The “can use” application feature in our catalog allows practical consolidation of electrical units; giving distributor countermen and outside sales personnel additional chances to complete the sale.

All of our units have a 1 year/unlimited mileage warranty from the date of installation, matching OE programs for similar applications.

*World American* customer support and tech services utilize highly qualified professionals to deliver the best knowledge and service in the industry.

Every single unit is tested to our rigorous internal standards. No unit is shipped that is not a proven performer!

All *World American* heavy-duty starting motors are equipped with a ratchet design pinion gear for positive engagement starts every time.

Every *World American* alternator is guaranteed to match or exceed the amperage output of the original design.

All *World American* units are packaged with color-coded connections and easy to understand instructions. This attention to detail will reduce in large measure the amount of defect claims due to incorrect installation procedures.
# TABLE OF CONTENTS

## BASIC INSTALLATION/GUIDES
- Part Number Identification Guide .......................................................... 2
- Visual Identification Guide ........................................................................ 3
- General Notes ............................................................................................. 4

## ELECTRICAL COMPONENT SECTION
### Replacement Starters: ........................................................................... 5-17
#### Mid-Range Starters
- General Motors® - Style ........................................................................... 6
- Ford® - Style ............................................................................................ 6-7
- Delco® - Style .......................................................................................... 7
#### Heavy Duty Starters
- Delco® - Style .......................................................................................... 8-13
- Denso® - Style .......................................................................................... 14-15
- Denso® - Style Application Chart .............................................................. 16

### Refrigeration Starters
- Thermo King ................................................................................................ 17

### Replacement Solenoids
- Delco® - Style .......................................................................................... 17

### Replacement Alternators: ....................................................................... 19-36
#### Mid-Range Alternators
- General Motors® - Style ........................................................................... 19
- Ford® - Style ............................................................................................ 20

#### Heavy Duty Alternators
- Delco® - Style .......................................................................................... 21-34
- Leece-Neville® - Style ............................................................................... 35-36

### Replacement Components:
- Power Cables ............................................................................................ 37-46
- Electrical Connectors .................................................................................. 38
- Junction Box ............................................................................................... 38-39
- Solenoid Valves .......................................................................................... 39
- Electric 2 Speed Motor ................................................................................ 40
- Electro-Pneumatic Switches ........................................................................ 41-42
- Replacement Lights ..................................................................................... 43-45

## INSTALLATION GUIDES/WARRANTY SECTION
- All Starters ................................................................................................... 47
- Mid-Range Alternators ............................................................................... 48
- Delco® - Style Alternators ......................................................................... 49
- Leece-Neville® - Style Alternators .............................................................. 50

### WARRANTY
- WARRANTY .................................................................................................... 51
- WARRANTY FORM ...................................................................................... 52

---

**PARTS LISTED IN THIS CATALOG ARE NOT NECESSARILY MANUFACTURED BY THE ORIGINAL EQUIPMENT MANUFACTURER AND ANY REFERENCE TO THE TRADEMARKS OR PART NUMBERS OF OTHERS ARE FOR CROSS REFERENCE INFORMATIONAL PURPOSES ONLY. THE PHOTOS PROVIDED HEREIN ARE PROVIDED ONLY FOR ILLUSTRATIVE PURPOSES. THE ACTUAL PRODUCTS SUPPLIED MAY DIFFER. THE TRADEMARKS OF OTHERS REFERRED TO HEREIN ARE OWNED BY THEIR RESPECTIVE COMPANIES AND ARE NOT AFFILIATED IN ANY WAY WITH MIDWEST TRUCK & AUTO PARTS, INC.®. WORLD AMERICAN®, MOTIVE GEAR® AND MOTIVE GEAR PERFORMANCE® ARE REGISTERED TRADEMARKS OF MIDWEST TRUCK & AUTO PARTS, INC.® USE OF THE ™ IN CONNECTION WITH A MARK OF MIDWEST TRUCK & AUTO PARTS, INC.® INDICATES THAT THE MARK IS REGISTERED IN AT LEAST THE UNITED STATES. NO REPRESENTATION IS MADE WITH RESPECT TO THE SOURCE OF MANUFACTURE OF ANY PARTICULAR PART. WHILE EVERY EFFORT IS MADE TO PROVIDE ACCURATE INFORMATION, NO GUARANTEE IS PROVIDED AS TO THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. WE ARE NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS. © 2013, MIDWEST TRUCK & AUTO PARTS, INC.® ALL RIGHTS RESERVED. (-005)**
HOW TO IDENTIFY - PART NUMBERS -

**STARTERS**

**WORLD AMERICAN®**

**WA421211N**

**TYPE OF UNIT**

**VOLTAGE**

**TEETH ON STARTER DRIVE**

Corresponds to:

42MT™ - Style / 12V / 11 TOOTH

**INTERCHANGE INFORMATION:**
The numbers listed in this section are cross reference numbers for:
Dixie®, Wilson®, Popular OE, and Reman® OE

**ALTERNATORS**

**WORLD AMERICAN®**

**WA2212160N**

**TYPE OF UNIT**

**VOLTAGE**

**AMPERAGE OUTPUT**

Corresponds to:

22SI™ - Style / 12V / 160 AMP

**INTERCHANGE INFORMATION:**
The numbers listed in this section are cross reference numbers for:
Dixie®, Wilson®, Popular OE, and Reman® OE
VISUAL IDENTIFICATION - GUIDE-

The World American® Electronic Component catalog was designed to assist distributor salespeople and their customers in easily identifying starters and alternators. Therefore, units are presented in a way that makes the proper selection accurate and simple.

**STARTERS**

Starter pictures are presented in two views:

*Front* - This angle will always show the solenoid at the 12 o’clock position to illustrate the proper drive end rotation for installation efforts.

*Profile* - This angle will always show the unit from a side view, detailing the opening to the drive pinion.

**ALTERNATORS**

Alternator pictures are presented in two views:

*Rear* - This angle will always show the power and auxiliary terminal, or any plug detail, needed on lighter-duty units.

*Profile* - This angle will always show the unit relative to the mounting configuration.
GENERAL NOTES

GENERAL NOTE #1
When substituting alternators it is OK to replace a unit one for the other as long as the system voltage is the same (either 12 or 24 volt) and the replacement alternator is rated at the same or higher amperage output. For example: it is acceptable to replace an alternator with an output of 100 amps with one of 130 amps or higher as long as the unit supplied as the replacement is the same voltage. Doing this will not affect the wiring of the vehicle or connections to the battery or the accessory connections on the back of the alternator.

GENERAL NOTE #2
Pad type mountings are becoming more popular as they appear on the newer engines. The rules pertaining to amps and voltage when substituting these alternators are the same as in note #1. Some information relative to the mounting configurations is necessary. 22SI™ Style, 24SI™ Style and 110-555 Pad types all have the same mounting patterns and drill hole circumference. These units can be substituted for each other as long as the voltage and amp ratings are applied as in general note # 1. However the mounting pattern on part number 3412135P is slightly different and substituting this with other Pad type alternators is not recommended. One exception to this rule would be on DDA Series 60 engines that are supplied from the factory with an adapter bracket used to mount the 34SI™ Style pad mount alternator. In this case, the DDA bracket will allow a 22SI™ Style, 24SI™ Style or 110-555 Pad mount configuration to be used.

GENERAL NOTE #3
21SI™, 22SI™, 24SI™ Delco®-Style and 110-555 & JB type Leece-Neville® Style alternators using the standard SAE J-180 type of mounting may be substituted for each other as per general note # 1. It is very important however to recognize that some truck makers may mount these units differently. In most cases all the units noted have a top mounting ear that connects to a curved slide bracket and is pulled tight during installation to achieve the proper belt tension. However, in some cases, the truck makers have placed the OE alternator in a “C” bracket to help control vibration. In this case the Delco® 21SI™ Style, 22SI™ Style and 24SI™Style units can be used as substitutes for each other but not for the Leece-Neville® units. In turn the 110-555 and JB Series Leece-Neville® Style units can be used as substitutes for each other but not for the Delco® Style units. The reason for this is caused by the centerline of the bolt holes in the front housing of the units being slightly different. The center to center bolt measurement of the Leece-Neville® Style is about 1/2 inch wider.

GENERAL NOTE #4
40MT™, 41MT™, 42MT™, 50MT™ Delco® style and Denso® M-S starting motors are equipped with an adjustable drive (nose) housing. This design feature is incorporated into these units to accommodate the need for the motor body to be rotated in order for the solenoid to clear other engine components that may hinder the fit. Carefully done this is an acceptable practice by the end user. However, it is important to note that removing the drive housing to replace the pinion gear (from 11 to 12 tooth for example) is not recommended! The pinion gear in all of our motors has been calibrated to engage the engine flywheel perfectly. By removing the pinion gear this measurement is affected. The end result may be a torque failure of the drive, causing pieces of the starter to break and jam the flywheel motion. Every starting motor application in our catalog is supplied with the housing rotation set to the most popular aftermarket position. This will result in far fewer field adjustments.

GENERAL NOTE #5
Most, if not all, 41MT™ Style starting motors are used on mid-range diesel applications. These would include city delivery trucks made by Freightliner®, Mack®, Ford®, and GMC®.

GENERAL NOTE #6
Starting motors of this group are used primarily on fleet service vehicles equipped with Cummins®, International® or Ford® mid-range diesel engines.

GENERAL NOTE #7
Denso® R-S starters do not have a rotatable nose housing. Please refer to page 21 for the application chart. These units can be replaced with the rotatable nose units.
**MID-RANGE STARTERS - GENERAL MOTORS®-TYPE**

**WA#: WA1210DEL**

**APPLICATION:** Delco®-type motor for Chevy® C&K, GMC®, Vans/PU 1995/2002 w/6.5L diesel engines

**INTERCHANGE INFORMATION:**
- Dixie®: S-8213
- Wilson®: 91-01-3927
- Popular OE: 1113296
- Reman®: 10465168

**GENERAL NOTES:** Please read GENERAL NOTE #6 for this part (page 5)

---

**MID-RANGE STARTERS - FORD®-TYPE**

**WA#: WA1213MIT**

**APPLICATION:** Mitsubishi®-type motor for Ford® Van/PU 1985/1994 w/7.3L diesel engines

**INTERCHANGE INFORMATION:**
- Dixie®: S-8150
- Wilson®: 91-27-3039
- Popular OE: M3T90071

**GENERAL NOTES:** Please read GENERAL NOTE #6 for this part (page 5)
**MID-RANGE STARTERS - FORD®-TYPE...CONTINUED**

**WA#: WA1212MIT**

- **INTERCHANGE INFORMATION:**
  - Dixie®: S-8423
  - Wilson®: 91-27-3156
  - Popular OE: M8T50071

- **APPLICATION:**
  - Mitsubishi®-type motor for Ford® Van/PU
  - 1995/2000 w/7.3L diesel engines

- **GENERAL NOTES:** Please read GENERAL NOTE #6 for this part (page 5)

---

**MID-RANGE STARTERS - DELCO®-TYPE**

**WA#: WA411212N**

- **INTERCHANGE INFORMATION:**
  - Dixie®: TS-1541
  - Wilson®: 91-01-4285
  - Popular OE: 1993871
  - Reman® OE: 10461089

- **APPLICATION:**
  - Cummins®
  - Navistar®
  - Waukesha Motors®

- **GENERAL NOTES:** Please read GENERAL NOTES #4 and #5 for this part (page 5)

- **SPECIAL NOTES:** Mounting holes are 5/8".
HEAVY DUTY STARTERS - *DELCO®*-TYPE

**WA391211**

**INTERCHANGE INFORMATION:**
- Dixie: TS-1679
- Wilson: 91-01-4487
- Popular OE: 19011500
- Reman OE: 10461334

**APPLICATION:**
- Most Current: Freightliner
- Mack

**SPECIAL NOTES:** Replaces Delco’s newest heavy duty starting motor. This unit is an “open drive end” design.

**WA401211N**

**REPLACES:** WA1114098

**INTERCHANGE INFORMATION:**
- Dixie: 5-1107
- Wilson: 91-01-3701
- Popular OE: 1114098
- Reman OE: 10461045

**WORLD AMERICAN CAN USE:**
- WA421211
- WA421211HSF

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:** Features - 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.
### WA401212N
**REPLACES:** WA1114156

**INTERCHANGE INFORMATION:**
- Dixie®: S-1132
- Wilson®: 91-01-3702
- Popular OE: 1114156
- Reman® OE: 10461046

**WORLD AMERICAN® CAN USE:**
- WA421212
- WA421212HSF

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:**
- Features: 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.

### WA421211N
**REPLACES:** WA1990352

**INTERCHANGE INFORMATION:**
- Dixie®: TS-1501
- Wilson®: 91-01-4166
- Popular OE: 1990483
- Reman® OE: 10461052

**WORLD AMERICAN® CAN USE:**
- WA421211HSF

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:**
- Features: 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.
**SPECIAL NOTES:** This starter motor is equipped with a Heat Sensitive Fuse style relay built into the field housing. This device is designed to interrupt power to the unit if continuous cranking overheats it to a point where it may be damaged. Once it cools off, the relay will allow the motor to be engaged once again.

**INTERCHANGE INFORMATION:**
- **Dixie**: TS-1512
- **Wilson**: 91-01-4295
- **Popular OE**: 1990355
- **Reman OE**: 10461028

**WORLD AMERICAN® CAN USE:**
- **WA#: WA421211HSF**
- **42MT™ STYLE / 12V / 11 TOOTH**
- **Heat Sensitive Fuse Style**

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**WA#: WA421212N**

**REPLACES: WA1990353**

**INTERCHANGE INFORMATION:**
- **Dixie**: TS-1500
- **Wilson**: 91-01-4161
- **Popular OE**: 1990429
- **Reman OE**: 10461100

**WORLD AMERICAN® CAN USE:**
- **WA421212HSF**
- **42MT™ STYLE / 12V / 12 TOOTH**

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:** Features - 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.
**WA#: WA421212HSF**

**INTERCHANGE INFORMATION:**
- Dixie®: TS-1611
- Wilson®: 91-01-4407
- Popular OE: 1990406
- Reman® OE: 10461233

**WORLD AMERICAN® CAN USE:**

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:** This starter motor is equipped with a Heat Sensitive Fuse style relay built into the field housing. This device is designed to interrupt power to the unit if continuous cranking overheats it to a point where it may be damaged. Once it cools off, the relay will allow the motor to be engaged once again.

---

**WA#: WA422411N**

**REPLACES:** WA1990456

**INTERCHANGE INFORMATION:**
- Dixie®: TS-1503
- Wilson®: 91-01-4159
- Popular OE: 1990456
- Reman® OE: 10461068

**WORLD AMERICAN® CAN USE:**

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:** Features - 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.
**WA#: WA422412N**

**INTERCHANGE INFORMATION:**
- Dixie: TS-1502
- Wilson: 91-01-4158
- Popular OE: 1990453
- Reman OE: 10461025

**WORLD AMERICAN® CAN USE:**

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:** Features - 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.

---

**WA#: WA501211N**

**INTERCHANGE INFORMATION:**
- Dixie: S-1293
- Wilson: 91-01-4107
- Popular OE: 1109545
- Reman OE: 10461056

**WORLD AMERICAN® CAN USE:**

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:** Features - 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.
WA#: WA502411

INTERCHANGE INFORMATION:
Dixie®: TS-1061
Wilson®: 91-01-3948
Popular OE: 1990250
Reman® OE: 10461057

WORLD AMERICAN® CAN USE:

SPECIAL NOTES: Features - 100% new, positork drive, heat treated armature shaft, varnished field coils, ductile iron D.E. housing, solenoids are 100% tested for coil strength, voltage drop across contacts & reserve burn off, 100% computer tested.
HEAVY DUTY STARTERS - DENSO®-TYPE

**WA#: WA428000-1210**

INTERCHANGE INFORMATION:
- Dixie®: S-80135
- Wilson®: 91-29-5550
- Popular OE: 428000-1210

WORLD AMERICAN® CAN USE:
- WA421211N, WA421211HSF

**GENERAL NOTES:** Please read GENERAL NOTE #4 for this part (page 5)

**SPECIAL NOTES:**

**WA#: WA4420**

INTERCHANGE INFORMATION:
- Dixie®: S-80135
- Wilson®: 91-29-5546
- Popular OE: 428000-4420

WORLD AMERICAN® CAN USE:
- WA421211N, WA421211HSF, WA428000-1210

**GENERAL NOTES:** Please read GENERAL NOTE #7 for this part (page 5)

**SPECIAL NOTES:** Refer to the application chart on Page 21
HEAVY DUTY STARTERS - DENSO®-TYPE ...CONTINUED

WA#: WA4430

INTERCHANGE INFORMATION:
Dixie®:
Wilson®: 91-29-5647
Popular OE: 428000-4430

WORLD AMERICAN® CAN USE:
WA421211N, WA421211HSF, WA428000-1210

GENERAL NOTES: Please read GENERAL NOTE #7 for this part (page 5)

SPECIAL NOTES: Refer to the application chart on Page 21

WA#: WA4440

INTERCHANGE INFORMATION:
Dixie®:
Wilson®: 91-29-5648
Popular OE: 428000-4440

WORLD AMERICAN® CAN USE:
WA421211N, WA421211HSF, WA428000-1210

GENERAL NOTES: Please read GENERAL NOTE #7 for this part (page 5)

SPECIAL NOTES: Refer to the application chart on Page 21
# DENSO®-STYLE STARTER APPLICATION CHART

<table>
<thead>
<tr>
<th>Engine / Truck Model</th>
<th>Freightliner®</th>
<th>Sterling®</th>
<th>International® thru 2006</th>
<th>Peterbilt®</th>
<th>Kenworth®</th>
<th>MACK®</th>
<th>VOLVO®</th>
<th>Western Star®</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT® - C11</td>
<td></td>
<td></td>
<td>WA4420</td>
<td></td>
<td></td>
<td>WA4420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAT® - C12</td>
<td>WA4420</td>
<td></td>
<td>WA4420 ¬</td>
<td>WA4420 *</td>
<td></td>
<td>WA4420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAT® - C13</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td></td>
<td>WA4420 *</td>
</tr>
<tr>
<td>CAT® - C15</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td></td>
<td>WA4420 *</td>
</tr>
<tr>
<td>CUMMINS® ISM</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td>WA4420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUMMINS® ISX</td>
<td>WA4440</td>
<td></td>
<td>WA4440</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUMMINS® M11</td>
<td>WA4430</td>
<td>WA4430</td>
<td>WA4430</td>
<td>WA4430</td>
<td>WA4430</td>
<td>WA4430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUMMINS® N14</td>
<td>WA4440</td>
<td>WA4440</td>
<td>WA4440</td>
<td>WA4440</td>
<td>WA4440</td>
<td>WA4440</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DETROIT® DIESEL 60</td>
<td>WA4430*</td>
<td>WA4430*</td>
<td>WA4430*</td>
<td>WA4430*</td>
<td>WA4430*</td>
<td>WA4430</td>
<td></td>
<td>WA4430*</td>
</tr>
<tr>
<td>MACK® - E TECH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MACK® - E-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WA4430</td>
</tr>
</tbody>
</table>

* - 1994-2006 Freightliner® with fuel filter mounted on the outside of the frame rail.
¬ - 1998 ONLY
¹ - 1999 ONLY
² - 2007 ONLY
³ - 1997 ONLY

---

**STARTER MUST BE INSTALLED WITH THE DRAIN TUBE IN THE DOWNWARD POSITION.**
REFRIGERATION STARTER - HITACHI®-TYPE

WA#: WATK129

INTERCHANGE INFORMATION:
- Dixie®: S-8315
- Wilson®: 91-25-7048
- Delco®: 10465439
- Thermo King®: 45-1263
- Carrier: 20-45-1263

WORLD AMERICAN® CAN USE:

SPECIAL NOTES:

Delco® STYLE / 12V / 9 TOOTH

HEAVY DUTY REPLACEMENT SOLENOIDS

<table>
<thead>
<tr>
<th>PART#</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA1115556</td>
<td>12v SOLENOID FITS 40 &amp; 50MT TYPE STARTERS</td>
</tr>
<tr>
<td>WA1115593</td>
<td>12v SOLENOID FITS 42MT TYPE STARTERS</td>
</tr>
<tr>
<td>WA1115609</td>
<td>12v SOLENOID FITS 37M TYPE STARTERS</td>
</tr>
</tbody>
</table>
**WA#: WA12105DEL**

INTERCHANGE INFORMATION:
- Dixie*: A1448/A1467
- Wilson*: 90-01-4245
- Popular OE: 10480167

APPLICATION:
- 1999-2000 Chevy® C&K Series
- 6.5L Diesel w/Int. Fan

SPECIAL NOTES: PLUG #313

**WA#: WA12105DEL-1**

INTERCHANGE INFORMATION:
- Dixie*: A-1548
- Wilson*: 90-01-4339
- Popular OE: 10480326

APPLICATION:
- 2001-2002 Silverado
- 6.5L Diesel

SPECIAL NOTES: PLUG #314
WA#: WA12110FOR

INTERCHANGE INFORMATION:
Dixie*: A-2024
Wilson*: 90-02-5092
Popular OE: F81Z-10346-EA

APPLICATION:
1999-2003 Ford® F-Series
7.3L Diesel w/Single Alt.

SPECIAL NOTES: PLUG #336. This is also used in dual alternator setups. This is the top position alternator.

MID-RANGE MANUAL TRANSMISSION COMPONENTS
This is a valuable resource for quality manual transmission replacement components including: bearings, shafts, synchronizers, small parts kits and much more!

Contact your sales representative for a copy of the MID-RANGE MANUAL TRANSMISSION COMPONENTS catalog, or you can download a PDF version of this catalog at:
WWW.WORLDAMERICAN.COM
WWW.MIDWESTTRUCK.COM
WA212470

**21SI™ STYLE / 24V / 70 AMP**

**SPECIAL NOTES:** The only 24-volt unit in either the 21/22 SI™ style series of Delco®-style alternators.

**INTERCHANGE INFORMATION:**
- Dixie® A-1351
- Wilson®: 90-01-4152
- Popular OE: 19010111

**WORLD AMERICAN® CAN USE:**

WWW.WORLDAMERICAN.COM
WA#: WA2212145N
REPLACES: WA19020303

INTERCHANGE INFORMATION:
Dixie*: A-1452
Wilson*: 90-01-4270
Popular OE: 19020303
Reman*: 10459190

WORLD AMERICAN CAN USE:
WA2212160N, WA2412145N, WA2412160N,
WA2812180N, WA2812200N

22SI™ STYLE / 12V / 160 AMP

GENERAL NOTES:
Please read GENERAL NOTES #1 AND #3
for this part (page 5)

SPECIAL NOTES:
Features: 100% new-built extra tough for heavy duty service, long-shaft rotor & longer needle
bearings - provides more bearing surface to spread belt load for longer service life, 1/4” - 20 thru bolts used, universal
R-terminal, features bolt pin type & 10-24 threaded connections.

WA#: WA2212145PN
REPLACES: WA19020389

INTERCHANGE INFORMATION:
Dixie*: A-1621
Wilson*: 91-01-4393
Popular OE: 19020389
Reman*: 10459321

WORLD AMERICAN CAN USE:
WA2212160PN, WA2412145PN, WA2412160PN,
WA2812180PN, WA2812200PN

22SI™ STYLE / 12V / 160 AMP
Pad Mount

GENERAL NOTES:
Please read GENERAL NOTES #2 for this
part (page 5)

SPECIAL NOTES:
Features: 100% new-built extra tough for heavy duty service, long-shaft rotor & longer needle
bearings - provides more bearing surface to spread belt load for longer service life, 1/4” - 20 thru bolts used, universal
R-terminal, features bolt pin type & 10-24 threaded connections.
**WA#: WA2212160N**  
REPLACES: WA19020303

INTERCHANGE INFORMATION:
Dixie®: A-1494  
Wilson®: 90-01-4297  
Popular OE: 19020310  
Reman®: 10459472

WORLD AMERICAN CAN USE:  
WA2412160N, WA2812180N, WA2812200N

GENERAL NOTES: Please read GENERAL NOTES #1 AND #3 for this part (page 5)

SPECIAL NOTES: Features: 100% new-built extra tough for heavy duty service, long-shaft rotor & longer needle bearings - provides more bearing surface to spread belt load for longer service life, 1/4” - 20 thru bolts used, universal R-terminal, features bolt pin type & 10-24 threaded connections.

---

**WA#: WA2212160PN**  
REPLACES: WA19020389

INTERCHANGE INFORMATION:
Dixie®: A-1621  
Wilson®: 91-01-4393  
Popular OE: 19020889  
Reman®: 10459481

WORLD AMERICAN CAN USE:  
WA2412160N, WA2812180PN, WA2812200PN

GENERAL NOTES: Please read GENERAL NOTES #2 for this part (page 5)

SPECIAL NOTES: Features: 100% new-built extra tough for heavy duty service, long-shaft rotor & longer needle bearings - provides more bearing surface to spread belt load for longer service life, 1/4” - 20 thru bolts used, universal R-terminal, features bolt pin type & 10-24 threaded connections.
**WA#: WA2412130N**

**INTERCHANGE INFORMATION:**
- Dixie*: A-1698
- Wilson*: 90-01-4465
- Popular OE: 19020903
- Reman*: 8700010

**WORLD AMERICAN CAN USE:**
- WA2412145N, WA2412160N, WA2812180N, WA2812200N

**SPECIAL NOTES:**
- HEAVY DUTY ALTERNATORS - DELCO®-TYPE ...

**24SI™ STYLE / 12V / 130 AMP**

**GENERAL NOTES:** Please read GENERAL NOTES #1 AND #3 for this part (page 5)

**WA#: WA2412130PN**

**INTERCHANGE INFORMATION:**
- Dixie*: A-1702
- Wilson*: 90-01-4447
- Popular OE: 1902902
- Reman*: 8700012

**WORLD AMERICAN CAN USE:**
- WA2412145N, WA2412160N, WA2812180N, WA2812200N

**SPECIAL NOTES:**
- Coming Soon

**24SI™ STYLE / 12V / 130 AMP**

**Pad Mount**

**GENERAL NOTES:** Please read GENERAL NOTES #2 for this part (page 5)
WA#: WA2412145N

INTERCHANGE INFORMATION:
Dixie®: A-1699
Wilson®: 90-01-4521
Popular OE: 89020901
Reman®: 8700009

WORLD AMERICAN CAN USE:
WA2412160N, WA2812180N, WA2812200N

24SI™ STYLE / 12V / 145 AMP

GENERAL NOTES: Please read GENERAL NOTES #1 AND #3 for this part (page 5)

SPECIAL NOTES:

WA#: WA2412145PN

INTERCHANGE INFORMATION:
Dixie®: A1703
Wilson®: 90-01-4450
Popular OE: 19020900
Reman®: 8700008

WORLD AMERICAN CAN USE:
WA2412160PN, WA2812180PN, WA2812200PN

24SI™ STYLE / 12V / 145 AMP
Pad Mount

GENERAL NOTES: Please read GENERAL NOTES #2 for this part (page 5)

SPECIAL NOTES:
**HEAVY DUTY ALTERNATORS - DELCO®-TYPE...CONTINUED**

**WA#: WA2412160N**

**INTERCHANGE INFORMATION:**
- Dixie®: A-1700
- Wilson®: 90-01-4467
- Popular OE: 860142
- Reman®: 8700021

**WORLD AMERICAN CAN USE:**
- WA2812180N, WA2812200N

**GENERAL NOTES:**
Please read GENERAL NOTES #1 AND #3 for this part (page 5)

**SPECIAL NOTES:**

---

**WA#: WA2412160PN**

**INTERCHANGE INFORMATION:**
- Dixie®: A-1704
- Wilson®: 90-01-4569
- Popular OE: 8600043
- Reman®: 8700013

**WORLD AMERICAN CAN USE:**
- WA28122180PN, WA2812200PN

**GENERAL NOTES:**
Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**

---

**HEAVY DUTY ALTERNATORS - DELCO®-TYPE...CONTINUED**

**WA#: WA2412160N**

**INTERCHANGE INFORMATION:**
- Dixie®: A-1700
- Wilson®: 90-01-4467
- Popular OE: 860142
- Reman®: 8700021

**WORLD AMERICAN CAN USE:**
- WA2812180N, WA2812200N

**GENERAL NOTES:**
Please read GENERAL NOTES #1 AND #3 for this part (page 5)

**SPECIAL NOTES:**

---

**WA#: WA2412160PN**

**INTERCHANGE INFORMATION:**
- Dixie®: A-1704
- Wilson®: 90-01-4569
- Popular OE: 8600043
- Reman®: 8700013

**WORLD AMERICAN CAN USE:**
- WA28122180PN, WA2812200PN

**GENERAL NOTES:**
Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**

---
WA#: WA2812180N

Coming Soon

28SI™ STYLE / 12V / 180 AMP

GENERAL NOTES: Please read GENERAL NOTES #1 AND #3 for this part (page 5)

SPECIAL NOTES:

INTERCHANGE INFORMATION:
Dixie®:
Wilson®:
Popular OE: 8600223
Reeman®:

WORLD AMERICAN CAN USE:
WA2812180N

WA#: WA2812180LN

Coming Soon

28SI™ STYLE / 12V / 180 AMP
Pad Mount

GENERAL NOTES:

SPECIAL NOTES:

INTERCHANGE INFORMATION:
Dixie®:
Wilson®:
Popular OE: 8600311
Reeman®:

WORLD AMERICAN CAN USE:
WA2812180LN

SPECIAL NOTES:

HEAVY DUTY ALTERNATORS - DELCO®-TYPE ...CONTINUED
**HEAVY DUTY ALTERNATORS - DELCO®-TYPE ...CONTINUED**

**WA#: WA2812180PN**

**INTERCHANGE INFORMATION:**
- Dixie®:
- Wilson®:
- Popular OE: 8600316
- Reman®:

**WORLD AMERICAN CAN USE:**
- WA#: WA2812200N

**GENERAL NOTES:** Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**

**WA#: WA2812200N**

**INTERCHANGE INFORMATION:**
- Dixie®:
- Wilson®:
- Popular OE: 8600313
- Reman®:

**WORLD AMERICAN CAN USE:**
- WA2812200N

**GENERAL NOTES:** Please read GENERAL NOTES #1 AND #3 for this part (page 5)

**SPECIAL NOTES:**

**HEAVY DUTY ALTERNATORS - DELCO®-TYPE ...CONTINUED**
WA#: WA2812200LN

Coming Soon

28SI™ STYLE / 12V / 200 AMP

INTERCHANGE INFORMATION:
Dixie®:
Wilson®:
Popular OE: 8600307
Reman®:

WORLD AMERICAN CAN USE:

GENERAL NOTES:

SPECIAL NOTES:

WA#: WA2812200PN

Coming Soon

28SI™ STYLE / 12V / 200 AMP
Pad Mount

INTERCHANGE INFORMATION:
Dixie®:
Wilson®:
Popular OE: 8600314

WORLD AMERICAN CAN USE:

GENERAL NOTES:

SPECIAL NOTES:

HEAVY DUTY ALTERNATORS - DELCO®-TYPE ...CONTINUED
HEAVY DUTY ALTERNATORS - DELCO®-TYPE …CONTINUED

**WA#: WA3312135**

![Image of WA3312135](image1)

**INTERCHANGE INFORMATION:**
- Dixie: A -1456
- Wilson: 90-01-4262
- Popular OE: 19011155
- Reman OE: 10459141

**WORLD AMERICAN® CAN USE:**
- WA3512140N, WA3612170N

**SPECIAL NOTES:**
- 33SI™ STYLE / 12V / 135 AMP
- “Brushless Type”

**GENERAL NOTES:** Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**

---

**WA#: WA3412135P**

![Image of WA3412135](image2)

**INTERCHANGE INFORMATION:**
- Dixie: A -1659
- Wilson: 90-01-4344
- Popular OE: 19011177
- Reman OE: 10459278

**WORLD AMERICAN® CAN USE:**
- WA3512140PN, WA3612170PN

**SPECIAL NOTES:**
- 34SI™ STYLE / 12V / 135 AMP
- Pad Mount
- “Brushless Type”

**GENERAL NOTES:** Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**
WA#: WA3412135QN
REPLACES: WA19011167

**INTERCHANGE INFORMATION:**
Dixie*: A-1459  
Wilson*: 90-01-4272  
Popular OE: 19011167  
Reman* OE: 10459206

**WORLD AMERICAN® CAN USE:**
WA3512140QN, WA3612170QN

**GENERAL NOTES:**
Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**

---

WA#: WA3512140N

**INTERCHANGE INFORMATION:**
Dixie*: A1719  
Wilson*: 90-01-4511  
Popular OE: 8600064/19011232

**WORLD AMERICAN CAN USE:**
WA3612170N

**GENERAL NOTES:**
Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:**
**WA#: WA3512140PN**

**INTERCHANGE INFORMATION:**
Dixie®: A1720
Wilson®: 90-01-4513
Popular OE: 8600065/19011258

**WORLD AMERICAN® CAN USE:**
WA3612170PN

**SPECIAL NOTES:**

**GENERAL NOTES:** Please read GENERAL NOTES #2 for this part (page 5)

---

**WA#: WA3512140QN**

**INTERCHANGE INFORMATION:**
Dixie®: A1720
Wilson®: 90-01-4512
Popular OE: 8600065

**WORLD AMERICAN CAN USE:**
WA3612170QN

**SPECIAL NOTES:**

**GENERAL NOTES:** Please read GENERAL NOTES #2 for this part (page 5)
WA#: WA3612170N

INTERCHANGE INFORMATION:
Dixie®: A1707
Wilson®: 90-01-4506
Popular OE: 8600072

WORLD AMERICAN CAN USE:

36SI™ STYLE / 12V / 170 AMP

GENERAL NOTES:

SPECIAL NOTES:

WA#: WA3612170PN

INTERCHANGE INFORMATION:
Dixie®: A1711
Wilson®: 90-01-4505
 Popular OE: 8600060

WORLD AMERICAN CAN USE:

36SI™ STYLE / 12V / 170 AMP

GENERAL NOTES:

SPECIAL NOTES:
HEAVY DUTY ALTERNATORS - DELCO®-TYPE ...CONTINUED

WA#: WA3612170QN

INTERCHANGE INFORMATION:
Dixie®: A1713
Wilson®: 90-01-4503
Popular OE: 8600071

WORLD AMERICAN® CAN USE:

SPECIAL NOTES:

GENERAL NOTES:

HEAVY DUTY AIR BRAKE & VALVE COMPONENTS
This catalog is a valuable resource for quality replacement brake valves as well as clutches, steering components, electrical components, and water & hydraulic pumps.

Contact your sales representative for a copy, or download a PDF version at:

www.worldamerican.com
www.midwesttruck.com
**HEAVY DUTY ALTERNATORS - LEECE-NEVILLE®-TYPE**

### WA#: WA110-555N

**INTERCHANGE INFORMATION:**
- Dixie®: A-9204
- Wilson®: 90-05-9124
- Popular OE: 8LHA2070VB
- Reman® OE: 110-555HD

**WORLD AMERICAN® CAN USE:**
- WA2812160JB
- WA2212145

**GENERAL NOTES:** Please refer to GENERAL NOTES #1 AND #3 for this part (page 5)

**SPECIAL NOTES:** This is the most popular substitute replacement alternator in the marketplace. This unit can be used on almost all standard SAE J-180 mounting configurations.

### WA#: WA110-555PN

**INTERCHANGE INFORMATION:**
- Dixie®: A-9384
- Wilson®: 90-05-9220
- Popular OE: 8LHP2170V
- Reman® OE: 110-555P

**WORLD AMERICAN® CAN USE:**
- WA222145P

**GENERAL NOTES:** Please refer to GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:** Pad mount type units are seen primarily on truck models after 2001. This type of mounting was developed to overcome harsh vibrations caused by big bore diesel engines.
**HEAVY DUTY ALTERNATORS - LEECE-NEVILLE®-TYPE**

### WA#: WA2712130JB

**INTERCHANGE INFORMATION:**
- Dixie®: A-771
- Wilson®: 90-04-7021
- Popular OE: 2670LC
- Reman® OE: 2760LCRM

**WORLD AMERICAN® CAN USE:**
- WA110-555
- WA2812160JB
- WA2212145

**GENERAL NOTES:** Please refer to GENERAL NOTES #1 AND #3 for this part (page 5)

**SPECIAL NOTES:** This L/N type alternator has the biggest frame of all of the most popular high output replacement units. Take care to measure clearances before using as a substitute unit.

---

### WA#: WA2812160JB

**INTERCHANGE INFORMATION:**
- Dixie®: A-772
- Wilson®: 90-04-7039
- Popular OE: 2800LC
- Reman® OE: 2800LCRM

**WORLD AMERICAN® CAN USE:**

**GENERAL NOTES:** Please refer to GENERAL NOTES #1 AND #3 for this part (page 5)

**SPECIAL NOTES:** This L/N type alternator has the biggest frame of all of the most popular high output replacement units. Take care to measure clearances before using as a substitute unit.
**ELECTRICAL COMPONENTS - REPLACEMENT POWER CORDS**

<table>
<thead>
<tr>
<th>WA#: WA22-4621</th>
<th>DESCRIPTION: HEAVY DUTY ELECTRICAL CORD, 6/12 GA., 1/10 GA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACES: PHILIPS’ 22-4621</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WA#: WA24-4621</th>
<th>DESCRIPTION: LIGHT DUTY ELECTRICAL CORD, 6/14 GA., 1/12 GA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACES: PHILIPS’ 22-4621</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WA#: WA30-4621</th>
<th>DESCRIPTION: 15’ ABS GREEN ELECTRICAL CORD, 4/12 GA., 2/10 GA., 1/8 GA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACES: PHILIPS’ 15-630</td>
<td></td>
</tr>
</tbody>
</table>

**ELECTRICAL COMPONENTS - REPLACEMENT CONNECTORS**

**4, 6, and 7 - Way Sockets**

<table>
<thead>
<tr>
<th>WA#: WA15-400</th>
<th>DESCRIPTION: 4-way electrical socket</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACES: PHILIPS’ 15-400</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WA#: WA15-430</th>
<th>DESCRIPTION: 4-way electrical plug with spring &amp; cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACES: PHILIPS’ 15-430</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WA#: WA15-600</th>
<th>DESCRIPTION: 6-way electrical socket</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPLACES: PHILIPS’ 15-600</td>
<td></td>
</tr>
</tbody>
</table>
4, 6, and 7 - Way Sockets

**WA#: WA15-630**
REPLACES: PHILIPS' 15-630
DESCRIPTION: 6-way electrical plug with spring & cable

**WA#: WA15-720**
REPLACES: PHILIPS' 15-720
DESCRIPTION: 7-way electrical socket with split 2-pin hole

**WA#: WA15-730**
REPLACES: PHILIPS' 15-730
DESCRIPTION: 7-way electrical plug with spring & cable

**WA#: WA15-740**
REPLACES: PHILIPS' 15-740
DESCRIPTION: 7-way weather hood guard

---

**ELECTRICAL COMPONENTS - 7-TERMINAL JUNCTION BOX**

**WA#: WA22040**
REPLACES: MIDLAND® BE22040
DESCRIPTION: 7-TERMINAL STYLE STRIP WITH GROMMETS & HARDWARE

---

WWW.WORLDAMERICAN.COM
ELECTRICAL COMPONENTS - REPLACEMENT SOLENOID VALVES

Shift Solenoid Valves

**WA#: WAKN68237**
DESCRIPTION: 24 Volt, Supply Port (1) 1/4" P.T. Delivery Port (1) 1/4" P.T.
REPLACES: MIDLAND® KN68237

**WA#: 288905C91**
DESCRIPTION: 12 Volt, Supply Port (1) 1/4" P.T. Delivery Port (1) 1/4" P.T.
REPLACES: MIDLAND® KN68230

Fuel Solenoid Valves

**WA#: WA6997312**
DESCRIPTION: 12 Volt
REPLACES: CUMMINS® 3035342, BM-6997312

**WA#: WA6997324**
DESCRIPTION: 24 Volt
REPLACES: CUMMINS® 3035344, BM-69973-24

ELECTRICAL COMPONENTS - REPLACEMENT ELECTRIC 2-SPEED MOTORS

**WA#: 113745R**
DESCRIPTION: Electric shift motor, late style 1984 & later
REPLACES: EATON® 113745
**ELECTRICAL COMPONENTS** - REPLACEMENT ELECTRO-PNEUMATIC SWITCHES

### Low Pressure Switches

**WA#: WA13240**  
**DESCRIPTION:** 12 or 24 Volt, 1/8-27 NPTF thread, single pole. 2-terminal design actuates at 55psi. Circuit normally closed at 0psi. BLACK  
**REPLACES:** MIDLAND® BE13240, 13240A

**WA#: WA13241**  
**DESCRIPTION:** 12 or 24 Volt, 1/8-27 NPTF thread, single pole. 2-terminal design actuates at 66psi. Circuit normally closed at 0psi. BROWN  
**REPLACES:** MIDLAND® BE13241, 13241A

**WA#: WA228750**  
**DESCRIPTION:** 1/4” P.T. double terminal. Opens at 60psi. Normally closed at 0psi.  
**REPLACES:** BENDIX® LP-3™ 228750

**WA#: WA279416**  
**DESCRIPTION:** 1/4” P.T. double terminal. Opens at 60psi. Normally closed at 0psi.  
**REPLACES:** BENDIX® LP-3™ 279416
Stop Light Switches

**WA#: WA13250**

- **DESCRIPTION:** 12 Volt or 24 Volt 1/4-18 NPTF thread single pole - Two terminal design actuates at 3-5 psi circuit normally closed at 0 pressure - One million cycles at 30 amps - BLACK

**WA#: WA13255**

- **DESCRIPTION:** 12 Volt or 24 Volt 1/8-27 NPTF thread actuates at 55 psi single pole - double throw - three terminal design circuit normally one open/one closed - BROWN

**WA#: WA228600**

- **DESCRIPTION:** 1/4” P.T. normally closed (0 psi) closes at 5 psi

**REPLACES: MIDLAND® BE13250, 13250**

Service Circuit Stoplight Switch

**REPLACES: MIDLAND® BE13255A, 13255**

Trailer Emergency Stoplight Switch

**REPLACES: BENDIX® LP-3™ 279416**

Stoplight Switch

**Satisfaction Guaranteed**

At World American® we guarantee product quality, product performance, product value and customer service satisfaction. World American® products:

- **Meet or beat industry quality requirements.**
- **Backed by a comprehensive warranty.**
- **Competitively priced.**

Visit us online for more information at:

WWW.WORLDAMERICAN.COM
WWW.MIDWESTTRUCK.COM
WA#:WA22501A  REPLACES: TRUCK-LITE® 30250Y
PETERSON® 164A
GROTE® 47113
Amber 2” LED Clr/Mrkr Lamp

WA#:WA22501R  REPLACES: TRUCK-LITE® 30250R
PETERSON® 164R
GROTE® 47112
Red 2” LED Clr/Mrkr Lamp

WA#:WA22502R  REPLACES: TRUCK-LITE® 10250Y
PETERSON® 162A
GROTE® 47123
Amber 2.5” LED Clr/Mrkr Lamp

WA#:WA22502A  REPLACES: TRUCK-LITE® 10250R
PETERSON® 162R
GROTE® 47122
Red 2.5” LED Clr/Mrkr Lamp

WA#:WA22546R  REPLACES: TRUCK-LITE® 44302R
PETERSON® 417R-3
GROTE® 53252
Red 4” Grommet Mt.10 LED S/T/T Lamp

WA#:WA22565R  REPLACES: TRUCK-LITE® 60250R
PETERSON® 420R-3
GROTE® 53962
Red Oval 10 LED S/T/T Lamp

WA#:WA10017A  REPLACES: TRUCK-LITE® 60215Y
PETERSON® -------
GROTE® 52193
Amber Oval Mid Trir Side Turn

All lights meet D.O.T. requirements FMVSS 108 and pass rain, temperature and humidity, vibration, shock, aging and salt spray testing as per customer's specifications.
All lights meet D.O.T. requirements FMVSS 108 and pass rain, temperature and humidity, vibration, shock, aging and salt spray testing as per customer’s specifications.
**ELECTRICAL COMPONENTS - REPLACEMENT LIGHTING ...CONTINUED**

**WA#: WA53874**  
3-Wire Plug, Straight  
REPLACES:  
TRUCK-LITE® 60250R  
PETERSON® 420R-3  
GROTE® 53962  

**WA#: WA538751**  
2-Wire Plug, Straight  
REPLACES:  
TRUCK-LITE® 94902  
PETERSON® 142-49  
GROTE® ------

**WA#: WA538752**  
2-Wire Plug, 90 Degree  
REPLACES:  
TRUCK-LITE® 94924  
PETERSON® -----  
GROTE® 67050

**WA#: WA55206-1**  
2.5” Open Grommet  
REPLACES:  
TRUCK-LITE® 107000  
PETERSON® 143-18  
GROTE® 91400

**WA#: WA55208**  
2” Open Grommet  
REPLACES:  
TRUCK-LITE® 30700  
PETERSON® 146-18  
GROTE® 92120

**WA#: WA55227**  
4” Open Grommet  
REPLACES:  
TRUCK-LITE® 40700  
PETERSON® 426-18  
GROTE® 91740

All lights meet D.O.T. requirements FMVSS 108 and pass rain, temperature and humidity, vibration, shock, aging and salt spray testing as per customer’s specifications.
INSTALLATION GUIDE
& WARRANTY
SECTION

WORLD AMERICAN®
INSTALLATION GUIDE - ALL STARTERS

This installation guide will be included in ALL starter motor shipments.

Stop!!

*Before installing...this electrical unit you must disconnect the black (ground) cable from the negative battery post! Failure to do so could result in serious personal injury.*

**For best results when installing a brand new starter please make the connections in the following sequence.**

1. Connect **ground** cable to the post marked with the **Black** ground tab indicator.
2. Connect **power** cable to the post marked with the **Red** power tab indicator.
3. Connect the **key switch** cable to the post marked with the **Green** tab indicator.
4. Double Check all electrical connections to assure proper conductivity. **DO NOT OVER TORQUE!!** Broken or damaged connections will cause premature failure and void warranty.
5. Double check all bolts securing the unit to the engine. Make sure these fasteners are torqued properly.
6. Wire brush the ground cable connection and post; reconnect the cable to the negative post on the battery and tighten.

**Important note...**Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. **In these cases warranty will be voided.**
INSTALLATION GUIDE - MID-RANGE ALTERNATORS

This installation guide will be included in ALL mid-range alternator shipments.

Stop!!

*Before installing...* this electrical unit you must disconnect the **black (ground)** cable from the negative battery post! Failure to do so could result in serious personal injury.

For best results when installing a brand new alternator please make the connections in the following sequence.

**MID-RANGE® ALTERNATOR APPLICATIONS ONLY**

1. Connect power cable to the post marked with the **Red** power tab indicator.
2. If so equipped, connect the male wire harness plug into the receptacle located either on the rear or side of the alternator.
3. Double check all electrical connections to assure proper conductivity. **DO NOT OVER TORQUE!!** Broken or damaged connections will cause premature failure and void warranty.
4. Double check all bolts securing the unit to the engine. Make sure these fasteners are torqued properly.
5. Wire brush the ground cable connection and post; reconnect the cable to the negative post on the battery and tighten.

**Important note...** Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. **In these cases warranty will be voided.**
This installation guide will be included in ALL Delco®-type alternator shipments.

**Note!**

*Before installing...this electrical unit you must disconnect the black (ground) cable from the negative battery post! Failure to do so could result in serious personal injury.*

For best results when installing a brand new alternator please make the connections in the following sequence.

**DELCO®-STYLE ALTERNATORS ONLY**

1. Connect power cable to the post marked with the *Red* power tab indicator. On some units this post could be marked BAT or POS.
2. Delco® type alternators are generally case grounded through the mounting bracket to the frame or engine. *If replacing a Leece Neville® type, reuse the existing ground strap and attach to the Delco® unit where indicated on their housing.*
3. If so equipped, connect the cable for the relay switch, indicator light or tachometer to the post with the *Blue* tab indicator.
4. Double Check all electrical connections to assure proper conductivity. **DO NOT OVER TORQUE!!** Broken or damaged connections will cause premature failure and void warranty.
5. Double check all bolts securing the unit to the engine. Make sure these fasteners are torqued properly.
6. Wire brush the ground cable connection and post; reconnect the cable to the negative post on the battery and tighten.

*Important note...Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. In these cases warranty will be voided.*
INSTALLATION GUIDE - LEECE-NEVILLE®-TYPE ALTERNATORS

This installation guide will be included in ALL Leece-Neville®-type alternator shipments.

---

Stop!!

*Before installing*...this electrical unit you must disconnect the **black (ground)** cable from the negative battery post! Failure to do so could result in serious personal injury.

For best results when installing a brand new alternator please make the connections in the following sequence.

**LEECE-NEVILLE® ALTERNATOR ONLY**

1. Connect **power** cable to the post marked with the **Red** power tab indicator.
2. Connect the **black** tab indicator. If replacing a Delco® type with this unit, you must make sure to place a ground strap to the unit as indicated.
3. If so equipped, connect the cable for the relay switch, indicator light or tachometer to the post with the **Blue** tab indicator.
4. Double check all electrical connections to assure proper conductivity. **DO NOT OVER TORQUE!!** Broken or damaged connections will cause premature failure and void warranty.
5. Double check all bolts securing the unit to the engine. Make sure these fasteners are torqued properly.
6. Wire brush the ground cable connection and post; reconnect the cable to the negative post on the battery and tighten.

---

**Important note**...Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. **In these cases warranty will be voided.**
MIDWEST TRUCK & AUTO PARTS, INC.™ warrants that all new MIDWEST TRUCK & AUTO PARTS, INC.™, except as otherwise provided herein, will be free from defects in material and workmanship for the first 6 months or 50,000 miles, whichever occurs first, with the sole exception of its heavy duty alternators and starters, the warranty for which shall extend for the first year, with no mileage limit. THIS WARRANTY WILL NOT APPLY IF ANY PART HAS BEEN MODIFIED, DAMAGED OR IS DEFECTIVE AS A RESULT OF ANY ACCIDENT, MISUSE, USE IN COMPETITIVE APPLICATIONS, IMPROPER INSTALLATION, NEGLIGENCE, REPAIR OR ALTERATION.

COMPETITION PARTS ARE SOLD “AS IS”, WITHOUT ANY WARRANTY WHATSOEVER. IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF SUCH PARTS IS WITH THE BUYER. SHOULD SUCH PARTS PROVE DEFECTIVE FOLLOWING THEIR PURCHASE, THE BUYER, AND NOT THE MANUFACTURER, DISTRIBUTOR OR RETAILER, ASSUMES THE ENTIRE COST OF ALL NECESSARY SERVICING OR REPAIR.

The MIDWEST TRUCK & AUTO PARTS, INC.™ parts warranty is voided if the part is used for competition or if it has been modified.

To make a warranty claim on parts used in non-competitive applications, distributors should contact MIDWEST TRUCK & AUTO PARTS, INC.™ distributor for a Return Goods Authorization (RGA) Number. No returns will be accepted without an RGA Number. All parts should be returned to MIDWEST TRUCK & AUTO PARTS, INC.™, freight prepaid. MIDWEST TRUCK & AUTO PARTS, INC.™ will issue a credit equal to the original purchase price for all defective parts covered by this warranty. In the event that a warranty claim cannot be substantiated by MIDWEST TRUCK & AUTO PARTS, INC.™, the parts will be returned to the customer, freight collect.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IN NO EVENT WILL MIDWEST BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, ANY LABOR COSTS.
Date: ________________________________
RGA Number: __________________________ Invoice -or- Sales Order Number: __________________________

CONTACT INFORMATION - PLEASE PRINT

Contact Name: __________________________ Distributor: __________________________
Street Address: __________________________ City/State/Zip: __________________________
Phone: _______________ Ext: ______________ Fax: __________________________
Email Address: __________________________

UNIT INFORMATION

Type of Unit: [ ] ALTERNATOR [ ] STARTER [ ]
Part Number: __________________________ Date Installed: __________________________
Type of Engine: _______DIESEL _______ GASOLINE _______NATURAL GAS
Type of Vehicle: _______ TRUCK _______ CONSTRUCTION _______ AG _______ BUS

REASON FOR RETURN - Please Select From the Options Below

[ ] STARTER
   _____ Will Not Fit Engine   _____ Will Not Start   _____ Broken Studs or Contacts
   _____ Stays Engaged   _____ Burned Out
   _____ Other: __________________________

[ ] ALTERNATOR
   _____ Failed on Turn   _____ Overcharges   _____ Fails to Charge Once Installed
   _____ Burned Out   _____ Broken Studs or Contacts
   _____ Other: __________________________

GENERAL NOTE:
Starting motors claimed as warranty that fail due to a low voltage condition in the batteries will not be honored.

APPLICATION NOTE:
Alternators claimed as warranty that fail due to cross wiring (causing improper polarization) will not be honored.