

## **COMPETITIVE EDGE**



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.

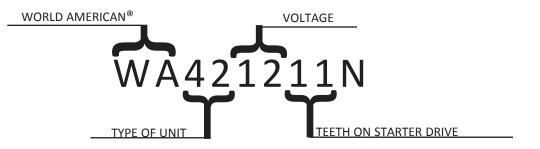
## TABLE OF CONTENTS

BASIC INSTALLATION/GUIDES	
Part Number Identification Guide	2
Visual Identification Guide	
General Notes	
ocherul Notes	
ELECTRICAL COMPONENT SECTION	
Replacement Starters:	5-17
Mid-Range Starters	
General Motors® - Style	6
Ford® - Style	
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	
Heavy Duty Alternators	
Delco* - Style	21-34
Leece-Neville® - Style	
Replacement Components:	
Power Cables	
Electrical Connectors	
Junction Box	
Solenoid Valves	
Electric 2 Speed Motor	
Electro-Pneumatic Switches	
Replacement Lights	
INSTALLATION GUIDES/WARRANTY SECTION	
All Starters	47
Mid-Range Alternators	
Delco® - Style Alternators	
Leece-Neville® - Style Alternators	
WARRANTY	51

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# HOW TO IDENTIFY - PART NUMBERS -

#### **STARTERS**



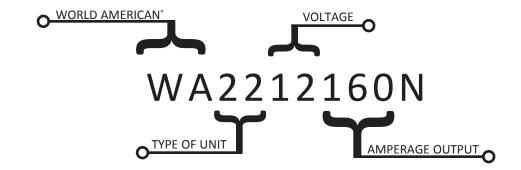
Corresponds to:

<u>42</u>MT<sup>™</sup>- Style / <u>12</u>V / <u>11</u> TOOTH

#### **INTERCHANGE INFORMATION:**

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

#### **ALTERNATORS**



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-

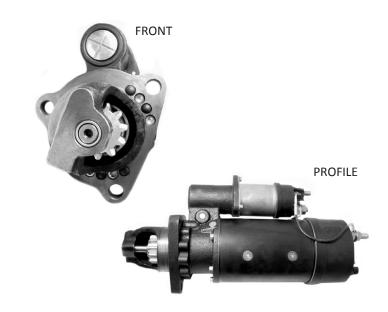
The World American\* Electronic Component catalog was designed to assist distributor salespeople and their customers in easily identifying starters and alternators. Therefore, units are presented in a way that makes the proper selection accurate and simple.

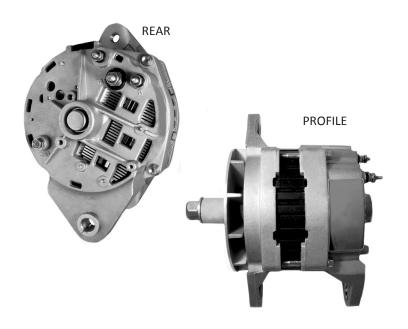
#### **STARTERS**

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-5 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**

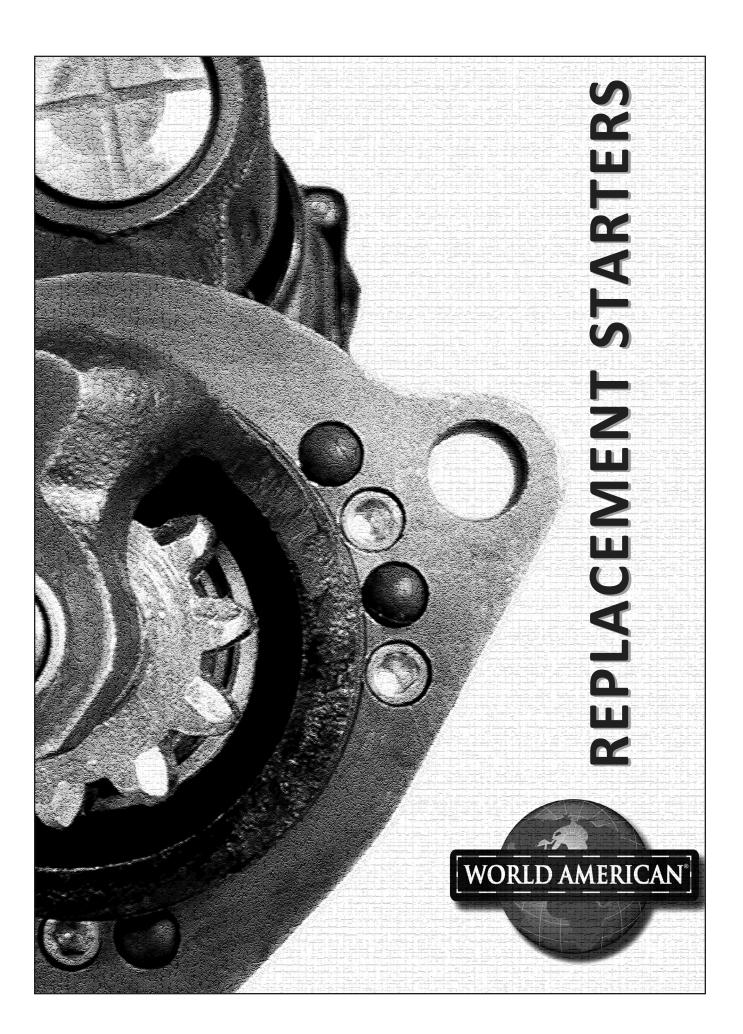
Most, if not all, 41MT™ Style starting motors are used on mid-range diesel applications. These would include city delivery trucks made by Freightliner®, Mack®, Ford®, and GMC®.

#### **GENERAL NOTE #6**

Starting motors of this group are used primarily on fleet service vehicles equipped with Cummins®, International® or Ford® midrange diesel engines.

#### **GENERAL NOTE #7**

Denso® R-5 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**





12V / 10 TOOTH / DELCO\* TYPE

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #6 for this part (page 5)

#### **INTERCHANGE INFORMATION:**

Dixie<sup>\*</sup>: S-8213 Wilson<sup>\*</sup>: 91-01-3927 Popular OE: 1113296 Reman<sup>\*</sup>: 10465168

#### **APPLICATION:**

Delco\*-type motor for Chevy\* C&K, GMC\*, Vans/PU 1995/2002 w/6.5L diesel engines
Fits both manual & automatic transmissions

## **MID-RANGE STARTERS - FORD®-TYPE**

## **WA#:WA1213MIT**





12V / 13 TOOTH / MITSUBISHI® TYPE

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #6 for this part (page 5)

#### **INTERCHANGE INFORMATION:**

Dixie\*: S-8150 Wilson\*: 91-27-3039 Popular OE: M3T90071

#### **APPLICATION:**

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

## MID-RANGE STARTERS - FORD®-TYPE...continued

## **WA#:WA1212MIT**





12V / 12 TOOTH / MITSUBISHI® TYPE

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #6 for this part (page 5)

#### 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

## **MID-RANGE STARTERS - DELCO®-TYPE**

## WA#:WA411212N





<u>41</u>MT™ STYLE / <u>12</u>V / <u>12</u> TOOTH

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #4 and #5 for this part (page 5)

SPECIAL NOTES: Mounting holes are 5/8".

#### **INTERCHANGE INFORMATION:**

Dixie<sup>\*</sup>: TS-1541 Wilson<sup>\*</sup>: 91-01-4285 Popular OE: 1993871 Reman<sup>\*</sup> OE: 10461089

#### **APPLICATION:**

Cummins<sup>®</sup> Navistar<sup>®</sup> Waukesha Motors<sup>®</sup>

## HEAVY DUTY STARTERS - DELCO®-TYPE

### WA391211





39MT™ STYLE / 12V / 11 TOOTH

#### **INTERCHANGE INFORMATION:**

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

#### **APPLICATION:**

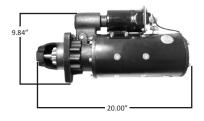
Most Current: Freightliner Mack

SPECIAL NOTES: Replaces Delco<sup>®</sup>'s newest heavy duty starting motor. This unit is an "open drive end" design.

## **WA401211N**

REPLACES: WA1114098





40MT™ STYLE / 12V / 11 TOOTH

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #4 for this part (page 5)

#### **INTERCHANGE INFORMATION:**

Dixie\*: S-1107 Wilson\*: 91-01-3701 Popular OE: 1114098 Reman\* OE: 10461045

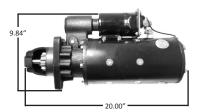
#### **WORLD AMERICAN CAN USE:**

WA421211 WA421211HSF

<u>SPECIAL NOTES:</u> 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





40MT<sup>™</sup> STYLE / 12V / 12 TOOTH

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

#### INTERCHANGE INFORMATION:

Dixie°: S-1132 Wilson°: 91-01-3702 Popular OE: 1114156 Reman® OE: 10461046

#### World American® can use:

WA421212 WA421212HSF

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





42MT™ STYLE / 12V / 11 TOOTH

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

#### INTERCHANGE INFORMATION:

Dixie°: TS-1501 Wilson\*: 91-01-4166 Popular OE: 1990483 Reman° OE: 10461052

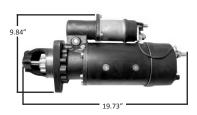
WORLD AMERICAN® CAN USE:

WA421211HSF

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#:<u>WA421211HSF</u>





<u>42</u>MT<sup>™</sup> STYLE / <u>12</u>V / <u>11</u> TOOTH <u>H</u>eat <u>S</u>ensitive <u>F</u>use Style

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #4 for this part (page 5)

#### **INTERCHANGE INFORMATION:**

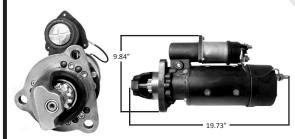
Dixie\*: TS-1512 Wilson\*: 91-01-4295 Popular OE: 1990355 Reman\* OE: 10461028

#### WORLD AMERICAN® CAN USE:

<u>SPECIAL NOTES:</u> This starter motor is equipped with a <u>Heat Sensitive Euse</u> 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#:WA421212N

REPLACES: WA1990353



**42**MT™ STYLE / **12**V / **12** TOOTH

 $\underline{\mathsf{GENERAL}}$  NOTES: Please read GENERAL NOTE #4 for this part (page 5)

#### INTERCHANGE INFORMATION:

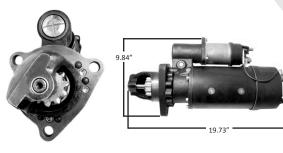
Dixie\*: TS-1500 Wilson\*: 91-01-4161 Popular OE: 1990429 Reman\* OE: 10461100

WORLD AMERICAN® CAN USE:

WA421212HSF

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#:<u>WA421212HSF</u>



42MT™ STYLE / 12V / 12 TOOTH Heat Sensitive Fuse Style

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

#### INTERCHANGE INFORMATION:

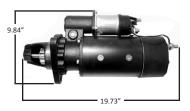
Dixie°: TS-1611 Wilson\*: 91-01-4407 Popular OE: 1990406 Reman° OE: 10461233

#### WORLD AMERICAN CAN USE:

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





42MT™ STYLE / 24V / 11 TOOTH

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

#### INTERCHANGE INFORMATION:

Dixie°: TS-1503 Wilson°: 91-01-4159 Popular OE: 1990456 Reman® OE: 10461068

#### 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.

## WA#: WA422412N REPLACES: WA1993804





**42**MT™ STYLE / **24**V / **12** TOOTH

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

#### INTERCHANGE INFORMATION:

Dixie°: TS-1502 Wilson\*: 91-01-4158 Popular OE: 1990453 Reman° OE: 10461025

#### 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

### WA#:WA501211N





50MT™ STYLE / 12V / 11 TOOTH

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

#### INTERCHANGE INFORMATION:

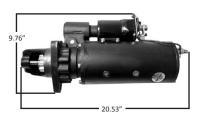
Dixie°: S-1293 Wilson°: 91-01-4107 Popular OE: 1109545 Reman® OE: 10461056

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.

## WA#: WA502411





50MT™ STYLE / 24V / 11 TOOTH

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #4 for this part (page 5)

#### **INTERCHANGE INFORMATION:**

Dixie\*: TS-1061 Wilson\*: 91-01-3948 Popular OE: 1990250 Reman\* OE: 10461057

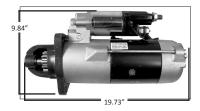
#### WORLD AMERICAN CAN USE:

<u>SPECIAL NOTES:</u> 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#:<u>WA428000-1210</u>



#### **INTERCHANGE INFORMATION:**

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

GENERAL NOTES: Please read GENERAL NOTE #4 for this

part (page 5)

**SPECIAL NOTES:** 

WORLD AMERICAN® CAN USE: WA421211N, WA421211HSF

## WA#:<u>WA4420</u>





<u>GENERAL NOTES:</u> Please read GENERAL NOTE #7 for this part (page 5)

SPECIAL NOTES: Refer to the application chart on Page 21

#### INTERCHANGE INFORMATION:

Dixie®:

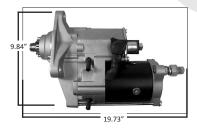
Wilson®: 91-29-5646 Popular OE: 428000-4420

WORLD AMERICAN® CAN USE:

WA421211N, WA421211HSF, WA428000-1210

## WA#: WA4430





**INTERCHANGE INFORMATION:** 

Dixie®:

Wilson®: 91-29-5647 Popular OE: 428000-4430

WORLD AMERICAN® CAN USE:

WA421211N, WA421211HSF, WA428000-1210

<u>GENERAL NOTES:</u> Please read GENERAL NOTE #7 for this part (page 5)

SPECIAL NOTES: Refer to the application chart on Page 21

### WA#: WA4440





<u>GENERAL NOTES:</u> Please read GENERAL NOTE #7 for this part (page 5)

SPECIAL NOTES: Refer to the application chart on Page 21

#### INTERCHANGE INFORMATION:

Dixie®:

Wilson®: 91-29-5648 Popular OE: 428000-4440

#### WORLD AMERICAN® CAN USE:

WA421211N, WA421211HSF, WA428000-1210

## **DENSO®-STYLE STARTER APPLICATION CHART**

Engine / Truck Model	Freightliner®	Sterling®	International® thru 2006	Peterbilt®	Kenworth®	MACK®	VOLVO®	Western Star®
CAT® - C11			WA4420		WA4420			
CAT® - C12			WA4420°	WA44201				WA4420 <sup>2</sup>
CAT® - C13	WA4420	WA4420	WA4420	WA4420	WA4420			
CAT® - C15	WA4420	WA4420	WA4420	WA4420	WA4420			WA4420 <sup>2</sup>
CUMMINS® ISM	WA4420	WA4420	WA4420	WA4420	WA4420		WA4420	
CUMMINS® ISX	WA4440		WA4440					
CUMMINS® M11	WA4430	WA4430	WA4430	WA4430	WA4430			
CUMMINS® N14	WA4440	WA4440	WA4440	WA4440	WA4440		WA4440	
DETROIT® DIESEL 60	WA4430*	WA4430*	WA4430*	WA4430*	WA4430*			WA4430*2
MACK® - E TECH						WA4430		
MACK® - E-7						WA4430		

- \* 1994-2006 Freightliner® with fuel filter mounted on the outside of the frame rail.
- 9 1998 ONLY
- 1 1999 ONLY
- <sup>2</sup> 2007 ONLY
- <sup>3</sup> 1997ONLY

# STARTER MUST BE INSTALLED WITH THE DRAIN TUBE IN THE DOWNWARD POSITION.

## **REFRIGERATION STARTER - HITACHI®-TYPE**

## WA#: WATK129





Delco<sup>®</sup> STYLE / <u>12</u>V / <u>9</u> TOOTH

#### **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:** 

## **HEAVY DUTY REPLACEMENT SOLENOIDS**



## PART# DESCRIPTION

WA1115556 12v SOLENOID FITS 40 & 50MT TYPE STARTERS



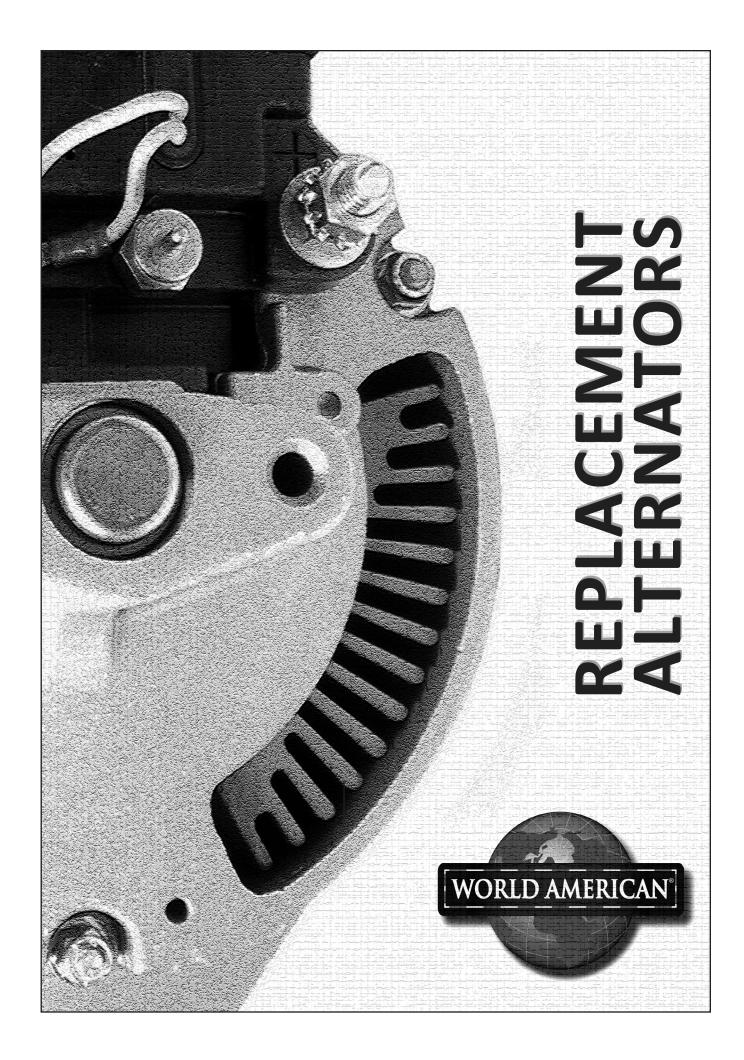
### PART# DESCRIPTION

WA1115593 12v SOLENOID FITS 42MT TYPE STARTERS



### PART# DESCRIPTION

WA1115609 12v SOLENOID FITS 37M TYPE STARTERS



## MIDRANGE ALTERNATORS - GENERAL MOTORS®-TYPE

## WA#: WA12105DEL





12V / 105A / DELCO\* TYPE

SPECIAL NOTES: PLUG #313

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

## WA#: <u>WA12105DEL-1</u>





12V / 105A / DELCO° TYPE

INTERCHANGE INFORMATION:

Dixie°: A-1548 Wilson\*: 90-01-4339 Popular OE: 10480326

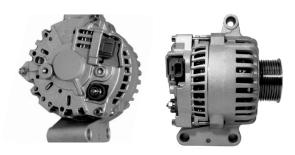
APPLICATION: 2001-2002 Silverado

6.5L Diesel

SPECIAL NOTES: PLUG #314

## MIDRANGE ALTERNATORS - FORD®-TYPE

## **WA#:WA12110FOR**



<u>12</u>V / <u>110</u>A / <u>FOR</u>D° TYPE

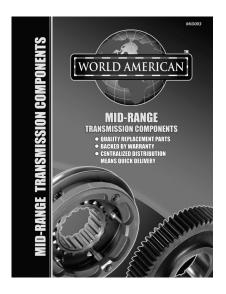
#### **INTERCHANGE INFORMATION:**

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

## **HEAVY DUTY ALTERNATORS - DELCO®-TYPE**

## **WA212470**





**INTERCHANGE INFORMATION:** 

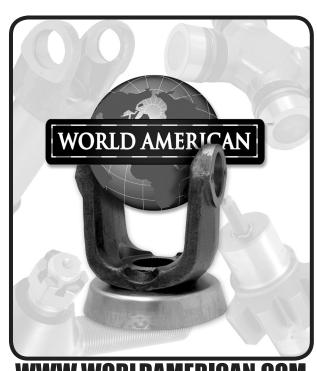
Dixie® A-1351

Wilson\*: 90-01-4152 Popular OE: 19010111

WORLD AMERICAN® CAN USE:

21SI™ STYLE / 24V / 70 AMP

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



## WA#: WA2212145N REPLACES: WA19020303





22SI™ STYLE / 12V / 160 AMP

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

#### **INTERCHANGE INFORMATION:**

Dixie°: A-1452 Wilson°: 90-01-4270 Popular OE: 19020303 Reman®: 10459190

#### **WORLD AMERICAN CAN USE:**

WA2212160N, WA2412145N, WA2412160N,

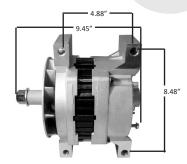
WA2812180N, WA2812200N

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





22SI™ STYLE / 12V / 160 AMP Pad Mount

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

#### INTERCHANGE INFORMATION:

Dixie°: A-1621 Wilson\*: 91-01-4393 Popular OE: 19020389 Reman®: 10459321

#### WORLD AMERICAN® CAN USE:

WA2212160PN, WA2412145PN, WA2412160PN,

WA2812180PN, WA2812200PN

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





22SI™ STYLE / 12V / 160 AMP

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

#### INTERCHANGE INFORMATION:

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

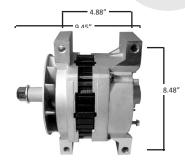
#### **WORLD AMERICAN CAN USE:**

WA2412160N, WA2812180N, WA2812200N

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





22SI™ STYLE / 12V / 160 AMP Pad Mount

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

#### INTERCHANGE INFORMATION:

Dixie°: A-1621

Wilson°: 91-01-4393 Popular OE: 19020889 Reman®: 10459481

#### WORLD AMERICAN CAN USE:

WA2412160N, WA2812180PN, WA2812200PN

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#: <u>WA2412130N</u>

## **Coming Soon**

24SI™ STYLE / 12V / 130 AMP

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

**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

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

#### **WORLD AMERICAN CAN USE:**

WA2412145N, WA2412160N, WA2812180N,

WA2812200N

## WA#: <u>WA2412130PN</u>

## **Coming Soon**

 $\underline{24}$ SI™ STYLE /  $\underline{12}$ V /  $\underline{130}$  AMP Pad Mount

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

Dixie\*: A-1702 Wilson\*: 90-01-4447 Popular OE: 1902902 Reman®: 8700012

#### WORLD AMERICAN CAN USE:

WA2412145N, WA2412160N, WA2812180N,

WA2812200N

## WA#: <u>WA2412145N</u>

## **Coming Soon**

24SI™ STYLE / 12V / 145 AMP

GENERAL NOTES: Please read GENERAL NOTES #1 AND #3

for this part (page 5)

**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

Dixie\*: A-1699 Wilson\*: 90-01-4521 Popular OE: 89020901 Reman®: 8700009

#### **WORLD AMERICAN CAN USE:**

WA2412160N, WA2812180N, WA2812200N

## WA#:<u>WA2412145PN</u>

## **Coming Soon**

24SI™ STYLE / 12V / 145 AMP Pad Mount

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #2 for this part (page 5)

SPECIAL NOTES:

#### **INTERCHANGE INFORMATION:**

Dixie\*: A1703 Wilson\*: 90-01-4450 Popular OE: 19020900 Reman®: 8700008

#### WORLD AMERICAN® CAN USE:

WA2412160PN, WA2812180PN, WA2812200PN

## WA#: <u>WA2412160N</u>

## **Coming Soon**

<u>24</u>SI™ STYLE / <u>12</u>V / <u>160</u> AMP

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

**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

Dixie\*: A-1700 Wilson\*: 90-01-4467 Popular OE: 860142 Reman\*: 8700021

#### **WORLD AMERICAN CAN USE:**

WA2812180N, WA2812200N

## WA#: <u>WA2412160PN</u>

## **Coming Soon**

24SI™ STYLE / 12V / 160 AMP Pad Mount

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

Dixie\*: A-1704 Wilson\*: 90-01-4569 Popular OE: 8600043 Reman\*: 8700013

#### WORLD AMERICAN CAN USE:

WA28122180PN, WA2812200PN

## WA#:<u>WA2812180N</u>

**Coming Soon** 

<u>28</u>SI™ STYLE / <u>12</u>V / <u>180</u> AMP

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

**SPECIAL NOTES:** 

**INTERCHANGE INFORMATION:** 

Dixie<sup>°</sup>: Wilson<sup>°</sup>:

Popular OE: 8600223

Reman®:

**WORLD AMERICAN CAN USE:** 

WA2812200N

## WA#: <u>WA2812180LN</u>

**Coming Soon** 

28SI™ STYLE / 12V / 180 AMP Pad Mount

**GENERAL NOTES:** 

**SPECIAL NOTES:** 

**INTERCHANGE INFORMATION:** 

Dixie<sup>®</sup>:
Wilson<sup>®</sup>:

Popular OE: 8600311

Reman®:

WORLD AMERICAN® CAN USE:

WA2812200LN

## WA#: <u>WA2812180PN</u>

## **Coming Soon**

28SI™ STYLE / 12V / 180 AMP

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

Dixie<sup>°</sup>: Wilson<sup>°</sup>:

Popular OE: 8600316

Reman®:

#### **WORLD AMERICAN CAN USE:**

WA2812200N

## WA#: <u>WA2812200N</u>

## **Coming Soon**

28SI™ STYLE / 12V / 200 AMP Pad Mount

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

**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

Dixie<sup>°</sup>: Wilson<sup>°</sup>:

Popular OE: 8600313

Reman®:

#### WORLD AMERICAN® CAN USE:

WA#: WA2812200LN

**Coming Soon** 

28SI™ STYLE / 12V / 200 AMP

**GENERAL NOTES:** 

**SPECIAL NOTES:** 

**INTERCHANGE INFORMATION:** 

Dixie<sup>°</sup>: Wilson<sup>°</sup>:

Popular OE: 8600307

Reman®:

**WORLD AMERICAN CAN USE:** 

## WA#:<u>WA2812200PN</u>

**Coming Soon** 

28SI™ STYLE / 12V / 200 AMP Pad Mount

**GENERAL NOTES:** 

**SPECIAL NOTES:** 

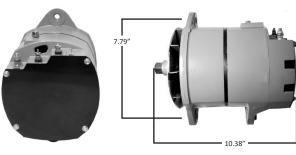
**INTERCHANGE INFORMATION:** 

Dixie<sup>°</sup>: Wilson<sup>°</sup>:

Popular OE: 8600314

WORLD AMERICAN® CAN USE:

### WA#:WA3312135



33SI™ STYLE / 12V / 135 AMP

"Brushless Type"

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

**SPECIAL NOTES:** 

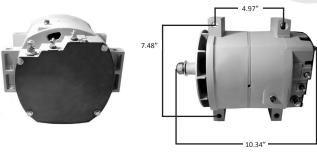
#### **INTERCHANGE INFORMATION:**

Dixie<sup>\*</sup>: A -1456 Wilson\*: 90-01-4262 Popular OE: 19011155 Reman° OE: 10459141

#### **WORLD AMERICAN® CAN USE:**

WA3512140N, WA3612170N

## WA#:WA3412135P REPLACES: WA19011177



<u>34</u>SI™ STYLE / <u>12</u>V / <u>135</u> AMP Pad Mount "Brushless Type"

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

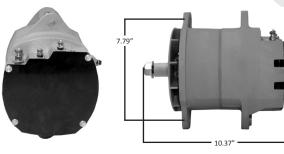
**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

Dixie\*: A -1659 Wilson°: 90-01-4344 Popular OE: 19011177 Reman® OE: 10459278

WORLD AMERICAN CAN USE: WA3512140PN, WA3612170PN

## WA#: WA3412135QN REPLACES: WA19011167



34SI™ STYLE / 12V / 135 AMP Quad Mount Style

"Brushless Type"

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

**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

Dixie°: A-1459 Wilson°: 90-01-4272 Popular OE: 19011167 Reman° OE: 10459206

WORLD AMERICAN® CAN USE: WA3512140QN, WA3612170QN

## *WA#: <u>WA3512140N</u>*



35SI™ STYLE / 12V / 170 AMP

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

**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

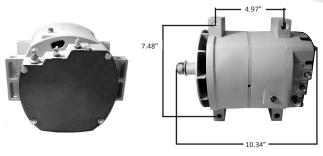
Dixie°: A1719 Wilson°: 90-01-4511

Popular OE: 8600064/19011232

#### WORLD AMERICAN CAN USE:

WA3612170N

## WA#: <u>WA3512140PN</u>



**?**SI™ STYLE / ?V / **?** AMP

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

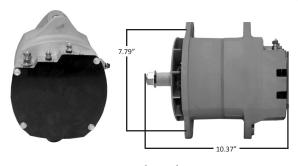
Dixie<sup>°</sup>: A1721 Wilson<sup>°</sup>: 90-01-4513

Popular OE: 8600066/19011258

#### WORLD AMERICAN® CAN USE:

WA3612170PN

## WA#: <u>WA3512140QN</u>



35SI™ STYLE / 12V / 170 AMP

<u>GENERAL NOTES:</u> Please read GENERAL NOTES #2 for this part (page 5)

**SPECIAL NOTES:** 

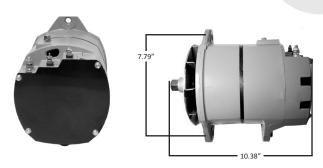
#### **INTERCHANGE INFORMATION:**

Dixie\*: A1720 Wilson\*: 90-01-4512 Popular OE: 8600065

#### **WORLD AMERICAN CAN USE:**

WA3612170QN

## WA#: <u>WA3612170N</u>



36SI™ STYLE / 12V / 170 AMP

**GENERAL NOTES:** 

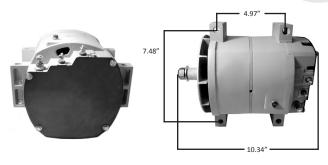
**SPECIAL NOTES:** 

#### INTERCHANGE INFORMATION:

Dixie\*: A1707 Wilson\*: 90-01-4506 Popular OE: 8600072

WORLD AMERICAN® CAN USE:

## WA#: <u>WA3612170PN</u>



<u>36</u>SI™ STYLE / <u>12</u>V / <u>170</u> AMP

**GENERAL NOTES:** 

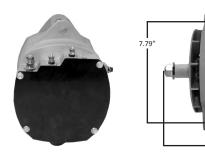
**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

Dixie\*: A1711 Wilson\*: 90-01-4505 Popular OE: 8600060

**WORLD AMERICAN CAN USE:** 

## WA#: <u>WA3612170QN</u>



<u>36</u>SI™ STYLE / <u>12</u>V / <u>170</u> AMP

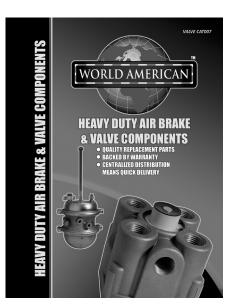
**GENERAL NOTES:** 

**SPECIAL NOTES:** 

#### **INTERCHANGE INFORMATION:**

Dixie<sup>°</sup>: A1713 Wilson<sup>°</sup>: 90-01-4503 Popular OE: 8600071

WORLD AMERICAN® CAN USE:



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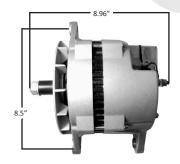
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## **HEAVY DUTY ALTERNATORS - LEECE-NEVILLE®-TYPE**

### WA#:WA110-555N





<u>LN</u> / <u>12</u>V / <u>140</u> AMP "Load Handler" Style

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

#### **INTERCHANGE INFORMATION:**

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

WORLD AMERICAN° CAN USE:

WA2812160JB WA2212145

<u>SPECIAL NOTES:</u> 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#:<u>WA110-555PN</u>





 $\underline{\text{LN}}$  /  $\underline{\text{12V}}$  /  $\underline{\text{140}}$  AMP  $\underline{\text{P}}$ ad Mount - "Load Handler" Style

<u>GENERAL NOTES:</u> Please refer to GENERAL NOTES #2 for this part (page 5)

#### INTERCHANGE INFORMATION:

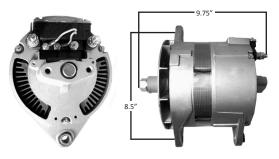
Dixie\*: A-9384 Wilson\*: 90-05-9220 Popular OE: 8LHP2170V Reman\* OE: 110-555P

WORLD AMERICAN° CAN USE: WA222145P

<u>SPECIAL NOTES:</u> 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#:<u>WA2712130JB</u>



27 SERIES STYLE / 12V / 130 AMP JB Type

<u>GENERAL NOTES:</u> Please refer to GENERAL NOTES #1 AND #3 for this part (page 5)

#### INTERCHANGE INFORMATION:

Dixie<sup>®</sup>: A-771 Wilson<sup>®</sup>: 90-04-7021

Popular OE: 2670LC Reman® OE: 2760LCRM

#### WORLD AMERICAN° CAN USE:

WA110-555 WA2812160JB WA2212145

<u>SPECIAL NOTES:</u> 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#:<u>WA2812160JB</u>





28 SERIES STYLE / 12V / 160 AMP JB Type

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

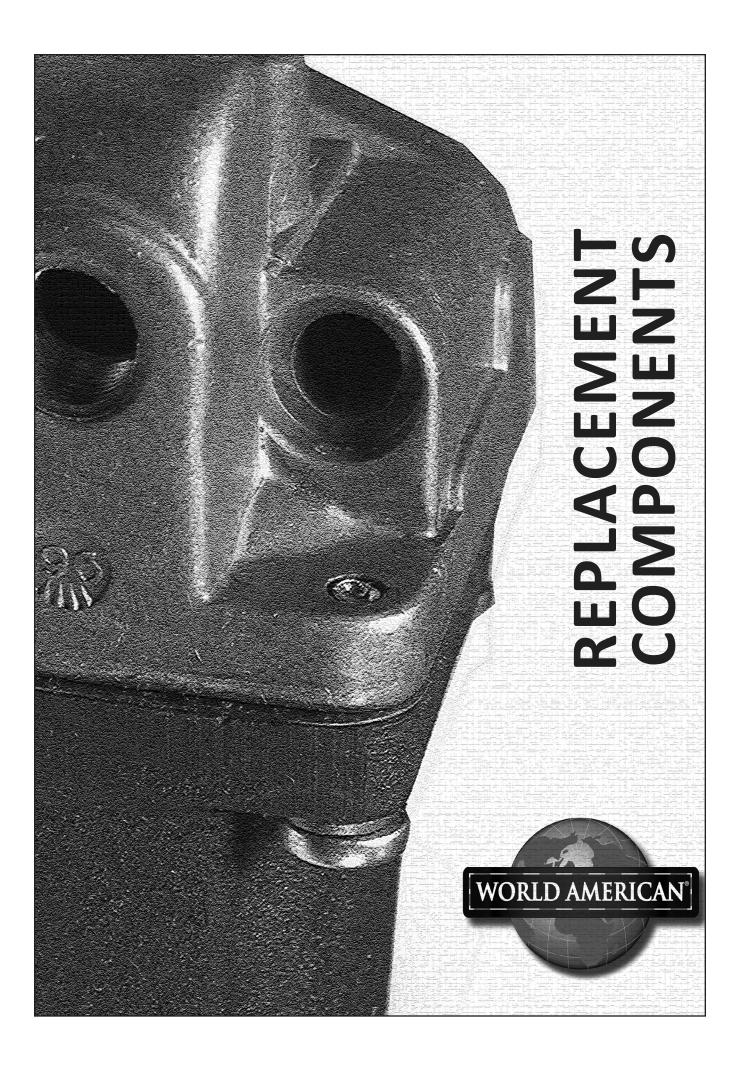
#### INTERCHANGE INFORMATION:

Dixie<sup>®</sup>: A-772

Wilson\*: 90-04-7039 Popular OE: 2800LC Reman\* OE: 2800LCRM

#### WORLD AMERICAN° CAN USE:

<u>SPECIAL NOTES:</u> 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



WA#:WA22-4621 DESCRIPTION: HEAVY DUTY ELECTRICAL CORD,

6/12 GA., 1/10 GA.

REPLACES: PHILIPS® 22-4621



WA#:WA24-4621 DESCRIPTION: LIGHT DUTY ELECTRICAL CORD,

6/14 GA., 1/12 GA.

REPLACES: PHILIPS® 22-4621



WA#:WA30-4621 DESCRIPTION: 15' ABS GREEN ELECTRICAL

CORD, 4/12 GA., 2/10 GA., 1/8 GA.

REPLACES: PHILIPS® 15-630

## **ELECTRICAL COMPONENTS - REPLACEMENT CONNECTORS**

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



WA#:WA15-400

**DESCRIPTION:** 4-way electrical socket

REPLACES: PHILIPS® 15-400



WA#:WA15-430

**DESCRIPTION:** 4-way electrical plug with spring & cable

REPLACES: PHILIPS® 15-430



WA#:<u>WA15-600</u>

**DESCRIPTION:** 6-way electrical socket

REPLACES: PHILIPS® 15-600

# **ELECTRICAL COMPONENTS** - REPLACEMENT CONNECTORS

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



WA#:<u>WA15-630</u>

REPLACES: PHILIPS® 15-630

<u>DESCRIPTION:</u> 6-way electrical plug with spring & cable



WA#:<u>WA15-720</u>

REPLACES: PHILIPS® 15-720

<u>DESCRIPTION:</u> 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

auard

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



WA#:WA22040

REPLACES: MIDLAND® BE22040

<u>DESCRIPTION:</u> 7-TERMINAL STYLE STRIP WITH GROMMETS & HARDWARE

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## **ELECTRICAL COMPONENTS -** *REPLACEMENT SOLENOID VALVES*

#### **Shift Solenoid Valves**



WA#:WAKN68237

REPLACES: MIDLAND° KN68237

<u>DESCRIPTION:</u> 24 Volt, Supply Port (1) 1/4" P.T. Delivery Port (1) 1/4" P.T.



WA#:288905C91

REPLACES: MIDLAND° KN68230

<u>DESCRIPTION:</u> 12 Volt, Supply Port (1) 1/4" P.T. Delivery Port (1) 1/4" P.T.

#### **Fuel Solenoid Valves**



WA#:WA6997312

REPLACES: CUMMINS° 3035342, BM-6997312

**DESCRIPTION: 12 Volt** 

WA#:WA6997324

**DESCRIPTION:** 24 Volt

REPLACES: CUMMINS® 3035344, BM-69973-24

## **ELECTRICAL COMPONENTS -** *REPLACEMENT ELECTRIC 2-SPEED MOTOTRS*



WA#:113745R

REPLACES: EATON® 113745

<u>DESCRIPTION:</u> Electric shift motor, late style 1984 & later

# **ELECTRICAL COMPONENTS** - REPLACEMENT ELECTRO-PNEUMATIC SWITCHES

#### **Low Pressure Switches**



WA#:WA13240

REPLACES: MIDLAND° BE13240, 13240A

<u>DESCRIPTION:</u> 12 or 24 Volt, 1/8-27 NPTF thread, single pole. 2-terminal design actuates at 55psi. Circuit normally closed at Opsi. BLACK



WA#:WA13241

REPLACES: MIDLAND° BE13241, 13241A

<u>DESCRIPTION:</u> 12 or 24 Volt, 1/8-27 NPTF thread, single pole. 2-terminal design actuates at 66psi. Circuit normally closed at Opsi. BROWN



WA#:WA228750

REPLACES: BENDIX® LP-3™ 228750

<u>DESCRIPTION:</u> 1/4" P.T. double terminal. Opens at 60psi. Normally closed at 0psi.



WA#: WA279416

REPLACES: BENDIX® LP-3™ 279416

<u>DESCRIPTION:</u> 1/4" P.T. double terminal. Opens at 60psi. Normally closed at 0psi.



## **ELECTRICAL COMPONENTS -** REPLACEMENT ELECTRO-PNEUMATIC SWITCHES

#### **Stop Light Switches**



#### WA#: WA13250

REPLACES: MIDLAND® BE13250, 13250
Service Circuit Stoplight Switch

<u>DESCRIPTION:</u> 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#:<u>WA13255</u>

REPLACES: MIDLAND® BE13255A, 13255

Trailer Emergency Stoplight Switch

<u>DESCRIPTION</u>: 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

REPLACES: BENDIX® LP-3™ 279416

Stoplight Switch

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



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## **ELECTRICAL COMPONENTS - REPLACEMENT LIGHTING**



WA#:WA22501A

Amber 2" LED Clr/Mrkr Lamp

**REPLACES:** TRUCK-LITE'30250Y

PETERSON° 164A

GROTE\* 47113

WA#:WA22501R

Red 2" LED Clr/Mrkr Lamp

**REPLACES:** 

TRUCK-LITE\* 30250R PETERSON° 164R

GROTE\* 47112



WA#:WA22502R

Amber 2.5" LED Clr/Mrkr Lamp

**REPLACES:** 

TRUCK-LITE\* 10250Y

PETERSON° 162A

GROTE\* 47123

WA#:WA22502A

Red 2.5" LED Clr/Mrkr Lamp

**REPLACES:** 

TRUCK-LITE® 10250R PETERSON\* 162R

GROTE\* 47122

WA#:WA22546R

Red 4" Grommet Mt.10 LED S/T/T Lamp

**REPLACES:** 

TRUCK-LITE 44302R

PETERSON°417R-3

GROTE\* 53252



WA#:WA22565R

Red Oval 10 LED S/T/T Lamp

**REPLACES:** 

TRUCK-LITE\* 60250R

PETERSON° 420R-3

GROTE\* 53962



**WA#:**<u>WA</u>10017A

Amber Oval Mid Trir Side Turn

**REPLACES:** 

TRUCK-LITE® 60215Y

PETERSON\* -----

GROTE\* 52193

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#:WA10019A

Amber Oval Turn Lamp

REPLACES:

TRUCK-LITE® 60202Y

PETERSON\* 421A GROTE\* 52893



WA#:WA10015R

Red 4" Reflectorized S/T/T Lamp

REPLACES:

TRUCK-LITE\* 40215R

PETERSON® 427R

GROTE\* 52672



WA#:WA10227R

Red 4" S/T/T Lamp - Plain

**REPLACES:** 

TRUCK-LITE\* 4020R

PETERSON\* 426R

GROTE\* 52772



WA#: WA20207A

Amber 2.5" Clr/Mrkr w/Reflector

REPLACES:

TRUCK-LITE\* 10205Y

PETERSON° 143A

GROTE\* 45833

WA#:WA20207R

Red 2.5" Clr/Mrkr w/Reflector

**REPLACES:** 

TRUCK-LITE\* 10205R

PETERSON\* 143R

GROTE\* 45832



WA#:WA20208A

Amber 2" Clr/Mrkr Lamp

**REPLACES:** 

TRUCK-LITE® 30200Y

PETERSON° 146A

GROTE\* 45823

WA#:WA20208R

Red 2" Clr/Mrkr Lamp

**REPLACES:** 

TRUCK-LITE\* 30200R

PETERSON° 146R

GROTE\* 45822

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#:<u>WA538752</u>* 

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#:<u>WA55208</u>

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



## **INSTALLATION GUIDE - ALL STARTERS**

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

#### Note!



#### Stop!!

<u>Before installing</u>...this electrical unit you must disconnect the <u>black (ground)</u> 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.



<u>Important note...</u>Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. <u>In these cases warranty</u> will be voided.

#### **INSTALLATION GUIDE - MID-RANGE ALTERNATORS**

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

#### Note!



#### Stop!!

<u>Before installing...</u>this electrical unit you must disconnect the <u>black (ground)</u> 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.



<u>Important note</u>...Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. <u>In these cases warranty</u> will be voided.

#### **INSTALLATION GUIDE -** *DELCO®-TYPE ALTERNATORS*

This installation guide will be included in ALL Delco°-type alternator shipments.

#### Note!



#### Stop!!

<u>Before installing...</u>this electrical unit you must disconnect the <u>black (ground)</u> 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

- Connect power cable to the post marked with the <u>Red</u> power tab indicator. On some units this post could be marked BAT or POS.
- 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.
- If so equipped, connect the cable for the relay switch, indicator light or tachometer to the post with the <u>Blue</u> tab indicator.
- Double Check all electrical connections to assure proper conductivity. <u>DO NOT OVER TOROUE!!</u> Broken or damaged connections will cause premature failure and void warranty.
- Double check all bolts securing the unit to the engine. Make sure these fasteners are torqued properly.
- 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<sup>®</sup>-type alternator shipments.

#### Note!





<u>Before installing</u>...this electrical unit you must disconnect the <u>black (ground)</u> 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.
- Double check all electrical connections to assure proper conductivity. <u>DO NOT OVER TORQUE!!</u> 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.



<u>Important note</u>...Installing this unit without first disconnecting the cable from the negative ground post may cause premature power surges, causing the unit to fail. <u>In these cases warranty</u> will be voided.



#### **WARRANTY**

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.

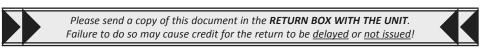
THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IN NO EVENT WILL MIDWEST BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, ANY LABOR COSTS.



## **WARRANTY CLAIM FORM**



#### **ELECTRICAL UNIT**



Date:	
RGA Number:	Invoice -or- Sales Order Number:
CONTA	ACT INFORMATION - PLEASE PRINT
Contact Name:	Distributor:
	City/State/Zip:
Phone: Ext:	Fax:
Email Address:	
	UNIT INFORMATION
Type of Unit: ALTERNATOR	STARTER
Part Number:	
	NATURAL GAS
Type of Vehicle:TRUCK	CONSTRUCTION AGBUS
REASON FOR RET	TURN - Please Select From the Options Below
STARTER	
Will Not Fit Engine	Will Not Start Broken Studs or Contacts
Stays Engaged	Burned Out
Other:	
Starting motors claimed as	GENERAL NOTE: s warranty that fail due to a low voltage condition in the batteries will not be honored.
ALTERNATOR	
Failed on Turn	OverchargesFails to Charge Once Installed
Burned Out	Broken Studs or Contacts
Other:	
Alternators claimed as wa	GENERAL NOTE: rranty that fail due to cross wiring (causing improper polarization) will not be honored.
	a copy of this document in the <b>RETURN BOX WITH THE UNIT</b> . so may cause credit for the return to be <b>delayed</b> or <b>not issued</b> !

**52** 

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