Kawasaki

H1-D

Assembly & Preparation Manual

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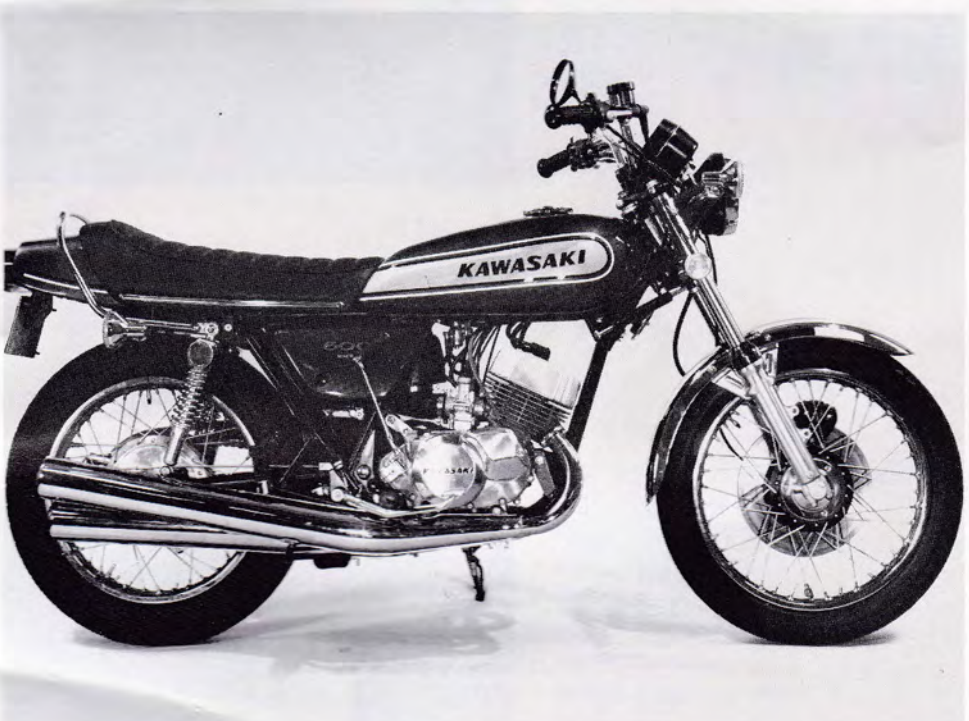
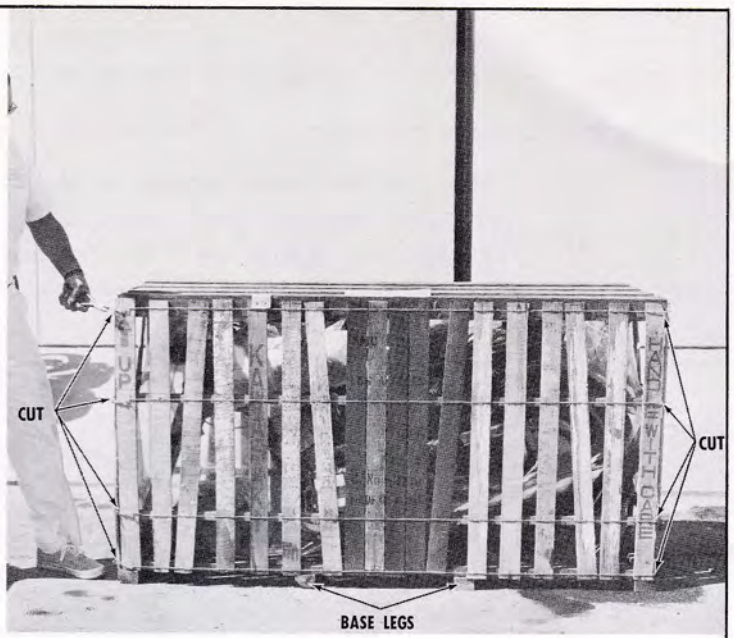
KAWASAKI MODEL H1-D
ASSEMBLY AND PREPARATION MANUAL

There are three major sections in this manual:

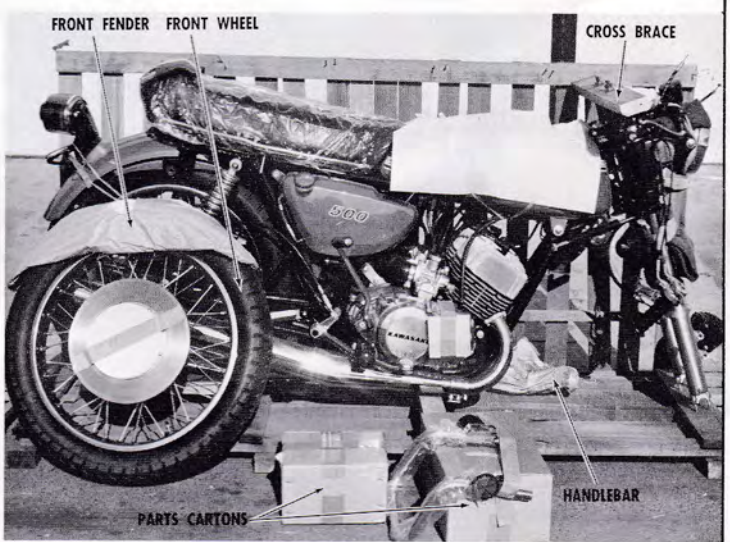
ASSEMBLY INSTRUCTIONS —Work performed during uncrating and assembly.
PREPARATION SERVICING —Detailing and inspection performed before delivery.
SERVICE SPECIFICATION —Handy specs for possible trouble-shooting.



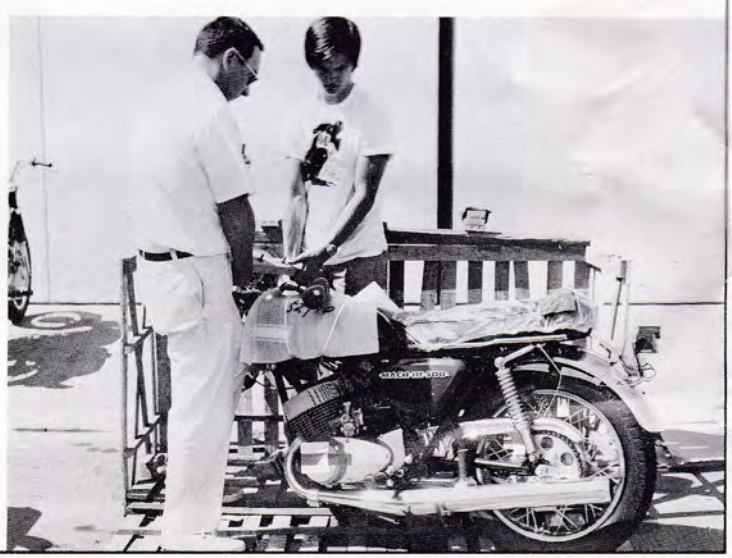
Clear a 20' x 20' area, and then position the crate upright on its base. Pry off the top panel, and then cut the banding wires at the corners of the crate.

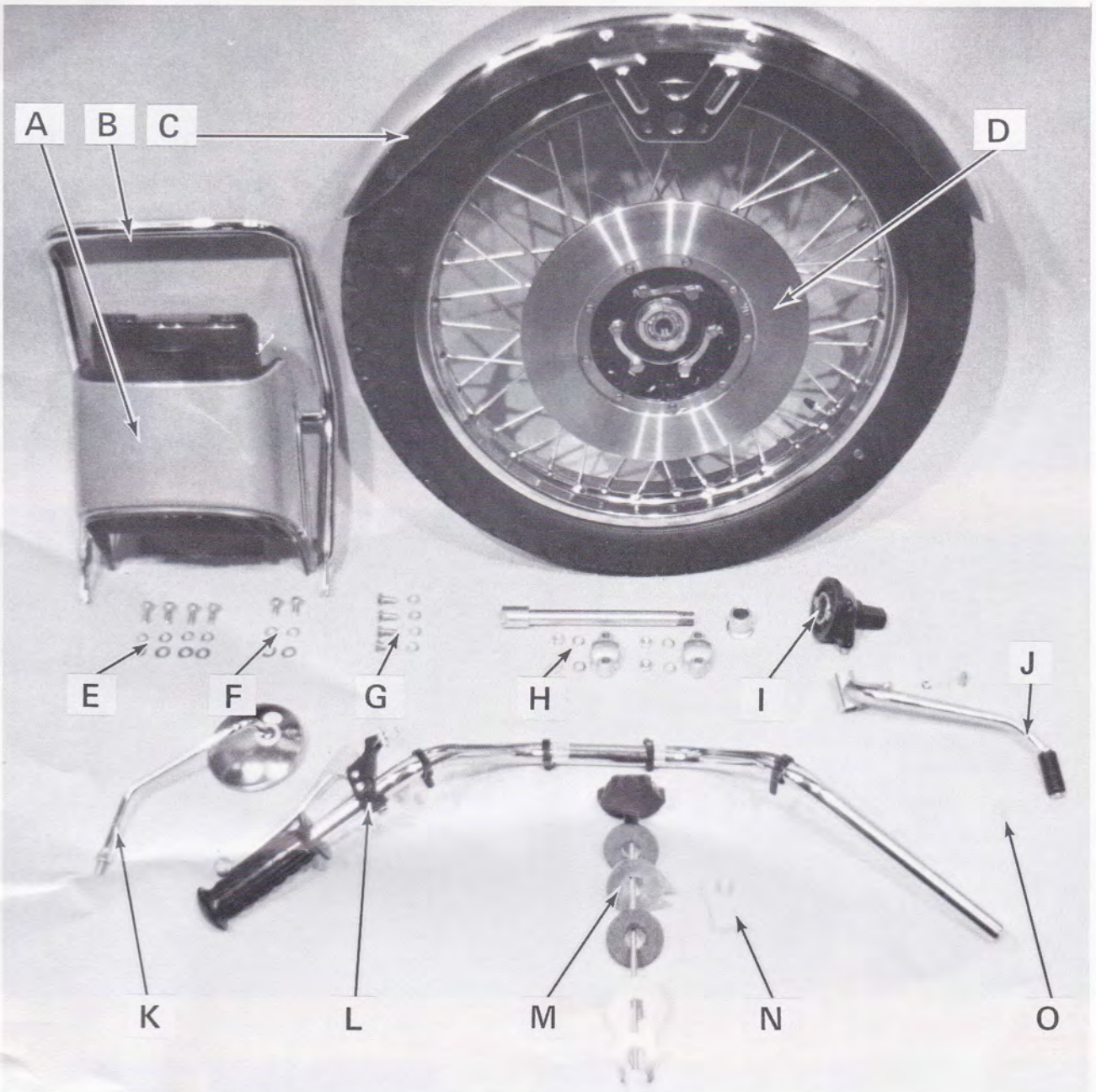


Fold back the top panel and pull down the side panels and the two end panels. Remove the plastic covering and lift out the front wheel, the front fender, and the two parts cartons. Pry up the strap holding the handlebar to the bottom of the crate, and remove the handlebar. NOTE: Do not remove the protective packing material from the fuel tank at this time.



With a helper, lift the rear of the motorcycle out of the crate base, and then lift the front by using the cross brace. Roll the unit out of the crate. CAUTION: Peen over any nails to prevent injury or puncturing the tires. Park the motorcycle on the center stand.

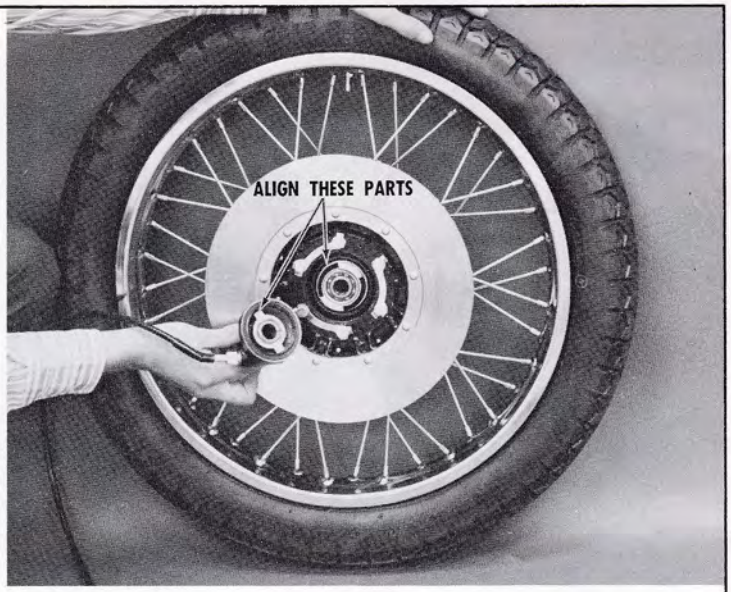




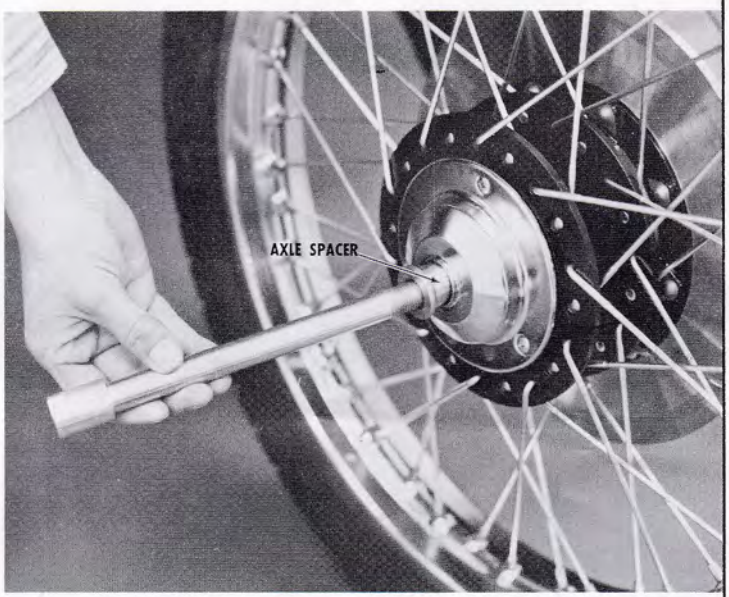
Open the parts cartons and check the contents against this photo.

A. Seat backrest assembly.
B. Grab rail.
C. Front fender
D. Front wheel assembly.
E. Seat backrest hardware: 4 bolts, 4 lockwashers, 4 washers.
F. Grab rail hardware: 2 bolts, 2 lockwashers, 2 washers.
G. Front fender hardware: 4 bolts, 4 lockwashers.
H. Front axle with spacer, 2 clamps, 4 nuts, and 4 lockwashers.
I. Speedometer drive gearbox.
J. Shift lever with pin, washer, and circlip.
K. Rear view mirror.
L. Handlebar assembly.
M. Steering damper assembly with 2 friction discs, torque plate, steel plate, spring, nut, and cotter pin.
N. Steering damper detent spring and nut.
O. Mirror mount plug.

Check the inside of the speedometer drive gear assembly for loose parts and fit it to the front wheel hub. Be sure to align the tangs in the drive assembly to the recesses in the hub. CAUTION: Loose parts can wedge into the speedometer drive gears with resulting damage.



Insert the axle spacer into the hub grease seal as shown and thread in the axle.

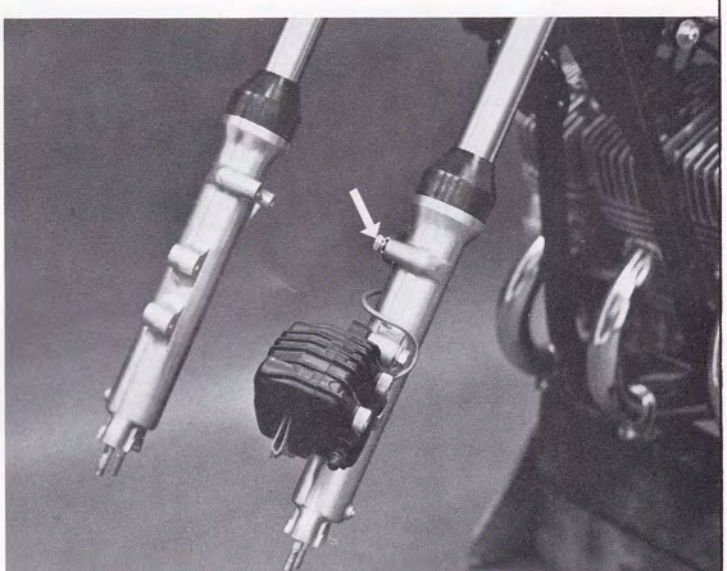


Tighten the axle securely, and then turn the speedometer drive assembly to check for binding.

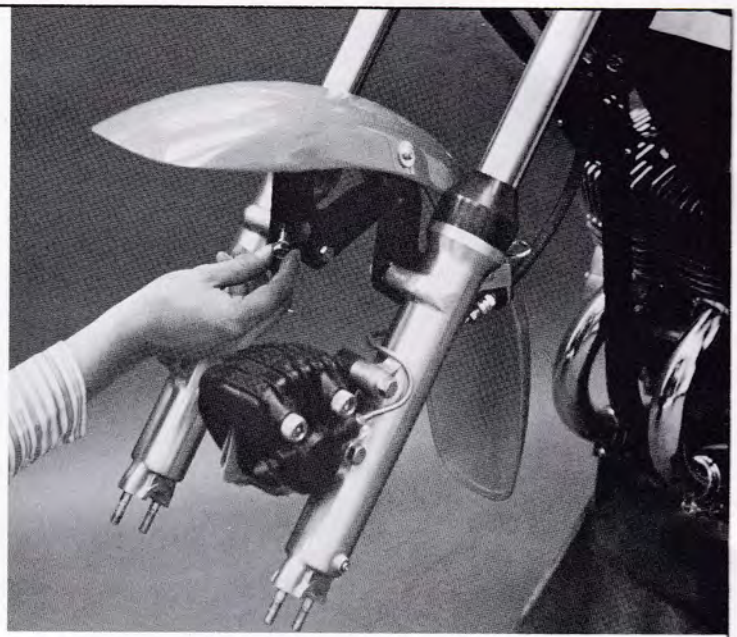
Wipe the disc clean with trichloroethylene or other oiless solvent.

Wipe any residual tape adhesive off the fork tubes with trichloroethylene or other suitable solvent.

Turn the fork sliders so that the fender mounting holes face inward. Take out the fender bolt and lockwasher from the left slider.

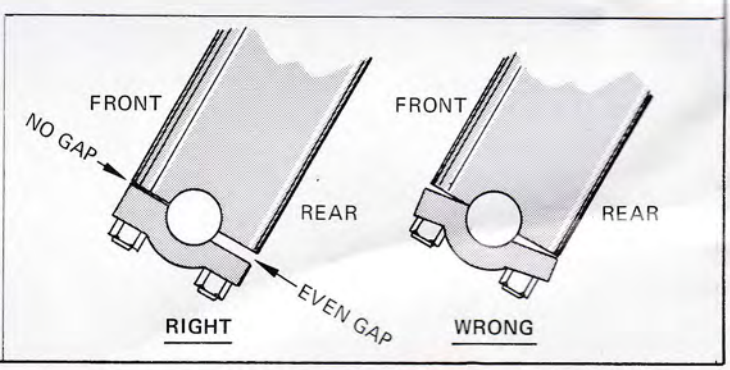


Mount the front fender with four 14 mm long bolts and lockwashers, with the short end of the fender toward the front. Be sure to mount the brake hose bracket between the fender brace and the fork sliders, as shown. CAUTION: Do not bend the hydraulic brake pipe during this operation, or it may cause the disc brake linings to squeal.

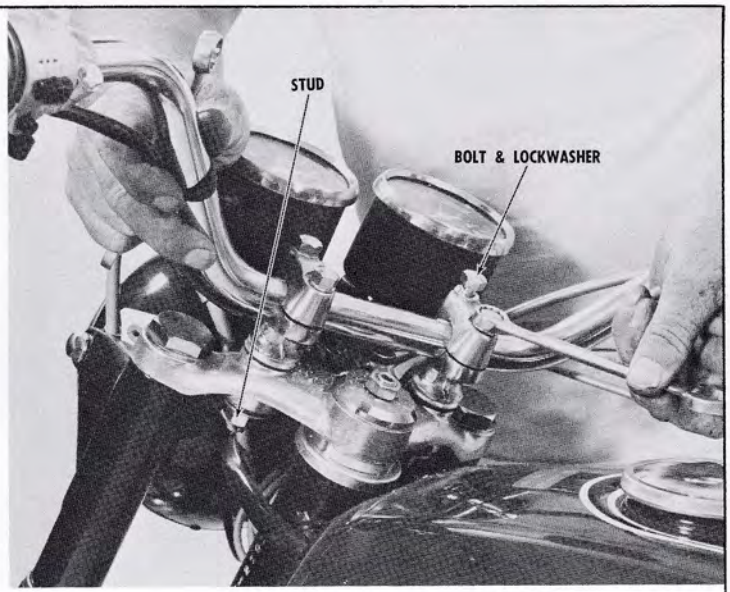


Remove the carboard spacer from between the caliper pads. Lift the front wheel into position with the disc between the caliper pads, and the axle ends between the axle mounting studs. Fit the axle mounting caps with nuts and lockwashers, but do not tighten them yet. NOTE: Install each nut with the flat side facing the lockwasher.

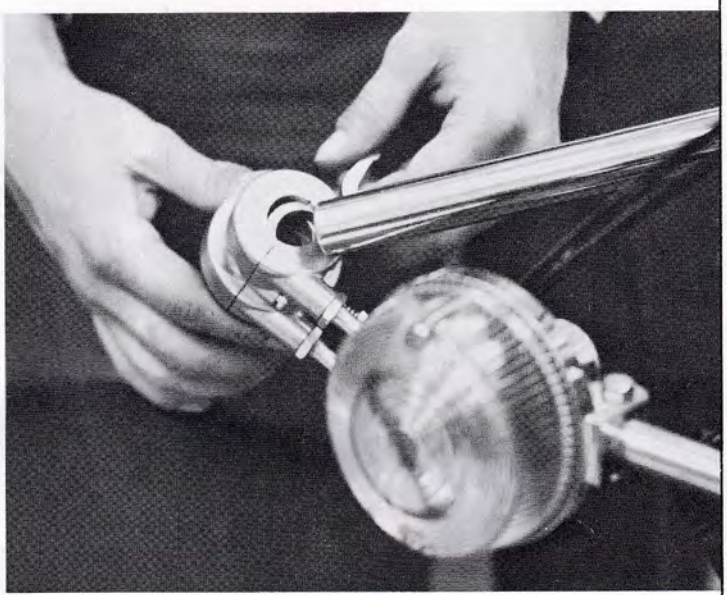
Turn the speedometer drive assembly so that the cable axis points to the left sparkplug. This will insure that there are no sharp bends in the lower end of the speedometer cable. Tighten the front nut of the left-hand clamp and then the rear, each to 14 lb.-ft. of torque. Depress the forks several times to center the axle and tighten the right-hand clamp cap nuts, front first and then rear, to 14 lb.-ft.



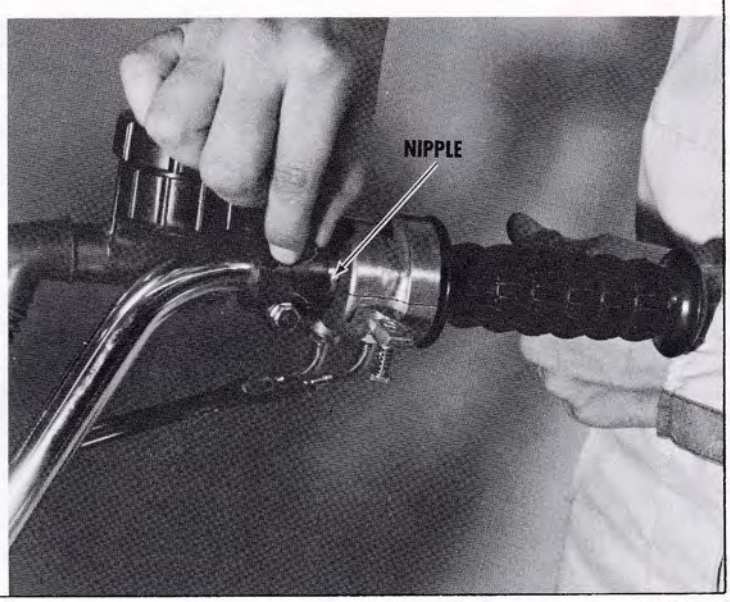
Remove the handlebar clamp bolts; take off and discard the metal plate and bolt. Check the handlebar holders for bent studs, and then position the handlebar in the holders as shown. Install the two clamps with four bolts and lockwashers, but do not tighten them. Remove the protective packing material from the fuel tank.



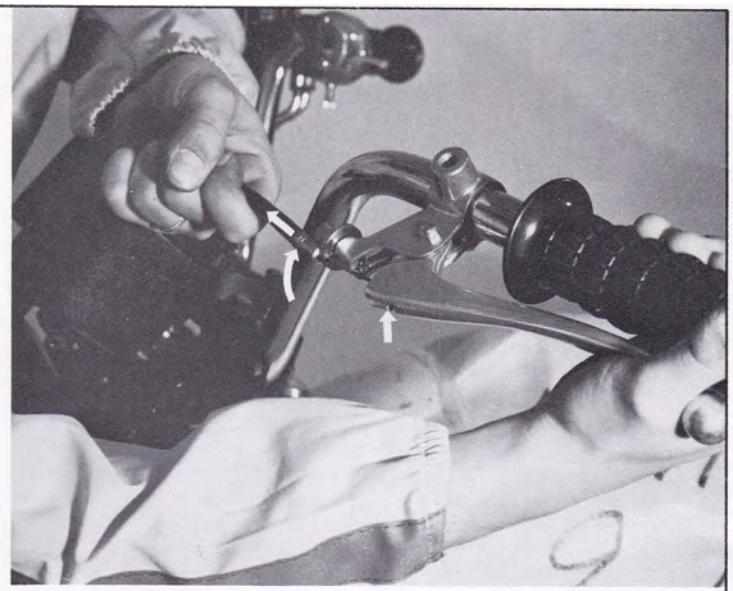
Invert the handlebar and slide on the throttle grip assembly, taking care to center the starter lever. Rotate the handlebar to the proper position and tighten the clamps. Tighten the two Phillips head screws in the throttle case so that the cables are pointing downward. Be sure that the rubber hand grip does not drag on the end of the handlebar.



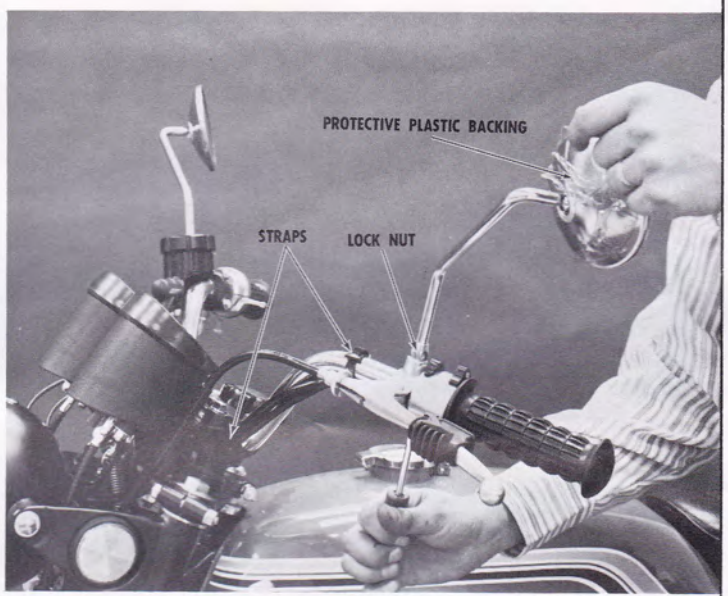
Mount the brake master cylinder next to the twist grip. The nipple on the side of the handlebar clamp cap will space the master cylinder assembly the proper distance from the twist grip. Tighten the bolts to about 4.5 lb.-ft. of torque.



Turn the adjuster and thumbwheel into the lever bracket as far as possible and then back them out until the slots line up. Push the cable nipple up into the lever socket. Pull on the cable sheath, and then swing the cable into the adjuster and release it.

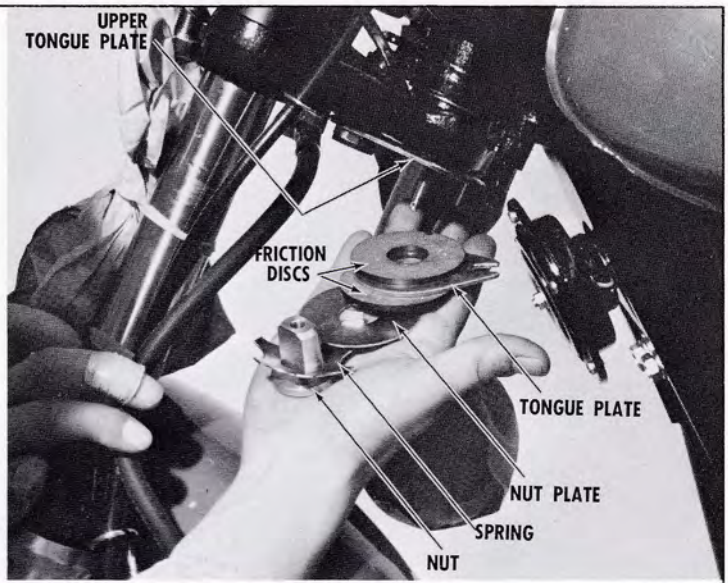


Mount the left-hand grip case and the rear view mirrors. Tighten the mirror locknuts when the mirrors are in the proper position and strip the protective plastic off the mirror backs. Fit the two handlebar wiring straps as shown.

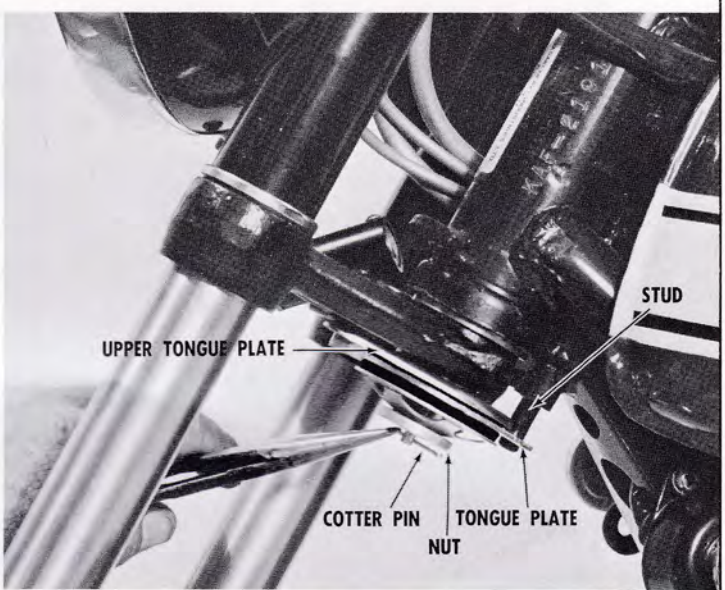


Mount the knob detent spring and thread on the detent nut. Position the knob detent spring with the tongue to the front. Tighten the detent nut and insert the damper shaft into the steering stem.

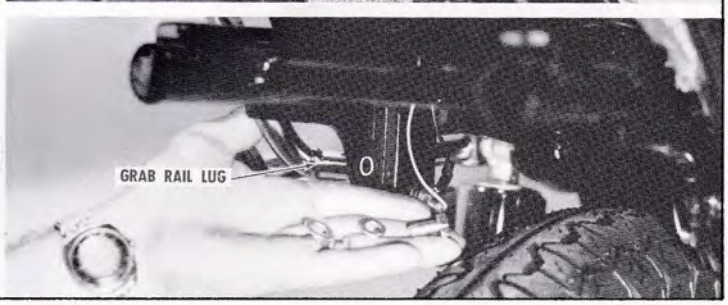
Stack the steering damper parts, as shown here, before installation. CAUTION: Clean off any oil or grease with an oilless solvent, such as trichloroethylene, to insure smooth damper action. Follow these assembly instructions exactly to prevent steering difficulties.



The upper tongue plate is bolted to the fork lower bridge at the factory. Install the parts shown in the previous step, taking care to engage the tongue plate with the frame stud. Screw the nut, with spring, onto the damper shaft. Finally, insert the safety cotter pin and split the ends.

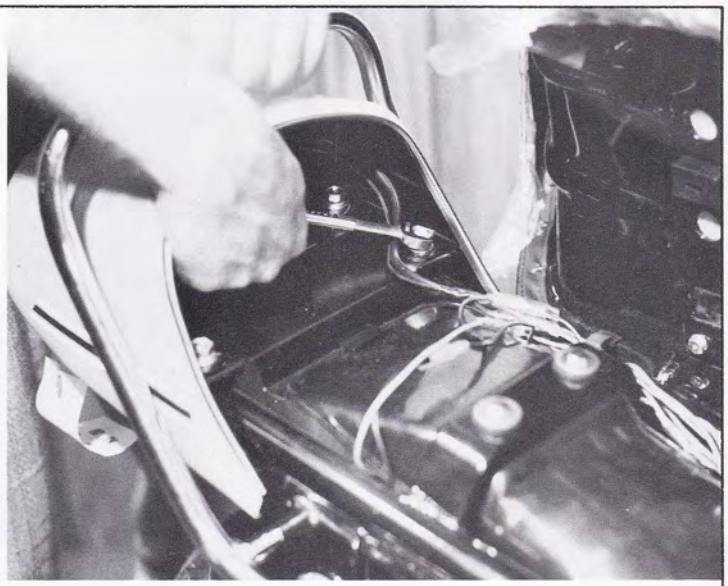


To mount the passenger grab rail, loosen the upper shock mount nuts on both sides. Slip the slotted ends of the grab rail tubes under the outer washer on the upper shock mounts, so that the grab rail lug is aligned with the hole in the turn signal mount bracket. Insert a bolt with a lockwasher and washer on each side, and tighten it securely. After tightening these bolts, tighten the upper shock mount nuts.

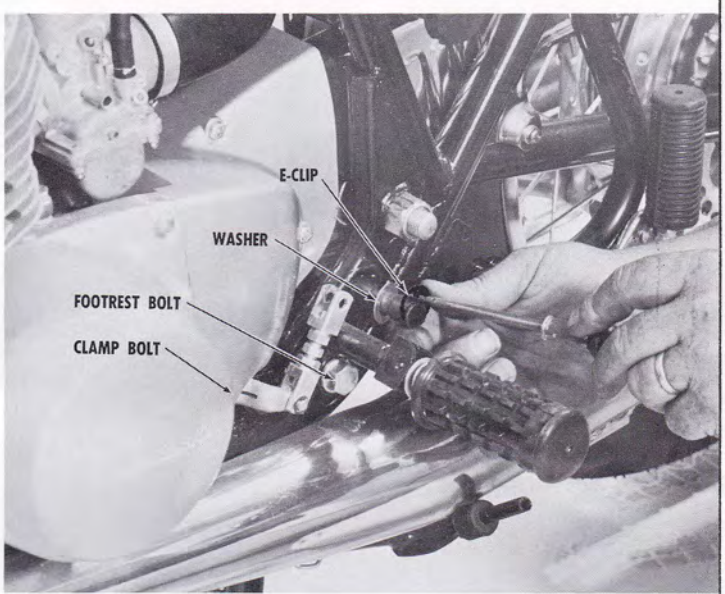


Position the seat backrest assembly under the grab rail and fasten it in place with four bolts, each with a washer and lockwasher. Connect the wires by color code:

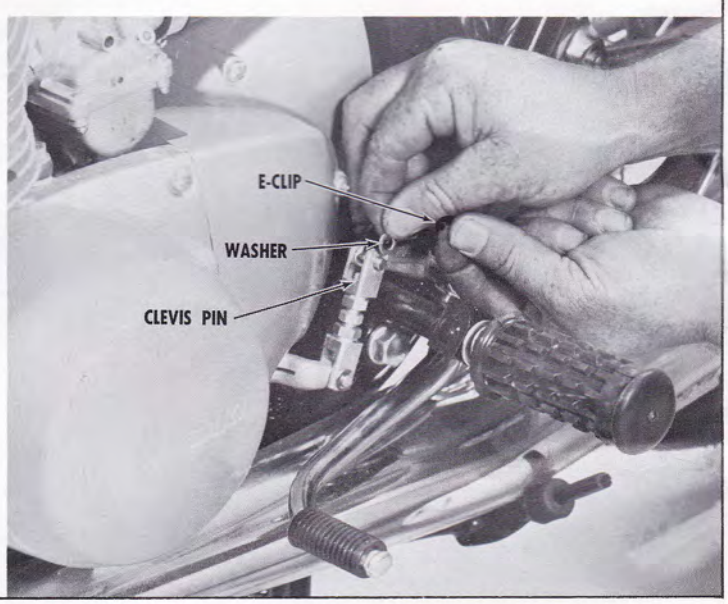
Black/Yellow to Black/Yellow
Red/White to Red
Blue/Red to Blue



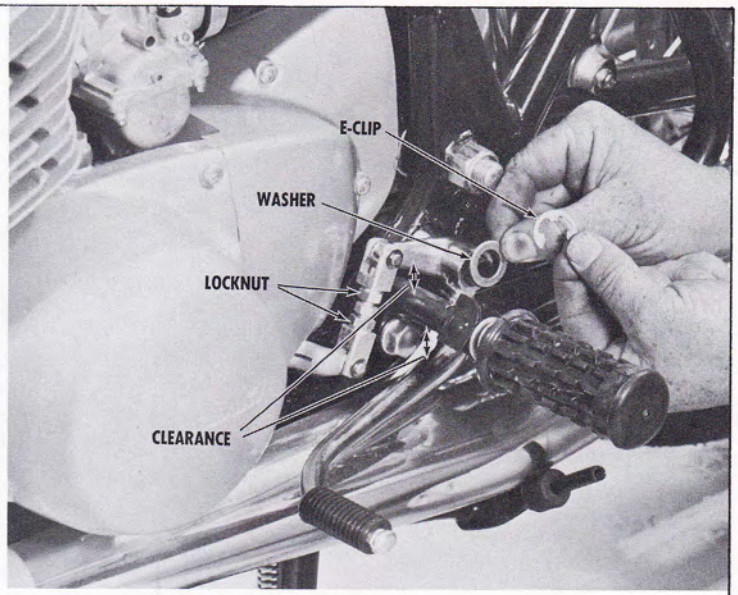
Pry off the E-clip and then remove the thrust washer from the pivot shaft. Grease the shaft. Tighten the shift shaft clamp bolt and footrest bolt.



Slide the shift lever onto the pivot shaft. Line up the hole in the shift lever and the turnbuckle, and then insert the clevis pin from behind. Install the washer and E-clip.



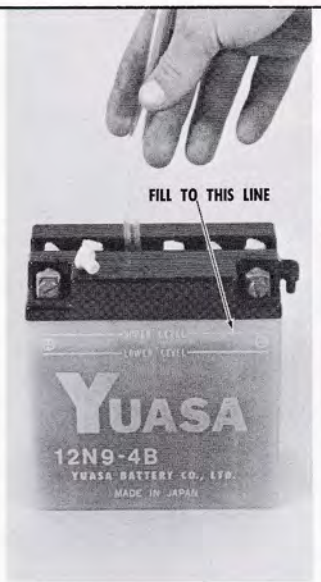
Install the thrust washer and E-clip on the pivot shaft. Adjust the turnbuckle so that the shift lever has equal clearance with the footrest bar on full upshift/downshift strokes. Tighten the locknuts after adjustment.

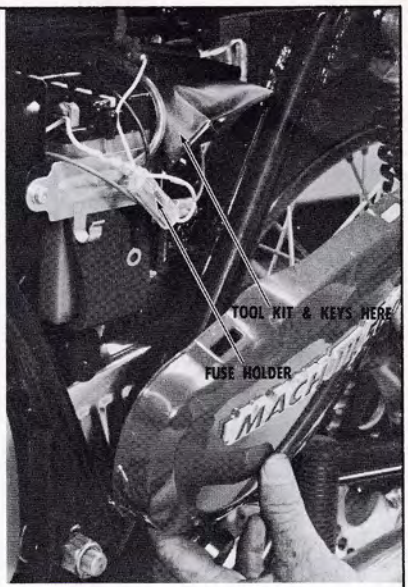


PREPARATION SERVICING

FILLING

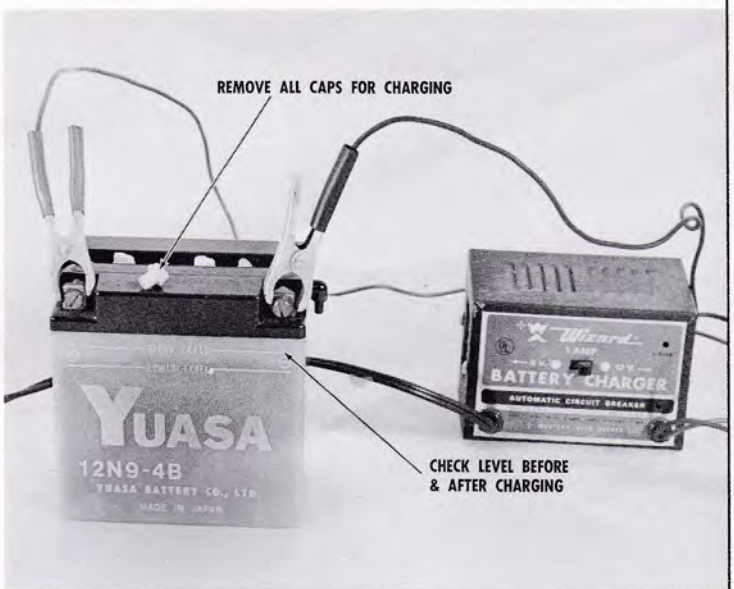
Remove the battery cover, and take the battery from the motorcycle. Be sure that the battery vent hose has been cut or the rubber band removed. Fill the battery to the top level with fresh electrolyte fluid, at a temperature of 85° F or less. Let the battery stand for 2 hours. If the fluid level drops below the upper line, top off with more electrolyte before charging.





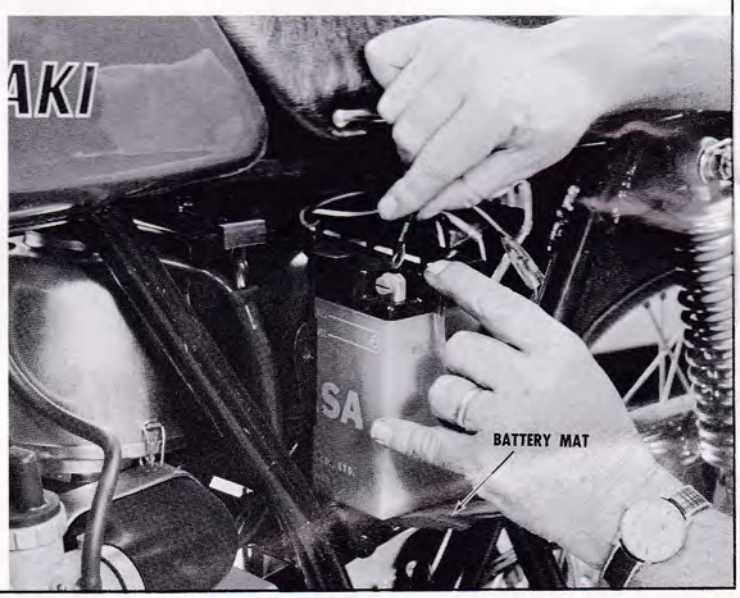
CHARGING

To avoid battery damage, remove all of the caps. Connect the battery charger leads (red to +, black to —) to the battery posts. CAUTION: Do not charge at a rate greater than 1 amp. Charge for 15 to 20 hours. Discontinue charging if the temperature rises to 115°F. If the electrolyte level drops, fill with **distilled water only.**

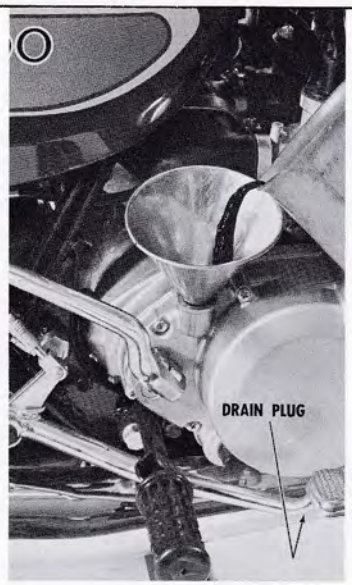


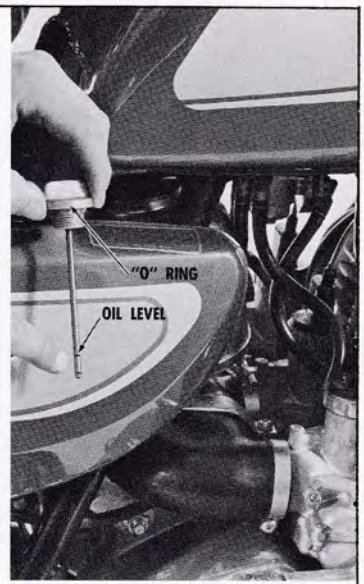
INSTALLATION

Wash off any spilled acid with fresh water. Be sure that the battery mat is in position to accept and protect the battery. Connect the white lead from the fuse to the (+) battery post. Push the insulation boot in position. Slide the battery into position halfway and then connect the black lead to the (—) post, as shown. Slide the battery into final position. Make sure that there is no opportunity for the battery post or leads to make contact with the battery box. Place the battery mat around the end of the battery and secure it with the clamp and screw. TAKE CARE NOT TO PINCH THE VENT TUBE. Route the vent tube forward, over the side panel screw bracket, behind the frame cross tube, inboard of the chain guard and between the engine cases and the swing arm tube.



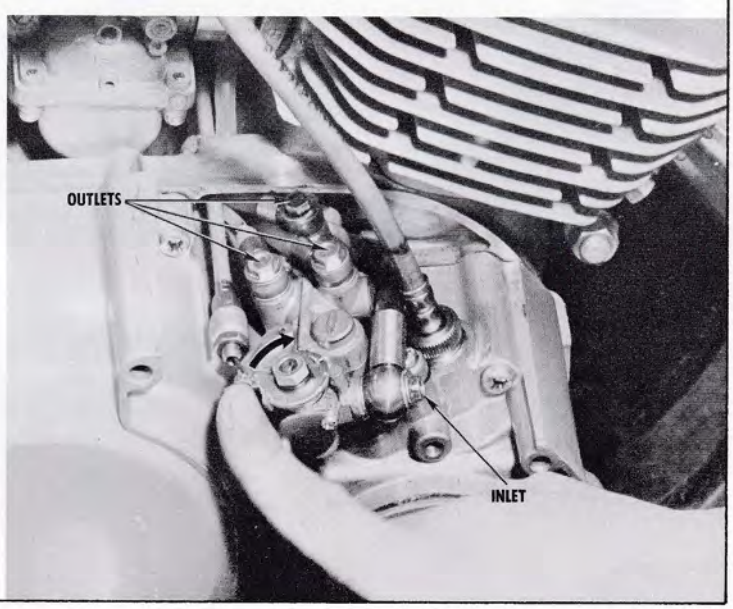
Remove the drain plug and drain the preservative oil from the transmission. Replace the drain plug, remove the oil filler cap and fill with SAE 10-W-40, 20W-50, or 10W-50 motor oil marked SD or SE until the level is between the two lines marked on the level gauge when the cap is threaded into the case. Make sure the O-ring is in place. Quantity: 1.3 qt., 1.2 liter or 42 fl. oz.

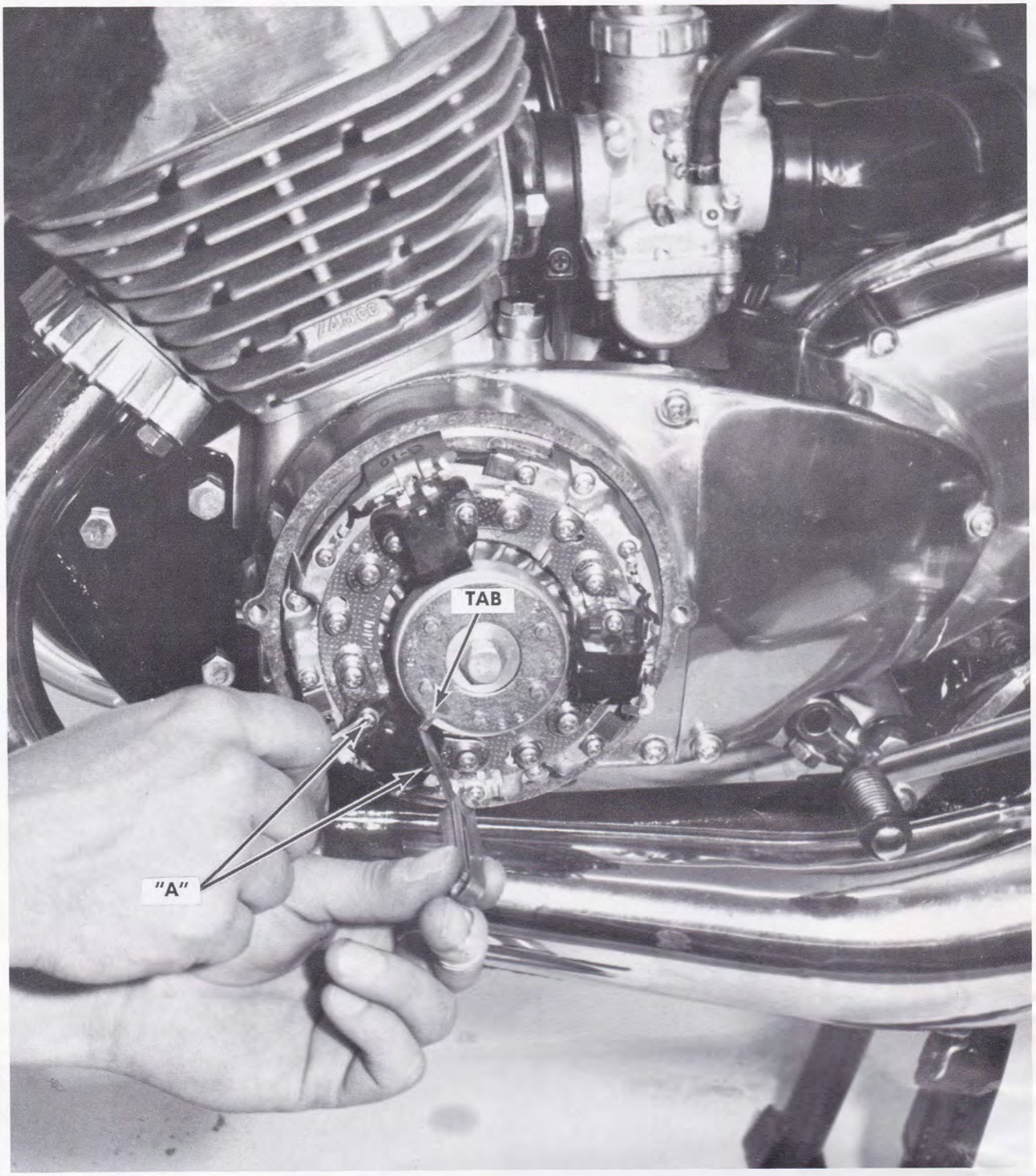




Remove the oil tank cap and fill the tank with a quality brand of 2-stroke oil. CHECK THE TIGHTNESS OF THE OIL TANK BANJO BOLT. Make sure the oil tank cap O-ring is in place before installing. CAUTION: The metal oil tank cap is not vented. The plastic vent tube from the top of the oil tank must be routed so that it will not be pinched by the seat. Be sure the vent tube is open.

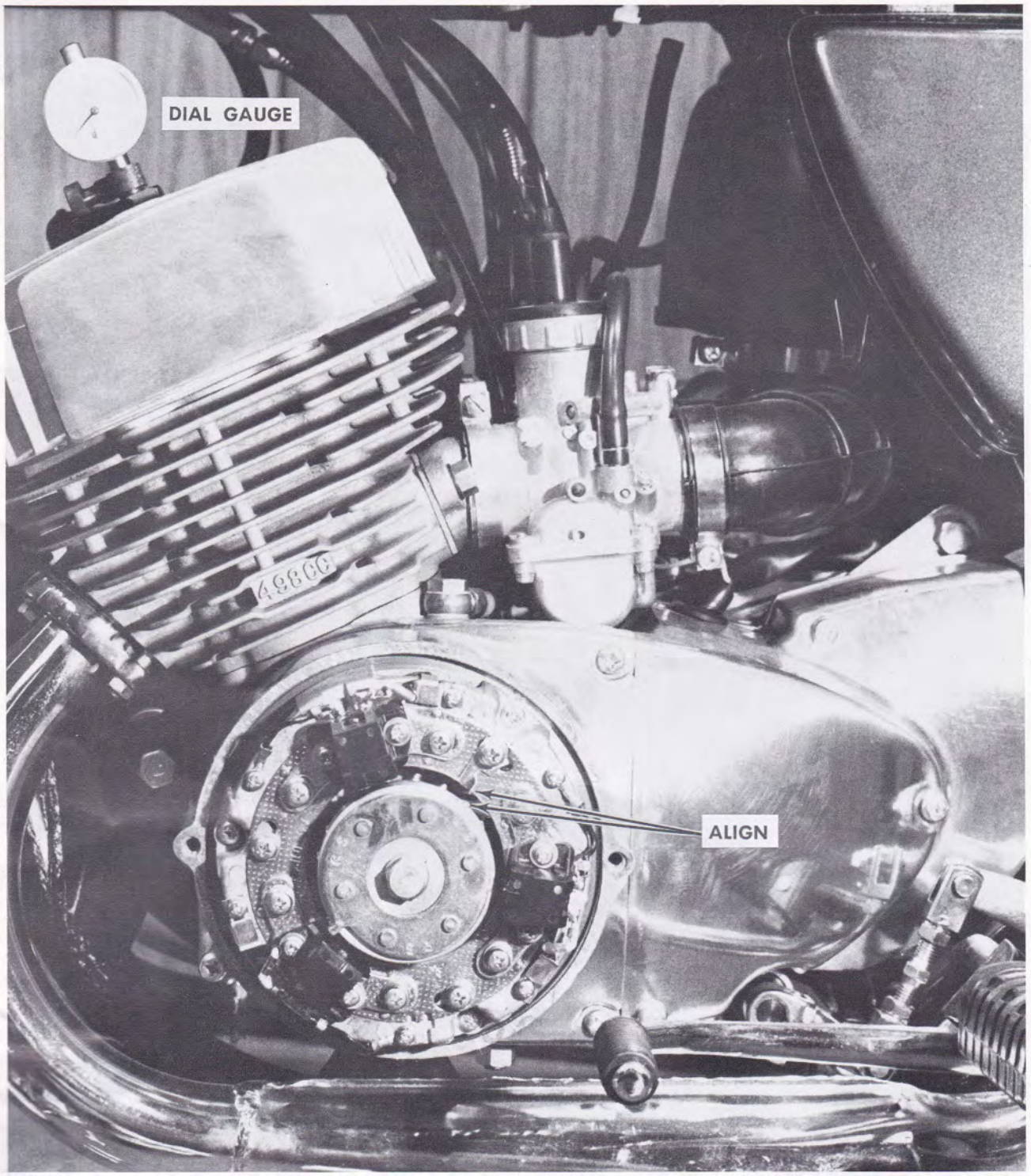
Bleed the oil tank hose of any air by loosening the inlet banjo bolt. After two minutes of oil flow, tighten the bolt. CAUTION: If the oil flow is slow or stops altogether, check the oil tank banjo bolt for clogging and the oil hose for pinching. Also check the tightness of the outlet banjo bolts. Start the engine and maintain engine speed at 1500-2000 rpm. Hold the control lever in the wide-open position to bleed air out of the oil pump body and oil pressure lines. When the exhaust starts smoking heavily, release the lever and stop the engine. CAUTION: If the exhaust does not smoke, or if bubbles are present in the oil pressure lines, check for blockage or loose connections.





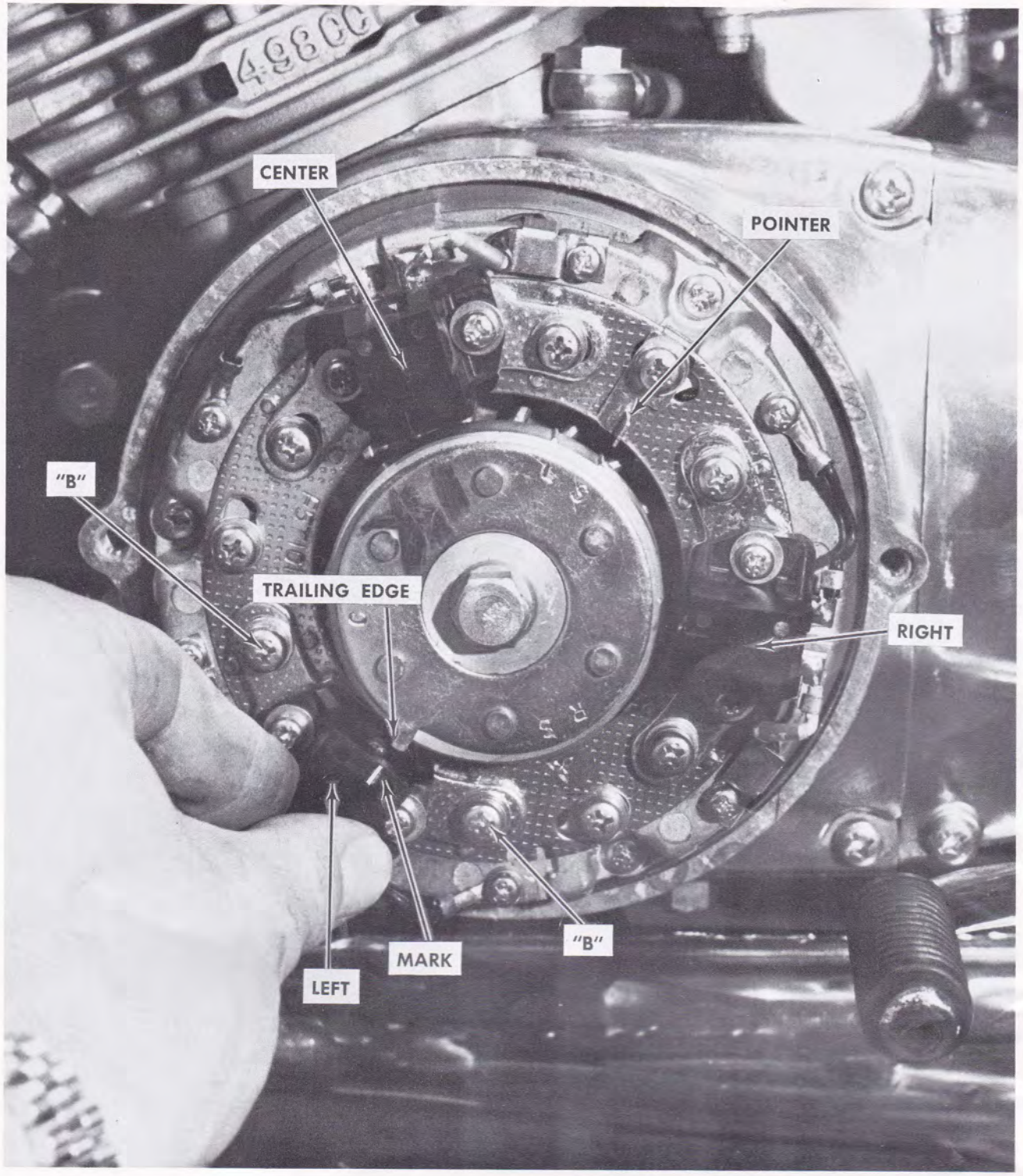
SETTING THE AIR GAP

Remove the ignition cover. Turn the engine until the tab on the signal generator rotor is aligned with the magnet in the center of one of the pick-ups. There should be a gap of 0.025 in. between the pick-up and the tab on the rotor. If the gap is incorrect, fully loosen the two screws "A" and adjust the pick-up by hand. Tighten the screws securely and repeat the procedure on the other two pick-ups. CAUTION: Do not pry on the pick-ups with a screwdriver or any other tool. Be sure the screws are completely loose before adjusting the pick-ups, or they may break.



STATIC IGNITION TIMING

Remove the sparkplug and fit a dial gauge to the left cylinder. Turn the crankshaft to top dead center and then rotate it clockwise until the dial gauge shows that the piston is 2.94mm BTDC. The pointer should now align with the "L" mark on the rotor. If it does not, bend the pointer accordingly. Take out the dial indicator and replace the sparkplug.



Turn the crankshaft in the direction shown until the "S" (static) mark nearest the "L" mark lines up with the pointer. The trailing edge of the rotor tab should align with the mark on the pick-up for the left-hand cylinder, as shown. If it does not, loosen the two screws "B" and adjust the pick-up accordingly. Tighten the screws securely after adjustment. Turn the crankshaft until the pointer aligns with the "S" mark nearest the "R" on the rotor. The trailing edge of the rotor tab should align with the mark on the pick-up for the right-hand cylinder. If it does not align, adjust the pick-up. Using the "S" mark nearest the "C" on the rotor, do the same for the center cylinder pick-up.

DYNAMIC IGNITION TIMING

Connect a stroboscopic timing light to the left-hand sparkplug wire. Start the engine and maintain steady speed of 4000 rpm. Using the timing light, check to see that the pointer aligns with the "L" mark on the rotor. If it does not align, loosen the two screws "B" and adjust the pick-up. After adjustment, tighten the screws securely. Repeat this procedure for the center and right-hand cylinder pick-ups, using the "C" and "R" marks, respectively.

STARTER CABLE ADJUSTMENT

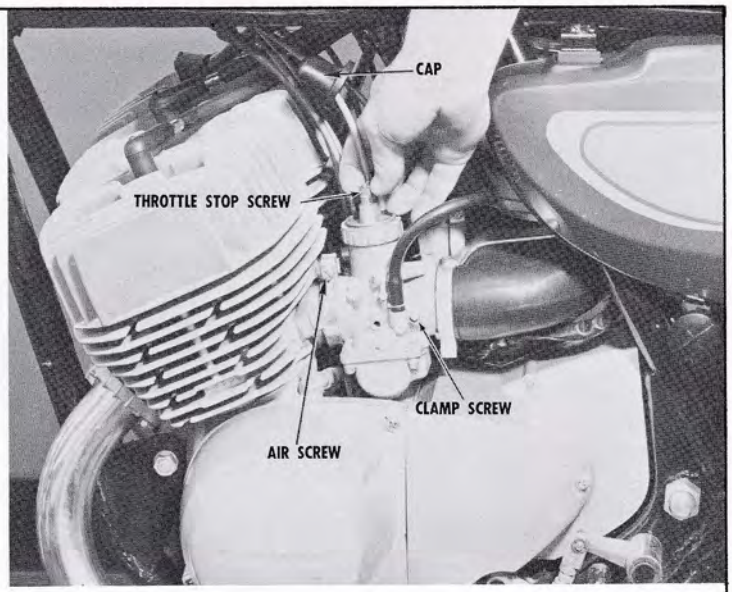
Loosen the locknut and turn the adjuster in until the starter cable has at least ¼" of slack. Do the same to the throttle cable.

Tug on the starter cables to check for free play, which should be ⅛" in each cable. NOTE: If there is no slack, the starter plunger will be held open slightly, causing rich mixtures from that carburetor. To adjust cable slack, pull up the rubber cap, loosen the locknut, and turn the adjuster. Tighten the locknut after adjusting. NOTE: The carburetor is removed here for clarity; it is not necessary to remove the carburetor for adjustment.

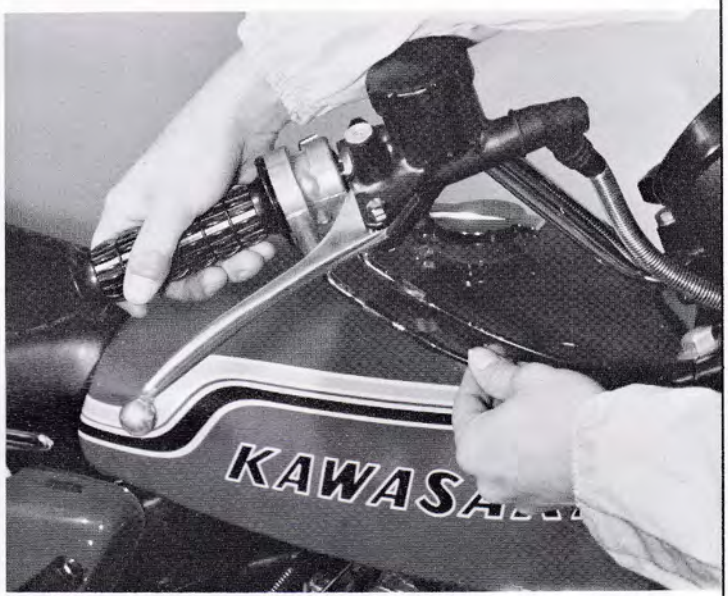
CARBURETOR SYNCHRONIZATION

For smooth, reliable performance, the three carburetors must all have the same slide position at any throttle opening. Turn in all 3 throttle stop screws completely so that the throttle valves rest on the bottom of the carburetor venturis; lift each throttle rod to make sure it has some play and is not holding the slide open. The slides are now in the same position: fully closed. Tug on the throttle cables to make sure each cable has the same amount of slack: 1/16". Correct any tight or loose cable by loosening the locknut and turning the cable adjuster. When all three cables have 1/16" slack, tighten the locknuts. After this operation, the three slides will be parallel at any throttle position from fully closed to wide open.

Turn in each air screw until it bottoms lightly, and then back it out 1¼ turns. Start the engine and warm it up for a minute or two; then back out the throttle stop screws evenly until a stable idle of 1300-1500 rpm is obtained. Hold your hands over the mufflers to see if the exhaust pressure is balanced among the three cylinders. To balance the exhaust, turn the throttle stop screws — back out the screw on a "weak" cylinder; turn in the screw on a "strong" cylinder. When the idle is balanced, wrap electrical tape around the throttle stop screw and cable adjuster to prevent loosening.

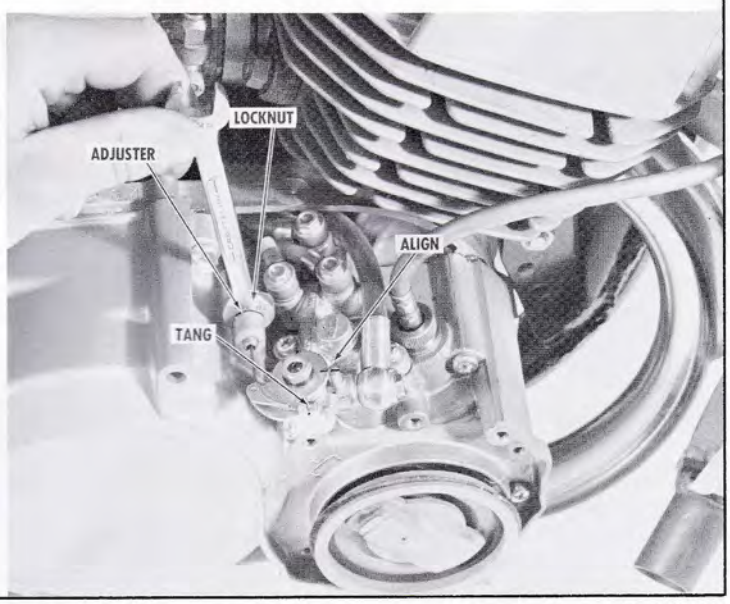


Finally, lengthen the cable adjuster on the twistgrip so that there is approximately 1/16"-1/8" play in the throttle. Do the same to the starter cable. Install the carburetor rubber caps, and check the tightness of the carburetor mounting clamps.



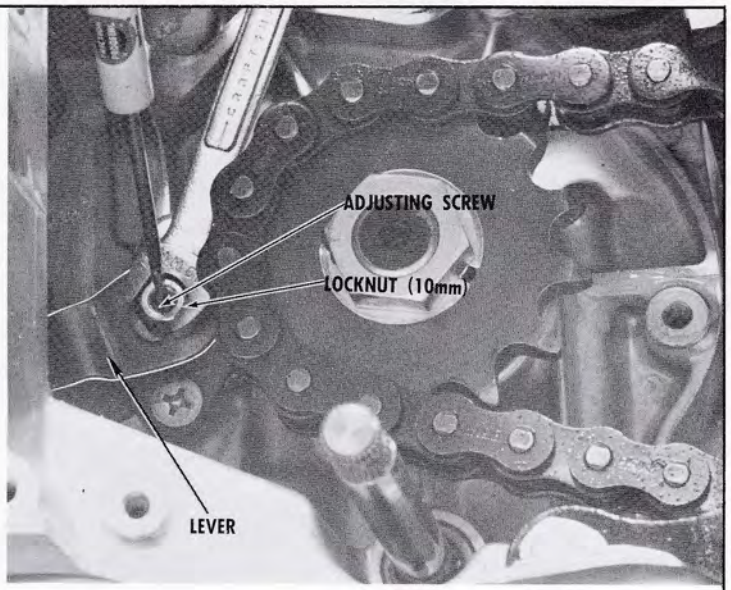
OIL PUMP ADJUSTMENT

Inspect the oil pump adjustment only after adjusting the carburetors. The mark on the oil pump lever should align with the mark on the oil pump body with the throttles just beginning to open. To correct the pump lever position, loosen the locknut and turn the cable adjuster. Tighten the locknut. At the same time, make sure the lever tang is bent over to retain the cable nipple.



CLUTCH ADJUSTMENT

Remove the sprocket cover and check the position of the clutch release lever, which should be at approximately 8 o'clock, as shown. Correct the lever position by turning the clutch cable adjuster under the gas tank. Loosen the locknut on the release screw and then turn the screw clockwise until you just start to feel clutch spring tension. Hold the screw in this position while tightening the locknut. Check the tightness of the sprocket nut, making sure the washer is bent, and then replace the sprocket cover.

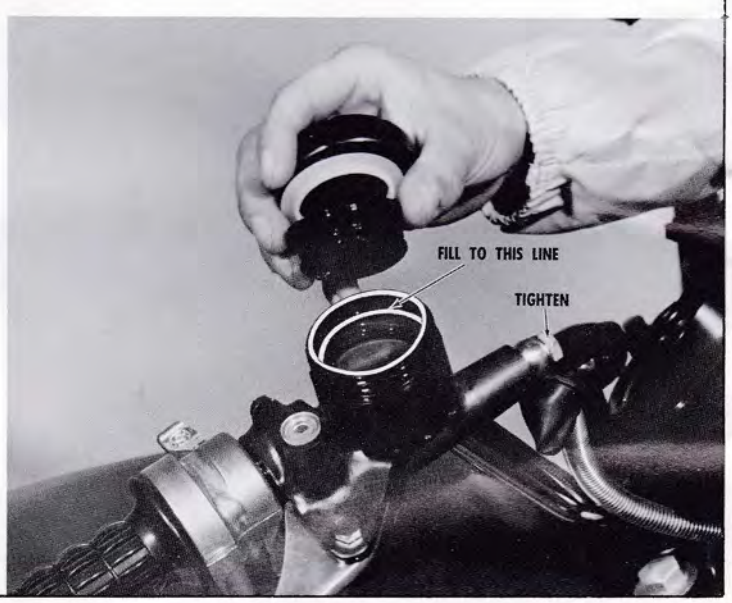


Turn the clutch cable adjuster on the handlebar to obtain a ⅛" gap when you just start to feel clutch spring tension, and then tighten the thumbwheel.

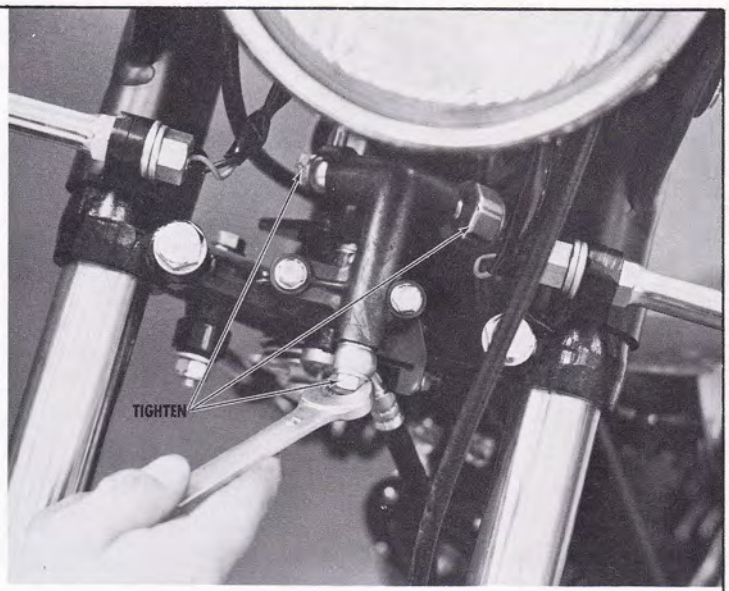
Check the fluid level in the brake master cylinder reservoir with the reservoir held as nearly level as possible. If the fluid level is below the line on the inside wall of the reservoir, fill it with one of the following recommended brake fluid brands:

Atlas Extra Heavy Duty
Shell Super Heavy Duty
Texaco Super Heavy Duty
Wagner Lockheed Heavy Duty

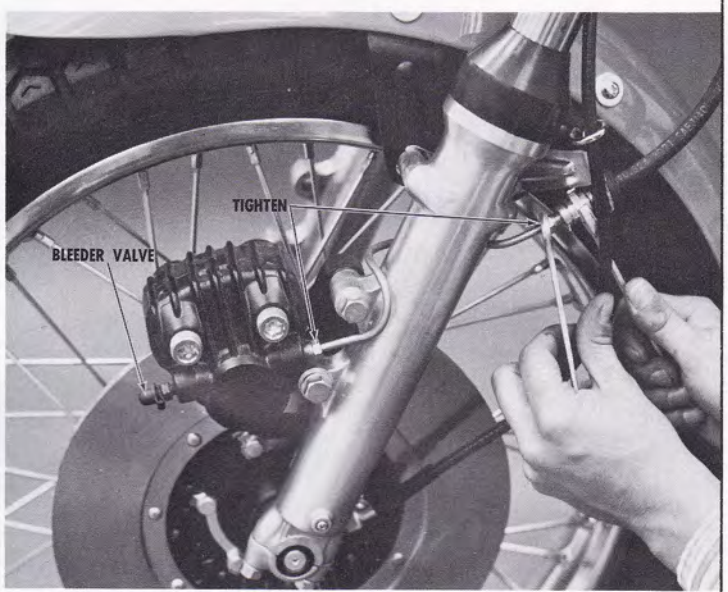
Check to be sure that the master cylinder banjo bolt is tightened to 20 lb.-ft. of torque.



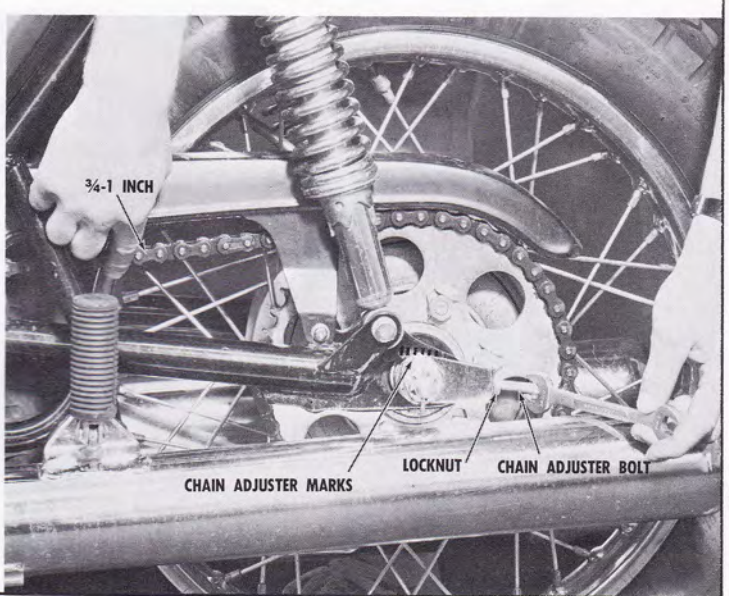
Check to be sure both banjo bolts on the three-way fitting are tightened to 20 lb.-ft. of torque. The brakelight switch should be tightened to 13 lb.-ft. of torque



Check to be sure that these hydraulic fittings are tightened to about 12.5 lb.-ft. of torque. The bleeder valve should be tightened to about 6.5 lb.-ft. of torque.

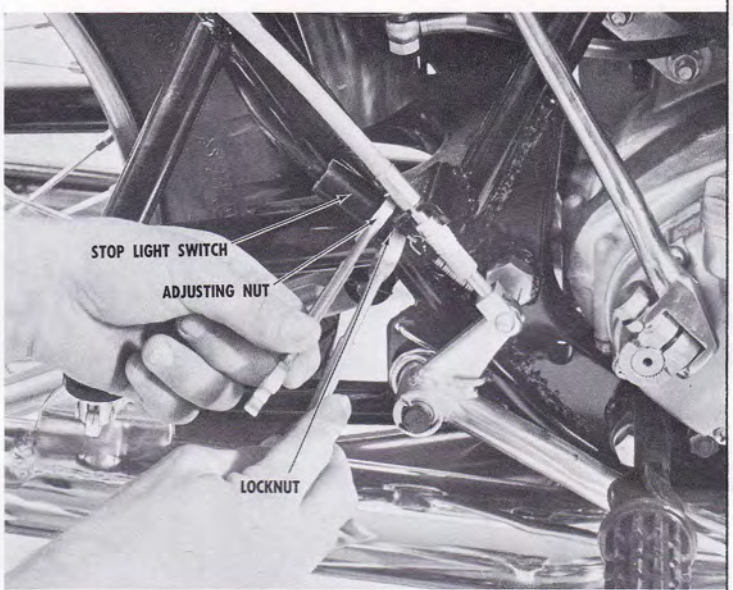


Remove the cotter pin and loosen the rear axle nut. Loosen the chain adjuster locknuts on either side of the swing arm. Turn the adjuster bolts until the drive chain has just less than one inch of slack on the lower run of chain, midway between the sprockets. Tighten the locknuts and axle nuts after adjustment. CAUTION: Make sure the cotter pin is replaced. NOTE: To insure proper wheel and sprocket alignment, make sure the marks on the chain adjuster are positioned at equal divisions on the swing arm tabs.

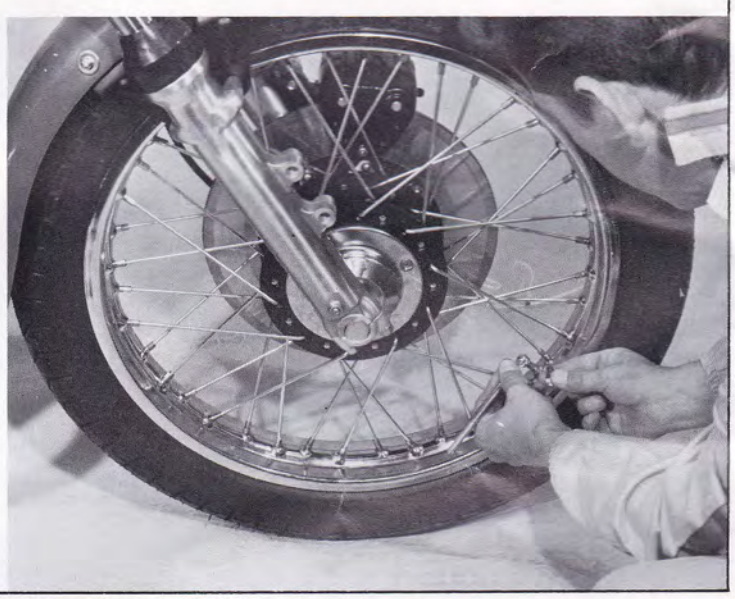


The rear brake pedal should have about one inch of free movement. If it doesn't, turn the adjuster accordingly. Adjust both rear shocks to the softest position.

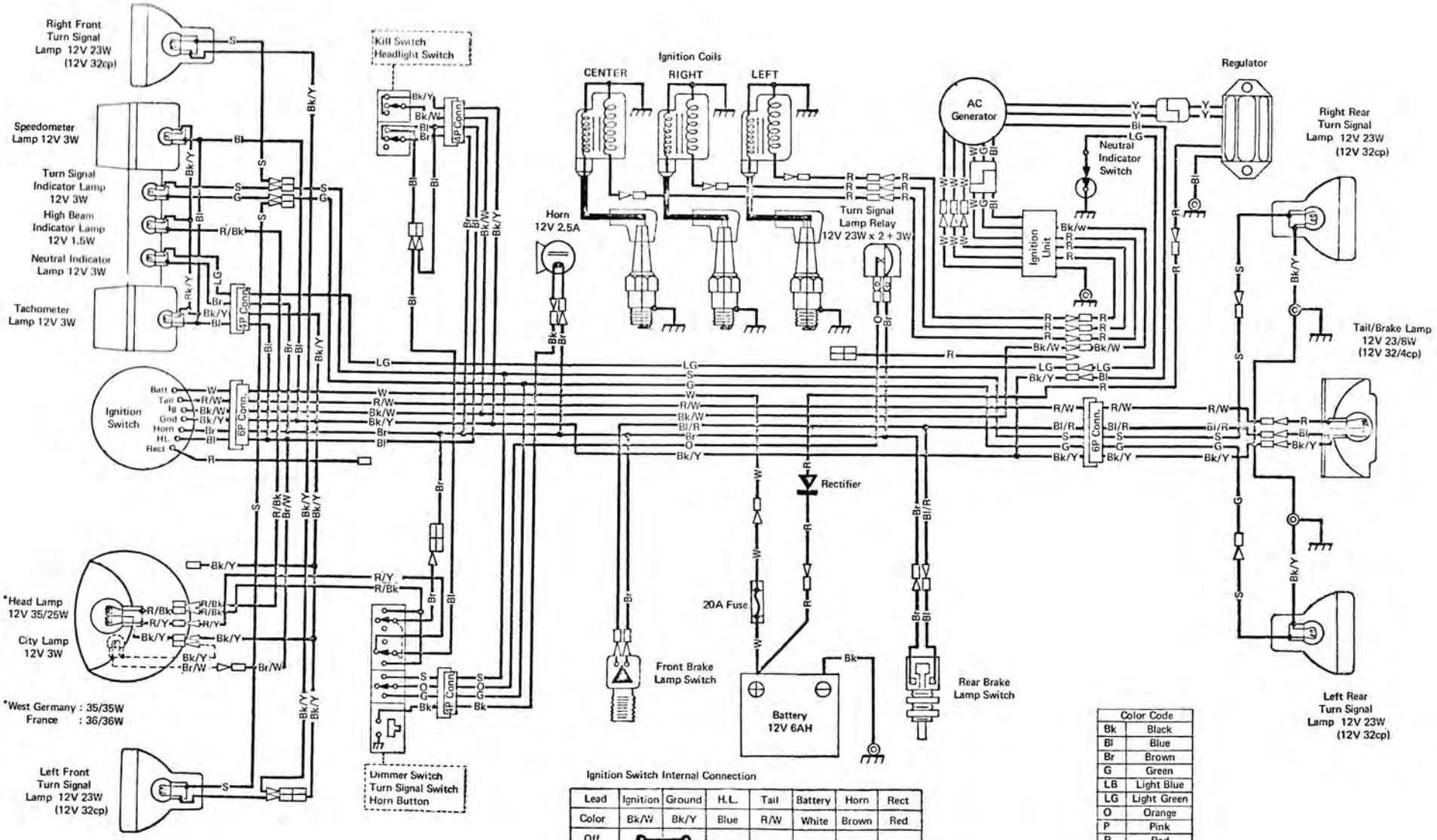
Turn the main switch on, and then operate the front and rear brakes individually. The front brake light switch does not require adjustment. The brake light should turn on when the rear brake pedal travels ½" to ¾". Adjust the brake lamp switch by loosening the locknut and turning the adjusting nut. Tighten the locknut after adjustment.



To prevent flat-spotting, the tires are overinflated before crating. Reduce the pressures to: 26 psi in the front tire, and 31 psi in the rear.



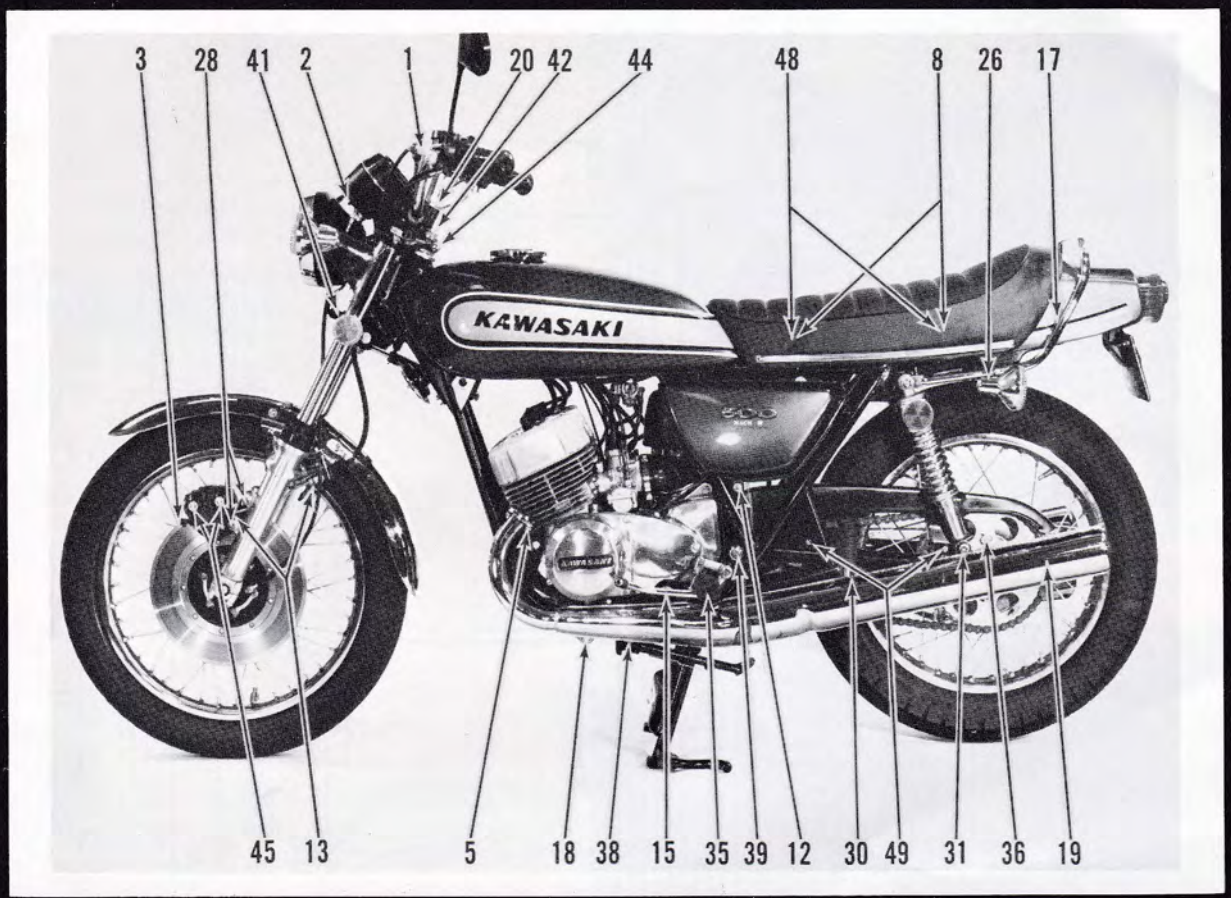
Wiring Diagram



Ignition Switch Internal Connection

Lead	Ignition	Ground	H.L.	Tail	Battery	Horn	Rect
Color	Bk/W	Bk/Y	Blue	R/W	White	Brown	Red
Off	●	●					
On			●	●	●	●	●
Park	●	●		●	●		

Color Code	
Bk	Black
Bl	Blue
Br	Brown
G	Green
LB	Light Blue
LG	Light Green
O	Orange
P	Pink
R	Red
S	Slate
W	White
Y	Yellow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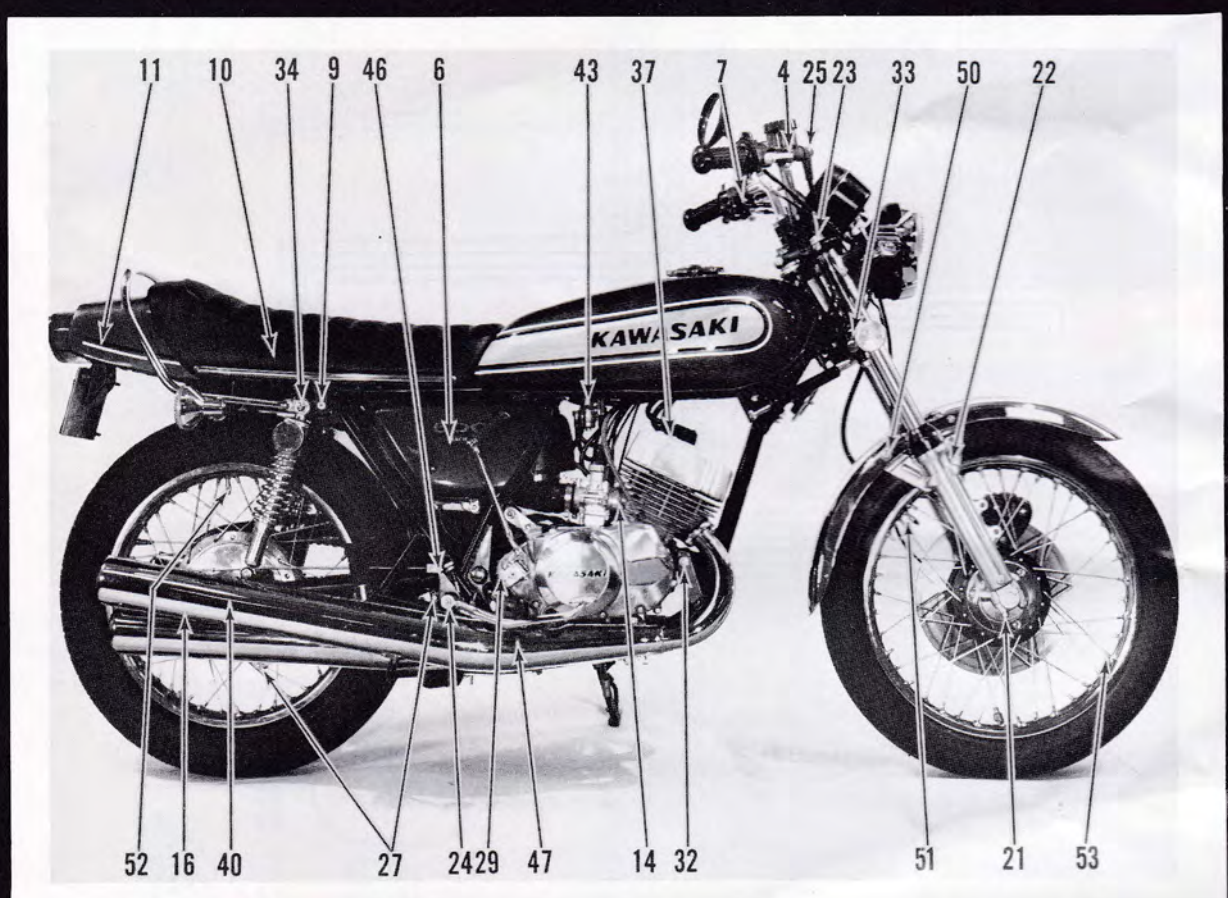
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KAWASAKI MODEL H1-D
PRE-SALE SERVICE
CHECK THESE ITEMS BEFORE DELIVERY

ITEM	DESCRIPTION	TOOL SIZE	REMARKS
1	Clutch Lever Pivot Nut	8mm	
2	Instrument Nuts (4)	8mm	
3	Brake Bleeder Valve	10mm	6.5 lb.-ft.
4	Brake Lever Pivot Nut	10mm	
5	Exhaust Flange Nuts (6)	10mm	
6	Oil Tank Bolts (2)	10mm	
7	Lever Bracket Clamp Bolts (3)	10mm	4.5 lb.-ft.
8	Seat Hinge Bolts (4)	10mm	
9	Seat Latch Bolts (4)	10mm	
10	Rear Fender Bolts (2)	10mm	
11	Tail Lamp Bolts (5)	10mm	
12	Side Cover Bolts (2)	10mm	
13	Hydraulic Pipe Fittings (2)	10mm	12.5 lb.-ft.
14	Carburetor Manifold Nuts (6)	12mm	
15	Shift Lever Bolt	13mm	
16	Rear Brake Cam Lever Bolt	13mm	
17	Seat Backrest Bolts (4)	13mm	
18	Front Muffler Mount Bolts (2)	13mm	
19	Chain Adjuster Locknuts (2)	13mm	
20	Handlebar Clamp Bolts (4)	13mm	12 lb.-ft.
21	Front Axle Clamp Bolts (4)	13mm	14 lb.-ft.
22	Front Fender Mount Bolts (4)	13mm	
23	Top Triple Clamp Bolts (3)	13mm	
24	Rear Brake Pedal Pivot Nut	13mm	
25	Brake Hose Banjo Bolts (3)	14mm	20 lb.-ft.
26	Rear Turn Signal Mount Nuts (2)	14mm	
27	Brake Torque Link Nuts (2)	14mm	w/safety clips
28	Caliper Bracket Bolts (2)	14mm	
29	Kickstarter Lever Bolt	14mm	
30	Passenger Peg Nuts (2)	14mm	w/lockwashers
31	Lower Shock Mount Bolts (2)	14mm	
32	Engine Mount Nuts (5)	17mm	
33	Lower Triple Clamp Bolts (2)	17mm	
34	Top Shock Mount Nuts (2)	17mm	
35	Footpeg Bolts (2)	17mm	
36	Sprocket Nuts (6)	17mm	w/lockplates
37	Cylinder Head Nuts (12)	17mm	19 lb.-ft.
38	Sidestand Mount Bolt	17mm	
39	Swingarm Pivot Nut	24mm	150 lb.-ft.
40	Rear Axle Nut	27mm	w/cotter Pin 55 lb.-ft.
41	Hydraulic Brake Light Switch	27mm	13 lb.-ft.
42	Steering Stem Bolt	27mm	
43	Fuel Valve Nut	30mm	
44	Steering Bearing Nut	42mm	Spanner type. Do not bind. No excessive play
45	Caliper Bolts (2)	10mm Allen Head	
46	Rear Brake Rod Link Pin	Cotter Pin	
47	Center Stand Pivot Joints (2)	Washer & Cotter Pin	
48	Seat Hinge Pins (2)	Washer & Safety Clip	
49	Chain Guard Screws (2)	#2 Phillips	Check chain clearance to guard
50	Front Fender Screws (4)	#2 Phillips	
51	Tire Pressure — Front	26 psi	
52	Tire Pressure — Rear	31 psi	
53	Spoke Nipples		Check & Tighten

KAWASAKI MODEL H1-D
SERVICE SPECIFICATIONS

CARBURETOR	
Manufacture & Type	Mikuni VM28SC
Float Level	24.0 ± 1mm
Fuel Level	30.0 ± 1mm
Main Jet Size & Type	#92.5 R
Needle Jet & Primary Choke (mm)	#0-4/8
Jet Needle & Clip Position	#5DJ19-4th
Pilot Jet	#30
Throttle Valve Cutaway	#2.0
Air Screw (Turns Out)	1¼
IGNITION	
Air Gap	0.025"
Ignition Timing — Static	2.94mm BTDC
Ignition Timing — Dynamic	23° BTDC at 4000 RPM
Sparkplug Type	NGK B-9HS
Sparkplug Gap	0.040"
LUBRICANTS	
Front Fork Oil Type	SAE 10W
Front Fork Oil Quantity	160cc
Front Fork Oil Level (from top)	448mm
Transmission Oil Type	SAE 10W-40, 20W-50, 10-W50 SD or SE
Transmission Oil Quantity	1200cc, 1.3 qt., 42 fl. oz.
Brake Fluid	Atlas Extra Heavy Duty Shell Super Heavy Duty Texaco Super Heavy Duty Wagner Lockheed Heavy Duty