

PARTS LIST

2004

STANDARD SERIES VALVE SEAT CUTTERS (for use with standard series pilots, .375" top)

Cutter Head Dia.	Angles	No. of Blades	Part No. of Blades	Part Number
28.6mm 1-1/8"	15°	3	250	243
	30°	3	250	278
	30°	3	253	299
	30° x 45°	3/3	250	274
	45°	3	250	268
	60°	3	252	269
	75°	3	254	279
31.8mm 1-1/4"	0°	3	250	701
	15°	3	250	244
	15°	5	250	604
	15° x 31°	3/5	250	603
	15° x 45°	3/3	250	229
	15° x 46°	3/3	250	204
	15° x 60°	3/3	250/252	273
	15° x 75°	3/3	250/254	212
	20° x 45°	3/3	250	220
	25°	5	250	606
	30°	5	250	607
	30° x 45°	3/3	250	230
	31°	5	250	602
	31° x 46°	3/3	250	203
	45°	5	250	608
	46°	3	250	285
	46°	5	250	609
	60°	3	252	270
	65°	3	254	605
	70°	3	252	222
	75°	3	254	206
	80°	5	254	8031
35mm 1-3/8"	0° x 46°	3/5	250	617
	11° x 45°	3/3	250	286
	15° x 45°	3/5	250	615
	15° x 46°	3/3	250	209
	15° x 46°	3/5	250	612
	20° x 45°	3/3	250/251	221
	20° x 46°	3/5	251/250	613
	30° x 45°	3/3	250/251	232
	30° x 45°	5/5	251	616
	31°	5	250	611
	31° x 46°	3/3	250/251	201
	35° x 60°	5/5	250/252	618

Large cutters up to 150mm diameter (6")
made to special order

Cutter Head Dia.	Angles	No. of Blades	Part No. of Blades	Part Number
38mm 1-1/2"	0°	3	251	720
	11° x 45°	3/3	251	239
	15°	5	250	629
	15° x 30°	3/5	250	623
	15° x 45°	3/5	251	625
	15° x 46°	3/5	251	621
	15° x 60°	3/3	251/254	213
	15° x 60°	5/5	251/254	619
	15° x 70°	3/3	251/254	297
	15° x 75°	3/3	251/254	217
	15° x 75°	5/5	251/254	624
	25°	5	251	689
	30°	5	250	627
	30° x 45°	3/3	251	234
	30° x 45°	5/5	251	626
	31°	5	251	628
	31° x 46°	3/3	251	208
	31° x 46°	5/5	251	622
	35°	5	251	690
	36°	5	251	692
41.3mm 1-5/8"	43° x 52°	5/5	251	691
	45°	5	251	620
	46°	3	251	275
	60°	3	254	205
	65°	3	254	219
	70°	3	254	271
	75°	3	254	216
	80°	5	254	8038
	15° x 45°	5/5	251	635
	15° x 46°	3/5	251	631
	20° x 45°	5/5	251	633
	30° x 45°	3/3	251	237
	30° x 45°	5/5	251	636
	31° x 46°	5/5	251	632
	45°	5	251	634
44.5mm 1-3/4"	0°	3	251	740
	15° x 45°	3/5	251	646
	15° x 46°	3/5	251	641
	15° x 60°	3/3	251/254	292
	15° x 60°	5/5	251/254	643
	15° x 75°	5/5	251/254	697
	25°	5	251	696
	30°	5	250	647
	30° x 45°	5/5	251	645
	31°	5	251	649

Cutter Head Dia.	Angles	No. of Blades	Part No. of Blades	Part Number
44.5mm 1-3/4"	31° x 46°	5/5	251	642
	35°	5	251	695
	37-1/2°	5	251	698
	60°	3	254	293
	60°	5	254	644
	75°	3	254	272
	80°	5	254	8044
	55°	5	251	17555
50.8mm 2"	0°	3	251	750
	15°	5	251	686
	15° x 45°	3/5	251	659
	15° x 60°	3/3	251/254	288
	15° x 60°	5/5	251/254	653
	15° x 75°	5/5	251/254	654
	20°	5	250	681
	30°	5	251	680
	30° x 45°	5/5	251	660
	31° x 46°	5/5	251	652
	36°	5	251	683
	60°	5	254	657
	70°	5	254	684
	80°	7	254	8050
55.5mm 2-3/16"	20°	5	251	685
57.2mm 2-1/4"	0°	3	251	760
	15° x 46°	5/9	251	664
	15° x 60°	5/5	251/254	666
	30° x 45°	7/7	251	665
	31° x 46°	7/7	251	662
	55°	5	251	22555
63.5mm 2-1/2"	15°	5	251	676
	15° x 60°	5/5	251/254	674
	30° x 45°	7/7	251	677
	31° x 46°	7/7	251	672
	60°	5	254	675
	55°	5	251	25055

**SPECIAL ORDER CUTTERS CAN BE
MADE TO ANY ANGLE / DIAMETER
YOU MAY REQUIRE (UP TO 6").
CALL FOR QUOTATION.**

SMALL SERIES VALVE SEAT CUTTERS (for use with small series pilots, .297" top)

Cutter Diameter	Angle	Number of Blades	Part Number	
.760"	19.3mm	15°	3**	134
.816"	20.7mm	15°	3**	130
.870"	22.1mm	20°	3**	138
.758"	19.3mm	32°	3**	144
.830"	21.1mm	32°	3**	132
.925"	23.5mm	32°	3**	142
.830"	21.1mm	45°	3**	135
.850"	21.6mm	45°	3**	131
.925"	23.5mm	45°	3**	143
.874"	22.2mm	60°	3**	133

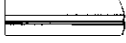
Cutter Head Dia.	Angles	No. of Blades	Part No. of Blades	Part Number
24.8mm .975"	20°	3	253	127
	31°	3	250	115
	31°	3	253	123
	45°	3	253	122
25.4mm 1"	46°	3	253	110
	15°	3	553	120
	15°	3	355	119
	15°	3	253	121
	30°	3	250	126
	60°	3	252	111
	75°	3	254	125

Cutter Head Dia.	Angles	No. of Blades	Part No. of Blades	Part Number
28.6mm 1-1/8"	31° x 46°	3/3	253	103
31.8mm 1-1/4"	30° x 45°	3/3	250	128
	60°	3	252	114
33.3mm 1-5/16"	15° x 60°	3/3	251/254	124
	31° x 46°	3/3	251	102

**Sold as complete unit only — blades nonreplaceable

TUNGSTEN CARBIDE REPLACEMENT BLADES

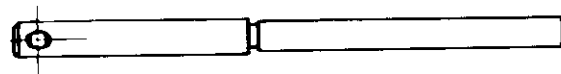
FOR VALVE SEAT CUTTERS

Part No.	Length	Description
 152	1/2" (12.7mm)	Non-serrated blade correction cutters
 154	3/4" (19mm)	Non-serrated blade correction cutters
 250	3/8" (9.5mm)	0° thru 46° seat cutters
 250 LC	3/8" (9.5mm)	For use on hard seats only
 251	1/2" (12.7mm)	0° thru 46° seat cutters
 251 LC	1/2" (12.7mm)	For use on hard seats only
 252	1/2" (12.7mm)	60° thru 80° correction cutters
 253	5/16" (7.9mm)	0° thru 46° seat cutters
 254	3/4" (19mm)	60° thru 80° correction cutters
 352	1/2" (12.7mm)	Radius blade — blending purpose
 354	3/4" (19mm)	Radius blade — blending purpose
 355	3/8" (9.5mm)	Radius blade — blending purpose
 353	5/16" (7.9mm)	Honda power products (stepped)
 553	5/16" (7.9mm)	Suzuki motorcycles (short-angled)

FOR VALVE REFACERS

 VFR 72	— —	For VFR-1000, standard insert
 VFR 74	— —	For VFR-1000, titanium/stainless valves
 VFR 75	— —	For VFR-1000, very hard stellite valves
 HVR CARB	3/4" (19mm)	For "Gizmatic" and HVR manual valve refacers

STANDARD SERIES SOLID PILOTS — .375" TOP



Note: Neway stocks many special sized pilots which do not appear on the parts list. Please call to check availability.

FRACTIONAL SIZES

Part No.	Overall Length	Part No.	Overall Length
140-1/4" Std. (Also -3, -2, -1, +1, +2, +3, +4)	.152mm (6")	140-3/8" Std. (Also -5, -4, -3, -2, -1, +1, +2, +3, +4, +5, +6, +7, +13, +14, +15, +16)	.178mm (7")
140-9/32" Std. (Also -1, +1, +2, +3, +4, +5)	.152mm (6")	140-13/32" Std. (Also -1, +1, +2, +3, +4, +5, +8, +9, +10, +11, +12)	.178mm (7")
140-19/64" Std. (Also -1, +1, +2, +3, +4, +5)	.152mm (6")	140-7/16" Std. (Also -3, -2, -1, +1, +2, +3, +4, +5)	.178mm (7")
140-5/16" Std. (Also -4, -3, -2, -1, +1, +2, +3, +4, +5, +14, +15, +16)	.152mm (6")	140-29/64" Std. (Also -3, -2, -1, +1, +2, +3, +4, +5, +6, +7, +8)	.197mm (7-3/4")
140-21/64" Std. (Also -1, +1)	.165mm (6-1/2")	140-1/2" Std. (Also -4, -3, -2, -1, +1, +2, +3, +4, +5)	.197mm (7-3/4")
140-11/32" Std. (Also -4, -3, -2, -1, +1, +2, +3, +4, +5, +14, +15, +16)	.165mm (6-1/2")		

METRIC SIZES

Part No.	Overall Length	Part No.	Overall Length
140-4.5mm (Also 4.52mm)	.152mm (6")	140-8.0mm (Also 7.98mm, 8.02mm, 8.10mm, 8.20mm)	.152mm (6)
140-5.0mm (Also 4.98mm, 5.02mm)	.152mm (6")	140-8.5mm (Also 8.48mm, 8.52mm)	.165mm (6-1/2")
140-5.5mm (Also 5.48mm, 5.52mm, 5.55mm)	.152mm (6")	140-9.0mm (Also 8.98mm, 9.02mm)	.165mm (6-1/2")
140-6.0mm (Also 5.98mm, 6.02mm)	.152mm (6")	140-9.5mm (Also 9.48mm, 9.52mm)	.178mm (7")
140-6.6mm (Also 6.58mm, 6.62mm)	.152mm (6")	140-10.0mm (Also 9.98mm, 10.02mm)	.178mm (7")
140-7.0mm (Also 6.98mm, 7.02mm, 7.10mm, 7.20mm)	.152mm (6")	140-11.0mm (Also 10.98mm, 11.02mm)	.197mm (7-3/4")
140-7.5mm (Also 7.48mm, 7.52mm)	.152mm (6")	140-12.0mm (Also 11.98mm, 12.02mm)	.197mm (7-3/4")

STANDARD SERIES EXPANDABLE PILOTS — .375" TOP



FRACTIONAL SIZES

Part No.	Collet Length	Overall	Part No.	Collet Length	Overall
150-1/4"	.38mm (1-1/2")	152mm (6")	200-5/16"	.44mm (1-3/4")	197mm (7-3/4")
150-9/32"	.38mm (1-1/2")	159mm (6-1/4")	200-11/32"	.44mm (1-3/4")	197mm (7-3/4")
150-5/16"	.38mm (1-1/2")	165mm (6-1/2")	200-3/8"	.44mm (1-3/4")	197mm (7-3/4")
150-11/32"	.38mm (1-1/2")	165mm (6-1/2")	200-25/64"	.50.8mm (2")	203mm (8")
150-3/8"	.38mm (1-1/2")	178mm (7")	200-13/32"	.50.8mm (2")	203mm (8")
150-25/64"	.38mm (1-1/2")	178mm (7")	200-7/16"	.50.8mm (2")	203mm (8")
150-13/32"	.38mm (1-1/2")	178mm (7")	200-1/2"	.50.8mm (2")	203mm (8")
150-7/16"	.38mm (1-1/2")	178mm (7")			
150-1/2"	.38mm (1-1/2")	178mm (7")			

METRIC SIZES

Part No.	Collet Length	Overall	Part No.	Collet Length	Overall
150-5.5mm	.29mm (1-1/8")	152mm (6")	200-8mm	.44mm (1-3/4")	197mm (7-3/4")
150-6mm	.29mm (1-1/8")	152mm (6")	200-8.5mm	.44mm (1-3/4")	197mm (7-3/4")
150-6.5mm	.29mm (1-1/8")	152mm (6")	200-9mm	.44mm (1-3/4")	197mm (7-3/4")
150-7mm	.38mm (1-1/2")	159mm (6-1/4")	200-9.5mm	.44mm (1-3/4")	197mm (7-3/4")
150-7.5mm	.38mm (1-1/2")	159mm (6-1/4")	200-10mm	.50.8mm (2")	203mm (8")
150-8mm	.38mm (1-1/2")	165mm (6-1/2")	200-10.5mm	.50.8mm (2")	203mm (8")
150-8.5mm	.38mm (1-1/2")	165mm (6-1/2")	200-11mm	.50.8mm (2")	203mm (8")
150-9mm	.38mm (1-1/2")	178mm (7")	200-11.5mm	.50.8mm (2")	203mm (8")
150-9.5mm	.38mm (1-1/2")	178mm (7")	200-12mm	.50.8mm (2")	203mm (8")
150-10mm	.38mm (1-1/2")	178mm (7")	200-12.5mm	.50.8mm (2")	203mm (8")
150-10.5mm	.38mm (1-1/2")	178mm (7")	200-13mm	.50.8mm (2")	203mm (8")
150-11mm	.38mm (1-1/2")	178mm (7")			
150-11.5mm	.38mm (1-1/2")	178mm (7")			
150-12mm	.38mm (1-1/2")	178mm (7")			
150-12.5mm	.38mm (1-1/2")	178mm (7")			

SMALL SERIES SOLID PILOTS — .297" TOP (FOR USE WITH SMALL SERIES CUTTERS)

FRACTIONAL SIZES

Part No.	Overall Length	Part No.	Overall Length
100-1/4" (Also -1, +1)	114mm (4-1/2")	100-5/16" (Also +1)	114mm (4-1/2")
100-9/32"	114mm (4-1/2")	100-11/32"	114mm (4-1/2")

METRIC SIZES

Part No.	Overall Length	Part No.	Overall Length
100-3.8mm (Also 3.82mm)	.95mm (3-3/4")	100-5.58mm (short)	.76mm (3")
100-4.0mm* (Also 3.98mm, 4.02mm*, 4.05mm)	.95mm (3-3/4")	100-6.0mm (Also 5.98mm, 6.02mm, 6.05mm)	114mm (4-1/2")
100-4.5mm* (Also 4.48mm, 4.52mm*, 4.55mm)	114mm (4-1/2")	100-6.5mm	133mm (5-1/4")
100-4.8mm	.89mm (3-1/2")	100-6.6mm (Also 6.58mm, 6.62mm)	133mm (5-1/4")
100-5.0mm (Also 4.98mm, 5.02mm)	114mm (4-1/2")	100-7.0mm (Also 7.02mm, 7.05mm)	114mm (4-1/2")
100-5.5mm (Also 5.48mm, 5.52mm)	114mm (4-1/2")	100-7.5mm	114mm (4-1/2")
100-5.5mm (short)	.76mm (3")	100-8.0mm	114mm (4-1/2")
100-5.52mm (short)	.76mm (3")	100-9.0mm	114mm (4-1/2")
100-5.55mm (short)	.76mm (3")		

* Carbide pilots also available in these sizes

SMALL SERIES EXPANDABLE PILOTS — .297" TOP (FOR USE WITH SMALL SERIES CUTTERS)

FRACTIONAL SIZES

Part No.	Collet Length	Overall
120-1/4"	.29mm (1-1/8")	133mm (5-1/4")
120-9/32"	.38mm (1-1/2")	159mm (6-1/4")
120-5/16"	.38mm (1-1/2")	159mm (6-1/4")
120-11/32"	.38mm (1-1/2")	165mm (6-1/2")

METRIC SIZES

Part No.	Collet Length	Overall
120-5.5mm	.29mm (1-1/8")	133mm (5-1/4")
120-6mm	.29mm (1-1/8")	133mm (5-1/4")
120-6.5mm	.29mm (1-1/8")	133mm (5-1/4")
120-7mm	.38mm (1-1/2")	159mm (6-1/4")
120-7.5mm	.38mm (1-1/2")	159mm (6-1/4")
120-8mm	.38mm (1-1/2")	159mm (6-1/4")
120-8.5mm	.38mm (1-1/2")	165mm (6-1/2")

TOOL CASES

Part No.	Capacity	Case Dimensions
CA 303 Case	3 Cutters	7-1/2" x 10" (19cm x 25cm)
CA 160 Case	6 Cutters	8" x 12" (20cm x 30.5cm)
CA 497 Case	11 Cutters	12-1/2" x 15-1/2" (32cm x 39cm)

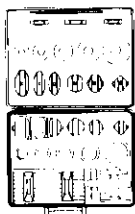
For Small Series Only



CA 303



CA 160

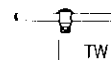


CA 497

WRENCHES

Part No.	
TWEZ	Easy-Turn Wrench (see page 7)
TW 503*	1/2" Hex metal T-wrench (for standard series cutters)
TW 503-1	Adaptor 1/2" to 3/8" (for small series cutters)
TW 503-4	503 Extension 4-1/4" (108mm) tube only
TW 503-8	503 Extension 8" (203mm) tube only
TW 503-10	503 Extension 10" (254mm) tube only
TW 503-12	503 Extension 12" (305mm) tube only
TW 505	T-wrench, 1/2" hex, nylon fiber (for standard series cutters)
TW 513	T-wrench, 3/8" hex, nylon fiber (for small series cutters)

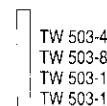
*T-Wrench consists of two pieces — handle and tube.



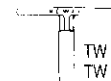
TW 503



TW 503-1



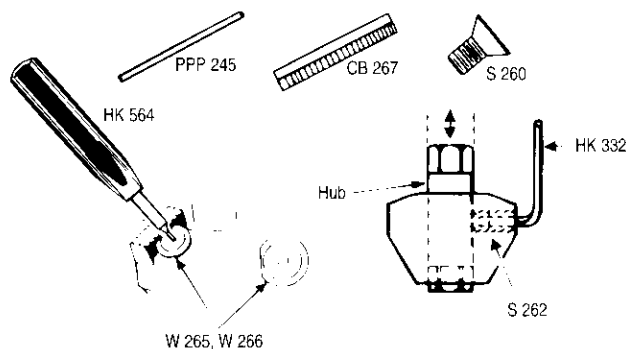
TW 503-4
TW 503-8
TW 503-10
TW 503-12



TW 505
TW 513

MISCELLANEOUS SEAT CUTTER PARTS

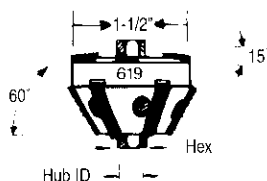
Part No.	
HK 564	5/64" Hex Driver
HK 332	3/32" Hex Key
PPP 245	Pilot Puller Pin
S 260	5-40 Flat Head Screw
S 262	10-32 Set Screw
W 265	Wedge, for heads over 25.4mm (1") diameter
W 266	Wedge, for 25.4mm (1") diameter heads
CB 267	Cleaning Brush
KACC 246	ACCESSORIES KIT, includes:
	HK 564 5/64" Hex Driver PPP 245 Pilot Puller Pin
	HK 332 3/32" Hex Key CB 267 Cleaning Brush
KACC 100	REPAIR KIT, includes:
	12 W 265 Wedges 1 HK 564 5/64" Hex Driver
	36 S 260 Screws 1 CB 267 Cleaning Brush



TECHNICAL INFORMATION

CUTTERS

Cutters of various angles and diameters up to 6" (152mm) quoted on request.



Hub Hex Size	Hub ID
3/8"	.297"
1/2"	.375"
3/4"	.572"

Application

Small Series — designed for use on small seats.

Standard Series — designed for use on most valve seats up to 2-1/2".

4000 Series — designed for use on large engines with valve guides exceeding 1/2" (12.7mm) in diameter and seats larger than 2-1/4" (57mm) in diameter. Used with .572 or 9/16" pilots.

SOLID PILOTS

Solid pilot diameters are measured at center of taper (taper .0007"/inch). See examples at right.

Top Dia.
.297"
.375"

Application

Small Series (100) — for use with small series cutters only.

Standard Series (140) — for use with standard series cutters only.

Part No.	Diameter at Center of Taper
140-3/8 Std.	.375" (3/8") diameter
140-3/8-1	.374 (3/8"-.001") diameter

140-7mm	.275" (7mm) diameter
140-7.02mm	.276" (7.02mm) diameter

EXPANDABLE PILOTS

Top Dia.
.297"
.375"
.375"

Application

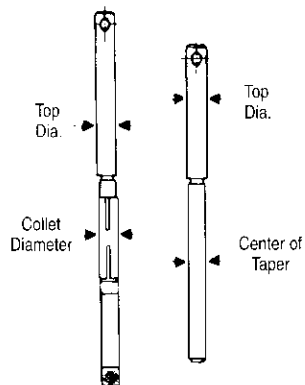
Small Series (120) — for use with small series cutters only.

Standard Series (150) — for use with standard series cutters only. Fits the majority of valve guides.

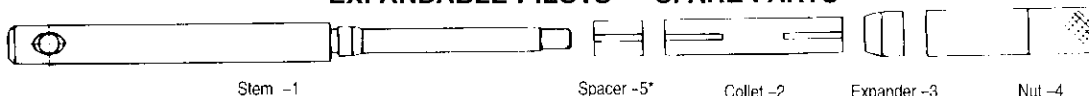
Standard Series (200) — for use with standard series cutters only. Fits heads with extra long valve guides.

Note: Expandable pilot diameters are measured at center of collet which is .003" under the stated diameter.

Collets expand a total of .020" (0.5mm) from .003" (0.1mm) under stated diameter to .017" (0.4mm) over stated diameter.



EXPANDABLE PILOTS — SPARE PARTS



Note: Orders for expandable pilot spare parts **MUST** include **PILOT PART NUMBER, SUFFIX, and DESCRIPTION**.

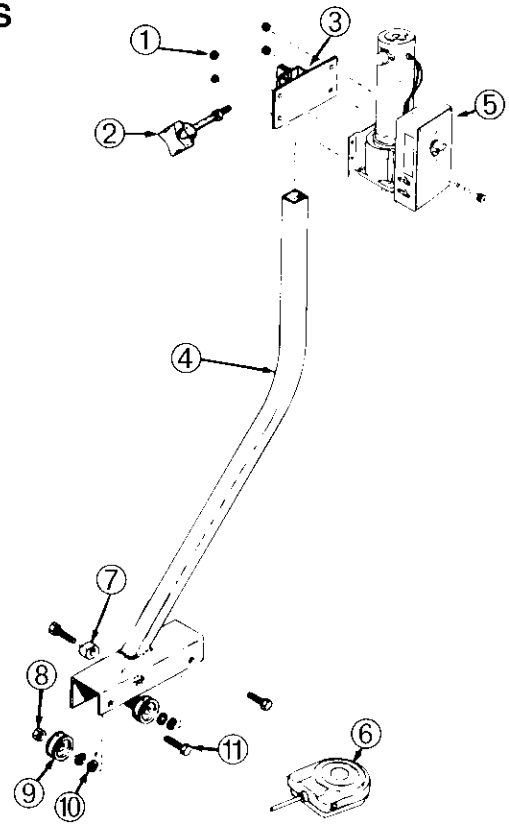
*Spacer available only for 150-8mm (5/16") expandable pilot. Used on VW Rabbit or any engine with valve guides less than 1-1/2" (38mm) long.

POWER UNIT PARTS

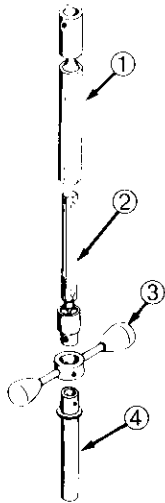
REPLACEMENT PARTS LIST

Key No.	Part No.	Description
1.	*	1/4-20 Hex Nut
2.	PU 042315	Motor Mount Handle
3.	PU 042310	Motor Mount Bracket
4.	PU 1703	Trolley Complete
5.	PU 1801	Motor & Control Box Assembly
	PU 1801-230	Motor & Control Box Assembly — 230V
6.	PU 042501	Foot Switch (1800 Motor)
	PU 0425010	Foot Switch (1700 Motor)
7.	PU 042134	Nylon Washer
8.	*	3/8-16 Hex Nut
9.	PU 42136	Wheel Assembly
10.	*	3/8 ID Washer
11.	*	3/8-16 x 1" Hex Bolt

*Obtain locally



PU 1517 TRANSMISSION FOR POWER UNITS



REPLACEMENT PARTS BY SUB-ASSEMBLIES

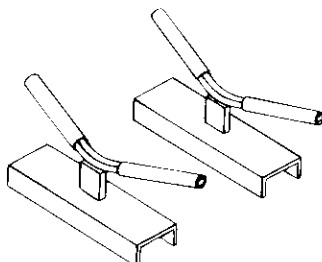
Key No.	Part No.	Description
1.	PU 043044	Long Slide Tube
	PU 043045	Short Slide Tube
2.	PU 043046	Long Hexed Slide
	PU 043047	Short Hexed Slide
3.	PU 043063	Handle Assembly
4.	PU 043067	Transmission Wrench — 1/2" Standard
	PU 043069	Transmission Wrench — 3/4" Special

Note: Sub-assemblies may not be interchangeable with older style transmissions.

POWER UNIT ACCESSORIES

HEAD STANDS

Engine heads of any shape can be set quickly onto a pair of these welded steel head stands.

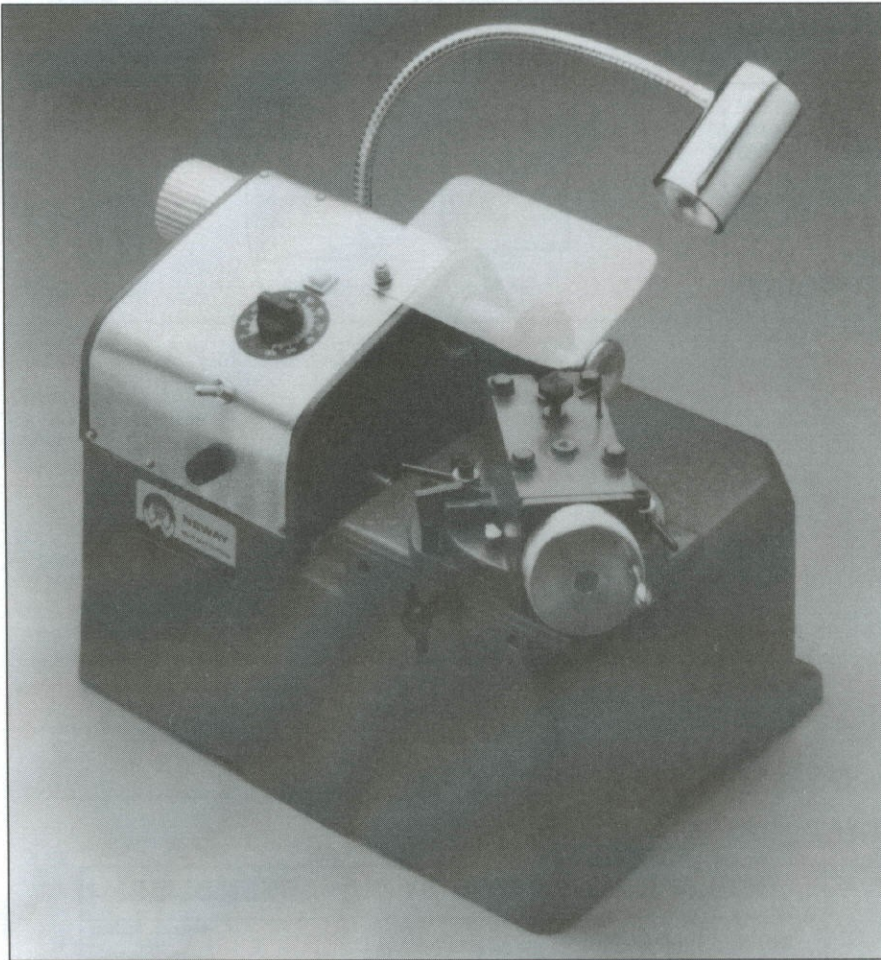


PU 1705 (sold as shown)

TRACK

Track is included with all power units in standard lengths of 4'. Special lengths are available upon request.

VFR-1000 VALVE REFACER PARTS



VFR-1000 COLLETS

Part No.

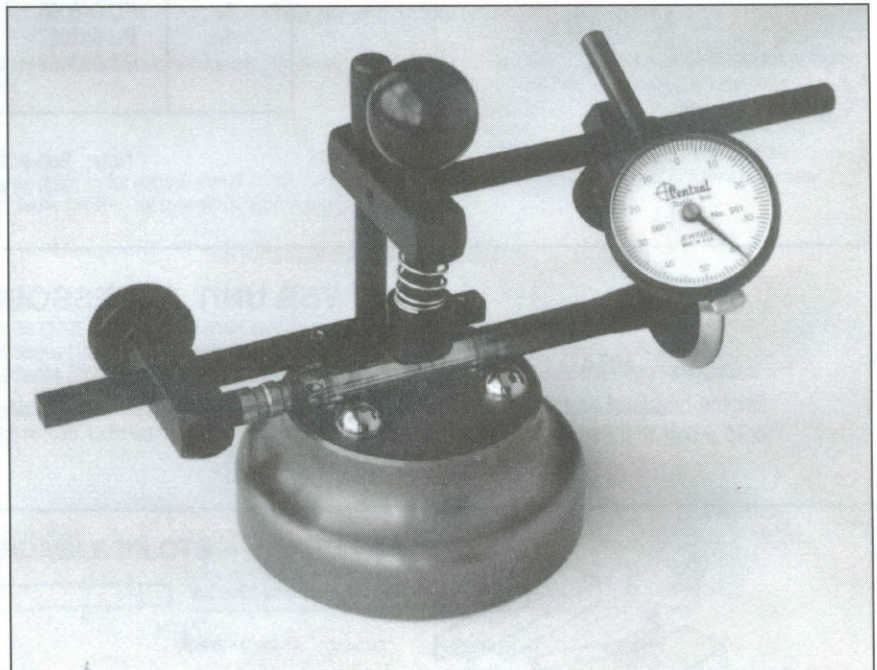
VFRC40	.4.0mm
VFRC50	.5.0mm
VFRC55	.5.5mm - 7/32"
VFRC60	.6.0mm
VFRC65	.6.5mm - 1/4"
VFRC66	.6.6mm
VFRC70	.7.0mm
VFRC932	.9/32"
VFRC80	.8.0mm - 5/16"
VFRC85	.8.5mm
VFRC1132	.11/32"
VFRC90	.9.0mm
VFRC95	.9.5mm - 3/8"
VFRC100	.10.0mm
VFRC105	.10.5mm - 13/32"
VFRC110	.11.0mm - 7/16"
VFRC115	.11.5mm
VFRC120	.12.0mm
VFRC125	.12.5mm
VFRC12	.1/2"

VFR-1000 PARTS

VFR DISC	.Sanding discs (4/pkg.)
VFR 72	.Carbide insert
VFR 74	.Carbide (titanium/stainless)
VFR 75	.Carbide (diesel)
VFR FUSE	.4 Amp fuse
VFR BULB	.25W R14 Bulb

Valve Concentricity Gauge

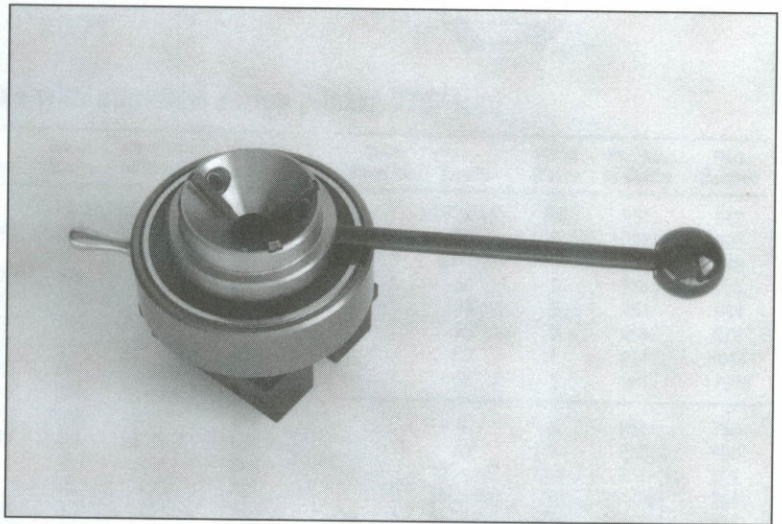
Part Number CG



"GIZMATIC" VALVE REFACER PARTS

Part No.

GIZMATIC-3 "Gizmatic" Valve Refacer
HVR CARB Carbide Blade
HK 5645/64" Hex Driver
S260 Screw
W265 Wedge
CB267 Cleaning Brush



EASY-TURN WRENCH

Part No.

TWEZ Easy-Turn Wrench (includes TW503-1 Adaptor)
TW503-1 Adaptor, 1/2" to 3/8" for Small Series Cutters

