

Lumenition Throttle Body Linkage Systems

For use with Single and Twin Throttle Body Installations.

12005

CLS 002 Twin Cable Top Mounting

General Notes on Installation

These linkage sets are designed to be used with Lumenition Twin Choke Throttle Bodies, either single or twin installations can be accommodated. Customers using the early TBS/TBP 450,455,480 & 485 versions require to obtain a replacement primary lever (Part No 16228, available separately) to use this linkage set. Later version Throttle Bodies, TBS/TBP 452,457,482 & 487 include this part within the boxed set.

We recommend that the installer take time to familiarise themselves with all the components supplied within the kit and read thoroughly the instructions prior to attempting to install the parts on the Throttle Bodies.

A "loose" fitting will allow the installer to achieve optimum spacings prior to tightening the Nyloc nuts used in the kit.

Throttle Lever Fitment

Ensure that the 2 Throw lever Part No 16228, is assembled to the primary throttle body before attempting to assemble the remaining parts. This part may be required separately

Kit Contents Parts List

Item	Part Description	Quantity per Kit
1	Linkage Mounting Bracket (Steel)	1
2	Bearing Bracket (Steel), Bearing Spacer inserted.	1
3	Sector Arm (Steel)	2
4	Spring Mandrel (Black Nylon)	2
5	Sliding Bearing Piece (Aluminium)	2
6	Compression Spring, Steel, 165 * 10 mm	2
7	Cable Adjuster, M6, Pre-assembled with M6 locknut.	2
8	Rod End Spacers, 3 * 8mm Dia	2
9	M5 Rod End to M5 Ball Joint Linkage Assembly	1
10	M5 Ball Joint to M5 Ball Joint Linkage Assembly	1
11	M5 * 18mm Clevis Pin	2
12	M5 * 50mm Bolt	2
13	M5 * 35mm Bolt	0
14	M5 * 30mm Bolt	2
15	M5 * 12mm Bolt	2
16	M5 Plain washer, Dia 10mm (Small)	8
17	M5 Plain Washer, Dia 12.5mm (Large)	4
18	"R" Clips	2
19	M5 "Nyloc" Nut	7
20	Accelerator Cable, 1.0 m Outer & 1.2 m Inner	2
21	Solderless Cable Nipple, M6	2

Twin Cable Linkage

Assembly Instructions (CLS 002)

Ensure that the Pivot Bearing Spacer is inserted into the bearing of bracket (2), and using the M5*30 Bolt (14) as a spindle, sandwich the bearing between both sector arms, as in assembly diagram, see over, use M5 Nyloc & Washer (16).

Similarly sandwich the Rod End of the Linkage(9) along with both spacers (8) between the adjustment slots of the sector arms, finish with bolt (14) and Nyloc nut & washer(17). Initially use central mounting location until optimum location can be ascertained.

Insert clevis pin (11) through hole in spring mandrel (4), with head on opposite side from flat face, using 2 large washers (17) sandwich sector arm mounting hole and finish with "R" clip (18) on inside face. Repeat for other mandrel. Refer to assembly diagram for details.

Assemble and compress springs (6) onto mandrels and using the aluminium sliding bearing pieces sandwich the bearing bracket between. Note: care should be exercised to avoid loosening pieces during this operation. When fully assembled the sectors should be free to rotate and be returned smoothly with no binding of the mandrels, if this occurs then check for correct assembly.

Screw the cable adjusters, with locknuts, into the rear of sliding bearing piece as shown overleaf. Loosely assemble the Linkage Mounting Bracket (1) using M5*12 bolts, washers and M5 Nylocs.

You are now ready to offer the linkage up to the Throttle Bodies. The mounting bracket should be trapped under the top 2 mounting nuts of either the left or right throttle body, the choice being dependant upon the easiest accelerator cable routing.

Linkage Installation on Bodies

Due to the variety of centre spacings which Lumenition Throttle Bodies can cope with the Linkage kit is supplied with an adjustable mounting bracket which can be reversed to move the range of adjustment. As previously mentioned it is advisable to leave final tightening of Nyloc nuts until correct positioning can be confirmed.

In essence the linkage should be positioned such that :

- Full Throttle opening can be achieved with available pedal travel.
- Linkage does not bind on lever arms or synchronising clip.
- Cable runs are free from obstruction or sharp changes of direction.

Accelerator Cable Connection

The Lumenition Throttle Body range and accessories is designed for "Retrofit" to sidedraught carburetor equipped vehicles and hence the carry over accelerator pedal cable attachment can be applied.

It is advised to use the solderless nipples at the linkage end of the cable as access is generally easier than the pedal box area. Excess cable inner may be removed by cutting, however we advise first wrapping in insulating tape to avoid "fraying".

Accelerator Linkage Adjustment

The linkage kit has an adjustable length linkage fitted between the sector arm and the primary lever, its length should be adjusted to ensure that at the fully open position the sector arm should butt against the lower bracket clamping bolt nearest the pivot point.

The sector arm allows a variable length of throw to suit differing pedal cable pull lengths.

The Cable Adjusters supplied with the kit permit cable length adjustment. It is generally advised to tension one cable such that it performs all the work and have the second cable set with a little extra slack such that in the event of the first cable failing the second can take over.

Associated Parts:

Part Description	Part No (Order Code)
Replacement Primary Lever (See text)	16228
45mm Throttle Body (pair)	TBP 452
As above + Idle Air Bypass feature	TBP 457
48mm Throttle Body (pair)	TBP 482
As above + Idle Air Bypass feature	TBP 487
Throttle Potentiometer suit use with above	TPS 002
Fuel Injector 180cc/min @ 2.5 Bar	INJ 001
Fuel Injector 300cc/min @ 2.5 Bar	INJ 002
45mm Full Radius Air Horn (Spun Alu')	AH 450
48mm Full Radius Air Horn (Spun Alu')	AH 480
Manifold Studs, M8 to M8 (Use with TBPs)	MK 001
Manifold Studs, 5/16" UNC to UNF	MK 002

If you require any further information on the above associated components then please contact Lumenition Engineering.

PLEASE NOTE : Lumenition cannot be held responsible for any failures or injuries arising from incorrect installation of this Accelerator Linkage Kit. Supplier liability is limited to the replacement of any genuine component failures within the kit and cannot cover any associated engine / vehicle damage which may occur as a result of said component failure.

