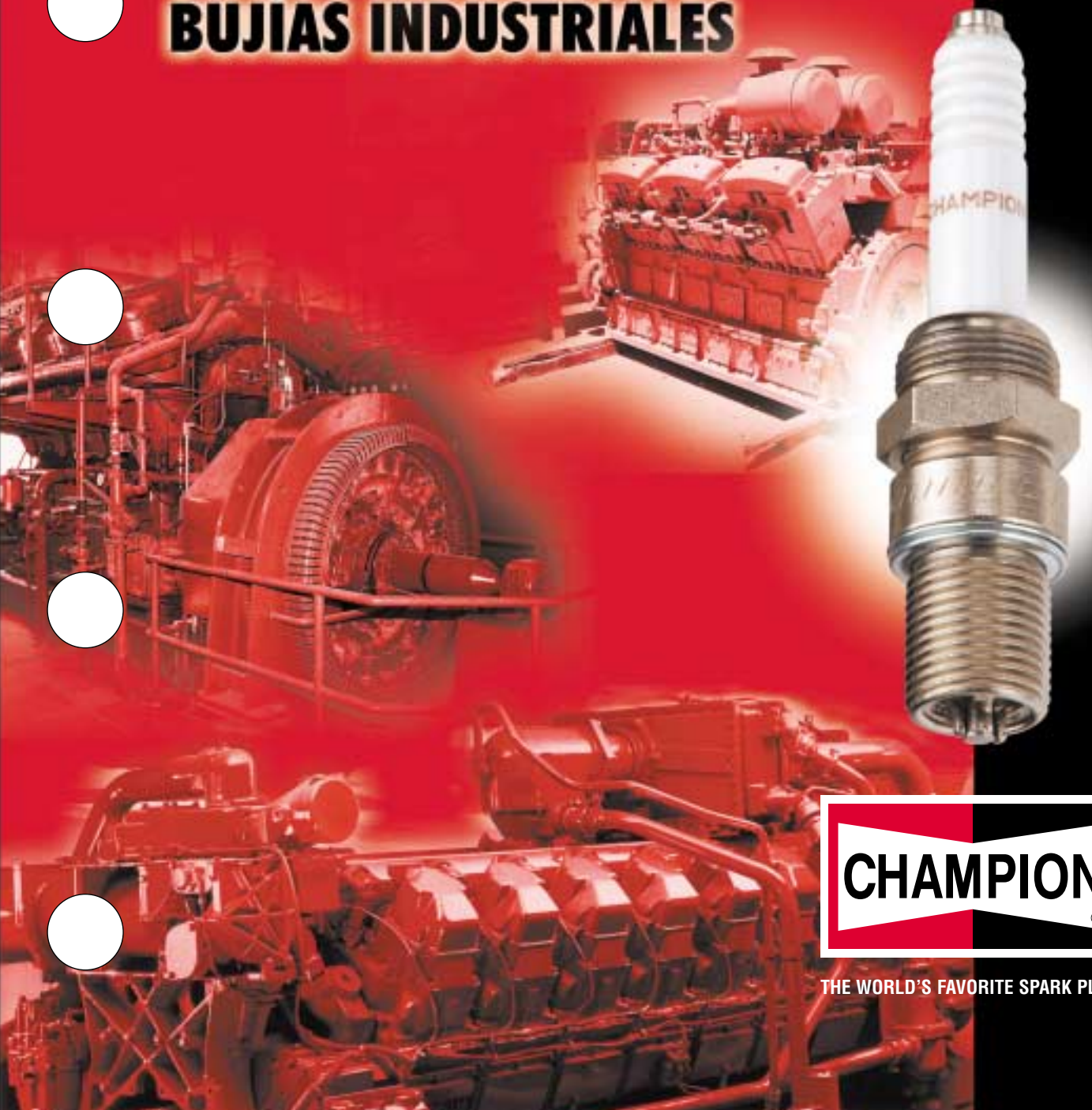
INDUSTRIAL SPARK PLUG CATALOG

CATALOGUE DE BOUGIES INDUSTRIELLES

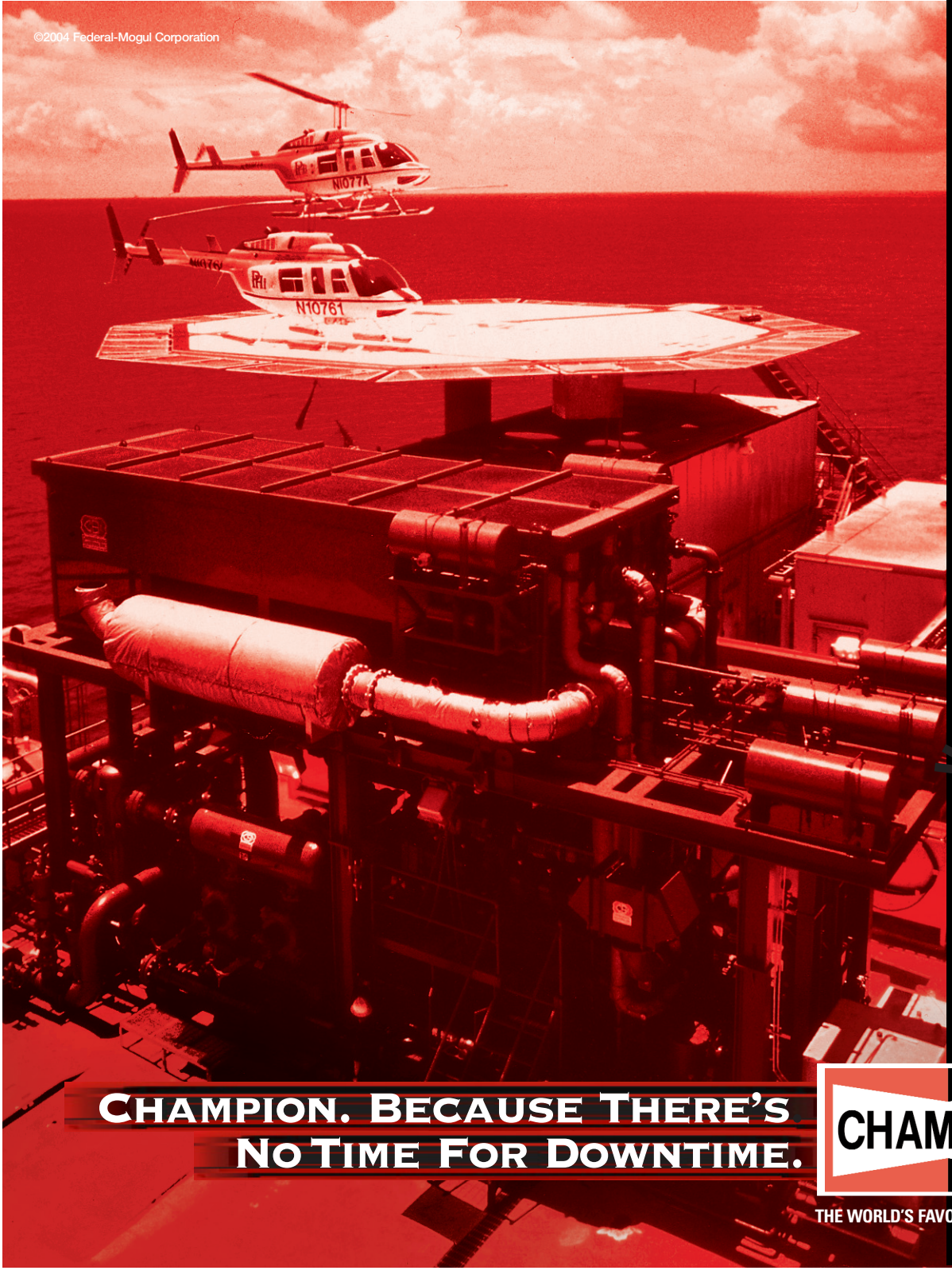
CATÁLOGO DE BUJÍAS INDUSTRIALES



CHAMPION®

THE WORLD'S FAVORITE SPARK PLUG.™

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INDUSTRIAL SPARK PLUGS

CHAMPION. BECAUSE THERE'S NO TIME FOR DOWNTIME.

CHAMPION®

THE WORLD'S FAVORITE SPARK PLUG™



If you demand reliability and service-life, trust the world leader. Champion® spark plugs. To ensure complete application coverage and rapid response, we offer the most comprehensive line of industrial plugs, backed by a fully-dedicated sales, engineering and R&D team. And our pioneering designs are developed by a global team of engineers and metallurgists. Because like you, we have a name to live up to.

www.federal-mogul.com/champion

FEDERAL MOGUL

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Motores comerciales, fijos y de gasolina (Excepto 5/8"-24 protegida) **4**

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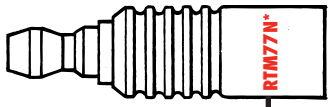
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SALES SYMBOL
SYMBOLES DE VENTE
SÍMBOLO DE VENTAS



R T | M | 77 | N | *

SUPPRESSOR / SHIELDING

Letter	Description
E	Shielded 5/8"–24
H	Shielded 3/4"–20
K	Resistor (Special Application)
M	Shielded 5/8"–24 Ordnance
R	Resistor
T	13/16"–20 Thread Above Hexagon
U	Auxiliary Gap
X	Resistor (Special Application)

SHELL DESIGN

Letter	Thread Size	Reach	Hex
B	18mm	13/16"	7/8"
C	14mm	3/4"	5/8"
D	18mm	1/2"	7/8"
GC*	7/8"-18	All	7/8"
GM*	18mm	All	7/8"
H	14mm	7/16"	13/16"
J	14mm	3/8"	13/16"
L	14mm	1/2" or .472"	13/16"
M	18mm	1/2"	7/8"
N	14mm	3/4"	13/16"
S	1-1/8"	5/8"	1"
W	7/8"-18	All	15/16" or 1"
X	14mm	1/2" or .500"	5/8"

*1"-20 Female Connector

HEAT RANGE / APPLICATION

Ref.#	Description
1-25	Automotive, Small Engine & Ordnance
75-99	Industrial & Special Applications

FIRING END DESIGN

Letter	Description
B	Two Ground Electrodes
C	Copper Plus Design
D	Protruding Nose, Round Ground Electrode
F	Three Ground Electrode
G	Fine Wire—Semi-Precious Electrode
J	Cutback Ground Electrode, Includes Modified Gap
N	Four Ground Electrode
P	Platinum Electrode
R	Push Wire
Y	Standard Projected Core Nose
*PP	Double Platinum
*PYP	Projected Double Platinum
*WP	Iridium/Platinum
WPC	Iridium/Platinum/Copper
WPCC	Iridium/Platinum/Double Copper

*Includes Copper Plus Design

SPECIAL GAP DESIGNATION

No.	Description
15	Gapped at .015"
17	Gapped at .017"
21	Gapped at .021"
25	Gapped at .025"

The sales symbol on a spark plug is composed of a basic "Heat Range" number with letters and numbers to indicate major features of the plug design. These charts contain a detailed example of the Champion Sales Symbol.

ANTIPARASITE / BLINDAGE

Lettre	Description
E	Électrode protégée 5/8 po–24
H	Électrode protégée 3/4 po–20
K	Résistance (application spéciale)
M	Électrode protégée 538 po–24 Matériel militaire
R	Résistance
T	Hexagone à filetage supérieur 13/16 po–20
U	Écartement auxiliaire
X	Résistance (application spéciale)

MODÈLE DE CULOT

Lettre	Calibre de filetage	Portée	Hexagone
B	18 mm	13/16 po	7/8 po
C	14 mm	3/4 po	5/8 po
D	18 mm	1/2 po	7/8 po
GC*	7/8 po-18	Toutes	7/8 po
GM*	18 mm	Toutes	7/8 po
H	14 mm	7/16 po	13/16 po
J	14 mm	3/8 po	13/16 po
L	14 mm	1/2 po ou 0,472 po	13/16 po
M	18 mm	1/2 po	7/8 po
N	14 mm	3/4 po	13/16 po
S	1 1/8 po	5/8 po	1 po
W	7/8 po-18	Toutes	15/16 po ou 1
X	14 mm	1/2 po ou 0,500 po	5/8 po

*Raccord femelle 1 po - 20

GAMME THERMIQUE / APPLICATION

N°de réf	Description
1-25	Automobiles, petits moteur, matériel militaire
75-99	Applications industrielles et spéciales

ALLUMAGE ET CONCEPT

Lettre	Description
B	Deux électrodes de masse
C	Concept Copper Plus
D	Pointe saillante, électrode de masse ronde
F	Trois électrodes de masse
G	Fil fin - électrode en pierre semi-précieuse
J	Électrode de masse racourcie avec écartement modifié
N	Quatre électrodes de masse
P	Électrode en platine
R	Fil de poussé
Y	Pointe en saillie ordinaire
*PP	Double platine
*PYP	Pointe en saillie double platine
*WP	Iridium/platine
WPC	Iridium/platine/cuivre
WPCC	Iridium/platine/double cuivre

*Avec concept Copper Plus

DÉSIGNATION D'ÉCARTEMENT SPÉCIAL

N°	Description
15	Écartement de 0,015 po
17	Écartement de 0,017 po
21	Écartement de 0,021 po
25	Écartement de 0,025 po

Le symbole de vente figurant sur une bougie se compose d'un numéro de "gamme thermique" de base ainsi que de lettres et de chiffres indiquant les caractéristiques principales du modèle de bougie. Les tableaux ci-dessus donnent un exemple détaillé d'un symbole de vente Champion.

SUPRESOR / PROTECCIÓN

Letra	Descripción
E	Blindado 5/8"–24
H	Blindado 3/4" - 20
K	Resistor (aplicación especial)
M	Blindado 5/8" 3/4 24 armamento
R	Resistor
T	Rosca por encima del hexágono 13/16"–20
U	Separación entre puntas auxiliar
X	Resistor (aplicación especial)

DISEÑO DEL RECUBRIMIENTO

Letra	Tamaño de rosca	Distancia	Hex.
B	18 mm	13/16"	7/8"
C	14mm	3/4"	5/8"
D	18mm	1/2"	7/8"
GC*	7/8"-18	Todas	7/8"
GM*	18mm	Todas	7/8"
H	14mm	7/16"	13/16"
J	14mm	3/8"	13/16"
L	14mm	1/2" ó 0,472"	13/16"
M	18mm	1/2"	7/8"
N	14mm	3/4"	13/16"
S	1-1/8"	5/8"	1"
W	7/8"-18"	Todas	15/16" ó 1"
X	14mm	1/2" ó 0,500"	5/8"

*Conector hembra 1"-20

GAMA TÉRMICA / APLICACIONES

No. ref.	Descripción
1-25	Automotriz, motores pequeños, armamento
76-99	Aplicaciones industriales y especiales

DISEÑO DE EXTREMO DE ENCENDIDO

Letra	Descripción
B	Electrodo de dos tierras
C	Diseño Copper Plus
D	Electrodo redondo a tierra de punta saliente
F	Electrodo de tres tierras
G	Electrodo de alambre fino semiprecioso
J	Electrodo de tierra recortado, incluye separación modificada
N	Electrodo de cuatro tierras
P	Electrodo de platino
R	Alambre de empuje
Y	Punta de núcleo saliente normal
*PP	Platino doble
*PYP	Platino doble saliente
*WP	Iridio/Platino
WPC	Iridio/Platino/Cobre
WPCC	Iridio/Platino/Cobre doble

* Incluye diseño Copper Plus

DISEÑO ESPECIAL DE SEPARACIÓN ENTRE PUNTAS

No.	Descripción
15	Separadas 0,015"
17	Separadas 0,017"
21	Separadas 0,021"
25	Separadas 0,025"

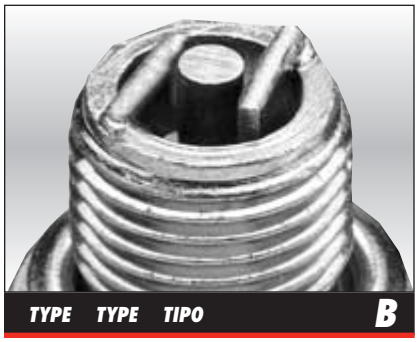
El símbolo de ventas de una bujía está compuesto por un número básico de "gama térmica" con letras y números para indicar las propiedades importantes del diseño de la bujía. Estas tablas contienen un ejemplo detallado del símbolo de ventas de Champion.

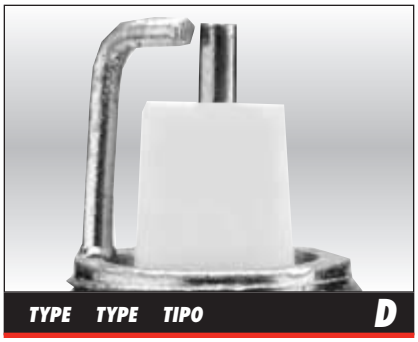
Single, precious metal or multiple gap electrode configurations are utilized to assure longest possible gap life and maximum deposit scavenging. Photographed here are electrode designs referred to in the Heat Range Chart.

Des configurations d'électrodes simple, multiple ou en métal précieux sont utilisées pour assurer une durabilité optimale des écartements et faciliter l'élimination des dépôts. On fait référence aux concepts d'électrode illustrés sur cette page dans le tableau des gammes thermiques.

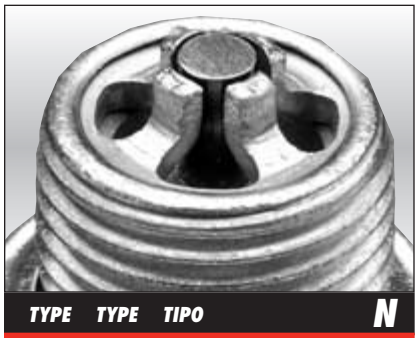
Las configuraciones de los electrodos de metales preciosos, de separación sencilla o múltiple se utilizan para asegurar la máxima duración posible de la separación entre puntas y el máximo barrido de depósitos. Aquí se indican los diseños de electrodos indicados en la tabla de gamas de temperaturas.

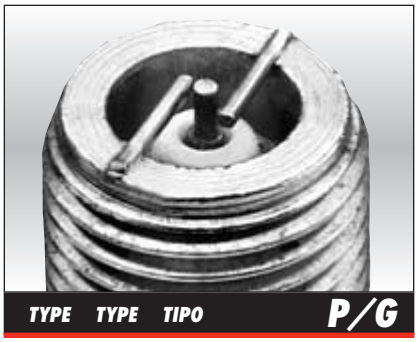

STANDARD STANDARD ESTÁNDAR

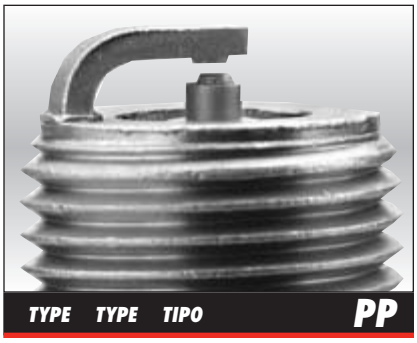

TYPE TYPE TIPO **B**


TYPE TYPE TIPO **D**


TYPE TYPE TIPO **F**

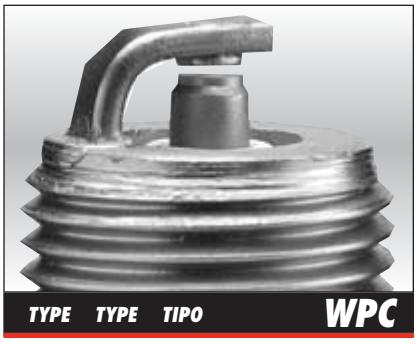

TYPE TYPE TIPO **N**

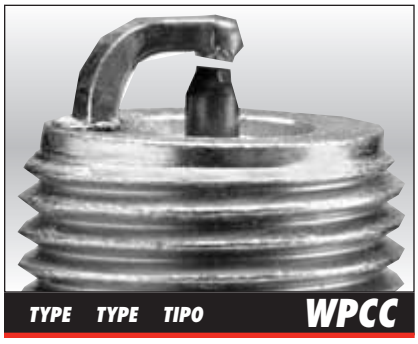

TYPE TYPE TIPO **P/G**


TYPE TYPE TIPO **PP**


TYPE TYPE TIPO **PYP**


TYPE TYPE TIPO **WP**


TYPE TYPE TIPO **WPC**


TYPE TYPE TIPO **WPCC**


PRECHAMBER PRÉCHAMBRE PRECÁMARA

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PLUG TYPE	GAP	COPPER PLUS UNSHIELDED STOCK NO.	PLUG TYPE	GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	PLUG TYPE	GAP
ABC													
Washing Machines													
All Models	—	—	—	569	W14	.030	—	—	—	—	—	—	—
AJAX													
(Cooper Energy Services)													
6-1/2x8CMA, EA30	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
7-1/4x8CMA, E30, 7-1/2x10CMA, E42	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
CMA, C30, 7-1/2x10, CMA, EA22 6-1/2x8	—	—	—	569	W14	.030	—	—	—	—	—	—	—
E15 5-1/4x8, E42, C40, C42 8-1/2x10	—	—	—	569	W14	.030	—	—	—	—	—	—	—
DP60, DPC60, DPC120 9-1/2x12	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DP80, DPC80 11x14	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DP115, DP125 13-1/4x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DP160, DPC160 11x14	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DP165, DP300, DP325 15x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DP230, DP250 13-1/4x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC81 10-1/2x12, DPC105 12x14	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC115, DPC140 13-1/4x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC162, DPC180, DPC300 15x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC180LE, DPC360LE Pre Chamber	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
DPC180LE, DPC360LE Main Chamber	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC230, DPC280 13-1/4x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC360, DPC540 15x16	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC600, DPC800	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DPC600LE, DPC800LE Pre Chamber	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
DPC600LE, DPC800LE Main Chamber	—	—	—	518	W18	.025	—	—	—	—	—	—	—
WL, EA15 5x6-1/2	—	—	—	569	W14	.030	—	—	—	—	—	—	—
ALLIS-CHALMERS													
GASOLINE													
G-138, G-149, G-160, 14 Power Units	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
G-226 3/8" Reach	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
G-226, G-262 3/4" Reach	—	—	—	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
P-1879, PC-1879, PC-2505, PCS-2505	—	—	—	509	D9	.025	—	—	—	—	—	—	—
NATURAL & LP-GAS													
G-138, G-149, 14 Power Units	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
G-160	—	—	—	825	J4C	.015	—	—	—	—	—	—	—
G-226 3/8" Reach	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
G-226, G-262 3/4" Reach	—	—	—	818/805	RN2C/N2C	.020	575	RHN79G	—	—	540	RTN79G	.020
LOW GRADE FUEL													
G-226, W-201 3/8" Reach	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
G-226 3/4" Reach	—	—	—	405	RN14YC	.030	—	—	—	—	—	—	—
AMERICAN MOTORS													
232, 258 cid 6-Cyl.	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
304, 360 cid V-8	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
ARIEL													
JGS-1 High Tension	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
JGS-1 Low Tension	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
ARROWS													
C46, C66, C96, C106, C255	—	—	—	502/543	D21/D89D	.025	—	—	—	—	—	—	—
C96, C106, C255	—	—	—	502/543	D21/D89D	.025	—	—	—	—	—	—	—
L-333, L-795, L-1770, L-2165, F-208	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
VRG220, VRG330	530	RN79G	.015	123/120	RN5C/N5C	.020	—	—	575	RHN79G	540	RTN79G	.015
Y-12, Y-18, Y-24, Y-33	—	—	—	405	RN14YC	.030	—	—	—	—	—	—	—
BARTON													
Washing Machines													
All Models	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
BOUDOUIN													
6 or 12 P15.2	—	—	—	685	S59YC	.020	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PREMIUM LONG LIFE PLUG TYPE	PREMIUM LONG LIFE GAP	COPPER PLUS UNSHIELDED STOCK NO.	COPPER PLUS UNSHIELDED PLUG TYPE	COPPER PLUS UNSHIELDED GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PREMIUM SHIELDED 3/4"-20 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	SHIELDED 3/4"-20 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	INTEGRAL COIL TYPE 13/16"-20 PLUG TYPE	GAP
BERNARD													
All Models	620	RL85G	.015	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.015
BUDA (See Allis-Chalmers)													
CASE													
A284, A377, 159G Gasoline	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
A284, A377, 159G Natural & LP Gas	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
188G, 301G, 377G Gasoline	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
188G, 301G, 377G Natural & LP Gas	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
CATERPILLAR													
NATURAL GAS													
3306, G333 1/2" Reach	620	RL85G	.015	535	RL15B	.015	551	RHL79G	—	—	556	RTL85G	.015
3306, G333 3/4" Reach, G343, G3304	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
G342, G353, G375, G379	620	RL85G	.015	535	RL15B	.015	551	RHL79G	—	—	556	RTL85G	.015
G397, G398, G399	620	RL85G	.015	535	RL15B	.015	551	RHL79G	—	—	556	RTL85G	.015
G3400 Series	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
G3500 Series	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
G3600 Series	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
G3600 Series (Sensor Plug)	—	—	—	227	FI21505	—	—	—	—	—	—	—	—
G3600 Series (Sensor Plug) Bulbos	—	—	—	1211	FI21511	—	—	—	—	—	—	—	—
STARTING ENG FOR DIESELS													
14mm Heads													
D330, D333	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
D320, D339, D342, D343, D353	—	—	—	58	RJ18YC	.030	—	—	—	—	—	—	—
D375, D379, D397, D398, D4600	—	—	—	58	RJ18YC	.030	—	—	—	—	—	—	—
18mm Heads													
D320, D326, D337	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
D339, D342, D343, D353	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
D375, D379, D397, D398	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
CHRYSLER													
GASOLINE													
Normal Service													
1978 H105	—	—	—	415/300	RN9YC/N9YC	.025	—	—	—	—	—	—	—
Thru 1974 H225, HB-225	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
1976-75 H225, HB-225	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
1978-77 HB225	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
1978-77 LH318	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
1978-77 L360, LH360	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
1975-73 440-3 (Motor Home)	—	—	—	400	RV9YC	.035	—	—	—	—	—	—	—
H273	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
H318, HB318, HC318, HT318	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
LH318	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
LT318	—	—	—	129	RF10C	.030	—	—	—	—	—	—	—
H361, H383, H413, HA318	—	—	—	63	RJ14YC	.035	—	—	—	—	—	—	—
HB361, HB383, HC361, HT361	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
HB413, HC413, HB170	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
HT413, HB426, HC426, H170	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
H440	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
IND5A, IND6A, IND7A	—	—	—	592/511	RJ12/J11C	.035	—	—	—	—	—	—	—
IND8A, IND13, IND13A	—	—	—	592/511	RJ12/J11C	.035	—	—	—	—	—	—	—
IND12A, IND19B, IND52	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
IND14, IND14A, IND15, IND15A	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
IND16A, IND 18A, IND19A, IND20A	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
IND23A, IND24A	—	—	—	504	N21	.035	—	—	—	—	—	—	—
IND31, IND32, IND33	—	—	—	592/511	RJ12/J11C	.035	—	—	—	—	—	—	—
IND30, IND38, IND908A, IND931	—	—	—	592/511	RJ12/J11C	.035	—	—	—	—	—	—	—
IND53, IND56, IND56A	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
IND54	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
Light Service													
Thru 1974 H225, HB-225	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
1976-75 H225, HB-225	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
H440	—	—	—	63	RJ14YC	.035	—	—	—	—	—	—	—
IND54	—	—	—	58	RJ18YC	.035	—	—	—	—	—	—	—
LH318, H170, HB170	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PLUG TYPE	GAP	COPPER PLUS UNSHIELDED STOCK NO.	PLUG TYPE	GAP	PREMIUM SHIELDED ¾″-20 STOCK NO.	PLUG TYPE	SHIELDED ¾″-20 STK. NO.	PLUG TYPE	INTEGRAL COIL TYPE 13/16″-20 STOCK NO.	PLUG TYPE	GAP
CHRYSLER–continued													
Severe Service													
H440	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
IND56, IND56A, LH318	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
NATURAL & LP-GAS													
1977 HB225	—	—	—	406	RV12YC	.020	—	—	—	—	—	—	—
IND5A, IND6A, IND7A, IND8A, IND13	—	—	—	871/841	RJ8C/J8C	.020	—	—	—	—	—	—	—
IND13A, IND14, IND13A, IND14A, IND15	—	—	—	871/841	RJ8C/J8C	.020	—	—	—	—	—	—	—
IND15A, IND16A, IND30, IND31, IND32	—	—	—	871/841	RJ8C/J8C	.020	—	—	—	—	—	—	—
IND33, IND38, IND908A, IND931	—	—	—	871/841	RJ8C/J8C	.020	—	—	—	—	—	—	—
H170, HB170, H225, HB225	530	RN79G	—	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
H318, HB318, HC318, HT318	—	—	—	14/10	RJ12YC/J12YC	.020	—	—	—	—	—	—	—
H361, H383, H413, HA318	—	—	—	63	RJ14YC	.020	—	—	—	—	—	—	—
HB361, HB383, HC361, HT361	530	RN79G	.020	818/805	RN2C/N2C	.020	575	RHN79G	—	—	540	RTN79G	.020
HB413, HC413, HT413, HB426, HC426	530	RN79G	.020	818/805	RN2C/N2C	.020	575	RHN79G	—	—	540	RTN79G	.020
CLARK (See Dresser Clark)													
CLEVELAND DIESEL													
Model 358	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
CLIMAX													
GASOLINE													
CE101, CE106, CE264	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
CE46, CE66, CE81, CE96	—	—	—	514	D14	.025	—	—	—	—	—	—	—
R-165 Snowplow Only	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
V-80, V-85, V-122, V-125 8.2:1 C.R.	—	—	—	514	D14	.025	—	—	—	—	—	—	—
V-80, V-85, V-122, V-125 9.4:1 C.R.	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
CONTINENTAL													
Normal Service													
B405, 4124, 4140, 4162, 4163, 6226	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
B6244, 6245, 6277, 6371, 6405, 6427	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
C46, C66	—	—	—	543	D89D	.025	—	—	—	—	—	—	—
C96, C106, C225	—	—	—	502	D21	.025	—	—	—	—	—	—	—
E223, F124, 135, 140, 162, 163, 186	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
F209, 226, 227, 244, 245	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
FO6228	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
G134, 157, 176, H227, 243, 260	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
G4193	—	—	—	857	RH18Y	.030	—	—	—	—	—	—	—
G193, K6271, 6298, 6330, 6363	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
J382 to 403, T371 to 427	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
L478	—	—	—	825	J4C	.025	—	—	—	—	—	—	—
L6478	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
M6271, 6290, 6330, 6363, OS220	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
R11, 14, 17	—	—	—	327/312	RL87YC/L87YC	.025	—	—	—	—	—	—	—
R688-46, R800-46, R810-46, R839-46	—	—	—	327/312	RL87YC/L87YC	.025	—	—	—	—	—	—	—
R6513, 6572, 6602, U6501 14mm Hds	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
R6513, 6572, 6602, U6501 18mm Hds	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
RS542, T6371, 6427, TC56	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
TM13, 20, 27	—	—	—	415/300	RN9YC/N9YC	.035	—	—	—	—	—	—	—
TS415, Z134	—	—	—	509	D9	.025	—	—	—	—	—	—	—
Y69, Y91, Y112, Y4069, 4091, 4112	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
Z105 to 120, ZA120	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
700, 800, 900, 1100, 1200	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
All Other 14mm Heads	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
Multi-Tool	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
Severe Service													
F4163, F6227, F6245	—	—	—	509	D9	.025	—	—	—	—	—	—	—
NATURAL & LP-GAS													
C46, C66, C96, C106, C255	—	—	—	543	D89D	.020	—	—	—	—	—	—	—
E223, F124, 162, 224, 226	—	—	—	509	D9	.020	—	—	—	—	—	—	—
G193	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
H280, 277, M271, 290, 330, 363	—	—	—	509	D9	.020	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PREMIUM LONG LIFE PLUG TYPE	PREMIUM LONG LIFE GAP	COPPER PLUS UNSHIELDED STOCK NO.	COPPER PLUS UNSHIELDED PLUG TYPE	COPPER PLUS UNSHIELDED GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PREMIUM SHIELDED 3/4"-20 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	SHIELDED 3/4"-20 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	INTEGRAL COIL TYPE 13/16"-20 PLUG TYPE	GAP
CONTINENTAL–*continued*													
J382 to 403	—	—	—	509	D9	.020	—	—	—	—	—	—	—
S749, T247, 371 to 427	—	—	—	509	D9	.020	—	—	—	—	—	—	—
All Other 14mm Heads	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
ALL FUELS													
B20, 371, 421, R513, R572, R602	—	—	—	509	D9	.025	—	—	—	—	—	—	—
N56 to 62, N4062, NA82, TS415	—	—	—	509	D9	.025	—	—	—	—	—	—	—
S6749 to 6820, Y69, Y91, Y112	—	—	—	509	D9	.025	—	—	—	—	—	—	—
U501, Z129, 134	—	—	—	509	D9	.025	—	—	—	—	—	—	—
COOPER - BESSEMER													
ENG, GNG	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
GAB, GAF, GAG, GAJ, GAN	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
GAO, GAOA, GAR, GAU, GBE, GBE, GBG	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
GAS, EN, ENB; 'Hope' 14-3/4" x 16"	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
GAW, GMR, GMV, JS	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
GBH, GBI, GBK	—	—	—	518	W18	.025	—	—	—	—	—	—	—
GBM thru GBP, GN, GSC, GSD	—	—	—	518	W18	.025	—	—	—	—	—	—	—
GDA thru GDS, GHA, GHB, GMD	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
GDJ, GMA, GMB, GMC w/G402 Reducing Bushing	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
GDT, GFB, GFE, GFK w/G402 Reducing Bushing	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
GMG, GMO, GMOA, GRC	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
GMW, GMX, V-250, V-275, W330 5/8" Reach	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
GMWA, GMWC, GMW, GMX, V-250, V-275, Z330 1" Reach	228	RW77PP	.012	565/631	RW77N/RW78N	.012	—	—	635	RHW78N	552	RGC77N[1]	.012
GMWC, GMWA 5/8" Reach	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
GMVH, LSVB	228	RW77PP	.012	565/631	RW77N/RW78N	.012	—	—	635	RHW78N	552	RGC77N[1]	.012
GMXE, GMWH, GMXH, W330 5/8" Reach	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
GMXE, GMWH, GMXH, W330 1"Rch.	228	RW77PP	.012	565/631	RW77N/RW78N	.012	—	—	635	RHW78N	552	RGC77N[1]	.012
GS	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
LS, LSV 7/8"-18 Heads	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
LS, LSV 1-1/8"-12 Heads	—	—	—	598	RS79N	.012	—	—	—	—	—	—	—
Z330 5/8" Reach	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
19, 22, 24, 25, 26, 80	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
'Hope' 18" x 20"	—	—	—	525	25	.025	—	—	—	—	—	—	—
Quad Series	228	RW77PP	.012	565/631	RW77N/RW78N	.012	—	—	635	RHW78N	552	RGC77N[1]	.012
COOPER ENERGY SERVICES (See Superior)													
CP - CHICAGO PNEUMATIC													
9CPG Low Compression	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
16CPG, RHGB-50	—	—	—	518	W18	.025	—	—	—	—	—	—	—
Cat. D13000 And Other 7/8"-18 Hds.	—	—	—	569	W14	.030	—	—	—	—	—	—	—
CUMMINS													
GNHC-4, GNH-220, GNH-250 3/8" Rch	—	—	—	825	J4C	.025	—	—	—	—	—	—	—
GNHC-4, GNH-220, GNH-250 1/2" Rch	620	RL85G	.015	535	RL15B	.015	551	RHL79G	—	—	556	RTL85G	.015
GV-12450, GM-12-525 3/8" Reach	—	—	—	825	J4C	.025	—	—	—	—	—	—	—
GV-12450, GV-12-525 1/2" Reach	620	RL85G	.015	535	RL15B	.015	551	RHL79G	—	—	556	RTL85G	.015
6B	—	2095	.020	—	—	—	—	—	—	—	—	—	—
6B w/230 hp	1206/1208	RC78WP/RC78PYP	.017	1209	RC78YCC15	.015	—	—	—	—	—	—	—
6C	1206/1208	RC78WP/RC78PYP	.017	1209	RC78YCC15	.015	—	—	—	—	—	—	—
Engines w/Special Adapter													
No. 173416 5/8" Rch w/N677 Gasket	530	RN79G	.020	818/805	RN2C/N2C	.020	575	RHN79G	—	—	540	RTN79G	.020
No. 90210035, 90210036 3/4" Rch.	530	RN79G	.020	818/805	RN2C/N2C	.020	575	RHN79G	—	—	540	RTN79G	.020
Q19G	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
QSV	1205	RB77WPCC	.008	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012

[1] 1"-20 internal thread. [1] Filetage interne 1 po - 20. [1] 1"-20 rosca interior.

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PLUG TYPE	GAP	COPPER PLUS UNSHIELDED STOCK NO.	PLUG TYPE	GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	PLUG TYPE	GAP
DECO-GRAND													
DE2, DE2R, DE3, DE3R, DE7R, DEA8 ..	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
DELAVAL													
1980-72 HA6, HVA-8	228	RW77PP	.012	206/539	RW77N/W77N	.015	—	—	577	RHW77N	552	RGC77N(1)	.015
1980-69 HV-8, HV-12, HV-16	228	RW77PP	.012	206/539	RW77N/W77N	.015	—	—	577	RHW77N	552	RGC77N(1)	.015
1980-74 HVA-12	228	RW77PP	.012	206/539	RW77N/W77N	.015	—	—	577	RHW77N	552	RGC77N(1)	.015
1980-73 HVA-16	228	RW77PP	.012	206/539	RW77N/W77N	.015	—	—	577	RHW77N	552	RGC77N(1)	.015
DETRIOT DIESEL													
30, 40, 50 Series	243	RC78PYP15	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
DEUTZ MWM													
G620 V-8,TBG616 V-8,TBG616 V-12 ..	209/242	RB75WPC/RB75WPCC	.012	—	—	—	—	—	—	—	—	—	—
TBG616K V-8K, TBG616K V-12K, TBG616K V-16K	209/242	RB75WPC/RB75WPCC	.012	—	—	—	—	—	—	—	—	—	—
TBG620 V-8, TBG620 V-12, TBG620 V-16	209/242	RB75WPC/RB75WPCC	.012	—	—	—	—	—	—	—	—	—	—
TBG620K V-12K, TGB620K V-16K	209/242	RB75WPC/RB75WPCC	.012	—	—	—	—	—	—	—	—	—	—
DORMAN													
3DAG, 4DAG, 6DAG, 6QG, DATG4, 6 ..	530	RN79G	.020	880/801	RN3C/N3C	.020	575	RHN79G	—	—	540	RTN79G	.020
6LEG	620	RL85G	.015	874/811	RL82C/L82C	.015	551	RHL79G	—	—	556	RTL85G	.015
6SEG, 8SEG, 12SEG	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
12SG	217/233	RM77PP/RM82WPCC	.012	519/566	RM77N/M82N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
6SETCWG	—	—	—	685	S59YC	.020	—	—	—	—	—	—	—
6SETCWG MinNox	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
6PG, 12PG	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
12S, 12STCWG, 12STCAG, 6PG, 12PG .	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
DRESSER													
All Models–screw in prechamber (SIP) which accepts 14MM, 3/4" reach plugs	1206/243	RC78WP/RC78PYP15	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
DRESSER CLARK													
BA, HBA, HMA, HLA, HRA, MA	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
RA, TRA, TLA, TCV	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
Super & Turbocharged													
HBAT, HLAT, HRAT, TRA, TLA	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
TCVB, TCVC, TVM, VMC	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
TLAB, TLAC, TLAD, TPV, TCVA	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
TVC, HSRA, RAS, TMB	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
DRESSER RAND													
KVG Pulse Chamber Type	1207/582	RW80PP/RW82P	.012	559	RW83F	.012	1204	RHW80PP	544	HW83F	645	RTW83F	.012
KVSR, KVSRA, KVSE, KVFS, PKVSE	228	RW77PP	.012	565/631	RW77N/RW78N	.012	—	—	635	RHW78N	552	RGC77N(1)	.012
TCV, TCVA, TCVD, TLAD	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
ECHO													
KEH202D, SV2 (Kioritz)	—	—	—	840/843	RCJ8/CJ8	.025	—	—	—	—	—	—	—
ENTERPRISE													
GSG-36, 38; GSM-36, 38	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
GSM-36, 38 7/8"-18 Heads	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
GSM-36, 38 18mm Heads	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
HV-8, HV-12, HV-16	228	RW77PP	.012	206/539	RW77N/W77N	.015	1204	RHW80PP	577	RHW77N	552	RGC77N	.015
TDSG-36-6-38 Center of Head	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
TDSG-36-6-38 Rear Side Of Head	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
FAIRBANKS MORSE													
FM-7, FM-12, FM-18, FM-24, FM-36 ..	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
ZC, ZC118, ZC208, ZC346	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
ZC346, ZC503, ZC739	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
38D8-1/8 Series	217/233	RM77PP/RM82WPCC	.012	571	RM79F	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
38DS8-1/8, 38F-85, 38FS5-1/4	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012

(1) 1"-20 internal thread. (1) Filetage interne 1 po - 20. (1) 1"-20 rosca interior.

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	 PLUG TYPE	 GAP	COPPER PLUS UNSHIELDED STOCK NO.	 PLUG TYPE	 GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	 PLUG TYPE	 GAP
FICHTEL-SACHS (See Sachs)													
FORD													
67 cid (1.1L)	—	—	—	415/300	RN9YC/N9YC	.035	—	—	—	—	—	—	—
79 cid (1.3L)	—	—	—	304	RS9YC	.035	—	—	—	—	—	—	—
98 cid (1.6L)	—	—	—	415/300	RN9YC/N9YC	.035	—	—	—	—	—	—	—
91, 120, 134, 172, 192 cid Gasoline	—	—	—	854/844	RH10C/H10C	.025	—	—	—	—	—	—	—
91, 120, 134, 172, 192 cid LP Gas	—	—	—	538/587	RH8C/H8C	.020	—	—	—	—	—	—	—
104 cid	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
140 cid (2.3L)	—	—	—	401	RS12YC	.035	—	—	—	—	—	—	—
144, 170 cid	—	—	—	22	RF11YC	.030	—	—	—	—	—	—	—
153 cid (2.5L)	—	—	—	401	RS12YC	.035	—	—	—	—	—	—	—
158, 175, 201, 256 cid	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
182 cid (3.0L)	—	—	—	332	RN7YC	.035	—	—	—	—	—	—	—
223, 272 cid	—	—	—	409	RF9YC	.030	—	—	—	—	—	—	—
200, 240, 250, 262, 292 cid	—	—	—	129	RF10C	.030	—	—	—	—	—	—	—
300 cid (4.9L)	—	—	—	22	RF11YC	.030	—	—	—	—	—	—	—
330, 332, 361, 391, 401 cid	—	—	—	129	RF10C	.030	—	—	—	—	—	—	—
460, 429, 351, 302, 370 cid	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
477 cid 1977 & Up	—	—	—	106	RZF10	.035	—	—	—	—	—	—	—
477 cid Thru 1977	—	—	—	129	RF10C	.030	—	—	—	—	—	—	—
534 cid 1976 & Up	—	—	—	106	RZF10	.035	—	—	—	—	—	—	—
534 cid Thru 1976	—	—	—	129	RF10C	.030	—	—	—	—	—	—	—
CSG 850, CSG 850M-EFI	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
WSG 858, WSG 858-HO	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
WSG 858, WSG 858-HO EFI, LSG875	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
LSG 875	—	—	—	406	RV12YC	.035	—	—	—	—	—	—	—
FUJI-ROBIN													
EC-02, EC-02R	—	—	—	849	CJ6	.025	—	—	—	—	—	—	—
EC-05, EC-07, FG-14	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
EC-10, EY-21	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
EY-13, EY-18, EY-25, EY-33	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
EY-27, EY-14, EY-40, EC-16	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
EY-44, EY-88, EC-03, EC-04	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
Series FA, KB, KD, KE, KH, KM	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
KEROSENE													
EY-13, EY-18, EY-25, EY-33, EY-44	—	—	—	806	L92YC	.025	—	—	—	—	—	—	—
GEMINI													
G26, G35	620	RL85G	.025	874/811	RL82C/L82C	.025	551	RHL79G	—	—	556	RTL85G	.025
GENERAL MOTORS													
305, 351, 401, 478, 702 Gasoline	530	RN79G	.025	104/803	RN4C/N4C	.025	575	RHN79G	—	—	540	RTN79G	.025
305, 351, 401, 478, 702 LPG	530	RN79G	.025	880/801	RN3C/N3C	.020	575	RHN79G	—	—	540	RTN79G	.020
16-358HN, 16-358-X	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
GUASCOR													
FG180, FGLD180, FG240	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
FGLD240, FGLD360, FGLD480	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
HALL SCOTT													
GASOLINE													
136, 180, 190, 504 Exhaust	—	—	—	514	D14	.025	—	—	—	—	—	—	—
151, 152, 165, 167	—	—	—	569	W14	.025	—	—	—	—	—	—	—
440, 2269-0; 1091-OS Exhaust	—	—	—	514	D14	.025	—	—	—	—	—	—	—
590 Series	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
779-GHI	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
855, 935 Intake	—	—	—	502	D21	.025	—	—	—	—	—	—	—
855, 935 Exhaust	—	—	—	506	D6	.025	—	—	—	—	—	—	—
200-0, 201-0; 400-0 Regular	—	—	—	514	D14	.025	—	—	—	—	—	—	—
400-0, 300, 470, 480 Intake	—	—	—	502	D21	.025	—	—	—	—	—	—	—
400-0, 470, 480, 6156 Exhaust	—	—	—	514	D14	.025	—	—	—	—	—	—	—
400-0 Water-Jacketed Exhaust	—	—	—	509	D9	.025	—	—	—	—	—	—	—
400-0, 470, 480 Sour Gas	—	—	—	597	K97F	.020	—	—	—	—	—	—	—
1091-G1 Intake	—	—	—	502	D21	.025	—	—	—	—	—	—	—
1091-OS Intake	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
6156, FE, G1, G2 Intake	—	—	—	502	D21	.025	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PLUG TYPE	GAP	COPPER PLUS UNSHIELDED STOCK NO.	PLUG TYPE	GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	PLUG TYPE	GAP
HALL SCOTT–*continued*													
6156-B1, 6182-B1, 1091-B1 Intake	—	—	—	514	D14	.025	—	—	—	—	—	—	—
6156-B1, 6182-B1, 1091-B1 Exhaust	—	—	—	506	D6	.025	—	—	—	—	—	—	—
6182, G1, G2, FE Intake	—	—	—	502	D21	.025	—	—	—	—	—	—	—
F3, G1, G2, 6182 Exhaust	—	—	—	514	D14	.025	—	—	—	—	—	—	—
G1, G2, FE; 1091G1 Exhaust	—	—	—	514	D14	.025	—	—	—	—	—	—	—
NATURAL & LP-GAS													
590 Series	—	—	—	825	J4C	.015	—	—	—	—	—	—	—
400-0, 470, 480, 855, 935 Exhaust	—	—	—	506	D6	.020	—	—	—	—	—	—	—
400-0, 470, 480, 855, 935 Intake	—	—	—	514	D14	.020	—	—	—	—	—	—	—
HERCULES													
CV4-180, CV4-180ER	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
G-1000 Natural & LP Gas	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
G-Series 1400, 1500, 1600, 1700	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
G-Series 2000, 2300, 3000, 3400	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
G298H	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
G3400 Power Unit (Magneto Ign.)	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
G4800, GTA4800	1206/218	RC78WP/RC78PYP	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
GO Series 226, 298, 339, 226AH	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
GO3, QXB, WXLC, GO	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
GTA 3.7, GTA 5.6	219	RC78PYP	.025	—	—	—	—	—	—	—	—	—	—
HXE, HXLEF	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
IXB	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
IXLB, JXC, JXD, JXLD, 14mm Heads	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
JXLD, JXC 18mm Heads	—	—	—	509	D9	.025	—	—	—	—	—	—	—
JXLDER, IXBER, NXB, JX4LD	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
QXC, QXD, JX4C, GO6, JX4S, RXC	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
RXLDH, C2-90D, IXA, QXLD, GO4	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
149H, 169H, 198AH, L237	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
1091-OS Intake	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
1091-OS Exhaust	—	—	—	514	D14	.025	—	—	—	—	—	—	—
1404	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
6156, 6182 Natural & LP Gas Intake	—	—	—	514	D14	.025	—	—	—	—	—	—	—
6156, 6182 Natural & LP Gas Exhaust	—	—	—	506	D6	.025	—	—	—	—	—	—	—
Thermo King	—	—	—	644	RJ88P	.015	—	—	—	—	—	—	—
14mm Heads Using Natural Gas	—	—	—	825	J4C	.015	—	—	—	—	—	—	—
HOFFCO													
Powerhead (Power Products AV52)	—	—	—	840/843	RCJ8/CJ8	.025	—	—	—	—	—	—	—
Powerhead (Tecumseh Engines)	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
HOPE (See Cooper-Bessemer)													
INGERSOLL - RAND													
PULSE GEN. IGNITION													
KVS, PKVG, KVGR, PKVGR	1207/582	RW80PP/RW82P	.012	559	RW83F	.012	1204	RHW80PP	544	HW83F	645	RTW83F	.012
NATURALLY ASPIRATED													
PKVG, KVGR, PKVGR	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
XVG, PVG, JVG, SVG, KVG, PJVG, PSVG	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
Turbocharged Models	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
KVS-FT Series on Thru 1977	1207/582	RW80PP/RW82P	.012	559	RW83F	.012	1204	RHW80PP	544	HW83F	645	RTW83F	.012
Thru 1977 KVR, KVSR	1207/582	RW80PP/RW82P	.012	559	RW83F	.012	1204	RHW80PP	544	HW83F	645	RTW83F	.012
TVS, TVR, SVS, KVT, KVH	1207/582	RW80PP/RW82P	.012	559	RW83F	.012	1204	RHW80PP	544	HW83F	645	RTW83F	.012
KVS-AT Thru ET Series	1207/582	RW80PP/RW82P	.012	559	RW83F	.012	1204	RHW80PP	544	HW83F	645	RTW83F	.012
KVS, KVR, KVSR w/Precombustion Chamber	228	RW77PP	.012	565/631	RW77N/RW78N	.012	—	—	577	RHW77N	552	RGC77N[1]	.012
INTERNATIONAL													
GASOLINE													
Normal Service													
C-152, C-196, C-304, C-345, C-392	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
C-446	—	—	—	408	RS14YC	.035	—	—	—	—	—	—	—
C-537, C-605	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
C-549	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
T340	—	—	—	509	D9	.025	—	—	—	—	—	—	—
U2, U2A, UC60, UC135	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—

[1] 1"-20 internal thread. [1] Filetage interne 1 po - 20. [1] 1"-20 rosca interior.

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	 PLUG TYPE	 GAP	COPPER PLUS UNSHIELDED STOCK NO.	 PLUG TYPE	 GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	 PLUG TYPE	 GAP
INTERNATIONAL–*continued*													
U164, U169, U175	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
UB240, UV266	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
UC135B, UC153, UC175	—	—	—	526/515	RD15Y/D15Y	.025	—	—	—	—	—	—	—
UC135B, UC153	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
UC175, UC200, UC301	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
UC200, UC221, UC263, UC301, T6	—	—	—	526/515	RD15Y/D15Y	.025	—	—	—	—	—	—	—
UC221, UC263 Shielded	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
UR372, UV304, UV345, UV392	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
Light Service													
U175, UC175, UC200, UC221, UC263	—	—	—	549	D18Y	.025	—	—	—	—	—	—	—
U220, UB220, U240, UB240	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
U308, UB308, UV345, U372, UV392	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
UB264, UV266, U282, UV304	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
UC60, U123, UC135, UC135B, UC153	—	—	—	549	D18Y	.025	—	—	—	—	—	—	—
UC301, U164, U169, U281	—	—	—	549	D18Y	.025	—	—	—	—	—	—	—
UR501, RV549, U269, UR372	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
UV401, U450, UR450, UV461, U501	—	—	—	14/10	RJ12YC/J12YC	.030	—	—	—	—	—	—	—
Severe Service													
C-446	—	—	—	304	RS9YC	.035	—	—	—	—	—	—	—
U175, UC175, UC200, UC221, UC263	—	—	—	506	D6	.025	—	—	—	—	—	—	—
U220, UB220, U240, UB240	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
U308, UB308, UV345, U372, UV392	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
UB264, UV266, U282, UV304	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
UC60, U123, UC135, UC135B, UC153	—	—	—	506	D6	.025	—	—	—	—	—	—	—
UC301, U164, U169, U264, U281	—	—	—	506	D6	.025	—	—	—	—	—	—	—
UR501, UV549, U269, UR372	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
UV401, U450, UR450, UV461, U501	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
NATURAL & LP-GAS													
C-152, C-196, C-304, C-345, C-392	—	—	—	14/10	RJ12YC/J12YC	.020	—	—	—	—	—	—	—
C-446 Normal Service	—	—	—	408	RS14YC	.020	—	—	—	—	—	—	—
C-446 Severe Service	—	—	—	304	RS9YC	.020	—	—	—	—	—	—	—
C-537, C-605	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
C-549	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
U175, UC153, UC175	—	—	—	526/515	RD15Y/D15Y	.015	—	—	—	—	—	—	—
U220, UB220, U240, UB240	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
U308, UB308, UV345, U372, UV392	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
U817, U817B, UT817, UT817B 14mm Hds	620	RL85G	.015	535	RL15B	.015	551	RHL79G	—	—	556	RTL85G	.015
U817, U817B, UT817, UT817B 18mm Heads	—	—	—	129	RF10C	.015	—	—	—	—	—	—	—
UB264, UV266, U282, UV304	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
UC60, UC200	—	—	—	526/515	RD15Y/D15Y	.015	—	—	—	—	—	—	—
UC135, UC135B, U164, U169	—	—	—	526/515	RD15Y/D15Y	.015	—	—	—	—	—	—	—
UC221, UC263, UC301, U264, U281	—	—	—	526/515	RD15Y/D15Y	.015	—	—	—	—	—	—	—
UR501, U269, UR372, UV549	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
UV401, U450, UR450, UV461, U501	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
JENBACHER													
J208 8-Cyl., J212 12-Cyl.	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
J216 16-Cyl., J312 12-Cyl.	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
J316 16-Cyl., J320 20-Cyl.	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
J612 12-Cyl. Thru 8/95	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
J612 12-Cyl. After 9/95	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
J616 16-Cyl. Thru 8/95	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
J616 16-Cyl. After 9/95	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
JLO - ROCKWELL													
G49, L35, L77, LV298, MM25, MM40	620	RL85G	.020	874/811	RL82C/L82C	.020	551	RHL79G	—	—	556	RTL85G	.020
GA50 Updated Version, V49	620	RL85G	.020	874/811	RL82C/L82C	.020	551	RHL79G	—	—	556	RTL85G	.020
L101, L152, L197	—	—	—	509	D9	.025	—	—	—	—	—	—	—
L252, L292, L297, L372	—	—	—	509	D9	.025	—	—	—	—	—	—	—
JOHN DEERE													
GASOLINE													
92, 115, 145, 165, 217, 232	—	—	—	854/844	RH10C/H10C	.025	—	—	—	—	—	—	—
LUC, LUH, LUW, LUS	—	—	—	854/844	RH10C/H10C	.025	—	—	—	—	—	—	—
Series TA92, TB92, TA145, TA217	—	—	—	854/844	RH10C/H10C	.025	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PLUG TYPE	GAP	COPPER PLUS UNSHIELDED STOCK NO.	PLUG TYPE	GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	PLUG TYPE	GAP
JOHN DEERE–*continued*													
NATURAL & LP-GAS													
92, 115, 145, 165, 217, 232	—	—	—	538/587	RH8C/H8C	.015	—	—	—	—	—	—	—
300 Series	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
341, 400, 500 Series	—	—	—	514	D14	.025	—	—	—	—	—	—	—
400, 500 Series Natural & LP Gas	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	596	RHM77N	1201/223	RTM78N/RTM77PP	.015
6076AFN30 (150 & 200 h.p.)	1206/218	RC78WP/RC78PYP	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
NATURAL & LP-GAS													
LUC, LUH, LUW, LUS	—	—	—	538/587	RH8C/H8C	.015	—	—	—	—	—	—	—
Series TA92, TB92, TA145, TA217	—	—	—	538/587	RH8C/H8C	.015	—	—	—	—	—	—	—
Stationary Engine Type W, WSP	—	—	—	518	W18	.025	—	—	—	—	—	—	—
J-W POWER													
Superburn	228	RW77PP	.012	206/539	RW77N/W77N	.015	—	—	577	RHW77N	552	RGC77N[1]	.015
Superburn Pre-Cell	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
LISTER PETTER													
Alpha Series LPWG2, 3 & 4	—	—	—	344	RC9YC	.020	—	—	—	—	—	—	—
HR2G, HR3G	—	—	—	506/625	D6/D78Y	.015	—	—	—	—	—	—	—
LORAIN													
30, 37, 40, 50	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
A, L, O, R 7/8"-18 Heads	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
LUFKIN													
GSC	—	—	—	513	C97B	.025	—	—	—	—	—	—	—
H795 Severe Service	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
H1770, H2165 Normal Service	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
H1770, H2165 Severe Service	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
HT333, HC333, H795, GSD, GSDH	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
L333, L795, L1770, L2165, F280	—	—	—	589	W89D	.025	—	—	—	—	—	—	—
MAYTAG													
Washing Machines													
'Multi-Motor' 1/2"-14 Pipe Heads	—	—	—	525	25	.025	—	—	—	—	—	—	—
14mm Heads	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
McCULLOCH													
Models 77, 99	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
All Other Models	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
M.E.P. INDUSTRIES													
M.E.P.-6, -8, -10, -12	217/233	RM77PP/RM82WPCC	.012	519/566	RM77N/M82N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
MINNEAPOLIS - MOLINE													
GASOLINE													
Low-Compression													
165-4A, 185-4A, 206-4A	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
220-4, HD220-4A, M220-A4A	—	—	—	514	D14	.025	—	—	—	—	—	—	—
336A-4A, HD425-6A	—	—	—	514	D14	.025	—	—	—	—	—	—	—
403-4A, 605-6A 14mm Hds.	—	—	—	868/861	RJ19LM/J19LM	.025	—	—	—	—	—	—	—
403-4A, 605-6A, 1918-4A, 2714-6A	—	—	—	569	W14	.030	—	—	—	—	—	—	—
800-6A, 1210-12A 14mm Hds.	—	—	—	868/861	RJ19LM/J19LM	.025	—	—	—	—	—	—	—
BEU, DU, FEU, GU, GUA, HU	—	—	—	569	W14	.030	—	—	—	—	—	—	—
CU, KEU, JU, 283-4A, 4256A	—	—	—	569	W14	.030	—	—	—	—	—	—	—
LU, MEU, NEU, SEU, TAU, TEU	—	—	—	569	W14	.030	—	—	—	—	—	—	—
HD504-6A, HD425-6A	—	—	—	514	D14	.025	—	—	—	—	—	—	—
HD504A-6A, 605A-6A, 605B-6A	—	—	—	514	D14	.025	—	—	—	—	—	—	—
HD605-6A, 800-6A	—	—	—	514	D14	.025	—	—	—	—	—	—	—
HD800-6A, HD800A-6A, 1210-12A	—	—	—	514	D14	.025	—	—	—	—	—	—	—
All Above Models w/18mm Heads	—	—	—	514	D14	.025	—	—	—	—	—	—	—
High-Compression													
165-4A, 185-4A, 206-4A	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
403-4A, 605-6A, 1918-4A, 2714-6A	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
BEU, DU, FEU, GU, GUA, HU	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
CU, KEU, JU, 283-4A, 4256A 18mm Hds.	—	—	—	509	D9	.025	—	—	—	—	—	—	—

[1] 1"-20 internal thread. [1] Filetage interne 1 po - 20. [1] 1"-20 rosca interior.

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	 PLUG TYPE	 GAP	COPPER PLUS UNSHIELDED STOCK NO.	 PLUG TYPE	 GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	 PLUG TYPE	 GAP
MINNEAPOLIS - MOLINE–*continued*													
CU,KEU,JU,283-4A,4256A 7/8"-18 Hds	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
LU, MEU, NEU, SEU, TAU, TEU	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
NATURAL & LP-GAS													
206-4A, 220-4, HD220-4A, M220-A4A	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
283-4A, HD504-6A	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
336A-4A, HD425-6A, HD504A-6A	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
403-4A, 605-6A, 1918-4A, 2714-6A	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
425-6A	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
605A-6A, 605B-6A, HD605-6A	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
800-6A, 1210-12A, 1600-12A	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
BEU, DU, FEU, GU, GUA, HU	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
CU, KEU, JU, 283-4A, 4256A	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
HD800-6A, HD800A-6A, 1210-12A	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
LU, MEU, NEU, SEU, TAU, TEU	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
NORDBERG (HATCH & KIRK)													
Power Chief 4FG	—	—	—	514	D14	.025	—	—	—	—	—	—	—
4FG	—	—	—	542	B86N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
FSE96 Natural Gas	226	RB76PP	.012	576	RB76N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
RTG Series Natural Gas	—	—	—	542	B86N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
OILWELL													
1/2"-14 Pipe Heads	—	—	—	525	25	.025	—	—	—	—	—	—	—
18mm Heads	—	—	—	597	K97F	.020	—	—	—	—	—	—	—
OLIN													
All Models	—	—	—	525	25	.025	—	—	—	—	—	—	—
O.M.C.													
Single And Twin Cylinder	—	—	—	22	RF11YC	.030	—	—	—	—	—	—	—
PERKINS													
G4-203	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
G4-236	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
900 Series	244	RC78PYP21	.021	—	—	—	—	—	—	—	—	—	—
4000 Series	634/636	RB77WPCC/RB77WPC	.012	—	—	—	—	—	—	—	—	—	—
RATHBUN JONES													
All Models	—	—	—	597	K97F	.020	—	—	—	—	—	—	—
Models w/G-402 Reducing Bushing	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
ROBIN (See Fuji-Robin)													
ROILINE													
F1500, H2000, H2470 (Light Load)	217/233	RM77PP/RM82WPCC	.012	571	RM79F	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
F1500,H2000,H2470 (Heavy Load)	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
H540, H844, H570, H884	217/233	RM77PP/RM82WPCC	.012	571	RM79F	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
L3230, L3460, L4000 (Light Load)	217/233	RM77PP/RM82WPCC	.012	571	RM79F	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
L3230, L3460, L4000 (Heavy Load)	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
GASOLINE													
A114, A288	—	—	—	592/511	RJ12C/J11C	.030	—	—	—	—	—	—	—
H540, H844, H884	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
TH884, H570, TH570	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
Low Compression													
F1500,F1850,H2000,H2150,H2470	—	—	—	514	D14	.025	—	—	—	—	—	—	—
L3000, L3230, L3460, L4000	—	—	—	514	D14	.025	—	—	—	—	—	—	—
High Compression													
F1500,F1850,H2000,H2150,H2470	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
L3000, L3230, L3460, L4000	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
NATURAL & LP-GAS													
H540, H570, TH570, H884, TH884	—	—	—	825	J4C	.015	—	—	—	—	—	—	—
ROPER													
Model 1900, CA301AR	—	—	—	851	DJ6J	.025	—	—	—	—	—	—	—
Model 3700	—	—	—	849	CJ6	.025	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE			COPPER PLUS UNSHIELDED			PREMIUM SHIELDED 3/4"-20		SHIELDED 3/4"-20		INTEGRAL COIL TYPE 13/16"-20		
	STOCK NO.	PLUG TYPE	GAP	STOCK NO.	PLUG TYPE	GAP	STOCK NO.	PLUG TYPE	STK. NO.	PLUG TYPE	STOCK NO.	PLUG TYPE	GAP
ROTAX													
300cc Normal Service	—	—	—	509	D9	.025	—	—	—	—	—	—	—
370cc Normal Service	620	RL85G	.020	830/306	RL86C/L86C	.020	551	RHL79G	—	—	556	RTL85G	.020
370cc Severe Service	620	RL85G	.020	874/811	RL82C/L82C	.020	551	RHL79G	—	—	556	RTL85G	.020
RUSTON													
RK270GS Series	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
SACHS													
Stamo 277, 281, 293	—	—	—	509	D9	.025	—	—	—	—	—	—	—
Stamo SL-2	620	RL85G	.025	874/811	RL82C/L82C	.025	551	RHL79G	—	—	556	RTL85G	.025
504 Series, 505 Series, 508	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
SACM													
Model UD30 Thru 1994	1206/218	RC78WP/RC78PYP	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
Model 175 1996 & up	1206/218	RC78WP/RC78PYP	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
STOVER													
CT-1, -2, -3, -4	—	—	—	518	W18	.025	—	—	—	—	—	—	—
DVA, DVA1	—	—	—	514	D14	.025	—	—	—	—	—	—	—
DV1, DV2, DVA2, XVH, 502 14mm Hds.	—	—	—	587	H8C	.025	—	—	—	—	—	—	—
DV1, DV2, DVA2, XVH, 502 7/8"-18 Hds.	—	—	—	518	W18	.025	—	—	—	—	—	—	—
K-1, K-6, K-8, MV-2, MV-5, MV-6, MV-7	—	—	—	518	W18	.025	—	—	—	—	—	—	—
MVA, IXA	—	—	—	569	W14	.030	—	—	—	—	—	—	—
1/2"-14 Pipe Heads	—	—	—	525	25	.025	—	—	—	—	—	—	—
STRUCK													
Mini-Dozer	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
SUPERIOR													
1706G2, 1712G1	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
2400 G Series	—	—	—	643	RB75N	.012	—	—	—	—	—	—	—
1973-39 80G Series	—	—	—	514	D14	.025	—	—	—	—	—	—	—
1973-39 80GX Series	—	—	—	514	D14	.025	—	—	—	—	—	—	—
1980-46 G510 Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
1980-51 G825 Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
1979-65 GT825 Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
1980-79 GTL Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
1991-81 GTLA/B Series	—	—	—	625	D78Y	.015	—	—	—	—	—		
1991-81 GTLA/B Series (Light Use)	—	—	—	526/515	RD15Y/D15Y	.015	—	—	—	—	—		
1980-61 GT510 Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	—	—	1201/223	RTM78N/RTM77PP	.015
1965-58 GX825 Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	—	—	1201/223	RTM78N/RTM77PP	.015
1980-76 SGT Series	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	—	—	1201/223	RTM78N/RTM77PP	.015
1991-81 SGTA/B Series	—	—	—	625	D78Y	.015	—	—	—	—	—	—	—
1991-81 SGTLA/B Series (Light Use)	—	—	—	526/515	RD15Y/D15Y	.015	—	—	—	—	—	—	—
1970-63 VG825 Series86	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
1970-63 VGT825 Series86	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
SYVARO													
1980 SP-440 Rotary	—	—	—	890	N19V	—	—	—	—	—	—	—	—
TANAKA													
Q-22, T-23, T-30, QEG-300	—	—	—	840/843	RCJ8/CJ8	.025	—	—	—	—	—	—	—
TELEDYNE (See Continental or Wisconsin)													
TML													
3500	—	—	—	840/843	RCJ8/CJ8	.025	—	—	—	—	—	—	—
TRANSAMERICA DELAVAL (See Delaval)													
UNIVERSAL													
Atomic Four	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
18mm Heads	—	—	—	514	D14	.025	—	—	—	—	—	—	—
7/8"-18 Heads	—	—	—	569	W14	.030	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	 PLUG TYPE	 GAP	COPPER PLUS UNSHIELDED STOCK NO.	 PLUG TYPE	 GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	 PLUG TYPE	 GAP
VOLKSWAGEN													
ADF, ADH w/1.8L Engs.	—	—	—	415/300	RN9YC/N9YC	.035	—	—	—	—	—	—	—
EA111 w/1.0L Engs.	—	—	—	415/300	RN9YC/N9YC	.035	—	—	—	—	—	—	—
Models 122, 124A Gasoline	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
Models 122, 124A Natural & LPG	620	RL85G	.025	874/811	RL82C/L82C	.025	551	RHL79G	—	—	556	RTL85G	.025
WARTSILA													
Model W25SG, W28SG, W34SG	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
Model 175 After 1994	1206/218	RC78WP/RC78PYP	.015	1209	RC78YCC15	.015	—	—	—	—	—	—	—
WAUKESHA													
GASOLINE													
14mm Heads													
FC, ICK, 6BZ, 6MZA, 6SRKR, 6WAK	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
F265GA, F283G, VRG265	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
H540, H570, H844, H884, H884G	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
VRG283, VRG310	—	—	—	322/302	RN11YC4/N11YC	.025	—	—	—	—	—	—	—
VRG220, VRG330	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
135G, 135GK, 135GKB, 135GZB	—	—	—	538/587	RH8C/H8C	.025	—	—	—	—	—	—	—
135GZ, 140GZ, 145GZ, F554G, F817G	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
140G, 140GK, 140GKB, 140GZB	—	—	—	538/587	RH8C/H8C	.025	—	—	—	—	—	—	—
145G, 145GK, 145GKB, 145GZB	—	—	—	538/587	RH8C/H8C	.025	—	—	—	—	—	—	—
Cranes, Carriers, Power Shovels	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
Generator Sets	—	—	—	871/841	RJ8C/J8C	.030	—	—	—	—	—	—	—
18mm Heads													
CFR	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
F1197GR, VRG155	—	—	—	514	D14	.025	—	—	—	—	—	—	—
Shielded Type For D-14	—	—	—	514	D14	.025	—	—	—	—	—	—	—
D155G, D176G, VRG232	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
Shielded Type For D-16	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
6BZ, LRORB, VLRORB, ICK	—	—	—	514	D14	.025	—	—	—	—	—	—	—
6LRZ, 6LRZB, 6MZA, 6MZR, 6NK	—	—	—	514	D14	.025	—	—	—	—	—	—	—
6NKR, 6NKRB, 6SRKR, 6WAK, 6WAKB	—	—	—	514	D14	.025	—	—	—	—	—	—	—
140GK, 140GS, 145GK, 145GS	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
180G, 180GB, 180GL	—	—	—	514	D14	.025	—	—	—	—	—	—	—
180GS, 185GS, 190GS, FC	—	—	—	516/555	D16/UD16	.025	—	—	—	—	—	—	—
185GL, 185GLB, 190G, 190GL, 190GLB	—	—	—	514	D14	.025	—	—	—	—	—	—	—
195G, 195GK, 195GKA, 195GL	—	—	—	514	D14	.025	—	—	—	—	—	—	—
7/8"-18 Heads													
6LRO, 6SRKR, LRORB, XAH	—	—	—	569	W14	.030	—	—	—	—	—	—	—
NATURAL & LP-GAS													
14mm Heads													
H1077G, H1077GSI, L1616G, L1616GSI	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
ICK, F554G, H884G	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
P2154G, P2154GSI	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
VRG220, VRG330	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
VRN265, VRN283, VRN310	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
135G, 140G, 145G	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
135GZ, 140GZ, 145GZ	—	—	—	102/823	RJ6C/J6C	.020	—	—	—	—	—	—	—
INTERMEDIATE SERIES													
Inline-6													
F817G	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
VSG SERIES													
F11G, F11GSI/GSID	530	RN79G	.015	—	—	—	575	RHN79G	—	—	540	RTN79G	.015
18mm Heads													
F1850G, H2475G, L3711G Natural Gas	—	—	—	514	D14	.025	—	—	—	—	—	—	—
F1850G, H2475G, L3711G LPG	—	—	—	509	D9	.025	—	—	—	—	—	—	—
F1197GRSI, F1905GRSI, Generator Set	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
F2894G, F2894GRSI, F3520G, L5100GR	217/233	RM77PP/RM82WPCC	.012	519/566	RM77N/M82N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
H1077G, H1077GSI, L1616G, L1616GSI	—	—	—	509	D9	.025	—	—	—	—	—	—	—
L5788GRSI, L7040G	217/233	RM77PP/RM82WPCC	.012	519/566	RM77N/M82N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
L5100GRSI, L5788GR	217/233	RM77PP/RM82WPCC	.012	519/566	RM77N/M82N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PLUG TYPE	GAP	COPPER PLUS UNSHIELDED STOCK NO.	PLUG TYPE	GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	PLUG TYPE	GAP
WAUKESHA–continued													
L7042GSIE, F3521GSIE	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
VRN232, VRN155	—	—	—	514	D14	.025	—	—	—	—	—	—	—
6BZ, 6LRZ, 6LRZB, 6MZA, 6MZR, ICK	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
6NK, 6WAK, 6WAKB, NKRB, WAKR, LRORB	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
140GK, 145GK, FC	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
180G, 180GB, 180GKB, 185GLB	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
190G, 190GLB, 195G, 195GK	217/233	RM77PP/RM82WPCC	.012	529/519	D14N/RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
VHP SERIES													
V-16													
9390G, P9390GSI	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
9390GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
9390GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
5115GL	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
V-12													
L5108G, L5108GSI, L5790G	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
L5790GSI, L7042G, L7042GSI	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
5108GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
5108GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
5790GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
5790GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
7042GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
7042GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
Inline-6													
F2895G, F2895GSI	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
F3521G, F3521GSI	217/233	RM77PP/RM82WPCC	.012	519	RM77N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
2895GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
2895GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
3521GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
3521GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
AT SERIES													
V-12													
12V-AT25GL/AT27GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
12V-AT25GL/AT27GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
Inline-8													
8L-AT25GL/AT27GL (1/2" Rch Hds)	217/233	RM77PP/RM82WPCC	.012	640	RM77N	.012	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.012
8L-AT25GL/AT27GL (13/16" Rch Hds)	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
VGF SERIES													
V-16													
P48GL/GLD	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
V-12													
L36GL/GLD	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
Inline-8													
H24G, H24GL/GLD	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
Inline-6													
F18G, F18GL/GLD	634/636	RB77WPCC/RB77WPC	.012	237/643	RB77CC/RB75N	.012	—	—	624	RHB81N	235	RTB77WPCC	.012
INTERMEDIATE SERIES													
F1197G	—	—	—	514	D14	.025	—	—	—	—	—	—	—
F1905GR	217/233	RM77PP/RM82WPCC	.012	519/566	RM77N/M82N	.015	222/236	RHM78PP/RHM78WPCC	234	RHM78N	1201/223	RTM78N/RTM77PP	.015
7/8"-18 Heads													
6SRKR, XAH, LRORB	1207/582	RW80PP/RW82P	.012	510/545	W10/W85N	.015	1204	RHW80PP	532	RHW80N	638	RTW80N	.015
WEST BEND													
Models 610, 820	—	—	—	874/811	RL82C/L82C	.030	—	—	—	—	—	—	—
All Other Models													
(Normal Load)	—	—	—	538/587	RH8C/H8C	.025	—	—	—	—	—	—	—
All Other Models (Light Load)	—	—	—	854/844	RH10C/H10C	.025	—	—	—	—	—	—	—
All Other Models (Severe Load)	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
WHITE ENGINES, INC. (See Hercules)													
WHITE-SUPERIOR (See Superior)													
WISCONSIN													
ACN, AEN, AENLD	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
AEH, AENL, AENS, AFH, AGH, AHH	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
AGND	—	—	—	502	D21	.025	—	—	—	—	—	—	—
BKN, S7D, S8D, S10D, S12D, S14D, TE	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—

MAKE YEAR & MODEL	PREMIUM LONG LIFE STOCK NO.	PREMIUM LONG LIFE PLUG TYPE	PREMIUM LONG LIFE GAP	COPPER PLUS UNSHIELDED STOCK NO.	COPPER PLUS UNSHIELDED PLUG TYPE	COPPER PLUS UNSHIELDED GAP	PREMIUM SHIELDED 3/4"-20 STOCK NO.	PREMIUM SHIELDED 3/4"-20 PLUG TYPE	SHIELDED 3/4"-20 STK. NO.	SHIELDED 3/4"-20 PLUG TYPE	INTEGRAL COIL TYPE 13/16"-20 STOCK NO.	INTEGRAL COIL TYPE 13/16"-20 PLUG TYPE	GAP
WISCONSIN–*continued*													
TF, TH, THD, TRA10D, TRA12D, THPD, TJD	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
THOM, VE4, VF4, VE4, VF4D	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
VG4D, VH4, VH4D, W2-280	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
VH4DM, TR10D, W4-1770, W2-1230	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
V460D, V461D, V465D	—	—	—	404/38	RN12YC/N12YC	.025	—	—	—	—	—	—	—
W2-880, W2-1230 Thru Serial #5995537	—	—	—	564/516	D16J/D16	.030	—	—	—	—	—	—	—
W2-1230 Serial #5996538 & Up	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
W2-1235, W4-2460, W2-1250	530	RN79G	.020	123/120	RN5C/N5C	.020	575	RHN79G	—	—	540	RTN79G	.020
All 18mm Heads Using LP Gas	—	—	—	509	D9	.025	—	—	—	—	—	—	—
WISCONSIN-ROBIN													
EY18-3W, EY25W Gasoline	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
EY18-3W, EY25W Kerosene	—	—	—	806	L92YC	.025	—	—	—	—	—	—	—
EY18W, EY21W, EY27W, EY44W	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
WT-125V, W1-450V	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
W1-080, W1-150, W1-230, W1-280	—	—	—	327/312	RL87YC/L87YC	.025	—	—	—	—	—	—	—
W1-145, W1-390, W1-185, W1-340	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
WITTE (Also see Oilwell)													
G-260	620	RL85G	.015	874/811	RL82C/L82C	.015	551	RHL79G	—	—	556	RTL85G	.015
WORTHINGTON													
AG, BG, BBG, EEGX	—	—	—	569	W14	.030	—	—	—	—	—	—	—
CG, CCG, CCGX, DG, DDG	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
DDGX Natural Gas	—	—	—	825	J4C	.015	—	—	—	—	—	—	—
DDGX Gasoline	—	—	—	102/823	RJ6C/J6C	.030	—	—	—	—	—	—	—
DHG, DRG, EEG	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
EHG, LFC, LCE	1207/582	RW80PP/RW82P	.012	545	W85N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
LTC 18X25, & LTC 20X25	—	—	—	518	W18	.025	—	—	—	—	—	—	—
ML Turbocharged	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
SDHG & SDHP Severe Service	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
SLHC, SLHCA, SLHP	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
SUTC, SEGH, SWG	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
SWG, SOME, SEHG w/Clamp in plugs	—	—	—	598	RS79N	.012	—	—	—	—	—	—	—
UTC	1207/582	RW80PP/RW82P	.012	553/580	RW80N/W80N	.012	1204	RHW80PP	532	RHW80N	638	RTW80N	.012
YAMAHA													
AS110	620	RL85G	.025	830/306	RL86C/L86C	.025	551	RHL79G	—	—	556	RTL85G	.025
MF180, MF260, MF410	—	—	—	327/312	RL87YC/L87YC	.025	—	—	—	—	—	—	—
YANMAR													
Y12, Y18, Y24, Y33	—	—	—	405	RN14YC	.030	—	—	—	—	—	—	—
YOUNG													
All Models	—	—	—	518	W18	.025	—	—	—	—	—	—	

COMMERCIAL, STATIONARY AND GAS ENGINE APPLICATIONS–5/8"-24 SHIELDED
MOTEURS COMMERCIAUX, STATIONNAIRES ET À ESSENCE–BOUGIES BLINDÉES 5/8 PO - 24
MOTORES COMERCIALES, FIJOS Y DE GASOLINA–5/8"-24 PROTEGIDA

MAKE YEAR & MODEL	SHIELDED 5/8"-24 STOCK NO.	SHIELDED 5/8"-24 PLUG TYPE	GAP
BUDA (See Allis-Chalmers)			
CASE			
A284, A377, 159G Gasoline	563	XED16	.025
A284, A377, 159G Natural & LP Gas	568	REM77N	.012
188G, 301G, 377G Gasoline	563	XED16	.025
188G, 301G, 377G Natural & LP Gas	568	REM77N	.012

MAKE YEAR & MODEL	SHIELDED 5/8"-24 STOCK NO.	SHIELDED 5/8"-24 PLUG TYPE	GAP
CATERPILLAR			
STARTING ENG FOR DIESELS			
18mm Heads			
D320, D326, D337	563	XED16	.025
D339, D342, D343, D353	563	XED16	.025
D375, D379, D397, D398	563	XED16	.025
CLARK (See Dresser Clark)			

MAKE YEAR & MODEL	SHIELDED ⅝"-24 STOCK NO.	PLUG TYPE	GAP
CLEVELAND DIESEL			
Model 358	578	REW82P	.012
CLIMAX			
GASOLINE			
CE101, CE106, CE264	568	REM77N	.012
CE46, CE66, CE81, CE96	550/572	ED14/XED14	.025
R-165 Snowplow Only	563	XED16	.025
V-80, V-85, V-122, V-125 8.2:l C.R.	550/572	ED14/XED14	.015
V-80, V-85, V-122, V-125 9.4:1 C.R.	568	REM77N	.012
CONTINENTAL			
GASOLINE			
Normal Service			
B405, 4124, 4140, 4162, 4163, 6226	563	XED16	.025
B6244, 6245, 6277, 6371, 6405, 6427	563	XED16	.025
C46, C66	505	ED89D	.025
E223, F124, 135, 140, 162, 163, 186	563	XED16	.025
F209, 226, 227, 244, 245	563	XED16	.025
G134, 157, 176, H227, 243, 260	563	XED16	.025
J382 to 403, T371 to 247	563	XED16	.025
M6271, 6290, 6330, 6363, OS220	563	XED16	.025
R6513, 6572, 6602, U6501 18mm Heads	563	XED16	.025
RS542, T6371, 6427, TC56	563	XED16	.025
Y69, Y91, Y112, Y4069, 4091, 4112	563	XED16	.025
Z105 to 120, ZA120	563	XED16	.025
NATURAL & LP-GAS			
C46, C66, C96, C106, C255	505	ED89D	.025
COOPER - BESSEMER			
ENG, GNG	568	REM77N	.015
GAW, GMR, GMV, JS	578	REW82P	.012
GDJ, GMA, GMB, GMC w/G402 Reducing Bushing	568	REM77N	.015
GDT, GFB, GFE, GFK w/G402 Reducing Bushing	568	REM77N	.015
GMW, GMX, V-250, V-275, W330 5/8" Reach	578	REW82P	.012
GMWC, GMWA 5/8" Reach	578	REW82P	.012
GMXE, GMWH, GMXH, W330 5/8" Reach	578	REW82P	.012
GS	563	XED16	.025
Z330 5/8" Reach	578	REW82P	.012
COOPER ENERGY SERVICES (See Superior)			
CP - CHICAGO PNEUMATIC			
9CPG Low Compression	563	XED16	.025
9CPG High Compression	534	REW80N	.012
DECO-GRAND			
AU7B, DE8	567	XEJ12	.025
DORMAN			
12SG	568	REM77N	.015
6PG, 12PG	568	REM77N	.015
12S, 12STCWG, 12STCAG, 6PG, 12PG	568	REM77N	.015
DRESSER CLARK			
BA, HBA, HMA, HLA, HRA, MA	578	REW82P	.012
RA, TRA, TLA, TCV	578	REW82P	.012
Super & Turbocharged			
HBAT, HLAT, HRAT, TRA, TLA	578	REW82P	.012
TCVB, TCVC, TVM, VMC	578	REW82P	.012
TLAB, TLAC, TLAD, TPV, TCVA	578	REW82P	.012
TVC, HSRA, RAS, TMB	578	REW82P	.012
DRESSER RAND			
TCV, TCVA, TCVD, TLAD	578	REW82P	.012
ENTERPRISE			
GSM-36, 38 7/8"-18 Heads	578	REW82P	.012
TDSG-36-6-38 Center of Head	578	REW82P	.012

MAKE YEAR & MODEL	SHIELDED ⅝"-24 STOCK NO.	PLUG TYPE	GAP
FAIRBANKS MORSE			
38D8-1/8 Series	568	REM77N	.012
FICHTEL-SACHS (See Sachs)			
GENERAL MOTORS			
16-358HN, 16-358-X	578	REW82P	.012
HALL SCOTT			
GASOLINE			
136, 180, 190, 504 Exhaust	550/572	ED14/XED14	.025
440, 2269-0; 1091-OS Exhaust	550/572	ED14/XED14	.025
779-GHI	563	XED16	.025
200-0, 201-0; 400-0 Regular	550/572	ED14/XED14	.025
400-0, 470, 480, 6156 Exhaust	550/572	ED14/XED14	.025
1091-OS Intake	563	XED16	.025
6156-B1, 6182-B1, 1091-B1 Intake	550/572	ED14/XED14	.025
F3, G1, G2, 6182 Exhaust	550/572	ED14/XED14	.025
G1, G2, FE; 1091G1 Exhaust	550/572	ED14/XED14	.025
NATURAL & LP-GAS			
400-0, 470, 480, 855, 935 Intake	550/572	ED14/XED14	.025
HERCULES			
HXE, HXLEF	563	XED16	.025
1091-OS Intake	563	XED16	.025
1091-OS Exhaust	550/572	ED14/XED14	.025
6156, 6182 Natural & LP Gas Intake	550/572	ED14/XED14	.025
HOPE (See Cooper-Bessemer)			
INGERSOLL - RAND			
NATURALLY ASPIRATED			
PKVG, KVGR, PKVGR	578	REW82P	.012
XVG, PVG, JVG, SVG, KVG, PJVG, PSVG	578	REW82P	.012
Turbocharged Models	578	REW82P	.012
INTERNATIONAL			
GASOLINE			
Normal Service			
U2, U2A, UC60, UC135	563	XED16	.025
U164, U169, U175	563	XED16	.025
UC135B, UC153	563	XED16	.025
UC175, UC200, UC301	563	XED16	.025
UC221, UC263 Shielded	563	XED16	.025
JOHN DEERE			
341, 400, 500 Series	550/572	ED14/XED14	.025
400, 500 Series Natural & LP Gas	568	REM77N	.012
LORAIN			
30, 37, 40, 50	563	XED16	.025
A, L, O, R 7/8"-18 Heads	578	REW82P	.012
LUFKIN			
H795 Severe Service	578	REW82P	.012
H1770, H2165 Normal Service	578	REW82P	.012
H1770, H2165 Severe Service	578	REW82P	.012
M.E.P. INDUSTRIES			
M.E.P.-6, -8, -10, -12 Unshielded	568	REM77N	.015
MINNEAPOLIS - MOLINE			
GASOLINE			
Low-Compression			
165-4A, 185-4A, 206-4A	563	XED16	.025
220-4, HD220-4A, M220-A4A	550/572	ED14/XED14	.025
336A-4A, HD425-6A	550/572	ED14/XED14	.025

MAKE YEAR & MODEL	SHIELDED ⅝″-24 STOCK NO.	 PLUG TYPE	 GAP
MINNEAPOLIS - MOLINE–*continued*			
HD504-6A, HD425-6A	550/572	ED14/XED14	.025
HD504A-6A, 605A-6A, 605B-6A	550/572	ED14/XED14	.025
HD605-6A, 800-6A	550/572	ED14/XED14	.025
HD800-6A, HD800A-6A, 1210-12A	550/572	ED14/XED14	.025
All Above Models w/18mm Heads	550/572	ED14/XED14	.025
NATURAL & LP-GAS			
206-4A, 220-4, HD220-4A, M220-A4A	568	REM77N	.012
283-4A, HD504-6A	568	REM77N	.012
336A-4A, HD425-6A, HD504A-6A	568	REM77N	.012
605A-6A, 605B-6A, HD605-6A	568	REM77N	.012
HD800-6A, HD800A-6A, 1210-12A	568	REM77N	.012
NORDBERG (HATCH & KIRK)			
Power Chief 4FG	550/572	ED14/XED14	.025
RATHBUN JONES			
Models w/G-402 Reducing Bushing	568	REM77N	.015
ROBIN (See Fuji-Robin)			
ROILINE			
F1500, H2000, H2470 (Light Load)	568	REM77N	.012
H540, H844, H570, H884	568	REM77N	.012
L3230, L3460, L4000 (Light Load)	568	REM77N	.012
GASOLINE			
Low Compression			
F1500, F1850, H2000, H2150, H2470	550/572	ED14/XED14	.025
L3000, L3230, L3460, L4000	550/572	ED14/XED14	.025
Shielded Plug	550/572	ED14/XED14	.025
High Compression			
F1500, F1850, H2000, H2150, H2470	568	REM77N	.012
L3000, L3230, L3460, L4000	568	REM77N	.012
Shielded Plug	550/572	ED14/XED14	.025
RUSTON			
RK270GS Series	578	REW82P	.012
SOLAR TURBINE			
Mars, Centaur	550/572	ED14/XED14	.025
Type H, Tauros	550/572	ED14/XED14	.025
STOVER			
DVA, DVA1	550/572	ED14/XED14	.025
SUPERIOR			
2400 G Series	550/572	ED14/XED14	.025
1973-39 80G Series	550/572	ED14/XED14	.025
1973-39 80GX Series	550/572	ED14/XED14	.025
1980-46 G510 Series	568	REM77N	.015
1980-51 G825 Series	568	REM77N	.015
1979-65 GT825 Series	568	REM77N	.015
1980-79 GTL Series	568	REM77N	.015
1980-61 GT510 Series	568	REM77N	.015
1965-58 GX825 Series	568	REM77N	.015
1980-76 SGT Series	568	REM77N	.015
1970-63 VG825 Series86	578	REW82P	.012
1970-63 VGT825 Series86	578	REW82P	.012
TELEDYNE (See Continental)			
UNIVERSAL			
18mm Heads	550/572	ED14/XED14	.025

MAKE YEAR & MODEL	SHIELDED ⅝″-24 STOCK NO.	 PLUG TYPE	 GAP
WAUKESHA			
GASOLINE			
14mm Heads			
Shielded Type for J8C	557	XEJ8	.025
CFR	563	XED16	.025
F1197GR, VRG155	550/572	ED14/XED14	.025
Shielded Type For D-14	550/572	ED14/XED14	.025
D155G, D176G, VRG232	563	XED16	.025
Shielded Type For D-16	563	XED16	.025
6BZ, LRORB, VLRORB, ICK	550/572	ED14/XED14	.025
6LRZ, 6LRZB, 6MZA, 6MZR, 6NK	550/572	ED14/XED14	.025
6NKR, 6NKRB, 6SRKR, 6WAK, 6WAKB	550/572	ED14/XED14	.025
140GK, 140GS, 145GK, 145GS	563	XED16	.025
180G, 180GB, 180GL	550/572	ED14/XED14	.025
180GS, 185GS, 190GS, FC	563	XED16	.025
185GL, 185GLB, 190G, 190GL, 190GLB	550/572	ED14/XED14	.025
195G, 195GK, 195GKA, 195GL	550/572	ED14/XED14	.025
VSG SERIES			
18mm Heads			
F1850G, H2475G, L3711G Natural Gas	550/572	ED14/XED14	.025
F1197GRSI, F1905GRSI, Generator Set	568	REM77N	.012
F2894G, F2894GRSI, F3520G, L5100GR	568	REM77N	.015
L5788GRSI, L7040G	568	REM77N	.015
L5100GRSI, L5788GR	568	REM77N	.015
L7042GSIE, F3521GSIE	568	REM77N	.012
VRN232, VRN155	550/572	ED14/XED14	.025
6BZ, 6LRZ, 6LRZB, 6MZA, 6MZR, ICK	568	REM77N	.015
6NK, 6WAK, 6WAKB, NKRB, WAKR, LRORB	568	REM77N	.015
140GK, 145GK, FC	568	REM77N	.015
180G, 180GB, 180GKB, 185GLB	568	REM77N	.015
190G, 190GLB, 195G, 195GK	568	REM77N	.015
VHP SERIES			
V-16			
9390G, P9390GSI	568	REM77N	.012
9390GL (1/2″ Rch Hds)	568	REM77N	.012
V-12			
L5108G, L5108GSI, L5790G	568	REM77N	.012
L5790GSI, L7042G, L7042GSI	568	REM77N	.012
5108GL (1/2″ Rch Hds)	568	REM77N	.012
5790GL (1/2″ Rch Hds)	568	REM77N	.012
7042GL (1/2″ Rch Hds)	568	REM77N	.012
Inline-6			
F2895G, F2895GSI	568	REM77N	.012
F3521G, F3521GSI	568	REM77N	.012
2895GL (1/2″ Rch Hds)	568	REM77N	.012
3521GL (1/2″ Rch Hds)	568	REM77N	.012
AT SERIES			
V-12			
12V-AT25GL/AT27GL (1/2″ Rch Hds)	568	REM77N	.012
Inline-8			
8L-AT25GL/AT27GL (1/2″ Rch Hds)	568	REM77N	.012
INTERMEDIATE SERIES			
Inline-6			
F1197G	550/572	ED14/XED14	.025
F1905GR	568	REM77N	.015
WHITE ENGINES, INC. (See Hercules)			
WHITE-SUPERIOR (See Superior)			
WORTHINGTON			
CG, CCG, CCGX, DG, DDG	578	REW82P	.012
DHG, DRG, EEG	578	REW82P	.012
EHG, LFC, LCE	578	REW82P	.012
ML Turbocharged	578	REW82P	.012
SDHG & SDHP Severe Service	578	REW82P	.012
SLHC, SLHCA, SLHP	578	REW82P	.012
SUTC, SEGH, SWG	578	REW82P	.012
UTC	578	REW82P	.012

INDUSTRIAL SPARK PLUG GAPS
ÉCARTEMENTS DES BOUGIES INDUSTRIELLES
SEPARACIÓN ENTRE PUNTAS DE LAS BUJÍAS INDUSTRIALES

STK. NO.	PLUG TYPE	AVAIL. GAP	SKU NO.	PACK QTY.	POPULAR CODE	REACH INCHES	HEX INCHES	TERMINAL THREAD NUT	REPL. GASKET
14mm THREAD DIAMETER									
557	XEJ8	.025	10415	8	SW	.375	13 / 16	SHIELDED	N-678
567	XEJ12	.025	10435	8	SW	.375	13 / 16	SHIELDED	N-678
588	XMJ14	.025	10445	8	SW	.375	13 / 16	SHIELDED	N-678
573	XMJ20	.025	10470	8	SW	.375	13 / 16	SHIELDED	N-678
594	TJ83	.025	10584	8	SW	.375	13 / 16	BN-9A	N-678
644	RJ88P	.015	11444	8	W	.375	13 / 16	BN-9A	N-678
612	RML12	.025	10437	8	SW	.500	13 / 16	SHIELDED	N-678
603	XML12	.025	10438	8	SW	.500	13 / 16	SHIELDED	N-678
535	RL15B	.015	10453	8	SW	.500	13 / 16	BN-9A	N-678
633	XML15Y	.025	10454	8	SW	.500	13 / 16	SHIELDED	N-678
551	RHL79G	.015	10489	1	SW	.500	7 / 8	SHIELDED	N-678
620	RL85G	.015	10532	8	SW	.500	13 / 16	BN-9A	N-678
556	RTL85G	.015	10583	8	SW	.500	13 / 16	BN-9A	N-678
610	REL88B	.020	10540	8	SW	.500	13 / 16	SHIELDED	N-678
522	REL89G	.015	10548	1	SW	.500	13 / 16	SHIELDED	N-678
637	RHL89G	.015	10544	1	SW	.500	7 / 8	SHIELDED	N-678
230	RX85PYP	.012	12509	6	SW	.500	5 / 8	NONE	N-678
218	RC78PYP	.015	11420	6	SW	.750	5 / 8	NONE	N-678
1208	RC78PYP	.017	14480	6	SW	.750	5 / 8	NONE	N-678
219	RC78PYP	.021	11560	6	SW	.750	5 / 8	NONE	N-678
243	RC78PYP15	.015	13918	6	SW	.750	5 / 8	NONE	N-678
232	RC78PYP17	.017	12507	6	SW	.750	5 / 8	NONE	N-678
244	RC78PYP21	.021	11560	6	SW	.750	5 / 8	NONE	N-678
241	RC78PYP25	.025	11560	6	SW	.750	5 / 8	NONE	N-678
1209	RC78YCC15	.015	14857	6	SW	.750	5 / 8	NONE	N-678
1206	RC78WP	.012	14822	6	SW	.750	5 / 8	NONE	N-678
575	RHN79G	.015	10490	1	SW	.750	7 / 8	SHIELDED	N-678
616	XMN12	.025	10439	8	SW	.750	7 / 8	SHIELDED	N-678
614	XEN14	.025	10447	8	SW	.750	7 / 8	SHIELDED	N-678
530	RN79G	.015	10511	8	SW	.750	13 / 16	NONE	N-678
642	RN79G	.025	11350	8	SW	.750	13 / 16	NONE	N-678
247	RN79PYP17	.017	14566	8	SW	.750	13 / 16	NONE	N-678
540	RTN79G	.015	10582	8	SW	.750	13 / 16	BN-9A	N-678
18mm THREAD DIAMETER									
509	D9	.025	14465	6	SW	.500	7 / 8	BN-9A	N-678
514	D14	.025	20089	6	SW	.500	7 / 8	BN-9A	N-678
529	D14N	.015	10442	8	W	.531	7 / 8	BN-9A	A-678
204	D14N	.025	11351	8	W	.531	7 / 8	BN-9A	A-678
550	ED14	.025	10441	8	W	.531	7 / 8	SHIELDED	A-678
572	XED14	.025	10440	8	SW	.531	7 / 8	SHIELDED	A-678
649	XMD15	.025	10450	8	SW	.531	7 / 8	SHIELDED	A-678
516	D16	.025	11938	6	SW	.500	7 / 8	ZN-9A	A-678
555	UD16	.025	13758	6	SW	.500	7 / 8	ZN-9A	A-678
563	XED16	.025	10456	8	W	.531	7 / 8	SHIELDED	A-678
643	RB75N	.012	12605	4	W	.802	7 / 8	NONE	A-678
225	RB75PP	.012	12606	4	SW	.813	7 / 8	BN-9A	A-678
209	RB75WPC	.012	12608	4	SW	.813	13 / 16	NONE	A-678
242	RB75WPCC	.012	13910	4	SW	.813	13 / 16	NONE	A-678
647	M76R	.016	10498	8	W	.500	7 / 8	ZN-9A	M-674
576	RB76N	.012	10499	8	SW	.802	7 / 8	BN-9A	A-678
226	RB76PP	.012	12609	4	SW	.813	7 / 8	BN-9A	A-678
229	KB77WPCC	.012	12604	4	SW	.813	7 / 8	NONE	A-678
235	RTB77WPCC	.012	13638	4	SW	.813	1	BN-9A	A-678
237	RB77CC	.012	13682	4	SW	.813	7 / 8	NONE	A-678
636	RB77WPC	.012	12610	4	W	.813	7 / 8	NONE	A-678
634	RB77WPCC	.012	12611	4	SW	.813	7 / 8	NONE	A-678
1205	RB77WPCC	.007	14816	4	SW	.813	7 / 8	NONE	A-678
568	REM77N	.015	10500	8	SW	.531	7 / 8	SHIELDED	A-678
596	RHM77N	.015	10484	8	SW	.531	7 / 8	SHIELDED	A-678
213	RHM77N	.020	11357	8	SW	.531	7 / 8	SHIELDED	A-678
519	RM77N	.015	10502	8	SW	.531	7 / 8	BN-9A	A-678
640	RM77N	.012	11352	8	SW	.531	7 / 8	BN-9A	A-678
641	RM77N	.020	11354	8	SW	.531	7 / 8	BN-9A	A-678
217	RM77PP	.015	11416	8	SW	.531	7 / 8	BN-9A	A-678
214	RTM77N	.012	11355	8	SW	.531	1	BN-9A	A-678
547	RTM77N	.019	10579	8	SW	.531	1	BN-9A	A-678

STK. NO.	PLUG TYPE	AVAIL. GAP	SKU NO.	PACK QTY.	POPULAR CODE	REACH INCHES	HEX INCHES	TERMINAL THREAD NUT	REPL. GASKET
18mm THREAD DIAMETER–*continued*									
223	RTM77PP	.012	12617	4	SW	.531	7 / 8	BN-9A	A-678
625	D78Y	.015	10481	8	W	.500	7 / 8	ZN-9A	A-678
234	RHM78N	.015	13639	4	SW	.531	7 / 8	SHIELDED	A-678
222	RHM78PP	.012	12612	4	SW	.531	7 / 8	SHIELDED	A-678
236	RHM78WPCC	.012	13680	4	SW	.531	7 / 8	SHIELDED	A-678
1203	RTB78N	.012	14715	4	SW	.531	7 / 8	NONE	A-678
1201	RTM78N	.012	14712	4	SW	.531	7 / 8	NONE	A-678
1202	RTM78N	.019	14714	4	SW	.531	7 / 8	NONE	A-678
571	RM79F	.015	10507	8	SW	.500	7 / 8	BN-9A	A-678
216	RM79F	.025	11361	8	SW	.500	7 / 8	BN-9A	A-678
548	RTM79	.025	10581	8	SW	.531	7 / 8	BN-9A	A-678
646	RTB80N	.012	10553	8	SW	.813	7 / 8	BN-9A	A-678
624	RHB81N	.012	10513	8	SW	.813	7 / 8	SHIELDED	A-678
630	M82N	.012	11366	8	SW	.531	7 / 8	BN-9A	A-678
566	M82N	.015	10516	8	SW	.531	7 / 8	BN-9A	A-678
233	RM82WPCC	.012	13646	4	SW	.531	7 / 8	BN-9A	A-678
583	RHM83N	.015	10521	8	SW	.531	7 / 8	SHIELDED	A-678
639	RHM83N	.025	11367	8	SW	.531	7 / 8	SHIELDED	A-678
503	REM84P	.015	10539	8	SW	.500	7 / 8	SHIELDED	A-678
585	RHM85G	.015	10529	1	SW	.500	7 / 8	SHIELDED	A-678
591	RM85G	.013	10531	8	SW	.500	7 / 8	BN-9A	A-678
542	B86N	.012	10537	8	SW	.813	7 / 8	BN-9A	A-678
586	RGM86N	.013	10538	1	SW	.500	7 / 8	NONE	A-678
543	D89D	.025	10541	8	SW	.500	7 / 8	NA-9E	A-678
505	ED89D	.025	10543	8	SW	.500	7 / 8	SHIELDED	A-678
597	K97F	.020	10554	8	SW	.688	1	ZN-9A	A-678
⅞"-18 THREAD DIAMETER									
510	W10	.025	10425	8	W	.625	15 / 16	BN-9A	A-478
569	W14	.030	10449	8	W	.625	15 / 16	BN-9A	A-478
561	W16Y	.025	10455	8	W	.625	15 / 16	BN-9A	A-478
518	W18	.025	10465	8	D	.750	15 / 16	NA-9E	A-478
520	W20	.025	10472	8	W	.625	15 / 16	BN-9A	A-478
552	RGC77N	.012	10493	1	SW	1.000	1	NONE	A-478
577	RHW77N	.015	12613	4	SW	1.000	1	SHIELDED	A-478
206	RW77N	.015	13922	4	SW	1.000	1	BN-9A	A-478
565	RW77N	.012	12618	4	SW	1.000	1	BN-9A	A-478
228	RW77PP	.012	12619	4	SW	1.000	15 / 16	BN-9A	A-478
201	W77N	.012	11356	8	SW	1.000	15 / 16	BN-9A	A-478
539	W77N	.015	10503	8	SW	1.000	15 / 16	BN-9A	A-478
635	RHW78N	.012	12614	4	W	.860	1	SHIELDED	A-478
631	RW78N	.012	12620	4	SW	.860	15 / 16	BN-9A	A-478
579	RHW79N	.012	12615	4	SW	.625	1	SHIELDED	A-478
534	REW80N	.012	10512	8	SW	.600	15 / 16	SHIELDED	A-478
623	RGC80F	.013	10515	1	SW	.625	1 1 / 8	NONE	A-478
554	RGC80N	.013	10517	1	SW	.595	1 1 / 8	NONE	A-478
532	RHW80N	.013	12616	4	SW	.625	1	SHIELDED	A-478
1204	RHW80PP	.012	14710	8	SW	.625	1	SHIELDED	A-478
638	RTW80N	.012	10557	1	SW	.625	1	BN-9A	A-478
553	RW80N	.012	12623	4	SW	.625	1	BN-9A	A-478
200	RW80N	.015	12622	4	SW	.625	1	BN-9A	A-478
1207	RW80PP	.012	14861	8	SW	.625	15 / 16	BN-9A	A-478
580	W80N	.013	10508	8	W	.600	15 / 16	BN-9A	A-478
202	W80N	.020	11364	8	SW	.600	15 / 16	BN-9A	A-478
578	REW82P	.012	10519	8	SW	.625	1	SHIELDED	A-478
582	RW82P	.012	10518	8	SW	.625	15 / 16	BN-9A	A-478
544	HW83F	.012	10524	1	SW	.625	1	SHIELDED	A-478
645	RTW83F	.012	10551	1	SW	.625	1	BN-9A	A-478
559	RW83F	.012	10522	8	SW	.625	1	BN-9A	A-478
545	W85N	.013	10534	8	SW	.600	15 / 16	BN-9A	A-478
203	W85N	.020	11368	8	SW	.600	15 / 16	BN-9A	A-478
589	W89D	.025	10546	8	W	.625	15 / 16	NA-9E	A-478
595	C95F	.020	10552	8	W	.625	1 1 / 8	NA-9E	A-478
562	W95D	.040	10550	8	SW	.625	15 / 16	A-146	A-478
513	C97B	.025	10555	8	SW	1.250	1 1 / 8	A-146	A-478
1⅛"-12 THREAD DIAMETER									
598	RS79N	.012	10506	8	SW	.625	1	BN-9A	FGS-8A

HEAT RANGE	THREAD REACH (Inches)	HEX SIZE (Inches)	STANDARD			INTEGRAL COIL			SHIELDED		
			STANDARD DESIGN	PRECIOUS METAL	PRECIOUS METAL LONGER LIFE	13/16" EXTERNAL THREAD	13/16" EXTERNAL THREAD PRECIOUS METAL	1" INTERNAL THREADS	5/8"-24	3/4"-20	3/4"-20 PRECIOUS METAL
14mm THREAD DIAMETER											
4	3/8	13/16				TJ83					
3	1/2	5/8		RX85PYP							
6	1/2	13/16							REL89G(1)	RHL89G(1)	
4	1/2	13/16	RL15B	RL85G					REL88B(1)		
4	1/2	15/16					RTL85G				
3	1/2	7/8								RHL79G(1)	
3	3/4	5/8		RC78PYP							
2	3/4	5/8	RC78YCC15	RC78PYP15 RC78PYP17 RC78PYP21 RC78PYP25	RC78WP RC78WYP(4)						
2	3/4	13/16		RN79G RN79G1						RHN79G(1)	
2	3/4	15/16					RTN79G				
18mm THREAD DIAMETER											
7	1/2	7/8	D89D						ED89D(1)		
6	1/2	7/8	D14N								
5	1/2	7/8		RM85G							RHM85G(1)
5	1/2	7/8	D78Y								
4	1/2	7/8	M82N		RM82WPCC				REM84P(1)	RHM83N(1)	
3	1/2	7/8	RM79F			RTM79					
3	1/2	7/8	RM77N	RM77PP		RTM77N RTM78N(3)	RTM77PP	RGM86N	REM77N(1)	RHM77N(1) RHM78N(2)	RHM78WPCC(2) RHM78PP(2)
7	.691	1	K97F								
1	13/16	13/16			RB75WPCC						
5	13/16	7/8	B86N								
1	13/16	7/8				RTB78N(3) RTB80N				RHB81N(1)	
1	13/16	7/8	RB77CC RB75N	RB75PP	RB77WPCC KB77WPCC RB77WPC RB78WPC(4)		RTB77WPCC				
1	13/16	7/8	RB76N	RB76PP							
7/8"-18 THREAD DIAMETER											
7	5/8	15/16	W95D W89D								
7	5/8	15/16	W20								
6	5/8	15/16	W16Y W14, W10								
5	5/8	15/16	W85N	RW82P							
3	5/8	15/16	W80N RW80N	RW80PP							
4	5/8	1							REW82P(1)		
3	5/8	1	RW83F			RTW83F RTW80N			REW80N(1)	RHW80N(2) RHW79N(1) HW83F(2)	RHW80PP(2)
7	5/8	1 1/8	C95F								
3	5/8	1 1/8						RGC80N			
3	5/8	1 1/8						RGC80F			
7	3/4	15/16	W18								
3	.860	1	RW78N							RHW78N(2)	
3	1	1	W77N RW77N							RHW77N(2)	
3	1	1 1/8						RGC77N			
7	1 1/4	1 1/8	C97B								
1 1/8"-12 THREAD DIAMETER											
3	.595	1	RS79N								

HEAT RANGE (IMEP) IMEP established per SAE J549

COLD	1	2	3	4	5	6	7	HOT
	400+	350-400	300-350	250-300	200-250	150-200	100-150	

(1) 1" shielded spark plug well depth.
(2) 2" shielded spark plug well depth.
(3) Increased flashover protection for longer life.
(4) Availability to be announced.

REPLACEMENTS FOR DISCONTINUED SPARK PLUGS
RECHANGES POUR BOUGIES QUI NE SONT PLUS OFFERTES
REPUESTOS PARA BUJÍAS DEJADAS DE FABRICAR

This list contains industrial spark plugs that have been discontinued. See the Champion Master Application Catalog. Refer to the Champion policy on Unsalable Product or consult your supplier or Champion Representative on the handling of these plug types.

Cette liste contient les bougies industrielles dont la fabrication a cessé. Voir le catalogue principal des applications Champion. Consulter la politique Champion sur les produits invendables ou consulter votre fournisseur ou représentant de produits Champion pour savoir comment procéder pour ce type de bougies.

Esta lista contiene tipos de bujías dejados de fabricar. Consulte las Normas de Champion sobre productos que no se puede vender o consulte con su proveedor o representante de Champion acerca de cómo se tratan estos tipos de bujías.

DISCONT'D PLUG	REPLACED BY PLUG
0-COM	510/W10
C0	569/W14
1	569/W14
1-COM	569/W14
C1	518/W18
ORD-1	588/XMJ14
TAC-1	610/REL88B
2	518/W18
2-COM	518/W18
2-COM-L	518/W18
N2	818/RN2C
RN2	818/RN2C
RN2G	818/RN2C
ORD-2	517/XMJ17
TAC-2	612/RML12
UJ2J	825/J4C
3	561/W16Y
3-COM	518/W18
N3	880/RN3C
RN3	880/RN3C
4	561/W16Y
4-COM	506/D6
QC4	561/W16Y
C4X	561/W16Y
J4	825/J4C
J4J	825/J4C
RJ4	825/J4C
RJ4J	825/J4C
N4	104/RN4C
RN4	104/RN4C
TAC-4	603/XML12
X4-COM	506/D6
5	429/3X
5-COM	509/D9
5M	509/D9
5MJ	509/D9
C5	569/W14
J5J	102/RJ6C
L5	874/RL82C
L5J	874/RL82C
N5	123/RN5C
RN5	123/RN5C
X5-COM	509/D9
6	518/W18
6-COM	514/D14
6-COM-D	514/D14
6-COM-62	514/D14
6M	514/D14
6MJ	514/D14
XD6	506/D6
E6-COM	572/XED14
X6-COM	514/D14
XE6-COM	572/XED14
DJ6	851/DJ6J
DJ6Y	872/RDJ7Y
EJ6	557/XEJ8
EJ6J	557/XEJ8
J6	102/RJ6C
J6J	102/RJ6C
J6JM	102/RJ6C
RJ6	102/RJ6C
UJ6	102/RJ6C
UJ6M	102/RJ6C
RJ6J	102/RJ6C
XEJ6	557/XEJ8
XEJ6J	557/XEJ8
N6	123/RN5C
RN6	123/RN5C
N6Y	339/RN6YC
RN6Y	339/RN6YC
RD6	506/D6
7	541/RD16
7-COM	541/RD16
C7	541/RD16
E7	563/XED16
J7	871/RJ8C
J7J	871/RJ8C
K7	506/D6
XJ7	871/RJ8C
XEJ7	557/ XEJ8
K7	506/D6
XEL7A	610/REL88B
N7Y	332/RN7YC
RN7Y	332/RN7YC
R7B	506/D6
XE7	563/XED16
8	541/RD16
8-COM	541/RD16
8-COM-C	523/D23
8-COM-D	523/D23
8-COM-K	526/RD15Y
8-SPEC	541/RD16
D8	597/K97F
DL8	597/K97F
DL8C	597/K97F
E8-COM	563/XED16
ED8	597/K97F
EDL8	597/K97F
HO8A	533/UJ11G
EH8	610/REL88B
EHO8	610/REL88B
XEH8	557/XEJ8
XEH8J	557/XEJ8
J8	871/RJ8C
J8J	871/RJ8C
DJ8	865/RDJ8J
EJ8	557/XEJ8
EJ8J	557/XEJ8
JT8	840/RCJ8
RJ8	871/RJ8C
RJ8J	871/RJ8C
TJ8J	840/RCJ8
UJ8	871/RJ8C
UCJ8G	840/RCJ8
XJ8	871/RJ8C
XJ8J	871/RJ8C
XEJ8J	557/XEJ8
K8	509/D9
N8	123/RN5C
RN8	123/RN5C
X8-COM	541/RD16
XE8-COM	563/XED16
9	502/D21
9-COM	523/D23
D9J	509/D9
D9JM	509/D9
ED9	550/ED14
RD9	509/D9
XD9	509/D9
XE9	572/XED14
XED9-COM	572/XED14
F9Y	409/RF9YC
F9YC	409/RF9YC
RF9Y	409/RF9YC
RF9Y5	409/RF9YC
H9	538/RH8C
H9-COM	538/RH8C
H9J	538/RH8C
EH9	610/REL88B
XH9	538/RH8C
XEH9	610/REL88B
K9	509/D9
N9Y	415/RN9YC
RN9Y	415/RN9YC
10	541/RD16
10-COM	523/D23
10-COM-64	523/D23
C10S	557/XEJ8
D10	509/D9
RF10	129/RF10C
H10	854/RH10C
EH10	610/REL88B
RH10	854/RH10C
XEH10	610/REL88B
J10-COM	102/RJ6C
J10-COM-J	102/RJ6C
J10Y	14/RJ12YC
UK10	509/D9
RN10Y	322/RN11YC4
11	541/RD16
F11Y	22/RF11YC
F11YC	22/RF11YC
RF11Y	22/RF11YC
H11	854/RH10C
H11J	854/RH10C
EH11	610/REL88B
XH11	854/RH10C
XEH11	610/REL88B
J11	511/J11C
J11J	511/J11C
EJ11	567/XEJ12
XEJ11	567/XEJ12
J11Y	14/RJ12YC
RJ11Y	14/RJ12YC
K11	509/D9
RBL11Y6	79/RV15YC6
N11Y	322/RN11YC4
ON11Y	322/RN11YC4
RN11Y	322/RN11YC4
RN11YC	322/RN11YC4
RF12	129/RF10C
RF12-5	129/RF10C
XH12	854/RH10C
J12	592/RJ12C
EJ12	567/XEJ12
KJ12	592/RJ12C
J12Y	14/RJ12YC
RJ12Y	14/RJ12YC
RJ12Y6	66/RJ18YC6
RJ12YC6	66/RJ18YC6
K12G	514/D14
N12Y	404/RN12YC
RN12Y	404/RN12YC
13	541/RD16
A13	525/25
J13	525/25
J13-0	525/25
J13Y	63/RJ14YC
K13	514/D14
N13L	101/RN13LYC
RN13L	101/RN13LYC
N13Y	405/RN14YC
14	541/RD16
A14	525/25
A14-0	525/25
C14	525/25
RD14M	514/D14
RD14	514/D14
XD14	514/D14
F14Y	21/RF14YC
RF14Y	21/RF14YC
RF14Y4	21/RF14YC
J14	592/RJ12C
J14C1	599/J99
J14-64CL	599/J99
J14J	846/CJ14
EJ14	567/XEJ12
MJ14	588/XMJ14
UEJ14	567/XEJ12
XEJ14	567/XEJ12
J14Y	63/RJ14YC
J14YC	63/RJ14YC
RJ14Y	63/RJ14YC
N14Y	405/RN14YC
N14LY	101/RN13LYC
FN14LY	412/RC12LYC
RN14Y	405/RN14YC
H014S	REB37E
15	541/RD16
15A	541/RD16
15-SPEC	541/RD16
A15	525/25
C15	502/D21
XEC15	563/XED16
UD15Y	526/RD15Y
JI15	514/D14
K15J	514/D14
16	541/RD16
C16C	561/W16Y
RD16M	541/RD16
ED16	563/XED16
RD16J	541/RD16
XD16	541/RD16
XD16J	541/RD16
UED16	563/XED16
H16	506/D6
H16A	506/D6
UK16V	506/D6
N16Y	405/RN14YC
N16YC	405/RN14YC
RN16Y	405/RN14YC
H17	509/D9
H17A	509/D9
18	514/D14
H18Y	857/RH18Y
J18Y	58/RJ18YC
J18YC	58/RJ18YC
RJ18Y	58/RJ18YC
20	520/W20
RJ20Y	58/RJ18YC
21	510/W10
XED21	563/XED16
22	520/W20
J23	525/25
A24	525/25
G24	525/25
A25	525/25
A26	541/RD16
29	525/25
30	525/25
31	525/25
32	525/25
34	525/25
A34	525/25
35	520/W20
35-COM	518/W18
40	597/K97F
41	597/K97F
42	597/K97F
43	518/W18
A43	569/W14
B43	561/W16Y
JA43	561/W16Y
JAS43	561/W16Y
JB43	518/W18
JC43	561/W16Y
G44	520/W20
GH44	518/W18
45	562/W95D
46	562/W95D
49	543/D89D
E49	505/ED89D
XE49	505/ED89D
A53	518/W18
AA53	518/W18
B53	561/W16Y
JA53	518/W18
JC53	518/W18
00-55-1	627/F-6A-13
00-55-2	NR
00-55-3	NR
62S	572/XED14
A64	541/RD16
72	510/W10
73	510/W10
D77V	506/D6
HW77N	596/RHW77N
RM78P	519/RM77N
REN79G	NR
RF80N	129/RF10C
RM80F	571/RM79F
HW80N	532/RHW80N
EC85N	534/REW80N
RL85P	620/RL85G
TN85Y	540/RTN79G
RL86	830/RL86C
C87S	610/REL88B
RJ87P	14/RJ12YC
L87Y	327/RL87YC
RL87Y	327/RL87YC
C88	610/REL88B
C88S	610/REL88B
RC88S	610/REL88B
UED88G	572/XED14
K88S	610/REL88B
H88	538/RH8C
L88	830/RL86C
ED89F	505/ED89D
UED89D	505/ED89D
XED89D	505/ED89D
XED89DXI	505/ED89D
EW90	NR
ED91	505/ED89D
HC95F	544/HW83F
K98F	597/K97F
RWP102	582/RW82P
UK112	506/D6
808	529/D14N
E901	534/REW80N
CH36001	547/RTM77N
CH36002	548/RTM79
CH36003	540/RTN79G
CH36004	556/RTL85G
CH36006	NR
CH36007	NR
CH36008	556/RTL85G
CH36009	540/RTN79G
CH36010	625/D78Y
CH38016	NR

NR–No Replacement NR–Aucune rechange NR–Sin reemplazo

Spark Plug Removal and Installation

The recommended procedure is to remove the old spark plug and install the new spark plug by hand until it contacts the gasket seat. A new gasket should always be used. By removing and installing the spark plug by hand, it will be easier to detect any problems in the thread area such as binding or looseness. Should problems be detected, refer to the NOTE section for recommended course of action. Once all spark plugs have been installed by hand, return to the first spark plug installed and tighten to correct torque. This will allow the spark plug temperature to stabilize with the cylinder head temperatures. (Figure 1)

Torque Recommendations

SERVICE GASKET	SPARK PLUG THREAD SIZE	TORQUE WRENCH	
		CAST IRON HEADS	ALUMINUM HEADS
	Gasket Type		
N678	14mm	26-30 lb-ft	18-22 lb-ft
A678	18mm	32-38 lb-ft	28-34 lb-ft
A478	7/8"	50-55 lb-ft	—
—	1-1/8"	140-150 lb-ft	—
	Tapered Seat		
—	14mm	7-15 lb-ft	7-15 lb-ft
—	18mm	15-20 lb-ft	15-20 lb-ft

FIGURE 1

These torque values are for spark plugs installed in clean, dry threads and should be followed unless otherwise specified by the engine manufacturer. Excessive installation torque (over-torque) can lead to thread body stretch. This may lead to shell seal leakage and poor heat transfer out of the spark plug, causing premature failure. The leakage can also result in ejection of the insulator from the shell. (Figure 2)

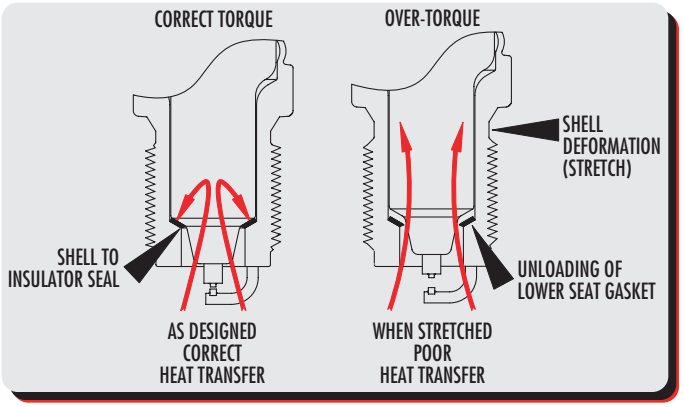


FIGURE 2

If the threads are lubricated, the torque value should be reduced 20%. Apply a very small amount only on the second thread from the firing end of the spark plug. No lubricant must be allowed on the firing end or anywhere on the upper area of the plug.

Spark plug cleanliness is essential for maximum spark plug life. All parts of the ignition system must be kept clean from dirt, oil, grease and paint. Any and all of these contaminants on the inside or outside of leads, boots, and connections, or anywhere on the spark plug can cause misfire and/or shortened spark plug life.

NOTE. After the normal service life of a spark plug, one or more of the spark plugs may be a little difficult to remove. Penetrating oil may be used if the spark plug appears to be dangerously tight. Apply steady pressure with a spark plug wrench until the spark plug loosens. Once loosened, if the spark plug is still turning hard, apply more penetrating oil, then tighten and loosen the spark plug repeatedly until the spark plug rotates easily. Before removing the spark plug, blow any dirt from the port area that might be present to prevent it from falling into the combustion chamber.

If the spark plug appeared to be overly tight when removed by hand, it may be due to deposits collecting in the threaded area of the cylinder head. The threads should be cleaned with the proper size and length chaser tool, and the seat wiped clean to assure good seat contact before installing a new spark plug.

Recommended practice would be to clean spark plug port threads and seating area every six months or every spark plug change, whichever is longer. If chasing the threads does not allow hand installation of the spark plug, further investigation is necessary. At this point it might be necessary to use a tap to verify correct thread size. Before using a tap, it is critical to verify the correct size and pitch. This tap should only be used if the thread chaser does not permit installation of the spark plug by hand. Frequent use can result in unnecessary metal removal, causing the spark plug to be loose in the port. When using the thread chaser tool or tap, a heavy grease should be applied to the flutes to catch debris removed from the thread area.

If looseness is obvious, necessary steps must be taken to avoid serious problems. A loose fitting spark plug could result in torching of the thread area and/or pre-ignition if the heat transfer from the spark plug to the cylinder head is insufficient to cool the spark plug.

Corona vs. Flashover

Under certain atmospheric conditions, a pale bluish glow may be observed around a conductor carrying high voltage. You may have noticed that while driving at night, high-tension cross-country power lines may have an eerie blue glow about them. You may also notice this glow on spark plug insulators if the engine is running in a darkened room. This glow is called corona, and it will not affect ignition output or engine performance. Corona does not indicate a faulty ignition system or spark plug.


Corona

Even if you never see corona it may leave a telltale, non-conductive, yellow or brown stain around the insulator near the top of the shell. This stain should not be interpreted as leakage between the shell and insulator. This stain is caused by the corona discharge attracting airborne dirt to the insulator surface. Corona is not to be confused with flashover, a situation where the voltage actually tracks down the outside of the insulator, resulting in misfire. Corona is harmless and is characterized by a hissing sound, much different than the familiar "snap" caused by flashover.


Corona stain

Flashover occurs because the high tension lead at the spark plug terminal is not adequately sealed and the voltage requirement at the spark plug's firing end is higher than the voltage requirement to arc externally. This external arcing is flashover. Typical causes of flashover are poor or damaged ignition boots, dirty cap ends, high moisture/humidity, damaged spark plug insulators or worn firing end gaps. Flashover is identified on the spark plug ceramic by blackened track marks where the spark has occurred externally and tracked down the surface of the insulator.


Flashover


Cap end flashover track marks

Champion provides cap end shapes to suit the needs of the application. Champion's insulator, combined with good plug boots, will prevent harmful flashover. Corona, however, can occur under any condition where high voltage is present.

Connector Well Flashover / Contamination

Shielded spark plugs have a unique set of problems. One is contamination in the lead connector well. Contamination in this area of the plug often leads to the creation of a conductive path and eventually misfire due to flashover as seen in the quarter sectioned shielded spark plug photograph.


Contamination in shielded spark plug well

Connector well contamination may be caused by material falling into the well, faulty or loose connections, moisture or contaminated leads. The lead connection and spark plug well should be carefully inspected for contamination and condition before assembly.

The terminal lead connector (stinger) must be free of contamination internally and externally. The lead connectors are typically ceramic and are believed to last until broken. However, in some cases the inner bore of the stinger can become contaminated. This condition is difficult to detect and can result in a misfire condition. The cause of the contamination may be oil or dirt that becomes lodged between the connector lead and inner bore of the stinger. The result is the formation of a conductive path that causes the spark to arc to ground internal to the stinger with little or no evidence noticeable upon removing the ignition lead from the spark plug well.

This condition is easily detected once the stinger is removed from the ignition lead. Inspection of the lead and bore of the stinger may reveal arc etching of the ceramic and a corresponding mark on the ignition lead. If these marks are found the stinger/lead assembly must be replaced.


Dielectrically failed lead connector/stinger

On the other hand, flashover external to the stinger whether it is from contamination, improper lead attachment or excessive voltages due to a worn out spark plug is often more easily identifiable as can be seen on the stinger in the photograph. When arcing is found on the outside of the stinger, there is a good chance that the spark plug well also has been etched by the arc. If this is the case, both the stinger and the spark plug need to be replaced.

As greater demands are applied at the spark gap the required voltage increases. This increased voltage will follow the path of least resistance, and any contamination in the spark plug well or stinger assembly will contribute to the creation of an alternate path. Oftentimes replacement of the spark plug will eliminate the misfire. In the case of a contaminated well it will solve the problem. In the case of a contaminated stinger assembly a new plug with a tight gap and sharp edges will reduce the voltage requirement and provide a temporary solution. If plug life appears to steadily decrease the stinger assembly should be carefully inspected for contamination.

The Spark Plug's Relation To The Ignition System

The ignition system must be capable of supplying the voltage necessary to initiate a spark between the spark plug electrodes. In practice this means there must be considerable "ignition reserve" to compensate for normal wear of the spark plugs and components of the ignition system.

Ignition reserve is the difference between voltage available (Va) from the ignition system, and voltage required (Vr) by the spark plug. If at any time Vr equals Va, misfire will likely occur. (Figure 3)

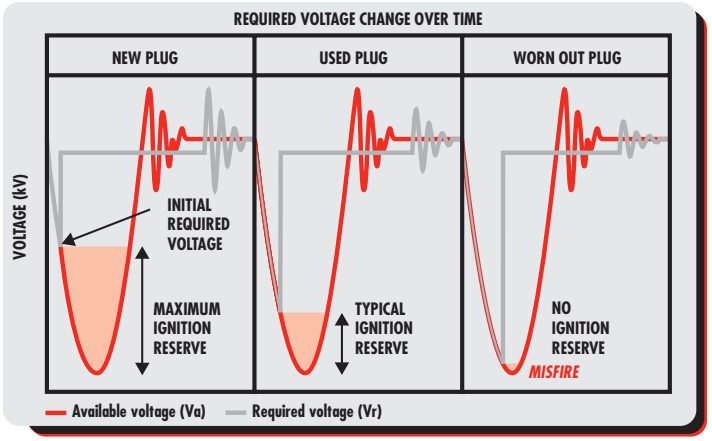


FIGURE 3

Factors Affecting Voltage Requirements (Vr)

COMPRESSION PRESSURE

Depending on the type of fuel, moisture content and voltage source, required voltage increases as pressures increase.

IGNITION TIMING

At TDC (top dead center), voltage requirements will be greatest due to high compression pressures. An advance in timing lowers Vr as pressure decreases. Since the advance creates higher flame temperature, Vr is further reduced by the hotter electrodes. Retarding timing past TDC also decreases Vr as pressures decrease, but appreciable losses of power and temperature result.

SPEED AND LOAD

High speed and load generally produces the highest Vr due to increased cylinder pressures despite the natural increase in electrode temperatures.

ELECTRODE TEMPERATURE

Voltage requirements will decrease as electrode temperatures increase, and increase as temperatures decrease.

ELECTRODE CONDITION

Sharp, new electrodes concentrate the spark arcing by offering an easier path for current flow. As new plugs with well-defined electrodes wear, an increase in required voltage results.

ELECTRODE MATERIAL

Commonly used electrode materials are platinum, iridium, gold-palladium and nickel, in descending voltage requirement.

GAP SIZE

With other influencing factors being equal, required voltages will increase as gap size increases.

Multi-strike ignition: While multi-strike ignition can be beneficial for igniting the air-fuel charge, particularly in lean burn applications, it also accelerates gap wear. To minimize wear, use the fewest number of ignition strikes necessary to achieve complete combustion.

COIL POLARITY

Polarity is a design feature of each ignition system. Current flow from center electrode to ground electrode is referred to as "negative polarity." "Positive polarity" is current flow from the ground electrode to center electrode. Most all manufacturers recommend negative polarity for best spark plug life and performance, since reversed or positive polarity will increase required voltages and substantially reduce ignition system reserve.

FUEL/AIR RATIO

With other factors being equal, voltage requirements will be lowest at the ideal stoichiometric fuel/air ratio. Voltage requirements increase with leaner mixtures because air is a poor conductor.

TURBOCHARGING

Turbocharging increases the voltage requirement because of higher cylinder pressures.

Factors Affecting Voltage Requirements (Vr) *continued*

LOW VOLTAGE		HIGH VOLTAGE
LOW	COMPRESSION PRESSURE	HIGH
ADVANCE AWAY FROM TDC	IGNITION TIMING	RETARD TOWARDS TDC
LOW	SPEED AND LOAD	HIGH
HOT	ELECTRODE TEMPERATURE	COLD
WELL DEFINED	ELECTRODE CONDITION	WORN
NICKEL	ELECTRODE MATERIAL	PLATINUM
NARROW	GAP SIZE	WIDE
NEGATIVE	COIL POLARITY	POSITIVE
STOICHIOMETRIC	FUEL / AIR RATIO	LEAN
LOW	TURBOCHARGING	HIGH

FIGURE 4

Factors Affecting Spark Plug Temperatures

SPEED AND LOAD

As engine power requirements increase with speed and load, spark plug insulator temperatures increase proportionately. Temperatures at constant speed and load will remain relatively stable.

IGNITION TIMING

Ignition timing has one of the greatest effects on insulator temperature. Advances in timing subjects the insulator as well as all other parts of the combustion chamber to longer periods of flame exposure. Recommended spark plug heat ranges, therefore, must consider manufacturers' specified timing and fuel/air ratios. Any advances over specifications will increase insulator temperatures.

CYLINDER HEAD TEMPERATURES

Insulator temperatures will vary almost directly with cylinder head temperatures. A fifty degree increase in coolant temperature will increase the insulator approximately fifty degrees–a negligible amount. In cases of localized cooling system blockages (liquid or air), it is possible to create severe overheating. Extremes in ambient operating temperatures can be detrimental to cylinder heat temperatures by creating a detonation or pre-ignition environment.

DETONATION

Detonation produces severe pressures and temperatures which may affect not only spark plug temperatures but also may impose severe stress on insulators, electrodes, pistons, valves, bearings and other engine components.

PRE-IGNITION

Pre-ignition will generally cause a very rapid and severe temperature rise in the spark plugs and other combustion chamber components.

INSTALLATION TORQUE

Over-torquing or under-torquing upon installation can impair heat transfer out of the spark plug, causing the spark plug to leak and run hotter, decreasing its life.

COLD		HOT
LOW	ENGINE SPEED	HIGH
LOW	ENGINE LOAD	HIGH
RETARDED	IGNITION TIMING	ADVANCED
LOW	CYLINDER HEAD & COOLANT TEMPERATURE	HIGH
NONE	DETONATION	SEVERE
NONE	PRE-IGNITION	SEVERE
CORRECT TORQUE	INSTALLATION TORQUE	OVER / UNDER-TORQUE

FIGURE 5

Heat Range Facts

The term "Heat Range" refers to a spark plug's thermal characteristics: more specifically, to its ability to dissipate combustion heat from its firing end to the cylinder head and cooling medium.

A spark plug must maintain an even flow of heat from its firing end to avoid becoming a source of pre-ignition. Yet it also must operate hot enough to burn off conductive deposits that can short-circuit the high voltage and result in misfire.

For any specific application, it is the range of temperatures from low speed and low load to high speed and heavy load that determines the heat range requirement of a spark plug. From a design standpoint, the range of operating temperatures is largely determined by the length of the insulator nose. The longer the insulator nose, the hotter the spark plug. (Figure 6)

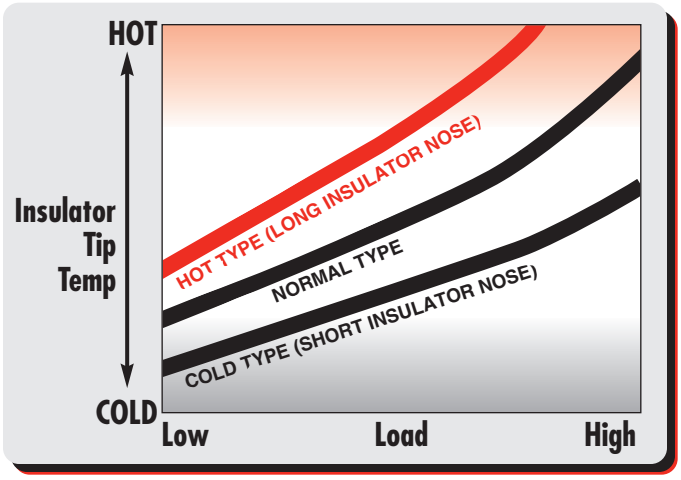


FIGURE 6

Thermocouple plugs designed by Champion are used to monitor firing tip temperatures. For best service at all load conditions, the optimum range of temperatures a plug should operate within is between 700°F and 1200°F (400°C to 650°C). The final selection of a plug for an engine is made on this basis.

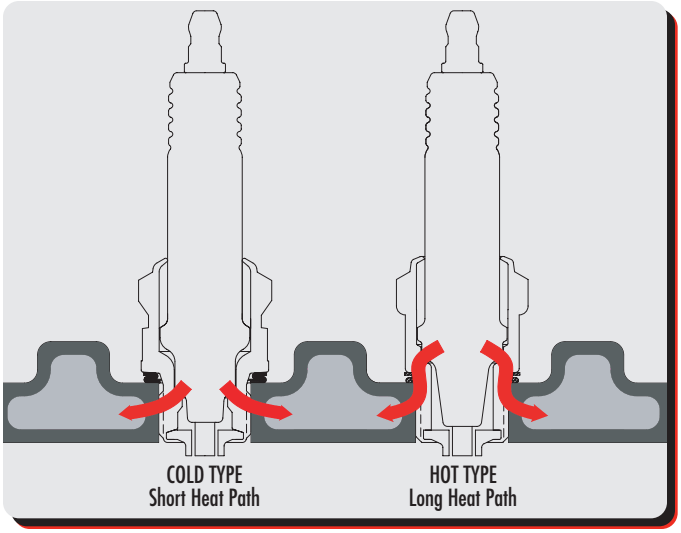


FIGURE 7

Usually each size and design of a spark plug is manufactured in various heat ranges as illustrated. They vary from a "colder" type, which operates on the lower end of the temperature scale, to a "hotter" type, which operates on the higher end of the same scale in the same engine under identical conditions.

Spark plugs with short insulator firing tips are called "cold" designs because they dissipate heat rapidly. They vary from a "colder" type, which operates on the lower end of the temperature scale, to a "hotter" type, which operates on the higher end of the same scale in the same engine under identical conditions. (Figure 7)

It is the temperature at which the plug operates that determines whether it is a hot or cold type, and not necessarily the design.

TYPES OF GROUND ELECTRODE

There are several ground electrode configurations. Those that project furthest from the spark plug into the combustion chamber will have the longest heat transfer path. Four-prong ground electrodes run colder than J-gap ground electrodes due to the shorter heat transfer path. However ground electrode projection may be beneficial for certain applications. (Figure 8)

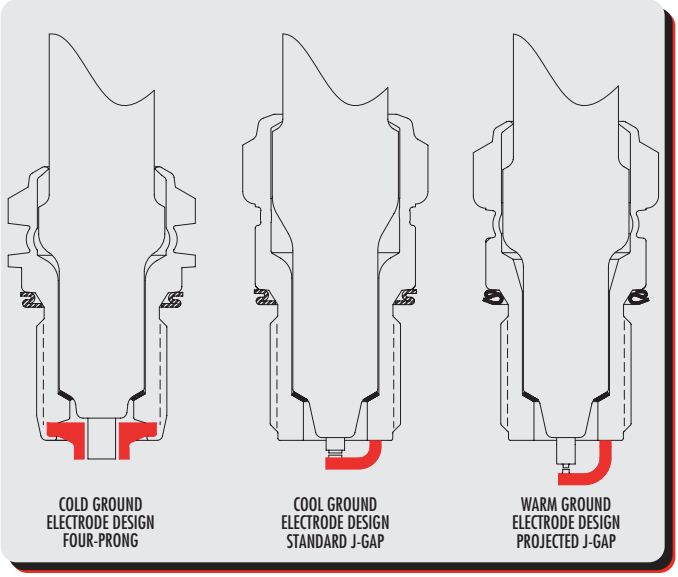


FIGURE 8

COPPER CORED ELECTRODES

The use of copper cored electrodes improves heat transfer, resulting in longer gap life. Copper is used in most center electrodes and in J-gap ground electrodes.

SEAT GASKET TEMPERATURE

Seat gasket thermocouple spark plugs can be used as an indicator of heat transfer out of the spark plug. Spark plug seat gaskets are intended to run no hotter than 400°F. If a seat gasket thermocouple reads above this, spark plugs and engine performance may be adversely affected.

Effect of Fuel on Spark Plug Selection

While most engines are designed for a specific fuel and placed into service with specifications tailored to that fuel, some operators are making conversion to different fuels or multi-fuel operation.

Spark plug selection of heat range and gap spacing should follow manufacturers' guidelines. When converting to alternative fuels see the spark plug selection chart. (Figure 9)

FUEL TYPE	APPROX. OPTIMUM ENGINE COMP. RATIO	AVERAGE OCTANE RES. NO.	MANIFOLD HEAT REQUIRED	SPARK PLUG HEAT RANGE	SPARK PLUG GAP SPACING	IGNITION VOLTAGE REQUIRED
Natural Gas (methane)	14:1 (plus)	115-120	DECREASE	COLD	CLOSE	HIGH
LP-Gas	9:1 - 12:1	95-105	↕	↕	↕	↕
Gasoline	8:1 - 11:1	85-100				
Kerosene	5:1 - 7:1	35-50				
Distillate	4:1	25-30	INCREASE	HOT	OPEN	LOW

FIGURE 9

Low energy fuels often contain contaminants which can decrease spark plug life due to deposit build-up. (Figure 10)

LOW ENERGY	FUEL SOURCE	TYPICAL COMPOSITION
Landfill gas	Natural anaerobic decomposition of organic landfill waste.	55% methane and 45% CO_2 with small amounts of oxygen and nitrogen, and contaminants such as sulfur compounds, halides, acids and solids.
Digester gas	Natural anaerobic decomposition of organic waste from sewage, animal waste or waste from vegetable and alcohol mills.	65% methane and 35% CO_2 with small amounts of oxygen and nitrogen, and contaminants as above.
Blended fuel	Landfill or digester gas enriched with natural gas.	Depends on fuel concentration.

FIGURE 10

Integral Coil Features



Integral coils must be installed at a maximum of 5 lb-ft after the spark plug has been installed and properly torqued. It is very important to follow coil manufacturer instructions for tightening. Over-torque can cause damage to coil and/or plug, resulting in possible engine damage. The "T" type and "G" type spark plugs described below are designed to be used in conjunction with ignition systems utilizing an integral (transformer) coil. These plugs along with the use of integral coils have been approved by Canadian Standards Association for Class 1, Group D, Division 2 hazardous-location service.

"T" Type Spark Plugs



A "T" type spark plug is shown in Figure 11. Typical plugs are the RTM77N, RTM78N, RTB78N, RTB80N, RTL85G, RTN79G, TJ83, RTW80N and RTW83F. These coils require that the shell turnover has a 13/16" thread to accommodate the female threaded coil.

FIGURE 11

"G" Type Spark Plugs

A "G" type spark plug is shown in Figure 12. Typical plugs are the RGC80N, RGC80F and RGC77N in the 7/8" line and the RGM86N in the 18mm line. These utilize a 1" upper female threaded shell.

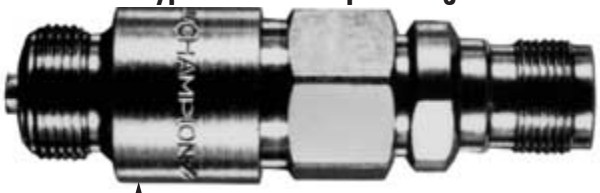




FIGURE 12

Shielded Extension Features and Installation

Typical Shielded Spark Plug



Shielded Extension



Teflon Ignition Rod





The 1/4″ brass rod or American Bosch high ohmic resistor is not supplied by Champion. A resistor must be used with American Bosch pulse generator.





Grommet Spring Assembly
included with 3/4″-20 shielded extension

NOTE: This extension assembly can only be used with spark plug with a 1" well depth such as RHL79G, RHL89G, RHN79G, RHM77N, RHM83N, RHM85G, RHW79N, RHB81N. The following have a 2" well and require a brass rod adapter: RHM78PP, RHM78WPCC, RHW77N, RHW78N, RHW80N, HW83F.

- Install spark plug and tighten to recommended torque.
- Take center rod and install spring assembly and rubber grommet with at least 1-1/2" of center rod extending from bottom.
- Insert center rod with spring assembly and grommet into shielded spark plug.
- Install shielded extension over the center rod pushing the grommet and spring assembly down to the shell. This will ensure the center rod is in contact with the terminal of the spark plug.
- Tighten shielded extension to a maximum of 5 lb-ft.



SPARK PLUG INSPECTION VIEWER

CT-456A Reorder No. 14053

Read spark plugs quickly and accurately with this lighted spark plug viewer. This tool magnifies the spark plugs 10X for a sharper look at any spark plug. Operates with two C size batteries, not included.



RETRACTABLE FINE WIRE GAP GAUGE

CT-466 Reorder No. 94608

High impact red plastic case contains 4 sets of retractable go and no go wire gauges. Sizes include: .011-.015", .013-.017", .018-.022" and .023-.028".

SPARK PLUG: SHIELDED EXTENSIONS, NON-SHIELDED EXTENSIONS GASKETS AND TERMINAL NUT

SPARK PLUG SHIELDED EXTENSIONS



EXTENSIONS

5/8"-20 THREAD

LENGTH	PART#	REORDER#
4"	SE-4B	92966
6"	SE-6B	94462
8"	SE-8B	92821
10"	SE-10B	11500

3/4"-20 THREAD

LENGTH	PART#	REORDER#
4"	SE-4D	11496
6"	SE-6D	93538
8"	SE-8D	93717
10"	SE-10D	11503



TEFLON IGNITION RODS

LENGTH	PART#	REORDER#
4"	SE-4T	11497
6"	SE-6T	11504
8"	SE-8T	11505
10"	SE-10T	11506



GASKETS

LENGTH	PART#	REORDER#
14MM	N678	91954
18MM	A678	91591
7/8MM	A478	94349

TERMINAL NUT



BN9A 11276

SPARK PLUG NON-SHIELDED EXTENSIONS



TEFLON DIELECTRIC SHIELDS

LENGTH	PART#	REORDER#
3"	DS3	13601
4"	DS4	13602
5"	DS5	13604
6"	DS6	13607
8"	DS8	13609
10"	DS10	13610
12"	DS12	13611
14"	DS14	13612
16"	DS16	13613
18"	DS18	13614
20"	DS20	13615
24"	DS24	13617

#50kV RESISTANCE



ALUMINUM EXTENSION RODS

LENGTH	PART#	REORDER#
3"	SCE3	13587
4"	SCE4	13588
5"	SCE5	13589
6"	SCE6	13590
8"	SCE8	13591
10"	SCE10	13592
12"	SCE12	13594
14"	SCE14	13595
16"	SCE16	13596
18"	SCE18	13597
20"	SCE20	13599
24"	SCE 24	13600

#8-32 INTERNAL THREAD

Ignition wire and accessories are available through the Champion/Powerpath catalog. Ignition and primary wiring plus a vast collection of connectors and supplies can be located by contacting Customer Service at 1-877-621-3089–or contacting Federal-Mogul via our web site.

FM eCONNECT™ *YOUR ONLINE SOURCE FOR FEDERAL-MOGUL INFORMATION*

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- Links and phone numbers for the Federal-Mogul Technical Assistance Call Center
- F-M TEC course descriptions and schedules.

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KELL-STROM DIRECT PURCHASE SPECIALTY TOOLS

KELL-STROM MANUFACTURES CHAMPION INDUSTRIAL TOOLS AND EQUIPMENT UNDER LICENSE AND ARE AVAILABLE BY CALLING 1-800-851-6851 (CT 860-529-6851) OR BY VISITING THE KELL-STROM WEBSITE (WWW.KELL-STROM.COM).

SPARK PLUG CLEANER/TESTER *CT-475-I*
For all 14mm, 18mm and 7/8-18" spark plugs.
Customer to specify 110 or 220V.



ABRASIVE MEDIA *CT-91893-I*
For use in Spark Plug Cleaner/Tester CT475-I.
Comes in box of 12 bags.

PORTABLE GAP SETTING TOOL *CT-415-I*
Low cost tool for setting gaps on 4-prong, massive electrode designs.
Tool package includes: CT-466 gap gauge, 18mm and 7/8-18 thread size mounting rings and CT-467 gap adjusting tool.

GAP ADJUSTING TOOL *CT-467*



BENCH GAP SETTING TOOL *CT-2500-I*
For gapping 4-prong 18mm and 7/8 -18" spark plugs. Gap tool sizes: .010", .014", .018" and .022". Also includes CT-467 gap adjusting tool.

THREAD CLEANING TOOL
Full-length tools designed to clean the entire installation hole.

	Reach
CT-14TSC	14mm-fl"
CT-18TSC	18MM-1"
CT-78TSC	7/8-18-1"



12 HOLE PLUG TRAY FOR INDUSTRIAL PLUGS *CT-446-I*

RUBBER INSTALLATION TOOL FOR NON-SHIELDED SPARK PLUGS

CT-463-I	.8"
CT-463-14-I	.14"



6 PT. SPARK PLUG SOCKETS
Specially designed for longer industrial plugs.
fi" drive, flank drive, positive plug retention and black oxide finish.

	Hex	Mininum Inside Length
CT-625	5/8"	2fi"
CT-812	13/16"	3fi"
CT-875	7/8"	3fi"
CT-937	15/16"	3fi"
CT-1000	1"	3fi"



THREAD LUBE *CT-550*









CT-550



CONTACT KELL-STROM TOOLS AT 1-800-851-6851 (CT 860.529.6851) OR WWW.KELL-STROM.COM TO FIND OUT ABOUT THESE AND OTHER CHAMPION LICENSED TOOLS.

USED SPARK PLUG ANALYSIS

An effective way to diagnose an engine's operating conditions is to examine the used spark plugs for abnormal conditions. If all systems of a given cylinder are in proper working condition, the recommended spark plug will take on deposit, gap wear and insulator coloring characteristics which must be considered normal. By indexing each plug to its respective cylinder and location during removal, the technician can later scrutinize the plug under magnification to determine the possibility of engine abnormalities.

This procedure can be very useful if conducted as part of regular maintenance inspections. The following series of photographs and explanations may serve as a guide to spark plug and engine analysis; conditions will vary from engine to engine.

NORMAL

Appearance. Slight even wear on electrodes, very light deposits, a coloring of brown or greyish tan. Very clean, deposit-free firing ends are common on LP and Natural gas applications.

Indication. Correct spark plug for application; cylinder from which removed is "healthy."

WORN OUT

Appearance. Very pronounced wear on electrodes, widened gap space.

Indication. Worn condition creates high voltage requirement and stresses the ignition system. Replace with equivalent heat range, perform routine ignition maintenance.

BRIDGED GAP

Appearance. A deposit lodged between the electrodes which "short-circuits" the ignition voltage.

Indication. Flaking off of combustion chamber deposits. May happen after long periods of constant speed and load operation followed by cyclic accelerations.

OIL ASH DEPOSITS

Appearance. Light colored (generally grayish) crusty build-up on spark plug firing end. May vary in density from very soft and flaky to extremely hard and rock-like.

Indication. Residual deposits from oil entering the combustion chamber in small amounts and being burned. These deposits, depending on oil additives, may be non-conductive and harmless. However, sufficient quantities of these deposits may build to mask the entire firing end and affect initiation of combustion. Should the deposits be conductive, the potential is great for core nose tracking and misfire.

LANDFILL GAS DEPOSITS

Appearance. Light colored (generally white) crusty build-up on spark plug firing end. May vary in density from very soft and flaky to extremely hard and rock-like.

Indication. Residual deposit from an engine operated on gas from a landfill. This type of fuel is often referred to as "dirty" gas, thus the naturally occurring deposits. These deposits may be non-conductive and harmless, but sufficient quantities may build to mask the entire firing end and interfere with the initiation of combustion. Should the deposits be conductive, the potential is great for core nose tracking and misfire.

DETONATION

Appearance. Electrodes or insulator fractured/physically broken as if by mechanical means.

Indication. Engine operated under abnormal combustion–detonation (uncontrolled burning or exploding of the fuel/air charge). Generally due to excessive temperature from over-heating, improper fuel/air ratios, over-advanced timing, cooling system blockages, insufficient engine tolerances, or improper balance of fuel mixture and timing.

PRE-IGNITION

Appearance. Overheated spark plug with electrodes and/or insulator melted.

Indication. Engine operated under abnormal combustion–pre-ignition (ignition prior to timed spark). Pre-ignition generally results from excessive temperatures created by "hot spots," possibly carbon, sharp valve edge, gasket protruding into the chamber, or improper heat range plug.

CORE NOSE TRACKING

Appearance. Ignition marks etched into the insulator core nose, or its deposits, that travel from the center electrode up the core nose to ground within the shell bore. These marks are often black in color.

Indication. Misfire may occur as the ignition spark has found an alternate path to ground as opposed to the desired path of arcing from center electrode to the ground electrode. Tracking can be caused by any of the following conditions: Conductive deposits on the insulator core nose, Too wide a spark gap, Too lean a fuel/air ratio, Increased cylinder pressures at time of ignition.

CARBON FOULED

Appearance. Soft, black, sooty deposits covering firing end.

Indication. Possible problem in the fuel delivery system–overly rich. Weak ignition system, flashover or secondary voltage, leak, or extremely low compression. More common to gasoline fueled auxiliary type engines.

TORCHED SEAT

Appearance. Cutting torch effect in the thread and seat area of the plug shell.

Indication. Plug was not seated properly, could not dissipate heat and allowed gases to blow by the threaded area.

USED SPARK PLUG ANALYSIS
ANALYSE DE L'USURE DES BOUGIES
ANÁLISIS DE BUJÍAS USADAS

CHAMPION

Normal



Usure normale
Normal

Detonation



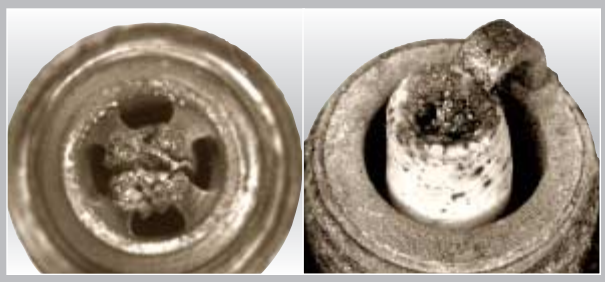
Détonation
Detonación

Worn Out



Usure totale
Desgastada

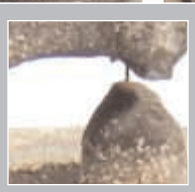
Pre-ignition



Préallumage
Encendido prematuro

Bridged Gap









Écartement obstrué
No existe separación entre puntas

Core Nose Tracking



Traces de cheminement de l'isolant
Formación de trayectorias en la nariz

Oil Ash Deposits



Dépôts résiduels d'huile
Depósitos de cenizas aceitosas

Landfill Gas Deposits



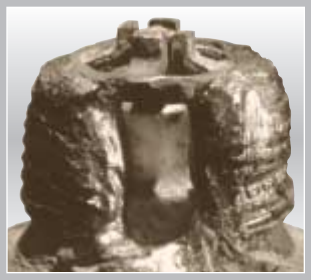
Dépôts résiduels de gas d'enfouissement
Depósitos de gas de vertedero

Carbon Fouled



Calaminage
Cubiertas de carbón

Torched Seat



Siège brûlé
Asiento quemado

Champion®
Powers Them All.



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