

KNOW
YOUR
GEARBOX

WATCH STAN TRUSCOTT REASSEMBLE THE HEAVYWEIGHT

A.M.C. BOX

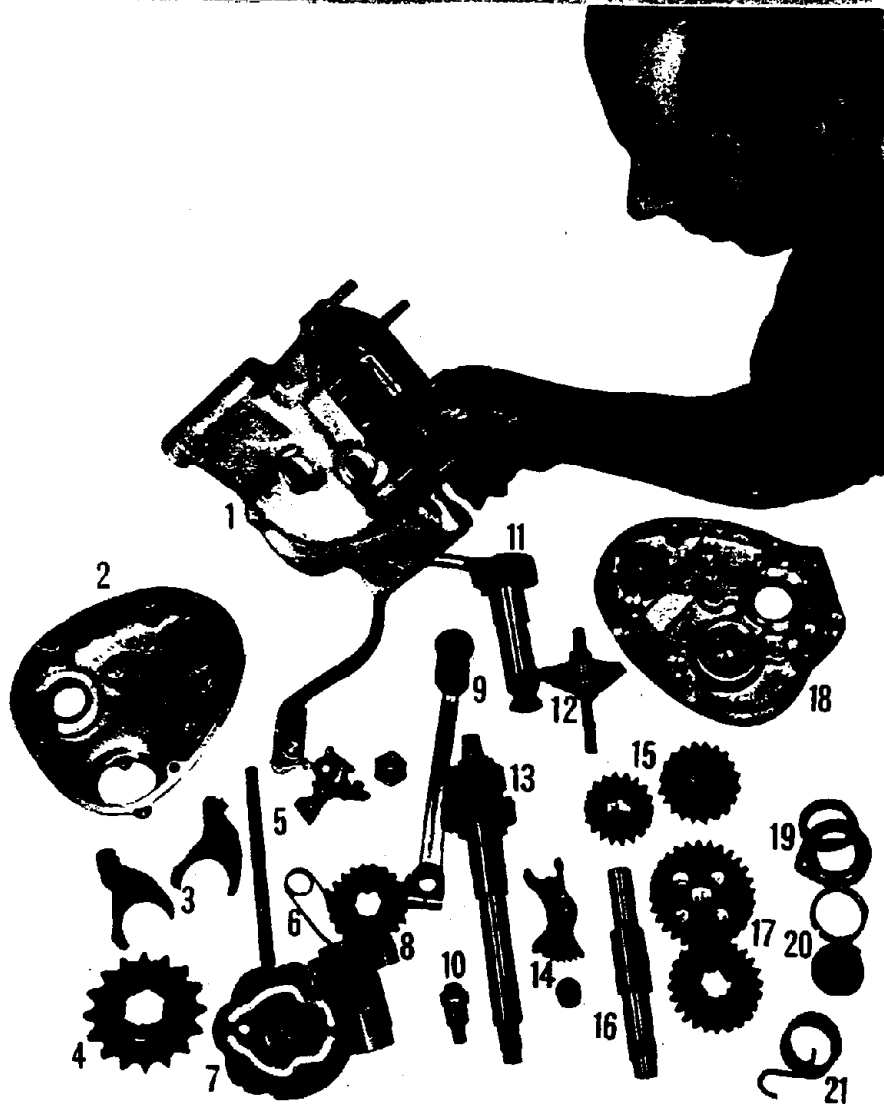
THE gearbox shown here is fitted to all the present-day heavyweight Matchless and A.J.S. machines. These include the 350 and 500 c.c. singles and all of the big twin-cylinder models. To dismantle or reassemble the A.M.C. gearbox is fairly straightforward. Although special service tools are available to carry out the work, the box can be assembled without having to use them.

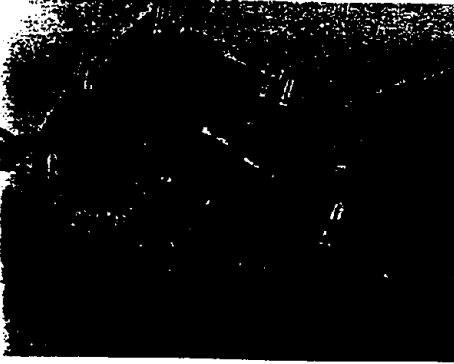
To remove the box from the frame of the motorcycle it is necessary to completely dismantle the primary drive and clutch. Once this work is complete, the top and bottom retaining and adjusting bolts are removed and the gearbox lifts out.

To dismantle the gearbox, simply reverse the picture sequence shown here. Once dismantled, check all bearings, gear pinions and dogs for wear. If any components show signs of wear and you are in doubt, don't hesitate to renew them. It is better to do the work while the unit is stripped than replace worn parts and have to dismantle the unit again at a later date.


KEY TO PARTS

1, Gearbox Shell. 2, Outer Cover. 3, Selector Forks. 4, Drive Sprocket. 5, Selector Fork Rod. 6, Gearchange Return Spring. 7, Camplate. 8, Sleeve Gear. 9, Gearchange Pedal. 10, Camplate Plunger. 11, Kickstart Ratchet. 12, Gearchange Ratchet Plate. 13, Mainshaft. 14, Camplate Quadrant and Roller. 15, Gear Pinions. 16, Layshaft. 17, Gear Pinions. 18, Inner Cover. 19, Driver Sprocket Spacer, Nut and Locking Ring. 20, Clutch Operating Cover. 21, Kickstart Return Spring.







1 Locate camplate and quadrant. Note the quadrant at right-angle to the camplate location hole on right-hand of plate



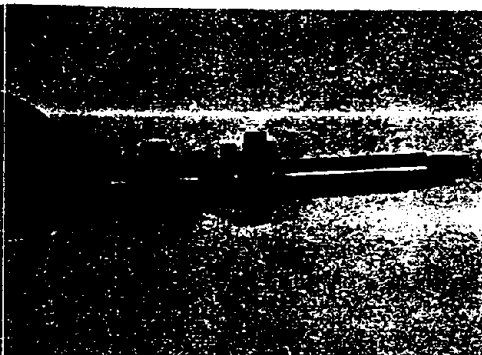
2 Rotate camplate clockwise to the third gear position and insert plunger shown. Screw down firmly to set plate position



3 New oil seals must be fitted over camplate and plunger spindles, then they must be secured with washers and bolts




4 Locate sleeve gear shown through the box case. Fit on spacer, sprocket and left-hand thread nut with locking ring




5 Mainshaft assembled. Fit sliding gear followed by bronze bush. Next, locate mainshaft free gear over bush as shown




6 After fitting small pinion, place selector fork in sliding gear. Set assembly in shell and locate fork in camplate




7 Assemble layshaft—sliding gear first, then bush, free gear and finally pinion with shoulder mating with case bearing



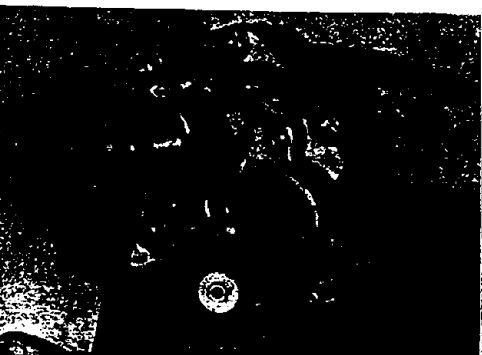
8 Insert layshaft cluster with selector fork mating on camplate. Locate spindle shown and place large pinion on layshaft




9 Insert kickstart shaft (push fit) and knuckle roller in quadrant. Ensure the third gear selected. Fit gasket/cover



10 Fit mainshaft nut, ball bearing, then clutch body—line slot with cable hole in outer cover. Fit kickstart spring



11 Engage gearchange ratchet in knuckle roller. Fit clutch body arm and roller and secure. Fit outer gasket on cover



12 Fit pawl spring shown so that cranked leg is nearest bottom of gearbox. Fit outer cover and levers to complete job