



### 3 Synchro Straight Cut Gears

#### GEAR RATIO COMPARISON (3 SYNCHRO GEARS)

	850/997/998	'S' & 998 COOPER	STRAIGHT 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



3 Synchro straight cut gear sets include 2nd, 3rd gear, 1st motion shaft and laygear only, but must be used with original B type 1st/2nd outer track 22A1021 and 22G202 standard reverse gear. Gears are also kept in stock for the Sprite/Midget box. First gear outer track 22G1118/9 is needed for this set up.

	Mini	Sprite
Kit part number	C-AJJ3371	C-AJJ3319
Laygear 12, 17, 20, 23 teeth	C-22G1047	C-22G1047
2nd Gear 28 teeth	C-22G1049	C-22G1049SPRITE
3rd Gear 24 teeth	C-22G1050	C-22G1050SPRITE
1st Motion 22 teeth	C-22G1048	C-AEG3138
1st Gear Outer Track (not supplied in kit)	22A1021	22G1119

#### NUMBER OF TEETH

Ratio	Primary Gear	Idler Gear	Input Gear
1-1	24	30	24
1-1	23	30	23
1.0416-1	24	30	25
1.0434-1	23	30	24
1.045-1	22	30	23
1.0869-1	23	30	25
1.09-1	22	30	24
0.958-1	24	30	23
1.136-1	22	30	25

22 tooth primary is for hill climbs, sprints only.  
23 tooth primary originally turbo race (Metro)

#### Evolution Drop Gears

There are a unique eight ratios of straight cut drop gears to replace the standard helical set up, all based around a common idler gear. Produced to accurate specifications and a high quality finish, back lash is reduced to a minimum. This vastly reduces the 'clatter' experienced when using straight cut drop gears from other manufacturers, also making the gears inherently stronger and more tolerable when used in road cars. The

interchangeability greatly reduces the cost for racers of having alternative ratios for different circuits - allowing the optimum gear ratios to be used for each circuit without the need for crown wheel and pinion changes. NOTE: When fitting to 3 synchro boxes, spacer number C-STR239 is required for the input gear.

To alleviate undue pressure on standard idler gear bearings and thrust washers a twin taper roller or single roller bearing kit is available using a special converted idler gear. The taper type requires specialist installation.

- Primary Gears.**
  - 24 tooth 1300cc type ..... C-STR124
  - 23 tooth 1300cc type ..... C-STR123
  - 22 tooth 1300cc type ..... C-STR122
- Idler Gears.**
  - 30 tooth - pre A-plus 1/2" shaft ..... C-STR30
  - 30 tooth - A-plus 7/8" shaft ..... C-STR30A
- 30 tooth idler gear & taper roller bearing conversion.**
  - Pre A-plus ..... C-STR30T
  - A-plus ..... C-STR30TA
- 30 tooth idler with one large central roller bearing conversion.**
  - Pre A-plus ..... C-STR31
  - A-plus ..... C-STR31A
- Input Gears.**
  - 23 tooth extra strong. .... C-STR230
  - 24 tooth input gear. .... C-STR240
  - 25 tooth input gear. .... C-STR250



### 4 Synchromesh Straight Cut Gears

Mini Spares are proud to boast that their unique gears are definitely the best on the market in terms of value, quality, design and appearance using original Rover tooling for the speed gears.

#### GEAR RATIO COMPARISON (4 SYNCHRO GEARS)

	HELICAL			STRAIGHT CUT	
	EARLY 850/998/1100	'S' & 1275GT	A-PLUS	CLUBMAN SET	'ST' SET
1st gear	3.52	3.32	3.64	2.583	2.544
2nd gear	2.21	2.09	2.18	1.711	1.731
3rd gear	1.43	1.35	1.42	1.250	1.258
4th gear	1.0	1.0	1.0	1.0	1.0

#### Evolution Gears

By using the very latest gear cutting techniques, equipment, Rover tooling and drawings it has enabled top line manufacture of all our gears, allowing Mini Spares to make alternative ratios, namely the 5 speed gearbox and the Evolution Clubman A-plus straight cut gear set.

The Evolution Clubman straight cut gear set has teeth counts that provide a ratio between the old special tuning 3 and 4 Synchro gearsets. This provides a better set for the road and is much favoured by certain participants of motorsports such as rallycross. This set utilises your standard 1st and reverse gear which are already straight cut as standard, which helps to reduce cost.

In A-plus type only ..... C-STN39

C-STR291	Clubman 2nd Gear	26 Teeth
C-STR292	Clubman 3rd Gear	23 Teeth
C-STR293A	Clubman 1st motion Shaft	20 Teeth
C-STR294	Laygear	15,19,23,25 Teeth

#### Original Design Special Tuning Gears

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, as well as a different laygear and 1st motion shaft on A-plus kits. All ST laygears are made to accept the 3 bearings.



	Straight Cut Gears	Remote Type ST Ratio Gear Kit	Rod Change ST Ratio Gear Kit	Rod Change A-Plus Gear Kit
Part Number for Kits	C-AJJ4014	C-STN76	C-STN77	
1st motion pre A-plus, 19 teeth	C-22A1732	C-22A1732		
1st motion A-plus, 19 teeth				C-22A1732A
3rd Gear, 22 teeth	C-22A1733	C-22A1733	C-22A1733	
2nd Gear, 25 teeth	C-22A1734	C-22A1734	C-22A1734	
1st Gear, 29 teeth	C-22A1735	C-22A1735	C-22A1735	
Laygear, 15,19,23,25 teeth	C-22A1737	C-22A1737		
A-plus Laygear				C-22A1737A
Reverse Gear rod Gear	C-22A1736			
Rod Change Reverse Gear			C-STR303	C-STR303

Over 1,000 Straight Cut Gears Sold Annually

### Synchromesh Hubs

- 1st/2nd synchronizing hub for 4 synchromesh gearboxes
  - Complete hub assembly .... DAM7455
  - Outer track only of DAM7455. .... DAM7300
- 3rd/4th synchronizing hub for 4 synchromesh gearboxes ..... DAM7456

