

# Owner's and Operator's Manual

1992 Gasoline and Electric

- ☆ Columbia ParCar
- ☆ Columbia Utilitruck
- ☆ Columbia Shuttle

**COLUMBIA ParCar** 

Columbia ParCar Corp.

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PART NO. 99466-92

**COLUMBIA ParCar** 

Your Columbia vehicle has been manufactured in full compliance with all applicable American National Standards Institute (ANSI) standards. Your safe use and operation of your vehicle is important to us. Any alteration of your Columbia vehicle that results in the vehicle being in noncompliance with applicable ANSI standards is strictly prohibited. Columbia ParCar is not responsible or liable for any damage that results from any such alteration and all warranties for any such altered vehicles are null and void.

## **WARNING**

**For Angle Bag Rack Model G4S, E4S, secure body upright and avoid possible personal injury through accidental closing of body, remove body hold-up rod from clip and insert into slot in body frame.**

**ParCar**

## **INTRODUCTION**

This manual contains important safety information, operating instructions, model specifications and maintenance instructions for the Columbia ParCar, Utilitruck, and Shuttle.

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 ParCar dealers. Such major repairs require the attention of a skilled mechanic and the use of special tools and equipment. Your Columbia ParCar dealer has the facilities, experience and genuine Columbia ParCar parts and accessories to properly service Columbia ParCar Vehicles.

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.

## **MODEL IDENTIFICATION**

Except for the Utilitruck, the vehicle identification number (VIN) is located on a metal tag above the rear tire on the left fender. The Utilitruck VIN is on a plate below the seat in the passenger compartment. On gasoline powered vehicles, the engine serial number is located on the top of the engine crankcase.

**IMPORTANT!** Always give the (VIN) number when ordering parts or making inquiries about your Columbia Vehicle.

### **PATENT NOTICE**

Columbia ParCar products are manufactured under one or more of the following: U. S. Patents — 2986162, 2987934, 2998809, 3116089, 3144631, 3144860, 3229792, 3434887, 3559773, 3673359, 3680403, 3683716, 3709317, 4648473, Des. 225 626.

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

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### **WARNING**

**The modification of Columbia ParCar Vehicles is not recommended. Exceeding load capacities or recommended speed may result in possible injury or property damage.**

### **WARNING**

**This vehicle has a designed maximum speed of 15 mph and is not designed or intended to be used on public roadways or highways.**

# Columbia ParCar, Utilitruck and Shuttle SAFE OPERATING RULES

Before operating the Columbia ParCar, Utilitruck and Shuttle, 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 vehicle, it is your responsibility to inform the person or persons using the vehicle about the following basic rules of operation for their personal safety.

## WARNING

For personal safety and to maintain vehicle stability and control:

- To be operated by authorized persons only and only in designated areas.
- ParCars are restricted to no more than 2 occupants and their equipment. Exceeding this limitation may endanger occupants.
- ParCar total load capacity including persons and equipment for gasoline and electric golf vehicles is 750 pounds.
- Utilitrucks are designed to transport no more than two people unless adequate provisions have been made for additional passengers.
- Utilitruck total load capacity including persons and cargo is 1,000 pounds for gasoline vehicles and 800 pounds for electric vehicles.
- The Columbia Shuttle is restricted to no more than six passengers at one time, or a total load capacity of 1,200 lbs. including persons. Exceeding this limitation may endanger occupants.
- Always properly distribute and secure loads.
- Always drive vehicle slowly 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 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 vehicle on an incline — use the brake.
- Make sure safety directional key is in position for desired direction of travel before depressing accelerator. DO NOT CHANGE DIRECTION OF VEHICLE WHILE MOVING!

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

These basic rules of operation, combined with courtesy and common sense will help to make driving your Columbia ParCar, Utilitruck or Shuttle a safe and pleasant experience.

## CONTROLS AND OPERATION

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

### WARNING

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

## SAFETY DIRECTIONAL KEY SWITCH

The switch requires key to operate. Turn to FORWARD position to run vehicle forward. Turn to REVERSE position to run vehicle in reverse.

### CAUTION

**Do not change direction until vehicle has come to a complete stop.**

Warning buzzer sounds when in reverse. Key can only be removed when in the OFF position. Switch locks automatically when key is removed.

### CAUTION

**Always turn key OFF before exiting the vehicle. Always remove key when leaving the vehicle unattended.**

## ACCELERATOR

### Gasoline Vehicles

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

## ACCELERATOR

### Electric Vehicles

Accelerator pedal operates the vehicles in selected speeds as pedal is depressed. With key in desired position, depress accelerator to operate vehicle in desired direction.

## FOOT BRAKE

Depress brake pedal to slow or stop vehicle. The parking brake lock is controlled by a bar located across the top of the pedal. To lock brake for parking, depress pedal and bar at the same time. **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 momentarily pressing brake pedal and then releasing.

## HAND PARKING BRAKE (Optional)

Depress brake pedal to slow or stop vehicle. To lock brake for parking, pull hand brake outward to lock. **Always apply parking brake when leaving vehicle.** Parking brake remains applied until manually released for vehicle operation.

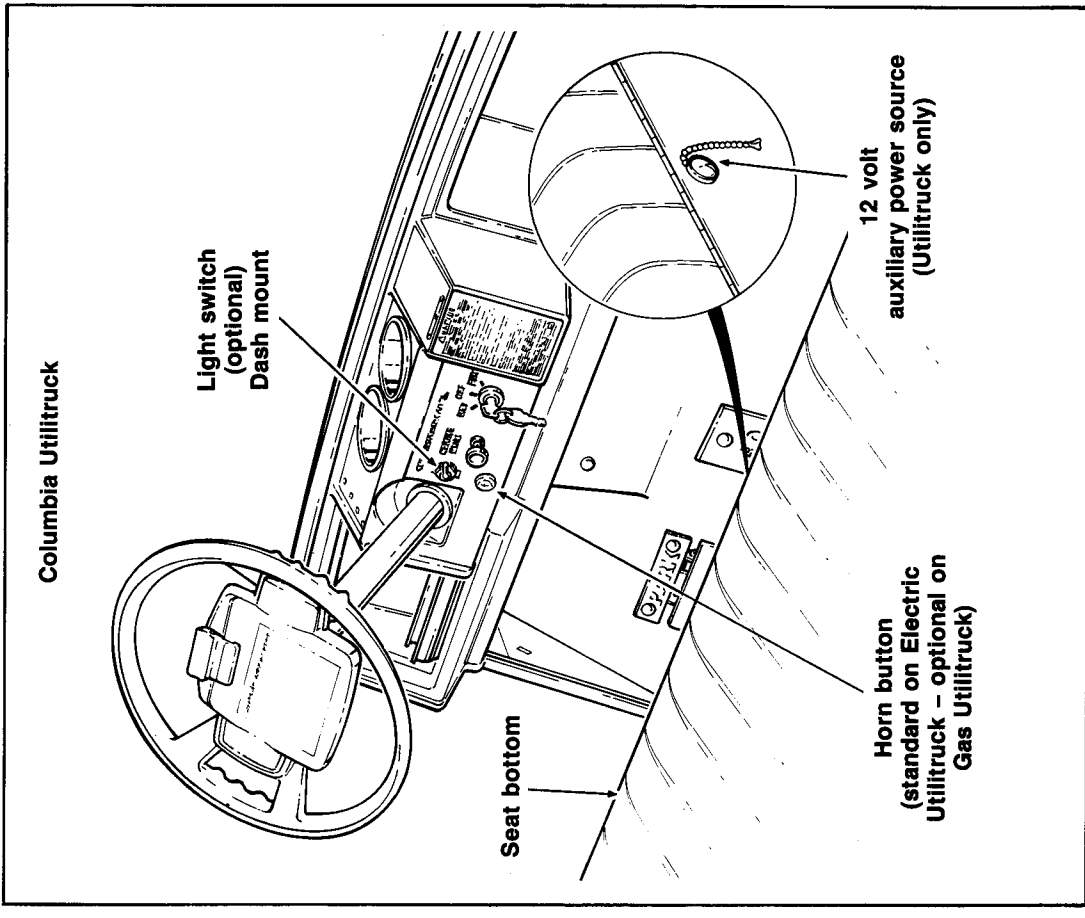
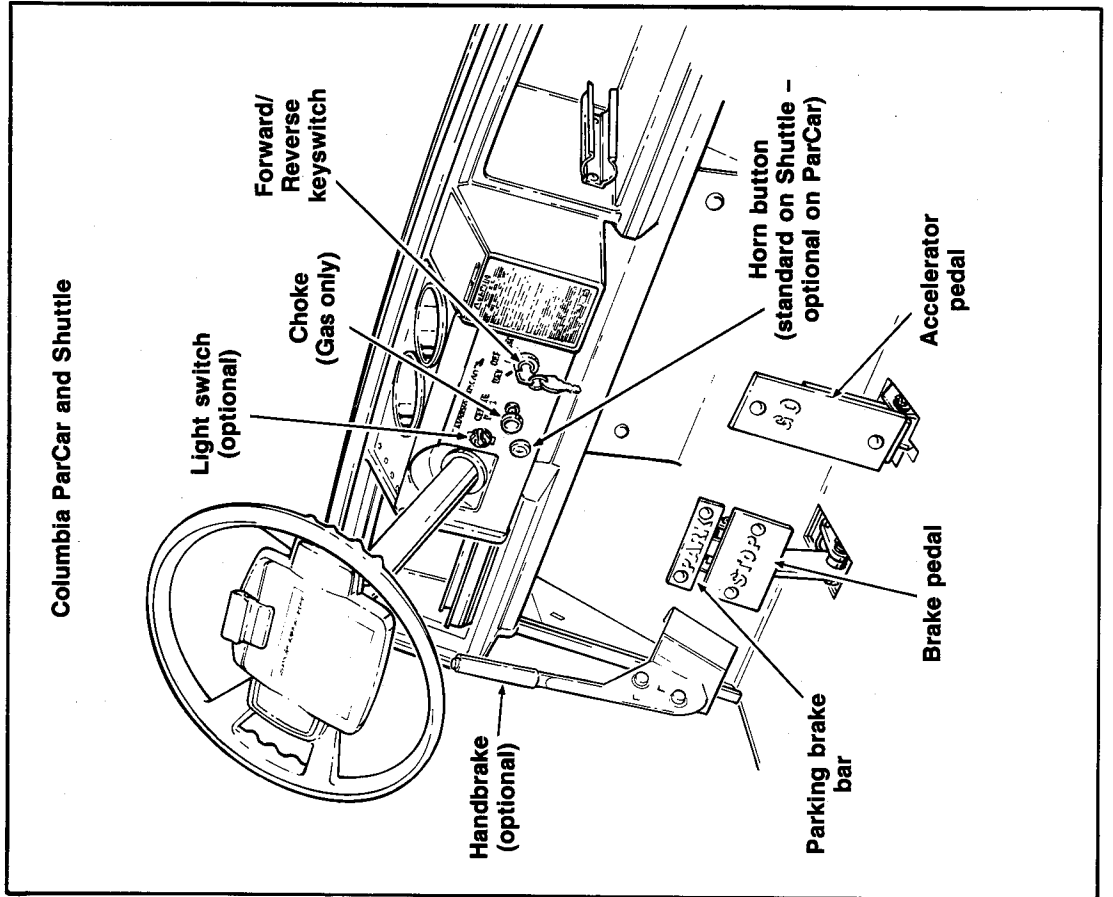
## CHOKE - Gasoline Vehicle Only

Choke knob is located on the front console next to safety directional key switch. Use choke knob when starting a cold engine. Pull knob out to choke. Note: Choke is spring returned to the open position. It will probably not be necessary to use choke again unless the engine has completely cooled off.

# Columbia ParCar, Utilitruck and Shuttle

## STEERING AND CONTROLS

- All models are equipped with a steering wheel.



## AUXILIARY POWER SOURCE

The Utilitruck is equipped with an auxiliary power source located below the seat on the seat panel. This may be used for a 12 volt DC negative ground electrical accessory.

## TRAILERING

### WARNING

When Trailering your vehicle, observe the following safety precautions:

- Use trailers specifically designed to carry your Columbia Vehicle.
- Secure vehicle to trailer following trailer manufacturer's instructions.
- On vehicles equipped with windshield, cab or suntop, be certain windshield, cab or suntop is secured properly to vehicle to prevent loss or damage while trailering. Also secure vehicle body to chassis as it may raise as a result of air flow on suntop while trailering. Increased trailering speed adds stress to windshield, cab or suntop and subsequently increases chance of loss or damage.

## Gasoline Vehicle SERVICING

Performance and quality have been designed into every Columbia Vehicle. Continued dependable and trouble free service depends primarily on the care and attention you provide.

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

## ENGINE LUBRICATION AND FUEL

Columbia ParCar gasoline vehicles are equipped with oil injection so it is not necessary to mix oil with the gas. Use regular grade leaded or unleaded gasoline in the fuel tank and Genuine Columbia ParCar Lubricant in the oil tank. Check level of oil in oil tank every time gasoline is added to fuel tank.

Use of lubricant other than Genuine Columbia ParCar Oil, or other lubricants which DO NOT meet ParCar standards, may damage 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 vehicle when refueling.

## SERVICE SCHEDULE

Use the following service schedule as a guide for maintaining your Columbia Gasoline Vehicle.

### WARNING

Always disconnect negative battery cable before performing any service to avoid accidental start-up of vehicle and possible personal injury.

## AS NECESSARY OR EVERY WEEK

### Cooling Air

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

### Cleaning

- Wash underside of vehicle to remove all dirt and debris.
- Wash body and seats with a mild detergent only. DO NOT use abrasives (bodies are painted). Apply Columbia ParCar Cleaner Part No. 99642-85 and Sealer Part No. 99643-85. Order through Columbia ParCar Parts Department.

### Starter-Generator Belts

- On new vehicles, or vehicles with newly installed belts, belt tension must be checked at least within the first hour of operation to account for any initial stretch or seating of components.
- Tighten new belts to  $110 \pm 10$  pounds ( $43.3 \pm 4.5$  kg) tension. Retighten belts to  $90 \pm 10$  pounds ( $40.8 \pm 4.5$  kg) tension. Do not allow belt tension to drop below 70 pounds (31.8 kg).

## EVERY MONTH, 24 HOURS OPERATING TIME OR 32 ROUNDS

### Brake

- To adjust brake:
  1. Loosen locknuts on brake rod clevises. Loosen clevis to provide slack in linkage.
  2. Raise rear wheels of vehicle off ground. Support with stands.
  3. Remove rubber protective boots from brake adjusters on brake backing plates.
  4. While rotating rear wheel, turn adjusting screw in until brake locks. Back off adjusting screw until wheel rotates freely (5 clicks). Replace boot. Adjust opposite brake in same manner.
  5. Remove clevis pin from rear end of brake rod clevis. Turn clevis to lengthen or shorten rod as necessary to provide tension on brake cables without allowing brakes to drag on the brake drums.
  6. Replace clevis pin and cotter pin.
  7. Tighten locknut on brake rod.
  8. Check free travel of pedal and brake function.

### Tires

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

### Starter-Generator Belt

- Check belt tension. Do not allow belt tension to drop below 70 pounds (31.8 kg). Retighten belts to  $90 \pm 10$  pounds ( $40.8 \pm 4.5$  kg) tension.

## Air Cleaner

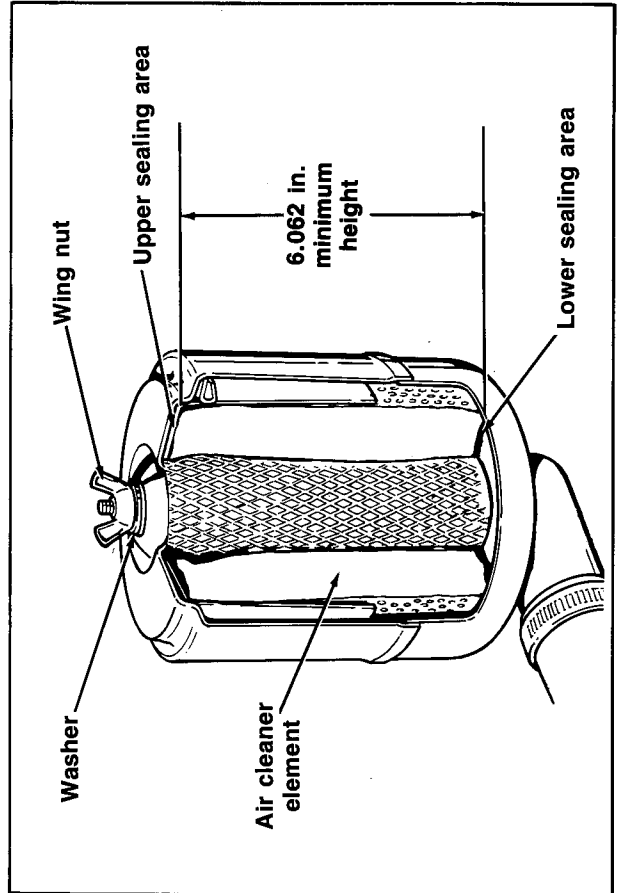
- Service air cleaner more often under dirty operating conditions, or if power loss is noted. The air cleaner element can be removed by loosening the wing nut and removing end of filter housing.
- Check automatic dust unloader for obstruction or damage. Replace if necessary. Make sure the lower filter housing is positioned with the unloader valve pointing to the rear of the vehicle.
- Replace air cleaner element if dirty with element purchased from Columbia ParCar Authorized Dealer or Service Center, Part No. 29131-71. Install element, and position the lower filter housing with unloader valve pointing to rear of vehicle. Tighten wing nut snugly by hand but do not crush element. To ensure proper canister seal, the air cleaner element must have a minimum height of 6.062 inches as shown.

### CAUTION

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

### CAUTION

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



## Lubrication

- Oil body hinges.
- Columbia ParCar Vehicles have nine grease fittings; two on steering column joints, three on each side of front suspension, and one on the brake pedal pivot which should be greased with high quality chassis grease.
- Check differential oil level and fill with API Service GL5 Multipurpose Gear Lubricant APG 90 Part No. 99890-61A, available through Columbia ParCar Parts Department as required to maintain level to the bottom of the filler opening.

## EACH SEASON

Perform all monthly service operations in addition to the following:

### Spark Plug

- Replace with Champion L95YC or equivalent.

## Gasoline Vehicle PROLONGED STORAGE

### Engine

- Add a good quality fuel stabilizer to the fuel following the manufacturer's recommendations on the container.

### WARNING

Gasoline is extremely flammable and highly explosive under certain conditions. Store vehicle 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, and recharge as necessary.



## Gasoline ParCar GENERAL FEATURES

Automatic Transmission with Governed Forward and Reverse Speed Adjustable Up to a Maximum of 15 mph (24.1 kph)

**Turning Radius**  
(measured from turning center to center of outside tire tread) . . . 8 ft

**Clearance Radius** . . . . . 10 ft

### DIMENSIONS AND WEIGHTS

	P4G	G4S
Wheelbase . . . . .	63.5 in.	63.5 in.
Ground Clearance . . . . .	4 in.	4 in.
Weight . . . . .	655 lbs	695 lbs
Max. Load Capacity . . . . .	750 lbs	750 lbs
Overall Length . . . . .	92.5 in.	94.62 in.
Overall Width . . . . .	44.5 in.	44.25 in.
Overall Height . . . . .	46 in.	47.5 in.

## Gasoline Columbia Utilitruck GENERAL FEATURES

Automatic Transmission with Governed Forward and Reverse Speed Adjustable Up to a Maximum of 15 mph (24.1 kph)

**Turning Radius**  
(measured from turning center to center of outside tire tread) . . 12 ft

**Clearance Radius**  
(measured from turning center to outside edge of bumper) . . . 13.8 ft

### DIMENSIONS AND WEIGHTS

Wheelbase . . . . .	73.5 in.
Ground Clearance . . . . .	4 in.
Weight . . . . .	920 lbs
Maximum Load Capacity* . . . . .	1000 lbs
Gross Vehicle Weight . . . . .	1920 lbs
Overall Length . . . . .	102.5 in.
Overall Width . . . . .	43 in.
Overall Height . . . . .	47.5 in.

\*including driver and passenger.

## Gasoline Columbia Shuttle GENERAL FEATURES

Automatic Transmission with Governed Forward and Reverse Speed Adjustable Up to a Maximum of 15 mph (24.1 kph)

**Turning Radius**  
(measured from turning center to center of outside tire tread) . . . 20 ft

**Clearance Radius**  
(measured from turning center to outside edge of bumper) . . . . . 22 ft

### DIMENSIONS AND WEIGHTS

Wheelbase . . . . .	88.5 in.
Ground Clearance . . . . .	4 in.
Weight . . . . .	833 lbs
Maximum Load Capacity* . . . . .	1200 lbs
Gross Vehicle Weight . . . . .	2033 lbs
Overall Length . . . . .	118 in.
Overall Width . . . . .	44.25 in.
Overall Height . . . . .	46 in.

\*including driver and passenger.

## Gasoline Vehicle SPECIFICATIONS CAPACITIES

Fuel Tank . . . . .	7 U.S. gals (26.5 liters) (Approx.)
Oil Tank . . . . .	3.5 U.S. qts (3.3 liters) (Approx.)
Differential . . . . .	24 oz (710 cc)

## ENGINE

Type	Reversible - two-cycle
Number of Cylinders	One
Cooling	Fan air-cooled
Mounting	Rubber
Bore	2.75 in. (70 mm)
Stroke	2.50 in. (64 mm)
Displacement	14.8 cu in. (243 cc)
Compression Ratio	6.5:1
Air Cleaner	Dry-type
Spark Plug	Champion L95YC
Type	14 mm x 1/2 in. (12.78 mm) reach
Size	.035 in. (.6 mm)
Gap	15-20 ft-lbs (2-2.7 kg/m)
Torque	19° BTC
Ignition Timing	

## POWER TRANSMISSION

Automatic variable-pitch V-belt transmission. Overall drive ratio variable from 8.82 to 42.14.

## BRAKES

Drum brakes on rear wheels mechanically operated. Brake pedal parking brake incorporates ratchet with automatic release controlled by accelerator pedal. Hand parking brake optional.

## TIRES

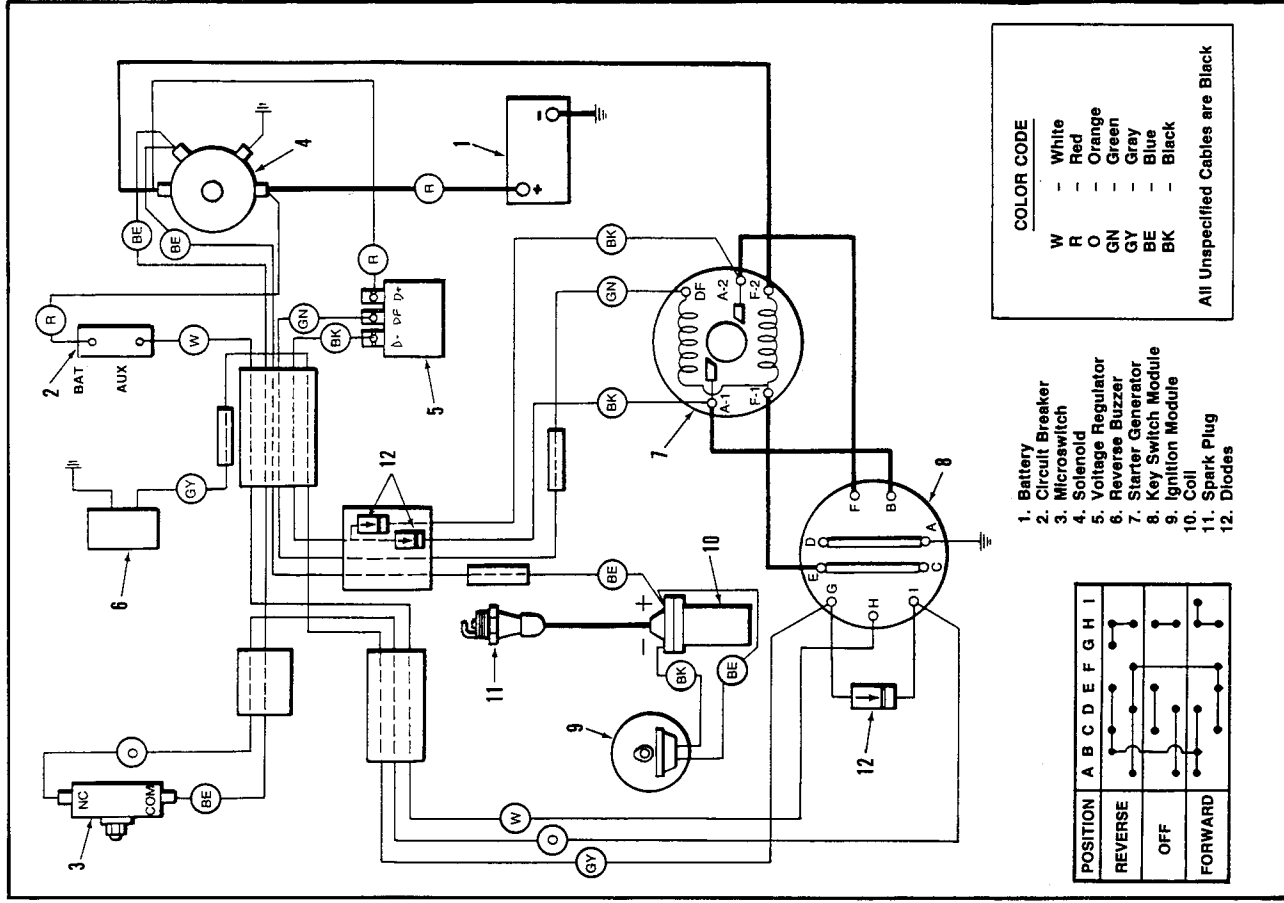
Type	High flotation
Size	18 x 8.50 - 8 Std.
Pressure	18 psi (1.2 atm) front and rear

## ELECTRICAL EQUIPMENT

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

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

# Gasoline Vehicle BASIC WIRING DIAGRAM



# Electric Vehicle SERVICING

Performance and quality have been designed into every Columbia Vehicle. Continued dependable and trouble free service depends primarily on the care and attention you provide.

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

## WARNING

Always disconnect one negative battery cable from each bank of batteries before performing any vehicle service to avoid accidental start-up of vehicle and possible personal injury.

## CAUTION

Do not overcharge battery, overcharging could cause damage to battery cells.

## WARNING

When adding water or acid to battery, always wear protective eye glasses and protect hands.

## 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 5 amps per battery (30 amps for 6 batteries).

## 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. Raise body or seats over batteries while charging vehicle to allow hydrogen to escape freely.

Use the following charging time chart as a guide for maintaining batteries in top condition. The detailed service procedures are outlined in service manuals available from your Columbia ParCar dealer.

## NOTE

For optimum battery performance, limit the use of new batteries to 18 holes between charges for first 5 charging cycles. This will prevent premature failure of the batteries.

## LESTRONIC II

### CHARGING TIME CHART

ParCar Usage	Charging Time
9 Holes	7 Hours*
18 Holes or More	12 Hours*

\* Approximate time to recharge batteries at 70° F (20° C) using Portable Automatic Charger Part No. 66534-83 available from Columbia ParCar Parts Department, or the 66501-89 On-Board Automatic Charger, stand on the Utilitruck and Shuttle.

## NOTE

Charging times to fully charge batteries vary with differences in battery age, temperature and use. New batteries and cold temperatures require longer charge times.

If performance, service per charge is effected by the charger electrical supply, check facility for proper wire size, that the circuit breaker is adequate for charging while giving protection from overload. Check charger instructions, local codes, and your Columbia ParCar dealer for full details.

## SERVICE SCHEDULE

Use the following service schedule as a guide for maintaining your electric vehicle in top operating condition.

### DAILY

#### Batteries

- EU4 Utilitruck and E4S ParCar charging receptacle is located on front side of rear body between seats. On Model P4E ParCar and Columbia Shuttle, receptacle is located on left side of vehicle under shell. Be sure key switch is off, key removed from switch and accelerator pedal released.
- Check electrolyte level and, if low, add sufficient distilled or low mineral content water to cover plates before charging. Do not fill to the marker until the battery is charged. Electrolyte expands during charging and could overflow if filled to the marker before charging.

#### WARNING

Batteries give off hydrogen gas which is highly explosive!  
DO NOT allow flame or sparks near charging area when charging. Charging area must be well ventilated.

#### 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.

## AS NECESSARY OR EVERY WEEK

#### Batteries

- Check electrolyte level. Fill to marker in each cell with distilled water or water low in mineral content after charging.

#### Cleaning

- Wash underside of vehicle to remove all dirt and debris. Do not direct high pressure water at the controller, speed switches, or tops of the batteries. Dry the controller and top surfaces of the batteries immediately after washing.
- Wash body and seats with a mild detergent only. DO NOT use abrasives (bodies are painted). Apply ParCar Cleaner Part No. 99642-85 and Sealer Part No. 99643-85. Order through Columbia ParCar Parts Department.

## EVERY MONTH, 24 HOURS OPERATING TIME OR 32 ROUNDS

#### Brake

- To adjust brake:
  1. Loosen locknuts on brake rod clevises. Loosen clevis to provide slack in linkage.
  2. Raise rear wheels of vehicle off ground. Support with stands.
  3. Remove rubber protective boots from brake adjusters on brake backing plates.
  4. While rotating rear wheel turn adjusting screw in until brake locks. Back off adjusting screw until wheel rotates freely (5 clicks). Replace boot. Adjust opposite brake in same manner.
  5. Remove clevis pin from rear end of brake rod clevis. Turn clevis to lengthen or shorten rod as necessary to provide tension on brake cables without allowing brakes to drag on the brake drum.
  6. Replace clevis pin and cotter pin.
  7. Tighten locknut on brake rod.
  8. Check free travel of pedal and brake function.

## Tires

- Check pressure and inflate to 18 psi (1.2 atm) for Columbia Shuttle and ParCar.
- Check pressure and inflate to 50 psi (3.4 atm) for Columbia Utilitruck.

## Electrical

- Check solenoid terminal connections and battery connections. Tighten and clean as required.

## Lubrication

- Oil body hinges.
- Columbia ParCar Vehicles have nine grease fittings; two on steering column joints, three on each side of front suspension, and one on the brake pedal pivot which should be greased with high quality chassis grease.
- Check differential oil level and fill to 8 to 12 oz. with API Service GL5 Light Weight Gear Lubricant APG 75 30W oil as required to maintain level to bottom of the filler opening.

## EACH SEASON

Perform all monthly service operations in addition to the following:

- Inspect battery pack for charge and electrolyte. If low, add water to safe level.

## STORAGE

- Fully charge batteries. With electrolyte level up in all cells, store batteries in as cold a place as possible. If stored above 50° F (27° C), check state of charge every 8 to 10 weeks and charge as necessary to maintain 1.250 to 1.270 specific gravity. Use the chart below to determine freezing point of battery and maximum recommended storage temperature.

Specific Gravity	1.260	1.230	1.200	1.117	1.110
Freezing Point of Electrolyte	F C -70 -57	F C -39 -38	F C -16 -26	F C -2 -19	F C +17 -8

## Electric ParCar GENERAL FEATURES

Maximum Speed on Level Ground Surface . . . . . 12 mph

Turning Radius  
(measured from turning center to center of outside tire tread) . . . . . 8 ft

Clearance Radius . . . . . 10 ft

## DIMENSIONS AND WEIGHTS

	P4E	E4S
Wheelbase . . . . .	63.5 in.	63.5 in.
Overall Length . . . . .	92.5 in.	94.62 in.
Overall Width . . . . .	44.5 in.	44.25 in.
Overall Height . . . . .	46 in.	47.5 in.
Ground Clearance . . . . .	4 in.	4 in.
Weight		
w/o batteries . . . . .	590 lbs	629 lbs
with batteries . . . . .	938 lbs	977 lbs
Maximum Load Capacity . . . . .	750 lbs	750 lbs

## Electric Columbia Utilitruck GENERAL FEATURES

Maximum Speed on Level Ground Surface . . . . . 11 mph

Turning Radius  
(measured from turning center to center of outside tire tread) . . . . . 10 ft

Clearance Radius  
(measured from turning center to outside edge of bumper) . . . . . 13.8 ft

## DIMENSIONS AND WEIGHTS

Wheelbase . . . . .	73.5 in.
Ground Clearance . . . . .	4 in.
Weight . . . . .	1143 lbs
Maximum Load Capacity*	800 lbs
Gross Vehicle Weight . . . . .	1943 lbs
Overall Length . . . . .	102.5 in.
Overall Width . . . . .	43 in.
Overall Height . . . . .	47.5 in.

\*including driver and passenger.

# Electric Columbia Shuttle

## GENERAL FEATURES

Maximum Speed on Level Ground Surface . . . . . 12 mph

Turning Radius  
(measured from turning center to center of outside tire tread) . . . 20 ft

Clearance Radius  
(measured from turning center to outside edge of bumper) . . . . . 22 ft

## DIMENSIONS AND WEIGHTS

Wheelbase . . . . . 83.5 in.

Ground Clearance . . . . . 4 in.

Weight  
w/o batteries . . . . . 780 lbs  
with batteries . . . . . 1150 lbs

Maximum Load Capacity\* . . . . . 1200 lbs

Overall Length . . . . . 118 in.

Overall Width . . . . . 44.25 in.

Overall Height . . . . . 46 in.

\*including driver and passenger.

## Electric Vehicle

### SPECIFICATIONS

#### MOTOR

Type . . . . . Series wound, reversible

Rating, Standard Motor . . . . . 2 HP @ 2800 RPM, 36 volts

Rating, Optional Motor . . . . . 3 HP @ 2700 RPM, 36 volts

#### DRIVE

Direct Drive Motor to Differential Shaft

Drive Ratio . . . . . 12.55

## BATTERIES

Type . . . . . 6-volt electric vehicle (EV) lead storage battery

Quantity . . . . . 6 per vehicle

Rating . . . . . 106 minutes (75 amp discharge at 80° F to 5.25 volts)

Charge Rate . . . . . (total for 6 batteries in series)  
Maximum; 30 amperes with automatic charger  
reduction to low rate

## TIRES

### ParCar and Columbia Shuttle

Type . . . . . High Flotation

Size . . . . . 18 x 8.50 - 8 Std

Pressure . . . . . 18 psi (1.2 atm), front and rear

### Columbia Utilitruck

Type . . . . . High Speed

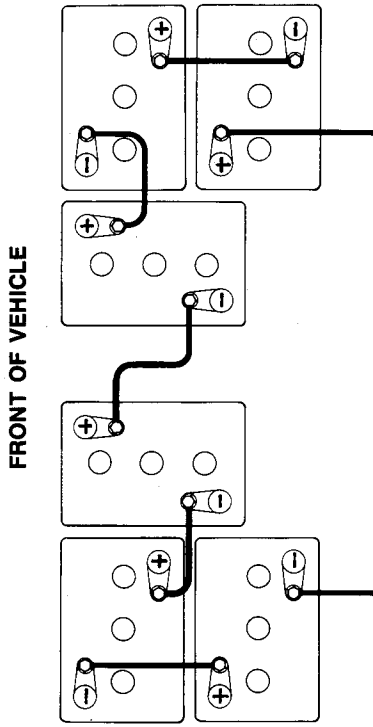
Size . . . . . 5.70 x 8 Std

Pressure . . . . . 50 psi (3.4 atm)

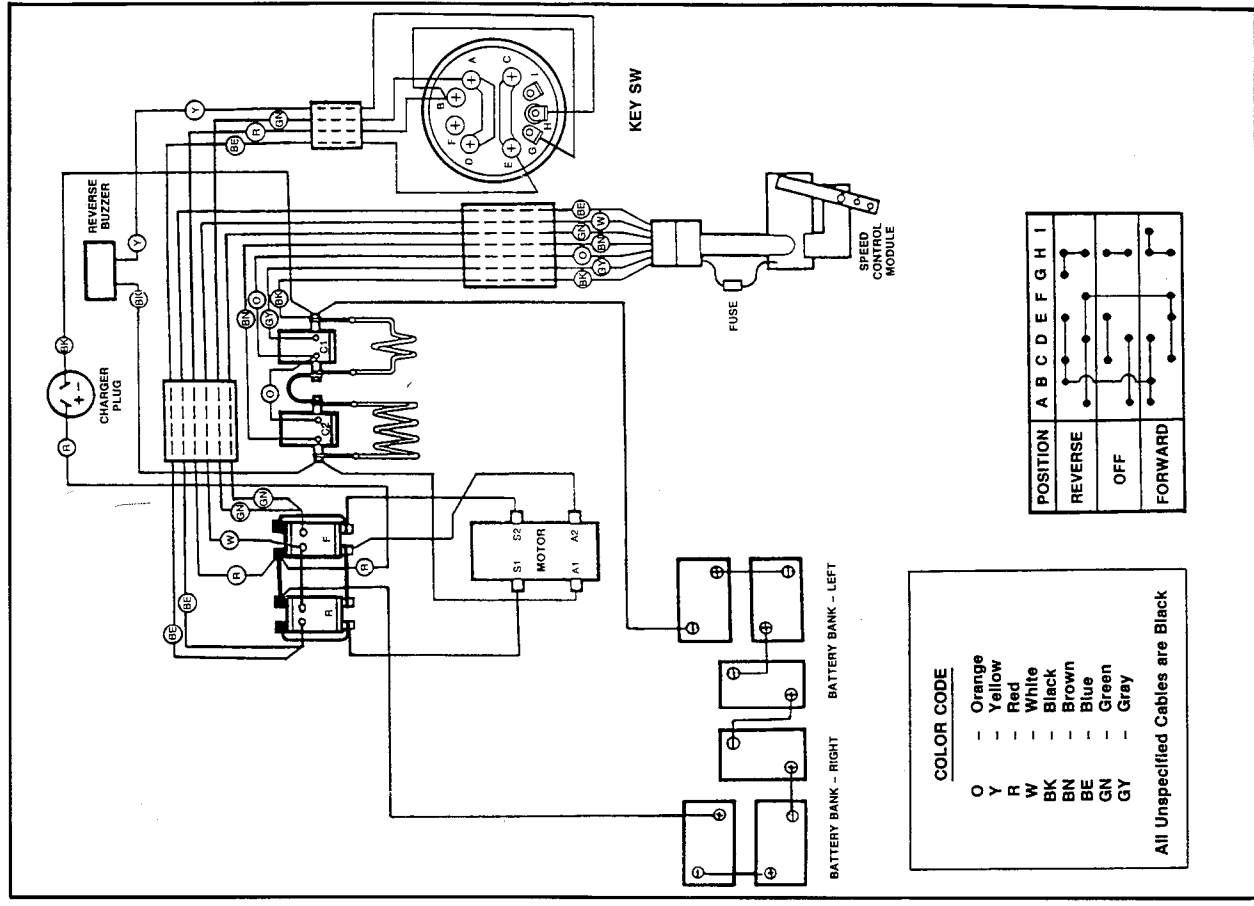
## BRAKES

Drum brakes on rear wheels mechanically operated. Brake pedal parking brake incorporates ratchet with automatic release controlled by accelerator pedal. Hand parking brake optional.

# BATTERY INSTALLATION



# Electric ParCar and Columbia Shuttle WIRING DIAGRAM



# Electric Utilitruck WIRING DIAGRAM

# NOTES/SERVICE RECORDS

