

GEARBOX IDENTIFICATION CHART

ORIGINAL LAMBRETTA 4-SPEED GEARBOXES

These are the gear sets available as standard on production scooter models. In some cases several models used the same ratios. Early gear clusters are likely to be bored down the centre to accept the spindle of early clutch pressure plates. This was abandoned on later models.

GEARBOX	GEAR No.	GEAR CLUSTER	LOOSE GEAR	LOOSE GEAR DIAMETER ± 0.2mm	LOOSE GEAR IDENTIFICATION & NOTES	GENERAL GEARBOX NOTES
*LI150 Special *Pacemaker *Late LI125 Italian frame no >94018	1st 2nd 3rd 4th	11 13 17 19	50 41 39 35	115.3 106.5 97.2 92.8	Late cluster not bored for clutch centre spindle 3rd across 5 teeth: Early = 33mm, Late = 33.8mm	DO NOT use early type gearbox in a powerful engine because it is too weak
*LI125 S1 S2 early S3 (Italian & Spanish)	1st 2nd 3rd 4th	9 12 16 19	51 42 39 35	119.0 109.5 97.2 92.8		Low 1st gear makes this a good box for sidecar use.
*LI125 Special *GP125 *GP200 (Italian)	1st 2nd 3rd 4th	10 12 15 18	50 42 39 36	117.5 109.5 100.1 - 100.4 95.3		SPROCKETS: 125cc uses 15x46 200cc uses 18x47 Good for clutch life.
*GP 200 (late Indian)	1st 2nd 3rd 4th	10 12 16 18	50 42 38 36	115.3 109.5 100.2 95.3		Smaller 3rd – 4th gear jump than Italian GP200 but not built as strong. Good for clutch life.
*LI150 Special (Spanish) & engine numbers starting LI150 *3-----*	1st 2nd 3rd 4th	11 13 17 20	50 41 39 34	115.3 106.6 97.2 90.2		Biggest 3rd – 4th ratio jump. Dire for most tuned engines.
*LI150 (Italian and early Spanish models)	1st 2nd 3rd 4th	11 14 17 20	50 41 37 34	115.3 105.5 96.2 90.2	3rd 34.6mm across 5 teeth	Excellent gearbox for general use with correct sprockets
*SX150 *GP150	1st 2nd 3rd 4th	10 12 15 19	50 42 39 35	117.5 109.5 100.1 - 100.4 92.8		Big 3rd – 4th ratio jump.
*GP150 (Indian Vijai Super)	1st 2nd 3rd 4th	10 12 16 19	50 42 38 35	117.5 109.5 100.2 92.8		Different 3rd gear ratio to Italian which reduces 3rd – 4th ratio jump
*GP150 (Indian Vijai Super Mk2)	1st 2nd 3rd 4th	10 13 17 21	50 41 37 33	117.5 106.5 96.2 87.7- 88.1		Oddball late Indian box uses GP125 1st, Pacemaker 2nd, LI150 Italian 3rd and SX200 4th gears.
*TV175 (2 & 3) *SX200 *Jet 200 *Lince 200	1st 2nd 3rd 4th	12 14 18 21	49 40 37 33	112.8 104.7 - 104.9 95.6 - 95.9 87.7 - 88.1	3rd 34.2mm across 5 teeth	Good gearbox for tuned motor use with correct sprockets.
*TV200 (GT200)	1st 2nd 3rd 4th	13 15 19 22	47 39 36 32	111.1 102.4 93.3 85.3		Too tall gearing for use in most tuned engines unless very torquey.

SPECIAL LAMBRETTA GEARBOX IDENTIFICATION CHART

GEARBOX	GEAR No.	GEAR CLUSTER	LOOSE GEAR	LOOSE GEAR ORIGIN	NOTES
*LI150 Rallymaster special (UK)	1st 2nd 3rd 4th	9 12 17 20	51 42 37 34	LI125 early LI125 early LI150 Italian LI150 Italian	Rare special edition gearbox for this limited edition 1960s UK-only importer special model.
*MSC (UK) close ratio	1st 2nd 3rd 4th	11 13 16 18	50 41 39 36	LI150 Spanish LI150 Spanish GP125 Italian GP125	Special race gearbox produced in low numbers by Dave Webster at Midland Scooter Centre.
*AF (Indian) close ratio	1st 2nd 3rd 4th	11 13 16 18	50 41 38 36	LI150 Spanish LI150 Spanish GP125 Indian GP125	Close ratio gearbox produced in India for AF Rayspeed.
* DRT (Italy) "Monza Super-speed"	1st 2nd 3rd 4th	10 12 14 17	50 42 37 35	GP200 GP200 DRT special DRT special	Complete retail gearbox made using Indian GP box as a basis with modified cluster and special loose gears.
* DRT (Italy) "Gran Tour"	1st 2nd 3rd 4th	10 12 15 18	50 42 38 36	GP200 GP200 DRT special DRT special	Complete retail gearbox made using Indian GP box as a basis with modified cluster and special loose gears.
* DRT (Italy)	1st 2nd 3rd 4th	10 Std 12 Std 14 17	50 Std 42 Std 37 36	GP200 GP200 DRT special DRT special	DRT special 3rd + 4th gear cogs to be fitted to GP200 cluster meshing special DRT loose gears.
* DRT (Italy) "Mountain Tourist"	1st 2nd 3rd 4th	- 12 or 13 Std 15 18	- - 38 36	- - DRT special DRT special	DRT special 3rd + 4th gear cogs to be fitted to any cluster with 12T or 13T 2nd gear. Special loose gears to match.
* DRT (Italy) "Road Tourist"	1st 2nd 3rd 4th	- 12 or 13 Std 15 18	- - 37 35	- - DRT special DRT special	DRT special 3rd + 4th gear cogs to be fitted to any cluster with 12T or 13T 2nd gear. Special loose gears to match.
*DRT (Italy) LI 150/SX 200 based close ratio	1st 2nd 3rd 4th	12 Std 14 Std 17 Std 20	49 Std 40 Std 37 Std 34	SX200 SX200 SX200 LI150 Italian	DRT special 20T 4th gear cog to be fitted to an SX200 cluster meshing LI150 4th.

DRT (Denis Racing Team) in Italy are currently the main producer of special Lambretta gearboxes. The Monza Superspeed and Gran Tour are commercially available complete gearboxes built around modified Indian GP200 boxes. The lower four DRT options are not complete gear sets, but are matching loose and cluster gears which can be adapted to fit another Lambretta gearbox. The process involves modifying the gearbox by machining off some of the gears from the gear cluster ('Christmas tree') very precisely and then pressing-on DRT's purpose-made replacements. This engineering work is very involved and should only be entrusted to an expert.

An excellent tool for seeing exactly how changes to the gearbox can affect your Lambretta's performance is Tony Cassidy's Lambretta Gearbox Visualiser. This can be found via the links page of www.lambrettabook.com.