McCULLOCH® SERVICE BULLETIN

NO. 1604

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SUBJECT Dixson Model 1081 Tachometer

Maintaining factory recommended operating speeds is of vital importance to the achievement of proper engine performance and life expectancy. McCulloch Corporation has found that the most convenient and accurate tool available for the measurement of operating speed, revolutions per minute (rpm), for McCulloch chain saws and generators is the Dixson Model 1081 Tachometer. The Dixson tachometer can be used effectively on all McCulloch chain saws and generators as well as many other applications for both two and four cycle one cylinder engines such as motorcycles and lawnmowers.

McCulloch chain saws have two rpm specifications which must be maintained to ensure proper engine performance. These specifications are:

1. Idle Speed RPM.
2. No Load/Full Throttle RPM (bar & chain installed).

The first specification is the rpm at which the engine should operate without clutch engagement and chain movement. The second specification is the rpm at which the engine should operate when not cutting (no load) using full throttle with the bar and chain installed. When the rpm is correctly set under these conditions, the engine will achieve maximum power when cutting.

The following table lists the factory recommended rpm specifications which apply to all current production McCulloch chain saws.

Chain Saw Model	Idle Speed RPM	NO LOAD/FULL THROTTLE RPM (bar & chain installed)
Mini Mac 25, 30, 35	2600 to 3000	10000 to 11200
Power Mac 6 Automatic	2700 to 2900	
SP 40	2400 to 2800	
Mac 10-10 Automatic	2400 to 2600	
Pro 10-10 Automatic	2400 to 2600	
PM 55	2400 to 2600	
7-10 Automatic	2400 to 2600	
SP 70	2400 to 2600	
SP 81	2400 to 2600	
PM 105	2600 to 2900	
SP 125C	2600 to 2900	
Super 250	2600 to 2900	
895C	2200 to 2600	10000 to 11200

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In addition to its usefulness in maintaining the proper engine rpm specifications, the Dixson tachometer will assist service personnel in problem solving. For example, when the idle rpm is correctly set, but the clutch continues to engage and the chain moves, this indicates that possible causes other than idle rpm should be investigated. It is possible that the clutch spring is stretched or the rotor arms or shoes are worn. These conditions could cause clutch engagement at rpms below the Idle Speed RPM.

Far too often service personnel are so involved with making carburetor adjustments in order to reduce the idle rpm, that they overlook the possibility of other related problems. However, by using the Dixson tachometer to correctly set the idle rpm, they will be certain that poor idle characteristics are not related to carburetion. Then other possible causes can be considered which may have been overlooked.

McCulloch generators also have two rpm specifications which must be maintained to ensure proper engine performance and electrical output. These specifications are:

1. No Load RPM.
2. Full Load RPM.

The first specification is the rpm at which the engine should run when no current is being drawn from the generator (no load). The second specification is the rpm at which the engine should run when the full current output is being drawn from the generator. When the no load rpm is correctly set, the engine speed will automatically be reduced when under load to the full load rpm specification.

The following table lists the factory recommended rpm specifications which apply to all current production McCulloch generators.

Generator Model	Output In Watts Intermittent/Continuous	No Load RPM	Full Load RPM
H 1500	1500 / 1275	3700 to 3800	3500 to 3700
H 2000	2000 / 1700	3700 to 3800	3500 to 3700
H 3000	3000 / 2550	3700 to 3800	3500 to 3700



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The Dixson Tachometer, P/N 91424, is offered at the manufacturer's suggested retail price of $31.45 complete with operating instructions. Considering its great usefulness in connection with McCulloch products, we feel you will consider it to be one of your most valuable service tools.

As shown in the photograph, the Dixson tachometer only needs to be held near the spark plug in order to obtain an rpm reading. Its convenience is only one of the features which make the Dixson tachometer an excellent tool.

McCULLOCH CORPORATION

Product Service Department