



OWNER'S
MANUAL

Schwinn

DERAILLEUR EQUIPPED

Lightweight Sports Bikes

- Paramount
- Super Sport
- Sierra
- Continental
- Varsity
- Collegiate

ARNOLD, SCHWINN & COMPANY • Chicago 39, Illinois

OWNER'S MANUAL
FOR YOUR NEW

Schwinn

DERAILLEUR
BICYCLE

Welcome to a new kind of cycling!

Sports bikes are quite different from ordinary bikes in two important ways:

- 1. performance**—Sports bikes with high pressure tires and racing equipment require only about half as much energy as regular bikes—thus will go nearly twice as fast with the same effort.
- 2. maintenance**—Unlike children's bikes which are built to withstand abuse, sports bikes are light and more complex. They must be ridden with care and properly serviced or damage may result.

This Owner's Manual will help you get the most enjoyment for your new Schwinn Sports Bike. Read it carefully **before** riding—then keep for future reference.

INDEX

- 1 Tires
- 2 How To Use Derailleur Gears
- 3 Gear Tables
- 4 Adjusting Bicycle To Fit Rider
- 6 Removing Wheels—Quick Release Hubs
- 8 Sprint Derailleurs
- 10 Campagnolo Derailleurs
- 12 Caliper Brakes
- 14 Center Pull Caliper Brakes
- 16 Lubrication And Maintenance

TIRES

Tires make a big difference in the speed and riding qualities of sports bikes, even more than weight. But because they are light and inflated to high pressure, they require special care.

High pressure tires normally lose air due to slight porosity of the rubber and therefore must be checked **each time you ride**. Never sit on your bike or ride on under-inflated tires. Not only may the tire be damaged or ruined, but the rim as well. **CHECK TIRE PRESSURE EACH TIME BEFORE YOU RIDE.**

proper pressure. Three types of tires are used on Schwinn derailleur bicycles. Keep them inflated as below:

| | |
|--|-------------|
| Schwinn Sports Touring 26 x 1 $\frac{3}{4}$ | 55-60 lbs. |
| Schwinn Breeze 27 x 1 $\frac{3}{4}$ | 60-55 lbs. |
| Schwinn Breeze 24 x 1 $\frac{3}{4}$ | 55-60 lbs. |
| High Pressure 27 x 1 $\frac{3}{4}$ Road Racing | 65-75 lbs. |
| Tubular (sew-up) tires | 90-100 lbs. |

inflation. Sports or racing tires hold only a small volume of air at high pressure. Use care at a gas station since they can be over-inflated or blown out in only a very few seconds. Use a tire gauge to check pressure until you become familiar with the feel by pressing with your thumb.

tire care. Do not hit curbs, bumps, or chuck holes, and avoid sharp stones and glass. After riding through an area with glass and sharp stones, wipe off the tire surface to remove small sharp embedded particles.

tire repairs. Sooner or later you are likely to have a flat. For long rides carry either a spare tube or a repair kit, with wrenches if you don't have quick release hubs, and a tire tool. Use care that you don't puncture the tube while removing it. Replace the tire **without** using tools.

how to use your

DERAILLEUR GEARS

Proper use of your derailleur gears will add greatly to your cycling pleasure. They will help you to ride farther, in less time, with a great deal less effort.

The following instructions and pointers are applicable to all derailleur equipped bicycles—

NEVER MOVE SHIFT HANDLES WHEN CRANKS AND WHEELS ARE NOT ROTATING. THE CHAIN CAN MOVE FROM ONE SPROCKET TO ANOTHER ONLY WHEN IT IS IN MOTION.

Selecting the proper gear depends to a great extent on your physical condition and the riding conditions. Beginners have a tendency to shift into the higher gear ranges. This will not necessarily get you to your destination any faster nor with as little effort as a lower gear. Except for hills or heavy winds, the middle range will give you a more pleasant, comfortable, and restful ride.

When shifting up or down, go only one or two steps until you have become accustomed to changing. Make a conscious effort to study the effect of each of the ranges in your early rides. After a short time the best ranges for you will come naturally.

Shifting the gears can be done only while the pedals and wheels are moving. However, the pressure against the pedals should be slightly relieved. Attempting to shift with the bicycle stationary or while applying heavy pressure against the pedals may bend the mechanism or stretch the cables.

Chain noise while shifting is caused by the chain links striking the shifter cage. After making the gear change a slight movement of the lever may be necessary to allow the chain to run free. It may also be necessary to move the rear shifting lever, too. This is especially true when changing through several gears at once.

Cleaning the derailleur and chain is relatively easy. All the parts are exposed. Wiping off the grease and dirt with a clean cloth is all that is necessary. Lubricate all the moving parts and joints lightly, removing all excess oil.

Keep the chain and derailleur clean. Never rest or drop the bicycle down on its right side.

Do not turn pedals backward as this may unseat the chain.

Use care to avoid striking or bending the derailleur arm.

gear tables. The accompanying tables show the various gears obtainable on your new Schwinn derailleur equipped bicycle.

Under ordinary conditions on level roads a gear of about 70 is right for most riders.

The gear table figures are evaluated by multiplying the diameter of the wheel by the number of teeth in the front sprocket and dividing the resultant figure by the number of teeth in the rear sprocket. The gear is related to the distance traveled forward in one complete revolution of the pedals. The distance traveled forward is pi (3-1/7) times the gear number. As an example, a 70 gear \times pi (3-1/7) = 220 inches traveled per revolution of the pedals.

Gears for 15 speed models with 27" wheels.

| Number of teeth in rear sprocket | 14 | 16 | 20 | 24 | 30 | |
|-------------------------------------|----|-----|----|----|----|----|
| | 40 | 77 | 68 | 54 | 45 | 36 |
| Number of teeth in front chainwheel | 47 | 91 | 79 | 64 | 53 | 42 |
| | 52 | 100 | 88 | 70 | 59 | 47 |

Sierra

Gears for 10 speed models with 27" wheels.

| Number of teeth in rear sprocket | 14 | 16 | 20 | 24 | 28 | |
|-------------------------------------|----|----|----|----|----|----|
| | 39 | 75 | 66 | 53 | 46 | 38 |
| Number of teeth in front chainwheel | 50 | 96 | 84 | 68 | 56 | 48 |

Varsity
Continental
Super
Sport

Gears for 10 speed model with 24" wheels.

| Number of teeth in rear sprocket | 14 | 16 | 20 | 24 | 28 | |
|-------------------------------------|----|----|----|----|----|----|
| | 39 | 65 | 58 | 46 | 39 | 33 |
| Number of teeth in front chainwheel | 50 | 85 | 75 | 60 | 50 | 42 |

Varsity

Gears for 10 speed Paramount models.

| Number of teeth in rear sprocket | 14 | 16 | 18 | 21 | 24 | |
|-------------------------------------|----|-----|----|----|----|----|
| | 49 | 95 | 83 | 74 | 63 | 55 |
| Number of teeth in front chainwheel | 52 | 100 | 88 | 78 | 67 | 59 |

Gears for 5 speed models with 26" wheels.

| Number of teeth in rear sprocket | 14 | 16 | 20 | 24 | 28 | |
|-------------------------------------|----|----|----|----|----|------------|
| | 46 | 85 | 75 | 60 | 50 | 43 |
| Number of teeth in front chainwheel | | | | | | Collegiate |

ADJUSTING THE BICYCLE TO YOUR SIZE

Adult type bicycles are designed by frame size rather than wheel size, as is common with children's bicycles. Schwinn derailleur equipped sports bicycles for men are available in frame sizes from 19" to 24"; larger frames are available in the Paramount custom built model. Women's models are offered in only one standard size, but the wide adjustment range for saddle and handlebars will accommodate practically all riders.

adjusting the bicycle

Even the finest bicycle will not be comfortable or easy to ride if it isn't adjusted to proper size.

The heel of the foot should easily reach the pedal while it is in its lowest position with the front of the saddle 2 or 3 inches behind the center of the crank hanger and the saddle top level with the ground.



If more than 4 inches of seat post is exposed, a larger frame should be used; or if a larger frame is not available, an extra long seat post should be installed.

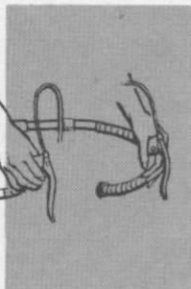
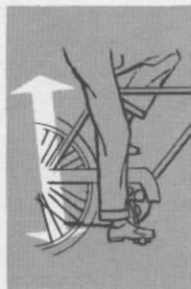
The handlebar stem should be approximately 1 inch below the saddle height. For many beginners this will be a new experience in riding. However, after a few days the position will seem most natural. Caution: be sure that at least $1\frac{3}{4}$ " of the handlebar stem is inserted into the fork.

On bicycles with drop type handlebars, the hooded brake levers have been designed to fit in the crotch of the hand between the thumb and index finger. The brake can then be easily applied with the fingers.

The lower part of the bars are used mainly when riding against the wind, climbing hills, or to change position for comfort.

pedaling

Always pedal with the ball of the foot over the center of the pedal (the pedal axle). This will give you the maximum thrust and will be easier on legs and ankles.



WHEEL REMOVAL

with quick release hubs

Several Schwinn models are equipped with quick release hubs. This facilitates quick removal or replacement of wheels, easily and without the use of wrenches or tools.

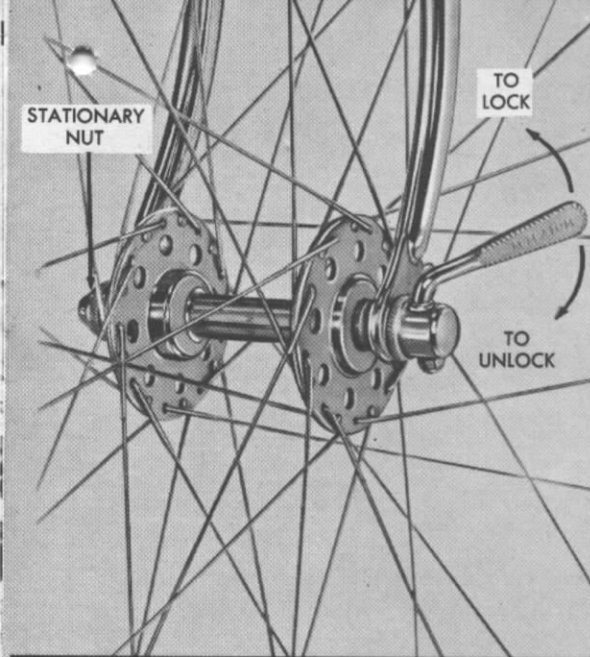
to remove wheels —

1. Trip quick release button on brake handlever (see page 14)
2. Turn hub lever 180 degrees. Wheel will now slide out. On rear wheels it is best that the derailleur be shifted onto the small rear sprocket to facilitate wheel removal (See note "Replacement of Quick Release Wheels.")

replacement of quick release wheels —

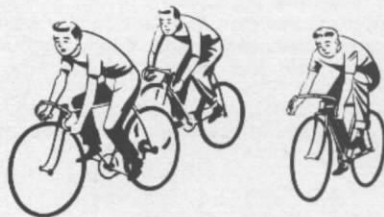
Quick release wheels are held in place by cam action. To replace wheels in bicycle—

1. Be sure brake is in released position.
2. Slide wheel into frame or fork, having lever on side of bicycle opposite the chain.
3. Turn lever 180 degrees. Lever should lock tightly so wheel will be firmly held. If too loose, or too tight, adjust as follows:
 - A. Twist lever to wide open position.
 - B. Turn stationary nut on opposite side of wheel approximately $\frac{1}{2}$ turn while holding the lever.
 - C. Turn lever to retighten wheel. Make further adjustment as required.



lubrication

The quick release hubs were lubricated and adjusted at the factory. They should require no further lubrication for at least a year unless ridden long distances or under very adverse conditions. After this time it is best to have a Schwinn Factory Trained Dealer dismantle, clean and adjust the hubs.



HOW TO ADJUST YOUR SPRINT DERAILLEUR

The following instructions apply to all models of Sprint derailleurs as used on 5-speed, 10-speed and 15-speed Schwinn models. The 15-speed Sprint derailleur does not require any different adjustment procedures.

(All derailleur adjustments should be made by a Schwinn Service dealer. In case of emergency, these instructions will help put the derailleur in working order until it can be serviced by a Schwinn dealer.)

1. to align rear sprockets and idlers

The Derailleur mechanism has been sturdily constructed. However, should it be bent in an accident or through misuse—

- A. Turn bicycle upside down and sight down a vertical line to check alignment of derailleur sprockets. They must run parallel to the hub sprockets. If they do not line up, use an adjustable wrench to gently twist the outside arm back into position.

2. tension adjustment of shifting levers

Since your Sprint derailleur is spring operated, it is necessary that tension be maintained in shifting levers. Should either front or rear derailleur have a tendency to shift while riding, tighten the shifting lever thumb screw slightly. **DO NOT TIGHTEN TOO MUCH OR SHIFTING LEVERS WILL NOT OPERATE SMOOTHLY.** (See Fig. 3)

3. adjustment of rear derailleur cable

As in all cable operated units there is likely to be a slight amount of cable stretch after a short period of time. On the Sprint this is evidenced by difficulty in shifting the rear derailleur into low gear.

To readjust, shift the unit into high gear by pushing the right shifting lever all the way forward while turning the pedals. The slack in the cable can now be taken up by turning the adjusting barrel until the cable is **ALMOST** tight. (Fig. 1) Retighten the lock nut. If all the adjustment in the barrel has been used up, unscrew the lock nut to the head of the barrel and screw the barrel down almost all the way. Now loosen the cable pivot nut and pull cable through until it is **ALMOST** tight. Retighten the cable bolt nut. (Fig. 1) Fine adjustment can now be made with the adjusting barrel as previously described.

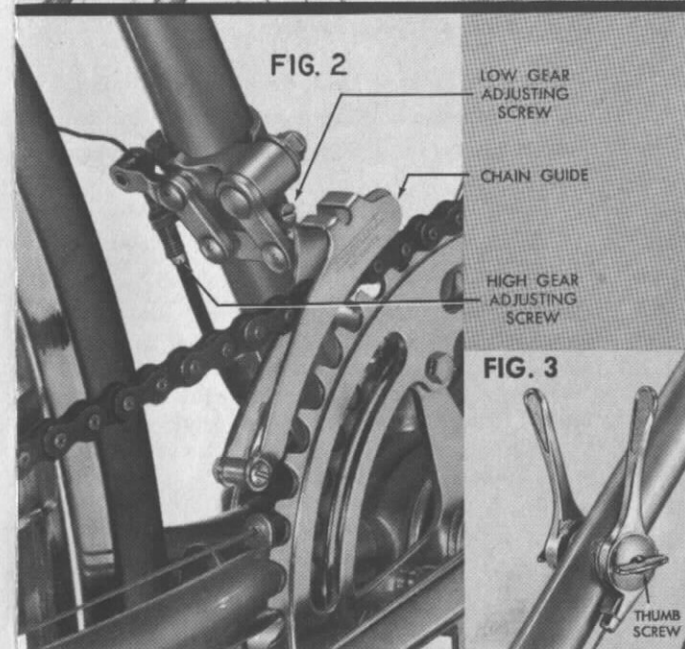
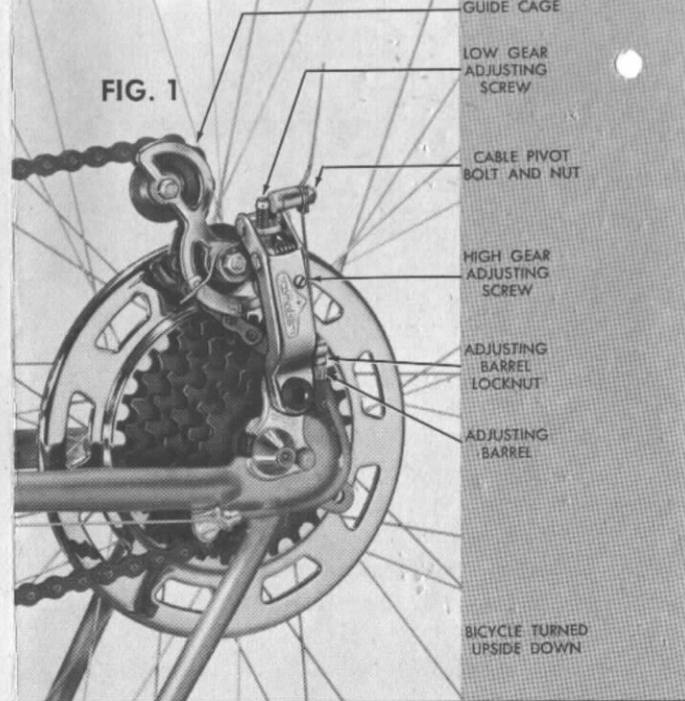
4. adjustment of front derailleur cable

The maladjustment of the front derailleur cable is indicated by the inability to shift the front changer into high gear. To adjust the cable, push the left side lever all the way forward while turning the pedals. The cable should now be almost tight. To take up slack in the cable, loosen the cable pivot bolt nut and pull the cable through as needed. Retighten the cable pivot bolt nut.

5. complete readjustment of the Sprint derailleurs

After an extended period of time or a great deal of use, it may be necessary to readjust the complete derailleur. If possible, it is best that this be done by a Schwinn Factory Trained dealer. However, if that is inconvenient, primary adjustments can be made as follows:

- A. Shift front changer to the small sprocket. If there is difficulty in doing this, or if the chain shifts over and off the sprocket, adjust the low gear adjusting screw until the chain guide is centered over the sprocket (See Fig. 2). In this position, the handle should be all the way forward and the cable should be almost taut. If the cable has stretched readjust as outlined in section 3.
- B. Shift front changer to high gear (large sprocket). If chain has a tendency to overrun the sprocket or does not quite climb on, adjust by turning high gear adjusting screw as needed. (See Fig. 2.)
- C. Shift rear derailleur to high gear (small sprocket). The cable should be almost under tension. If not, readjust as shown in section 3. In this position the guide cage should be centered over the chain and the sprocket. If adjustment is necessary, turn high gear adjusting screw as needed. (See Fig. 1.)
- D. Shift rear derailleur to low gear (large sprocket). If chain has a tendency to overrun onto the spokes or does not quite climb onto the sprocket, turn low gear adjusting screw as needed. (See Fig. 1.)



HOW TO ADJUST CAMPAGNOLO DERAILLEURS

1. to align rear sprockets and idlers (fig. 1)

If mechanism has been knocked out of alignment, this can be checked by sighting a line down the idler and jockey gears and the rear sprockets. If they are twisted or out of line, use an adjustable wrench over the outside of the heavy casting (where the pivots go through) and twist gently back into position.

2. to tighten shifting levers

If gears try to shift by themselves, this may be caused by loose shifting levers. Tighten the wing nuts at the center of each lever enough to prevent slipping.

3. to adjust cables

Cables normally stretch after use and may require adjustment. When either shifting lever is all the way forward (chain on small front sprocket and small rear sprocket), the cable should be almost taut. If it isn't, loosen the cable anchor screw and pull the cable tighter. Then retighten the anchor screw. (See Fig. 1 and 2)

(All derailleur adjustments should be made by a Schwinn Service Dealer. In case of emergency, these instructions will help put the derailleur in working order until it can be fully serviced by a Schwinn Dealer.)

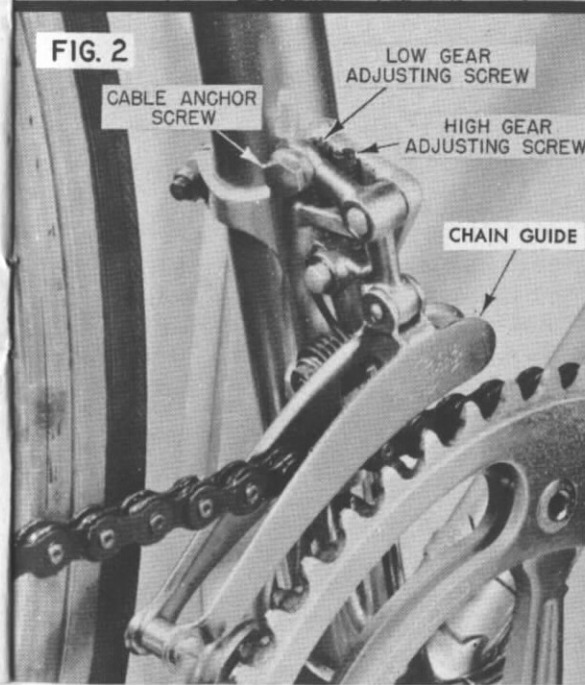
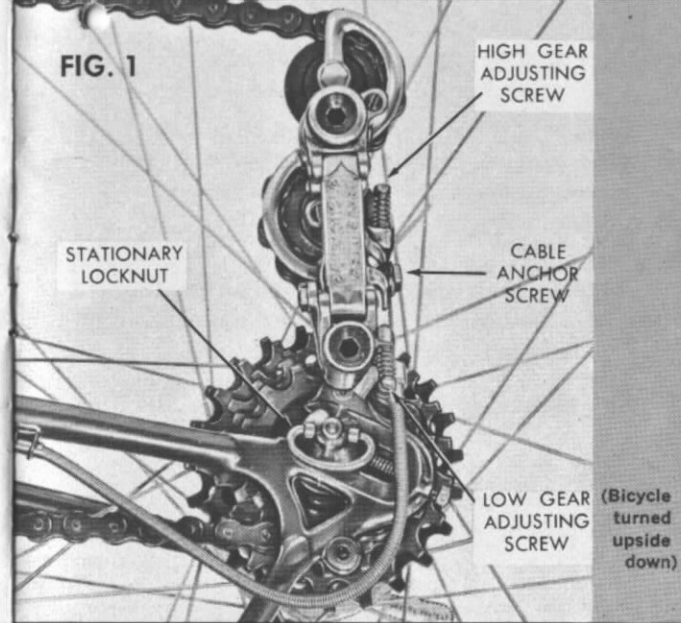
4. to readjust complete gearshift mechanism

A. Shift front changer to the small sprocket. If there is difficulty in doing this, or if the chain shifts over and off the sprocket, adjust the low gear adjusting screw until the chain guide is centered over the sprocket (See Fig. 2). In this position, the handle should be all the way forward and the cable should be almost taut. If the cable has stretched readjust as outlined in section 3.

B. Shift front changer to high gear (large sprocket). If chain has a tendency to overrun the sprocket or does not quite climb on, adjust by turning high gear adjusting screw as needed. (See Fig. 2.)

C. Shift rear derailleur to high gear (small sprocket). The cable should be almost under tension. If not, readjust as shown in section 3. In this position the guide cage should be centered over the chain and the sprocket. If adjustment is necessary turn high gear adjusting screw as needed. (See Fig. 1.)

D. Shift rear derailleur to low gear (large sprocket) If chain has a tendency to overrun onto the spokes or does not quite climb onto the sprocket, turn low gear adjusting screw as needed. (See Fig. 1.)

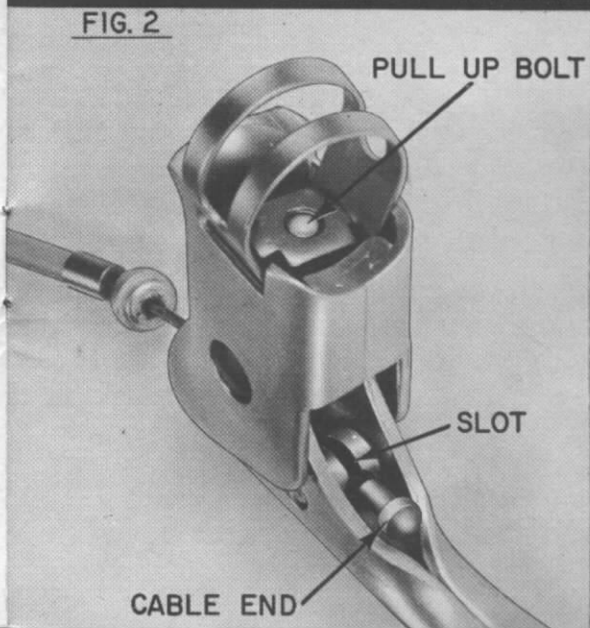
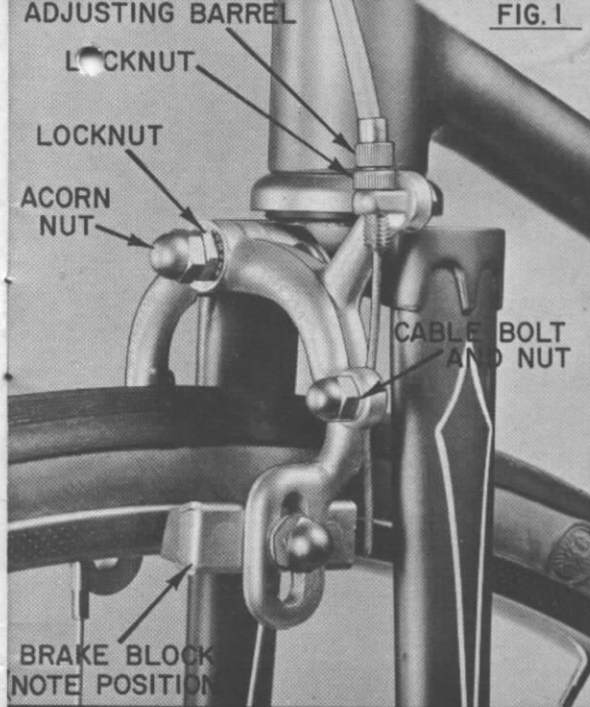


CALIPER BRAKES

The caliper brakes on your Schwinn bicycle were designed for quick, positive, safe stopping. Caliper brakes are positive and easy to adjust and keep in good repair.

1. Check the pivot nut periodically (located behind the front fork opposite the acorn nut)—make sure it is tight. (See Fig. 1.)
2. Check alignment of brake blocks. The brake shoes should be parallel to the side of the rim. Also, be sure brake block holder nut is tight. (See Fig. 1.)
3. Lubricate the pivot bolt with a light machine oil between the brake arms every two weeks. (See Fig. 1.)
4. Lubricate the cable with a few drops of light machine oil inserted into the cable casing.
5. Keep hand-lever clamps tight so assembly is securely fastened to handlebar. (See Fig. 2.)

Adjustment of the caliper brakes can be made by loosening the barrel lock nut and unscrewing the barrel several turns (see Fig. 1). The lock nut should then be securely tightened. If there is not enough take-up left on the brake barrel, further adjustment can be obtained by screwing the barrel in all the way, loosening the cable bolt and pulling the cable through the cable stud until the brake shoes are approximately $\frac{1}{8}$ " from the rim on each side. Lock the cable bolt securely after moving the cable.



QUICK RELEASE BRAKE LEVERS

On drop handlebar models the hand brake levers have a built-in quick release mechanism. This feature makes possible the removal of the wheels without scuffing the tires on the brake shoes or taking the brake out of adjustment. Before removing the wheel, press the red button on the hand lever (see Fig. 2) allowing the brake arms to open. After replacing the wheel grip the handlever, as in braking in order to place the handlever and brake arms in normal operating position.

CENTER PULL BRAKES

The center pull brakes on Schwinn bicycles are the newest and most efficient brake design available in the world. They are easy to keep in adjustment and will give long life with a minimum of care.

It is vitally important however, that they be regularly serviced and kept in proper working order for safety and dependability.

proper maintenance

1. Check all bolts and nuts for tightness, including those holding the brake and brake lever to the bicycle.
2. Check the alignment of the brake shoes and their wear. The shoes should be parallel to the side of the rim. Be sure the brake holder nut is tight.
3. Lubricate the pivot parts and inner cables of the brakes with a light oil every few weeks. Wipe off excess oil. Points of lubrication are shown in Fig. 1.
4. Keep hand levers tight.

to adjust brakes

1. Turn cable adjusting barrel as needed. Be sure to tighten lock nut after making the adjustment. Brakes are properly adjusted when the brake blocks are approximately $\frac{1}{8}$ " from the rim with the brake in the off position.
Note: On quick release brakes be sure the lever is in a raised position before making the adjustment.
2. If, because of wear or cable stretch it is not possible to adjust brakes sufficiently with the cable adjusting barrel —
 - A. Unscrew lock all the way on the adjusting barrel.
 - B. Turn adjusting barrel all the way down.
 - C. Loosen cable bolt nut and pull cable taut as needed. Retighten cable bolt nut and adjust as described above.

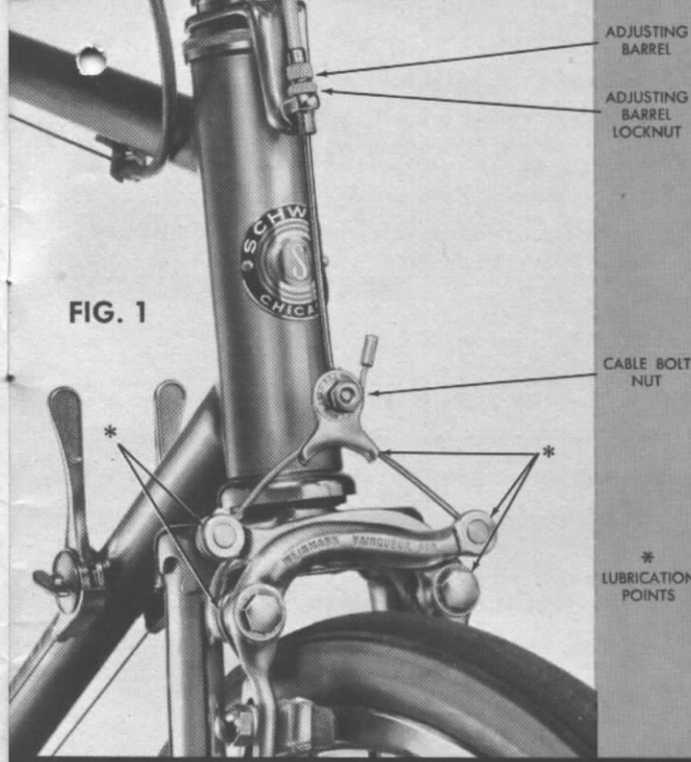


FIG. 1

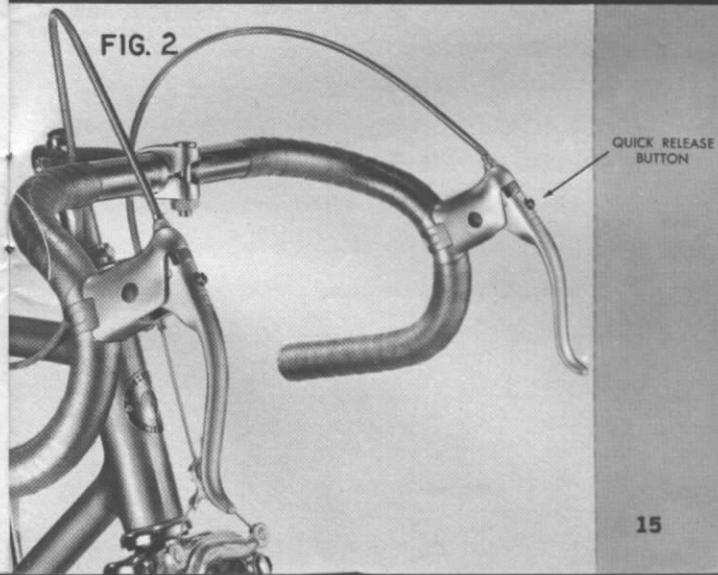


FIG. 2

LUBRICATION AND MAINTENANCE

1. keep your bicycle clean. Only a few minutes are required to wipe off dirt, oil or moisture. Give all plated or painted surfaces a regular coat of wax.

2. lubrication. Use light oil frequently but sparingly on chain, sprockets and cables. Wipe off excess oil.

3. keep bearings adjusted. Head bearings, crank bearings and front and rear hubs should be checked regularly. They should be just loose enough to turn easily, but too much play will cause excessive wear. These adjustments should be made by your Authorized Schwinn Dealer.

4. derailleur gears and chain should be kept free of grit or sand. Wipe off frequently and oil lightly.

Proper care of your Schwinn bicycle will not only make it last longer, but will also make it ride easier and look better. Here are a few pointers on maintenance:

5. saddle care: If you use a racing saddle, it may seem hard and uncomfortable until it is "broken in." It can be softened quicker by rubbing in neatsfoot oil on the underside of the leather top, but watch out for clothing stains until the oil dries in.

6. hang your bicycle on hooks in your garage, if you want to keep it out of the way and protect it from bumps.

7. have your bicycle serviced by your Authorized Schwinn Dealer once or twice each year to tighten spokes, true wheels, grease and adjust all bearings, brake and derailleur controls, etc. As with cars, regular service is well worth its cost.



PLAY IT SAFE!

*Read this owner's manual
before you ride!*



IMPORTANT!

1. DO NOT MOVE GEARSHIFT LEVERS

except when wheels and cranks are turning. The chain can be shifted from one sprocket to another only when it is moving. Moving gearshift levers by force when chain and sprockets are stationary may stretch or break cables or damage shifting mechanism.

2. DO NOT SIT ON THIS BICYCLE

unless tires are fully inflated as recommended on page 1 in this booklet. High pressure tires and racing wheels are easily damaged when tires are under-inflated.