Series II

Air Motor Installation and Operating Instructions

A DANGER

Indicates a hazard which, if not avoided, will result in serious injury or death.

WARNING Indicates a hazard which, if not avoided, could result in serious injury or death.

GENERAL SAFETY INSTRUCTIONS

AWARNING

- Read and follow all instructions carefully.
- Disconnect and lock out power before installation and maintenance. Working on or near energized equipment can result in severe injury.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.
- Read and understand the information in this section and in this manual completely before installing, operating or maintaining this equipment. Failure to follow this instruction could result in severe injury or death.

Air Motor Installation and Operating Instructions

Operating Recommendations

- Huco Air Motors are designed and built to be safe and reliable when properly used. Advice and approval should be sought from authorized Huco Dynatork personnel before any of our products are used in circumstances other than recommended herein.
- 2. Compressed air is the only medium to be used.
- 3. Air pressure should not exceed 6.9 bar (100 lb/in2)
- 4. Motors requiring lubrication must have a lubricator fitted to the air supply. Recommended lubricants are shown opposite.
- 5. Each motor should be supplied with air that is adequately filtered to remove fluids and particles above 40 microns.
- An operating temperature range of -10°C to +80°C (14°F to 176°F) is recommended.
- 7. Motors should be sited and mounted to avoid excessive vibration.
- 8. Safety or system integrity should not depend upon the assumption that leakages cannot or will not occur.
- 9. Actual response times for air motors can vary according to ambient conditions and service life.
- 10. Adequate regular maintenance is essential to ensure continuous satisfactory and safe performance.

Installation

- 1. Huco Air Motors are precision machines and are susceptible to damage by dirt particles. Cleanliness is essential during installation and service.
- 2. To prevent ingress of dirt or grit do not remove the red protective caps (Item 8) from the ports until installed.
- 3. When the motor has been mounted and the shaft connected, air supply tubes should be fitted to the ports ensuring that no dirt or grit can enter the ports.

Regal Rexnord Application Engineering: 800 626 2093

PTSAppEng@regalrexnord.com regalrexnord.com/Huco

Indicates a hazard which, if not avoided, could result in minor or moderate personal injury.

FORM

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NOTICE Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

A CAUTION

 Perform periodic inspections. Equipment may fail prematurely and could become unsafe if not properly inspected and maintained. Failure to follow this instruction could result in mild or moderate personal injury.

Commissioning

- 1. Set air pressure to zero.
- 2. Set any speed restrictor valves to the fully open position
- 3. Slowly increase air pressure until the shaft rotates under load.
- For low load applications, increase air pressure by a further 1 1.25 bar (15 – 20 lb/in2). This may not be necessary for high-load applications.
- 5. Adjust the speed restrictor to give the required speed.
- 6. The air motor will now be running at the optimum and most efficient setting.

NOTICE: It is bad practice to apply excessive line air pressure and then have a tight restriction on the exhaust port. This can cause excessive wear on the base of the pistons.

Recommended Lubricants

The following lubricants are in accordance with ISO 3448

- BP Energol HL32 (ISO)
- Caltex Rando HD32
- Esso Nuto H32
- Gulf Harmony 32
- Mobil DTE light oil
- Shell Tellus 37

Recommended Grease

- Shell Alvania RL3 (Aluminum Motor Standard)
- Rocol Foodlube (Acetal Motor Standard)

Maintenance Procedures

Huco Air Motors are precision engineered and are designed for a long working life. The wearing parts are the pistons, cylinder liners and seals, which can be replaced as part of a routine maintenance schedule.

For this purpose, spare parts kits can be purchased from Huco Dynatork or our authorized distributors, comprising three pistons, three liners, three piston seals and three O Rings. When ordering a spares kit please specify whether the system is lubricated or non-lubricated.

The drive shaft and rotary valve assembly are matched during manufacture and should not be removed from the motor body. In the event that they are removed they will require replacement with new parts in our factory.

As with all precision engineered machines, cleanliness is essential during dismantling and assembly. Before dismantling, the air supply ports must be covered with plastic caps and the workbench should be clean and free of debris.

Dismantling

1. Ensure that all the airlines are disconnected from the motor.



2. Remove the three countersunk screws holding the rear cover to expose the crank area. Remove the three-cylinder caps by withdrawing the four bolts on each cap.



- 3. The three exposed ports of the air flow route (2 on each cylinder cap and 3 on the body) must be protected to prevent any ingress of dirt/grit. This is critical.
- 4. Push out the three piston/liner assemblies; push outwards from the crank case with the seals and the O Rings.



5. Clean the crank area and cylinder bores using a suitable solvent to ensure it is free from dirt particles.



NOTICE: Shaft and bushings are assembled as a unit and should not be removed. If you find the shaft will not rotate freely, we recommend you contact Huco prior to any further work.

Reassembly

- 1. Ensure all parts are clean and grit free
- 2. Insert replacement piston/liner/seal assemblies ensuring that the seal is at the cylinder end
- 3. Fit the O Ring in the groove on cylinder depending on the type.
- 4. Apply a small amount of oil onto each piston



5. Locate the three-cylinders onto the motor body, secure in place using the two bolts. The bolts should be tightened evenly to ensure no leakage of air, also do not apply excessive force as this may strip the threads



- 6. Apply a small amount of grease to the crank bearing. Piston kits are supplied greased. Do not fill the crankcase with grease, as this impairs operation. New motors are supplied greased with approximately 16 grams.
- 7. Re-connect the air supply, making sure the pressure is at zero.
- 8. Slowly increase the air pressure to approx. 1 1.25 bar (15-20 lb./in) the motor should start to rotate slowly.
- 9. Disconnect air supply and replace rear cover







Itom	Description	Lub Dynatork 1	Non-Lub Dynatork 1	Acetal Dynatork 1
item		(930.10.A)	(930.15.A)	(910.15.A)
1	Body	L120101	L120101	L106001
2	Drive Shaft	L100201	L100201	L100201
3	Cover	L120302	L120302	L106301
4	Oilite bush	L102100	L102100	L102100
5	Oilite bush	L102101	L102101	L102101
6	Ball bearing	L102000	L102000	L102002
7	Ball bearing	L102001	L100201	L102003
8	Dust Cap	L102300	L102300	L102300
9	Key Woodruff	N/A	N/A	N/A
10	Pin	L102500	L102500	L102500
11	Washer	PWS.M050	PWS.M050	PWS.M050
12	Screw hex head	SCP.M050.160	SCP.M050.160	SCS.M050.160
13	Screw csk head	SSK.M040.100	SSK.M040.100	SSK.M050.160
14	Piston Liner	L100600	L103600	L103600
15	Piston seal	L102600	L102601	L102601
16	Piston	L100500	L103500	L103500
17	O ring seal	L102700	L102701	L102701
18	Piston Sleeve	N/A	N/A	N/A
19	Cylinder Cap	L120401	L120401	L106401
20	Screw cap head	SCS.M040.120	SCS.M040.120	SCS.M050.250
21	Vent air silencer	L102400	L102400	L102401
22	Plug	SSS.M060.060	SSS.M060.060	N/A
23	O ring seal	L122702	L122702	N/A
24	Air Fittings	N/A	N/A	L102201
25	Tubing	N/A	N/A	MAT00
26	Bearing Carrier	N/A	N/A	L106900







ltom	Description	Lub Dynatork 3	Non-Lub Dynatork 3	Acetal Dynatork 3
item		(930.30.A)	(930.35.A)	(910.35.A)
1	Body	L320101	L320101	L306001
2	Drive Shaft	L300201	L300201	L300201
3	Cover	L320302	L320302	L306301
4	Oilite bush	L302100	L302100	L302100
5	Oilite bush	L302101	L302101	L302101
6	Ball bearing	L302000	L302000	L302002
7	Ball bearing	L302001	L302001	L302003
8	Dust Cap	L302300	L302300	L302300
9	Key Woodruff	L302800	L302800	L302800
10	Pin	L302500	L302500	L302500
11	Washer	PWS.M080	PWS.M080	PWS.M080
12	Screw hex head	SSH.M080.150	SSH.M080.150	SSH.M080.200
13	Screw csx head	SSK.M060.150	SSK.M060.150	SSK.M.080.300
14	Piston Liner	L3006000	L303600	L303600
15	Piston seal	L302600	L302601	L302601
16	Piston	L300500	L303500	L303500
17	O ring seal	L302700	L302701	L302701
18	Piston Sleeve	L321300	L321300	N/A
19	Cylinder Cap	L320401	L320401	L603401
20	Screw cap head	SCS.M060.600	SCS.M060.600	SCS.M060.300
21	Vent air silencer	L102400	L102400	L102401
22	Plug	L322500	L322500	N/A
23	O ring seal	L302702	L302702	N/A
24	Air Fittings	N/A	N/A	L302201
25	Tubing	N/A	N/A	MAS00
26	Bearing Carrier	N/A	N/A	L306900





Itom	Description	Lub Dynatork 7	Non-Lub Dynatork 7
Item		(930.70.A)	(930.75.A)
1	Body	L720101	L720101
2	Drive Shaft	L300201	L300201
3	Cover	L320302	L320302
4	Oilite bush	L302100	L302100
5	Oilite bush	L302101	L302101
6	Ball bearing	L302000	L302000
7	Ball bearing	L302001	L302001
8	Dust Cap	L302300	L302300
9	Key Woodruff	L302800	L302800
10	Pin	L302500	L302500
11	Washer	PWS.M080	PWS.M080
12	Screw hex head	SSH.M080.150	SSH.M080.150
13	Screw csk head	SSK.M060.150	SSK.M060.150
14	Piston Liner	L721300	L721301
15	Piston seal	L702600	L702601
16	Piston	L707400	L707100
17	O ring seal	L702700	L702700
18	Piston Sleeve	N/A	N/A
19	Cylinder Cap	L720401	L720402
20	Screw cap head	SCS.M060.800	SCS.M060.800
21	Vent air silencer	L102401	L102401
22	Plug	L322500	L322500
23	O ring seal	L302702	L302702
24	Air Fittings	N/A	N/A
25	Tubing	N/A	N/A
26	Bearing Carrier	N/A	N/A

Service Kits Fitting Procedure

- Remove back flange
- Remove all three piston caps.
- Push out Pistons and liners and ensure of O ring is removed.
- Check for any debris before fitting new pistons
- Fit new Liners, Pistons and O rings assembly, ensuring piston slides when fitted.
- Refit Piston Caps.
- Refit Flange plate.
- Test run motor.

Piston service kits are available. The table below shows the sales code detailing the contents of each kit. Note piston kits contain three pistons, liners, seals and o rings.



Dynatork Ref	Dynatork 1	Dynatork 3	Dynatork 7	
Sales Code	909.15	909.35	- Cas Delaus antiana	
Piston	L103500	L303500		
Piston Liner	L103600	L303600		
Piston Seal	L102601	L302601	See Below options	
O Ring Seal	L102701	L302701		
Airway O Ring	L122702	L302702		
Lubricated service kits 909.10 and 909.30 not available - 909.15 and 909.35 are suitable replacements for these kits				

If you have arrangement 909.75M



(No piston liners)

You can update the latest spec using update kit 939.75



2017 production motors and motors updated with kit 939.75

959.75



The proper selection and application of products and components, including assuring that the product is safe for its intended use, are the responsibility of the customer. To view our Application Considerations, please visit https://www.regalrexnord.com/Application-Considerations.

To view our Standard Terms and Conditions of Sale, please visit https://www.regalrexnord.com/Terms-and-Conditions-of-Sale.

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