



SERVICE BULLETIN

Title: 23XL Compressor Maintenance Tools

Models Affected: 23XL

Number: C9802

Date: 1/2/98

Supersedes: C9607

Date: 2/7/96

Purpose:

This bulletin provides information on how to procure/assemble locally a 23XL compressor maintenance "Mini" tool kit.

File: Compressor

Prepared By: Nick Chashin

Approved By: Alan M. Johnson

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Information:

When performing a major overhaul on a 23XL compressor; i.e., replacing bearings and screw rotors the service tool kit (see bulletin C9606) will be required.

To perform major maintenance, i.e., slide valve assembly inspection and overhaul, motor replacement, o-ring (ALL) replacement, due to external leaks and perform Major Inspection, the following tools can be procured/built locally at a minimum cost.

Mini 23XL tool kit, (every service office should have it):

Item	Quantity	Description
1	3	Guide pin M16x2 x 110 lg
2	3	Guide pin M12x1.75 x 110 lg
3	3	Guide pin M10x1.5 x 110 lg
4	3	Guide pin M20x2.5 x 140 lg
5	3	Eye bolt (shoulder) M16x2.0 27 mm 35 mm 680 kg (1500 lbs)
6	3	Eye bolt (shoulder) M12x1.75 20 mm 30 mm 325 kg (720 lbs)
7	3	Eye bolt (shoulder) M10x1.5 17 mm 25 mm 225 kg (500 lbs)
8	3	Eye bolt (shoulder) M20x2.5 30 mm 45 mm 900 kg (2000 lbs)
9	1	Protective sleeve 75.4 mm ID x 88 mm OD x 340 mm lg
10	1	Protective sleeve 85.4 mm ID x 100 mm OD x 340 mm lg
11	1	End clearance T-bar
12	1	H type puller minimum length 7 inches

Item	Quantity	Description
13	2	Slide valve locknut socket p/n T-144502d
14	2	Slide valve locknut socket p/n T-144504d
15	2	1/2-13UNC hex bolt or threaded rod 4 inches long
16	1	9/16-12UNC hex bolt or threaded rod 4 inches long
17	1 each	1/2-13UNC & 9/16-12UNC taps
18	2	17mm socket
19	1	Metric hex bit socket set — 4,5,6,7,8,10,12,14,17,19 mm
20	1	Metric I-shaped hex keys — 4,5,6,7,8,10,12,14,17,19 mm
21	1	Dial indicator with a long stem and magnetic base holder
22	1	3/8-16 UNC steel threaded rod 3 feet long
23	1	Large ratchet type snap ring pliers

To assemble the above:

Items 1-4 — Make from metric bolt Grade 8 or from steel threaded rod.

Example: M10x1.5 x 110lg M10 (basic screw diameter 10 mm) 1.5 (thread pitch) 110 mm (bolt length) m = metric and mm = millimeters.

Items 5-8 — Procure locally an eye bolt ex. M10x1.5 17 mm 25 mm 225 kg (500 lbs) M10 (basic screw diameter 10 mm) 1.5 (thread pitch) 17 mm (thread length) 25 mm eye diameter and 225 kg rating.

Items 9, 10 — The sleeve is made from nylon tubing. Dimensions are in millimeters (1 mm = 0.03937 inches). Used to protect the rotor shaft from hitting bearing during removal. An optional method can be applied, i.e., wrap the shaft with several layers of duct tape.

Item 11 — A tee bar is used to check the rotor end clearances. The handle is CRS $\frac{3}{4}$ " dia. rod by 12" long, the stem is CRS $\frac{3}{4}$ " dia. rod by 12" long and the bolt M10x1.5 x 110 lg Grade 8. Take the stem and weld to middle of handle, cut the head of the bolt and weld to end of the stem. (CRS = cold rolled steel)

Item 12 — Most of the centrifugal technicians have item 12. They use when pulling the 19D and 19E impellers. H type puller is purchased locally and it is used to pull the motor rotor.

Item 13 — Order from RCD or make it from an impact socket using the new locknut as a guide.

Note: The above items 1 thru 13 and bearing pullers are included in the major overhaul kit available from RCD.

Item 14 — Order from RCD.

Item 15 through 23 must be procured locally.

Note: Item 23 only used on a variable V.I. Slide valve assembly.