

10-Speed Bicycle



JOHN DEERE

OPERATORS MANUAL

10-Speed
Bicycle

OMM64648 H3 English

John Deere
Lawn & Grounds Care Division
OMM64648 H3

LITHO IN U.S.A.
ENGLISH





Safety Precautions

 **Improper use or maintenance of your New John Deere 10-Speed Bicycle can result in injury. To reduce this possibility, follow these safety precautions.**

Preparation

Check your state and local regulations for proper bicycling procedures and safety equipment. Know the local regulations pertaining to street and sidewalk use.

Adjust bicycle to properly fit whoever is going to ride it. Be sure at least 2-1/2 inches of seat post and handlebar stem remain inside frame. Observe "MINIMUM INSERT" line. See pages 3 and 4.

Avoid wearing clothing that could become tangled in chains, spokes, or other moving parts. Wear light-colored or reflective clothing at night.

Operation

Never carry passengers unless they are small children in seats designed for that purpose. Carry packages only in racks, baskets, or carriers designed for that purpose. Avoid loss of control due to obstructed vision or poor balance.

Observe and obey all traffic regulations including traffic lights, stop signs, one-way streets, etc.

Keep to the right. Always ride with traffic. Never ride facing traffic. However, avoid striking pedal on curb or dropping into holes on shoulder of road or into sewer gratings.

When riding in the right-hand lane be especially alert for right-turning motor vehicles.

Ride defensively. Auto drivers may fail to recognize bicycles or fail to yield the right-of-way to bicycles.

Ride in a straight line and in single file. Do not weave in or out, swerve, race or stunt in traffic.

Be careful at all crosswalks and intersections - signal, slow down, look both ways, then proceed with caution. See page 8.

Always use the proper hand signals. See page 9.

Always give pedestrians the right-of-way.

Do not grab or hold onto other moving vehicles while riding a bicycle.

Keep both hands on the handlebars except when giving hand signals. Return hand to handlebars as soon thereafter as possible.

Avoid heavy traffic. Observe and obey all restrictions pertaining to the use of bicycles.

Be aware of road surface conditions - loose gravel, rocky, wet, or slippery surfaces are dangerous.

Always apply the rear wheel brake first. Never stop suddenly using the front wheel brake only.

Do not ride at dusk or night, or at any time visibility is limited, without adequate lights and reflective devices so you can see ahead and be seen by operators of other vehicles. Check local regulations for required safety equipment. Various safety lights and devices are available from your John Deere dealer.

Maintenance

Keep your bicycle in good repair so it performs efficiently and safely. Be sure front wheel is securely fastened in fork, and that all axle, handlebar, crank and saddle nuts are tightened. Never ride a bicycle in need of repair.

Keep brakes adjusted so you can stop safely. Frequently check brake shoes for wear. Keep wheel rims and brake shoes free of oil and wax. Be especially careful when brake shoes are wet.

Check chain condition and adjustment frequently.

Keep reflectors in place and clean at all times.

Do not overinflate tires. A blow-out may occur if you strike an obstruction.



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To the Purchaser

Thank you for buying a John Deere Bicycle. Because we want you to be satisfied with your purchase, we have written this operator's manual to help you keep your bicycle in top running condition. In this way, you'll have more fun and fewer problems.

Before riding your new bicycle, read this manual. Pay particular attention to the safety precautions throughout the manual.

⚠ This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and read carefully the message that follows.

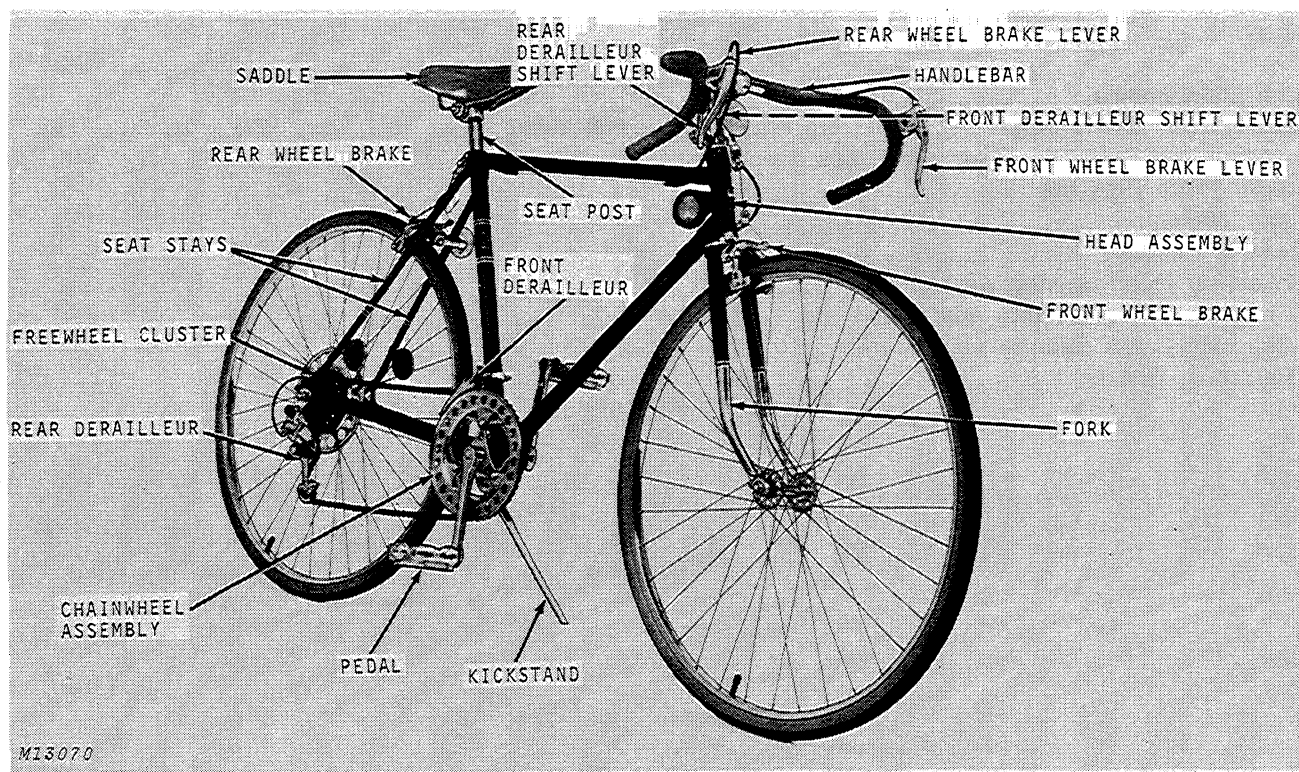
Check and observe all state and local regulations pertaining to bicycle operation. Respect the rights of

pedestrians and motor vehicles. Don't spoil a fine sport for others.

Right-hand (R.H.) and left-hand (L.H.) references used in this manual are determined by standing at the rear of the bicycle and facing the direction of forward travel.

When in need of parts or major service, see your John Deere Dealer. Be prepared to give him your bicycle serial number.

Your bicycle serial number is stamped on the underneath side of the crank housing. Record this serial number on page 25 to aid in finding your bicycle if it is stolen and to assist you in securing proper parts for service.



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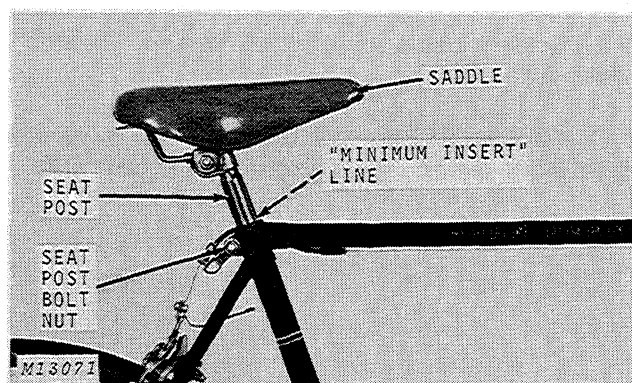
John Deere 10-Speed Bicycle



Fitting Bicycle To Rider

CAUTION: Do not permit friends to ride your bicycle if they cannot comfortably reach the handlebars . . . if their feet cannot reach the pedals in their lowest position . . . or if they cannot comfortably straddle the top tube with both feet on the ground.

ADJUSTING SADDLE HEIGHT

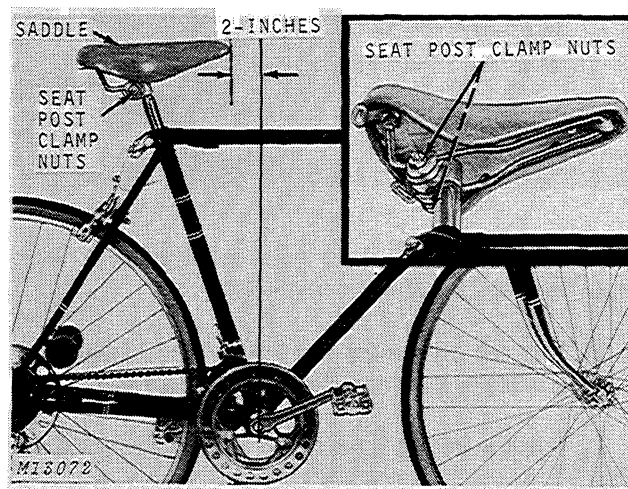


1. Loosen nut on seat post bolt.
2. Remove your right shoe and straddle bicycle.
3. Place heel on right-hand pedal (pedal in lowest position).
4. Straighten right leg completely.
5. Raise saddle until it rests against your crotch.

CAUTION: Do not pull seat post out beyond "MINIMUM INSERT" line stamped in seat post (2-1/2 inches from lower end).

6. Tighten nut on seat post bolt and test saddle position.

ADJUSTING SADDLE FORWARD OR REARWARD (ALSO SADDLE ANGLE)

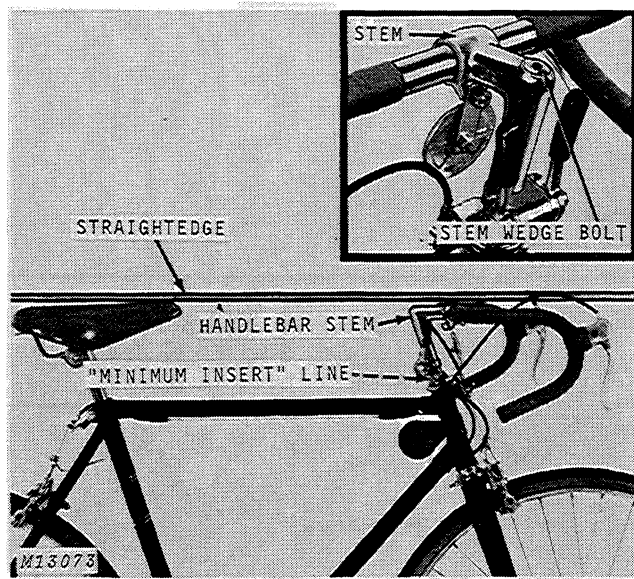


1. Loosen seat post clamp nuts.
2. Slide saddle forward or rearward until a comfortable position is obtained.

NOTE: The most comfortable riding position is to have the front tip of the saddle a minimum of 2 inches behind the center of the crank axle.

3. Position saddle parallel with ground or tip front slightly upward.
4. Tighten seat post clamp nuts.

ADJUSTING HANDLEBAR HEIGHT

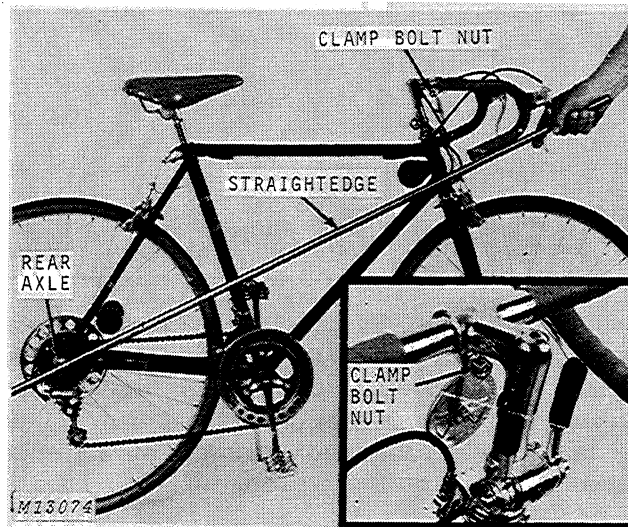


1. Loosen stem wedge bolt two full turns using hex. wrench furnished with bicycle.
2. Tap top of wedge bolt lightly with a mallet or wooden block to loosen wedge inside head.
3. Position top of stem about level with top of saddle.

CAUTION: Do not pull stem out beyond "MINIMUM INSERT" line stamped in stem (2-1/2 inches from lower end).

4. Align stem with front wheel and tighten stem wedge bolt.

ADJUSTING HANDLEBAR POSITION

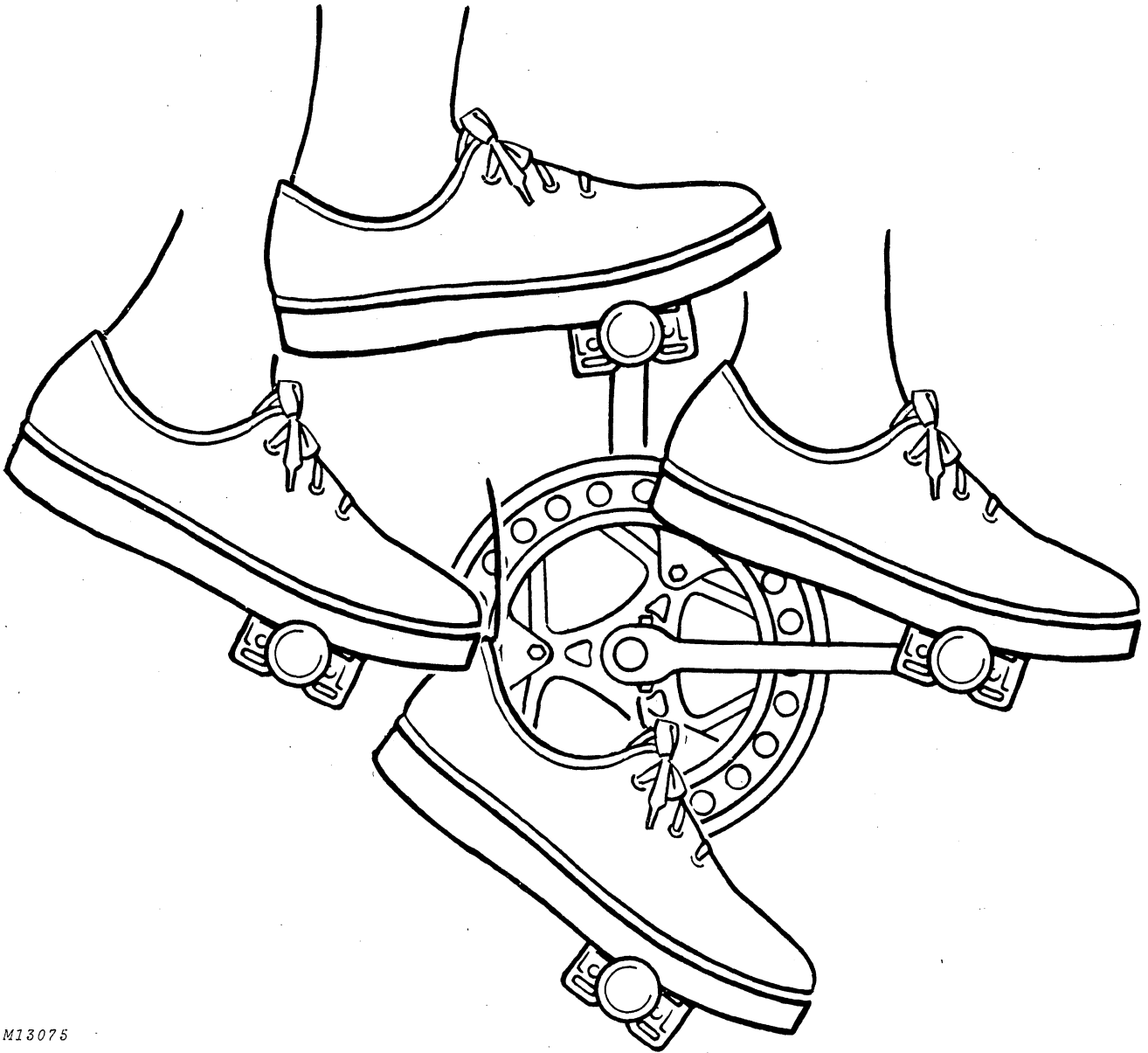


1. Loosen clamp bolt nut at front of handlebar stem (see inset).
2. Pivot handlebars until bottom ends of handlebars point directly at the center of the rear axle.
3. Tighten clamp bolt nut securely.



Riding Instructions

ANKLING TECHNIQUE



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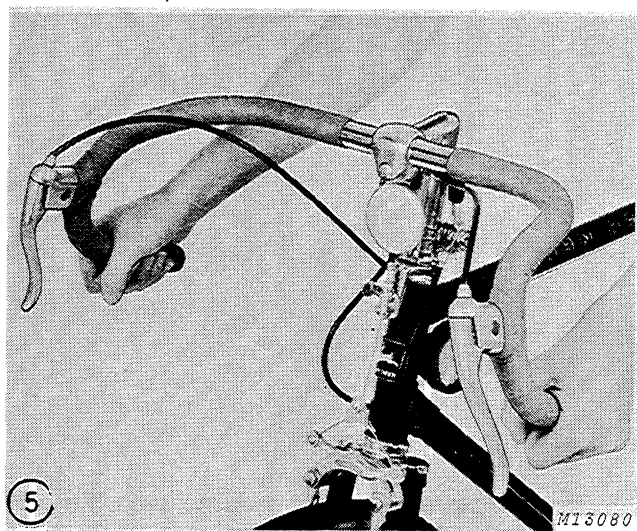
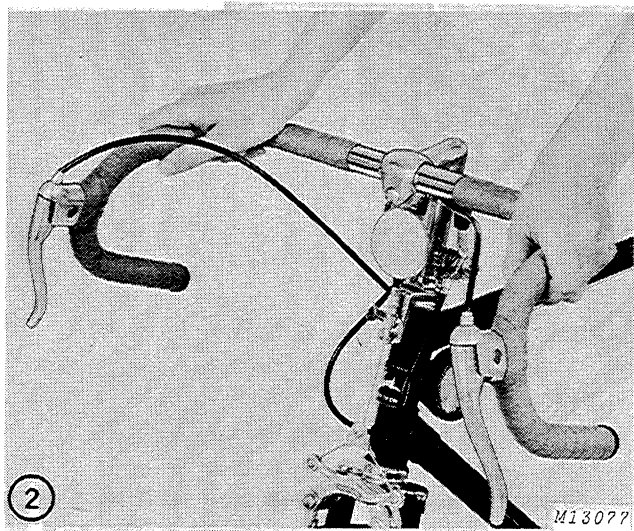
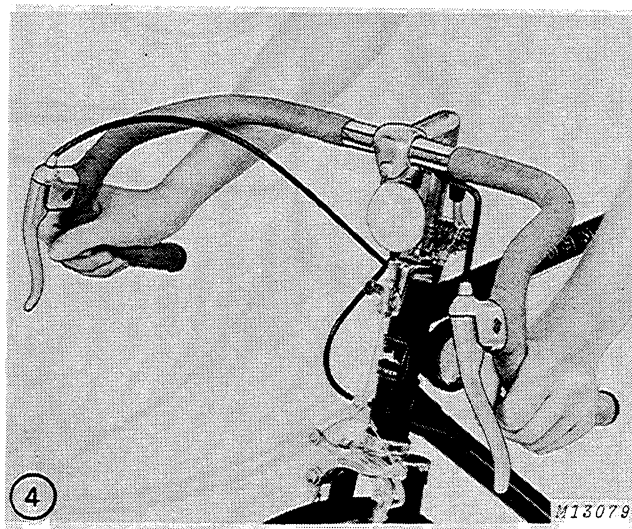
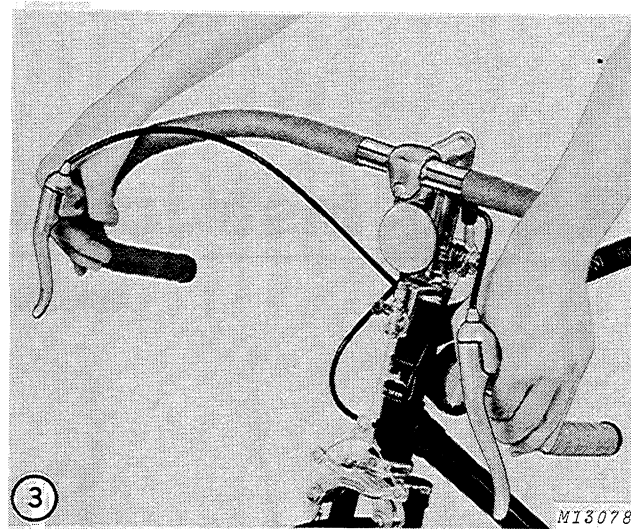
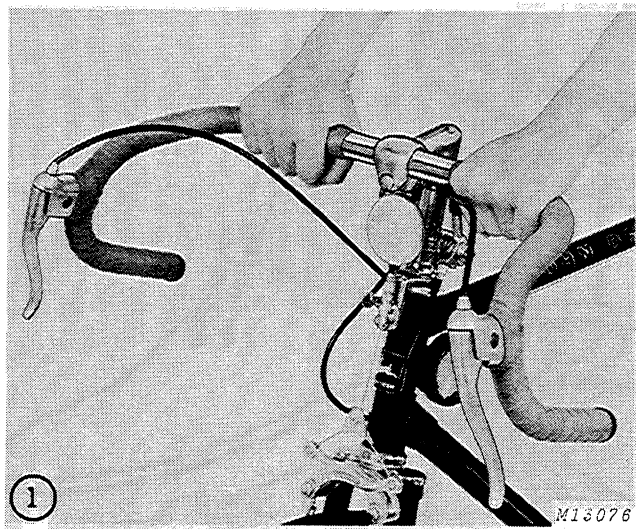
The ankleing technique of pedaling uses the ankle muscles to maintain constant pressure on the pedal. The ball of the foot is always directly over the pedal axle in all positions as shown above.

Choose a quiet **traffic free** area such as a vacant parking lot at a city park or public school to watch the movement of your feet and practice the ankleing technique.

POSITIONING YOUR HANDS

The five different hand positions shown on this page give maximum comfort for each type of riding as follows:

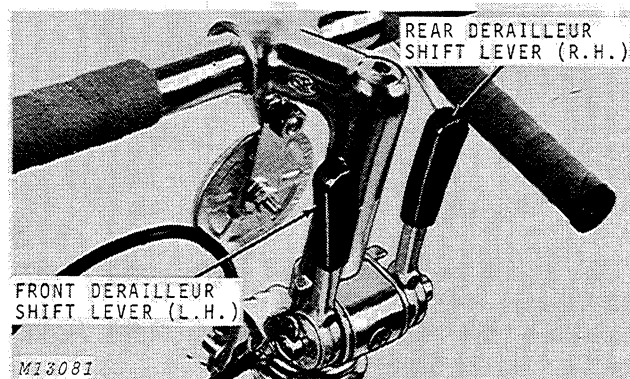
1. Easy riding on level road against no wind.
2. Easy riding on level road with quick reach of brake lever.
3. Resting position on downhill ride with quick reach of brake lever.
4. Pedaling position against a slight wind or incline.
5. Hard pedaling position for steep inclines or head winds.



SELECTING YOUR SPEED

Your 10-speed bicycle is equipped with two sprockets on the crank assembly (chainwheel) and five sprockets on the rear wheel (freewheel).

The chain is shifted from one sprocket to another by a mechanism called a derailleur. There are front and rear derailleurs.



Two shift levers are used to control the two individual derailleurs. The left-hand lever controls the front derailleur; the right-hand lever, the rear derailleur.

To change speeds, pedal lightly and move the shift levers either forward or rearward. Moving the left-hand lever causes the front derailleur to pick up the chain and move it to the other sprocket. Moving the right-hand lever causes the rear derailleur to pick up the chain and move it to the next size sprocket.

Ten different speeds can be obtained by shifting into various combinations of front and rear sprockets. See the chart at right.

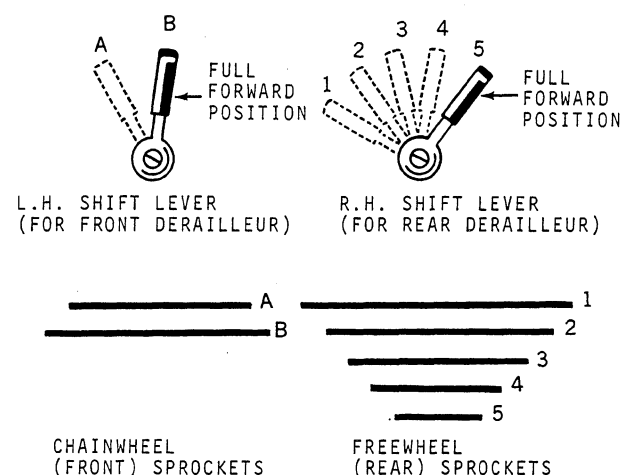
Use the lower speed combinations for easiest pedaling and climbing hills. Use the mid-range combinations for normal pedaling on level ground and when learning to ride. Use the higher speed combinations for fastest travel on level ground. Pedaling will be more difficult.

When shifting up or down, move the shift levers only one or two steps until you have become accustomed to changing speeds. In your early rides, experiment to see how moving the shift levers varies your pedaling effort and bicycle speed. After a short time, you will "get the feel" of shifting and it will come naturally.

Chain noise while shifting is caused by the chain links striking the derailleur cage. After making a gear change, it may be necessary to move the shift levers slightly to allow the chain to run freely and quietly. This is especially true when shifting through several gears at one time.

IMPORTANT: The following precautions will prevent damage to the bicycle and reduce the amount of adjustment required:

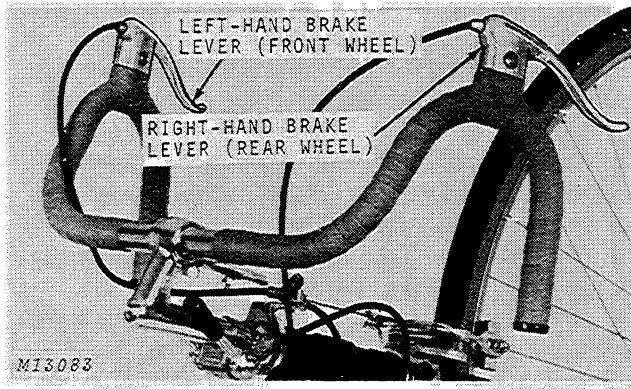
1. Do not pedal under full power when shifting. Maintain pedaling motion, but relieve pressure against the pedals.
2. Never move the shift lever unless the crank and wheels are rotating. The chain cannot move from one sprocket to another unless it is in motion.
3. Do not pedal backwards, because this could unseat the chain from the sprockets.
4. Do not drop or rest your bicycle on the right-hand side, because this could damage the derailleur or knock it out of adjustment. Keep the chain and derailleur clean.



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Speed	Shift Lever and Chain Positions	Gear Ratio	Inches of Travel Per One Crank Revolution
1 Low	A-1	38.6	121
2	A-2	45.1	142
3	B-1	48.3	152
4	A-3	54.0	170
5 Normal	B-2	56.2	176
6	A-4	63.5	199
7	B-3	67.5	212
8	A-5	77.2	242
9	B-4	79.4	249
10 High	B-5	96.4	303

STOPPING YOUR BICYCLE



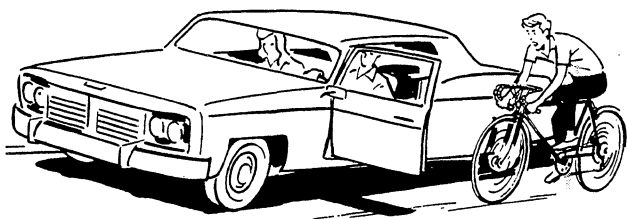
1. Gradually squeeze right-hand (rear wheel) brake lever.
2. Gradually apply same pressure to left-hand (front wheel) brake lever.
3. Lower feet to ground.

CAUTION: Never stop suddenly using only the front brake. Keep oil and wax from brake shoes and rims. Be extra careful in rainy weather. Wet rims reduce braking efficiency.

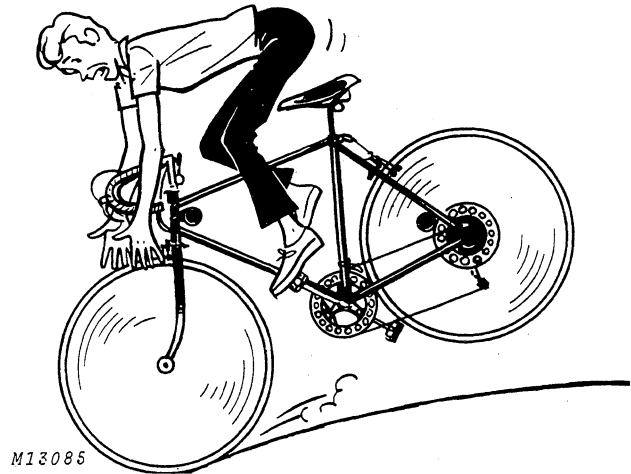
RIDING YOUR BICYCLE

Think about these safety rules before riding your bicycle.

Have your bicycle inspected annually and purchase proper licenses as required by your community. This aids in finding your bicycle if it is stolen.



Avoid speeding. Fast travel may seem fun, but it can be dangerous. You can't predict when a car might back out of a driveway . . . when a car door might open in front of you . . . or when a car might force you from the road.



Do not use excessive speed when going down hills. Always keep your bicycle under control. Apply rear wheel brake first; then, front wheel brake. Apply pressure evenly on both brake levers.

Always slow down when approaching a curve or corner. Avoid applying brakes when turning sharp curves. Skids could result, causing you to spill.

Be especially careful when riding on deep loose gravel, dirt, rock, rutted or wet surfaces. Stopping and turning are much more difficult under these conditions.

Keep tires in good shape. Check tire pressure frequently. Proper tire pressure is found on the side of your tires. Also see page 12.

Stunting can result in falls that could lead to serious injury. Do not hit curbs at high speeds, stand or lie on the saddle, or perform "stunts" of any kind.

Always keep all nuts and bolts tight, chains properly tensioned, and your bicycle properly lubricated. A loose saddle, wheel, chain or handlebars could result in a serious accident.

Learn to ride straight at all times . . . do not weave in and out. Practice riding in a straight line. If you weave, motorists cannot predict what you will do next.

Never ride on busy streets unless adequate space is available for both cars and bicycles.

Do not cut diagonally across busy intersections. Always stop at the corner and check for traffic behind you and across the intersection. Walk the bicycle across the intersection, if necessary.

Watch out for dogs or other pets that could cause you to lose control.

Do not ride in areas where hazards such as glass, nails or sharp stones are known to be. Do not jump curbs or ride double. Tires are not designed to take such abuse. Keep wheels properly aligned to prevent wear on the sidewalls.

Never sit on your bicycle nor ride it when tires are under-inflated. The shape of a tire should not change noticeably when mounting or dismounting from the bicycle.

Read and understand all safety precautions on the inside front cover of this manual.

USING CORRECT HAND SIGNALS

Know and use the proper hand signals. Indicate to pedestrians and operators of cars, trucks, and other bicycles what you intend to do next. Never turn or stop without signaling. As soon as the hand signal is completed, return your hand to the handlebars to insure proper control.

The most commonly used hand signals are illustrated at right. However, check your state traffic rules to be sure they do not differ.

Making Right Turns



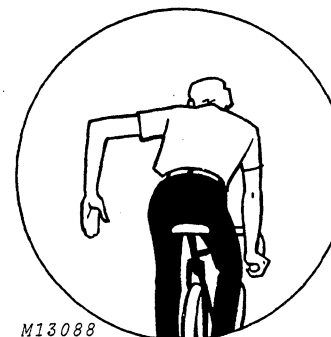
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Making Left Turns



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Slowing or Stopping

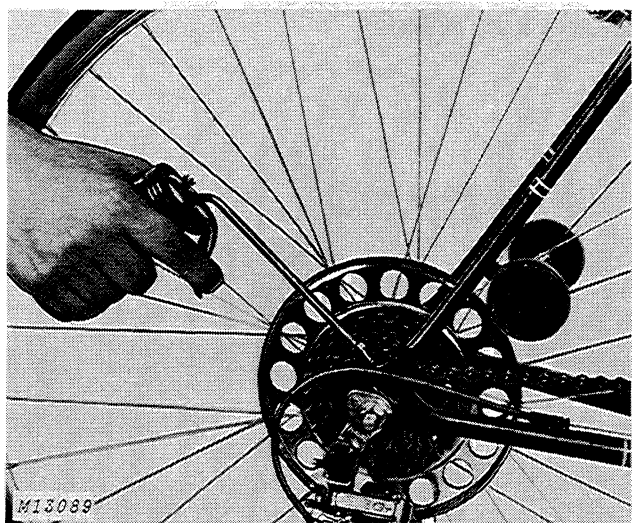


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Lubrication

LUBRICATING CHAIN



Every 30 days lubricate the chain as follows:

1. Lift rear of bicycle up and rotate crank slowly.
2. Apply SAE 30 or 10W-40 weight oil to each link of the chain.
3. Wipe off excess oil to prevent dirt and oil-gum buildup.

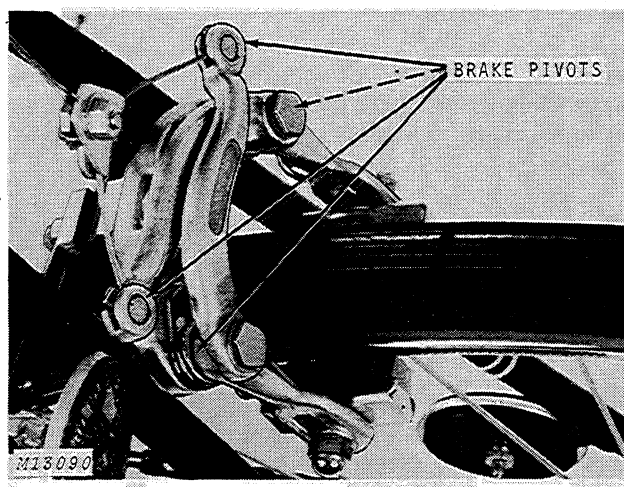
CAUTION: Do not get oil on brake shoes or on braking surface of rim.

If chain is excessively dirty, follow procedure for servicing chain on page 17.

LUBRICATING BEARINGS

Bearings in the head, wheels, crank and pedals are lubricated with grease. These components must be disassembled for proper cleaning and lubrication. Because disassembly requires special tools and knowledge, it is recommended that this be done annually by your John Deere dealer.

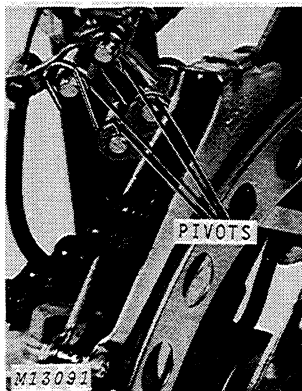
LUBRICATING BRAKE PIVOTS



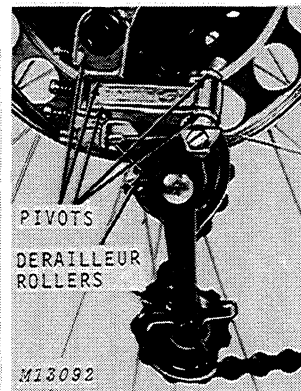
Rear Wheel Brake Illustrated

Every 30 days apply a drop of SAE 30 or 10W-40 oil on the front and rear wheel brake pivots. Do not get oil on brake shoes or rim.

LUBRICATING DERAILLEUR PIVOTS



Front Derailleur



Rear Derailleur

Lubricate front and rear derailleur pivot points and rollers with SAE 30 or 10W-40 oil. Clean derailleur rollers if necessary (see page 17).



General Maintenance

TREATING TIRES WITH RESPECT

One of your major items of expense will be tires if you do not care for them properly.

To obtain maximum life from your tires:

1. Do not ride in areas where glass, nails or sharp stones are known to be.
2. Do not jump curbs or ride double.
3. Keep wheels properly aligned to prevent wear on sidewalls.
4. Do not use screwdrivers or other sharp tools when repairing tires.
5. Use care when inflating tires to prevent blow-outs.
6. Do not use good tubes in broken, cut or severely punctured tires.
7. Always seat tires properly to prevent pinching tubes.
8. Make sure valve is straight in hole of rim.
9. Do not let bicycle rest long periods on the tires. To store bicycle, hang it up or turn it upside down.

NOTE: When storing bicycle upside down, block up handlebars to prevent damage to brake cables and levers.

10. Never sit on bicycle nor ride it when tires are underinflated.

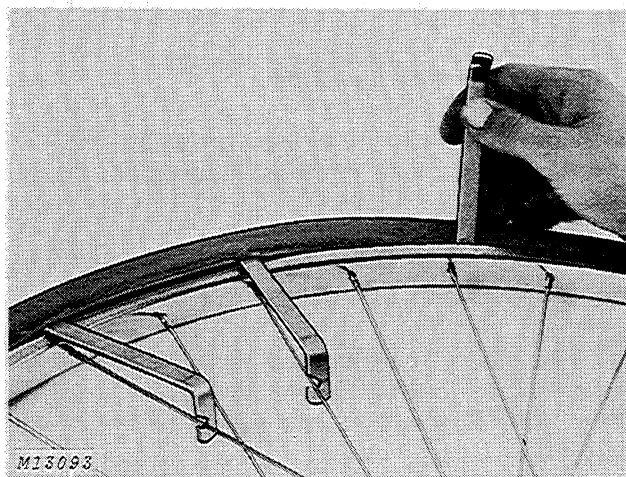
CHANGING AND REPAIRING TIRES AND TUBES

Your new 10-speed bicycle is equipped with clincher-type tires with separate inner tubes. Should you have a flat tire:

1. Remove the wheel from the bicycle.

NOTE: If rear wheel is to be removed, shift chain to small freewheel sprocket and pull derailleur roller cage forward to remove chain from derailleur.

2. Depress valve core in valve stem to completely deflate tire. Loosen core to release any remaining air pressure.



3. Remove tire from wheel using only special tire tools available from your dealer. Start opposite valve stem and carefully roll tire off rim.
4. Patch tube if possible. Follow patch manufacturer's instructions. Otherwise, replace tube with a new one.
5. Check tire carefully. Be sure no nails, thumb tacks, pieces of glass or other items remain in tire to cause repeated tube failure. If tire is severely cut, replace it.
6. Check wheel rim for sharp edges.
7. Be sure rubber rim strip covers spoke heads.

CHANGING AND REPAIRING TIRES AND TUBES—Continued

8. Install tube in tire.

NOTE: Dust tube with talcum powder to prevent tube from being pinched or twisted.

9. Tighten valve core in valve stem.
10. Inflate tube until it seeks shape of tire. Do not over-inflate.
11. Install valve stem in rim and mount tire on rim.

IMPORTANT: Use only your hands when installing tires. Do not use screwdrivers or other sharp tools. These could cut bead or puncture tube.

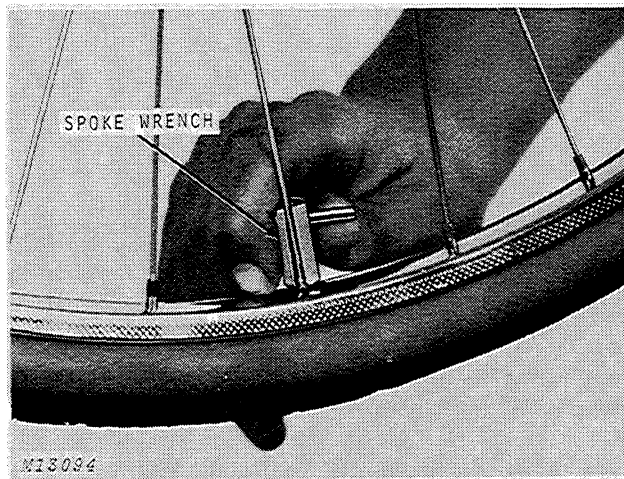
12. When tire is in place, carefully inflate tube to 12 psi.
13. Check to see that tire and tube are properly positioned. Tube should not be pinched. Valve stem should be perpendicular (90-degree angle) to rim.
14. Partially deflate tube so it seeks its own position.
15. Reinflate tube to 12 psi.
16. Again check valve stem position and tire mounting. Inflate tube to 60 psi (pounds per square inch).
17. Install wheel on bicycle. Be sure wheel is true and properly aligned in frame.

If rear wheel was removed, pull derailleur roller cage forward, guide chain around lower derailleur roller, over upper roller and onto small freewheel sprocket.

CHECKING TIRE PRESSURE

Check tire pressure each week because inner tubes lose air slowly. Use a tire gauge and inflate front and rear 27 x 1-1/4-inch tires to 60 psi (pounds per square inch).

TRUING WHEELS



If wheel rim appears out of true, that is, slightly twisted or sprung, bring it back into true by adjusting the spokes. Adjust spokes and true wheels as follows:

1. Turn bicycle upside down on its saddle and handlebars.

NOTE: Be careful not to scratch chrome or damage saddle. Block up handlebars to prevent damage to brake cables and levers.

2. Rotate wheel and check it for wobble as it rotates through caliper brake.

3. If rim is twisted slightly to the left, tighten spoke nipples on the right-hand side of wheel. This shortens spokes and pulls rim to the right.

4. If rim is twisted slightly to the right, tighten spoke nipples on the left-hand side of wheel. To true wheel, you may have to loosen spoke nipples slightly on the side of the wheel opposite spokes being tightened.

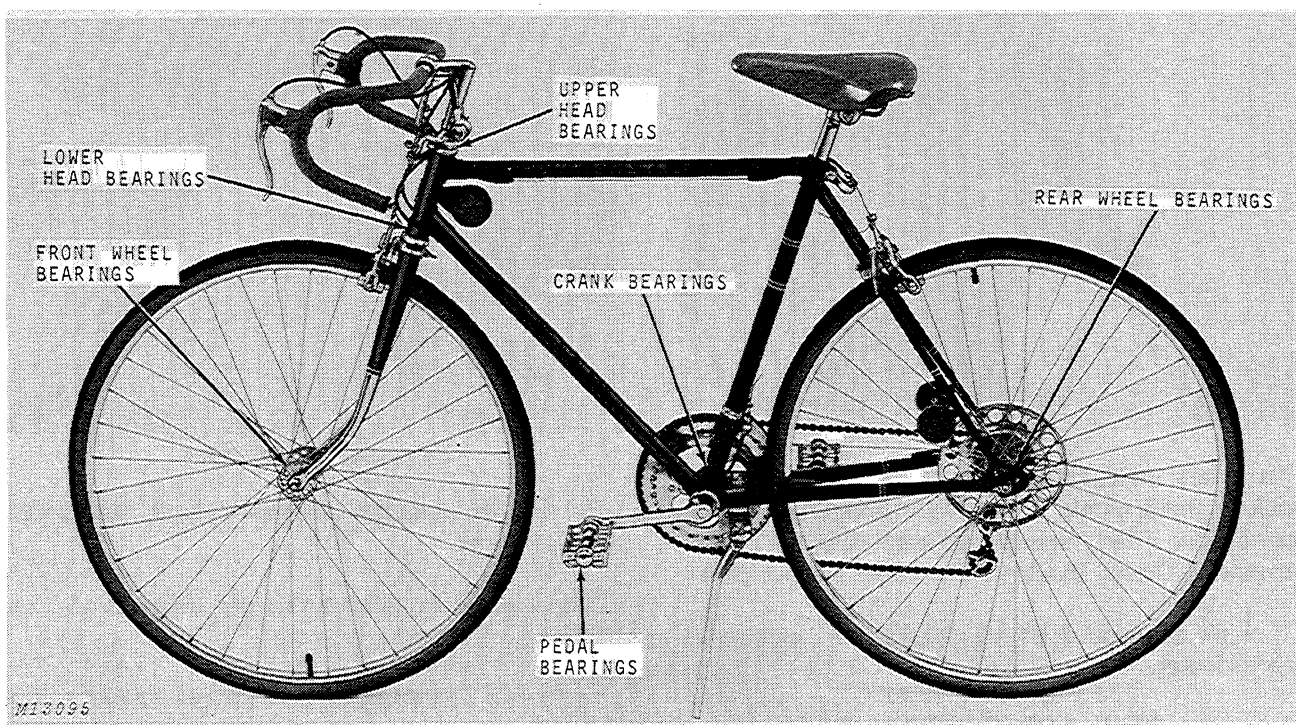
NOTE: See your John Deere dealer for an inexpensive spoke wrench. Do not use pliers.

5. Turn spoke nipples onto spokes to tighten . . . off spokes to loosen.

NOTE: Turn spoke nipples no more than one complete turn at a time. Several spokes may have to be adjusted to bring wheel back into true.

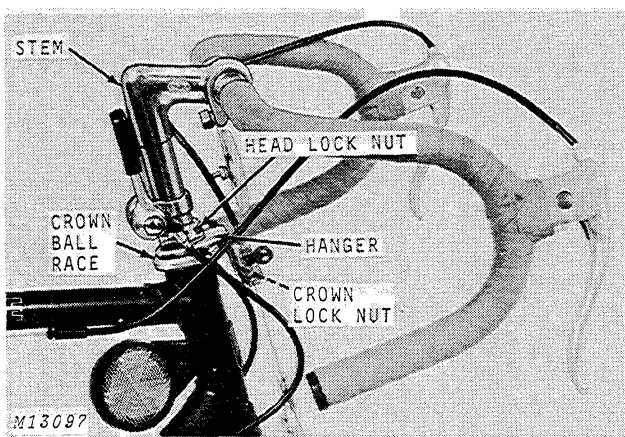
If wheel is severely out of line from hitting a curb or other obstruction, see your John Deere dealer.

ADJUSTING BEARINGS



John Deere 10-Speed Bicycles are equipped with two sets of bearings in the head, lower bracket (crank assembly), each pedal and in each wheel.

Checking Head Bearing Adjustment



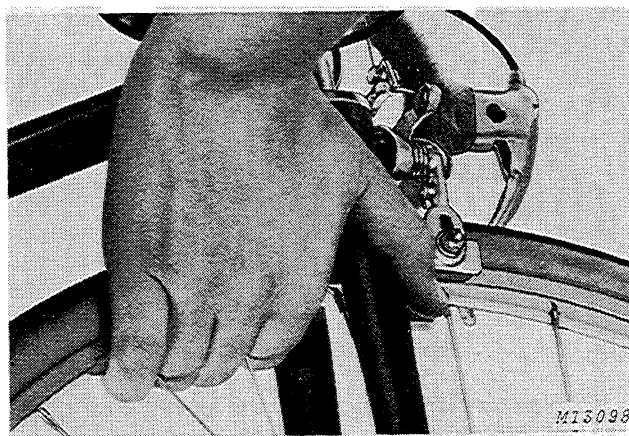
To check head bearing adjustment, lift up on handlebars. There should be no vertical or horizontal play in either the handlebar stem or the fork within the frame. Handlebars should turn freely without binding or excessive play.

To adjust head bearing:

1. Disconnect front caliper brake cable.
2. Remove head lock nut and raise hanger.

3. Loosen crown lock nut.
4. Tighten or loosen crown ball race until handlebar stem turns freely without play.
5. Tighten crown lock nut.
6. Lower hanger and tighten head lock nut.
7. Install front caliper brake cable as shown on page 21.

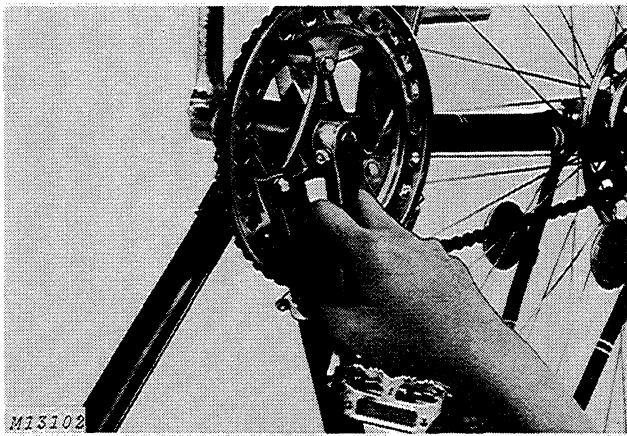
Checking Wheel Bearing Adjustment



To check wheel bearing adjustment, lift wheel off ground. There should be little horizontal movement of wheel at rim . . . none at hub. Wheel should turn easily without binding or wobbling.

To adjust wheel bearing follow instructions on page 19.

Checking Crank Bearing Adjustment

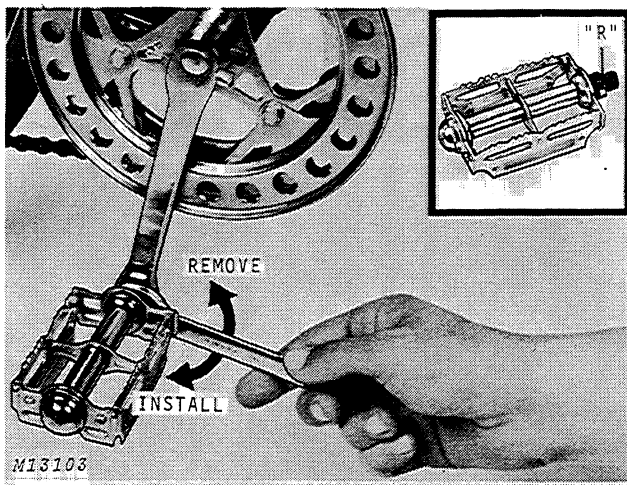


To check adjustment of crank bearings in lower bracket, grasp crank and move it horizontally from side-to-side. There should be very little horizontal movement. Crank should rotate freely without play.

If crank bearings need adjustment, see your John Deere dealer.

REPLACING PEDALS

Should pedals become damaged, replace them with genuine John Deere reflectorized pedals. Pedals have different threads for right- and left-hand installation.

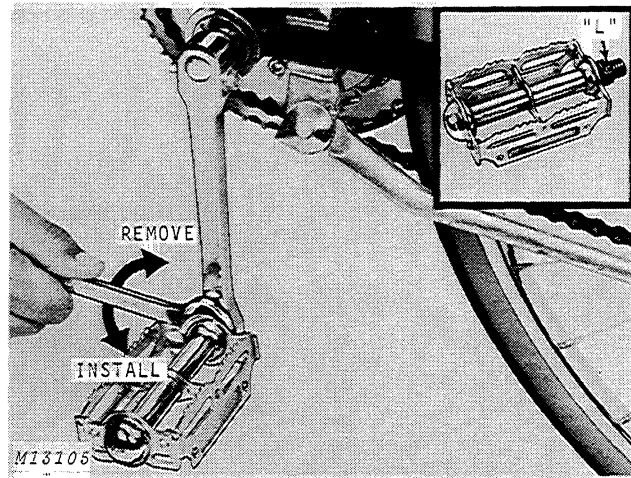


Replacing Right-Hand Pedal

To remove damaged right-hand pedal, turn pedal axle counterclockwise.

When installing right-hand pedal (marked "R" on axle):

1. Thread pedal axle into crank on right-hand side of bicycle.
2. Turn pedal axle clockwise.
3. Tighten securely.



Replacing Left-Hand Pedal

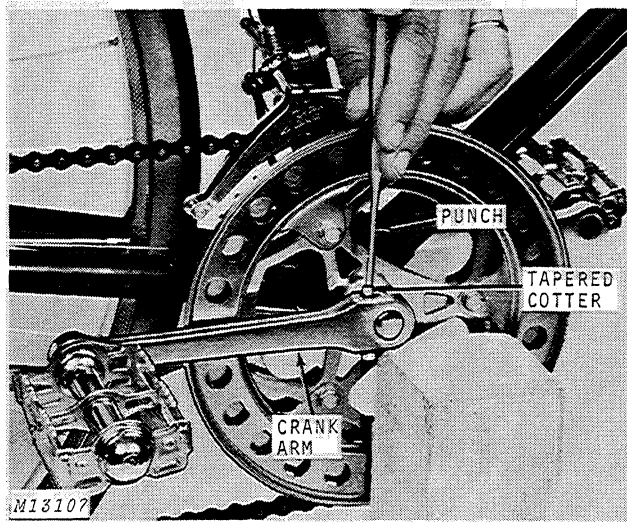
To remove damaged left-hand pedal, turn pedal axle clockwise.

When installing left-hand pedal (marked "L" on axle):

1. Thread pedal axle into crank on left-hand side of bicycle.
2. Turn pedal axle counterclockwise.
3. Tighten securely.

IMPORTANT: Be sure to adjust pedal bearings as explained on page 23.

REPLACING CRANK ARM



If a crank arm becomes bent or pedal threads in arm become stripped:

1. Remove nut from tapered cotter (wedge pin).
2. Support crank arm assembly with a block of wood.

IMPORTANT: The crank must be firmly supported to prevent damage to bearings or axle when you strike the cotter.

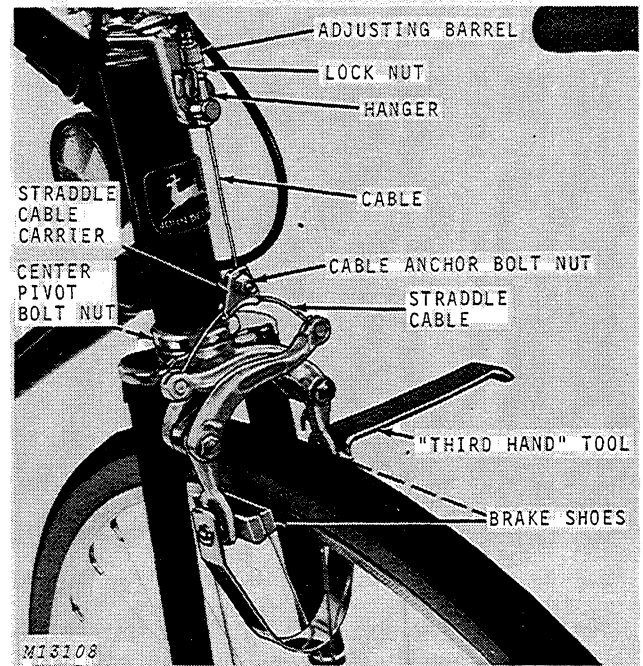
3. Tap tapered cotter from crank arm, using a hammer and punch.
4. Install new crank arm.
5. Insert tapered cotter in arm.

NOTE: Tapered cotters must be installed in opposite direction on each side (one nut up, one down) to provide proper position of crank arm.

6. Support crank arm assembly with a block of wood.
7. Strike cotter a solid blow to seat it until a minimum of 1/4 inch of thread is exposed.
8. Install and tighten nut securely.
9. Strike cotter solidly again.
10. Torque nut to 4 ft-lbs.

CAUTION: Check nut for tightness frequently. A loose cotter could result in crank arm damage. Should tapered cotter slip out, crank arm could come off, resulting in possible injury to rider or damage to bicycle.

ADJUSTING BRAKES



As brake shoes wear, loosen lock nut. Turn adjusting barrel counterclockwise until shoes clear rim by 1/16 to 1/8 inch. Retighten lock nut.

When initial brake adjustment has been used up:

1. Turn lock nut and adjusting barrel clockwise all the way into hanger.
2. Hold brake shoes in position using a "third hand" tool or an adjustable clamp.
3. Loosen nut on cable anchor bolt.
4. Pull cable tight with a pliers, and slide straddle cable carrier up.

IMPORTANT: Be careful not to fray cable when using pliers.

5. Secure nut on cable anchor bolt.
6. Readjust using the adjusting barrel if necessary.

If one brake shoe is closer to the rim than the other:

1. Loosen center pivot bolt nut.
2. Center unit around wheel rim.
3. Tighten pivot bolt nut.
4. Be sure brake shoes strike rim and not sidewall of tire.
5. Adjust brake shoe assemblies in slot as necessary.

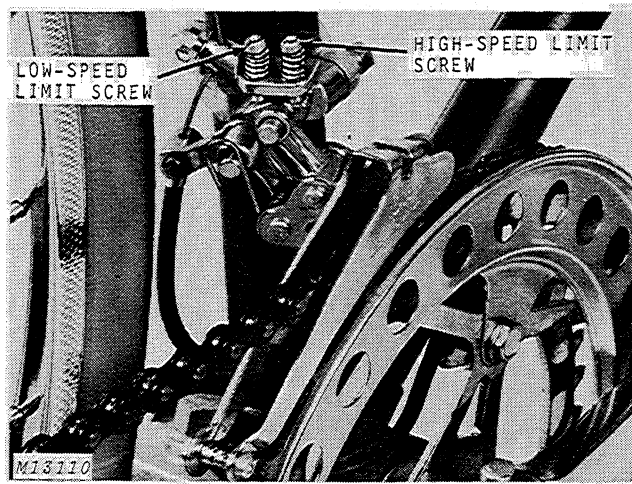
Adjust brake shoes as shown on page 22.

REPLACING BRAKE AND SHIFT CABLES

If cables leading from brake and shift levers become damaged and require replacement, see your John Deere dealer.

ADJUSTING FRONT DERAILLEUR

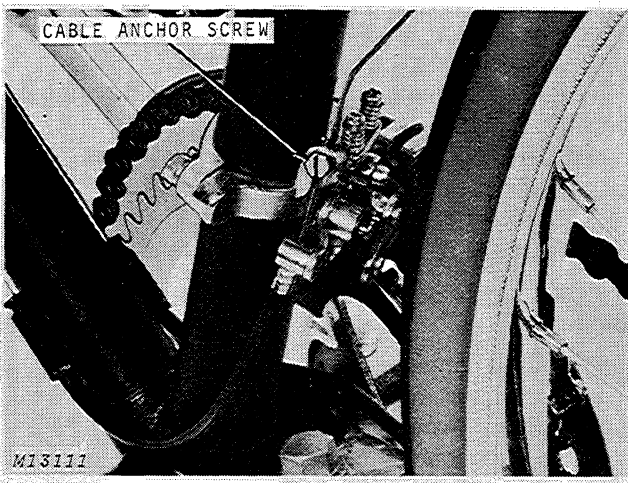
Adjusting Front Derailleur Limit Screws



Position left-hand shift lever fully forward while pedaling to bring chain onto largest chainwheel sprocket. Adjust high-speed limit screw so derailleur chain guides are centered over large sprocket.

Position left-hand shift lever fully rearward while pedaling to bring chain onto smallest chainwheel sprocket. Adjust low-speed limit screw so derailleur chain guides are centered over small sprocket.

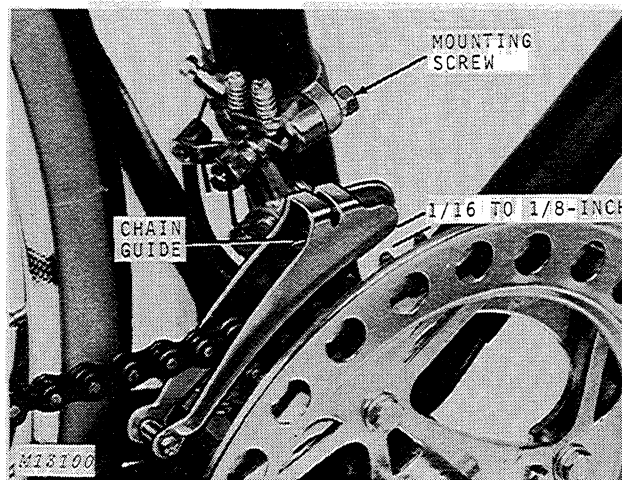
Adjusting Front Derailleur Shift Cable



Position left-hand shift lever fully forward while pedaling to bring chain onto largest chainwheel sprocket. Loosen cable anchor screw and pull cable with pliers to take slack out of cable. Retighten cable anchor screw.

IMPORTANT: Be careful not to fray cable when using pliers

Adjusting Front Derailleur Position



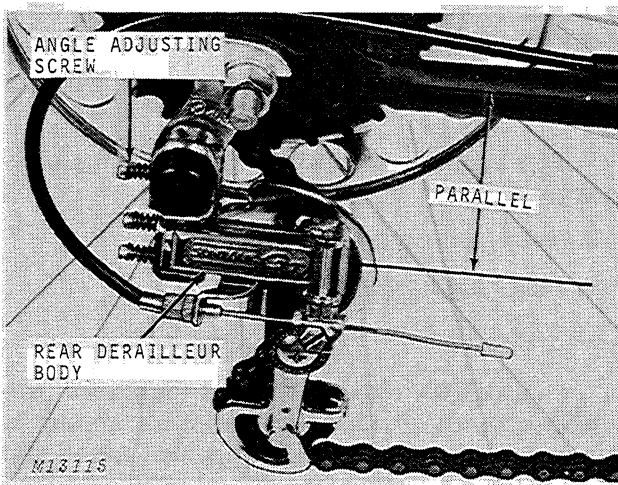
Turn pedals and move left-hand shift lever fully forward to shift chain onto largest chainwheel sprocket. Turn pedals and move right-hand shift lever fully forward to shift chain onto smallest freewheel sprocket.

Make sure chain guide is parallel to the chain and the bottom edge of the outside chain guide arm is 1/16 to 1/8 inch above teeth on largest chainwheel sprocket. If it is not, adjust as follows:

1. Loosen mounting screws.
2. Rotate derailleur until chain guide is parallel to chain.
3. Move derailleur up or down on seat tube until bottom edge of outside chain guide arm is 1/16 to 1/8 inch above teeth on largest chainwheel sprocket.
4. Tighten mounting screws.

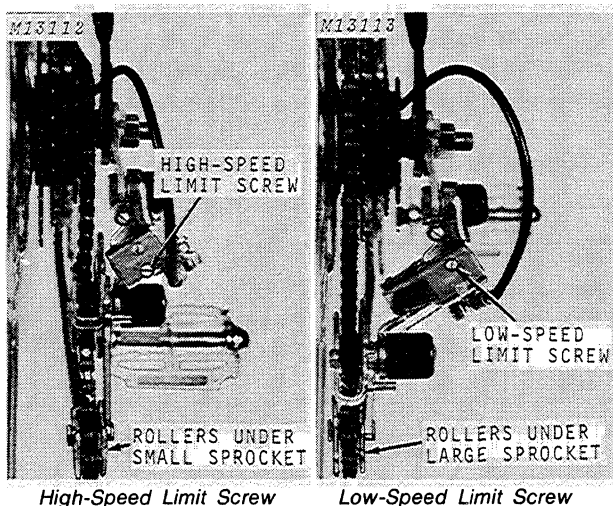
ADJUSTING REAR DERAILLEUR

Adjusting Rear Derailleur Angle



Make sure the body of the rear derailleur is parallel to the chain stays when chain is on the smallest freewheel sprocket. If it is not, adjust by turning the angle adjusting screw clockwise or counterclockwise until body is parallel to chain stay.

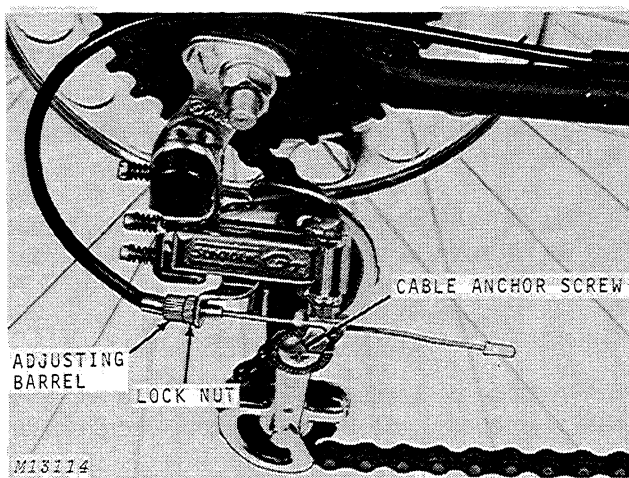
Adjusting Rear Derailleur Limit Screws



Position right-hand shift lever fully forward while pedaling to bring chain onto smallest freewheel sprocket. Adjust high-speed limit screw so derailleur idler rollers are directly under small sprocket.

Position right-hand shift lever fully rearward while pedaling to bring chain onto largest freewheel sprocket. Adjust low-speed limit screw so derailleur idler rollers are directly under large sprocket.

Adjusting Rear Derailleur Shift Cable

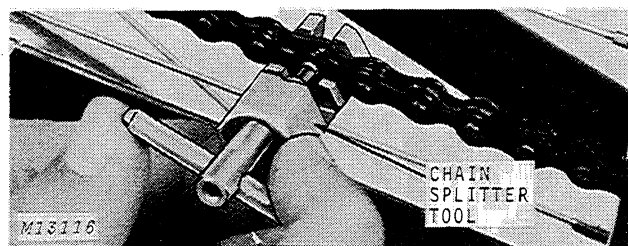


Position right-hand shift lever fully forward while pedaling to bring chain onto smallest freewheel sprocket. Loosen lock nut on adjusting barrel and turn lock nut and barrel into bracket. Loosen cable anchor screw and pull cable with pliers to take slack out of cable. Retighten cable anchor screw.

IMPORTANT: Be careful not to fray cable when using pliers.

Later adjustments can be made by threading adjusting barrel out of bracket.

SERVICING CHAIN AND DERAILLEUR ROLLERS



If chain requires cleaning or replacement, it can be removed by using an inexpensive chain splitter tool available from your John Deere dealer.

The chain splitter tool allows you to split the chain for removal or remove sections of the chain for repair.

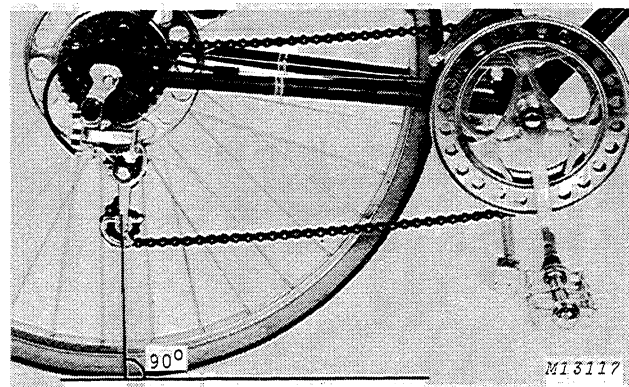
If chain requires cleaning:

1. Remove chain using chain splitter tool.

CAUTION: Be careful when using kerosene so it does not ignite. Use only in a well-ventilated area away from any sparks, heat or flame.

2. Wash chain in kerosene.
3. Wipe chain dry.
4. Submerge chain in SAE 30 or 10W-40 oil. Wipe off excess oil.
5. Clean grit and grime from derailleur rollers using a brush or rag. Do not attempt to remove rollers for cleaning.
6. Reinstall chain on sprockets.
7. Reconnect chain with chain splitter tool.

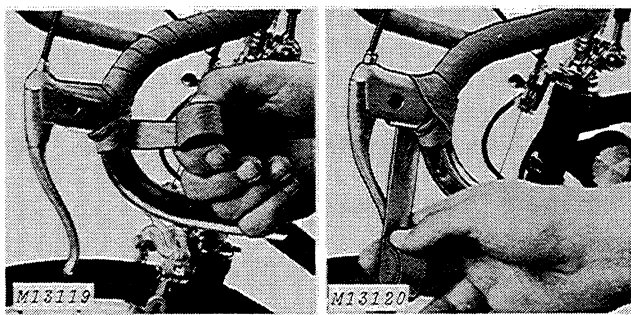
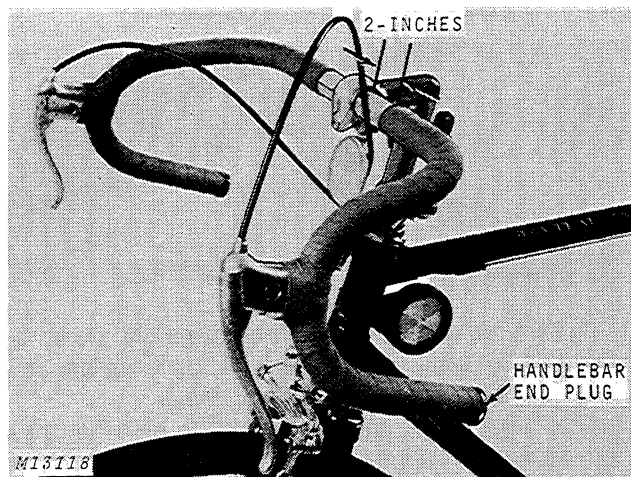
ADJUSTING CHAIN LENGTH



The chain length is correct when the rear derailleur rollers are perpendicular (90 degree angle) to the floor with the chain on the smallest freewheel sprocket and the largest chainwheel sprocket. It may be necessary to add or remove links of chain using a chain splitter tool to reach the correct chain length.

NOTE: A new chain may seem tight. This is normal. As bicycle is used, chain will loosen allowing free movement.

REPLACING HANDLEBAR TAPE



To replace handlebar tape:

1. Remove handlebar end plugs.
2. Unwind tape from handlebar.
3. Start wrapping new tape about 2 inches from handlebar stem on each side.
4. Wrap tape one full turn and overlap tape approximately $\frac{1}{8}$ inch for each remaining turn.
5. Wrap tape in a figure 8 fashion around brake levers as shown.
6. Leave a couple of inches of tape beyond end of handlebar and cut off excess.
7. Tuck end of tape inside handlebar.
8. Secure tape with handlebar end plugs.

REPLACING REFLECTORS

Your bicycle is equipped with reflectors to make it safer and easier to see. Should reflectors become broken or lost, see your John Deere dealer and replace them immediately. Keep them clean.

Reflectors are found at the following locations:

Location	Size	Color
Rear on Frame	2 inch	Red
Rear Sides	2 inch	Red
Front Sides	2 inch	Amber
Front on Stem	2 inch	Crystal
Pedals*	—	Amber

* Must replace pedal to obtain reflectors.

APPEARANCE CARE AND STORAGE

Keep your bicycle dry to prevent saddle from being damaged and chain from rusting. Wash and wax your bicycle frequently. Use liquid waxes to protect its finish. Touch-up scratches with matching paint to prevent rust.

When putting your bicycle away for the season store it in a dry garage, shed or basement—one that can be locked. Hang the bicycle on a wall or from the rafters to take the weight off the tires. If this is impossible, store bicycle upside down with the saddle and handlebars on a dry surface.

NOTE: When storing bicycle upside down, block up handlebars to prevent damage to brake cables and levers.

When removing bicycle from storage, check to see that all hardware is tight and that bearings are adjusted properly. Oil the chain.

ACCESSORIES

A number of accessories are available for your new 10-speed bicycle from your John Deere dealer.

Included among these are bells, child carriers, horns, lights, baskets, padlocks, chains, cables, bicycle wrench, spoke wrench, speedometers, and many others.



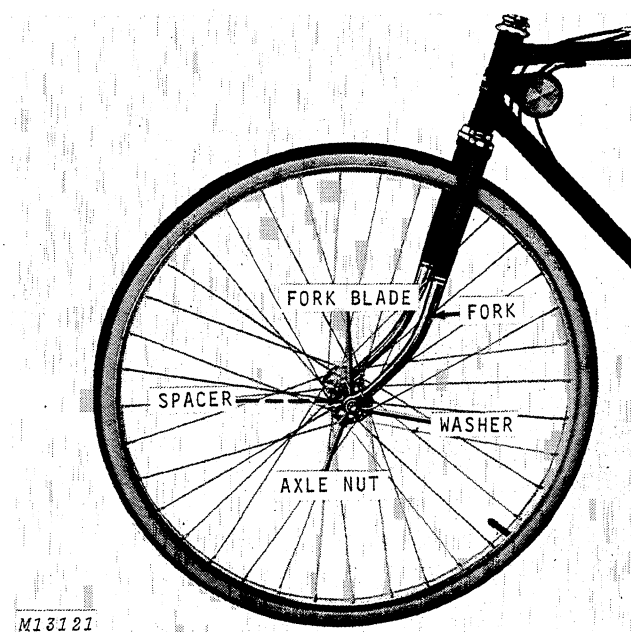
Assembly

CAUTION: Assemble the bicycle carefully, especially the front wheel, fork and handlebars.

UNPACKING BICYCLE

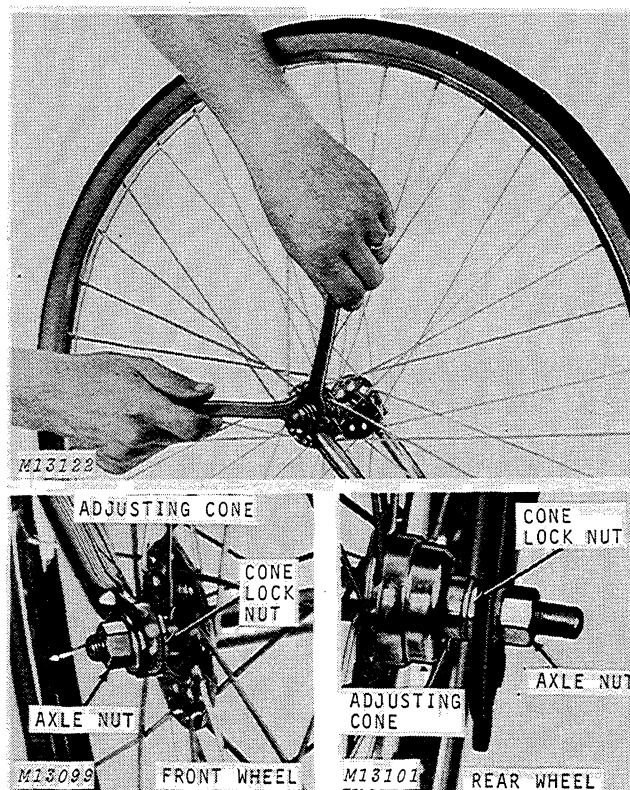
Open top side of bicycle carton and remove bicycle frame and seat assembly. Remove all ties holding components to bicycle frame. Remove shipping guards from front and rear wheel axles.

ATTACHING FRONT WHEEL



1. Loosen nuts on front wheel axle.
2. Install wheel assembly in fork with one spacer on the inside and one washer on the outside of each fork blade.
3. Center the wheel in fork.
4. Tighten axle nuts.

ADJUSTING WHEEL BEARINGS



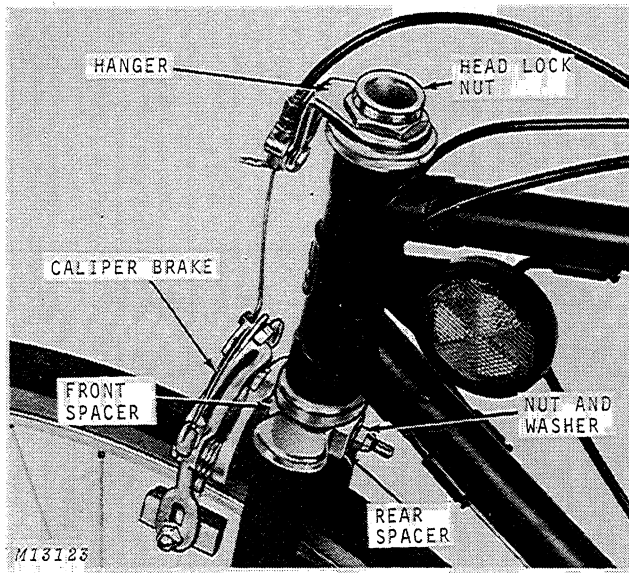
NOTE: Wheels should spin freely without binding and with very little horizontal movement at rim.

Check bearing adjustment on front and rear wheels (see page 13). If necessary, adjust as follows:

1. Loosen axle nut on either side of front wheel and left-hand side of rear wheel.
2. Loosen cone lock nut.
3. Using a thin open-end wrench (cone-wrench), adjust cone until the wheel has only slight sideplay at the rim and wheel spins freely without binding.
4. Hold cone in this position with cone-wrench and tighten cone lock nut.
5. Tighten axle nut.

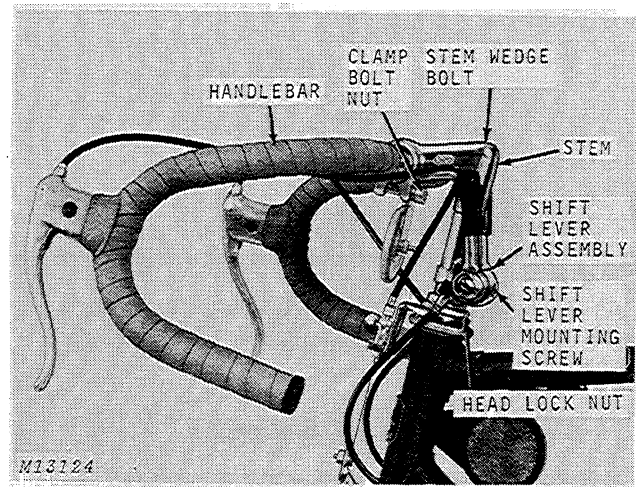
IMPORTANT: Tightening cone lock nut tends to tighten adjusting cone. Recheck bearing adjustment after cone lock nut is tightened.

ATTACHING FRONT CALIPER BRAKE AND HANGER



1. Remove head lock nut.
2. Install hanger (tab in hanger fits in slot on upper threaded end of fork).
3. Reinstall head lock nut and tighten.
4. Remove nut, washer and rear spacer from caliper brake.
5. Install caliper brake in fork (front spacer matches shape of fork).
6. Install rear spacer, washer and nut (rear spacer matches shape of fork).
7. Center caliper brake around rim.
8. Install nut on caliper brake and tighten.

ATTACHING HANDLEBAR AND SHIFT LEVERS



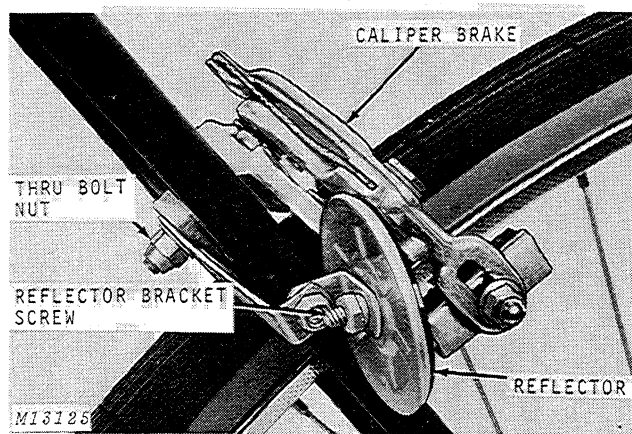
1. Slide shift lever assembly onto handlebar stem.
2. Loosen stem wedge bolt and apply SAE 30 or 10W-40 weight oil to threads.

3. Slide stem into frame.

CAUTION: A "MINIMUM INSERT" line is stamped on the handlebar stem, 2-1/2 inches from lower end. Do not pull stem out beyond this line.

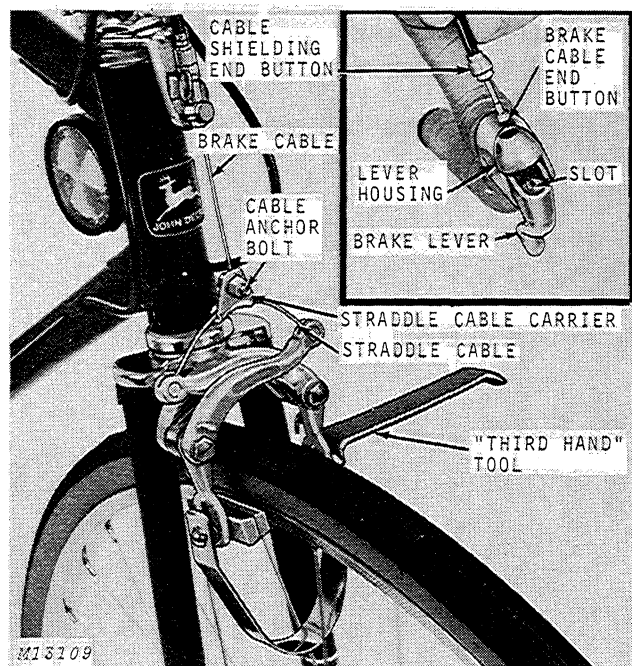
4. Align stem with front wheel.
5. Tighten stem wedge bolt using the hex wrench packed with bicycle.
6. Position handlebar with bottom ends of handlebar pointing directly at center of rear axle as shown on page 4.
7. Tighten clamp bolt nut (make sure reflector bracket points directly down).
8. Lower shift lever assembly to rest above head lock nut.
9. Align shift lever assembly so levers are straight.
10. Tighten shift lever mounting screw.

ATTACHING REAR CALIPER BRAKE AND REFLECTOR



1. Loosen nut on thru bolt.
2. Swing reflector out to left-hand side of bicycle.
3. Center caliper brakes around wheel.
4. Tighten nut on thru bolt.
5. Loosen reflector bracket screw.
6. Position reflector vertical (at 90 degree angle) to ground facing rearward.
7. Tighten reflector bracket screw.

INSTALLING BRAKE CABLES (FRONT AND REAR)



NOTE: Right-hand brake lever controls rear brake and left-hand brake lever controls front brake.

1. Slide brake cable end button through hole in lever housing. Guide cable through slot in lever and secure end button in lever.
2. Pull brake end of cable to place tension on lever.

3. Place cable shielding end button in hole in lever housing.

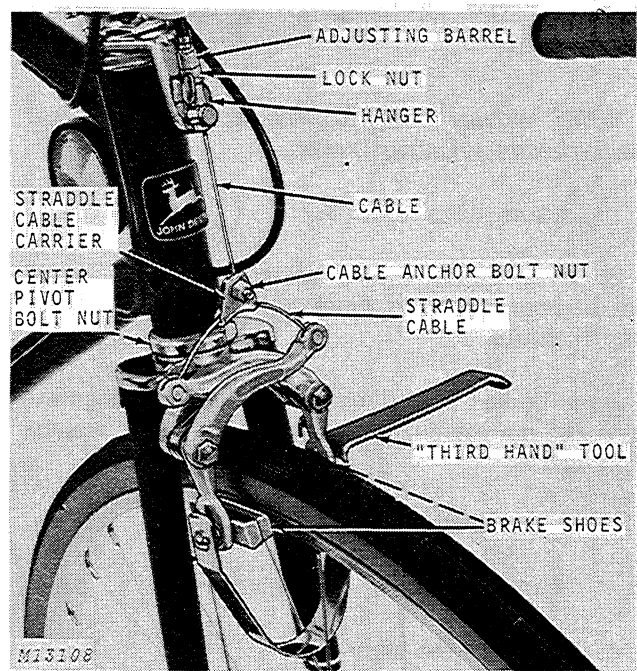
4. Install "third hand" tool on caliper brake.
5. Loosen cable anchor bolt nut.
6. Slide straddle cable carrier down.
7. Install straddle cable in carrier.
8. Pull brake cable tight with a pliers and slide straddle cable carrier up.

IMPORTANT: Be careful not fray cable when using pliers.

9. Tighten cable anchor bolt nut.

NOTE: New brake cables will stretch. Work brake levers several times before making adjustments.

ADJUSTING BRAKE CABLES



1. Loosen lock nut.
2. Turn adjusting barrel until brake shoes are approximately 1/16 to 1/8 inch from rim on each side.
3. Tighten lock nut.

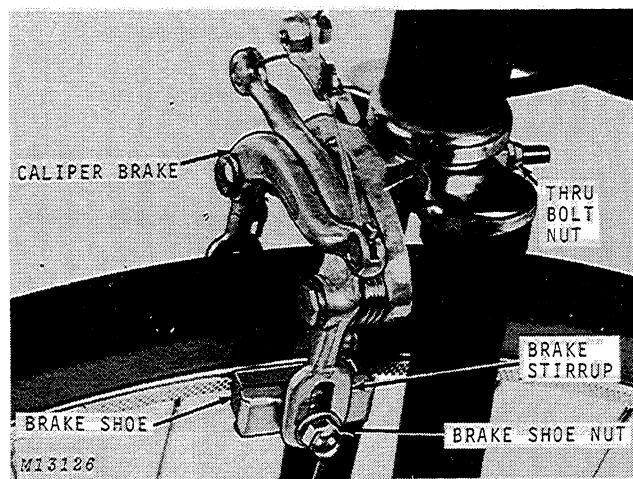
If cable cannot be adjusted with adjusting barrel, adjust as follows:

1. Turn lock nut and adjusting barrel clockwise all the way into hanger.
2. Hold brake shoes in braking position using a "third hand" tool or an adjustable clamp.
3. Loosen nut on cable anchor bolt.
4. Pull brake cable tight with a pliers and slide straddle cable carrier up.

IMPORTANT: Be careful not to fray cable when using pliers.

5. Tighten nut on cable anchor bolt.
6. Readjust using the adjusting barrel if necessary.

ADJUSTING BRAKE SHOES

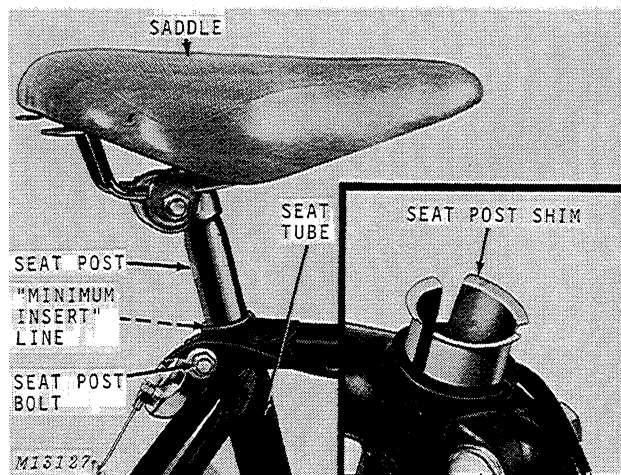


NOTE: Wheels must be centered in fork and seat stays before adjusting brakes.

1. Loosen nut on thru bolt.
2. Center caliper brakes so the distance between brake shoe and rim is equal on each side. Retighten thru bolt nut.
- Apply brakes and check that brake shoes align evenly with rim without touching tire. If not, follow steps 3, 4 and 5.
3. Loosen brake shoe nuts.
4. Align brake shoes with wheel rim.
5. Tighten brake shoe nuts.

Make sure that front edge of brake shoes are approximately 1/32 inch closer to wheel rim than the rear. If not, carefully bend the brake stirrup using an adjustable wrench.

INSTALLING SADDLE



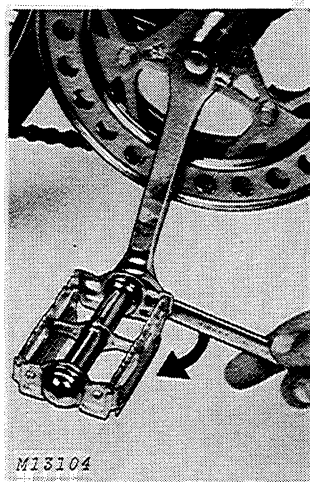
NOTE: A seat post shim is included with bicycle, if needed (see inset).

1. Place seat post in seat tube.

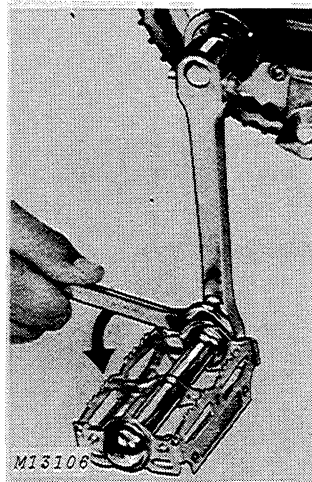
CAUTION: A "MINIMUM INSERT" line is stamped on the seat post 2-1/2 inches from the lower end. Do not install post any higher than this line.

2. Raise or lower seat post in seat tube until desired height is achieved.
3. Tighten seat post bolt nut.

INSTALLING PEDALS



Right-Hand Pedal



Left-Hand Pedal

1. Install right-hand pedal (marked "R" on pedal axle) on right-hand crank arm. Thread clockwise into crank arm.
2. Install left-hand pedal (marked "L" on pedal axle) on left-hand crank arm. Thread counterclockwise into crank arm.
3. Tighten pedals securely.

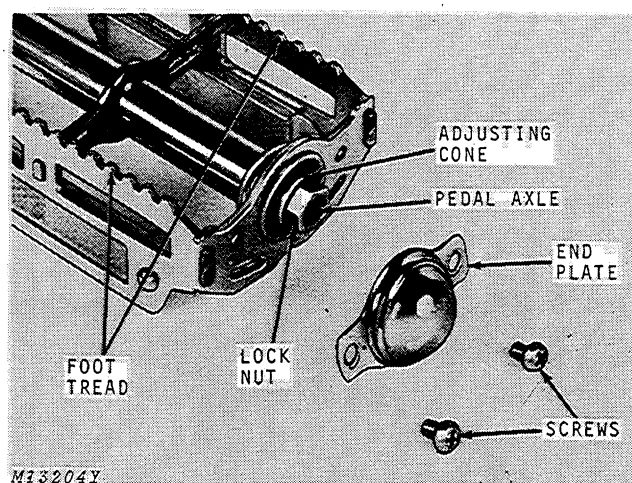


CAUTION: Be sure pedals are tightened securely.

ADJUSTING PEDAL BEARINGS

To check pedal bearings, spin pedals to make sure they spin freely and come to a stop with the foot tread up. Check that very little side play exists on pedal axle.

NOTE: Check that bearings are well lubricated after removing end plate. Lubricate pedal bearings with John Deere AT30408 High-Temperature Grease if necessary.



To adjust pedal bearing:

1. Remove two screws and end plate.
2. Loosen lock nut.
3. Turn adjusting cone clockwise or counterclockwise until pedal axle has very little side play and pedal spins freely without binding.
4. Hold adjusting cone in this position and tighten lock nut.
5. Install end plate and tighten two screws.

ADJUSTING DERAILLEURS

Adjust front and rear derailleurs and cables as shown on pages 16 and 17.

INFLATING TIRES

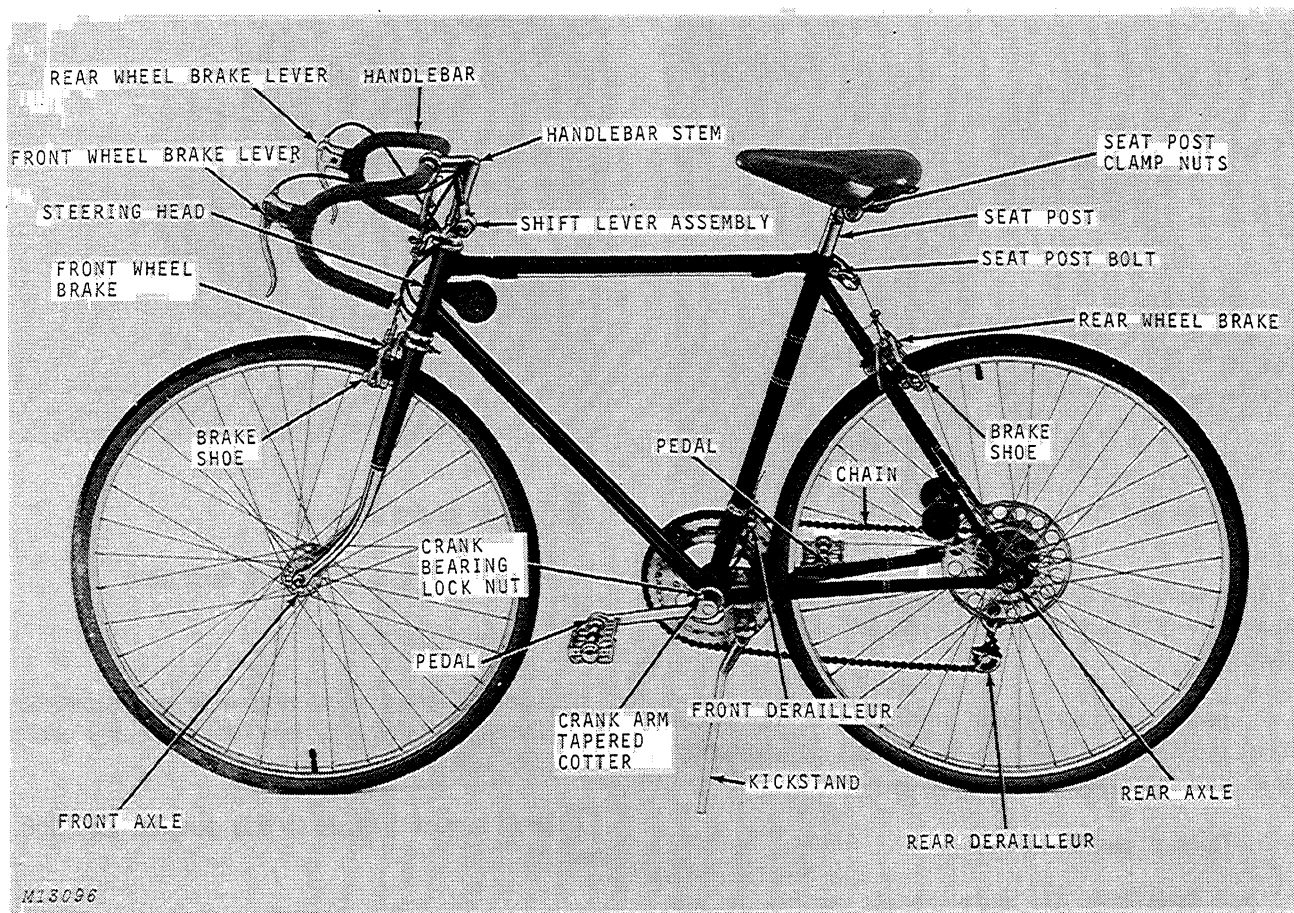
NOTE: Check that the tire bead is properly set on wheel rim before inflating tire. If not, deflate tire and properly position tire bead on rim.

1. Check valve stems to be sure they are not being pinched or cut.
2. Inflate tires to 60 psi (pounds per square inch).

ADJUSTING BICYCLE TO RIDER

Before delivering bicycle to customer, assemble it completely and adjust it to fit its rider as explained on page 3 of this manual.

PREDELIVERY SERVICE



Before delivering bicycle to customer, adjust and tighten:

1. Wheel axle nuts.
2. Pedal axles in crank arms.
3. Seat post bolt nut.
4. Seat post clamp nuts.
5. Crank arm tapered cotter nuts.
6. Brake mounting bolts.
7. Brake shoe nuts.
8. Handlebar stem wedge bolt.
9. Handlebar stem clamp nut.
10. Head lock nut and crown ball race.
11. Crank bearing lock nut.
12. Brake lever mounting screws.

Before delivering bicycle to customer, lubricate with SAE 30 or 10W-40 oil:

1. Derailleur pivot points and rollers.
2. Brake pivot points.
3. Chain links.
4. Kickstand sliding surfaces.
5. Brake lever pivots.
6. Shift lever pivots.



Specifications

Frame Design.....Tubular-steel with
lugged joints
Length of Seat Tube.....21 inches
Weight.....34 pounds
Front Derailleur.....Sun Tour Spirt
Rear Derailleur.....Sun Tour GT
Hubs.....Medium flange steel
Freewheel Sprockets...14, 17, 20, 24 and 28 teeth
Chainwheel sprockets.....40 and 50 teeth
Pedals.....Steel rattrap
Brakes.....Caliper, center-pull
Rims.....27-inch, 36 holes
Tires.....27 x 1-1/4-inch gumwall
Tire Inflation Pressure.....60 psi.
Handlebar.....Chrome-plated, dropped-
style racing
Shift Levers.....Stem-mounted dual
Brake Levers.....Dual extension
Crank Assembly.....3-piece cottered
Length of stem in head.....2-1/2 inches minimum
Length of seat post in
seat tube.....2-1/2 inches minimum
Seat.....Injection-molded base
with foam padding and vinyl cover

REFLECTORS

Location	Size	Color
Rear, on frame	2 inch	Red
Rear, sides	2 inch	Red
Front, sides	2 inch	Amber
Front, on stem	2 inch	Crystal
Pedals*	—	Amber

* Must replace pedal to obtain reflectors

Specifications and design subject to change without notice.

SERIAL NUMBER

Serial No. _____

Date of Purchase _____

(To be filled in by Purchaser)

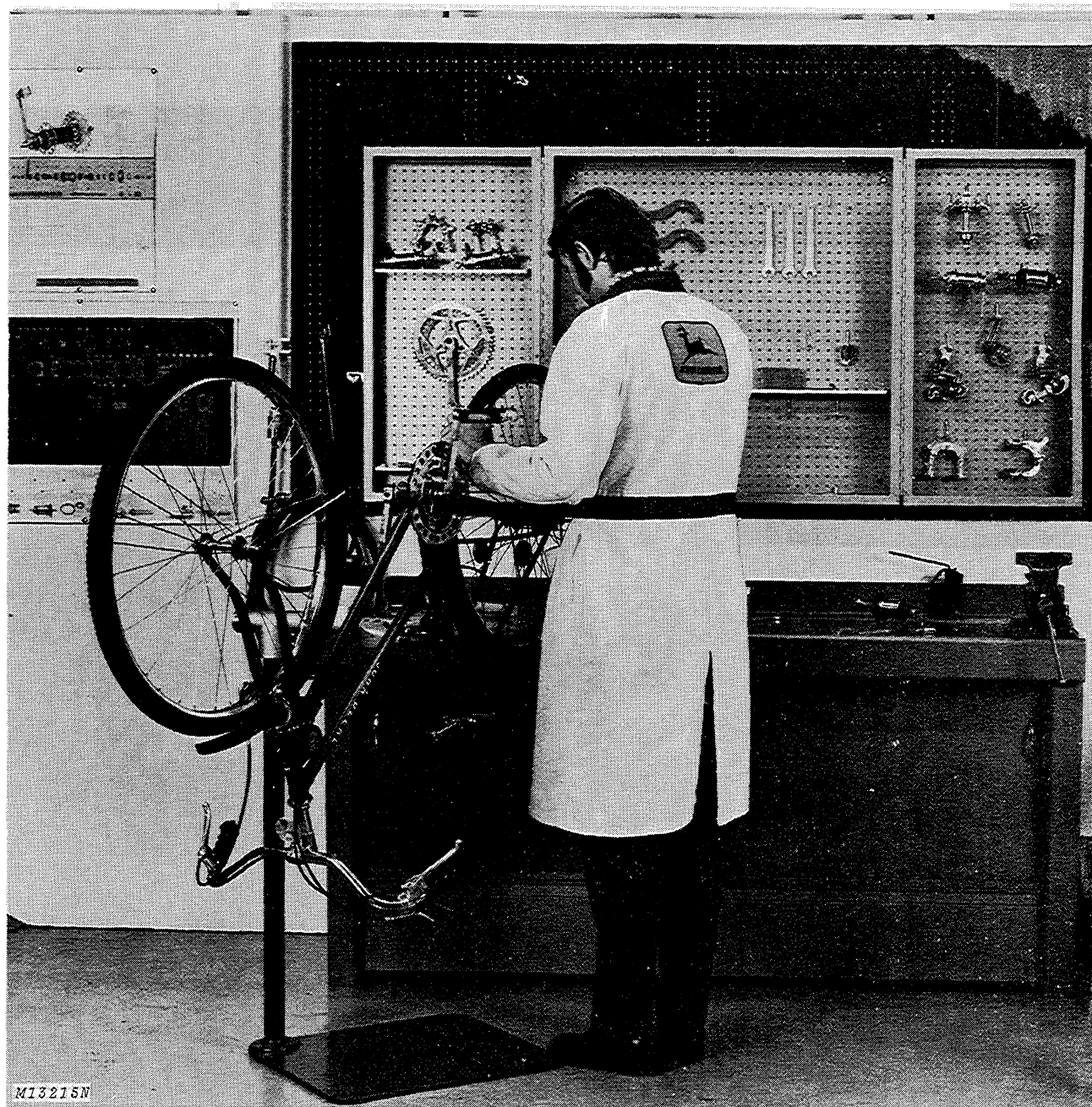
MEMORANDA

MEMORANDA

MEMORANDA



Service to keep you on the go



Your John Deere dealer is ready to serve you with dependable parts and service to keep you on the go. His factory-trained servicemen have the knowledge and parts to keep your bicycle running smoothly.

See your John Deere dealer for a choice of accessories to make your bicycling more enjoyable. You can trust your dealer to meet your needs. It's part of the satisfaction you can expect from John Deere.

