



# QR-25<sup>®</sup> Series Model 390

Parts Manual  
Record of Change 109

This manual contains important safety information and must be carefully read in its entirety and understood prior to installation by all personnel who install, operate and/or maintain this product.

*On-line product registration, parts ordering and warranty information is available at [www.quincycompressor.com](http://www.quincycompressor.com)*

Manual No. 2022206000

July 2014 Edition



# INTRODUCTION

This manual provides information for the following QR-25 Series, Model 390 (Record of Change 109) compressor versions:

- L Control Version L**  
head assembly with 2 unloader towers & a hydraulic unloader
- LS Control Version LS**  
head assembly with 2 unloader towers, a hydraulic unloader, & a pilot valve with a check valve assembly
- LVD Control Version LVD**  
head assembly with 2 unloader towers, a hydraulic unloader, & a pilot valve with a lockout & check valve

These compressors are aircooled, two stage, two cylinder, pressure lubricated compressors, with up to 200 PSI continuous pressure capability (*201 to 250 PSI intermittent pressure capability with proper configuration; consult factory*). The Model 390 has a 7.5" low pressure piston bore and a 4" high pressure piston bore and a 4" stroke and can be run at 400-940 RPM.

Available options included in this manual:  
-hooded air filter  
-hooded air filter / silencer

# CHANGES

*since previous printing dated January 2014:*


The bearing carrier was redesigned with a new oil pump including an oil filter.

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# MODEL & SERIAL NUMBER IDENTIFICATION

Record of Change No.

MODEL		
SERIAL NO.		
110831		

Model & Serial Number Identification Tag

The model & serial number tag is located on the handhole plate side of the crankcase. Fill in the numbers from your compressor's tag in the corresponding spaces provided here and reference this page when ordering replacement parts.

All replacement parts are to be ordered through an authorized Quincy distributor. Insist on genuine Quincy parts only! Failure to do so may void warranty.

## ORDERING REPLACEMENT PARTS

Prompt service can be rendered on repair parts orders if the following information is given:

- Item 1)** the model number, record of change number, & serial number.
- Item 2)** the exact part number needed. (Do not order by item numbers.)
- Item 3)** the exact quantity needed.
- Item 4)** the preferred type of transportation

## CRANKCASE LUBRICANT CAPACITY

Model	Capacity
390	9 qts. & 22 oz. (9.17 lit.)

## QUIN-CIP LUBRICANT

Refer to the chart below to order Quin-Cip-D or Quin-Cip compressor lubricant from your local authorized Quincy distributor.

Quin-Cip-D Lubricant (synthetic)	
SAE 30 (ISO 100)	
Quart	115468Q
Case (12 Qts.)	115438C
Quin-Cip Lubricant	
SAE 10W (ISO 32)	
Quart	112541Q032
Case (12 Qts.)	112541C032
SAE 20 (ISO 68)	
Quart	112542Q068
Case (12 Qts.)	112542C068
SAE 30 (ISO 100)	
Quart	112543Q100
Case (12 Qts.)	112543C100

**CAUTION !**

Refer to the QR-25 Series Instruction Manual for vital lubrication information.

**CAUTION !**

Follow all safety precautions outlined in the QR-25 Series instruction manual.

**WARNING !**

Do not operate this compressor without a totally enclosed belt guard or any other required safety equipment.

**DANGER !**

Air used for breathing or food processing must meet OSHA 1910.134 or FDA 21 CFR 178.3570 regulations. Failure to do so may cause severe injury or death.

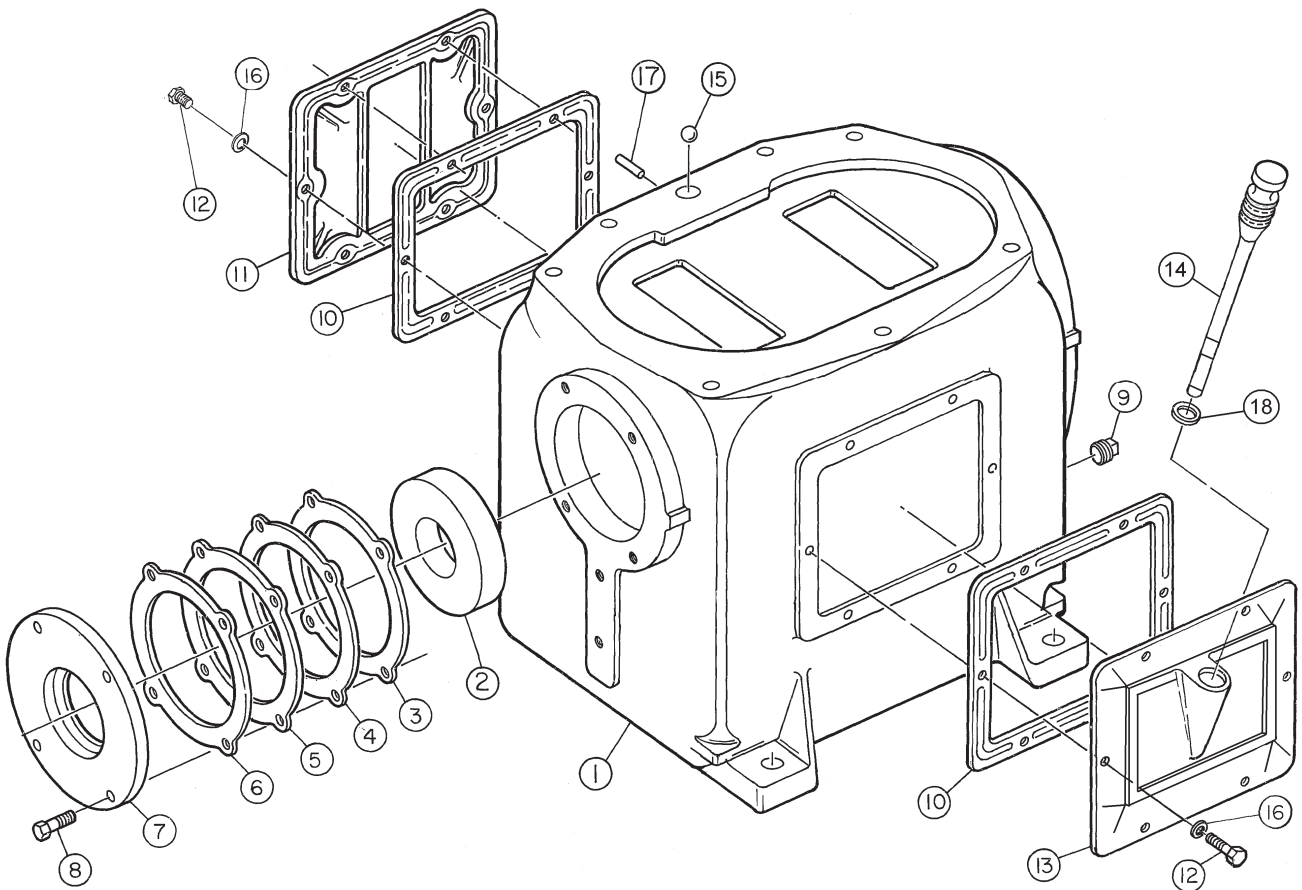
# CRANKCASE GROUP 110650

Item Number	Qty.	Part Number	Description
1	1	6946	crankcase
2	1	4357	bearing cup
3	*	1498	bearing adjustment shim, .005 steel
4	*	1498A	bearing adjustment shim, .007 plastic
5	*	1498B	bearing adjustment shim, .020 steel
6	*	1498C	bearing adjustment shim, .002 steel
7	1	6643	adjustment plate
8	4	123478-N14	hex. screw, 1/2-13 unc x 1.25, grade 5 (@ 75 ft.-lbs.)
9	1	2057	pipe plug, 1/2 npt
10	2	1315	gasket, inspection plate
11	1	1249-1	inspection plate
12	12	123478-K12	hex. screw, 5/16-18 unc x 1.00, grade 5 (@ 12 ft.-lbs.)
13	1	6849-2	inspection plate
14	1	111876-2	dipstick
15	1	5783	breather ball
16	12	110428N031	flatwasher, 5/16
17	1	5932	drive pin
18	1	112033-908	"o"ring, 3/32 wide x .82 o.d.

N.S.S. = Not Sold Separate

@ Indicates torque value in foot pounds (dry threads)

Note: For reversal of compressor rotation refer to QR-25 instruction manual.



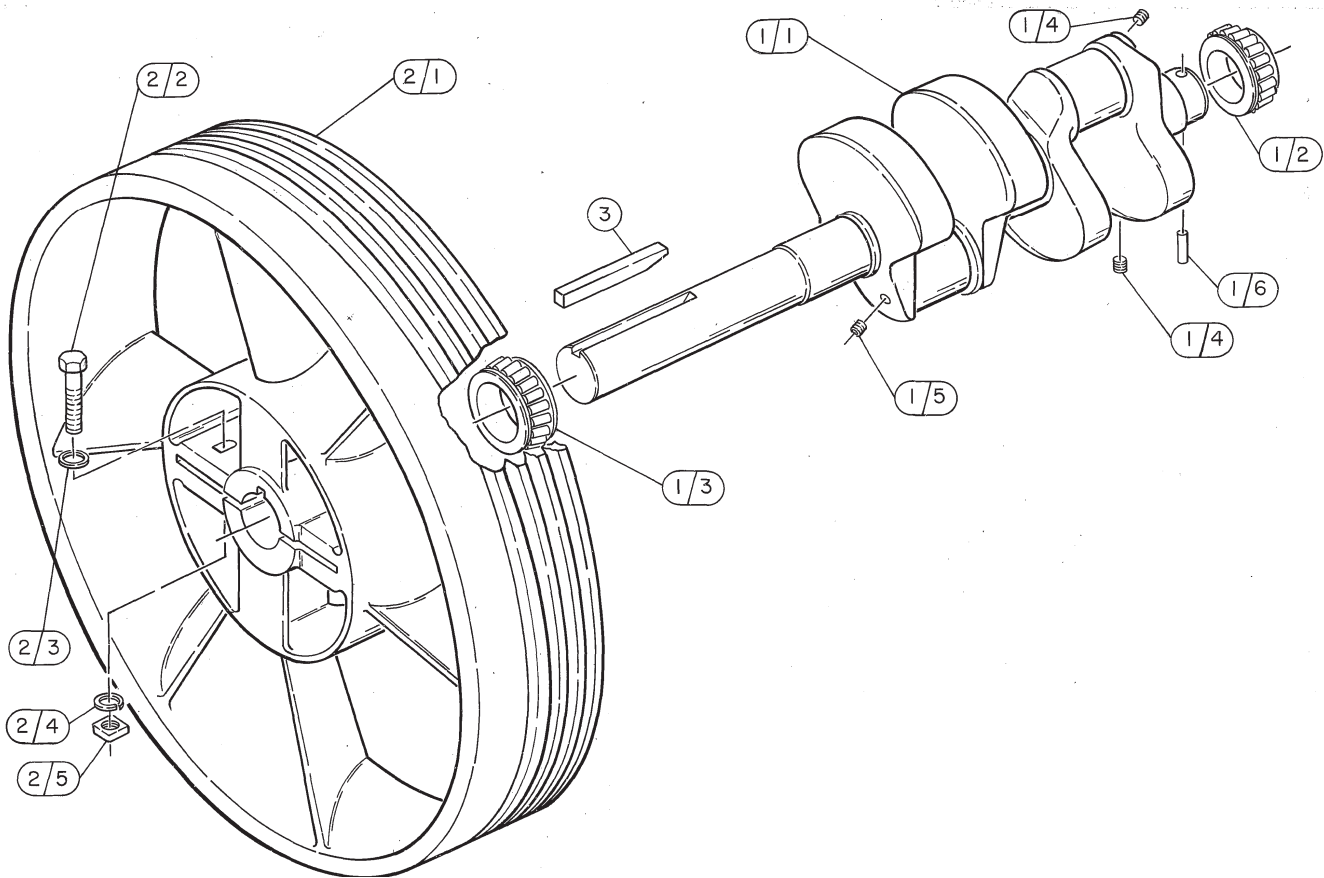
# CRANKSHAFT GROUP 110651-1

Item Number	Qty.	Part Number	Description
1	1	112521X	crankshaft assembly
1.1	1	112521	crankshaft (N.S.S.; order 112521X)
1.2	1	3776	bearing cone
1.3	1	6651	bearing cone
1.4	2	2755S	pipe plug, 1/4 npt
1.5	1	110234	orifice, 1/8 npt
1.6	1	110705-F17	roll pin, 3/16 x 1.38
2	1	110558X	sheave assembly
2.1	1	8297-1R	sheave, 23-1/2", 4G, B section, ccw (N.S.S.; order 110558X)
2.2	2	123478-Q21	hex. screw, 5/8-11 unc x 3.00, grade 5 (@ 150 ft.-lbs.)
2.3	2	115512	flatwasher-5/8
2.4	2	123115-10C	lockwasher, 5/8
2.5	2	1883-001	square nut, 5/8-11 unc
3	1	2851	key

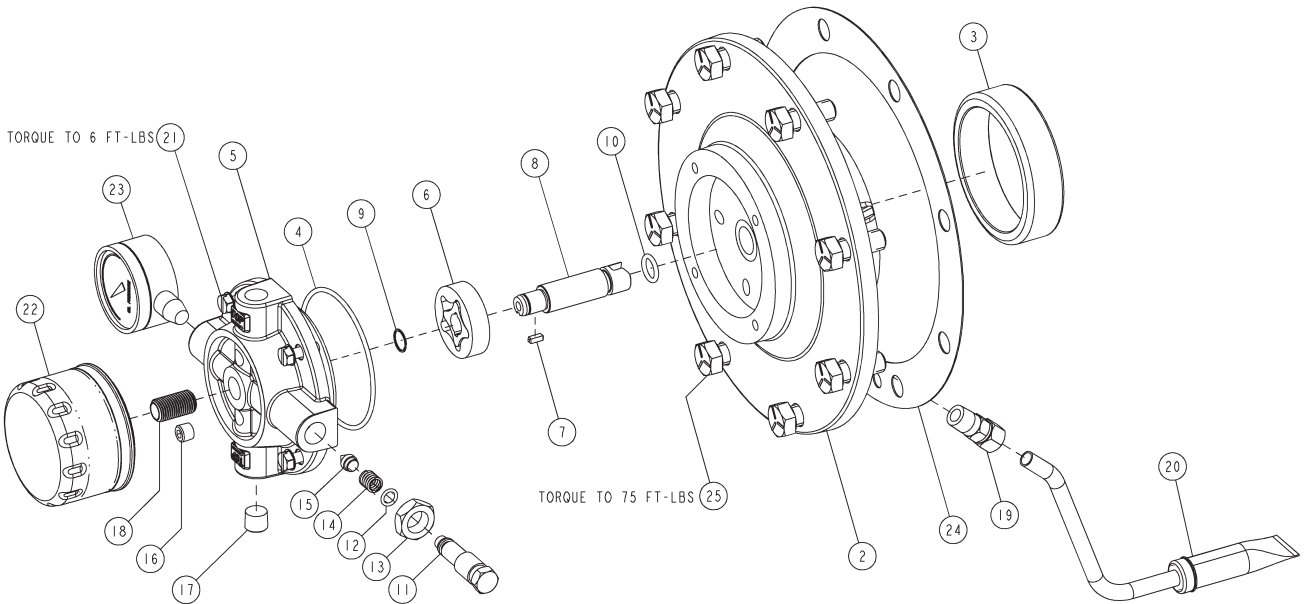
@ Indicates torque value (dry threads). Tighten multiple bolts, capscrews & hex nuts in a criss-cross or alternating pattern. Bring each fastener to the recommended torque specification in even increments.

N.S.S. = Not Sold Separate

For reversal of compressor rotation refer to QR-25 instruction manual.



# BEARING CARRIER GROUP 2024400260

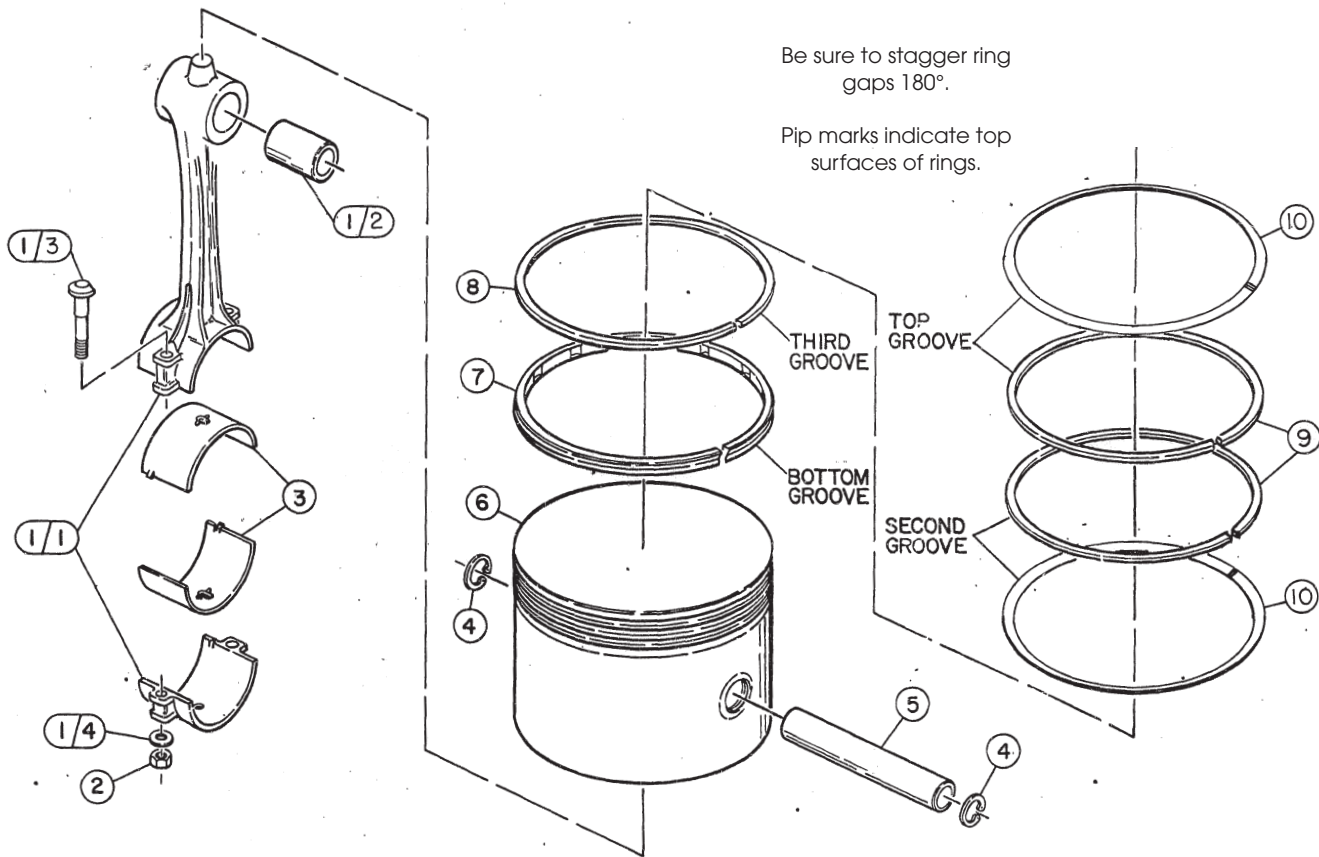


2024400260 BEARING CARRIER GROUP			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	2024400250	1	BEARING CARRIER ASSEMBLY (N.S.S. - ORDER KIT)
2	2024400201	1	BEARING CARRIER
3	3720	1	CUP, BEARING
4	22749-152	1	O-RING, VITON
5	2024400601	1	OIL PUMP HOUSING
6	160003	1	OIL PUMP
7	160075-001	1	KEY
8	2024200201	1	OIL PUMP DRIVESHAFT
9	6285	1	RETAINING RING
10	22749-112	1	O-RING, VITON
11	5489	1	ADJUSTMENT SCREW
12	22749-011	1	O-RING, VITON
13	124369-P02	1	JAM NUT
14	1160	1	SPRING
15	112857	1	NEEDLE VALVE
16	2755S	1	PIPE PLUG, 1/8 NPT
17	2719	1	PIPE PLUG, 1/4 NPT
*	18	2023400200	FILTER STUD
**	19	124393-012	TUBE FITTING,CONNECTOR, 3/8 TUBE X 1/4 NPT
***	20	2023400003	OIL PICKUP TUBE WITH SCREEN
	21	123777-J10	4 MACHINE SCREW
	22	2023400100	1 OIL FILTER
*	23	110822	1 OIL PRESSURE GAUGE
	24	5494	1 GASKET,BEARING CARRIER
	25	142578-N14	8 CAP SCREW, 1/2-13x1.25, GRADE 5
<b>MAINTENANCE PARTS</b>			
	2023400101		10 PACK OF OIL FILTERS
<b>REPLACEMENT KITS</b>			
	2024400280		BEARING CARRIER ASSEMBLY REPLACEMENT KIT INCLUDES BEARING CARRIER ASSEMBLY, FILTER, GAUGE, AND GASKET

\* INSTALL WITH PIPE SEALANT  
 \*\* INSTALL WITH RETAINING COMPOUND  
 \*\*\* INSTALL WITH PIPE SEALANT ON NPT & THREADLOCKER ON NUT  
 N.S.S. = NOT SOLD SEPARATE  
 TORQUE VALUES ARE FOR DRY THREADS. TIGHTEN MULTIPLE BOLTS, CAPSCREWS, AND HEX NUTS  
 IN A CRISS-CROSS PATTERN. BRING EACH FASTENER TO THE RECOMMENDED TORQUE  
 SPECIFICATION IN EVEN INCREMENTS.

# CONNECTING ROD & PISTON GROUP 110652-001

(low pressure)





# CONNECTING ROD & PISTON GROUP 110652-001

(low pressure)

Item Number	Qty.	Part Number	Description
1	1	40249	connecting rod assembly (N.S.S.; order 110589X)
1.1	1	110589	connecting rod (N.S.S.; order 110589X)
1.2	1	1345	connecting rod bushing (can not be purchased; order 1345SR)
1.3	2	1344	connecting rod bolt, 7/16-20 unf x 3.25
1.4	2	1319	connecting rod bolt washer
2	2	124471-M08	locknut, 7/16-20 unf (@ 40 ft.-lbs.)
3	2	2819	connecting rod bearing insert (N.S.S.; order 2819PR)
4	2	8649	retaining ring
5	1	8645	piston pin
6	1	8641	piston, LP
7	1	2338	piston oil ring
8	1	8057	piston ring
9	2	7969	piston ring
10	2	8059	spring
<b>Maintenance Parts</b>			
* 3	1	2819PR	connecting rod inserts (1 pair, standard size)
* 3	1	2819-010PR	connecting rod inserts (1 pair, .010 undersize)
1.2	1	1345SR	connecting rod bushing
6	1	8641-010	piston, LP (.010 oversize)
6	1	8641-020	piston, LP (.020 oversize)
		<b>8169</b>	<b>Piston Ring Set, LP</b> includes piston rings
		<b>2378-010</b>	<b>Piston Ring Set, LP</b> includes piston rings
		<b>2378-020</b>	<b>Piston Ring Set, LP</b> includes piston rings
		<b>8641X</b>	<b>Piston Assembly, LP (Standard)</b> includes compressor piston, piston ring, retaining ring & side sealer ring set
		<b>8641X010</b>	<b>Piston Assembly, LP (.010 Oversize)</b> includes compressor piston, piston ring, retaining ring & piston ring set
		<b>8641X020</b>	<b>Piston Assembly, LP (.020 Oversize)</b> includes compressor piston, piston pin, retaining ring & piston ring set
		<b>110589X</b>	<b>Replacement Connecting Rod Assembly</b> includes connecting rod assembly, con rod bearing inserts & locknuts
		<b>110589XUS</b>	<b>Replacement Connecting Rod Assembly (.010 Undersize)</b> includes connecting rod assembly, con rod bearing inserts & locknuts

@ Indicates torque value (dry threads). Tighten multiple bolts, capscrews & hex nuts in a criss-cross or alternating pattern. Bring each fastener to the recommended torque specification in even increments.

\* One pair required for each connecting rod assembly.

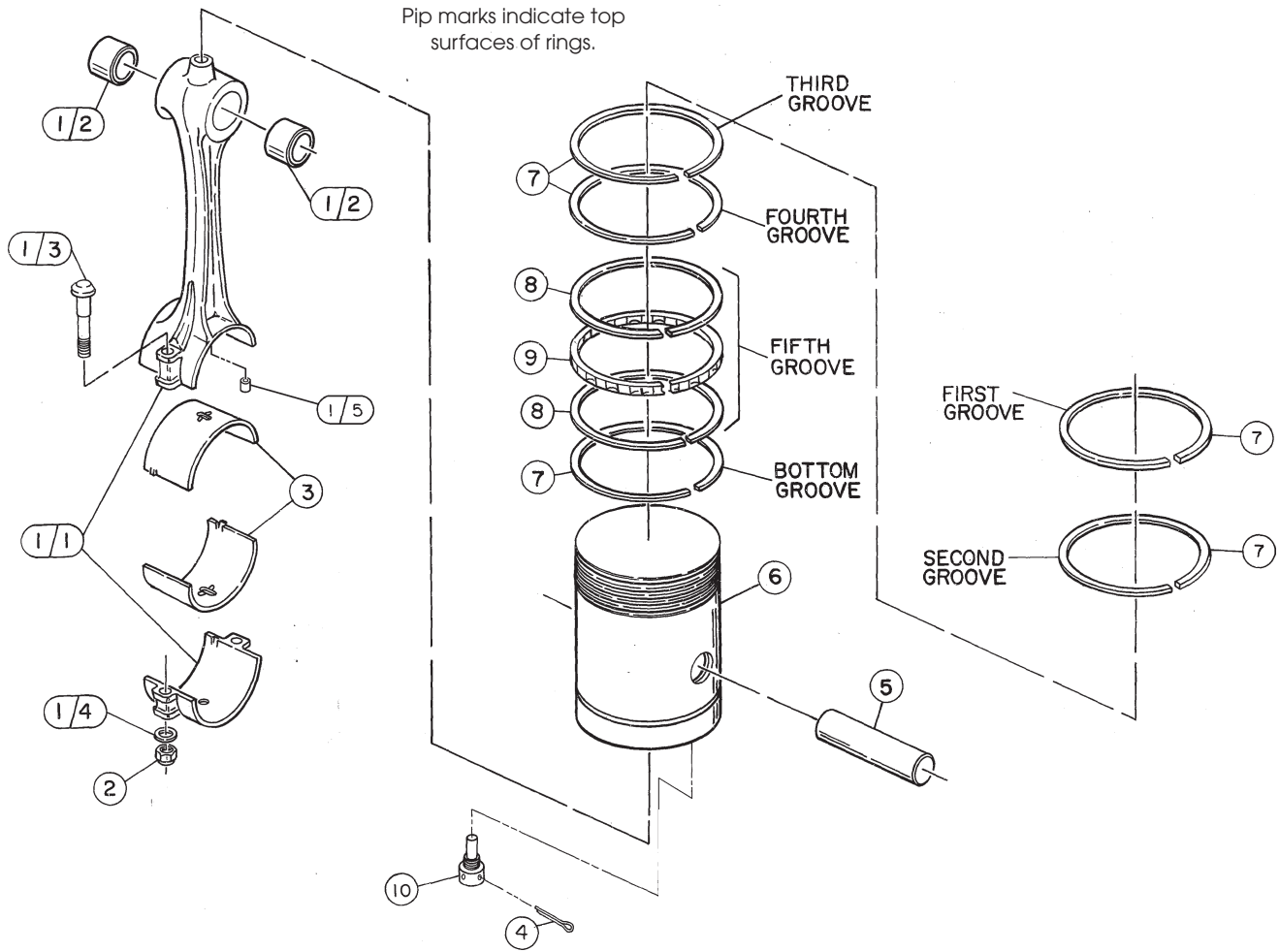
N.S.S. = Not Sold Separate

# CONNECTING ROD & PISTON GROUP 110642

(high pressure)

Be sure to stagger ring gaps 180°.

Pip marks indicate top surfaces of rings.



# CONNECTING ROD & PISTON GROUP 110642

(high pressure)

Item Number	Qty.	Part Number	Description
1	1	114999	connecting rod assembly (N.S.S.; order 110589X002)
1.1	1	40249-001	connecting rod (N.S.S.; order 110589X002)
1.2	2	112059	needle bearing
1.3	2	1344	connecting rod bolt, 7/16-20 unf x 3.25
1.4	2	1319	connecting rod bolt washer
1.5	1	110801-001	orifice plug
2	2	124471-M08	locknut, 7/16-20 unf (@ 40 ft.-lbs.)
3	2	2819	connecting rod bearing insert (N.S.S.; order 2819PR)
4	1	1298	cotter pin
5	1	2341	piston pin
6	1	5645-002	piston, HP
7	5	1464	piston ring
8	2	6591	piston rail
9	1	6590	expander oil ring
10	1	1384	piston pin lock screw

### Maintenance Parts

* 3	1	2819PR	connecting rod inserts (1 pair, standard size)
* 3	1	2819-010PR	connecting rod inserts (1 pair, .010 undersize)
6	1	5645-011	piston, HP (.010 oversize)
6	1	5645-021	piston, LP (.020 oversize)
		<b>8170A</b>	<b>Piston Ring Set, HP</b> includes piston rings, oil ring expander & piston rails
		<b>5627-010</b>	<b>Piston Ring Set, HP</b> includes piston rings, oil ring expander & piston rails
		<b>5627-020</b>	<b>Piston Ring Set, HP</b> includes piston rings
		<b>5645X001</b>	<b>Piston Assembly, HP (Standard)</b> includes high pressure piston, piston pin, cotter pin, piston ring set & lock screw
		<b>5645X011</b>	<b>Piston Assembly, HP (.010 Oversize)</b> includes high pressure piston, piston pin, cotter pin, lock screw & piston ring set
		<b>5645X021</b>	<b>Piston Assembly, HP (.020 Oversize)</b> includes high pressure piston, piston pin, cotter pin, piston ring set & lock screw
		<b>110589X002</b>	<b>Replacement Connecting Rod Assembly</b> includes connecting rod assembly, con rod bearing inserts & locknuts
		<b>110589XUS1</b>	<b>Replacement Connecting Rod Assembly (.010 Undersize)</b> includes connecting rod assembly, con rod bearing inserts & locknuts

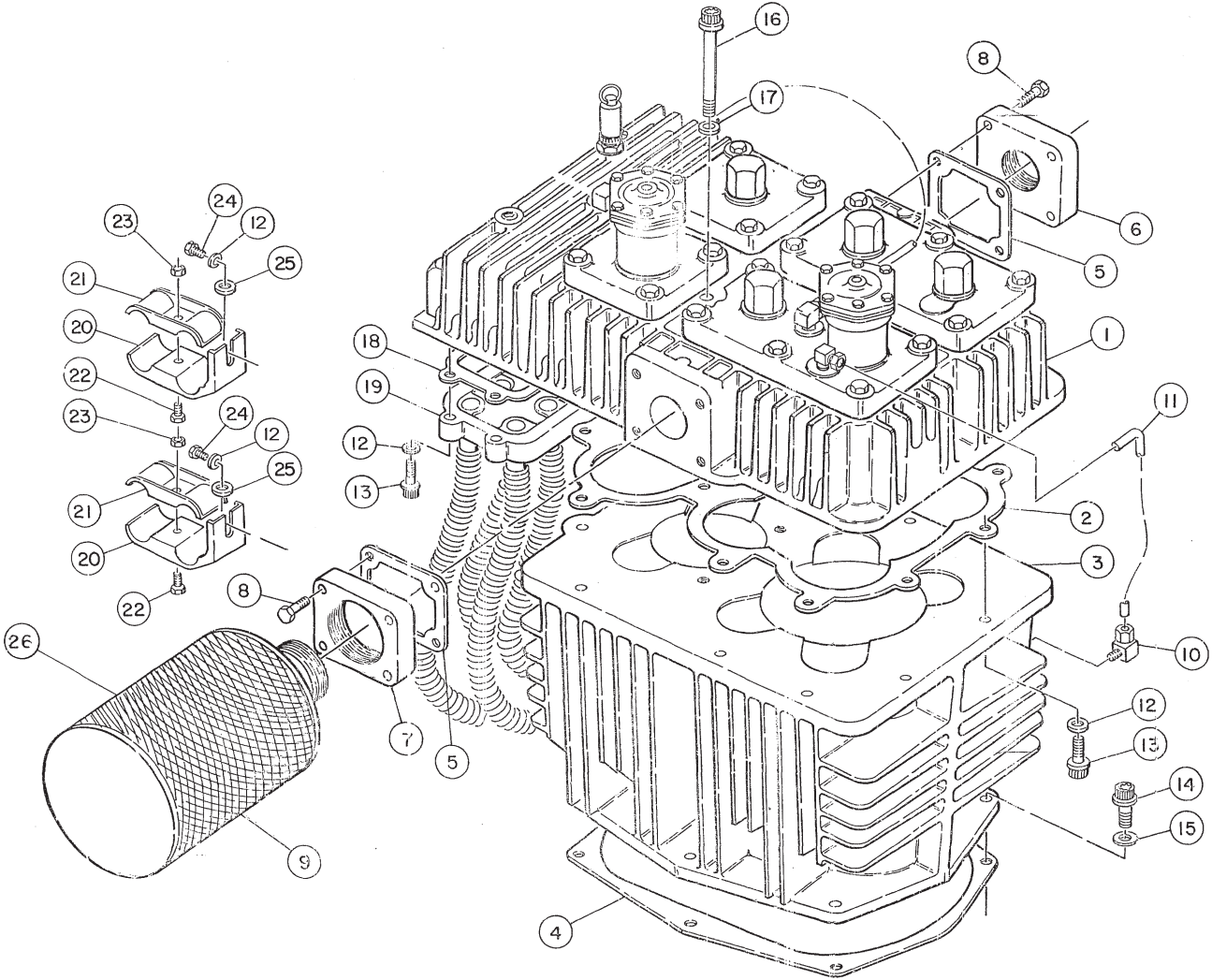
@ Indicates torque value (dry threads). Tighten multiple bolts, capscrews & hex nuts in a criss-cross or alternating pattern. Bring each fastener to the recommended torque specification in even increments.

\* One pair required for each connecting rod assembly.

N.S.S. = Not Sold Separate

# CYLINDER & HEAD GROUP 110654-001

(control versions L, LS & LVD)



# CYLINDER & HEAD GROUP 110654-001

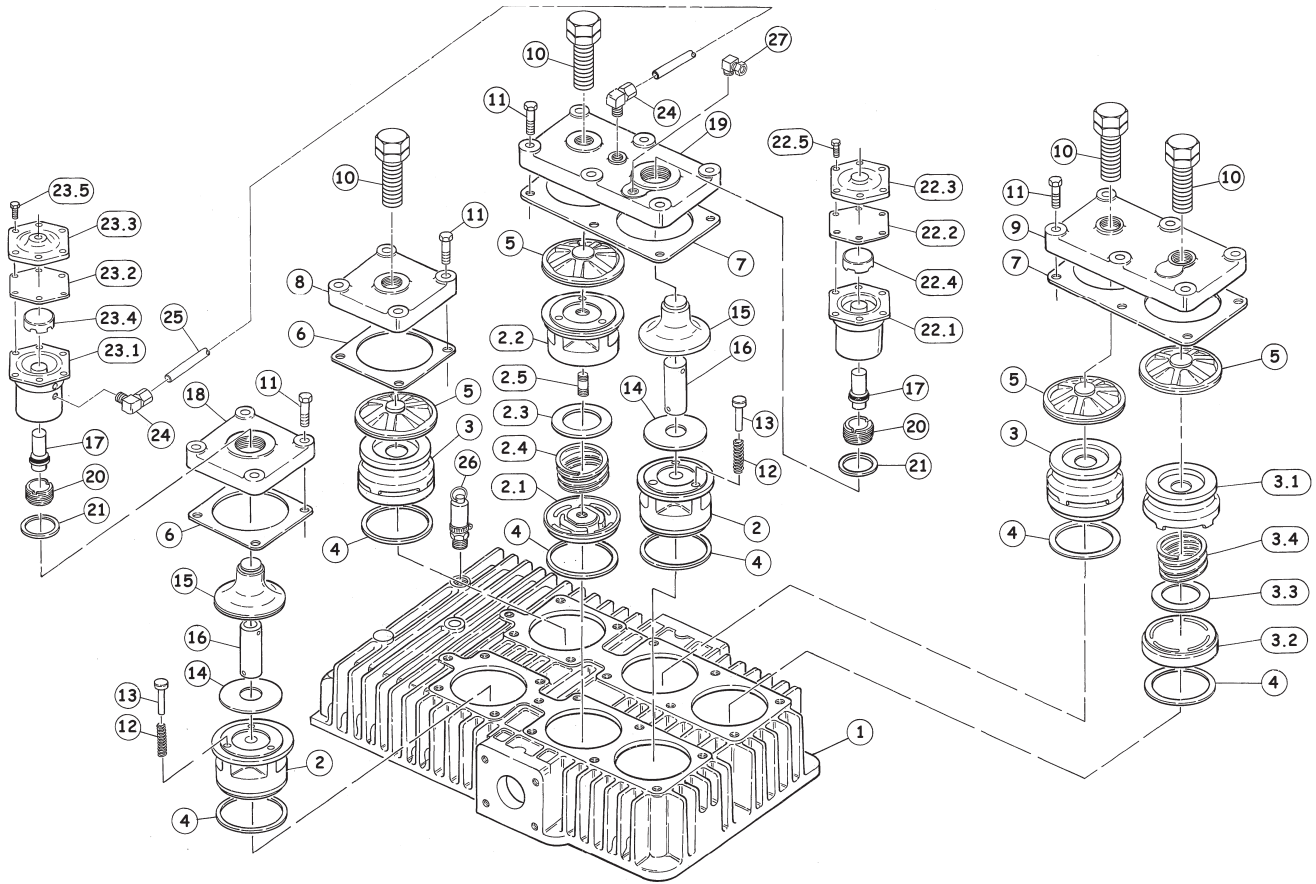
(control versions L, LS & LVD)

Item Number	Qty.	Part Number	Description
1	1	2334UU	head assembly
2	1	5695	gasket, cylinder to head
3	1	2333-1	cylinder
4	1	2344	gasket, cylinder to crankcase
5	2	2346	gasket, flange
6	1	2349	discharge flange
7	1	2350	intake flange
8	8	123478-N16	hex. screw, 1/2-13 unc x 1.75, grade 5 (@ 75 ft.-lbs.)
9	1	110377F250	air filter
or			
9	1	110377H250	hooded air filter
or			
9	1	110377S250	hooded air filter silencer
10	1	3145	tube fitting, 90° male elbow, 1/2 tube x 3/8 npt
11	3 ft.	110515-050	copper tube, 1/2 o.d.
12	15	123115-08C	lockwasher, 1/2
13	13	90386-N16	counterbore screw, 1/2-13 unc x 1.75, grade 8 (cylinder to head: @ 80 ft.-lbs.) (intercooler to head: @ 65 ft.-lbs.)
14	7	90386-Q15	counterbore screw, 5/8-11 unc x 1.50, grade 8 (@ 110 ft.-lbs.)
15	7	123115-10C	lockwasher, 5/8
16	5	90386-N27	counterbore screw, 1/2-13 unc x 5.00, grade 8 (@ 80 ft.-lbs.)
17	5	1478-1	flatwasher
18	1	5694	gasket, intercooler
19	1	2343-2	intercooler
20	2	2358	bracket
21	2	2359	intercooler bracket clamp
22	2	124571-K12	hex. screw, 5/16-24 unf x 1.00 grade 5
23	2	124471-K08	locknut, 5/16-24 unf
24	2	90386-N12	counterbore screw, 1/2-13 unc x 1.00 grade 8
25	2	110428N050	flatwasher, 1/2
			Maintenance Parts
26	1	110377E200	air filter element
		<b>2334X16L</b>	<b>Replacement Head Assembly</b> includes head assembly & gaskets

@ Indicates torque value (dry threads). Tighten multiple bolts, capscrews & hex nuts in a criss-cross or alternating pattern. Bring each fastener to the recommended torque specification in even increments.

# HEAD ASSEMBLY 2334UU

(control versions L, LS & LVD)



# HEAD ASSEMBLY 2334UU

(control versions L, LS & LVD)

Item Number	Qty.	Part Number	Description
1	1	2334	head
2	3	6949X1	suction valve assembly
2.1	1	6949	valve bumper
2.2	1	2002	valve seat
2.3	1	2087	valve disc
2.4	1	6909	valve spring
2.5	1	1429	valve stud
3	3	6948X002	discharge valve assembly
3.1	1	6948-002	valve bumper
3.2	1	1424A002	valve seat
3.3	1	2087	valve disc
3.4	1	6909	valve spring
4	6	1356	valve gasket
5	4	6952	valve retainer
6	2	2347	gasket, valve plate
7	2	2348	gasket, cover plate
8	1	6941	cover plate
9	1	6955	cover plate
* 10	4	114545-R19	bolt and jamnut assembly (bolt @ 75 ft.-lbs.; jamnut @ 50 ft.-lbs.)
11	20	123478-N16	hex. screw, 1/2-13 unc x 1.75, grade 5 (@ 75 ft.-lbs.)
12	6	6910	valve spring
13	6	1857	valve pin
14	2	6938	valve platform
15	2	6951	valve retainer
16	2	6950-001	unloader pin
17	2	7532X	unloader piston assembly
18	1	6940	cover plate
19	1	6942	cover plate
20	2	3008	holddown screw/ (@ 60 ft.-lbs.)
21	2	1556	gasket, valve
22	1	40055	unloader assembly (@ 75 ft.-lbs.) (N.S.S.; order 7483X)
22.1	1	7483	unloader body
22.2	1	1855	diaphragm
22.3	1	1818B	diaphragm cover plate
22.4	1	5910	diaphragm disc
22.5	6	7499	hex. screw, 1/4-20 unc x .75, grade 2 (@ 72 in.-lbs.)
23	1	40192	unloader assembly (@ 75 ft.-lbs.), (N.S.S.; order 8272X)
23.1	1	8272	unloader body
23.2	1	1855	diaphragm
23.3	1	1818B	diaphragm cover plate
23.4	1	5910	diaphragm disc
23.5	6	7499	hex. screw, 1/4-20 unc x .75, grade 2 (@ 72 in.-lbs.)
24	2	1642	tube fitting, 90° male elbow, 1/4 tube x 1/8 npt
25	2 ft.	110515-025	copper tube, 1/4 o.d.
26	1	3022-100	pressure relief valve
27	1	3145	tube fitting, 90° male elbow, 1/2 tube x 3/8 npt

CONTINUED ON PAGE 18.

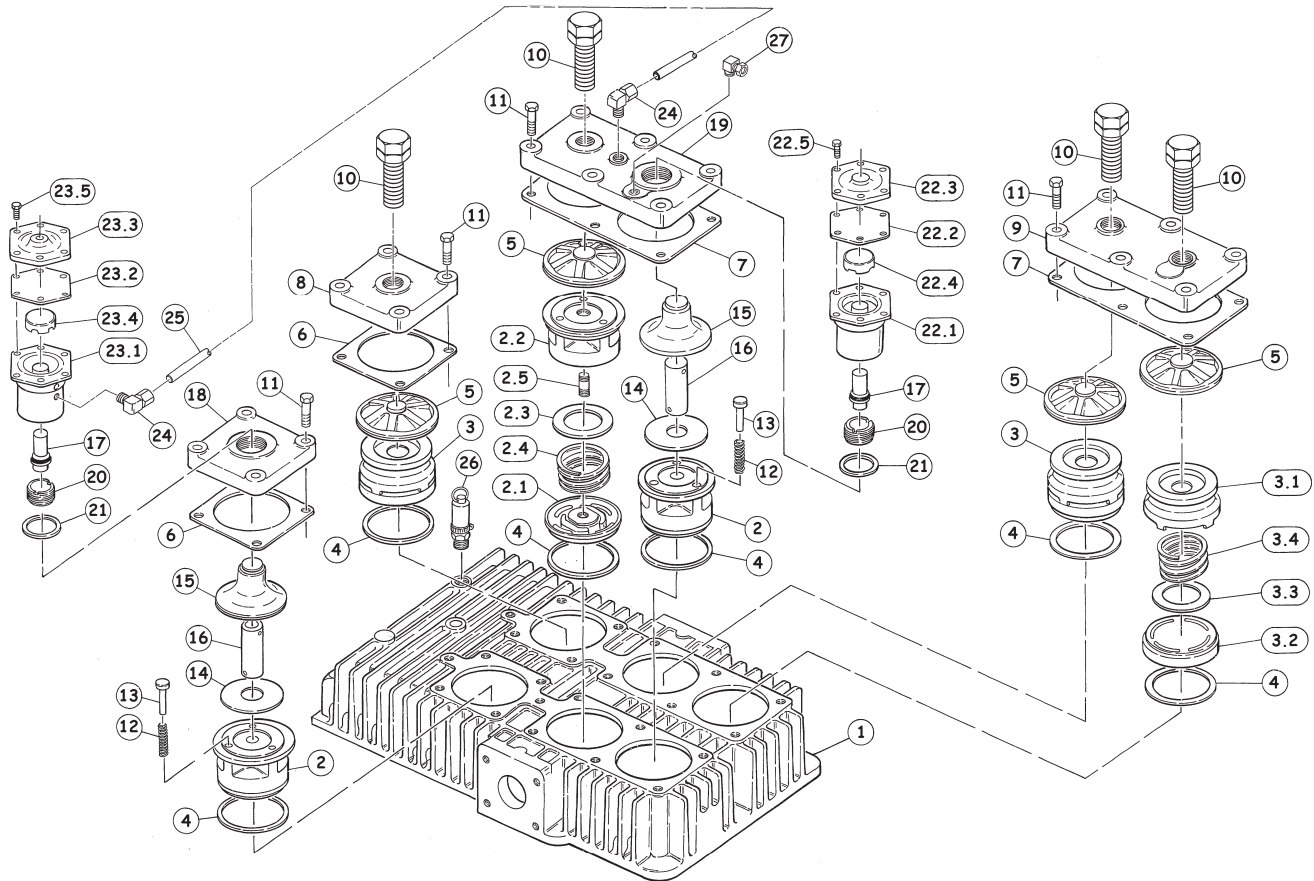
@ Indicates torque value (dry threads). Tighten multiple bolts, capscrews & hex nuts in a criss-cross or alternating pattern. Bring each fastener to the recommended torque specification in even increments.

N.S.S. = Not Sold Separate

\* Apply Loctite 272 during assembly

# HEAD ASSEMBLY 2334UU

(control versions L, LS & LVD)





# HEAD ASSEMBLY 2334UU

(control versions L, LS & LVD)

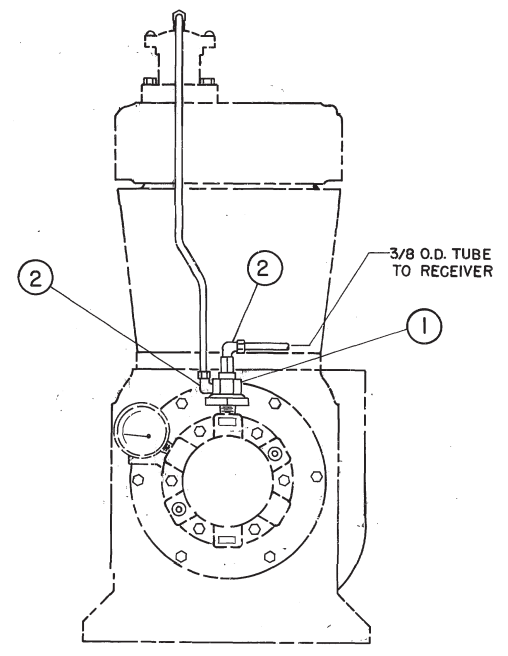
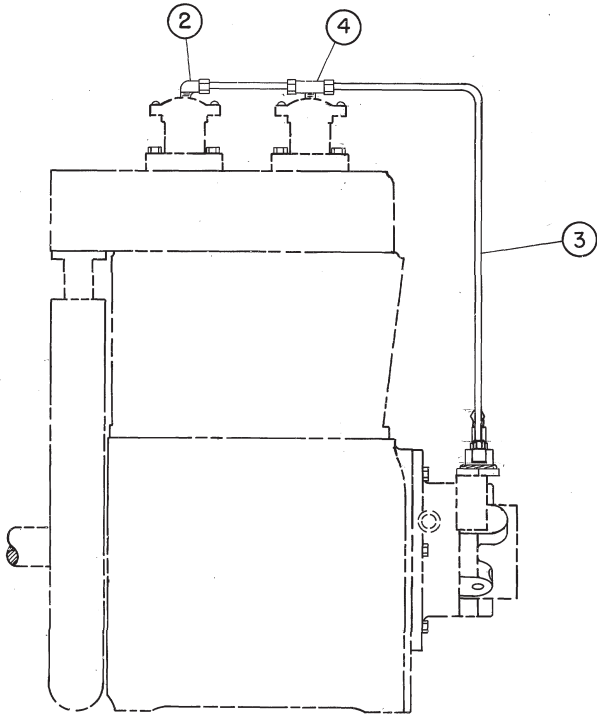
Item Number	Qty.	Part Number	Description
Maintenance Parts			
	1	<b>6949X</b>	<b>Replacement Suction Valve Assembly</b> includes suction valve assembly & gasket valve
	2	<b>6949XU</b>	<b>Suction Valve Assembly</b> includes suction valve assembly, unloader pin spring, valve pin & valve gasket
	3	<b>6948X2</b>	<b>Replacement Discharge Valve Assembly</b> includes discharge valve assembly & valve gasket
	1	<b>7483X</b>	<b>Replacement Suction Valve Assembly</b> includes unloader assembly, unloader piston assembly, valve gasket & pipe plug
	1	<b>8272X</b>	<b>Replacement Suction Valve Assembly</b> includes unloader piston assembly, unloader assembly & valve gasket
Parts for use with diester or phosphate ester synthetic based lubricants			
23.2	1	1855S	diaphragm
24.2	1	1855S	diaphragm

@ Indicates torque value (dry threads). Tighten multiple bolts, capscrews & hex nuts in a criss-cross or alternating pattern. Bring each fastener to the recommended torque specification in even increments.  
 N.S.S. = Not Sold Separate

# CONTROL GROUP 110860

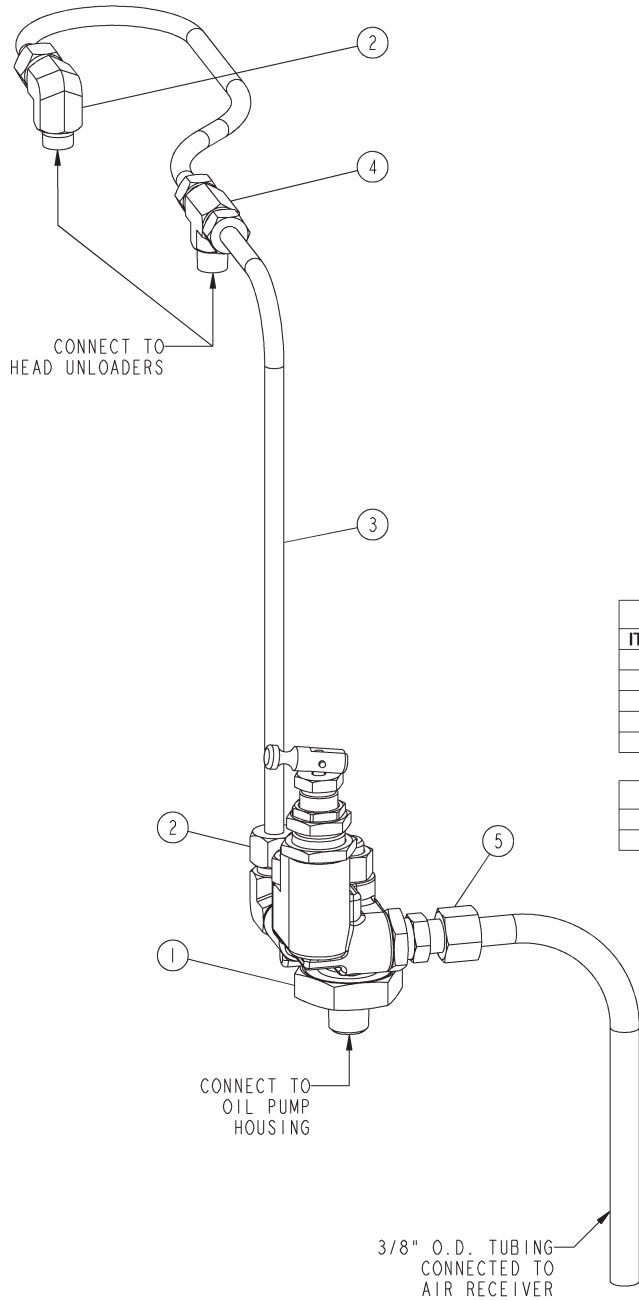
(control version L)

Item Number	Qty.	Part Number	Part Number	Description
		<b>0-200 p.s.i.</b>	<b>201-500 p.s.i.</b>	
1	1	110827-001	110827-002	hydraulic unloader assembly
2	3	1642	1642	tube fitting, 90° male elbow, 1/4 tube x 1/8 npt
3	4 ft.	110515-025	110515-025	copper tube, 1/4 o.d.
4	1	1665	1665	tube fitting, male branch tee, 1/4 tube x 1/4 tube x 1/8 npt
<b>Maintenance Parts</b>				
		<b>113225</b>	<b>113225</b>	<b>Hydraulic Unloader Repair Kit</b> includes diaphragm, stem assembly, inlet filter & fitting assembly, spring (0-200 p.s.i.) and spring (201-500 p.s.i., red color code)



# CONTROL GROUP 2023903355

(control version LS)



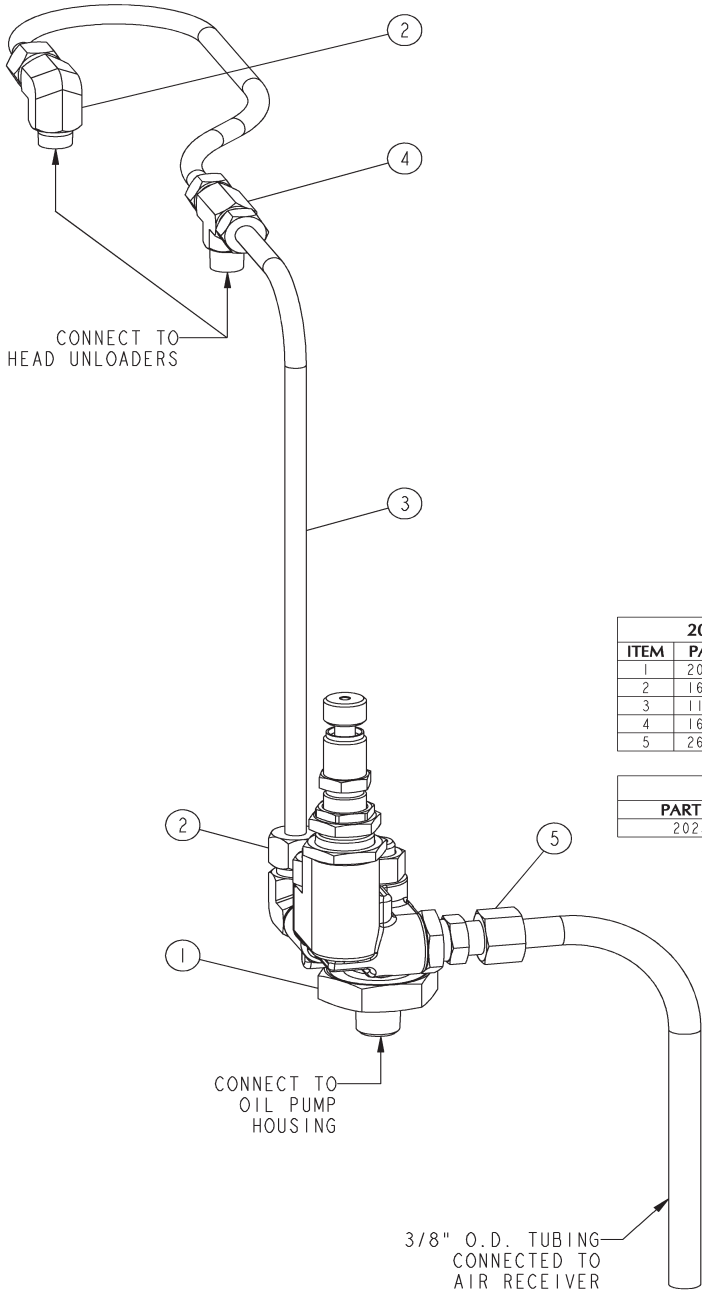
2023903355 LS CONTROL GROUP (STANDARD 165-175 PSI)			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	2023903305	1	LS CONTROL VALVE, 165-175 PRESET
2	1642	2	TUBE FITTING, 90° ELBOW, 1/4TX1/8MP
3	110515-025	1	1/4" COPPER TUBING - 5 FT.
4	1665	1	MALE BRANCH TEE 1/4T X 1/8P
5	2616	1	TUBE FITTING, STRAIGHT, 3/8 TUBE X 1/4 NPT

MAINTENANCE PARTS	
PART NUMBER	DESCRIPTION
2023903290	CONTROL VALVE INLET FILTER

\* See page 19 for optional pilot valves that must be used with respective pressure ranges.

# CONTROL GROUP 2023903255

(control version LVD)

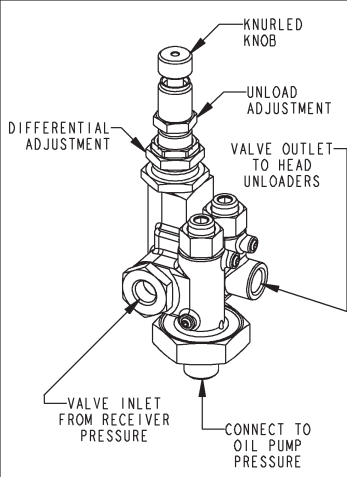


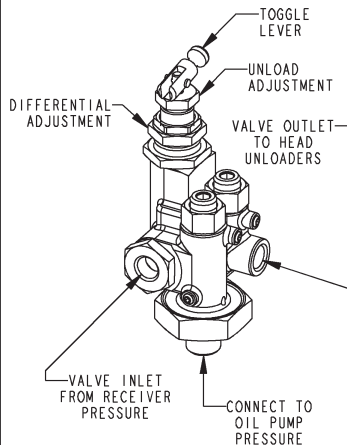
2023903255 LVD CONTROL GROUP (STANDARD 155-165 PSI)			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	2023903205	1	LVD CONTROL VALVE, 155-165 PRESET
2	1642	2	TUBE FITTING, 90° ELBOW, 1/4T X 1/8MP
3	110515-025	1	1/4" COPPER TUBING - 5 FT.
4	1665	1	MALE BRANCH TEE 1/4T X 1/8P
5	2616	1	TUBE FITTING, STRAIGHT, 3/8 TUBE X 1/4 NPT

MAINTENANCE PARTS	
PART NUMBER	DESCRIPTION
2023903290	CONTROL VALVE INLET FILTER

\* See page 19 for optional pilot valves that must be used with respective pressure ranges.

# PILOT VALVES

<b>COMBINATION VALVES - CONTROL VERSION "LVD"</b> CONTAINS THE HYDRAULIC UNLOADER, PILOT VALVE, AND CHECK VALVE IN A SINGLE PART						
	PILOT SETTINGS	QUINCY PART #	FACTORY PRE-SET:		*CUSTOMER RE-SETTABLE:	
	SEE WARNING BELOW		LOAD PRESSURE (PSI)	UNLOAD PRESSURE (PSI)	LOAD PRESSURE RANGE (PSI)	UNLOAD PRESSURE RANGE (PSI)
	CUSTOM PRESSURE SETTING	2023903201	100	115	**	51-120
		2023903202	130	140	**	121-250
		2023903203	450	500	**	251-500
	STANDARD 1-STAGE COMPRESSOR	2023903204	85	95	**	51-120
	STANDARD 2-STAGE COMPRESSOR	2023903205	155	165	**	121-250

<b>COMBINATION VALVES - CONTROL VERSION "LS"</b> CONTAINS THE HYDRAULIC UNLOADER, PILOT VALVE, AND CHECK VALVE IN A SINGLE PART						
	PILOT SETTINGS	QUINCY PART #	FACTORY PRE-SET:		*CUSTOMER RE-SETTABLE:	
	SEE WARNING BELOW		LOAD PRESSURE (PSI)	UNLOAD PRESSURE (PSI)	LOAD PRESSURE RANGE (PSI)	UNLOAD PRESSURE RANGE (PSI)
	CUSTOM PRESSURE SETTING	2023903301	100	110	**	51-120
		2023903302	130	140	**	121-250
		2023903303	450	500	**	251-500
	STANDARD 1-STAGE COMPRESSOR	2023903304	90	100	**	51-120
	STANDARD 2-STAGE COMPRESSOR	2023903305	165	175	**	121-250

\* THE PILOT IS SUPPLIED PRESET FROM THE FACTORY. IF THE PILOT NEEDS TO BE RESET, REFER TO THE QR-25 SERIES INSTRUCTION MANUAL FOR INSTRUCTIONS.

\*\* SEE DIFFERENTIAL SETTING CHART.  $LOAD\ PRESSURE = UNLOAD\ PRESSURE - DIFFERENTIAL$ .

DIFFERENTIAL SETTING CHART	
UNLOAD PRESSURE (PSI)	DIFFERENTIAL MIN-MAX (PSI)
51-175	10-15
175-250	15-25
251-500	25-50

**WARNING!**  
NOT ALL PILOTS ARE FOR USE WITH ALL COMPRESSOR SYSTEMS. MAKE SURE THAT THE PILOT YOU ORDER IS SET WITHIN THE SAFE OPERATING LIMITS OF YOUR COMPRESSOR. FAILURE TO HEED THIS WARNING COULD RESULT IN AN EXPLOSION.  
REFER TO THE "INTRODUCTION" SECTION OF YOUR PARTS MANUAL FOR THE SAFE OPERATING LIMITS OF YOUR COMPRESSOR.

# SUCTION VALVE UNLOADER ASSEMBLIES

## Description

The Quincy suction valve unloader assembly consists of unloading arrangements on the suction valves, having a plunger to contact the suction valve disc and an unloader pilot valve to automatically regulate the passing of receiver pressure to the unloading arrangement.

## Application

Suction valve unloader assemblies are recommended for use on Quincy compressors where the compressor is to run continuously and a constant pressure is to be maintained. The purpose is to automatically unseat the suction valve of the compressor when the air supply is greater than the demand.

## Operation

Unloading occurs when receiver pressure is sufficient to overcome pilot valve spring pressure. The check ball is then unseated, allowing receiver pressure to pass to the unloading arrangements. The compressor will run unloaded until the receiver pressure drops to a predetermined level. At this time, the action of the ball is reversed, shutting off receiver pressure to the unloader arrangement and venting the unloader to atmosphere. This allows the compressor to load. The drive, either electric motor or combustion engine, runs continuously and must be started and stopped manually.

The LS control version is equipped with a toggle lever on the pilot valve which can be flipped to provide manual unloading.

The LVD control version is designed to provide a choice between "start/stop" or "continuous run" operation. The LVD pilot valve can be set for "start/stop" operation by turning the knurled knob at the end of the pilot valve clockwise until it stops. Under these circumstances a pressure switch is required to stop the motor. Failure to use a pressure switch, with the pilot valve locked out, could result in unsafe conditions.

### WARNING !

A pressure switch must be incorporated whenever an LVD pilot valve is employed as part of the control system.

The compressor will operate in the continuous run mode if the knurled knob on the LVD pilot valve is turned counterclockwise until it stops.

## Installation

The pilot valve is to be connected to the air receiver using a minimum of 3/8" o.d. copper tube. Compressors in the field, not equipped with a suction valve unloader assembly, can be converted to constant speed. Consult your local Quincy distributor for assistance with conversion procedures.

## Service

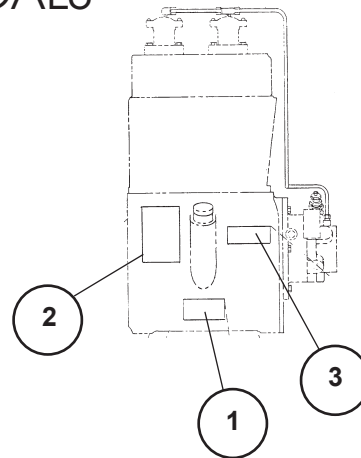
Periodically check the filter & screens in the inlet of the pilot valve to make sure they are free of obstructions. If they become clogged, remove and clean or replace. Inspect the "o"ring located in the opposite end of the pilot valve body for wear or damage; replace if necessary.

## Adjustment

The unloading pressure is adjustable and is regulated by turning the hex nut (marked "unload adj." in cross sectional illustrations of pilot valves). Turn the hex nut clockwise to increase and counterclockwise to decrease the unloading pressure.

The differential (difference between unloading and loading pressure) is set by turning the hex nut marked "differential adjustment" in the illustrations of the pilot valves on previous pages. Increase the differential pressure by turning the hex nut clockwise - decrease by turning counterclockwise. Tighten the locknuts after adjustment.

## DECALS



### Decals for QR 390 Basic Compressor

Item #	Qty.	Part Number	Description
1	1	110831	serial number & nameplate
2	1	127889-A	decal, CAUTION!/manual/"Failure to follow..."
3	1	127889-B	decal, DANGER! / "Air used for breathing..."

\* Not sold separate; order 127889.

<b>Head Kit K390A</b>			
Item #	Qty.	Part Number	Description
	6	2087	valve disc
	6	6909	valve spring
	6	1356	valve gasket
	2	2348	gasket, cover plate
	2	2347	gasket, valve plate
	2	1556	gasket, valve
	2	1855	diaphragm
	1	5695	gasket, cylinder to head
	1	110377E200	air filter element
	1	5694	gasket, intercooler

<b>Overhaul Kit K390B</b>			
Item #	Qty.	Part Number	Description
	2	2819PR	connecting rod inserts (1 pair)
	1	8170A	Piston Ring Set, HP
	1	8169A	Piston Ring Set, LP
	1	7079	gasket set
	2	1855	diaphragm
	6	2087	valve disc
	6	6909	valve spring
	1	110377E200	air filter element

<b>Piston Pin Kit K390F</b>			
Item #	Qty.	Part Number	Description
	1	2341	piston pin
	1	8645	piston pin
	2	1345	connecting rod bushing

<b>Oil Pump Repair Kit 2022132306</b>			
Item #	Qty.	Part Number	Description
	1	160003	oil pump gerotor
	1	2024200201	driveshaft
	1	160075-001	key
	1	6285	retaining ring
	1	22749-011	"o"ring
	1	22749-112	"o"ring
	1	22749-152	"o"ring

<b>Yearly Maintenance Kit 110516-390</b>			
Item #	Qty.	Part Number	Description
	2	1855	diaphragm
	6	1857	valve pin
	6	2087	valve disc
	2	6283	hydraulic unloader filter
	6	6909	valve spring
	6	6910	valve spring
	1	7079	gasket set
	1	110822	oil pressure gauge

<b>Basic Compressor Repair Kit 2022118442</b>			
Item #	Qty.	Part Number	Description
	1	2341	piston pin
	1	110377E200	air filter element
	1	110774	"o"ring kit
	1	2023400100	oil filter
	2	1345SR	connecting rod bushing
	6	2087	valve disc
	2	2819PR	connecting rod inserts (1 pair)
	1	3720	bearing cup
	1	3776	bearing cone
	1	4357	bearing cup
	1	6651	bearing cone
	6	6909	valve spring
	1	7079	gasket set
	1	8169	piston ring set
	1	8170A	piston ring set
	1	8645	piston pin

<b>Recommended Spare Parts</b>			
Item #	Qty.	Part Number	Description
	2	1855	unloader diaphragm
	or		
*	2	1855S	unloader diaphragm
	3	6949X	suction valve assembly
	3	6948X2	discharge valve assembly
	2	2819PR	connecting rod inserts (1 pair)
	1	110822	oil pressure gauge
	1	2022132306	oil pump repair kit
	1	110832-051	pilot repair kit
	1	7079	gasket set
	1	110377E200	air filter element
	1	2023903290	control valve inlet filter
	1	113225	hydraulic unloader repair kit

\* For phosphate ester synthetic lubricated models

<b>Gasket Set 7079</b>			
Item #	Qty.	Part Number	Description
	2	1315	inspection plate gasket
	6	1356	valve gasket
	3	1498	bearing shim, .005
	3	1498A	bearing shim, .007
	1	1498B	bearing shim, .020
	2	1498C	bearing shim, .002
	2	1556	valve gasket
	1	2344	gasket, cylinder to crankcase
	2	2346	flange gasket
	2	2347	valve plate gasket
	2	2348	cover plate gasket
	1	5494	bearing carrier gasket
	1	5694	intercooler gasket
	1	5695	gasket, cylinder to head
	1	6679	oil inlet bracket gasket

# TYPICAL UNIT REPAIR PARTS LIST

The parts listed here are for *standard* QR 390 (up to 175 PSI) units and may or may not be applicable to custom built units. Check with your local authorized Quincy distributor for parts that can be used for custom built units. Make sure the components you order are rated within the safe operating limits of your system. If you are doubtful about which components to order, contact your local Quincy distributor.

## (QR 390 simplex - horizontal tank - electric motor)

Qty	Part Number	Part Number	Part Number	Description
	<b>120 gal.</b>		<b>200 gal.</b>	
1	113271-200	113273-200		tank (200 PSI max. working pressure)
1	113278-001	<i>113282-001</i>		top plate
1	111136-050	111136-050		tank drain valve
1	111136-100	111136-100		ball valve
1	110514-300	110514-300		pressure gauge
1	110512-003	110512-003	§	pressure switch (135-175 PSI)
1	110513-200	110513-200		pressure relief valve (200 PSI)
1	113404	113404		discharge tube
2	111265	111265		ferrule/sleeve
	<b>20 h.p.</b>			
3	<i>110258B103</i>			drive belt
1	<i>110476</i>			motor pulley
1	<i>8936</i>			motor pulley bushing
1	<i>113229</i>			belt guard assembly
	<b>200v, 3Ø</b>		<b>230/460v, 3Ø</b>	
1	<i>40658</i>	<i>5177</i>		20 h.p. motor (ODP)

§ 2298-175 pressure switch for base mounted units.

## (QR 390 duplex - horizontal tank - electric motor)

Qty	Part Number	Part Number	Part Number	Description
	<b>240 gal.</b>			
1	113470-200			tank (200 PSI max. working pressure)
2	<i>113282-001</i>			top plate
1	111136-050			tank drain valve
1	111136-100			ball valve
1	110514-300			pressure gauge
2	110512-003			pressure switch (135-175 PSI)
1	110513-200			pressure relief valve (200 PSI)
2	113566			discharge tube
4	111265			ferrule/sleeve
	<b>20 h.p.</b>			
6	<i>110258B103</i>			drive belt
2	<i>110476</i>			motor pulley
2	<i>8936</i>			motor pulley bushing
2	<i>113229</i>			belt guard assembly
	<b>200v, 3Ø</b>		<b>230/460v, 3Ø</b>	
2	<i>40658</i>	<i>5177</i>		20 h.p. motor (ODP)

Part numbers shown in italics apply to tank mounted units and base mounted units.



# QUINCY COMPRESSOR STANDARD TERMS AND CONDITIONS

**LEGAL EFFECT:** Except as expressly otherwise agreed to in writing by an authorized representative of Seller, the following terms and conditions shall apply to and form a part of this order and any additional and/or different terms of Buyer's purchase order or other form of acceptance are rejected in advance and shall not become a part of this order.

The rights of Buyer hereunder shall be neither assignable nor transferable except with the written consent of Seller.

This order may not be canceled or altered except with the written consent of Seller and upon terms which will indemnify Seller against all loss occasioned thereby. All additional costs incurred by Seller due to changes in design or specifications, modification of this order or revision of product must be paid for by Buyer.

In addition to the rights and remedies conferred upon Seller by this order, Seller shall have all rights and remedies conferred at law and in equity and shall not be required to proceed with the performance of this order if Buyer is in default in the performance of such order or of any other contract or order with seller.

**TERMS OF PAYMENT:** Unless otherwise specified in the order acknowledgment, the terms of payment shall be 1% 15, net forty-five (45) days after shipment. These terms shall apply to partial as well as complete shipments. If any proceeding be initiated by or against Buyer under any bankruptcy or insolvency law, or in the judgment of Seller the financial condition of Buyer, at the time the equipment is ready for shipment, does not justify the terms of payment specified, Seller reserves the right to require full payment in cash prior to making shipment. If such payment is not received within fifteen (15) days after notification of readiness for shipment, Seller may cancel the order as to any unshipped item and require payment of its reasonable cancellation charges.

If Buyer delays shipment, payments based on date of shipment shall become due as of the date when ready for shipment. If Buyer delays completion of manufacture, Seller may elect to require payment according to percentage of completion. Equipment held for Buyer shall be at Buyer's risk and storage charges may be applied at the discretion of Seller.

Accounts past due shall bear interest at the highest rate lawful to contract for but if there is no limit set by law, such interest shall be eighteen percent (18%). Buyer shall pay all cost and expenses, including reasonable attorney's fees, incurred in collecting the same, and no claim, except claims within Seller's warranty of material or workmanship, as stated below, will be recognized unless delivered in writing to Seller within thirty (30) days after date of shipment.

**TAXES:** All prices exclude present and future sales, use, occupation, license, excise, and other taxes in respect of manufacture, sales or delivery, all of which shall be paid by Buyer unless included in the purchase price at the proper rate or a proper exemption certificate is furnished.

**ACCEPTANCE:** All offers to purchase, quotations and contracts of sales are subject to final acceptance by an authorized representative at Seller's plant.

**DELIVERY:** Except as otherwise specified in this quotation, delivery will be F. O. B. point of shipment. In the absence of exact shipping instruction, Seller will use its discretion regarding best means of insured shipment. No liability will be accepted by Seller for so doing. All transportation charges are at Buyer's expense. Time of delivery is an estimate only and is based upon the receipt of all information and necessary approvals. The shipping schedule shall not be construed to limit seller in making commitments for materials or in fabricating articles under this order in accordance with Seller's normal and reasonable production schedules.

Seller shall in no event be liable for delays caused by fires, acts of God, strikes, labor difficulties, acts of governmental or military authorities, delays in transportation or procuring materials, or causes of any kind beyond Seller's control. No provision for liquidated damages for any cause shall apply under this order. Buyer shall accept delivery within thirty (30) days after receipt of notification of readiness for shipment. Claims for shortages will be deemed to have been waived if not made in writing with ten (10) days after the receipt of the material in respect of which any such shortage is claimed. Seller is not responsible for loss or damage in transit after having received "In Good Order" receipt from the carrier. All claims for loss or damage in transit should be made to the carrier.

**TITLE & LIEN RIGHTS:** The equipment shall remain personal property, regardless of how affixed to any realty or structure. Until the price (including any notes given therefore) of the equipment has been fully paid in cash, Seller shall, in the event of Buyer's default, have the right to repossess such equipment.

**PATENT INFRINGEMENT:** If properly notified and given an opportunity to do so with friendly assistance, Seller will defend Buyer and the ultimate user of the equipment from any actual or alleged infringement of any published United States patent by the equipment or any part thereof furnished pursuant hereto (other than parts of special design, construction, or manufacture specified by and originating with Buyer), and will pay all damages and costs awarded by competent court in any suit thus defended or of which it may have had notice and opportunity to defend as aforesaid.

**STANDARD WARRANTY:** Seller warrants that products of its own manufacture will be free from defects in workmanship and materials under normal use and service for the period specified in the product instruction manual. Warranty for service parts will be Ninety (90) days from date of factory shipment. Electric Motors, gasoline and diesel engines, electrical apparatus and all other accessories, components and parts not manufactured by Seller are warranted only to the extent of the original manufacturer's warranty.

Notice of the alleged defect must be given to the Seller, in writing with all identifying details including serial number, type of equipment and date of purchase within thirty (30) days of the discovery of the same during the warranty period.

Seller's sole obligation on this warranty shall be, at its option, to repair or replace or refund the purchase price of any product or part thereof which proves to be defective. If requested by Seller, such product or part thereof must be promptly returned to seller, freight prepaid, for inspection.

Seller warrants repaired or replaced parts of its own manufacture against defects in materials and workmanship under normal use and service for ninety (90) days or for the remainder of the warranty on the product being repaired.

This warranty shall not apply and Seller shall not be responsible or liable for:

(a) Consequential, collateral or special losses or damages;

(b) Equipment conditions caused by fair wear and tear, abnormal conditions of use, accident, neglect or misuse of equipment, improper storage or damage resulting during shipping;

(c) Deviation from operating instructions, specifications or other special terms of sale;

(d) Labor charges, loss or damage resulting from improper operation, maintenance or repairs made by person(s) other than Seller or Seller's authorized service station.

In no event shall Seller be liable for any claims whether arising from breach of contract or warranty or claims of negligence or negligent manufacture in excess of the purchase price.

**THIS WARRANTY IS THE SOLE WARRANTY OF SELLERS AND ANY OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED IN LAW OR IMPLIED IN FACT, INCLUDING ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE ARE HEREBY SPECIFICALLY EXCLUDED.**

**LIABILITY LIMITATIONS:** Under no circumstances shall the Seller have any liability for liquidated damages or for collateral, consequential or special damages or for loss of profits, or for actual losses or for loss of production or progress of construction, whether resulting from delays in delivery or performance, breach of warranty, negligent manufacture or otherwise.

**ENVIRONMENTAL AND OSHA REQUIREMENTS:** At the time of shipment of the equipment from the factory, Quincy Compressor / Ortman Fluid Power will comply with the various Federal, State and local laws and regulations concerning occupational health and safety and pollution. However, in the installation and operation of the equipment and other matters over which the seller has no control, the Seller assumes no responsibility for compliance with those laws and regulations, whether by the way of indemnity, warranty or otherwise.

June 30, 2003



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Website: [quincycompressor.com](http://quincycompressor.com)

