

TM 9-4910-436-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL

GRINDING KIT, VALVE SEAT,
ELECTRIC, CONCENTRIC DRIVE, 7500 RPM RATED NO LOAD SPEED,
115-VOLT, AC/DC, SHIELDED TO PREVENT RADIO INTERFERENCE
(ALBERTSON AND CO. MODEL 1712-S) (4910-473-6437)



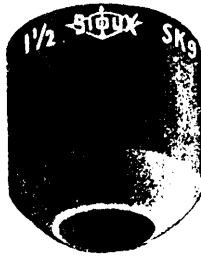
HEADQUARTERS, DEPARTMENT OF THE ARMY
16 DECEMBER 1964

Valve Seat Grinding Instructions

To properly grind valve seats it must be understood that two factors are to be taken into consideration: correct driver speed and the correct grade grinding wheel for driver speed and material to be ground.

Below is chart showing Sioux Drivers by catalog number and allowable diameter wheels for each driver to allow for grinding not over approximately 6500 surface feet per minute.

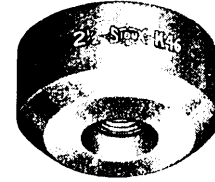
SPECIFICATIONS ON VALVE GRINDING DRIVERS



SK-Type Grinding Wheel - made up to 1 1/2" Diameter

Unit No.	No. Load Speed	Angle of Drive*	Diameter Capacity
1700	12,000	Straight	Wheels Up to 2"
1705	8,000	Straight	Wheels Up to 3"
1710	12,000	15°	Wheels Up to 2"
1712	8,000	15°	Wheels Up to 3"
1770	4,000	Straight	Wheels, Up to 6 1/4"
1770A	6,000	Straight	Wheels Up to 4 1/4"

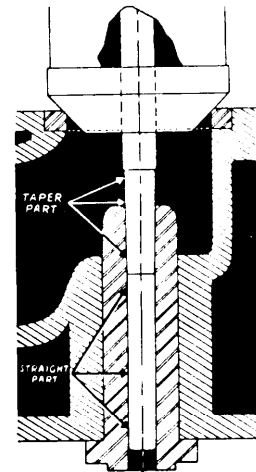
*Degrees Given Are from Horizontal
Grinding Wheels Not to be Operated Above 6500 S.F.P.M.



K-Type Grinding Wheel - up to 6 1/4" Diameter

GRINDING VALVE SEATS

- See that valve guides are clean. Use suitable guide cleaner or reamer for this purpose.
- Select pilot of correct size for guide hole. Place a drop of oil on pilot stem before inserting.
Top of pilot should be of length to allow a minimum of 2 1/2 inches to fit into holder.
SIoux Tapered Pilots are very accurate and are made up to .004 oversize. They also serve as plug guages for checking the wear in guides. If the .004 oversize pilot is loose, then new guides should be installed.
Sioux Tapered Solid Pilots are the most accurate centering device made. Often for ease in handling, customers prefer Expanding Pilots. Sioux Expanding Pilots, while very good, are not as accurate as the Solid Tapered Pilots, and should not be used when extreme accuracy is desired or required.
- The seat must be clean and dry to prevent carbon from clogging the grinding wheel as this will slow up the grinding and require unnecessary dressing.
Wipe with a clean, dry cloth. Use a piece of abrasive cloth under one side of the wheel and turn the holder around several turns by hand and clean the carbon off the seats thoroughly.



By selecting largest Sioux Tapered Pilot which will enter valve guide, straight part aligns pilot correctly with center line of valve guide, assuring perfect accuracy.