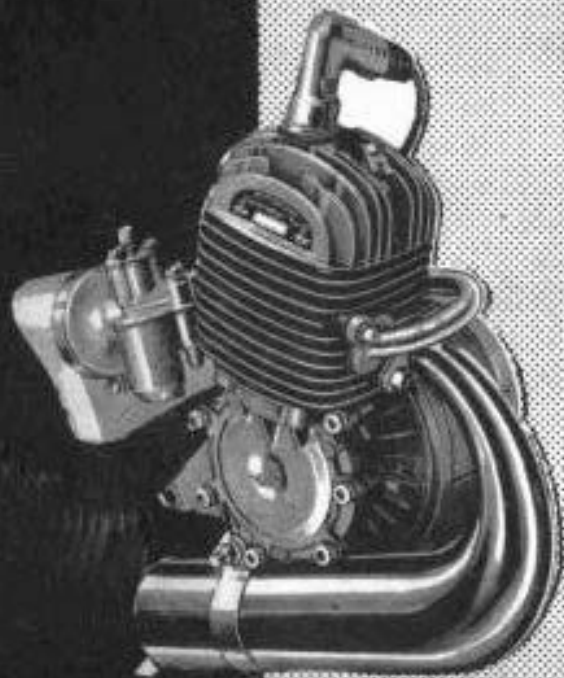


# Cady

## —SERVICE MANUAL—



Ref 959/5/76

# Cady SERVICE MANUAL

This Service Manual has been specially prepared for the use of our Cady Servicing Agents. In some areas it may appear that we have been too explicit but we have taken into account that there may be many consumers who wish to have such a manual. The techniques recommended in this manual are those which we employ and teach in training courses.



## NOTE:

To the consumer and the servicing dealer  
It is expressly understood that under the terms of the Cady Warranty, any damage caused to any part or parts of the Cady motor or machine by use of tools other than "SPECIAL TOOLS" as listed in this SERVICE MANUAL will not be covered by the Warranty



Where an operation is described as "Left Hand Side" or "Right Hand Side" this is determined as when the rider is seated on the machine in the normal manner.

## USEFUL METRIC CONVERSIONS

1 mm (millimetre) = .0394" (inch)  
1 cm (centimetre) = .394" (inch)  
2.54 cm ( " ) = 1.000" (inch)

1 IMPERIAL GALLON = 4.546 litres  
1 U.S. GALLON = 3.785 litres  
1 IMPERIAL GALLON = 160 fl.ozs.  
1 U.S. GALLON = 128 fl.ozs.

# JOHN JOEDICK Cady SERVICE MANUAL

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## PAGE

### DESCRIPTION

GREASE GUN (WITH MINIATURE NOZZLE)

PLUG WRENCH 14 mm

10" SCREWDRIVER, FLAT BLADE

#2 PHILLIPS SCREWDRIVER

OPEN/BOX WRENCHES

6mm THROUGH 14mm and 16mm

METRIC NUT DRIVERS

5mm THROUGH 9mm

BATTERY TERMINAL BRUSH

7" PLIERS

LONG NOSED PLIERS

12" ADJUSTABLE WRENCH

### DESCRIPTION

FEELER GAUGES

CIRCLIP PLIERS (INT)

CIRCLIP PLIERS (EXT)

BLOW TORCH

4mm HEX KEY (LONG TYPE BEST)

5mm HEX KEY (LONG TYPE BEST)

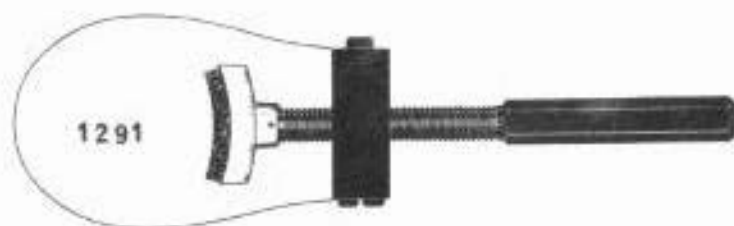
METRIC WRENCHES AND OR SOCKETS

6mm - 8 - 10 - 11 - 12 - 13 - 17 - 19mm

MULTI LOCK PLIERS

DOUBLE ENDED PEDAL WRENCH

HAMMER - BALL PEIN TYPE



FLYWHEEL VISE



MAGNETO CAM PULLER



PISTON PIN TOOL



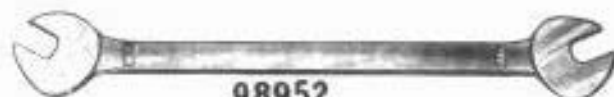
CLUTCH PULLER



TIMING  
GAUGE



CAM FIXING TOOL



PEDAL WRENCH



FREEWHEEL REMOVER

# Cady SERVICE MANUAL

## OBSOLETE ENGINES

### A WORD OF WARNING

#### MR. DEALER

OVER THE PAST FEW YEARS A CERTAIN NUMBER OF MOPEDS (AUTOCYCLES) HAVE ENTERED CANADA USING BASICALLY THE SAME ENGINE AS IS PRESENTLY USED ON THE CADY MOPEDS.

IT IS CONCEIVABLE THAT YOU WILL RECEIVE SOME ENQUIRIES FOR PARTS FOR THESE FORERUNNERS AND WHEREAS QUITE A FEW CADY PARTS WILL BE INTERCHANGEABLE THERE WILL BE OTHERS THAT ARE NOT.

VARIOUS MODIFICATIONS AND IMPROVEMENTS HAVE BEEN MADE OVER THE PAST FEW YEARS WHICH HAVE PUT CERTAIN PARTS OF THESE OLDER MACHINES INTO THE CATEGORY OF "OBSOLETE". AT THE SAME TIME WHILST YOU MAY NOT BE ABLE TO REPLACE AN EARLIER PART IT MAY BE POSSIBLE TO REPLACE THAT PART WHEN INCLUDED IN A SUB ASSEMBLY. WHEREVER SUCH INSTANCES ARISE PLEASE CHECK OUT THE PART THOROUGHLY AND WHEN IN DOUBT PASS YOUR INQUIRY THROUGH HOME OFFICE WHERE EVERY ATTENTION WILL BE GIVEN TO PROCURE THE NECESSARY PARTS.

# Cady SERVICE MANUAL

## MOTOR REMOVAL & REFITTING

NO SPECIAL TOOLS REQUIRED

NOTE: For many service operations it is not necessary to remove the complete motor.

Such operations as Minor decarbonizing - Checking the timing - Clutch removal - Ignition checking etc., can be carried out with the engine in place. (If the machine is elevated to bench level by whatever means suits you best, most servicing and repair jobs can be carried out efficiently and successfully.)

### REMOVAL

- 1) Remove both chain covers LH & RH sides
- 2) Loosen upper engine mounting bolt ("A" Fig. 6-1) but do not remove.
- 3) Loosen and remove lower engine mounting bolt ("B" Fig. 6-1)
- 4) Slip drive belt off large pulley
- 5) Release decompressor cable by screwing in cable adjuster on R.H. lever. Now press down on decompressor ("C" Fig. 6-1) release outer casing from top of decompressor and inner wire nipple from bracket at base of decompressor.
- 6) Remove lighting wire from magneto stator plate ("D" Fig. Page 12) and spark plug cap from spark plug.
- 7) Remove carburettor by slackening screw ("D" Fig. 6-1) gently rotate carburettor left and right to remove front intake pipe. The carburettor can now hang freely.
- 8) The motor can now be removed by holding it firmly while removing the upper engine bolt "A" Fig. 6-1)

### REFITTING

- 9) Reverse the operation when refitting the motor making sure the carburettor is pushed all the way onto the intake pipe.
- 10) Readjust the decompressor cable allowing a little slack in the cable. See page 34 Decompressor Adjustment.

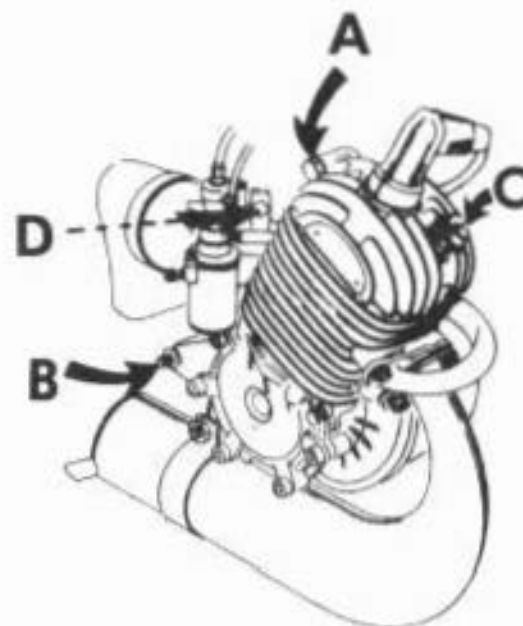


Fig. 6-1

# Cady SERVICE MANUAL DRIVE BELT

## NO SPECIAL TOOLS REQUIRED

The correct tensioning of the drive belt is important to the performance of the motor.

A "tight" belt will cut down performance as also will a "slack" belt and both conditions contribute to belt wear.

Any excess tension from a tight belt will also add to the wear of the crankshaft bearings.

Most failures in belts can be contributed to -

- 1) Using a non original drive belt (this is the most common).
- 2) Too much or too little tension.
- 3) A warped pulley (damaged).
- 4) A deformed or dented pulley groove.
- 5) Improper alignment of the belt due to a twisted frame or motor, or bent pedal crank shaft.

The tension on the drive belt should be set as described on page 8 to allow for a deflection of the belt of approx. 1/4" to 3/8" see Fig. 7-1.

You might run into a situation where the engine "pulsates" when being drive and this is very often a condition caused by the belt being worn narrow in one area due to excessive revving of the motor with the machine stationery. A good example is revving the motor for a quick get-a-way at stop lights.

Always check that the belt does not have any narrow (worn) areas and is not showing signs of cracking and separation. Properly cared for the drive belt will be the least of your problems.

When in doubt always replace the belt with an original equipment belt. This has been specifically developed for Cady mopeds for long life.

See next page for Belt Replacement and Adjusting.



Fig. 7-1

# Cady SERVICE MANUAL DRIVE BELT REPLACEMENT & TENSION

NO SPECIAL TOOLS REQUIRED

- 1) Remove L.H. Chain Cover
- 2) Loosen upper motor mounting bolt "A" Fig. 8-1
- 3) Loosen lower motor mounting bolt "B" Fig. 8-1, on some machines loosen also the belt adjusters, "E" Fig. 8-3. The motor can now be pivoted to the rear on the upper mounting bolt slackening the drive belt.
- 4) Slip the drive belt off from the bottom of the large pulley "D" Fig. 8-2 and rotate the pulley anti-clockwise until the belt is free of the pulley. You can now force the belt from under the plastic cover and off the clutch without removing the plastic cover "C" Fig. 8-2.

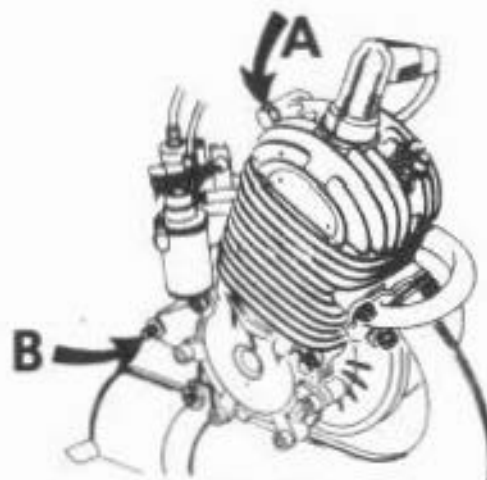


Fig. 8-1

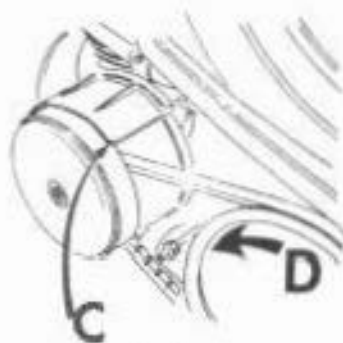


Fig. 8-2



Fig. 8-3

- 5) To replace the drive belt, reverse the above procedure and tension the belt correctly as follows.
- 6) On machines without belt tensioning adjusters, pivot the motor to the front until any belt slack is taken up and then tighten the lower motor mounting bolt first and then the upper motor mounting bolt.
- 7) On machines with belt tensioning adjusters adjust both equally. See "E" Fig. 8-3 for location.
- 8) Make sure you can depress the drive belt 1/4" to 3/8" before locking the adjusters and tightening the engine mounting bolts. See Fig. 7-1, page 7 for checking belt tension.

## SPECIAL TOOLS REQUIRED

Order of use

- |                   |        |
|-------------------|--------|
| 1 Flywheel holder | #1291  |
| 1 Clutch Puller   | #15141 |

### NOTE:

This operation can be performed with the motor on the machine or on the bench in a vise.

If clamped in a vise do not overtighten and make sure the lower motor mounting bracket is at right angles to the vise jaws. Fibre pads should be used in the vise jaws.

- 1) Remove plastic cover "A" Fig. 9-2 using thin bladed screwdriver between edge of stator plate and plastic cover "B" Fig. 9-2 it is a snap-on fit and will snap off, by gently prying at 3 or 4 points around the edge.
- 2) Tighten universal wheel vice #1291, "C", Fig. 9-1 on flywheel "D" Fig. 9-1.
- 3) Remove clutch drum nut "E" Fig. 9-2 (R.H. thread)
- 4) Screw clutch puller #15141 into hub of drum see "F" Fig. 9-1 (keeping a firm grip on tool 1291) and progressively tighten centre screw "G" Fig. 9-1 (R.H. thread). The clutch drum "H" Fig. 9-2, which is splined to the crank shaft will now pull off easily.

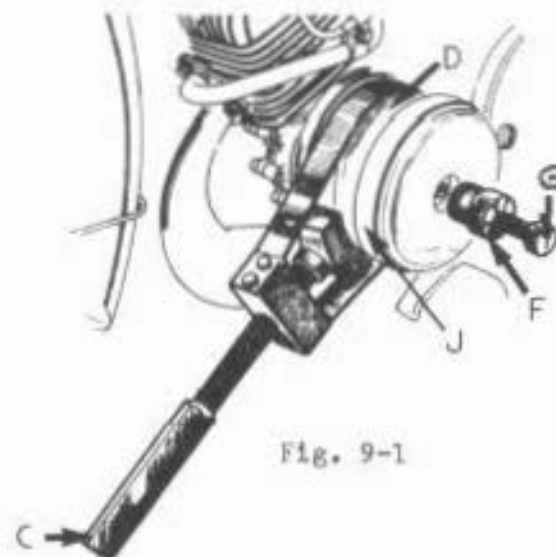


Fig. 9-1

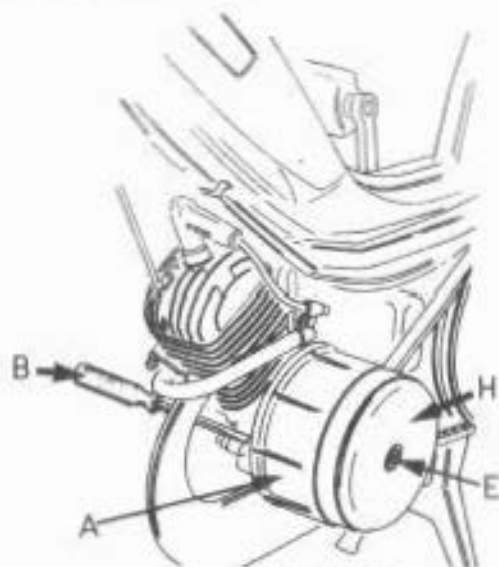


Fig. 9-2

- 5) The clutch hub assembly "J" Fig. 9-1 can now be pulled off the shaft. It may be necessary to turn the clutch hub a little left or right to line up the grooves in the clutch hub with the grooves on the crankshaft before it will pull off easily.
- 6) Never force the clutch drums off with levers. The clutch is a two piece unit and unless severely damaged it will be easily removed without force.
- 7) If severely damaged inspect the crankshaft and ensure it is not bent.
- 8) To refit the clutches reverse the above procedure making sure to line up the splined washer - no force needed.

With the double clutch removed proceed as follows -

The SECONDARY clutch Fig. 10-1 This is a very simple mechanism and the things to check for are damage to the drum and wear on the clutch linings. The clutch linings can be replaced but generally it is best to replace the complete drum. If replacing the linings smooth off the rivet heads inside the drum after rivetting.

The PRIMARY clutch Fig. 10-2 incorporates a needle bearing and this requires inspection from time to time. The clutch drum should be checked for damage and the clutch linings for wear.

To remove the needle bearing.

- 1) Remove the circlip "E" (internal circlip pliers)
- 2) The flat washer "D" (larger than "B")
- 3) The splined washer "C"
- 4) The flat washer "B" (smaller than "D")
- 5) The needle bearing "A"
- 6) Inspect the inner bearing surface of the clutch drum for wear and or corrosion pit marks.
- 7) To reassemble reverse the procedure above making sure the bearing surfaces and the bearing are absolutely clean and then greased with a general purpose grease.

To remove the clutch shoes -

- 1) File off the swaged end of the pivot pins "J" Fig. 10-2 and remove the plain washer "K" and wave washer "L" and then the clutch shoes with lining and unhook the springs.
- 2) Reverse the procedure to refit the clutch shoes. Lubricate the pivot pins first with a smear of general purpose grease. Swage the ends of the pivot pins to securely hold the clutch shoes in place.

The double clutch can be adjusted to allow for starting at a lower speed. This is achieved by hooking the springs in the holes nearest to each other. See "M" Fig. 10-2

To install the Double automatic clutch.

- 1) Push assembled clutch drum "F" Fig. 10-2 on the crankshaft aligning splined washer "C" with crankshaft splines allowing the clutch to slide all the way on.
- 2) Place clutch drum "G" Fig. 10-1 on splines on the shaft, push on as far as possible and finally install clutch nut and tighten. Hold the flywheel with tool 1291 to securely tighten the clutch nut. See Fig. 9-1, page 9.

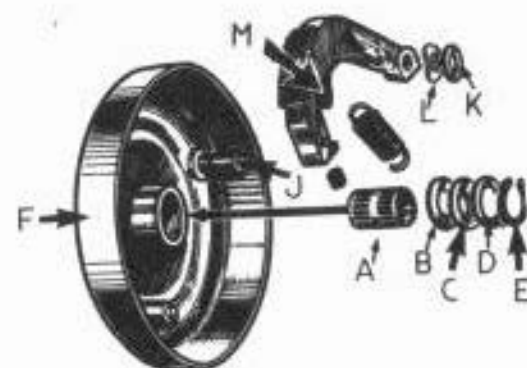


Fig.10-2



Fig.10-1

### SPECIAL TOOLS REQUIRED

Flywheel Holder #1291

Magneto Cam Puller #1390

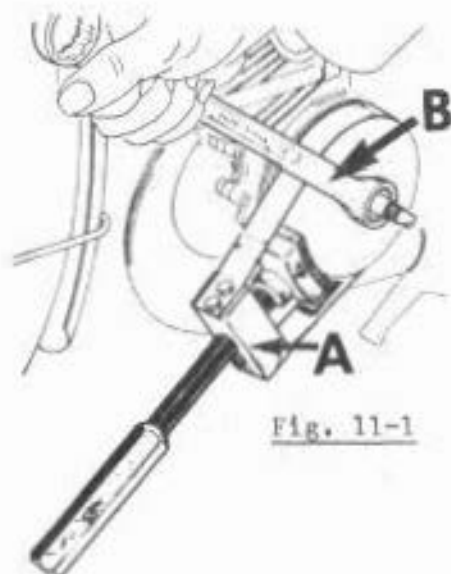


Fig. 11-1

After removing the clutch (see page 9) proceed as follows:-

- 1) Disconnect the ignition wire (small wire with spade terminal) from the coil under the fuel tank and the lighting wire at stator plate (also spade terminal) "K" and "L" Fig. 11-2.
- 2) Tighten universal wheel vice #1291 onto flywheel see "A" Fig. 11-1 and remove flywheel nut and washer "C" Fig. 11-3 (.R.H. thread) using long 24mm wrench "B" Fig. 11-1. The flywheel is now free to be removed. The magnets will cause some resistance.
- 3) Using magneto cam puller #1390 "C" Fig. 11-4 remove cam "H" Fig. 11-3 from shaft by screwing puller "C" on cam "H", hold the puller with a wrench and screw in centre bolt "D" Fig. 11-4.
- 4) To remove stator plate "E" Fig. 11-2 simply remove the three Allen type screws using 4 mm hex key, see "F" Fig. 11-2.

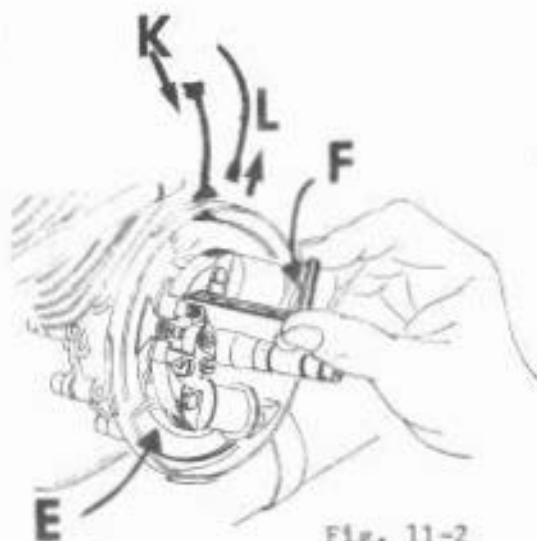


Fig. 11-2

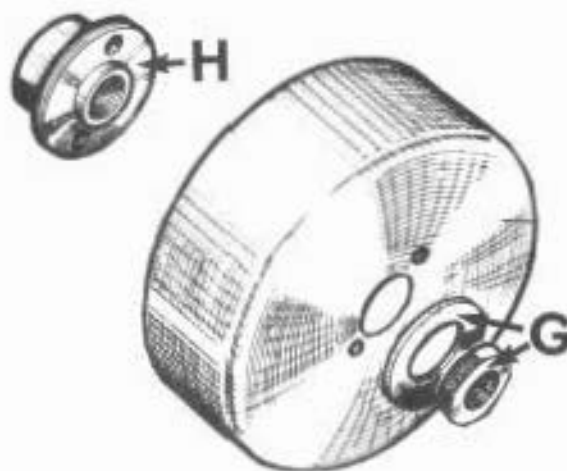


Fig. 11-3

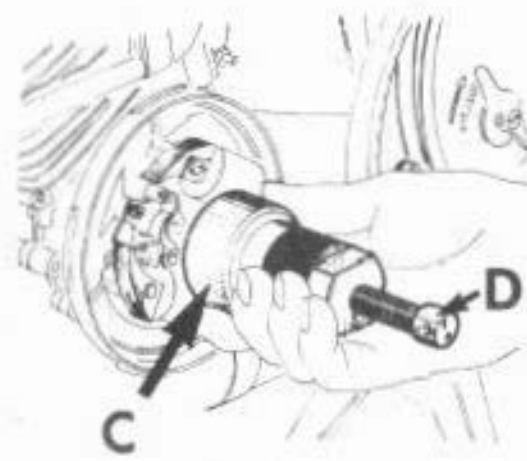
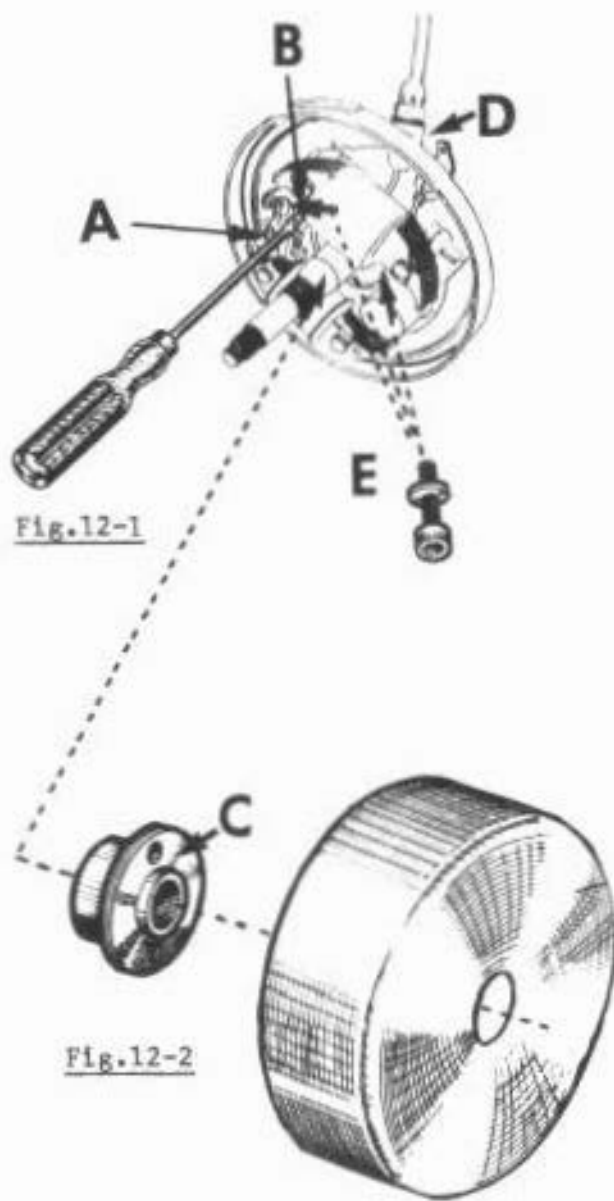


Fig. 11-4

NO SPECIAL TOOLS REQUIRED



### STATOR PLATE

- 1) Replace the stator plate by reversing procedure 4, on page 11 making sure H.T. wire and lighting terminal are in 1 o'clock position "D" Fig. 12-1, and lining up the 3 holes for the Allen type screws. See Location "E" Fig. 12-1. Use Locktite Blue Locking Cement on the mounting screws.

### CONTACT BREAKER SETTING

- 2) Place magneto cam "C" Fig. 12-2 gently onto shaft and rotate to obtain maximum breaker gap. At this point adjust the point gap to 3/10 mm (.012") as follows.
- 3) Loosen contact breaker securing screw "A" Fig. 12-1 and turn concentric cam "B" Fig. 12-1 to set points to .012" using a feeler gauge.

Note: Turning the cam "B" anti-clockwise opens the gap and clockwise closes the gap.

- 4) Tighten locking screw "A" securely and double check points gap is still .012" and has not changed.  
Final fitting of flywheel and magneto cam is described on page 13.

### SPECIAL TOOLS REQUIRED

TIMING GAUGE # 1470  
FLYWHEEL VISE #1291

- 1) Having set the contact breakers, page 12, proceed as follows
- 2) Remove the spark plug and screw in the timing gauge #1470 finger tight. Fig. 13-1.
- 3) Rotate the motor clockwise until piston is at T.D.C. (The stem of timing gauge fully extended).
- 4) Unscrew the timing gauge slowly until the shoulder of the tool reaches the bottom of the YELLOW mark on the stem. See "B" Fig. 13-1.
- 5) Turn the motor clockwise until the yellow mark disappears about 1/4" below the shoulder of the gauge and then rotate the motor very slowly anti-clockwise until the YELLOW mark just becomes visible - DO NOT rotate the motor again until you do the timing check, see page 14.
- 6) Place the magneto cam over the crankshaft onto the tapered section, rotate the cam anti-clockwise and stop as soon as a resistance is felt. (This is when the high point of the cam comes in contact with the plastic pad on the moving breaker arm)
- 7) Using a steel tube 23/32 i.d. x 7/8" o.d. x 6" tighten the cam onto the crankshaft by lightly tapping with a hammer (Final tightening will be made when the flywheel is installed. See Fig. 13-2.
- 8) Before you refit the flywheel, double check the timing in case the cam slipped when being tapped into position.
- 9) Place the flywheel over the crankshaft and onto the cam making sure the two studs (inside the flywheel) are lined up and engage in the corresponding holes in the cam. The flywheel can be rotated in either direction to line up the studs with the holes. Hold the flywheel in place, place the washer over the cam shoulder and screw the flywheel nut on finger tight. (Flat side out)
- 10) Hold the flywheel with tool 1291 and tighten the flywheel nut, see Fig. 11-1 Page 11.

NOTE: See Page 14 for timing check.

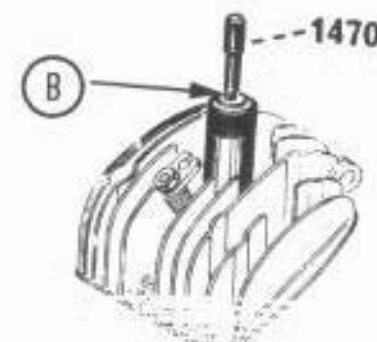


Fig. 13-1

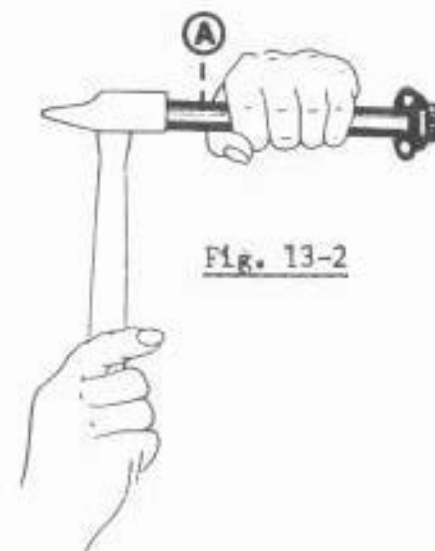


Fig. 13-2

# Cady SERVICE MANUAL

## IGNITION TIMING CHECK - EXTERNAL & INTERNAL

### SPECIAL TOOL REQUIRED

Timing gauge # 1470

Flywheel vise # 1291

Having complete the operations on page 13, proceed as follows

INTERNAL With timing gauge installed, flywheel removed.

- 1) Rotate the motor clockwise till the shaft of the timing gauge only protrudes approx. 1/2"
- 2) Open the contact breaker points and place a thin leaf of paper between the contact beads (cigarette paper is ideal) or a feeler gauge of not more than .002".
- 3) Rotate the motor slowly anti-clockwise gently pulling on the paper until it pulls out from between the contact beads and stop the rotation there.
- 4) At this moment the breaker points start to open and this is the exact point of ignition and the top of the yellow mark on the stem of the timing gauge should just be visible and in line with the shoulder of the timing gauge.
- 5) Replace the flywheel as described in section, 9-10 page 13.

EXTERNAL With motor on bench or on machine, fully assembled.

- 1) Remove spark plug and screw in the timing gauge #1470 finger tight.
- 2) Rotate the motor until the stem of timing gauge is fully extended, unscrew the timing gauge so the bottom of the YELLOW mark is level with the shoulder of timing gauge (see Fig. 14-1).
- 3) With a simple low voltage (1.5V to 3V) continuity tester, attach one lead to the HIGH TENSION FEED wire (Grey wire at bottom of H.T. Coil) and the other to the cylinder fins. See Fig. 14-1.
- 4) Rotate the motor clockwise till the YELLOW mark disappears and then slowly rotate the motor anti-clockwise.
- 5) While rotating anti-clockwise observe the light bulb and you will notice a flicker in the light. This occurs at the moment the contact breakers open and the top of the YELLOW mark should just be visible at the shoulder of timing gauge.
- 6) If the flicker in the light and the YELLOW mark do not coincide as described it will be necessary to re-time the ignition, see page 13.

NOTE: The timing of the ignition is 1.2 mm BTDC which is equivalent to 3/4" of rotation on the outside diameter of the flywheel.



Fig.14-1

NO SPECIAL TOOLS REQUIRED.

NOTE: This can be done with motor in frame but can be better accomplished if motor is removed. See page 6.

- 1) Remove motor from frame and remove exhaust assembly as described on pages 6 & 18.
- 2) Clamp motor in bench vise using the lower motor mounting bracket. See illustration below.
- 3) Cylinder head can be removed by unscrewing the four cylinder head bolts using a 5mm hex ALLEN type key.
- 4) To remove the cylinder use a 5 mm Hex Allen type key and unscrew the four cylinder bolts (sunk into lower part of cooling fins) be careful not to lose copper washers used on cylinder bolts as they may be left behind when you remove bolts. The cylinder can now be pulled up and off the piston quite easily.
- 5) There will be a metalized head gasket and a paper cylinder base gasket exposed during this operation. These should be discarded and replaced with new ones.

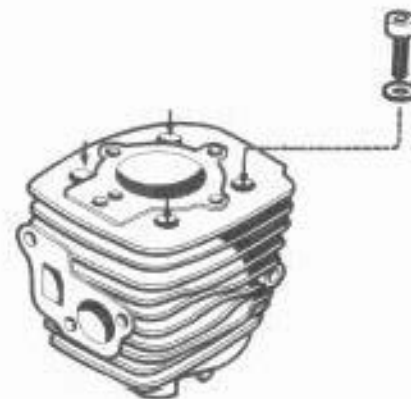
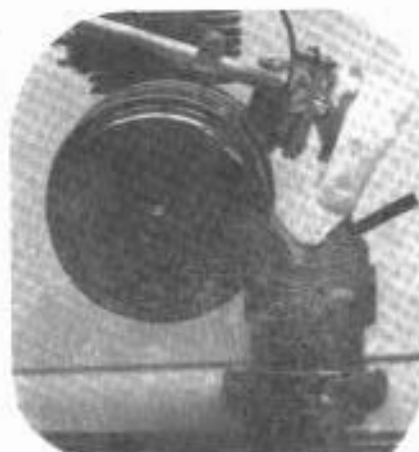


Fig. 15-1



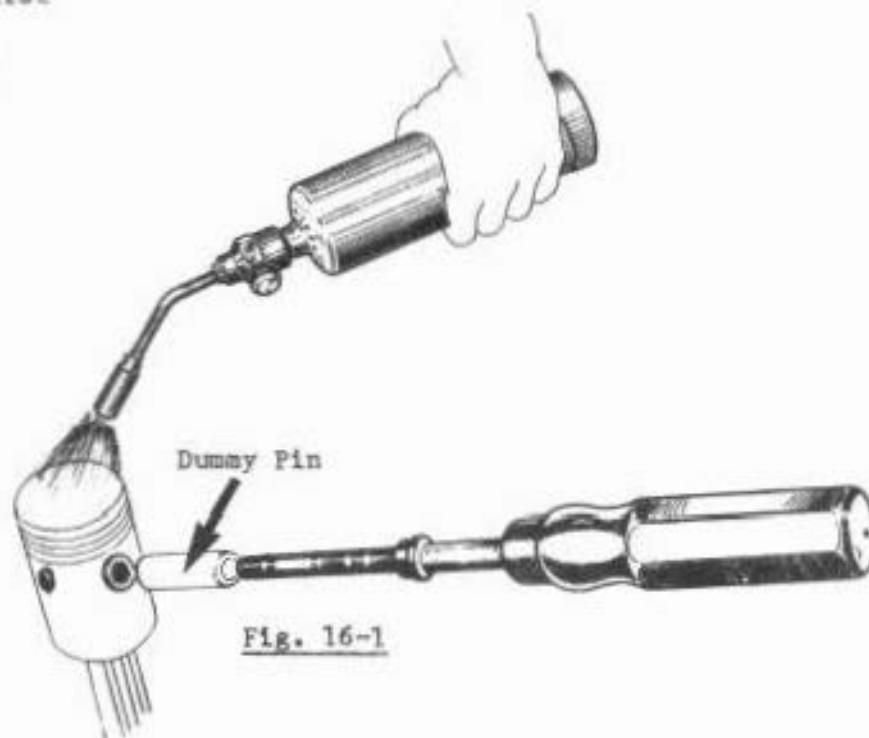
### SPECIAL TOOLS REQUIRED

Piston Pin Tool #1434 with dummy piston pin.

### REMOVAL

Having removed the cylinder head and cylinder proceed as follows

- 1) Clamp the crankcase in the vise.
- 2) Remove piston pin clips, (use needle nose pliers) and piston rings.
- 3) Heat piston with blowtorch directed onto top of piston to about 212°F (100°C) see Fig. 16-1 and with the dummy piston pin placed over the piston pin tool #1434 insert the end of the tool into the piston pin and apply a gently pressure - as the correct heat is reached the applied pressure will push the pin out. See Fig. 16-1.
- 4) Place the piston on the bench and place the cylinder over the piston. At first the cylinder will not drop over the piston but as the piston cools down the cylinder will slowly slide down over the piston. This does two things 1. It allows the piston to cool evenly and 2. Eliminates any distortion.



# Cady SERVICE MANUAL PISTON REFITTING

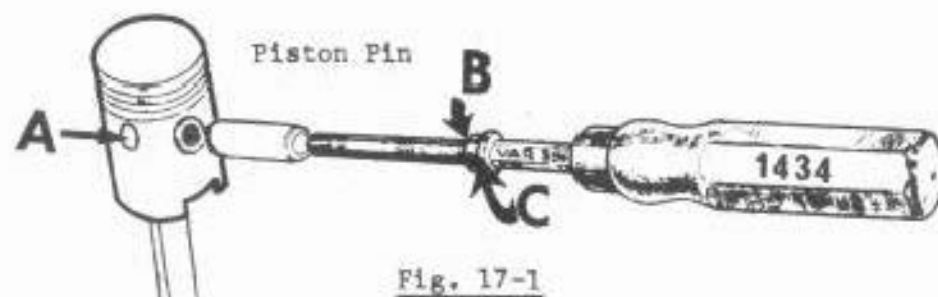
## REFITTING

## SPECIAL TOOLS REQUIRED

Piston Pin Tool #1434 with  
dummy piston pin

With crankcase held in the vise

- 1) Make sure the piston is facing the correct way. The small hole "A" Fig. 17-1 faces to the rear of the motor.
- 2) Insert the small end needle bearing into the connecting rod, position the piston over the connecting rod and insert the dummy piston pin into the needle bearing to secure the piston in its correct place.
- 3) Have the tool 1434 ready with the piston pin placed over the piston pin tool right up to the shoulder "B" Fig. 17-1. If possible keep the piston pin chilled for easier replacement.
- 4) Heat the piston as directed, on page 16 and when heated sufficiently place the exposed end of the piston pin tool into the dummy pin and push the piston pin tool with the piston pin into the piston in one movement as far as the shoulder "C" Fig. 17-1 will allow.
- 5) The dummy pin is pushed out and the piston pin is now properly centred.
- 6) With the piston rotated to the T.D.C. position, place the cylinder over the piston and allow it to cool, in the same manner as described on page 16.
- 7) Remove the cylinder and replace the piston pin clips and piston rings.  
See page 19 for correct positioning of piston rings.
- 8) Lightly lubricate the piston pin needle bearing with SAE 30 oil or a good grade "Two Stroke" oil and make sure the piston moves laterally and freely on the piston pin.



# Cady SERVICE MANUAL

## DECARBONIZING

### NO SPECIAL TOOLS REQUIRED

NOTE: Carbon build-up is common to most two cycle engines and is the most likely cause of poor performance. The removal of carbon from the Cady engine is a simple operation and should be performed regularly.

#### MINOR DECARBONIZING - Motor in the frame

- 1) Remove the 2 exhaust flange nuts and washers "A" Fig.18-1
- 2) Remove the muffler clamp bolt and nut "B" Fig.18-1
- 3) The muffler is now free to work on, on the bench.
- 4) Pull the exhaust pipe out of the muffler and remove any carbon and clean thoroughly. Discard the two gaskets one each side of the exhaust pipe flange and replace with new ones when re-assembling.
- 5) Remove the bolt "E" Fig. 18-1 at end of muffler and then remove the end cap "F" Fig. 18-1 and clean out the tail pipe.
- 6) Remove the baffle plate "G" Fig.18-1 and clean out the holes in it.
- 7) Clean the hole "H" Fig.18-1 in the inner fixed baffle plate.
- 8) Inspect the exhaust port in the cylinder and clean thoroughly. It may be necessary to scrape the carbon out (be careful not to damage the piston). A final cleaning can be done with a battery terminal wire brush.
- 9) Reverse the procedure to re-assemble.

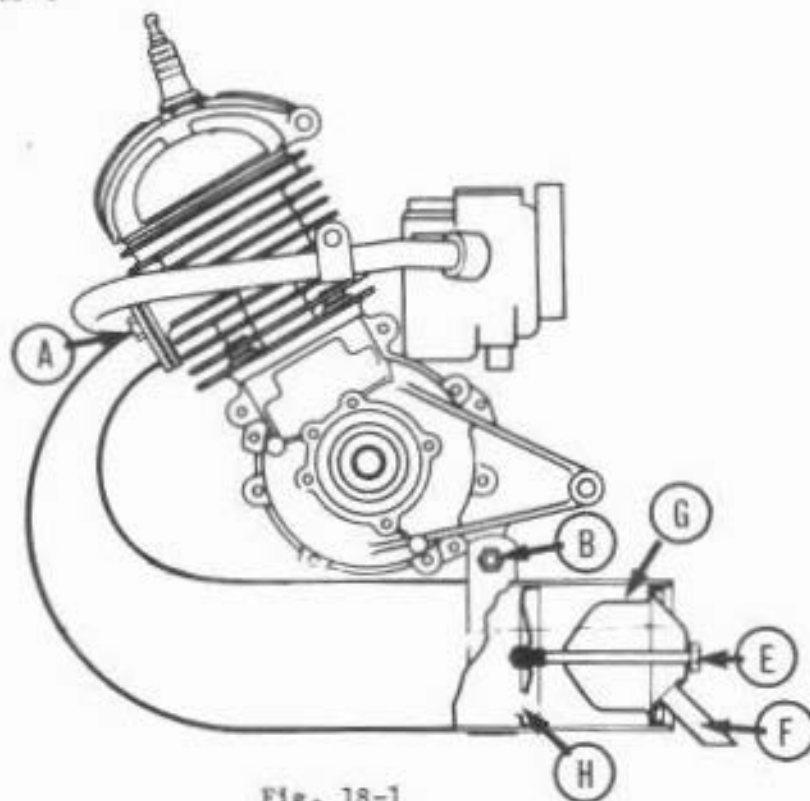


Fig. 18-1

#### MAJOR DECARBONIZING - Motor in bench vise

Carry out the same procedure for a MINOR DECARBONIZING and also

- 10) Remove the cylinder head and cylinder, see page 15 and remove the carbon from the cylinder head.
- 11) Before cleaning the piston head and piston ring grooves rotate the motor so the piston is at T.D.C. and protect the crankcase by wrapping a clean cloth around the connecting rod to stop any carbon falling into the crankcase.
- 12) Remove the piston rings and scrape out any carbon in the piston ring grooves ( a broken piston ring makes a good scraper) and clean the piston head.
- 13) Reverse the procedure to reassemble using new gaskets where necessary and new piston rings if required. See page 19 for Piston Ring fitting and page 20 for Cylinder and Cylinder Head refitting.

# Cady SERVICE MANUAL

## PISTON RING FITTING - PISTON TO CYLINDER MATCHING

NO SPECIAL TOOLS REQUIRED

The fitting of piston rings is very simple - just follow the notes below



Fig.19-1

NOTE "A" There are piston ring anti turning stops in the piston ring grooves of the piston - make sure the rings are the right way to match the stops in the piston. See Fig. 19-1.

NOTE "B" Although there are pistons manufactured to match up with specific cylinders the rings are all one size and fit all pistons. NO "GAPPING" IS REQUIRED.

NOTE "C" When replacing piston rings on a used piston make sure the piston ring grooves are free of carbon. A simple method of cleaning the grooves is to snap an old piston ring, and with a piece about 1" long and squared off at the end on a grindstone, carefully scrape the carbon from the grooves being careful not to remove any metal.

FITTING To refit the rings simply spread each ring apart just enough to pass over the piston, it is best when servicing a motor to always fit new piston rings.

Piston to Cylinder Matching See Fig. 19-2

NOTE "D" Cylinders are always supplied with matching pistons.

NOTE "E" If it is necessary to replace a piston only, first identify the cylinder by the letter stamped on the top face of the cylinder and order the part number according to the chart below.

EXAMPLE:- If cylinder is marked 'F' or 'G' use cylinder part number 19187.

EXAMPLE

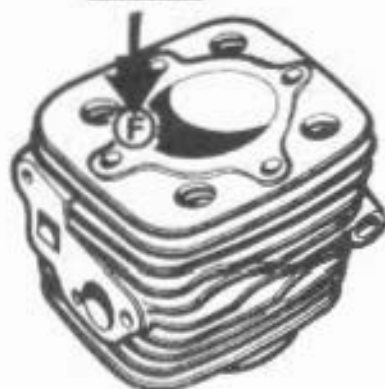


Fig. 19-2

### PISTON CHART

A	Use Part	19199	H J	Use part	19188
BC	"	" 19185	K L	"	" 19189
DE	"	" 19186	M N	"	" 19190
FG	"	" 19187	O P	"	" 19103

# **Eady** SERVICE MANUAL

## CYLINDER AND CYLINDER HEAD REFITTING

### NO SPECIAL TOOLS REQUIRED

Crankcase held in vise

NOTE: Use new gaskets when carrying out this operation.

- 1) Make sure the cylinder and cylinder head are perfectly clean especially the contact area between the crankcase and cylinder and cylinder top and head. Make sure the two halves of the crankcase are lined up and form flat surface so a proper joint can be made with the cylinder.
- 2) Lightly coat both sides of cylinder base gasket with general purpose grease and place it on the crank case - making sure it is correct way round.
- 3) With piston assembled lightly lubricate the piston and piston rings with SAE 30 oil or good grade "Two Stroke" oil.

NOTE: The cylinder bore is chamfered at the base to allow easy entry of the piston rings when compressed with the fingers. Each piston ring being compressed one at a time as the cylinder is installed. A slight rotation of the cylinder both left and right will help.

- 4) Rotate crankshaft so piston is at T.D.C. position, compress the piston rings with your fingers (make sure they are lined up properly on the stops in the piston ring grooves) and place the cylinder over the piston, (exhaust and intake ports to the front). Gently push down until it mates with the crankcase. Double check that the cylinder base gasket is in correct position and that the cylinder and cylinder base bolt holes are lined up. If you have to rotate the cylinder to line up the holes double check the crank case gasket again.
- 5) Place the copper washers over the crankcase Allen type hex screws and drop into their respective holes through the cylinder fins and tighten securely with 5mm Allen type key.
- 6) Rotate the crankshaft a few times and make sure everything is correctly assembled then lightly grease the cylinder head gasket both sides, place it on the cylinder head lining up the holes correctly.
- 7) Line up cylinder head on the cylinder and screw the cylinder head bolts in place - tighten securely with 5 mm Allen type key.

# Cady SERVICE MANUAL

## CHAINS - CARE & REPLACEMENT

### NO SPECIAL TOOLS REQUIRED

The Cady uses two sizes of chains and the lengths differ according to the model.

NOTE A) The pedalling chain is size 1/2" x 1/8"

NOTE B) The motor chain is 1/2" x 3/16" heavy duty type

- 1) The life of a chain depends entirely on the care and attention it receives and if properly cleaned, lubricated and tensioned it will perform its function for many years.
- 2) A new chain takes a little time to "run in" and during this time will need adjusting. Regular care and attention is required for exposed chains as used on the Cady. Correct adjustment is determined by the degree of up and down movement (deflection) of each chain at a point midway between the sprockets, see Fig. 21-1. The maximum deflection is 1/2" and the best operating tension is a deflection of 1/4" minimum to 1/2" maximum. See special adjustment for machines with rear suspension on page 26, items 8 and 9.
- 3) A chain that is too loose may not only jump the sprockets but will whip sideways causing excessive sprocket wear. A "stretched" chain is actually a worn chain and should be replaced before it wears the sprockets.
- 4) The pedalling chains on the Cady's are provided with chain tensioners. MODELS WITH rear suspension have a spring loaded tensioner which keeps the tension constant. MODELS WITHOUT rear suspension have an adjustable tensioner which will require occasional adjustment. See page 25.
- 5) To determine when a chain needs replacing measure 23 pitches, see Fig. 21-2 (This would be 11-1/2" on a new chain) and if this is more than 11-3/4" replace the chain.
- 6) Make sure when fitting a new chain that the connecting link is the correct way round. The closed end of the spring clip facing the direction of chain travel. See Fig. 21-3.
- 7) Illustrations Fig. 21-4 and 21-5 show the removal of rivets and fitting of the spring clip on a master link.

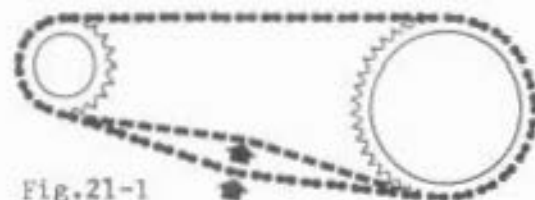


Fig.21-1



Fig.21-2

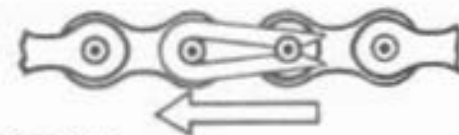


Fig.21-3



Fig.21-4



Fig.21-5

# Cady SERVICE MANUAL PULLEY CONVERTER REMOVAL AND SERVICING

NOTE: ALL PARTS INDICATED BY LETTER REFER TO FIG 22-2

NO SPECIAL TOOLS REQUIRED

The pulley converter is used to engage or disengage the motor and this is achieved by turning the drive selector lever Fig. 22-1 anticlockwise to the "V" position to disengage the motor and clockwise to the "M" position to engage the motor. There may be some resistance felt in turning the lever to the engaged position and this is easily overcome by rolling the machine backwards allowing the mechanism to fully engage.

The pulley converter requires very little service and the removal and refitting are quite simple. Most service problems are due to damage and or lack of lubrication. To service proceed as follows -

- 1) Remove the drive belt as described on page 8.
- 2) Remove the L.H. Chain cover and the L.H. Crank cotter pin and pedal crank with pedal. Hold a solid steel object against the crank when striking the pin to remove it.
- 3) Using multi-lock pliers grip the dust cap "A" and remove with a twist and pull action.
- 4) Remove the circlip "B" and washer "C" and slide the pulley converter off the pedal shaft.
- 5) Remove the two piece needle bearing "D" - inspect the pulley hub "F" and bearings for wear and or corrosion. Make sure the bearings are well greased with general purpose grease.
- 6) Check the motor engagement lever "G" and ensure the rivet "H" is secure and the engaging "dog" "J" is not worn. If the rivet is loose it can be peined over at point "K". If the engaging lever is worn, drill out the rivet at point "K" (5/16" drill) so washer "L" is free then punch out the rivet "H". Replace the required parts and securely peen over the rivet at point "K".



Fig. 22-1

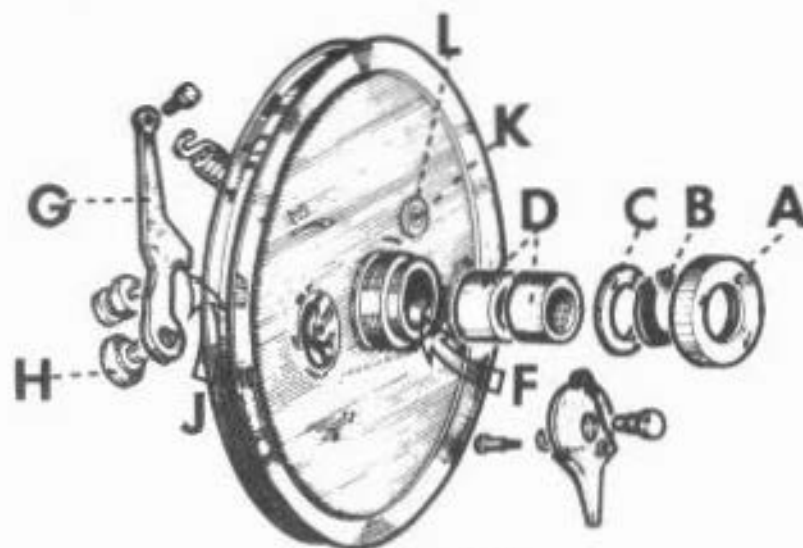


Fig. 22-2

# Cady SERVICE MANUAL

## PULLEY CONVERTER REFITTING & SERVICING AND DRIVE SELECTOR LEVER

NOTE: ALL PARTS INDICATED BY LETTERS REFER TO FIG. 23-2

NO SPECIAL TOOLS REQUIRED

- 1) The selector lever "M" can be replaced by drilling out the rivet "N" from back of pulley and removing the screw "P". When replacing the screw "P" apply Loctite Blue to the threads first.
- 2) Reverse the procedures 1 to 5 on page 22 to re-assemble and refit the pulley converter.
- 3) When replacing the crank cotter pin rotate the pedal axle so the cutaway section faces to the rear, place the crank arm over the axle with it also facing the rear, see Fig. 23-1. Insert the cotter pin from the bottom with the flat portion lined up with the cutaway portion on the axle - put on the washer and nut and tap into place and tighten nut, rotate the axle so the crank is vertical and with a wrench on the nut with pressure applied strike the head of the cotter pin and take up the slack on the nut at the same time. Repeat this a few times until you feel the pin is in as far as it will go and the nut is tight. NEVER use excessive force when tightening the nut as this will weaken or strip the threads. NEVER drive the pin in with excess hammering. ALWAYS take up the slack on the cotter pin nut at the same time as you strike the cotter pin head.
- 4) When fitting the R.H. crank arm follow the same procedure as in 3) above. The crank arms Left or Right must face to the rear when installing crank cotter pins and the pin is inserted from below and the nut screwed on from above.

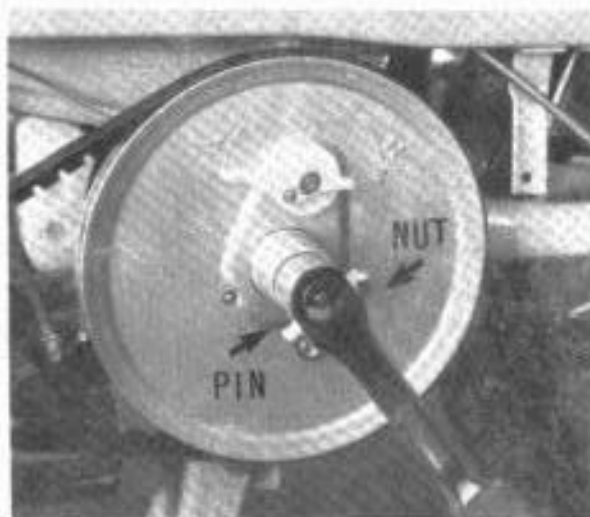


Fig. 23-1

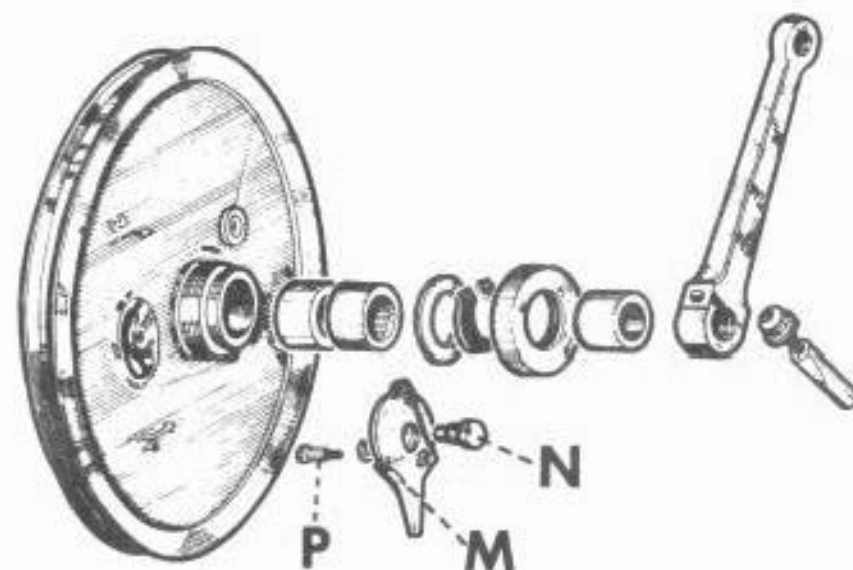


Fig. 23-2

## NO SPECIAL TOOLS REQUIRED

NOTE: All parts indicated by letters refer to Fig. 24-1

- 1) Remove pulley converter as described on page 22 item 1 to 4.
- 2) Slacken the rear wheel as described on page 28 and lift chain off the large sprocket and the small engine sprocket and remove the washer "A" (it may have remained stuck by grease to the pulley converter) and the small engine sprocket "B" with its needle bearings "C" and washer "D".
- 3) Remove the circlip "E" and the chainwheel with axle is now free to be removed from the right hand side of the frame after you have slipped the chain off the chainwheel.
- 4) It is not necessary to remove the right hand crank for normal servicing of the axle.
- 5) To refit the chainwheel and axle reverse the procedure above, making sure the circlip "F" and washer "G" are in place and lightly grease the axle with a general purpose grease. It is also a good idea to apply a grease gun to the grease nipple at the end of the axle and force some grease through to make sure the grease channel is not blocked, before assembling.
- 6) Before refitting the needle bearing "C" and the small engine sprocket "B" clean them thoroughly and coat them with general purpose grease.

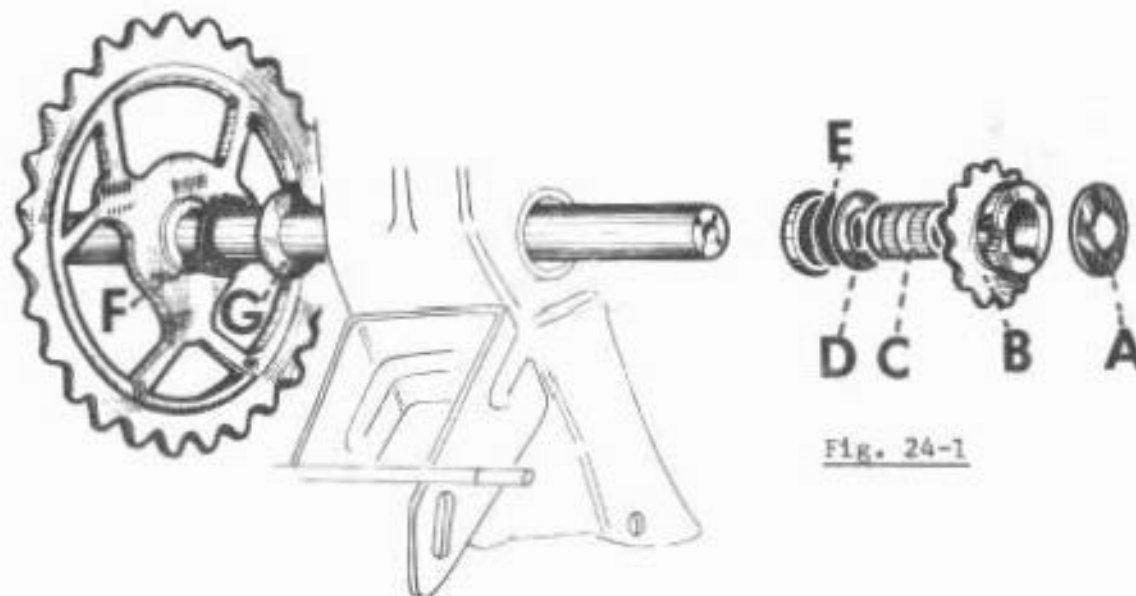


Fig. 24-1

MODELS WITHOUT REAR SUSPENSION - Machine on it's stand.

#### PEDALLING CHAIN

The engine drive chain and pedalling chain can be adjusted independently or together at the same time.

- 1) Slacken the 2 nuts "A" Fig. 25-1 on the chain tensioner, press down on the tensioner arm setting the tension as described on page 21. Tighten the tensioner nuts.

#### Motor Chain

- 2) Release the quick release lever on the frame under the saddle.
- 3) Slacken the 2 nuts on the chain tensioner (item 1 above)
- 4) Slacken the 2 nuts (one each side) at the base of the frame stays "C" Fig. 25-2.
- 5) Pull the rear wheel backwards until the engine chain is tensioned as described on page 21. Make sure the wheel is properly centered in the frame and tighten the frame stay nuts "C" Fig. 25-2.
- 6) Set the pedal chain tension and tighten the tensioner nuts "A" Fig. 25-1 and lock the quick release lever.

#### Note: MODELS WITH OR WITHOUT REAR SUSPENSION

Make sure the chain tensioner is properly aligned by rotating the pedals backwards, if there is any roughness due to the arm being bent or twisted minor adjustments can be made by gently bending and straightening the tensioner arm to correct the alignment.

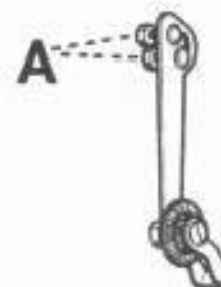


Fig. 25-1

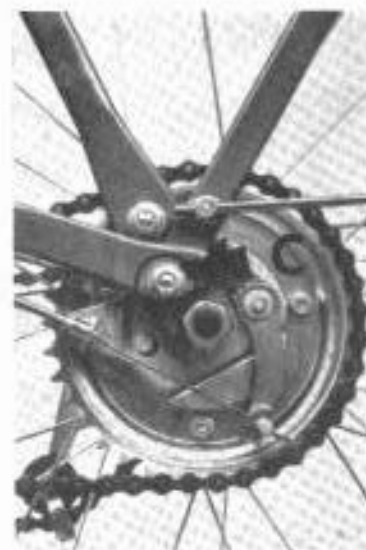


Fig. 25-2

NO SPECIAL TOOLS REQUIRED

MODELS WITH REAR SUSPENSION - machine on it's stand

- 1) The pedalling chain on these models has a spring loaded tensioner and chain tension is constantly maintained. The tensioner can be lifted and locked in the "UP" position and released by pressing the catch "D" Fig. 26-2 inwards.

### Motor Chain

- 2) The adjusting of the motor chain on models with rear suspension should be carried out with the rear shock absorbers depressed to the position of an average rider. Unless this is done the chain tension will be too tight when a rider sits on the machine.
- 3) Slacken the axle nuts "A" Fig. 26-1 and the lock nuts "B" Fig. 26-1 on the chain adjusters "C" Fig. 26-1 and push the rear wheel backwards by screwing in the chain adjusters equally on both sides until the correct tension is achieved as described on page 21. Tighten axle nuts "A" and adjuster lock nuts "B".

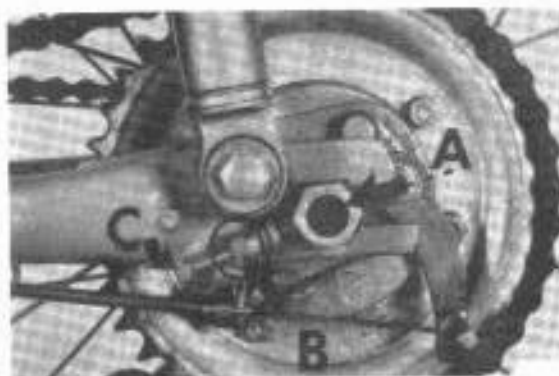


Fig. 26-1

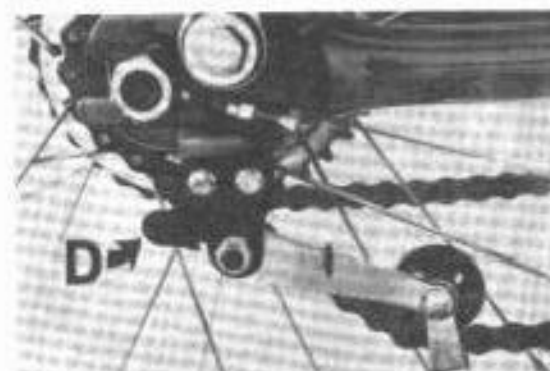


Fig. 26-2

# Cady SERVICE MANUAL

## FRONT WHEEL REMOVAL & REFITTING

### FRONT WHEELS

### NO SPECIAL TOOLS REQUIRED

Models without front suspension - machine on its stand

- 1) Slacken the axle nuts "A" Fig. 27-1. Raise the wheel off the ground and pull the wheel down and out of the forks. Reverse the procedure to refit the wheel.

Models with front suspension - machine on its stand

- 2) Push the brake arm "A" 27-2 and release the cable nipple "B" Fig. 27-2 and cable from the brake arm.
- 3) Slacken the axle nuts and washers "C" Fig. 27-2. Raise the wheel off the ground and pull the wheel down and out of the forks. Reverse the procedure to refit the wheel making sure the lug "D" Fig. 27-2 on the brake plate is engaged in the slot "E" Fig. 27-2 on the R.H. Fork end.
- 4) Make sure the ferrule on the cable outer casing is properly installed in the cable stop located inside the fork end at point "F" Fig. 27-2.



Fig. 27-1

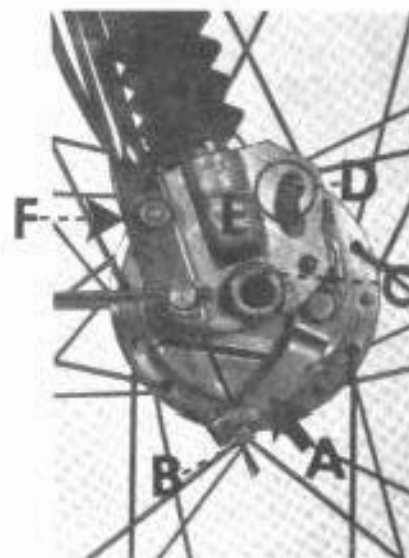


Fig. 27-2

### REAR WHEELS

MODELS WITH REAR SUSPENSION - machine on its stand

- 1) Push the brake arm "A" Fig. 28-1 forward and release the cable nipple "B" Fig. 28-1 with cable from brake arm.
- 2) Slacken the axle nuts "C" Fig. 28-1 and the chain adjuster bolts "D" Fig. 28-1 and push the wheel forward.
- 3) Push the chain tensioner up into the locked position "E" Fig. 28-2.
- 4) Lift both chains off the rear wheel sprockets and pull the wheel to the rear and out of the frame slots.
- 5) To replace the wheel reverse the procedure making sure the slot in the brake plate fits over the lug on the inside of the R.H. rear fork just forward and slightly below the bolt at the bottom of the shock absorber. See location indicated by \* on Fig. 28-1.

REFITTING - Reverse the procedure.

- 6) The washers on the axle go to the outside of the rear fork followed by the axle nuts.
- 7) Before tightening the axle nuts adjust the motor chain as described on page 21 and 26 and check the pedal chain tensioner. Tighten the axle nuts securely and adjust the brakes.

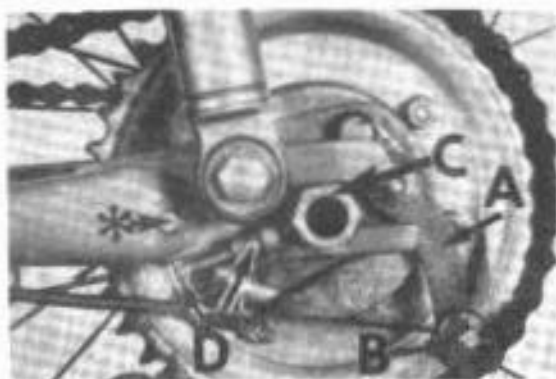


Fig. 28-1

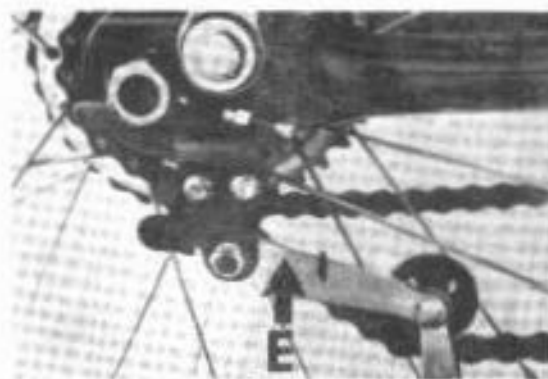


Fig. 28-2

#### MODELS WITHOUT REAR SUSPENSION

##### REMOVAL

- 1) Push the brake arm "A" Fig. 28A-1 forward and release the cable nipple and cable "B" Fig. 28A-1 from the brake arm. Slacken the axle nuts "C" Fig. 28A-1. Raise the frame and pull the wheel downwards and out of the frame slots.
- 2) Slacken the pedal chain tensioner nuts and bolts, lift both chains off the rear wheel sprockets and remove the rear wheel.

##### REFITTING - Reverse the procedure.

- 3) The washers on the axle go to the outside of the rear fork followed by the axle nuts. Tighten the axle nuts securely and set the chain tension as described on page 21 and 25 and adjust the brake.
- 4) Make sure the slot in the brake plate "D" Fig. 28A-2 fits over the lug on the inside of the R.H. frame stay at the point indicated by \* on Fig. 28A-1.

NOTE: When refitting rear wheels make sure the wheel is properly centred by checking the space either side of the tire at the inside of the forks. The space should be equal on both sides.

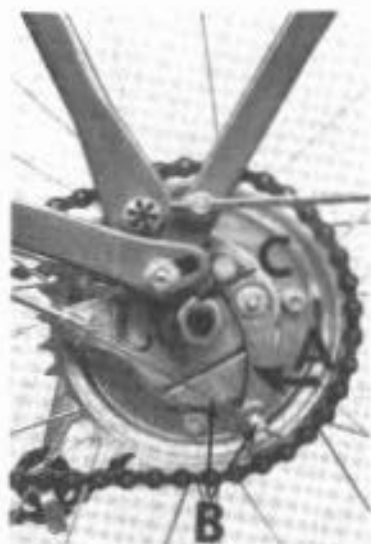


Fig. 28A-1



Fig. 28A-2

# Cady SERVICE MANUAL

## BRAKE ADJUSTMENT

NO SPECIAL TOOLS REQUIRED

### NOTE: ALL BRAKES

The basic adjustment of the brakes is done at the handlebar brake lever position. This adjustment will take up any slack in the brake cables during the "bedding down" of the brakes and initial stretch of the brake cables.

Brake adjustment - machine on its stand. Engine engagement lever set to "V" (motor disengaged) position Fig. 22-1 Page 22.

- 1) Slacken the locknut "A" Fig. 29-1 on the respective brake lever.
- 2) Spin the wheel being adjusted and screw out the adjuster "B" Fig. 29-1 until the brake begins to engage the wheel. Squeeze the brake lever once or twice - spin the wheel again - readjust if necessary and screw up the locknut "A" Fig. 29-1. When squeezing the brake lever there should be approximately 1/2" of free movement before braking takes effect.

### Front Brake - models without suspension

- 3) Additional adjustment is provided on the brake at point 'C' Fig. 29-2.
- 4) Screw in the adjuster 'B' Fig. 29-1 on the lever
- 5) Slacken off the nut 'D' Fig. 29-2 squeeze together the brake shoes against the wheel rim and pull the brake inner wire downwards by holding with pliers and twisting at the same time.
- 6) Hold the wire in this position and tighten nut 'D' Fig. 29-2.
- 7) Make fine adjustment as described in item 2 above..

### Front Brake - models with front suspension

- 8) Additional adjustment is provided on this brake at point 'E' Fig. 29-3.
- 9) Screw in the adjuster 'B' Fig. 29-1 on the lever.'
- 10) Slacken the square headed bolt on the cable nipple 'F' Fig. 29-3.
- 11) Push up on brake arm 'G' Fig. 29-3 and slide nipple up as far as possible and tighten the bolt on the cable nipple.
- 12) Make fine adjustment as described in item 2 above.



Fig. 29-2



Fig. 29-3

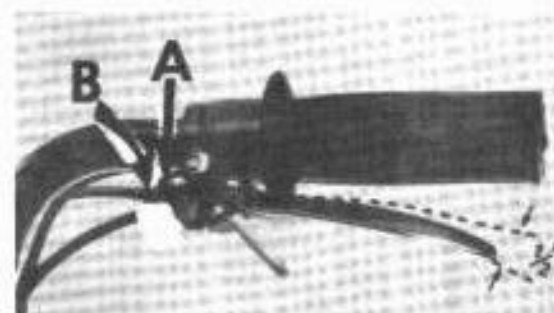


Fig. 29-1

# Cady SERVICE MANUAL

## BRAKE SERVICING & CABLE REPLACEMENT

NO SPECIAL TOOLS REQUIRED

### Replacement of cables

A brake cable should be replaced when the brake lever becomes sluggish or stiff to operate. This is usually caused by "DAMAGE" "KINKING" "RUST" OR "CORROSION" or a "FRAYED" Inner Wire.

If you are replacing only the inner wire on a brake make sure it is lubricated first and follow the adjustment directions on page 29 after you have installed the new wire.

If you are replacing a complete cable first check the routing of the cable you are going to replace and install the new cable in exactly the same route and follow the adjustment directions on page 29.

### Replacement of drum brake linings.

Remove the wheels as per directions on page 27 & 28 & 28A.

- 1) Remove the axle nuts and washer and spacer from the brake plate side of the axle.
- 2) Remove the brake plate and clamp it in the vise. See Fig.30-1.
- 3) With a screw driver, lever the brake shoes up and off the fixed pin "A" Fig. 30-1 then push the shoes off the brake arm cam "B" Fig.30-1 with the springs, "C" Fig. 30-1 still attached.
- 4) Smear a little all purpose grease on the fixed pin "A" Fig.30-1 and a few drops of oil where the brake shoe cam passes through the plate. Make sure the brake arm operates freely, when you have the brake shoes off.
- 5) To install new brake shoes reverse the above operation using new springs with new shoes. Attach the springs to the shoes first.

NOTE: Front brake on models without front suspension.

If it is found necessary to remove either side of this cantilever type brake from the fork blades it is best to use an impact type tool with socket to loosen the bolt "D" Fig. 30-2. This bolt is securely tightened at the factory and being thin, one could easily strip the corners off the hexagon head with a ring or open wrench.

The brake shoes with pads can be adjusted or replaced by slackening the eye bolt nut "E" Fig. 30-2.

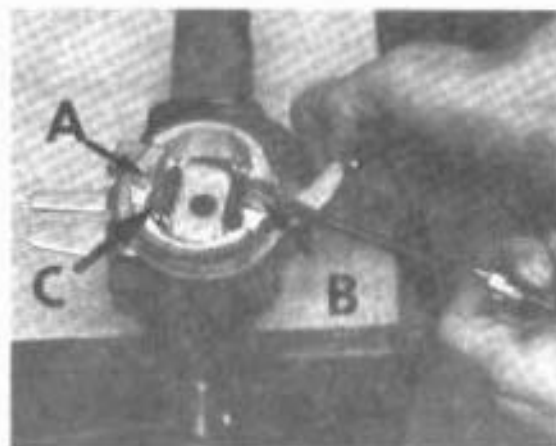


Fig. 30-1



Fig. 30-2

# Cady SERVICE MANUAL

## HUBS - SERVICING

### NO SPECIAL TOOLS REQUIRED

The servicing of hubs relates to the axles and bearings (Brake service will be found on page 30) and the same principles apply whether the machine is with or without suspension.

An axle set consists of a number of washers and spacers and locknuts and cones. When stripping a hub of its axle the order in which the parts are assembled should be carefully noted.

- 1) Remove the wheel and if a drum brake is fitted remove the brake plate. See pages 27-28-30.
- 2) Once the brake plate is removed you can proceed with whatever wheel is involved in the same manner.
- 3) Grip the lock nut on the side opposite the brake drum in the vise and with suitable tools, remove the lock nut from against the cone on the exposed side and then remove the cone.
- 4) The wheel can now be lifted off the axle - the ball bearings will drop out.
- 5) Wash off the hub and the bearings and cones with a suitable solvent and wipe dry with a clean rag. Inspect the cups in the hub for any rough spots, also the ball bearings and cones and replace as necessary.
- 6) Pack the bearing cups in the hub with general purpose grease and place the ball bearings in the grease in each cup.
- 7) Rassemble by reversing the stripping procedure.

NOTE 1) It is always advisable to replace the ball bearings with new ones when servicing a hub.

NOTE 2) If you are not sure how many bearings should go in the hub the best rule to follow is to fill the cup to create a full circle of balls and then remove one.

- 8) The final setting of the cone should be done with the wheel in the vise, see item 3 above, so that a very slight amount of play can be felt at the rim and with the wheel removed from the vise the axle should rotate smoothly between the fingers.

### WHEEL BEARING SIZE CHART

MODEL	FRONT	REAR
M1-PR	1/4"	3/16"
M1-PRTS	7/32"	3/16"
M3-PRTS	7/32"	3/16"

# Cady SERVICE MANUAL

## THROTTLE CABLE ADJUSTMENT

### NOTE A Machine on its kickstand

It is important to allow 1/16" to 1/8" of play in the throttle cable to allow for any "pull" on the cable when the steering is rotated.

### NO SPECIAL TOOLS REQUIRED

- 1) Start the motor - allow time for warm up and rotate the throttle noting the amount of rotation required before the engine speed picks up.
- 2) With throttle closed unscrew the idle adjusting screw 'A' Fig. 32-1 until the engine speed is at its lowest and then slowly screw it in until the engine speed just begins to increase.
- 3) At the lever end slacken the lock nut 'A' Fig. 32-2 and with throttle closed screw out the adjuster 'B' Fig. 32-2 until the engine speed increases - screw the adjuster back in two full turns and tighten the lock nut 'A' Fig. 32-2.
- 4) You should now have the necessary amount of free rotation on the twist grip before the engine speed increases and remove the possibility of any increase in engine speed when the steering is rotated.
- 5) Up to this point we have assumed that the throttle wire and casing are in good condition so it is advisable to open and close the throttle a few times and make sure everything is in order.
- 6) If the adjuster has to be screwed out to its full extent refer to page 36 item 7 for instructions of additional adjustment at the twist grip.
- 7) Should the engine speed not slow down to an idle after operating the twist grip check the throttle cable for damage and replace if necessary see pages 35 and 36 and check that the throttle slide is not sticking see pages 37-38-39. Also check that the idle adjusting screw 'A' Fig. 32-1 is not screwed in too far.



Fig. 32-1



Fig. 32-2

# Cady SERVICE MANUAL

## CHOKE CABLE ADJUSTMENT & REPLACEMENT

NOTE "A" The choke cable adjustment is simple and seldom required but like the throttle cable it is important to maintain it correctly and operating freely for correct engine performance.

### NO SPECIAL TOOLS REQUIRED

- 1) The choke lever is found on the left hand lever bracket "A" Fig. 33-1
- 2) A small amount of free movement of the choke lever is required and this should not exceed 1/4" at the lever end.
- 3) To adjust first unlock the lock nut "B" on the adjuster "C" and adjust until the required free play is achieved on the lever "A" Fig. 33-1.
- 4) Check to make sure that the choke moves freely up and down.
- 5) If everything is in order tighten the lock nut and double check the free movement.
- 6) If the choke slide sticks or is stiff to operate it may be necessary to replace the choke cable due to damage or rust or the choke slide could be corroded or damaged - see pages 37-38-39 for "Carburettor Service".
- 7) To replace the choke inner wire slacken the nut "D" Fig. 33-1 at the lever - remove the carburettor from the intake pipe and push the inner wire down and pull it out from the bottom of the choke slide.
- 8) Lightly lubricate the replacement wire and feed it up through the choke slide and the outer casing until it appears at the lever end.
- 9) Screw the adjuster all the way into the lever bracket.
- 10) Pass the wire through the adjuster and into the pinch bolt on the choke lever - pull gently on the wire to take up any slack and tighten the pinch bolt. Adjust as described above, items 2 to 5.
- 11) If it is necessary to replace the outer casing, remove the inner wire first and install the outer casing following the same route as the old one. Then install the inner wire as described above (items 7 to 10).

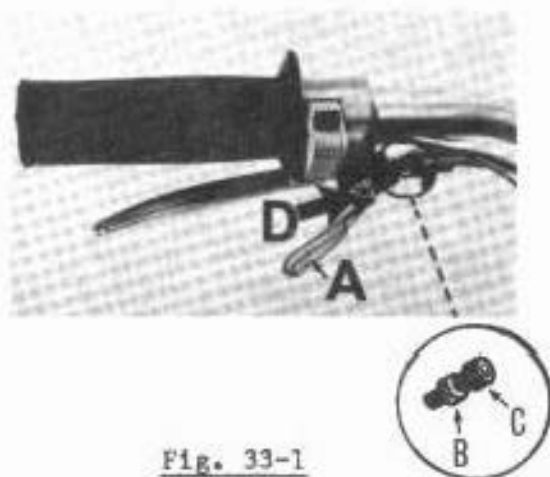


Fig. 33-1

# Cady SERVICE MANUAL

## DECOMPRESSOR CABLE ADJUSTMENT & REPLACEMENT

### NO SPECIAL TOOLS REQUIRED

The decompressor cable is found on the Right Hand lever bracket and it is important that it is never over adjusted.

#### Adjustment

- 1) A small amount of free movement of the decompressor lever is required and this should not exceed 1/4" of movement at the lever end.
- 2) To adjust first unlock the lock nut on the adjuster and unscrew the adjuster until the required free play is achieved on the lever.
- 3) Check to make sure the decompressor moves freely up and down.
- 4) If everything is in order tighten the locknut and double check the free movement.
- 5) If the decompressor sticks in the "down" position when operating the lever check the cable for damage and or rust. To do this screw the adjuster at the lever all the way in and remove the cable at the decompressor and check that the cable operates freely. If necessary replace it, see items 7 to 10 below.
- 6) If the cable operates freely press down and release the decompressor a few times with your thumb and if it sticks replace it, see items 11 to 14 below.

#### Cable Replacement

- 7) Remove the old cable by first slackening the pinch bolt on the lever and pulling the inner wire out then remove the nipple from its holder at the cylinder head - then the complete cable. Note the shouldered ferrule position in the top plate on the decompressor.
- 8) Re-route the new cable through the plastic casing and reverse the procedure in item 7 above, making sure the shouldered ferrule is properly fitted into the top plate on the decompressor.
- 9) Before feeding the inner wire into the lever pinch bolt, screw the cable adjuster on the lever bracket out about 1/4" then take up the slack on the inner wire and tighten the pinch bolt.
- 10) Make final adjustment as described above items 1,2 & 3.

#### Decompressor replacement

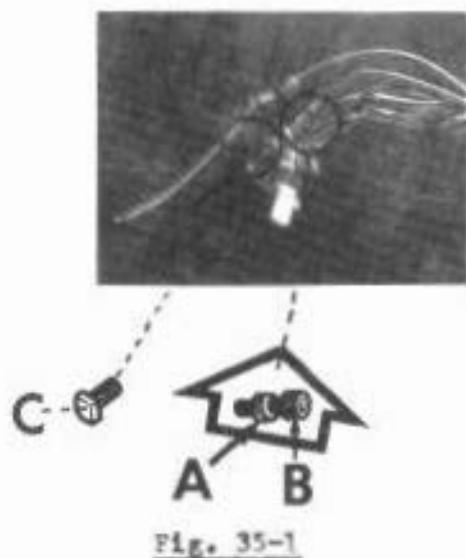
- 11) Remove the cable - disconnect the plug lead.
- 12) Remove the upper engine mounting bolt, four Allen type cylinder head bolts and the cylinder head.
- 13) Remove the decompressor valve using a wrench on the hexagon nut on top of the valve stem and a screw driver at the base of the valve stem inside the cylinder head.
- 14) Install the new decompressor reversing the above procedure, and use a new head gasket.

### NO SPECIAL TOOLS REQUIRED

NOTE "A" Quite often it is possible to replace only the inner wire rather than the complete assembly, but this should only be done if the outer casing is in good condition. The areas most subject to damage are the exposed sections of the cable between the control and the frame.

### Throttle

- 1) Slacken the locknut "A" Fig. 35-1 on the cable adjuster "B" Fig. 35-1 and screw the adjuster into the twist grip bracket as far as possible.
- 2) Unscrew the square headed cable retaining bolt "C" Fig. 35-1 pull out throttle cable.
- 3) Remove the carburettor from the intake pipe by slackening the clamp "E" Fig. 35-2 and remove the screw "D" Fig. 35-2 on the mixing chamber cover "F" Fig. 35-2 and the cover complete with the throttle slide and spring and choke slide and spring, see Fig. 35-3.
- 4) Push the throttle inner wire down so you can pull it right out of the throttle slide and throttle slide spring.  
(Some carburettors have a plastic cable guide on the mixing chamber cap - this will become free when the inner wire is removed, so place it aside until installing the new inner wire or complete cable) See "G" Fig. 35-2.



See Page 35 for Fig. 35-1, 2 and 3

- 5) If replacing only the inner wire feed it through the mixing chamber cap and plastic cable guide (if used) and through the outer casing, leaving enough wire to replace the spring and the throttle slide. Now push the inner wire up to the point where the spring is held between the cap and throttle slide.
- 6) Before installing the throttle slide "K" Fig. 35-2 and choke slide "L" Fig. 35-2, into the mixing chamber, line up the slot "H" Fig. 35-3 in the throttle slide with the small guide pin "J" Fig. 35-3 inside the mixing chamber (the cutaway portion on the bottom of the throttle slide facing the air filter). When lined up properly push the throttle and choke slides into the mixing chamber, see Fig. 35-3. Correctly lined up they will slide in easily. Now, press down on the cap compressing the springs and replace the screw "D" Fig. 35-1.
- 7) At the twist grip end you can now feed the inner wire through the adjuster and into the retainer with the square headed bolt "C" Fig. 35-1, page 35. Pull up the slack on the inner wire and tighten the square headed retainer bolt.
- 8) Before refitting the carburettor to the intake pipe, operate the twist grip a few times to ensure the throttle is working freely.
- 9) Refit the carburettor and make final adjustments as described on page 32.
- 10) To replace the complete cable follow the instructions 1 to 4 on page 35 and then separate the new inner wire from its outer casing.
- 11) Before removing the old outer casing observe the route it follows and then replace it with the new one.
- 12) To complete the operation once the new outer casing is installed follow the instructions 5 through 9, above.

# Cady SERVICE MANUAL

## CARBURETTOR SERVICE

### NO SPECIAL TOOLS REQUIRED

NOTE "A" The Cady carburettor is a very simple carburettor and is a gravity feed type.

NOTE "B" In the event of a carburation problem and before deciding that it is necessary to remove the carburettor, first check that there is fuel flowing from the fuel tank to the carburettor.

### TO CHECK FOR FUEL FLOW

- 1) Make sure there is fuel in the fuel tank and with fuel tap up (OFF), remove the fuel line from the fuel tap, push the fuel tap down (ON) and make sure the fuel is flowing. If the fuel is flowing pull the fuel tap up (OFF) and refit the fuel line. Repeat the processes at the carburettor to ensure the fuel is flowing.
- 2) There are two filters which should be checked. One is situated on the fuel tap retaining bolt "A" Fig. 37-1. The other is on the carburettor at the float bowl cover "B" Fig. 38-2. If there is a lack of fuel to the carburettor the filters could be blocked or the fuel line clogged.

### FUEL FILTERS

- 3) To check the fuel tank filter remove the fuel tap retaining bolt "A" Fig. 37-1 and check and clean the filter screen.
- 4) To check the carburettor filter remove the slotted end cap "C" Fig. 37-2, pull out the filter, check and clean it.
- 5) If either filter is damaged replace it with a new one.
- 6) Make sure the gaskets on both the fuel tap and carburettor intake are in good condition - replace if necessary.
- 7) With the filters and fuel line back in position remove the jet "D" Fig. 37-3, push the fuel tap down (ON) and fuel should run out of the carburettor. This determines that fuel is reaching the float bowl "E" Fig. 37-3. Replace the jet after cleaning thoroughly.



Fig. 37-1

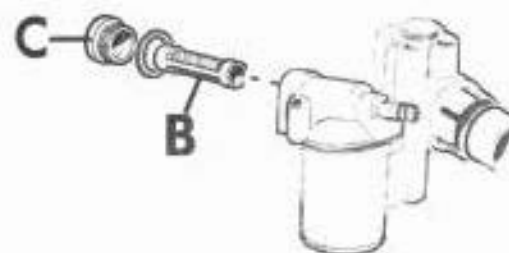


Fig. 37-2



Fig. 37-3

Continued on Pages 38 & 39.

### THE FLOAT

- 8) The float bowl contains a cylindrical float which incorporates a needle through its center. As the float bowl fills with fuel the float rises and at the correct fuel level the needle seats into the inlet valve and cuts off the supply of fuel.
- 9) If a situation of fuel flooding occurs it could be due to the needle not seating correctly for the following reasons.
  - a) The needle seat has some foreign matter in it. (Grit or gum oil)
  - b) The float needle is bent (uncommon) or worn (common after long use)
  - c) The float has a leak in it and fuel has entered and made it heavy (uncommon).
- 10) To check any of the situations A,B or C remove the two screws "E" Fig. 38-1 and remove the float bowl cover "J" and lift out the float "F". Check the needle seat for any foreign matter or gum and clean it thoroughly. Check the needle and make sure it is not bent or worn, see diagram Fig. 38-2. If bent or worn replace it with a new one. Shake the float to determine if there is any fuel inside and if so replace it.
- 11) Check the gasket "G" Fig. 38-1 on the float bowl cover and replace if necessary.
- 12) If the needle is worn the needle seat in the float bowl cover will also be worn and it also should be replaced along with the float.
- 13) The other things to check if there is a fuel leak is -
  - a) The fuel tap is tight
  - b) The fuel line is not cracked or split.
- 14) Before replacing the float and float chamber cover inspect the inside of the float bowl and clean it out thoroughly. There could be gummed oil and grit inside or water or corrosion caused by moisture.

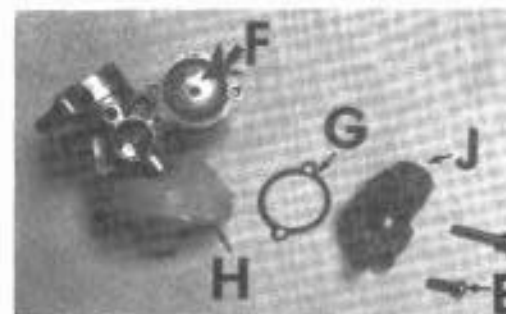


Fig. 38-1

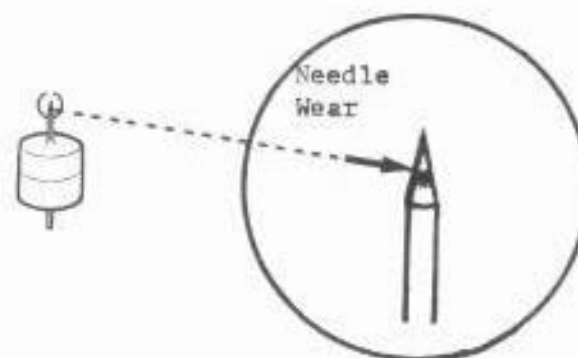


Fig. 38-2

### AIR FILTERS

- 15) There are fine wire mesh screens in the air filter "H" Fig. 38-1 which should be cleaned; this is easily done by removing the air filter cover and removing the two screws on the end cap of the air filter, giving access to the screens. Wash these clean with a suitable solvent.

# Cady SERVICE MANUAL

CARBURETTOR SERVICE (continued)

## THROTTLE & CHOKE SLIDE

- 16) If the throttle or choke are sticking follow the instructions on page 33 for choke, pages 35 and 36 for throttle, and inspect for
- a) Corrosion caused by moisture
  - b) Damage to throttle slide and or choke slide
  - c) Frayed throttle or choke wires.
  - d) Throttle or choke wires stiff in outer casing.

To correct the above problems

- a) Clean the throttle and choke slides thoroughly, also the inside of carburettor mixing chamber - insert each of these individually into their respective position to make sure they operate freely. This can be done without removing the slides from the inner wires.
  - b) Damage to the throttle slide and or choke slide is usually in the form of a burr. It may be possible to remove this using fine wet and dry rubbing down paper. After removing the "burr" check each slide in its respective position and make sure they operate freely. If in doubt or if damaged too much replace the part.
  - c & d) Replace any frayed wires and or outer casings, see page 33 for Choke Cable or pages 35 and 36 for Throttle Cable.
- 17) After servicing a carburettor and before installing on the engine, double check that the throttle and choke slides operate freely and set the idle screw. The best way to do this is to unscrew the idle screw to allow the throttle slide to be in its lowest position - then screw the idle screw in slowly until the throttle slide begins to rise (This can be observed by looking into the carburettor air intake with the air filter removed). See also page 32 for idle adjustment.
- 18) Final idle adjustment can be made after the carburettor is assembled on the engine and with the engine running.

# Cady SERVICE MANUAL

## PEDAL REMOVAL AND REPLACEMENT

### NO SPECIAL TOOLS REQUIRED

NOTE A: The pedals as used on Cady mopeds use a metric thread (14mm) and it is important that the correct replacements are used.

NOTE B: A pair of pedals consists of one Right hand and one Left hand. The Right hand pedal can be identified by letter "R" or "D" stamped on the threaded end or shoulder of the pedal spindle. The thread is right hand and is screwed into the pedal crank clockwise and fits on the right hand side of the machine.

The Left hand pedal can be identified by the letter "L" or "G" stamped on the threaded end or shoulder of the pedal shaft. The thread is left hand and is screwed into the pedal crank anticlockwise.

- 1) To remove the pedals use a pedal wrench (approx 13" long) to achieve sufficient leverage. Fit the wrench over the flats on the end of the pedal spindle and unscrew turning the wrench anticlockwise for the Right hand pedal and clockwise for the Left hand pedal.
- 2) To replace the pedals always "start" the threads using your fingers, making sure the pedal spindle threads are lined up correctly with the pedal crank threads. This will eliminate cross threading.
- 3) Screw the pedal spindles in all the way and tighten securely with the pedal wrench.
- 4) If a long pedal wrench is not available use a suitable open ended wrench and a length of pipe to extend the length and obtain the necessary leverage to either remove or replace the pedals.



PEDAL WRENCH

# Cady SERVICE MANUAL

## REAR FORK REMOVAL & REFITTING & SHOCK ABSORBERS

Models with rear suspension

NO SPECIAL TOOLS REQUIRED

### REMOVAL

- 1) Remove both chain covers
- 2) Remove rear wheel, see page 28
- 3) Remove pulley converter, see page 22.
- 4) Remove small engine sprocket and right hand chain wheel with axle, see page 24.
- 5) Remove the lower shock absorber bolts "A" Fig. 41-1 (both sides)
- 6) Remove the 2 chain tensioner retaining bolts "B" Fig. 41-1 and the chain tensioner pulley bolt and pulley wheel "C" Fig. 41-1 and the chain tensioner is now free to be removed from the pedalling chain.
- 7) Remove the rear fork pivot bolt and nut "D" Fig. 41-2 and pull the rear fork out of the frame.
- 8) Replacement rear forks are fitted with pivot bushes and ready to be installed.

### REFITTING

- 9) To install the rear fork reverse the above operations making sure to grease the pivot bolt "D" Fig. 41-2 with general purpose grease and securely tighten the nut. Make sure the pedalling chain and motor chain are inside the shock absorbers before refitting the lower shock absorber bolts.
- 10) The rear fork bushes are replaceable, but this should not be attempted unless a press is available.

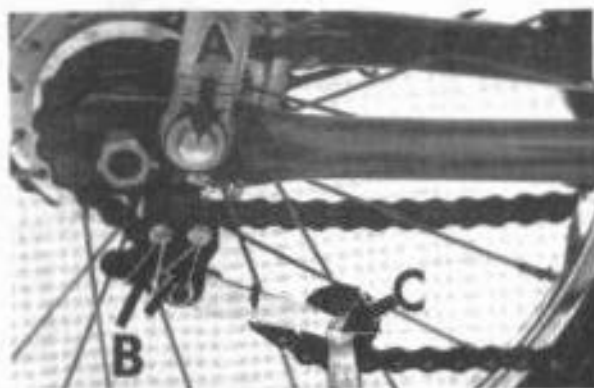


Fig. 41-1

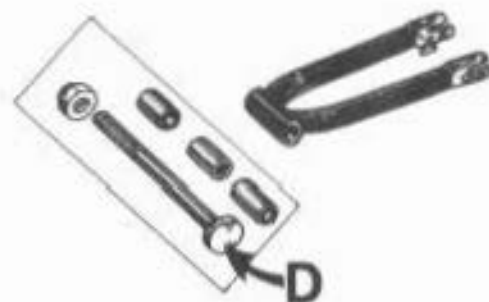


Fig. 41-2

### NO SPECIAL TOOLS REQUIRED

#### The Rear Shock Absorbers

These are a factory assembled unit and not designed for repair and should be replaced as a complete assembly or in pairs. If replacing one shock absorber only, it will be necessary to remove both shock absorbers from the machine and check the new one for length against the one to be retained. If there is 1/2" or more difference when extended replace both shock absorbers. This will ensure equal compression of the shock absorbers while riding as well as correct suspension.

#### Removal

**NOTE:** The rear shock absorbers are retained by bolts and nuts at the top and bottom of each unit. See Fig. 42-1 "A" and "B".

The lower bolt assembly "B" is threaded into the rear forks and locked with a lock nut.

The upper bolt assembly passes through a hole in the frame bracket "C" and is locked with its nut at point "A" Fig. 42-1.

- 1) Remove the nut from inside the rear fork then unscrew the bolt "B" making a note of the order of washers and spacer.
- 2) Remove the bolt "A" and nut from the upper frame bracket.
- 3) Remove the shock absorber.

#### Refitting

- 4) Reverse the above procedure - the spacer goes between the frame and shock absorber on the lower mounting bolts.
- 5) Make sure the lower bolt is securely tightened into the rear forks and the nut locked up tight. Also the upper nut and bolt are securely tightened.

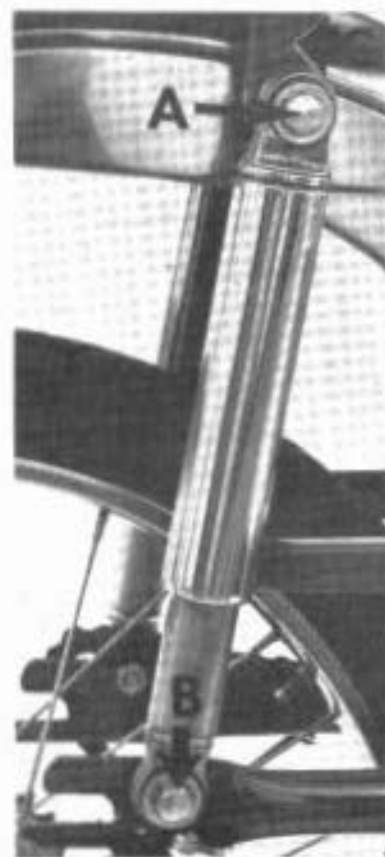


Fig. 42-1

# Cady SERVICE MANUAL

## FRONT FORK REMOVAL AND REFITTING

Models without front suspension - Machine on its stand

NO SPECIAL TOOLS REQUIRED

**REMOVAL - Note:** If removing only to service the head fittings the front wheel and mudguard can remain in the forks.

- 1) Remove the handlebar assembly complete with stem and control levers by unscrewing the bolt "A" Fig. 43-1 approx. 1/4" and tapping it down to release the expander plug located inside the fork column at base of the stem. Lift out the handlebar assembly and let it hang to one side.
- 2) Remove the front wheel, see page 27 and support the machine with a block under the muffler.
- 3) Remove the mudguard attached by 2 bolts and nuts at fork crown and 2 stay eye bolts just above fork ends.
- 4) Slacken the pinch bolt nut "B" Fig. 43-2 and pull out the brake wire.
- 5) Remove the head fittings C & D Fig. 43-2 then the lamp bracket with head lamp and horn and let it hang to one side, then the washer and the screwed race "E" Fig. 43-3. Hold the forks while unscrewing the screwed race and when fork is free it can be pulled down and out of the frame. The loose ball bearings (5/32") will fall out from the bottom frame cup "G" Fig. 43-3 and can be removed from the top cup "F" Fig. 43-3. These should be replaced (24 balls to each cup) when servicing the forks.
- 6) If fitting a new fork the fixed cone "H" Fig. 43-3 can be removed by driving it upwards from underneath, using a hammer and punch and then refitted onto the new fork. Drive it on using a brass or copper punch so as not to damage the bearing surface.
- 7) Before refitting the forks check the bearing surfaces of the parts "E", "H", "F" & "G", Fig. 43-3. These parts should all have smooth bearing surfaces and if worn be replaced. The frame cups "F" & "G" can be removed using a punch and hammer - when refitting them use a hardwood block.

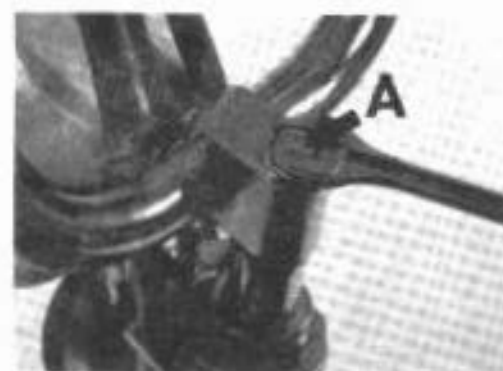


Fig. 43-1



Fig. 43-2



### REFITTING

- 8) Before refitting the forks reversing the above procedure, pack the top and bottom frame cup "F" & "G" Fig. 43-3 with general purpose grease and place the ball bearings in the grease.

Models with front suspension - Machine on stand

NO SPECIAL TOOLS REQUIRED

### REMOVAL

Note: If removing only to service the head fittings, the front wheel and mudguard can remain in the forks.

- 1) Remove the handlebar assembly complete with control levers, by removing the nuts from the handlebar "U" bolts, see "A" Fig. 44-1 and on some models remove the bolt that locks the handlebars (it is in front of and between the two "U" bolts).
- 2) Remove the front wheel, see page 27 and support the machine with a block under the muffler.
- 3) Remove the mudguard by removing the stay fixing bolts, "C" Fig. 44-2.
- 4) Disconnect the horn wires and the ground wire located at the back of the headlamp mounting plate "F" Fig. 44-3 then remove the two bolts, one on each side (left and right) of the headlamp mounting plate, see "G" Fig. 44-3. Before you can remove the head lamp completely you will have to straighten out a metal tab that secures the headlamp body to the fork top plate, located centrally between the fork legs. This is reached from the back of and from underneath the headlamp and straightened out by levering with a screwdriver. Let the headlamp hang to one side.
- 5) Remove the fork stem retaining bolt "D" Fig. 44-3 by first bending back the top of the lock washer "E" Fig. 44-3 then remove the head lock nut and its washer. See "B" Fig. 45-1 on page 45.



Fig. 44-1

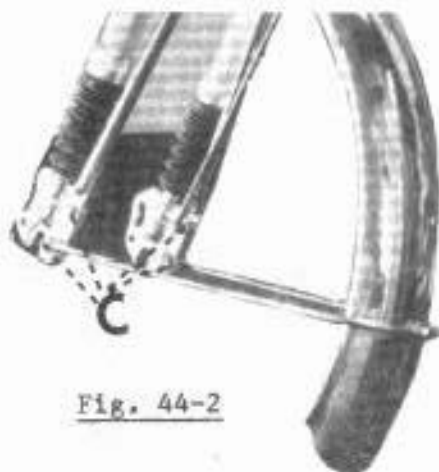


Fig. 44-2



Fig. 44-3

Continued on next page

### REMOVAL ( continued )

- 6) The fork assembly can now be removed, see Fig. 45-2, using a hardwood block and a hammer. This will spring the lower plate off the bottom of fork stem and by pulling the fork assembly forward and up, it will lift off the threaded upper part of the fork stem "H" Fig. 45-2.
- 7) The fork stem "H" Fig. 45-1 can now be removed by unscrewing the screwed race "J" Fig. 45-1. The loose ball bearings (5/32") will fall out of the bottom frame cup "L" Fig. 45-1 and can be removed from the top frame cup "K" Fig. 45-1. These should be replaced (24 balls to each cup), when servicing the forks.

### REFITTING

Note "A" Before refitting the forks check the bearing surfaces of the parts J,K,L and M, see Fig. 45-1. These parts should all have smooth bearing surfaces and if worn be replaced. The frame cups "K" and "L" Fig. 45-1 can be removed using a punch and hammer - when refitting them use a hardwood block.

Note "B" Before refitting the forks reversing the removal procedure, pack the top and bottom frame cups "K" and "L" Fig. 45-1 with general purpose grease and place the ball bearings in the grease.

Note "C" The fork assembly has to be sprung back onto the fork stem, after the stem has been installed and the screwed race adjusted so the stem rotates freely and there is no up and down play.

Note "D" Rotate the fork stem so the chamfered edge of the fixed cone at the bottom of the fork stem faces the front of the machine and the two lugs in the hole in the lower plate are in line with the corresponding grooves at the base of the fork stem.

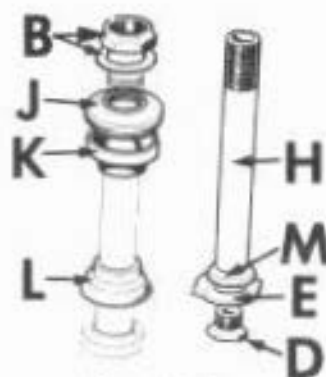


Fig. 45-1

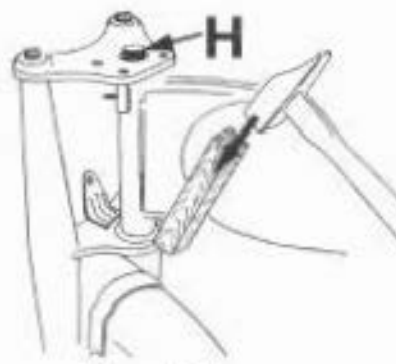


Fig. 45-2

# Cady SERVICE MANUAL

## FRONT FORK SERVICING

NO SPECIAL TOOLS REQUIRED

### MODELS WITH FRONT SUSPENSION

Note: In most instances the forks can be serviced on the machine. To do this remove the front wheel, see page 26 and the front mudguard, see page 44. If it is necessary to remove the complete fork, refer to pages 44 and 45. In any event the following instructions apply.

#### TO DISASSEMBLE

- 1) Either fork blade A or B, Fig. 46-1 can be removed by unscrewing the slotted nut-metal cover and rubber washer "G" Fig. 46-2 which allows the complete fork blade A or B, with spring "C" Fig. 46-3 and upper spring retainer "F" Fig. 46-1 to be completely removed from the fork tube. This assembly can be separated simply by unscrewing the fork blade or the upper spring retainer from the spring.
- 2) The fork blade seals "D" Fig. 46-5 can be removed by unscrewing them (usually by hand) from the fork tube after removing the fork gator "E" Fig. 46-5.
- 3) Inside each fork tube is a set of bushes and sleeves see "H" Fig. 46-4. These can be removed and replaced if worn but this is seldom necessary.

#### TO REASSEMBLE

- 4) Reverse the above procedure replacing the bushes and sleeves in order as illustrated and coating the springs with graphited grease.
- 5) The springs should always be replaced in pairs so fork ends are equalized in length. NEVER mix old and new springs.
- 6) Make sure the fork blades are fitted to the correct side. The main difference is the R.H. fork blade has a slot in the fork end to retain the brake plate, see \* Fig. 46-5.

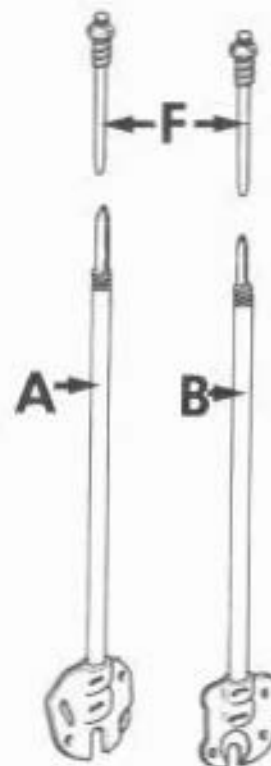


Fig. 46-1



Fig. 46-2



Fig. 46-4



Fig. 46-3

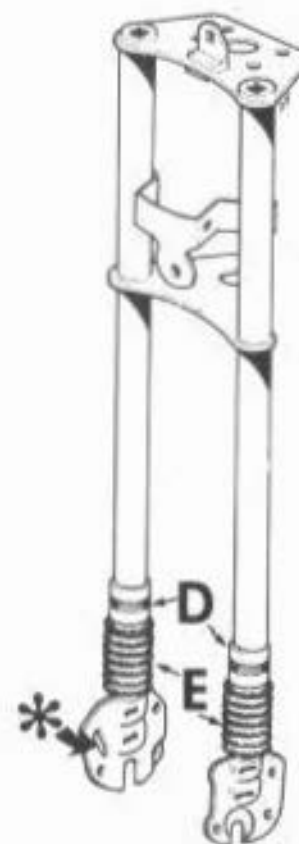


Fig. 46-5

### NO SPECIAL TOOLS REQUIRED

If a fork lock has to be installed or removed follow the instructions below.

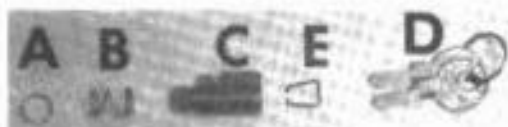
The lock assembly consists of 5 pieces and they are installed in the order as listed.

- "A" a split washer
- "B" a spring
- "C" the brass lock
- "D" two keys
- "E" a wire clip

The principle is to lock the steering so the machine cannot be driven or wheeled away.

Note: The lock housing is located on the left side at the rear of the steering head just above the fuel tank.

- 1) Place the split washer over the "tongue" of the brass lock, partially insert the lock into the housing and compress the split ring so it enters the housing, insert a key into the lock and turn it anti-clockwise and push the lock in as far as possible. This will place the split washer into its position inside the housing.
- 2) With the key still inserted and turned to the left (anti-clockwise) remove the brass lock and place the spring over the "tongue" and still with the key turned to the left insert the lock with the spring in place into the housing as far as it will go.
- 3) Release the key so it turns back to its vertical position and it is installed.
- 4) To secure it in place with the wire clip. The two short ends of the clip fit into the holes (one either side) provided in the top of the lock housing and the closed end of the clip is snapped down over the front of the housing.
- 5) To lock the forks turn the key to the left (anti-clockwise) pressing the brass lock inwards at the same time and rotate the forks to a right turn position and move slightly to left and right while still applying inward pressure to the lock. At the correct position the lock will move in a little further as the "tongue" fits into its slot in the fork stem.
- 6) The key can now be removed by turning it clockwise to a vertical position.
- 7) To unlock the fork insert the key and turn it to the left (anticlockwise). The spring will push the lock out and the key can be removed by turning it to the right (clockwise). It may be necessary to wiggle the steering slightly to remove any pressure from the "tongue" of the lock when unlocking.
- 8) To completely remove a lock from the frame reverse the installation procedure.



# Cady SERVICE MANUAL

## HANDLEBAR ADJUSTMENT

NO SPECIAL TOOLS REQUIRED

### MODELS WITHOUT FRONT SUSPENSION

The handlebars on these machines can be adjusted for height only. To adjust the height on these, see page 43, item 1), slacken the stem bolt as described and set the handlebar height to required position. Tighten the bolt securely after setting the handlebars and make sure they are correctly centred in relation to the front wheel.

### MODELS WITH FRONT SUSPENSION

Only the handlebars on those machines that are NOT fitted with a locking plate and bolt between the "U" bolts can be adjusted.

The adjustment available on handlebars without a locking bolt is for reach and this is achieved by twisting the handlebars in the "U" bolts after slackening the "U" bolt nuts, see Fig. 44-1, page 44. After changing the handlebar position it may be necessary to also change the levers for a more comfortable grip position. The levers can be rotated to any desired position by slackening the slotted screw that passes through the choke lever on the left hand side and the decompressor lever on the right hand side. Make sure you tighten the "U" bolt nuts and the lever slotted screws securely after making adjustments.

Illustrated below are the types of handlebars.



ADJUSTABLE FOR  
HEIGHT ONLY



NON-ADJUSTABLE



ADJUSTABLE  
FOR REACH

# Cady SERVICE MANUAL

## BOTTOM BRACKET ASSEMBLY

### NO SPECIAL TOOLS REQUIRED

NOTE A) To service the bottom bracket it will be necessary to complete the operations on page 22 and 24 first.

NOTE B) As you will see by the illustration on this page, the bottom bracket bushes are removable and replaceable. It is very seldom necessary to replace these bushes and generally the only service consists of cleaning and greasing.

REMOVAL To remove the bushes drive them out using a hammer and punch.

REFITTING To refit the bushes first "start" the bushes in the bracket housing by partially tapping them in using a hardwood block. Complete installation can be done by passing a large bolt through the bushes, placing a washer against the outside of each bush first, then fitting a nut to the bolt and tighten up on the nut while gripping the bolt head. Alternatively, the bushes can be pressed in using a bench press or a bench vise.

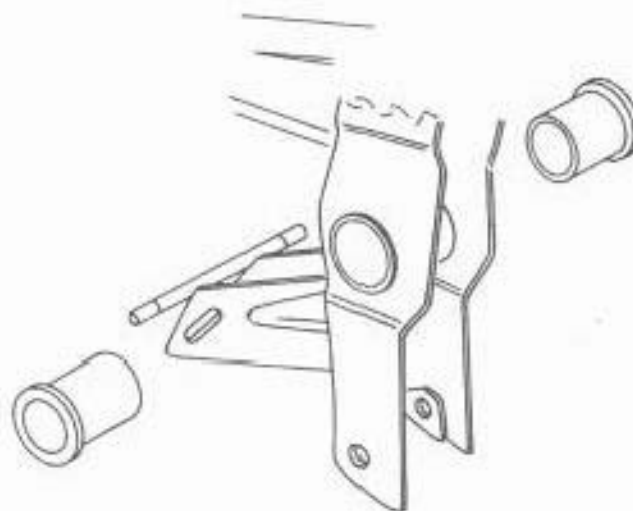


Fig. 49-1

### SPECIAL TOOLS REQUIRED

FREEWHEEL REMOVER # 17650

The freewheel should be lubricated from time to time to keep it running "free" and to prevent corrosion.

The best way to do this is to rotate the cranks backwards and at the same time apply a few drops of SAE 30 oil to the edge of the freewheel at the point "A" Fig. 50-1, where the moving outer rim of the freewheel revolves over the fixed body of the freewheel. If the freewheel is worn and not engaging when pedalling it will have to be replaced.

### REMOVAL

- 1) Remove the rear wheel as described on page 28 and 28A.
- 2) Remove the axle nuts and washer and cone lock nut from right hand side of the axle.
- 3) Place the freewheel removal tool in the bench vise.
- 4) Place the wheel over the freewheel removal tool so the axle fits into the tool and the lugs on the tool engage in the grooves in the freewheel body. See "B" Fig. 50-1.
- 5) Hold the wheel firmly pressing downwards to keep the tool engaged in the freewheel and turn the wheel anti-clockwise and unscrew the freewheel from the wheel hub.



### REFITTING

- 6) Lightly lubricate the threads on the hub and screw the new freewheel on as far as possible by hand.
- 7) The new freewheel will automatically tighten itself on the hub after the wheel is installed in the machine and has been pedalled.
- 8) Refit the rear wheel as described on page 28 and 28A.

Fig. 50-1

# Cady SERVICE MANUAL

## ENGINE AND FRAME SERIAL NUMBERS

NOTE: Every Cady has an Engine and a Frame serial number.

These are located -

"A" The Engine serial number is on the left hand side of the cylinder head, see Fig. 51-1.

"B" The Frame serial number is stamped on the left hand side of the frame, see Fig. 51-2.

If a cylinder head or complete engine has to be replaced, the engine serial number plate must be transferred to the new head or engine.



Fig. 51-1

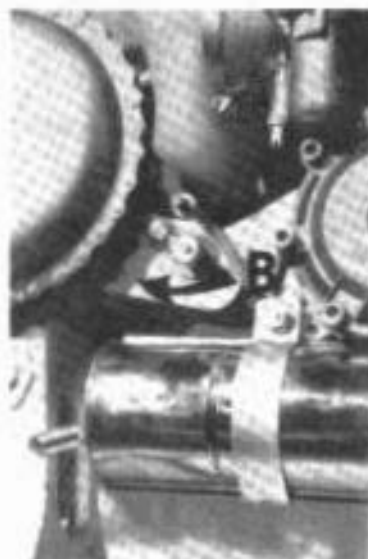


Fig. 51-2

# Cady SERVICE MANUAL

## LUBRICATION

Regular Lubrication is necessary wherever there are moving parts that come in contact with each other. The following is a guide only and should be adjusted depending on conditions and usage.

The major lubrication points are as follows -

	S A E 30 oil	Frequency Every month or Every 600 miles (1000 KM)
1) Brake lever pivot bolts	- " -	- " -
2) All cables	- " -	- " -
3) Decompressor lever	- " -	- " -
4) Choke lever	- " -	- " -
5) Throttle cable	- " -	- " -
6) Pedals	- " -	- " -
7) Brake arm and cable nipples F and R.	- " -	- " -
8) Brake pivot bolts (cantilever brake)	- " -	- " -
9) Kickstand pivot bolts	- " -	- " -
10) Freewheel	- " -	- " -

Under extreme operating conditions lubricate more frequently as required.

			<u>MILES</u>	<u>KM</u>
11) Pulley shaft	Multi Purpose Grease	Every	1250	2000
12) Telescopic forks	- " -	"	600	1000
13) Hub bearings	- " -	"	3700	6000
14) Clutch bearings	- " -	"	1250	2000
15) Chains	- " - or Special Chain lube	- monthly or	- " -	- " -
16) Steering head bearings	- " -	Every	3700	6000
17) Bottom bracket axle	- " -	"	3700	6000

Under extreme operating conditions the parts requiring grease should be cleaned and greased more regularly.

# Cady SERVICE MANUAL

## TECHNICAL DATA

ENGINE: 2 Cycle M1 1 H.P. at 3000 R.P.M. M3 1.5 H.P. at 4500 R.P.M.

CAPACITY: 49.9 C.C. Bore 39 mm - Stroke 41.8 mm

COMPRESSION: 8 to 1

LUBRICATION: By Gas (Petrol) and oil mixture

IGNITION: Flywheel magneto - Plug Gap .015" Points Gap .012" to .014"

CARBURATION: Gravity feed - fixed jet - manual choke

CLUTCH: Dimoby double automatic

BRAKES: Drum 70 mm dia - Cantilever

LIGHTING: Direct (D.C.) Flywheel Magneto generated

TIRES: 16 x 2 Moped Cushion type

TUBES: 16 x 2 with Schrader valve.  
Tube pressures - Front 22 lbs - Rear 26 lbs. (average rider)

FUEL TANK: Capacity .614 Gallons

HORN: Electric

TIMING: 1.2 mm before T.D.C.

FUEL CONSUMPTION: 100 to 120 M.P.G.

PLUGS: MARCHAL GT 35

PLUGS: BOSCH 436

PLUGS: A C 430Z

PLUGS: MOTOCRAFT AE 32

PLUGS: CHAMPION L88A

# Cady SERVICE MANUAL

## MOTOR FAULT FINDING

In this section we will deal with finding faults when the motor will not start or run correctly or constantly.

Motor faults can be broken down into two basic sections and these are FUEL PROBLEMS and IGNITION PROBLEMS.

Both of these problems can be dealt with systematically and for the most part will be found externally. Before pulling the motor apart to find a problem, follow the instructions in this section and by a process of elimination you will most likely find the fault without too much trouble.

From the outset, it is necessary to determine whether the problem is FUEL or IGNITION and the best way to check this is to proceed as follows -

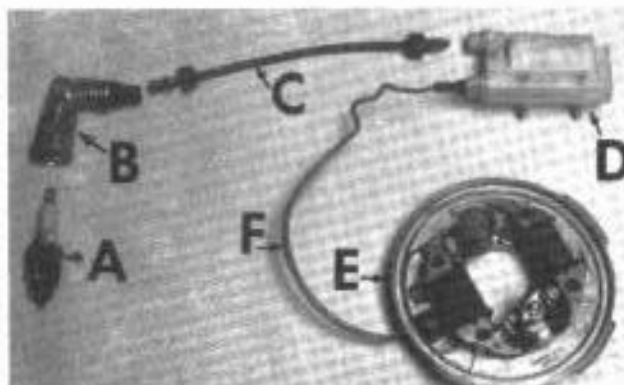
### MOTOR DOES NOT START or HARD TO START

- 1) Remove the plug lead and cap from the spark plug, remove the spark plug and inspect it. If the plug is wet the problem is most likely "IGNITION". If the plug is dry the problem is most likely "FUEL".

### CHECKING IGNITION PROBLEMS

The external parts to check in the following order are -

- A) The Spark Plug
- B) The Spark Plug Cap
- C) The H.T. Plug Lead
- D) The H.T. Coil
- E) The Magneto
- F) The H.T. Feed Wire



### CHECKING FOR SPARK

- 1) Remove the spark plug from the motor, attach it to the plug cap and lay it on the cylinder head fins (grounded)
- 2) Rotate the motor by turning the pedals and check for a spark at the plug.
- 3) If no spark, replace the spark plug and check again.
- 4) If still no spark replace the plug cap (which contains an interference supressor) and check for spark again.

Continued on next page.

# Cady SERVICE MANUAL

## MOTOR FAULT FINDING

- 1) If still no spark replace the H.T. plug lead and check again. The plug lead has a long and a short connecting end and the long end fits into the H.T. Coil and the short end into the plug cap.
- 2) If still no spark remove the H.T. coil. Attach a new coil to the H.T. plug lead and attach the H.T. feed wire from the magneto to the coil. Place the H.T. Coil on the cylinder head fins so one of the mounting screws is wedged in the fins (grounded) and check again for spark.
- 3) If still no spark, double check the procedure items 1 through 6, before inspecting the magneto.
- 4) The things to look for when double checking are -
  - 8-1 - The plug being grounded properly.
  - 8-2 - The H.T. plug lead properly connected to the plug cap and H.T. coil.
  - 8-3 - The H.T. feed wire properly connected - also check the cover of the wire from the H.T. Coil to the magneto plate for damage or fractures and possible "shorts".
- 5) If still no spark it will be necessary to inspect the magneto as follows -
  - 9-1 - Remove the double clutch, see page 9.
  - 9-2 - Remove the flywheel, see page 11.
  - 9-3 - With the magneto exposed check for the following possible problems.
  - 9-4 - The points are opening and closing by rotating the engine, check points gap, see page 12.
  - 9-5 - Check for sticking contact breaker points or moving breaker arm stiff - remove and clean and lubricate shaft with a smear of graphite oil.
  - 9-6 - Check all the wires for chafing and possible shorting to ground and rubbing on the flywheel.
  - 9-7 - Check the points for burning and clean or replace as necessary.
  - 9-8 - Remove and replace the condenser.
  - 9-9 - Check for oil seepage from the crankshaft (denotes oil seal damaged). Cleaning the oil from points and magneto will effect a temporary repair but not eliminate the problem.
  - 9-10- Check the flywheel for damage - possible loose magnets.
  - 9-11- Check for demagnetized flywheel (VERY RARE) by replacing with a new one.
  - 9-12- Check H.T. Coil by replacing with new one (NOT COMMON)

### RESISTANCE TEST FIGURES

COILS	H.T. FEED COIL	# 19949 or # 21994	0.5 OHMS
	LIGHTING COIL	# 19948	1.0 OHMS
	" "	# 21995	1.8 OHMS
SUPPRESSOR (in plug cap)		# 20451	4000. OHMS
CONDENSER		# 19067	0.15 M.F.

# Cady SERVICE MANUAL

## MOTOR FAULT FINDING

### CHECKING FUEL PROBLEMS

Always remember that the fuel which reaches the cylinder is a combination of Gas (Petrol) and Oil and Air and if this mixture is upset by any means the motor will not perform correctly. Any fuel problems will involve - The Fuel Tank - The Fuel Tap - The Carburettor and ultimately the motor.

A number of possible problems are described on pages 37-38 and 39 and it is worth reviewing this section before proceeding with the following -

NOTE: The carburettor is of the gravity feed type and the mixture is constant as there is no provision for a LEAN or RICH mixture and the fuel is metered by a replaceable jet.

The gas (petrol) and oil mixture is a ratio of 25 parts gas (petrol) to 1 part oil, when using regular TWO CYCLE or 2 STROKE oils of top grade. A mixture of 40 parts gas (petrol) to 1 part oil can be used if ESSO ULTRA MARINE OIL is available.

Any "Regular" gas (petrol) is satisfactory or "Premium" fuels may be used. Non leaded gas (petrol) is also acceptable.

25 to 1 RATIO (4%) = 6.4 ozs. oil to 1 IMPERIAL GALLON GAS (PETROL)

40 to 1 RATIO (2.5%) = 4 ozs. oil to 1 " " " "

- 10) Make sure there is fuel in the tank, see pages 37-38-39.
- 11) Make sure there is fuel reaching the carburettor, see pages 37-38-39
- 12) If the motor has had considerable use and is hard to start or idles poorly, check for carbon build up in the exhaust port and exhaust pipe and check the muffler is not blocked. See page 18.
- 13) If there is excessive carbon check the fuel mixture is correct. Drain the tank and pour in about a pint of fuel you know is the proper mixture and run the motor.
- 14) Check that the carburettor is fitted tight onto the intake pipe and the intake pipe is tight on the cylinder at the manifold.
- 15) Check the manifold gasket - replace if necessary. If the intake pipe is loose or the gasket damaged the motor will draw in extra air and upset the mixture.
- 16) Check the fuel filters and jet for clogging, see pages 37-38-39.
- 17) Check that the cylinder is tight and cylinder base gasket not damaged - the motor will draw in excess air at this point also, ----- as well as lose its crankcase compression.
- 18) Check that the cylinder head is tight and the head gasket in good condition. Generally if there is a problem in this area you can hear the pressure escaping.
- 19) Check the joining of the two crankcase halves for any leaks of fuel and if necessary tighten the crankcase bolts (7 Allen type hex bolts). If the crankcase gasket is damaged it will be necessary to strip the engine to replace it. It is very rare that this occurs.

### OTHER POSSIBLE MOTOR PROBLEMS

Having checked the IGNITION and FUEL and if the motor still does not run properly check the following list for the most likely cause of the problem.

#### Poor Motor Performance

- 20) Check fuel mixture.
- 21) Check spark plug.
- 22) Check colour of spark, it should be blue, if it is orange check the points for - burning - gap or dirt, if still orange replace the condenser.
- 23) Check the timing - see page 13 and 14.
- 24) Double check for carbon build up, see page 18.
- 25) Check drive belt for tension, see page 8.
- 26) Check chain tension, see page 21.
- 27) Check tire pressures (could be too low).
- 28) Check the brakes are not over adjusted.

If a motor runs in reverse the timing needs adjusting, see pages 13 and 14.

This is usually caused by the magneto cam improperly installed during after service.

- 29) Check that the crankshaft is not bent - this can be visually checked by turning the motor over and observing the double clutch and flywheel. If bent the crankcase assembly will have to be replaced. Remember the crankshaft controls the magneto cam and if bent it is not possible to obtain correct ignition.
- 30) Check for worn crankcase bearings (side play on the crankshaft).
- 31) Check for cylinder and piston ring wear.

#### Noisy Motor

- 32) Check for cylinder and piston and piston ring wear.
- 33) Check connecting rod bearings for wear, both the big end and small end.
- 34) Check for loose muffler.
- 35) Check for loose engine mounting bolts.
- 36) Check for main bearing wear.
- 37) Check for clutch bearing wear and possible damage from impact and also for bent crankshaft.
- 38) Check for broken mounting bracket (UNCOMMON).