

# installation tooling

Installation tooling for Blind Nuts and Blind Bolts requires a hand held hydraulic gun fitted with the proper size driving tools, and actuated by one of Hi-Shear's portable hydraulic Power Units. Operated by factory air pressure of 90 psi, these Power Units can be adjusted by the worker to provide sustained pressure to the Guns, suitable to the individual settings required by each size Blind Nut or Blind Bolt. The Power Units are design-rated to 3000 psi, and being activated by air pressure are non-sparking in operation, and can be safely used in flight ramp areas. These units are suitable for factory or field use, are compact in size, mobile, and are built to precision standards. They are simple to operate, easy to maintain, and are constructed for rugged usage. A maintenance manual is furnished with each unit. As portable hydraulic power sources, these units can be adapted to other uses in addition to fastener installation.

For factory or field convenience, Driving Tool Kits are available which contain individual tools necessary to drive a variety of sizes of Blind Nuts and Blind Bolts. These kits are packaged in metal boxes, ready to be attached to the caster equipped Power Units.

Hand installation tooling is also available for field service or limited use applications.

## BP7000 AIR-HYDRAULIC POWER UNIT

This Power Unit, wheel mounted, is designed for factory production work. It is non-sparking in design; hence, it can be used safely for the repair of fueled aircraft or launch-ready vehicles. It is actuated from a normal factory air pressure of 90 psi. Weight (with furnished 12' hose but no gun) is approximately 78 lbs. Overall dimensions are 17½" wide, 39¾" long and 25½" high.

Ordering part number:

BP7000 Power Unit Assembly (Does not include Gun or Driving Tool Kit)

Note: The BP7000 Power Unit replaces the earlier BP3000 Air-Hydraulic Power Unit, the latter no longer available for ordering. Spare parts for the BP3000 Unit can still be obtained.

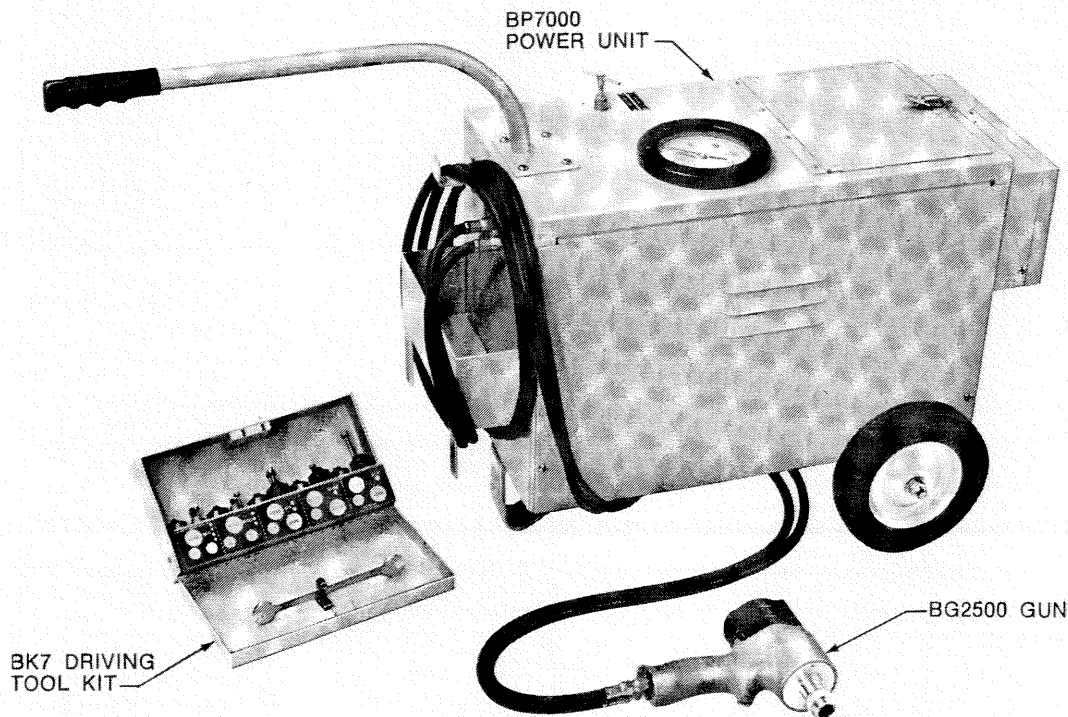
Federal Stock Number 5130-944-5621. Manufacturer's Code 73197.

## COMPLETE KITS FOR POWER UNITS, GUNS AND TOOLS

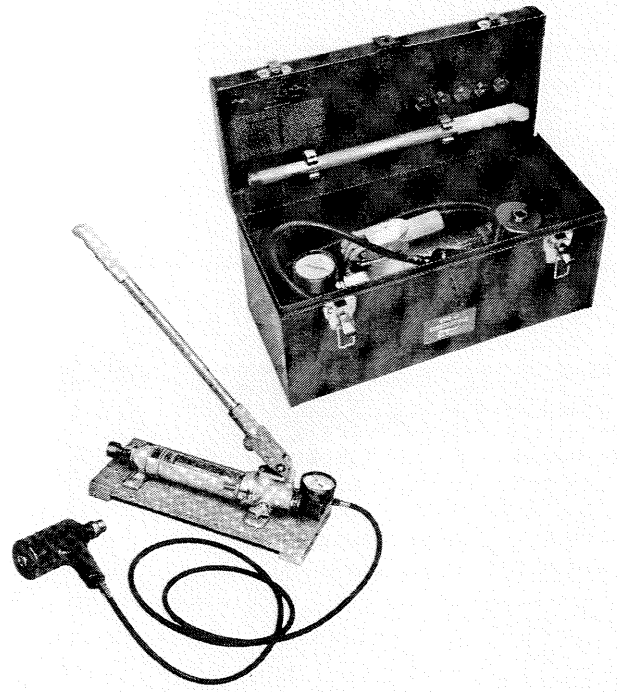
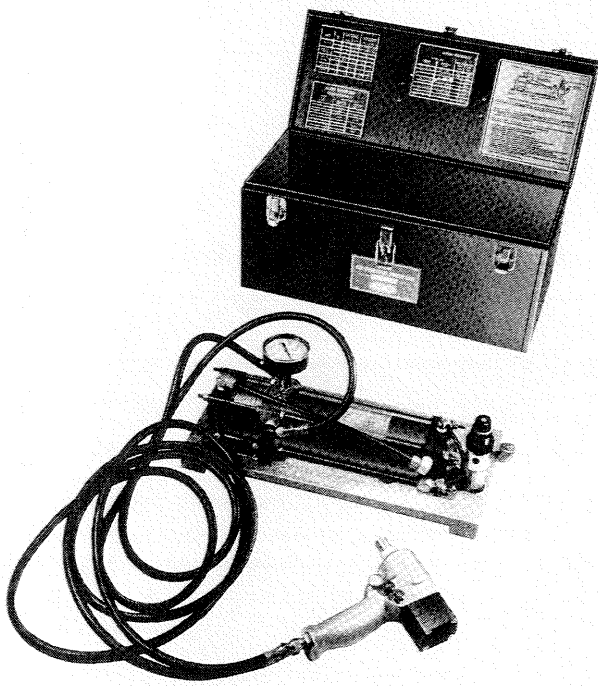
Power Units, Guns and installation tooling can be conveniently ordered in complete kits by a single part number as indicated below or by individual component part numbers as described on subsequent pages of this brochure. For description of "BK" series Driving Tool Kits see pages 34 and 35.

- |        |  |
|--------|--|
| B7175  | Complete Kit, includes:<br>BP7000 Air-Hydraulic Power Unit<br>BG1750 Gun<br>BK3 Driving Tool Kit—Blind Bolts (-5 thru -10 sizes, "J" type tooling)           |
| B7175N | Complete Kit, includes:<br>BP7000 Air-Hydraulic Power Unit<br>BG1750 Gun<br>BK6 Driving Tool Kit—Blind Nuts (-440 thru 1032 sizes, "A" and "B" type tooling) |
| B7250  | Complete Kit, includes:<br>BP7000 Air-Hydraulic Power Unit<br>BG2500 Gun<br>BK4 Driving Tool Kit—Blind Bolts (-5 thru -12 sizes, "J" type tooling)           |
| B7250N | Complete Kit, includes:<br>BP7000 Air-Hydraulic Power Unit<br>BG2500 Gun<br>BK7 Driving Tool Kit—Blind Nuts (-440 thru -428 sizes "A" and "B" type tooling)  |

NOTE: The BK8 Driving Tool Kit is for use with the BG2500 Gun to install -12, -14 and -16 diameter Blind Bolts and -428 thru -820 Blind Nuts and is available on optional order.



B7250N COMPLETE KIT SHOWN



## BH245 AIR-HYDRAULIC PORTABLE POWER UNIT

The versatile and portable BH245 Power Unit is intended for work areas where mobility and ease of carrying are essential, particularly when scaffolds, workstands and ladders are involved to gain access to off-the-floor work locations. It operates from a normal factory air pressure of 90 psi, and being air actuated, the unit is non-sparking and safe for use on fueled aircraft and launch-ready vehicles. The BH245 Power Unit will provide hydraulic pressure up to 2700 psi to operate Hi-Shear's Blind Nut-Blind Bolt installation guns, and can be adapted to a variety of other uses requiring hydraulic pressure. The unit is compact, rugged, and lightweight (26 lbs.).

Ordering part numbers:

- BH245 Power Unit Assembly (Power Unit Only)
- BH245-17 Power Unit Assembly (Includes Unit, BG1750 Gun and Hose)
- BH245-25 Power Unit Assembly (Includes Unit, BG2500 Gun and Hose)

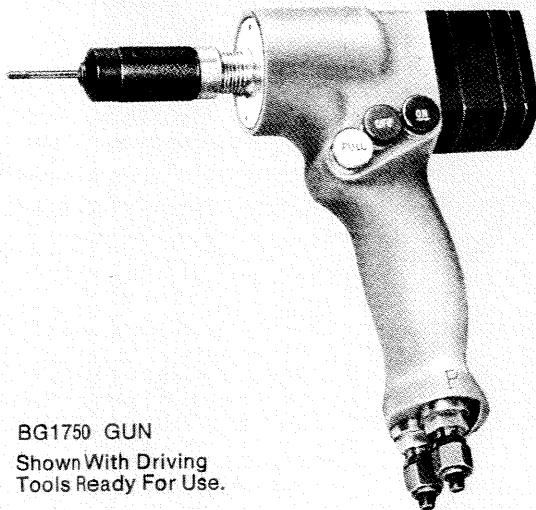
## BH25A HAND PUMP ASSEMBLY

The BH25A Hand Pump & Case Assembly is designed to facilitate the installation of BN & BB Series Blind Nuts™ and Blind Bolts™ manufactured by Hi-Shear Corporation. The complete BH25A Assembly consists of a Hand Pump Assembly (BH26A), and a Case Assembly (BH85). The Hand Pump Assembly includes a Hydraulic Hand Pump (BH95), a Hydraulic Gun (BH86), a Hydraulic Hose (BH102), and any combination of four (4) sets of driving tools (Anvils, Chucks, Mandrels) for use on the BH86 Hydraulic Gun. Any driving tool part number listed in the catalog for use on the BG2500 Hydraulic Gun will fit the BH86 Hydraulic Gun included in this unit.

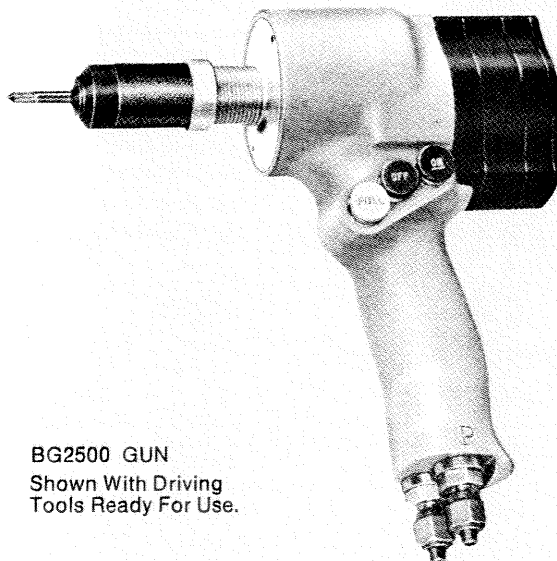
## DRIVING PRESSURES (power unit settings) - PSI

BLIND NUT SIZE	BLIND BOLT SIZE	BG1750 GUN		BG2500 GUN	
		2017 AL. BN518	STAINLESS STEEL BN360, BB351, BB352	2017 AL. BN518	STAINLESS STEEL BN360, BB351, BB352
-440 (440)	-5 (5/32)	350	500		
-632 (6-32)	-6 (3/16)	500	700 800		
-832 (8-32)	-8 (1/4)	750	1100		650
-1032 (10-32) -1024 (10-24)	10 (5/16)	1000	1850	500	950
-428 (1/4-28) -420 (1/4-20)	-12 (3/8)			1000	1450
-524 (5/16-24) -518 (5/16-18)	-14 (7/16)			1100	1900
-624 (3/8-24) -616 (3/8-16)	-16 (1/2)			1250	2250
-720 (7/16-20) -714 (7/16-14)				1400	2300
-820 (1/2-20) -813 (1/2-13)				1500	2350

# hydraulic guns



**BG1750 GUN**  
Shown With Driving  
Tools Ready For Use.



**BG2500 GUN**  
Shown With Driving  
Tools Ready For Use.

## GUNS

These guns are used to install Hi-Shear type blind fasteners such as the Blind Bolt, Blind Nut, Hi-Kor Blind Fasteners, and Hi-Sert and Blind-Sert Inserts. The guns are operated by hydraulic pressure supplied from Hi-Shear manufactured Power Units BP7000, BH245 and BH25A. The Gun is designed for operation simplicity and for worker comfort. The worker presses three control buttons in a ON (red), PULL (white) and OFF (blue) sequence with his thumb. This rotates the Gun's mandrel in a clockwise motion, engaging the expander; retracts the mandrel, drawing the expander into the sleeve; and rotates the mandrel in a counterclockwise motion, releasing the mandrel from the expander. End-loading by the worker is not required, only nominal effort by one hand to properly position the Gun to the hole.

## BG1750 GUN

The compact-sized BG1750 Gun was especially designed to gain accessibility into tightly congested areas. It efficiently installs small Blind Bolts in sizes from -5 (5/32) thru -10 (5/16) and Blind Nuts in thread sizes from 4-40 thru 10-32 or 10-24. Weight: 3.3 lbs.

Federal Stock Number 5130-845-6172, Manufacturer's Code 73197.

## BG2500 GUN

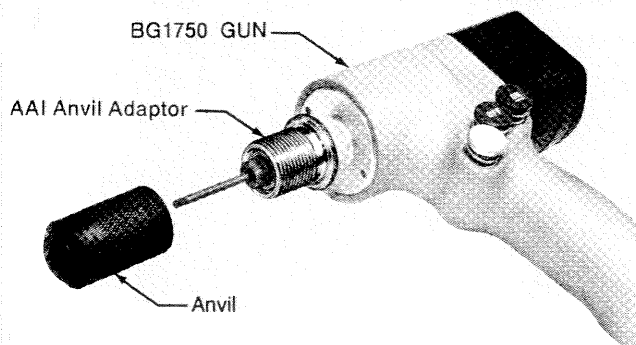
The all-purpose BG2500 Gun installs all sizes (up thru 1/2" diameter) of Blind Bolts and Blind Nuts. It is most efficient for Blind Bolts starting in -8 (1/4) and Blind Nuts in 8-32 and larger sizes. It can install smaller sizes but with a slower action. Weight: 5.5 lbs.

Federal Stock Number 5130-760-9677, Manufacturer's Code 73197.

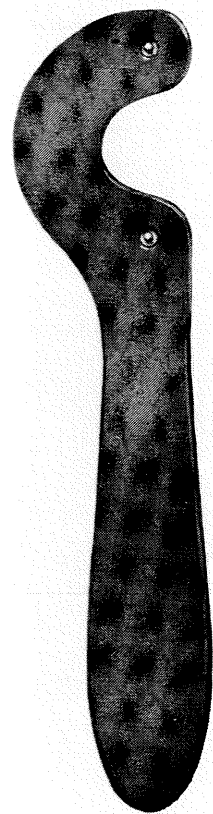
## anvil adaptor

### (CONVERTS BG2500 GUN TOOLING TO FIT BG1750 GUN)

The BG1750 Gun, fitted with an AA1 Anvil Adaptor, can be used with BG2500 type Anvils to install Blind Bolts (in nominal diameters up through 5/16 or -10) and Blind Nuts (in thread sizes up through 10-32/10-24 or -1032/-1024). The Adaptor can be used in combination with BG2500 type Standard, Extended and Offset Anvils fitted to the BG1750 Gun to install blind fastener sizes within the driving pressure capacity of the Gun.



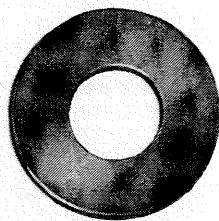
# gun service tool kits



BGT15  
Wrench  
(BG2500)



BGT14  
Wrench  
(BG1750)



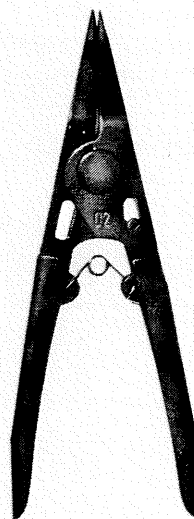
BGT16  
Washer  
(BG2500)



BGT9  
Punch



BGT10  
Puller



BGT7  
Expander  
Pliers



HT3203M  
Hi-Torque  
Recess Driver  
(BG1750)



HT3304M  
Hi-Torque  
Recess Driver  
(BG2500)

BGT13  
Compressor



BGT8  
Compressor

## GUN SERVICE TOOLS

Service tools to simplify the maintenance of the Guns are available individually or in kit form.

The Kits include:

- BGT2 Complete Kit for service of BG1750, and BG2500 Guns.
- BGT3 Kit for service of BG1750 Gun.
- BGT4 Kit for service of BG2500 Gun.

KIT CONTENTS (One Each)	KIT BGT2 All Guns	KIT BGT3 BG1750 Gun	KIT BGT4 BG2500 Gun
WRENCH Nose End	BGT14 BGT15	BGT14	BGT15
PUNCH Control Button Pin	BGT9	BGT9	BGT9
PULLER Control Button Valve Spoon	BGT10	BGT10	BGT10
EXPANDER PLIERS Swivel Fitting Snap Ring	BGT7	BGT7	BGT7
COMPRESSOR Control Button Assembly	BGT13	BGT13	BGT13
COMPRESSOR Control Button Removal	BGT8	BGT8	BGT8
DRIVER Hi-Torque Recess Bolts	HT3203M HT3304M	HT3203M	HT3304M
WASHER Nose End Removal	BGT16		BGT16

## **SERVICE POLICY, REPAIRS AND WARRANTY**

The Power Units and Guns were designed and built to first class standards in workmanship and materials. With proper care and use, the Power Units and Guns should have a service life equal to that of any precision piece of hydraulic equipment.

For service and repairs, check with your Hi-Shear Corporation Sales Engineer or send the Power Unit, Gun, or components, prepaid to Hi-Shear Corporation, 2600 Skypark Drive, Torrance, California. Please use the model and serial number for reference and describe malfunction insofar as possible, along with your purchase order for repair parts required. **NOTE:** Be sure to return complete Power Unit, Gun or component parts when shipped for repair or exchange, as all missing parts will be supplied and invoiced at list prices.

The Company agrees to repair at its factory, or to duplicate f.o.b. its works, any part of its own manufacture proving defective from faulty workmanship or materials, within three months from date of shipment, provided written notice is given immediately upon the discovery of such defect and the defective equipment and accessories are guaranteed only to the extent that the Company recovers under the original manufacturer's guarantee. The Company shall not be held liable for any contingent damages or delays caused by defective material, and will make no allowance for repairs or alterations made by owner, or be held responsible for damage resulting from substitute service parts unless authorized in writing by the Company.