OPERATION
AND
MAINTENANCE MANUAL
WITH
PARTS LIST

MODEL:	SC 1-75, 1-76
SERIAL NO. :	40472 - 84336
YEAR:	1977 - 1986
MANUAL NO. :	MD-175-00

- IMPORTANT -

READ AND FOLLOW INSTRUCTIONS GIVEN IN SAFETY & OPERATIONS AND THOSE SECTIONS RELATED TO YOUR SERVICE AND REPAIR RESPONSIBILITIES

TAYLOR-DUNN
Commercial and Industrial Vehicles Since 1949
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SECTION D
PAGE 1

MAINTENANCE GUIDE CHECKLIST

This checklist is provided for your convenience as a guide for servicing your vehicle. If followed you will enjoy a good running and trouble free unit. It has been set up for average normal use. More frequent service is recommended for extreme or heavy usage. If desired you Taylor-Dunn dealer will gladly perform these services for you as he has expert service men in the field for this purpose. Do not hesitate to call your Service Manager if any questions arise.

MAINTENANCE SERVICE	REFER SECTION	EVERY WEEK	EVERY MONTH	EVERY 3 MONTHS	EVERY YEAR
Check & record specific gravity & water level of each cell. Fill, as necessary, using distilled water. (see chart in Section J8)	J8	X	X	X	X
* Examine battery terminal connections. Clean and tighten as necessary, but Not while batteries are being charged	J8	X	X	X	X
* Clean off all dirt and grease on and between power bars and J Hook. Lube sliding contact area w/T-D Grease 94-421-00 or a quality hi-temp.Grease (500°Min. Melt Point).	J6 & E	X	X	X	X
* Check rheostat adjustment	J6	X	X	X	X
* Check tire pressure.	J1	X	X	X	X
Adjust Motor Mount & Chain	J2		X	X	X
* Lubricate all zerk fittings.	E		X	X	X
* Lubricate all moving parts without zerk fittings. Use all purpose engine oil.	E		X	X	X
Wash off batteries with water, (Use Soda if necessary).	J8		X	X	X
* Check all wire connections. Be sure they are all clean and tight, but not while batteries are being charged.		X	X	X	
Check brake lining for wear. Adjust or replace as necessary.	J2		X	X	X
Check drive axle oil level. (Refer to Lubrication Diagram).	J2 & E		X	X	X

* Items related to Safety Recommendations.

CAUTION: Before performing maintenance on any part of the vehicle electrical system, disconnect both main battery leads, place forward/reverse switch in neutral, turn key to off and remove from switch. Set parking brake.

CAUTION: Never bend the brake band anchor bolt. Any bending of the bolt may result in Unexpected failure of the bolt and complete loss of Drive Line braking Action.

SECTION J1
PAGE 2

SERVICE AND ADJUSTMENT
REFER TO FIGURE 3
FRONT AXLE, FORK, STEERING AND TIRES

Adjustment of Wheel Bearings

1. Adjust wheel bearings by holding 1 axle nut and tightening the other until drag is felt on wheel. Then back off nut approximately 1/4 turn. Wheel should turn free but not have excess play in bearings.

Removal of Wheel & Axle Assembly

1. Remove 1 axle nut by holding nut on one end of axle and unscrewing nut on opposite end.
2. Slide axle from fork & wheel, being careful to catch spacers and wheel as they come free.
3. Wheel bearings may be flushed, cleaned and repacked without removing from hub, unless, damaged or embedded with foreign material.
4. To remove wheel bearings and seals:
   A. Pull seals from hub.
   B. Remove taper roller bearings.
   C. If necessary, press bearing races from hub wit suitable press or with flat punch by hitting back and forth one side or other.

Re-Assembly of Wheel and Axle

1. Press bearing races into hub with suitable press, taking care that they are seated against stops within the hub.
2. Generously lubricate wheel bearings with wheel bearing grease and insert into bearing races.
3. Press or tap seals into place. (Proper position is when face of seal is flush with end of hub). Note: It is recommended that new seals be installed whenever bearings are removed from wheel hub, or whenever seals are worn or damaged. Worn or damaged seals allow dirt and foreign matter to enter wheel bearings, shortening bearing life.
4. Install wheel and hub assembly into fork by starting axle through one side of fork, inserting 1 spacer then sliding axle through wheel bearings. Insert other spacer and slide axle through remainder of wheel assembly.
5. Install locknut.
6. Adjust wheel bearings as outlined above.
7. Wheel hub has 2 zerk fittings for grease lubrication.

Adjustment of Steering Fork Bearings

1. Elevate front of vehicle using suitable hoist or jack.
2. Remove locknut from steering sleeve at steering fork.
3. Adjust steering fork bearings by tightening nut on king bolt until drag is felt when turning steering fork. Loosen nut on king bolt until steering fork rotates freely, approximately 1/16 turn. Bearings should not have any play when adjusted.
   NOTE: Any excessive play in bearings can lead to bearing failure due to shock effect when vehicle encounters bumps or uneven terrain.
4. Replace steering sleeve back on steering fork, tighten nut and secure with cotter pin.

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Install Motor

1. If installing new motor, clean motor surface and install motor mounting plate to motor with four flat-head cap screws. Tighten screws to 30 ft. lb. torque, and stake head in place with center punch.
2. If installing new motor, or if motor sprocket has been removed in order to repair motor, assemble spacers, key, sprocket, washer, and shaft nut to motor shaft. Tighten shaft nut to 75 ft. lb. torque.
3. Place "o" ring in motor mounting plate opening , and attach motor and mounting plate assembly to back plate with three nuts and washers. Engage chain with sprocket and tighten nuts.
   Note: Chain Tension Adjustment is covered in a later step.
4. If seal in gear case cover is worn or damaged, install a new seal. It is recommended that the new seal be pre-soaked in light oil for several hours before installation. When pressing new seal into cover, use a small amount of oil resistant sealer on seal opening in cover.
5. Install gear case cover to backplate and pinion shaft. Assemble, but do not tighten, retaining bolts and nuts.
6. Place centering tool 41-532-50, (for centering pinion shaft seal to brake drum hub) on pinion shaft and into seal retainer.
   Note: If centering tool is not available, slide brake drum onto pinion shaft and into seal. Install pinion shaft washer and nut and tighten to 100 ft. lb. torque. Position gear case cover so that seal pressure is uniform around hub of brake drum. Tighten gear case cover retaining bolts and nuts. Omit Steps 7 through 10.
7. Install pinion shaft washer and nut, and tighten to 100 ft. lb. torque.
8. Tighten gear case cover retaining bolts and nuts.
9. Remove pinion shaft nut and washer, and remove centering tool.
10. Install brake drum, washer, and pinion shaft nut. Tighten nut to 100 ft. lb. torque.
11. Install brake band, brake assembly brackets, and brake band centering bracket to gear case cover and tighten retaining bolts.
12. Adjust drive chain tension as described in preceding subsection.
13. Reconnect brake rod and brake lever arm with clevis pin and cotter pin.
14. Install mechanical linkage return spring.
15. Adjust brake band as described on Page 2 of this Section of Manual.
16. Fill gear case with oil. Refer to Lube Diagram in Section E.
17. Connect motor leads as follows: (Important!!)
    a) Check that each motor terminal stud nut is tightened securely but not over-tightened as this could bend or twist the terminal post and cause an electrical short within the motor.
    b) Install motor leads on correct motor terminals post.
    c) Install a second nut on each terminal post and finger tighten.
    d) To avoid bending, twisting or breaking-off a terminal post, use a thin pattern 9/16" wrench to hold the bottom nut from moving while tightening the top nut. Carefully tighten the top nut so as to make a good connection between the terminal post and motor lead.
18. Connect battery leads.

Motor Maintenance - General

Maintenance of electric mtors should be referred to personnel with appropriate experience and equipment. Procedures covering maintenance of brushes, bearings, and commutator are covered in the following Sections. Should it be necessary to order replacement parts, include complete motor name plate data with order.

SECTION J2M
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MOTOR MAINTENANCE, SERVICE AND ADJUSTMENT
ELECTRIC MOTORS
REFER TO FIGURE 5H

Detailed service procedures covering maintenance of bearing brushes and commutator are covered in this section. DO NOT PERFORM THIS PROCEDURE WHILE BATTERIES ARE BEING CHARGED.

Maintenance of electric motors should be referred to personnel with experience and equipment. Should it be necessary for you to order replacement parts for your motor, IT IS NECESSARY TO INCLUDE COMPLETE NAMEPLATE DATA WITH ORDER.

MOTOR MAINTENANCE - BRUSH INSPECTION AND REPLACEMENT

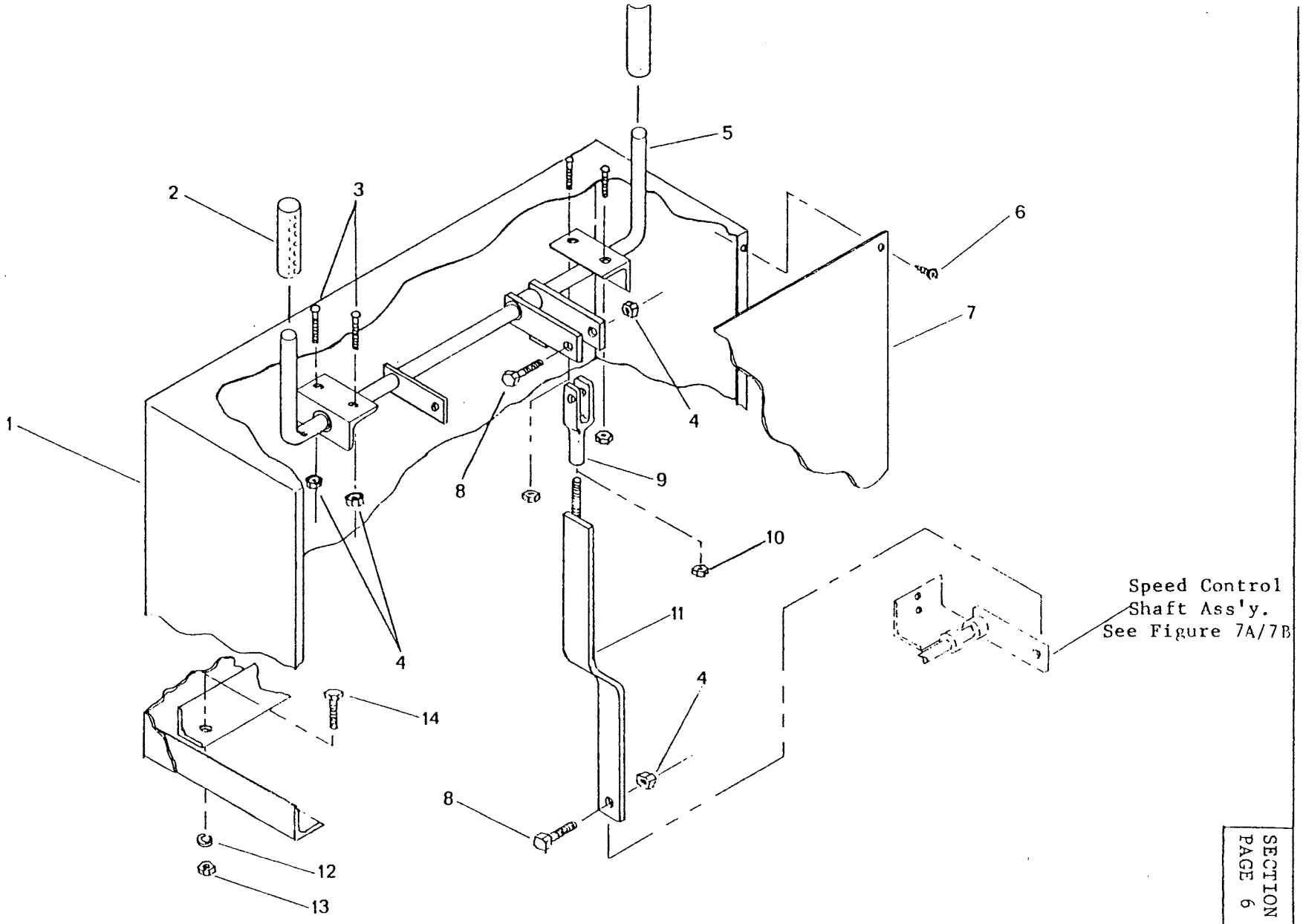
1. Remove cover, exposing brush assemblies. Lift brush from holder for inspection.
2. If brushes are worn, remove, install new brushes. Use fine sandpaper to "seat in" new brushes to commutator. To determine when to replace worn brushes, proceed as follows:
   a. For motors equipped with brushes having end pigtails and side hooks, replace brush when hook is within 1/16" from bottom of hook slot.
   b. For motors equipped with brushes having side pigtails only, replace brush when pigtail is within 1/16" from bottom of pigtail slot.

   NOTE: When one brush is replaced in a motor, it is considered good maintenance practice to replace all brushes.
3. Check operation of each brush to assure that brush slides freely and does not bind in holder.
4. Replace Cover.

MOTOR DISASSEMBLY AND REASSEMBLY

1. Remove motor from vehicle as described in section J2.
2. Determine if witness marks on end bell and stator housing are present. If not, mark end bell and housing to assure proper relation of brushes and commutator when reassembling.
3. Remove cover, exposing brush assemblies. Lift brushes from brush holder.
4. Remove bolts holding end bells and remove end bell and rotor. (Pull from shaft extension end). Take care not to damage any coils or armature wires when handling motor parts.
5. Press or pull old bearings off by using bearing press or bearing puller. Do not damage shaft while removing bearings.
6. Install new bearings onto shaft by gentle pressure or tapping with proper tool on inner race only. Bearing will be damaged if pressed or driven by outer race or seals.
7. If the commutator is worn or "burned" it should be turned, the mica undercut and the commutator polished.
8. Oil bearing housing lightly to aid in reassembly.
9. Reassemble motor taking care that all parts are kept clean.
10. Install brushes and "seat in" with fine sandpaper.
11. Check operation of each brush to assure that brush slides freely in holder.
12. Replace cover.
13. Reassemble to vehicle as described in preceding subsection.

NOTE: If motor terminal studs were removed for inspection, refer to Section J2, P. 5, item 17 for correct procedure to avoid damaging studs.



NO.	DESCRIPTION	LENGTH	QUAN.	REVISED DATE	REVISION

TOL. FRAC.± DEC.±	FIGURE 7B	OPTIONAL WALK-ALONG CONTROL
SCALE NONE	SECTION J4	1175SC & 1176SC
DRAWN BY J.M.		
DATE 8-77		

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Anaheim, Calif.

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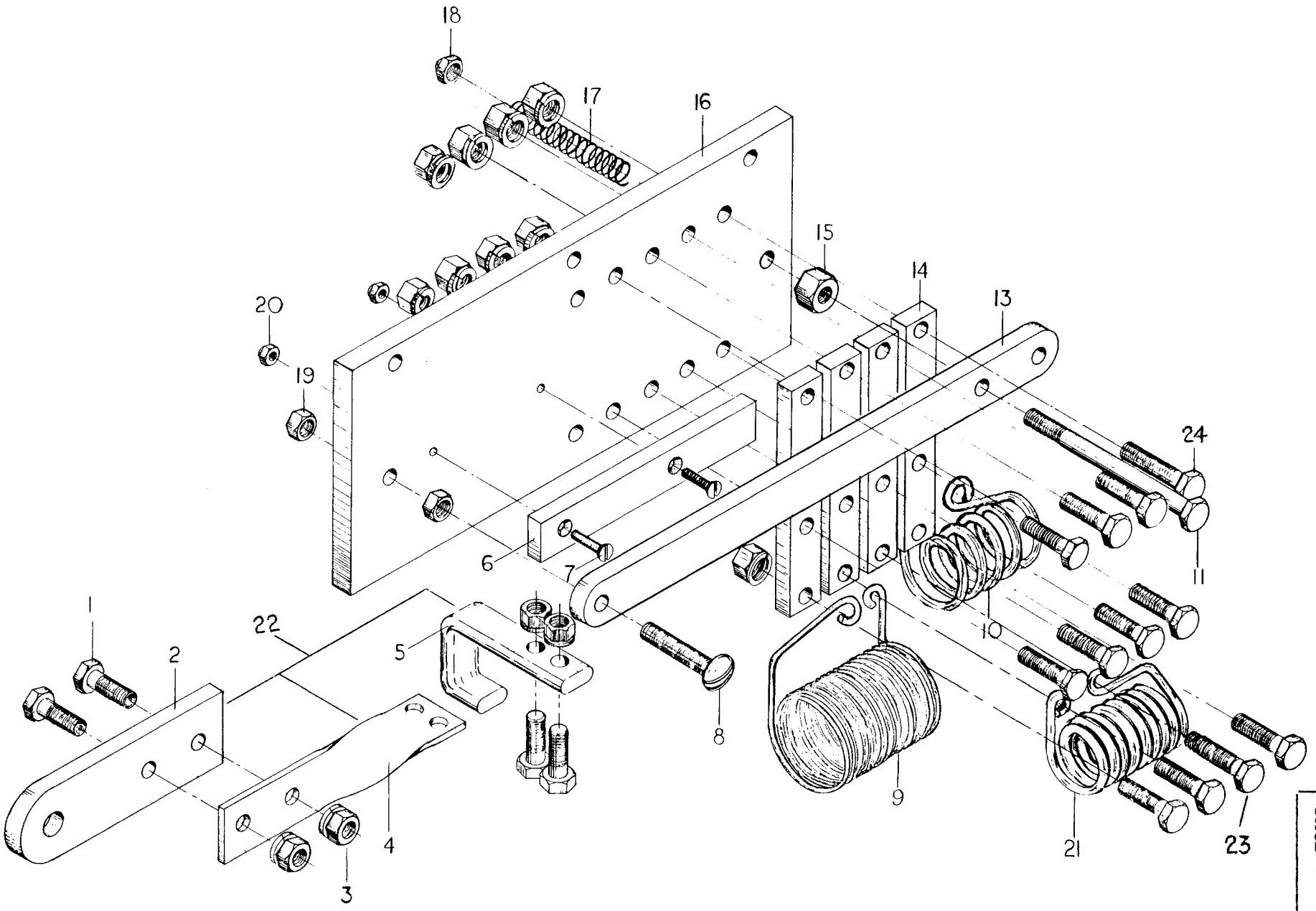

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NO.	DESCRIPTION	LENGTH	QUAN.	REVISED DATE	REVISION

TOL. FRAC.± DEC.±	FIGURE 9	SPEED CONTROL RHEOSTAT
SCALE	SECTION J6	FOUR SPEED
DRAWN BY		
DATE 1-11-75		

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SECTION J8
PAGE 5

SERVICE AND ADJUSTMENTS
BATTERY CHARGER

INTRODUCTION

This section describes the operation, trouble-shooting and repair of the CHRISTIE Series A and Series T Battery Chargers. They are designed for safe and efficient, daily recharging of batteries. Chargers may be furnished in a portable cabinet or of a type built-in to the vehicle.

SPECIFICATIONS

A SERIES

MODEL Portable	Built-in	A-C Volts	A-C Amp	Battery Amp Hours*	D-C Volts	D-C Amp
2420A	2420A-C/2420A-SS/2420AB	115	5	130/170	24	20
3620A	3620A-C/3620AB	115	9	130/170	36	20
	2410A	115	2.5	90	24	10
	T SERIES					
2420T	2420T-C	115	5	130/220	24	20
2430T	2430T-C/2430TB	115	7	170/250	24	30
3620T/T3620T	T3620TG/T3620T-C/T3620TB	115	9	130/220	36	20
3630T/T3630T	T3630TG/T3630T-C/T3630TB	115	10	170/250	36	30
4820T		115	10	130/220	48	20

*Higher capacity batteries may be charged if longer than 12 hours recharge time is available.

CHARGING CHARACTERISTICS

Series A - This charger uses a constant potential method of recharging. This means that the charger output voltage is held relatively constant through the charge cycle. Since the rate of charge is a function of the difference between charger output voltage and battery voltage the charger output current is reduced by the increased voltage of the battery as it recharges. On a discharged battery the charger should start charging at near it's rated output and as the battery recharges the charge rate will be reduced until it reaches a final charge rate of approximately 2 to 3 amperes on a fully charged battery. The charging time is controlled by a timer which terminates the charge at the end of a preset time. Recommended minimum charging times are shown on the CHARGING TIME CHART.

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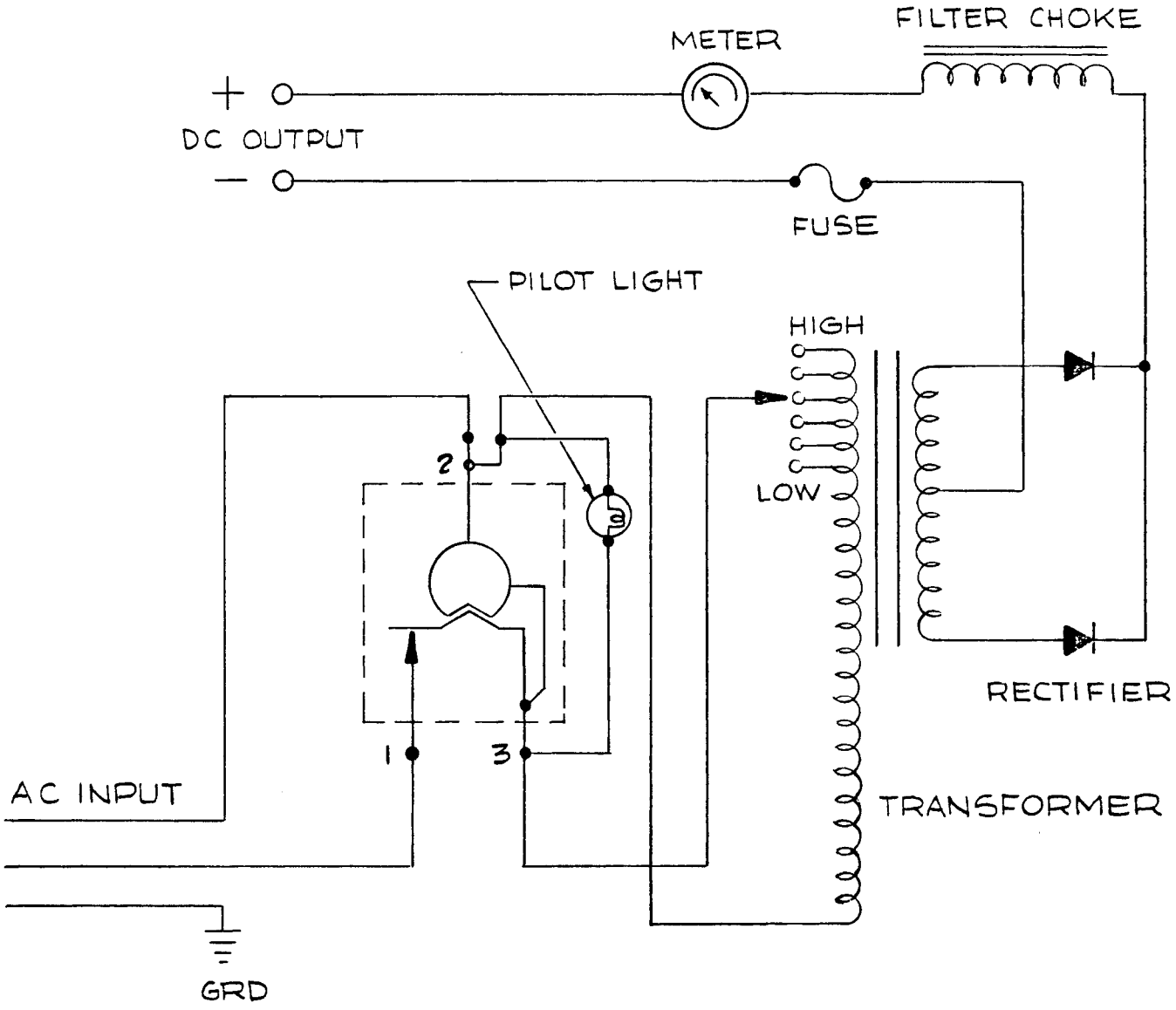
CIRCUIT DIAGRAM

MODELS 2445 & 3645 CHARGERS



CHARGING TIME CHART

The following chart provides useful information for determining the minimum charging time needed to restore a battery to a full charge condition. In addition to normal charging, the cells of the batteries should be equalized twice each month. This is done by charging the batteries an additional seven (7) hours after a normal charge cycle. The current indications of the ammeter will be low during cell equalization.

Specific Gravity Reading	Condition of Battery	Hours Needed* to Charge
1100	fully discharged	12
1125	10% charged	10
1150	20% charged	8
1175	30% charged	7
1200	60% charged	4
1225	75% charged	2
1250	95% charged	1/2
1260	fully charged	0

*Charging time will vary with the AH capacity of the battery.

INSPECTION OF BATTERIES AND ASSOCIATED CIRCUITS

An inspection of batteries and associated circuits is required often to assure that the batteries are capable of being fully charged. This inspection requires the use of a single-cell voltmeter, a hydrometer and a continuity tester.

1. Verify that all connections within the unit to be charged are clean and tight.

2. Check each battery for loose terminal posts.

3. Test for continuity between all battery terminals and the charging receptacle.

4. Verify that the top of each battery is free of moisture, grease and acid flims which may cause a current leakage.

5. Test each individual cell in each battery after recharging with the hydrometer to verify that all specific gravity readings are within 10 points of one another.

6. Using the hydrometer, pull out acid from a cell and then vigorously expel the acid back into the cell to cause a violent stirring action. Immediately draw out another sample of acid and visually inspect it to see if it contains a brownish sediment (indicates positive plates are deteriorated).

IMPORTANT FACTS ON BATTERIES AND CHARGERS

Do not discard a good battery as being defective because its specific gravity does not show an increase immediately upon applying a charge. Many good batteries require a charging period as long as three (3) hours before they show any increase in the specific gravity.

Do not charge a battery if the electrolyte temperature could rise above 120°F. This could damage both battery and charger. As a rule of thumb, the electrolyte temperature during normal charging is about 25°F above the local air temperature.

There are only two test methods to determine if a discharged battery is defective without applying a charge. These tests are given in steps 5 and 6 of the INSPECTION OF BATTERIES AND ASSOCIATED CIRCUITS. Voltage testing methods without fully charging or made while charging have no relationship to battery defectiveness.

Failure to keep the battery electrolyte to the proper level will result in a crumbling (abnormal sulfation) of the plates and cause failure of the battery. Distilled water must be added to the battery regularly to make up for the loss due to evaporation, especially during periods of high charging rates. Add water only to fully charged batteries.

Both overcharging and undercharging can cause a premature failure of a battery. Overcharging destroys the positive plates. Consistent undercharging causes a buckling of the plates.

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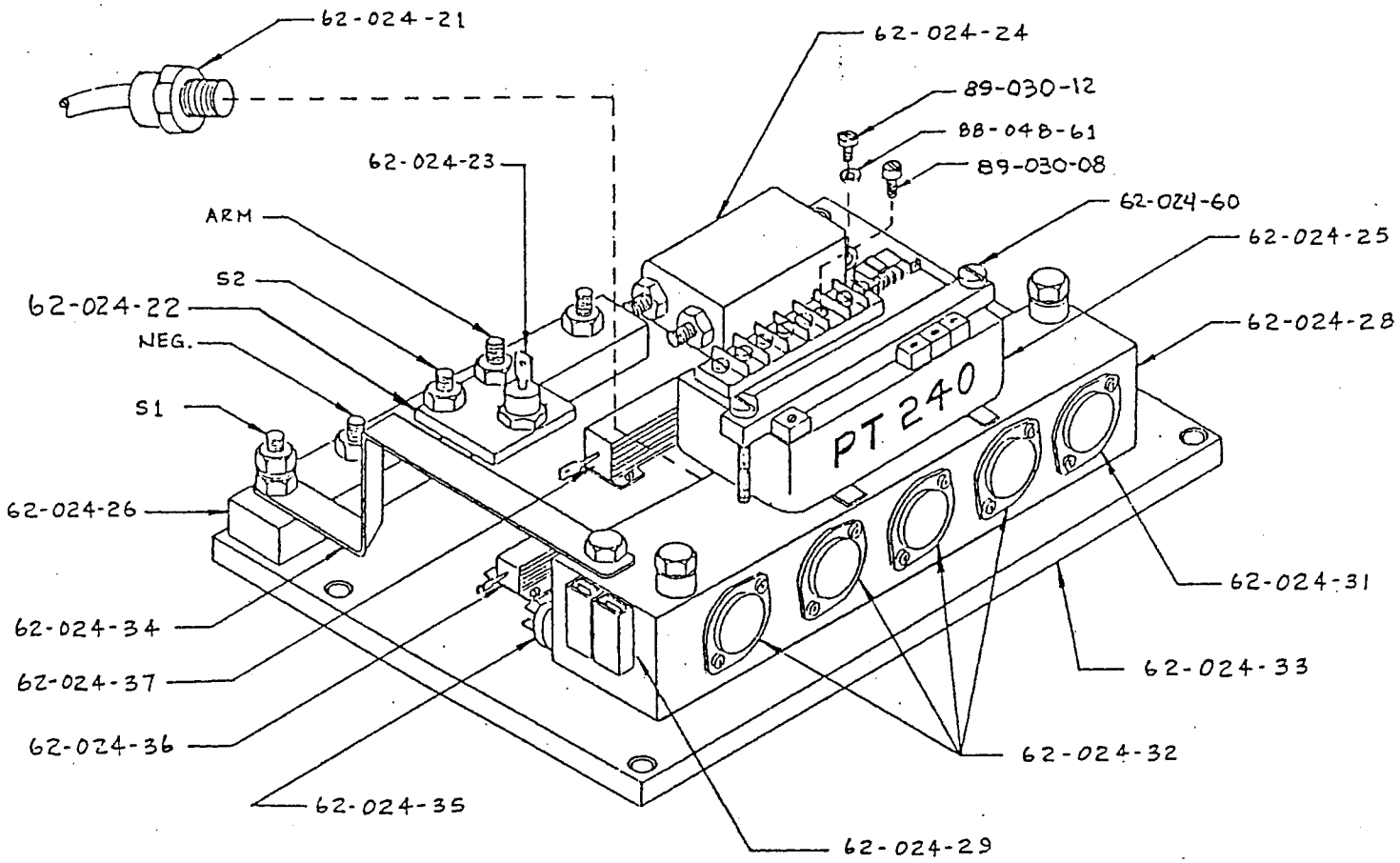

PT240 SPEED CONTROLLER AND PARTS LIST
(PT240 TYPICAL FOR ALL 24 & 36 VOLT VEHICLES)

PART NO.	DESCRIPTION	QTY.
62-024-21	Diode, Flywheel	1
62-024-22	Heat Sink, Diode, Plugging	1
62-024-23	Diode, Plugging	1
62-024-24	Capacitor	1
62-024-25	Logic Unit	1
62-024-28	Transistor Block	1
62-024-31	Transistor Driver	1
62-024-32	Transistor Power	(set) 4
62-024-33	Base, PT240	1
62-024-29	Switch Key (24V & 36V)	1
62-024-35	Switch, Thermal	1
62-024-36	Resistor, 70 OHM	1
62-024-37	Resistor, 1/2 OHM	1
62-024-34	Bar, Buss	1
62-024-26	Block, Terminal	1
89-030-12	Screw, 3 MM x 12 MM	7
89-030-08	Screw, 3 MM x 8 MM	10
62-024-60	Kit, Logic Bar & 2 Screws	2
88-048-61	Washer, # 10 SAE	7

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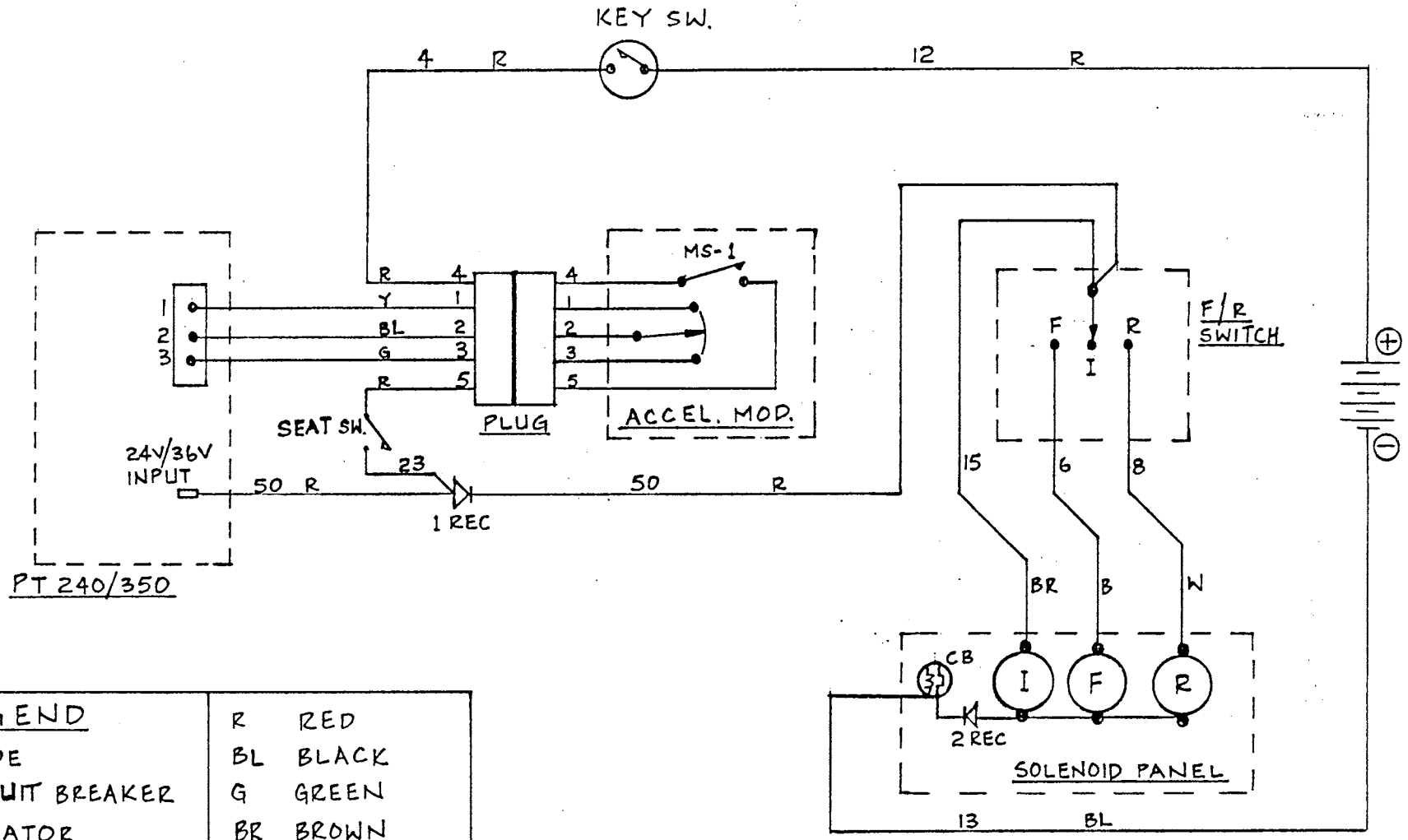
OPERATING YOUR PWR-TRON 240, 350 AND 480 EQUIPPED VEHICLE

To put your vehicle into operation, turn ignition key to "ON". Select direction you wish to travel by moving forward/reverse switch to desired position. Release parking brake, slowly depress accelerator pedal until vehicle is moving at desired speed.

You will notice your vehicle has a smooth transistion from start to high speed operation. This is a built-in characteristic of the PWR-TRON speed control, avoiding "jack-rabbit" starts.

"Plug braking" is an additional feature of the PWR-TRON. It is not necessary to come to a complete stop before reversing the vehicle. It is only necessary to reverse the vehicle while it is in motion and accelerator is fully depressed. The vehicle will automatically slow to an immediate stop and reverse itself to full acceleration. "Plug braking" should be done in an obstruction free area until the operator gets the feel for this maneuver. This maneuver does not damage the PWR-TRON. It is recommended when starting the vehicle to be sure to always turn ignition key on first then select direction of travel with the forward reverse switch, before depressing the accelerator pedal.



LEGEND			
REC	DIODE	R	RED
CB	CIRCUIT BREAKER	BL	BLACK
I	ISOLATOR	G	GREEN
F	FORWARD	BR	BROWN
R	REVERSE	Y	YELLOW
		W	WHITE

PWR-TRON 240/350 CONTROL SCHEMATIC FIG. 2

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TROUBLE SHOOTING (CONTINUED)
(USE COMBINED CIRCUIT FOR CORRECTIVE ACTION)

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
9. No apparent output motor whines.	Grade or load is too great. Motor armature or field short.	See item 1. One direction missing, same action as item no. 1.
10. Vehicles "growls" during acceleration	PWR-TRON B+ to reverse solenoid (red lead) wired wrong.	(See combined circuit) Red lead from B+ tied to outside post. Re-wire red lead to reverse terminal post as on reverse solenoid.
11. Vehicle shudders and shakes	Battery voltage too low	Check batteries re-charge as necessary
12. Vehicle stalls, sits and whines	Bad accelerator pot or due to pulley turning free on pot shaft.	Apply "Super Glue" to pulley. If pot is O.K. and pulley is not loose on shaft, then adjust plugging pot 1/4 turn.

* Transistors must be replaced as matched sets: See respective page for speed controller.

SECTION 3
Page 1

OPERATING INSTRUCTIONS

The controls on your Taylor-Dunn vehicle have been designed and located for convenience of operation and efficient performance. Before driving your vehicle for the first time, familiarize yourself with each of the controls. Read the following instructions and with power OFF, operate each control.

STEERING
The steering wheel and steering system is similar to automotive types. Turn the steering wheel to the right (clockwise) for a right turn and left (counterclockwise) for a left turn.

KEY LOCK
Your vehicle is equipped with a keyed lock located on the instrument panel. It is designed to lock the switch in the neutral position only. The key will remove from the lock in the locked position (neutral) only.

BRAKE AND ACCELERATOR
The foot treadle is a combination brake and accelerator control. It is pivoted near the center so that application of heel pressure to the rear of the treadle applies braking action, while application of toe pressure to the front of the treadle releases the brakes and controls the amount of power delivered to the motor. Full power is achieved when the front of the treadle is depressed as far as it is allowed to travel, and minimum power is achieved when the front of the treadle is partially depressed. intermediate speeds occur between those two positions.

Spring pressure holds the treadle in the braked position when no foot pressure is applied. This provides automatic braking when the vehicle is parked and left unattended.

FORWARD-REVERSE SWITCH
The forward-reverse switch is located on the console, to the right of the driver. To travel forward, move the operating handle to the position marked "FORWARD". To travel rearward, move the operating handle to the position marked "REVERSE".

FORWARD-REVERSE SWITCH (PWR-TRON II)
The forward-reverse switch is located on a separate panel with the key lock. It is a rocker type switch. Depressing the upper part moves the vehicle forward. Depressing the lower part moves the vehicle in reverse.

CAUTION: The forward-reverse switch serves the same purpose as the transmission in your automobile. Treat it with the same respect and care. DO NOT SHIFT from forward to reverse or vice-versa while the vehicle is in motion, especially near top speed, this causes great strain to your entire vehicle and will eventually cause severe damage, complete loss of power and could cause an accident.

HORN BUTTON
The horn button is located to the right of the steering wheel on the Model SC, and on the console for Model AN when so equipped. Depressing button will cause the horn to sound. Releasing button will immediately silence horn.

LIGHT SWITCH
The light switch that controls headlamps and taillamps is located in the control console. It is labeled for On-Off positions.

BATTERY CHARGER
Refer to SECTION 9 for proper instructions to operated your battery charger.

SPECIAL ACCESSORIES:
Refer to the appropriate section of this manual for separate operating instructions pertaining to any special feature or accessory your vehicle may have.

SECTION 6
Page 2

TROUBLE SHOOTING PROCEDURES

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
4. Power System:		
a) No power to motor in forward or reverse	1. Batteries discharged or defective	Recharge or replace batteries
	2. Forward-reverse switch maladjusted or worn	Adjust or repair forward-reverse contacts
	3. Motor brushes not contacting armature	Adjust or replace
	4. Loose or broken wire	Tighten or replace wire
	5. Motor defective	Replace or repair motor
	6. Check rheostat for contact	Adjust or replace bars (see section 16)
b) Erratic Operation	1. Batteries discharged	Recharge batteries
	2. Forward-reverse switch maladjusted or worn	Adjust or repair forward-reverse contacts
	3. Loose wire or wires	Tighten
	4. Motor brushes worn	Replace brushes

* **NOTE:** See Section 15 for PWR-TRON II Trouble Shooting

SECTION 9
Page 1

CHARGER MAINTENANCE, SERVICE AND ADJUSTMENT

TAYLOR-DUNN / LESTER-MATIC BATTERY CHARGER

Line voltage compensation achieved by flux oscillator circuit applied to battery chargers by Lester in 1962 for high reliability "Minute Man" missile standby applications. Compensates automatically for AC supply voltage variations 105-128 volts. Supply voltage variation ± 10% from 117 volts = ± 1% maximum battery voltage variation, decreasing to ± 1/2% at finish rate with constant electrolyte temperature. No taps or rate controls to set.

Automatic taper of charge rate for superior battery life through good equalization of cells and low water use rate.

Silicon diodes with inherent surge protection operated at a conservative percentage of their rating.

Convection cooled design for maximum reliability and minimum maintenance.

LESTRONIC II BATTERY CHARGERS

The all new automatic Lestronic chargers eliminate over and undercharging for new, old or defective batteries, whether hot or cold. Precise charging is achieved by patented Electronic Timer, utilizing state of the art integrated circuits.

Charger turns on automatically by simply connecting D.C. cord to batteries. The ammeter indicates charge rate. The charge rate tapers gradually to a finish rate of 5 to 10 amps. The Electronic Timer monitors the rate of voltage change during the charge period. When this rate levels off, the charger automatically shuts off.

OPERATION OF "LESTER MATIC" BATTERY CHARGERS

INTRODUCTION

The Lester-Matic battery charger is a highly reliable, line compensating unit. When used according to instructions, the Lester-Matic will tend to lengthen battery life with less frequent additions of water.

INITIAL INSTALLATION:

Circuit breaker or fuse protection in the AC line to which the charger is to be plugged should allow at least 15 amps per charger. When it is necessary to use an AC extension cord to the charger, use a three conductor No. 12 AWG cord with ground, and keep as short as possible. Instructions printed on the cover of the charger are for daily reference.

NORMAL OPERATION

The state of discharge of the batteries will be slightly different every time they are put on charge, but the Lester-Matic varies automatically the initial charge rates, and taper of charge rate over the charge period. Thus momentary initial charge rate will vary from 18-30 amps, dropping quickly to a lower value, and then tapering gradually over the charge period to a finish rate of 1-4 amps (in the green shaded area of the ammeter dial) for the last 1-3 hours. When batteries are slightly discharged, the ammeter needle will be in the green shaded area for 7-8 hours, but the specific gravity will not rise to full charge until the cells have been equalized. The normal charging with the ammeter needle in the green shaded area is important to achieve equalization of all battery cells, every time the batteries are charged. Since the taper of the charging rate (in amps, as indicated by the ammeter needle) is controlled

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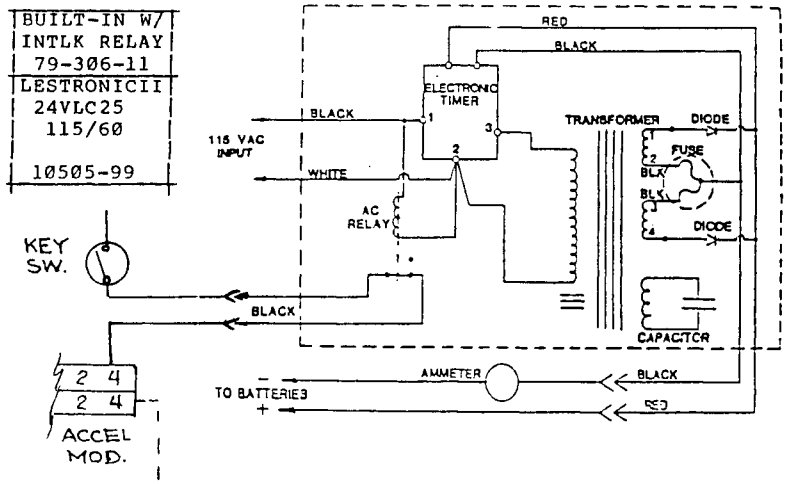
PARTS LIST, BUILT-INS

RECOMMENDED REPLACEMENT PARTS

Taylor-Dunn Part No.	BUILT-IN W/ INTLK RELAY 79-306-11	PORTABLE 79-301-00 *79-301-05
Lester Model No.	LESTRONICII 24VLC25 115/60 10505-99	PORTABLE LESTRONIC II 24LC25 115/60 *BUILT-IN
TRANSFORMER/RECTIFIER ASSEMBLY		
Transformer		
Capacitor	79-902-00	PORT & BLT IN 79-902-00
Heat Sink Assy. with Diodes	79-749-11	79-749-00 79-749-11
Diode Replacement	79-745-10	PORT & BLT IN 79-745-10
Fuse Assembly	79-831-00	PORT & BLT IN 79-831-00
CONTROL CONSOLE ASSEMBLY	INTLK RELAY 79-809-00	
Bushing, for Cordsets	79-530-00	79-530-00
Housing		
Timer	79-805-66	79-805-64 *79-805-66
Knob, Timer		
Ammeter	79-851-10	79-851-10
Cordset, A.C.	79-575-10	79-575-10



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SERVICE AND ADJUSTMENTS
REFER TO FIGURE 5 - REAR AXLE, MOTOR AND BRAKES
REFER TO FIGURE 7 - MECHANICAL CONTROL LINKAGE

CAUTION: BEFORE PERFORMING SERVICE AND ADJUSTMENTS, DISCONNECT BATTERY LEADS FROM MAIN POSITIVE AND MAIN NEGATIVE TERMINALS.

ADJUSTMENT OF BRAKE BAND TO COMPENSATE FOR NORMAL LINING WEAR

IMPORTANT NOTE: Observe position of Speed Control J-Hook and brake lever arm when treadle is depressed to "Full-On" position. The J-Hook must be centered on the high speed power bar with plus or minus 1/8 inch, and simutaneously the brake lever arm must contact the gear case cover, preventing further, forward travel of the J-Hook. If this condition does not exist, then it will be necessary to adjust the brake rod as described in the next subsection.

If J-Hook and brake lever arm are positioned as described, it will not be necessary to change brake rod adjustment.

1. Tighten nut or brake band anchor bolt sufficiently so that full vehicle braking force is applied when the rear edge of the J-Hook is 1/4 to 1/2 inch forward of the rear edge of the neutral bar.

2. Check brake release. Operate the treadle through its full stroke several times, then position the treadle so that the J-Hook is just starting to make contact with the first speed power bar. In this position the brake band should not contact the brake drum. Should drag occur, loosen the brake band anchor bolt nut sufficiently until drag is just eliminated as the J-Hook starts to contact the first speed power bar.

3. Adjust brake band centering screw to bring band as close to drum as possible without causing brake drag. If band is too far from drum, brake will grab in the forward direction.

CAUTION: NEVER BEND the brake band anchor bolt. Any bending of the bolt may result in unexpected failure of the bolt and complete loss of Drive Line braking action.

ADJUSTMENT OF BRAKE ROD AND J-HOOK TRAVEL (REFER TO FIGURES 5 AND 7)

1. Loosen nut or threaded rod which joins clevises attached to brake lever arm and to brake arm of mechanical control linkage.
2. Remove clevis pin from brake lever arm.
3. Remove mechanical control linkage return spring.
4. Position and hold J-Hook in alignment with high speed power bar, and position and hold brake lever arm against gear case cover.
5. With J-Hook and brake lever arm in position described in Step 4, adjust threaded brake rod in clevises so that clevis holes line up with proper hole in brake lever arm, and install clevis pin and cotter pin.
6. Tighten nut on threaded rod against clevis.
7. Reassemble mechanical linkage return spring.
8. Adjust brake band as outlined in preceding subsection.
9. With power disconnected, or with forward-reverse switch in "OFF" possition, operate the treadle through its full stroke several times, and observe the action of the J-Hook and brake band. Readjust, if necessary, the brake rod and/or brake band to accommodate to the slack in mechanical control linkage, until speed control and braking action are as described in the preceding subsection.

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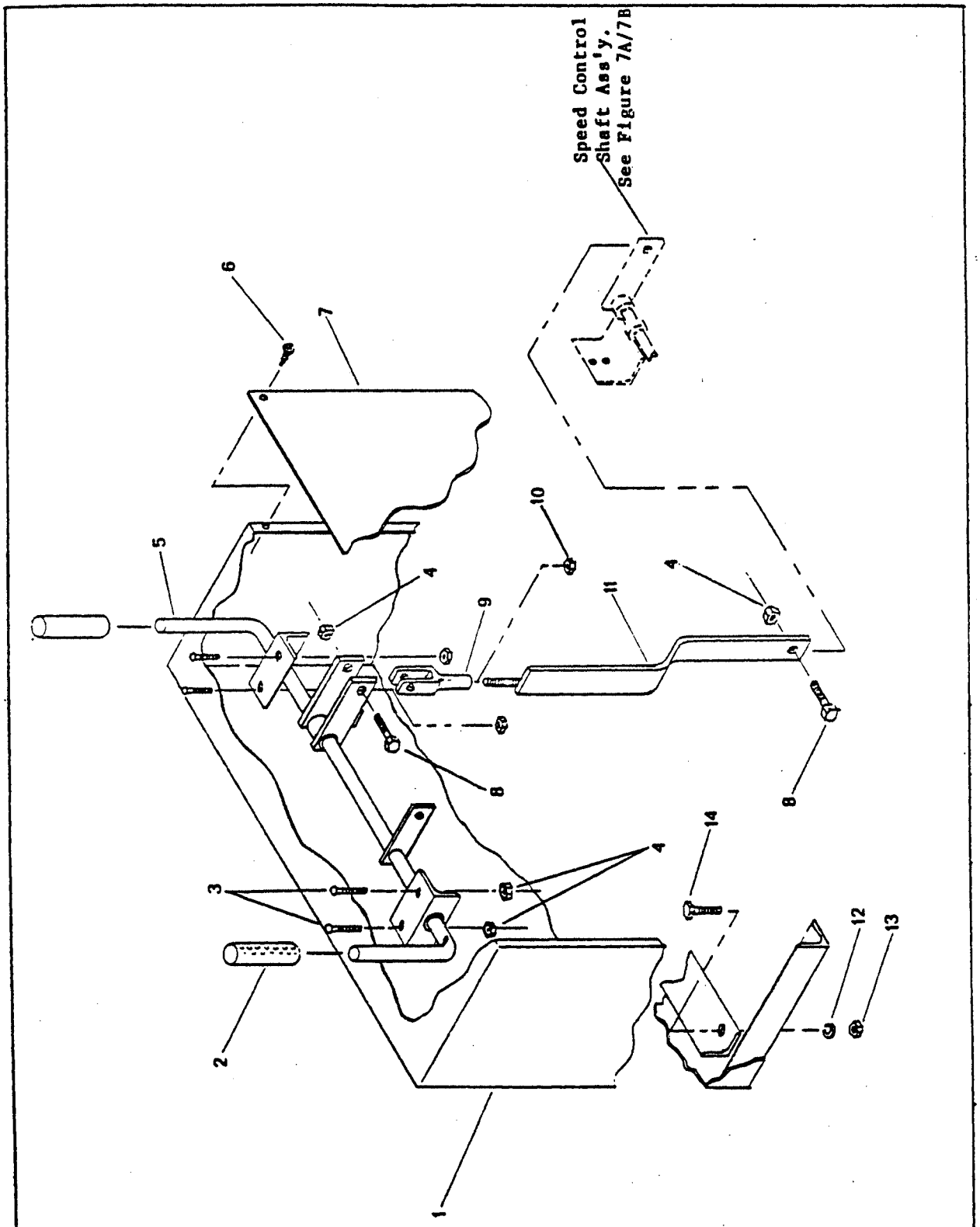
POWER TRACTION DRIVE AXLE
FIGURE 5

FIG.I.D.	T-D PART NO	DESCRIPTION	QTY.
	NOTE: REFER TO SECTION 10 FOR TIRE/WHEEL INFORMATION		
106	45-044-00	GASKET, REAR AXLE BEARING	2
118	88-527-11	COTTER PIN 1/8 X 1 (AXLE VENT)	1
119	88-088-61	WASHER 5/16 SAE	11
122	80-703-00	"O" RING MOTOR MOUNT SEAL	1
123	70-454-00	MOTOR MOUNT PLATE	1
124	88-067-11	SOCKET SET SCREW 1/4 N.C. X 1	1
125	88-069-80	NUT, 1/4 N.C. HEX	1
126	88-109-80	NUT, 3/8 N.C. HEX	3
127	16-400-00	SPACER, 1-1/4 I.D. X .125 THICK	0 - 1 OR 2
128	88-140-14	HEX HEAD CAP SCREW 1/2 X 1-1/2 N.C.	2
129	88-140-20	HEX HEAD CAP SCREW 1/2 X 3 N.C.	2
130	88-148-62	1/2 LOCKWASHER	4
131	88-159-84	LOCK NUT, 1/2 -20 N.F.	1
132	88-159-82	JAM NUT, 1/2 -20 N.F.	1

SECTION 13
Page 5

OPTIONAL WALK-ALONG CONTROL
FIGURE 7B



SECTION 15
Page 5

PWR-TRON II PREVENTIVE MAINTENANCE

1. REPAIR OR REPLACEMENT OF INDIVIDUAL COMPONENTS

If replacement of semi-conductors, i.e. transistors or diodes becomes necessary, the following points must be rigidly adhered. The serviceman is advised that in the event of uncertainty over repair procedures, it is better to change the complete control unit, rather than risk further damage with an improper repair.

(a) Transistors - These are available as a factory approved spare consisting of a matched set of transistors. Only factory approved spares must be used. **Replavement of individual transistors invalidates warranty.**

(b) Insulation - The insulation material (fibreglass reinforced teflon) must be kept absolutely clean. The electrical isolation between heatsink and baseplate must be checked with an Ohm meter after assembly. Check that the resistance is greater that 1 Megohm (1,000,000 Ohms).

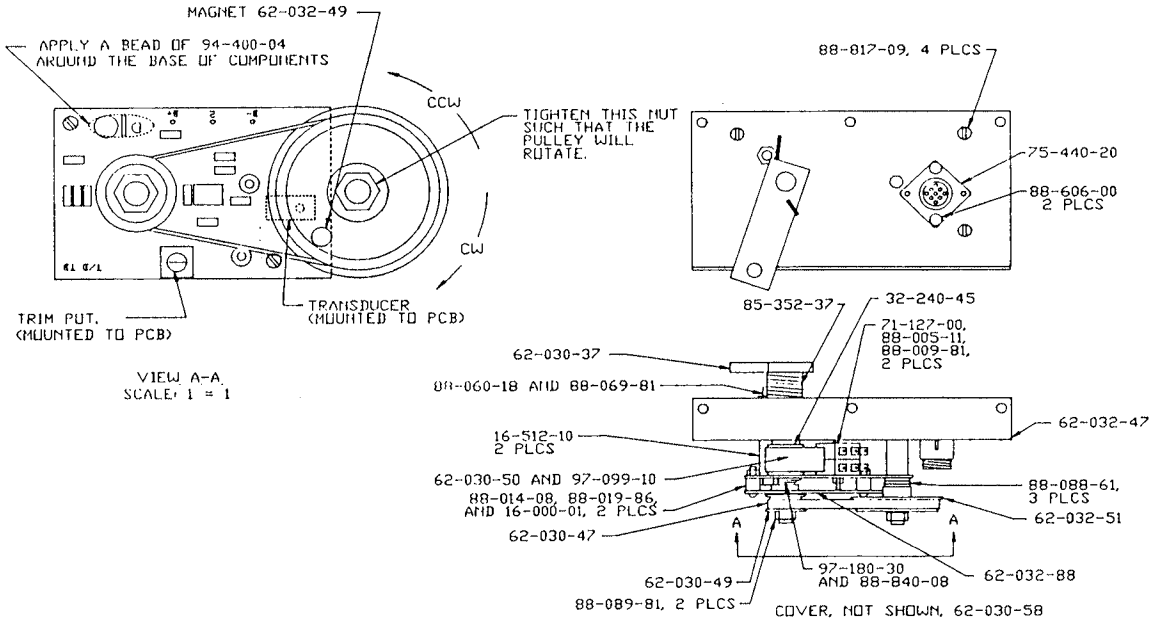
(c) Wiring - The positions of all wires and lugs should be noted and marked prior to removal so that there is no confusion on re-assembly.

(d) Component Polarity - Transistors can be damaged by quite modest currents incorrectly applied and are destroyed by reverse currents. If replacing transistors ensure that polarity is correct.

(e) Connections - Check all connections for tightness on completion.

(f) Final Checks - Prior to the first switch on, **check battery polarity.** Use test light to ensure safety.

* **NOTE:** **Any controllers that will be used in ambient temperature above 104 degrees F or 40 degrees C should be brought to the attention of the truck manufacturer.**



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ACCELERATOR MODULE
FIGURE 2

SECTION 15
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TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE
FULL MOTOR TORQUE AVAILABLE - GENERAL FAULTS	
TO TEST VOLTAGES, FIRST PLACE TEST LIGHT IN SERIES WITH ARMATURE.	
1. Solenoid closes and full speed.	Check accelerator circuit and voltage at pin 2. Should swing from 6.3 to 11 Volts with depression of accelerator.
2. Unequal braking in either direction, or unequal power in each direction.	Misadjusted motor brushes. Rotate brush gear to give equal braking in each direction.
	Dirty or burned direction solenoid contacts.