Cortez Division
Operators Manual

No. CC-112

Clark Equipment Company

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CORTEZ DIVISION

CCM–294

The Owner's Manual contains important information regarding the operation and maintenance of your Cortez.

In order to obtain maximum enjoyment and usage from your Cortez, we suggest that you familiarize yourself with the contents of this manual and follow the recommendations as outlined in the Vehicle Maintenance.

Your Cortez dealer has the trained personnel and specialized equipment to properly service your Cortez. Have him inspect your unit and perform any maintenance or adjustment required.

We would like to take this opportunity to thank you for choosing a Cortez product, and assure you of our continuing interest in your motoring pleasure and satisfaction.

CORTEZ DIVISION

CERTIFICATION

OF

OWNERSHIP

_____
(Serial Number)

_____
(Delivery Date)

_____
(Owner's Name)

_____
(Address)

_____
(City and State)

_____
(Dealer's Name)

_____
(Address)

_____
(City and State)

_____
(Owner's Signature)

_____
(Dealer's Signature)

CORTEZ DIVISION

CORTEZ

WARRANTY

"Clark Equipment Company (CLARK CORTEZ)" warrants to DEALER each new CLARK CORTEZ vehicle to be free from defects in material and workmanship under normal use and maintenance as herein provided. CLARK CORTEZ' sole obligation under this warranty shall be limited to repairing, replacing, or allowing credit for, at CLARK CORTEZ' option, any part of the product which, under normal and proper use and maintenance, proves defective in material or workmanship within ninety (90) days after delivery to, or four thousand (4,000) miles of use by, the first ultimate user, whichever shall first occur; provided that notice of any such defect and satisfactory proof thereof is promptly given by DEALER to CLARK CORTEZ, and thereafter such part is returned to CLARK CORTEZ, with transportation charges prepaid and CLARK CORTEZ' examination proves such part to have been defective.

In addition, CLARK CORTEZ warrants to DEALER, the engine block, head and all internal engine parts, water pump, intake manifold, transmission case and all internal transmission parts, front drive axle, and all components of said axle, to be free from defects in workmanship and material for a period of twenty-four (24) months after delivery to, or twenty-four thousand (24,000) miles of use by, the first ultimate user, whichever shall first occur, provided, that the vehicle is maintained as prescribed in the Operator's Manual and certification that this maintenance has been performed is presented to CLARK CORTEZ, and provided further that notice of any such defect and satisfactory proof thereof is promptly given by DEALER to CLARK CORTEZ, and thereafter such part is returned to CLARK CORTEZ, with transportation charges prepaid and CLARK CORTEZ' examination proves such part to have been defective.

This warranty does not apply in respect of damage to any product or accessory or attachment thereof caused by overloading or other misuse, neglect, or accident, nor does this warranty apply to any product or accessory or attachment thereof which shall have been repaired or altered in any way which, in the sole judgment of CLARK CORTEZ affects the performance, stability, or general purpose for which it was manufactured.

This warranty is in lieu of all other warranties (except title) express or implied, and THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, -- and in no event shall CLARK CORTEZ be liable for consequential or special damages.

This warranty does not apply to batteries (other than CLARK CORTEZ brand), tires, or other trade accessories which are covered by the existing warranties, if any, of the respective manufacturers thereof.

CLARK CORTEZ reserves the right to make changes from time to time in the design or specification of any of our products, or any part thereof, without notice to dealers, and without obligation to make such changes or any other similar changes or substitutions or additions with respect to any of our products previously delivered to dealers or being manufactured or sold in accordance with dealer's orders.

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CORTEZ DIVISION

INTRODUCTION

OWNER'S RESPONSIBILITY UNDER THE CORTEZ NEW VEHICLE WARRANTY

Owner's Responsibility:

Proper maintenance and care of the Cortez will help you achieve lower over-all operating costs. Also, regular and proper maintenance of the Cortez by competent technicians will help you avoid conditions arising from neglect which are not covered by the Cortez New Vehicle Warranty. In this connection, maintenance services, as outlined in this manual, should be performed at the time and/or mileage intervals stated by an authorized Cortez Dealer or any qualified service station or garage regularly providing such services.

Normal maintenance services and replacement of service items, such as those outlined in vehicle maintenance sections, are the responsibility of the owner and as such are not considered defects in material and workmanship under the provisions of the Cortez New Vehicle Warranty. Weather and atmospheric conditions, varying road surfaces, individual driving habits, and vehicle usage greatly contribute to the need for maintenance services. To help owners get the utmost in satisfaction and extended service from the Cortez, the principal services and replacement items are herein described.

Maintenance Services:

Lubrication: Hot, cold, dusty conditions or unusually wet weather all contribute to the need for lubrication at regular intervals. In addition to the regular chassis lubrication at recommended intervals, throttle linkage, parking brake linkage, and body parts such as door latches, hinges, etc., should receive attention at every oil change. As part of the periodic lubrication service, all lubricant and fluid levels should be checked and replenished.

Wheel Alignment and Wheel Balance: Are affected by operating conditions such as hitting chuck holes and curbs, rapid starts and stops, tire skidding, etc. Wheel alignment and balancing service contributes to longer tire life and better vehicle handling.

Tire Rotation: Rapid acceleration, quick stops, vehicle speed, and loading affect tire life and can cause uneven wear. Tires should be rotated regularly for uniform wear and maximum life.

Brake and Clutch Adjustment: Brake and clutch linings are subject to wear from usage depending upon driving conditions and driving habits of each individual driver. Periodic check of brake linings, brake adjustment, and clutch adjustment at specified intervals is recommended for safe operation.

Engine Oil Change and Filters: Changing engine oil, fuel, and air filters at recommended intervals is the owner's best investment in prolonged engine life, efficiency, and performance.

Transmissions Oil Change: Extended use and contamination affect transmission oil. To assure efficient operation, transmission oil should be changed at recommended intervals.

Engine Tune-Up and Electrical System Checks: Fuel and electrical systems are subject to wear and contamination and require periodic cleaning and adjustments to maintain maximum economy and performance.

Crankcase Ventilation Valve: Crankcase vapors and other impurities can cause malfunctions of the crankcase ventilation valve. Periodic checks or replacement is necessary for proper engine operation.

Belt Adjustment: To assure proper performance of belt-driven engine components, all belts should be checked and adjusted at recommended intervals.

Spark Plugs and Ignition Points: Are subject to wear and/or contamination. They should be inspected at recommended intervals and replaced if necessary for maximum engine performance and economy.

Chrome and Exterior Paint Maintenance: Are affected by normal wear and exposure. Proper maintenance and care of these items can add to their appearance and durability.

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DEALER RESPONSIBILITY UNDER THE CORTEZ NEW VEHICLE WARRANTY

The Dealer is responsible to extend to its customers the warranty on products and parts at least as extensive as the warranty given to dealers by Clark Cortez, and to perform warranty service thereunder.

The Dealer shall warrant each new Cortez vehicle sold by that dealer (including each part of any accessory or equipment manufactured or sold by CLARK CORTEZ) to be free from defects in material and workmanship under normal use and service until such motor vehicle has been operated for a period of 90 days after delivery to, or 4,000 miles of use which ever event shall first occur. This warranty is extended to 24 months or 24,000 miles whichever event shall first occur on certain engine and transmission components, from the date of delivery to the original purchaser.

Dealer's obligation under this warranty is limited to the replacement or repair at dealer's option without charge for installation at the dealer's place of business.

The following is a sample list of items not covered by this warranty:

1. Tires, tubes, or batteries (manufacturer's warranty).
2. Vehicles subjected to misuse, negligence, or accident.
3. Vehicle repairs which are caused (in the judgment of Clark Cortez) by parts not made or supplied by Clark Cortez.
4. Any vehicle altered or repaired in such a way that it adversely affects its performance or reliability.
5. Normal maintenance services including, but not limited to, engine tune-up, wheel balancing and alignment, carburetor, brakes, and linkage adjustments.
6. Parts replaced as part of a normal maintenance service, including, but not limited to, air, oil and fuel filters, spark plugs, distributor points, condensers, wiper blades, brakes, or clutch parts.
7. Normal deterioration of soft trim or apperance.

Operating Characteristics:

The Clark Cortez driving compartment is ahead of the front wheels to afford better visibility and allows for exceptional ease of handling. So much so, in fact, that you may have a tendency to forget you are operating a vehicle quite a bit wider (and higher) than a conventional automobile. In the Clark Cortez, as in all motor homes, the ratio of power-to-weight is lower than that of the conventional automobile. Consequently, its ability to accelerate is somewhat reduced. Be sure to allow for these characteristics while driving, turning corners, and passing other vehicles.

Break-in Period:

Drive moderately during the first 500 miles and do not exceed 45 miles per hour. Any steady, unchanging speed during this period tends to cause uneven wear of precision parts. Therefore, deliberately vary the speed if traffic conditions do not do it for you automatically.

Fuel Recommendations:

The Clark Cortez engine will operate efficiently under most driving conditions on regular grades of gasoline. However, if "pinging" or "knocking" occurs and cannot be cured by minor engine adjustment, switch to the next higher grade of fuel.

Engine Oil Recommendations:

The engine oil and oil filter should be changed after the first 1,000 miles of operation and thereafter at 3,000 mile intervals. It is important that the engine oil be checked regularly, for if it drops below the safe operating level, severe and costly damage may result. Use only engine oil marketed by reputable refineries and identified as "For Service MS."

Batteries:

Since most of the appliances are operated electrically, it is very important to maintain proper fluid level in the batteries. The fluid level should be checked and refilled with distilled water as often as required.

DRIVING AND OPERATING INSTRUCTIONS

Driving:

The shift pattern for the transmission is shown on the gear shift lever knob and on the shift pattern plate. When changing gears, be sure the clutch pedal is fully depressed. (Fig. 10)

Do not exceed the maximum speed in the following ranges:

First Gear	0--13 M.P.H.
Second Gear	10–24 M.P.H.
Third Gear	20–42 M.P.H.
Fourth Gear	30–71 M.P.H.

Avoid resting foot on the clutch pedal when not shifting gears. This is called "riding the clutch" and can result in clutch failure.

Never use the clutch to "hold" the vehicle when at a standstill or when on a grade.

When it is necessary to reduce speed, shift to a lower gear before engine starts to labor.

The best ranges for down-shifting are:

Fourth to Third	30–40 M.P.H.
Third to Second	15–20 M.P.H.
Second to First	–0– M.P.H.

When down-shifting, Always go to the next lower gear.

Never shift to reverse gear when vehicle is in motion.

Day-To-Day Care:

Tires:

Tires should be inspected daily. As near as possible, specified tire pressure should be maintained. (Page 38)

When You Stop For Gasoline:

The radiator coolant level should be checked with every fuel service stop.

Have fluid level of the batteries in the rear compartment checked daily, until owner is aware of their requirements.

Check the engine battery and one (1) interior battery (if so equipped), located under the right front floor board. It should require checking only about once a month.

The engine oil level should be the last item checked so that the oil circulating in the engine will have time to drain down into the crankcase. Oil needs to be added only if the oil level is at or below the "add" mark on the dipstick. Be careful not to fill above the full mark. (Fig. 59)

NOTE: USE YOUR SEAT BELTS

It is recommended that all passengers use seat belts when the vehicle is in motion.

Starting the Engine:

Do not start or run the engine in a closed or poorly ventilated building, as exhaust gases contain poisonous carbon monoxide endangering health or life if breathed steadily for even a few minutes.

Set the parking brake, place the transmission shift lever in neutral position, and depress the clutch pedal to eliminate drag of gears, especially in cold weather.

If the engine is cold, press the accelerator pedal once all the way to the floor for a moment, and then release it. This sets the automatic choke to give the engine a "rich" fuel mixture for cold starting.

If the engine is still relatively warm, depress the accelerator pedal about one-third of its downward travel and keep it there while starting the engine. Do not pump the accelerator pedal, you will only flood the engine.

Next, turn the key in the ignition switch to the **START** position. After engine is running, release the key and it will spring back to **IGN** position. After a cold engine operates for a few seconds, tap the accelerator pedal sharply with your foot and release it to reduce engine idle speed.

Always let the engine idle for a moment after starting and drive at moderate speeds for several miles, especially during cold weather. This

prevents unnecessary wear on the moving parts of the engine.

Starting a Flooded Engine:

Never pump the accelerator pedal to start a flooded engine. Just push the accelerator pedal to the floor and hold it there. Then turn the ignition key to the START position. Release both the ignition key and the accelerator pedal when the engine starts.

CHECK BEFORE DRIVING

The Clark Cortez contains most of the convenience items of your home, some of which could be needlessly damaged if not properly closed, locked, or stored while in transit. It is suggested you adopt a standard checkout routine to be followed before taking the vehicle out on the road.

Suggested is a partial list of items that might be checked. Each owner will naturally have items to be added to this list.

1. Close valve on L. P. Gas container.
2. Be sure stove burners are shut "off".
3. Close all ceiling vents.
4. Be sure weight is properly distributed and that vehicle is not overloaded.
5. Check to see that loose items are properly stored.
6. Latch cupboard doors and drawers.
7. Latch closet and bathroom doors.
8. Be sure refrigerator door is secured.
9. Fasten rear door latch.

NOTES

Keys:

Each Cortez is equipped with two (2) sets of keys. You will find a metal tag attached to each set. Stamped on this tag is a number which should be used to identify keys and locks in the event replacement is required from a dealer.

Ignition Switch:

The four position switch is located at the extreme left of the instrument panel. The Acc. (Accessory) position may be used to operate accessories when engine is not running. (Fig. 1)

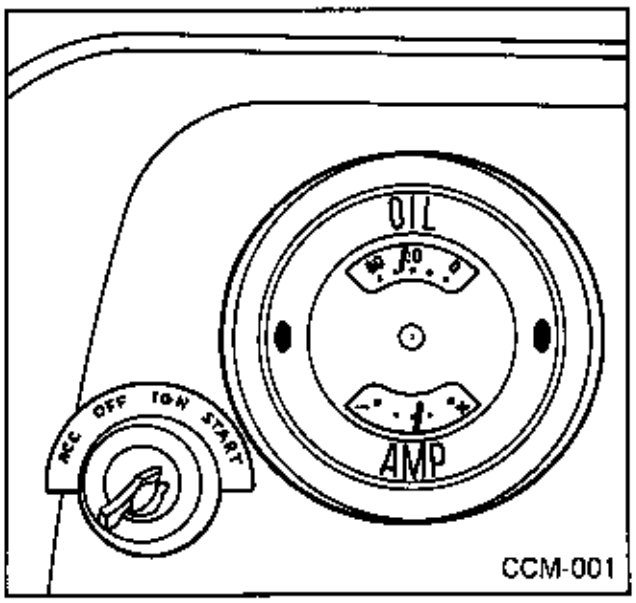

Fig. 1 Ignition Switch, Oil Pressure, and Ammeter

Engine should be operated with the ignition switch in the IGN position.

Use the START position as described on Page 3.

Oil Pressure Gauge:

The oil gauge is located in the top of the left instrument group. This gauge indicates the pressure at which oil is being delivered to the various parts of the engine. In the event of complete loss of oil pressure, the engine should be shut off until the cause is determined. (Fig. 1)

Ammeter:

The ammeter is located in the bottom of the left instrument group. When the alternator is supplying more current than required, the Ammeter will indicate a charge. If the current demand is more than the alternator output, a discharge will be indicated. (Fig. 1)

Speedometer and Odometer:

The speedometer is located in the center of the instrument group. The speedometer indicates vehicles forward speed in miles per hour. (M.P.H.) The odometer (mileage gauge) (Fig. 2) records total mileage.

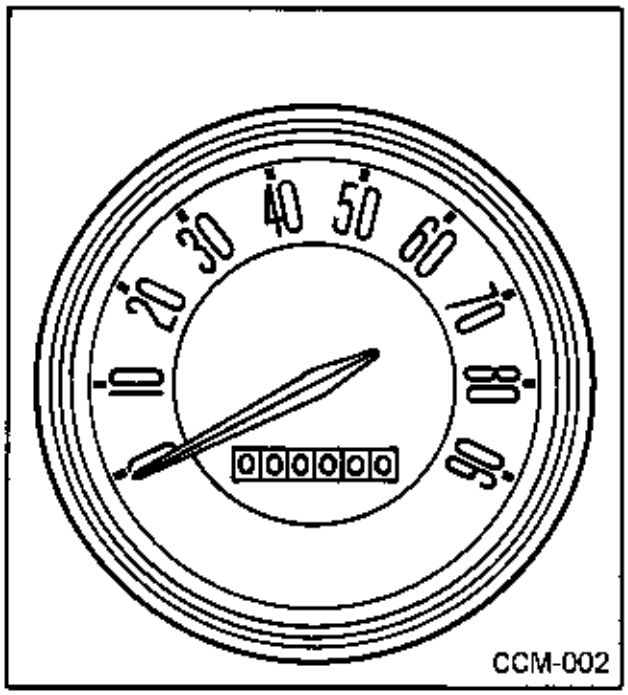

Fig. 2 Speedometer and Odometer

Temperature Gauge:

The temperature gauge is located in the top of the right instrument group. The temperature gauge (Temp) (Fig. 3) indicates coolant temperature. In the event the engine temperature rises to hot, the engine should be shut off until cause is determined.

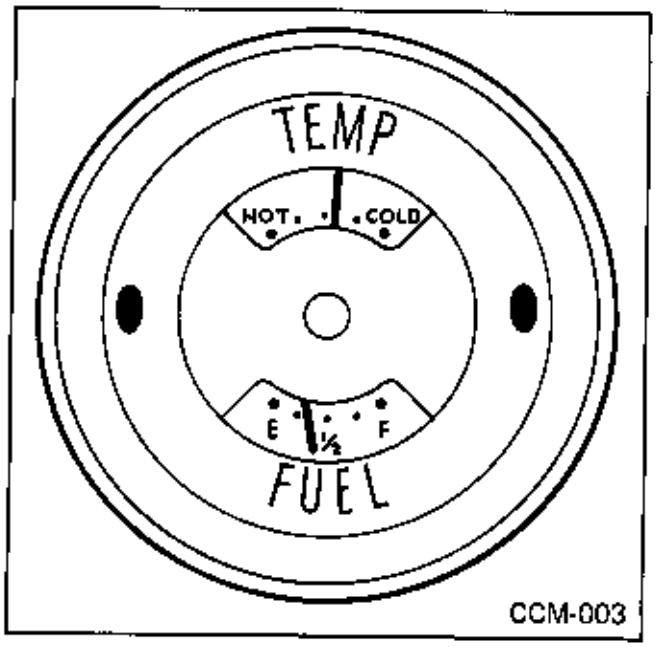

Fig. 3 Temperature and Fuel Gauges

Fuel Gauge:

The fuel gauge is located in the bottom of the right instrument group. The fuel gauge will indicate the approximate amount of gasoline in the fuel tank. (Fig. 3)

Rear View Mirror:

The rear view mirror is centrally located above the windshield inside the vehicle giving a panoramic view of the interior and an outside view through the rear door window. In addition, a mirror is located outside the vehicle at each front door.

Sun Visors:

Sun glare through the windshield can be controlled by tilting visors downward.

Windshield Wiper and Washer Control:

The chrome knob to the left of the radio controls the two-speed electric windshield wipers.

Turn the wiper knob clockwise to start the electric wipers. The two-speed electric wipers have both a high and a low speed.

Pressing the button in the center of the wiper knob will send water onto the windshield and will start the wiper motor. The wipers will then continue to operate until manually turned off. (Fig. 4)

Throttle Control:

The throttle control is located above the windshield wiper control. Depress accelerator pedal and pull throttle control out until engine operates at the desired speed. To lock throttle control, turn knob clockwise. To release throttle control, turn knob counter clockwise.**CAUTION: Do Not use throttle to control speed on the highway. (Fig. 4)**

Light Switch:

The headlight switch is located directly to the left of the wiper switch. The first position controls all running lights, except the headlights. The second position controls all lights except the parking lights. The brightness of the dash panel lights can be controlled by rotating the knob. (Fig. 4)

Flasher:

The flasher control switch is located directly in front of the steering column. To operate, pull knob outward. This will allow parking lights and tail lights to flash automatically. (Fig. 4)

Heater and Defroster:

The heater controls are located at the right of the instrument panel directly above the radio. Pull the heater vent knob outward. This controls the desired flow of outside air through the heater.

Pull the temperature knob outward. This controls the desired temperature flow through the heater core. The heater blower operation is controlled by a two position switch, low and high.

Doors on heater front panel must be open.

The defroster blower operation is controlled by a two position switch, low and high. (Fig. 4)

Companion Seat Heat Control:

Heated air may be directed to the lower level of the companion seat compartment by moving a lever on the side of the heater to the front notch and pulling out the defroster blower (DEF) knob. (Fig. 5)

Turn Indicator Lever:

Push lever upward to signal a right turn. Pull lever down to signal a left turn. (Fig. 6)

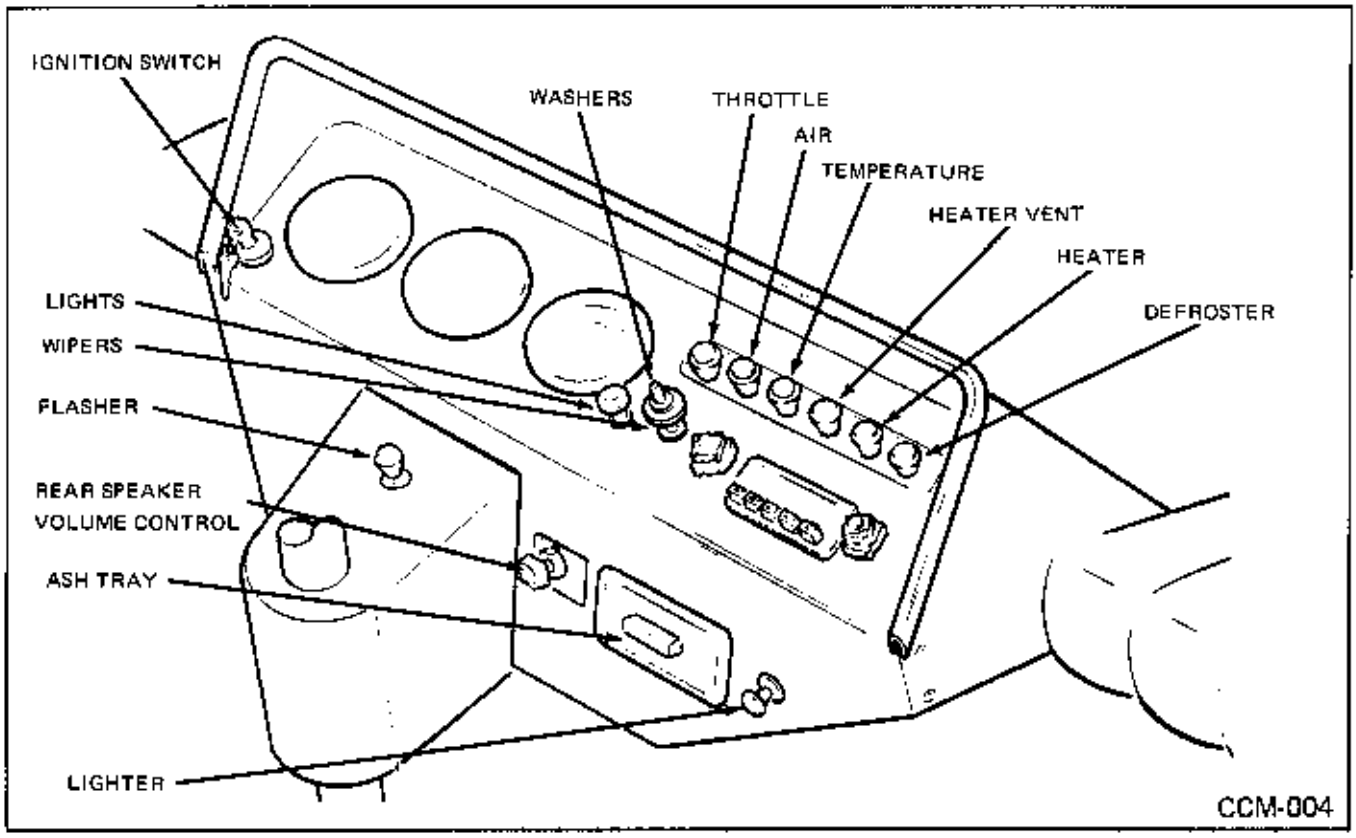

Fig. 4 Instrument Panel

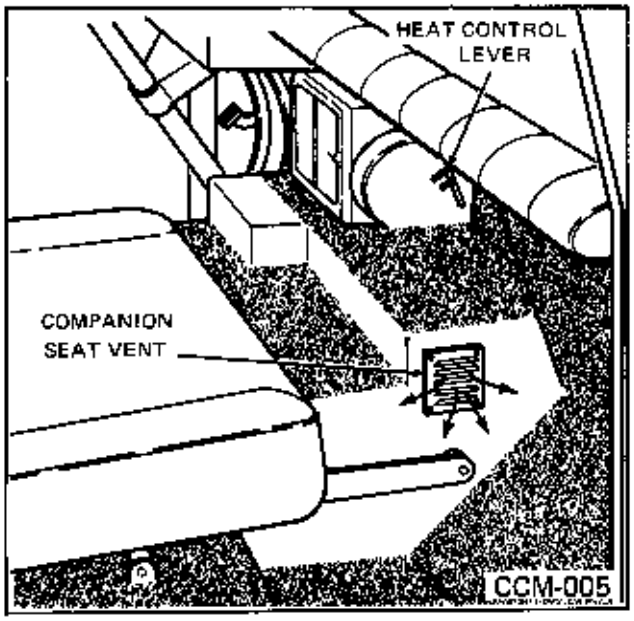

Fig. 5 Companion Seat Heat Control

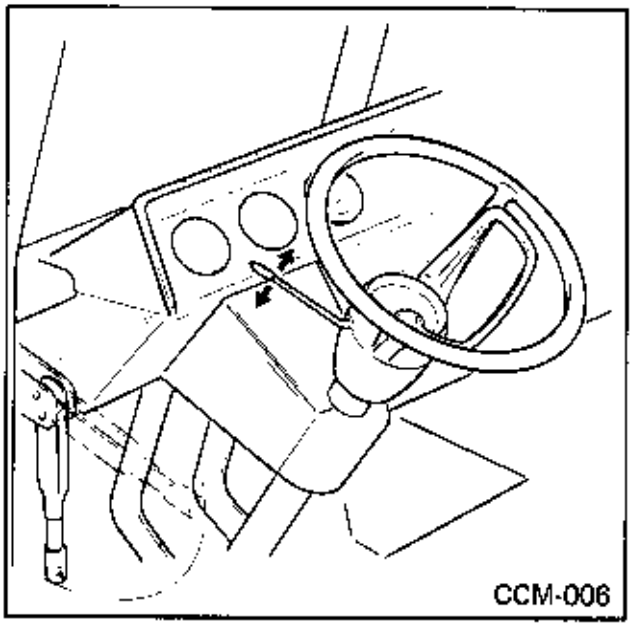

Fig. 6 Parking Brake Control and Turn Indicator Lever

Parking Brake Control:

To set parking brake, pull the lever to a horizontal position. Parking brake can be adjusted from driver's seat by rotating knob on the end of the lever. (Fig. 6)

Push Button Radio:

In addition to the manual controls, the push button radio provides five push buttons with which to automatically select pre-set stations. To pre-set, pull one push button out as far as it will go, tune in the desired station manually and then push button in. Repeat this operation for each button. (Fig. 7)

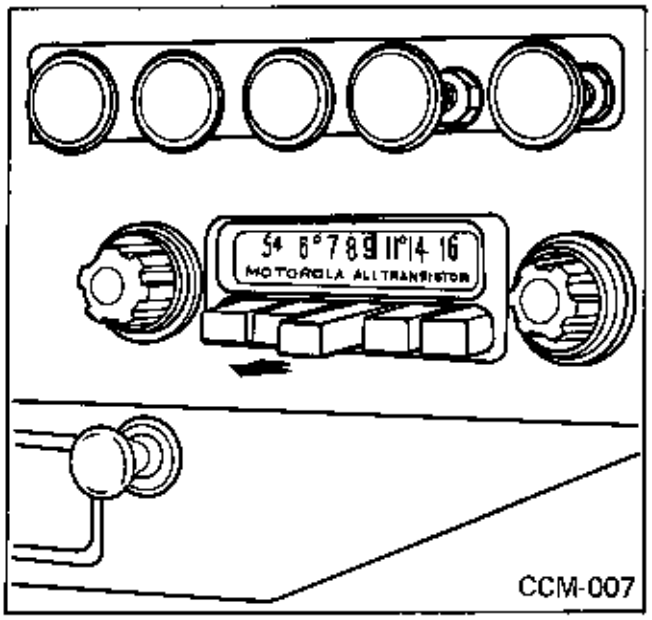

Fig. 7 Radio

Front and Rear Speaker Volume Control:

The Front/Rear Speaker Control Knob, if so equipped, is located to the left of the ash tray. To control the volume between front and rear speakers, manually turn the knob to the desired position. (Fig. 8)

Headlight Beam Selector:

High and low headlight beams are controlled by the floor button at your left foot. The high beam indicator, located in the speedometer dial, will light when high beams are in use. (Fig. 8)

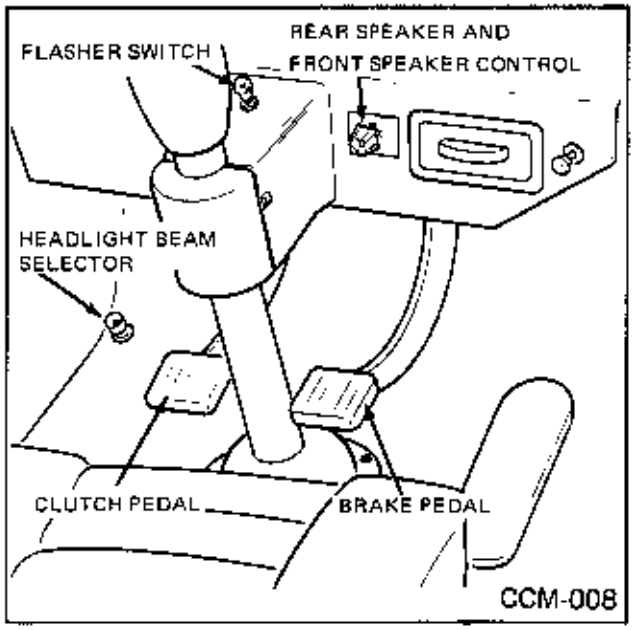

Fig. 8 Foot Controls, Speaker Control, and Flasher Control

Driver's Seat Adjustment:

The driver's seat position can be adjusted manually by pushing the release lever to the rear. The swivel control allows the seat to be rotated toward the rear of the vehicle. To swivel the seat, pull swivel control lever and rotate seat to desired position. (Fig. 9)

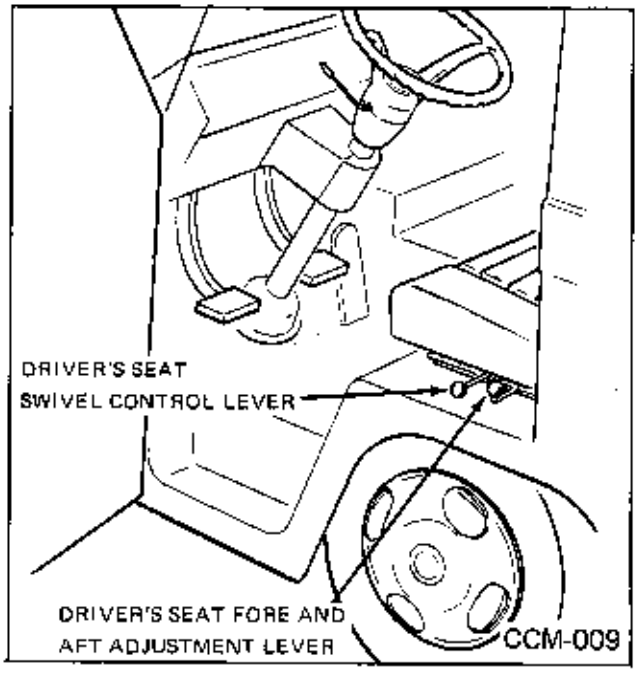

Fig. 9 Driver's Seat Control Levers

Gear Shift Lever:

The shift lever is located on the floor between the front seats. The shift pattern for the four speed transmission is shown on both the lever knob and lever plate. (Fig. 10)

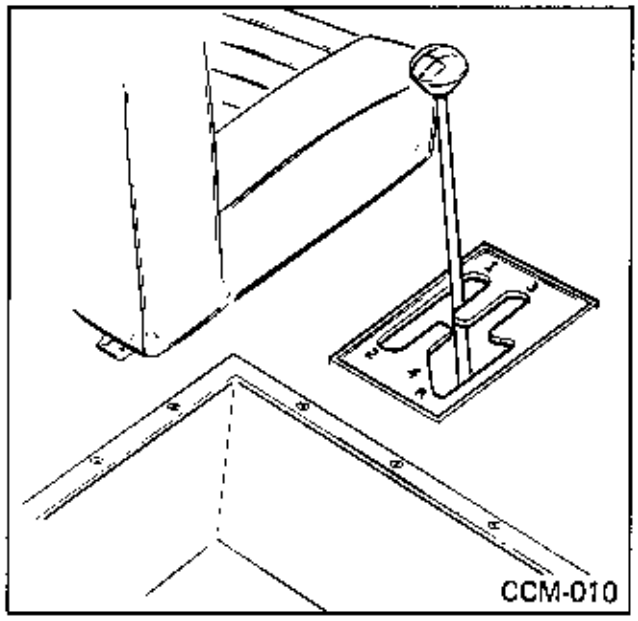

Fig. 10 Gear Shift Lever

Door Locks:

All outside door locks are key operated. All doors can be locked from the inside by pushing down on the handle. (Fig. 11)

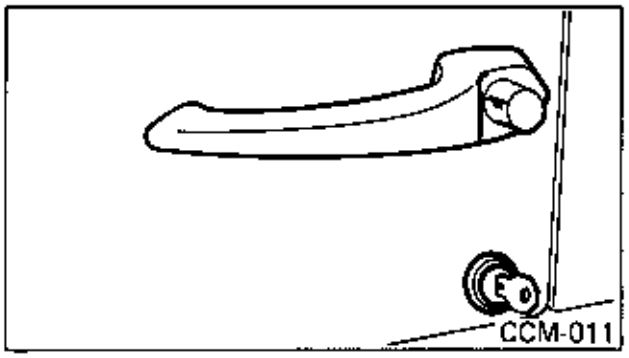

Fig. 11 Door Handle and Lock

Fire Extinguisher:

The fire extinguisher should be mounted in a visible location. The fire extinguisher can be removed from its mounting bracket (Fig. 12) by releasing the latch. The extinguisher should be inspected periodically. To operate extinguisher, see instructions on extinguisher body.

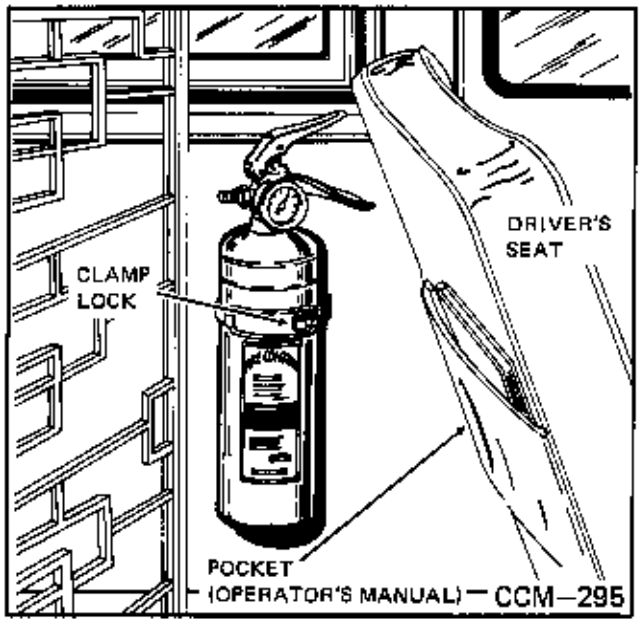

Fig. 12 Fire Extinguisher

To Connect To An Outside Electrical Source:

The Clark Cortez is wired for 110 – 125 volt alternating current. DO NOT connect to higher voltage. Be sure the electrical source is properly grounded.

Insert plug into outside receptacle of unit (Fig. 13). Connect other end of cable to service outlet.

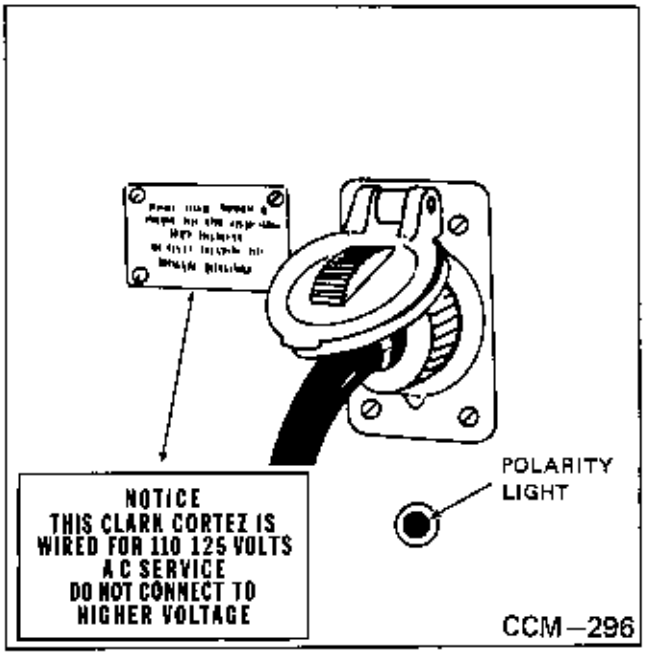

Fig. 13

Charging The Batteries:

Running the engine at fast idle for about an hour in the morning and an hour again in the evening will keep the batteries sufficiently charged for normal use. Have the fluid level of the batteries in the front and rear compartment checked daily until the owner is aware of their requirements. When unit is connected to shore power, the interior batteries are being charged automatically.

Battery Charger:(Fig. 14)

The Cortez battery charger incorporates the latest advances in solid state circuitry. The combination automatic cut-on–cut-off and polarity protector has no moving parts to arc or break down (Fig. 14).

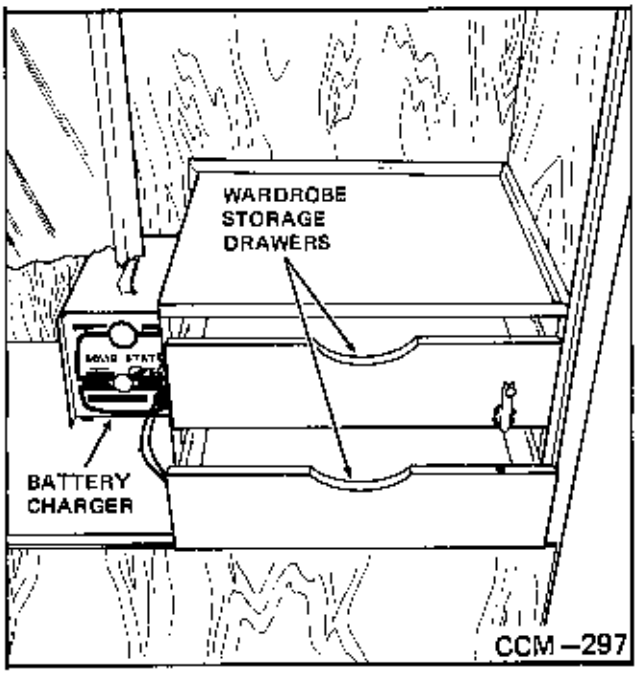

Fig. 14

Operation:

1. When the Cortez is connected to shore power, the charger automatically brings the interior battery bank to a fully charged state and cuts off. When interior components are turned on, the charger cuts on and replaces power being used from the battery bank.

2. The automatic control is pre-set at factory to terminate charge at 95 to 100% of full charge into an average battery. Should it become necessary to change this setting because of variations in batteries:

   (a) Bring batteries to a fully charged state.
   (b) Remove chrome plug button located at bottom of front panel on charger.
   (c) Insert screw driver and adjust control until charger just stops out-put.
   (d) Replace chrome plug button.

To Fill Water Tank with a Hose:

Item 1:

1. Remove cap from inlet. (Item 1, Fig. 15)
2. Place end of a water hose into the cap opening. Turn on the outside water supply and fill tank.
3. Replace the water tank filler cap.

To Connect Water Hose for Continuous Use, if Accomodations Are Available:

Item 2:

1. Remove cap from connector. (Item 2, Fig. 16)
2. Attach water hose to connector and turn on outside water supply.

NOTE: The water tank cannot be filled by connecting hose to connector, (Item 2). This connector is for the purpose of supplying continuous water service when accomodations are available. The water tank will have to be filled at the water tank inlet, (Item 1, Fig. 15)

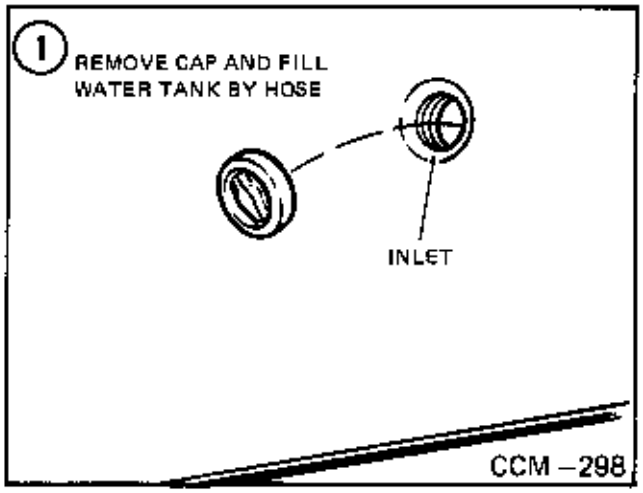

Fig. 15

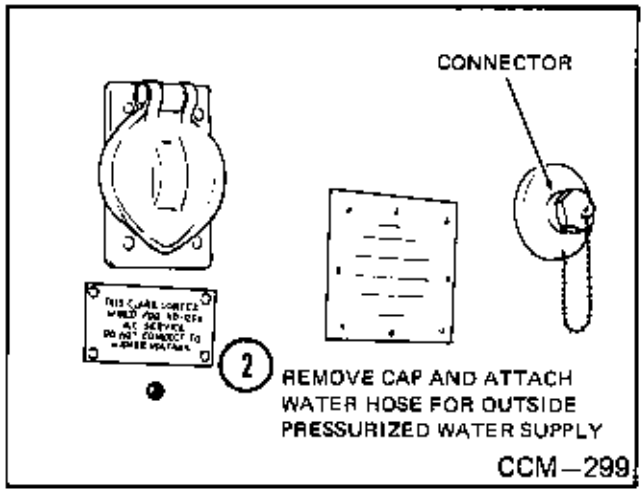

Fig. 16

Water Pump: (Fig. 17)

Instructions for initial starting or if pump has not operated for some time:

Turn on switch (Fig. 27) and open a sink faucet. Keep faucet open until air is cleared from the lines and water comes from spigot. Then turn off faucet and pump is ready for operation.

NOTES

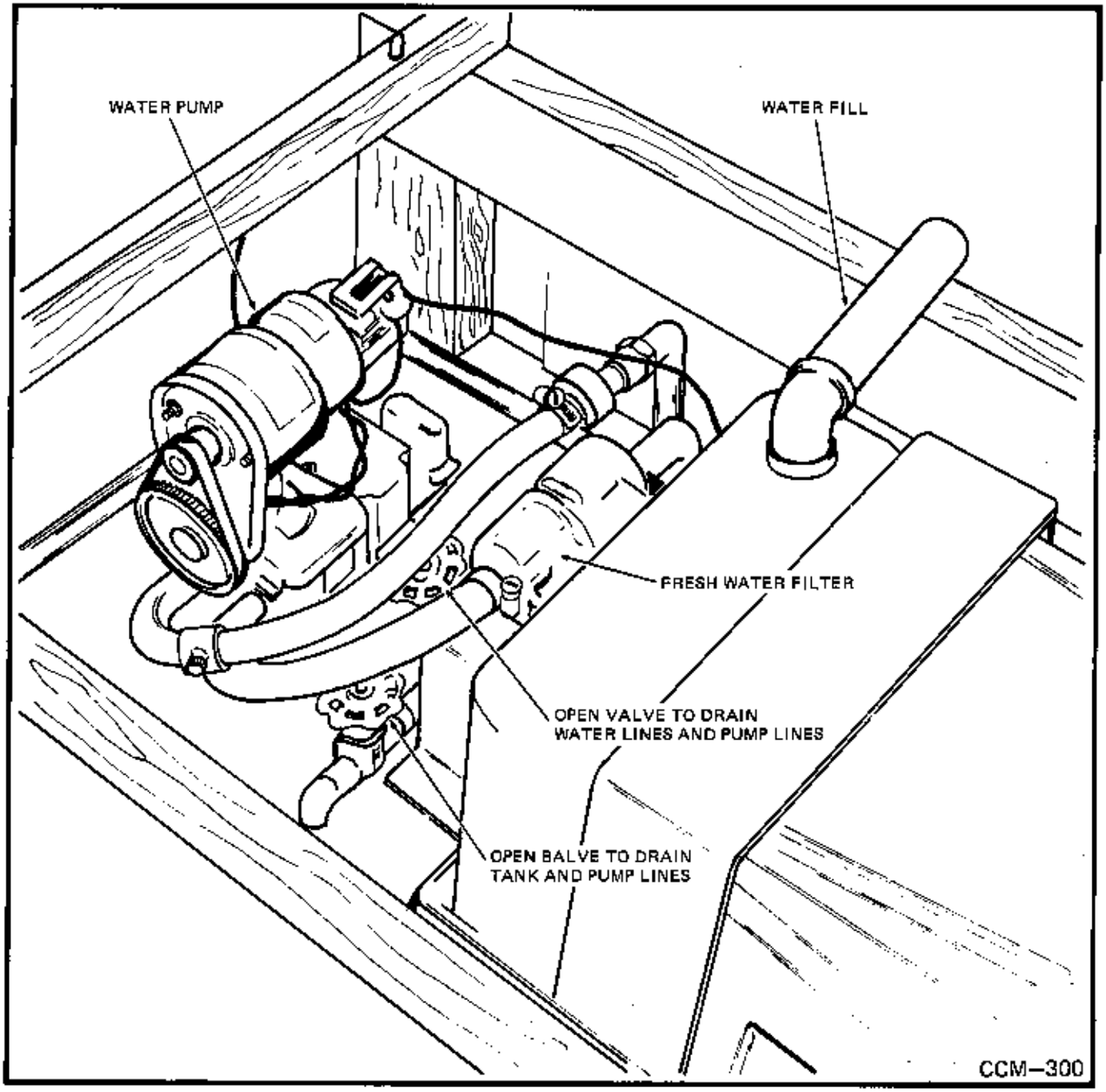
WATER PUMP
WATER FILL
FRESH WATER FILTER
OPEN VALVE TO DRAIN
WATER LINES AND PUMP LINES
OPEN BALVE TO DRAIN
TANK AND PUMP LINES
CCM—300

Fig. 17

NOTES

Hot Water Heater:

Capacity of the water heater tank is approximately six (6) gallons and, if not used, water will remain hot for about eight hours. There are two methods of heating water, which are:

1. Connect power cable to 110 volt outlet. When vehicle is connected to 110 volt service (Page 19) operation of water heater is automatic.

   NOTE: For initial starting or any time the heater has been drained of water, heater automatically shuts off and it is necessary to depress the Reset Button to start heater operation. (Fig. 18)

2. Start and run the engine. Water in the heater tank will be heated to approximately the same temperature as indicated by the engine temperature gauge on the instrument panel.

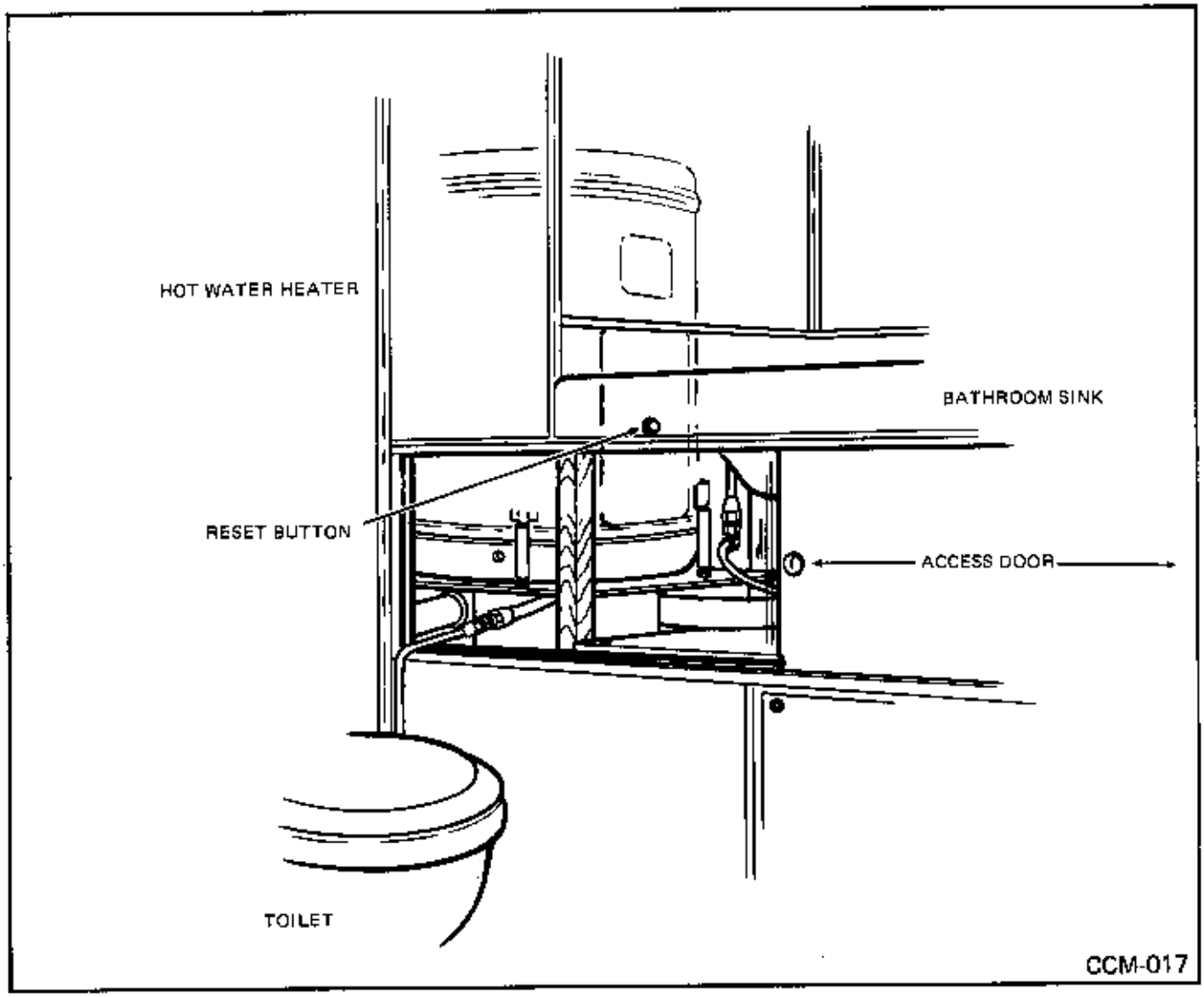

Fig. 18

Using the Waste Water By-Pass System:

This model Clark Cortez features a waste by-pass system which can be utilized in an area where no sewer facility is available but it is not objectionable to dispose of waste water on the ground.

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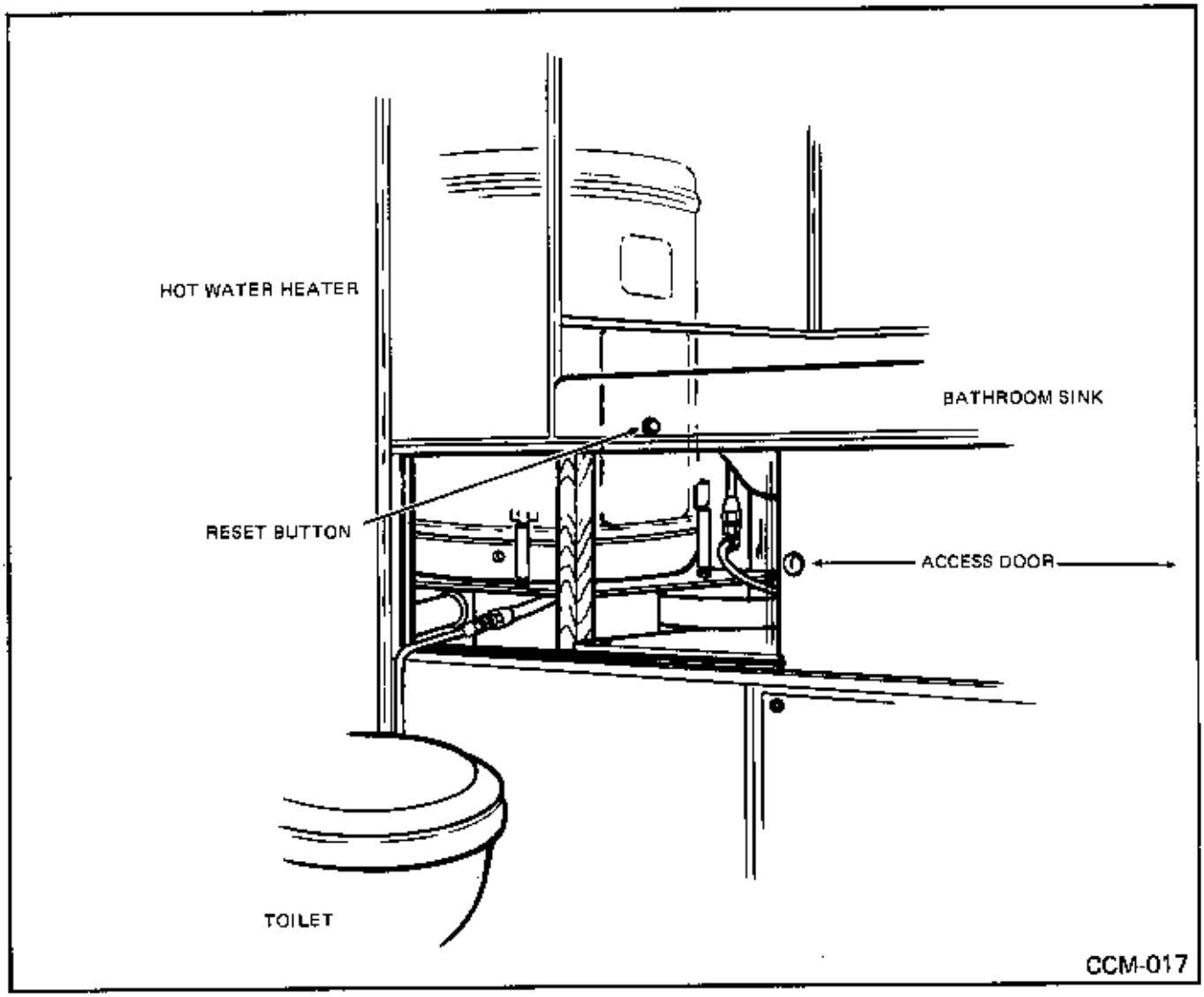


Fig. 18

Using the Waste Water By-Pass System:

This model Clark Cortez features a waste by-pass system which can be utilized in an area where no sewer facility is available but it is not objectionable to dispose of waste water on the ground.

To make use of this system, close drain valve and remove cap as shown in View D, Fig. 20. In this position only waste water from the kitchen and bathroom sinks will flow through the drain; other connections will flow to, and remain in, the holding tank.

Draining the Holding Tank:

Follow instructions given in "To Connect to a Sewer Facility" on Page 15. After tank has drained, remove and store hose in its compartment and replace drain cap. (Fig. 19)

Waste Holding Tank:

Capacity of the holding tank is 30 gallons. When traveling, the tank drain cap should be in place and the valve closed, as shown in View A, Fig. 20.

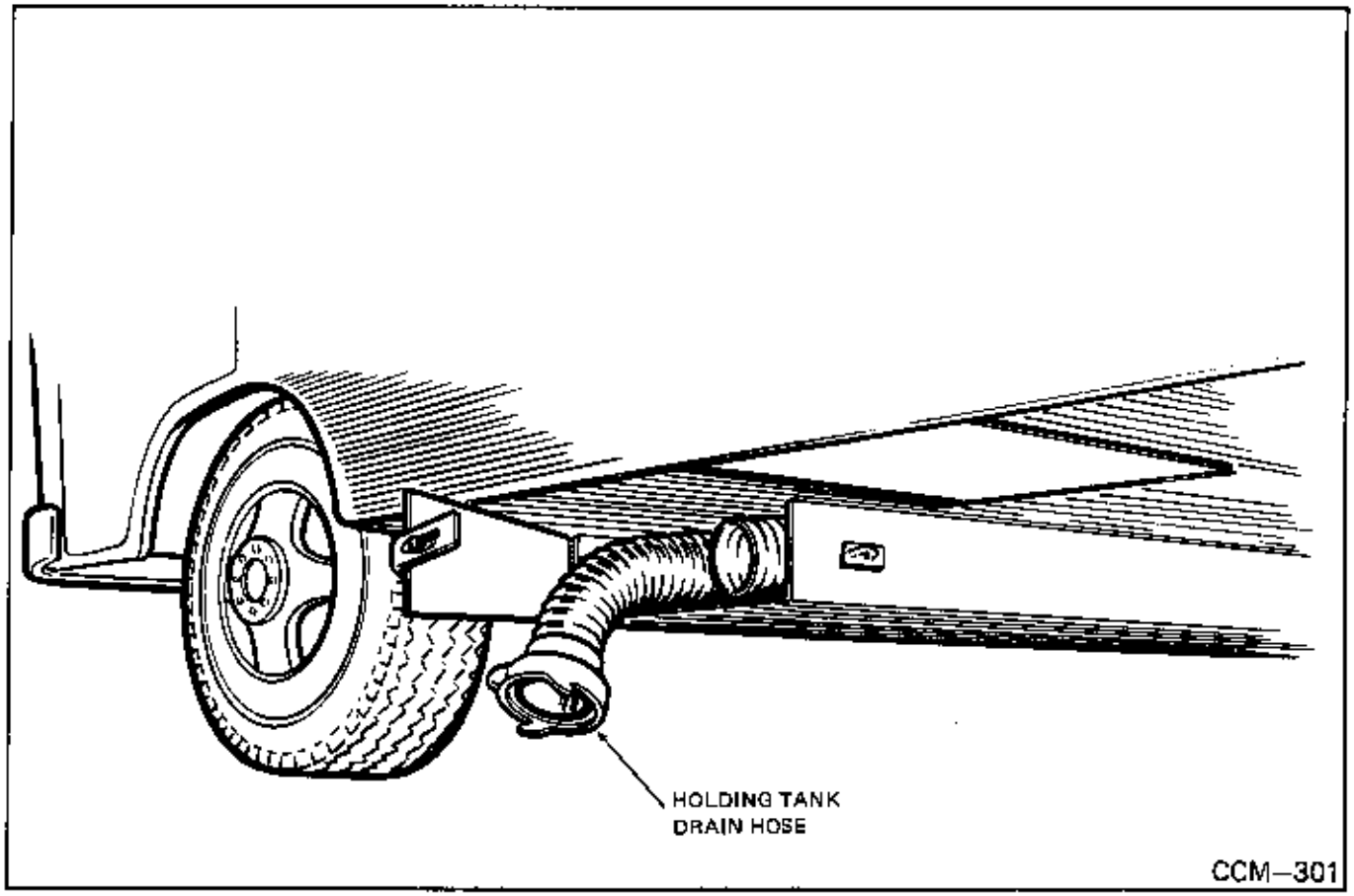


Fig. 19

Using the Holding Tank:

The toilet is connected directly to the holding tank and may be used at any time.

The drainage system is a by-pass system and, on the road, should be operated with cap and valve closed. (View A, Fig. 20)

This gives you drainage capacity equal to volume of drain pipes. On back roads you may travel with cap off and valve closed. Cap will store on underside of body corner. (Fig. 20)

Do not intermix drain water with sewage, such as View B with cap on and valve open. (Fig. 20) This can result in obnoxious fumes from drain system, and there would be much embarrassment when you removed the cap to connect the drain hose. Also, this is frowned on in some states.

To Connect to a Sewer Facility:

1. Remove drain hose from its storage compartment located to the rear of left front wheel, under vehicle. (Fig. 19)
2. Be sure holding tank drain valve is closed. (View A, Fig. 20)
3. Remove drain cap by turning to the left.
4. Connect drain hose to tank and to sewer facility.
5. Open drain valve. (View C)

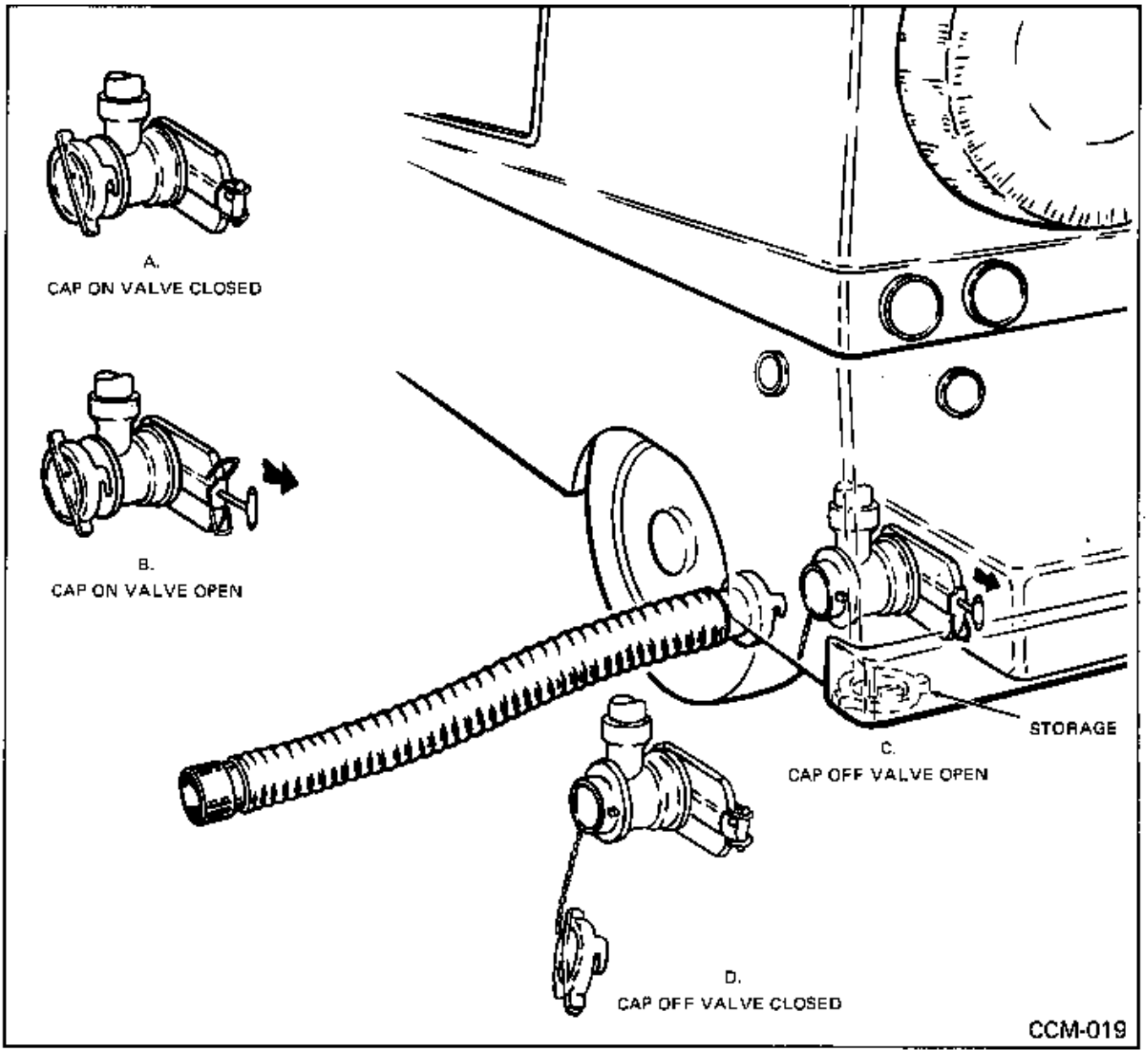


Fig. 20

Draining System for Storage:

When draining the water system, the water pump should remain running until the complete system is drained.

1. Open valves (1 and 2), (Fig. 21) to drain water tank, pump lines, and water lines. Open in-line water pump valve. (No. 3) (Fig. 21)

2. Open water heater drain valve located in cabinet below gas stove.

3. Open all sink faucets.

4. Open shower line drain valve, (Fig. 22).

5. Make sure all drain valves in the water lines are open.

6. Allow water pump to run until water stops flowing from the faucets and drain valves. Shut water pump off.

7. Drain holding tank as explained on Page 15. The tank drain should be left open until the vehicle is to be used again.

NOTE: To clean the tank, fill and empty the tank twice with clean water, then fill tank with garden hose thru toilet, with toilet valve open, until full. Add a standard commercial decontaminating chemical to the water. If possible, wait at least four (4) days before emptying the tank. The chemical will then have a chance to break down and dissolve all solids, allowing the tank to drain clean and sanitary before the next trip.

#6950 PETERS RUSSELL
213 749 6517

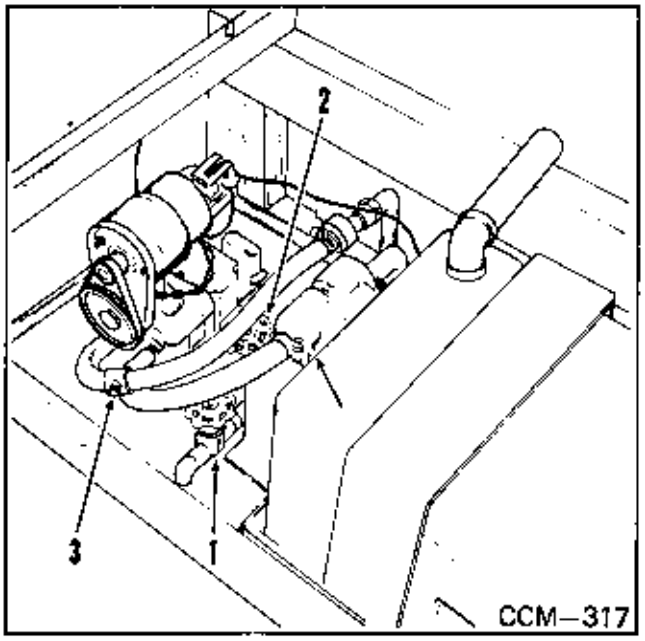


Fig. 21

8. The following instructions should be followed for winterizing the drainage system and holding tank for cold weather operation.

Thetford Toilet: (if so equipped)

After draining complete system, remove sink drain traps and empty or pour a suitable anti-freeze (not of the permanent type) into all drain traps. Use air pressure to blow water from shower "P" trap.

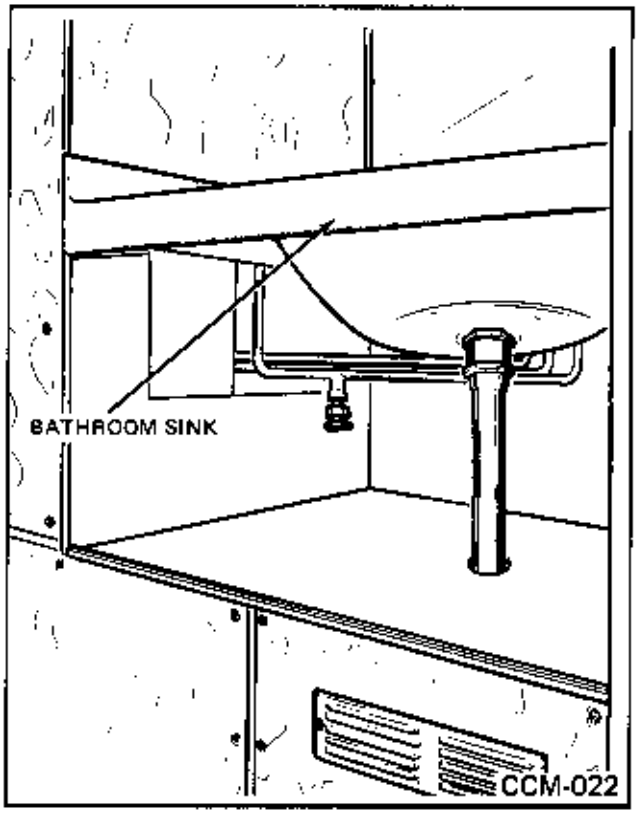


Fig. 22

NOTE: Calcium Chloride flakes or alcohol type anti-freeze can be used in the holding tank during cold weather operation. Pour or empty chemicals through toilet only. The quantity will vary according to temperature.

Do Not use permanent type (Ethylene Glycol Base) anti-freeze in sink traps or shower "P" trap.

Monomatic Toilet: (If so equipped)

After draining complete system, remove sink traps and empty or pour a suitable anti-freeze (not of the permanent type) into all drain traps. Use air pressure to force water from shower "P" trap.

NOTE: Add anti-freeze to initial charge. The amount of anti-freeze required depends on the temperature range to which the Monomatic will be subjected. See anti-freeze container for complete instructions.

CAUTION: Use only Ethylene Glycol Base anti-freeze. Do Not use Alcohol products.

Do Not use permanent type (Ethylene Glycol Base) anti-freeze in sink traps or shower "P" trap.

Draining Vehicle Engine for Storage:

Refer to the instructions in the Chrysler engine manual to properly prepare the engine for storage.

Before putting the vehicle into operation again, we recommend that you once again familiarize yourself with those instructions covering L.P. Gas containers and appliances; and refer to Page 101, paragraph 13, in your Chrysler engine manual.

NOTE: The Chrysler engine manual is under separate cover and is included with this publication.

L.P. Gas Container:

Be sure all control knobs on stove are "off" before opening the L. P. Gas Container Shut-off valve.

Turning on the Gas Supply:

The L.P. Gas Container is located in a compartment on the right rear side of the vehicle. To open the compartment door, turn screws to the left. Screws are part of the door. (Fig. 24)

Slowly open the valve, by turning to the left. Turning the valve too quickly will close a safety check valve and shut off the gas supply. If the check valve should close, shut off the container valve and wait one to five minutes until the check valve reopens before turning on the container valve.

THIS CLARK CORTEZ IS EQUIPPED FOR USE OF LIQUIFIED PETROLEUM GAS ONLY. DO NOT CONNECT NATURAL GAS TO THIS SYSTEM. CONTAINER SHUT-OFF VALVE SHALL BE CLOSED DURING TRANSIT. AFTER TURNING ON GAS TEST GAS PIPING AND APPLIANCE FOR LEAKAGE WITH SOAPY WATER. TANKS USED MUST BE APPROVED FOR HORIZONTAL USE. DO NOT EXCHANGE FOR VERTICAL TANKS WHICH ARE IN COMMON USE. CCM-025

Fig. 23

Refilling L.P. Gas Container:

1. Close the container valve.
2. Disconnect gas line at valve.
3. Remove centering device and remove the container from the vehicle. Fill the container by weight only.
4. When replacing the refilled container, place container in its compartment so that the centering device properly locates the container in position.
5. Connect hose to container shut-off valve.

Connections at the regulator, L.P. Gas Container, and appliances should be checked periodically for leaks.

WARNING: *Never use a match or flame when checking for leaks. Use a soapy water solution or its equivalent. If gas leak is present, solution will bubble.*

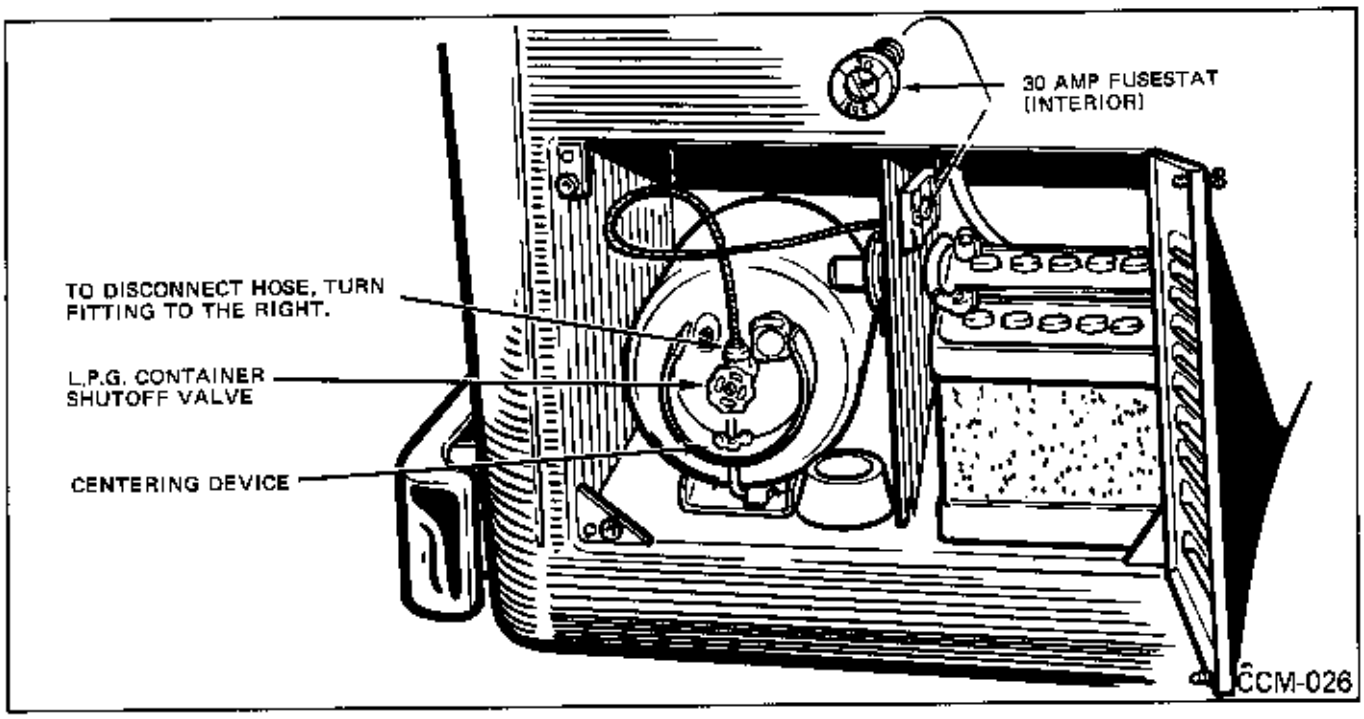


Fig. 24

Center Ceiling Vent:

When using the stove, the center ceiling vent should be open and the vent fan turned on. (Fig. 25)

Thermos Container:

The Thermos container can be used for either hot or cold liquids. Turn spigot at bottom of thermos clockwise to open. (Fig. 25) To remove thermos for filling or cleaning, release spring clamp at top of thermos and lift thermos from mounting bracket. To refill or clean thermos, unscrew cap at spigot end and remove the spigot assembly from the container. To clean thermos, use baking soda and water.

NOTE: *When thermos container is not in use, leave cap at spigot end loose.*

Gas Stove:

How to light the burner:

1. Turn on the main gas supply. (Fig. 24)
2. Hold a lighted match to burner and turn control knob to the left.

Cleaning Instructions:

Do Not wash the porcelain finish when it is warm. Do Not use cleaning powder containing grit or acid. Care should be taken when cleaning the burner heads that the ports are not obstructed with cleaning compound. (A toothpick can be used to open the ports.)

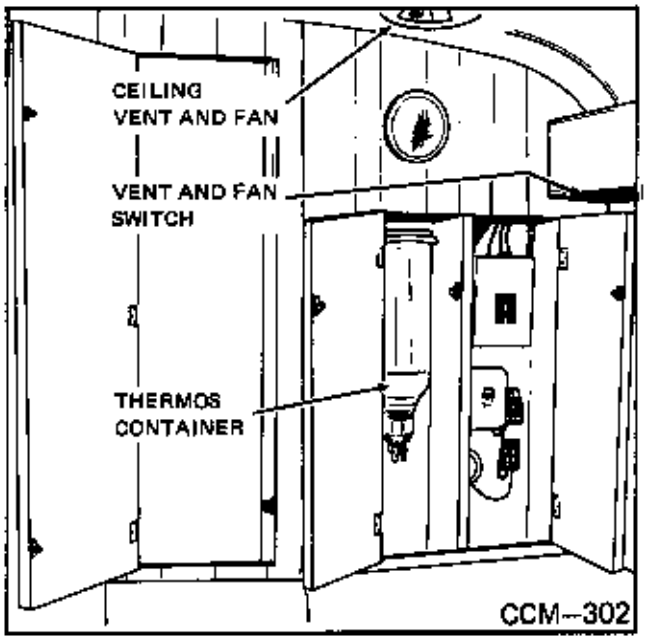


Fig. 25 Center Ceiling Vent and Thermos Container

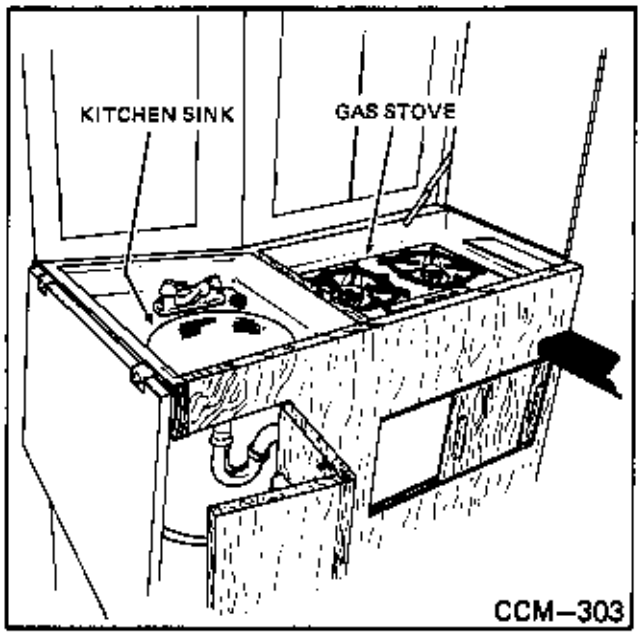


Fig. 26 Kitchen Sink and Gas Stove

Water Level Indicator:

For the fresh water tank, the indicator is located in the cabinet behind the stove. It will indicate the approximate amount of water in the fresh water tank. The pointer's position will vary slightly when the vehicle is on an incline. Check water supply when the vehicle is reasonably level.

To obtain a reading, depress the button just below the indicator. (Fig. 27)

NOTE: To make the gauge as accurate as possible, a resistance TRIM–POT is wired in series with the gauge. After installation is completed, and tank is full of water, press momentarily the on-off switch to test reading. Carefully turning TRIM–POT (Blue Knob) to left or right will set dial pointer near end of green area. (Full) The TRIM–POT is located on the rear of the indicator gauge.

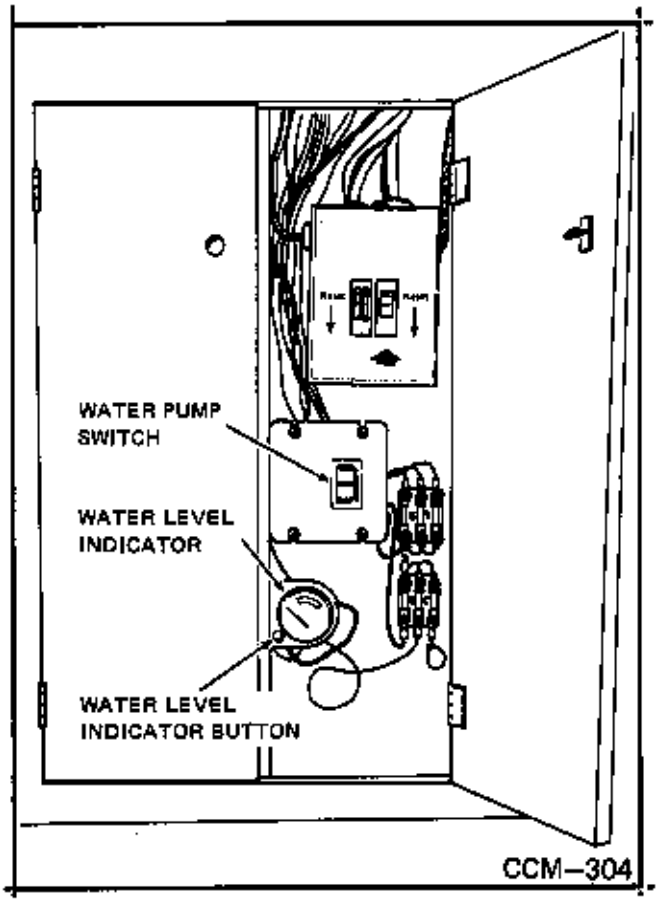


Fig. 27

Electrical System:

DO NOT allow batteries to become discharged to the point where they are no longer effective.

The Clark Cortez is wired for 110 – 125 volt, 60 cycle, alternating current service. DO NOT connect to higher voltage.

For the protection of small appliances, (toasters, electric irons, table lamps, etc.), which are normally wired for alternating current only, the Clark Cortez electric outlets remain inoperative when the vehicle is not connected to an outside (AC) source of power.

To Connect To An Outside Electrical Source:

Insert cable plug in Cortez power receptacle, (Fig. 13). Connect other end of cable to the service outlet.

A polarity light (Fig. 13), located on the side of the vehicle will illuminate if a common ground is not present. When this occurs, disconnect shore power and check for proper wiring of supply outlet.

Monomatic Toilet System: (If so equipped)

Preparing the Monomatic For Use:

The Monomatic requires an initial charge of four (4) gallons of water mixed with one (1) package of Monochem T-5 chemical. When charged, the Monomatic will operate each time the flush button is depressed for an automatically timed cycle of eight (8) seconds. (Fig. 28)

1. The water is piped for convenient rinsing and filling. The 1/2 inch pipe vacuum breaker fitting will not allow any syphoning action of the fluid in the Monomatic to back up into the supply line or water source. When filling, the water passes through the vacuum-breaker and charging tube. The end of the tube is positioned within the tank at the four(4) gallon level. A readily apparent change in the noise level provides a signal that the water has reached the four (4) gallon point.

2. Press the flush button (Fig. 28), and slowly sprinkle the contents of one (1) package of Monochem T-5 into the bowl while the Monomatic is flushing. (Fig. 29)

3. Flush several times in order to thoroughly dissolve the chemical.

Operating The Monomatic Toilet:

Once the unit is charged, its remaining capacity will accommodate approximately 80 usages. The potency of Monochem T-5 is formulated for effective color and odor control for five (5) continuous days or a number of weekends. Less use over extended time periods is possible, although some loss of potency may result. Though it is not essential, it is recommended that the Monomatic be emptied and cleaned after each trip to assure optimum performance. On extended trips, the Monomatic should be charged about once a week. If allowed to operate to maximum capacity, the fluid level in the tank will rise to the point where it becomes visible at the bottom of the bowl.

Cold Weather Operation:

Add anti-freeze to initial charge. The amount of anti-freeze required depends on the temperature range to which the Monomatic will be subjected. See anti-freeze container for complete instructions. Protect the full capacity of 81/2 gallons.

CAUTION: Use only ethylene glycol base anti-freeze. DO NOT use alcohol products.

Emptying the Monomatic:

1. The Monomatic toilet is installed over the holding tank. Contents will be discharged into the tank rather than directly to sewer outlet. See Fig. 20 for holding tank operation.

2. A removable front skirt is located at the base of the Monomatic. Press in at the skirt ends and pull forward to reveal the built-in drain valve.

3. Release drain valve lock clips and pull drain handle forward.

4. When waste has been discharged into holding tank, close drain valve and introduce rinse water.

5. Where facilities are available, it is best to fill the Monomatic with four (4) to eight (8) gallons of water and add 1/2 cup of "Vanish" bowl cleaner. Flush several times to automatically clean all internal parts. This solution may be left overnight for even more effective cleaning.

6. Open and close valve as required to thoroughly rinse the Monomatic with clean water. Close drain valve, replace front skirt and recharge with one (1) package of Monochem T-5 as described on Page 20. When holding tank becomes full, refer to Fig. 20 for holding tank operation.

This unit is a self-contained, electrically operated, recirculating, flushing toilet.

To Flush:

When charged, the Monomatic will operate each time the flush button is depressed for an automatically timed cycle of eight seconds. (Fig. 28)

NOTE: Do not operate flush button when Monomatic is empty.

Emptying and Recharging Monomatic:

1. Remove front skirt located at base of Monomatic by pressing in at skirt ends and pulling forward.

2. Release drain valve lock clips and pull handle forward.

3. While waste is discharging, introduce rinse water directly into bowl.

4. When thoroughly rinsed, close drain valve and replace skirt.

5. Fill Monomatic with four (4) gallons of water. Press the flush button and add the contents of one package of Monochem T-5 into the bowl while the Monomatic is flushing. (Fig. 29) Flush several times in order to thoroughly dissolve the chemical. Once the unit is charged its remaining capacity will accomodate approximately 80 usages. The Monochem T-5 is formulated for effective color and odor control for five continuous days or a number of weekends.

Care and Service Instructions:

Never leave your Monomatic empty and dry without thoroughly cleaning and rinsing. For extended dry storage, the entire Monomatic cartridge, containing motor timer and filter pump assembly, may be easily removed. (Fig. 32)

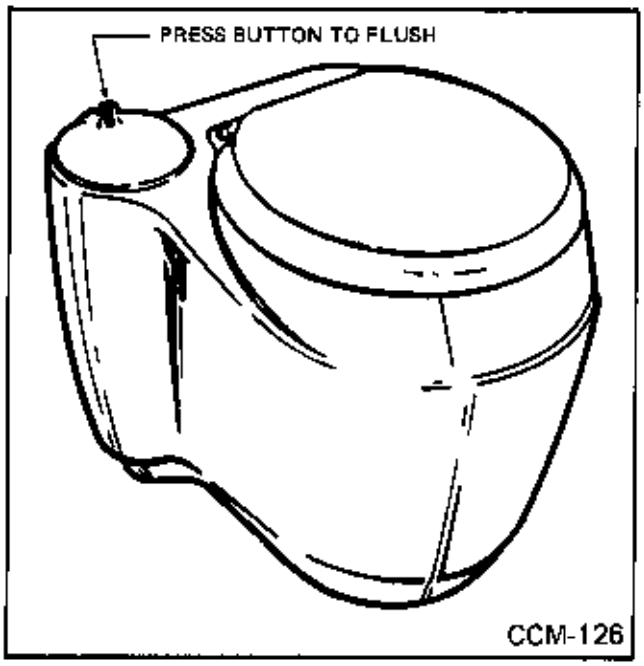


Fig. 28

Fig. 29

When Monomatic is seasonally out of use, fill to capacity, (8 1/2 gallons), add one package of Monochem T-5, and flush several times. If freezing temperatures are anticipated, add ethylene glycol base anti-freeze.

CAUTION: Do not use alcohol products. Charge according to manufacturers directions on anti-freeze container. Flush to mix all additives.

Do not deposit kleenex or wet strength tissues or other items not normally deposited in a household toilet. Never use abrasive or solvent based materials which may damage the finish of your Monomatic. The Monomatic will retain its gleaming appearance for many years, if cleaned with household soap or detergent and finished with a non-solvent based auto wax such as Vista, or furniture wax such as Sani-wax.

Though salt water may be used for charging and rinsing, fresh water is recommended for optimum performance.

Monomatic Toilet:

Parts Description: (Fig. 30)

Item	Description
1	Seat
2	Vacuum Breaker Fitting
3	Cartridge Cover
4	Body
5	Mounting Stud and Washer
6	Removable Skirt
7	Valve Gasket
8	1/4 x 1/16 Thick Washer
9	Valve
10	Mounting Brackets
11	1/4 x 20 x 1 1/4 Bolts
12	Oval Head Brass Studs

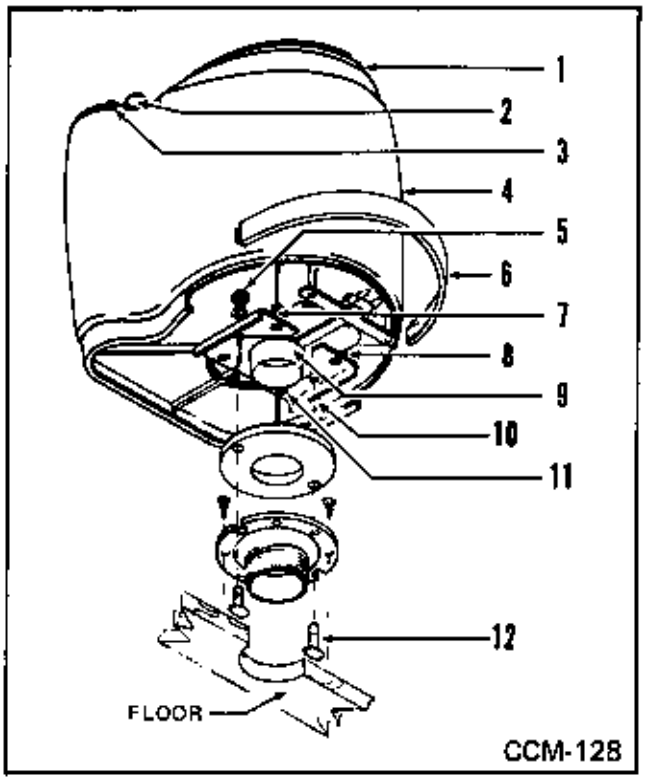


Fig. 30

Cartridge Parts Description: (Fig. 31)

Item	Description
1	Cartridge Cover
2	Fuse Chamber
3	Timer
4	Motor Housing
5	Motor
6	Gear Box Assembly
7	Hose
8	Pump Sleeve
9	Pinion Shaft (Pair)
10	Pump Assembly
11	Filter Basket and Wiper Assembly.

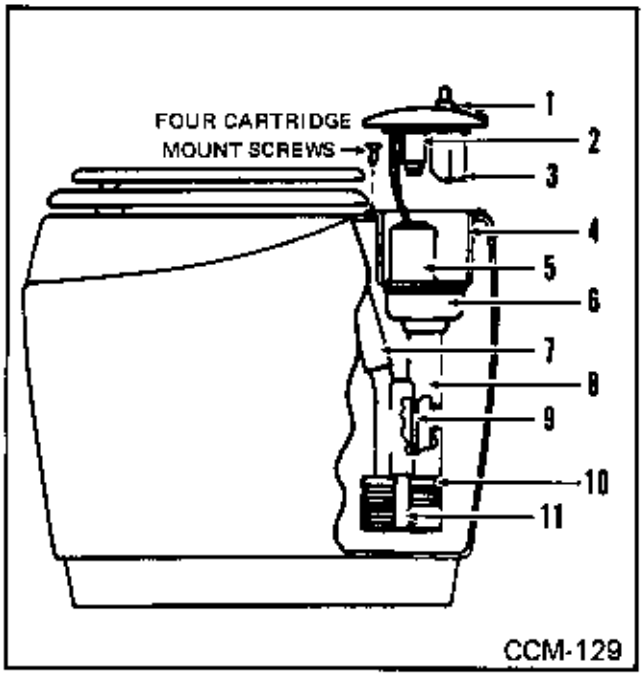
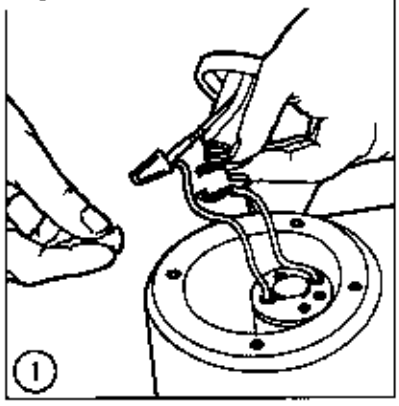
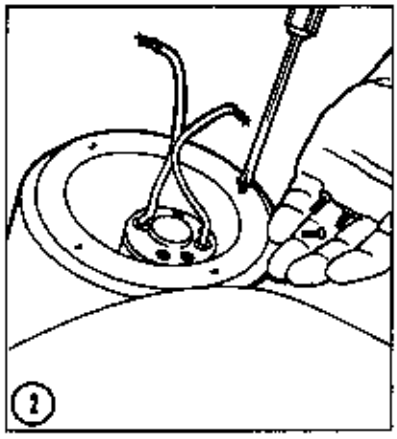


Fig. 31

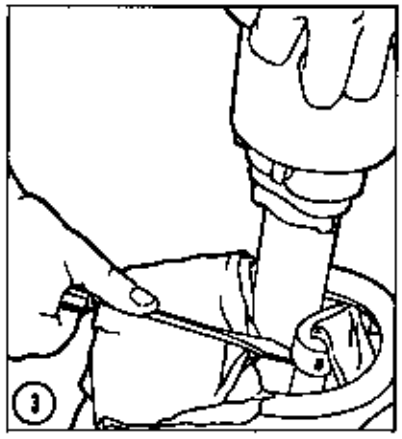
Cartridge Removal and Repair:



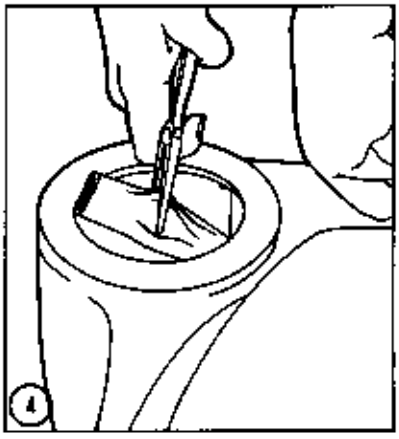
Pry off cartridge cover with finger tips . . . exposing electrical connectors. Unscrew plastic connection insulators, disconnect electrical wires inside motor housing.



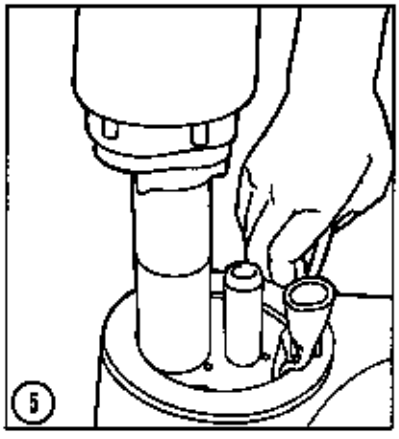
Remove four cartridge mounting screws.



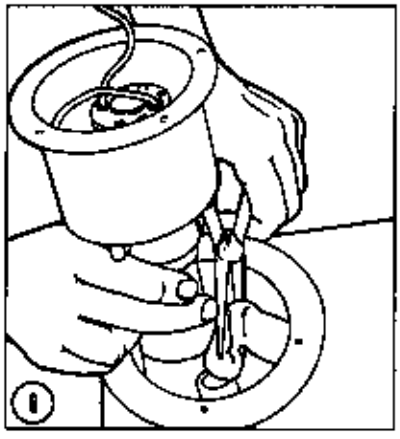
Pull cartridge assembly upward until hose connection is exposed. Protect plastic tank body with folded cloth and pry off hose connection with screwdriver.



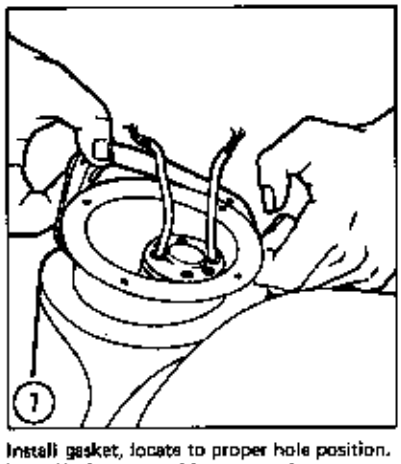
Grasp hose with long nose pliers as shown.



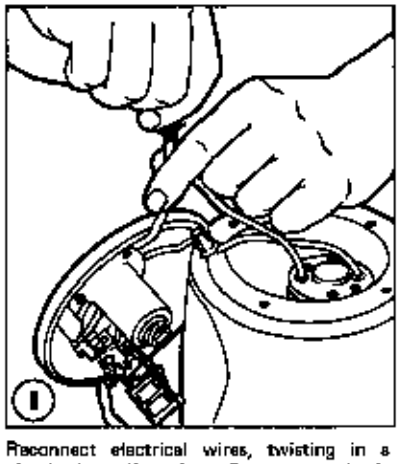
Pull hose away to permit insertion of motorized filter pump assembly.



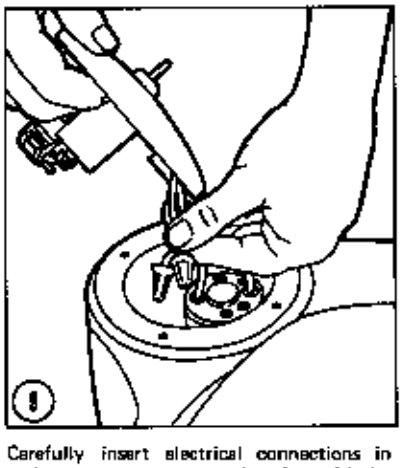
Bend hose as shown and push fit ½ to ¾" onto hose nipple of cartridge, make sure red marks on hose and cartridge line up. Use vaseline or glycerin around inside of hose to facilitate insertion.



Install gasket, locate to proper hole position. Install four cartridge mounting screws, tighten so that gasket seals between motor housing flange and tank body opening.



Reconnect electrical wires, twisting in a clockwise direction. Screw on plastic connection insulators.



Carefully insert electrical connections in such a manner so as not to interfere with the timing mechanism. Replace cartridge cover adjusting to a snug fit.

Fig. 32

CCM-130

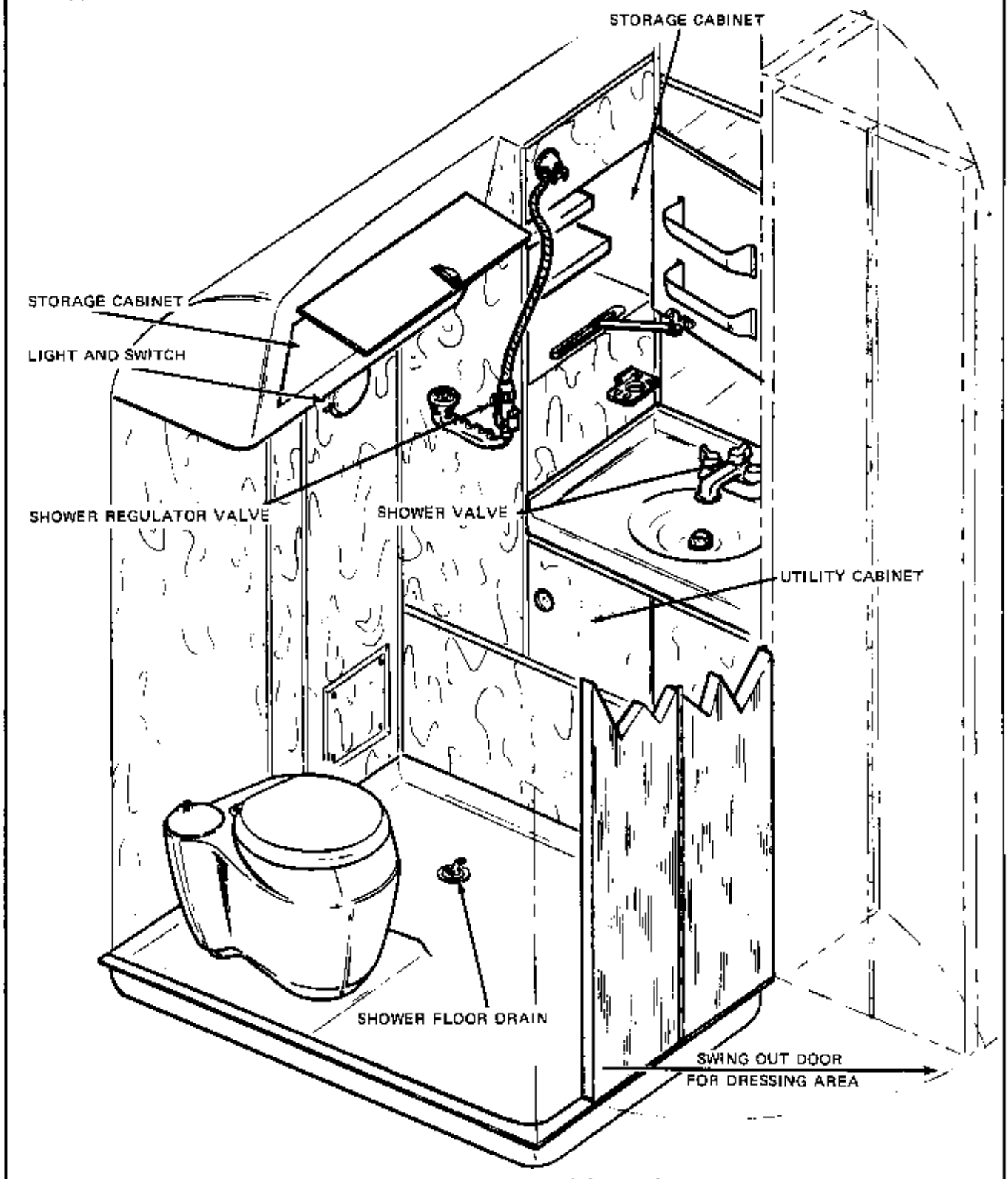
Trouble Shooting Guide:

SYMPTOMS	PROBABLE CAUSE	CHECK FOR	CORRECT
Motor runs, but little or no water through flush jet.	Insufficient water		Add more water
	Insufficient voltage	Check voltage at source and toilet connection	See installation instructions
	Filter not submerged	Not level	Level or add more water
Timer does not function	Defective timer	Motor operates if timer is by-passed	Replace timer
Unit fails to operate but timer functions	Electric failure	Blown fuse	After checking circuit replace 3 AG-10 Amp. fuse
		Dead battery or defective power source	Recharge, replace or correct
	Motor failure	Jammed or clogged filter	If cleaning filter does not correct, replace defective part(s)
Odor	Improper cleaning between charging	Was not cleaned according to directions	Add additional chemical until facilities are available for thorough cleaning with Vanish bowl cleaner
	Evaporation of chemical ingredients due to limited use over extended time	Last date chemical was added	Add additional chemical or clean and recharge according to operating instructions

Fig. 33

NOTES

Shower and Bathroom Sink:



NOTE: Shower floor drain plug should be tightened while traveling.

CCM-132

Fig. 34

Self Contained Toilet System: (If so equipped)

How to Use Your Self Contained Toilet System:

The toilet system has been developed to give satisfactory service in two types of usage:

1. While on the road or when parked without being connected to a sewer system.
2. When connected to sewer and water lines for overnight or lengthy stays.

When traveling, the idea is to save space in the holding tank until it is convenient to dump it. This means using as little water for flushing as possible and still maintain cleanliness.

However, when connected to a sewer line, the tank space is not so important because the tank can be emptied at will. Therefore, there is no need to worry about having a full tank at an inconvenient place.

How to Use the System When Connected To a Sewer Line:

1. Keep the Holding Tank Dump Valve Closed:

   Empty the tank every few days (every day is all right). The idea is to send a large volume of sewage through the tank and drain hose at one time. This practice sets up a swirling action and high currents which float the toilet paper and other solids completely away.

2. Avoid Accumulations of Solids:

   It is very poor practice to keep the tank valve open or partially open when connected to a sewer or gopher hole. It is not like a home toilet where a large volume of water is used at each flush. There are usually not enough liquids to float all of the solids in a single flush. The result is that all of the liquids go, leaving some solids. In time this builds up into trouble. The end result can be a disagreeable cleaning job.

Should this ever happen, the best method of cleaning the tank is to close the valve, fill the tank about half full of water, and then drive the Clark Cortez fifty miles or so. The turbulence and surging of the water will usually dissolve the solids into suspension and the tank can be drained. You can add a little soap, or tank deodorizer, but nothing else.

How to Use the System When Parked Without a Sewer Line Connection:

1. Automatic Flush:

   When traveling, if you anticipate finding a dumping station, or being connected to a sewer line every few days, you can use the toilet on automatic flush if you wish. It uses very little water. The holding tank will provide space for the requirements of two adults for two to four days, or longer. All you have to do, is to be careful not to hold the flush pedal down.

Don't worry about your fresh water supply as it is readily available almost anywhere. Pressure or hand refill of your fresh water tank is seldom a problem.

Things Not to Put Into the Toilet and Tank:

1. Facial and Other Similar Tissues:

   Unlike toilet paper, nearly all of the facial tissues are impregnated and treated to give them wet strength. This quality makes it almost impossible to dissolve them in the tank. Most toilet papers dissolve after a period of time, especially if agitated by traveling. However, facial and similar tissues do not. So never put them in the tank.

2. Do Not Use Detergents and Bleaches:

   This is a fairly common practice, and always does more harm than good. The harm is that detergents remove lubricating oils and greases. They actually do no good at all. It is far better to use a trailer sewage tank deodorizer which you can obtain from your dealer.

3. Do Not Dump Dishwater in Your Tank:

   Nearly all dishpan soaps contain detergents which attack the lubricants. Do not allow dishwater to drain into your tank. Use the waste water by-pass system. Refer to Fig. 20 for instructions.

How to "Gopher Hole":

Dig a hole about 18 or 20 inches in diameter down to a depth of 40 inches or so. Dig a very slight channel for a lead-in for the end of the drain hose. Place a cover over the hole (wood, metal, etc.) that is strong enough to hold a man's weight and cover with a six inch layer of dirt. This seals the hole. If the soil is sandy and readily absorbs fluids, the gopher hole can be used for weeks.

Thetford Toilet: (If so equipped)

Aqua Magic Model No.1400

To Flush:

Depress the foot pedal, thus opening the slide valve and dropping the waste into the holding tank. (Fig. 35) Keep the foot pedal depressed from one to three seconds until water begins to swirl in the bowl, rinsing it. This short time lag fills the rim storage (for bowl refill) and allows the bowl to drain. Release the foot pedal, thus closing the valve and stopping usage of fresh water. The rim storage now drains and refills the bowl.

Lubrication:

The Aqua Magic Toilet requires NO lubrication.

Care and Service Instructions:

Ordinary household cleaners may be used for routine cleaning. Ordinary toilet bowl cleaners may be used. However, they should be flushed on through the system within four (4) hours. They should not be left in the holding tank for any extended period of time.

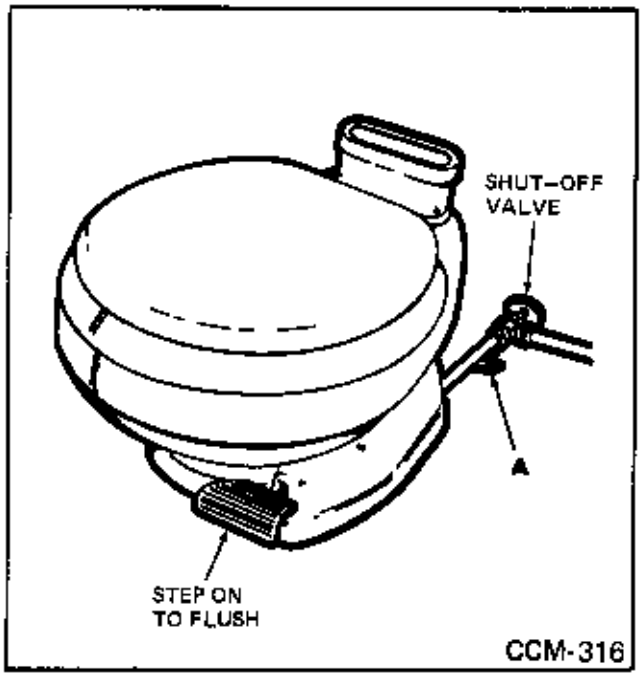


Fig. 36

Check Valve:

If water flow seems to be restricted, the check valve screen may need cleaning. The check valve is in the water line between the water inlet valve and the vacuum breaker water control unit. Disassemble and remove the screen and clean thoroughly. (Fig. 37)

Winterizing:

Open all water drain spigots in the incoming water lines. Separate the check valve and hold the foot pedal down allowing the system to drain.(Fig. 37)

Make sure all drain valves in the water lines are open. ("A" Fig. 35)

NOTES

Thetford Toilet

Aqua Magic Model No. 1400

Parts Description, Figure 36:

Item	Description
1	Seat
2	Cover Plate
3	Vacuum Breaker
4	Float Seal
5	Seal
6	Float
7	Vacuum Breaker Connector Package
8	Hose Clamp
9	Grommet
10	Screw
11	Hopper
12	Mechanism Assembly Package
13	Hose Clamp
14	Hopper to Mechanism Seal
15	Grommet
16	Screen Check Valve
17	Foot Pedal
18	Control Valve
19	Mechanism to Hopper Mounting Package
20	Closet Flange Seal
21	Closet Bolt Package

Parts Description, Figure 37:

Item	Description
1	Vacuum Breaker Unit
2	Check Valve
3	Trap Tube
4	Water Inlet Valve
5	Foot Pedal
6	Water from Vacuum Breaker enters here

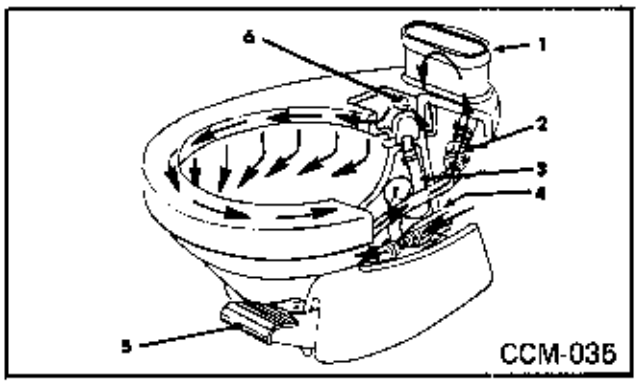


Fig. 37

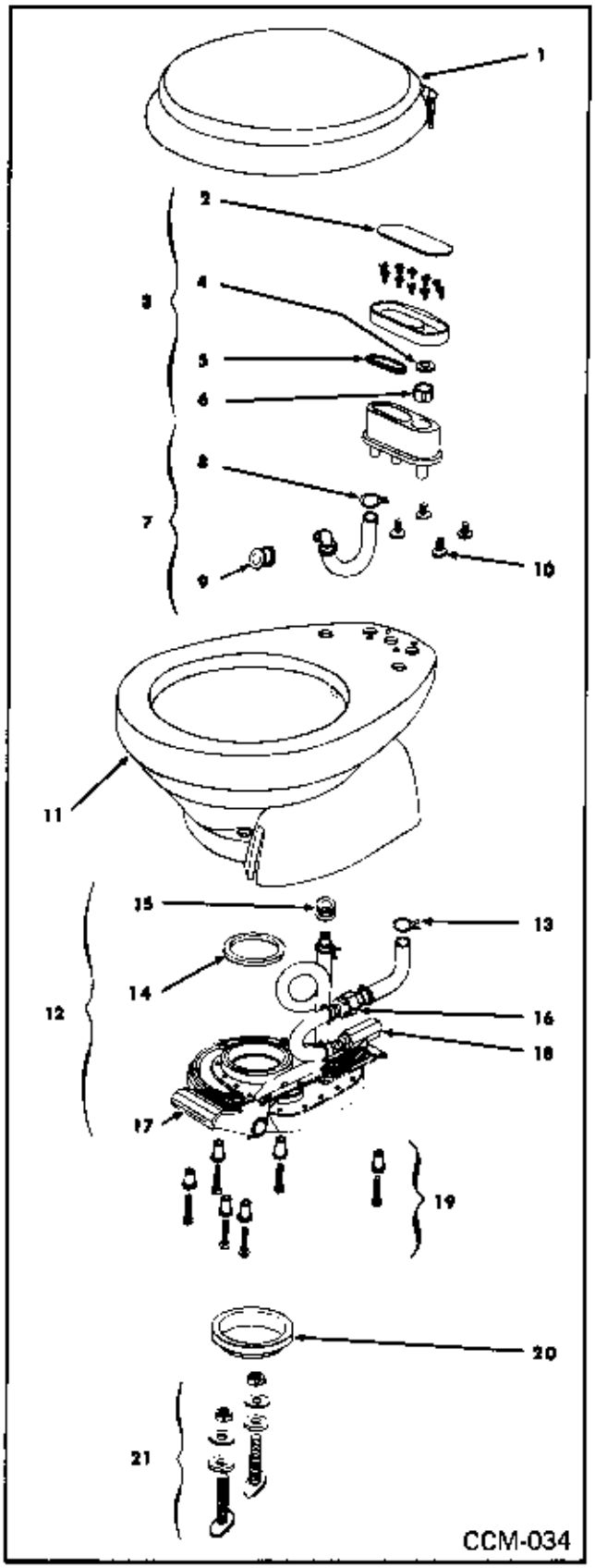


Fig. 36

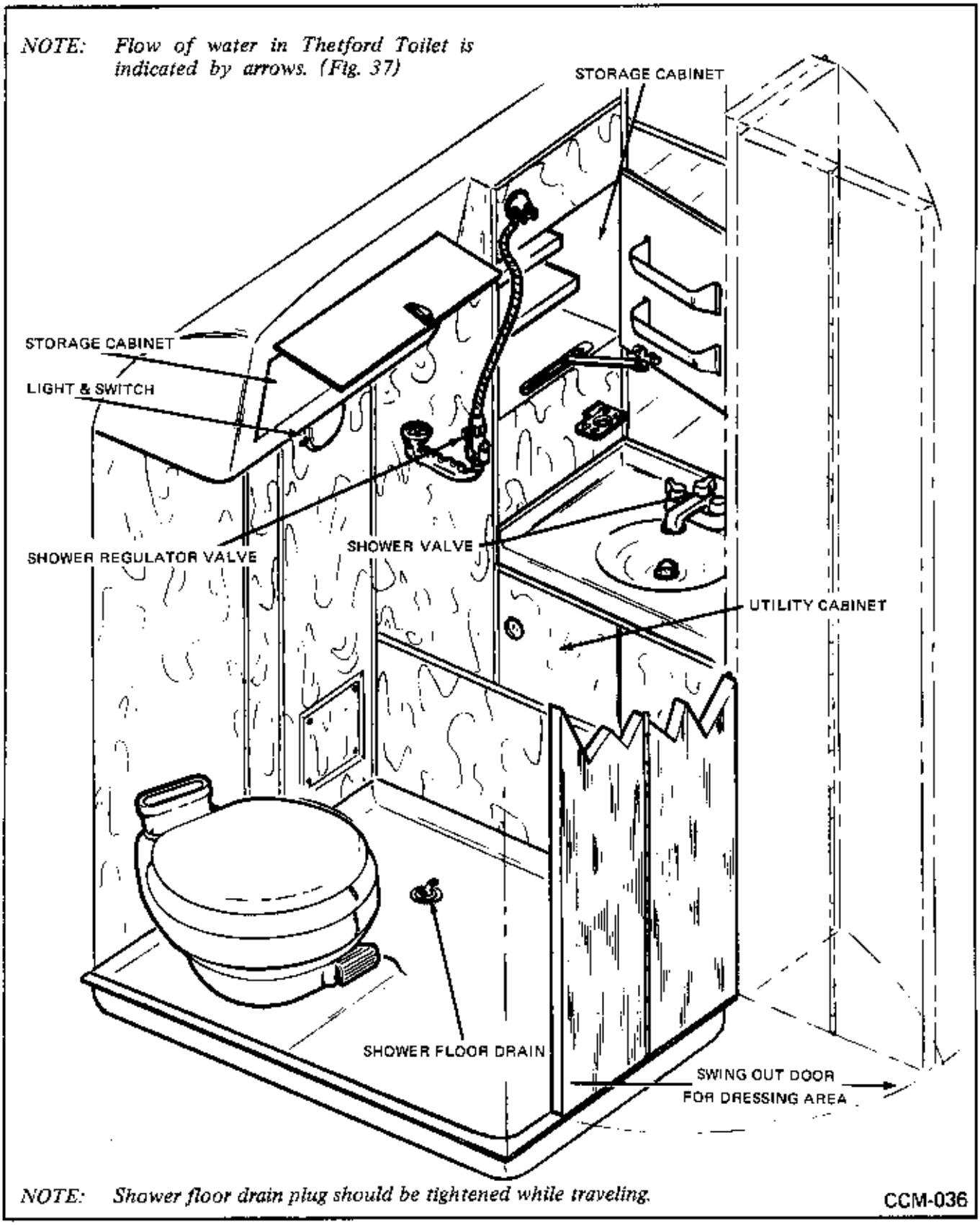


Fig. 38 Shower and Bathroom Sink

Interior Heating System:

The heater uses the same fuel as the vehicle engine, however, the heater draws only from the top 3/4 of the gas tank. The heater will not receive any fuel if the tank is 1/4 (or less) full.

To Start the Heater:

Move control on thermostat to the temperature setting desired. (Fig. 39) Refer to Page 32.

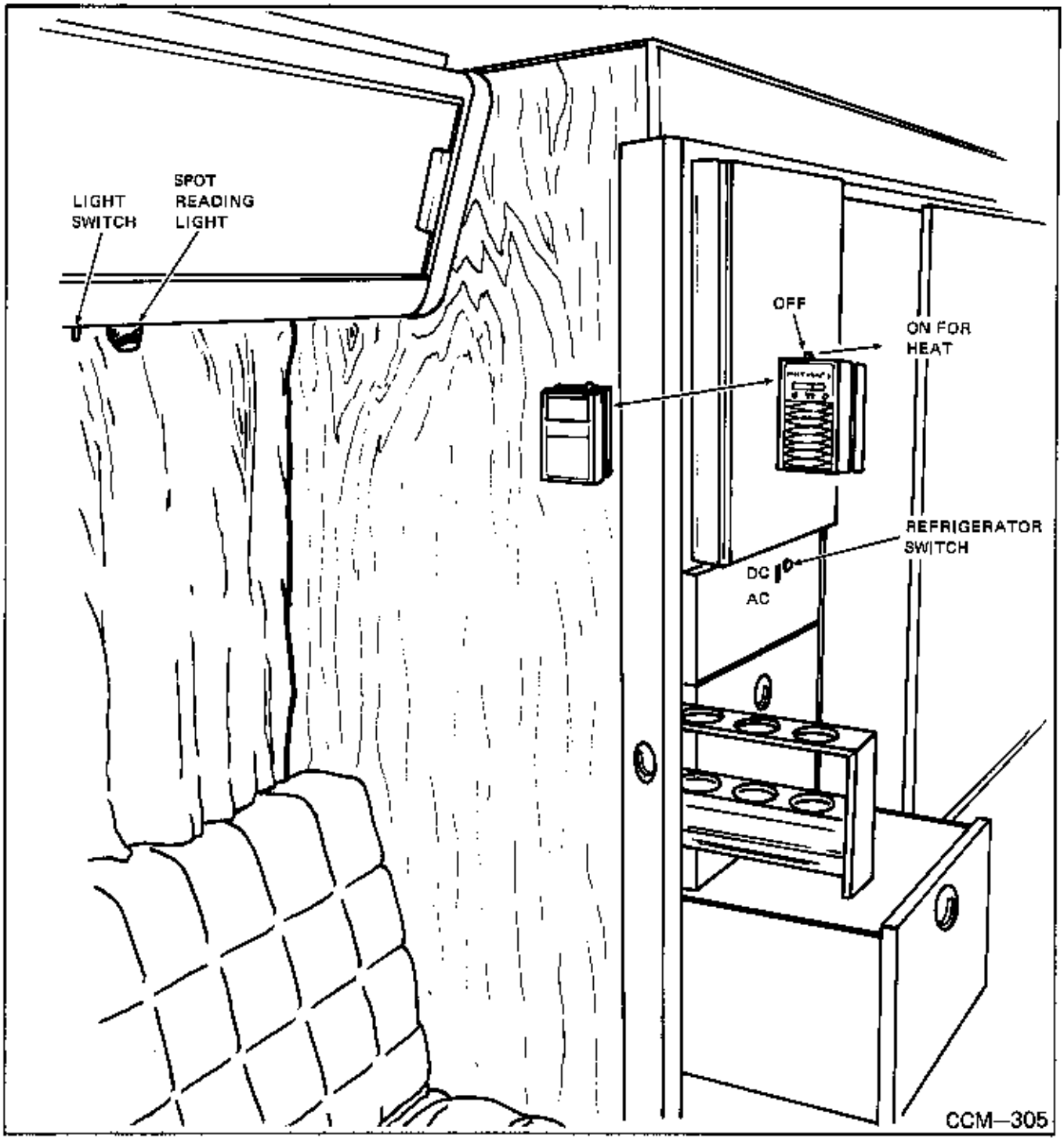


Fig. 39

Norcold Refrigerator: (D.C. or A.C. Operation)

To Start the Refrigerator:

Move refrigerator switch in proper location for either D.C. or A.C. operation. (Fig. 39)

To start your refrigerator turn the thermostat dial clockwise until it reaches position No. 3. Now your refrigerator has started to operate. (Fig. 40)

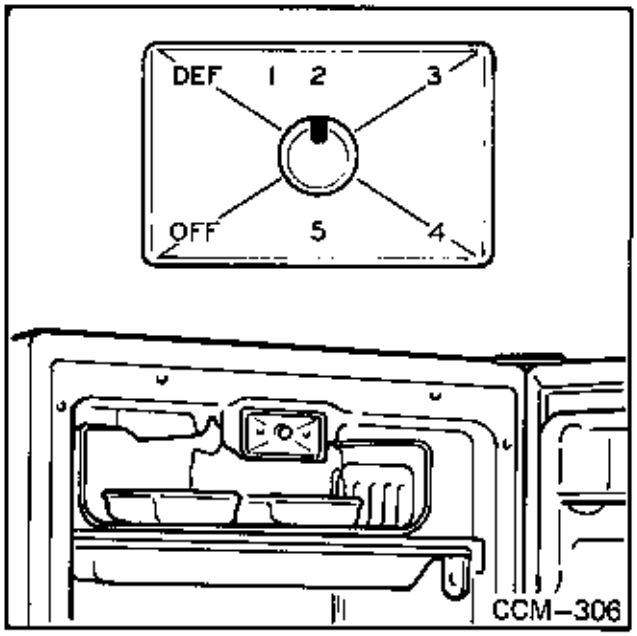


Fig. 40

Regulation of Temperature:

Refrigerating temperature can be controlled by means of the thermostat dial, (Fig. 40), which also serves as the on-off switch. Turn the dial clockwise from "off" and your refrigerator is switched "on" just before the dial reaches the "off" position.

Interior temperature drops as the dial position is changed from "1" to "5". In this way, interior temperatures can be regulated freely within the range of 45° to 32° F. To switch off your refrigerator, turn dial counter-clockwise to "off". The dial does not turn clockwise beyond "5". For efficient operation, regulate the temperature according to the types of foods stored.

Defrosting Refrigerator:

Set the thermostat dial at "off". (Fig. 40) When frost is melted, wipe with a soft, dry cloth. The best suggestion is to set the dial before you retire for the night. The frost will be gone the next morning.

CAUTION: This method is recommended only for A.C. operation.

Cleaning Refrigerator:

Wipe with a soft, dry cloth. To remove dirt, use a cloth moistened by a warm neutral detergent solution. Never use hot water. After cleaning, wipe with a dry cloth.

Gasket: (Door Cushion)

Wipe away dirt with a soft cloth moistened by a neutral detergent. DO NOT soak the cloth excessively. If water gets inside, the insulating effect may become temporarily impaired.

Attachments:

Wash all attachments in soapsuds. Rinse and wipe clean with a dry cloth.

CAUTION: Never use a brush, powder soap, cleanser, acid, benzene, gasoline, or thinner. These tend to leave scratches on the coating.

Shut Down Refrigerator:

Turn the thermostat dial to "off" to shut down the refrigerator for a day or two. For a longer period, switch to "off". When not in use the refrigerator should be emptied, cleaned and dried, and the door left ajar.

If the Heater Does Not Start:

If the heater has not been used, or if the heater has been run out of fuel, it will be necessary to start the heater manually by depressing the reset button (Fig. 41) and holding until 10 seconds after heater ignites.

If, after performing the above, the heater still does not start, check the heater fuses. Two are located in the heater compartment (Fig. 41) and one is located in the L.P.G. compartment (Fig. 52, Page 42).

After the initial start, the heating system will turn on and off (cycle) automatically as required to maintain the temperature selected on the thermostat.

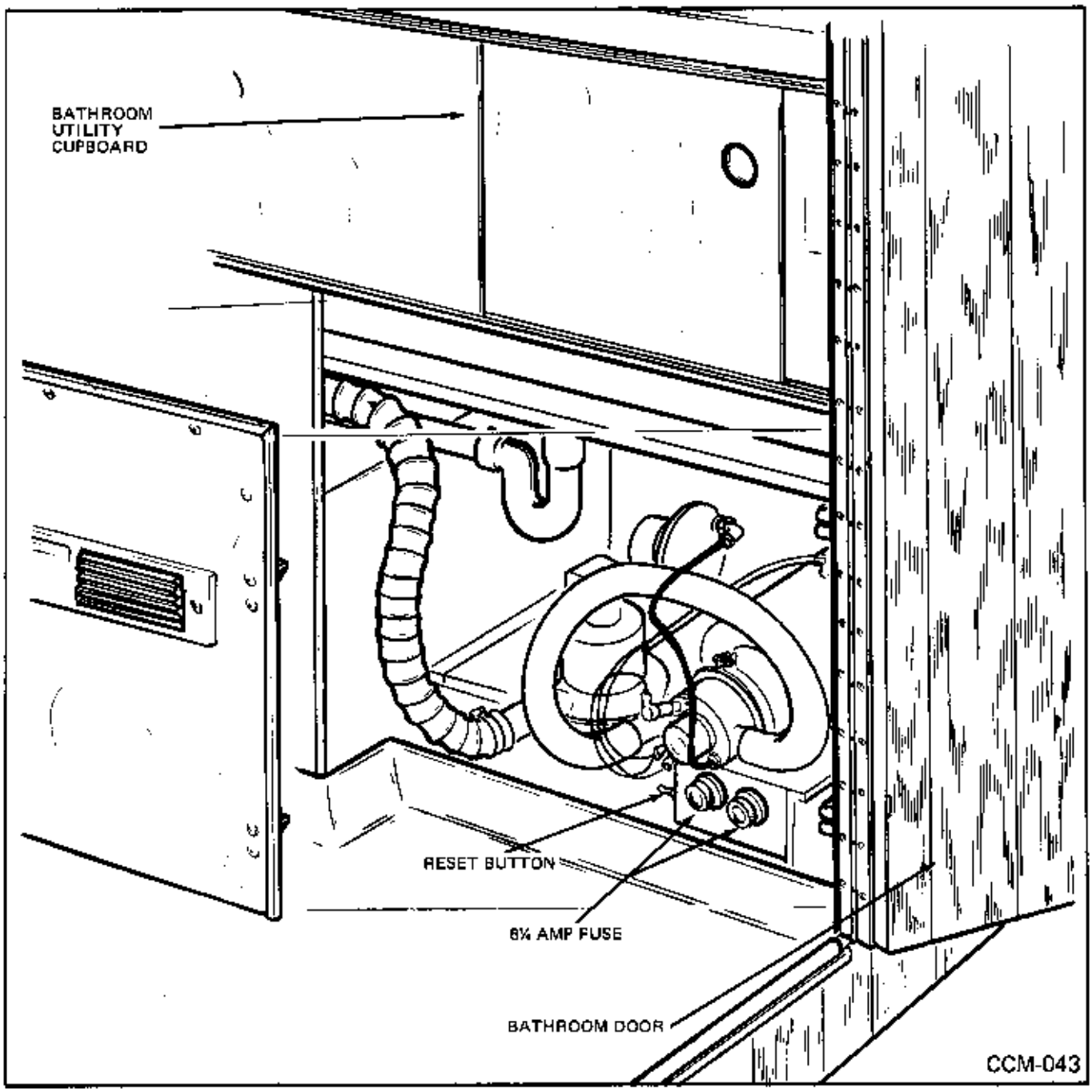


Fig. 41

Table:

To raise table, lift upward until hinge braces are locked in place. (Fig. 42)

The table can be lowered by releasing the hinge braces and letting the table down against the wall. (Fig. 43)

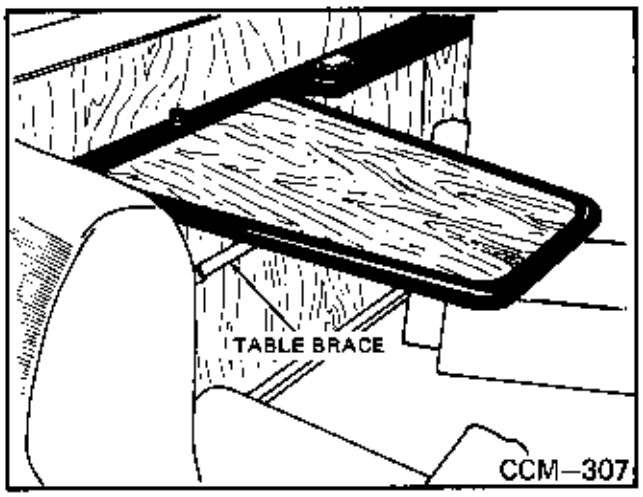


Fig. 42 Table Raised

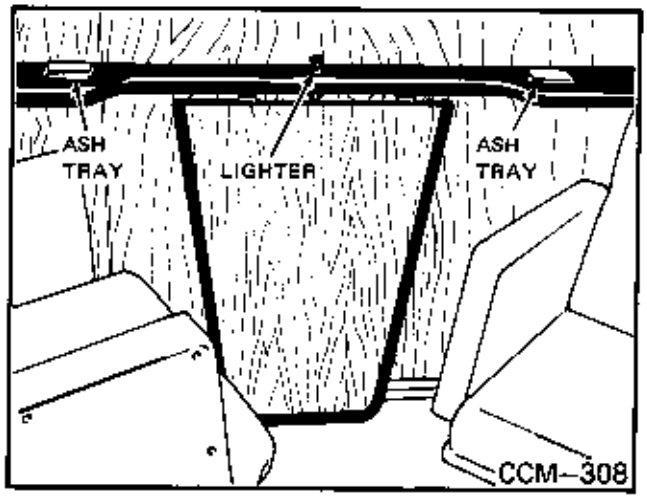


Fig. 43 Table Lowered

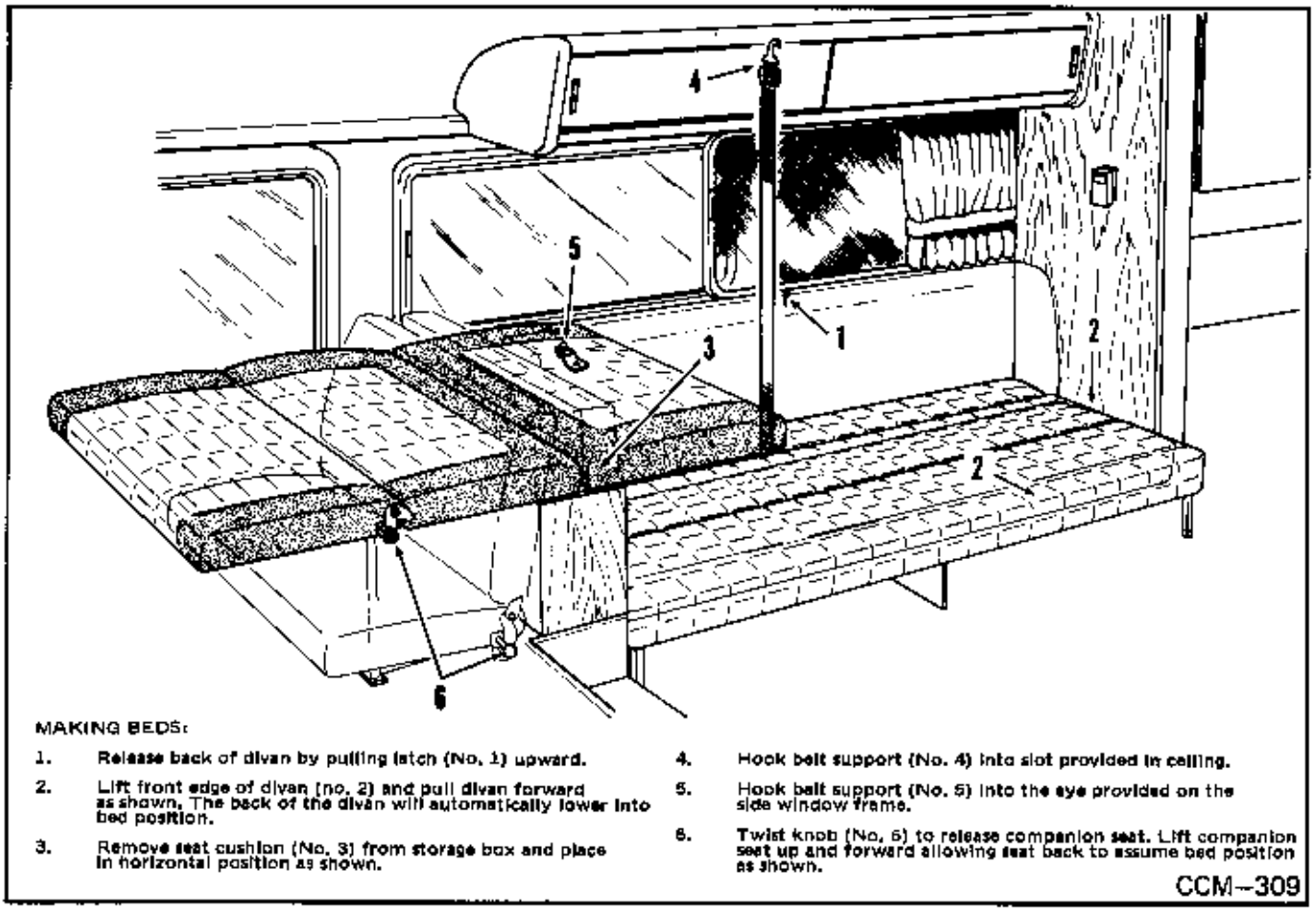


Fig. 44 Converting Companion Seat and Divan Into Beds (If so equipped)

Chair Adjustments:

The chair back position can be adjusted by pulling upward on the control lever. (No. 1, Fig. 45)

The swivel control (No. 2) allows the chair to be rotated. To swivel the chair, turn the control lever and rotate chair to desired position. (Fig. 45)

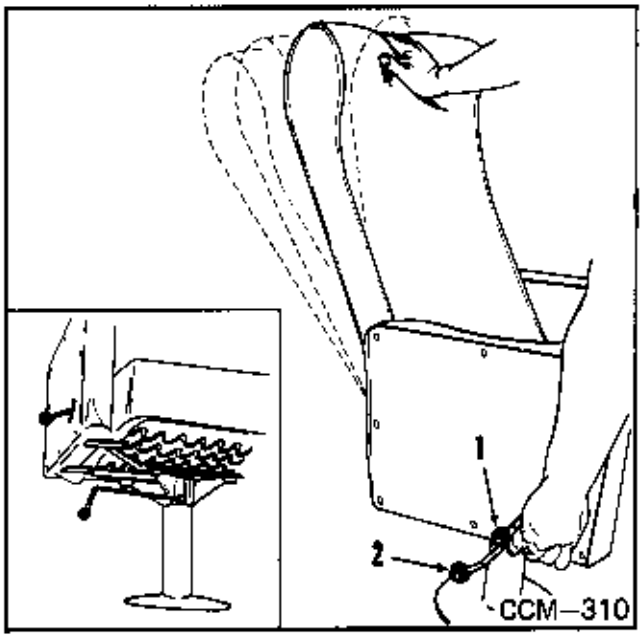


Fig. 45

Rear Step:

To release step, move latch to the left, lower step, and then pivot extension outward. (Fig. 46)

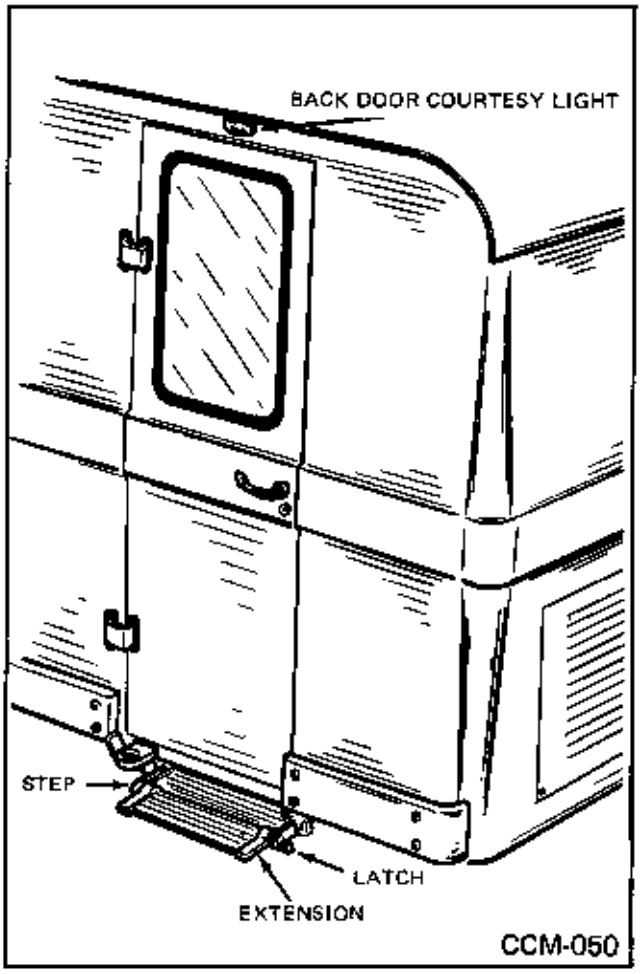


Fig. 46

NOTES

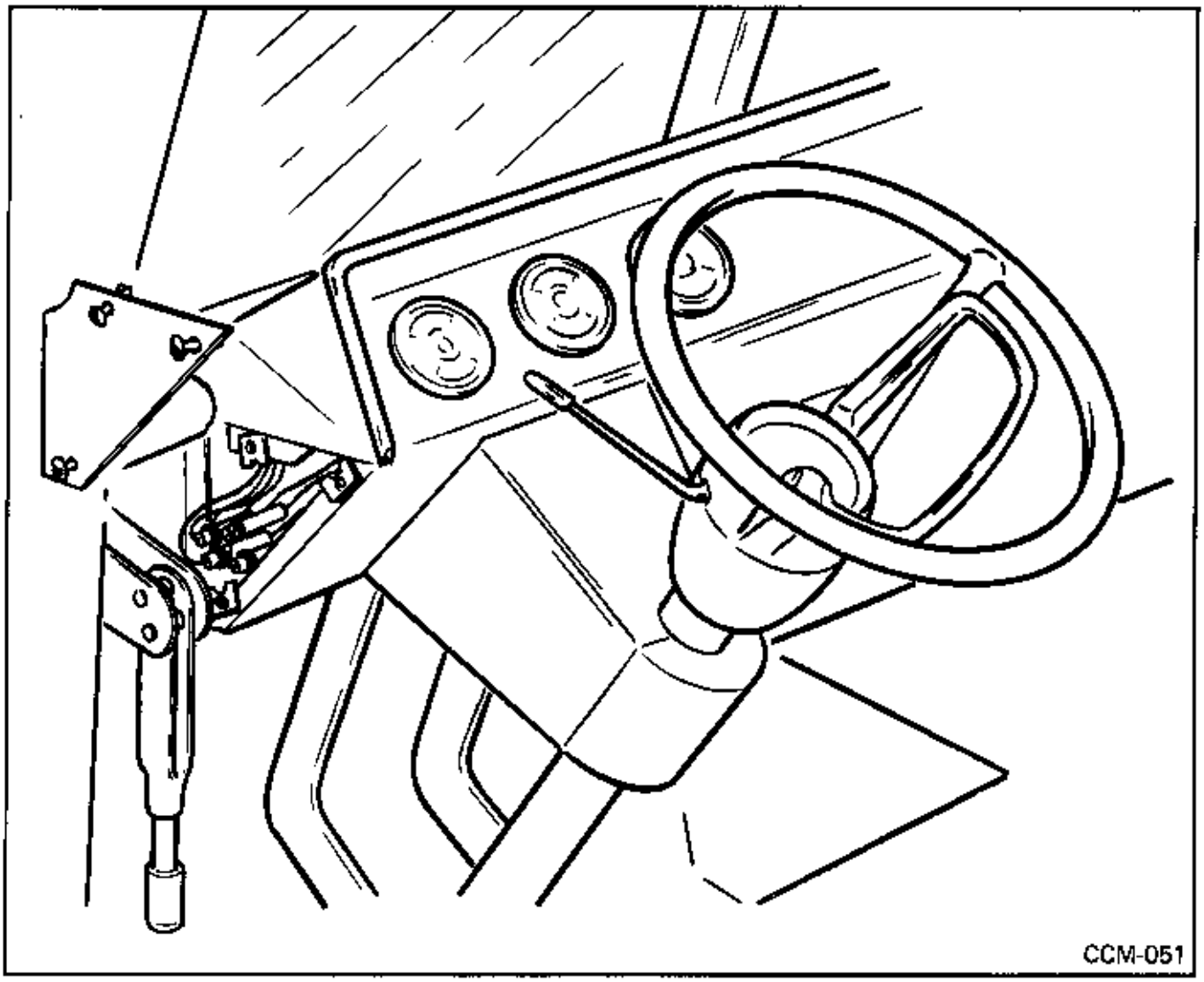


Fig. 47

Fuse Holder Markings:

Instrument Light:	Instrument Panel Lights–SFE–14A
Turn Signal:	Turn Signals and Stop Lights–SFE–14A
Park Light:	Parking Lights (Front)–SFE–14A
Rear Run Light:	License Plate, Tail and Clearance Lights–SFE–14A
Heater:	Heater and Defroster–SFE–14A
Wiper:	Windshield Wiper–SFE–14A
Radio:	Inline Fuse on Power Feed Line, beneath Radio–1AG–5A

Headlights:	15 Amp. Circuit Breaker (located in same compartment as shown on Page 35) Back-up Light Fuse in an Inline Fuse at Trans. Switch.
Aisle Light:	Aisle Light - SFE-14A
Air Conditioner:	(Optional Equipment) 2–30 Amp. Circuit Breakers in parallel, located in Battery Compartment beneath floor board of the Companion Seat Compartment.
Back-up Light Fuse:	14 Amp.–Located at Back-up Light Switch in Transmission Area.
NOTE:	*All fuse holders are marked for identification.*

General:

Wheel Base		120 in.
Tread (Front)	7.50 x 16 Tire (8 Ply)	69 in.
Tread (Rear)	7.50 x 16 Tire (8 Ply)	69 1/4 in.
Tread (Front)	10 x 17.5 Tire (8 Ply)	69 1/2 in.
Tread (Rear)	10 x 17.5 Tire (8 Ply)	70 in.
Over-all Length		225 in.
Over-all Width (Less Mirrors)		95 in.
Over-all Height		96 in.
Over-all Height	(Including Air Conditioner and Luggage Pod)	115 in.
Interior Height		76 in.
Turning Radius	7.50 x 16 Tires (8 Ply)	315 in. (Approx.)
Turning Radius	10 x 17.5 Tires (8 Ply)	316 in. (Approx.)

Transmission:	Four Speed with Synchromesh on Three Gear Positions.
Drive:	Clark Front Wheel Drive with Trans-axle.
Steering:	Power Steering–Recirculating Ball Type.
Front Suspension:	Independent Ball Joint Suspension with Torsional Bars.
Rear Suspension:	Independent Suspension with E-Z Ride Coil Springs.
Brakes:	Power Boosted, 4 Wheel, Self-Energizing Duo-Servo, 2 Shoe Type, Hydraulic 12 1/8" x 2".
Shocks:	Heavy-duty Type--Double Acting Automotive Type.
Windshield Wipers:	Dual Electric, 2 speed with Automatic Washers.
Rear Door:	22" Wide x 69 7/8" High.

CORTEZ DIVISION

Weights:

Maximum Permissible, Loaded (Including Passengers)

Front Axle:	5520 lbs.
(Each Front Wheel)	2760 lbs.
Rear Axle:	3930 lbs.
(Each Rear Wheel)	1965 lbs.
Total:	9450 lbs.

Empty (with full fuel, LPG and Water)

Front Axle:	4975 lbs.
Rear Axle:	3320 lbs.
Total:	8295 lbs.

Capacities:

Engine Cooling	16 Qts.
Engine Cooling and Interior Water Heater	19 Qts.
Engine Crank Case (Add one (1) Quart when Filter Cartridge is changed)	4 Qts.
Steering Pump	1Qt.
Fresh Water Tank	30 Gal.
Waste Holding Tank	30 Gal. (Approximate)
Trans-axle	11 1/2 Pts.
Fuel Tank	40 Gal.

Engine:

Make and Model	Chrysler HB-225-450
Type	In-Line Valve-in-Head
Number of Cylinders	6
Bore (Inches)	3.40
Stroke (Inches)	4.12
Piston Displacement (Cubic Inches)	225
Compression Ratio	8.2 to 1

Compression Pressure at 150 RPM Cranking Speed, Throttle Open Wide . . . . . 130–160 PSI

Maximum Variation between Cylinders . . . . . 20 PSI

Firing Order 1-5-3-6-2-4

Ignition Timing (@ 500 RPM) . . . . . 5^{O} to 6^{O} BTC

Breaker Point Opening . . . . . .017"-.023"

Spark Plugs (Type) N-6

Spark Plug Gap . . . . . .035"

Batteries:

Volts 12

Capacity, Vehicle Battery (Amp. Hours) 70

Capacity, 3 Interior Batteries (Amp. Hours) 70
Two located in rear battery compartment
One located beneath the floor board in
front of the companion seat.
(If so equipped)

Tires and Tubes:

Tire . . . . . 7.50 x 16 (8 Ply)

Wheel . . . . . 16 x 5.50–F Type (8 Lug)

Tube . . . . . 7.50 x 16–TR-75A Valve Stem

Tire Pressure (Air PSI, Cold)

Front 60

Rear 55

(If so equipped):

Tire (Tubeless) . . . . . 10 x 17.5 (8 Ply)

Wheel . . . . . 17.5 x 8.25

Valve Stem . . . . . 1010344 (Type 501)

Tire Pressure (Air PSI, Cold)

Front 60

Rear 45

Distribution Of Storage:

Weight	Front Axle	Each Front Wheel	Rear Axle	Total
Maximum Permissible Loaded Including Passengers	5520	2760	3930	9450
Empty (w/ fuel, L.P.G. and Water)	4975		3320	8295

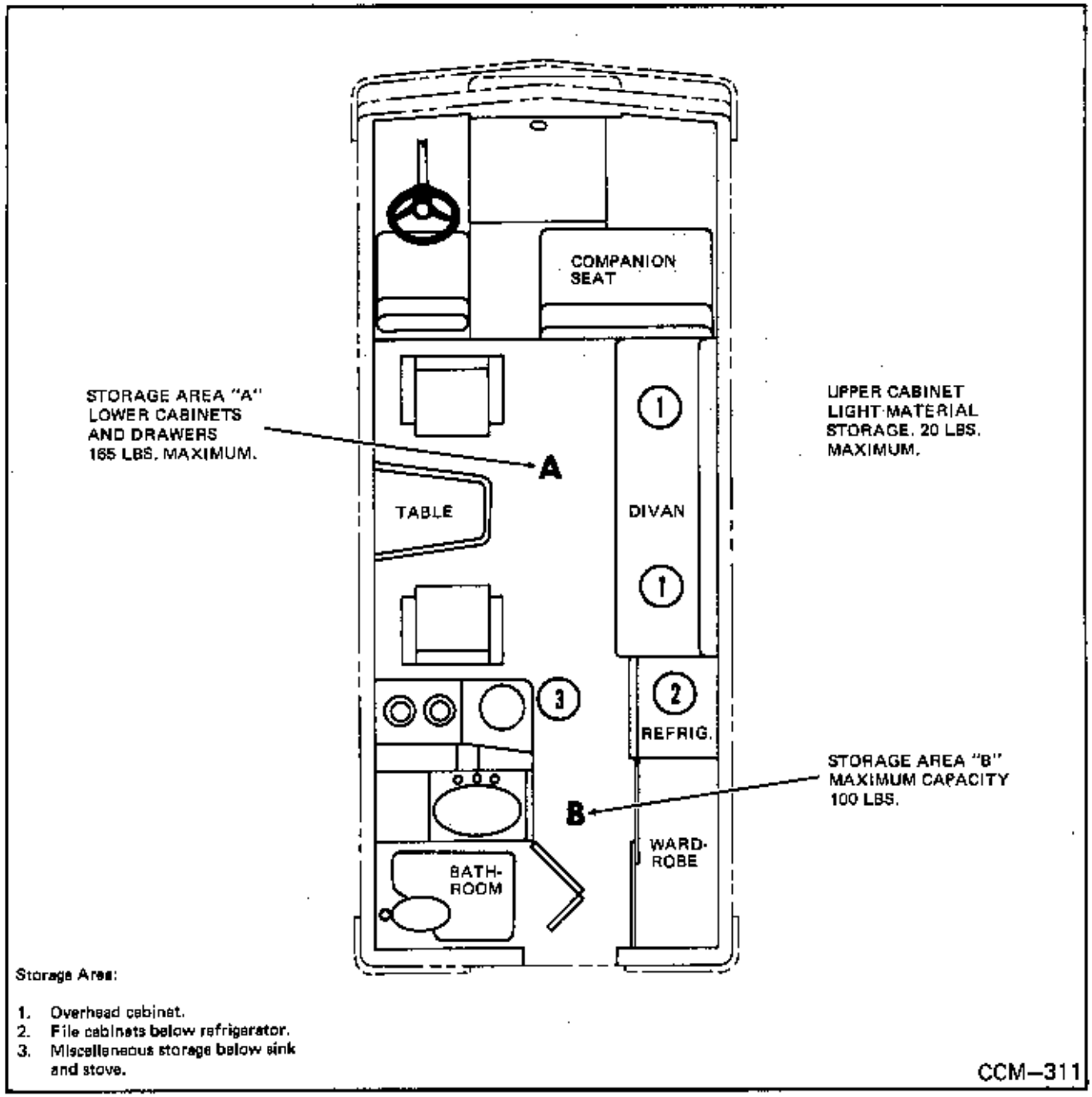


Fig. 48 Floor Plan

CORTEZ DIVISION

The vehicle certification tag is located on the Left Hand side door step well. This tag shows the vehicle serial number, trans-axle number, engine number, proper weight distribution, and tire pressures.

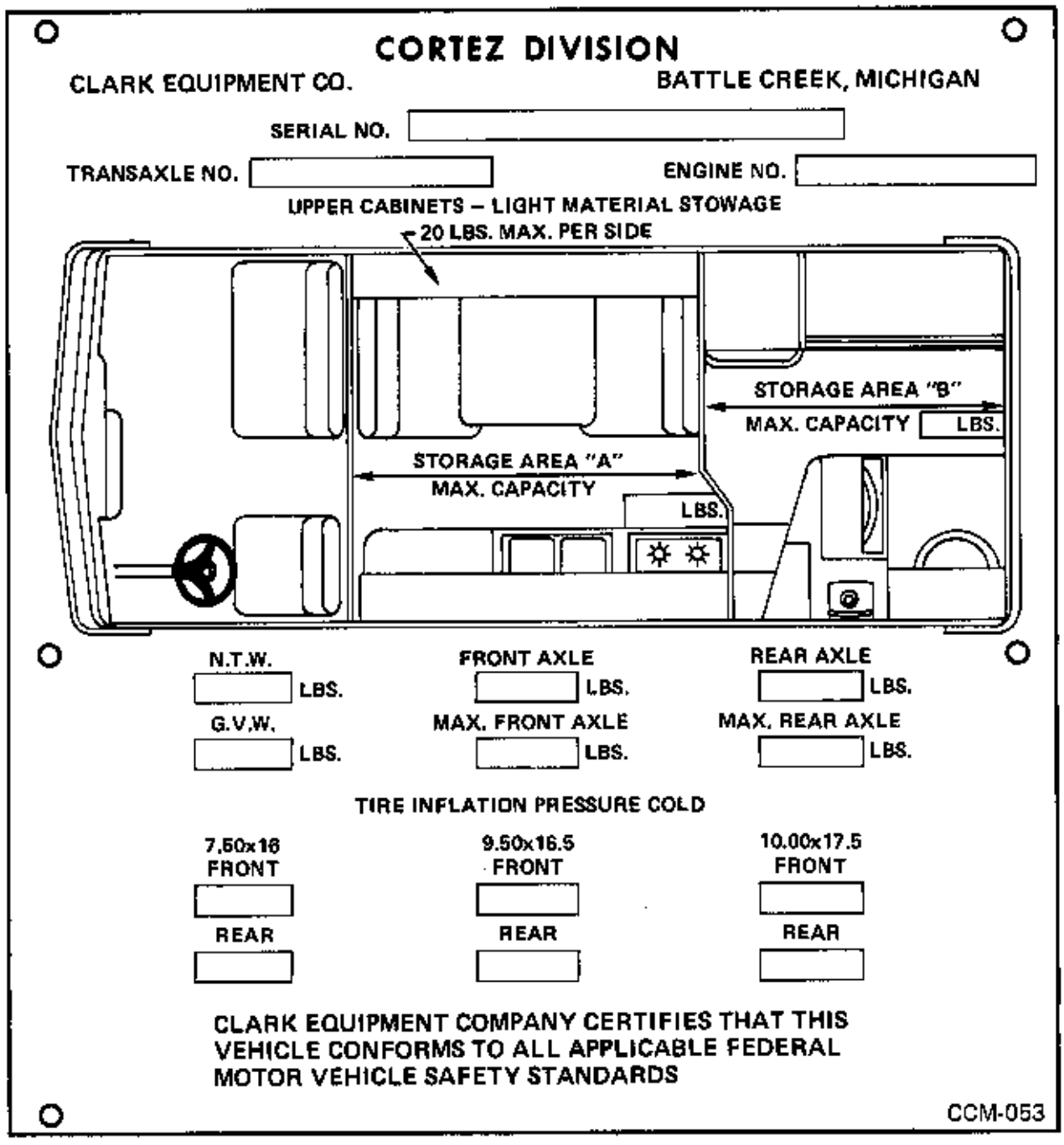


Fig. 49

NOTES

Automotive Fuses and Circuit:

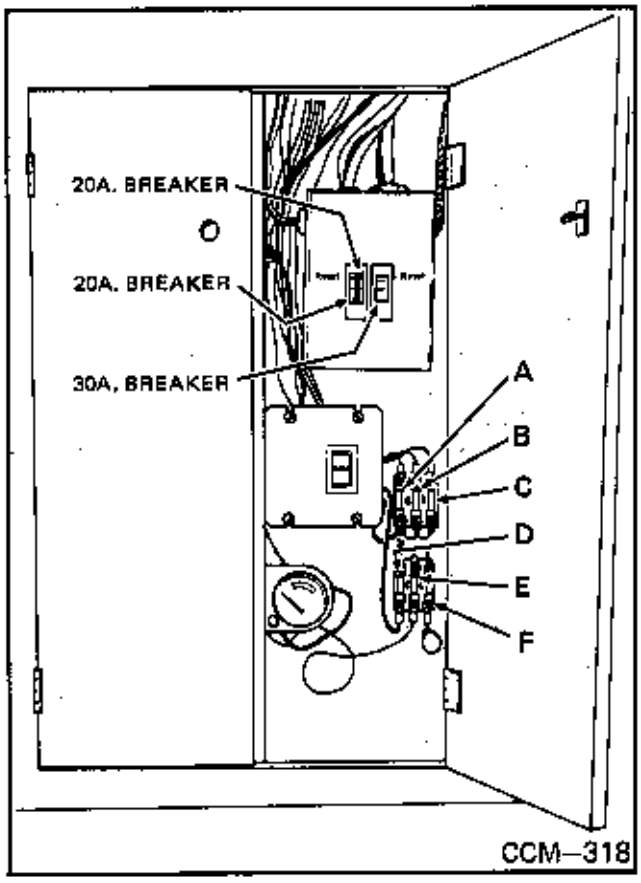


Fig. 50

Fuse "A"	Front Vent – L.H. Valance Lights	A.G.C. 15
Fuse "B"	Rear Vent – R.H. Cabinet Lights Lavatory Lights (2)	A.G.C. 15
Fuse "C"	Galley Vent – Center Dome Light	A.G.C. 15
Fuse "D"	Furnace	A.G.C. 15
Fuse "E"	Water Pump	A.G.C. 15
Fuse "F"	Toilet	A.G.C. 15
Left Breaker	(Circuit Breaker Box) Hot Water Heater	20 A
Center Breaker	(Circuit Breaker Box) Interior Receptacles	20 A
Right Breaker	(Circuit Breaker Box) Main Disconnect	30 A

Automotive Fuses and Circuit Breakers:

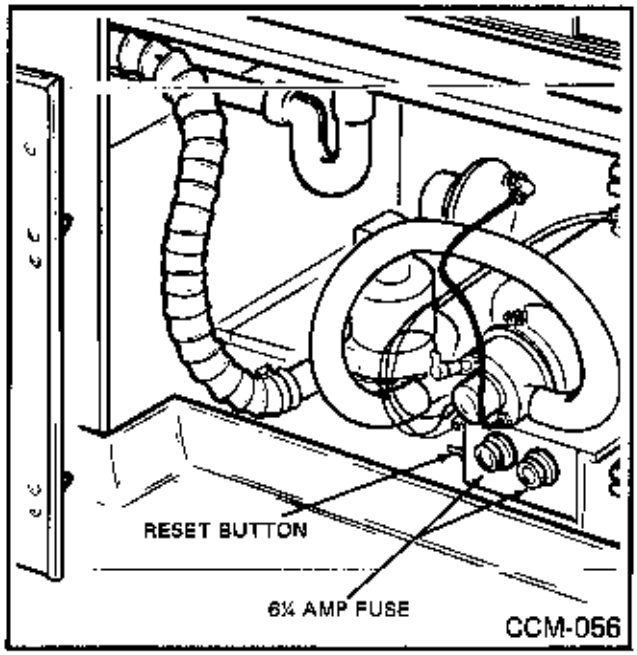


Fig. 51 Interior Heater Fuses

House Type Fustat two (2) required. Heater Fuse 6 1/4 Amp. (location: behind panel, beneath sink, in bathroom). (Fig. 51)

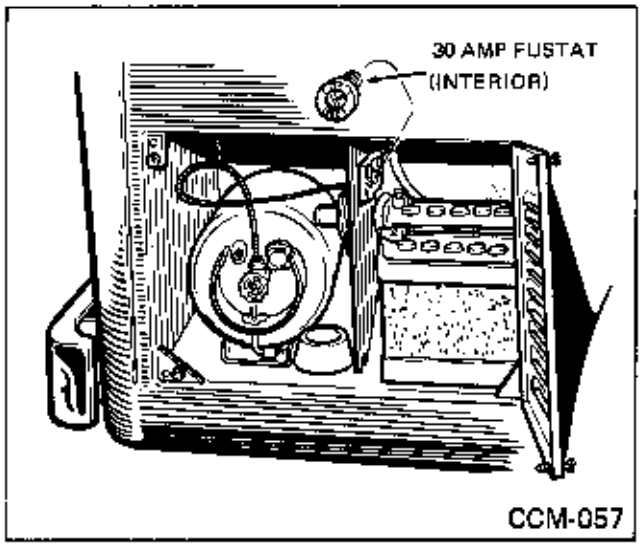


Fig. 52 Interior Fuse

Water Pump:

15 Amp. Fuse (Fig. 50) A.G.C. 15

House Type Fustat one (1) required. Interior Lights 30 Amp. (located in L.P. Gas Compartment) 12 Volt Main Disconnect. (Fig. 52)

NOTES

CORTEZ DIVISION

LUBRICATION INSTRUCTIONS

Lubrication Chart: (Fig. 53)

These recommendations should be followed by all personnel who service Cortez units and by all Cortez owners.

NAME OF UNIT	CAPACITY	HOW LUBRICATED	TYPE OF LUBRICANT	WHEN REQ'D.
Hydrovac	2 oz.	Plug rear lower	Bendix cylinder lubricant	***E
Power steering	1 qt.	Reservoir cap	Type "A" fluid AQ-ATF	**E
Engine air cleaner	Dry	Clean or replace		**E, H
Engine oil	5 qts. with oil filter change	Drain old oil and add new oil	See Chrysler engine manual	**D, F
Oil filter cartridge				**D, F
Distributor oil cup	3 to 5 drops	Oil can oiler	S.A.E. 10 oil	**E
Distributor cam		Thin coating	Cam lubricant	**K
Distributor felt wick	2 to 3 drops	Oil can	S.A.E. 10 oil	**K
Batteries			Distilled water	**C
Fuel filter		Clean	Cleaning solvent	**H
Front wheel bearings		Repack	* (See Note)	**J
Rear wheel bearings		Repack	* (See Note)	**I
Transmission	11 1/2 pts.	Drain old oil and add new oil	S.A.E. 50 oil H.D.	****E, **G
Power train steering and control linkage, clutch rel. shaft		Grease	* (See Note)	**E
Shift lever	2 oz.	Raise shift lever ball	Lubriplate Clark specification MS 45	**E
Clutch release bearing		Grease cup rotate one turn	* (See Note)	**E
Clutch pilot shaft, bearing		Thinly coat	* (See Note)	**K

CORTEZ DIVISION

NAME OF UNIT	CAPACITY	HOW LUBRICATED	TYPE OF LUBRICANT	WHEN REQ'D
Engine coolant	16 qts.			**A, B
Brake master cylinder		Plate top of instrument panel	S.A.E. 70R3	**E
Clutch master		Plate top of instrument panel	S.A.E. 70R3	**E
Tire inflation 7.50 x 16 10 x 17.5	Front Rear 60 P.S.I. 55 P.S.I. 60 P.S.I. 45 P.S.I.	Cold		**E
Manual controls		Oil can	S.A.E. 10 oil	**E

* Recommended Lithium Soap Base Grease
Standard Oil Amolith MP
Shell Alvania EP
Texaco Multi-Fax MP

** A—Check daily—add as required.

** B—Check at refueling—add as required.

** C—Check weekly—add as required.

** D—Replace at first 1,000 miles.

**** E—Change at first 3,000 miles.

*** E—Every 20,000 miles or one (1) year, service or lubricate as required.

** E—Every 3,000 miles check, service or lubricate as required.

** F—Change every 3,000 miles.

** G—Change every 6,000 miles.

** H—Change every 10,000 miles.

** I—Every 12,000 miles repack rear wheel bearings.

** J—Every 25,000 miles repack front wheel bearings.

** K—Lubricate when replacing parts.

NOTES

Lubrication Chart Locations:

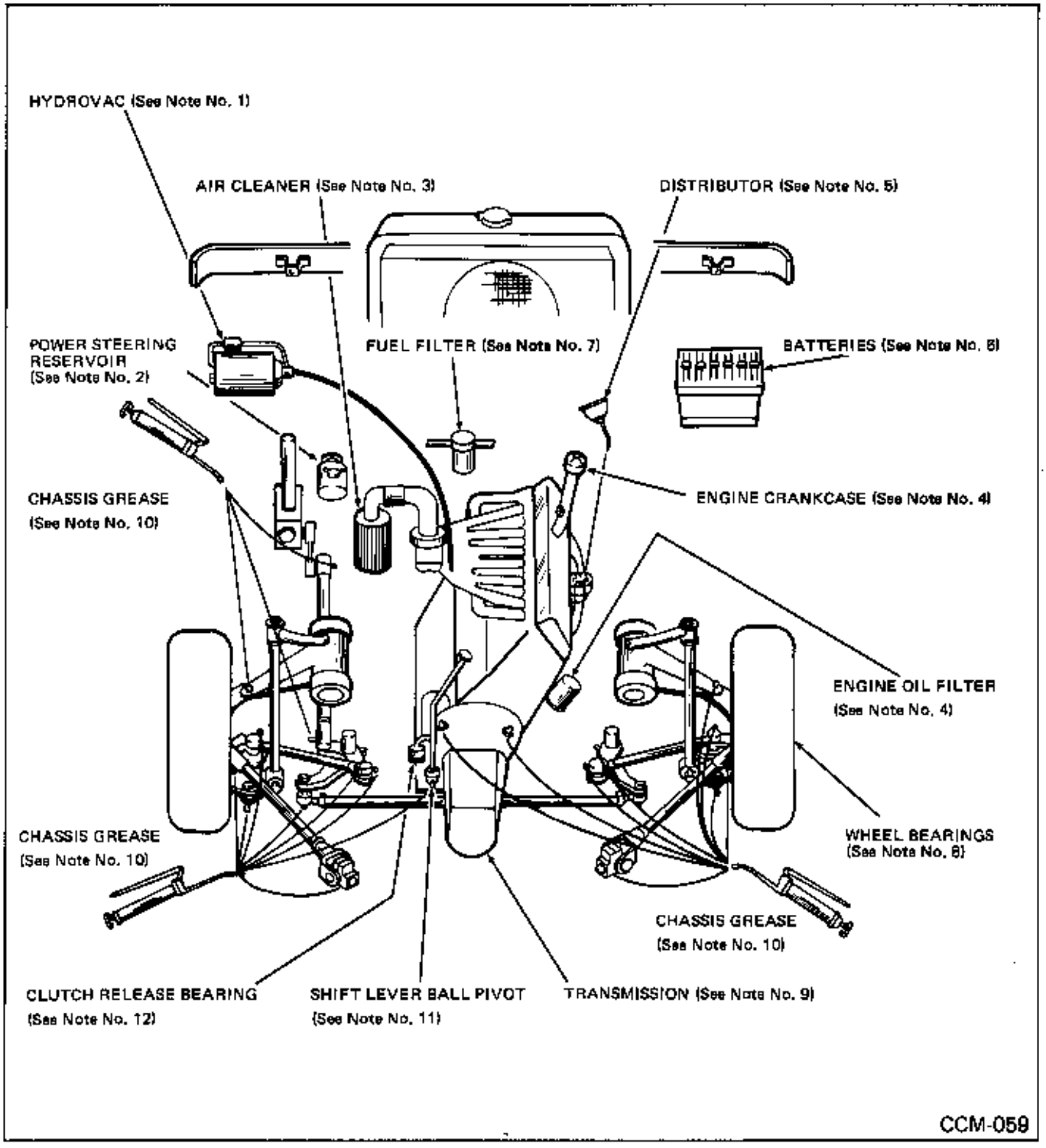


Fig. 54

Note No. 1

Hydrovac Unit (Power Brakes):

Every 20,000 miles or 1 year, service or lubricate as required.

The hydrovac unit is located in the front left hand corner of the vehicle ahead of the L.H. steer wheel. Refer to the lubrication chart for approximate location.

With engine "off" and brakes released, wipe hydrovac free of dirt and remove plug from rear and lower center of hydrovac unit. (Fig. 55) Inject Vacuum Cylinder Lubricant into port until fluid begins to run out of the port. (Capacity approximately two (2) ounces). Replace plug after filling.

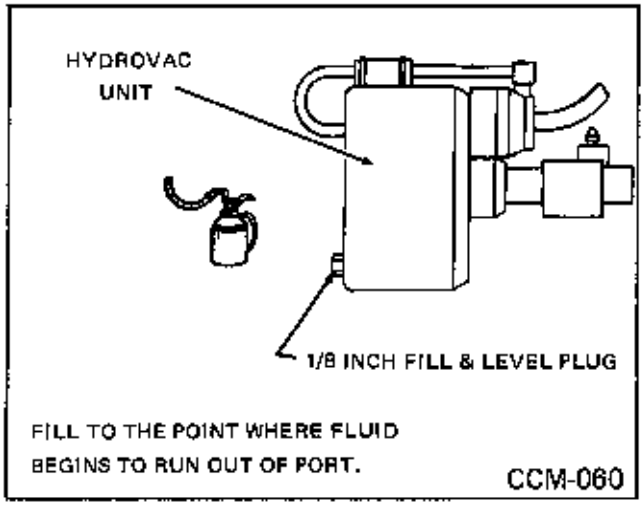


Fig. 55 Hydrovac Lubrication

Note No. 2

Power Steering Reservoir:

Check fluid level every 3,000 miles (Refer to "Service Opening", Fig. 67 for location of reservoir). Before removing reservoir cap, wipe outside of cap and reservoir so that dirt will not fall into the reservoir. Turn cap one half turn to the left and remove. Fluid level should be 1/2 to 3/4 of an inch below the top of the filler neck. If additional fluid is required, use Type "A" Automatic Transmission Fluid. Containers must have number prefixed by AQ—ATF.

Fig. 56 Bendix Vacuum Cylinder Lubrication

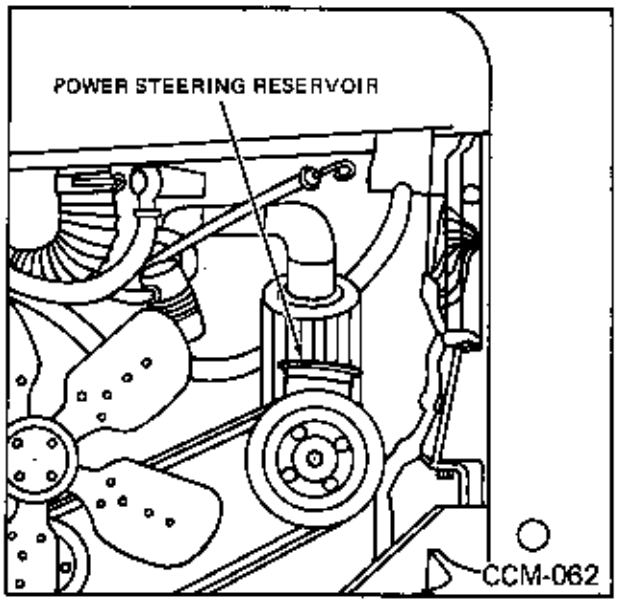


Fig. 57 Power Steering Reservoir

Note No. 3

Engine Air Cleaner:

The air cleaner element should be cleaned every 1,000 miles and should be replaced every 10,000 miles or every six (6) months, whichever first occurs. Clean or replace element more often if the vehicle is driven in dusty or sandy areas. The air cleaner is accessible through the Service Opening. (Fig. 67)

Unscrew fastener and remove cover. (Fig. 58) Remove element and shake out accumulated dirt. Do not wash, oil, or immerse element in fluid. Before installing the cleaned (or replacement) element, check to be sure the gasket on the cleaner body is not damaged. If it is, gasket replacement is required.

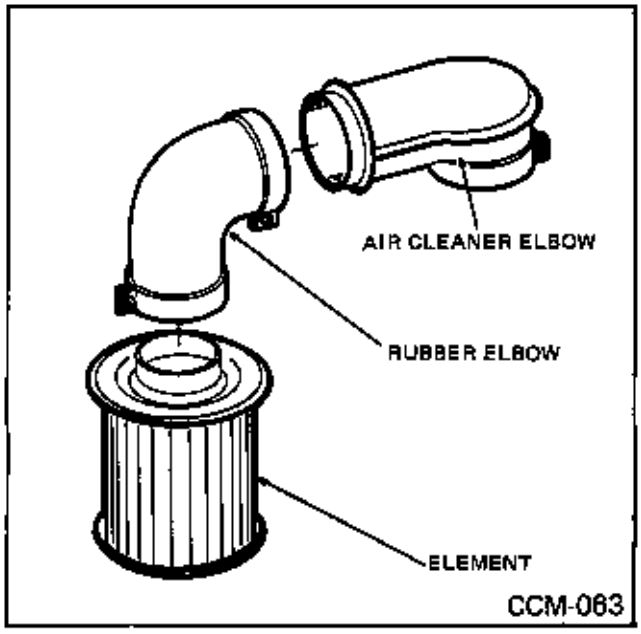


Fig. 58 Engine Air Cleaner

Inspect each crankcase ventilation hose (refer to the Lubrication Chart, every 10,000 miles or every six (6) months, whichever first occurs, to be sure all connections are secure at the crankcase fill pipe, carburetor, tappet cover, and intake manifold.

Note No. 4

Engine Crankcase Oil:

A good quality engine oil having both an S.A.E. designation and an MS service classification on the container is the only type oil that should be used.

Check crankcase oil level every time the vehicle gas tank is refilled. Oil need be added only if the oil level is close to or below the add-oil mark on the dipstick. (Fig. 59)

Fig. 59 Crankcase Dipstick

CAUTION: DO NOT RUN THE ENGINE WITH THE OIL LEVEL BELOW THE ADD-OIL MARK ON THE DIPSTICK. DO NOT OVERFILL THE CRANKCASE. FILL TO THE FULL MARK ON THE DIPSTICK. TOO MUCH OIL IN THE CRANKCASE WILL BRING THE LEVEL HIGH ENOUGH FOR THE CONNECTING RODS TO DIP, THUS CAUSING EXCESSIVE QUANTITIES OF OIL TO BE THROWN TO THE CYLINDER WALLS RESULTING IN OIL CONSUMPTION, SMOKING, EXCESSIVE CARBON DEPOSITS, AND FOULED SPARK PLUGS.

Drain and refill engine crankcase oil (with engine at operating temperature) after the first 1,000 miles and every 3,000 miles thereafter; or, more often in dusty areas or under severe operating conditions. After refilling crankcase, run engine a few minutes and add oil as required to bring oil level to full mark indicated on the dipstick. Capacity without oil filter, four (4) quarts—with oil filter, five (5) quarts.

WARNING

THE ELECTRIC CIRCUIT ON THIS ENGINE IS NEGATIVE GROUND

CCM-065

Fig. 60

OIL—RECOMMENDED VISCOSITY

ANTICIPATED TEMPERATURE RANGE	RECOMMENDED VISCOSITY GRADE NO.	RECOMMENDED MULTI-VISCOSITY OIL
Above + 32 ° F	S.A.E. 30	S.A.E. 20W-40
Low as +10 ° F	S.A.E. 20-W	S.A.E. 20W-40 S.A.E. 10W-30 S.A.E. 10W-20
Low as—10 ° F	S.A.E. 10-W	S.A.E. 10W-30 S.A.E. 10W-20 S.A.E. 5W-20
Below—10 ° F	S.A.E. 5-W	S.A.E. 5W-20

Engine Oil Filter:

Replace oil filter cartridge after the first 1,000 miles and every 3,000 miles thereafter (the filter cartridge should be changed with every engine oil change).

Remove old filter cartridge. When installing new filter cartridge, install new gasket.

After installing new cartridge and gasket, operate engine a few minutes and check for leaks. Then shut engine off and check crankcase oil level. Add oil as required to compensate for oil absorbed by the new cartridge. Fill until oil level is at the full mark on the dipstick.

Note No. 5

Distributor:

The distributor oil cup should be filled once with S.A.E. No. 10 engine oil every 3,000 miles.

Distributor Cam:

When installing new breaker points (approximately every 10,000 miles depending on vehicle usage), clean off old lubricant to the cam before assembling new points.

Apply two or three drops of light engine oil to the felt wick in the top of the cam. SEE THAT NO OIL GETS ON OR NEAR THE BREAKER POINTS.

Note No. 6

Batteries:(If so equipped)

The vehicle battery and one (1) interior battery is located beneath the floorboard in front of the companion seat. (Fig. 61)

Keep the batteries filled with distilled water to the bottom of the ring in the filler well. During freezing weather, the vehicle should be driven for

five or six miles, after adding water, to insure thorough mixing of water with the battery electrolyte solution.

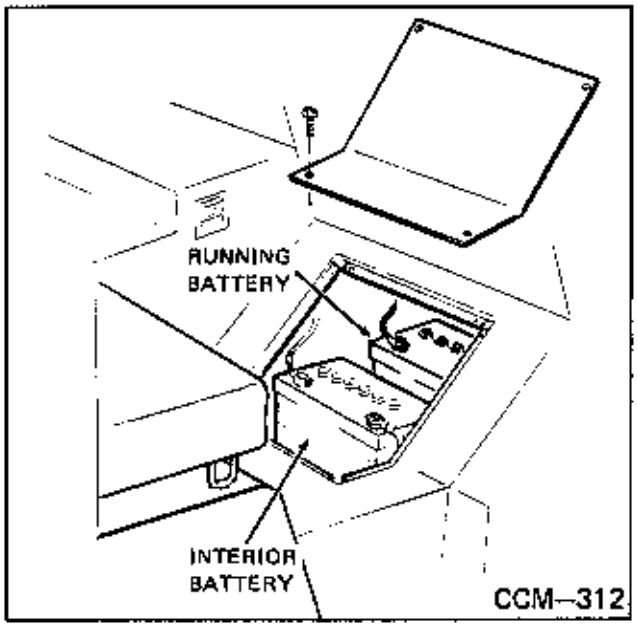


Fig. 61 Battery Compartment

Note No. 7

Fuel Filter (Engine):

Clean the fuel filter every 10,000 miles. Remove filter bowl and filter element—clean both in a Stoddard type cleaning solvent. Check the fuel filter hose line connections to be sure hose clamps are securely mounted.

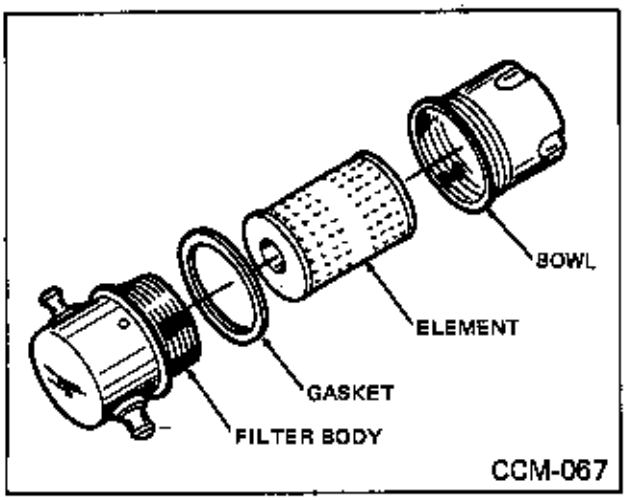


Fig. 62 Engine Fuel Filter

Note No. 8

Steer Wheel Bearings:

Clean, inspect, adjust, and repack wheel bearings every 25,000 miles. Use Shell Alvania No. 1 E.P. Lithium Base grease or equivalent.

Rear Wheel Bearings:

Clean, inspect, adjust, and repack wheel bearings every 12,000 miles. Use Shell Alvania No. 1, E.P. Lithium Base Grease or equivalent.

Note No. 9

Transmission:

Check lubricant level at every lubrication interval (3,000 miles). Drain old lubricant (at operating temperature) after the first 3,000 miles and refill with S.A.E. 50 Heavy Duty Engine Oil. (Capacity 11 1/2 pints). Drain and refill every 6,000 miles thereafter. (Fig. 63)

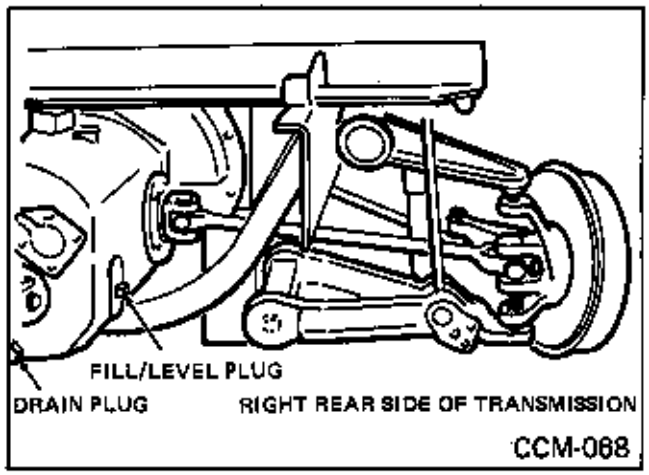


Fig. 63 Transmission (Rear View)

Note No. 10

Front Suspension Lubrication:

Lubricate the front suspension, ball joints, steering linkage, steering linkage bell cranks, universal joints and drive shafts, clutch release shaft, and gear shift linkage with a Lithium Soap Multipurpose Grease or equivalent every 3,000 miles.

Note No. 11

Shift Lever Ball Pivot:

Remove the engine compartment doors for access to the shift lever ball pivot. Remove shift lever dust cover and lubricate ball pivot with two (2) ounces of Lubriplate (Clark specifications MS-45) every 3,000 miles. The shift lever linkage grease fitting is accessible from beneath the vehicle and should be lubricated per the instructions in Note No. 10 (Fig. 64)

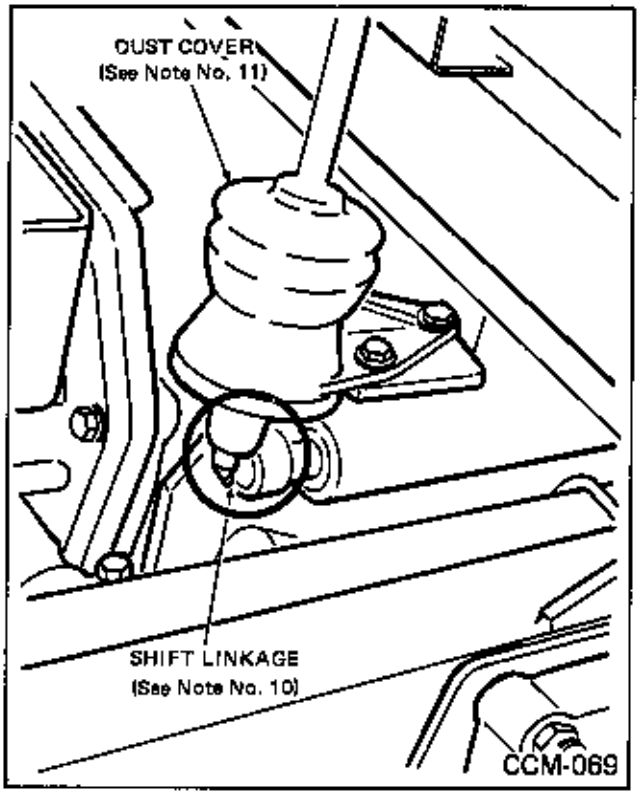


Fig. 64 Shift Lever Ball Pivot

Note No. 12

Clutch Release Bearing:

A grease cup is used to lubricate the clutch release bearing and is accessible from beneath the vehicle. Rotate the cup one (1) complete turn every 3,000 miles. When it is necessary to refill the grease cup, use a Clutch Release Bearing High Temperature Grease (Shell 5A, Texaco 1199 or equivalent). Refer to lubrication chart Fig. 54

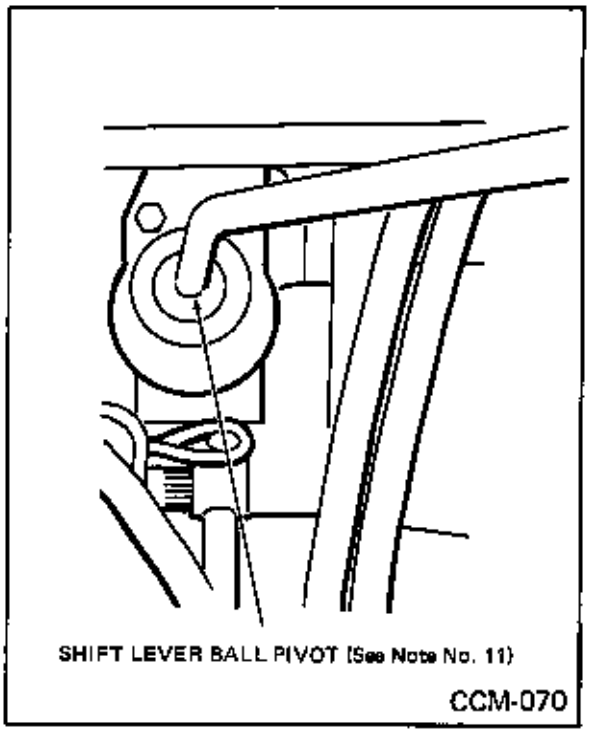


Fig. 65 Shift Lever Lubrication

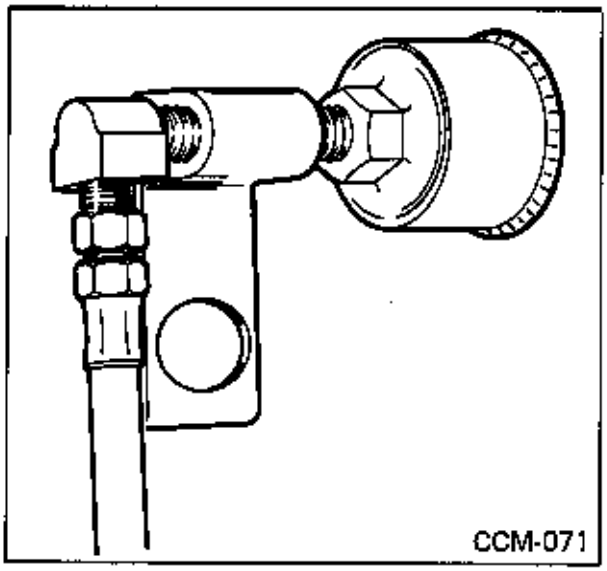


Fig. 66 Release Bearing Grease Cup

Radiator:

To Check water level: The radiator is equipped with a 14 pound pressure type radiator cap. To remove the cap, place a cloth over cap and turn left (a quarter of a turn) to first stop, allowing pressure and steam in the cooling system to safely escape through the overflow tube in the radiator,

then remove cap. The coolant level should be within one (1) inch of the top. If required, add clean water, or add proper amount of anti-freeze solution if operation is in freezing weather (32 degrees or below). For proper amount of anti-freeze solution, refer to the instructions on the anti-freeze container.

Windshield Washers and Container:

Windshield washer container (Fig. 67) should be filled at all times. Avoid operating the washers when bag is empty. Fill the bag only 3/4 full during the winter months to allow for expansion if the temperature should fall low enough to freeze the solution. Windshield washer solvent aids in cutting grease and road film and is recommended for use except in freezing weather. In freezing weather, a "Windshield washer anti-freeze" should be added.

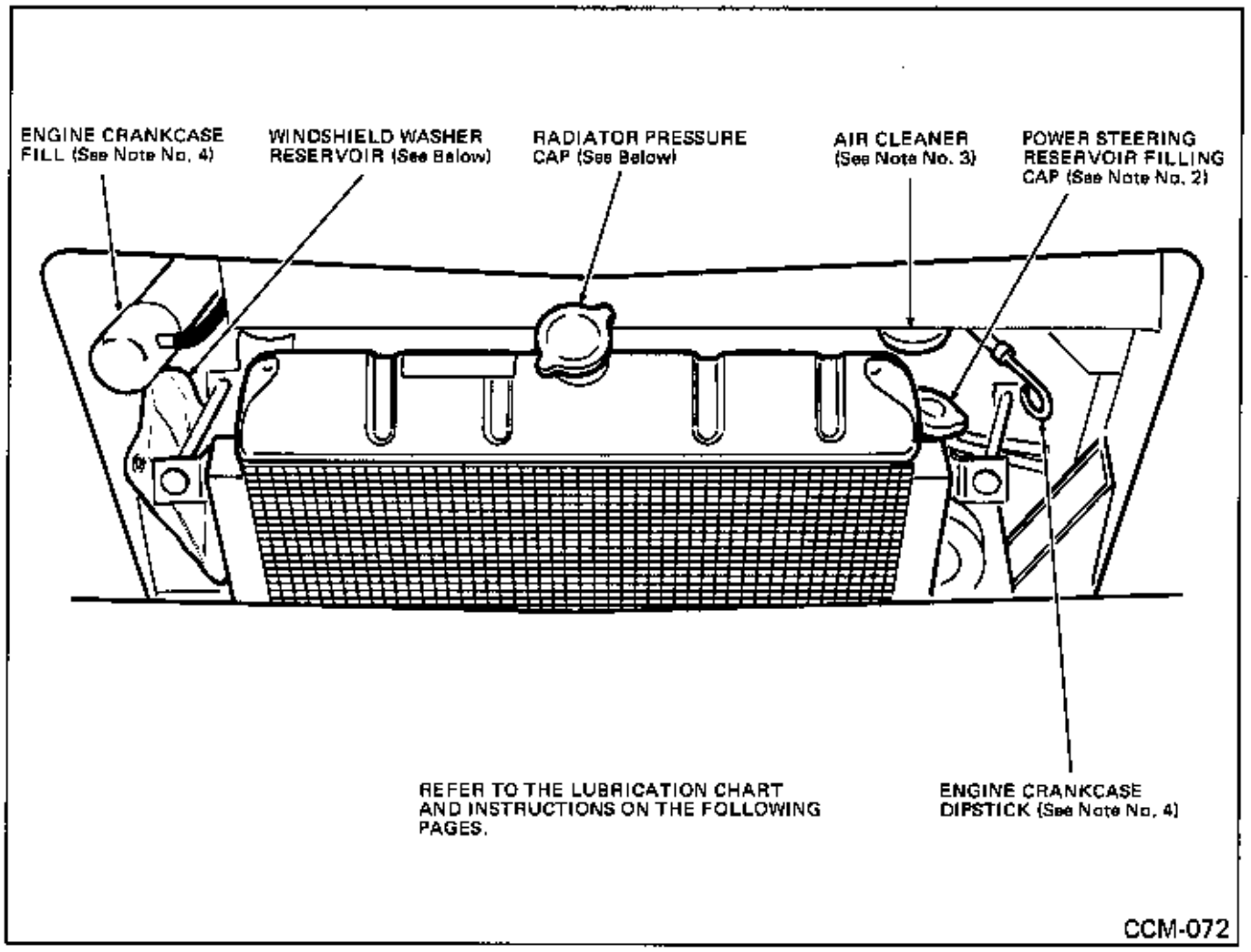


Fig. 67 Service Opening

Engine Compartment:

The engine compartment doors may be removed by loosening the screws (located at each corner of the doors) until free of the compartment frame.

Brake and Clutch Master Cylinders:

The cylinders are accessible by removing a plate on the dash panel above the instrument cluster. (Fig. 69)

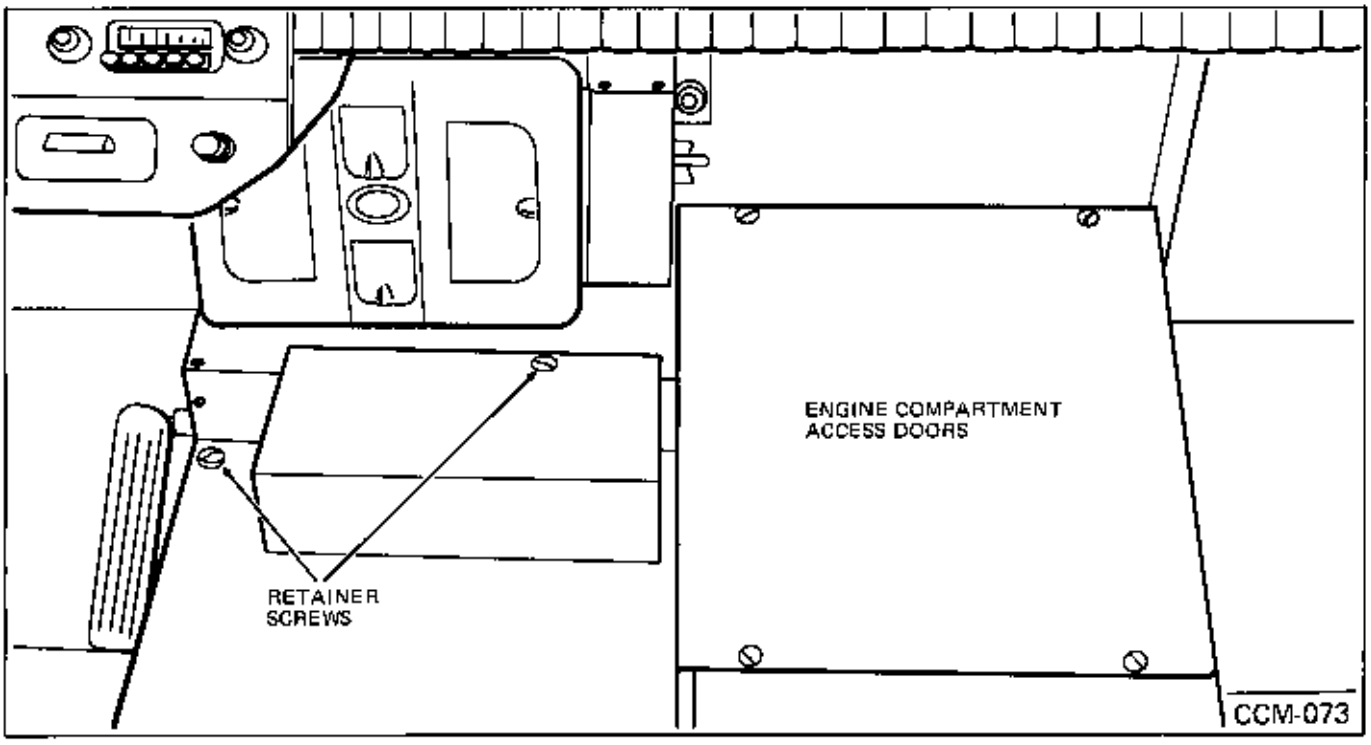


Fig. 68 Engine Compartment

Check the fluid level every 3,000 miles. Fluid should be within 1/4" of the top of the reservoir. If fluid level is low, fill with S.A.E. 70R3 Heavy Duty Brake Fluid.

Periodically check filler cap vent hole for obstructions. The vent (of each cap) must be open at all times.

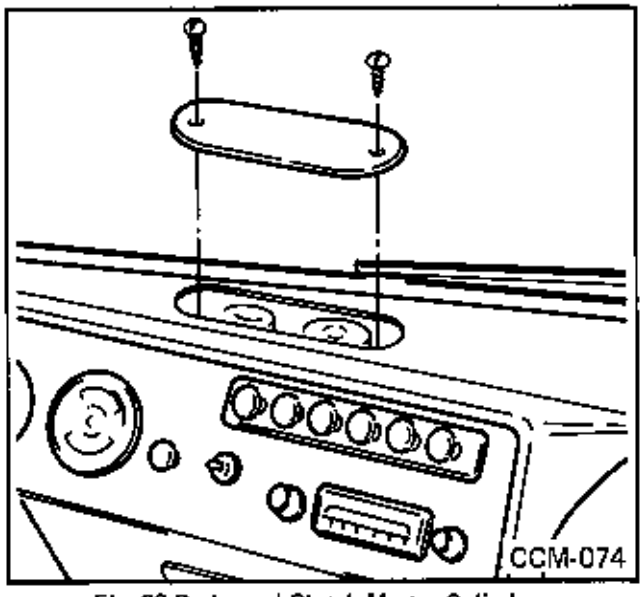


Fig. 69 Brake and Clutch Master Cylinders

NOTE: Add distilled water immediately before charging. Do not add immediately after a charge.

CAUTION: NEVER ALLOW A SPARK OR FLAME TO BE BROUGHT NEAR THE BATTERY VENT OPENINGS. HYDROGEN GAS, WHICH FORMS IN NORMAL BATTERY OPERATION, MAY BE PRESENT AND EXPLODE.

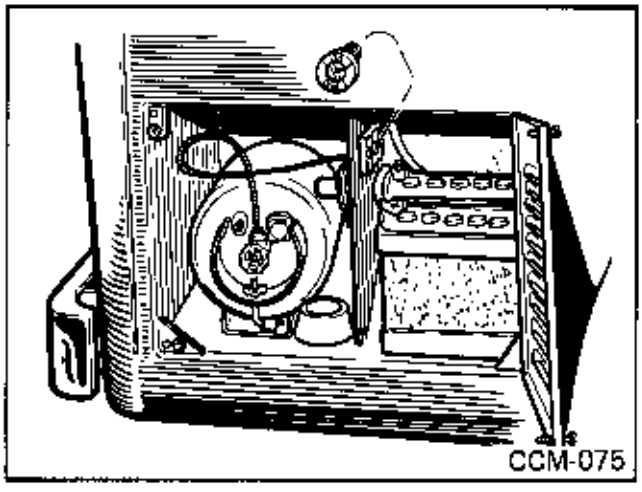


Fig. 70 Interior Batteries

Towing Instructions:

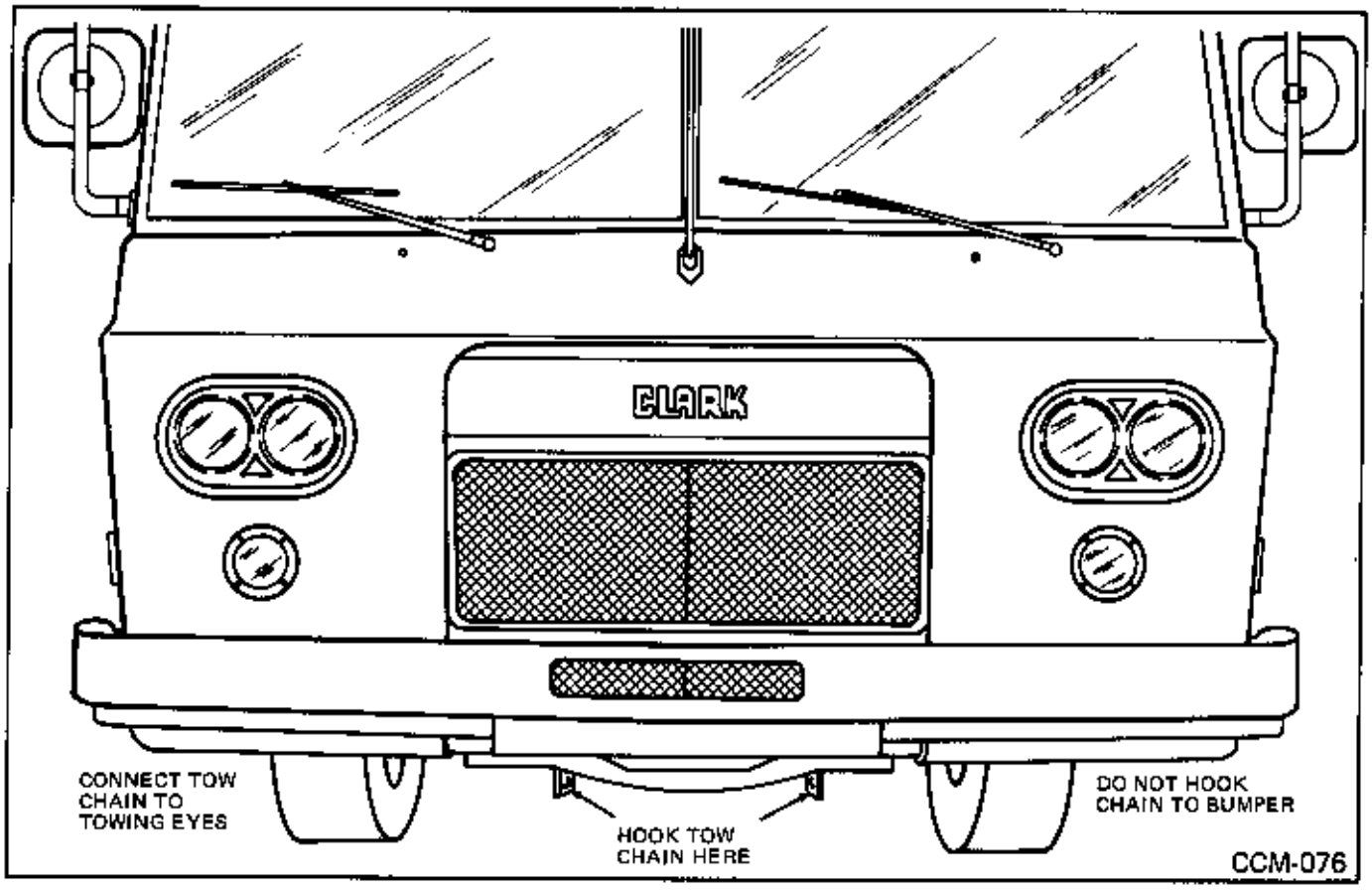


Fig. 71

The vehicle should be towed at a speed not to exceed 25 miles per hour by any one of the following methods:

Towing with Front Drive Wheels off the Road:

Raise front of vehicle so the front drive wheels sufficiently clear the ground.

Towing with Front Drive Wheels Remaining on the Road:

Place transmission shift lever in 4th gear. Fully depress clutch pedal to actuate the hydraulic clutch release and block or hold pedal in the down position. Each 1/2 hour the clutch pedal should again be depressed and blocked to make sure that the clutch does not become engaged during towing.

For long distance towing, it is recommended that the front drive shafts be removed.

NOTES

Tire Change And Care:

Spare Tire Removal:

The vehicle should be parked on as level a surface as possible. Shut off engine, move gear shift lever to first gear position, and set hand brake.

Block the wheel (front and rear) that is diagonally opposite the one to be removed.

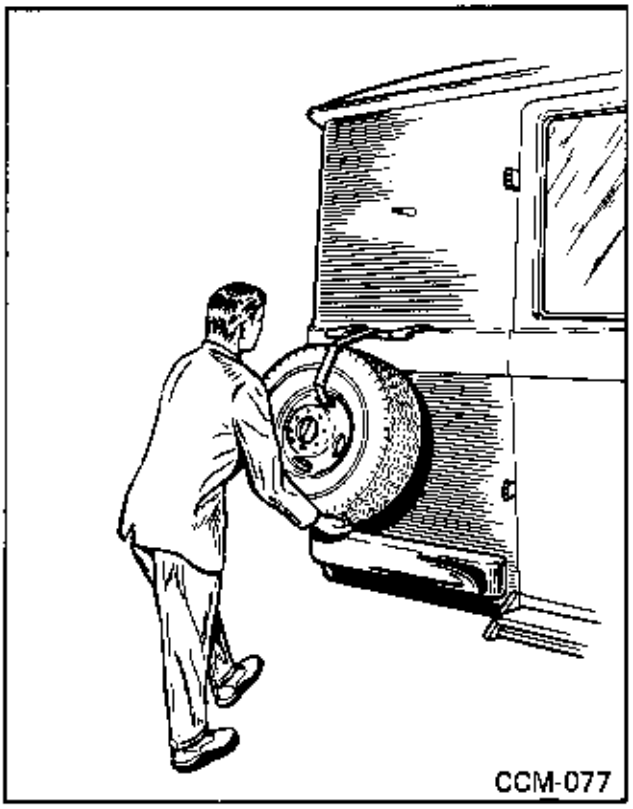


Fig. 72 Step 1-Spare Tire Removal

Remove spare tire cover.

Remove nut "A" (Fig. 73) securing the spare wheel bracket to vehicle.

Allow wheel and bracket to swing to the "down" position.

Remove nuts "B" and "C" (Fig. 73) securing wheel to bracket. Pull outward on lower portion of wheel allowing it to slide free of bracket and lower to the ground.

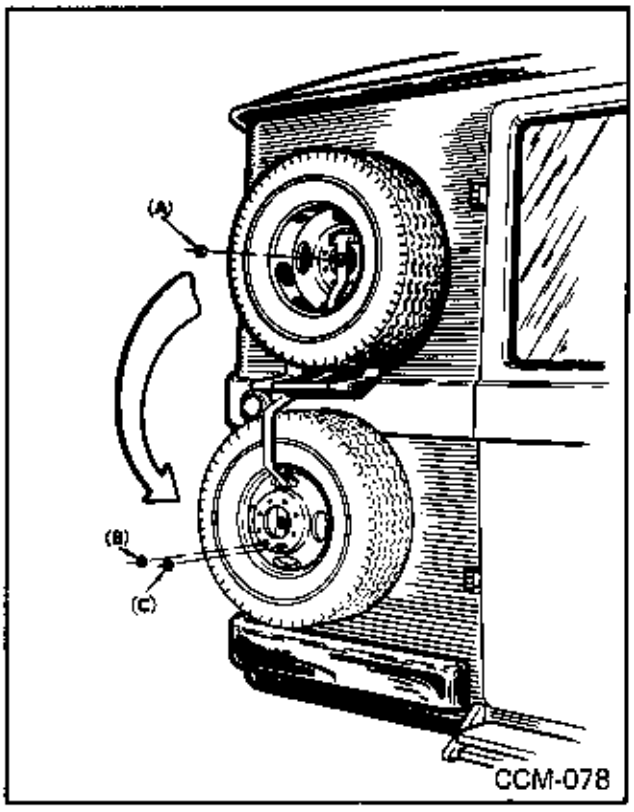


Fig. 73 Step 2 – Spare Tire Removal

Place jack and jack extension under jack pad. Jack pads are located in front of each rear wheel and behind each front wheel. Be sure jack is centered and in line with jack pad. (Fig. 74)

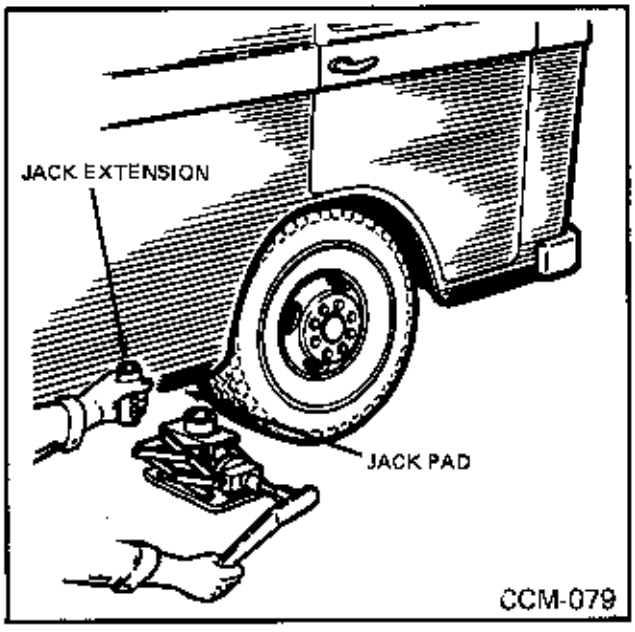


Fig. 74 Jack Position

Insert jack handle in jack and turn until most of the vehicle weight is off the tire.

Loosen wheel lug nuts. Do Not remove them. Now continue to jack the vehicle until tire is clear of ground.

Remove lug nuts and remove wheel.

Install spare tire and tighten lug nuts as tight as possible.

Lower vehicle until tire contacts the ground and tighten lug nuts securely.

Lower vehicle to ground, remove jack, jack extension, and blocking from wheels.

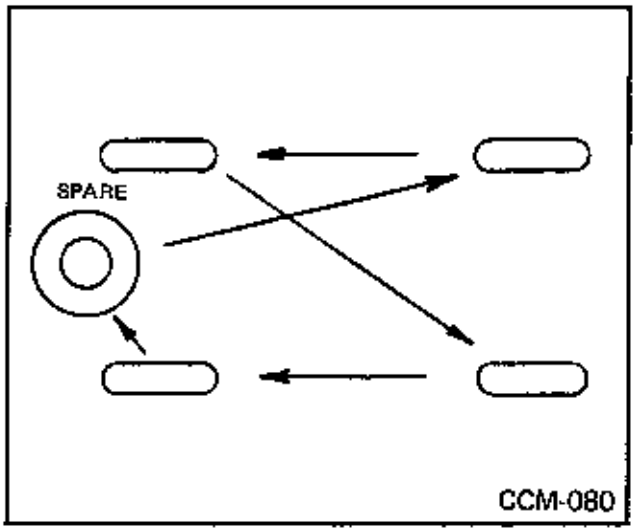


Fig. 75 Tire Rotation

Tire Care and Rotation:

Wheel alignment and rotate the tires every 6,000 miles. Tire life can be prolonged by rotating all four (4) wheels and the spare (Fig. 75) and at the time interval specified.

Inflation Checks:

The vehicle is designed to operate most efficiently with the tires inflated (cold) to the specified pressures. Excessive pressures can adversely affect riding comfort and quietness. Under-inflation will hamper vehicle handling and tire life. Inspect for proper inflation regularly.

Tire Inflation:

7.50 x 16 (8 Ply) Air PSI Cold	Front	60
	Rear	55
10 x 17.5 (8 Ply) Air PSI Cold	Front	60
	Rear	45

Power Train Removal:

All power train components are mounted in one cradle which is easily removed after disconnecting control attachments.

Block front and back of each rear tire. (Fig. 76)

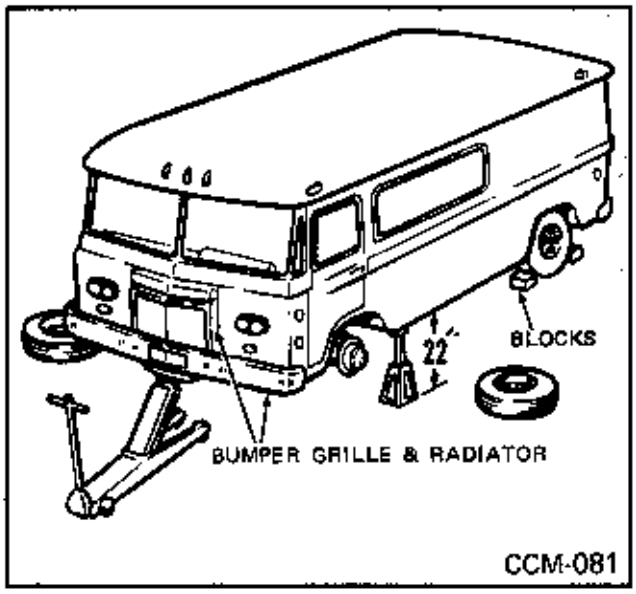


Fig. 76

Jack front of unit up to 22" at jack pad location and place jack stands in each side. Remove jack. (Fig. 76)

Remove right and left wheels and tires. (Fig. 76)

Disconnect battery cables. Remove front bumper bolts. (Fig. 76)

Remove grill. (Fig. 76)

Drain radiator.

Remove radiator's two lower bolts and nuts, and two nuts on support rods. Remove radiator.

Disconnect wiring on engine side in the front left

side of the engine compartment and any optional equipment wiring attached between body and power train. (Fig. 77)

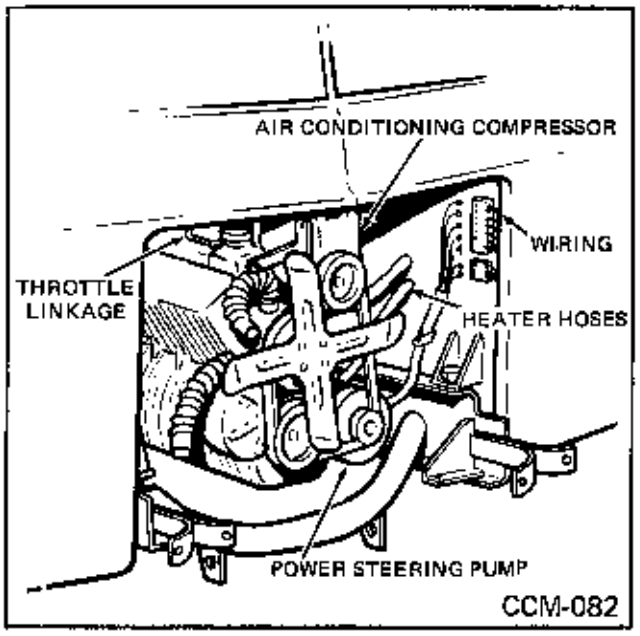


Fig. 77

Remove power steering pump from engine and tie out of the way on the front of the Cortez. (Fig. 77)

Remove air conditioning compressor (if so equipped) from engine, leaving hose intact, and tie up out of the way.

NOTE: Air conditioner will require recharging if hoses are disconnected.

Disconnect heater hoses from engine. Leave attached to the body.

Remove engine cover and carpet from inside of the Cortez. Disconnect throttle linkage to the carburetor and swing back out of the way. Disconnect hydro-vac hose from the intake manifold.

Disconnect brake line "A" on left side of Cortez from body. (Fig. 78)

Disconnect gas line "A" and brake line "B" on right side of Cortez. (Fig. 79)

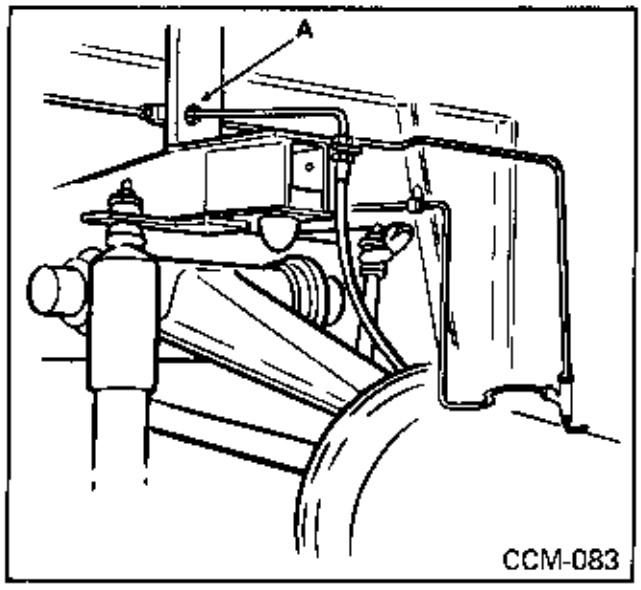


Fig. 78

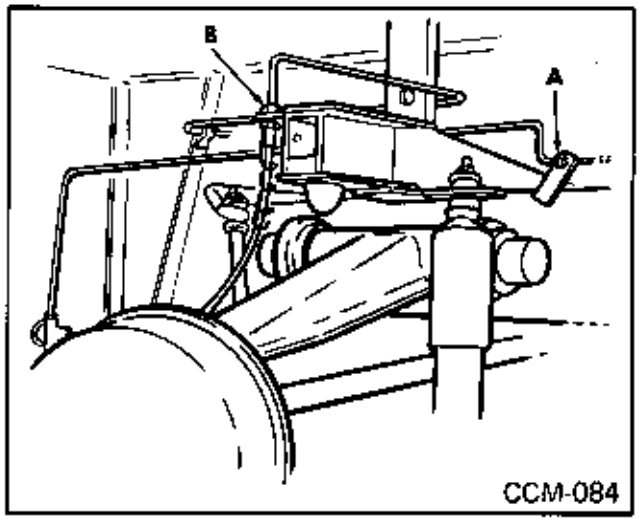


Fig. 79

Disconnect clutch slave cylinder from engine mounting bracket and tie back out of the way. (Fig. 80)

Disconnect speedometer cable from rear of transmission.

Remove gear shift lever by removing capscrews at its mounting. (Fig. 80)

Disconnect drag line from pitman arm to idler lever at idler end, leaving pitman arm attached. Tie up out of the way. (Fig. 80)

Disconnect tail pipe from body.

Attach power train cradle to four wheeled hydraulic jack.(Fig. 81)

Place cradle under engine train frame (3 on each side). (Fig. 80)

Remove bolts from engine train frame (3 on each side). (Fig. 80)

Carefully lower power train and pull straight forward until power train is clear of Cortez.

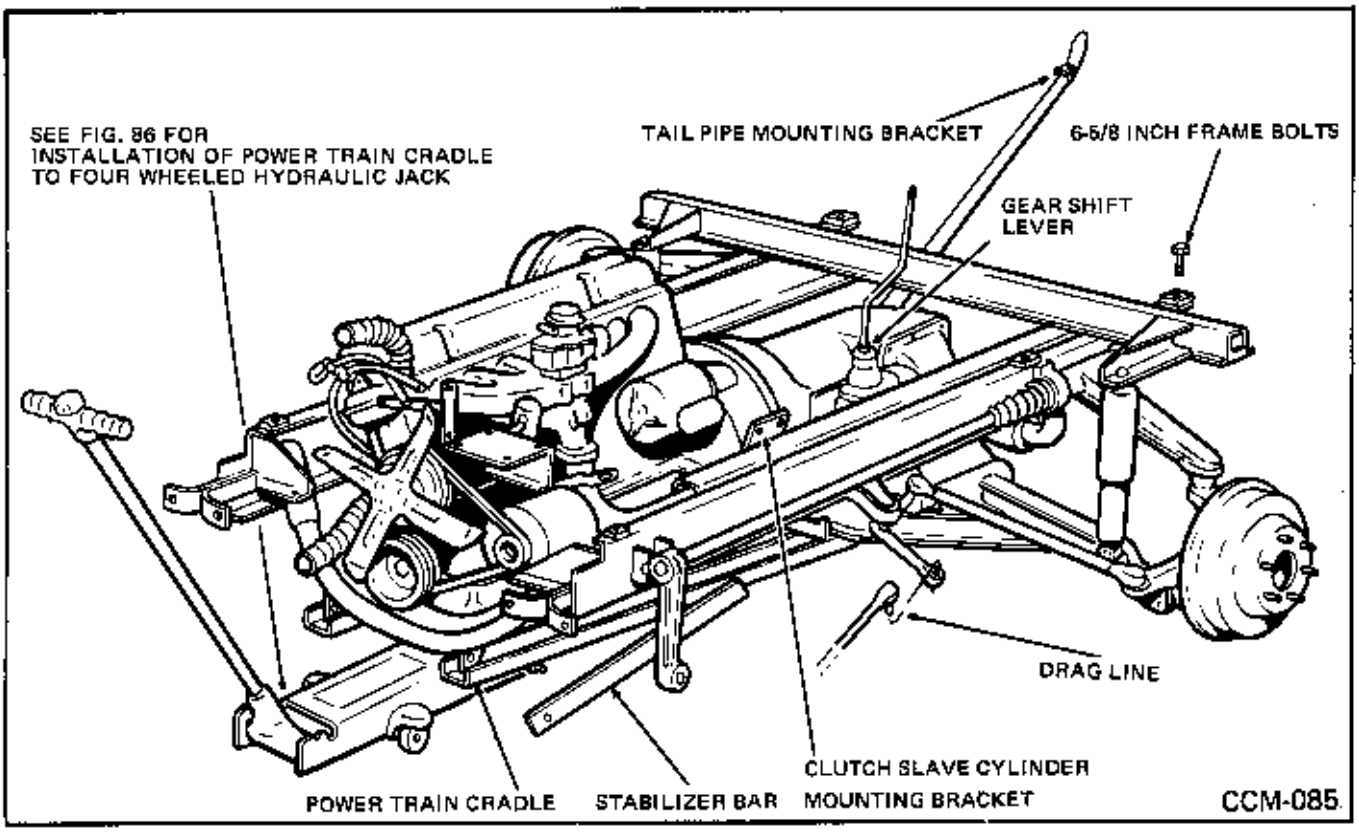


Fig. 80

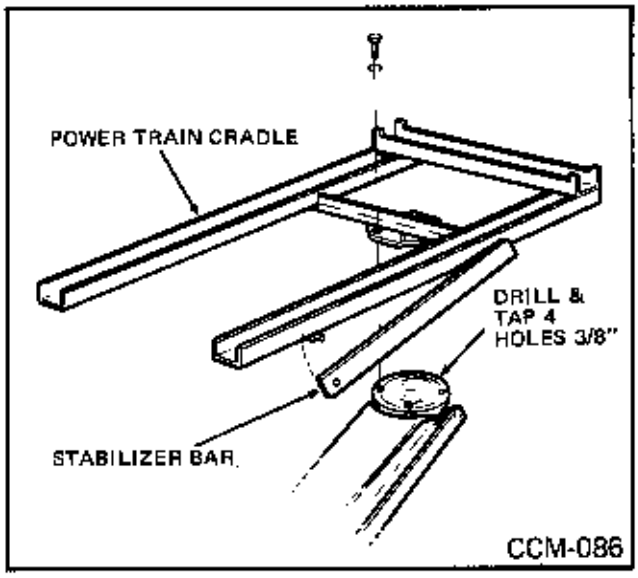


Fig. 81

Engine Removal And Replacement:

Engine removal is accomplished by pulling the engine out from the front by the use of a cradle and extended hydraulic boom jack.

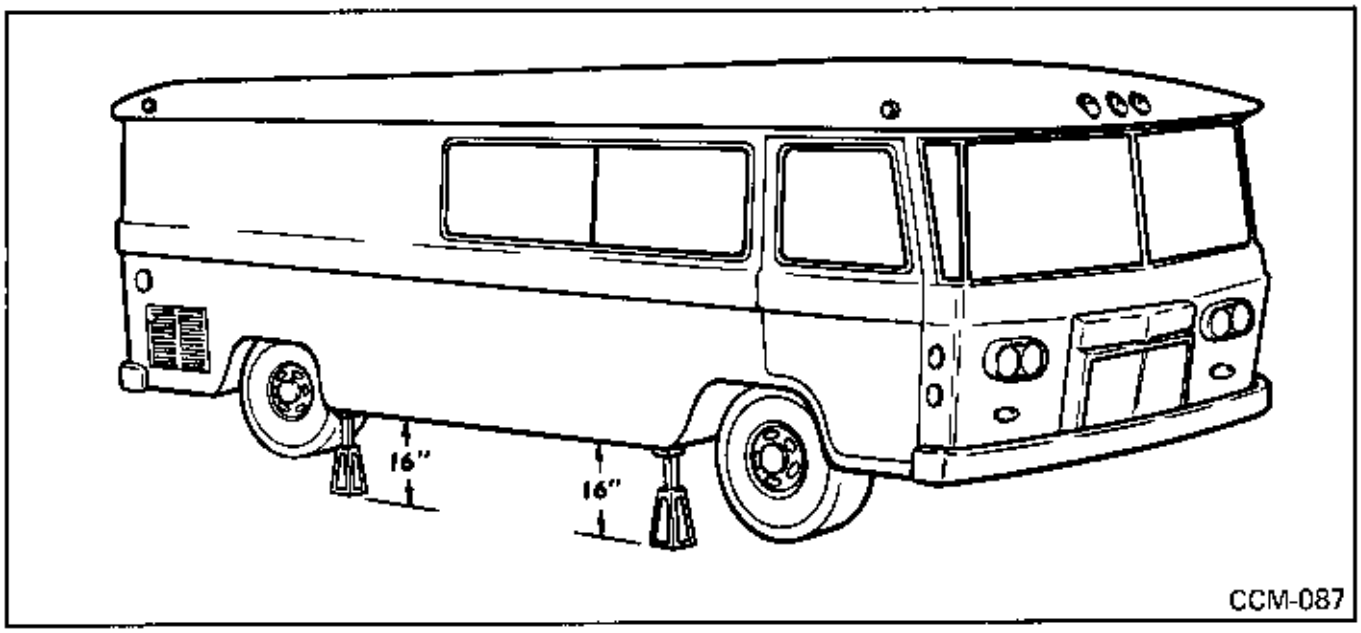


Fig. 82

The following steps show how to remove the engine from the unit.

1. Raise the front and rear of unit on all four jack stands at a height of 16" on each jack stand. (Fig. 82)

2. a. Remove front wheels and tires.
   b. Remove front bumper.
   c. Remove grille.
   d. Remove radiator.
   e. Remove engine covers and carpet.
   f. Remove vertical engine cover.
   g. Disconnect engine wiring harness at terminal block.
   h. Remove power steering pump from engine and tie out of the way on the front of the Cortez.
   i. Remove air conditioning compressor (if so equipped) from engine, leaving hoses intact, and tie up and out of the way.

   NOTE: Air conditioning will require recharging if hoses are disconnected.

CAUTION: Disconnect battery for safety.

3. Disconnect heater hose at hose tee.

4. Disconnect exhaust pipe at manifold.

5. Disconnect carburetor linkage at carburetor.

6. Remove clutch slave cylinder from the bracket at rear of engine and place on top of the exhaust pipe, out of the way.

7. Disconnect gas line at fuel pump.

8. Drill four 3/8" tapped holes in wheeled hydraulic floor jack using support adapter as a pattern.

9. Attach support adapter to the jack with four bolts. (Fig. 83)

10. Attach engine adapter to support adapter with four bolts and nuts. (Fig. 83)

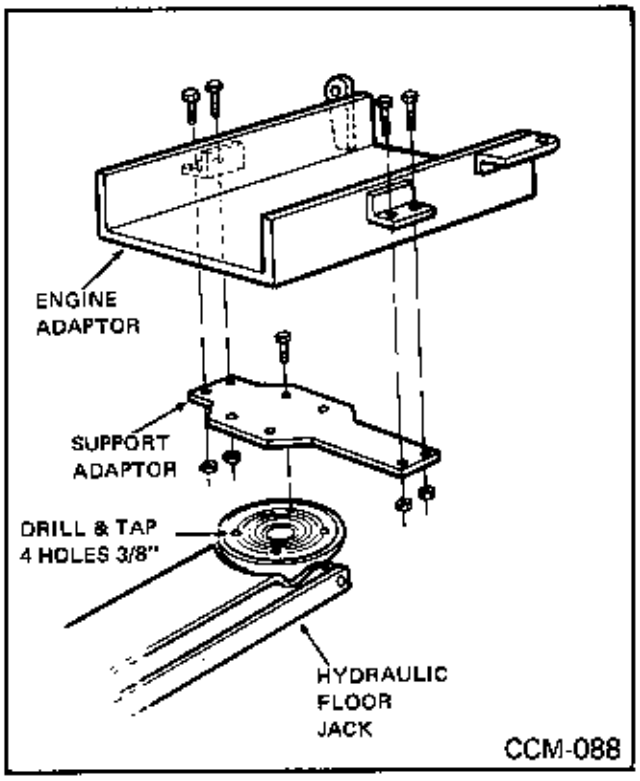


Fig. 83

11. Fasten engine adapter to engine by using the two engine bolts (Fig. 84) and place slight tension on jack.

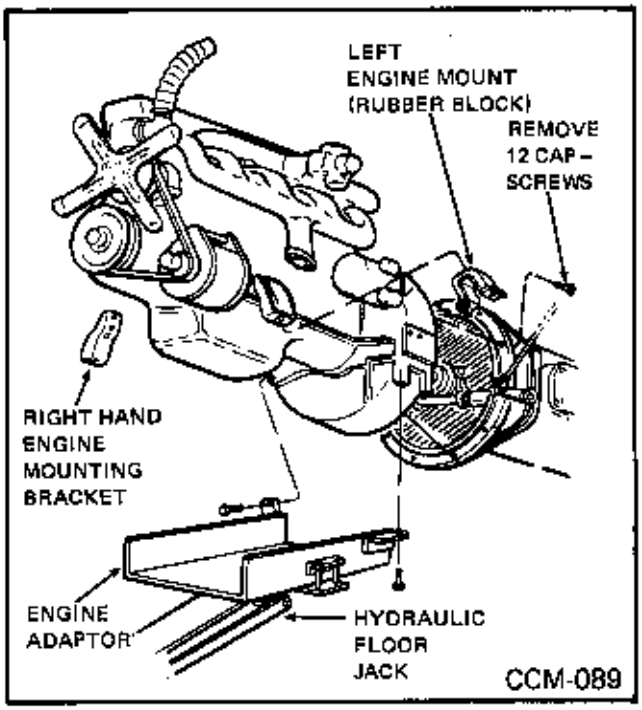


Fig. 84

12. Remove left engine mount (rubber block) by removing three hex nuts and allowing rubber block to come out. (Fig. 84)

13. Remove right engine mounting bracket from engine and rubber block by removing two capscrews and one hex nut, leaving rubber block in place.

14. Remove back-up light switch wires.

15. Remove 12 capscrews holding transmission to engine bell housing. (Fig. 84)

16. Move engine forward, and up as far as tubular frame of unit will allow, in a horizontal line with the transmission.

17. Bolt lift bracket to the engine head. (two bolts)

18. Fasten extended hydraulic boom jack to lift bracket. (Fig. 85)

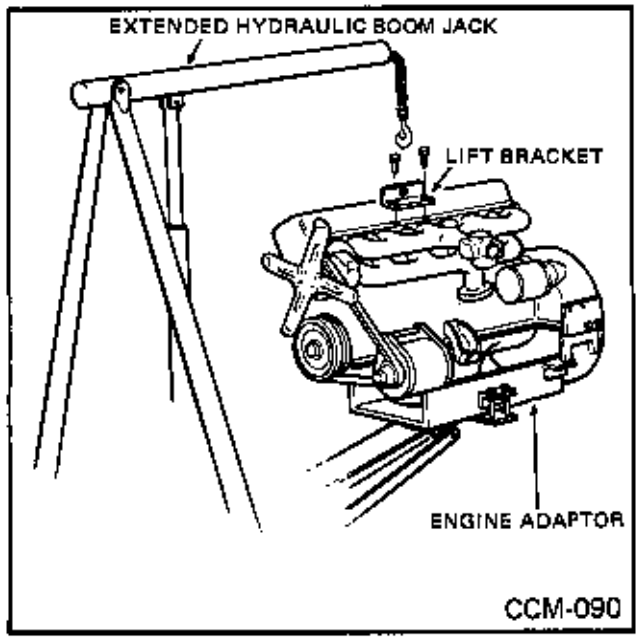


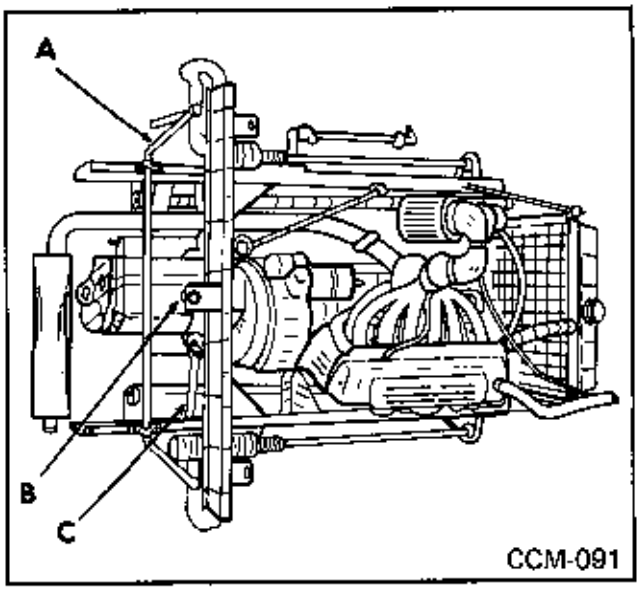
Fig. 85

19. Raise extended boom jack slightly to relieve engine weight on engine adapter and remove. (Fig. 85)

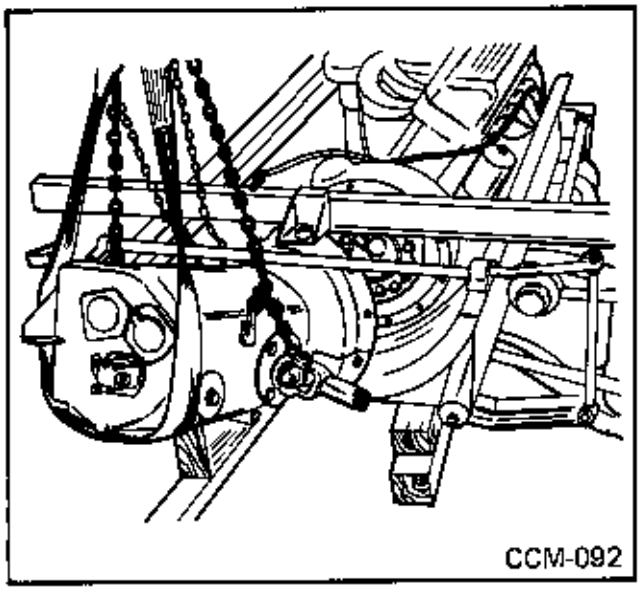
Reassemble by reversing preceding procedures and road test.

Transmission Removal:

1. Remove stabilizer bar from cradle. ("A", Fig. 86)
2. Place blocking under engine flywheel housing linkage to support engine while transmission is removed.
3. Remove clevis pin from slave cylinder to disconnect slave cylinder from clutch arm.
4. Disconnect drive shaft from transmission output shaft. ("C", Fig. 86)
5. Remove transmission mounting stud from the top of the transmission. ("B", Fig. 86)
6. Place sling webbed belt or chain around transmission to support, while 12 capscrews are removed, attaching transmission bell housing to flywheel housing. (Fig. 87)
7. With hoist, pull transmission straight back to free pilot shaft from pilot bushing and clutch plate.
8. Tilt rear of transmission up as it is removed from cradle.



(Fig. 86) Power Train (Top View)



(Fig. 87) Transmission Removal

NOTES

Replacement Of Clutch Cover, Disc, And Throw-Out Bearing:

Cortez Clutch replacement can be accomplished by disconnecting the engine from clutch bell housing, moving it forward a distance of eight inches (8"), and by disconnecting linkages, gas lines, brake cylinder, exhaust, and radiator hoses.

The following steps show how to remove and replace "Clutch Cover", "Disc", and "Throw-out Bearing".

1. Raise the front and rear of unit on all four jack stands at a height of 16" on each jack stand. (Fig. 88)

2. a. Remove front wheels and tires.
   b. Remove front bumper.
   c. Remove grille.
   d. Remove radiator.
   e. Remove engine covers and carpet.

   CAUTION: Disconnect battery for safety.

   f. Remove vertical engine cover.

3. Disconnect heater hose at hose tee.

4. Disconnect exhaust pipe at manifold.

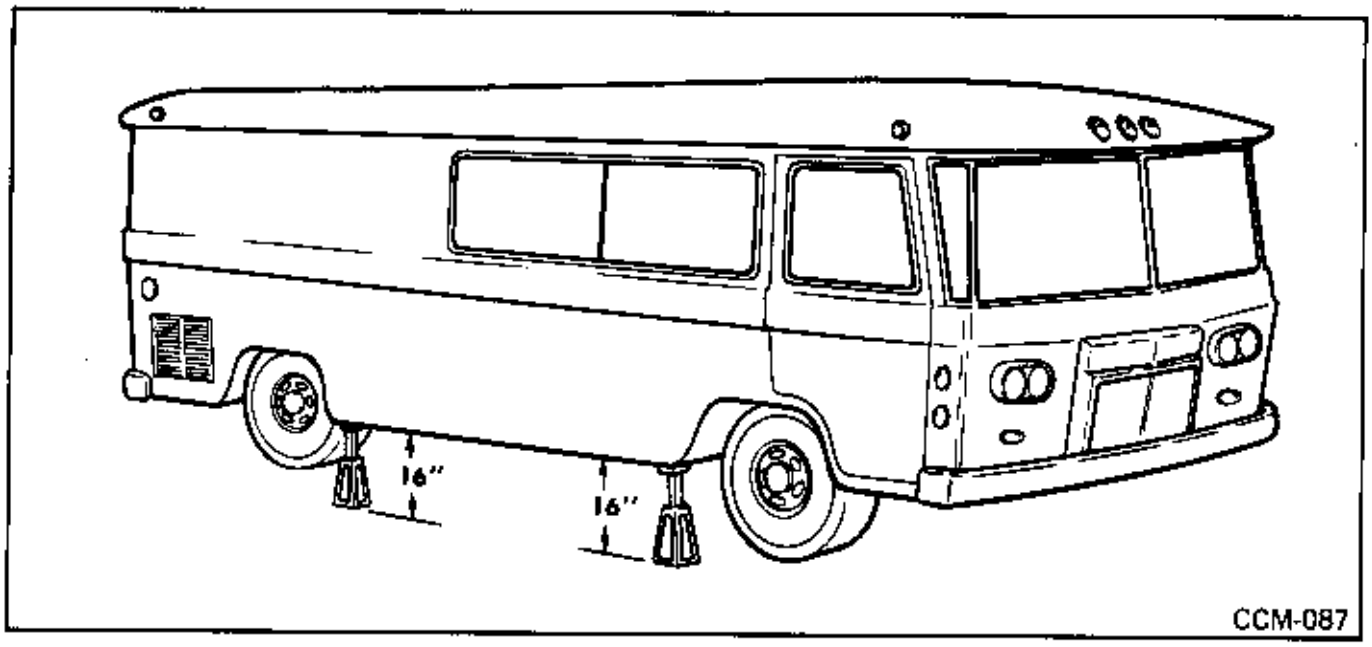


Fig. 88

5. Disconnect carburetor linkage at carburetor.

6. Remove clutch slave cylinder from the bracket at rear of engine and place on top of exhaust pipe.

7. Disconnect gas line at fuel pump.

8. Drill four (4) 3/8" tapped holes in wheeled hydraulic floor jack using support adapter as a pattern. (Fig. 89)

9. Attach support adapter to jack with four bolts. (Fig. 89)

10. Attach engine adapter to support adapter with four bolts and nuts.

11. Fasten engine adapter to engine by using the two (2) engine bolts (Fig. 90) and place slight tension on jack.

12. Remove left engine mount (rubber block) by removing three (3) hex nuts allowing rubber block to come out.

13. Remove right engine mounting bracket from engine and rubber block by removing two (2) capscrews and one (1) hex nut, leaving rubber block in place. (Fig. 90)

14. Remove back-up light switch wires.

15. Remove 12 capscrews holding transmission to engine bell housing. (Fig. 90)

16. Move engine forward on hydraulic jack in a horizontal line with transmission shaft until clearance is about eight (8) inches. (Fig. 90)

17. Remove six (6) capscrews holding clutch plate and remove clutch plate and disc. (Fig. 91)

Reassembly:

1. *CAUTION: Be sure to place alignment pilot shaft into flywheel to center disc while clutch plate is being bolted back on.*

2. Place clutch plate into position, and secure with six (6) capscrews and torque to 50 ft. lbs. in two (2) stages.

3. Remove alignment pilot shaft tool and move engine back into place centering pilot transmission shaft into engine's flywheel.

   CAUTION: Keep in perfect alignment.

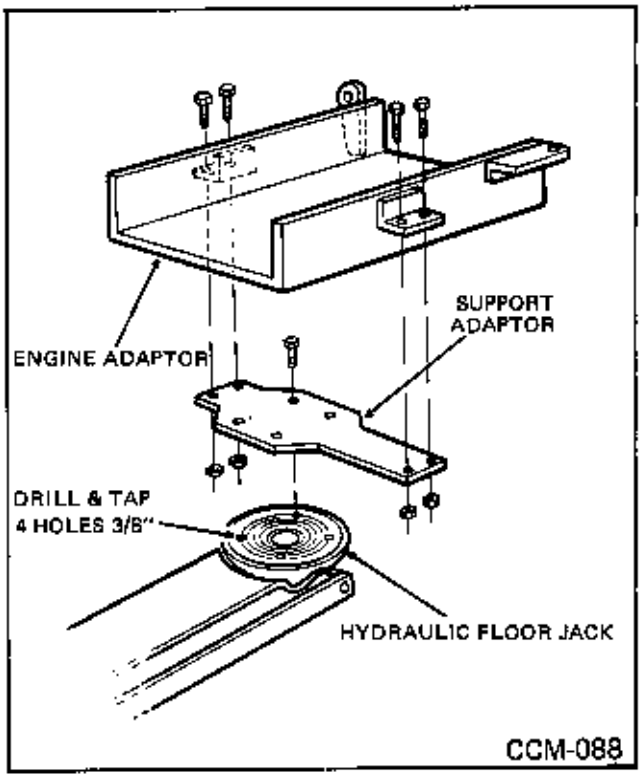


Fig. 89

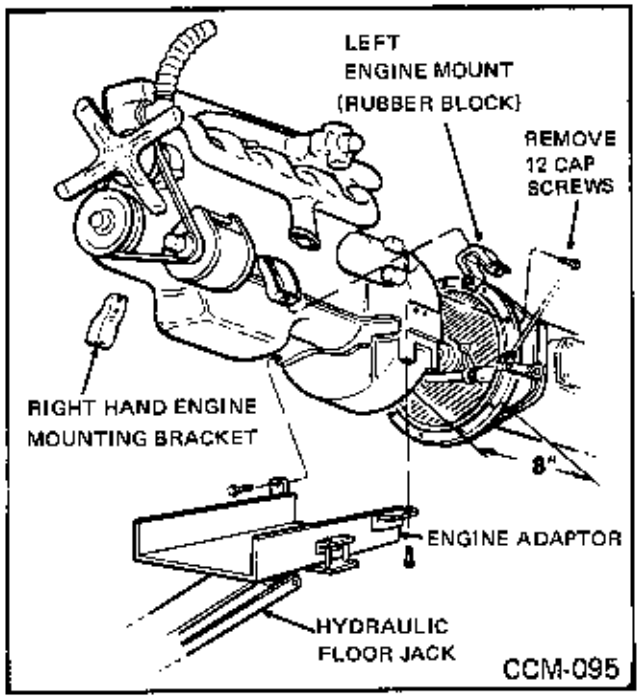


Fig. 90

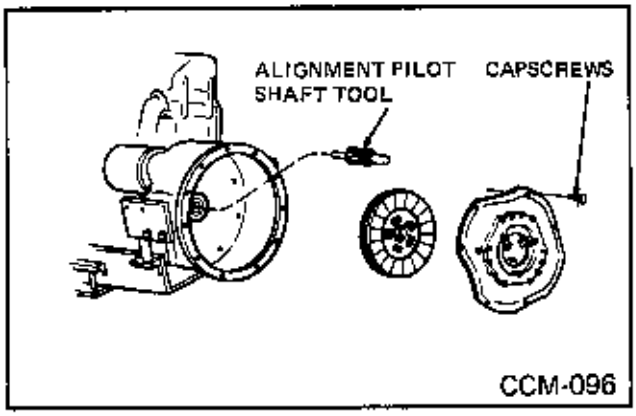


Fig. 91

4. Replace 12 capscrews in transmission housing and torque capscrews to 30 ft. lbs.

5. Replace two (2) engine mounts as shown in removal procedure.

6. Replace back-up light switch wires.

7. Remove jack and adapter. Be sure to replace the two (2) bolts back into engine bell housing that were removed to hold adapter to engine.

8. Replace clutch slave cylinder and linkage. Adjust for free travel.

9. Connect carburetor linkage.

10. Install radiator, grille, and bumper.

11. Replace gas line to fuel pump.

12. Replace engine vertical covers.

13. Replace front wheels and tires.

14. Road test vehicle.

IMPORTANT: Caution must be taken to adhere to greasing and torque recommendations.

Bleeding Clutch System:

Air in the clutch hydraulic system must be removed by bleeding the lines. If there is an insufficient amount of fluid in the system or if any part of the system has been disconnected:

1. Check fluid level in clutch master cylinder and fill (to within 1/4" of top) if necessary. (Fig. 92)

2. Attach a bleeder hose to the bleeder valve on clutch slave cylinder (Fig. 94) and submerge lower end of hose in hydraulic fluid in a transparent bottle.

3. Unscrew bleeder valve 1/2 turn. Depress clutch pedal slowly, tighten bleeder screw and allow pedal to return to normal position. Repeat operation until no air bubbles flow from end of hose.

4. Check fluid level in master cylinder and fill as required.

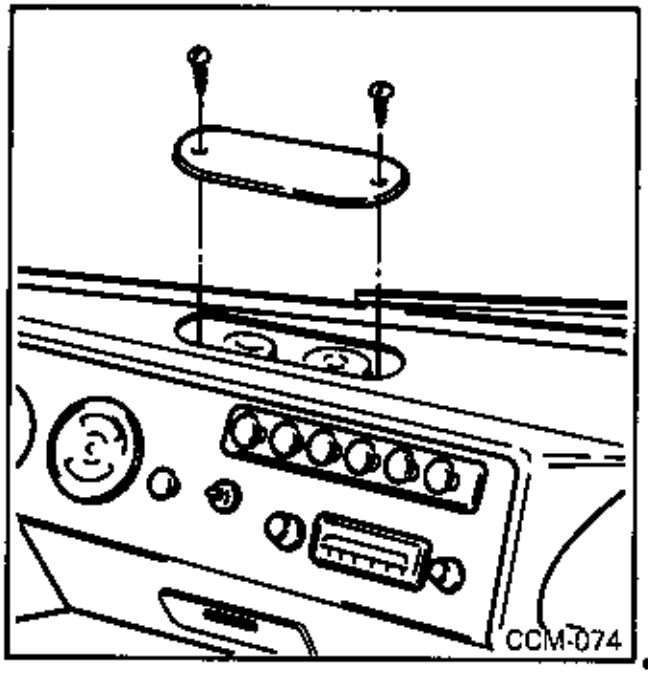


Fig. 92 Clutch Master Cylinder

Clutch Adjustment:

1. If necessary, adjust bolt ("A", Fig. 93) so that clutch pedal free play does not exceed 1/4" at pedal pad. Check pedal free play by hand.

2. Loosen locknut. ("A", Fig. 94)

3. Make sure slave cylinder piston is at top of travel by pushing up on the cylinder push rod.

4. Move clutch arm "D" down until release bearing just contacts clutch fingers (Fig. 94) and turn jam nut "B" finger tight against cylinder push rod.

5. Back off jam nut "B", (Fig. 94), four (4) to five (5) turns and lock in place with locknut "A", (Fig. 94). Test clutch operation. Clutch pedal free-travel should be from 2 to 2 3/8".

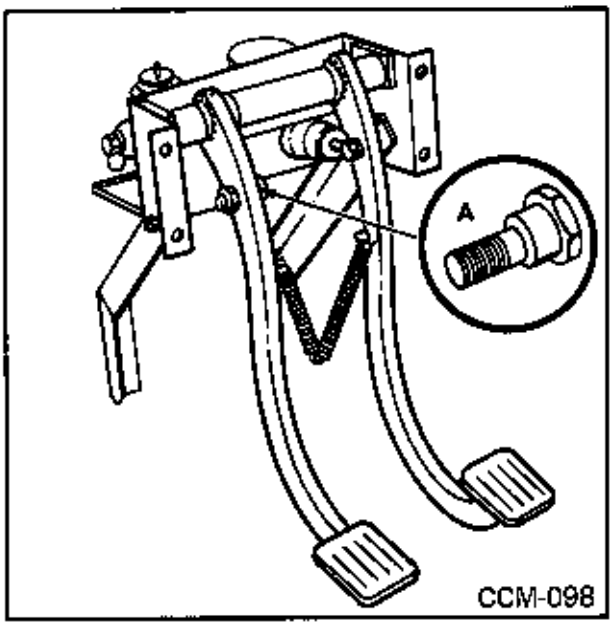


Fig. 93 Clutch Pedal

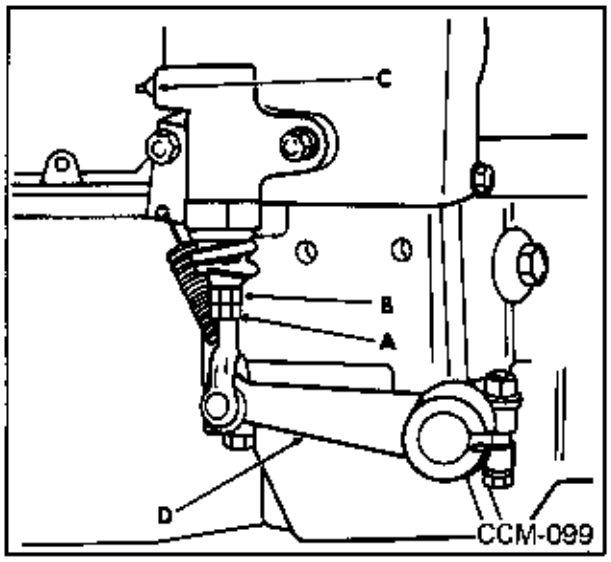


Fig. 94 Clutch Slave Cylinder

Transmission Disassembly And Assembly:

The following procedure will serve as a guide for the disassembly and assembly of the Cortez transmission and its various sub-assemblies.

Disassembly:

1. Clean transmission and work area.
2. Remove shift tower assembly.
3. Remove clutch housing assembly (complete) by removing eight (8) capscrews.
4. Remove shift control cover assembly (complete).
5. Remove two (2) wheel drive shaft bearing carrier assemblies.
6. Remove differential assembly.
7. Remove speedometer driven gear.
8. Remove three (3) rear bearing cap and shims.
9. Remove pinion shaft nut, speedometer drive gear, rear bearing and shims. (Fig. 95)

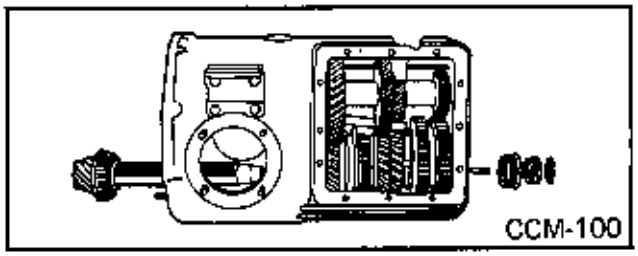


Fig. 95

10. Pull pinion shaft forward and roll gear group out the side opening. Remove front bearing cup and snap ring.
11. Drive intermediate shaft to the rear, removing rear bearing cup. Use bearing puller to remove rear bearing cone. (Fig. 96)

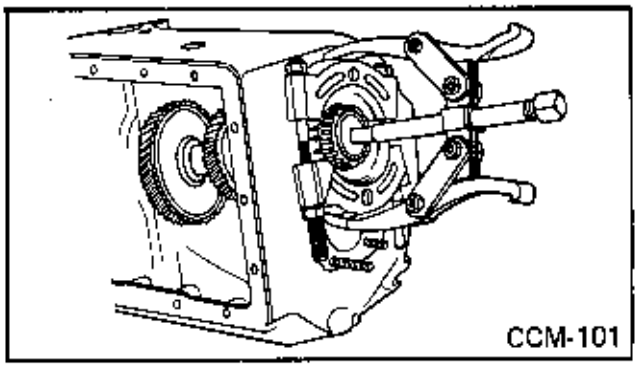


Fig. 96

12. Remove intermediate shaft assembly through the side opening and front bearing cup snap ring.

13. Drive reverse shift rail to rear, remove shifting fork. (Fig. 97)

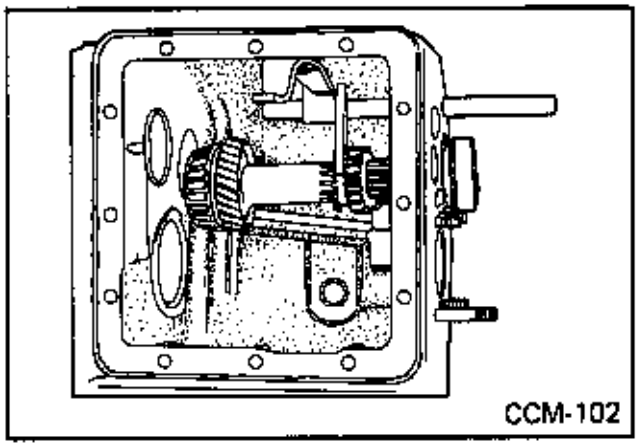


Fig. 97

14. Drive main drive shaft to rear, removing rear bearing cup. Remove main shaft through side opening. Remove front bearing cup and snap rings. (Fig. 97)

15. Clean and inspect case and all internal parts.

Disassembly of Control Cover Assembly:

1. Remove reverse lug locating screw lock wire and screw. Push reverse rail clear of over-shift spacers and lug. (Fig. 98)

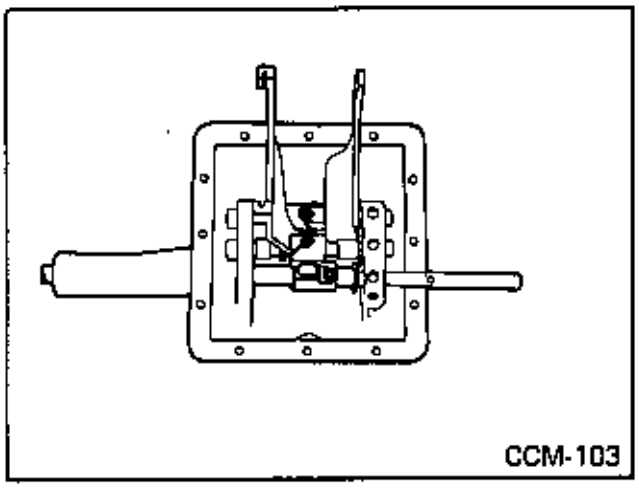


Fig. 98

2. Remove reverse shift rail from cover, taking care not to lose detent ball and spring.

3. Remove third-fourth and first-second shift rails as in paragraph one and two.

NOTE: Two mesh lock balls are located in the orifice between first-second and third-fourth shift rails, also between third-fourth and reverse rail. These balls work in conjunction with an interlock pin located in the third-fourth shift rail.

4. Remove shift shaft from shift cover after removing lock screw from shift shaft inside finger.

5. Remove shift shaft's two (2) seals.

6. Disassemble, assemble, and adjust reverse latch plunger. Plunger should be flush with lug. Use adjusting screw. (Fig. 99)

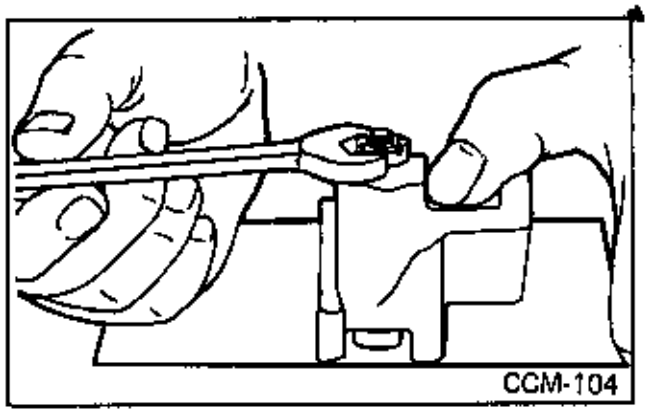


Fig. 99

Assembly of Control Cover:

Follow disassembly procedure in reverse order.

Disassembly of Differential Carrier Assembly:

1. Mark assembly halves for location on reassembly.

2. Remove carrier bearing cones, using bearing puller.

3. Remove lock wires and differential case bolts. Separate halves. Remove spider and gears. (Fig. 100)

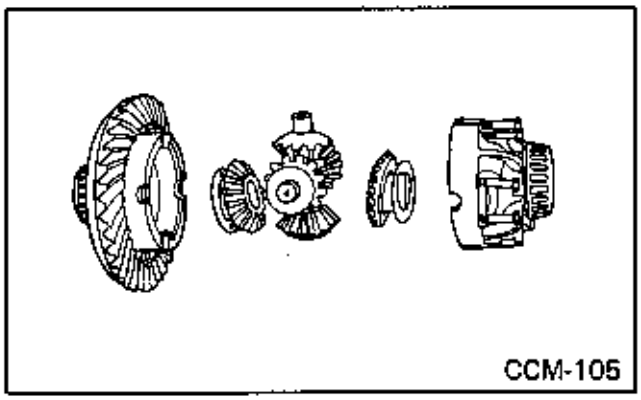


Fig. 100

Assembly of Differential Carrier Assembly:

Follow disassembly procedure in reverse order.

Disassembly of Wheel Drive Shaft Carrier Assembly:

1. Remove differential bearing cup. (Fig. 101)

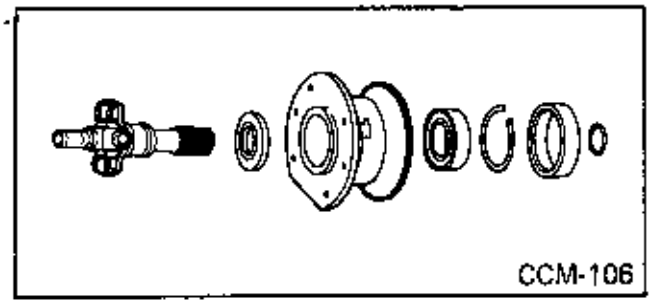


Fig. 101

2. Remove wheel drive, drive shaft, bearing snap ring, and carrier snap ring.
3. Press wheel drive shaft and yoke out of assembly. Remove wheel drive shaft bearing.
4. Remove wheel drive shaft oil seal.

Assembly of Wheel Drive Shaft Carrier Assembly:

Follow disassembly procedure in reverse order.

Disassembly of Clutch Housing Assembly:

1. Remove clutch release shaft arm.
2. Remove right and left clutch release yoke retaining bolts. Drive clutch release shaft out of clutch housing.
3. Remove clutch shaft bushings.
4. Remove three (3) capscrews to remove main shaft bearing cap. Remove cap and input shaft with bearing.
5. Remove input shaft snap rings to remove main drive front bearing.

Assembly of Clutch Housing Assembly:

Follow disassembly procedure in reverse order.

Transmission Assembly Procedure:

1. Install main drive shaft front bearing cup, snap ring, main shaft assembly, rear bearing, and cup. See Fig. 97 for assembly sequence.
2. Install reverse shift fork and shift rail.
3. Install rear bearing shims and cap. Add or remove shims to obtain 2-6 in. lbs. pre-load.
4. Install intermediate front bearing cup and snap ring, intermediate shaft assembly, rear bearing cone, cup, shims, and cap. Add or remove shims to adjust bearing pre-load to 2-6 in. lbs. See Fig. 102 for assembly sequence.

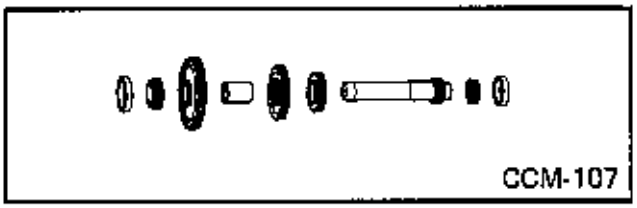


Fig. 102

5. Install pinion shaft, bearings, all spacers and bushings, shim kit, speedometer drive gear, and nut.

   NOTE: Gears should not be installed.

   Torque to 150-200 ft. lbs. Add or remove shims to adjust pre-load to 10-15 in. lbs. Remove pinion shaft.

6. Install differential assembly and wheel drive shaft bearing carrier assemblies. Add or remove bearing carrier shims to adjust

pre-load to 15-25 in. lbs. Remove differential and carrier assemblies.

7. Install pinion shaft and gear group (Fig. 103) for proper sequence and torque nut to 150-200 ft. lbs.

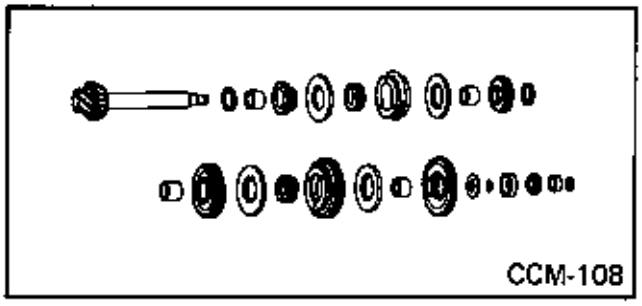


Fig. 103

8. Install differential assembly and wheel drive shaft carrier bearing assemblies and shims. Transfer shims from side to side to obtain .006–.010 back lash between ring and pinion gear. Torque carrier retaining nuts to 35 ft. lbs.

NOTE: Ring gear must be on input shaft side of ring gear. (Fig. 104)

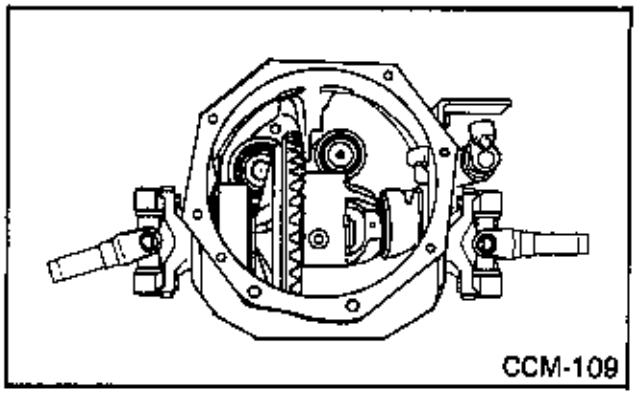


Fig. 104

9. Install rear pinion bearing cover and speedometer driven gear.

10. Install shift control cover, shifting tower, and clutch housing assembly.

NOTES

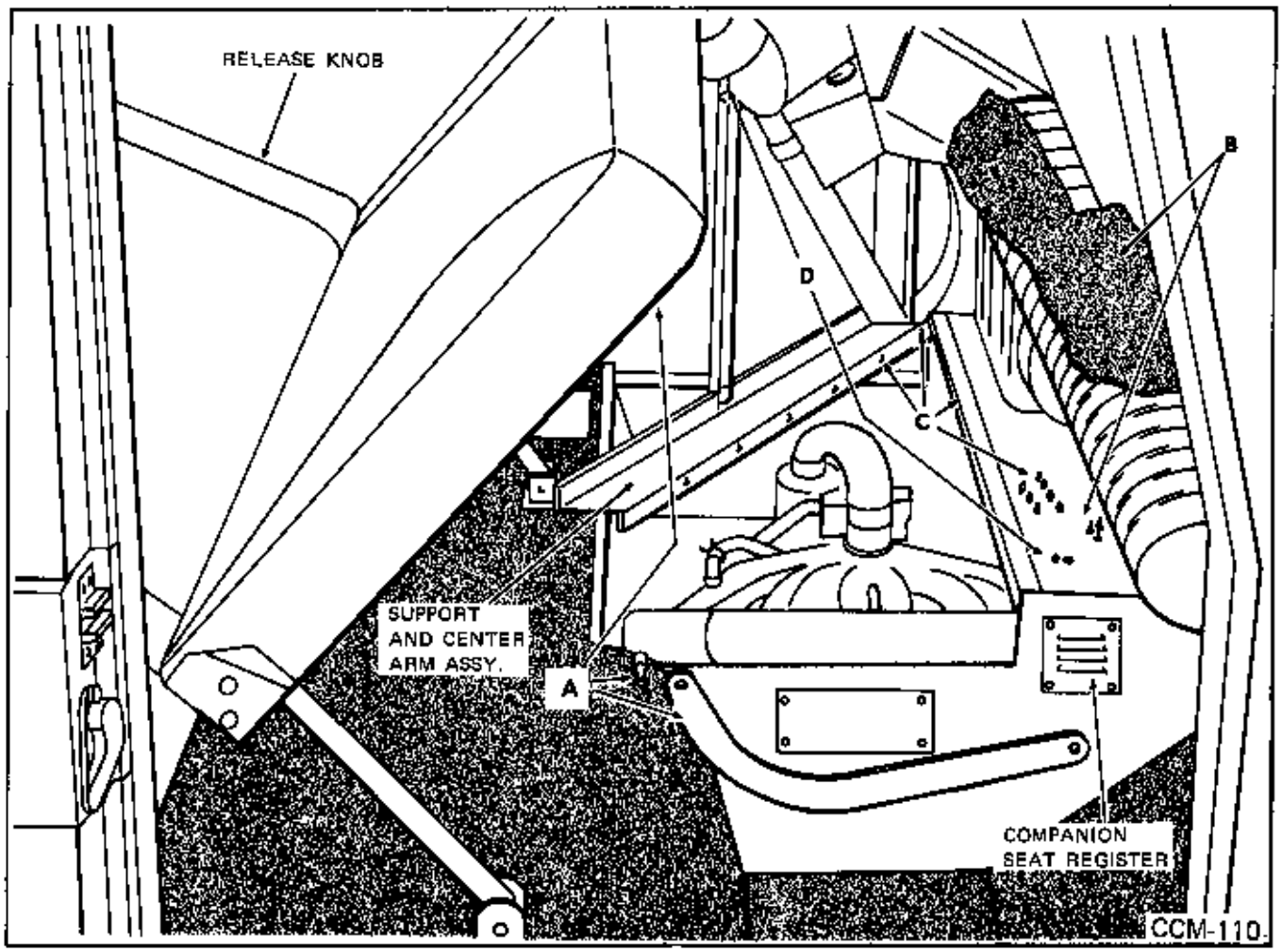


Fig. 105

WHEN ADJUSTING ENGINE TAPPETS OR PERFORMING MAINTENANCE WHERE ADDITIONAL ROOM IS REQUIRED (OTHER THAN THAT PROVIDED WITH THE ENGINE COMPARTMENT DOORS OPEN), REMOVE SUPPORT AND CENTER ARM ASSEMBLY AS FOLLOWS:

1. Remove carpet from engine compartment doors.

2. Pull seat release knob and move seat upward as far as possible and then remove seat guide retainer pin (A) from guide and bottom of seat. Swing seat upward. (Fig. 105)

3. Remove screws and carpet (B). Remove engine compartment doors (Fig. 68). Doors are retained by screws located at each corner of both doors.

4. Remove screws from support and compartment floor (C). (Fig. 105)

5. Remove nut and lockwasher from the bottom of the center arm (D) and compartment floor. Support may now be removed. (Fig. 105)

6. When adjusting engine tappets, the heater hose going to the companion seat register will have to be removed. This will allow enough room to remove the engine tappet cover.

7. For engine adjustments and maintenance procedures, refer to the "Chrysler Operating Manual".

Front Axle Servicing:

Wheel bearings should be packed every 25,000 miles with Shell Alvania No. 1, E.P. Lithium Base Grease or Equivalent. Spindle nut and U-joint capscrews must be accurately torqued to specifications.

1. Raise front of unit.
2. Place two (2) jack stands under front jack pads.
3. Remove wheel and tire.
4. Remove brake drum. (Fig. 106)

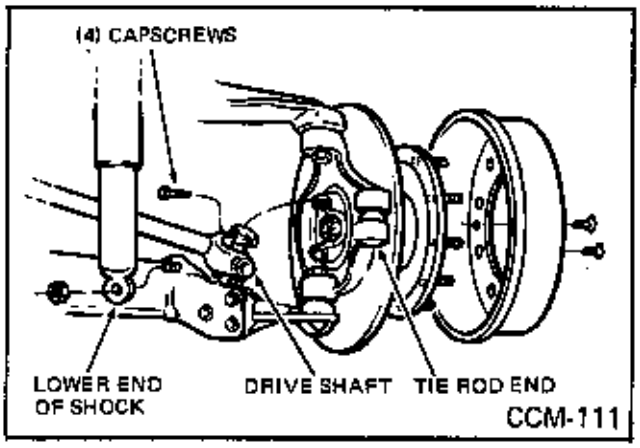


Fig. 106

5. Remove lower end of shock and swing out of the way. (Fig. 106)
6. Remove tie rod from spindle support end (only). (Fig. 106)
7. Remove four (4) capscrews from driveshaft end and swing out of the way. (Fig. 106)
8. Remove safety wire and roll pin. (Fig. 107)
9. Place adapter on four (4) wheel studs and secure in place with wheel nuts. (Fig. 107)
10. Place 1 5/8" socket on spindle yoke nut. Place 1 1/2" socket on adapter and remove spindle yoke nut with torque wrench. (Fig. 107)

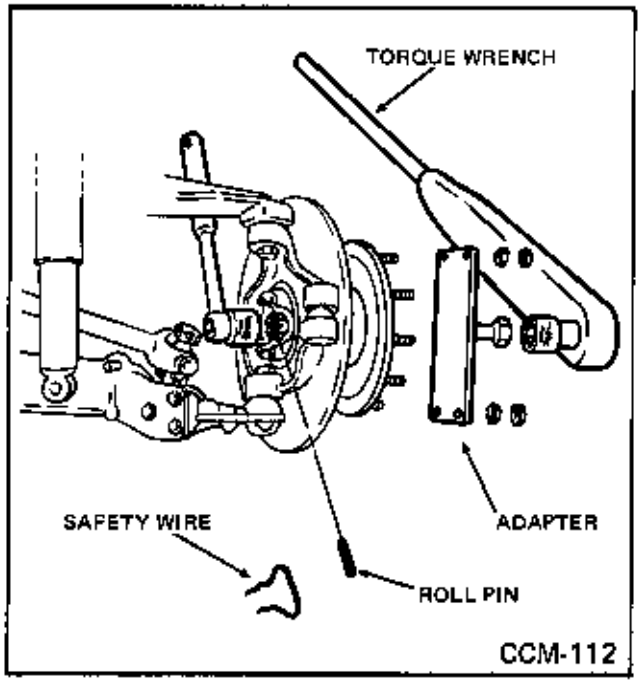


Fig. 107

11. Place spindle flange adapter on spindle yoke by using the four (4) capscrews from drive shaft. (Fig. 108)

    NOTE: Do not remove flange adapter until after reassembly.

12. Place 1" socket on spindle flange adapter nut and torque lose. (Fig. 108)

    CAUTION: Tighten puller screw to 200 ft. lb. (Max.). Tap to break loose, repeat as required.

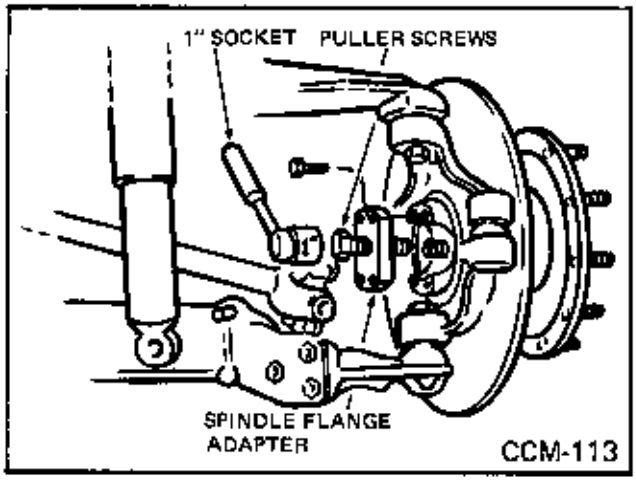


Fig. 108

13. Remove splined washer.

14. Remove drive flange and bearing.

15. Remove spindle and bearing assembly from spindle support. (Fig. 109)

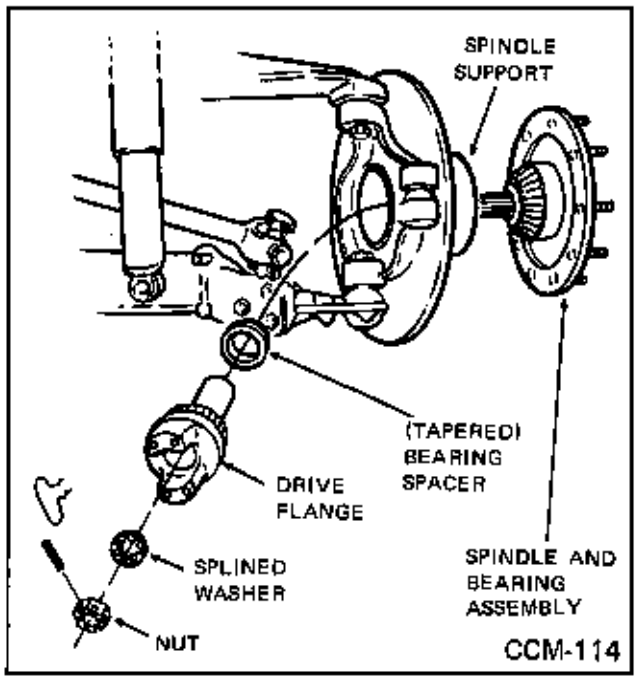


Fig. 109

16. Remove tapered bearing spacer. (Fig. 109)

17. Clean all parts thoroughly and repack bearings, approximately 1/2 lb. of grease per wheel.

Reassembly:

1. After bearings have been repacked, care must be taken when installing spacer, to have taper down toward brake drum. (Fig. 109)

2. Install spindle and bearing assembly into spindle support. (Fig. 109)

3. Index drive flange to spindle spline and press together. If necessary to tap drive flange onto spindle, remove puller screw and use flange adapter for driving surface until splined washer can be properly indexed to spindle spline. (Fig. 109)

4. Install nut and torque spindle nut to 450 ft. lbs. minimum and increase torque until nut slot is in line with roll pin hole.

5. Insert roll pin and lock wire.

6. Reverse above disassembly procedure (Steps 1 through 7).

IMPORTANT: SPINDLE END PLAY MUST BE .002 TO .006.

NOTES

Steering Adjustments:

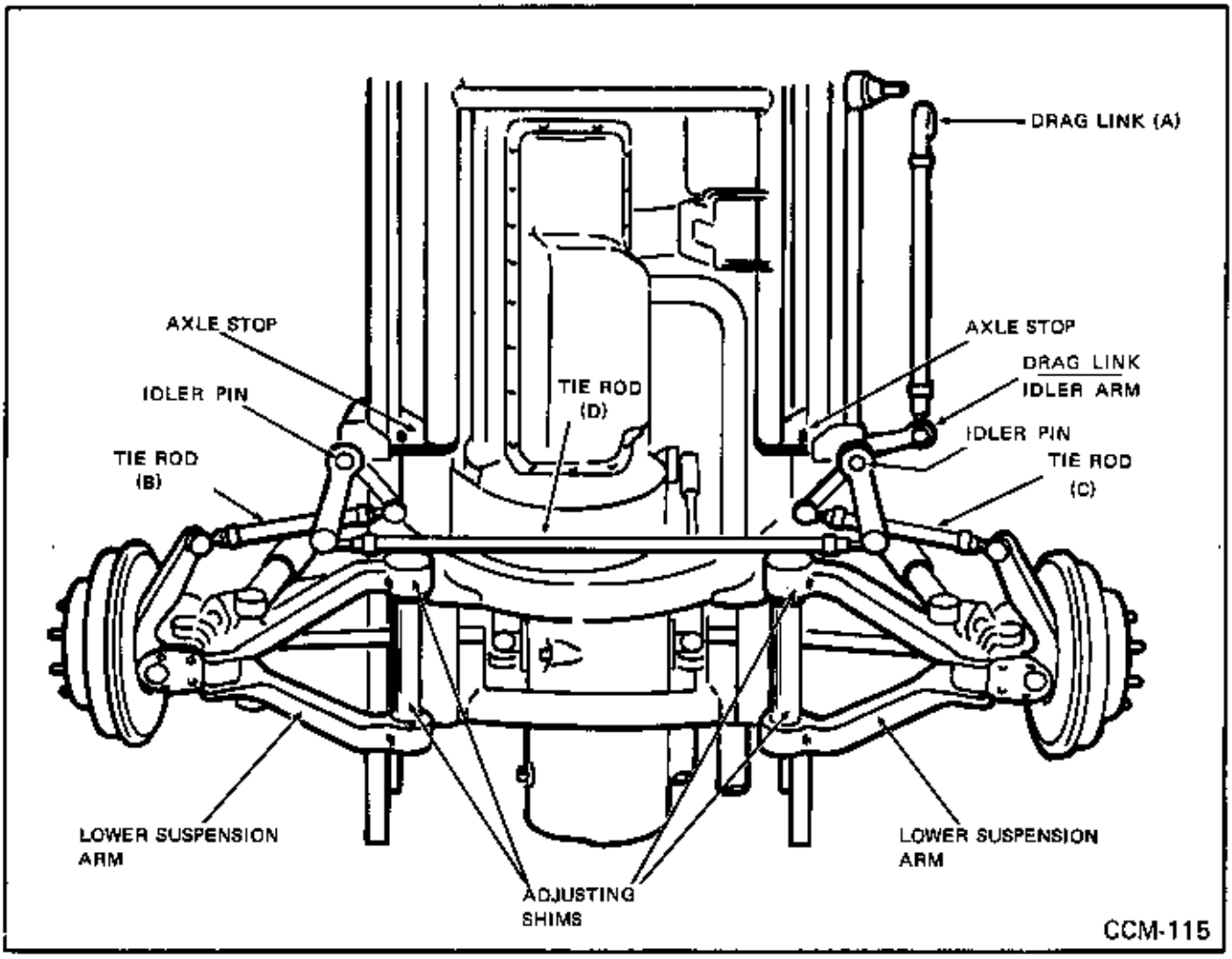


Fig. 110 Wheel Alignment and Steer Linkage Adjustments

Wheel Alignment and Steer Linkage Adjustments:

(7.50 x 16 and 10 x 17.5 Tires)

When wheel alignment is required, adjustments must be made with normal load on the axles and with recommended tire pressures.

1. Adjust torsion bars so front underside of engine frame rails are 16-1/2 to 18 inches from the floor.

2. Adjust tie rod (Item D, Fig. 110) so that distance from center of ball joint to center of ball joint is 39 inches. Fasten clamp bolts securely.

3. Disconnect drag link (Item A, Fig. 110) from idler arm. Remove pitman arm stops. Center steering gear by rotating steering wheel from full right to full left, counting the number of revolutions. Return wheel to center position by reversing the wheel one-half the total revolutions. Steering wheel spoke should be horizontal. If not, remove steering wheel and reposition on steering column.

   Do not move steering wheel after it has been centered.

4. Using the side rail of the frame as a squaring surface, place the center line of the drag link idler arm (Fig. 110) 15/16 inch ahead of the center line of the idler pin. Do not move after it has been set.

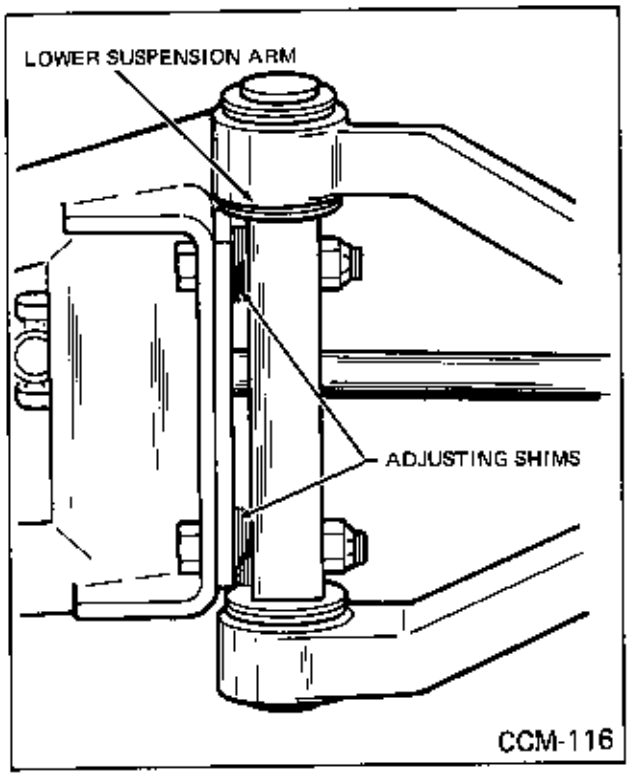


Fig. 111 Camber Adjustment

5. With tie rod set (Item D, Fig. 110), steering wheel centered, and drag link idler arm 15/16 inch ahead of pin center line, adjust drag link so that the ball joint shaft will fall freely into the drag link idler arm hole. When adjustment has been made, fasten link clamp bolts and ball joints securely. Do not disturb from this point on.

6. By turning tie rods (Items B & C, Fig. 110) adjust the wheels to the approximate straight ahead position.

7. Front wheel caster is designed into the vehicle and is not adjustable. The front wheel caster angle should be 1/2 degree positive to 3 degrees positive with a maximum variation of the 1/2 degree between wheels.

   Measurements not within the above caster requirement could be the result of worn or damaged suspension structure. Worn or damaged parts must be replaced.

8. Adjust camber by shimming between the lower suspension arm and the frame at the mounting bolts with equal thickness shims (Fig. 111) to obtain 3/8 degree positive camber on the right front wheel and 1/8 degree positive camber on the left front wheel. A 1/32 inch shim positioned as described above will produce approximately 1/8 of 1 degree change in camber. A 1/16 inch shim would produce a camber of approximately 1/4 degree, etc.

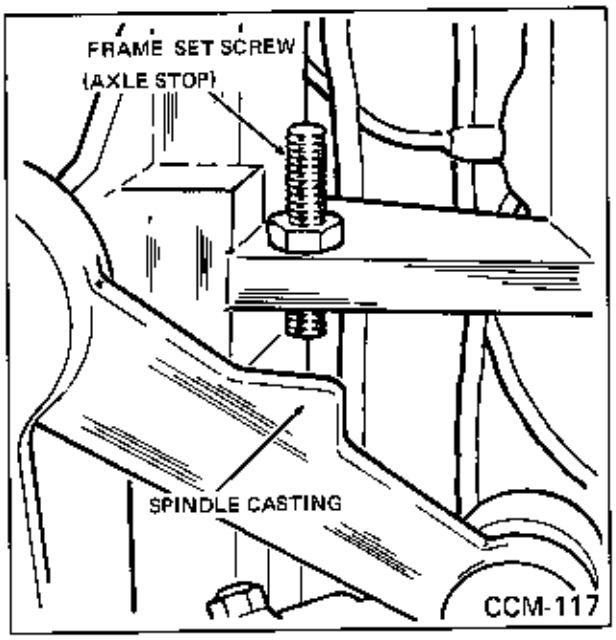


Fig. 112 Axle Stop Adjustment

9. Adjust tie rods (Items B & C, Fig. 110) to set front alignment at 3/16 inch toe-out. After setting has been made, fasten securely all steering linkage by tightening all ball joints and clamping bolts. Be sure all bolts and nuts on the steering linkage do not interfere with other parts when traveling from full right to full left turn.

10. Adjust axle steering stops on underside of frame (Fig. 112) at turning angles of 22 degrees 30 minutes on the inside wheel and 27 to 28 degrees on the opposite wheel. After the correct angularity has been obtained adjust the pitman arm stops (Fig. 113) to touch the pitman arm when turning angles are obtained.

Steering Gear Lash Adjustment:

Steering gear lash adjustment may be required to compensate for wear.

1. Disconnect power steering pressure and

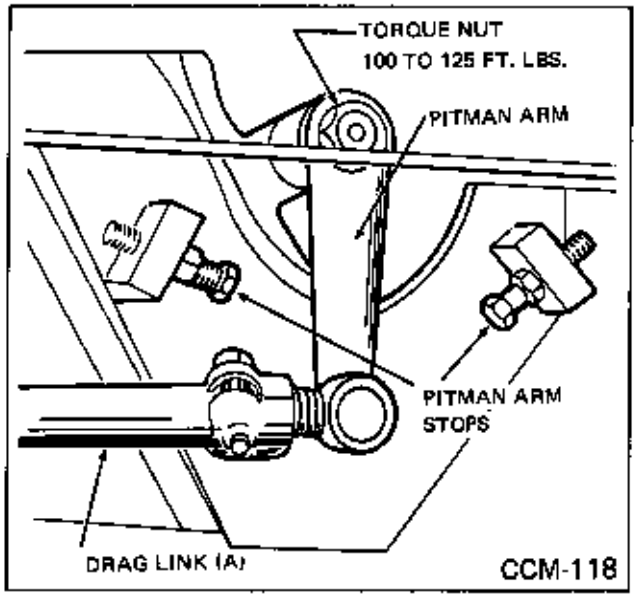


Fig. 113 Pitman Arm Stop Adjustment

return lines from steering gear. Allow all oil to drain before making lash adjustment.

2. Disconnect drag link "A" (Fig. 110) from Pitman arm. Pitman arm must be in center of travel as shown in Fig. 118.

3. Loosen lash adjuster lock nut "A"(Fig. 114) and back out adjuster "B" one turn.

4. Use a spring scale at end of spoke on steering wheel, with steering gear on center and pitman shaft backed off, measure total drag. With gear on center, adjust pitman shaft thrust screw so that pre-load is four (4) to eight (8) inch pounds in excess of total pre-load and drag. Readings are to be made through an arc not exceeding 20° with gear on center. Tighten lock nut. Total over center load not to exceed 16 inch pounds.

5. Connect pressure and return hoses. Refill power steering pump reservoir to 1/2" to 3/4" below top of filler neck with Type "A" Automatic Transmission Fluid (Armour Qualified).

Rear Wheel Alignment

1. Turn the vehicle around, placing rear wheels on the turning pads and measure camber.

   Camber should be from zero to 1/4 degree positive on the left rear and from zero to 1/2 degree positive on the right rear. If the

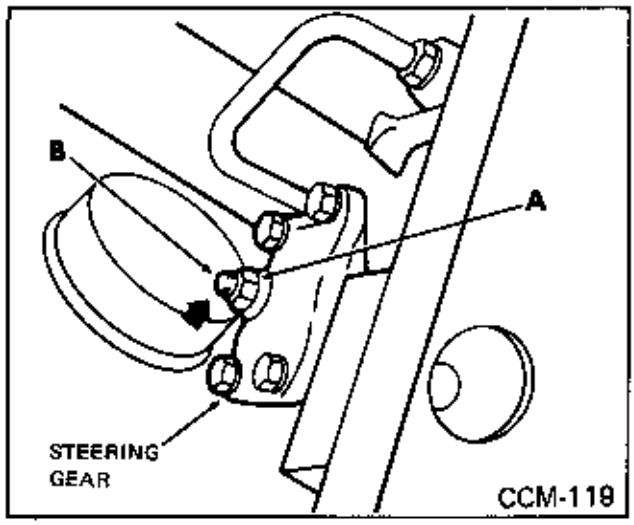


Fig. 114 Lash Adjustment

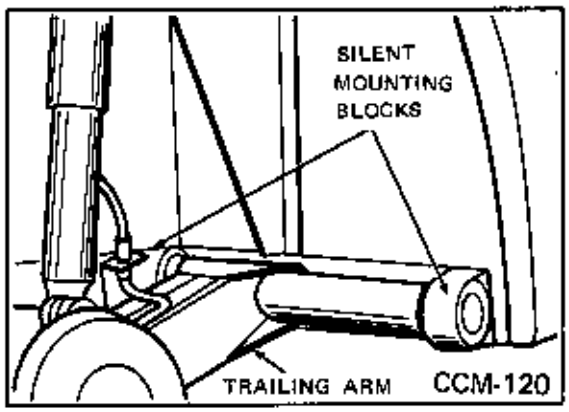


Fig. 115 Rear Wheel Adjustment

camber measured is not within the above angles, the trailing arm and hub are not straight and should be replaced. The rear camber setting is not adjustable.

2. The rear wheels should have 1/8 inch toe-in for proper tire wear. Toe adjustments are made by shimming the trailing arm mounting blocks (Fig. 115). To increase toe-in, shim the inside mounting block on each side of the vehicle. To increase toe-out, shim the outside block on each side of the vehicle.

Wheel and Tire Balancing:

It is important for proper alignment that wheels and tires be balanced. For Cortez units equipped with 7.50 x 16 tires, standard balancing procedures should be used. Due to restricted clearances, Cortez Units equipped with 10 x 17.5 tires must be balanced utilizing Taypa wheel weights, (Self Adhesive).

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CORTEZ DIVISION

REQUIRED VEHICLE MAINTENANCE

1,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 1,000 Miles:

( ) Engine Oil Change
( ) Oil Filter Change
( ) Distributor Oil
( ) Adjust Brakes
( ) Check Tire Pressure
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Clean Air Filter
( ) Adjust Clutch

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICLE MAINTENANCE

3,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 3,000 Miles:

( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Shift Lever Lubrication
( ) Clutch Release Bearing Lubrication
( ) Manual Controls Lubrication
( ) Transmission Oil Change
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Clean Air Filter
( ) Adjust Clutch
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICLE MAINTENANCE

6,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 6,000 Miles:

( ) Engine Oil Change
( ) Oil Filter Change
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.
( ) Oil Distributor
( ) Adjust Brakes & Deglaze Linings.
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Shift Lever Lubrication
( ) Clean Air Filter
( ) Clutch Release Bearing Lubrication
( ) Adjust Clutch
( ) Rotate Wheels and Tires (All 5)
( ) Wheel Alignment
( ) Check Tire Pressure

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICILE MAINTENANCE

9,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 9,000 Miles:

NOTE: Change Engine Air Cleaner and Engine Fuel Filter at 10,000 Miles.

( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Transmission Oil Change
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Clean Air Filter
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.
( ) Adjust Clutch
( ) Check Tire Pressure
( ) Shift Lever Lubrication
( ) Clutch Release Bearing Lubrication
( ) Manual Controls Lubrication

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICLE MAINTENANCE

12,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 12,000 Miles:

( ) Repack Rear Wheel Bearings
( ) Rotate Wheels and Tires (All 5)
( ) Wheel Alignment
( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Shift Lever Lubrication
( ) Adjust Brakes & Deglaze Linings.
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Clutch Release Bearing Lubrication
( ) Clean Air Filter
( ) Adjust Clutch
( ) Check Tire Pressure
( ) Change Spark Plugs, Points and Condenser (or as required)

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICILE MAINTENANCE

15,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 15,000 Miles:

( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Transmission Oil Change
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Clean Air Filter
( ) Adjust Clutch
( ) Check Tire Pressure
( ) Shift Lever Lubrication
( ) Clutch Release Bearing Lubrication
( ) Manual Controls Lubrication
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICILE MAINTENANCE

18,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Data) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defrostar
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 18,000 Miles:

( ) Rotate Wheels and Tires (All 5)
( ) Wheel Alignment
( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Adjust Brakes & Deglaze Linings.
( ) Chassis Lubrication
( ) Shift Lever Lubrication
( ) Belt Adjustment
( ) Clean Air Filter
( ) Clutch Release Bearing Lubrication
( ) Adjust Clutch
( ) Check Tire Pressure
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.

(Data) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICLE MAINTENANCE

21,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 21,000 Miles:

NOTE: Change Engine Air Cleaner and Engine Fuel Filter at 20,000 miles. Service or
( ) *lubricate hydrovac every 20,000 miles.*

( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Transmission Oil Change
( ) Chassis Lubrication
( ) Belt Adjustment
( ) Clean Air Filter or Replace
( ) Adjust Clutch
( ) Check Tire Pressure
( ) Shift Lever Lubrication
( ) Clutch Release Bearing Lubrication
( ) Manual Controls Lubrication
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

CORTEZ DIVISION

REQUIRED VEHICLE MAINTENANCE

24,000 MILES

This Service and Additional Services requested by owner were performed by:

(Servicing Dealer)

(Date) (Mileage)

(Service Manager) (Owner's Signature)

(Retain In Manual)

Inspect and Service as Necessary:

( ) Transmission
( ) Power Steering
( ) Hydrovac Fluid
( ) Batteries
( ) Starter
( ) Parking Brake
( ) Horn
( ) Heater and Defroster
( ) *Radio
( ) Instruments
( ) *Water System
( ) *Toilet
( ) *Refrigerator
( ) *Hot Water Heater
( ) *Interior
( ) Windows and Door Operation
( ) Tires
( ) Crankcase Ventilation Valve Assembly
( ) Clutch Fluid
( ) Brake Fluid
( ) Front and Rear Suspension
( ) Carburetor Adjustment
( ) Distributor Timing
( ) Manifold Heat Control Valve
( ) Windshield Wipers
( ) Windshield Washers
( ) Exterior Lights
( ) *Interior Lights
( ) *110 Volt Circuit
( ) *Water Pump
( ) *Interior Heater
( ) *Gas Range
( ) *Ventilating Fans
( ) Fire Extinguisher
( ) Wheel Lug Nuts

*(If so equipped)

Required Maintenance at 24,000 Miles:

NOTE: Repack Front Wheel Bearings at 25,000 Mile Intervals.

( ) Repack Rear Wheel Bearings
( ) Rotate Wheels and Tires (All 5)
( ) Wheel Alignment
( ) Engine Oil Change
( ) Oil Filter Change
( ) Oil Distributor
( ) Adjust Brakes & Deglaze Linings.
( ) Chassis Lubrication
( ) Torque U-Joint Cap Screws 30 Ft. Lbs.
( ) Belt Adjustment
( ) Shift Lever Lubrication
( ) Clean Air Filter
( ) Clutch Release Bearing Lubrication
( ) Adjust Clutch
( ) Check Tire Pressure
( ) Change Spark Plugs, Points and Condenser (or as required)

(Date) (Unit) (Mileage)

(Service Manager) (Owner's Signature)

(This section to be forwarded to Product Service Battle Creek, Michigan)

NOTE: To maintain Maximum performance for the life of your Cortez, previous maintenance intervals should be continued.

CORTEZ DIVISION

NOTES

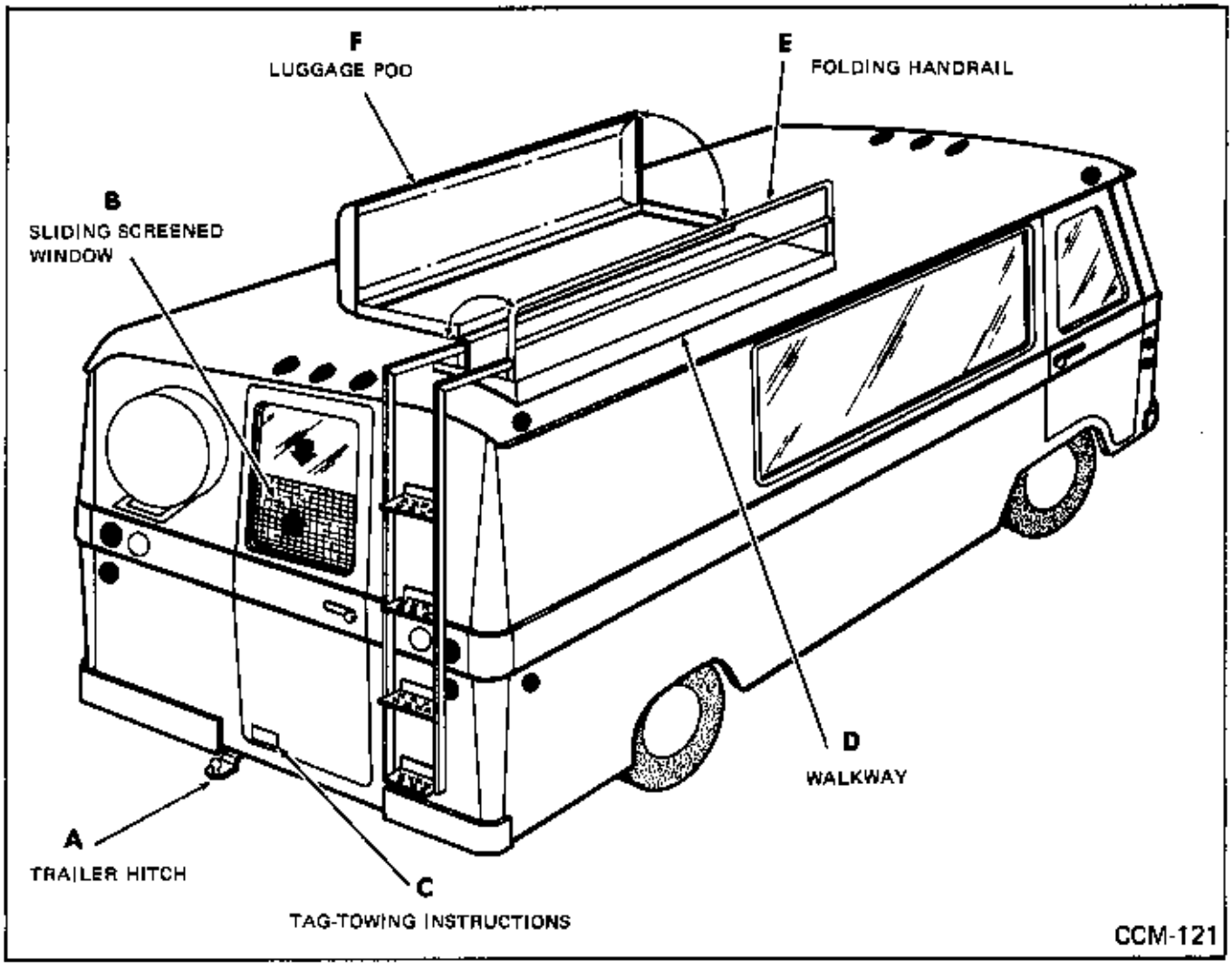


Fig. 116

Trailer Hitch:

For Cortez owners desiring the convenience of towing a light weight additional vehicle, the Cortez trailer hitch is available. Instructions on the towing tag must be adhered to, to prevent damage to your Cortez.

The trailer hitch ball must be purchased locally to meet individual owner's needs. (Fig. 116)

Towing Instruction Plate:

The towing instruction plate (Fig. 117) is located at the bottom exterior of the rear door. (Fig. 116)

Rear Door Sliding Window and Screen:

A very nice Cortez option for high ambient temperature areas is the sliding rear door window and screen.

The sliding rear door window and screen can be used to prevent heat build-up or to take advantage of prevailing breezes.

The Cortez sliding window and screen is completely adjustable to allow the desired ventilation by the owner. Maximum opening is approximately 50% of the window size. See "B" Fig. 116. Due to the materials used, this option requires very little periodic maintenance.

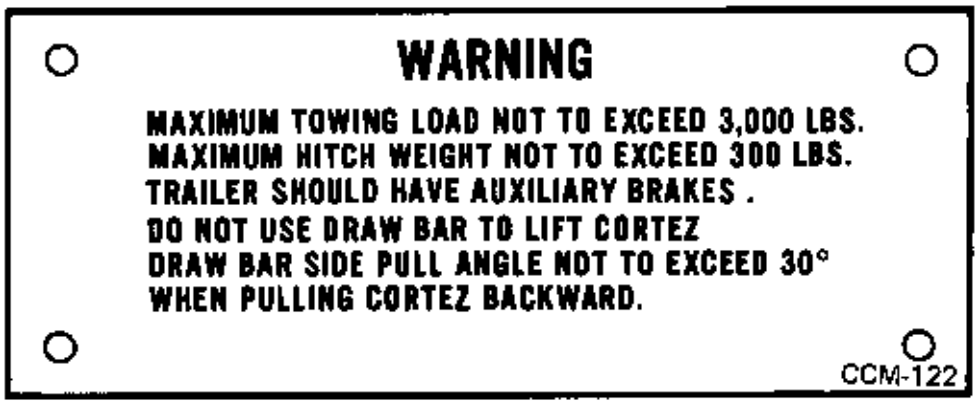


Fig. 117

Luggage Pod, Walkway, and Ladder:

The Cortez Luggage Pod option gives you additional outside storage space.

Due to its weather proof features, the Cortez Luggage Pod can be utilized to carry most anything the owner desires. It is designed to carry items as long as skis, or as compact as a complete set of luggage.

The Cortez Luggage Pod comes equipped with a roof walkway complete with hand rail (chrome) and a four (4) step chrome ladder for easy access to the Luggage Pod. The Luggage Pod is also equipped with a lock to prevent the loss of your valuable personal equipment.

Like all Cortez options, the Luggage Pod has been designed to enhance the over-all appearance of your Cortez. ("D" "E" "F", Fig. 116)

NOTE: The maximum loading capacity for the luggage pod is 200 lbs.

Stereo Tape Deck:

For those Cortez owners that desire the ultimate in listening pleasure, Cortez 8 track stereo is available.

Standard installation of this fine option includes four (4) high quality speakers that are adjustable for balance from the stereo master control panel.

This option includes a push button full transistor, hi-fidelity radio. To pre-set radio, pull one push button out as far as it will go, tune in the desired station manually and then push button in. Repeat this operation for each button.

To operate stereo tape and cartridge, radio must be in the "on" position. Slide stereo tape cartridge gently into the cartridge receiver until it locks in position. The volume and balance can then be adjusted for individual listening pleasure. Your Cortez stereo option is equipped with an eight channel selector bar. Each time the bar is depressed, the stereo tape player will automatically change channels.

The stereo tape cartridge can be removed at any time by the operator. To remove tape cartridge, a slight pull is required. Radio cannot be operated with tape cartridge locked in position. Cartridges can be purchased locally throughout the United States.

Minor Adjustment Instructions:

Your Lear Jet Stereo 8 unit is checked for all proper adjustments at the factory. Occasionally, a slight further adjustment may be necessary once the unit is in operation, to correct crosstalk or adjust the speed control of the unit. If this should become necessary, follow instructions below.

Should crosstalk occur (two stereo selections playing at one time on the tape player on one cartridge) use the following procedure to correct this condition. First, check several more cartridges for the same condition. If only the one cartridge produces crosstalk, the cartridge is defective.

However, should the majority of the cartridges produce crosstalk, the unit requires adjustment. To make the adjustment to eliminate crosstalk or misadjusted playback head position, follow the step by step procedure.

1. Use a cartridge of known good performance.

2. Note red painted screw on bottom of unit. (Fig. 118)

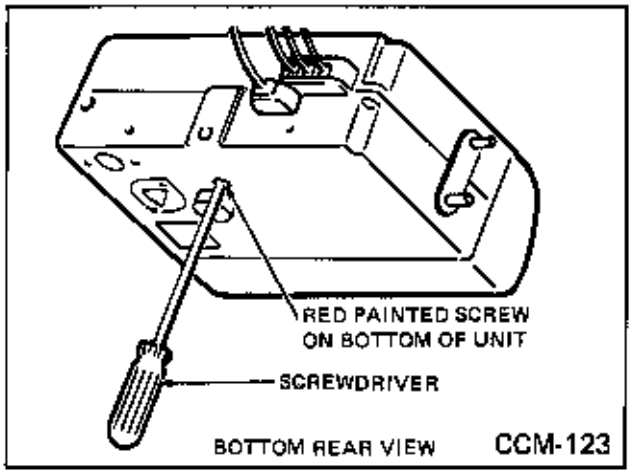


Fig. 118

3. Insert cartridge noting if crosstalk is present.

4. Using a screwdriver, adjust the red painted screw. Should the interfering channel become louder, reverse the screw adjustment until the unit plays without interference.

5. Secure the adjustment in position with plastic glue.

Minor Adjustment Instructions:

Speed Control Adjustment:

Should speed variation be present, always check the cartridge first (by substitution). Select a vocal tape of an artist with whose singing voice you are familiar. Turn unit on and insert the cartridge, listening for the pitch of the artist's voice. Should the voice pitch be high, the unit is running fast; or if the voice pitch is low, the unit is running slow.

To correct either the high or low pitch condition, follow the speed correction outline procedure below:

1. Remove the two right hand knobs from the control shaft on the tape only, or AM radio models (Fig. 119) noting an access hole to the right of the control shaft.

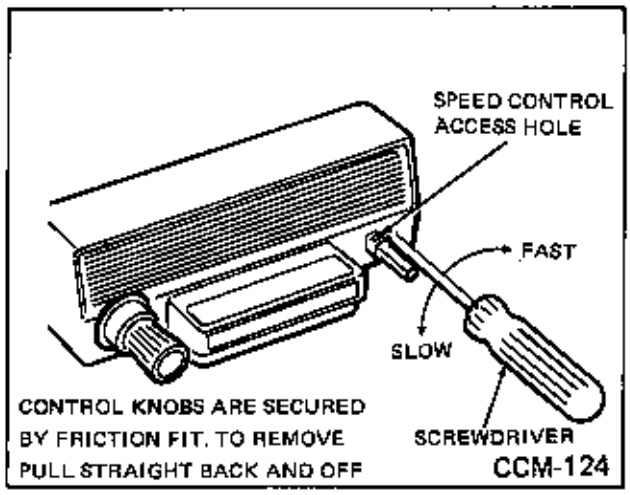


Fig. 119

2. Using a small screwdriver (inserted into access hole) make the speed control adjustment. Should the unit be running fast, a counter-clockwise rotation of the screwdriver will slow the unit down; should the unit be running slow, a clockwise rotation of the screwdriver will speed it up. Set the speed control at that point where the artist's voice sounds correct to your ear.

   NOTE: If further adjustments are required, contact your nearest Lear Jet Stereo 8 warranty repair center.

Water Purifier:

When in doubt about the safety of water in areas where you travel, the Cortez water purifier is a splendid option.

After initial installation, the Cortez water purifier requires little maintenance. To chlorinate water when there is a question of safety, the following procedure is suggested:

1. One teaspoon of fresh Chlorox for each 10 gallons of water can be used for quick killing of harmful bacteria and known virus.

2. The best way to "dose" the water is to connect hose to Cortez and add bleach in other end before connecting it to the hydrant. This method will also keep hoses and connections free from contamination. Follow this procedure each time tank is filled.

WINTERIZING:

Manufacturer's instructions for winterizing should be followed. To insure protection to the EVERPURE, open all faucets served by the unit and run or pump all water out. In moderate climates, the cartridge can be left in the shell. In cold climates, the cartridge must be removed. It can be wrapped in wax paper and stored until the following season.

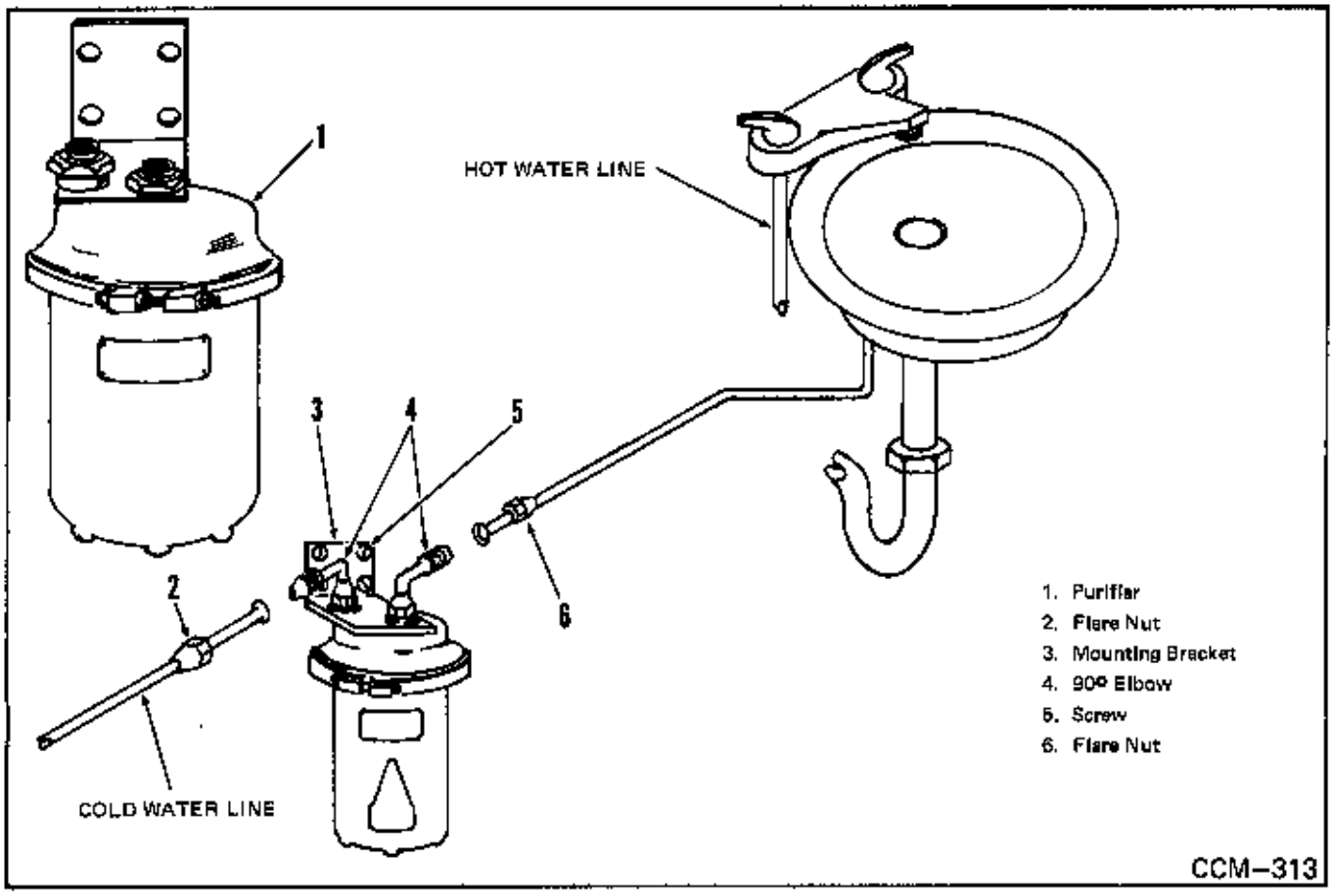


Fig. 120

Trouble Shooting Guide:

Problem	Solution
1. No water coming through:	a. Check to see if lines are piped in backwards–outlet is in center of top, inlet on the side. b. Remove the seal from "U-fil" cartridge. c. If lines are blocked–flush with detergent. d. Pressure in water system too low.
2. Black water:	a. Travel over rough roads can unseat the filter coat. Run several gallons of water to waste to re-build the coat on the filter.
3. Water leak:	a. Gasket in top is not smooth. b. Tighten V-Band on top. c. Tighten connector nuts on fittings.

Air Conditioner:

The air conditioner unit is located in front above the driver's compartment. (Fig. 121) The air conditioner is equipped with adjustable louvers and three controls. For maximum cooling, turn temperature selector knob clockwise, then push master switch to "on" position and push blower switch to "high" position. (Fig. 121) For night operation or during moderate weather, partial cooling can be obtained. Turn temperature selector knob to desired temperature, then reduce blower switch speed to "medium" or "low" speed. If your air conditioner should fail to operate, turn master switch to "off" position until cause can be determined.

NOTE: Air conditioner should be operated approximately once a month during the off season. This will help protect compressor seals.

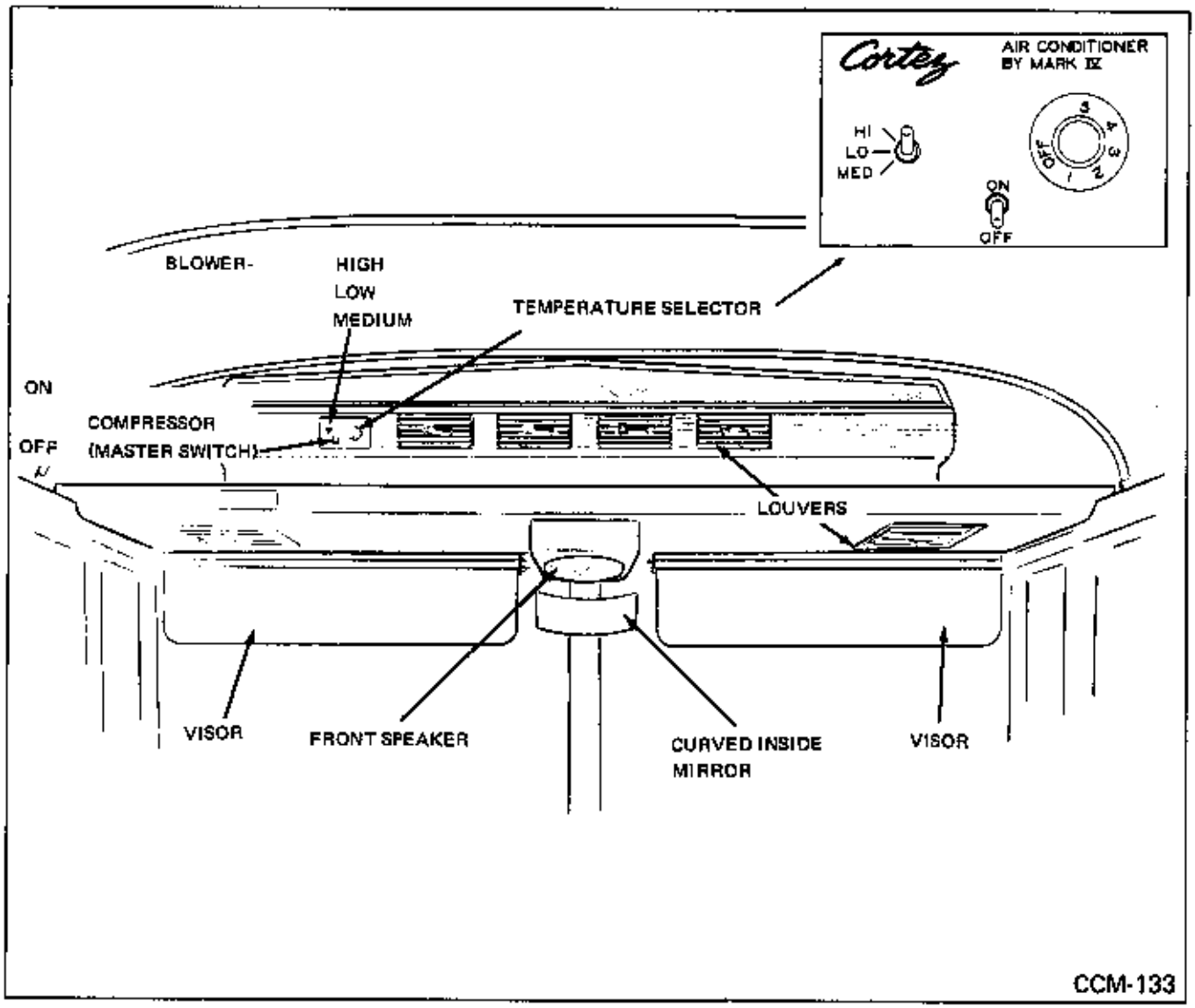


Fig. 121 Air Conditioner

Stewart Warner Space Heater:

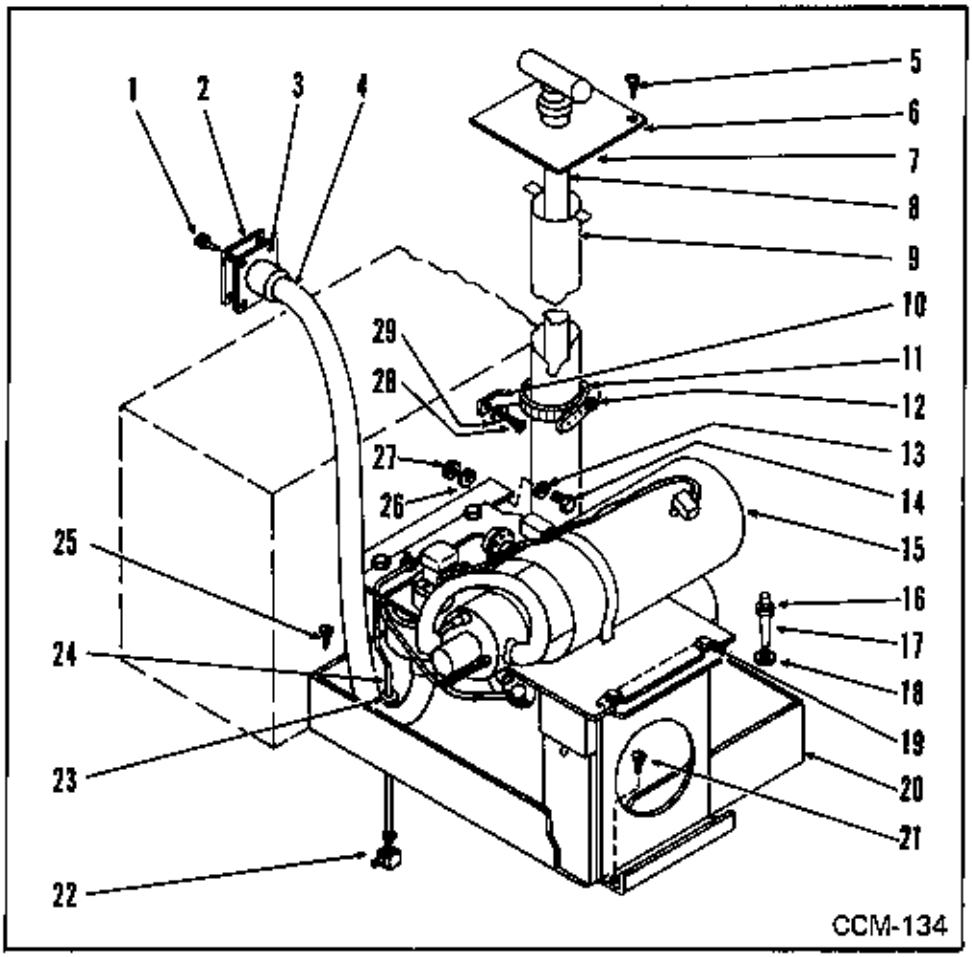


Fig. 122 Interior Heater

1. Louver Mounting Screw
2. Air Intake Louver
3. Louver Mounting Gasket
4. Air Intake Hose
5. Flashing Mounting Screw
6. Exhaust Flashing Assembly
7. Exhaust Stack Clamp & Fingers
8. Exhaust Stack
9. Exhaust Shroud
10. Shroud Clamp Angle
11. Clamp
12. Shroud Bracket
13. Cleat Mounting Washer
14. Cleat Mounting Bolt
15. Heater Assembly (See Separate Parts List for Components)
16. Drain Tube Nut
17. Exhaust Elbow Drain Tube - 12"
18. Drain Tube Grommet
19. Heater Mounting Bolt
    Heater Mounting Washer
    Heater Mounting Lockwasher
    Heater Mounting Nut
20. Drip Pan
21. Support to Floor Screw
22. Fuel Line to Tank Fitting
23. Grommet
24. Fuel Line Assembly
25. Drip Pan to Floor Screw
26. Cleat Mounting Lockwasher
27. Cleat Mounting Nut
28. Bracket Mounting Screw
29. Bracket Mounting Lockwasher

CORTEZ DIVISION

Occasionally a minor problem may be encountered with your Cortez Stewart Warner Space Heater. The source of the problem can usually be located by following the trouble shooting procedures as outlined below.

TROUBLE SHOOTING CHART

POSSIBLE CAUSE / COMPLAINT	Ventilating Air Blower Runs Continuously	Heater Inoperative; Combustion Air Blower Inoperative	Heater Inoperative; Combustion Air Blower Operates	Heater Operates; No Warm Air Delivered	Popping or Back-firing When Heater Cycles	Excessive Exhaust Smoke	Gasoline and / or Exhaust Odors in Car	Intermittent Operation; Heat Too Low
Burned out fuse	–	X	–	–	–	–	–	–
Loose or defective wiring	–	X	X	–	X	X	–	X
Incorrect wiring	X	X	X	X	X	X	–	X
Low voltage	–	–	X	–	X	X	–	X
Kinked or restricted fuel lines	–	–	X	–	X	–	–	X
Defective fuel pump	–	–	X	–	X	X	–	X
Broken pump coupling	–	–	X	–	X	–	–	X
Defective pump check valves	–	–	X	–	X	–	–	X
Air lock in fuel line	–	–	X	–	–	–	–	X
Open fuel solenoid coil	–	–	X	–	–	–	–	–
Fuel valve sticking on seat	–	–	X	–	–	–	–	–
Clogged nozzle	–	–	X	–	–	–	–	X
Defective overheat switch	–	–	X	–	–	–	–	X
Defective Ductstat	–	–	X	–	–	–	–	X
Leaking Fuel Valve	–	–	–	–	X	X	–	–
Incorrect spray from nozzle	–	–	X	–	X	–	–	–
High fuel pressure	–	–	–	–	–	X	–	–
Incorrect fuel nozzle	–	–	–	–	–	X	–	–
Leaking fuel lines	–	–	–	–	–	–	X	X
Leak at coil cup	–	–	–	–	–	–	X	–
Leak between nozzle & casting	–	–	–	–	X	–	–	–
Leaking heat exchanger	–	–	–	–	–	–	X	–
Loose burner clamp	–	–	–	–	–	X	X	–
Slow combustion air motor	–	–	–	–	X	X	–	–
Combustion air motor not grounded	–	X	–	–	X	X	–	–
Damaged or disconnected Combustion air duct	–	–	X	–	X	X	X	–
Restricted exhaust	–	–	X	–	X	X	X	–
Pitted breaker points	–	–	X	–	X	–	–	–
Poor condenser solder joint (at breaker points)	–	–	X	–	X	–	–	–
Worn points cam	–	–	X	–	X	–	–	–
Incorrect points gap	–	–	X	–	X	–	–	–
Damaged spark plug	–	–	X	–	X	–	–	–
Incorrect spark gap	–	–	X	–	X	–	–	–
Defective ignition coil	–	–	X	–	X	–	–	–
Open flame detector switch	–	–	X	–	–	–	–	–
Open safety valve coil	–	–	X	–	–	–	–	–
Defective relay	–	X	–	–	X	X	–	–
Defective control switch	–	X	–	–	X	–	–	–
Defective wall thermostat	–	X	–	–	–	–	–	X
Damaged or restricted air duct	–	–	–	X	–	–	–	X
Ventilating air motor defective	–	–	–	X	–	–	–	X
Incorrect installation	–	–	X	X	–	–	X	X
Incorrect customer operation	–	–	–	–	–	–	–	X
Leak at vehicle tank or engine	–	–	–	–	–	–	X	–
Quartz rod broken	X	X	–	–	–	–	–	–
Defective F. D. switch	X	–	–	X	–	–	–	–

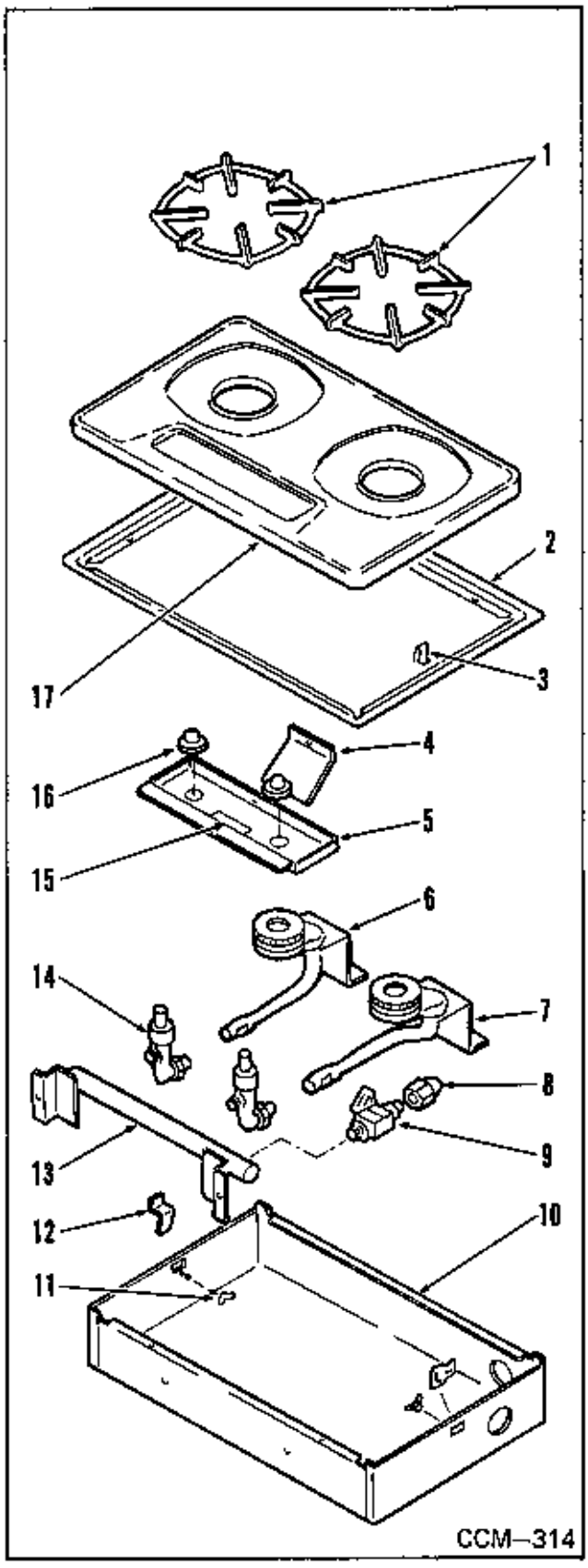


Fig. 123

Magic Chef Stove: (Fig. 123)

1. Square Grate
2. Drop-In Frame
3. Main Top Hold-Down Clip
4. Manifold Panel Support
5. Manifold Panel
6. Left Burner Assembly
7. Right Burner Assembly
8. Half Union Nut
9. Shut-off Valve
10. Burner Box Assembly
11. Wing Nut
12. Mounting Clip
13. Manifold Pipe
14. Top Burner Valve
15. Magic Chef Name Plate
16. Top Burner Knob
17. Main Top

Norcold Refrigerator: (Fig. 124)

1. Hinge Assembly
2. Door Case Assembly
3. Egg Holder
4. Handle Bar
5. Butter Holder
6. Lock Assembly
7. Latch Assembly
8. Door Plate
9. Bottle Holder
10. Gasket
11. Hinge Assembly
12. Base
13. Door Supporter
14. Shelf Stop
15. Rack
16. Latch Holder
17. Drainage Pan
18. Ice Cube Tray
19. Evaporator
20. Evaporator Rubber Stop
21. Selector
22. Thermostat Dial
23. Cabinet Assembly
24. Blind Cover Plate
25. Rating Plate
26. Inverter Cover
27. D.C. Terminal
28. Fuse Holder
29. Ground Terminal

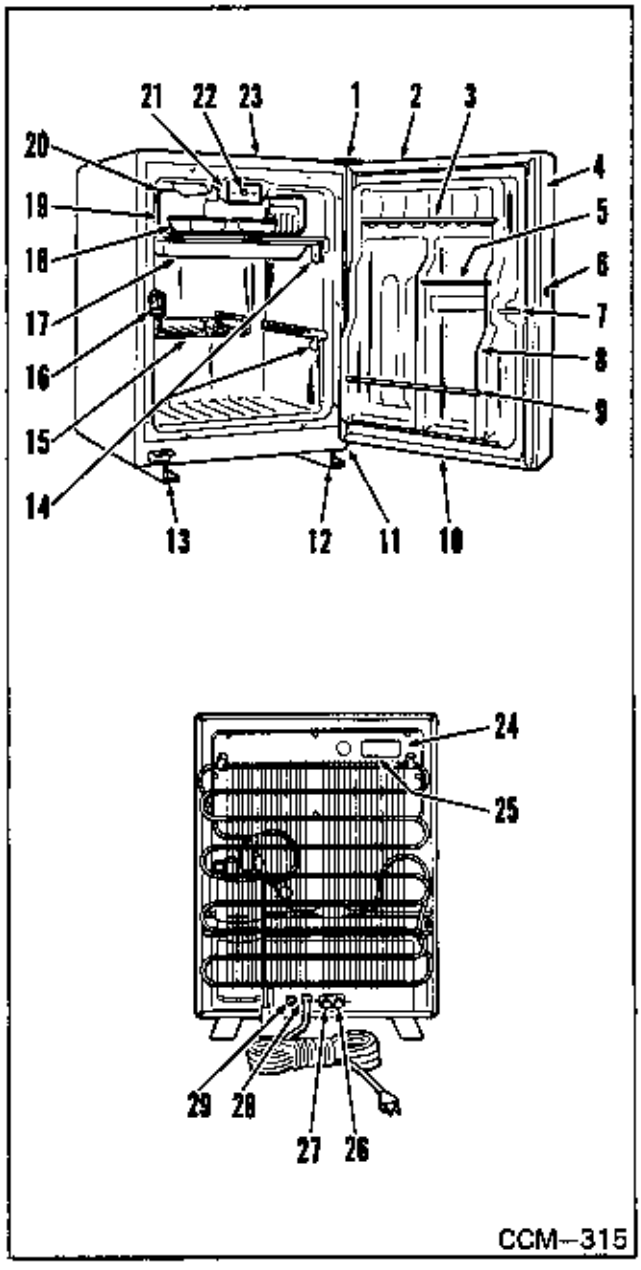


Fig. 124

CORTEZ DIVISION

Peters and Russel, Inc.
Spring field, Ohio
Water Pump Model No. 6950 model J
Pressure Water Systems

Wiring:

The following wire sizes must be strictly adhered to:

1. Wire sizes for 12 and 32 volt systems with up to 30 ft. from power source to pump, use 12 gauge wire. Over 30 ft., use 10 gauge wire.

2. Install a switch in hot side of line to turn off unit when not in use.

Pressure Switch:

Pressure switch on unit has been regulated to turn pump on at 15 P.S.I. and off at 25 P.S.I.

CAUTION: ALL WARRANTIES ARE VOID IF SWITCH IS ALTERED FROM FACTORY SETTINGS.

The PAR Pressure Master Water Systems have been designed to provide automatic trouble free pressurized water, with a minimum amount of maintenance which can, in the majority of cases, be performed without disconnecting the plumbing or electrical connection to the unit.

Symptom: Pump Does Not Prime:

Cure:
1. Check level of fresh water tank.
2. Check system for leaks (especially intake side).
3. Be sure all valves and strainers are open.
4. Check power supply and see that voltage is up.
5. Dismantle unit and check valve assemblies to make certain no foreign matter is between the valve and valve seat causing loss of suction. This is done without disturbing plumbing as follows:
   a. Remove four (4) slotted hex head screws.
   b. Lift motor, drive, and diaphragm assembly off base.
   c. Lift valve assemblies from pockets and clean all foreign matter from valve and valve seat.
   d. Replace valve assemblies back in same pockets, being sure rubber valve is UP on INTAKE side and DOWN on EXHAUST side.
   e. Replace top assembly and bolt back together, being careful to tighten evenly.

Sympton: Pressure Drops and Pump Kicks on Periodically When Water is not Being Drawn:

Cure:
1. Check all connections and faucets for leaks. One drop of water per minute will cause the pump to run every two hours.
2. Check valves for foreign matter, as per above paragraph.

Symptom: Pump is Rough and Has Excessive Noise:

Cure:
1. Check plumbing and strainer (if used) for restriction.
2. Be sure both pieces of hose have been used as per paragraph 2 in installation instructions.
3. After several months of operation, under certain conditions, the flow of the pump may become rough. If this happens, the flow may be smoothed out again as follows:

   Turn pump off, close inlet and open outlet. With a PAR air pump, force air into system through the snifter valve, located on exhaust side about middle of unit, until air comes from the outlet. Recap snifter, open intake and restart unit as per starting instructions.

Periodic attention should be given to snifter valve to see that valve core works freely and that hole in cover is kept open.

4. Remove aerator from faucets and clean (these restrict the flow when dirty).

Symptom: Radio Interference Caused by Pump:

Cure: 1. Reverse motor leads.
2. If reversing of leads does not suppress noise, then a .1 MFD condenser should be placed in the line with pigtail to hot side of line, and the case grounded.

Symptom: Decrease in Belt Life:

Cure: Too much or too little belt tension will decrease belt life. It has been found that the belt has proper tension if it can be moved in and out on one side for a total of 1/4" at a point halfway between pulleys.

Adjust Belt as Follows: Loosen nuts on end of motor and slide motor up or down until desired tension is gained and re-tighten nuts.

Performance and Capability Rating:

Service: Supply two faucets or shower, adequate pressure.

Pump Number	6950 or 6950-J
Page Number	3

Discharge Pressure G.P.M. and Amps. @ 12 Volts D.C.

5 P.S.I.	2.5 G.P.M.
10 P.S.I.	2.2 G.P.M.
20 P.S.I.	1.8 G.P.M.
25 P.S.I.	1.6 G.P.M.
30 P.S.I.	—
Shut-off P.S.I.	30
Maximum Operating Amps.	
Intermittent	6.2
Number of Outlets	4
Suction Lift, Maximum	5 ft.
Discharge Head, Maximum	7 ft.

NOTES

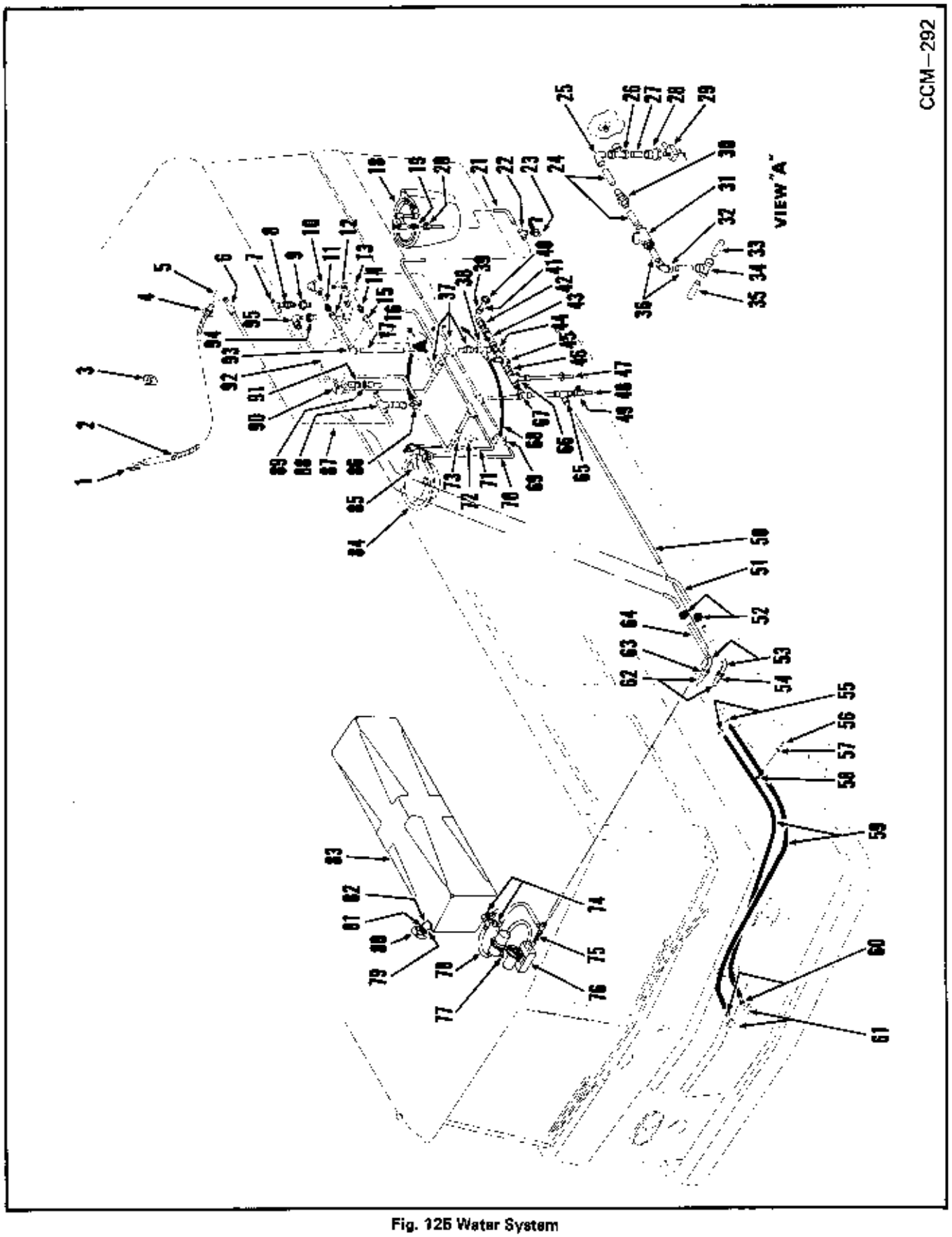


Fig. 125 Water System

CORTEZ DIVISION

Water System: (Fig. 125)

1. Hand Shower
2. Volume Regulator
3. Shower Clip
4. Lock Nut
5. Street Elbow
6. 1/2" Flare Nut
7. Jet Vent Baseboard Tee
8. Union
9. Adapter
10. Relief Valve
11. 1/2" Fl. x 1/2 MPT Adapter
12. 5/8" Flare Nut
13. 1/2" FPT Tee
14. 1/2" Fl. x 1 1/2" MPT Adapter
15. 5/8" Flare Nut
16. Water Heater
17. Tubing 1/2" O.D. Copper
18. Monomatic Toilet
19. Male Half Union 1/2" Fl. to 3/8" MPT
20. 1/2" Flare Nut
21. Tubing 1/2" O.D. Copper
22. Tee
23. Sill Cock 1/4" MPT
24. Tubing 5/8" O.D. Copper
25. Street Elbow
26. Tee Copper to MPT
27. Tubing 5/8" O.D. Copper
28. Adapter
29. Sill Cock 1/4" MPT
30. Union
31. Check Valve
32. Elbow
33. Tubing 5/8" O.D. Copper
34. Tee
35. Tubing 3/8" O.D. Copper
36. Tubing 5/8" O.D. Copper
37. Tee
38. Cross
39. Female Pipe Elbow
40. City Water Connection Swivel
41. Nipple
42. Flare Nut
43. Check Valve
44. Adapter
45. Regulating Valve
46. Adapter
47. Tubing 1/2" O.D.
48. Tubing 5/8" O.D. Copper
49. Drain Valve
50. Tubing 5/8" O.D. Copper
51. Tubing 5/8" O.D. Copper
52. Grommet
53. Elbow
54. Bulkhead Fitting
55. Hose Clamp
56. Screw
57. Washer
58. Clamp
59. Hose
60. Hose Clamp
61. Fitting
62. Tubing 1/2" I.D. Copper
63. Bulkhead Fitting
64. Tubing 5/8" O.D. Copper
65. Tee
66. Relief Valve
67. Tee
68. Hose
69. Sill Cock 1/4" MPT
70. Tubing 3/8" O.D. Copper
71. Tubing 3/8" O.D. Copper
72. Adapter
73. Tee
74. Drain Valve
75. Check Valve
76. Water Pump
77. Bracket
78. In-Line Strainer
79. Water Fill Hose
80. Water Fill
81. Clamp
82. 45° Elbow
83. Water Tank
84. Kitchen Sink
85. Kitchen Faucet
86. Sill Cock 1/4" MPT
87. Tubing 1/2" O.D. Copper
88. Tee
89. 1/2" Flare Nut
90. Lavatory Faucet
91. Union
92. Lavatory Sink
93. 90° Elbow
94. Adapter
95. 90°Elbow

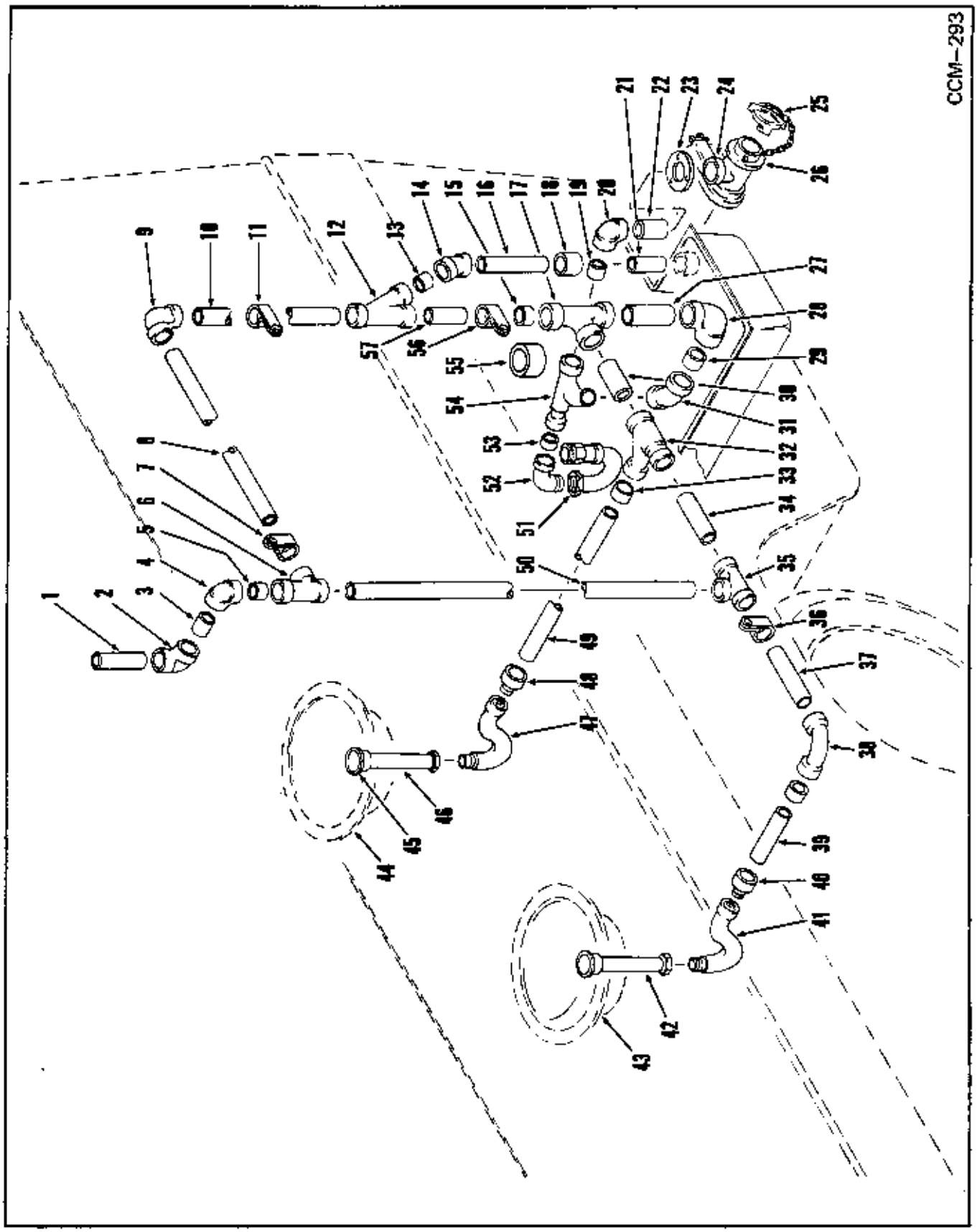


Fig. 126 Drainage System

CORTEZ DIVISION

Drainage System: (Fig. 126)

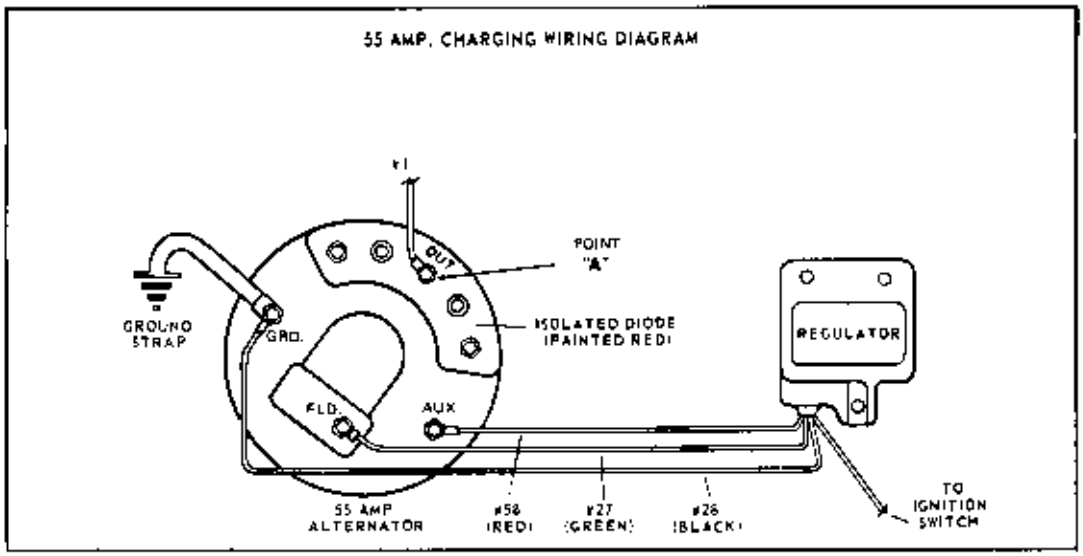
1. 1 1/2" x 6 3/4" Long Pipe
2. 1 1/2" – 90° Elbow
3. 1 1/2" x 3" Long Pipe
4. 1 1/2" – 90° Elbow
5. 1 1/2" x 1 1/2" Long Pipe
6. 1 1/2" – T-Y Short Turn
7. Support Clamp
8. 1 1/2" x 20 5/8" Long Pipe
9. 1 1/2" – 90° Short Turn Elbow
10. 1 1/2" x 20" Long Pipe
11. Support Clamp
12. 1 1/2" – "Y" Branch
13. 1 1/2" x 2 5/8" Long Pipe
14. 1 1/2" – 45° Long Turn Elbow
15. 2" x 1 1/2" Flush Bushing
16. 1 1/2" x 27 1/2" Long Pipe
17. 2" – T-Y Short Turn
18. "O" Ring Coupling
19. 2"x 1 3/4" Long Pipe
20. 2" – 90° Short Turn Elbow
21. 1 1/2" x 8" Long Pipe
22. 2" x 2 1/4" Long Pipe
23. Washer
24. Collector Septic Tank Valve
25. Collector Cap Septic Tank Valve
26. Basic Valve Septic Tank
27. 2" x 13 1/2" Long Pipe
28. 2" – 90° Long Turn Elbow
29. 2" x 1 3/4" Long Pipe
30. 2" x 8 1/4" Long Pipe
31. 2" – 45° Street Elbow
32. 2" x 1 1/2" x 1 1/2" T-Y Long Turn
33. 1 1/2" x 1 1/4" Flush Bushing
34. 1 1/2" x 7" Long Pipe
35. 1 1/2" – T-Y Short Turn
36. Support Clamp
37. 1 1/2" x 12 1/2" Long Pipe
38. 1 1/2" – 90° Elbow
39. 1 1/2" x 21 3/4" Long Pipe
40. Adapter 1 1/2" x 1 1/4" Male Slip x M.P.T.
41. 1 1/4" Brass "P" Trap
42. Waste Outlet
43. Kitchen Sink
44. Bathroom Sink
45. Strainer with Basket
46. Tail Piece
47. 1 1/4" – "P" Trap
48. Adapter Slip to M.P.T. 1 1/4"
49. 1 1/4" x 19" Long Pipe
50. 1 1/4" x 42" Long Pipe
51. "P" Trap Shower Pan
52. 2" – 90° Short Turn Elbow
53. 2" x 1 3/4" Long Pipe
54. 2" x 1 1/2" x 2" – T-Y Long Turn
55. Nipple
56. Support Clamp
57. 1 1/2" x 18 1/4" Long Pipe

NOTES

CORTEZ DIVISION

Motorola Charging System:

Recommended test procedures for the Motorla 55 Amp. charging system follows. It is important that careful attention be given each item of instructions to prevent damage or destruction to the various charging system components.



WARNINGS

NOTE
DO NOT OPERATE ALTERNATOR UNDER OPEN CIRCUIT CONDITIONS.
DO NOT GROUND FIELD CIRCUIT (NO. 27 WIRE) OR THE AUXILIARY CIRCUIT (NO. 58 WIRE).
OBSERVE PROPER BATTERY POLARITY (NEGATIVE (-) GROUND).
DO NOT DISCONNECT ANY TERMINAL OR PLUGS WITH ALTERNATOR OPERATING.
RED PLATE (ISOLATION DIODE) IS ELECTRICALLY "HOT" WHEN ENGINE IS OPERATING.

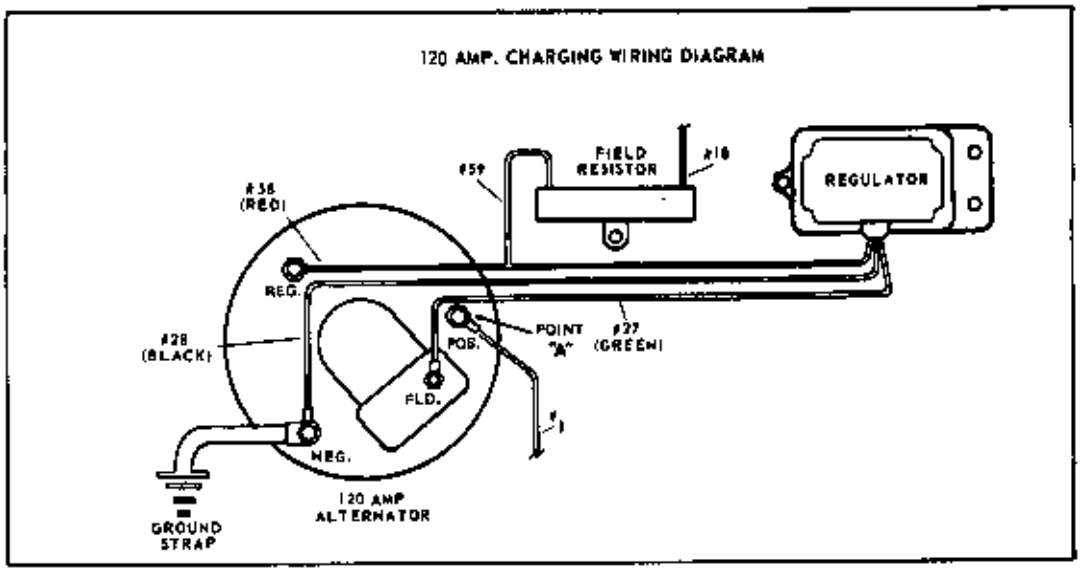
TEST PROCEDURE

EQUIPMENT REQUIRED: VOLTMETER (0 TO 16 VOLTS)

STEP NO. 1 IGNITION SWITCH OFF. VOLTMETER POS. LEAD TO POINT "A". VOLTMETER NEG. LEAD TO GROUND. VOLTMETER SHOULD READ BATTERY VOLTAGE.	IF VOLTMETER READS NO VOLTAGE, CHECK CIRCUIT THROUGH CABLES AND BATTERIES.
STEP NO. 2 CRANK ENGINE VOLTMETER LEADS SAME AS IN STEP NO. 1. VOLTAGE SHOULD INCREASE TO APPROX. 13.8 TO 14.4 VOLTS WITH INCREASE IN ENGINE SPEED.	IF VOLTAGE INCREASES PROPERLY ALTERNATOR, REGULATOR, AND BATTERY CIRCUITS ARE OPERATING PROPERLY. IF NOT, **STOP ENGINE** AND PROCEED TO STEP NO. 3.
STEP NO. 3 CHECK DRIVE BELTS FOR PROPER TENSION.	IF BELTS ARE OK, PROCEED TO STEP NO. 4
STEP NO. 4 CHECK ALL CONNECTIONS FOR TIGHTNESS AND PROPER CONNECTION	IF CONNECTIONS ARE OK, PROCEED TO STEP NO. 5.
STEP NO. 5 CONNECT VOLTMETER POS. LEAD TO "FLD." TERMINAL ON ALTERNATOR AND NEG. LEAD TO GROUND. IGNITION SWITCH ON ENGINE NOT RUNNING VOLTMETER SHOULD READ FROM 1.5 TO 2 VOLTS.	IF VOLTMETER READS NO VOLTAGE, REPAIR REGULATOR. IF VOLTMETER READS HIGH (10 TO 12 VOLTS), REPAIR ALTERNATOR

Motorola Charging System:

Recommended test procedures for the Motorola 120 Amp. charging system follows. It is important that careful attention be given each item of instructions to prevent damage or destruction to the various charging system components.



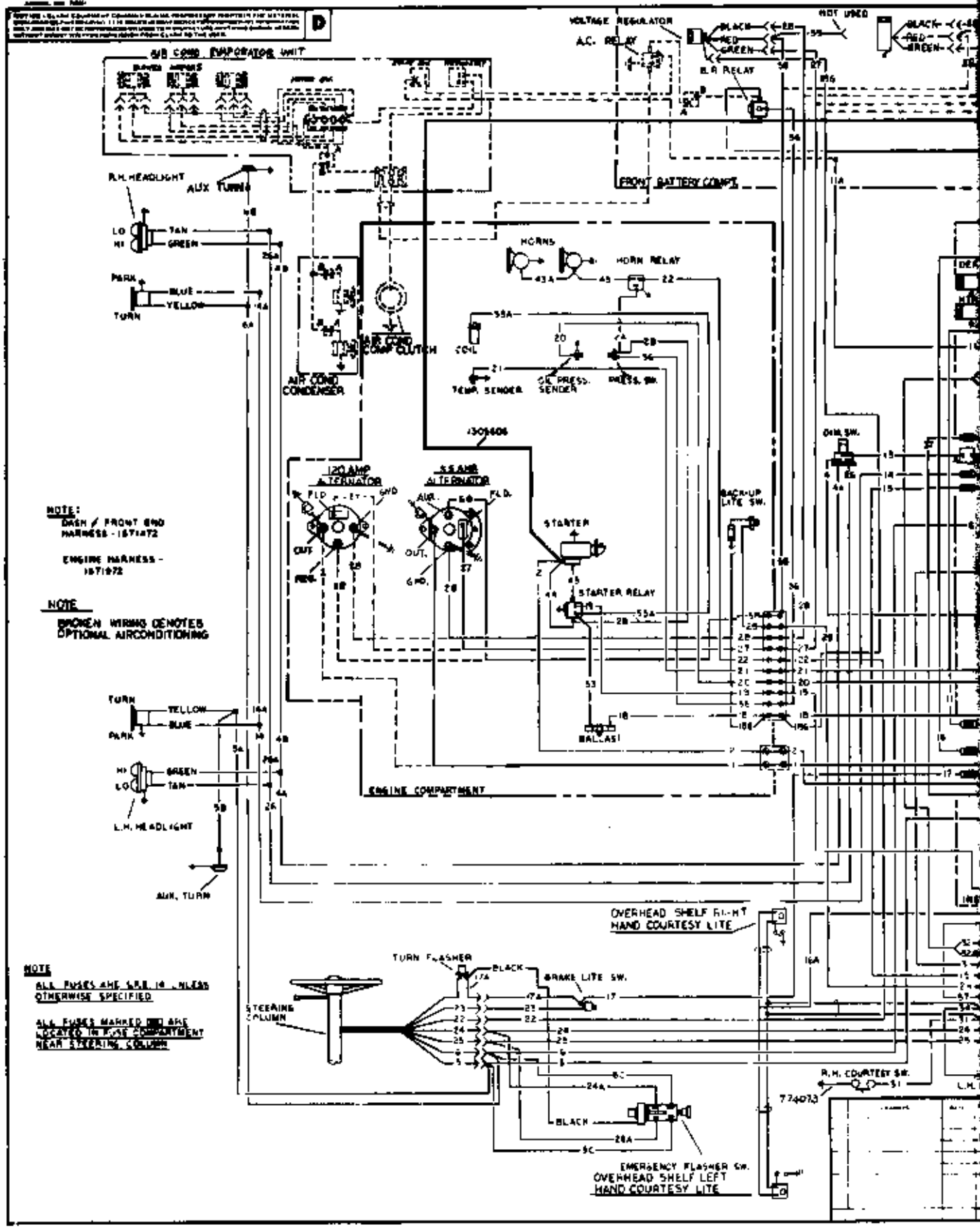
WARNINGS

NOTE:
DO NOT OPERATE ALTERNATOR UNDER OPEN CIRCUIT CONDITIONS.
DO NOT GROUND FIELD CIRCUIT (NO. 27 WIRE) OR REG. CIRCUIT (NO. 58 WIRE).
OBSERVE PROPER BATTERY POLARITY (NEGATIVE (-) GROUND).
DO NOT DISCONNECT ANY TERMINAL OR PLUG WITH ALTERNATOR OPERATING.

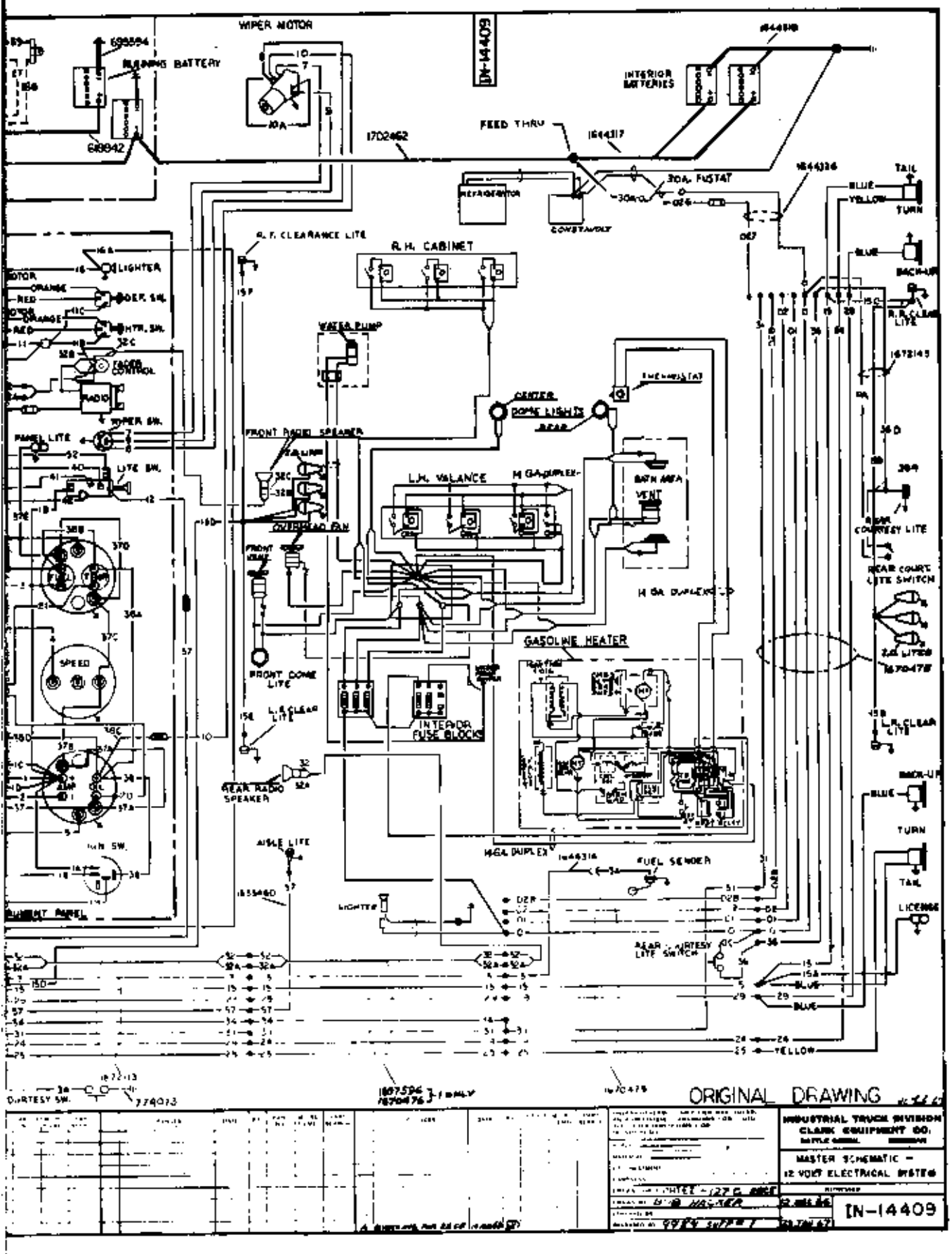
TEST PROCEDURE

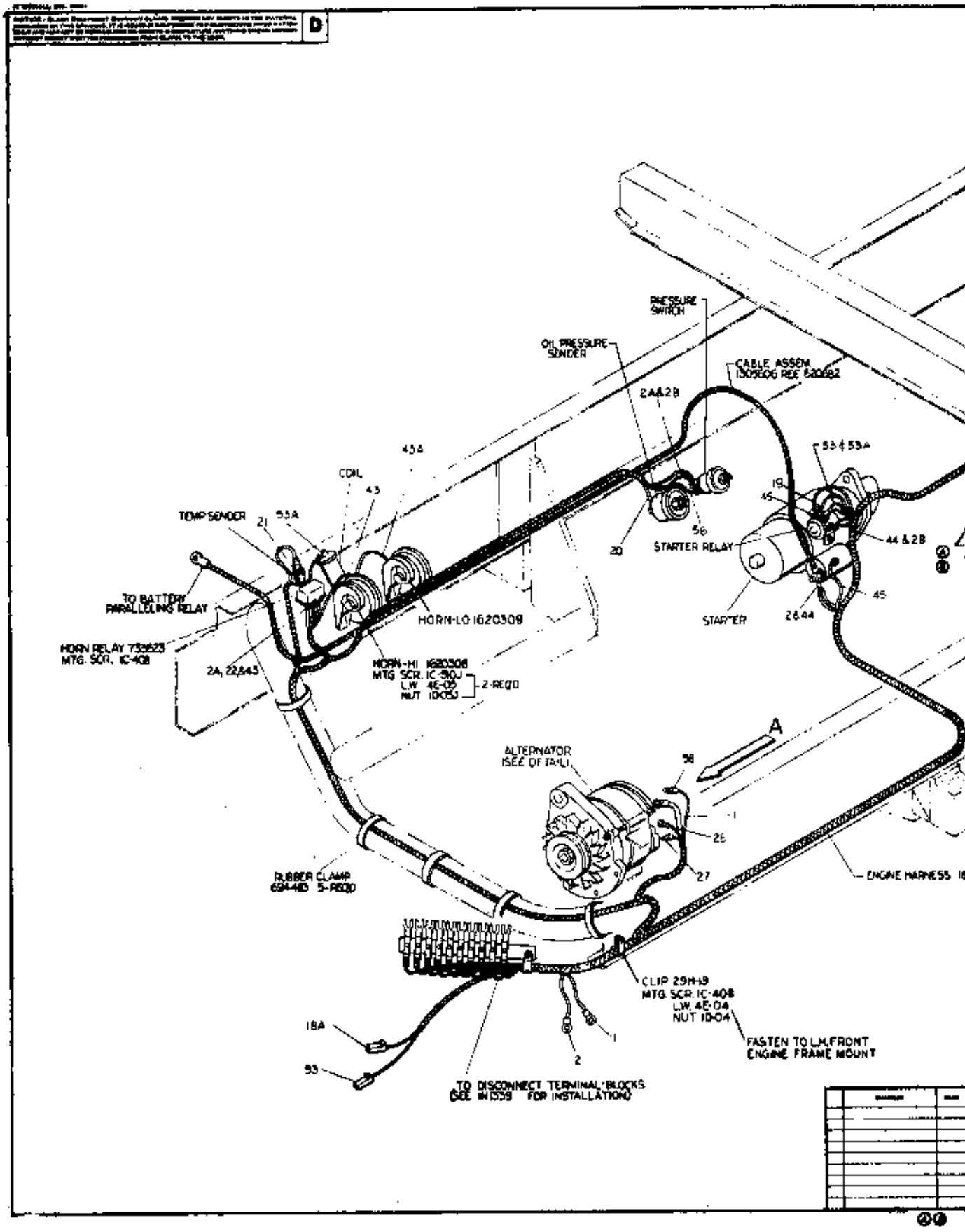
EQUIPMENT REQUIRED: VOLTMETER (0 TO 16 VOLTS)

STEP NO. 1 IGNITION SWITCH OFF. VOLTMETER POS. LEAD TO POINT "A". VOLTMETER NEG. LEAD TO GROUND. VOLTMETER SHOULD READ BATTERY VOLTAGE.	IF VOLTMETER READS NO VOLTAGE, CHECK CIRCUIT THROUGH CABLES AND BATTERIES.
STEP NO. 2 CRANK ENGINE. VOLTMETER LEADS SAME AS IN STEP NO. 1. VOLTAGE SHOULD INCREASE TO APPROX. 13.8 TO 14.4 VOLTS WITH INCREASE IN ENGINE SPEED.	IF VOLTAGE INCREASES PROPERLY, ALTERNATOR, REGULATOR, AND BATTERY CIRCUITS ARE OPERATING PROPERLY. IF NOT, **STOP ENGINE** AND PROCEED TO STEP NO. 3.
STEP NO. 3 CHECK DRIVE BELTS FOR PROPER TENSION.	IF BELTS ARE OK, PROCEED TO STEP NO. 4.
STEP NO. 4 CHECK ALL CONNECTIONS FOR TIGHTNESS AND PROPER CONNECTION.	IF CONNECTIONS ARE OK, PROCEED TO STEP NO. 5.
STEP NO. 5 IGNITION SWITCH ON ENGINE NOT RUNNING. VOLTMETER POS. LEAD TO ALTERNATOR FIELD TERMINAL. VOLTMETER NEG. LEAD TO GROUND.	IF VOLTAGE IS HIGH (10 TO 12 VOLTS), REPAIR ALTERNATOR. IF VOLTMETER INDICATES NO VOLTAGE, CHECK 75 OHM FIELD RESISTOR. IF RESISTOR IS OK, REPAIR REGULATOR.



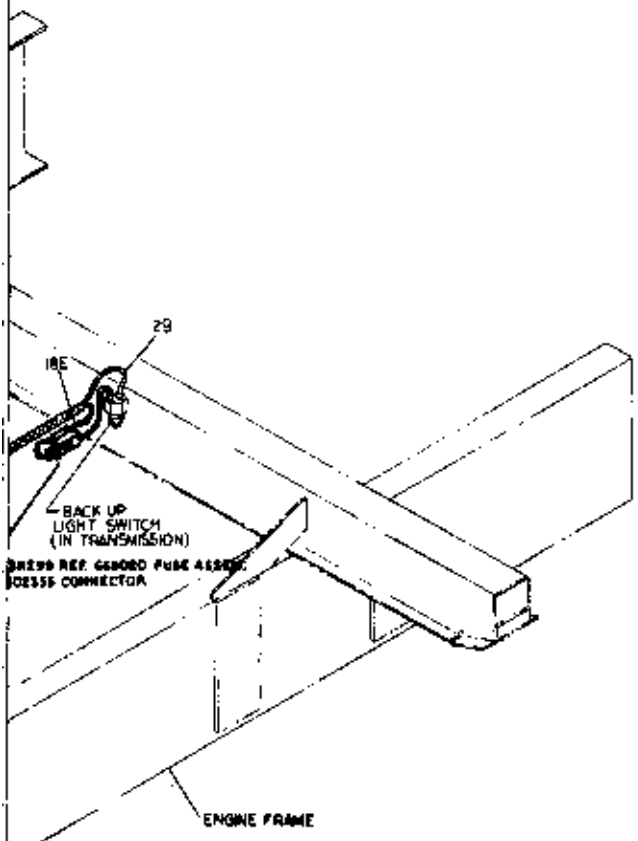
55 AMP–120 AMP STANDARD SERIES 28 - CE IN - 14409

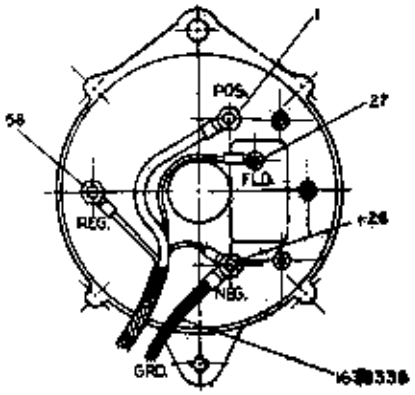

IN-14409
WIPER MOTOR
RUNNING BATTERY
INTERIOR BATTERIES
FEED THRU
30A. FUSTAT
TAIL
TURN
BACK-UP
R.H. CABINET
R.H. CLEARANCE LITE
LIGHTER
WIPER SW.
PANEL LITE
LITE SW.
RADIO
WATER PUMP
CENTER DOME LIGHTS
FRONT RADIO SPEAKER
L.H. VALANCE
H.D. DUPLEX
BATH AREA VENT
REAR COURTESY LITE
REAR COURT. LITE SWITCH
GASOLINE HEATER
INTERIOR FUSE BLOCKS
FRONT DOME LITE
L.H. CLEAR LITE
REAR RADIO SPEAKER
AISLE LITE
FUEL SENDER
L.R. CLEAR LITE
LICENSE
ORIGINAL DRAWING
INDUSTRIAL TRUCK DIVISION
CLARK EQUIPMENT CO.
MASTER SCHEMATIC -
12 VOLT ELECTRICAL SYSTEM
IN-14409



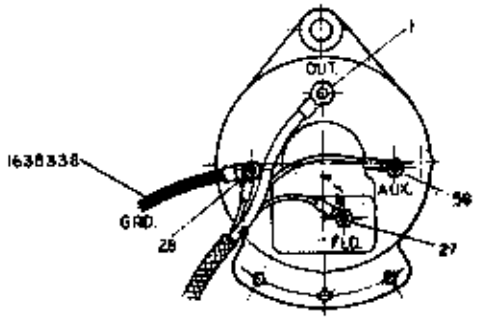
55 AMP–120 AMP ENGINE WIRING SERIES 28 - CE IN - 14162

IN1462



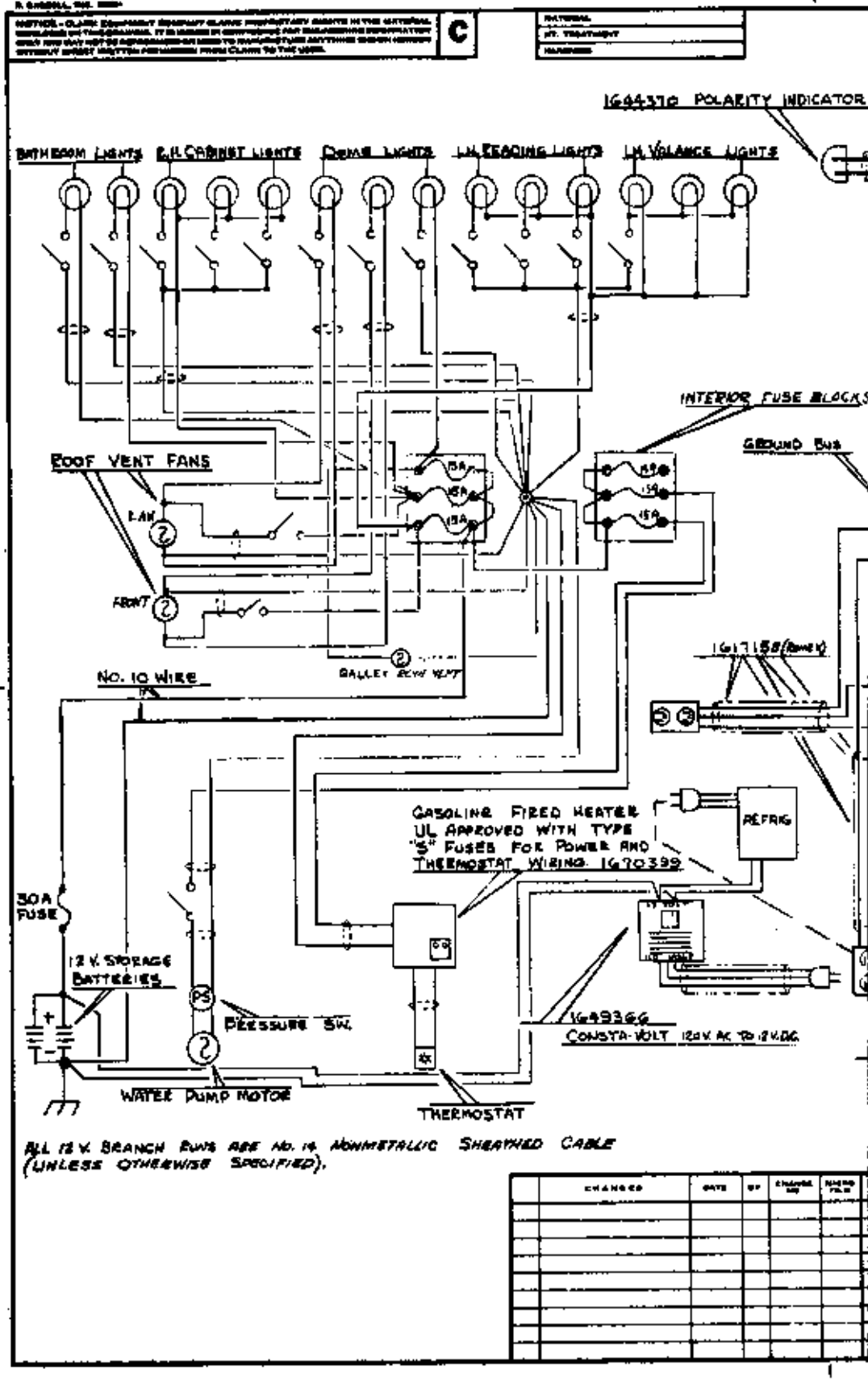


VIEW A
120 AMP

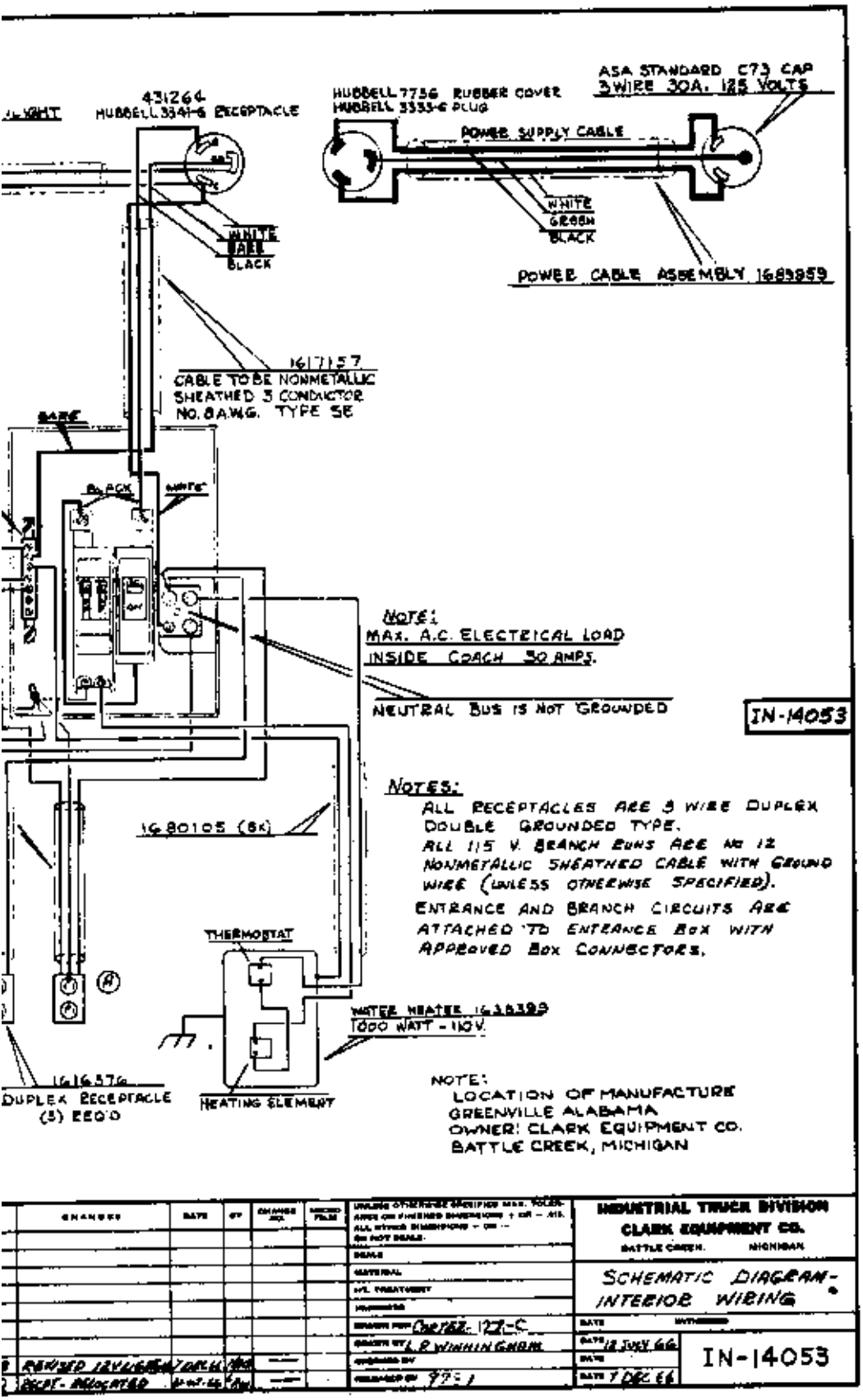


VIEW A
55 AMP

IN-1462



110 VOLT STANDARD SERIES 28 - CE IN - 14053



CHANGES	DATE	BY	CHANGE NO.	NOTICE FILED
REVISED 12V CIRCUIT	4-6-66	[illegible]	—	
DEPT. RELOCATED	11-17-66	[illegible]	—	

UNLESS OTHERWISE SPECIFIED MAX. ROUGH EDGES ON FINISHED DIMENSIONS = 1/64 — ALL FINISH DIMENSIONS = 125 — DO NOT SCALE.

SCALE

MATERIAL

HT. TREATMENT

FINISH

DRAWN PER CHRYSLER 127-C

CHECKED BY L. P. WINKLER GROUP

APPROVED BY

RELEASED BY [illegible]

INDUSTRIAL TRUCK DIVISION
CLARK EQUIPMENT CO.
BATTLE CREEK, MICHIGAN

SCHEMATIC DIAGRAM-
INTERIOR WIRING

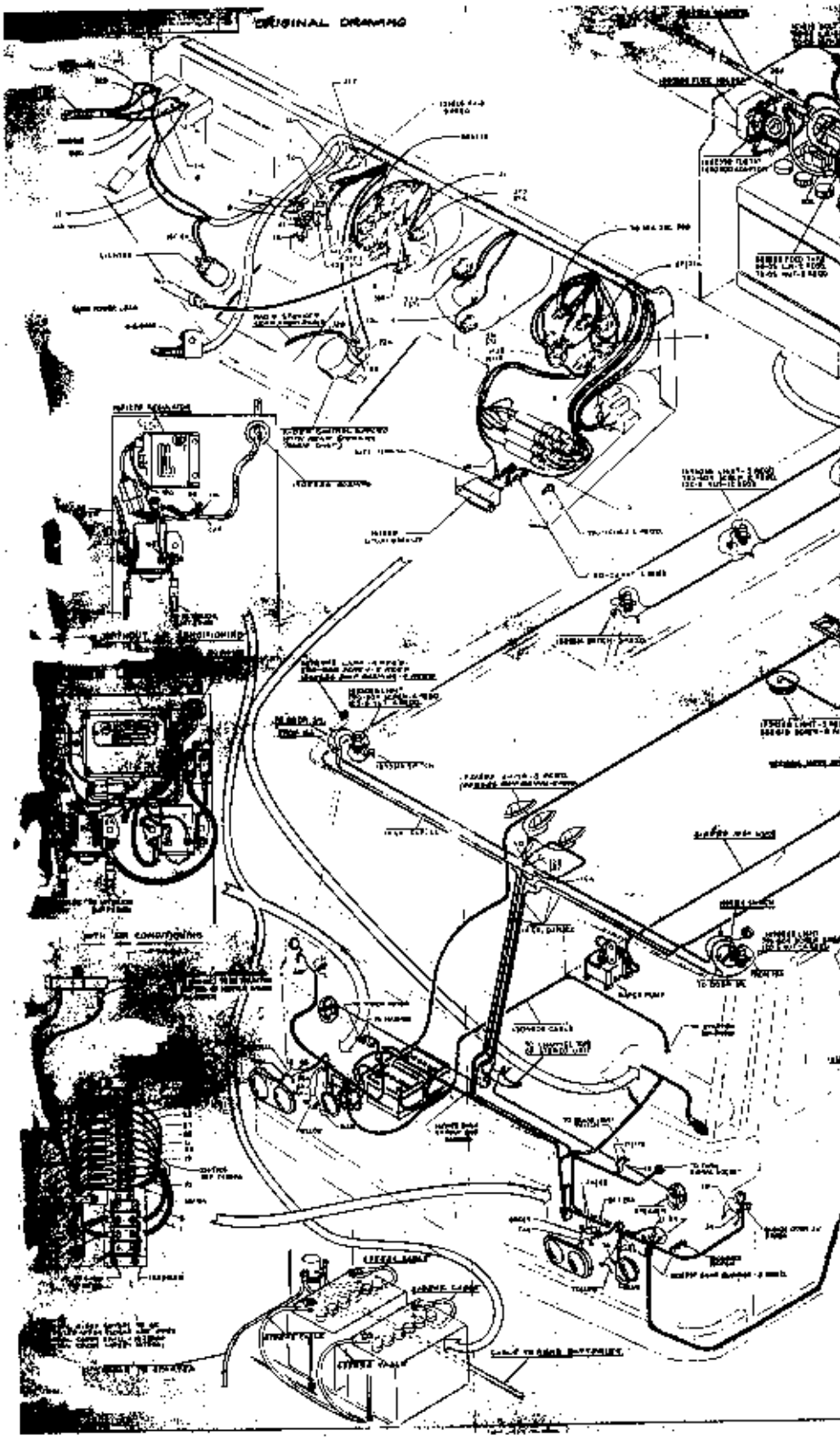
DATE WITHDRAWN

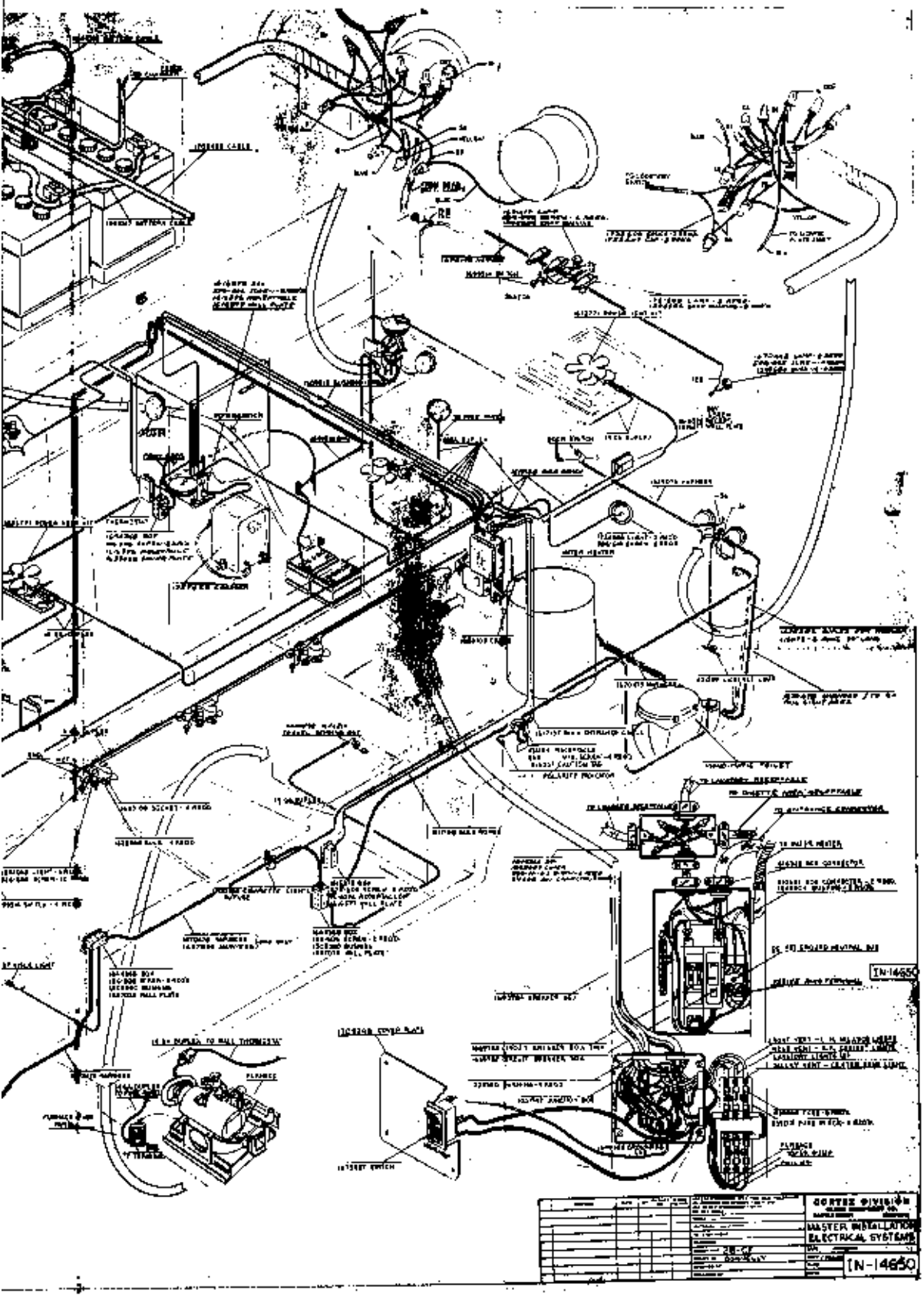
DATE 12 JULY 66

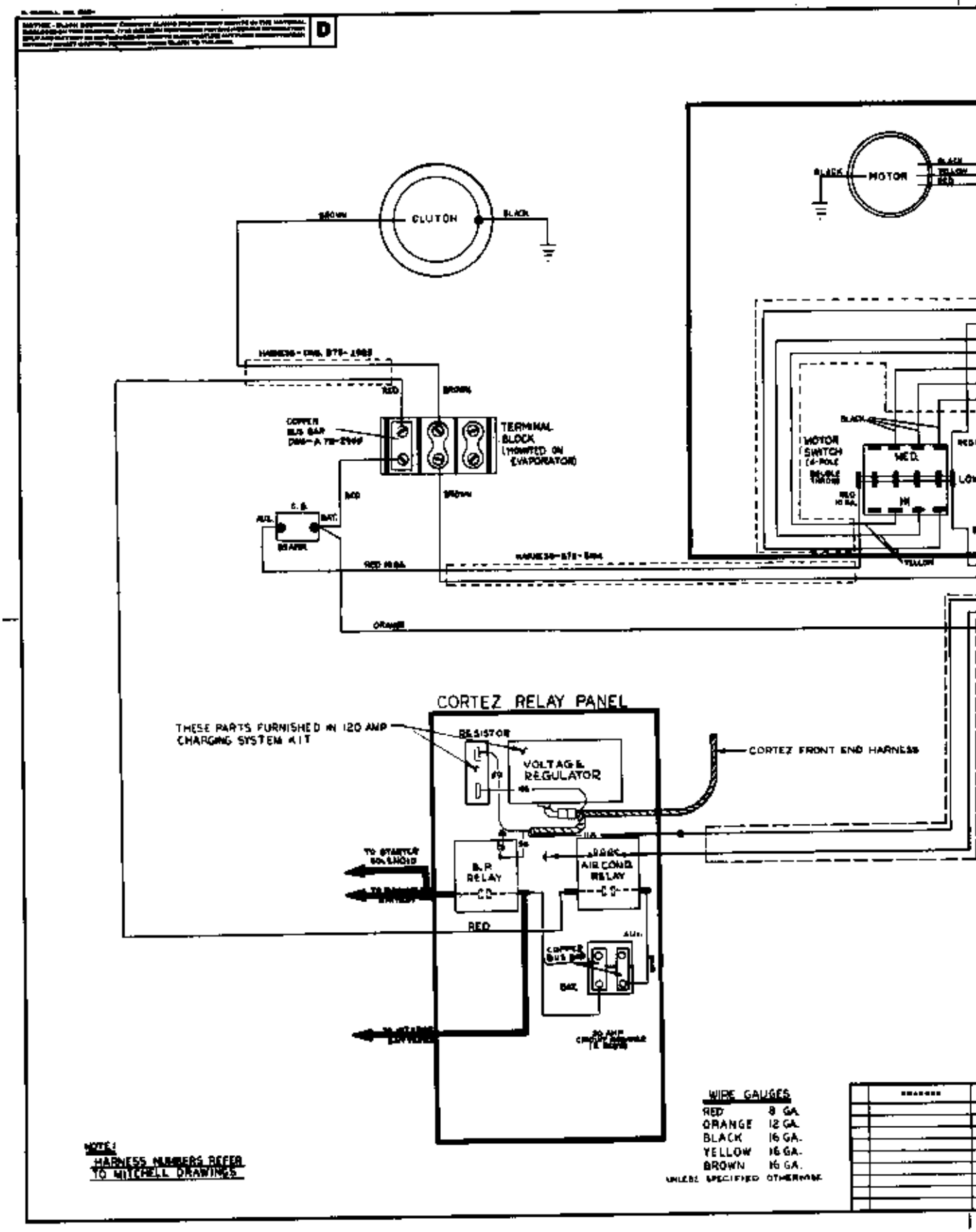
DATE

DATE 7 DEC 66

IN-14053


ORIGINAL DRAWING

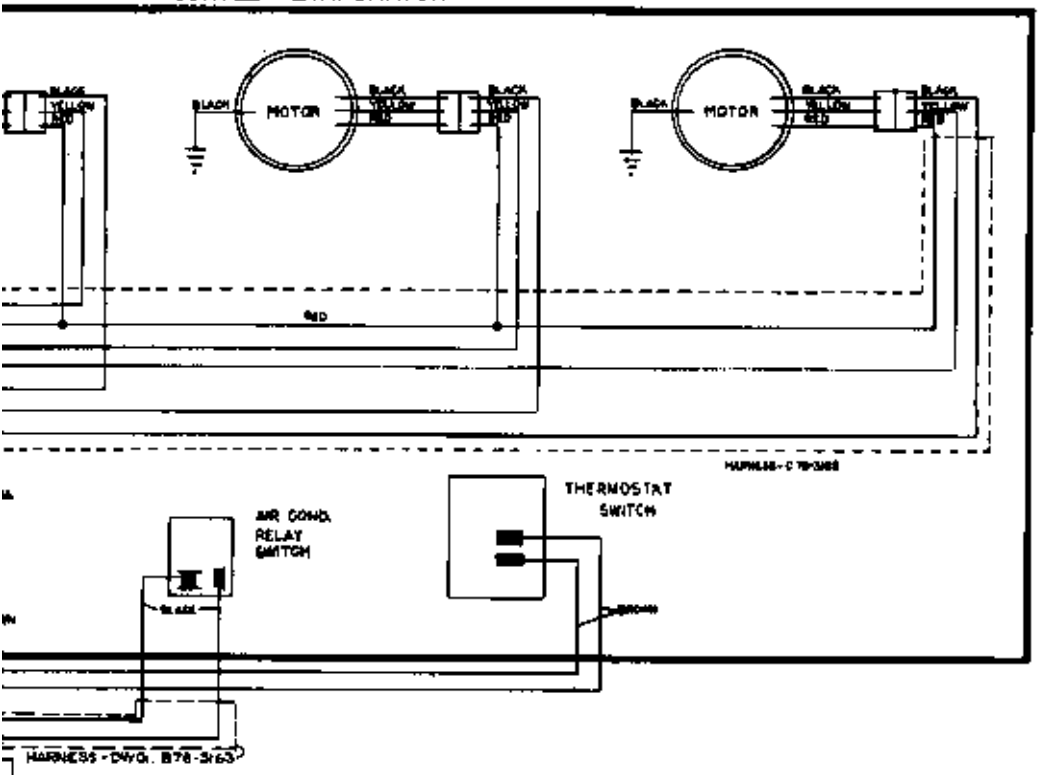

CORTEZ DIVISION
MASTER INSTALLATION
ELECTRICAL SYSTEMS
IN-14650



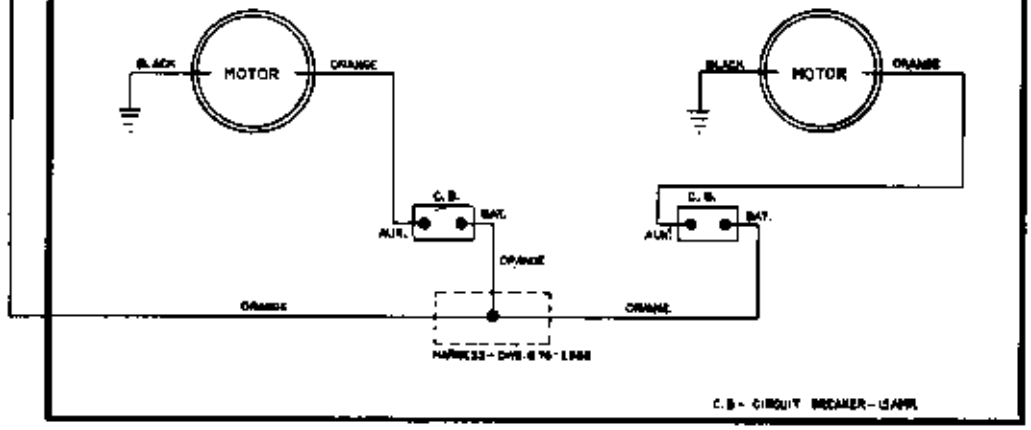
AIR CONDITIONER CIRCUIT DIAGRAM SERIES 28 - CE IN - 13392

IN-13392

CORTEZ EVAPORATOR



CORTEZ CONDENSER



	INDUSTRIAL TRUCK DIVISION CLARK EQUIPMENT CO.
SCALE	NONE
	SCHEMATIC DIAGRAM MARK IV AIR COND. INSTALLATION
DRAWN BY	J. VINTON
	IN-13392