

28B700 to 28B799

SERVICE ENGINE



SALES MANUAL

**MODEL 28B700 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 23:** If the original engine is equipped with a Six Pin Wiring Harness transfer to the replacement engine.
- 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.

28B700 to 28B799

| 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 | |
| 0001 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 0002 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 2600 | 496606 | | |
| 0008 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0009 | 28B707 | 496784 | No Replacement Repair With Individual Parts. | | | | | | | | | All | 3600 | | |
| 0111 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3300 | 496606 | R | |
| 0112 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3400 | 496606 | R | |
| 0113 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3200 | 496606 | R | |
| 0116 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0117 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0118 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3600 | 496606 | R | |
| 0119 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0120 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0121 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0122 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3300 | 496606 | R | |
| 0123 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3400 | 496606 | | |
| | | | | | | | | | 64 | | | | | | |
| 0124 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 0125 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3300 | 496606 | | |
| 0126 | 28B707 | 495162 | 216907 | 0019 | | | | | 33 | | All | 3300 | 496606 | | |
| 0127 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3100 | 496606 | R | |
| 0128 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3200 | 496606 | R | |
| 0129 | 28B705 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0130 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3200 | 496606 | R | |
| 0131 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0132 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3400 | 496606 | R | |
| 0133 | 28B706 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3600 | 496606 | |
| 0134 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 0135 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3400 | 496606 | R | |

28B700 to 28B799

| 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 | |
| 0136 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3600 | 496606 | R | |
| 0137 | 28B707 | 495162 | 217907 | 0028 | | | | | 33 | | All | 2800 | 496606 | R | |
| 0138 | 28B707 | 495162 | 217907 | 0028 | | | | | 33 | | All | 3600 | 496606 | R | |
| 0139 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3000 | 496606 | R | |
| 0140 | 28B707 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3200 | 496606 | R |
| 0145 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3250 | 496606 | | |
| 0146 | 28B707 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3000 | 496606 | R |
| 0150 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 0151 | 28B707 | 495162 | 217907 | 0028 | | | | | 33 | | All | 2600 | 496606 | R | |
| 0190 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3300 | 496606 | R | |
| 0191 | 28B707 | 495162 | 217907 | 0028 | | | | | 33 | | All | 3000 | 496606 | R | |
| 0610 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3500 | 496606 | | |
| 0629 | 28B705 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 0630 | 28B707 | 495162 | 21B907 | 0028 | | | | | 33 | | All | 3600 | 496606 | | |
| 0632 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3400 | 496606 | R | |
| 0633 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1001 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1008 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 | | All | 3600 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| 1015 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1016 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 1019 | 28B707 | 495162 | 217907 | 0019 | | | | | 23 | | All | 3600 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| 1020 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 1021 | 28B707 | 495162 | 217907 | 0019 | | | | | 23 | | All | 3400 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| | | | | | | | | | 64 | | | | | | |
| 1025 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 | | All | 3400 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| 1026 | 28B707 | 495162 | 217907 | 0028 | | | | | 23 | | All | 3400 | 496606 | R | |
| | | | | | | | | | 33 | | | | | | |
| 1030 | 28B706 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3400 | 496606 | |
| 1031 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1041 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 1110 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3400 | 496606 | | |
| 1112 | 28B707 | 693944 | 217907 | 0025 | | | | | 23 | | All | 3400 | 496606 | R | |
| | | | | | | | | | 33 | | | | | | |
| 1113 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1114 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 | | All | 3300 | 496606 | R | |
| | | | | | | | | | 33 | | | | | | |
| 1117 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 | | All | 3600 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| 1118 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1120 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 | | All | 3600 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| 1123 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 | | All | 3400 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| | | | | | | | | | 64 | | | | | | |
| 1124 | 28B702 | 495162 | 216902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 1125 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 | | All | 3600 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |
| | | | | | | | | | 64 | | | | | | |
| 1128 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 | | All | 3100 | 496606 | R | |
| | | | | | | | | | 33 | | | | | | |
| 1129 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 | | All | 3600 | 496606 | | |
| | | | | | | | | | 33 | | | | | | |

28B700 to 28B799

| 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 | |
| 1130 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 33 | | All | 3600 | 496606 | | |
| 1131 | 28B707 | 495162 | 217907 | 0019 | | | | | 23 33 | | All | 3600 | 496606 | | |
| 1132 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3400 | 496606 | R | |
| 1133 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1134 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1135 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3400 | 496606 | R | |
| 1136 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3400 | 496606 | R | |
| 1137 | 28B702 | 693944 | 217902 | 0015 | | | | | 33 | | All | 3600 | 496606 | | |
| 1138 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3000 | 496606 | R | |
| 1139 | 28B707 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3000 | 496606 | R |
| 1140 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 33 64 | | All | 3600 | 496606 | | |
| 1141 | 28B707 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3000 | 496606 | R |
| 1142 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 33 | | All | 3250 | 496606 | | |
| 1143 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3300 | 496606 | | |
| 1144 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 33 | | All | 3300 | 496606 | | |
| 1146 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 64 | | All | 3000 | 496606 | R | |
| 1147 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3400 | 496606 | | |
| 1148 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3400 | 496606 | | |
| 1149 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1150 | 28B707 | 693944 | 217907 | 0019 | | | | | 33 | | All | 3600 | 496606 | | |
| 1151 | 28B707 | 495162 | 217907 | 0028 | | | | | 23 33 | | All | 2600 | 496606 | R | |
| 1152 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3400 | 496606 | R | |
| 1153 | 28B707 | 495162 | 217907 | 0019 | | | | | 23 33 | | All | 3500 | 496606 | | |
| 1154 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3500 | 496606 | | |
| 1155 | 28B707 | 495162 | 217907 | 0019 | | | | | 23 33 | | All | 3400 | 496606 | | |
| 1156 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 64 | | All | 3300 | 496606 | R | |
| 1157 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 64 | | All | 3300 | 496606 | R | |
| 1158 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3400 | 496606 | | |
| 1159 | 28B707 | 495162 | No Replacement Repair With Short Block and/or Individual Parts | | | | | | | | | All | 3200 | 496606 | R |
| 1160 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3200 | 496606 | R | |
| 1161 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1162 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 33 64 | | All | 3600 | 496606 | | |
| 1163 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | | |
| 1164 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 33 | | All | 3600 | 496606 | | |

28B700 to 28B799

| 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 |
| 1165 | 28B707 | 495162 | 21B907 | 0028 | | | | | 23 33 | | All | 3600 | 496606 | |
| 1166 | 28B707 | 693944 | 217907 | 0025 | | | | | 23 33 64 | | All | 3000 | 496606 | R |
| 1167 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 3600 | 496606 | |
| 1168 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 33 | | All | 3600 | 496606 | |
| 1169 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 33 64 | | All | 3600 | 496606 | |
| 1170 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 33 64 | | All | 3600 | 496606 | |
| 1171 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 2600 | 496606 | |
| 1172 | 28B707 | 693944 | 217907 | 0025 | | | | | 23 33 | | All | 2800 | 496606 | |
| 1173 | 28B702 | 693944 | 217902 | 0020 | | | | | 33 | | All | 3300 | 496606 | |
| 1174 | 28B707 | 693944 | 217907 | 0025 | | | | | 33 | | All | 3400 | 496606 | R |
| 1192 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3400 | 496606 | R |
| 1193 | 28B702 | 495162 | 217902 | 0020 | 1 | 695132 | 1 | 790415 | 33 | | All | 3500 | 496606 | |
| 1194 | 28B702 | 495162 | 217902 | 0015 | | | | | 33 | | All | 3700 | 496606 | |
| 1195 | 28B702 | 495162 | 217902 | 0020 | | | | | 33 | | All | 3400 | 496606 | |
| 1196 | 28B707 | 495162 | 217907 | 0028 | | | | | 23 33 64 | | All | 3300 | 496606 | R |
| 1197 | 28B707 | 495162 | 217907 | 0025 | | | | | 23 33 | | All | 3400 | 496606 | R |
| 1198 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 33 64 | | All | 3600 | 496606 | |
| 1199 | 28B707 | 693944 | 21B907 | 0028 | | | | | 23 33 64 | | All | 3600 | 496606 | |
| 1200 | 28B707 | 693944 | 217907 | 0025 | | | | | 23 33 | | All | 3600 | 496606 | R |
| 1201 | 28B707 | 693944 | 217907 | 0025 | | | | | 33 | | | | 496606 | R |
| 1205 | 28B707 | 495162 | 217907 | 0025 | | | | | 33 | | All | 3400 | 496606 | R |