

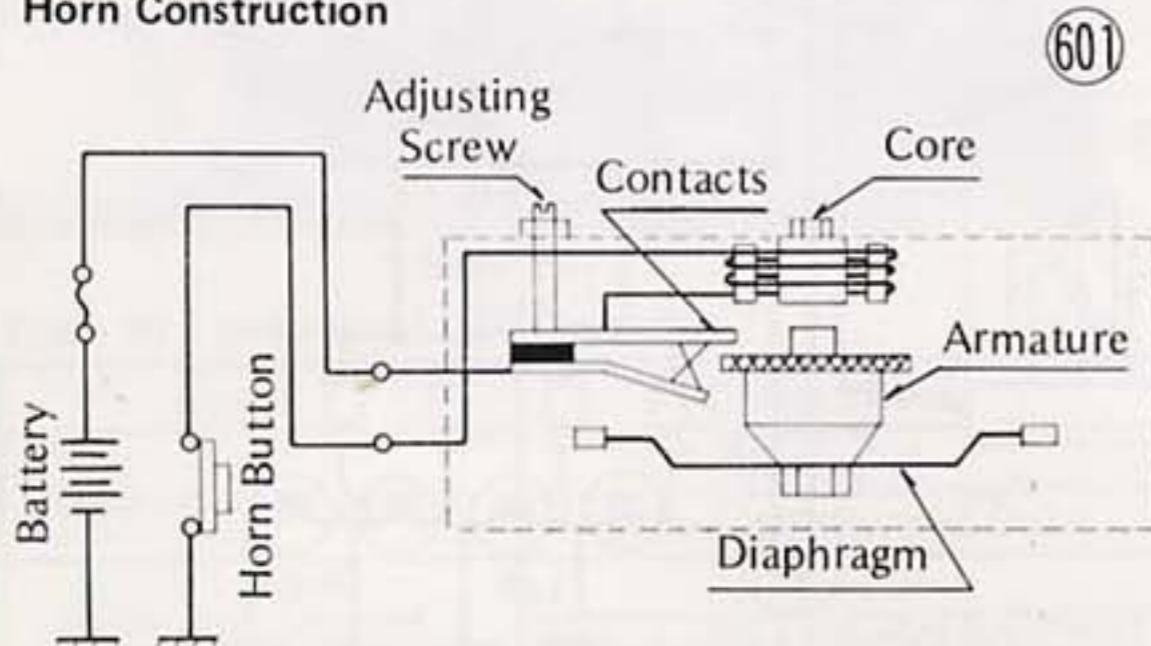


- (2) Both right or both left turn signals come on and stay on or flash too slowly:
- Check that battery voltage is not low.
  - Check that all wiring connections are good.
  - Check that the turn signal bulbs and indicator bulb are of the correct wattage.
  - If all of the above check good, replace the relay.
- (3) A single light on one side comes on and stays on:
- Either the light that does not come on is burned out or of the incorrect wattage, or the wiring is broken or improperly connected.
- (4) Neither light on one side comes on:
- Unless both lights for that side are burned out, the trouble is with the turn signal switch.
- (5) Flashing rate is too fast:
- If this occurs on both the right and left sides, check that the battery is not being overcharged (indicating a defective regulator). If the dynamo and the battery voltage are normal, replace the turn signal relay.
  - If this occurs on only one side, one or both of the turn signal bulbs are of too high a wattage.

**HORN**

The horn circuit and construction are shown in Fig. 601. When the horn button is pressed with the ignition switch on, the horn is grounded to complete the horn circuit. Current then flows through the horn contacts and horn coil, magnetizing the iron core. The magnetized iron core pulls on the armature and diaphragm assembly, the movement of which pushes open the contacts, interrupting the current flow. Since the core now loses its magnetism, the armature and diaphragm assembly springs back to its original position, closing the contacts. This cycle repeats until the horn button is released. Since each cycle takes only a fraction of a second, the diaphragm moves fast enough to produce sound.

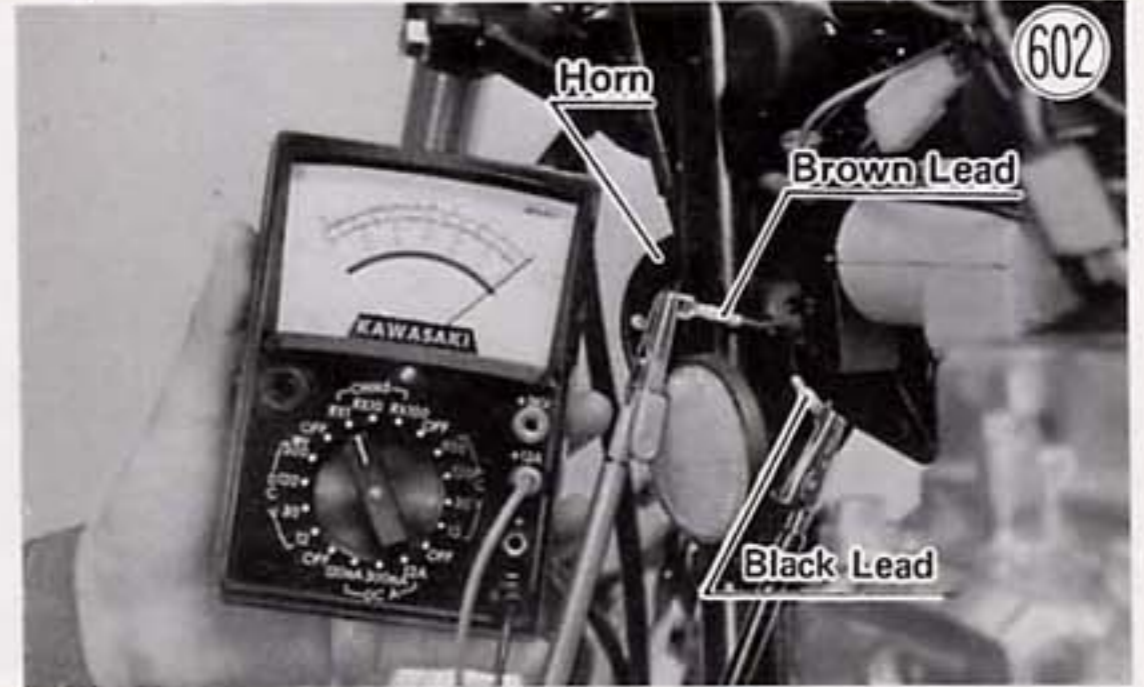
**Horn Construction**



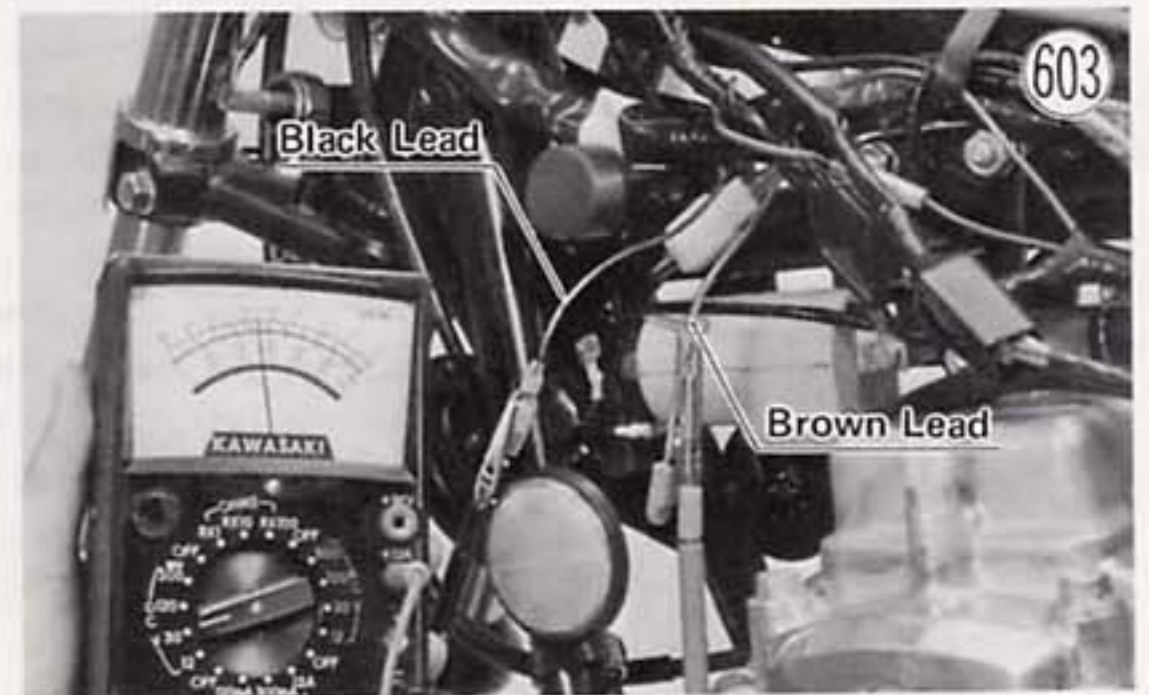
The contacts wear down after long use, requiring adjustment from time to time (Pg. 22). If the horn itself is determined to be at fault and adjustment fails to correct the trouble, the contacts or some other component in the horn is defective. The horn cannot be disassembled and must be replaced if defective.

**Horn trouble**

- Check that battery voltage is normal.
- Disconnect the leads to the horn, and connect to the horn leads a multimeter set to the R x 1 range to check for continuity (close to zero ohms). If the reading is several ohms or if there is no reading at all, replace the horn.



- If the reading is very close to zero, set the multimeter to the 30 VDC range, and connect the meter to the leads that were disconnected from the horn. The + meter lead goes to the brown lead, and the - meter lead goes to the black lead. With the ignition switch on, press the horn button. The meter should register battery voltage. If it does not, the fuse, ignition switch, horn button, or the wiring is at fault.
- If the meter does show battery voltage, indicating that the horn trouble lies within the horn itself, and adjustment fails to correct the trouble, replace the horn.



**NOTE:** Do not loosen the armature mounting since doing so would alter the armature position such that the horn would probably have to be replaced.

**SPEEDOMETER, TACHOMETER**

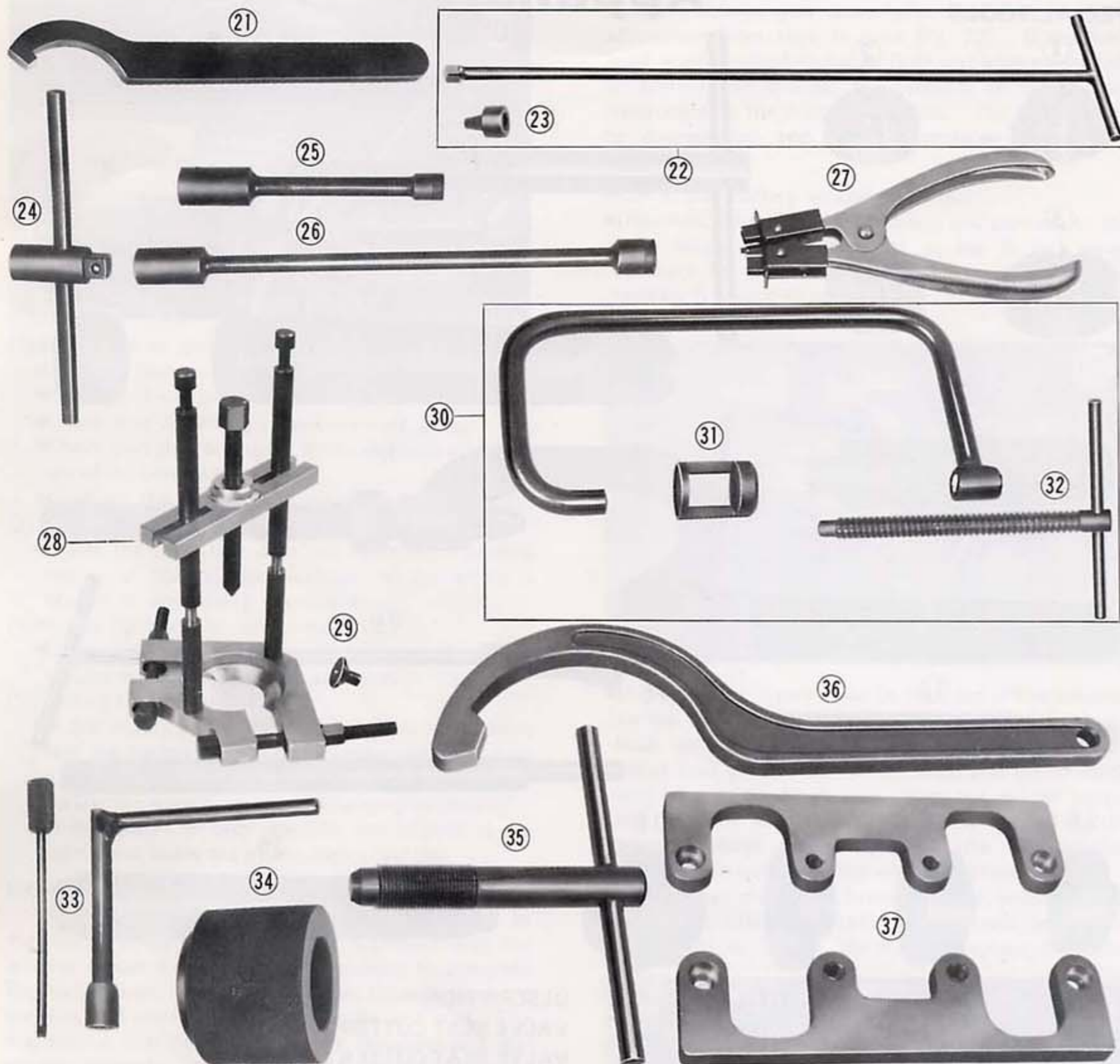
The speedometer and the tachometer are sealed units which cannot be disassembled. If either fails to work satisfactorily, it must be replaced as a complete unit. The speedometer and tachometer illumination lights and the indicator lights are independent and can be removed for replacement if necessary.

# Appendix

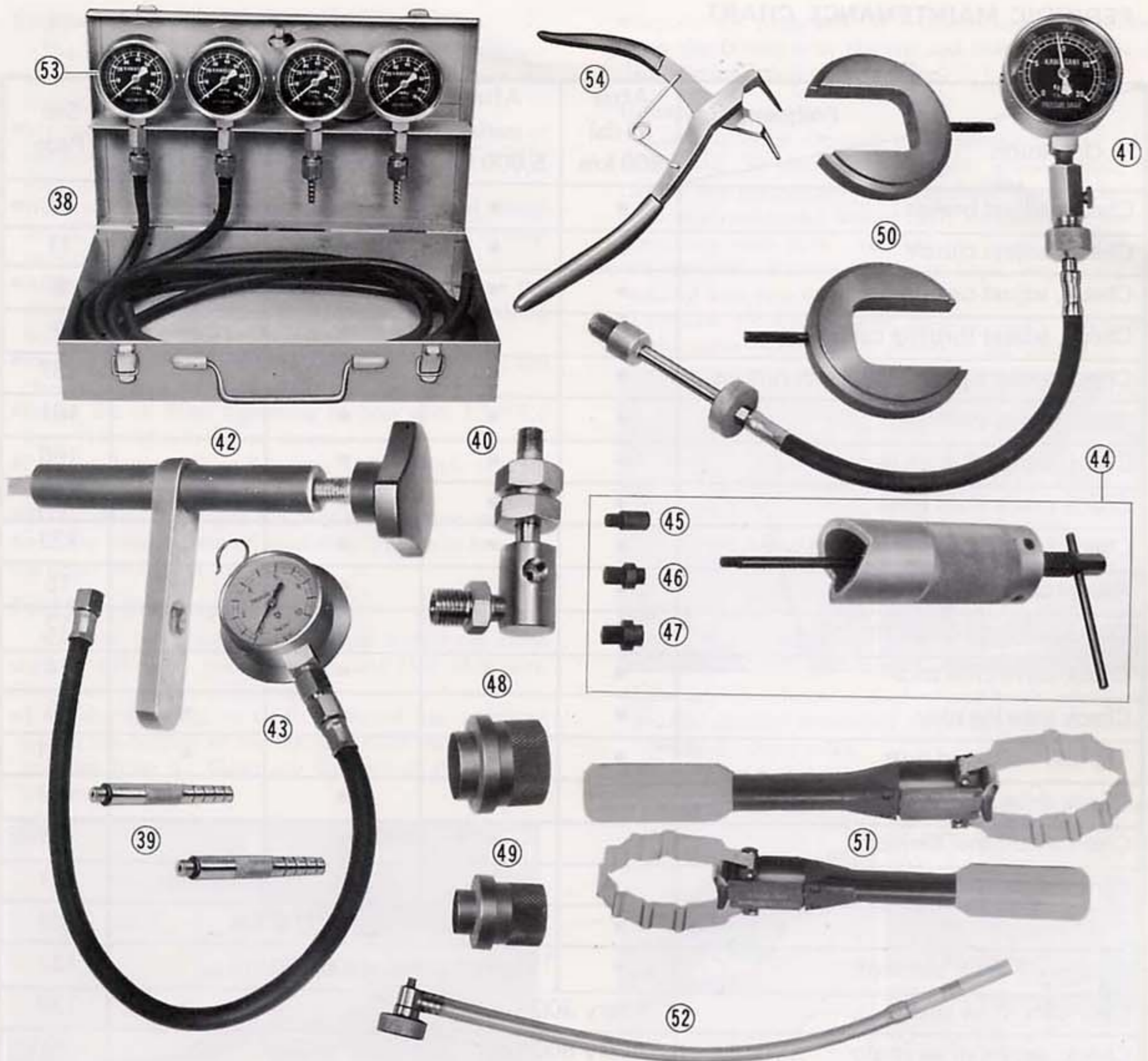
## SPECIAL TOOLS



REF.NO.	TOOL NO.	DESCRIPTION
1	57001-101	VALVE SEAT CUTTER 30°
2	57001-102	VALVE SEAT CUTTER 45°
3	57001-360	INLET VALVE SEAT CUTTER 75°
4	57001-361	EXHAUST VALVE SEAT CUTTER 75°
5	57001-106	VALVE SEAT CUTTER HOLDER
6	57001-162	VALVE GUIDE REAMER
7	56019-111	MASTER CYLINDER STOPPER REMOVER
8	57001-132	MASTER CYLINDER RING DRIVER
9	57001-137	STEM BEARING DRIVER
10	57001-294	STEM BEARING DRIVER ADAPTER
11	57001-139	BEARING DRIVER HOLDER
12	56019-040	ENGINE SPROCKET HOLDER
13	57001-380	TRANSMISSION CIRCLIP DRIVER
14	57001-110	SPARK PLUG WRENCH
15	57001-163	VALVE GUIDE ARBOR
16	57001-288	WHEEL BEARING DRIVER "A"
17	57001-289	WHEEL BEARING DRIVER "B"
18	57001-290	WHEEL BEARING DRIVER "C"
19	57001-138	STEM CUP DRIVER
20	57001-285	SHIFT DRUM BEARING DRIVER



REF.NO.	TOOL NO.	DESCRIPTION
21	57001-134	STEM NUT WRENCH
22	57001-179	FRONT FORK CYLINDER HOLDER ASSEMBLY
23	57001-181	FRONT FORK CYLINDER HOLDER ADAPTER
24	57001-370	CYLINDER HEAD BOLT WRENCH HANDLE
25	57001-371	CYLINDER HEAD BOLT WRENCH SOCKET 10 mm
26	57001-372	CYLINDER HEAD BOLT WRENCH SOCKET 13 mm
27	57001-115	PISTON RING PLIERS
28	57001-158	STEM BEARING PULLER
29	57001-166	STEM BEARING ADAPTER
30	57001-241	VALVE SPRING COMPRESSOR ASSEMBLY
31	57001-242	VALVE SPRING COMPRESSOR ADAPTER
32	57001-244	VALVE SPRING COMPRESSOR CENTER SHAFT
33	57001-167	BALANCE ADJUSTER
34	57001-191	FRONT FORK OIL SEAL DRIVER
35	57001-254	DYNAMO ROTOR PULLER
36	57001-255	DYNAMO ROTOR HOLDER
37	57001-165	CYLINDER HEAD HOLDING PLATE



REF.NO.	TOOL NO.	DESCRIPTION
38	57001-127	VACUUM GAUGE
39	57001-401	VACUUM GAUGE ADAPTER
40	57001-400	OIL PRESSURE GAUGE ADAPTER
41	57001-123	COMPRESSION GAUGE
42	57001-350	VALVE CLEARANCE ADJUSTER
43	57001-164	OIL PRESSURE GAUGE
44	57001-910	PISTON PIN PULLER ASSEMBLY
45	57001-912	ADAPTER "A" - Not used for KZ400
46	57001-913	ADAPTER "B"
47	57001-914	ADAPTER "C" - Not used for KZ400
48	57001-265	KICK SHAFT OIL SEAL GUIDE
49	57001-264	SHIFT SHAFT OIL SEAL GUIDE
50	57001-340	PISTON BASE
51	57001-921	PISTON RING COMPRESSOR ASSEMBLY
52	57001-208	FUEL LEVEL GAUGE
53	57001-226	VACUUM GAUGE
54	57001-154	RETAINING RING PLIERS

PERIODIC MAINTENANCE CHART

Operation	Frequency	After initial 800 km	After initial 5,000 km	Every subsequent 5,000 km	Every subsequent 10,000 km	See Page
Check, adjust brakes		•	•	•		17
Check, adjust clutch		•	•	•		11
Check, adjust carburetors		•	•	•		9
Check, adjust throttle cables		•	•	•		9
Check spoke tightness and rim runout		•	•	•		137
Clean fuel system		•	•	•		181
Clean, set spark plug gaps		•	•	•		166
Check brake fluid level		•	•	•		143
Check tire pressure and tread wear		•	•	•		133
Adjust camshaft chain		•		•		15
Check, adjust points, timing		•		•		12
Check valve clearance		•		•		14
Check steering play		•			•	16
Tighten bolts and nuts		•			•	183
Check drive chain wear			•	•		139
Clean air cleaner element			•	•		101
Perform general lubrication			•	•		181
Change engine oil		•	Every subsequent 3,000 km			181
Change oil filter element		•	Every subsequent 6,000 km			132
Lubricate drive chain		Every 300 km				139
Check, adjust drive chain		Every 800 km				20
Check brake wear		Every 10,000 km				144,146
Change front fork oil		Every 10,000 km				151
Lubricate timing advancer		Every 10,000 km				166
Change air cleaner element		*Every 10,000 km or after cleaning 5 times				101
Change brake fluid		*Every year or 10,000 km				143
Regrease wheel bearings		*Every 2 years or 20,000 km				138
Regrease speedometer gear housing		*Every 2 years or 20,000 km				138
Regrease brake camshaft		*Every 2 years or 20,000 km				147
Lubricate steering stem bearings		*Every 2 years or 20,000 km				148

\* Whichever occurs first

### Engine Oil Change

The engine oil and oil filter are changed as follows:

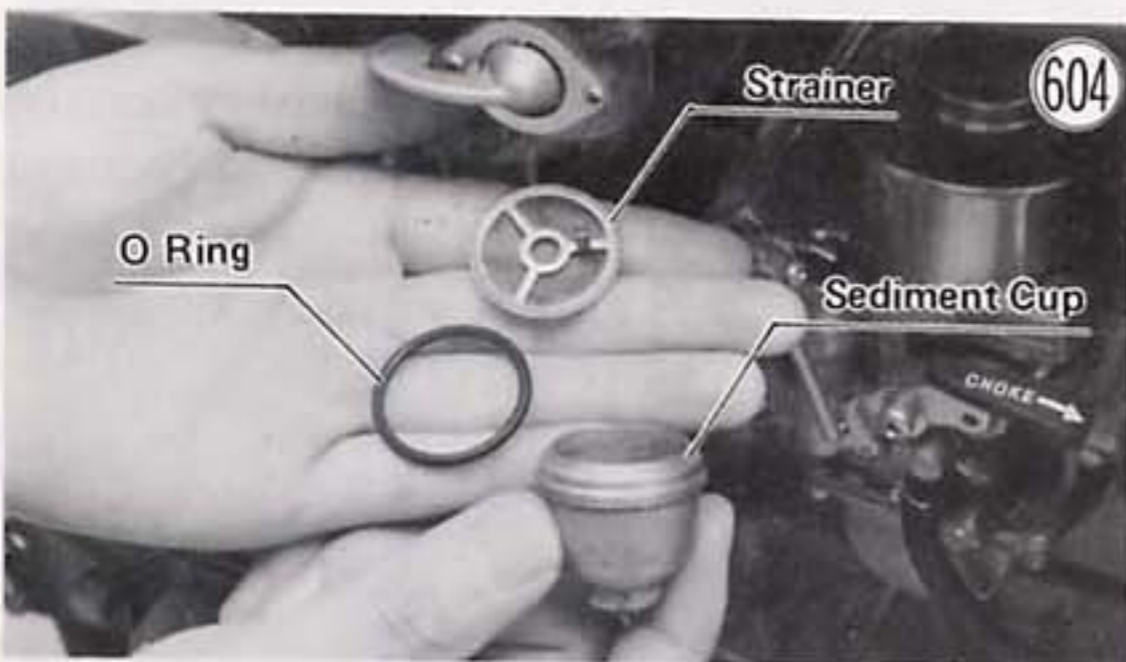
- Warm up the engine thoroughly, and then stop the engine.
- Set the motorcycle up on its center stand, place an oil pan beneath the engine, and remove the engine drain plug and oil filter.
- Wipe off the drain plug removing any steel filings which may be clinging to it (the drain plug is magnetic).
- After the oil has completely drained out, screw the drain plug back in. Proper torque for the drain plug is 2.7~3.3 kg-m (19.5~24 ft-lbs).
- Replace the oil filter with a new one if necessary, and check that it is properly assembled (Pg. 27).
- Install the oil filter tightening its bolt with 1.5 ~ 2.0 kg-m (11 ~ 14.5 ft-lbs) of torque.
- Pour in 3 ℓ of SE or SD class SAE 10W40, 10W50, or 20W50 motor oil.

**NOTE:** After the engine has been run and then stopped for a few minutes, the oil level should come to between the upper and lower marks.

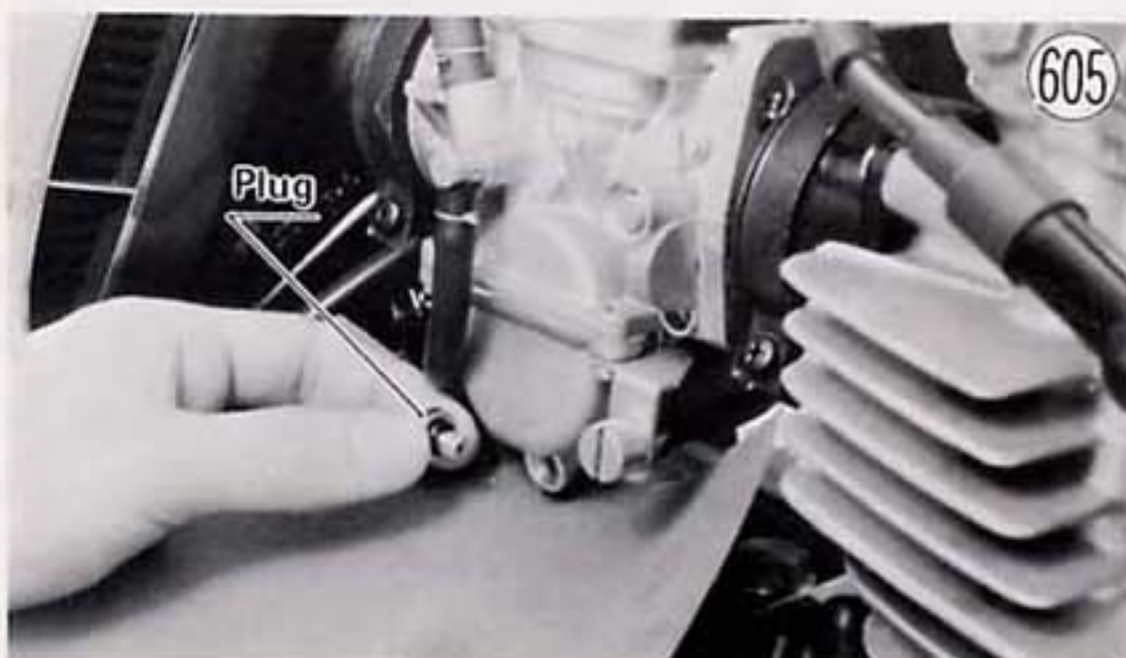
### Fuel Line Cleaning

Water or dirt anywhere in the fuel system can cause starting difficulty, poor running, and lack of power. Clean out the lines as follows:

- Turn the fuel tap to OFF. Unscrew the sediment cup at the bottom of the tap, and clean out the water and dirt from it. Clean any dirt out of the fuel tap strainer.



- If there was water inside the sediment cup, there may also be some in the fuel tank. Holding a container under the fuel tap, turn the tap to RES to drain the tank until gasoline only comes out, and then close the tap.
- Remove the plug from the side of each carburetor float bowl to drain the bowls.



- Replace the plugs and the sediment cup. Make sure that the O ring is in the tap and that the strainer is not damaged during installation.

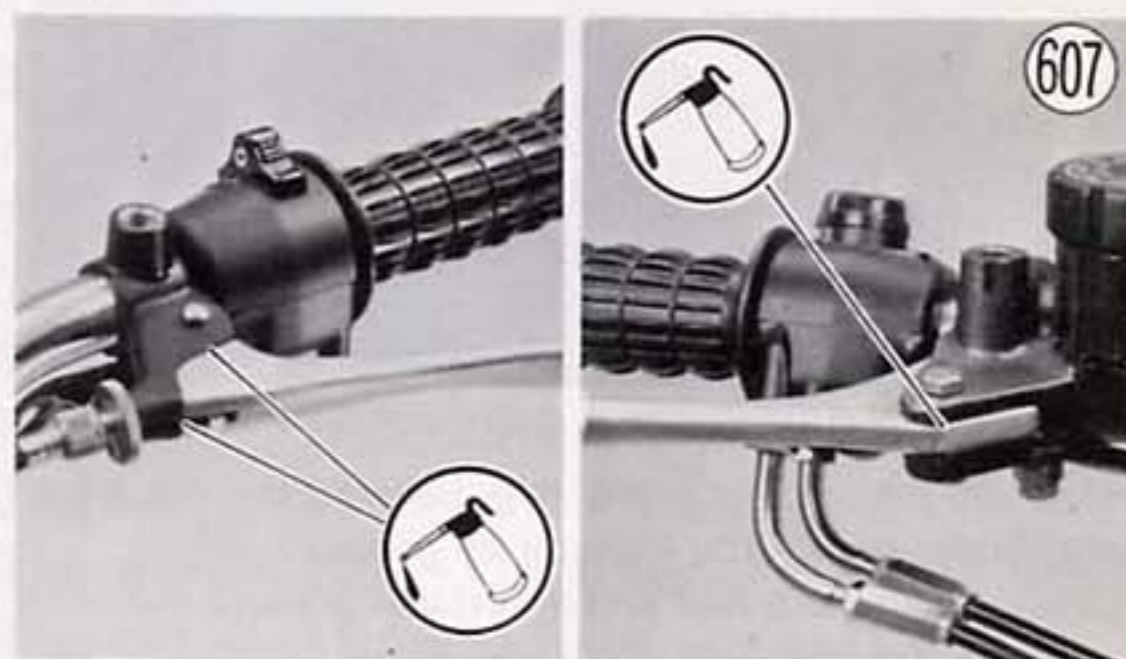
### General Lubrication

Lubrication of exposed parts subject to rust with either SAE 30 motor oil or regular grease should be carried out periodically and whenever the vehicle has been operated under wet or rainy conditions. Before lubricating each part, clean off any rusty spots with rust remover. Badly rusted nuts, bolts, etc. should be replaced with new ones.

- Lubricate the clutch cable, throttle cables, and front brake cable (KZ400S) as shown in the figure.



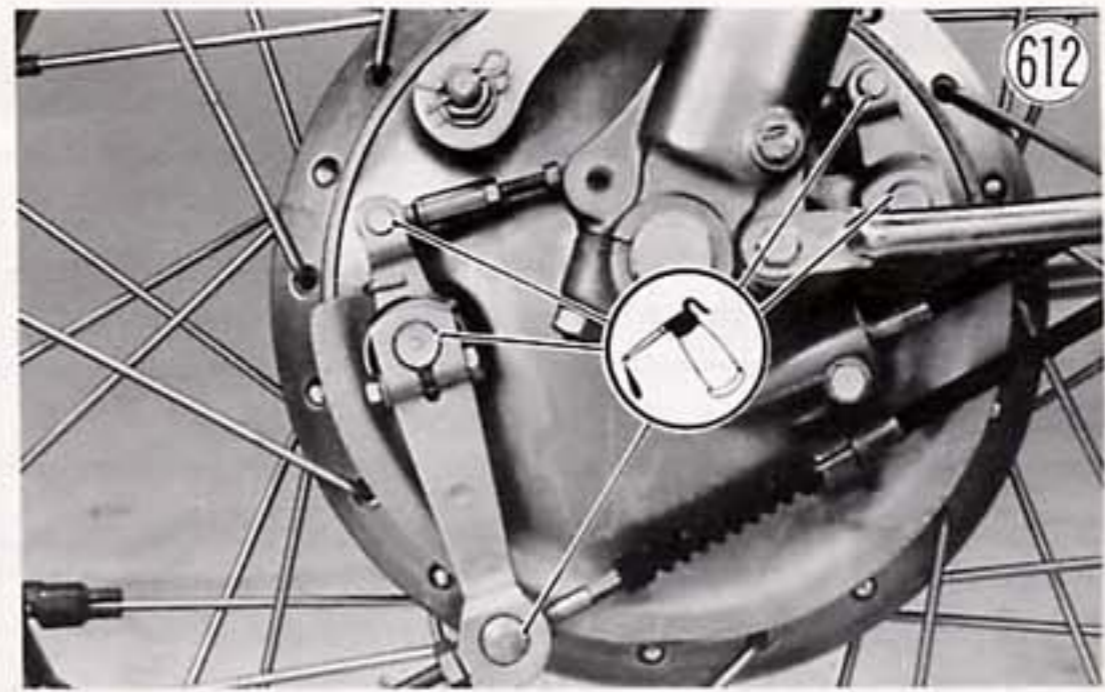
- Lubricate the clutch lever pivot and brake lever pivot, and the exposed portion of the clutch inner cable and front brake inner cable.
- Wipe off excess lubricant.



- Wipe clean the throttle grip inner surface and the handlebar where the throttle grip fits.
- Apply grease to the handlebar where the throttle grip turns.
- Apply a light coat of grease to the exposed portion of the throttle grip inner cables and their catches in the throttle grip.
- Fit the throttle cables into the throttle grip.

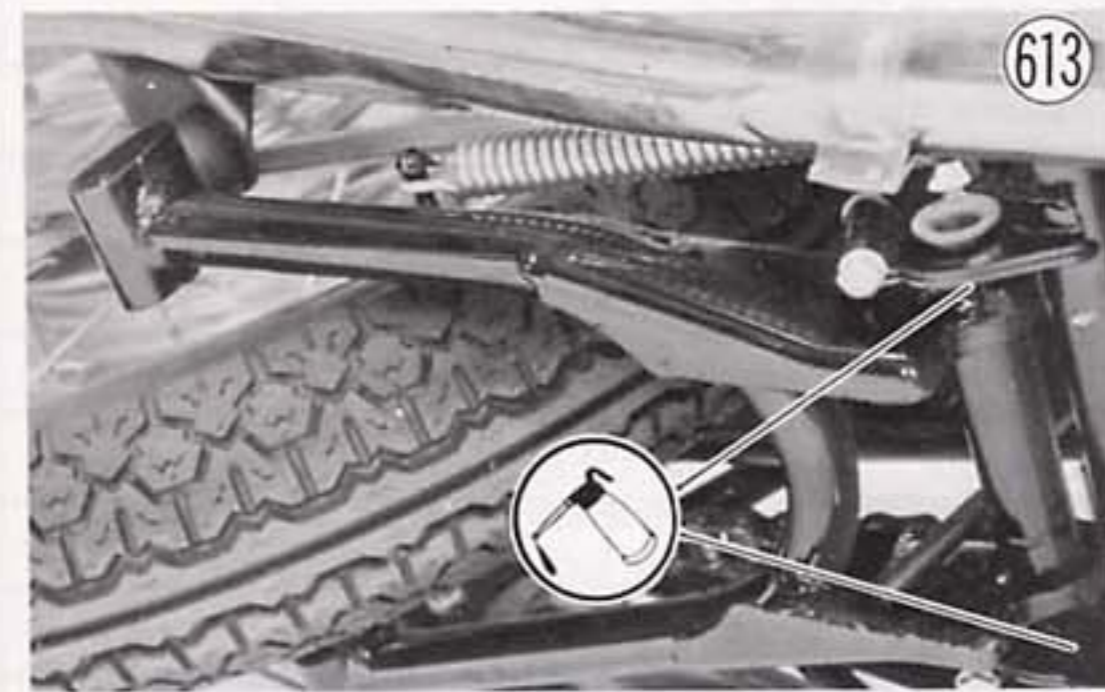


- Force grease into the fitting until it comes out at both sides of the swing arm, and wipe off any excess.

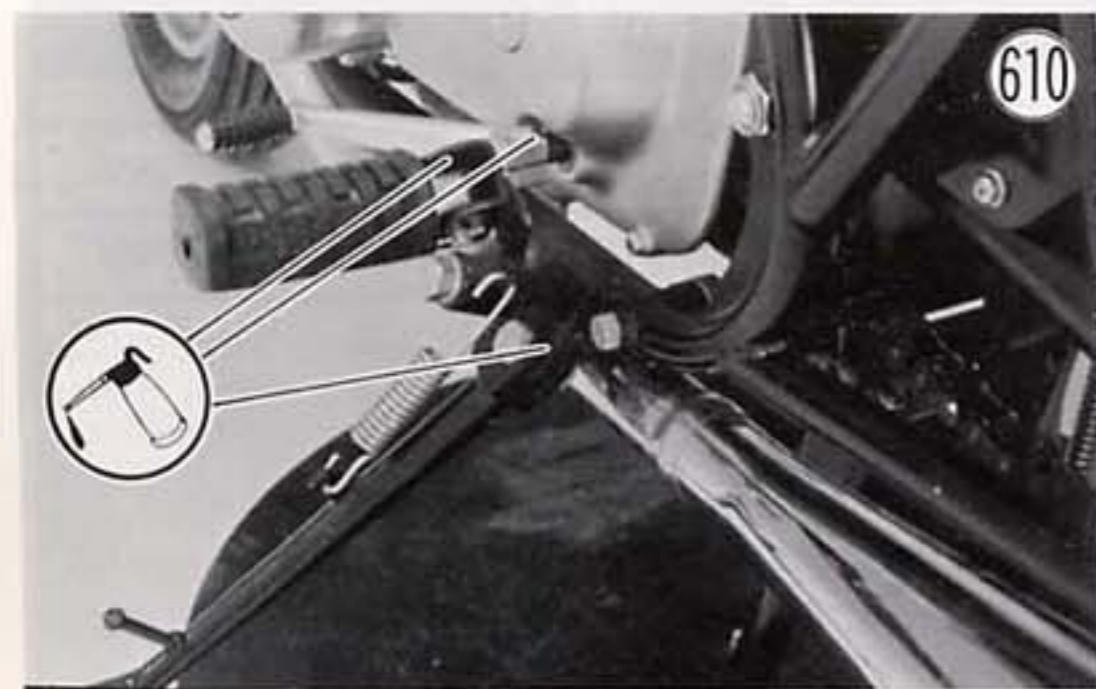


- Oil lightly the end of each drive chain adjuster, the camshaft serration, and the end of the brake rod.
- Wipe off excess oil.
- Lubricate the center stand pivot.

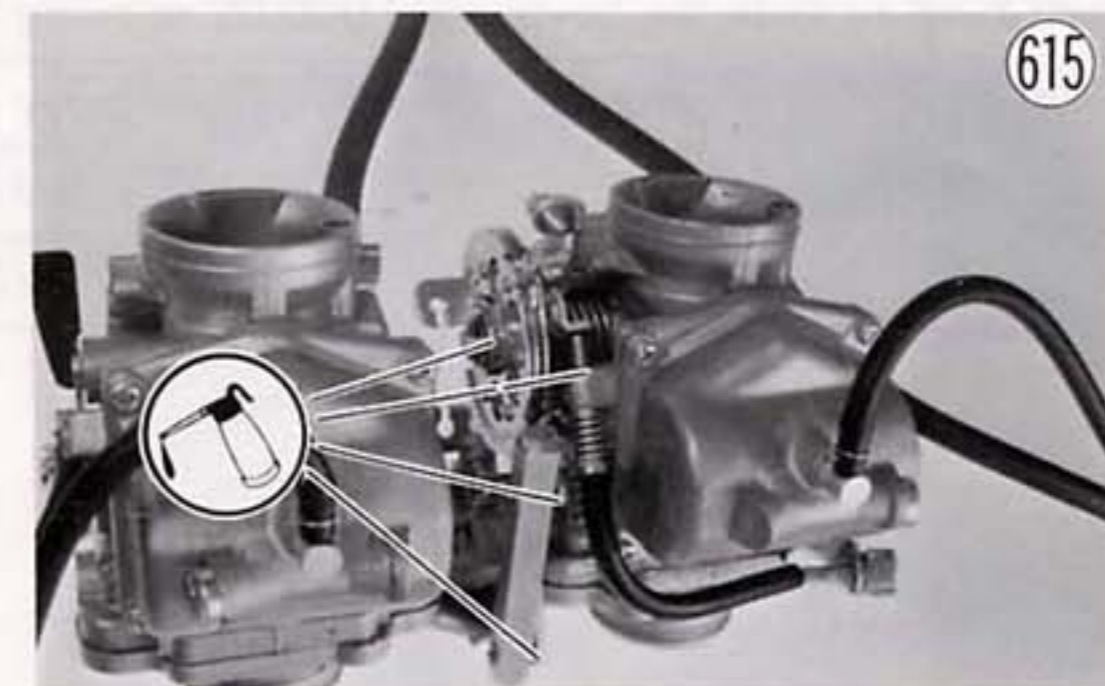
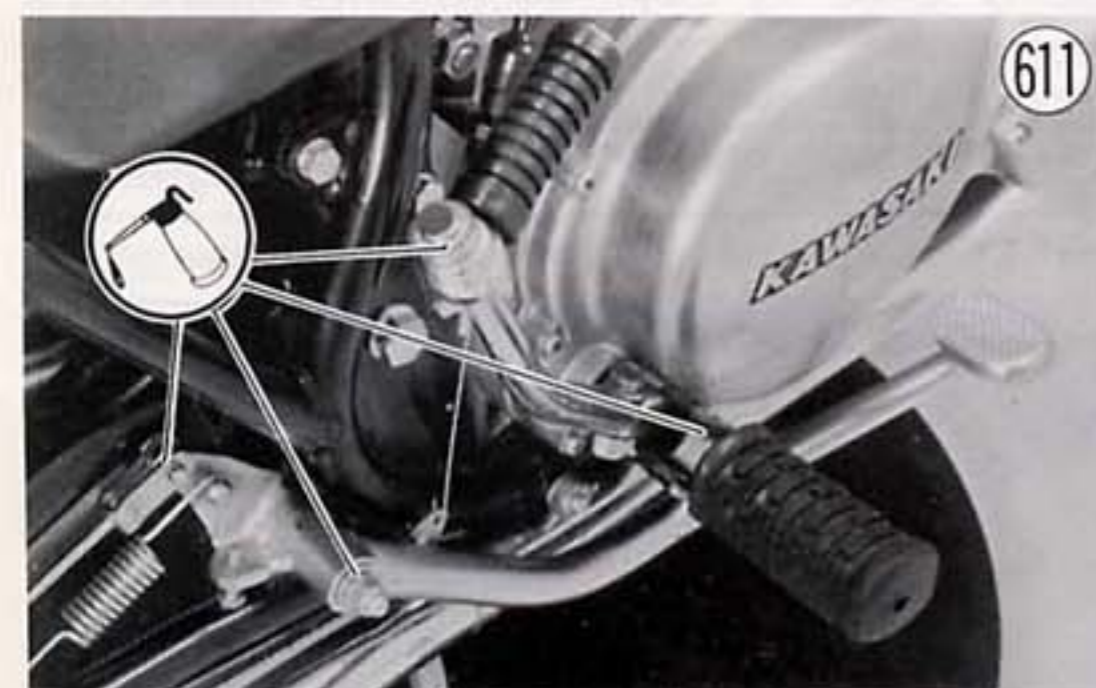
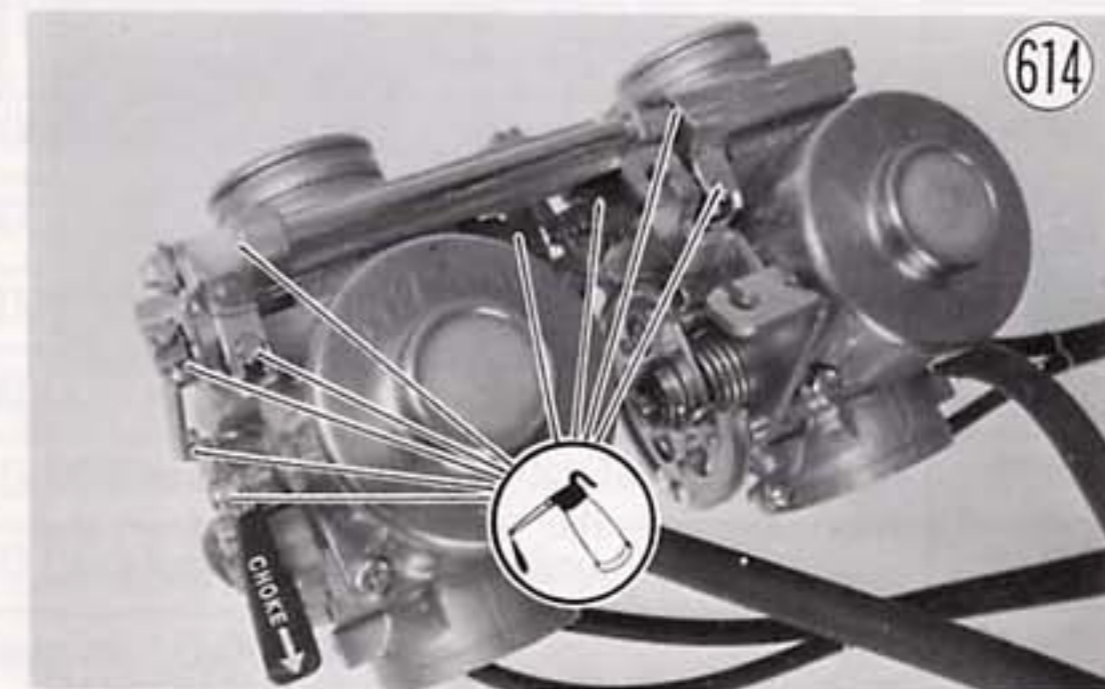
- Wipe off any dirt or grime from around the left foot peg, shift pedal, and side stand.
- Lubricate the exposed metal surfaces around the shift pedal serration and the bolts and nuts for the left foot peg and side stand.
- Wipe off excess lubricant.



- Oil lightly the carburetor link mechanism and the choke link mechanism.



- Wipe off any dirt or grime from around the right foot peg, brake pedal, and kickstarter pedal.
- Lubricate the exposed metal surfaces around the bolts and nuts for the right foot peg, brake pedal, and kick starter pedal.
- Wipe off excess lubricant.



- Oil lightly around the camshaft serrations and where the cam lever connects to the brake cable and the connecting rod (KZ400S).

## TORQUE TABLE

Tighten all bolts and nuts to the proper torque using an accurate torque wrench. A bolt or nut if insufficiently tightened may become damaged or fall out, possibly resulting in damage to the motorcycle and injury to the rider. A bolt or nut which is over-tightened may become damaged, strip an internal screw, or break and then fall out.

The following table lists the tightening torque for the major bolts and nuts:

	Metric	English	See Pg.
Engine drain plug	2.7 ~ 3.3 kg-m	19.5 ~ 24 ft-lbs	27,51,181
Oil filter bolt	1.5 ~ 2.0 kg-m	11 ~ 14.5 ft-lbs	27,51,181
Engine mounting bolts (3)	3.4 ~ 4.6 kg-m	25 ~ 33 ft-lbs	25
Engine mounting bracket bolts, front (3)	2.0 ~ 2.8 kg-m	14.5 ~ 20 ft-lbs	25
Engine mounting bracket bolts, rear (2)	1.6 ~ 2.2 kg-m	11.5 ~ 16 ft-lbs	—
Breather cover bolts 8 $\phi$ (4)	1.8 ~ 2.0 kg-m	13 ~ 14.5 ft-lbs	26,32,35,38
Cylinder head cover nuts 8 $\phi$ (8)	2.5 ~ 3.0 kg-m	18 ~ 22 ft-lbs	32,35,38,70
Cylinder head bolts 8 $\phi$ (2)	2.5 ~ 3.0 kg-m	18 ~ 22 ft-lbs	38,70
Cylinder head bolts 6 $\phi$ (2)	1.1 ~ 1.3 kg-m	95 ~ 113 in-lbs	38,70
Camshaft sprocket bolts 6 $\phi$ (2)	1.4 ~ 1.6 kg-m	10 ~ 11.5 ft-lbs	34,37,70
Rocker shaft nuts (4)	2.4 ~ 2.6 kg-m	18 ~ 22 ft-lbs	15
Dynamo rotor bolt 10 $\phi$	6.5 ~ 7.0 kg-m	47 ~ 51 ft-lbs	45,60
Starter clutch Allen bolts 8 $\phi$ (3)	3.3 ~ 3.7 kg-m	24 ~ 27 ft-lbs	46
Dynamo field coil Allen bolts 6 $\phi$ (3)	0.7 ~ 0.8 kg-m	61 ~ 69 in-lbs	43
Dynamo armature Allen bolts 6 $\phi$ (3)	0.7 ~ 0.8 kg-m	61 ~ 69 in-lbs	43,44
Engine sprocket nut	12 ~ 15 kg-m	87 ~ 108 ft-lbs	53,63
Crankcase bolts 8 $\phi$ (4)	2.5 ~ 3.0 kg-m	18 ~ 22 ft-lbs	59
Crankcase bolts 6 $\phi$ (16)	0.8 ~ 1.0 kg-m	69 ~ 87 in-lbs	59
Balancer holder bolts 6 $\phi$ (8)	2.3 ~ 2.7 kg-m	16.5 ~ 19.5 ft-lbs	66
Balancer weight bolts 6 $\phi$ (2)	1.1 ~ 1.3 kg-m	95 ~ 113 in-lbs	66
Crankshaft bushing cap bolts 8 $\phi$ (4)	2.5 ~ 3.0 kg-m	18 ~ 22 ft-lbs	66
Connecting rod nuts 8 $\phi$ (4)	3.5 ~ 3.8 kg-m	25 ~ 27 ft-lbs	71
Timing advancer bolt	2.3 ~ 2.7 kg-m	16.5 ~ 19.5 ft-lbs	49,51,60
Neutral indicator switch	1.5 ~ 2.0 kg-m	11 ~ 14.5 ft-lbs	54
Oil pressure indicator switch	1.4 ~ 1.6 kg-m	10.0 ~ 11.5 ft-lbs	130
Front axle clamp nuts (2)	1.6 ~ 2.2 kg-m	11.5 ~ 16 ft-lbs	72,75
Front axle nut	7 ~ 9 kg-m	51 ~ 65 ft-lbs	72,75
Front fork top bolts (2)	2.5 ~ 3.0 kg-m	18 ~ 22 ft-lbs	93,95
Shock absorber upper clamp bolts (2)	1.6 ~ 2.2 kg-m	11.5 ~ 16 ft-lbs	93,95,96
Shock absorber lower clamp bolts (2)	2.0 ~ 3.0 kg-m	14.5 ~ 22 ft-lbs	16,93,95,97
Stem head clamp bolt	1.6 ~ 2.2 kg-m	11.5 ~ 16 ft-lbs	16,97
Stem head bolt	5.5 kg-m	40 ft-lbs	16
Handlebar clamp bolts (4)	1.6 ~ 2.2 kg-m	11.5 ~ 16 ft-lbs	88
Rear axle nut	10 ~ 14 kg-m	72 ~ 101 ft-lbs	21,78,87
Torque link nuts (4) (2 on KZ400D)	2.6 ~ 3.5 kg-m	19 ~ 25 ft-lbs	21,75,77,87,99
Rear sprocket nuts (4)	3.5 ~ 4.3 kg-m	25 ~ 31 ft-lbs	87
Rear shock absorber bolts (2)	2.6 ~ 3.5 kg-m	19 ~ 25 ft-lbs	99,100
Rear shock absorber cap nuts (2)	2.6 ~ 3.5 kg-m	19 ~ 25 ft-lbs	100
Swing arm pivot shaft nut	6 ~ 10 kg-m	43 ~ 72 ft-lbs	99
Steering stem lock nut	2.7 ~ 3.3 kg-m	19.5 ~ 24 ft-lbs	96
Disc brake parts	—	—	81
Spoke	0.2 ~ 0.4 kg-m	17 ~ 35 in-lbs	81,137
* Clutch spring bolts	0.9 ~ 1.1 kg-m	78 ~ 113 in-lbs	51, 60



The table below, relating tightening torque to thread diameter and pitch, lists the basic torque for the bolts and nuts used on Kawasaki Motorcycles. However, the actual torque that is necessary may vary among bolts and nuts with the same thread diameter and pitch. The bolts and nuts listed on Pg.183 vary to a greater or lesser extent from what is given in this table. Refer to this table for only the bolts and nuts not included in the table on Pg.183. All of these values are for use with dry solvent cleaned threads.

Coarse threads

dia (mm)	pitch (mm)	kg-m	ft-lbs
5	0.80	0.35 ~ 0.50	2.5 ~ 3.5
6	1.00	0.6 ~ 0.9	4.5 ~ 6.5
8	1.25	1.6 ~ 2.2	11.5 ~ 16.0
10	1.50	3.1 ~ 4.2	22 ~ 30
12	1.75	5.4 ~ 7.5	39 ~ 54
14	2.00	8.3 ~ 11.5	60 ~ 83
16	2.00	13 ~ 18	94 ~ 130
18	2.50	18 ~ 25	130 ~ 181
20	2.50	26 ~ 35	188 ~ 253

Fine threads

dia (mm)	pitch (mm)	kg-m	ft-lbs
5	0.50	0.35 ~ 0.50	2.5 ~ 3.5
6	0.75	0.6 ~ 0.8	4.5 ~ 5.5
8	1.00	1.4 ~ 1.9	10.0 ~ 13.5
10	1.25	2.6 ~ 3.5	19.0 ~ 25
12	1.50	4.5 ~ 6.2	33 ~ 45
14	1.50	7.4 ~ 10.2	54 ~ 74
16	1.50	11.5 ~ 16	83 ~ 116
18	1.50	17 ~ 23	123 ~ 166
20	1.50	23 ~ 33	166 ~ 239

PARTS REQUIRING USE OF A NON-PERMANENT LOCKING AGENT

Part	Q'ty	See Pg.
Camshaft Sprocket Bolts	2	34,37,70
Carburetor Mounting Screws	4	30
Clutch Release Mounting Screws	2	52
Dynamo Rotor Bolt	1	45,60
Dynamo Field Coil Allen Bolts	3	43
Dynamo Armature Allen Bolts	3	43,44
Starter Motor Retaining Bolts	2	47,60
Starter Motor Chain Guide Screws	2	43,44
Starter Motor Clutch Allen Bolts	3	46
Balancer Chain Guide Screws	2	66
Drive Chain Guide Screws	4	52
Primary Chain Guide Screws	2	124
Balancer Weight Bolts	2	66
Neutral Indicator Switch	1	54
Oil Pressure Relief Valve	1	64
External Shift Mechanism Stopper Screws	2	56,60
External Shift Mechanism Return Spring Pin	1	126
Sump Plate Screws	4	58
Front Fork Bottom Allen Bolts	2	95
Oil Pressure Switch	1	130
Pad B Mounting Screw	1	82,83
Front Brake Light Switch	1	174

RECOMMENDED LOCKING AGENTS

1. KAWASAKI LIQUID LOCK-K
2. NON-PERMANENT LOCTITE

## TROUBLESHOOTING GUIDE

### Engine Doesn't Start; Starting Difficulty

#### Starter motor not rotating

- Starter motor defective
- Battery voltage low
- Relay not contacting or operating
- Starter button not contacting
- Wiring open or shorted
- Ignition switch defective
- Engine stop switch defective
- Fuse blown

#### Starter motor rotating but engine doesn't start

- Starter motor clutch defective

#### Engine won't turn over

- Valve seizure
- Cylinder, piston seizure
- Con-rod small end seizure
- Con-rod big end seizure
- Transmission gear or bearing seizure
- Camshaft seizure
- Kickstarter return spring broken
- Kick ratchet gear not engaging

#### No fuel flow

- No fuel in tank
- Fuel tap turned off
- Tank cap air vent obstructed
- Fuel tap clogged
- Fuel line clogged
- Float valve clogged
- Starter jet clogged

#### Engine flooded

- Float level too high
- Float valve worn or stuck open
- Starting technique faulty  
(When flooded, kick with the throttle fully open to allow more air to reach the engine.)

#### No spark; spark weak

- Battery voltage low
- Spark plug dirty, defective, or maladjusted
- Spark plug cap or high tension wiring defective
- Spark plug cap shorted or not in good contact
- Contact breaker points dirty or damaged
- Condenser defective
- Ignition coil defective
- Ignition or engine stop switch shorted
- Wiring shorted or open

#### Compression low

- Cylinder, piston worn
- Piston rings bad (worn, weak, broken, or sticking)
- Piston ring clearance excessive
- Cylinder head gasket damaged
- Cylinder head not sufficiently tightened down
- Cylinder head warped
- Spark plug loose
- Valve sticking
- Valve not closing
- Valve spring broken or weak
- Valve not seating properly (valve bent, warped, or worn)

### Poor Running at Low Speed

#### Spark weak

- Spark plug dirty, defective, or maladjusted

- Spark plug cap or high tension wiring defective
- Spark plug cap shorted or not in good contact
- Contact breaker points dirty or damaged
- Condenser defective
- Ignition coil defective

#### Fuel/air mixture incorrect

- Pilot screw(s) and/or throttle stop screw maladjusted
- Pilot jet, slow jet, or air passage clogged
- Air cleaner clogged, poorly sealed, or missing
- Starter plunger stuck open
- Carburetor linkage not right
- Float level too high or too low
- Fuel tank air vent obstructed
- Carburetor intake ducts loose

#### Compression low

- Cylinder, piston worn
- Piston rings bad (worn, weak, broken or sticking)
- Piston ring clearance excessive
- Cylinder head gasket damaged
- Cylinder head not sufficiently tightened down
- Cylinder head warped
- Spark plug loose
- Valve sticking
- Valve not closing
- Valve spring broken or weak
- Valve not seating properly (valve bent, warped, or worn)

#### Other

- Ignition timing maladjusted
- Timing not advancing (spring broken or stretched)
- Engine oil viscosity too high

### Poor Running or No Power at High Speed

#### Firing incorrect

- Spark plug dirty, defective, or maladjusted
- Spark plug cap or high tension wiring defective
- Spark plug cap shorted or not in good contact
- Contact breaker points dirty or damaged
- Condenser defective
- Ignition coil defective
- Ignition timing maladjusted
- Contact breaker spring weak

#### Fuel/air mixture incorrect

- Main jet clogged or wrong size
- Jet needle or needle jet worn
- Float level too high or too low
- Needle jet bleed hole clogged
- Air cleaner clogged, poorly sealed, or missing
- Starter plunger stuck open
- Water or foreign matter in fuel
- Carburetor intake ducts loose
- Fuel tank air vent obstructed

#### Compression low

- Cylinder, piston worn
- Piston rings bad (worn, weak, broken, or sticking)
- Piston ring clearance excessive
- Cylinder head gasket damaged
- Cylinder head not sufficiently tightened down
- Cylinder head warped
- Spark plug loose
- Valve sticking
- Valve not closing

Valve spring broken or weak  
Valve not seating properly (valve bent, warped, or worn)

**Knocking**

Ignition timing maladjusted  
Carbon built up in combustion chamber  
Fuel poor quality or incorrect

**Miscellaneous**

Throttle valve won't fully open  
Ignition timing maladjusted  
Timing not advancing  
Balancer mechanism malfunctioning  
Brakes dragging  
Clutch slipping  
Overheating  
Engine oil level too high  
Engine oil viscosity too high

**Overheating****Firing incorrect**

Spark plug dirty, damaged, or maladjusted  
Ignition timing maladjusted

**Fuel/air mixture incorrect**

Main jet clogged  
Float level too low  
Carburetor intake ducts loose  
Air cleaner clogged

**Compression high**

Carbon built up in combustion chamber

**Engine load faulty**

Clutch slipping  
Engine oil level too high  
Brakes dragging

**Lubrication inadequate**

Engine oil level too low

**Clutch Operation Faulty****Clutch slipping**

No clutch lever play  
Friction plates worn or warped  
Steel plates worn or warped  
Clutch springs weak  
Clutch cable maladjusted  
Clutch inner cable catching  
Clutch release mechanism defective  
Clutch hub or housing unevenly worn

**Clutch not disengaging properly**

Clutch lever play excessive  
Clutch plates warped or too rough  
Clutch spring tension uneven  
Engine oil deteriorated  
Engine oil of too high a viscosity  
Clutch housing frozen on drive shaft  
Clutch release mechanism defective

**Gear Shifting Faulty****Doesn't go into gear; shift pedal doesn't return**

Clutch not disengaging  
Shift fork(s) bent or seized  
Shift return spring weak or broken  
External shift mechanism pawl broken  
Shift return spring pin loose

External shift mechanism arm spring broken

**Jumps out of gear**

Shift fork(s) worn  
Gear groove(s) worn  
Gear dogs, dog holes, and/or dog recesses worn  
Shift drum groove(s) worn  
Shift drum positioning pin spring weak or broken  
Shift fork pin(s) worn  
External shift mechanism arm spring or pawl worn  
Drive shaft, output shaft, and/or gear splines worn

**Overshifts**

Shift return spring pin loose

**Abnormal Engine Noise****Knocking**

Ignition timing maladjusted  
Carbon built up in combustion chamber  
Fuel poor quality or incorrect  
Overheating

**Piston slap**

Cylinder/piston clearance excessive  
Cylinder, piston worn  
Con-rod bent  
Piston pin, piston holes worn

**Valve noise**

Valve clearance incorrect  
Valve spring broken or weak  
Camshaft bearings worn

**Other noise**

Con-rod small end clearance excessive  
Con-rod big end clearance excessive  
Piston ring(s) worn, broken, or stuck  
Piston seizure damage  
Cylinder head gasket leaking  
Exhaust pipe leaking at cylinder head connection  
Crankshaft runout excessive  
Engine mounts loose  
Crankshaft bearings worn  
Primary chain, chain guides worn  
Starter motor chain, chain guides worn  
Balancer chain, chain guides worn  
Camshaft chain tensioner defective  
Camshaft chain, sprocket, guides worn  
Camshaft chain requires adjustment  
Balancer mechanism springs weak or broken

**Abnormal Drive Train Noise****Clutch noise**

Clutch housing/friction plate clearance excessive

**Transmission noise**

Bearings worn  
Transmission gears worn or chipped  
Metal chips jammed in gear teeth  
Engine oil insufficient or too thin  
Kick ratchet gear not properly disengaging from kick gear

**Drive chain noise**

Chain worn  
Rear and/or engine sprocket(s) worn  
Chain lubrication insufficient  
Rear wheel misaligned

### Abnormal Frame Noise

#### Front fork shock absorber noise

- Oil insufficient or too thin
- Spring weak or broken

#### Rear shock absorber noise

- Shock absorber defective

#### Disc brake noise

- Pad B loose
- Pad surface glazed
- Disc warped
- Caliper seal defective
- Cylinder damaged

#### Drum brake noise

- Brake linings overworn or worn unevenly
- Drum worn unevenly or scored
- Brake spring weak or broken
- Foreign matter in hub
- Brake not properly adjusted

#### Other noise

- Brackets, nuts, bolts, etc. not properly mounted or tightened

### Handlebar pulls to one side

- Frame bent
- Wheel misalignment
- Swing arm bent or twisted
- Swing arm pivot shaft runout excessive
- Steering stem bent
- Front fork shock absorber(s) bent
- Right/left front fork shock absorber oil level uneven
- Right/left rear shock absorbers unbalanced

### Shock absorption unsatisfactory

- Too hard:
  - Front fork oil excessive
  - Front fork oil viscosity too high
  - Tire air pressure too high
  - Shock absorber maladjusted
- Too soft:
  - Front fork oil insufficient and/or leaking
  - Front fork oil viscosity too low
  - Front fork, rear shock absorber spring(s) weak
  - Rear shock absorber oil leaking

### Oil Pressure Indicator Light Goes On

- Engine oil pump defective
- Engine oil screen clogged
- Engine oil level too low
- Camshaft journals worn
- Crankshaft bearings worn
- Oil pressure indicator light switch defective
- Wiring defective

### Exhaust Smoke

#### White smoke

- Piston oil ring worn
- Cylinder worn
- Valve guide worn
- Engine oil level too high

#### Black smoke

- Air cleaner clogged
- Main jet too large or fallen off
- Starter plunger stuck open
- Float level too high

#### Brown smoke

- Main jet too small
- Float level too low
- Carburetor intake ducts loose

### Brakes Don't Hold

#### Disc Brake

- Air in the brake line
- Pad or disc worn
- Brake fluid leak
- Brake fluid deteriorated
- Primary or secondary cup defective
- Master cylinder scratched inside

#### Drum brake

- Brake maladjusted
- Brake lining or drum worn
- Overheated
- Water on brake drum
- Brake cam, camshaft worn
- Oil on brake linings

### Battery Discharged

- Battery faulty (e.g., plates sulphated, shorted through sedimentation, electrolyte level too low)
- Battery leads making poor contact
- Rectifier defective
- Ignition switch defective
- Regulator defective
- Armature coil open or short
- Wiring faulty

### Battery Overcharged

- Regulator defective or wiring open
- Dynamo defective
- Battery defective

**NOTE:** This is not an exhaustive list, giving every possible cause for each problem listed. It is meant simply as a rough guide to assist the troubleshooting for some of the more common difficulties. Electrical troubleshooting is not covered here due to its complexity. For electrical problems, refer to the appropriate heading in the Maintenance Section.

### Handling and/or Stability Unsatisfactory

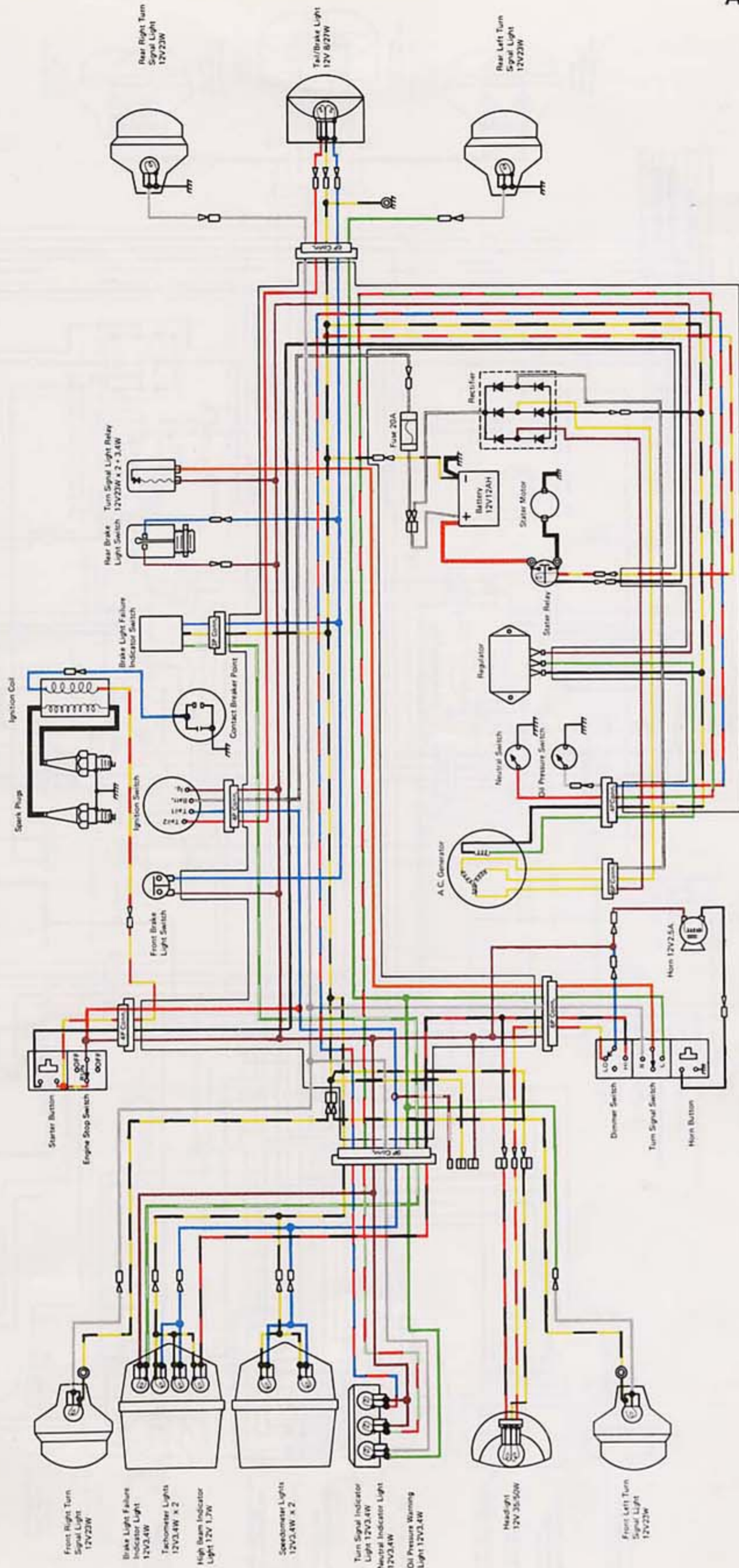
#### Handlebar hard to turn

- Steering stem lock nut too tight
- Bearing balls damaged
- Race(s) dented or worn
- Steering stem lubrication inadequate
- Steering stem bent
- Tire air pressure too low

#### Handlebar shakes or excessively vibrates

- Tire(s) worn
- Swing arm bushing damaged
- Rim(s) warped, or not balanced
- Front, rear axle runout excessive
- Spokes loose
- Wheel bearing(s) worn
- Handlebar clamps loose

# KZ400D Wiring Diagram (US Model)



- Front Right Turn Signal Light 12V23W
- Brake Light Failure Indicator Light 12V2.4W
- Tachometer Lights 12V3.4W x 2
- High Beam Indicator Light 12V 1.7W
- Speedometer Lights 12V3.4W x 2
- Turn Signal Indicator Light 12V3.4W
- Neutral Indicator Light 12V2.4W
- Oil Pressure Warning Light 12V3.4W
- Headlight 12V 35-50W
- Front Left Turn Signal Light 12V23W
- Rear Right Turn Signal Light 12V23W
- Tail/Brake Light 12V 8.27W
- Rear Left Turn Signal Light 12V23W

**Right Hand Side Switch Connections**

Starter Button	Engine Stop Switch
OFF	OFF
ON	ON
Color	Color
RY	RY

**System Switch Connections**

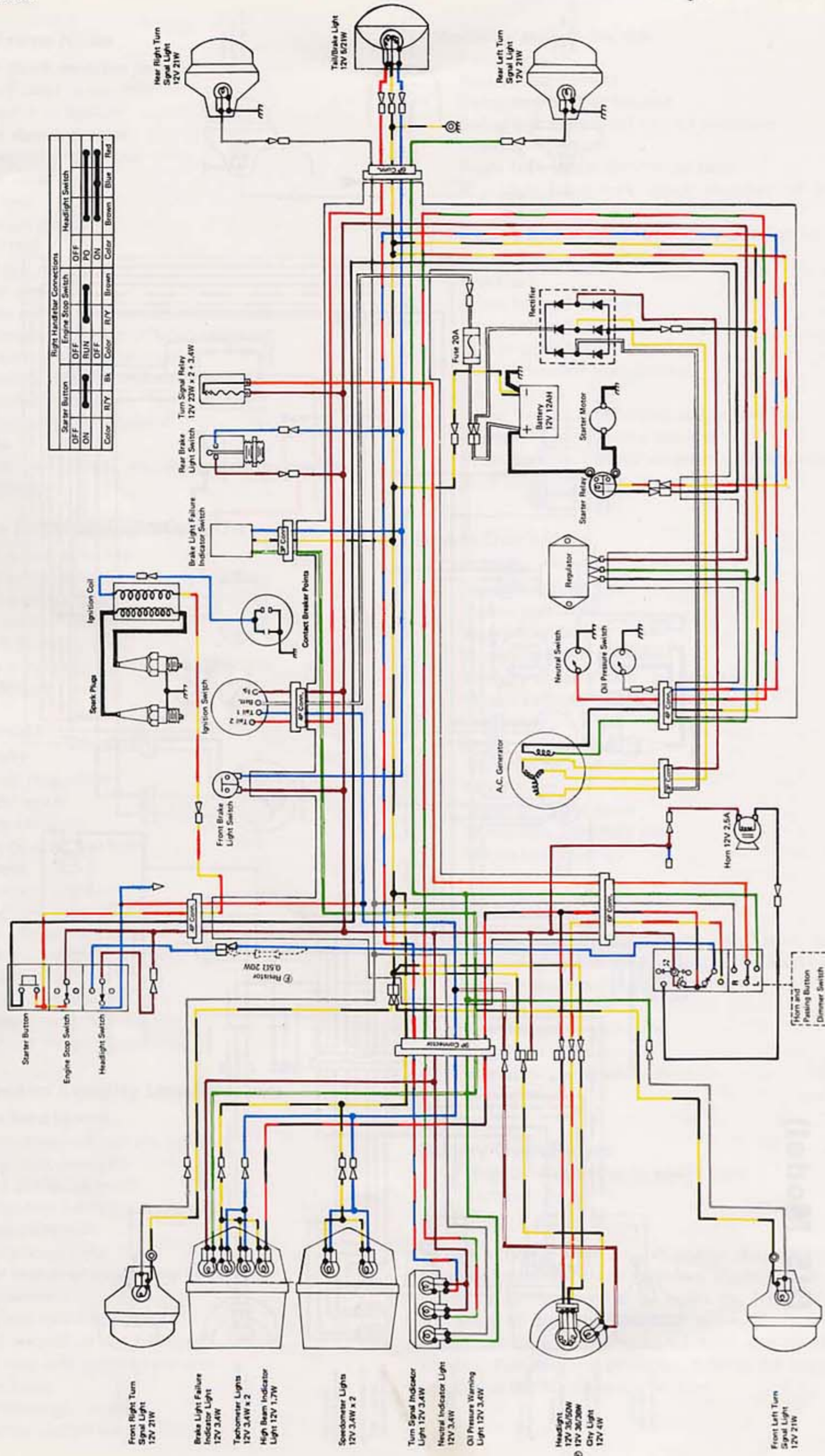
Brake Light	Tail 1	Tail 2
OFF	OFF	OFF
ON	ON	ON
PARK	PARK	PARK
Color	Color	Color
RY	RY	RY

**Left Hand Side Switch Connections**

Horn Button	Dimmer Switch	Turn Signal Switch
OFF	OFF	OFF
ON	ON	ON
Color	Color	Color
RY	RY	RY

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# KZ400D Wiring Diagram (European model)



Right Handbar Connections

Starter Button	Engine Stop Switch	Headlight Switch
OFF	OFF	OFF
ON	RUN	PO
Color	Color	Color
B/Y	Bk	B/Y
	Blk	Brown
		Brown
		Blue
		Red

Ignition Switch Connections

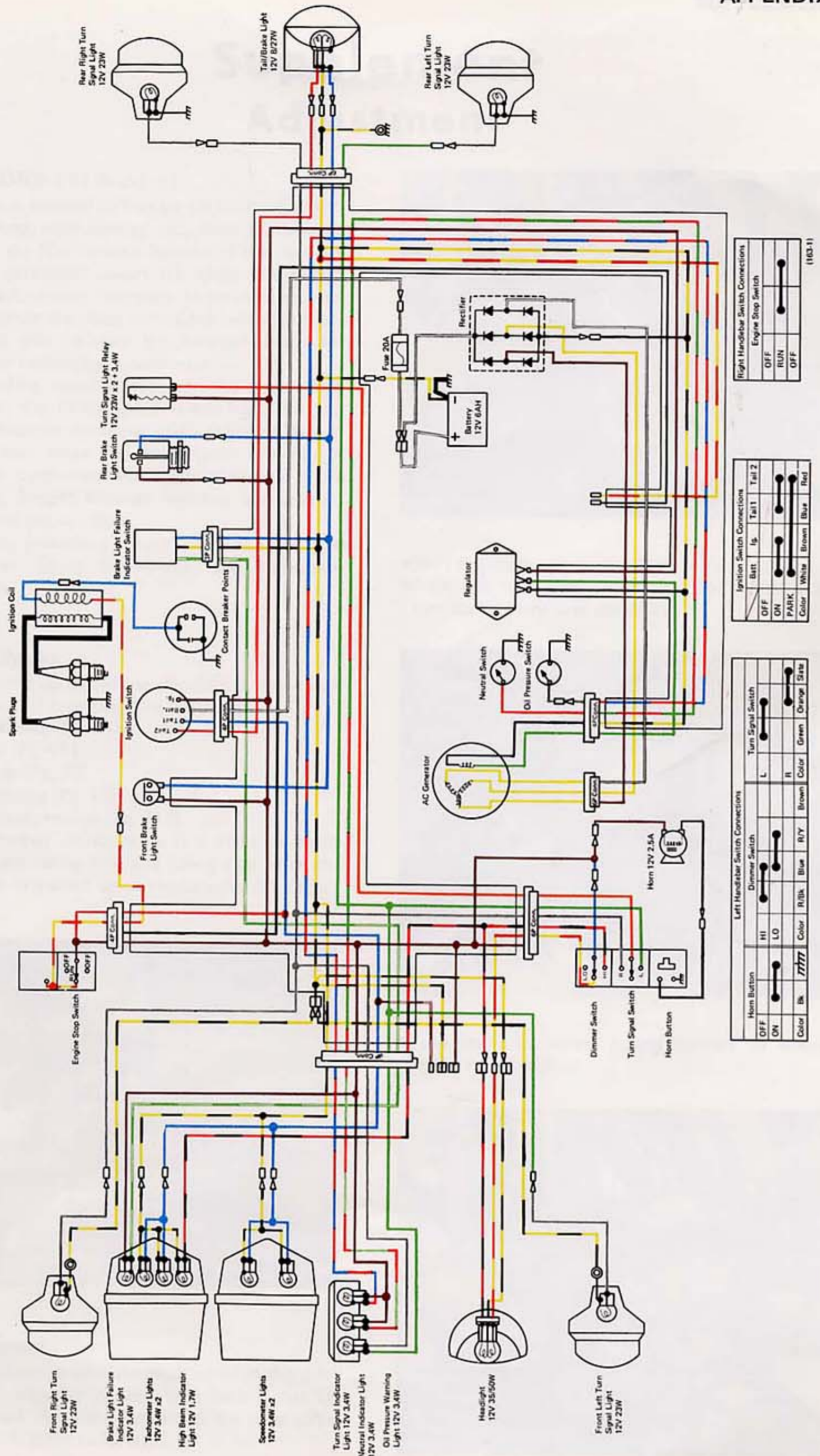
Batt	Ig	Tail 1	Tail 2
OFF	ON	PARK	
Color	White	Brown	Blue
		Blue	Red

Left Handbar Switch Connections

Horn Button	Passing Button	Dimmer Switch	Turn Signal Switch
OFF	OFF	HI	L
ON	ON	LO	R
Color	Color	Color	Color
Blk	R/Blk	Brown	R/Blk
		Blue	B/Y
			Orange
			State

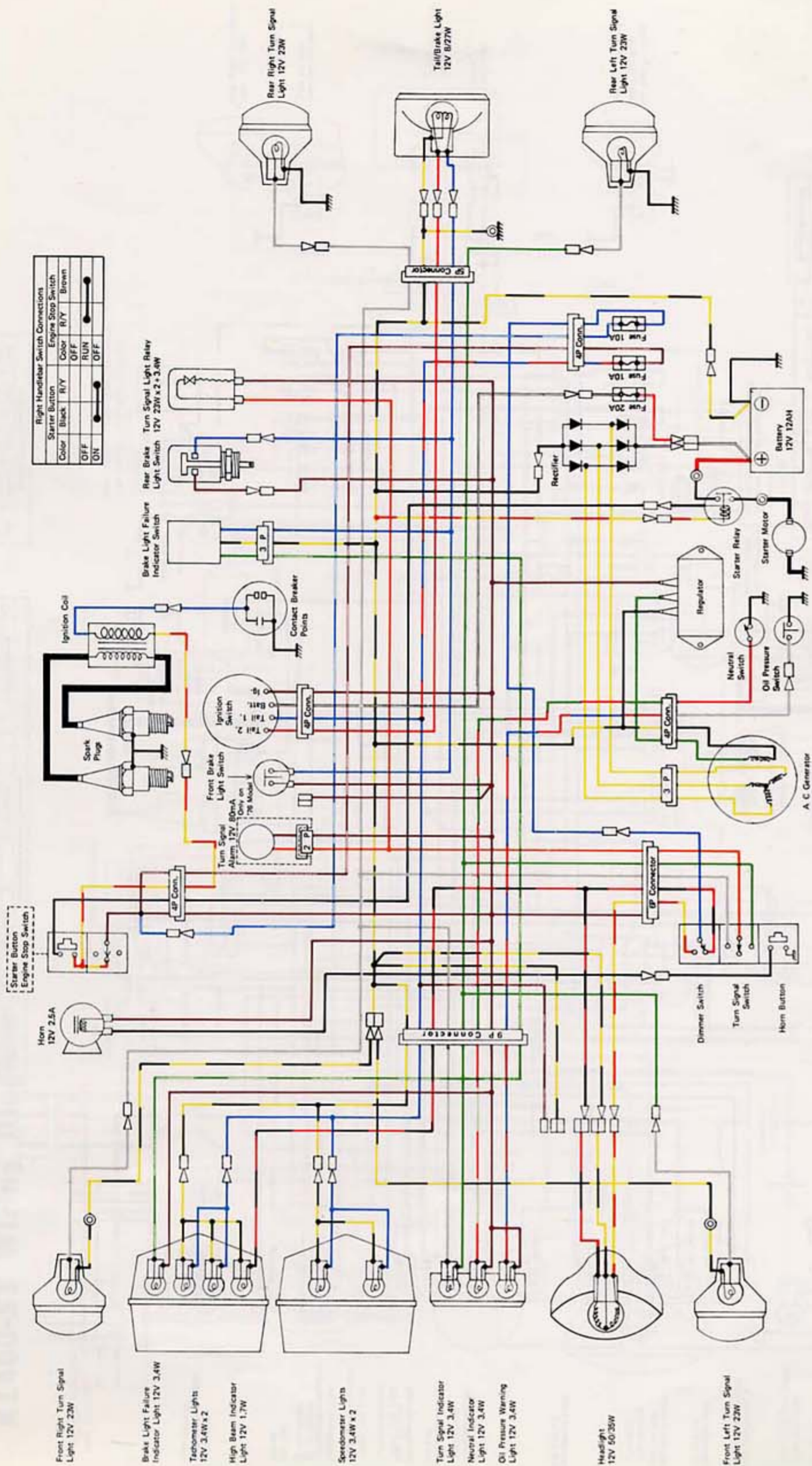
- Front Right Turn Signal Light 12V 21W
- Brake Light Failure Indicator Light 12V 3.4W
- Tachometer Lights 12V 3.4W x 2
- High Beam Indicator Light 12V 1.7W
- Speedometer Lights 12V 3.4W x 2
- Turn Signal Indicator Light 12V 3.4W
- Neutral Indicator Light 12V 3.4W
- Oil Pressure Warning Light 12V 3.4W
- Headlight 12V 35/50W
- City Light 12V 30/20W
- Horn Light 12V 4W
- Front Left Turn Signal Light 12V 21W

# KZ400S Wiring Diagram





# KZ400-D4 Wiring Diagram (US Model)



Right Hand/Left Switch Connections

Starter Button	Engine Stop Switch
Color: Black	Color: R/Y
OFF	OFF
ON	RUN
	OFF

Ignition Switch Connections

Lead	Ign	Tail 1	Tail 2
Color: White	Color: Brown	Color: Blue	Color: Red
OFF	ON	ON	PAIK

Left Hand/Right Switch Connections

Horn Button	Dimmer Switch	Turn Signal Switch
Color: Blk	Color: Blk/R	Color: Blk
OFF	HI	Left
ON	LO	Right

Front Right Turn Signal Light 12V 22W

Brake Light Failure Indicator Light 12V 3.4W

Tachometer Lights 12V 3.4W x 2

High Beam Indicator Light 12V 1.7W

Speedometer Lights 12V 3.4W x 2

Turn Signal Indicator Light 12V 3.4W

Neutral Indicator Light 12V 3.4W

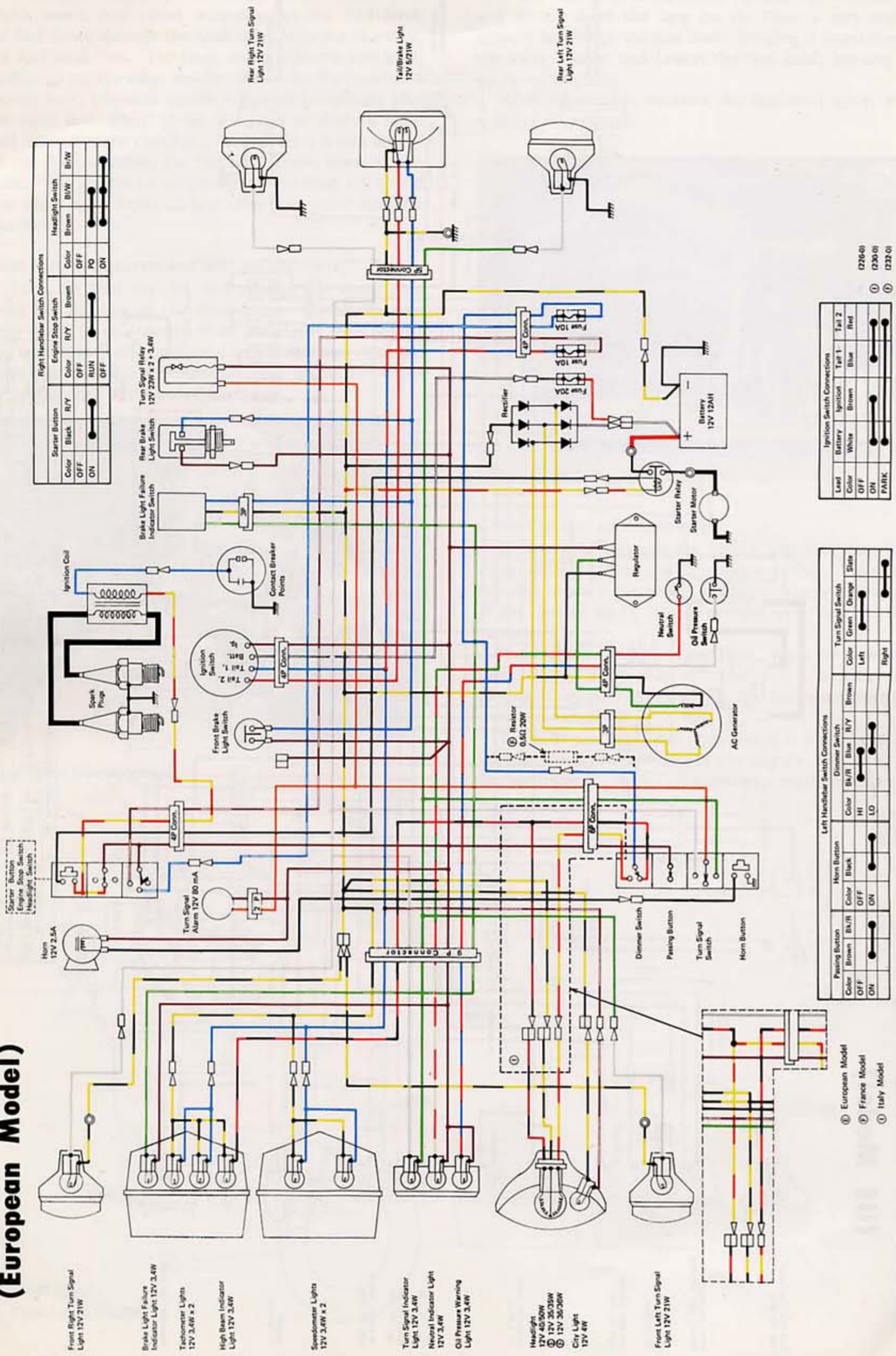
Oil Pressure Warning Light 12V 3.4W

Headlight 12V 50/25W

Front Left Turn Signal Light 12V 22W

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# KZ400-D4 Wiring Diagram (European Model)



Right Hand/Left Hand Switch Connections

Starter Button		Engine Stop Switch		Headlight Switch	
Color	R/Y	Color	Brown	Color	Br/W
OFF	ON	OFF	ON	OFF	ON
ON	OFF	RUN	OFF	PO	ON

Ignition Switch Connections

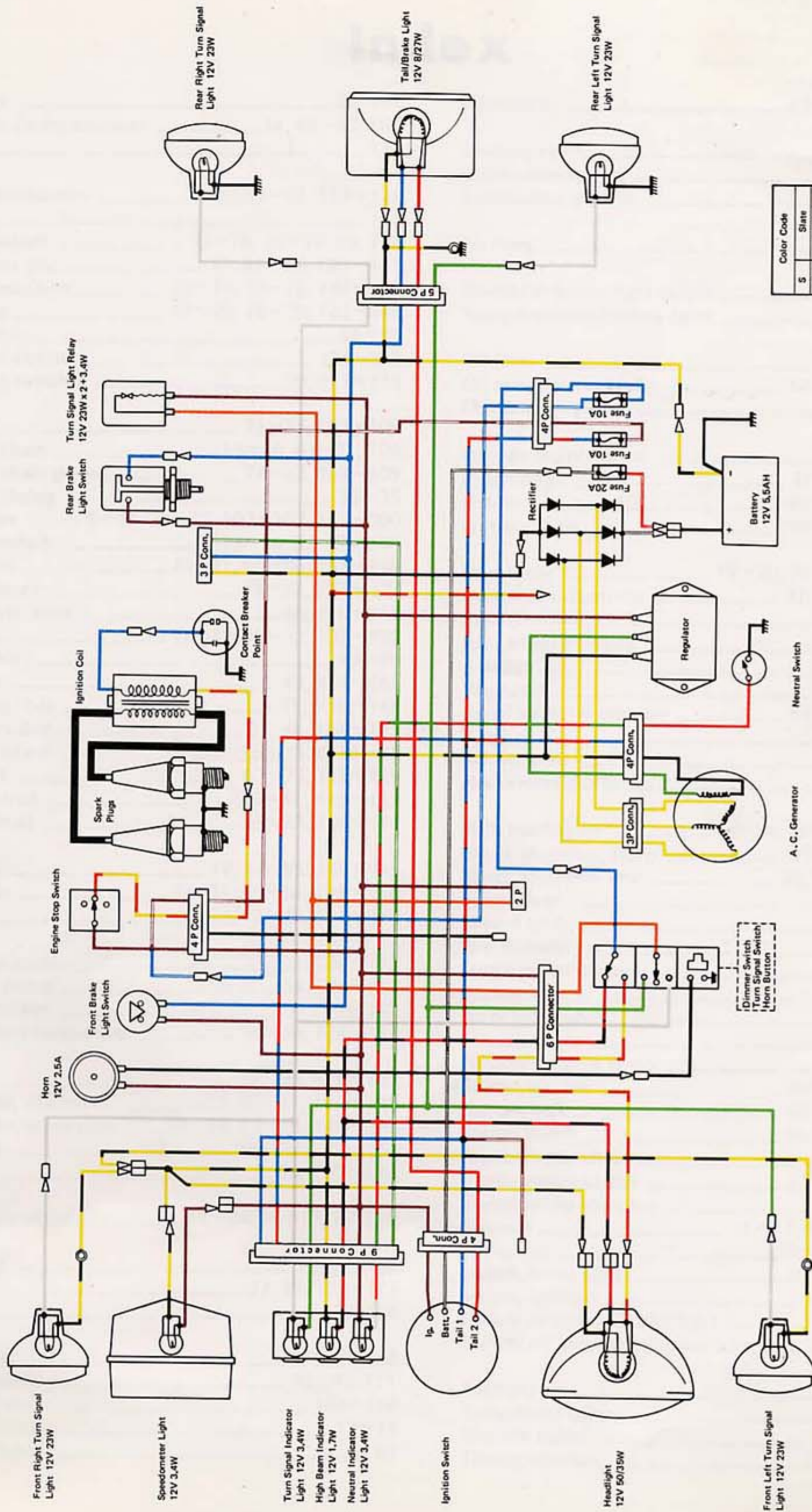
Lead	Ignition	Tail 1	Tail 2
Color	Brown	Blue	Red
OFF	ON	ON	ON
ON	OFF	OFF	OFF

Left Hand/Right Hand Switch Connections

Passing Button		Horn Button		Dimmer Switch		Turn Signal Switch	
Color	Br/W	Color	Black	Color	Bl/R	Color	Green
OFF	ON	OFF	ON	HI	LO	Left	Right
ON	OFF	ON	OFF	LO	HI	Right	Left

- ① European Model
- ② France Model
- ③ Italy Model

# KZ400-S3 Wiring Diagram



Color Code	Color
S	Slate
Bk	Black
Br	Brown
W	White
Bl	Blue
G	Green
LG	Light Green
O	Orange
Y	Yellow
R	Red

Right Handlebar Switch Connections	
Color	Function
R/Y	Engine Stop Switch
Brown	
OFF	
RUN	
OFF	

Ignition Switch Connections	
Leads	Function
Battery	Ignition
White	Ignition
Blue	Tail 1
Red	Tail 2
OFF	
ON	
PARK	

Left Handlebar Switch Connections	
Color	Function
Blk/R	Dimmer Switch
Blue	Dimmer Switch
Green	Turn Signal Switch
Orange	Turn Signal Switch
Slate	Turn Signal Switch
OFF	
ON	
LO	
HI	
L	Color
R	Color

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