



# AJS/Matchless Lightweight Gearbox Removal

How to remove the gearbox from a 250cc AJS Model 14 / Matchless G2 or a 350cc AJS Model 8 / Matchless G5 motorcycle.

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## INTRODUCTION

This guide will show you how to remove the gearbox from a 250cc AJS Model 14 / Matchless G2 or a 350cc AJS Model 8 / Matchless G5 motorcycle (all years).

You will need a set of Whitworth spanners or sockets and a decent flat-bladed screwdriver.

Note that the bike featured in this guide has a few modifications from standard, so your bike may look a little different in places. The basic technique remains the same, regardless of which model of Lightweight you have.



### TOOLS:

- [Set of Whitworth spanners](#) (1)
- [Set of Whitworth sockets](#) (1)
- [Flathead Screwdriver](#) (1)
- [AMC clutch extractor tool](#) (1)

*Optional*

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## Step 1 — Remove the primary drive cover



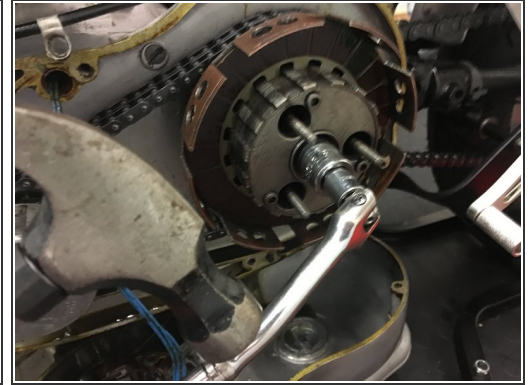
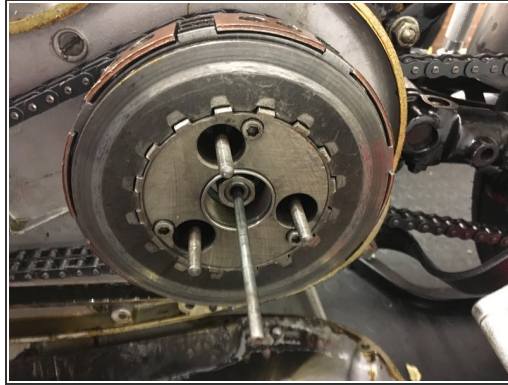
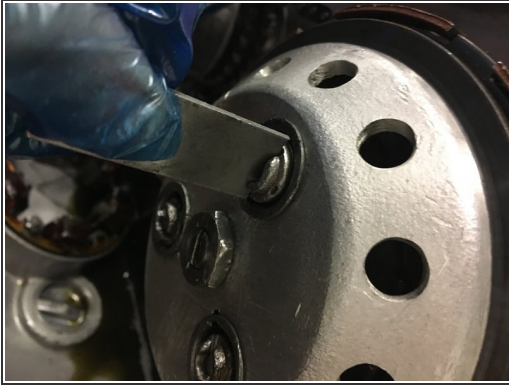
- Remove the six screws holding the primary drive cover on.

⚠ You can either drain the oil first, or just put a dish underneath to catch the oil spillage.

- Lift the cover away. Note that the cables to the alternator will still be attached, so make sure the cover is supported and not pulling on the cables.

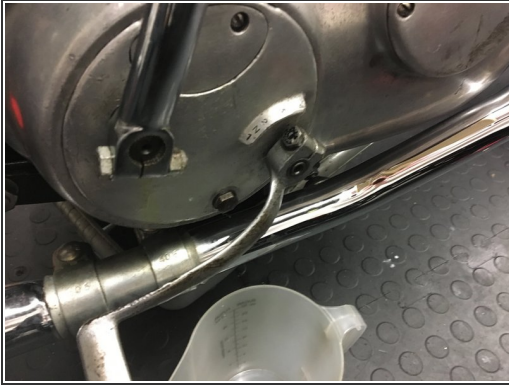


## Step 2 — Undo the clutch



- Unscrew the clutch springs with a piece of flat metal.
  - Lift off the clutch cover and withdraw the clutch operating rod and clutch plates.
  - Engage a gear and undo the clutch retaining nut. This is likely to be tight; it will undo more easily if you "shock" it loose with light hammer taps onto a socket driver.
- i** If you are lucky, the clutch will be loose on the shaft. If it is stuck fast, you may need to use the special puller.

### Step 3 — Remove ancillaries



- Remove the kickstart.
- Remove the gear position indicator (if fitted) and the gear lever.
- Remove the exhaust.
- ❗ You may need to remove other ancillaries such as footrests and chain cover (not shown in these pictures)
  - Remove the link from the rear chain and move it clear of the gearbox sprocket.
  - Drain the oil from the gearbox.

## Step 4 — Right side cover



- Undo the four screws holding the right side cover on and remove it.
- ⚠ Some trapped oil may run out if there are any leaks on this side of the engine.
- Undo the two screws holding the inspection cover on and remove it.

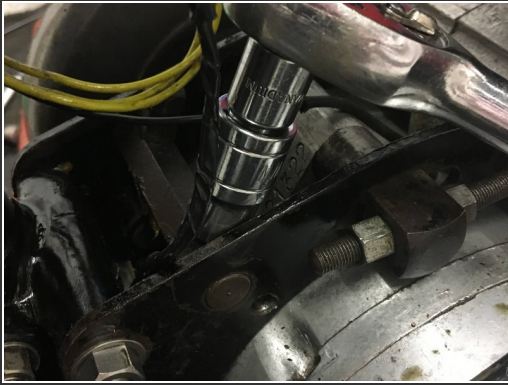
## Step 5 — Release the clutch cable



- Slacken off the clutch cable completely at the handlebar end and release it from the clutch lever.
- Push the cable through to release it at the gearbox end.
- Look in through the gearbox inspection hole and release the cable from the operating fork.
- Withdraw the clutch cable from the gearbox and put it to one side.



## Step 6 — Remove gearbox tensioner



- Remove the two barrel bolts from the gearbox retaining bands.
- Remove the two nuts holding the tensioner in place.
- Withdraw the tensioner and the two spacers either side of the gearbox mounting tab.

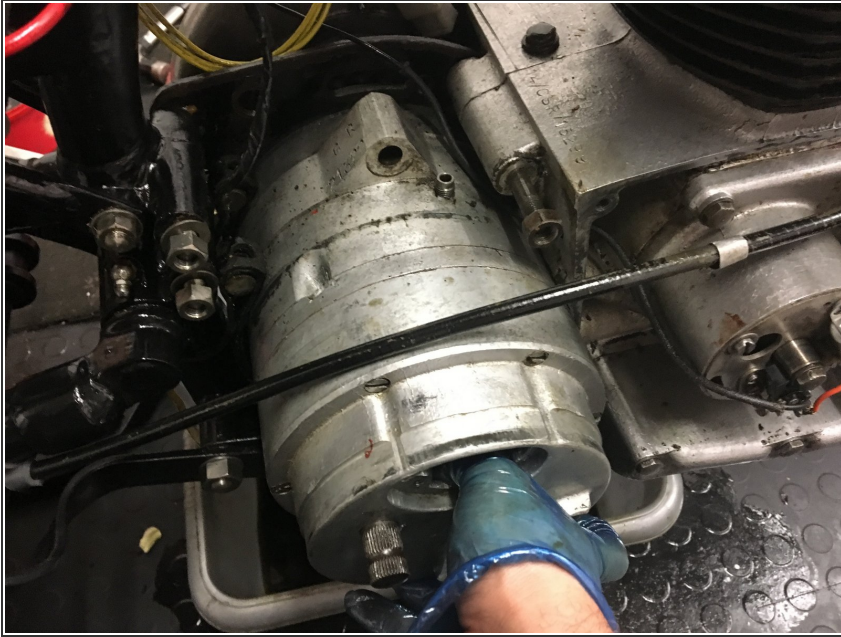
## Step 7 — Remove gearbox mounting plate



- Remove the two nuts at the rear of the mounting plate.
- Lift the mounting plate away.



## Step 8 — Remove the gearbox



- You can now lift the gearbox away from the bike.
- ⚠ Don't forget to hold on to the clutch basket on the other side of the bike. It will fall away as you remove the gearbox.

See my other guide on how to overhaul the gearbox...