

# Mangoletsi

**Polished Manifolds**

**NEW INTAKE SYSTEMS  
DATSUN 240/260/280 Z  
INLET MANIFOLDS FOR WEBER AND DELLORTO  
CARBURETTORS  
INJECTION THROTTLE BODIES  
NEW LINKAGES**  
[www.mangoletsimanifolds.com](http://www.mangoletsimanifolds.com)

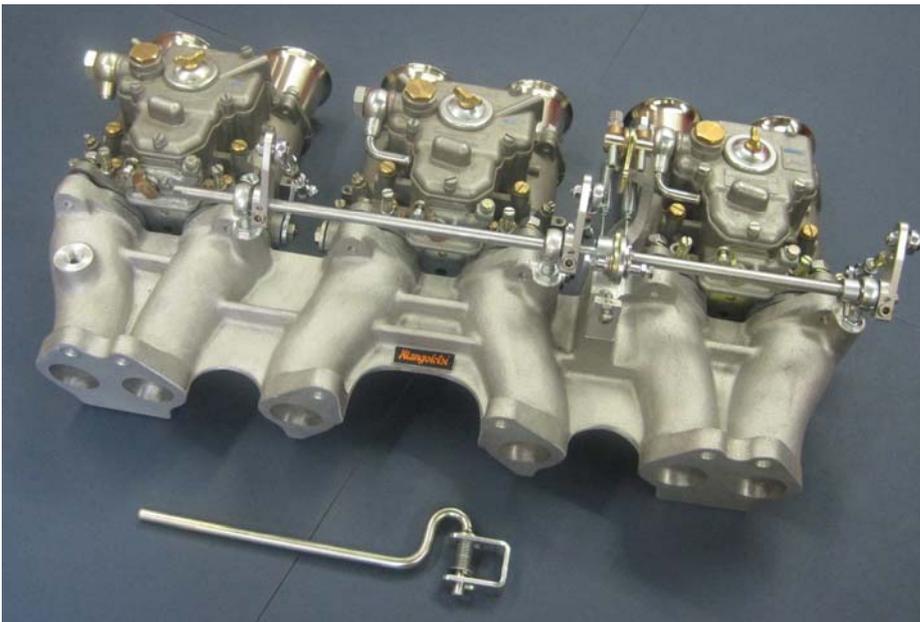
## **NEW INNOVATIONS FOR CLASSIC CARS**

The Mangoletsi 240 Z triple Weber DCOE manifolds and linkages were produced within 6 months of the arrival of the 240Z in England in 1971. They have been extensively used by many leading Datsun tuners, in particular Spike Anderson on his legendary Samuri, and by Janspeed, who also supplied Nissan Europe.

High quality castings are manufactured by a highly mechanised specialist foundry, who produce engine manufacturers' original equipment cylinder heads, blocks and manifolds to BS9001 quality standard – see [www.mangoletsimanifolds.com/technical](http://www.mangoletsimanifolds.com/technical)



## **NEW 45 & 48 BIG BORE HIGH FLOW MANIFOLDS**



Originally the 240Z manifold was produced for 40mm DCOE Webers, and was opened up to 45mm for the then relatively few engines being tuned to that level. As heads, cams and exhaust manifolds have continually been developed, 45s and 48s and injection bodies are regularly fitted. With the continuing growth of the classic car tuning market, we have completely re-designed our manifolds and linkages to give the most advanced Datsun 240/260/280Z products available.

Two years of development with leading Datsun tuners has optimised the all-round performance of these manifolds, with great attention given to the runner design and profile, maximising torque as well as power.

## **NEW 40 HIGH TORQUE MANIFOLD**

Designed for maximum low-end torque and throttle response all through the range.

A well known problem with Weber manifolds for Datsun Zs is that the exhaust ports are interspersed with the inlets. Therefore a one-piece inlet flange is not possible. To avoid the whole manifold distorting, which causes the inlet ports to misalign with the cylinder head, the Mangoletsi manifold has carefully designed webbing and ribs to give extra strength and rigidity.

## MANGOLETSI MANIFOLD PORT TO HEAD PORT TEMPLATE MATCHING SYSTEM ONE MANIFOLD FITS ALL HEADS - PERFECTLY

**A unique innovation** solves the major problem that no one manifold design has ports that will accurately match the inlet ports of the many different cylinder heads that can be found on the L series range. The ports of many Z cylinder heads have been found to be out of centre in relation to each other and to the manifold fixing studs and ports, and substantial differences have been found between the widths and heights of the supposedly round ports. This creates very difficult and time consuming problems in attempting to satisfactorily match the cylinder head and manifold ports to each other.

Many heads with a wide range of casting numbers were measured and used to create a set of standard centres. The manifolds are CNC bored at these centres with a head port size of 35mm and are drilled for two dowels for port matching. The carburettor ports are CNC machined to be exactly matched to the carburettors or throttle bodies. Manifold ports are flowed and fully polished for optimum performance

**Simple, accurate and quick to use.**



Template 6mm thick fitted with 2 drill jig bushes, supplied with 2 dowels and 5mm drill.

The dowel holes are CNC drilled in the manifold in exact geometric relation to the ports and cylinder head stud holes.

- Step one:** The template port windows are 37mm, the manifold port diameters are 35mm. Place the template over the studs. Move the template around until the optimum alignment with the cylinder head ports is achieved. Tighten at least six nuts, two in the middle, two at each end adjacent to the dowels. Mark out the head face.
- Step two:** IMPORTANT - A sleeve is supplied that fits over the drill bit. The drill should be pushed into the chuck so that 9.0 mm is left protruding – this avoids drilling in to the water gallery. Drill the two dowel holes. Remove template..
- Step three** Open up cylinder head ports to 35mm, flap-wheel supplied.
- Step four** Place manifold over protruding dowels – Bolt up

### **Reverse Port Matching for bigger bore inlet ports:**

The template system has another valuable and time-saving use - where the cylinder head has already been opened up to over 35mm, and you plan to open up your new manifold to match, the template can be matched to the cylinder head and then the manifold is matched to the shape of the template. **See detailed instructions sheet**

## **DATSUN 240/260/280Z LINKAGE SYSTEMS**

These linkages are designed **only** for use with the new Mangoletsi Z manifolds. There is considerable discussion as to whether a cable or rod linkage is the best option. The linkage kit comes with components for the customer to choose which he prefers. Whichever system is chosen, it is technically and operationally better than anything else on the market.

### **THE MANGOLETSI TWIN CABLE LINKAGE SYSTEM Patent Pending No.0922289.4**

Designed and engineered as a complete throttle control system from pedal to carburettors/throttle bodies, which gives unrivalled throttle response and can be adjusted to suit personal driving styles and requirements.

**Bulkhead Cable quadrant assembly -Simple fitting– fits RHD/ LHD**



Three bolts fix to bulkhead – template and drill supplied  
The new adjustable pedal pushrod clips on to the original pedal ball and passes through a bulkhead shroud, connecting, via a rose joint, to the quadrant casting.

- the pedal can be floored without

The quadrant is fitted with a on a large diameter stainless smooth progressive action for the permanently retained in their bar



An important feature is the adjustable **fully closed** and **fully open** throttle stops. This enables selection of pedal travel and also pedal position in relation to the brake pedal. This system is ideal for competition use damage to the linkage.

bronze bush which rotates steel shaft and provides a twin cables, which are grooves by a small cross

### Immediate throttle response-

Most ball joints have built-in end float, and normally rose joint spherical bearings are very stiff to rotate. Mangoletsi use aircraft standard rose joints, which rotate smoothly with zero end float. These are the heart of the system.

The main stainless steel operating cross-shaft runs in 3 rose joints, for minimum deflection, and CNC'd perfectly in line for friction free rotation. The aluminium CNC billet levers are clamped and also permanently located with grub screws in countersinks on to the cross-shaft, all at the same angle, and in line with the Weber carburettor levers (supplied). A left/right hand threaded hexagon adjusting bar connects the rose joints to the levers. The slotted main operating lever is dowelled to the cross-shaft with the option of 2 positions to change the rate of throttle opening. The 3 rose joints, cross-shaft and levers come ready assembled. All rotating components run in replaceable oilite bushes for long life and smooth operation. Spares supplied.



**“Sliding set-up”- simplicity to set (twin cable system only) Full instructions supplied.**

- Pedal Travel** Slide cable clamp assembly along the two slots until the throttles fully open and fully closed positions are achieved - tighten
- Spring tension** Slide spring/cable carrier assembly until a good balance between a positive idle shut off and pedal feel is obtained – tighten.
- Manifold Linkage stop** Next, with the throttle fully open, screw the linkage stop bolt until it makes contact with the bottom of the main operating lever – then lock the bolt

### THE MANGOLETSI ROD LINKAGE

Common to both the cable and rod linkage systems is the manifold linkage lever cross bar assembly with aluminium levers and rose jointed adjustable connecting rods (described above)

**Bulkhead Linkage rod** – The new articulated rod linkage bar connects from the standard bulkhead bush to the end of the linkage cross bar. Select the appropriate holes on the aluminium operating levers to give full throttle. Adjust the spring tension. Set the pedal stop.

A big advantage of the Mangoletsi rod linkages over the standard rod linkage is that twin adjustable tension pull-off springs give a good pedal feel and return the whole linkage assembly positively to idle. Also an adjustable full throttle pedal stop saves linkage and carburettor damage.

The main disadvantage of the standard bulkhead Datsun rod linkage is the lost motion that occurs through the collection of conventional ball joints and swivel trees, (both with built-in play)

#### **Quote from Steve Kiddell (Santa Pod record holder) on Z Club forum 26/9/2011**

*Get one of Mangoletsi's latest setups they are superb... both rod and (for that more stable feel) dual cable. I use the dual cable plus the 45mm manifold, which has been improved upon massively from previous incarnations with much straighter runners and a superb fit out of the box. I attribute a significant amount of my 294 hp to this setup as the latest runner design directly influences mid range cylinder fill.*

*The key to a good manifold is the runner, with an L6 there is little choice but to have some degree of bend in the runners as the pitch of the inlet ports doesn't match the pitch of any carb/throttle body, that as a given, it's critical to obtain optimum cylinder fill exactly how the manufacturer handles these bends. On this front Mangoletsi does an exceptional job and when comparing the new 45mm version alongside other leading makes one can "see" measurably more of the inlet butterfly leading to the conclusion that the runner is straighter, any bends that are required are also well profiled and are not excessive.*

*The next desirable attribute is accuracy in port alignment, on an L6 it's difficult to make one manifold fit all as there is a definite variation in castings over the years and even variation amongst casting subsets, meaning that some can be out by many mm thus making a well fitting generic manifold impossible. Mangoletsi have overcome this by engineering plenty of meat in the runner and an innovative template which is provided in the kit, this allows the engine builder to easily and accurately port match the setup and then dowel it in place (also provided in the kit). On the sample unit I was sent, we were able to set the entire thing up to the head port match to a high standard and dowel in in about two hours, remarkable, in "other" installations this has taken significantly more time and none were better.*

*The jewel in the crown is the new linkage setup that John (Mangoletsi) has developed this is in either rod or (dual) cable form and allows almost infinite adjustment in order to get the best pedal to butterfly ratio, the quality of the components used makes adjustment and operation very easy indeed. The result is a very (not overly) sensitive pedal that gives great control both in and out of town even in a 300 hp car.*

### **FEEDBACK**

We have spent very considerable development time on this new equipment and hope our customers will be happy with the performance.

We always plan to sell the best product, but the final judgement is down to the customer, so we would greatly appreciate any feedback.

Whilst it is hoped that you will be entirely satisfied, if you find any difficulties with the product as you receive it, the installation, understanding the instructions, or its performance on the road, we would like to hear from you, so that we can offer advice and continue to advance the design of the system.

Please contact us at [avtman@talktalk.net](mailto:avtman@talktalk.net)

JOHN MANGOLETSI

**Mangoletsi**  
DESIGN

**The unique Mangoletsi designs are protected by international copyright law  
and Patent Pending No. 0922289.4 .**



DESIGN

**DATSUN 240/260/280Z**  
**NEW INTAKE MANIFOLDS & LINKAGES**  
for  
WEBER & DELLORTO CARBURETTORS  
and  
INJECTION THROTTLE BODIES

SPECIFICATION & PRICES

FEBRUARY 2012

**INTAKE MANIFOLD**

PART NO. & BORE	PRICE GB£ ex VAT	SPECIFICATION
4700-40	350.00	Each manifold is supplied with:- <b>Fully polished Intake manifold</b> with 35mm outlet ports to cylinder head. Port centres CNC bored and dowelled to <b>head port matching template plate (included)</b> .  <b>Carburettor fitting kit</b> – O ring blocks, O rings, studs, double coil washers and Nylok nuts.  <b>Injection throttle body fitting kit</b> – studs, washers, Nylok nuts.  Fitting instructions included.
4700-45 Big Bore	350.00	
4700-48 Big Bore	380.00	

**FULL KIT – MANIFOLD WITH  
BOTH ROD & TWIN CABLE LINKAGES INCLUDED**

PART NO. & BORE	PRICE GB£ ex VAT	SPECIFICATION
4700-40 Kit	595.00	Each kit is supplied with:- <b>Manifold, template matching system and fitting kits as specified above.</b>  <b>Mangoletsi 9 rose jointed linkage system</b> with aluminium billet levers, twin spring throttle return for both rod and cable.  <b>Rod version</b> – includes linkage bar from bulkhead to rose joint cross shaft, and connecting lever to standard Z system. and <b>Twin cable version</b> – Mangoletsi patented adjustable sliding set-up system, bulkhead quadrant assembly, and twin cables.
4700-45 Big Bore Kit	595.00	
4700-48 Big Bore Kit	625.00	

Please refer to our Dealer list - [www.mangoletsimanifolds.com](http://www.mangoletsimanifolds.com)