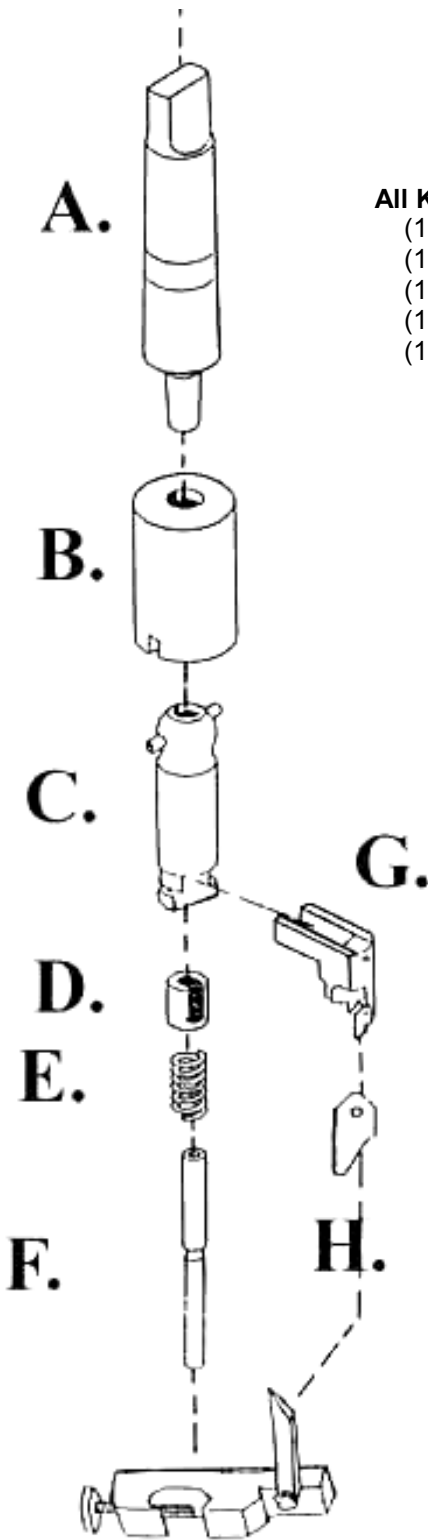


## Seat Angle Cutter Kit

The Newest in Three Angle Ball Drive Tooling

1. Use existing seat grinding arbor
2. Available for most seat and guide machines
3. Uses dead pilot (Kwik-Way, Sioux, Neway, or Sunnen)
4. Popular with general automotive and high performance shops
5. Can also use Serdi carbide inserts



**All Kits Contain:**

- |                          |                          |
|--------------------------|--------------------------|
| (1) Carrying Box         | (2) Springs              |
| (1) Morse Taper Adapter  | (3) Tool Holders         |
| (1) Ball Socket Assembly | (4) Carbide Inserts      |
| (1) Ball Head            | (1) Tool Setting Fixture |
| (1) Spring Bushing       | (1) Instructions         |

<u>Kit No.</u>	<u>Adapter</u>	<u>Ball Head</u>	<u>Pilots</u>
TS-503KW	TS-3M	TS-106KW	Kwik-Way
TS-504KW	TS-4M	TS-106KW	Kwik-Way
TS-503SX	TS-3M	TS-106SX	Sioux
TS-504SX	TS-4M	TS-106SX	Sioux
TS-503NEW	TS-3M	TS-106NEW	Neway
TS-504NEW	TS-4M	TS-106NEW	Neway
TS-503SUN	TS-3M	TS-106SUN	Sunnen
TS-504SUN	TS-4M	TS-106SUN	Sunnen
TS-503BP	TS-3B	Specify Ball Head for Pilots	

**A. MORSE TAPER ADAPTERS**

- TS-3M #3 Morse Taper Adapter  
 TS-4M #4 Morse Taper Adapter  
 TS-3IDL To adapt #3 Morse Taper to IDL Drive  
 TS-3B Straight Shank Adapter for Bridgeport, etc.

**B. BALL SOCKET ASSEMBLY**

- TS-105 Ball Socket Assy. for TS-3M and TS-4M

**C. BALL HEAD**

- TS-106KW Ball Head for Kwik Way pilots  
 TS-106SX Ball Head for Sioux pilots  
 TS-106NEW Ball Head for Neway pilots  
 TS-106SUN Ball Head for Sunnen pilots  
 TS-106A Lock Screws for tool holders (Hex Head)  
 TS-106B Dowel Pins for Ball Head

**D. SPRING BUSHING**

- TS-107KW Spring Bushing for Kwik Way  
 TS-107SX Spring Bushing for Sioux, Sunnen & Neway

**E. SPRINGS**

- TS-108 Springs (2 per kit)

**F. PILOTS (Not Included in Kits)**

**G. TOOL HOLDERS**

- TS-102 Small Tool Holder (.975 - 1.195) & Screw  
 TS-102A Radial Adjusting Screw for TS-102 (Hex Head)  
 TS-103 Medium Tool Holder (1.195 - 1.600) & Screw  
 TS-103A Radial Adjusting Screw for TS-103 (Hex Head)  
 TS-104 Large Tool Holder (1.550 - 2.450) & Screw  
 TS-104A Radial Adjusting Screw for TS-104 (Hex Head)  
 TS-109 Torx® Insert Lock Screw

**H. CARBIDE INSERTS (Standard in Kit)**

	<u>Seat Angle &amp; Width</u>	<u>Top Angle &amp; Overhang</u>	<u>Throat Angle</u>
R-1	45°-.059	30°-.071	60°
R-2	30°-.051	15°-.039	45°
R-3	45°-.051	30°-.039	60°
R-4	70° Single Angle Tool for Throating		



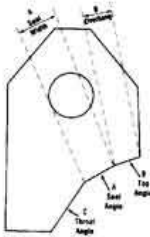
## Seat Angle Cutter Kit (cont.)

### TOOL SETTING FIXTURE

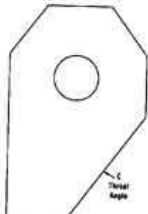
- TS-101** Tool Setting Fixture Assembly
- TS-101A** Setting Fixture Body Only
- TS-101B** Setting Fixture Pointer Only
- TS-101C** Pointer Lock Screw Only
- TS-101D** Arbor (Pilot) Lock Screw Only

### MISCELLANEOUS

- TS-100** Plastic Box for Kit
- TX-8** T-8 Torx® Screwdriver



Type 1



Type 2



Type 3



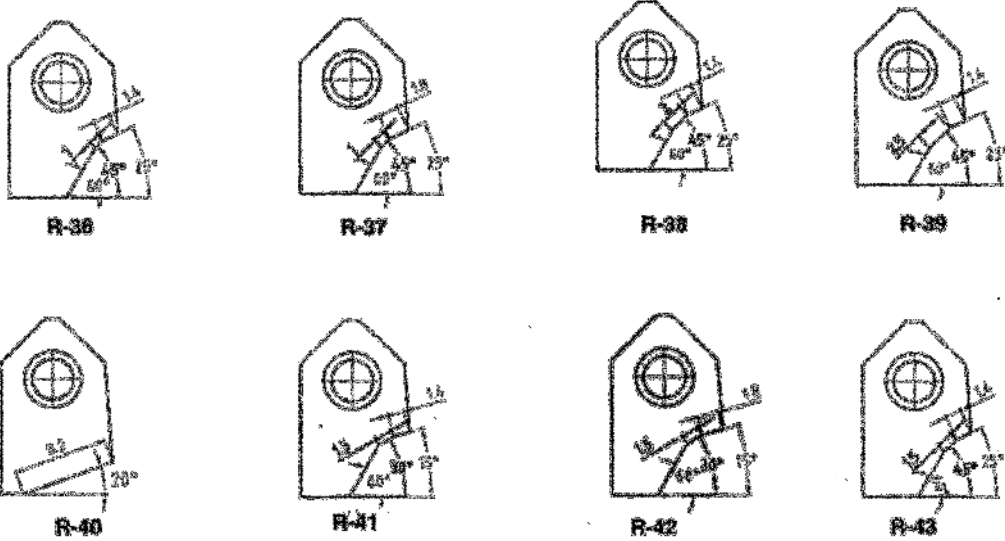
Type 4

### ADDITIONAL CARBIDE INSERTS FOR SEAT ANGLE CUTTER KITS

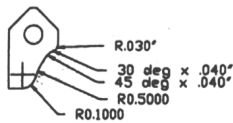
No.	Type	Seat Angle/Width	Top Angle/Overhang	Throat Angle	SERDI Profile #
R-1	1	45°/.059	30°/.071	60°	15J45X60
R-2	1	30°/.051	15°/.039	45°	13E30U45
R-3	1	45°/.051	30°/.039	60°	13E45X60
R-4	2	Straight 70° Cutter	70°	70°	70
R-5	3	5mm Radius Cutter			R-5
R-6	1	45°/.059	37°/.071	52°	15J45G52
R-7	1	45°/.079	30°/.087	60°	20L45X60
R-8	1	45°/.051	30°/.079	52°	13K45X52
R-9	1	45°/.039	35°/.063	60°	10H45F60
R-10	1	45°/.039	35°/.063	55°	10H45F55
R-11	1	45°/.039	30°/.047	60°	10F45X60
R-12	1	45°/.063	30°/.039	60°	16E45X60
R-13	1	45°/.055	30°/.039	60°	14E45X60
R-14	1	45°/.071	30°/.063	60°	18H45X60
R-15	1	45°/.075	30°/.079	60°	19K45X60
R-16	1	30°/.071	15°/.055	60°	18G30U60
R-17	1	30°/.075	15°/.079	60°	19K30U60
R-18	1	30°/.098	15°/.079	60°	25K30U60
R-19	1	30°/.039	20°/.063	52°	10H30D52
R-20	1	30°/.059	20°/.118	60°	15Q30D60
R-21	1	30°/.059	0°/.079	60°	15K30R60
R-22	1	30°/.079	15°/.055	60°	20G30U60
R-23	1	45°/.039	35°/.063	52°	10H45F52
R-24	4	Counterboring Cutter (90°)			L-12
R-25	1	30°/.110	0°/.079	60°	28K30R60
R-26	1	45°/.051	37°/.079	52°	13K45G52
R-27	1	45°/.051	30°/.079	60°	13K45X60
R-28	1	30°/.063	15°/.079	45°	16K30U45
R-29	1	45°/.063	30°/.079	60°	16K45X60
R-30	1	30°/.075	15°/.039	45°	19E30U45
R-31	2	Straight 30° Cutter			30
R-32	2	Straight 45° Cutter			45
R-33	1	37.5°/.071	20°/.047	52°	18F37.5D52
R-34	1	45°/.059	30°/.071	52°	15J45X52
R-35	1	20°/.098	11°/.079	60°	25B20B60

**CARBIDE BLADES for 3 angle cutting**

No.	Seat Angle & Width	Top Angle & Overhang	Throat Angle
R-36	45/.039	25/.055	60
R-37	45/.039	25/.071	60
R-38	45/.079	25/.055	60
R-39	45/.098	25/.055	60
R-40	20	-	-
R-41	30/.059	15/.055	60



**High Performance Carbide Inserts**  
Special carbide blades for REGIS three-angle tooling kits.



**R-50**

EXHAUST PROFILE  
NARROW SEAT



**R-51**

EXHAUST PROFILE  
WIDE SEAT



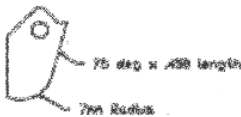
**R-52**

EXHAUST PROFILE  
NARROW SEAT



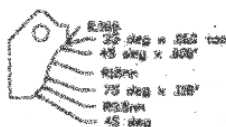
**R-53**

Radius insert for  
unshrouring valves & blending to seat  
area. (Cutting combustion chambers)



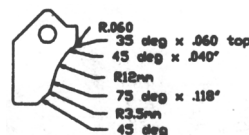
**R-54**

Open Bowls on Seats  
special angles available



**R-55**

Wide Seat, full profile insert.  
Open pockets & finish seats.



**R-56**

Narrow Seat, full profile insert.  
Open pockets & finish seats.



**R-57**

Insert for small 4 valve auto head.  
Min. dia. .900" w/ no pilot obstruct. .965

## Three-Angle Tooling Ball Heads

Works in conjunction with existing TS-500 tooling.



TS-106D Series

### Deluxe Ball Head

The same size range as the standard TS-106, this is a new design that increases the stability of the cutting tool allowing less chatter and providing a superior finish.

No.	Machine
TS-106D-SX	Sioux
TS-106D-NEW	Neway
TS-106D-KW	Kwik-Way
TS-106D-SUN	Sunnen



TS-1106 Series

### Large Ball Head

Specially designed to create a larger cutting range, from 1.600" to 2.900". This ball head allows for very heavy, chatter-free cuts such as opening pockets for larger valves, and unshrouding combustion chambers. Utilizes standard tool holders!

No.	Machine
TS-1106SX	Sioux
TS-1106NEW	Neway
TS-1106KW	Kwik-Way
TS-1106SUN	Sunnen



K-106S & W Series

### Part No. **Seat Ring Cutter Adapter**

Simplifies tooling and reduces setup time when cutting for seat rings on any seat and guide machine.

Use with TS-105 Ball Driver

Specify machine model.

Seat Cutter: 5/8" I.D. (Kwik-Way, Peterson)	9/16" I.D. (Winona)	Pilot Used
K-106SKW	K-106W-KW	Kwik-Way 7/16"
K-106SNEW	K-106W-NEW	Neway 3/8"
K-106SSUN	K-106W-SUN	Sunnen .390"
K-106SSX	K-106W-SX	Sioux .385"

## Starrett Levels and Replacement Vials



No.	Description
TSL-6	6" Complete Level
TSL-V	Replacement Vial
TSL8	8" Complete Level
RV-8	6" Replacement Vial
TSL-12	12" Complete Level
RV-12	8" Replacement Vial