Phillips and Temro Industries (PTI) is a global OEM and aftermarket provider of custom engineered thermal systems and solutions. Trucking, agriculture, automotive, oil & gas and EV/hybrid are just a few of the diverse markets that benefit from PTI's heating, cooling, and electrification solutions. PTI manages the entire process from concept design, prototyping and testing to delivery with a focus on quality. PTI's portfolio of technologies include Zerostart, Temro, Artic Fox, Idle Free and Truflo.

**MARKET APPLICATIONS**
- Automotive / Light Duty
- Medium / Heavy Duty
- Agriculture
- Off-Road / Industrial
- Oil & Gas
- Power Generation
- Power Sports

**CONTACT US**

**Corporate Headquarters**
9700 West 74th Street
Eden Prairie, MN 55344

**Zerostart & Temro Products**
**Customer Service**
800-328-6108 or 952-941-9700
customerservice@phillipsandtemro.com

**Sales**
sales@phillipsandtemro.com

**Arctic Fox Products**
**Customer Service**
800-654-5382 or 763-972-2758
customerservice@arctic-fox.com
RESOURCES

WEBSITE
Visit our website at www.phillipsandtemro.com for a full range of resources.

- Catalogs
- Product Data Sheets
- Interactive Parts Lookup
- Where to Buy – Dealer Locator
- Videos
- White Papers
- Safety Data Sheets
- General FAQ
- Request Additional Information

ADVERTISING & MARKETING
Advertise Phillips & Temro products more effectively with these marketing tools:

- **Product Ads** – Electronic or Printed
  - Battery Pad Heaters
  - Cab & Cargo
  - Coolant Dam
  - Defroster Fans
  - Diesel Fuel Filter Pad Heater
  - Flip Cap Receptacle
  - Heat Magnet
  - Hydra Liner
  - Thermostat Immersion Heater System
  - In-Line Fuel Warmers
  - Interior Car Warmer
  - Lit Plug
  - Silicone Pad Heater
  - Thermostat
  - Vibra

- **Product Images** – Web or Print

- **Email Campaign**
  - Target your customers more effectively with an email campaign

- **Planogram**
  - We can develop a custom planogram for your retail location and specific Phillips & Temro products

Advertising / Marketing Contact
sales@phillipsandtemro.com
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NEW PRODUCTS

FORCED FLOW CIRCULATION HEATER
Circulate warm coolant throughout the engine to provide even heat distribution.

**Application(s)**
- Diesel or natural gaseous gensets

See Page B7

UL INDUSTRIAL TANK CIRCULATION HEATER
UL listed tank heater that provides dependable engine starts in all temperatures by circulating warmed coolant throughout the engine.

**Application(s)**
- Genset

See Page B9

FLIP CAP RECEPTACLE
A bumper mount receptacle that provides a complete connection between the engine block heater and a standard 120V outlet.

**Application(s)**
- Automotive and light duty vehicles

See Page B2

FORD FUSION BLOCK HEATER KIT

**Part No.** 3100138
2010-2016 L4-2.5L IVCT
400W, 120V, 3/4” NPT

See Automotive and Light Duty Section for application

CHRYSLER CARTRIDGE HEATER KITS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Year Range</th>
<th>Engine</th>
<th>Power</th>
<th>Voltage</th>
<th>Connectors</th>
</tr>
</thead>
</table>

See Automotive and Light Duty Section for application
ENGINE BLOCK
HEATERS – 4 TYPES

Provide direct heat to the engine coolant or block, designed and tested for individual engine applications.

- Ensure quick winter starts – Reduce engine wear
- Highest rated, most efficient type of heater
- Direct OEM replacement in many applications
- Plated steel installation adapter
- Replacement cordsets available

FREEZE PLUG (V-LOCK)
Fits directly into a frost plug port with copper heating element and V-LOC™ locking system

- Plated stamped steel & forged brass adapters with copper heating element for maximum life and efficiency
- V-LOC™ locking system provides quick, trouble-free installation

THREADED
Plated steel threaded base with copper element. Threads directly into the engine block.

PLATE/BOLT-ON
Plate mounts to engine block with copper heating element.

CARTRIDGE
Heater is placed directly into a dry cavity of the engine block. Quick installation – no need to drain the engine coolant.

4 VARIÉTÉS DE
CHAUFFE-MOTEURS

Procure une chaleur directe au liquide de refroidissement ou au bloc moteur, conçu et testé pour des utilisations particulières du moteur.

- Assure un démarrage rapide en hiver – Réduit l’usure du moteur
- Le type de chauffage le mieux coté pour l’efficacité
- Remplacement direct par des pièces d’origines (OEM) pour de nombreuses applications
- Adaptateur d’installation en acier plaqué
- Cordon électrique de remplacement disponible

BOUCHON EXPANSIBLE
(VERROUILLAGE V-LOCK™)
S’adapte directement dans l’orifice du bouchon expansible avec élément chauffant en cuivre et système de verrouillage V-LOCK™

- Acier plaqué estampé et adaptateurs en laiton forgé avec élément chauffant en cuivre pour une durée de vie et une efficacité maximales
- Système de verrouillage V-LOCK™ assure une installation rapide sans problème.

FILETÉ
Base filetée en acier plaqué avec élément en cuivre. Se visse directement dans le bloc moteur.

PLAQUE BOULONNÉE
Plaque qui se fixe sur le bloc moteur avec élément chauffant en cuivre.

CARTOUCHE
Le chauffe-moteur est placé directement dans une cavité sèche du bloc moteur. Installation rapide – il n’est pas nécessaire de vidanger le liquide de refroidissement du moteur.
**COLUMN DESCRIPTIONS**

**FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)**

<table>
<thead>
<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2&quot;</td>
<td>LC or RC</td>
<td>6 o'clock</td>
<td>1</td>
</tr>
</tbody>
</table>

**Heater Part No. Standard Plug**

Immersion/Freeze plug part number with standard cord

**Heater Part No. Lit Plug**

Immersion/Freeze plug part number with lit cord

**Replacement Cord Part No. Standard**

Standard cord replacement part number

**Replacement Cord Part No. Lit**

Lit cord replacement part number

**Bore Diameter**

Freeze Plug Heaters will list a size similar to the above heater (English or metric). Threading type heaters will list “THD” after the size. Heaters with NPT threads will list “NPT” after the size. “Clamp-On” entry indicates an external bolt-on type heater is recommended. “Cartridge” entry indicates that a cartridge type heater is recommended.

**Installation Location**

Use chart below to assure proper installation location.

**Point element**

Use the clock position listed to determine the direction the element should point. “N/A” entry indicates a threaded heater with no element bend, or recommended heater has no requirements for element direction.

**Notes**

If a number appears in this column, see page 36 for important information regarding application.

**INSTALLATION LOCATION**

Where a Freeze Plug style heater is specified, use the chart below to determine the proper mounting location. Unless otherwise noted, freeze plugs are numbered from front.

**CONVENTIONAL**

![Conventional Diagram]

**TRANSVERSE**

![Transverse Diagram]

**Automotive Applications:**

Diagram shown from driver's seat view.

**Year(s), type of engine, size/model of engine, possible additional information.**

1956-1962 V8 327 CID

Heater Part No. Standard Plug

Immersion/Freeze plug part number with standard cord

Repl. Cord Part No. Standard

Standard cord replacement part number

Repl. Cord Part No. Lit

Lit cord replacement part number

Bore Diameter

Freeze Plug Heaters will list a size similar to the above heater (English or metric). Threading type heaters will list “THD” after the size. Heaters with NPT threads will list “NPT” after the size. “Clamp-On” entry indicates an external bolt-on type heater is recommended. “Cartridge” entry indicates that a cartridge type heater is recommended.

Installation Location

Use chart below to assure proper installation location.

Point Element

Use the clock position listed to determine the direction the element should point. “N/A” entry indicates a threaded heater with no element bend, or recommended heater has no requirements for element direction.

Notes

If a number appears in this column, see page 36 for important information regarding application.
APPLICATIONS AUTOMOBILES ET CAMIONS LÉGERS

DES COLONNES

<table>
<thead>
<tr>
<th>Chauffe-moteur \n</th>
<th>No. pièce \n</th>
<th>Cordon de \n</th>
<th>Diamètre de \n</th>
<th>Emplacement \n</th>
<th>Orientation \n</th>
<th>Notes*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARQUE, MODÈLE, ANÉ &amp; MOTEUR</td>
<td>No. pièce</td>
<td>Lumineux</td>
<td>No. pièce</td>
<td>Lumineux</td>
<td>de l'alésage</td>
<td>pour Installation</td>
</tr>
<tr>
<td>ANNÉE(s), type de moteur, puissance/modèle du moteur, renseignements supplémentaires possibles.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1956-1962 V8 327 CID</td>
<td>3100039</td>
<td>3100124</td>
<td>3600006</td>
<td>3600116</td>
<td>1-1/2&quot;</td>
<td>LC or RC</td>
</tr>
</tbody>
</table>

No de pièce du chauffe-moteur – Cordon standard
Numéro de pièce du chauffe-moteur/thermoplongeur avec cordon standard

No de pièce du chauffe-moteur – Cordon lumineux
Numéro de pièce du chauffe-moteur/thermoplongeur avec cordon lumineux

Diamètre de l'alésage

Site d'installation
Utilisez le graphique ci-dessous pour vous assurer du site d'installation approprié.

Orientation de l'élément
Utilisez la position horaire inscrite pour établir la direction dans laquelle l'élément doit être orienté. « S.O. » indique un réchauffeur fileté sans courbure de l'élément ou un réchauffeur recommandé sans exigences relatives à l'orientation.

Remarques
Si un numéro apparaît dans cette colonne, consultez la page 36 pour des renseignements importants concernant l'utilisation.

EMPLACEMENT POUR L'INSTALLATION

Si un chauffe-moteur est indiqué, utilisez le graphique ci-dessous pour déterminer l'emplacement approprié pour le montage. À moins d'indication contraire, les chauffe-moteurs sont numérotés sur le devant.

Applications automobiles:
Le schéma est montré du point de vue du siège du conducteur.
<table>
<thead>
<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACURA</strong></td>
<td></td>
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<tr>
<td><strong>AUTOMOTIVE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Cylinder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996-2000 L4 – 1.6L</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LR</td>
</tr>
<tr>
<td>1987-1989 L4 – 1.6L</td>
<td>3400001</td>
<td></td>
<td>3600002</td>
<td></td>
<td>Clamp-On</td>
<td>N/A</td>
</tr>
<tr>
<td>2002-2005 L4 – 1.7L</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LR</td>
</tr>
<tr>
<td>1990-2001 L4 – 1.7, 1.8L</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>RF</td>
</tr>
<tr>
<td>2002-2006 L4 – 2.0L (RSX)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>RR</td>
</tr>
<tr>
<td>2006-2011 L4 – 2.0L (CSX)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>RR</td>
</tr>
<tr>
<td>1995-1997 L4 – 2.2L (CL Coupe)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LR</td>
</tr>
<tr>
<td>1998-1999 L4 – 2.3L (CL Coupe)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LR</td>
</tr>
<tr>
<td>2004-2017 L4 – 2.4L (TSX)</td>
<td>See Dealer</td>
<td></td>
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</tr>
<tr>
<td>5 Cylinder</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1992-1998 L5 – 2.5L</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>RF</td>
</tr>
<tr>
<td>6 Cylinder</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1987-1990 V6 – 2.5, 2.7L</td>
<td>See Dealer</td>
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<td></td>
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<tr>
<td>1991-1999 V6 – 3.2L</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LC</td>
</tr>
<tr>
<td>1993-2003 V6 – 3.0, 3.2L (NSX)</td>
<td>See Dealer</td>
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<tr>
<td>1997-1999 V6 – 3.0L (CL coupe)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td>1999-2007 V6 – 3.2 (TL, CL coupe)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
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<tr>
<td>2007-2010 V6 – 3.5L (TL Type S)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td>1996-2004 V6 – 3.5 (RL)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td>2005-2012 V6 – 3.5L (RL)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td>2009-2014 V6 – 3.7L (TL)</td>
<td>3100006</td>
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<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td><strong>LIGHT TRUCK</strong></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>2007-2010 L4 – 2.3L (RDX)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>N/A</td>
</tr>
<tr>
<td>1998-2000 V6 – 3.5L</td>
<td>See Dealer</td>
<td></td>
<td></td>
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<tr>
<td>2001-2006 V6 – 3.5L (MDX)</td>
<td>3100006</td>
<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td>2007-2013 V6 – 3.7L (MDX)</td>
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<td>3100124</td>
<td>3600005</td>
<td>3600117</td>
<td>28 MM THD</td>
<td>LF</td>
</tr>
<tr>
<td><strong>AMC – EXCEPT JEEP AND EAGLE</strong></td>
<td></td>
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<tr>
<td><strong>AUTOMOTIVE</strong></td>
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</tr>
<tr>
<td>4 Cylinder</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1984 L4 – 2.5L</td>
<td>3100006</td>
<td></td>
<td>3600006</td>
<td>1-3/4&quot;*</td>
<td>LR</td>
<td>6 o’clock</td>
</tr>
<tr>
<td>1980-1983 L4 – 2.5L (Pontiac engine)</td>
<td>3100054</td>
<td></td>
<td>3600006</td>
<td>1-5/8&quot;*</td>
<td>LR</td>
<td>12 o’clock</td>
</tr>
<tr>
<td>6 Cylinder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964-1987 L6 – 4.2L, 199, 232, 258 cu. in.</td>
<td>31000072</td>
<td></td>
<td>3600006</td>
<td>2&quot;*</td>
<td>LR</td>
<td>12 o’clock</td>
</tr>
<tr>
<td>8 Cylinder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1956-1962 V8 – 327 cu. in.</td>
<td>3100039</td>
<td></td>
<td>3600006</td>
<td>1-1/2&quot;*</td>
<td>LC or RC</td>
<td>6 o’clock</td>
</tr>
<tr>
<td>1966-1980 V8 – 290, 304, 343, 360, 390, 401 cu. in.</td>
<td>3100039</td>
<td></td>
<td>3600006</td>
<td>1-1/2&quot;*</td>
<td>LR</td>
<td>5 o’clock</td>
</tr>
<tr>
<td><strong>AUDI</strong></td>
<td></td>
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<tr>
<td><strong>AUTOMOTIVE</strong></td>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
### FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)

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<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
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*Point Element - Please confirm element orientation. Improper position may result in heater or engine damage. Description of footnotes - See page 34*
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<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.

Description of footnotes - See page 34.
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<td>CR or CF</td>
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<td>CR</td>
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<td>2005–2009 V6 – 3.4L, Transverse (Equinox)</td>
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<td>Cartridge</td>
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<td>1980–1981 V6 – 3.8L (229 cu. in.)</td>
<td>3100057</td>
<td>3100126</td>
<td>3600006</td>
<td>3600116</td>
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<td>1978–1988 V6 – 3.8L (231 cu. in.)</td>
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<td>1998–2004 V6 – 3.8L, Transverse</td>
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<td>3100041</td>
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<td>1-1/2”</td>
<td>RR</td>
<td>CR</td>
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<td>2006–2012 V6 – 3.9L, Transverse</td>
<td>3100041</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>CR</td>
<td>N/A</td>
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Point Element – Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34
## FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)

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<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Lit Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Lit Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot</th>
<th>Notes*</th>
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<td>1982-1985 V6 – 4.3L (263 cu. in.), Diesel, Conventional</td>
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<td>3600006</td>
<td>3600116</td>
<td>1-1/2&quot;</td>
<td>LR or RF</td>
<td>12 o'clock</td>
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<td>1983-1985 V6 – 4.3L (263 cu. in.), Diesel, Transverse</td>
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<td>3100126</td>
<td>3600006</td>
<td>3600116</td>
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<td><strong>8 Cylinder</strong></td>
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<td>3600116</td>
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<td>1986-1990 V8 – 5.0L, 307 cu. in. Vin Y</td>
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<td>RF</td>
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<td><strong>LIGHT TRUCK – INCLUDES VANS/MPV</strong></td>
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<td>3 o'clock</td>
<td>6</td>
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</table>

*Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.*

Description of footnotes - See page 34

---

**FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)**

**MAKE, MODEL, YEAR, ENGINE**

**HOT PLUG HEATER**

**FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)**

**CHEVROLET & GMC (ALSO SEE GEO)**

**LIGHT TRUCK – INCLUDES VANS/MPV**

**4 Cylinder**

**5 Cylinder**

**6 Cylinder**

---

**CHEVROLET (Also see Geo) – Continued**

**AUTOMOTIVE**

**6 Cylinder**

**8 Cylinder**

---

**CHEVROLET & GMC (ALSO SEE GEO)**

**LIGHT TRUCK – INCLUDES VANS/MPV**

**4 Cylinder**

**5 Cylinder**

**6 Cylinder**
<table>
<thead>
<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No.</th>
<th>Repl. Cord Part No.</th>
<th>Bore Diameter</th>
<th>Installation</th>
<th>Element Position</th>
<th>Foot Notes*</th>
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<td>1990-1996 V6 – 3.1L, Transverse</td>
<td>3100015</td>
<td>3600006</td>
<td>34 MM</td>
<td>CR</td>
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<td>34 MM</td>
<td>CR</td>
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<tr>
<td>2005-2009 V6 – 3.4L, Transverse (Equinox)</td>
<td>3100109</td>
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<td>LC</td>
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<tr>
<td>2009-2017 V6 – 3.6L (Acadia, Terrain)</td>
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<td>RR</td>
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<tr>
<td>1980-1985 V6 – 3.8L (229 cu. in.)</td>
<td>3100057</td>
<td>3100126</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8”</td>
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<tr>
<td>1993-1996 V6 – 3.8L (231 cu. in.), Transverse</td>
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<td>3600006</td>
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<td>1978-1988 V6 – 3.8L (231 cu. in.)</td>
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<td>1978-1988 V6 – 3.8L (231 cu. in.)</td>
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<td>1980-1985 L6 – 250, 292 cu. in.</td>
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<td>1985-1989 V6 – 3.0L, 3.8L, 5.0L (265 HP)</td>
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<td>LF</td>
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<td>1981-2000 V8 – 6.2, 6.5L, Diesel (600W heater)</td>
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<td>2001-2006 V8 – 6.6L, Diesel (Duramax)</td>
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<td>1965-1985 V8 – DH 637</td>
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<tr>
<td>2006-2011 L4 – 1.8L, Transverse (Caliber)</td>
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<td>RR</td>
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<td>1999-2006 L4 – 2.4L, Turbo</td>
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<td>3 o’clock</td>
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*Foot Notes* - See page 34.
# Automotive & Light Duty Truck Applications

## CHRYSLER – Continued

### AUTOMOTIVE

#### 4 Cylinder

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<th>Year Model Engine</th>
<th>Std Kit P/N</th>
<th>Lit Kit P/N</th>
<th>Std Cord P/N</th>
<th>Lit Cord P/N</th>
<th>Bore Dia.</th>
<th>Inst Location</th>
<th>Element Position</th>
<th>Footnotes</th>
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<tbody>
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<td>3100125</td>
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<td>1-5/8&quot;</td>
<td>CR</td>
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<td>1978-1985 L4 – 2.6L, Conventional</td>
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<td>1985-1989 L4 – 2.6L, Conventional, Turbo</td>
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#### 6 Cylinder

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<th>Lit Kit P/N</th>
<th>Std Cord P/N</th>
<th>Lit Cord P/N</th>
<th>Bore Dia.</th>
<th>Inst Location</th>
<th>Element Position</th>
<th>Footnotes</th>
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<tbody>
<tr>
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<td>3600116</td>
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<td>CR</td>
<td>3 o'clock</td>
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<tr>
<td>2002-2009 V6 – 2.7L, Transverse</td>
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<td>Cartridge</td>
<td>LR</td>
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<tr>
<td>1987-1998 V6 – 3.0L (6G72), Transverse</td>
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<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8&quot;</td>
<td>LR</td>
<td>12 o'clock</td>
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<td>2001-2005 V6 – 3.0L</td>
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<td>3600116</td>
<td>1-5/8&quot;</td>
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<tr>
<td>1988-1992 V6 – 3.0L (Monaco)</td>
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<td>36 MM</td>
<td>RRF IN HEAD</td>
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<td>2004-2008 V6 – 3.2L, Conventional (Crossfire, SRT6)</td>
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<td>3100125</td>
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<td>THD</td>
<td>Lower Hose Fitting</td>
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<td>1990-1998 V6 – 3.3L, Transverse</td>
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<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8&quot;</td>
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<td>1993-1997 V6 – 3.3L, Conventional</td>
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<td>3100125</td>
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<td>3600116</td>
<td>1-5/8&quot;</td>
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<td>12-1 o'clock</td>
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<td>3100125</td>
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<td>3600116</td>
<td>1-5/8&quot;</td>
<td>RR</td>
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<td>1998-2011 V6 – 2.7, 3.2, 3.5L, Conventional</td>
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<td>Cartridge</td>
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<td>2011-2017 V6 – 3.6L, Pentastar</td>
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<td>Cartridge</td>
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<td>1961-1983 L6 – 170, 198, 225 cu. in. (Slant)</td>
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<td>1-5/8&quot;</td>
<td>LC or RC</td>
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<tr>
<td>1996-2010 V10 – 8.0, 8.2, 8.3, 8.4L</td>
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## DAEWOO

### AUTOMOTIVE

#### 4 Cylinder

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<th>Year Model Engine</th>
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<th>Lit Kit P/N</th>
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<th>Inst Location</th>
<th>Element Position</th>
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<tr>
<td>1999-2002 L4 – 1.6L (Lanos)</td>
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### DODGE

#### LIGHT & MEDIUM DUTY TRUCKS & VANS

#### 4 Cylinder

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<th>Std Cord P/N</th>
<th>Lit Cord P/N</th>
<th>Bore Dia.</th>
<th>Inst Location</th>
<th>Element Position</th>
<th>Footnotes</th>
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<tbody>
<tr>
<td>1992-1996 L4 – 1.8L (4G93) (Vista/Summit)</td>
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<td>35 MM</td>
<td>RF</td>
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<td>1997-1982 L4 – 2.0L</td>
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<td>LF</td>
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<td>1983-1989 L4 – 2.0L (4G63B) (122 cu. in.)</td>
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<td>1984-1991 L4 – 2.0L (Vista)</td>
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## FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)

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<th>Heater Part No.</th>
<th>Repl. Cord Part No.</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot</th>
<th>Notes*</th>
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<td><strong>LIGHT &amp; MEDIUM DUTY TRUCKS &amp; VANS</strong></td>
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<td>3600116</td>
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<tr>
<td>2007-2011 V6 – 3.0L, Diesel</td>
<td>See Dealer</td>
<td>See Dealer</td>
<td>See Dealer</td>
<td>See Dealer</td>
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<td></td>
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<tr>
<td>2011-2014 V6 – 3.6L Pentastar</td>
<td>3100128</td>
<td>3600120</td>
<td>Cartridge</td>
<td>RR</td>
<td>N/A</td>
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<tr>
<td>2002-2008 V6 – 3.7L</td>
<td>3100104</td>
<td>3600006</td>
<td>35 MM</td>
<td>2ND RR</td>
<td>N/A</td>
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<tr>
<td>1987-2003 V6 – 3.9L [239 cu. in.]</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8&quot;</td>
<td>RR</td>
<td>6 o'clock</td>
</tr>
<tr>
<td>1987-2001 L6 – 5.9L Cummins, Diesel</td>
<td>3500030</td>
<td>3600008</td>
<td>58 MM</td>
<td>RC</td>
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<td>2002-2006 L6 – 5.9L Cummins, Diesel</td>
<td>3500022</td>
<td>3600008</td>
<td>3/4&quot; NPT</td>
<td>Rear of oil cooler</td>
<td>N/A</td>
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<td>2007-2014 L6 – 6.7L Cummins, Diesel</td>
<td>3500022</td>
<td>3600008</td>
<td>3/4&quot; NPT</td>
<td>Rear of oil cooler</td>
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<tr>
<td>8 Cylinder</td>
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<td></td>
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<td></td>
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<tr>
<td>2000-2012 V8 – 4.7L</td>
<td>3100104</td>
<td>3600006</td>
<td>35 MM</td>
<td>RR</td>
<td>N/A</td>
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<tr>
<td>1991-1999 V8 – 5.2L (Dakota)</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8&quot;</td>
<td>LR or RC</td>
<td>12 o'clock</td>
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<tr>
<td>1996-2001 V8 – 5.2L (Ram &amp; (Durango)</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8&quot;</td>
<td>RR</td>
<td>6 o'clock</td>
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<tr>
<td>2003-2014 V8 – 5.7L, Hemi</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
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<td>RR</td>
<td>6 o'clock</td>
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<tr>
<td>1999-2001 V10 – 8.0L</td>
<td>3100091</td>
<td>3600006</td>
<td>1-5/8&quot;</td>
<td>RR</td>
<td>11 o'clock</td>
<td></td>
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</tr>
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</table>

**Note:** Some Chrysler corp. engines have an .060 oversized frost plug hole. You may have to obtain an oversized O-ring 6027513 from a Chrysler dealer.

## EAGLE

### AUTOMOTIVE

#### 4 Cylinder

| 1989-1996 L4 – 1.5L, [G15G], Transverse | 3100024 | 3600006 | 35 MM | 2ND LR | 9 o'clock |
| 1989-1990 L4 – 1.6L, [4G61] DOHC ENG | 3100020 | 3600006 | 35 MM | 2ND RR | 4 o'clock |
| 1990-1996 L4 – 1.8L, [4G37] (Talon) | 3100024 | 3600006 | 35 MM | RR | 12 o'clock |
| 1989-1997 L4 – 2.0L, [4G63], Turbo (Talon) | 3100024 | 3600006 | 35 MM | LR | 3 o'clock |
| 1995-1997 L4 – 2.0L (Talon) (Chrysler engine) | 3100024 | 3600006 | 35 MM | LF | 3 o'clock |
| 1988-1989 L4 – 2.2L | 3100003 | 3600001 | 1" NPT | RF | 6 o'clock |
| 1992-1996 L4 – 2.4L, [4G64], Transverse (Summit) | 3100024 | 3600006 | 35 MM | LR/2ND LR | 3 o'clock |
| 1992-1996 L4 – 2.4L, [4G64], Transverse | 3100024 | 3600006 | 35 MM | RR | 3 o'clock |
| 1988-1989 L4 – 2.5L [150 cu. in.] | 3100065 | 3600006 | 1-3/4" | LF | 12 o'clock |

#### 6 Cylinder

| 1988-1993 V6 – 3.0L | 3100031 | 3600006 | 36 MM | RRF IN HEAD | 9 o'clock |
| 1993-1997 V6 – 3.3L, Conventional | 3100055 | 3100125 | 3600006 | 3600116 | 1-5/8" | LF | 12-1 o'clock |
| 1993-1997 V6 – 3.5L, Conventional | 3100055 | 3100125 | 3600006 | 3600116 | 1-5/8" | RR | 12 o'clock |

### FIAT

#### AUTOMOTIVE

| 2011-2017 L4 – 1.4L | See Dealer | N/A | N/A | N/A |
| 2012 L4 – 1.4L, Turbo | See Dealer | N/A | N/A | N/A |
|---------------------------|------------------------|-----------------------------|-----------------------------|---------------|----------------------|----------------|------------|
| **FORD/MERCURY/LINCOLN**  |                        |                             |                             |               |                      |                 |            |
| **AUTOMOTIVE**            |                        |                             |                             |               |                      |                 |            |
| 4 Cylinder                |                        |                             |                             |               |                      |                 |            |
| 1988-1997 L4 – 1.3L       | 3100016                | 36000006                    | 35 MM                       | 2ND LR        |         12 o'clock    |                 |            |
| 1971-1981 L4 – 1.3, 1.6L  | 3100057                | 3100126                     | 36000006                    | 3600116       | 1-5/8"              | LF              | 12 o'clock |
| 1971-1973 L4 – 1.6L OHV   | 3100054                |                             | 36000006                    |               | 1-5/8"              | LF              | 12 o'clock |
| 1979-1980 L4 – 1.6L, Transverse (Fiesta) | 3100053 | 36000006 | 1-5/8" | LF | 9 o'clock |
| 1981-1985 L4 – 1.6L (Escort) | 3100053 | 36000006 | 1-5/8" | LF | 9 o'clock |
| 1988-1996 L4 – 1.6L (Tracer) | 3100016 | 36000006 | 35 MM | 2ND RF | 12 o'clock |
| 2010-2017 L4 – 1.6L       | See Dealer             | N/A                         | 35 MM                       | 2ND RF        |         9 o'clock    |                 |            |
| 1991-1996 L4 – 1.8L DOHC  | 3100021                |                             | 36000006                    |               | 1-5/8"              | LF              | 9 o'clock |
| 1986-1990 L4 – 1.9L, Transverse | 3100053 | 36000006 | 35 MM | 2ND RF | 9 o'clock |
| 1991-2004 L4 – 1.9L CVH, 2.0L SPI, Transverse | 3100102 | 36000006 | 35 MM | 2ND RF | 9 o'clock |
| 1971-1975 L4 – 2.0L OHV/OHC | 3100039 | 36000006 | 1-1/2" | RF | 12 o'clock |
| 1972-1975 L4 – 2.0L OHV   | 3100039                |                             | 36000006                    |               | 1-1/2"              | RF              | 12 o'clock |
| 1984-1988 L4 – 2.0L, Diesel | 3100016 | 36000006 | 35 MM | 2ND LF | 12 o'clock |
| 1993-1997 L4 – 2.0L (Mazda engine) | 3100023 | 36000006 | 35 MM | RR | 8 o'clock |
| 1995-2004 L4 – 2.0L (Zetec engine, inc. SVT)* | 310018 | 36000006 | 35 MM | RR | 3 o'clock |
| 2004-2011 L4 – 2.0L (Duratec, Transverse (Focus)) | 3100028 | 3600001 | 3600118 | 3/4" NPT | LR | N/A |
| 1971-1975 L6 – 2.0L       | 3100039                |                             | 36000006                    |               | 1-1/2"              | RR or RF        | 6 or 12 o'clock |
| 1983-1995 V6 – 2.5L       | 3100126                |                             | 36000001                    | 3600118       | 3/4" NPT            | LR              | N/A        |
| 1988-1992 L6 – 2.2L       | 3100016                | 36000006                    | 35 MM                       | 2ND RF        |         12 o'clock    |                 |            |
| 1989-1992 L6 – 2.2L, Turbo | 3100017 | 36000006 | 35 MM | 2ND RF | 12 o'clock |
| 1971-1980 V6 – 2.9L       | 3100001                |                             | 36000001                    | 3600118       | 3/4" NPT            | RR              | N/A        |
| 1972-1982 V6 – 2.6, 2.8L  | 3100036                | 36000003                    | 1-1/2"                      | LFF or RFF    |         4 or 9 o'clock |
| 1987-1990 V6 – 2.9L (Scorpio) | 3100042 | 36000006 | 1-1/2" | LFF | 10 o'clock |
| 1986-2006 V8 – 3.0L 12-VALVE, Transverse (Except Villager and SHO) | 3100039 | 36000006 | 1-1/2" | LF | 6 o'clock |
| 1989-1994 V8 – 3.3L (SHO) | See Dealer             | N/A                         | N/A                         | N/A           |                     |                 |            |
| 2000-2005 V8 – 3.0L 12-VALVE, Transverse (Except Villager and SHO) | 3100040 | 36000006 | 38MM | RR | 7 o'clock |
| 2005-2009 V8 – 4.0L, Conventional | 3100065 | 36000006 | 1-5/8" | 2ND RF | 12 o'clock |
| 1999-2001 V8 – 4.6L, Conventional | 3100045 | 36000006 | 1-5/8" | LR | 12 o'clock |
| 1974-1995 V8 – 5.0L       | 3100001                |                             | 36000001                    | 3600118       | 3/4" NPT            | RR              | N/A        |
| 1996-1998 V8 – 5.0L       | 3100040                |                             | 36000001                    | 3600118       | 3/4" NPT            | RR              | N/A        |
| 2000-2005 V8 – 5.4L, Conventional | 3100010 | 36000005 | 30 MM | LR | N/A |

Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
### FORD/MERCURY/LINCOLN – Continued

#### AUTOMOTIVE

**8 Cylinder**

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Engine Description</th>
<th>Standard Kit Part No.</th>
<th>Lit Kit Part No.</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992-2010 V8 – 4.6L, Conventional</td>
<td>3100040</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>9 o’clock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999-2000 V8 – 4.6L, Conventional (Mustang)</td>
<td>3100040</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>9 o’clock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2009 V8 – 4.6L, Conventional (Mustang)</td>
<td>3100040</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>9 o’clock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995-2004 V8 – 4.6L, 32V (Mustang)</td>
<td>3100040</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>9 o’clock</td>
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</tr>
<tr>
<td>2003-2004 V8 – 4.6L, 32V (Merauder)</td>
<td>3100040</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LF</td>
<td>9 o’clock</td>
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<tr>
<td>1991-2017 V8 – 5.0L</td>
<td>3100002</td>
<td>3010121</td>
<td>3600001</td>
<td>3600118</td>
<td>3/4” NPT</td>
<td>LF</td>
<td>N/A</td>
</tr>
<tr>
<td>2006-2011 V8 – 5.4L, Conventional (Mustang)</td>
<td>3100040</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>9 o’clock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966-1996 V8 – 289, 302 cu. in. (5.0L)</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR or RR</td>
<td>6 o’clock</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1974-1988 V8 – 5.8L, 351W, 351 cu. in.</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>6 o’clock</td>
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<tr>
<td>1972-1988 V8 – 5.8L, 351W, 351 cu. in.</td>
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<td>1-1/2”</td>
<td>RR</td>
<td>12 o’clock</td>
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<tr>
<td>1974-1985 V8 – 5.8L, 302 cu. in.</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>6 o’clock</td>
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<tr>
<td>1966-1974 V8 – 289, 302 cu. in. (5.0L)</td>
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<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>12 o’clock</td>
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<tr>
<td>1968-1973 V8 – 351, 400, 640 cu. in.</td>
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<td>3600006</td>
<td>1-1/2”</td>
<td>LF or LR</td>
<td>12 o’clock</td>
<td></td>
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<tr>
<td>1963-1971 V8 – 352, 390, 410, 427, 428 cu. in.</td>
<td>3100065</td>
<td>3600006</td>
<td>1-3/4”</td>
<td>RR</td>
<td>6 or 12 o’clock</td>
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</tbody>
</table>

#### LIGHT & MEDIUM DUTY TRUCKS & VANS – Includes Aerostar, Explorer & Windstar

**4 Cylinder**

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Engine Description</th>
<th>Standard Kit Part No.</th>
<th>Lit Kit Part No.</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-1982 L4 – 1.8L</td>
<td>3100071</td>
<td>3600006</td>
<td>50 MM</td>
<td>LC</td>
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<tr>
<td>1981-1985 L4 – 2.2L, Diesel</td>
<td>3100010</td>
<td>3600006</td>
<td>30 MM</td>
<td>RR</td>
<td>6 o’clock</td>
<td></td>
</tr>
<tr>
<td>1983-1992 V6 – 2.9L</td>
<td>3100002</td>
<td>3600004</td>
<td>30 MM</td>
<td>LF</td>
<td>6 o’clock</td>
<td></td>
</tr>
<tr>
<td>1986-1999 V6 – 3.0L, Conventional (Villager)</td>
<td>3100002</td>
<td>3100012</td>
<td>3600001</td>
<td>3600118</td>
<td>3/4” NPT</td>
<td>LF</td>
</tr>
<tr>
<td>1999-2000 V6 – 3.3L, Conventional (Villager)</td>
<td>3100009</td>
<td>3600004</td>
<td>30 MM</td>
<td>LF</td>
<td>6 o’clock</td>
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<tr>
<td>2001-2012 V6 – 2.5L, Conventional</td>
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<td>N/A</td>
<td>Cartridge</td>
<td>N/A</td>
<td>N/A</td>
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#### 8 Cylinder

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<tr>
<th>Year Range</th>
<th>Engine Description</th>
<th>Standard Kit Part No.</th>
<th>Lit Kit Part No.</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1980-1989 V8 – 4.1L</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
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<tr>
<td>1995-1999 V8 – 4.6L, 4.7L, Transverse</td>
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<td>3600006</td>
<td>1-1/2”</td>
<td>LF</td>
<td>6 o’clock</td>
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<tr>
<td>1999-2004 V8 – 4.6L, 4.7L, Transverse</td>
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<td>3600006</td>
<td>1-1/2”</td>
<td>LF</td>
<td>6 o’clock</td>
<td></td>
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<tr>
<td>1999-2008 V8 – 4.6L, 4.7L, Transverse</td>
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<td>3600006</td>
<td>1-1/2”</td>
<td>LF</td>
<td>6 o’clock</td>
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<tr>
<td>2000-2005 V8 – 4.6L</td>
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<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>12 o’clock</td>
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<tr>
<td>1977-1989 V8 – 4.9L</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>12 o’clock</td>
<td></td>
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<tr>
<td>1980-1989 V8 – 5.0L</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>12 o’clock</td>
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<tr>
<td>1990-1997 V8 – 5.0L</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>RR</td>
<td>12 o’clock</td>
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</tr>
</tbody>
</table>

### Notes

- **Foot Element** - Please confirm element orientation. Improper position may result in heater or engine damage.
- **Description of footnotes** - See page 34.
<table>
<thead>
<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes*</th>
</tr>
</thead>
</table>

**FORD/MERCURY/LINCOLN – Continued**

**LIGHT & MEDIUM DUTY TRUCKS & VANS – Includes Aerostar, Explorer & Windstar**

<table>
<thead>
<tr>
<th>8 Cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 V8 – 5.0L</td>
</tr>
<tr>
<td>2000-2014 V8 – 5.4L</td>
</tr>
<tr>
<td>1966-1997 V8 – 5.8L (351 cu. in.), 400 cu. in.</td>
</tr>
<tr>
<td>1966-1997 V8 – 7.5L (460 cu. in.), 429 cu. in.</td>
</tr>
<tr>
<td>1960-1980 V8 – 330, 352, 361, 389, 391 cu. in.</td>
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<tr>
<td>1960-1979 V8 – 360, 390 cu. in.</td>
</tr>
<tr>
<td>1979-1986 V8 – 601, 475, 477, 534 cu. in.</td>
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<tr>
<td>2003-2006 V8 – 6.0L, Diesel (VT365)</td>
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<tr>
<td>2010-2014 V8 – 6.2L</td>
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<tr>
<td>2007-2010 V8 – 6.4L, Diesel</td>
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<tr>
<td>1983-1994 V8 – 6.9, 7.3L, Diesel</td>
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<td>1995-2002 V8 – 7.3L (T444E)</td>
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<th>10 Cylinder</th>
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<tr>
<td>1998-2010 V10 – 6.8L</td>
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**GEO AUTOMOTIVE**

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<tr>
<th>3 Cylinder</th>
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<tbody>
<tr>
<td>1989-1997 L3 – 1.0L (Metro)</td>
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</table>

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<th>4 Cylinder</th>
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<tbody>
<tr>
<td>1989-1999 L4 – 1.3L (Suzuki engine)</td>
</tr>
<tr>
<td>1989 L4 – 1.5L</td>
</tr>
<tr>
<td>1988-1997 L4 – 1.6L (Suzuki engine) (Tracker)</td>
</tr>
<tr>
<td>1990-1997 L4 – 1.6, 1.8L (Trans) (Isuzu engine) (Storm)</td>
</tr>
<tr>
<td>1985-1997 L4 – 1.6, 1.8L (Trans) (Toyota engine) (Prizm)</td>
</tr>
</tbody>
</table>

**HINO – SEE CHEVROLET LIGHT & MEDIUM TRUCKS**

**HONDA AUTOMOTIVE**

<table>
<thead>
<tr>
<th>4 Cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2004 L4 – 1.0L</td>
</tr>
<tr>
<td>1973-1983 L4 – 1.2, 1.3L</td>
</tr>
<tr>
<td>1984-1992 L4 – 1.3, 1.5L</td>
</tr>
<tr>
<td>2003-2014 – 1.3L</td>
</tr>
<tr>
<td>1996-2000 L4 – 1.6L, Transverse 16-Valve</td>
</tr>
<tr>
<td>1999-2000 L4 – 1.6L, DOHC (Civic SiR)</td>
</tr>
<tr>
<td>1988-1995 L4 – 1.5L, 1.6L, Transverse 16-Valve only</td>
</tr>
<tr>
<td>1976-1983 L4 – 1.5, 1.6L</td>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.

Description of footnotes - See page 36.
### FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)

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<th>Repl. Cord Part No. Std Cord</th>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
### FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)

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<td>ALL L6 – 225 cu. in.</td>
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<td>ALL L6 – 220, 240, 241, 264, 265 (Black Diamond)</td>
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<td>ALL L6 – 3.2L (SD-33) (Nissan, Diesel)</td>
<td>3100023</td>
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<td>35 MM</td>
<td>2ND or 4TH LS</td>
<td>12 o’clock</td>
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Point Element – Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.

1-800-328-6108 or 952-941-9700 • phillipsandtemro.com
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<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No.</th>
<th>Repl. Cord Part No.</th>
<th>Bore Diameter</th>
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<td>ALL V8 – 401, 461, 462, 478, 549, 550</td>
<td>3100038 3600006 1-1/2”</td>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
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<tr>
<td>1968-1971 V8 – 350 cu. in. (Buick engine)</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LF or RR</td>
<td>12 o’clock</td>
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<tr>
<td>1972-1991 V8 – 304, 360, 401 cu. in.</td>
<td>3100039</td>
<td>3600006</td>
<td>1-1/2”</td>
<td>LR</td>
<td>5 o’clock</td>
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<tr>
<td>1999-2007 V8 – 4.7L</td>
<td>3100104</td>
<td>3600006</td>
<td>35 MM</td>
<td>RR</td>
<td>N/A</td>
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<td>1993-1998 V8 – 5.2L</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8”</td>
<td>RR</td>
<td>6 o’clock</td>
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<tr>
<td>2005-2017 V8 – 5.7L, Hemi</td>
<td>3100131</td>
<td>3600121</td>
<td>Cartridge</td>
<td>LR</td>
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<td>1998 V8 – 5.9L</td>
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<td>3100125</td>
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<td>3600116</td>
<td>1-5/8”</td>
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<td>6 o’clock</td>
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<tr>
<td>2006-2010 V8 – 6.1L, Hemi</td>
<td>See Dealer</td>
<td>N/A</td>
<td>Cartridge</td>
<td>LR</td>
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<tr>
<td>2012-2017 V8 – 6.4L, Hemi</td>
<td>See Dealer</td>
<td>N/A</td>
<td>Cartridge</td>
<td>LR</td>
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<td>KIA</td>
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<td>4 Cylinder</td>
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<td>2001-2002 L4 – 1.5L (Rio)</td>
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<td>2003-2004 L4 – 1.6L (Rio)</td>
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<td>35MM</td>
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<tr>
<td>2006-2010 L4 – 1.6L (Rio)</td>
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<td>3600006</td>
<td>35MM</td>
<td>LF</td>
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<td>2009-2011 L4 – 1.6L (Soul)</td>
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<td>N/A</td>
<td>Cartridge</td>
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<td>2012 L4 – 1.6L GDI (Rio, Soul)</td>
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<td>Cartridge</td>
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<td>1998-2003 L4 – 1.8L (Sephia, Spectra)</td>
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<td>35 MM</td>
<td>RF</td>
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<td>1999-2003 L4 – 2.0L (Sportage)</td>
<td>3100016</td>
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<td>35 MM</td>
<td>2ND LF</td>
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<tr>
<td>2004-2006 L4 – 2.0L (Spectra, Sportage)</td>
<td>3100098</td>
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<td>3600116</td>
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<td>2ND RR</td>
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<tr>
<td>2009-2017 L4 – 2.0L (Forte)</td>
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<td>3600083</td>
<td>Cartridge</td>
<td>LF</td>
<td>N/A</td>
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<td>2012-2017 L4 – 2.0L, Turbo</td>
<td>See Dealer</td>
<td>N/A</td>
<td>Cartridge</td>
<td>RR</td>
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<tr>
<td>2002-2006 L4 – 2.4L, Transverse</td>
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<td>3100122</td>
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<td>3600116</td>
<td>35 MM</td>
<td>LR</td>
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<td>2006-2017 L4 – 2.4L, Transverse (Optima, MaGentis, Forte)</td>
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<td>Cartridge</td>
<td>LF</td>
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<td>2011-2014 L4 – 2.4L GDI</td>
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<td>Cartridge</td>
<td>RR</td>
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<tr>
<td>6 Cylinder</td>
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<tr>
<td>2001 V6 – 2.5L (Magentis)</td>
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<td>3100122</td>
<td>3600006</td>
<td>3600116</td>
<td>35 MM</td>
<td>LR</td>
<td>6 o’clock</td>
</tr>
<tr>
<td>2002-2005 V6 – 2.7L (MaGentis, Sportage)</td>
<td>3100098</td>
<td>3100122</td>
<td>3600006</td>
<td>3600116</td>
<td>35 MM</td>
<td>LR</td>
<td>6 o’clock</td>
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<tr>
<td>2007-2009 V6 – 3.3L (Sorento)</td>
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<td>25 MM THD</td>
<td>RR</td>
<td>N/A</td>
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<td>2002-2005 V6 – 3.5L (Sedona)</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8”</td>
<td>LR</td>
<td>12 o’clock</td>
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<tr>
<td>2004-2006 V6 – 3.5L (Amanti)</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1-5/8”</td>
<td>LR</td>
<td>12 o’clock</td>
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<tr>
<td>2003-2005 V6 – 3.5L (Sorento)</td>
<td>3100055</td>
<td>3100125</td>
<td>3600006</td>
<td>3600116</td>
<td>1 5/8”</td>
<td>RR</td>
<td>12 o’clock</td>
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<tr>
<td>2010-2015 V6 – 3.5L (Sorento, Sedona)</td>
<td>See Dealer</td>
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<td>Cartridge</td>
<td>LR</td>
<td>N/A</td>
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<td>2006-2009 V6 – 3.8L (Sedona)</td>
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<td>25 MM THD</td>
<td>CR</td>
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<td>2007-2009 V6 – 3.8L (Amanti)</td>
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<td>25 MM THD</td>
<td>CR</td>
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<td>2009-2012 V6 – 3.8L (Borrego)</td>
<td>See Dealer</td>
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<td>Cartridge</td>
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<tr>
<td>2010 V6 – 3.8L (Sedona)</td>
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<td>3600083</td>
<td>Cartridge</td>
<td>LR</td>
<td>N/A</td>
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</tbody>
</table>

Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34

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### MAKE, MODEL, YEAR, ENGINE

<table>
<thead>
<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)</strong></td>
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</tbody>
</table>

#### AUTOMOTIVE

**8 Cylinder**

- 2009-2011 V8 – 4.6L (Borrego) 3100113 3600083 25 MM THD LR N/A

**LADA**

- 1978-1993 L4 – 1.5L 3100050 3600006 40 MM LF 9 o'clock
- 1981-1993 L4 – 1.6L 3100050 3600006 40 MM LS 9 o'clock
- 1987-1993 L4 – 1.3, 1.5L, Transverse 3100032 3600006 36 MM LF 3 o'clock

**LAND ROVER**

- 4 Cylinder
  - 1958-UP L4 – 120.8 cu. in. Gas/Diesel (Land Rover) 3100070 1-15/16” LC 6 o'clock
  - 2012-2017 L4 – 2.0L, Turbo See Dealer N/A N/A N/A N/A

- **6 Cylinder**
  - 1958-UP L6 – 161, 182.7 cu. in. 3100003 3600001 1” NPT N/A N/A
  - 2002-2005 V6 – 2.5L See Dealer N/A N/A N/A N/A
  - 2007-2012 L6 – 3.2L See Dealer N/A N/A N/A N/A
  - 2004-2008 V6 – 4.0L 3100039 3600006 1-1/2” RF 6 o'clock

- **8 Cylinder**
  - 1987-2004 V8 – 3.9, 4.0, 4.2, 4.6L 3100039 3600006 1-1/2” LC 12 o'clock
  - 2003-2004 V8 – 4.4L (BMW Engine) See Dealer N/A N/A N/A N/A
  - 2005-2009 V8 – 4.2L, 4.4L (Jaguar Engine) See Dealer N/A 30 MM THD LR N/A
  - 2010-2017 V8 – 5.0L See Dealer N/A 30 MM THD LR N/A

**LEXUS**

- **AUTOMOTIVE**
  - 4 Cylinder
    - 2012 L4 – 1.8L See Dealer N/A N/A N/A N/A
    - 2011-2012 L4 – 2.4L See Dealer N/A N/A N/A N/A

  - **6 Cylinder**
    - 2001-2005 L6 – 3.0L 3100029 3600006 35 MM RF 3 o'clock
    - 1989-1991 V6 – 2.5L 3100019 3600006 35 MM LF 6 o'clock
    - 2006-2015 V6 – 2.5L (4GR-FSE), Conventional See Dealer N/A N/A LR N/A
    - 1992-1994 V6 – 3.0L (3VZ-FE) 3100021 3600006 35 MM LF 3 o'clock
    - 1994-2003 V6 – 3.0L (1MV-FE) 3100021 3600006 35 MM RF 3 o'clock
    - 2004-2006 V6 – 3.3L (3MZ-FE) 3100029 3600006 35 MM RF 3 o'clock
    - 2007-2017 V6 – 3.5L (2GR-FE), Transverse See Dealer N/A N/A N/A N/A
    - 2006-2017 V6 – 3.5L (2GR-FSE), Conventional See Dealer N/A N/A LR N/A N/A

  - **8 Cylinder**
    - 1989-2001 V8 – 4.0L See Dealer N/A N/A N/A N/A
    - 2002-2007 V8 – 4.3L (3UZ-FE) 3100029 3600006 35 MM RF 3 o'clock
    - 2007-2017 V8 – 4.6L (1URFS, 1UR-FSE, 2UR-FSXE) See Dealer N/A N/A N/A N/A
    - 2008-2014 V8 – 5.0L (2UR-FSE) See Dealer N/A N/A N/A N/A
    - 2008-2014 V8 – 5.0L (2UR-GSE) (IS-F) See Dealer N/A N/A N/A N/A

**LIGHT TRUCK**

- **6 Cylinder**
  - 1999-2003 V6 – 3.0L 3100029 3600006 35 MM RF 3 o'clock
  - 2004-2006 V6 – 3.3L (3MZ-FE) 3100029 3600006 35 MM RF 3 o'clock
  - 2007-2017 V6 – 3.5L (2GR-FE), Transverse See Dealer N/A N/A LF N/A

- **8 Cylinder**
  - 2010-2015 V8 – 4.6L See Dealer N/A 35 MM RF N/A
  - 1998-2009 V8 – 4.7L (2UZ-FE) See Dealer N/A 35 MM RF N/A
  - 2008-2017 V8 – 5.7L (2UR-FE) 3100129 3100123 3600083 3600119 Cartridge LR N/A

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**Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.**

**Description of footnotes - See page 34**
### Automotive & Light Duty Truck Applications

**MAKE, MODEL, YEAR, ENGINE**

<table>
<thead>
<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Lit Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Lit Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes*</th>
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**LEXUS – Continued**

**LIGHT TRUCK**

10 Cylinder

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<th>YEAR</th>
<th>APPLICATION</th>
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<tbody>
<tr>
<td>2010-2013 V10 4.8L</td>
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MAZDA

**AUTOMOTIVE**

Rotary

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<th>YEAR</th>
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<tr>
<td>1971-1996 R2 – ALL</td>
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<td>2004-2011 R2 (RX8)</td>
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4 Cylinder

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<tr>
<th>MAKES</th>
<th>MODALY, YEAR, ENGINE</th>
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<tbody>
<tr>
<td>1971-1980 L4 – 1.2L, Conventional</td>
<td>3600008 3600001 Clamp-On</td>
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<tr>
<td>1975-1980 L4 – 1.3L, 1.4L, 1.5L, Conventional</td>
<td>3100016 3600006 35 MM LF 6 o'clock</td>
</tr>
<tr>
<td>1981-1982 L4 – 1.5L</td>
<td>3600009 3600002 Clamp-On</td>
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<tr>
<td>1981-1985 L4 – 1.5L, Transverse</td>
<td>3100019 3600006 35 MM LF 3 o'clock</td>
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<tr>
<td>1995-1998 L4 – 1.5L</td>
<td>3100023 3600006 35 MM 2ND RF 6 or 12 o'clock</td>
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<td>1996-1989 L4 – 1.6L, Transverse (Except, Turbo)</td>
<td>3100016 3600006</td>
</tr>
<tr>
<td>1988-1989 L4 – 1.6L, Transverse DOHC, Turbo</td>
<td>3100017 3600006 35 MM 2ND RF 12 o'clock</td>
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<td>1990-1998 L4 – 1.6L, Transverse</td>
<td>3100023 3600006 35 MM 2ND RF 9 o'clock</td>
</tr>
<tr>
<td>1989-1995 L4 – 1.6L DOHC, Conventional</td>
<td>3100016 3600006</td>
</tr>
<tr>
<td>1970-1980 L4 – 1.6L – 1.8L, Conventional</td>
<td>3100007 3600006 50 MM LC 12 o'clock</td>
</tr>
<tr>
<td>1999 L4 – 1.6L DOHC, Transverse</td>
<td>See Dealer</td>
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<tr>
<td>2010-2012 L4 – 1.6L, Transverse (Mazda 2)</td>
<td>See Dealer</td>
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<tr>
<td>1990-1998 L4 – 1.8L SOHC</td>
<td>3100021 3600006 35 MM 2ND RF 6 o'clock</td>
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<tr>
<td>1995-1999 L4 – 1.8L DOHC</td>
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<td>1999-2000 L4 – 1.8L DOHC, Transverse</td>
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</tr>
<tr>
<td>1985-1987 L4 – 2.0L, Diesel</td>
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</tr>
<tr>
<td>1983-1992 L4 – 2.0L (626), Transverse</td>
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<tr>
<td>1979-1982 L4 – 2.0L, Conventional</td>
<td>3100071 3600006 50 MM LC 12 o'clock</td>
</tr>
<tr>
<td>1993-1998 L4 – 2.0L</td>
<td>3100023 3600006 35 MM RR 8 o'clock</td>
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<tr>
<td>1998-2003 L4 – 2.0L DOHC (626, Protege)</td>
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<td>2003-2004 L4 – 2.0L DOHC, Turbo</td>
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<tr>
<td>2004-2011 L4 – 2.0L (Mazda 3)</td>
<td>3100002 3100121 3600001 3600118 3/4&quot; NPT LR N/A</td>
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<td>2012-2017 L4 – 2.0L (Mazda 3, Mazda 5, Mazda 6)</td>
<td>3100002 3100121 3600001 3600118 3/4&quot; NPT RF N/A</td>
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<td>2006-2007 L4 – 2.0L (Mazda MX5)</td>
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<tr>
<td>2008-2009 L4 – 2.0L (Mazda 3, Mazda 6)</td>
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**6 Cylinder**

<table>
<thead>
<tr>
<th>MAKES</th>
<th>MODALY, YEAR, ENGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992-1999 V6 – 1.8L, 2.5L, Transverse</td>
<td>3100028 3600006 35 MM REAR 8 o'clock</td>
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<tr>
<td>1995-2002 V6 – 2.0L, 2.3L (Miller cycle engine)</td>
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</tr>
<tr>
<td>1988-1997 V6 – 3.0L</td>
<td>3100016 3600006 35 MM REAR 1 o'clock</td>
</tr>
<tr>
<td>2003-2008 V6 – 3.0L (Mazda 6)</td>
<td>310002 3100121 3600001 3600118 3/4&quot; NPT RF N/A</td>
</tr>
<tr>
<td>2009-2015 V6 – 3.7L (Mazda 6)</td>
<td>310002 3100121 3600001 3600118 3/4&quot; NPT RR N/A</td>
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**LIGHT & MEDIUM DUTY TRUCKS**

4 Cylinder

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<th>MAKES</th>
<th>MODALY, YEAR, ENGINE</th>
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<tbody>
<tr>
<td>1971-1977 L4 – 1.6L</td>
<td>3100071 3600006 50 MM LC 6 o'clock</td>
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<tr>
<td>1977-1984 L4 – 1.8L, 2.0L</td>
<td>3100071 3600006 50 MM LC 12 o'clock</td>
</tr>
<tr>
<td>1985-1993 L4 – 2.0L, 2.2L GAS</td>
<td>3100016 3600006 35 MM 2ND LF 12 o'clock</td>
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<tr>
<td>2001-2003 L4 – 2.0L (Tribute) (Ford engine)</td>
<td>3100018 3600006 35 MM RR 3 o'clock</td>
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<tr>
<td>2012-2017 L4 – 2.0L Skyactiv (CX-5)</td>
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<tr>
<td>1982-1987 L4 – 2.2L, Diesel</td>
<td>3100023 3600006 35 MM 2ND RF 3 or 9 o'clock</td>
</tr>
</tbody>
</table>

---

*Point Element - Please confirm element orientation. Improper position may result in heater or engine damage. Description of footnotes - See page 34

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# FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)

## MAKE, MODEL, YEAR, ENGINE

<table>
<thead>
<tr>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes</th>
</tr>
</thead>
</table>

### MAZDA – Continued

#### LIGHT & MEDIUM DUTY TRUCKS

**4 Cylinder**

<table>
<thead>
<tr>
<th>Year</th>
<th>Model</th>
<th>Engine</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-2011</td>
<td>L4 – 2.3L (B2300)</td>
<td>3100002</td>
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<td>L4 – 2.3L (B2300) (Ford engine)</td>
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<td>L4 – 2.3L (B2300) (Ford engine)</td>
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<td>1989-1995</td>
<td>L4 – 2.6L (B2600) &amp; MPV (Mazda engine)</td>
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### MERCEDES-BENZ

#### AUTOMOTIVE

**4 Cylinder**

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**8 Cylinder**

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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.

Description of footnotes - See page 34.
### Automotive & Light Duty Truck Applications

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<th>Bore Diameter</th>
<th>Installation Location</th>
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<td>1999-2002 V6 – 3.5L (6G74) (Montero Sport)</td>
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<td>40 MM</td>
<td>3RD RS</td>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage. Description of footnotes - See page 34.
### Automotive & Light Duty Truck Applications

<table>
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<tr>
<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
<th>Foot Notes</th>
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<td><strong>MAKE, MODEL, YEAR, ENGINE</strong></td>
<td><strong>Std Kit</strong></td>
<td><strong>Lit Kit</strong></td>
<td><strong>Std Cord</strong></td>
<td><strong>Lit Cord</strong></td>
<td><strong>Element Position</strong></td>
<td><strong>Foot Notes</strong></td>
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<td>2005–2007 L4 – 2.5L (QR25DE), Conventional</td>
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<td>LF</td>
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| **6 Cylinder** | | | | | | |
| 1984–1995 V6 – 3.0L (VG30E, VG30) | 3100009 | 3600004 | 30 MM | LR | 6 o'clock |
| 1993–1998 V6 – 3.0L (VG30E), Transverse (Quest) | 3100009 | 3600004 | 30 MM | LF | 6 o'clock |
| 1999–2000 V6 – 3.3L (VG33), Transverse (Quest) | 3100009 | 3600004 | 30 MM | LF | 6 o'clock |
| 1998–2004 V6 – 3.3L (VG33), Conventional | 3100009 | 3600004 | 30 MM | LR | 6 o'clock |
| 2001–2014 V6 – 3.5L (VQ35DE), Conventional | 3100007 | 3600005 | 30MM THD | LF | N/A |
| 2005–2015 V6 – 4.0L (VQ40DE), Conventional | 3100007 | 3600005 | 30MM THD | LF | N/A |

| **8 Cylinder** | | | | | | |
| 2004–2017 V8 – 5.6L (VK56DE) | 3100007 | 3600005 | 30MM THD | RF | N/A |
| 2015–2016 V-8 5.0L Diesel | 3500165 | 3600008 | 27mm | N/A | |

| **OLDSMOBILE** | | | | | | |
| **AUTOMOTIVE** | | | | | | |
| **4 Cylinder** | | | | | | |
| 1982–1989 L4 – 1.8, 2.0L OHC (Brazil engine) | 3100015 | 3600006 | 34 MM | 2ND LF | 1 or 3 o'clock |
| 1982–1984 L4 – 1.8, 2.0L | 3100014 | 3600006 | 34 MM | LF | 12 o'clock |
| 1985–1986 L4 – 2.0L | 3100062 | 3600006 | 42 MM | LF | 4 o'clock |
| 1987–1992 L4 – 2.2L | 3100081 | 3600006 | 42 MM | LF | 9 o'clock |
| 1993–1996 L4 – 2.0L, 2.2L, Transverse | 3100081 | 3600006 | 42 MM | LF | 9 o'clock |
| 2002–2004 L4 – 2.2L (Ecotec), Transverse | 3400019 | 3600100 | Clamp-On | RR | N/A |
| 1987–1993 L4 – 2.3L Quad IV | 3100093 | 360023 | 3/4” NPT | N/A | N/A |
| 1994–1995 L4 – 2.3L Quad IV Gen II | 3100001 | 3600002 | 1/2” NPT | N/A | N/A |
| 1993–1997 L4 – 2.3L, Transverse | 3100007 | 3600006 | 1-5/8” | LF | 12 o'clock |
| 1978–1981 L4 – 2.5L, Conventional | 3100076 | 3600006 | 1-5/8” | LR | 12 o'clock |
| 1980–1986 V6 – 2.8L, Transverse | 3100014 | 3600006 | 34 MM | RS | 3 o'clock |
| 1987–1989 V6 – 2.8L, Transverse (Vin W) | 3100015 | 3600006 | 34 MM | CR | 3 o'clock |
| 1982–1988 V6 – 3.0L, Transverse | 3100041 | 3600006 | 34 MM | LF | 12 o'clock |
| 1989–1999 V6 – 3.1L, Transverse | 3100015 | 3600006 | 34 MM | CR | 3 o'clock |
| 1992–1997 V6 – 3.4L, Transverse | 3100015 | 3600006 | 34 MM | CR | 3 o'clock |
| 1999–2004 V6 – 3.4L, Transverse | 3100015 | 3600006 | 34 MM | CR | 3 o'clock |
| 1999–2002 V6 – 3.5L DOHC, Transverse See Dealer | N/A | Clamp-On | N/A | N/A |
| 1989–1998 V6 – 3.300, 3800, Transverse | 3100041 | 3600006 | 1-1/2” | RF or LF | 12 o'clock |
| 1975–1986 V6 – 3.8L (231 cu. in.), Conventional | 3100039 | 3600006 | 1-1/2” | RR | 12 o'clock |
| 1984–1986 V6 – 3.8L (231 cu. in.), Transverse | 3100041 | 3600006 | 1-1/2” | LF | 3 o'clock |
| 1981–1984 V6 – 4.1L (252 cu. in.), Conventional | 3100039 | 3600006 | 1-1/2” | RR | 12 o'clock |
| 1983–1985 V6 – 4.3L, Diesel, Transverse | 3100039 | 3600006 | 1-1/2” | RR or LF | 12 o'clock |
| 1982–1985 V6 – 4.3L, Diesel, Conventional | 3100039 | 3600006 | 1-1/2” | LF or FF | 12 o'clock |
| 1991–1996 V6 – 4.3L | 3100057 | 3100126 | 3600006 | 3600116 | 1-5/8” | LR | 6 o'clock |
| 1968–1976 L6 – 250 cu. in. | 3100054 | 3600006 | 1-5/8” | LF or LR | 6 or 12 o'clock |
| 2006–2014 V6 – 4.3L | 3100109 | 3100127 | 3600082 | 3600119 | 28 MM THD | LC | N/A |

| **8 Cylinder** | | | | | | |
| 1979–1985 V8 – 260 cu. in., Diesel | 3100039 | 3600006 | 1-1/2” | LR | 12 o'clock |
| 1975–1982 V8 – 260 cu. in. GAS | 3100039 | 3600006 | 1-1/2” | RF | 6 o'clock |
| 1997–2003 V8 – 4.0L (Aurora) See Dealer | N/A | Clamp-On | N/A | N/A |
| 1980–1981 V8 – 4.3L (265 cu. in.) | 3100070 | 3600006 | 1-15/16” | LC | 11 o'clock |

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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage. Description of footnotes - See page 34.
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<th>Foot Notes*</th>
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**Notes**

- **Point Element** - Please confirm element orientation. Improper position may result in heater or engine damage.
- **Description of footnotes** - See page 34.
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
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<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
<th>Element Position</th>
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<tr>
<td><strong>PHILLIPS &amp; TEMRO INDUSTRIES</strong></td>
<td>1-800-328-6108 or 952-941-9700 • phillipsandtemro.com</td>
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# Automotive & Light Duty Truck Applications

## MAKE, MODEL, YEAR, ENGINE

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<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No. Std Kit</th>
<th>Repl. Cord Part No. Std Cord</th>
<th>Bore Diameter</th>
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**Description of footnotes** - See page 34.
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<th>MAKE, MODEL, YEAR, ENGINE</th>
<th>Heater Part No.</th>
<th>Repl. Cord Part No.</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
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<th>Foot Notes</th>
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Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
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**LIGHT & MEDIUM DUTY TRUCKS & VANS**

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**Footnotes**

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<th>Repl. Cord Part No.</th>
<th>Bore Diameter</th>
<th>Installation Location</th>
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<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>8 Cylinder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006-2011 V8 – 4.4L, Transverse</td>
<td>3100002</td>
<td>3100121</td>
<td>3600001</td>
<td>3600118</td>
<td>3/4” NPT</td>
<td>LR</td>
</tr>
</tbody>
</table>

**FOOTNOTES**

<table>
<thead>
<tr>
<th>Footnote #</th>
<th>Application Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remove and replace starter</td>
</tr>
<tr>
<td>2</td>
<td>Pull or pry out core plug</td>
</tr>
<tr>
<td>3</td>
<td>Replacement heater only. May require lower coolant return line (steel tube purchase from GM)</td>
</tr>
<tr>
<td>4</td>
<td>Remove and replace alternator</td>
</tr>
<tr>
<td>5</td>
<td>Installation by certified mechanic recommended</td>
</tr>
<tr>
<td>6</td>
<td>On some models, the air pump has to be loosened</td>
</tr>
<tr>
<td>7</td>
<td>Remove right front wheel and splash guard</td>
</tr>
<tr>
<td>10</td>
<td>Install in hose rise closet to water pump</td>
</tr>
<tr>
<td>12</td>
<td>Lower Radiator Hose Heater: 1993 &amp; prior</td>
</tr>
<tr>
<td>13</td>
<td>If LR is a 40mm core hole, install heater in 2NDLR</td>
</tr>
<tr>
<td>15</td>
<td>Kit contains a thermostatically controlled cord required for compatibility with the OBD 11 system in these vehicles</td>
</tr>
<tr>
<td>16</td>
<td>May Require: Mounting Elbow 14075-AM700, Gasket 11065-AM700, and Bolts A1005H8 (Available from Nissan Infinity)</td>
</tr>
<tr>
<td>17</td>
<td>Heater location is behind the exhaust manifold</td>
</tr>
</tbody>
</table>

Point Element - Please confirm element orientation. Improper position may result in heater or engine damage.
Description of footnotes - See page 34.
**AGRICULTURAL, HEAVY DUTY, OFF ROAD & INDUSTRIAL APPLICATION**

**SECTION DESCRIPTIONS**

**MACK**

**E6 (672 CID 6 cyl.)**
(Engines with smooth bore freeze plug. Example: EM6300, E6350, EM6237)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>8609748</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
</tr>
<tr>
<td>8609772</td>
<td>1500</td>
<td>240</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1-3/4" freeze plug on side of engine.

**Available Service Parts:** O-ring and clamping device kit (3500003)

**Installation Information:** See chart below for mounting location information.

- Part Number, Heater Wattage, Heater Voltage, Bore Diameter (if applicable), Heater Type. "Plate" indicates mounting plate installation.
- Additional engine information, selection criteria
- Engine Model and/or size, plus any descriptions

**Typical applications for engine:**

- **Agricultural Use**
- **Industrial Use**
- **Heavy Duty Truck Use**

**INSTALLATION LOCATION**

Heater installation locations are as viewed from flywheel end of engine.

**Note:** Heaters in this section ship with the appropriate standard 6 ft. cord.
UTILISATION AGRICOLE, POIDS LOURD & INDUSTRIEL

DESCRIPTION DES SECTIONS

MACK

E6 (672 CID 6 cyl.)
(Moteurs avec bouchon expansible à alésage lisse. Exemple: EM6300, E6350, EM6237)

<table>
<thead>
<tr>
<th>Numéro de pièce</th>
<th>Watt</th>
<th>Volt</th>
<th>Diamètre</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608748</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Bouchon expansible</td>
</tr>
<tr>
<td>8609772</td>
<td>150</td>
<td>240</td>
<td>1-3/4&quot;</td>
<td>Bouchon expansible</td>
</tr>
</tbody>
</table>

Consignes d’installation :
Remplace le bouchon expansible 1-3/4" sur le côté du moteur.

Pièces disponibles : ensemble de joints toriques et dispositif de serrage (3500003)

Consignes d’installation : voir le schéma ci-dessous pour information sur l’emplacement du montage.

No Pièce: puissance et tension du chauffe-moteur, diamètre de l’alésage (si applicable), type de chauffe-moteur, “Plaque” indique installation avec plaque de montage.

Critères de sélection additionnels en fonction du moteur.

Modèle et/ou grandeur du moteur, plus toutes autres descriptions.

Application d’usage pour un moteur

Usage agricole

Usage industriel

Usage pour camions lourd

EMPLACEMENT POUR L’INSTALLATION

Emplacements d’installation du chauffe-moteur sont montrés à partir de l’extrémité du volant d’inertie et du moteur

Volant d’inertie

Remarque : Les chauffes-moteurs dans cette section sont expédiés avec le cordon standard de 6 pi. approprié.
### Agricultural, Heavy Duty & Industrial Applications

#### ALLIS CHALMERS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left, 2ND from Rear. Point element UP/DOWN.

---

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500014</td>
<td>1000</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600024</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element forward.

---

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500013</td>
<td>1500</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>LRHH</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR).

---

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200003</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower Radiator Hose Heater. Circulation heater is acceptable alternative.

---

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200005</td>
<td>600</td>
<td>120</td>
<td>2&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower Radiator Hose Heater. Circulation heater is acceptable alternative.

---

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 9 o’clock.

---

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100067</td>
<td>400</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Center (LC). Point element UP.
### BOLENS – CONTINUED

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100067</td>
<td>400</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element DOWN.

#### TX1502, TX1504, TX1704

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100067</td>
<td>400</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS). Point element UP.

### DAVID BROWN

#### All 900, 995, 1200, 1212

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100066</td>
<td>400</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Center (LC). Point element 12 o’clock.

### CASE IH / JI CASE / CASE NEW HOLLAND

#### 336, 401, 451, 504 CID, 1470TK, W2A (504 CID) (4 & 6 cyl)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500024</td>
<td>1000</td>
<td>120</td>
<td>2&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element DOWN.

#### 390 (4 cyl. 3.9L), 590 (6 cyl. 5.9L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500030</td>
<td>750</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601666</td>
<td>750</td>
<td>240</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Installs in Right Side (RS). Point element DOWN. Circulation heater is acceptable alternative.

#### 430, 730, 830 (188D, 251G, 267D, 284D, 310D)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500026</td>
<td>400</td>
<td>120</td>
<td>3/8”NPT</td>
<td>Immersion</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Circulation Heater or #3200005 Lower Radiator Hose Heater are acceptable alternatives.

#### 675 (6 cyl.) 675TWV, TV140

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100112</td>
<td>750</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600023</td>
</tr>
</tbody>
</table>

**Installation Information:** 2ND core hole from rear right side.

#### 830 (6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601860</td>
<td>1000</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601852</td>
<td>1000</td>
<td>240</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element 4 o’clock. Circulation heater is acceptable alternative.
### CASE IH / JI CASE / CASE NEW HOLLAND – CONTINUED

#### 930 (6 cyl.) 377G, 401D

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500026</td>
<td>400</td>
<td>120</td>
<td>3/8” NPT</td>
<td>Immersion</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Two heaters are required. Circulation heater is acceptable alternative.

#### B10

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500149</td>
<td>1000</td>
<td>120</td>
<td>42mm THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 42mm pipe plug. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

#### Case Maxxum (4 & 6 cyl.) New Holland T6000 Series

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500154</td>
<td>750</td>
<td>120</td>
<td>58MM</td>
<td>2 Bolt Flange</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install Right side (RS) of engine.

#### Cursor Engine

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500150</td>
<td>1000</td>
<td>120</td>
<td>42MM THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 42mm pipe plug. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

#### CATERPILLAR

#### 1100 Series, 3100 Series

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601518</td>
<td>1000</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601577</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).

#### 1404 (163 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100088</td>
<td>400</td>
<td>120</td>
<td>2.125”</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Center (LC) or Left Rear (LR). Point element 12 o’clock.

#### 1670 (350 CID), G/D 333 (525/638 CID), 1693, 1674 (638 CID)

*Use Circulation Heater.*

#### 1693 & D343 (893 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601909</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).
### 1693T & 1693TA (893 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601976</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650).

### 3003 (3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100016</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 6 o’clock.

### 3013 (3 cyl.), 3024, 3014 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 6 o’clock.

### 3034 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100101</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head. Point element 4 o’clock.

### 3046 (5L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100078</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 2ND Left Rear (2ND LR). Point element 6 o’clock.

### 3054, 3056

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100045</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600007</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 1-1/2" core hole on Right Side (RS) of engine, between #1 and #2 cylinders, behind exhaust manifold.


<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500084</td>
<td>750</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install Right Rear (RR), Point element 3 o’clock.

### 3114 (4.4L), 3116 (6.6L), 3126 (7.2L), 3126B (7.2L), C7 (7.2L, all years prior to 2004), C7 ACERT (2004–2007), CFE (Caterpillar/Freightliner Engine)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500015</td>
<td>1000</td>
<td>120</td>
<td>44mm</td>
<td>Freeze Plug</td>
<td>3600048</td>
</tr>
<tr>
<td>3500016</td>
<td>1000</td>
<td>240</td>
<td>44mm</td>
<td>Freeze Plug</td>
<td>N/A</td>
</tr>
<tr>
<td>3500081</td>
<td>1500</td>
<td>120</td>
<td>44mm</td>
<td>Freeze Plug</td>
<td>3600048</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces core plug on center of Right Side. Heater kit includes special high temperature cordset. Engine may also accept oil pan heater 3500006 (3116 only). See threaded immersion heater page for specifications.
### 3150, 3160 (636 C.I.D.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602816</td>
<td>600</td>
<td>120</td>
<td>44mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:**
- **3150:** Replaces rear freeze plug on right side of engine (requires one heater)
- **3160:** Replaces center freeze plug on side of engine (requires two heaters)

**Available Service Parts:** Hex nut (8602999), Element gasket (8603650)

### 3176 (10.2L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601267</td>
<td>1500</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601259</td>
<td>1500</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Instructions:** Replaces 3/4” pipe plug on Right Rear Side of engine. Special high temperature cordset included in kit. Engine may also accept Oil Pan Heaters 8609683, 8609659, or 8609713 (requires 1” x 1/2” bushing to reduce port size). See threaded immersion heater page for specifications.

### 3196

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500013</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500031</td>
<td>1500</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1” NPT plug in rear of oil cooler. Engine may also accept the following oil pan heaters: 8609683, 8609659, 8609713 (requires 1” x 1/2” bushing to reduce port size). See page 83 for oil pan heater specifications.

### 3204, 3208 (636 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602816</td>
<td>600</td>
<td>120</td>
<td>44mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:**
- **3204:** Replaces Rear freeze plug on Right Side of engine (requires one heater)
- **3208:** Replaces center freeze plug on side of engine (requires two heaters)

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650).

### 3208 (636 CID) Swivel style heater

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602549</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8602514</td>
<td>1000</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8602611</td>
<td>1500</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8602573</td>
<td>1500</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4” pipe plug on Front of engine.

### 3304 (with oil cooler), 3306 (638 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600988</td>
<td>1000</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8601011</td>
<td>1500</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601054</td>
<td>1500</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4” pipe plug at Rear of oil cooler on Left Side of engine.
Agricultural, Heavy Duty, Off Road & Industrial Applications

CATERPILLAR – CONTINUED

3406 (Except 1998 models), 3406 (with BrakeSaver—through 1993 models), 3406E
Not for use with 1998 3406E or 15.8L 600 hp engine.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600090</td>
<td>1000</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600120</td>
<td>1000</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600260</td>
<td>1500</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8605580</td>
<td>2000</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608652</td>
</tr>
</tbody>
</table>


3406 (With BrakeSaver—1994 & newer)
Not for use with 1998 3406E or 15.8L 600 hp models.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500013</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1” pipe plug in oil cooler, front bonnet.

3406E (1998 models only), 3456, 15.8L (600 hp)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500033</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600048</td>
</tr>
<tr>
<td>3500034</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>HTR-Only</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Installation Information: Installs in oil cooler rear bonnet. Not interchangeable with 8605556 for this application due to unique 1998 engine design.

3408 (1099 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600090</td>
<td>1000</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600120</td>
<td>1000</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600260</td>
<td>1500</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1” pipe plug behind oil cooler on Right cylinder bank.

3412 (12 cyl.)
(See Circulation Heater Section pages 87-90)

C3.3B, C3.8

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500120</td>
<td>400</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600110</td>
</tr>
</tbody>
</table>

Installation Information: C3.3B – Left Front (LF), C3.8 – Right Rear (RR).

C3.4, C3.4B

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100117</td>
<td>600</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

Installation Information: Right Front (RF).

C4.4

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500084</td>
<td>750</td>
<td>120</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Only use 3500084 when replacing existing freeze plug. 3500145 is recommended for all new installations. Install 3500145 Left Center (LC). Install 3500084 Right Rear (RR) or Right Front (RF) with element at 3 o’clock.
### CATERPILLAR – CONTINUED

#### C4.4 ACERT Tier 4

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500145</td>
<td>600</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600100</td>
</tr>
<tr>
<td>3500148</td>
<td>600</td>
<td>240</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Left Center (LC).

#### C6.6 (2006 & Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500087</td>
<td>1000</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Install in Right Rear (RR).

#### C9, C15, C16

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600090</td>
<td>1000</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600120</td>
<td>1000</td>
<td>240</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600260</td>
<td>1500</td>
<td>240</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Install in oil cooler rear bonnet.

#### C9 ACERT, C15 ACERT, C16 ACERT (2004–2006)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500073</td>
<td>1500</td>
<td>120</td>
<td>1-1/16&quot; – 12 Immersion</td>
<td>3600008</td>
<td></td>
</tr>
<tr>
<td>3500077</td>
<td>1500</td>
<td>120</td>
<td>1-3/16&quot; – 12 Immersion</td>
<td>3600008</td>
<td></td>
</tr>
<tr>
<td>3500076</td>
<td>1500</td>
<td>240</td>
<td>1-3/16&quot; – 12 Immersion</td>
<td>8608377</td>
<td></td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1-3/16" threaded plug in rear of oil cooler bonnet. Engine may also accept the following oil pan heaters: 3500079, 3500078 (replaces 1-5/16" threaded plug).

#### C9.3, C15

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500117</td>
<td>1500</td>
<td>120</td>
<td>1-5/16&quot; – 12 Immersion</td>
<td>3600008</td>
<td></td>
</tr>
<tr>
<td>3500128</td>
<td>1500</td>
<td>240</td>
<td>1-5/16&quot; – 12 Immersion</td>
<td>8608377</td>
<td></td>
</tr>
</tbody>
</table>

Installation Information: Right Rear (RR).

#### C10, C12

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500013</td>
<td>1500</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500031</td>
<td>1500</td>
<td>240</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1" NPT plug in rear of oil cooler. Engine may also accept the following oil pan heaters: 8609683, 8609659, 8609713 (requires 1" x 1/2" bushing to reduce port size). See threaded immersion heater page for specifications.


<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500075</td>
<td>1500</td>
<td>120</td>
<td>1-5/16&quot; – 12 Immersion</td>
<td>3600008</td>
<td></td>
</tr>
<tr>
<td>3500074</td>
<td>1500</td>
<td>240</td>
<td>1-5/16&quot; – 12 Immersion</td>
<td>8608377</td>
<td></td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1-5/16" threaded plug in rear of oil cooler. Engine may also accept the following oil pan heaters: 3500079, 3500078 (replaces 1-5/16" threaded plug).
### CATERPILLAR – CONTINUED

#### C13 ACERT & C15 ACERT (2007 & NEWER CAT)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500111</td>
<td>1500</td>
<td>120</td>
<td>1-3/16&quot; – 12</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1-3/16" plug located in the rear of the oil cooler, on right hand side of engine.

#### C18 ACERT

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500077</td>
<td>1500</td>
<td>120</td>
<td>1-3/16&quot; – 12</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500132</td>
<td>1500</td>
<td>240</td>
<td>1-3/16&quot; – 12</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Rear (RR).

### CHEVROLET

**Forward & Tiltmaster, all Gasoline engines**

*See Chevrolet Automotive/Light Truck Gasoline applications.*

### CONTINENTAL (TELEDYNE)

#### F162, F163, Y112 (4 cyl.) (1981 & newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100053</td>
<td>400</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left Side (LS). Point element UP.

*Note:* Heater for cup-type core hole only.

#### F227, F245 (1979 & newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100053</td>
<td>400</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left Side (LS). Point element UP.

#### F227, F245 (1979 & newer – alternate wattage)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100057</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left Side (LS). Point element UP.

#### TM27, TMD27 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100060</td>
<td>400</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Right Side (RS). Point element UP.

### CUMMINS

#### 170 & 185 (470 CID), 210 (504 CID), VT225, V555, VT555 (555 CID)

**Engines without alternator mounted over water jacket access plate**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601763</td>
<td>1000</td>
<td>120</td>
<td></td>
<td>Plate</td>
<td>36000008</td>
</tr>
<tr>
<td>8601801</td>
<td>1000</td>
<td>240</td>
<td></td>
<td>Plate</td>
<td>8608377</td>
</tr>
<tr>
<td>8601844</td>
<td>1500</td>
<td>120</td>
<td></td>
<td>Plate</td>
<td>36000008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on front left cylinder bank.

*Available Service Parts:* Hex Nut (8602999), Element Gasket (8603650).

If Cummins 504 CID has alternator, uses International Bracket International Bracket (3549687C1).
CUMMINS – CONTINUED

855 CID Engines with full flow cooling, low-mount oil cooler (Connected to Front port, Rear port blocked by exhaust)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608709</td>
<td>1500</td>
<td>120</td>
<td></td>
<td>Plate</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

855 CID Alternate installation
Rear plug location without aftercooler water connection. Recommended as alternate location for cab-over vehicles only

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500036</td>
<td>1500</td>
<td>120</td>
<td>1-1/2&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1-1/2" pipe plug on Rear face of engine, right side (above flywheel housing).

855 CID Alternate installation
1996 & newer engines with O-ring seal

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500023</td>
<td>1500</td>
<td>120</td>
<td>1-5/8&quot; STOR</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1-5/8" plug on Rear face of engine, right side (above flywheel housing).

855 CID Engines with full flow cooling, high-mount oil cooler (Uses hose and two clamps for water tube connection to casting. Most engines manufactured from August 1975 to June 1982)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601100</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

855 CID Engines with full flow cooling, high-mount oil cooler – obstruction (Connected to Rear port which is partially blocked by exhaust)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608741</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Plate Gasket (8603359)

855 CID Engines with full flow cooling, high-mount oil cooler – O-ring (Uses O-ring for water tube connection. Engines only produced prior to 1975) Use Circulation heater.

855 CID Replacement element for existing 8602379 heater (Does NOT include casting. Cordset is included)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602301</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces heating element in casting. Available Service Parts: Hex Nut (8602999), Plate (8603138), Gasket (8603383)

B3.3T (3.3L), QSB (3.3L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100046</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

Installation Information: Installs in Left Rear (LR).
CUMMINS – CONTINUED

6B5.9 & 6BT5.9 (5.9L 359 CID 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500030</td>
<td>750</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601666</td>
<td>750</td>
<td>240</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug on Right side on engine.

**Available Service Parts:** O-ring and clamp device (3500002)

### C Series: 6C8.3 & 6CT8.3 (8.3L 505 CID), 6CTA8.3

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601860</td>
<td>1000</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601852</td>
<td>1000</td>
<td>240</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug on Right rear side of engine.

**Available Service Parts:** O-ring and clamp device (3500002)

### C & J 160, 175 & 190 (464 CID)

Use Circulation heater.

### ISB Series: (5.9L, 6.7L) QSB (3.9L, 4.5L, 5.9L, 6.7L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500022</td>
<td>750</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500110</td>
<td>750</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Installs in 3/4” NPT port to Rear of oil cooler.

### ISC, QSC Series (8.3L 505 CID), ISL Series (8.9L 543 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500032</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Installs in upper 3/4” NPT port, to front of oil cooler.

### ISV (5.0L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500165</td>
<td>600</td>
<td>120</td>
<td>27mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Front Face, Left Cylinder (LFF)

### ISX 12 (2007 & Newer), ISX 12G (2007 & Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500107</td>
<td>1500</td>
<td>120</td>
<td>26mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500153</td>
<td>1500</td>
<td>240</td>
<td>26mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS).

### ISX (2007 & Newer), QSX (2007 & Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500107</td>
<td>1500</td>
<td>120</td>
<td>26mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500153</td>
<td>1500</td>
<td>240</td>
<td>26mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS).

### K Series (KT19, KT450, KT1150, KTA525 – 1150 CID 6 cyl.), QSK Series

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500017</td>
<td>1500</td>
<td>120</td>
<td>1-3/4”-18 THUD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces large hex plug at either upper front or center thread position on oil cooler cover. Point element 6 o’clock or 12 o’clock position.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)
**CUMMINS – CONTINUED**

**L10 (10L 611 CID 6 cyl.), M11, ISM Series, QSM11**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600015</td>
<td>1500</td>
<td>120</td>
<td>38mm THUD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600031</td>
<td>1500</td>
<td>240</td>
<td>38mm THUD</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in heater casting on Right rear side of engine.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

---

**M11 (11L) (2000 and newer)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500042</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500109</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Install on Right Rear (RR) side of engine.

---

**N Series** (855 CID-14 litre NT315, N14-330, N14-330E, N14-460, N14-460, etc.)

**Big Cam IV, New Big Cam IV, 88NT, 444**

Engines without heater hose connection to rear plate or Full Flow Cooling

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601003</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601046</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Due to oil cooler provisions on 855 CID series engines, special applications which accommodate full flow cooling designs are necessary. Where there is interference, the heater required will depend upon the oil cooler and exhaust configuration. The various installation options are shown here. Also see alternate installation below. Engine may accept oil pan heaters 8609683, 8609659, or 8609713 (requires 1" x 1/2" reducer bushing to reduce port size). See page 83 for oil pan heater specifications.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

---

**N Series, Big Cam IV, New Big Cam IV, 88NT** Alternate installation

Engines with one heater hose connection (1/2" NPT) to Rear plate.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601526</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces Rear access plate. Heater includes 1/2" NPT port for hose connection. **Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

---

**New Big Cam IV**

Forward plate installations with reverse bolt pattern – without single-pass oil cooler 1986-1988

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600627</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600651</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces forward side plate. **Available Service Parts:** Hex Nut (8602999), Plate Gasket (8603715).

---

**QSB (4.5L) Hot Side**

2005-2006 ISB 02 200 HP

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500096</td>
<td>750</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace freeze plug opening on Right front side of engine. Must have threaded bolt holes in block for attaching mounting plate.
### Cummins – Continued

**Signature 600, ISX, APEX**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500108</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>36008377</td>
</tr>
</tbody>
</table>

**Installation Information:** Remove flat 2 – bolt cover on right side of block, near rear of water inlet casting. Install with element pointing toward front of engine.

**Signature 600, ISX (Pre 2007), QSX (15L-915 CID)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500038</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS).

**V6-140 (352 CID), V6-155 (378 CID)**

(Engines without alternator mounted over water jacket access plate)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601763</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601801</td>
<td>1000</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8601844</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on front left cylinder bank.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

**V903, VT903, VT350, Formula VT300 (903 CID) (Alternate installation)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601267</td>
<td>1500</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601054</td>
<td>1500</td>
<td>240</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4" pipe plug at bottom rear of oil cooler. Check engine to be sure 3/4" pipe plug is available on engine before proceeding.

**V903, VT903, VT350, Formula VT300 (903 CID)**

**V6-195, 200, 215, 280 (588 CID)**

**V8-235, 265, 300, 370 (785 CID), 350 & 430 (950 CID)**

(Replacement element only)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8607605</td>
<td>1500</td>
<td>120</td>
<td>N/A</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replacement element only. Circulation heater is acceptable alternative.

**Detroit Diesel**

**3-53, 4-53, 3-71, 4-71**

Engines without water cooled compressor

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600295</td>
<td>750</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600368</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine.

**Note:** Do not use 1000 watt heater on 3-53, 4-53, or 3-71 engines.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

**3-53, 4-53, 3-71, 4-71**

Engines with water cooled compressor

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601291</td>
<td>750</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601305</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine.

**Note:** Do not use 1000 watt heater on 3-53, 4-53, or 3-71 engines.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)
### DETROIT DIESEL – CONTINUED

#### 6-71

**Engines without water cooled compressor**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600368</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600422</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

#### 6-71

**Engines with water cooled compressor**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601305</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601372</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

#### 6V-53

**Vehicles with or without automatic transmission**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500021</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces water jacket access plate on side of engine.

**Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

#### 6V-71, 8V-71 Vehicles without power steering and/or air conditioning

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600090</td>
<td>1000</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600120</td>
<td>1000</td>
<td>240</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600260</td>
<td>1500</td>
<td>240</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1" pipe plug on front face of Left cylinder bank.

#### 8V-53

Use 1500 or 2250 Watt Circulation heater.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600996</td>
<td>1000</td>
<td>240</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4" pipe plug on Right front side of engine.

#### 6D38 (3.8L 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8604967</td>
<td>600</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS) of engine.

#### DD13, DD15, DD16 (2008 & Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500095</td>
<td>1500</td>
<td>120</td>
<td>27mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Right side. M27 port in the oil module below intake.

#### Series 30

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100045</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600007</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS). Point element UP.
DETROIT DIESEL – CONTINUED

Series 40 (466 CID)
Engines manufactured prior to September 1993

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608512</td>
<td>1250</td>
<td>120</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8608539</td>
<td>1250</td>
<td>240</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 3RD or 4TH freeze plug on Left side of engine.
Available Service Parts: O-ring and clamp device (3500004)

Series 50 (Except low-mount turbo)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600090</td>
<td>1000</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1” NPT plug in oil cooler casting.
Engine may also accept oil pan heater 8603243. See threaded immersion heater page for specifications.

Series 55

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500008</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500009</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces water jacket access plate on Left side of engine.

Series 60 (2007 & Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500077</td>
<td>1500</td>
<td>120</td>
<td>1-3/16”</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

Installation Information: Upper hex port of oil cooler. Right side of engine.

Series 60 (11.1L 677 CID, 12.7L 775 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600260</td>
<td>1500</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8605580</td>
<td>2000</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608652</td>
</tr>
</tbody>
</table>

May also accept oil pan heater 8603243. See threaded immersion heater page for specifications.
## DETROIT DIESEL – CONTINUED

### Silver Series

**6V-92, 8V-92**

**6V-71, 8V-71, 12V-71, 16V-71, 6V-92, 8V-92, 12V-92, 16V-92**

Engines without air conditioner compressor mounted next to water jacket access plate

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601631</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
<tr>
<td>8601704</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
<tr>
<td>8601739</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces water jacket access plate on Left front cylinder bank.

Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8606854).

### Silver Series

**6V-71, 8V-71, 12V-71, 16V-71, 6V-92, 8V-92, 12V-92, 16V-92**

Engines with air conditioner compressor mounted next to water jacket access plate, except for GMC General with 92 Series engine

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601658</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
<tr>
<td>8601712</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
</tbody>
</table>

Installation Information: Replaces water jacket access plate on Left front cylinder bank.

Available Service Parts: Hex Nut (8602999), Plate Gasket (8606854).

### Silver Series (6V-92, 8V-92), 12V-71, 16V-71, 12V-92, 16V-92, GMC General (with 92 Series engine) (Alternate installation)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
<tr>
<td>8602514</td>
<td>1000</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8602611</td>
<td>1500</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
<tr>
<td>8602573</td>
<td>1500</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 3/4” pipe plug in oil cooler elbow on right side of engine.

Check engine carefully – 3/4” pipe plug not available on all engines.

Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

---

### DEUTZ

#### 1012, 1013, 2013

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500019</td>
<td>750</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600020</td>
</tr>
</tbody>
</table>

Installation Information: Install in oil cooler housing.

Check engine – heater port not available on all engines.

#### BF4L913 (4 cyl.)

(Oil pan heater only)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8603170</td>
<td>325</td>
<td>120</td>
<td>48mm THUD</td>
<td>Immersion</td>
<td>3600024</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 48mm plug in oil pan. Check engine carefully – 48mm plug not available on all oil pans. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

#### F3L912, F3L913 (3 cyl)

(Oil pan heater only)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8603146</td>
<td>150</td>
<td>120</td>
<td>48mm THUD</td>
<td>Immersion</td>
<td>3600024</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 48mm plug in oil pan. Check engine carefully – 48mm plug not available on all oil pans. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)
### DEUTZ – CONTINUED

**F6L913, BF6L913** (6 cyl.)
(Oil pan heater only)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8603170</td>
<td>325</td>
<td>120</td>
<td>48mm</td>
<td>THUD Immersion</td>
<td>3600024</td>
</tr>
</tbody>
</table>

**Installation Information:** Dual kit – purchase two heaters and cordsets. Replaces 48mm plugs in oil pan. Check engine carefully – 48mm plugs not available on all oil pans. **Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

### FAHR

**1012, 1013, 2013**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500055</td>
<td>750</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in oil cooler housing. Check engine – heater port not available on all engines. Available on all oil pans. **Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

### FIAT

**8060, 8061, 8065** (5.5L 335 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600333</td>
<td>1000</td>
<td>120</td>
<td>42mm</td>
<td>THUD Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 42mm threaded opening on Right rear of engine. **Available Service Parts:** Hex Nut (8602999), Element Gasket (8603650)

**8360, 8361** (8.1L 494 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600090</td>
<td>1000</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600120</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1" pipe plug in coolant elbow casting on Front left side.

### FORD

**091PV** (91 CID 4 cyl.), **GSG417** (104 CID 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100036</td>
<td>400</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right front face of cylinder head. Point element UP or DOWN.

**134, 172, 192 CID** (Engines used in tractors)
NAA, NAB, 500, 600, 700; 800, 900, 901, 1800 G/D; 2000, 2100, 4000 G/D, 4110D, 4120, 4121

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100087</td>
<td>600</td>
<td>120</td>
<td>2.06&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left Side (LS). Point element UP or DOWN.

**401 CID (V-8), 477 CID (V-8), 534 CID (V-8)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601518</td>
<td>1000</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any 1-3/4" freeze plug.
### FORD – CONTINUED

#### 401 CID (6.6L), 474 CID (7.8L)
(Engines manufactured in August 1989 and later featuring plate type heater)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500048</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8606331</td>
<td>1250</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 2ND freeze plug from rear – right side.
(Diameter of element in plate 1.5”)

#### 401 CID (6.6L), 474 CID (7.8L)
(Engines manufactured prior to August 1989 featuring freeze plug type heater)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>2207044</td>
<td>1000</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601984</td>
<td>1500</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601968</td>
<td>1500</td>
<td>260</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 2ND freeze plug from rear – right side.

#### 421 CID V-8 (6.9L), 445 CID V-8 (7.3L)
(Except Navistar T444E engine)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100043</td>
<td>1000</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600010</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug on Right rear of engine. Point element 11 o’clock.

#### 445 CID V-8 – Navistar T444E engine (7.3L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600996</td>
<td>1500</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8602611</td>
<td>1500</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4” NPT threaded plug in oil cooler.

#### 1060 (5.9L 359 CID 6 cyl. – Cummins B Series)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500030</td>
<td>750</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601666</td>
<td>750</td>
<td>240</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug on Right side of engine.
**Available Service Parts:** (O-ring & clamp device kit 3500002).

#### 1460 (8.3L 505 6 cyl. – Cummins C Series)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8601860</td>
<td>1000</td>
<td>120</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8601852</td>
<td>1000</td>
<td>240</td>
<td>58mm</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug on Right rear side of engine.
**Available Service Parts:** O-ring & clamp device kit (3500002)

#### 2000, 3000, 4000, 5000, 6000 (3, 4, 6 cyl.)
(Engines manufactured up to 1967)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200004</td>
<td>600</td>
<td>120</td>
<td>1-3/4”</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower radiator hose heater. Circulation heater is acceptable alternative.
### FORD – CONTINUED

#### 3000, 4000, 5000, 8000, 9000 Series

*Engines manufactured 1968-1970*

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100065</td>
<td>600</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 4TH & 5TH Right Side (RS). Two heaters required. Point element DOWN. Circulation heater or LRHH are acceptable alternative.

#### 3000, 4000, 5000, 7000, 8000, 9000 Series

*Engines manufactured in 1971 and later*

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100112</td>
<td>750</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600023</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 4TH and 5TH Right Side (RS). Two heaters are required. Point element DOWN. Circulation heater or LRHH are acceptable alternatives.

#### BSD666 (401 CID 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100054</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element UP/DOWN.

#### CSG649 (300 CID 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100053</td>
<td>400</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element UP/DOWN.

#### DSD & ESD442 (254 CID 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100061</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600036</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Center (LC). Point element UP/DOWN.

#### DSD & ESD659 (362 CID 6 cyl.), 660 (363 CID 6 cyl.), 680 (380 CID 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100061</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600036</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Center (LC). Point element UP/DOWN.

#### KSG411 (67 CID 4 cyl.), KSG416 (98 CID 4 cyl.)

*Engines with distributor*

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100084</td>
<td>400</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 3 o’clock.
**FORD – CONTINUED**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSG633</td>
<td>(200 CID 6 cyl.)</td>
<td>3100065</td>
<td>600</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Installation Information: Install in Right Front (RF) or Right Center (RC). Point element UP or DOWN.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| LSG861 | (370 CID V-8), LSG870 | 3100039 | 600  | 120  | 1-1/2"   | Freeze Plug | 3600006   |
|        | (429 CID V-8), LSG875 |          |      |      |          |      |            |
|        | (460 CID V-8)         |          |      |      |          |      |            |
|        | Installation Information: | Install in Right Front (RF) or Right Center (RC). Point element UP or DOWN. |

| SSD655 | (335 CID 6 cyl.) | 8600333 | 1000 | 120  | 42mm THUD | Immersion | 3600008   |
|        |                 |          |      |      |          |        |            |
|        | Installation Information: Install in Right Side (RS) or Left Side (LS). Point element UP. |

| VSG411 | (67 CID 4 cyl.), VSG413 | 3100085 | 400  | 120  | 1-5/8"   | Freeze Plug | 3600006   |
|        | (79 CID 4 cyl.)         |          |      |      |          |      |            |
|        | (Engines without distributor) |
|        | Installation Information: Install in back of head. Point element 3 o'clock. |

| WSG858 | (351W V-8), 255 (V-8), 302 (V-8) | 3100039 | 600  | 120  | 1-1/2"   | Freeze Plug | 3600006   |
|        |                              |          |      |      |          |      |            |
|        | Installation Information: Install in Left Rear (LR) or Right Rear (RR). Point element DOWN. |

**HERCULES**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1600</td>
<td>(2.7L 163 CID)</td>
<td>3100088</td>
<td>400</td>
<td>120</td>
<td>2.135&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Installation Information: Install in Left Center (LC) or Left Rear (LR). Point element UP or DOWN.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| G/D2300, DT3.7 | (226 CID), 5.8L (339 CID), G/D3400 | 3100027 | 600  | 120  | 35mm     | Freeze Plug | 3600006   |
|----------------|-----------------------------------|        |      |      |          |            |            |
| (1983+ engines), GT & DT 5.6 |
| Installation Information: Replace freeze plug on Right side of engine. |

| G/D3400 & 3400T | (339 CID) | 3100039 | 600  | 120  | 1-1/2"   | Freeze Plug | 3600006   |
| (Engines manufactured up to 1982) |
| Installation Information: Replaces freeze plug on Right side of engine. |

| G/D4800 | (7.8L 478 CID) | 3500025 | 1000 | 120  | 2"       | Freeze Plug | 3600024   |
|         |                 |          |      |      |          |            |            |
|         | Installation Information: Replaces freeze plug on Right side – near rear. |

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### HINO

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500018</td>
<td>1000</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace core plug on Right front side of engine.

### W04C, W06E, H06C-T, H07C-B (3.8L, 5.7L, 6.0L, 6.4L, 6.7L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600988</td>
<td>1000</td>
<td>240</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4" plug in water transfer casting/oil cooler cover.

### INTERNATIONAL / NAVISTAR

#### 400, 500, 600, 700, 900

(Engines built in 1986 and later) See UD Truck listings – page 80-81.

#### 421 CID (6.9L), 445 CID (7.3L)

(Not for use with T444E engine)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100043</td>
<td>1000</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600010</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces freeze plug on Right rear of engine.

Point element 11 o’clock. **Available Service Parts:** O-ring and clamp device (3500005)

#### 460, 560, 660, 706, TD62, TD92 (All models)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100061</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600036</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 3RD Right Side (RS). Point element DOWN, if no interference w/throttle rod. Use 12 o’clock for other installations.

Circulation heater or LRHH are acceptable alternatives.

#### 504 (153G), 606 (221G)

Engines manufactured in 1964 and later
(Can be used on gas or diesel engines)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100054</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Center (RC). Point element DOWN.

Circulation heater is acceptable alternative.

#### 806, 1206, 1256 (1963-67), 856, C152, C175, C200, C221, C263, C282, C291, C301, D166, D188, D236, D282, D301, D361, D407, DT407

(Can be used on gas or diesel engines)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100061</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600036</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 1ST, 2ND, or 5TH freeze plug on Right side. Point element DOWN.

Circulation heater or LRHH are acceptable alternatives.

#### 817 (817 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600759</td>
<td>1500</td>
<td>120</td>
<td>1-1/2&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 1-1/2" pipe plug on side of engine.
### INTERNATIONAL / NAVISTAR – CONTINUED

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608612</td>
<td>1250</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left side.

### Cub Lo-Boy

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200004</td>
<td>600</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower radiator hose heater. Circulation heater is acceptable alternative.

### D150, D170, D190 (461 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100038</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace any freeze plug. Point element UP.

### D312, D414, DT414, D436, DT436, DTA466

(Engines manufactured prior to 1994)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608652</td>
<td>1250</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8608539</td>
<td>1250</td>
<td>240</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3RD or 4TH freeze plug on Left side of engine.

### D550 (549 CID), 9L (551 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100044</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace any freeze plug. Point element between cylinders.

### DT360, DTA360

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608601</td>
<td>1000</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 3RD or 4TH freeze plug on Left side of engine.

### DT466 High Torque, DT466, DT466E, HT530, DT530 (2001–2003)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500054</td>
<td>1250</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Left side, protruding boss above engine oil dipstick. Element direction 12 o’clock

### DT466 & DT570 (2004–2006)

**Installation Information:** Replaces 1-1/4" freeze plug in boss on Left side of engine.
### INTERNATIONAL / NAVISTAR – CONTINUED

**MaxxForce 5 & 7 (2007 & Newer)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500069</td>
<td>1000</td>
<td>120</td>
<td>27mm THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Rear (RR).

---

**MaxxForce 9 & 10 MaxxForce DT (2007 & Newer)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500163</td>
<td>1250</td>
<td>120</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1-1/4” freeze plug in boss on Left side of engine.

---

**MaxxForce 11 & 13**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500095</td>
<td>1500</td>
<td>120</td>
<td>27mm THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower right front.

---

**MaxxForce 15**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>350038</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Side (RS).

---

**MV, 404, 446, 485 engines**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100044</td>
<td>600</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left Side (LS) or Right Side (RS).

---

**Neuss Engine (179, 206, 239, 246, 268, 310, 358 CID)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>350012</td>
<td>1000</td>
<td>120</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>3600024</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Circulation heater is acceptable alternative.

---

**T444E (7.3L V-8)**

(Engines manufactured in 1994 and later)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600996</td>
<td>1000</td>
<td>240</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4” threaded plug in oil cooler.

---

**V800 (798 CID)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600260</td>
<td>1500</td>
<td>240</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 1” pipe plug in oil cooler bonnet.
### ISUZU

#### 3LD1 & 3LD2 (3 cyl.), 4LE1 & 4LE2 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100094</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600005</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left side. Point element 9 o’clock.

#### 3LB1 (3 cyl.), 4LC1 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100098</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in any Left side. Point element 9 o’clock.

#### 4BD1 (3.9L 4 cyl.), 6BD1 (5.8L 6 cyl.), 6BG1 (6.5L 6 cyl.), 6HE1 (7.1L 6 cyl.), 6HK1 (7.8L), 6SA1 (8.4L 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100089</td>
<td>600</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Installs in Left rear 1” threaded opening, except for 6SA1, which installs in Right side 1” threaded opening. Two heaters recommended for 6SA1.

#### 4BD1 (3.9L 4 cyl.), 6BD1 (5.8L 6 cyl.), 6BG1 (6.5L 6 cyl.), 6SA1 (8.4L 6 cyl.) QD-100 (3.9L), QD-145 (5.8L), 4BG1, 4BGI, 4BGITC

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100065</td>
<td>600</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 45mm freeze plug in the back of head. Install element 1 o’clock.

#### 4FB1 (111 CID 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100018</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element UP.

#### 4H Series

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500151</td>
<td>600</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 45mm core plug between #1 & #2 cylinder near alternator. Point element DOWN.

#### 4JB1, 4JG (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100069</td>
<td>400</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 6 o’clock.

#### 6SA1, 6SA1-T, 6SD1, QD-170 & QD-170T (8.4L 6 cyl.)

*Use circulation heater.*

#### E-120 (733 CID 6 cyl.), 6RB-1 (839 CID 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602220</td>
<td>1250</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 45mm plug on Rear face or back – right side. Point element DOWN.
### ISUZU – CONTINUED

#### QD-27 (2AB1), QT-15 (2KC1), 2AA1 (2 Cylinder)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100067</td>
<td>400</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** All except QT-15: Install Left Side (LS). Point element UP.<br>QT-15: Install in back of head. Point element 10 o'clock.

#### QD-40 (3AB1 108 CID) (3 Cylinder)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100068</td>
<td>400</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element 6 o'clock.

#### QD-60, C240, C201, C223 (144, 137 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100068</td>
<td>400</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Position element 6 o'clock.

#### QD-90, 4BB1 (219 CID 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100065</td>
<td>600</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head. Point element 1 o'clock. Not for use on Isuzu 4JJ engines.

#### QT-23 (3KC-1 87 CID), QT-35 (3KR-1-60 87 CID), 3AA (3 Cylinder)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100067</td>
<td>400</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** All except 3AA: Install in back of head. Point element 10 o'clock.<br>3AA: Install in Left Side (LS). Point element 6 o'clock.

#### QT-23 (3KC-1)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100026</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 9 o'clock.

#### QD-130 (6BB1 329 CID 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100065</td>
<td>600</td>
<td>120</td>
<td>45mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head. Point element 1 o'clock. Not for use on Isuzu 4JJ engines.

### IVECO

#### Z100 (F5L-912 Deutz air cooled engine)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3400014</td>
<td>500</td>
<td>120</td>
<td>6” x 6”</td>
<td>Clamp-On</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Clamp-On type heater. Engine may also use M22 x 1.5 threaded oil pan heater – see page 83.

#### Z110, Z120, Z220, Z340 (335 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600333</td>
<td>1000</td>
<td>120</td>
<td>42mm x 1.5</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 42mm threaded opening on Right rear of engine.<br>Available Service Parts: Hex Nut (8602999), Plate Gasket (8603650)
## JOHN DEERE

### 50, 60, 70, 730 Series A, B, D, G

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in bottom of water jacket. Circulation heater is acceptable alternative.

### 1020, 2020, 3010, 3020, 4000, 4010, 4020

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200004</td>
<td>600</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower radiator hose heater. Circulation heater is acceptable alternative.

### 2010

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200003</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower radiator hose heater. Circulation heater is acceptable alternative.

### 3029

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4" pipe plug on rear face of engine.

### 4230, 4430, 4440, 4630, 6030, 7020, 7520 (Tractors manufactured prior to 1976 without large hex plug)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602050</td>
<td>1000</td>
<td>120</td>
<td>2&quot;</td>
<td>Freeze Plug</td>
<td>3600024</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element UP. Circulation heater is acceptable alternative.

### 6105, 6125

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500013</td>
<td>1500</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Installs in oil cooler housing.

### 6404, 6466, 6619 (Engines featuring smooth bore core hole – engines manufactured prior to 1976)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602050</td>
<td>1000</td>
<td>120</td>
<td>2&quot;</td>
<td>Freeze Plug</td>
<td>3600024</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 2" diameter core hole on Left side of engine.

### Power Tech: 4045, 6068

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500020</td>
<td>1000</td>
<td>120</td>
<td>1-5/8&quot; THUD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 1-5/8" threaded plug on Right side of engine.

### Series 250 PowerTech: 4024 PowerTech (2.4L, 4 Cyl.) & 5030 PowerTech (3.0L, 5 Cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500089</td>
<td>600</td>
<td>120</td>
<td>1.25&quot;</td>
<td>Freeze Plug</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 1.25" diameter core hole on Left side of engine, near the starter.

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### JOHN DEERE – CONTINUED

**Series 300 (3029, etc.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500045</td>
<td>1000</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500152</td>
<td>1000</td>
<td>240</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left rear face of block.

**Series 300: 3164, 3179, 4039, 4045, 4219, 4239, 4276, 6059, 6068, 6329, 6359, 6414**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8603596</td>
<td>1000</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 3/4" pipe plug on rear face of engine. Some engines (manufactured in 1987 and later) may require a 1" x 3/4" reducer bushing.

**Series 300: 3164, 4039, 4045, 4219, 4239, 4276, 6329, 6359, 6414, 6059, 6068**

**Series 400: 6076, 6081, 6101, 6414, 6466, 6619**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500029</td>
<td>1000</td>
<td>120</td>
<td>1-5/8&quot; THUD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1-5/8" threaded plug on Left side of engine.

**Series 350 PowerTech Plus iT4 (Interim Tier 4): 4045 PowerTech Plus iT4 (4.5L, 4 Cyl.)**

**& 6068 PowerTech Plus iT4 (6.8L, 6 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500069</td>
<td>1000</td>
<td>120</td>
<td>27mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Rear (RR).

**All tractors (manufactured 1977 and later featuring large hex plug on side of engine)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500029</td>
<td>1000</td>
<td>120</td>
<td>1-5/8&quot; THUD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element UP. Circulation heater is acceptable alternative.

### KOMATSU

**4D95 (2.9L 164 CID)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100046</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 40mm core plug on Left rear of engine.

**Note:** May not fit all engines due to block thickness. Maximum 5/18" (15.8mm) thickness.

**SA6D107**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100046</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 40mm core plug.

**SA6D125 (624 CID)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600880</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot; THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600813</td>
<td>1000</td>
<td>120</td>
<td>1-3/4&quot; THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces threaded core plug on Right side of engine.

**S4D106-1**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Freeze Plug</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Left Center (LC)
### KOMATSU – CONTINUED

**S6D-95L & SA6D-95L (298 CID)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100082</td>
<td>600</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>3100010</td>
<td>600</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600005</td>
</tr>
</tbody>
</table>

**Installation Information:**
- 3100082: Install in Left Rear (LR). Point element UP.
- 3100010: Insert at 3 o’clock and rotate to 4 o’clock.

**S6D140, SA6D140**

(Example: WA500 loader)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8605602</td>
<td>1500</td>
<td>120</td>
<td>1-3/8”</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600880</td>
<td>1500</td>
<td>120</td>
<td>1-3/4” THD</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:**
- 8605602: Replace 3RD core plug on right side of engine.
- 2001 and newer use 8600880: Replaces threaded core plug on right side of engine.

**S6D170, SA6D170**

(Example: WA600 loader)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8602301</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Install in rectangular water jacket access plate (6-bolt) located on the Right side of engine – rear. Requires removal of engine side plate and hole to be drilled for heater installation.

### KUBOTA

**B Series**

(Except 2 cylinder)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Install in Right Front (RF). Use 1” x 3/4” pipe bushing.

**L Series**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Install in Right Front (RF). Use 1” x 3/4” pipe bushing.

**M Series (3 & 4 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Install in front.

**D600, D640, WG600, D662, D722*, DG750, DF750, WG750**

(Super Mini/New Super Mini 3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100099</td>
<td>400</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Install in back of head.

*Kubota D722:* use 3100099 on Tier 2 or older; use 3100132 on newer D722 (needs a pound in heater due to change in valve cover).
### KUBOTA

#### D650, D750, D850, DH850, D950 (3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Front (RF). Use 1” x 3/4” pipe bushing.

#### D850 – V1200 Models (70mm Stroke)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>2204320</td>
<td>400</td>
<td>115</td>
<td>3/4&quot; NPT</td>
<td>Freeze Plug</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Crankcase, inlet side under fuel injection pump, tapered head

**OS Series Installation:** Crankcase, exhaust side, threaded plug, tapered head

#### D1102, D1302, D1402, D1403, D1703, D1803, D2203, D2403 (3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100025</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head. Point element 2 o’clock.

#### D3000B, D3200B (3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in front.

#### S2800 (6 cyl.), F2803 (5 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100025</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head.

#### Super 5 Series: D905, DH905, D1005, DH1005, D1105, V1205, VH1205, V1305, VH1305, V1505

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF).

#### V800

(Super Mini/New Super Mini 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100099</td>
<td>400</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head.

#### V1100, VH1100, V1200 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Instructions:** Install in Right Front (RF). Use 1” x 3/4” pipe bushing.

#### V1505

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Instructions:** Install in open port closest to center of engine.

#### V1702, V1703, V1902, V1903, V2003, V2003T, V2203 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100025</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head. Point element 2 o’clock.
### KUBOTA – CONTINUED

**V2607, V3307, V3600, V3800**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500120</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600110</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 1" NPT pipe plug.

**V3300**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Front (RF). Use 1" x 3/4" pipe bushing.

**V4000B, V4300B (3 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in front.

**Z400, Z482, D722* (Super Mini/New Super Mini 2 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100099</td>
<td>400</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head.

*Kubota D722: use 3100099 on Tier 2 or older; use 3110108 on newer D722 (needs a pound in heater due to change in valve cover).

**Z600 & ZH600 (Super Mini/New Super Mini 2 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install Right Front (RF). Use 1" x 3/4" pipe bushing.

**Z602-D902-WG, DF, DG972 (Super Mini 02 Series 73.6mm Stroke)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100132</td>
<td>400</td>
<td>155</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600083</td>
</tr>
</tbody>
</table>

**Installation Information:** Rear of cylinder head in rear frost plug hole, knock in type, tapered body

### LISTER-PETTER

**LPW Series (1994 & newer 56 CID 2 cyl., 85 CID 3 cyl., 113 CID 4 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100077</td>
<td>400</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
</tbody>
</table>

**Installation Information:** Install between cylinders. Point element UP or DOWN.

### LOMBARDINI

**CHD Series: LDW1503, LDW1603 (3 cyl.), LDW2004, LDW2204, LDW2004T (4 cyl.)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100096</td>
<td>400</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Point element 3 or 9 o'clock.
### Agricultural, Heavy Duty, Off Road & Industrial Applications

LOMBARDINI – CONTINUED

LDW602, LDW702 (2 cyl.), LDW903, LDW1003 (3 cyl.),
FOCS Series 1204, LDW1404, LDW1204T (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200002</td>
<td>375</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

Installation Information: Lower radiator hose heater.

### MACK

865 Series, 866 & 1000 Series, EM9-400 (998 CID), E9

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600988</td>
<td>1000</td>
<td>240</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>8601011</td>
<td>1500</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8601054</td>
<td>1500</td>
<td>240</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Installs in oil cooler casting. Two heaters are required.
Engine may also accept oil pan heater 8609683, 8609659, 8609713 (requires 1" x 1/2" bushing to reduce port size). See threaded immersion heater page for specifications.

E7 & EM7 (12.0L) Example: EM7-300, E7-350

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8607206</td>
<td>1500</td>
<td>120</td>
<td>1-3/8&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8607184</td>
<td>1500</td>
<td>240</td>
<td>1-3/8&quot;</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replace 1-3/8" core plug on Right side of block – front or rear face.
Available Service Parts: O-Ring (3600059) 10 pack.

E3 Midliner (5.5L 335 CID, 6.2L), E5 (8.8L 537 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600317</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600384</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600414</td>
<td>1500</td>
<td>240</td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: E3: Replace plug in rear face of block (MS200 serial numbers 1915 and higher).
E5: Install in oil cooler water feed pipe (MS300 serial numbers 60131 and higher).
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

E6 (672 CID 6 cyl.)
(Engines with smooth bore freeze plug. Example: EM6300, E6350, EM6237)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8609748</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>8609772</td>
<td>1500</td>
<td>240</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1-3/4" freeze plug on side of engine.
Available Service Parts: O-ring and clamping device kit (3500003)

E6, EM6 (threaded freeze plug models manufactured prior to August 1981)
END465 (1957 & later), 711, EN438, 504, 707, 673, 675, 676 Series

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600813</td>
<td>1000</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600880</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600910</td>
<td>1500</td>
<td>240</td>
<td>1-3/4&quot;</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

Installation Information: Replaces 1-3/4" threaded plug on side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)
### MACK – CONTINUED

**END465 (1953-56), 672, 673, 711, EN438, 540, 707**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600759</td>
<td>1500</td>
<td>120</td>
<td>1-1/2&quot; NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace 1-1/2" pipe plug on side of engine.

**E-Tech (water pump mount)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500051</td>
<td>1500</td>
<td>240</td>
<td>1-3/8&quot;</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
<tr>
<td>3500052</td>
<td>1500</td>
<td>120</td>
<td>1-3/8&quot;</td>
<td>Immersion</td>
<td>8608652</td>
</tr>
</tbody>
</table>

**Installation Information:** Mount in water pump.

**Available Service Parts:** 0-Ring (3600059) 10 Pack. 3500070 includes 84" weatherproof cord and receptacle.

**MP7 (10.8L)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500099</td>
<td>1000</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500100</td>
<td>1500</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500104</td>
<td>240</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600086</td>
</tr>
</tbody>
</table>

**Installation Information:** Right front, in coolant pipe.

**MP8 (12.8L)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500102</td>
<td>1500</td>
<td>240</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500115</td>
<td>1500</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500104</td>
<td>1000</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
</tbody>
</table>

**Installation Information:** Right front

**MP10 (16.1L)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500105</td>
<td>1500</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500106</td>
<td>1000</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Immersion</td>
<td>3600086</td>
</tr>
</tbody>
</table>

**Installation Information:** Right rear

### MASSEY FERGUSON

**1100**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200005</td>
<td>600</td>
<td>120</td>
<td>2&quot;</td>
<td>LRHH</td>
<td>3600047</td>
</tr>
</tbody>
</table>

**Installation Information:** Lower radiator hose heater. Circulation heater is acceptable alternative.

**445P, 333, 444, 555, 88**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100054</td>
<td>600</td>
<td>120</td>
<td>1-5/8&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Front (RF). Circulation heater is acceptable alternative.

**MF-35, 40, 50, 150, 203, 205, 235, 2135 & 2200 (AD3-152)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS). Point element DOWN. Circulation heater is acceptable alternative.
### MASSEY FERGUSON – CONTINUED

MF-65, 165, 255, 302, 304, 365 & 3165 (AD4-203)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS). Circulation heater is acceptable alternative.

MF-90, 1080, 1085 & 285 (A4-300)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces existing heater. Circulation heater is acceptable alternative.

MF-175, 180 & 265 (AD4-236)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left, 2ND from rear. Point element UP/DOWN. Circulation heater is acceptable alternative.

MF-1100, 1105, 1130 & 1135 (A6-354)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left, 2ND from rear. Point element UP. Circulation heater is acceptable alternative.

MF-1140 & MF-1145 (1120, 1125 – 1240, 1250, 1260 Mfg. prior to mid 0’s before serial #E50101)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100066</td>
<td>400</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 3 o’clock.

MF-1150, 1155 (AV510, 540)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Install one heater in each side (two heaters required). Circulation heater is acceptable alternative.

MF-3120, MF-3140

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100045</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600007</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR) or Right Front (RF). Point element 12 o’clock. Circulation heater is acceptable alternative.

### MERCEDES

**Freightliner Sprinter Van 2.7L (2009 & Older)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100105</td>
<td>500</td>
<td>120</td>
<td>38mm THD</td>
<td>Freeze Plug</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Rear (RR). May need to heat existing plug to remove.

**MBE4000 Series/OM460 (2003 & Older)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500080</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** 3500080 – Replace plate on right side (center). Point element 9 o’clock. Do not install on left side.
## MERCEDES – CONTINUED

### MBE4000 Series/OM4609 (2004 & Newer)

<table>
<thead>
<tr>
<th>Part No</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500082</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
<tr>
<td>3500083</td>
<td>240</td>
<td></td>
<td>Plate</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces plate on right side (center). Point element, 3 o’clock.

### MBE900 Series: OM904 & OM906

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500046</td>
<td>1000</td>
<td>120</td>
<td>60mm</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
</tbody>
</table>

**Installation Information:** Installation in Right Rear (RR) core hole. Point element DOWN, 6 o’clock.

### MBE-HDEP 15.2 L

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500095</td>
<td>1500</td>
<td>120</td>
<td>27mm THD</td>
<td>Immersion</td>
<td>36000008</td>
</tr>
</tbody>
</table>

**Installation Information:** Installation in Right Rear (RR) core hole. Point element DOWN, 6 o’clock.

## MINNEAPOLIS MOLINE

### JetStar 3 (gas & diesel 206 CID), U302 (gas 220 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500026</td>
<td>400</td>
<td>120</td>
<td>3/8” NPT</td>
<td>Immersion</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces existing heater. Circulation heater is acceptable alternative.

### M602, 604, 670, G705, 706, 900, 1000

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100038</td>
<td>600</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces existing heater. Circulation heater is acceptable alternative.

## MITSUBISHI

### 4G32 & 4G33 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100016</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** 4G32: Install in Left Center (LC). Point element 9 o’clock. 4G33: Install in Left Center (LC). Point element UP.

### 4G52, 4G53, 4G54 (4 cyl. engines)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100071</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Center (RS). Point element 3 o’clock.

### 4G63 (2.0L 4 cyl.), 4G64 (2.4L 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100021</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 3 o’clock.

### 6G72 (3.0L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100055</td>
<td>600</td>
<td>120</td>
<td>1-5/8”</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element 9 o’clock.
### MITSUBISHI – CONTINUED

#### K3A & K3B (3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100067</td>
<td>400</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Side (RS). Point element UP.

#### L3A (3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element 9 o'clock.

#### S4L2 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100078</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install Right Rear (RR). Point element 11 o'clock.

#### S6E & S6E2 (6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100078</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 3 o'clock.

### MITSUBISHI FUSO

#### 4D31 (201 CID), 6D14 (400 CID), 6D31 (302 CID), 6D16 (460 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8604967</td>
<td>600</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 3/4" threaded plug on Left rear side of engine.

### MTU

#### Series 1100 (10.7L), Series 1300 (12.8L), Series 1500 (15.6L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500095</td>
<td>1500</td>
<td>120</td>
<td>27mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Note:** 3500095 heater does not come with 3600008 cord. Order cord separately.

**Installation Information:** Left side of engine, M27x2 port to the right of oil filter housing below intake manifold.

### MWM MURPHY

#### D225 & D226 Series (2, 3, 4, 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100071</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces any freeze plug on Right side. Point element UP or DOWN.

### NISSAN

#### FD6 (5.6L 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Front (RF). Point element 3 o'clock.
### NISSAN – CONTINUED

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100019</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:**
- **H20:** Install in Left Front (LF) or Left Rear (LR). Point element UP.
- **SD-22, SD4-47, SD-25:** Install in Left Front (LF). Point element DOWN. **A15** install Left Front (LF) or Left Rear (LR) and point element 12 o’clock.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100016</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 3 o’clock.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100019</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 3 o’clock.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100016</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 5TH, Left side. Point element 12 o’clock.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Front (RF).

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100023</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>3100108</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug – 12” Cord</td>
<td>3600036</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in 2ND and 4TH Left side. Two heaters are required. Point element 12 o’clock.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100090</td>
<td>600</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Center (RC). Remove 3-bolt plate.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100048</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 12 o’clock.

### OLIVER

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500043</td>
<td>1000</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in cast elbow at front of engine – between radiator and engine block.

### PACCAR

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500107</td>
<td>1500</td>
<td>120</td>
<td>26mm</td>
<td>Plate</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Front (RF).
<table>
<thead>
<tr>
<th>PERKINS</th>
</tr>
</thead>
</table>

### 3-152 (C Series 3 cyl.), 900 Series (CN)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in Right Side (RS). Point element 6 o’clock.

### 4-108 (E Series 4 cyl.), 4-236 (LD 4 cyl.), 4-248 (LF 4 cyl.), 4-248-2 (LG 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4”</td>
<td>Freeze Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in Left, 2ND from rear. Point element UP or DOWN.

### 4-135 (GB Series 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100023</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>3100108</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug – 12” Cord</td>
<td>3600036</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in Right Side (RS). Point element UP or DOWN.

### 4-154 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100010</td>
<td>400</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600005</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in Left Side (LS). Point element UP or DOWN.

### 4-203 (J Series 4 cyl.)

(Engines with no starter obstructions)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4” NPT</td>
<td>Freeze Plug</td>
<td>3600003</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in Left Side (LS). Point element UP or DOWN.

### 4-236 (4 cyl.) (Engines with larger core hole)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100027</td>
<td>600</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in Left side – 2ND from rear.

### 6-354 (alternate), NA-120 (6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500027</td>
<td>750</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

- **Installation Information**: Install in back of head.
### PERKINS – CONTINUED

**103.06** (KB 3 cyl.), **103.07** (KL 3 cyl.), **103.09** (KC 3 cyl.), **103.10** (KD 3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100016</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 6 o’clock.

**103.12** (KG 3 cyl.), **103.13** (KH 3 cyl.), **103.15** (KE/KJ 3 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 6 o’clock.

**103.19** (KF/KK 4 cyl.), **104.22** (KR 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100049</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Front (LF). Point element 6 o’clock.

### 200 Series: **204.25** (GD 4 cyl.), **204.30** (GE 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100086</td>
<td>400</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS).

**400 Series** (4.41, T4.40), **4.0L**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100045</td>
<td>600</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600007</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Side (RS), point element UP.

**540** (8 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
</tbody>
</table>

**Installation Information:** Install one heater in each side.

**640** (Z Series 8 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8605556</td>
<td>1500</td>
<td>120</td>
<td>1” NPT</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR).

**700 Series** **704.30** (4A 4 cyl.), **704.30T** (4C 4 cyl.), **704.26** (4C 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100101</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in back of head. Point element 4 o’clock.

**854**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100117</td>
<td>600</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Left Center (LC).

**1004** (A Series 4 cyl.) (D Series 4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100045</td>
<td>600</td>
<td>120</td>
<td>1-1/2”</td>
<td>Freeze Plug</td>
<td>3600007</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR) or Right Front (RF). Point element 12 o’clock.
### PERKINS – CONTINUED

#### 1006 (Y Series 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100045</td>
<td>600</td>
<td>120</td>
<td>1-1/2&quot;</td>
<td>Freeze Plug</td>
<td>3600007</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR), or Right Front (RF). Point element 12 o’clock.

#### 1104 (C Series 4 cyl.) (D Series)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500084</td>
<td>750</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Only use 3500084 when replacing existing freeze plug. 3500145 is recommended for all new installations. Install 3500145 Left Center (LC). Install 3500084 Right Rear (RR) or Right Front (RF) with element at 3 o’clock.

#### 1104 Tier 4, 1204

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500145</td>
<td>600</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600100</td>
</tr>
</tbody>
</table>

**Installation Information:** Left Center (LC).

#### 1106D, 1206E (2006 and Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500087</td>
<td>1000</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Free Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element 12 o’clock.

#### N Series: 4-300 (4 cyl.), 4-318 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100093</td>
<td>400</td>
<td>120</td>
<td>3/4&quot; NPT</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Side (LS).

#### T Series: 6-354 (6 cyl.), 6-354.4 (4 cyl.), 6-372 (4 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100013</td>
<td>600</td>
<td>120</td>
<td>1-1/4&quot;</td>
<td>Free Plug</td>
<td>3600022</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Rear (RR). Point element 12 o’clock.

### PEUGEOT

#### 1.6L

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500147</td>
<td>400</td>
<td>120</td>
<td>N/A</td>
<td>Manifold Plug</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces Manifold Drain Plug.

### TOYOTA

#### 2F (4.2L 6 cyl.)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100071</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element 9 o’clock.

#### 3F

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100101</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Left Rear (LR). Point element at 45° angle.
### TOYOTA – CONTINUED

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Y</td>
<td>3100019</td>
<td>400</td>
<td>120</td>
<td>35mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>5R</td>
<td>310071</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>5R, 2J</td>
<td>3100071</td>
<td>400</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Install in Left Rear (LR). Point element 3 or 9 o’clock.
- Install in Left Front (LF) or Left Rear (LR). Point element 12 o’clock.
- Replaces 30mm freeze plug on Right front of engine. Install element 3 o’clock.
- Replaces 40mm freeze plug on Right side of engine – 2ND from rear. Install element 5 o’clock.
- Replaces 50mm freeze plug on Left rear of engine.
- Install in Right Center (RC) of oil cooler. Remove 3-hole plate.

### UD TRUCK

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD35T</td>
<td>3100012</td>
<td>600</td>
<td>120</td>
<td>30mm</td>
<td>Freeze Plug</td>
<td>3600004</td>
</tr>
<tr>
<td>FD46TA</td>
<td>3100103</td>
<td>400</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>FE6</td>
<td>8602441</td>
<td>1000</td>
<td>120</td>
<td>40mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
<tr>
<td>NE6</td>
<td>8602492</td>
<td>1500</td>
<td>120</td>
<td>50mm</td>
<td>Freeze Plug</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:**
- Replaces 30mm freeze plug on Right front of engine. Install element 3 o’clock.
- Install in Left Rear (LR) above fuel pump.
- Replaces 40mm freeze plug on Right side of engine – 2ND from rear. Install element 5 o’clock.
- Replaces 50mm freeze plug on Left rear of engine.
- Install in Right Center (RC) of oil cooler. Remove 3-hole plate.

### VOLKSWAGEN

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>1588cc</td>
<td>3100034</td>
<td>400</td>
<td>120</td>
<td>36.5mm</td>
<td>Freeze Plug</td>
<td>3600016</td>
</tr>
</tbody>
</table>

**Installation Information:** Install in Right Center (RC). Point element 6 o’clock.
### VOLVO

#### D11 (10.8L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500099</td>
<td>1000</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500100</td>
<td>1500</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500101</td>
<td>1500</td>
<td>240</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600086</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Rear (Contact Volvo dealer for Replacement O’Ring P/N 975664).

#### D13 (12.8L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500102</td>
<td>1500</td>
<td>240</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600086</td>
</tr>
<tr>
<td>3500115</td>
<td>1500</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500104</td>
<td>1000</td>
<td>120</td>
<td>25mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
</tbody>
</table>

**Installation Information:** Right Front (RF) in coolant pipe. (Contact Volvo dealer for Replacement O-ring (975664).

#### D16 (16.1L)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500105</td>
<td>1500</td>
<td>120</td>
<td>62mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
<tr>
<td>3500106</td>
<td>1000</td>
<td>120</td>
<td>62mm</td>
<td>Immersion</td>
<td>3600085</td>
</tr>
</tbody>
</table>

**Installation Information:** Right front

#### VE-D7

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500041</td>
<td>1500</td>
<td>120</td>
<td>1-3/4&quot;-18</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Replace plug on Left Rear of engine. Reuse existing seal. Point element at 1 o’clock.

#### VED-12 (2002 & Newer)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500090</td>
<td>1000</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>3500091</td>
<td>1500</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
</tbody>
</table>

**Installation Information:** Mount below turbocharger at the Right Center (RC) of engine.

#### VED-12 (Engines manufactured prior to 2002)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600252</td>
<td>1000</td>
<td>120</td>
<td>44mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600287</td>
<td>1500</td>
<td>120</td>
<td>44mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600309</td>
<td>1500</td>
<td>240</td>
<td>44mm</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Mount below turbocharger at the Right Center (RC) of engine.

#### TD60 & TD61 (334 CID), TD70 & TD71 (409 CID), TD73 (427 CID), TD100 & TD101, VE10 (586 CID), TD120, TD121, TD122, TD123 (732 CID)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600252</td>
<td>1000</td>
<td>120</td>
<td>44mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600287</td>
<td>1500</td>
<td>120</td>
<td>44mm</td>
<td>Immersion</td>
<td>3600008</td>
</tr>
<tr>
<td>8600309</td>
<td>1500</td>
<td>240</td>
<td>44mm</td>
<td>Immersion</td>
<td>8608377</td>
</tr>
</tbody>
</table>

**Installation Information:** Replaces 44mm threaded plug on Left Front (LF) of engine. Point element at 4 or 5 o’clock.
### YANMAR

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3T72HLE (3 cyl.)</td>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
<tr>
<td>Installation Information: Install in Left Front (LF).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>3TN66, 3TN72 (3 cyl.)</td>
<td>3500001</td>
<td>400</td>
<td>120</td>
<td>Plate</td>
<td>Immersion</td>
<td>3600003</td>
</tr>
<tr>
<td>Installation Information: Install in Right Rear (RR).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>4TN82E &amp; 4TNE98 (4 cyl.)</td>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Immersion</td>
<td>3600001</td>
</tr>
<tr>
<td>Installation Information: Install in Left Center (LC).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>YYDXL4.4 1 D4T</td>
<td>3100003</td>
<td>400</td>
<td>120</td>
<td>1&quot; NPT</td>
<td>Freeze Plug</td>
<td>3600001</td>
</tr>
<tr>
<td>Installation Information: Install in Left Center (LC).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ZETOR

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Watt</th>
<th>Volt</th>
<th>Diameter</th>
<th>Type</th>
<th>Repl. Cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Models – except 278 (4.5L) &amp; 417 (6.8L)</td>
<td>3100065</td>
<td>600</td>
<td>120</td>
<td>1-3/4&quot;</td>
<td>Freeze Plug</td>
<td>3600006</td>
</tr>
<tr>
<td>Installation Information: Install in Left Rear (LR). Point element UP.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** See page 80-81 for Universal Coolant Heater and Oil Pan Heater applications.
# OIL PAN & TRANSMISSION HEATERS

## THREADED IMMERSION HEATERS (STAINLESS)

- Easy to spec: Not model specific! Measure space and determine threading at installation location.
- 10 watts of power per quart of oil
- Keeps oil warm and free flowing for instant lubrication
- Stainless steel element – Low watt density heating for long life in oil and hydraulic fluid applications
- For use in oil or coolant for oil pans, transmissions, hydraulic systems, etc.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage</th>
<th>Wattage</th>
<th>Thread Size</th>
<th>Element Length</th>
<th>Thermostat Included</th>
<th>Replacement Cordset</th>
</tr>
</thead>
<tbody>
<tr>
<td>2201712</td>
<td>120</td>
<td>150</td>
<td>1/2&quot; NPT</td>
<td>7-3/4&quot; (19.5cm)</td>
<td>3600002</td>
<td>3600002</td>
</tr>
<tr>
<td>8609624</td>
<td>120</td>
<td>150</td>
<td>1/2&quot; NPT</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>2204274*</td>
<td>120</td>
<td>150</td>
<td>1&quot; NPT</td>
<td>6-5/8&quot; (16.6cm)</td>
<td>36000015</td>
<td>36000015</td>
</tr>
<tr>
<td>2200635</td>
<td>120</td>
<td>150</td>
<td>1&quot; NPT</td>
<td>5-5/8&quot; (14.2cm)</td>
<td>36000015</td>
<td>36000015</td>
</tr>
<tr>
<td>8609802</td>
<td>120</td>
<td>150</td>
<td>1&quot; NPT</td>
<td>6&quot; (15.2cm)</td>
<td>8609845</td>
<td>3600008</td>
</tr>
<tr>
<td>3500006</td>
<td>120</td>
<td>150</td>
<td>1-1/16&quot; – 12 STOR</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>3500085</td>
<td>120</td>
<td>150</td>
<td>1-5/16&quot; – 12 STOR</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>3500047</td>
<td>120</td>
<td>150</td>
<td>M22 x 1.5</td>
<td>7&quot; (17.8cm)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8602859</td>
<td>120</td>
<td>150</td>
<td>M22 x 1.5</td>
<td>3-1/2&quot; (8.9cm)</td>
<td>8602794</td>
<td>3600008</td>
</tr>
<tr>
<td>3500071</td>
<td>120</td>
<td>150</td>
<td>M25 x 1.5</td>
<td>3-1/2&quot; (8.9cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>3500094</td>
<td>120</td>
<td>150</td>
<td>M27 x 2</td>
<td>3-1/2&quot; (8.9cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>8609683</td>
<td>120</td>
<td>300</td>
<td>1/2&quot; NPT</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>2201968</td>
<td>120</td>
<td>300</td>
<td>3/4&quot; NPT</td>
<td>11-1/8&quot; (28.2cm)</td>
<td>3600015</td>
<td>3600015</td>
</tr>
<tr>
<td>8603243</td>
<td>120</td>
<td>300</td>
<td>3/4&quot; NPT</td>
<td>5-1/2&quot; (13.9cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>8609861</td>
<td>120</td>
<td>300</td>
<td>1&quot; NPT</td>
<td>6&quot; (15.2cm)</td>
<td>8609853</td>
<td>3600008</td>
</tr>
<tr>
<td>2202662</td>
<td>120</td>
<td>300</td>
<td>1&quot; NPT</td>
<td>6&quot; (15.2cm)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3500079</td>
<td>120</td>
<td>300</td>
<td>1-5/16&quot; STOR</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>8602913</td>
<td>120</td>
<td>300</td>
<td>M22 x 1.5</td>
<td>5-1/2&quot; (13.9cm)</td>
<td>8602905</td>
<td>3600008</td>
</tr>
<tr>
<td>3500093</td>
<td>120</td>
<td>300</td>
<td>M27 x 2</td>
<td>5-1/2&quot; (13.9cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>8609713</td>
<td>120</td>
<td>450</td>
<td>1/2&quot; NPT</td>
<td>7-1/2&quot; (19cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>3500049</td>
<td>120</td>
<td>450</td>
<td>M27 x 2</td>
<td>7-1/4&quot; (18.4cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>8609098</td>
<td>120</td>
<td>1000</td>
<td>1&quot; NPT</td>
<td>9-1/2&quot; (24cm)</td>
<td>-</td>
<td>3600008</td>
</tr>
<tr>
<td>8609837</td>
<td>240</td>
<td>150</td>
<td>1&quot; NPT</td>
<td>6&quot; (15.2cm)</td>
<td>-</td>
<td>-</td>
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<tr>
<td>3500086</td>
<td>240</td>
<td>150</td>
<td>1-5/16&quot; – 12 STOR</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8609659</td>
<td>240</td>
<td>300</td>
<td>1/2&quot; NPT</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3500078</td>
<td>240</td>
<td>300</td>
<td>1-5/16&quot; STOR</td>
<td>5&quot; (12.7cm)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Welding flange included. Designed for Caterpillar 3406 with BrakeSaver

**Note:** To prevent potential damage to heater and fluid, oil pan heaters should only be used to keep warm oil warm. Do not use with cold oil.

**Installation:** Not all oil pans are equipped with ports. Inspect oil pan carefully before ordering to determine available ports. When no pre-threaded port exists, contact the engine manufacturer for proper installation procedure.

**Accessory:** 8602824

1/2" NPT Adapter Bushing (1" outside diameter). For use on steel pans only. 1/2" NPT oil pan heaters are supplied with weld or braze-in adapter.
OIL PAN & TRANSMISSION HEATERS

STANDARD IMMERSION HEATERS

- Easy to Spec: Not model specific! Measure space and determine threading at installation location.
- Ensure quick winter starts – reduce engine wear
- Most efficient type of heater
- Direct OEM replacement in many applications
- Copper element for use in engine blocks
- Includes Power Cord

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage</th>
<th>Wattage</th>
<th>Thread Size</th>
<th>Element Length</th>
<th>For Use In</th>
<th>Replacement Cordset</th>
</tr>
</thead>
<tbody>
<tr>
<td>3500026</td>
<td>120</td>
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<td>2-3/4&quot; (6.9cm)</td>
<td>Coolant</td>
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<tr>
<td>3100093</td>
<td>120</td>
<td>400</td>
<td>3/4&quot; NPT</td>
<td>1&quot; (2.5cm)</td>
<td>Coolant</td>
<td>3600003</td>
</tr>
<tr>
<td>3100003</td>
<td>120</td>
<td>400</td>
<td>1&quot; NPT</td>
<td>1&quot; (2.5cm)</td>
<td>Coolant</td>
<td>3600001</td>
</tr>
<tr>
<td>8606067</td>
<td>120</td>
<td>600</td>
<td>3/4&quot; NPT</td>
<td>1-3/8&quot; (3.4cm)</td>
<td>Coolant</td>
<td>-</td>
</tr>
<tr>
<td>3500022</td>
<td>120</td>
<td>750</td>
<td>3/4&quot; NPT</td>
<td>2-7/8&quot; (7.1cm)</td>
<td>Coolant</td>
<td>3600008</td>
</tr>
<tr>
<td>8602549**</td>
<td>120</td>
<td>1000</td>
<td>3/4&quot; NPT</td>
<td>4&quot; (10.1cm)</td>
<td>Coolant</td>
<td>3600008</td>
</tr>
<tr>
<td>3500032</td>
<td>120</td>
<td>1000</td>
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<td>3-3/8&quot; (8.5cm)</td>
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</tr>
<tr>
<td>3500043</td>
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<td>1000</td>
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<td>3-7/8&quot; (9.7cm)</td>
<td>Coolant</td>
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</tr>
<tr>
<td>8600090</td>
<td>120</td>
<td>1000</td>
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<td>4-1/4&quot; (10.6cm)</td>
<td>Coolant</td>
<td>3600008</td>
</tr>
<tr>
<td>8602611**</td>
<td>120</td>
<td>1500</td>
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<td>4-3/4&quot; (12cm)</td>
<td>Coolant</td>
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<tr>
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<td>5-1/4&quot; (13.3cm)</td>
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</tr>
<tr>
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<td>Coolant</td>
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<tr>
<td>3500013</td>
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<td>1500</td>
<td>1&quot; NPT</td>
<td>3-3/4&quot; (9.5cm)</td>
<td>Coolant</td>
<td>3600008</td>
</tr>
<tr>
<td>8602514**</td>
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<td>4&quot; (10.1cm)</td>
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<td>-</td>
</tr>
<tr>
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<td>1000</td>
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<td>4-1/2&quot; (11.4cm)</td>
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<td>-</td>
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<tr>
<td>8600120</td>
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<td>-</td>
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<tr>
<td>8601054</td>
<td>240</td>
<td>1500</td>
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<td>5-1/4&quot; (13.3cm)</td>
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<td>-</td>
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<tr>
<td>8600260</td>
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</tr>
<tr>
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<td>1500</td>
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<td>3-3/4&quot; (9.5cm)</td>
<td>Coolant</td>
<td>-</td>
</tr>
</tbody>
</table>

**Element does not turn during installation.
Warning: Not for use in oil or hydraulic-fluids.
# CORDSETS

## STANDARD

### Application(s)
- Freeze Plug Heaters
- Engine Block Heaters
- Oil Pan Heaters
- Transmission Heaters

<table>
<thead>
<tr>
<th>Plug Type</th>
<th>Part No.</th>
<th>Connector Angle</th>
<th>Cord Length</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3600001</td>
<td>R</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>3600002</td>
<td>R</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>3600023</td>
<td>R</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>36000010</td>
<td>R</td>
<td>7.5' (2.29m)</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3600019</td>
<td>R</td>
<td>3' (0.9m)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>3600003</td>
<td>S</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>3600005</td>
<td>S</td>
<td>5' (1.52m)</td>
<td>Aluminum &amp; Brass Heaters</td>
</tr>
<tr>
<td>E</td>
<td>3600006</td>
<td>R</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>3600021</td>
<td>R</td>
<td>94&quot; (2.4m)*</td>
<td>Steel Heaters</td>
</tr>
<tr>
<td>E</td>
<td>3600036</td>
<td>R</td>
<td>1' (30.3cm)</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3600007</td>
<td>R</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>3600016</td>
<td>R</td>
<td>6' (1.83M)</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>3600004</td>
<td>R</td>
<td>5' (1.52m)</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>3600022</td>
<td>R</td>
<td>1' (30.3cm)</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>3600080</td>
<td>S</td>
<td>5' (1.52m)</td>
<td>Pyroil Brands Only</td>
</tr>
<tr>
<td>J</td>
<td>3600083</td>
<td>S</td>
<td>5' (1.52m)</td>
<td>GM - Threaded cordnut</td>
</tr>
<tr>
<td>J</td>
<td>3600100</td>
<td>S</td>
<td>5' (1.52m)</td>
<td>GM - Cord clip</td>
</tr>
<tr>
<td>J</td>
<td>3600082</td>
<td>S</td>
<td>5' (1.52m)</td>
<td>GM - Includes thermostat, 2006 and newer models to avoid check engine light</td>
</tr>
</tbody>
</table>
## HEAVY DUTY

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600024</td>
<td>Threaded Cord Nut</td>
<td>120</td>
<td>1' (30.1CM)</td>
<td>16</td>
</tr>
<tr>
<td>3600015</td>
<td>Threaded Cord Nut</td>
<td>120</td>
<td>5' (1.5M)</td>
<td>16</td>
</tr>
<tr>
<td>3600085</td>
<td>Volvo, High-Temp Sleeve, Threaded Cord Nut</td>
<td>120</td>
<td>6' (1.8M)</td>
<td>14</td>
</tr>
<tr>
<td>3600048</td>
<td>High-Temp Sleeve, Threaded Cord Nut</td>
<td>120</td>
<td>6' (1.8M)</td>
<td>16</td>
</tr>
<tr>
<td>3600008</td>
<td>Threaded Cord Nut</td>
<td>120</td>
<td>6' (1.8M)</td>
<td>16</td>
</tr>
<tr>
<td>8608377</td>
<td>Threaded Cord Nut</td>
<td>240</td>
<td>6' (1.8M)</td>
<td>16</td>
</tr>
<tr>
<td>3600086</td>
<td>Volvo, High-Temp Sleeve, Threaded Cord Nut</td>
<td>240</td>
<td>6' (1.8M)</td>
<td>14</td>
</tr>
</tbody>
</table>

## WEATHERPROOF

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
</tr>
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<tbody>
<tr>
<td>3600046</td>
<td>120</td>
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<td>18</td>
</tr>
<tr>
<td>8608849</td>
<td>120</td>
<td>5.5' (1.7m)</td>
<td>14</td>
</tr>
<tr>
<td>8608652</td>
<td>120</td>
<td>7' (2.2m)</td>
<td>14</td>
</tr>
<tr>
<td>8608814</td>
<td>120</td>
<td>10' (3.1m)</td>
<td>14</td>
</tr>
<tr>
<td>8608857</td>
<td>120</td>
<td>12' (3.6m)</td>
<td>14</td>
</tr>
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<td>8608865</td>
<td>120</td>
<td>14' (4.3m)</td>
<td>14</td>
</tr>
<tr>
<td>8605122</td>
<td>240*</td>
<td>7' (2.2m)</td>
<td>14</td>
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</table>

## CORDSET ACCESSORIES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600012</td>
<td>Plug Protector</td>
</tr>
<tr>
<td></td>
<td>• Prevents freeze ups</td>
</tr>
<tr>
<td></td>
<td>• Keeps plug contacts clean for optimum power &amp; safety</td>
</tr>
<tr>
<td>3600040</td>
<td>3-way Connector</td>
</tr>
<tr>
<td></td>
<td>• Use multiple cold weather products with one common cord</td>
</tr>
<tr>
<td></td>
<td>• 3 Wire grounded cord</td>
</tr>
<tr>
<td></td>
<td>• Not available in Canada (Not CSA Approved)</td>
</tr>
<tr>
<td></td>
<td>• Cord Length 23&quot; (59cm)</td>
</tr>
<tr>
<td></td>
<td>• 14 Gauge Cord</td>
</tr>
<tr>
<td>3600018</td>
<td>Through-The-Grille Cordset</td>
</tr>
<tr>
<td></td>
<td>• 2 Piece, Low Profile</td>
</tr>
<tr>
<td></td>
<td>• Prevents plug from bening visible</td>
</tr>
<tr>
<td></td>
<td>• Fits all vehicles</td>
</tr>
<tr>
<td></td>
<td>• 120 V AC 1500 W</td>
</tr>
<tr>
<td></td>
<td>• Cord Length 6' (1.8m)</td>
</tr>
<tr>
<td>3600045</td>
<td>Cord Holder</td>
</tr>
<tr>
<td></td>
<td>• Holds cord in place for routing</td>
</tr>
<tr>
<td>3600115</td>
<td>Thermostat By-Pass Tool</td>
</tr>
<tr>
<td></td>
<td>• Used to test heavy duty heaters through a Series Y-Cord</td>
</tr>
<tr>
<td></td>
<td>• Connects to thermostat cord end of a Series Y-Cord</td>
</tr>
</tbody>
</table>
FLIP CAP RECEPTACLE

A bumper mount receptacle that provides a complete connection between the engine block heater and a standard 120 volt outlet.

Benefits:
- Provides convenient access to plug in the engine block heater
- Eliminate dangling power cords
- Low profile flip cap receptacle
- Automotive and light duty applications

Features:
- Kit Includes: Receptacle with cordset and silicone connector, 16' (5m) power cord, template and receptacle installation instructions
- Optional 1.5' (46cm) extension cord (sold separately)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>1.5’ Extension</th>
<th>Plug Type</th>
<th>Connector Angle</th>
<th>Replacement Cordset</th>
<th>Misc.</th>
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<tbody>
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<td>3700002</td>
<td>A</td>
<td>R</td>
<td>3600001</td>
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<tr>
<td>3600129</td>
<td>3700002</td>
<td>H</td>
<td>R</td>
<td>3600004</td>
<td></td>
</tr>
<tr>
<td>3600127</td>
<td>3700002</td>
<td>D</td>
<td>S</td>
<td>3600005</td>
<td>Aluminum &amp; Brass Heaters</td>
</tr>
<tr>
<td>3600124</td>
<td>3700002</td>
<td>E</td>
<td>R</td>
<td>3600006</td>
<td>Steel Heaters</td>
</tr>
<tr>
<td>3600128</td>
<td>3700002</td>
<td>I</td>
<td>S</td>
<td>3600080</td>
<td>Pyroil Brands Only</td>
</tr>
</tbody>
</table>

Cross reference the Replacement Cordset part number with the Flip Cap Receptacle to identify the appropriate part.

LIT PLUGS

The cordset plug lights indicating power is being supplied to the engine block heater.

Benefits:
- Light is visible from 50’ (15m) to monitor from a distance
- Automotive and light duty applications

Features:
- 120 Volt AC plug with LED indicator light
- Cordset Length: 5' (1.5m)
- Available in and cordset only

<table>
<thead>
<tr>
<th>Part No.</th>
<th>1.5’ Extension</th>
<th>Plug Type</th>
<th>Connector Angle</th>
<th>Replacement Cordset</th>
<th>Misc</th>
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<tbody>
<tr>
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<td>S’ (1.52m)</td>
<td>A</td>
<td>R</td>
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</tr>
<tr>
<td>3600117</td>
<td>S’ (1.52m)</td>
<td>D</td>
<td>S</td>
<td>3600005</td>
<td>Aluminum &amp; Brass Heaters</td>
</tr>
<tr>
<td>3600116</td>
<td>S’ (1.52m)</td>
<td>E</td>
<td>R</td>
<td>3600006</td>
<td>Steel Heaters</td>
</tr>
<tr>
<td>3600119</td>
<td>S’ (1.52m)</td>
<td>J</td>
<td>S</td>
<td>3600082</td>
<td>GM 2006 and newer models to avoid check engine light</td>
</tr>
<tr>
<td>3600119</td>
<td>S’ (1.52m)</td>
<td>J</td>
<td>S</td>
<td>3600083</td>
<td></td>
</tr>
</tbody>
</table>

Lit Plug Cordset: Cross reference the Replacement Cordset part number with the Lit Plug to identify the appropriate part

Lit Plug Kit
Includes engine block heater and lit plug.

Lit Plug Only

LIT PLUG CORDSETS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Cord Length</th>
<th>Plug Type</th>
<th>Connector Angle</th>
<th>Replacement Cordset</th>
<th>Misc</th>
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</thead>
<tbody>
<tr>
<td>3600119</td>
<td>S’ (1.52m)</td>
<td>A</td>
<td>R</td>
<td>3600001</td>
<td></td>
</tr>
<tr>
<td>3600117</td>
<td>S’ (1.52m)</td>
<td>D</td>
<td>S</td>
<td>3600005</td>
<td>Aluminum &amp; Brass Heaters</td>
</tr>
<tr>
<td>3600116</td>
<td>S’ (1.52m)</td>
<td>E</td>
<td>R</td>
<td>3600006</td>
<td>Steel Heaters</td>
</tr>
<tr>
<td>3600119</td>
<td>S’ (1.52m)</td>
<td>J</td>
<td>S</td>
<td>3600082</td>
<td>GM 2006 and newer models to avoid check engine light</td>
</tr>
<tr>
<td>3600119</td>
<td>S’ (1.52m)</td>
<td>J</td>
<td>S</td>
<td>3600083</td>
<td></td>
</tr>
</tbody>
</table>

Lit Plug Kit
Includes engine block heater and lit plug.

Lit Plug Only

Lit Plug Cordset: Cross reference the Replacement Cordset part number with the Lit Plug to identify the appropriate part

Reference the Automotive and Light Duty Section of the catalog for application.
THERMOSTAT & IMMERSION HEATER SYSTEM

Select each of the following components to customize your heavy duty solution.

- Engine Block Heater
- Thermostat
- Series Y-Cord
- Indicator Light

THERMOSTATS

Upgrade Option:

Install thermostat on opposite side of engine block heater and use Series Y-Cord to connect thermostat with engine block heater. The thermostat will turn the engine block heater on & off for maximum efficiency.

Features

- Thermostatically controlled
- Saves money by reducing engine heater operating hours
- For new installations or replacement use
- For more economy use lower thermostat temperature settings

COMMON THERMOSTAT APPLICATION CHART

<table>
<thead>
<tr>
<th>Engine</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATERPILLAR</td>
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<td></td>
</tr>
<tr>
<td>3406E</td>
<td>3600066</td>
<td>3/4&quot; NPT</td>
</tr>
<tr>
<td>C9</td>
<td>3600081</td>
<td>#8 STOR</td>
</tr>
<tr>
<td>C11 &amp; C13</td>
<td>3600081</td>
<td>#8 STOR</td>
</tr>
<tr>
<td>C15 &amp; C16</td>
<td>3600081</td>
<td>#8 STOR</td>
</tr>
<tr>
<td>CUMMINS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISB</td>
<td>3600066</td>
<td>3/4&quot; NPT</td>
</tr>
<tr>
<td>ISC</td>
<td>3600066</td>
<td>3/4&quot; NPT</td>
</tr>
<tr>
<td>ISM</td>
<td>3600068</td>
<td>1/2&quot; NPT</td>
</tr>
<tr>
<td>ISX</td>
<td>3600087</td>
<td>M27</td>
</tr>
<tr>
<td>DETROIT DIESEL</td>
<td></td>
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</tr>
<tr>
<td>Series-60</td>
<td>3600066</td>
<td>3/4&quot; NPT</td>
</tr>
<tr>
<td>DD13, DD15, DD16</td>
<td>3600087</td>
<td>M27</td>
</tr>
<tr>
<td>INTERNATIONAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT-666 (Non-EGR 1998-2005)</td>
<td>3600068</td>
<td>1/2&quot; NPT</td>
</tr>
<tr>
<td>DT 5 &amp; 7</td>
<td>3600087</td>
<td>M27</td>
</tr>
<tr>
<td>DT 11 &amp; 13</td>
<td>3600087</td>
<td>M27</td>
</tr>
<tr>
<td>MACK</td>
<td></td>
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<tr>
<td>E-Tech</td>
<td>3600066</td>
<td>1/2&quot; NPT</td>
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<tr>
<td>PACCAR</td>
<td></td>
<td></td>
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<tr>
<td>PX-6, PX-7</td>
<td>3600066</td>
<td>3/4&quot; NPT</td>
</tr>
<tr>
<td>PX-8, PX-9</td>
<td>3600066</td>
<td>3/4&quot; NPT</td>
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</tbody>
</table>

SPECIALTY CORDSETS

SERIES Y-CORDS

Application:

- Use with heater and thermostat to control heater usage.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
<th>Thermostat On / Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600065</td>
<td>Series Y-Cord (standard plug)</td>
<td>120</td>
<td>6’ / 6’</td>
<td>16</td>
<td>–</td>
</tr>
<tr>
<td>8604002</td>
<td>Series Y-Cord and thermostat (standard plug)</td>
<td>120</td>
<td>6’ / 6’</td>
<td>16</td>
<td>100° F / 120° F</td>
</tr>
<tr>
<td>8604037</td>
<td>Series Y-Cord and thermostat (standard plug)</td>
<td>240</td>
<td>6’ / 6’</td>
<td>16</td>
<td>100° F / 120° F</td>
</tr>
</tbody>
</table>
## WEATHERPROOF SERIES Y-CORDS

**Application:**
- Use with heater and thermostat to control heater usage.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600079</td>
<td>Weatherproof Series Y-Cord &amp; indicator light connections</td>
<td>120</td>
<td>72&quot; / 72&quot;</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3600091</td>
<td>Weatherproof Series Y-Cord &amp; indicator light connections</td>
<td>120</td>
<td>100&quot; / 168&quot;</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3600090</td>
<td>Weatherproof Series Y-Cord &amp; indicator light connections</td>
<td>120</td>
<td>110&quot; / 55&quot;</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3600097</td>
<td>Weatherproof Series Y-Cord &amp; indicator light connections</td>
<td>120</td>
<td>168&quot; / 168&quot;</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3600054</td>
<td>Weatherproof Series Y-Cord Kit - Thermostat, Housing &amp; Dual Indicator Light</td>
<td>120</td>
<td>6' / 6</td>
<td>16</td>
<td>100° F / 120° F (on/off)</td>
</tr>
<tr>
<td>3600094</td>
<td>Weatherproof W-Cord Series and Parallel Note: One heater is always on and one heater is controlled by thermostat</td>
<td>120</td>
<td>10' / 10' / 11.5'</td>
<td>16</td>
<td></td>
</tr>
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</table>

## WEATHERPROOF W-CORD

**Application:**
- Use with two heaters and one thermostat

<table>
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<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600094</td>
<td>Weatherproof W-Cord Series and Parallel Note: One heater is always on and one heater is controlled by thermostat</td>
<td>120</td>
<td>10' / 10' / 11.5'</td>
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</table>

## WEATHERPROOF PARALLEL Y-CORD

**Application:**
- Use with multiple heaters (no thermostat)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>8608768</td>
<td>Weatherproof Parallel Y-Cord with AC Outlet</td>
<td>120</td>
<td>12' / 7'</td>
<td>14</td>
<td>12&quot; Female Plug</td>
</tr>
<tr>
<td>8608792</td>
<td>Weatherproof Parallel Y-Cord with AC Outlet</td>
<td>120</td>
<td>12' / 10'</td>
<td>14</td>
<td>12&quot; Female Plug</td>
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<tr>
<td>8607990</td>
<td>Weatherproof Parallel Y-Cord</td>
<td>120</td>
<td>7' / 7'</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>8608059</td>
<td>Weatherproof Parallel Y-Cord</td>
<td>120</td>
<td>7' / 10'</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>8608423</td>
<td>Weatherproof Parallel Y-Cord</td>
<td>120</td>
<td>14' / 14'</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>8607311</td>
<td>Weatherproof Parallel Y-Cord &amp; Receptacle</td>
<td>120</td>
<td>7' / 9'</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>
WEATHERPROOF RECEPTACLES & INDICATOR LIGHTS

RECEPTACLE + SINGLE INDICATOR LIGHT
- All features of receptacle PLUS
- LED indicator light for voltage confirmation or heater operation at a single glance

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Specifications</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600101</td>
<td>Indicator Light Receptacle</td>
<td></td>
<td>2.25” W x 2.5” H</td>
<td>chrome</td>
</tr>
<tr>
<td>3600098</td>
<td>Indicator Light Harness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3600099</td>
<td>Indicator Light Harness &amp; Receptacle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3600067</td>
<td>Replacement LED Light</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RECEPTACLE + DUAL INDICATOR LIGHT
- All features of receptacle PLUS
- LED indicator light for voltage confirmation at a single glance
- LED indicator light for heater operation at a single glance

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Specifications</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600049</td>
<td>Receptacle, light plate and cord kit</td>
<td>120</td>
<td>6'</td>
<td>chrome</td>
</tr>
<tr>
<td>3600062</td>
<td>Replacement Cord</td>
<td>120</td>
<td>6'</td>
<td></td>
</tr>
<tr>
<td>3600078</td>
<td>Replacement Cord</td>
<td>120</td>
<td>12'</td>
<td></td>
</tr>
<tr>
<td>3600060</td>
<td>Replacement Indicator Light Plate</td>
<td></td>
<td></td>
<td>chrome</td>
</tr>
<tr>
<td>3600077</td>
<td>Replacement Indicator Light Plate</td>
<td></td>
<td>24 hole square</td>
<td>black</td>
</tr>
<tr>
<td>3600067</td>
<td>Replacement LED Light</td>
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</table>

KITS & ACCESSORIES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Volts</th>
<th>Length</th>
<th>Gauge</th>
<th>Housing Spec.</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600028</td>
<td>Weatherproof Cordset &amp; receptacle</td>
<td>120</td>
<td>8' (2.4m)</td>
<td>16</td>
<td>2-hole square</td>
<td>chrome plated</td>
</tr>
<tr>
<td>3600014</td>
<td>Weatherproof Cordset &amp; receptacle</td>
<td>120</td>
<td>12' (3.6m)</td>
<td>16</td>
<td>2-hole square</td>
<td>chrome plated</td>
</tr>
<tr>
<td>8602891</td>
<td>Weatherproof cordset &amp; receptacle</td>
<td>120</td>
<td>6' (1.8m)</td>
<td>16</td>
<td>3-hole round</td>
<td>zinc plated</td>
</tr>
<tr>
<td>8602948</td>
<td>Weatherproof cordset &amp; receptacle</td>
<td>120</td>
<td>10' (3.1m)</td>
<td>16</td>
<td>3-hole round</td>
<td>zinc plated</td>
</tr>
<tr>
<td>8602921</td>
<td>Weatherproof cordset &amp; receptacle</td>
<td>240*</td>
<td>6' (1.8m)</td>
<td>16</td>
<td>3-hole round</td>
<td>zinc plated</td>
</tr>
<tr>
<td>8606005</td>
<td>Weatherproof Silicone Cordset &amp; receptacle</td>
<td>120</td>
<td>6' (1.8m)</td>
<td>16</td>
<td>4-hole square</td>
<td>chrome plated</td>
</tr>
<tr>
<td>8606013</td>
<td>Weatherproof Silicone Cordset &amp; receptacle</td>
<td>120</td>
<td>10' (3.1m)</td>
<td>16</td>
<td>4-hole square</td>
<td>chrome plated</td>
</tr>
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</table>
## KITS & ACCESSORIES

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Cord Specs</th>
<th>Housing Specs</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>8605505</td>
<td>Receptacle - Round (Weatherproof Field-Wired)</td>
<td>120V</td>
<td>3-Hole</td>
<td>Zinc Plated</td>
</tr>
<tr>
<td>8605688</td>
<td>Receptacle - Square (Weatherproof Field-Wired)</td>
<td>120V</td>
<td>4-Hole</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>8605513</td>
<td>Receptacle - Round (Weatherproof Field-Wired)</td>
<td>240V</td>
<td>3-Hole</td>
<td>Zinc Plated</td>
</tr>
<tr>
<td>3600041</td>
<td>Receptacle &amp; 3-Way Connector (not CSA)</td>
<td>120V, 5' (1.5m), 14 Gauge</td>
<td>4-Hole Square</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>8608032</td>
<td>Receptacle - Square</td>
<td>-</td>
<td>2-Hole, Gasket, 2.5&quot; (6.2cm)</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>8605149</td>
<td>Receptacle - Square</td>
<td>-</td>
<td>2-Hole, 2.5&quot; (6.2cm)</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>3600056</td>
<td>Receptacle - Round</td>
<td>-</td>
<td>3-Hole, Gasket, 2.8</td>
<td>Zinc Plated</td>
</tr>
<tr>
<td>8606080</td>
<td>Receptacle - Square</td>
<td>-</td>
<td>4-Hole, 2.5&quot; (6.2cm)</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>3600088</td>
<td>Receptacle - Square</td>
<td>-</td>
<td>4-Hole, 2.5&quot; (6.2cm)</td>
<td>Black Steel</td>
</tr>
<tr>
<td>8606056</td>
<td>Mounting Bracket - Square Use With: 8605505, 8602921, 8602948</td>
<td>-</td>
<td>3-Hole, 3&quot; W x 3.5&quot;H</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>8606048</td>
<td>Mounting Bracket - Square Use With: 8605688, 3600028, 3600041, 8606080, 3600014, 3600088</td>
<td>-</td>
<td>2 &amp; 4-Hole, 3&quot; W x 3.5&quot;H</td>
<td>Chrome Plated</td>
</tr>
<tr>
<td>8605254</td>
<td>Male Plug - Weatherproof</td>
<td>120V, 15A</td>
<td>Use with any Weatherproof Housing</td>
<td></td>
</tr>
<tr>
<td>8605646</td>
<td>Rubber Boot - Weatherproof</td>
<td>Use with any Weatherproof Housing</td>
<td></td>
<td></td>
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</tbody>
</table>
CIRCULATION HEATERS

FORCED FLOW

Circulates warm coolant throughout the engine to provide even heat distribution.

**Application(s)**
- Diesel or Natural Gaseous Genset

**Features**
- Nonmagnetic impeller
- Die cast aluminum housing
- Corrosion resistant steel brackets included
- Thermostatically controlled and protected
  - On 80°F (27°C)
  - Off 125°F (52°C)
- Safety shut-off provides overheat protection
- Improves even heat distribution throughout engine
- Reduce low coolant level alarms
- 6' (1.8m) cord
- Assembled service kit available includes element, thermostat, wire harness, cover and o-ring

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Outlet Location</th>
<th>Watts</th>
<th>Volts</th>
<th>Amps</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Heater Hose Connections</th>
<th>Service Kit</th>
<th>Plug Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>3309020</td>
<td>Right</td>
<td>1500</td>
<td>120</td>
<td>12.5</td>
<td>8-1/2&quot; (22cm)</td>
<td>4-13/16&quot; (12.2cm)</td>
<td>10' (25.4cm)</td>
<td>5/8&quot; (16mm)</td>
<td>3309026</td>
<td>C</td>
</tr>
<tr>
<td>3309021</td>
<td>Left</td>
<td>1500</td>
<td>120</td>
<td>12.5</td>
<td>8-1/2&quot; (22cm)</td>
<td>4-13/16&quot; (12.2cm)</td>
<td>10' (25.4cm)</td>
<td>5/8&quot; (16mm)</td>
<td>3309027</td>
<td>C</td>
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<tr>
<td>-</td>
<td>Right</td>
<td>2700</td>
<td>240</td>
<td>11.25</td>
<td>8-1/2&quot; (22cm)</td>
<td>4-13/16&quot; (12.2cm)</td>
<td>10' (25.4cm)</td>
<td>5/8&quot; (16mm)</td>
<td>-</td>
<td>B</td>
</tr>
<tr>
<td>-</td>
<td>Left</td>
<td>2700</td>
<td>240</td>
<td>11.25</td>
<td>8-1/2&quot; (22cm)</td>
<td>4-13/16&quot; (12.2cm)</td>
<td>10' (25.4cm)</td>
<td>5/8&quot; (16mm)</td>
<td>-</td>
<td>B</td>
</tr>
</tbody>
</table>

HIGH CAPACITY

Applications:
- Industrial
- Big Bore Engines (14L+)

Features:
- Low Watt-Density heating elements for long life
- Thermally isolated regulating thermostat available
- Overheat thermostat 205°F (96°C) to 165°F (74°C)
- NRTL/C approval (complies with UL/CSA)
- Four-bolt flange for easy element replacement
- 14 gauge SJOW cord (16 in. length – 40.6cm) is abrasion, oil, and grease resistant
- Nylon check valve
- 1” NPT inlet and outlet / 1/4” NPT drain

Regulating & Overheat Thermostat

Overheat Thermostat
# CIRCULATION HEATERS

## HIGH CAPACITY

**Mounting space requirements:**

- 27.5" (69.8cm) length x 3" (7.6cm) width x 6.5" (16.5cm) height.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Amps</th>
<th>Replacement Heating Element - 205°F (96°C)</th>
<th>Regulating T-Stat Service Kit</th>
<th>Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>3300011</td>
<td>120</td>
<td>1500</td>
<td>12.5</td>
<td>Y</td>
<td>3300051</td>
<td>3300094 A</td>
</tr>
<tr>
<td>3300012</td>
<td>120</td>
<td>2000</td>
<td>16.7</td>
<td>Y</td>
<td>3300052</td>
<td>3300094 C</td>
</tr>
<tr>
<td>3300014</td>
<td>240</td>
<td>2000</td>
<td>8.4</td>
<td>Y</td>
<td>-</td>
<td>3300094 B</td>
</tr>
<tr>
<td>3300015</td>
<td>120</td>
<td>2250</td>
<td>18.8</td>
<td>Y</td>
<td>3300055</td>
<td>3300094 C</td>
</tr>
<tr>
<td>3300018</td>
<td>240</td>
<td>3000</td>
<td>12.5</td>
<td>Y</td>
<td>-</td>
<td>3300094 B</td>
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</tbody>
</table>

**Regulating Thermostat On/Off − 100° / 120°F (38° / 49°C)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Amps</th>
<th>Replacement Heating Element - 205°F (96°C)</th>
<th>Regulating T-Stat Service Kit</th>
<th>Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>3300021</td>
<td>120</td>
<td>1500</td>
<td>12.5</td>
<td>Y</td>
<td>3300051</td>
<td>3300095 A</td>
</tr>
<tr>
<td>3300022</td>
<td>120</td>
<td>2000</td>
<td>16.7</td>
<td>Y</td>
<td>3300052</td>
<td>3300095 C</td>
</tr>
<tr>
<td>3300025</td>
<td>120</td>
<td>2250</td>
<td>18.8</td>
<td>Y</td>
<td>3300055</td>
<td>3300095 C</td>
</tr>
<tr>
<td>3300030</td>
<td>240</td>
<td>4000</td>
<td>16.6</td>
<td>Y</td>
<td>3300061</td>
<td>3300095 D</td>
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</table>

**Regulating Thermostat On/Off − 120° / 140°F (49° / 60°C)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Amps</th>
<th>Replacement Heating Element - 205°F (96°C)</th>
<th>Regulating T-Stat Service Kit</th>
<th>Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>3300031</td>
<td>120</td>
<td>1500</td>
<td>12.5</td>
<td>Y</td>
<td>3300051</td>
<td>3300096 A</td>
</tr>
<tr>
<td>3300032</td>
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<td>2000</td>
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<td>Y</td>
<td>3300052</td>
<td>3300096 C</td>
</tr>
<tr>
<td>3300035</td>
<td>120</td>
<td>2250</td>
<td>18.8</td>
<td>Y</td>
<td>3300055</td>
<td>3300096 C</td>
</tr>
<tr>
<td>3300037</td>
<td>240</td>
<td>2500</td>
<td>10.4</td>
<td>Y</td>
<td>-</td>
<td>3300096 B</td>
</tr>
<tr>
<td>3300039</td>
<td>240</td>
<td>3500</td>
<td>14.6</td>
<td>Y</td>
<td>-</td>
<td>3300096 B</td>
</tr>
</tbody>
</table>

**Overheat Thermostat (No Regulating Thermostat)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Amps</th>
<th>Replacement Heating Element - 205°F (96°C)</th>
<th>Regulating T-Stat Service Kit</th>
<th>Plug</th>
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<tr>
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<td>2500</td>
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## REGULATING THERMOSTATS

- Fits all high capacity circulation heaters
- Includes: Housing, thermostat, o-ring, & t-stat cord

<table>
<thead>
<tr>
<th>T-Stat On</th>
<th>T-Stat Off</th>
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<tbody>
<tr>
<td>80°F (27°C)</td>
<td>100°F (38°C)</td>
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<tr>
<td>100°F (38°C)</td>
<td>120°F (49°C)</td>
</tr>
<tr>
<td>120°F (49°C)</td>
<td>140°F (60°C)</td>
</tr>
</tbody>
</table>
### Features:
- Rugged die cast, one-piece, aluminum construction
- Low watt, density copper heating element
- Temperature sensing thermostat with automatic reset
- Water resistant terminal end cap protects against harsh chemicals
- Flame retardant, permanently connected power cord

### Overall Dimensions

![Overall Dimensions Diagram]

### Part No. Volts Watts Amps Inlet/Outlet Size Thermostat On/Off - Temperature启用

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Amps</th>
<th>Inlet/Outlet Size</th>
<th>Thermostat On/Off - Temperature启用</th>
<th>Power Cord Length</th>
<th>Tank Size</th>
<th>Plug</th>
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<tr>
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<td>5’ (1.5m)</td>
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</tr>
<tr>
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<td>120</td>
<td>1000</td>
<td>8.3</td>
<td>5/8”</td>
<td>-</td>
<td>Yes</td>
<td>5’ (1.5m)</td>
<td>Small A</td>
</tr>
<tr>
<td>3305052</td>
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<td>Large -</td>
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<td>750</td>
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<td>-</td>
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<td>5’ (1.5m)</td>
<td>Large -</td>
</tr>
</tbody>
</table>

See page 87 for plug configuration.
CIRCULATION HEATERS

SERIES 41

**Applications:**
- Industrial
- Agriculture
- Off-road

**Features:**
- Thermostatically controlled: Opens at 190°F (88°C), closes at 151°F (66°C)
- Vertical installation only
- Heavy Duty 3-wire 5 ft. (1.52m) attached cord, 2000W heater has 22" attached cord.
- Rugged cast aluminum construction is corrosion and impact resistant.
- Copper heating element provides excellent heat transfer.
- Dimensions: 2-3/4" x 8-1/2" (7cm x 21.6cm)
- Replaceable element and thermostat

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watts</th>
<th>Volts</th>
<th>Amps</th>
<th>Plug Configuration</th>
<th>Inlet/Outlet Size</th>
<th>Replacement Element</th>
<th>Thermostat</th>
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<td>2204061</td>
<td>2204266</td>
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<tr>
<td>2204029</td>
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<td>12</td>
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<td>2204088</td>
<td>2204266</td>
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<td>2204037</td>
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<td>C</td>
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<td>2204266</td>
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<td>–</td>
<td>–</td>
<td>–</td>
<td>2204266</td>
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<tr>
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<td>B</td>
<td>–</td>
<td>–</td>
<td>220126</td>
<td>2204266</td>
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</tbody>
</table>

See page 87 for plug configuration.

SERIES 8000

**Applications:**
- Light-duty

**Features:**
- Cylindrical design of heater and universal mounting strap allow for convenient, new or retrofit applications.
- Integral check valve supports extensive range of plumbing configurations.
- Top-side location of power cord connection provides damage protection from road debris and chemicals.
- New detachable power cord enhances ease of installation.
- Temperature sensing safety thermostat provides overheat protection 147°F (64°C) ON - 185°F (85°C) OFF.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Watts</th>
<th>Volts</th>
<th>Amps</th>
<th>Plug Configuration</th>
<th>Inlet/Outlet Size</th>
<th>Replacement Cord 18&quot;</th>
<th>Replacement Cord 60&quot;</th>
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</thead>
<tbody>
<tr>
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<td>16</td>
<td>A</td>
<td>5/8&quot;</td>
<td>3309001</td>
<td>3309002</td>
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<tr>
<td>3308002</td>
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<td>12</td>
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<td>5/8&quot;</td>
<td>3309001</td>
<td>3309002</td>
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<tr>
<td>3308003</td>
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<td>5/8&quot;</td>
<td>3309001</td>
<td>3309002</td>
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</table>

See page 87 for plug configuration.
CIRCULATION HEATERS

PLUG CONFIGURATIONS

<table>
<thead>
<tr>
<th>PLUG CONFIGURATIONS</th>
<th>(A)</th>
<th>(B)</th>
<th>(C)</th>
<th>(D)</th>
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</thead>
<tbody>
<tr>
<td>Standard Plug</td>
<td>125 Volt 15 Amp</td>
<td>240 Volt 15 Amp</td>
<td>125 Volt 20 Amp</td>
<td>240 Volt 20 Amp</td>
</tr>
<tr>
<td>Weatherproof Plug</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- (A) Furnished with standard 120V male plug.
- (B) Furnished with standard 240V male plug.
- (C) Furnished with high-current 120V male plug. 20 Amp electrical service required.
- (D) Plug not attached. High-current 240V detachable male plug is provided. 20 Amp electrical service required.

A Note About Extension Cord Selection and Usage:

When using an extension cord with one or more heating devices, it is important that the TOTAL current draw of all devices not exceed the capacity of the extension cord or the AC circuit. Use only 3-wire GROUNDED extension cords. Ground Fault Interrupter (GFI) service is also recommended. See page 4 for more information on proper cord length and gauge.

All circulation heaters on pages 87-90 are equipped with different male plugs depending on the wattage and voltage requirements of the heater. This diagram shows the plug configuration for the three wattage/voltage combinations that are used. Vehicles with heater hose connected to radiator cannot use circulation type heaters.

ACCESSORIES

The small size of some engine compartments, especially vehicles with transverse engines, may make circulation heater installation difficult even though it may be listed as a heating option. The following accessories are available for use with circulation heaters:

**Part No. 3300085**
5/8" (15.8MM) x 3/4" (19MM)
Metal "T" fitting

**Part No. 3300086**
1/4" NPT (6MM)
"A" Adapter to 5/8" (15.8MM) hose

**Part No. 3300090**
5/8" (15.8MM) x 3/4" (19MM)
Plastic "Y" fitting

**Beaded T (Steel)**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>DIM A</th>
<th>DIM B</th>
<th>DIM C</th>
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<tbody>
<tr>
<td>A-2321</td>
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<td>5/8&quot;</td>
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<tr>
<td>A-2323</td>
<td>5/8&quot;</td>
<td>7/8&quot;</td>
<td>7/8&quot;</td>
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<td>A-3600</td>
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</tr>
<tr>
<td>A-2322</td>
<td>3/4&quot;</td>
<td>7/8&quot;</td>
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</tbody>
</table>

**Beaded Y (Steel)**

<table>
<thead>
<tr>
<th>Part No.</th>
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<th>DIM C</th>
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</table>
CIRCULATION HEATERS

LOWER RADIATOR HOSE HEATER

Features:
- Installs in minutes in non-corrugated lower radiator hose
- Available in five hose sizes for best coverage
- Thermostatically protected (245°F/118°C maximum heater temperature)
- Replaceable cordset

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Fits hose size (ID)</th>
<th>Watt</th>
<th>Volt</th>
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<th>Dim B</th>
<th>Dim C</th>
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<td>3.25&quot;</td>
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</table>

Note: All dimensions reflect approximate installation space requirements, not exact product measurements. Dimension “A” includes cord.

Installation:
- Hose must have a minimum 15° rise.
- Must be installed in smooth, molded hose.
- Must have direct access to engine water jacket

Replacement Cordsets:
- 120 Volt AC, 42” (112CM)

Part No. 3600009
For heaters with this configuration.
Heater stamped with Model C (example 150C) on bottom of unit.

Part No. 3600047
For heaters with this configuration.
Heater stamped with Model D (example 150D) on bottom of unit.

HEAT MAGNET®

Part No. 3400017
- 200 Watt – 120 Volt AC
- Built-in thermostat maintains optimum temperature—will not exceed 250°F (121°C)
- Quick grip handle protects hands from heat
- Dimensions – Length: 4-3/8” (11cm), Width: 2-1/2” (6.3cm), Height: 3” (7.5cm) (including handle)
SILICONE PAD HEATERS

ADHESIVE – SILICONE PAD HEATERS

Silicone pad heater that is easily installed with adhesive mounting and silicone weatherproofing for installation on smooth metal surfaces.

- Reduces engine wear by improving the flow of engine fluids
- Reduces pump cavitation, blown seals and burst
- CSA models include thermostats

<table>
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<tr>
<th>Part No.</th>
<th>Watts</th>
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<th>Amp</th>
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<th>Hydraulic Fluid</th>
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<td>2” (5cm)</td>
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<td>80</td>
<td>12 DC</td>
<td>6.7</td>
<td>1-1/2” (4cm)</td>
<td>8” (20cm)</td>
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<td>-</td>
<td>0.5-6 Qts (0.5-5.7L)</td>
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<td>120 AC</td>
<td>1</td>
<td>2-1/4” (6cm)</td>
<td>4” (10cm)</td>
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<td>4” (10cm)</td>
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DECIL FUEL FILTER – SILICONE PAD HEATERS

Flexible silicone pad heater that snugly wraps around diesel fuel filters with velcro wrap closure.

- Fits diesel fuel filters from 2-3/4” – 5” (8.9 – 12.7cm)
- Reduces engine wear by improving the flow of engine fluids

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<th>Part No.</th>
<th>Watts</th>
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<th>Amp</th>
<th>Width</th>
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<td>3-1/2-5” (8.9-12.7cm)</td>
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</table>
Electric heating that is applied directly to the battery for reliable cold-weather starting.

**Benefits:**
- Maintain available cold cranking amps in cold weather by warming the batteries
- Efficient direct heat transfer
- Three heating options available – silicone pad, blanket and box heater

**SILICONE PAD – BATTERY HEATER**
Silicone pad heater placed underneath the batteries.
- Silicone material is resistant to battery acid
- Slim design to fit in the battery box/tray

**BLANKET – BATTERY HEATER**
Thinsulate™ thermal blanket that wraps around the battery to maintain temperature in cold or warm weather.
- Warms battery core to 60–70° above ambient temperature for quick starts
- Grounded cord 30" (76cm) in length

**BOX – BATTERY HEATER**
Box heater with a preset thermostat that maintains 80°F (27°C) battery warmth
- Designed to fit in the battery box/tray
- Grounded cord 8’ (2.4m) in length

__Caution:__ Battery heater is not recommended for nickel cadmium batteries.
COOLANT DAM®
Part No. T-1000

2-in-1 Shop Tool – Coolant Dam pulls a vacuum on the cooling system through the radiator cap allowing repairs to be done in less time while not completely draining the coolant out and then, changes over to a pressure tester after the repair has been completed.

Applications:
- Changing heater hoses
- Changing fan sensors
- Changing Temperature sensors
- Installing shut-off valves for fuel warmers & separators
- Replacing cab heater cores
- Replacing heater control valves

Features:
- Creates a vacuum, holding coolant inside the engine without hand pumping or running the engine
- Quickly converts the unit from vacuum to a pressure tester
- No need to drain the block for simple repairs
- Coolant Filling

ACCESSORIES

<table>
<thead>
<tr>
<th>Part No.</th>
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<tbody>
<tr>
<td>T-1025</td>
<td>Standard Automotive Size. Reversible seal fits 1&quot; or 3/4&quot; deep filler necks. Also fits late model Mercedes 1319.</td>
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<tr>
<td>T-1027</td>
<td>To be used with T-1025 to test 32mm I.D. 16mm deep cooling system filler necks.</td>
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<tr>
<td>T-1029</td>
<td>GMC – Freightliner – Western Star Theded, Non-Vented, Western Star cap part number 20009-0002.</td>
</tr>
<tr>
<td>T-1034</td>
<td>Pop Off Pressure Adapter. Mounts to top of Coolant Dam® to test pop off pressure of truck “B” size cap.</td>
</tr>
<tr>
<td>T-1040</td>
<td>Volvo. Fits vehicles using Volvo part number 6794668 radiator cap. (63 x 3mm Thread).</td>
</tr>
<tr>
<td>T-1223</td>
<td>Volvo VN Series. Fits vehicles using Volvo part number 6794668 radiator cap.</td>
</tr>
<tr>
<td>T-1229</td>
<td>Kenworth Vehicles using cap #N5349001.</td>
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<tr>
<td>T-1230</td>
<td>Volvo VN Series. 2006 and newer Fits vehicles using Volvo part number 20519046.</td>
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<tr>
<td>T-1233</td>
<td>Freightliner Columbia/Cascadia. 2008&amp; newer Vehicles using cap # N9689001 or BHTW9689001 or BHTW3678001.</td>
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<tr>
<td>T-3030X</td>
<td>Caterpillar Adapter. Call for information – Cat. #s 7N918, 7N5565, 6N1981, 1N3599.</td>
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Rubber Expansion Plugs – Used to temporarily plug coolant lines during component replacement

<table>
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<tbody>
<tr>
<td>KT-T1000-CUMMINS-ISX-ATI</td>
<td>Servicing Cummins ISX After-Treatment Injector (ATI) Units</td>
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</table>

Kit includes:
- 3089567 Coolant Block Plug
- 4918690 Coolant Line Plugs
- A-6622 36” Extension Hose
- B-702 Work Instruction Sheet

PHILLIPS & TEMRO®

Heating & Accessory Products
CAB & CARGO HEATERS

- Ideal as a secondary heat source in trucks, sleeper cabs, etc.
- 2-speed reversible fan motors
- 14-gauge construction (models 200 and 300)
- 20-gauge construction (models 100, 400, and 500)
- Installation kit included
- Custom fabrication available – contact Customer Service for more information

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<th>Part No.</th>
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<th>Airflow (CFM)</th>
<th>Current (Amps)</th>
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<th>Outlet Diameter</th>
<th>Outlet Direction</th>
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* Outlet direction featured in photos

Heating & Accessory Products
CAB & CARGO HEATERS
DEFROSTER FANS, HEAT EXCHANGERS & REPLACEMENT PARTS

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<th>Description</th>
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<td>7602855</td>
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<td>7602891</td>
<td>24 Volt – Defroster Fan – 2 Speed</td>
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<td>7100001</td>
<td>Installation Kit</td>
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<td>7” (17.6cm) Fan Blade</td>
<td>100, 300, 400, 500</td>
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<td>8” (20.1cm) Fan Blade</td>
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<td>6” (15.5cm) Fan Blade</td>
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<td>Replacement Front Fan Guard</td>
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<tr>
<td>7675771</td>
<td>Replacement Rear Fan Guard</td>
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<tr>
<td>7619162</td>
<td>Blade</td>
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<tr>
<td><strong>MOTORS</strong></td>
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<td></td>
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<tr>
<td>7100004</td>
<td>12-Volt Motor (short)</td>
<td>100, 300, 400, 500, &amp; 7009001</td>
</tr>
<tr>
<td>7100005</td>
<td>12-Volt Motor (long)</td>
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<tr>
<td>7100006</td>
<td>24-Volt Motor (short)</td>
<td>100, 300, 400, 500</td>
</tr>
<tr>
<td>7100007</td>
<td>24-Volt Motor (long)</td>
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<td><strong>HEAT EXCHANGERS</strong></td>
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<tr>
<td>7100022</td>
<td>Model 100 Heat Exchanger (3/4” R top)</td>
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<tr>
<td>7100023</td>
<td>Model 100 Heat Exchanger (5/8” R top)</td>
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<tr>
<td>710012</td>
<td>Model 200 Heat Exchanger (3/4” side)</td>
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<tr>
<td>710013</td>
<td>Model 200 Heat Exchanger (5/8” side)</td>
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<tr>
<td>710014</td>
<td>Model 200 Heat Exchanger (3/4” rear)</td>
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<td>710015</td>
<td>Model 200 Heat Exchanger (5/8” rear)</td>
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<td>710016</td>
<td>Model 300 Heat Exchanger (3/4” side)</td>
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<td>710017</td>
<td>Model 300 Heat Exchanger (5/8” side)</td>
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<tr>
<td>710020</td>
<td>Model 400 Heat Exchanger (3/4” bottom)</td>
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<td>710021</td>
<td>Model 400 Heat Exchanger (5/8” bottom)</td>
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<td>7100008</td>
<td>Model 500 Heat Exchanger (3/4” bottom)</td>
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<td>7100009</td>
<td>Model 500 Heat Exchanger (3/4” rear)</td>
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<tr>
<td>7100010</td>
<td>Model 500 Heat Exchanger (5/8” bottom)</td>
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</tr>
<tr>
<td>7100011</td>
<td>Model 500 Heat Exchanger (5/8” rear)</td>
<td></td>
</tr>
</tbody>
</table>

**INTERIOR CAR HEATER**  
Part No. 2600900

- Ideal for use in passenger, light-duty, and recreational vehicles
- 900 Watts – 120 Volt AC
- Mounts on floor or under dash. Mounting bracket included
- Compact size: 7” (17.6 cm) (L) x 4.5” (11.3 cm) (W) x 2.75” (7 cm) (H)
- Cord length: 7.5 ft. (2.3 m)
- 3,000 BTU
- Includes a blower fan

Car Warmer Replacement Cord  
Part No. 3600055
IN-LINE DIESEL FUEL WARMER

Features:
- Lower operating costs by using #2 fuel all year
- Transfers heat from engine coolant to the fuel just before the fuel filter for maximum efficiency
- Eliminates clogged fuel filters when temperatures are below 10°F (-12°C)
- Exclusive stainless steel construction with no internal welds prevents coolant from leaking into fuel
- Minimal pressure drop
- Can be used as a heat exchanger in some hydraulic applications
- Port size: 1/2 – 14 NPT (Heavy-Duty)

Specifications:
Pressure Drop ............................................. less than 0.05 psi
Maximum operating pressure ................................ 75 psi
Maximum operating temperature ................................ 350°F (177°C)
Test pressure ................................................ 100 psi
Weight (without bracket) ........................................ 2 lbs. (907g)

Note: See full Arctic Fox catalog for additional diesel fuel heaters.

DIESEL STARTING FLUID

- All ZeroStart® Diesel Starting Fluid kits require cylinder #8200327. Gaskets are not included with cylinders.
- Minimum quantity of starting fluid that can be ordered is 1 complete case (12 cylinders).
- Starting fluid cylinders are NOT returnable.
- A disposal fee will be charged for each cylinder included in a product return.
- SDS pages are available on our website at www.phillipsandtemro.com.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Size</th>
<th>Nozzle</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200327</td>
<td>18 oz. 1” neck (Used with most kits)</td>
<td>3” x 11”</td>
<td>1” – 20</td>
</tr>
<tr>
<td>8201277</td>
<td>21 oz. 1” neck (Fits KBI Dieselmatic kits)</td>
<td>4” x 8”</td>
<td>1” – 20</td>
</tr>
<tr>
<td>8203903</td>
<td>1” standard gaskets (cork gasket flat)</td>
<td>Pkg. of 50</td>
<td></td>
</tr>
</tbody>
</table>
DIESEL STARTING FLUID SYSTEMS

- Pre-heats combustion chamber in diesel engines for quick starts
- Measured/metered shot system limits the amount of starting fluid that can enter an engine—provides for optimum starting with less chance of waste or engine damage
- Convenient, one person operation
- Economical – about 16# per start
- High pressure replacement cylinders meet D.O.T. standards
- Available in 12 and 24 volt electrical and mechanically operated models
- Uses standard 1 inch cylinders

**Note:** Diesel Starting Fluid Systems are NOT for use with engines equipped with glow plug or flame thrower systems, or engines equipped with intake air heater.

**E-Z Stock, E-Z Mount Electrical Kit (12 Volt)**  
Part No. 8203237  
One part number covers most class 7 and 8 vehicles. Kit includes: 3 atomizers (8202966, 8202974, 8202982), switch, valve fitting, 48” nylon tube, dash decal, 16 gauge wire, valve and mounting brackets & surface-mount thermostat. Starting fluid cylinder NOT included.  
**Note:** To change to 24V system – you need to purchase 8204020 Bracket/Valve assembly. All other components are compatible.

**E-Z Mount Electrical Kit (12/24 Volt)**  
(See page 101 for applications)  
Replace existing systems, or custom design your own. Kit includes: valve and mounting bracket mounting bracket, switch, valve fitting, dash decal, 48” nylon tubing. Atomizer not included – see page 102.

**Mini E-Z Mount Electrical Kit (12 Volt)**  
Part No. 8200001  
Provides the benefits of our full-size measured shot system in a compact design—for use with 250-500 CID applications. Includes: Mini valve with mounting bracket, push button switch, valve fitting, 48” nylon tubing, dash decal. See page 101 for applications. Atomizer not included – see page 102 for information.

**Standard Electrical Kit (12/24 Volt)**  
(See page 101 for applications)  
Direct replacement for some factory installed systems. Kit includes: Valve, switch, cylinder clamp, valve fitting, dash decal, 48” nylon tubing. Atomizer not included – see page 102.

**Mechanical Kit**  
(See page 101 for applications)  
A simple, economical way to add ether injection. Kit includes: Valve, cylinder clamp, 84” control cable, valve fitting, dash decal, 48” nylon tubing. Atomizer not included – see page 102.

**Aerosol Starting Fluid Valve (12 Volt)**  
Part No. 5801001  
Continuous flow system for replacement of industrial and agricultural applications. Uses standard 7.5 – 8.5 oz. spray can (not included). Leak-proof seal and easy one-hand installation of starting fluid can simplify use. Kit includes ether valve and elbow connection.
## DIESEL STARTING FLUID SYSTEMS

### GENERAL APPLICATIONS (SPECIFIC ENGINES LISTED BELOW)

<table>
<thead>
<tr>
<th>Engine Size</th>
<th>Shot Size</th>
<th>EZ-Mount Electrical 12V</th>
<th>EZ-Mount Electrical 24V</th>
<th>Standard Electrical 12V</th>
<th>Standard Electrical 24V</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 250 CID (4L)</td>
<td>1.5 cc</td>
<td>8204136</td>
<td>N/A</td>
<td>8204179</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>250-500 CID (4-8L)</td>
<td>3 cc</td>
<td>8203938</td>
<td>8203946</td>
<td>8200106</td>
<td>8200165</td>
<td>8200211</td>
</tr>
<tr>
<td>450-950 CID (8-15.5L)</td>
<td>6 cc</td>
<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
<td>8200270</td>
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<tr>
<td>Over 900 CID (14-7L)</td>
<td>12 cc</td>
<td>8203970</td>
<td>8203989</td>
<td>N/A</td>
<td>8200602</td>
<td>8200432</td>
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### REPLACEMENT PARTS

<table>
<thead>
<tr>
<th>Engine Size</th>
<th>Shot Size</th>
<th>EZ-Mount Electrical 12V</th>
<th>EZ-Mount Electrical 24V</th>
<th>Standard Electrical 12V</th>
<th>Standard Electrical 24V</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 250 CID</td>
<td>Valve Only</td>
<td>N/A</td>
<td>N/A</td>
<td>8204101</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>250-500 CID</td>
<td>Valve Only</td>
<td>8203997</td>
<td>N/A</td>
<td>8202427</td>
<td>N/A</td>
<td>8202397</td>
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<tr>
<td>450-950 CID</td>
<td>Valve Only</td>
<td>8204012</td>
<td>N/A</td>
<td>8202435</td>
<td>8202478</td>
<td>N/A</td>
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<tr>
<td>Over 900 CID</td>
<td>Valve Only</td>
<td>8204039</td>
<td>N/A</td>
<td>8202443</td>
<td>N/A</td>
<td>8202419</td>
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<tr>
<td>Cylinder Clamp</td>
<td>N/A</td>
<td>N/A</td>
<td>8202575</td>
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<td>Switch</td>
<td>8202699</td>
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<td>84’ Control Cable</td>
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<td>N/A</td>
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<td>Valve fitting</td>
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<td>48’ Nylon tube</td>
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<td>Dash decal</td>
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### ENGINE SPECIFIC APPLICATIONS

<table>
<thead>
<tr>
<th>Make &amp; Engine Model</th>
<th>EZ-Mount Electrical 12V</th>
<th>EZ-Mount Electrical 24V</th>
<th>Standard Electrical 12V</th>
<th>Standard Electrical 24V</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Z Stock EZ-Mount</td>
<td>Standard Electrical</td>
<td>Mechanical</td>
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<td>CATERPILLAR</td>
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<tr>
<td>1100, 320B, 3306, others over 500 cid1</td>
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<tr>
<td>3406, 340B, D3461</td>
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<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
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<tr>
<td>3406B turbo1</td>
<td>-</td>
<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
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<tr>
<td>31761</td>
<td>8203237</td>
<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
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<tr>
<td>CUMMINS</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>855 CID series, all turbo over 400 cid</td>
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<td>8203954</td>
<td>8203962</td>
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<td>8200238</td>
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<tr>
<td>B Series – 4 cylinder</td>
<td>(D)</td>
<td>8204136</td>
<td>-</td>
<td>8204179</td>
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</tr>
<tr>
<td>B Series – 6 cylinder</td>
<td>(D)</td>
<td>8203938</td>
<td>8203946</td>
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<td>C Series</td>
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<tr>
<td>10 Litre, 11 Litre</td>
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<td>8203954</td>
<td>8203962</td>
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<td>DETROIT DIESEL</td>
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<td>3-53, 4-53, 3-71, 4-71</td>
<td>(D)</td>
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<td>8203946</td>
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<td>6-71, 6V-53, 6V-71, 6V-92</td>
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<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
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<tr>
<td>8V-71, 8V-92</td>
<td>-</td>
<td>8203970</td>
<td>8203989</td>
<td>-</td>
<td>8200602</td>
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<tr>
<td>8.2 Litr</td>
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<td>8203954</td>
<td>8203962</td>
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<td>8200238</td>
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<tr>
<td>Series 60 (677 &amp; 774 CID)</td>
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<td>FORD</td>
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<tr>
<td>6.6L, 7.8L</td>
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<td>8203938</td>
<td>8203946</td>
<td>8200106</td>
<td>8200165</td>
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<td>D150 (661 CID), D170, D190</td>
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<td>8203962</td>
<td>8200157</td>
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<tr>
<td>D550 (649 CID), V800 (798 CID)</td>
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<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
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<tr>
<td>817 (817 CID), 9 Litre</td>
<td>8203237</td>
<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
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<tr>
<td>D, DT31—DT312, DT360, DT436, DT466</td>
<td>(D)</td>
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<td>8203946</td>
<td>8200106</td>
<td>8200165</td>
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<tr>
<td>Midliner</td>
<td>-</td>
<td>8203938</td>
<td>8203946</td>
<td>8200106</td>
<td>8200165</td>
</tr>
<tr>
<td>ALL 6 Cylinder</td>
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<td>8203962</td>
<td>8200157</td>
<td>8200238</td>
</tr>
<tr>
<td>864, 865 &amp; 866 V-8 series</td>
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<td>8203954</td>
<td>8203962</td>
<td>8200157</td>
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<td>MERCEDES</td>
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<tr>
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<td>-</td>
<td>8203938</td>
<td>8203946</td>
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<td>PERKINS</td>
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<td>ALL</td>
<td>(D)</td>
<td>8203938</td>
<td>8203946</td>
<td>8200106</td>
<td>8200165</td>
</tr>
</tbody>
</table>

If your engine is not under “Specific Applications”, then choose a kit based on the engine size.

(A)–Air-to-air aftercooled engines (ATAAC) generally will use an 8202982 atomizer installed in pipe between discharge side of aftercooler and engine manifold.

(B)–Use 8202966 if installed in blower box or manifold.

(C)–Use 8202982 if installed in air intake horn.

(D)–Mini ether system (#8200001) may be used for this application.

Note: All starting fluid kits, except mini-ether kits, use starting fluid cylinder #8200327 (not included).

All kits, except for #8203237 require atomizer. See following page for atomizer information.
**DIESEL STARTING FLUID SYSTEMS**

**Starting Fluid System Atomizers**
- Designed for most engines with 1/8" or 1/4" NPT opening
- Provides proper direction and atomization of pressurized fluid
- Sintered bronze filter maintains purity of intake air
- Spray pattern clearly marked for easy installation

**Atomizer Applications**

<table>
<thead>
<tr>
<th>Part No. Orifice/Size</th>
<th>Applications</th>
<th>Location</th>
<th>Spray Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>8203067 .018</td>
<td>Caterpillar 3406B Turbo</td>
<td>Pre-tapped hole in aftercooler</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8202931 .011</td>
<td>Cummins B &amp; C Series</td>
<td>Pre-tapped manifold</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8202966* .018 Blue</td>
<td>Cummins Non-Turbo &amp; other manifolds over 2&quot;</td>
<td>Center intake manifold</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8202990 .018</td>
<td>Mack in-line 6</td>
<td>Pre-tapped hole between cylinders #5 &amp; #6</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8203016 .013</td>
<td>Mack Midliner</td>
<td>Air intake pipe or intake manifold</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>Under 500 CID 8202974* .013 Yellow</td>
<td>Ford 6.6/7.8L, Cummins &amp; Perkins in-line, all Turbocharged engines</td>
<td>Direct either flow against flow of incoming air</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8200003 .018</td>
<td>Cummins 600 Swivel Style</td>
<td>Pre-tapped hole in air cleaner adapter</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8200004 .013 Over 450 CID 8202982* .018 Red</td>
<td>Cummins 600 Swivel Style</td>
<td>Direct flow of starting fluid into air stream, not directly into cylinder.</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
<tr>
<td>8202958 .013</td>
<td>DDA 8.2 Litre</td>
<td>Pre-tapped hole in air cleaner adapter</td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
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<tr>
<td>8203008 .018</td>
<td>Ford industrial diesel</td>
<td></td>
<td><img src="https://via.placeholder.com/150" alt="Diagram" /></td>
</tr>
</tbody>
</table>

*Included in kit 8203237 Note: All atomizers 1/8" NPT.

**Diesel Starting Fluid System Thermostats**
- Locks out electrical valve operation at specified engine temperatures
- Surface mount installs without draining engine coolant
- Threaded 1/2" NPT installs directly in any 1/2" NPT opening in water jacket

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Type</th>
<th>Temp ON</th>
<th>Temp OFF</th>
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</thead>
<tbody>
<tr>
<td>8200386</td>
<td>Surface Mount</td>
<td>60°F (16°C)</td>
<td>85°F (29°C)</td>
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<tr>
<td>8202281</td>
<td>Threaded</td>
<td>45°F (7°C)</td>
<td>65°F (18°C)</td>
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<tr>
<td>8291837</td>
<td>Threaded</td>
<td>70°F (21°C)</td>
<td>100°F (38°C)</td>
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</tbody>
</table>
CAB POWER® – SHORE POWER

The Cab Power® system is a series of pre-wired, modular components for cabs and sleepers of over-the-road trucks and service vehicles. The system allows for “living room” electrical convenience without the need to keep the truck engine idling by distributing power from APU’s, inverters and land based electrical grids (Shore Power).

Features:
- Reduce Idling
- Increase Cab Comfort & Convenience
- Increase Driver Retention
- Reduce Overall Fuel Cost
- Integrates with Idle Free System
- Long-haul Trucking Convenience Products

CAB POWER ACCESSORIES:
8500634 Surface Mount Outlet/Receptacle
8500635 Flush Mount Outlet/Receptacle
8500637 Weatherproof Housing w/Cab Power Insignia
8500640 85” Exterior Wire Harness (to housing)
8500641 54” Interior Wire Harness (to outlet)
8500643 96” Interior Wire Harness (to outlet)
8500644 163” Interior Wire Harness (to outlet)
8500647 Inverter, Panel-Mount Connector Kit (AC-in + AC-out)

CAB POWER® PLUS – SHORE POWER PLUS

Complete 12 Volt DC to 120 Volt AC Battery Inverter Kit & Wiring All In One Package.
- Includes 1800W Inverter
- Reduce Idling
- Increase Cab Comfort & Convenience
- Increase Driver Retention
- Reduce Overall Fuel Cost
- Integrates with Idle Free System

CAB POWER PLUS COMPONENTS & ACCESSORIES:
8500640 Cable – AC IN 85”
8500639 Cable – Interior Cab Power 163”
8500634 Surface Mount Interior Outlet
8500637 Weatherproof Housing w/Cab Power Insignia
8500660 200A Fuse
8500666 1800 W Inverter with 40A Battery Charger
**TECHNICAL INFORMATION**

**RECOMMENDED PART APPLICATION BASED ON CLIMATE & EQUIPMENT**

Use the chart below to determine the recommended part based on the climate, starting system and equipment classification.

1. Select the appropriate ‘Temp” the equipment will operate under

**ATTENTION:** 90% of maximum temperature will be reached in 5 hours of operation but the heater is designed for continuous overnight use.

2. Select the proper “Starting System”

3. Determine what “Engine Class” the equipment is classified

4. If you need additional information, please contact your Phillips & Temro Industries sales representative or contact customer service directly.

### TECHNICAL INFORMATION

**Small Diesels**
- 150 to 350 CID (2.4 to 5.7 liters)

**Medium Duty Diesels**
- to approx. 550 CID (9.0 liters)

**Heavy Duty Diesels**
- to approx. 1150 CID (18.8 liters)

**Large Duty Diesels**
- Industrial/Off Highway

<table>
<thead>
<tr>
<th>TEMP °F/°C</th>
<th>Starting System</th>
<th>Engine Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>40/4</td>
<td>Coolant Heater</td>
<td>Small Diesels</td>
</tr>
<tr>
<td>0/-18</td>
<td>Oil Pan Heater</td>
<td>Medium Duty Diesels</td>
</tr>
<tr>
<td>-30/-34</td>
<td>Additional Products</td>
<td>Heavy Duty Diesels</td>
</tr>
<tr>
<td>-60/-51</td>
<td>Coolant Heater</td>
<td>Large Duty Diesels</td>
</tr>
</tbody>
</table>

**Coolant Heater**
- 400 to 750 Watt Immersion, 1000 Watt Circulation Heater
- 600 or 750 Watt Immersion, 1000 Watt Circulation Heater
- 750 Watt Immersion, 1500 Watt Circulation Heater

**Oil Pan Heater**
- 150 Watt Immersion with Thermostat
- 150 Watt Immersion or 300 Watt Clamp-On
- 150 Watt Immersion or 300 Watt Clamp-On

**Additional Products**
- Measured Shot Ether Kit, Battery Heater
- Measured Shot Ether Kit, Battery Heater
- Measured Shot Ether Kit, Battery Heater
- Measured Shot Ether Kit, Battery Heater

**Coolant Heater**
- 2500 Watt Tank, 2250-2500 Watt Circulation Heater
- 2500 Watt Tank, 2250-3500 Watt Circulation Heater
- 2500 Watt Tank, 2250-3500 Watt Circulation Heater

**Oil Pan Heater**
- 450 Watt Immersion
- 450 Watt Immersion
- 450 Watt Immersion

**Additional Products**
- Battery Heater
- Battery Heater
- Battery Heater
- Battery Heater

**Coolant Heater**
- (2) 2500 Watt Circulation, (2) 2500-3500 Watt Circulation Heaters

**Oil Pan Heater**
- 450 Watt Immersion
- 450 Watt Immersion
- 450 Watt Immersion

**Additional Products**
- Battery Heater
- Battery Heater
- Battery Heater
- Battery Heater

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1-800-328-6108 or 952-941-9700 • phillipsandtemro.com
TECHNICAL INFORMATION

HEATERS
Avoid Common Engine Heater Installation Mistakes:
Do not use an engine heater when using 100% antifreeze.
A 50/50 mixture is recommended. Using a mixture that is richer than 65% will cause the element to fail prematurely.

Do not run your engine while the engine heater is plugged in.
This will create an air bubble around the element which will then cause the element to burn out prematurely.

Do not plug in your engine heater prior to installing to “see if it works”.
Without being submerged in liquid, the heat generated has nowhere to go and could result in serious burns.

How to safely test a heater.
Connect a multi-meter to the heater pins. A reading between 5 ohms and 100 ohms indicates that the heater is working correctly.

Do not use petroleum based lubricants on the O-ring.
A petroleum based lubricant will significantly reduce the life of the O-ring. Use antifreeze instead.

Do not over tighten the heater.
The O-ring will form an adequate seal when the heater is torqued to the specifications in the instructions. Over tightening will strip the screw threads and reduce the quality of the seal.

After heater use, disconnect the extension cord from the heater cord by firmly grasping each plug and pulling in opposite directions.
Only grasp the plugs. Do not grasp, pull, yank or snap the cords to disconnect power. Damage will result to the power cord connections which could result in permanent malfunction and even an electrical short.

DETERMINING CURRENT USAGE
The current usage of a heater can be determined based on a heaters volt and wattage rating.

<table>
<thead>
<tr>
<th>Watts</th>
<th>Amperes @ 120 Volts</th>
<th>Amperes @ 240 Volts</th>
<th>Cost per hour *</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>0.63</td>
<td>0.31</td>
<td>.008</td>
</tr>
<tr>
<td>100</td>
<td>0.83</td>
<td>0.42</td>
<td>.010</td>
</tr>
<tr>
<td>150</td>
<td>1.25</td>
<td>0.63</td>
<td>.015</td>
</tr>
<tr>
<td>200</td>
<td>1.67</td>
<td>0.84</td>
<td>.020</td>
</tr>
<tr>
<td>300</td>
<td>2.50</td>
<td>1.25</td>
<td>.030</td>
</tr>
<tr>
<td>450</td>
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<td>.045</td>
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<td>12.50</td>
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<td>.150</td>
</tr>
<tr>
<td>2000</td>
<td>16.67</td>
<td>8.34</td>
<td>.200</td>
</tr>
<tr>
<td>2500</td>
<td>20.83</td>
<td>10.42</td>
<td>.250</td>
</tr>
</tbody>
</table>

*Based on 10¢ per KWH
WARRANTY
This limited warranty is expressly limited to the Company’s products that have been purchased by the original consumer purchaser or for purposes of resale or use in the ordinary course of the purchaser’s business. The term original consumer purchaser is defined as a person who purchases Company products for personal, family, or household use.
The Company’s products are warranted against defects in materials and workmanship for a period of one year from date of purchase by purchaser. Sales receipt or proof of purchase must accompany product when returned to location of purchase. The exclusive remedy for any product found to be defective under this limited warranty consists of the repair or replacement of the defective product. This limited warranty does not apply to defects which arise from normal wear and tear, accident, misuse, abuse, neglect, mishandling, misapplication, faulty installation, modification, improper or extraordinary use or use inconsistent with any instruction or recommendation issued by the Company.
The foregoing limited warranty is exclusive and in lieu of all other warranties, whether written or oral, express, implied or statutory.

‘ EXCLUDES DUMP BODY VIBRA — 90 DAY WARRANTY ’
NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. THE LIMITED WARRANTY CONTAINED HEREIN DOES NOT EXTEND TO INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF A BREACH OF THIS WARRANTY.

To obtain performance of this limited warranty, the alleged defective product must be returned, together with reasonable proof of purchase, postage or freight prepaid, directly to:

In CANADA
Phillips & Temro Industries
c/o Purolator
1151 Martin Grove Road
Door 50
Etobicoke, Ontario, M9W 4W7

The Company will return the repaired or replaced product, postage or freight prepaid. Final determination of defects shall be made in accordance with procedures established by the Company.

This limited warranty gives the original consumer purchaser specific rights. You may have other rights which vary from state to state or province to province depending upon the location of your residence. Some states/provinces do not allow the exclusion or limitation of incidental or consequential damages.

Manufacturer’s rights retained:
The Company reserves the right to make changes in design, additions or improvements to any of its products at any time without incurring any obligation whatsoever to install or replace the same or improve upon products previously manufactured.

Note: Warranty credit will be issued at current year’s price.

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GARANTIE
Cette garantie limitée est expressément réservée aux produits de la Société qui ont été achetés par le consommateur-acheteur d’origine ou aux fins de revente ou d’utilisation dans le cours normal des affaires de l’acheteur. Le terme « consommateur-acheteur d’origine » se définit comme la personne ayant fait l’acquisition des produits de la Société à des fins personnelles, familiales ou domestiques.

Les produits de la Société sont garantis contre tout défaut matériel et vice de fabrication pendant une période d’un an à partir de la date d’achat par l’acheteur. Un reçu de caisse ou une preuve d’achat doit accompagner le produit lorsqu’il est retourné au lieu de l’achat. Le recours exclusif offert pour tout produit qui se révèlera défectueux en vertu de cette garantie limitée consiste à réparer ou à remplacer le produit défectueux. Cette garantie limitée ne s’applique pas aux défauts découlant d’une usure normale, d’un accident, d’un mauvais emploi, d’un abus, d’une négligence, d’une mauvaise manutention, d’une mauvaise utilisation, d’une mauvaise installation, d’une modification, d’une utilisation inadéquate ou inhabituelle et d’une utilisation contraire aux instructions ou aux recommandations fournies par la Société.

La garantie limitée ci-dessus est exclusive et remplace toute autre garantie, qu’elle soit écrite ou orale, expresse, tacite ou statutaire.

* N’INCLUS PAS LE ‘’ DUMP BODY VIBRA ‘’ 90 JOURS DE GARANTIE. *

AUCUNE GARANTIE IMPLICITE DE QUALITÉ MARCHANDE ET DE CONVENANCE PRÉCISE N’EST APPLICABLE. LA GARANTIE LIMITÉE CONTENUE AUX PRÉSENTES NE S’APPLIQUE PAS AUX DOMMAGES INDIRECTS CAUSÉS PAR L’UTILISATION DE CE PRODUIT OU SURVENANT EN RAISON D’UNE VIOLATION DE CETTE GARANTIE.

Pour obtenir l’exécution de cette garantie limitée, le produit présumé défectueux doit être retourné accompagné d’une preuve d’achat raisonnable et l’affranchissement ou le fret payé d’avance, directement à :

Aux ÉTATS-UNIS
Service de la garantie
Phillips & Temro Industries Inc.
9700 West 74ème Street
Eden Prairie, MN 55344

La Société retournera le produit réparé ou remplacé sans frais d’expédition. La décision définitive quant aux défauts sera prise conformément aux procédures établies par la Société.

Cette garantie limitée donne au consommateur-acheteur d’origine des droits particuliers. Vous pouvez bénéficier d’autres droits qui varient selon votre état ou votre province de résidence. Certains états n’autorisent pas l’exclusion ou la limitation des dommages indirects.

Droits retenus par le fabricant:
La Société se réserve le droit de modifier ses produits, de faire des ajouts ou d’apporter des améliorations en tout temps et sans aucune obligation d’installer ou de remplacer lesdits produits ou les produits améliorés fabriqués ultérieurement.

Remarque: Garantie des crédits accordé correspondra au prix année en cours.