RedMax SYSTEMATIC/SEQUENTIAL
TWO-STROKE ENGINE
TROUBLESHOOTING PROCESS

1. CUSTOMER INTERVIEW

CUSTOMER NAME:_____

MODEL:_____ **SERIAL #:** _____

TELEPHONE #: _____

A. Nature of the problem._____

_____

B. Purchase date: _____

C. Approximate hours of use per month. _____

D. When did problem first occur? _____

E. Who used the unit when problem occurred? _____

F. Was unit in storage? _____

1. How long? _____

G. Type of oil used. _____

1. Mix ratio: _____

2. How, where was fuel mixed? _____

H. Brand or type of gasoline: _____

I. Was the unit loaned out? _____

J. Are the limiter caps in place and set fully **Counter-Clockwise**?

_____

NOTES

TROUBLESHOOTING PROCESS

		GOOD	BAD/REASON
A.	**Maintenance Inspection**		
1.	Check for damaged or crushed housings.		
2.	Look for broken or damaged cutting attachments.		
3.	Check for broken or missing hardware		
4.	The chains and blades should be sharp.		
5.	Verify correct line length on string cutters.		
6.	Check the cooling air intake system.		
B.	**Controls Inspection**		
1.	Verify drive operation (will the engine turn over?)		
2.	Check for full open throttle operation.		
3.	Check for full open/closed operation of the choke.		
4.	Check linkage for operation.		
5.	Verify operation of the chain brake.		
6.	Check the condition of the vibration reduction mounts.		
C.	**Fuel Inspection**		
1.	Verify the presence of ISO-L-EGD certified two-stroke oil in the gasoline	YES	NONE
2.	Check for water in the fuel.	NONE	YES
3.	Check for dirt in the fuel system.	NONE	YES
4.	Verify the use of fresh fuel (under 30 days old)	GOOD	BAD
D.	**Fuel Delivery Inspection**		
1.	Check the integrity of the fuel tank		
2.	Check the fuel line(s) and filter		
3.	Verify fuel vent operation (both directions)		
E.	**Air Intake Inspection**		
1.	Filter condition (clean, nut bulged inward)		
2.	Proper assembly (orientation, sealing)		
3.	Inside of air box should be clean		
F.	**Compression Check**		
1.	Check engine compression		
	• V Good 120-170 psi		
	• Major damage 100 psi or lower		
	• Carbon build-up 175 psi or higher		
G.	**Restricted Exhaust Symptoms**		
1.	Lacking power		
2.	Poor acceleration		
3.	Limited peak power RPM		
4.	Excessive spit-back		
5.	Engine temperature high (overheating)		
H.	**Exhaust System Inspection**		
1.	S.A.M. screen		
2.	Muffler body (white color – Overheating)		
3.	Check the exhaust port for blockage		
4.	Check the combustion chamber for carbon		
I.	**Run/No-Run Test**		
1.	Shop mix **(DO NOT use customer's fuel)**		
2.	Check and record carburetor adjustments (limiter caps must be turned **fully counter-clockwise)**		

		GOOD	BAD/REASON
J.	**Positive 3 Point Spark Plug Test**		
1.	4mm blue, violet spark at cranking speed		
2.	6mm blue, violet spark with:		
	• Warm running engine		
	• High RPM (6000 RPM or higher)		
	• Confirmed shift in STEP or SLOPE electronic ignition system (if applicable)		
3.	If all above are good, proceed to fuel supply tests		
K.	**Negative 3 Point Spark Plus Test**		
1.	Inspect spark plug, replace as necessary		
2.	Re-test engine.		
3.	If all above are **NOT** good, proceed to ignition tests		
L.	**Ignition Inspection**		
1.	Check spark plug condition and gap		
2.	Check stop switch		
3.	Check cap/connector		
4.	Check common grounds (less than 0.2 Ohm)		
5.	Confirm correct air gap (0.014") Manual		
6.	Check ignition module (when warm) for resistance and conduct coil power test		
7.	Check flywheel key or mounting flats		
M.	**Fuel Supply System Ignition**		
1.	Check carburetor for tightness		
2.	Check manifold, boots, gaskets and hoses		
3.	Primary impulse strong and free		
	• Unobstructed/strong – proceed to carburetor		
	• Unobstructed/weak – proceed to primary compression test		
N.	**Carburetor**		
1.	Perform carburetor "NO-GO" tests		
	• H&L needle not damaged or bent		
	• Verify condition of throttle shaft/barrel		
	• Check condition of castings (corrosion)		
2.	Carburetor inspection and test		
	• Needle Tension springs		
	• Fuel pumps diaphragm		
	• Fuel filter screen		
	• Metering diaphragm		
	• Lever height		
	• Fuel pump/needle test		
	• Metering chamber test		
O.	**Primary Compression Test (Base)**		
1.	Holds a minimum 3-4 psi for min. 3-4 minutes	YES	NO
2.	Check gasket and surface integrity		
3.	Check oil seals and fittings		
P.	**Carburetor Adjustment**		
1.	Under load (RPM?)		
2.	Maximum RPM under no load (RPM?)		
3.	Adjusted per **Emission Bulletin**	YES	NO
4.	Limiter caps properly installed	YES	NO