OPERATION

AND

MAINTENANCE MANUAL

WITH

PARTS LIST

Model:	**B, BN, M**
Serial No.:	**19300 - 54833**
Year:	**1971 - 1979**
Manual:	**MB-248-93**

- IMPORTANT -

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

TAYLOR-DUNN®
Commercial and Industrial Vehicles Since 1949

2114 West Ball Road, Anaheim, CA 92804 (714) 956-4040 FAX (714) 956-0504
Mailing Address: P.O. Box 4240, Anaheim, California 92803

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 your 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 and fill batteries. If necessary fill with distilled water only.	J8	X	X	X	X
Clean off all dirt and grease on and between power bars and J hook. Reapply chassis lube.	J6	X	X	X	X
Check rheostat adjustment.	J6	X	X	X	X
Check tire pressure.	J1	X	X	X	X
Adjust Motor Mount & Chain (Refer To Chart Section J2)	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.	J5, J6, J7		X	X	X
Check service and adjust parking and manually operated brake.	J2		X	X	X
Check hydraulic brake system for leaks, also check brake fluid level in master cylinder.	J3		X	X	X
Check rear axle differential oil level (refer to lubrication diagram).	J2 & E		X	X	X
Check, clean, and adjust forward reverse switch.	J5		X	X	X
Check motor brushes. Blow out carbon dust. (replace if necessary).	J2			X	X
Check and adjust front wheel bearings and fork spindle bearings.	J1			X	X

SECTION J1
PAGE 2

SERVICE AND ADJUSTMENT
REFER TO FIGURE 3
FRONT AXLE, FORK, STEERING AND TIRES (3 WHEEL MODEL)

Removal of tire, wheel and 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. Tire may be changed or repaired without removing wheel from hub. To change wheel remove 5 lug nuts thereby releasing wheel from hub assembly.
4. Wheel bearings may be flushed, cleaned and repacked without removing from hub, unless, severely damaged or embedded with foreign material.
5. To remove wheel bearings and seals:
   A. Pull seals from hub.
   B. Remove taper roller bearings.
   C. If necessary, press bearing races from hub with suitable press or with flat punch by hitting back and forth one side to other.

Re-assembly and adjustments:

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 & 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 fork assembly.
5. Install locknut.
6. Adjust wheel bearings by holding 1 axle nut and tightening the other until a drag is felt on wheel. Then back off nut approximately 1/4 turn. Wheel should turn free but not have excess play in bearings.
7. Wheel hub has 1 zerk fitting for grease lubrication.

Dis-assembly of fork spindle:

1. Remove front seat cushions.
2. Remove 2 screws holding center control console.
3. Slide console far enough over to expose fork spindle.
4. Remove dust cap.
5. Remove cotter pin & nut on ball joint.
6. Rap ball joint stud sharply with soft hammer or use soft block and regular hammer to loosen tapered stud from steering arm.
7. Remove lock nut on spindle end.
8. Slide fork and spindle out of housing.
9. Remove bearings and dust seals.
10. A puller is required to remove bearing races from housing.

PAGE 12

REMOVE AND REPLACE STEERING WORM ASSEMBLY

1. Pry steering wheel cap up to expose locknuts holding horn button in place.
2. Remove 2 horn button screws.
3. Remove wiring from horn button and slide out of steering tube through bottom.
4. Remove lock nut and with suitable puller, remove steering wheel.
5. Remove "U" bolt on steering tube.
6. Remove steering worm guard.
7. Remove 2 "U" bolts on universal joint.
8. Remove 2 steering worm holding bolts and slide steering worm assembly from bottom of vehicle.
9. Remove locknut holding universal yoke on shaft.
10. Mark position of universal yoke and remove from worm shaft.
11. If installing new steering worm it is important to place the universal yoke in the same relative position on the new unit as it was on the old unit. Failure to do this will result in a misalignment of the universal joint and a limitation of steering in one direction.
12. Install steering worm in reverse to manner outlined in steps 1 to 8.
13. When installing steering wheel, rotate the steering shaft until the front wheels are aimed straight ahead. Install steering wheel in centered position.
14. Adjust minor misalignment. Loosen steering link sleeve clamps and adjust steering link until front wheel and steering wheel are both in position.
15. Check that you will be able to turn the steering mechanism equally in both directions. If you cannot, it means the universal yoke was not properly installed and it will be necessary to separate universal, remove yoke and replace it in the proper position.
16. Lubricate steering worm through zerk fitting located on worm housing. Refer to Lubrication Diagram and Maintenance Guide Sections D & E.

DISASSEMBLE AND REASSEMBLE STEERING WORM

REFER TO SECTION J1A

SECTION J2
PAGE 2

SERVICE AND ADJUSTMENTS
REFER TO FIGURE 5
"POWER TRACTION" REAR AXLE, MOTOR AND BRAKES

Adjustment Of Brake (Minor) To Compensate For Normal Lining Wear. Important Note.

Observe position of Brake Lever Arm. It must be 1/16" to ¼" from Gear Case Cover with brake pedal and hand brake fully released.

If brake lever arm is not in the correct position, due to improperly adjusted cables or brake rods, then it will be necessary to perform a complete major brake adjustment as itemized under next section "Adjustment of Brakes (Complete)".

Note: If brake lever arm is in the correct position as described above, it will not be necessary to touch cable or rod adjustments.

1. Adjust brake band anchor bolt and nut, tightening it until brake pedal travels approximately half way to floorboard engaging brake sufficiently to stop vehicle. Vehicles equipped with automatic (deadman) brake requires the treadle to operate the braking action within the last ½ of it's stroke.
2. Adjust centering screws, centering band around drum to bring band as close to drum as possible without brake dragging. Lock centering screw. If band is too far from brake drum, brakes will grab in the forward direction.

Adjustment of Brake (Complete) Except For Automatic (Deadman) Brake Refer to Section J4

1. Loosen clevis and locknut on foot brake, cable (or rod) and adjust length to position brake lever arm 1/16" to ¼" from gear case cover as described above.
   It may be necessary on vehicles equipped with other control cables such as handbrake cables to disconnect them so they will not interfere with this first important adjustment.
2. Adjust brake band as outlined in steps 1 and 2 above.
3. Adjust hand parking brake lever knob on end of handle, turning counter-clockwise until it stops. Place lever in locked position. Then loosen clevis locknut on cable or rod on underside of parking brake lever and adjust cable or rod (by shortening) until brake band engages drum properly. Lock clevis nut.
   Note: Brake band and brake cable must be adjusted first as outlined above.
4. Try completely releasing hand lever to be certain brake band is completely released. Additional brake holding power can be applied by turning knob on end of handle in clockwise direction.
   Note: Turning knob in clockwise direction increases travel of brake cable but decreases leverage of brake lever. Therefore, if it is adjusted too far clockwise the lever will be difficult to operate. You compensate for this condition by shortening hand brake rod as outlined above. Caution: if you shorten rod too far, you will not allow the brake band to completely release. Obviously the ideal condition is midway between the two extremes described above.
5. If vehicle is equipped with hydraulic wheel brakes, refer to Section J3 for service and adjustment.
6. If vehicle is equipped with brake-accelerator lock, refer to Section J4 for service and adjustment.
7. If vehicle is equipped with Automatic (Deadman) brake, refer to Section J4 for service and adjustment.

SECTION J2
PAGE 12

FIG. I.D. NO.	T-D PART NO.	DESCRIPTION	QTY. REQ.
5-40	41-711-00	Shim - Drive Pinion Bearing	1 to 3
5-41	31-235-00	Ring and Pinion Gear Set 2.75 Ratio	1
5-41	31-236-00	Ring and Pinion Gear Set 3.10 Ratio	1
5-41	31-237-00	Ring and Pinion Gear Set 3.25 Ratio	1
5-41	31-238-00	Ring and Pinion Gear Set 3.50 Ratio	1
5-41	31-239-00	Ring and Pinion Gear Set 5.43 Ratio	1
5-41	31-234-00	Ring and Pinion Gear Set 3.00 Ratio	1
5-42	80-702-00	"O" Ring - Drive Pinion Bearing Retainer	1
5-43	80-555-00	Ball Bearing - Rear, Pinion Pilot	1
5-44	41-714-00	Driving Pinion Pilot Bearing Retainer	1
5-45	41-998-00	Plug, 1/2 NPT	1
5-46	91-509-00	Spring Clip	1
5-47	80-554-00	Tapered Roller Bearing - Pinion Shaft	2
5-48	80-125-00	Tapered Bearing Race - Pinion Shaft	2
5-49	44-340-90	Pinion Bearing Case Assembly & Bearing Races	1
5-50	45-021-00	Gasket Gear Case To Pinion Bearing Assembly	1
5-51	16-415-00	Spacer Pinion Shaft (.440" Thick)	1
5-52	16-419-00	Spacer Pinion Shaft (.002" Thick)	2 to 6
5-52	16-410-00	Spacer Pinion Shaft (.018" Thick)	2 to 6
5-53	16-411-00	Spacer Pinion Shaft (.005" Thick)	2 to 6
5-54	16-415-00	Spacer Pinion Shaft (.440" Thick)	1
5-54	16-417-00	Spacer Pinion Shaft (.340" Thick)	1
5-55	41-371-00	Brake Alignment Bracket	2
5-56	88-080-20	Hex Head Cap Screw 5/16" x 3" N.C.	9
5-57	41-989-00	Plug (Filler Level and Drain) 1/4" N.P.T.	2
5-58	88-228-61	Washer 3/4" S.A.E.	2
5-59	88-089-81	Lock Nut 5/16" N.C. (Hex)	14
5-60	88-080-11	Hex Head Cap Screw 5/16" x 1" N.C.	2
5-61	85-270-00	Extension Spring 1-1/4" OD x 4-3/8" Free	1
5-62	43-201-11	Gear Case Cover with Oil Seal	1
5-63	45-331-00	Oil Seal - Gear Case to Pinion	1
5-64	41-532-00	Brake Drum (Splined)	1
5-65	97-250-00	Nut - Pinion 3/4" - 20 Extra Fine Threat	1
5-66	41-661-00	Full Brake Band for 6" Drum	1
5-67	50-656-00	Brake Lever Arm	1
5-68	88-517-11	Cotter Pin 3/32" x 1"	1
5-69	96-771-00	Clevis Pin 3/8" x 3/4" Face to Hole	1
5-70	88-089-80	Nut - 5/16" N.C. (Hex)	10
5-71	88-100-13	Hex Head Cap Screw 3/18" x 1-1/4" N.C.	7
5-72	41-370-00	Brake Mounting Bracket	1
5-73	85-060-00	Compression Spring 5/8" OD x 2-1/2" Long	1
5-74	88-108-60	Washer 3/8" Flat Cut	4

SECTION J3
PAGE 2

SERVICE AND ADJUSTMENT

. REFER TO FIGURE 6
HYDRAULIC BRAKE SYSTEM

The loss of brake pedal action may be due to a defective master cylinder. It can usually be detected by signs of fluid leakage at master cylinder or by the action of the brake pedal. When foot pedal pressure is applied you will feel the brakes engage, yet, the pedal will continue to travel downward. A ruptured hydraulic line or a defective wheel cylinder will produce the same action. You can determine the cause by the location of brake fluid leakage.

MASTER CYLINDER REPAIR OR REPLACE

1. Remove cotter pin, clevis pin, and remove push rod. (It will slide out of master cylinder socket).
2. Disconnect hydraulic line at cylinder (There will be 2 lines of 4 wheel brake system).
3. Remove 2 holding bolts and lift master cylinder out of chassis.
4. Cylinder should be thoroughly cleaned.
5. Remove boot and locking ring.
   NOTE: Piston parts are under spring pressure, take care that they do not pop out when you remove lock ring.
6. Remove piston and cup assembly.
7. Inspect cylinder wall. If scoring or roughness is present it must be removed with a fine hone.
8. Taking care that all parts are kept clean, install new piston and cup assembly kit. A diagram is furnished with each kit. It is also recommended that parts are coated with a small amount of brake fluid prior to assembly.
9. Replace lock ring and boot.
10. Install cylinder in chassis in reverse order to which it was removed.
11. ADJUST push rod by loosening locknut and shortening or lengthening the rod so that when brake pedal is fully raised the push rod should be within 1/16" of contacting piston socket. A good way to be certain is to remove clevis pin. While lightly holding rod against socket (DO NOT PUSH HARD ENOUGH TO MOVE PISTON) observe the alignment of clevis and hole. When correct you will have to pull rod approximately 1/16" out of socket to insert clevis pin.
12. Tighten locknut and install cotter pin.

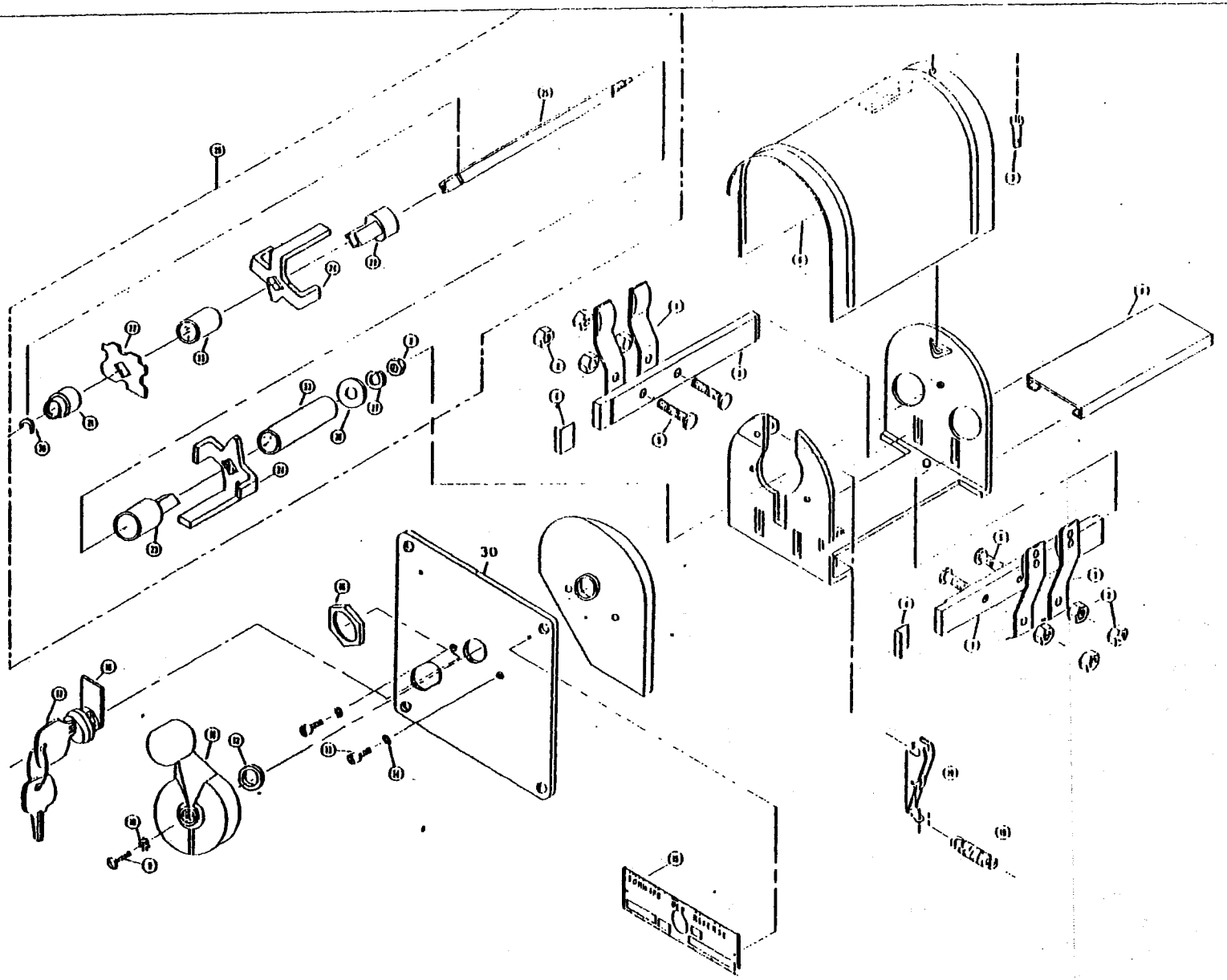
BLEED AIR FROM BRAKE SYSTEM

NOTE: Anytime that any part of the hydraulic system is disconnected or replaced, it is necessary to bleed air from system.

If fluid level is allowed to fall too low in master cylinder reservoir, air will be pumped into system. Consequently the system will have to be bled to remove air. To bleed air from system, follow procedure outlined next.

SECTION J2
PAGE 14

FIG. I.D. NO.	T-D PART NO.	DESCRIPTION	QTY. REQ.
5-84	97-242-00	Special Nut 3/4" N.F. (Hex) For 14 Tooth Sprocket	1
5-85	44-352-51	Gear Case Back Plate (Side Motor Mount) Adjustable	1
5-87	70-049-00	Motor, 2 H.P. at 36V.	1
5-87	70-054-00	Motor, 3.5 H.P. at 36V.	1
5-87	70-061-00	Motor, 5.0 H.P. at 36V.	1
5-91 thru 5-98		REFER TO SECTION J1 FOR TIRE, TUBE, AND WHEEL PARTS LISTING	
5-99	41-346-98	Brake Backup Plate Assembly with Shoes (Left Side)	1
5-99	41-346-99	Brake Backup Plate Assembly with Shoes (Right Side)	1
5-101	41-640-00	Brake Shoes 7" Internal Expanding (Set for One Wheel)	2 Sets
5-102	42-003-00	Brake Adjustment Cam (7" Hydraulic Brake)	4
5-103	85-207-00	Spring, Extension 3/8 x 1-3/8 Free Length (Red) (Not Used When Items 5-128 thru 5-132 are used)	4
5-104	85-208-00	Spring, Extension, 1/2 x 4-1/2" Free Length (Orange)	2
5-105	85-411-00	Spring, Torsion, 1-1/4" Diameter (Blue)	2
5-106	45-044-00	Gasket - Rear Axle Bearing	2
5-107	88-068-62	Washer - 1/4" Lock	4
5-108	88-060-06	Hex Head Cap Screw 1/4" x 1/2" N.C.	4
5-109	41-514-00	Brake Drum (7")	2
5-110	86-000-00	Shock Absorber	1
5-111	88-189-81	Lock Nut 5/8" (Hex)	2
5-112	88-180-18	Hex Head Cap Screw 5/8" x 2-1/2 N.C.	2
5-113	88-188-61	Washer 5/8" SAE	2



SECTION J5
PAGE 4

NO.	DESCRIPTION	LENGTH	QUAN.	REVISED DATE	REVISION

TOL. FRAC. ± DEC. ±
SCALE NONE
DRAWN BY REA
DATE 9-13-69

FIGURE 8
SECTION J5

FORWARD - REVERSE SW.
PART NO. 71-040-00

TAYLOR DUNN MFG. CO
2114 West Ball Rd.
Anaheim, Calif.

SECTION J5
PAGE 4

SECTION J8
PAGE 2

MAINTENANCE PROCEDURES
BATTERIES

4. CLEANING

Batteries pick up various kinds of dirt and dust, depending on their surroundings and the type of service they are subject to. This is usually dry dirt, which can readily be blown off with low pressure air or brushed off. However, if cells are overfilled and electrolyte collects on the covers, the top of the battery becomes wet and stays wet, since the acid in the electrolyte does not evaporate. This moist surface in combination with certain kinds of dirt becomes electrically conductive and permits stray currents to flow externally over the top of the battery. These currents cause corrosion of cell posts, nuts, connectors and steel trays, which eventually become troublesome and expensive to repair.

When wet dirt accumulates on top of the battery, remove it by washing the battery with a strong solution of baking soda and hot water (1 lb. of soda to 1/2 gallon of water). A convenient brush to use is one having flexible bristles like an old paint brush. Continue the application of the soda solution until all fizzing stops, which indicates that the acid has been neutralized. Then rinse thoroughly with clear water.

Wet covers can be an indication of overfilling, leaky seals at posts and covers or of excessive gassing during charge. When observed the cause should be determined and the abusive conditions corrected.

5. RECORDS

A battery record system is recommended for all vehicles. It is considered essential for large operations, and where minimum battery operating cost is desired. A properly supervised record system can be made to detect and call attention to such operating irregularities as:

a. Overcharging
b. Undercharging
c. Overdischarging
d. Excessive Water Consumption
e. Cleanliness
f. Worn Out Batteries
g. Excessive Current Consumption on Trucks

It is not advisable to allow a battery to stand for a long period of time in a low state of charge. Doing so subjects the battery to excessive plate erosion and in cold climate conditions the electrolyte will freeze at a much higher temperature. For example, a fully charged battery will not freeze at temperatures near 60° below zero. Yet a battery in a very low state of charge may freeze at temperatures around 10° to 15° above zero.

A battery not in use maintains small amounts of chemical action which slowly tends to dissappate the charged condition. It is wise to re-charge a battery not in use every 1 to 2 months. If possible store the battery in a cool place, as the self discharge rate is increased with warmer temperatures.