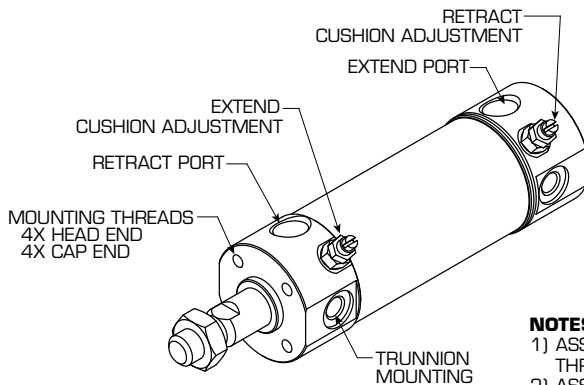


SERIES OCG CYLINDER START-UP PROCEDURE

PHD, Inc. makes no warranty as to the fitness of its products or as to the length of service life after being repaired or parts replaced by anyone other than authorized employees of PHD, Inc. In no event shall PHD, Inc. be liable for loss of profits, indirect, consequential, or incidental damages arising out of the use of PHD products.

Specifications	Series OCG Cylinder
Maximum Air Pressure	140 psi [9.7 bar]
Temperature Limits	32° to +140°F [0° to +60°C]
Velocity	2 to 20 in/s [50 to 500 mm/s]
Rated Life	3 million cycles
Lubrication	Factory lubricated for rated life



NOTES:

- 1) ASSUMES USE OF AT LEAST 75% OF FULL THREAD DEPTH
- 2) ASSUMES USE OF HIGH STRENGTH STEEL SOCKET HEAD CAP SCREWS
- 3) PHD RECOMMENDS USE OF THREAD-LOCKER ON MOUNTING THREADS

CYLINDER START UP PROCEDURES

- 1) Securely mount unit and attach tooling (see table below).
- 2) Install external flow controls.
- 3) Provide adequate clearance for rod to extend from cylinder.
- 4) Set both extend and retract cushion adjustments one complete turn (counter clockwise) from fully closed.
- 5) Slowly apply pressure to unit.
- 6) Adjust cushion to desired performance if needed.

Recommended Mounting Torques

Bore Size		Mounting Torque		Trunnion Torque	
in	mm	in-lb	Nm	in-lb	Nm
3/4	20	13.3	1.5	20	2.2
1	25	26	3	32	3.6
1-1/4	32	26	3	80	9
1-1/2	40	43	5	160	18
2	50	104	12	280	32
2-1/2	63	217	25	460	52

Switches & Brackets

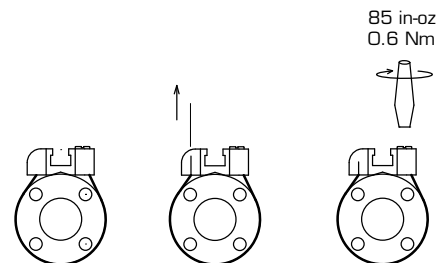
Part Number	Description
85844-0	Reed DC 5-30 V, 50mA, Quick Connect
85844-2	Reed DC 5-30 V, 50mA, 2m Cable
85845-0	Sink Type (NPN), DC 5-30 V, 50mA, Quick Connect
85845-2	Sink Type (NPN), DC 5-30 V, 50mA, 2m Cable
85846-0	Source Type (PNP), DC 5-30 V, 50mA, Quick Connect
85846-2	Source Type (PNP), DC 5-30 V, 50mA, 2m Cable
86999	Round Cylinder Switch Band Bracket

Includes one switch or bracket

SWITCH CIRCUIT TYPE	85844 REED SWITCH	phd OPTIMAX PNP REED DC 5-30V. 50mA MODEL: 85844 -		
	85845 SINK/NPN	phd OPTIMAX NPN SOLID STATE DC 5-30V. 50mA MODEL: 85845 -		
	85846 SOLID STATE SOURCE/PNP	phd OPTIMAX PNP SOLID STATE DC 5-30V. 50mA MODEL: 85846 -		

SWITCH INSTALLATION PROCEDURES

- 1) Loosen screw with care that screw does not come out of nut.
- 2) Wrap band around cylinder and insert end through cutout in housing.
- 3) Pull band by hand and lock nearest cutout over tab in housing. (Note: assembly may still be loose.)
- 4) Tighten screw to secure housing to cylinder. Recommended torque 85 in-oz [0.6 Nm].
- 5) DO NOT OVER TIGHTEN. Damage to the cylinder may occur.
- 6) Trim excess band material as required.



For additional technical assistance, call or visit our website:

phd, inc. P.O. Box 9070, Fort Wayne, IN 46899
1-800-624-8511
www.phdinc.com

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Mounting Attachments

Base Part No.		Cylinder Size Dash No.	Description
Imperial	Metric		
86993	87084	-xx	Base Mounting ⁽¹⁾
86994	87085	-xx	Rectangular Flange Mounting ⁽¹⁾
86995	86995	-xx	Trunnions
86996	87087	-xx	Rear Hinge Clevis ⁽¹⁾
86997	86997	-xx	Rear Hinge & Trunnion Bracket
86998	86998	-xx	Rear Pin

DASH NO.

- **02**

Cylinder Size

- 01** = 3/4 Bore (Size 20)
- 02** = 1 Bore (Size 25)
- 03** = 1-1/4 Bore (Size 32)
- 04** = 1-1/2 Bore (Size 40)
- 05** = 2 Bore (Size 50)
- 06** = 2-1/2 Bore (Size 63)

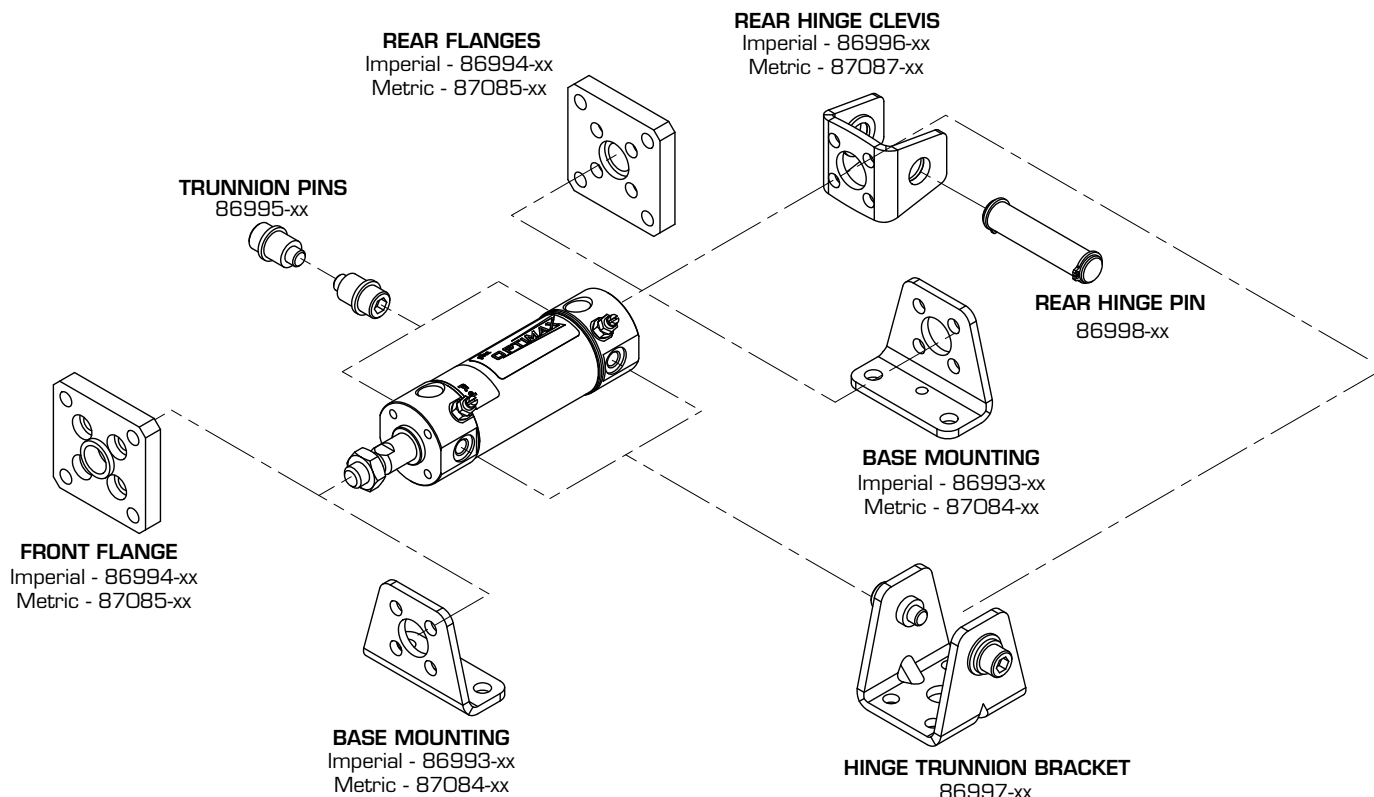
Repair Kit

Size		Part No.
in	mm	
3/4	20	87000-01
1	25	87000-02
1-1/4	32	87000-03
1-1/2	40	87000-04
2	50	87000-05
2-1/2	63	87000-06

NOTE: Apply grease to all replacement seals and contact surfaces.

NOTES:

- 1) Includes fasteners for attaching accessory to the cylinder.
- 2) Bracket 86997-xx includes trunnion pins 86995-xx.
- 3) Torque fasteners according to recommended mounting torques on page 1.



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