



223 Series Compressor Pump



Model:	Flywheel
223-007	
223-507	X

Specifications:

Minimum rpm:	350	Max Duty Cycle for 8 hour/day operation:	75-80%
Maximum rpm:	950	Max Duty Cycle for 16 hour/day operation:	60%
		Max Duty Cycle for 24 hour/day operation:	30-35%

Maximum Continuous Duty Working Pressure: 150 psi

Approx. Oil Capacity of Crankcase: 30 Fluid Ounces / 0.75 litres

HP	100 psi (3 ph)		100 psi (1 ph)		Cylinders			Flywheel	
	rpm	CFM	rpm	CFM	Qty	Bore	Stroke	Dia.	Groove
1	438	3.7	360	3.0	2	2.5"	2.25"	12"	1A
1-1/2	689	5.6	568	4.5					
2	906	7.0	712	5.6					

Note: As indicated above, the CFM output of a Unit with single phase electrics is approximately 80% that of the three phase power.

NOTE

For installation and maintenance information, refer to DV Systems Bulletin 'HDI01'.

CAUTION

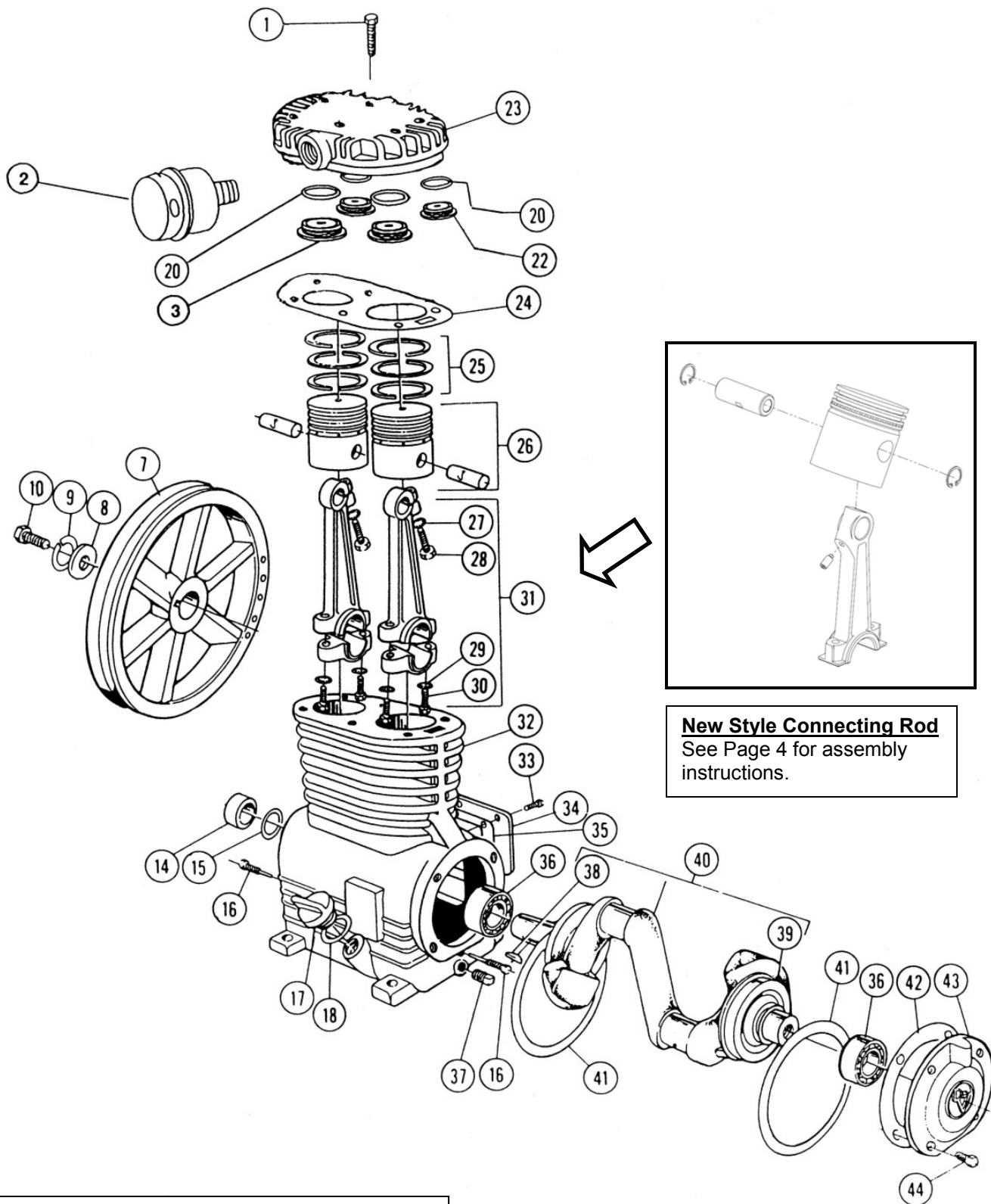
Check for proper oil level prior to using the Pump.

Service & Maintenance: Use only Genuine DV Systems Oil and Kits as indicated on Page 3 of this manual.



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The Item Numbers in the chart below refer to the Pump Breakdown on the previous page.

Ref. #:	Qty:	Part #:	Description:	Ref. #:	Qty:	Part #:	Description:
1	6	SS-29	HHCS 3/8-16 x 2"	26	2	45855-131	Piston + Pin Assy
2	1	356-9406	Silencer Assembly	28	2	SS-6041	HSSS 1/4-28 x 1/2"
	1	356-9701	Filter Element	29	4	SS-3674	Shakeproof Lockwasher 5/16"
3	2	123-417	Intake Valve Assembly	30	4	21741-193	Screw
7	1	31438-124	Flywheel	31	2	45856-170	Rod + Cap Assy
8	1	32233-122	Flywheel Washer	32	1	37136-111	Cylinder + Crankcase
9	1	SS-3607	3/8" Medium Lockwasher	33	6	SS-1	HHCS 1/4-20 x 1/2"
10	1	SS-25	HHCS 3/8-16 x 1"	34	1	36883-105	Inspection Plate
14	1	130-111	Oil Seal	35	1	38513-125	Inspection Plate Gasket
15	1	330-160	Washer (NLA)	36	2	130-23	Ball Bearing
16	1	220-6	Oil Pickup Ring Retainer	37	1	SS-1217	3/8 Square Head Plug
17	1	NCB-303-1	Oil Fill Plug	38	1	SS-1578	Key Number 13, 1 x 3/16
18	1	SS-2670	O Ring	39	2	225-43	Oil Cup
20	4	123-28	Valve Gasket	40	1	45817-526	Crankshaft + Oil Cup Assy
22	2	123-405	Exhaust Valve Assembly	41	2	32541-115	Oil Throw Ring
23	1	37132-120-1	Cylinder Head	42	1	38281-110	End Plate Gasket
24	1	38547-108	Cylinder Head Gasket	43	1	37331-106	End Plate
25	2	KK-9848	Ring Kit - Std	44	4	SS-12	HHCS 5/16-18 x 3/4"

Service Kits and Maintenance Items:

- PR-20-4: 20 Weight Oil, 4 litre (1 US gallon), suitable for ambient temperatures below 30°C (90°F)
 PR-30-4: 30 Weight Oil, 4 litre (1 US gallon), suitable for ambient temperatures above 30°C (90°F)
 OJ2000-K1: Synthetic Oil, 4 litre (1 US gallon)
 MK-223: Includes (4) litres of 'PR-20' Oil and (2) '356-9701' Air Filters
- VK-123: Valve Kit includes (1) Intake Valve Assembly, (1) Exhaust Valve Assembly, and (2) Valve Gaskets
 (2) Kits required per Pump.
- OK-223: Overhaul Kit includes (1) Oil Seal, (1) Gasket Kit, (2) Ring Kits, and (2) Valve Kits
- GK-9406: Gasket Kit includes all Gaskets

Compressor Pump Torque Values:

Ref. #:	Description:	In Lbs	Ft Lbs	Nm
1	Head Bolts	240	20	27.1
3, 22	Valves	360	30	40.6
10	Flywheel Bolt	240	20	27.1
16	Oil Ring Retainer	144	12	16.2
28	Connecting Rod - Pin End	45	3.75	5.1
30	Connecting Rod - Crank End	228	19	25.7
33	Inspection Cover	72	6	8.1
44	Large End Plate	144	12	16.2

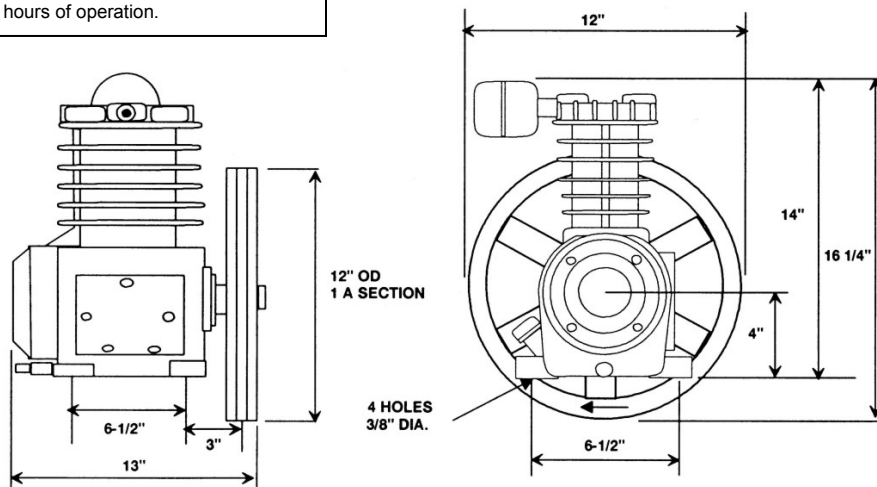
Note: Re-torque Head Bolts (#1), Inspection Cover Bolts (#33) and End Plate Screws (#44) after first 10 hours of operation.

Honing Specifications:

	Standard Hone Dia:	Skirt / Cyl Dia Clearance
Std Cylinder	2.5000" / 2.5005"	.0035" / .0055"

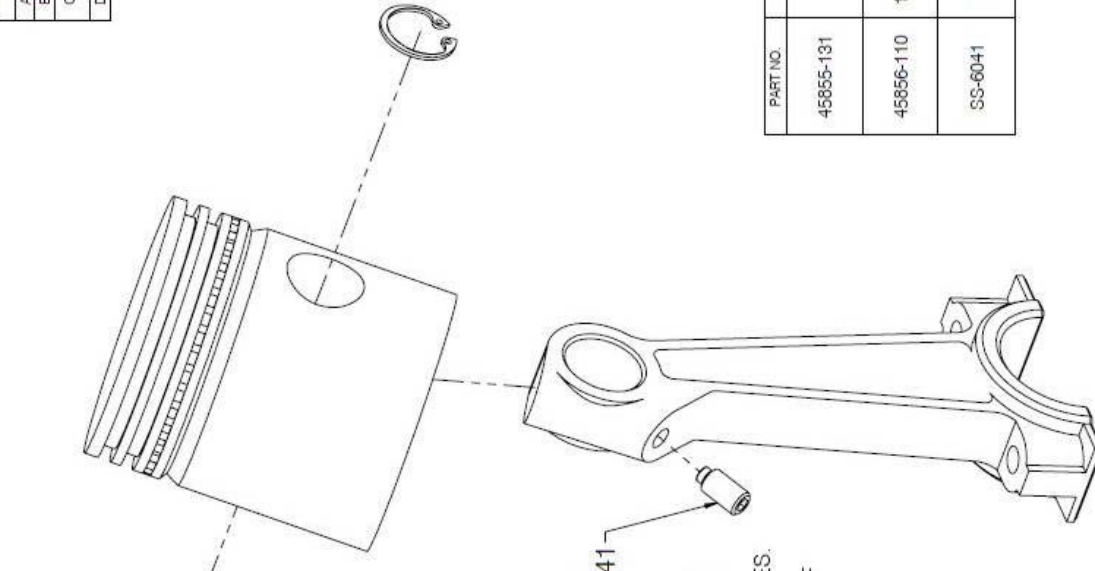
- Cylinder must be within diametral tolerance at all points. Out-of-round or taper must not exceed 0.005".
- Hone, 20 minimum to 35 maximum micro-inches of surface roughness.
- De-burr the sharp corners at the top and bottom of the Cylinder opening with a 1/64" to 1/32" x 30° chamfer.

Pump Dimensions:



New Style Connecting Rod Assembly:

REV.	DATE	REVISION DESCRIPTION	PCH NO.
	6/08/10	21741-194 SCREW & SS-553 L.W. REMOVED	10-28
A	6/28/10	PISTON & PIN ASSEMBLY ADDED	---
B	5/31/11	SET SCREW REPLACES SPRING PIN	11-08
C	7/20/11	TORQUE, LOCTITE AND SET SCREW DESCRIPTION CHANGED	---
D	5/17/12	SS-6041 WAS SS-553 TORQUE TO 45 IN-LBS	---




PART NO.	DESCRIPTION	QTY.
45855-131	123/223 PISTON & PIN ASSEMBLY	1
45856-110	123/223 CON-ROD ASSEMBLY	1
SS-6041	1/4-28 X 1/2" HS SET SCREW HALF DOG PT	1

ASSEMBLY INSTRUCTIONS:

1. REMOVE WITH VARSOL ANY OIL OR GREASE FROM CONNECTING ROD AND SET SCREW.
2. ALLOW THE PARTS TO DRY FOR FEW MINUTES.
3. APPLY RED LOCTITE 262 ON THREADS OF SS-553 SET SCREW
4. TIGHTEN SET SCREW TO 45 LBS. IN.
5. ALLOW THE PARTS TO CURE FOR 24 HOURS TO ACHIEVE FULL STRENGTH

ALL DIMENSIONS ARE IN INCHES
 FRACTIONAL DIMENSIONS: ± 1/32
 DECIMAL DIMENSIONS: ± .005
 ANGLES: ± 1°
 *UNLESS OTHERWISE SPECIFIED



NAME OF PROJECT
 123/223 RECIPROCATING PUMP
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: 6/08/10
 SCALE: NTL5
 DESCRIPTION OF DRAWING
 CON-ROD & SPRING PIN
 REF: 110REV
 45856-170-1
 D

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