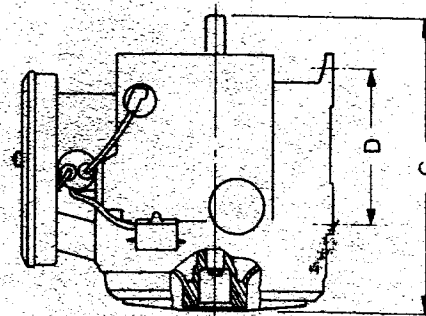
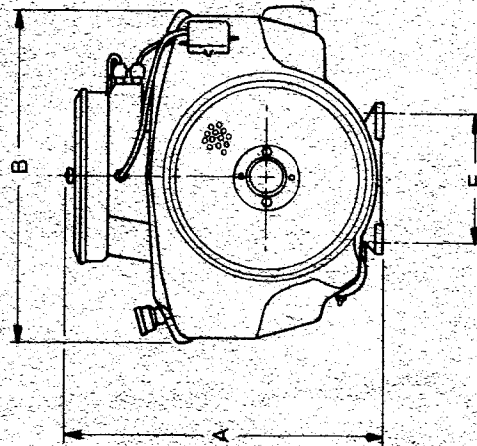


# Onan

## Replacement Engine Reference Catalog



# INDEX - REPLACEMENT ENGINE REFERENCE CATALOG

## REPLACEMENT ENGINE REFERENCE CATALOG

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## REPLACEMENT ENGINE REFERENCE CATALOG

Historically Onan has attempted to provide replacement engines which require little or no modification to the existing equipment. With the vast number of engine configurations and the age of these installations this task is becoming more difficult.

The information in this publication has been assembled to assist Onan Distributors and Dealers in providing end-users with new and/or comparable power plants for their existing equipment. This publication is to be used in conjunction with the L740-L and the L740-N when replacing engines of older or obsolete series. Additionally, the information on the various Engine Specification and Data sheets should be incorporated into a "re-power" or "up-power" situation. An attempt has been made to supply information concerning differences between original and replacement engine specifications in footnote form. Consult the micro-fische for more detailed engine configuration. Certain situations require the customer to make considerable changes to the equipment to allow the installation of an updated configuration. If the customer desires not to make these changes, the alternative is to supply a short block assembly as offered by the Service Parts Group.

The format used is conveniently arranged such that when placed in a loose leaf, three ring binder, tabbed divider sheets may be used which will allow easy location of a particular engine family.

The responsibility for proper engine installation belongs to the parties involved in each specific situation. The Onan Warranty Statement lists the coverage and responsibilities of both the Onan Corp. and the end user. Guidelines for proper engine installation are also published by Onan and are important for long engine life and minimum "down-time".

All information, illustrations and specifications contained in this catalog are based on the latest product information available at the time of publication. Onan reserves the right to make changes at any time without notice.

# MODEL IDENTIFICATION - REPLACEMENT ENGINE REFERENCE CATALOG

## Onan Air Cooled Industrial Engine Identification

A typical Model Number is made up of several sets of information. The following chart will assist in identifying Onan Industrial Engines:

CCK - S / 881 F  
1 2 3 4 5

| 1. ENGINE FAMILY | # OF CYL,S. | 2. POWER TAKE-OFF                                                                          |
|------------------|-------------|--------------------------------------------------------------------------------------------|
| ACK              | 2           | F -----CLUTCH DRIVE                                                                        |
| AJ               | 1           |                                                                                            |
| AK               | 1           | G -----GEAR REDUCTION DRIVE<br>(2G = 2:1, 4G = 4:1, etc)                                   |
| BF               | 2           |                                                                                            |
| BG               | 2           | M -----ELECTRIC STARTER                                                                    |
| BH               | 2           | MF -----ELEC. STARTER & CLUTCH DRIVE                                                       |
| CK               | 2           |                                                                                            |
| CCK              | 2           | MG -----ELEC. STARTER & GEAR REDUCTION DRIVE<br>(2MG = 2:1, 4MG = 4:1, etc)                |
| CCKA             | 2           |                                                                                            |
| CCKB             | 2           | MS -----ELECTRIC STARTER & STUB SHAFT                                                      |
| CCKM             | 2           |                                                                                            |
| RCKK             | 2           | MT -----ELEC. STARTER WITH TRANSMISSION<br>(4MT = 3.9:1)                                   |
| L25              | 1           |                                                                                            |
| NH               | 2           | S -----STUB SHAFT PTO (MANUAL START)                                                       |
| NHA              | 2           |                                                                                            |
| NHB              | 2           | T -----TRANSMISSION DRIVE - CLUTCH & GEAR<br>TRANSMISSION<br>(2T = 2:1 OR 2.5:1, 4T = 4:1) |
| NHBV             | 2           |                                                                                            |
| NHC              | 2           |                                                                                            |
| NHCV             | 2           |                                                                                            |

3. DIAGONAL LINE: Separates unit characteristics from specification number and letter.
4. SPECIFICATION NUMBER: Denotes customer requested deviations from the standard model.
5. SPECIFICATION LETTER: Denotes major changes in the unit series at the factory level.

More recent engine designation is presented in a different format, as follows:

B 43 M - G A 016 / 3588 A  
1 2 3 4 5 6 7 8 9

1. ENGINE SERIES: "B" Indicates the engine is a four stroke, twin cylinder, horizontally opposed, L-head design aluminum block with cast iron cylinder liners.
2. DISPLACEMENT: Listed in cubic inches.
3. DUTY CYCLE: "M" indicates medium duty, "G" indicates a higher duty cycle version.
4. FUEL: "G" indicates Gasoline fueled.
5. COOLING: "A" indicates air cooled.
6. HORSEPOWER: "016" indicates 16 BHP, "018" indicates 18 BHP, etc.
7. DIAGONAL LINE: Separates unit characteristics from specification number and letter.
8. SPECIFICATION NUMBER: Denotes customer requested deviations from the standard model.
9. SPECIFICATION LETTER: Denotes major changes in the unit series at the factory level.

A derivative of the above format involves the "T260G" engine. It is similar to the above format except for the following:

1. "T" : An updated version of the "N" series cylinder block design family.
2. "2" : Two Cylinder, horizontally opposed block.
3. "60" : Displacement listed in cubic inches.
4. DUTY CYCLE: "G" indicates a higher duty cycle version.

# ENGINE MOUNTING DATA - REPLACEMENT ENGINE REFERENCE CATALOG

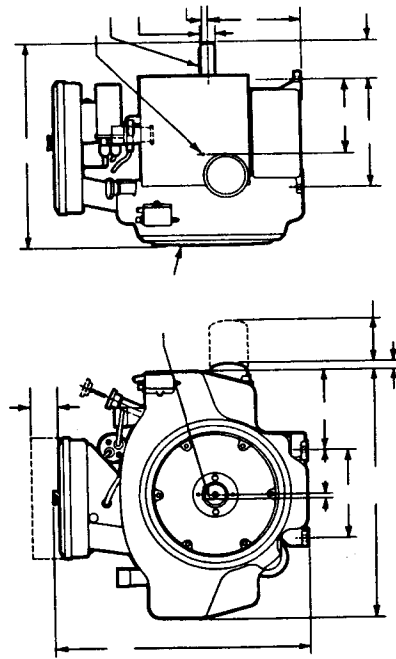
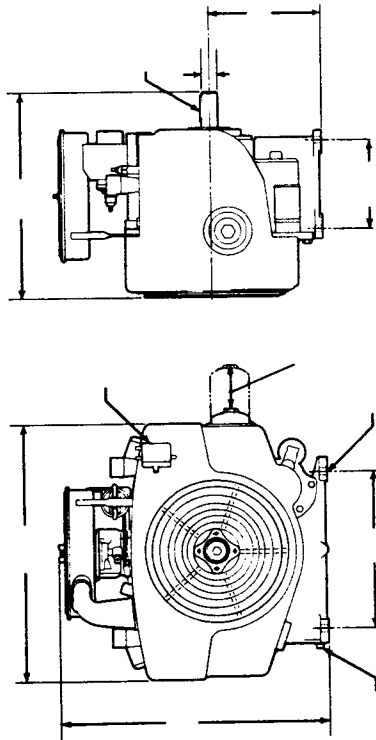
## ENGINE MOUNTING DATA

The following information should be useful when upgrading an existing application with a more recent design or larger output engine.

| ENGINE                  | OIL BASE<br>CAPACITY | CRANKSHAFT<br>C/L HEIGHT | MOUNTING<br>PATTERN |
|-------------------------|----------------------|--------------------------|---------------------|
| "B" Series              | 1.75 Qt.             | 6.59"                    | 7.25" X 8.94"       |
| "B" Series<br>(Miller)  | 2.75 Qt.             | 7.48"                    | 7.25" X 8.94"       |
| CCK-MS                  | 3.50 Qt.             | 8.65"                    | 12.25" X 7"         |
| CCK-S<br>(Manual Start) | 3.00 Qt.             | 6.83"                    | 12.25" X 7"         |
| N52M                    | 1.75 Qt.             | 6.59"                    | 7.25" X 8.94"       |
| "N" Series              | 3.50 Qt.             | 8.65"                    | 12.25" X 7"         |
| PERFORMER               | 1.50 Qt.             | 6.59"                    | 7.25" X 8.94"       |
| PERFORMER               | 2.75 Qt.             | 8.65"                    | 7.25" X 8.94"       |
| P224                    | 2.75 Qt.             | 8.65"                    | 7.25" X 8.94"       |
| RCKK-MS                 | 3.50 Qt.             | 8.65"                    | 12.25" X 7"         |
| T260G                   | 2.50 Qt.             | 7.50"                    | 7.25" X 8.94"       |

## COMPETITIVE ENGINES -

|         |        |
|---------|--------|
| KOHLER: |        |
| K582    | 7.50"  |
| MAGNUM  | 6.125" |
| BRIGGS  | 6.59"  |



# AJ, CK & L25-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

\*\*\*\*\*

AJ-S/1826F

-----SHORT BLOCK

|          |        |            |              |                    |
|----------|--------|------------|--------------|--------------------|
| CK-S/35K | MILLER | 1.625" TPR | CCKA-S/2769J | SEE NOTES 1, 2 & 3 |
| CK-S/35K | MILLER | 1.625" TPR | CCKA-S/3871J | SEE NOTES 1, 2 & 3 |

-----

|           |  |           |              |  |
|-----------|--|-----------|--------------|--|
| CK-S/199J |  | 1.500" ST | CCK-MS/3242J |  |
|-----------|--|-----------|--------------|--|

-----SHORT BLOCK

|              |  |           |             |  |
|--------------|--|-----------|-------------|--|
| L25-MS/2004A |  | 1.125" ST | SHORT BLOCK |  |
| L25-MS/2127A |  | 1.125" ST | SHORT BLOCK |  |
| L25-MS/2454A |  | 1.125" ST | SHORT BLOCK |  |
| L25-MS/2700B |  | 1.125" ST | SHORT BLOCK |  |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.

NOTE 2 - MILLER REPLACEMENTS MAY REQUIRE 2 EA OF THE FOLLOWING: (AVAILABLE THROUGH THE SERVICE PARTS DEPT.)

155-0484 MUFFLER  
331-0053 LOCKNUT  
505-0003 ELBOW  
505-0086 NIPPLE

NOTE 3 - CRANKSHAFT IS ADDER G65, 1.625" TAPER STUB X 2.25" TIP TO RR FACE OF BLOCK "GEN TAPER" (104-0882).

# CCK MISC. - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS   |
|------------------------|----------|--------------|---------------------------|------------|
| CCK-F/3302J            | -----    | -----        | -----                     | SAME       |
| CCK-MF/1542D           | STOCK    | 1.437" ST    | CCKA-MS/3345J             | SEE NOTE 3 |
| CCK-MF/2056            | -----    | 1.500" ST    | SHORT BLOCK               |            |
| CCK-MF/2208G           | -----    | 1.500" ST    | SAME(OR CCK-MS/1J)        | SEE NOTE 3 |
| CCK-MFV/835E           | -----    | 1.500" ST    | SHORT BLOCK               |            |
| CCK-3MG/3167J          | -----    | -----        | SHORT BLOCK               |            |
| CCK-3MG/3341J          | -----    | -----        | SAME                      | SEE NOTE 1 |
| CCK-4G/452J            | -----    | .985" ST     | SHORT BLOCK               | SEE NOTE 2 |
| CCK-4MG/477D           | -----    | .985" ST     | SHORT BLOCK               | SEE NOTE 2 |
| CCK-4MG/682F           | -----    | .985" ST     | SHORT BLOCK               | SEE NOTE 2 |
| CCK-13MC/117F          | -----    | 190-0222     | SHORT BLOCK               |            |

NOTE 1 - REPLACEMENT ENGINE LESS GEAR BOX. ENGINE DATA 1005-2065.

NOTE 2 - CRANKSHAFT IS ADDER G183, .985" ST SHAFT X 2.95" TIP TO RR FACE OF BLOCK "GEAR REDUCTION STUB"  
(104-0905).

NOTE 3 - CLUTCH NOT SUPPLIED ON REPLACEMENT ENGINE.



# CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS        |
|------------------------|----------|--------------|---------------------------|-----------------|
| *****                  |          |              |                           |                 |
| CCK-MS/1J              | MASTER   | 1.500" ST    | SAME                      |                 |
| CCK-MS/28J             | BLALOCK  | 1.500" ST    | -----                     |                 |
| CCK-MS/312E            | -----    | 1.500" ST    | CCK-MS/1J                 | SEE NOTE 10     |
| CCK-MS/393J            | McENTYRE | 1.500" ST    | -----                     |                 |
| CCK-MS/517             | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/556E            | -----    | 1.625" TPR   | SHORT BLOCK               |                 |
| CCK-MS/568E            | -----    | 1.500" ST    | -----                     |                 |
| CCK-MS/606F            | -----    | -----        | SHORT BLOCK               |                 |
| CCK-MS/610             | -----    | 1.625" TPR   | SHORT BLOCK               |                 |
| CCK-MS/629             | -----    | 1.500" ST    | CCK-MS/1J                 |                 |
| CCK-MS/637F            | -----    | 1.500" ST    | SHORT BLOCK               | OR STOCK ENGINE |
| CCK-MS/651F            | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/663F            | -----    | -----        | SHORT BLOCK               |                 |
| CCK-MS/675G            | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/693F            | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/695             | MILLER   | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1 & 2 |
| CCK-MS/696F            | -----    | 1.437" ST    | CCKA-MS/3345J             | SEE NOTE 10     |
| CCK-MS/734J            | -----    | -----        | SHORT BLOCK               |                 |
| CCK-MS/736             | MILLER   | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1 & 2 |
| CCK-MS/747F            | -----    | 1.625" ST    | SHORT BLOCK               | SEE NOTE 14     |
| CCK-MS/777F            | -----    | 1.125" ST    | SHORT BLOCK               |                 |
| CCK-MS/831F            | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/867F            | -----    | -----        | SHORT BLOCK               |                 |
| CCK-MS/931F            | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/1070F           | -----    | 1.625" ST    | SHORT BLOCK               |                 |
| CCK-MS/1095G           | -----    | 1.625" TPR   | SHORT BLOCK               |                 |
| CCK-MS/1096F           | -----    | 1.625" TPR   | SHORT BLOCK               |                 |
| CCK-MS/1097G           | -----    | 1.437" ST    | CCKA-MS/3345J             |                 |
| CCK-MS/1106            | MILLER   | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1 & 2 |
| CCK-MS/1108F           | -----    | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MS/1121F           | -----    | -----        | SHORT BLOCK               |                 |
| CCK-MS/1181F           | -----    | 1.125" ST    | SHORT BLOCK               |                 |
| CCK-MS/1187F           | -----    | -----        | SHORT BLOCK               |                 |

# CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER    | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS          |
|------------------------|-------------|--------------|---------------------------|-------------------|
| *****                  |             |              |                           |                   |
| CCK-MS/1196            | MILLER      | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1 & 2   |
| CCK-MS/1198G           | -----       | 1.625" ST    | SHORT BLOCK               | SEE NOTE 14       |
| CCK-MS/1204G           | -----       | -----        | SHORT BLOCK               | -----             |
| CCK-MS/1212F           | STOCK       | 1.437" ST    | CCKA-MS/3350J             | SEE NOTE 3        |
| CCK-MS/1216C           | -----       | 1.625" TPR   | SHORT BLOCK               | -----             |
| CCK-MS/1233G           | -----       | 1.625" TPR   | SHORT BLOCK               | -----             |
| CCK-MS/1236G           | -----       | 1.125" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1240G           | -----       | 1.625" TPR   | SHORT BLOCK               | -----             |
| CCK-MS/1241G           | THERMO KING | 1.625" TPR   | CCK-MS/2779J              | -----             |
| CCK-MS/1244G           | -----       | 1.625" ST    | SHORT BLOCK               | SEE NOTE 14       |
| CCK-MS/1247G           | WAYNE       | 1.125" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1250G           | -----       | -----        | SHORT BLOCK               | -----             |
| CCK-MS/1251G           | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1254G           | THERMO KING | 1.625" TPR   | CCK-MS/2857J              | -----             |
| CCK-MS/1256G           | -----       | -----        | SHORT BLOCK               | -----             |
| CCK-MS/1260G           | -----       | -----        | SHORT BLOCK               | -----             |
| CCK-MS/1286            | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1324C           | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1338            | THERMO KING | 1.500" ST    | CCK-MS/2747J              | SEE NOTE 1        |
| CCK-MS/1377G           | -----       | 1.625" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1378G           | -----       | 1.625" TPR   | CCK-MS/3182J              | -----             |
| CCK-MS/1380            | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1381G           | -----       | 1.500" ST    | CCK-MS/4280J              | SEE NOTE 12       |
| CCK-MS/1382G           | -----       | 1.500" ST    | CCK-MS/4067J              | -----             |
| CCK-MS/1395G           | WESTOASTER  | 1.625" ST    | SHORT BLOCK               | SEE NOTE 14       |
| CCK-MS/1396G           | -----       | -----        | -----                     | -----             |
| CCK-MS/1400G           | -----       | -----        | SHORT BLOCK               | -----             |
| CCK-MS/1420G           | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1450G           | MELROE      | 1.500" ST    | CCK-MS/4397J              | SEE NOTES 1 & 7   |
| CCK-MS/1456G           | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1450G           | -----       | 1.625" ST    | SHORT BLOCK               | SEE NOTE 14       |
| CCK-MS/1464G           | -----       | -----        | SHORT BLOCK               | -----             |
| CCK-MS/1483G           | -----       | 1.500" ST    | SHORT BLOCK               | -----             |
| CCK-MS/1487G           | -----       | -----        | -----                     | REF; CCK-MS/1400E |

# CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER                   | CRANK<br>DIA  | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|----------------------------|---------------|---------------------------|--------------------|
| *****                  | *****                      | *****         | *****                     | *****              |
| CCK-MS/1500G           | -----1.500" ST             | CCKA-MS/3373J |                           |                    |
| CCK-MS/1522G           | -----1.500" ST             | SHORT BLOCK   |                           |                    |
| CCK-MS/1548            | NAMCO 1.500" ST            | CCK-MS/2734J  |                           | SEE NOTES 1 & 8    |
| CCK-MS/1552            | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/1573G           | -----1.500" ST             | SHORT BLOCK   |                           |                    |
| CCK-MS/1578G           | -----1.500" ST             | CCKA-MS/2762J |                           |                    |
| CCK-MS/1610G           | -----1.500" ST             | SHORT BLOCK   |                           |                    |
| CCK-MS/1689G           | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/1778G           | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/1871G           | NAMCO 1.500" ST            | CCK-MS/2735J  |                           | SEE NOTES 1 & 9    |
| CCK-MS/1872            | NAMCO 1.500" ST            | CCK-MS/2734J  |                           | SEE NOTES 1 & 8    |
| CCK-MS/1879G           | THERMO KING 1.625" TPR     | SHORT BLOCK   |                           | SEE NOTE 16        |
| CCK-MS/1881C           | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/1985J           | EQUIPMENT SALES 1.500" ST  | -----         |                           |                    |
| CCK-MS/2031G           | NAMCO 1.500" ST            | CCK-MS/2735J  |                           | SEE NOTES 1 & 9    |
| CCK-MS/2032G           | NAMCO 1.500" ST            | CCK-MS/2734J  |                           | SEE NOTES 1 & 8    |
| CCK-MS/2085G           | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/2111            | GRAVELLY 1.125" ST         | CCK-MS/3612J  |                           | SEE NOTES 1, 4 & 5 |
| CCK-MS/2126G           | U.S. ARMY TSC 1.500" ST    | -----         |                           |                    |
| CCK-MS/2158G           | -----104-0638              | SHORT BLOCK   |                           |                    |
| CCK-MS/2171G           | -----1.625" ST             | SHORT BLOCK   |                           |                    |
| CCK-MS/2235            | -----                      | SAME          |                           |                    |
| CCK-MS/2236G           | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/2270J           | MENGE 1.500" ST            | CCK-MS/3397J  |                           |                    |
| CCK-MS/2261            | -----                      | SHORT BLOCK   |                           |                    |
| CCK-MS/2313J           | ELECTRICAL CONST 1.500" ST | SAME          |                           |                    |
| CCK-MS/2326G           | NAMCO 1.500" ST            | CCK-MS/2734J  |                           | SEE NOTES 1 & 8    |
| CCK-MS/2327G           | NAMCO 1.500" ST            | CCK-MS/2735J  |                           | SEE NOTES 1 & 9    |
| CCK-MS/2485G           | -----1.500" ST             | SHORT BLOCK   |                           |                    |
| CCK-MS/2508            | NAMCO 1.500" ST            | CCK-MS/2734J  |                           | SEE NOTES 1 & 8    |
| CCK-MS/2509G           | NAMCO 1.500" ST            | CCK-MS/2735J  |                           | SEE NOTES 1 & 9    |
| CCK-MS/2567            | GRAVELLY 1.125" ST         | CCK-MS/3612J  |                           | SEE NOTES 1, 4 & 5 |
| CCK-MS/2593G           | THERMO KING 1.625" TPR     | CCK-MS/2752J  |                           | SEE NOTE 16        |
| CCK-MS/2667            | -----                      | SHORT BLOCK   |                           |                    |

# CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER      | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|---------------|--------------|---------------------------|--------------------|
| *****                  | *****         | *****        | *****                     | *****              |
| CCK-MS/2677            | MILLER        | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1 & 2    |
| CCK-MS/2716J           | BLALOCK       | 1.500" ST    | -----                     | -----              |
| CCK-MS/2734J           | NAMCO         | 1.500" ST    | SAME                      | SEE NOTES 1 & 8    |
| CCK-MS/2735J           | NAMCO         | 1.500" ST    | SAME                      | SEE NOTES 1 & 9    |
| CCK-MS/2736J           | -----         | -----        | SHORT BLOCK               | -----              |
| CCK-MS/2740J           | C & M POWER   | 1.625" TPR   | -----                     | -----              |
| CCK-MS/2743J           | -----         | -----        | SHORT BLOCK               | -----              |
| CCK-MS/2747J           | THERMO KING   | 1.500" ST    | SAME                      | SEE NOTE 1         |
| CCK-MS/2752J           | THERMO KING   | 1.625" TPR   | SAME                      | SEE NOTE 16        |
| CCK-MS/2755J           | THERMO KING   | 1.625" TPR   | CCK-MS/2788J              | SEE NOTE 16        |
| CCK-MS/2756J           | THERMO KING   | 1.625" TPR   | CCK-MS/3182J              | -----              |
| CCK-MS/2760J           | WINTER ENGINE | 1.500" ST    | -----                     | -----              |
| CCK-MS/2763J           | MCENTYRE INC. | 1.500" ST    | -----                     | -----              |
| CCK-MS/2767J           | THERMO KING   | 1.625" TPR   | CCK-MS/3182J              | SEE NOTE 16        |
| CCK-MS/2774J           | THERMO KING   | 1.625" TPR   | SHORT BLOCK               | SEE NOTE 16        |
| CCK-MS/2779J           | THERMO KING   | 1.625" TPR   | -----                     | SEE NOTE 13        |
| CCK-MS/2785J           | THERMO KING   | 1.625" TPR   | CCK-MS/3525J              | SEE NOTE 13        |
| CCK-MS/2787J           | THERMO KING   | 1.625" ST    | CCK-MS/3229J              | SEE NOTE 16        |
| CCK-MS/2788J           | THERMO KING   | 1.625" TPR   | -----                     | SEE NOTE 16        |
| CCK-MS/2789J           | THERMO KING   | 1.625" TPR   | SHORT BLOCK               | SEE NOTE 13        |
| CCK-MS/2799J           | MFCO          | 1.500" ST    | -----                     | -----              |
| CCK-MS/2804J           | THERMO KING   | 1.625" TPR   | CCK-MS/3525J              | -----              |
| CCK-MS/2808J           | THERMO KING   | 1.625" TPR   | SHORT BLOCK               | SEE NOTE 13        |
| CCK-MS/2813            | GRAVELY       | 1.125" ST    | CCK-MS/3612J              | SEE NOTES 1, 4 & 5 |
| CCK-MS/2817J           | THERMO KING   | 1.625" TPR   | SHORT BLOCK               | SEE NOTE 13        |
| CCK-MS/2822J           | CONCO INC     | 1.500" ST    | CCK-MS/4280J              | -----              |
| CCK-MS/2857J           | THERMO KING   | 1.625" TPR   | -----                     | SEE NOTE 13        |
| CCK-MS/2866J           | MELROE        | 1.500" ST    | CCK-MS/4397J              | -----              |
| CCK-MS/2883J           | WINTER ENGINE | 1.500" ST    | -----                     | -----              |
| CCK-MS/2890J           | C.S.C.        | 1.500" ST    | -----                     | -----              |
| CCK-MS/2893J           | THERMO KING   | 1.625" TPR   | SHORT BLOCK               | SEE NOTE 16        |
| CCK-MS/2925J           | CLYMAR        | 1.500" ST    | -----                     | -----              |
| CCK-MS/2932J           | CAL WEST      | 1.500" ST    | -----                     | -----              |
| CCK-MS/2967J           | C.S.C.        | 1.500" ST    | -----                     | -----              |

# CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|------------------|--------------|---------------------------|--------------------|
| *****                  |                  |              |                           |                    |
| CCK-MS/2988J           | C.S.C.           | 1.500" ST    | -----                     |                    |
| CCK-MS/3039J           | EKSTRONS         | 1.500" ST    | -----                     |                    |
| CCK-MS/3110            | GRAVELLY         | 1.125" ST    | CCK-MS/3612J              | SEE NOTES 1, 4 & 5 |
| CCK-MS/3114J           | C.S.C.           | 1.500" ST    | -----                     |                    |
| CCK-MS/3182J           | THERMO KING      | 1.625" TPR   | SAME                      | SEE NOTES 1 & 16   |
| CCK-MS/3183J           | THERMO KING      | 1.625" TPR   | SHORT BLOCK               | SEE NOTE 16        |
| CCK-MS/3187J           | DIEM             | 1.500" ST    | -----                     |                    |
| CCK-MS/3211J           | MCENTYRE         | 1.500" ST    | -----                     |                    |
| CCK-MS/3216J           | G.I.T.           | 1.500" ST    | -----                     |                    |
| CCK-MS/3226J           | BURLEC           | 1.500" ST    | -----                     |                    |
| CCK-MS/3229J           | THERMO KING      | 1.625" ST    | SAME                      | SEE NOTE 16        |
| CCK-MS/3242J           | RONCO            | 1.500" ST    | SAME                      |                    |
| CCK-MS/3259J           | BURLEC           | 1.500" ST    | -----                     |                    |
| CCK-MS/3291J           | ESCO             | 1.625" TPR   | -----                     | SEE NOTE 15        |
| CCK-MS/3304J           | LAND UND MARINE  | 1.500" ST    | -----                     |                    |
| CCK-MS/3312J           | SVC. AUTO. WHSE. | 1.500" ST    | -----                     |                    |
| CCK-MS/3325J           | INST OF TOSITSA  | 1.500" ST    | -----                     |                    |
| CCK-MS/3339J           | THERMO KING      | 1.625" TPR   | CCK-MS/3525J              | SEE NOTE 13        |
| CCK-MS/3342J           | FORCES           | 1.500" ST    | -----                     |                    |
| CCK-MS/3343J           | ELECTRICAL CONST | 1.500" ST    | -----                     |                    |
| CCK-MS/3354J           | RONCO            | 1.500" ST    | -----                     |                    |
| CCK-MS/3397J           | MENCE            | 1.500" ST    | -----                     | SEE CCK-MS/2270J   |
| CCK-MS/3462J           | ELECTRICAL CONST | 1.500" ST    | CCKA-MS/2750J             | SEE NOTE 11        |
| CCK-MS/3496J           | TRIDENT          | 1.625" TPR   | -----                     | SEE NOTE 15        |
| CCK-MS/3505J           | ESCO             | 1.500" ST    | -----                     |                    |
| CCK-MS/3506J           | BLALOCK          | 1.500" ST    | SHORT BLOCK               |                    |
| CCK-MS/3514J           | MECELEC          | 1.500" ST    | -----                     |                    |
| CCK-MS/3517J           | RONCO            | 1.500" ST    | -----                     |                    |
| CCK-MS/3525J           | THERMO KING      | 1.625" TPR   | SAME                      | SEE NOTE 13        |
| CCK-MS/3526J           | ESCO             | 1.500" ST    | -----                     |                    |
| CCK-MS/3546J           | GEN POWER        | 1.500" ST    | -----                     |                    |
| CCK-MS/3612J           | GRAVELLY         | 1.125" ST    | SAME                      | SEE NOTE 1         |
| CCK-MS/3612J           | GRAVELLY         | 1.125" ST    | B48G-GA020/4431G          | SEE NOTE 6         |
| CCK-MS/3657J           | THERMO KING      | 1.625" TPR   | -----                     | SEE NOTE 16        |

# CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER       | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS             |
|------------------------|----------------|--------------|---------------------------|----------------------|
| CCK-MS/3699J           | RONCO          | 1.500" ST    | -----                     | *****                |
| CCK-MS/3719J           | THERMO KING    | 1.625" TPR   | -----                     | SEE NOTE 13          |
| CCK-MS/3720J           | THERMO KING    | 1.500" ST    | -----                     | -----                |
| CCK-MS/3721J           | THERMO KING    | 1.625" TPR   | -----                     | SEE NOTE 16          |
| CCK-MS/3722J           | THERMO KING    | 1.625" TPR   | -----                     | SEE NOTE 16          |
| CCK-MS/3745J           | RONCO          | 1.500" ST    | -----                     | -----                |
| CCK-MS/3753J           | HARRISON       | 1.500" ST    | -----                     | -----                |
| CCK-MS/3791J           | RONCO          | 1.500" ST    | SAME                      | -----                |
| CCK-MS/3838J           | BLALOCK        | 1.500" ST    | SAME                      | -----                |
| CCK-MS/3852J           | MGR EQUIP CORP | 1.500" ST    | SAME                      | NSN:2805-01-117-1970 |
| CCK-MS/3854J           | STOCK          | 1.437" ST    | SAME                      | -----                |
| CCK-MS/3885J           | TRIDENT        | 1.500" ST    | -----                     | -----                |
| CCK-MS/3922J           | BLALOCK        | 13 T/SAE A   | -----                     | -----                |
| CCK-MS/3949J           | WESTERBEKE     | 1.500" ST    | -----                     | -----                |
| CCK-MS/4011J           | THERMO KING    | 1.500" ST    | SAME                      | -----                |
| CCK-MS/4067J           | CAL WEST       | 1.500" ST    | -----                     | -----                |
| CCK-MS/4280J           | CAL WEST       | 1.500" ST    | -----                     | -----                |
| CCK-MS/4397J           | A & I DIST.    | 1.500" ST    | SAME                      | -----                |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.

NOTE 2 - MILLER REPLACEMENTS MAY REQUIRE 2 EA OF THE FOLLOWING: (AVAILABLE THROUGH THE SERVICE PARTS DEPT.)

155-0484 MUFFLER  
331-0053 LOCKNUT  
505-0003 ELBOW  
505-0086 NIPPLE

NOTE 3 - REPLACEMENT ENGINE IS THE STOCK ENGINE AS LISTED IN L-740L.

NOTE 4 - MAY REQUIRE EXHAUST SYSTEM (ONAN) AND DRIVE GEARS, ETC (GRAVELY).

NOTE 5 - MAY REQUIRE 149-1384 FUEL PUMP.

NOTE 6 - REPLACEMENT ENGINE DELIVERS MORE POWER. REQUIRES EXHAUST SYSYTEM FROM GRAVELY.

NOTE 7 - MAY REQUIRE 193-0108 SENDING UNIT.

NOTE 8 - REPLACEMENT ENGINE IS SET UP FOR PROPANE FUELING.

NOTE 9 - REPLACEMENT ENGINE IS SET UP FOR GASOLINE FUELING.

NOTE 10 - REPLACEMENT ENGINE IS CLOSE TO ORIGINAL SPEC. CHECK FISCHE FOR DIFFERENCES.

NOTE 11 - MAY REQUIRE CONTROL PANEL.

CCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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 NOTE 12 - REPLACEMENT ENGINE HAS A68 PRESSURE LINE.  
 NOTE 13 - C/SHAFT IS ADDER G25, 1.625" TAPER SIUB X 2.25" TIP TO RR FACE OF BLOCK \* SIM TO G65 (104-0275).  
 NOTE 14 - C/SHAFT IS ADDER G31, 1.625" ST SHAFT X 2.75" TIP TO RR FACE OF BLOCK, WARNER T-96 (104-0877).  
 NOTE 15 - C/SHAFT IS ADDER G65, 1.625" TAPER SIUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).  
 NOTE 16 - C/SHAFT IS ADDER G111, 1.625" TAPER SIUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0601).  
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# CCK-MSV/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS        |
|------------------------|----------|--------------|---------------------------|-----------------|
| CCK-MSV/427E           |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/562E           |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/675F           |          | 1.500" ST    | -----                     |                 |
| CCK-MSV/775            | MELROE   | 1.500" ST    | CCK-MS/4397J              | SEE NOTES 1 & 2 |
| CCK-MSV/778F           |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/885            | MELROE   | 1.500" ST    | CCK-MS/4397J              | SEE NOTES 1 & 2 |
| CCK-MSV/913F           |          | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MSV/929            | MELROE   | 1.500" ST    | CCK-MS/4397J              | SEE NOTES 1 & 2 |
| CCK-MSV/975F           |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/1060F          | MELROE   | 1.500" ST    | CCK-MS/4397J              | SEE NOTES 1 & 2 |
| CCK-MSV/1061F          |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/1069F          |          | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MSV/1075F          | NAMOO    | 1.500" ST    | CCK-MS/2734J              | SEE NOTE 4      |
| CCK-MSV/1076F          | NAMOO    | 1.500" ST    | CCK-MS/2735J              | SEE NOTE 3      |
| CCK-MSV/1129           | MELROE   | 1.500" ST    | CCK-MS/4397J              | SEE NOTES 1 & 2 |
| CCK-MSV/1202G          |          | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MSV/1203G          |          | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MSV/1229G          |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/1344           | MELROE   | 1.500" ST    | CCK-MS/4397J              | SEE NOTE 1      |
| CCK-MSV/1404G          |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/1451G          |          | 1.500" ST    | SHORT BLOCK               |                 |
| CCK-MSV/1474G          | NAMOO    | 1.500" ST    | CCK-MS/2734J              | SEE NOTE 4      |
| CCK-MSV/1475G          | NAMOO    | 1.500" ST    | CCK-MS/2735J              | SEE NOTES 1 & 3 |
| CCK-MSV/1476G          |          |              | -----SHORT BLOCK          |                 |
| CCK-MSV/1548G          | NAMOO    | 1.500" ST    | CCK-MS/2734J              | SEE NOTE 4      |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.  
 NOTE 2 - MAY REQUIRE A P/N 193-0108, OIL PRESSURE SENDING UNIT (AVAILABLE THROUGH THE SERVICE PARTS DEPT.).  
 NOTE 3 - REPLACEMENT ENGINE IS SET UP FOR GASOLINE FUELING.  
 NOTE 4 - REPLACEMENT ENGINE IS SET UP FOR GASEOUS FUELING (PROPANE).



# CKK-S/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS        |
|------------------------|------------------|--------------|---------------------------|-----------------|
| CKK-S/27J              | ANDERSON         | 1.500" ST    | SAME                      |                 |
| CKK-S/28J              | ESCO             | 1.500" ST    | CKK-S/3337J               |                 |
| CKK-S/29J              | C & J            | 1.500" ST    | -----                     |                 |
| CKK-S/259B             | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/364C             | -----            | -----        | SHORT BLOCK               |                 |
| CKK-S/397C             | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/422C             | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/435              | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/475B             | -----            | -----        | -----                     |                 |
| CKK-S/509F             | -----            | 1.500" ST    | SHORT BLOCK               |                 |
| CKK-S/531D             | -----            | -----        | SHORT BLOCK               |                 |
| CKK-S/538E             | -----            | -----        | SHORT BLOCK               |                 |
| CKK-S/694              | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/735              | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/797              | LINCOLN          | 1.625" TPR   | CKKA-S/3522J              | SEE NOTE 1      |
| CKK-S/816F             | -----            | -----        | SHORT BLOCK               |                 |
| CKK-S/883F             | -----            | 1.500" ST    | SAME                      |                 |
| CKK-S/1107             | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/1195             | MILLER           | 1.625" TPR   | CKKA-S/2769J              | SEE NOTES 1 & 2 |
| CKK-S/1135G            | GORMAN RUPP      | -----        | SHORT BLOCK               |                 |
| CKK-S/1230F            | -----            | -----        | SHORT BLOCK               |                 |
| CKK-S/1246J            | LIGHTBOURN       | 1.500" ST    | CKK-S/2806J               |                 |
| CKK-S/1319G            | -----            | 1.250" ST    | SHORT BLOCK               |                 |
| CKK-S/1470             | DISTRAGEN        | 1.500" ST    | CKKA-S/2832J              |                 |
| CKK-S/1570             | LINCOLN          | 1.625" TPR   | CKKA-S/3522J              | SEE NOTE 1      |
| CKK-S/1769G            | AKSA             | 1.625" TPR   | -----                     | SEE NOTE 3      |
| CKK-S/1776             | -----            | -----        | SHORT BLOCK               |                 |
| CKK-S/1982G            | -----            | 1.625" TPR   | CKKA-MS/3176J             |                 |
| CKK-S/2583             | LINCOLN          | 1.625" TPR   | CKKA-S/3522J              |                 |
| CKK-S/2738J            | QUATAR PETROLEUM | 1.500" ST    | SAME                      |                 |
| CKK-S/2806J            | HARRISON         | 1.500" ST    | SAME                      |                 |
| CKK-S/2894J            | WALES METAL PROD | 1.500" ST    | SAME                      | SEE NOTE 5      |
| CKK-S/3337J            | MECO             | 1.500" ST    | SAME                      |                 |

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# CCK-S/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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|             |                |            |      |            |
|-------------|----------------|------------|------|------------|
| CCK-S/3579J | AKSA           | 1.625" TPR | SAME | SEE NOTE 3 |
| CCK-S/4008J | MATHEY MACHINE | .985" ST   | SAME | SEE NOTE 4 |
| CCK-S/4092J | MECO           | 1.625" TPR | SAME | SEE NOTE 3 |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.

NOTE 2 - MILLER REPLACEMENTS MAY REQUIRE 2 EA OF THE FOLLOWING: (AVAILABLE THROUGH THE SERVICE PARTS DEPT.)

155-0484 MUFFLER  
331-0053 LOCKNUT  
505-0003 ELBOW  
505-0086 NIPPLE

NOTE 3 - C/SHAFT IS ADDER G65, 1.625" TAPER STUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).

NOTE 4 - C/SHAFT IS ADDER G183, .985" ST SHAFT X 2.95" TIP TO RR FACE OF BLOCK, GEAR REDUCTION (104-0905).

NOTE 5 - C/SHAFT IS ADDER D14, 1.50" ST SHAFT X 4.00" TIP TO RR FACE OF BLOCK, ROCKFORD CLUTCH (104-0913).

# CCKA MISC. - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS        |
|------------------------|-----------------|--------------|---------------------------|-----------------|
| *****                  |                 |              |                           |                 |
| CCKA-F/1736G           | -----           | 1.500" ST    | SHORT BLOCK               |                 |
| CCKA-MF/1530           | -----           | 1.500" ST    | SHORT BLOCK               |                 |
| CCKA-MF/1824G          | -----           | 1.500" ST    | SHORT BLOCK               |                 |
| CCKA-MF/2921J          | HARRISON        | 1.500" ST    | CCKA-MF/3927J             | SEE NOTES 3 & 5 |
| CCKA-MF/3165J          | STIMSON MAXWELL | 1.500" ST    | -----                     | SEE NOTE 4      |
| CCKA-MF/3173J          | FLAHERTY        | 1.500" ST    | -----                     | SEE NOTE 4      |
| CCKA-MF/3359J          | ELECTRIC CONST. | 1.500" ST    | -----                     | SEE NOTE 4      |
| CCKA-MF/3385J          | OWSLEY          | 1.500" ST    | -----                     | SEE NOTE 4      |
| CCKA-MF/3667J          | TULLER          | 1.500" ST    | -----                     | SEE NOTE 4      |
| CCKA-MF/3717J          | AKSA            | 1.500" ST    | -----                     | SEE NOTE 4      |
| CCKA-MF/3771J          | TULLER          | 1.500" ST    | SHORT BLOCK               | SEE NOTE 4      |
| CCKA-MF/3805           | CLYMAR          | 1.625" ST    | CCKA-MF/3927J             | SEE NOTE 1      |
| CCKA-MF/3927J          | CLYMAR          | 1.625" ST    | SAME                      | SEE NOTE 1      |
| CCKA-MF/4003J          | TULLER          | 1.625" TPR   | -----                     | SEE NOTE 2      |
| CCKA-3MG/3739J         | TULLER          | .985" ST     | SHORT BLOCK               | SEE NOTE 3      |
| CCKA-3MG/4005J         | MECELEC         | .985" ST     | SHORT BLOCK               | SEE NOTE 3      |

NOTE 1 - C/SHAFT IS ADDER G31, 1.625" ST SHAFT X 2.75" TIP TO RR FACE OF BLOCK, WARNER T-96 (104-0877).  
 NOTE 2 - C/SHAFT IS ADDER G65, 1.625" TAPER STUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).  
 NOTE 3 - C/SHAFT IS ADDER G183, .985" ST SHAFT X 2.95" TIP TO RR FACE OF BLOCK, GEAR REDUCTION (104-0905).  
 NOTE 4 - C/SHAFT IS ADDER D14, 1.50" ST SHAFT X 4.00" TIP TO RR FACE OF BLOCK, ROCKFORD CLUTCH (104-0913).  
 NOTE 5 - MAY REQUIRE 542-7022 MUFFLER.

CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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|               |            |            |               |  |
|---------------|------------|------------|---------------|--|
| CCKA-MS/1     | SPEC 1     | 1.500" ST  | SAME          |  |
| CCKA-MS/1091G |            |            | SHORT BLOCK   |  |
| CCKA-MS/1274  |            |            | SHORT BLOCK   |  |
| CCKA-MS/1308G |            |            | SHORT BLOCK   |  |
| CCKA-MS/1381G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1400  |            |            | SHORT BLOCK   |  |
| CCKA-MS/1522  |            |            | SHORT BLOCK   |  |
| CCKA-MS/1552G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1578G |            | 1.500" ST  | CCKA-MS/2762J |  |
| CCKA-MS/1610G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1637G |            |            | SHORT BLOCK   |  |
| CCKA-MS/1698G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1715G |            | 1.000" ST  | SHORT BLOCK   |  |
| CCKA-MS/1717G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1736  |            |            | SAME          |  |
| CCKA-MS/1772G |            | 1.500" ST  | CCKA-MS/3777J |  |
| CCKA-MS/1773G |            | 1.500" ST  | CCKA-MS/3741J |  |
| CCKA-MS/1814G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1816G |            | 1.000" ST  | SHORT BLOCK   |  |
| CCKA-MS/1828  |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1831  | GRAVELLY   | .876" ST   | SHORT BLOCK   |  |
| CCKA-MS/1880G |            | 1.500" ST  | SHORT BLOCK   |  |
| CCKA-MS/1905G |            |            | SHORT BLOCK   |  |
| CCKA-MS/1906G |            |            | SHORT BLOCK   |  |
| CCKA-MS/1912C |            |            | SHORT BLOCK   |  |
| CCKA-MS/1949G |            | .876" ST   | SHORT BLOCK   |  |
| CCKA-MS/1991G |            |            | SHORT BLOCK   |  |
| CCKA-MS/2022G |            | 1.000" ST  | CCKA-MS/3004J |  |
| CCKA-MS/2023  |            | 1.000" ST  | CCKA-MS/3010J |  |
| CCKA-MS/2026G | SIMPLICITY | 1.437" ST  | CCKB-MS/2733J |  |
| CCKA-MS/2030G | NICKEL     | 104-0706   | SHORT BLOCK   |  |
| CCKA-MS/2043G | G.L.T.     | .876" ST   | SHORT BLOCK   |  |
| CCKA-MS/2052  | MILLER     | 1.625" TPR | CCKA-MS/2748J |  |

SEE NOTES 1, 5 & 12

SEE NOTES 1 & 2

# CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                |
|------------------------|------------------|--------------|---------------------------|-------------------------|
| *****                  | *****            | *****        | *****                     | *****                   |
| CCKA-MS/2085G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2094G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2117G          | MILLER           | 1.625" TPR   | CCKA-MS/2778J             | SEE NOTES 1 & 2         |
| CCKA-MS/2123G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2159G          | -----            | 1.625" ST    | SHORT BLOCK               | SEE NOTE 11             |
| CCKA-MS/2165G          | G.L.T.           | .876" ST     | SHORT BLOCK               |                         |
| CCKA-MS/2220           | MILLER           | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1 & 2         |
| CCKA-MS/2222G          | -----            | 1 7/16" ST   | CCKA-MS/3566J             | SEE NOTE 12             |
| CCKA-MS/2229G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2237G          | MILLER           | 1.625" TPR   | CCKA-MS/2748J             | SEE NOTES 1, 2 & 11     |
| CCKA-MS/2240           | -----            | -----        | SAME                      |                         |
| CCKA-MS/2244G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2260G          | -----            | 1.625" ST    | SHORT BLOCK               | SEE NOTE 10             |
| CCKA-MS/2265           | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2270J          | SIDERICOUDIS     | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2299           | MILLER           | 1.625" TPR   | CCKA-MS/2778J             | SEE NOTES 1, 2 & 11     |
| CCKA-MS/2313J          | LAND UND MARINE  | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2316G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2335G          | -----            | -----        | SAME                      |                         |
| CCKA-MS/2426G          | -----            | 1.625" ST    | SHORT BLOCK               | SEE NOTE 10             |
| CCKA-MS/2432G          | MATERIAL MOVEM'T | 1.000" ST    | CCKA-MS/3004J             |                         |
| CCKA-MS/2437A          | MATERIAL MOVEM'T | 1.000" ST    | CCKA-MS/3010J             |                         |
| CCKA-MS/2481G          | -----            | 1.437" ST    | CCKA-MS/3566J             | SEE NOTE 14             |
| CCKA-MS/2506G          | -----            | 1.625" ST    | SHORT BLOCK               | SEE NOTE 10             |
| CCKA-MS/2507G          | WEST COAST MCHY. | 1.625" ST    | SHORT BLOCK               | SEE NOTE 10             |
| CCKA-MS/2523           | -----            | 1.500" ST    | SHORT BLOCK               |                         |
| CCKA-MS/2550G          | -----            | -----        | SAME                      |                         |
| CCKA-MS/2561           | -----            | 1.500" ST    | CCKA-MS/2751J             |                         |
| CCKA-MS/2603G          | -----            | -----        | SHORT BLOCK               |                         |
| CCKA-MS/2694G          | -----            | 1.500" ST    | CCKA-MS/3096J             | SEE NOTE 9              |
| CCKA-MS/2714G          | -----            | -----        | CCKA-MS/3835J             |                         |
| CCKA-MS/2741J          | WINTER ENGINE    | 1.500" ST    | CCKA-MS/3741J             |                         |
| CCKA-MS/2743J          | WIKEL MFG CO     | 1.500" ST    | SHORT BLOCK               |                         |
| CCKA-MS/2748J          | MILLER           | 1.625" TPR   | SAME                      | SEE NOTES 1, 2, 11 & 16 |

CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                |
|------------------------|------------------|--------------|---------------------------|-------------------------|
| *****                  | *****            | *****        | *****                     | *****                   |
| CCKA-MS/2750J          | STOCK            | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2751J          | STOCK            | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2754J          | MATERIAL MOVEM'T | 1.000" ST    | CCKA-MS/3004J             |                         |
| CCKA-MS/2757J          | MATERIAL MOVEM'T | 1.000" ST    | CCKA-MS/3010J             |                         |
| CCKA-MS/2762J          | HUNT PIERCE      | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2772J          | SIDERICAUDIS     | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2773J          | SIDERICAUDIS     | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2778J          | MILLER           | 1.625" TPR   | SAME                      | SEE NOTES 1, 2, 11 & 17 |
| CCKA-MS/2781J          | LIGHTBOURN       | 1.500" ST    | SHORT BLOCK               |                         |
| CCKA-MS/2783J          | MECO             | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2790J          | F.A.S.           | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2802J          | OTIS MATERIAL    | 1.625" ST    | SHORT BLOCK               | SEE NOTE 10             |
| CCKA-MS/2803J          | J. I. CASE       | 1.437" ST    | CCKA-MS/3566J             | SEE NOTE 14             |
| CCKA-MS/2813J          | GRAVELY          | 1.125" ST    | CCKA-MS/3612J             | SEE NOTE 13             |
| CCKA-MS/2818J          | SCOTT IND.       | 1.500" ST    | CCKA-MS/3096J             |                         |
| CCKA-MS/2826J          | DISTRAGEN        | 1.500" ST    | CCKA-MS/3373J             |                         |
| CCKA-MS/2868J          | WIEDERT MFG      | 1.500" ST    | SHORT BLOCK               |                         |
| CCKA-MS/2869J          | WIEDERT MFG      | 1.500" ST    | SHORT BLOCK               |                         |
| CCKA-MS/2881J          | PEZETEL          | 1.500" ST    | SAME                      |                         |
| CCKA-MS/2885J          | MARK IND.        | 1.500" ST    | SHORT BLOCK               |                         |
| CCKA-MS/2910J          | WINTER ENGINE    | 1.500" ST    | CCKA-MS/3777J             |                         |
| CCKA-MS/2939J          | AKSA             | 1.625" TPR   | -----                     | SEE NOTE 11             |
| CCKA-MS/2942J          | DISTRAGEN        | 1.500" ST    | -----                     |                         |
| CCKA-MS/2944J          | SELMEC           | 1.500" ST    | -----                     |                         |
| CCKA-MS/2956J          | J. C. SCHULTZ    | 1.500" ST    | -----                     |                         |
| CCKA-MS/2966J          | CARROLL STUART   | 1.500" ST    | -----                     |                         |
| CCKA-MS/2982J          | OTIS MATERIAL    | 1.625" ST    | SHORT BLOCK               | SEE NOTE 10             |
| CCKA-MS/3004J          | MATERIAL MOVM'T  | 1.000" ST    | SAME                      |                         |
| CCKA-MS/3007J          | ESCO             | 1.500" ST    | -----                     |                         |
| CCKA-MS/3010J          | MATERIAL MOVM'T  | 1.000" ST    | SAME                      |                         |
| CCKA-MS/3017J          | SELMEC           | 1.500" ST    | -----                     |                         |
| CCKA-MS/3023J          | MARK IND.        | 1.500" ST    | CCKB-MS/4006J             |                         |
| CCKA-MS/3027J          | MECANO           | 1.625" TPR   | -----                     | SEE NOTE 11             |
| CCKA-MS/3036J          | UNION CARBIDE    | 1.500" ST    | SAME                      | SEE NOTE 15             |

CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS            |
|------------------------|------------------|--------------|---------------------------|---------------------|
| CCKA-MS/3037J          | MENGE            | 1.500" ST    |                           |                     |
| CCKA-MS/3043J          | DISTRAGEN        | 1.500" ST    | CCKA-MS/3175J             |                     |
| CCKA-MS/3044J          | DISTRAGEN        | 1.500" ST    |                           |                     |
| CCKA-MS/3047J          | SCOTT IND.       | 1.500" ST    |                           |                     |
| CCKA-MS/3050J          | DISTRAGEN        | 1.500" ST    |                           |                     |
| CCKA-MS/3060J          | SIM HOLLAND      | 1.500" ST    |                           |                     |
| CCKA-MS/3090J          | FLAHERTY         | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3096J          | SCOTT IND.       | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3106J          | LINCOLN          | 1.625" TPR   |                           | SEE NOTE 11         |
| CCKA-MS/3108J          | ESCO             | 13 T/SAE B   |                           |                     |
| CCKA-MS/3110J          | GRAVELLY         | 1.125" ST    | CCKA-MS/3612J             | SEE NOTES 1, 8 & 13 |
| CCKA-MS/3119J          | R. B. GROVE      | 1.500" ST    |                           |                     |
| CCKA-MS/3148J          | C. S. C.         | 1.625" TPR   |                           | SEE NOTE 11         |
| CCKA-MS/3175J          | DISTRAGEN        | 1.500" ST    |                           |                     |
| CCKA-MS/3176J          |                  | 1.625" TPR   | SAME                      | SEE NOTE 11         |
| CCKA-MS/3197J          | SCOTT IND.       | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3200J          | GEN. UNLIMITED   | 1.500" ST    |                           |                     |
| CCKA-MS/3255J          | LAND UND MARINE  | 1.500" ST    |                           |                     |
| CCKA-MS/3275J          | AMERICAN AR/FLTR | 1.500" ST    | CCKA-MS/4319J             |                     |
| CCKA-MS/3277J          | MECO             | 1.500" ST    | SHORT BLOCK               |                     |
| CCKA-MS/3311J          | G.L.T.           | 1.500" ST    |                           |                     |
| CCKA-MS/3317J          | C.S.C.           | 1.625 TPR    | SHORT BLOCK               | SEE NOTE 11         |
| CCKA-MS/3330J          | LAND UND MARINE  | 1.500" ST    |                           |                     |
| CCKA-MS/3345J          | STOCK            | 1.437" ST    | SAME                      | SEE NOTES 6 & 12    |
| CCKA-MS/3350J          | STOCK            | 1.437" ST    | SAME                      | SEE NOTES 6, 7 & 12 |
| CCKA-MS/3370J          | FORCES           | 1.500" ST    |                           |                     |
| CCKA-MS/3373J          | DISTRAGEN        | 1.500" ST    |                           |                     |
| CCKA-MS/3380J          | CAL WEST         | 1.500" ST    |                           |                     |
| CCKA-MS/3389J          | FORCES           | 1.500" ST    |                           |                     |
| CCKA-MS/3407J          | DIEM             | 1.500" ST    |                           |                     |
| CCKA-MS/3426J          | LIGHTBOURN       | 1.500" ST    |                           |                     |
| CCKA-MS/3451J          | HECK             | 1.437" ST    |                           | SEE NOTE 12         |
| CCKA-MS/3459J          | AKSA             | 1.625 TPR    |                           | SEE NOTE 11         |
| CCKA-MS/3460J          | SEIMEC           | 1.500" ST    | SAME                      |                     |

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# CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER      | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS            |
|------------------------|---------------|--------------|---------------------------|---------------------|
| *****                  | *****         | *****        | *****                     | *****               |
| CCKA-MS/3465J          | LIGHTBOURN    | 1.500" ST    | -----                     |                     |
| CCKA-MS/3467J          | R.B. GROVE    | 1.500" ST    | -----                     |                     |
| CCKA-MS/3480J          | C.S.C.        | 1.500" ST    | -----                     |                     |
| CCKA-MS/3490J          | C.S.C.        | 1.500" ST    | -----                     |                     |
| CCKA-MS/3491J          | DESERT        | 1.500" ST    | -----                     |                     |
| CCKA-MS/3499J          | A.M.A.        | 1.500" ST    | -----                     |                     |
| CCKA-MS/3506J          | BIALOCK       | 1.500" ST    | -----                     |                     |
| CCKA-MS/3509J          | C.S.C.        | 1.625 TPR    | -----                     | SEE NOTE 11         |
| CCKA-MS/3523J          | DIEM          | 1.500" ST    | -----                     |                     |
| CCKA-MS/3550J          | MECO          | 1.500" ST    | SHORT BLOCK               |                     |
| CCKA-MS/3556J          | C.S.C.        | 1.500" ST    | -----                     |                     |
| CCKA-MS/3562J          | POWER PLANT   | 1.500" ST    | -----                     |                     |
| CCKA-MS/3566J          | J. I. CASE    | 1.437" ST    | SAME                      | SEE NOTE 14         |
| CCKA-MS/3576J          | G.L.T.        | .876" ST     | SHORT BLOCK               |                     |
| CCKA-MS/3612J          | GRAVELLY      | 1.125" ST    | SAME                      | SEE NOTE 1 & 13     |
| CCKA-MS/3628J          | MCENTYRE      | 1.500" ST    | -----                     |                     |
| CCKA-MS/3639J          | MARK IND      | 1.500" ST    | CCKB-MS/4006J             |                     |
| CCKA-MS/3640J          | G.L.T.        | 1.125" ST    | SHORT BLOCK               | SEE NOTE 13         |
| CCKA-MS/3667           | -----         | -----        | SHORT BLOCK               |                     |
| CCKA-MS/3670J          | MILLER        | 1.625" TPR   | CCKA-MS/4379J             | SEE NOTES 1, 2 & 11 |
| CCKA-MS/3687J          | DISTRAGEN     | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3692J          | C.S.C.        | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3718J          | MILLER        | 1.625" TPR   | CCKA-MS/4379J             | SEE NOTES 1, 2 & 11 |
| CCKA-MS/3741J          | PAXTON        | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3742J          | KECO          | 1.500" ST    | CCKA-MS/4244J             |                     |
| CCKA-MS/3749J          | LIGHTBOURN    | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3751J          | A.M.A.        | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3757J          | WINTER ENGINE | 1.500" ST    | SAME                      | SEE NOTE 16         |
| CCKA-MS/3758J          | WINTER ENGINE | 1.500" ST    | SAME                      | SEE NOTE 17         |
| CCKA-MS/3763J          | C.S.C.        | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3777J          | WINTER ENGINE | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3781J          | AKSA          | 1.625" TPR   | SAME                      | SEE NOTE 11         |
| CCKA-MS/3805J          | CLYMAR        | 1.500" ST    | SAME                      |                     |
| CCKA-MS/3834J          | KECO          | 1.500" ST    | CCKA-MS/4244J             |                     |



# CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

|               |                |            |               |                     |
|---------------|----------------|------------|---------------|---------------------|
| CCKA-MS/3835J | R.B. GROVE     | 1.500" ST  | SAME          |                     |
| CCKA-MS/3848J | MILLER         | 1.625" TPR | CCKA-MS/4379J | SEE NOTES 1, 2 & 11 |
| CCKA-MS/3853J | A.M.A.         | 1.500" ST  | SAME          |                     |
| CCKA-MS/3862J | FREMONT        | 9 T/SAE A  | SAME          |                     |
| CCKA-MS/3876J | TULLER         | 1.500" ST  | CCKA-MS/3908J |                     |
| CCKA-MS/3877J | FREMONT        | 1.500" ST  | SAME          |                     |
| CCKA-MS/3908J | TULLER         | 1.500" ST  | SAME          | SEE NOTE 5          |
| CCKA-MS/3940J | A.M.A.         | 1.500" ST  | SAME          |                     |
| CCKA-MS/3963J | CSC            | 1.500" ST  | SAME          |                     |
| CCKA-MS/3975J | DISTRAGEN      | 1.500" ST  | SAME          |                     |
| CCKA-MS/3983J | SUEIRAK        | 1.625" TPR | SAME          | SEE NOTE 11         |
| CCKA-MS/3987J | MENGE          | 1.437" ST  | SAME          | SEE NOTE 12         |
| CCKA-MS/4069J | SIMSON MAXWELL | 1.625" ST  | SAME          | SEE NOTE 10         |
| CCKA-MS/4090J | AVIKOR LTD.    | 1.500" ST  | -----         |                     |
| CCKA-MS/4161J | SIMSON MAXWELL | 1.500" ST  | SAME          |                     |
| CCKA-MS/4188J | STANNARD POWER | 1.500" ST  | -----         |                     |
| CCKA-MS/4244J | DCSC           | 1.500" ST  | SAME          |                     |
| CCKA-MS/4290J | -----          | -----      | SAME          |                     |
| CCKA-MS/4319J | KELLY AFB-USAF | 1.500" ST  | SAME          |                     |
| CCKA-MS/4341J | MEOO           | 1.500" ST  | SAME          |                     |
| CCKA-MS/4379J | MILLER         | 1.625" TPR | SAME          | SEE NOTES 1, 2 & 11 |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.  
 NOTE 2 - MILLER REPLACEMENTS MAY REQUIRE 2 EA OF THE FOLLOWING: (AVAILABLE THROUGH THE SERVICE PARTS DEPT.)

155-0484 MUFFLER  
 331-0053 LOCKNUT  
 505-0003 ELBOW  
 505-0086 NIPPLE

NOTE 3 - REQUIRES INSTRUCTION SHEET A259.  
 NOTE 4 - MAY REQUIRE 148-0323 ACCESSORY KIT.  
 NOTE 5 - SOME MODIFICATION MAY BE REQUIRED TO THE TRACTOR TO UPGRADE TO THE CCKB ENGINE. CONSULT THE SIMPLICITY DEALER.  
 NOTE 6 - STOCK ENGINE PER L-740L.  
 NOTE 7 - ENGINE CONFIGURED FOR REMOTE OPERATION.

CCKA-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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NOTE 8 - MAY USE B48G-GA020/3738E W/MOD AVAILABLE FROM GRAVELLY.

NOTE 9 - USE SPECIAL COMPONENTS FROM OLD ENGINE IF REQUIRED.

NOTE 10 - C/SHAFT IS ADDER G31, 1.625" ST SHAFT X 2.75" TIP TO RR FACE OF BLOCK, WARNER T-96 (104-0877).

NOTE 11 - C/SHAFT IS ADDER G65, 1.625" TAPER STUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).

NOTE 12 - C/SHAFT IS ADDER G129, 1.437" STRAIGHT SHAFT X 4.00" TIP TO RR FACE OF BLOCK (104-0880).

NOTE 13 - C/SHAFT IS ADDER G139, 1.125" STRAIGHT SHAFT X 4.70" TIP TO RR FACE OF BLOCK (104-0885).

NOTE 14 - C/SHAFT IS ADDER G147, 1.437" STRAIGHT SHAFT X 2.50" TIP TO RR FACE OF BLOCK (104-0910).

NOTE 15 - C/SHAFT IS ADDER G173, 1.500" STRAIGHT SHAFT X 2.87" TIP TO RR FACE OF BLOCK (104-0933).

NOTE 16 - REPLACEMENT ENGINE IS SET UP FOR GASOLINE FUELING.

NOTE 17 - REPLACEMENT ENGINE IS SET UP FOR GAS-GASO FUELING.

# CCKA-MSV & -S/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER      | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|---------------|--------------|---------------------------|--------------------|
| *****                  |               |              |                           |                    |
| CCKA-MSV/1031          |               |              | -----SHORT BLOCK          |                    |
| CCKA-S/28J             | SELMEC        | 1.500" ST    |                           |                    |
| CCKA-S/1627G           | LINCOLN       | 1.625" TPR   | CCKA-S/3522J              | SEE NOTES 1 & 3    |
| CCKA-S/1820G           |               | 1.250" ST    |                           |                    |
| CCKA-S/2103            | MILLER        | 1.625" TPR   | CCKA-S/2769J              | SEE NOTES 1, 2 & 3 |
| CCKA-S/2583G           | LINCOLN       | 1.625" TPR   | CCKA-S/3522J              | SEE NOTES 1 & 3    |
| CCKA-S/2737J           | LINCOLN       | 1.625" TPR   | CCKA-S/3522J              | SEE NOTES 1 & 3    |
| CCKA-S/2744J           | LINCOLN       | 1.625" TPR   | CCKA-S/3522J              | SEE NOTES 1 & 3    |
| CCKA-S/2769J           | MILLER        | 1.625" TPR   | SAME                      | SEE NOTES 1, 2 & 3 |
| CCKA-S/2824J           | DISTRAGEN     | 1.625" TPR   | CCKA-S/3176J              | SEE NOTE 3         |
| CCKA-S/2832J           | DISTRAGEN     | 1.500" ST    |                           |                    |
| CCKA-S/2976J           | LINCOLN       | 1.625" TPR   | CCKA-S/3522J              | SEE NOTES 1 & 3    |
| CCKA-S/3065J           | DISTRAGEN     | 1.500" ST    |                           |                    |
| CCKA-S/3166J           | LINCOLN       | 1.625" TPR   | CCKA-S/3522J              | SEE NOTES 1 & 3    |
| CCKA-S/3176J           | DISTRAGEN     | 1.625" TPR   | SAME                      | SEE NOTE 3         |
| CCKA-S/3263J           | DISTRAGEN     | 1.500" ST    | SAME                      |                    |
| CCKA-S/3322J           | MILLER        | 1.625" TPR   |                           | SEE NOTES 1, 2 & 3 |
| CCKA-S/3512J           | DISTRAGEN     | 1.500" ST    |                           |                    |
| CCKA-S/3522J           | LINCOLN       | 1.625" TPR   | SAME                      | SEE NOTES 1 & 3    |
| CCKA-S/3671J           | MILLER        | 1.625" TPR   | CCKA-S/3871J              | SEE NOTES 1, 2 & 3 |
| CCKA-S/3729J           | AKSA          | 1.625" TPR   |                           | SEE NOTE 3         |
| CCKA-S/3846J           | DISTRAGEN     | 1.625" TPR   |                           | SEE NOTE 3         |
| CCKA-S/3871J           | MILLER        | 1.625" TPR   | SAME                      | SEE NOTES 1, 2 & 3 |
| CCKA-S/4062J           | HARRISON      | 1.125" ST    | SAME                      | SEE NOTE 4         |
| CCKA-S/4357J           | BELL & ORDERS | 1.625" TPR   | SAME                      | SEE NOTE 3         |
| CCKA-S/4435J           | CAL-WEST      | 1.625" TPR   | SAME                      | SEE NOTE 3         |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.

CCKA-MSV & -S/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

\*\*\*\*\*  
NOTE 2 - MILLER REPLACEMENTS MAY REQUIRE 2 EA OF THE FOLLOWING: (AVAILABLE THROUGH THE SERVICE PARTS DEPT.)

- 155-0484 MUFFLER
- 331-0053 LOCKNUT
- 505-0003 ELBOW
- 505-0086 NIPPLE

NOTE 3 - C/SHAFT IS ADDER G65, 1.625" TAPER STUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).  
NOTE 4 - C/SHAFT IS ADDER G139, 1.125" STRAIGHT SHAFT X 4.70" TIP TO RR FACE OF BLOCK (104-0885).

# CCKB MISC. - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS        |
|------------------------|------------------|--------------|---------------------------|-----------------|
| *****                  |                  |              |                           |                 |
| CCKB-MF/1455H          |                  | 1.625" TPR   | CCKB-MF/3393J             | SEE NOTE 4      |
| CCKB-MF/1587G          |                  | 1.625" ST    | SHORT BLOCK               | SEE NOTE 3      |
| CCKB-MF/1642H          |                  | 1.500" ST    | SHORT BLOCK               | SEE NOTE 3      |
| CCKB-MF/1812           |                  | 1.625" ST    | SHORT BLOCK               | SEE NOTE 3      |
| CCKB-MF/1869           |                  | 1.625" ST    | SHORT BLOCK               | SEE NOTES 1 & 4 |
| CCKB-MF/2746J          | FAIRMONT RAILWAY | 1.625" TPR   | CCKB-MF/3393J             | SEE NOTE 3      |
| CCKB-MF/2863J          |                  | 1.625" ST    | SHORT BLOCK               | SEE NOTES 2 & 5 |
| CCKB-MF/3280J          | E-Z-GO           | 1.500" ST    | B48M-GA018/4401A          | SEE NOTE 4      |
| CCKB-MF/3393J          | FAIRMONT RAILWAY | 1.625" TPR   | SAME                      |                 |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.  
 NOTE 2 - THIS REPLACEMENT MAY REQUIRE SOME MODIFICATION, CHECK FISCHER FOR ENGINE CONFIGURATION.  
 NOTE 3 - C/SHAFT IS ADDER G31, 1.625" ST SHAFT X 2.75" TIP TO RR FACE OF BLOCK, WARNER T-96 (104-0877).  
 NOTE 4 - C/SHAFT IS ADDER G65, 1.625" TAPER STUB X 2.25" TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).  
 NOTE 5 - C/SHAFT IS ADDER D14, 1.50" ST SHAFT X 4.00" TIP TO RR FACE OF BLOCK, ROCKFORD CLUTCH (104-0913).

# CCKB-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER  | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS              |
|------------------------|-----------|--------------|---------------------------|-----------------------|
| CCKB-MS/1              | MASTER    | 1.500" ST    | -----                     | -----                 |
| CCKB-MS/28J            | DISTRAGEN | 1.500" ST    | -----                     | -----                 |
| CCKB-MS/648H           | STOCK     | 1.437" ST    | CCKB-MS/3355J             | SEE NOTE 4            |
| CCKB-MS/1271           | WAYNE     | 1.125" ST    | CCKB-MS/2719J             | SEE NOTES 1, 3 & 13   |
| CCKB-MS/1322H          | -----     | 1.000" ST    | SHORT BLOCK               | SEE NOTE 14           |
| CCKB-MS/1369G          | -----     | G67          | SHORT BLOCK               | CRANKSHAFT - 104-0581 |
| CCKB-MS/1381H          | -----     | 1.500" ST    | CCKB-MS/3995J             | -----                 |
| CCKB-MS/1455           | -----     | 1.625" TPR   | CCKB-MF/3393J             | SEE NOTE 12           |
| CCKB-MS/1507G          | STOCK     | 1.437" ST    | CCKB-MS/3355J             | SEE NOTE 4            |
| CCKB-MS/1523H          | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1540G          | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1576           | WAYNE     | 1.125" ST    | CCKB-MS/2719J             | SEE NOTES 1, 3 & 13   |
| CCKB-MS/1585G          | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1598H          | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1610H          | -----     | 1.500" ST    | SAME                      | -----                 |
| CCKB-MS/1616H          | -----     | 1.500" ST    | CCKB-MS/3645J             | -----                 |
| CCKB-MS/1684H          | -----     | 1.500" ST    | SAME                      | -----                 |
| CCKB-MS/1751H          | -----     | 1.500" ST    | CCKB-MS/2854J             | -----                 |
| CCKB-MS/1765           | WAYNE     | 1.125" ST    | CCKB-MS/2775J             | SEE NOTE 1            |
| CCKB-MS/1801H          | -----     | 1.500" ST    | SHORT BLOCK               | SEE NOTE 28           |
| CCKB-MS/1802           | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1805H          | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1825H          | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1829           | -----     | 1.500" ST    | SHORT BLOCK               | -----                 |
| CCKB-MS/1835H          | -----     | 1.500" ST    | CCKB-MS/3760J             | SEE NOTE 10           |
| CCKB-MS/1838H          | -----     | 1.500" ST    | CCKB-MS/3645J             | -----                 |
| CCKB-MS/1869H          | -----     | 1.625" ST    | SHORT BLOCK               | SEE NOTE 9            |
| CCKB-MS/1873H          | WAYNE     | 1.125" ST    | CCKB-MS/2775J             | SEE NOTE 1            |
| CCKB-MS/1888H          | -----     | 1.500" ST    | SAME                      | -----                 |
| CCKB-MS/1908H          | -----     | G115         | SHORT BLOCK               | -----                 |
| CCKB-MS/1968H          | -----     | 1.000" ST    | CCKB-MS/3104J             | -----                 |
| CCKB-MS/2005H          | -----     | 1.500" ST    | CCKB-MS/3233J             | -----                 |
| CCKB-MS/2006H          | -----     | 1.500" ST    | CCKB-MS/3218J             | -----                 |

# CCKB-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER    | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS         |
|------------------------|-------------|--------------|---------------------------|------------------|
| *****                  |             |              |                           |                  |
| CCKB-MS/2008H          | -----       | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2009H          | -----       | 1.500" ST    | CCKB-MS/3218J             |                  |
| CCKB-MS/2031G          | -----       | 1.500" ST    | SAME                      | SEE NOTE 11      |
| CCKB-MS/2037H          | -----       | 1.000" ST    | CCKB-MS/3104J             |                  |
| CCKB-MS/2045H          | -----       | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2071H          | CLEARR CORP | 1.500" ST    | CCKB-MS/3233J             |                  |
| CCKB-MS/2105H          | -----       | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2113H          | -----       | 1.500" ST    | SHORT BLOCK               | SEE NOTE 10      |
| CCKB-MS/2142H          | -----       | 1.437" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2143H          | -----       | 1.437" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2151H          | WAYNE       | 1.125" ST    | CCKB-MS/2775J             | SEE NOTE 1       |
| CCKB-MS/2200H          | -----       | -----        | SHORT BLOCK               |                  |
| CCKB-MS/2218J          | -----       | G10          | SHORT BLOCK               |                  |
| CCKB-MS/2232H          | FMC         | 1.125" ST    | CCKB-MS/2768J             | SEE NOTE 22      |
| CCKB-MS/2266H          | -----       | 1.500" ST    | SHORT BLOCK               | SEE NOTE 10      |
| CCKB-MS/2267H          | -----       | 1.500" ST    | SAME                      | SEE NOTE 10      |
| CCKB-MS/2313J          | FREEMONT    | 1.500" ST    | -----                     |                  |
| CCKB-MS/2324H          | FMC         | 1.125" ST    | CCKB-MS/2768J             | SEE NOTE 22      |
| CCKB-MS/2336G          | -----       | -----        | SHORT BLOCK               |                  |
| CCKB-MS/2350H          | -----       | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2378           | -----       | 1.125" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2379H          | -----       | -----        | SHORT BLOCK               |                  |
| CCKB-MS/2420H          | SIMPLICITY  | 1.437" ST    | CCKB-MS/2733J             | SEE NOTE 10      |
| CCKB-MS/2435H          | -----       | 1.500" ST    | SHORT BLOCK               | SEE NOTE 1       |
| CCKB-MS/2440H          | SIMPLICITY  | 1.437" ST    | CCKB-MS/2733J             | SEE NOTE 5       |
| CCKB-MS/2512           | -----       | 1.500" ST    | CCKB-MS/1                 |                  |
| CCKB-MS/2521H          | -----       | 1.500" ST    | CCKB-MS/2810J             |                  |
| CCKB-MS/2627           | -----       | 1.000" ST    | CCKB-MS/3104J             |                  |
| CCKB-MS/2667H          | -----       | -----        | SAME                      |                  |
| CCKB-MS/2671H          | -----       | 1.500" ST    | SHORT BLOCK               | SEE NOTE 10      |
| CCKB-MS/2679H          | FMC         | 1.125" ST    | CCKB-MS/2768J             | SEE NOTE 22      |
| CCKB-MS/2719J          | WAYNE       | 1.125" ST    | SAME                      | SEE NOTES 1 & 13 |
| CCKB-MS/2720J          | WAYNE       | 1.125" ST    | CCKB-MS/2775J             | SEE NOTES 1 & 16 |
| CCKB-MS/2733J          | SIMPLICITY  | 1.437" ST    | SAME                      | SEE NOTES 1 & 18 |

# CCKB-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS         |
|------------------------|------------------|--------------|---------------------------|------------------|
| *****                  | *****            | *****        | *****                     | *****            |
| CCKB-MS/2736J          | AMERICAN LINCOLN | 1.500" ST    | SHORT BLOCK               | SEE NOTE 10      |
| CCKB-MS/2746J          | FAIRMONT RAILWAY | 1.625" TPR   | CCKB-MF/3393J             | SEE NOTES 1 & 12 |
| CCKB-MS/2749J          | WINTER ENGINE    | 1.500" ST    | CCKB-MS/3645J             |                  |
| CCKB-MS/2759J          | WAYNE            | 1.125" ST    | SHORT BLOCK               | SEE NOTE 22      |
| CCKB-MS/2763J          | COMET            | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2768J          | FMC              | 1.125" ST    | SAME                      | SEE NOTE 22      |
| CCKB-MS/2770J          | HYDRA MASTER     | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2771J          | HYDRA MASTER     | 1.500" ST    | SAME                      |                  |
| CCKB-MS/2775J          | WAYNE            | 1.125" ST    | SAME                      | SEE NOTES 1 & 22 |
| CCKB-MS/2776J          | CLEAR CORP       | 1.500" ST    | CCKB-MS/3218J             |                  |
| CCKB-MS/2807J          | CONCO INC        | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2810J          | FLEXIBLE         | 1.500" ST    | SAME                      |                  |
| CCKB-MS/2811J          | ESCO             | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2816J          | KISSELINCHV INC  | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2830J          | C.S.C.           | 1.500" ST    | CCKB-MS/3504J             |                  |
| CCKB-MS/2849J          | ESCO             | 1.500" ST    | CCKB-MS/4004J             |                  |
| CCKB-MS/2853J          | STOCK            | 1.500" ST    | SAME                      |                  |
| CCKB-MS/2854J          | STOCK            | 1.500" ST    | SAME                      |                  |
| CCKB-MS/2859J          | GORMAN RUPP      | 1.000" ST    | CCKB-MS/3104J             | SEE NOTE 14      |
| CCKB-MS/2861J          | WILSON & COUSINS | G119         | -----                     | SEE NOTE 17      |
| CCKB-MS/2863J          | -----            | 1.625" ST    | SHORT BLOCK               | SEE NOTE 9       |
| CCKB-MS/2864J          | SIM HOLLAND      | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2874J          | SCHROEDER MFG    | 1.500" ST    | SHORT BLOCK               | SEE NOTE 10      |
| CCKB-MS/2876J          | CARROLL STUART   | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2878J          | PUREX CORP       | G119         | SAME                      | SEE NOTE 17      |
| CCKB-MS/2895J          | FLAHERTY         | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2897J          | CLARKE DIV.      | 9 T/SAE A    | SHORT BLOCK               | SEE NOTE 19      |
| CCKB-MS/2898J          | CLARKE DIV.      | 9 T/SAE A    | SAME                      | SEE NOTE 19      |
| CCKB-MS/2899J          | HALE PUMP        | 1.500" ST    | -----                     | -----            |
| CCKB-MS/2900J          | GORMAN RUPP      | 1.000" ST    | CCKB-MS/3105J             | SEE NOTE 15      |
| CCKB-MS/2912           | -----            | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2920J          | -----            | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/2933J          | -----            | G21          | SAME                      |                  |
| CCKB-MS/2947J          | CAL WEST         | 1.500" ST    | -----                     | SEE NOTE 10      |



# CCKB-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS    |
|------------------------|------------------|--------------|---------------------------|-------------|
| *****                  | *****            | *****        | *****                     | *****       |
| CCKB-MS/2953J          | FLAHERTY         | 1.500" ST    |                           |             |
| CCKB-MS/2969J          | ESCO             | 1.500" ST    | SHORT BLOCK               |             |
| CCKB-MS/2984J          | EKSTROMS         | 1.250" ST    | CCKB-MS/3973J             | SEE NOTE 24 |
| CCKB-MS/2985J          | HYDRA MASTER     | 1.500" ST    | SHORT BLOCK               | SEE NOTE 6  |
| CCKB-MS/2989J          | LIGHTBOURN       | 1.500" ST    |                           | SEE NOTE 6  |
| CCKB-MS/3017J          | SELMEC           | 1.500" ST    |                           |             |
| CCKB-MS/3030J          | BURLEC           | 1.500" ST    |                           |             |
| CCKB-MS/3032J          | MENGE            | 1.500" ST    |                           |             |
| CCKB-MS/3049J          | FRIGICOL         | 1.625" TPR   |                           |             |
| CCKB-MS/3061J          | SIM HOLLAND      | 1.500" ST    |                           |             |
| CCKB-MS/3074J          | FLAHERTY         | 1.500" ST    |                           |             |
| CCKB-MS/3083J          | ELECTRICAL CONST | 1.500" ST    |                           |             |
| CCKB-MS/3089J          | HENRIK A, FOG    | 1.500" ST    |                           |             |
| CCKB-MS/3098J          | FREMONT          | 1.500" ST    |                           | SEE NOTE 6  |
| CCKB-MS/3100J          | ESCO             | 1.500" ST    | SAME                      | SEE NOTE 6  |
| CCKB-MS/3104J          | GORMAN RUPP      | 1.000" ST    | SAME                      | SEE NOTE 15 |
| CCKB-MS/3105J          | GORMAN RUPP      | 1.000" ST    | SAME                      | SEE NOTE 15 |
| CCKB-MS/3113J          | ELECTRICAL CONST | 1.500" ST    | SHORT BLOCK               |             |
| CCKB-MS/3116J          | SCOTT IND        | 1.500" ST    | SAME                      |             |
| CCKB-MS/3140J          | FLAHERTY         | 1.500" ST    |                           |             |
| CCKB-MS/3141J          | AMERICAN LINCOLN | 1.500" ST    | SHORT BLOCK               | SEE NOTE 10 |
| CCKB-MS/3145J          | ROCKWELL INT.    | 1.500" ST    | SHORT BLOCK               |             |
| CCKB-MS/3163J          | HYDRA-MASTER     | 1.500" ST    | SHORT BLOCK               |             |
| CCKB-MS/3170J          | CAL WEST         | 1.500" ST    |                           |             |
| CCKB-MS/3193J          | FLAHERTY         | 1.500" ST    | CCKB-MS/3218J             | SEE NOTE 6  |
| CCKB-MS/3195J          | SENTINEL         | 1.500" ST    |                           |             |
| CCKB-MS/3211J          | ESCO             | 1.500" ST    |                           |             |
| CCKB-MS/3218J          | CLEAR CORP       | 1.500" ST    | SAME                      | SEE NOTE 6  |
| CCKB-MS/3233J          | CLEAR CORP       | 1.500" ST    |                           |             |
| CCKB-MS/3239J          | ESCO             | 1.500" ST    |                           |             |
| CCKB-MS/3280J          |                  | 1.625" ST    | SHORT BLOCK               | SEE NOTE 9  |
| CCKB-MS/3293J          | MARK IND         | 1.500" ST    | CCKB-MS/4006J             |             |
| CCKB-MS/3316J          | FLAHERTY         | 1.500" ST    |                           |             |
| CCKB-MS/3323J          |                  | 1.500" ST    | SAME                      |             |

# CCKB-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS         |
|------------------------|------------------|--------------|---------------------------|------------------|
| *****                  | *****            | *****        | *****                     | *****            |
| CCKB-MS/3340J          | FORCES           | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3355J          | STOCK            | 1.437" ST    | SAME                      | SEE NOTES 2 & 18 |
| CCKB-MS/3360J          | STOCK            | 1.437" ST    | SAME                      | SEE NOTES 2 & 18 |
| CCKB-MS/3365J          | MECO             | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/3371J          | LAND UND MARINE  | 1.625" TPR   | -----                     | SEE NOTE 12      |
| CCKB-MS/3395J          | FLAHERTY         | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3402J          | ESCO             | 1.500" ST    | SAME                      | SEE NOTE 6       |
| CCKB-MS/3430J          | ONAN ILLINOIS    | 1.500" ST    | CCKB-MS/1                 |                  |
| CCKB-MS/3439J          | GEN UNLIMITED    | 1.500" ST    | SHORT BLOCK               |                  |
| CCKB-MS/3455J          | ESCO             | 1.500" ST    | CCKB-MS/4043J             |                  |
| CCKB-MS/3456J          | TULLER           | 1.500" ST    | -----                     |                  |
| CCKB-MS/3462J          | SELMEC           | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3463J          | WEST FIRE EQUIP  | 1.500" ST    | SAME                      | SEE NOTE 10      |
| CCKB-MS/3473J          | FREMONT          | 1.500" ST    | -----                     |                  |
| CCKB-MS/3474J          | CLYMAR           | 1.500" ST    | -----                     |                  |
| CCKB-MS/3476J          | ESCO             | 1.500" ST    | -----                     |                  |
| CCKB-MS/3485J          | ELECTRICAL CONST | 1.500" ST    | SHORT BLOCK               | SEE NOTE 7       |
| CCKB-MS/3489J          | SILVER           | 1.500" ST    | -----                     |                  |
| CCKB-MS/3494J          | STANNARD POWER   | 1.500" ST    | -----                     | SEE NOTE 6       |
| CCKB-MS/3504J          | C.S.C.           | 1.500" ST    | -----                     |                  |
| CCKB-MS/3545J          | WILSON & COUSINS | G119         | -----                     | SEE NOTE 17      |
| CCKB-MS/3558J          | FLAHERTY         | 1.500" ST    | -----                     |                  |
| CCKB-MS/3589J          | TRIDENT          | 1.437" ST    | -----                     | SEE NOTE 18      |
| CCKB-MS/3595J          | WEST FIRE EQUIP  | 1.500" ST    | -----                     |                  |
| CCKB-MS/3608J          | CAL WEST         | 1.500" ST    | -----                     | SEE NOTE 7       |
| CCKB-MS/3639J          | MARK IND         | 1.500" ST    | CCKB-MS/4006J             |                  |
| CCKB-MS/3645J          | WINTER ENGINE    | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3658J          | ESCO             | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3693J          | -----            | -----        | SAME                      |                  |
| CCKB-MS/3752J          | CAL WEST         | 1.437" ST    | -----                     | SEE NOTE 18      |
| CCKB-MS/3760J          | EVANSVILLE AUTO  | 1.500" ST    | -----                     | SEE NOTE 10      |
| CCKB-MS/3770J          | TRIDENT          | 1.500" ST    | -----                     | SEE NOTE 8       |
| CCKB-MS/3801J          | TILLER           | 9 T/SAE A    | -----                     | SEE NOTE 21      |
| CCKB-MS/3808J          | IBERMAQ          | 1.625" TPR   | -----                     | SEE NOTE 12      |

# CC.B-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER      | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS         |
|------------------------|---------------|--------------|---------------------------|------------------|
| CCKB-MS/3821J          | STANDBY POWER | 1.500" ST    | -----                     |                  |
| CCKB-MS/3829J          | SEIMEC        | 1.500" ST    | -----                     |                  |
| CCKB-MS/3849J          | BURLEC        | 1.500" ST    | -----                     |                  |
| CCKB-MS/3857J          | BLALOCK       | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3882J          | HYDRAMASTER   | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3925J          | FLAHERTY      | 1.500" ST    | -----                     |                  |
| CCKB-MS/3943J          | NAMCO         | 1.500" ST    | SAME                      | SEE NOTE 11      |
| CCKB-MS/3944J          | NAMCO         | 1.500" ST    | SAME                      | SEE NOTE 11      |
| CCKB-MS/3950J          | FLAHERTY      | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3965J          | G.L.T.        | 1.500" ST    | -----                     | SEE NOTE 6       |
| CCKB-MS/3969J          | ESCO          | 1.500" ST    | SAME                      |                  |
| CCKB-MS/3973J          | -----         | 1.250" ST    | SAME                      | SEE NOTE 24      |
| CCKB-MS/3995J          | ATLAS         | 1.500" ST    | -----                     |                  |
| CCKB-MS/3999J          | HARRISON      | 13 T/SAE B   | SAME                      | SEE NOTES 6 & 19 |
| CCKB-MS/4004J          | MARK IND.     | 1.500" ST    | SAME                      |                  |
| CCKB-MS/4006J          | MARK IND      | 1.500" ST    | SAME                      |                  |
| CCKB-MS/4016J          | ESCO          | 1.500" ST    | SAME                      | SEE NOTE 6       |
| CCKB-MS/4036J          | MECO          | 1.437" ST    | -----                     | SEE NOTE 18      |
| CCKB-MS/4043J          | ESCO          | 1.500" ST    | SAME                      | SEE NOTE 6       |
| CCKB-MS/4055J          | INTERSTATE    | 1.500" ST    | -----                     |                  |
| CCKB-MS/4083J          | SVC AUTO WHSE | 1.500" ST    | -----                     | SEE NOTE 6       |
| CCKB-MS/4084J          | INTERSTATE    | 9 T/SAE A    | SAME                      | SEE NOTE 21      |
| CCKB-MS/4125J          | CURTIS        | 13 T/SAE B   | SAME                      | SEE NOTE 19      |

NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD REPLACEMENT AS LISTED IN THE L-740L.

NOTE 2 - REPLACEMENT ENGINE IS THE STOCK ENGINE AS LISTED IN THE L-740L.

NOTE 3 - REPLACEMENT REQUIRES A CHANGE OF CHOKE CABLE, AVAILABLE FROM WAYNE MFG.

NOTE 4 - THIS REPLACEMENT MAY REQUIRE SOME MODIFICATION, CHECK FISCHE FOR ENGINE CONFIGURATION.

NOTE 5 - MAY REQUIRE 542-7027 MUFFLER, 123-0674 OIL FILL TUBE & 123-0694 OIL INDICATOR.

NOTE 6 - REPLACEMENT ENGINE HAS ADDER C7, LPG CARBURETION FOR VAPOR WITHDRAWAL.

NOTE 7 - REPLACEMENT ENGINE HAS ADDER C23, LPG CARBURETION FOR LIQUID WITHDRAWAL.

NOTE 8 - REPLACEMENT ENGINE HAS ADDER C159, LPG CARBURETION FOR LIQUID WITHDRAWAL, W/O REG. & VAPORIZER.

NOTE 9 - C/SHAFT IS ADDER G31, 1.625" ST SHAFT X 2.75" TIP TO RR FACE OF BLOCK, WARNER T-96 (104-0881).

NOTE 10 - C/SHAFT IS ADDER G46, 1.500" ST SHAFT X 5.50" TIP TO RR FACE OF BLOCK (104-0881).

# CCKB-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER       | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC         | COMMENTS                                             |
|------------------------|----------------|--------------|-----------------------------------|------------------------------------------------------|
| *****                  |                |              |                                   |                                                      |
| NOTE 11 - C/SHAFT      | IS ADDER G49,  | 1.500"       | ST SHAFT X 2.50"                  | TIP TO RR FACE OF BLOCK (104-0884).                  |
| NOTE 12 - C/SHAFT      | IS ADDER G65,  | 1.625"       | TAPER STUB X 2.25"                | TIP TO RR FACE OF BLOCK, GEN TAPER (104-0882).       |
| NOTE 13 - C/SHAFT      | IS ADDER G74,  | 1.125"       | ST SHAFT X 5.25"                  | TIP TO RR FACE OF BLOCK (104-0907).                  |
| NOTE 14 - C/SHAFT      | IS ADDER G85,  | 1.000"       | ST SHAFT X 4.50"                  | TIP TO RR FACE OF BLOCK (104-0190).                  |
| NOTE 15 - C/SHAFT      | IS ADDER G85,  | 1.000"       | ST SHAFT X 4.50"                  | TIP TO RR FACE OF BLOCK (104-0878).                  |
| NOTE 16 - C/SHAFT      | IS ADDER G113, | 1.125"       | ST SHAFT X 5.25"                  | TIP TO RR FACE OF BLOCK (104-0883).                  |
| NOTE 17 - C/SHAFT      | IS ADDER G119, |              | (104-0887).                       |                                                      |
| NOTE 18 - C/SHAFT      | IS ADDER G129, | 1.437"       | STRAIGHT SHAFT X 4.00"            | TIP TO RR FACE OF BLOCK (104-0880).                  |
| NOTE 19 - C/SHAFT      | IS ADDER G134, | 13           | TOOTH INTERNAL SPLINE (104-0916). |                                                      |
| NOTE 20 - C/SHAFT      | IS ADDER G139, | 1.125"       | STRAIGHT SHAFT X 4.70"            | TIP TO RR FACE OF BLOCK (104-0885).                  |
| NOTE 21 - C/SHAFT      | IS ADDER G141, | 9            | TOOTH INTERNAL SPLINE (104-0915). |                                                      |
| NOTE 22 - C/SHAFT      | IS ADDER G144, | 1.125"       | ST SHAFT X 5.25"                  | TIP TO RR FACE OF BLOCK (104-0883).                  |
| NOTE 23 - C/SHAFT      | IS ADDER G147, | 1.437"       | STRAIGHT SHAFT X 2.50"            | TIP TO RR FACE OF BLOCK (104-0910).                  |
| NOTE 24 - C/SHAFT      | IS ADDER G154, | 1.250"       | ST SHAFT X 4.00"                  | TIP TO RR FACE OF BLOCK (104-0879).                  |
| NOTE 25 - C/SHAFT      | IS ADDER G173, | 1.500"       | ST SHAFT X 2.87"                  | TIP TO RR FACE OF BLOCK (104-0933).                  |
| NOTE 26 - C/SHAFT      | IS ADDER G181, | 11           | TOOTH INTERNAL SPLINE (104-0991). |                                                      |
| NOTE 27 - C/SHAFT      | IS ADDER G183, | .985"        | ST SHAFT X 2.95"                  | TIP TO RR FACE OF BLOCK, GEAR REDUCTION (104-0905).  |
| NOTE 28 - C/SHAFT      | IS ADDER D14,  | 1.50"        | ST SHAFT X 4.00"                  | TIP TO RR FACE OF BLOCK, ROCKFORD CLUTCH (104-0913). |

# CCKB-MSV & -S/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
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|----------------|--|--|------------------|--|
| CCKB-MSV/375E  |  |  | -----SHORT BLOCK |  |
| CCKB-MSV/1478G |  |  | -----SHORT BLOCK |  |

|              |                  |           |              |                 |
|--------------|------------------|-----------|--------------|-----------------|
| CCKB-S/27J   | SILVER           | 1.500" ST | SAME         |                 |
| CCKB-S/28J   | SELMEC           | 1.500" ST | SAME         |                 |
| CCKB-S/1537G | -----            | 1.500" ST | -----        |                 |
| CCKB-S/1597H | -----            | 1.500" ST | -----        |                 |
| CCKB-S/2233H | -----            | 1.500" ST | -----        |                 |
| CCKB-S/2442  | HAKO-WERKE       | 1.500" ST | SHORT BLOCK  |                 |
| CCKB-S/2726J | HAKO-WERKE       | 1.500" ST | CCKB-S/2912J | SEE NOTES 2 & 3 |
| CCKB-S/2729J | HAKO-WERKE       | 1.500" ST | CCKB-S/3413J | SEE NOTES 1 & 4 |
| CCKB-S/2875J | SCHROEDER MFG    | 1.500" ST | CCKB-S/2912J | SEE NOTE 4      |
| CCKB-S/2911J | HAKO-WERKE       | 1.500" ST | SAME         |                 |
| CCKB-S/2912J | HAKO-WERKE       | 1.500" ST | CCKB-S/3413J | SEE NOTE 1      |
| CCKB-S/2935J | MAQUINARIA PACIF | 1.500" ST | SAME         |                 |
| CCKB-S/3196J | R. C. EQUIP      | 1.500" ST | SAME         | SEE NOTE 5      |
| CCKB-S/3413J | HAKO-WERKE       | 1.437" ST | SAME         | SEE NOTE 6      |
| CCKB-S/3493J | TRIDENT          | 1.500" ST | SAME         |                 |

NOTE 1 - ORIGINAL ENGINE HAD 1.500" C/SHAFT STUB. REPLACEMENT ENGINE IS EQUIPPED W/ 1.437" STUB.  
 NOTE 2 - MAY REQUIRE GOVERNOR BRACKETS FROM ORIGINAL ENGINE.  
 NOTE 3 - MAY REQUIRE OIL FILL TUBE, INDICATOR & BREAKER BOX FROM ORIGINAL ENGINE.  
 NOTE 4 - ORIGINAL ENGINE HAD A 160-1162 BREAKER BOX. REPLACEMENT ENGINE IS EQUIPPED W/160-1113 BREAKER BOX.  
 NOTE 5 - C/SHAFT IS ADDER G46, 1.500" ST SHAFT X 5.50" TIP TO RR FACE OF BLOCK (104-0881).  
 NOTE 6 - C/SHAFT IS ADDER G129, 1.437" STRAIGHT SHAFT X 4.00" TIP TO RR FACE OF BLOCK (104-0880).

# CCKM MISC. - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
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| CCKM-MF/471G |  |  | SHORT BLOCK |  |
|--------------|--|--|-------------|--|

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|---------------|--|-----------|------|--|
| CCKM-MS/1674J |  |           | SAME |  |
| CCKM-MS/1899G |  | 1.125" ST | SAME |  |
| CCKM-MS/2050G |  | 1.500" ST | SAME |  |
| CCKM-MS/2126G |  |           | SAME |  |
| CCKM-MS/2504G |  | 1.125" ST | SAME |  |
| CCKM-MS/2964G |  |           | SAME |  |

|               |  |           |               |  |
|---------------|--|-----------|---------------|--|
| CCKM-MSV/427E |  | 1.125" ST | SHORT BLOCK   |  |
| CCKM-MSV/1454 |  | 1.125" ST | CCKM-MS/1899G |  |

# ROCK-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
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| ROCK-MS/3199A | ----- | 1.500" ST | SHORT BLOCK |            |
| ROCK-MS/3213A | ----- | 1.625" ST | SHORT BLOCK |            |
| ROCK-MS/3236A | ----- | 1.500" ST | SHORT BLOCK |            |
| ROCK-MS/3396A | ----- | 1.500" ST | SAME        | SEE NOTE 1 |
| ROCK-MS/3449A | ----- | 1.500" ST | SAME        |            |
| ROCK-MS/3611A | ----- | 1.625" ST | SAME        |            |
| ROCK-MS/3642A | ----- | 1.500" ST | SAME        |            |

NOTE 1 - ENGINE EQUIPPED W/ADDER D14, ROCKFORD CLUTCH.

# BF & BG-MS/ - R PLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS        |
|------------------------|-----------------|--------------|---------------------------|-----------------|
| BF-MS/2270C            | -----1 1/8"     | ST           | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2271E            | -----1 1/8"     | ST           | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2367             | -----1 1/8"     | ST           | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2379B            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2425C            | BOLENS          | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2434B            | J. I. CASE      | 1 1/8"       | B43M-GA016/4254C          | SEE NOTES 1 & 2 |
| BF-MS/2449             | -----1 1/8"     | ST           | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2493             | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2666C            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTES 1 & 3 |
| BF-MS/2675G            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2728             | -----1 1/8"     | ST           | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2833E            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTES 1 & 3 |
| BF-MS/2851             | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2891             | J. I. CASE      | 1 1/8"       | B43M-GA016/4254C          | SEE NOTES 1 & 2 |
| BF-MS/2929E            | WHEELHORSE      | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/2938E            | BOLENS          | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3128E            | -----1 1/8"     | ST           | SHORT BLOCK               |                 |
| BF-MS/3157E            | DIENES          | 1 1/8"       | B48M-GA018/3548A          |                 |
| BF-MS/3177             | J. I. CASE      | 1 1/8"       | B43M-GA016/4254C          | SEE NOTES 1 & 2 |
| BF-MS/3221             | MASSEY FERGUSON | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3250F            | -----1 1/8"     | ST           | SHORT BLOCK               |                 |
| BF-MS/3264F            | J. I. CASE      | 1 1/8"       | B43M-GA016/4254C          | SEE NOTES 1 & 2 |
| BF-MS/3265F            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3268             | WHEELHORSE      | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3271E            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3283             | BOLENS          | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3294F            | DIENES          | 1 1/8"       | B48M-GA018/3548A          |                 |
| BF-MS/3347F            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3394F            | ROPER/SEARS     | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3398F            | BOLENS          | 1 1/8"       | B43M-GA016/4254C          | SEE NOTE 1      |
| BF-MS/3414             | -----1 1/8"     | ST           | B43M-GA016/4254C          | SEE NOTE 1      |
| BG-MS/2950A            | ROPER/SEARS     | 1 1/8"       | B48M-GA018/3783A          | SEE NOTE 1      |



BF & BG-MS/ -- REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
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| *****       | *****       | *****  | *****               | *****      |
| BG-MS/2980A | ROPER/SEARS | 1 1/8" | ST B48M-GA018/3783A | SEE NOTE 1 |
| BG-MS/3158A | DIENES      | 1 1/8" | ST B48M-GA018/3548A |            |
| BG-MS/3270A | ROPER/SEARS | 1 1/8" | ST B48M-GA018/3783A | SEE NOTE 1 |
| BG-MS/3272A | ROPER/SEARS | 1 1/8" | ST B48M-GA018/3783A | SEE NOTE 1 |
| BG-MS/3310A | ROPER/SEARS | 1 1/8" | ST B48M-GA018/3783A | SEE NOTE 1 |
| BG-MS/3344A | ROPER/SEARS | 1 1/8" | ST B48M-GA018/3783A | SEE NOTE 1 |

NOTE 1 - REPLACEMENT IS THE STANDARD "TURF REPLACEMENT ENGINE" AS LISTED IN THE L-740L.

NOTE 2 - J.I.CASE/INGERSOLL EQUIPMENT REPLACEMENTS REQUIRE SHORTENING THE CRANKSHAFT TO THE SAME LENGTH AS ON THE ENGINE BEING REPLACED. CASE/INGERSOLL 446 TRACTORS WITH A BF ENGINE REQUIRE EXHAUST SYSTEM MODIFICATION - COMPONENTS ARE AVAILABLE FROM INGERSOLL EQUIPMENT DEALERS.

NOTE 3 - REQUIRES 1 EA 122-0438 OIL FILTER PAD COVER, 122-0375 GASKET & 508-0273 GROMMET.

# B43E-GA016/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
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| B43E-GA016/4130A | DEERE - 316    | 1 7/16"    | ST B43E-GA016/4326D |                    |
| B43E-GA016/4232C | DEERE - 316    | 1 7/16"    | ST B43E-GA016/4326D |                    |
| B43E-GA016/4246A | WOLLARD        | 1 1/8"     | ST B43E-GA016/4318D |                    |
| B43E-GA016/4247B | MALTE MANSON   | 1 1/8"     | ST B43E-GA016/4405D | SEE NOTES 4 & 8    |
| B43E-GA016/4260C | STOCK ENGINE   | 1 1/8"     | ST SAME             | SEE NOTE 1         |
| B43E-GA016/4303C | WOLLARD        | 1 1/8"     | ST B43E-GA016/4318D |                    |
| B43E-GA016/4313C | LINCOLN        | 1 1/8 TPR  | SAME                | SEE NOTES 2 & 7    |
| B43E-GA016/4317B | STANDBY POWER  | 1 1/8 TPR  | SAME                | SEE NOTE 6         |
| B43E-GA016/4318D | WOLLARD        | 1 1/8"     | ST SAME             |                    |
| B43E-GA016/4326D | DEERE - 316    | 1 7/16"    | ST SAME             | SEE NOTES 5 & 8    |
| B43E-GA016/4335C | INGRAM KUT-MOR | 13 T/SAE A | B43E-GA016/4356D    |                    |
| B43E-GA016/4350C | HARRISON       | 1 1/8"     | ST SAME             |                    |
| B43E-GA016/4355C | BELCO IND      | 1 1/8"     | ST B43E-GA016/4426D | SEE NOTES 2, 3 & 7 |
| B43E-GA016/4356D | INGRAM KUT-MOR | 13 T/SAE A | SAME                | SEE NOTE 6         |
| B43E-GA016/4369D | LINCOLN        | 1 1/8 TPR  | SAME                | SEE NOTES 4 & 8    |
| B43E-GA016/4372C | ESAB           | 1 1/8 TPR  | SAME                | SEE NOTES 2, 3 & 7 |
| B43E-GA016/4405D | STOCK ENGINE   | 1 1/8"     | ST SAME             |                    |
| B43E-GA016/4418D | LINCOLN        | 1 1/8 TPR  | SAME                |                    |
| B43E-GA016/4426D | BELCO IND      | 1 1/8"     | ST SAME             |                    |

NOTE 1 - REPLACEMENT IS THE STOCK ENGINE AS LISTED IN THE L-740L.  
 NOTE 2 - /4313 WAS NOT EQUIPPED WITH AN OIL FILTER. SPECS /4369 & /4418 ARE EQUIPPED WITH AN OIL FILTER.  
 NOTE 3 - /4369 HAD SPECIAL LINCOLN BEARING PLATE. /4418 HAS STANDARD BEARING PLATE W/7" PILOT ADAPTER.  
 NOTE 4 - REPLACEMENT ENGINE IS EQUIPPED WITH A402, SOLENOID SHIFT STARTER-SIDE MOUNT, 191-1808-01.  
 NOTE 5 - REPLACEMENT ENGINE IS EQUIPPED WITH A403, SOLENOID SHIFT STARTER-DOWN MOUNT, 191-1808-02.  
 NOTE 6 - C/SHAFT IS ADDER G195, 1.125" TAPER SHAFT X 3.11" TO RR FACE OF BLOCK (104-0895).  
 NOTE 7 - C/SHAFT IS ADDER G234, 1.125" TAPER SHAFT X 4.964" TO RR FACE OF BLOCK (104-1621).  
 NOTE 8 - THIS REPLACEMENT MAY REQUIRE A STARTER SWAP (TO P/N 191-1567) OR REWIRING, SEE SERVICE MANUAL.

# B43G-GA018/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
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| B43G-GA018/3733B | GRAVELY       | 1 1/8" ST  | B48G-GA020/4431G | SEE NOTE 5         |
| B43G-GA018/4060B | DEERE - 318   | 1 7/16" ST | B43G-GA018/4327D | SEE NOTES 1, 3 & 4 |
| B43G-GA018/4113B | JACOBSSEN     | 1 1/8" ST  | B43G-GA018/4263D |                    |
| B43G-GA018/4135C | DEERE - 318   | 1 7/16" ST | B43G-GA018/4327D | SEE NOTES 1, 3 & 4 |
| B43G-GA018/4137C | JACOBSSEN     | 1 1/8" ST  | B43G-GA018/4263D |                    |
| B43G-GA018/4166D | NEW HOLLAND   | 1 1/8" TPR | SAME             | SEE NOTE 6         |
| B43G-GA018/4167C | DEERE - 318   | 1 7/16" ST | B43G-GA018/4327D | SEE NOTES 1, 3 & 4 |
| B43G-GA018/4173C | DEERE - 318   | 1 7/16" ST | B43G-GA018/4327D | SEE NOTES 1, 3 & 4 |
| B43G-GA018/4174C | DEERE - 318   | 1 7/16" ST | B43G-GA018/4327D | SEE NOTES 1, 3 & 4 |
| B43G-GA018/4206C | DEERE         | 1 7/16" ST | SHORT BLOCK      |                    |
| B43G-GA018/4219C | TENNANT       | 1 1/8" ST  | SHORT BLOCK      |                    |
| B43G-GA018/4234D | DEERE - 318   | 1 7/16" ST | B43G-GA018/4327D | SEE NOTES 1, 3 & 4 |
| B43G-GA018/4237C | HOBBS EQUIP   | 1 1/8" ST  | B43G-GA018/4262D | SEE NOTE 8         |
| B43G-GA018/4262D | STOCK ENGINE  | 1 1/8" ST  | SAME             | SEE NOTE 2         |
| B43G-GA018/4263D | JACOBSSEN     | 1 1/8" ST  | SAME             |                    |
| B43G-GA018/4265D | STANDBY POWER | 1 1/8" ST  | SAME             |                    |
| B43G-GA018/4295D | BUNTON        | 1 1/8" ST  | SAME             |                    |
| B43G-GA018/4327D | DEERE - 318   | 1 7/16" ST | SAME             | SEE NOTE 3         |
| B43G-GA018/4336D | JACOBSSEN     | G225       | SAME             | SEE NOTE 7         |

NOTE 1 - ORIGINAL SPEC HAS AN INERTIA DRIVE STARTER.

NOTE 2 - REPLACEMENT IS THE STOCK ENGINE AS LISTED IN THE L-740L.

NOTE 3 - REPLACEMENT SPEC IS EQUIPPED WITH A403, SOLENOID SHIFT STARTER-DOWN MOUNT, 191-1808-02.

NOTE 4 - THIS REPLACEMENT MAY REQUIRE A STARTER SWAP (TO P/N 191-1567) OR REWIRING, SEE SERVICE MANUAL.

NOTE 5 - C/SHAFT IS ADDER G186, 1.125" ST SHAFT X 4.71" TIP TO RR FACE OF BLOCK (104-0893).

NOTE 6 - C/SHAFT IS ADDER G195, 1.125" TAPER SHAFT X 3.11" TIP TO RR FACE OF BLOCK (104-0895).

NOTE 7 - C/SHAFT IS ADDER G225, " SHAFT X " TIP TO RR FACE OF BLOCK (104-1549).

NOTE 8 - USE EXHAUST COMPONENTS FROM ORIGINAL ENGINE.

# B43M-GA016/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER          | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                  |
|------------------------|-------------------|--------------|---------------------------|---------------------------|
| B43M-GA016/3418A       | ROPER/SEARS       | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTE 1                |
| B43M-GA016/3419A       | CASE/INGERSOLL    | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTES 1 & 4           |
| B43M-GA016/3420A       | MASSEY FERGUSON   | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTE 1                |
| B43M-GA016/3422A       | GRAVELY           | 1 1/8" ST    | B43M-GA016/4420C          | SEE NOTE 6                |
| B43M-GA016/3433A       | HYDRAMASTER       | 1 1/8" ST    | SHORT BLOCK               |                           |
| B43M-GA016/3441A       | STOCK ENGINE      | 1 7/16" ST   | B43M-GA016/3586C          | SEE NOTE 2                |
| B43M-GA016/3442A       | STOCK ENGINE      | 1 7/16" ST   | B43M-GA016/3586C          | SEE NOTES 2 & 3           |
| B43M-GA016/3507A       | STOCK ENGINE      | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTE 1                |
| B43M-GA016/3543A       | ANDERSON          | 1 1/8" ST    | B43M-GA016/4254C          |                           |
| B43M-GA016/3552A       | CASE/INGERSOLL    | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTES 1 & 4           |
| B43M-GA016/3570A       | ANDERSON          | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTES 1 & 4           |
| B43M-GA016/3586C       | STOCK ENGINE      | 1 7/16" ST   | SAME                      | SEE NOTE 2                |
| B43M-GA016/3602A       | WHEELHORSE        | 1 1/8" ST    | B43M-GA016/4417C          |                           |
| B43M-GA016/3622A       | CASE/INGERSOLL    | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTES 1 & 4           |
| B43M-GA016/3782B       | STOCK ENGINE      | 1 1/8" ST    | B43M-GA016/4254C          | SEE NOTE 1                |
| B43M-GA016/3798A       | FLAHERTY          | 9 T/SAE A    | B48M-GA018/4315A          |                           |
| B43M-GA016/3812A       | AMA               | 1 7/16" ST   | B43M-GA016/3586C          | SEE NOTE 8                |
| B43M-GA016/3840A       | ESCO              | 9 T/SAE A    | B48M-GA018/4315A          |                           |
| B43M-GA016/3842A       | OAKES/PRIME MOVER | 1/8" ST      | B43M-GA016/4254C          | SEE NOTES 1 & 4           |
| B43M-GA016/3896A       | ESCO              | 9 T/SAE A    | B48M-GA018/4315A          |                           |
| B43M-GA016/3902A       | -----             | 1 1/8" ST    | B43M-GA016/4380C          |                           |
| B43M-GA016/3945B       | ONAN EPD          | 1.04" TPR    | -----                     | SEE NOTE 7                |
| B43M-GA016/3956A       | CASE/BURLINGTON   | 1 1/8" ST    | B43M-GA016/4380C          |                           |
| B43M-GA016/3984A       | ESCO              | 9 T/SAE A    | B48M-GA018/4315A          |                           |
| B43M-GA016/3996B       | ONAN EPD          | 1.04" TPR    | -----                     | SEE NOTE 7                |
| B43M-GA016/4029B       | CASE/DAVIS        | 1 1/8" ST    | -----                     |                           |
| B43M-GA016/4034A       | HSE               | 1 7/16" ST   | B43M-GA016/3586C          |                           |
| B43M-GA016/4150A       | CASE/BURLINGTON   | 1 1/8" ST    | B43M-GA016/4380C          |                           |
| B43M-GA016/4183C       | INGERSOLL         | 1 1/8" ST    | SAME                      | SEE NOTE 5                |
| B43M-GA016/4248C       | -----             | 1 7/16" ST   | SAME                      | SAE A BEARING PLATE (F16) |
| B43M-GA016/4250C       | MIDWESTERN        | 1 1/8" ST    | B43M-GA016/4380C          |                           |
| B43M-GA016/4254C       | TURF REPLACEMENT  | 1/8" ST      | SAME                      | SEE NOTE 1                |
| B43M-GA016/4289C       | CASE/BURLINGTON   | 1 1/8" ST    | B43M-GA016/4380C          |                           |

B43M-GA016/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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|                  |                 |           |      |            |
|------------------|-----------------|-----------|------|------------|
| B43M-GA016/4380C | CASE/BURLINGTON | 1 1/8" ST | SAME |            |
| B43M-GA016/4417C | WHEELHORSE      | 1 1/8" ST | SAME |            |
| B43M-GA016/4420C | GRAVELLY        | 1 1/8" ST | SAME | SEE NOTE 6 |

NOTE 1 - REPLACEMENT IS THE STANDARD "TURF REPLACEMENT" ENGINE AS LISTED IN THE L-740L.

NOTE 2 - REPLACEMENT IS THE STOCK ENGINE AS LISTED IN THE L-740L.

NOTE 3 - MAY REQUIRE 150-1716 CONTROL PANEL KIT.

NOTE 4 - MAY REQUIRE 160-1303 BREAKER BOX, TOP ADJUST POINTS.

NOTE 5 - C/SHAFT IS ADDER G160, 1.125" ST SHAFT X 2.27" TIP TO RR FACE OF BLOCK (104-0897).

NOTE 6 - C/SHAFT IS ADDER G186, 1.125" ST SHAFT X 4.71" TIP TO RR FACE OF BLOCK (104-0893).

NOTE 7 - C/SHAFT IS ADDER G214, 1.04" TAPER SHAFT X 3.650" TIP TO RR FACE OF BLOCK (104-1170), YCB.

NOTE 8 - USE STARTER FROM ORIGINAL ENGINE.

# B48G-GA020/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS            |
|------------------------|-----------------|--------------|---------------------------|---------------------|
| B48G-GA020/3707E       | INTL HARVESTER  | 1 1/8" ST    | B48G-GA020/4433G          |                     |
| B48G-GA020/3713B       | ROPER/SEARS     | 1 1/8" ST    | SHORT BLOCK               |                     |
| B48G-GA020/3738E       | GRAVELLY        | 1 1/8" ST    | B48G-GA020/4431G          | SEE NOTE 3          |
| B48G-GA0199/3800E      | STOCK ENGINE    | 1 1/8" ST    | B48G-GA020/4409G          |                     |
| B48G-GA0199/3831E      | LARSEN AG SPRAY | 13 T/SAE B   | -----                     |                     |
| B48G-GA020/3858E       | ROPER/SEARS     | 1 1/8" ST    | B48G-GA020/4434G          |                     |
| B48G-GA020/4000D       | STOCK           | 1 7/16" ST   | B48G-GA020/4430G          |                     |
| B48G-GA020/4001D       | STEINER         | 1 1/8" ST    | B48G-GA020/4436G          |                     |
| B48G-GA020/4051C       | TORO            | 1 1/8" ST    | B48G-GA020/4348G          | SEE NOTE 8          |
| B48G-GA020/4061C       | DEERE           | 1 7/16" ST   | B48G-GA020/4235F          | SEE NOTES 1, 6 & 11 |
| B48G-GA020/4074D       | JACOBSEN        | 1 1/8" ST    | B48G-GA020/4445G          |                     |
| B48G-GA020/4085D       | OLATHE          | 1 1/8" ST    | B48G-GA020/4445G          |                     |
| B48G-GA020/4136E       | DEERE - 420     | 1 7/16" ST   | B48G-GA020/4235F          |                     |
| B48G-GA020/4138E       | JACOBSEN        | 1 1/8" ST    | B48G-GA020/4445G          |                     |
| B48G-GA020/4139F       | TORO            | 1 1/8" ST    | B48G-GA020/4348G          | SEE NOTES 1 & 8     |
| B48G-GA020/4140E       | OLATHE          | 1 1/8" ST    | B48G-GA020/4291G          | SEE NOTES 7 & 11    |
| B48G-GA020/4141F       | STOCK           | 1 7/16" ST   | B48G-GA020/4430G          |                     |
| B48G-GA020/4142E       | LARSEN AG SPRAY | 13 T/SAE B   | -----                     |                     |
| B48G-GA020/4143E       | ROPER/SEARS     | 1 1/8" ST    | -----                     |                     |
| B48G-GA020/4144E       | STEINER         | 1 1/8" ST    | -----                     |                     |
| B48G-GA020/4145E       | TORO            | 1 1/8" ST    | -----                     | SEE NOTE 8          |
| B48G-GA020/4146E       | OLATHE          | 1 1/8" ST    | -----                     |                     |
| B48G-GA020/4168E       | GEHL            | 1 1/8" ST    | SAME                      |                     |
| B48G-GA020/4175E       | DEERE - 420     | 1 7/16" ST   | B48G-GA020/4235F          | SEE NOTE 1          |
| B48G-GA020/4176E       | HAKO            | 1 7/16" ST   | B48G-GA020/4223F          |                     |
| B48G-GA020/4192E       | STEINER         | 1 1/8" ST    | B48G-GA020/4360G          |                     |
| B48G-GA020/4208E       | KUT KWICK       | 1 7/16" ST   | B48G-GA020/4425F          |                     |
| B48G-GA020/4216F       | DISTRAGEN       | 1 1/8" TPR   | -----                     |                     |
| B48G-GA020/4218E       | STEPP MFG       | -----        | SAME                      |                     |
| B48G-GA020/4223F       | HAKO            | 1 7/16" ST   | SAME                      |                     |
| B48G-GA020/4224E       | FAIRMONT        | 1 7/16" ST   | B48G-GA020/4413G          |                     |
| B48G-GA020/4225E       | KUT KWICK       | 1 7/16" ST   | B48G-GA020/4294F          |                     |
| B48G-GA020/4230E       | DEERE - F910    | 1 7/16" ST   | B48G-GA020/4446G          | SEE NOTE 1          |

## B48G-GA020/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

|                  |                |            |                  |                           |
|------------------|----------------|------------|------------------|---------------------------|
| *****            |                |            |                  |                           |
| B48G-GA020/4231E | HARRISON       | 13 T/SAE B |                  |                           |
| B48G-GA020/4235F | DEERE - 420    | 1 7/16" ST | SAME             | SEE NOTE 4                |
| B48G-GA020/4249F | DEERE - F910   | 1 7/16" ST | B48G-GA020/4446G | SEE NOTE 1                |
| B48G-GA020/4261F | STOCK          | 1 7/16" ST | B48G-GA020/4430G | SEE NOTE 5                |
| B48G-GA020/4262F | STOCK          | 1 1/8" ST  | B48G-GA020/4409G |                           |
| B48G-GA020/4264F | JACOBSEN       | 1 1/8" ST  | B48G-GA020/4445G |                           |
| B48G-GA020/4276F | CUB CADET      | 1 1/8" ST  | B48G-GA020/4433G |                           |
| B48G-GA020/4278F | STEINER        | 1 1/8" ST  | B48G-GA020/4436G |                           |
| B48G-GA020/4283F | FURATELL       | 13 T/SAE B | SAME             |                           |
| B48G-GA020/4291G | OLATHE         | 1 1/8" ST  | SAME             |                           |
| B48G-GA020/4294F | KUT KWICK      | 1 7/16" ST | SAME             |                           |
| B48G-GA020/4296F | MIDWESTERN     | 13 T/SAE B |                  |                           |
| B48G-GA020/4316F | JACOBSEN       | 1 1/2" ST  |                  | SEE NOTE 9                |
| B48G-GA020/4321F | DUPLICARVER    | 1 1/8" ST  | SAME             |                           |
| B48G-GA020/4325F | COET           | 1 1/8" ST  |                  |                           |
| B48G-GA020/4328F | DEERE          | 1 7/16" ST | SAME             | SEE NOTE 6                |
| B48G-GA020/4329F | DEERE - F910   | 1 7/16" ST | B48G-GA020/4446G | SEE NOTE 7                |
| B48G-GA020/4337E | MECO           | 13 T       |                  |                           |
| B48G-GA020/4339F | BLALOCK        | 13 T/SAE A |                  |                           |
| B48G-GA020/4344F | LINCOLN (AUST) | 1 1/8" TPR |                  |                           |
| B48G-GA020/4346F | STEINER        | 1 1/8" ST  |                  |                           |
| B48G-GA020/4348G | TORO           | 1 1/8" ST  | SAME             | SEE NOTES 1 & 8           |
| B48G-GA020/4351F | STEINER        | 1 1/8" ST  | B48G-GA020/4445G |                           |
| B48G-GA020/4353F | FAIRMONT       | 1 7/16" ST | B48G-GA020/4413G |                           |
| B48G-GA020/4359G | MILLER         | 1 1/8" TPR | SAME             | TRAILBLAZER - SEE NOTE 10 |
| B48G-GA020/4360G | STEINER        | 1 1/8" ST  | SAME             |                           |
| B48G-GA020/4365G | LINCOLN (AUST) | 1 1/8" TPR | SAME             |                           |
| B48G-GA020/4368G | LANTIS CORP    | 1 1/8" ST  |                  |                           |
| B48G-GA020/4370G | MECO           | 1 1/8" ST  | SAME             |                           |
| B48G-GA020/4374F | HARTMAT        | 1 7/16" ST |                  |                           |
| B48G-GA020/4375F | COMET          | 1 1/8" ST  |                  |                           |
| B48G-GA020/4378F | FURATELL       | 13 T/SAE B |                  |                           |
| B48G-GA020/4409G | STOCK ENGINE   | 1 1/8" ST  | P220G-I/10722B   | SEE NOTE 2                |
| B48G-GA020/4411G | MECELEC        | 1 1/8" ST  | SAME             |                           |

# B48G-GA020/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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|                  |              |            |                |            |
|------------------|--------------|------------|----------------|------------|
| B48G-GA020/4413G | FAIRMONT     | 1 7/16" ST | SAME           |            |
| B48G-GA020/4425F | KUT KWICK    | 1 7/16" ST | SAME           |            |
| B48G-GA020/4430G | STOCK        | 1 7/16" ST | P220G-I/10721B | SEE NOTE 2 |
| B48G-GA020/4431G | GRAVELY      | 1 1/8" ST  | SAME           |            |
| B48G-GA020/4433G | CUB CADET    | 1 1/8" ST  | SAME           |            |
| B48G-GA020/4434G | ROPER/SEARS  | 1 1/8" ST  | SAME           |            |
| B48G-GA020/4436G | STEINER      | 1 1/8" ST  | SAME           |            |
| B48G-GA020/4445G | JACOBSEN     | 1 1/8" ST  | SAME           |            |
| B48G-GA020/4446G | DEERE - F910 | 1 7/16" ST | SAME           |            |
| B48G-GA020/4447G | HAKO WERKE   | 1 7/16" ST | SAME           |            |

- NOTE 1 - ORIGINAL SPEC HAS AN INERTIA DRIVE STARTER.
- NOTE 2 - REPLACEMENT IS THE STOCK ENGINE AS LISTED IN THE L-740N.
- NOTE 3 - MAY REQUIRE 541-0197, EXHAUST MANIFOLD-REAR, RIGHT DOWN.
- NOTE 4 - REPLACEMENT ENGINE IS EQUIPPED WITH AN INERTIA DRIVE STARTER.
- NOTE 5 - MAY REQUIRE 542-7214, FLANGED EXHAUST ADAPTERS-3.5" VERTICAL.
- NOTE 6 - REPLACEMENT ENGINE IS EQUIPPED WITH A403 SOLENOID SHIFT STARTER-DOWN MOUNT, 191-1808-02.
- NOTE 7 - REPLACEMENT ENGINE IS EQUIPPED WITH A402 SOLENOID SHIFT STARTER-SIDE MOUNT, 191-1808-01.
- NOTE 8 - C/SHAFT IS ADDER G165, 1.125" ST SHAFT X 2.27" TIP TO RR FACE OF BLOCK (104-1067 & 104-1419).
- NOTE 9 - C/SHAFT IS ADDER G187, 1.50" ST SHAFT X 2.74" TIP TO RR FACE OF BLOCK (104-0999).
- NOTE 10 - C/SHAFT IS ADDER G223, 1.125" TAPER SHAFT X 2.18" TIP TO RR FACE OF BLOCK (104-1455).
- NOTE 11 - THIS REPLACEMENT MAY REQUIRE A STARTER SWAP (TO P/N 190-1567) OR REWIRING, SEE SERVICE MANUAL.



B48M-GA018/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|------------------|--------------|---------------------------|--------------------|
| *****                  |                  |              |                           |                    |
| B48M-GA018/3147A       | ROPER/SEARS      | 1 1/8" ST    | B48M-GA018/3819A          | SEE NOTES 1 & 3    |
| B48M-GA018/3417A       | ROPER/SEARS      | 1 1/8" ST    | B48M-GA018/3783A          | SEE NOTES 1 & 3    |
| B48M-GA018/3421A       | MASSEY FERGUSON  | 1 1/8" ST    | B48M-GA018/3783A          | SEE NOTES 6 & 7    |
| B48M-GA018/3423A       | GRAVELLY         | 1 1/8" ST    | SAME                      |                    |
| B48M-GA018/3438A       | HYDRA-MAC        | 1 1/8" ST    | SHORT BLOCK               |                    |
| B48M-GA018/3443A       | STOCK ENGINE     | 1 7/16" ST   | B48M-GA018/3588A          | SEE NOTE 2         |
| B48M-GA018/3444A       | STOCK ENGINE     | 1 7/16" ST   | SAME                      | SEE NOTE 4         |
| B48M-GA018/3450A       | E-Z-GO           | 1 1/2" ST    | B48M-GA018/4299A          | SEE NOTE 8         |
| B48M-GA018/3475A       | ROPER/SEARS      | 1 1/8" ST    | B48M-GA018/3783A          | SEE NOTES 1, 3 & 6 |
| B48M-GA018/3506A       | ROPER/SEARS      | 1 1/8" ST    | -----                     |                    |
| B48M-GA018/3508A       | TURF REPLACEMENT | 1 1/8" ST    | B48M-GA018/3783A          | SEE NOTES 1 & 3    |
| B48M-GA018/3547A       | STANWARD POWER   | 1 1/8" ST    | SHORT BLOCK               |                    |
| B48M-GA018/3548A       | DIENES           | 1 1/8" ST    | SAME                      |                    |
| B48M-GA018/3560A       | ROPER/SEARS      | 1 1/8" ST    | B48M-GA018/3819A          |                    |
| B48M-GA018/3588A       | STOCK ENGINE     | 1 7/16" ST   | SAME                      | SEE NOTE 2         |
| B48M-GA018/3615A       | ESCO             | 1 7/16" ST   | B48M-GA018/3588A          | SEE NOTE 2         |
| B48M-GA018/3631A       | CASE/INGERSOLL   | 1 1/8" ST    | B48M-GA018/3783A          | SEE NOTES 1, 3 & 6 |
| B48M-GA018/3633A       | ROPER/SEARS      | 1 1/8" ST    | B48M-GA018/3819A          |                    |
| B48M-GA018/3649A       | ESCO             | 1 7/16" ST   | B48M-GA018/3588A          | SEE NOTE 2         |
| B48M-GA018/3783A       | TURF REPLACEMENT | 1 1/8" ST    | SAME                      | SEE NOTE 1         |
| B48M-GA018/3799A       | MCENTYRE         | 9 T/SAE A    | B48M-GA018/4252A          | SEE NOTE 5         |
| B48M-GA018/3818A       | ROPER/SEARS      | 1 1/8" ST    | B48M-GA018/3819A          |                    |
| B48M-GA018/3819A       | ROPER/SEARS      | 1 1/8" ST    | SAME                      |                    |
| B48M-GA018/4087A       | OAKES/PRIME MOVR | 1 1/8" ST    | B48M-GA018/3783A          | SEE NOTES 1, 3 & 6 |
| B48M-GA018/4107A       | MILLER           | 1 1/8" TPR   | SAME                      | SEE NOTE 10        |
| B48M-GA018/4108A       | MILLER           | 1 1/8" TPR   | SAME                      | SEE NOTES 10 & 11  |
| B48M-GA018/4111A       | OAKES/PRIME MOVR | 1 1/8" TPR   | SHORT BLOCK               |                    |
| B48M-GA018/4153A       | STANDBY POWER    | 9 T/SAE A    | B48M-GA018/4252A          | SEE NOTE 5         |
| B48M-GA018/4184A       | INGERSOLL        | 1 1/8" ST    | SAME                      | SEE NOTE 9         |
| B48M-GA018/4227A       | INLAND DIESEL    | 9 T/SAE A    | B48M-GA018/4252A          | SEE NOTE 5         |
| B48M-GA018/4229A       | STANDBY POWER    | 9 T/SAE A    | B48M-GA018/4252A          | SEE NOTE 5         |
| B48M-GA018/4236A       | E-Z-GO           | 1 1/2" ST    | SAME                      | SEE NOTE 8         |
| B48M-GA018/4238A       | PRIME MOVER      | 1 1/8" ST    | SHORT BLOCK               |                    |

# B48M-GA018/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER      | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS               |
|------------------------|---------------|--------------|---------------------------|------------------------|
| *****                  |               |              |                           |                        |
| B48M-GA018/4252A       | INLAND DIESEL | 9 T/SAE A    | SAME                      | SEE NOTE 5             |
| B48M-GA018/4279A       | INTERSTATE    | 1 1/8" ST    | SAME                      | SEE NOTE 3             |
| B48M-GA018/4299A       | E-Z-GO        | 1 1/2" ST    | SAME                      | SEE NOTE 8             |
| B48M-GA018/4315A       | INLAND DIESEL | 9 T/SAE A    | SAME                      | SEE NOTE 5, REMOTE A/C |
| B48M-GA018/4349A       | INLAND DIESEL | 1 1/8" ST    | SAME                      | SEE NOTE 5             |
| B48M-GA018/4381A       | MILLER        | 1 1/8" TPR   | SAME                      | SEE NOTE 10            |
| B48M-GA018/4387A       | E-Z-GO        | 1 1/2" ST    | B48M-GA018/4401A          | SEE NOTE 8             |
| B48M-GA018/4401A       | E-Z-GO        | 1 1/2" ST    | SAME                      | SEE NOTE 8             |

- NOTE 1 - REPLACEMENT ENGINE IS THE STANDARD "TURF REPLACEMENT" ENGINE AS LISTED IN THE L-740L.
- NOTE 2 - REPLACEMENT ENGINE IS THE STOCK ENGINE AS LISTED IN THE L-740L.
- NOTE 3 - REPLACEMENT ENGINE IS EQUIPPED WITH REAR ADJUST POINTS, ADDER "N81".
- NOTE 4 - REPLACEMENT ENGINE IS EQUIPPED WITH CONTROL PANEL, ADDER "R69".
- NOTE 5 - REPLACEMENT ENGINE IS EQUIPPED WITH CONTROL PANEL, ADDER "R82".
- NOTE 6 - ORIGINAL ENGINE IS EQUIPPED WITH TOP ADJUST POINTS.
- NOTE 7 - C/SHAFT IS ADDER G185, 1.125" ST SHAFT X 4.71" TIP TO RR FACE OF BLOCK (104-1037).
- NOTE 8 - C/SHAFT IS ADDER G187, 1.50" ST SHAFT X 2.74" TIP TO RR FACE OF BLOCK, "CLUTCH STUB" (104-0999).
- NOTE 9 - C/SHAFT IS ADDER G204, 1.125" ST SHAFT X 2.27" TIP TO RR FACE OF BLOCK (104-1067 OR 104-1419).
- NOTE 10 - C/SHAFT IS ADDER G223, 1.125" TAPER SHAFT X 2.18" TIP TO RR FACE OF BLOCK (104-1455).
- NOTE 11 - ORIGINAL ENGINE IS MANUAL START W/ MAGNETO IGNITION.

NH, NHA, NHB & N52M -- REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                              |
|------------------------|-----------------|--------------|---------------------------|---------------------------------------|
| NH-MS/1832C            | ----            | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/1918C            | HYDRA-MAC       | 1.437"       | ST                        | NHC-MS/4390E SEE NOTE 28              |
| NH-MS/1952C            | ----            | 1.437"       | ST                        | -----                                 |
| NH-MS/1980C            | ----            | 1.437"       | ST                        | -----                                 |
| NH-MS/1981C            | ----            | 1.437"       | ST                        | NHC-MS/4390E SEE NOTES 13 & 28        |
| NH-MS/2024C            | ----            | 1.437"       | ST                        | -----                                 |
| NH-MS/2053C            | ----            | 1.437"       | ST                        | NHC-MS/4439D SEE NOTE 32              |
| NH-MS/2055C            | ----            | 1.437"       | ST                        | NHC-MS/4390E SEE NOTES 13 & 28        |
| NH-MS/2057C            | ----            | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2074C            | ----            | 1.437"       | ST                        | -----                                 |
| NH-MS/2110B            | ----            | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2118C            | WAYNE (LEROI)   | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2120C            | ----            | 13 T/SAE B   | ST                        | NHC-MS/4429E                          |
| NH-MS/2128B            | CHARLES MACHINE | 1.437"       | ST                        | NHC-MS/4439D                          |
| NH-MS/2136C            | CHARLES MACHINE | 1.437"       | ST                        | NHC-MS/4439D                          |
| NH-MS/2138C            | LAYTON          | 1.437"       | ST                        | NHC-MS/4390E                          |
| NH-MS/2145C            | TENNANT         | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2146C            | TENNANT         | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2154C            | ----            | G127         | ST                        | SHORT BLOCK                           |
| NH-MS/2196C            | CASE-DAVIS      | 1.437"       | ST                        | NHC-MS/4428E                          |
| NH-MS/2199C            | ----            | 1.437"       | ST                        | NHC-MS/4390E                          |
| NH-MS/2242A            | ----            | G140         | ST                        | -----G140/104-0918                    |
| NH-MS/2259A            | OWATONNA        | 1.437"       | ST                        | NHC-MS/4423E                          |
| NH-MS/2262C            | ----            | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2288C            | ----            | 1.437"       | ST                        | NHC-MS/4390E                          |
| NH-MS/2394C            | LEROI           | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2497A            | ----            | 1.437"       | ST                        | -----                                 |
| NH-MS/2589C            | ----            | 1.437"       | ST                        | SHORT BLOCK                           |
| NH-MS/2849             | ----            | 1.437"       | ST                        | NHC-MS/4423E SEE NOTE 27              |
| NHA-MF/1967C           | McENTYRE BROS.  | 1.437"       | ST                        | NHC-MS/4390E SEE NOTES 1, 10, 20 & 28 |
| NHA-MS/2570C           | ----            | 1.437"       | ST                        | NHC-MS/4390E SEE NOTES 13 & 28        |

# NH, NHA, NHB & N52M - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                                    |
|------------------------|------------------|--------------|---------------------------|---------------------------------------------|
| NHA-MS/2571C           | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 3, 5, 8, 10 & 28                  |
| NHA-MS/2913B           | -----            | G140         | SHORT BLOCK               | G140/104-0918                               |
| NHA-MS/3191C           | DIEM             | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 19 & 28                           |
| NHA-MS/3208C           | LIGHTBOURN       | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 14 & 28                           |
| NHA-MS/3252C           | McENTYRE BROS.   | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTES 3, 5, 11 & 28                     |
| NHA-MS/3377C           | COMET            | 9 T/SAE A    | NHC-MS/4440E              | SEE NOTES 6, 9 & 28                         |
| NHB-MF/1967C           | McENTYRE BROS.   | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 1, 10, 20 & 28                    |
| NHB-MF/2617C           | HORVICK          | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 13, 20 & 23                       |
| NHB-MS/2270C           | G.L.T.           | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 1, 10 & 28                        |
| NHB-MS/2570C           | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 13 & 28                           |
| NHB-MS/2571C           | STOCK            | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 3, 5, 8, 10, 12 & 28              |
| NHB-MS/2576C           | McENTYRE BROS.   | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 2, 10, 12 & 28                    |
| NHB-MS/2725B           | -----            | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 14 & 31                           |
| NHB-MS/2784B           | -----            | 13 T/SAE A   | -----F16/G136             |                                             |
| NHB-MS/3012B           | VERMEER          | 1.437" ST    | NHC-MS/4390E              | SEE NOTE 28                                 |
| NHB-MS/3069C           | VERMEER          | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 5, 8, 10, 12 & 28                 |
| NHB-MS/3126C           | FRINK-SNO PLOWS  | 13T/SAE A    | NHC-MS/4427E              | SEE NOTES 3, 5, 8, 10, 14, 17 & 29          |
| NHB-MS/3143C           | COMET            | 1.437" ST    | SHORT BLOCK               | NHC-MS/4390E MAY BE USED W/ MODS, NOTE 28   |
| NHB-MS/3208C           | LIGHTBOURN       | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 1, 8, 10, 14 & 28                 |
| NHB-MS/3230C           | FOSTER MFG       | 1.437" ST    | NHC-MS/4428E              | SEE NOTES 14 & 30. CHECK FISCHE.            |
| NHB-MS/3274C           | HARRISON         | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 12, 14 & 31                       |
| NHB-MS/3280C           | -----            | G31          | -----                     |                                             |
| NHB-MS/3296C           | TULLER           | 13 T/SAE A   | NHC-MS/4427E              | SEE NOTES 2, 10, 15, 17 & 29                |
| NHB-MS/3351C           | WISCONSIN MARINE | 1.437" ST    | SHORT BLOCK               | NHC-MS/4390E MAY BE USED W/MODS-SEE NOTE 28 |
| NHB-MS/3357C           | -----            | D14          | -----                     |                                             |
| NHB-MS/3377C           | COMET            | 9 T/SAE A    | NHC-MS/4440E              | SEE NOTES 6, 9 & 28                         |
| NHB-MS/3457C           | TULLER           | 13 T/SAE A   | NHC-MS/4427E              | SEE NOTES 3, 5, 11, 14, 15 & 29             |
| NHB-MS/3471C           | EKSTROM          | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 3, 5, 8, 10, 12, 19 & 28          |
| NHB-MS/3498C           | SILVER           | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 2, 10 & 28                        |
| NHB-MS/3519C           | HARRISON         | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTES 3, 5, 11 & 28                     |
| NHB-MS/3555C           | EQUIPMENT SALES  | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 12 & 31                           |
| NHB-MS/3598C           | TULLER           | 13 T/SAE A   | NHC-MS/4427E              | SEE NOTES 4, 5, 8, 10, 14, 15, 17, 18 & 29  |

NH, NHA, NHB & N52M - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                                   |
|------------------------|------------------|--------------|---------------------------|--------------------------------------------|
| *****                  |                  |              |                           |                                            |
| NHB-MS/3604C           | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 5, 8 & 28                        |
| NHB-MS/3610C           | EKSTROM          | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 3, 5, 8, 10, 19 & 28             |
| NHB-MS/3623C           | TULLER           | 13 T/SAE A   | NHC-MS/4427E              | SEE NOTES 4, 5, 8, 10, 14, 15, 17, 18 & 29 |
| NHB-MS/3708C           | ELECTRICAL ENGR  | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 1, 5, 8, 10 & 28                 |
| NHB-MS/3765C           | LAHMAN           | 1.437" ST    | NHC-MS/4423E              | SEE NOTES 5, 10, 12 & 27                   |
| NHB-MS/3797C           | McENTYRE         | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTES 3, 5, 11 & 28                    |
| NHB-MS/3900D           | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 5, 8 & 28                        |
| NHB-MS/3901D           | ELECTRICAL ENGR  | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 1, 5, 8, 10 & 28                 |
| NHB-MS/3921D           | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 10, 13 & 28                      |
| NHB-MS/3959D           | HARRISON         | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 12 & 31                          |
| NHB-MS/4066D           | HARRISON         | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 12 & 31                          |
| NHB-MS/4082D           | MIDWESTERN POWER | 1.437" ST    | NHC-MS/4423E              | SEE NOTES 3, 5, 8, 10, 12, 21, 22 & 27     |
| NHB-MS/4201D           | G.L.T.           | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 5, 8 & 28                        |
| NHB-MS/4282D           | CRAFOO           | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 12 & 31                          |
| *****                  |                  |              |                           |                                            |
| N52M-GA0199/3380B      | ROPER/SEARS      | 1.125" ST    | P220G-I/10722B            | SEE NOTE 23                                |
| N52M-GA0199/3411A      | ROPER/SEARS      | 1.125" ST    | P220G-I/10722B            | SEE NOTE 23                                |
| N52M-GA0199/3447A      | STOCK            | 1.437" ST    | P220G-I/10721B            | SEE NOTES 24 & 25                          |
| N52M-GA0199/3448A      | STOCK            | 1.437" ST    | P220G-I/10721B            | SEE NOTE 24                                |
| N52M-GA0199/3521A      | MEXO             | 1.437" ST    | P220G-I/10721B            | SEE NOTES 19 & 24                          |
| N52M-GA0199/3564A      | LIGHTBOURN       | 9 T/SAE A    | -----                     |                                            |
| N52M-GA0199/3580B      | ROPER/SEARS      | 1.125" ST    | P220G-I/10722B            | SEE NOTE 23                                |
| N52M-GA0199/3581A      | MEXO             | 1.437" ST    | P220G-I/10721B            | SEE NOTES 19 & 24                          |
| N52M-GA0199/3593B      | GRAVELY          | 1.125" ST    | SHORT BLOCK               |                                            |
| N52M-GA0199/3601B      | STOCK            | 1.437" ST    | P220G-I/10721B            | SEE NOTE 24                                |
| N52M-GA0199/3613A      | TULLER           | 1.125" ST    | P220G-I/10722B            | SEE NOTES 19 & 26                          |
| N52M-GA0199/3638B      | RANSOMES         | 1.125" ST    | SHORT BLOCK               |                                            |
| N52M-GA0199/3644B      | ELEC. CONST.     | 1.437" ST    | SHORT BLOCK               |                                            |
| N52M-GA0199/3663B      | FLAHERTY         | 11 T/SAE B   | -----                     |                                            |
| N52M-GA0199/3664B      | FLAHERTY         | 9 T/SAE A    | -----                     |                                            |
| N52M-GA0199/3785B      | HOSHALL IND      | 1.437" ST    | P220G-I/10721B            | SEE NOTES 24 & 25                          |
| N52M-GA0199/3809B      | LIGHTBOURN       | 9 T/SAE A    | -----                     |                                            |
| N52M-GA0199/3817B      | LIGHTBOURN       | 13 T/SAE B   | -----                     |                                            |
| N52M-GA0199/3820B      | ROPER/SEARS      | 1.125" ST    | P220G-I/10722B            | SEE NOTE 23                                |

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# NH, NHA, NHB & N52M - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

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- NOTE 1 - ORIGINAL ENGINE HAS FIXED SPEED GOVERNOR CONTROL (STD).
- NOTE 2 - ORIGINAL ENGINE HAS VARIABLE SPEED GOVERNOR CONTROL (B3 ADDER).
- NOTE 3 - ORIGINAL ENGINE HAS UNIVERSAL PULL GOVERNOR (B62 ADDER).
- NOTE 4 - ORIGINAL ENGINE HAS TWO SPEED THROTTLE CONTROL (B107 ADDER).
- NOTE 5 - ORIGINAL ENGINE HAS REMOTE FRONT PULL CHOKE (C47 ADDER).
- NOTE 6 - ORIGINAL ENGINE HAS FRONT OIL DRAIN (J86 ADDER).
- NOTE 7 - REPLACEMENT ENGINE HAS FIXED SPEED GOVERNOR CONTROL (STD).
- NOTE 8 - REPLACEMENT ENGINE HAS REMOTE REAR PULL CHOKE (STD).
- NOTE 9 - REPLACEMENT ENGINE HAS LEFT OIL DRAIN (STD).
- NOTE 10 - REPLACEMENT ENGINE HAS SIDE PULL GOVERNOR CONTROL (B65 ADDER).
- NOTE 11 - REPLACEMENT ENGINE HAS CONTROL PANEL (R82 ADDER).
- NOTE 12 - REPLACEMENT ENGINE HAS 20 AMP ALTERNATOR (R84 ADDER).
- NOTE 13 - MAY REQUIRE 150-1716 CONTROL PANEL.
- NOTE 14 - MAY REQUIRE 542-7119 EXHAUST MANIFOLD KIT, LEFT REAR OUTLET.
- NOTE 15 - MAY REQUIRE 541-0147 ELBOW KIT.
- NOTE 16 - MAY REQUIRE 542-7129 EXHAUST ADAPTER KIT.
- NOTE 17 - REQUIRES REMOTE MOUNTED AIR CLEANER.
- NOTE 18 - REQUIRES TWO SPEED THROTTLE CONTROL FROM ORIGINAL ENGINE.
- NOTE 19 - REQUIRES USE OF OIL PRESSURE SWITCH FROM ORIGINAL ENGINE.
- NOTE 20 - REQUIRES CLUTCH FROM ORIGINAL ENGINE.
- NOTE 21 - MAY REQUIRE MODIFYING FRONT GRILLE TO ALLOW PTO ACCESS.
- NOTE 22 - MAY REQUIRE 190-0577 FRONT PTO SHAFT KIT.
- NOTE 23 - MAY REQUIRE 541-0296 STATIONARY GUARD KIT.
- NOTE 24 - MAY REQUIRE 542-7214 FLANGED EXHAUST ADAPTER KIT.
- NOTE 25 - MAY REQUIRE 541-0194 CONTROL PANEL KIT.
- NOTE 26 - MAY REQUIRE 541-0191 FRONT PULL GOVERNOR KIT.
- NOTE 27 - REFER TO APPENDIX 1, NHC SECTION.
- NOTE 28 - REFER TO APPENDIX 2, NHC SECTION.
- NOTE 29 - REFER TO APPENDIX 3, NHC SECTION.
- NOTE 30 - REFER TO APPENDIX 4, NHC SECTION.
- NOTE 31 - REFER TO APPENDIX 5, NHC SECTION.
- NOTE 32 - REFER TO APPENDIX 6, NHC SECTION.

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|------------------|--------------|---------------------------|--------------------|
| *****                  |                  |              |                           |                    |
| NHC-MS/1918C           | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 5 |
| NHC-MS/1981            | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 5 |
| NHC-MS/2138            | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 5 |
| NHC-MS/2145            | -----            | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2169            | TENNANT          | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2199C           | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3    |
| NHC-MS/2270A           | -----            | 1.437" ST    | -----                     |                    |
| NHC-MS/2302A           | TENNANT          | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6     |
| NHC-MS/2303A           | TENNANT          | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2313C           | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 5 |
| NHC-MS/2342A           | -----            | 1.437" ST    | -----                     |                    |
| NHC-MS/2362C           | -----            | 1.437" ST    | -----                     |                    |
| NHC-MS/2364A           | -----            | 13 T/SAE A   | -----                     |                    |
| NHC-MS/2365A           | -----            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3    |
| NHC-MS/2372B           | CHARLES MACHINE  | 1.437" ST    | NHC-MS/4439D              | SEE APPENDIX 6     |
| NHC-MS/2377A           | DAVIS            | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4     |
| NHC-MS/2386            | -----            | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2417C           | -----            | G115         | -----                     |                    |
| NHC-MS/2429C           | -----            | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2433A           | -----            | 1.437" ST    | -----                     |                    |
| NHC-MS/2436A ?         | AMERICAN LINCOLN | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2456A           | -----            | 1.437" ST    | -----                     |                    |
| NHC-MS/2467A           | TENNANT          | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6     |
| NHC-MS/2469A           | TENNANT          | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2476A           | HYDRA-MAC        | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4     |
| NHC-MS/2477            | -----            | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2479A           | PCM              | 13 T/SAE B   | NHC-MS/4432E              | SEE NOTES 2 & 21   |
| NHC-MS/2487A           | TENNANT          | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6     |
| NHC-MS/2488A           | TENNANT          | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2497A           | -----            | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2498A           | -----            | 1.437" ST    | -----                     |                    |
| NHC-MS/2502C           | -----            | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5     |
| NHC-MS/2510A           | -----            | 1.437" ST    | SHORT BLOCK               |                    |

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS            |
|------------------------|------------------|--------------|---------------------------|---------------------|
| NHC-MS/2517C           | ATLAS LAWN       | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3     |
| NHC-MS/2530A           | MORLEY MURPHY    | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 15 |
| NHC-MS/2531C           | OWATONNA         | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5      |
| NHC-MS/2538A           | AMERICAN LINCOLN | 1.437" ST    | NHC-MS/4423E              | SEE NOTE 1          |
| NHC-MS/2540A           | DAVIS            | 1.437" ST    | SHORT BLOCK               |                     |
| NHC-MS/2541B           | BADGER DYNAMICS  | 1.437" ST    | SHORT BLOCK               | SEE APPENDIX 4      |
| NHC-MS/2543B           | STOCK            | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3      |
| NHC-MS/2565A           | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3     |
| NHC-MS/2568            | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3     |
| NHC-MS/2570C           | PCM              | 1.437" ST    | SHORT BLOCK               |                     |
| NHC-MS/2571C           |                  | 13 T/SAE B   | NHC-MS/4432E              | SEE NOTES 2 & 21    |
| NHC-MS/2572A           |                  | 13 T/SAE A   |                           |                     |
| NHC-MS/2577A           |                  | 1.437" ST    |                           |                     |
| NHC-MS/2580A           |                  | 1.437" ST    |                           |                     |
| NHC-MS/2613A           | HYDRA-MAC        | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3     |
| NHC-MS/2618B           | ERICKSON         | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4      |
| NHC-MS/2623A           | GLT              | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3      |
| NHC-MS/2624C           |                  | 1.437" ST    |                           |                     |
| NHC-MS/2626C           |                  | 1.437" ST    |                           |                     |
| NHC-MS/2628C           | HESSTON          | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3     |
| NHC-MS/2635A           |                  | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5      |
| NHC-MS/2636A           | BADGER DYNAMICS  | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3      |
| NHC-MS/2642C           |                  | 1.437" ST    |                           |                     |
| NHC-MS/2644A           | TENNANT          | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6      |
| NHC-MS/2645A           | TENNANT          | 1.437" ST    | SHORT BLOCK               |                     |
| NHC-MS/2652A           | AMERICAN LINCOLN | 1.437" ST    | SHORT BLOCK               |                     |
| NHC-MS/2672A           |                  | 13 T/SAE A   |                           |                     |
| NHC-MS/2684B           |                  | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3, & 4 |
| NHC-MS/2698C           | DAVIS            | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4      |
| NHC-MS/2699B           | OWATONNA         | 1.437" ST    | NHC-MS/4423E              | SEE NOTE 1          |
| NHC-MS/2702A           | ATLAS            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3     |
| NHC-MS/2703B           | ERICKSON         | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3      |
| NHC-MS/2704B           |                  | 1.437" ST    | SHORT BLOCK               |                     |
| NHC-MS/2705B           | TENNANT          | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6      |



# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS           |
|------------------------|-----------------|--------------|---------------------------|--------------------|
| NHC-MS/2706B           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2707B           | TENNANT         | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6     |
| NHC-MS/2708B           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2710B           | BADGER DYNAMICS | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3     |
| NHC-MS/2717B           |                 | 1.437" ST    |                           |                    |
| NHC-MS/2718B           | ADVANCE MACHINE | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3     |
| NHC-MS/2721B           | PIONEER SEED    | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5     |
| NHC-MS/2731B           | HYDRA-MAC       | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4     |
| NHC-MS/2732C           | HYDRA-MAC       | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4     |
| NHC-MS/2763B           |                 | 1.437" ST    |                           |                    |
| NHC-MS/2786B           | ATLAS LAWN      | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3    |
| NHC-MS/2834B           |                 | 1.437"/SAE B |                           |                    |
| NHC-MS/2838C           |                 | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 5 |
| NHC-MS/2846B           |                 | 13 T/SAE A   |                           |                    |
| NHC-MS/2849            |                 | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3    |
| NHC-MS/2856B           |                 | 1.437" ST    | NHC-MS/4423E              | SEE NOTE 1         |
| NHC-MS/2867B           |                 | 104-0917     | SHORT BLOCK               |                    |
| NHC-MS/2884C           | PIONEER SEED    | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5     |
| NHC-MS/2889B           |                 | 1.437" ST    |                           |                    |
| NHC-MS/2896B           |                 | 1.437" ST    |                           |                    |
| NHC-MS/2909            |                 | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2913            |                 | 104-0918     | SHORT BLOCK               |                    |
| NHC-MS/2916B           | TENNANT         | 1.437" ST    |                           | PSB #55            |
| NHC-MS/2917B           | TENNANT         | 1.437" ST    | SHORT BLOCK               | PSB #55            |
| NHC-MS/2918B           | TENNANT         | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6     |
| NHC-MS/2919B           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2922B           | CHARLES MACHINE | 1.437" ST    | NHC-MS/4439D              | SEE APPENDIX 6     |
| NHC-MS/2954B           |                 | 13 T/SAE B   | SHORT BLOCK               |                    |
| NHC-MS/2991B           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2992B           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2993B           | TENNANT         | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6     |
| NHC-MS/2994B           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                    |
| NHC-MS/2999B           | ATLAS LAWN      | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3    |
| NHC-MS/3009            |                 | 13 T/SAE B   | SHORT BLOCK               |                    |

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                |
|------------------------|-----------------|--------------|---------------------------|-------------------------|
| NHC-MS/3016B           | LAYTON          | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3         |
| NHC-MS/3034B           | TYMCO           | 1.437" ST    | NHC-MS/4438E              | SEE NOTE 2              |
| NHC-MS/3052C           | ADVANCE MACHINE | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3          |
| NHC-MS/3056C           | -----           | 13 T/SAE B   | SHORT BLOCK               |                         |
| NHC-MS/3071C           | TENNANT         | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6          |
| NHC-MS/3072C           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                         |
| NHC-MS/3073C           | TENNANT         | 1.437" ST    | NHC-MS/3914D              | SEE APPENDIX 6          |
| NHC-MS/3077C           | CASE-DAVIS      | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4          |
| NHC-MS/3094C           | HYDRA-MAC       | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4          |
| NHC-MS/3097C           | ELEC. CONST.    | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3         |
| NHC-MS/3102C           | -----           | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3, 6 & 10  |
| NHC-MS/3103C           | TYMCO           | 1.437" ST    | NHC-MS/4438E              | SEE APPENDIX 2          |
| NHC-MS/3107C           | HOWARD COMM.    | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3         |
| NHC-MS/3115            | -----           | 1.437"/SAE B | -----                     |                         |
| NHC-MS/3125C           | BADGER DYNAMICS | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3          |
| NHC-MS/3144B           | -----           | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4          |
| NHC-MS/3146C           | -----           | 1.437" ST    | SHORT BLOCK               |                         |
| NHC-MS/3151C           | ELEC. ENG.      | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3, 14 & 15 |
| NHC-MS/3152C           | TYMCO INC       | 1.437" ST    | NHC-MS/4438E              | SEE NOTE 2              |
| NHC-MS/3154C           | ERICKSON        | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3          |
| NHC-MS/3155C           | FOX GROVE SOD   | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3         |
| NHC-MS/3168C           | -----           | 104-0917     | SHORT BLOCK               |                         |
| NHC-MS/3194C           | SIMSON MAXWELL  | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3         |
| NHC-MS/3203C           | CHARLES MACHINE | 1.437" ST    | NHC-MS/4439D              | SEE APPENDIX 6          |
| NHC-MS/3209C           | SIMSON MAXWELL  | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3, 14 & 15 |
| NHC-MS/3254C           | CASE-DAVIS      | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4          |
| NHC-MS/3285D           | OWATONNA        | 1.437" ST    | NHC-MS/4423E              | SEE APPENDIX 1          |
| NHC-MS/3286C           | -----           | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3         |
| NHC-MS/3287C           | TENNANT         | 1.437" ST    | SHORT BLOCK               |                         |
| NHC-MS/3308C           | GEHL            | 1.437" ST    | SHORT BLOCK               | SEE NOTE 7              |
| NHC-MS/3319C           | -----           | 13 T/SAE B   | NHC-MS/4412E              | SEE APPENDIX 6          |
| NHC-MS/3335C           | CHARLES MACHINE | 1.437" ST    | NHC-MS/4439D              | SEE APPENDIX 4          |
| NHC-MS/3346C           | CASE-DAVIS      | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 3          |
| NHC-MS/3348C           | ERICKSON        | 13 T/SAE A   | NHC-MS/4427E              |                         |

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER                   | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                              |
|------------------------|----------------------------|--------------|---------------------------|---------------------------------------|
| NHC-MS/3361C           | -----1.437" ST             | SHORT BLOCK  |                           |                                       |
| NHC-MS/3376C           | -----1.437" ST             |              |                           |                                       |
| NHC-MS/3391C           | -----1.625" TPR            |              |                           | SEE NOTE 23                           |
| NHC-MS/3392C           | -----1.437" ST             |              | NHC-MS/4390E              | SEE NOTES 2 & 3                       |
| NHC-MS/3404C           | -----13 T/SAE B            |              | NHC-MS/4412E              | SEE NOTES 2 & 7                       |
| NHC-MS/3406D           | 1.437" ST                  |              | NHC-MS/4423E              | SEE NOTE 1                            |
| NHC-MS/3468C           | 1.437" ST                  | SHORT BLOCK  |                           |                                       |
| NHC-MS/3469C           | -----1.437" ST             |              |                           |                                       |
| NHC-MS/3481C           | 1.437" ST                  | NHC-MS/4441E |                           | SEE NOTE 2                            |
| NHC-MS/3518C           | ADVANCE MACHINE 13 T/SAE A | NHC-MS/4427E |                           | SEE APPENDIX 3                        |
| NHC-MS/3538C           | GARLOCK 9 T/SAE A          | NHC-MS/4392E |                           | SEE NOTE 2                            |
| NHC-MS/3597C           | GARLOCK 9 T/SAE A          | NHC-MS/4392E |                           | SEE NOTE 2                            |
| NHC-MS/3624C           | ELEC.ENG. 13 T/SAE A       | NHC-MS/4427E |                           | SEE APPENDIX 3                        |
| NHC-MS/3626C           | STOCK ENGINE 1.437" ST     | NHC-MS/4390E |                           | SEE NOTES 2 & 3                       |
| NHC-MS/3637C           | HYDRA-MAC 1.437" ST        | NHC-MS/4428E |                           | SEE NOTES 13, 14, 15, 18 & APPENDIX 4 |
| NHC-MS/3646C           | -----13 T/SAE B            | SHORT BLOCK  |                           |                                       |
| NHC-MS/3673C           | ELEC. ENG. 1.437" ST       | NHC-MS/4444E |                           | SEE NOTES 2, 13, 14, 15, 16, & 17     |
| NHC-MS/3715C           | CLYMAR 9 T/SAE A           | NHC-MS/4440E |                           | SEE NOTE 2                            |
| NHC-MS/3727C           | ELEC. ENG. 13 T/SAE B      | NHC-MS/4412E |                           | SEE NOTES 2, 13, & 14                 |
| NHC-MS/3730C           | WINTER 13 T/SAE B          | NHC-MS/4429E |                           | SEE APPENDIX 5                        |
| NHC-MS/3762C           | ERICKSON 13 T/SAE A        | NHC-MS/4427E |                           | SEE APPENDIX 3                        |
| NHC-MS/3780C           | STANNARD POWER 1.437" ST   | NHC-MS/4390E |                           | SEE NOTES 2 & 3                       |
| NHC-MS/3793C           | -----1.437" ST             | NHC-MS/4390E |                           | SEE NOTES 2 & 3                       |
| NHC-MS/3806C           | EQUIPMENT SALES 1.437" ST  | NHC-MS/4391E |                           | SEE NOTE 2                            |
| NHC-MS/3822D           | OWATONNA 1.437" ST         | NHC-MS/4423E |                           | SEE NOTE 1                            |
| NHC-MS/3832D           | OAKES/PRIME MOVE1.437" ST  | NHC-MS/4428E |                           | SEE NOTES 8, 13, 14 & APPENDIX 4      |
| NHC-MS/3837D           | INGERSOLL-RAND 1.437" ST   | NHC-MS/4390E |                           | SEE NOTES 2, 3, 16 & 17               |
| NHC-MS/3843D           | LIGHTBOURN 11 T/SAE B      | SHORT BLOCK  |                           |                                       |
| NHC-MS/3865D           | CHARLES MACHINE 1.437" ST  | NHC-MS/4439D |                           | SEE APPENDIX 6                        |
| NHC-MS/3866D           | STANNARD POWER 1.437" ST   | NHC-MS/4390E |                           | SEE NOTES 2 & 3                       |
| NHC-MS/3868D           | HYDRA-MAC 1.437" ST        | NHC-MS/4428E |                           | SEE NOTES 13, 14, 15 & APPENDIX 4     |
| NHC-MS/3888D           | STOCK ENGINE 1.437" ST     | NHC-MS/4390E |                           | SEE NOTES 2 & 3                       |
| NHC-MS/3889D           | ERICKSON 13 T/SAE A        | NHC-MS/4427E |                           | SEE NOTE 11 & APPENDIX 3              |
| NHC-MS/3898D           | EQUIPMENT SALES 1.437" ST  | NHC-MS/4391E |                           | SEE NOTE 2                            |

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                 |
|------------------------|------------------|--------------|---------------------------|--------------------------|
| NHC-MS/3903D           | WINTER ENGINE    | 13 T/SAE B   | SHORT BLOCK               |                          |
| NHC-MS/3904D           | GARLOCK          | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTE 2               |
| NHC-MS/3905D           | DISTRAGEN        | 1.437" ST    | SHORT BLOCK               |                          |
| NHC-MS/3906D           | ERICKSON         | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3           |
| NHC-MS/3907D           | CASE-DAVIS       | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4           |
| NHC-MS/3910D           | TENNANT          | 1.437" ST    | SAME                      | SEE NOTE 22 & APPENDIX 6 |
| NHC-MS/3911D           | OWATONNA         | 1.437" ST    | NHC-MS/4423E              | SEE NOTE 1               |
| NHC-MS/3912D           | TENNANT          | 1.437" ST    | SAME                      | SEE APPENDIX 6           |
| NHC-MS/3913D           | TENNANT          | 1.437" ST    | SAME                      | SEE NOTE 22 & APPENDIX 6 |
| NHC-MS/3914D           | TENNANT          | 1.437" ST    | SAME                      | SEE APPENDIX 6           |
| NHC-MS/3916D           | BADGER DYNAMICS  | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3           |
| NHC-MS/3917D           | HYDRA-MAC        | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4           |
| NHC-MS/3918D           | CASE-DAVIS       | 1.437" ST    | NHC-MS/4428E              | SEE APPENDIX 4           |
| NHC-MS/3919D           | STOCK            | 1.437" ST    | SHORT BLOCK               | SEE NOTE 9 & APPENDIX 6  |
| NHC-MS/3920D           | STOCK            | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 10      |
| NHC-MS/3921D           | -----1.437" ST   |              | SAME                      |                          |
| NHC-MS/3923D           | PIONEER SEED     | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5           |
| NHC-MS/3937D           | ADVANCE MACHINE  | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3           |
| NHC-MS/3952D           | WINTER ENGINE    | 13 T/SAE B   | SHORT BLOCK               | SEE APPENDIX 6           |
| NHC-MS/3958D           | FREMONT ELECTRIC | 13 T/SAE B   | SHORT BLOCK               | SEE APPENDIX 6           |
| NHC-MS/3961D           | CAL WEST         | 13 T/SAE B   | SHORT BLOCK               | SEE APPENDIX 6           |
| NHC-MS/3962D           | HARRISON         | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5           |
| NHC-MS/3967D           | GEHL             | 1.437" ST    | SHORT BLOCK               | SEE APPENDIX 6           |
| NHC-MS/3968D           | FLAHERTY         | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTE 2               |
| NHC-MS/3970D           | SASKATCHEWAN WP  | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3 & 10      |
| NHC-MS/3971D           | SANSOM           | 1.437" ST    | SHORT BLOCK               | SEE NOTE 9 & APPENDIX 6  |
| NHC-MS/3977D           | CHARLES MACHINE  | 1.437" ST    | NHC-MS/4439D              | SEE APPENDIX 6           |
| NHC-MS/3982D           | GEHL             | 1.437" ST    | NHC-MS/4441E              | SEE NOTE 2               |
| NHC-MS/3990D           | MENGE            | 11 T/SAE B   | SHORT BLOCK               |                          |
| NHC-MS/3994D           | SIMSON MAXWELL   | 13 T/SAE B   | SHORT BLOCK               |                          |
| NHC-MS/4015D           | MENGE            | 11 T/SAE B   | SHORT BLOCK               |                          |
| NHC-MS/4019D           | INTERSTATE       | 9 T/SAE F22  | SAME                      |                          |
| NHC-MS/4022D           | MIDWESTERN POWER | 1.437" ST    | NHC-MS/4444E              | SEE NOTES 2 & 12         |
| NHC-MS/4037D           | OWATONNA         | 1.125" ST    | NHC-MS/4424E              | SEE APPENDIX 1           |

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER         | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                              |
|------------------------|------------------|--------------|---------------------------|---------------------------------------|
| NHC-MS/4073D           | WINTER ENGINE    | 1.437" ST    | SAME                      |                                       |
| NHC-MS/4078D           | STANNARD POWER   | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2, 3, 8 & 10                |
| NHC-MS/4091D           | -----1.437" ST   | ST           | SHORT BLOCK               |                                       |
| NHC-MS/4112D           | TOTAL POWER      | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3                       |
| NHC-MS/4122D           | PRYME POWER      | 1.437" ST    | NHC-MS/4391E              | SEE NOTES 2 & 20                      |
| NHC-MS/4149D           | PRIME MOVER      | 1.437" ST    | SAME                      |                                       |
| NHC-MS/4152D           | INTERSTATE       | 9 T/SAE A    | NHC-MS/4440E              | SEE NOTE 2                            |
| NHC-MS/4155D           | -----1.437" ST   | ST           | -----                     |                                       |
| NHC-MS/4156A           | C W SILVER       | 13 T/SAE B   | NHC-MS/4432E              | SEE NOTE 2                            |
| NHC-MS/4193D           | INTERSTATE       | 13 T/SAE A   | NHC-MS/4427E              | SEE APPENDIX 3                        |
| NHC-MS/4194D           | PIONEER SEED     | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5                        |
| NHC-MS/4200D           | FAGJY            | 9 T/SAE A    | SHORT BLOCK               | NHC-MS/4392 MAY BE USED W/MODS        |
| NHC-MS/4204D           | PRYME POWER      | 1.437" ST    | NHC-MS/4391E              | SEE NOTES 2 & 20                      |
| NHC-MS/4209D           | CHARLES MACHINE  | 1.125" ST    | NHC-MS/4421E              | SEE NOTE 2                            |
| NHC-MS/4222D           | INTERSTATE       | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTE 2                            |
| NHC-MS/4257D           | INLAND-MB        | 9 T/SAE A    | NHC-MS/4392E              | SEE NOTE 2                            |
| NHC-MS/4274E           | STOCK ENGINE     | 1.437" ST    | NHC-MS/4390E              | SEE NOTES 2 & 3                       |
| NHC-MS/4293D           | -----1.437" ST   | ST           | NHC-MS/4444E              | SEE NOTES 2 & 10                      |
| NHC-MS/4305D           | PIONEER SEED     | 13 T/SAE B   | NHC-MS/4429E              | SEE APPENDIX 5                        |
| NHC-MS/4311D           | BLALOCK          | 13 T/SAE B   | NHC-MS/4429E              | SEE NOTES 11, 12, 19, 20 & APPENDIX 5 |
| NHC-MS/4331D           | PRYME POWER      | 1.437" ST    | NHC-MS/4391E              | SEE NOTES 2, 19 & 20                  |
| NHC-MS/4377D           | POWER UNLIMITED  | 1.437" ST    | NHC-MS/4440E              | SEE NOTES 2 & 11                      |
| NHC-MS/4390E           | STOCK ENGINE     | 1.437" ST    | SAME                      | SEE NOTES 2 & 3                       |
| NHC-MS/4391E           | -----1.437" ST   | ST           | SAME                      | SEE NOTE 2                            |
| NHC-MS/4392E           | INTERSTATE       | 9 T/SAE A    | SAME                      | SEE NOTE 2                            |
| NHC-MS/4412E           | MENGE            | 13 T/SAE B   | SAME                      | SEE NOTE 2                            |
| NHC-MS/4421E           | CHARLES MACHINE  | 1.125" ST    | SAME                      | SEE NOTE 2                            |
| NHC-MS/4423E           | OWATONNA REPL    | 1.437" ST    | SAME                      | SEE NOTE 1                            |
| NHC-MS/4424E           | OWATONNA REPL    | 1.125" ST    | SAME                      | SEE NOTE 1                            |
| NHC-MS/4427E           | -----13 T/SAE A  | SAME         | SAME                      | SEE APPENDIX 3                        |
| NHC-MS/4428E           | -----1.437" ST   | ST           | SAME                      | SEE APPENDIX 4                        |
| NHC-MS/4429E           | -----13 T/SAE B  | SAME         | SAME                      | SEE APPENDIX 5                        |
| NHC-MS/4432E           | LIGHTBOURN EQUIP | 13 T/SAE B   | SAME                      | SEE NOTE 2                            |
| NHC-MS/4438E           | -----1.437" ST   | ST           | SAME                      | SEE NOTE 2                            |

# NHC-MS/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS |
|------------------------|----------|--------------|---------------------------|----------|
|------------------------|----------|--------------|---------------------------|----------|

|              |                                |  |  |                |
|--------------|--------------------------------|--|--|----------------|
| NHC-MS/4439D | CHARLES MACHINE 1.437" ST SAME |  |  | SEE APPENDIX 6 |
| NHC-MS/4440E | CURTIS ENGINE 9 T/SAE A SAME   |  |  | SEE NOTE 2     |
| NHC-MS/4441E | -----1.437" ST SAME            |  |  | SEE NOTE 2     |
| NHC-MS/4444E | CAL-WEST 1.437" ST SAME        |  |  | SEE NOTE 2     |

- \*\*\*\*\*
- NOTE 1 - REFER TO APPENDIX 1.
- NOTE 2 - REFER TO APPENDIX 2.
- NOTE 3 - REPLACEMENT ENGINE IS THE STOCK ENGINE.
- NOTE 4 - MAY REQUIRE 542-7121, EXHAUST MANIFOLD & 190-0576, FRONT PTO PULLEY.
- NOTE 5 - VARI-SPEED GOV IS NO LONGER AVAILABLE. MAY HAVE TO MODIFY GOVERNOR LINKAGE-SUGGEST SIDE PULL
- NOTE 6 - MAY REQUIRE 542-7101, PEPPER POT MUFFLERS.
- NOTE 7 - GOVERNOR LINKAGE, & EXHAUST MANIFOLD MAY BE RE-USED FROM OLD ENGINE. MAY REQUIRE FUEL PUMP.
- NOTE 8 - MAY REQUIRE 541-0147, REMOTE AIR CLEANER RUBBER ELBOW.
- NOTE 9 - MAY POSSIBLY USE THE /4390E ENGINE W/MODIFICATIONS.
- NOTE 10 - MAY REQUIRE 150-1716, CONTROL PANEL.
- NOTE 11 - ORIGINAL SPEC HAD B62, FRONT PULL GOVERNOR. REPLACEMENT HAS B65 AND STD PULSE PUMP.
- NOTE 12 - ORIGINAL SPEC HAD C149, ELECTRIC CHOKE & 15 AMP ALT. REPLACEMENT HAS CONTROL PANEL & 20 AMP
- NOTE 13 - ORIGINAL ENGINE HAS REMOTE FRONT PULL CHOKE (C47 ADDER).
- NOTE 14 - REPLACEMENT ENGINE HAS REMOTE REAR PULL CHOKE (STD).
- NOTE 15 - REPLACEMENT ENGINE HAS SIDE PULL GOVERNOR CONTROL (B65 ADDER).
- NOTE 16 - ORIGINAL ENGINE HAS FRONT OIL DRAIN (J86 ADDER).
- NOTE 17 - REPLACEMENT ENGINE HAS LEFT OIL DRAIN (STD).
- NOTE 18 - ORIGINAL ENGINE HAD A REMOTE MTD OIL FILTER, KIT P/N 122-0554.
- NOTE 19 -
- NOTE 20 -
- NOTE 21 - REQUIRES 140-1473, REMOTE AIR CLEANER ADAPTER.
- NOTE 22 - THIS SPEC WILL BE OBSOLETE WHEN CURRENT INVENTORY IS DEPLETED.
- NOTE 23 - C/SHAFT IS ADDER G127, 1.625" TAPER SHAFT X 2.25" TIP TO RR FACE OF BLOCK (104-0869).

APPENDIX 1 - REPLACEMENT ENGINE SCHEDULE

APPENDIX 1 - Owatonna Manufacturing Company Replacement Engines

Two new Spec "E" NHC Engines have been released to replace all earlier Owatonna engines. This information will outline the differences in old versus new engines and the expected modifications to the machines which will be required for a repower.

Refer to Appendix 2 for additional information regarding the Spec "E" NHC-MS/ Engines.

It was necessary to release two different engines because Owatonna changed from a 1 7/16" crankshaft stub end to a 1 1/8" stub on their most recent production engine, the NHC-MS/4037D. The replacement engines are identical except for the crankshaft.

NHC-MS/4423E - This engine was released to replace the following Owatonna specs:

|             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|
| NHC-MS/2699 | NHC-MS/3285 | NHC-MS/3406 | NHC-MS/3822 | NHC-MS/3911 |
|-------------|-------------|-------------|-------------|-------------|

Adders for this spec are as follows:

|      |                                                                              |
|------|------------------------------------------------------------------------------|
| A345 | Special Oil Line - To Terminal Block                                         |
| B65  | Governor - Variable Speed, Remote Left Side Pull (5 Ball)                    |
| C196 | Fuel Filter - In-line                                                        |
| E27  | Delete Rotating Debris Screen                                                |
| J130 | Oil Base - With Multiple Drains                                              |
| K101 | Air Cleaner - Carb. Mounted Adapter for Remote - 2" Hose (customer supplied) |
| M48  | Flywheel Screen - Full Stationary Grille (W/O PTO Cutout)                    |
| R84  | Alternator - 12 V, 20 Amp with Bottom Mounted Regulator                      |
| S12  | Flat Black Paint                                                             |

NHC-MS/4424E - This engine was released to replace: NHC-MS/4037

Adders for this spec are the same as above except for the crankshaft:

G217 Crankshaft - 1.125" Straight Shaft X 3.95" Tip to RR Face of Block (104-1159)

Contd.,

## APPENDIX 1 - REPLACEMENT ENGINE SCHEDULE

The following is a summary of major differences/similarities of old specs versus the replacements:

**CRANKSHAFT** NHC-MS/2699, /3285, /3406, /3822, /3911 & their replacement, /4423E utilize the 104-0865 crankshaft (1 7/16").  
NHC-MS/4037 & its replacement, /4424E utilize the 104-1159 crankshaft (1 1/8").

**OIL BASE** Both front and rear drain oil bases were used on the old specs. A multi-tap base is used on the replacement engines.

**CRANKCASE** Old spec engines used a special cylinder block with a fuel pump pulse line tap on the rear of the block. The replacement engines use the standard NHC/T260 block with the pulse line tap near the gearcase with a line to the blower housing mounted pulse pump.

**OIL FILTER** Replacement engines are supplied with an engine mounted oil filter with an oil pressure line extending to the terminal block. The /3406 and /3822 specs had a remote filter adapter which must be reused if it is impossible to service the engine mounted filter. The oil pressure line supplied is somewhat different than the previous Owatonna special line and the customer may need to supply some fittings or reinstall the old line in the adapter.

**MANIFOLD ASSEMBLY** A spec E downdraft carburetor with rear pull choke adapted for remote air cleaner is supplied on the replacement engines. The coil mounting and the terminal block are identical to the spec 1E configuration. The /3285 and /3911 had high rise manifolds with side draft carburetors. The customer must adapt to the downdraft with revised piping. Also, the stock muffler on the unit may need to be modified or replaced to provide clearance with the downdraft manifold, coil mounting and terminal block.

**ALTERNATOR** Both replacement engines use the standard 20 amp system with the regulator mounted on the bottom of the blower housing.

**GOVERNOR** Both replacement engines are supplied with a side pull governor which is set up to be used with a bowden wire cable. Owatonna used several different governor systems on the older specs. Our suggestion is to install a throttle cable kit purchased from an auto parts store to actuate the throttle. It's expected that much of the mechanical linkage may be worn out by the time the engine is replaced.

Contd.,



# APPENDIX 1 - REPLACEMENT ENGINE SCHEDULE

## FLYWHEEL

The previous Owatonna specs (except /4037) had a blower wheel machined for front PTO with a 1 15/16" pilot diameter and 3/8"-16 tapped holes on a 2 5/8" bolt circle. The replacement engines have a 2" pilot with 5/16"-18 tapped holes on a 2.75" bolt circle. For old units which did not take power from the front of the engine, this won't be a problem. For those units which did bolt PTO shafts on the wheel, either a new or modified shaft must be used. One possible alternative is to have the customer purchase the 190-0577 Stub Shaft Kit and adapt the shaft to fit the application.

## BLOWER HOUSING

The same blower housing is supplied on both replacement engines. The housing has a pulse type fuel pump mounted on it and a stationary grille without the PTO cutout. For units which take power from the blower wheel, the grille must be modified.

## FUEL FILTER/ PUMP

Both replacement engines have a 149-2005 fuel filter and fuel line between the fuel pump and carburetor. For the replacement of /4037 engines, it may be necessary to remove and relocate the pulse fuel pump if it interferes with the rear door. Make certain that the pump is mounted above the engine such that the vacuum line will allow oil to drain back to the crankcase.

## PAINT

The replacement engines are flat black.

APPENDIX 2 - REPLACEMENT ENGINE REFERENCE CATALOG

APPENDIX 2 - MISCELLANEOUS SPEC "E" CHANGES TO THE NHC-MS/ ENGINE

The spec "E" revision to the NHC engines includes the following changes:

- Nikki carburetor with the semi-automatic "anti-flood" choke.
- Carbon filament spark plug wires replace the previous wires with suppressor boots.
- Remote rear pull choke is standard equipment.
- The 338-1100 Wiring Harness is standard in place of miscellaneous other harnesses.
- The T260G cylinder heads replace the NHC heads.
- Valve stem seals (A178) are now standard equipment.
- Aluminized intake valves are no longer available.
- Valve rotators are deleted on the intake valves.
- The 301-4824 Terminal Block is the only available spec E option.
- Lifting brackets (A357) are now standard equipment.
- The N series industrial camshaft has been replaced with the T260G cam. This cam does not have a mechanical fuel pump lobe. Customers that purchase short blocks or replacement cams for engines with mechanical pumps must retrofit them with pulse or electric pumps.

# APPENDIX 3 - REPLACEMENT ENGINE REFERENCE CATALOG

## APPENDIX 3 - NHC-MS/4427E REPLACEMENT ENGINE

Several spec "E" replacement engines for certain spec "C" and "D" engines have been released. Earlier specs used the side draft carburetor which has now been replaced with the Nikki down draft carburetor. Additionally, several engine specs for which there have been few or no orders in the past three years are now obsolete and replaced with short block only. The side draft carburetor is expensive and inferior in performance to the new Nikki design. Many engines also used the small expensive canister air filter which is now replaced with a standard replaceable element style air cleaner.

The following information provides differences between the original engines and their NHC spec "E" replacements. This information should be conveyed to customers ordering engines so they are prepared to adapt to the new configuration.

\*\*\*\* NHC-MS/4427E - This engine is used to replace the following specs:

|              |              |              |                |                |              |
|--------------|--------------|--------------|----------------|----------------|--------------|
| NHC-MS/2636A | NHC-MS/2710C | NHC-MS/3125C | NHC-MS/3348C   | NHC-MS/3906D   | NHC-MS/3916D |
| Badger Dyn.  | Badger Dyn.  | Badger Dyn.  | Erickson Corp. | Erickson Corp. | Badger Dyn.  |

Adders for this spec are as follows:

|      |                                                                              |
|------|------------------------------------------------------------------------------|
| B65  | Governor - Variable Speed, Remote Left Side Pull (5 Ball)                    |
| C196 | Fuel Filter - In-line                                                        |
| E27  | Delete Rotating Debris Screen                                                |
| F16  | Bearing Plate - SAE "A" Hydraulic Pump Adapter                               |
| G136 | Crankshaft - 13 Tooth Internal Spline                                        |
| K101 | Air Cleaner - Carb. Mounted Adapter for Remote - 2" Hose (customer supplied) |
| M48  | Flywheel Screen - Full Stationary Grille (W/O PTO Cutout)                    |
| P79  | Alternator - 12 V, 15 Amp with regulator                                     |
| S12  | Flat Black Paint                                                             |

The following items should be considered when using this replacement engine:

- 1 \* The new engine has a downdraft carburetor with an adapter for a 2" ID hose. The customer must improvise on piping from a remote air cleaner to carburetor. A 5" Donaldson or equivalent air cleaner is recommended. If necessary, a 541-0147 Remote Air Cleaner Elbow Kit may be supplied through the Service Parts Dept. to provide a 90 deg elbow off the downdraft carburetor.

APPENDIX 3 - REPLACEMENT ENGINE REFERENCE CATALOG

- 2 \* The new engine has a blower housing mounted pulse fuel pump. It should be used if possible, or removed and the vacuum tap plugged at the block if impossible to use. If the fuel pump requires remounting, make sure that the pump is mounted high enough such that the vacuum line will allow oil to drain back to the block.
- 3 \* The new engine has a side pull governor with cable clamp for a Bowden Wire type control. Original engines are equipped with the B62 Universal (rear) Pull type which is no longer available.
- 4 \* The new engine is set up for a remote, rear pull choke linkage which will be different than the arrangement on the side draft carburetor.
- 5 \* The alternative to this replacement engine is a short block assembly.
- 6 \* See Appendix 2 for additional Spec "E" engine changes.

# APPENDIX 4 - REPLACEMENT ENGINE REFERENCE CATALOG

## APPENDIX 4 - NHC-MS/4428E REPLACEMENT ENGINE

Several spec "E" replacement engines for certain spec "C" and "D" engines have been released. Earlier specs used the side draft carburetor which has now been replaced with the Nikki down draft carburetor. Additionally, several engine specs for which there have been few or no orders in the past three years are now obsolete and replaced with short block only. The side draft carburetor is expensive and inferior in performance to the new Nikki design. Many engines also used the small expensive canister air filter which is now replaced with a standard replaceable element style air cleaner.

The following information provides differences between the original engines and their NHC spec "E" replacements. This information should be conveyed to customers ordering engines so they are prepared to adapt to the new configuration.

\*\*\*\* NHC-MS/4428E - This engine is used to replace the following specs:

|              |              |              |                                                  |
|--------------|--------------|--------------|--------------------------------------------------|
| HYDRA-MAC -  |              |              |                                                  |
| NHC-MS/2476A | NHC-MS/2618B | NHC-MS/2731B | NHC-MS/2732B      NHC-MS/3094C      NHC-MS/3917D |
| CASE-DAVIS - |              |              |                                                  |
| NHC-MS/3077D | NHC-MS/3346C | NHC-MS/3907D | NHC-MS/3918D                                     |

Adders for this spec are as follows:

|      |                                                                              |
|------|------------------------------------------------------------------------------|
| A267 | Oil Fill Tube - Vertical, Extended                                           |
| B65  | Governor - Variable Speed, Remote Left Side Pull (5 Ball)                    |
| C196 | Fuel Filter - In-line                                                        |
| J94  | Oil Base - 4.0 Qt., Left and Rear Drain                                      |
| K101 | Air Cleaner - Carb. Mounted Adapter for Remote - 2" Hose (customer supplied) |
| M48  | Flywheel Screen - Full Stationary Grille (W/O PTO Cutout)                    |
| R84  | Alternator - 12 V, 20 Amp with regulator                                     |
| S12  | Flat Black Paint                                                             |

The following items should be considered when using this replacement engine:

APPENDIX 4 - REPLACEMENT ENGINE REFERENCE CATALOG

HYDRA-MAC -

- 1 \* The new engine has a downdraft carburetor with an adapter for a 2" ID hose. The customer must improvise on piping from a remote air cleaner to carburetor. A 5" Donaldson or equivalent air cleaner is recommended. If necessary, a 541-0147 Remote Air Cleaner Elbow Kit may be supplied through the Service Parts Dept. to provide a 90 deg elbow off the downdraft carburetor.
- 2 \* The new engine has a blower housing mounted pulse fuel pump. It should be used if possible, or removed and the vacuum tap plugged at the block if impossible to use. If the fuel pump requires remounting, make sure that the pump is mounted high enough such that the vacuum line will allow oil to drain back to the block.
- 3 \* The new engine has a side pull governor with cable clamp for a Bowden Wire type control. Original engines are equipped with the B62 Universal (rear) Pull type which is no longer available.
- 4 \* The new engine is set up for a remote, rear pull choke linkage which will be different than the arrangement on the side draft carburetor.
- 5 \* The new engine does not include an oil pressure sender unit or the wiring for it. Customer must use existing components or purchase new.
- 6 \* The new engine is supplied with the stationary grille guard. If power is taken from the front of the engine the customer must modify the front grille.
- 7 \* See Appendix 2 for additional Spec "E" engine changes.

CASE-DAVIS -

- 1 \* The new engine has a downdraft carburetor with an adapter for a 2" ID hose. The customer must improvise on piping from a remote air cleaner to carburetor. A 5" Donaldson or equivalent air cleaner is recommended. If necessary, a 541-0147 Remote Air Cleaner Elbow Kit may be supplied through the Service Parts Dept. to provide a 90 deg elbow off the downdraft carburetor.
- 2 \* An exhaust system is not supplied with the new engine.
- 3 \* The new engine has a side pull governor with cable clamp for a Bowden Wire type control. Original engines are equipped with the B62 Universal (rear) Pull type which is no longer available. A 150-1716 Control Panel Kit may be supplied as a possible option. This would satisfy both governor and choke modifications.
- 4 \* The new engine is set up for a remote, rear pull choke linkage which will be different than the arrangement on the side draft carburetor.
- 5 \* The new engine has the 12V, 20 amp alternator with blower housing mounted regulator rather than the "Syncro" system as used on older engines.
- 6 \* The new engine has oil drains located on the left and rear side. Some engines were equipped with the front drain.
- 7 \* See Appendix 2 for additional Spec "E" engine changes.

# APPENDIX 5 - REPLACEMENT ENGINE REFERENCE CATALOG

## APPENDIX 5 - NHC-MS/4429E REPLACEMENT ENGINE

Several spec "E" replacement engines for certain spec "C" and "D" engines have been released. Earlier specs used the side draft carburetor which has now been replaced with the Nikki down draft carburetor. Additionally, several engine specs for which there have been few or no orders in the past three years are now obsolete and replaced with short block only. The side draft carburetor is expensive and inferior in performance to the new Nikki design. Many engines also used the small expensive canister air filter which is now replaced with a standard replaceable element style air cleaner.

Refer to Appendix 2 for additional information regarding the Spec "E" NHC-MS/ Engines.

The following information provides differences between the original engines and their NHC spec "E" replacements. This information should be conveyed to customers ordering engines so they are prepared to adapt to the new configuration.

\*\*\*\* NHC-MS/4429E - This engine is used to replace the following specs:

|              |              |              |              |
|--------------|--------------|--------------|--------------|
| NHC-MS/3923D | NHC-MS/3962D | NHC-MS/4194D | NHC-MS/4305D |
| Pioneer Seed | Harrison     | Pioneer Seed | Pioneer Seed |

Adders for this spec are as follows:

|      |                                                                                 |
|------|---------------------------------------------------------------------------------|
| A345 | Oil Line to Terminal Block                                                      |
| C196 | Fuel Filter - In-line                                                           |
| F14  | Bearing Plate - SAE "B" Hydraulic Pump Adapter                                  |
| G136 | Crankshaft - 13 Tooth Internal Spline                                           |
| H2   | Low Oil Pressure Switch (LOPKO)                                                 |
| M48  | Flywheel Screen - Full Stationary Grille (W/O PTO Cutout)                       |
| R82  | Control Panel - W/ ST-STP Switch, Choke, Throttle, Ammeter & Oil Pressure Gauge |
| R84  | Alternator - 12 V, 20 Amp with regulator                                        |
| S12  | Flat Black Paint                                                                |

The following items should be considered when using this replacement engine:

- 1 \* Pioneer Seed used NHC-MS/4305D which incorporated a downdraft carburetor and engine mounted air cleaner. This replacement engine is the spec advanced version of that engine.

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APPENDIX 5 - REPLACEMENT ENGINE REFERENCE CATALOG

- 2 \* Earlier version Pioneer engines had somewhat different accessory options, i.e. exhaust manifolds and control panel. No problems should be encountered when using the /4429E.
- 3 \* The NHC-MS/3962D originally sold to Harrison is obsolete and replaced with this new spec due to the similarity in options. The end user application is unknown.

## APPENDIX 6 - REPLACEMENT ENGINE REFERENCE CATALOG

### APPENDIX 6 - MISCELLANEOUS NHC-MS/ SPEC "D" REPLACEMENTS

Several engine models were obsoleted due to low volume and/or unavailable components. Some comments on these are listed below:

- \*\*\*\* NHC-MS/3910D & /3913D - Tennant
  - > These engines use the "High Rise Manifold" and have had very low replacement engine volumes in the past three years. When current inventory is depleted these specs will become obsolete.
- \*\*\*\* NHC-MS/3919D - Stock Engine
  - > Customers must adapt the current stock engine or replace with a short block.
- \*\*\*\* NHC-MS/3952D - Winter Engine
- \*\*\*\* NHC-MS/3958D - Fremont Electric
- \*\*\*\* NHC-MS/3961D - Cal West
  - > Service with a short block or consider supplying an engine with somewhat different options such as: NHC-MS/4412E, NHC-MS/4429E or NHC-MS/4432E.
- \*\*\*\* NHC-MS/3967D - Gehl
  - > Service with a short block or consider NHC-MS/4423E. Note that the 1 15/16" blower wheel pilot is no longer available. See Appendix 1, "Flywheel".
- \*\*\*\* NHC-MS/3971D - Sansom Equip.
  - > Service with a short block or consider the stock engine with a control panel kit.

There are three NHC specs which still have the side draft carburetor:

- \*\*\*\* NHC-MS/3912D & /3914D - Tennant
  - > These engines are equipped with a LP Gas version of the side draft carburetor. Replacement for this option is currently in progress.
- \*\*\*\* NHC-MS/4439D - Charles Machine (Ditch-Witch)
  - > This engine is still being built for a limited time.

# T260G-GA024/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS                     |
|------------------------|-----------------|--------------|---------------------------|------------------------------|
| T260G-GA024/3851A      | ROPER/SEARS     | 1.125" ST    | T260G-GA024/4394F         | SEE NOTES 2, 3, 8, 9 & 11    |
| T260G-GA024/3974A      | RANSOMES        | 1.125" ST    | T260G-GA024/4285F         | SEE NOTES 2, 3, 7 & 11       |
| T260G-GA024/3991B      | STOCK           | 1.125" ST    | T260G-GA024/4394F         | SEE NOTES 2, 3 & 11          |
| T260G-GA024/4033B      | HAHN MFG        | 13 T/SAE A   | SAME                      | SEE NOTES 2 & 5              |
| T260G-GA024/4039B      | SPIRIT          | 11 T/SAE B   | T260G-GA024/4286F         | SEE NOTE 2                   |
| T260G-GA024/4065A      | RANSOMES        | 1.125" ST    | T260G-GA024/4285F         | SEE NOTES 2, 3, 7 & 11       |
| T260G-GA024/4148B      | MOBIL DRILLING  | 13 T/SAE B   | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4186B      | ROPER/SEARS     | 1.125" ST    | T260G-GA024/4394F         | SEE NOTES 1, 2, 3, 8, 9 & 11 |
| T260G-GA024/4187B      | RANSOMES        | 1.125" TPR   | T260G-GA024/4285F         | SEE NOTES 2, 3, 7 & 11       |
| T260G-GA024/4228D      | DEERE - F930    | 1.437" ST    | T260G-GA024/4395F         | SEE NOTES 2, 3 & 11          |
| T260G-GA024/4255D      | DEERE - F930    | 1.437" ST    | T260G-GA024/4395F         | SEE NOTES 2, 3 & 11          |
| T260G-GA024/4258E      | CRAVEN TASKER   | 13 T/SAE A   | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4266E      | STANDBY POWER   | 1.125" ST    | T260G-GA024/4422F         | SEE NOTES 2, 3, 6 & 11       |
| T260G-GA024/4268F      | STOCK           | 1.437" ST    | T260G-GA024/4425F         | SEE NOTES 2, 3, 10 & 11      |
| T260G-GA024/4274F      | BASE ENGINE     | 1.125" ST    | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4275E      | DEERE - F930    | 1.437" ST    | T260G-GA024/4395F         | SEE NOTES 1, 2, 3, 9 & 11    |
| T260G-GA024/4281E      | STEINER         | 1.125" ST    | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4285F      | RANSOMES        | 1.125" TPR   | SAME                      | SEE NOTE 3                   |
| T260G-GA024/4286F      | MARITIME        | 11 T/SAE B   | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4288E      | SO. OHIO POWER  | 13 T/SAE B   | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4290D      | COMET           | 1.125" ST    | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4308E      | BELOO IND       | 1.125" ST    | T260G-GA024/4437F         | SEE NOTE 2                   |
| T260G-GA024/4330E      | DEERE - F930    | 1.437" ST    | T260G-GA024/4395F         | SEE NOTE 3                   |
| T260G-GA024/4333E      | PEEL ENGINE     | 13 T/SAE A   | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4337E      | MECO            | 13 T/        | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4338E      | LIGHTBOURN      | 1.437" ST    | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4342E      | LITBOURN/INGRAM | 1.437" ST    | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4345E      | LITBOURN/INGRAM | 13 T/        | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4361F      | MECO            | 13 T/        | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4362E      | LIGHTBOURN      | 1.437" ST    | SAME                      | SEE NOTE 2                   |
| T260G-GA024/4371E      | SULLAIR         | 1.125" ST    | SAME                      | SEE NOTE 3                   |
| T260G-GA024/4382F      | KUT KWICK       | 1.437" ST    | T260G-GA024/4402F         | SEE NOTE 2                   |
| T260G-GA024/4383E      | INTERSTATE      | 1.125" ST    | SAME                      | SEE NOTE 3                   |

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T260G-GA024/ - REPLACEMENT ENGINE REFERENCE CATALOG

| ORIGINAL<br>MODEL/SPEC | CUSTOMER        | CRANK<br>DIA | REPLACEMENT<br>MODEL/SPEC | COMMENTS         |
|------------------------|-----------------|--------------|---------------------------|------------------|
| *****                  | *****           | *****        | *****                     | *****            |
| T260G-GA024/4394F      | STOCK           | 1.125" ST    | SAME                      | SEE NOTE 3       |
| T260G-GA024/4395F      | DEERE - F930    | 1.437" ST    | SAME                      | SEE NOTE 3       |
| T260G-GA024/4398F      | FURATELL        | 13 T/SAE B   | SAME                      | SEE NOTE 3       |
| T260G-GA024/4402F      | KUT KWICK       | 1.437" ST    | SAME                      | SEE NOTE 2       |
| T260G-GA024/4403F      | ASPLUNDH        | 1.437" ST    | SAME                      | SEE NOTE 2       |
| T260G-GA024/4404F      | WHEEL HORSE     | 1.125" ST    | SAME                      |                  |
| T260G-GA024/4406F      | LESCO - 500     | 1.125" TPR   | SAME                      | SEE NOTE 3       |
| T260G-GA024/4408F      | CYCLOMATIC      | 1.125" TPR   | SAME                      | SEE NOTE 3       |
| T260G-GA024/4410F      | LIGHTBOURN      | 1.437" ST    | SAME                      | SEE NOTE 3       |
| T260G-GA024/4414F      | STANDBY POWER   | 13 T/SAE A   | SAME                      | SEE NOTE 2       |
| T260G-GA024/4415F      | MECELEC         | 1.625" TPR   | SAME                      | SEE NOTE 2       |
| T260G-GA024/4419F      | DIXIE CHOPPER   | 13 T/        | SAME                      | SEE NOTE 2       |
| T260G-GA024/4422F      | STANDBY POWER   | 1.125" ST    | SAME                      | SEE NOTE 3       |
| T260G-GA024/4425F      | STOCK           | 1.437" ST    | SAME                      | SEE NOTES 3 & 10 |
| T260G-GA024/4437F      | BELOO           | 1.125" ST    | SAME                      | SEE NOTE 2       |
| T260G-GA024/4442F      | GRIMMER SCHMIDT | 1.125" ST    | SAME                      | SEE NOTE 3       |
| T260G-GA024/4448F      | DUPLICARVER     | 1.125" ST    | SAME                      |                  |
| T260G-GA024/4450F      | COMET           | 1.125" ST    | SAME                      |                  |
| T260G-GA024/4451F      | CRAFOO          | 1.125" ST    | SAME                      |                  |
| T260G-GA024/4453F      | ELEPHANT IND    | 9 T/SAE A    | SAME                      |                  |
| T260G-GA024/4454F      | N A O           | 9 T/SAE A    | SAME                      |                  |

- NOTE 1 - ORIGINAL ENGINE HAS FRONT PULL CHOKE (C47/C168 ADDER).
- NOTE 2 - ORIGINAL ENGINE IS EQUIPPED WITH AN INERTIA DRIVE STARTER.
- NOTE 3 - REPLACEMENT ENGINE IS EQUIPPED WITH A402 SOLENOID SHIFT STARTER-SIDE MOUNT, 191-1808-02.
- NOTE 4 - REPLACEMENT ENGINE HAS FRONT PULL CHOKE (C47/C168 ADDER).
- NOTE 5 - MAY REQUIRE LOW NOISE "RAYGUN" MUFFLERS P/N 542-7124.
- NOTE 6 - MAY REQUIRE FRONT STUB SHAFT KIT P/N 190-0577.
- NOTE 7 - REPLACEMENT IS A STANDARD REPLACEMENT AS LISTED IN THE L-740L.
- NOTE 8 - REQUIRES USING THE BEARING PLATE AND OIL INDICATOR FROM THE ORIGINAL ENGINE.
- NOTE 9 - REPLACEMENT ENGINE HAS REMOTE REAR PULL CHOKE (STD).
- NOTE 10 - REPLACEMENT ENGINE IS SUPPLIED WITHOUT EXHAUST TUBES.
- NOTE 11 - THIS REPLACEMENT MAY REQUIRE A STARTER SWAP (TO P/N 191-1587) OR REWIRING, SEE SERVICE MANUAL.