

GEARBOX



C-22G1049

2nd gear - 28 teeth.

C-22G1050

3rd gear - 24 teeth.

22A1021

3 Synchro 1st gear outer track.

The aforementioned gears also fit the Sprite and Midget, the only different gear is the 1st motion shaft which is much longer than the Mini. Also requires 22G1118/9 1st gear outer track.

C-AJJ3319

Sprite/Midget straight cut gear kit.

C-AEG3138

Sprite/Midget 1st motion shaft.

4 SYNCHRO TYPE



Six variations of all synchro gear sets are available, 3 helical and 3 straight cut. The early standard helical ratio set was fitted to all small bore Mini's, recognizable by their square top teeth. The first motion shaft uses 17 teeth, and the laygear is usually numbered 22G927.

The close ratio helical set fitted to the 'S' and 1275GT utilized the same first, second and third gears, but a different first motion shaft and laygear. The first motion shaft had 18 teeth, and the laygear was generally numbered 22G1040, although in later gearboxes some were marked 'ME'. Using these two components you can convert the early standard ratio gearbox to close ratio (sold as a set).

The third helical ratio set is fitted to all the A+ engined cars, irrespective of engine size. This can be identified by the sharp edge on the teeth tops and - barring a couple of initial gears - they also have a groove around the center of the tooth profile. The first motion shaft also has a .983" diameter hole for the larger mainshaft pilot bearing. Some early A+ units were fitted with the close ratio kit, the first motion shaft having the larger mainshaft pilot bearing.

GEAR RATIO COMPARISON

	EARLY 850/998 1098	'S' & 1275GT	A+
1st gear	3.52	3.32	3.64
2nd gear	2.21	2.09	2.18
3rd gear	1.43	1.35	1.42
4th gear	1.0	1.0	1.0

C-AJJ4032

4 synchro close ratio conversion set, laygear and 1st motion shaft for helical gears.

By using the very latest gear cutting techniques, equipment and top line manufacture it has been possible for Mini Spares to produce a close ratio, straight cut gear set with greatly reduced noise output usually associated with running a straight cut gearbox. This is ideal for powerful road engines where a close ratio, low power absorbing gear set is required to enhance engine performance. The ratio's have been reproduced as near as possible to the older 3 synchro straight cut close ratio set, as these have proven to be near perfect for road use. The racing 4 synchro straight cut gears being too close. It is also cheaper as the set utilizes the standard first and reverse gears, these being straight cut as standard. This is called the 'Clubman' set. There are 2 sets available, pre A-plus and A-plus, both use the single step layshaft, but only uses one bearing front and rear. The front bearing is supplied as it is peculiar to the set.

The 'special tuning' gear ratio set is available in 3 versions remote type, pre A-plus rod type, and A-plus rod type. There is a different reverse gear for the rod and remote types, all 3 use the single step layshaft.

The ultra close ratio set is available in 4 synchro. It will only fit the A-plus gearbox with large mainshaft pilot bearing and dual step layshaft without any gear case modifications. This is called the Metro Challenge set. The very low first gear is really designed for rolling starts.

GEAR RATIO COMPARISON

	Clubman Set	'ST' Set	Metro Challenge Set
1st gear	2.583	2.544	2.313
2nd gear	1.711	1.731	1.567
3rd gear	1.250	1.258	1.187
4th gear	1.0	1.0	1.0

C-STN38

Clubman gear set, all pre A-Plus.

C-STN39

Clubman gear set, all A-Plus.

C-STR291

Clubman 2nd gear, 26 teeth.

C-STR292

Clubman 3rd gear, 23 teeth.

C-STR293

Clubman 1st motion shaft, 20 teeth.

C-STR294

Clubman laygear, 15-19-23-25 teeth.

C-AJJ4014

Remote type ST ratio gear set.

C-STN76

Rod change ST ratio gear set, pre A-Plus.

C-STN77

Rod change ST ratio gear set, A-Plus

GEAR RATIO COMPARISON

Straight	850/997	'S' & 998	
	& 998	Cooper	Cut
1st gear	3.627	3.2	2.573
2nd gear	2.172	1.916	1.722
3rd gear	1.412	1.357	1.255
4th gear	1.0	1.0	1.0

C-AJJ3371

3 synchro straight cut gear set, includes 2nd, 3rd, 1st motion shaft and laygear. Requires 1st/2nd hub assembly 22A1021 and standard reverse gear. Can only be fitted to 'B' type boxes.

C-22G1047

Laygear cluster - number of teeth 13, 17, 20, 23.

C-22G1048

1st motion shaft - 22 teeth.