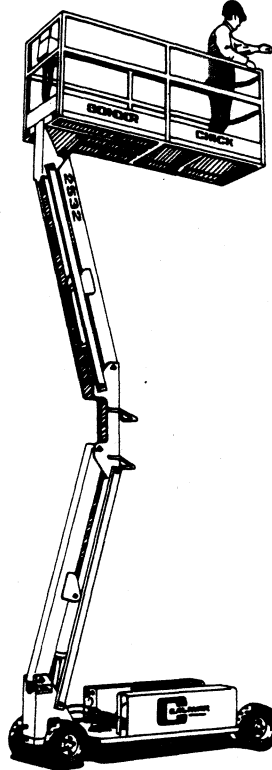


CALAVAR **CONDOR**[®]

CHICK 2532

SERVICE MANUAL



CALAVAR CORPORATION provides this manual for the guidance of all owners, operators, and servicing personnel in order to obtain the longest possible trouble-free service. It contains general data, operating instructions, lubrication procedures, maintenance and repair procedures and illustrated part breakdown.

Serial No. _____

Date Delivered _____

CUSTOMER _____

NOTE: Additional copies of this manual Part No. 92249 may be obtained through the Parts Department at **CALAVAR**.



8300 Imperial Dr., P.O. Box 21447, Waco, TX 76702-1447
(817) 666-4545 (800) 877-5544 - FAX (817) 666-4544

FROM SERIAL NO. 1466

ISSUED JAN. 89

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INTRODUCTION

The primary purpose of this manual is to assist the operator and maintenance personnel to better understand, operate, and maintain the Self-Propelled Condor **CHICK** Aerial Work Platform in a safe and proficient manner.

This manual has been produced as a **VALUABLE** tool for our **CUSTOMERS**. It consists of an Operation Section, General Maintenance, Repair Procedures, and Illustrated Parts Section. It is in the **BEST INTEREST** of everyone involved with the operation, maintenance, and repair of the machine to **READ** and thoroughly **UNDERSTAND** all sections of this manual.

In general, this manual covers the servicing of the machine and **ASSOCIATED STANDARD EQUIPMENT**. In some cases Condors are supplied with various options and specialized equipment. If service information is not found in this manual and information is required, it is suggested that **CALAVAR CUSTOMER SERVICE DEPARTMENT** be contacted. The proper information will then be forwarded if available at time of request.

All product descriptions, illustrations and specifications were in effect at the time the manual was released for printing. **Calavar Corporation reserves the right to make changes in design or to make additions to or improvements in its products without imposing any obligations upon itself to install them on its products previously manufactured.**

NOTE

Throughout this manual reference may be made to the serial number of Condor units. When **ORDERING PARTS** use of the serial number will assist our Parts Department in giving prompt and accurate service. It should also be used in phone conversations with Calavar Service Department.

DESCRIPTION OF CONDOR

The Condor is an articulating aerial work platform and is rugged, maneuverable and safe. It is designed for work on firm level surfaces with normal operation controlled by an operator using a control box in the platform. All operational modes can be accomplished from the platform including drive and steer. The Condor provides industrial, construction and maintenance workers the ability to safely elevate and perform installation, maintenance, and replacement tasks.

The Condor **CHICK** is powered by four - 6 volt D.C. batteries, producing a 24 volt D.C. system. Each battery is rated at 235 ampere hours and weighs 70 lbs. (wet). A 24 volt, 40 amp battery charger with 110 volt input is used to recharge the batteries after each day's use.

FIGURE 01 INTRODUCTION

GENERAL - 01 - 01



Prior to placing the **CONDOR CHICK** into service, a full check-out of the unit should be made, and the "Delivery Installation and Inspection Report" completed and mailed to **CALAVAR CORPORATION**. **CALAVAR** does want to know the condition of the **CHICK** as it arrives at the dealer/customer facility.

Each **CHICK** has undergone a thorough Quality Control inspection at **CALAVAR CORPORATION** so each unit leaves **CALAVAR** in the best possible condition. However, transportation damage may sometimes occur, and you must be aware of such damage and make note on the consignee copy of the freight bill, followed by your claim for repairs to the carrier.

CAUTION**CALAVAR CORPORATION IS NOT RESPONSIBLE FOR
DAMAGE TO UNITS WHILE IN TRANSIT**

1. Visually inspect all parts of the **CHICK**. From the slightest paint scratch to evidence of spilled or leaking battery acid, all deserve your attention.
2. Check for loose bolts, nuts, damaged or leaking hydraulic lines, hoses and fittings, broken wires or structural damage.
3. Check the tires for cuts or abrasions. (Standard tires are solid rubber.)
4. Check hydraulic oil level and cleanliness of oil. Add Dextron II, ATF (Automatic Transmission Fluid), if required.
5. Check battery with a hydrometer. Battery must have a full charge for **CHICK** to perform satisfactory. (A fully charged battery will have an electrolyte specific gravity of 1.265 to 1.285 at 77°F electrolyte temperature.)
6. Check battery terminal connections for tightness and cleanliness. Loose or corroded terminals lead to loss of power.
7. Hydraulic control valves and aerial controls (condition of levers and switches) for use and serviceability.
8. Check ground controls and aerial controls (condition of levers and switches) for use and serviceability.
9. Check drive wheels and steering wheels; ensure all lug nuts are tight.
10. Fill out the "DELIVERY INSTALLATION AND INSPECTION REPORT" with your findings and mail to **CALAVAR CORPORATION**.



OPERATOR QUALIFICATIONS

Each Condor **CHICK** has undergone a thorough Quality Control inspection at the factory. The design incorporates built-in safety features. An average skilled person can readily become proficient in the safe operation of the **CONDOR**. It is a personnel lifting device and can be potentially dangerous in the hands of **UNTRAINED** or **CARELESS OPERATORS**.

Knowing the characteristics of the machine and function of the controls is important to **SAFE, PROPER OPERATION AND USE**. Becoming familiar with the controls and practices will result in smooth accurate positioning.

It is the responsibility of all users to read and comply with the following rules and information designed to promote **SAFETY** and **UNDERSTANDING** of the **Condor**.

- A thorough understanding of the operating characteristics and limitations of the **CONDOR** machine is always the first requirement for any user, regardless, of his prior experience with similar types of equipment.
- Only **QUALIFIED/AUTHORIZED** and **TRAINED** personnel must be **ALLOWED** to operate the Condor. A **QUALIFIED/TRAINED** operator is one who has **READ** and **UNDERSTOOD** the instructions in this manual and is thoroughly familiar with the operating characteristics and limitations of the machine.
- **KNOW** and **FOLLOW** all cautions, warnings and operating instructions on the machine.
- **REPAIR** and **ADJUSTMENTS** should be made only by **QUALIFIED/TRAINED** personnel.
- No **MODIFICATION** is to be made to the machine without prior written consent of the Calavar Engineering Department.
- **UNDERSTAND** and **OBEY** all Federal, State and Local statutes and regulations applying to safe operation and use of aerial work platform.

**YOUR SAFETY IS OUR UTMOST CONCERN
AND YOUR RESPONSIBILITY**

FIGURE 02 OPERATOR QUALIFICATION



9200 Sorensen, Santa Fe Springs, CA 90670-2645
(213) 946-6561 • Telex 69-8378 • Fax 213-946-2265

GENERAL - 02 - 01

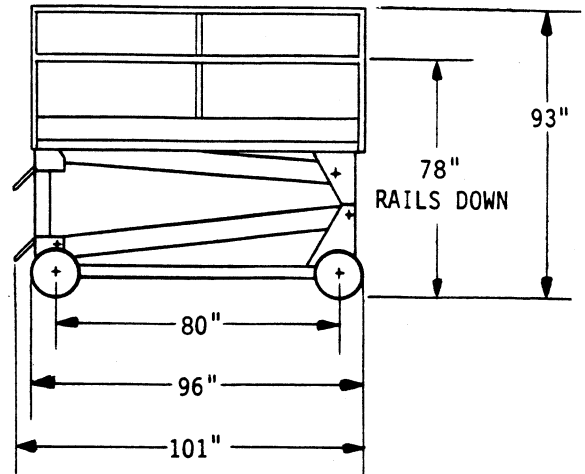
FROM SERIAL NO. 1466

ISSUED JAN. 89

CONDOR CHICK

SPECIFICATIONS

Maximum Platform Height	25'6"
Maximum Working Height-Nominal	19'6"
Platform Size	96"x30.5"x39"
Rated Platform Capacity	750 lbs.
Overall Length	8'5"
Overall Width	2'8"
Overall Height - Rails Up	7'9"
Wheel Base	6'8"
Travel Speed - Stowed	2.5 mph
Travel Speed - Raised	1.2 mph
Turning Diameter - Outside	24'
Weight - Approximate	3,600 lbs.
Tires	4.00 x 8 (solid)
Electrical System - Battery Powered	24 V.D.C.
Hydraulic System - Max. Pressure	2,775 P.S.I.



LIFT SYSTEM TIMES

Lower Arm - Up	22 - 24 Seconds
Lower Arm - Down	38 - 50 Seconds
Upper Arm - Up	21 - 23 Seconds
Upper Arm - Down	35 - 39 Seconds

DRIVE SYSTEM TIMES - 50 FEET ON FIRM LEVEL GROUND

High Speed - Forward	14 - 16 Seconds
High Speed - Reverse	14 - 16 Seconds
Low Speed - Forward	26 - 30 Seconds
Low Speed - Reverse	26 - 30 Seconds

Times established with batteries fully charged and CHICK operated from the platform (one man in platform).

PLATFORM OVERREACH

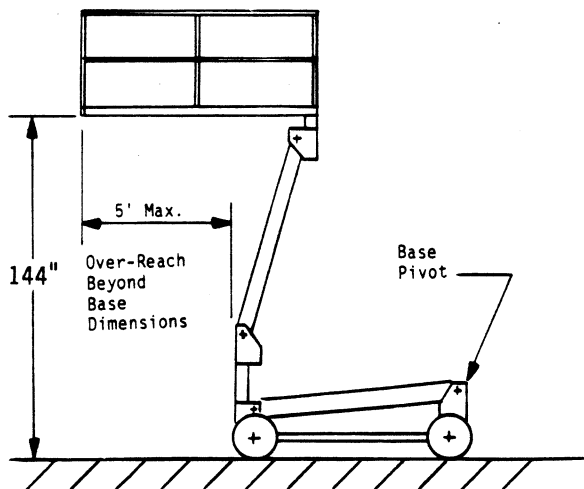
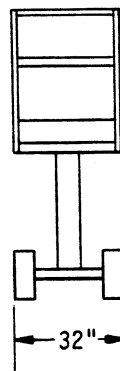


FIGURE SHOWS PLATFORM OVERREACH WHEN THE LIFT ASSEMBLY UPPER ARM IS OPERATED ONLY.



CAPACITY 750 LBS.

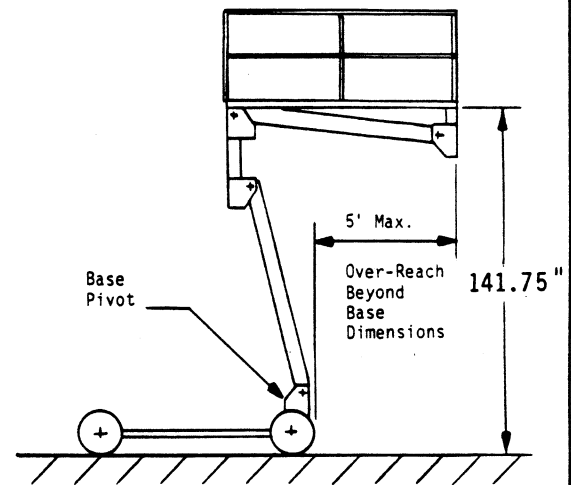


FIGURE SHOWS PLATFORM OVERREACH WHEN THE LIFT ASSEMBLY LOWER ARM IS OPERATED ONLY.

FIGURE 03 SPECIFICATIONS





9200 SORENSEN AVE. • SANTA FE SPRINGS, CALIFORNIA 90670-2645 • (213) 946-6561 • TELEX 69-8378 • TELECOPIER (213) 946-2265

Self-Propelled Booms and Scissors WARRANTY

Calavar Corporation ("Calavar") warrants each new aerial work platform made by Calavar and bearing the trademark "Condor" to be free from defects in material and workmanship.

The obligation and liability under this Warranty is expressly limited to repairing or, at Calavar's option, replacing free of charge at its factory in Santa Fe Springs, California or at an authorized repair facility as designated by Calavar, any part proving defective under normal use and service within 180 days after said aerial work platform is first placed in service or within one year after the original shipment of said aerial work platform from Calavar's plant, whichever first occurs.

Parts claimed to be defective and for which repair or replacement is desired shall be, if requested by Calavar, returned transportation prepaid to Calavar's factory for inspection. Replacement parts provided under the terms of this Warranty are for the remainder of the Warranty period applicable to the aerial work platform in which they are installed as if such parts were original components of the aerial work platform.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, AND THE OBLIGATION AND LIABILITY OF CALAVAR UNDER THIS WARRANTY SHALL NOT INCLUDE ANY TRANSPORTATION OR OTHER CHARGES OR THE COST OF INSTALLATION OR ANY LIABILITY FOR DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAY RESULTING FROM THE DEFECT.

Any operation beyond rated capacity or the improper use or application of equipment or the substitution upon it of parts not approved by Calavar or any alteration or repair by others in such manner as, in Calavar's judgment, to affect the equipment materially and adversely shall void this Warranty. No representative of Calavar is authorized to change this Warranty in any way, and no attempt, effort or promise to repair equipment of Calavar either by Calavar or by any representative of Calavar at any time shall change or extend this Warranty in any way. This Warranty covers only new and unused aerial work platforms manufactured by Calavar. Products or parts manufactured by others are covered only by such warranties as are extended to Calavar by its suppliers.

9200 Sorensen, Santa Fe Springs, CA 90670-2645
(213) 946-6561 • Telex 69-8378 • Fax 213-946-2265

FIGURE 04 CALAVAR WARRANTY

GENERAL - 04 - 01

FROM SERIAL NO. 1466

ISSUED JAN. 89

WARRANTY CLAIM PROCEDURE**WARRANTY CLAIM**

This procedure is offered to assist you in properly filling out the **CALAVAR** Warranty Claim Form. The more information supplied on this form the better Calavar can evaluate the problem and expedite processing.

The form should be typed or filled out legibly in ink. Several copies are utilized, thus ensure sufficient pressure is applied to make all copies legible.

PROCEDURE

Numbers noted below correspond with block numbers on claim form.

1. Where to mail claim - **CALAVAR'S** address, phone number.
2. Dealer information: Name of company, address, name of person submitting claim. This will be the name used on all correspondence.
3. Owner information: Name of company, address. If same as above column No. 2 write "SAME AS ABOVE".
4. Claim information:
 - A. Dealer's claim number: This is necessary as there may be more than one claim for this unit.
 - B. **CALAVAR** warranty number. This will be completed by the Warranty personnel at **CALAVAR**.
 - C. Return Authorization No.: If **CALAVAR** deems that the defective material (s) be returned, a return authorization number will be assigned and appropriate paperwork will be mailed to the dealer/owner. Upon receipt of the paperwork, the dealer is to ship the parts freight prepaid to **CALAVAR** for evaluation and further disposition. All dates pertinent to the claim are to be registered.
5. This area is provided to identify the **CHICK**. It is important to furnish serial number, date of delivery (date received by you), in-service date (date unit is sold by you or put into operation), model number.
6. This area is for part number (s) and description (s). The **CALAVAR** invoice number and amounts are necessary in order to properly process the claim. All dollar amounts are to be in U.S. currency.
7. A detailed labor description is required in order to fully evaluate the hours of your claim and the amount **CALAVAR** will approve.
8. This area is filled in by **CALAVAR** personnel and is for approval or denial of the claim and a brief explanation of steps taken.

FIGURE 05 WARRANTY CLAIM PROCEDURE



9. Upon completion of form, remove light yellow copy titled "Dealer Copy", retain, and send remaining copies to **CALAVAR**.

RETURN AUTHORIZATION

A Parts Return Authorization form is provided when **CALAVAR** deems it necessary to have the parts returned for evaluation. The form is issued by the Warranty or Parts Department of **CALAVAR**.

PROCEDURE

1. The form will be filled out by **CALAVAR** unless requesting necessary information and you will receive a blue copy and white copy as well as a green shipping tag.
2. Attach green shipping tag to part and insert return packing slip (blue copy).
3. Ship part to **CALAVAR** PREPAID.

Return Authorization # _____
Part # _____
Description _____
Quantity _____
Date _____
FORM 11118E 8/83

From: _____
Ship To: _____
Attn.: Warranty Dep't.
CALAVAR
CORPORATION
9200 SORENSEN AVE.
SANTA FE SPRINGS, CA 90670

Part must be returned to Calavar within 45 days from date of authorization.

FIGURE 05 WARRANTY CLAIM PROCEDURE





9200 SORENSEN AVE., SANTA FE SPRINGS, CA 90670-2645
 (213) 946-6561 TELEX 69-8378 CABLE: CALACORP

WARRANTY RETURN AUTHORIZATION

NO.

SHOW THIS NUMBER ON ALL CORRESPONDENCE, TAGS, DEBIT OR CREDIT MEMOS.

TO: _____

DATE: _____
 ATTN: _____
 REF. YOUR CLAIM # _____
 CALAVAR CLAIM # _____

Sub Dealer: _____

The items listed below are authorized for return to our factory. We are enclosing _____ shipping tags for attachment to and/or enclosure with the items being returned. The BLUE copy of Calavar's Return Authorization must accompany the material you are returning. Return only those items authorized. If a discrepancy in quantity or description develops at the time of shipment, please contact this office.

- ALL ITEMS SUBJECT TO CALAVAR INSPECTION.
- ALL FREIGHT SHIPMENTS MUST BE "PREPAID" F.O.B. SANTA FE SPRINGS, CALIFORNIA.
- UNAUTHORIZED MATERIALS RECEIVED BY CALAVAR MAY BE REFUSED AND/OR RETURNED FREIGHT COLLECT.
- THIS AUTHORIZATION EXPIRES AFTER FORTY-FIVE (45) DAYS FROM THE ABOVE DATE.
- INFORMATION REQUESTED ON THIS FORM MUST BE COMPLETED FOR EACH ITEM RETURNED.
- RETURNED MATERIAL DOES NOT GUARANTEE CLAIM APPROVAL.

Tag No.	Quan.	Calavar's Part Number	Part Description	Calavar Invoice Number

For additional items please attach a separate sheet.
 If you need further advice or information regarding the items on this Return Authorization, please contact our Warranty Representative _____ in Santa Fe Springs, CA. SIGNED _____

REMARKS:

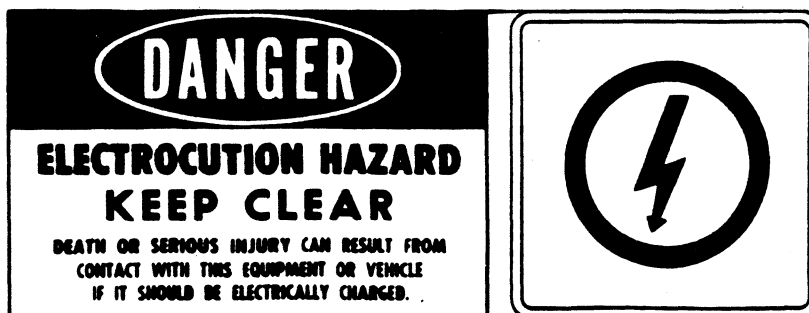
FORM 390A 1M 8/86

CALAVAR



SAFETY ALERT DECALS

DANGER, CAUTION, AND WARNING DECALS are designed for your protection. They are installed on the unit to keep you constantly aware of the dangers. Know and adhere to the information they provide.



21882-1

PLATFORM CAPACITY 750 LBS.



52759

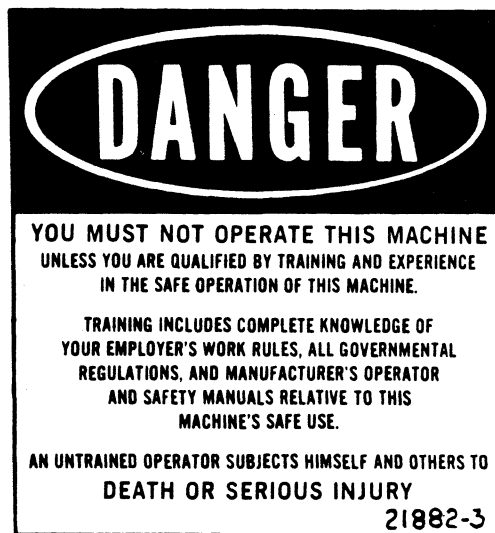
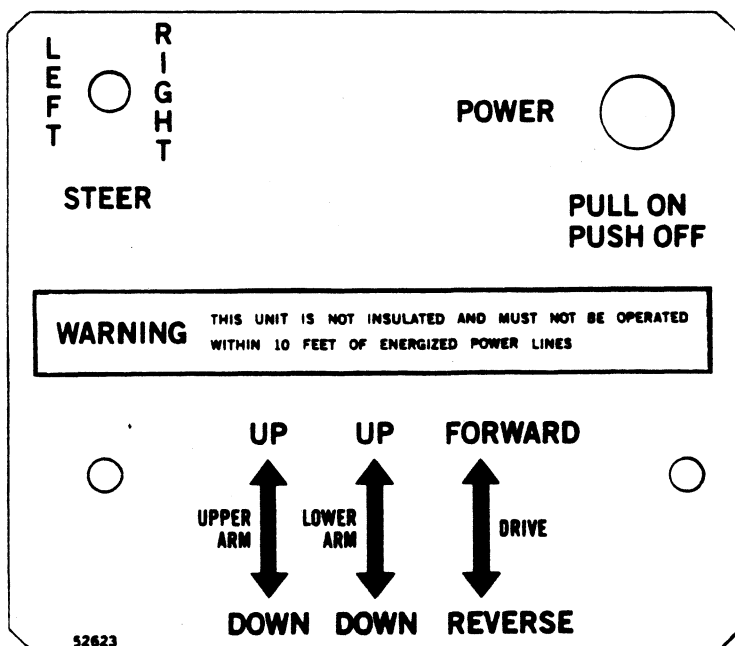


FIGURE 08 SAFETY ALERT DECALS



LOADING - TRANSPORTING - UNLOADING

The Condor **CHICK** although small in stature compared to larger type construction equipment, still requires the same care and attention in **LOADING, TRANSPORTING, and UNLOADING** as does the larger, heavier type equipment. At no time should this be **OVERLOOKED**.

LOADING AND UNLOADING

Before loading/unloading the Condor, inspect for any physical damage or defects. **DO NOT OPERATE A DEFECTIVE OR MALFUNCTIONING UNIT.**

CAUTION

The Condor "**CHICK**" Model 2532 weighs approximately 3,600 lbs. (1,634 kgs). Whatever means is used to load/unload the unit, it should be of sufficient strength to withstand the weight of the Condor.

DO NOT ATTEMPT TO OPERATE THE UNIT UNTIL YOU HAVE READ AND THOROUGHLY UNDERSTAND ALL INFORMATION PROVIDED ON THE OPERATION OF THE UNIT. FAMILIARIZE YOURSELF WITH THE CONTROLS, THEIR FUNCTION AND OPERATION.

A. - RAMP METHOD

- 1 - Ensure that ramp being used is sufficiently strong to handle the weight of the unit.
- 2 - Ramp should be set at an angle no steeper than 12° or 21% (i.e., 25-1/2" rise in 10 feet).
- 3 - Before driving the unit on the ramp, test all the controls and the brake system. Make sure that the operating levers return smoothly to the neutral, center position. Then move the Condor slowly back and forth and ensure the brakes automatically apply (i.e., brake pin is **ENGAGED** each time the drive control lever goes back to the neutral position.
- 4 - Move the unit on the truck or trailer, up or down the ramp approximately a foot at a time allowing the steering corrections to be made. Keep unit in alignment with the carrier and ramp during the loading/unloading procedure.

B. FORKLIFT LOADING/UNLOADING METHOD

1. Ensure that forklift has sufficient capacity to handle the weight of the Condor **CHICK**.



2. The forks should be long enough to completely go across the width of the frame and should be positioned as close to the inside of the tires as possible. When lifting machine, center the forklift between the **CHICK** tires.
3. Unit should be picked up from side of unit and should only be raised to a height to clear any obstructions.
4. Keep forklift travel with **CHICK** load to a minimum and set gently down to ground level.

C. TRANSPORTING

The **CHICK** can be easily and safely transported from job site to job site if a few simple rules and procedures are followed:

1. Block all wheels to prevent forward and reverse motion.
2. For long hauls it is recommended that wood blocks be placed under the base plate at each axle and at a sufficient height to take some load off the tires (tires just barely touching). This will protect steering spindles and drive motors from damage caused by the constant pounding.
3. Tie down the **CHICK** with chains or cables running them through the tie down brackets.
4. Install the transportation bar between the base pivot and the platform pivot. This protects the upper arm from damage caused by bouncing/pounding.

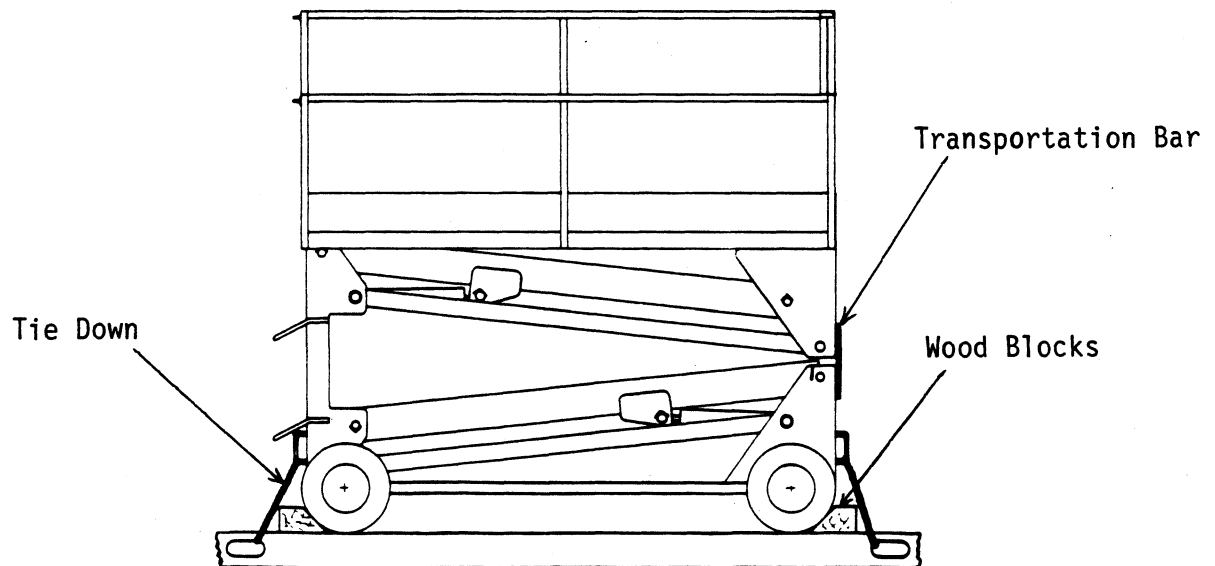


FIGURE 09 LOADING, TRANSPORTING AND UNLOADING PROCEDURE

CALAVAR CORPORATION
SELF-PROPELLED CONDOR CHICK
INSTALLATION AND INSPECTIONS REPORT

Dealer's Name _____ Address _____
 Model _____ Serial Number _____ Date _____
 End User (Sold To) _____ Address _____

This Condor Scissor was inspected and tested prior to leaving Calavar. Due to environmental conditions, loading, transporting, and unloading of the unit, it will be necessary to perform the following inspection. **THIS HELPS US HELP YOU.**

This report, when complete, must be returned to Calavar Corporation, 9200 Sorensen Ave., Santa Fe Springs, CA 90670-2645 to set up the warranty account.

Item No.	Description of Inspection/Test					Initial If O.K.	Remarks
1.	GENERAL APPEARANCE						
	A. Visual Damage						
	B. Fluid Leaks						
	C. Paint Damage						
	D. Missing Decals						
2.	MECHANICAL VISUAL						
	A. Arm Center Pivots						
	B. Platform Guard Rails						
	C. Steering Knuckles						
3.	TIRE & WHEEL CONDITION	LF	LR	FR	RR		
	A. Cuts						
	B. Lug Nuts Tight						
4.	POWER SOURCE						
	A. Battery Powered						
	1. Battery Condition						
	a. Electrolyte Level						
	b. Terminal Connections						
	2. Battery Charger Condition						
	3. Electric Motor						
5.	HYDRAULIC COMPONENTS - VISUAL						
	A. Hydraulic Tank Fluid Level						
	B. Pump						
	C. Drive Motors						
	D. Control Valves						
	E. Steering Cylinder						



FIGURE 10

DELIVERY INSTALLATION AND INSPECTION REPORT

GENERAL - 10-01

Item No.	Description of Inspection/Test	Initial If O.K.	Remarks
5.	HYDRAULIC COMPONENTS - VISUAL (Cont'd)		
	F. Lift Cylinder		
	G. Brake Release Valve		
	H. Hoses & Connections		
	I. Tubes & Connections		
6.	ELECTRICAL COMPONENTS - VISUAL		
	A. Solenoids		
	B. Limit Switches		
	C. Toggle Switches		
	D. Wiring & Connections		
7.	GROUND CONTROL STATION		
	A. Visual Condition		
	B. Power Shut-Off Switch		
	C. Lift Control		
	D. Free Wheeling Valve		
	E. Instruments/Gauges		
8.	PLATFORM CONTROL STATION		
	A. Visual Condition		
	B. Function Switches		
	C. Control Valves		
	D. Power Switch		
	E. Steering Switch		
9.	FUNCTION OPERATION		
	A. Lift Control		
	B. Drive	High	Low
	C. Steer	Right	Left
	D. Brakes		
	E. Height Interlock		

Inspection Performed By _____
Name
Title
Date



FIGURE 10

DELIVERY INSTALLATION AND INSPECTION REPORT

GENERAL - 10-02

GRADEABILITY CONVERSION CHART

Since the conversion of gradeability is often referred to in either percentages or in degrees, this chart is being provided for your convenience to quickly convert percents to degrees.

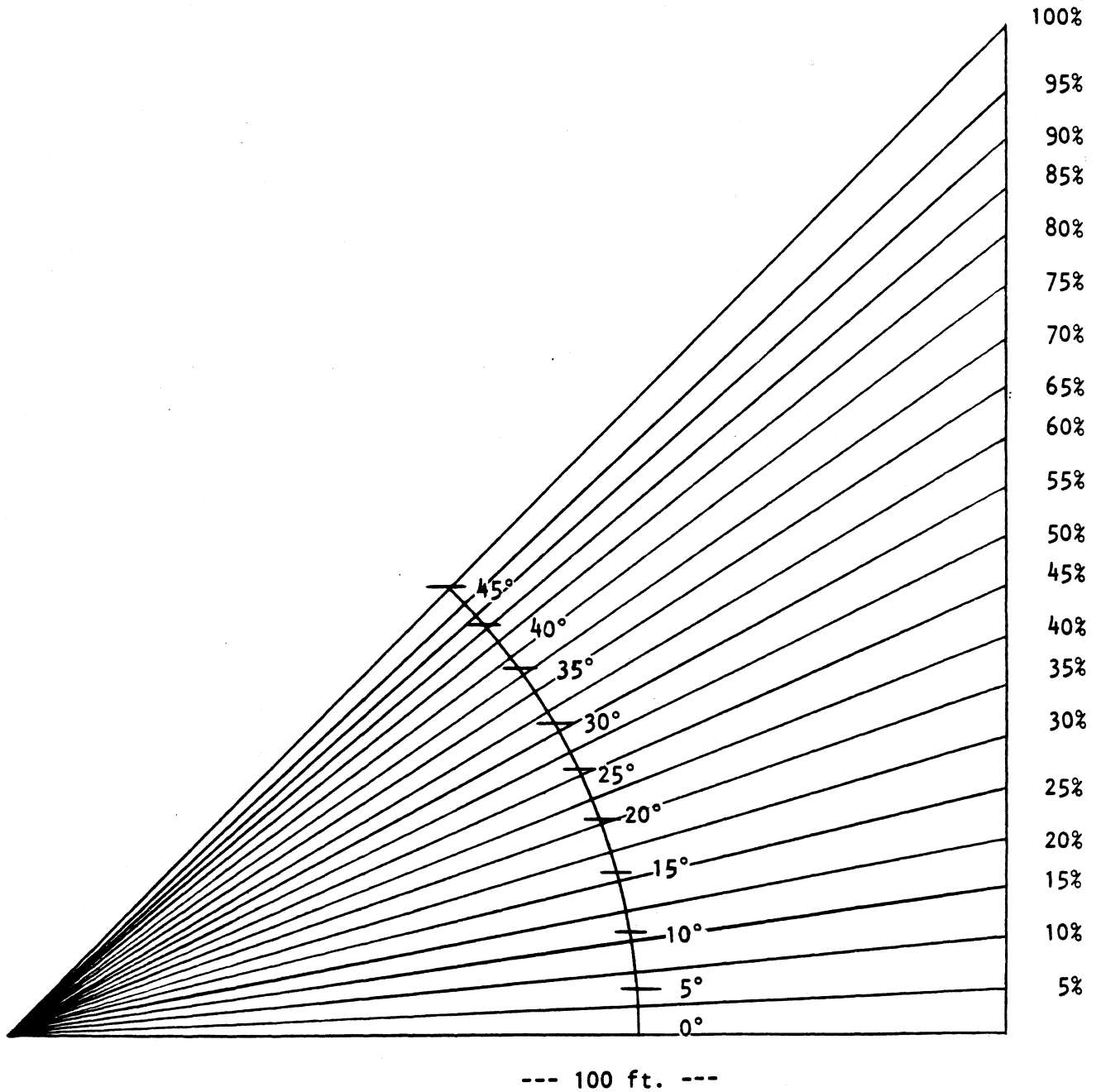


FIGURE 11 CONVERSION TABLE (DEGREE TO PERCENTAGE)



9200 Sorensen, Santa Fe Springs, CA 90670-2645
 (213) 946-6561 • Telex 69-8378 • Fax 213-946-2265

GENERAL - 11 - 01

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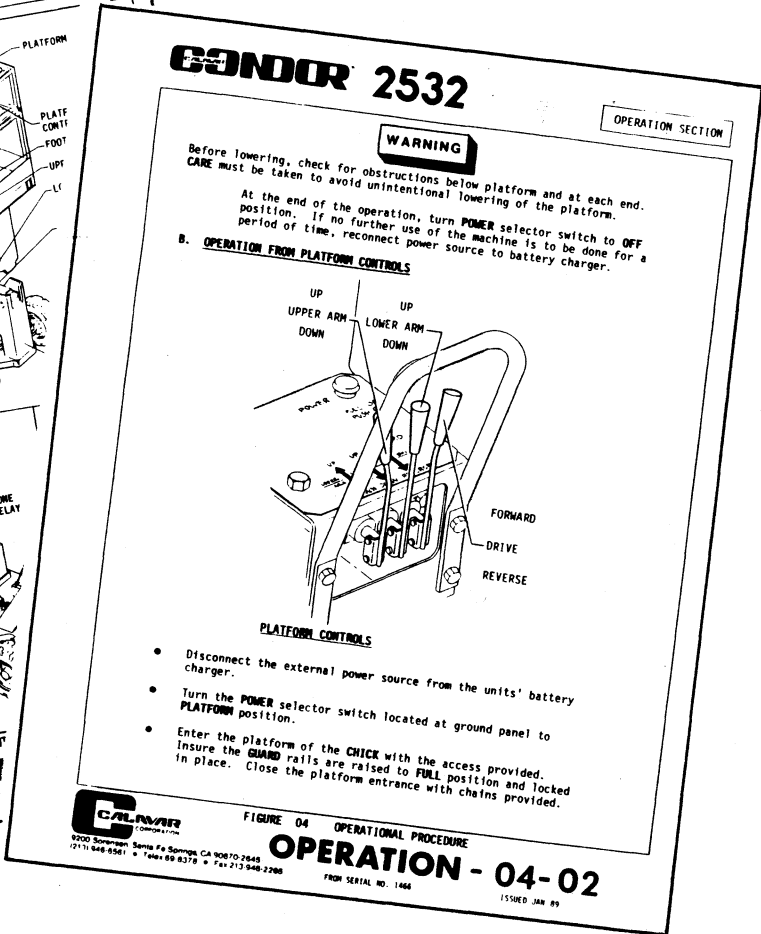
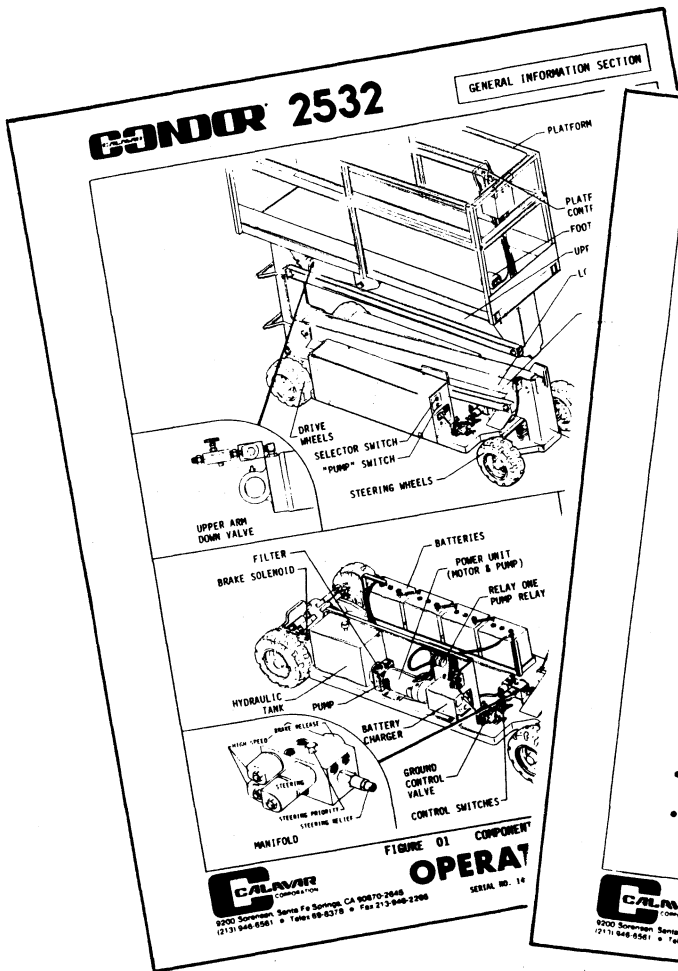


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-03	Control Familiarization and Limitations
-04	Operational Procedure



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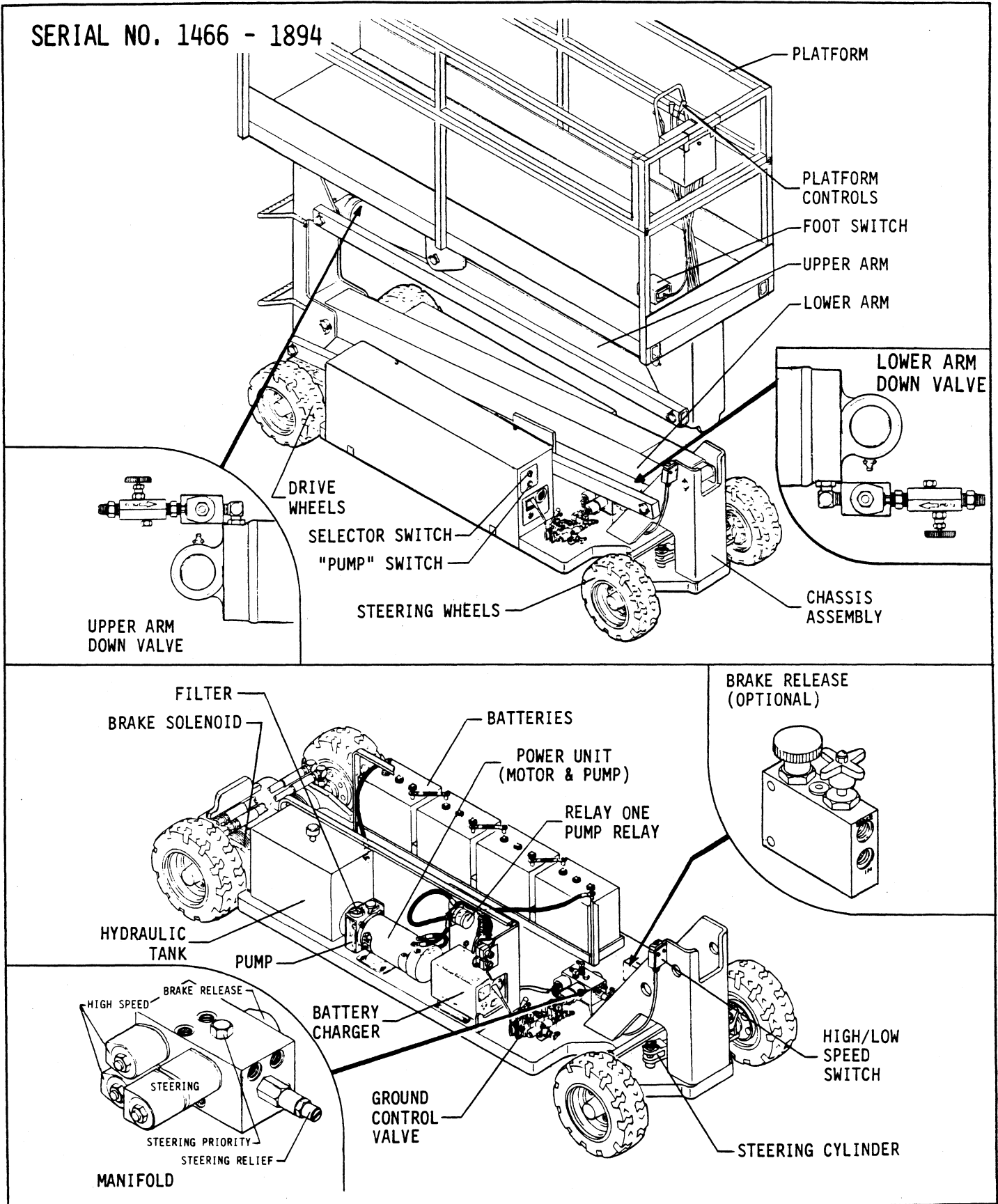


FIGURE 01 COMPONENT IDENTIFICATION



CALVAR CONDOR 2532

OPERATION SECTION

FROM SERIAL NO. 1895

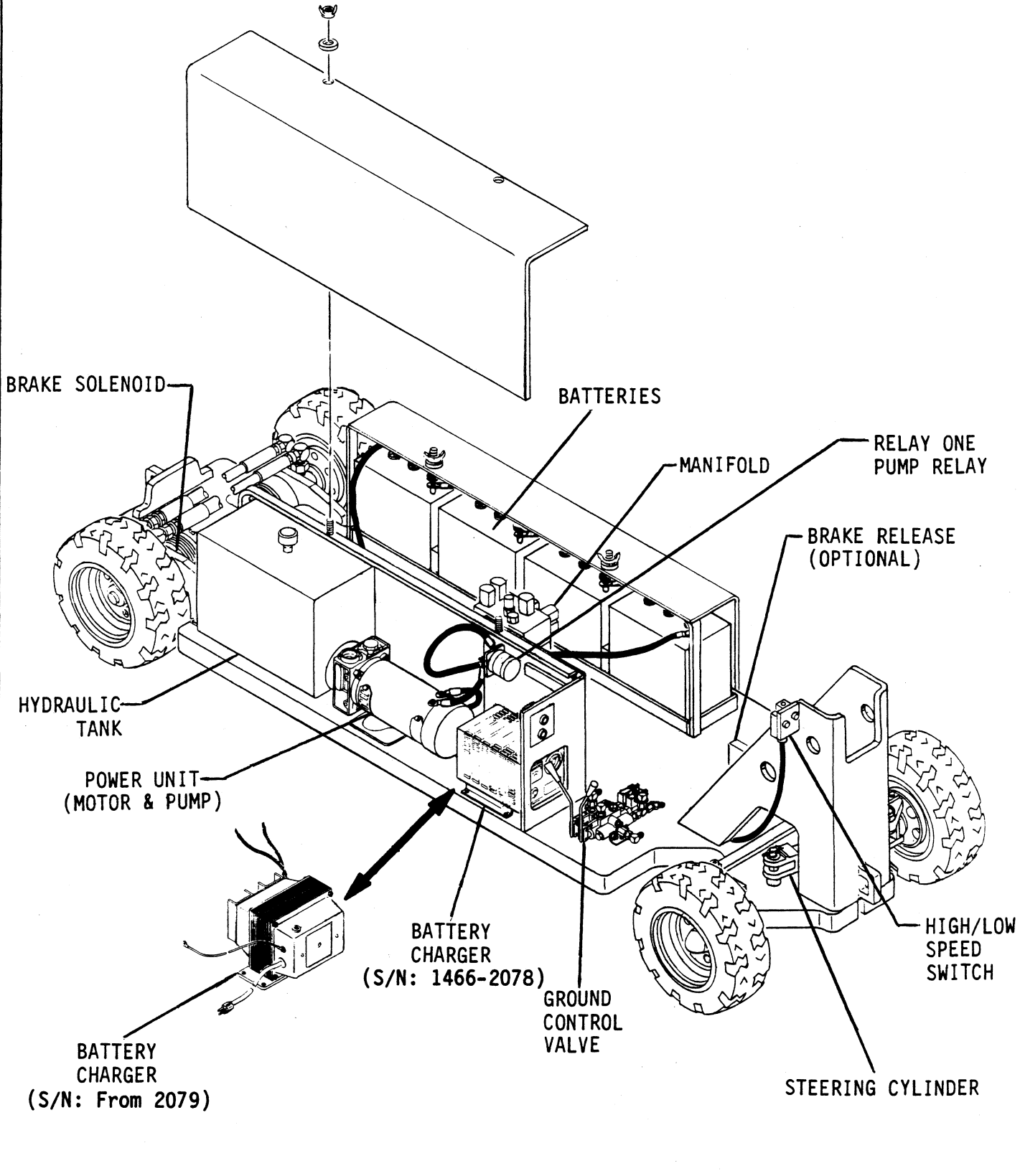


FIGURE 01 COMPONENT IDENTIFICATION



OPERATION-01-02