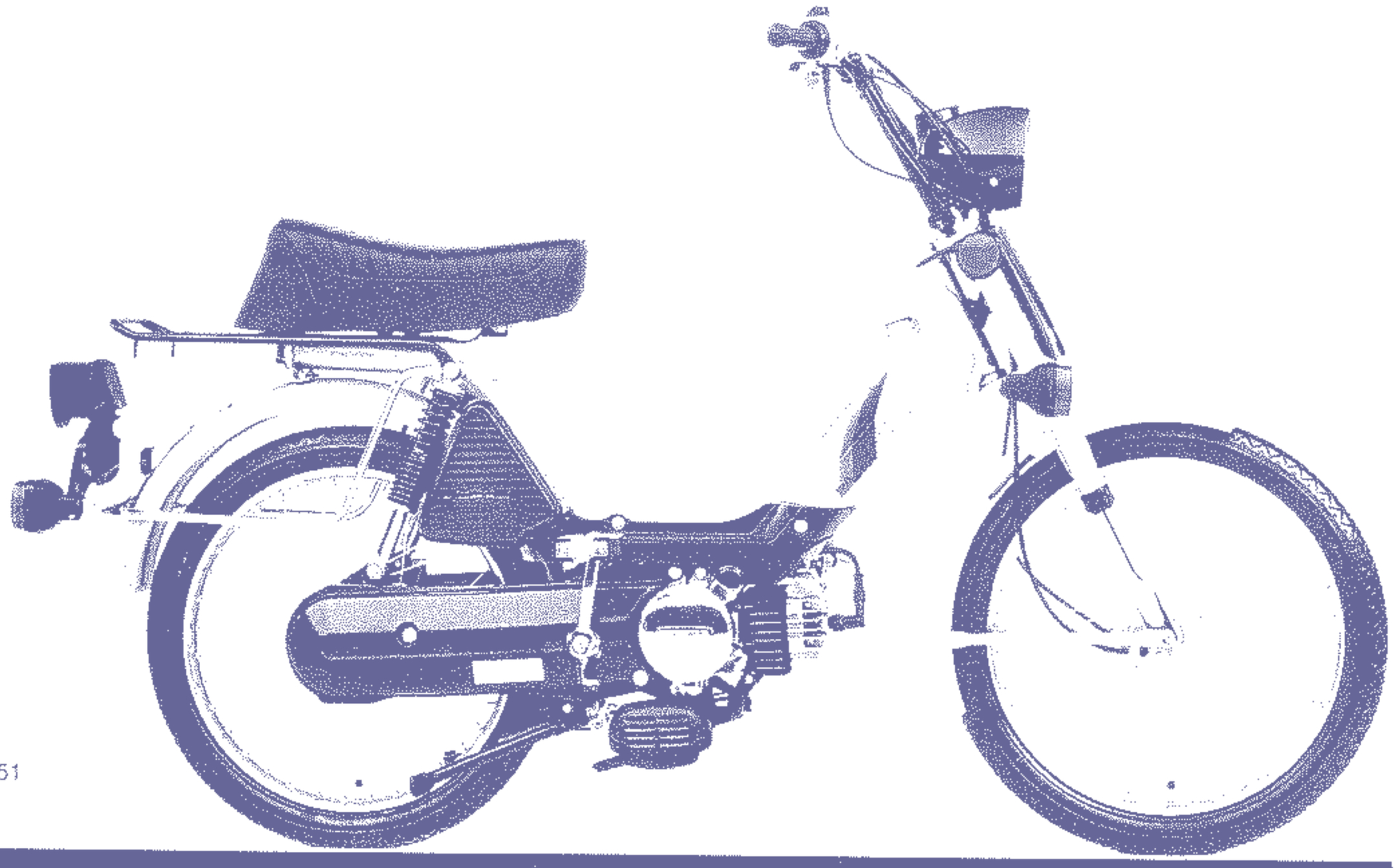
HONDA

SHOP MANUAL

PA50



NO. HM 1051

1983

PA50

IMPORTANT SAFETY NOTICE

WARNING *Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.*

CAUTION *Indicates a possibility of personal injury or equipment damage if instructions are not followed.*

NOTE: Gives helpful information.

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. It is important to note that this manual contains *some* warnings and cautions against some specific service methods which could cause **PERSONAL INJURY** to service personnel or could damage a vehicle or render it unsafe. Please understand that those warnings could not cover all conceivable ways in which service, whether or not recommended by Honda might be done or of the possible hazardous consequences of each conceivable way, nor could Honda investigate all such ways. Anyone using service procedures or tools, whether or not recommended by Honda *must satisfy himself thoroughly* that neither personal safety nor vehicle safety will be jeopardized by the service method or tools selected.

HONDA PA50

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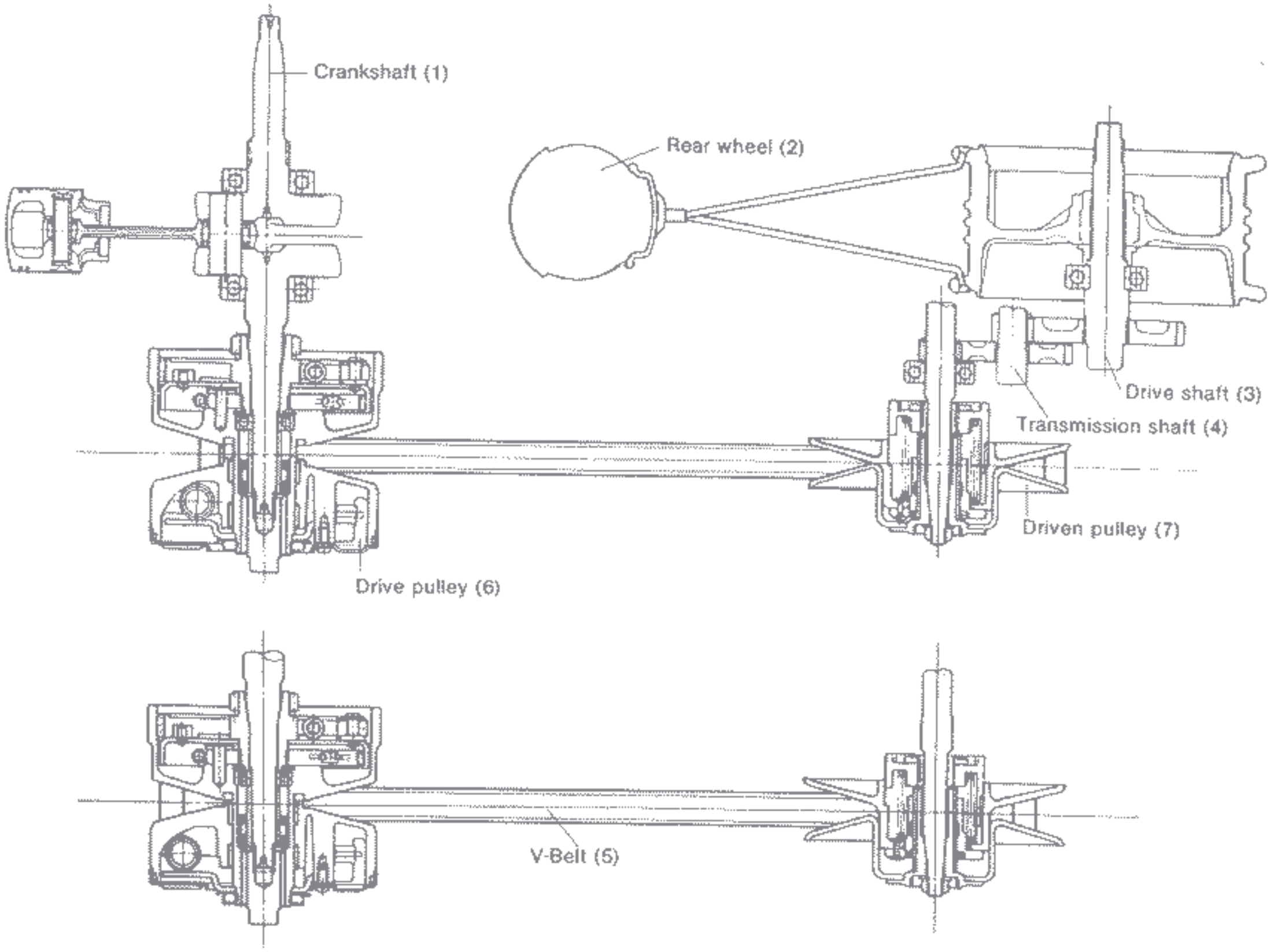
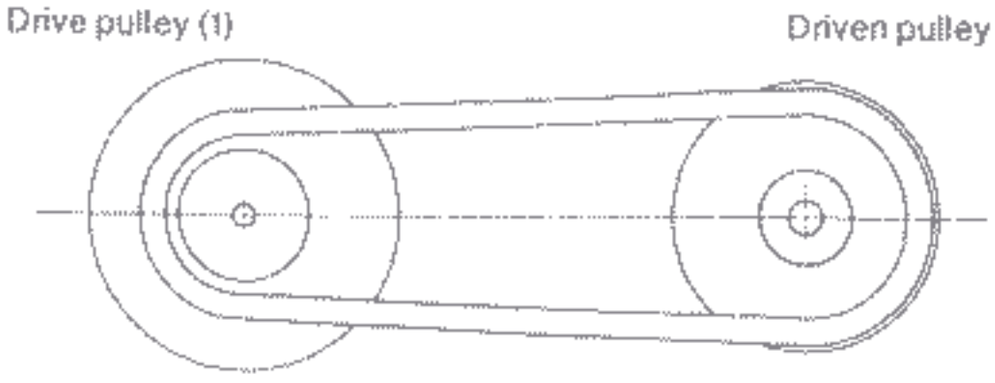
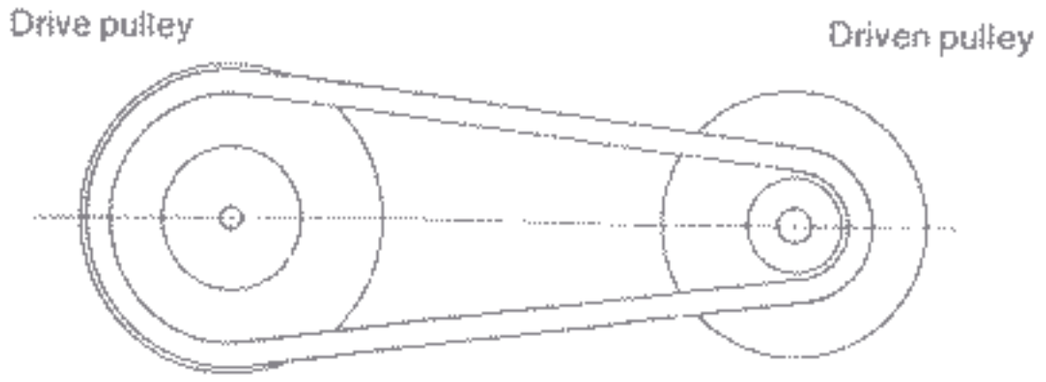
1. SPECIFICATIONS

ITEM	DX	S	Custom	St.
Overall height	1050	993	1120	985
Overall length	1650	1650	1650	1650
Overall width	640	620	715	620
Wheel base	1055	1055	1055	1055
Ground clearance	100	100	100	100
Dry weight	54 kg	50,8kg	59,7 kg	49,6 kg
FRAME			Back-Bone	
F. suspension travel			Telescopic	
R. suspension travel			Swing unit	
F. tire size			2.00 - 2.25 - 17 - 2PR	
R. tire size			2.00 - 2.25 - 17 - 2PR	
Fuel capacity			3 l	
Fuel reserve			0,6 l	
Caster angle			66° 30'	
Trail			55 mm	
ENGINE			Air cooled 2 stroke	
Bore and stroke			40.0 x 39.6	
Displacement			49 cc	
Compression ratio			6,7 : 1 (40 - 45 km/h) 7,0 : 1 (NL - 25 km/h)	
Carburator			Ø 12	
Max. power			1,69 Kw/5500 (45 km/h) 1,32 Kw/5000 (40 km/h) 1,10 Kw/3800 (NL - 25 km/h)	
Max. torque			3,72 Nm/3500 (45 km/h) 3,60 Nm/2400 (NL) 3,30 Nm/3000 (40 km/h) 3,05 Nm/3000 (25 km/h)	
Fuel			Mixed fuel/oil 1/25 - 40 - 45 km/h 1/50 - NL - 25 km/h	
Idling speed			1500 RPM	
DRIVE TRAIN			Drive belt	
Clutch			Autom. centrif. dry type	
Transmission			Variable pulley or fixed transmission	
Transmission ratio			1.80 ~ 0.98 (45 km/h) 1.80 ~ 1.12 (40 km/h) 1.80 ~ 1.46 (25 km/h) 2.149 ~ 1.131 (NL) 1.129 ~ for fixed transmission	
Final ratio			12.462	
ELECTRICAL			Flywheel magneto	
Battery			6 V - 0.8 AH 6 V - 6 W France 6 V - 18 W UK 6 V - 15 W other	
Generator			44 W/4800	
Tail/stop			6 V - 4/5 W	
Turn signal			6 V - 21 W Germany 6 V - 10 W other	
Tire pressure			Front: 2.00-2.50 kg/cm^2 Rear: 2.00-2.50 kg/cm^2	

2. TECHNICAL FEATURES HONDA V-MATIC







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3. SERVICE PROCEDURES

1. Service data

(Engine)

Unit: mm

Item	Assembly Standard		Repair Limit		Page
Piston-to-piston ring clearence	0.025-0.055	(0.001-0.002)	0.1	(0.0039)	94
Piston skirt O.D. (4mm from bottom)	39.955-39.975	(1.573-1.574)	39.85	(1.569)	94
Cylinder I.D.	40.00-40.020	(1.5748-1.5752)	40.05	(1.5767)	92
Piston ring end gap	0.15-0.35	(0.0059-0.138)	0.6	(0.024)	96
Piston pin O.D.	9.994-10.000	(0.395-0.3937)	9.97	(0.3925)	96
Piston pin hole I.D.	10.002-10.008	(0.3938-0.3940)	10.03	(0.3949)	96
Starting clutch lining thickness	2.9-3.1	(0.1142-1.220)	1.5	(0.0591)	118
Drive clutch lining thickness	3.4-3.6	(0.1339-1.417)	2.0	(0.0787)	118
Starting clutch face (Drive face) I.D.	96.9-97.1	(3.8149-3.8228)	97.5	(3.8386)	118
Clutch weight face (Drive face) I.D.	104.0-104.1	(4.0945-4.0984)	104.5	(4.1142)	118
Connecting rod big end bearing side clearence	0.15-0.41	(0.0059-0.0161)	0.6	(0.0236)	128
Crankshaft runout Left 60mm	0.05 max.	(0.0020)	0.15	(0.0059)	128
Crankshaft runout Right 75mm	0.05 max.	(0.0020)	0.15	(0.0059)	128

(Frame)

Item	Assembly Standard		Repair Limit		Page
Front wheel axle bend	0.05 max	(0.002)	0.1	(0.004)	–
Front and rear wheel hub I.D.	80.0-80.2	(3.150-3.157)	81.0	(3.189)	146
Front and rear brake lining thicknesses	3.5	(0.138)	2.0	(0.079)	146
Front wheel runout	1.0 max	(0.039)	2.0	(0.079)	146

2. Torque specifications

(Engine)

Ref.No	Tightening point	Qty	Thread dia mm	Torque kg-cm	(lbs-ft)	Page
1	Cylinder head hold-down	4	6	90-120	(5.8-8.7)	88
2	A.C. flywheel generator attaching nut	1	10	300-400	(21.7-28.9)	100
3	Drive pulley attaching nut	1	10	300-400	(21.7-28.9)	108
4	Driven pulley attaching nut	1	8	200-250	(14.5-18.1)	108
5	Intake pipe attaching nuts	4	6	80-120	(5.8-8.7	–
6	Nut special 27 mm	1	27	280-350	(20.3-25.3)	–
7	Nut special 20 mm	1	20	500	(36.0)	–
8	Engine Hanger Bolt	1	10	590-650	(42.6-47.0)	82

(Frame)

Ref.No	Tightening point	Qty	Thread dia mm	Torque kg-cm	(lbs-ft)	Page
1	Suspension bar Cap Nut	2	10	400-500	(28.9-36.1)	—
2	Steering stem nut	1	22	250-350	(18.1-25.3)	—
3	Steering top bridge bolts	2	10	300-400	(21.7-28.9)	—
4	Steering holder bolts	4	6	90-120	(6.5-8.7)	—
5	Front wheel axle nuts	2	11	300-400	(21.7-28.9)	—
6	Free wheel guide	1	14	400-600	(28.9-43.4)	—
7	Rear shock absorber bolts	4	8	300-400	(21.7-28.9)	—

Standard torque specifications

Type	Torque kg-cm	(lbs-ft)
5 mm bolts	40- 70	(2.9-5.1)
6 mm screws	80-120	(5.8-8.7)
6 mm bolts	80-120	(5.8-8.7)
8 mm bolts	200-250	(14.5-18.1)
10 mm bolts	300-400	(21.7-28.9)
14 mm nut	600-800	(43.4-57.8)

3. Special tools

N°	Tool parts no	Description
1	07902-1480000	Holder, drive pulley
2	07916-1480001	Wrench, lock nut 36 x 46
3	07925-0010001	Holder, flywheel
4	07933-1480000	Puller, drive pulley
5	07935-1480000	Puller, case
6	07965-1480001	Assembly tool, seal & case
7	07934-1480000	Cam Puller
8	07797-0010400	Case, special Tools
9	07933-1480100	Puller pulley
10	07960-1480100	Assy. driven pulley
11	07900-1480002	Tool Set

Common tools

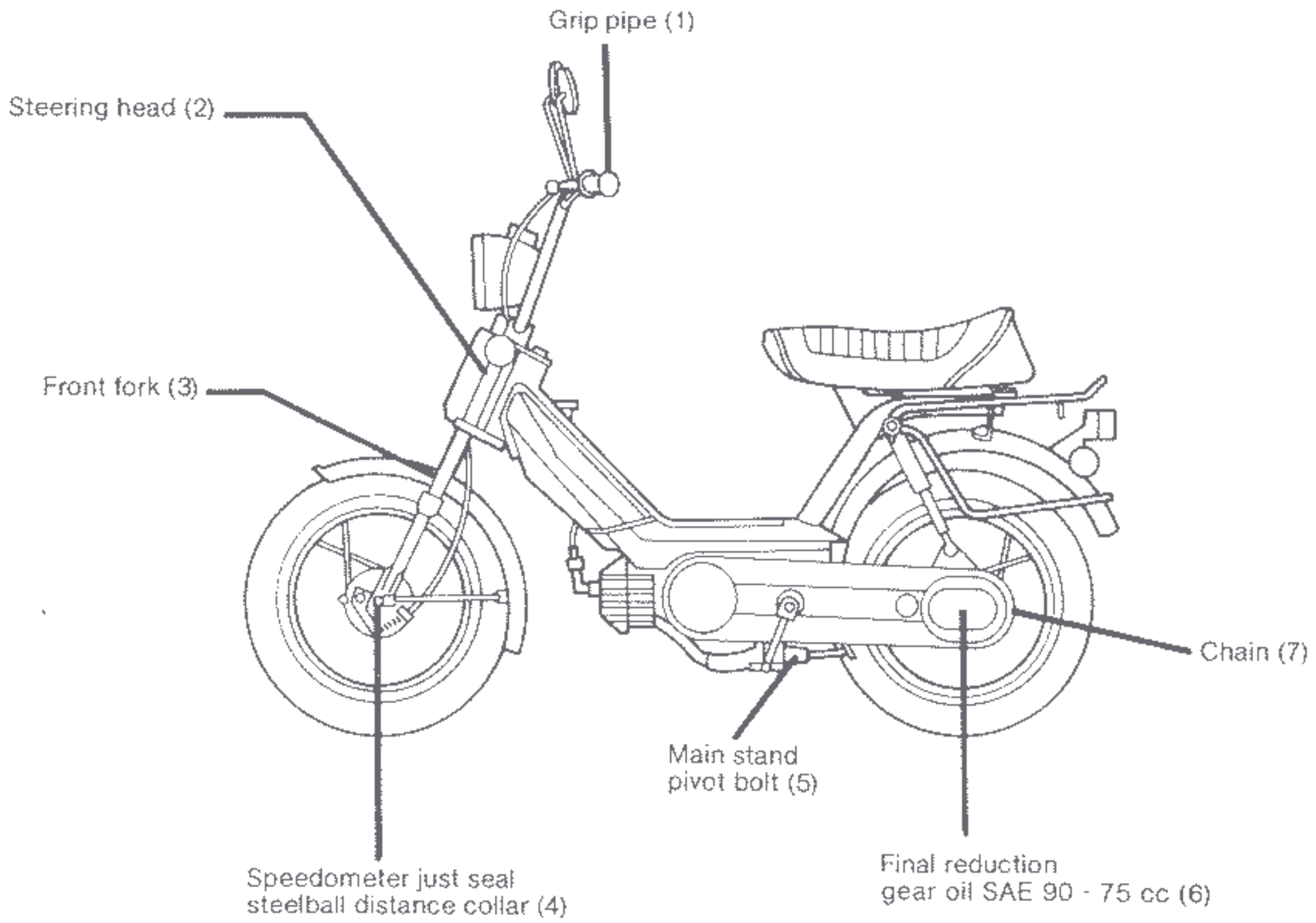
No	Tool parts no	Description
1	07959-3290000	Rear shock disassembly tool
2	07401-0010000	Float level gauge
3	07902-2000000	Pin spanner wrench

4. Lubrication

● ENGINE

	Point of lubrication	Lubricant
1	Crankcase rotating or sliding surfaces	Use Honda oil or equivalent
2	Cylinder rotating or sliding surfaces	Use Honda oil or equivalent
3	Oil felt	Engine oil (ultra oil)
4	Weight rollers of movable drive face	Grease
5	Driven pulley spring	Grease

● FRAME



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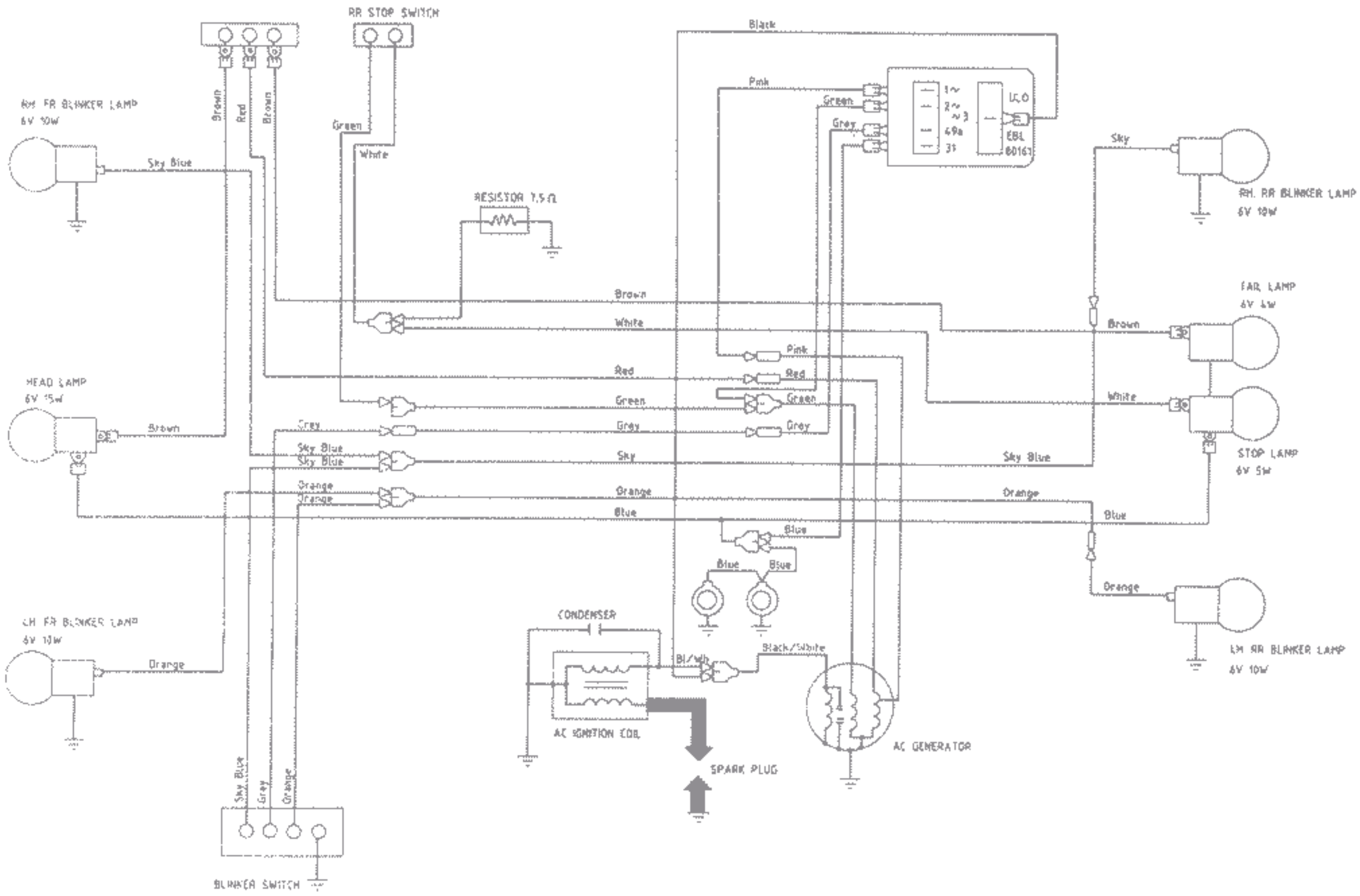

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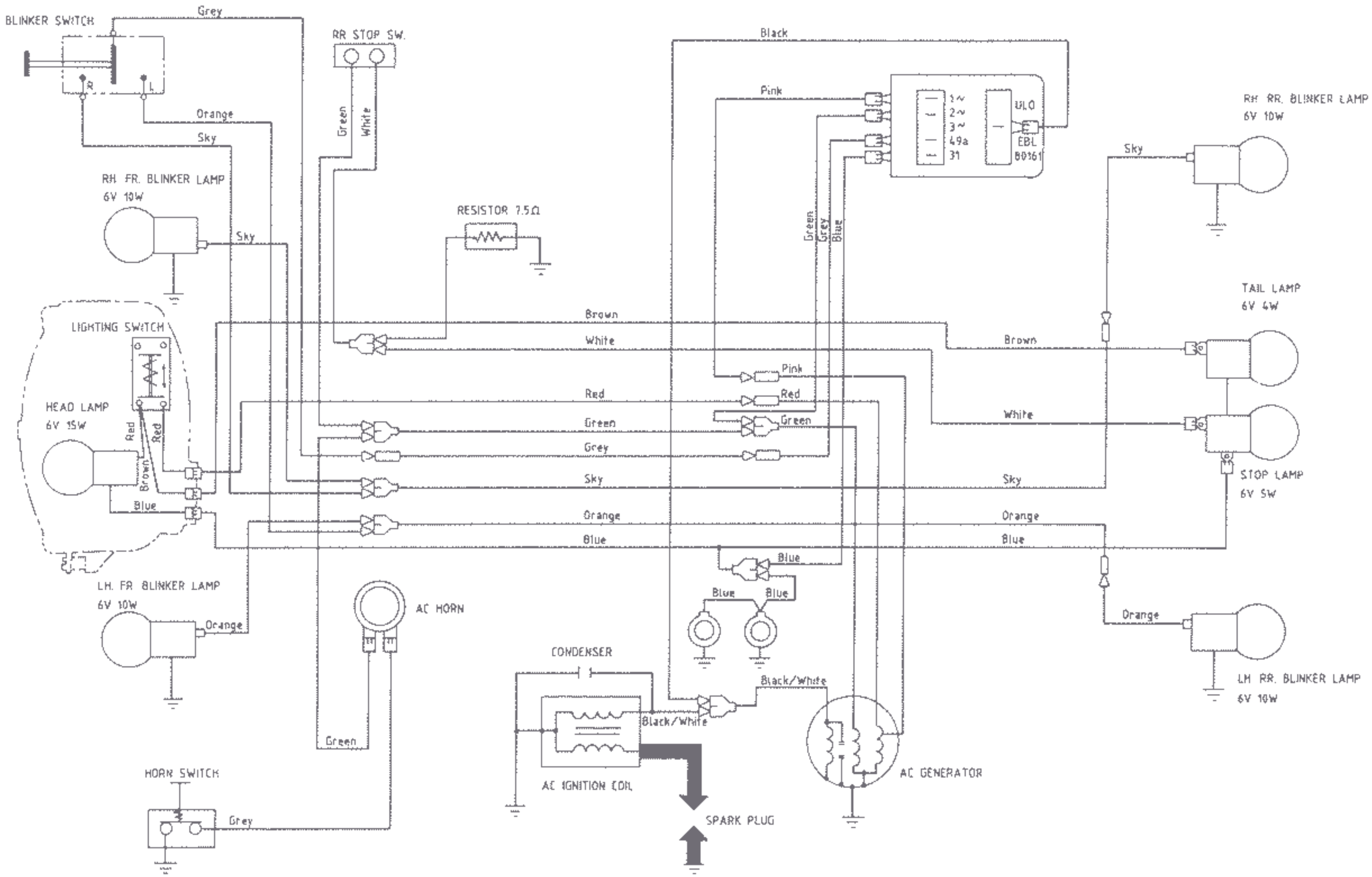
VLCB



DESTINATION : C VLCS : B
MC VLCS : B

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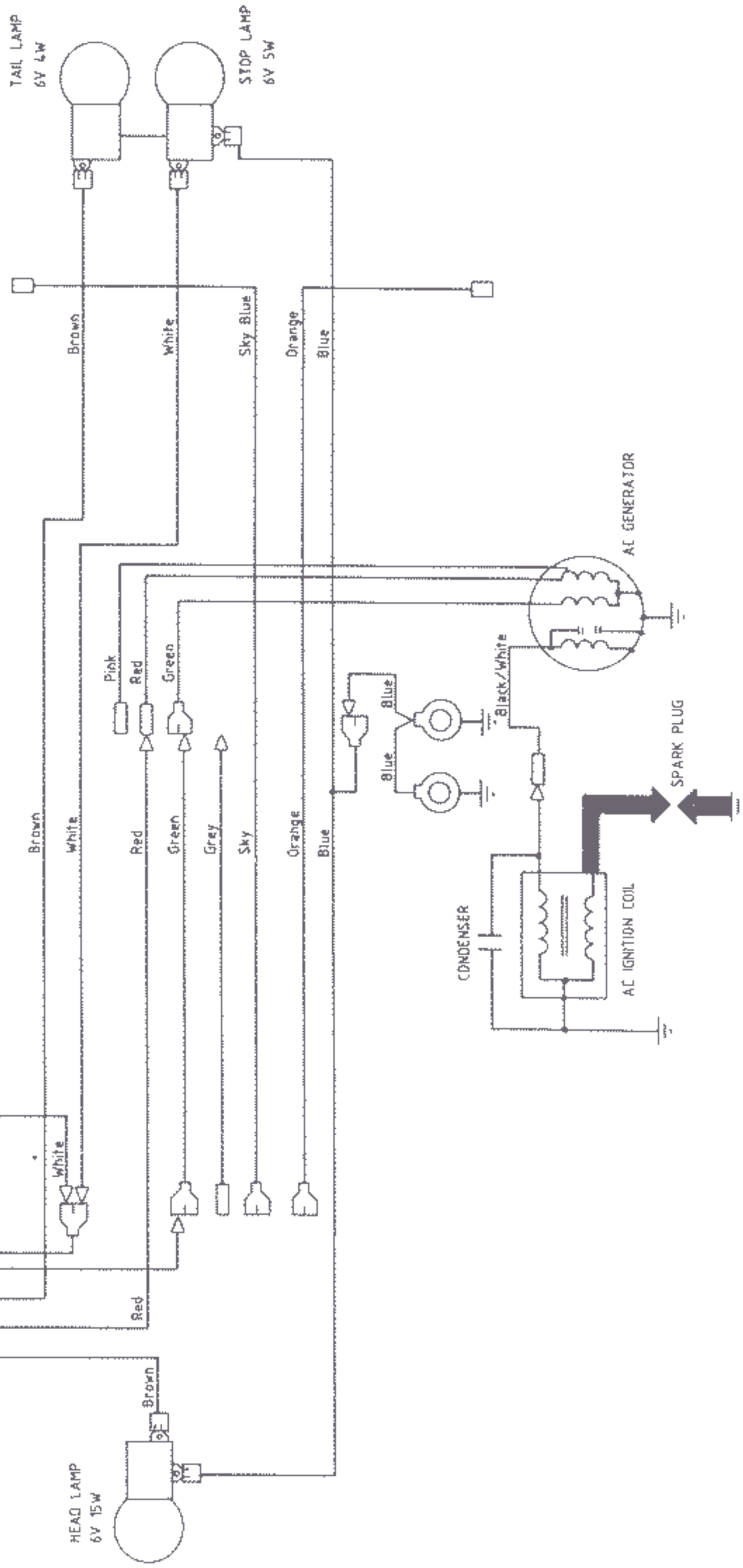
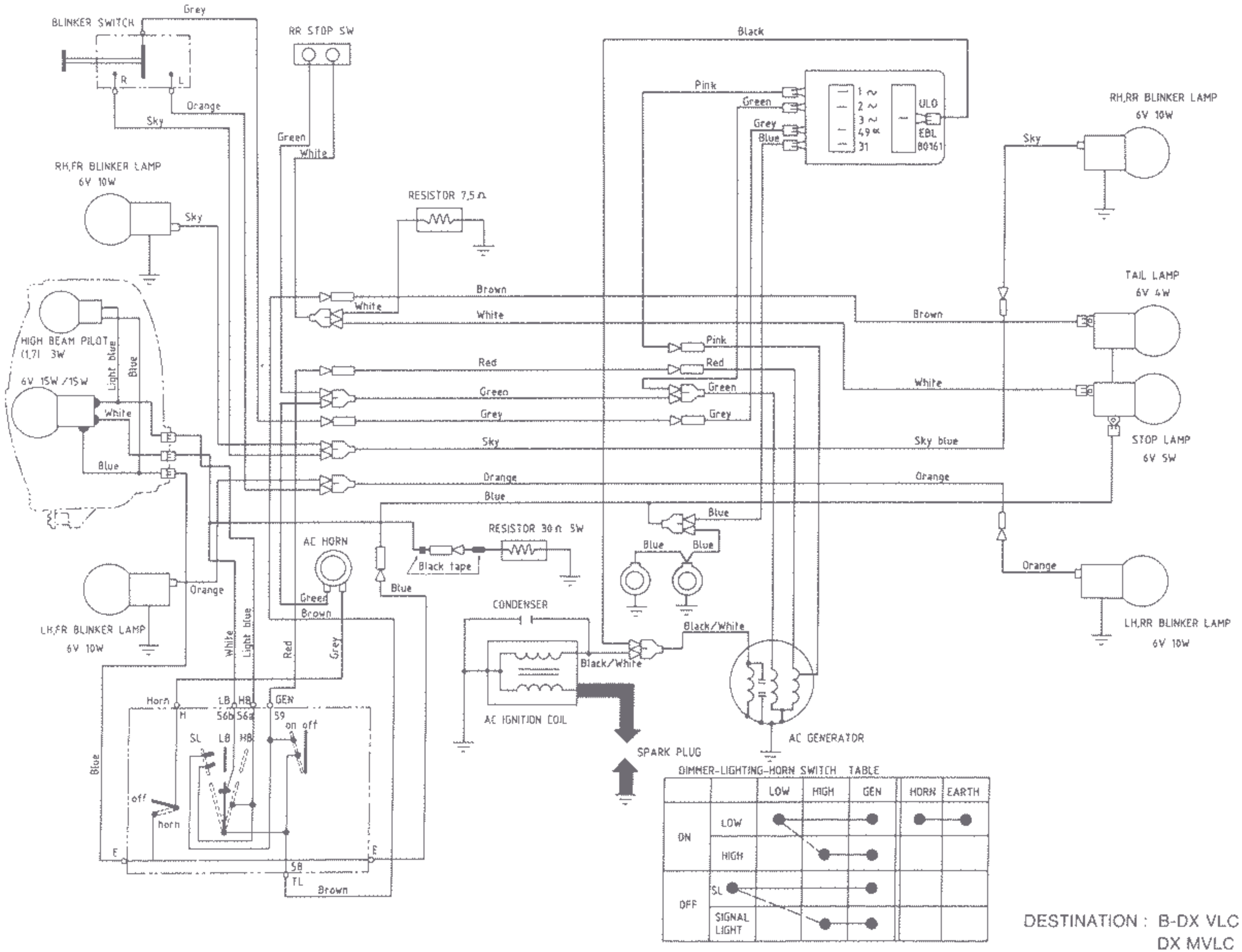
DESTINATION : B-L-VL
B-ML-MVL
DK-VL&S VL
AUS





DESTINATION : B-DX VLC
DX MVLC
S VLCS
S MVLCS

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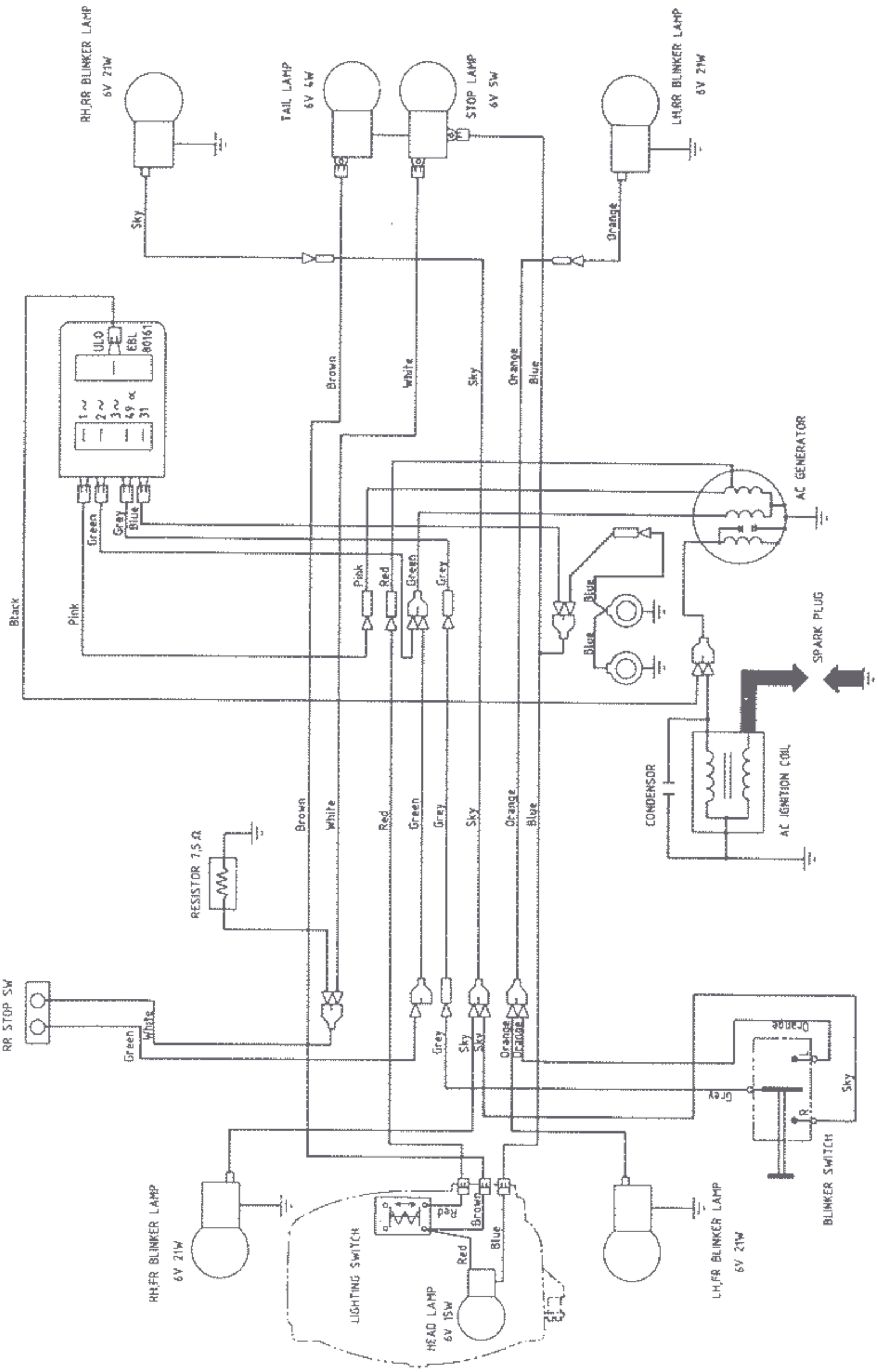
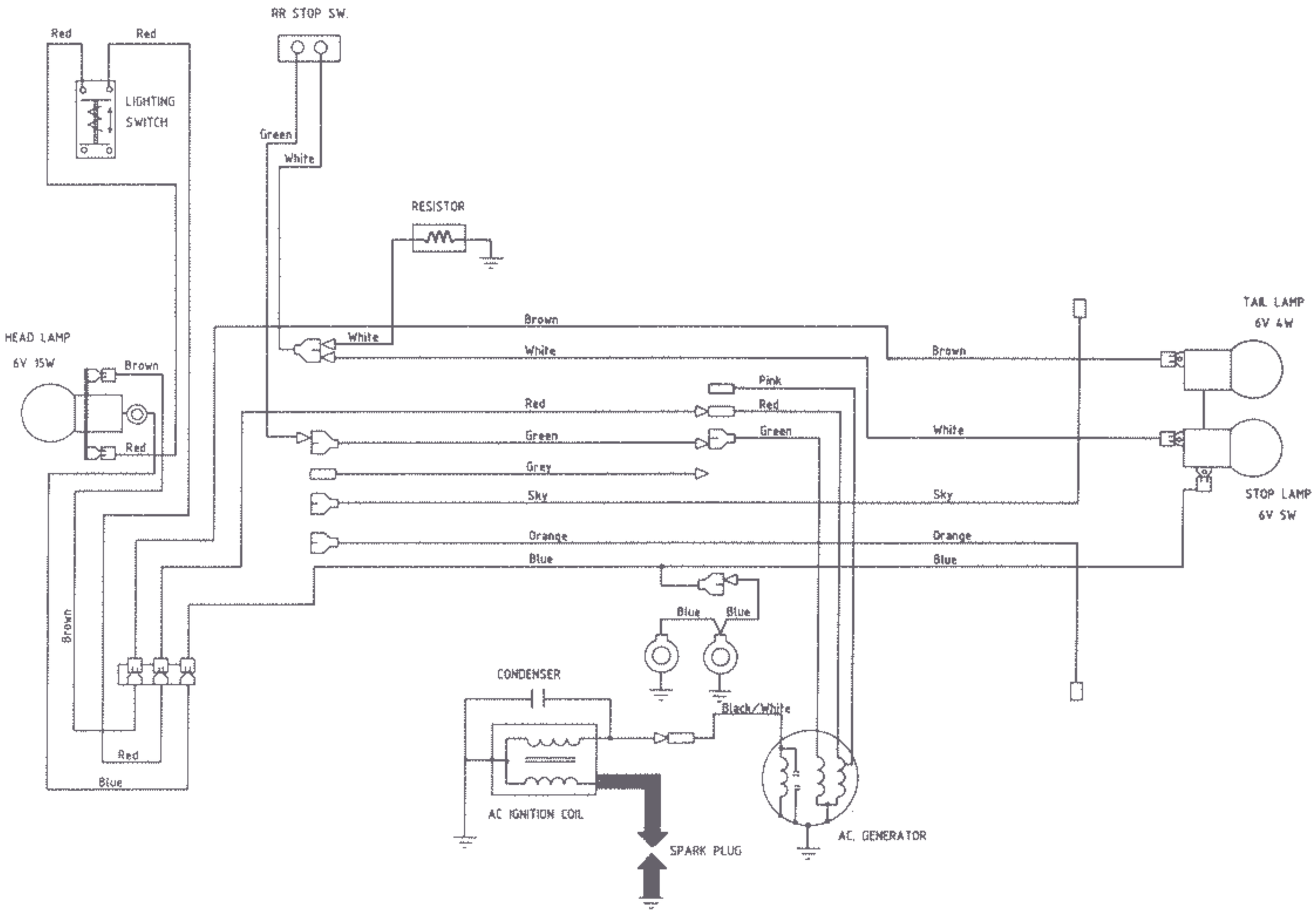
DESTINATION : G





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S MVLS : G
SVLS : A

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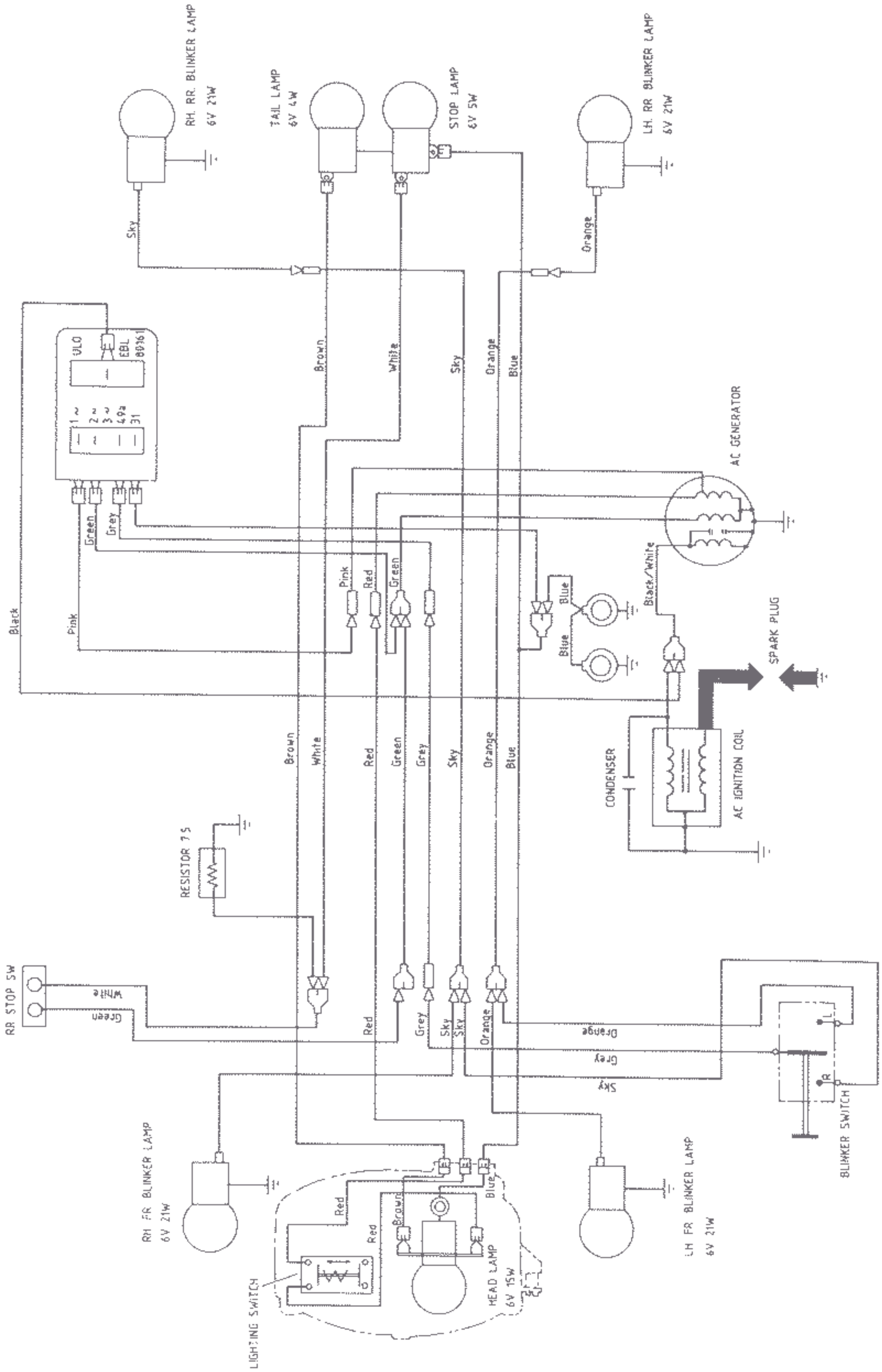
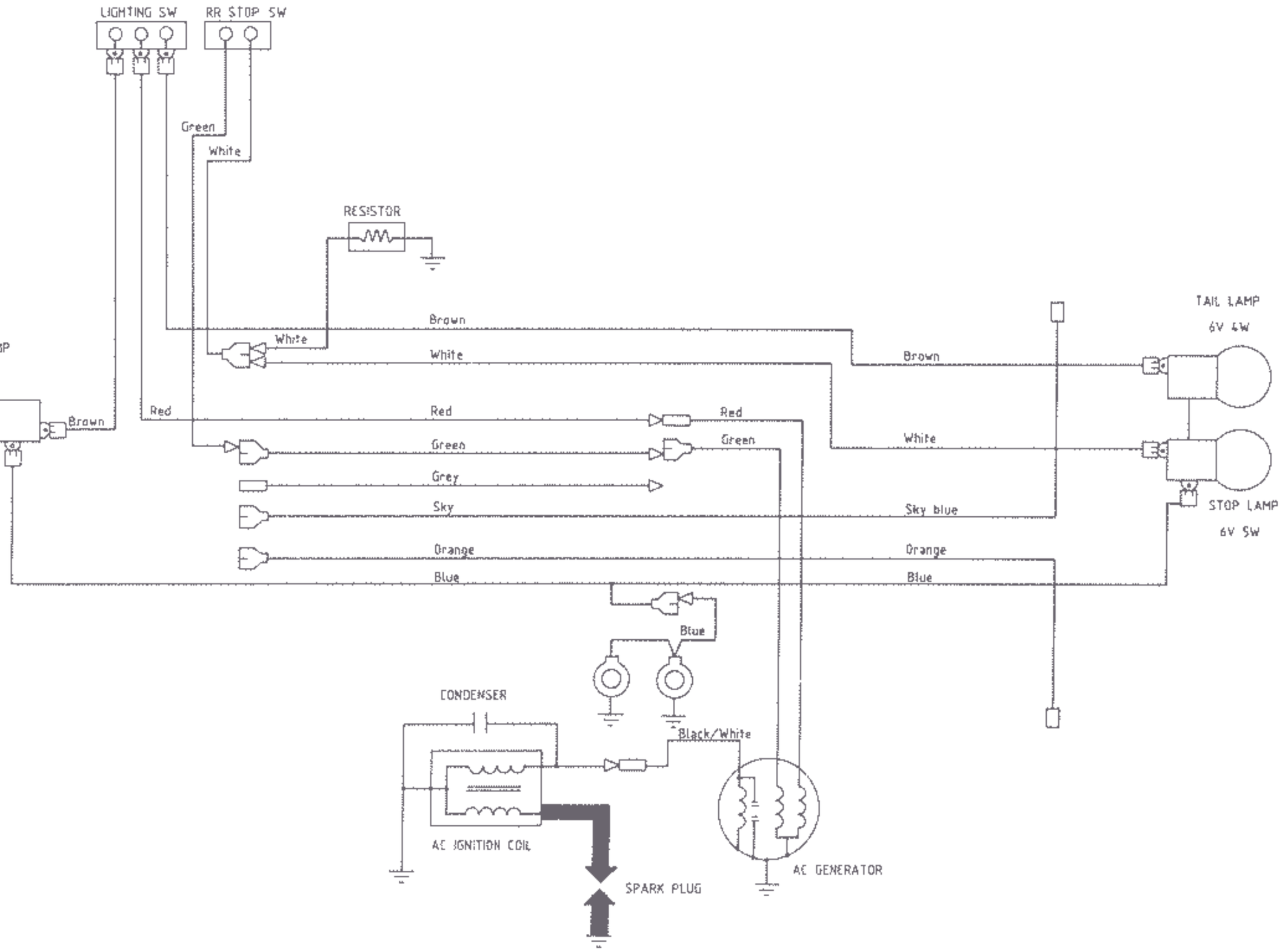
DESTINATION : GERM. MS VLCS
MS LCS





DESTINATION : VL : F
VL : GR

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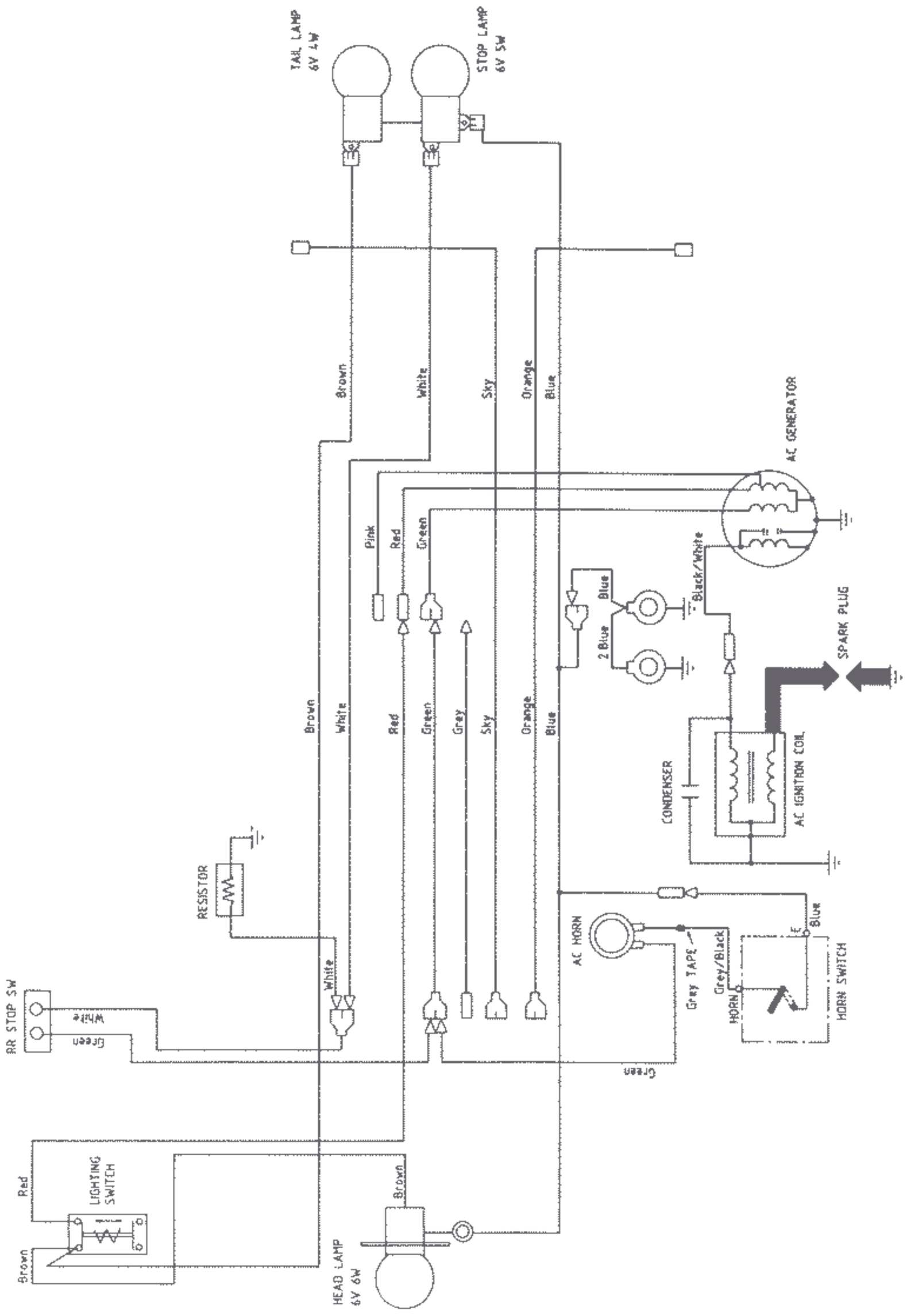
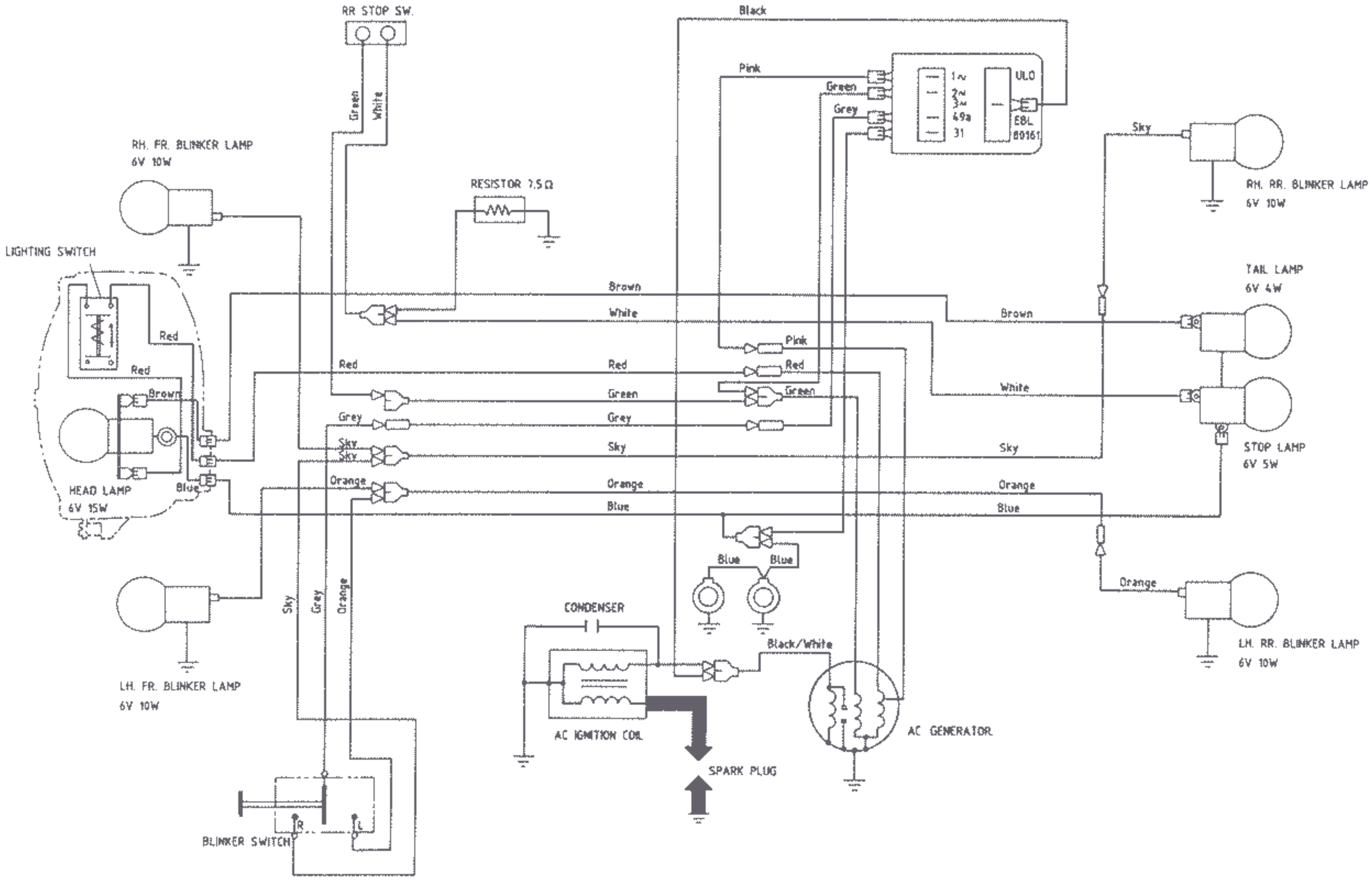
DESTINATION : DX - VL : F
S VLS : N





DESTINATION : NL DX VLC

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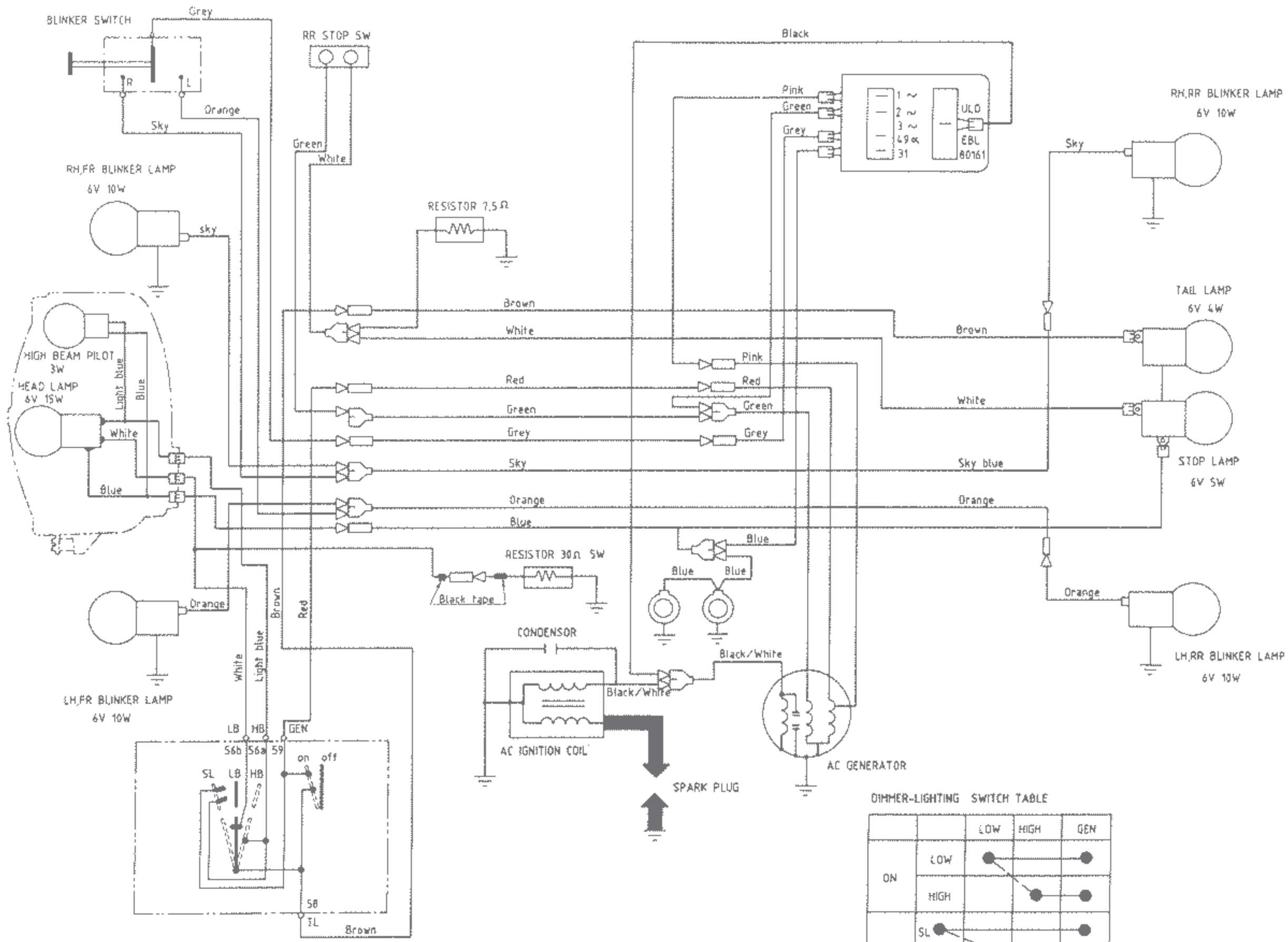
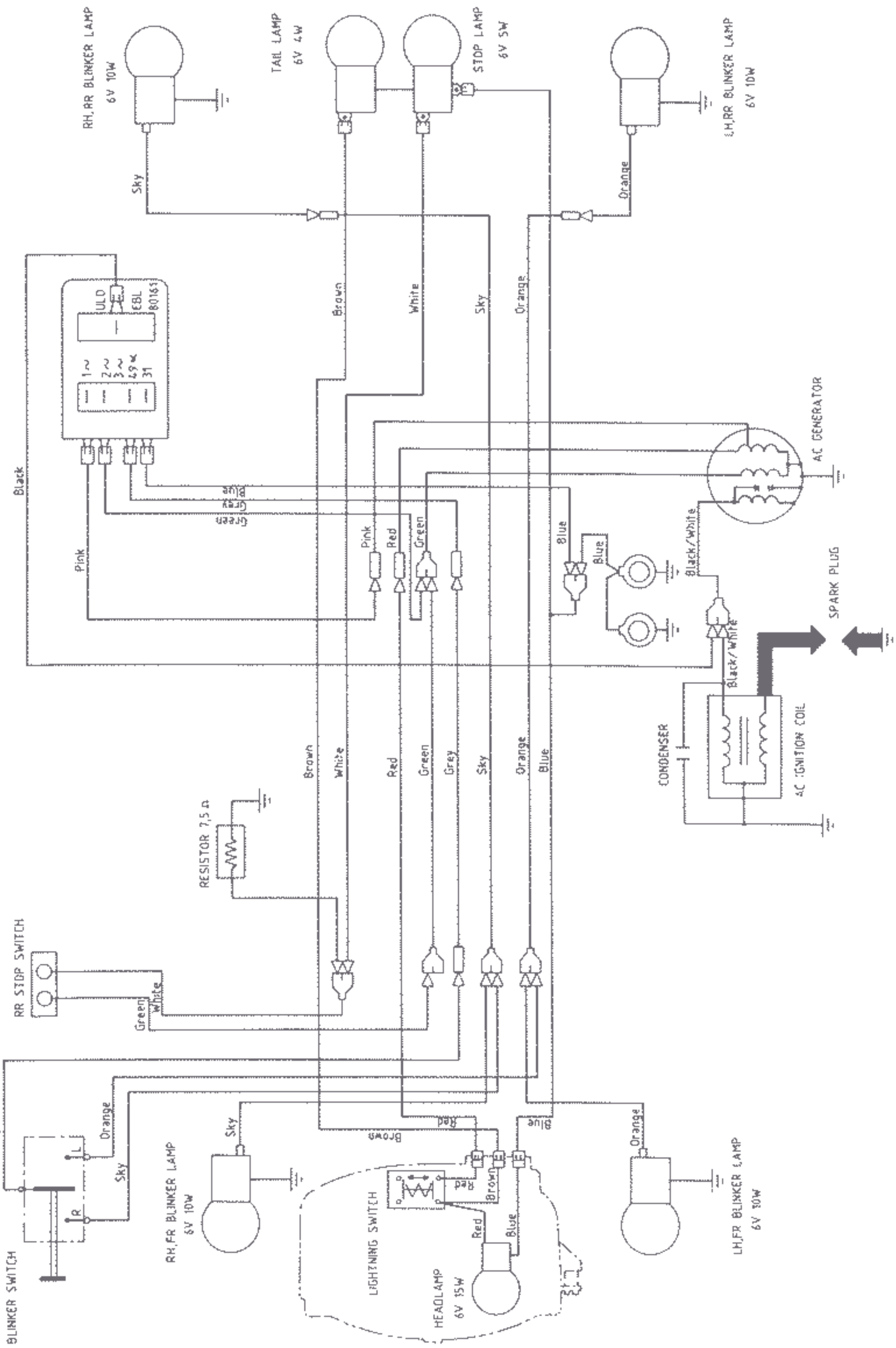


DIMMER-LIGHTING SWITCH TABLE

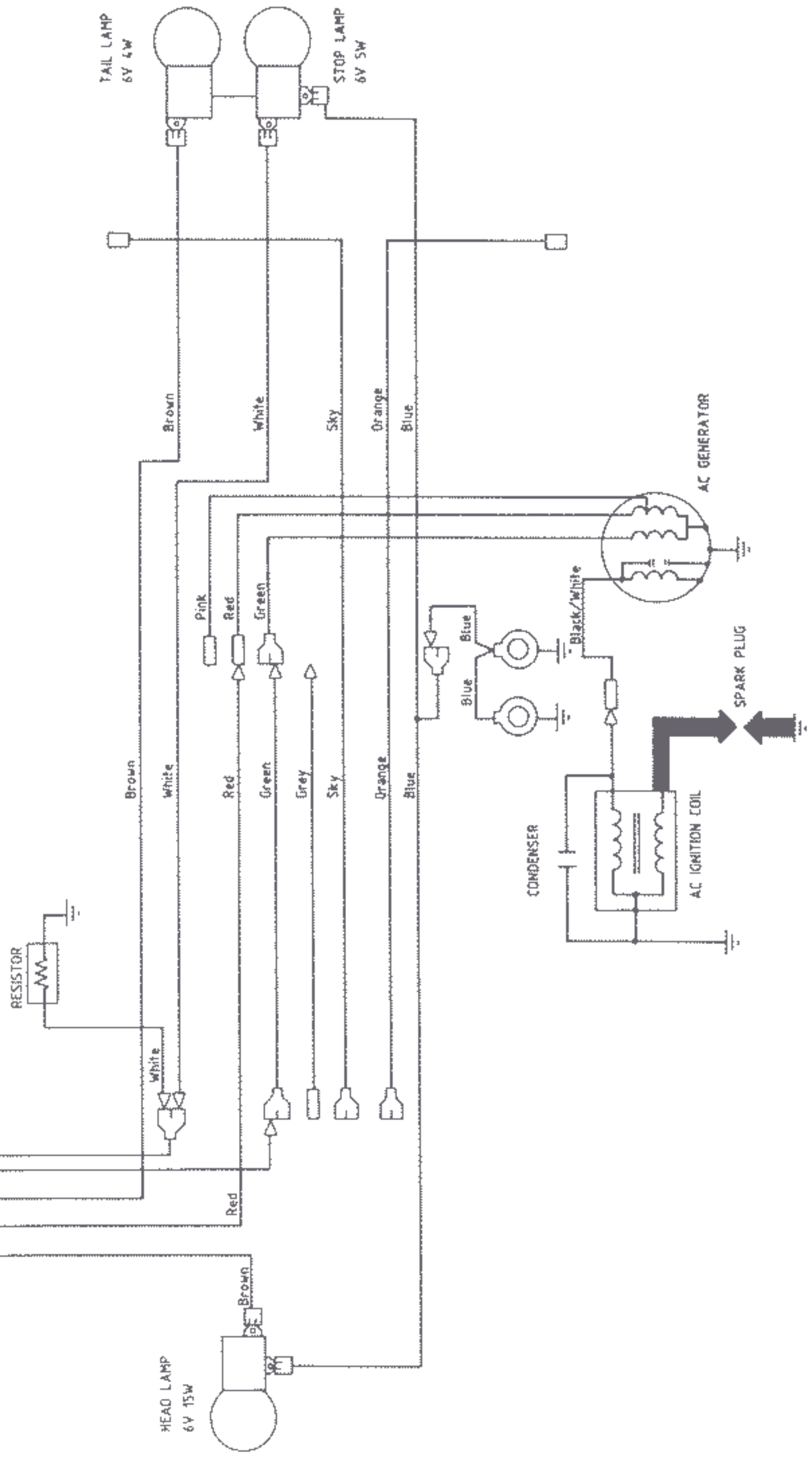
		LOW	HIGH	GEN
ON	LOW	●		●
	HIGH		●	●
OFF	SL	●		●
	SIGNAL LIGHT		●	●

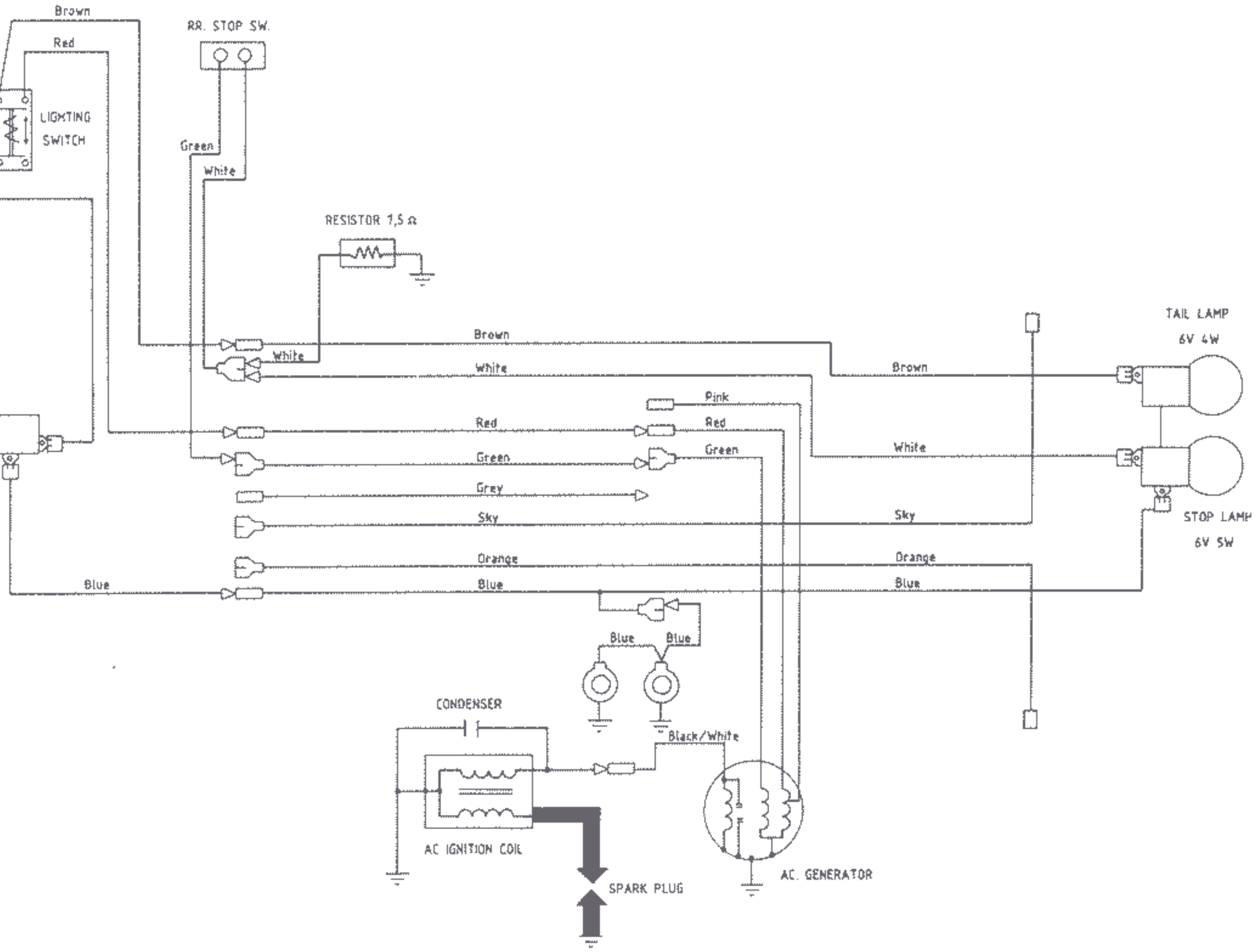
DESTINATION : SVLCS NL

DESTINATION : NL



DESTINATION : ML : D
VL : NL





DESTINATION : SVLS-AUS

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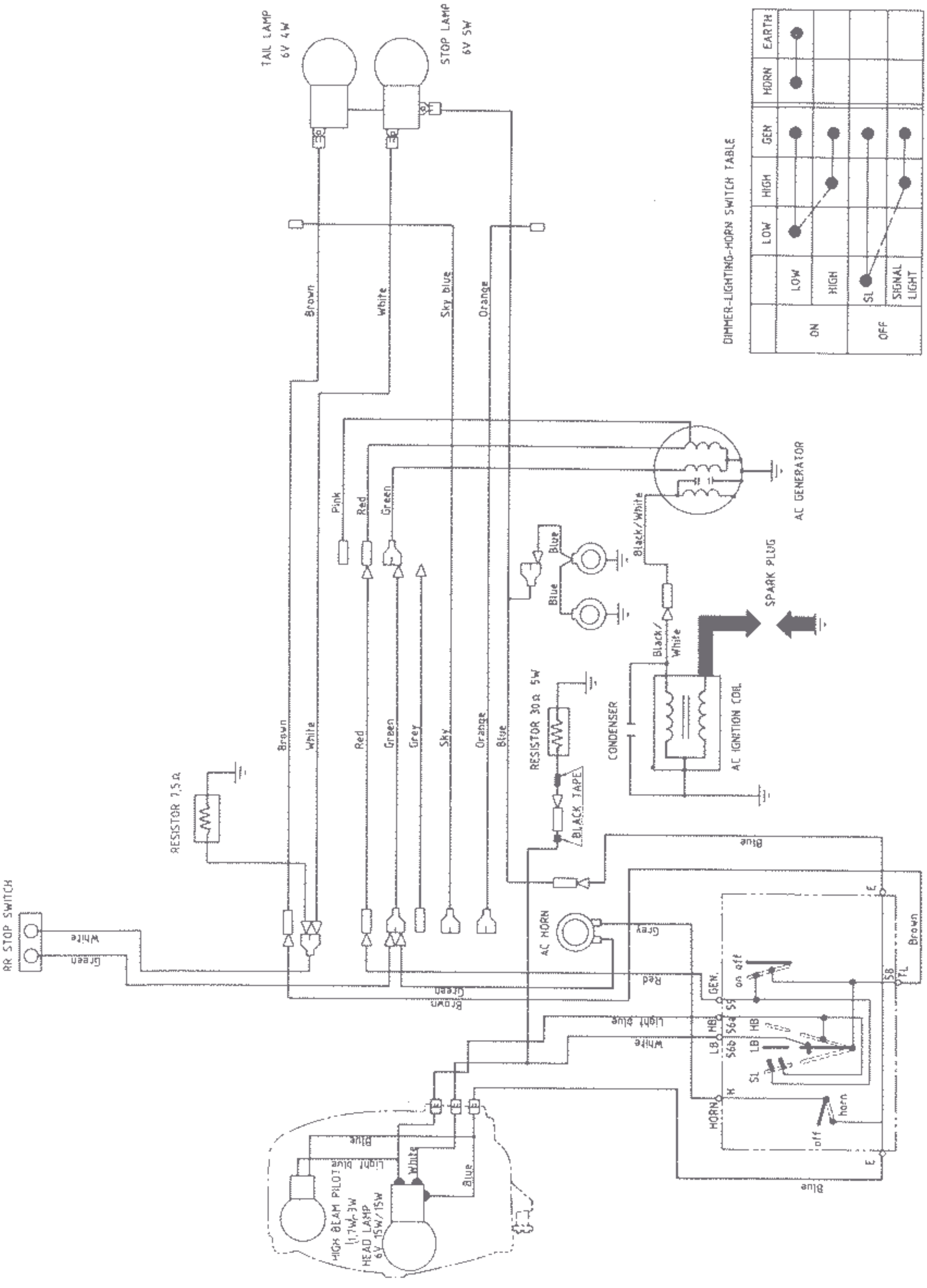
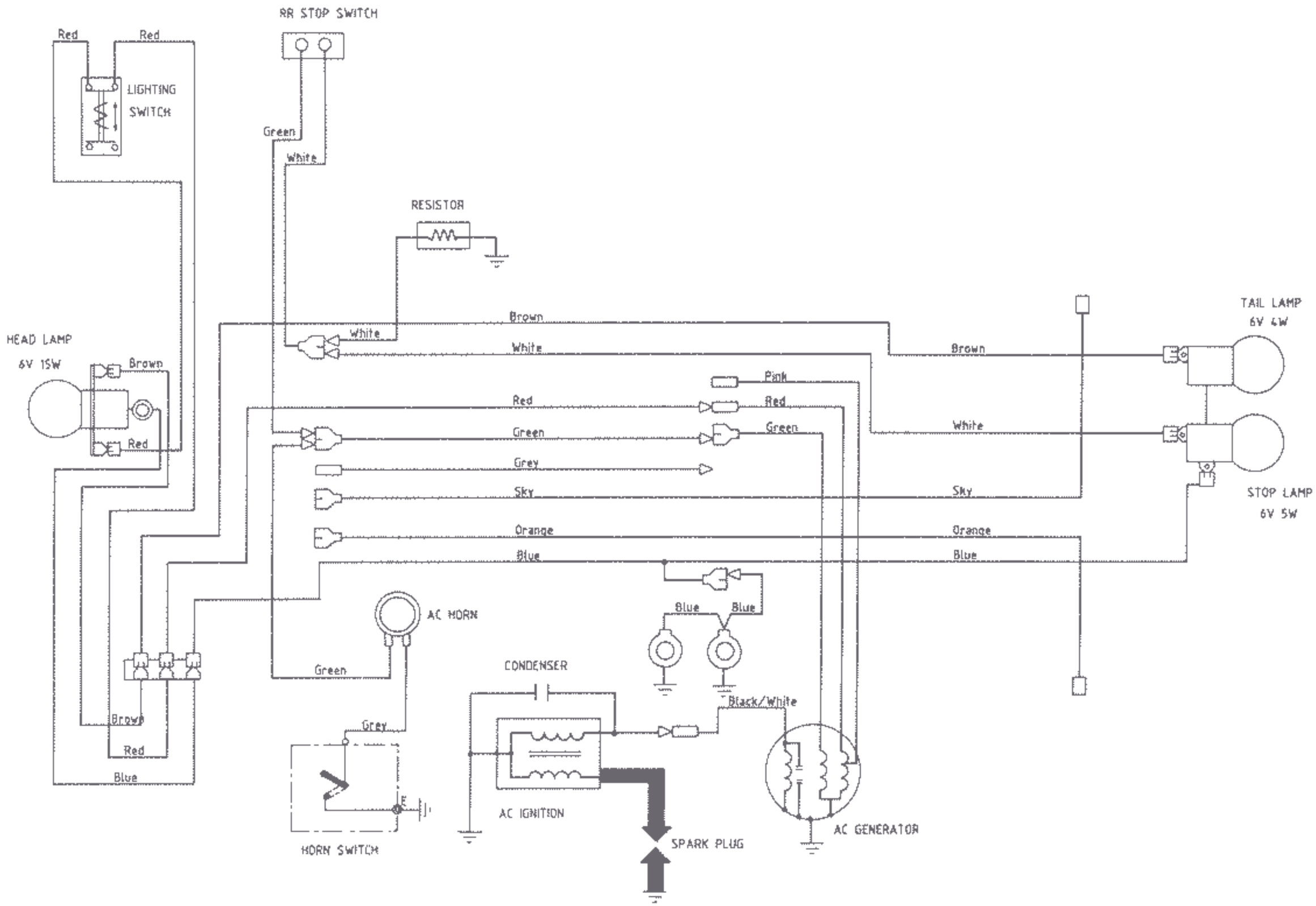
DESTINATION : NORWAY





DESTINATION : S VLS-E

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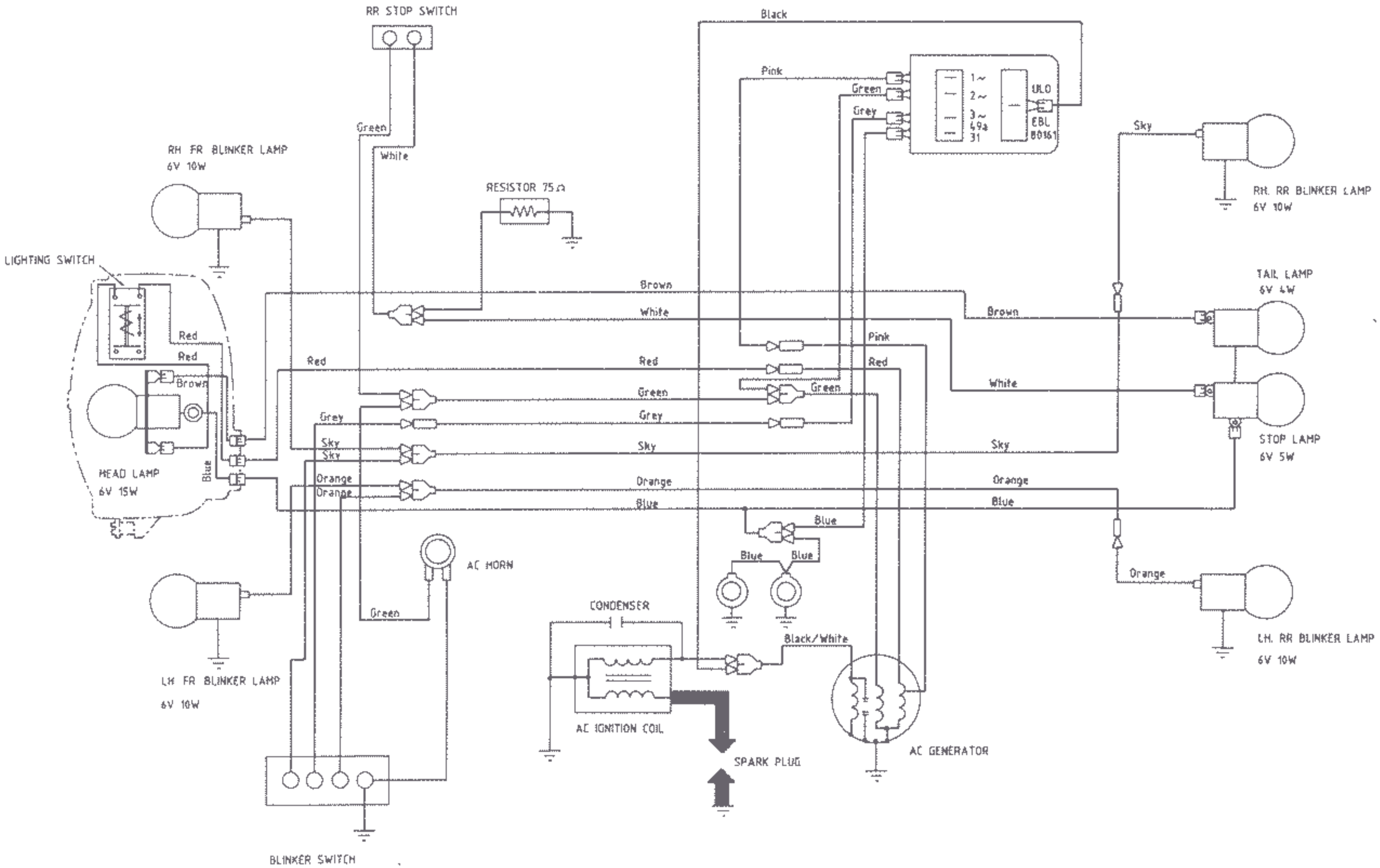
BLINKER SWITCH
Grey
R
L
Sky
Orange
Black
Pink
Green
1~
2~
3
49a
31
ULO
EBL
80161
RH. RR BLINKER LAMP
6V 10W
Sky
RH. FR BLINKER LAMP
6V 10W
Sky
Grey
Blue
CITY LIGHT (CL)
6V 15W
Brown
TAIL LAMP
6V 4W
Pink
Red
Green
Grey
Sky Blue
Orange
Dark blue
HEAD LAMP (HL)
6V 15W
Light blue
Orange
Green
HORN
Blue
Dark blue
Dark blue
LH. RR BLINKER LAMP
6V 10W
Orange
CONDENSER
Black/White
LH. FR BLINKER LAMP
6V 10W
Brown
White
Light blue
Red
Grey
Dark blue
AC IGNITION COIL
SPARK PLUG
AC GENERATOR
ON
OFF
CL
HL
GEN
LS
LIGHT SIGNALING
HORN SWITCH
LIGHTING, DIMMER , HORN SWITCH

		CL	HL	GEN	HORN	EARTH
ON	CL LS	●		●	●	●
	HL		●	●		
OFF	LS	●		●		
			●	●		

DESTINATION : IT. S VLCS



DESTINATION : SVLCSE

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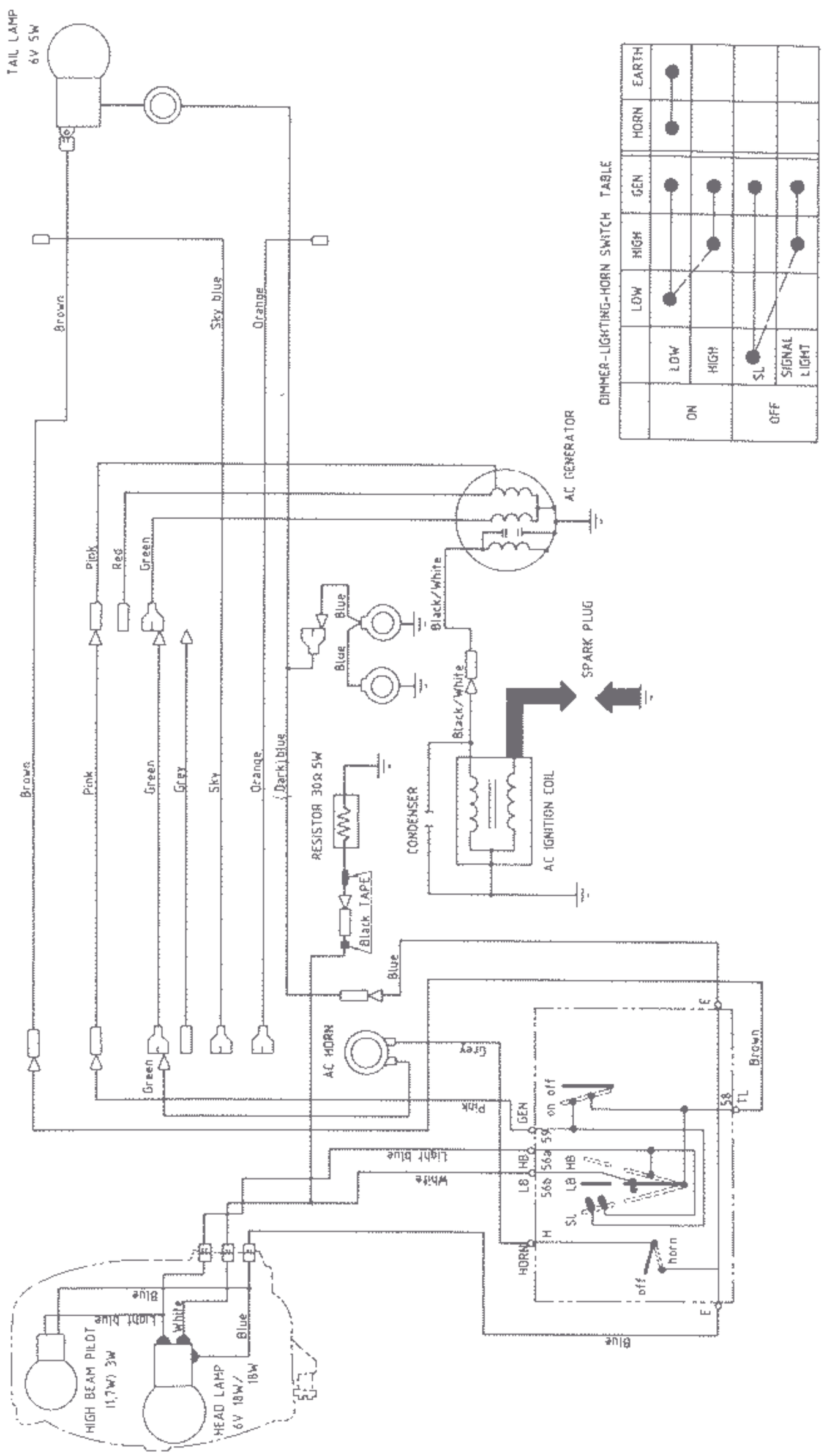
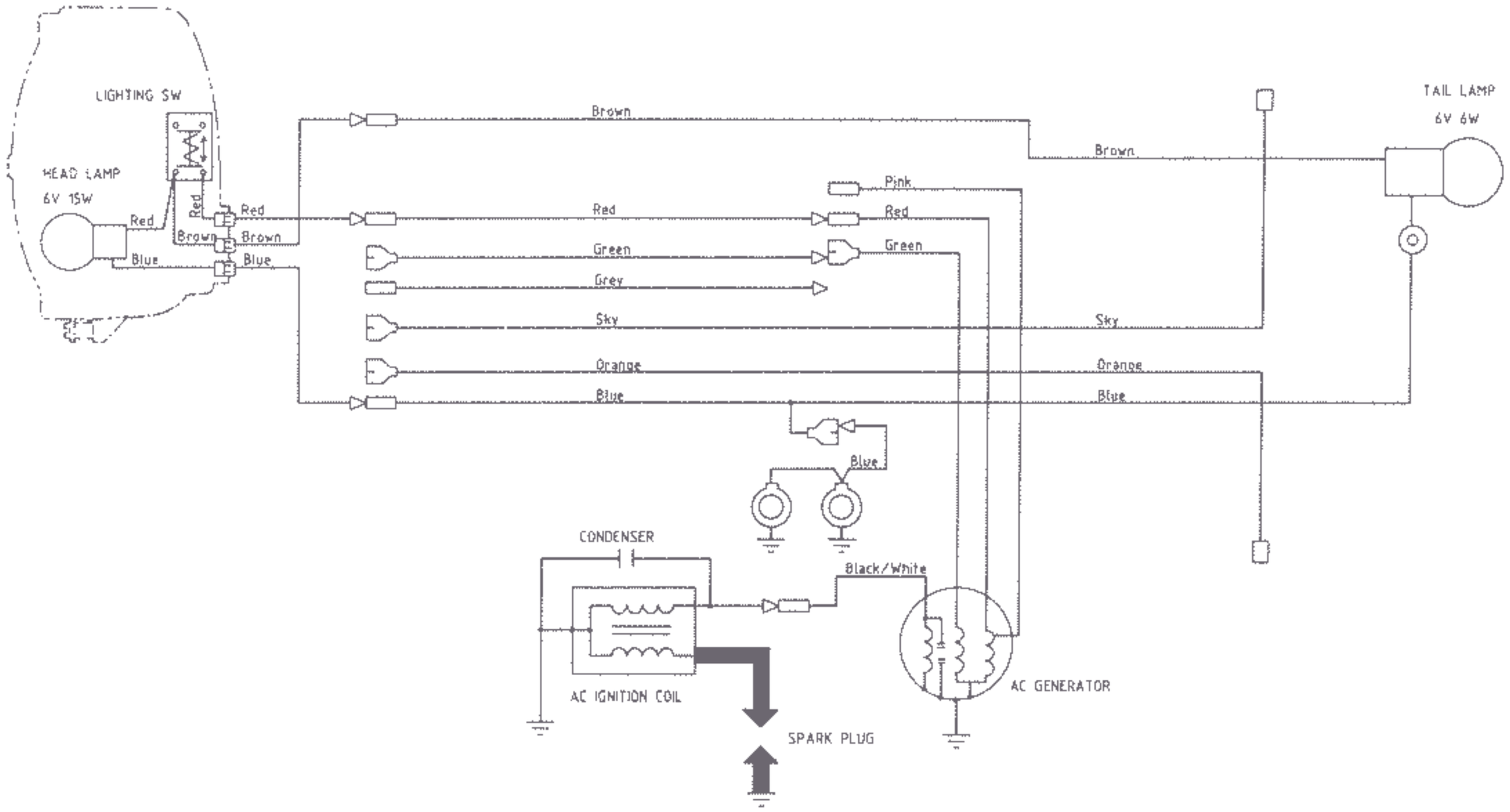
DESTINATION : GB-S VLS
DX VL





DESTINATION : CH

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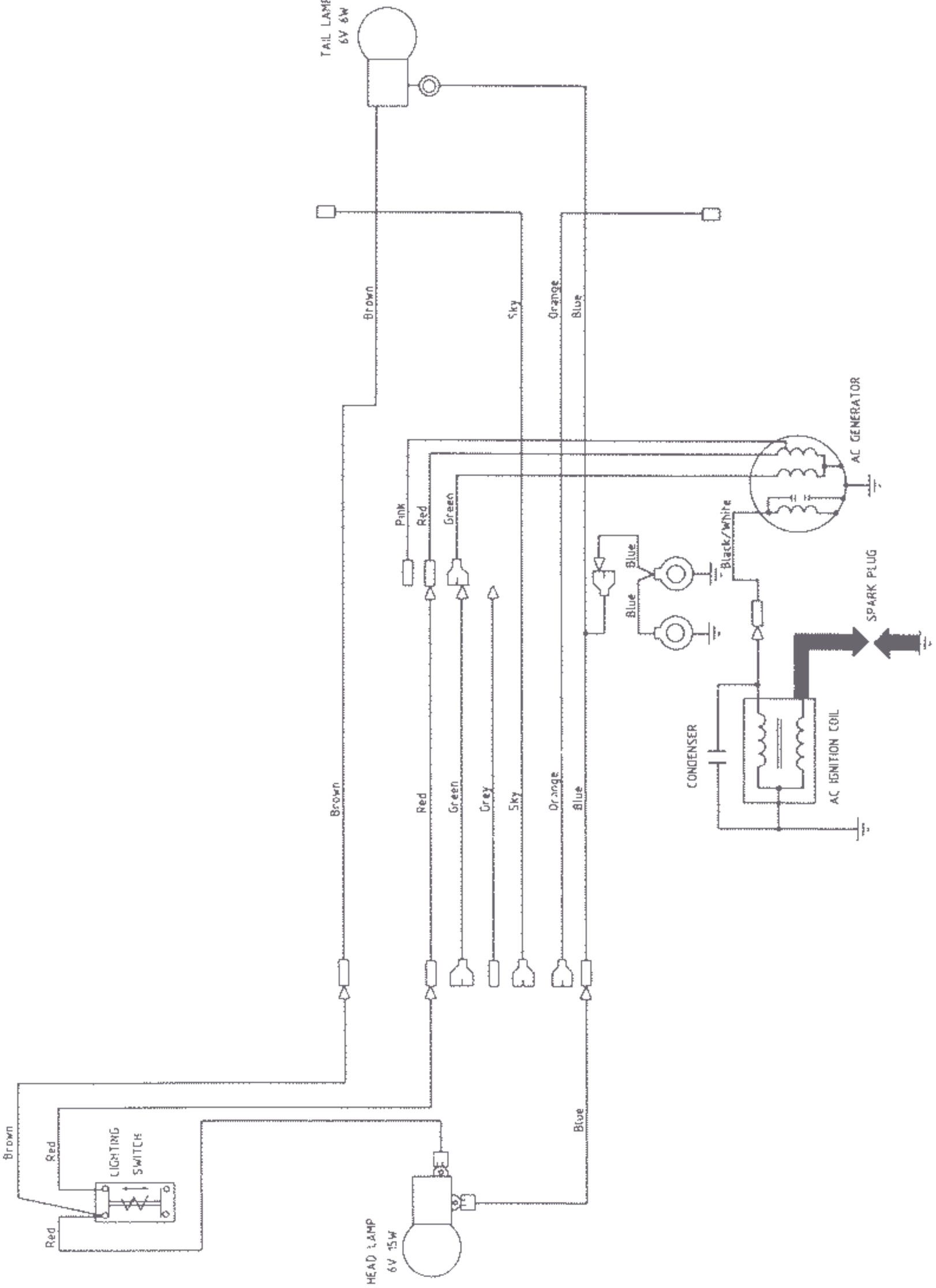
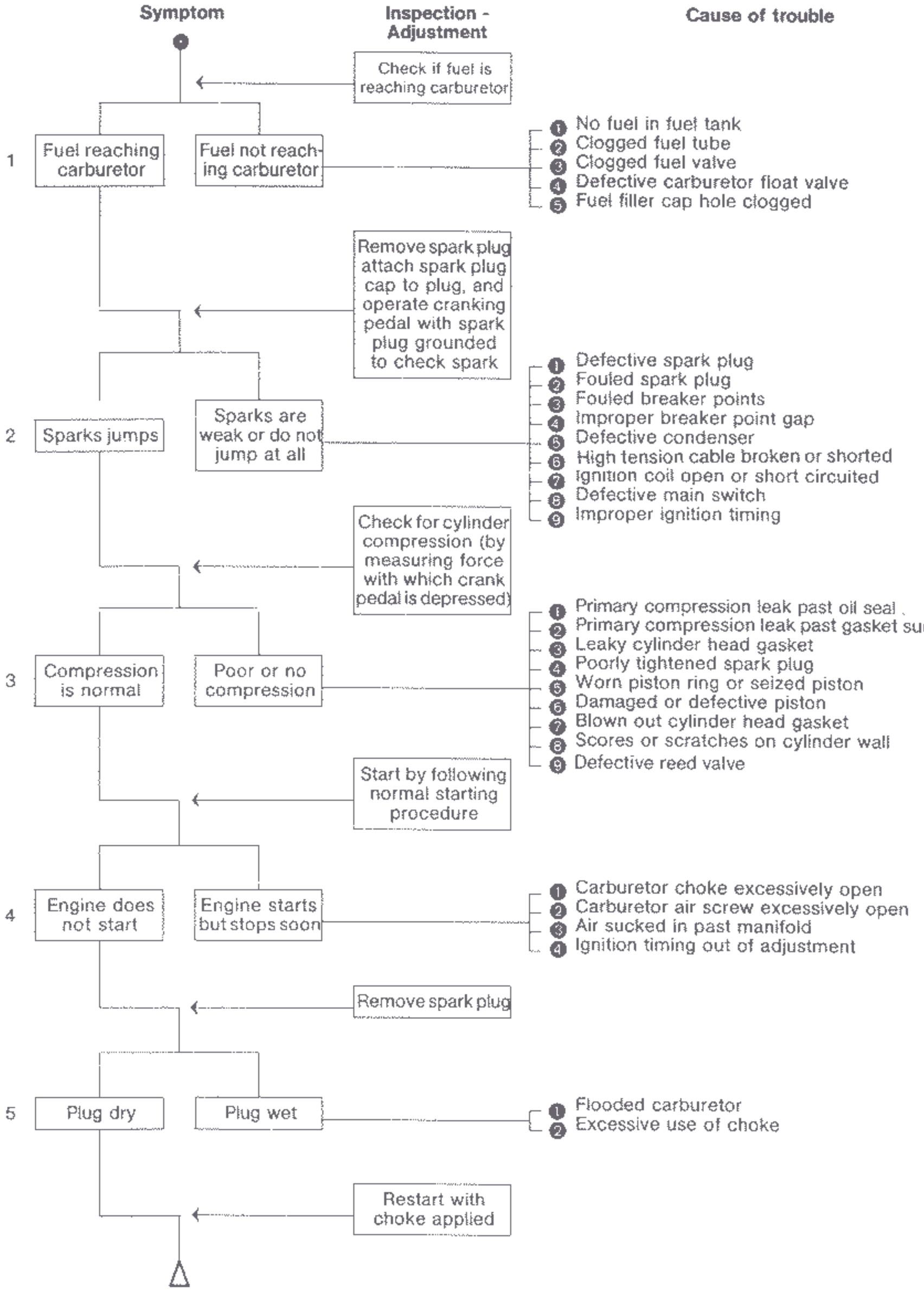
DESTINATION : MSVLS-CH



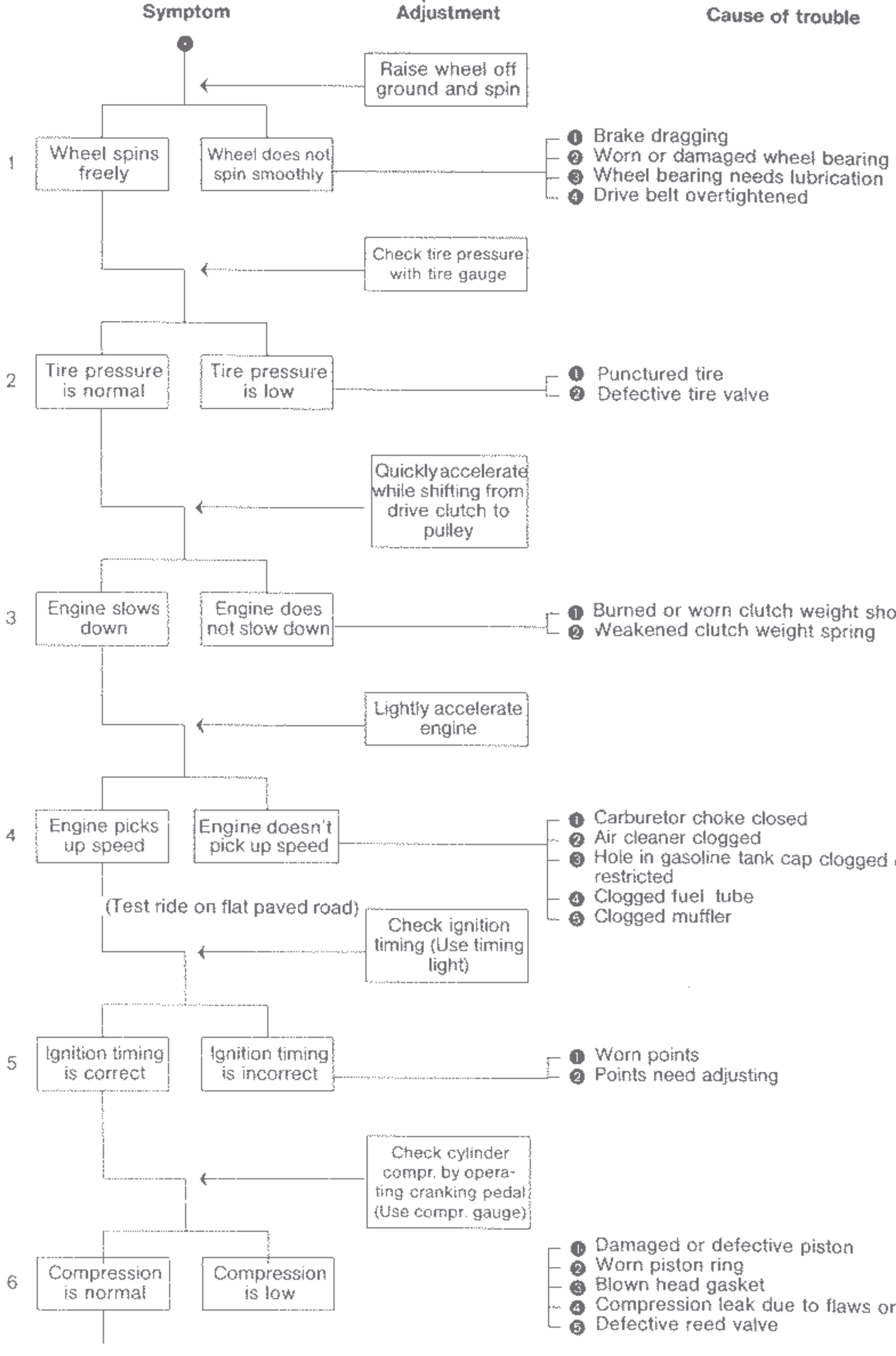
6. TROUBLE SHOOTING

A. Engine does not start or is hard to start

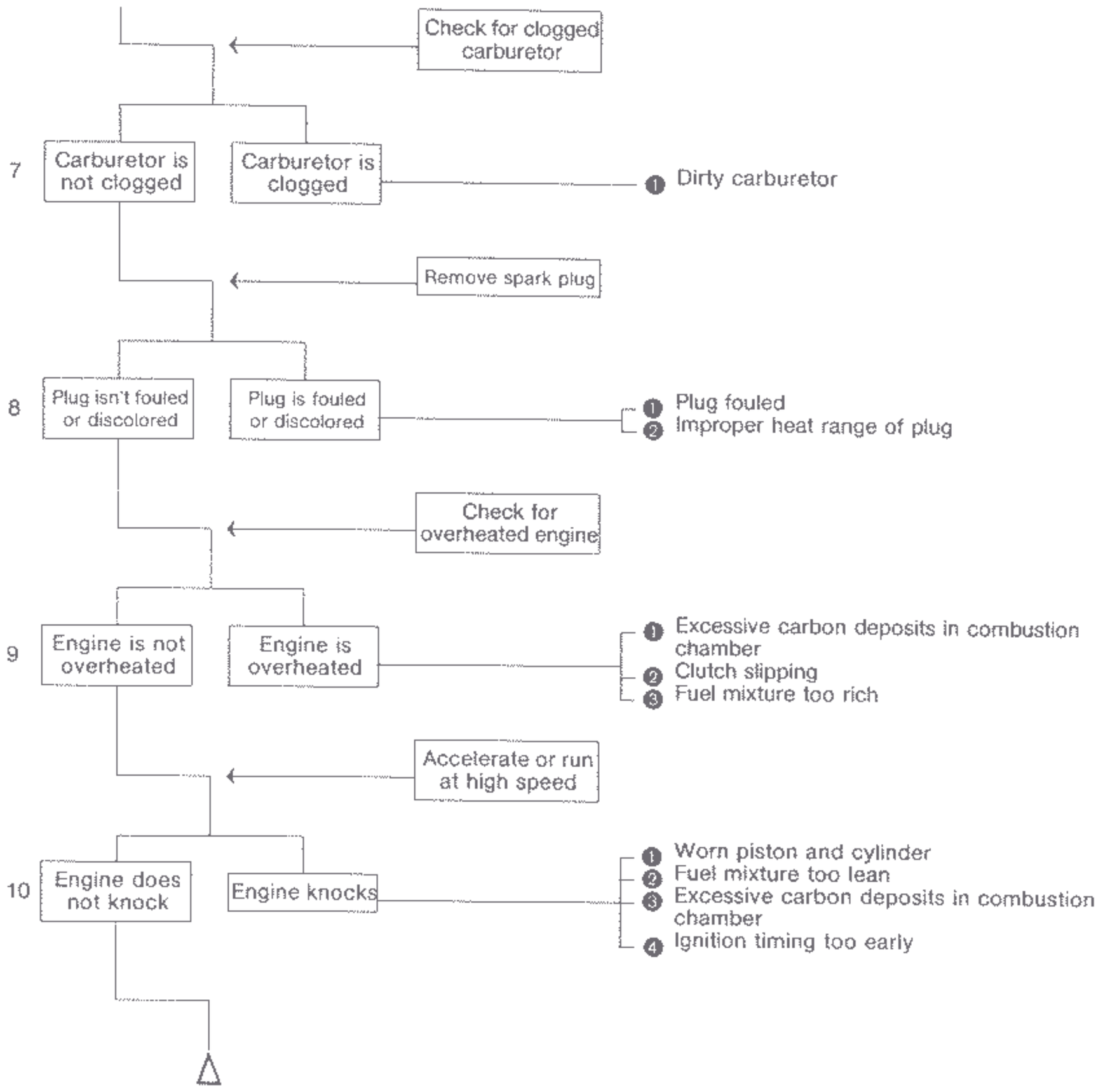


6. TROUBLE SHOOTING

B. Engine lacks power

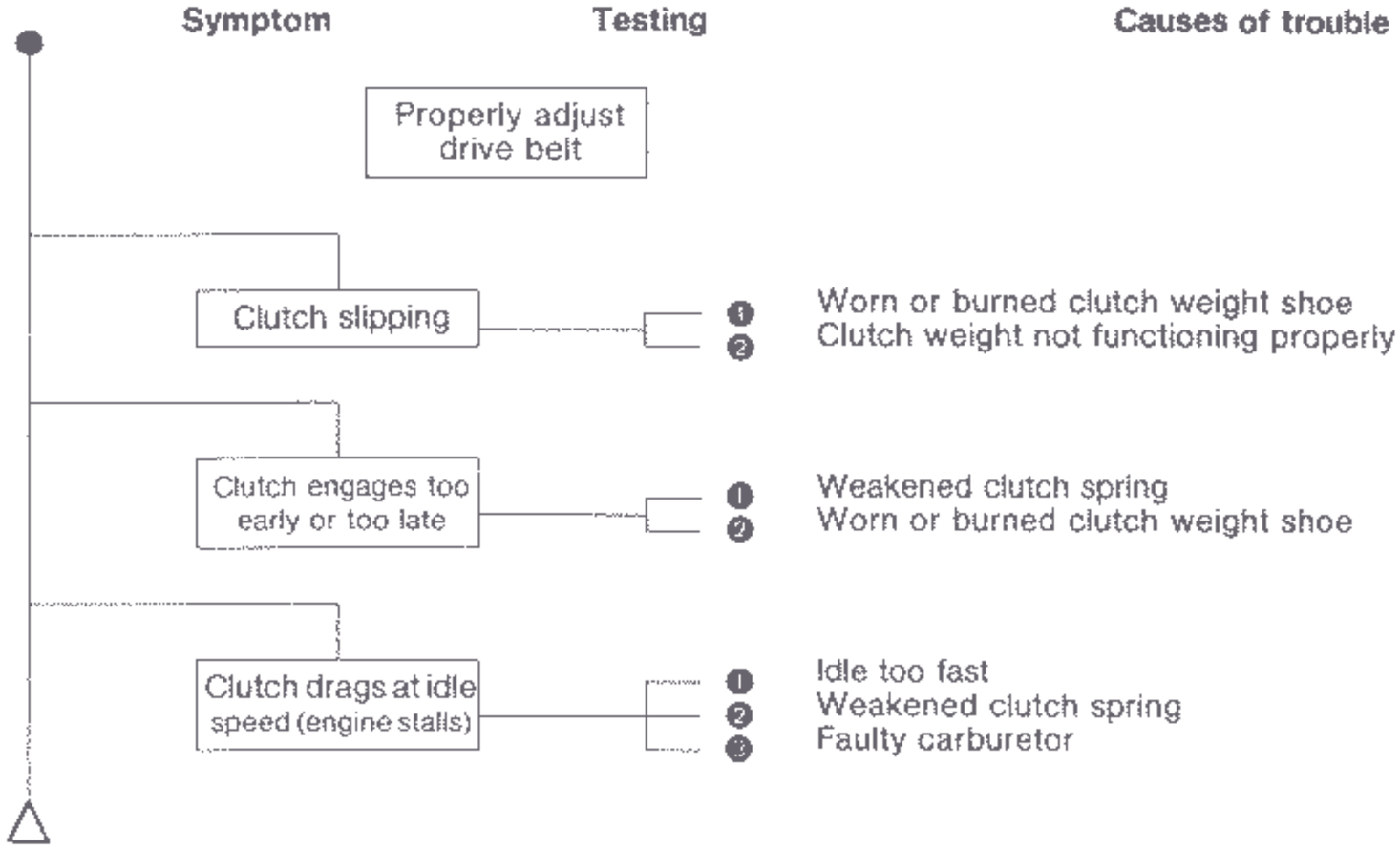


6. TROUBLE SHOOTING

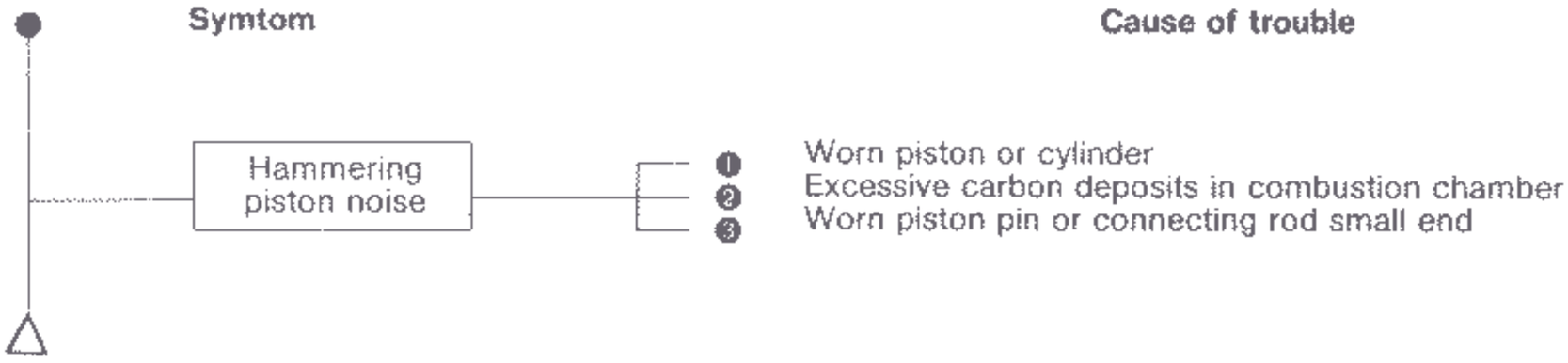


6. TROUBLE SHOOTING

C. Clutch not operating correctly



D. Engine noise



6. TROUBLE SHOOTING

E. Motorcycle pulls to one side

Symptom	Cause of trouble
(Both tire pressures normal)	
Steering heavy	❶ Steering stem cone races over-tightened ❷ Broken radial balls bearing ❸ Bent steering stem
Front or rear wheel excessively wobbling	❶ Excessive rattle in wheel bearing ❷ Deformed rim ❸ Loose spokes ❹ Worn rear fork pivot bushing ❺ Bent frame
Pulling to one side	❶ Uneven adjustment of right and left schock absorbers (front or rear) ❷ Front and rear wheels out of alignment ❸ Bent front fork ❹ Bent rear fork

F. Improper front/rear shock absorber

Symptom	Cause of trouble
(Tire pressure normal)	
Too soft a ride	❶ Weakened spring ❷ Load too heavy
Too hard a ride	❶ Front fork slide pipe out of operation
Excessive or abnormal noise at shock absorber	❶ Damaged stopper rubber ❷ Interference between fork pipe and spring

6 TROUBLE SHOOTING

G. Improper braking

Symptom	Cause of trouble
(Brake adjustment normal)	
Adjustment no longer effective	❶ Worn brake shoes
Brake squeaking when applied	❶ Worn brake shoes ❷ Presence of foreign objects on brake lining ❸ Rough brake drum inner face ❹ Worn brake panel bushing
Brake not effective	❶ Front brake cable out of operation ❷ Excessive rattle in brake pedal shaft ❸ Brake shoe not contacting brake drum properly ❹ Presence of water or mud in drum ❺ Oil or grease on lining

7. Maintenance schedule

MAINTENANCE SCHEDULE This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.	Pre-riding inspection	Initial safety inspection	Regular service period Perform at every indicated month or mileage interval, whichever occurs first.	
		1 month 300 miles	12 months 600 miles	24 months-2,000 miles
* Sparking plug			R	
* Contact breaker points		I	I	
* Ignition timing		I	I	
* Air filter element		(Every 6 months) C		
* Carburetor			I	
Throttle operation	I			
* Fuel filter screen		C	C	
Fuel level	I			
Fuel lines	I			
* Clutch shoes				I
* Decarbonize cylinder and muffler				C
* V-belt and pedal chain		I		
* Brake linings			I	
* Brake operation and free play	I			
Tires and pressure	I			
* Wheel trueness and spokes		I	I	
* Front and rear suspension			I	L
All lights and horn	I			
* Nuts, bolts (tighten)		I	I	
* Slide pipes				L

I - Inspect, clean, adjust or replace if necessary
R - Replace
C - Clean
L - Lubricate

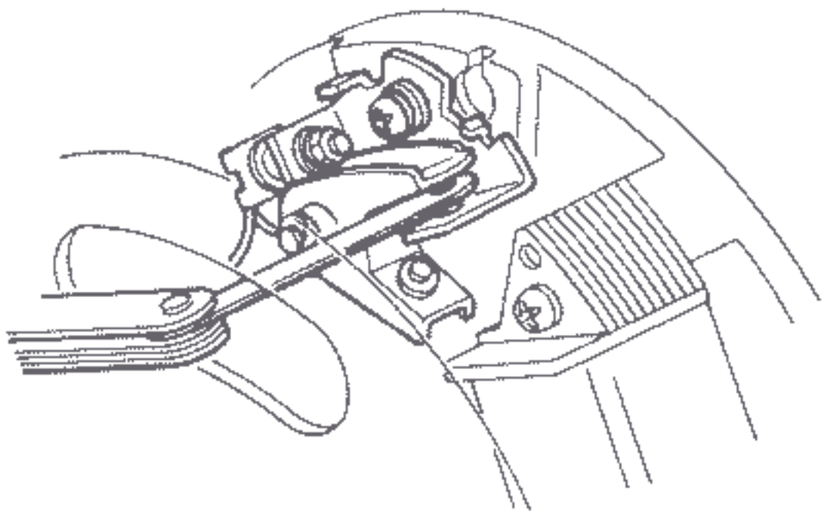
Items marked* should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically proficient. Other maintenance items may be serviced by the owner.

4. INSPECTION/ADJUSTEMENT

HONDA PA50

1. Contact breaker point gap / Ignition timing

Remove the generator cover.

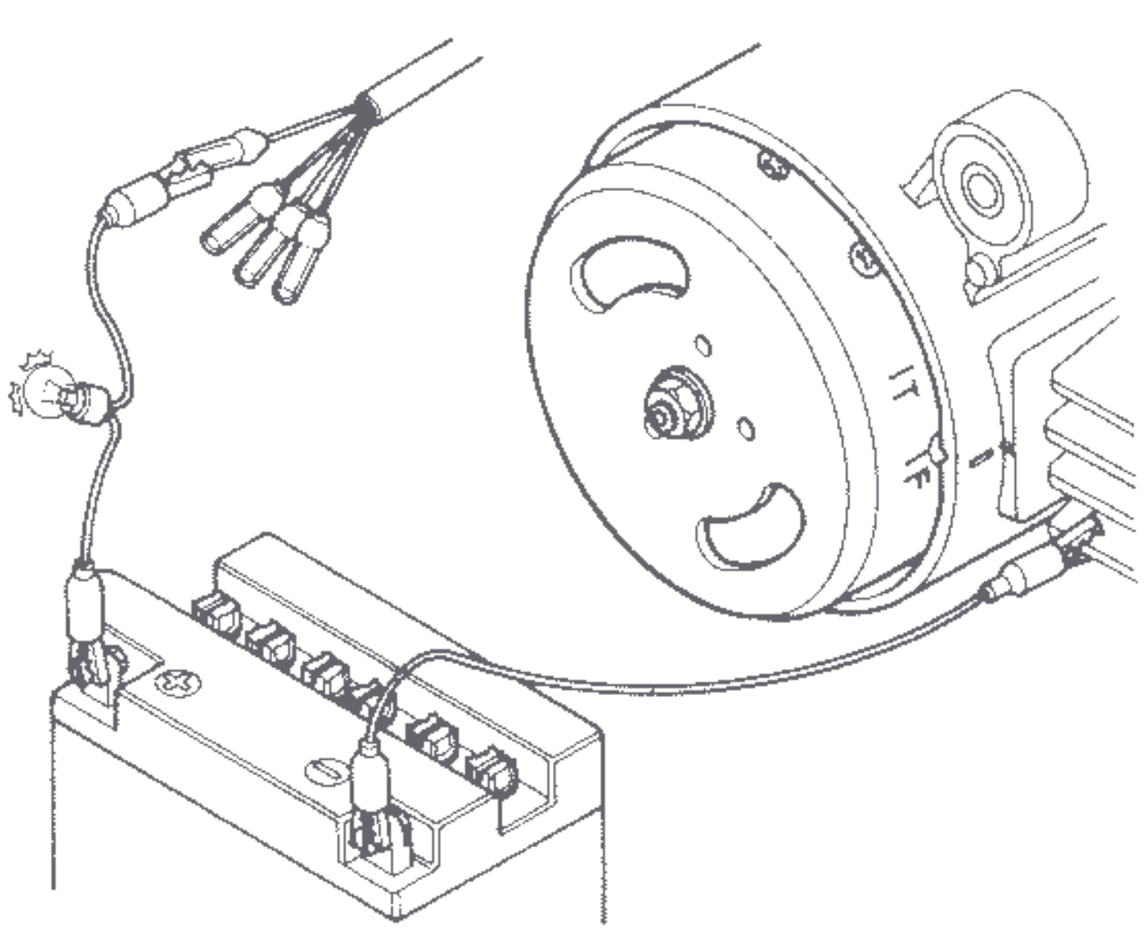


① Insert a thickness gauge through the rotor hole
② Check point gap

point gap	0.3 - 0.4 mm

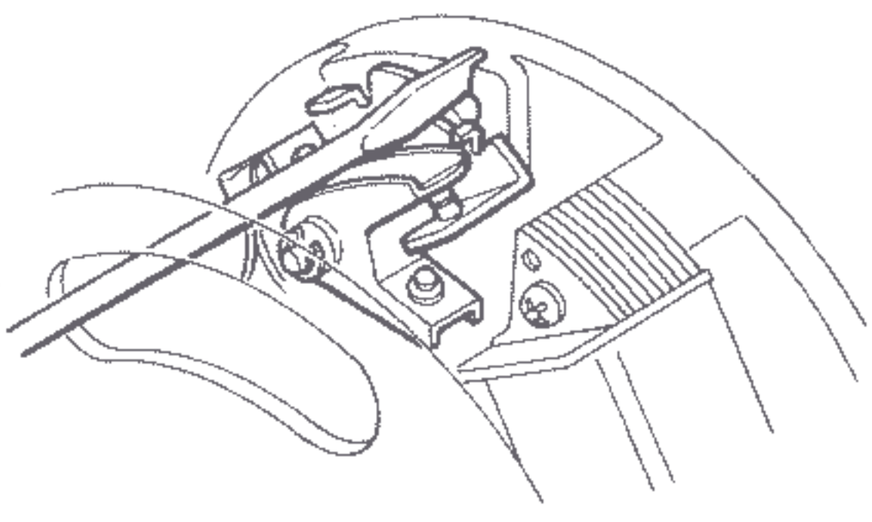
Replace if beyond specifications.

- Ignition timing with a testlamp



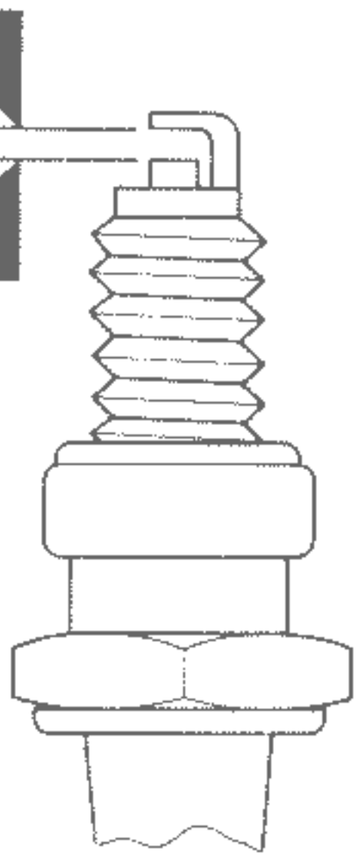
① Turn the flywheel clockwise until the "F" mark aligns with the index mark.
Timing is correct if the lamp dims when the marks align.

① To adjust, loosen the locking screw and move the contact braker plate to obtain the correct ignition timing when the lamp dims with the marks aligned. Recheck point gap. If the gap is more than 0,4 mm, the points should be replaced.



2. Spark Plug

0,6-0,7 mm



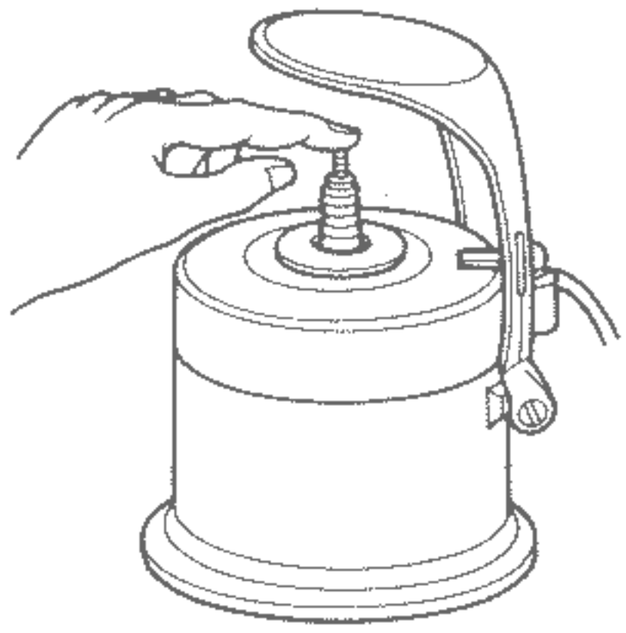
Check: gap deposit, electrode erosion.

Check: plug gasket for sealing.

Always use specified spark plug
BPR-6 HS (NGK)
W 20 FPR (ND)

A spark plug with burned electrodes or a damaged gasket should be replaced.

Spark plug cleaner (1)



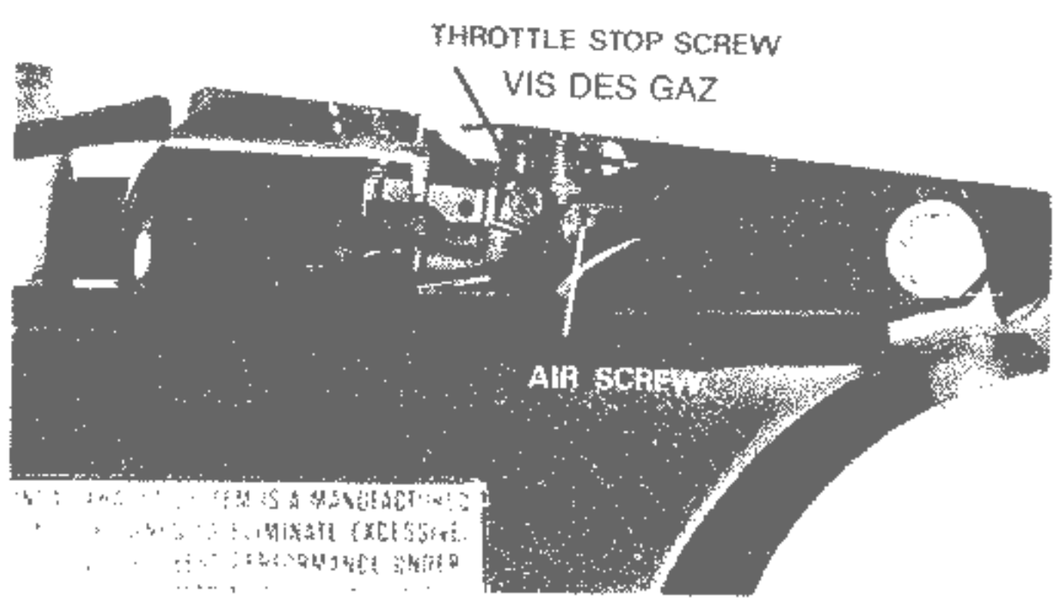
3. Carburetor

- Engine idle adjustment.

Start and warm up the engine for a few minutes

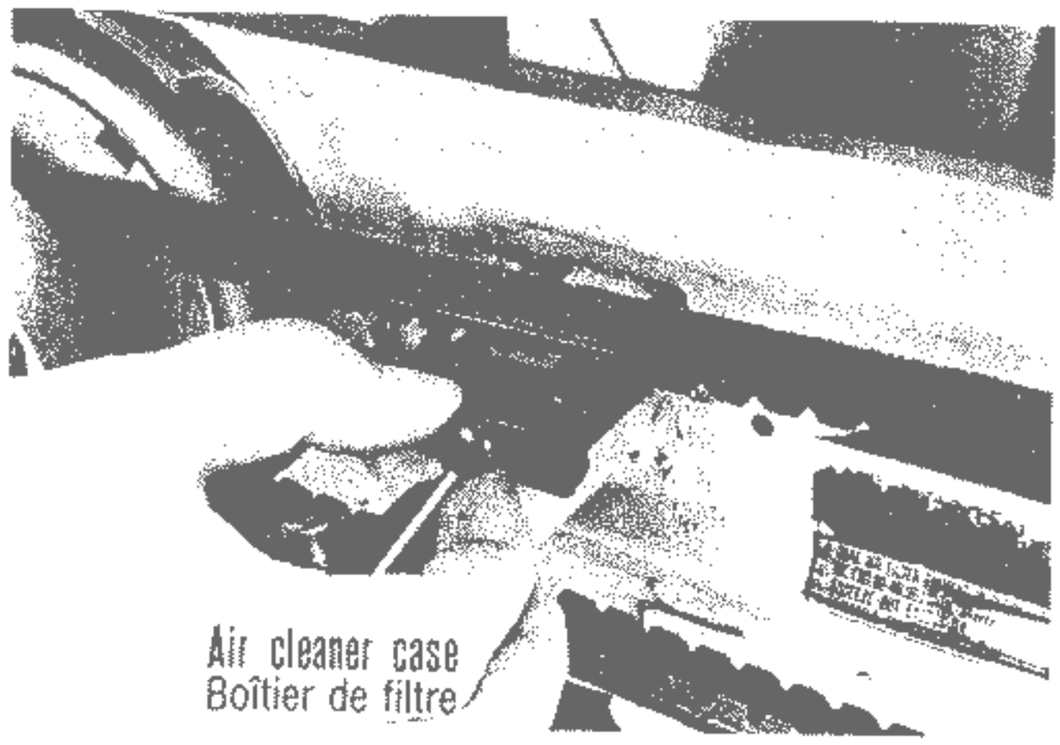
① Turn the throttle stop screw to the lowest idle speed.
② Turn the air screw in or out to find the highest idle speed.
③ Set the engine at the idle speed by turning the throttle stop screw.

Idle speed: 1.500 RPM

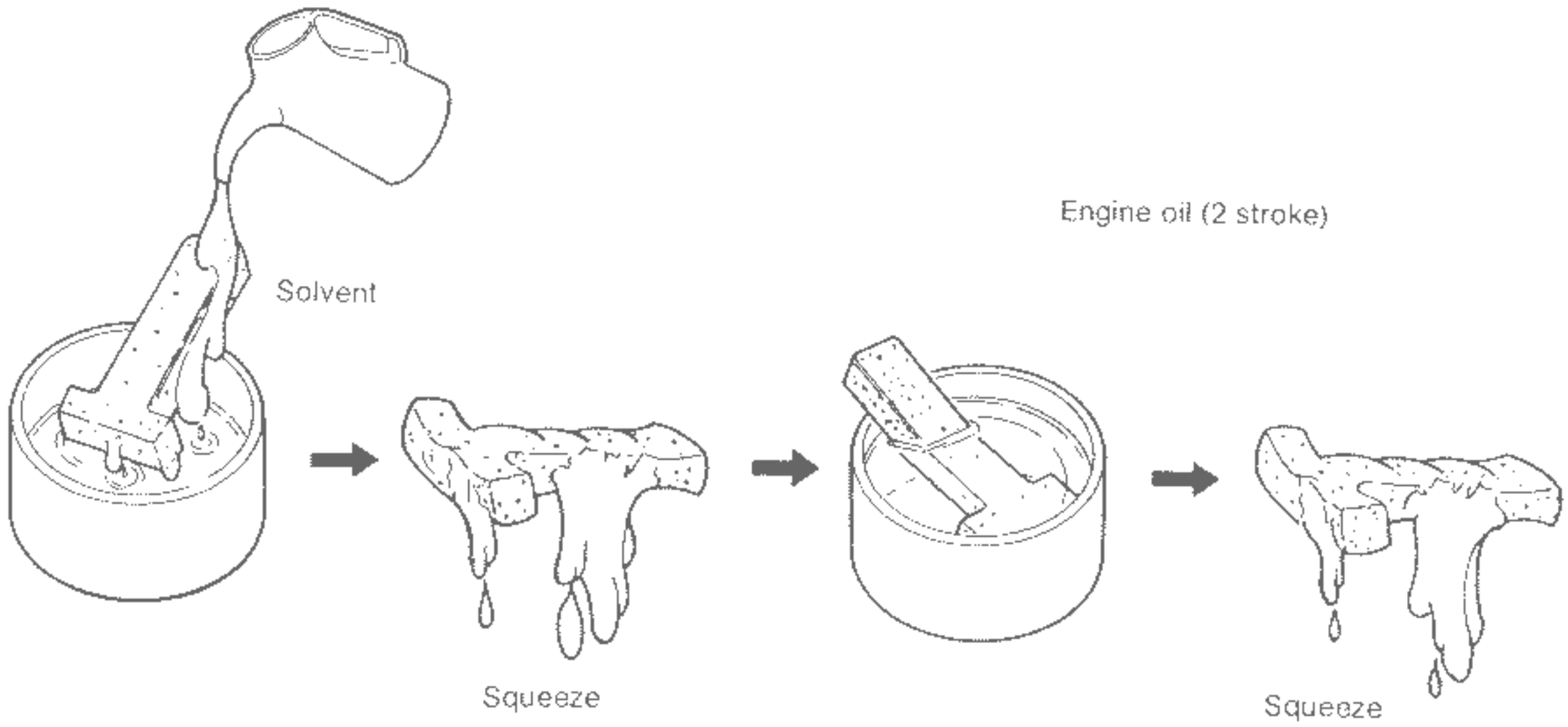


3. Air cleaner element

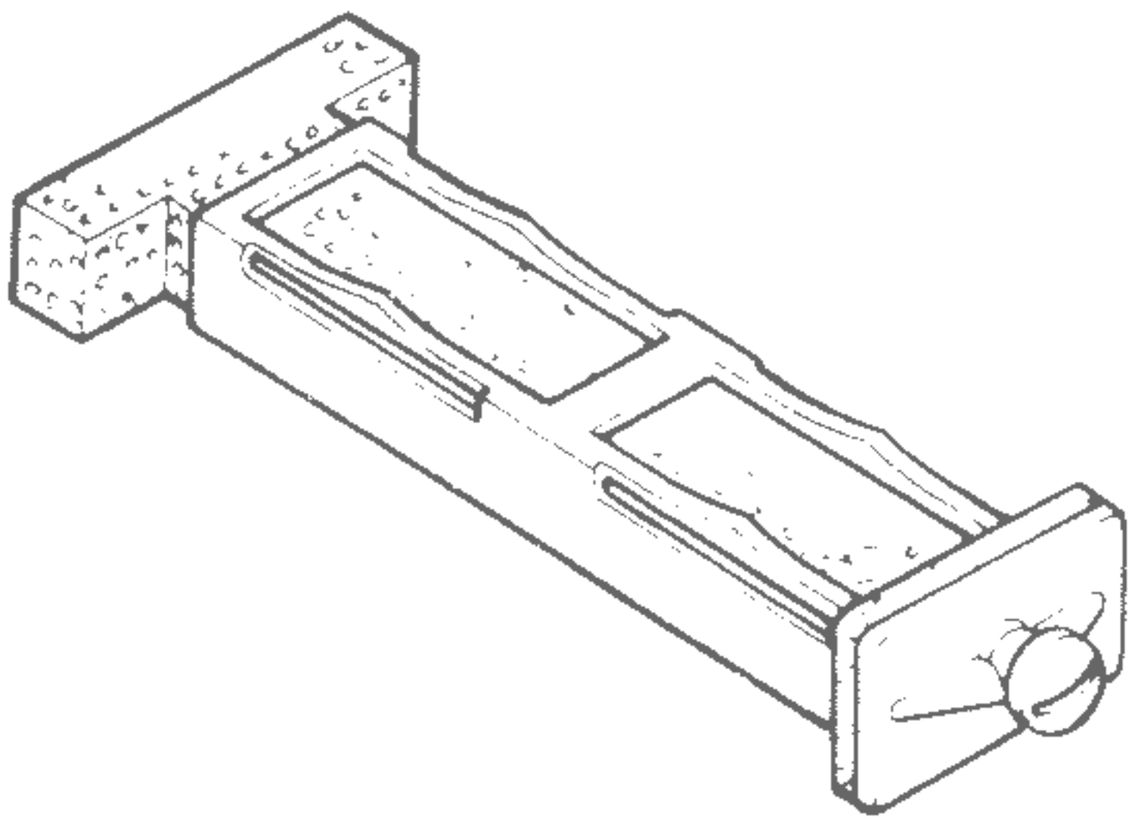
1. Remove the drive belt cover.
2. Release the air cleaner case retaining clip and pull the air cleaner case out.
3. Remove the air cleaner element from air cleaner case.
4. Wash the element in solvent and allow to dry thoroughly. Soak the element in clean gear oil, until saturated, then sqeeze out excess oil.



Engine oil (2 stroke)

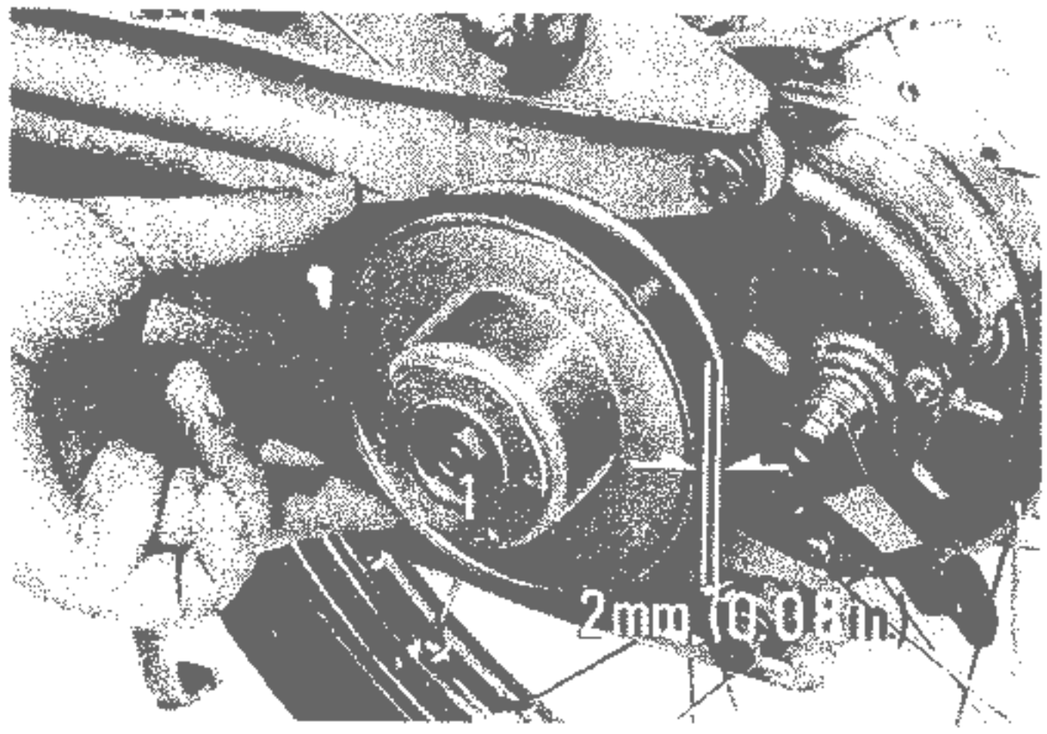


5. Reinstall the aircleaner element into the case.

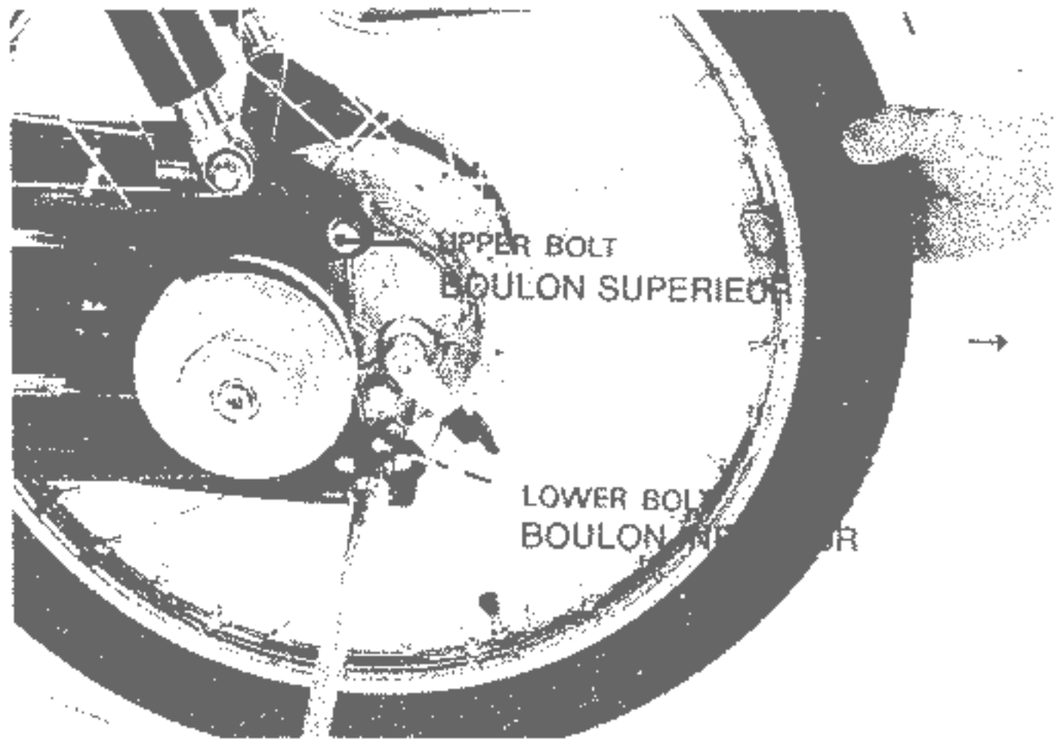


4. Drive belt

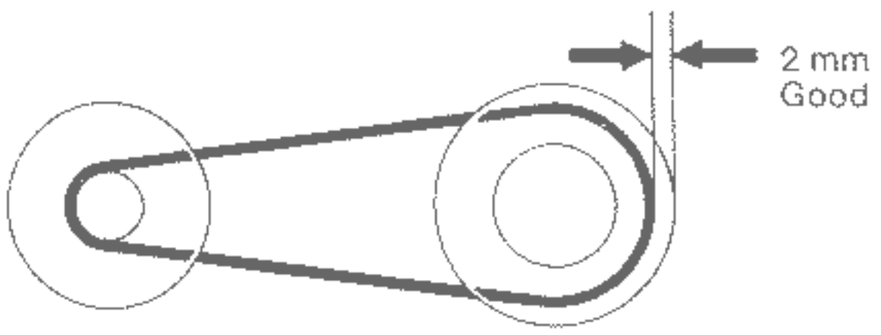
① Remove the drive belt cover and chain cover.
② Loosen the four rear fork bolts.
③ Adjust the drive belt so that the distance between the belt face and driven pulley outside diameter is 2 mm when pressure is applied widway between pulleys.
④ Move the wheel backward and tighten the bolts in the following order.

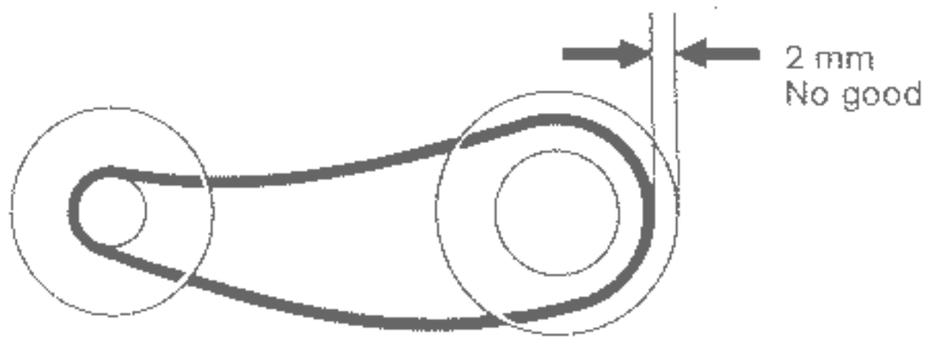


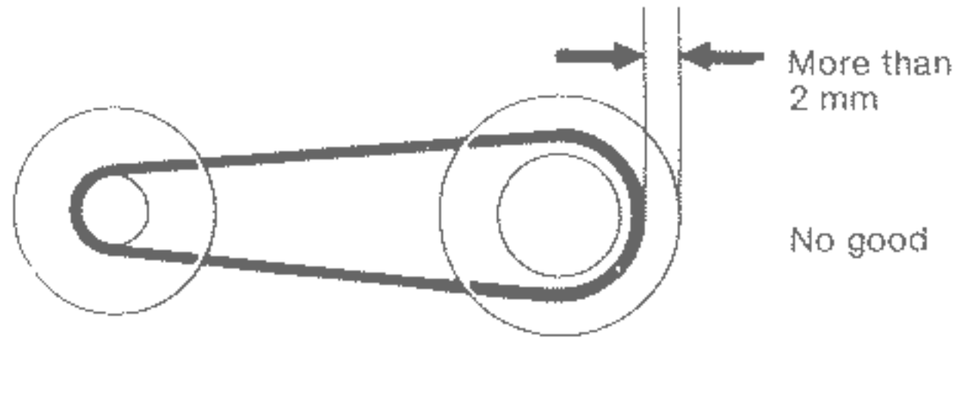
NOTE:
The right and left lower bolts should be aligned with the same notches in the side scales on the rear fork.



⑤ Operate the pedat several times and make sure that the belt is at "Low" and distance between the belt face and the driven pulley outside diameter is 2 mm.
⑥ Start the engine and make sure that the belt does not slip on the pulleys at stall revolution.





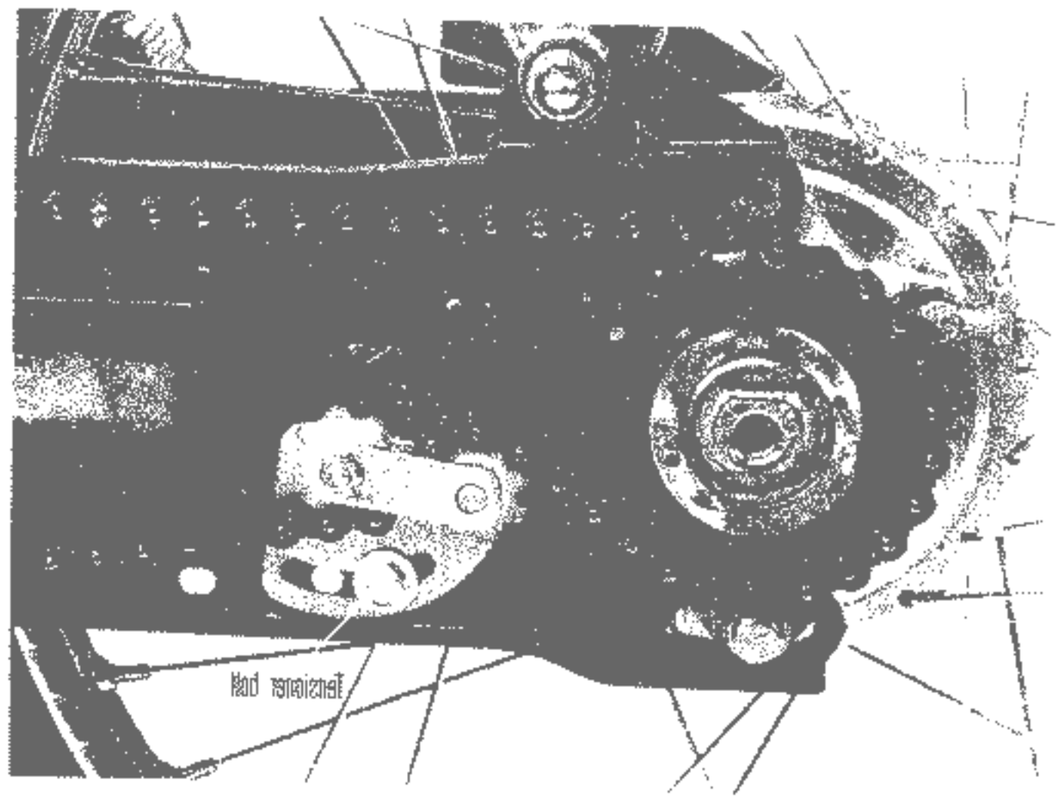


5. Drive chain

① Remove the chain cover.
② Loosen the tensionner bolts and adjust the drive chain.

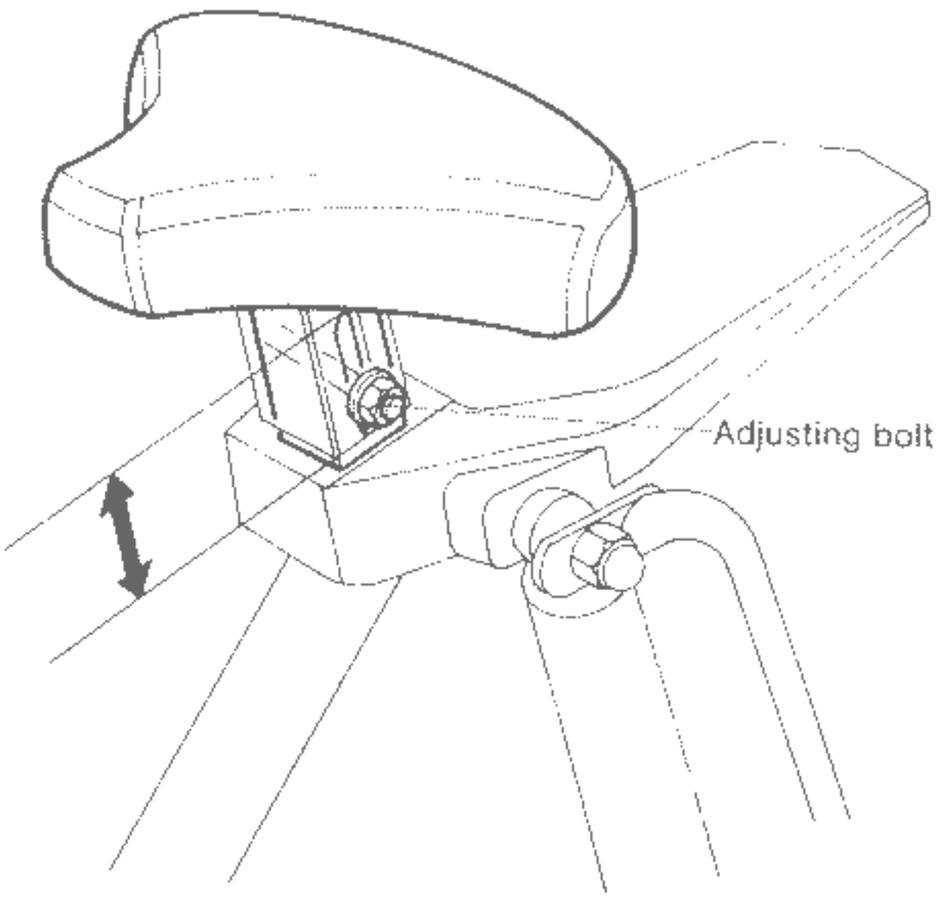
Chain slack	5-10 mm

NOTE:
Adjust the drive chain tension after drive belt adjustment.

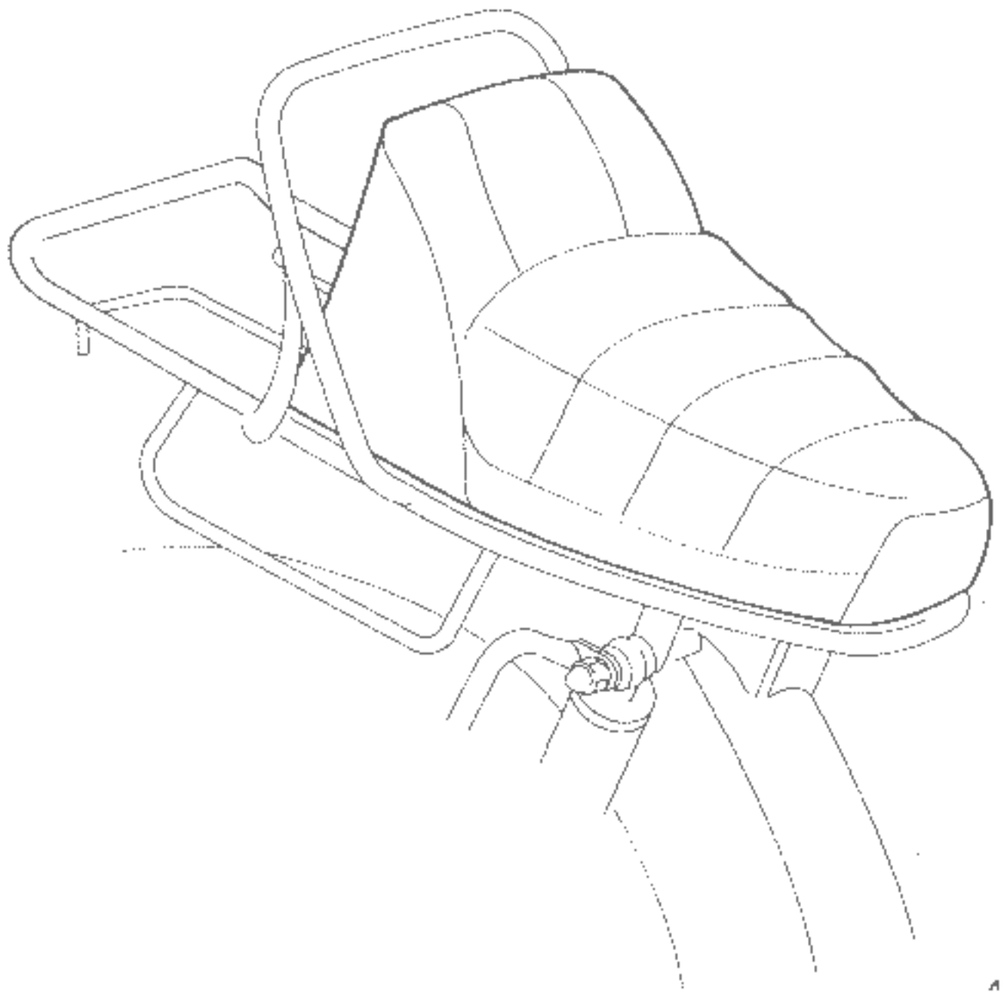


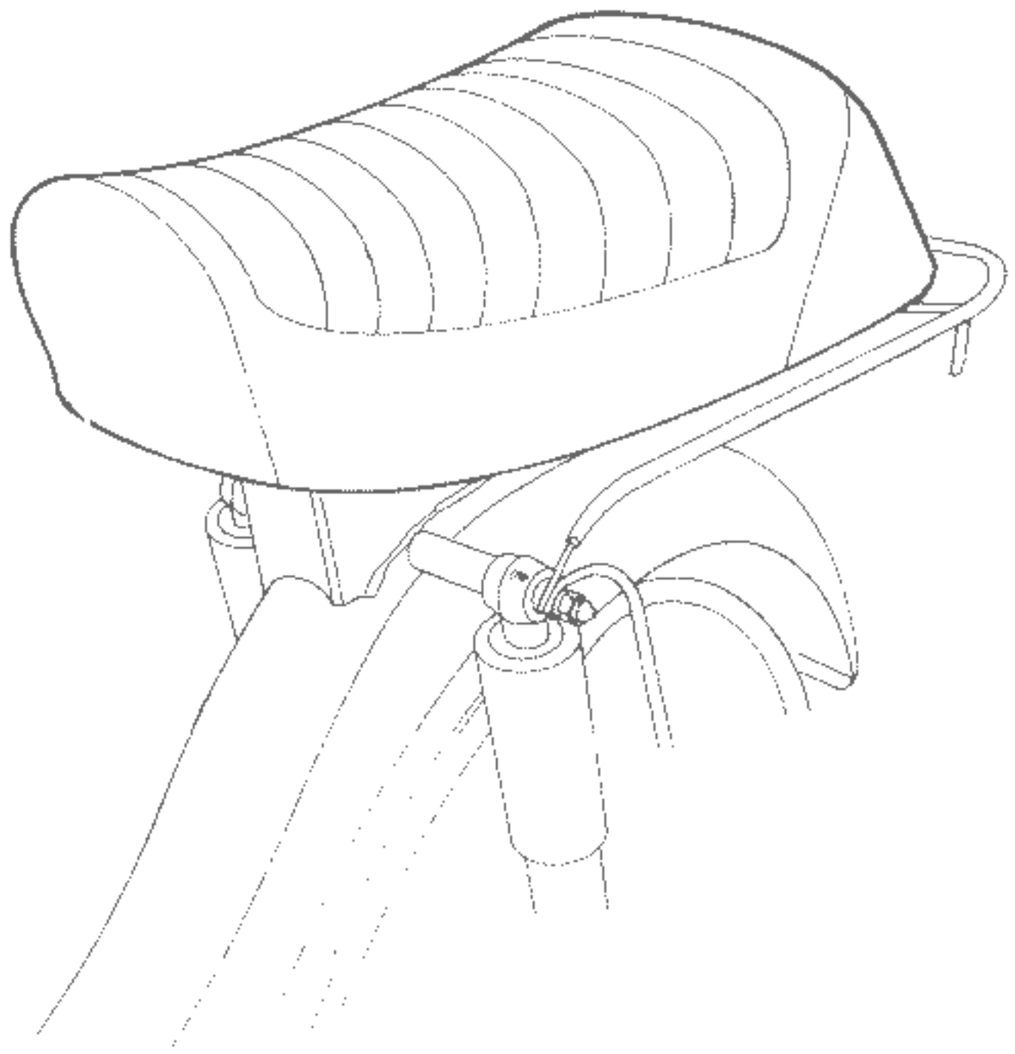
6. Seat

① Loosen the adjusting bolt.
② Adjust the seat to a suitable leight and secure with the adjusting bolt.



No adjustment possible.

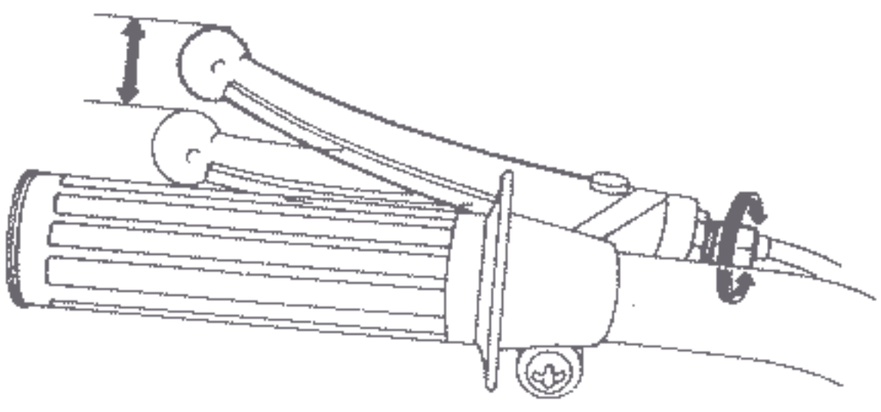




7. Brakes

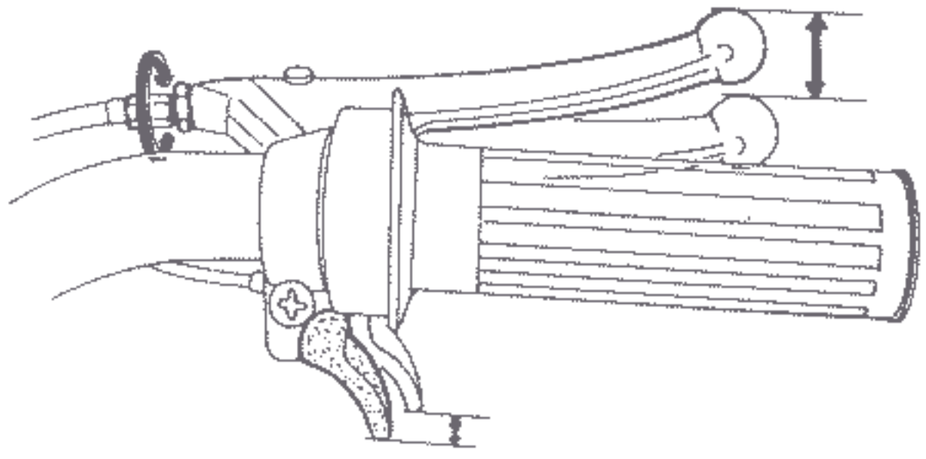
Brake lever adjustment.
Check brake lever free play at lever tip. If out of specifications, adjust by turning adjusting nut.

- Rear



Front brake lever play (1)
10-15 mm

- Front

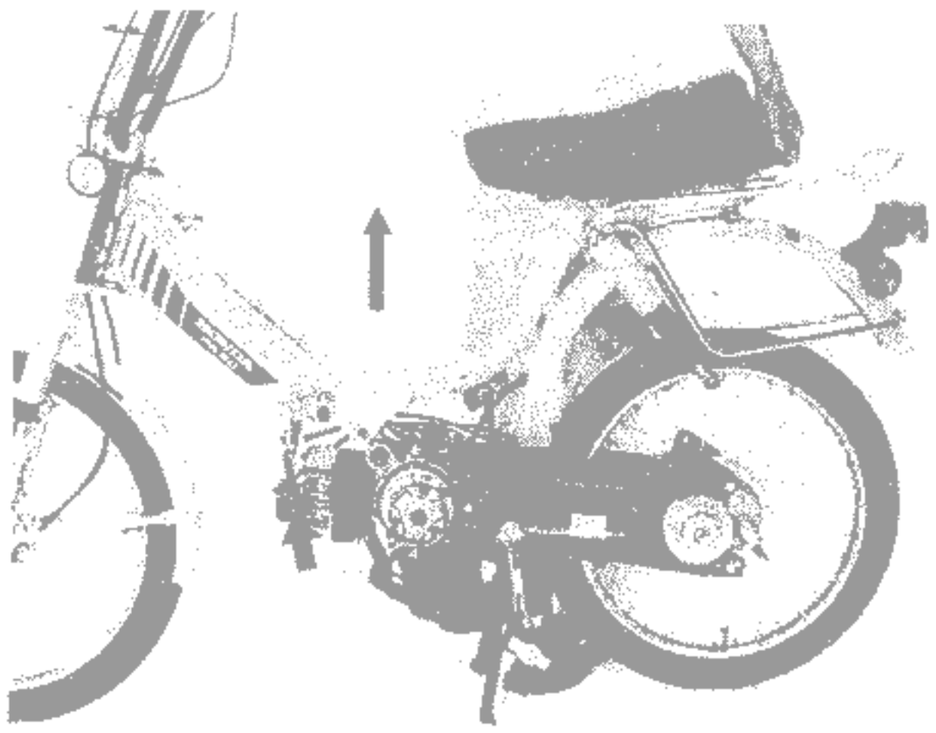


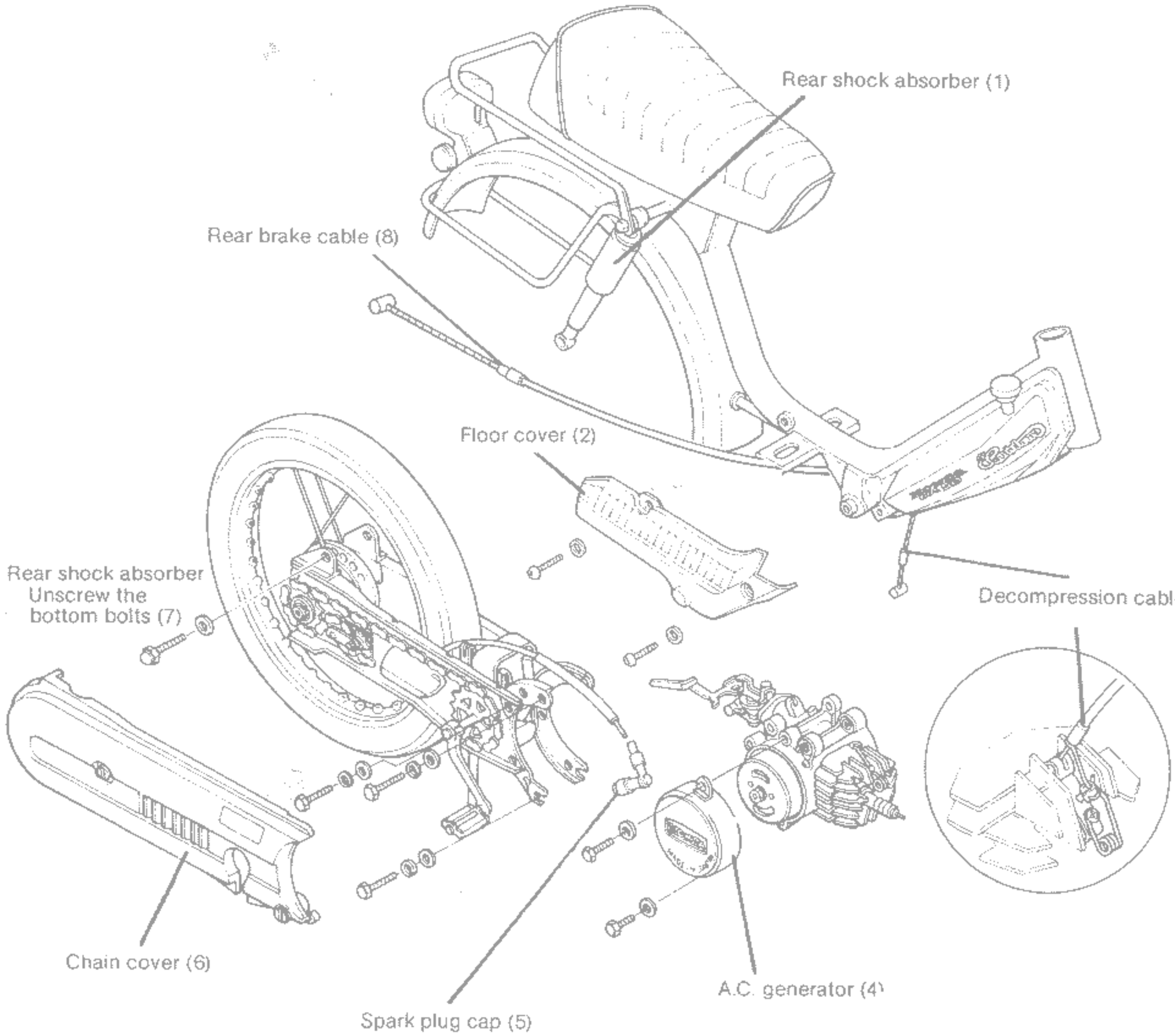
Rear brake lever play (2)
10-15 mm

5. ENGINE REMOVAL / INSTALLATION

REMOVE THE FRAME BODY FROM THE ENGINE IN THE FOLLOWING ORDER.

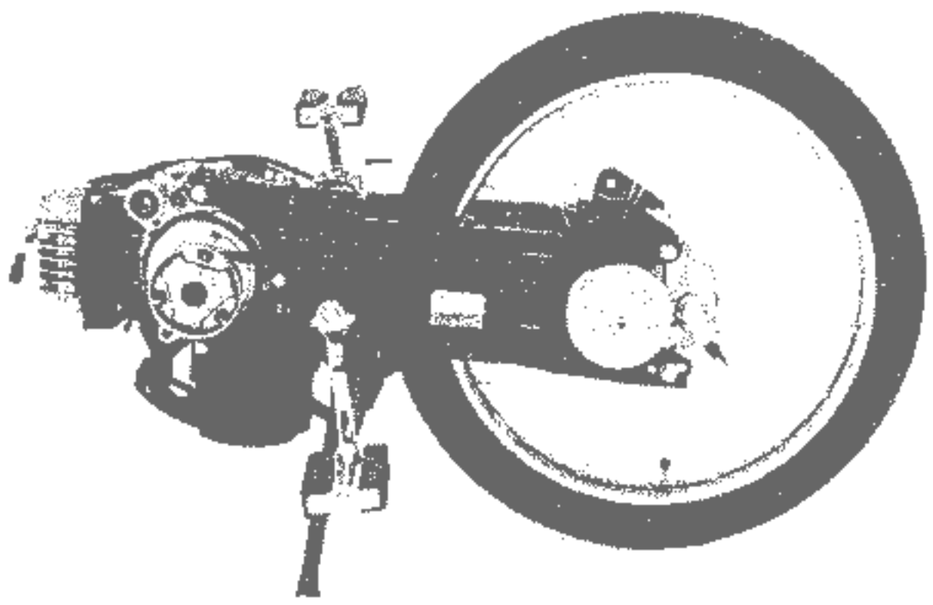
1. Remove the floor cover (L/R)
2. Remove the chain and belt covers
3. Turn the fuel valve lever to "Off" and disconnect the fuel hose.
4. Disconnect the lead connectors.
5. Disconnect the decompression cable.
6. Disconnect the plug cable
7. Disconnect the throttle cable.
8. Remove the rear brake cable end.
9. Remove the rear shock absorber bottom bolts.
10. Remove the engine hanger bolt



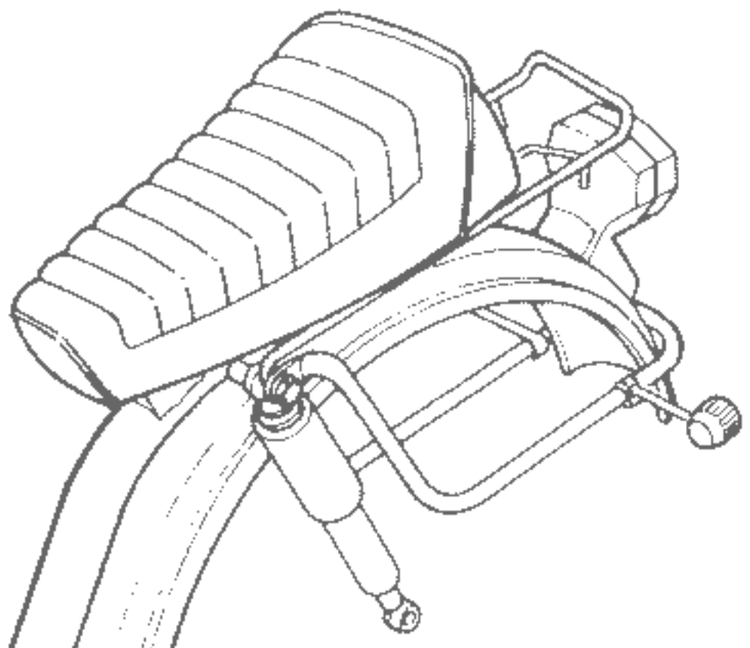


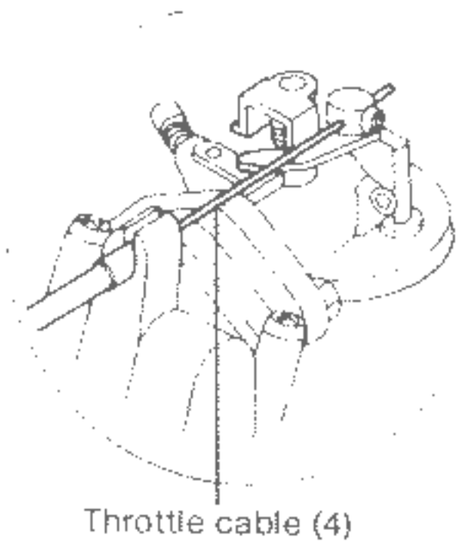
• PULL THE ENGINE FORWARD AND AWAY FROM THE REAR FORK IN THE FOLLOWING ORDER.

1. Loosen the four rear fork bolts and move the rear wheel forward
2. Remove the drive belt
3. Remove the muffler
4. Remove the engine mounting bolts

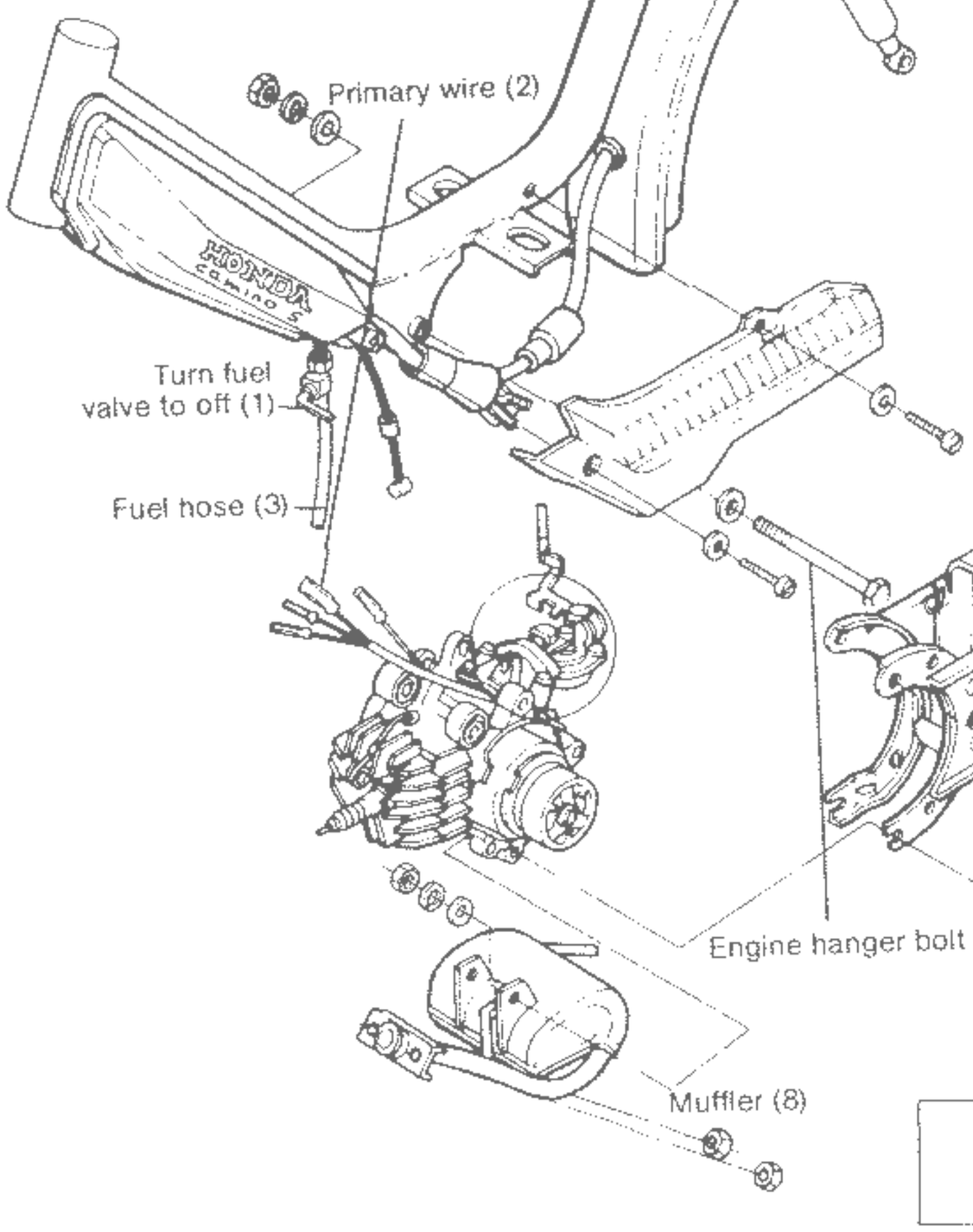


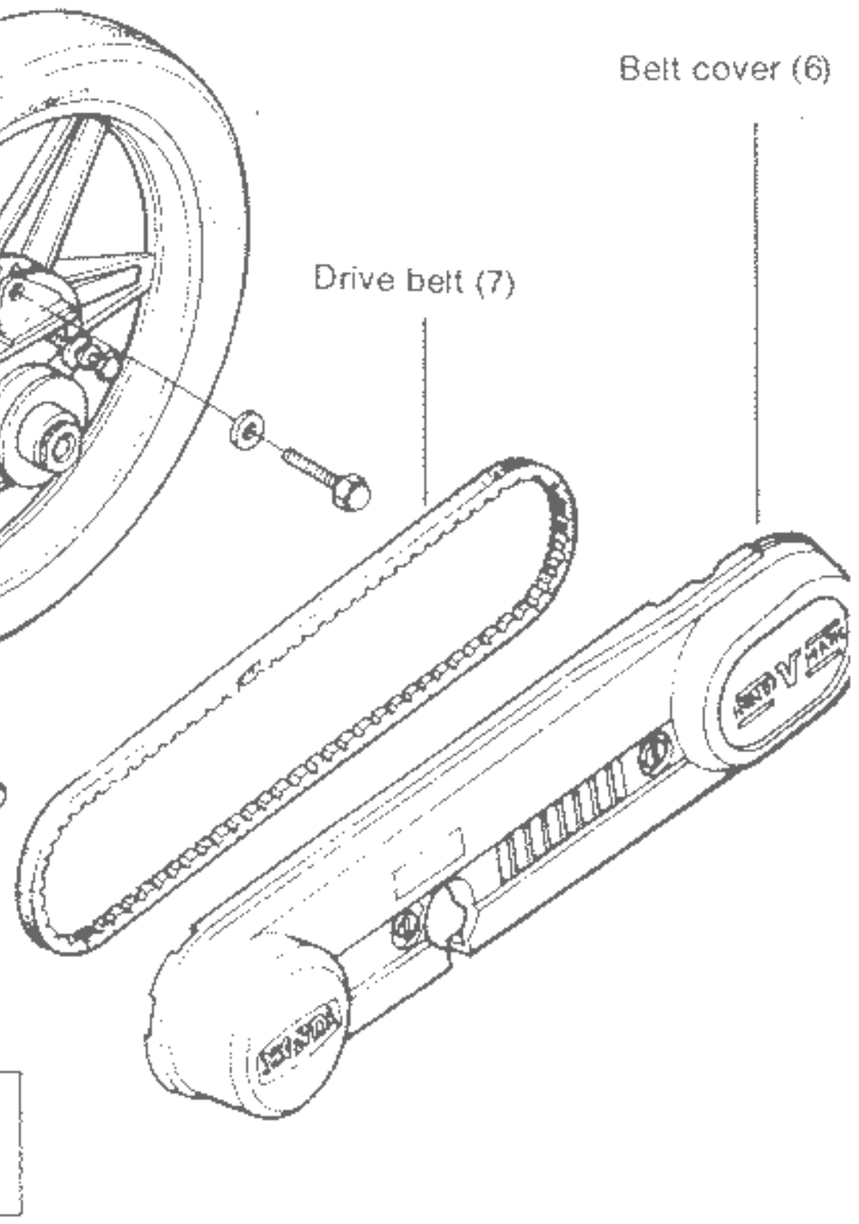
NOTE:
Connect color-to-color (*)





Throttle cable (4)





590-650 kg/cm

6. CYLINDER HEAD / CYLINDER / PISTON

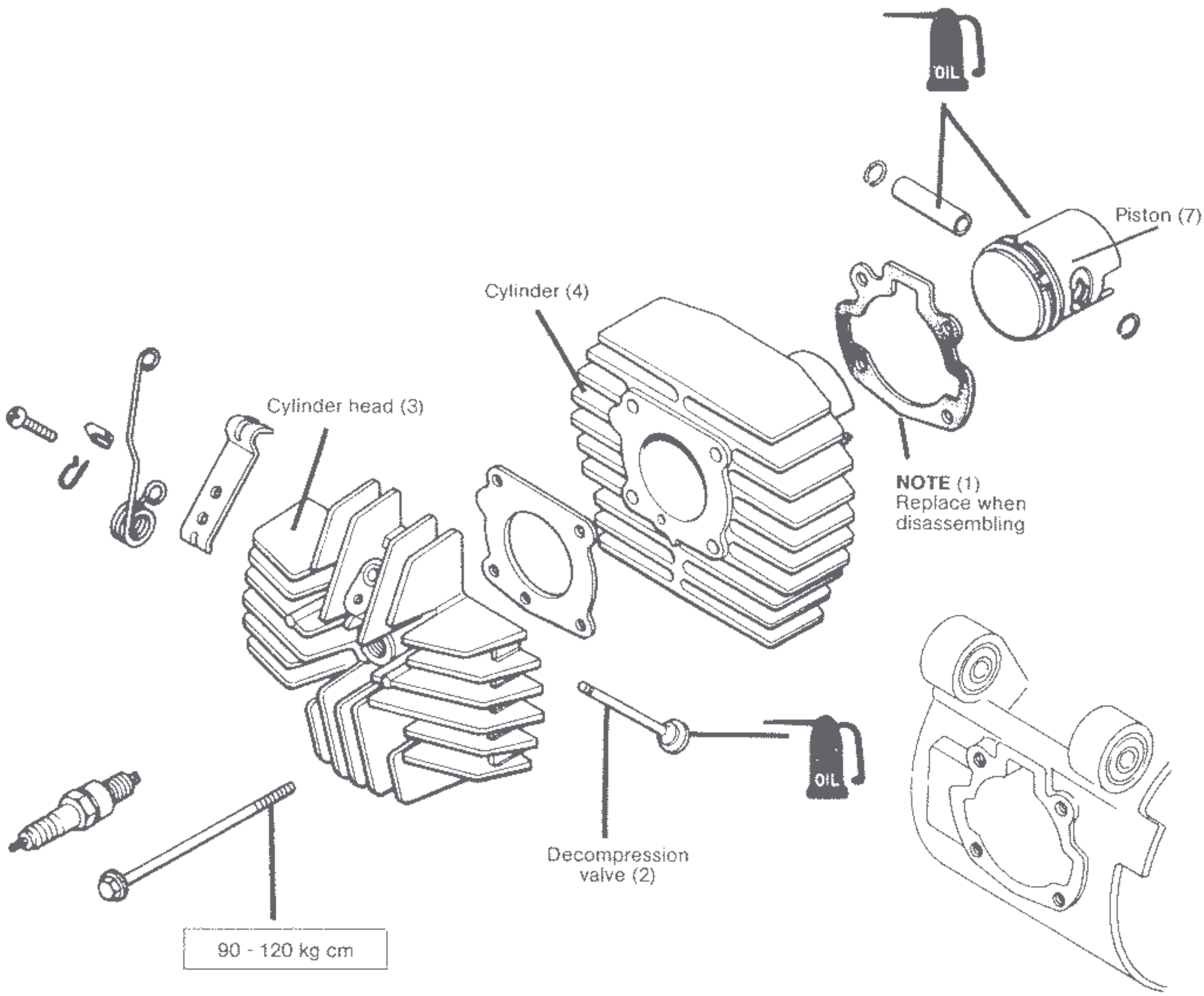
A. Trouble shooting

Symptom	Probable cause
No or loss of compression	Poorly tightened spark plug Blown cylinder head gasket Worn or seized piston rings Damaged cylinder or piston Defective reed valve Decompression valve not seating correctly
Overheating	Excessive carbon in combustion chamber Excessive carbon on piston or piston rings
Piston clearance	Worn cylinder wall Worn cylinder or piston Worn piston pin Worn connecting rod big end bearing
Excessive smoke	Worn or seized piston rings Excessive carbon in combustion chamber Worn cylinder or piston
Excessive compression	Excessive carbon in combustion chamber Excessive carbon on piston or piston rings

Removal/Installation

1. Disconect the decompression cable and plug cap at the cilinder head.
2. Remove the two 6 mm nuts, loosen the two lower engine mounting bolts, and remove the muffler.

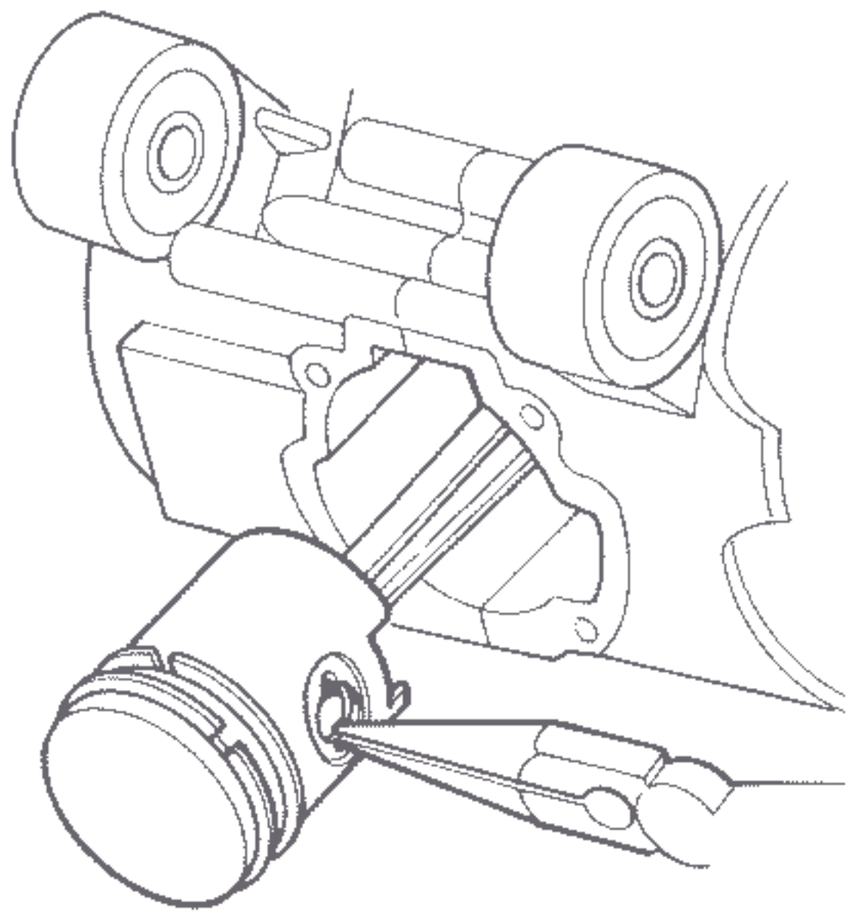
NOTE: Set the shift lever to pedal driving position



PISTON RING (6)
NOTE
Install the cylinder with the piston ring gaps fitted to the piston ring dowels

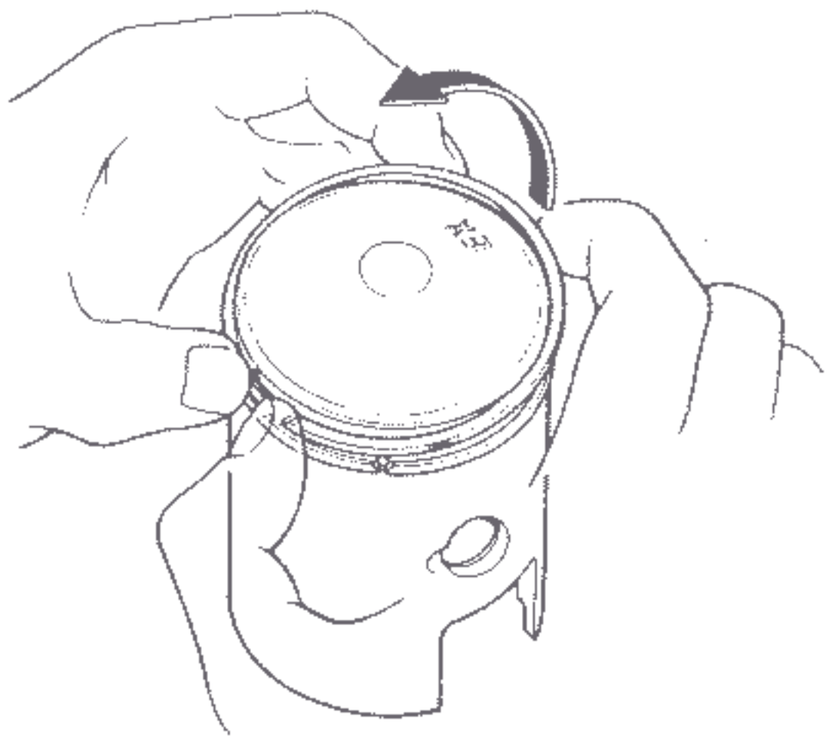
B. Diassembly/Assembly

Install piston pin with the "EX" facing the EXHAUST PORT



NOTE:
Avoid scoring or scratching the piston

● Piston Ring DISASSEMBLY/ASSEMBLY



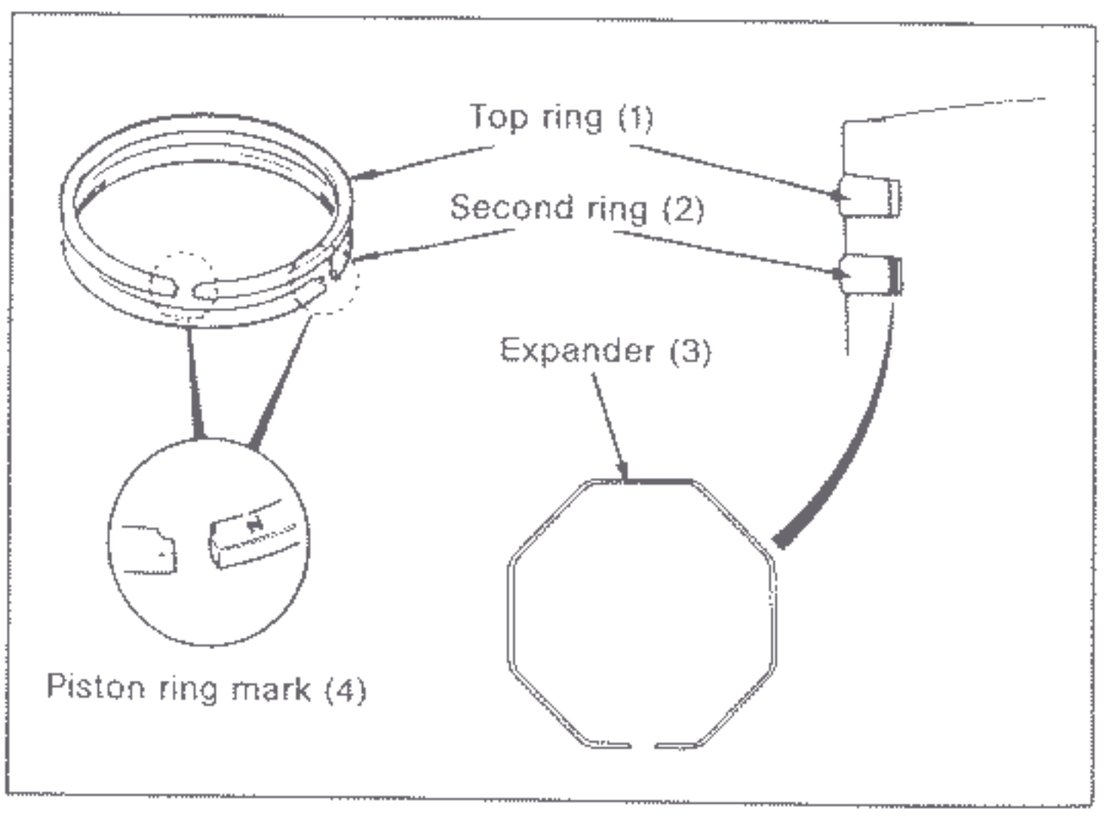
Always remove piston ring by lifting in the direction of the arrow.

Do not damage the piston rings

● ASSEMBLY

Install the piston rings with their markings facing up.
When replacing the rings, en sure that the proper rings are installed

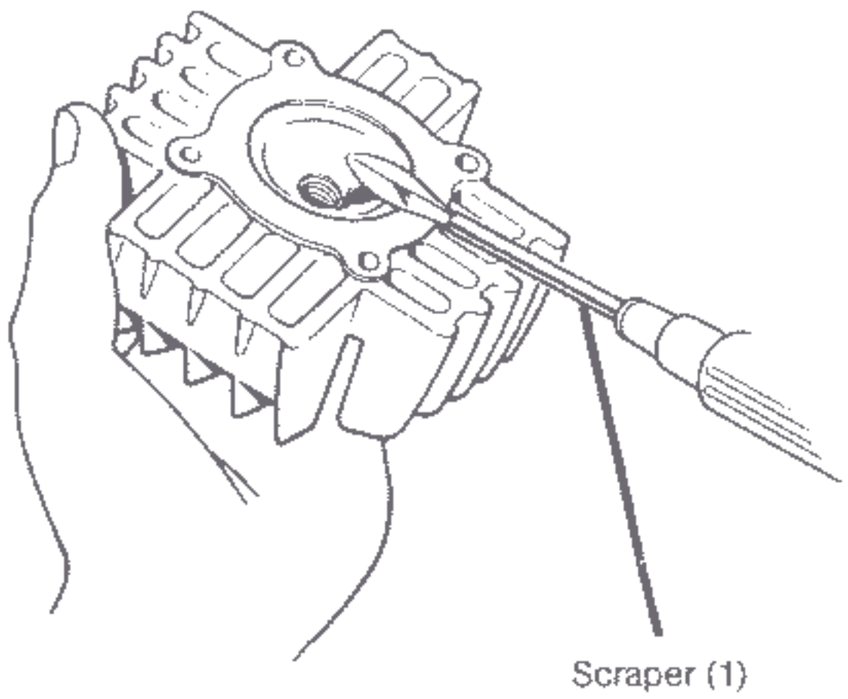
N: Nippon
T: Teikoku
1 = 1N or 1T
2 = 2N or 2T



NOTE:
Do not mix the top and second ring. Use the piston rings of the same manufacturer in a set.

C. Inspection

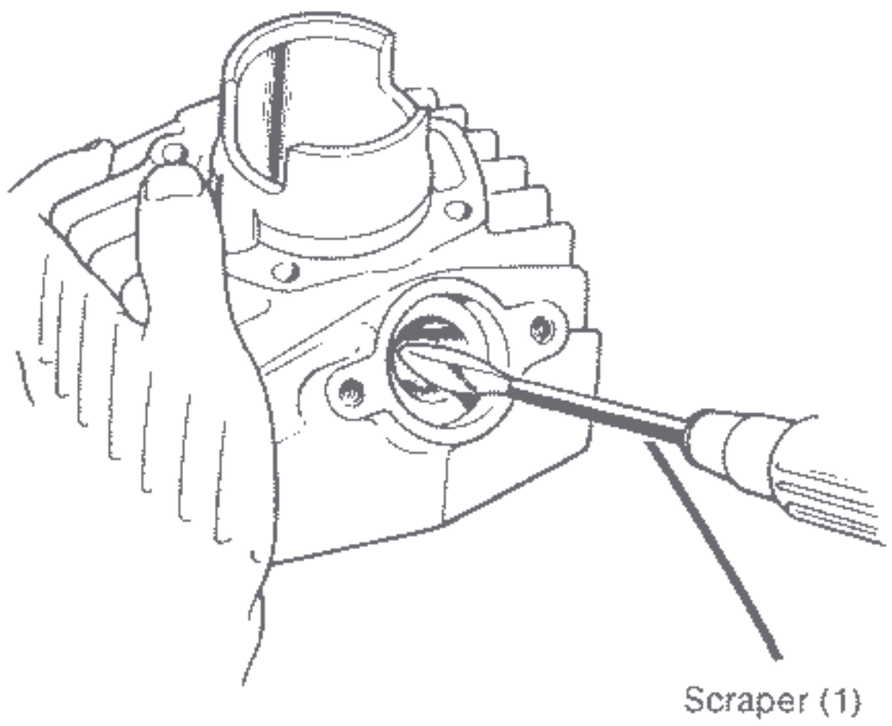
● Cylinder head DECARBONIZING



Scraper (1)

Avoid scratching side surface.
clean after decarbonizing

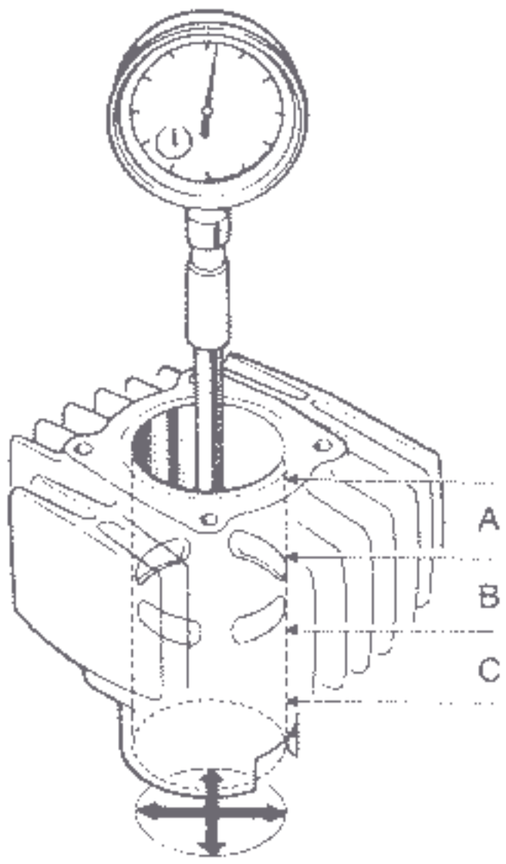
(Exhaust port. DECARBONIZING)



Scraper (1)

Clean after decarbonizing

● Cylinder I.D.



Take smallest diameter reading

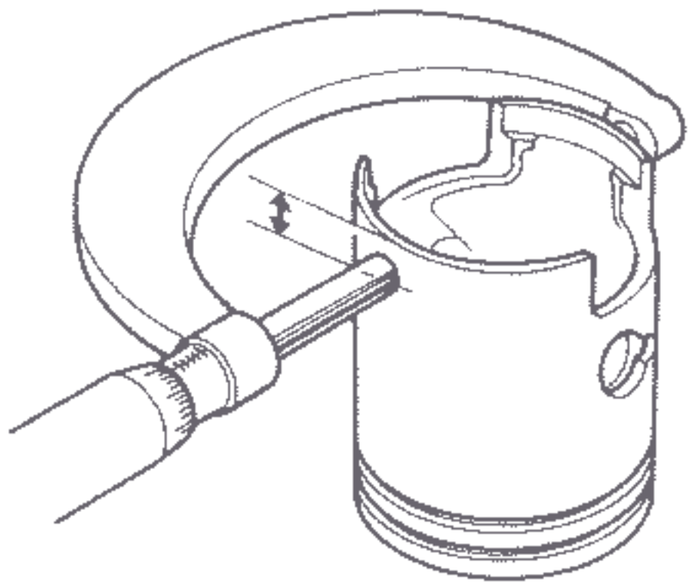
Measure in all three positions shown

	Standard	Service limit
A	40.000 - 40.020	40.05 mm
B	40.000 - 40.020	40.05 mm
C	40.000 - 40.020	40.05 mm

Measure positions as below

Position	Distance from face of gasket
A	0.35 mm
B	35 - 75 mm
C	75 - 88 mm

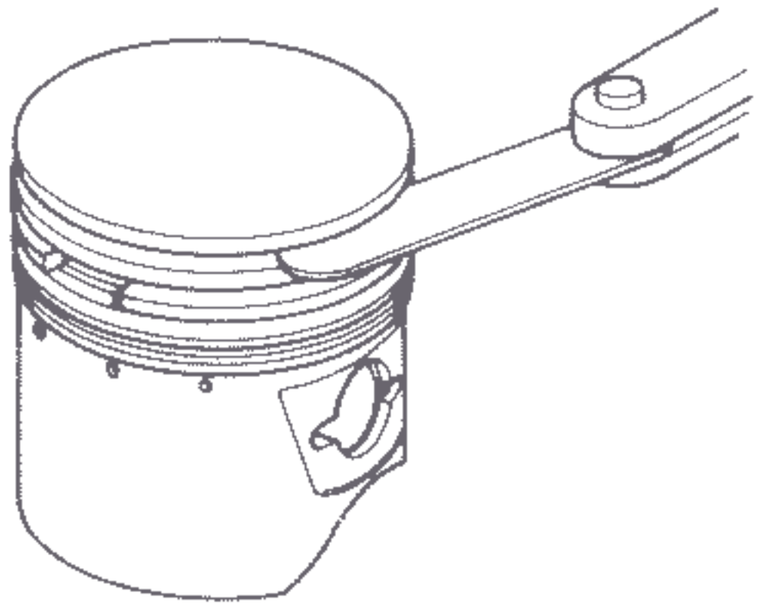
● Piston skirt O.D.



Measurement should be taken at a point 4 mm from bottom

Standard	Service Limit
39.955 - 39.975	39.85 mm

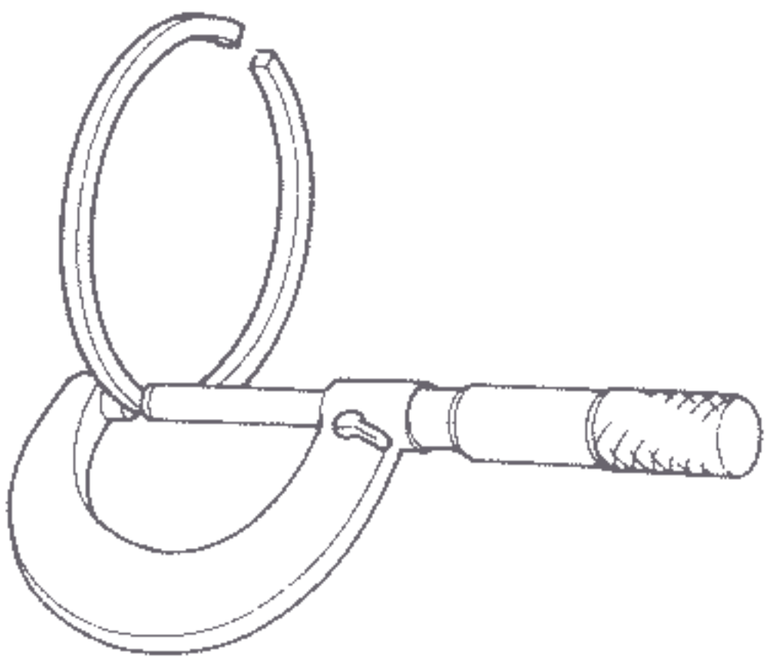
● Piston Ring side Clearance



2nd Rings

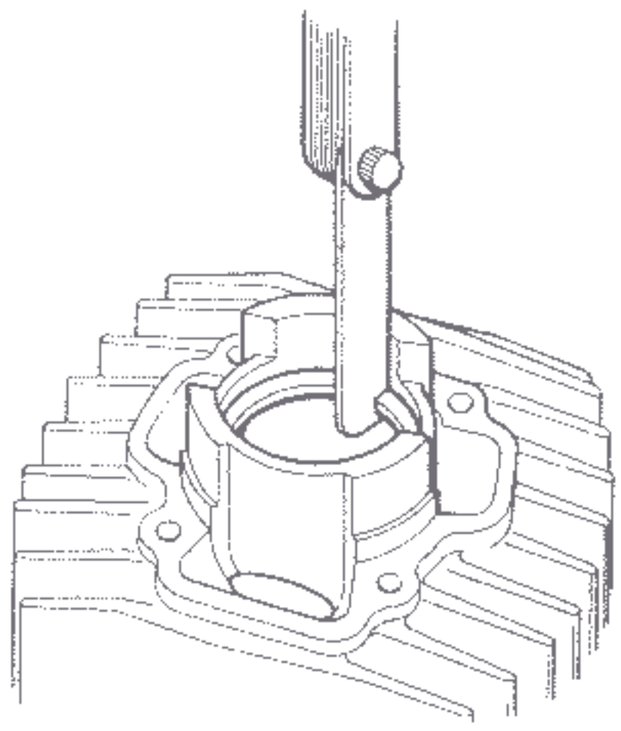
Standard	Service Limit
0.025 - 0.055	0.1 mm

● Piston Ring Thickness



Standard		Service Limit
2nd	1.4975 - 1.499	1.43 mm

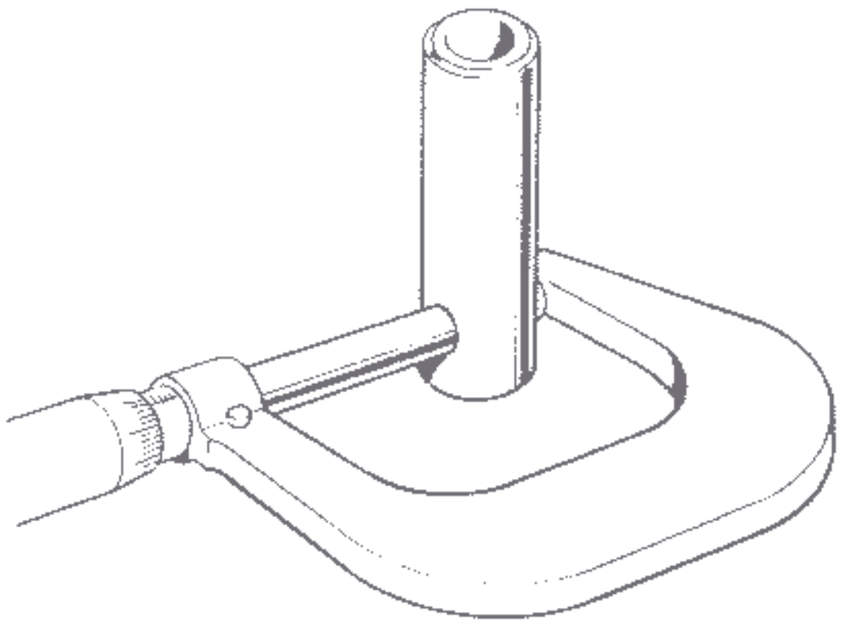
● Piston Ring end Gap



Both Top/2nd Rings

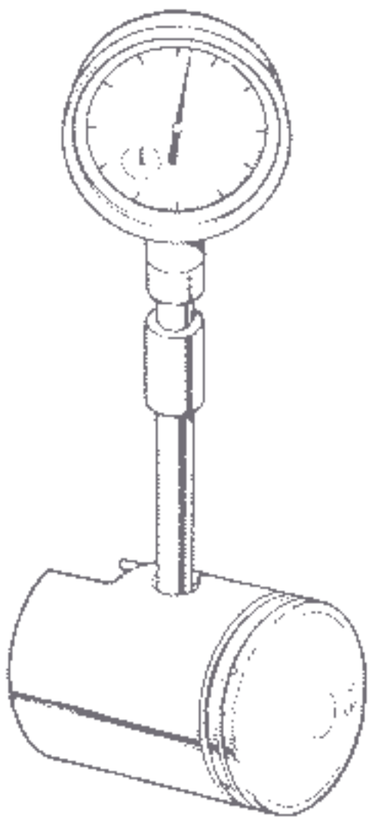
Standard	Service Limit
0.15 - 0.35	0.6 mm

● Piston Pin O.D.



Standard	Service Limit
9.994 - 10.000	9.97 mm

● Piston Pin Hole I.D.



Standard	Service Limit
10.002 - 10.008	10.03 mm

D. Compression

① Warm up the engine until normal operating temperature is reached

② Remove the spark plug

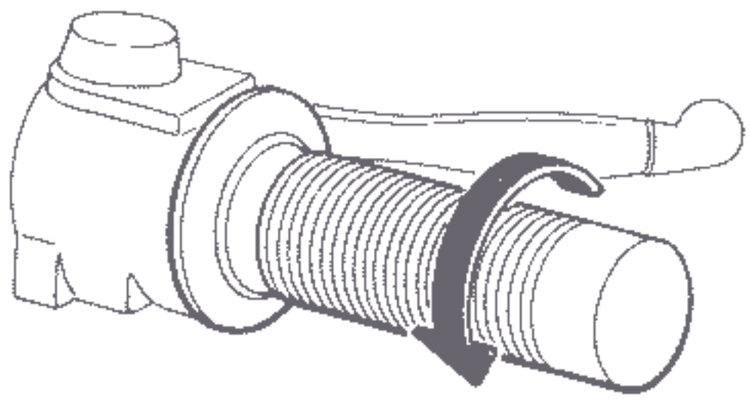
③ Set compression gauge in the spark plug hole

④ Turn the throttle grip fully open

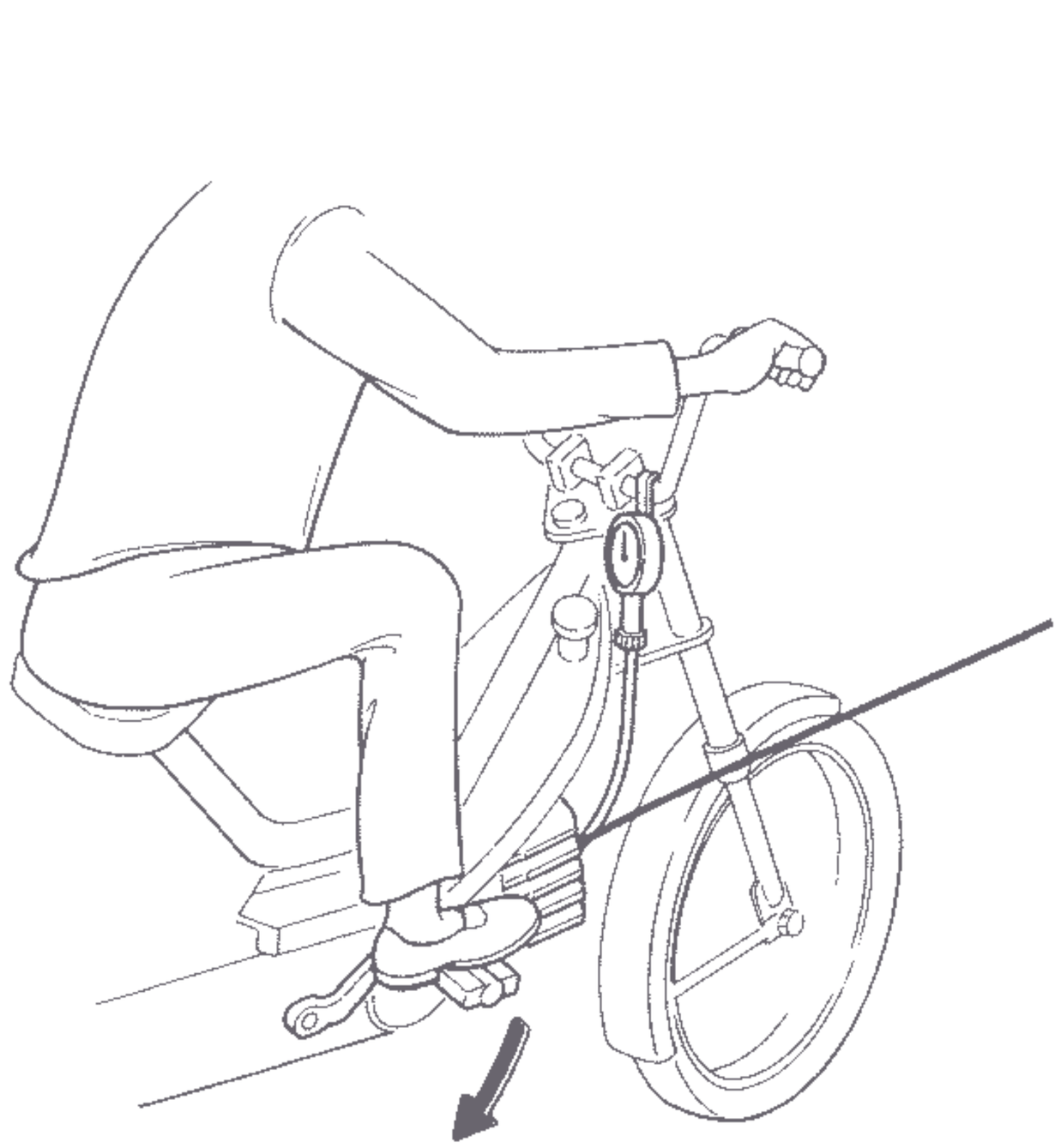
⑤ Crank the pedals until the gauge needle reaches the highest point

Compression
8 - 12 kg cm^2

Throttle grip (1)



Fully open (2)



NOTE

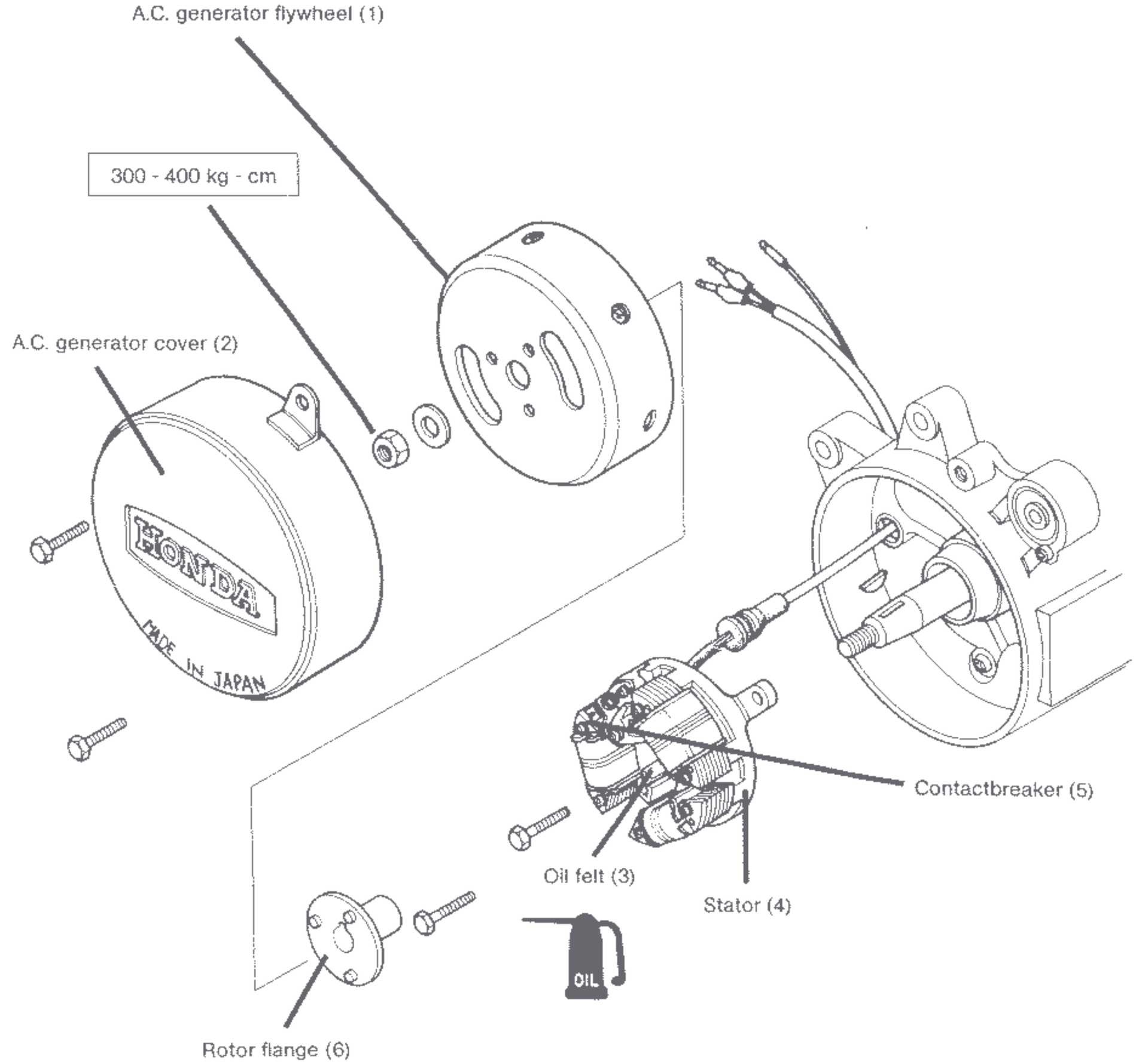
Tighten securely to prevent leaks

7. A.C. GENERATOR

A. Disassembly/Assembly

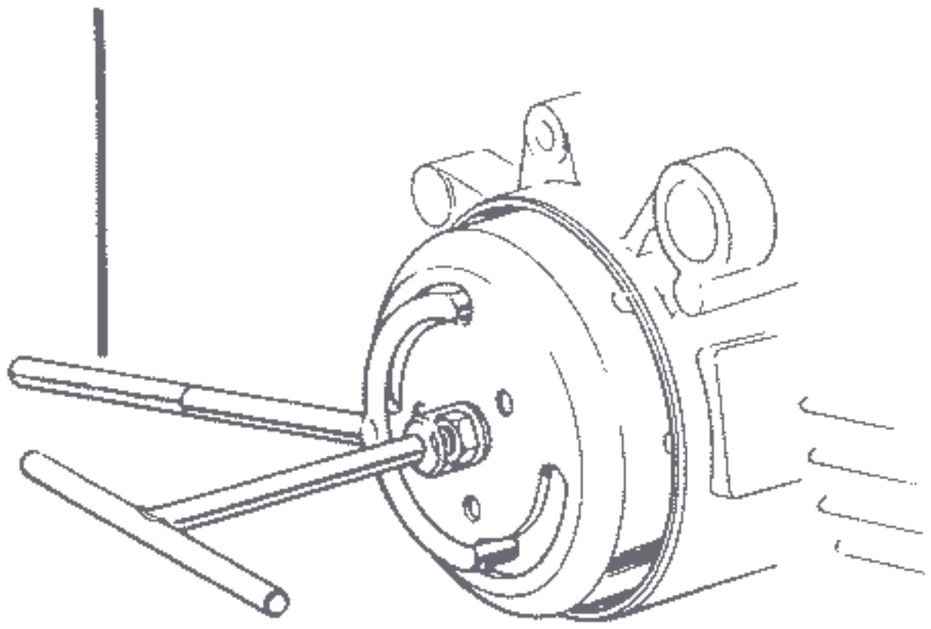
1. Remove the right floor cover
2. Remove the chain cover

During assembly and installation, make sure that no foreign particles have adhered tot the magnet inside of the flywheel.

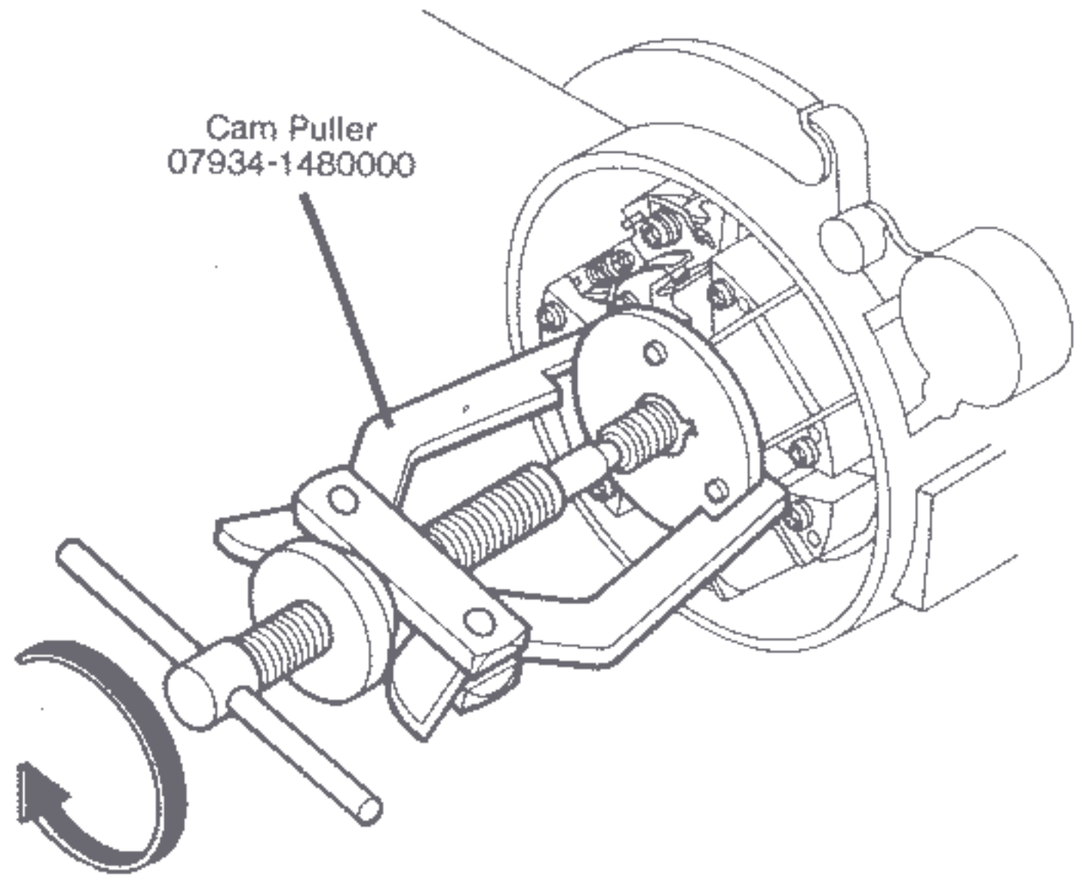


NOTE:
Prior to installation, route the A.C. generator cable trough the hole in the case

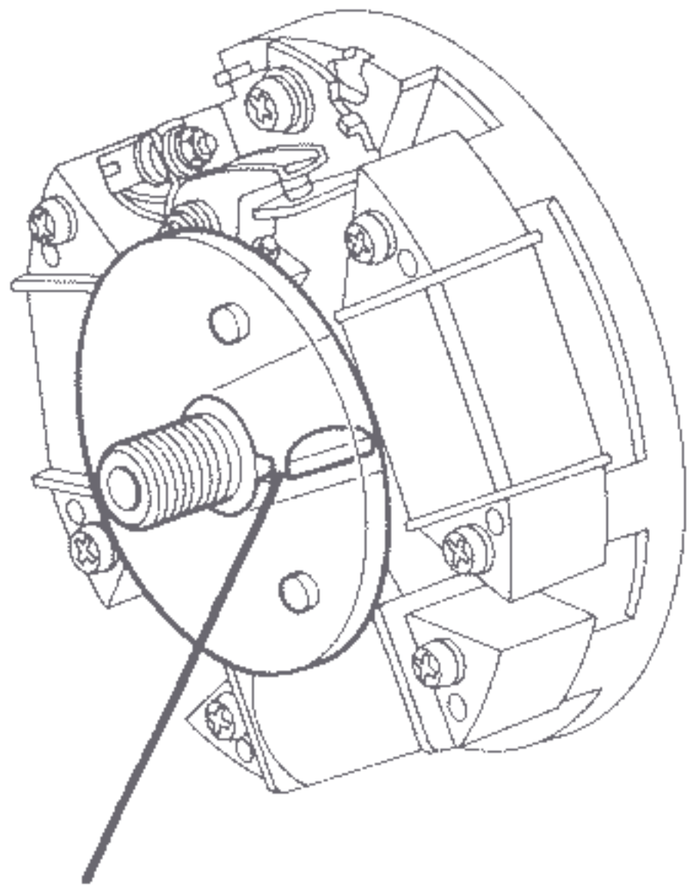
● Flywheel Disassembly/Assembly



● Rotor Flange Disassembly

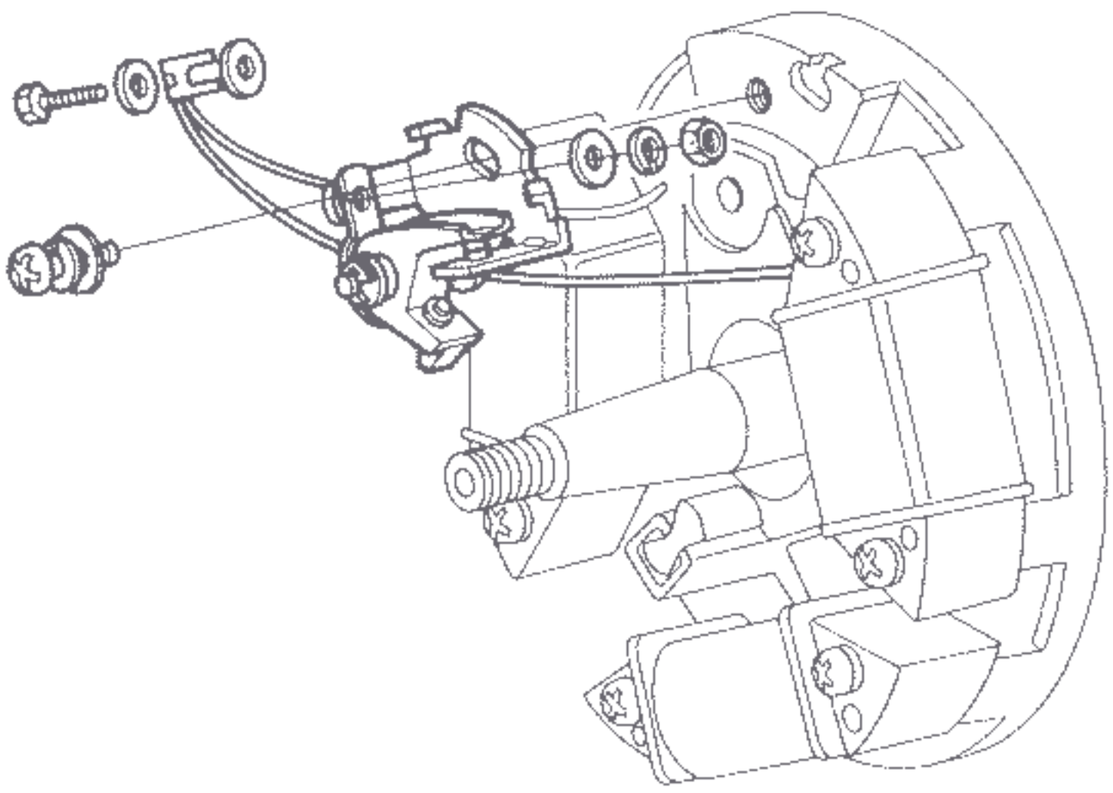


● Rotor Flange installation



Align the key with the keyway

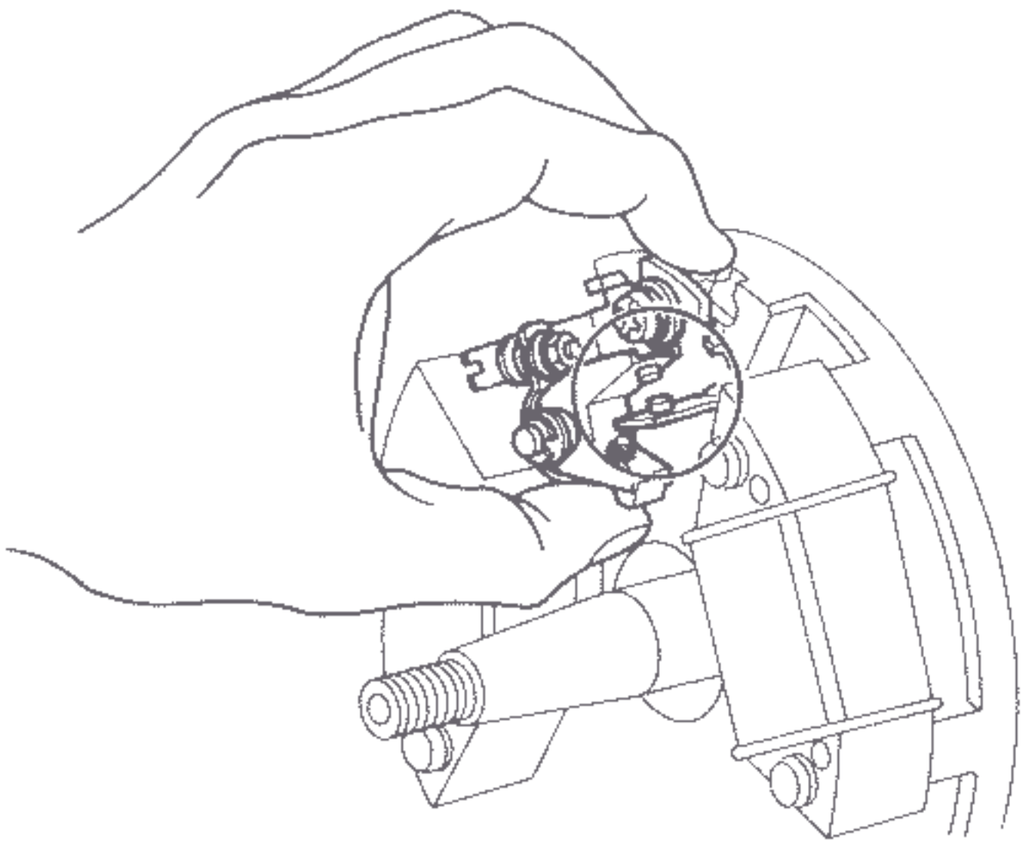
● Contact Breaker Disassembly



After assembling, adjust contact breaker point gap and ignition timing

B. Inspection

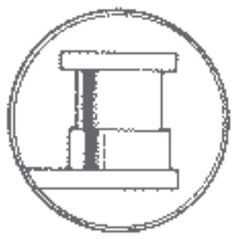
- Contact breaker point



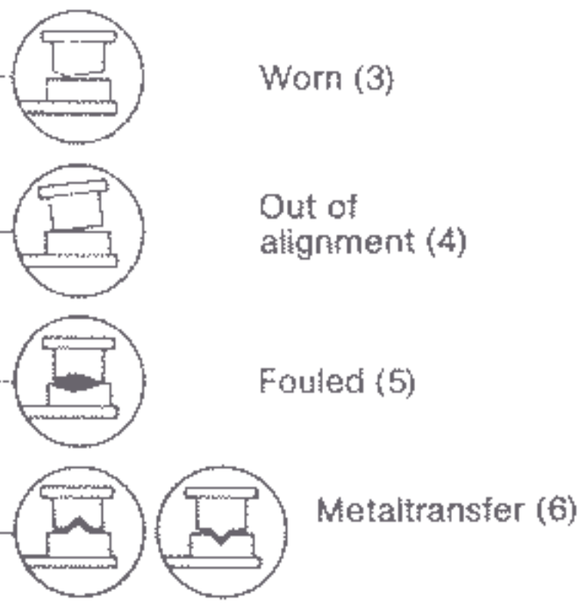
Point gap

standard; 0,3 - 0,4 mm

Normal (1)



No good (2)



Worn (3)

Out of alignment (4)

Fouled (5)

Metaltransfer (6)

8. DRIVE PULLEY/CLUTCH/DRIVEN PULLEY

A. Trouble shooting

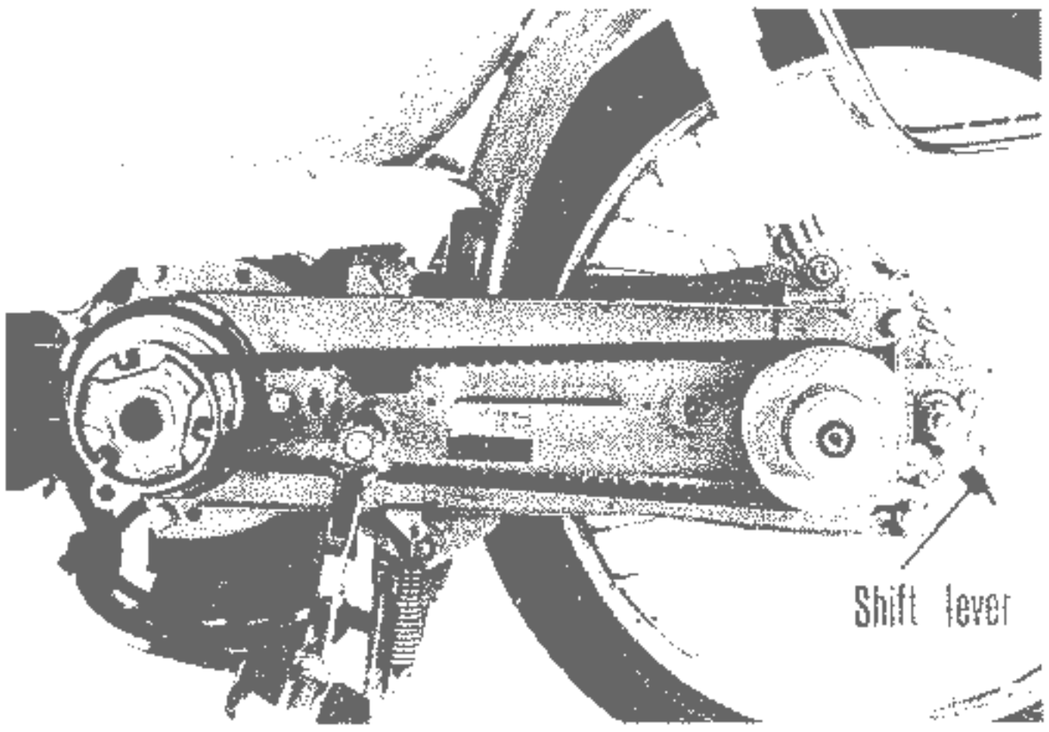
Symptom	Probable cause
Power not transmitted to the rear wheel	Worn damaged drive clutch linings
Poor performances at high speed	Worn weight sleeve. Deffective movable drive face
Lack of power	Defective torque of driven pulley

B. Disassembly/Assembly

Set the shift lever at pedal drive position

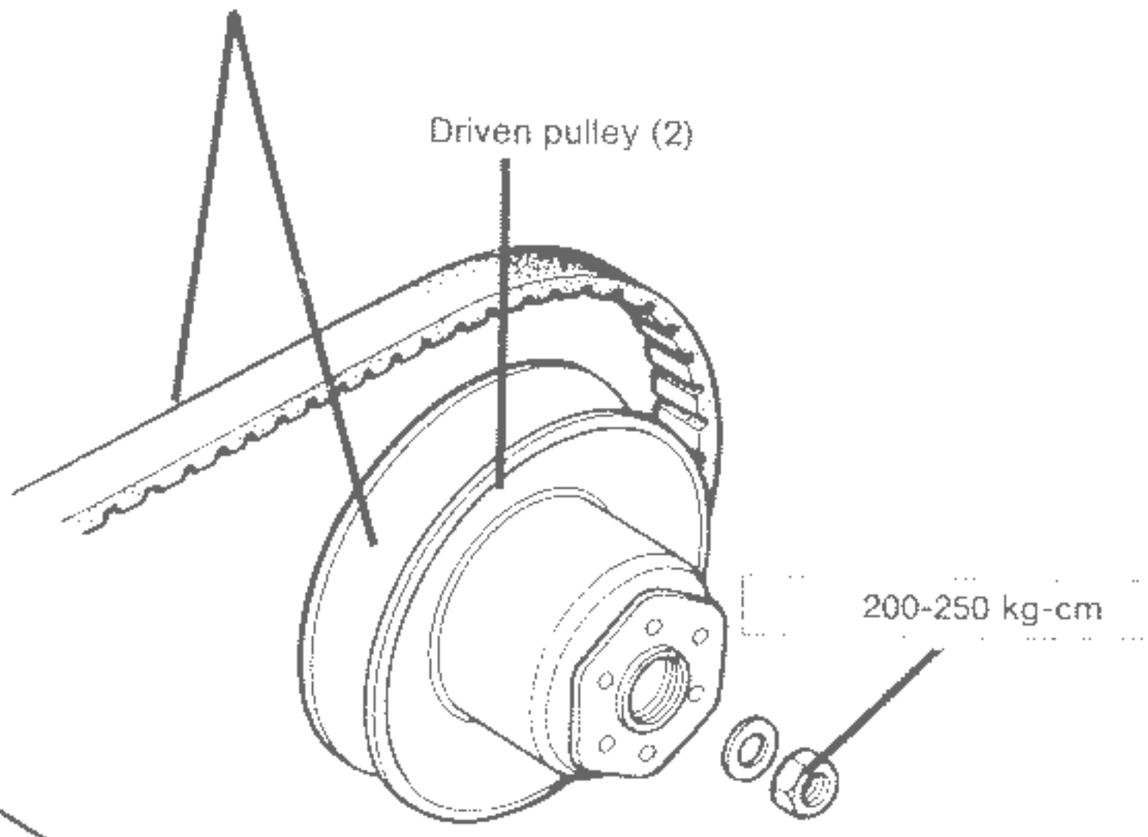
① Remove the drive belt cover

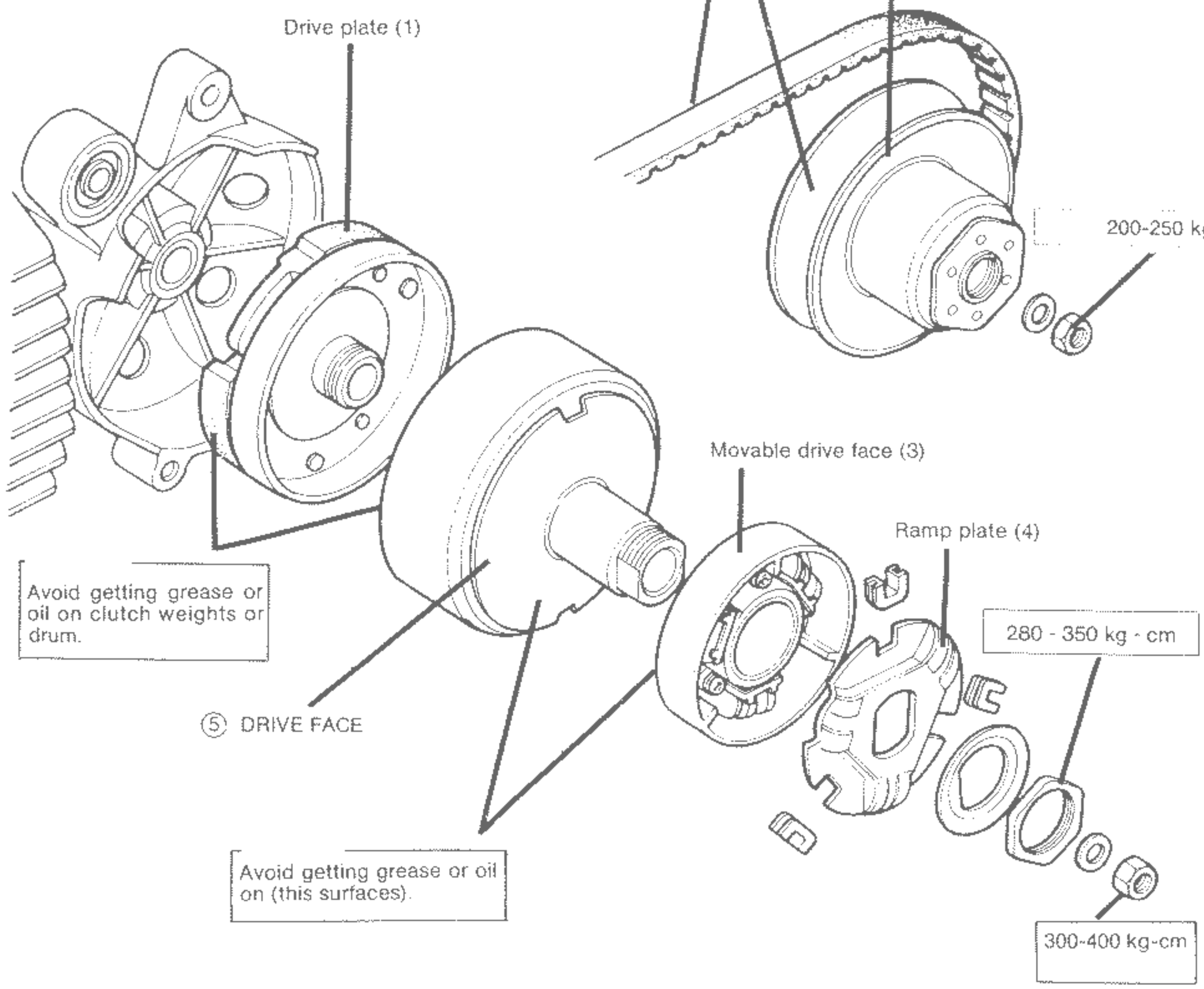
③ Remove the drive belt cover



Never start the engine with the drive pulley removed. The crankcase will be scratched by the centrifugal drive clutch weights

Avoid getting grease or oil on belt or pulley surfaces



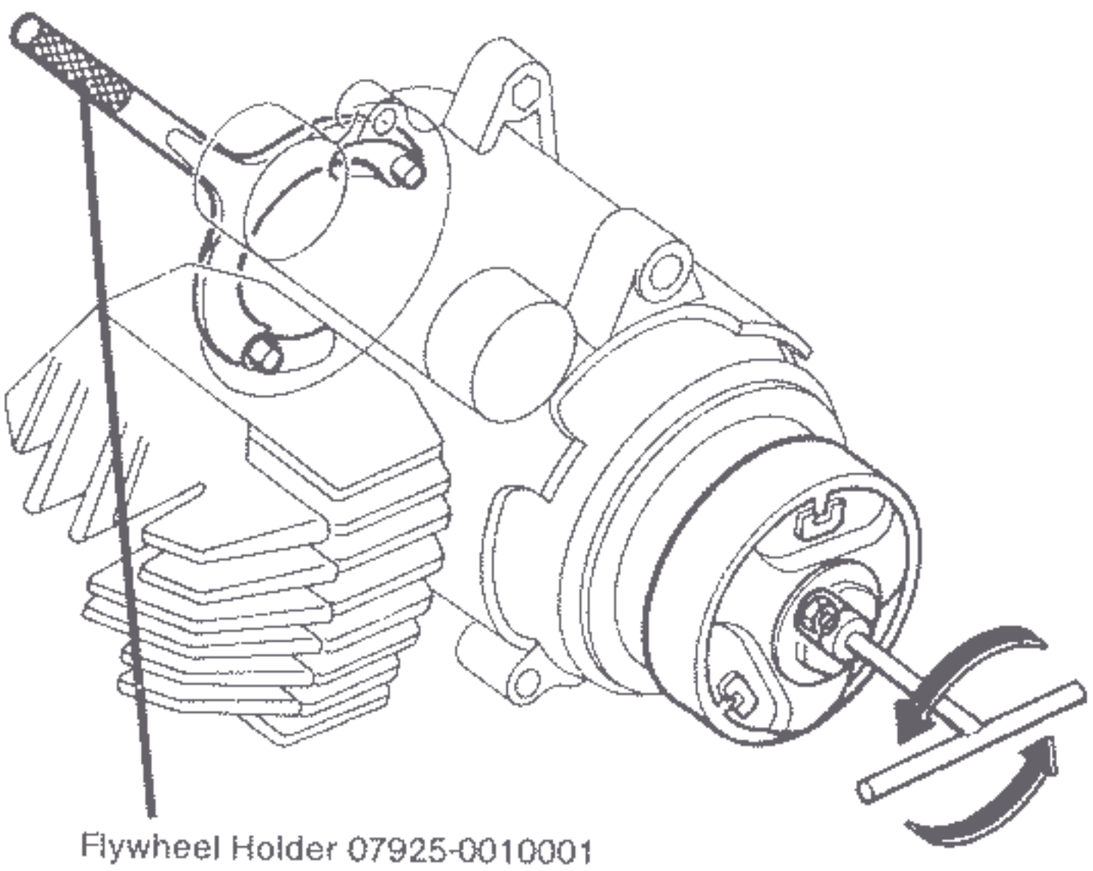


Avoid getting grease or oil on clutch weights or drum.

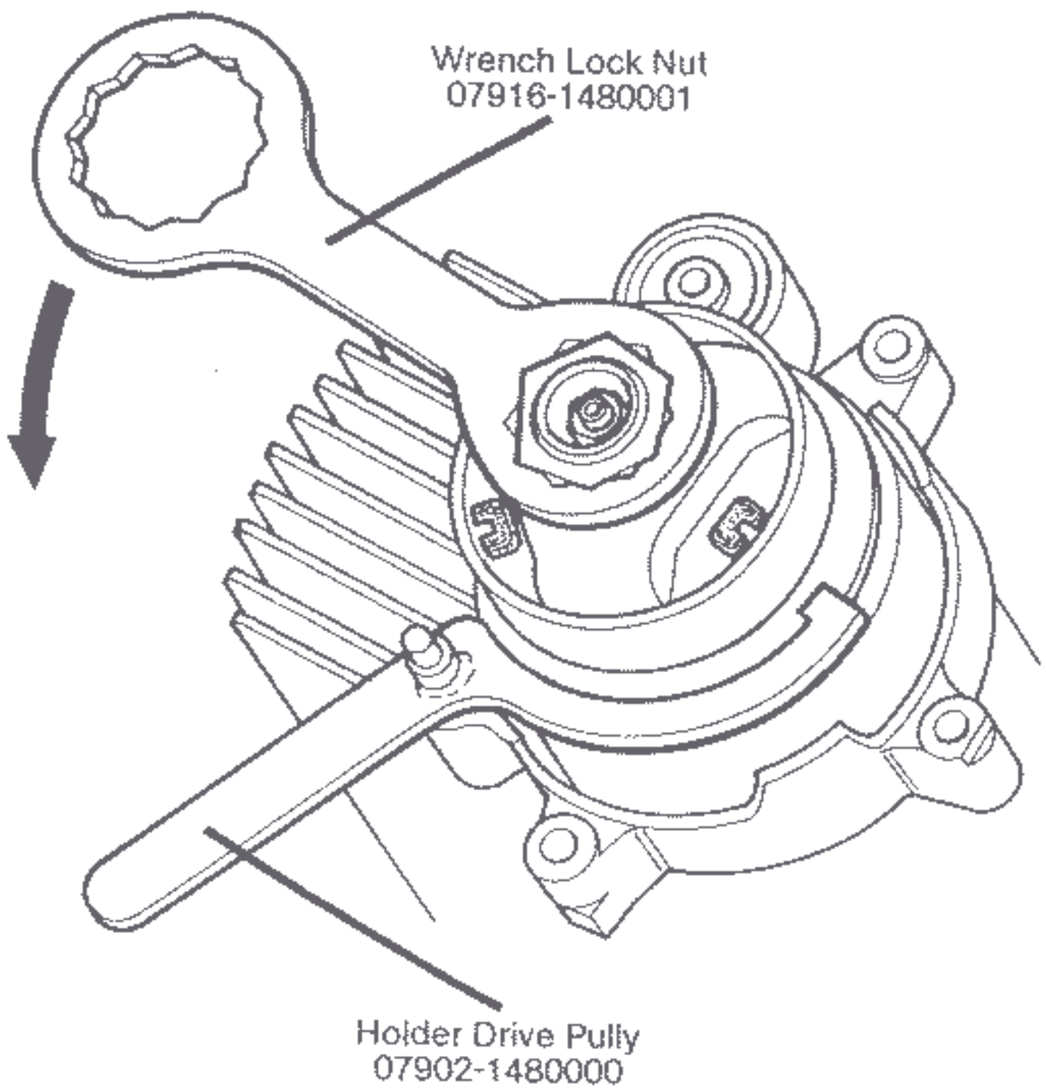
Avoid getting grease or oil on (this surfaces).

Disassembly/Assembly

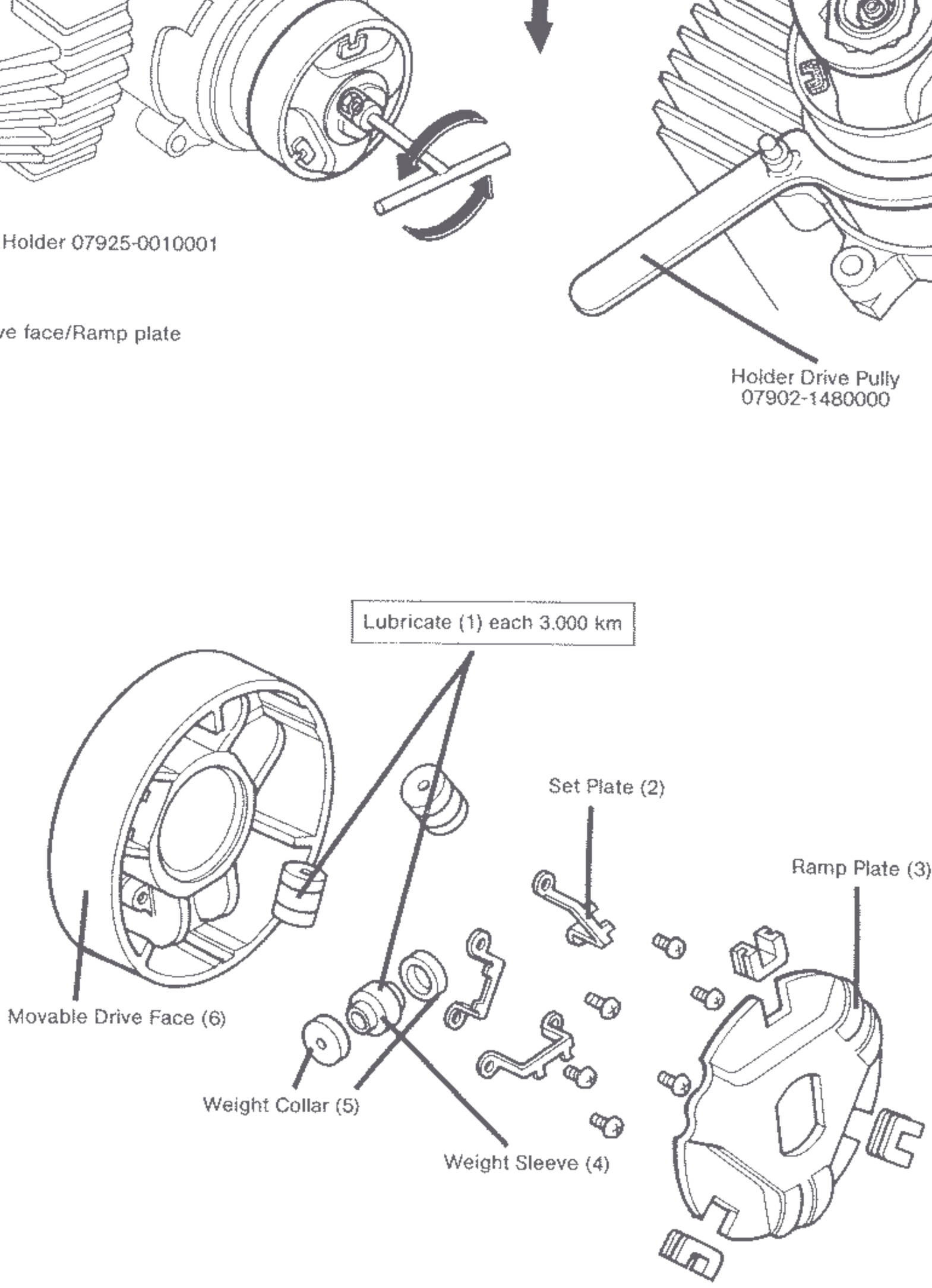
- Drive pulley attaching nut



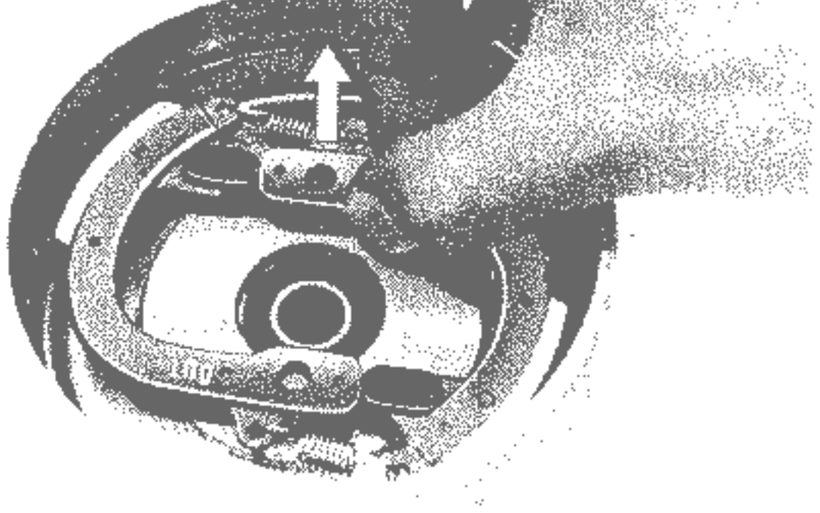
- Drive face securing nut



- Movable drive face/Ramp plate

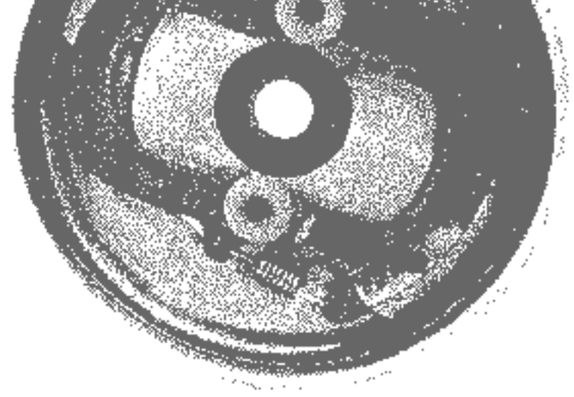


- Starting clutch disassembly



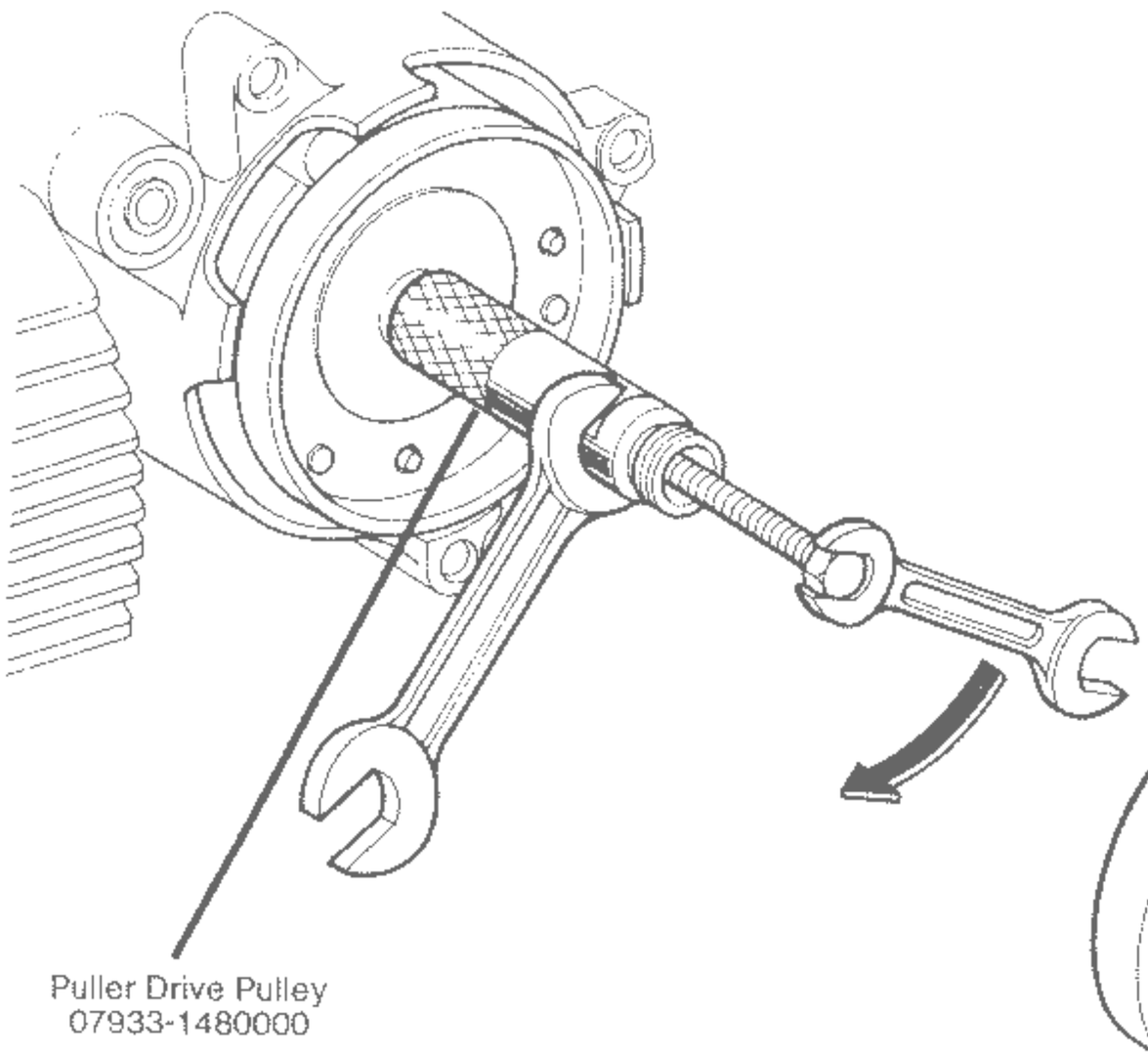
Lift up starting weight after removing the setting washers

- Starting clutch Assembly



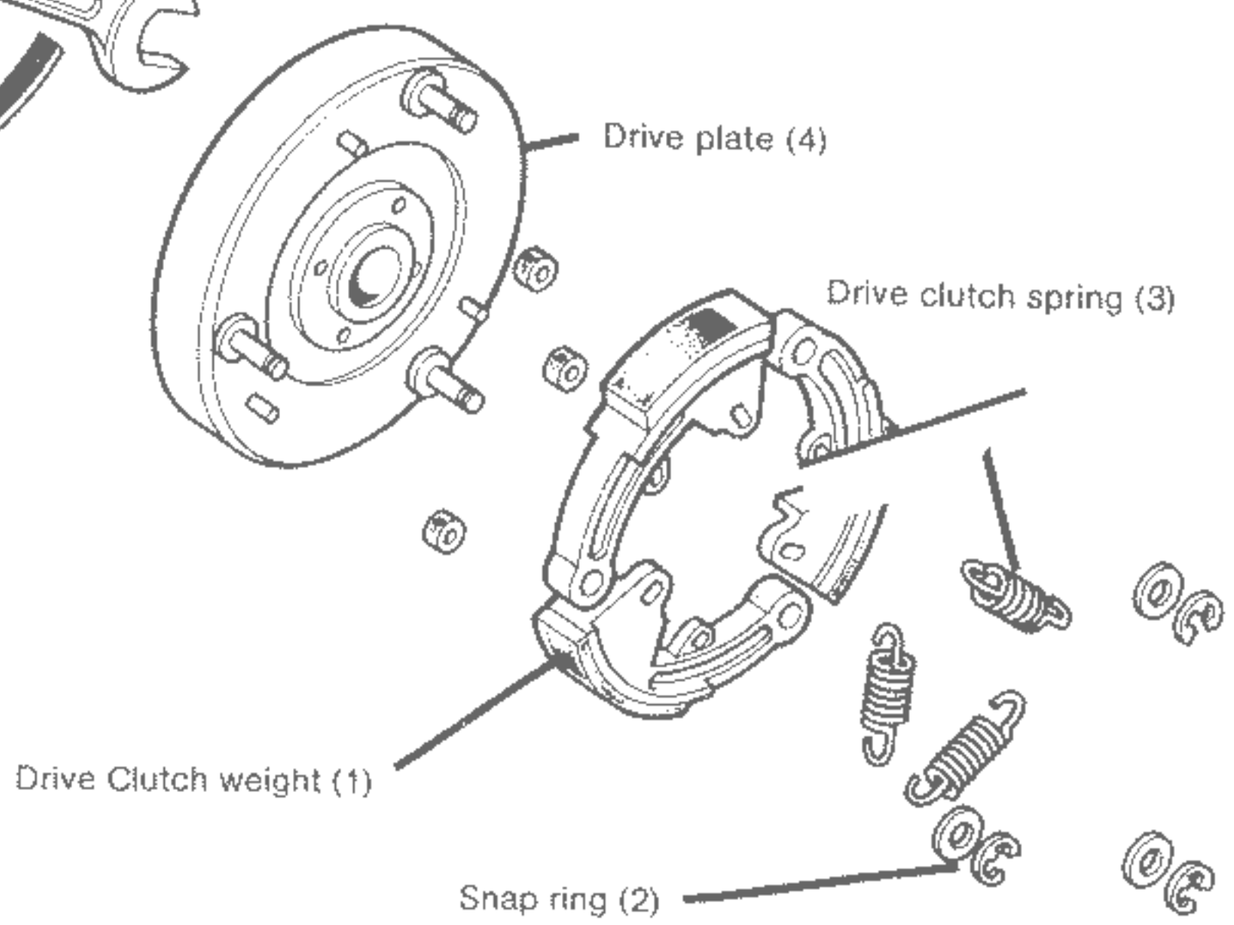
Install the starting clutch weight with "OUT" mark facing up

- Drive plate REMOVAL



Puller Drive Pulley
07933-1480000

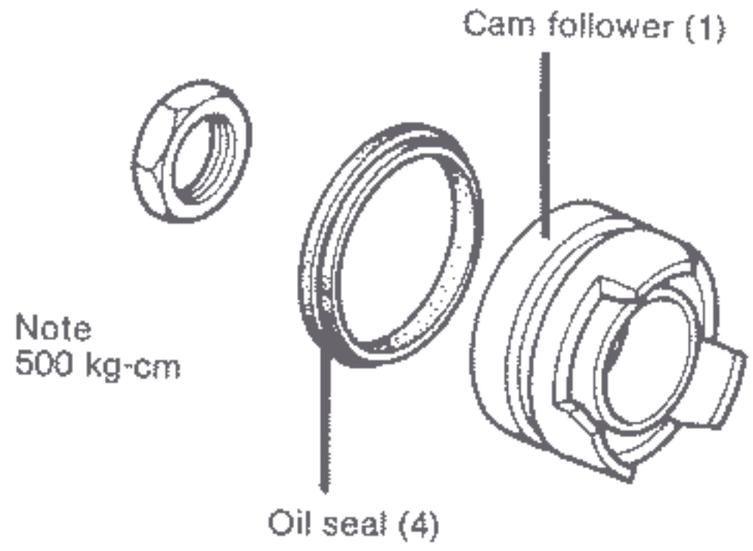
- Drive clutch DISASSEMBLY



Avoid getting grease or oil on the parts

Driven Pulley

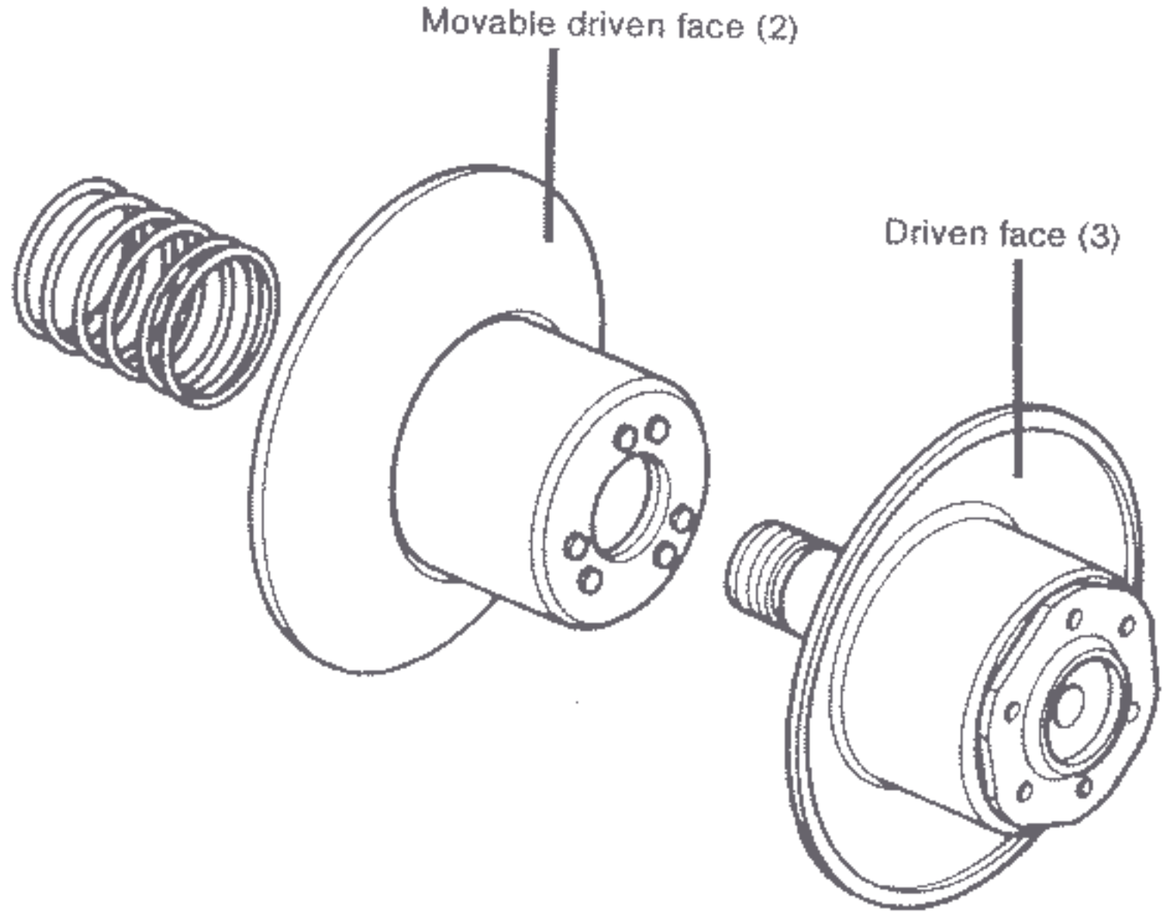
- Disassemble the driven pulley



GREASE CAPACITY : 5-7 g

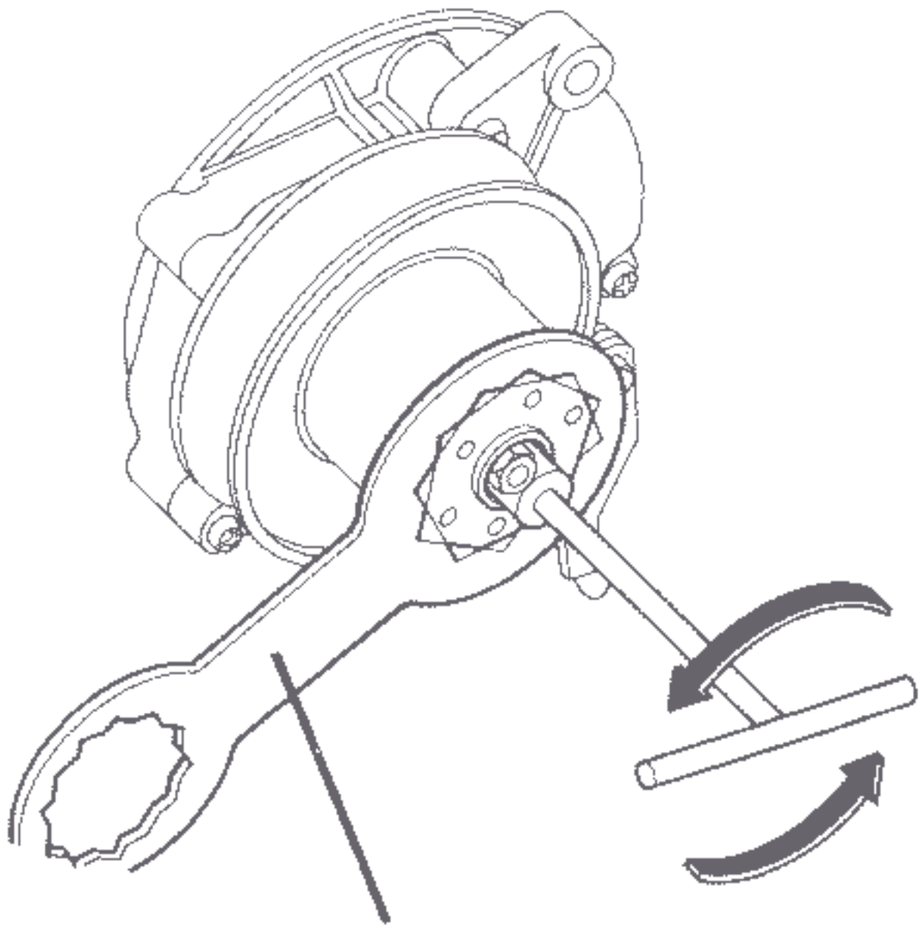
Avoid getting oil or grease on this parts

Avoid getting oil or grease on the pulley faces



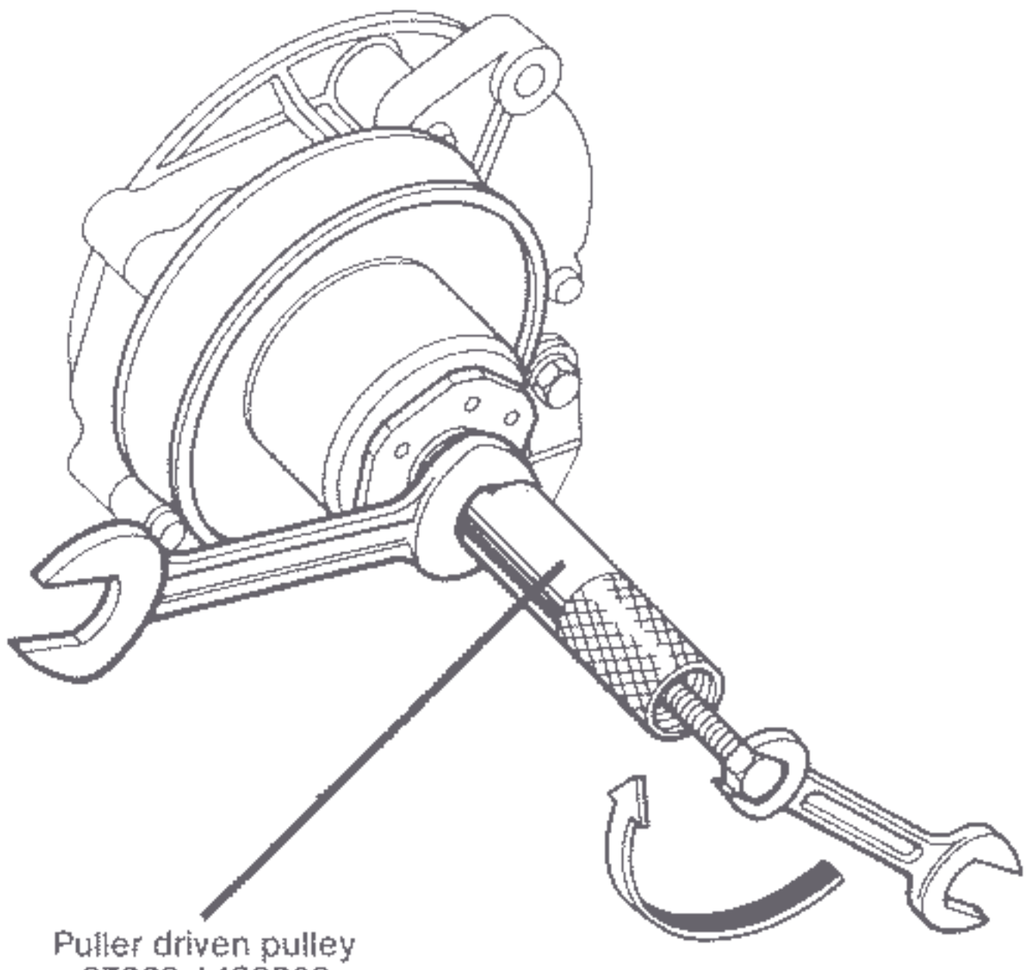
B. Disassebly

- Remove the driven pulley attaching nut

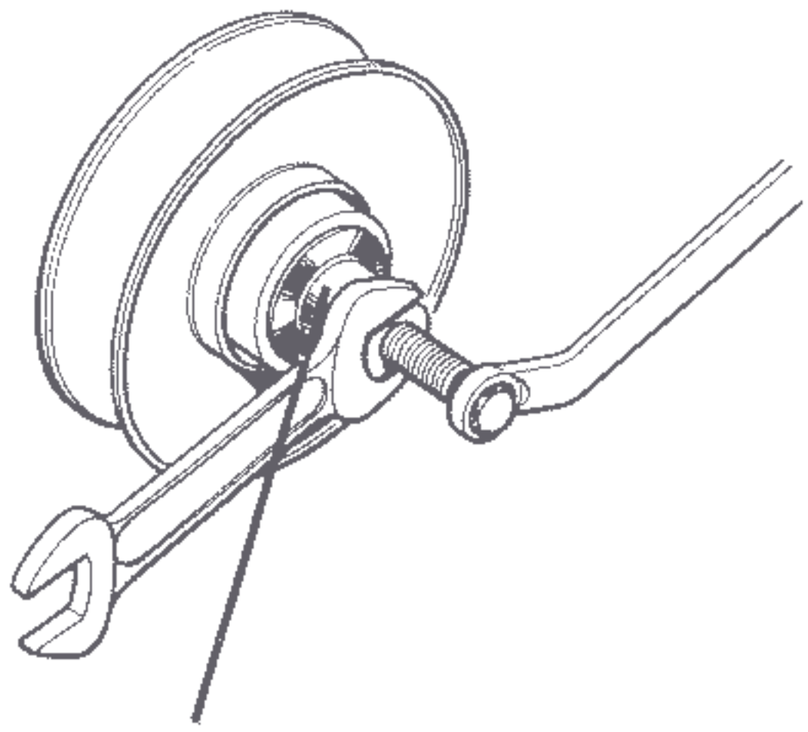


Use a 46 mm box end wrench

- Remove the driven pulley

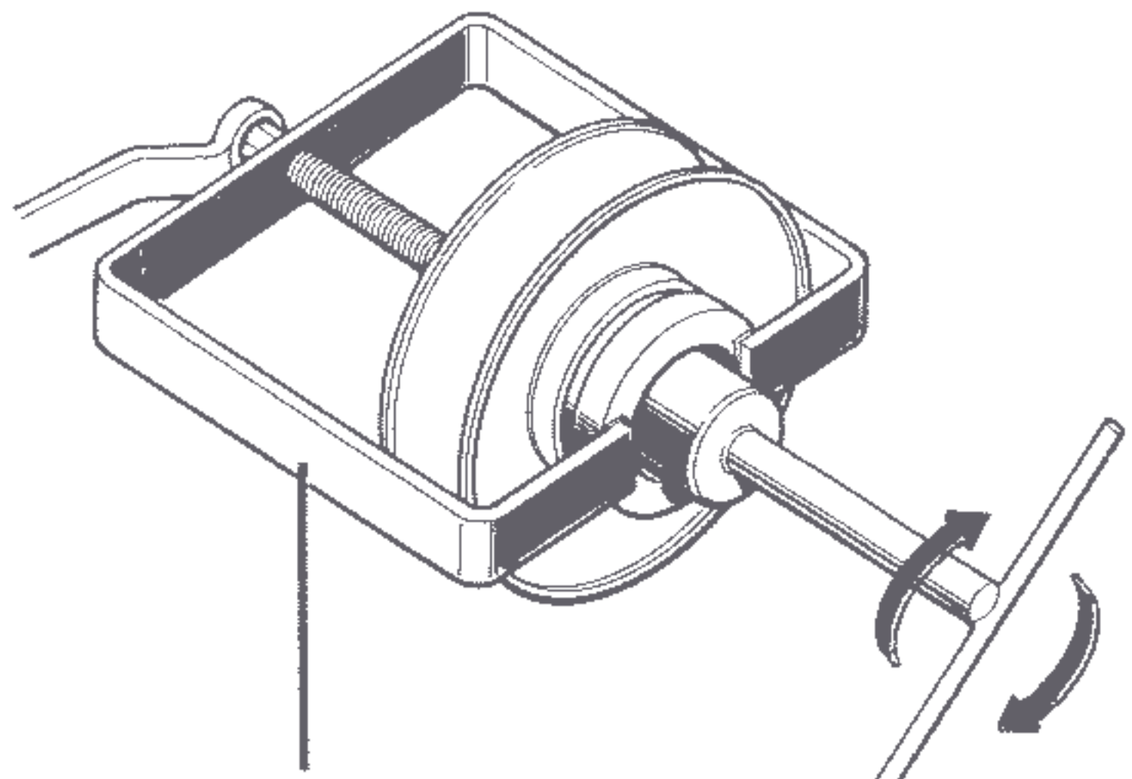


● Disassembly driven pulley



Puller pulley
07933-1480100

● Assembly driven pulley

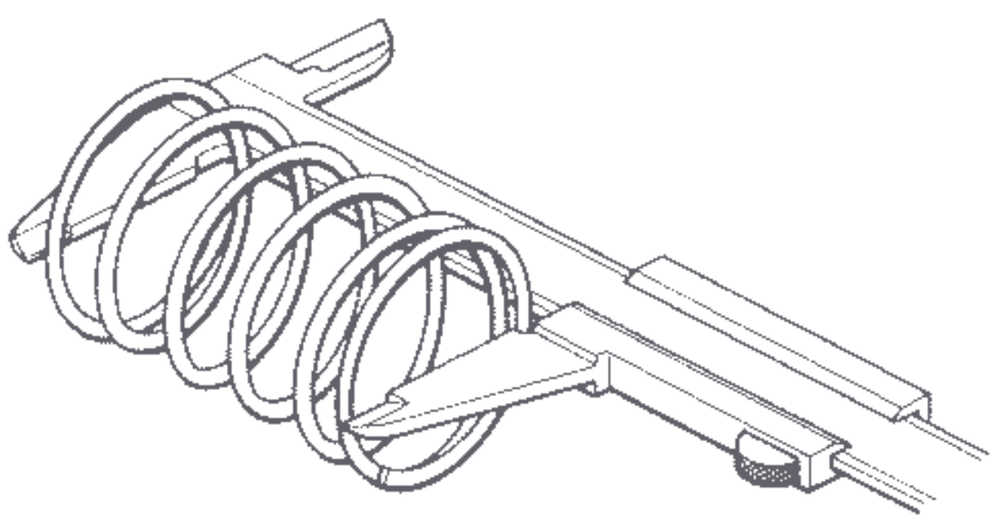


Assembly driven pulley
07960-1480100

Tighten the special nut and caulk after.
Setting the driven pulley with the driven pulley assembly tool.

C. Inspection

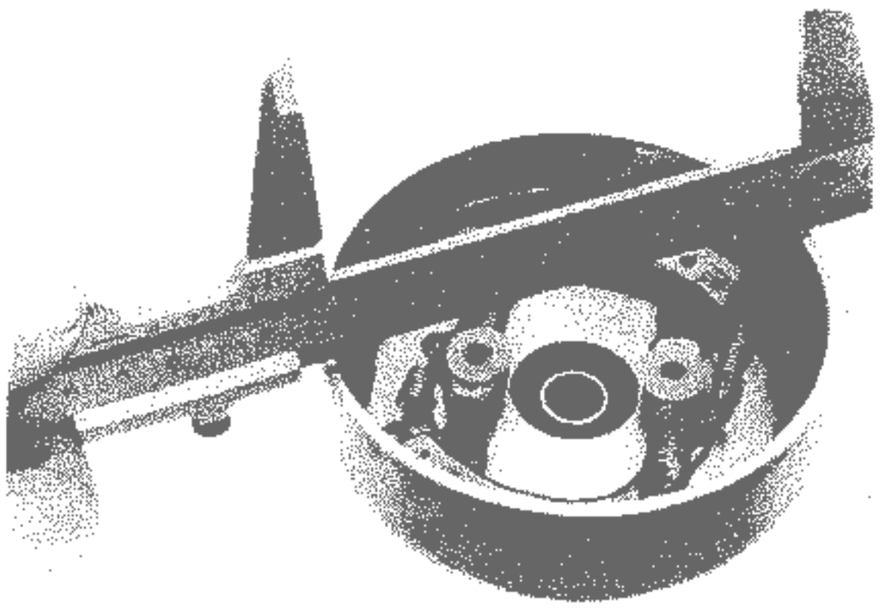
● Free length of driven face spring



Standard	Service Limit
72,3 mm	65,1 mm

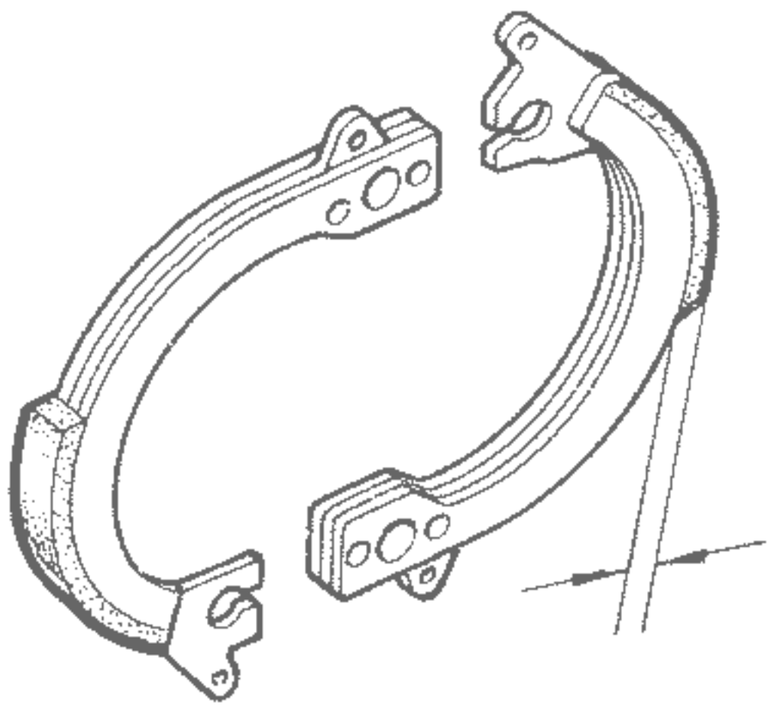
Inspection

Starting clutch face (Drive Face)
I.D.



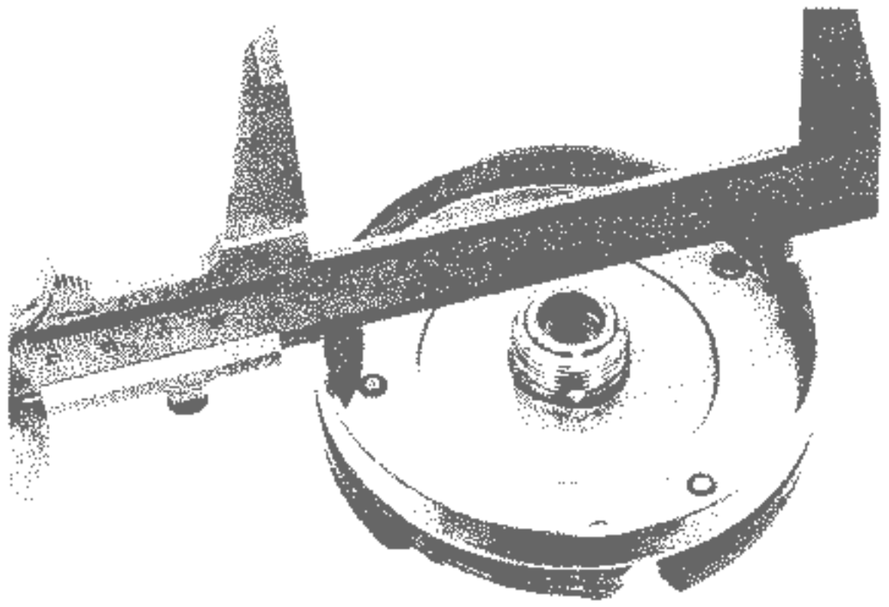
Standard	Service Limit
96.9 - 97.1 mm	97.5 mm

Starting clutch Thickness



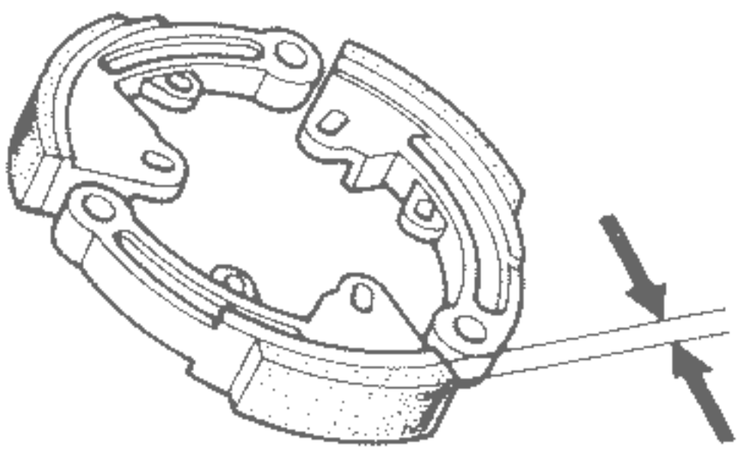
Standard	Service Limit
2.9 - 3.1 mm	1.5 mm

Clutch Weight Face (Drive Face)



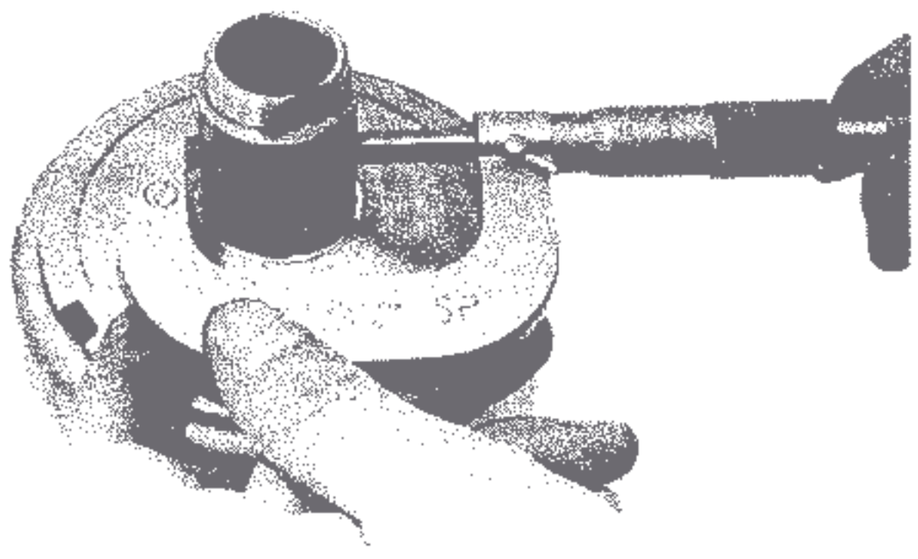
Standard	Service Limit
104.0 - 104.1 mm	104.5 mm

Clutch Weight Thickness



Standard	Service Limit
3.4 - 3.6 mm	2.0 mm

Drive pulley base O.D.



Standard	Service Limit
29.979 - 30.000 mm	29.9 mm

Movable drive pulley bushing I.D.

Standard	Service Limit
30.005 - 30,011	30.1 mm

9. CRANKSHAFT/CRANKCASE

A. Trouble Shooting

Symptom	Probable cause
No or loss of compression	Compression leak past oil seal Compression leak past cranckase mating faces Deffective reed valve Defection decompression valve
Poor performance at high speed	Compression leak past oil seal Compression leak past cranckase mating faces Defective reed valve
Engine stalls	Compression leak past oil seal Compression leak past cranckase mating faces Defective reed valve

B. Disassembly/Assembly

① Remove the engine

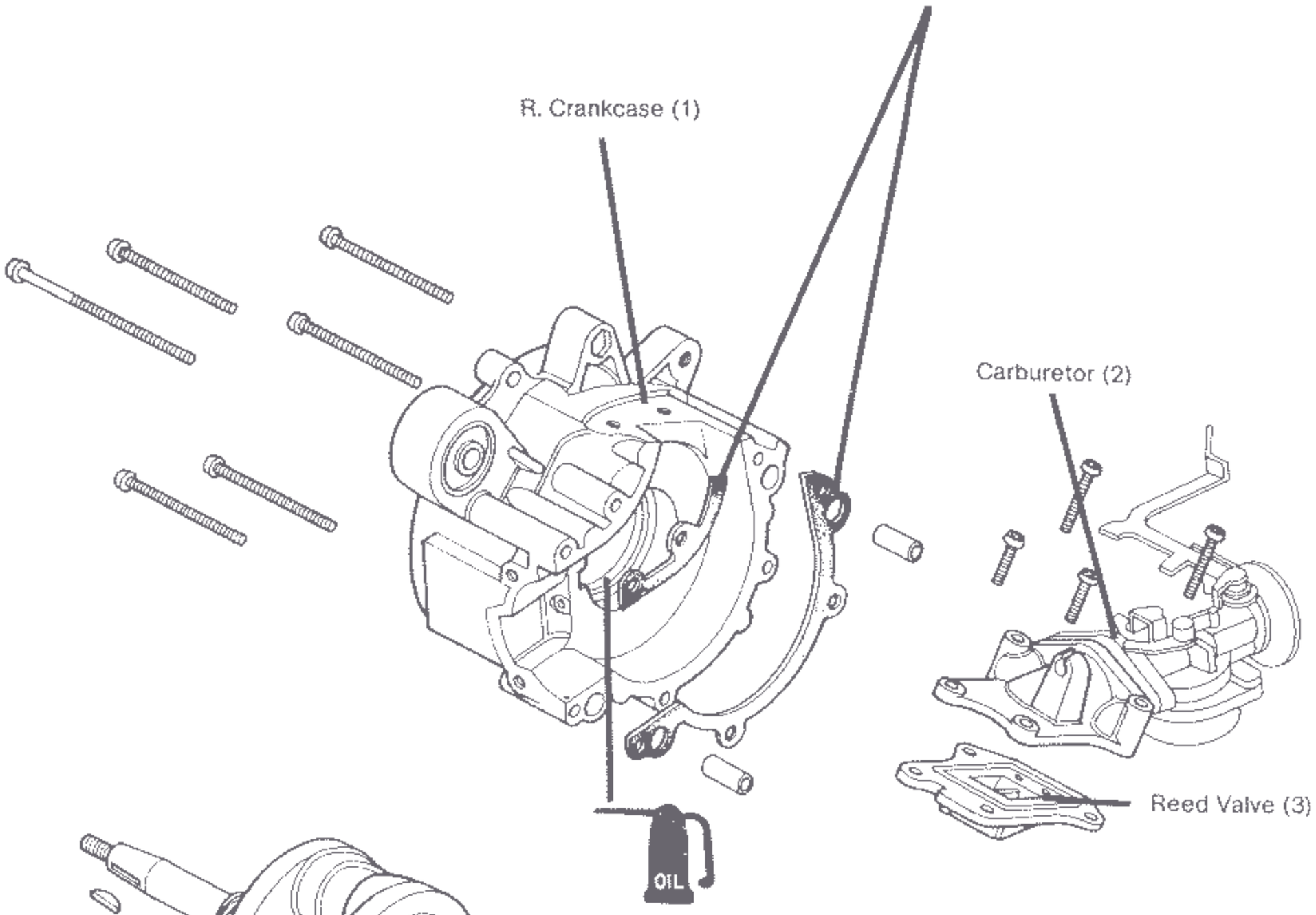
② Remove the cylinder head and piston

③ Remove the drive pulley

④ Remove the A.C. generator

NOTE:
Do not score or scratch parts
The crankcase must be tighten correctly

NOTE:
Replace with a new gasket during reassembly

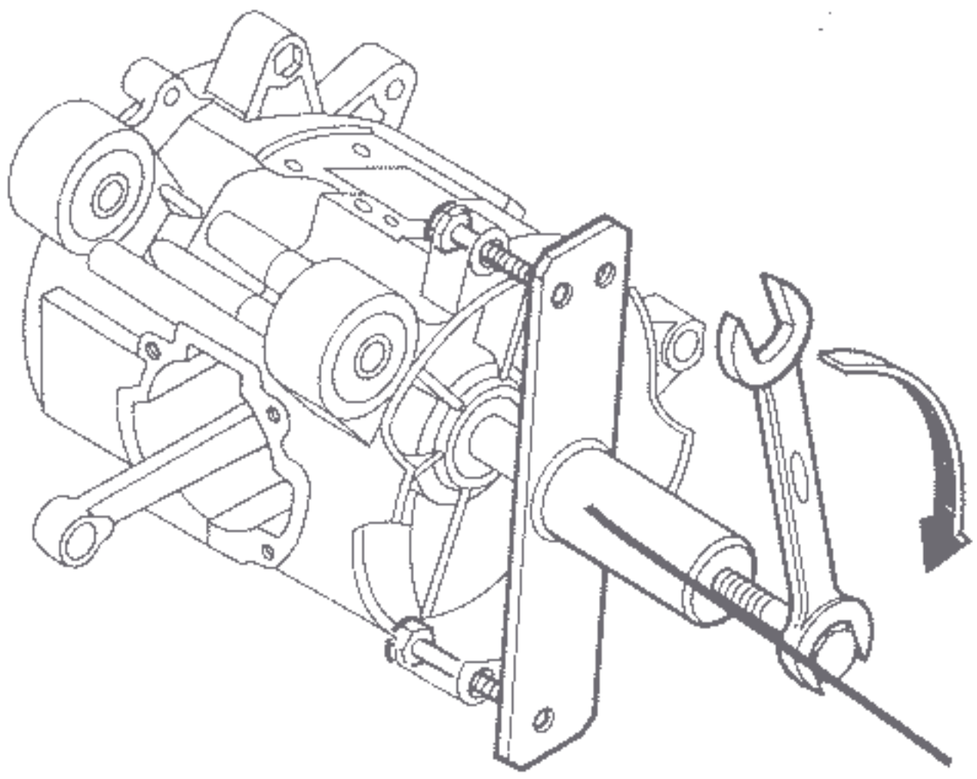


NOTE:
Replace the ball bearing oil seal
when disassembling

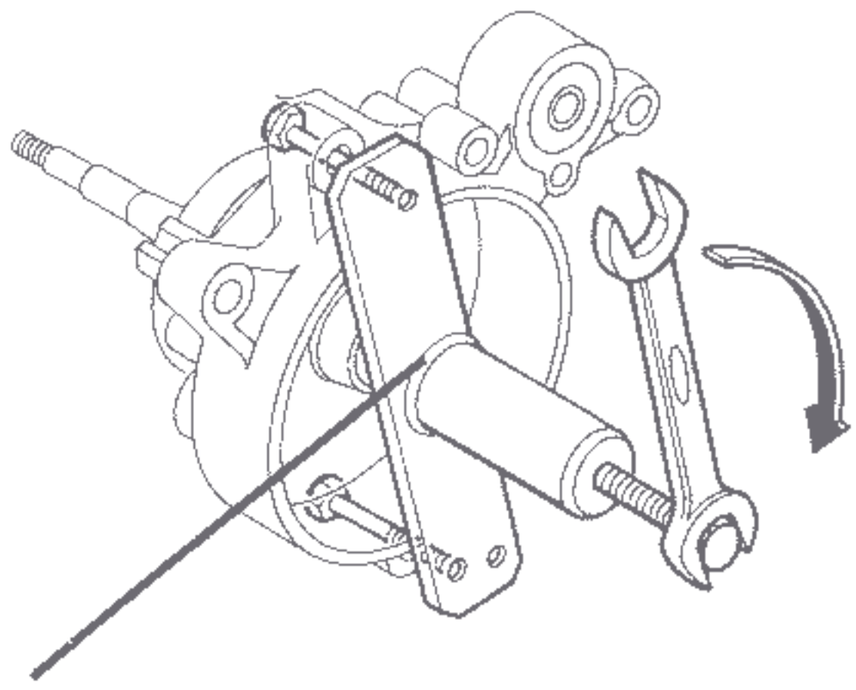
Crankshaft/Crankcase DISASSEMBLY

Unscrew the crankcase setting screws

- L. Crankcase



- R. Crankcase

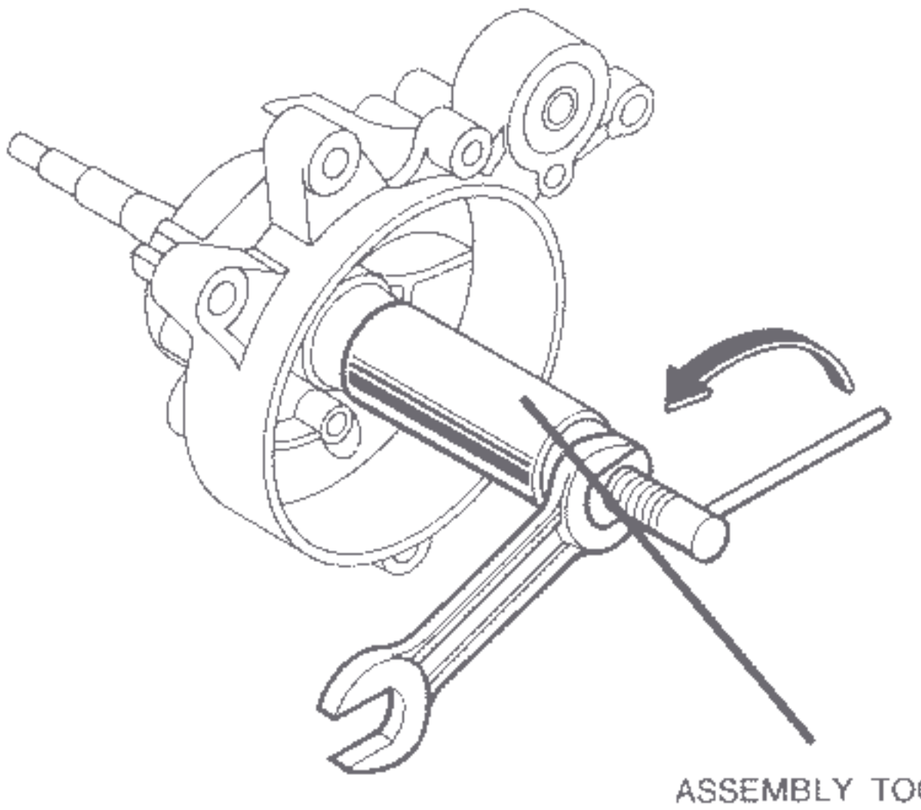


Puller case
07935-1480000

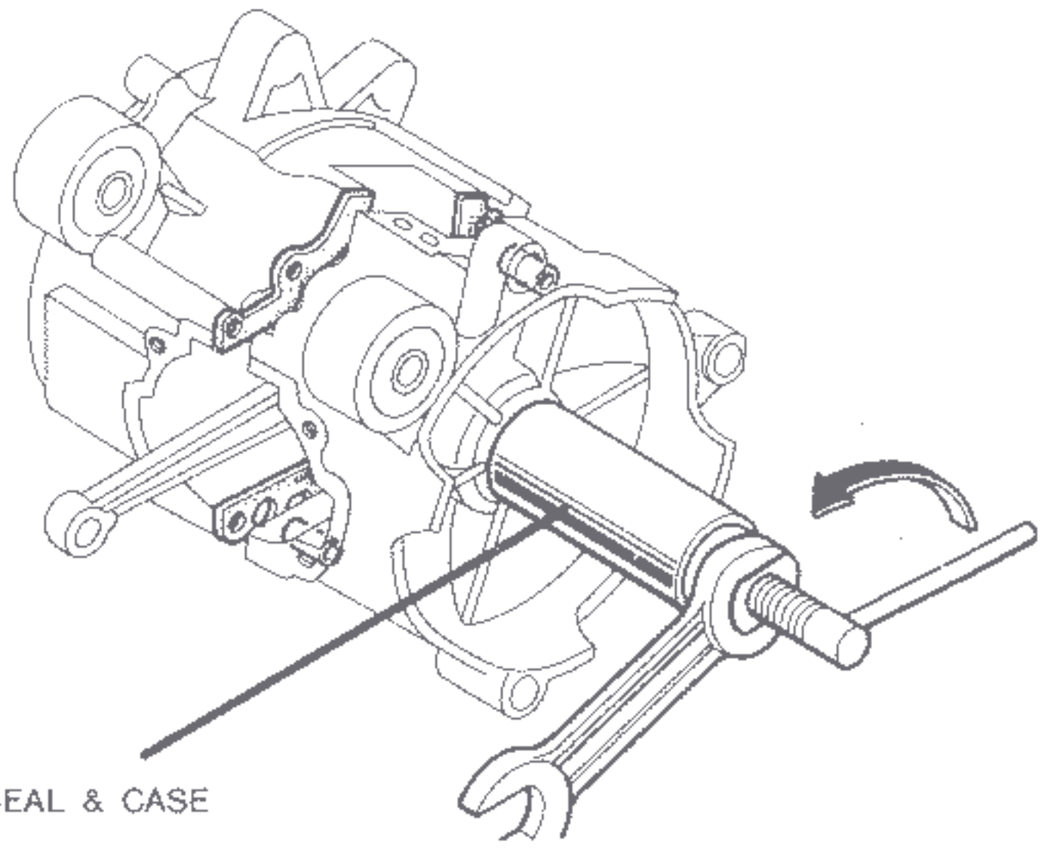
NOTE:
Tighten bolts securely when installing puller
Hold the crankshaft so that it cannot be removed by hand

Crankshaft/Crankcase Assembly

- R. Crankcase



- L. Crankcase



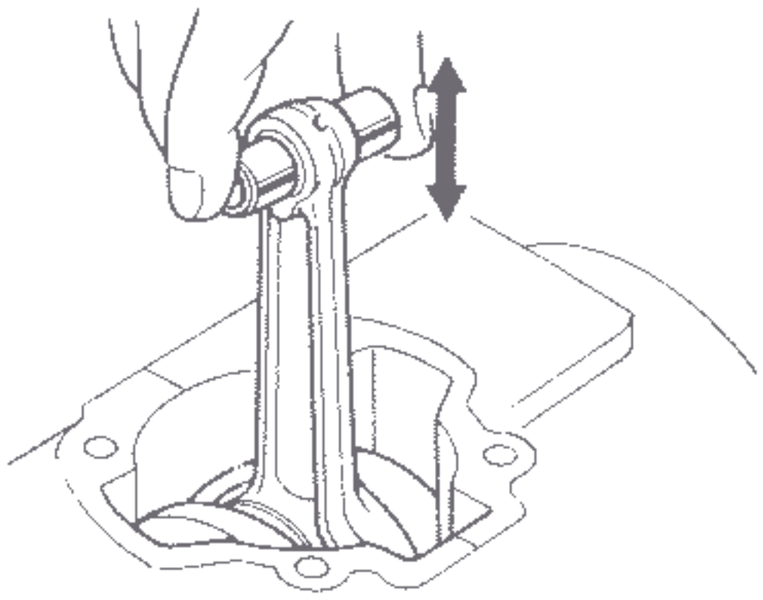
ASSEMBLY TOOL SEAL & CASE

N°. 07965-1480001

Slide the tool collar over the end of the crankshaft and turn in the handle of the tool bolt until the shaft fits into the bearing in the crankcase

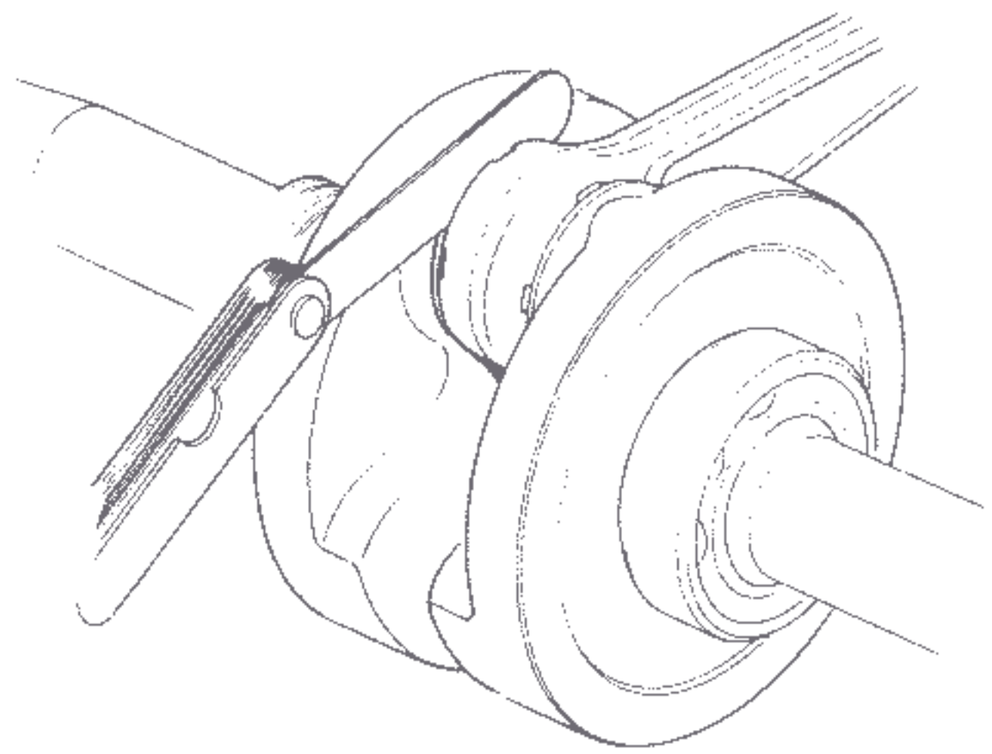
C. Inspection

- Check connecting rod small end bearing play



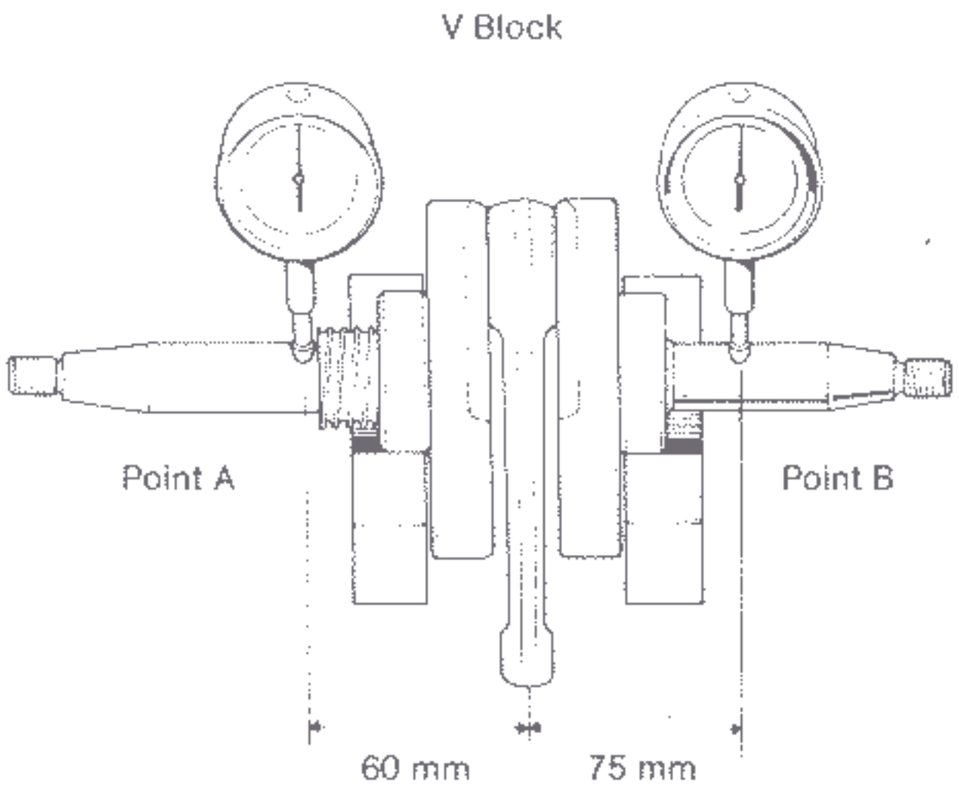
Be sure that the pin rotates smoothly without rattling

- Measure connectingrod big end bearing side clearence



Standard	Service Limit
0.15-0.41 mm	0.6 mm

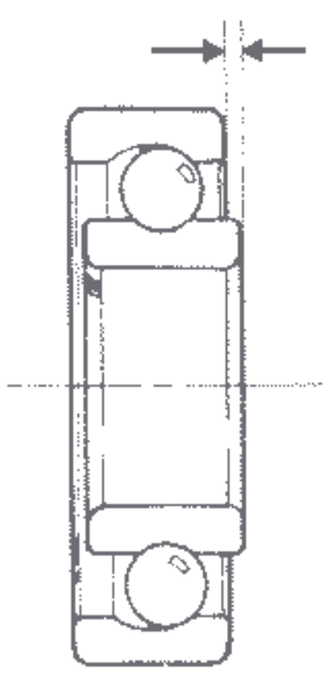
- Measure Crankshaft Runout



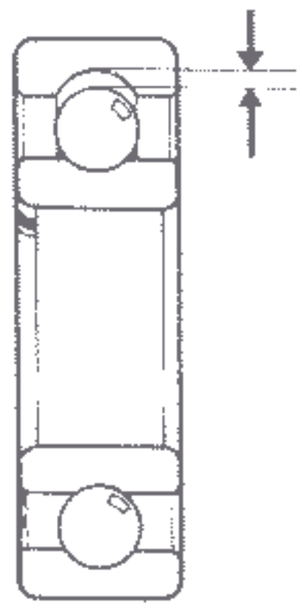
Measure at both ends A & B

Standard	Service Limit
0.05 mm	0.15 mm

- Check bearing play



Excessive play (1)
(Replace)



Excessive play
(Replace)

10. CARBURETOR/AIR CLEANER

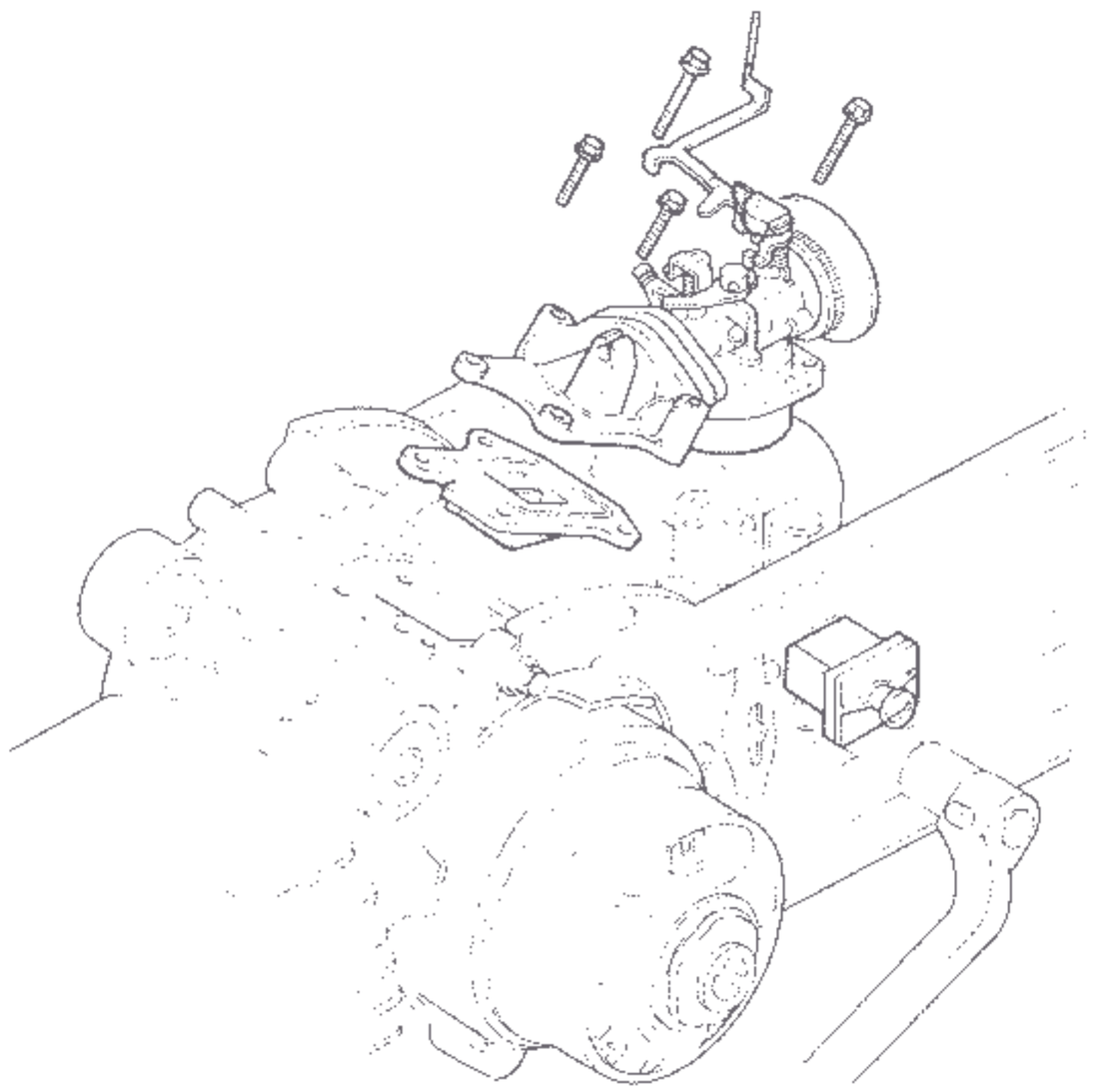
A. Trouble Shooting

Symptom	Probable cause
Hard starting	Clogged Float Valve Mixture screw out of adjustment Clogget carburetor jet
Lack of power	Clogged float valve Pilot screw out of alignment Clogged carburetor jet
Poor performance at low speed	Clogged float valve Clogged carburetor Loose carburetor jet
Poor performance at high speed	Clogged float valve Clogged carburetor Clogged Main jet

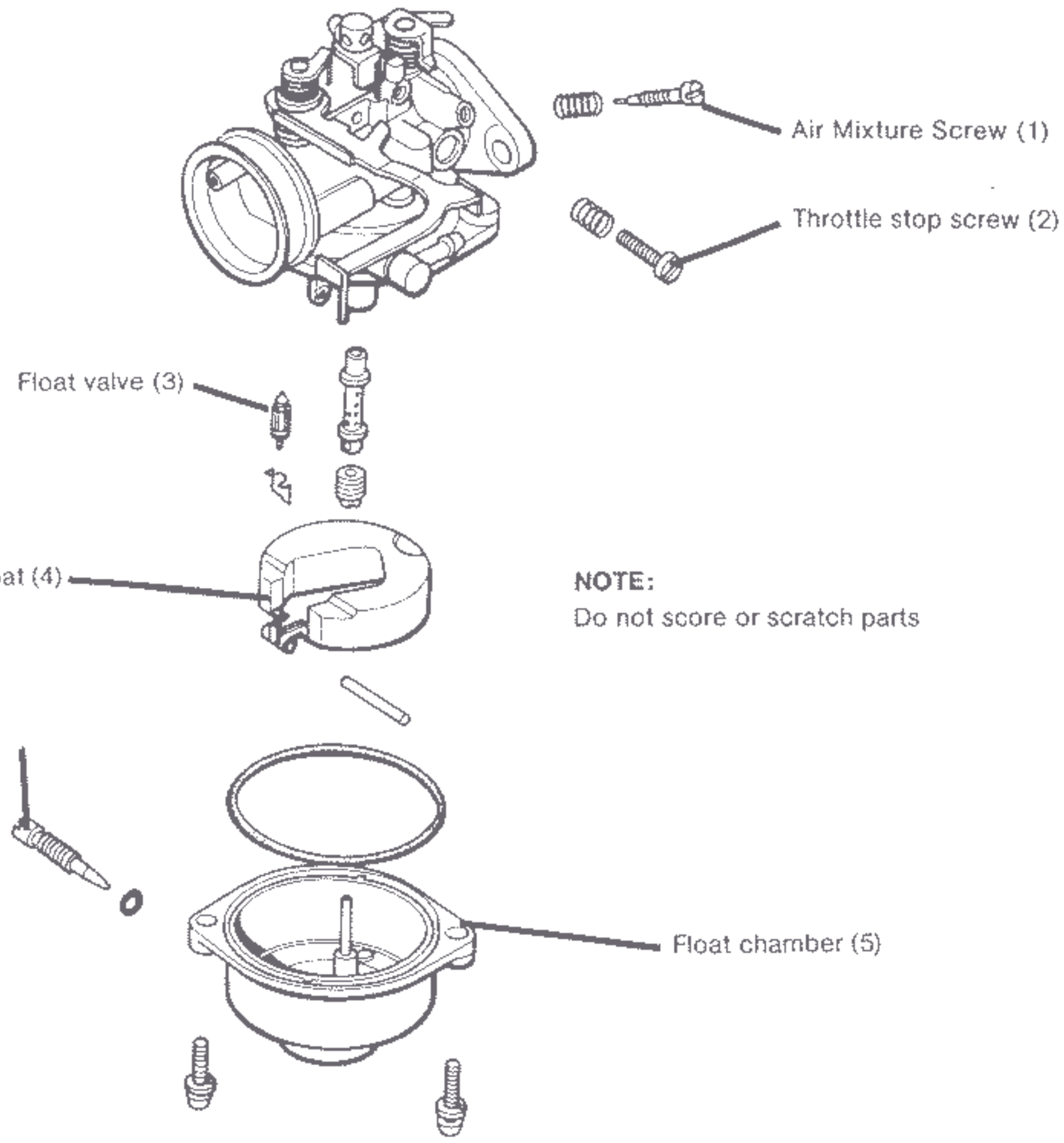
B. Carburetor Disassembly/Assembly

- Lift the frame away from the engine

① Unscrew four carburetor setting screws

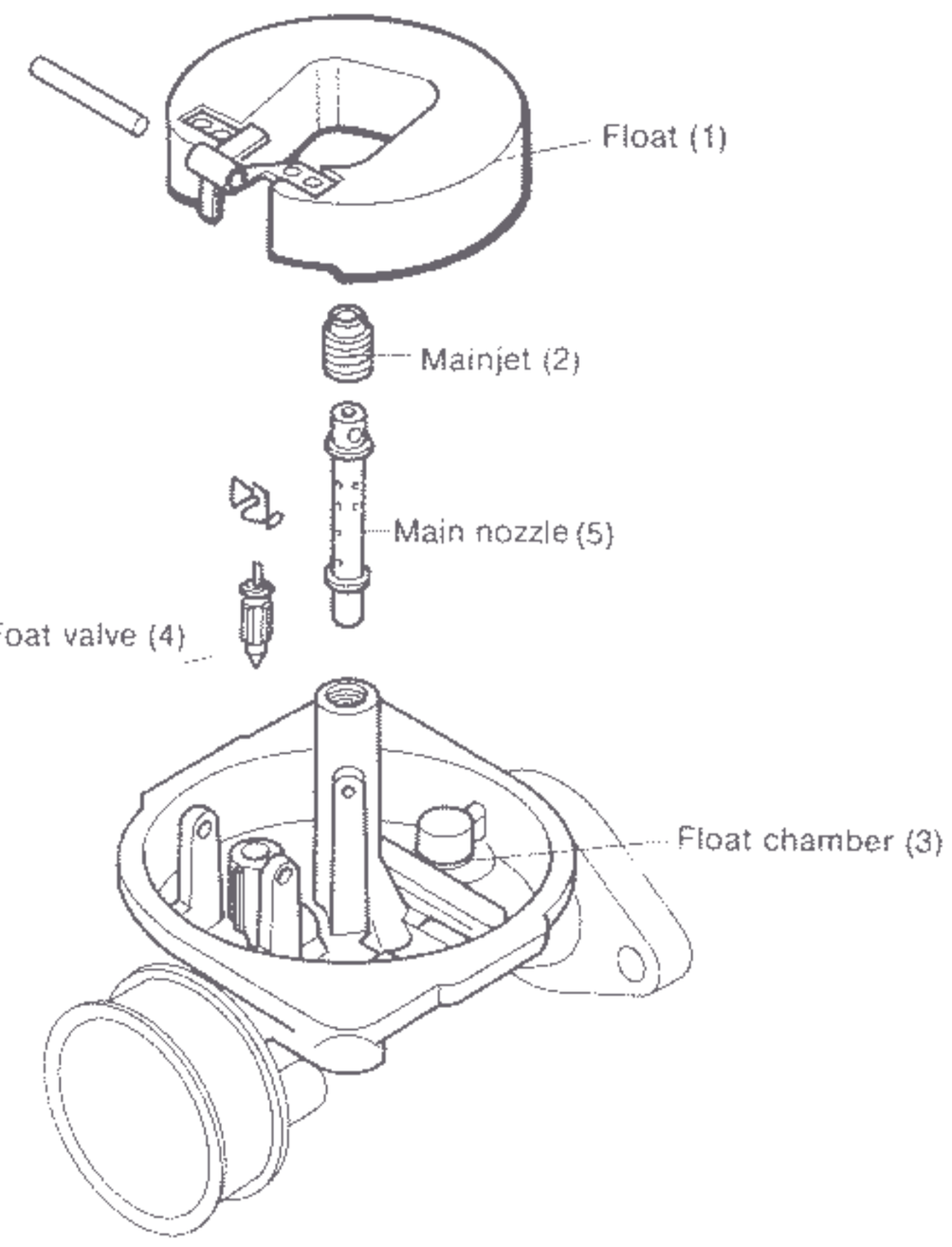


NOTE:
To prevent dust from entering the cylinder, do not remove the reed valve.



NOTE:
Do not score or scratch parts

● Float valve/Main Jet DISASSEMBLY/ASSEMBLY

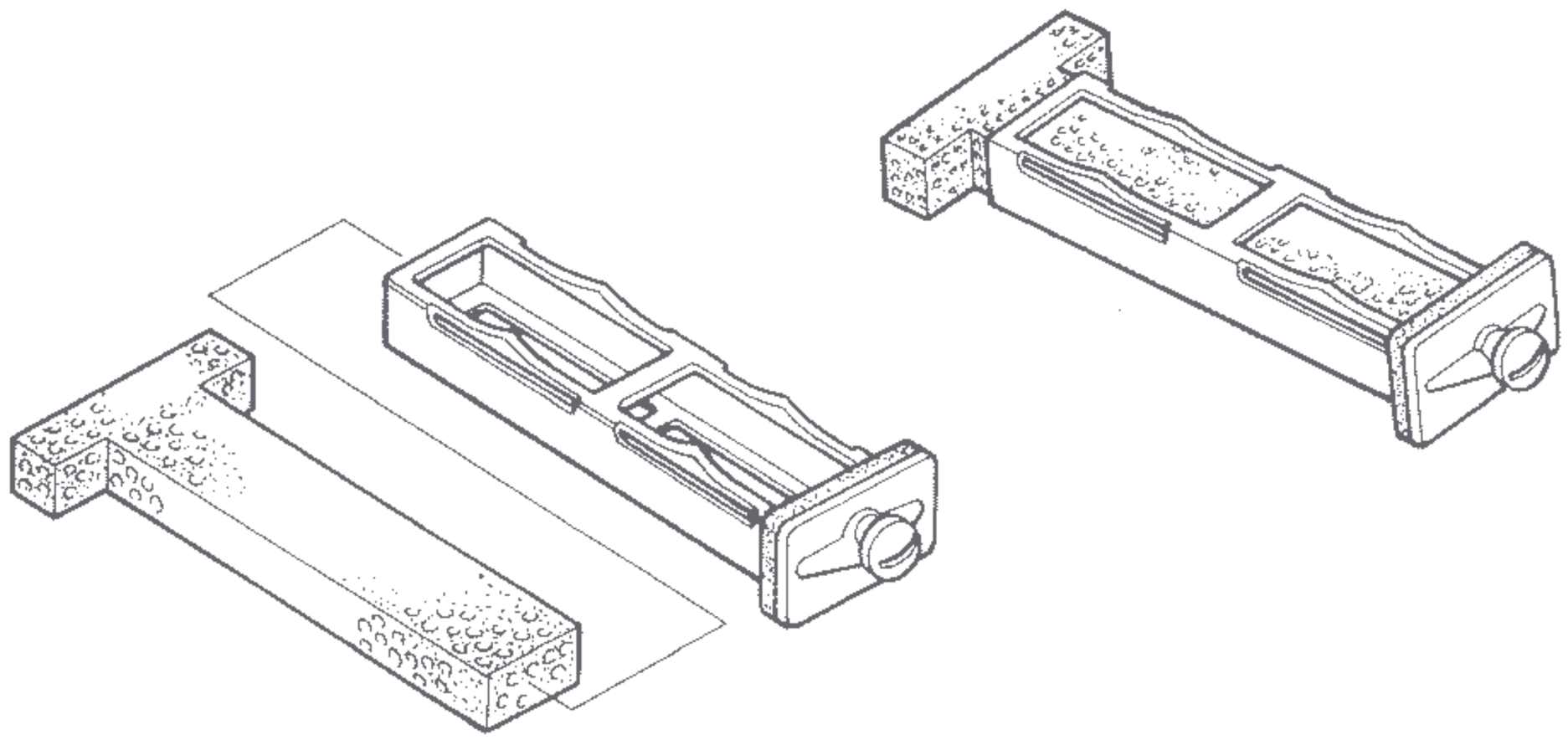


● Air cleaner DISASSEMBLY/ASSEMBLY

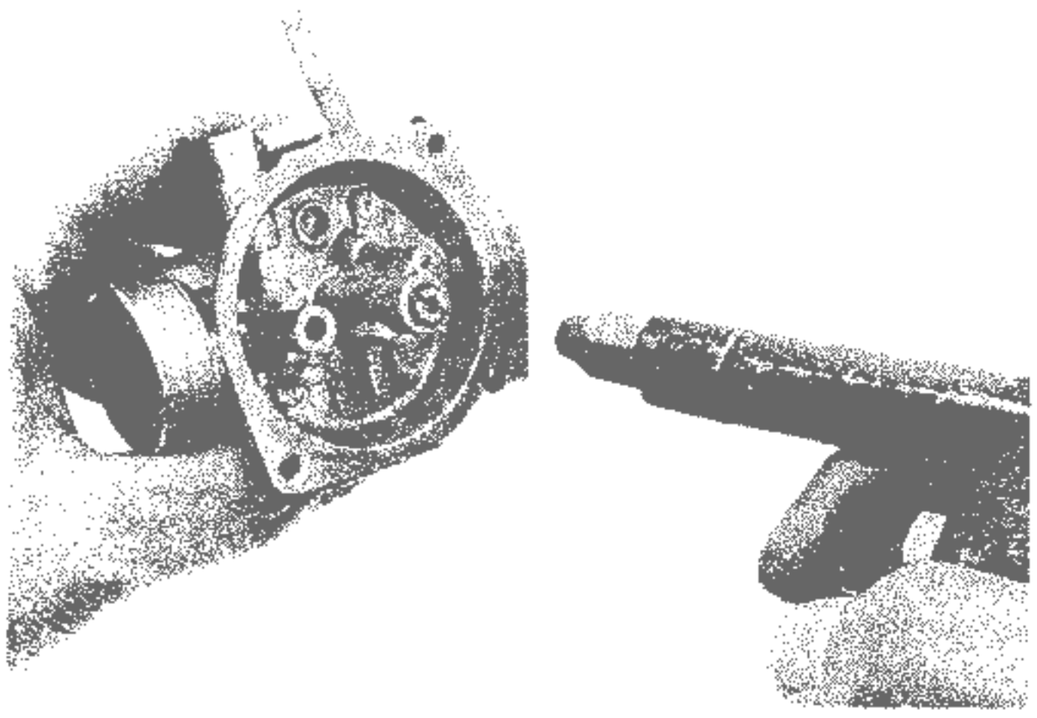
① Remove the drive belt cover

② Release the air cleaner case retaining clip

③ Pull the air cleaner case out from the rear fork

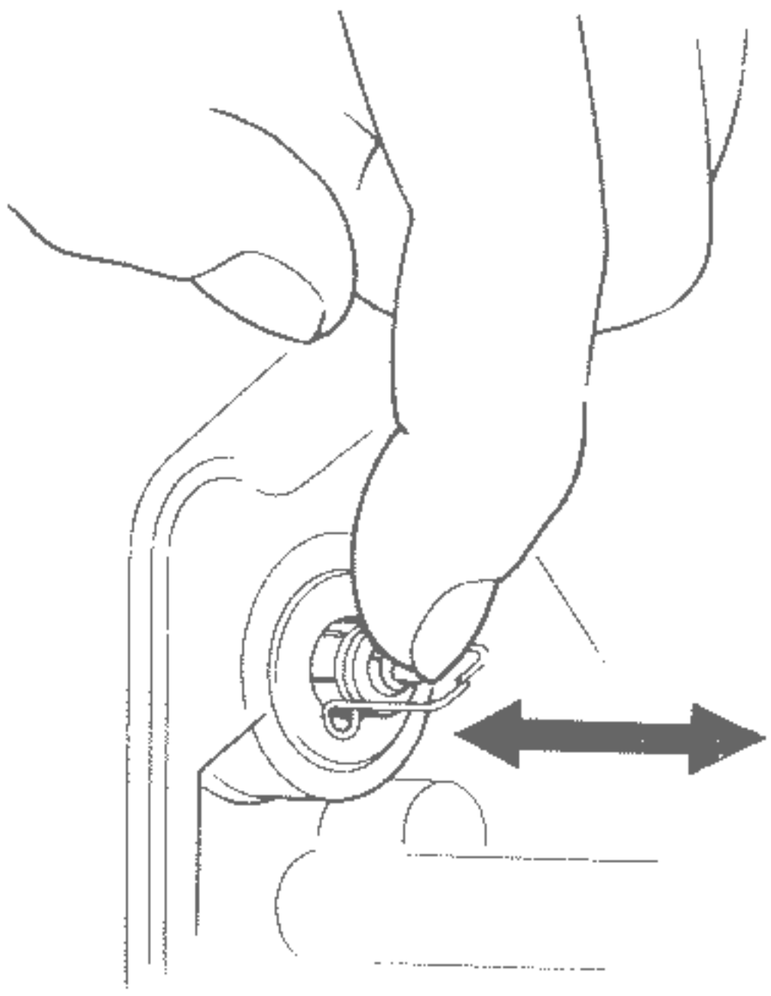


C. Inspection



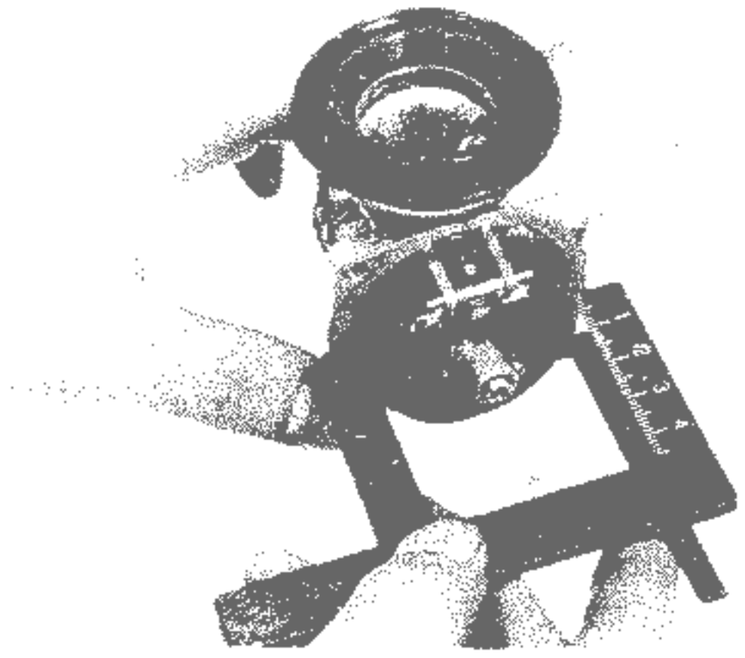
Remove carburetor jets, pilot screw and float.
With compressed air, blow out all passages in the carburetor body

Float valve inspection



Replace valve if it does not return smoothly

- Measure Float Height



Standard Float level -
10 mm

Float level gauge
07401-0010000

D. Cleaning

Carburator on the frame

1. Turn the fuel cock "OFF".
2. Drain the carburetor (screw A).
3. Clean the carburetor with compressed air.
4. Reinstall the carburetor on the frame.

Remark : Turn the mixture screw fully in, and after, 1 turn out.
Start the engine and adjust the carburetor.

Carburetor removed from the frame.

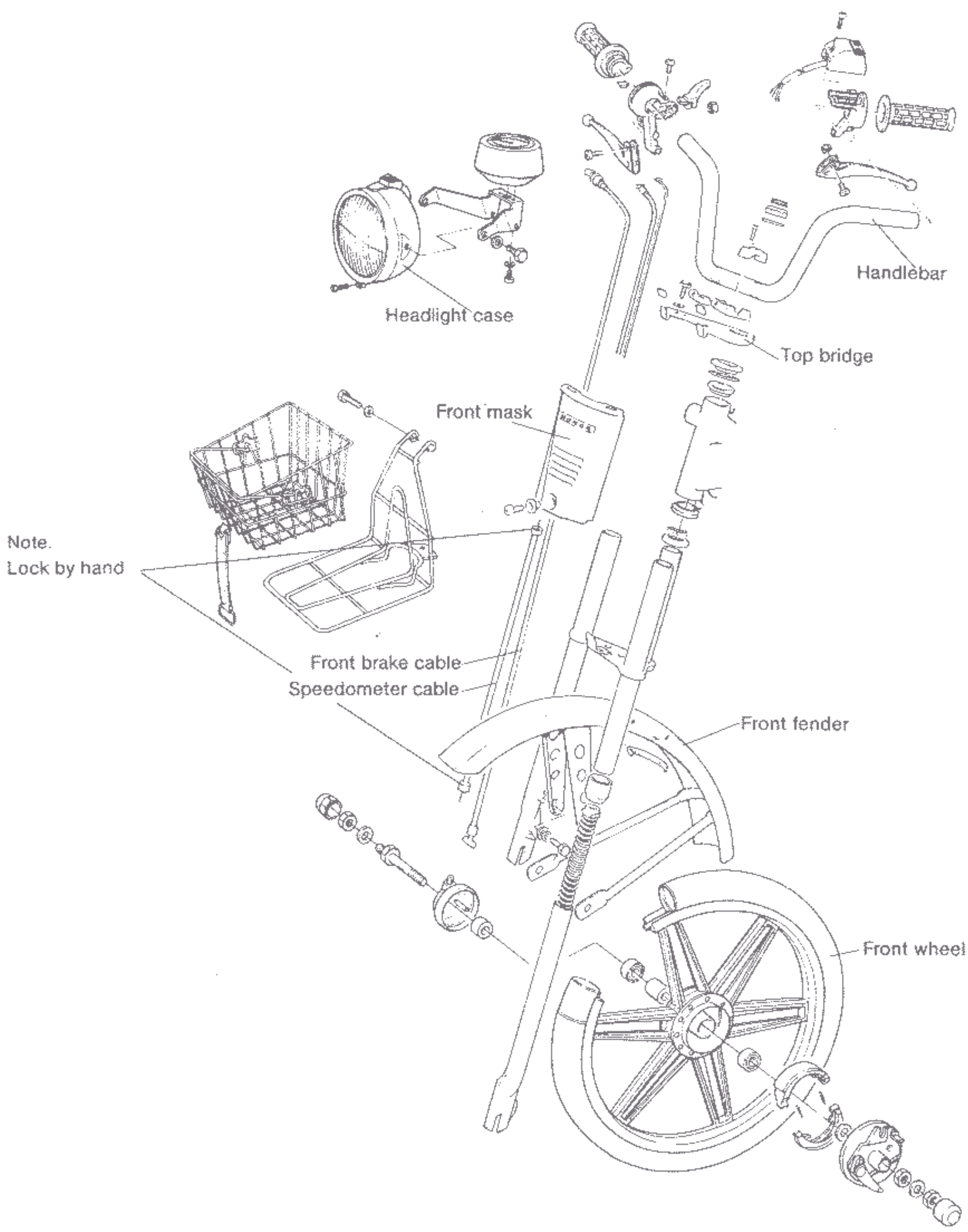
1. Remove the carburetor from the frame and blow compressed air as shown on the figure.
2. Reinstall the carburetor, start the engine and adjust the carburetor as shown above.

11. HANDLEBAR/FRONT SUSPENSION/FRONT WHEEL

A. Trouble Shooting

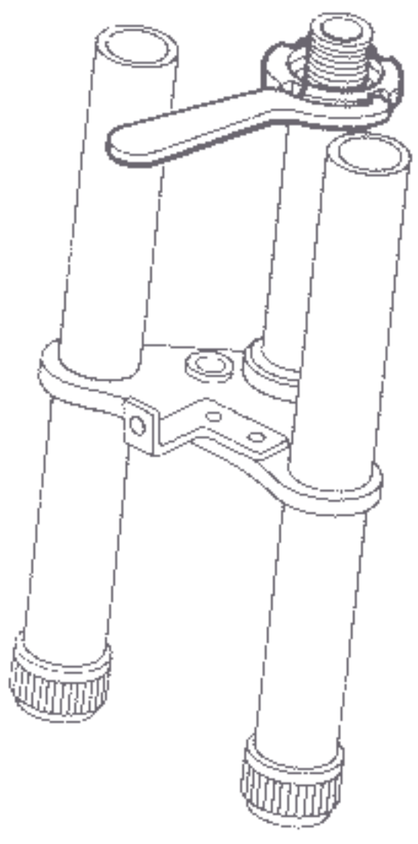
Symptom	Probable cause
Hard steering	Damaged or broken radiall ball bearings in steering stem Excessively tightened head top thread Low tire pressure
Front wheel wobble	Distorted wheel rim
Pulls to one side	Bent front fork Unbalanced schock absorbers
Poor brake performance	Worn brake shoe/drum Oil or grease on brake shoe or drum Worn brake cam
Too soft a ride	Weak shock absorber spring
Front suspension noise	Interference between shock absorber case and frame Interference beween shock absorber case and spring. Damaged stopper rubber.

B. Disassembly/Assembly

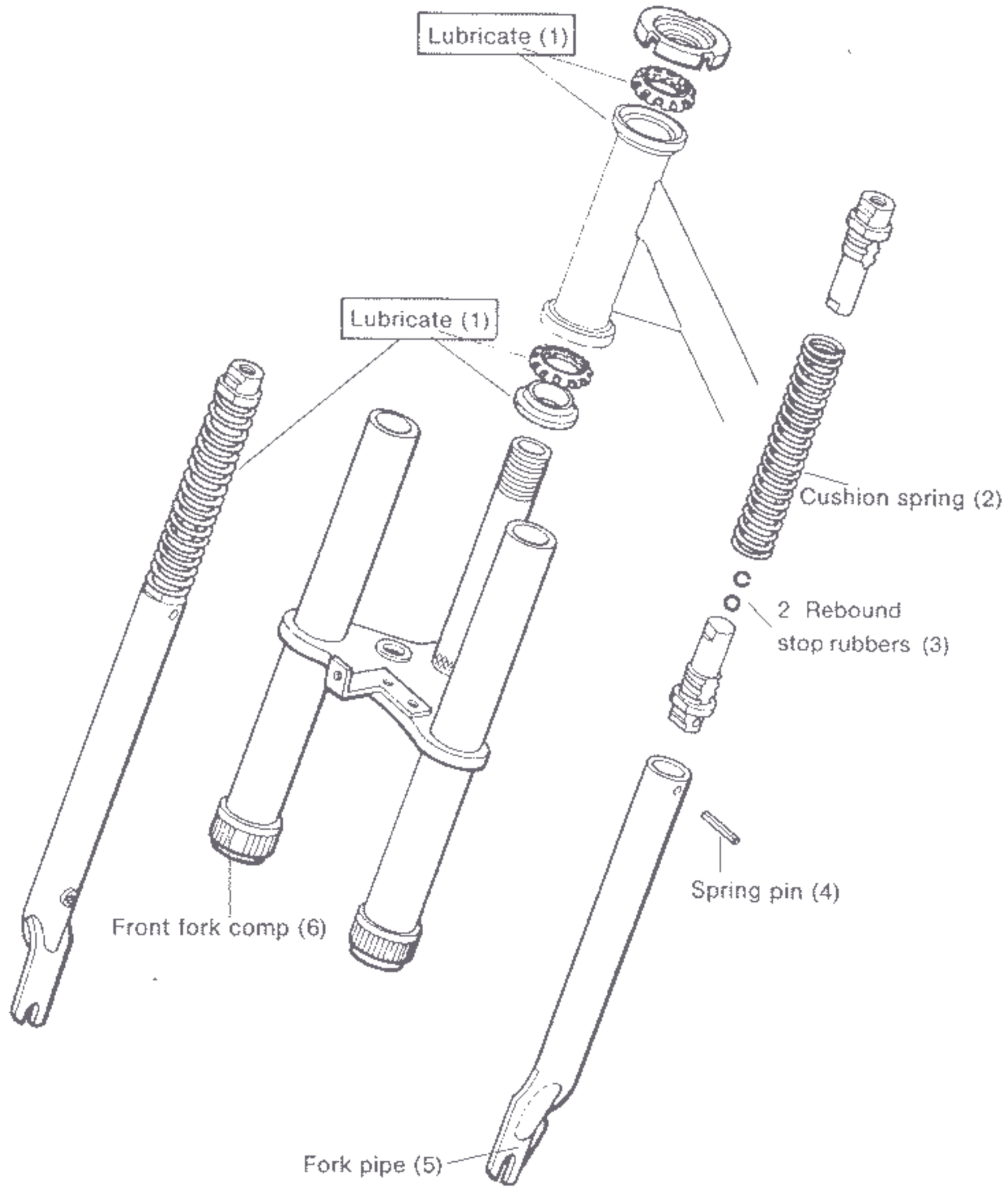


• Front Fork Disassembly/Assembly

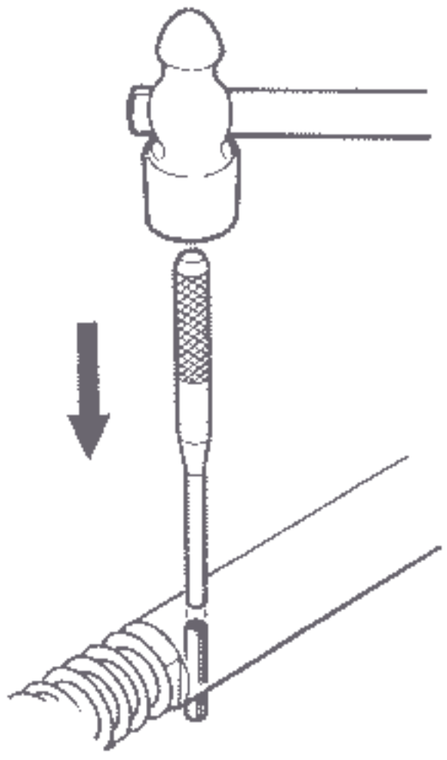
Pin Spanner Wrench
07902-2000000



Tighten against steering stem,
then back off 1/8 turn

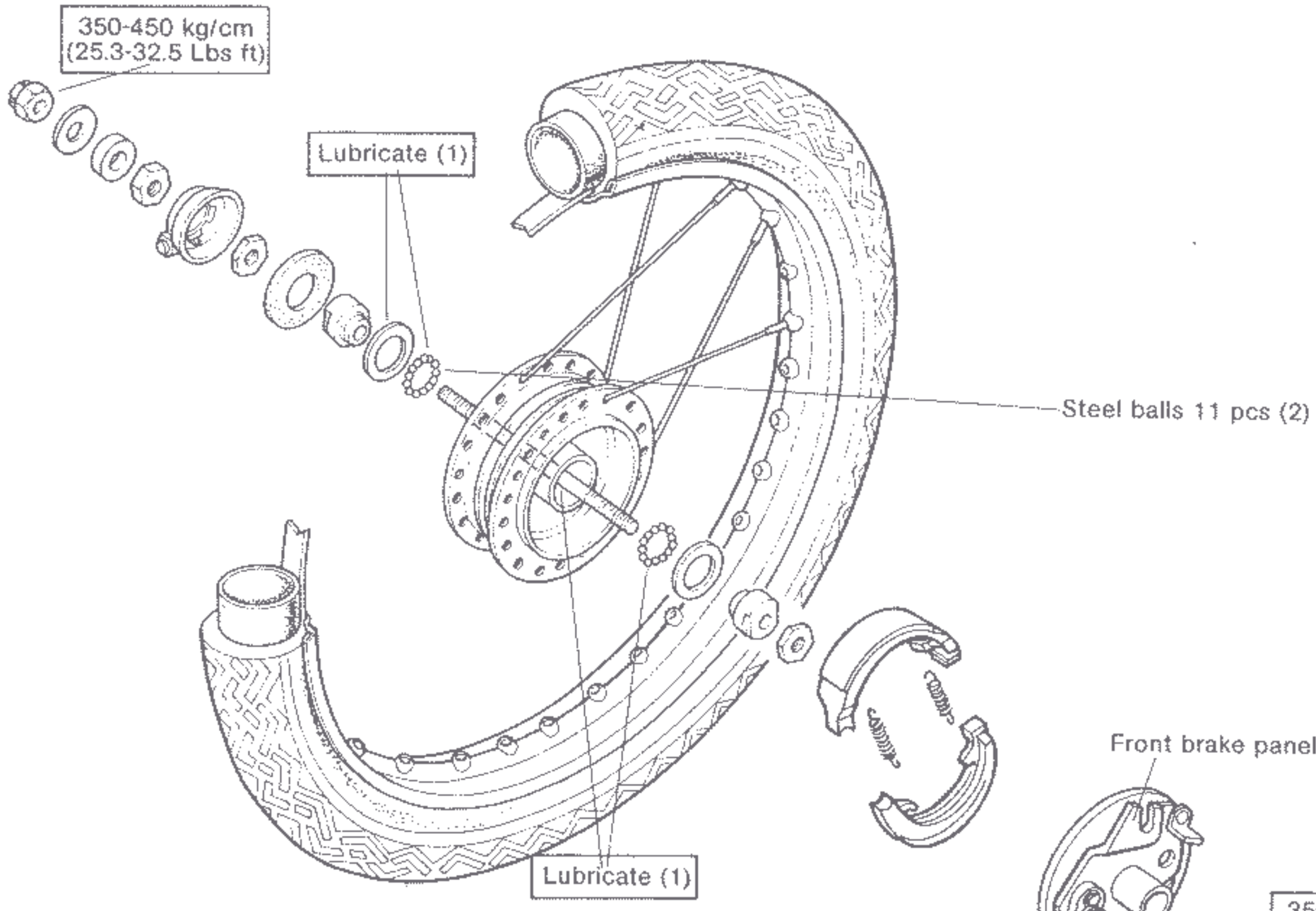


Spring Pin Driver 3.5 mm



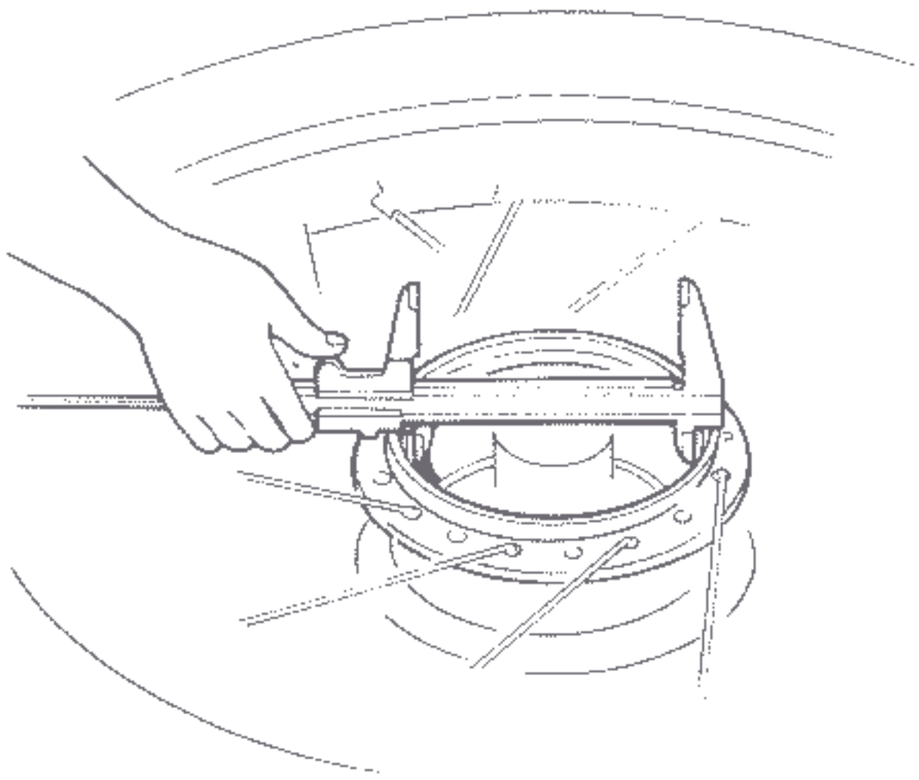
• Front Wheel Disassembly/Assembly

Avoid getting oil or grease on the linings and brake drum



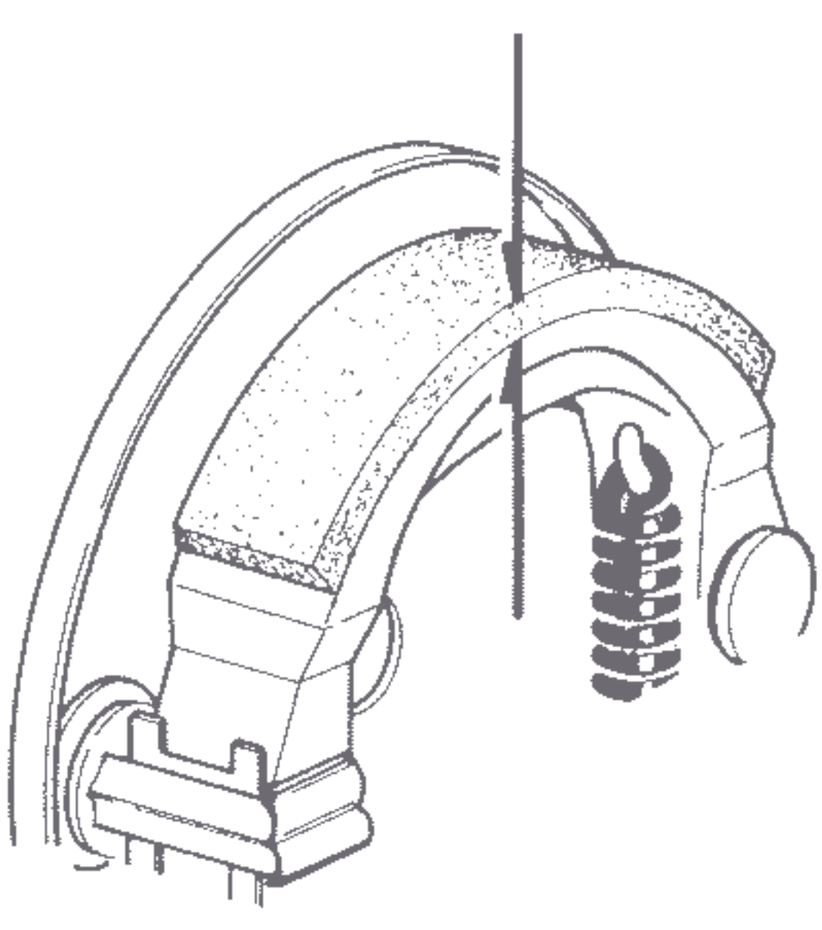
C. Inspection

● Wheel hub I.D.



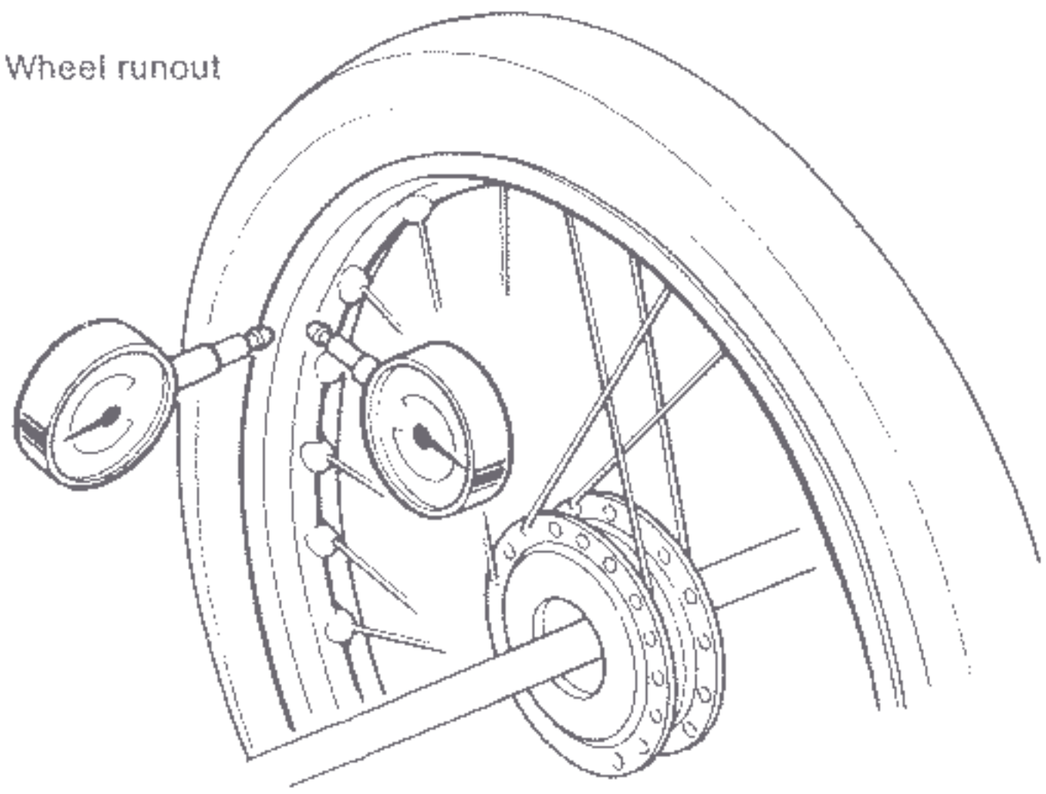
Standard	Service Limit
80.0 - 80.2 mm	81.0 mm

● Brake lining thickness



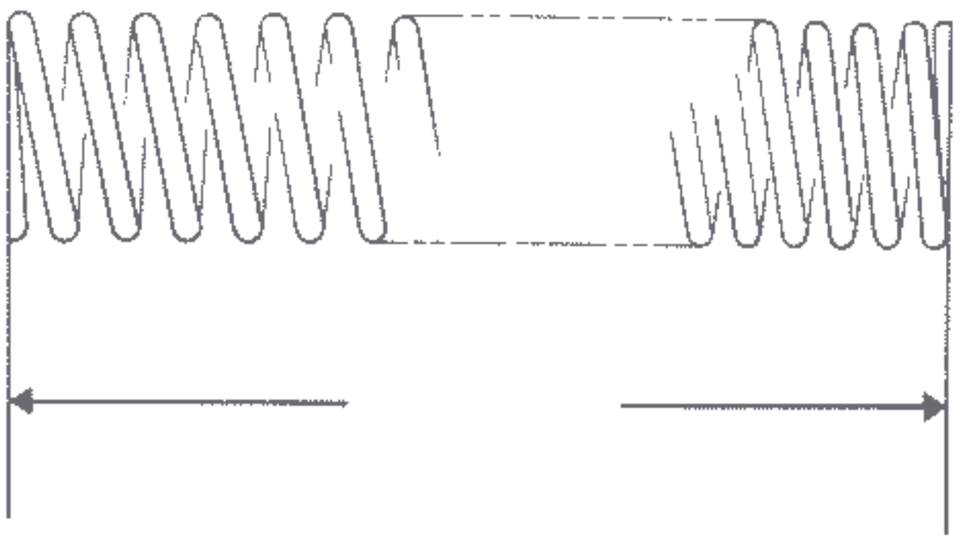
Standard	Service Limit
3.5 mm	2.0 mm

Front Wheel runout



Standard	Stervice Limit
1.0 mm	2.0 mm

- Front Fork spring free length



Standard	Service Limit
190,5-196,5 mm	173 mm

12. REAR WHEEL

A. Trouble Shooting

Symptom	Probable cause
Poor brake performance	Worn brake shoe/drum Oil or grease on brake shoe or drum Worn brake cam
Wheel wobble	Distorted wheel rim

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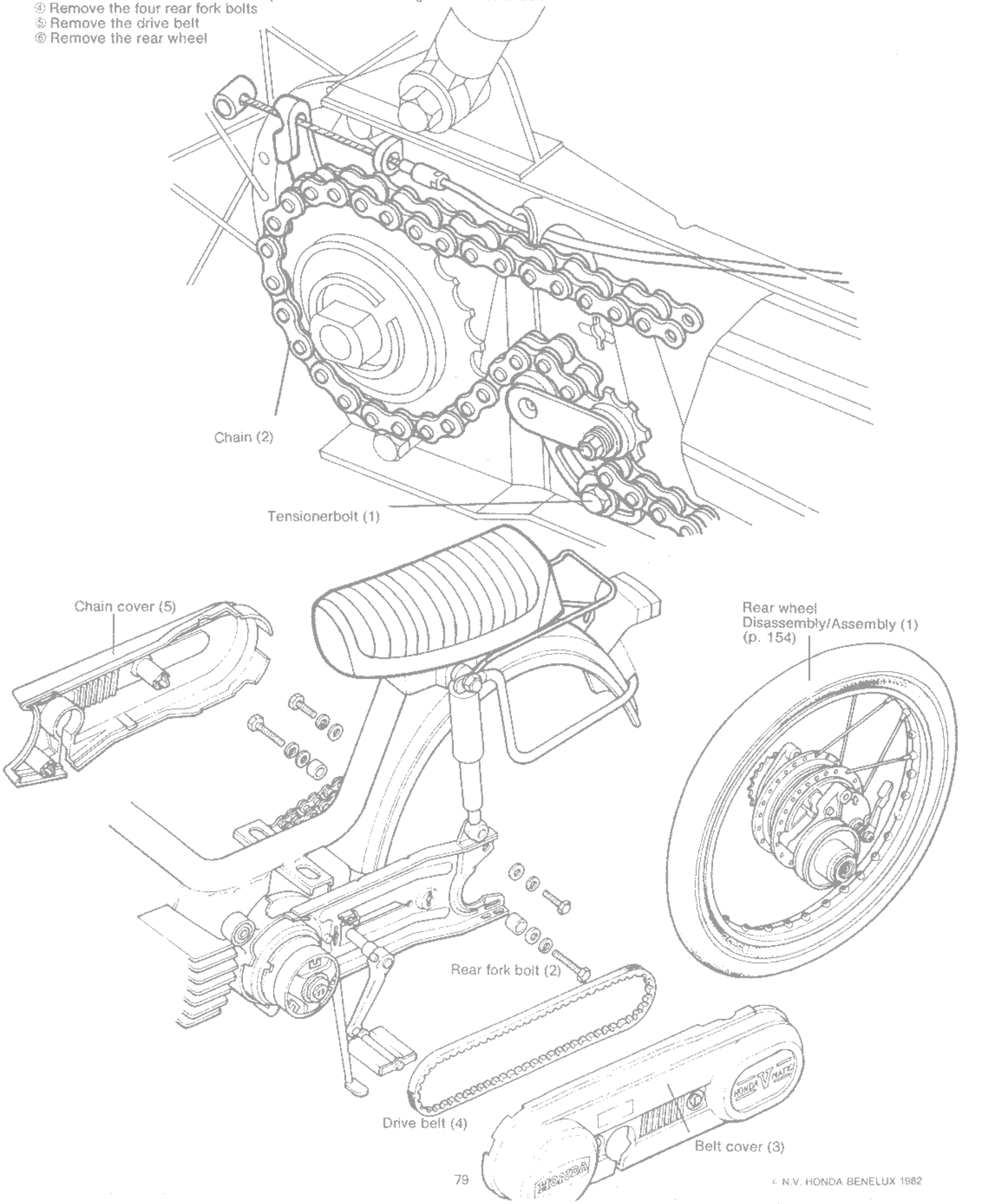
Rear Wheel Removal

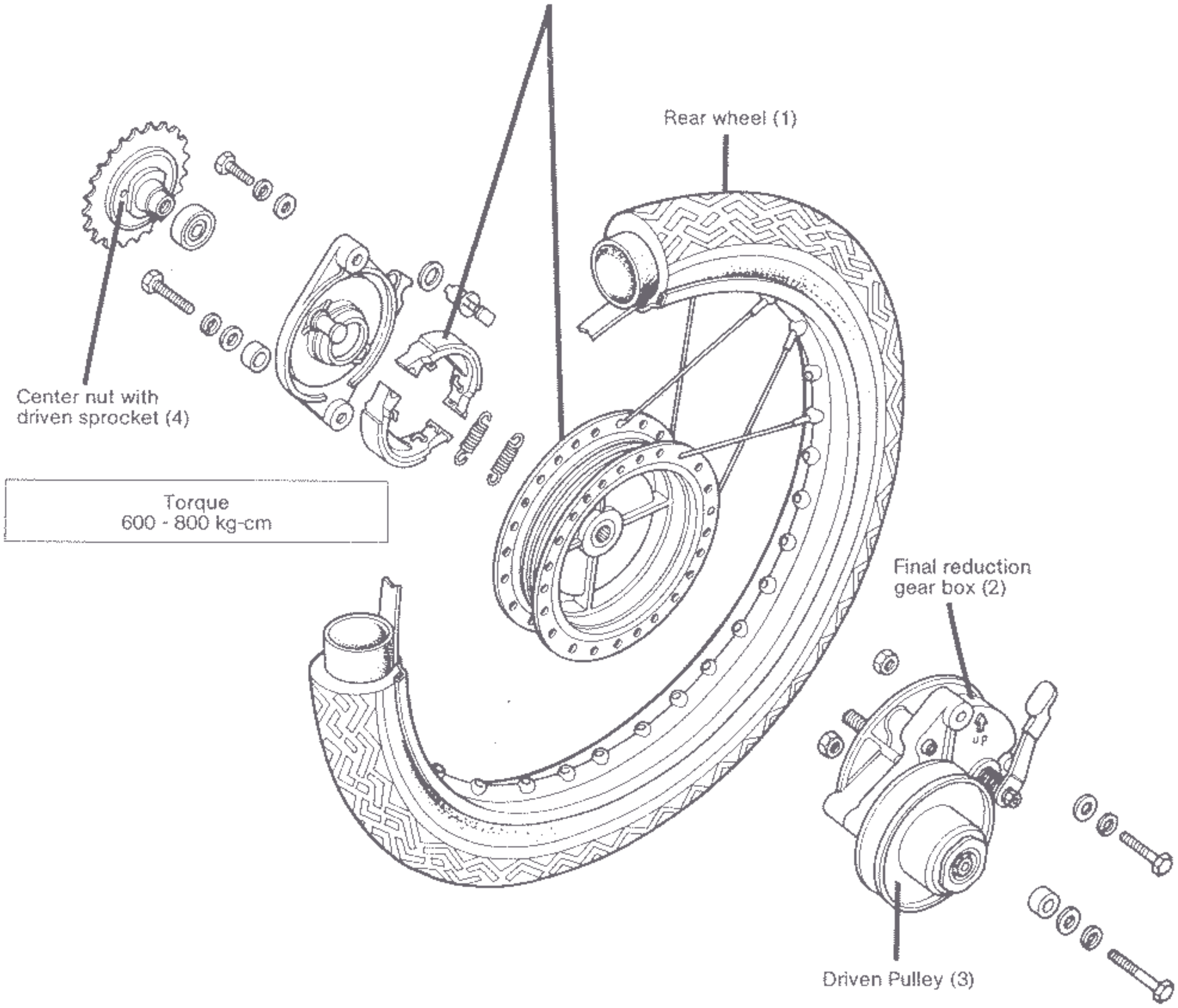
① Remove the belt cover and chain
② Disconnect the rear brake cable at the rear brake arm
③ Remove the chain at the driven sprocket after loosening the tensioner bolt
④ Remove the four rear fork bolts
⑤ Remove the drive belt
⑥ Remove the rear wheel



B. Rear Wheel Disassembly/Assembly

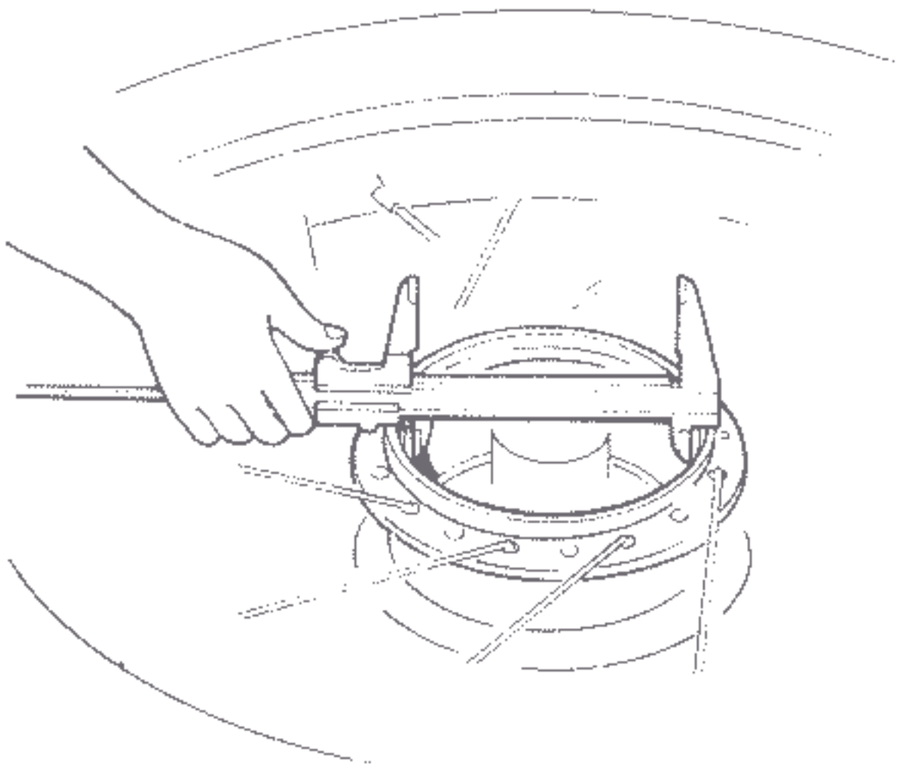
① Turn the center nut with driven sprocket counterclockwise
② Remove the rear brake
③ Remove the reduction gear box

Avoid getting oil or grease on linings or brake drum



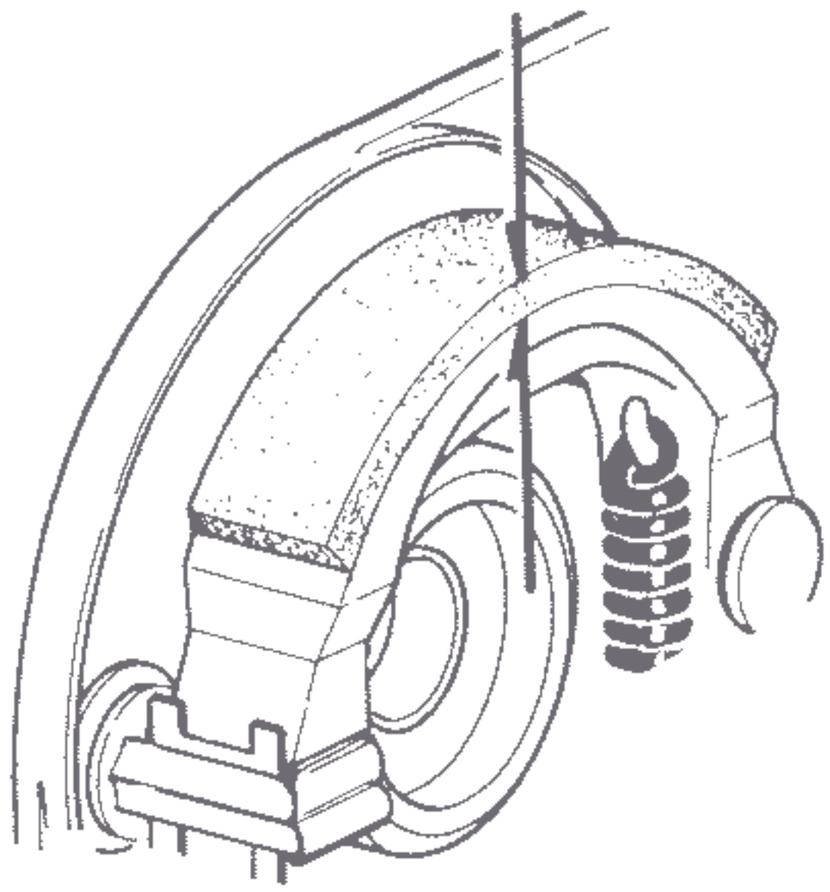
C. Inspection

- Wheel Hub I.D.



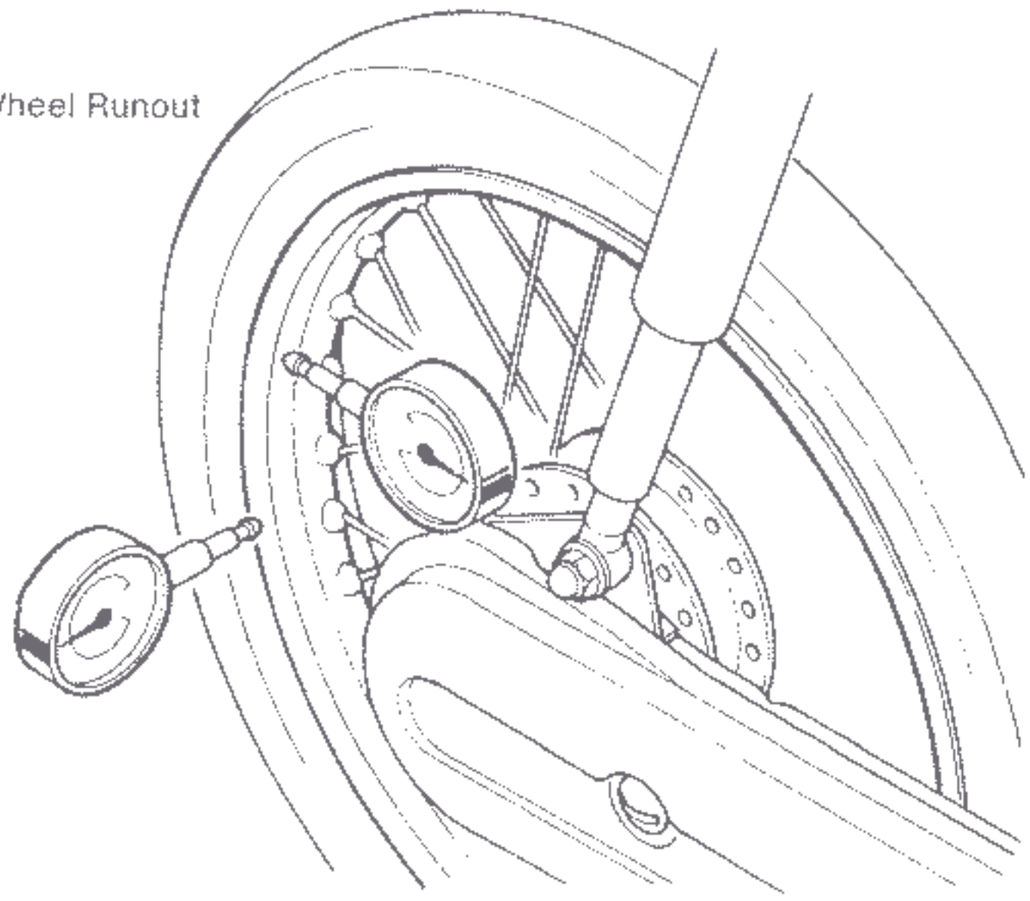
Standard	Service Limit
80.0 - 80.2 mm	81.0 mm

- Brake lining thickness



Standard	Service Limit
3.5 mm	2.0 mm

- Rear Wheel Runout



Standard	Service Limit
1.0 mm	2.0 mm

13. FINAL REDUCTION

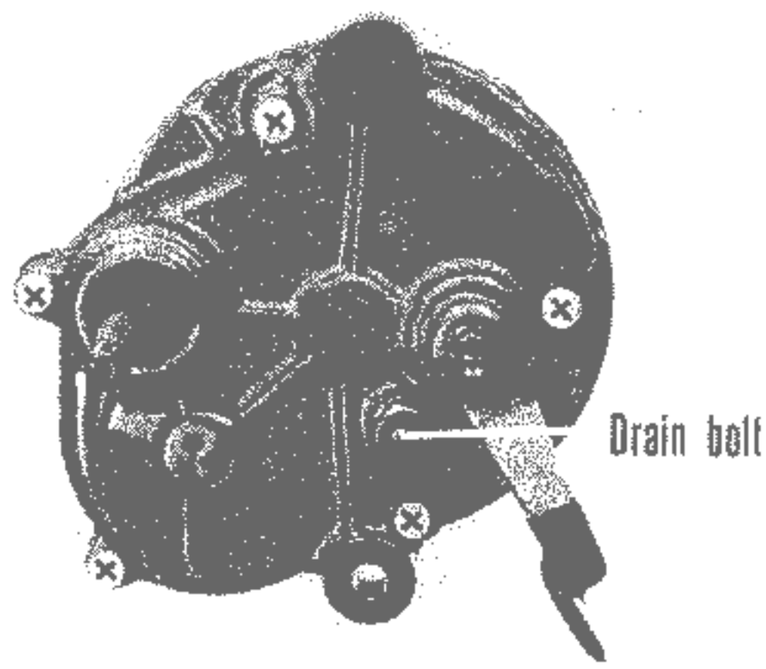
A. Trouble shooting

Symptom	Probable cause
Noise	Worn or seized gear Excessive rattle in ball bearing
Oil leaks	Excessive oil in case Defective oil seal

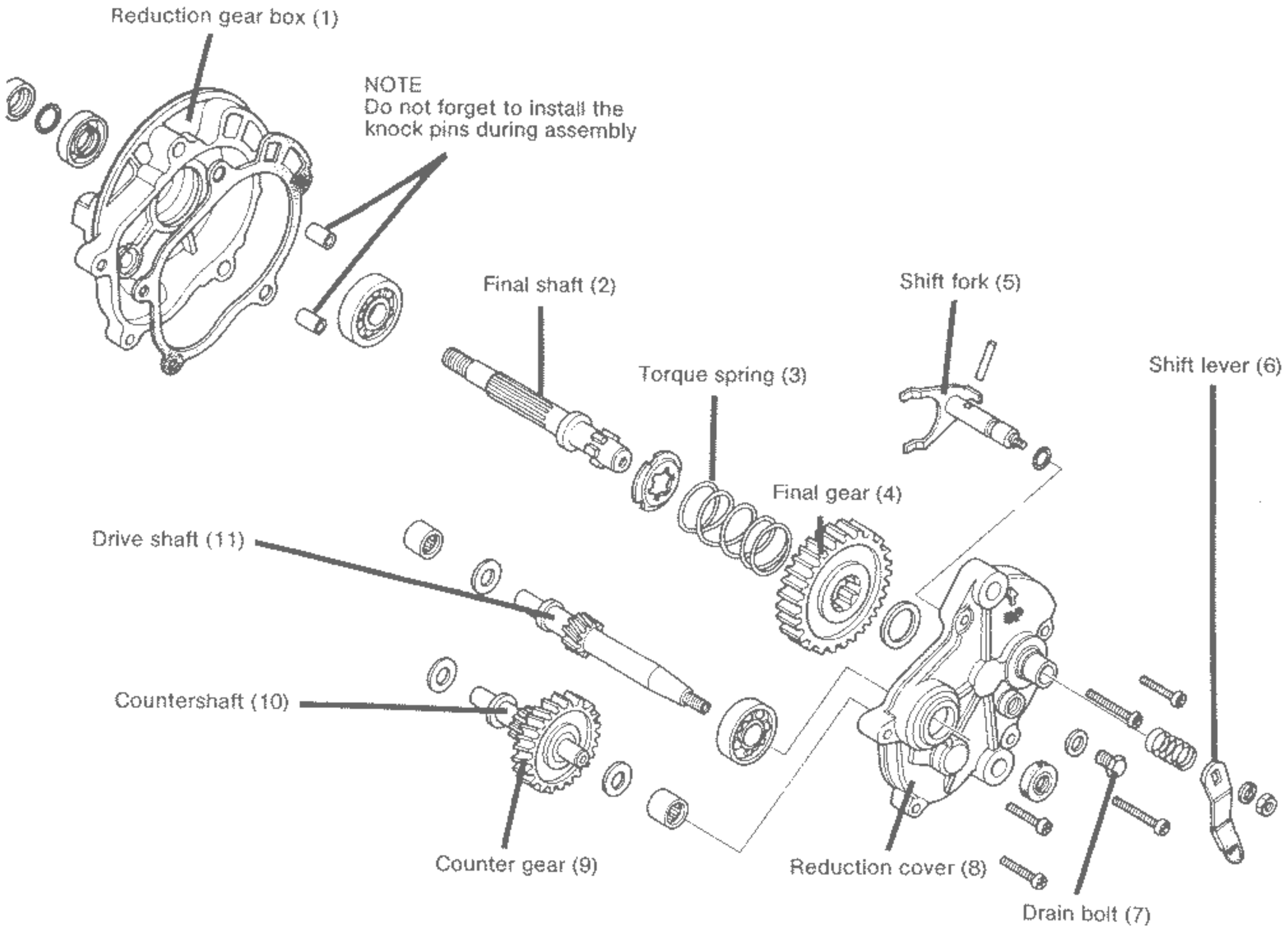
B. DISASSEMBLY / ASSEMBLY

① Remove the reduction gear box from the rear wheel.
② Remove the drain bolt and drain the gear oil.
③ Remove the five screws from the reduction cover.

NOTE:
Set the shift lever at the pedal driving position.



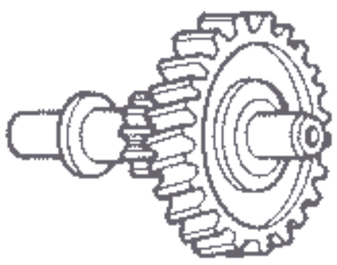
Gear oil SAE 90 Capacity 75 cc.



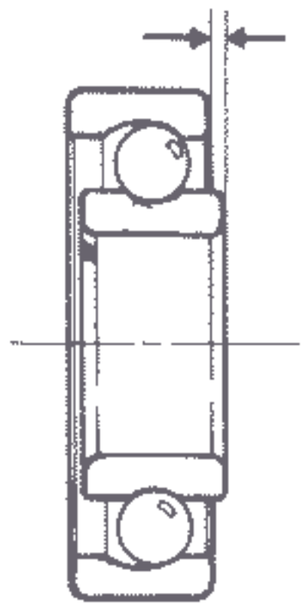
Assembly
Do not damage the oil seal when installing the drive and final shaft.

C. Inspection

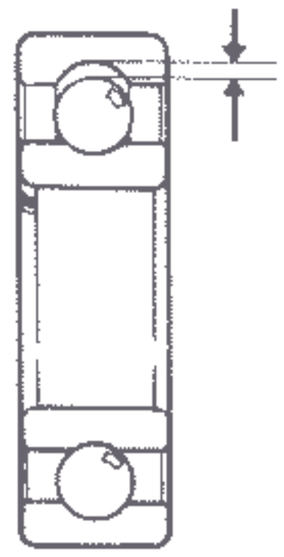
- Check for damage and wear.



- Check bearing play.



Excessive play (1)
(replace)



Excessive play
(replace)

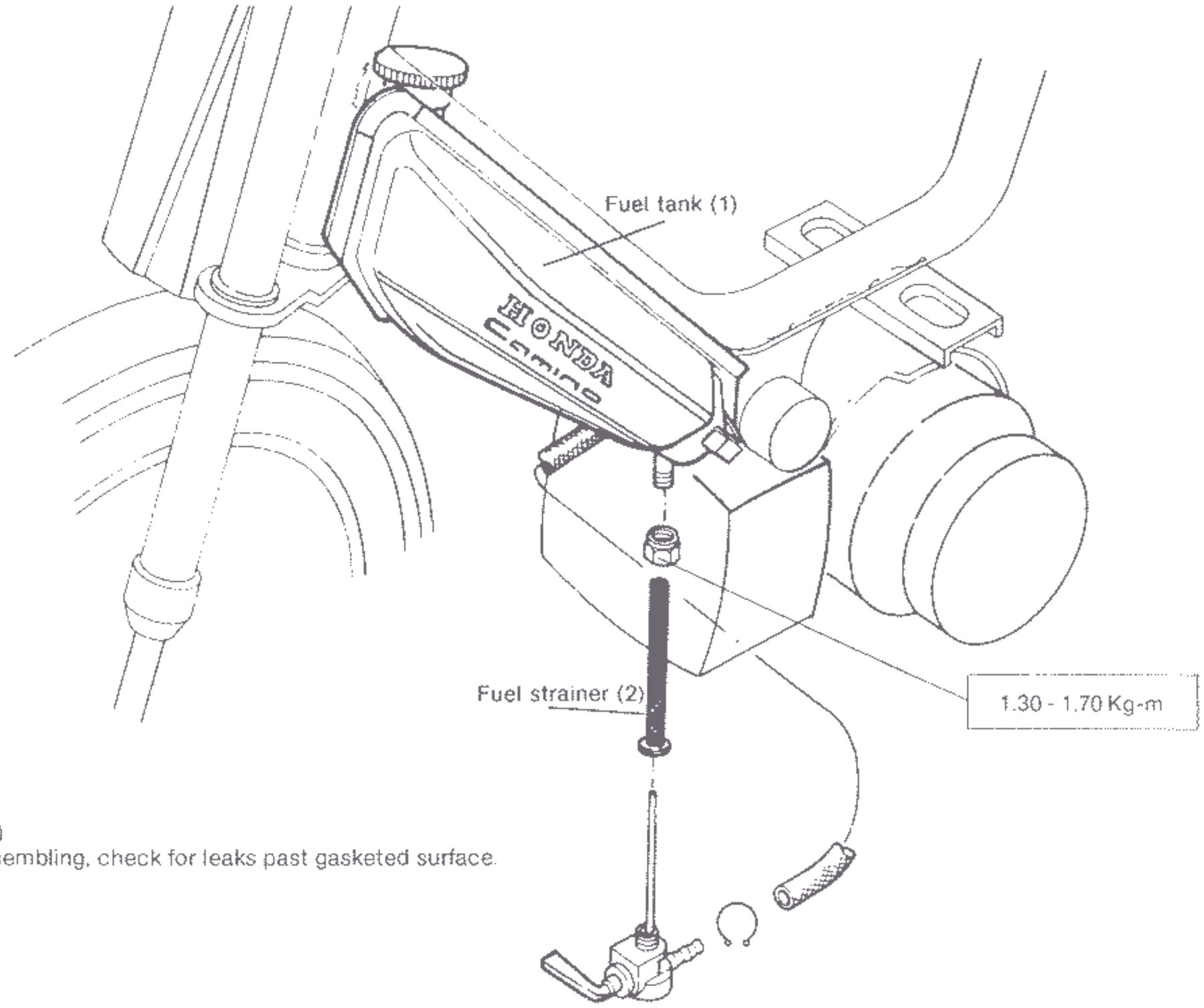
14. FUEL TANK / REAR SHOCK ABSORBER

● Fuel filter removal.

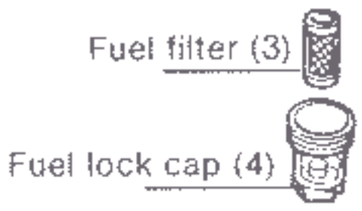
1. Turn the fuel valve lever to "Off".
2. Remove the fuel valve cap.
3. Pull the fuel filter out.

● Fuel strainer removal.

1. Remove the fuel tube band at carburetor and drain gasoline.
2. Loosen the fuel valve setting nut, and remove the fuel valve.



NOTE (1)
After assembling, check for leaks past gasketed surface.



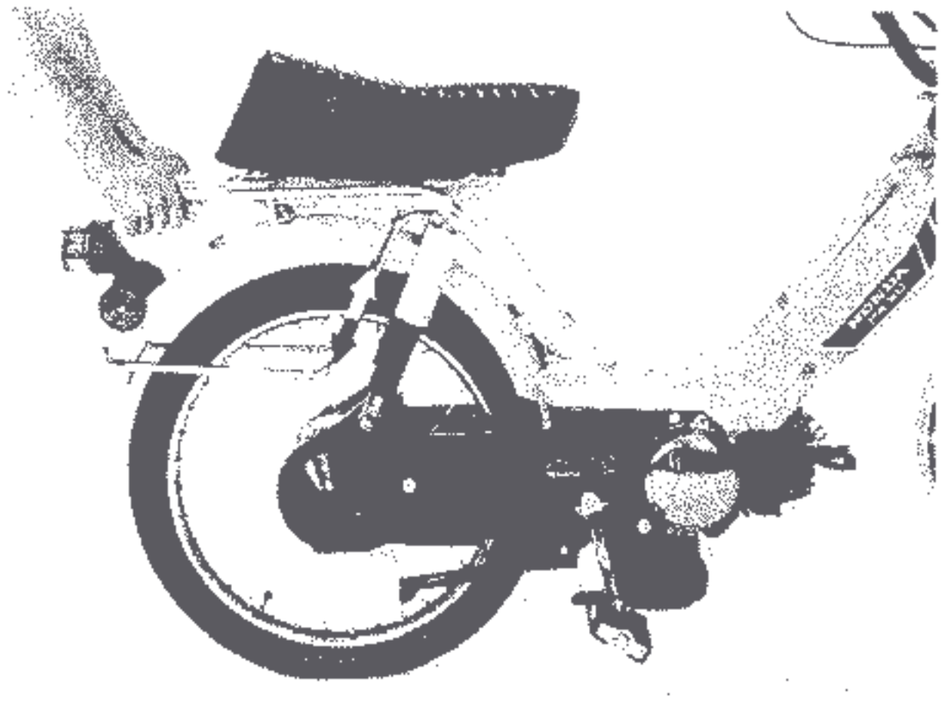
NOTE (2)
Clean filter and strainer in solvent.

Inspection

- Rear cushion spring Freelenght

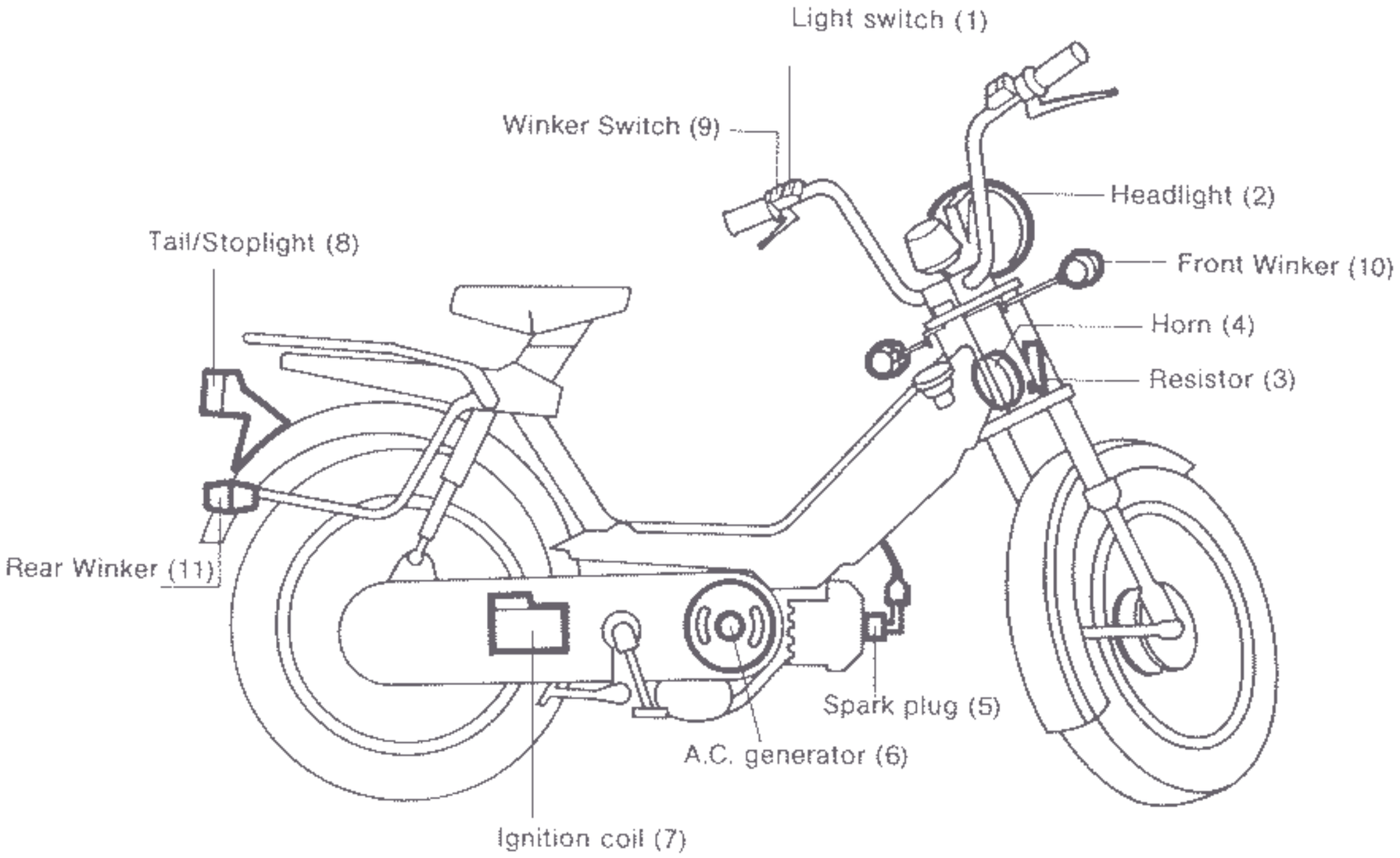
Standard	Service limit
226.9 mm	194.2 mm

After installing check operation.



15. ELECTRICAL

- Electrical Inspection.

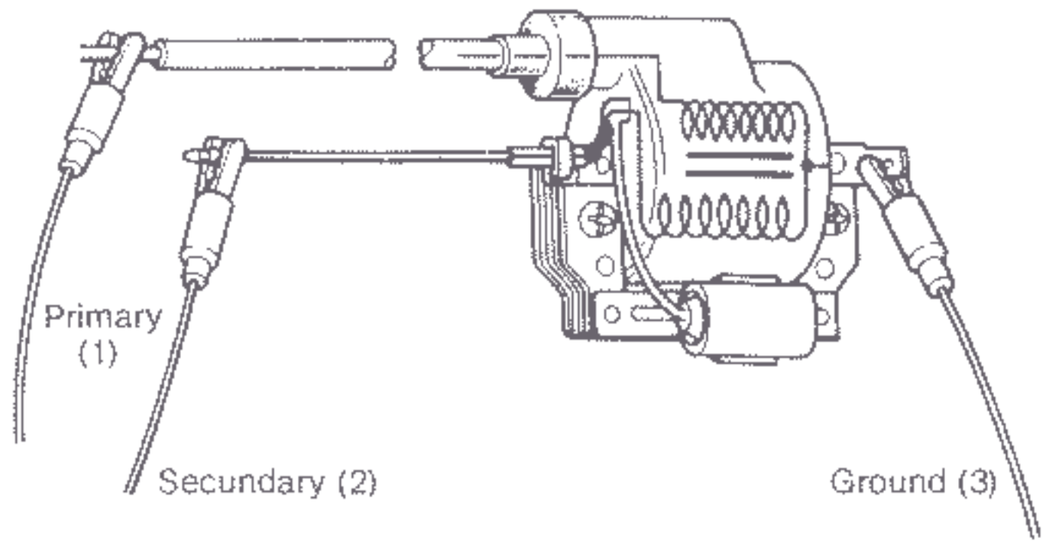


Note:
To load the battery for the first time,
ride 20 minutes without using the winkers.

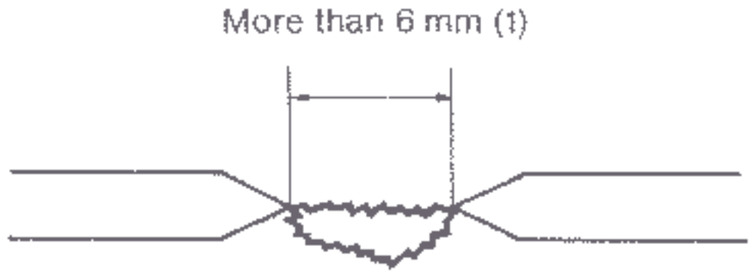
Inspection

- Ignition coil

3. Point spark test



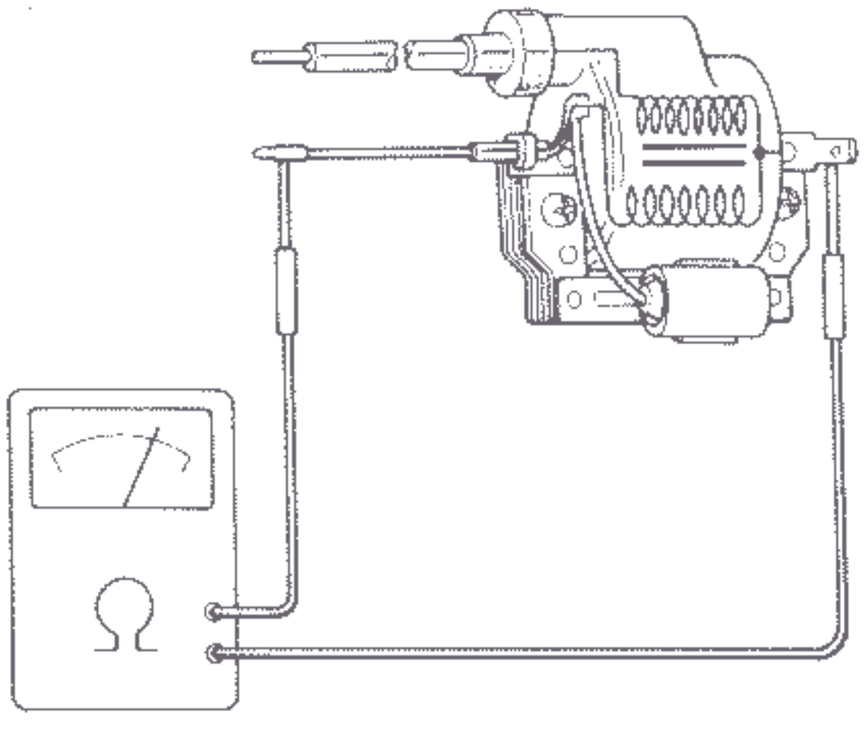
Connect according to service tester instructions.



Coil is normal if spark jumps 6 mm electrode gap on tester.

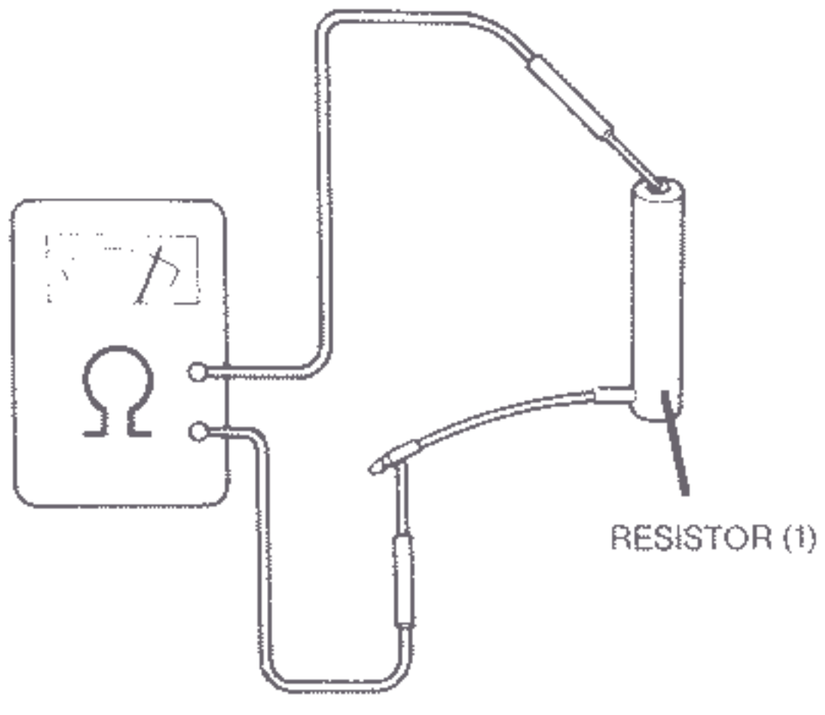
- Continuity test

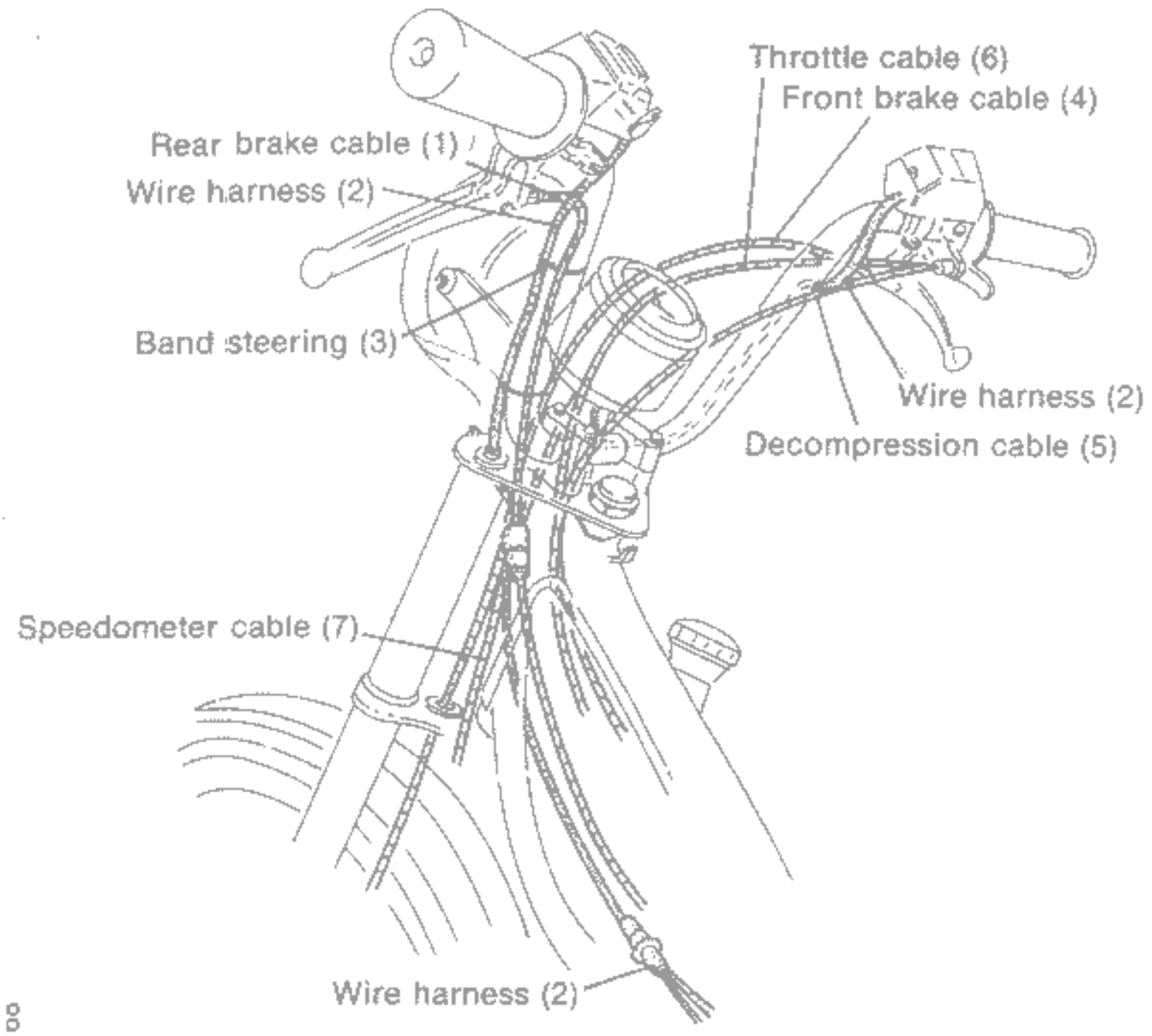
Check for continuity

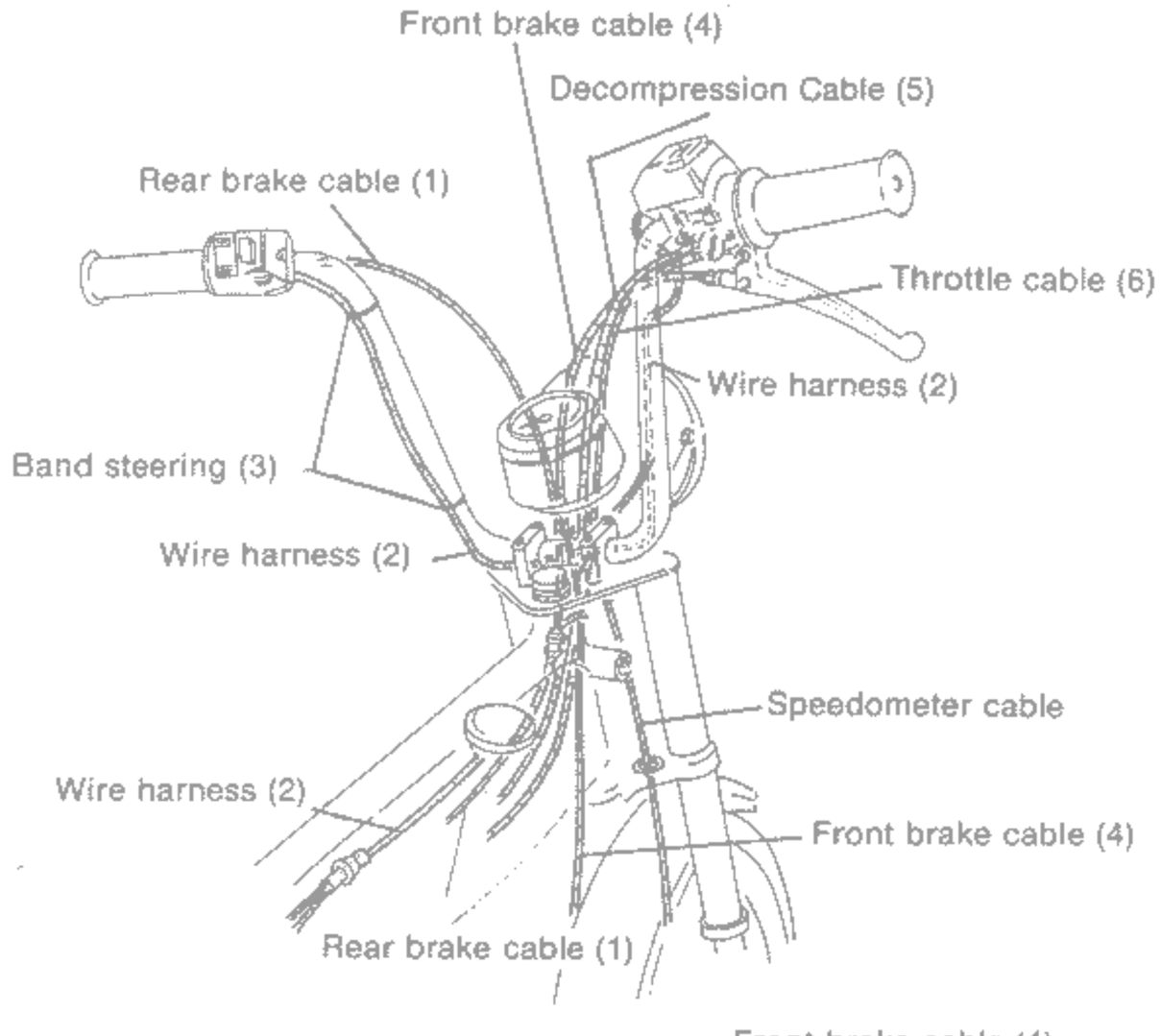


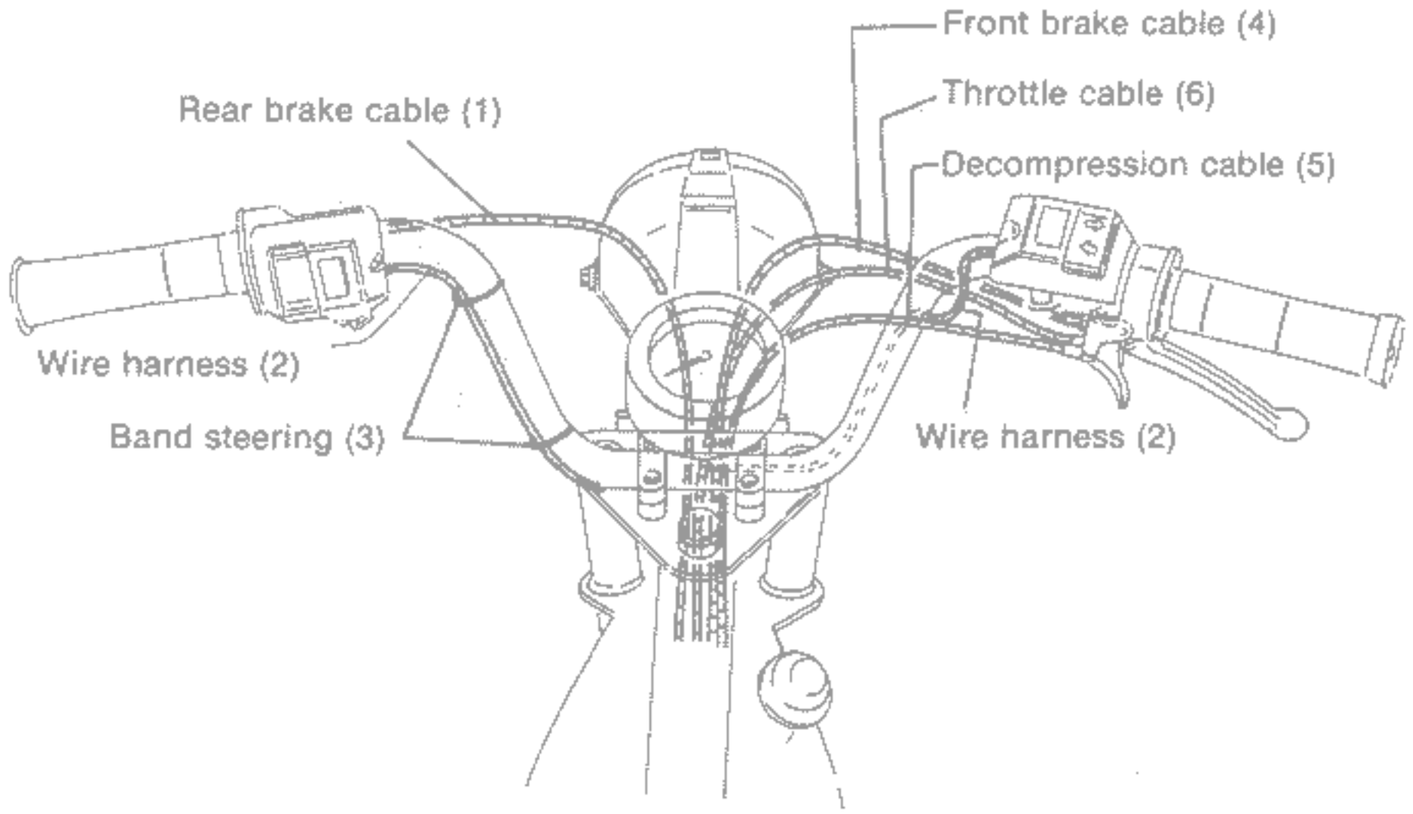
- Resistor

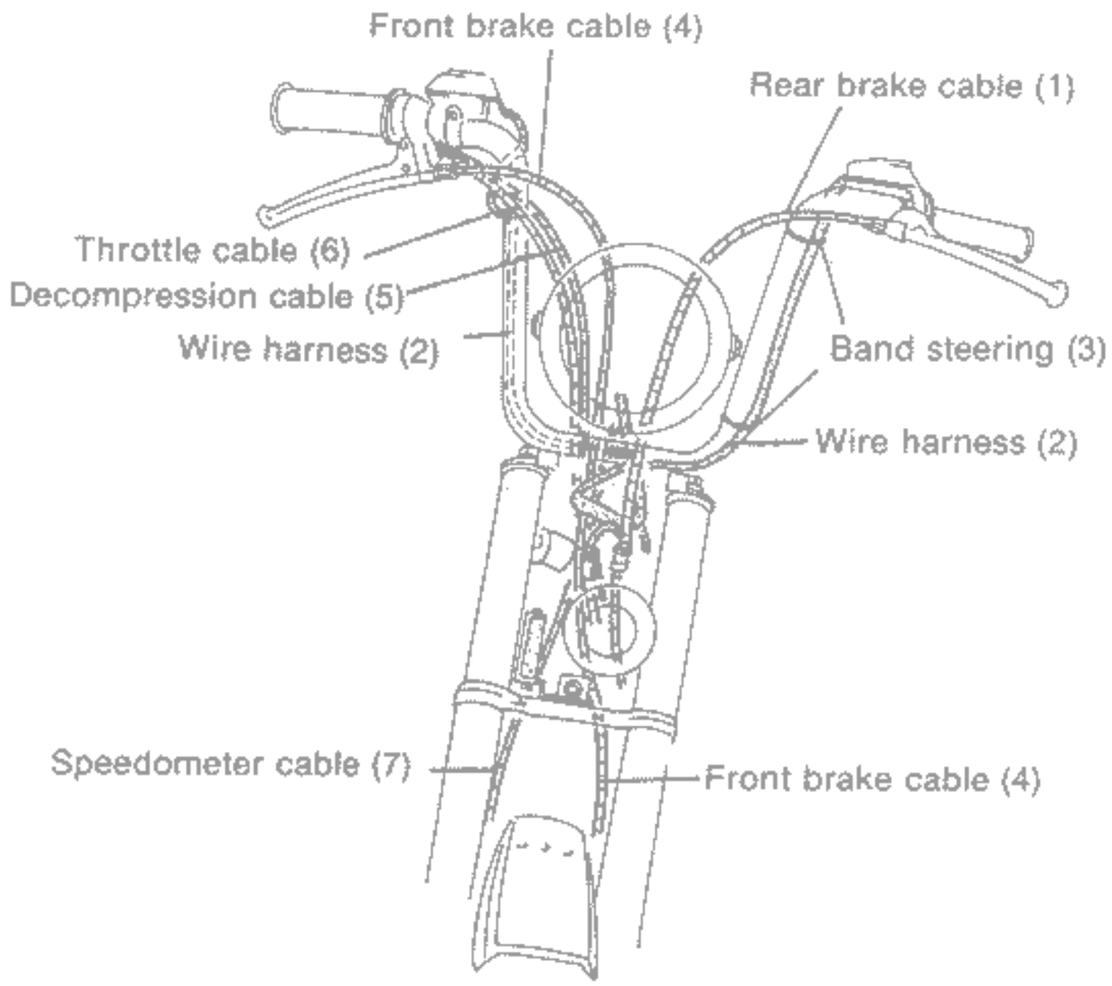
Continuity test

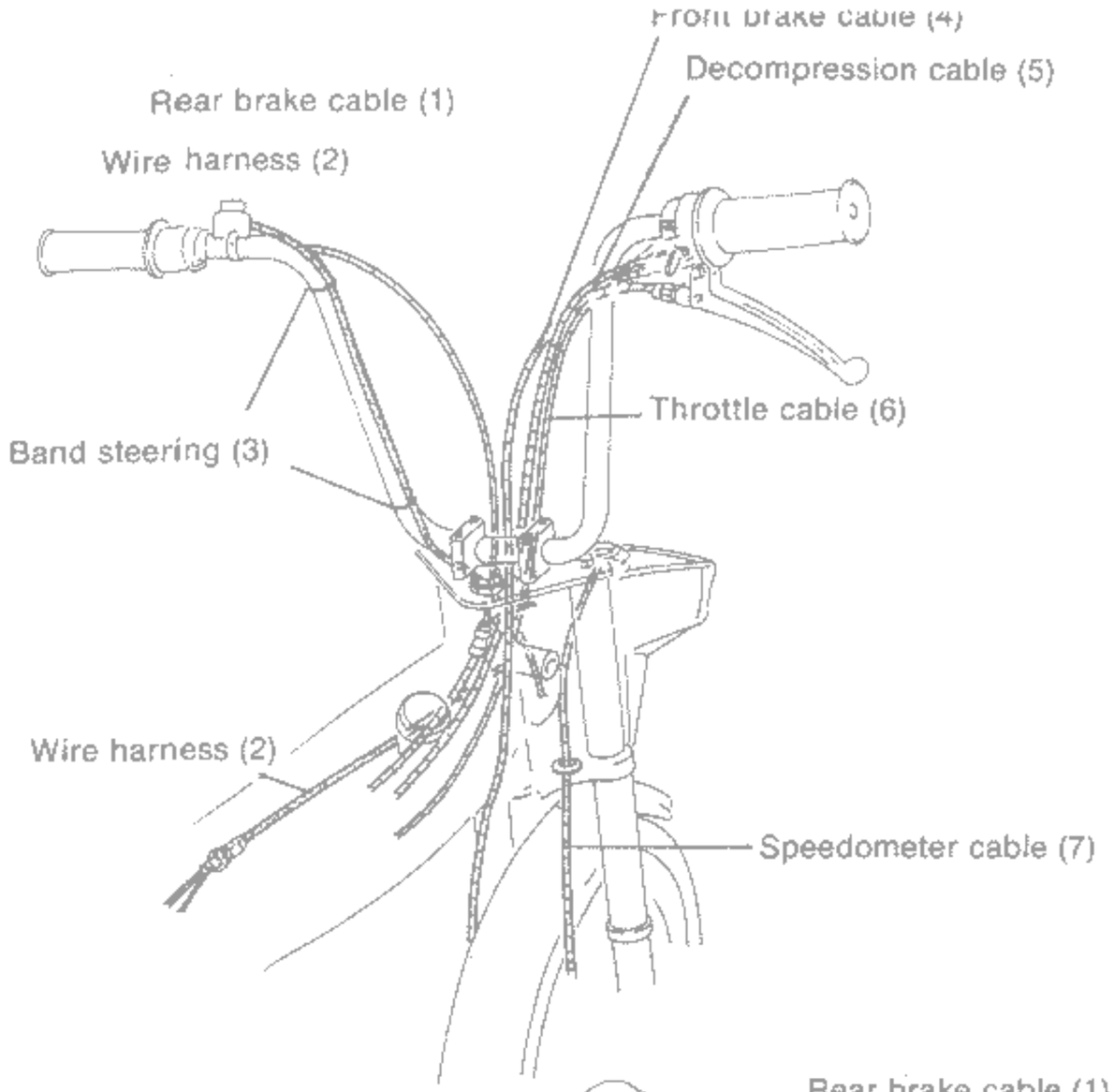


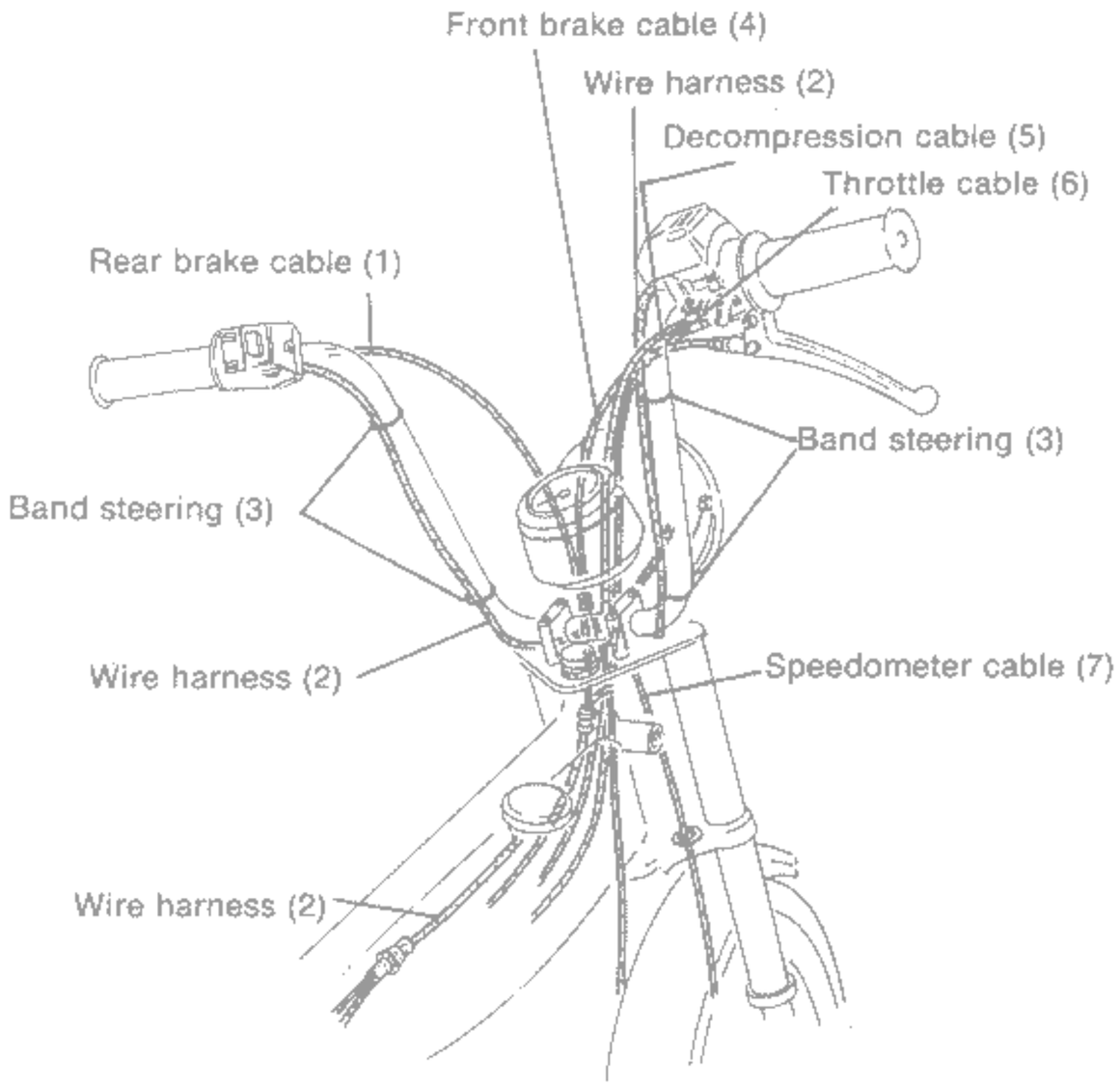


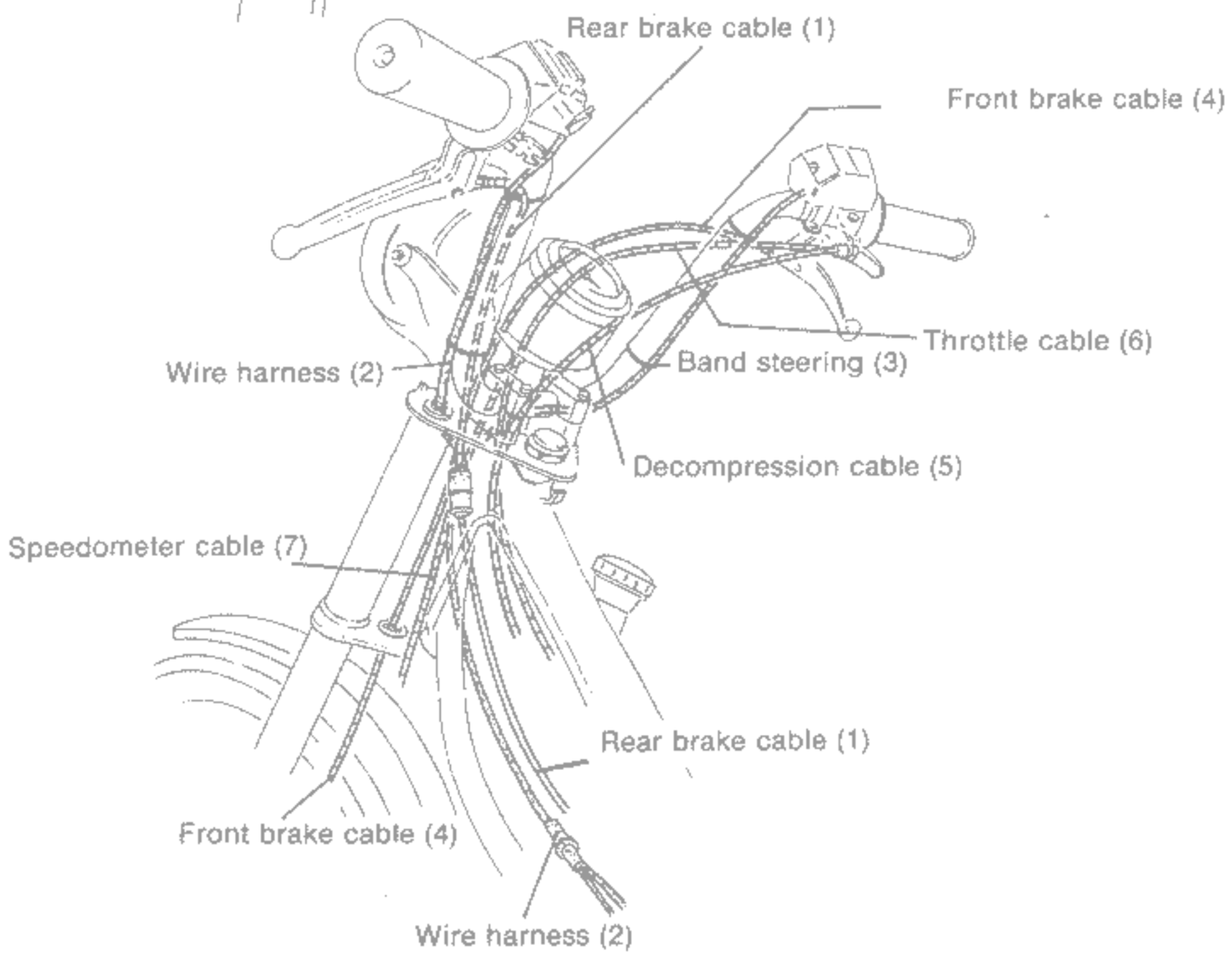


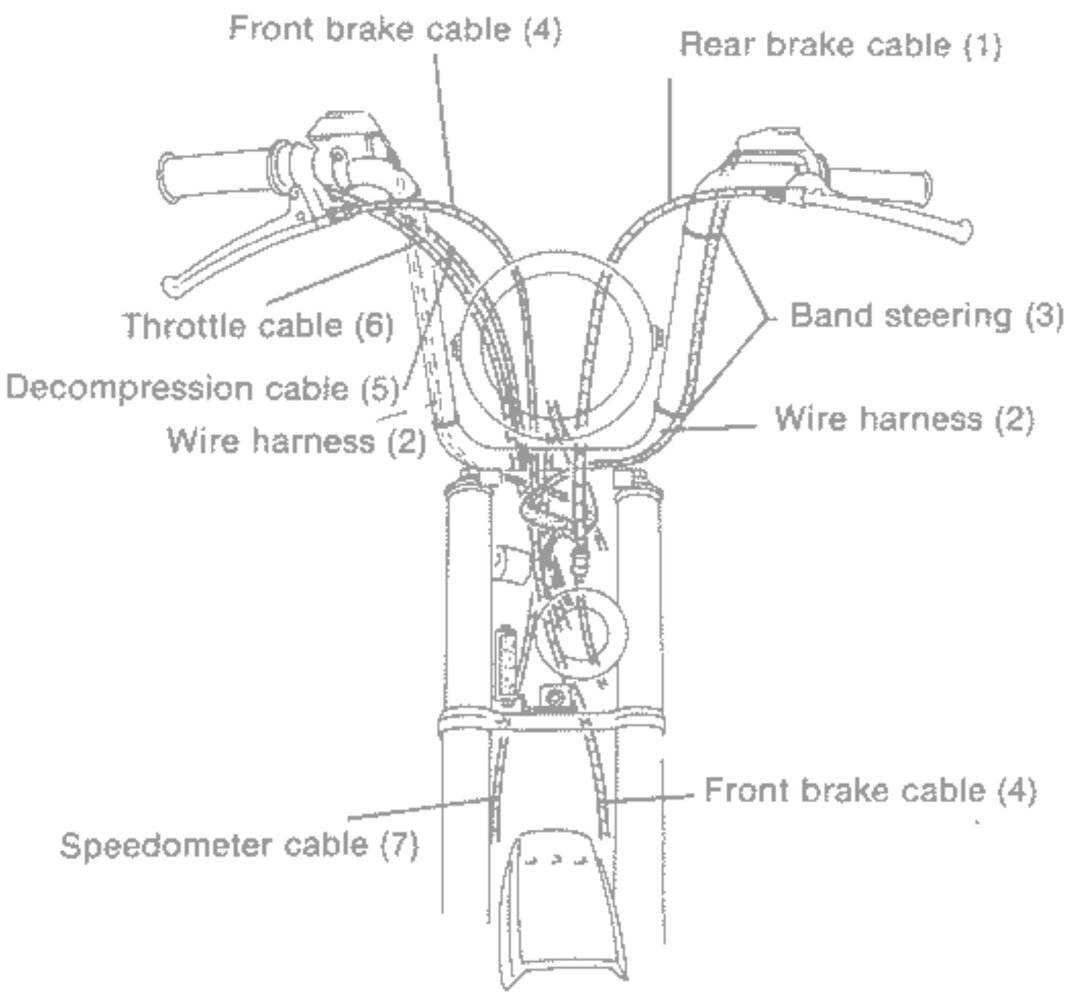












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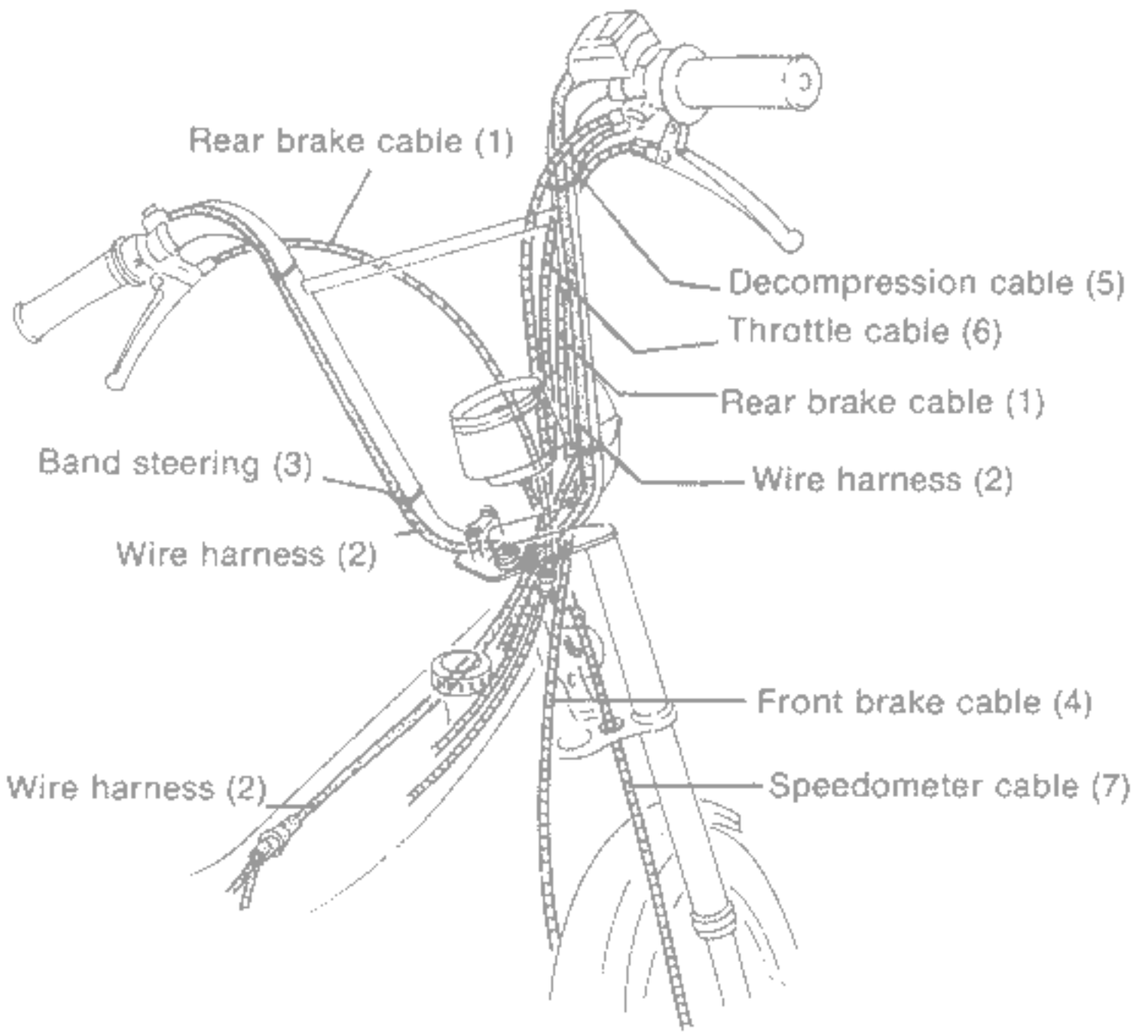
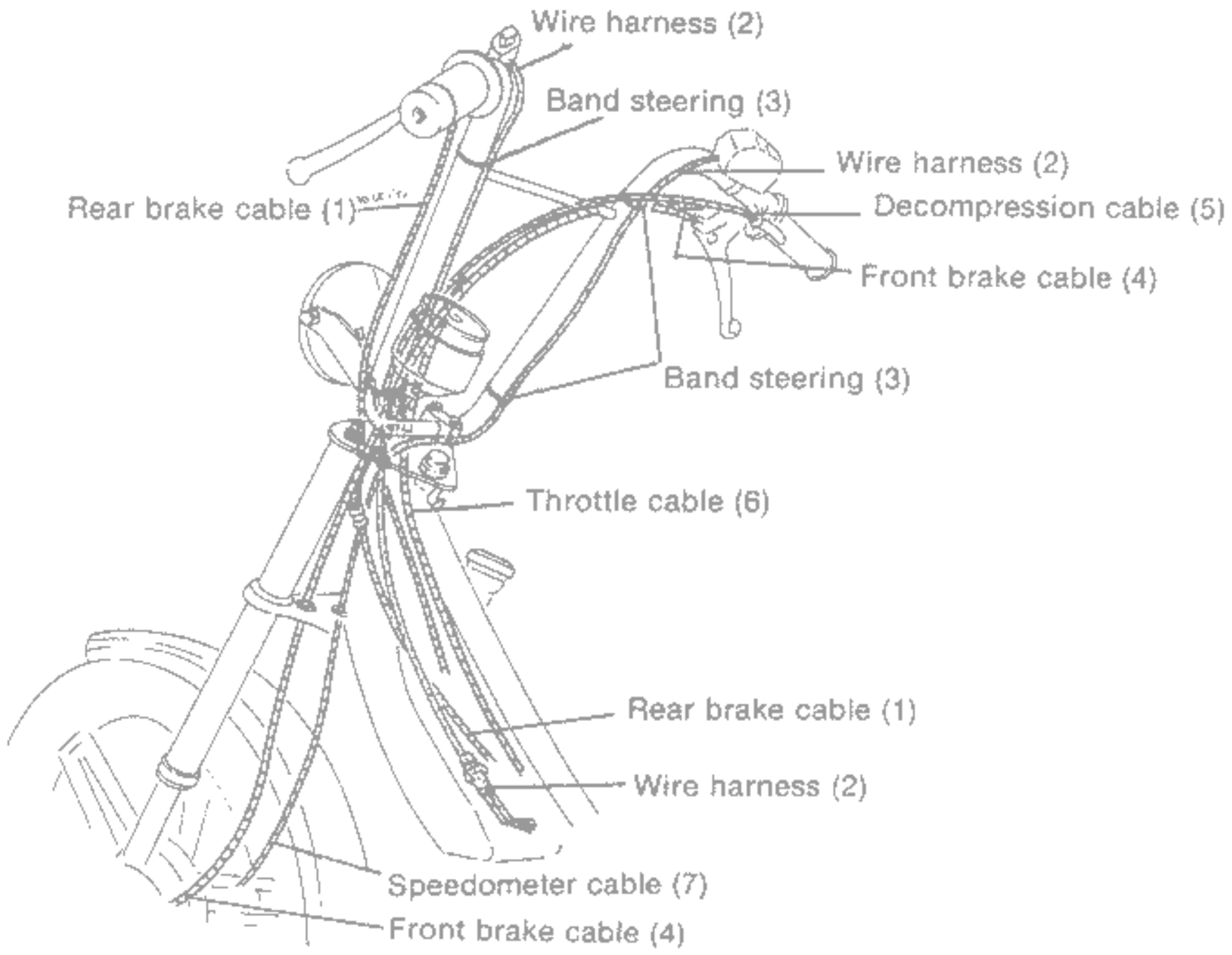
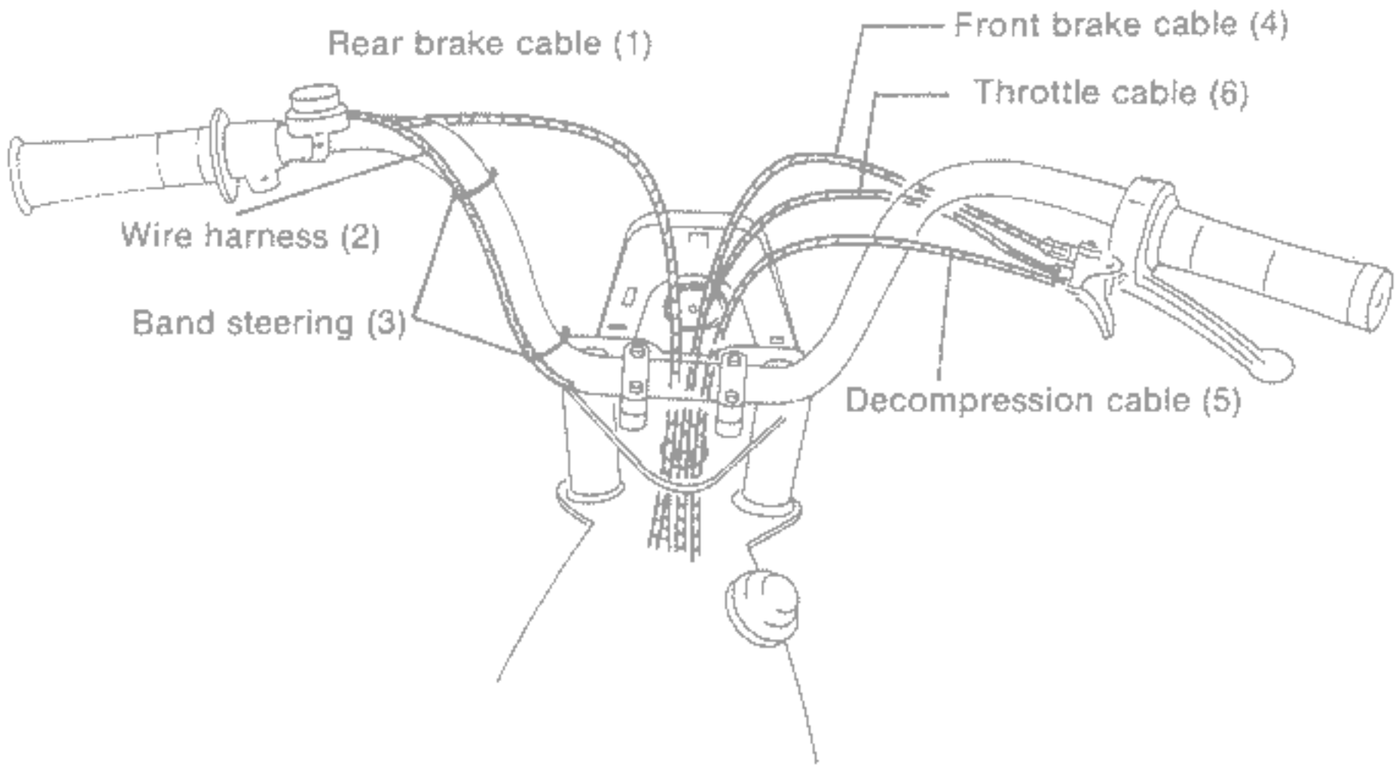
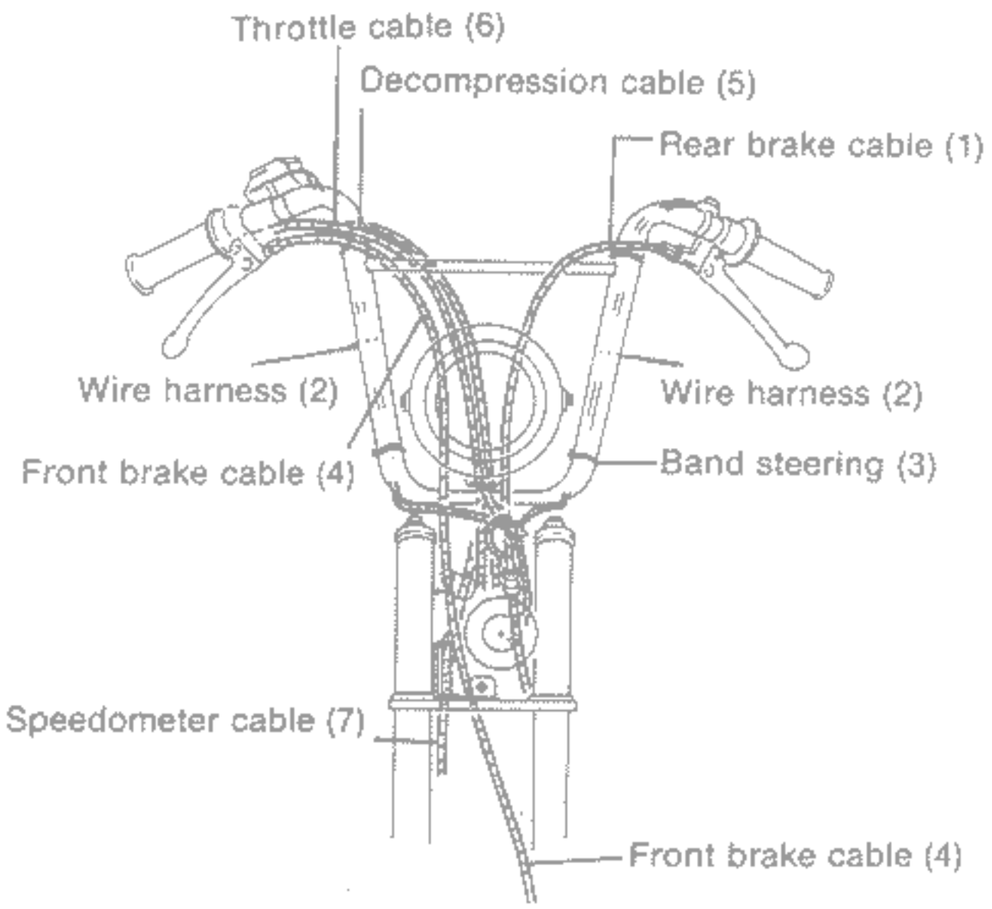

Rear brake cable (1)
Decompression cable (5)
Throttle cable (6)
Rear brake cable (1)
Band steering (3)
Wire harness (2)
Wire harness (2)
Front brake cable (4)
Wire harness (2)
Speedometer cable (7)


Wire harness (2)
Band steering (3)
Wire harness (2)
Rear brake cable (1)
Decompression cable (5)
Front brake cable (4)
Band steering (3)
Throttle cable (6)
Rear brake cable (1)
Wire harness (2)
Speedometer cable (7)
Front brake cable (4)


Rear brake cable (1)
Front brake cable (4)
Throttle cable (6)
Wire harness (2)
Band steering (3)
Decompression cable (5)


Throttle cable (6)
Decompression cable (5)
Rear brake cable (1)
Wire harness (2)
Wire harness (2)
Front brake cable (4)
Band steering (3)
Speedometer cable (7)
Front brake cable (4)

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MEMO

MEMO