

WORLD'S CHAMPION



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# OWNER'S MANUAL

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*Variant* ***SPORT***



World renowned quality in design and engineering.

CONGRATULATIONS. You have selected the new DERBI VARIANT SPORT, with automatic drive. DERBI has called upon its experience and success in world championship motorcycle and bicycle racing to build this most sophisticated moped. One of the features you will appreciate most are the handling characteristics imparted by the semi-hydraulic front forks and dual rear hydraulic shock absorbers which are unique to the DERBI VARIANT SPORT.

In addition to its quality construction, the DERBI VARIANT SPORT has many exclusive features that are designed for longevity and low cost maintenance. This book covers those features. This manual should be thoroughly read prior to operating your DERBI Moped.

Particular important information is distinguished in this manual by the following notations:

**NOTE:** A NOTE provides key information to make procedures easier or clearer.

**CAUTION**

A CAUTION indicates special procedures that must be followed to avoid damage to the moped.

**WARNING**

A WARNING indicates special procedures that must be followed to avoid damage to the moped and or injury to the operator or person inspecting or repairing the moped.

**NOTE:** This manual should be considered a permanent part of this moped and should remain with it even if the moped is subsequently sold.

**NOTE:** The information and technical specifications in this manual, are based on the latest information available at the time of publication. DERBI MOTORS, S.A. and MARINA MOBILI INC., reserve the right to make changes to the product described without prior notice and without obligation of any kind. Publication of any portion of this manual may not be made without prior written approval.

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## **SAFETY WARNINGS:**

1. Motor vehicle regulations vary from state to state. Study the regulations which apply in your state!
2. This vehicle is designed for on-road use only! It is not suitable for off-road use!
3. Do not load the rear carrier beyond its capacity. The load capacity of the rear carrier is 3.0 kg. (6.6 lb).

### **4. GASOLINE IS HIGHLY FLAMMABLE.**

- Always turn the ignition off when refuelling your DERBI.
  - Take care not to spill any gasoline on the engine or exhaust pipe or muffler when refuelling.
  - Never refuel while smoking or while in the vicinity of an open flame.
5. If accidentally you should swallow some gasoline, inhale a lot of gasoline fumes, or allow some gasoline to get in your eyes, see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash with soap and water and change your clothes.
  6. Always turn the ignition off before leaving your DERBI unattended. When parking your DERBI, note the following:
    - The engine, exhaust pipe and muffler may be hot. Park your DERBI in a place where pedestrians or children are not likely to touch hot engine components.
    - Do not park your DERBI on a slope or soft ground; your DERBI may overturn.
  7. Never start your engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your DERBI in an area with adequate ventilation.
  8. We recommend the wearing of a helmet, gloves, trousers(tapered around the cuff and ankle so they do not flap), and a brightly colored jacket for better protection and visibility.
  9. Be sure that feet are on the pedals during operation.

10. It is important in maintaining control of the vehicle to keep both hands on the handlebar controls at all times.
11. Your DERBI Moped is designed for use as a two-wheeled vehicle capable of carrying an operator and a passenger. The installation of an optional set of passenger foot pegs is required to carry a passenger.

**WARNING**

Some states prohibit the carrying of a passenger on a moped. Study the regulations which apply in your state!

The total weight of the rider, accessories, cargo or passenger must not exceed the maximum gross vehicle weight rating (GVWR) specified on the vehicle certification Label.

## TECHNICAL SPECIFICATIONS

### Motor

|                                 |                                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------|
| Number of cylinders . . . . .   | One aluminum cylinder with interior coating of nickel and silicon carbide («Scanimet»). |
| Type . . . . .                  | Two-stroke/air cooled.                                                                  |
| Bore X Stroke . . . . .         | 39.87 x 40 mm.                                                                          |
| Cylinder displacement . . . . . | 49 cc.                                                                                  |
| Fuel Intake System . . . . .    | Crankcase reed valve induction with triple transfer port distribution.                  |
| Compression ratio . . . . .     | 10:1.                                                                                   |
| Engine Rotation . . . . .       | Clockwise (viewed from the magneto side).                                               |

### Carburetor

|                |                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------|
| Type . . . . . | Dell'Orto SHA 12-12 with automatic choke. Intake silencer with incorporated filter which is removable for easy cleaning. |
|----------------|--------------------------------------------------------------------------------------------------------------------------|

## Clutch, Primary Transmission and Variator Ratio

|                                       |                                                                                                                                                                                                  |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clutch . . . . .                      | Fully automatic, centrifugal with 50% increased contact surface and isolated from primary transmission.                                                                                          |
| Primary Transmission . . . . .        | One helicoidal gear and reducer in constant mesh on needle bearings.                                                                                                                             |
| Variator. . . . .                     | New high torque variator driven by six centrifugal weights with the broadest range of variator ratio available on automatic scooters in the world market. Self cooled by forced air ventilation. |
| Maximum Surmountable Incline. . . . . | 30% (without pedal assist).                                                                                                                                                                      |

## Lighting

|                             |                                    |
|-----------------------------|------------------------------------|
| Headlamp. . . . .           | 6v. 25/25w High/low beam equipped. |
| Taillamp . . . . .          | 6v. 5w.                            |
| Stoplamp . . . . .          | 6v. 10w.                           |
| Speedometer Light . . . . . | 6v1.2w. bulbs.                     |

## Ignition

|                            |                                            |
|----------------------------|--------------------------------------------|
| Flywheel Magneto . . . . . | Motoplat 6v.                               |
| Timing Mark . . . . .      | 1.8 - 2mm BTDC.                            |
| Spark Plug . . . . .       | Bosch W5AC — Champion L-82 — N.G.K. B7 HS. |

### **Suspension**

|                 |                                          |
|-----------------|------------------------------------------|
| Front . . . . . | Central axis telescopic fork.            |
| Rear . . . . .  | Swing-arm and hydraulic shock absorbers. |

### **Brakes**

|                          |                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------|
| Front and Rear . . . . . | Internal-expanding shoe/drum. Diameter 105mm.<br>Total braking surface: 9,152 mm <sup>2</sup> . |
|--------------------------|-------------------------------------------------------------------------------------------------|

### **Tires**

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Front and Rear . . . . . | 2 <sup>3</sup> / <sub>4</sub> x 16" inch tube type. |
|--------------------------|-----------------------------------------------------|

### **Fuel Tank**

|                    |                                |
|--------------------|--------------------------------|
| Capacity . . . . . | 3,360 liters (0.9 US Gallons). |
|--------------------|--------------------------------|

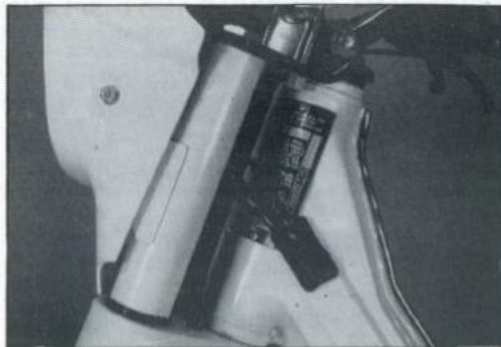
### **Dimensions**

|                          |                           |
|--------------------------|---------------------------|
| Total Length . . . . .   | 1,780 mm (70 inches).     |
| Wheel Base . . . . .     | 1,200 mm (47 1/4 inches). |
| Maximum Width. . . . .   | 690 mm (27 1/8 inches)    |
| Seat Height . . . . .    | 770 mm (30 1/3 inches)    |
| Road Clearance . . . . . | 140 mm (5 1/2 inches)     |
| Dry Weight . . . . .     | 55 kg. (121 Lbs.).        |

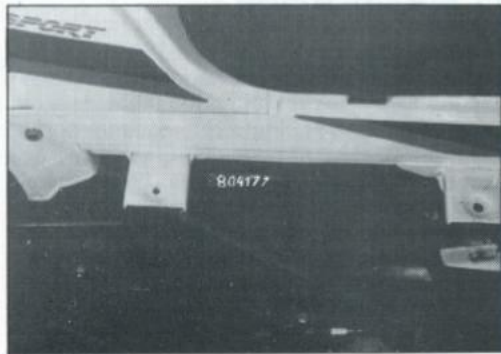
## SERIAL NUMBERS

The Federally required 17 digit vehicle identification number is located on the Manufacturer's Certification label riveted to the vehicle chassis beneath the handlebars.

The engine identification number is located on the right side of the engine and at the top of the crankcase.

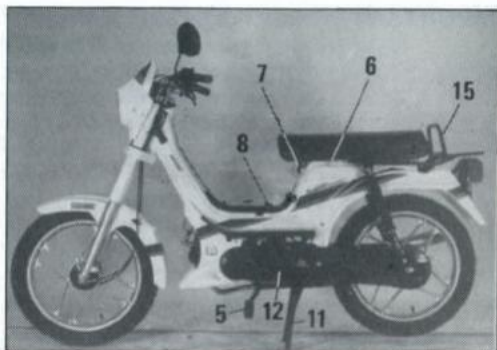
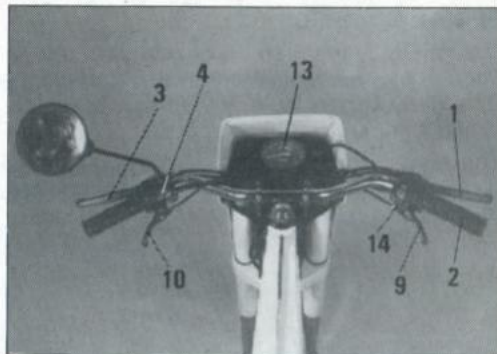


**IMPORTANT** The 17 digit vehicle identification number and engine identification number should be recorded on the inside of the back cover and on the bill of sale so that in the event a theft occurs the serial numbers can be reported to the appropriate authorities.



## EQUIPMENT, CONTROLS AND DISPLAYS

1. Front brake lever.
2. Throttle control.
3. Rear brake lever.
4. Lights and horn switch.
5. Pedals.
6. Fuel tank fill cap.
7. Seat lock.
8. Fuel valve (3 position).
9. Manual choke lever.
10. Decompression lever.
11. Center stand.
12. Engine engagement/disengagement control.
13. Speedometer/odometer.
14. Ignition on/off switch.
15. Rear luggage carrier.



## INSTRUCTIONS TO USE THE DERBI MOPED AS A BICYCLE

The DERBI Moped is equipped with dualpurpose pedals.

The moped pedals have three uses:

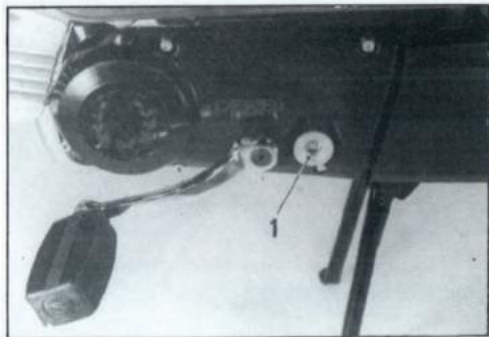
- 1) As a footrest when used as a moped.
- 2) As a starter for the engine, either on the stand or on the ground.
- 3) To transform the moped into a bicycle by disengaging the engine engagement lever shown in the photo as #. 1.

The engine must be OFF when converting your DERBI Moped to the bicycle model. Proceed as follows:

Pull outward on the engine engagement knob located on the rearward side of the left pedal arm. Pulling outward on the knob will disengage the engine from the pedal system.

You are now ready to pedal your DERBI Moped as a bicycle.

To convert your DERBI Moped back to motor drive simply push the engine engagement lever back into the engine.



## FUEL

Your DERBI Moped is equipped with a two cycle engine. Lubrication of the major engine components in the crankcase and combustion chamber is achieved by mixing a quality two cycle oil with the gasoline at a ratio of 50:1 or 2%. The use of a quality two cycle oil will prevent excessive soiling of the combustion chamber, engine parts and exhaust system and will keep the piston rings clean free and extend the life of the spark plug.

### CAUTION

NEVER use alcohol or benzene in your fuel mixture.

## FUEL VALVE

The fuel control valve is located in the center of the frame (1) and it has three positions:

- 1) Closed (OFF) when the lever is forward (center).
- 2) Open (ON) when the lever is turned to the left.
- 3) Reserve (FUEL RES) when the lever is turned to the right.

The fuel valve must be turned off when the vehicle is parked or not in use.



## CARBURETOR

Located inside the chassis, above the engine. For access, position petcock at slot then remove plastic cover by squeezing sides near petcock and lift as pictured.

## AIR FILTER AND AIR FILTER BOX

The carburetor is equipped with a dual air filter system. The primary filter is a metal mesh filter lodged in the carburetor body. The secondary filter is a fiber filter compressed between two grids in the air filter box. To service the air filter assembly loosen the air filter box clamp, pull back on air filter box and remove.



## ENGINE IDLE SPEED ADJUSTMENT

The idle speed adjustment must be performed while the engine is running and after the engine has had a chance to warm up. The adjustment of the idle is accomplished by using the adjustment screw located on the carburetor. Turn the spring loaded adjustment screw until the engine runs smoothly and at the lowest possible speed. With the idle adjusted correctly the clutch should not engage.

From time to time we suggest that you have your carburetor inspected and if necessary cleaned by your DERBI dealer.

## SEAT

The fuel tank cap and the toolkit are placed under the seat. In order to reach these elements, open the lock located in the front of the seat.

## FUEL TANK

The fuel tank is located inside the frame and is not visible from the outside. The cap is accessible under the seat.

It has a capacity of 3,360 litres (9 U.S. Gallon) with a reserve of 0,300 litres (1 U.S. Quart).



## THROTTLE CONTROL

The throttle control is located on the right side of the handlebars. Turning the throttle twist grip towards the rider opens the throttle. Turning the throttle twist grip away from the rider closes the throttle. The throttle twist grip assembly is spring loaded and will return to the closed or idle position when released.

## FRONT BRAKE CONTROL

The front brake assembly is operated by squeezing the front brake lever located on the right handlebar control assembly. The rear brake light will light when either of the brake levers is applied.

Always apply the rear brake when using the front brake.

### **WARNING**

Never apply the front brake alone. Depending upon road conditions, applying the front brake alone may cause front wheel lockup and loss of control of the vehicle resulting in damage to the vehicle and injury to the operator or passenger.

## REAR BRAKE CONTROL

The rear brake assembly is operated by squeezing the rear brake lever located on the left handlebar control assembly. The rear brake light will light when either of the brake levers is applied. More efficient braking will be obtained by applying both the front and rear brakes at the same time.

## CARBURETOR CHOKE CONTROL

The carburetor choke assembly is operated by squeezing the choke lever located beneath the front brake lever on the right handlebar control assembly. The only purpose for using the choke lever is to facilitate the starting of the engine when the engine is cold. Weather conditions will dictate how long the choke lever must be applied once the engine is started. In most situations the choke lever will only have to be applied for 4 to 5 seconds once the engine has started.

## DECOMPRESSION CONTROL

The decompression assembly is operated by squeezing the decompression lever located beneath the rear brake lever on the left handlebar control assembly. The decompression assembly is to be used only when the engine is being started. The decompression lever must be released while the engine is being kicked over for the engine to start.

## IGNITION ON/OFF SWITCH

The ignition on/off switch is located on the top of the right handlebar control. This switch has two functions:

Turn switch to the right: "RUN".

Engine will remain running.

Turn switch to the left: "OFF".

Engine will stop running.

**NOTE:** When attempting to start your DERBI Moped always check to make certain the ignition on/off switch is in the "RUN" position.

## LIGHT AND HORN SWITCHES

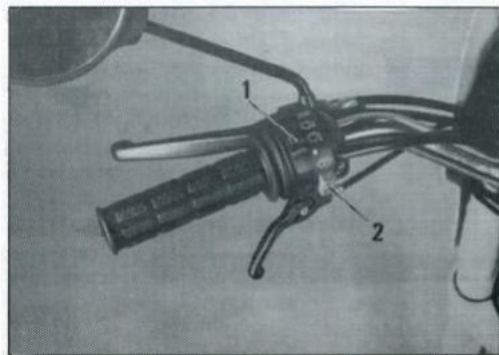
The light and horn switches are located on the left handlebar control assembly. The light switch (1) has three positions:

UP — High beam.

CENTER — Low beam.

DOWN — Lights OFF.

The horn button (2) functions by pressing the button.



## TIRE PRESSURES

Front: 26 PSI

Rear: 32 PSI

### WARNING

Tire inflation pressures are very important. Tire pressures must be checked only when the tire is at ambient temperature. Tire pressures must also be adjusted to accommodate luggage or a passenger.

### WARNING

For safety purposes, when replacing the original tires, the new tires must be Michelin 23/4 x 16" tube type tires, or equivalent tires having a maximum load rating of no less than 280 lbs. at 36 PSI cold pressure for each tire.

### WARNING

When inflating or adjusting air pressure on moped tires, we RECOMMEND that only a hand pump be used in order to eliminate the danger of overinflation which may result in a blowout, damaging the tire, rim and equipment, and also possible injury to the person inflating the tire and others as well.

## MUFFLER

The muffler is equipped with a removable baffle. Due to carbon accumulation from normal use, the baffle should be cleaned every 6 months or 2,000 miles, whichever occurs first. To clean the baffle, remove the two nuts and the washer. Pull out the baffle and clean it with a wire brush. Perform this service only when muffler has cooled off.

NOTE: The muffler system is a integral part to the proper performance of your DERBI Moped. Removal of the baffle system can cause severe engine damage.

## TAMPERING STATEMENT

Tampering with Noise Control System Prohibited!

Federal law prohibits the following acts or the causing thereof: **(1)** The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or **(2)** the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

### WARNING

When replacing exhaust system components be careful to use only replacement components which are rated for Federal noise requirements for the DERBI Moped.

## DERBI NOISE EMISSIONS WARRANTY

NACIONAL MOTOR, S.A. warrants that the DERBI Moped to which this warranty applies, at time of sale, meets all applicable U.S. E.P.A. Federal Noise Standards. The warranty period for which this noise emission warranty is made is 1 year or 3,730 miles (whichever occurs first) from the date of original retail sale. In the event of breach of this noise emissions warranty, NACIONAL MOTOR, S.A., through its authorized dealers and service centers at no expense to the purchaser, shall repair or replace (at its option) the defective component or components.

## INSTRUCTIONS FOR MAINTENANCE AND REPAIR OF NOISE CONTROL SYSTEM COMPONENTS

The following maintenance instructions are intended to help you, the consumer, and/or your mechanic maintain the noise control system of your moped. By following these instructions at the recommended maintenance/inspection intervals the degradation of the noise control system on your moped will be minimized.

1. Inspect exhaust header pipe (Fig. 1) for tightness at the cylinder mount.
2. Inspect muffler clamp and seal (Fig. 2 & 3) for tightness, cracks and leaks. Replace if cracked or leaking.
3. Inspect muffler for cracks and leaks (Fig. 4). Replace if cracked or leaking.
4. Inspect muffler baffle for tightness (Fig. 5).
5. Inspect carburetor air filter housing for tightness and cracks (Fig. 6).

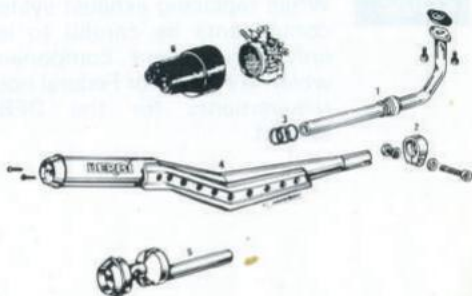
EACH OPERATION IS RECOMMENDED TO BE MADE AT A MAINTENANCE INSPECTION INTERVAL OF 1,000 MILES AND SHOULD BE RECORDED ONTO THE MAINTENANCE LOG CONTAINED ON PAGE 17 OF THIS OWNER'S MANUAL.

### WARNING

When preparing to examine the noise control system of your DERBI moped make certain that the engine has been allowed to cool down sufficiently. Touching hot engine components will cause severe burns.

### WARNING

The wearing of safety glasses is recommended when performing any maintenance or inspection on your DERBI moped.



## DERBI MOPED NOISE EMISSION CONTROL MAINTENANCE LOG

INDIVIDUAL OR SERVICE FACILITY

TYPE OF MAINTENANCE PERFORMED

DATE ODOMETER READING PERFORMING WORK

1. The first part of the paper is a review of the literature on the topic of the paper. It discusses the various theories and models that have been developed to explain the phenomenon of the paper. It also discusses the various methods that have been used to study the phenomenon of the paper.

2. The second part of the paper is a description of the data that was collected for the study. It discusses the various sources of data that were used and the various methods that were used to collect the data. It also discusses the various characteristics of the data that were collected.

3. The third part of the paper is a description of the results of the study. It discusses the various findings that were obtained from the study and the various implications of these findings. It also discusses the various limitations of the study and the various directions for future research.

4. The fourth part of the paper is a conclusion. It summarizes the main findings of the study and discusses the overall implications of the study. It also discusses the various limitations of the study and the various directions for future research.

## **SPARK PLUG**

Periodically remove the spark plug and look for abrasion. Verify that the gap between the electrodes is 0.5 mm. See Table of Maintenance, page 24.

## **CARBURETOR Maintenance**

Periodic cleaning of the carburetor air filter assembly is recommended. Cleaning intervals will be dictated by the specific environment the vehicle is used in. The average mileage interval for filter cleaning is 1,000 miles. Cleaning of the fiber filter can be accomplished by using clean water and then allowing the filter to dry. The metal mesh filter should be cleaned using fresh gasoline and dried by using compressed air. The fiber filter should be replaced every 3,000 miles.

## **CHAIN Maintenance**

The engine drive chain should be cleaned to remove old grease and dirt which can cause excessive wear.

Every 1,800 miles wipe chains thoroughly with a cloth and using a small brush, lubricate with SAE 50 oil. Apply oil to the inside of the chain and the outside while rotating the wheel to ensure that the entire chain length is well lubricated.

## **CHAIN ADJUSTMENT**

Correct tensioning of the engine drive chain is essential to the transmission of power from the engine to the rear wheel. The chain should never be tightened excessively. Chain tension should be checked at the middle of the chain midway between the engine and rear wheel. Optimum chain deflection when pushed with a finger is 3/8 inch.

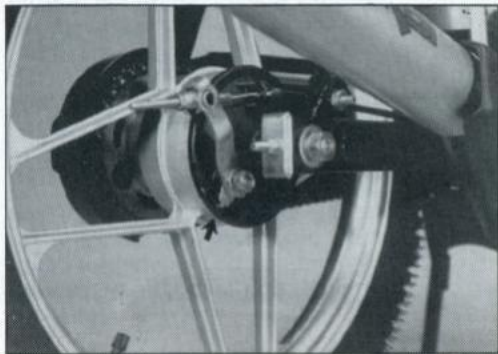
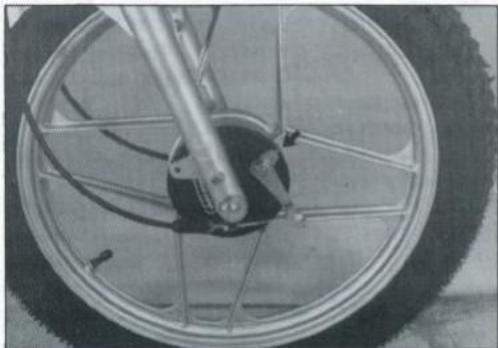
To adjust chain tension remove both the right and left swingarm covers. Loosen the rear axle nut and turn the rear wheel axle tensioner nuts clockwise to tighten the chain. Both tensioner nuts must be turned the same number of times to assure that the rear wheel is properly aligned with the front wheel and frame. Be certain to retighten the rear axle before reinstalling the right and left chain guards.

## **FRONT BRAKE CABLE ADJUSTMENT**

Unscrew the brake cable adjuster locking nut on the front wheel hub. Adjust the front brake cable so that the front brake lever has 1/4" travel. With the brake lever not applied check that the front wheel turns freely. Retighten the front brake cable adjuster lock nut on the front wheel hub. Fine adjustment can be obtained by using the adjuster located up by the brake levers.

## BRAKE SHOE WEAR INSPECTION

Brake shoe wear indicators are fitted on both the front and rear brake plate assemblies and are labeled "Shoes wear". The brake shoe wear indicators consist of a pointer which moves when the brake lever is applied and two indicator marks on each brake plate which represent the minimum and maximum brake pad wear range. The brake shoes must be replaced when the pointer lines up with the second brake shoe wear indicator mark when the brake is applied.



## REAR BRAKE CABLE ADJUSTMENT

The operation for rear brake cable adjustment is the same as that described for the front brake cable.

On both the front and rear wheel hub assemblies a brake padwear scale has been provided to enable you to determine the wear on the brake linings. Whenever either of these linings show signs of excessive wear consult your DERBI dealer.

## FRONT HEADLIGHT

To change the front headlamp bulb, loosen the two screws at the bottom of the headlamp lens. Remove the headlamp lens assembly by gently pulling out on the bottom of the lens and then pushing upward and out. Remove the bulb socket retaining clip from the back of the headlamp. Gently pull the bulb socket and bulb out of the headlamp lens assembly. To remove the bulb from the socket push in on bulb and turn the bulb to the left.

To assemble the headlamp, simply reverse the disassembly procedure. The headlamp on your DERBI Moped can be adjusted for beam aim by loosening or tightening the two spring

loaded headlamp mount screws. Correct headlamp adjustment is such that at a distance of 16 feet the headlamp focused beam should be the same height as the center of the headlamp assembly while the Moped is off its center stand and mounted by the rider.

## DRIVING INSTRUCTIONS DURING BREAK-IN PERIOD

1. The reliability and performance of your DERBI Moped depends upon the treatment it receives during the break in period. The break in period is 600 miles.
2. During the break in period the DERBI should be driven smoothly and carefully. Maximum throttle should not be used during the break in period.
3. The DERBI must be brought back to the dealer for a check up after the first 300 miles. The transmission oil must also be changed at the first 300 mile check up.

## INSTRUCTIONS FOR STARTING THE MOTOR (USING THE PEDALS)

The following steps should be carefully followed when starting your DERBI while it is on the centerstand.

1. Turn the ignition OFF/ON switch to the RUN position.
2. Turn the fuel valve to the "ON" position.
3. Open the throttle 1/4 of its rotation.
4. Pull up on the decompression lever using your left index finger.
5. Pull up on the choke lever (only when engine is cold) using your right index finger.
6. Bring the left pedal to the 12:00 o'clock position. Push down on the pedal briskly with your left foot and release the decompression lever as soon as the engine begins to turn over.

**NOTE:** The engine **will not** start if the decompression lever is not released.

### **WARNING**

Never apply full throttle when your moped is on its centerstand. Should the rear wheel contact the ground in a full throttle situation the moped will take off out of control.

Generally, during cold weather or first start in the morning it is necessary to use the choke lever when starting the DERBI. We recommend that the choke lever be continually held in until the engine starts. When attempting a cold start situation the time necessary for holding the choke lever engaged is generally 2-5 seconds after the engine has started.

## CLEANING YOUR DERBI

The general maintenance required of the DERBI VARIANT SPORT is minimal and simple to perform. By following the instructions outlined in the operations manual and performing a periodic thorough cleaning of your DERBI VARIANT SPORT the performance and appearance of your DERBI VARIANT SPORT will be enhanced.

- The chrome plated components should be washed with a sponge and soft detergent and then dried thoroughly.
- The painted and plastic surfaces should be washed with a sponge and soft detergent and then dried thoroughly. These surfaces should also be periodically waxed using a non-abrasive automobile wax and a clean rag.
- Should you be caught in the rain while riding your DERBI VARIANT SPORT, dry your DERBI thoroughly once you have reached your destination.

## EXTENDED STORAGE

Should you decide to store your DERBI Moped for a long period of time we recommend the following procedures be followed.

- Clean your DERBI moped completely.
- Drain the fuel tank and carburetor completely.
- Remove the spark plug and pour 1/2 oz. of SAE 30 oil through the spark plug hole. Turn the engine over several times so that all internal components will become lubricated. Replace the spark plug but do not tighten.
- Lubricate all cables.
- Lubricate the chain.
- Cover your DERBI moped with a material which will breathe to prevent condensation and dust accumulation.
- Periodically turn the engine over during storage.

## CHANGING THE TRANSMISSION OIL

### Draining the Transmission Oil

Remove the oil drain bolt located on the bottom right side of the engine. Once the oil has completed draining reinstall the oil drain bolt making certain that the gasket is on the drain bolt. (See photo/Figure # 1).

### Filling the Transmission With Oil

To fill the transmission with oil the following components must be removed to gain access to the oil fill bolt. (See photo/Figure # 2).

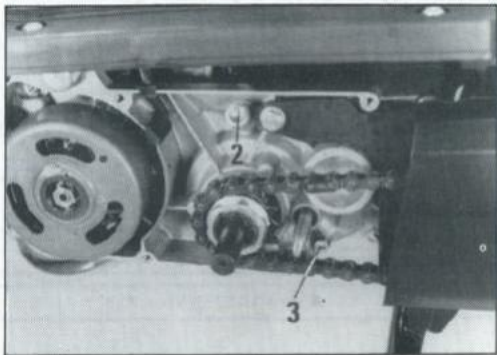
- Left Pedal Arm.
- Engine Engagement Knob.
- Left Engine Cover and Starter Motor.

Once access has been gained to the oil fill bolt, remove the bolt and gasket and fill the transmission with 150 cc. (5 oz.) of 30 weight 4 cycle oil. Reinstall the oil fill bolt and gasket and tighten.

### Checking the Transmission Oil Level

To check the oil level in the transmission remove the oil level check bolt (see photo/Figure #3). If the oil level is proper, oil will begin to drip out through the level check hole. If the oil level appears to be low, slowly add oil through the oil fill hole until the oil level rises and oil begins to drip out through the oil level hole.

Reinstall the oil level bolt and gasket.

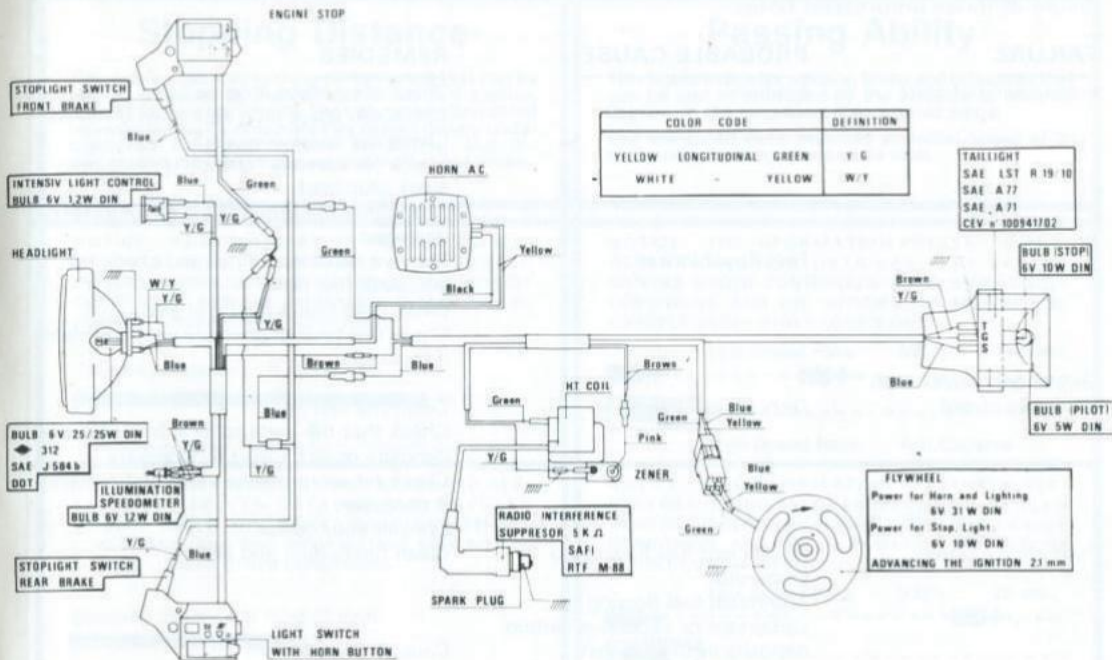


# MAINTENANCE AND LUBRICATING CHART

| MAINTENANCE AND LUBRICATION CHART |                     |                      |                      | (A) GREASE               |                    |                    |                        |
|-----------------------------------|---------------------|----------------------|----------------------|--------------------------|--------------------|--------------------|------------------------|
|                                   |                     |                      |                      | (B) SAE 30W OIL          |                    |                    |                        |
|                                   |                     |                      |                      | (C) CHAIN AND CABLE LUBE |                    |                    |                        |
|                                   | Before<br>Each Trip | A First 300<br>Miles | A First 900<br>Miles | Each 1800<br>Miles       | Each 3600<br>Miles | Each 6000<br>Miles | Type of<br>Lubrication |
| Tire Pressure                     | ■                   |                      |                      |                          |                    |                    |                        |
| Fuel level                        | ■                   |                      |                      |                          |                    |                    |                        |
| Cables                            | ■                   |                      | ■ ●                  |                          |                    |                    | A                      |
| Suspension Check                  | ■                   |                      |                      |                          |                    |                    |                        |
| Lights                            | ■                   |                      |                      |                          |                    |                    |                        |
| Brake Check                       | ■                   |                      |                      |                          | ▼                  |                    |                        |
| Crankcase Oil                     |                     | ○                    | ■                    |                          | ○                  |                    | B                      |
| Transmission Belt                 |                     | ■                    |                      | ■                        |                    | ○                  |                        |
| Spark Plug                        |                     |                      | ▼                    | ○                        |                    |                    |                        |
| Muffler and Silencer              |                     |                      | ■ *                  |                          |                    |                    |                        |
| Tighten Nuts, etc.                |                     |                      | ■                    |                          |                    | ■                  |                        |
| Needle bearing drive pulley unit  |                     |                      | *                    | *                        |                    |                    | A                      |
| Air Filter                        |                     |                      |                      | ■ *                      |                    |                    |                        |
| Carburetor                        |                     |                      |                      | ▼ *                      |                    |                    |                        |
| Cylinder Head, Piston             |                     |                      |                      |                          | *                  |                    |                        |
| Check Timing                      |                     |                      |                      |                          | ■                  |                    |                        |
| Front Fork                        |                     |                      |                      |                          | ○                  |                    | A                      |
| Wheel Bearings                    |                     |                      |                      |                          | ■ ●                |                    | A                      |
| Brake Shoes                       |                     |                      |                      |                          | *                  |                    |                        |
| Piston Ring-Cylinder Gap          |                     |                      |                      |                          | ■                  |                    |                        |
| Steering                          |                     |                      |                      | ●                        |                    |                    | A                      |
| Ignition                          |                     | ▼                    |                      | ■                        |                    | ○ Contact          |                        |
| Front and Rear Brake Levers       |                     |                      | ●                    | ●                        |                    |                    | C                      |
| Chain                             |                     | ●                    | ●                    |                          |                    |                    | C                      |
| Speedometer Drive                 |                     | ●                    | ●                    |                          |                    |                    | A                      |

CHECK-UP . . . . . ■ ADJUSTMENT . . . . . ▼ LUBE . . . . . ● PARTS . . . . . ○ CLEANING . . . . . \*

# WIRING DIAGRAM



## TROUBLE SHOOTING

If you have followed the instructions in this handbook and maintained your DERBI in good condition, failures will seldom occur. However, the following will assist you to readily locate a failure at those unforeseen times.

### FAILURE

### PROBABLE CAUSE

### REMEDIES

Engine will not start

Ignition

Check the engine stop switch  
Check the spark plug and clean if fouled.  
Check the spark plug gap.  
Check for damage to the high tension spark plug lead.  
Check that the ground lead is not loose or damaged  
Remove carburetor filter and check for adequate fuel flow.  
Clean both filters (fuel and air).  
Check fuel tank air pressure vent and clean if blocked.

Engine only starts with excessive choke.

Dirty jet or carburetor.

Clean the fuel jet.  
Check that the carburetor is free of water deposits or dirt. Clean if necessary.  
Check for worn needle valve and replace if necessary.  
Consult your dealer.  
Clean filters (fuel and air).

Poor engine power.

Insufficient fuel flowing to carburetor.  
Too much fuel flowing to carburetor or excessive carbon deposits in the exhaust.

Consult your dealer.

## DERBI VARIANT CONSUMER INFORMATION

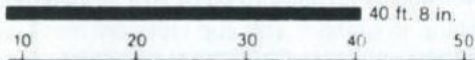
This brochure has been prepared for the information of consumers as required of all manufacturers of passenger vehicles under Title 49, Code of U.S. Federal Regulations, Part 575 pursuant to the "National Traffic and Motor Vehicle Safety Act of 1966".

### Stopping Distance

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

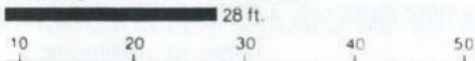
NOTICE THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS

Stopping distance in ft. at 30 mph



NOTICE THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS

Stopping distance in ft. at 25 mph

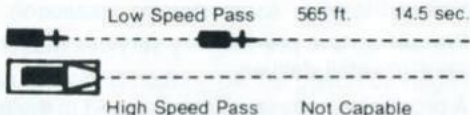


### Passing Ability

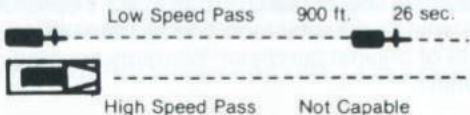
This figure indicates passing times and distances that can be met or exceeded by the vehicles to which it applies, in the situations diagrammed below.

The low-speed pass assumes an initial speed of 20 mph and a limiting speed of 30 mph.

NOTICE THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS



NOTICE THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS



## **DERBI MOPED Limited Warranty**

This warranty is limited to the DERBI Moped as imported by Marina Mobili Inc., P.O. Box 347, 146 West Commercial Avenue, Moonachie, New Jersey 07074 USA and sold by it's authorized DERBI Moped distributors and their authorized DERBI Moped dealers within the United States. This warranty is given to the first retail purchaser only and is not transferable to subsequent owners.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE PART OF MARINA MOBILI INC. AND MARINA MOBILI INC. NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER OBLIGATIONS OR LIABILITY IN CONNECTION WITH SUCH VEHICLES.

**QUALIFICATION REQUIREMENTS** for coverage under this warranty are:

1. The DERBI Moped must be purchased new from an authorized DERBI Moped dealer within the United States.
2. The set-up and pre-delivery services must be performed by an authorized DERBI Moped dealer prior to retail delivery.
3. A proof of purchase must be issued to the owner by the authorized DERBI Moped dealer at time of delivery.

**COVERAGE UNDER THIS WARRANTY** is limited to the following Marina Mobili Inc. terms and conditions:

Providing new or repaired parts, at it's option, to replace any part which is proven to be defective in material or manufacturer's workmanship, under normal use, for a period of six months from the date of original purchase. Warranty covered replacement parts only will be without charge to the owner.

The repair operation to effect replacement of warranty defective parts must be performed by an authorized DERBI Moped dealer or any other qualified Moped service or repair establishment which is competent to provide such services.

All defective parts exchanged for a new or repaired replacement part under warranty shall become the property of Marina Mobili Inc.

Parts repaired or replaced under warranty are warranted only for the balance of the original warranty period.

#### **WHAT THIS WARRANTY DOES NOT COVER:**

1. Any labor charges including the removal and replacement of defective parts. Labor charges are the responsibility of the owner.
2. Any malfunction and/or damage which occurs:
  - (a) In transit or results from fire, theft, accident, neglect or abuse.
  - (b) Due to failure to follow reasonable and necessary maintenance and/or operating instructions.
  - (c) From incorrect quantity, mixture or quality as to fuel or lubricating oil; i.e. piston damage resulting from improper fuel (oil to gasoline) mixture.
  - (d) From disassembly or attempting repair by anyone other than an authorized DERBI Moped dealer or any other qualified Moped service repair establishment which is competent to provide such service.
  - (e) From incorporation of or use of unsuitable attachments, parts or the unauthorized alteration of any part; i.e. installation of "hop up" parts (to increase speed or acceleration).
  - (f) From use for other application than that for which the DERBI Moped was sold; i.e. not racing, competition, or rental.

3. Items subject to normal wear including but not limited to: bulbs, spark plugs, magneto points and condensers, chains, clutches and brake linings, brake, throttle, starting and speedometer cables, tires and tubes.

This warranty does not cover accessories supplied by other manufacturers. Such accessories may have separate warranties as issued by their respective manufacturers.

Marina Mobili Inc. reserves the right to make any engineering or design changes at any time without prior notification or responsibility to the purchaser.

**REPLACEMENT PARTS UNDER THIS WARRANTY** can be obtained by:

Delivery of the DERBI Moped (and/or its defective part) with acceptable proof of purchase, at the owner's expense, to an authorized DERBI Moped dealer during the dealer's normal business hours along with proof of warranty repair (where applicable) and all reasonable and necessary maintenance services being performed by either an authorized DERBI Moped dealer or a qualified Moped service establishment.

**DISCLAIMER AS TO CONSEQUENTIAL DAMAGE AND IMPLIED WARRANTIES:** MARINA MOBILI INC. DISCLAIMS, TO THE EXTENT THE LAW PERMITS, ANY RESPONSIBILITY FOR LOSS OF TIME OR USE OF THE MOPED, TRANSPORTATION OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE WHICH INCLUDES, BUT IS NOT LIMITED TO LOSS OR DAMAGE TO PERSONAL PROPERTY. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

**FAILURE TO COMPLY WITH THE PRESCRIBED TERMS AND CONDITIONS AS SET FORTH HEREIN SHALL RESULT IN LOSS OF COVERAGE UNDER THE WARRANTY AND THE MOPED SHALL BE DEEMED TO HAVE BEEN SOLD "AS IS".**

# INSIST ON GENUINE

WORLD'S CHAMPION

**DERBI**  
RABASA

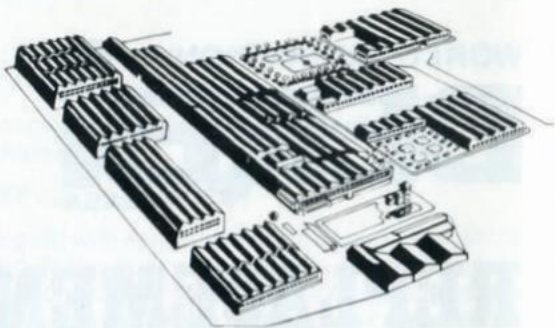
## REPLACEMENT PARTS.

## YOUR GUARANTEE OF QUALITY!



WORLD'S CHAMPION

**DERBI**  
RABASA



**DERBI** FACTORIES AT MOLLET - MARTORELLES (Spain)

Sole U.S. Representative  
for Nacional Motor.  
S.A./DERBI Products:



**MARINA MOBILI, INC.**

*Exporters/Importers/Distributors*

146 West Commercial Ave., P.O. Box 347

Moonachie, N.J. 07074-1794 • USA

## FOR SATISFACTION OF YOUR WARRANTY

### FOLLOW THESE STEPS IN ORDER:

If service or parts are ever necessary, make the recommended checks given in your owner's handbook. If it appears that service or parts are still required, contact the dealer from which you purchased the DERBI Moped or the service center authorized by Marina Mobili Inc.

MARINA MOBILI INC.  
P.O. Box 347  
146 West Commercial Avenue  
Moonachie, NJ 07074-1794  
U.S.A.

### IMPORTANT

Record the following information and save this warranty for future reference.

PURCHASE DATE \_\_\_\_\_

MODEL \_\_\_\_\_

ENGINE SERIAL # \_\_\_\_\_

VEHICLE IDENTIFICATION # \_\_\_\_\_

DEALER NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

DEALER SIGNATURE \_\_\_\_\_

**DEALER STAMP**

## DERBI

### Owner's Warranty Registration

This card should be mailed within 5 days after purchase as a means of proving the date you purchased the DERBI moped.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Model \_\_\_\_\_ Engine Serial # \_\_\_\_\_ VIN # \_\_\_\_\_

Dealer Name \_\_\_\_\_ Purchase Date \_\_\_\_\_

Address \_\_\_\_\_

Age \_\_\_\_\_ Male ☐ Female ☐ Occupation \_\_\_\_\_

I plan to use my DERBI primarily for

☐ Pleasure ☐ Work ☐ Commuting ☐ Other \_\_\_\_\_

I bought my DERBI because of

☐ Economy ☐ Comfort ☐ DERBI reputation ☐ Dealer reputation

☐ Friend ☐ To replace car ☐ Other \_\_\_\_\_

How would you describe the area in which you reside?

☐ Metropolitan/Central City ☐ Metropolitan/Suburban ☐ Non-metropolitan

Including the DERBI you just bought, how many mopeds are owned by your household?

☐ 1 ☐ 2 ☐ 3 or more \_\_\_\_\_

RETURN ADDRESS

---

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---

PLACE  
POSTAGE  
HERE

**MARINA MOBILI INC.**

P.O. Box 347

146 West Commercial Ave.

Moonachie, NJ 07074-1794

U.S.A.



**MARINA MOBILI, INC.**

*Exporters/Importers/Distributors*

146 West Commercial Ave., P.O. Box 347

Moonachie, N.J. 07074-1794 • USA

***Sole exclusive U.S. Agent for  
Nacional Motor S.A./DERBI Products.***

WORLD'S CHAMPION

**DERBI**  
RABASA



*Variant*

# **Consumer Information**

**All Variant automatic models**

## 2. Acceleration and passing ability

THIS FIGURE INDICATES PASSING TIMES AND DISTANCES THAT CAN BE MET OR EXCEEDED BY THE VEHICLES TO WHICH IT APPLIES. IN THE SITUATIONS DIAGRAMMED BELOW, THE LOW-SPEED PASS ASSUMES AN INITIAL SPEED OF 20 MPH AND A LIMITING SPEED OF 35 MPH. THE HIGH-SPEED PASS ASSUMES AN INITIAL SPEED OF 50 MPH AND A LIMITING SPEED OF 80 MPH.

NOTICE: THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS, AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS.

DESCRIPTION OF VEHICLES TO WHICH THIS TABLE APPLIES: VARIANT SL, SLE, CALIFORNIA and START, 25 mph. and 30 mph.

### SUMMARY TABLE:

#### 25 mph.

|                 |                      |
|-----------------|----------------------|
| LOW-SPEED PASS  | 550 FEET: 14 SECONDS |
| HIGH-SPEED PASS | NOT CAPABLE          |

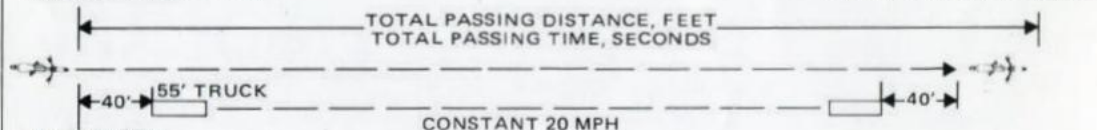
#### 30 mph.

|                 |                      |
|-----------------|----------------------|
| LOW-SPEED PASS  | 490 FEET: 12 SECONDS |
| HIGH-SPEED PASS | NOT CAPABLE          |

#### LOW-SPEED

INITIAL SPEED 20 MPH

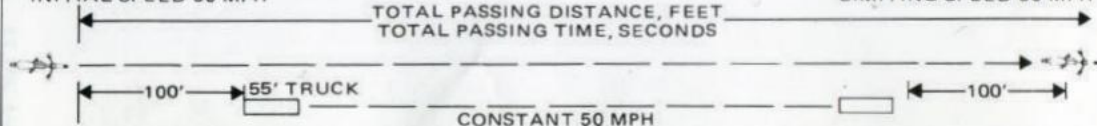
LIMITING SPEED: 35 MPH



#### HIGH-SPEED

INITIAL SPEED 50 MPH

LIMITING SPEED 80 MPH



## CONSUMER INFORMATION

### 1. Vehicle stopping distance

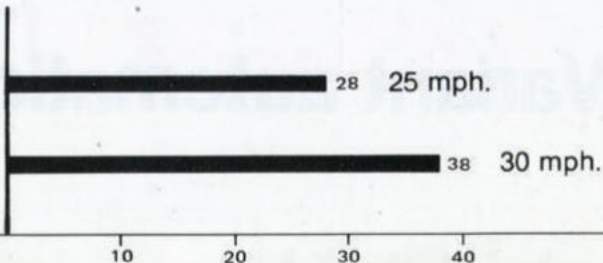
Vehicle minimum stopping distance on dry ground.

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels, under maximum conditions of loading. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: VARIANT SL, SLE, CALIFORNIA and START, 25 and 30 mph.

#### Fully Operational Service Brake

Maximum Load



Stopping distance in feet at maximum speed.

## CLEANING YOUR DERBI

The general maintenance required of the DERBI VARIANT SPORT is minimal and simple to perform. By following the instructions outlined in the operations manual and performing a periodic thorough cleaning of your DERBI VARIANT SPORT the performance and appearance of your DERBI VARIANT SPORT will be enhanced.

- The chrome plated components should be washed with a sponge and soft detergent and then dried thoroughly.
- The painted and plastic surfaces should be washed with a sponge and soft detergent and then dried thoroughly. These surfaces should also be periodically waxed using a non-abrasive automobile wax and a clean rag.
- Should you be caught in the rain while riding your DERBI VARIANT SPORT, dry your DERBI thoroughly once you have reached your destination.

## EXTENDED STORAGE

Should you decide to store your DERBI Moped for a long period of time we recommend the following procedures be followed.

- Clean your DERBI moped completely.
- Drain the fuel tank and carburetor completely.
- Remove the spark plug and pour 1/2 oz. of SAE 30 oil through the spark plug hole. Turn the engine over several times so that all internal components will become lubricated. Replace the spark plug but do not tighten.
- Lubricate all cables.
- Lubricate the chain.
- Cover your DERBI moped with a material which will breathe to prevent condensation and dust accumulation.
- Periodically turn the engine over during storage.