

281700 to 281799

SERVICE ENGINE  **SALES MANUAL**

**MODEL 281700 SERIES ENGINES REPLACED WITH
 STANDARD SERVICE ENGINES**

In most cases, the Original Type numbers shown may be replaced by a Service Type Number without making any changes. Necessary changes of engine parts such as crankshafts, reduction parts, blower housings, etc., are noted. Other differences, such as mufflers, elbows, deflectors, etc., are not listed but are very important for safety and engine performance. Be sure the exhaust system on the replacement engine duplicates the system originally selected by the equipment manufacturer. Parts that are suitable for additional use should be transferred. Before making any conversion, check the data shown in the column labeled "REMOVE, ADD and NOTE." See if the changes, which are shown, are actually necessary on the application in question. Often a standard service engine will be a WORKABLE replacement without converting to such things as a special fuel tank or starter position.

If the crankshaft number does not appear in the "Original Engine" column, consult the Illustrated Parts List for the correct service replacement crankshaft number.

Engine Replacement Notes:

- NOTE 33:** If the replacement engine supersedes to or is a Model 210000 series engine, refer to the illustrations located after the conversion data for this model series. The overall dimensions which differ, are shown in the illustrations. If after making a visual inspection and it is determined the Model 210000 series engine cannot be used because of equipment interference, the original engine should be repaired with a short block and/or individual parts.
- NOTE 64:** Transfer Alternator Assembly from original engine to replacement engine.

Short Block Notes:

The SHORT BLOCK part number shown, is the assembly which can be used to rebuild the Original Type Number. If a letter appears after the short block number, it indicates the short block must be modified. The change denoted by each letter is as follows:

- NOTE R:** Cut off 1-7/16" on Flywheel end of Crankshaft.
- NOTE RR:** Change Exhaust Valve Retainer. Remove 292260. Add 68293.

281700 to 281799

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block	
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes
0015	281702	490466	21B902	0015					33		01	3600	496606	
0016	281702	490466	21B906	0020					33		01	3600	496606	
0020	281702	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3600	496606	
0025	281707	490466	21B907	0026					33		01	3400	496606	R
0026	281707	490466	21B907	0026					33		01	3400	496606	R
0028	281707	490466	21B907	0028					33		01	3600	496606	
0029	281707	490466	21B907	0029					33		01	3600	496606	
0030	281707	490466	21B907	0029					33		01	3100	496606	RR
0031	281703	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3000	496606	RR
0032	281703	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3000	496606	RR
0111	281702	490466	21B902	0015					33		01	3600	496606	
0118	281707	490466	21B907	0026					33		01	3000	496606	R
0119	281707	490466	21B907	0026					33		01	3600	496606	R
0125	281707	490466	21B907	0026					33		01	3400	496606	R
0126	281707	490466	21B907	0026					33		01	3300	496606	R
0127	281707	490466	21B907	0029					33		01	3600	496606	R
									64					
0128	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3400	496606	R
0129	281702	490466	21B902	0015					33		01	3400	496606	
0130	281707	490466	21B907	0026					33		01	3600	496606	R
0131	281707	490466	21B907	0028					33		01	3500	496606	
0132	281707	490466	21B907	0026					33		01	3600	496606	R
0133	281707	490466	21B907	0026					33		01	3400	496606	R
0134	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3400	496606	R
0135	281707	490466	21B907	0026					33		01	3600	496606	R
0136	281702	490466	21B902	0015					33		01	3600	496606	
0137	281707	490466	21B907	0029					33		01	3300	496606	R
0138	281707	490466	21B907	0029					33		01	3600	496606	

281700 to 281799

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block		
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes	
0139	281702	490466	21B902	0015					33		01	3600	496606		
0140	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3600	496606	R
0141	281702	490466	21B902	0015					33		01	3600	496606		
0142	281707	490466	21B907	0026					33		01	3600	496606	R	
0143	281707	490466	21B907	0026					33		01	3250	496606	R	
0144	281707	490466	21B907	0026					33		01	3400	496606	R	
0145	281707	490466	21B907	0026					33		01	3400	496606	R	
0146	281702	490466	21B902	0015					33		01	3600	496606		
0147	281707	490466	21B907	0026					33		01	3600	496606	R	
0148	281707	490466	21B907	0026					33		01	3600	496606	R	
0149	281707	490466	21B907	0028					33		01	3600	496606		
0150	281707	490466	21B907	0028					33		01	3500	496606		
0151	281707	490466	21B907	0026					33		01	3600	496606	R	
0152	281702	490466	21B902	0015					33		01	3600	496606		
0153	281707	490466	21B907	0029					33		01	3600	496606		
0154	281702	490466	21B902	0015					33		01	3300	496606		
0155	281707	490466	21B907	0026					33		01	3200	496606	R	
0156	281707	490466	21B907	0028					33		01	3600	496606		
0157	281707	490466	21B907	0026					33		01	3300	496606	R	
0158	281707	490466	21B907	0026					33		01	3300	496606	R	
									64						
0159	281702	490466	21B902	0015					33		01	3600	496606		
0160	281707	490466	21B907	0026					33		01	2800	496606	R	
0161	281707	490466	21B907	0029					33		01	3600	496606		
0162	281707	490466	21B907	0029					33		01	3400	496606		
0163	281707	490466	21B907	0029					33		All	3600	496606		
0164	281702	490466	21B902	0015					33		01	3100	496606		
0165	281707	490466	21B907	0026					33		01	3400	496606	R	
									64						
0166	281707	490466	21B907	0028					33		01	3300	496606		
0167	281702	490466	21B902	0015					33		01	3600	496606		
0168	281707	490466	21B907	0029					33		01	3300	496606		
0169	281707	490466	21B907	0026					33		01	3600	496606	R	
0170	281707	490466	21B907	0026					33		01	3600	496606	R	
0171	281707	490466	21B907	0029					33		01	3600	496606		
0172	281702	490466	21B902	0015					33		01	3600	496606		
0173	281707	490466	21B907	0029					33		01	3100	496606		
0174	281707	490466	21B907	0028					33		01	3200	496606		
0175	281707	490466	21B907	0029					33		01	3300	496606		
0177	281707	490466	21B907	0028					33		01	3400	496606		
									64						
0178	281702	490466	21B902	0015					33		01	3600	496606		
0179	281707	490466	21B907	0026					33		01	3200	496606	R	
0180	281706	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3200	496606	
0181	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3400	496606	R
0182	281707	490466	21B907	0026					33		01	3200	496606	R	
0183	281702	490466	21B902	0015					33		01	3400	496606		
0184	281707	490466	21B907	0028					33		01	3600	496606		
0185	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3200	496606	R
0186	281706	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3600	496606	
0187	281707	490466	21B907	0029					33		01	3600	496606		
0188	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3600	496606	
0189	281707	490466	21B907	0026					33		01	3600	496606	R	
0190	281707	490466	21B907	0029					33		01	3100	496606		
0191	281707	490466	21B907	0026					33		01	3250	496606	R	
0192	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3200	496606	

281700 to 281799

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block	
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes
0193	281706	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3250	496606	
0194	281707	490466	21B907	0026					33		01	3400	496606	R
0195	281707	490466	21B907	0026					33		01	3400	496606	R
0196	281707	490466	21B907	0028					33		01	3250	496606	
0197	281707	490466	21B907	0029					33		01	3600	496606	R
0198	281707	490466	21B907	0026					33		01	3400	496606	R
0199	281707	490466	21B907	0026					33		01	3400	496606	R
0200	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								All	3400	496606	R
0201	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3600	496606	R
0202	281707	490466	21B907	0029					33		01	3500	496606	
0203	281706	490466	No Replacement Repair With Short Block and/or Individual Parts								All	3600	496606	
0204	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3100	496606	R
0205	281707	490466	21B907	0029					33		All	3200	496606	R
0206	281707	490466	21B907	0029					33		01	3100	496606	
0207	281707	490466	21B907	0029					33		01	3200	496606	
0208	281707	490466	21B907	0029					33		01	3200	496606	
0209	281707	490466	21B907	0026					33		01	2600	496606	R
0210	281707	490466	21B907	0028					33		01	2600	496606	
0211	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3600	496606	R
0212	281707	490466	21B907	0029					33		01	2800	496606	
0213	281707	490466	21B907	0029					33		01	3500	496606	
									64					
0214	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3400	496606	R
0215	281707	490466	21B907	0026					33		01	3400	496606	R
0216	281707	490466	21B907	0026					33		01	2800	496606	R
0217	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								All	2800	496606	R
0218	281707	490466	21B907	0026					33				496606	R
0219	281707	490466	21B907	0026					33		01	2800	496606	R
0220	281702	490466	21B902	0015					33		01	3600	496606	
0221	281702	490466	21B902	0015					33		01	3600	496606	
0222	281707	490466	21B907	0026					33		01	3400	496606	R
0223	281707	490466	21B907	0026					33		01	3200	496606	R
									64					
0224	281702	490466	21B902	0015					33		01	3600	496606	
0225	281707	490466	21B907	0029					33		01	3600	496606	
0226	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								All	3250	496606	R
0227	281707	490466	21B907	0029					33		01	3600	496606	
0228	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3600	496606	R
0229	281707	490466	21B907	0029					33		01	3600	496606	
									64					
0230	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3500	496606	
0231	281702	490466	21B902	0015					33		01	3500	496606	
0232	281707	490466	21B907	0029					33		01	3200	496606	
0233	281707	490466	21B907	0028					33		01	3100	496606	
0234	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3600	496606	R
0235	281702	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3300	496606	
0410	281707	490466	21B907	0028					33		01	3600	496606	
0411	281707	490466	21B907	0029					33		01	3300	496606	R
0412	281707	490466	21B907	0026					33		01	3500	496606	R
0413	281707	490466	21B907	0026					33		01	3600	496606	R
									64					
0414	281707	490466	21B907	0026					33		01	3400	496606	R
0415	281707	490466	21B907	0026					33		01	3400	496606	R
0416	281707	490466	21B907	0026					33		01	3200	496606	R
0417	281707	490466	No Replacement Repair With Short Block and/or Individual Parts								01	3400	496606	R
0418	281707	490466	21B907	0026					33		01	3400	496606	R

281700 to 281799

Original Engine			Make From		Remove		Add		Note	Change to Type	Trim	RPM	Short Block		
Type	Model	Crank	Model	Type #	Qty	Part #	Qty	Part #					Part #	Notes	
0419	281702	490466	21B906	0020					33		01	2600	496606		
0420	281707	490466	21B907	0028					33		01	2600	496606		
0421	281707	490466	21B907	0028					33		01	3600	496606		
0422	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3400	496606	R
0423	281707	490466	21B907	0028					33		01	3400	496606		
									64						
0424	281707	490466	21B907	0026					33		01	3300	496606	R	
0425	281707	490466	21B907	0026					33		01	3400	496606	R	
0426	281707	490466	21B907	0026					33		01	3200	496606	R	
0427	281707	490466	21B907	0026					33		01	3300	496606	R	
0428	281707	490466	21B907	0026					33		01	3400	496606	R	
0429	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3600	496606	R
0430	281707	490466	21B907	0029					33		01	3400	496606	R	
0431	281707	490466	21B907	0028					33		01	3600	496606		
0432	281707	490466	21B907	0028					33		01	2600	496606		
0433	281707	490466	21B907	0026					33		01	3300	496606	R	
0434	281707	490466	21B907	0026					33		01	3300	496606	R	
0435	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3600	496606	R
0436	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3600	496606	R
0437	281707	490466	21B907	0026					33		01	3300	496606	R	
4001	281707	490466	21B907	0026					33		01	3600	496606	R	
									64						
4002	281707	490466	21B907	0026					33		01	3600	496606	R	
									64						
4003	281707	490466	21B907	0028					33		All	3600	496606		
									64						
4004	281707	490466	21B907	0029					33		01	3600	496606		
									64						
4015	281702	490466	21B902	0015					33		All	3600	496606		
4016	281702	490466	21B906	0020					33		All	3600	496606		
4020	281702	490466	21B902	0015					33		01	3600	496606		
4029	281707	490466	21B907	0029					33		01	3600	496606		
4030	281707	490466	No Replacement Repair With Short Block and/or Individual Parts									01	3100	496606	RR
7001	281707	490466	21B907	0026					33		01	3600	496606	R	
									64						
7002	281707	490466	21B907	0026					33		01	3600	496606	R	
									64						

MODEL 281700

MODEL 210000

