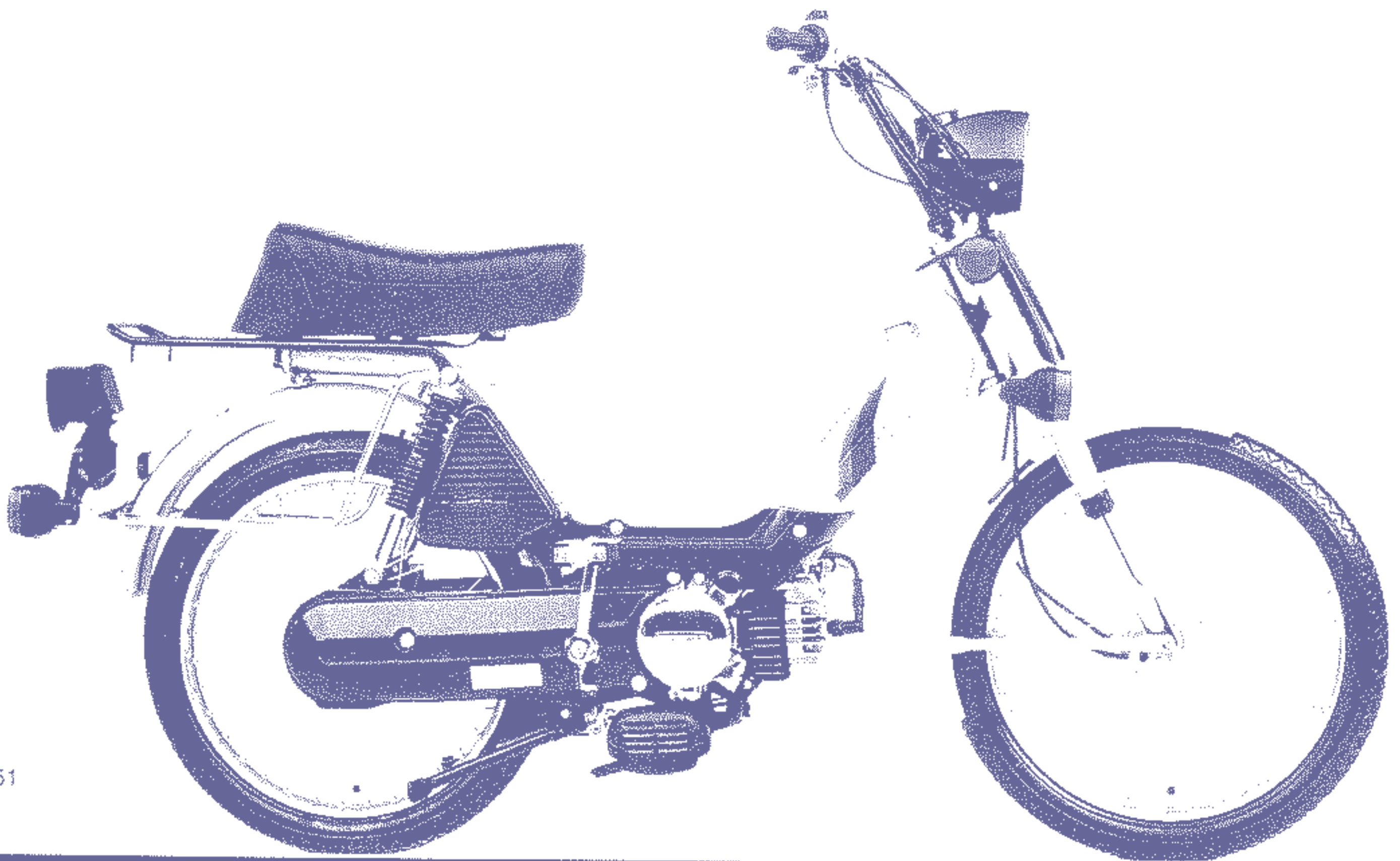




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SHOP MANUAL PA50



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.



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1. SPECIFICATIONS



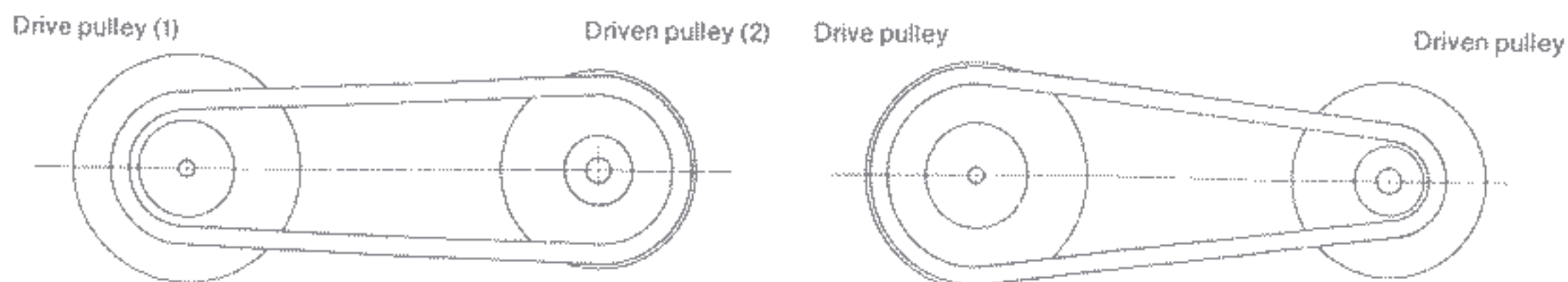
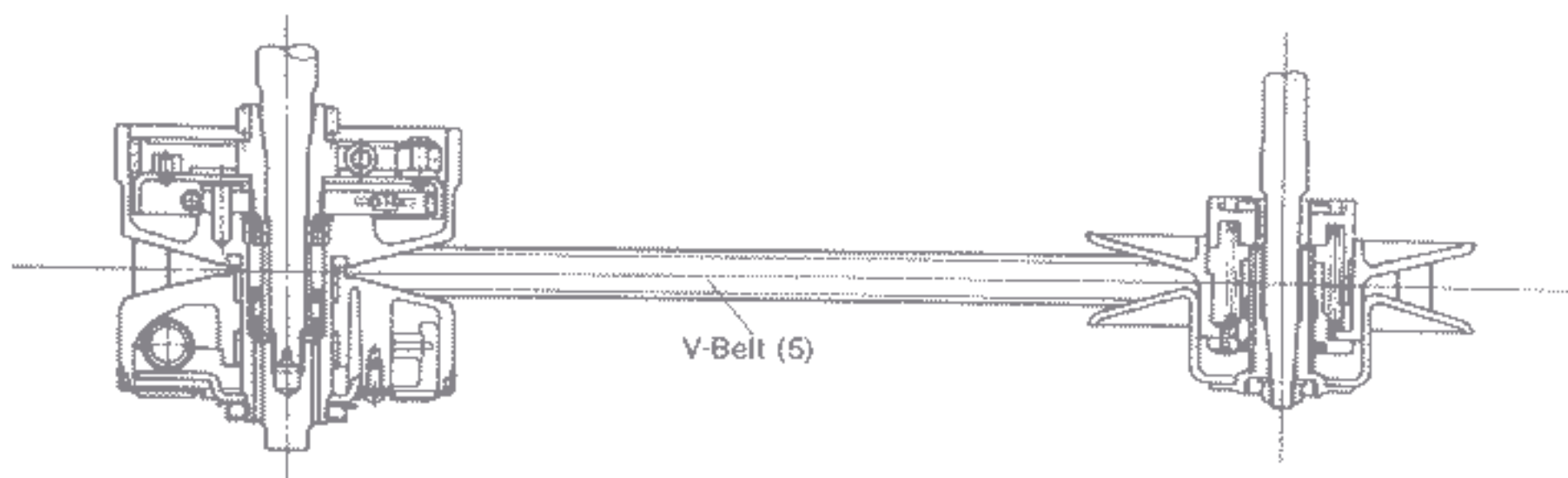
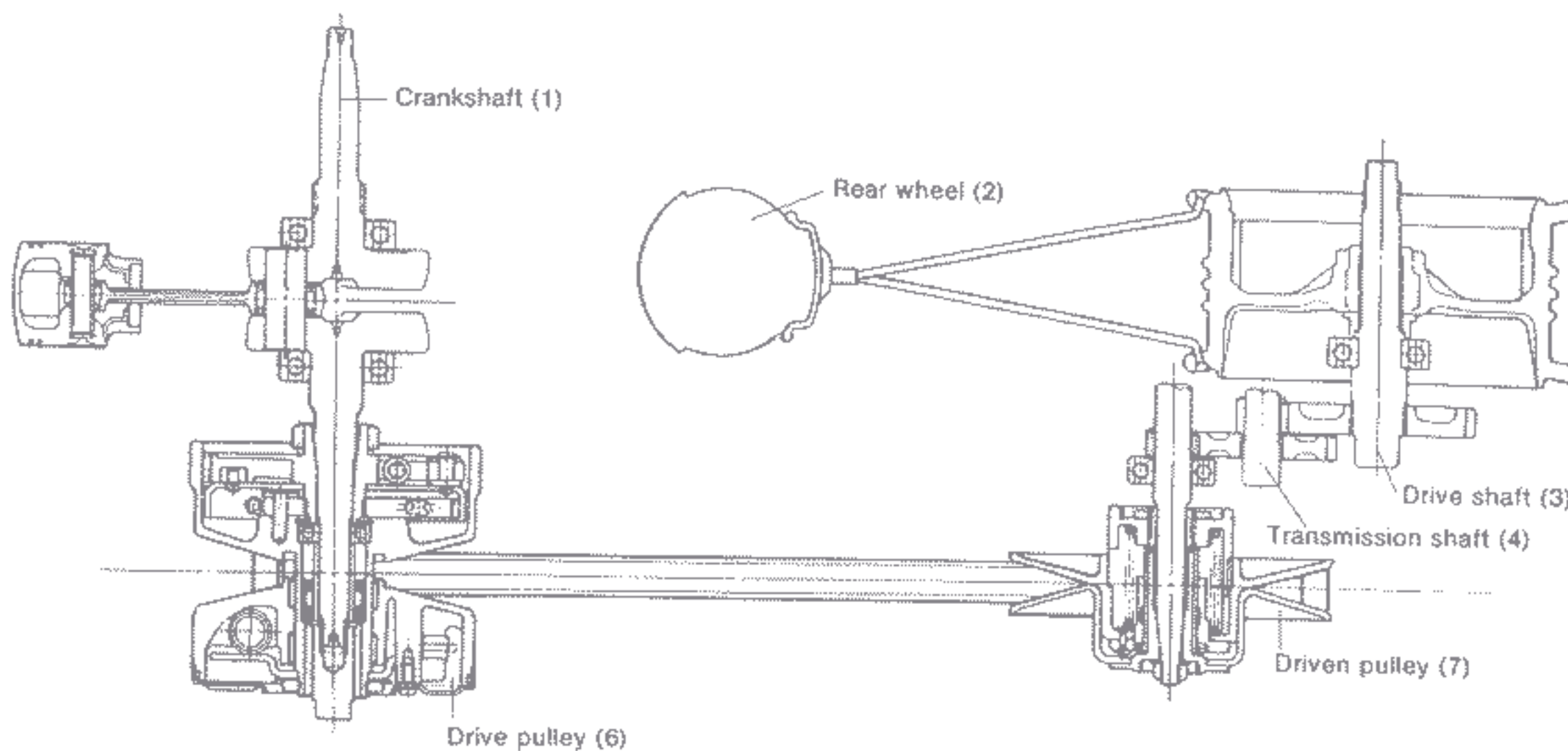
ITEM	DX		Custom	St.
Overall height	1050	993	1120	985
Overall length	1650	1650	1650	1650
Overall width	640	620	715	620
Wheel base	1055	1055	1055	1055
Ground clearance	100	100	100	100
Dry weight	54 kg	50,8kg	59,7 kg	49,6 kg
FRAME F. suspension travel R. suspension travel F. tire size R. tire size Fuel capacity Fuel reserve Caster angle Trail			Back-Bone Telescopic Swing unit 2.00 - 2.25 - 17 - 2PR 2.00 - 2.25 - 17 - 2PR 3 l 0.6 l 66° 30' 55 mm	
ENGINE Bore and stroke Displacement Compression ratio Carburator Max. power Max. torque Fuel Idling speed			Air cooled 2 stroke 40.0 x 39.6 49 cc 6,7 : 1 (40 - 45 km/h) 7,0 : 1 (NL - 25 km/h) ø 12 1,69 Kw/5500 (45 km/h) 1,32 Kw/5000 (40 km/h) 1,10 Kw/3800 (NL - 25 km/h) 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) Mixed fuel/oil 1/25 - 40 - 45 km/h 1/50 - NL - 25 km/h 1500 RPM	
DRIVE TRAIN Clutch Transmission Transmission ratio Final ratio			Drive belt Autom. centrif. dry type Variable pulley or fixed transmission 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 12.462	
ELECTRICAL Battery Generator Tail/stop Turn signal			Flywheel magneto 6 V - 0.8 AH 6 V - 6 W France 6 V - 18 W UK 6 V - 15 W other 44 W/4800 6 V - 4/5 W 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	



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2. TECHNICAL FEATURES HONDA V-MATIC





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3. SERVICE PROCEDURES

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3. Special tools	6
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5. Wiring diagram	8-28
6. Trouble shooting	29-34
7. Maintenance schedule	35

1. Service data

(Engine)

Unit: mm

Item	Assembly Standard	Repair Limit	Page
Piston-to-piston ring clearance	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 clearance	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
	Right 75mm	0.05 max. (0.0020)	

(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



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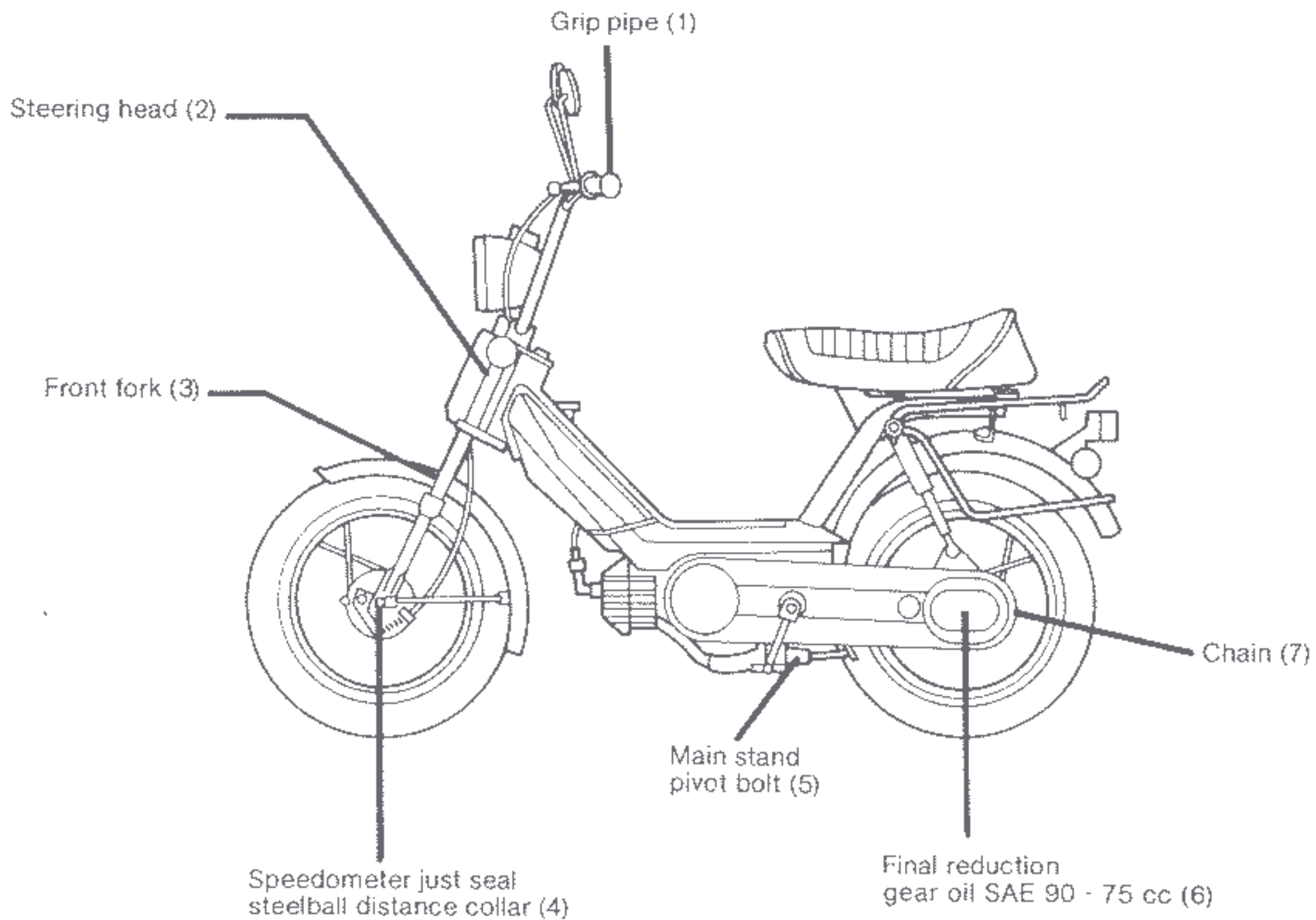


4. Lubrication

● ENGINE

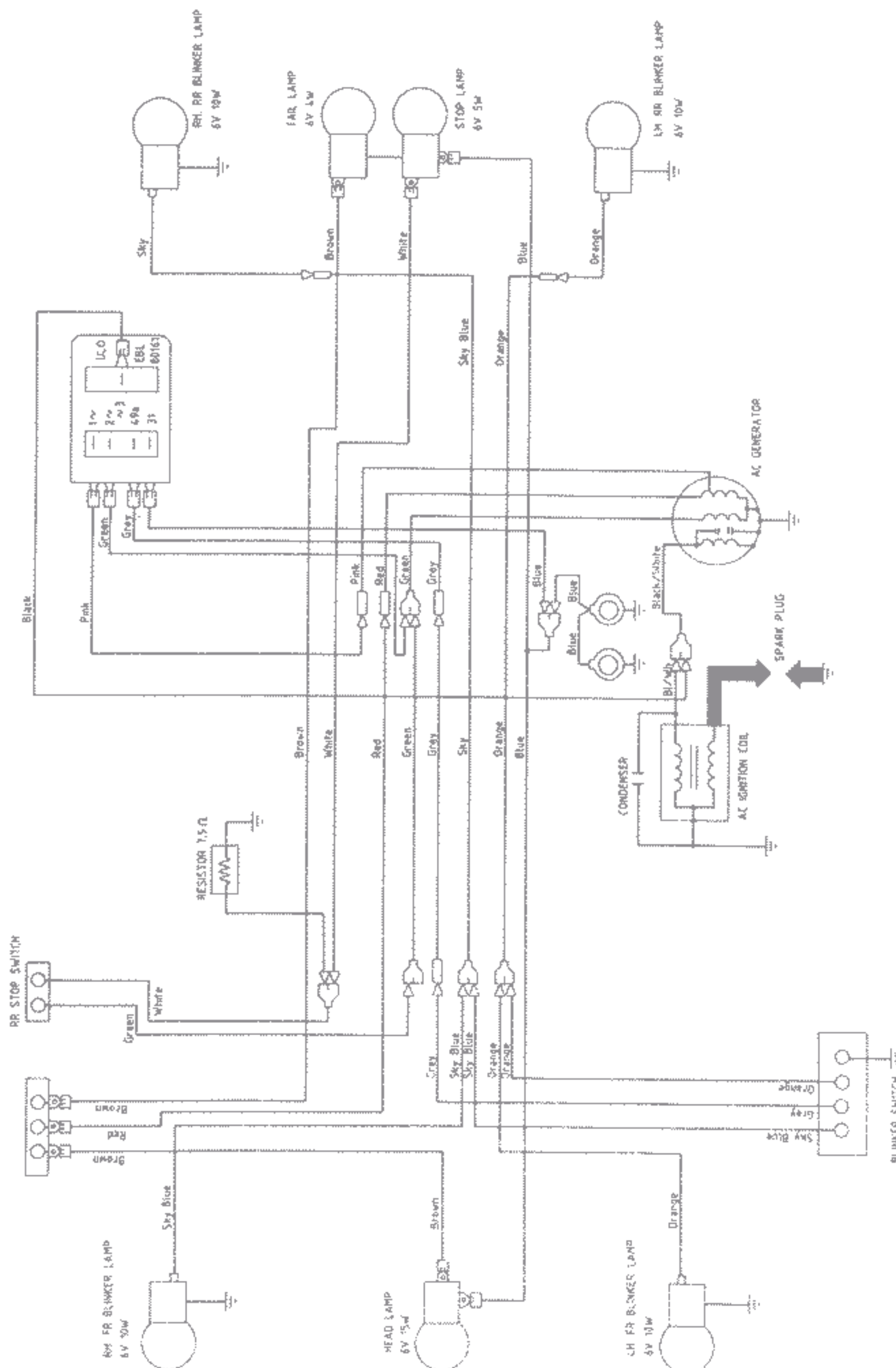
Point of lubrication		Lubricant
1	Crankcase rotating or sliding surfaces	Use Honda oil or equivalent
2	Cylinder rotating or sliding surfaces	Use Honda oil or equivalent
3	Oil felt	Engine oil (ultra oil)
4	Weight rollers of movable drive face	Grease
5	Driven pulley spring	Grease

● FRAME

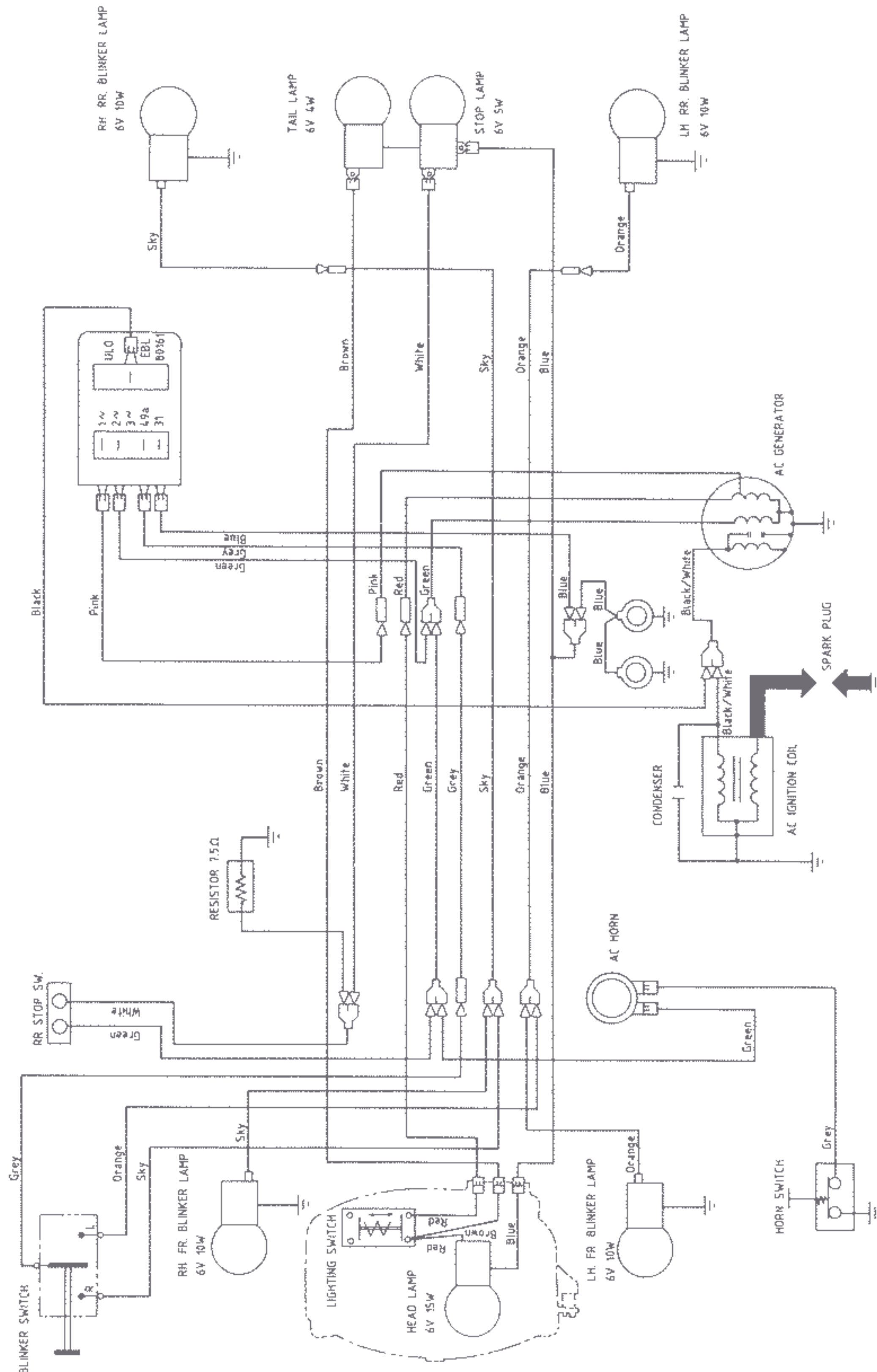




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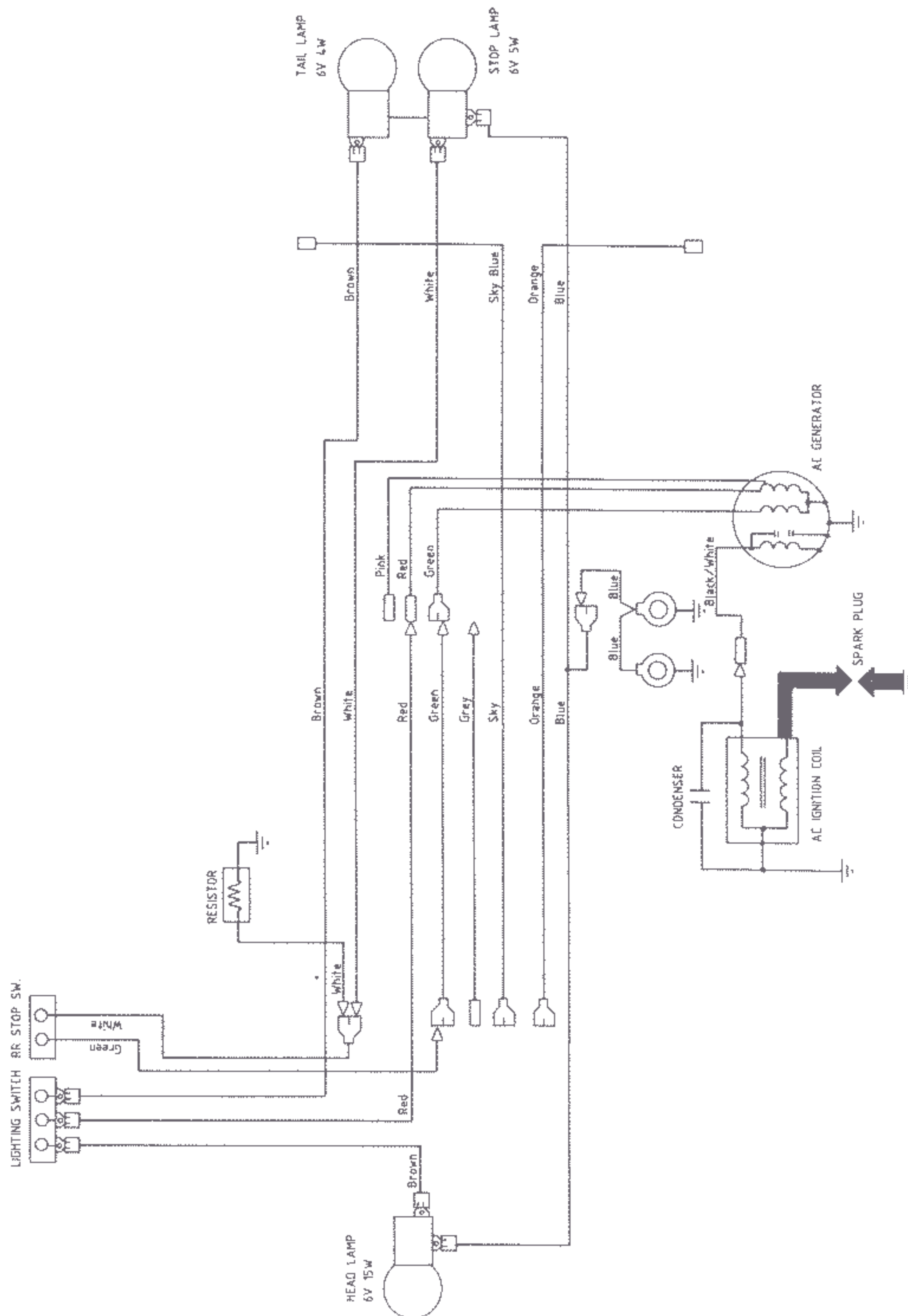
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VLCB



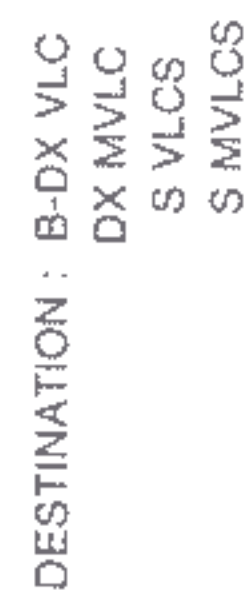
DESTINATION : C VLCS : B
MC VLCS : B



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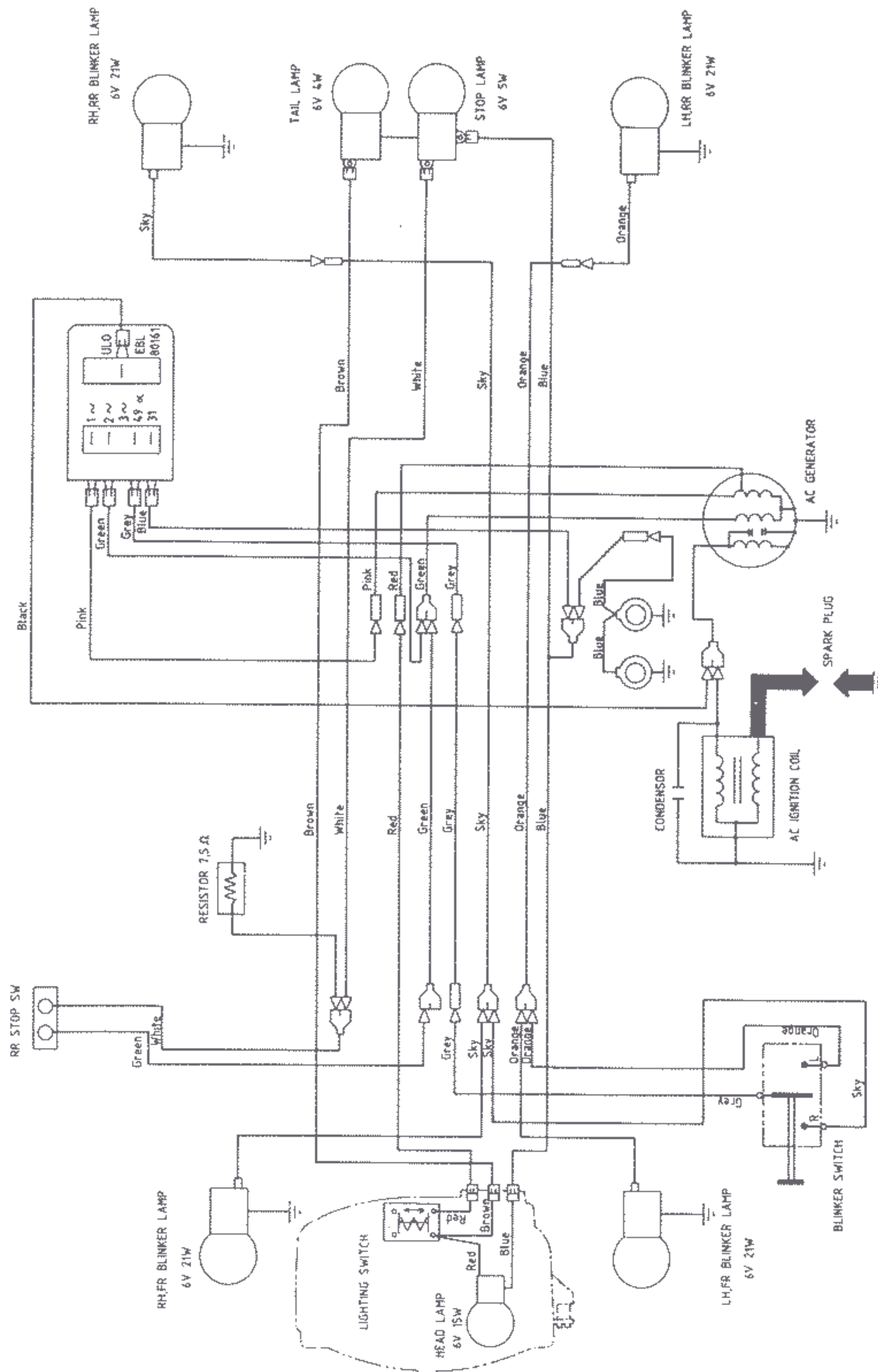


DESTINATION : B-L-VL
B-ML-MVL
DK-VL&S VL
AUS

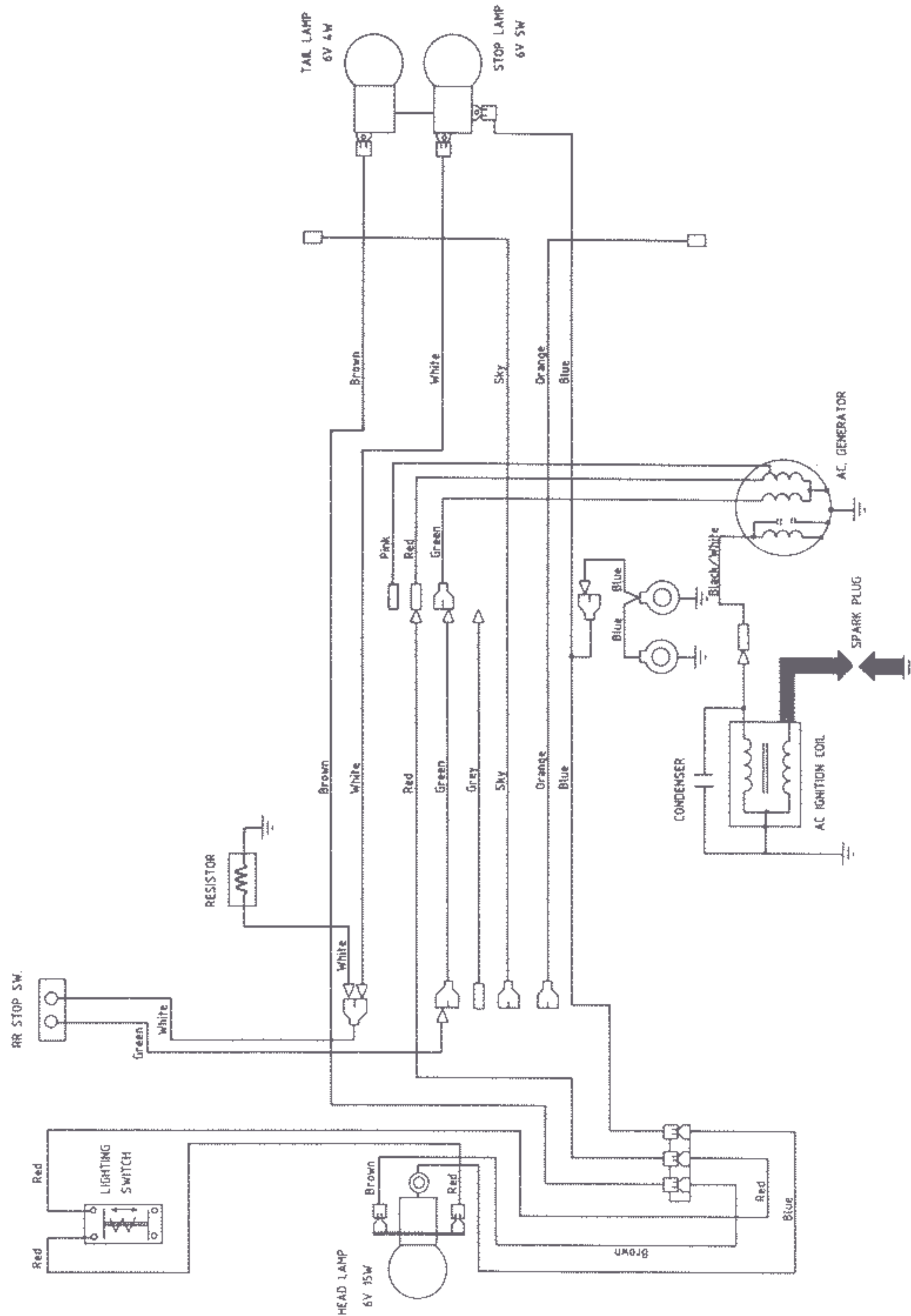




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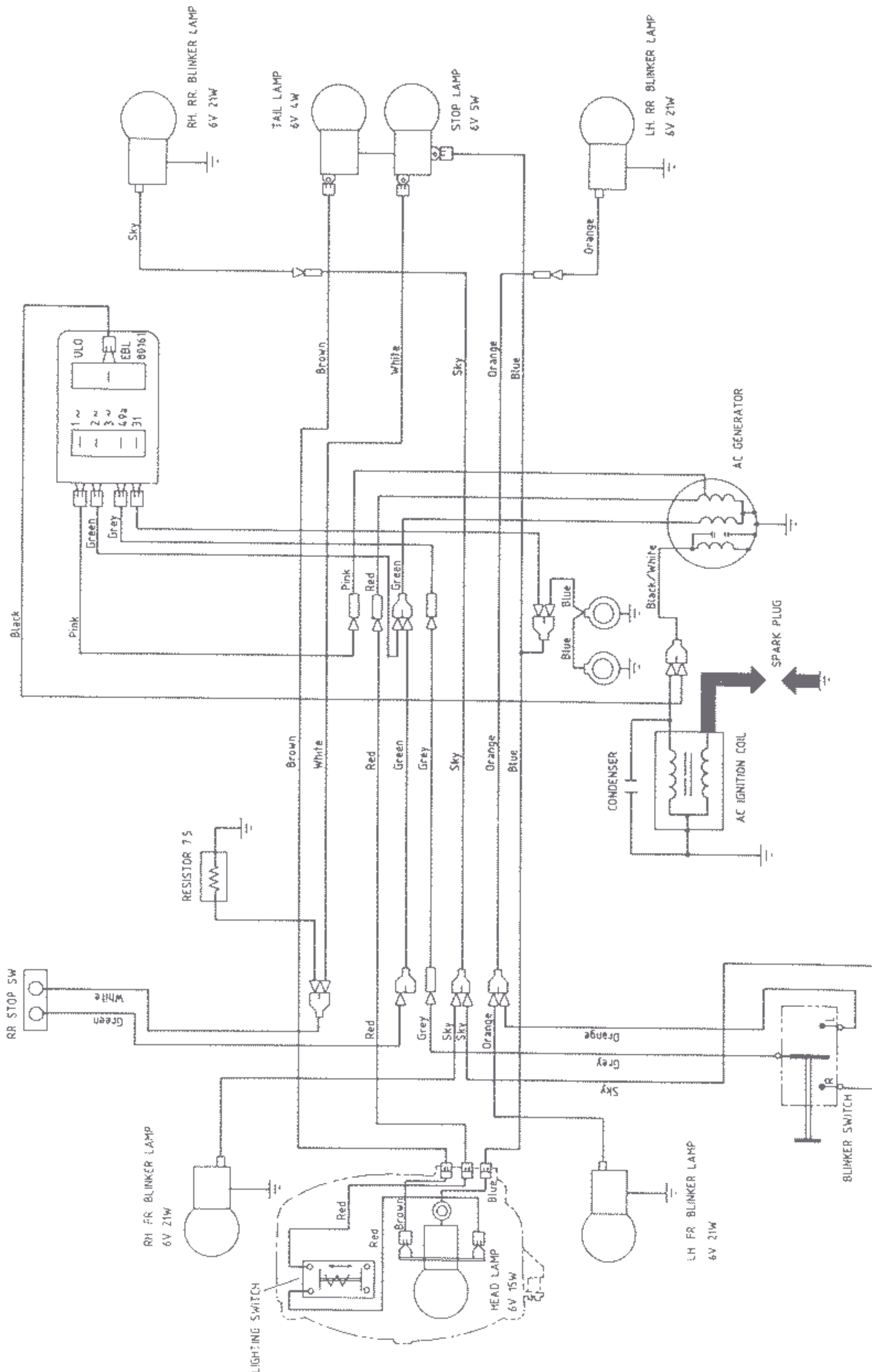
DESTINATION : G



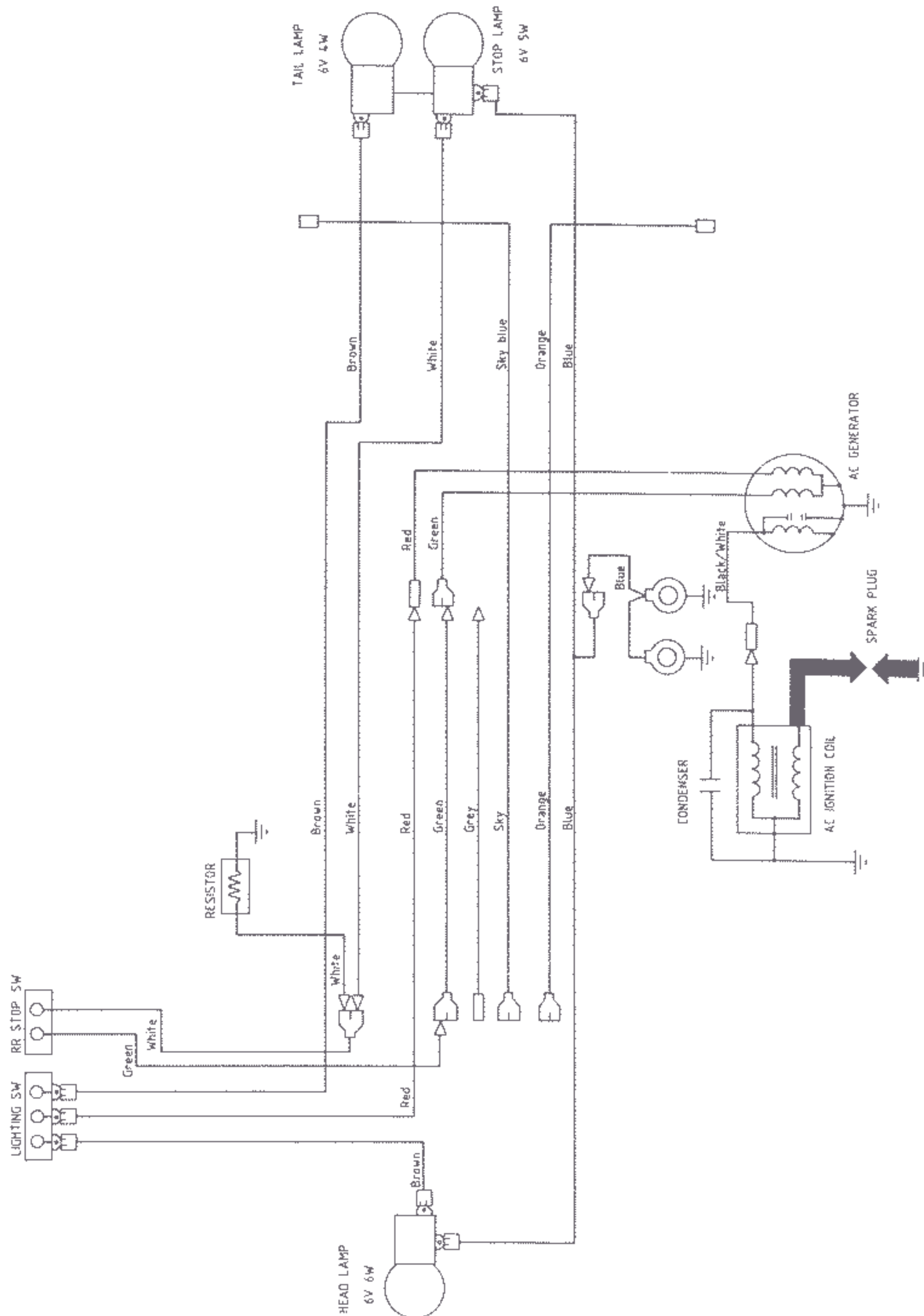
DESTINATION : DX MVLS : G
S MVLS : G
SVLS : A



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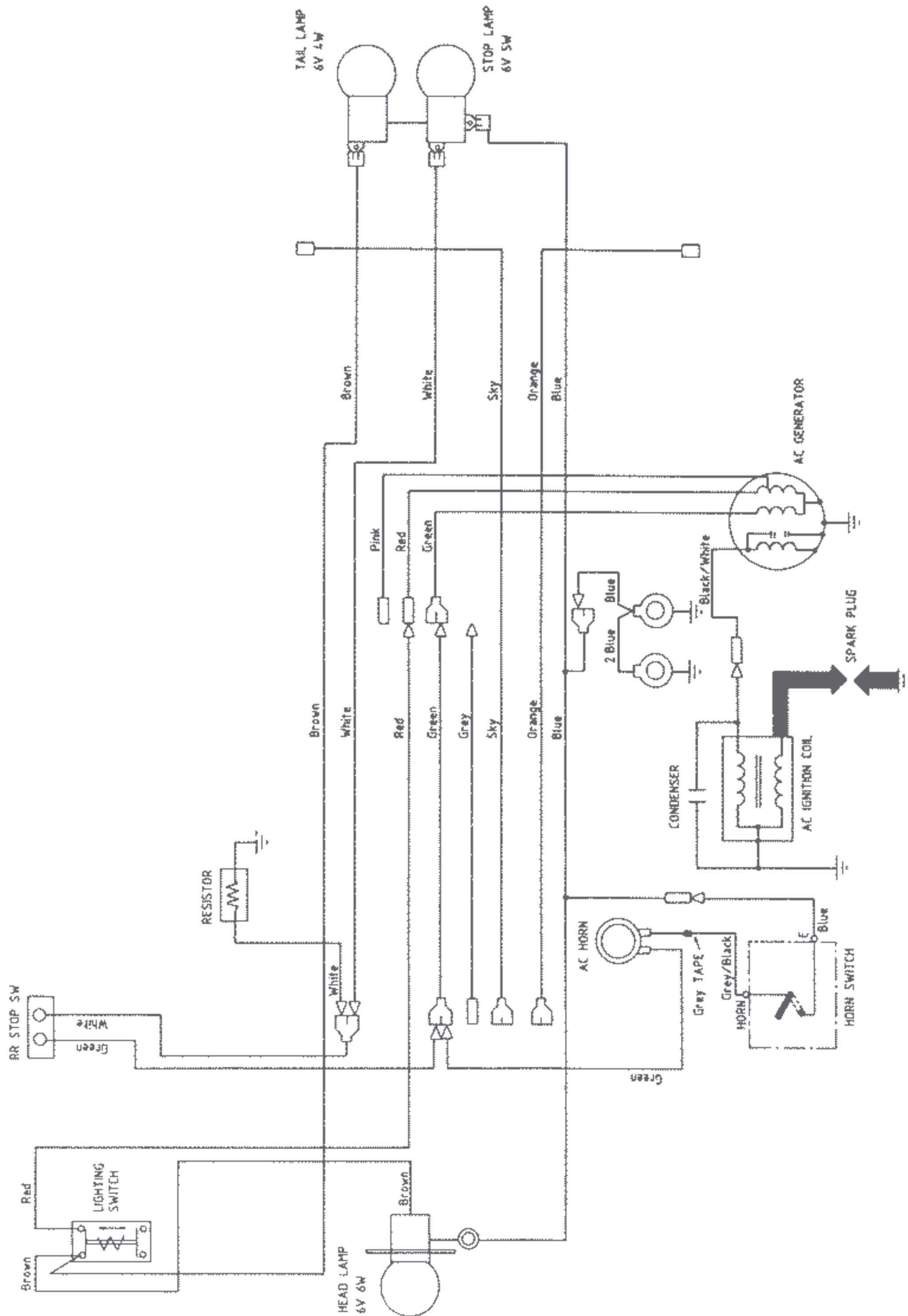
DESTINATION : GERM.
MS VLCS
MS LCS



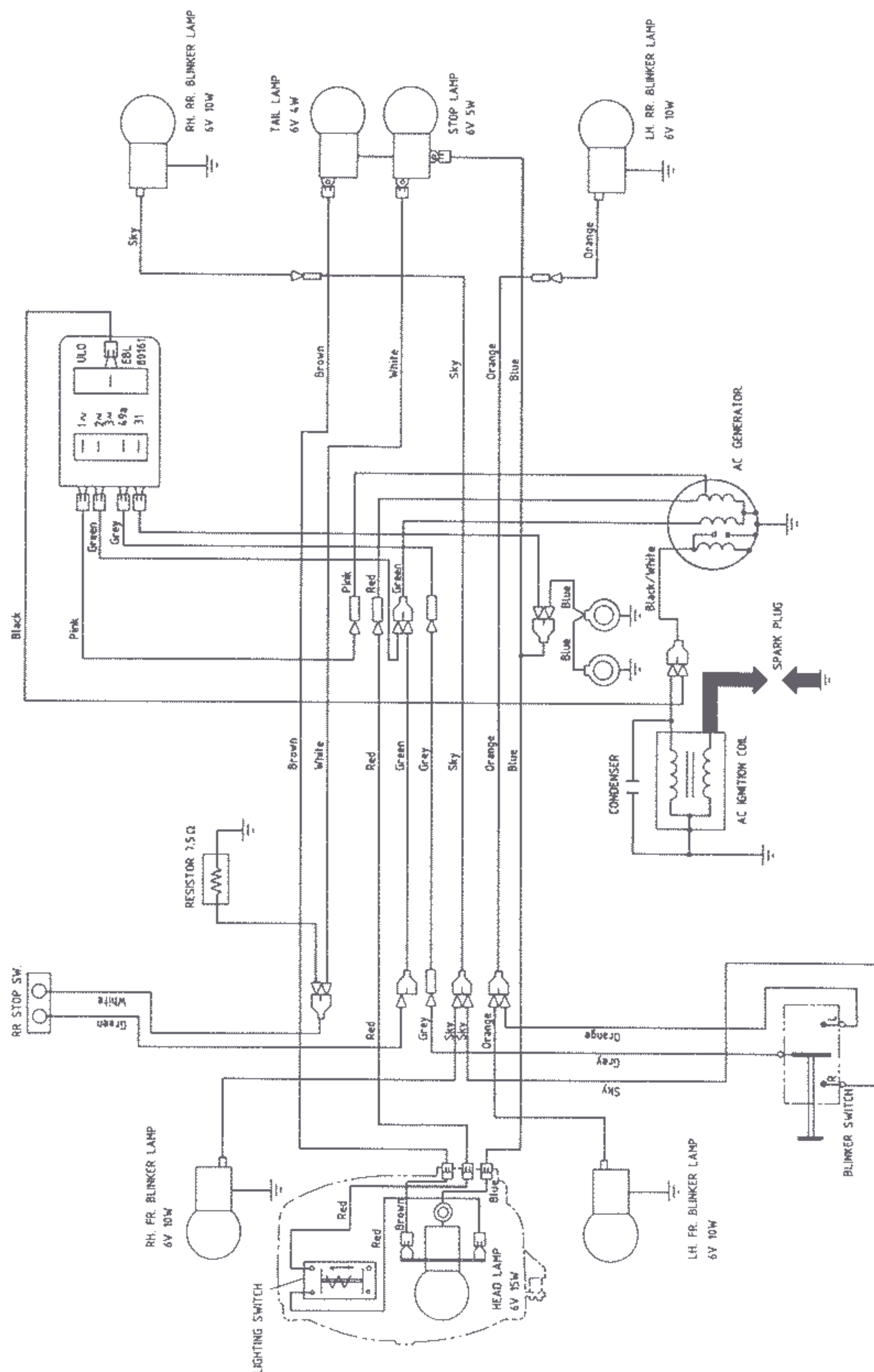
DESTINATION : VL : F
VL : GR



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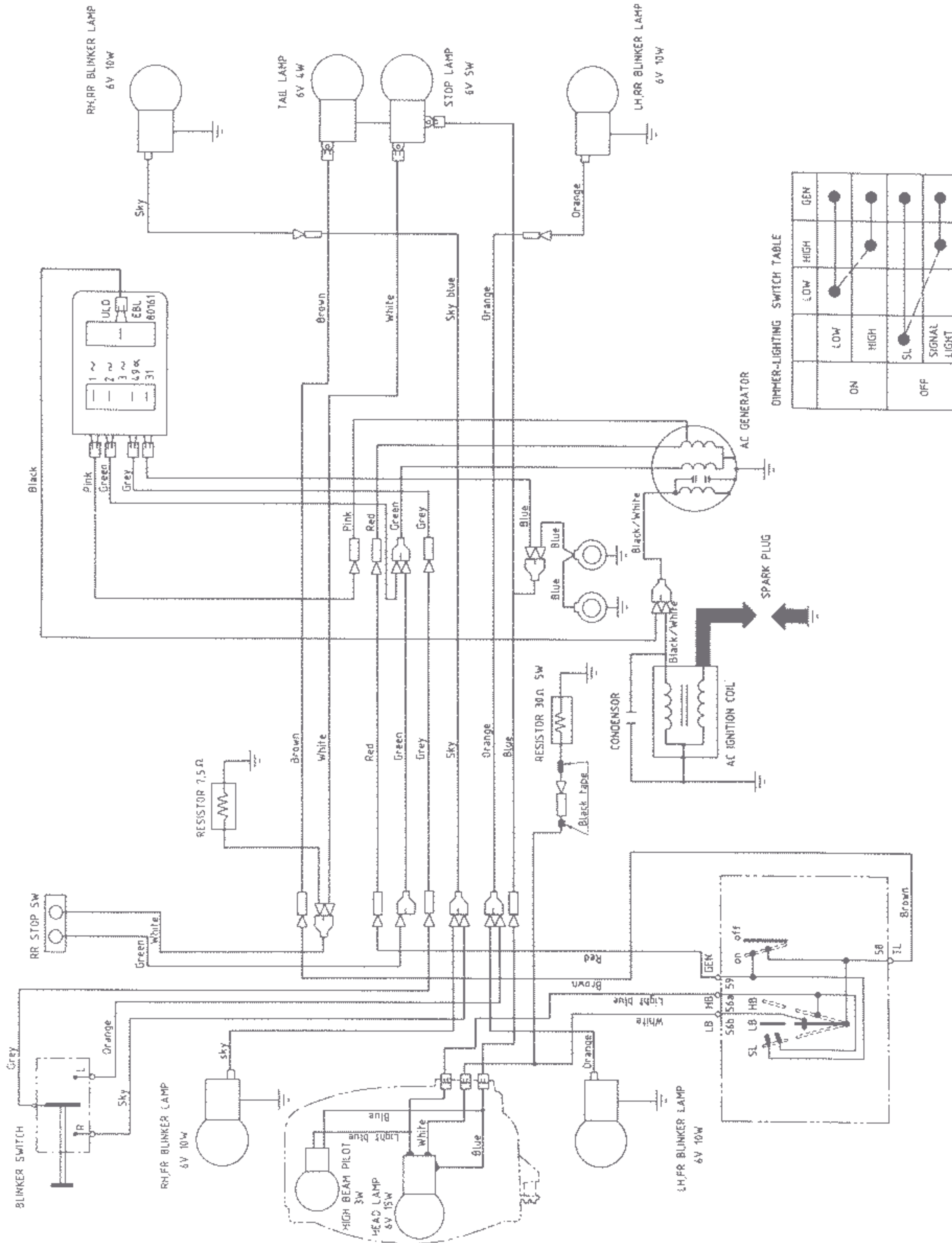
DESTINATION : DX - VL : F
S VLS : N



DESTINATION: NL DX VLC



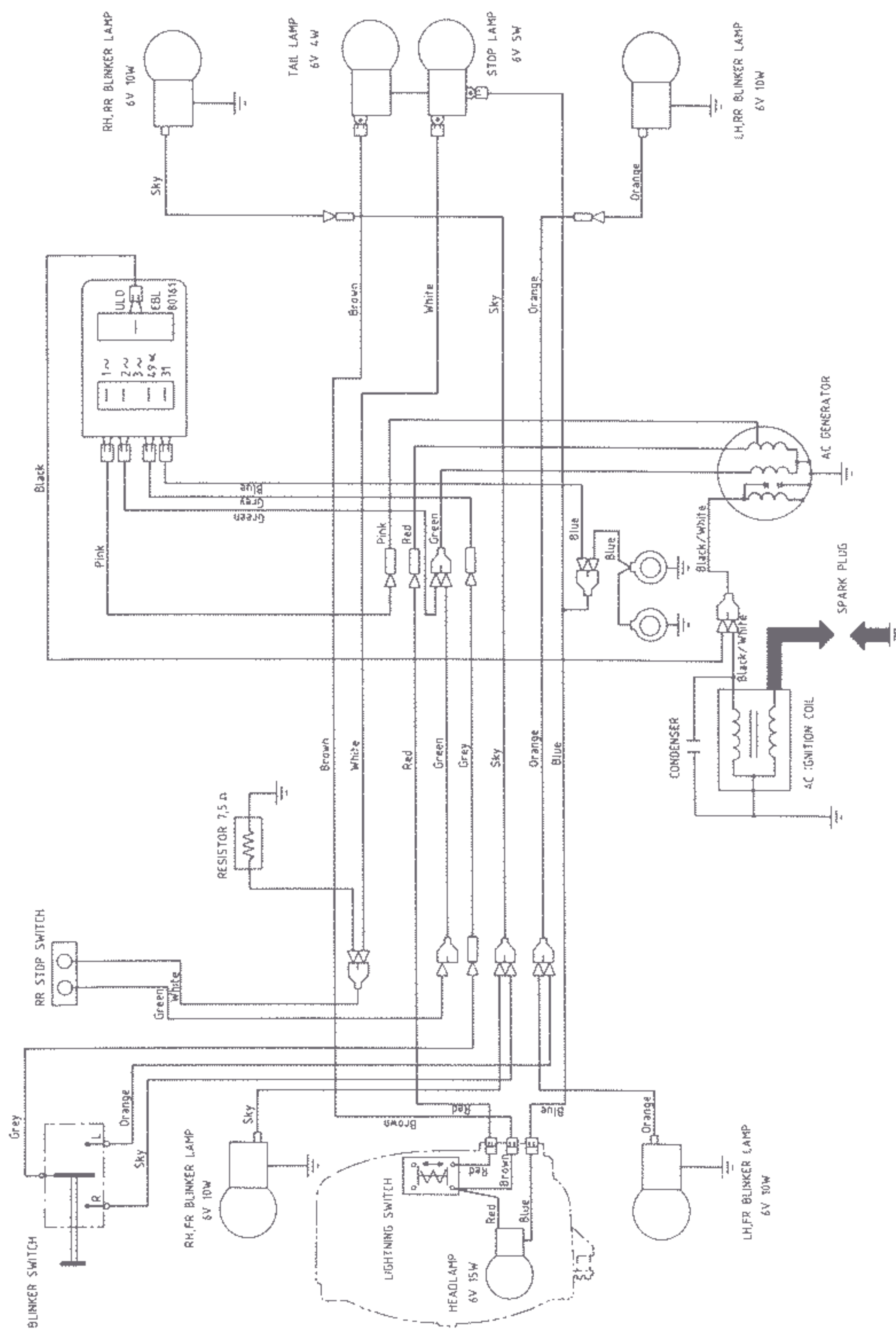
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DIMMER-LIGHTING SWITCH TABLE

	LOW	HIGH	GEN
ON			
OFF			

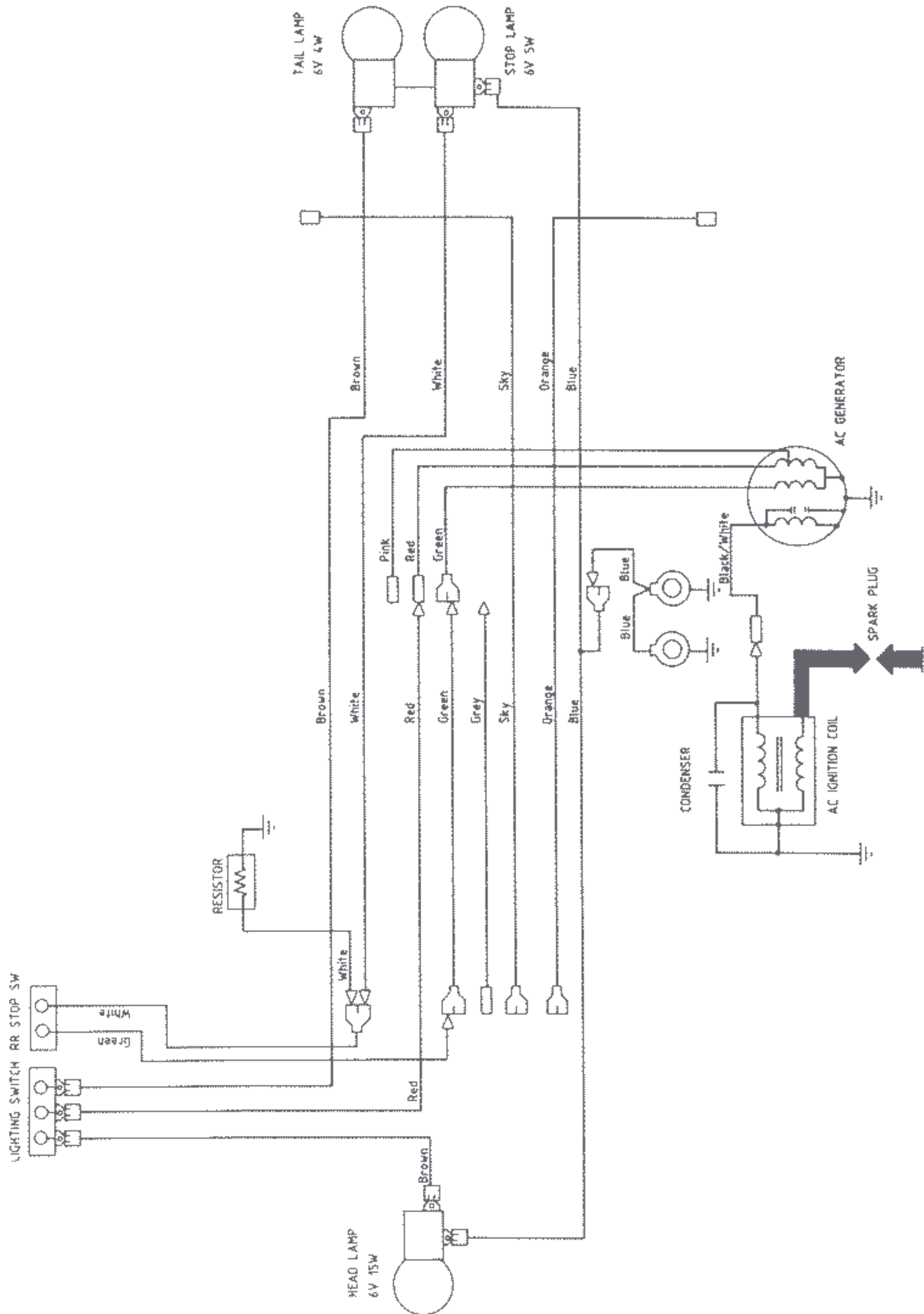
DESTINATION : SVLCS NL



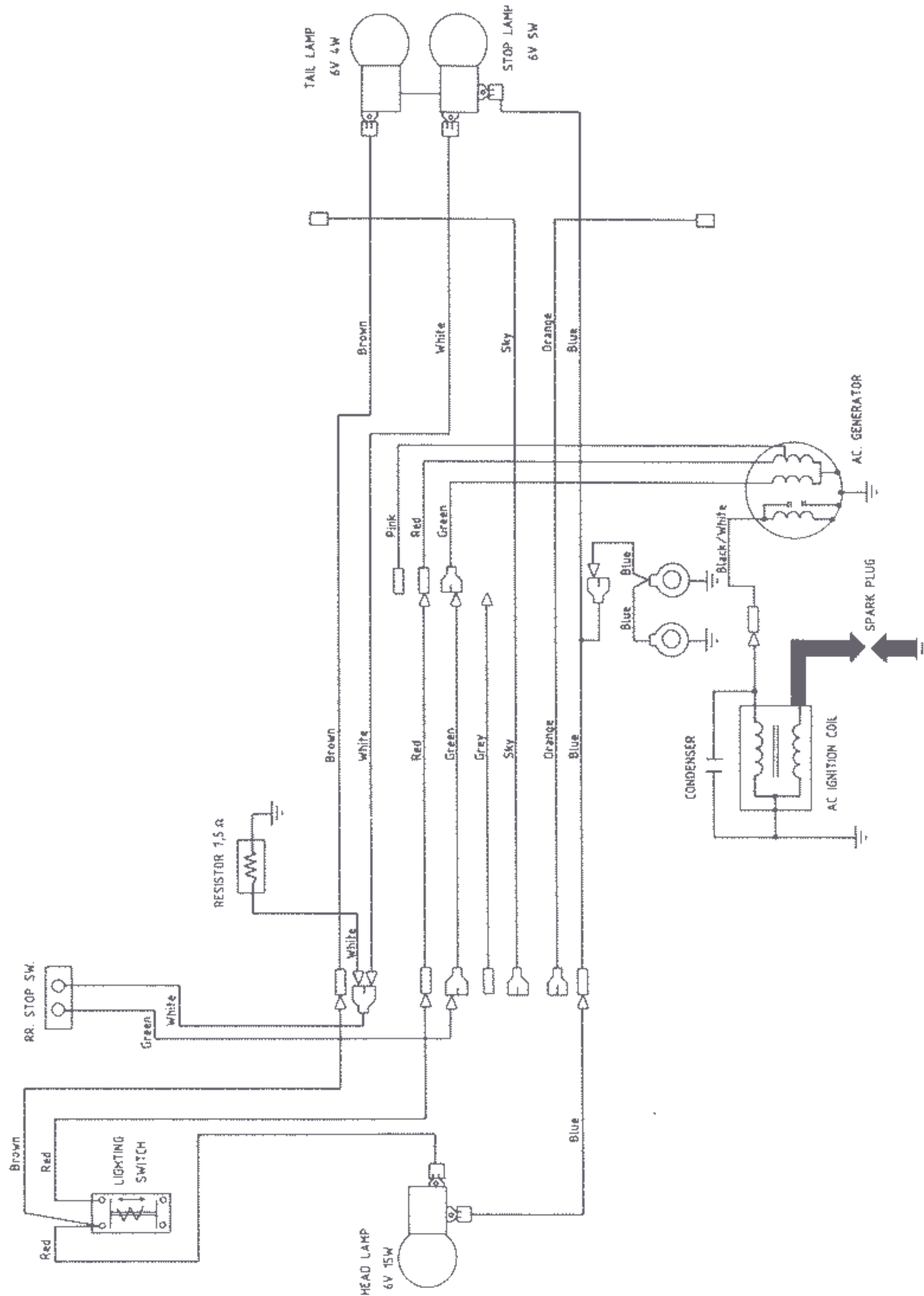
DESTINATION : NL



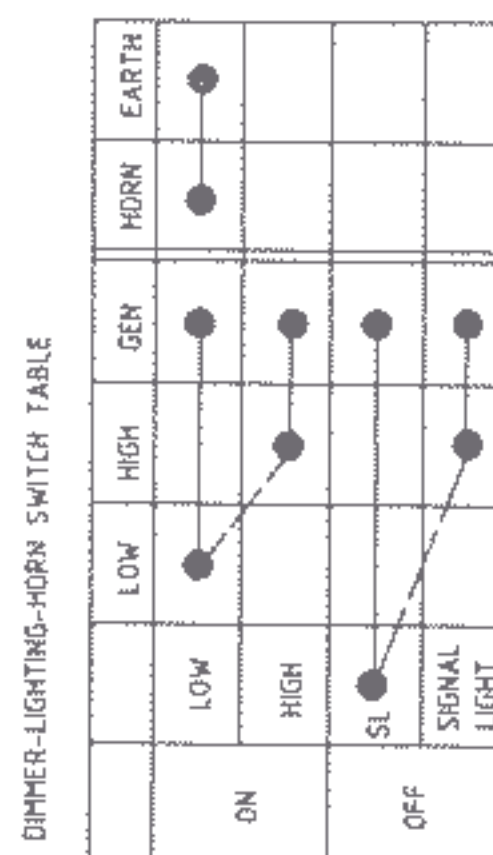
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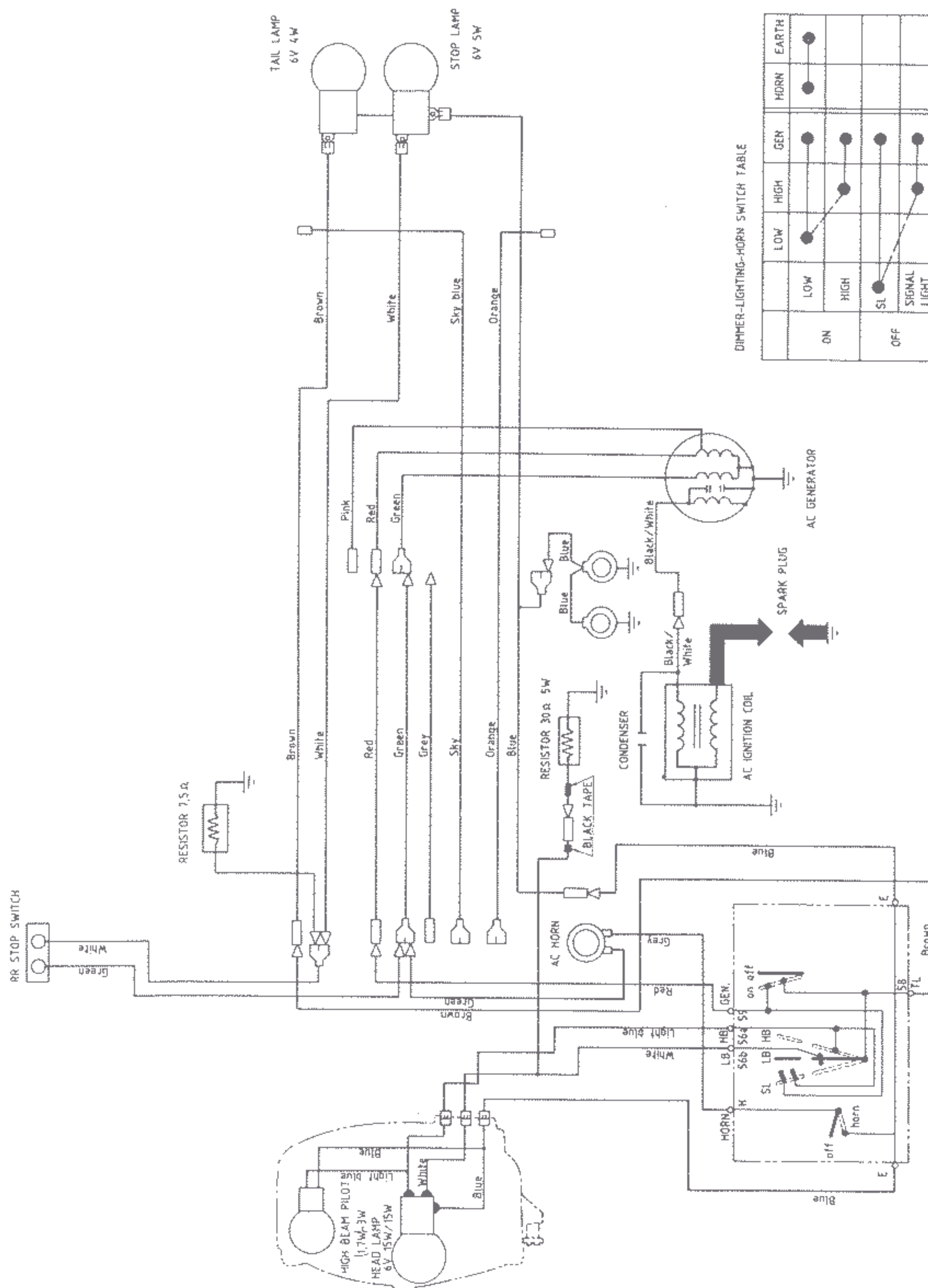
DESTINATION : ML : D
VL : NL

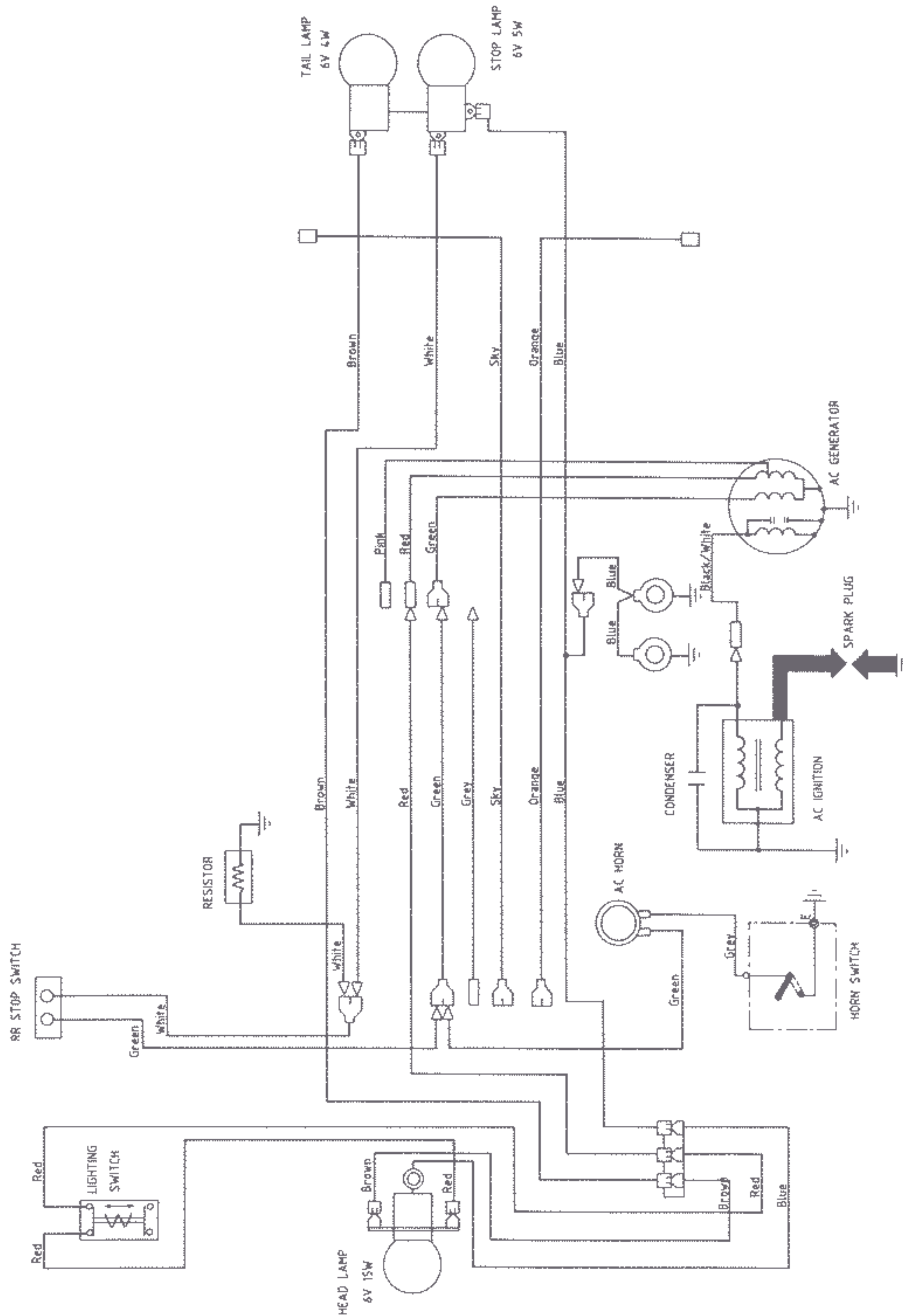


DESTINATION : SVLS-AUS



DESTINATION: NORWAY

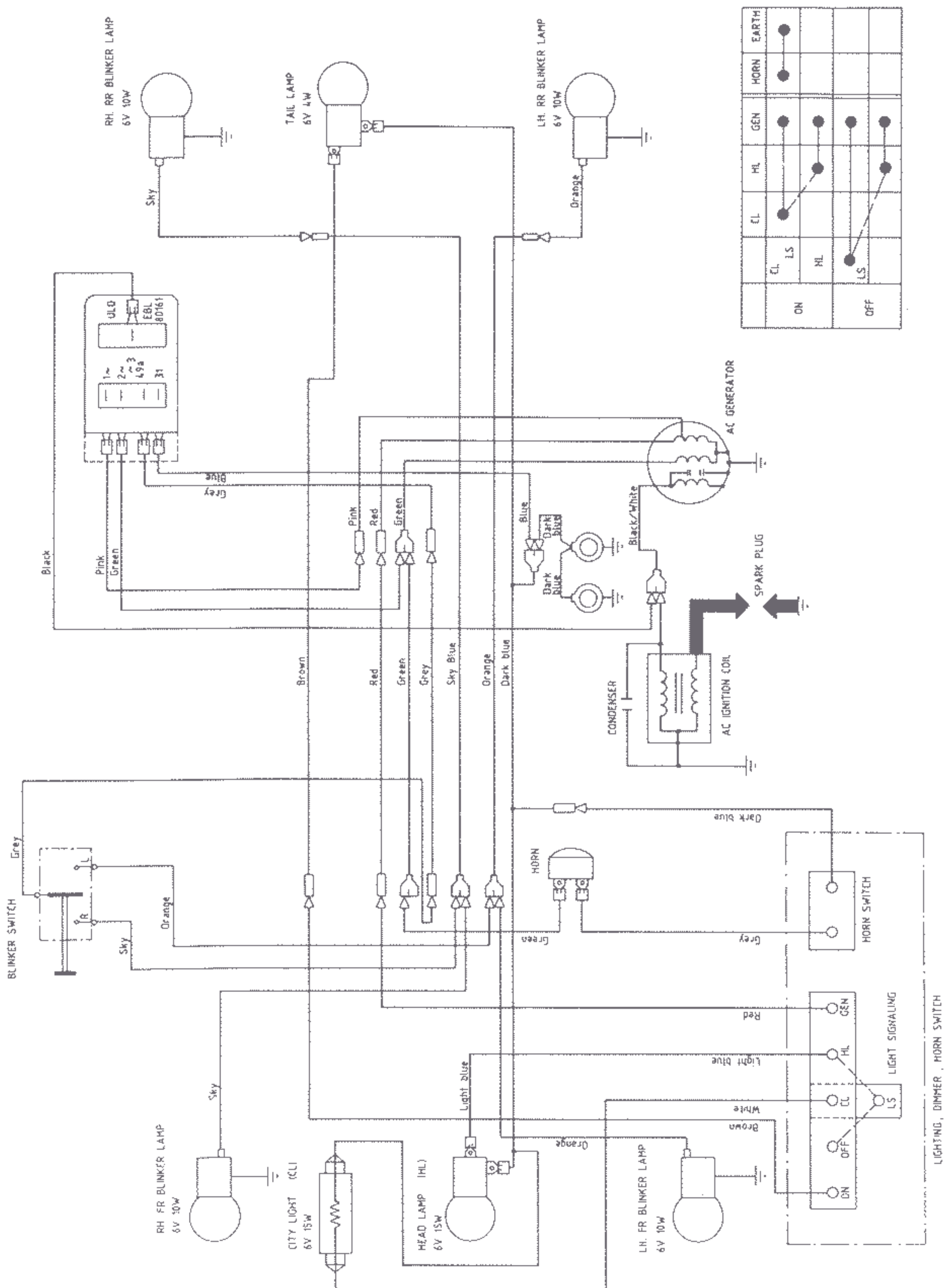




DESTINATION : S VLS-E

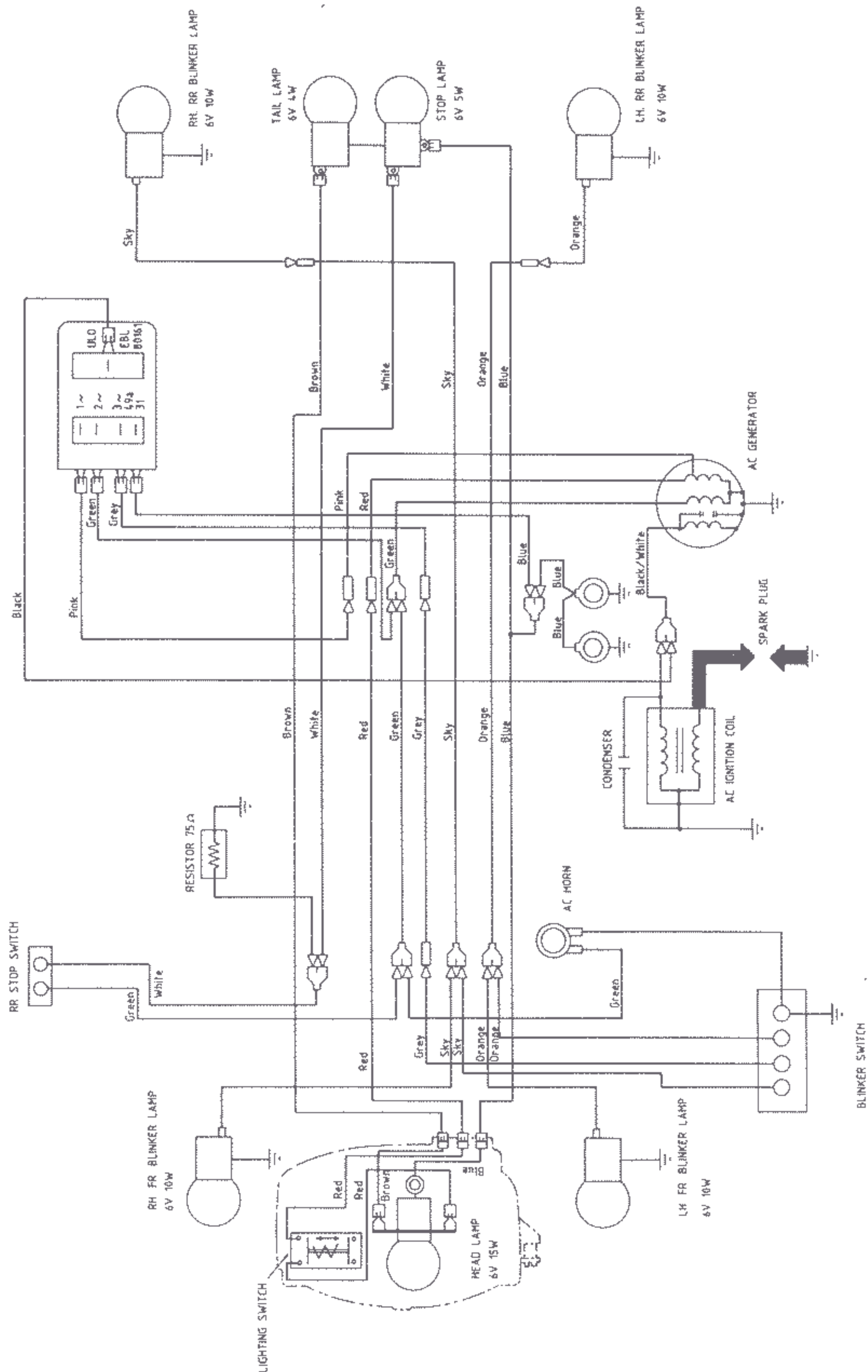


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	CL	HL	GEN	HORN	EARTH
ON	●	●	●	●	●
OFF	●	●	●	●	●

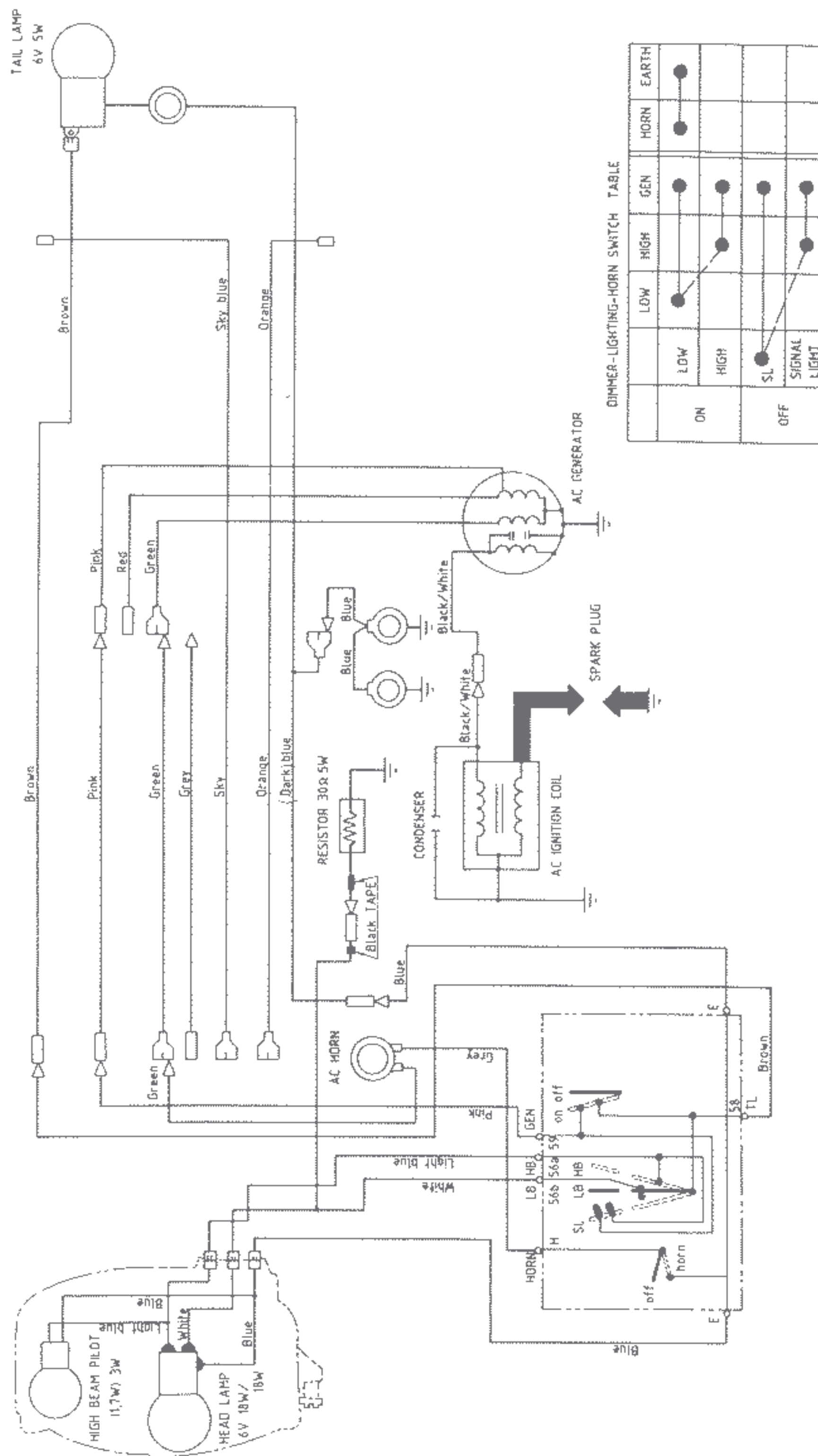
DESTINATION : IT. S VLCS



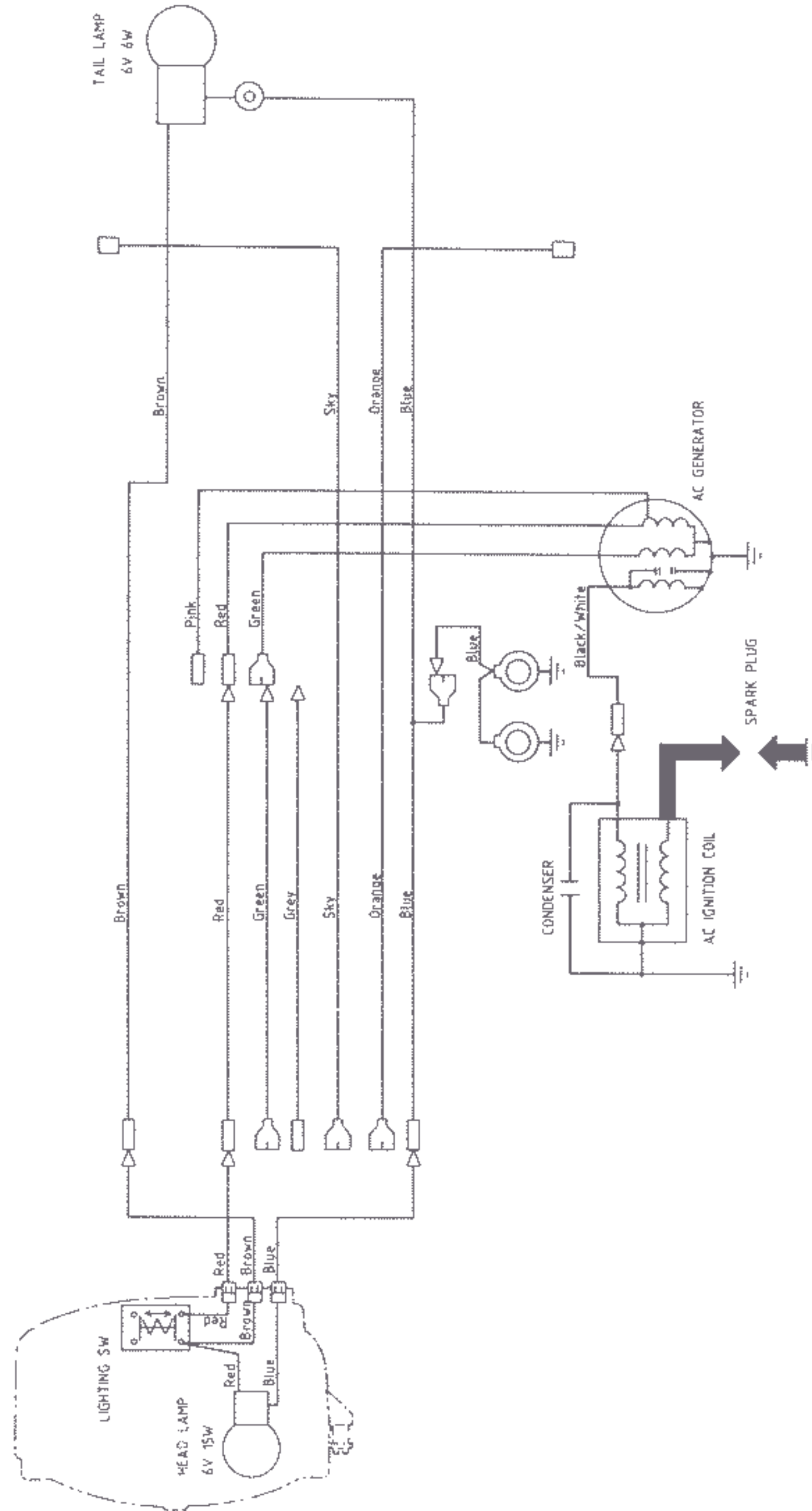
DESTINATION : SVLCSE



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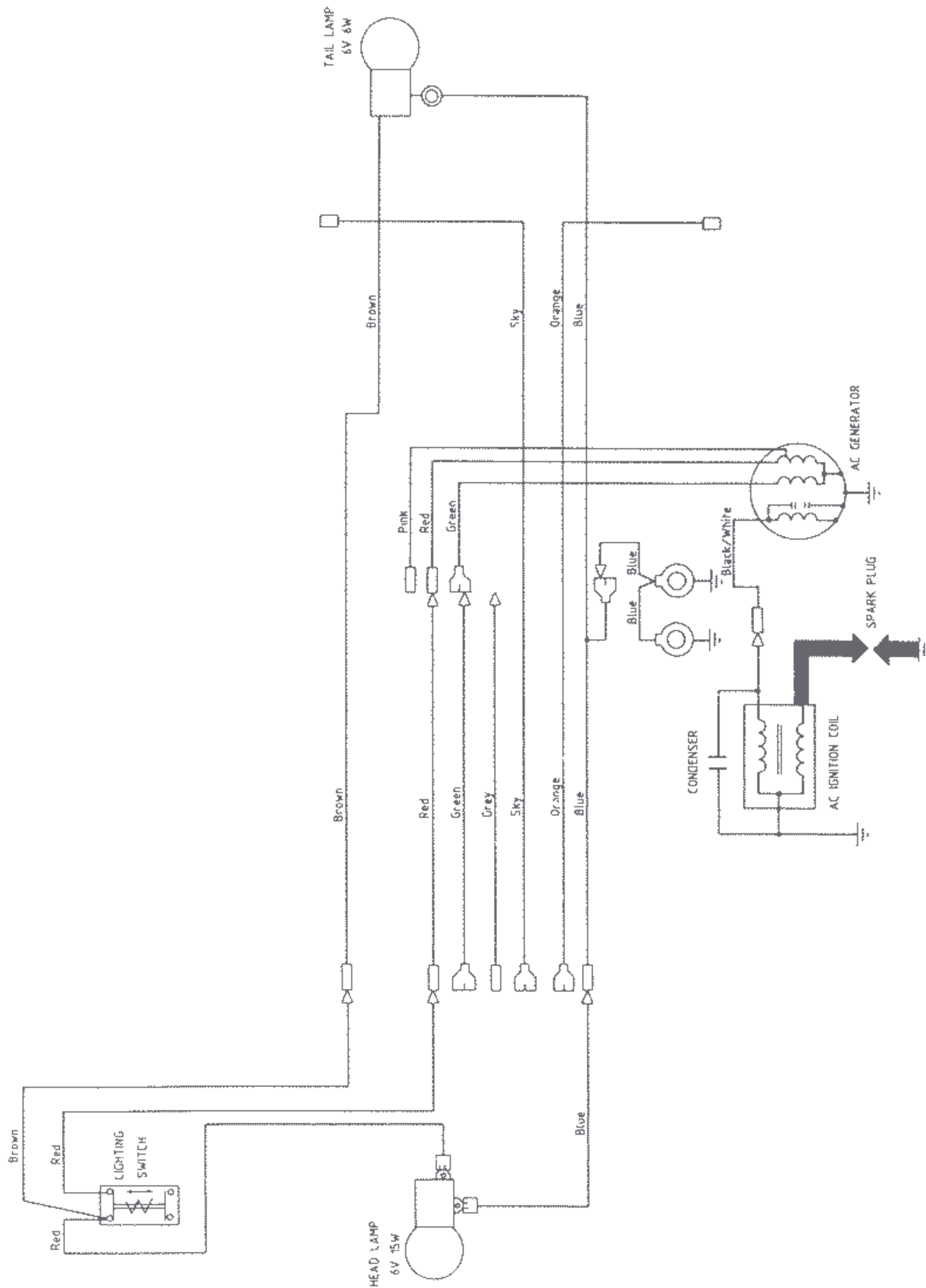
DESTINATION : GB-S VLS
DX VL



DESTINATION : CH



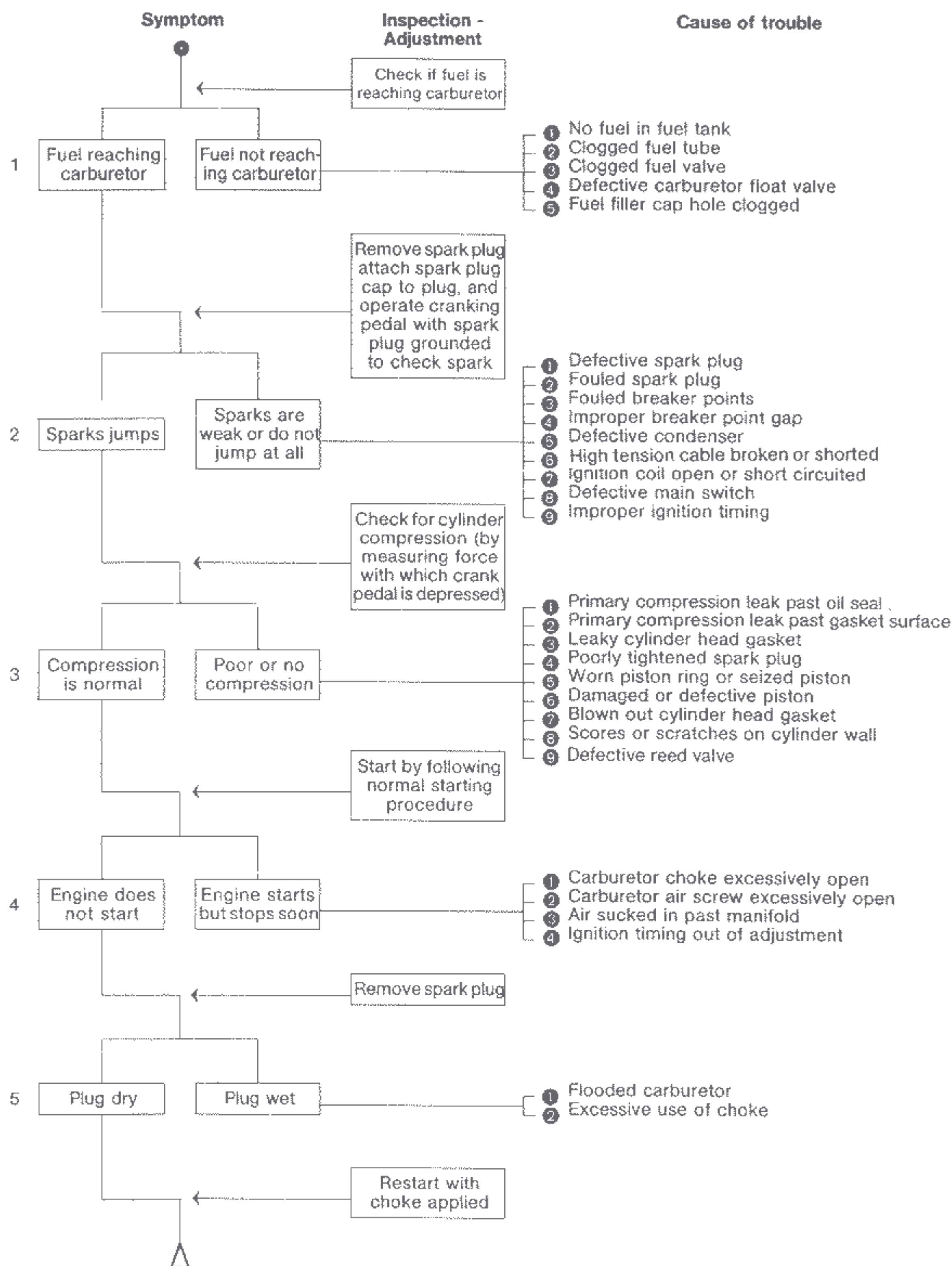
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DESTINATION : MSVLS-CH

6. TROUBLE SHOOTING

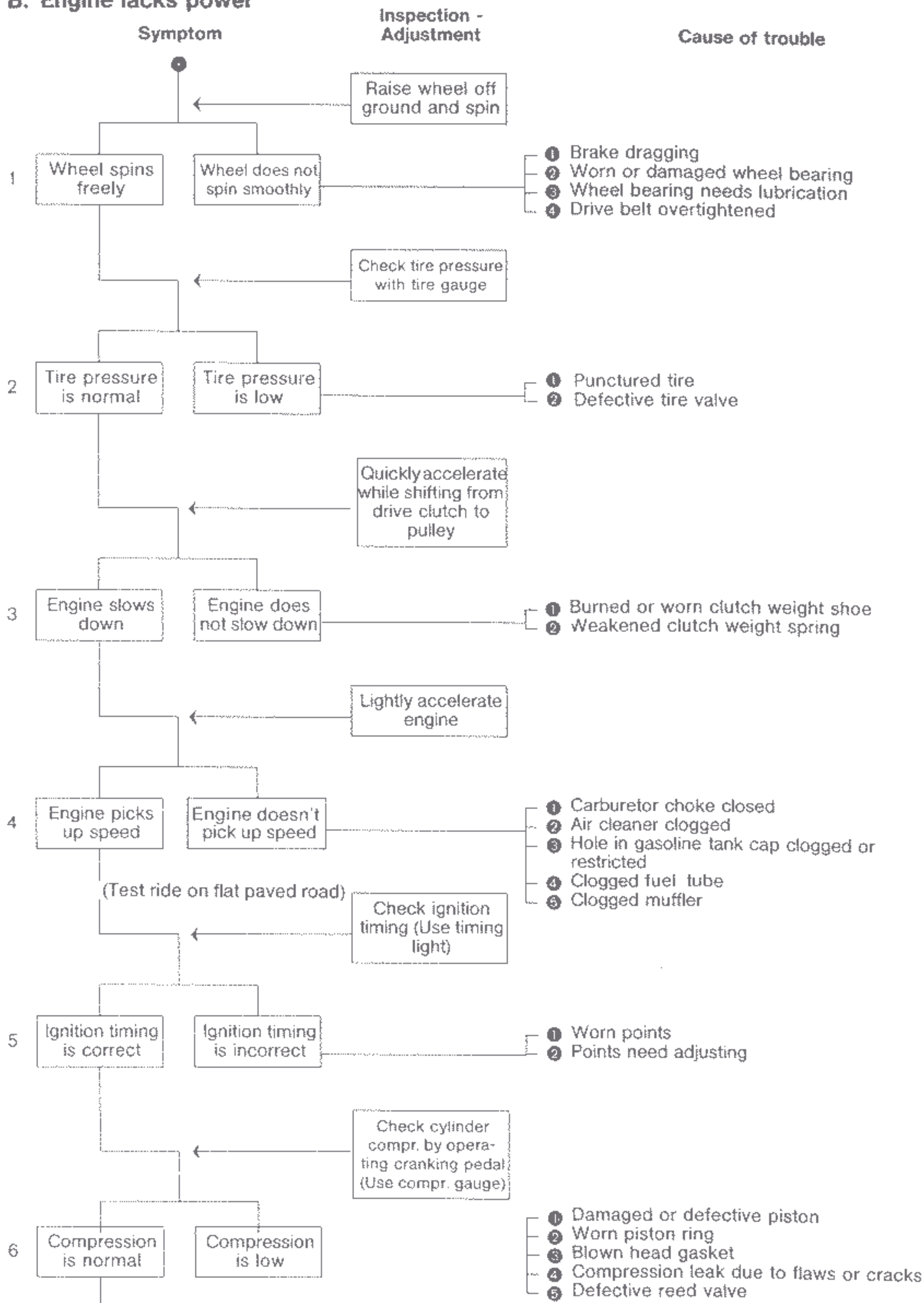
A. Engine does not start or is hard to start



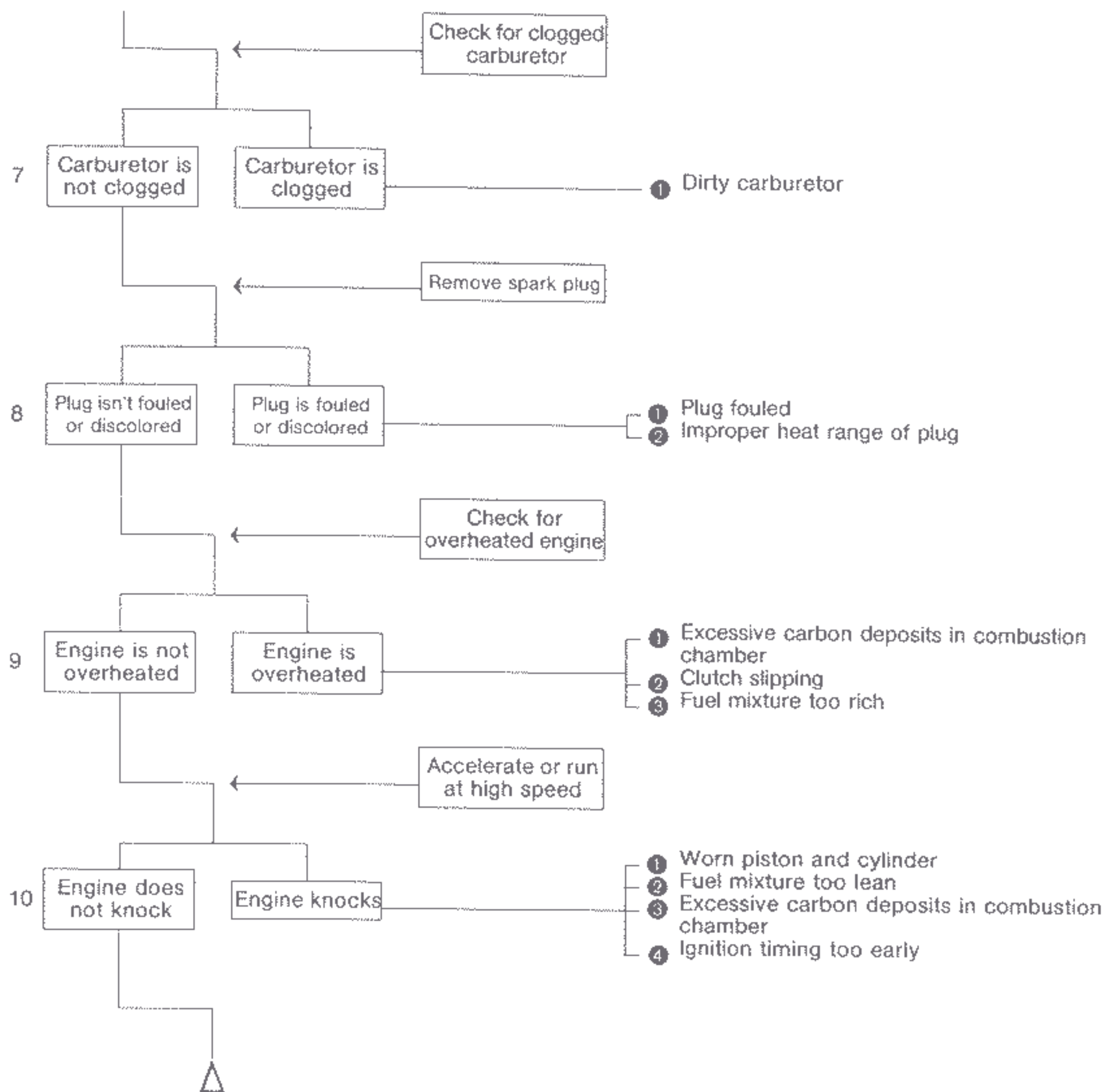


6. TROUBLE SHOOTING

B. Engine lacks power



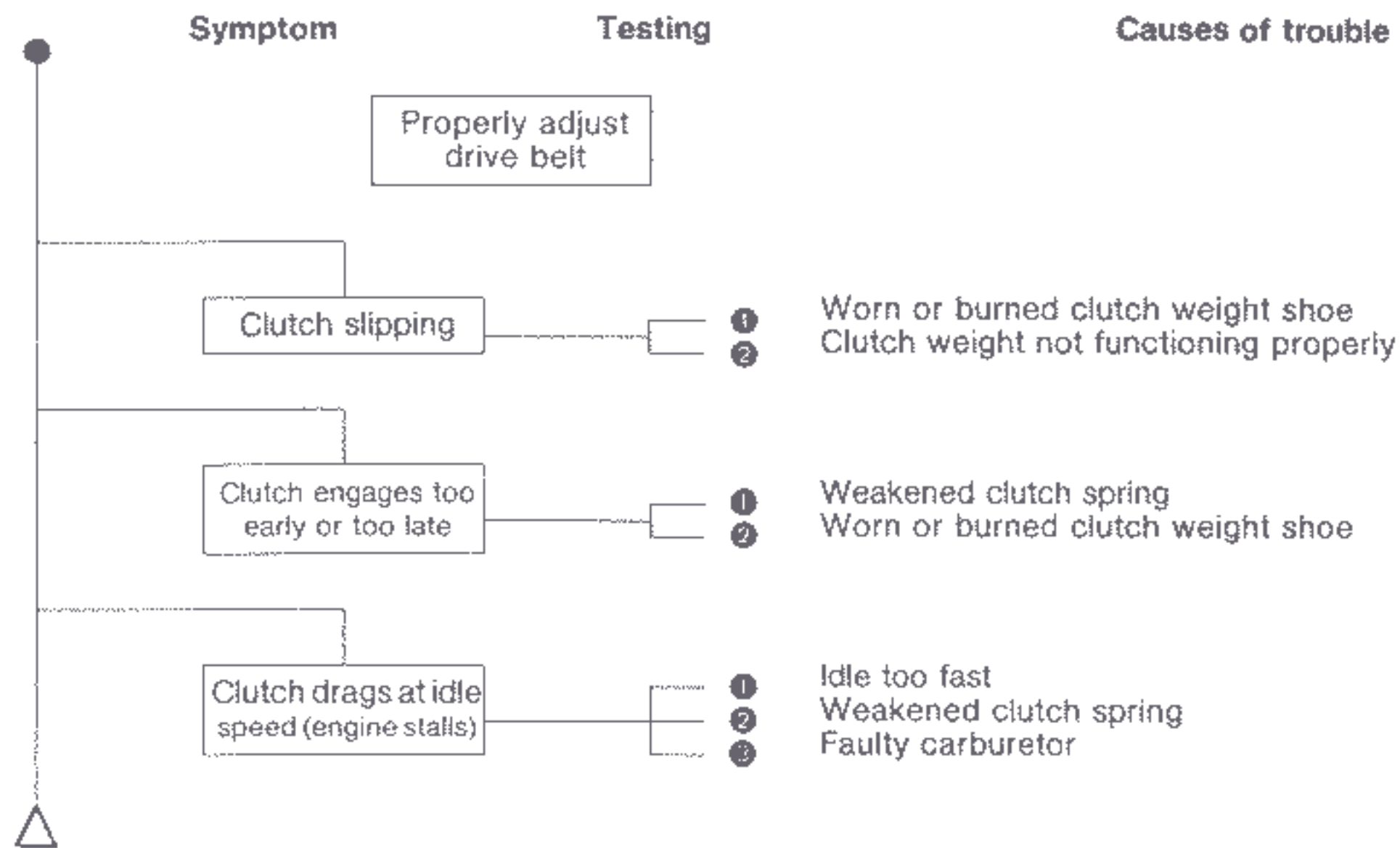
6. TROUBLE SHOOTING



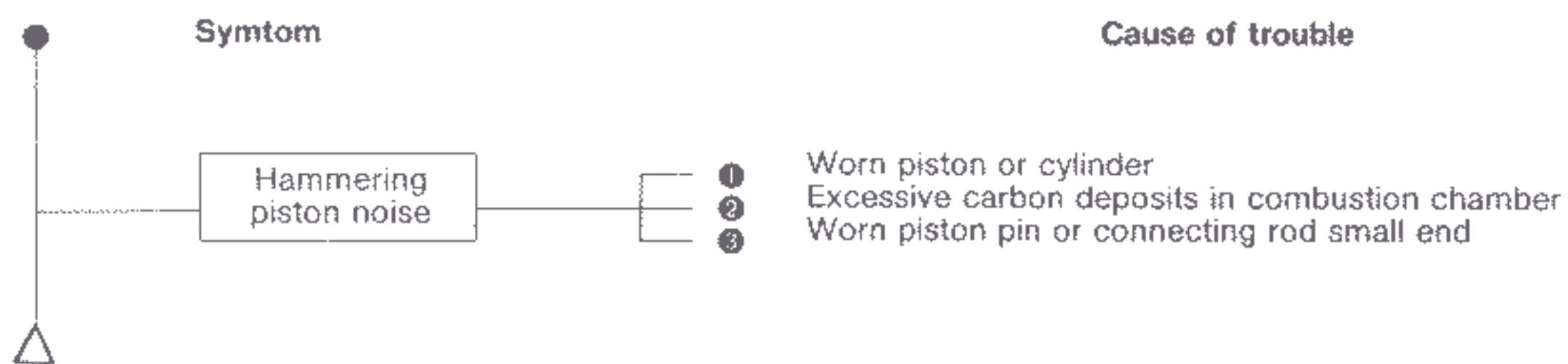


6. TROUBLE SHOOTING

C. Clutch not operating correctly

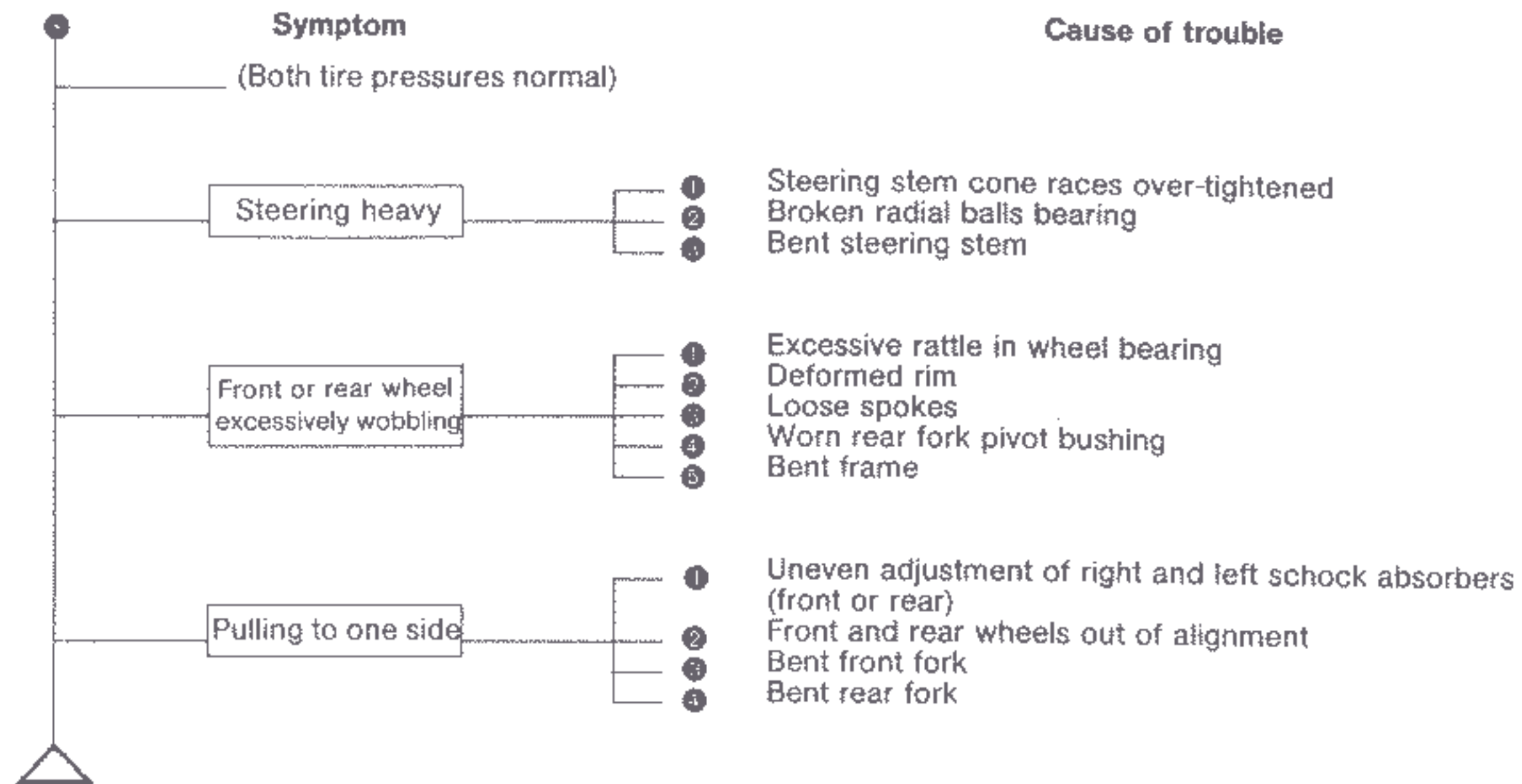


D. Engine noise

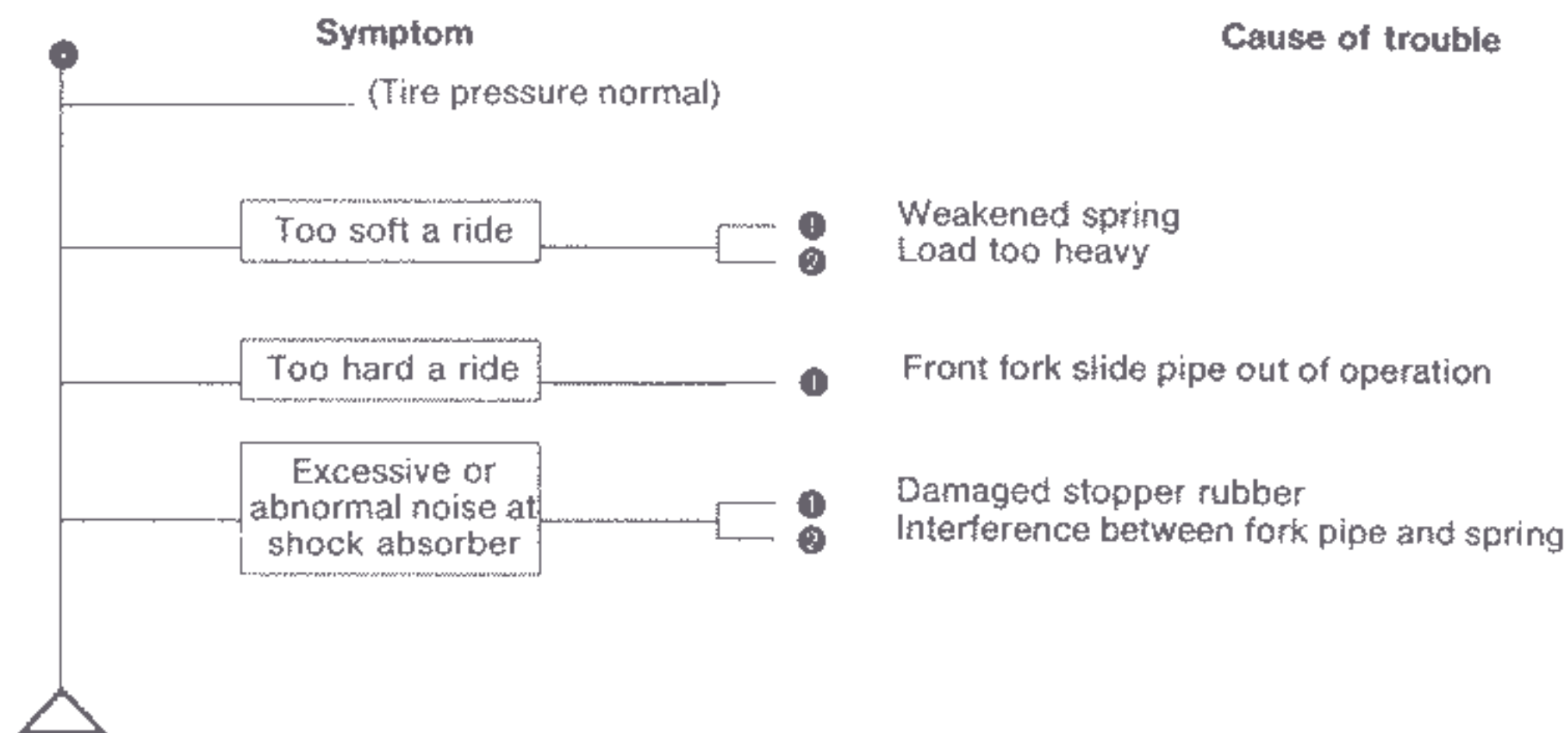


6. TROUBLE SHOOTING

E. Motorcycle pulls to one side



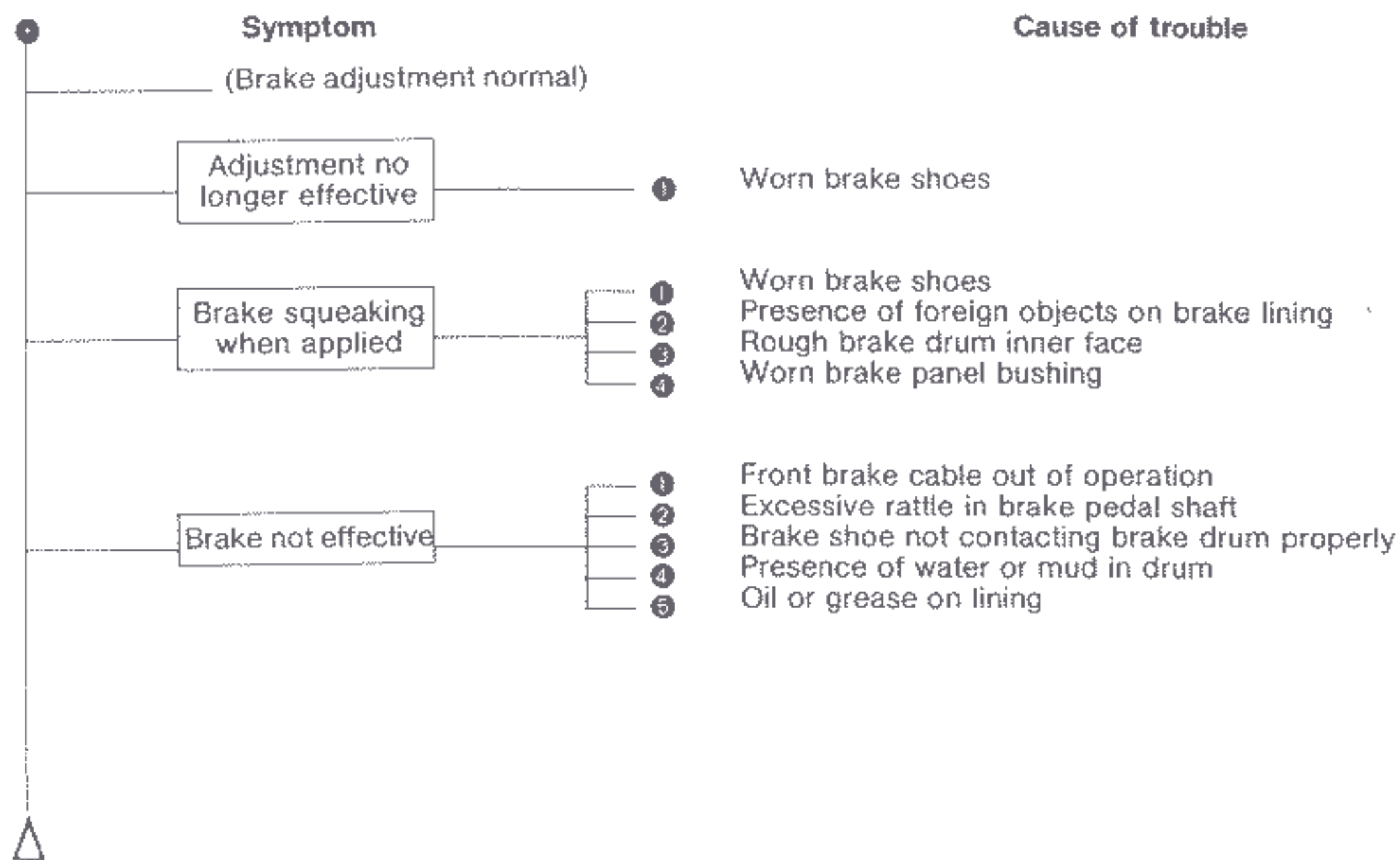
F. Improper front/rear shock absorber





6 TROUBLE SHOOTING

G. Improper braking





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.



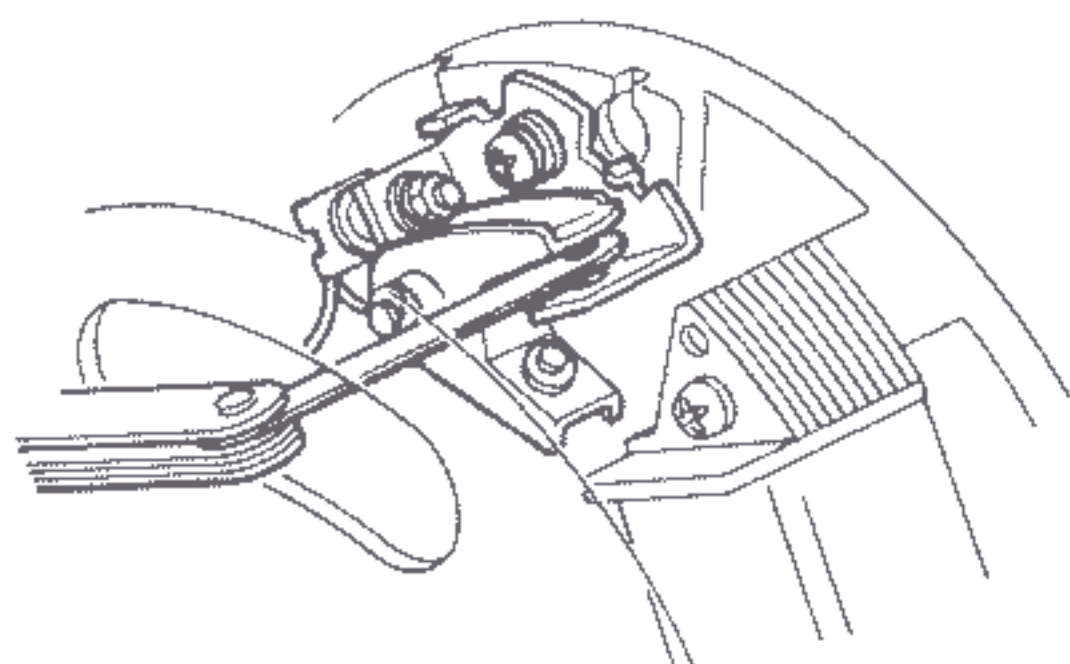
4. INSPECTION/ADJUSTEMENT

1. Contact breaker point/ignition timing	37
2. Spark plug	38
3. Air cleaner element	39
4. Drive belt	40
5. Drive chain	41
6. Seat	41
7. Brake	42



1. Contact breaker point gap / Ignition timing

Remove the generator cover.

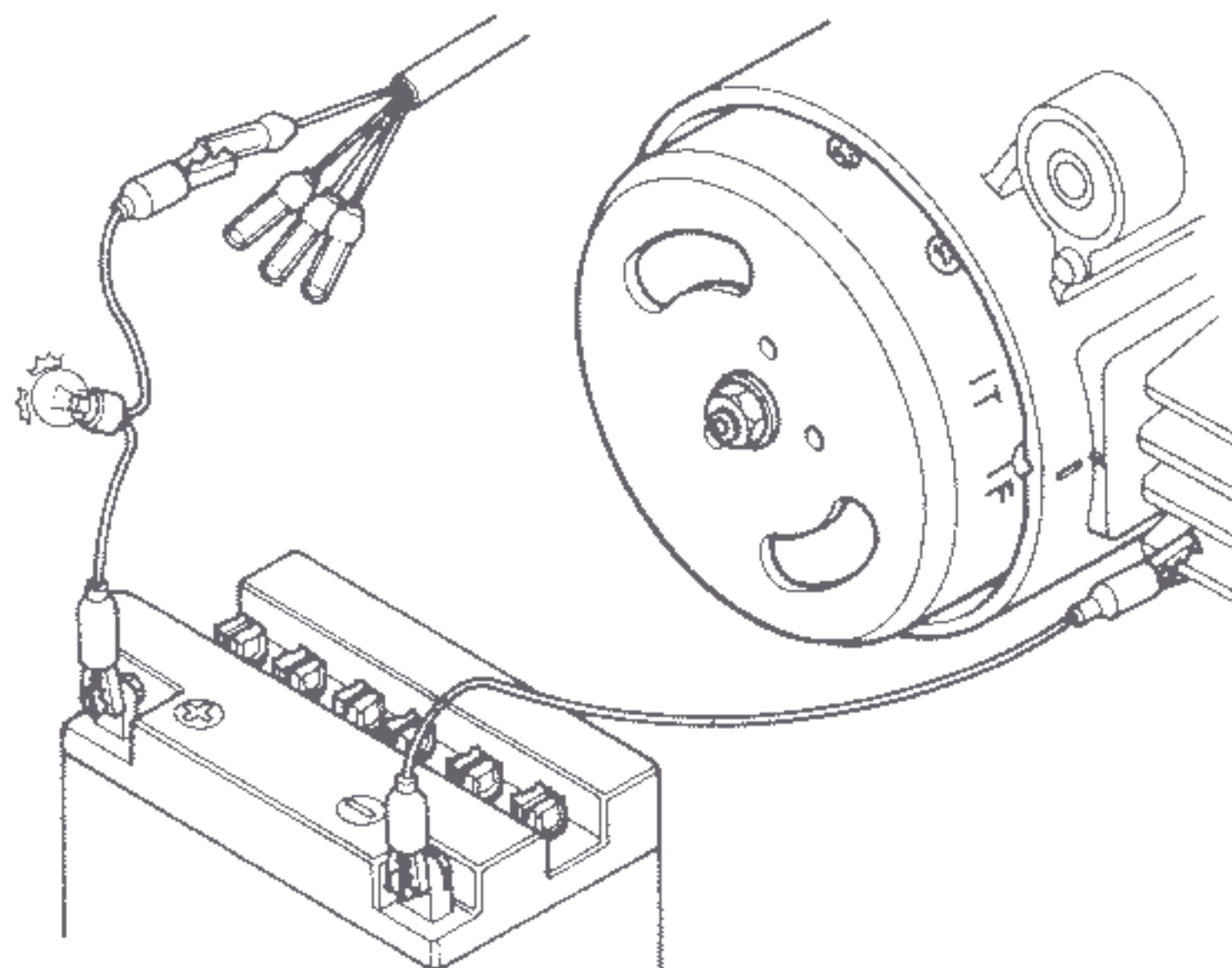


- ① Insert a thickness gauge through the rotor hole
- ② Check point gap

point gap	0.3 - 0.4 mm
-----------	--------------

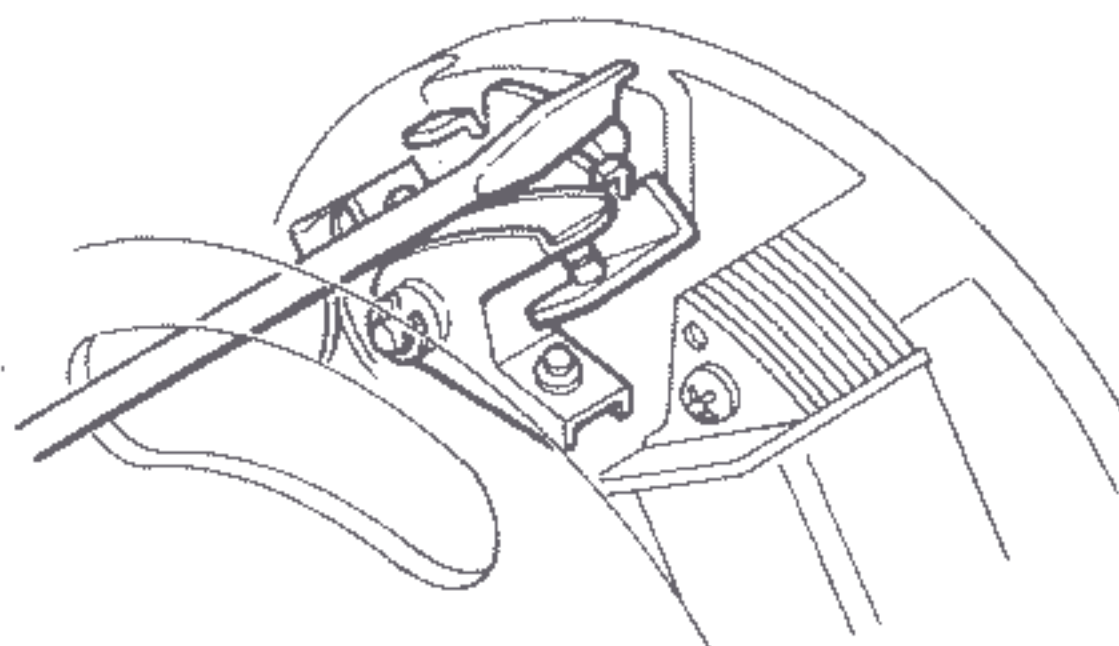
Replace if beyond specifications.

● 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 breaker 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.

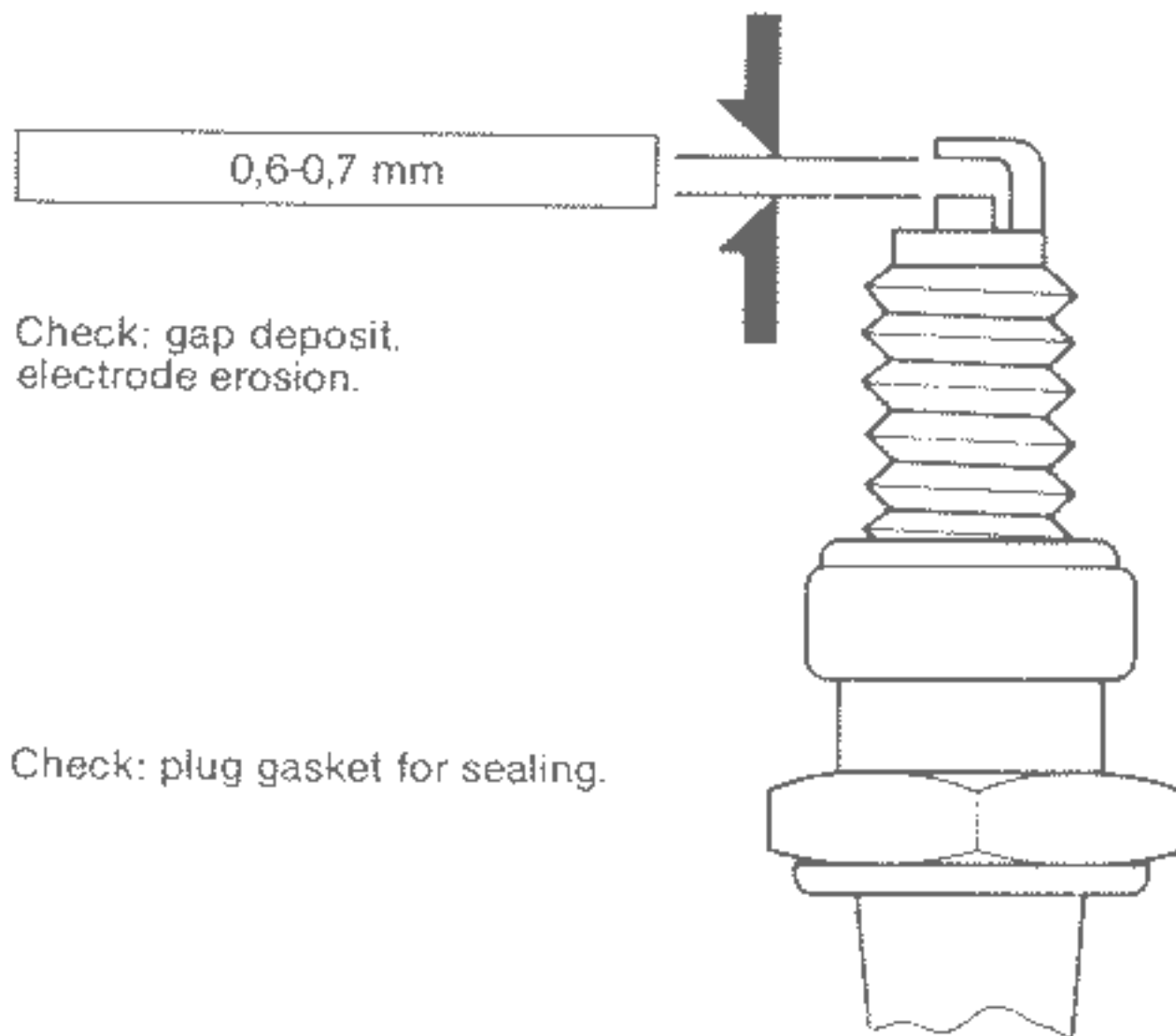




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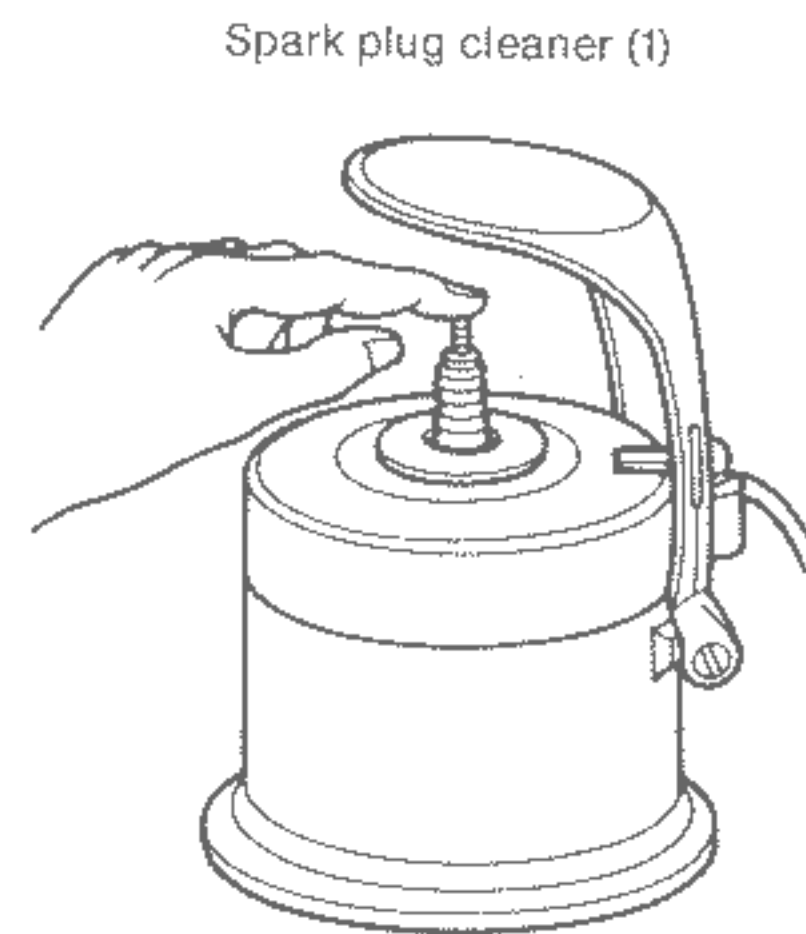


2. Spark Plug



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.



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



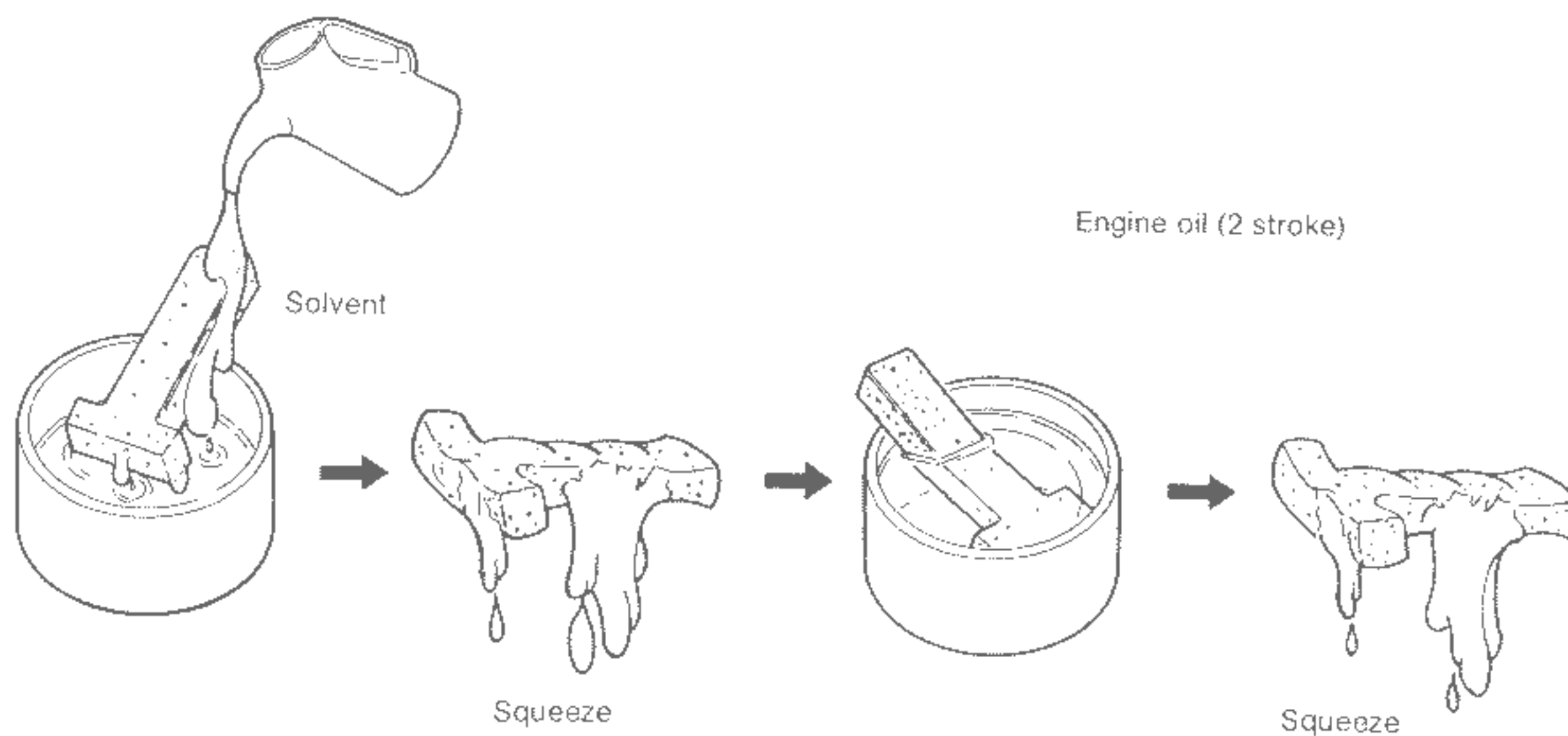


HONDA PA50

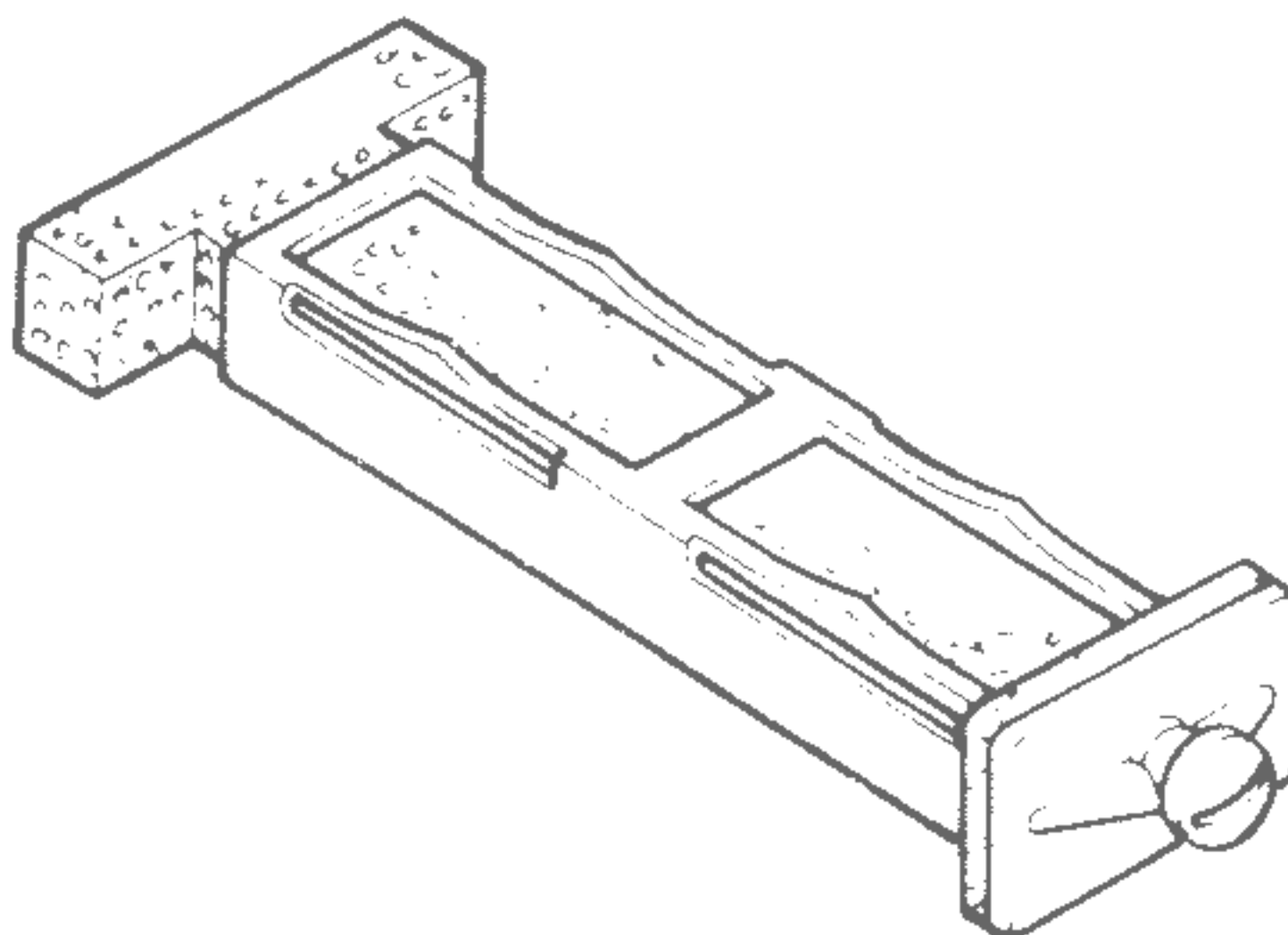


3. Air cleaner element

- 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 squeeze out excess oil.



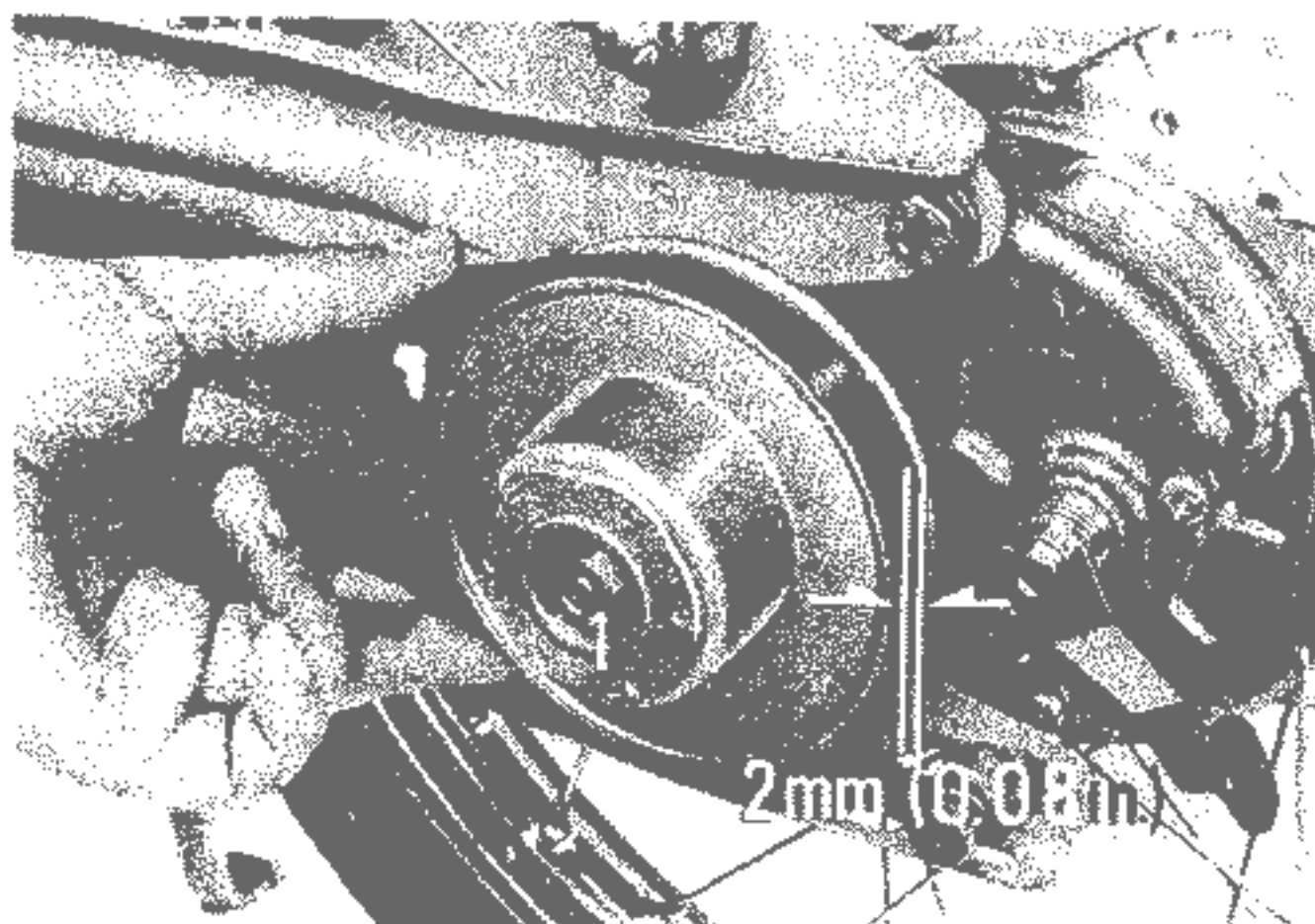
- 5 Reinstall the aircleaner element into the case.





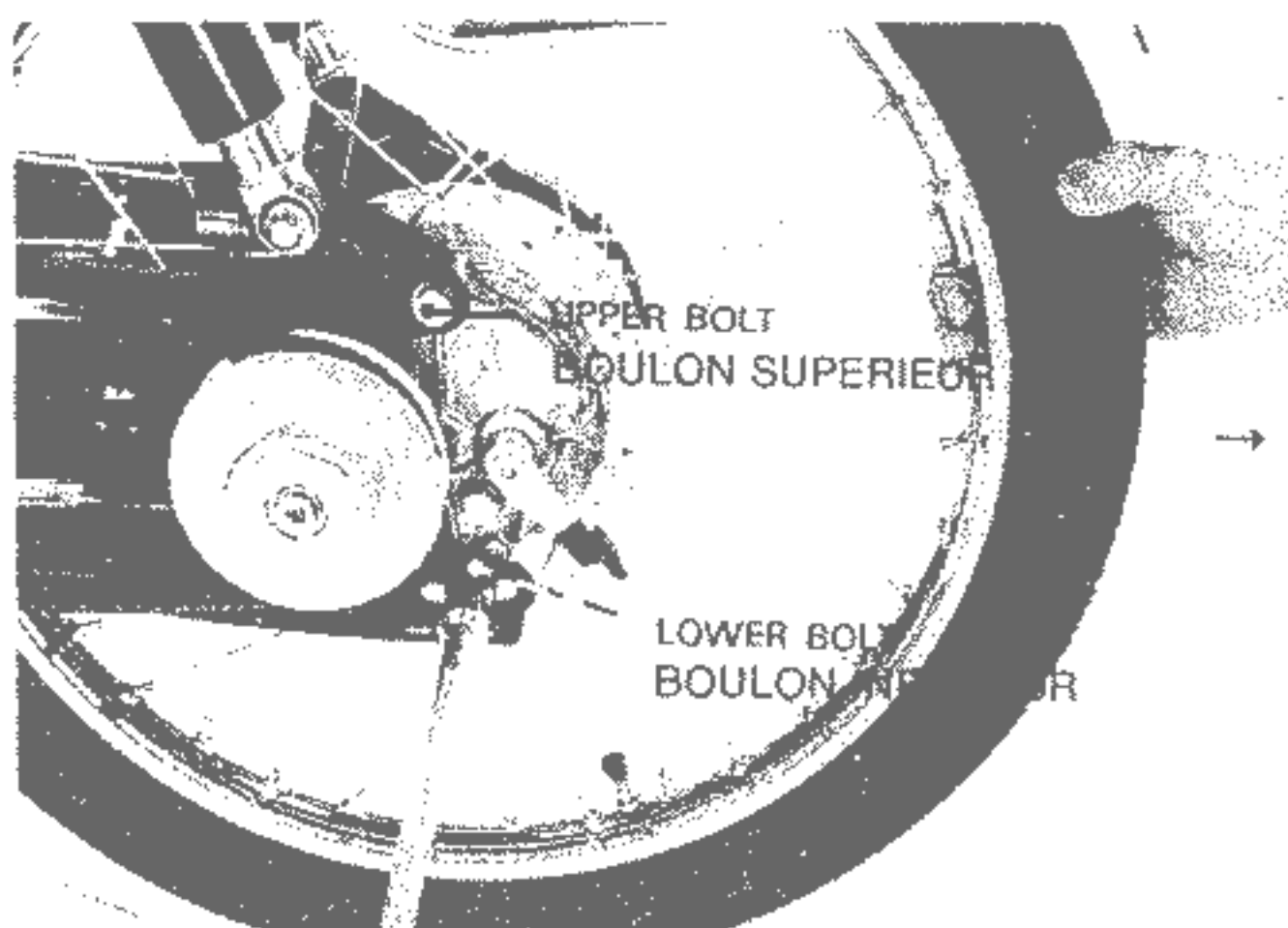
4. Drive belt

- 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 midway between pulleys.
- ④ Move the wheel backward and tighten the bolts in the following order.

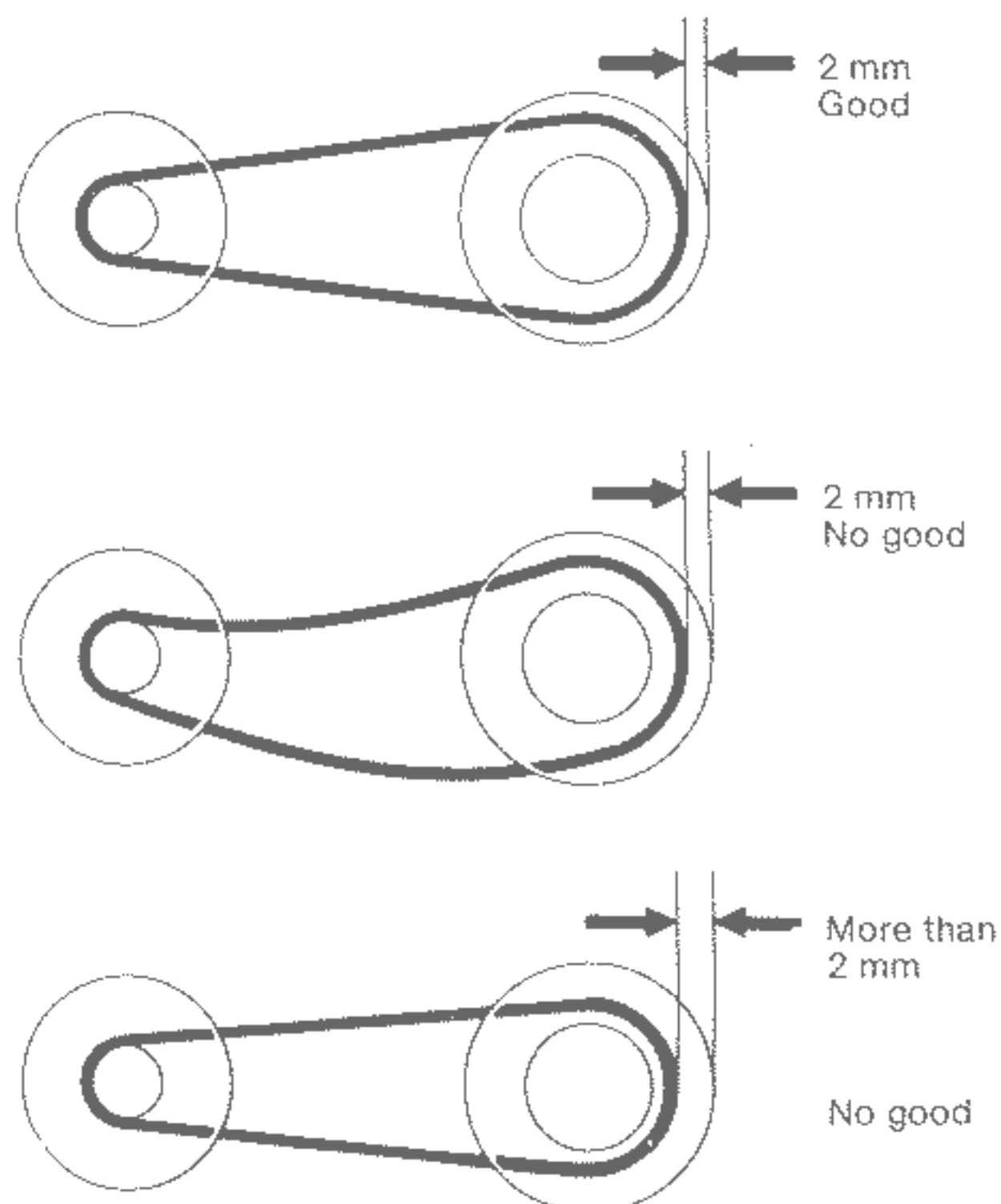


NOTE:

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



- ⑤ Operate the pedal 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.





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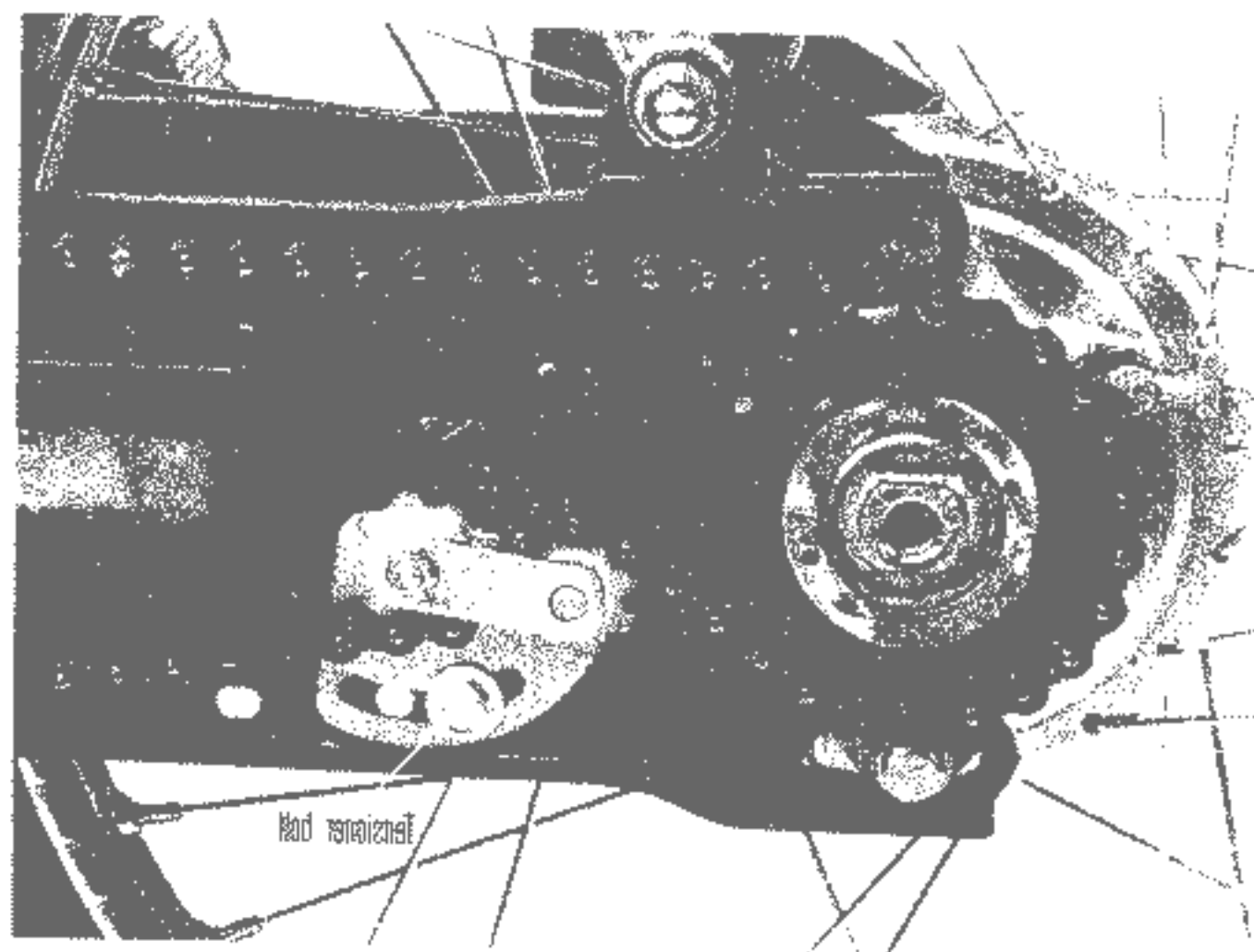
5. Drive chain

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

Chain slack	5-10 mm
-------------	---------

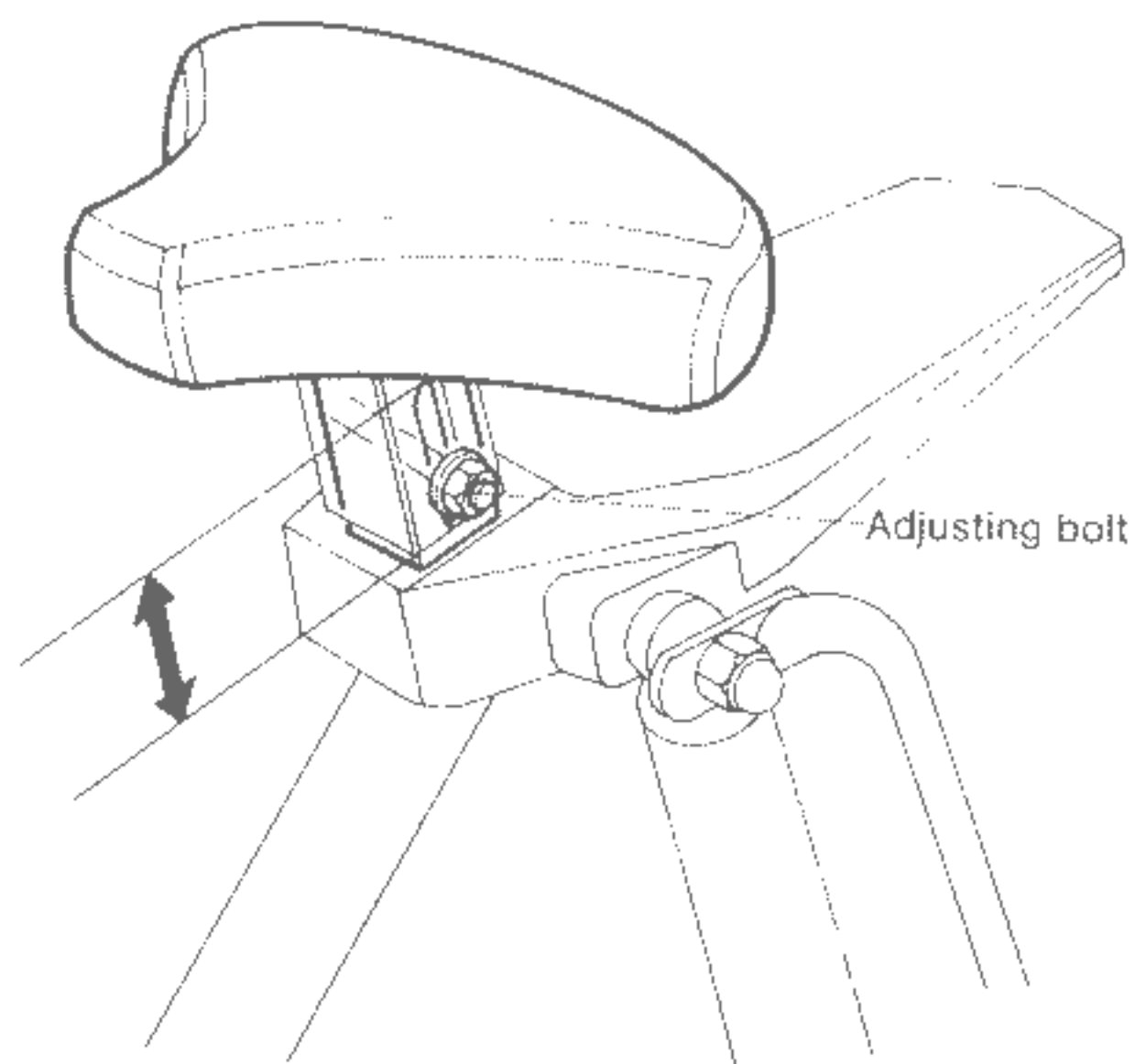
NOTE:

Adjust the drive chain tension after drive belt adjustment.

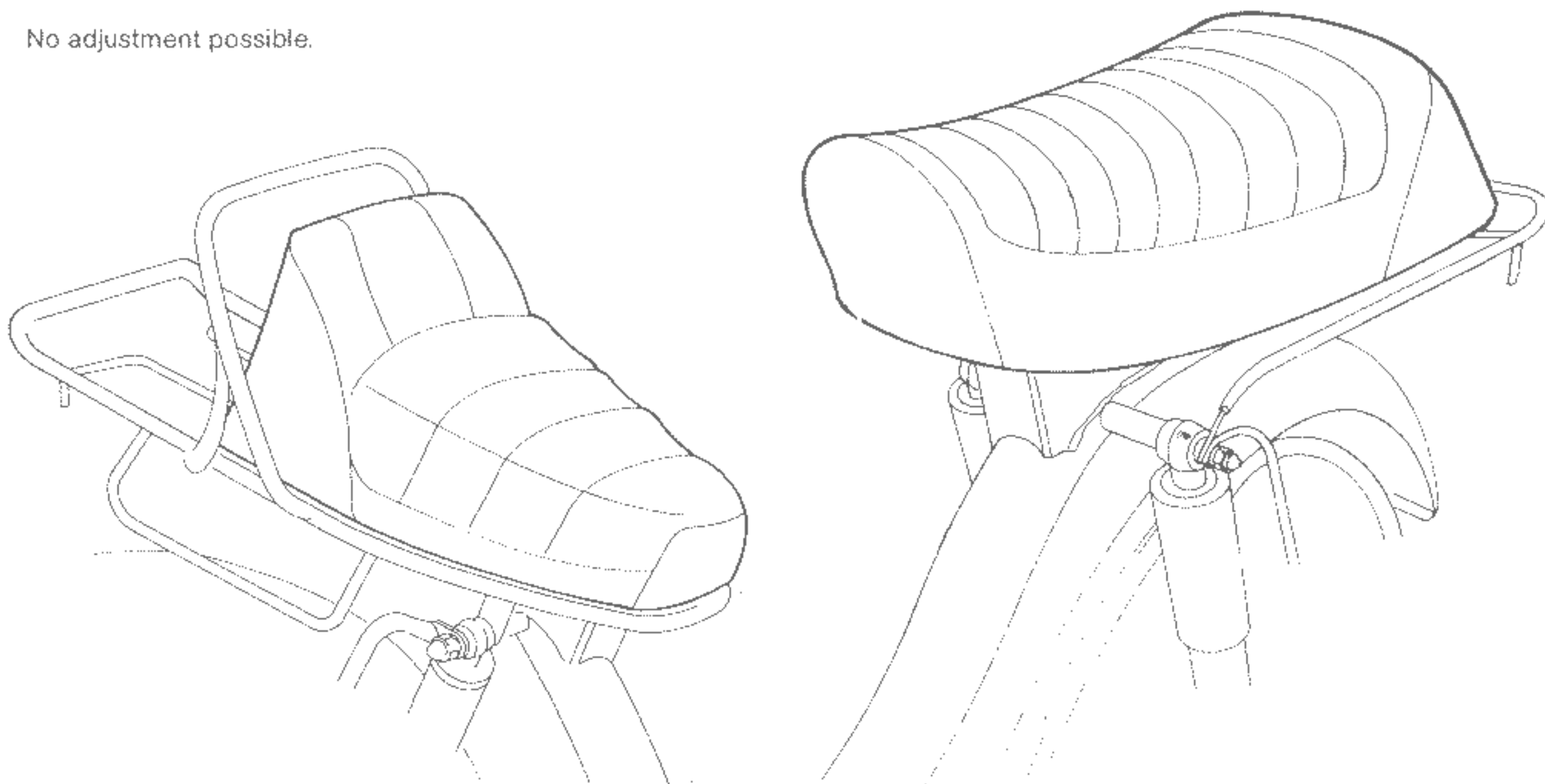


6. Seat

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



No adjustment possible.



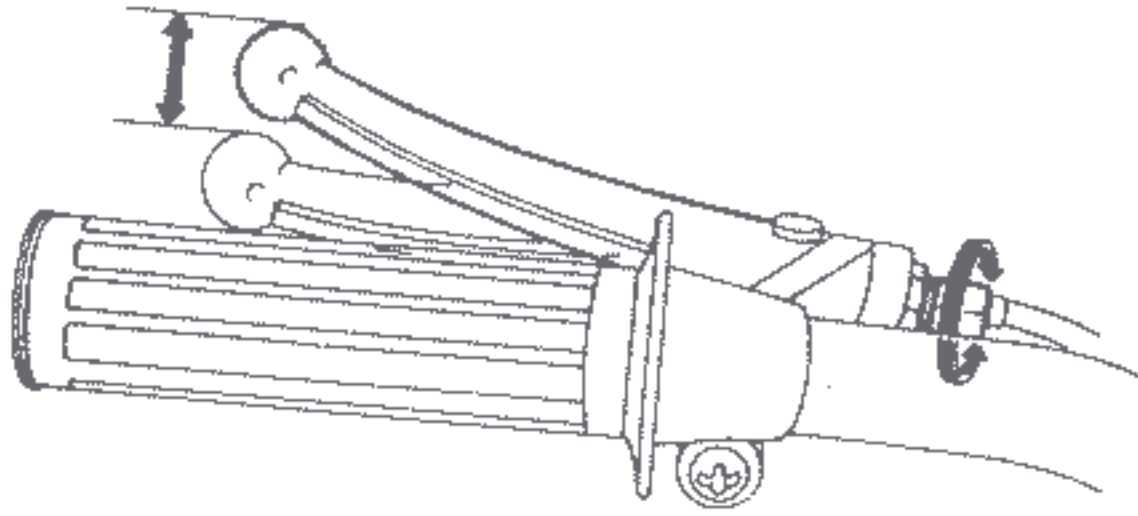


7. Brakes

Brake lever adjustment.

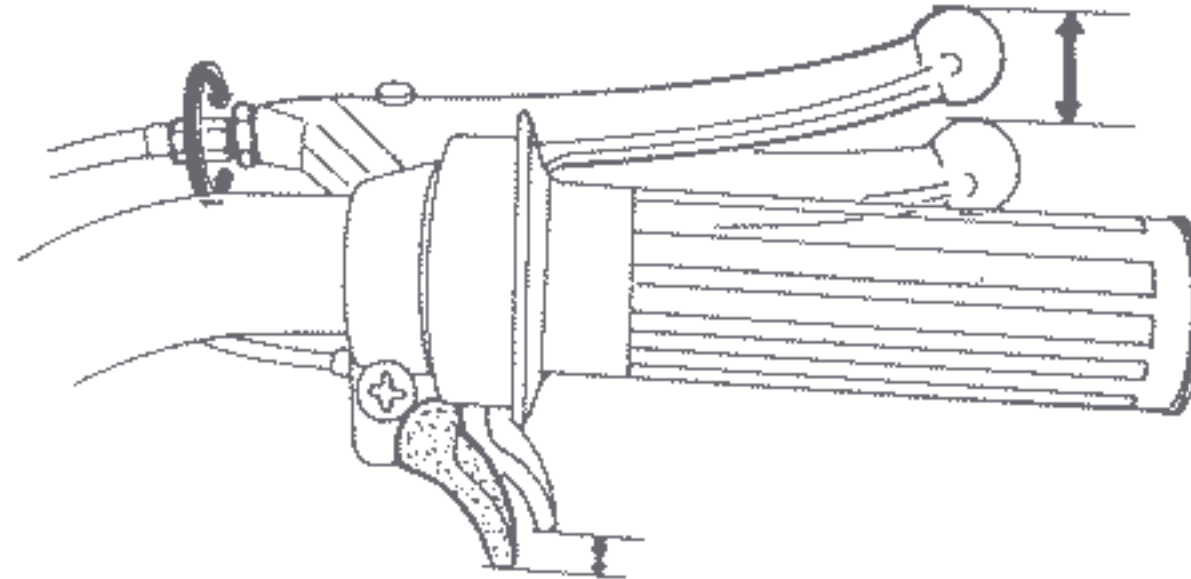
Check brake lever free play at lever tip. If out of specifications, adjust by turning adjusting nut.

● Rear



Front brake lever play (1)
10-15 mm

● Front



Rear brake lever play (2)
10-15 mm



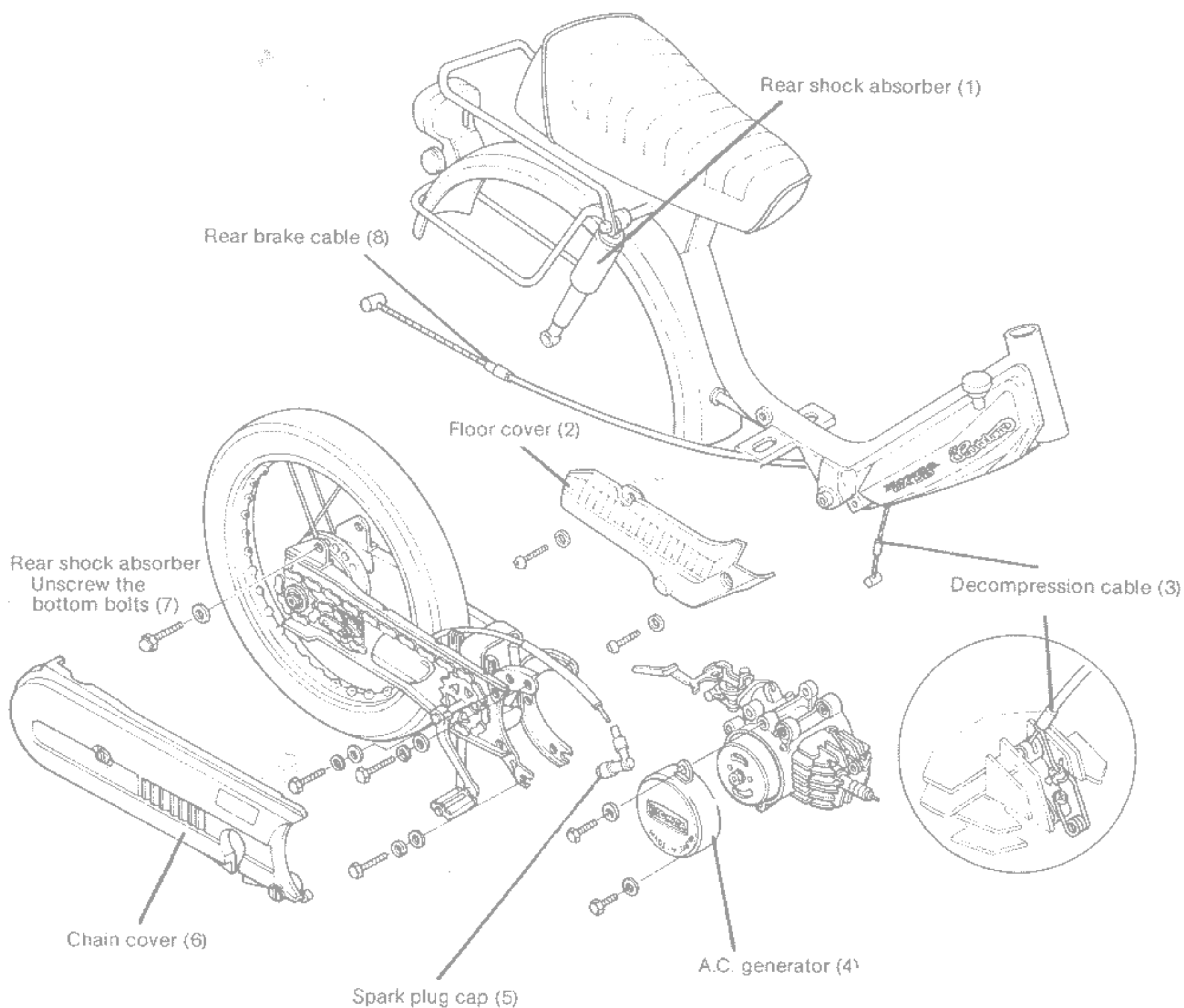
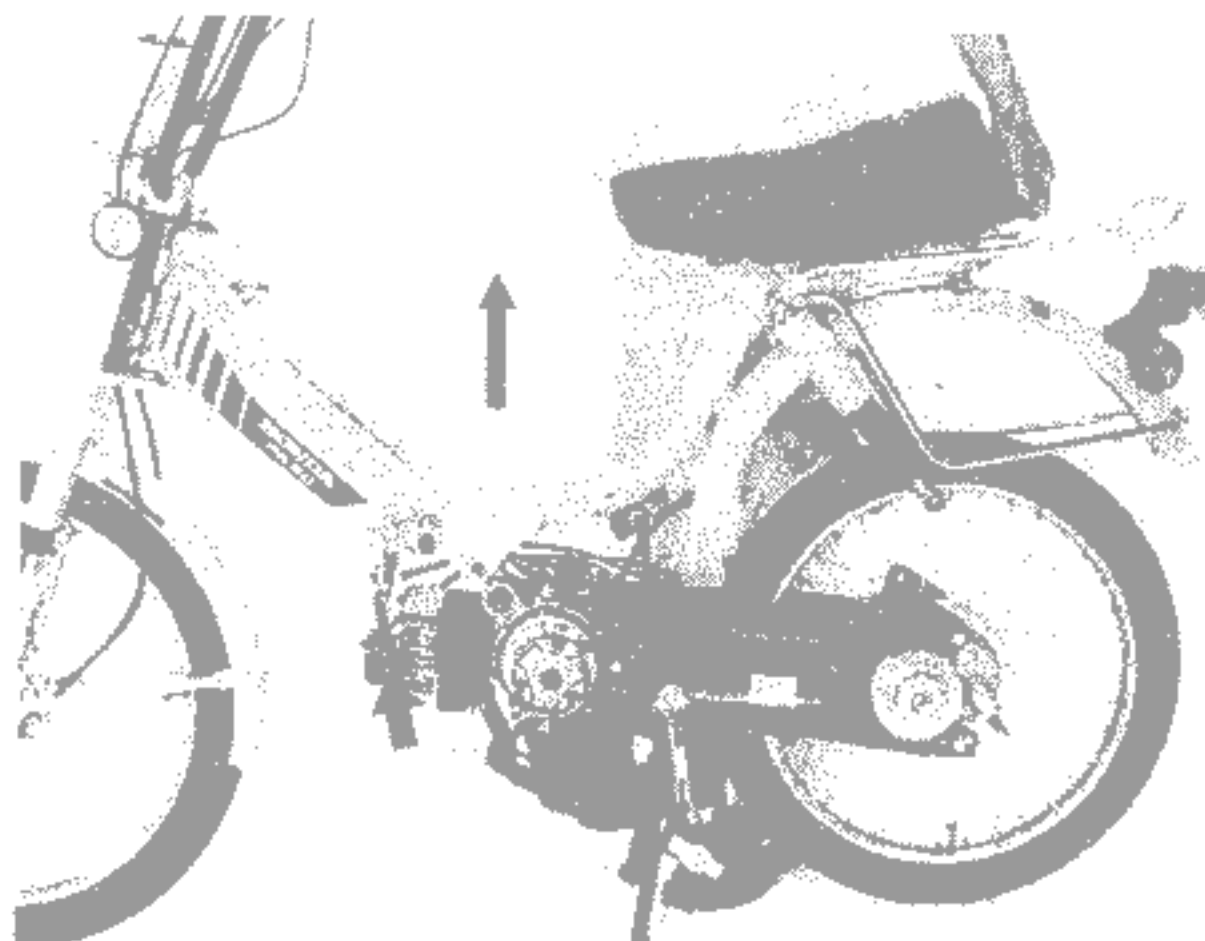
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5. ENGINE REMOVAL / INSTALLATION

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



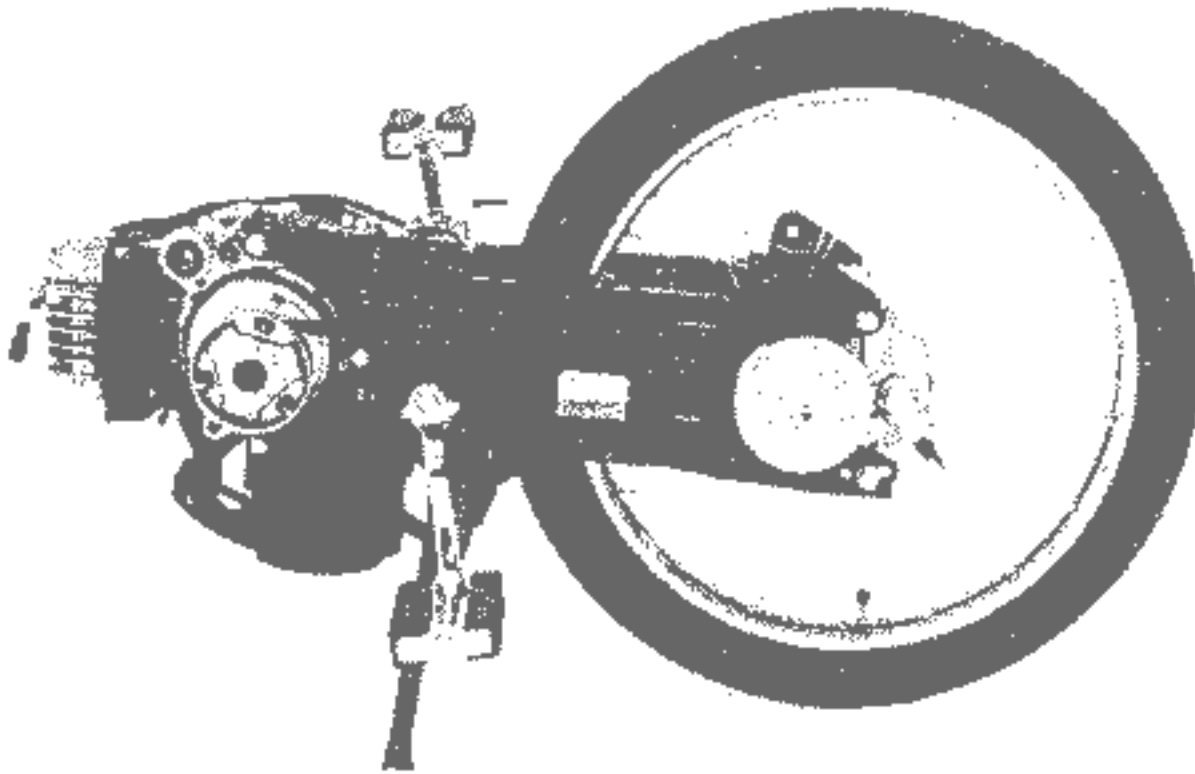


HONDA PA50

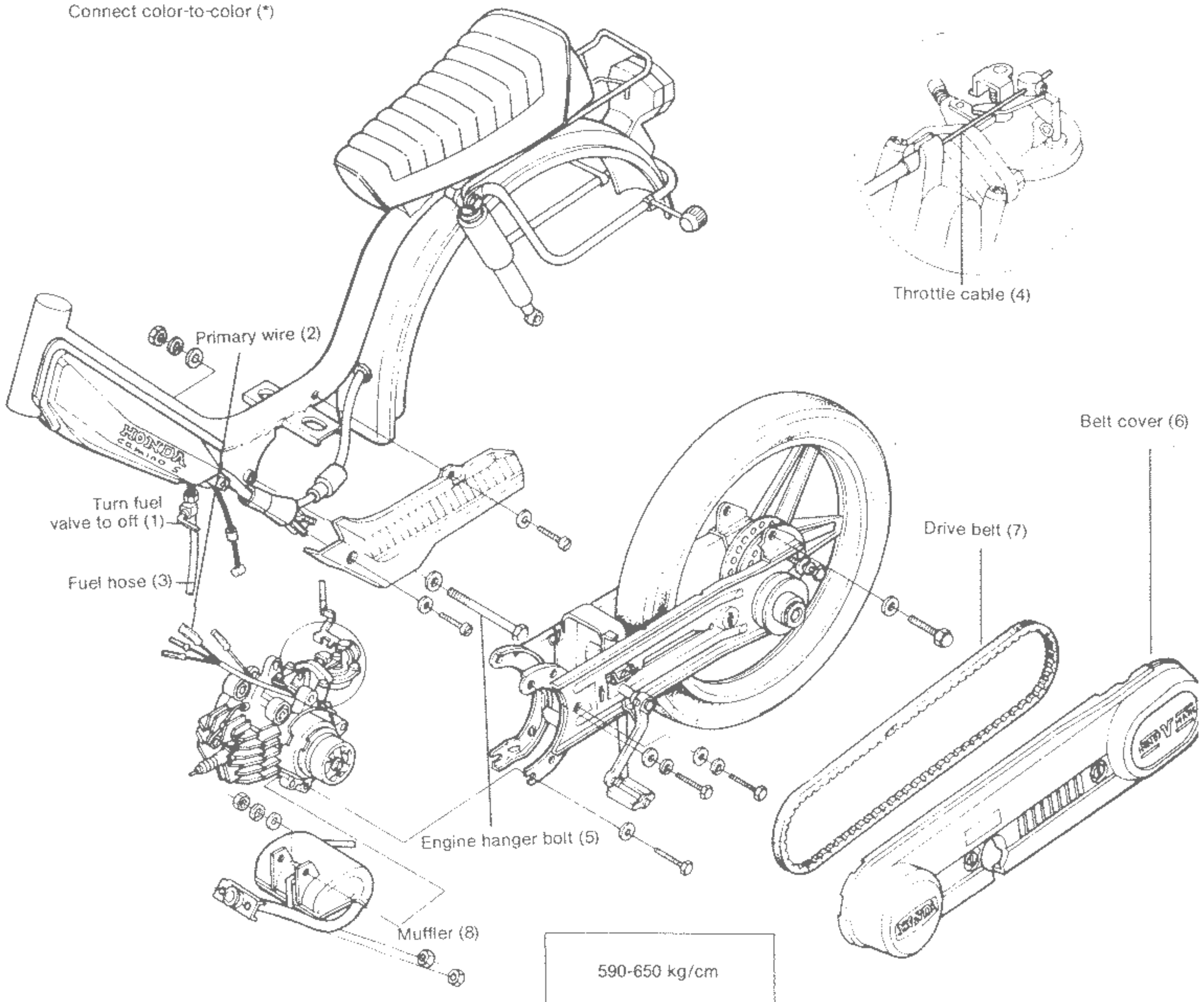


● PULL THE ENGINE FORWARD AND AWAY FROM THE REAR FORK IN THE FOLLOWING ORDER.

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 (*)





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6. CYLINDER HEAD / CYLINDER / PISTON

A. Trouble shooting	45
B. Disassembly / Assembly	47
C. Inspection	48
D. Testing compression	51

A. Trouble shooting

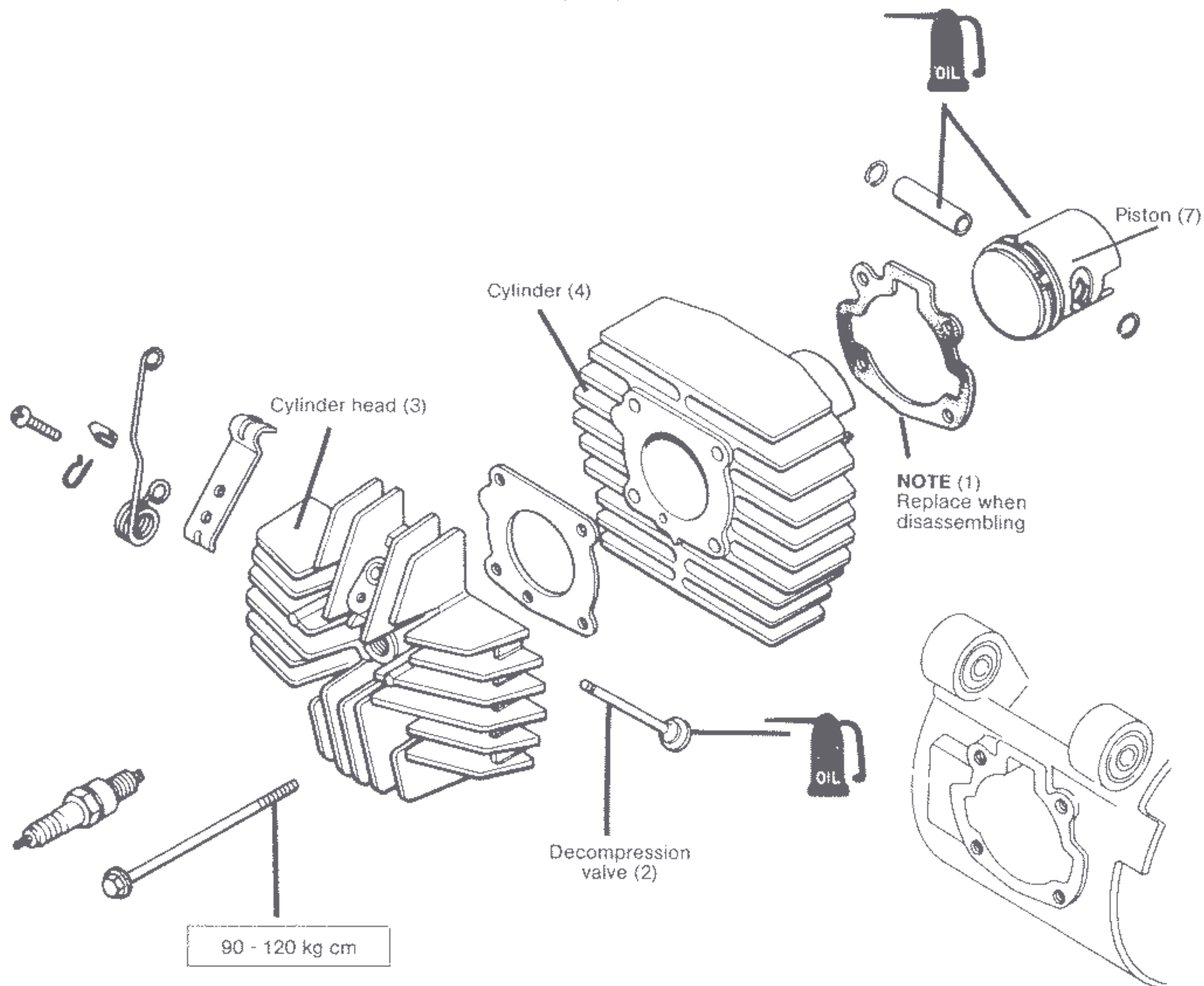
Symptom	Probable cause
No or loss of compression	Poorly tightened spark plug Blown cylinder head gasket Worn or seized piston rings Damaged cylinder or piston Defective reed valve Decompression valve not seating correctly
Overheating	Excessive carbon in combustion chamber Excessive carbon on piston or 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 Disconnect the decompression cable and plug cap at the cylinder 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

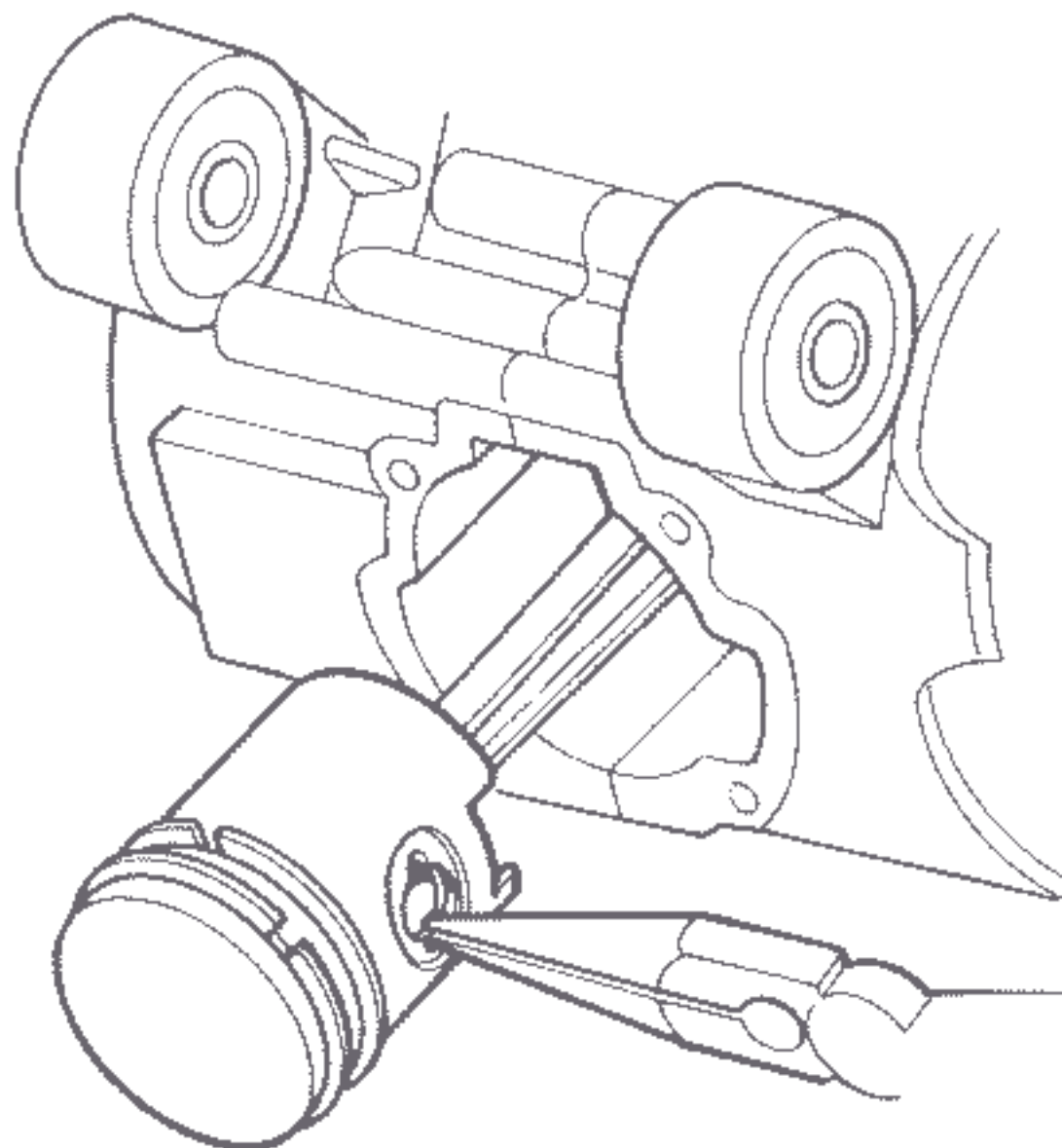
PISTON PIN CLIP (5)
Note
During assembly, install
new pin clip.



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

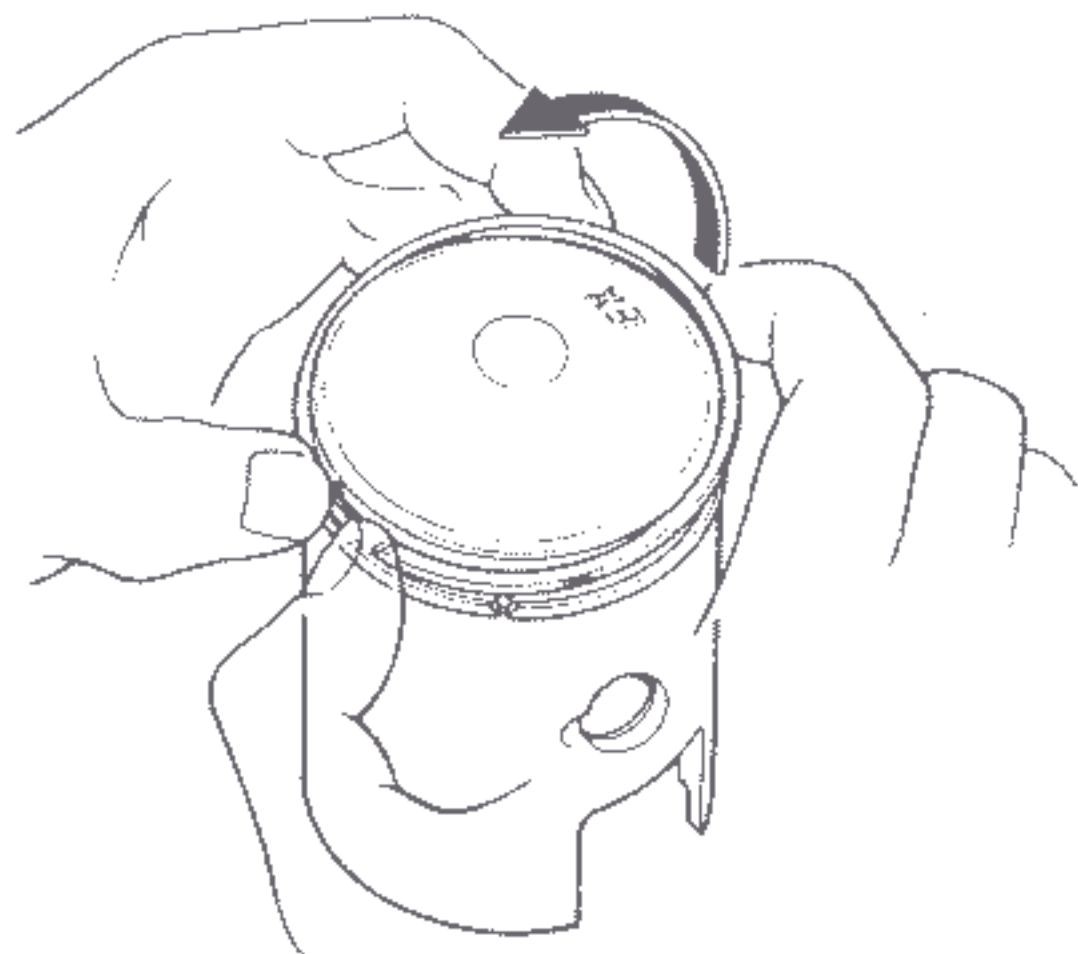
B. Diassembly/Assembly

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



NOTE:
Avoid scoring or scratching
the piston

● Piston Ring DISASSEMBLY/ASSEMBLY



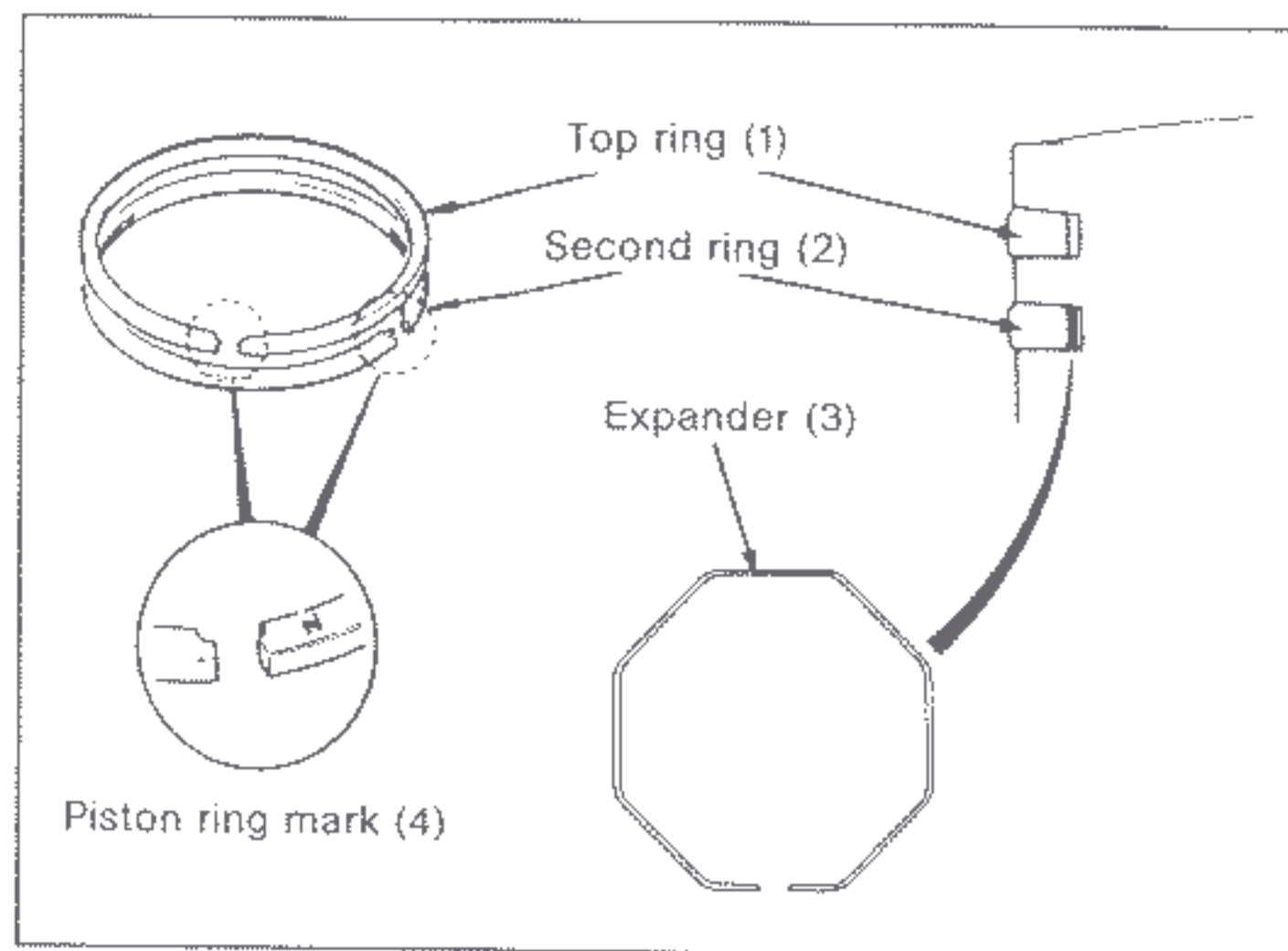
Always remove piston ring by lifting in
the direction of the arrow.

Do not damage the piston rings

● ASSEMBLY

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

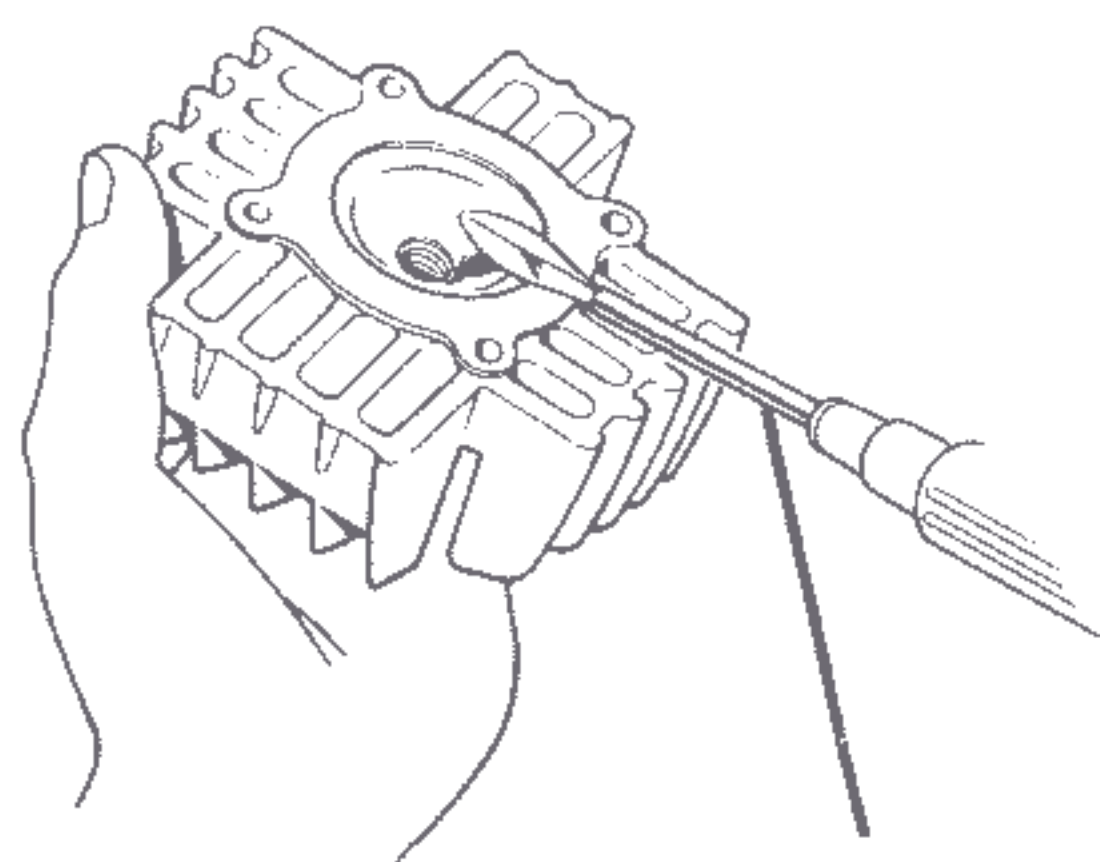
N: Nippon
T: Teikoku
1 = 1N or 1T
2 = 2N or 2T



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

C. Inspection

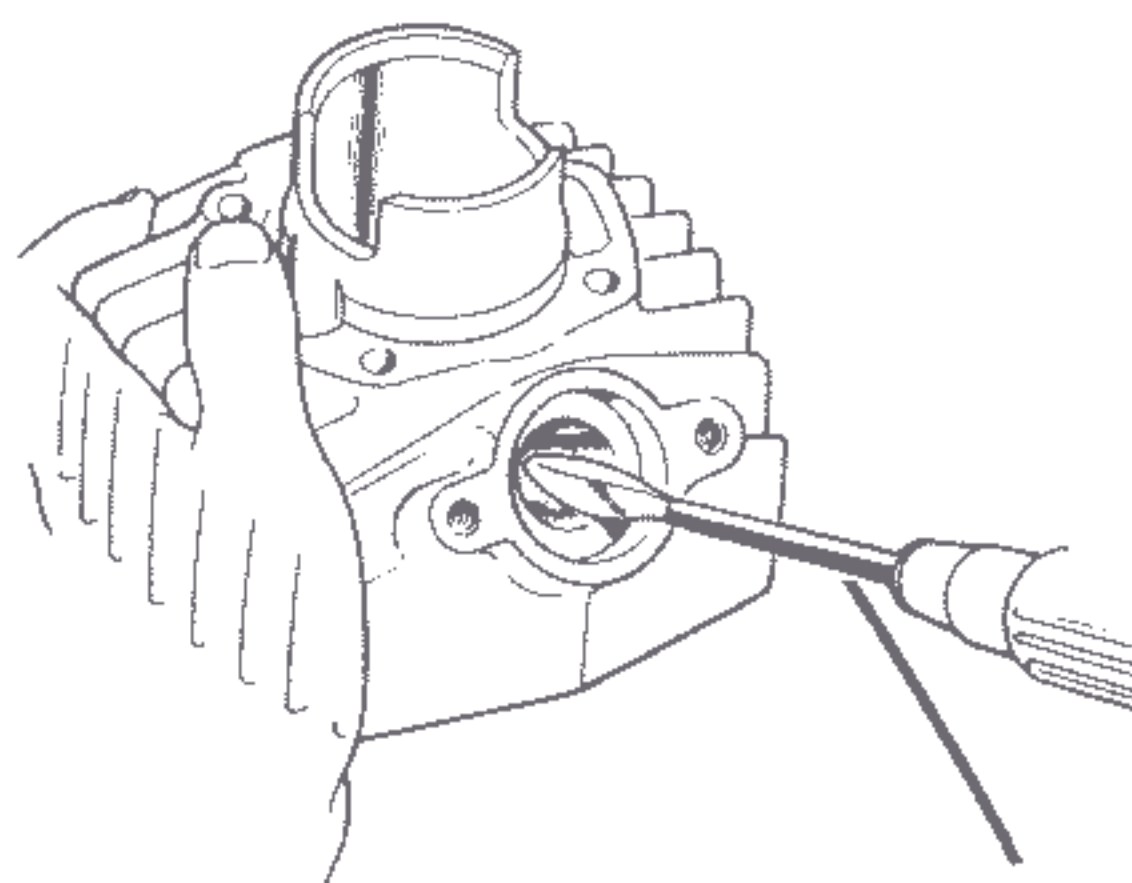
● Cylinder head DECARBONIZING



Scraper (1)

Avoid scratching side surface,
clean after decarbonizing

(Exhaust port. DECARBONIZING)



Scraper (1)

Clean after decarbonizing

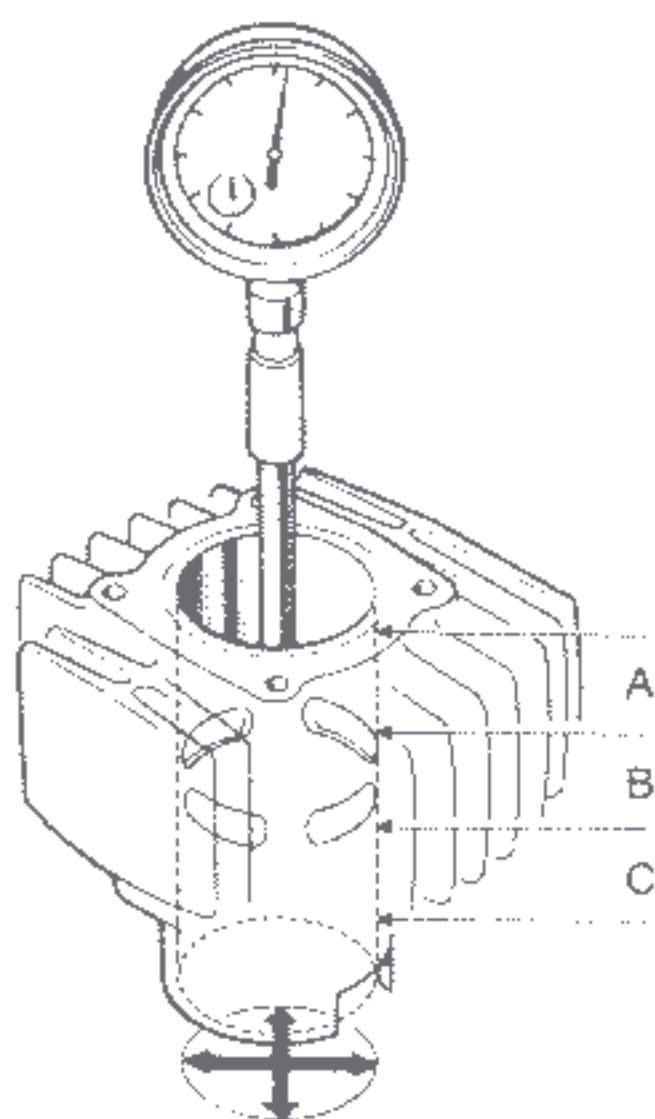
● Cylinder I.D.

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

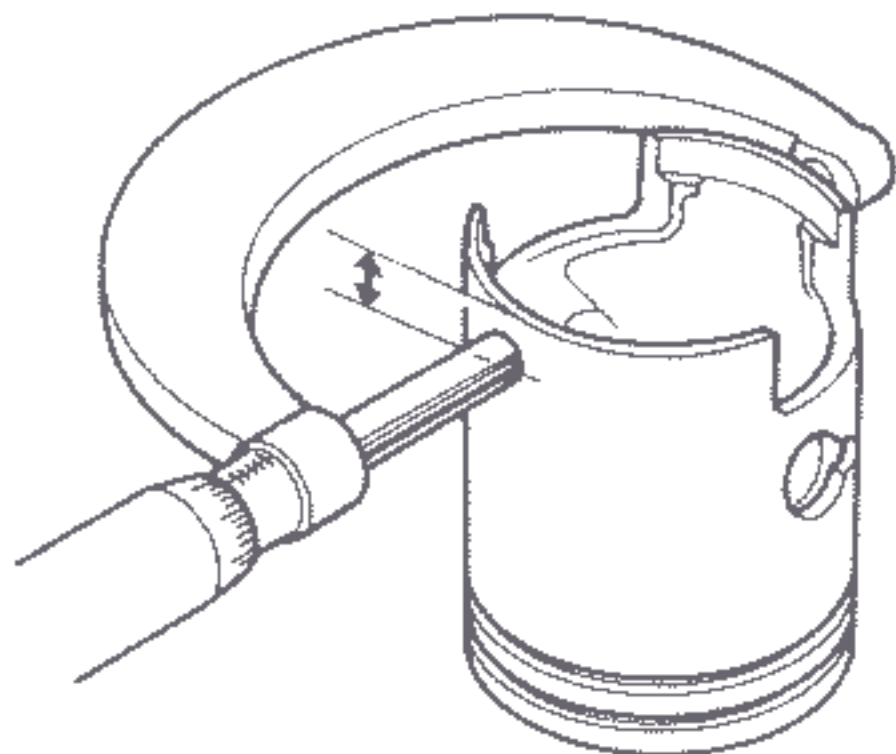
Position	Distance from face of gasket
A	0.35 mm
B	35 - 75 mm
C	75 - 88 mm



Take smallest
diameter reading



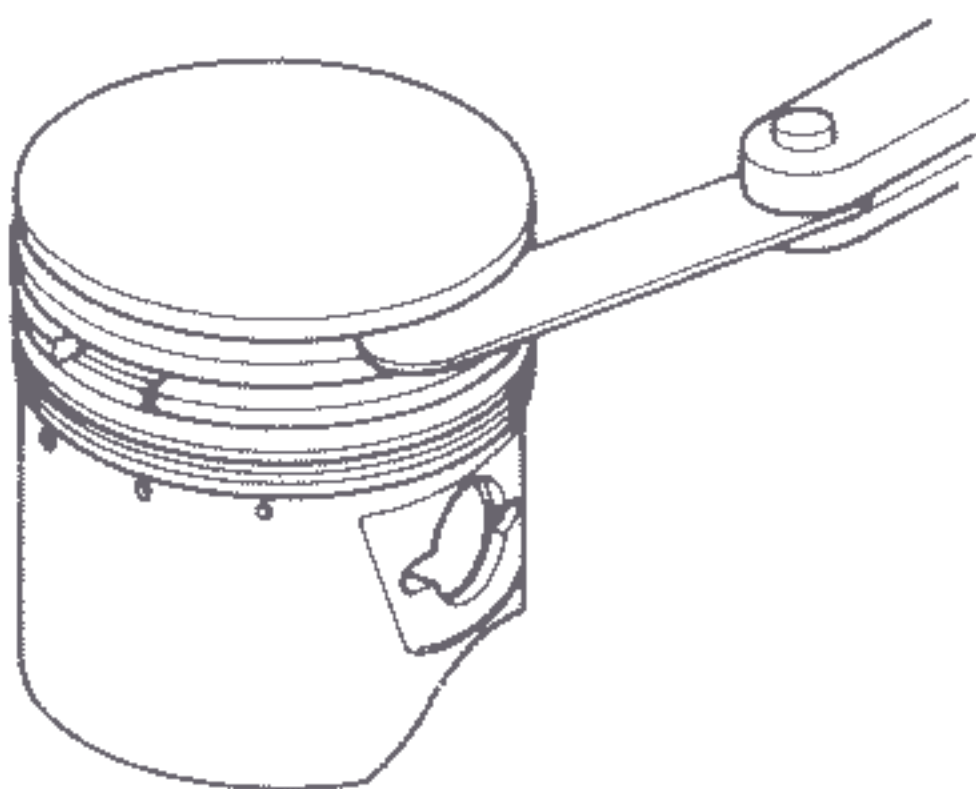
● Piston skirt O.D.



Measurement should be taken at a point 4 mm from bottom

Standard	Service Limit
39.955 - 39.975	39.85 mm

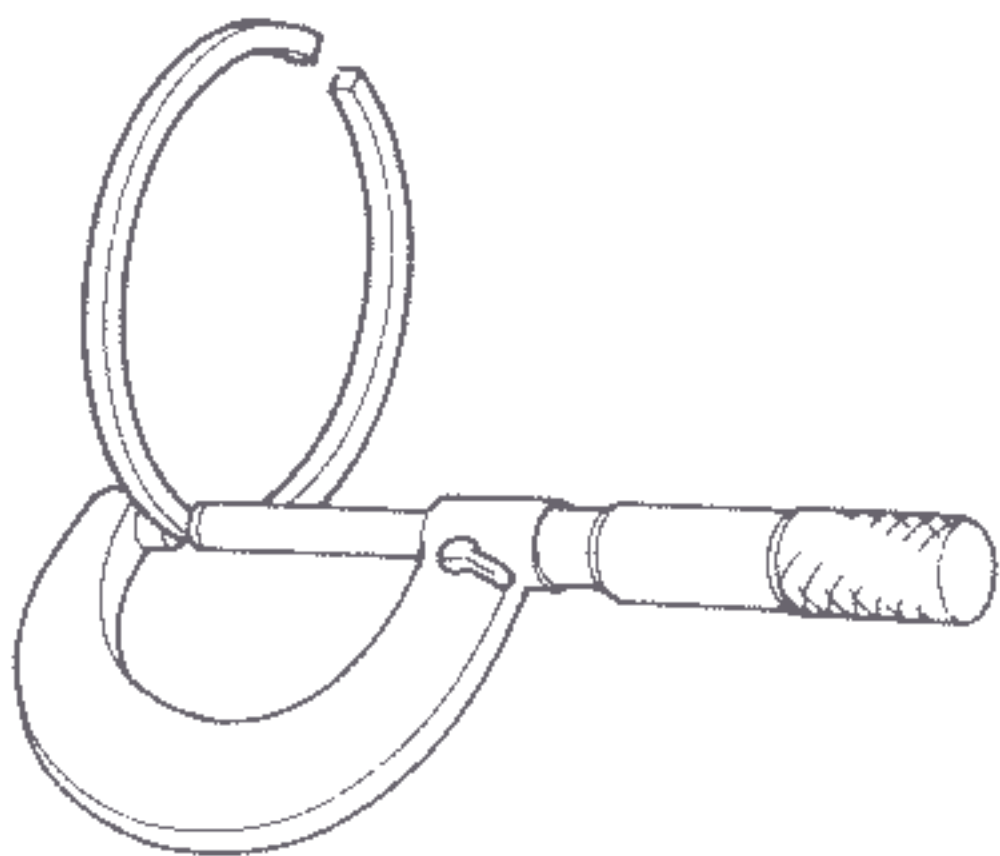
● Piston Ring side Clearance



2nd Rings

Standard	Service Limit
0.025 - 0.055	0.1 mm

● Piston Ring Thickness



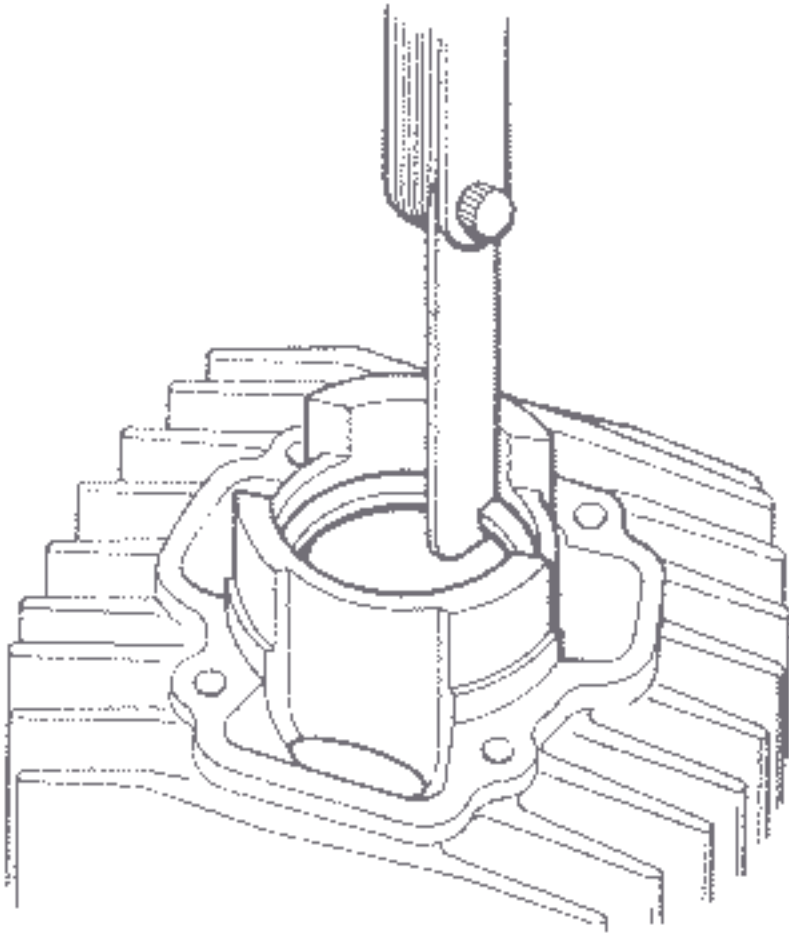
Standard		Service Limit
2nd	1.4975 - 1.499	1.43 mm



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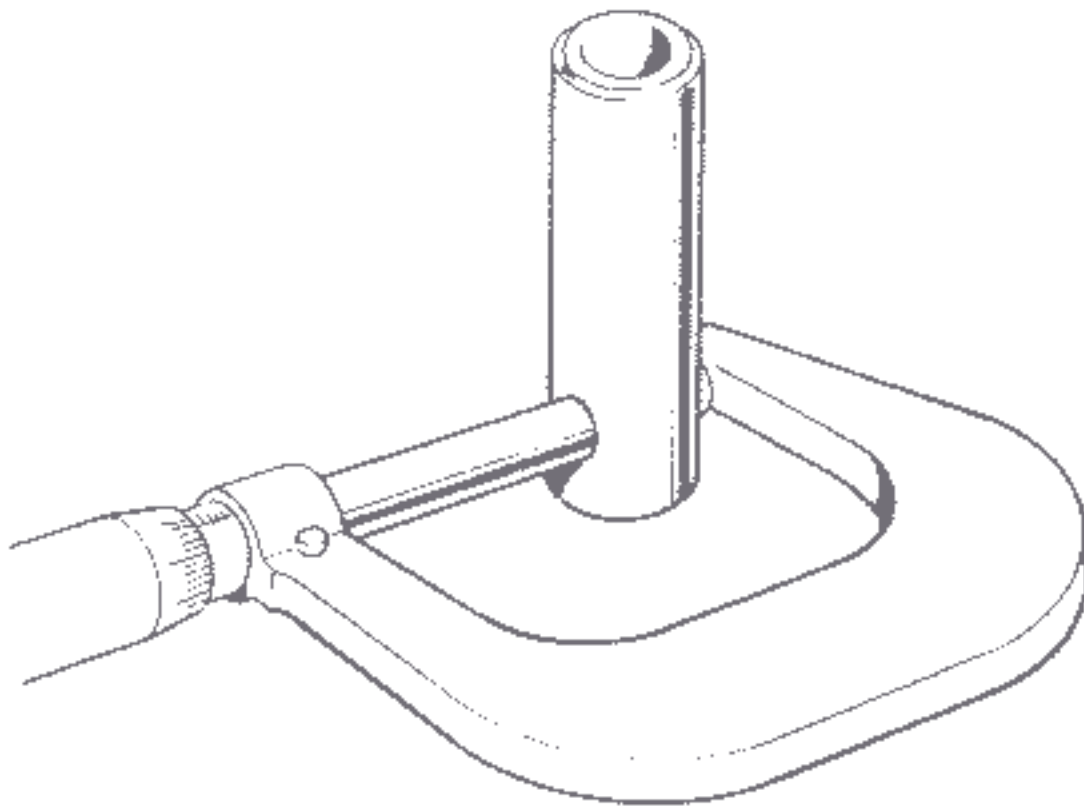
● Piston Ring end Gap



Both Top/2nd Rings

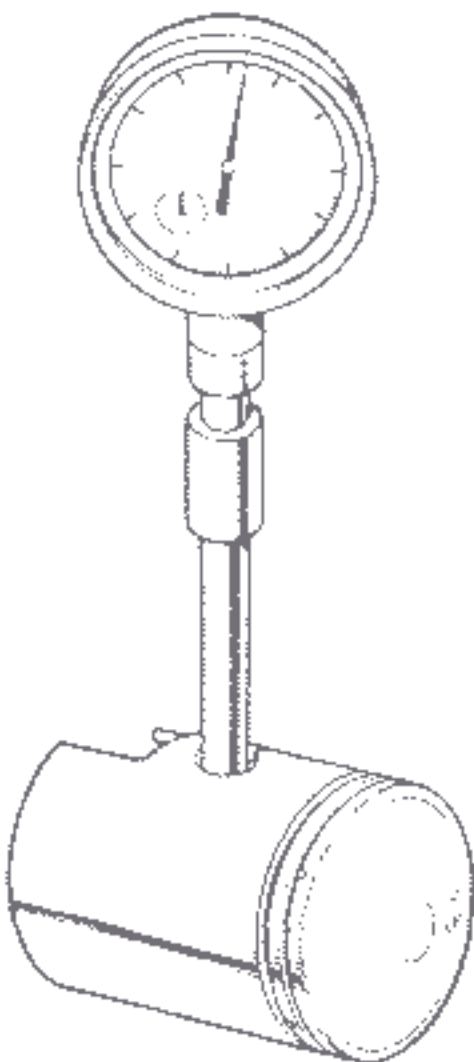
Standard	Service Limit
0.15 - 0.35	0.6 mm

● 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



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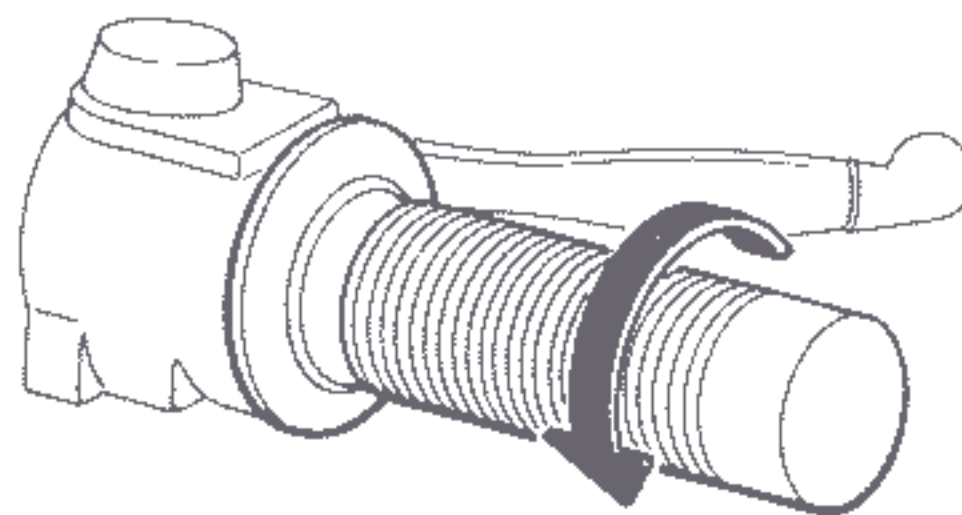


D. Compression

- 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

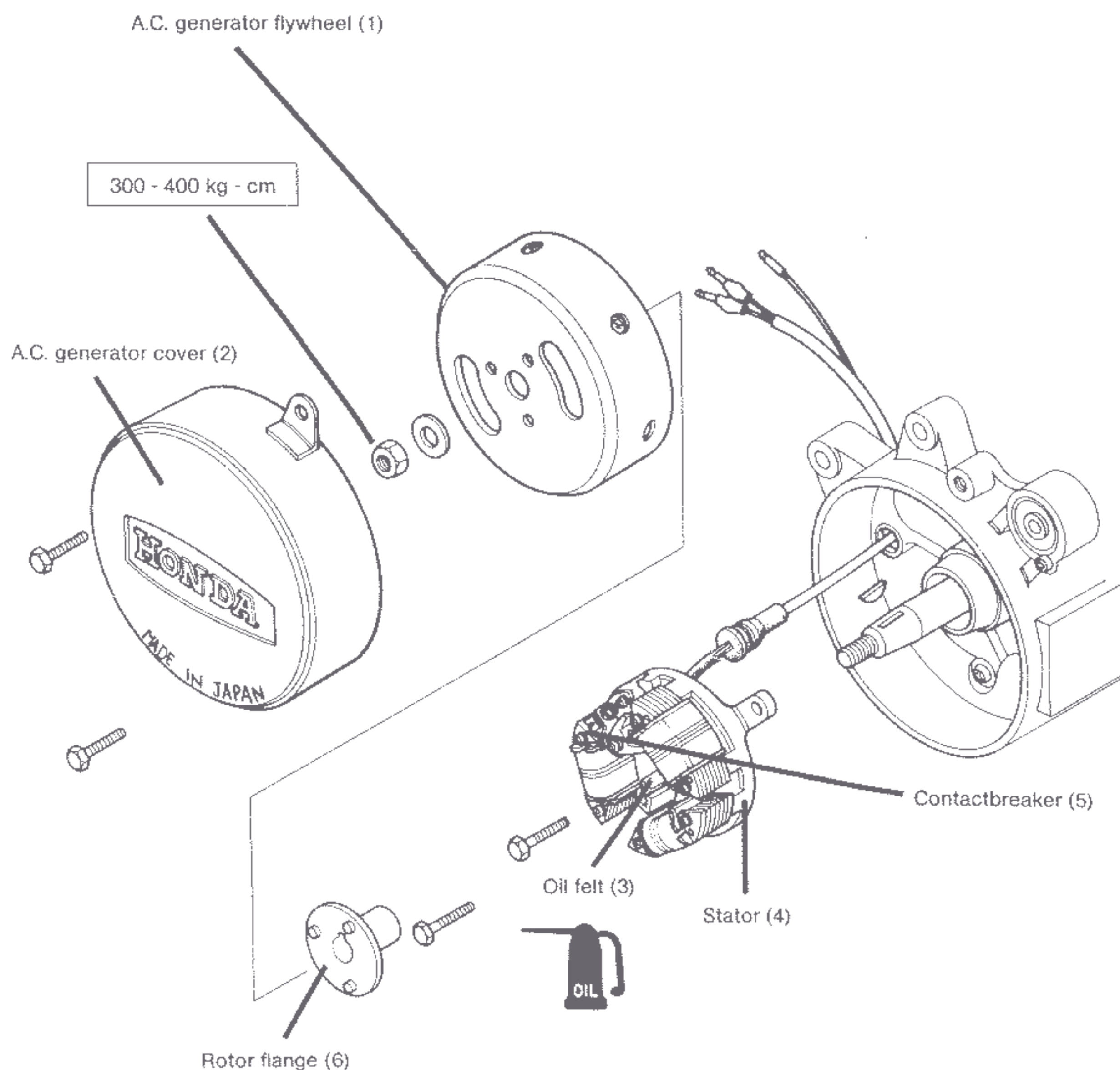
Tighten securely to prevent leaks

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 to the magnet inside of the flywheel.



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

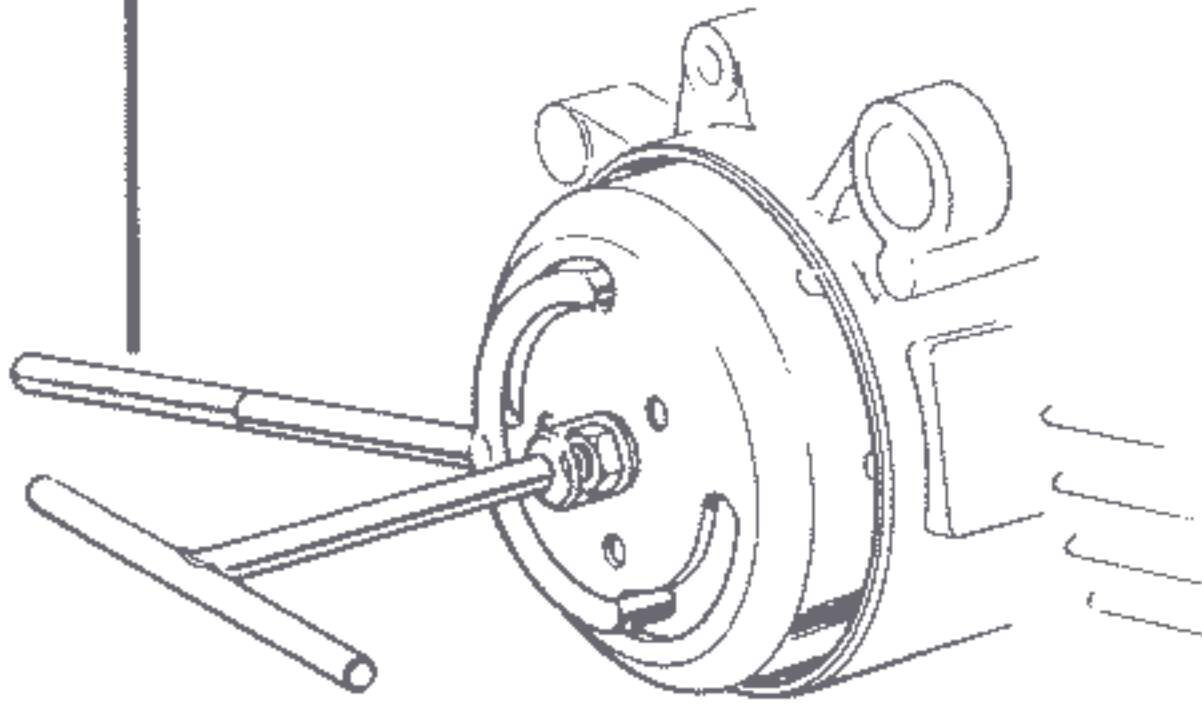


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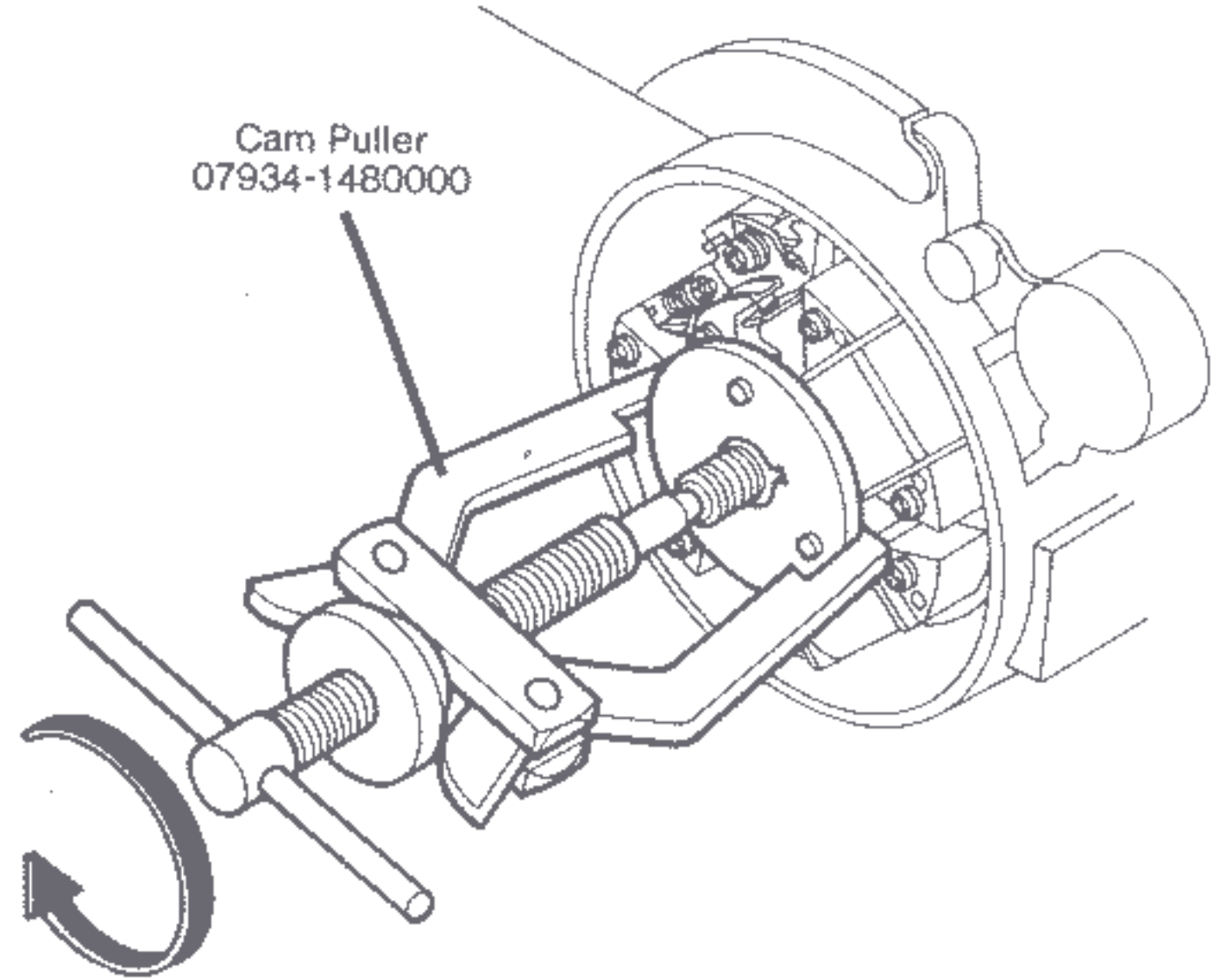
● Flywheel Disassembly/Assembly

Holder flywheel
07925-0010001

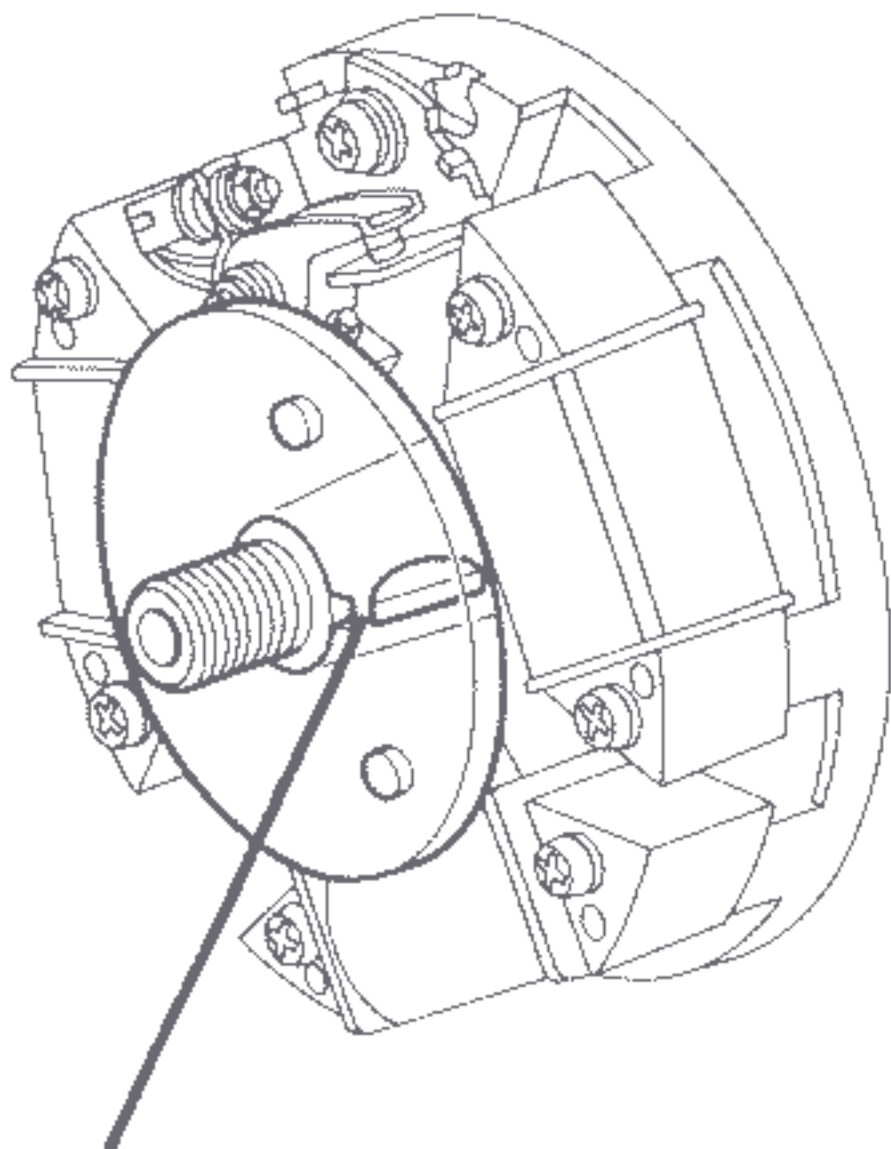


● Rotor Flange Disassembly

Cam Puller
07934-1480000

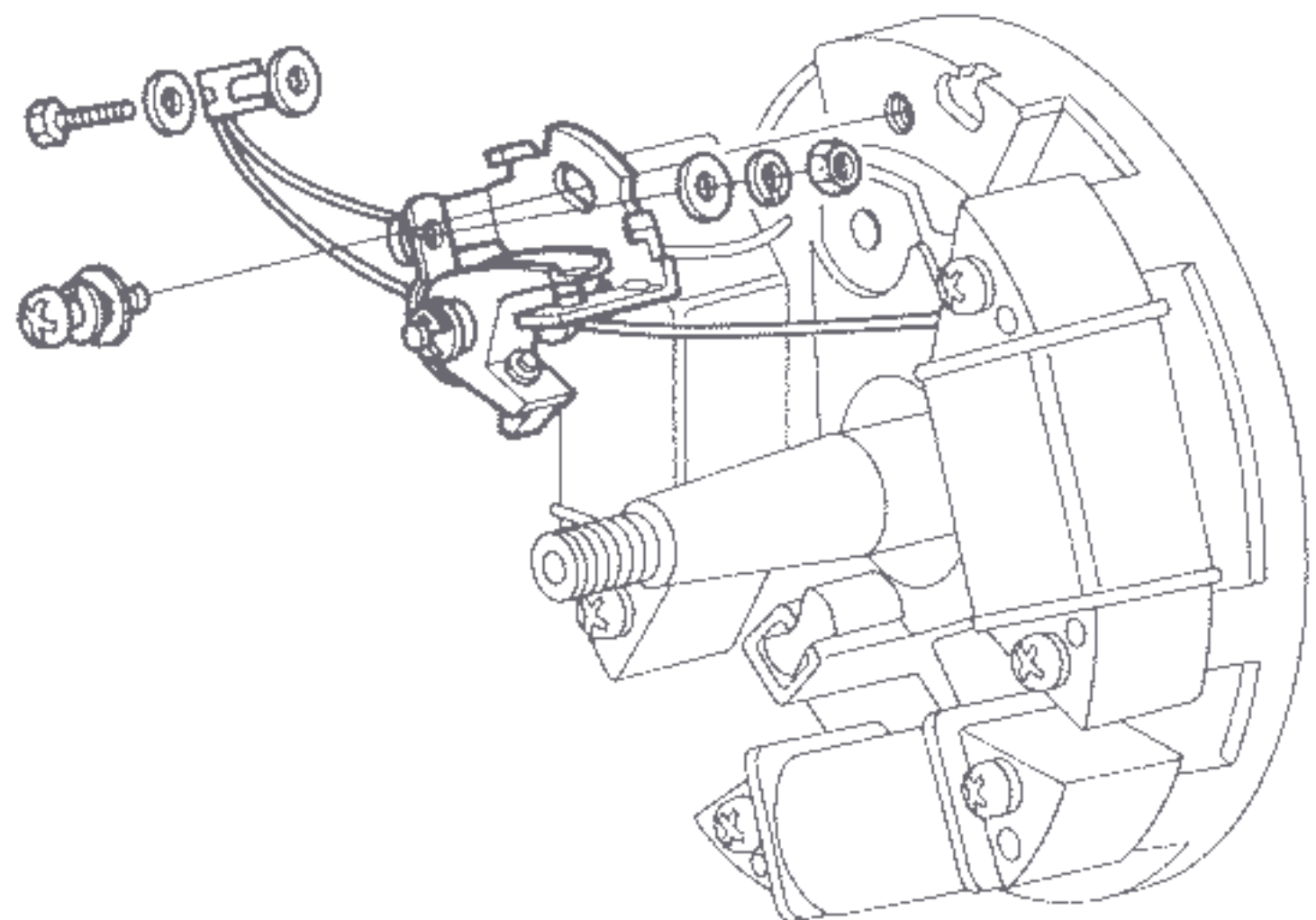


● Rotor Flange installation



Align the key with the keyway

● Contact Breaker Disassembly



After assembling, adjust contact breaker point gap and
ignition timing

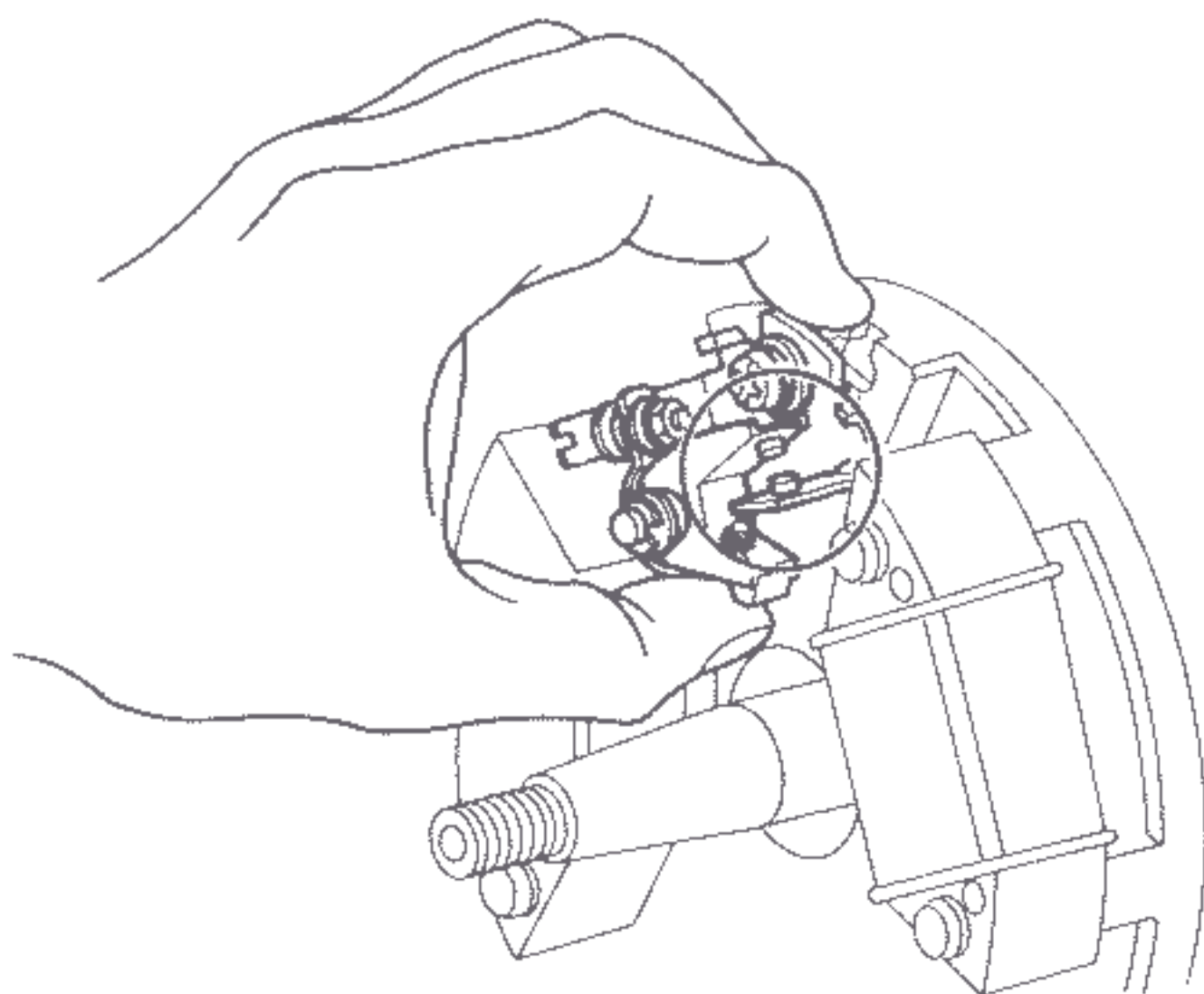


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B. Inspection

- Contact breaker point



Point gap

standard; 0,3 - 0,4 mm

Normal (1)



No good (2) X



Worn (3)



Out of
alignment (4)



Fouled (5)



Metaltransfer (6)

8. DRIVE PULLEY/CLUTCH/DRIVEN PULLEY

A. Trouble shooting	55
B. Disassembly/Assembly	56
C. Inspection	60

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. Defective movable drive face
Lack of power	Defective torque of driven pulley



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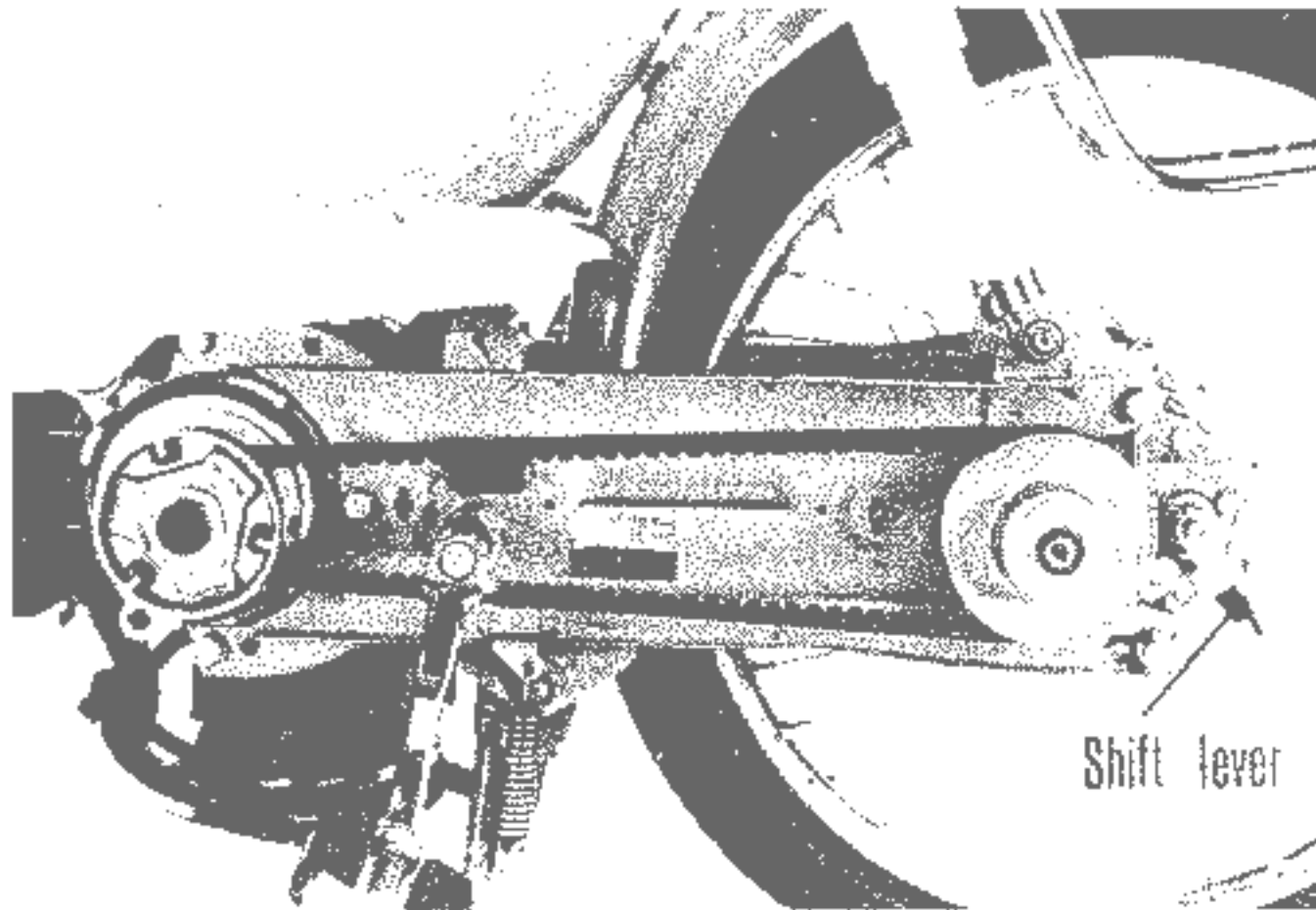


B. Disassembly/Assembly

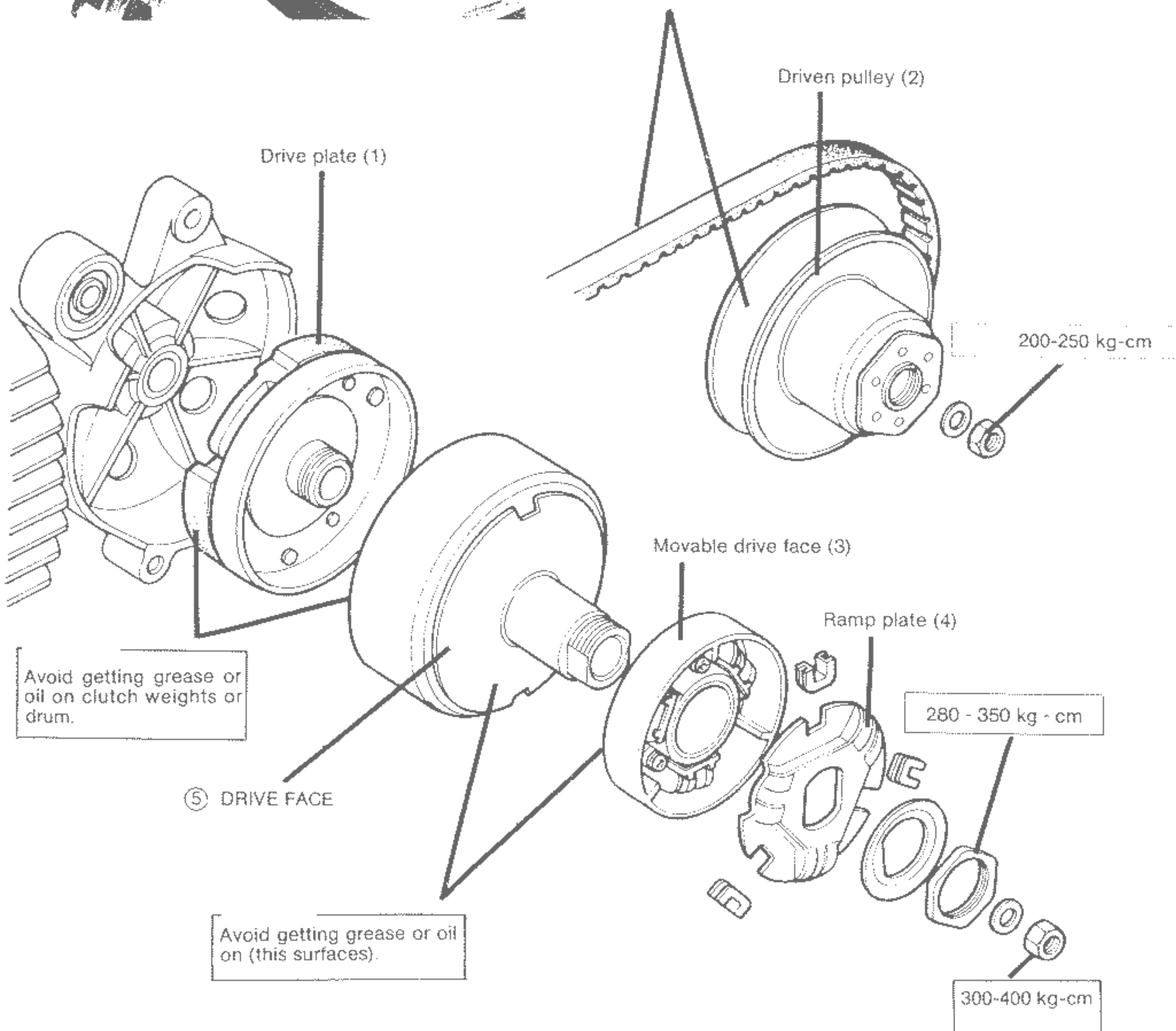
Set the shift lever at pedal drive position

- 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



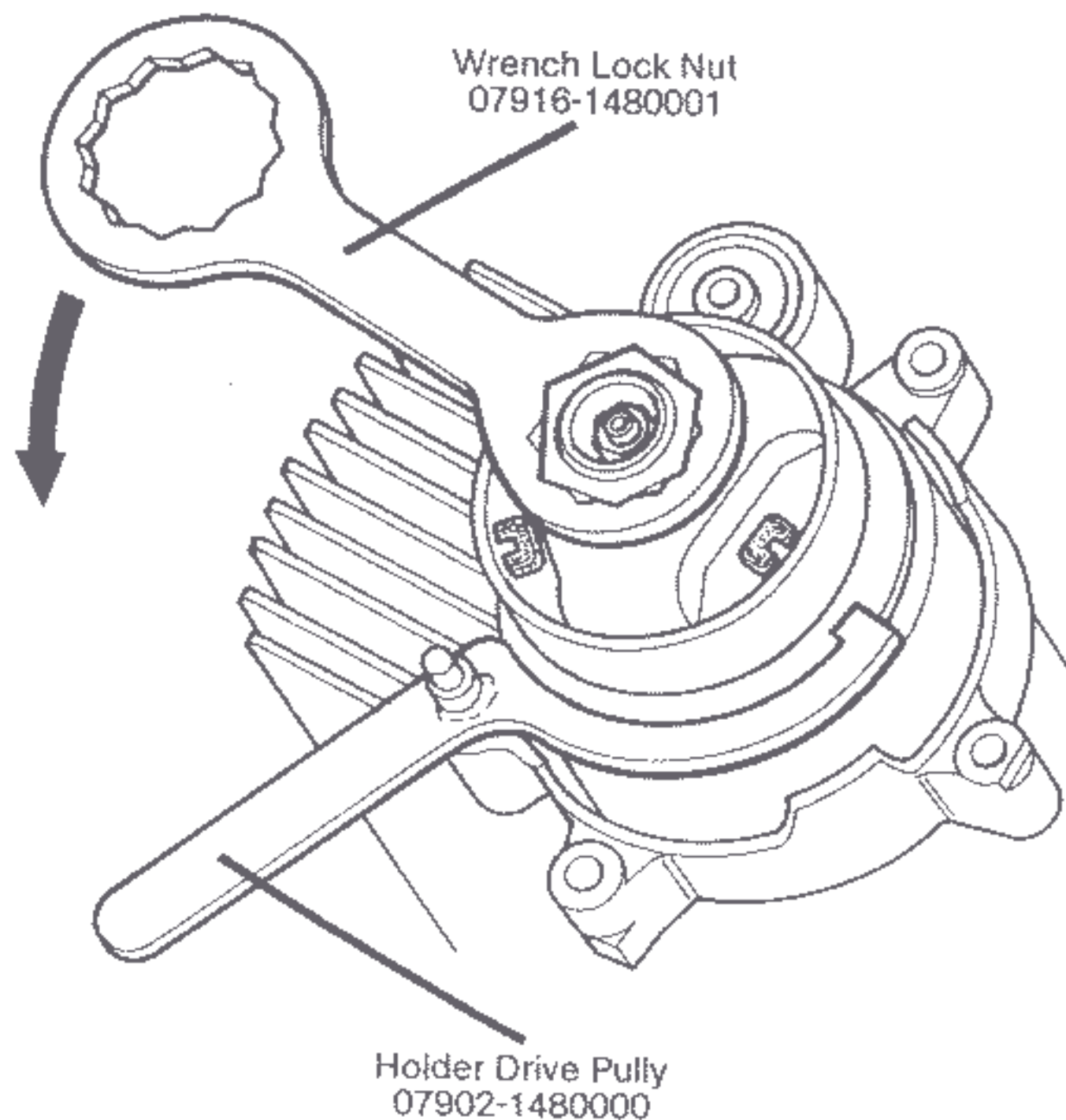
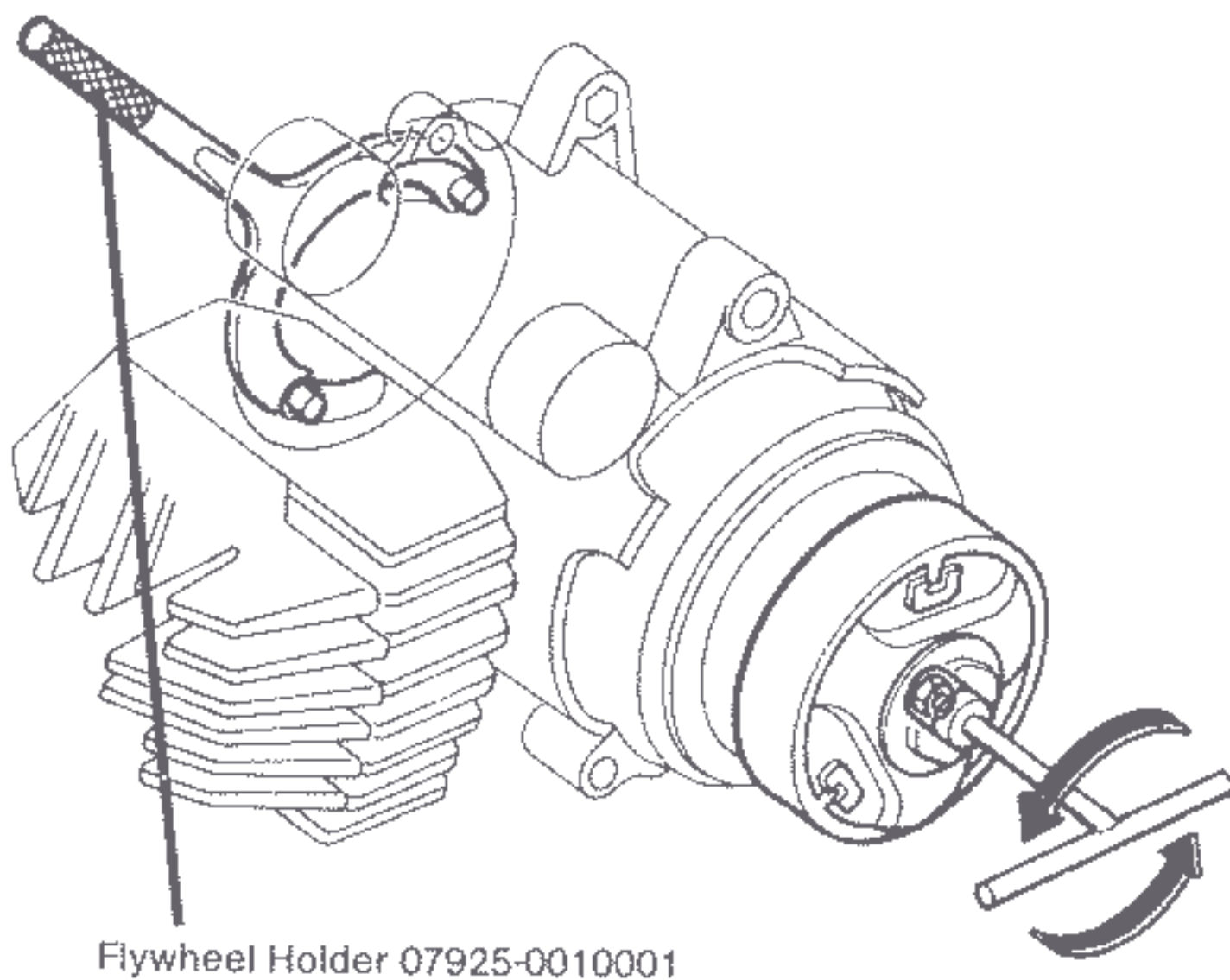
Avoid getting grease or oil on belt or pulley surfaces



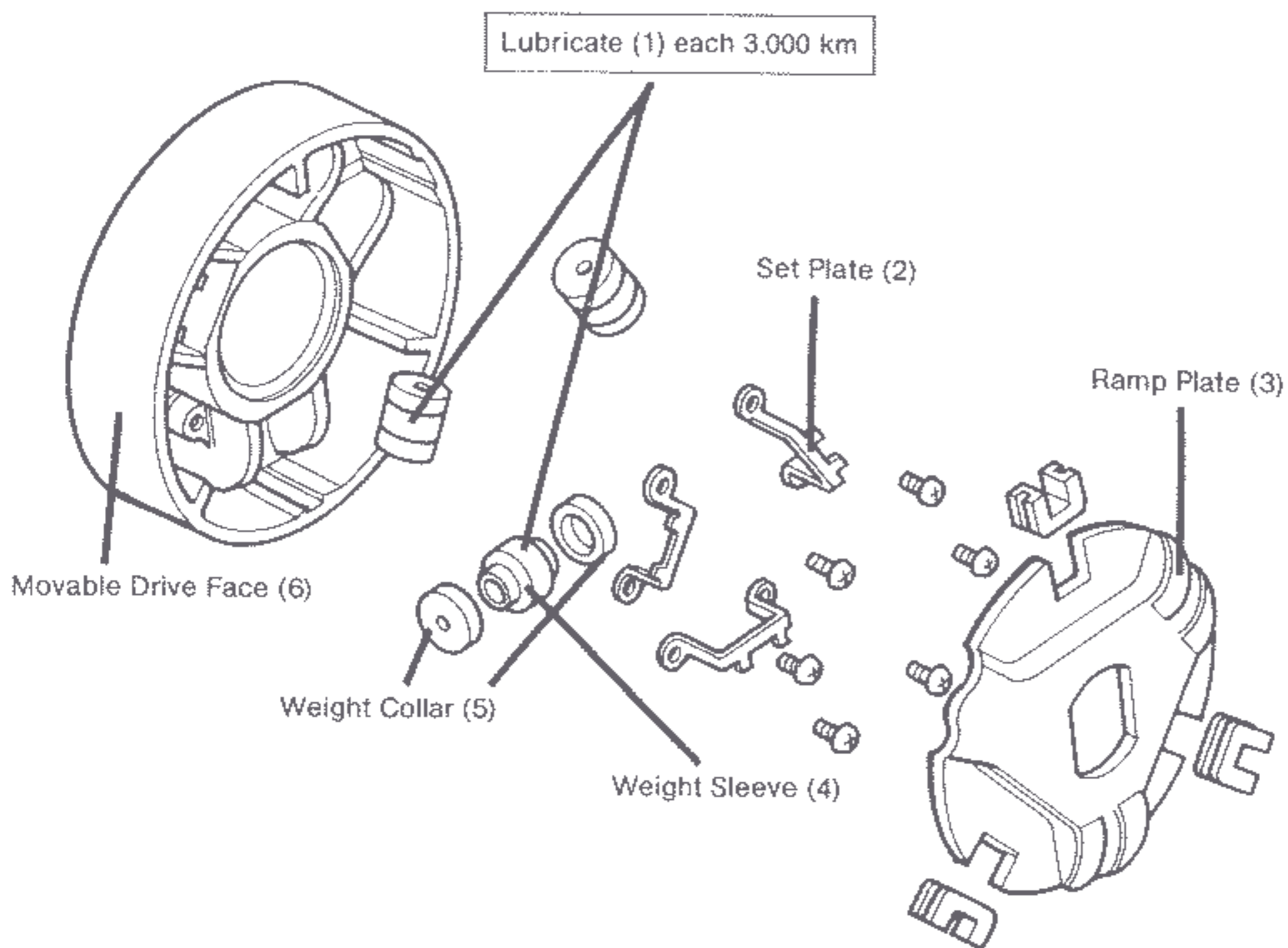
Disassembly/Assembly

● Drive pulley attaching nut

● Drive face securing nut

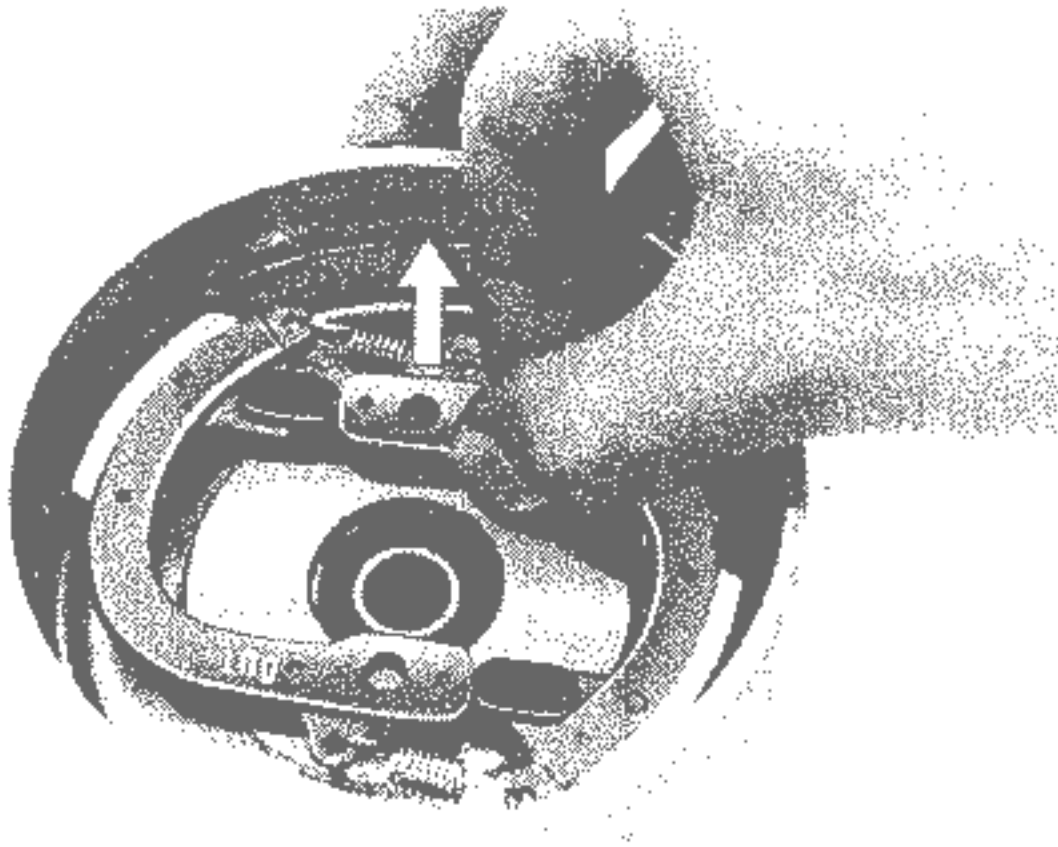


● Movable drive face/Ramp plate



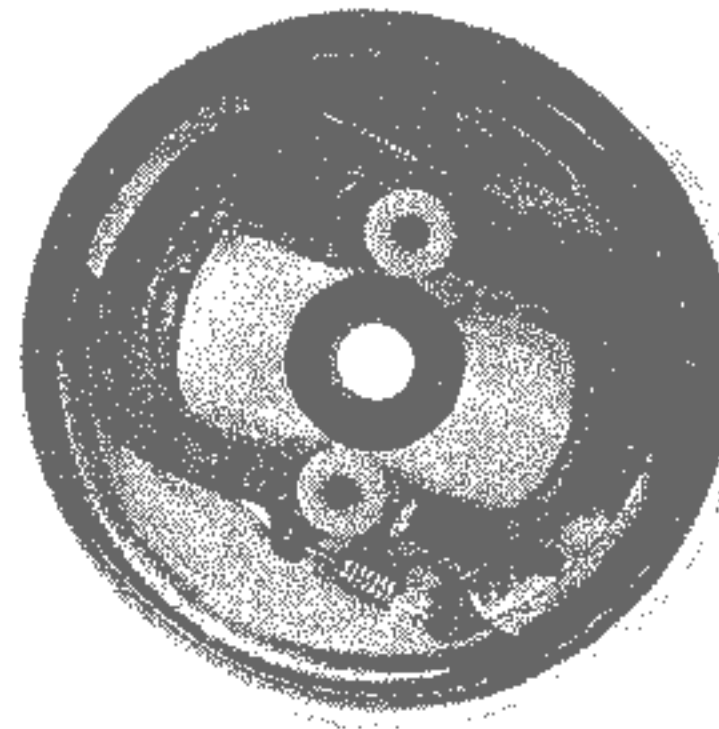


● Starting clutch disassembly



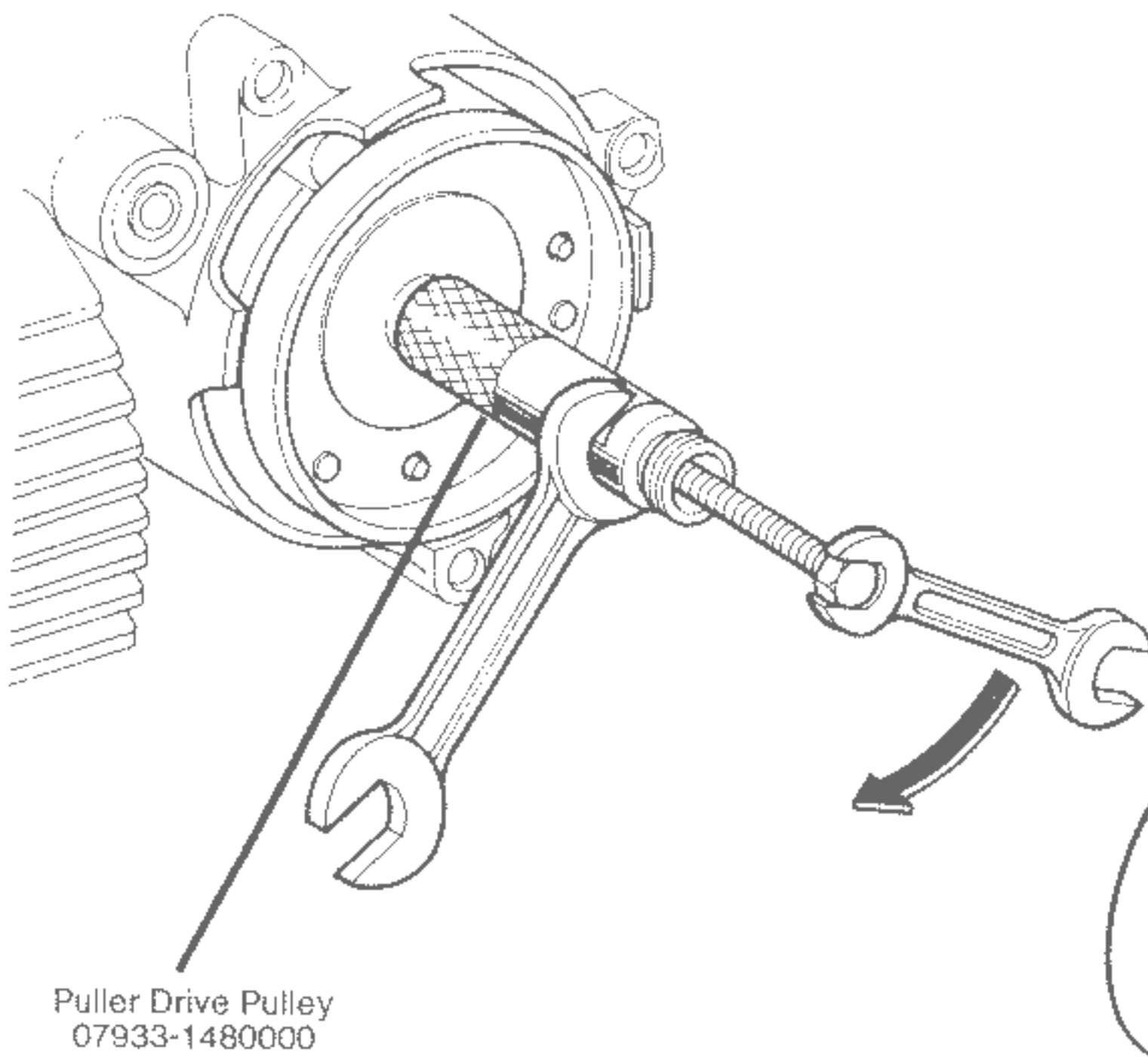
Lift up starting weight after removing the setting washers

● Starting clutch Assembly



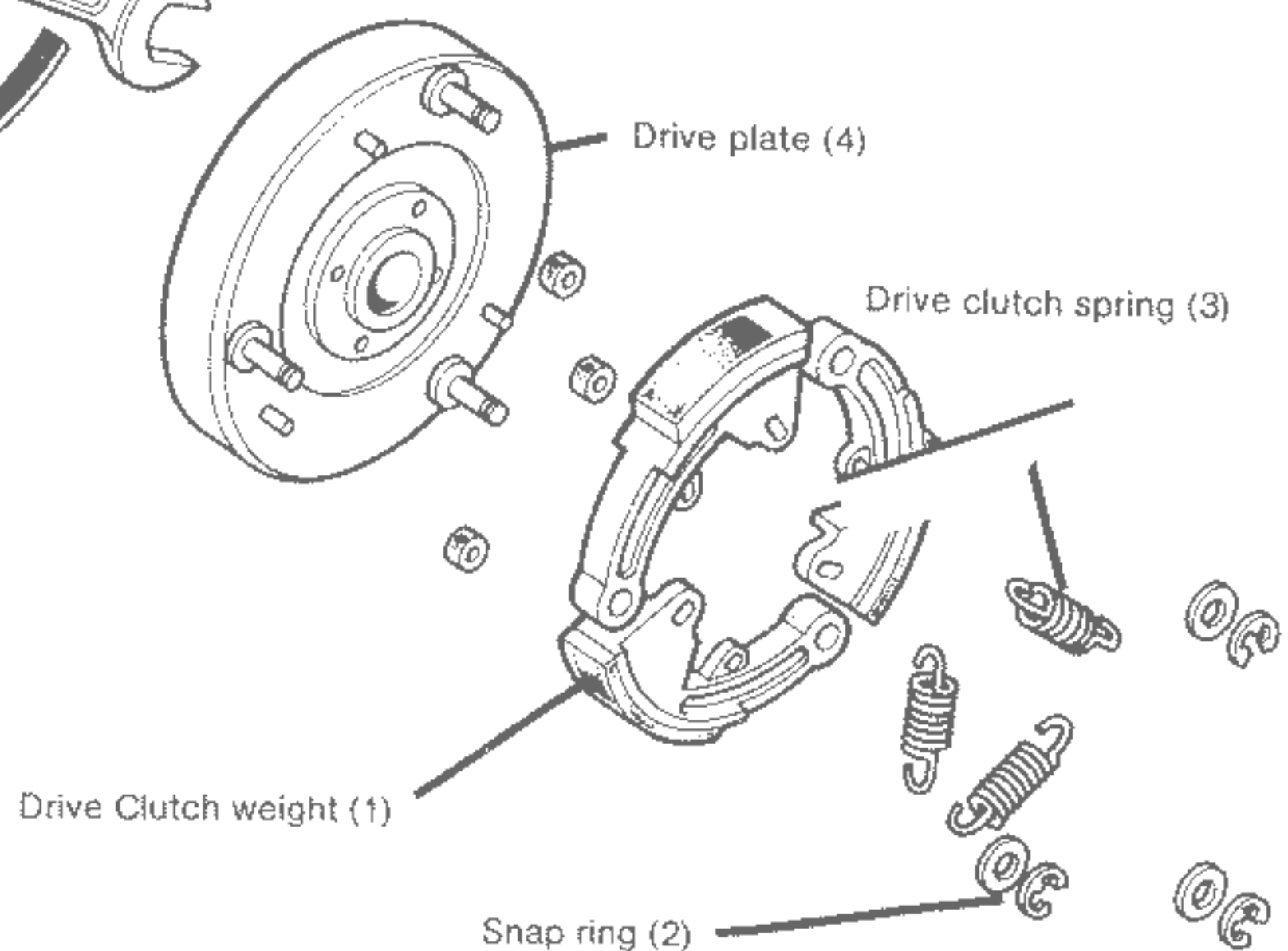
Install the starting clutch weight with "OUT" mark facing up

● Drive plate REMOVAL



Puller Drive Pulley
07933-1480000

● Drive clutch DISASSEMBLY



Avoid getting grease or oil on the parts

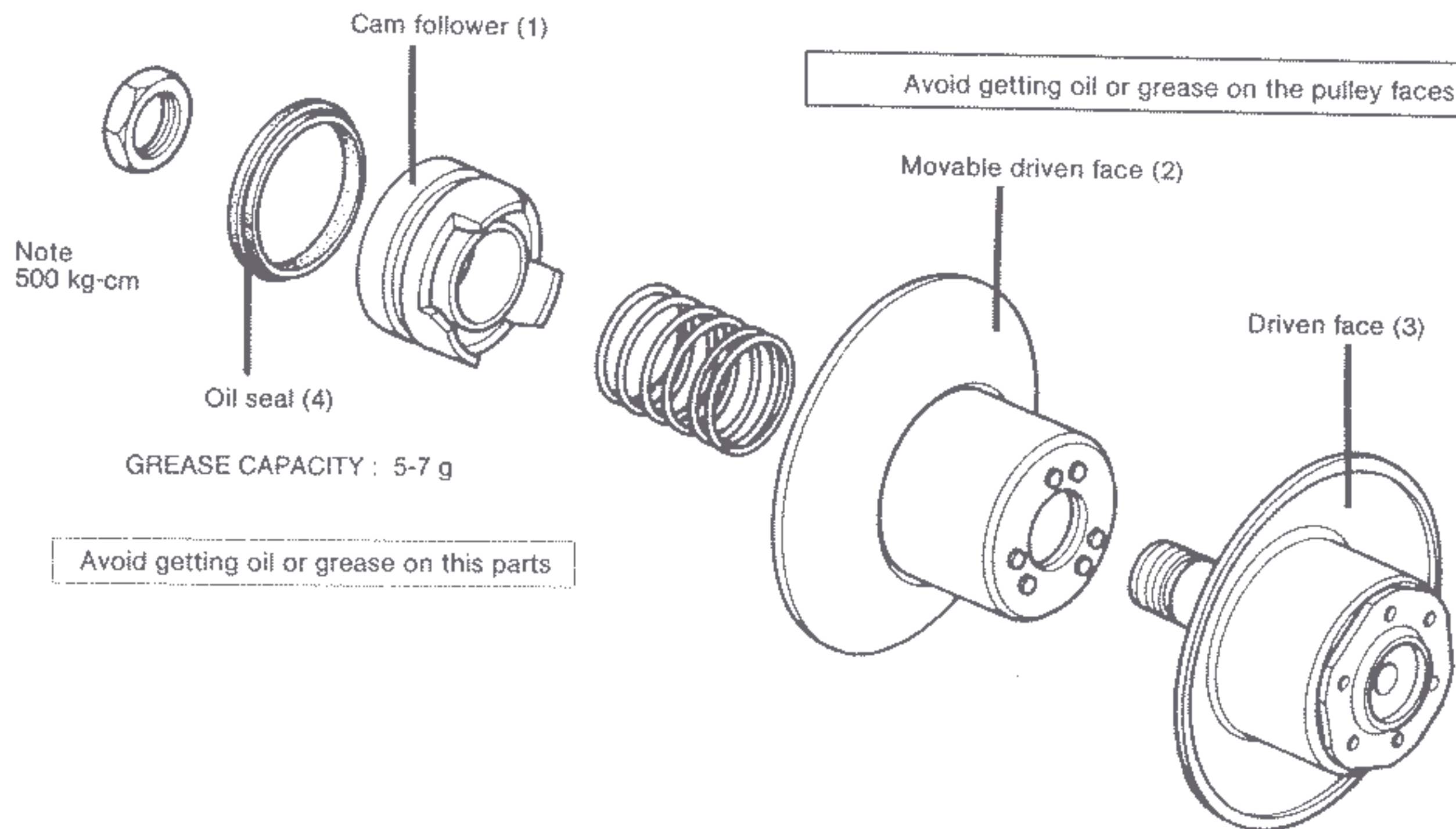


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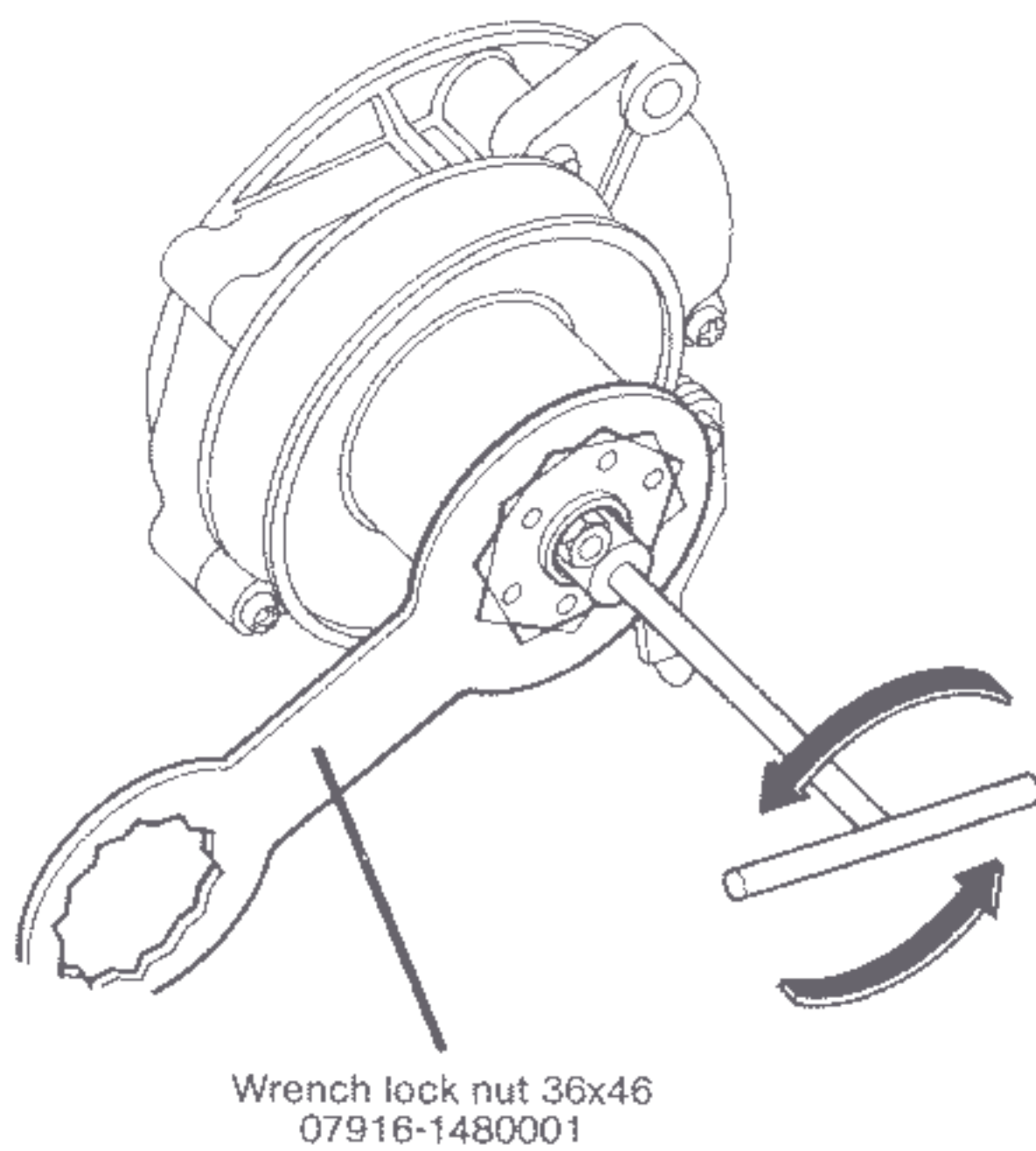
Driven Pulley

- Disassemble the driven pulley



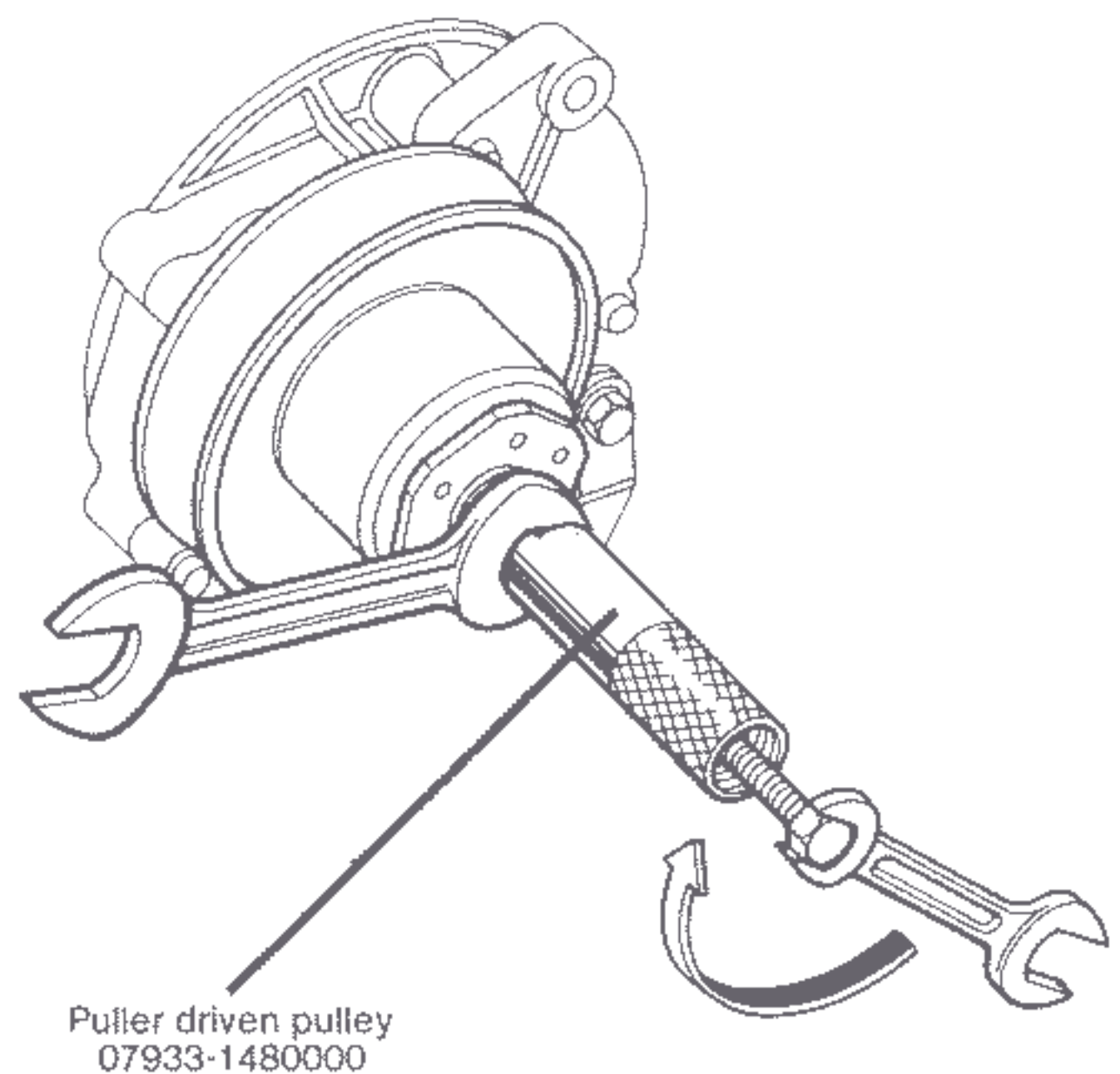
B. Disassembly

- Remove the driven pulley attaching nut



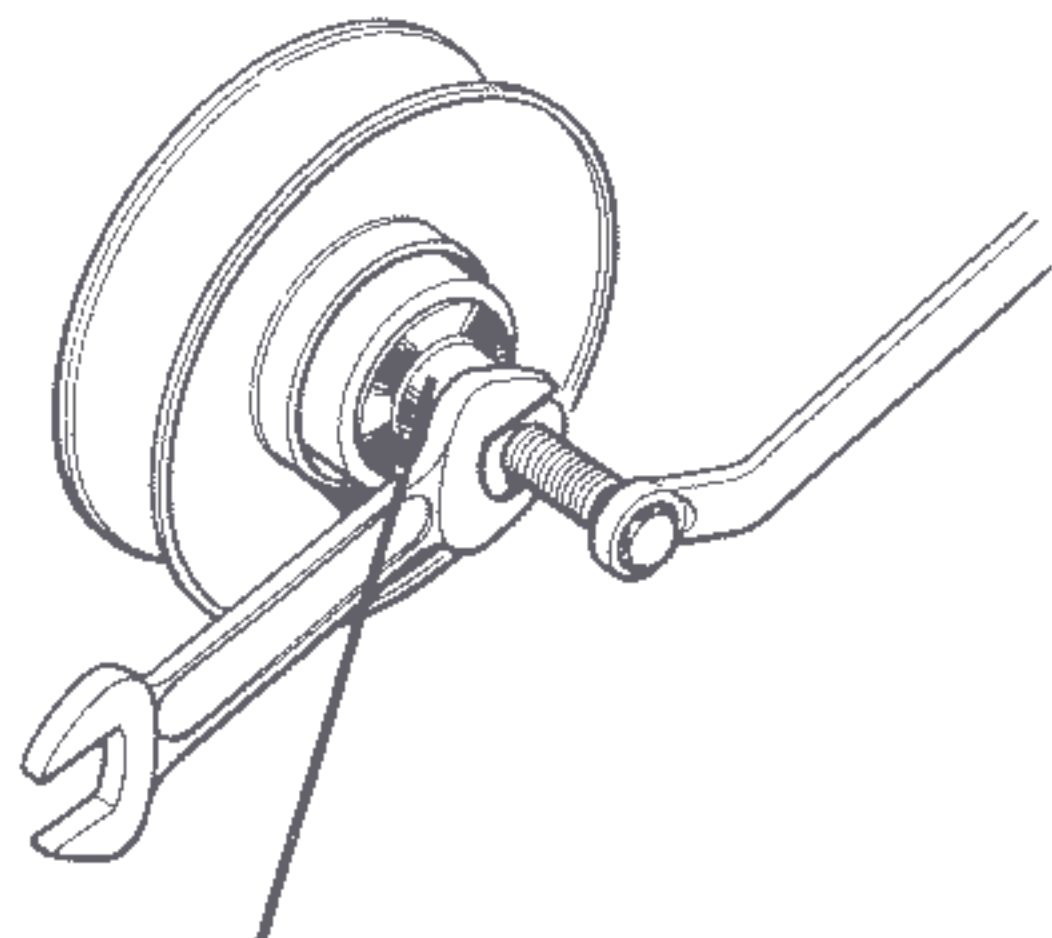
Use a 46 mm box end wrench

- Remove the driven pulley



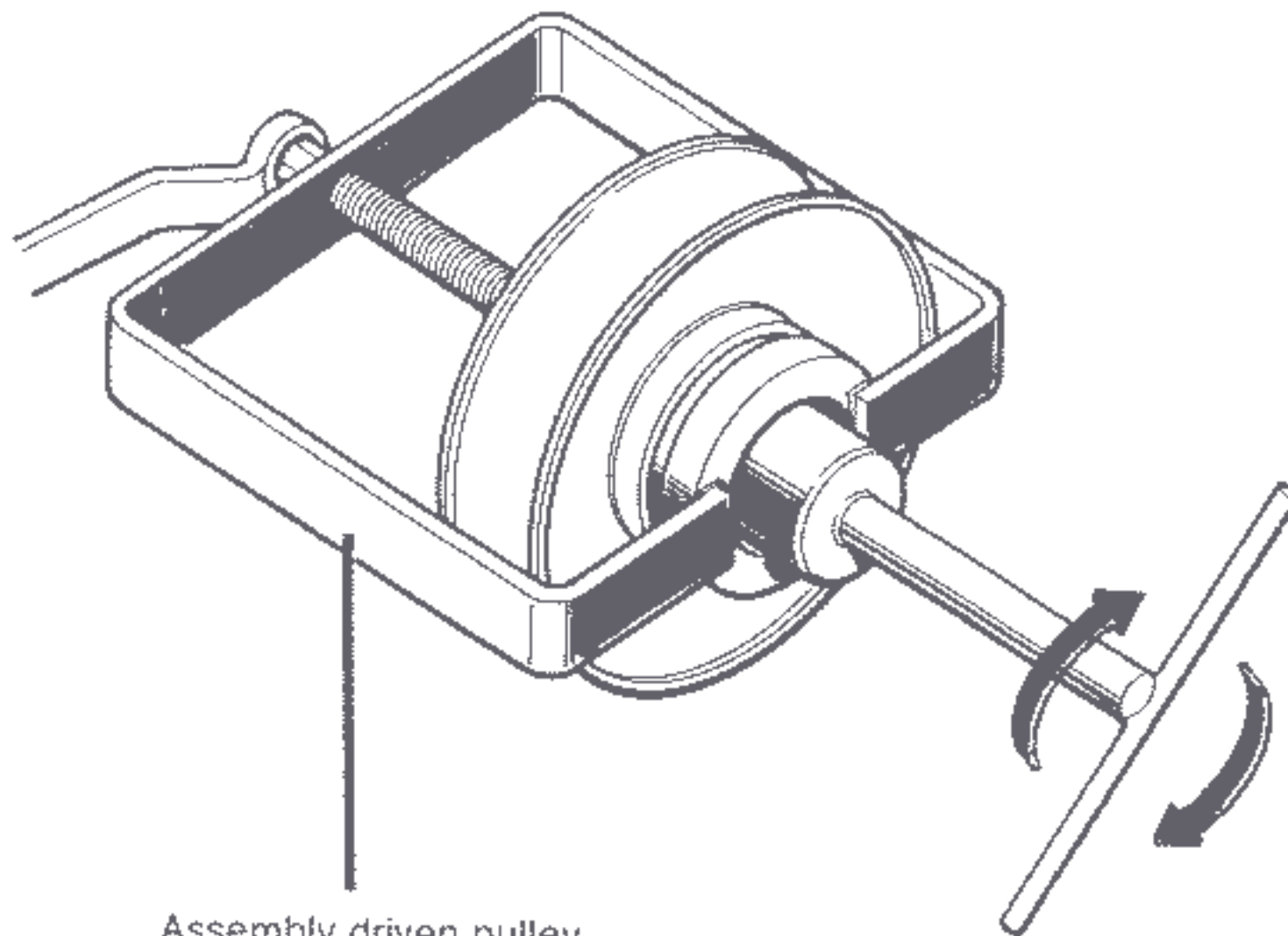


● Disassembly driven pulley



Puller pulley
07933-1480100

● Assembly driven pulley

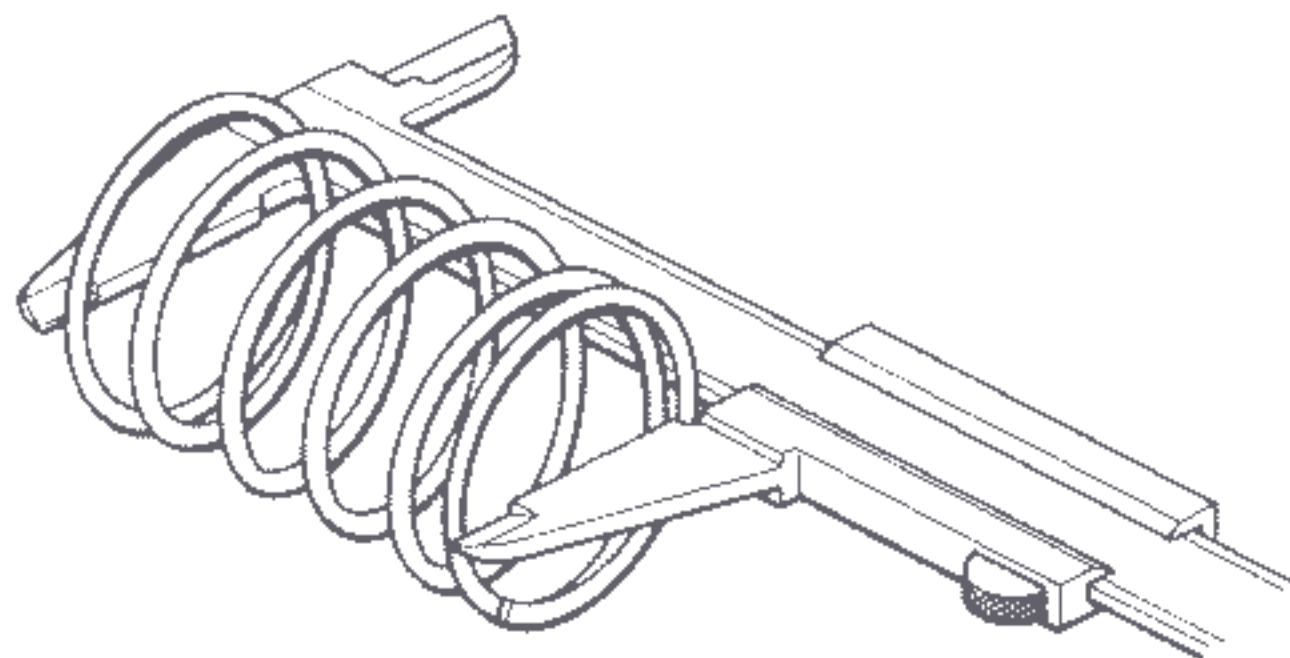


Assembly driven pulley
07960-1480100

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

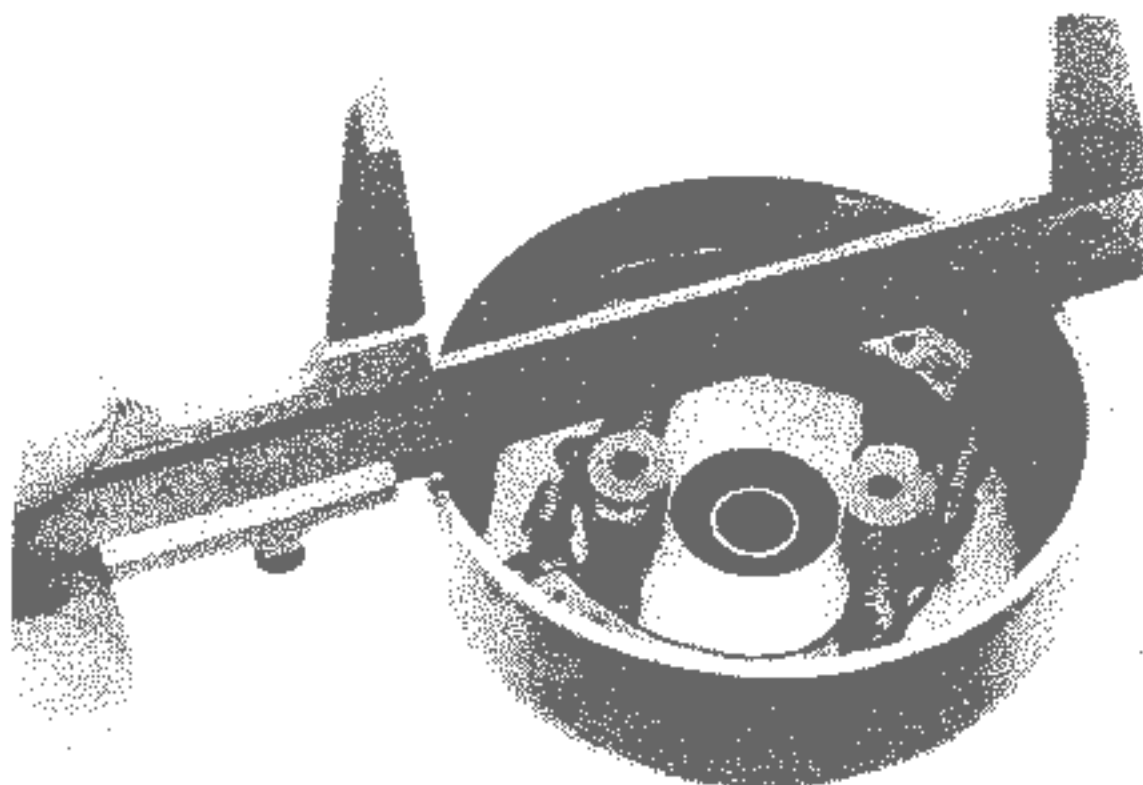


Standard	Service Limit
72,3 mm	65,1 mm



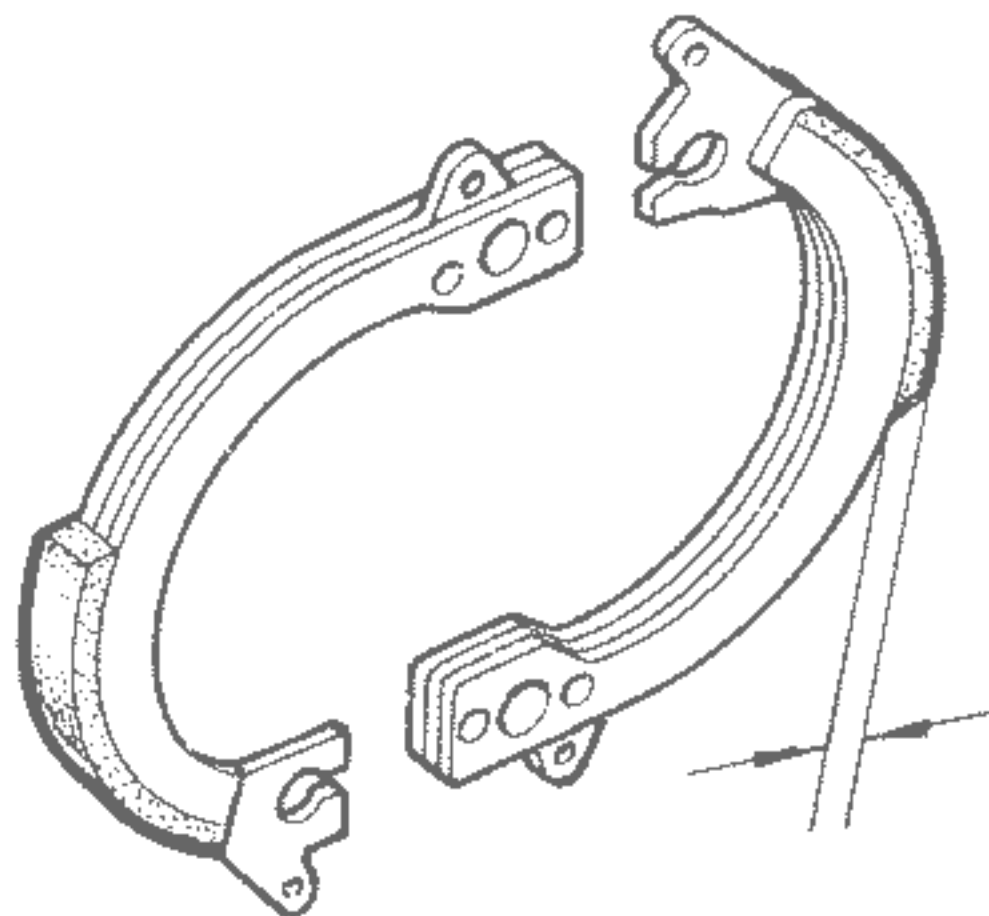
Inspection

Starting clutch face (Drive Face)
I.D.



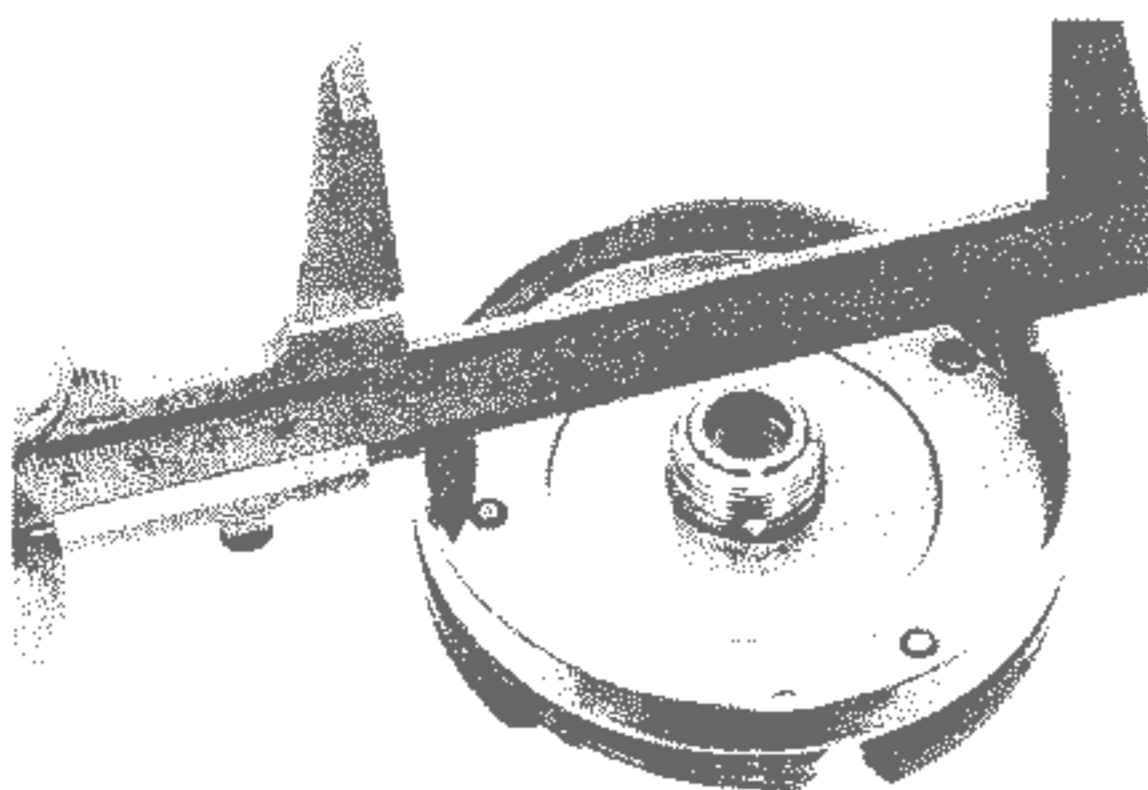
Standard	Service Limit
96.9 - 97.1 mm	97.5 mm

Starting clutch Thickness



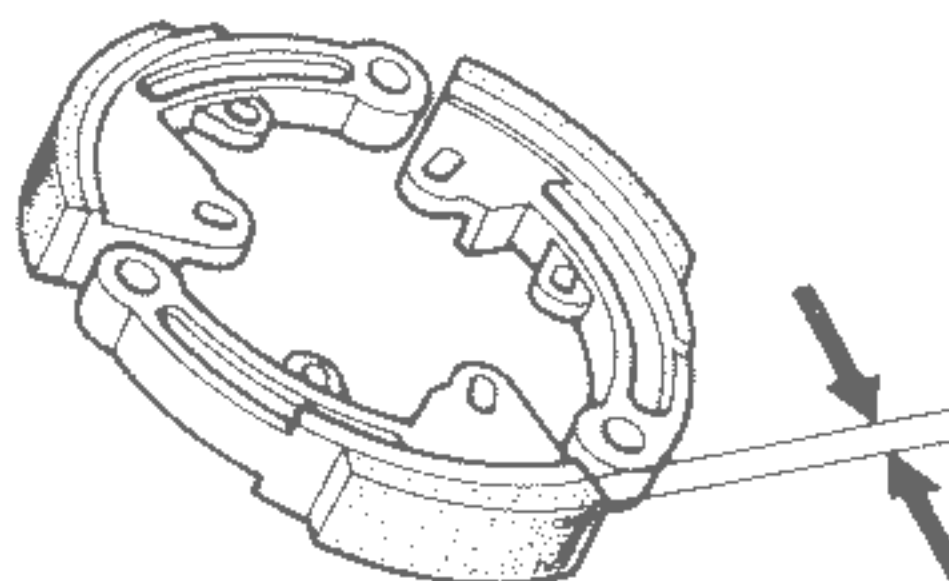
Standard	Service Limit
2.9 - 3.1 mm	1.5 mm

Clutch Weight Face (Drive Face)



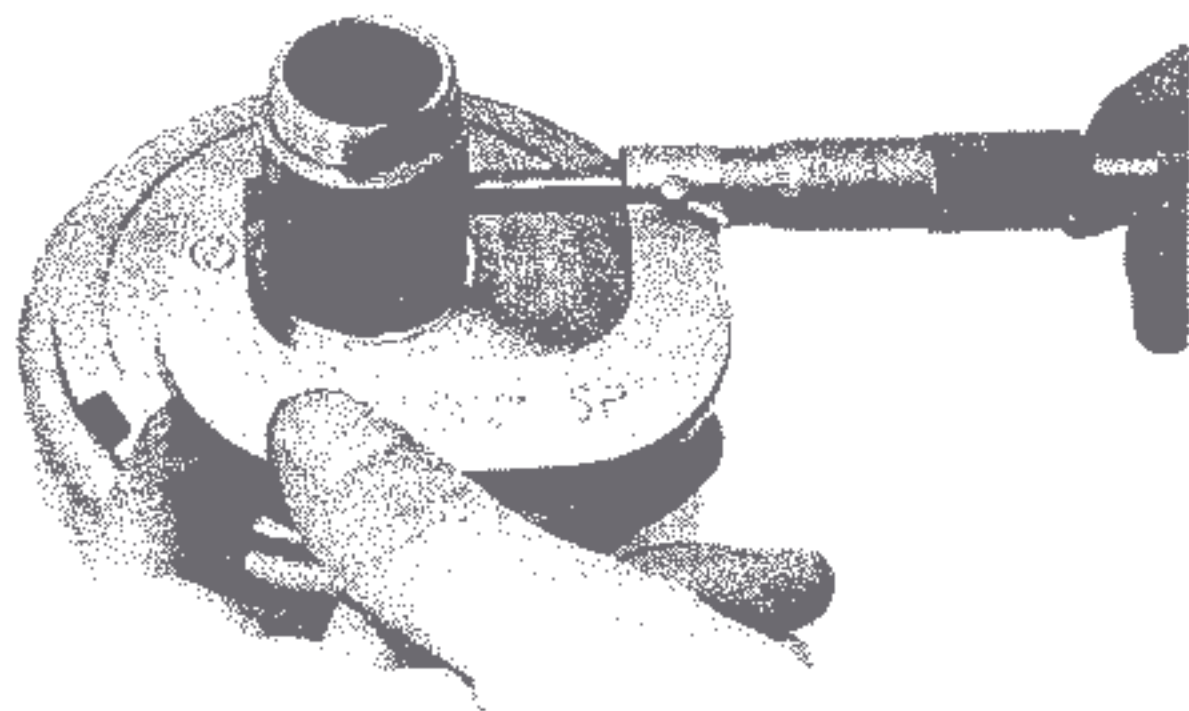
Standard	Service Limit
104.0 - 104.1 mm	104.5 mm

Clutch Weight Thickness



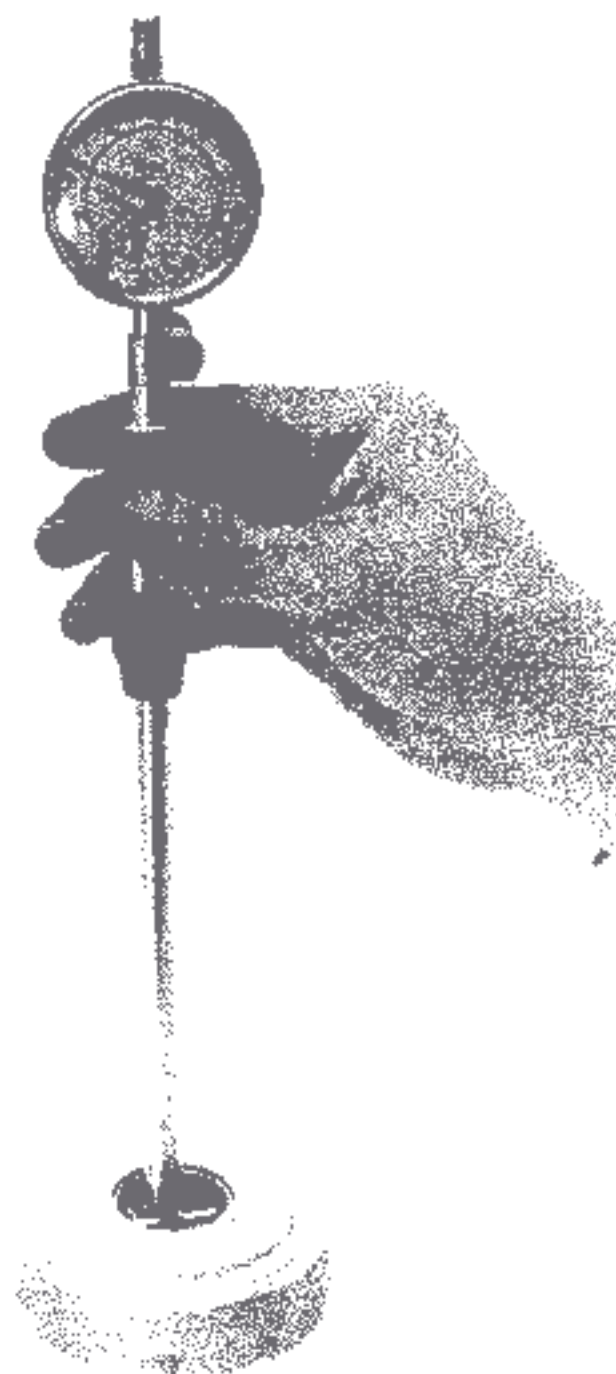
Standard	Service Limit
3.4 - 3.6 mm	2.0 mm

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	63
B. Disassembly/Assembly	64
C. Inspection	66

A. Trouble Shooting

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



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B. Disassembly/Assembly

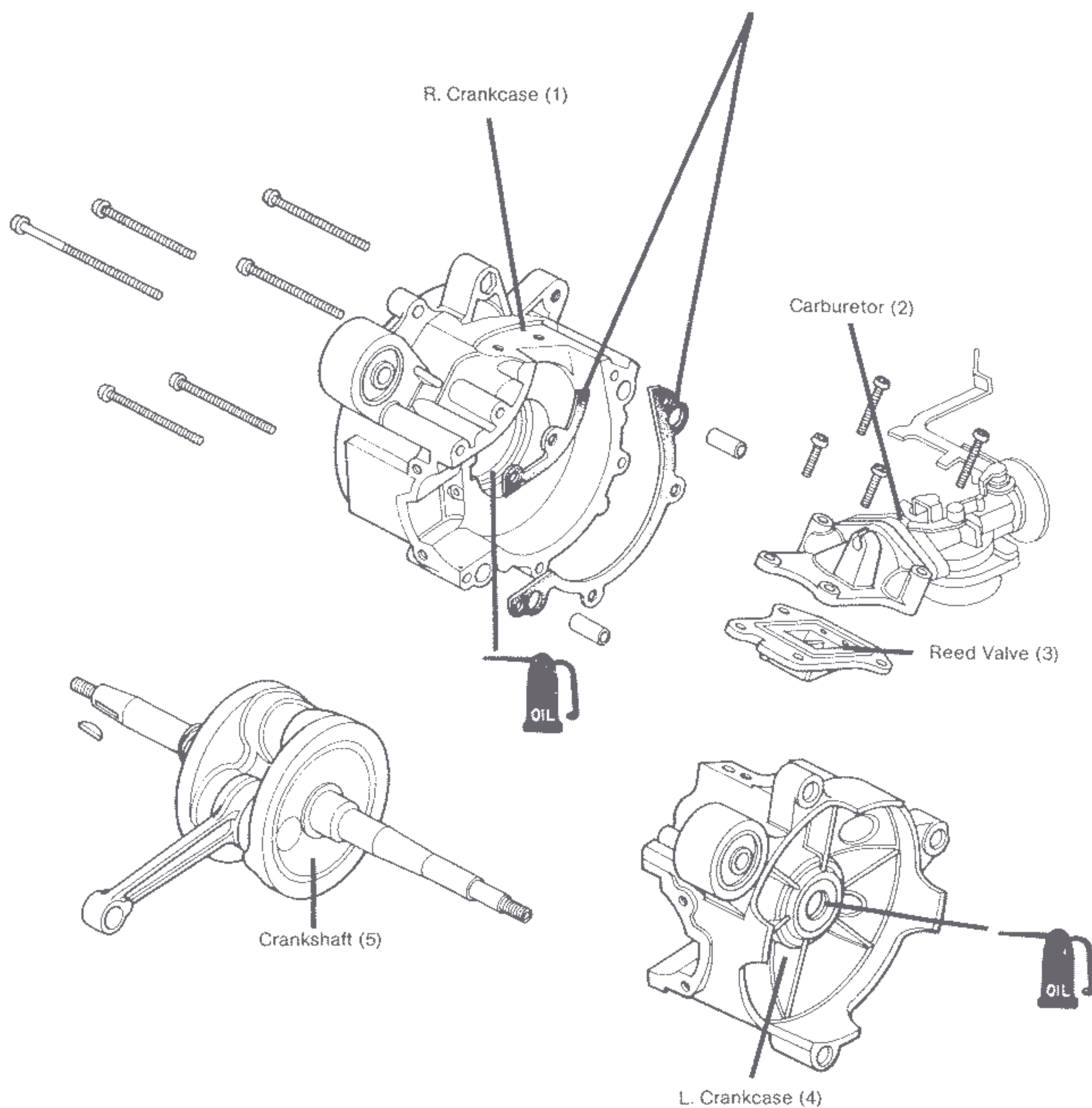
- ① Remove the engine
- ② Remove the cylinder head and piston
- ③ Remove the drive pulley
- ④ Remove the A.C. generator

NOTE:

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

NOTE:

Replace with a new gasket during reassembly



NOTE:

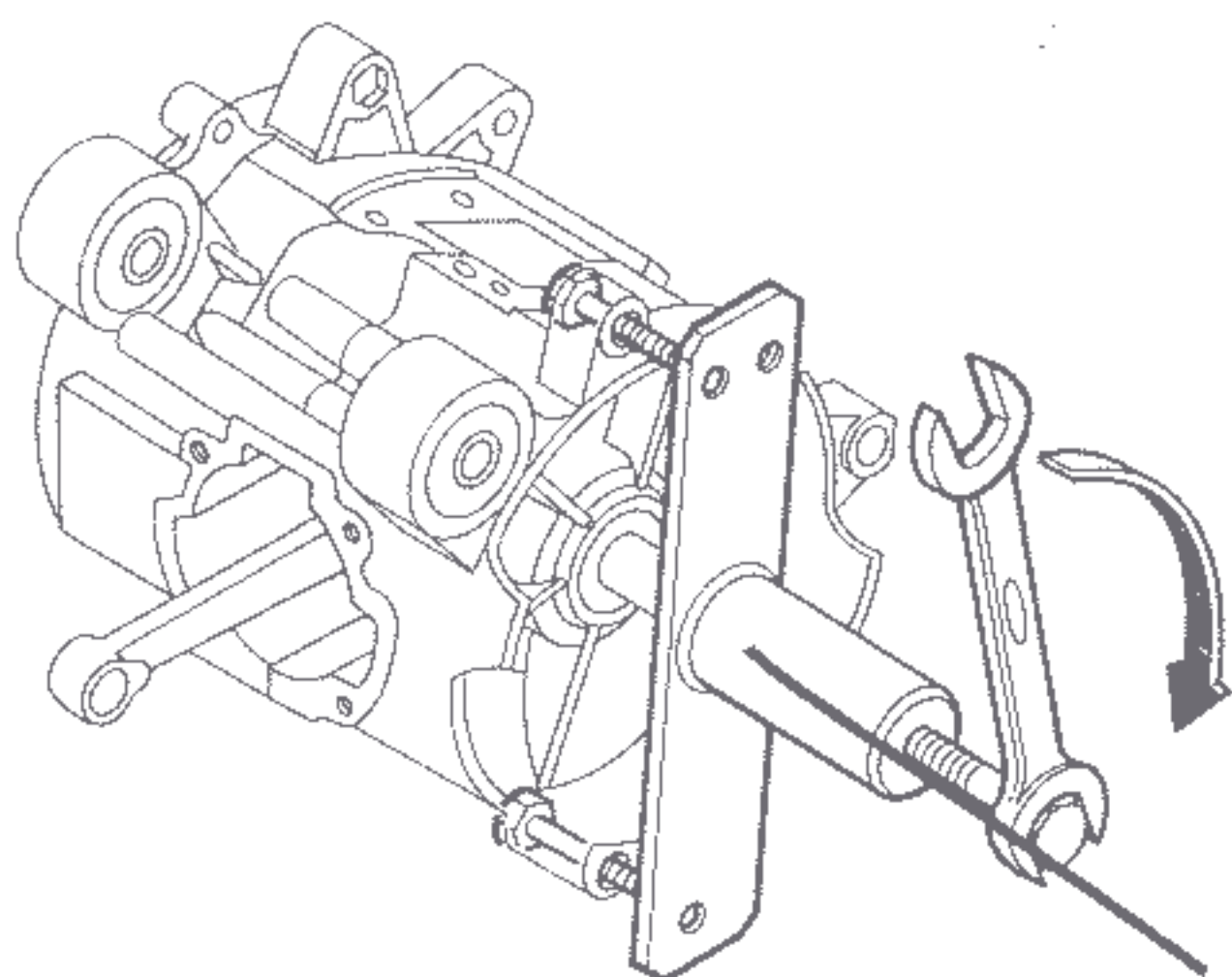
Replace the ball bearing oil seal
when disassembling



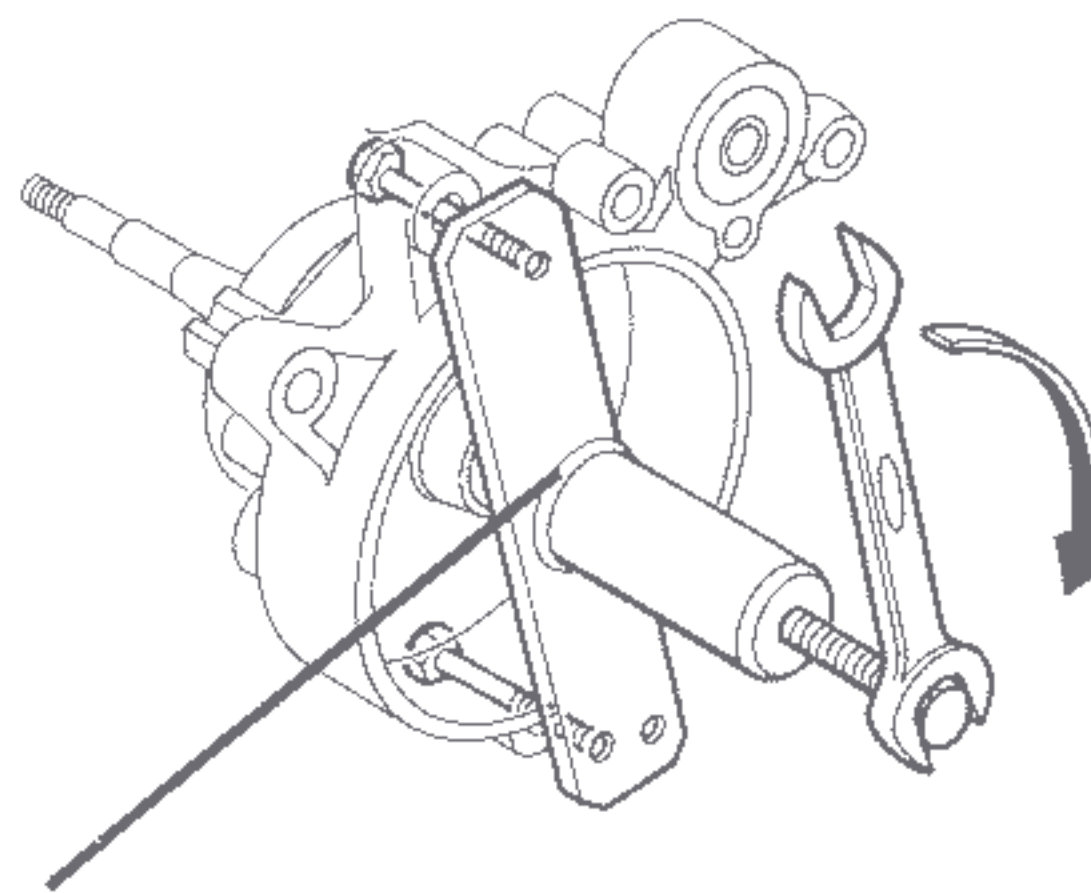
Crankshaft/Crankcase DISASSEMBLY

Unscrew the crankcase setting screws

● L. Crankcase



● R. Crankcase



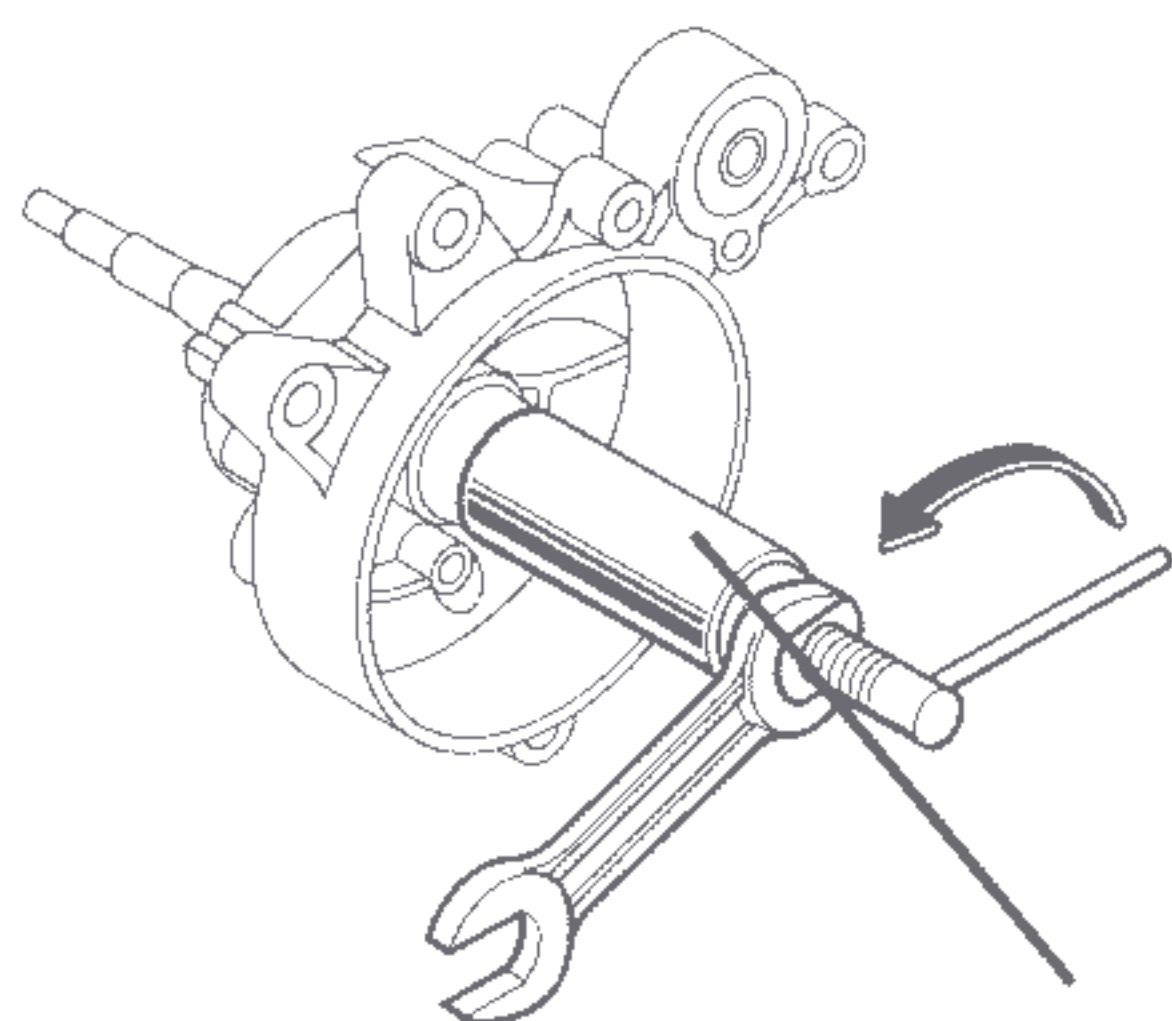
Puller case
07935-1480000

NOTE:

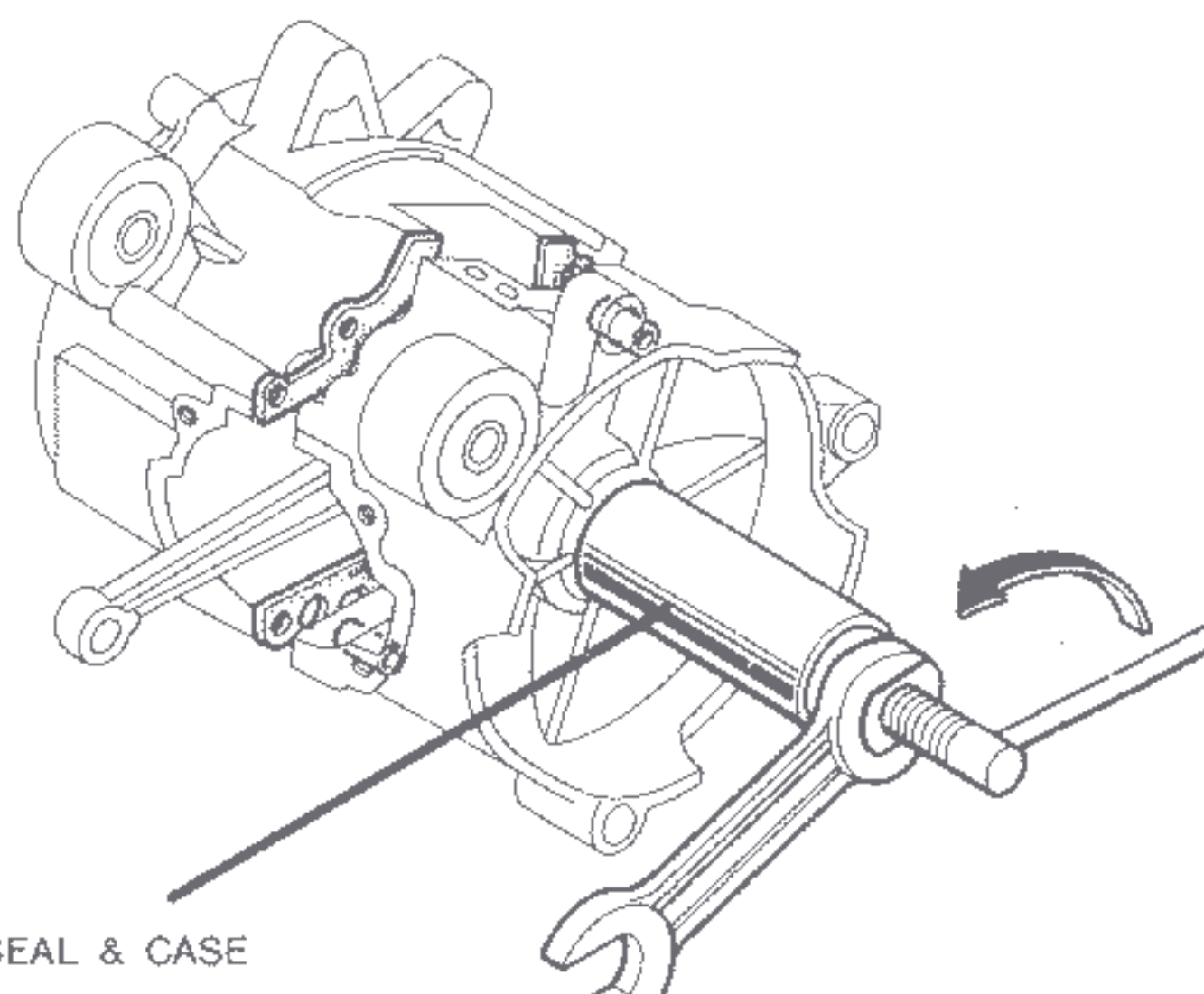
Tighten bolts securely when installing puller
Hold the crankshaft so that it cannot be removed by hand

Crankshaft/Crankcase Assembly

● R. Crankcase



● L. Crankcase



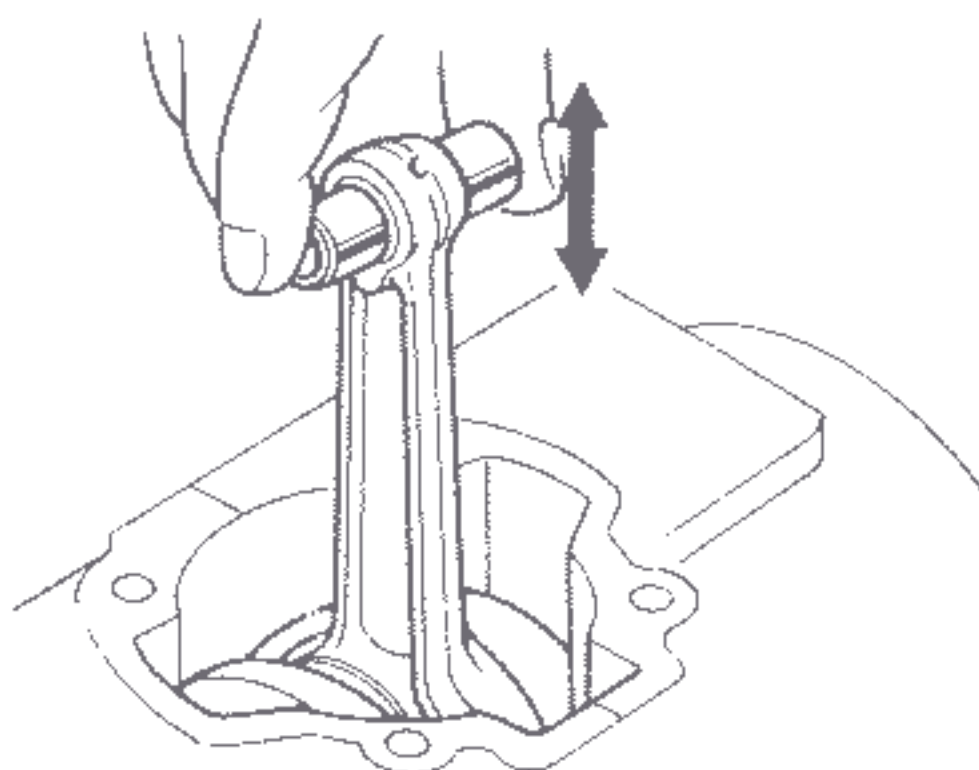
ASSEMBLY TOOL SEAL & CASE
N°. 07965-1480001

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

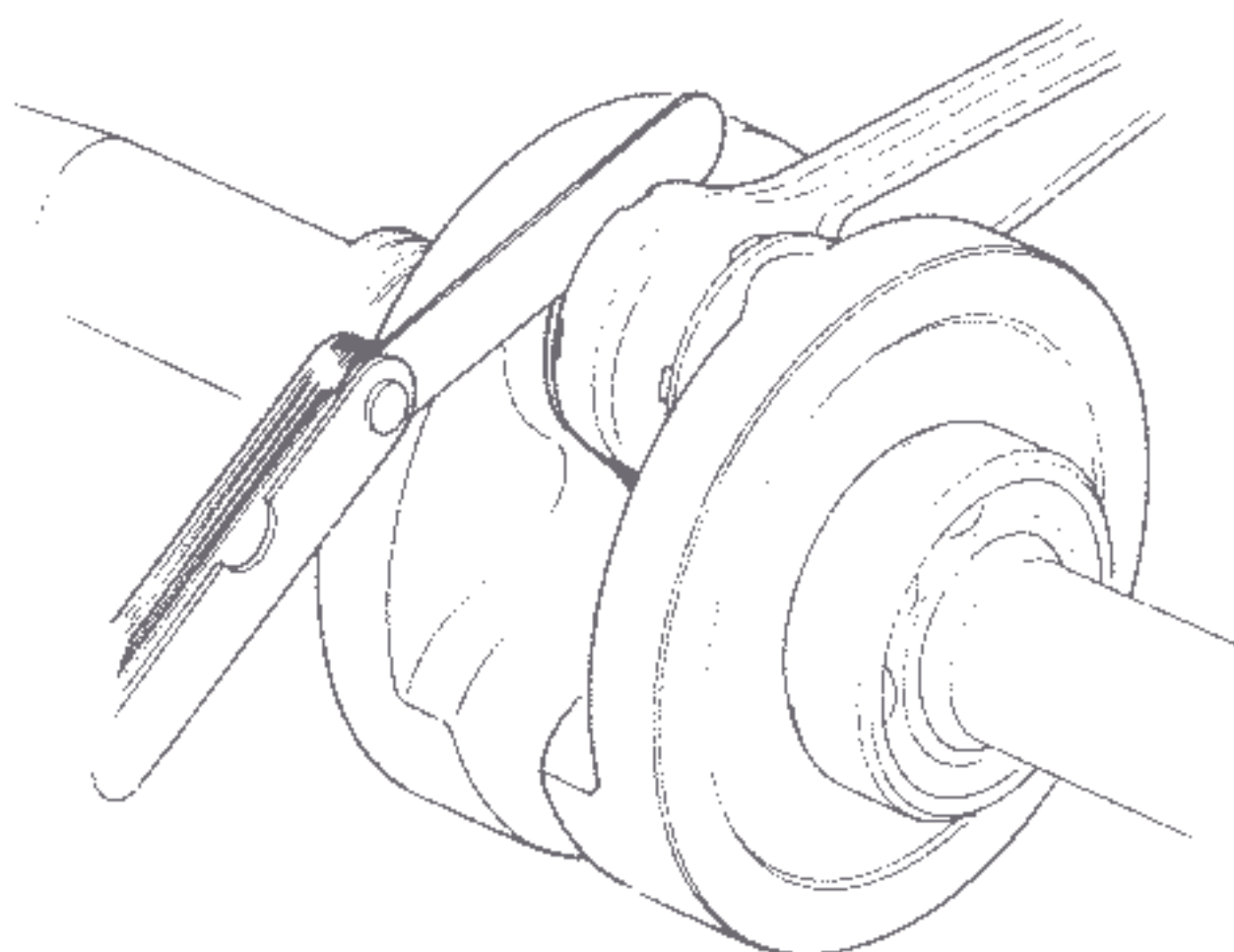
C. Inspection

- Check connecting rod small end bearing play

- Measure connectingrod big end bearing side clearance



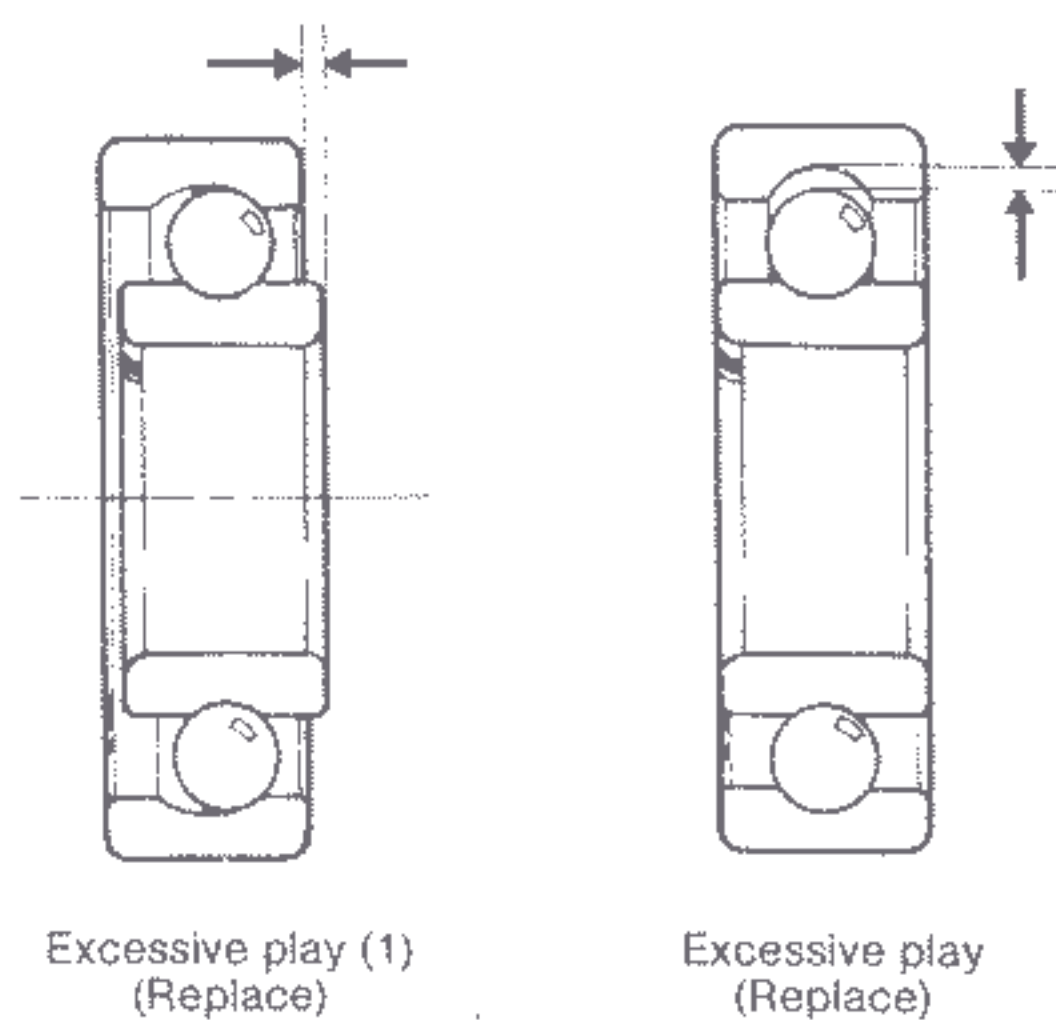
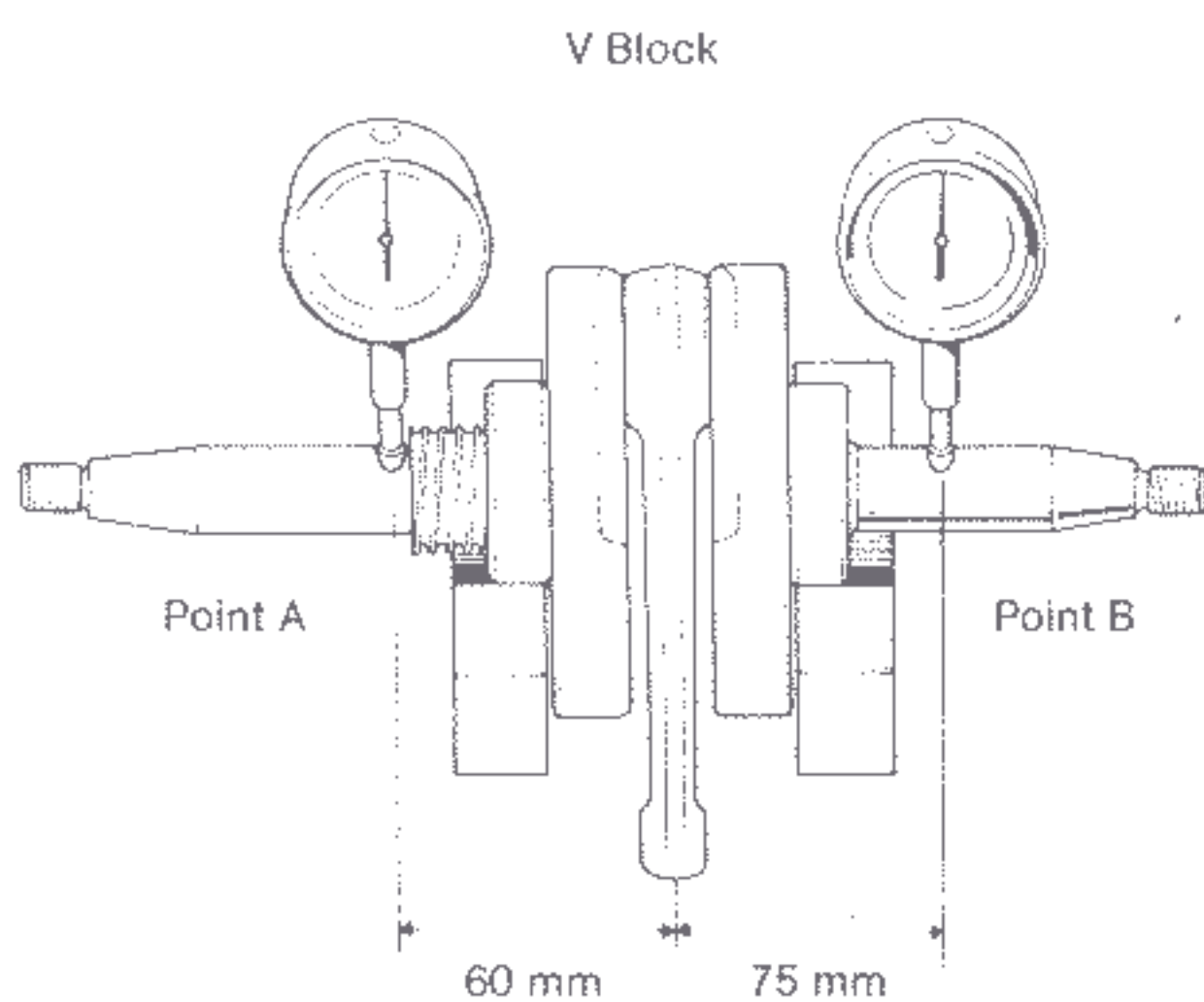
Be sure that the pin rotates smoothly without rattling



Standard	Service Limit
0.15-0.41 mm	0.6 mm

- Measure Crankshaft Runout

- Check bearing play



Measure at both ends A & B

Standard	Service Limit
0.05 mm	0.15 mm



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10. CARBURETOR/AIR CLEANER

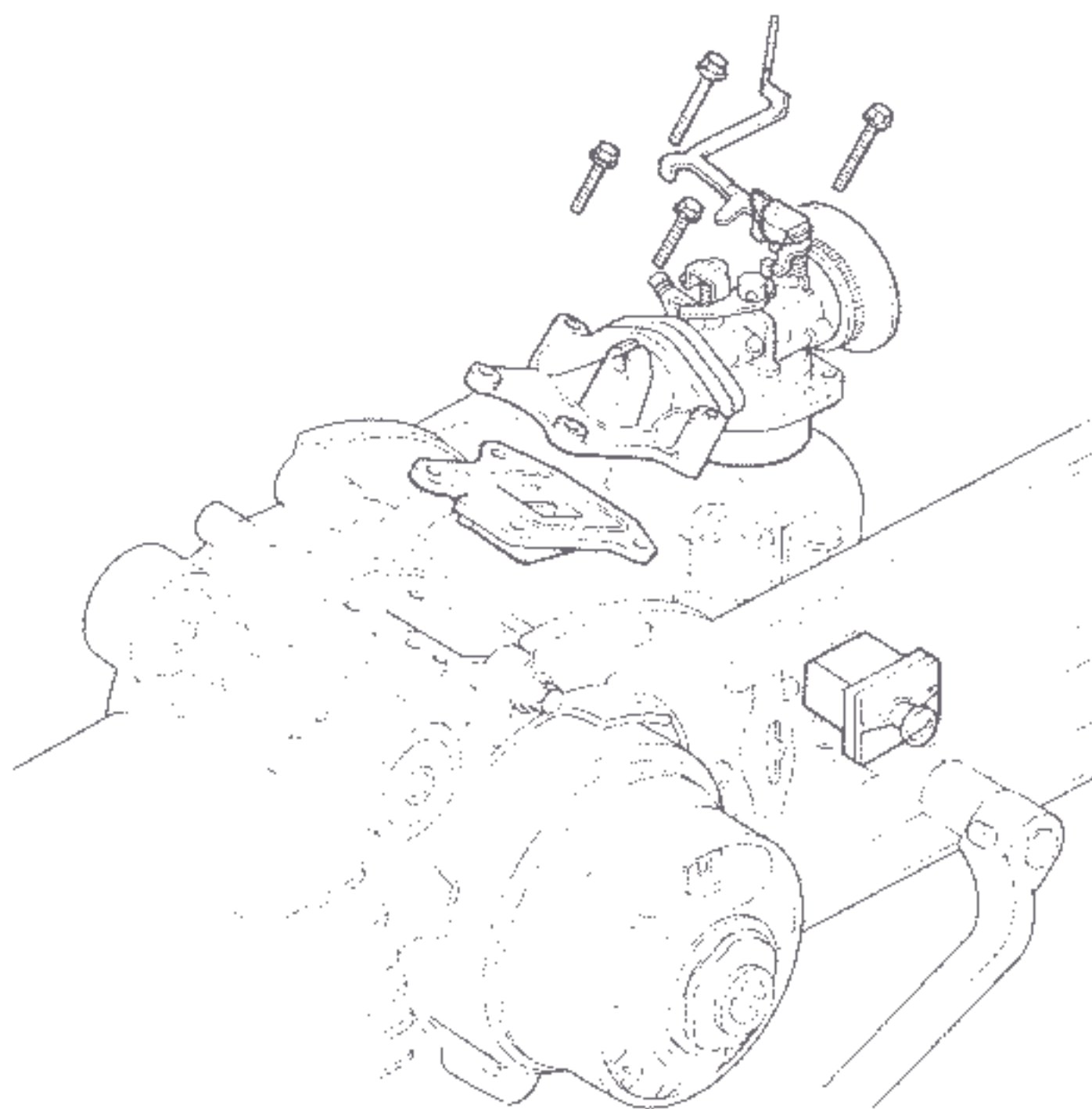
A. Trouble shooting	67
B. Disassembly/Assembly	68
C. Inspection	70
D. Cleaning	71

A. Trouble Shooting

Symptom	Probable cause
Hard starting	Clogged Float Valve Mixture screw out of adjustment Clogged 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

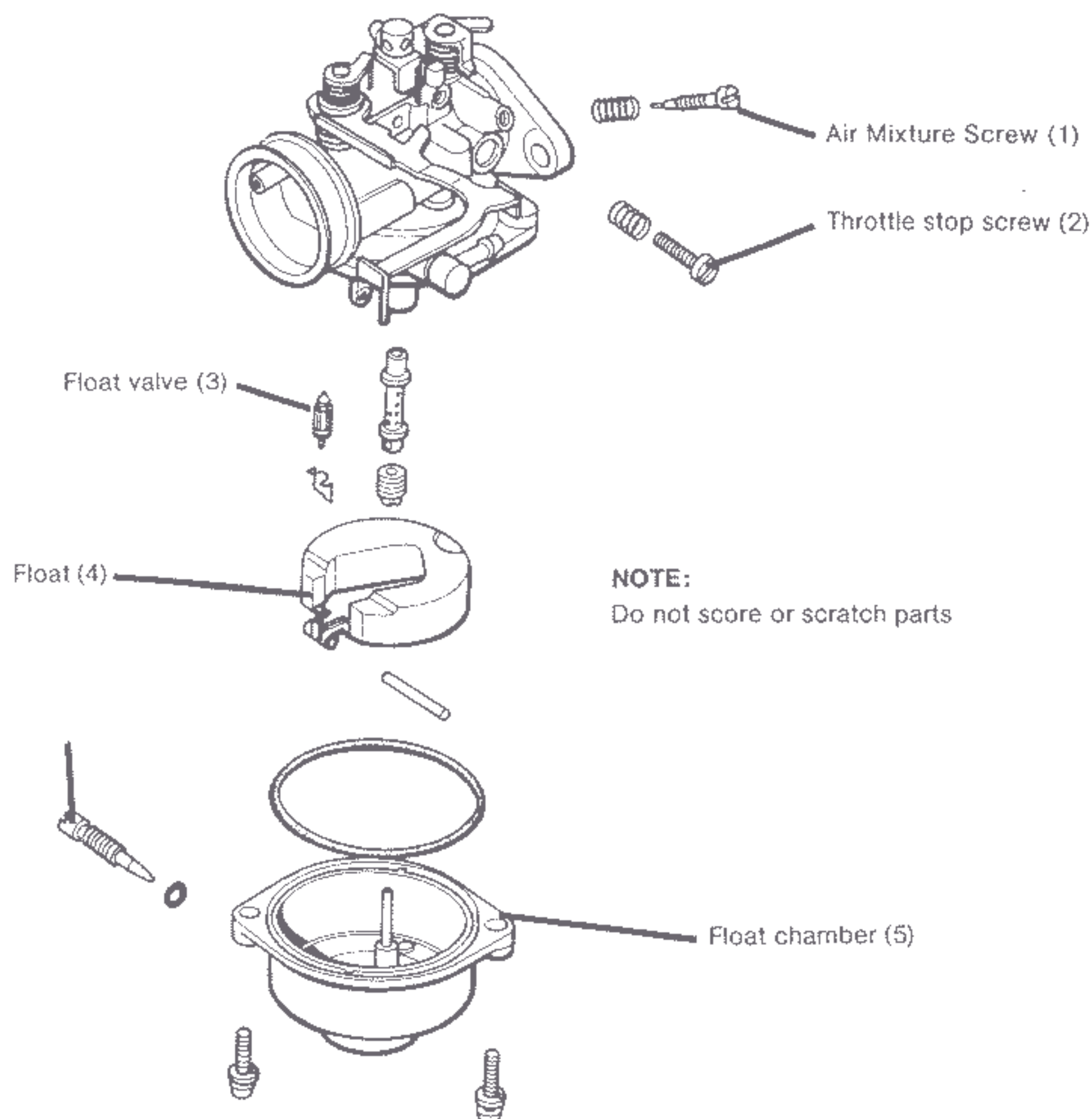
B. Carburetor Disassembly/Assembly

- 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:

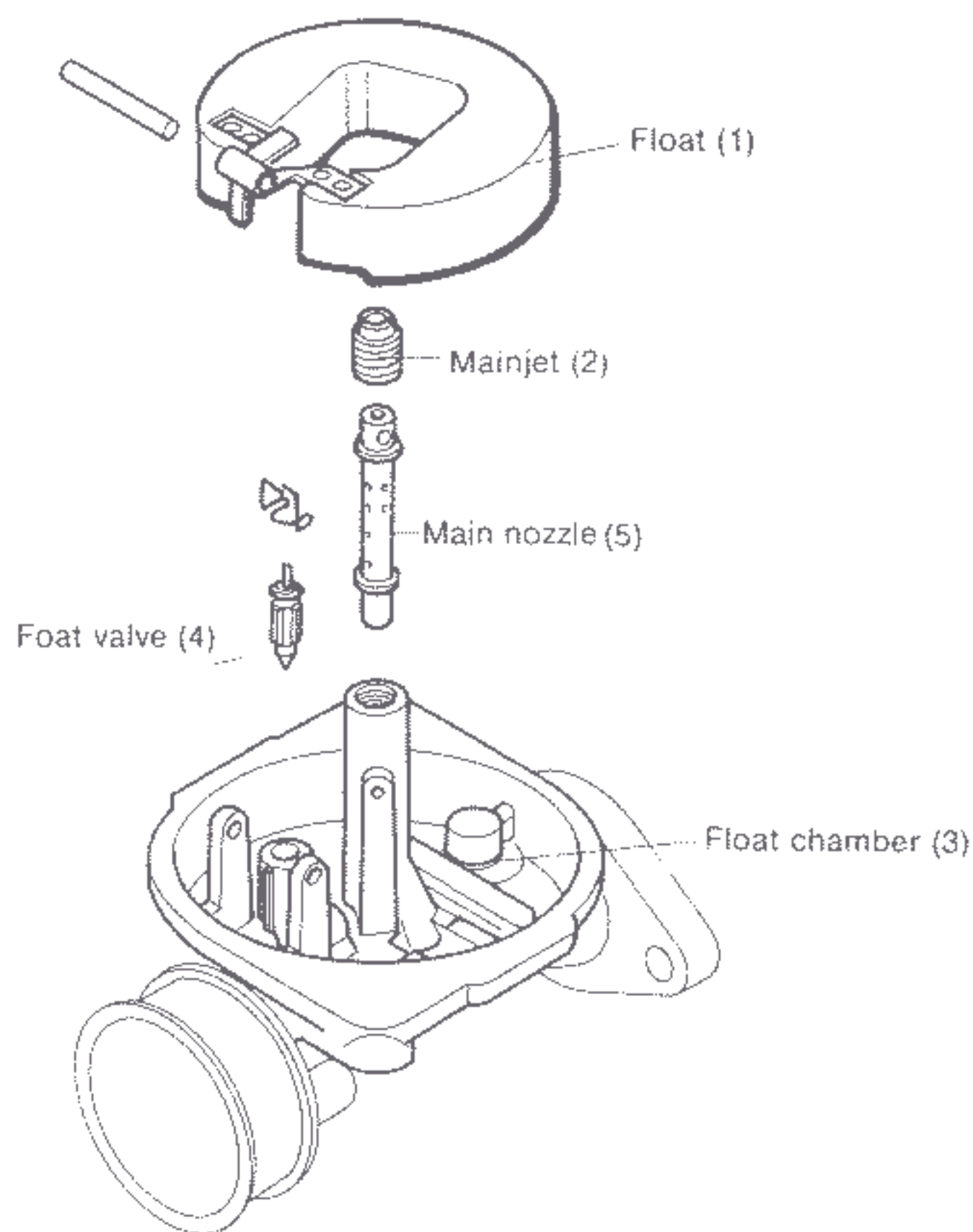
Do not score or scratch parts



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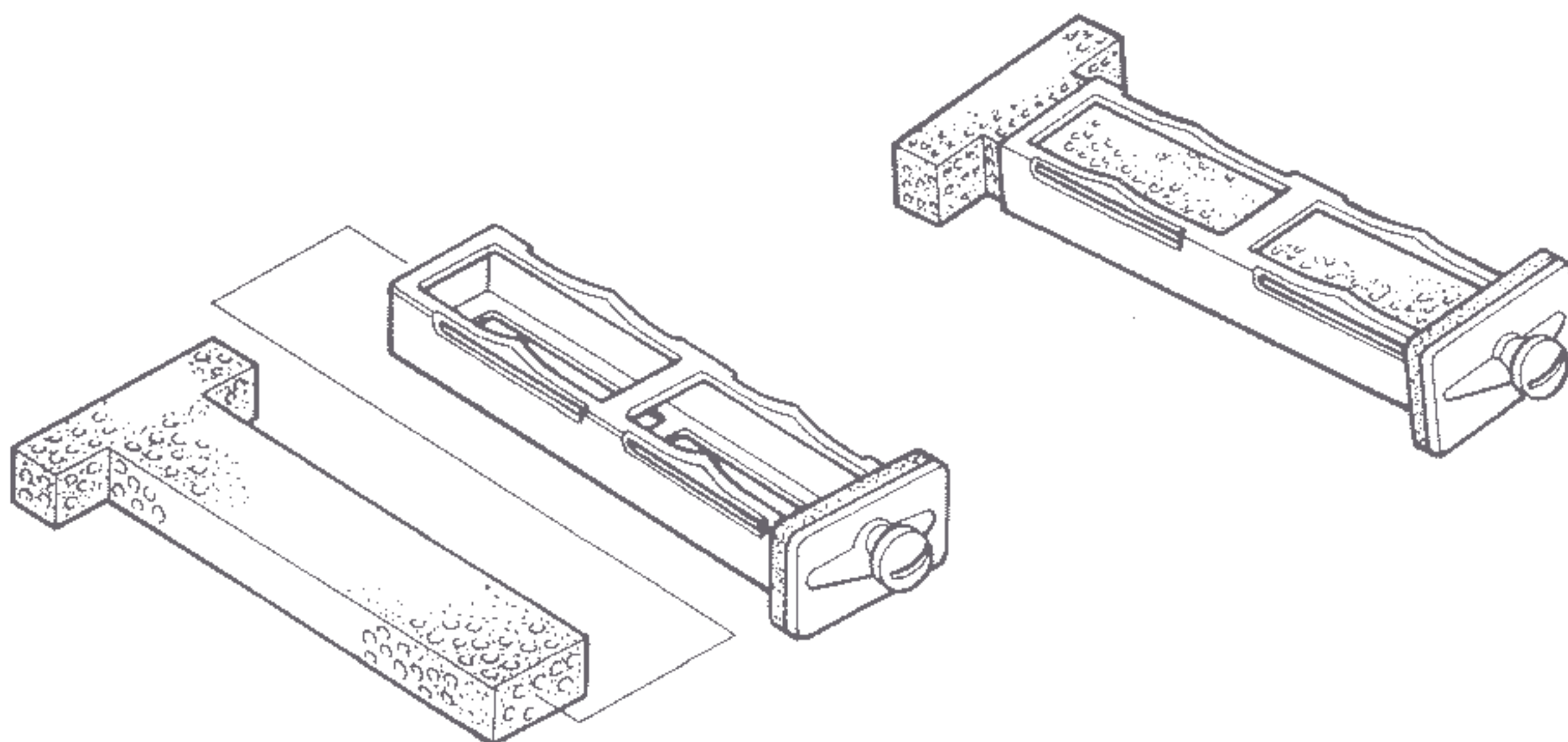


● Float valve/Main Jet DISASSEMBLY/ASSEMBLY



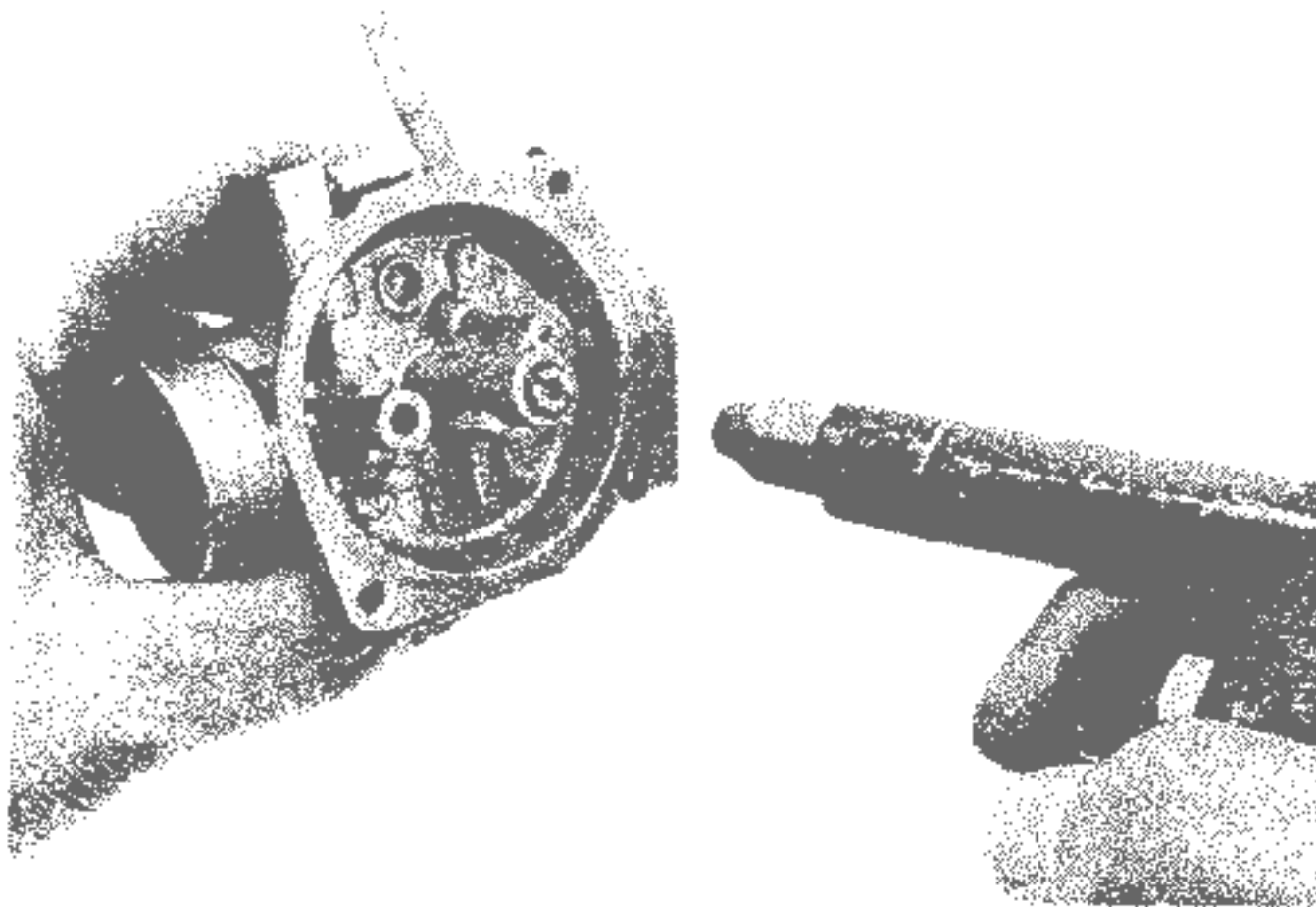
● Air cleaner DISASSEMBLY/ASSEMBLY

- 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



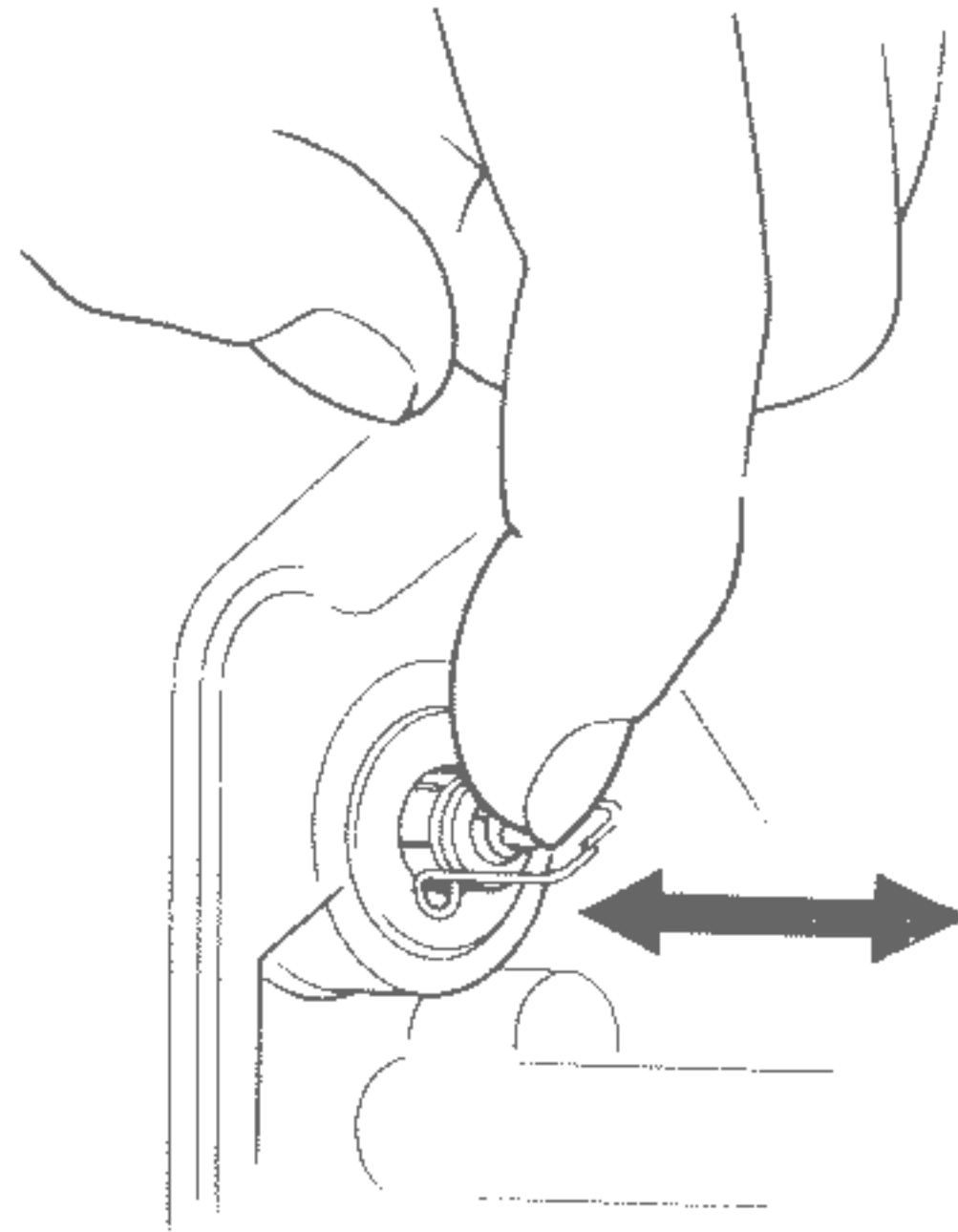


C. Inspection



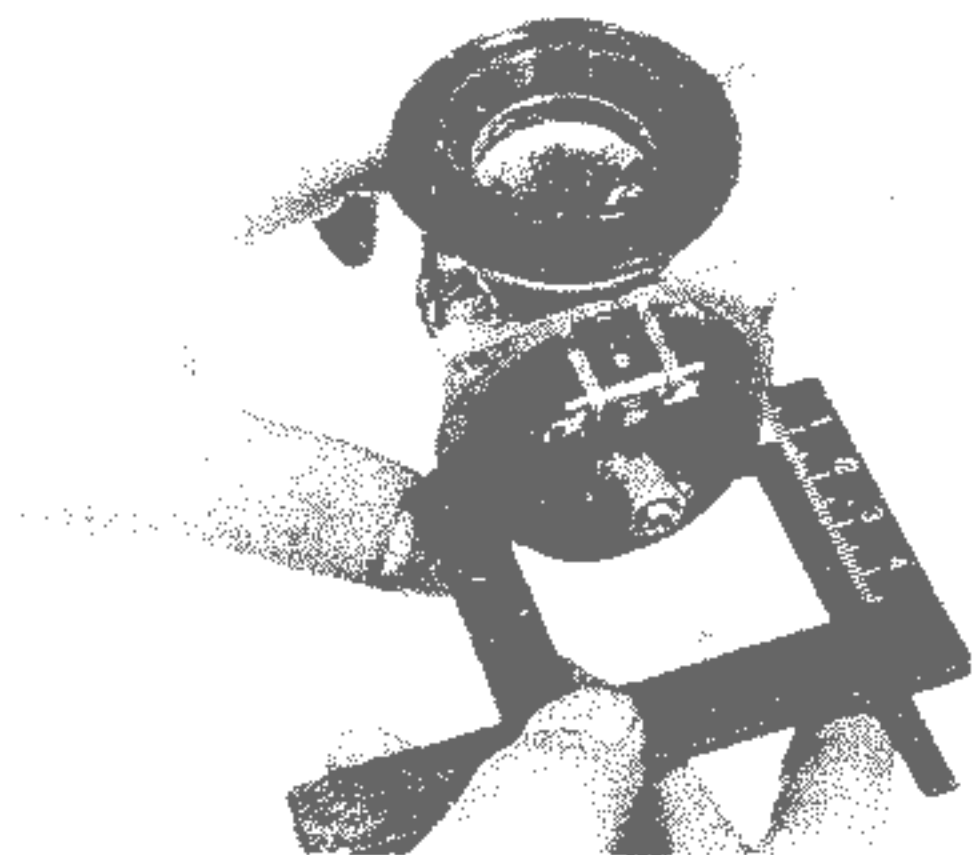
Remove carburetor jets, pilot screw and float.
With compressed air, blow out all passages in the carburetor body

Float valve inspection



Replace valve if it does not return smoothly

● Measure Float Height



Standard Float level -
10 mm

Float level gauge
07401-0010000



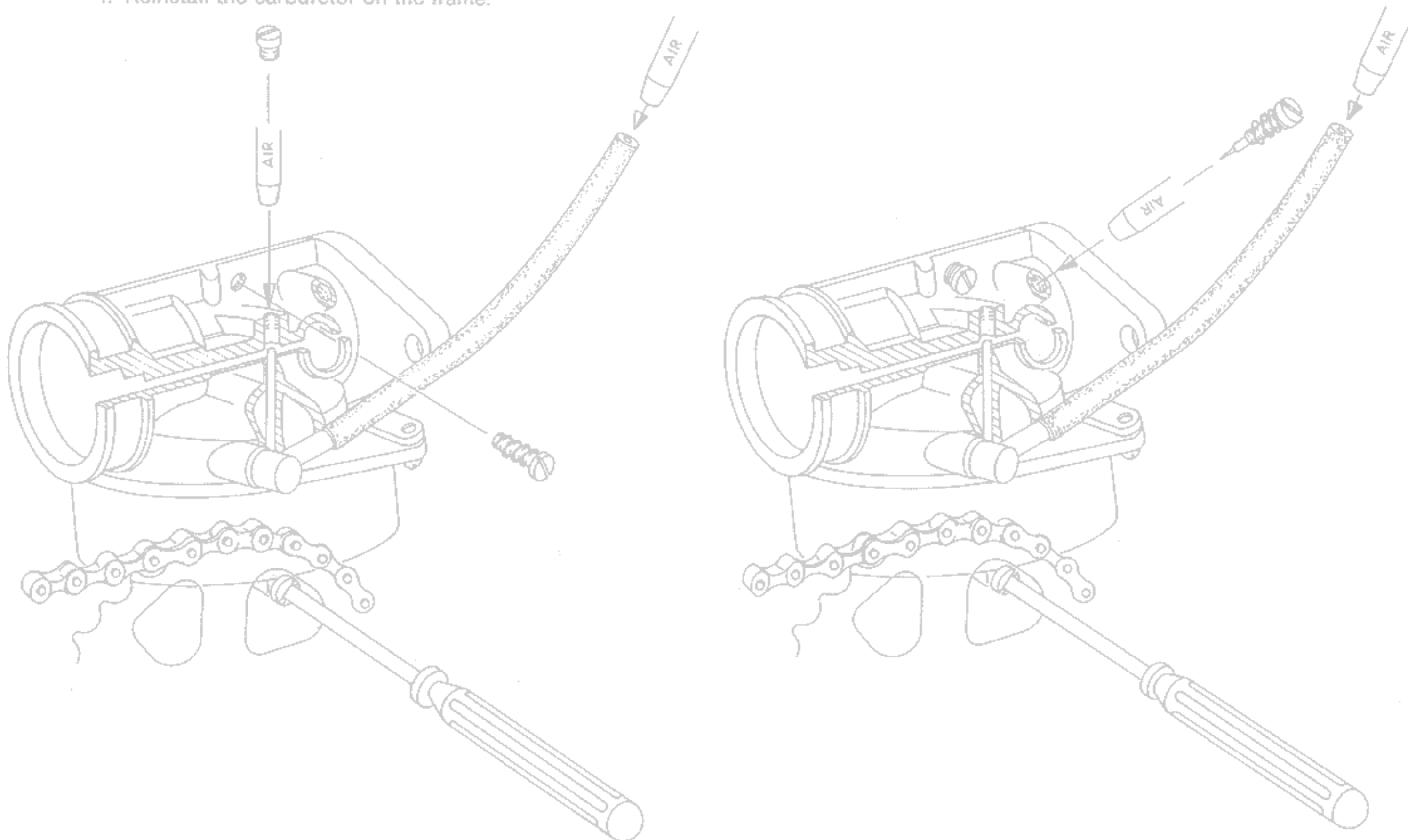
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D. Cleaning

Carburetor on the frame

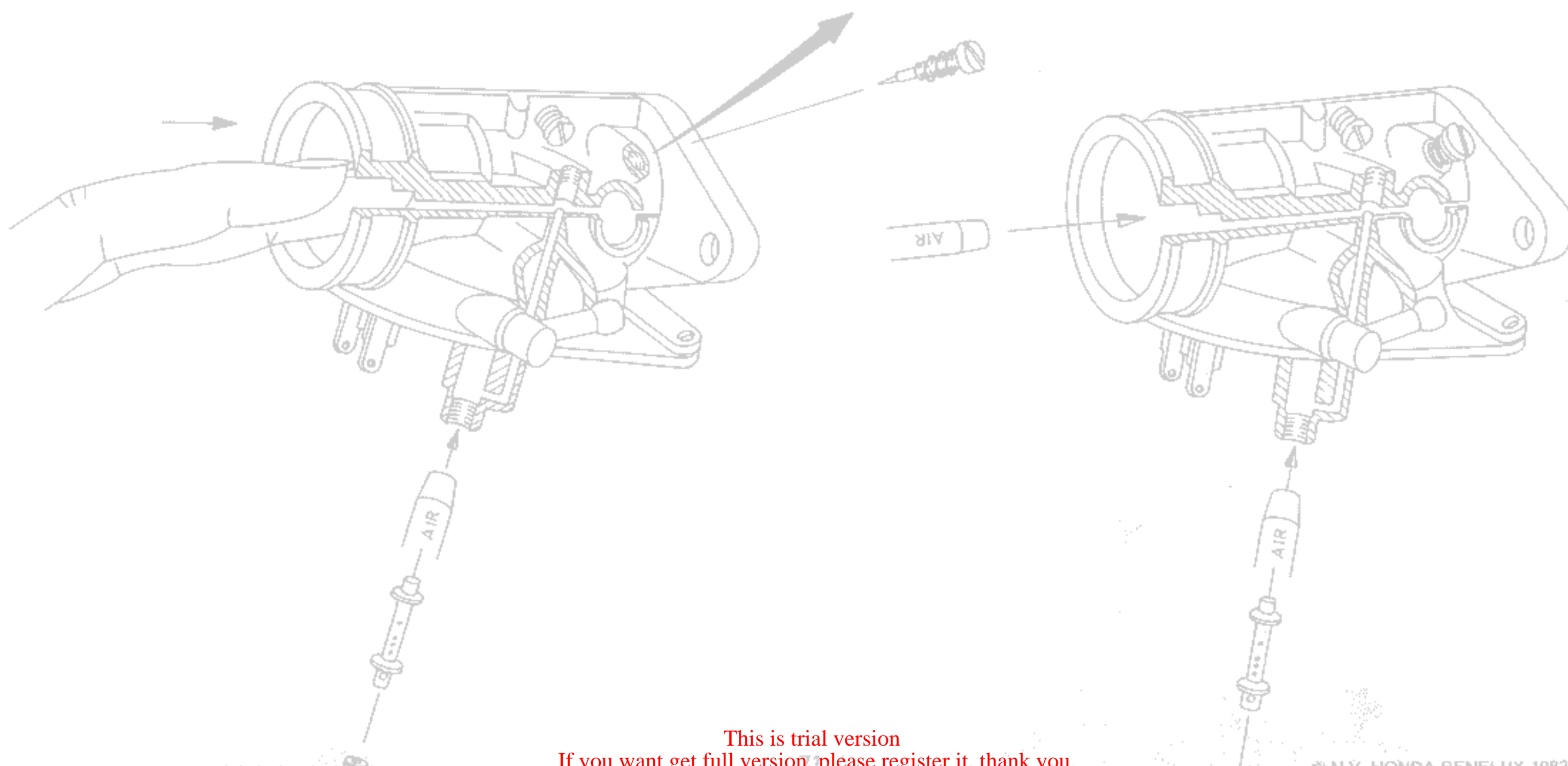
1. Turn the fuel cock "OFF".
2. Drain the carburetor (screw A).
3. Clean the carburetor with compressed air.
4. Reinstall the carburetor on the frame.



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

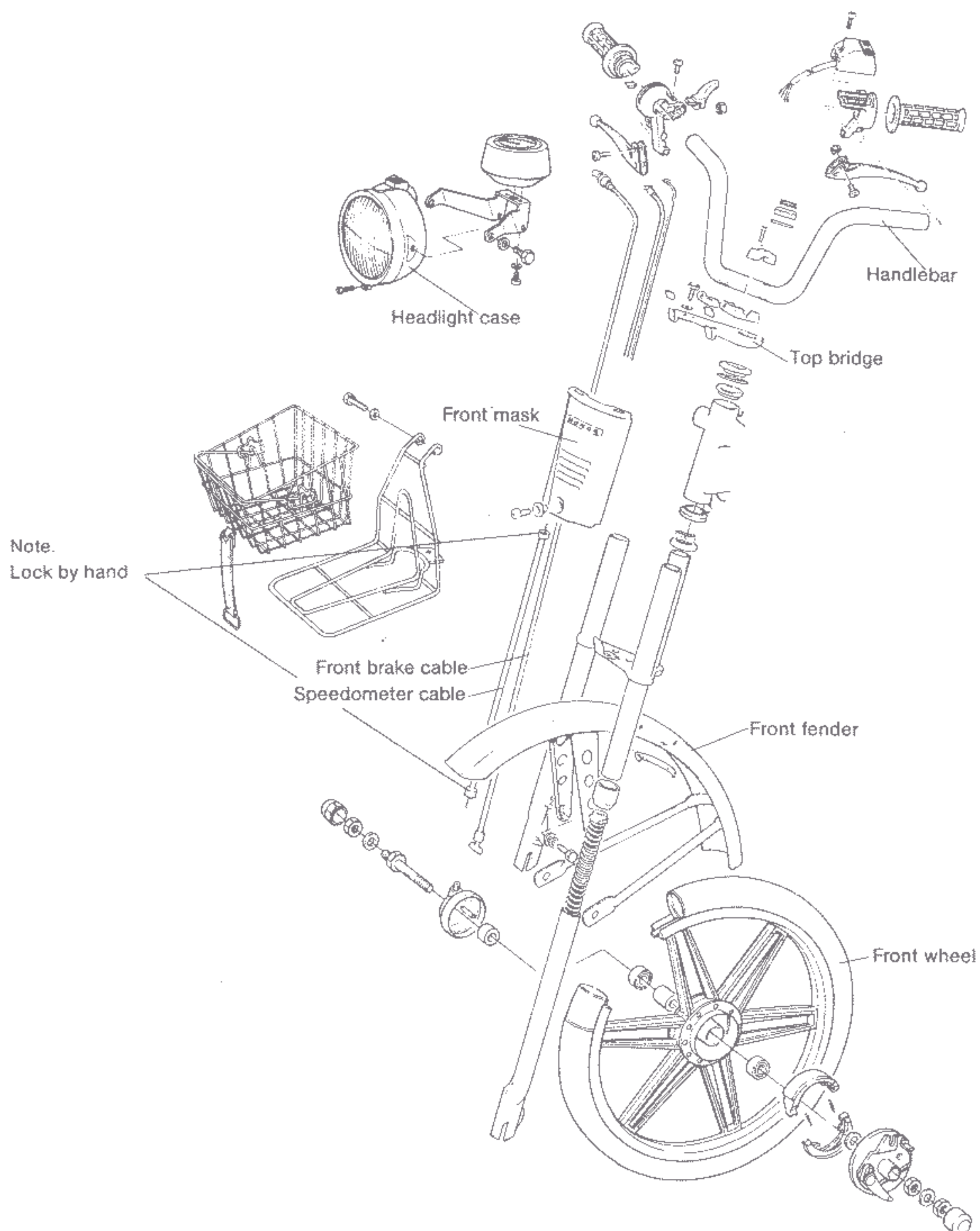
A. Trouble Shooting	72
B. Disassembly/Assembly	73
C. Inspection	76

A. Trouble Shooting

Symptom	Probable cause
Hard steering	Damaged or broken radial 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 shock 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 between shock absorber case and spring. Damaged stopper rubber.

B. Disassembly/Assembly

Install handlebar on the lower holders with the punch marks in line with the top of the holders



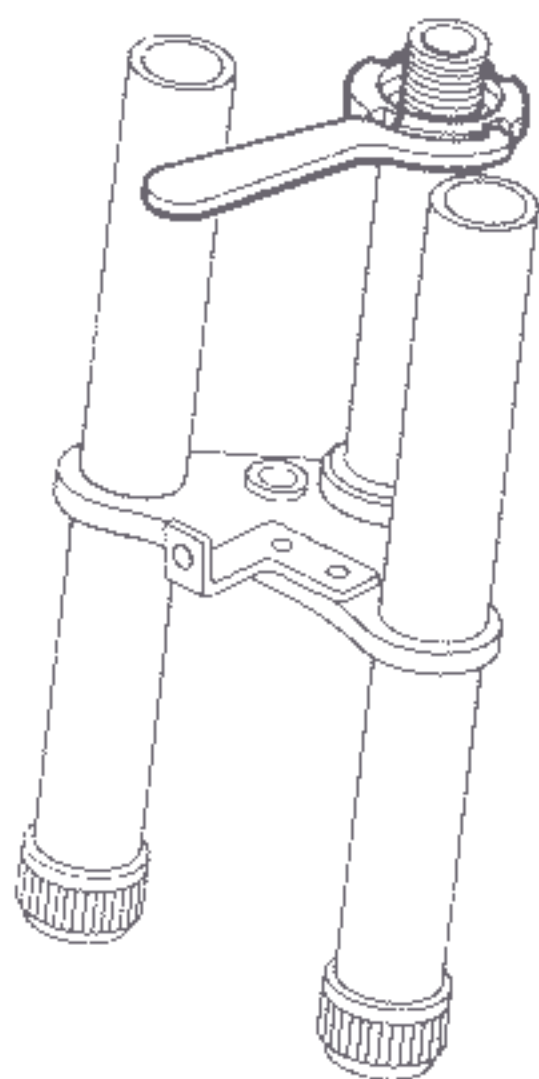


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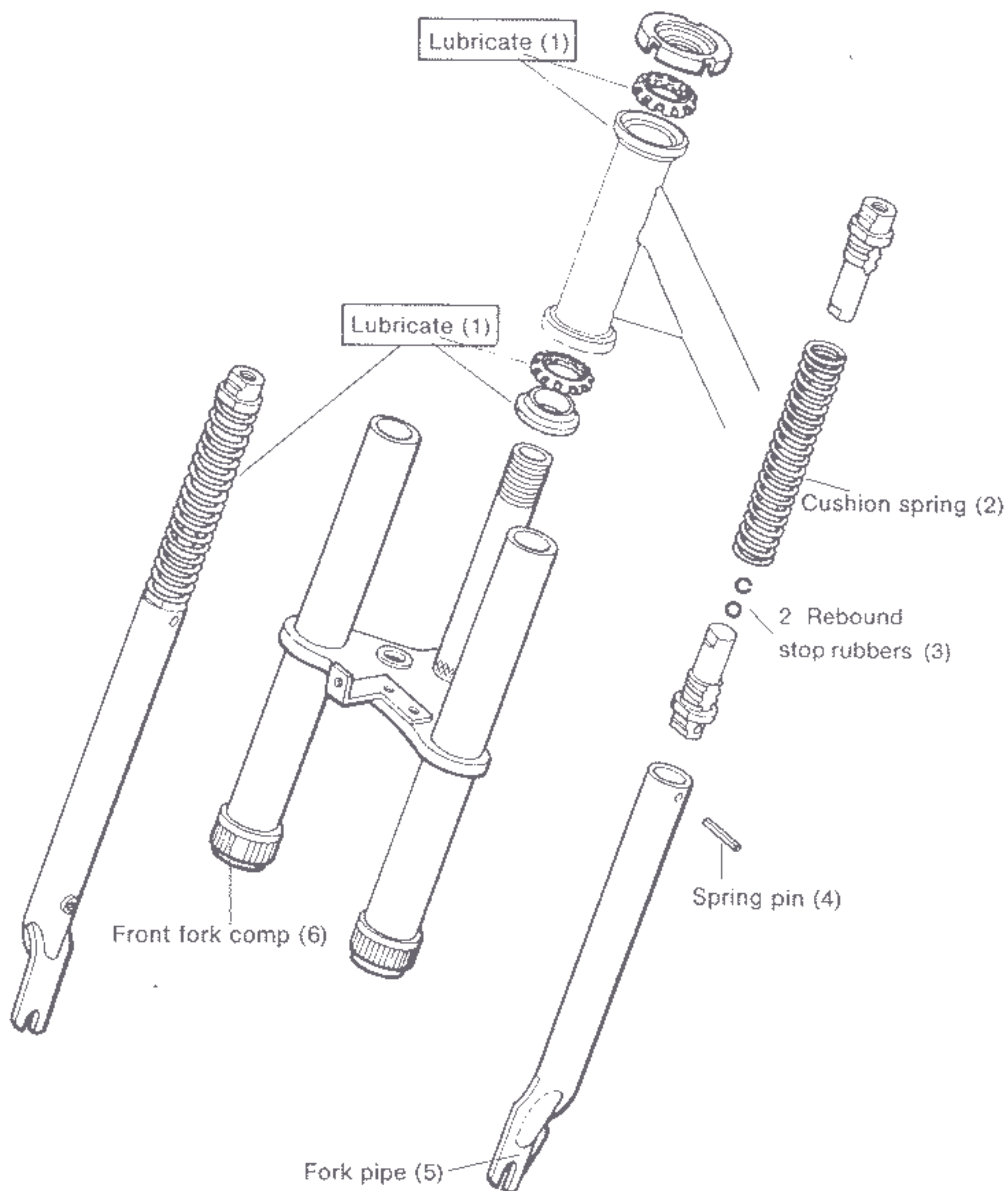


● Front Fork Disassembly/Assembly

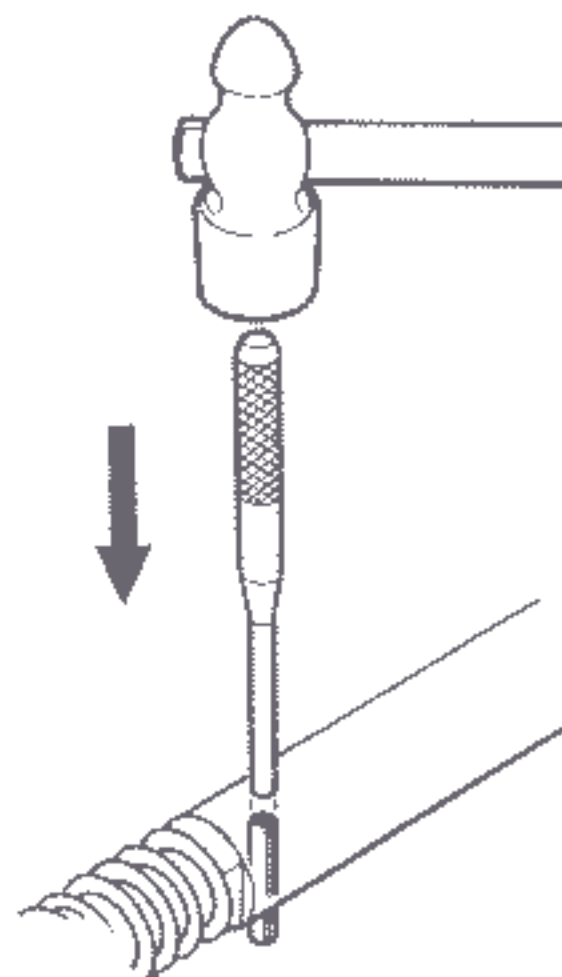
Pin Spanner Wrench
07902-2000000



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



Spring Pin Driver 3.5 mm



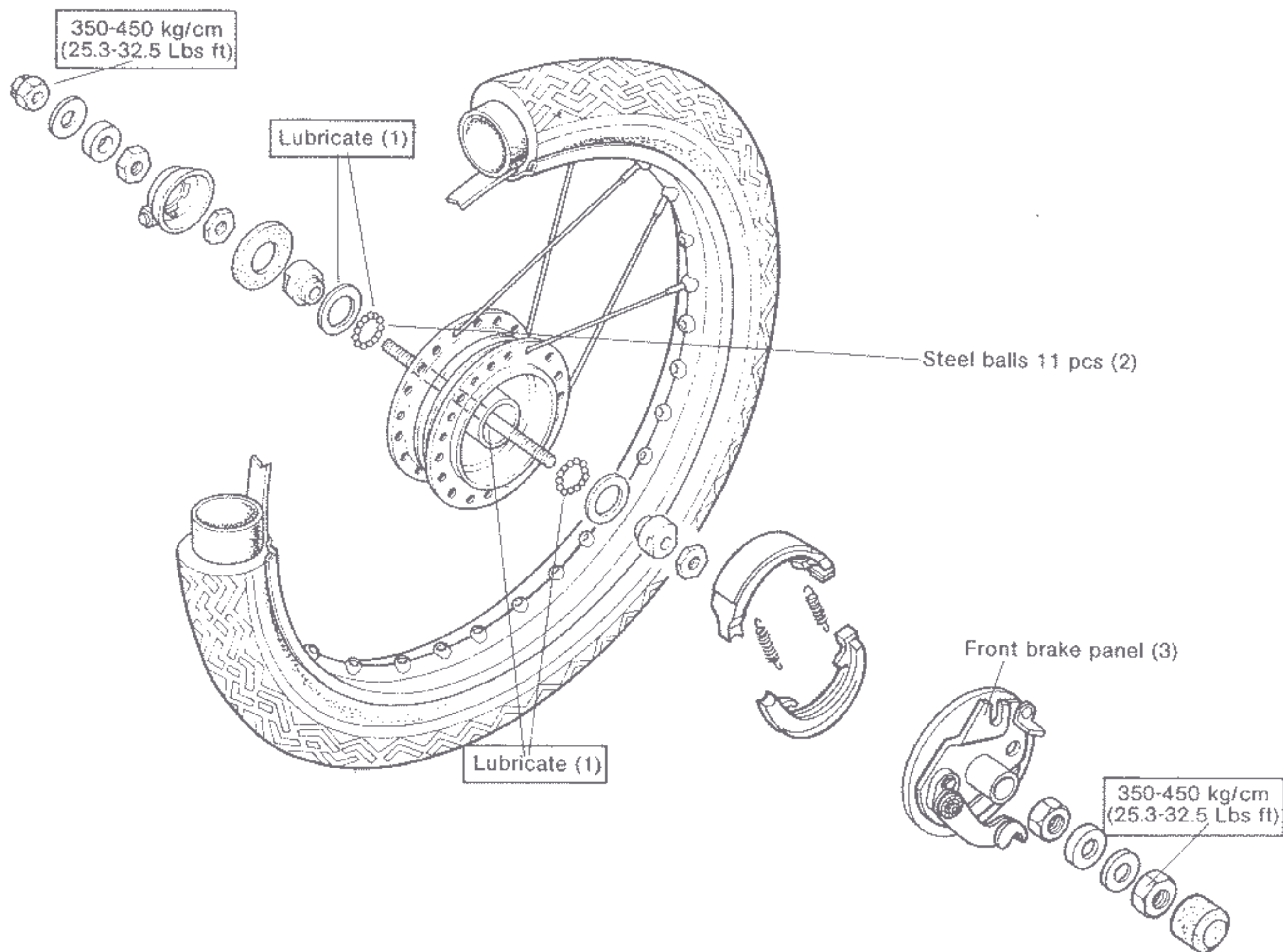


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● Front Wheel Disassembly/Assembly

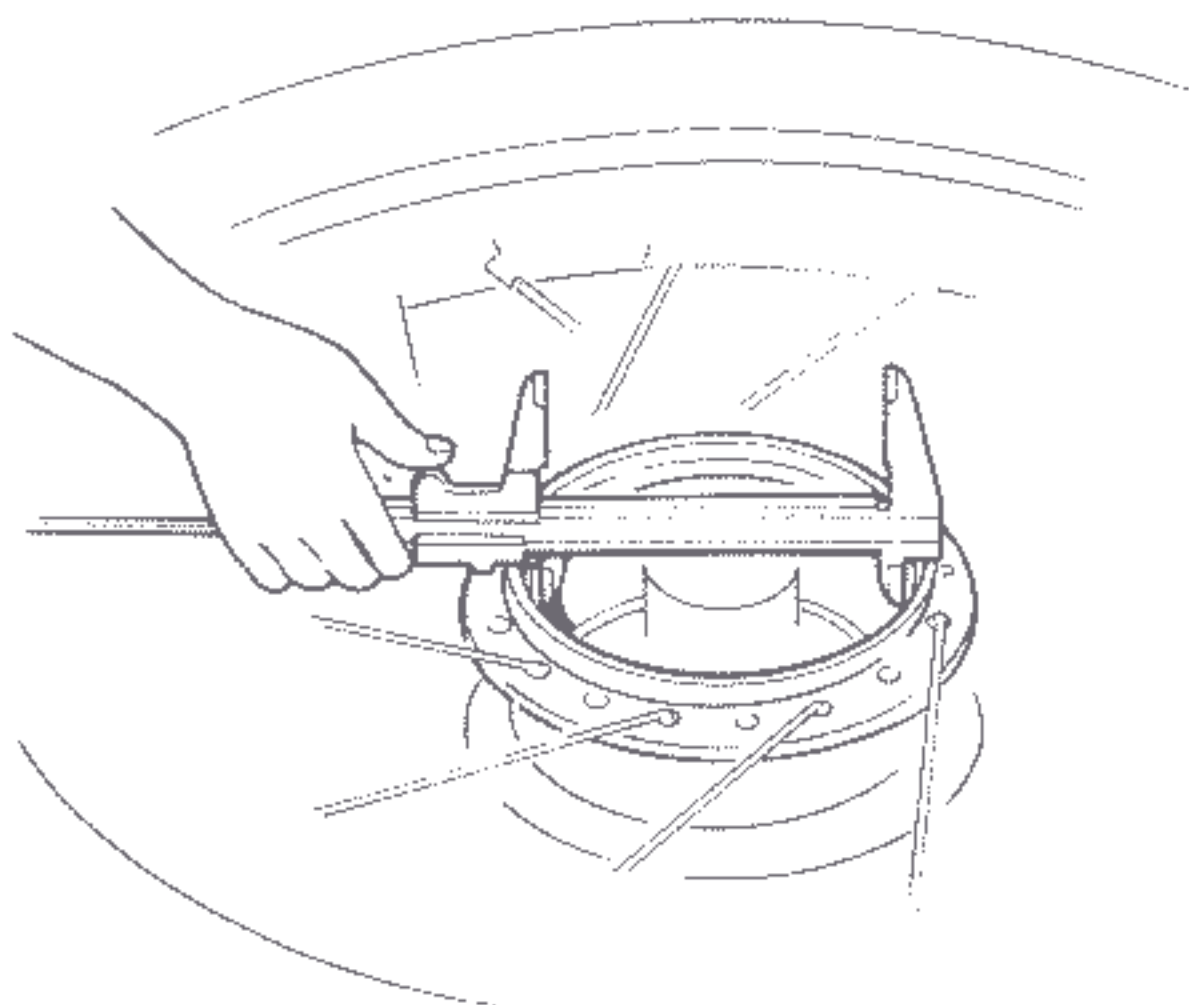
Avoid getting oil or grease on the linings and brake drum





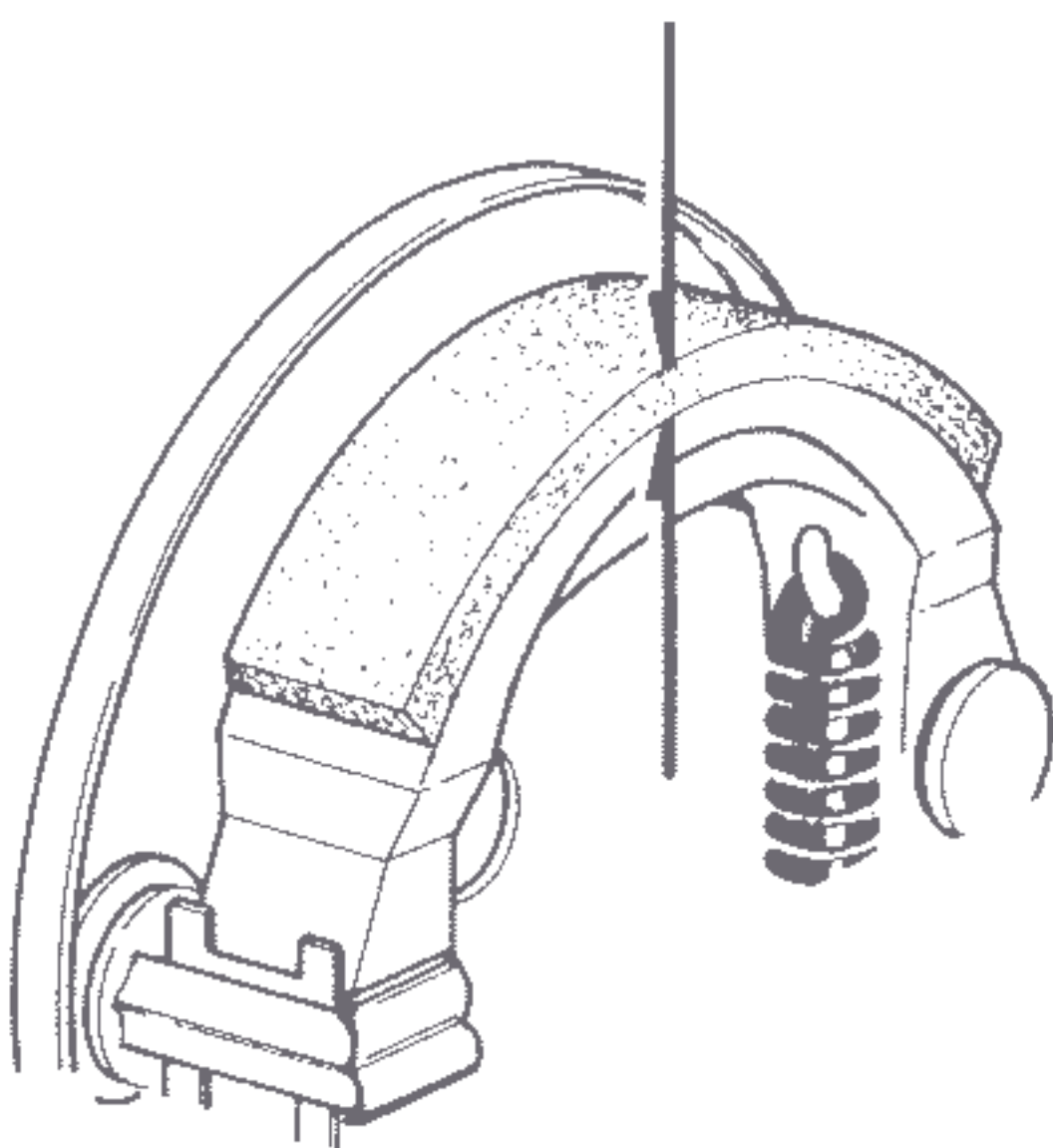
C. Inspection

● Wheel hub I.D.



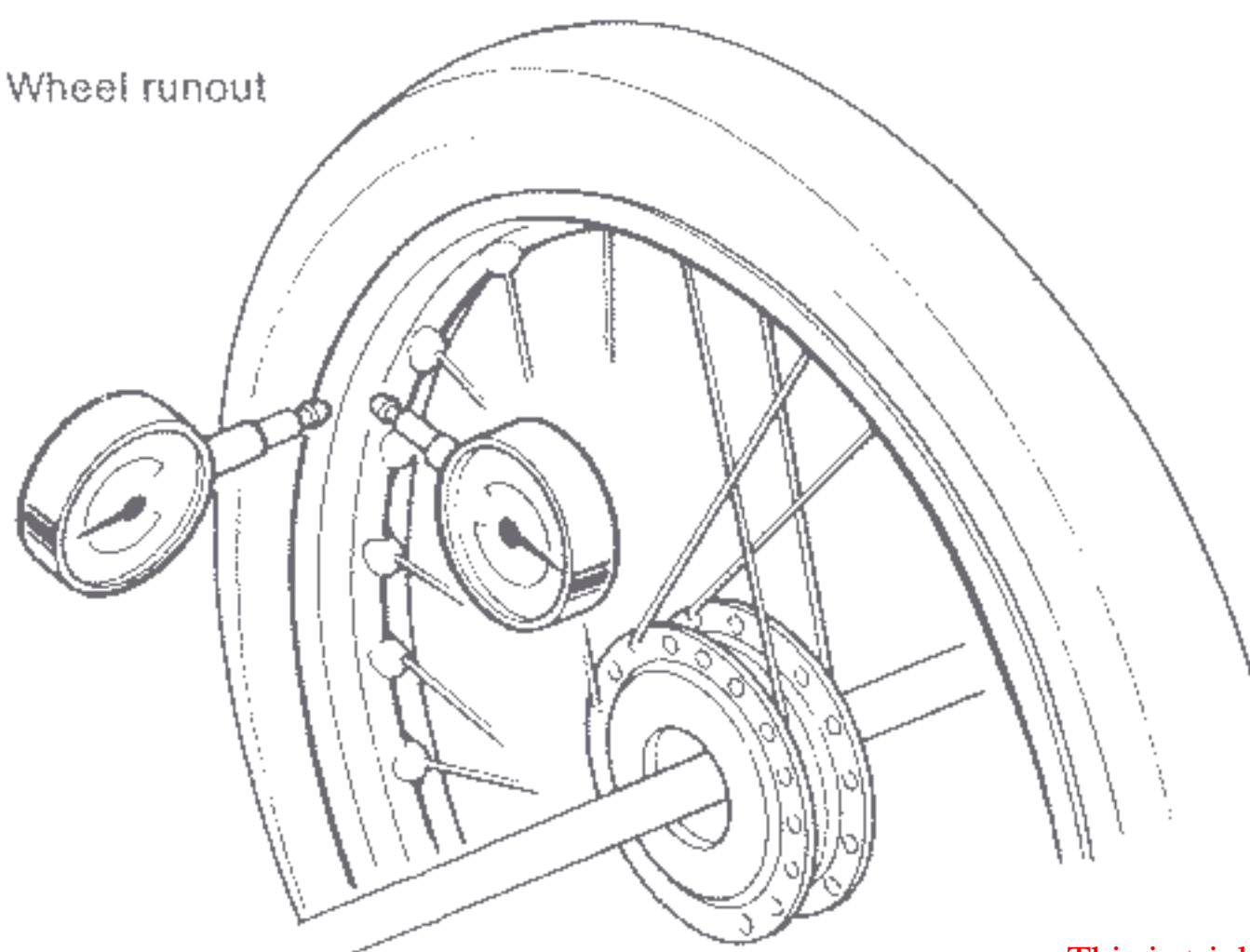
Standard	Service Limit
80.0 - 80.2 mm	81.0 mm

● Brake lining thickness



Standard	Service Limit
3.5 mm	2.0 mm

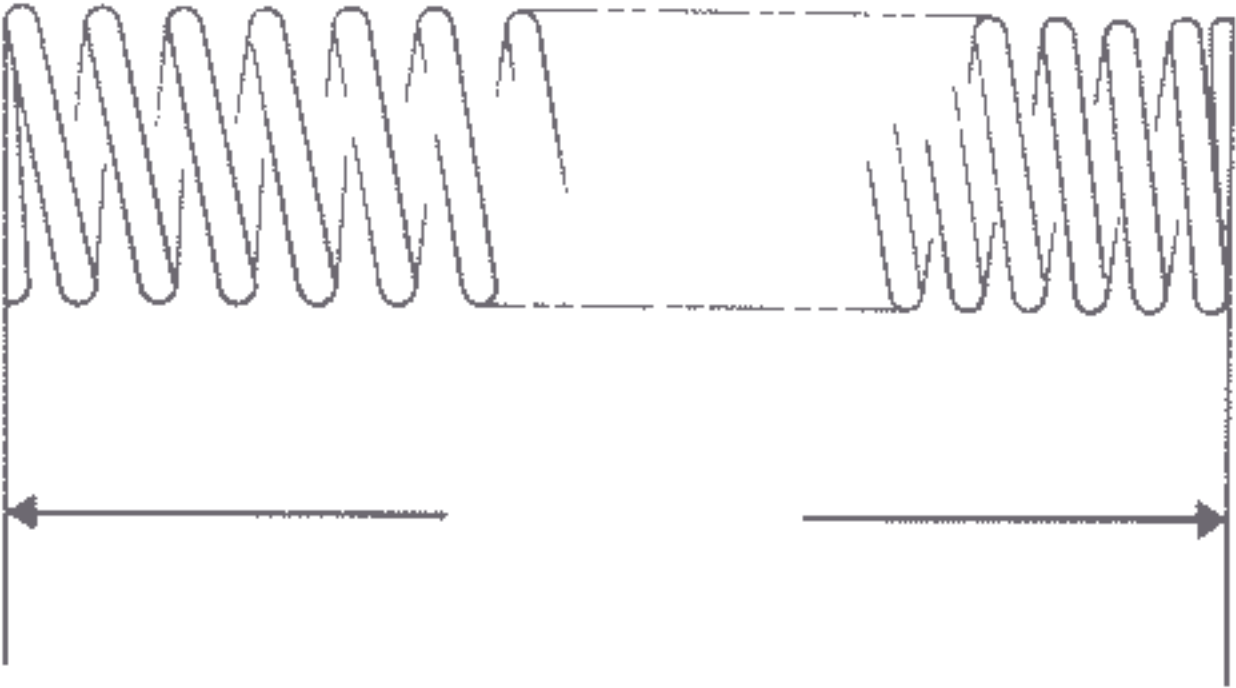
Front Wheel runout



Standard	Service 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	78
B. Disassembly/Assembly	80
C. Inspection	81

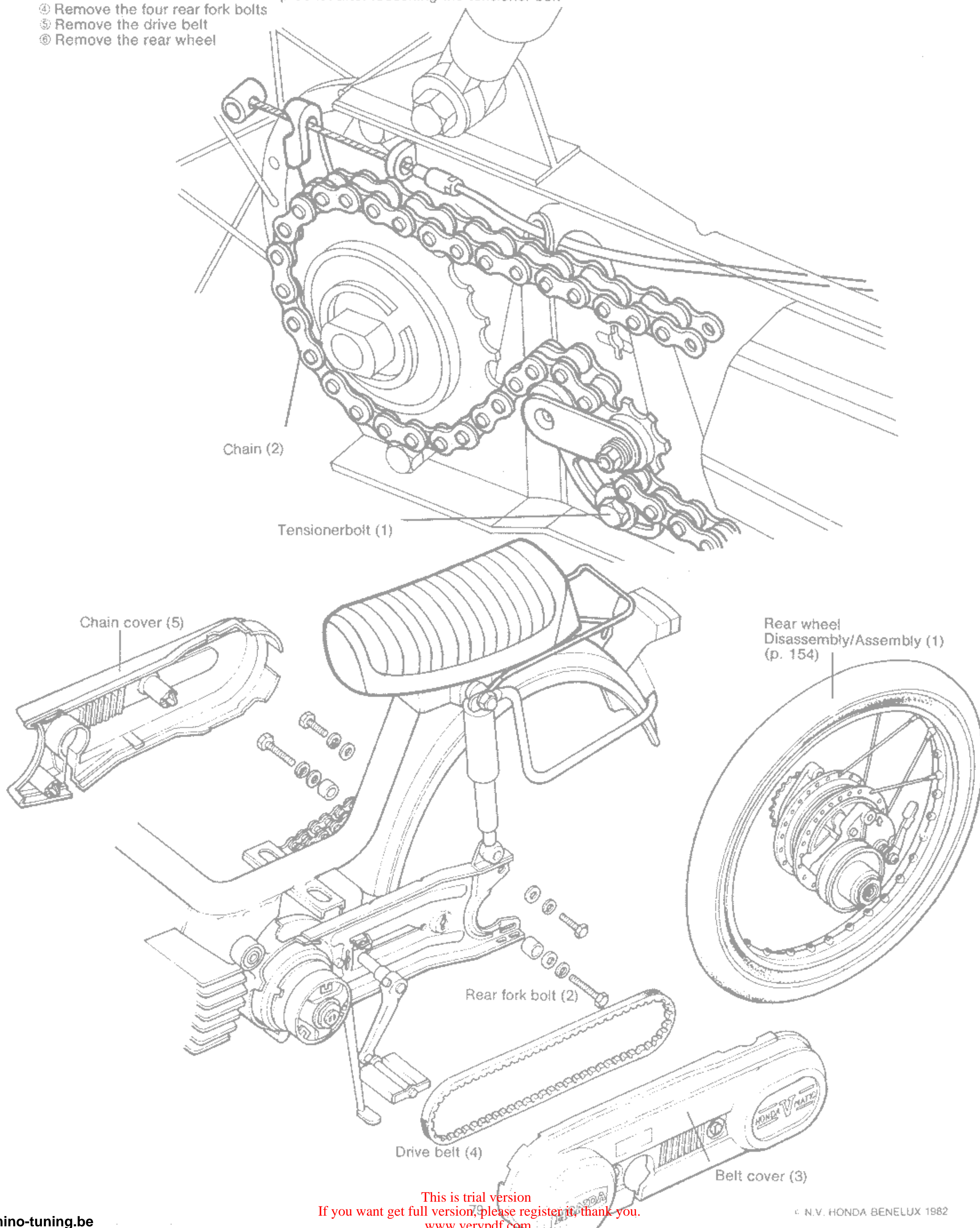
A. Trouble Shooting

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



Rear Wheel Removal

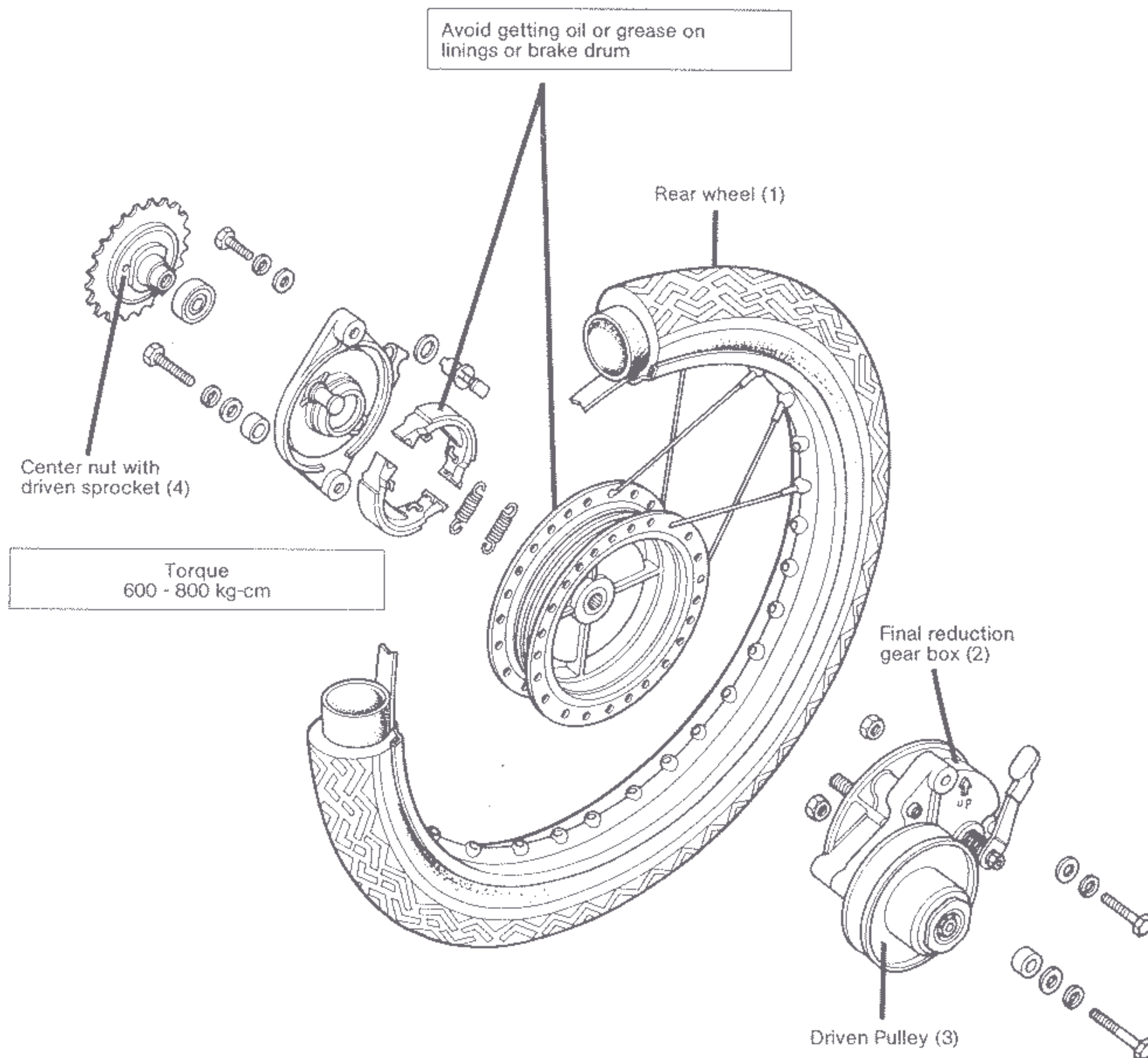
- ① Remove the belt cover and chain
- ② Disconnect the rear brake cable at the rear brake arm
- ③ Remove the chain at the driven sprocket after loosening the tensioner bolt
- ④ Remove the four rear fork bolts
- ⑤ Remove the drive belt
- ⑥ Remove the rear wheel





B. Rear Wheel Disassembly/Assembly

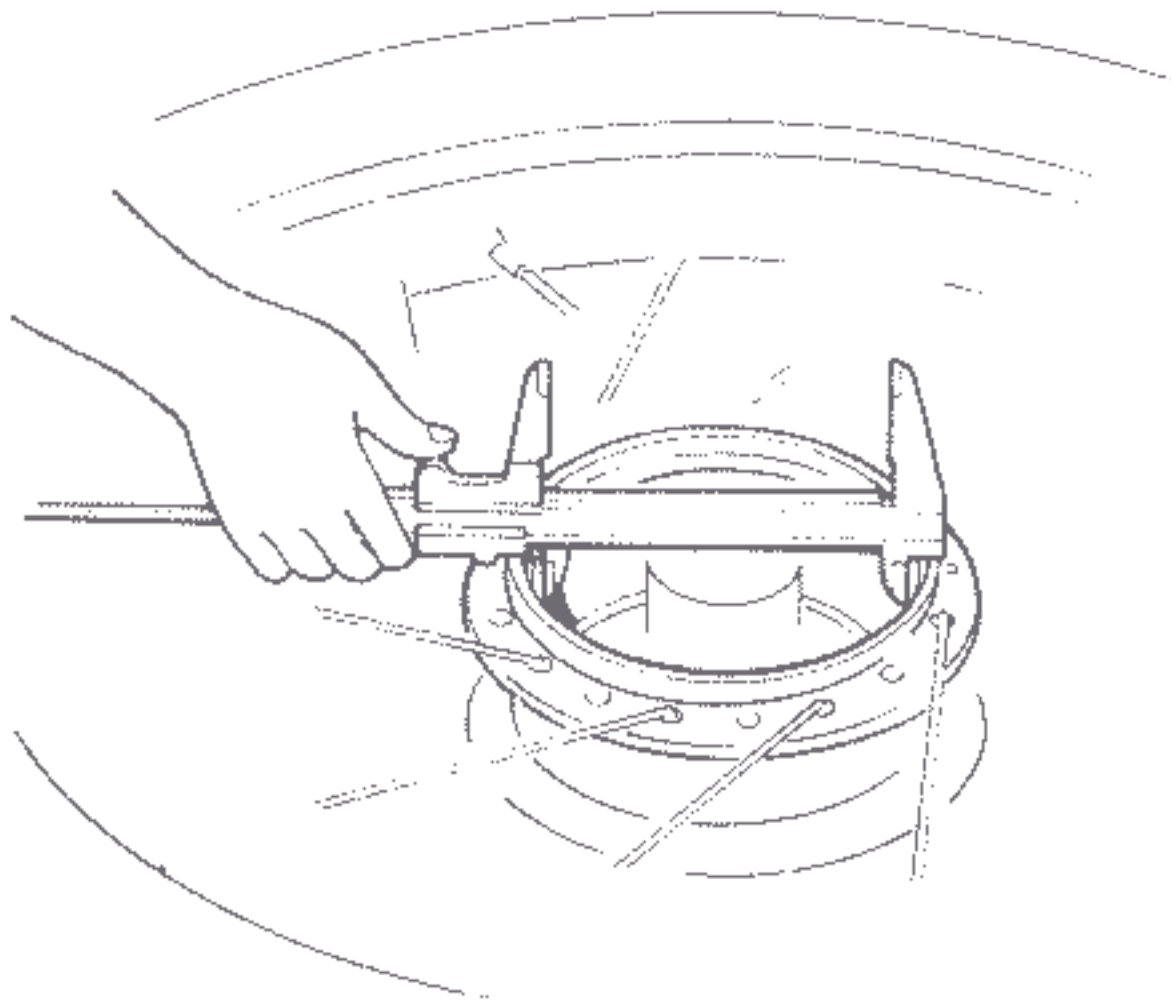
- ① Turn the center nut with driven sprocket counterclockwise
- ② Remove the rear brake
- ③ Remove the reduction gear box





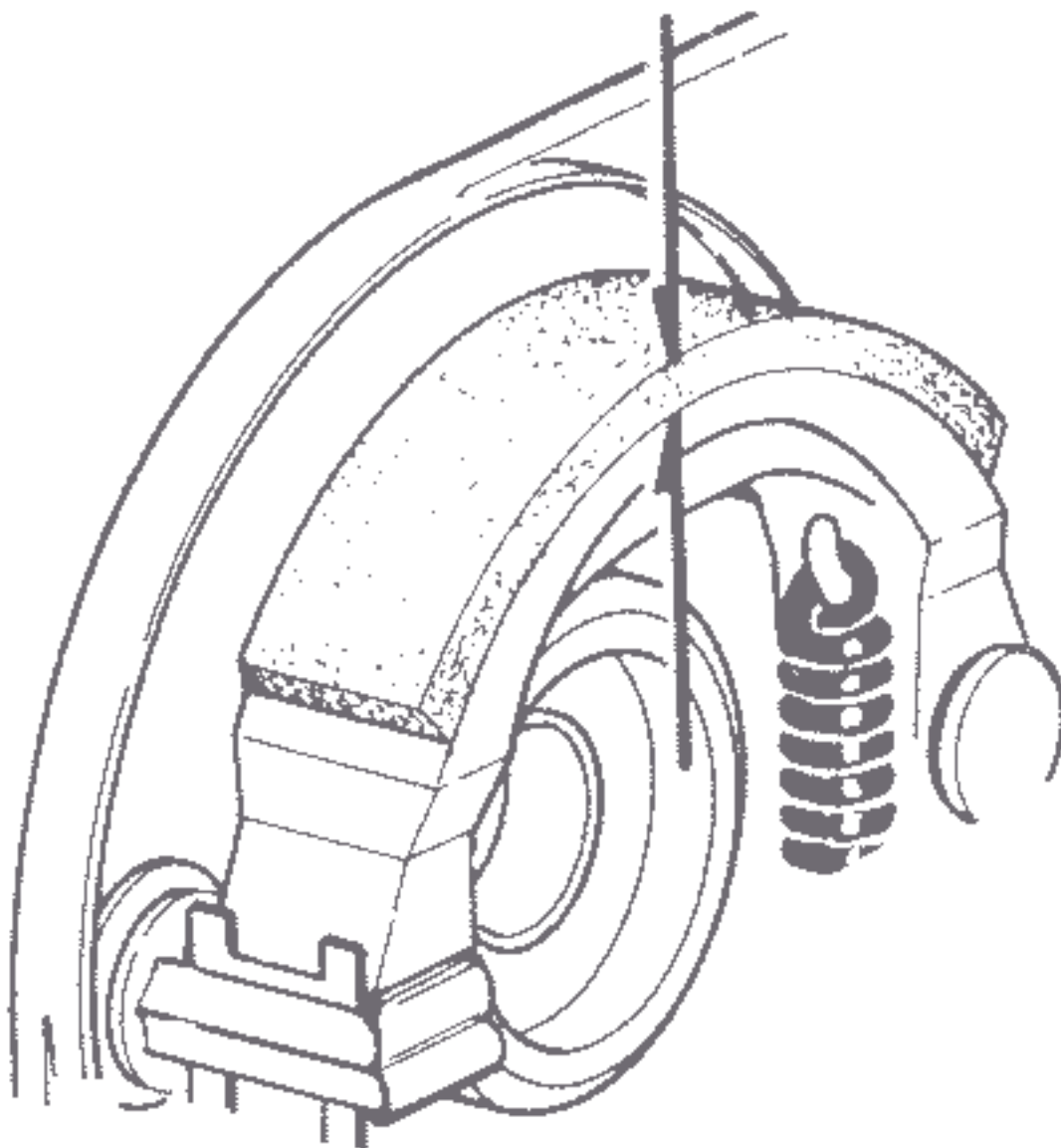
C. Inspection

● Wheel Hub I.D.



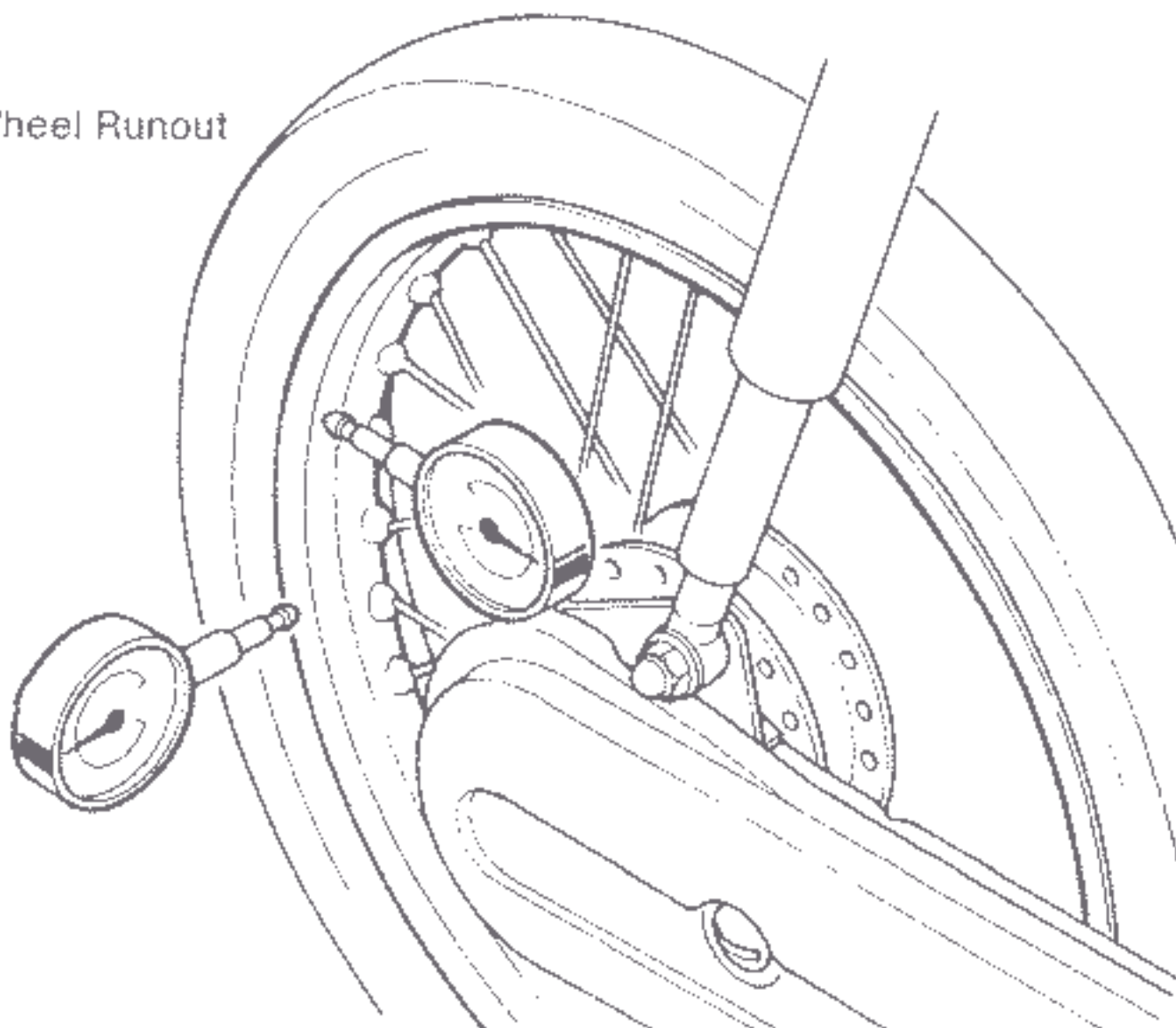
Standard	Service Limit
80.0 - 80.2 mm	81.0 mm

● 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	82
B. Disassembly/Assembly	83
C. Inspection	84

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



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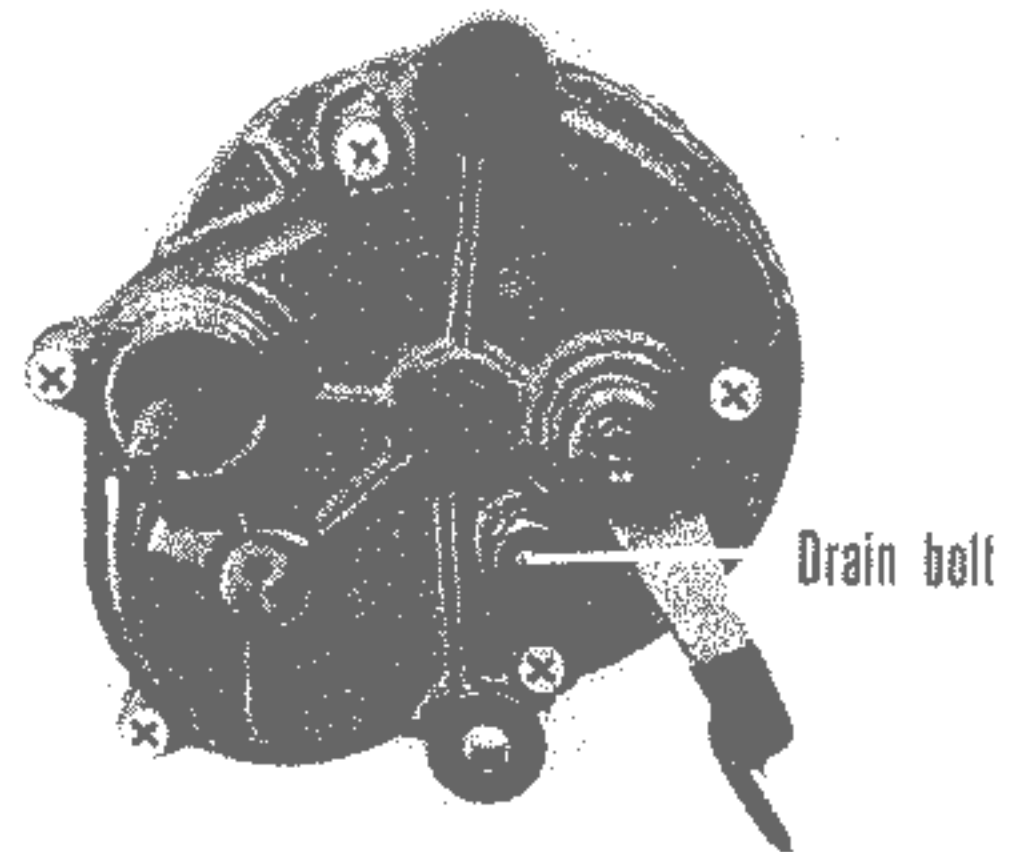


B. DISASSEMBLY / ASSEMBLY

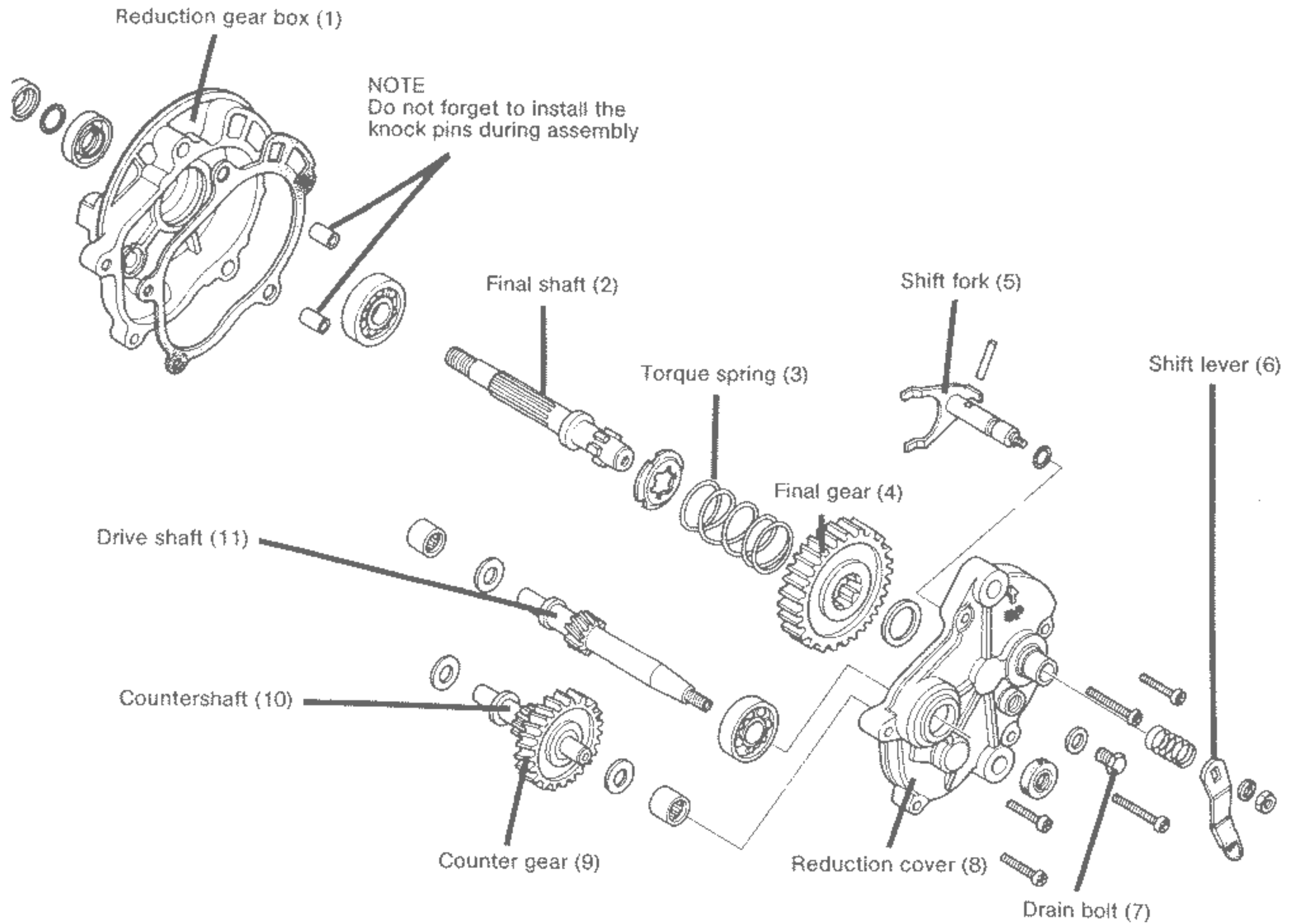
- ① Remove the reduction gear box from the rear wheel.
- ② Remove the drain bolt and drain the gear oil.
- ③ Remove the five screws from the reduction cover.

NOTE:

Set the shift lever at the pedal driving position.



Gear oil SAE 90
Capacity 75 cc.



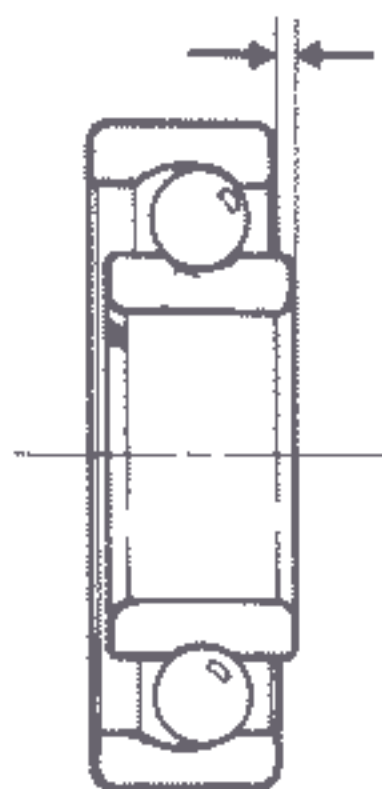
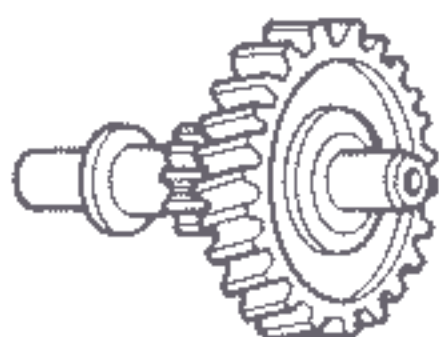
Assembly

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

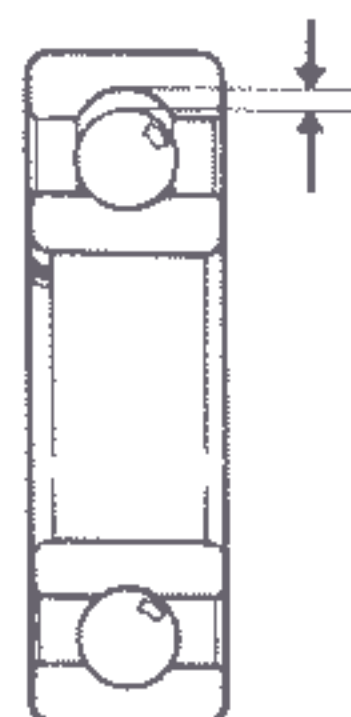
C. Inspection

● Check for damage and wear.

● Check bearing play.



Excessive play (1)
(replace)



Excessive play
(replace)



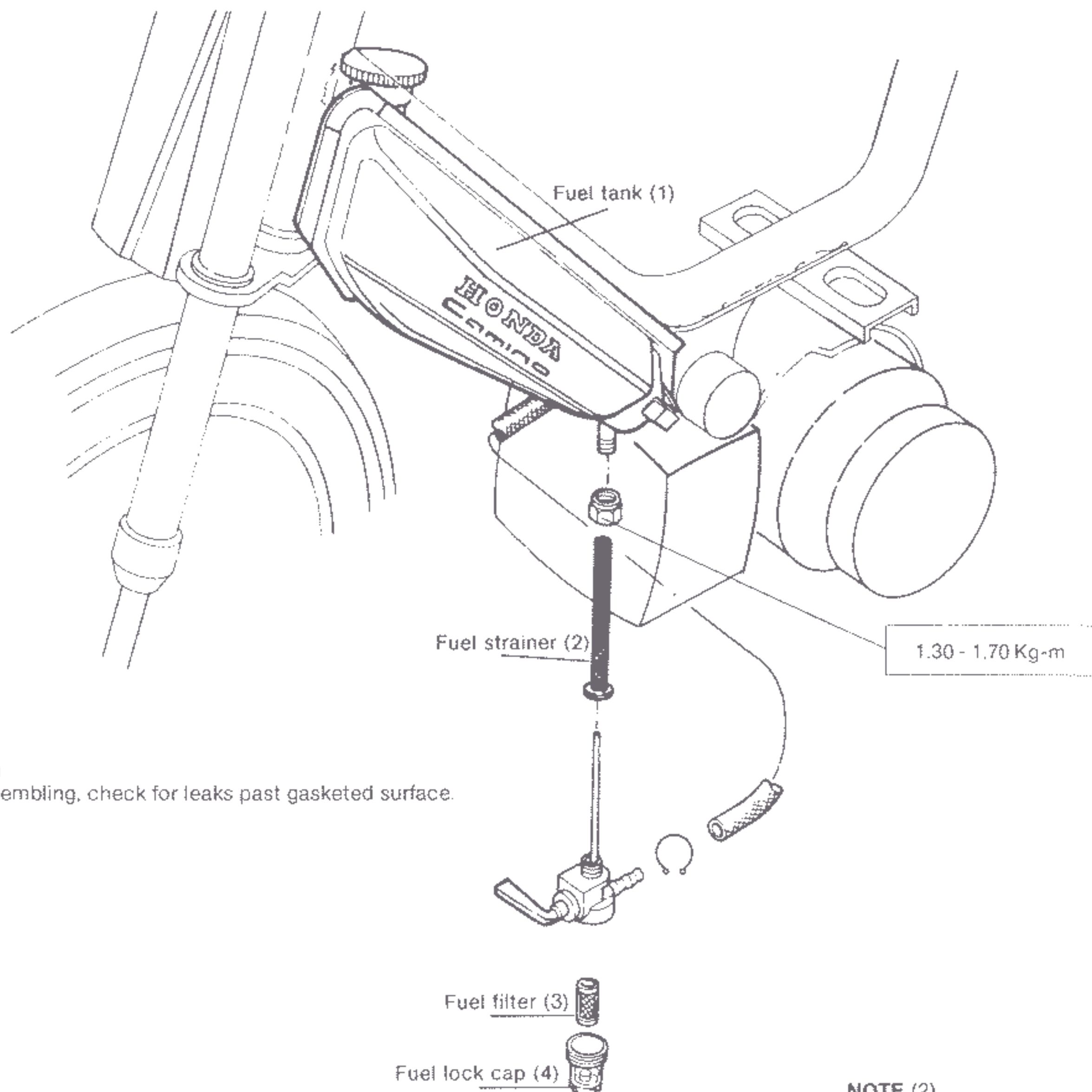
14. FUEL TANK / REAR SHOCK ABSORBER

● 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)

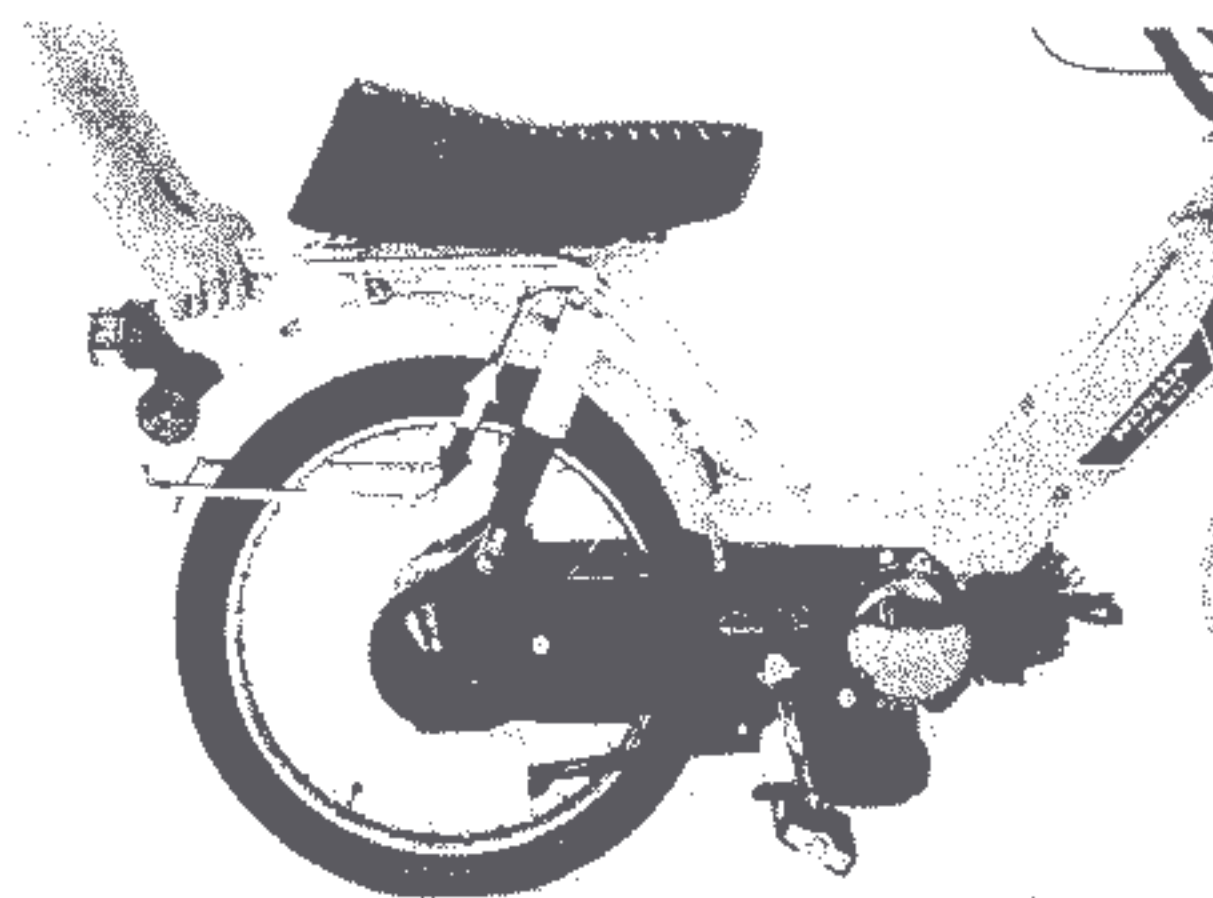
Clean filter and strainer in solvent.

Inspection

- Rear cushion spring Fre lenght

Standard	Service limit
226.9 mm	194.2 mm

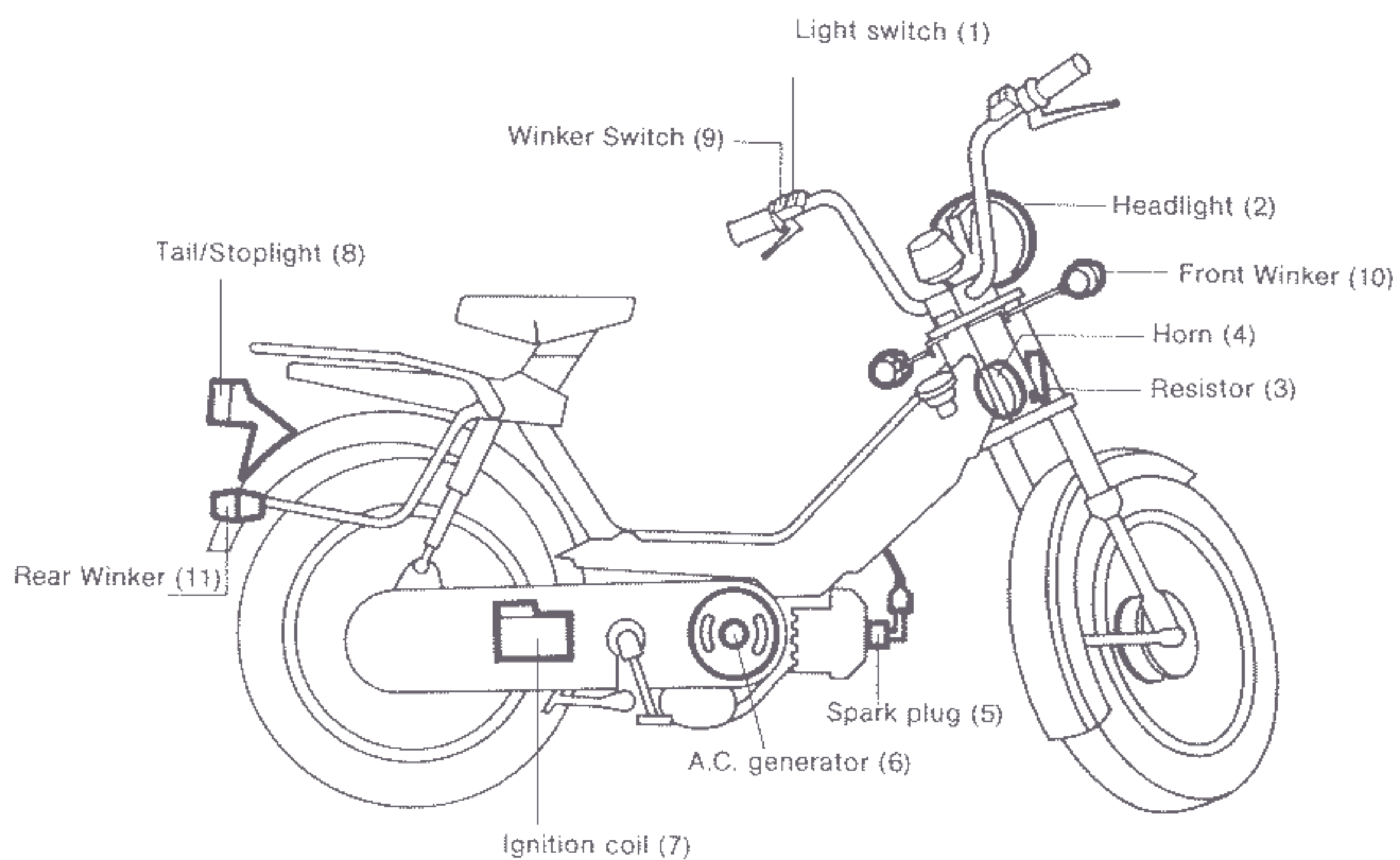
After installing check operation.





15. ELECTRICAL

- Electrical inspection.

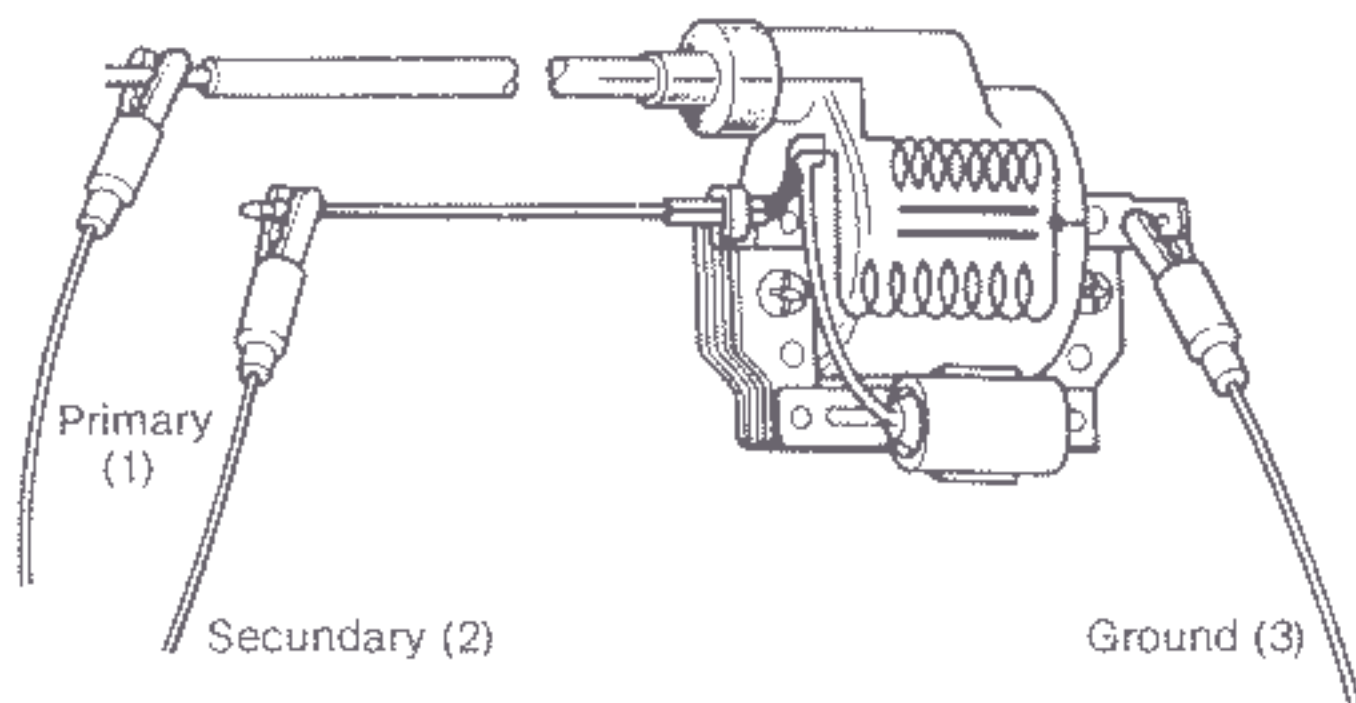


Note:
To load the battery for the first time,
ride 20 minutes without using the wipers.

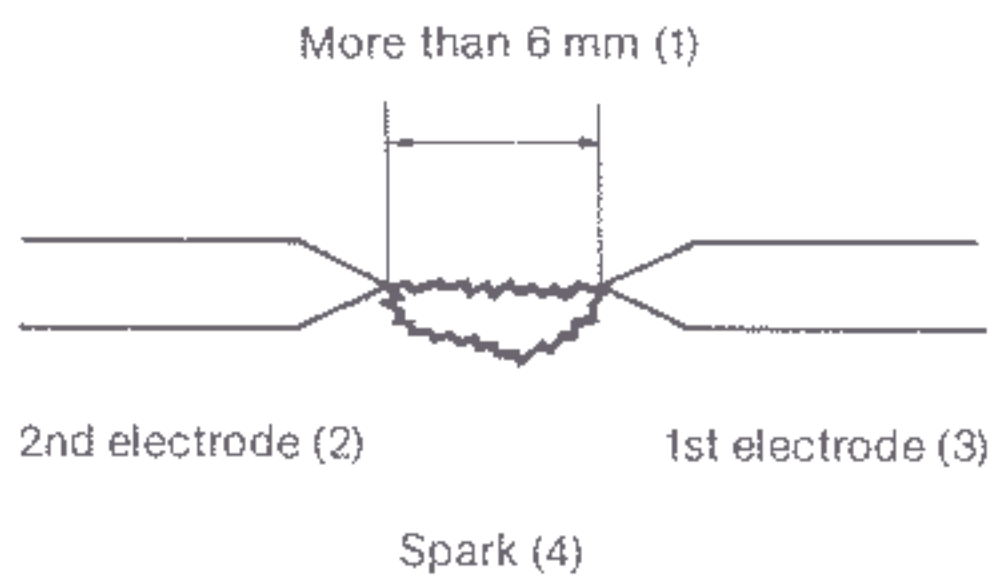
Inspection

● Ignition coil

3. Point spark test



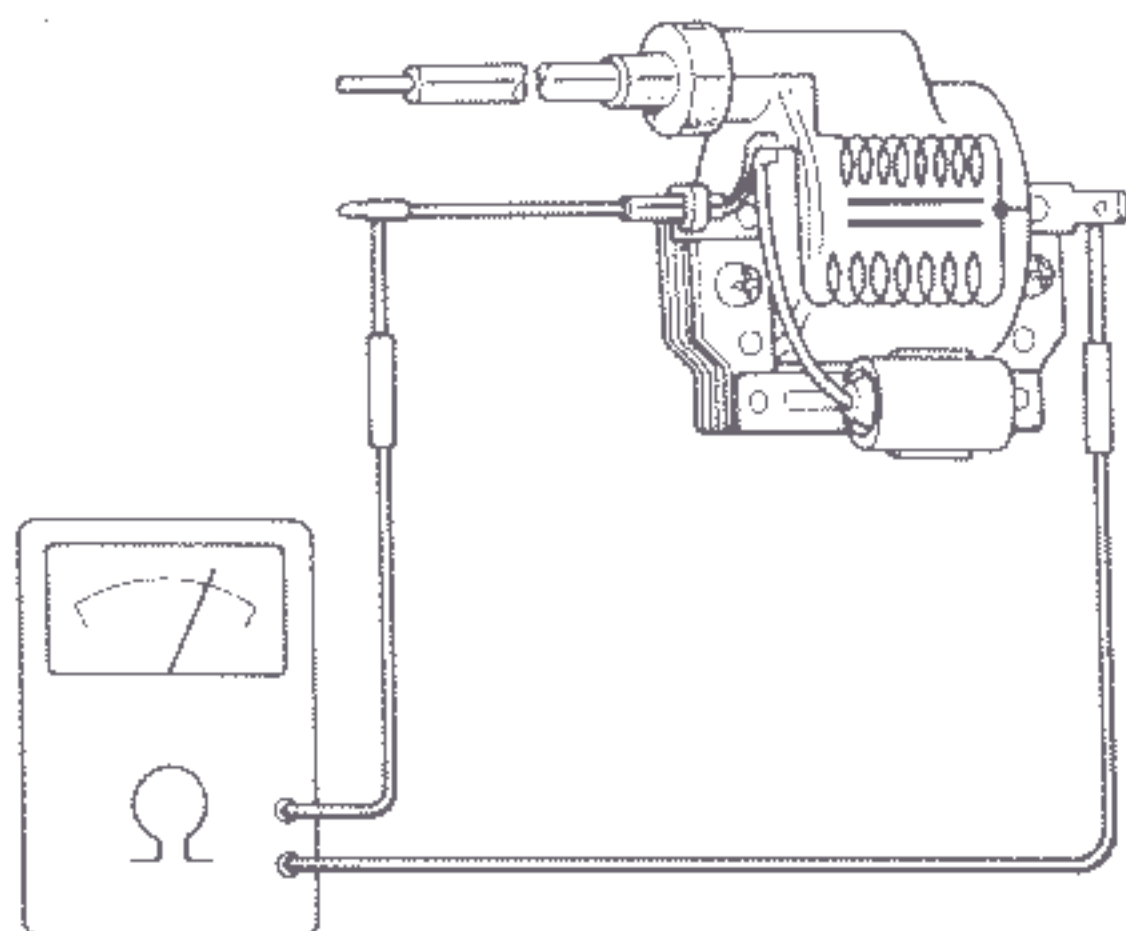
Connect according to service tester instructions.



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

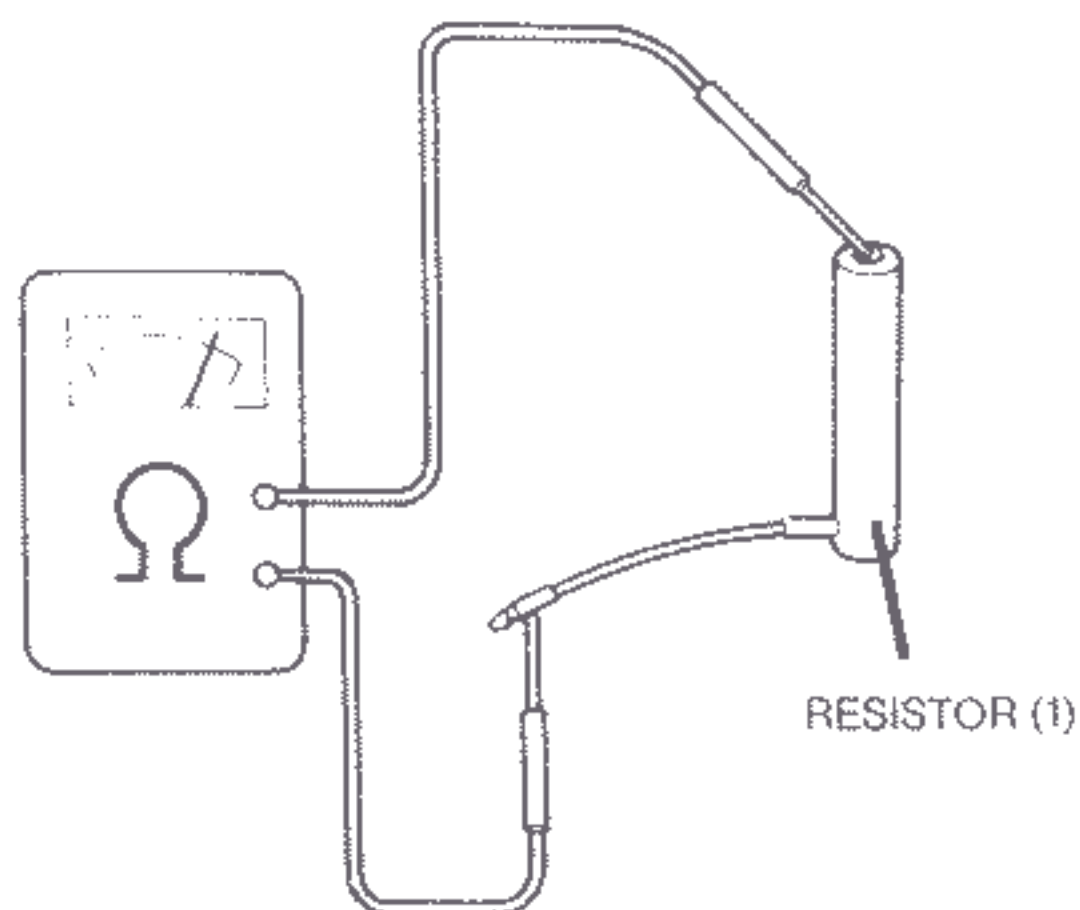
● Continuity test

Check for continuity



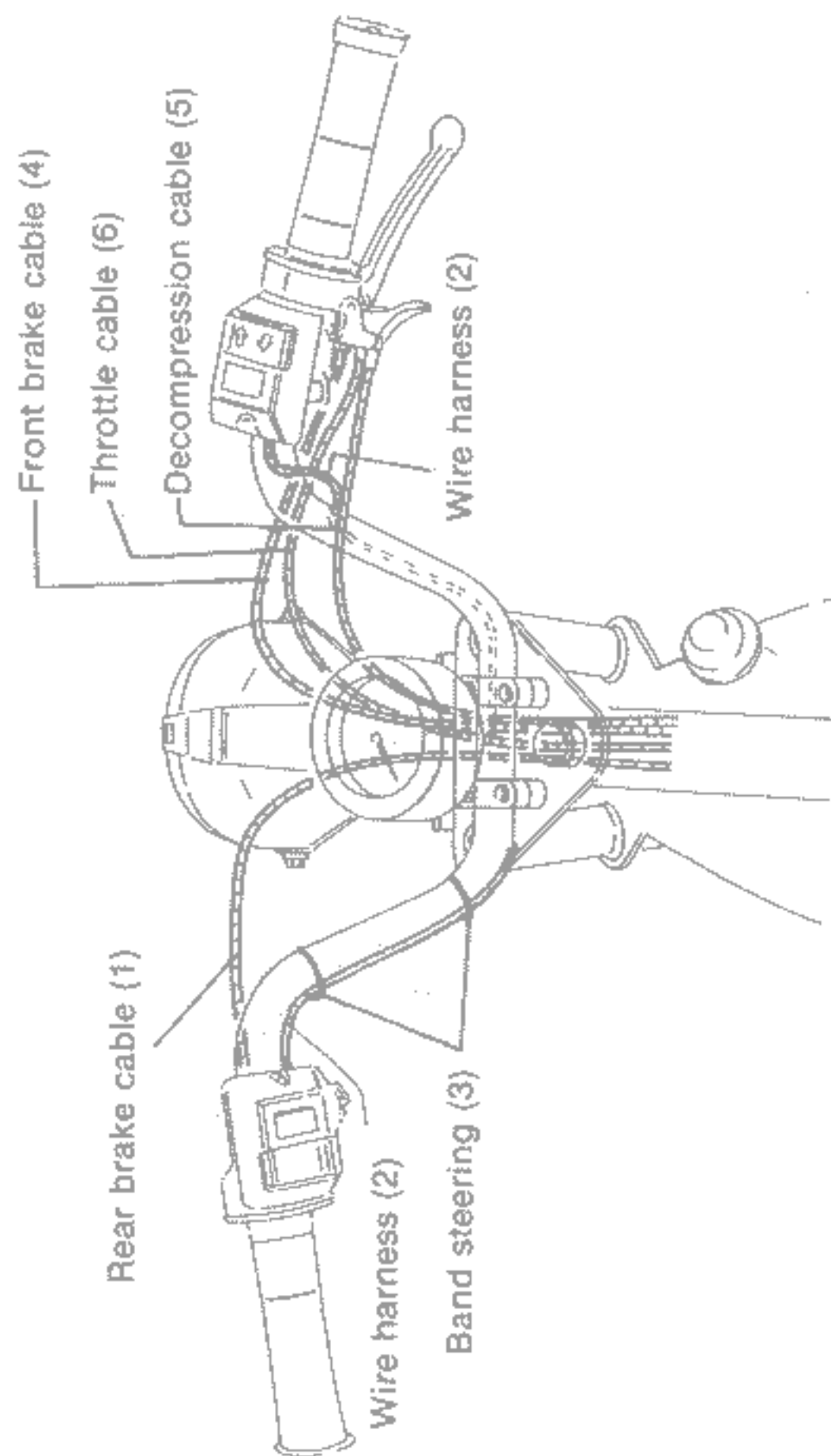
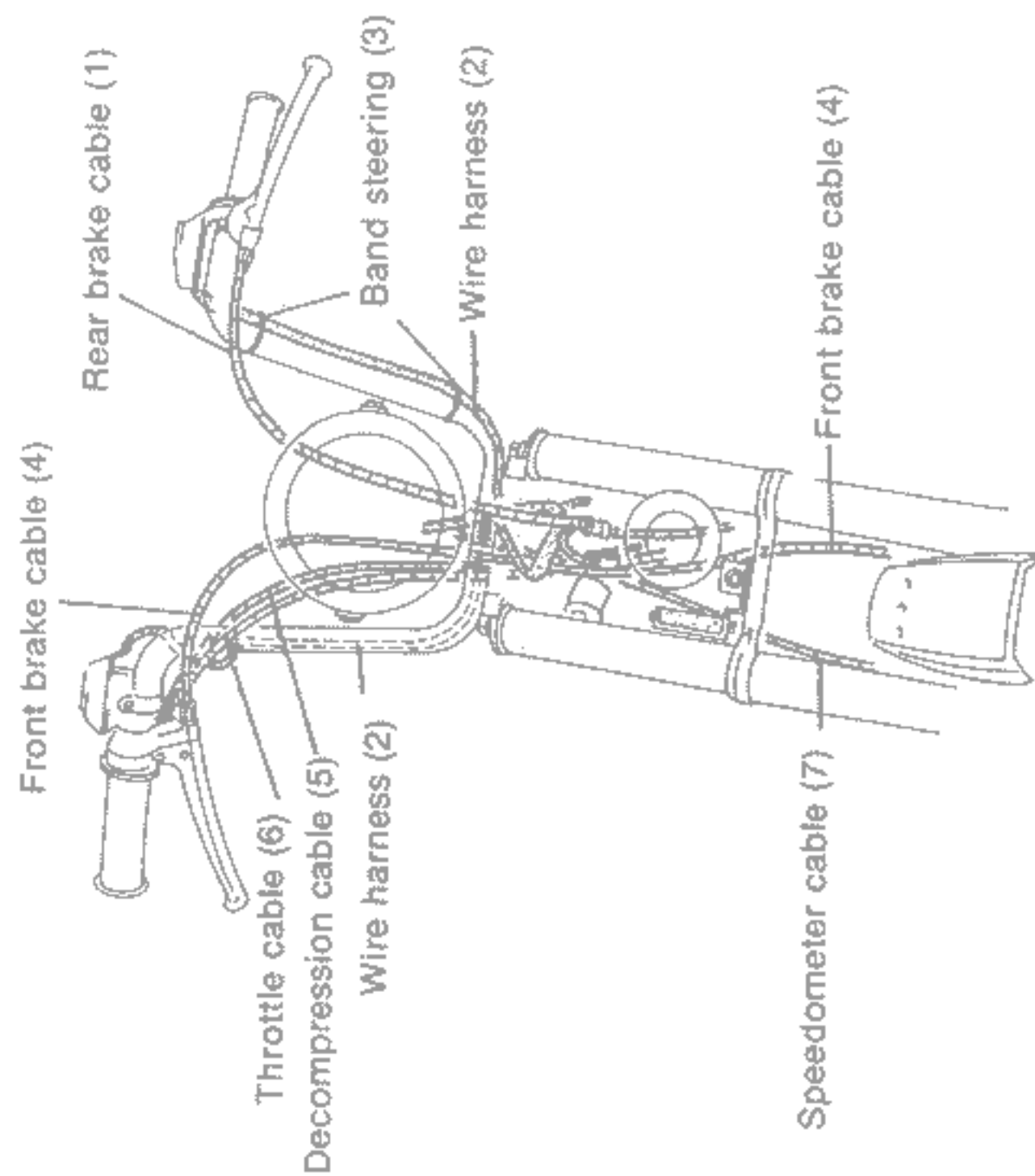
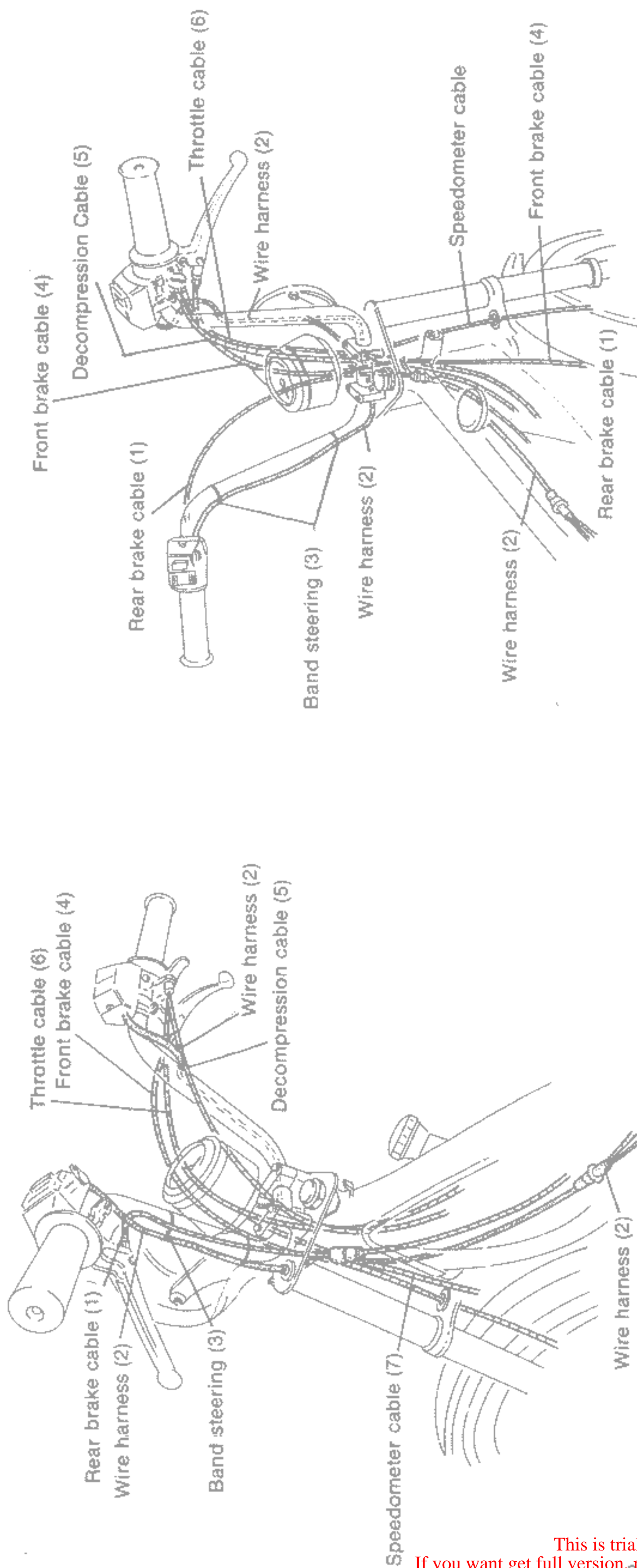
● Resistor

Continuity test



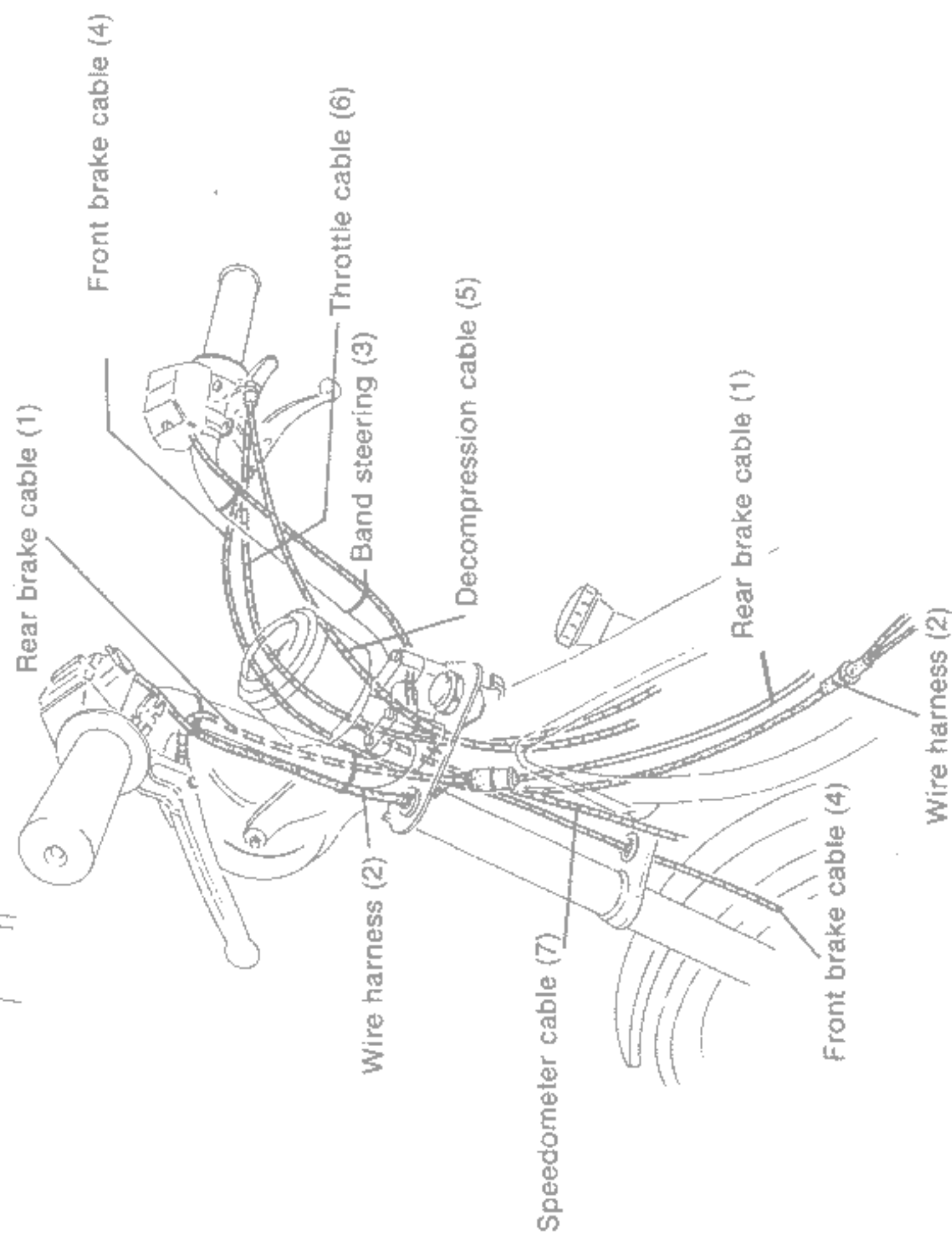
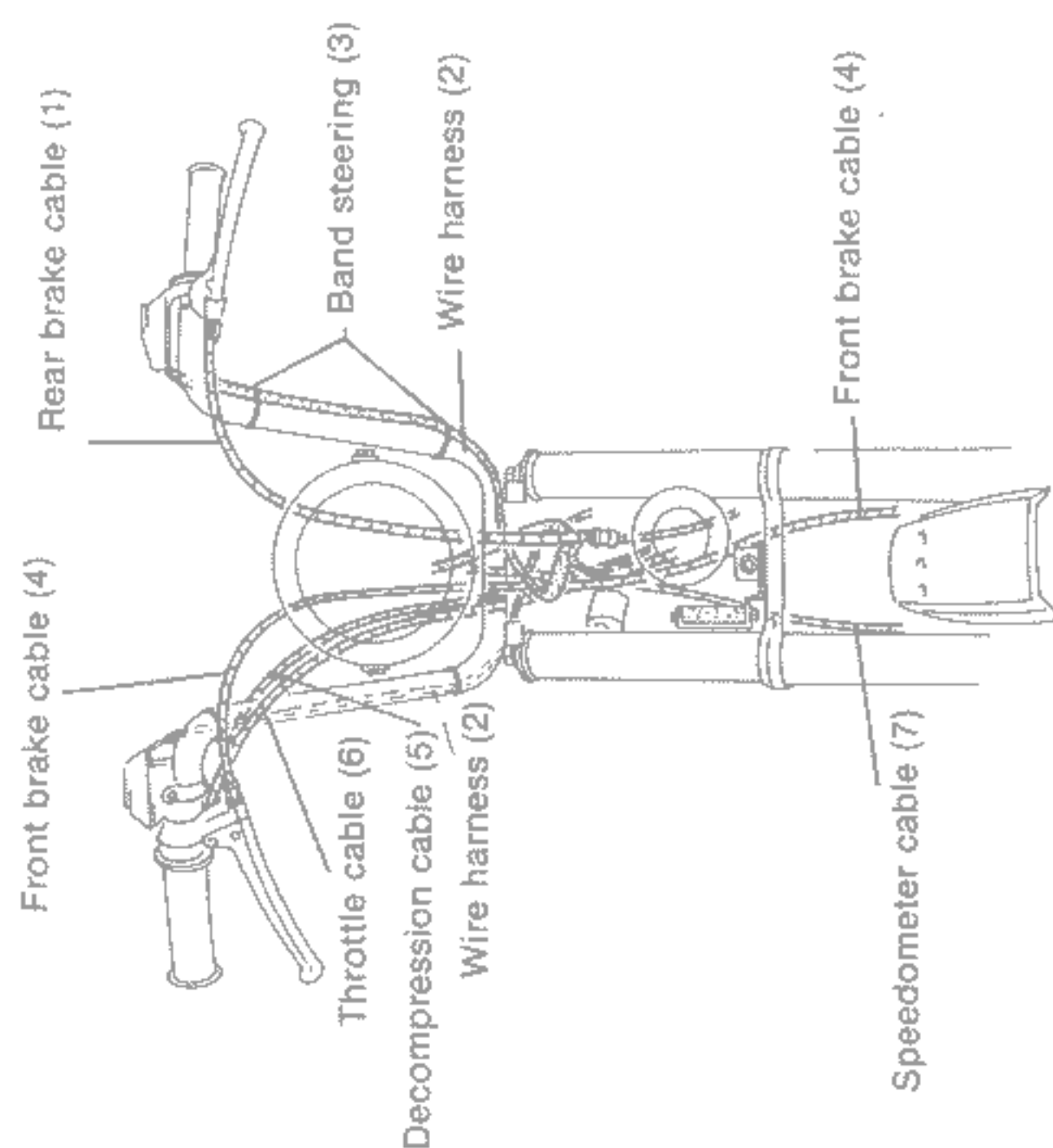
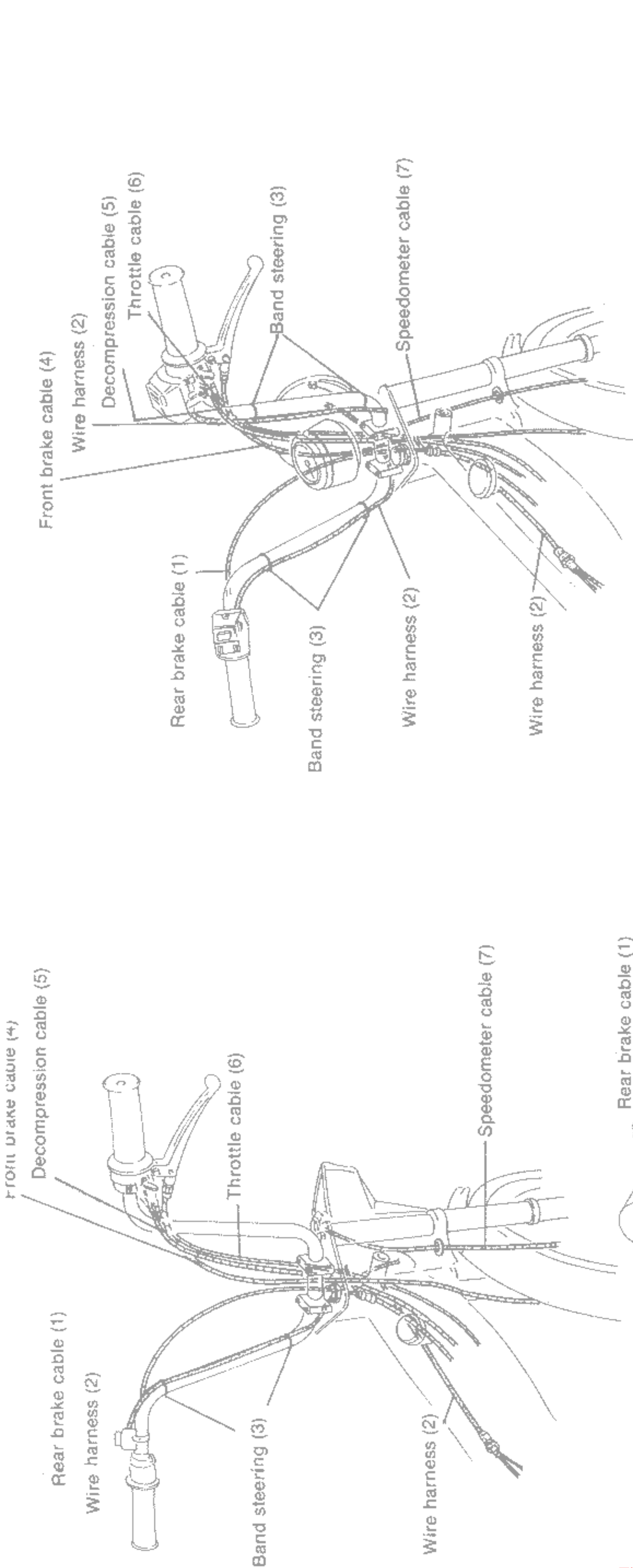


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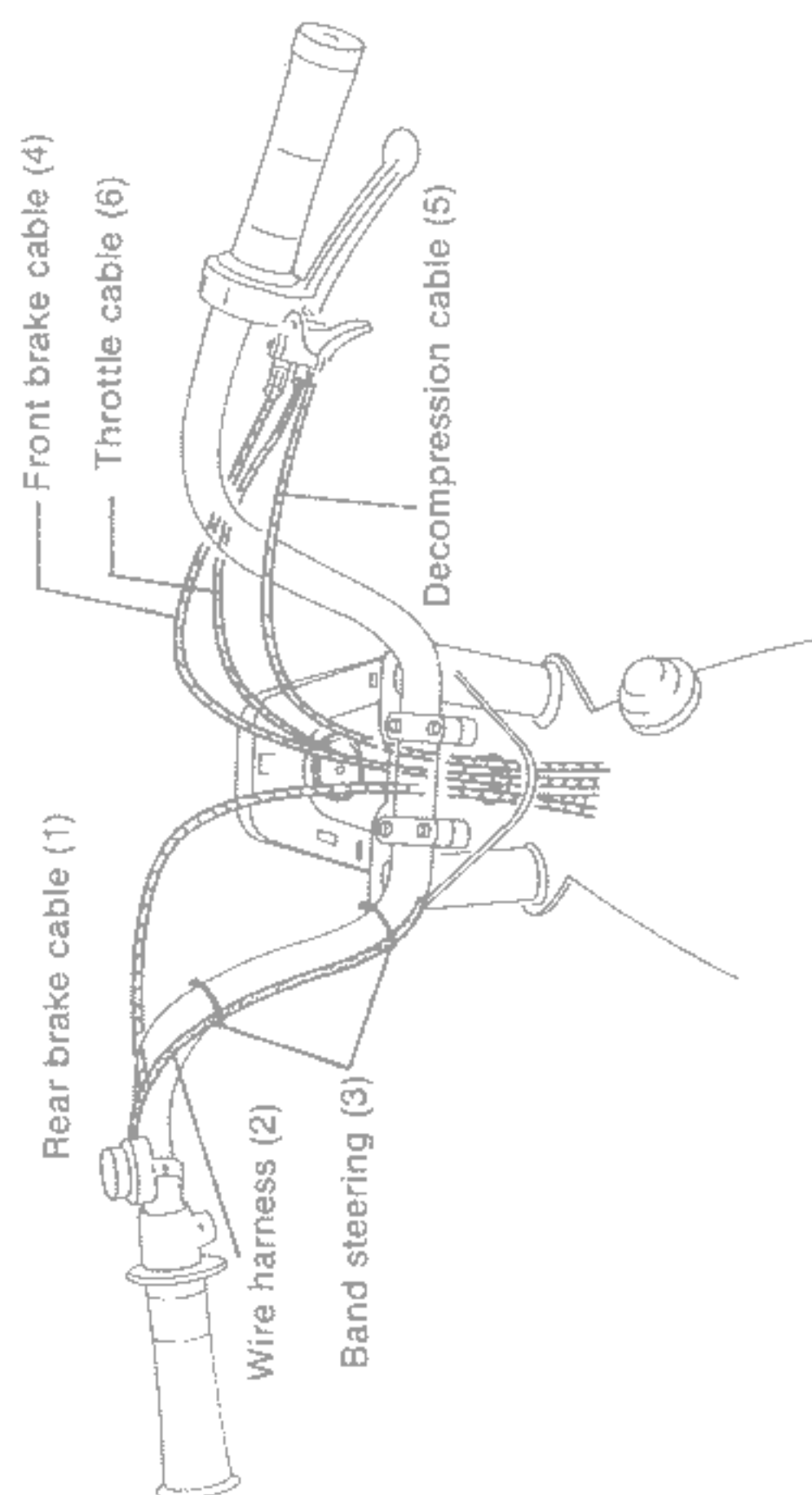
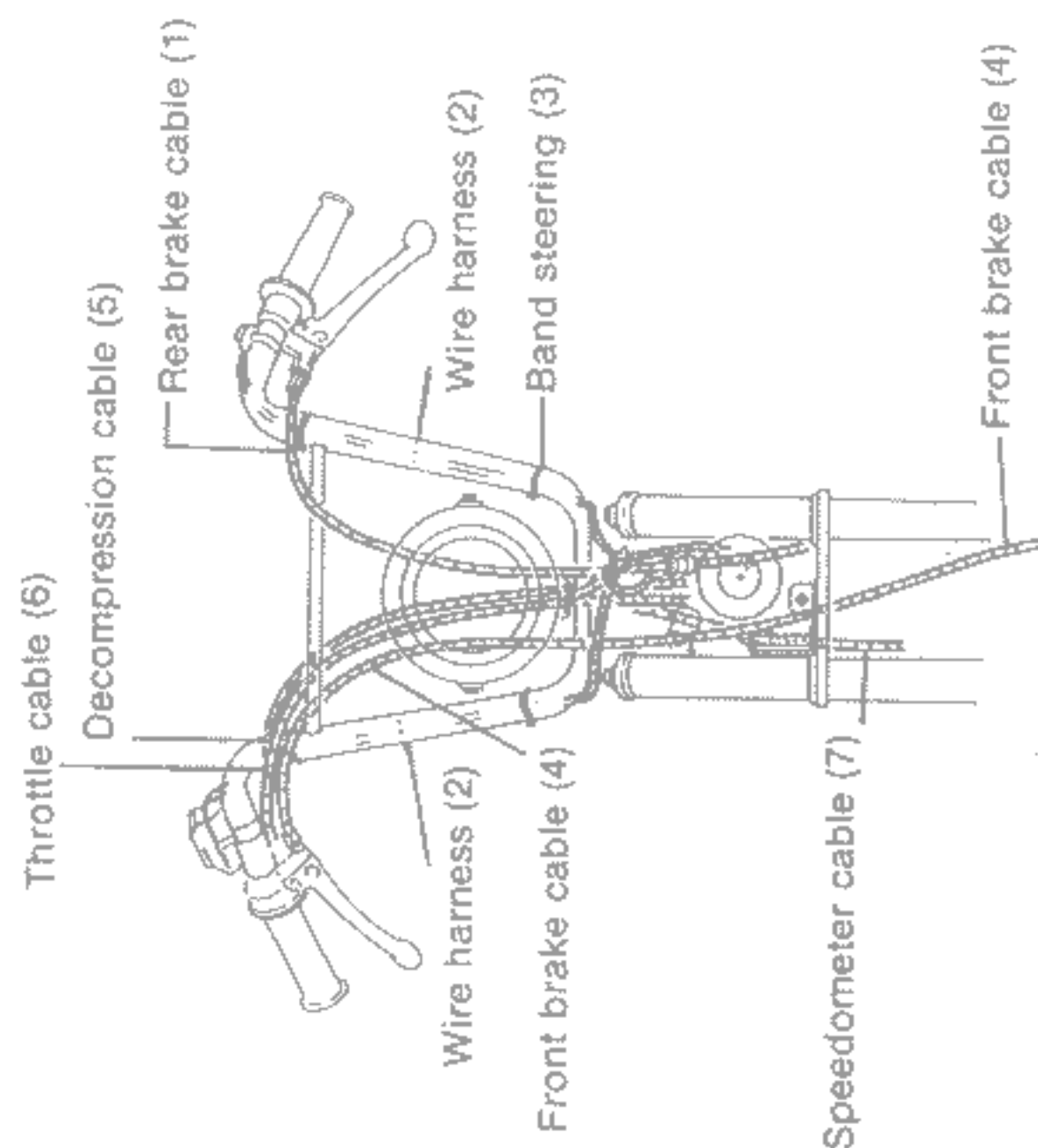
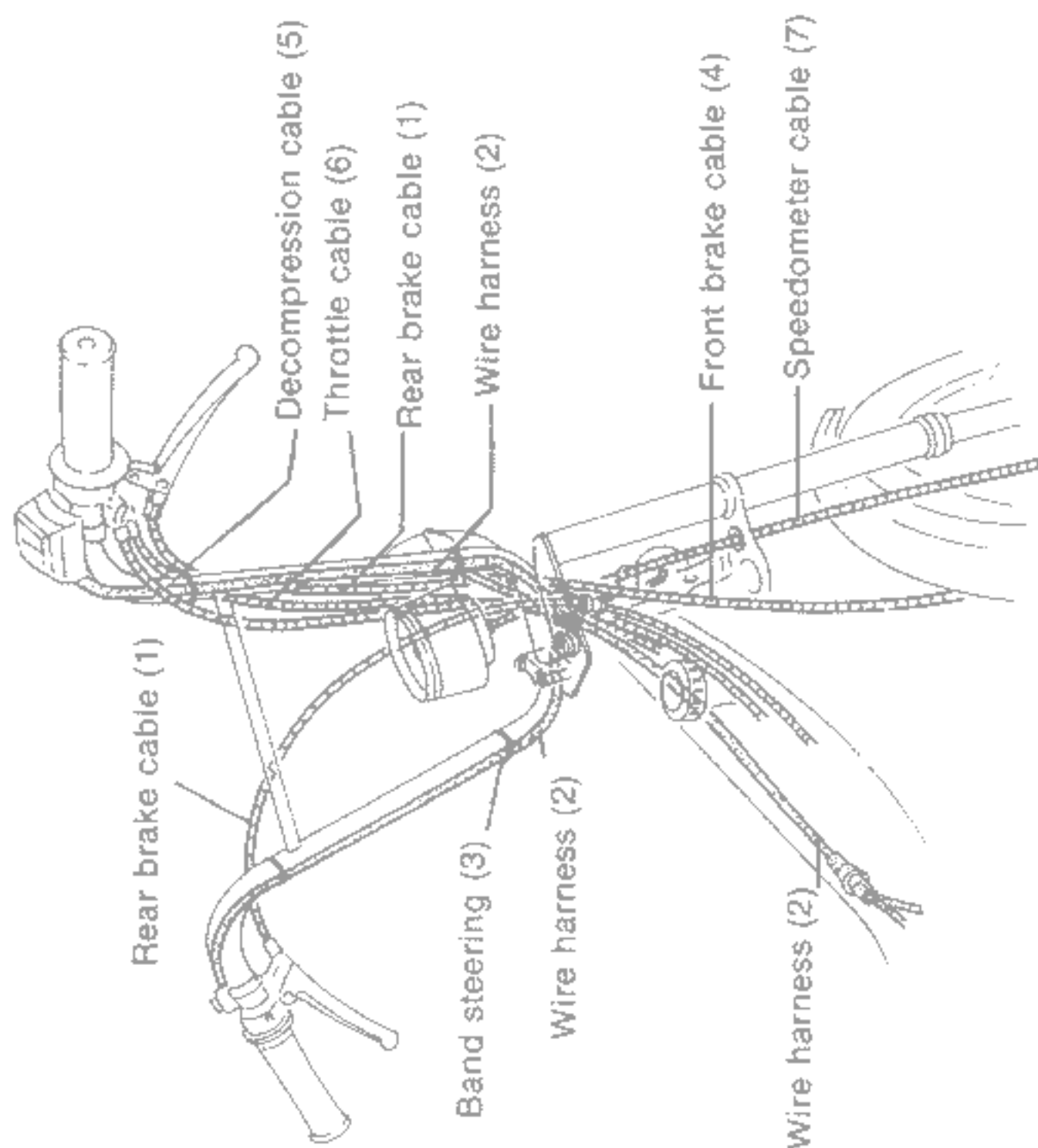
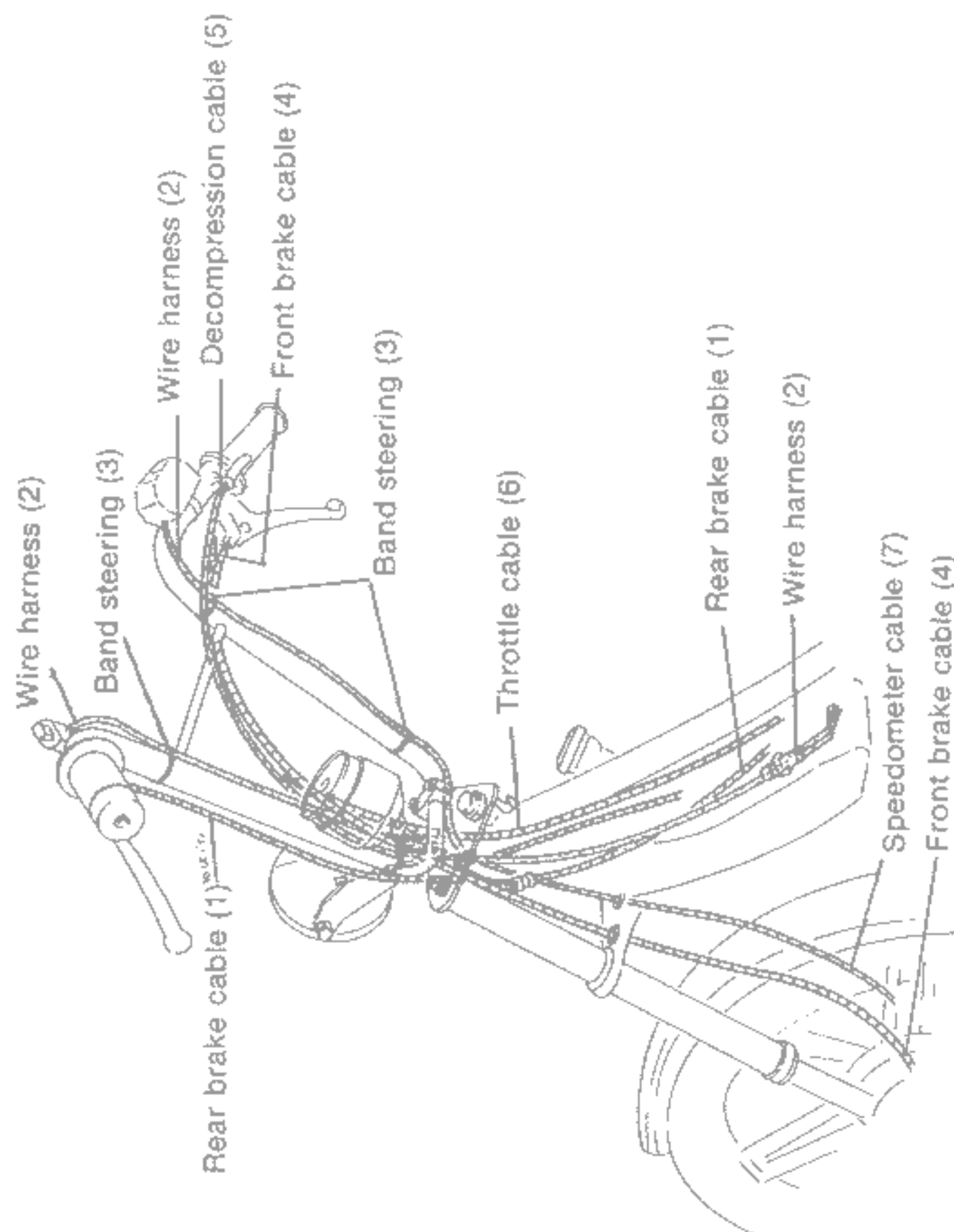


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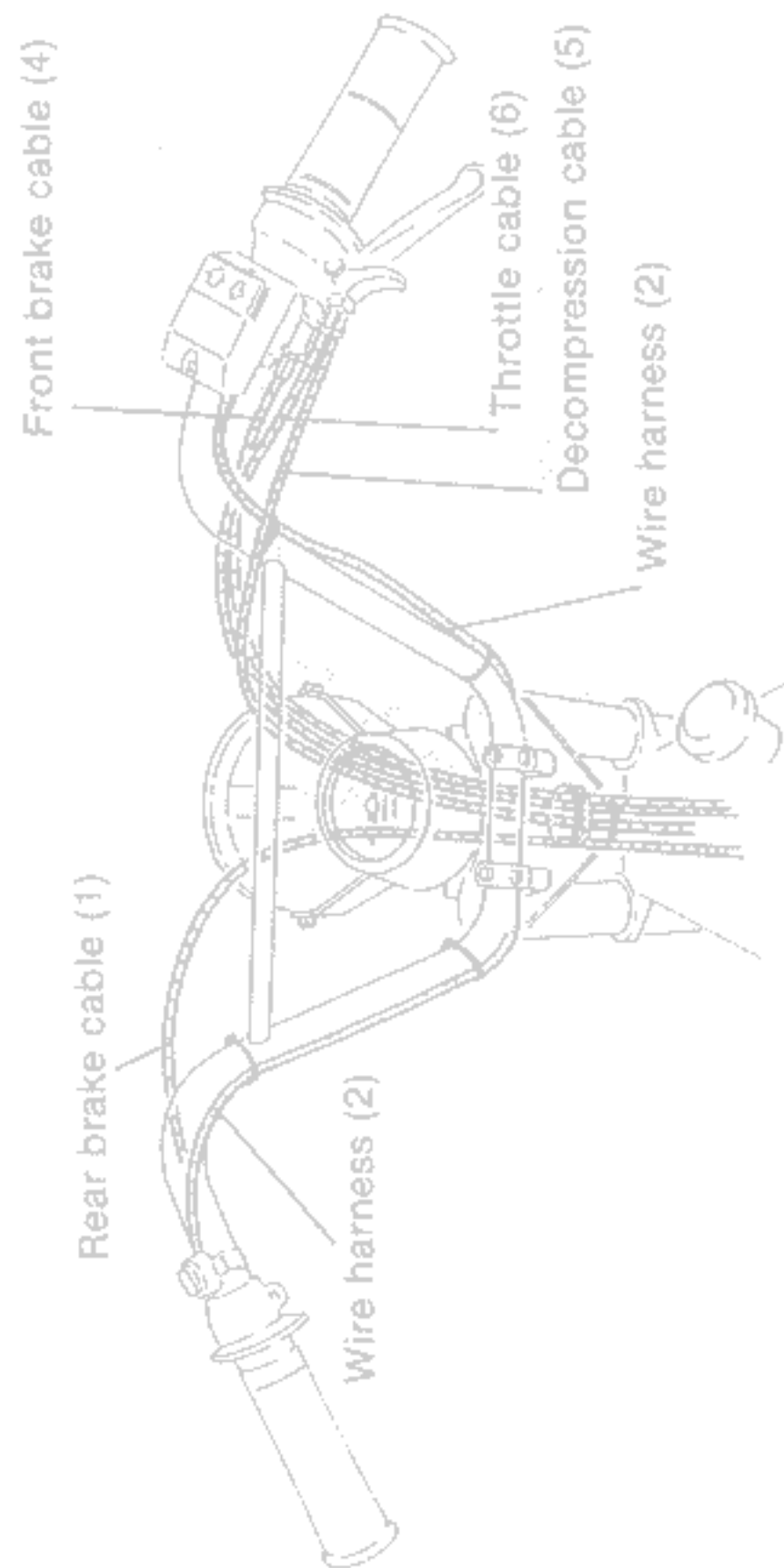
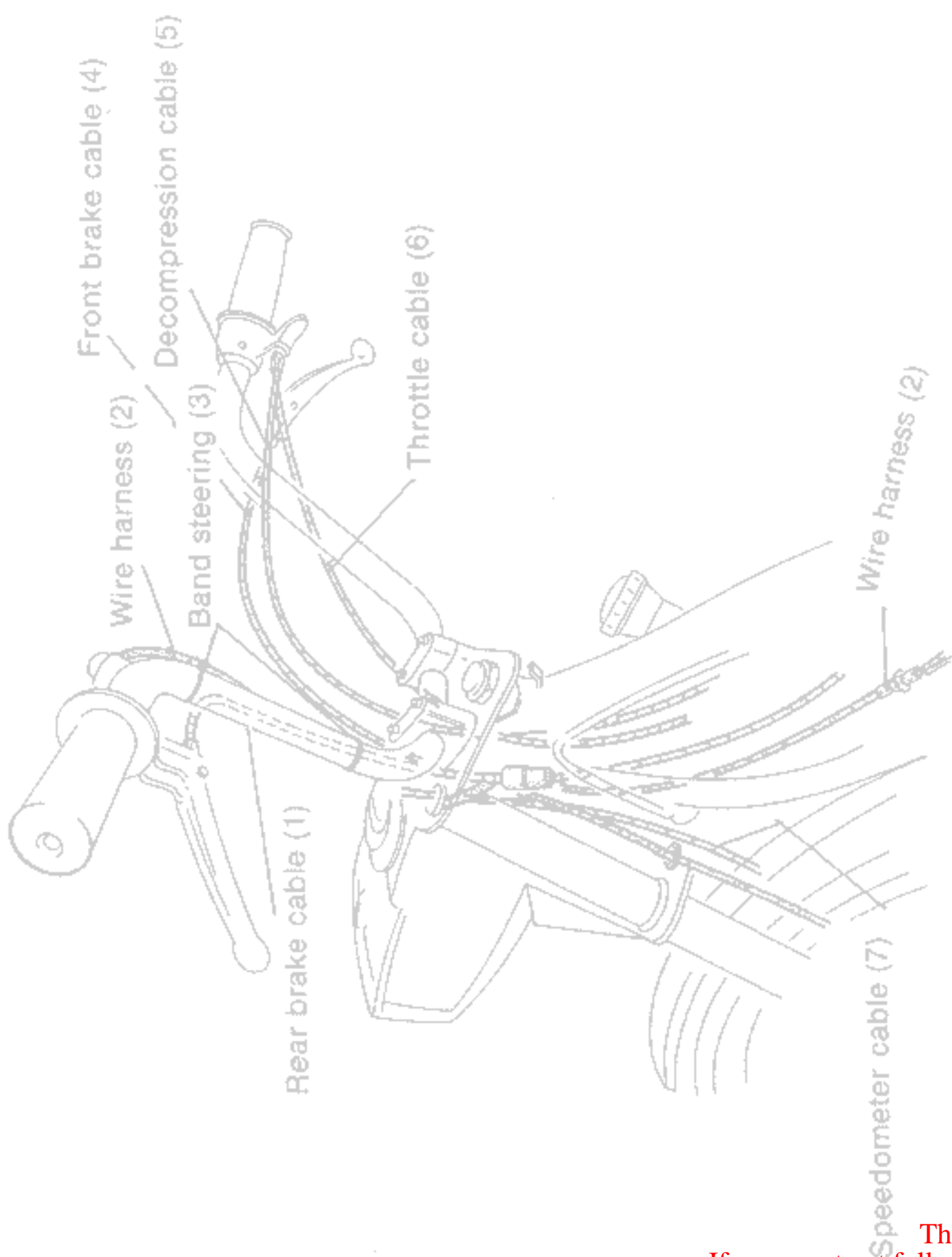
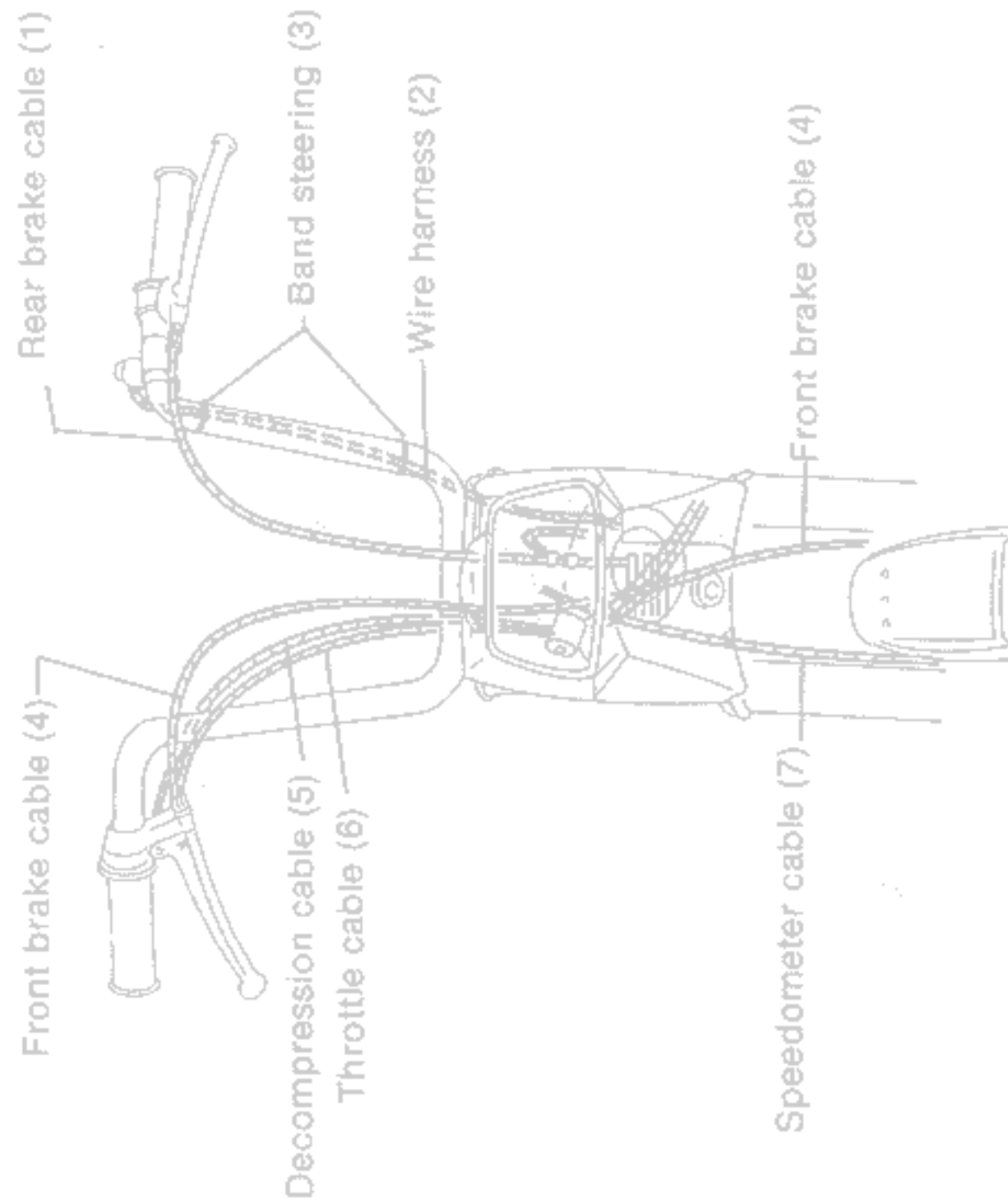
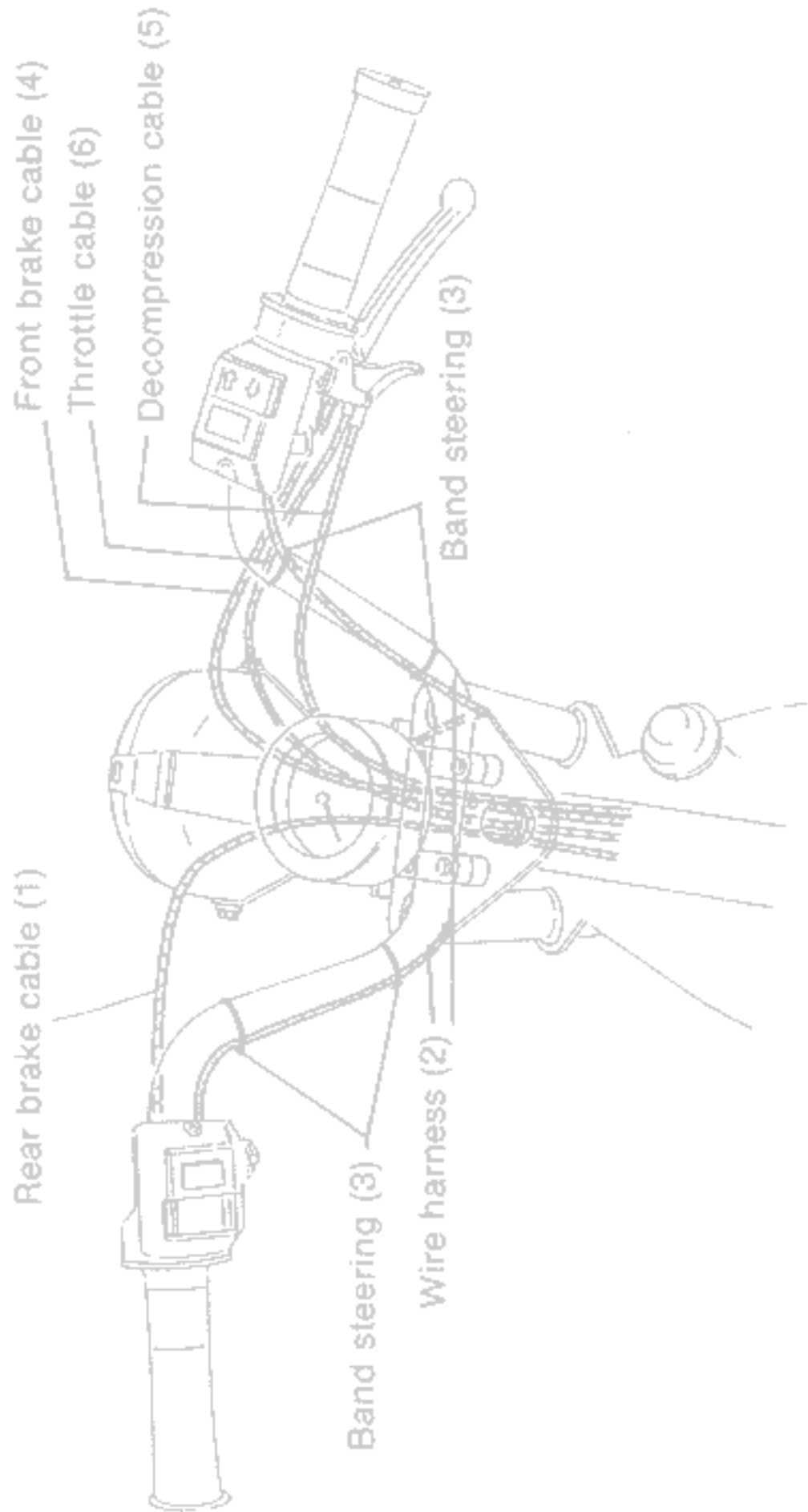




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Wiring Diagram





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