



# SERVICE BULLETIN

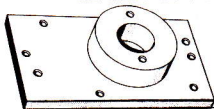
## No. 54

Sec. VIII, Div. A  
Service Bulletin #54  
Revised February, 1965  
Supersedes August, 1959

This bulletin contains all of the Special Tools that may be required for servicing all Clinton Engines, Chainsaws and Outboards. These tools are specially designed by the Clinton Engines Corporation to make your Service work more efficient. Always order by Part Number... consult the current Parts Price List in your Clinton Master Parts & Service Manual for current prices.

### BEARING TOOLS

#### REAMER GUIDE



951-48

Used to line ream bearing in blocks of group no. II, III, IV, V, VI, VII, VIII, IX, X, XIII, XIV, XV Engines. Used to ream bearings in bases of group no. VIII Engines.

Three Bushings Included  
With the Following Inside  
Diameters:

- .878
- 1.0003
- 1.030

#### GUIDE



951-148

Bushing is used when reaming bases on group no. XV engines that have a 1.000 Dia. bore

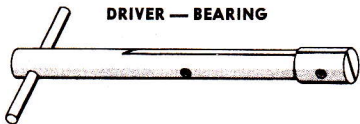
#### DRIVER — BEARING



951-18 and 951-39

Used to remove and install bearings in blocks, bases, and bearing plates of group no. I, II, III, IV, V, VI, VII, VIII, IX, X, XIII, XIV, XV Engines.

#### DRIVER — BEARING



951-31

Used to remove and install bearings in two bearing blocks or mounting flanges of group no. II and VIII Engines.

#### REAMER



951-29

Diameter .8773 to .8778

Used to ream bearings in blocks of group no. II, IV, VI, VII, & VIII and bearing plates of group no. VII and VIII, using block for guide. When reaming bearing plates in group no. X, it is necessary to use a sleeve bearing block of group no. VII or VIII.

951-30

Diameter .7518 to .7523

Used to ream bearing in bearing plates of group no. II, III, IV, V & VI, and blocks of group no. V.

951-44

Diameter 1.0003 to 1.0008

Used to enlarge bore of 7/8" bases so bronze bearing can be installed in group no. XV.

951-59

Diameter 1.0023 to 1.0028

Used to ream bearing in blocks of group no. III & X.

951-60

Diameter .8144 to .8155

Used to ream bearing in blocks of group no. XIII, XIV & XV.

951-63

Diameter .8758 to .8763

Used to ream bearings in bases of group no. XIV & XV.

951-143

Diameter 1.1218 to 1.1220

Used as second step to enlarge bore of 1" diameter bases of group no. XV so bronze bearing can be installed.

951-144

Diameter 1.1042 to 1.1062

Used as first step to enlarge bore of 1" diameter bases of group no. XV so bronze bearing can be installed.

951-146

Diameter .9338 to .9340

Used as second step to enlarge bore of blocks of aluminum engines in group no. XIV & XV so bronze bearing can be installed.

951-147

Diameter .9167 to .9187

Used as first step to enlarge bore of blocks of aluminum engines in group no. XIV & XV so bronze bearing can be installed.

### OIL SEAL LOADERS

For Loading Oil Seals Over Shafts Having The Following Dia.:

- 951 - 12 for 3/4" Dia. Shaft
- 951 - 13 for 5/8" Dia. Shaft
- 951 - 40 for 1 3/8" Dia. Shaft
- 951 - 49 for 1 3/16" Dia. Shaft
- 951 - 55 for 7/8" Dia. Shaft
- 951 - 56 for 1" Dia. Shaft
- 951 - 57 for 3/4" Dia. Shaft
- 951 - 47 for 1/2" Dia. Shaft
- 951 - 14 for 5/8" Dia. Shaft
- 951 - 118 for 1 1/4" Dia. Shaft
- 951 - 145 for 3/4" Dia. Shaft

#### LOADER — OIL SEAL



### OIL SEAL PULLER

951 - 50 for removing oil seal on flywheel side of group no. XIII, XIV & XV Engines.

#### PULLER — OIL SEAL



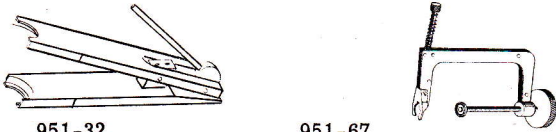
### OIL SEAL DRIVERS.

- 951 - 16 1.010 Inside Dia. & 1.250 Outside Dia. Length 4.00 Inches.
- 951 - 17 .885 Inside Dia. & 1.125 Outside Dia. Length 4.00 Inches.
- 951 - 62 .760 Inside Dia. & 1.00 Outside Dia. Length 3.00 Inches

#### DRIVER — OIL SEAL



**VALVE SPRING COMPRESSOR**



951 - 32 <sup>951-32</sup> Used to remove and install valve springs in group no. V, VI, VII, VIII, IX, X, XII, XIII, XIV & XV.

951 - 67 <sup>951-67</sup> Used to remove and install valve springs in group no. V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV & XV. (Re - placement Foot Part No. 951-134)

**REAMER — VALVE GUIDE**



951 - 22 (9/32 Oversize .281 Dia.)  
Used to enlarge valve guide holes so oversize stemmed valve can be used in group no. VI, VII, VIII, IX & X.

951 - 43 (.010 Oversize .261 Dia.)  
Used to enlarge valve guide holes so oversize stemmed valve can be used in group no. XIII, XIV & XV.

951 - 69 (Standard .250 Dia.)  
Used to clean standard valve guides. Can be used on group no. V, VI, VII, VIII, IX, X, XIII, XIV & XV.

**PILOT ASS'Y — VALVE GUIDE**



951 - 58 - 500  
This assembly contains one each of the following:

- 951 - 137 (.249 to .2505 Dia.)
- 951 - 138 (.2505 to .252 Dia.)
- 951 - 139 (.2605 to .262 Dia.)
- 951 - 140 (.2805 to .282 Dia.) Used in conjunction with 951 - 37 Valve Seat Cutter and, 951 - 41, 951 - 61 Cutter Valve Seat Counter Bore on group no. V, VI, VII, VIII, IX, X, XI, XIII, XIV & XV.

**PILOT — VALVE SEATING**

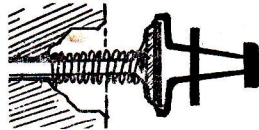


951 - 38 (.3115 to .313)  
Used in conjunction with 951 - 37 Valve Seat Cutter on group no. XI & XII.

**VALVE SEAT CUTTER**



951 - 37  
Used to cut valve seats on group no. V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV & XV Engines.  
NOTE: Replacement cutters for tool 951 - 37, set of three (3), Part Number 951 - 131.



951 - 136  
Used for lapping valves on group no. V, VI, VII, VIII, IX, X, XIII, XIV & XV Engines.

**CUTTER**



951 - 41 <sup>951-41</sup> <sup>951-61</sup>  
Used to oversize valve seat insert pocket .040 for installation of replacement insert in group no. XIV & XV Engines.

951 - 61  
Used to cut counter-bore for valve seat insert on group no. V, VI, VII, VIII, IX & X Engines.

**DRIVER — VALVE INSERT**



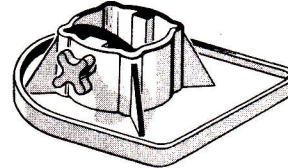
951 - 52  
Used to drive valve seat inserts in place on group no. V, VI, VII, VIII, IX, X, XIII, XIV & XV Engines.

**ROLLING TOOL**



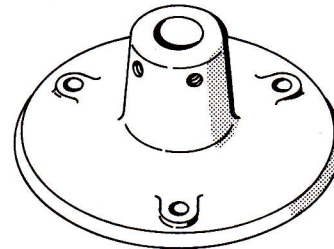
951 - 53  
Used topeen or roll metal around outside diameter of valve seat insert after installation on group no. V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV & XV Engines.

**FIXTURE ENGINE REPAIR**



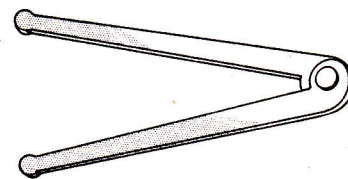
951 - 24  
Used for holding for display or repair on group no. III & IV Engines

**ENGINE STAND**



951 - 65  
Used for display or repair group no. III, VI, VIII, X, XI, XII, XIII and XV Engines.

**SPANNER WRENCH**



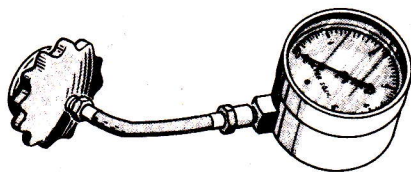
951 - 111  
Used for removing gear from clutch drum on gear drive chainsaws.

**SPANNER WRENCH**



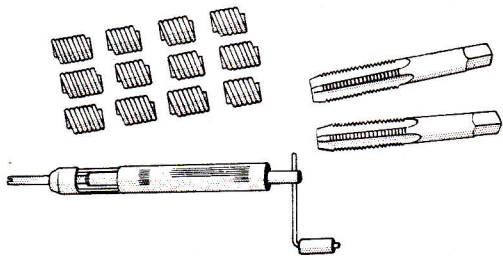
951 - 112  
Used for removing drive gear from clutch drum on gear drive chainsaws.

**PRESSURE GAUGE**



951 - 156  
Used for indicating fuel tank pressure when making adjustments on check valves on chainsaws manufactured before 1960.

**HELI-COIL THREAD REPAIR**



951 - 236 Consists of the following:

- (1) 951-154 1/4-20 Inserting Tool
- (1) 951-155 5/16-18 Inserting Tool
- (1) 951-157 1/4-20 Tap Heli-Coil
- (1) 951-158 5/16-18 Tap Heli-Coil
- (20) 136-75 1/4-20 Heli-Coil
- (40) 136-76 5/16-18 Heli-Coil
- (2) 952-47 Instruction Sheets

Used for installing 1/4-20 and 5/16-18 Heli-Coils in Engine, Outboard or Chainsaw castings.

**LOCTITE SEALANT**



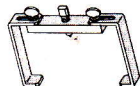
- 951 - 234 (50cc Bottle Loctite, 6oz. Spray Can Cleaner)
- 951 - 235 (Two 10cc Bottles Loctite, 4 Fl. Oz. Jar Cleaner)  
Used to assist in securing proper holding properties of screws.

**IMPACT NUTS**



- For Removing Flywheel From Taper
- 951 - 23 (7/16 Threaded End Crankshaft)
- 951 - 36 (7/8 Threaded End Crankshaft)
- 951 - 66 (1/2 Threaded End Crankshaft)

**PULLER FLYWHEEL**



951 - 133  
Used for removing flywheels from crankshaft taper on group no. I, II, III, IV, V, VI, VII, VIII, IX, X, XIII, XIV, XV Engines.

**HOLDER — FLYWHEEL**



951 - 42  
Used to hold flywheel when removing flywheel nut.

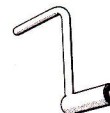
NOTE: Replacement Belt 951-151.

**DRIVER — CAM AXLE**



951 - 46  
Used to drive cam axle from block of group no. VII, VIII, IX, X & XI.

**HAND CRANK**



951 - 45  
Used for turning engine when setting points, checking timing (or) for operation of parts in group no. I, II, III, IV, V, VI, VII, VIII, IX, X, XIII, XIV & XV Engines.

**PISTON RING COMPRESSOR**



951 - 34  
Used for compressing rings on pistons 1 3/4" to 3 1/8" Dia. in group no. V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV & XV Engines.

**PISTON RING MOUNTING SLEEVE**



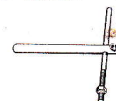
951 - 150 (1-7/8" Bore)  
951 - 153 (2-1/8" Bore)  
Used for installing standard and .020 oversize piston assembly in block of group no. I, II, III & IV Engines.

**TRU ARC PLIERS**



- 951 - 68 (5-5/8" External)
  - 951 - 100 (8-3/8" Internal)
  - 951 - 132 - 500 (6-1/2" Internal)
- Used for removing and installing tru-arc retainers on recoil starters, crankshafts, governor shafts, blocks, etc.

**RUN OUT GAUGE — CRANKSHAFT**



951 - 64  
Used for checking engines for bent crankshafts. Shows crankshaft deflection quickly.

SEE PAGE 4 FOR USAGE

**ENGINE GROUP  
NUMBER FOR TOOL USAGE**

**GROUP I**  
E65, D25-1000, D35-1000, D55-1000, D65-1000, J5, J6, J7, J8 & J9.

**GROUP II**  
AVS200, AVS200-1000, VS200, VS200-1000, AVS400, VS400, VS400-1000.

**GROUP III**  
VS200-2000, VS200-3000, VS200-4000, AVS400-1000, BVS400, CVS400-1000, VS400-2000, VS400-3000, VS400-4000, 501-0000-000, and 501-0001-000.

**GROUP IV**  
200, A200, A400, A400-1000, GK590, and 500-0000-000.

**GROUP V**  
300, A300, 350.

**GROUP VI**  
VS300

**GROUP VII**  
650, 700A, B700, C700, D700, D700-1000, D700-2000, D700-3000, 800, A800, 900, 900-1000, 900-2000, 900-3000, 900-4000, A&B1100, C1100, 494-0000-000, 494-0001-000.

**GROUP VIII**  
VS700, VS750, VS800.

**GROUP IX**  
D1100, 1200, 1200-1000, 1200-2000, A1200, B1290-1000, 498-0300-000, 498-0301-000.

**GROUP X**  
VS900, V1000-1000, VS1000, V1100-1000, VS1100, VS1100-1000, V1200-1000, VS1200, 497-0000-000, 499-0000-000.

**GROUP XI**  
1600, A1600-1000, 1800-1000, 2500, A2500, B2500-1000, 2790-1000, 414-1300-000, 414-1301-000, 416-1300-000, 418-1301-000, 420-1300-000, 420-1301-000, 422-1300-000, 422-1301-000, 418-1300-000.

**GROUP XII**  
412-0000-000, 413-0000-000.

**GROUP XIII**  
429-0003-000, 431-0003-000.

**GROUP XIV**  
100, 100-1000, 100-2000, 2100, A2100, A2100-1000, A2100-2000, 3100, 3100-1000, 3100-2000, 3100-3000, H3100-1000, 4100, 4100-1000, 4100-2000, 400-0000-000, 402-0000-000, 404-0000-000, 406-0000-000, 408-0000-000, 417-0000-000, 424-0000-000, 426-0000-000.

**GROUP XV**  
V100-1000, VS100, VS100-1000, VS100-2000, VS100-3000, VS100-4000, VS2100, VS2100-1000, VS2100-2000, VS2100-3000, VS3000, FV3100-1000, AFV3100-1000, AV3100-1000, AV3100-2000, AVS3100, AVS3100-1000, AVS3100-2000, AVS3100-3000, V3100-1000, V3100-2000, VS3100, VS3100-1000, VS3100-2000, VS3100-3000, AVS4100-1000, AVS4100-2000, VS4100-1000, VS4100-2000, 401-0000-000, 403-0000-000, 405-0000-000, 407-0000-000, 407-0002-000, 409-0000-000, 411-0000-000, 411-0002-000, 415-0000-000, 415-0002-000, 417-0000-000, 435-0003-000.

**ENGINES  
NUMERICAL FOR TOOL USAGE**

MODEL NO.	GROUP #	MODEL No.	GROUP #
E-65	I	VS200-1000	II
100	XIV	VS200-2000	III
100-1000	XIV	VS200-3000	III
100-2000	XIV	VS200-4000	III
V100-1000	XV	300	V
VS100	XV	A300	V
VS100-1000	XV	VS300	VI
VS100-2000	XV	350	V
VS100-3000	XV	A400	IV
VS100-4000	XV	A400-1000	IV
200	IV	AVS400	II
A200	IV	AVS400-1000	III
AVS200	II	BVS400	III
AVS200-1000	II	CVS400-1000	III
VS200	II	VS400	II

MODEL NO.	GROUP #	MODEL #	GROUP #
VS400-1000	II	AVS4100-1000	XV
VS400-2000	III	AVS4100-2000	XV
VS400-3000	III	VS4100-1000	XV
VS400-4000	III	VS4100-2000	XV
GK590	IV	J-5	I
650	VII	J-6	I
700A	VII	J-7	I
B700	VII	J-8	I
C700	VII	J9	I
D700	VII	D25-1000	I
D700-1000	VII	D35-1000	I
D700-2000	VII	D55-1000	I
D700-3000	VII	D65-1000	I
VS700	VIII	400-0000-000	XIV
VS750	VIII	401-0000-000	XV
800	VII	402-0000-000	XIV
A800	VII	403-0000-000	XV
VS800	VIII	404-0000-000	XIV
900	VII	405-0000-000	XV
900-1000	VII	406-0000-000	XIV
900-2000	VII	407-0000-000	XV
900-3000	VII	407-0002-000	XV
900-4000	VII	408-0000-000	XIV
VS900	X	409-0000-000	XV
V1000-1000	X	411-0000-000	XV
VS1000	X	411-0002-000	XV
A&B1100	VII	412-0000-000	XII
C1100	VII	413-0000-000	XII
D1100	IX	414-1300-000	XI
V1100-1000	X	414-1301-000	XI
VS1100	X	415-0000-000	XV
VS1100-1000	X	415-0002-000	XV
1200	IX	416-1300-000	XI
1200-1000	IX	417-0000-000	XV
1200-2000	IX	418-1300-000	XI
A1200	IX	418-1301-000	XI
B1290-1000	IX	420-1300-000	XI
V1200-1000	X	420-1301-000	XI
VS1200	X	422-1300-000	XI
1600	XI	422-1301-000	XI
A1600-1000	XI	424-0000-000	XIV
1800-1000	XI	426-0000-000	XIV
2100	XIV	429-0003-000	XIII
A2100	XIV	431-0003-000	XIII
A2100-1000	XIV	435-0003-000	XV
A2100-2000	XIV	494-0000-000	VII
VS2100	XV	494-0001-000	VII
VS2100-1000	XV	497-0000-000	X
VS2100-2000	XV	498-0300-000	IX
VS2100-3000	XV	498-0301-000	IX
2500	XI	499-0000-000	X
A2500	XI	500-0000-000	IV
B2500-1000	XI	501-0000-000	III
2790-1000	XI	501-0001-000	III
VS3000	XV		
3100	XIV		
3100-1000	XIV		
3100-2000	XIV		
3100-3000	XIV		
H3100-1000	XIV		
FV3100-1000	XV		
AFV3100-1000	XV		
AV3100-1000	XV		
AV3100-2000	XV		
AVS3100	XV		
AVS3100-1000	XV		
AVS3100-2000	XV		
AVS3100-3000	XV		
V3100-1000	XV		
V3100-2000	XV		
VS3100	XV		
VS3100-1000	XV		
VS3100-2000	XV		
VS3100-3000	XV		
4100	XIV		
4100-1000	XIV		
4100-2000	XIV		