McCULLOCH

SERVICE BULLETIN # 1139

SUBJECT IMPORTANCE OF MAINTAINING TORQUE VALUES OF SCREWS

MODEL ALL CHAIN SAWS DATE 8/2/61

Many reports of failures of component parts on chain saws have been traced to failure to maintain torque values of attaching screws. It is almost impossible to place enough importance on maintaining screw, bolt, and nut torque values, especially during the early life of each unit.

While all fasteners are subject to loosening from vibration, gasket setting, and from alternate heating and cooling, as the natural result of operation, it is in the first ten to twenty hours of use that the greatest amount of mechanical loosening takes place.

This type of loosening results in muffler failures, blown gaskets and loss of compression, air leaks and lean operation, and general failure and breakage of parts.

All screws, bolts, and nuts should be checked for tightness, as a matter of course, every time a chain saw comes into your shop. A repaired saw which leaves the repair shop with loose screws, and becomes damaged or has a mechanical failure, will reflect on the quality of service and may lose a valued customer. It's human nature.

Use of a reliable torque wrench will insure against such occurrences.

The following table of torque values has been revised to include new models. Refer to it when checking fasteners and make sure each screw, bolt, and nut is neither too loose nor too tight.

(see reverse side for Torque Table)

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TORQUE TABLE
(Inch-Pounds)

Location of Screws and Fasteners	D30, D36 1-40, 1-50	1-41, 1-51 1-42, 1-52	1-60, 1-61 1-62	D44, S44, S44A, 1-70 1-71, 1-72 1-75	55, S55 S55A, 1-80 1-81, 1-81HD 1-82, 1-85
Airbox to crankcase	55 - 60	55 - 60	55 - 60	---	---
Bar mounting bolt	240 - 300	240 - 300	240 - 300	240 - 300	240 - 300
Breaker box cover	---	---	---	---	55 - 60
Breaker points	30 - 35	30 - 35	30 - 35	55 - 60	55 - 60
Carburetor adapter	---	---	---	---	55 - 60
Chain oiler reservoir	---	---	---	90 - 100	---
Chain guard	---	---	---	---	55 - 60
Clutch rotor	300 - 360	300 - 360	300 - 360	---	---
Clutch rotor nut	---	---	---	240 - 300	240 - 300
Condenser	30 - 35	30 - 35	30 - 35	30 - 35	30 - 35
Connecting rod cap	65 - 70	65 - 70	65 - 70	65 - 70	65 - 70
Crankcase bottom	---	---	---	90 - 100	90 - 100
Crankcase end cover	60 - 65	60 - 65	60 - 65	60 - 65	60 - 65
Cylinder head	55 - 60	55 - 60	55 - 60	55 - 60	55 - 60
*Cylinder jacket - muffler shield	---	---	---	55 - 60	---
Cylinder jacket - muffler shield	---	---	---	90 - 100	90 - 100
Fan housing	55 - 60	55 - 60	55 - 60	55 - 60	55 - 60
Flywheel nut	300 - 360	300 - 360	300 - 360	300 - 360	300 - 360
Frame screws (1/4-20)	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Frame screws (10-24)	55 - 60	55 - 60	55 - 60	55 - 60	55 - 60
Fuel pump cover	25 - 30	25 - 30	25 - 30	25 - 30	25 - 30
Fuel Tank (top to bottom)	---	---	---	55 - 60	55 - 60
Fuel Tank (cover to tank)	55 - 60	55 - 60	55 - 60	55 - 60	55 - 60
Fuel tank to crankcase	90 - 100	90 - 100	90 - 100	55 - 60	55 - 60
**Gearcase shield	---	---	55 - 60	---	55 - 60
Handle brace to crankcase	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Handle halves	---	---	---	55 - 60	55 - 60
Idler assembly	---	---	90 - 100	90 - 100	90 - 100
Lamination assembly	55 - 60	55 - 60	55 - 60	55 - 60	55 - 60
Manual chain oiler housing	55 - 60	---	---	---	---
Muffler assembly and attach	55 - 60	55 - 60	55 - 60	55 - 60	55 - 60
Oiler tank to fuel tank	---	55 - 60	---	---	---
Reed valve	30 - 35	30 - 35	30 - 35	30 - 35	30 - 35
Shroud attach	---	---	---	90 - 100	90 - 100
Spark plug	216 - 264	216 - 264	216 - 264	216 - 264	216 - 264
Spike attach	---	---	---	90 - 100	90 - 100
Starter cover	35 - 40	35 - 40	55 - 60	55 - 60	55 - 60
Starter to fan housing	55 - 60	55 - 60	---	---	---
Transmission bolts	---	---	100 - 110	---	100 - 110
Transmission cover	---	---	55 - 60	---	55 - 60
Throttle handle to tank	---	---	---	55 - 60	55 - 60

* Model D44 only
**Same screws also hold the cylinder jacket

NOTE: To change inch-pounds to foot-pounds, divide the inch-pound figure by 12.