the rear brake shoe until a maximum of .030 in. (0.75 mm) side clearance, .015 in. (0.4 mm) on each side is achieved between each brake shoe and the disc. Install cotter pin. Adjust cable length until the brake cable can be reinstalled without engaging or disengaging the brake. (See Service Manual for detailed brake adjustment procedure.)

- Lubricate brake cable annually in conjunction with brake adjustment. Pull back spring on caliper end of cable and lube cable with good quality grease.

Tires

- Check pressure and inflate to 18 psi (1.2 atm).

Controls

- Oil throttle, choke and governor swivel blocks and control cable conduit ends.

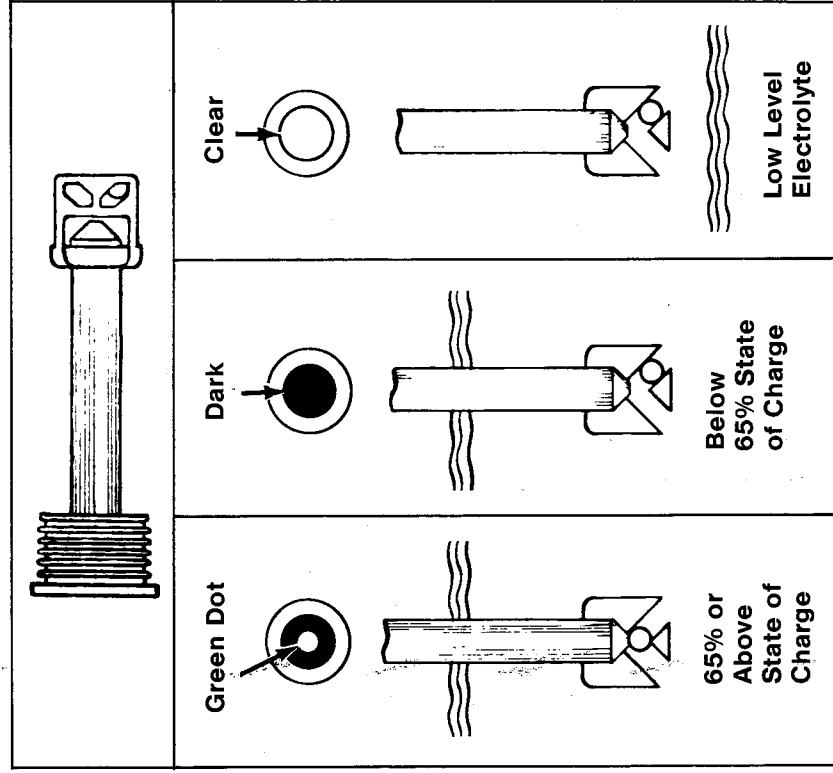
Battery

- Check Test indicator on top of freedom battery.

GREEN indicates the battery is adequately charged. DO NOT CHARGE BATTERY. A load test can be run.

BLACK indicates the battery NEEDS CHARGING. Charge battery in accordance with all specifications.

LIGHT YELLOW indicates a DEFECTIVE BATTERY. DO NOT CHARGE OR TEST.



CAUTION

Stop charging battery when green dot appears in battery window.

CAUTION

The original equipment battery is sealed, never add water or acid to battery.

WARNING

Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing.

Antidote:

External — Flush with water.

Internal — Drink large quantities of milk or water followed by milk of magnesia, vegetable oil or beaten eggs. Call doctor immediately.

Eyes — Flush with water and get immediate medical attention.

WARNING

Maximum battery charge rate is 6 amps.

WARNING

Batteries produce explosive hydrogen gas at all times, especially when being charged. To avoid personal injury, keep cigarettes, open flame, and sparks away from the battery at all times. Ventilate area when charging battery. Always protect hands and eyes with a shield or goggles when working near a battery or acid.

CAUTION

Do not use solvent to wash element or element will be damaged.

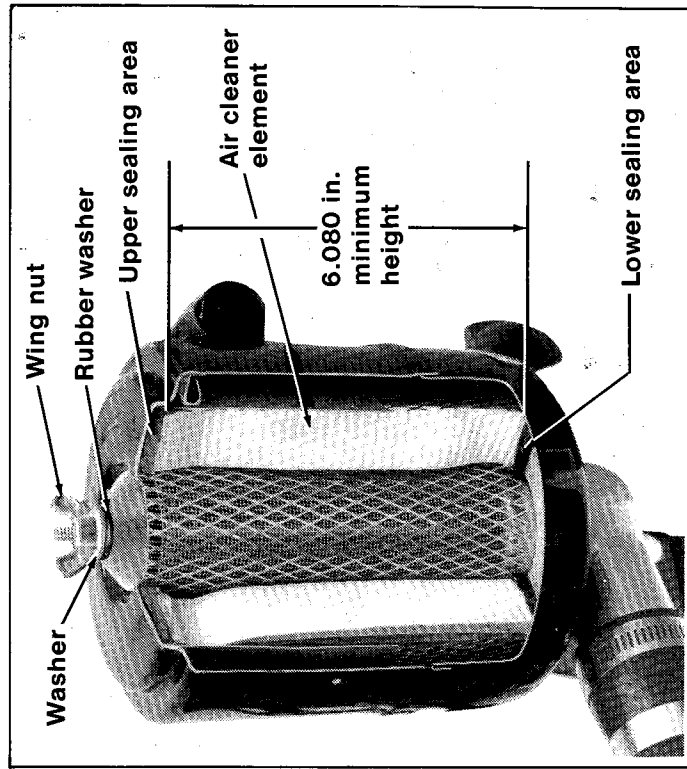
CAUTION

If the air cleaner element is short, the canister cover will contact before the element can seal, leaving a space on top for dirt to pass. This will damage the engine and void the warranty.

Air Cleaner

Service air cleaner more often under dirty operating conditions, or if power loss is noted. Avoid allowing dirt to drop in elbow when servicing the air filter. The air cleaner element can be removed by unscrewing the wing nut and lifting off the top of the filter housing. The filter element can be cleaned by gently tapping against hand, carefully blowing with compressed air (35 psi (2.4 atm) maximum) from inside out, or if oily, by washing with water and non-sudsing detergent. If water is used, shake off excess and allow element to dry completely.

After cleaning, inspect by holding light inside element. An even, fine pattern of light through element indicates element is clean. Any large spot of light indicates that element is damaged and should be replaced. If light does not show through, the pores of the element are blocked and it should be replaced. Replace element after six washings. To ensure maximum air filtration, and canister sealing, coat air filter top and bottom gasket with grease before inserting in filter canister. Install element, top of filter housing, washer and wing nut. To ensure proper canister seal, the air cleaner element must have a minimum height of 6.080" as shown.



Lubrication

- Oil body hinges and braces.
- Grease 4 front suspension fittings.
- Check differential and fill with Columbia Car TRANSMISSION LUBRICANT as required to maintain level $\frac{1}{2}$ inch (13 mm) below filler opening.

EACH SEASON

Perform all monthly service operations in addition to the following:

Spark Plug

- Replace

Ignition

- Inspect and adjust ignition contact points, lubricate rubbing block.
- Adjust ignition timing.

Carburetor

- Carburetor adjustments should be made by an authorized Columbia Car dealer.
- Throttle stop screw adjustment. Close throttle lever and back screw out until throttle plate is fully closed. Turn screw in until it contacts throttle arm, then turn in $\frac{1}{4}$ turn.
- Low speed mixture adjustment ($\frac{3}{4}$ to 1 turn open).
- Check governor operation. Governor is set at factory for 12 mph (19.4 kph) (2700-2800 rpm) car speed.

WARNING

DO NOT exceed governed speed of 12 mph (19.4 kph) (2700-2800 rpm). Exceeding 12 mph (19.4 kph) can be hazardous, resulting in loss of vehicle stability and/or control.

Lubrication

- Lube brake shoe operating cam with Loctite® ANTI-SEIZE.

WARNING

Do not get ANTI-SEIZE on brake pads or disc. ANTI-SEIZE is an anti-friction material, and if allowed to contact brake pads or disc, may result in brake loss.

- On steering wheel equipped cars, check steering gear box lubricant level. Remove filler plug and fill with Columbia Car TRANSMISSION LUBRICANT.
- Grease four front suspension fittings with multi-purpose chassis grease.
- Clean, inspect and repack front wheel bearings with Columbia Car BEARING GREASE.

STORAGE

Engine

- Add a good quality fuel stabilizer to the fuel following the manufacturer's recommendations on the container.
- Drain carburetor bowl into suitable container.

WARNING

Gasoline is extremely flammable and highly explosive under certain conditions. Store car in well ventilated area away from heat or open flame (such as pilot light or space heater).

Battery

- With battery fully charged, store battery in as cold a place as possible. If stored above 50°F (27°C), check state of charge every eight to ten weeks.

SPECIFICATIONS

GENERAL FEATURES

Automatic Transmission with Reverse and Governed Forward Speed Adjustable Up to a Maximum of 12 mph (19.4 kph)

Turning Radius (measured from turning center to center of outside tire tread)

4-Wheel (Steering Wheel) — Right 10'5"
Left 11'0"

Clearance Radius (measured from turning center to outside edge of bumper)

4-Wheel (Steering Wheel) — Right 11'2"
Left 11'9"

DIMENSIONS

Wheelbase 66.5 in. (169 cm)
Ground Clearance 4 in. (10.16 cm)
Weight 708 lbs. (321 kg)
Max. Load Capacity 750 lbs. (340 kg)
Overall Length 101 in. (256 cm)
Overall Width 44.25 in. (112 cm)
Overall Height 46 in. (117 cm)

CAPACITIES

Fuel Tank 8.5 U.S. gals. (32.2 liters) (Approx.) Fuel Mixture
Differential 24 oz. (710 cc) Transmission Lubricant

ENGINE

Type Reversible - two-cycle
Number of Cylinders One
Cooling Blower air-cooled
Mounting Rubber
Bore 2.75 in. (70 mm)
Stroke 2.50 in. (64 mm)
Displacement 14.8 cu. (243 cc)
Compression Ratio (after port closing 6.0:1) 7.7:1
Air Cleaner Washable dry-type
Spark Plug
Type Champion® - L82YC
Size 14 mm x 1/2" (12.7 mm) reach
Gap025 in. (.6 mm)
Torque 15-20 ft-lbs (2-2.7 kg/m)

Breaker Point Gap Setting012 - .016 in. (.3 - .4 mm)
Ignition Timing 19° .085 forward (2.16 mm) B.T.C.

POWER TRANSMISSION

Automatic variable-pitch V-belt transmission. Overall drive ratio variable from 10.4 to 38.2.

BRAKES

Disc brake on drive shaft mechanically operated. Brake pedal incorporates ratchet lock for parking, with automatic release controlled by accelerator pedal.

TIRES

Type High flotation
Size 8.50 x 8 Std.
Pressure 18 psi (1.2 atm) front and rear

ELECTRICAL EQUIPMENT

Reversible starter-generator, voltage regulator, coil ignition, 12 volt battery.

Specifications subject to change without notice.

APPROVED FLUIDS AND LUBRICANTS

Four cycle, 30W engine oil for lubricating linkages.

High quality chassis grease for front suspension components.

Columbia Car HEAVY WEIGHT DIFFERENTIAL LUBRICANT, Part No. 99890-61A (or equivalent) for differential and steering gear.

Loctite® ANTI-SEIZE (or equivalent) for brake caliper mechanism.

Columbia Car LUBRICANT (or equivalent) to mix with gasoline (85 to 1). Case of six gallons, Part No. 99803-76V, 55 gallon drum, Part No. 99810-76V.

Columbia SPECIAL BEARING GREASE, Part No. 99857-81, for front wheel bearings and steering head bearings.

See your Columbia Car dealer for his full line of replacement parts, accessories, service aids and service tools.

COLUMBIA

CAR CORPORATION

We warrant to the original consumer purchaser only that our 1983 model gasoline golf car will be free from defects in factory materials and workmanship under normal use and service for a period of twelve months (twenty-four months for major engine components defined as cylinder, piston, cylinder head, crankshaft assembly and bearings) from date of delivery or date of first use, whichever is earlier, as more fully explained below:

1. The battery is warranted by the battery manufacturer under a separate warranty included in your package and is not covered by this warranty. Your Columbia Car Dealer will assist you in requesting an adjustment if this becomes necessary.
2. Columbia will pay for parts provided under this warranty and you must pay all other expenses incurred in obtaining warranty repairs, including transportation and labor charges, if any. If we believe factory inspection of an alleged defective part is required, the part must be returned to us, transportation charges prepaid by the purchaser, as prior condition to the allowance of any warranty claim.
3. To qualify for warranty protection, you and the selling dealer must complete the Warranty Registration Form and return it to us within ten days after delivery. If this form is not on file, we will not be able to honor your warranty claims.
4. To obtain warranty service, you must return your golf car during the warranty period to the selling Columbia Dealer, to any authorized Columbia Dealer if you have moved a long distance, or to any other qualified repair facility. Our dealer should be able to provide service during his normal business hours and within a reasonable time, depending upon his workload and the availability of any necessary parts. For commercial customers, such as country clubs and resorts, this warranty is as stated above except it is void unless the customer uses parts approved by Columbia Car and unless repairs and warranty service are performed at an authorized Columbia dealer. Further information regarding warranty service may be obtained from Columbia by writing our Service Department, P.O. Box 25, 320 Industrial Park Road, Deerfield, Wisconsin 53531.
5. Any changes in golf car design or equipment made during the course of the model season shall not apply to golf cars previously manufactured.

6. THIS WARRANTY WILL NOT APPLY TO DEFECTS WHICH ARISE OUT OF:

- (a) Failure to operate or maintain as specified in the applicable Owner's Manual.
- (b) Abuse, misuse or neglect, including operation at other than the specified design speed or if used for other than golf play.
- (c) Alteration or repair outside of factory specifications.
- (d) Maintenance or operation by use or attachment of accessories, or parts and lubricants not specified by us which adversely affect the golf car's stability, reliability or performance.

1983 GASOLINE GOLF CAR LIMITED WARRANTY 12/24 MONTHS

7. THIS WARRANTY SHALL NOT APPLY TO:

- (a) Non-genuine parts and any damage caused by their use including damage caused by the use of batteries which do not meet Columbia specifications.
 - (b) Improperly installed repair parts.
 - (c) Normal maintenance shown in the Owner's Manual which the purchaser is expected to perform including, but not limited to, brake adjustment, battery maintenance (cleaning, maintaining proper fluid levels and battery charge), lubricant replacement in differential assemblies, etc.
 - (d) Fading or deterioration of seats, fiberglass, paint or chrome caused by ordinary wear and tear or exposure.
8. Our dealers are independently owned and operated, and may sell products other than Columbia. Therefore you should understand that **WE ARE NOT, AND CANNOT, BE RESPONSIBLE FOR THE QUALITY, SUITABILITY OR SAFETY OF ANY NON-COLUMBIA PART, ACCESSORY OR DESIGN MODIFICATION, INCLUDING LABOR, WHICH MAY BE SOLD AND/OR INSTALLED BY OUR DEALERS OR ANY DAMAGE CAUSED THEREBY.**
- THERE IS NO OTHER EXPRESS WARRANTY ON YOUR GOLF CAR. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS LIMITED TO THE TWELVE MONTH PERIOD OF THIS WARRANTY. TO THE FULLEST EXTENT ALLOWED BY LAW, COLUMBIA CAR CORPORATION AND ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF USE, INCONVENIENCE, LOST TIME, COMMERCIAL LOSS OR ANY OTHER INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES.**

9. (EXPORT GOLF CARS ONLY) In the case of golf cars sold outside the U.S.A. and Canada, defective parts must be returned to the selling dealer, transportation charges prepaid by the purchaser. Our dealer will then replace all parts which his inspection shall show to be defective under the warranty. We assume no liability for our dealers labor charges, if any, or any other expenses. For further information concerning export golf car service, please contact Columbia Car Corporation, P.O. Box 25, 320 Industrial Park Road, Deerfield, Wisconsin, 53531, U.S.A. Attn: Service Dept. (608) 764-5473.

Some states do not allow the exclusion or limitation of incidental, consequential or other damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.