

**BG IGNITION  
PRODUCTS**

**INDUSTRIAL SPARK PLUGS**

# BG SPARK PLUGS

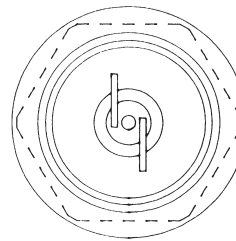
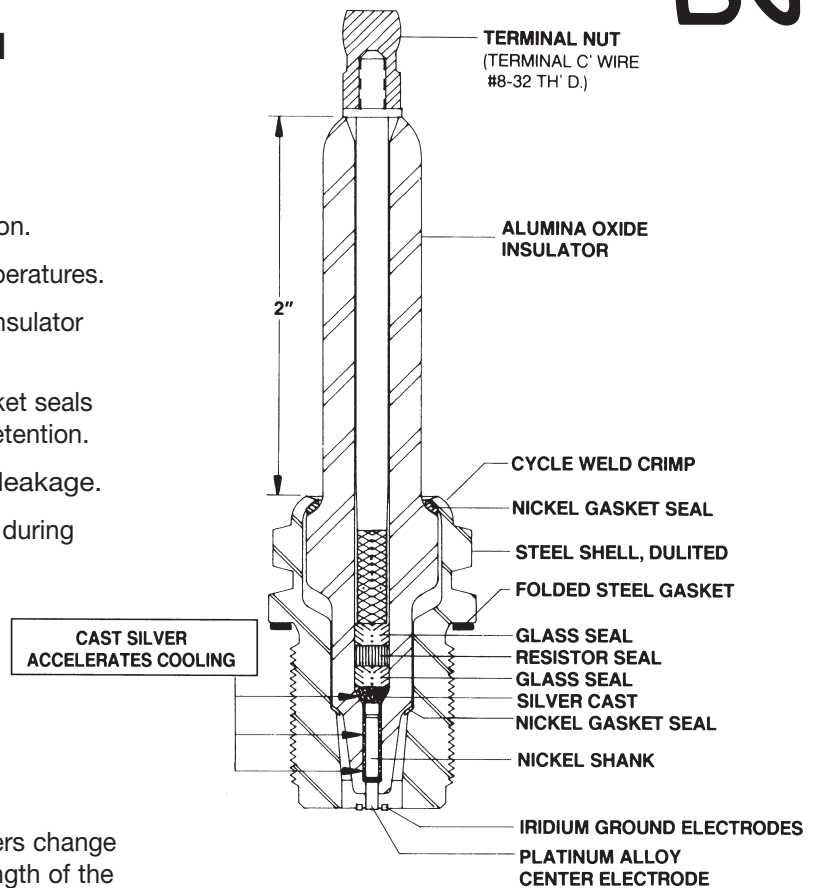


## Models RB105-1 And RB114-1 Have Long Insulators For Extra Flashover Protection

- 2" insulator provides extra flashover protection.
- Iridium electrodes resist erosion at high temperatures.
- High temperature non-conductive glaze on insulator resists flashover.
- Extra thick cycle weld crimp over nickel gasket seals for zero gas leakage and assured insulator retention.
- Conductive glass seal assures zero gas leakage.
- Folded steel gasket prevents plug loosening during operation.

## A unique cooling process is why BG plugs last longer. . .

The foremost way that spark plug manufacturers change heat range of a spark plug is to change the length of the ceramic nose — the length measured from the sealing gasket downward to the firing end. A shorter ceramic nose makes the spark plug “colder,” but also makes it more prone to fouling because the electrical path is shortened. Only BG uses cast silver in direct contact with the ceramic insulator to facilitate cooling — this allows BG to offer “colder” spark plugs with adequate nose lengths to prevent fouling.



**FINE WIRE  
ELECTRODE  
CONFIGURATION**

Cutaway above shows  
Model RB114-1



SPARK PLUG GASKETS		
Part No.	Size	Material
A506	14mm	Solid Copper
A4808	7/8"-18	Solid Copper
21001	7/8"-18	Folded Steel
21367	For top threaded S.P.	Solid Copper
21430	14mm	Folded Steel
21435	18mm	Folded Steel

All new BG spark plugs include a gasket. The ability of a spark plug to seal gas leakage and conduct heat depends upon the condition of the gasket. When reinstalling spark plugs, always use a new gasket.



# BG SPARK PLUGS

**BG's Iridium Electrode Spark Plugs Are Designed To Run Cooler, Last Longer, For Today's Clean Burn Engines. . .**


- Iridium electrodes resist erosion at high temperatures.
- Exceptional performance under the most demanding operating conditions.
- Models available to meet the requirements of most industrial engines.

**Consistent long-term performance has established BG's reputation for engineering excellence.**



Plug Type	Thread Size	Thread Reach	Model	Heat Range	Shielding Thread	Resistor	Installed Height	Hex Size	Std. Gap
<b>Unshielded</b> 	7/8"-18	5/8"	RB212-1	Medium	-	Yes	2-11/32"	15/16"	.015"
	7/8"-18	5/8"	RB105-1	Cold	-	Yes	3-7/16"	15/16"	.015"
	7/8"-18	1"	RB114-1	Cold	-	Yes	3-1/16"	15/16"	.015"
	18mm	1/2"	RB485-1	Medium	-	Yes	2-15/32"	7/8"	.015"
<b>Shielded</b> 	7/8"-18	5/8"	RB312S-1	Medium	5/8"-24	Yes	2-7/16"	7/8"	.015"
	7/8"-18	5/8"	RB118SD	Cold	3/4"-20	Yes	2-3/32"	15/16"	.015"
	18mm	1/2"	RBH485SD	Cold	3/4"-20	Yes	2-1/4"	7/8"	.015"
	18mm	13/16"	BG341-1	Medium	3/4"-20	Yes	2-1/2"	7/8"	.014"

**All models have two iridium ground electrodes. Model BG341-1 has a massive nickel electrode (4 prongs).**

Plug Type	Thread Size	Thread Reach	Model	Heat Range	Shielding Thread	Resistor	Installed Height	Hex Size	Std. Gap
<b>Unshielded</b> 	18mm	13/16"	RB777-1	Cold	-	Yes	3-17/32"	7/8"	.012"
	18mm	13/16"	RB777-2	Colder	-	Yes	3-17/32"	7/8"	.012"
<b>CALL FACTORY FOR LATEST NEWS ABOUT SPARK PLUGS</b>									

The model listed above has electrodes fitted with iridium discs held in place by a double retention system.  
The design also utilizes a monolythic resistor set-up.

# SPARK PLUG SELECTION CHART

IF THE ENGINE HEAD WAS RE-WORKED, OR IF A PRE-COMBUSTION CHAMBER WAS INSTALLED, VERIFY PLUG SIZE.

ENGINE MODEL	UNSHIELDED		SHIELDED		INTEGRAL COIL TYPE	
	SEVERE SERVICE	NORMAL SERVICE	5/8"-24 SHIELD	3/4"-20 SHIELD	13/16"-20 THREAD	1"-20 THREAD
<b>AJAX (Cooper Penjax)</b>						
CMA, EA22, 6½" x 8", EA30 7¼" x 8"	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
CMA, 7½" x 10", 8½" x 10", C40, C42 8½" x 10"	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
E42 8½" x 10", WL, EA15 5" x 6½"	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
DP60, DPC60, DPC120 9½" x 12"	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
DP80, DPC80, DP160, DPC160 11" x 14"	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
DP80A, DPC80A, DP160, DPC160A 11" x 14"	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
DP115, DPC115A, DP230, DPC230 13¼" x 16"	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
DP300, DPC300, 15" x 16", DPC600, DPC360, DPC540	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
E15 5¼" x 8", C30, E30, 7½" x 10"	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
<b>CATERPILLAR</b>						
3500 SERIES	RB777-1	RB777-1	----- CALL FACTORY -----			
3600 SERIES	----- CALL FACTORY -----					
<b>CLARK</b>						
MA, HMA, HMB	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
BA, HBA, HLA, HBA-T, HLA-T	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
RA, HRA, HSRA, HRA-T, HMAB	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
TPV, TLA, TLAD, TMB, TRA	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
TCV, TCVA, TCVD, TCVV	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
TVM, VMC, HMC, VRA	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
<b>COOPER-BESSEMER</b>						
(¾" Reach) G-AW, G-MR, G-MV, JS	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
(¾" Reach) GMV, GMVA, GMVB	RB105-1	RB212-1		RB118SD	SEE NOTE 1	SEE NOTE 2
(¾" Reach) GMVC, GMVE, GMVG, GMVH	RB105-1	RB212-1		RB118SD	SEE NOTE 1	SEE NOTE 2
(¾" Reach) GMW, GMWA, GMWC, GMWH	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
(1" Reach) GMW, GMWA, GMWC, GMWH	RB114-1	RB114-1			SEE NOTE 1	SEE NOTE 2
(¾" Reach) GMX, GMXE, GMXH, V250	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
(1" Reach) GMX, GMXE, GMXH, V250, GMVG	RB114-1	RB114-1			SEE NOTE 1	SEE NOTE 2
(¾" Reach) W-330, Z-330, V275	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
(1" Reach) W-330, Z-330, V275	RB114-1	RB114-1			SEE NOTE 1	SEE NOTE 2
(¾" Reach) LS, LSV, KSV Standard ¾" -18	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
<b>ENTERPRISE (Delaval)</b>						
HA6, HV8, HVA8, HV12	RB114-1	RB114-1			SEE NOTE 1	SEE NOTE 2
HVA12, HV16, HVA16, HVA20	RB114-1	RB114-1			SEE NOTE 1	SEE NOTE 2
TDSG-36-6-38 Rear Side Of Head				BG341-1	SEE NOTE 1	SEE NOTE 2
CSG-36, 38; GSM-36, 38				BG341-1	SEE NOTE 1	SEE NOTE 2
<b>INGERSOLL-RAND</b>						
XVG, PVG, JVG, PJVG, SVG, PSVG	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
KVG, KVGR, PKVG, PVGR, PKVGR	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
TVS, TVR, SVS, KVT, KVST thru 1977	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
KVSR 1978 on, w/Precomb Chamber	RB114-1	RB114-1			SEE NOTE 1	SEE NOTE 2
KVH, KVR, KVS, PKVR, PKVSR	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
<b>LUFKIN</b>						
HT333, HC333, GSD, GSDH	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
H795, H1770, H2165	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
<b>MINNEAPOLIS-MOLINE</b>						
BEU, DU, FEU, GU, GUA	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
LU, MEU, NEU, SEU, TAU	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
TEU, CU, KE, KU, HU	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
283-4A, 425-6A, 403-4A, 605-6A	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
206-4A, 165-4A (EU), 220-4	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
HD220-4A, M220-A4A, 283-4A	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
336-4A, 403-4A, 425-6A	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
KD425-6A, HD504-6A	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
605A-6A, 605B-6A, 800-6A	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
HD800-6A, HD800A-6A	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
1210-12A, 1600-12A	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2

# SPARK PLUG SELECTION CHART



IF THE ENGINE HEAD WAS RE-WORKED, OR IF A PRE-COMBUSTION CHAMBER WAS INSTALLED, VERIFY PLUG SIZE.

ENGINE MODEL	UNSHIELDED		SHIELDED		INTEGRAL COIL TYPE	
	SEVERE SERVICE	NORMAL SERVICE	5/8"-24 SHIELD	3/4"-20 SHIELD	13/16"-20 THREAD	1"-20 THREAD
<b>MEP/Fairbanks Morse</b>						
MEP-6, 8, 10, 12 38FS5-¼	RB485-1	RB485-1		RBH485SD BG341-1	SEE NOTE 1 SEE NOTE 1	SEE NOTE 2 SEE NOTE 2
<b>NORDBERG</b>						
4FG, FSE 96 Natural Gas				BG341-1	SEE NOTE 1	SEE NOTE 2
<b>WAUKESHA</b>						
AT25GL, AT27GL	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
FC, 180GKB, 190GLB, 195GK	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
F1197G, F1197GR, F1197GRSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
F1905GR, F1905GRSI, H2BG5G, L3711G	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
H1077G, H1077GSI (18mm Heads)	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
L1616G, L1616GSI (18mm Heads)	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
F2895G, F2895GSI, F3521G, F3521GSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
L5108G, L5108GSI, L5790G, L5790GSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
L7042G, L7042GSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
P9390G, P9390GSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
180GL, 190GL, 195GL	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
140GK, 140GZ, 185GL, 145GKB (18mm Heads)	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
WAK, WAKB, WAKC, NK, NKR	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
LRO, LROR (¾" -18 Heads)	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
LRO, VLRO, LRZ (18mm Heads)	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
F2894G, F2894GR, F2894GRSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
F3520G, L7040G	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
L5100GR, LT100GRSI, L5788GR, L5788GRSI	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
BA, BL, BM, BK, BZ, CHK, CHS, CR, CSR	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
CU, DHK, DK, DKR, DR, DU, EK, EL	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
FCL, FCS, FL, FLS, FS, GAK	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
130GS, 130GL, 140GZ, 180G	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
MK, ML, MS, MZA, SRK, RBR	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
MZ, MRK, MZR, SRKR	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
SPLR, WOK, VIK, XAH	RB212-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
7044 GSI	----- CALL FACTORY -----					
GL and GLD Series	----- CALL FACTORY -----					
<b>SUPERIOR</b>						
1979-80 6GTL, 8GTL, 12GTL, 16GTL	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
1976-80 12SGT, 16SGT	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
1970-80 12G825, 16G825	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
6GT510, 8G825, 6G825, 6G510	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
12GT825, 16GT825, 6GT825	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
8GT825, 6GX825, 8GX825	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
12VG825, 12VGT825, 16VG825, 16VGT825	RB105-1	RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
SGTB Clean Burn	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
2406G, 2408G, 2412G, 2416G	RB485-1	RB485-1		RBH485SD	SEE NOTE 1	SEE NOTE 2
<b>WORTHINGTON</b>						
AG, BG, BBG, EEGX, LCE, SDHG		RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
GG, CCG, CCGX, DG, DDG, EEG, LFC		RB212-1	RB312S-1	RB118SD	SEE NOTE 1	SEE NOTE 2
LTC, 18X25, 20X25 Horizontal 4 Cycle	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
ML, UTC, SLHC, SLHCA, SLHP	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2
SUTC, SEH, SDHG, SDHP	RB105-1	RB105-1		RB118SD	SEE NOTE 1	SEE NOTE 2

**NOTE 1:** Use the ¾" -20 Shielded Plug with the "FM1" Series Coil Adapters (Page 33) or Use the ¾" -24 Shielded Plug with the "FME" Series Coil Adapters (Page 33)

**NOTE 2:** Use the ¾" -20 Shielded Plug with the "M" Series Coil Adapters (Page 35) or Use the ¾" -24 Shielded Plug with the "E" Series Coil Adapters (Page 34)

# SPARK PLUG RECONDITIONING SERVICE

**Fast, Dependable Service. . .Everytime.**

1. BG reconditions your industrial precious metal electrode spark plugs using a 20+ step process that includes chemical cleaning, honing, gapping, repainting, new cylinder gasket, and complete testing.
2. On the average, about 10% of the plugs returned are unsuitable for further use due to excessive electrode wear. These, if they are BG plugs, which “fall out” during inspection can be replaced with new plugs.
3. Your cost of reconditioning is just a few dollars per plug (see price publication).
4. Since about 90% of the plugs returned can be reconditioned, users find that their “average plug” cost is reduced substantially.
5. Return plugs to your supplier or direct to factory (prepaid).



## This Spark Plug ran for 18 years!



Year after year BG spark plugs ran in an Ingersoll-Rand PVG engine at the Lower Neches Valley Water Authority in Beaumont, Texas. After 18 years of service, when this spark plug was returned to us for “reconditioning,” it was found suitable for further use!

## Installation Tips

- For best results, install Spark Plugs to the engine manufacturer’s recommended torque. Typical torque values are:

Thread Size	Torque*
7/8" -18	70-80 ft. lbs.
18mm	38 ft. lbs.
14mm	25 ft. lbs.

\*Reduce torque values by 20% when using anti-seize compound.

- Use BG Mica Lubricant (BG Part No. A718) on the plug threads to prevent thread seizure.
- Use BG Hole Conditioning Tool Part No. 21045 to clean cylinder threads and gasket seat in one operation.
- Avoid touching plug insulator during installation. Hold plug by metal shell part only.
- Use a good quality spark plug boot to maximize plug life.

# ULTIMA BLUE 3000 FIRING INDICATOR



.....simplifies trouble shooting because the indicator bulb is brighter!

- \* Unique BG bulb design flashes brighter and is easier to see.
- \* Nickel-plated probe provides maximum sensitivity – even through silicone hose!
- \* Premium Grade Virgin Teflon insulation protects operator from shock.
- \* Includes pen clip and leather carrying case.
- \* Replacement bulbs available. (P/N 23076)



## HOLE CONDITIONING TOOL Part No. 21045-

Use Hole Conditioning Tool to clean cylinder threads and gasket seat in one operation.

PART NO.	THREAD SIZE	EFFECTIVE REACH
21045-14	14 X1.25M (METRIC)	UP TO 5/8"(.625)
21045-14L	14 X1.25M (METRIC), LONG	GREATER THAN 5/8"(.625)
21045-14TS	14 X1.25M (METRIC), TAPERED SEAT	INFO. NOT AVAILABLE
21045-18	18 X1.5M (METRIC)	UP TO 17/32"(.531)
21045-18L	18 X1.5M (METRIC), LONG	GREATER THAN 17/32"(.531)
21045-18TS	18 X1.5M (METRIC), TAPERED SEAT	INFO. NOT AVAILABLE
21045-875	7/8-18 UNS-2A	UP TO 5/8"(.625)
21045-875L	7/8-18 UNS-2A, LONG	GREATER THAN 5/8"(.625)



## GAPSETTING TOOL Part No. M678-



BG's professional gapsetting tool is designed to provide gap adjustments without damaging the electrodes. It sets gaps precisely to "go-no go" measurement of  $-.001"$ ,  $+.002"$  of the nominal gap. Order with dash number for desired gap; i.e., M678-.015" gap.

## MICA LUBRICANT



### BG MICA LUBRICANT PREVENTS THREAD SEIZURE

Unlike other anti-seize compounds, Mica Lubricant is non-metallic, non-conductive, safer to use. Facilitates spark plug removal and prevents thread damage.

Part No.	Size
A718	4 Oz. Can
A719	16 Oz. Can
A768	32 Oz. Can

# BG's COIL TESTER MAKES TROUBLESHOOTING EASIER. . .

BG's CT300 Coil Tester is a portable instrument designed to check the condition of the primary and secondary windings of a capacitor discharge coil. The unit is powered by four "C" size dry cell alkaline batteries. The primary voltage is adjustable from 0 to 300 volts DC. The spark gap tests the secondary output of a coil at 28 to 30 KV. The basic system includes a set of ignition leads to test unshielded capacitor discharge coils. Optional leads are available to test shielded coils. Complete instructions, including voltage settings for various manufacturers' coils, are provided.



- PORTABLE – Allows on-site troubleshooting.
- COST EFFECTIVE – Pays for itself in “saved” coils and reduced downtime.
- EASY TO USE – Complete instructions provided.
- INCLUDES CABLES\*, CARRYING CASE, AND BATTERIES – Optional leads available for shielded coils.

\*[Primary lead P/N 22185 and Secondary lead P/N BG296-36 (24157-36)]

OPTIONAL LEADS REQUIRED TO TEST SHIELDED COILS ARE SHOWN HERE →

COIL MFG	COIL MODEL	PRIMARY LEAD P/N	SECONDARY LEAD P/N
ALTRONIC	501 061-S, 591 010-S 291 001-S	22230-30	BG293-36
	591 007, 591 008	22230-30	BG298-36
	591 011A, 591 011B	22230-30	22253-36
ALTRONIC FLANGE MOUNT	591012	22590-24	23580 (RIGID)
PRECISION (BENDIX)	10-320790-1, 10-382040-1	22231-30	BG291-36
	10-372385 SERIES	22232-30	USE STD LEAD (BG296-36)
	10-382080-XX 10-57460-XX 10-372360-XX	22236-30	BG292-36
DYNALCO	IGC 506	22232-30	BG293-36
FAIRBANKS MORSE (COLT)	PPT2477 AD, ADL	22231-30	BG294-36
	PPT2477AA	22231-30	22253-36
	PPT2477AB	22231-30	BG298-36

CALL FOR MORE OPTIONAL LEADS!