

PETROL ENGINE



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Model: MLR52

IMPORTANT: Read this manual fully before assembly and use and observe all safety rules and operating instructions



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Type	Single Cylinder 2-Stroke Air Cooled
Cylinder Capacity	51.7
Max Power/Revolutions	1.4/6500 kW/r/min
Noise Level	≤104 dB(A)
Petrol/Oil Ratio	Synthetic Oil 40:1 Mineral Oil 25:1
Fuel Tank Capacity	1.2 litre
Oil Type	2-stroke, synthetic or mineral
Spark Plug Gap	0.5 - 0.7 mm
Starting Method	Easy start manual pull cord
Net Weight	≤ 4.2 kg
Overall Dimensions	283x178x254 mm



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Thank you for purchasing our engine. This manual covers the operation and maintenance of your engine.

All information in this publication is based on the latest product information available at the time of printing. Forest Master Ltd reserves the right to make changes at any time without notice and without incurring any obligation. No part of this publication may be reproduced without written permission.

This manual should be considered a permanent part of the engine and should remain with it if it is resold.

Pay special attention to statements preceded by the following words:

WARNING! Indicates a strong possibility of severe personal injury or death if instructions are not followed.

CAUTION! Indicates a possibility of personal injury or equipment damage if instructions are not followed.

WARNING!

Read the instruction carefully. Be familiar with the controls and proper use of the engine.

Store fuel in containers specifically designed for this purpose. Refuel outdoors only and do not smoke while refueling. Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.

Replace the exhaust if faulty.

Replace all fuel tank and container caps securely.

Never store the equipment with petrol in the tank inside a building where fumes can reach an open flame or fire.

Allow the engine to cool before storing in any enclosure.



Petrol is highly flammable. Avoid smoking or bringing any flame or sparks near fuel. Make sure to stop the engine and allow it cool before refuelling the unit. Select outdoor bare ground for fuelling and move at least 3 m (10 ft) away from the fuelling point before starting the engine.

The exhaust and body of the engine get very hot when running, do not touch the exhaust or the body while the engine is running or just after it has stopped, allow the engine and exhaust time to cool.

To avoid electrical shock , don't touch the ignition plug cap and wires.

Prevent children and persons other than the operator from touching the engine.

The exhaust outlet must not point to the operator.

Ensure the exhaust and engine body are cool before covering the engine after daily work.

To prevent damage or the misfire of the engine, check and maintain the engine regularly and clean any carbon deposits in the exhaust silencer and in the cylinder exhaust.

Do not to use pure petrol (without two-stroke engine oil) as fuel.

Petrol engine can not work at high speed for a long time without load.

Do not operate the engine if drunk, dizzy, on medication or otherwise impaired.

Do not operate the engine if pregnant.

1. Add Fuel

The engine is specially designed for air-cooled two stroke mixed fuel use. Use only 2-stroke oil that is suitable for air cooled engines. Do not use BIA or TCW (2-stroke water-cooled marine type) 2-stroke oil.

How To Mix Fuel

Recommended mixing ratios;

Petrol 40 / Synthetic Oil 1 (Fig 1)

Petrol 25 / Mineral Oil 1 (Fig 2)

- Measure out the required quantities of petrol and oil to be mixed.
- Put some of the petrol into a clean, approved fuel container.
- Pour in all of the oil and agitate well.
- Pour in the rest of petrol and agitate again for at least one minute. As some oils may be difficult to agitate depending on oil ingredients, sufficient agitation is necessary for engine protection. If the agitation is insufficient, there is an increased danger of early piston seizing due to abnormally lean mixture.
- Put a clear indication on the outside of the container to avoid mixing up with petrol or other containers.
- Indicate the contents on outside of container for easy identification.

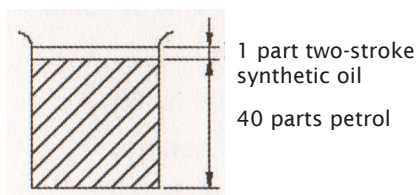


Fig 1: Using Synthetic oil

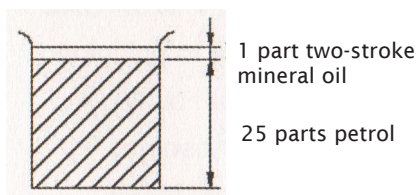


Fig 2: Using Mineral oil

Fill the gasoline to the edge of the tank neck. (Fig 2).

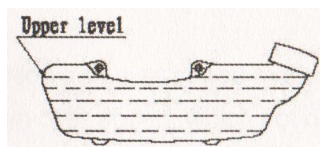


Fig: 2



2. Check and clean the air filter. The air filter must be cleaned often as a dirty air filter will lower the output power of the engine. If the air filter is blocked by dust, use petrol to clean the air filter, then dip in the oil, wring oil out and put the air filter back. (Fig 3)

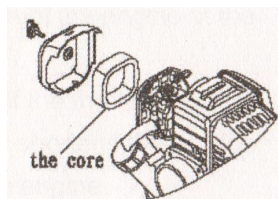


Fig: 3

3. Turn on the petrol tap until the petrol flows out of the clear plastic pipe. (Fig 4)

3. If the engine is cold, close the choke totally.(Fig 5).
If the engine has been run and is still hot, the choke must be totally open.

4. Open the throttle half way.

5. Draw the starter several times slowly, and then draw quickly.

Note: If excessive petrol causes starting difficulty, remove the ignition plug and the input pipe, open the choke and the throttle totally, draw the starter several times, then install the input pipe and start the engine.

After starting, open the choke totally. Allow the engine to warm up for several minutes before operating the equipment.

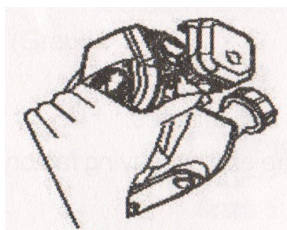


Fig: 4

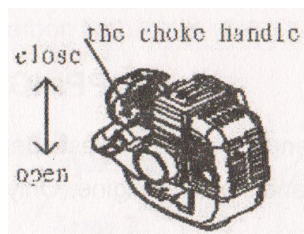


Fig: 5



1. After the engine starts, run for 3~5 minutes at a low speed.
2. When the engine is warmed up, adjust the throttle according to the required speed.

CAUTION: Don't accelerate abruptly due to lack of lubrication of the engine at the beginning of startup.

Avoid high idle speed and over speed. If the throttle is totally opened, the engine will over speed, which not only shortens the service life of the engine but also causes more problems in the engine.

Stopping The Engine

1. Reduce the engine to the slowest speed and run for 3-5 minutes.
2. Press the stop switch located either on the equipment or below the pullstart, to stop the engine.



1. Daily check

Check that all screws and nuts are secure.
Check for fuel leakage or air leakage.

2. Check after 20 hours running

Clean the air filter.
Clean the fuel strainer.

3. Check after 50 hours running

Refasten the nuts of the cylinder.

Clean the accumulated carbon in the exhaust of the cylinder.

Clean the accumulated carbon on the spark plug, adjust the clearance to 0.5-0.7mm. (Fig 6)

Clean the accumulated carbon in the intake and in the exhaust silencer.

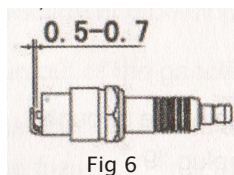


Fig 6

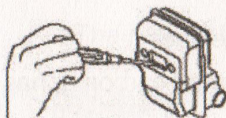


Fig 7

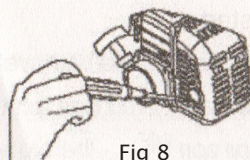


Fig 8

Storage

1. Totally remove any fuel in the tank and in the carburetor, close the choke totally and draw the starter 3-5 times.

2. Remove the spark plug. Add a small amount of engine oil through the spark plug hole into the cylinder and draw the starter 2-3 times to move the piston to top dead centre. Install the spark plug.

3. Use a soft cloth with engine oil to clean the surface of the Engine. Store the engine in a dry and dust free location.



1. Fails to start

- Fuel contaminated with water, replace it.
- The spark plug has accumulated carbon or has been broken through.
- Poor contact of the high-voltage wire with the spark plug.
-

2. The engine starts, but can't run fast

- The choke is not open totally
- The ratio of the engine oil and the gasoline is not correct.
- The fuel may be contaminated.
-

3. The engine runs, but has not enough power

- The air filter is may be blocked by dust.
- The cylinder exhaust and the silencer may be blocked by accumulated carbon.
- The piston or piston rings and the cylinder may have been badly worn out.
- The fuel strainer may be blocked by dust.
- The cylinder or cylinder head has oil leakage and air leakage.
-

4. The engine stops suddenly when running

- Run out of fuel.
- The high-voltage wire drops.
- The spark plug has accumulated carbon or is broken.
- The fuel strainer is blocked by dust.
- The fuel is contaminated.
- The air hole of the tank lid is blocked by dust.



Warranty

This product carries a limited parts warranty for 1 year from the date of purchase. Please keep your proof of purchase as this will be required for any claim.

Should this product become defective, contact the store where it was purchased and either replacement parts will be issued, it will be repaired or it will be replaced free of charge.

IMPORTANT: NO RESPONSIBILITY IS ACCEPTED FOR INCORRECT USE OF THIS PRODUCT. MODIFICATION OF THIS PRODUCT (UNLESS SAID MODIFICATION HAS BEEN AUTHORISED BY FOREST MASTER) WILL VOID THE WARRANTY.

This Warranty Does Not Cover:

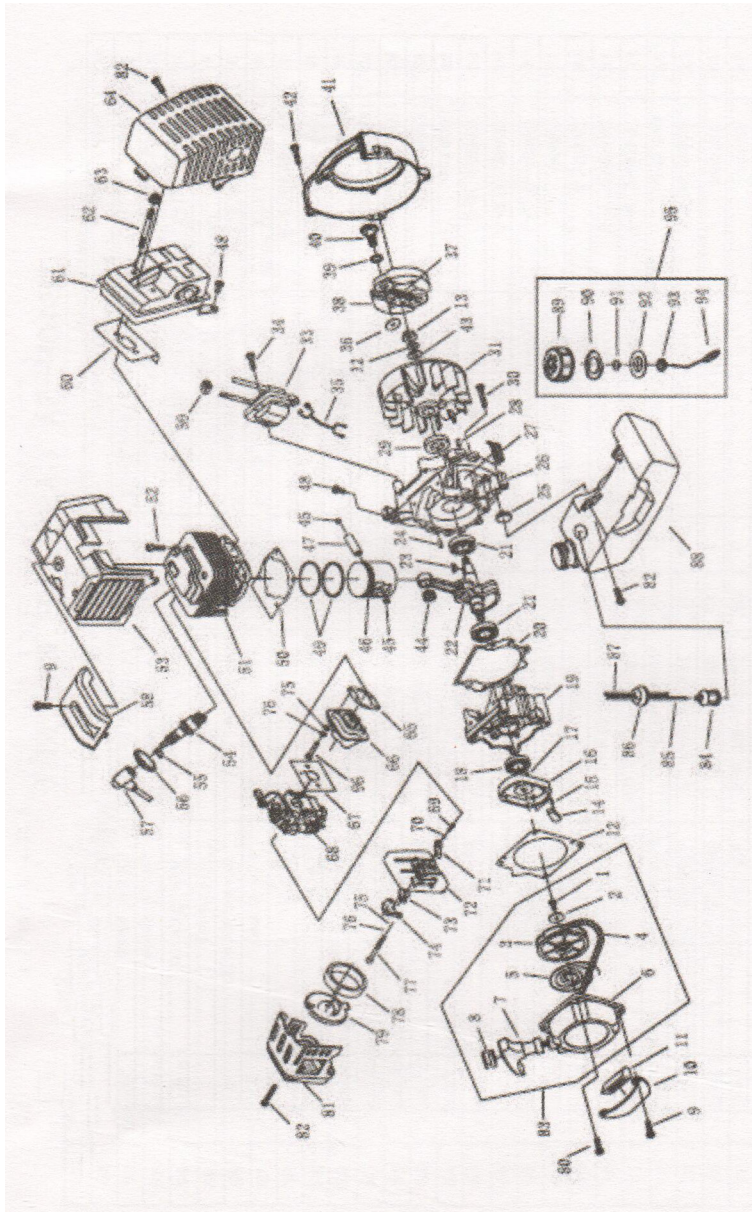
1. Any part that has become inoperative due to misuse, abuse, neglect, accident, improper maintenance, or alteration
2. The unit, if it has not been operated and/or maintained in accordance with the owner's manual
3. Normal wear
4. Routine maintenance items such as lubricants, blade sharpening
5. Normal deterioration of the exterior finish due to use or exposure

Shipping Charges:

Shipping charges for the delivery or collection of the unit, parts of the unit or attachments to the unit are the responsibility of the purchaser. The purchaser must pay transportation charges for any part submitted for replacement under this warranty unless such return is requested by Forest Master.



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Exploded Diagram



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Parts List

NO.	Part No.	Part Name	Qty.	NO.	Part No.	Part Name	Qty.
1	GB67	Screw M5×12-9.8-DZ	1	26	1E40F-5.8-1	Crank Case	1
2	1E40F-5.11-2	Washer	1	27	1E40F-5.8-3	Guide Cover	1
3	1E40F-5.11-1	Start Rope Reel	1	28	GB119	Pin B4×10	2
4		Rope	1	29	1E40F-5.9	Oil-seal	1
5	1E40FP-3Z.4-7	Recoil Spring	1	30	GB9074.4	Screw M5×30	4
6	1E40F-5.11.1	Start Cover Ass'y	1	31	1E40F-5.3.2	Fly Wheel	1
7	1E40FP-3Z.4-2	Start Handle	1	32	GB859	Washer 8	1
8	1E40FP-3Z.4-10	Ring	1	33	1E40F-5.3.3	Stator	1
9	GB9074.4	Screw M5×20	5	34	GB9074.13	Bolt M5×20	2
10	1E40F-5A-4	Stand	1	35	1E40F-5.3.1	Cord Comp.	1
11	1E40F-5A-2	Rubber Cover	1	36	1E36F-3	Washer B	2
12	1E40F-5-10	Gasket	1	37	1E36F-7C.4-1	Spring	1
13	GB6170	Nut M3	1	38	1E36F-2C.4.1	Expander	2
14	1E46FP.4-2	Start Claw	1	39	1E40F-5-11	Washer	2
15	1E36F.1.2-2	Start Spring	1	40	1E40F-5-12	Screw Pin	2
16	1E40F-5.7-1	Start Reel	1	41	1E40F-5-9	Fan Cover	1
17	GB896	Stop Ring 4	1	42	GB9074.13	Bolt M5×25	4
18	1E36F.2	Oil-seal	1	43	GB97.1	Washer 8	1
19	1E40F-5.8-2	Crank Case	1	44	1E40F-5.4-2	Bearing	1
20	1E40F-5.8-4	Gasket	1	45	1E40F-03.02.01	Ring	2
21	GB/1276	Bearing 6202/P6	2	46	1E40F-5.4-1	Piston	1
22	1E40F-5.4.1	Crank Shaft	1	47	1E46FP.6-3	Piston Pin	1
23	GB1099	Key 3×13	1	48	GB9074.4	Bolt M5×12	3
24	GB119	Pin B6×12	2	49	1E40FP-3Z.3-5	Piston Ring	2
25	1E40F-5A-3	Rubber Washer	2	50	1E40F-3-6	Gasket	1



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Parts List

NO.	Part No.	Part Name	Qty.	NO.	Part No.	Part Name	Qty.
51	1E40F-5-4	Cylinder	1	76	GB93	Washer 5	4
52	GB70	Screw M5×20	4	77	GB/170.1	Screw M5×55	2
53	1E40F-5-5	Guide Cover Ass'y	1	78	1E34F.1-1	Filter Net	1
54	L6 (LD)	Spark Plug	1	79	1E40F-5A.1-2	Inside Cover	1
55		Spring	1	80	1E40F-5A-CE-1	Screw M5×20	1
56		Plug Cap	1	81	1E40F-5A.1-1	Outside Cover	1
57		Cap	1	82	GB9074.4	Screw M5×16	4
58	1E40F-5-8	Cover	1	83	1E40F-5.11	Starter	1
59	1E40F-5-3-1	Plug	1	84	1E34F.9.2-3A	Cleaser Cover	1
60	1E40F-5-5	Gasket	1	85	CG420.1.3.2-1	Fuel Pipe	1
61	1E40F-5-2	Muffler	1	86	EB-415.4.2-2	Plug	1
62	1E40F-5-13	Bolt	2	87	EB-415.4.2-4	Fuel Pipe	1
63	GB6177	Nut M6	2	88	1E40F-5A.4.1	Fuel Tank	1
64	1E40F-5-7	Muffler Cover	1	89	1E32FL.6.2-1	Fuel Tank Lid	1
65	1E40F-5-2	Admitting Pipe	1	90	CG420.1.3.1-2	Gasket	1
66	HA45.9	Admitting Pipe	1	91	EB-415.4.1.1-1	Aircoop	1
67	1E40F-5A-1	Gasket	1	92	1E32FL.6.2-2	Inside Cover	1
68	1E40F-5A.8	Carburetor	1	93	1E32FL.6.2-3	Lid	1
69	GB845	Screw ST2.9×6.5	1	94	1E32FL.6.2-4	Chain	1
70	GB97.1	Washer 3	1	95	1E32FL.6.2	Fuel Tank Lid COMP.	1
71	1E40F-5A.1.1-1	Choke Handle	1	96	GB70	Screw M5×25	2
72	1E40F-5A.1.1.1	Inside Cover	1	97			
73	1E40F-5A.1.1-2	Choke	1	98			
74	1E40F-5A.1.2	Baffle	1	99			
75	GB97.1	Washer 5	4	100			

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Manufactured Forest Master Limited.

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