

Robin James Engineering Services

Clinton Road
Leominster
Herefordshire
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United Kingdom

VAT Number: 205 0520 67

Mr [Name]
[Address]
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Invoice

Number: 700
Date: 16th Mar '20
Due By: 13th Apr '20
Account: 2263
Purchase Order: 2263

Qty	Description	Rate	Total
68	2263 Labour 68 hours @ £40	40.00	2,720.00
1	2263 Parts & Materials, as per attached list	143.00	143.00

Please make cheques payable to: Robin James Engineering Services

Net: £2,863.00

Bank Transfers: -

VAT @ 20%: £572.60

Account name: Robin James Engineering Services

TOTAL: £3,435.60

Bank: Lloyds Bank plc

Sort Code: 30-94-99

Account number: 27034968

*Received with
trans
18th March 2020*

16th March 2020

Materials and Parts

1	Chronometric speedometer bulb holder		14.50
2	NGK BPR5 EIX sparking plug	9.00	18.00
1	JG electronic voltage regulator 6V +ve earth		85.00
2	Rubber plug cap	2.50	5.00
4'6"	Rubber covered HT cable	1.00	4.50
	Petrol		9.00
1 litre	2-stroke oil		<u>7.00</u>
			<u>£143.00π*</u>

Work done on Scott motorcycle

Investigate issues with machine. Prepare & give verbal report on problems.

Strip out old electrical wiring. Make brackets for JG regulator & a brake light switch. Remove tank & re-wire machine. Rewire dynamo, with correct rotation, to suit the JG regulator, which we then fitted to the machine. A 7/8" handlebar dip switch was modified to fit your 1" handlebars, the electrical connections soldered in place & it was fitted before we connected up a battery to the system & checked it.

Pressure test water jacket & radiator. Note that escaping air could be heard from right hand sparking plug hole. Also find that the drain tap on the water jacket is broken. Discussed this with you. Removed the cylinder with the cylinder head in place, as we could not remove it in situ. Set cylinders & head up on the mill & drill out 16 studs. Cylinder head still refused to free, so was left soaking over the weekend in paraffin. Spoke with you & the decision was made to fit a new cylinder head & to cut the old one off. Cut off the old cylinder head with the band saw & counter bored the head studs to release them from the remaining part of the head. Set the cylinders up on the mill & clocked the position of each of the seized studs before drilling them out, tapping the 16 threads & helicoiling one. Cylinders were then set up on the surface grinder & the top joint face was trued up.

The pistons were removed. One had a stuck ring, so it was heated up, the ring removed & the pistons were cleaned. Broken drain plug, seized into the cylinder jacket, would not free up, so cylinders were set up on the mill & the hole was drilled out, tapped & counter bored. Made a plug to suit the hole.

When your new cylinder head arrived we offered it up on the cylinders to find that the head studs supplied by the Scott Club were too short, they had only 5/16" screwed into the cylinder block. In talking to Roger Moss, he confirmed that some blocks had short threads and some had very long threads which penetrate the water jacket. The latter type suffer from water migration up the threads which causes corrosion of the cylinder head which causes it to stick on. You, of course, have the latter type. We discussed this with you & made a set of new ones from scratch. The studs were fitted with a hydraulic Loctite to prevent the water migration, & were made with 3/4" threads to enable them to reach into the unworn part of the thread in the cylinder block.

The small end bushes in the connecting rods were worn. Made tools to undo the big end bolts (the right hand is different from the left hand, so 2 were needed) which are included in the parts that are returned to you, removed the rods from the crank, made a press tool & removed them. Made new bushes, pressed into the connecting rods & honed to size before cut-outs milled in them as per originals. Finally, cut the oil holes in the bushes & refit the rods to the crank. Once fitted, checked that the connecting rods were straight. Noted that a lock nut was missing on crank bolt. To replace this, we removed the connecting rods & central crank bolt, made & fitted a left-hand thread lock nut & reassembled the bottom end.

Made cylinder base gaskets & fitted the pistons & cylinders. New cylinder head gasket was modified to fit & the cylinder head was fitted & head nuts were torqued down at 19 ft lbs.

Made a new left hand oil pipe & fitted it, along with the right hand one & the oil pump. New HT leads made, as the old ones were in poor condition, & fitted together with new spark plugs. Crankcases primed with oil & crankcase doors were fitted. New gaskets were made for the transfer ports &, along with the carburetter, were fitted. Radiator was fitted, after making new bottom mounting studs & cutting & fitting new water hoses.

2263/2

16th March 2020

On fitting the tank, noted bodged tank mounting bolt. New tank mounting made to give correct triangulation to frame and tank was fitted, along with the oil & petrol pipes. Checked & filled gearbox with oil, removed the footrests, cleared threads on the stud & refitted them. New exhaust manifold gasket made, & new mounting bolts, & exhaust system was fitted. Oil tank union was removed & cleaned before we topped up the oils & petrol & filled the radiator with water.

Time magneto & clean out carburetter. Engine was started & check made of carburation & dynamo output. Machine then given 10 mile road test - no problems. On return to works machine checked over, head nuts torqued down & chains adjusted. Chain adjusters & rear wheel spindle nuts damaged, so new were made & fitted.

N.B. Both chains are coming to the end of their working life, and will need replacement in the near future.

MOSS

ENGINEERING

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Ref 1j694-3
22-02-2020

Dear Sir or Madam

Please find enclosed

1 off Moss cylinder head to suit a post 1934 600cc Scott motorcycle engine

This item has been purchased by

[Redacted]
[Redacted]
[Redacted]

It is consigned to your company at his request as you have his motorcycle for renovation

Kind Regards

Roger Moss

*DEAR MIKE
LOVE ALL WITH THANKS 22-2-2020
REM*