

# TABLE OF CONTENTS

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This book covers a variety of models built over several years. Look in the following Table Of Contents for the portion of the machine that you wish to work on. Within that section we will cover each of the systems used.

ENGINE APPLICATIONS. . . . .	1 - 1
GENERAL INFORMATION	
General Safety Instructions . . . . .	2 - 1
Identification And Ordering . . . . .	2 - 2
Mixing Instructions For Gasoline And Oil . . . . .	2 - 3
Proper Fuel And Oil . . . . .	2 - 3
Off Season Storage . . . . .	2 - 5
CONTROLS/LOCATION AND OPERATION	
Primer . . . . .	3 - 2
Choke . . . . .	3 - 3
On/off Ignition Switch . . . . .	3 - 3
Checking The Ignition Switch . . . . .	3 - 4
Vane Control - Snow Pup - Snowmaster S-200 - S-620 . . . . .	3 - 5
Chute Control . . . . .	3 - 5
Chute Rotation And Detent Systems . . . . .	3 - 6
ENGINE REMOVAL AND INSTALLATION	
1965 - 1985 Models, Engine Removal . . . . .	4 - 1
1965 - 1985 Models, Engine Installation . . . . .	4 - 3
Powerlite, Engine Removal . . . . .	4 - 5
Powerlite, Engine Installation . . . . .	4 - 7
20" CCR, All Models, Engine Removal . . . . .	4 - 7
20" CCR, All Models, Engine Assembly . . . . .	4 - 9

# ENGINE APPLICATIONS

Model #	Model Name	Width	Years of Mfg	Eng Mfg	Eng Model	Mix Ratio	Max RPM	Spark Plug *	Gap (in.)
38173	Powerlite	16"	2000	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38175	Powerlite	16"	1991-1999	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38176	Powerlite	16"	1992-1998	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38177	Powerlite	16"	1999	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38178	Powerlite	16"	1999	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38180	CCR2000	20"	1986-1996	Toro	47P**	50:1	3550-3850	NGK BPMR4A	.032
38180C	CCR2000	20"	1987-1989	Toro	47P**	50:1	3550-3850	NGK BPMR4A	.032
38181	CCR2000	20"	1990-1996	Toro	47P**	50:1	3550-3850	NGK BPMR4A	.032
38182	Powerlite	16"	2000	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38183	Powerlite	16"	2000	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38185	CCR2000	20"	1987-1996	Toro	47P**	50:1	3550-3850	NGK BPMR4A	.032
38185C	CCR2000	20"	1988-1998	Toro	47P**	50:1	3550-3850	NGK BPMR4A	.032
38186	CCR2000	20"	1990-1996	Toro	47P**	50:1	3550-3850	NGK BPMR4A	.032
38190	CCR1000	20"	1990-1996	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38191	CCR1000	20"	1992-1996	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38195	CCR1000	20"	1990-1996	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38196	CCR1000	20"	1992-1996	Tec.	HSK600	50:1	4300-4700	Champion RCJ8Y	.030
38210	S140	14"	1979-1980	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38220	S200	20"	1979	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38225	S200	20"	1980	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38230	S200	20"	1979	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38232	S200	20"	1981-1985	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38235	S200	20"	1980-1983	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38242	S200	20"	1981-1983	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38252	S200	20"	1981	Tec.	AH520	32:1	4100-4500	Champion RJ18YC	.035
38350	Gas Power Shovel	14"	1983-1985	Toro	NA	32:1	7800-8800	Champion RCJ8	.022
38400	CCR1000	20"	1999-2000	Tec.	HSK635	50:1	4300-4700	Champion RCJ8Y	.030
38405	CCR1000	20"	1999-2000	Tec.	HSK635	50:1	4300-4700	Champion RCJ8Y	.030
38409	CCR2400	20"	1998-1999	Toro	R tek	50:1	3450-3950	NGK BPMR4A	.032
38410	CCR2400	20"	1997	Tec.	HSK850	50:1	3550-3850	Champion RCJ8Y	.030
38411	CCR2400	20"	1997	Tec.	HSK850	50:1	3550-3850	Champion RCJ8Y	.030
38412	CCR2400	20"	1998-1999	Toro	R tek	50:1	3450-3950	NGK BPMR4A	.032

# ENGINE REMOVAL AND INSTALLATION

11. If your 20" Snowthrower is equipped with an electric starter, remove the bolts retaining the electric starter to the engine mounting bracket (Figure 36). Also, remove the bolt and cable clamp retaining the wire harness to the engine. Finally, remove the motor tie down strap.

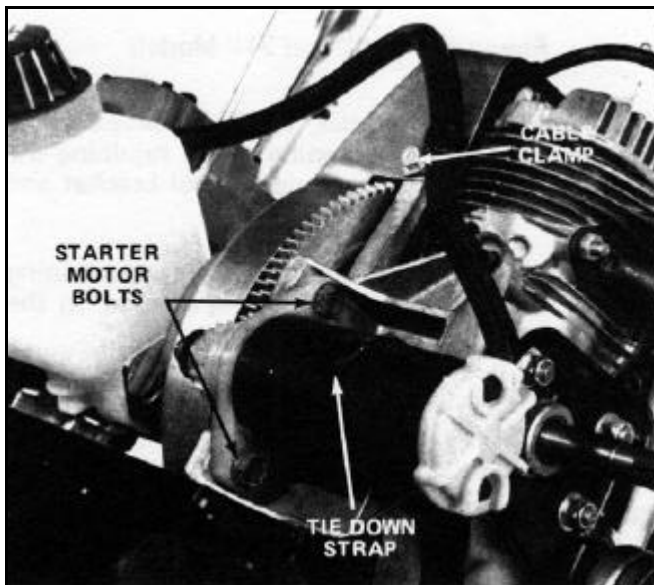


Figure 36 0217-019

12. Remove the engine mounting bracket that supports the engine on the starter housing side (Figure 37 and Figure 38).



Figure 37 – 20" Model 0217-020

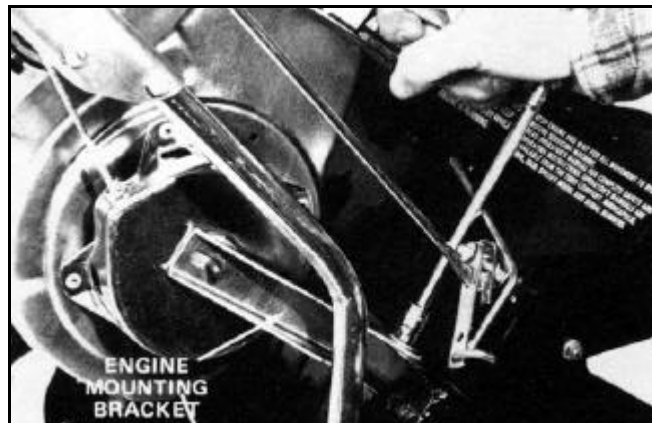


Figure 38 – 14" and 21" Models 0217-021

**Note:** On the 20" models, it will be necessary to remove the small self-tapping screw retaining the vane control rod to the vane control bracket and remove the muffler mounting nuts.

13. Lastly, remove the four mounting nuts retaining the engine to the engine mounting bracket on the crankshaft side (Figure 39).

The engine can now be removed from the unit for servicing.

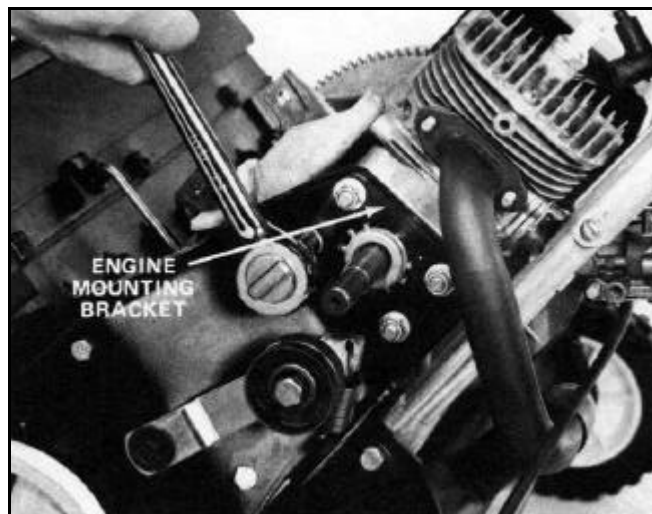


Figure 39 0217-022