



American Prime Mfg. Inc.[®] Comp Master™ Transmission Specifications

Clutch Release Cover	Socket Head Screws	120-144 in-lbs
Clutch Cable Fitting	Hex	36-60 in-lbs
Filler Plug / Dipstick	Socket Head	25-75 in-lbs
Drain Plug	Socket Head	14-21 ft-lbs
Starter Mounting Screws	Socket Head Screws	13-20 ft-lbs
Transmission M/S Sprocket Nut	Hex Head (LH threads)	60 ft-lbs, then 35- 45°
Transmission M/S		
Sprocket Nut Lock Plate	Socket Head Screws	90-110 in-lbs
Inner Primary or Motorplate	Hex Head / SH Screws	18-21 ft-lbs
Clutch Hub Mainshaft Nut	Hex Head (LH threads)	70-80 ft-lbs
Shifter Lever	Socket Head Screw	18-22 ft-lbs
Shifter Cam Support Blocks	Socket Head Screws	84-108 in-lbs
Transmission Top Cover	Socket Head Screws	84-108 in-lbs
Neutral Switch	Hex	120-180 in-lbs
Transmission Side Door (5/16 inch screws)	Socket Head Screws	13-16 ft-lbs
Transmission Side Door (1/4 inch screws)	Socket Head Screws	84-108 in-lbs
Mainshaft / Countershaft Nuts	Hex Head	45-55 ft-lbs
Centering Screw Locknut	Hex Head	33-38 ft-lbs
Transmission to Mounting Plate	Hex Head Nuts	33-38 ft-lbs
Speedometer Speed Sensor	Socket Head Screw	84-108 in-lbs
Speedometer Speed Sensor Air Gap	To point of tooth	.050-.100"
Recommended Transmission Lube	85/140 Bel-Ray	20-24 oz.

CLOSE RATIO 2.94:1 FIRST GEAR; SECOND GEAR 2.21; THIRD GEAR 1.60, FOURTH GEAR 1.23; FIFTH GEAR 1.00, 0.860:1 OVERDRIVE SIXTH GEAR, FORGED AND BACK CUT GEARS FOR POSITIVE SHIFTING

NOTE: To check the fluid level with the dipstick, the motorcycle should be sitting level to the ground and the dipstick resting on top of the threads. The fluid should be up to the FULL mark on the dipstick.

NOTE: To adjust the shifter drum, remove the top cover and put the transmission into 3rd gear. The shifter pawl arm should be centered on 2 pins on the left side of shifter drum. If you need to adjust the shifter pawl arm, loosen the lock nut on the centering screw. Turn the centering screw clockwise or counterclockwise to center the shifter pawl arm on the 2 pins. Torque the centering screw lock nut 33-38 ft. lbs. and re-install the top cover with a new gasket and torque the top cover screws. (see chart above)

NOTE: To check the air gap on speedometer sensor to gear, remove the speedometer sensor and measure the depth of the hole (trap door to top of one gear tooth) using a dial caliper or depth micrometer and record this measurement. Now measure the speedometer sensor from the surface that slides into trap door (where the sensor sets on trap door to end of speedometer sensor) and record this measurement. Subtract door to gear measurement from speedometer sensor measurement and this is you air gap.

NOTE: It is strongly recommended to re-torque all fasteners on a monthly basis.