

# Owner's Manual

1988

GASOLINE PARCAR

ELECTRIC PARCAR

GASOLINE UTILITRUCK

ELECTRIC UTILITRUCK

**COLUMBIA PARCAR** 

Columbia PARCAR Corp.

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**COLUMBIA PARCAR** 

PART NO 99466-88

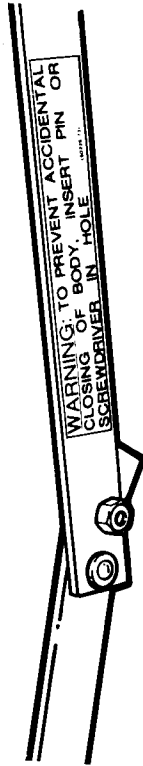
## WARNING

To 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

## WARNING

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.



## UTILITRUCK

### 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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## INTRODUCTION

This manual contains important safety information, operating instructions, model specifications and maintenance instructions for the 3 and 4 wheel PARCARS and UTILITRUCKS.

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 PARCARS.

## MODEL IDENTIFICATION

The vehicle identification number is located on a metal tag above the rear tire on the rear frame cross brace. On gasoline powered vehicles, 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 PARCAR.

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 UTILITRUCKS 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 12 mph and is not designed or intended to be used on public roadways or highways.

# PARCAR SAFE OPERATING RULES

Before operating the Columbia PARCAR, 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 PARCAR, it is your responsibility to inform the person or persons using the PARCAR 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.
- This PARCAR is restricted to no more than 2 occupants and their equipment. Exceeding this limitation may endanger occupants.
- Drive slowly straight up and down slopes. Drive slowly in turns and backing up.
- Keep arms, legs, and feet inside to avoid injury.
- Do not start until all occupants are seated. Remain seated while PARCAR is in motion.
- Set parking brake before leaving PARCAR. If PARCAR is left unattended, remove key.

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 the Columbia PARCAR a safe and pleasant experience.

# UTILITRUCK SAFE OPERATING RULES

Before operating the Columbia UTILITRUCK, 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 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:

- UTILITRUCKS are designed to transport no more than two people unless adequate provisions have been made for additional passengers.
- Never exceed load capacity (800 lbs. gasoline vehicle — 500 lbs. electric vehicle including persons).
- Always properly distribute and secure loads.
- 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 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 the Columbia UTILITRUCK a safe and pleasant experience.

## CONTROLS AND OPERATION

Simple controls make it easy to operate the Columbia PARCAR. 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

### Gasoline Cars

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.

## ACCELERATOR

### Electric Cars

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

## BRAKE

### 3-Wheel PARCAR and UTILITRUCK

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.

## BRAKE

### 4-Wheel PARCAR

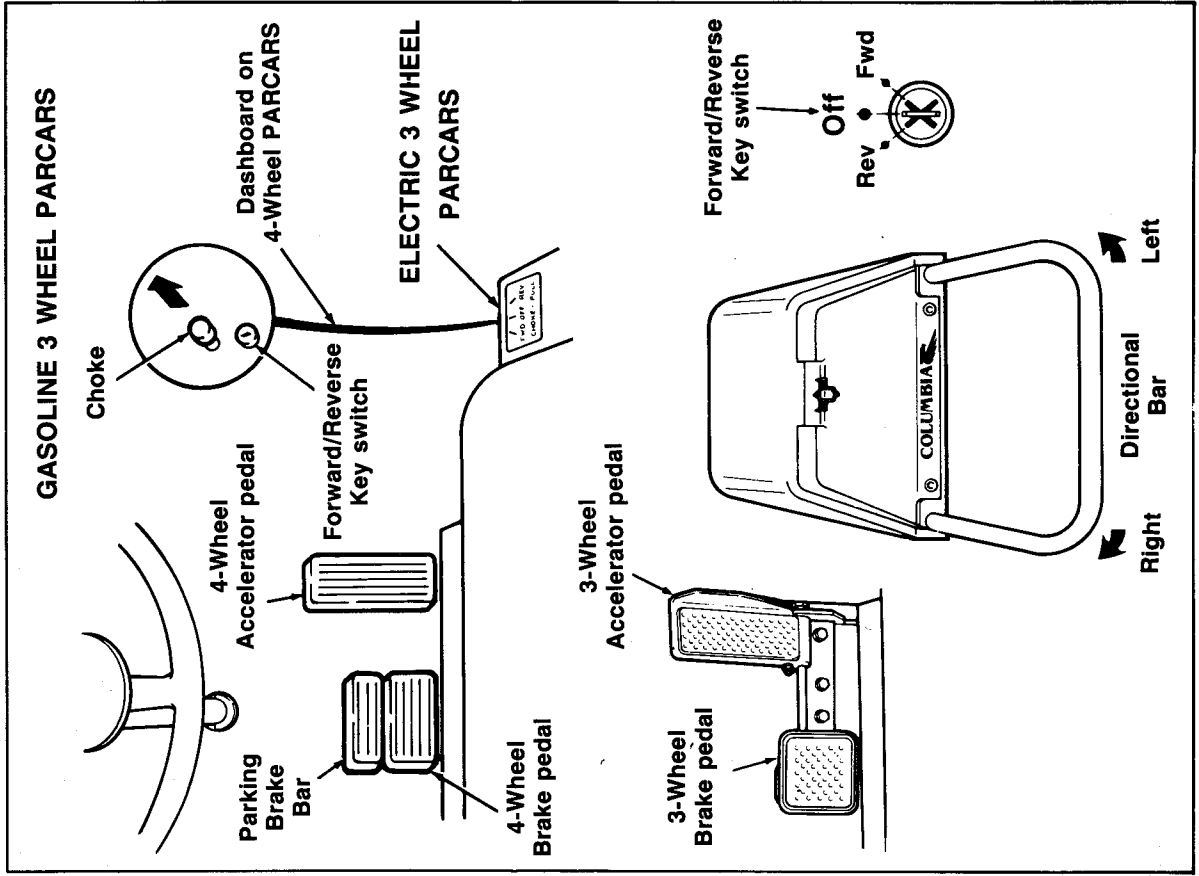
Depress brake pedal to slow or stop vehicle. The parking brake lock is controlled by a bar located across the top of the pedal. To lock brake for parking, depress pedal and bar at the same time. **Always apply parking brake when leaving vehicle.** Parking brake remains applied until automatically released by depressing accelerator pedal. Parking brake can also be released by momentarily pressing brake pedal and then releasing.

## CHOKES

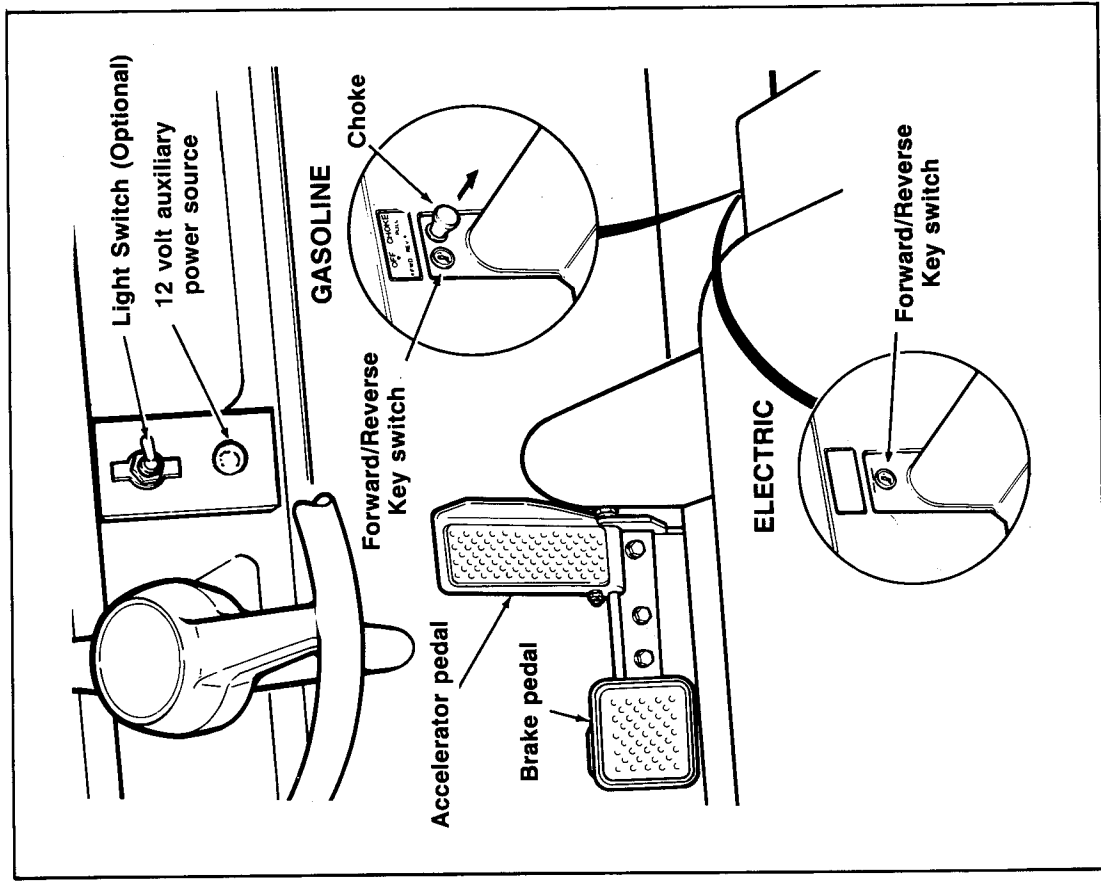
Choke knob is located in the front surface of the rear body between seats on 3-wheel, dashboard on 4-wheel, next to directional key switch. Use choke knob when starting a cold engine. Pull knob out to choke. Note: choke is spring returned to the open position. It will probably not be necessary to use choke again unless the engine has completely cooled off.

# PARCARS STEERING AND CONTROLS

- 4-wheel models are equipped with a steering wheel.
- 3-wheel models may be ordered with directional bar or steering wheel.



# UTILITRUCK STEERING AND CONTROLS



## LIGHTS (OPTIONAL)

The UTILITRUCK is equipped with two headlights and two taillights which are controlled by a switch located in the front storage area.

## AUXILIARY POWER SOURCE

The UTILITRUCK is equipped with an auxiliary power source located in the front storage area. This may be used for a 12 volt DC negative ground electrical accessory.

## TRAILERING

### WARNING

When Trailering PARCARS and UTILITRUCKS observe the following safety precautions:

- Use trailer specifically designed to carry PARCARS or UTILITRUCKS.
- 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 PARCAR AND UTILITRUCK SERVICING

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

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 FOR CARS WITH OIL INJECTION

On Columbia PARCARS equipped with oil injection it is not necessary to mix oil with the gas. Use regular grade leaded or unleaded gasoline in the fuel tank and Columbia PARCAR Lubricant in the oil tank. Oil tanks hold approximately 3.5 U.S. Qts. (3.3 liters) and are located over the rear axle. Check level of oil in oil tank every time gasoline is added to fuel tank.

Use of lubricant other than Columbia PARCAR Oil, or other lubricants which DO NOT meet PARCAR standards 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.

## ENGINE LUBRICATION AND FUEL FOR CARS WITHOUT OIL INJECTION

The Columbia PARCAR is equipped with a 2-cycle gasoline engine which requires oil to be mixed with the gas on cars without oil injection. It is essential (continued)

tial to use Columbia PARCAR Lubricant in the gas for smokeless, clean, trouble free operation. Use 1-1/2 oz. of lubricant per U.S. gallon (12cc lubricant per liter) of regular grade leaded or unleaded gasoline. Thoroughly pre-mix lubricant with gasoline in separate container before placing in tank.

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

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

U.S. Gal. Gas	1/2	1	2	3	4	5	6	7	8	9	10	25	50	85	100		
Columbia PARCAR 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 U.S. gal. = 128 oz.	1 qt. = 2 qt.	1 gal. = 1 gal.	1 gal. = 22	
1 liter = 33.82 oz.	1 Imp. gal. = 153.7 oz.												1 Imp. gal. = 1.2 U.S. gal.	oz.	oz.	oz.	oz.

## SERVICE CHART

Use the following service check chart as a guide for maintaining your Columbia PARCAR 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.

### Cleaning

- Wash underside of car to remove all dirt and debris.
- Wash body and seats with a mild detergent only. DO NOT use abrasives (bodies are painted).

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

### Brake

### Gasoline PARCAR

- To adjust brake:
  - Loosen locknuts on brake rod clevises. Loosen clevis to provide slack in linkage.
  - Raise rear wheels of car off ground. Support with stands.
  - Remove rubber protective boots from brake adjusters on brake backing plates.
  - 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.
  - 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.
  - Replace clevis pin and cotter pin.
  - Tighten locknut on brake rod.
  - Check free travel of pedal and brake function.
- Lubricate brake cables annually in conjunction with brake adjustment.

### Gasoline UTILITRUCK

- To adjust brake:
  - Raise both rear wheels off ground and block frame.
  - Remove both rear wheels.
  - Replace wheel lug nuts firmly with flat side against brake drum.
  - Rotate brake drum so oblong adjusting slot is located at about a one o'clock position.

5. Loosen brake linkage rod located under floorboard on driver's side to provide slack in brake cables.
6. Using a brake adjusting tool, rotate brake adjuster star wheel upward until shoes are forced firmly against drum so drum will not rotate.
7. Back off star wheel five (5) notches to provide operating clearance.
8. Repeat procedure to adjust opposite side brake.
9. Readjust linkage rod to allow parking brake to lock in first ratchet tooth.
10. Replace rear wheels and tighten lug nuts to 35 ft. lbs. torque.

### **Tires**

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

### **Controls**

- Oil throttle, choke, oil injection (if equipped), and governor swivel blocks and control cable conduit ends.

### **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.

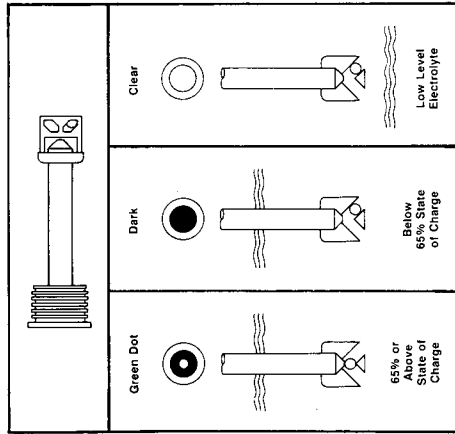
### **WARNING**

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.



## Battery

- Check Test indicator on top of battery if so equipped.
  - 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.
- FOLLOW MANUFACTURER'S INSTRUCTIONS FOR CHECKING BATTERIES AND OPERATION OF BATTERY CHARGERS.

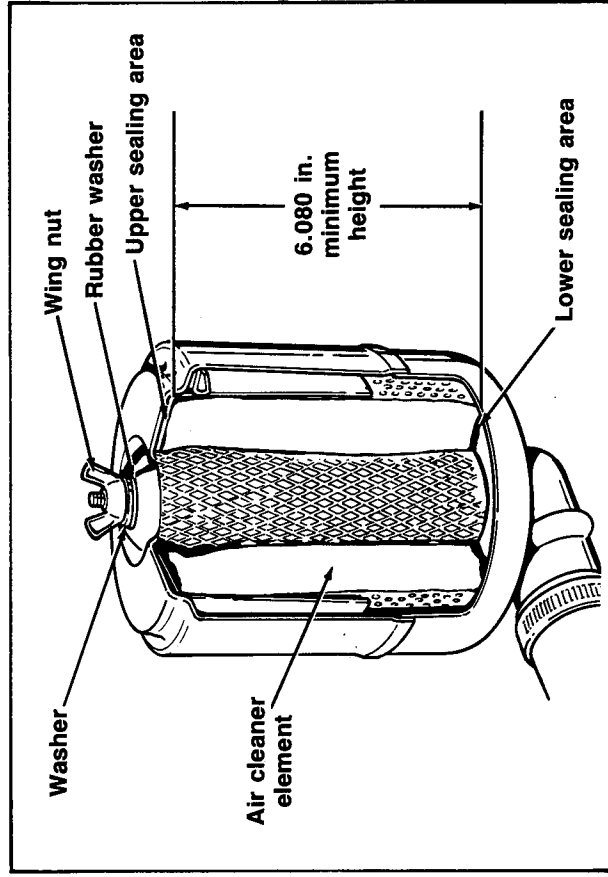


## CAUTION

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.



## 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.
- Replace air cleaner element if dirty. Install element, and position filter housing with unloader valve pointing outward. Tighten wing nut snugly by hand. To ensure proper canister seal, the air cleaner element must have a minimum height of 6.080" as shown.

## Lubrication

- Oil body hinges.
- Grease front suspension fittings (2 on 3-wheel, 7 on 4-wheel, and 4 on UTILITRUCK).
- Check differential oil level and fill with API Service GL5 Multipurpose Gear Lubricant APG 90 as required to maintain level 1/2 inch (13 mm) below filter opening.

## EACH SEASON

Perform all monthly service operations in addition to the following:

### Spark Plug

- Replace.

### Lubrication

- On steering wheel equipped 3-wheel PARCARS and UTILITRUCKS, check steering gear box lubricant level. Remove filler plug and fill with API Service GL5 Multipurpose Gear Lubricant APG 90.
- Clean, inspect and repack front wheel bearings with a water resistant Multipurpose Bearing Grease on 3-wheel PARCARS and UTILITRUCKS.

## GASOLINE PARCAR GASOLINE UTILITRUCK 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, and recharge as necessary.

## GASOLINE PARCAR 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 ..... 9'  
3-Wheel (with Directional Bar) ..... 12'  
          (with Steering Wheel) ..... 9'

**Clearance Radius** (measured from turning center to outside edge of bumper)  
4-Wheel ..... 10'  
3-Wheel (with Directional Bar) ..... 13'8"  
          (with Steering Wheel) ..... 10'8"

## DIMENSIONS

	4-Wheel	3-Wheel
Wheelbase	65 in. (165 cm)	60.5 in. (154 cm)
Ground Clearance	4 in. (10 cm)	4 in. (10 cm)
Weight	735 lbs. (334 kg)	671 lbs. (304 kg)
Max. Load Capacity	750 lbs. (340 kg)	750 lbs. (340 kg)
Overall Length	94.62 in. (240 cm)	91 in. (231 cm)
Overall Width	44.25 in. (112 cm)	45.5 in. (115 cm)
Overall Height	47.5 in. (121 cm)	46.5 in. (118 cm)

## GASOLINE UTILITRUCK 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) ..... 12'

**Clearance Radius** (measured from turning center to outside edge of bumper) ..... 13'8"

## DIMENSIONS

Wheelbase	66.5 in. (169 cm)
Ground Clearance	4 in. (10 cm)
Weight	920 lbs. (418 kg)
Maximum Load Capacity*	1000 lbs. (453 kg)
Gross Vehicle Weight (cargo area)	1720 lbs. (780 kg)
Overall Length	106.5 in. (270 cm)
Overall Width	48 in. (122 cm)
Overall Height	47 in. (119 cm)

\*including driver and passenger.

# GASOLINE PARCAR GASOLINE UTILITRUCK SPECIFICATIONS CAPACITIES

Fuel Tank . . . . . 8.5 U.S. gals. (32.2 liters) (Approx.)  
 Oil Tank (oil injection cars only) . . . . . 3.5 U.S. qts. (3.3 liters) (Approx.)  
 Differential . . . . . 24 oz. (710 cc)

## 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 . . . . . Dry-type  
 Spark Plug  
 Type . . . . . Champion® — L92YC  
 Size . . . . . 14 mm x 1/2" (12.78 mm) reach  
 Gap . . . . . .025 in. (.6 mm)  
 Torque . . . . . 15-20 ft.-lbs. (2-2.7 kg/m)  
 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

Drum brakes on rear wheels 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

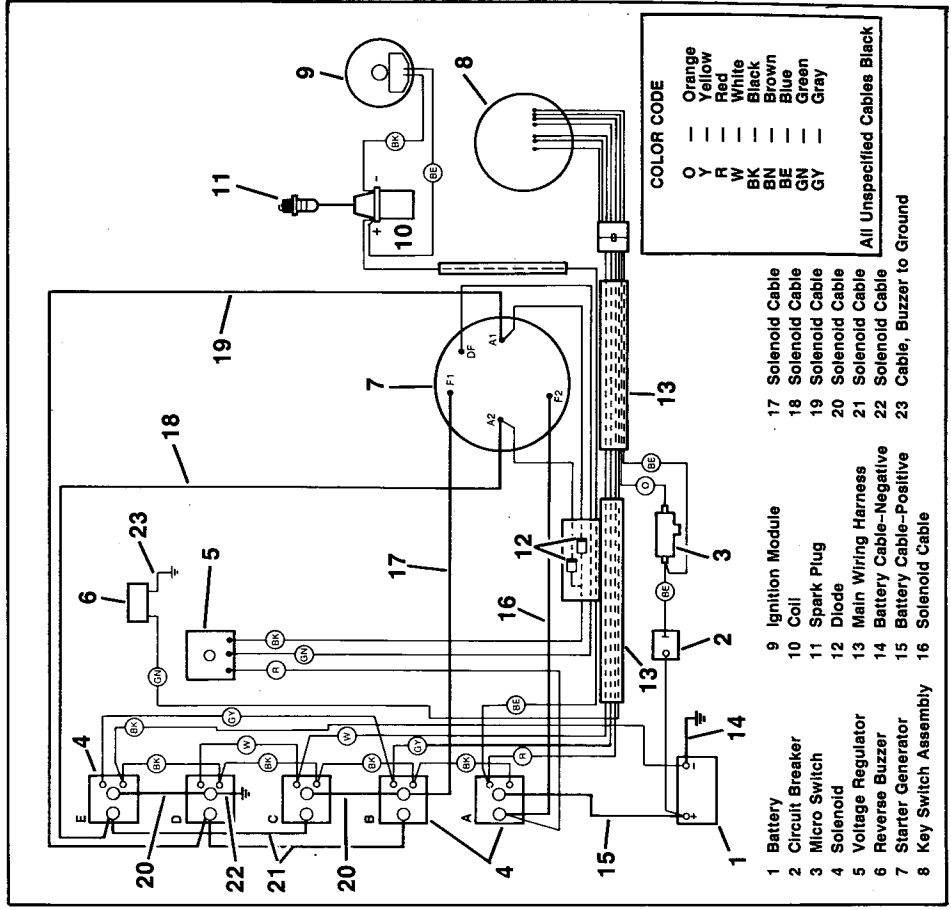
## ELECTRICAL EQUIPMENT

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

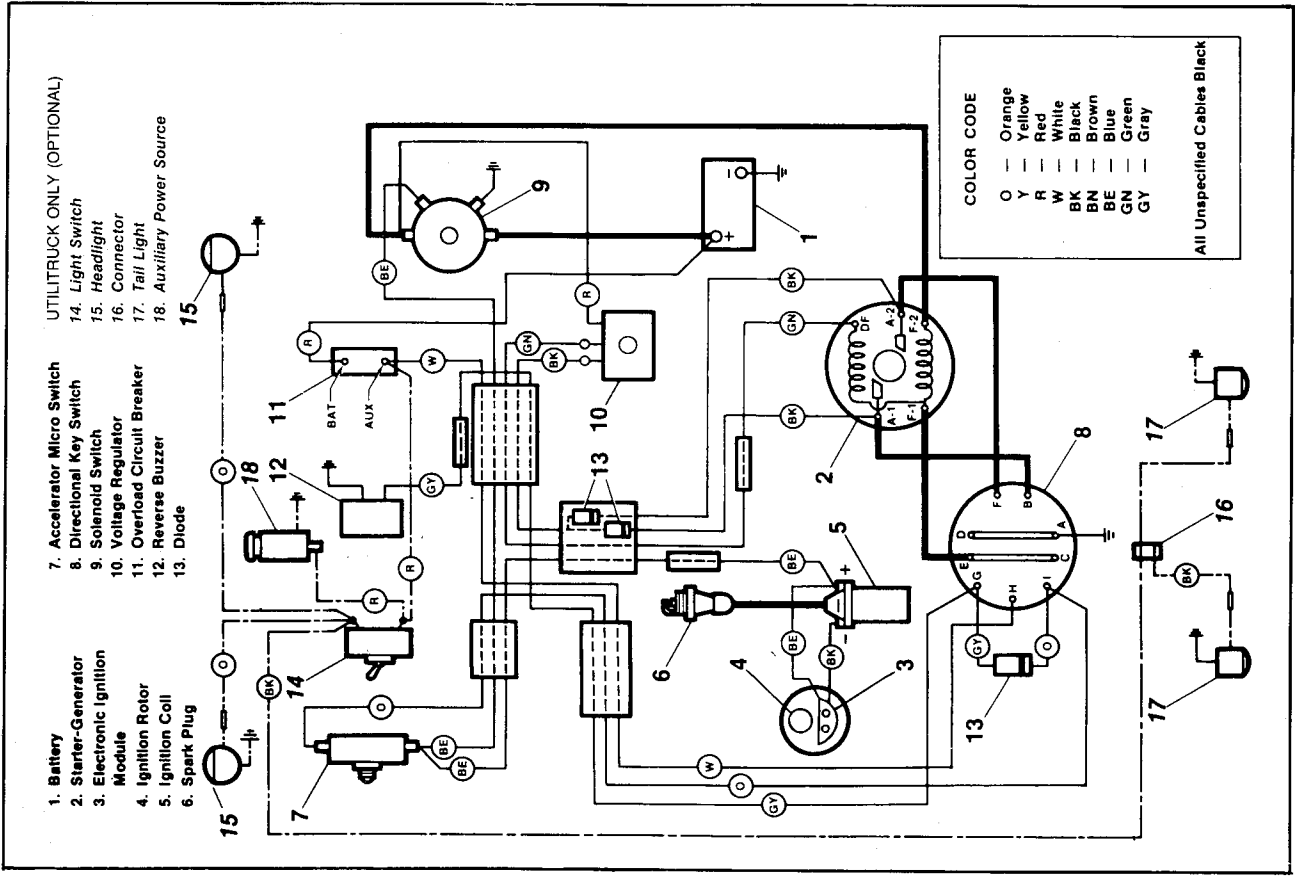
Specifications subject to change without notice.

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

# GASOLINE 4 WHEEL PARCARS AND GASOLINE UTILITRUCK WIRING DIAGRAM



# GASOLINE 3 WHEEL PARCARS AND GASOLINE UTILITRUCK WIRING DIAGRAM



# ELECTRIC PARCAR ELECTRIC UTILITRUCK SERVICING

Performance and quality have been designed into every Columbia PAR-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 PAR-CARS in fleets or rental use. Consult your Columbia PARCAR dealer for maintenance requirements of fleet operation.

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.*

## CHARGING TIME CHART

Approximate time to recharge batteries

70° F (20° C)

PARCAR USAGE

9 Holes

18 Holes or More

CHARGING TIME

7 Hours

12 Hours

## NOTE

*Charging times to fully charge batteries vary with differences in temperature. Cold temperature requires longer charge times.*

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

To service batteries, speed switch, motor or brakes, lift body up.

(continued)

### WARNING

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

## SERVICE CHART

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

### DAILY

#### Batteries

- Fully charge batteries after each useage as shown in chart. Charging receptacle is located on front side of rear body between seats. Be sure key switch is off, key removed from switch and accelerator pedal released.

### WARNING

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

### WARNING

Batteries cointain 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 car to remove all dirt and debris.
- Wash body and seats with a mild detergent only. DO NOT use abrasives (bodies are painted).

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

### Brake

#### Electric PARCAR

- To adjust brake:

1. Loosen locknuts on brake rod clevises. Loosen clevis to provide slack in linkage.
  2. Raise rear wheels of car 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.
  6. Replace clevis pin and cotter pin.
  7. Tighten locknut on brake rod.
  8. Check free travel of pedal and brake function.
- Lubricate brake cables annually in conjunction with brake adjustment.

(continued)

## Electric UTILITRUCK

- To adjust brake:
  1. Raise both rear wheels off ground and block frame.
  2. Remove both rear wheels.
  3. Replace wheel lug nuts firmly with flat side against brake drum.
  4. Rotate brake drum so oblong adjusting slot is located at about a one o'clock position.
  5. Loosen brake linkage rod located under floorboard on driver's side to provide slack in brake cables.
  6. Using a brake adjusting tool, rotate brake adjuster star wheel upward until shoes are forced firmly against drum so drum will not rotate.
  7. Back off star wheel five (5) notches to provide operating clearance.
  8. Repeat procedure to adjust opposite side brake.
  9. Readjust linkage rod to allow parking brake to lock in first ratchet tooth.
  10. Replace rear wheels and tighten lug nuts to 35 ft. lbs. torque.

## Tires

- Check pressure and inflate to 18 psi (1.2 atm) PARCAR, 50 psi (3.4 atm) UTILITRUCK.

## Electrical

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

## Lubrication

- Oil body hinges.

- Grease front suspension fittings (2 on 3-wheel, 7 on 4-wheel, and 4 on UTILITRUCK).
- Check differential oil level and fill with API Service GL5 Light Weight Gear Lubricant APG 75 as required to maintain level 1/2 inch (13 mm) below filler opening.

## EACH SEASON

Perform all monthly service operations in addition to the following:

## Lubrication

- On steering wheel equipped 3-wheel PARCARS and UTILITRUCKS, check steering gear box lubricant level. Remove filler plug and fill with API Service GL5 Multipurpose Gear Lubricant APG 90.
- Clean, inspect and repack front wheel bearings with a water resistant Multipurpose Bearing Grease on 3-wheel PARCARS and UTILITRUCKS.

## 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	
	F	C	F	C	F	C	F	C	F	C
Freezing Point of Electrolyte	-70	-57	-39	-38	-16	-26	-2	-19	+17	-8

## ELECTRIC UTILITRUCK GENERAL FEATURES

Maximum Speed on Level Ground Surface	12 MPH
Turning Radius (measured from turning center to center of outside tire tread)	
4-Wheel	9'
3-Wheel (with Steering Wheel)	9'

Clearance Radius (measured from turning center to outside edge of bumper)	
4-Wheel	10'
3-Wheel (with Steering Wheel)	10'8"

## DIMENSIONS

	3-Wheel	4-Wheel
Wheelbase	60.5 in. (154 cm)	65.0 in. (169 cm)
Overall Length	91 in. (231 cm)	94.62 in. (240 cm)
Overall Width	45 in. (115 cm)	44.25 in. (117 cm)
Overall Height	46.5 in. (118 cm)	47.5 in. (122 cm)
Ground Clearance	4 in. (10 cm)	4 in. (10 cm)
Weight		
w/o batteries	613 lbs. (278 kg)	672 lbs. (305 kg)
with batteries	961 lbs. (436 kg)	1020 lbs. (463 kg)
Maximum Load Capacity	750 lbs. (340 kg)	750 lbs. (340 kg)

## ELECTRIC UTILITRUCK GENERAL FEATURES

Maximum Speed on Level Ground Surface	11 MPH
Turning Radius (measured from turning center to center of outside tire tread)	12'
Clearance Radius (measured from turning center to outside edge of bumper)	13'8"

## DIMENSIONS

Wheelbase	66.5 in. (169 cm)
Ground Clearance	4 in. (10 cm)
Weight	1143 lbs. (520 kg)
Maximum Load Capacity*	800 lbs. (363 kg)
Gross Vehicle Weight (cargo area)	1643 lbs. (747 kg)
Overall Length	106.5 in. (270 cm)
Overall Width	48 in. (122 cm)
Overall Height	47 in. (119 cm)

\*including driver and passenger.

## ELECTRIC PARCAR ELECTRIC UTILITRUCK SPECIFICATIONS

### MOTOR

Type	Series wound, reversible
Rating	2 H.P. @ 2800 R.P.M., 36 volts

### DRIVE

Direct Drive Motor to Differential Shaft	
Drive Ratio	12.25

### BATTERIES

Type	6-volt electric vehicle (EV) lead storage battery
Quantity	6 per car
Rating	106 minutes (75 amp discharge at 80° F to 5.25 volts)
Charge Rate	Maximum; 25 amperes with automatic charger reduction to low rate

# TIRES

## PARCAR

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

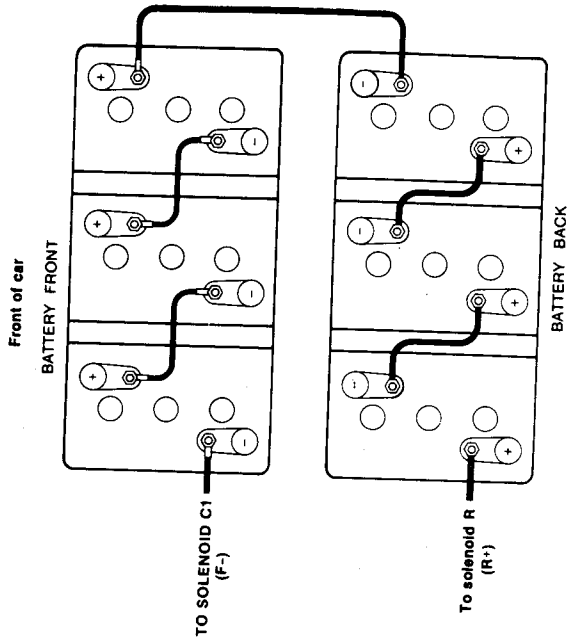
## UTILITRUCK

Type ..... High Speed  
 Size ..... 5.70 x 8  
 Pressure ..... 50 psi (3.4 atm)

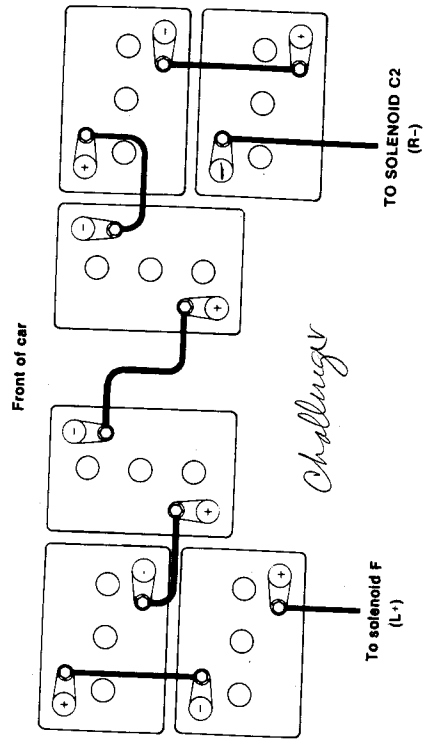
## BRAKES

Drum brakes on rear wheels mechanically operated. Brake pedal incorporates ratchet lock for parking, with automatic release controlled by accelerator pedal.

# 3-WHEEL PARCAR BATTERY INSTALLATION DIAGRAM



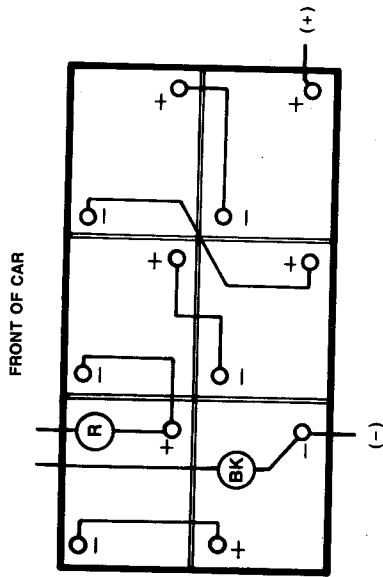
# 4-WHEEL PARCAR BATTERY INSTALLATION



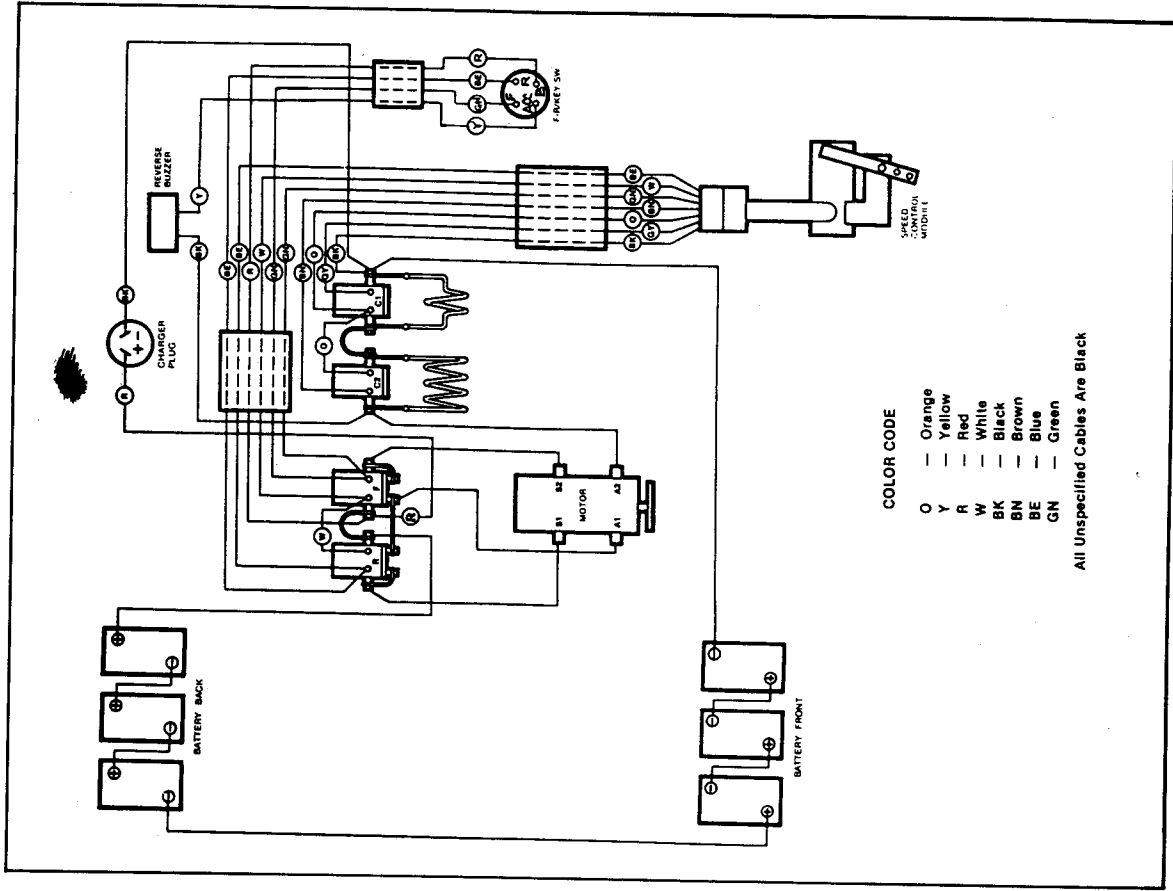
*Challenger*  
*R classic c1*



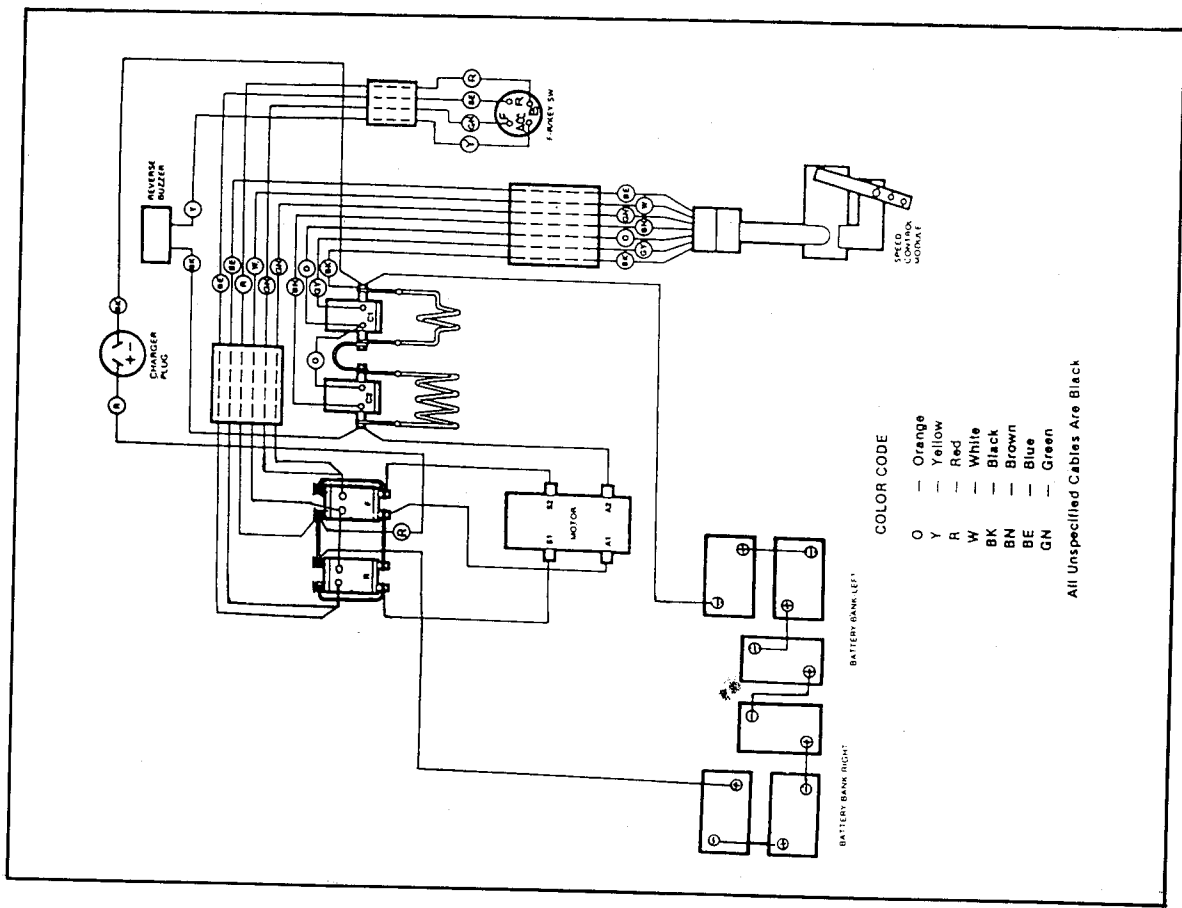
# ELECTRIC UTILITRUCK BATTERY INSTALLATION



# 3-WHEEL PARCAR WIRING DIAGRAM



# 4-WHEEL PARCAR WIRING DIAGRAM



# ELECTRIC UTILITRUCK WIRING DIAGRAM

