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OPERATING AND MAINTENANCE MANUAL

MINI JAW CRUSHER



The Model 150 Mini Jaw Crusher is moderately free from maintenance. Regular lubrication, in accordance with the instructions printed on the name plate, is generally all that is necessary.

The ceramic jaws of the crusher are tough and durable. They will perform adequately under normal operating conditions. However, a few precautions are advised, particularly when crushing hard or tough rock samples. Extensive testing has shown it is possible to chip the ceramic in two ways:

(1) By feeding sample pieces which are larger than the recommended size, 1 inch, or (2) When the sample is fed near the side of the jaw plates, there is a tendency for the plates to chip. Again, when crushing hard, brittle rocks, the clear plastic cover should be used over the crusher feed opening. This cover prevents sample chips from flying out and possibly hitting the operator in the eye.

New belts stretch in use and need to be tightened occasionally. Tighten belt by moving motor away from crusher. The discharge opening is set at the factory to approximately 1/8", which is adequate for most sample crushing operations. This is particularly true if the crusher is used in conjunction with our Model 150 Mini-Jaw Crusher. Nonetheless, changing the size of the discharge is a relatively simple operation.

(1) Adjusting Bolt is located in front of the Stationary Jaw Plate. Loosen the lock nut.

(2) Turn adjusting screw clockwise to reduce closed side gap. Turn adjusting screw counter clockwise to increase closed side gap.

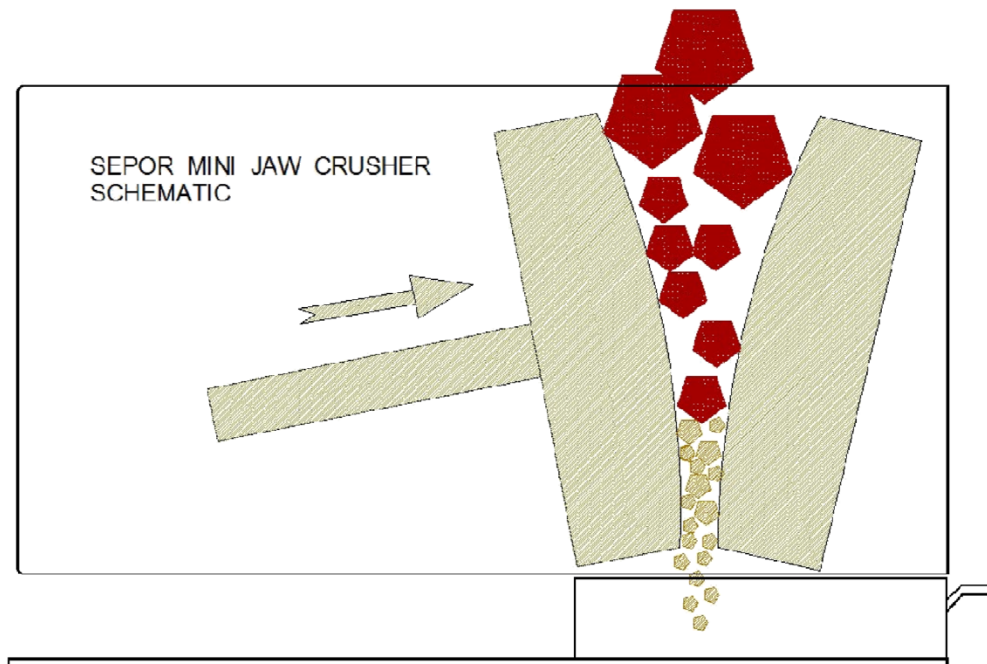
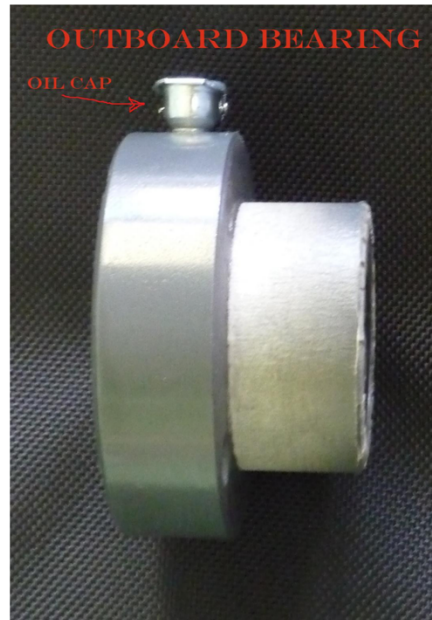
(3) Re-tighten the lock nut.

NOTE: It is important that the lower edges of the ceramic plates DO NOT TOUCH.

The toggle return spring keeps tension on the toggle to keep it in place and to prevent its chattering. The spring is tight enough when it is tightened sufficiently to prevent chattering as the harder samples are being crushed. A stainless-steel tray is provided for recovering the crushed sample. The residue from crushing most rock samples is easily removed from the jaws of the crusher and the tray with a short blast of compressed air. While samples containing large amounts of clays and iron oxides tend to cling to the jaws with the tenacity, we have found a narrow, tapered paddle, the point of which is covered with fine emery cloth or/and a coarse, stiff-bristled fabric, facilitates the cleaning operation.

LUBRICATION

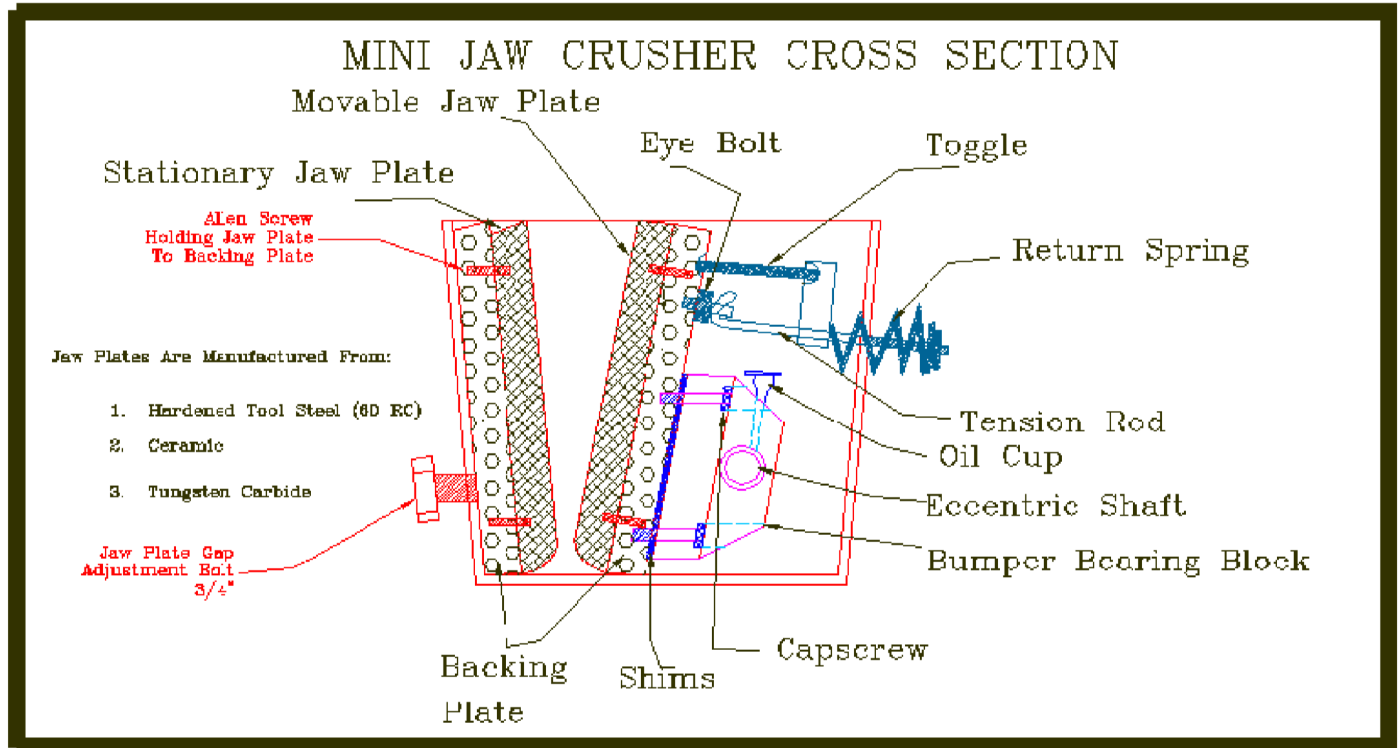
The jaw crusher has 3 bearings that require lubrication on a continual basis. Alight machine oil or 3 in 1 oil will be adequate for this purpose. The bearing housing has a oil cup, with a spring loaded lid that needs to be flipped back and oil added. After oiling bearings, turn crusher on and let if run for a few minutes, as this helps distribute oil; to the bearings. The three bearings requiring lubrication are the Left Outboard Bearing, the Right Outboard Bearing and the Bumper Block Bearing. Refer to attached parts drawing.

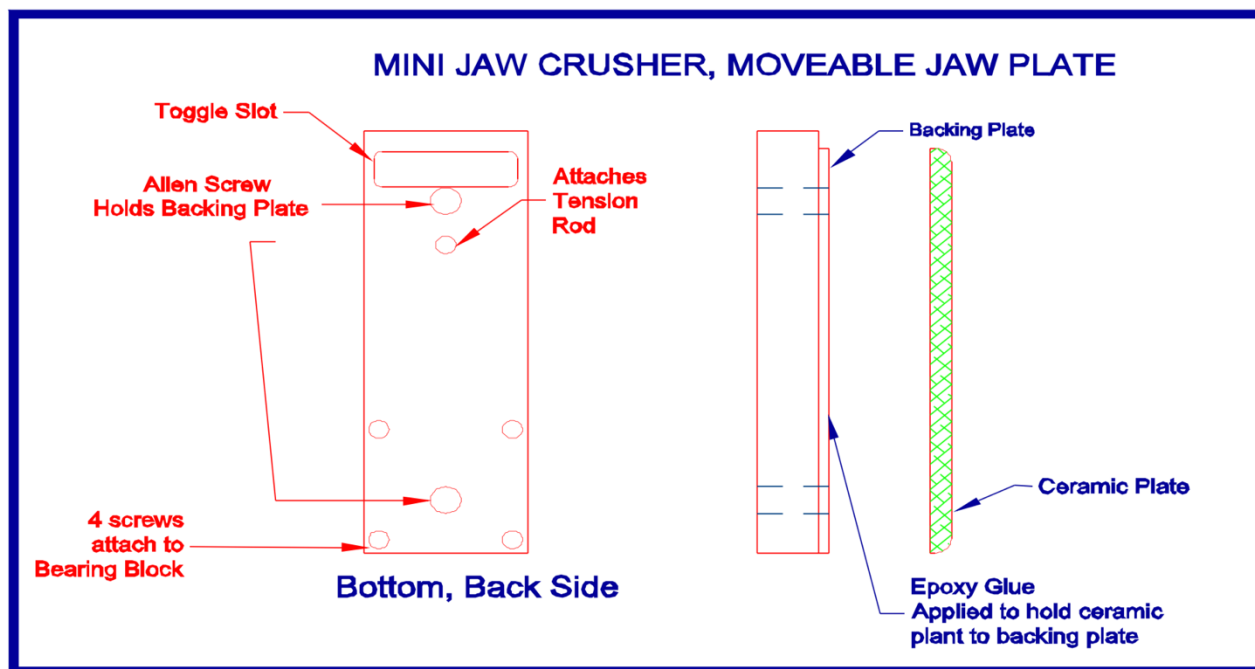
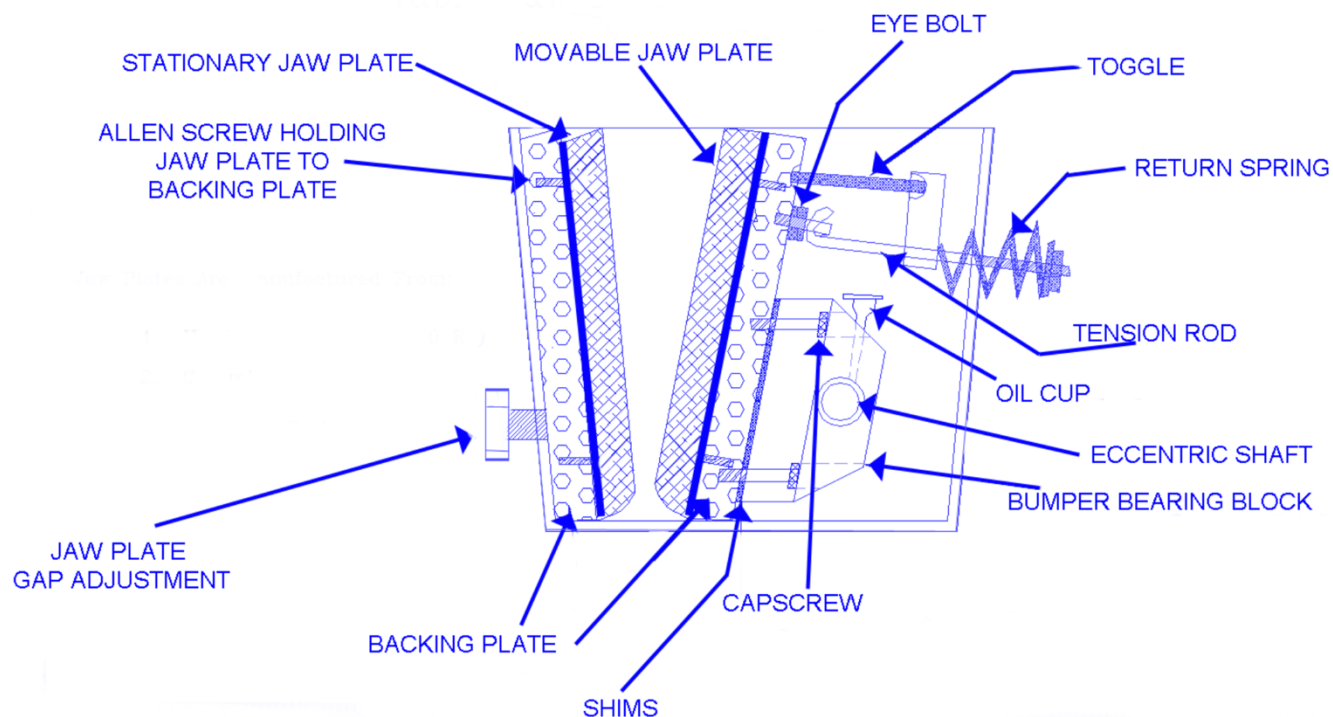


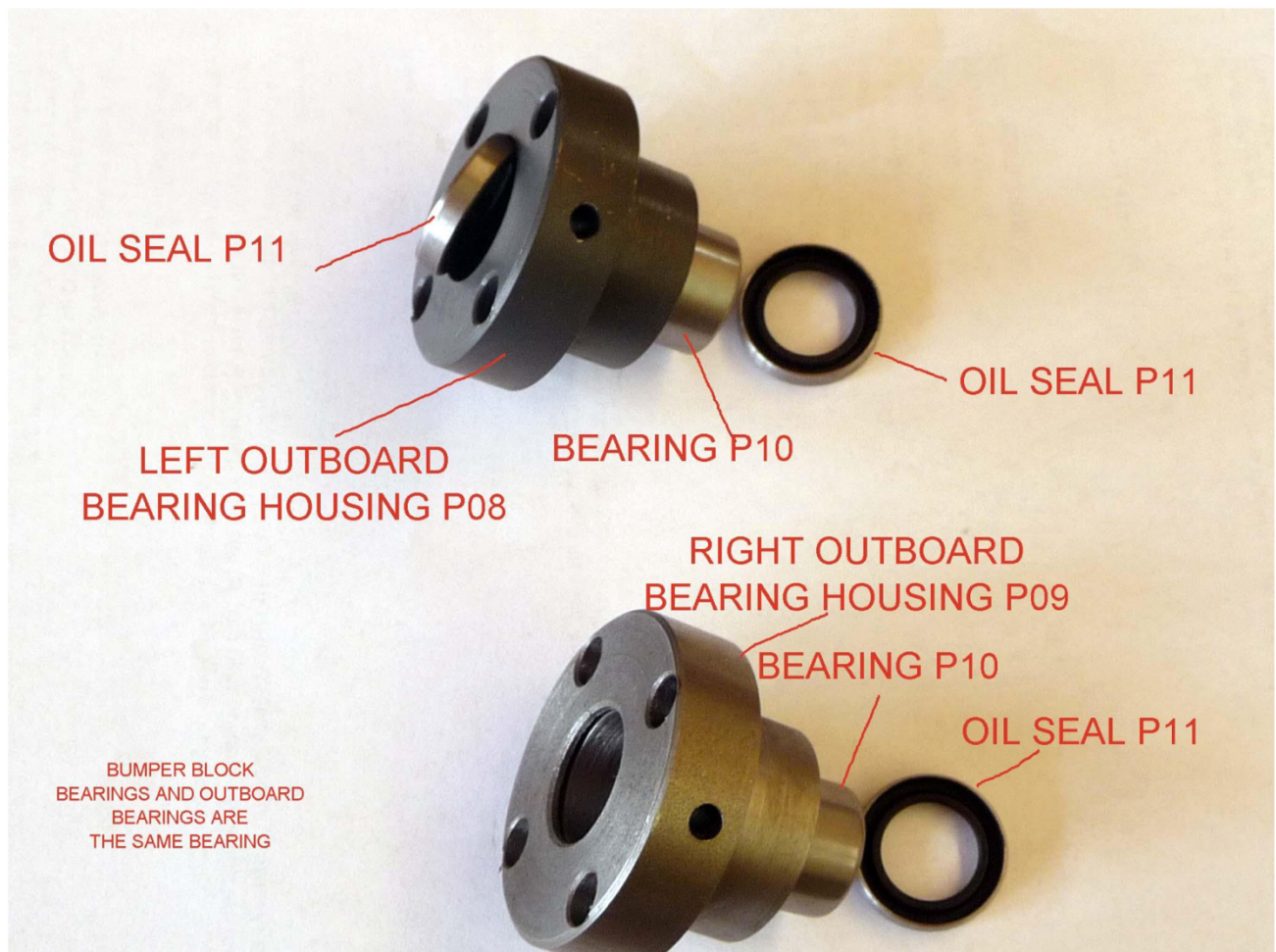
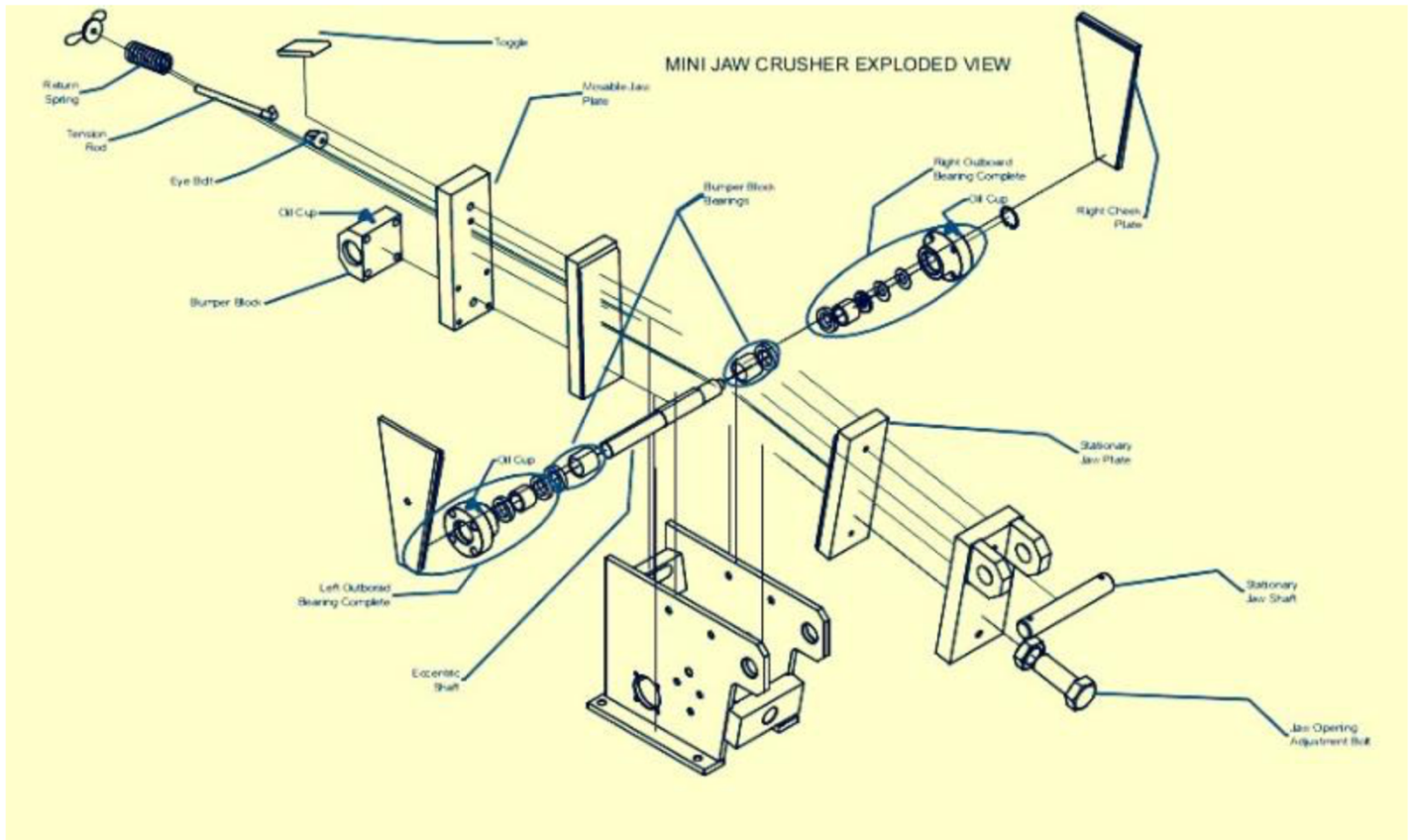
OPERATION OF THE MINI JAW CRUSHER

The Mini-Jaw Crusher is a single toggle type of miniature laboratory jaw crusher. The major operating components are illustrated (less drive) in the cross section, above. The movable jaw is attached to the drive via the eccentric shaft. The rotation of the eccentric shaft causes the movable jaw to move towards the stationary jaw in an elliptical motion.

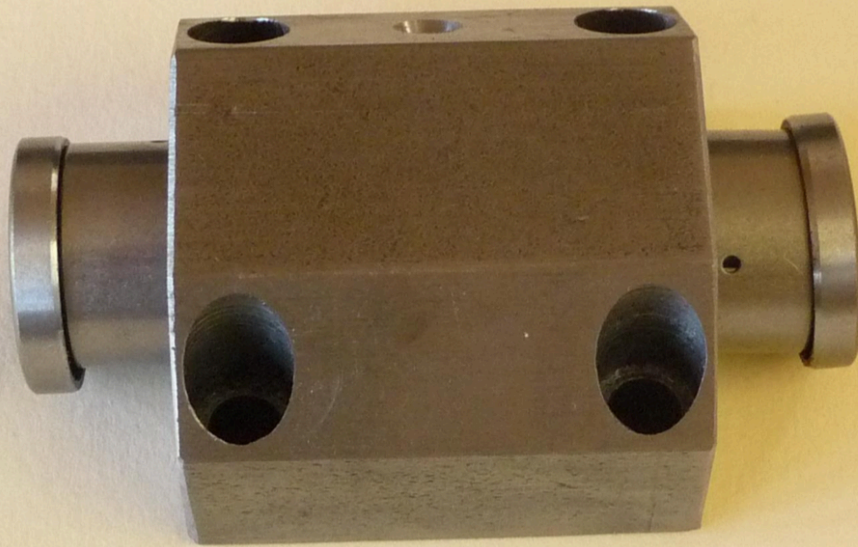
The toggle and the movable jaw are held in tension by the tension rod and return spring combination. The space at the bottom of the jaw determines the size of the crushed material. This space is factory set at 1/8". It may be adjusted, by turning the 3/4" adjusting screw shown above, to achieve 1/16"(or finer) to 1/4" jaw spacing. Replacement of the jaw plates is easy, since all crushers manufactured after January 1996 have jaw plates fastened to the backing plate with allen screws, countersunk into the backing plate to make the surface flush, which makes replacement quick and easy. Further, the different types of jaw plates are interchangeable. On crushers manufactured prior to January 1994, a jaw crusher with ceramic plates could not use steel plates or tungsten carbide plates, only ceramic plates. Now, all types of jaw plates may be used in any jaw crusher.







Bumper Block, bearings, seal



Item ID	Item Description	Qty Needed
010A-021	2x2 Mini Crusher W/Steel Plate	
010A-P001	2x2 Jaw crusher base	1
010A-P003	2x2 Jaw crusher Belt guard	1
010A-P004	2x2 Stationary Jaw Backing Pl	1
010A-P005	2x2 Moveable Jaw Backing Plate	1
010A-P006	2x2 Toggle	1
010A-P007	2x2 Jaw crusher frame	1
010A-P008	2x2 Left OutBoard Housing	1
010A-P009	2x2 Right OutBoard Housing	1
010A-P010	Eccentric Shaft 5/8" Complete	1
010A-P012	2x2 Bumper Block	1
010A-P020	2x2 Steel Jaw Plate Carb. .03	2
010A-P021	2x2 Steel Cheek Plate	2
010A-P024	2x2 Stand Off 3/4x1-1/4x5/16	4
010A-P028	2x2 Shaft 3/4" Complete	1
010A-P045	Pan for Mini jaw crusher	1
MO-102932	1/3hp 115/208-230v 60hz 1725rp	1
100ST035	Cap Screw 1/4"-20 Thrd 1/2"L	4
100ST062	Cap Screw 5 3/4"-16 2"L	1
100ST156	Cap Screw 1/4"-20 Thrd 2" L	4
100ST217	Machine Screw 10-32 Thrd 1/2"	1
100ST219	Machine Screw 10-32 Thrd 1" L	4
100ST271	Cap Screw 1/4"-28 Thrd 1" L	2
100ST305	Cup Set Screw 1/4"-28 1/2"L	10

100ST507	Cap Screw 8-32 Thrd 1" L	8
100ST412	Cap Screw 1/4"-28 Thrd 5/8" L	2
100ST465	Cap Screw 1/4"-20 Thrd 1" L	4
100ST538	Steel Hex Nut 1/4"-20Thrd 7/6"	8
100ST540	Hex Nut 10-32 Thrd 3/8" W 1/8"	4
100ST545	Hex Nut 3/4"-16x1-1/8" 41/64"	1
100ST750	Washer 1/4" Size 47/64"	4
100ST795	Washer 1/4" Size .49" OD .06"	6
101ST192	Wing Nut 1/4"-20 Size 1"	1
112ST205	Eyebolt Zink 1/4"-20x4"	1
112ST256	Tie-Down Eye 1/4" ID 5/8" Diam	1
600ST211	Steel Spring1.75" Long.750" OD	1
700ST090	Drive-in Oil-Hole Cover 6mm	3
730ST326	Bumper 7/8" Dia 17/32"	4
762ST176	V-Belt 4L-270	1
782ST029	Ball Bearing BA1112-Z-OH	2
782ST025	Ball Bearing BA1012-Z-OH	1
782ST275	Linear Ball Bearing Seal	1
782ST279	Linear Ball Bearing Seal	2
784ST006	Bearing NTA-613 3/8" I.D.X13/16	1
784ST022	Washer 3/8"x13/16"	2
789ST275	V-Belt Pulley 5/8" Fixed 2"OD	1
789ST289	V-Belt Pulley 5/8" Fixed 4"OD	1
800ST120	Motor Power Cord feed switch	1
B16800ST200	Grommet 1/2" ID1" OD3/32" 3/4	1

2x2 Mini Jaw Crusher with Alumina • 010A-011

Item ID	Item Description	Qty Needed
010A-P014	2X2 Alumina Jaw Plates	2
010A-P018	2x2 Alumina Jaw Backing Plate	2
010A-P026	2x2 Alumina Cheek Plate with Backing	2
010A-P015	2x2 Alumina Cheek Plate	2
010A-P017	2x2 Cheek Backing Plate	2

2x2 Mini Jaw Crusher with Tungsten• 010A-012

Item ID	Item Description	QTY Needed
010A-P022	2x2 Tungsten Cheek Plate w/backing	2
010A-P011	2x2 Tungsten Cheek Plate	2
010A-P017	2x2 Tungsten Cheek Backing Plate	2
010A-P025	2x2 Tungsten Jaw Plate w/backing	2
010A-P013	2x2 Tungsten Jaw Plate	2