

ALLIS CHALMERS

170 Diesel

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



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

180, 185, 200, 7000, 7010, 7020

(649, 649T, 2800, 2900 engines)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500014	1000	120	Plate	Immersion	3600024



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

7030, 7040, 7045, 7050, 7060, 7080, 7580

(D21, 210, 220, 3500 & 3700, 670T & 670I engines)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008



Installation Information: Install in Right Rear (RR).

W, WC, WD, WF, WR, WD-45

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200003	600	120	1-1/2"	LRHH	3600047



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

XP-170, XP190

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047



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

XP180, XP210, XP220

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200005	600	120	2"	LRHH	3600047



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

BELARUS

500, 800, 900 Series

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

BOLENS

5117H (Mitsubishi L3A)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006



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

G2102, 2104, 2702, 2704

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006



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

BOLENS – CONTINUED

TS1910, TS3420 (2 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006



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

TX1502, TX1504, TX1704

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006



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

CASE IH / JI CASE / CASE NEW HOLLAND

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500024	1000	120	2"	Freeze Plug	3600008



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500030	750	120	58mm	Freeze Plug	3600008
8601666	750	240	58mm	Freeze Plug	8608377



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500026	400	120	3/8"NPT	Immersion	N/A



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

675 (6 cyl.) 675TWV, TV140

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100133	600	120	1-1/2"	Freeze Plug	3600021



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

830 (6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601860	1000	120	58mm	Freeze Plug	3600008
8601852	1000	240	58mm	Freeze Plug	8608377



Installation Information: Install in Right Rear (RR). Point element 4 o'clock. Circulation heater is acceptable alternative.

930 (6 cyl.) 377G, 401D

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500026	400	120	3/8" NPT	Immersion	N/A



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

B10

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500149	1000	120	42mm THD	Immersion	3600008



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

CASE IH / JI CASE / CASE NEW HOLLAND – CONTINUED

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500154	750	120	58MM 2 Bolt Flange	Immersion	3600008



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

Cursor Engine

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500150	1000	120	42MM THD	Immersion	3600008



Installation Information: Replace 42mm pipe plug.

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

CATERPILLAR

1100 Series, 3100 Series

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601518	1000	120	1-3/4"	Freeze Plug	3600008
8601577	1500	120	1-3/4"	Freeze Plug	3600008



Installation Information: Replaces freeze plug.

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

1404 (163 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100088	400	120	2.125"	Freeze Plug	3600006



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)

Circulation Heater Recommended – See circulation heater section of this catalog



1693 & D343 (893 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601909	1500	120	Plate	Immersion	3600008



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

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

1693T & 1693TA (893 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601976	1500	120	Plate	Immersion	3600008



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

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

3003 (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006



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

CATERPILLAR – CONTINUED

3034 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100101	400	120	50mm	Freeze Plug	3600006



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

3046 (5L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100078	400	120	35mm	Freeze Plug	3600006



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

3054, 3056

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007



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

3054C, 3054E, C4.4 (2004-2006)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500084	750	120	1-1/4"	Freeze Plug	3600008



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500015	1000	120	44mm	Freeze Plug	3600048
3500016	1000	240	44mm	Freeze Plug	N/A
3500081	1500	120	44mm	Freeze Plug	3600048



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 section for product specifications.

3150, 3160 (636 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602816	600	120	44mm	Freeze Plug	3600008



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601267	1500	120	3/4" NPT	Immersion	3600008
8601259	1500	240	3/4" NPT	Immersion	8608377



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 section for product specifications.



CATERPILLAR – CONTINUED

3196

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008
3500031	1500	240	1" NPT	Immersion	8608377



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 oil pan heater section for product specifications.

3204, 3208 (636 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602816	600	120	44mm	Freeze Plug	3600008



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602549	1000	120	3/4" NPT	Immersion	3600008
8602514	1000	240	3/4" NPT	Immersion	8608377
8602611	1500	120	3/4" NPT	Immersion	3600008
8602573	1500	240	3/4" NPT	Immersion	8608377



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600988	1000	240	3/4" NPT	Immersion	8608377
8601011	1500	120	3/4" NPT	Immersion	3600008
8601054	1500	240	3/4" NPT	Immersion	8608377



Installation Information: Replaces 3/4" pipe plug at Rear of oil cooler on Left Side of engine.

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	240	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	240	1" NPT	Immersion	8608377
8605580	2000	120	1" NPT	Immersion	8608652



Installation Information: Without BrakeSaver: Replaces 1" pipe plug in oil cooler rear bonnet (pictured). **With BrakeSaver:** Install in front bonnet.

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008



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

CATERPILLAR – CONTINUED

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

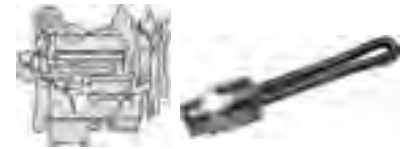
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500033	1500	120	1" NPT	Immersion	3600048
3500034	1500	120	1" NPT	HTR-Only	N/A



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

3408 (1099 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	240	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	240	1" NPT	Immersion	8608377



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

3412 (12 cyl.)

Circulation Heater Recommended – See circulation heater section of this catalog



C3.3B, C3.8

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500120	400	120	1" NPT	Immersion	3600110



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

C3.4, C3.4B

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100117	600	120	40mm	Freeze Plug	3600006



Installation Information: Right Front (RF).

C4.4

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500084	750	120	1-1/4"	Freeze Plug	3600008



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.

C4.4 ACERT Tier 4

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500145	600	120	3/4" NPT	Immersion	3600100
3500148	600	240	3/4" NPT	Immersion	8608377



Installation Information: Left Center (LC).

C6.6 (2006 & Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500087	1000	120	1-1/4"	Freeze Plug	3600008



Installation Information: Install in Right Rear (RR).

C9, C15, C16

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	240	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	240	1" NPT	Immersion	8608377



Installation Information: Install in oil cooler rear bonnet.

C9 ACERT, C15 ACERT, C16 ACERT (2004-2006)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500073	1500	120	1-1/16" – 12	Immersion	3600008
3500077	1500	120	1-3/16" – 12	Immersion	3600008
3500076	1500	240	1-3/16" – 12	Immersion	8608377



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500117	1500	120	1-5/16" – 12	Immersion	3600008
3500128	1500	240	1-5/16" – 12	Immersion	8608377



Installation Information: Right Rear (RR).

C10, C12

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008
3500031	1500	240	1" NPT	Immersion	8608377



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.

C11 ACERT, C13 ACERT, 2004-2006 C11, C13 (2004-2006)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500075	1500	120	1-5/16" – 12	Immersion	3600008
3500074	1500	240	1-5/16" – 12	Immersion	8608377



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).

C13 ACERT & C15 ACERT (2007 & NEWER CAT)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500111	1500	120	1-3/16" – 12	Immersion	3600008



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

C18 ACERT

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500077	1500	120	1-3/16" – 12	Immersion	3600008
3500132	1500	240	1-3/16" – 12	Immersion	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100053	400	120	1-5/8"	Freeze Plug	3600006



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

Note: Heater for cup-type core hole only.

F227, F245 (1979 & newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100053	400	120	1-5/8"	Freeze Plug	3600006



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

F227, F245 (1979 & newer – alternate wattage)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100057	600	120	1-5/8"	Freeze Plug	3600006



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

TM27, TMD27 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100060	400	120	1-5/8"	Freeze Plug	3600006



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601763	1000	120	Plate	Immersion	3600008
8601801	1000	240	Plate	Immersion	8608377
8601844	1500	120	Plate	Immersion	3600008



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

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

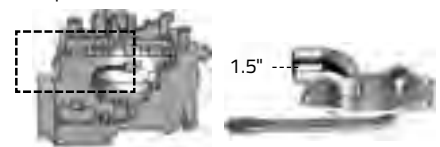
If Cummins 504 CID has alternator, uses International Bracket (3549687C1).

855 CID Engines with full flow cooling, low-mount oil cooler

(Connected to Front port, Rear port blocked by exhaust)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608709	1500	120	Plate	Immersion	3600008

Complete exhaust obstruction



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500036	1500	120	1-1/2" NPT	Immersion	3600008



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

CUMMINS – CONTINUED

855 CID Alternate installation

1996 & newer engines with O-ring seal

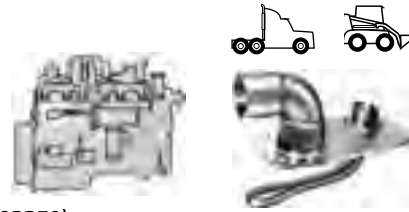
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500023	1500	120	1-5/8" STOR	Immersion	3600008



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)

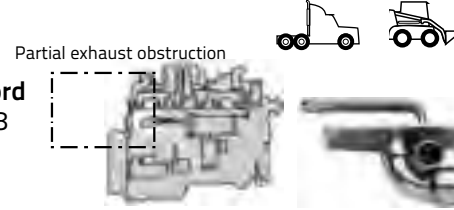
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601100	1500	120	Plate	Immersion	3600008



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608741	1500	120	Plate	Immersion	3600008

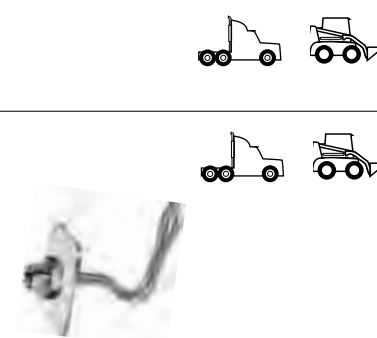


Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Plate Gasket (8603359)

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)
Circulation Heater Recommended – See circulation heater section of this catalog

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602301	1500	120	Plate	Immersion	3600008



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

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

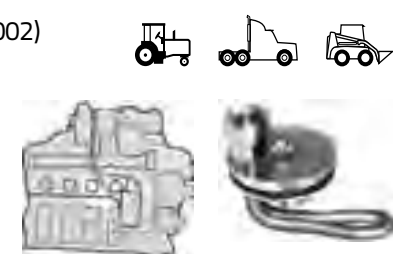
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100046	400	120	40mm	Freeze Plug	3600006



Installation Information: Installs in Left Rear (LR).

B Series: 4B3.9 & 4BT3.9 (1987-2002) (3.9L 239 CID 4 cyl., through model year 2002)
6B5.9 & 6BT5.9 (5.9L 359 CID 6 cyl.)

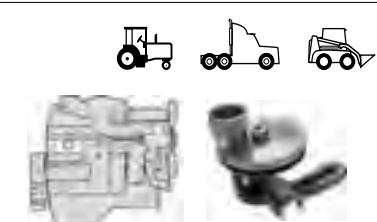
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500030	750	120	58mm	Freeze Plug	3600008
8601666	750	240	58mm	Freeze Plug	8608377



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601860	1000	120	58mm	Freeze Plug	3600008
8601852	1000	240	58mm	Freeze Plug	8608377



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

CUMMINS – CONTINUED

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

Circulation Heater Recommended – See circulation heater section of this catalog



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500022	750	120	3/4" NPT	Immersion	3600008
3500110	750	240	3/4" NPT	Immersion	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500032	1000	120	3/4" NPT	Immersion	3600008



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

ISV (5.0L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500165	600	120	27mm	Immersion	3600008



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500107	1500	120	26mm	Immersion	3600008
3500153	1500	240	26mm	Immersion	8608377



Installation Information: Install in Right Side (RS).

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500107	1500	120	26mm	Immersion	3600008
3500153	1500	240	26mm	Immersion	8608377



Installation Information: Install in Right Side (RS).

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500017	1500	120	1-3/4"-18 THUD	Immersion	3600008



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)



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600015	1500	120	38mm THUD	Immersion	3600008
8600031	1500	240	38mm THUD	Immersion	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500042	1500	120	Plate	Immersion	3600008
3500109	1500	240	Plate	Immersion	8608377



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

**N Series (855 CID-14 litre NT315, N14-330, N14-330E, N14-460, etc.)
Big Cam IV, New Big Cam IV, 88NT, 444**



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601003	1000	120	Plate	Immersion	3600008
8601046	1500	120	Plate	Immersion	3600008
8601062	1500	240	Plate	Immersion	8608377

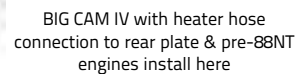
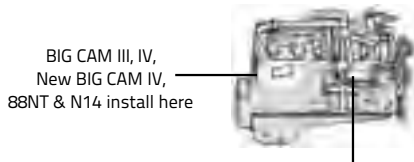
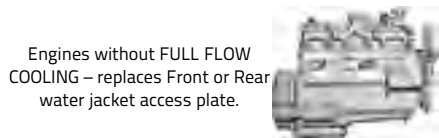


Replaces water jacket access plate

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. 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.



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601526	1500	120	Plate	Immersion	3600008

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)



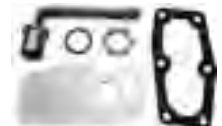
New Big Cam IV

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



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600627	1500	120	Plate	Immersion	3600008
8600651	1500	240	Plate	Immersion	8608377

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



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500096	750	120	Plate	Immersion	3600008

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



Signature 600, ISX, APEX



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500108	1500	240	Plate	Immersion	8608377

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)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500038	1500	120	Plate	Immersion	3600008

Installation Information: Install in Right Side (RS).



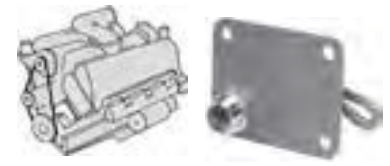
CUMMINS – CONTINUED

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



(Engines without alternator mounted over water jacket access plate)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601763	1000	120	Plate	Immersion	3600008
8601801	1000	240	Plate	Immersion	8608377
8601844	1500	120	Plate	Immersion	3600008



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)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601267	1500	120	3/4" NPT	Immersion	3600008
8601054	1500	240	3/4" NPT	Immersion	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8607605	1500	120	N/A	Immersion	3600008



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

X12 Diesel (2018 and newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500168	1500	120	27mm	Immersion	N/A



Installation Information: Install in Right Front (RF)

X12 Gas (2018 and newer), X15 (2018 and newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500107	1500	120	Plate	Immersion	3600008



Installation Information: Install in Right Side (RS)

DAVID BROWN

All 885, 900, 995, 1200, 1212

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100066	400	120	1-3/4"	Freeze Plug	3600006



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

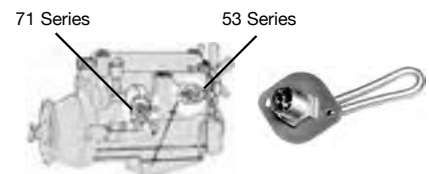
DETROIT DIESEL

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

Engines without water cooled compressor



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600295	750	120	Plate	Immersion	3600008
8600368	1000	120	Plate	Immersion	3600008



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



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601291	750	120	Plate	Immersion	3600008
8601305	1000	120	Plate	Immersion	3600008



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.

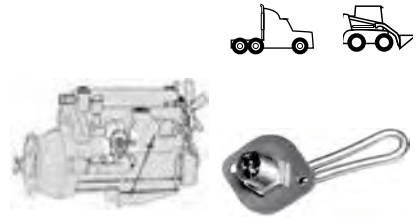
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

DETROIT DIESEL – CONTINUED

6-71

Engines without water cooled compressor

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600368	1000	120	Plate	Immersion	3600008
8600422	1500	120	Plate	Immersion	3600008

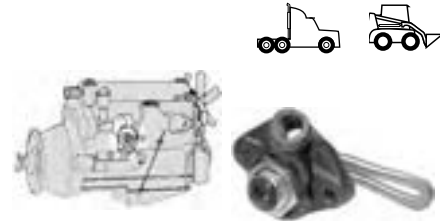


Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

6-71

Engines with water cooled compressor

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601305	1000	120	Plate	Immersion	3600008
8601372	1500	120	Plate	Immersion	3600008

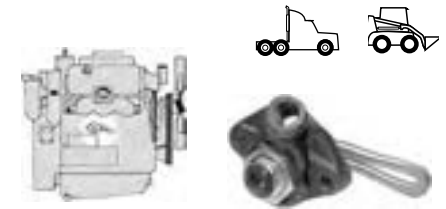


Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

6V-53

Vehicles with or without automatic transmission

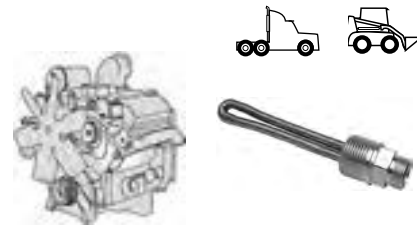
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500021	1000	120	Plate	Immersion	3600008



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	240	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	240	1" NPT	Immersion	8608377



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

8V-53

1500W or 2250W Circulation Heater Recommended – See circulation heater section of this catalog

8.2 Litre (501 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600996	1000	240	3/4" NPT	Immersion	8608377



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

D638 (3.8L 6 cyl.)

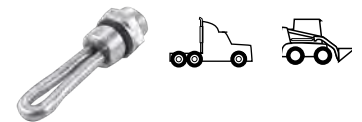
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8604967	600	120	3/4" NPT	Immersion	N/A



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

DD5, DD8 (2016 & newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500158	750	120	27mm	Immersion	



DD13, DD15, DD16 (2008 & Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm	Immersion	3600008



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

Series 30

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007



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

Series 40 (466 CID)

Engines manufactured prior to September 1993

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608512	1250	120	1-1/4"	Freeze Plug	3600008
8608539	1250	240	1-1/4"	Freeze Plug	8608377



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

Available Service Parts: O-ring and clamp device (3500004)

Series 40 (6.7L 408 CID, 7.6L 466 CID, 8.7L 530 CID)

Engines manufactured after August 1993

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500044	1250	120	1-1/4"	Freeze Plug	3600008
8608911	1250	240	1-1/4"	Freeze Plug	8608377



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

Series 50 (Except low-mount turbo)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8605556	1500	120	1" NPT	Immersion	3600008
8603243	300	120	3/4" NPT	Oil Pan	3600008



Installation Information: Replaces 1" NPT plug in oil cooler casting.

Series 50

(Including low-mount turbo)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500007	1000	120	1-1/2"	Freeze Plug	3600008



Installation Information: Install in core plug behind oil cooler. Engine may also accept oil pan heater 8603243. See threaded immersion heater page for specifications.

Series 55

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500008	1500	120	Plate	Immersion	3600008
3500009	1500	240	Plate	Immersion	8608377



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

Series 60 (2007 & Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500077	1500	120	1-3/16" STOR	Immersion	3600008



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	240	1" NPT	Immersion	8608377
8605580	2000	120	1" NPT	Immersion	8608652



Installation Information: Pre-1991 engines – Replaces 1" NPT plug in water pump outlet casting on Right front side of engine. 1991 & Newer replaces 1" pipe plug near top front of oil cooler. 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



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601631	1000	120	Plate	Immersion	3600008
8601704	1500	120	Plate	Immersion	3600008
8601739	1500	240	Plate	Immersion	8608377



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



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601658	1000	120	Plate	Immersion	3600008
8601712	1500	120	Plate	Immersion	3600008



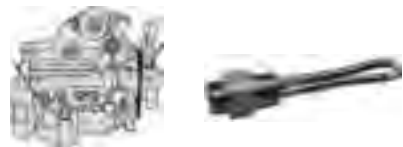
Installation Information: Replaces water jacket access plate on Left front cylinder bank.

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)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8602514	1000	240	3/4" NPT	Immersion	8608377
8602611	1500	120	3/4" NPT	Immersion	3600008
8602573	1500	240	3/4" NPT	Immersion	8608377



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



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500019	750	120	Plate	Immersion	3600020

Installation Information: Install in oil cooler housing.

Check engine – heater port not available on all engines.



BF4L913 (4 cyl.)

(Oil pan heater only)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603170	325	120	48mm THUD	Immersion	3600024

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)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603146	150	120	48mm THUD	Immersion	3600024

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)

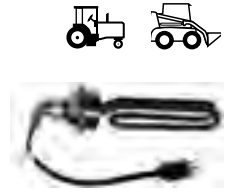


DEUTZ – CONTINUED

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603170	325	120	48mm THUD	Immersion	3600024

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)

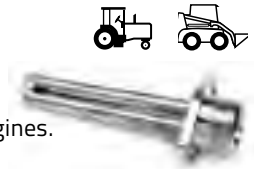


FAHR

1012, 1013, 2013

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500055	750	120	Plate	Immersion	3600008

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600333	1000	120	42mm THUD	Immersion	3600008

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	240	1" NPT	Immersion	8608377

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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100036	400	120	1-1/2"	Freeze Plug	3600003

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100087	600	120	2.06"	Freeze Plug	3600006

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601518	1000	120	1-3/4"	Freeze Plug	3600008

Installation Information: Install in any 1-3/4" freeze plug.



401 CID (6.6L), 474 CID (7.8L)

(Engines manufactured in August 1989 and later featuring plate type heater)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500048	1000	120	Plate	Immersion	3600008
8606331	1250	120	Plate	Immersion	3600008



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
2207044	1000	120	1-1/2"	Freeze Plug	3600008
8601984	1500	120	1-1/2"	Freeze Plug	3600008
8601968	1500	240	1-1/2"	Freeze Plug	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100043	1000	120	1-1/2"	Freeze Plug	3600010



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600996	1000	240	3/4" NPT	Immersion	8608377
8602611	1500	120	3/4" NPT	Immersion	3600008



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500030	750	120	58mm	Freeze Plug	3600008
8601666	750	240	58mm	Freeze Plug	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601860	1000	120	58mm	Freeze Plug	3600008
8601852	1000	240	58mm	Freeze Plug	8608377



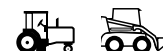
Installation Information: Replaces freeze plug on Right rear side of engine.

Available Service Parts: O-ring & clamp device kit (3500002)

2000, 3000, 4000, 5000, 6000 (3, 4, 6 cyl.)

(Engines manufactured up to 1967)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047



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

FORD – CONTINUED

3000, 4000, 5000, 8000, 9000 Series

(Engines manufactured 1968-1970)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	1-3/4"	Freeze Plug	3600006



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)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100133	600	120	1-1/2"	Freeze Plug	3600006



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100133	600	120	1-1/2"	Freeze Plug	3600006



Installation Information: Install in 4TH and 5TH Right side. Point element DOWN. Two heaters are recommended.

CSG649 (300 CID 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100054	600	120	1-5/8"	Freeze Plug	3600006



Installation Information: Install 2ND Right Side. Point element UP.

DSD & ESD442 (254 CID 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036



Installation Information: Install 2ND and 3RD Left side. Point element UP or DOWN. Two heaters are recommended.

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

(Engines with distributor)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100053	400	120	1-5/8"	Freeze Plug	3600006



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

LSG423 (140 CID 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006



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

LRG423 (140 CID 4 cyl.), **LRG425** (152 CID 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100084	400	120	1-1/2"	Freeze Plug	3600006



Installation Information: Install in Left Rear (LR). Point element 3 o'clock.

FORD – CONTINUED

LSG633 (200 CID 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Right Front (RF) or Right Center (RC). Point element UP or DOWN.



LSG861 (370 CID V-8), **LSG870** (429 CID V-8), **LSG875** (460 CID V-8)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in Right Side (RS) or Left Side (LS). Point element UP.



SSD655 (335 CID 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600333	1000	120	42mm THUD	Immersion	3600008

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



VSG411 (67 CID 4 cyl.), **VSG413** (79 CID 4 cyl.)
(Engines without distributor)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100085	400	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 3 o'clock.



WSG858 (351W V-8), **255** (V-8), **302** (V-8)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR) or Right Rear (RR). Point element DOWN.



HERCULES

G1600 (2.7L 163 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100088	400	120	2.135"	Freeze Plug	3600006

Installation Information: Install in Left Center (LC) or Left Rear (LR). Point element UP or DOWN.



G/D2300, DT3.7 (226 CID), **5.8L** (339 CID), **G/D3400** (1983+ engines), **GT & DT 5.6**

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100027	600	120	35mm	Freeze Plug	3600006

Installation Information: Replace freeze plug on Right side of engine.



G/D3400 & 3400T (339 CID)
(Engines manufactured up to 1982)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

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



G/D4800 (7.8L 478 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500025	1000	120	2"	Freeze Plug	3600024

Installation Information: Replaces freeze plug on Right side – near rear.



HINO

J Series: J05C (5.3L 4 cyl.), **J08C** (8.0L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500018	1000	120	50mm	Freeze Plug	3600008

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600988	1000	240	3/4" NPT	Immersion	8608377

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



INTERNATIONAL / NAVISTAR

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

(Not for use with T444E engine)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100043	1000	120	1-1/2"	Freeze Plug	3600010

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100054	600	120	1-5/8"	Freeze Plug	3600006

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036

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

Circulation Heater Recommended – See circulation heater section of this catalog or LRHH are acceptable alternatives.



817 (817 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600759	1500	120	1-1/2" NPT	Immersion	3600008

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



966, 1066, 1086, 1466

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



Installation Information: Installs in 3RD and 4TH Left Side (LS). Two heaters required. Circulation heater is acceptable alternative.

966, 1066, 1086, 1466
(Alternate installation)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608512	1250	120	1-1/4"	Freeze Plug	3600008



Installation Information: Install in Left side.

Cub Lo-Boy

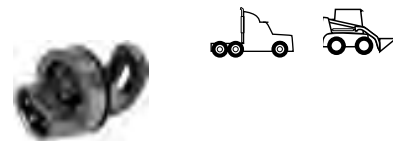
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047



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

D150, D170, D190 (461 CID)

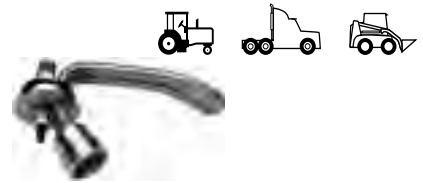
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100038	600	120	1-1/2"	Freeze Plug	3600006



Installation Information: Replaces any freeze plug. Point element UP.

D312, D414, DT414, D436, DT436, DTA466
(Engines manufactured prior to 1994)

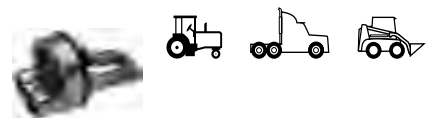
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608512	1250	120	1-1/4"	Freeze Plug	3600008
8608539	1250	240	1-1/4"	Freeze Plug	8608377



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100044	600	120	1-1/2"	Freeze Plug	3600006



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

DT360, DTA360

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608601	1000	120	1-1/4"	Freeze Plug	3600008



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

DT466 High Torque, DT466, DT466E, HT530, DT530 (2001-2003)

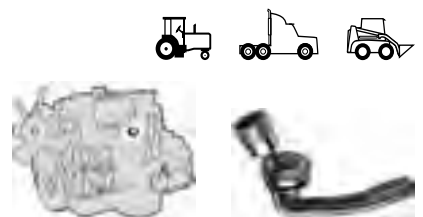
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500054	1250	120	1-1/4"	Immersion	3600008



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

DT466 & DT570 (2004-2006)
DT408, DT466, DT466E, 530, 570 (1994-2000)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500044	1250	120	1-1/4"	Freeze Plug	3600008
8608911	1250	240	1-1/4"	Freeze Plug	8608377



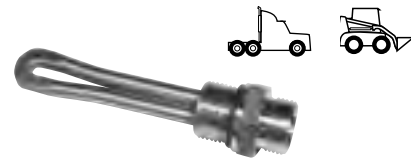
Installation Information: Replaces 1-1/4" freeze plug in boss on Left side of engine.

INTERNATIONAL / NAVISTAR – CONTINUED

MaxxForce 5 & 7 (2007 & Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500069	1000	120	27mm THD	Immersion	3600008

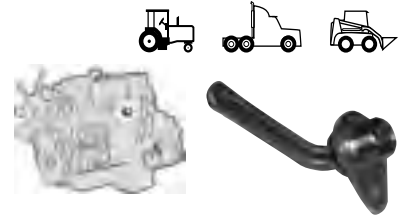
Installation Information: Right Rear (RR).



MaxxForce 9 & 10 MaxxForce DT (2007 & Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500163	1250	120	1-1/4"	Freeze Plug	3600008

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



MaxxForce 11 & 13

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm THD	Immersion	3600008

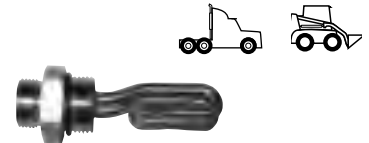
Installation Information: Lower right front.



MaxxForce 15

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500111	1500	120	1-3/16"-12	Immersion	3600008

Installation Information: Right Side (RS).



MV, 404, 446, 485 engines

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100044	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in any Left Side (LS) or Right Side (RS). Point element between cylinders. Circulation heater is acceptable alternative.



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500012	1000	120	1-1/4"	Freeze Plug	3600024

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

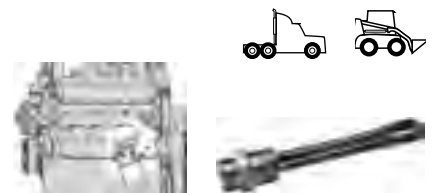


T444E (7.3L V-8)

(Engines manufactured in 1994 and later)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600996	1000	240	3/4" NPT	Immersion	8608377

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



VT275, VT365 (2003-2010)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500069	1000	120	27mm THD	Immersion	3600008

Installation Information: Right Rear (RR).



V800 (798 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	240	1" NPT	Immersion	8608377

Installation Information: Replace 1" pipe plug in oil cooler bonnet.



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100094	400	120	35mm	Freeze Plug	3600005



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100098	400	120	35mm	Freeze Plug	3600006



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 6 cyl.), 6SA1 (8.4L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100089	600	120	1" NPT	Immersion	3600006



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.), 6HK1 (7.8L 6 cyl.), 6SA1 (8.4L 6 cyl.) QD-100 (3.9L), QD-145 (5.8L), 4BGI, 4BGIT, 4BGITC

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	45mm	Freeze Plug	3600006



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

4FB1 (111 CID 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100018	400	120	35mm	Freeze Plug	3600006



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

4H Series

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500151	600	120	45mm	Freeze Plug	3600008



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

4JB1, 4JG (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100069	400	120	45mm	Freeze Plug	3600006



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

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

Circulation Heater Recommended – See circulation heater section of this catalog

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602220	1250	120	45mm	Freeze Plug	3600008



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	45mm	Freeze Plug	3600006



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100068	400	120	45mm	Freeze Plug	3600006



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100068	400	120	45mm	Freeze Plug	3600006



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	45mm	Freeze Plug	3600006



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	45mm	Freeze Plug	3600006



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

QT-23 (3KC-1)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100026	400	120	35mm	Freeze Plug	3600006



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	45mm	Freeze Plug	3600006



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3400014	500	120	6" x 6" (15.2cm ²)	Clamp-On	3600001



Installation Information: Clamp-On type heater. Engine may also use M22 x 1.5 threaded oil pan heater.

Z110, Z120, Z220, Z340 (335 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600333	1000	120	42mm x 1.5	Immersion	3600008



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047



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

2010

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200003	600	120	1-1/2"	LRHH	3600047



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

3029

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602050	1000	120	2"	Freeze Plug	3600024



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

6105, 6125

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008



Installation Information: Installs in oil cooler housing.

6404, 6466, 6619

(Engines featuring smooth bore core hole – engines manufactured prior to 1976)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602050	1000	120	2"	Freeze Plug	3600024



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

Power Tech: 4045, 6068

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500020	1000	120	1-5/8" THUD	Immersion	3600008



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500089	600	120	1.25"	Freeze Plug	N/A



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

JOHN DEERE – CONTINUED

Series 300 (3029, etc.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500045	1000	120	1" NPT	Immersion	3600008
3500152	1000	240	1" NPT	Immersion	8608377



Installation Information: Install in Left rear face of block.

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603596	1000	120	3/4" NPT	Immersion	3600024



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500029	1000	120	1-5/8" THUD	Immersion	3600008



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500069	1000	120	27mm	Immersion	3600008



Installation Information: Right Rear (RR).

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500029	1000	120	1-5/8" THUD	Immersion	3600008



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

KOMATSU

4D95 (2.9L 164 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100046	400	120	40mm	Freeze Plug	3600006



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100046	400	120	40mm	Freeze Plug	3600006



Installation Information: Replace 40mm core plug.

SA6D125 (624 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600880	1500	120	1-3/4" THD	Immersion	3600008
8600813	1000	120	1-3/4" THD	Immersion	3600008



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

S4D106-1

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Freeze Plug	3600001



Installation Information: Left Center (LC)

KOMATSU – CONTINUED

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100082	600	120	40mm	Freeze Plug	3600006
3100010	600	120	30mm	Freeze Plug	3600005



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600880	1500	120	1-3/4" THD	Immersion	3600008



Installation Information: 2001 and newer use 8600880: Replaces threaded core plug on right side of engine.

S6D170, SA6D170

(Example: WA600 loader)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602301	1500	120	Plate	Immersion	3600008



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

L Series

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

M Series (3 & 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



Installation Information: Install in front.

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

(Super Mini/New Super Mini 3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100099	400	120	30mm	Freeze Plug	3600004



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).

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

D850 – V1200 Models (70mm Stroke)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
2204320	400	115	1" NPT	Immersion	3600083



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

05 Series Installation: Crankcase, exhaust side, threaded plug, tapered head

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100025	400	120	35mm	Freeze Plug	3600006



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

D3000B, D3200B (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



Installation Information: Install in front.

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100025	400	120	35mm	Freeze Plug	3600006



Installation Information: Install in back of head.

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



Installation Information: Install in Left Front (LF).

V800

(Super Mini/New Super Mini 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100099	400	120	30mm	Freeze Plug	3600004



Installation Information: Install in back of head.

V1100, VH1100, V1200 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

V1505

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600008



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100025	400	120	35mm	Freeze Plug	3600006



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

KUBOTA – CONTINUED

V2607, V3307, V3600, V3800

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500120	400	120	1" NPT	Immersion	3600110



Installation Information: Replaces 1" NPT pipe plug.

V3300

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

V4000B, V4300B (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



Installation Information: Install in front.

Z400, Z482^, D722*

(Super Mini/New Super Mini 2 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100099	400	120	30mm	Freeze Plug	3600004



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 Z482: use 3100132 on Tier 2 or older

Z600 & ZH600

(Super Mini/New Super Mini 2 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

Z602-D902-WG, DF, DG972, D722 (Newer than Tier 2)

(Super Mini 02 Series 73.6mm Stroke)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100132	400	120	30mm	Freeze Plug	3600083



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100077	400	120	1-1/4"	Freeze Plug	3600004



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

LOMBARDINI

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100096	400	120	30mm	Freeze Plug	3600004



Installation Information: Install in Left Side (LS). Point element 3 or 9 o'clock.

LOMBARDINI – CONTINUED

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200002	375	120	1-1/4"	LRHH	3600047



Installation Information: Lower radiator hose heater.

MACK

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600988	1000	240	3/4" NPT	Immersion	8608377
8601011	1500	120	3/4" NPT	Immersion	3600008
8601054	1500	240	3/4" NPT	Immersion	8608377



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.

**ASET Engine Series (AI, AC + AMI) (12.0L) (2004-2006)
E7 & EM7 (12.0L) Example: EM7-300, E7-350**

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8607206	1500	120	1-3/8"	Freeze Plug	3600008
8607184	1500	240	1-3/8"	Freeze Plug	8608377



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600317	1000	120	Plate	Immersion	3600008
8600384	1500	120	Plate	Immersion	3600008
8600414	1500	240	Plate	Immersion	8608377

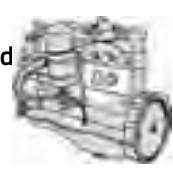


Installation Information:
E3: Replace plug in rear face of block (MS200 serial numbers 1915 and higher).
E5: Install in oil cooler water feed pipe (MS300 serial numbers 60131 and higher).
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

E6 (672 CID 6 cyl.)

(Engines with smooth bore freeze plug. Example: EM6300, E6350, EM6237)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8609748	1500	120	1-3/4"	Freeze Plug	3600008
8609772	1500	240	1-3/4"	Freeze Plug	8608377



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**

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600813	1000	120	1-3/4"	Immersion	3600008
8600880	1500	120	1-3/4"	Immersion	3600008
8600910	1500	240	1-3/4"	Immersion	8608377



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600759	1500	120	1-1/2" NPT	Immersion	3600008



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

E-Tech (water pump mount)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500051	1500	120	1-3/8"	Immersion	3600008
3500052	1500	240	1-3/8"	Immersion	8608377
3500070	1500	120	1-3/8"	Immersion	8608652

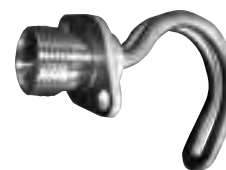


Installation Information: Mount in water pump.

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

MP7 (10.8L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500099	1000	120	25mm	Immersion	3600085
3500100	1500	120	25mm	Immersion	3600085
3500101	1500	240	25mm	Immersion	3600086



Installation Information: Right rear

MP8 (12.8L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500102	1500	240	25mm	Immersion	3600086
3500115	1500	120	25mm	Immersion	3600085
3500104	1000	120	25mm	Immersion	3600085



Installation Information: Right front, in coolant pipe.

MP10 (16.1L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500105	1500	120	62mm	Immersion	3600085
3500106	1000	120	62mm	Immersion	3600085



Installation Information: Right front

MASSEY FERGUSON

1100

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200005	600	120	2"	LRHH	3600047



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

445P, 333, 444, 555, 88

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100054	600	120	1-5/8"	Freeze Plug	3600006



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



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

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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



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 90's before serial #E50101)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100066	400	120	1-3/4"	Freeze Plug	3600006



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

MF-1150, 1155 (AV510, 540)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



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

MF-3120, MF-3140

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007



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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100105	500	120	38mm THD	Freeze Plug	N/A



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

MBE4000 Series/OM460 (2003 & Older)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500080	1500	120	Plate	Immersion	3600008



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)

Part No	Watt	Volt	Diameter	Type	Repl. Cord
3500082	1500	120	Plate	Immersion	3600008
3500083	1500	240	Plate	Immersion	8608377

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



MBE900 Series: OM904 & OM906

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500046	1000	120	60mm	Immersion	3600008

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



MBE-HDEP 15.2 L

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm THD	Immersion	3600008

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500026	400	120	3/8" NPT	Immersion	N/A

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



M602, M604, M670, G705, G706, G900, G1000

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100038	600	120	1-1/2"	Freeze Plug	3600006

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



MITSUBISHI

4G32 & 4G33 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in Right Center (RS). Point element 3 o'clock.



4G63 (2.0L 4 cyl.), 4G64 (2.4L 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100021	400	120	35mm	Freeze Plug	3600006

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



6G72 (3.0L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100055	600	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in Right Rear (RR). Point element 9 o'clock.



MITSUBISHI – CONTINUED

K3A & K3B (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006

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



L3A (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Right Rear (RR). Point element 9 o'clock.



S4L2 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100078	400	120	35mm	Freeze Plug	3600006

Installation Information: Install Right Rear (RR). Point element 11 o'clock.



S6E & S6E2 (6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100078	400	120	35mm	Freeze Plug	3600006

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) 4M40 (2835cc SOHC), 4D36 (3567cc)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8604967	600	120	3/4" NPT	Immersion	N/A

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)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm	Immersion	3600008

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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006

Installation Information: Replaces any freeze plug on Right side. Point element UP or DOWN.



NISSAN

FD6 (5.6L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Right Front (RF). Point element 3 o'clock.



NISSAN – CONTINUED

H20, SD22, SD4-47 (2.2L), SD-25, A12 (1.2L), A15 (1.5L) (4 cyl. engines)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

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 (LR) or Left Rear (LR) and point element 12 o'clock.



H20-2, H25 (4 cyl. engines)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100019	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 3 o'clock.



LD-28 (2.8L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in 5TH, Left side. Point element 12 o'clock.



P Series (4.0L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Right Front (RF).



SD-33 & SD6-72 (3.2L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100023	400	120	35mm	Freeze Plug	3600006
3100108	400	120	35mm	Freeze Plug – 12" Cord	3600036

Installation Information: Install in 2ND and 4TH Left side. Two heaters are required. Point element 12 o'clock.



TD42 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100090	600	120	35mm	Freeze Plug	3600006

Installation Information: Install in Right Center (RC). Remove 3-bolt plate.



Z24 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100048	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 12 o'clock.



OLIVER

All Models (except 1265, 1365, 1900)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008

Installation Information: Install in cast elbow at front of engine – between radiator and engine block.



PACCAR

MX-13

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500107	1500	120	26mm	Plate	3600008

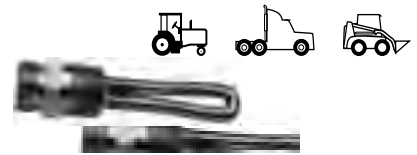
Installation Information: Right Front (RF).



PACCAR – CONTINUED

PX-6, PX-7 (6.7L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500022	750	120	3/4" NPT	Immersion	3600008



Installation Information: Installs in 3/4" NPT port to rear of oil cooler.

PX-8, PX-9 (8.3L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500032	1000	120	3/4" NPT	Immersion	3600008



Installation Information: Installs in upper 3/4" port to front of oil cooler.

PERKINS

3-152 (C Series 3 cyl.), 900 Series (CN)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



Installation Information: Install in Left, 2ND from rear. Point element UP or DOWN.

4-135 (GB Series 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100023	400	120	35mm	Freeze Plug	3600006
3100108	400	120	35mm	Freeze Plug – 12" Cord	3600036



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

4-154 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100010	400	120	30mm	Freeze Plug	3600005



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

4-203 (J Series 4 cyl.)

(Engines with no starter obstructions)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Freeze Plug	3600003



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

4-236 (4 cyl.) (Engines with larger core hole)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100027	600	120	35mm	Freeze Plug	3600006



Installation Information: Install in Left side – 2ND from rear.

6-354 (alternate), NA-120 (6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500027	750	120	Plate	Immersion	3600008



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006



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.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006



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

104.19 (KF/KK 4 cyl.), **104.22** (KR 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006



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

200 Series: 204.25 (GD 4 cyl.), **204.30** (GE 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100086	400	120	30mm	Freeze Plug	3600004



Installation Information: Install in Left Side (LS).

400 Series 4.41, T4.40, 4.0L

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007



Installation Information: Right Side (RS), point element UP.

540 (8 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



Installation Information: Install one heater in each side.

640 (Z Series 8 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605556	1500	120	1" NPT	Immersion	3600008



Installation Information: Install in Left Rear (LR).

700 Series 704.30 (4A 4 cyl.), **704.30T** (4C 4 cyl.), **704.26** (4C 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100101	400	120	50mm	Freeze Plug	3600006



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

854

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100117	600	120	40mm	Freeze Plug	3600006



Installation Information: Left Center (LC).

1004 (A Series 4 cyl.) (D Series 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007



Installation Information: Install in Right Rear (RR) or Right Front (RF). Point element 12 o'clock.

PERKINS – CONTINUED

1006 (Y Series 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007



Installation Information: Install in Right Rear (RR), or Right Front (RF). Point element 12 o'clock.

1104 (C Series 4 cyl.) (D Series)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500084	750	120	1-1/4"	Freeze Plug	3600008



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

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500145	600	120	3/4" NPT	Immersion	3600100



Installation Information: Left Center (LC).

1106D, 1206E (2006 and Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500087	1000	120	1-1/4"	Immersion	3600008



Installation Information: Install in Right Rear (RR).

N Series: 4-300 (4 cyl.), **4-318** (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003



Installation Information: Install in Left Side (LS).

T Series: 6-354 (6 cyl.), **6-354.4** (4 cyl.), **6-372** (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022



Installation Information: Install in Right Rear (RR). Point element 12 o'clock.

PEUGEOT

1.6L

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500147	400	120	N/A	Manifold Plug	N/A



Installation Information: Replaces Manifold Drain Plug.

TOYOTA

2F (4.2L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006



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

3F

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100101	400	120	50mm	Freeze Plug	3600006



Installation Information: Install in Left Rear (LR). Point element at 45° angle.

TOYOTA – CONTINUED

4Y (2.2L 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100019	400	120	35mm	Freeze Plug	3600006



Installation Information: Install in Left Rear (LR). Point element 3 or 9 o'clock.

5R (1.9L 4 cyl.), 2J (2.5L diesel)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006



Installation Information: Install in Left Front (LF) or Left Rear (LR). Point element 12 o'clock.

UD TRUCK

FD35T (3.5L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100012	600	120	30mm	Freeze Plug	3600004



Installation Information: Replaces 30mm freeze plug on Right front of engine. Install element 3 o'clock.

FD46TA

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100103	400	120	40mm	Freeze Plug	3600006



Installation Information: Install in Left Rear (LR) above fuel pump.

FE6 & FE6T (6.9L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602441	1000	120	40mm	Freeze Plug	3600008



Installation Information: Replaces 40mm freeze plug on Right side of engine – 2ND from rear. Install element 5 o'clock.

NE6 & NE6T (7.4L 6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602492	1500	120	50mm	Freeze Plug	3600008



Installation Information: Replaces 50mm freeze plug on Left rear of engine.

TD42T

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100090	600	120	35mm	Immersion	3600006



Installation Information: Install in Right Center (RC) of oil cooler. Remove 3-hole plate.

VOLKSWAGEN

1588cc (049.6 & 068.5 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100034	400	120	36.5mm	Freeze Plug	3600016

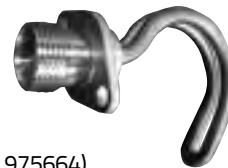


Installation Information: Install in Right Center (RC). Point element 6 o'clock.

VOLVO

D11 (10.8L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500099	1000	120	25mm	Immersion	3600085
3500100	1500	120	25mm	Immersion	3600085
3500101	1500	240	25mm	Immersion	3600086



Installation Information: Right Rear (Contact Volvo dealer for Replacement O'Ring P/N 975664).

D13 (12.8L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500102	1500	240	25mm	Immersion	3600086
3500115	1500	120	25mm	Immersion	3600085
3500104	1000	120	25mm	Immersion	3600085



Installation Information: Right Front (RF) in coolant pipe.
(Contact Volvo dealer for Replacement O-ring (975664).

D16 (16.1L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500105	1500	120	62mm	Immersion	3600085
3500106	1000	120	62mm	Immersion	3600085



Installation Information: Right front

VE-D7

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500041	1500	120	1-3/4"-18	Immersion	3600008



Installation Information: Replace plug on Left Rear of engine. Reuse existing seal. Point element at 1 o'clock.

VED-12 (2002 & Newer)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500090	1000	120	Plate	Immersion	3600008
3500091	1500	120	Plate	Immersion	3600008



Installation Information: Mount below turbocharger at the Right Center (RC) of engine.

VED-12 (Engines manufactured prior to 2002)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500039	1000	120	Plate	Immersion	3600008
8607702	1500	120	Plate	Immersion	3600008



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)**

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600252	1000	120	44mm	Immersion	3600008
8600287	1500	120	44mm	Immersion	3600008
8600309	1500	240	44mm	Immersion	8608377



Installation Information: Replaces 44mm threaded plug on Left Front (LF) of engine. Point element at 4 or 5 o'clock.

YANMAR**3T72HLE (3 cyl.)**

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



Installation Information: Install in Left Front (LF).

3TN66, 3TN72 (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500001	400	120	Plate	Immersion	3600003



Installation Information: Install in Right Rear (RR).

4TN82E & 4TNE98 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001



Installation Information: Install in Left Center (LC).

YYDXL4.4 1 D4T

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Freeze Plug	3600001



Installation Information: Install in Left Center (LC).

ZETOR**All Models – except 278 (4.5L) & 417 (6.8L)**

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	1-3/4"	Freeze Plug	3600006



Installation Information: Install in Left Rear (LR). Point element UP.

STANDARD COOLANT IMMERSION HEATERS

THREADED IMMERSION HEATERS (COPPER)

- COOLANT USE ONLY
- 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



Part No.	Voltage	Wattage	Thread Size	Element Length	For Use In	Replacement Cordset
3500026	120	400	3/8" NPT	2-3/4" (6.9cm)	Coolant	-
3100093	120	400	3/4" NPT	1" (2.5cm)	Coolant	3600003
3100003	120	400	1" NPT	1" (2.5cm)	Coolant	3600001
8604967	120	600	3/4" NPT	1-3/8" (3.4cm)	Coolant	-
3500022	120	750	3/4" NPT	2-7/8" (7.1cm)	Coolant	3600008
8602549**	120	1000	3/4" NPT	4" (10.1cm)	Coolant	3600008
3500032	120	1000	3/4" NPT	3-3/8" (8.5cm)	Coolant	3600008
3500043	120	1000	3/4" NPT	3-7/8" (9.7cm)	Coolant	3600008
8600090	120	1000	1" NPT	4-1/4" (10.6cm)	Coolant	3600008
8602611**	120	1500	3/4" NPT	4-3/4" (12cm)	Coolant	3600008
8601011	120	1500	3/4" NPT	5-1/4"(13.3cm)	Coolant	3600008
8605556	120	1500	1" NPT	5" (12.7cm)	Coolant	3600008
3500013	120	1500	1" NPT	3-3/4" (9.5cm)	Coolant	3600008
8602514**	240	1000	3/4" NPT	4" (10.1cm)	Coolant	-
8600988	240	1000	3/4" NPT	4-1/2" (11.4cm)	Coolant	-
8600120	240	1000	1" NPT	4-1/4" (10.8cm)	Coolant	-
8602573**	240	1500	3/4" NPT	4-3/4" (12cm)	Coolant	-
8601054	240	1500	3/4" NPT	5-1/4" (13.3cm)	Coolant	-
8600260	240	1500	1" NPT	5" (12.7cm)	Coolant	-
3500031	240	1500	1" NPT	3-3/4" (9.5cm)	Coolant	-

**Element does not turn during installation.
Warning: Not for use in oil or hydraulic-fluids.

CLAMP-ON OIL PAN & TRANSMISSION HEATERS

RADIANT HEATERS

- For applications with no core plug or core plug access
- Heating element conducts heat directly
- Universal mounting clamp included



Part No. 3400014
& 3400011



Part No. 3400020

Part No.	Dimensions	Watts	Volt	Replacement Cordset
3400014	6" x 6" (15.2cm x 15.2cm)	500	120	3600001
3400011	4" x 4" (10.1cm x 10.1cm)	300	120	3600001
3400020	GM Ecotec 2.2L/2.4L	300	120	3600002

OIL IMMERSION HEATERS



THREADED IMMERSION HEATERS (STAINLESS)



- For use in oil - engine oil pans, transmissions, hydraulic systems, etc.
- 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



Part No.	Voltage	Wattage	Thread Size	Element Length	Thermostat Included	Replacement Cordset
2201712	120	150	1/2" NPT	7-3/4" (19.5cm)	-	3600002
8609624	120	150	1/2" NPT	5" (12.7cm)	-	3600008
2204274*	120	150	1" NPT	6-5/8" (16.6cm)	-	3600015
8609802	120	150	1" NPT	6" (15.2cm)	8609845***	3600008
3500006	120	150	1-1/16" – 12 STOR	5" (12.7cm)	-	3600008
3500085	120	150	1-5/16" – 12 STOR	5" (12.7cm)	-	3600008
3500047	120	150	M22 x 1.5	7" (17.8cm)	-	-
8602859	120	150	M22 x 1.5	3-1/2" (8.9cm)	8602794***	3600008
3500071	120	150	M25 x 1.5	3-1/2" (8.9cm)	-	3600008
3500094	120	150	M27 x 2	3-1/2" (8.9cm)	-	3600008
8609683	120	300	1/2" NPT	5" (12.7cm)	-	3600008
2201968	120	300	3/4" NPT	11-1/8" (28.2cm)	-	3600015
8603243	120	300	3/4" NPT	5-1/2" (13.9cm)	-	3600008
8609861	120	300	1" NPT	6" (15.2cm)	8609853***	3600008
2202662**	120	300	1" NPT	6" (15.2cm)	-	-
3500079	120	300	1-5/16" STOR	5" (12.7cm)	-	3600008
3500171	120	150	M22 x 1.5	3-1/2" (8.9cm)	-	-
8602913	120	300	M22 x 1.5	5-1/2" (13.9cm)	8602905***	3600008
3500093	120	300	M27 x 2	5-1/2" (13.9cm)	-	3600008
8609713	120	450	1/2" NPT	7-1/2" (19cm)	-	3600008
3500049	120	450	M27 x 2	7-1/4" (18.4cm)	-	3600008
8609098	120	1000	1" NPT	9-1/2" (24cm)	-	3600008
8609837	240	150	1" NPT	6" (15.2cm)	-	-
3500086	240	150	1-5/16" – 12 STOR	5" (12.7cm)	-	-
8609659	240	300	1/2" NPT	5" (12.7cm)	-	-
3500078	240	300	1-5/16" STOR	5" (12.7cm)	-	-

*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.



**Part No. 2202662 Additional Information

- Cartridge style heater, element inside casting
- Thermostatically controlled On/158°F (70°C) Off/230°F (110°C)
- No replacement parts for thermostat



1/2" NPT ADAPTER BUSHING

Part No. 8602824

- 1" outside diameter
- Use on steel pans only
- 1/2" NPT oil pan heaters are supplied with weld or braze-in adapter

***Replacement t-stat 3600057 & replacement y-cord 3600064

THERMOSTATS

Maintain coolant temperature and save money by reducing the engine heater operating hours with a coolant thermostat. The thermostat is installed at the farthest point from the block heater to monitor the overall coolant temperature. Based on the temperature setting, the thermostat cycles the engine block heater on & off, reducing the operating hours of the engine block heater.

Features:

- Component of Thermostat Immersion Heater System
- Use in conjunction with engine block heater and Series Y-Cord to control heater usage
- Saves money by reducing engine heater operating hours
- New installations or replacement part



Part No. 3600068
1/2" NPT
On 40°F / Off 55°F



Part No. 3600066
3/4" NPT
On 40°F / Off 55°F



Part No. 3600081
#8 STOR
On 40°F / Off 55°F



Part No. 3600087
M27
On 40°F / Off 55°F

Part No. 3600058
1/2" NPT
On 55°F / Off 75°F

Part No. 3600073
M22 X 1.5
On 40°F / Off 55°F

Part No. 3600096
M18 X 1.5
On 40°F / Off 55°F

Part No. 3600057
1/2" NPT
On 100°F / Off 120°F

HEAT-MAGNET®



Part No. 3400017

- 200 Watt – 120 Volt AC
- Plug Type: Nema 5-15
- 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)



AUTOMOTIVE & LIGHT TRUCK CORDSET ACCESSORIES

PLUG PROTECTOR

Part No. 3600012



Fits 120V plugs. Prevents freeze ups. Keeps plug contacts clean for optimum power & safety.

SAFETY REMINDER

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.

HEAVY DUTY CORDSETS



HEAVY DUTY CORD SILICONE CONNECTORS

Silicone Connector	Pin Distance	Pin Diameter
K	0.360"	0.138"
L	0.375"	0.138"
M	0.360"	0.138"



Type B
Right Angle



Type K
Right Angle



Type L
Right Angle



Type M
Straight

SINGLE CORDSETS

Single heavy duty cord with male plug & silicone female connector

Part No.	Volts	Amp	Length	Wire	Plug Type	Silicone Connector	Notes
3600085	125	15	6' (1.8m)	14/3 SJOW	A - NEMA 5-15	K	
3600024	125	15	12" (30.5cm)	16/3 HPN	A - NEMA 5-15	K	
3600015	125	15	5' (1.5m)	16/3 HPN	A - NEMA 5-15	L	
3600048	125	15	6' (1.8m)	16/3 HPN	A - NEMA 5-15	K	High temp heat shield
3600008	125	15	6' (1.8m)	16/3 HPN	A - NEMA 5-15	K	Industrial silicone cord
3600122	125	15	6' (1.8m)	16/3 HPN	A - NEMA 5-15	K	Silicone cord
3600086	240	15	6' (1.8m)	14/3 SJOW	B - NEMA 6-15	K	High temp heat tape
8608377	240	15	6' (1.8m)	16/3 HPN	B - NEMA 6-15	K	



WP MALE PLUG

Part No. 8605254



120V 15A Plug.
Use with any
WP housing

WP RUBBER BOOT

Part No. 8605645



Fits 120V 15A WP Plug.
Use with WP plug
and housing.
Not CSA Approved.

PLUG PROTECTOR

Part No. 3600012



Fits 120V plugs. Prevents
freeze ups. Keeps plug
contacts clean for optimum
power and safety,

3-WAY CONNECTOR

Part No. 3600040

Use multiple cold weather product
with one common cord.



(3) 120V female receptacles.
14/3 Gauge Wire, 24" (61cm) long.
Type A male plug. Not CSA Approved.

3-WAY CONNECTOR & KIT

Part No. 3600041

Receptacle & 3-Way Connector (**not CSA**)



120V, 5' (1.5m), 14 Gauge.
4-Hole Square. Chrome Plated.

RECEPTACLE & WP PLUG KITS

	Part No.	Description	Cord Specs	Housing Specs	Finish
	8605505	Receptacle - Round (Weatherproof Field-Wired)	120V	3-Hole	Zinc Plated
	8605688	Receptacle - Square (Weatherproof Field-Wired)	120V	4-Hole	Chrome Plated
	8605513	Receptacle - Round (Weatherproof Field-Wired)	240V	3-Hole	Zinc Plated

Not CSA approved.

RECEPTACLE, WP PLUG & CORDSET KITS

	Part No.	Description	Volts	Length	Gauge	Housing Spec.	Finish
	3600028	Weatherproof Cordset & receptacle	120	8' (2.4m)	16	2-hole square	chrome plated
	3600014	Weatherproof Cordset & receptacle	120	12' (3.6m)	16	2-hole square	chrome plated
	8602891	Weatherproof cordset & receptacle	120	6' (1.8m)	16	3-hole round	zinc plated
	8602948	Weatherproof cordset & receptacle	120	10' (3.1m)	16	3-hole round	zinc plated
	8602921	Weatherproof cordset & receptacle	240*	6' (1.8m)	16	3-hole round	zinc plated
	8606005	Weatherproof Silicone Cordset & receptacle	120	6' (1.8m)	16	4-hole square	chrome plated
	8606013	Weatherproof Silicone Cordset & receptacle	120	10' (3.1m)	16	4-hole square	chrome plated

THERMOSTAT & IMMERSION HEATER SYSTEM



Calculator Maintenance

Zerostart[®]

Designed to reduce electric costs by regulating the engine block heater operating hours.

Select each of the following components to customize your heavy duty solution:

- Engine Block Heater
- Thermostat
- Series Y-Cord
- Dual Indicator Light Plate

Kits Available:

- Includes: Y-Cord, Receptacle, and Dual Indicator Light Plate
- Mack - Anthem & VN Series
 - Navistar A26



APPLICATION GUIDE

Make	Engine	Kit	Thermostat	Y-Cord for Dual Indicator Lights	Receptacle Chrome / Thunder Gray	Dual Indicator Light Chrome / Thunder Gray	Engine Block Heater
Caterpillar	3406E		3600066	See Series Y-Cord Chart for specific cord lengths	8606080 / 3600133	3600060 / 3600134	See Heavy Duty Application Guide
Caterpillar	C9		3600081				
Caterpillar	C11		3600081				
Caterpillar	C13		3600081				
Caterpillar	C15		3600081				
Caterpillar	C16		3600081				
Cummins	ISB		3600066				
Cummins	ISC		3600066				
Cummins	ISM		3600068				
Cummins	ISX		3600087				
Detroit Diesel	Series 60		3600066				
Detroit Diesel	DD13		3600087				
Detroit Diesel	DD15		3600087				
Detroit Diesel	DD16		3600087				
International	DT-466 (Non-EGR 1998-2005)		3600068				
International	DT5		3600087				
International	DT7		3600087				
International	DT11		3600087				
International	DT13		3600087				
Mack	Anthem	3600143	3600096				
Mack	MP8		3600096				
Mack	E-Tech		3600068				
Navistar	A26	3600142	3600096				
Paccar	PX-6		3600066				
Paccar	PX-7		3600066				
Paccar	PX-8		3600066				
Paccar	PX-9		3600066				
Volvo	D-13		3600096				
Volvo	VN Series	3600143	3600096				

THERMOSTAT BY-PASS TOOL



Part No. 3600115

- Use with thermostat immersion heater system to confirm system is operational
- Connects to the thermostat cord end of a Series Y-Cord
- Step-by-step instructions on our website at www.phillipsandtemro.com

CIRCULATION HEATERS



SERIES 41



APPLICATIONS

- Industrial
- Agriculture
- Off-road

TYPE OF HEATING

- Thermosiphon

FEATURES

- Thermostatically controlled
- Vertical installation only
- Rugged cast aluminum construction is corrosion and impact resistant.
- Copper heating element provides excellent heat transfer.
- Replaceable element and thermostat



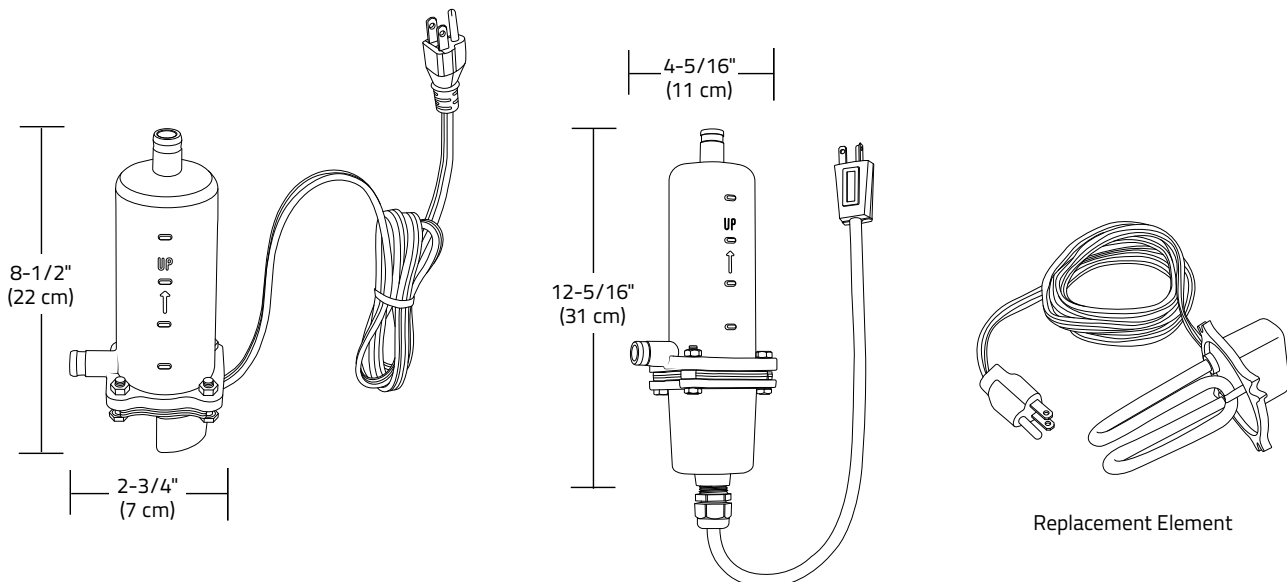
Part No. 2204010,
2204029, 2204037



Part No. 3300091

Part No.	Watts	Volts	Amps	Plug Type	Inlet/Outlet Size	Replacement Element	Thermostat	Cord Length
Regulating Thermostat – Open 190°F (88°C) / Closes 151°F (66°C)								
2204010	750	120	6.25	A - NEMA 5-15	5/8"	2204061	2204266	5' (1.5m)
2204029	1000	120	8.33	A - NEMA 5-15	5/8"	2204088	2204266	5' (1.5m)
2204037	1500	120	12.5	A - NEMA 5-15	5/8"	2204096	2204266	5' (1.5m)
Regulating Thermostat – Open 165°F (74°C) / Closes 205°F (96°C)								
3300091	2000	120	16.7	C - NEMA 5-20	5/8"	3300093	3300097	22" (56cm)

PRODUCT DIMENSIONS



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

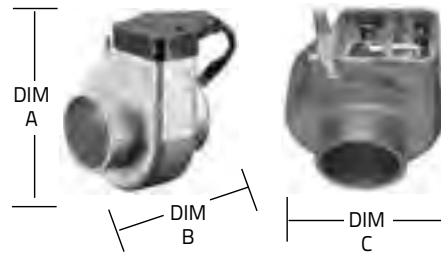


Part No.	Fits hose size (ID)	Watt	Volt	Dim A	Dim B	Dim C
3200001	1"	375	120	3.5"	3"	2.5"
3200002	1-1/4"	375	120	3.5"	3"	2.5"
3200003	1-1/2"	600	120	4"	3"	3"
3200004	1-3/4"	600	120	4"	3"	3"
3200005	2"	600	120	4.25"	3"	3.25"

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

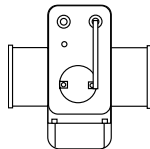


REPLACEMENT CORDSETS

- 120 Volt AC, 42" (112CM)

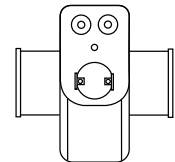
Part No. 3600009

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.



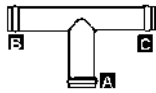
NOTE: NOT recommended for automotive or light truck applications.

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



Beaded T (Steel)

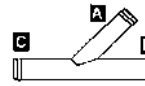
Part No.	DIM A	DIM B	DIM C
A-2321	5/8"	5/8"	5/8"
A-2323	5/8"	7/8"	7/8"
A-3600	3/4"	3/4"	3/4"
A-2322	3/4"	7/8"	7/8"



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 Y (Steel)

Part No.	DIM A	DIM B	DIM C
A-457	5/8"	5/8"	5/8"
A-459	3/4"	3/4"	3/4"