

## **LONG STROKE MANX® PARTS LIST**

The following sheets list the parts we can supply for the 79.62 X 100mm 499cc Long Stroke Manx engines as fitted to the early "Featherbed" frames from 1950 – 1953. These used the heavily finned magnesium crankcases, not the earlier radially ribbed "International" cases. We do not make any parts that are unique to the 71mm bore 350 models. For 1954 onward short stroke models please see separate catalogue.

All parts are manufactured to the exact original specification, with the benefit of original drawings, which together with Norton's production schedules, jigs, fixtures and the rights to the Manx name reached us through the well documented route of Colin Seeley, John Tickle, Unity Equipe. No other manufacturer has access to this depth of information, which allows us to offer our parts as genuine replacements. Indeed some of our existing stock was manufactured by Norton Motors before the closure of Bracebridge Street. The balance is now made in our own workshops, predominantly on modern CNC equipment.

Complete built engines are available to order, priced from £14,000 excluding magneto and carb.

Whilst we ensure that our parts are made to the highest standards, as the fitment and use are outside our control, and as use for racing is likely to ultimately result in failure, we can accept no liability whatsoever for damage arising from such failure. This is a condition of our business, which you are deemed to have accepted upon purchasing parts from us. However, if on receipt of goods purchased from Molnar Precision Ltd., you are not totally satisfied with the quality of workmanship we will be happy to supply replacements or refund any monies paid.

Shipping charges will be added to our prices, the amount dependant on package size & destination. Our preferred method of payment is by Debit Card for orders up to £500, or by bank transfer for larger amounts. Due to handling charges, payment by Credit Card and PayPal will only be accepted by arrangement. Cheques are no longer accepted.

All UK customers must add VAT at 20% to the prices listed.

Andy Molnar

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<u>PT. NO.</u>	<u>DESCRIPTION</u>	<u>QTY.REQ.</u>	<u>PRICE .£</u>
<b>A. CAMBOX</b>	<b>LONG STROKE</b>		
15000	Cambox, Complete, Assembled	1	4,100.00 ea
14906	Cambox Shell	1	980.00 ea
15912	Cambox Outer Cover	1	345.00 ea
15003	Cambox outer cover double ended stud	2	9.00 ea
15008	Cheesehead slotted screw, short, outer cover (original)	9	2.50 ea
15008A	Allen screw replacement for 15008	9	2.50 ea
15009	Cheesehead slotted screw, long, outer cover (original)	2	3.50 ea
15009A	Allen screw replacement for 15009	2	3.50 ea
15010	Outrigger Plate	1	185.00 ea
18448	Outrigger Plate Support Stud	3	10.00 ea
VP008	Nut & washer for Outrigger Plate Studs	3	1.00 ea
17329	Shim for Outrigger Plate. State 3, 5 or 8 thou	As reqd	2.00 ea
18358	Cambox Bevel Cover	1	85.00 ea
E6430	Gasket for Bevel Cover	1	2.00 ea
14105	Screws for Bevel Cover	4	2.00 ea
20595	Cambox Input Bevel Gear Coarse pitch	1	150.00 ea
E4047	Nut - Bevel Gear Retaining	1	14.00 ea
16121	Vernier Peg - Bevel Gear	1	9.00 ea
E5944	Shim for 20595 Bevel Gear. State 5 or 20 thou	As reqd	2.50 ea
15996	Input Bevel Shaft	1	110.00 ea
15989	Input Shaft Spacer	1	10.00 ea
10338	Spur Gear - Input Shaft	1	140.00 ea
E3683	Woodruff Key - Input Shaft Spur Gear	1	1.00 ea
10370	Nut - L.H. - Input Spur Gear	1	13.00 ea
18322	Ball Race for Input Shaft, behind Bevel Gear	1	40.00 ea
E4209	Ball Race Retainer Plate	1	6.00 ea
E3822	Csk Screw for Retainer Plate	3	0.50 ea
18387	Roller Bearing for Input Shaft (in Outrigger Plate)	1	65.00 ea
15015	Idler Shaft	2	40.00 ea
VP008	Nut & Washer - Idler Shaft Retaining - external	2	1.00 ea
15016	Stud, Idler Shaft	2	6.00 ea
15020	Idler Gear	2	160.00 ea
10345	Idler Gear Bearing Cage	2	25.00 ea
18367	Idler Gear Rollers	32	0.50 ea
10365	Idler Gear Thrust Washer - Plain	2	7.00 ea
17519	Idler Gear Thrust Washer - Drilled & Grooved	2	10.00 ea
10372	Idler Gear Retaining Washer (presses into gear)	2	15.00 ea
10361	Camshaft	2	60.00 ea
10364	Camshaft Nut (Left Hand Thread)	2	12.00 ea
18366	Camshaft Ball Race (in main casting)	2	36.00 ea
18387	Camshaft Roller Bearing (in outer cover) (Late Type)	2	65.00 ea
15080	Roller Bearing Housing (in outer cover)	2	70.00 ea
22384	Shim for 23553 Bearing Housing. State 3, 5 or 10 thou	As reqd	3.00 ea
22068	Blanking Plug for Camshaft Hole (aluminium alloy)	2	35.00 ea
22069	Shim for 22068 Plug State 5, 10, or 15 thou	As reqd	3.00 ea
14598	Locking Plate for 22068	2	6.00 ea
15022	Nut and Washer Retaining Locking Plate	2	0.50 ea
17249	Camshaft Top Hat Bush (shaft to roller bearing)	2	10.00 ea
22390	Cam Gear (with 1/8" dia vernier holes)	2	140.00 ea
22405	Cam Gear Vernier Peg parallel 1/8"	2	5.00 ea
15025	Cam Gear Vernier Peg – Parallel 5/32"	2	5.00 ea
15026	Cam Gear Vernier Peg – Stepped 5/32" – 1/8"	2	7.50 ea
15031	Cam – M59 (with 1/8" dia vernier holes)	2	120.00 ea
- - -	DLC diamond coating on cams (highly recommended)	As Reqd	65.00 ea
	Performance Cam Profiles Available – Please Ask For Details		
15040	Pusher Bush	2	35.00 ea
15050	Pusher	2	155.00 ea
	2 thou oversize available at £20.00 extra		
15055	Pusher Cap, (thick, face down to required thickness)	2	20.00 ea
10356	Cam Oil Feed Jet	2	15.00 ea
10354	Holder for Oil Feed Jet	2	15.00 ea
10011	Spring for Oil Feed Jet	2	6.00 ea
10355	Nut for Jet Holder	2	8.00 ea
10999	Union for Cambox Oil Feed Hose	1	8.00 ea

Note: Complete Cambox Assembly includes all of the above components.

<u>PT. NO.</u>	<u>DESCRIPTION</u>	<u>QTY.REQ.</u>	<u>PRICE £</u>
15060	Cambox Through Bolt - Front - Extended	2	32.00 ea
15061	Cambox Through Bolt - Rear	2	27.00 ea
E5376	Washer - Cambox Bolts	4	0.25 ea
19639	Tacho Gearbox	1	160.00 ea
18386	Spacer Tacho Gearbox - with oil seal	1	35.00 ea
16049	Screw - Tacho Gearbox Retaining	2	8.00 ea
16050	Nut for 16049	2	2.00 ea
15065	Alternative Allen Screw For Tacho Gearbox-MPL Engines only	2	3.00 ea
15070	Cambox Oil Feed Hose Assy - crimped high pressure type	1	37.00 ea
E6004	Union for Valve Guide Oil Feed	2	10.00 ea
15075	Spacer – Cambox to Cyl Head	4	12.00 ea

## **B. CYLINDER HEAD**

15100	Cylinder Head, c/w seats and guides, beautifully gas flowed	1	1,900.00 ea
15110	Valve Guide - Inlet - 5/16" Stem – "Colsibro"	1	25.00 ea
	Oversize inlet valve guide +1/2, +1, +3, +6, +20 thou	As reqd	30.00 ea
15115	Valve Guide - Exhaust - 13/32" Stem – "Colsibro"	1	28.00 ea
	Oversize exhaust valve guide +1, +3, +10 thou	As reqd	33.00 ea
14584	Inlet Valve	1	55.00 ea
15779	Exhaust Valve – 13/32" Stem (Original)	1	55.00 ea
15780	Exhaust Valve – 5/16" Stem – (Use Inlet Guides, Collets, Cap)	1	55.00 ea
17497	Valve Cap - Inlet	1	8.00 ea
17496	Valve Cap - Exhaust	1	12.00 ea
23503	Valve Collets - Inlet	1 Pr	10.00 pr
18670	Valve Collets - Exhaust	1 Pr	12.00 pr
23499	Valve Spring Top Collar for Hairpin Springs	2	45.00 ea
14897	Hairpin Valve Spring - Cranked	2	25.00 ea
14898	Hairpin Valve Spring - Straight	2	25.00 ea
	Original Long Stroke Engines With Cast Base Plate Use 4 off 14898 Straight Valve Spring MPL Engines With 17860 Base Plate Use 2 Straight And 2 Cranked Valve Springs		
17860	Valve Spring Bottom Plate for Hairpin Spring	2	45.00 ea
18373	Shim For Under 17860 – State 10 or 15 Thou	As reqd	5.00 ea
16600	Inlet Valve Guide Oil Feed Pipe & Sleeve Nut	1	25.00 ea
16601	Exhaust Valve Guide Oil Feed Pipe & Sleeve Nut	1	25.00 ea
15140	Cylinder Head Sleeve Nut	4	25.00 ea
15175	Washer for Sleeve Nut	4	4.00 ea
15180	Manifold Block – 1.7/32" Bore, 2" stud centres	1	50.00 ea
15185	Tufnol Spacer for above	1	15.00 ea

## **C. BARREL/PISTON LONGSTROKE 79.62mm BORE 1950-1953**

15200	Cylinder Barrel 9 Fin, cast as original	1	700.00 ea
15205	Cylinder barrel (car engines)	1	700.00 ea
15210	Barrel Through Stud	4	15.00 ea
15215	Compression Plate, state 5, 10 or 20 thou thick	As reqd	15.00 ea
15220	Bare Piston, Pin & Circlips 10:1 CR (petrol)	1	220.00 ea
	Spare Circlip for our Piston Only	As reqd	3.00 ea
15221	Bare Piston, Pin and Circlips 13:1 CR (methanol)	1	220.00 ea
15225	Compression Ring	2	15.00 ea
15227	Oil Ring	1	15.00 ea
17464	Little End Bush - Scrolled	1	20.00 ea

## **C. BARREL/PISTON LONGSTROKE 79.62mm BORE 1946-1950**

15206	Cylinder Barrel 11 Fin, Cast as original	1	750.00 ea
15211	Barrel Through stud – 11 fin barrels	4	18.00 ea

<u>PT. NO.</u>	<u>DESCRIPTION</u>	<u>QTY.REQ.</u>	<u>PRICE .£</u>
<b>D. CRANKCASE ASSEMBLY</b>			
15300	Crankcases Magnesium, exact replica of 1950 -53 version	1	2,100.00 pr
17275	Drive Side Main Bearing Assembly	1	205.00 ea
21485	Shim Washer for Drive Side Main Bearing	1	5.00 ea
17199	Retaining Plate for Drive Side Main Bearing	1	10.00 ea
E3822	Screw for 17199	4	0.50 ea
18927	Timing Side Main Bearing Assembly, flanged, s/s type	1	145.00 ea
22720	Retaining Screw for Timing Side Main Bearing	6	1.00 ea
- - -	Big end nut - Original Bracebridge Street NOS	2	25.00 ea
15310	Pressed up Crank Assembly for increased rigidity with Carrillo rod and INA Needle Roller Big End. Splined Drive Side Shaft	1	1,600.00 ea
NR361	1 Piece Crank – see Non Standard Parts Section		
E4221	Crankshaft Shim - 10 thou thick	As reqd.	2.50 ea
22724	Crankcase Drain Plug. With Magnet Fitted	1	24.50 ea
	Copper washer for Drain Plug	1	0.50 ea
10999	Union - Crankcase Breather (1/4 BSP)	4	8.00 ea
10992	Sleeve Nut for 10999	As reqd.	5.00 ea
15843	Oil Scavenge Pick Up Tube (cut to length on installation)	1	13.00 ea
15842	Filter Gauze "Sock" for 15843	1	10.00 ea
15011	Union - Oil Feed/Return Pipes	2	10.00 ea
20593	Crankshaft Bevel Gear Coarse pitch	1	135.00 ea
22774	Shim for Bevel Gear - State 5 thou or 10 thou thick	As reqd.	2.50 ea
18992	Crankshaft Half Time Pinion (22T)	1	63.00 ea
E3683	Woodruff Key for 18992 & 20593	2	1.00 ea
E4073	Nut for 18992 (Left Hand Thread)	1	13.00 ea
E6487	Oil Pump	1	380.00 ea
E6487/05	5 thou Oversize Oil Pump for Worn Crankcases	1	380.00 ea
E6497	Pump Body Screws (included with pump)	2	5.00 ea
18871	Pump Wear Plate (alloy) (not used in original cases)	1	5.00 ea
E6498	Pump Retaining Screw	2	7.50 ea
10711	Oil Pump Drive Dog Plate	1	15.00 ea
20787	Oil Pump Drive Pinion (44T) With Integral Shaft	1	95.00 ea
15006	Oil Pressure Relief Valve Screw	1	12.00 ea
15007	Oil Pressure Relief Valve Nut	1	5.00 ea
13665	Oil Pressure Relief Valve Spring	1	6.00 ea
17706	Oil Pressure Relief Valve Ball	1	1.00 ea
16598A	Breather Pipe 'U' Shape Behind Timing Cover	1	24.00 ea
16598B	Breather Pipe Front of Crankcase	1	24.00 ea
16598C	Breather Pipe Behind Drive Sprocket/Pulley	1	24.00 ea
16138	Oil Filter Bolt (screws in front of Crankcase)	1	24.50 ea
15531	Copper Washer for 16138	1	0.50 ea
18378	Inner Timing Cover with Bush	1	490.00 ea
E4048	Bush for Inner Timing Cover, Scrolled	1	20.00 ea
15845	Gasket - Inner Cover to Crankcase	1	2.00 ea
16181	Stud - Inner Cover to Crankcase (top)	1	6.00 ea
16182	Shim on 16181 Stud, Between Crankcase and Inner Cover	1	1.50 ea
VP009/TH	Nut for 16181	1	1.00 ea
16253	Lock Washer for 16181	1	1.00 ea
14105	Screw - Inner Cover to Crankcase	5	2.00 ea
18370	Outer Timing Cover	1	125.00 ea
14105	Screw - Outer Cover - Short	4	2.00 ea
22639	Screw - Outer Cover - Long (bottom)	1	3.00 ea
10007	Big End Oil Feed Jet	1	15.00 ea
10011	Spring for Oil Feed Jet	1	6.00 ea
10237	Holder for Big End Oil Feed Jet	1	15.00 ea
10238	Round Cover Nut for Big End Oil Feed Jet	1	10.00 ea
16660	Magneto Bottom Drive Sprocket	1	40.00 ea
VP009/TH	Nut for 16660	1	1.00 ea
15745	Magneto Top Driven Sprocket	1	40.00 ea
18388	Magneto Chain - 54 Links	1	23.00 ea
16137	Oil Filter Gauze - In Timing Cover	1	17.00 ea
14930	Oil Filter Slotted Tube/Blanking Plug Assembly	1	36.00 ea
14979	Copper Washer for Oil Filter	1	2.00 ea
	Felt for Magneto Seal available in 6, 8 and 12 mm	1	8.00 ea

<u>PT. NO.</u>	<u>DESCRIPTION</u>	<u>QTY.REQ.</u>	<u>PRICE £</u>
<b>F. BEVEL DRIVE ASSEMBLY – LONG STROKE</b>			
Note that we do not make the original specification fine pitch bevels & Oldham couplings. Instead we have adapted the original castings to accommodate the far superior later coarse pitch splined bevels			
18017	Top bevel housing c/w needle rollers	1	310.00 ea
15405	Stud – Top bevel housing to cambox	4	6.00 ea
VP132	Nut for 15405	4	1.00 ea
VP014	Washer for 15405	4	0.75 ea
22393	Top bevel shaft	1	210.00 ea
23504	Splined connecting tube	1	100.00 ea
22775	Bronze thrust washer	2	11.00 ea
22774	Bevel shaft shims	As reqd	2.50 ea
15410	Large gland nut	2	40.00 ea
15415	"O" ring – gland nut	4	2.00 ea
E5555	Copper/asbestos washer for 15410	2	5.00 ea
15420	Chromed tube	1	50.00 ea
15425	"O" ring		
20626	Bottom Bevel housing c/w needle rollers	1	310.00 ea
E6163	Stud – btm bevel housing to crankcase	4	6.00 ea
VP132	Nut for E6163	4	1.00 ea
VP014	Washer for E6163	4	0.75 ea
22394	Bottom Bevel Shaft	1	210.00 ea

#### **NON STANDARD ENGINE PARTS**

NR361	1 Piece, EN40 Crank With Special Carrilo/MPL Rod		2,450.00 ea
NR366	Seal Carrier Assy – Replaces 10007, 10011, 10237 For 1 Piece Cranks		50.00 ea
NR331	Kit of parts to convert Oldham Coupling Drive Tower to Splined Drive		980.00 set
	Specification including Crankcase and Gearbox Bevels		
- - -	Above parts supplied and fitted to your Original Tower Castings		1,130.00 set

NOTE: It is also necessary to bore out bottom Bevel Box in Crankcase to accommodate the larger Bevel Shaft.

NR329	Vernier Belt Drive Assembly for Magneto (Replaces Chain)		190.00 set
NR330	Vernier Chain Sprocket Assembly For Magneto (Replaces 15745)		85.00 ea
18927HC	High Capacity Flanged Timing Side Main Bearing (Short Stroke Type)		450.00 ea

#### **G. PRIMARY DRIVE & GEARBOX**

- - -	42T Modern Style multiplate clutch (chain)	1	590.00 ea
19834	Engine sprocket – state teeth, 17T – 23T available, splined bore only	1	110.00 ea
VP191	Nut for engine sprocket	1	10.00 ea
17200	Lock washer for VP191	1	5.00 ea
17201	Screw for 17200 lock washer	1	2.00 ea
NR345	Drive side oil seal assy	1	40.00 ea
20928	Primary chain – Regina GP with springs & rivet links	1	45.00 ea
12368	Gearbox sprocket – AMC Gearbox 15T-20T	1	40.00 ea
12368	Gearbox sprocket – AMC Gearbox 21T-23T	1	45.00 ea
12369	Spacer, to permit AMC Sprockets to be used on earlier gearboxes	1	10.00 ea
40070	Nut (LH) gearbox spkt	1	7.00 ea
40076	Washer & Allen Screw for 40070	1	3.00 ea

For belt primary drives, engine mounting plates, bolts etc & all chassis parts please see the full Manx parts catalogue which is focuses on the 1954 onwards short stroke engines, but most parts will fit around the long stroke engines, for Featherbed frames.

#### **H. CRANKCASE BOLTS**

E6139	Crankcase Mouth Clamp Bolt, Nut, Washers	2	15.00 ea
15732	3/8" Front, Bottom Crankcase Stud, Nuts, Washers	1	9.00 ea
14191	5/16" Crankcase Sump Bolt, Nut, Washers	4	13.00 ea



**MOLNAR MANX**  
**LONG STROKE ENGINES**

1950-1953 heavily finned magnesium crankcases cast from original patternwork with all correct numbers cast in.

8" Diameter flywheels with 40mm needle roller big end, custom made Carrillo Con Rod, pressed up assy.

Short stroke type flanged timing side main bearing, standard roller drive side man bearing.

Cast Alloy Barrel – choice of original square type or the round "Car" type – with spun cast iron liner.

Forged Omega Piston. Choice of Compression ratios.

Sand cast alloy head with "lead free" seats, "Colisbro" guides & stainless valves. Exposed hairpin valve springs. Standard 1.7/32" inlet port with 2" stud centres. Threaded exhaust port.

Cosmetically accurate cast alloy top & bottom bevel housings & chrome tubes, fitted with coarse pitch splined bevels.

Magnesium cambox & covers to exact original specification with original M59 cam profiles. Cams & Pushers DLC coated to minimise friction & extend life.

Built in a dedicated section of our workshop.

No Ignition or Carburettor included.

Engine not test run.

**Price: £14,000.00 + VAT as appropriate**

**The following options can be specified at the time of ordering at extra cost:**

	<b><u>Extra £</u></b>
One piece EN40 crankshaft & Carrillo rod	£850.00
High Capacity timing side main bearing	£300.00
Enclosed coil valve springs	£150.00
1.344" Inlet port & 65mm stud centres - To suit 1.3/8" GP Carb	£150.00
Special cylinder head with 1.344" inlet port & smaller exhaust valve To permit the use of higher performance cam profiles	£350.00
Install in our test bed & run up, strobe ignition etc	£250.00