

PANZITTA SALES & SERVICE
72 George Avenue
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ROBINAIR

Model 34288

Recovery/Recycling/Recharging Unit



Shown: Model 34288

Service Manual

Rev A

Associated Models Include: Matco (H234288), MAC (AC34288), and Cornwell (RA-C34288) Branded Units.

2 PARTS & COMPONENTS

34288 External Parts	16
34288 Internal Parts	18
Component Assemblies	20
34288 Head Assembly	20
34288 Head Assembly-Exploded View	21
Station Pump Assembly, 115V	22
Compressor Assembly, 115V	23
34288 Manifold Assembly	24
Internal Tank Assembly	26
Plumbing Diagram and Parts List	27
34288 Main Component Descriptions	28
Alphabetical Parts List	30

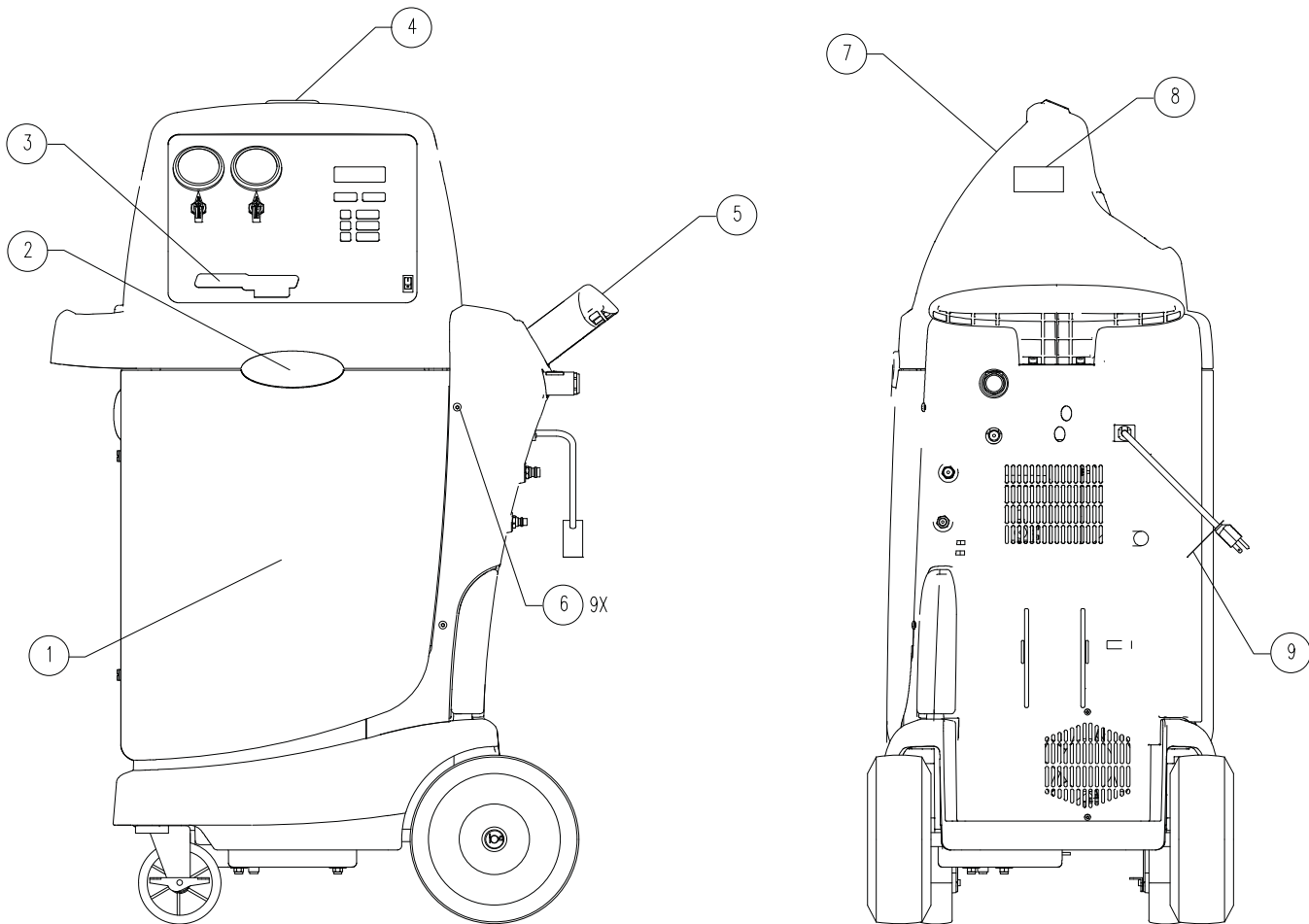
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Disclosure:

Although most parts are listed, some part numbers are part of an assembly available only to manufacturing.

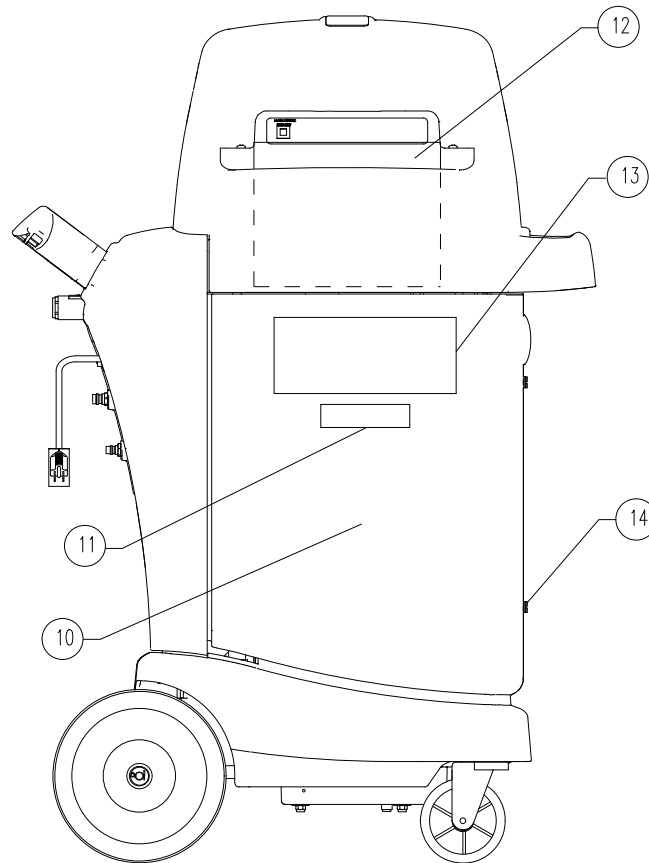
Information and part numbers contained in this publication were accurate at the time it was written. Any discrepancies should be brought to the attention of Robinair Technical Support.

34288 EXTERNAL PARTS



34288 EXTERNAL PARTS			
No.	Description	Qty.	Part No.
1	34288, FRONT PANEL	1	544023
2	DECAL, FRONT ROBINAIR	1	539901
3	DECAL, 34288 CONTROL PANEL	1	
4	COVER, LIGHT HOLE	1	122745
5	34288, SIDE SUPPORT ASS'Y	1	544095
6	SCREW, 1/4-20 X MACH TRX PAN BK	9	
7	34288, TOP COVER	1	544720
8	DECAL, 1-800 PHONE NUMBER	1	
9	AC POWER CORD	1	122770

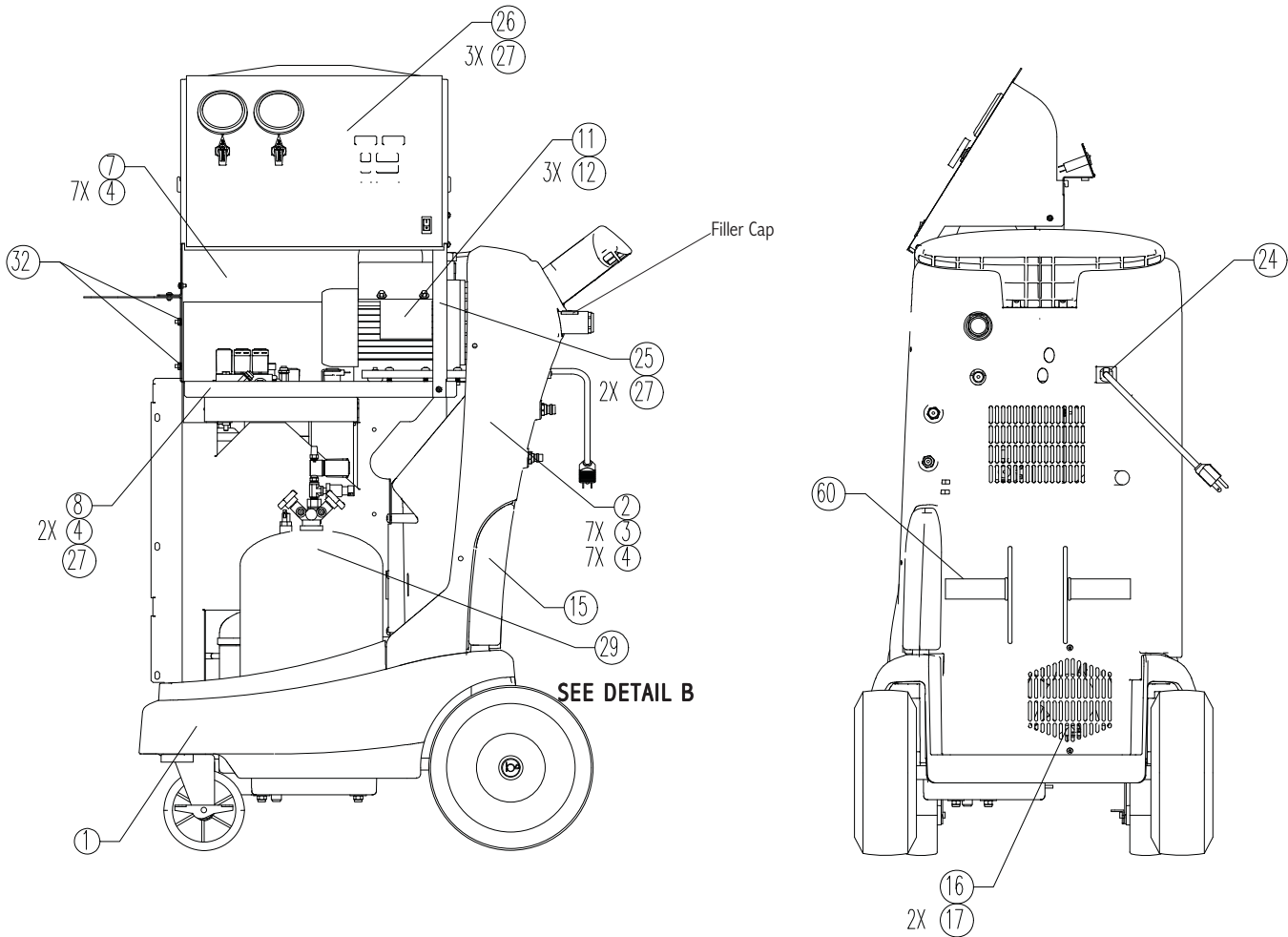
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34288 EXTERNAL PARTS			
No.	Description	Qty.	Part No.
10	34288, REAR DOOR	1	121575
11	DECAL, WARNING	1	
12	MANUAL, OWNERS 34288	1	543175
13	DECAL, UL, 34288	1	
14	DOOR LATCH KIT	2	RA19632

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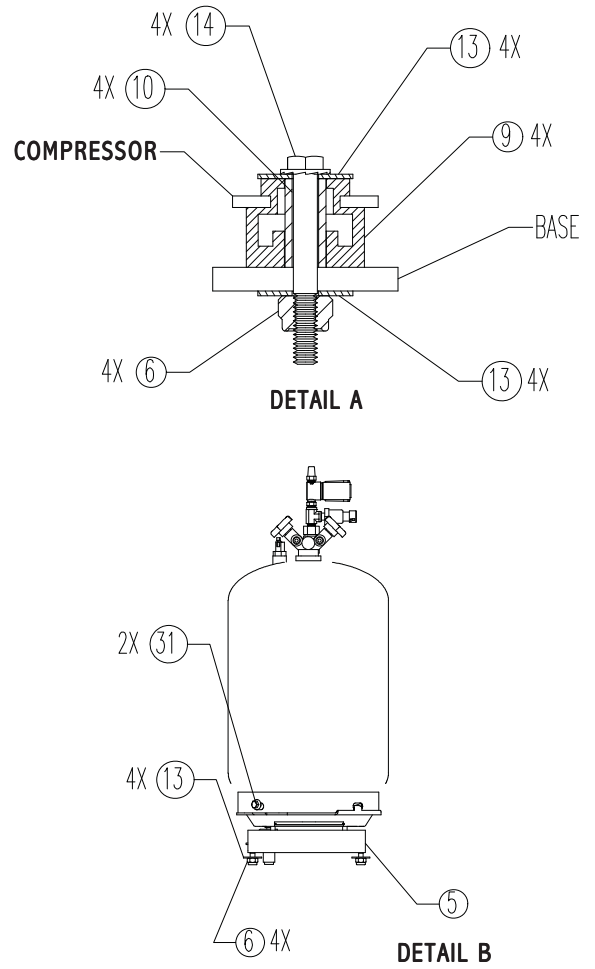
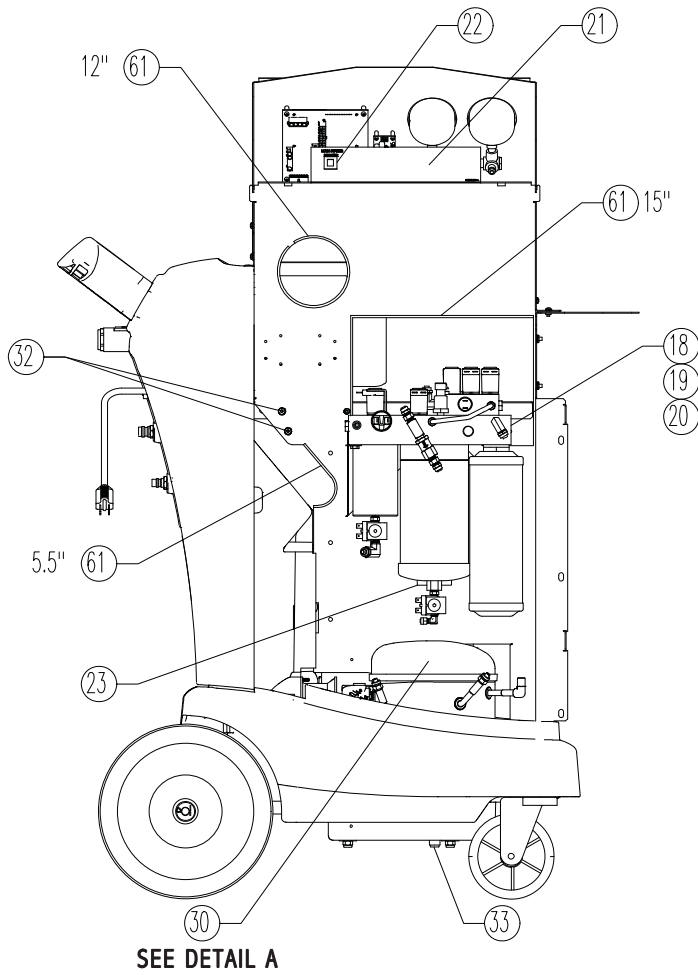
34288 INTERNAL PARTS



34288 UNIT COMPONENTS			
No.	Description	Qty.	Part No.
1	BASE ASSY	1	544094
2	ASSY, SIDE SUPPORT	1	544095
3	WASHER, 1/4" FLAT	7	12719
4	SCREW, 1/4 X 3/4" PLASTITE	16	
5	SCALE ASSEMBLY	1	RA20002
6	LOCKNUT, 1/4-20	8	
7	DIVIDER, CENTER 34288	1	543170
8	SHELF, VACUUM PUMP	1	
9	GROMMET, COMPRESSOR	4	
10	SLEEVE, COMPRESSOR	4	
11	STATION PUMP, 115V, 1.5 CFM	1	RA20031
12	SCREW, 1/4"-20 X 3/4"	3	

34288 UNIT COMPONENTS			
No.	Description	Qty.	Part No.
13	WASHER, 1/4" ID FENDER	12	
14	BOLT, 1/4-20 X 2" SERR HEAD	4	
15	BOTTLE, OIL DRAIN	1	17756
16	FAN ASSEMBLY, 115V	1	RA17416
17	SCREW, #10-16 X 3/4"	2	
18	MANIFOLD ASSEMBLY, 34288	1	RA20032
19	SCREW, 1/4-20 X 1/2" LONG	1	
20	SCREW, 1/4-20 X 3.5" LONG	1	
21	DECAL, CIRCUIT BREAKER	1	
22	CIRCUIT BREAKER, 15 AMP	1	518638
23	INSERT, DIE CUT FOAM	1	
24	BUSHING, HEYCO	1	100385

NOTE: The above parts listing may refer to parts located on unit diagrams on following page.

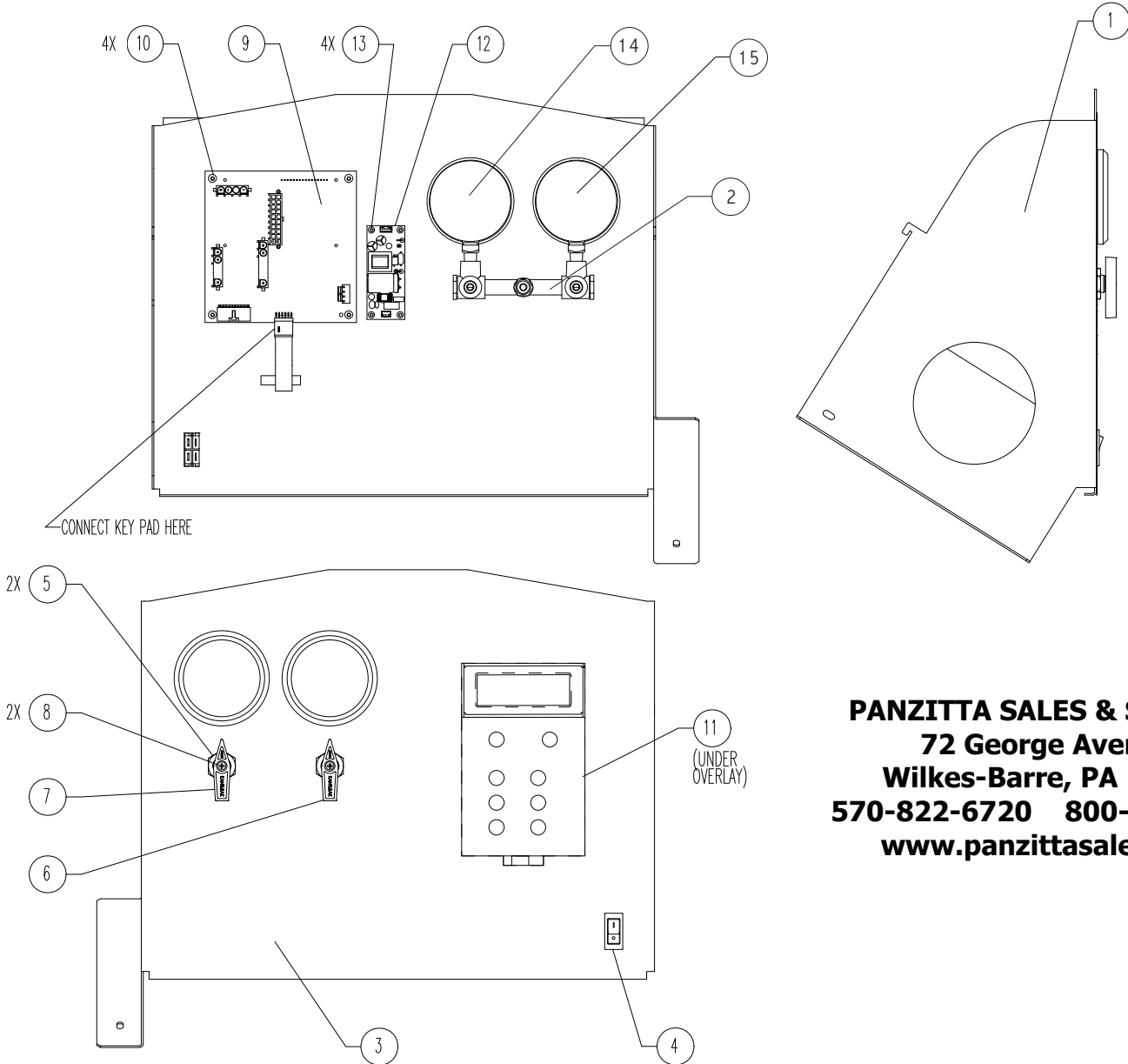


34288 UNIT COMPONENTS			
No.	Description	Qty.	Part No.
25	SUPPORT, CONTROL PANEL	1	
26	34288 CONTROL PANEL	1	
27	SCREW, 8-32 X 3/8 SEMS	6	
29	ISV TANK	1	543184
30	COMPRESSOR ASSEMBLY, 115V	1	RA20036
31	BOLT, 1/4-20 X 1/2"	2	
32	NUT, 8-32 SEMS	4	
33	SCALE & MAGNET	1	RA20002
60	STRAP, VELCRO	1	121925
61	EDGE GUARD	2.71'	122708

NOTE: The above parts listing may refer to parts located on unit diagrams on previous page.

COMPONENT ASSEMBLIES

CONTROL PANEL ASSEMBLY

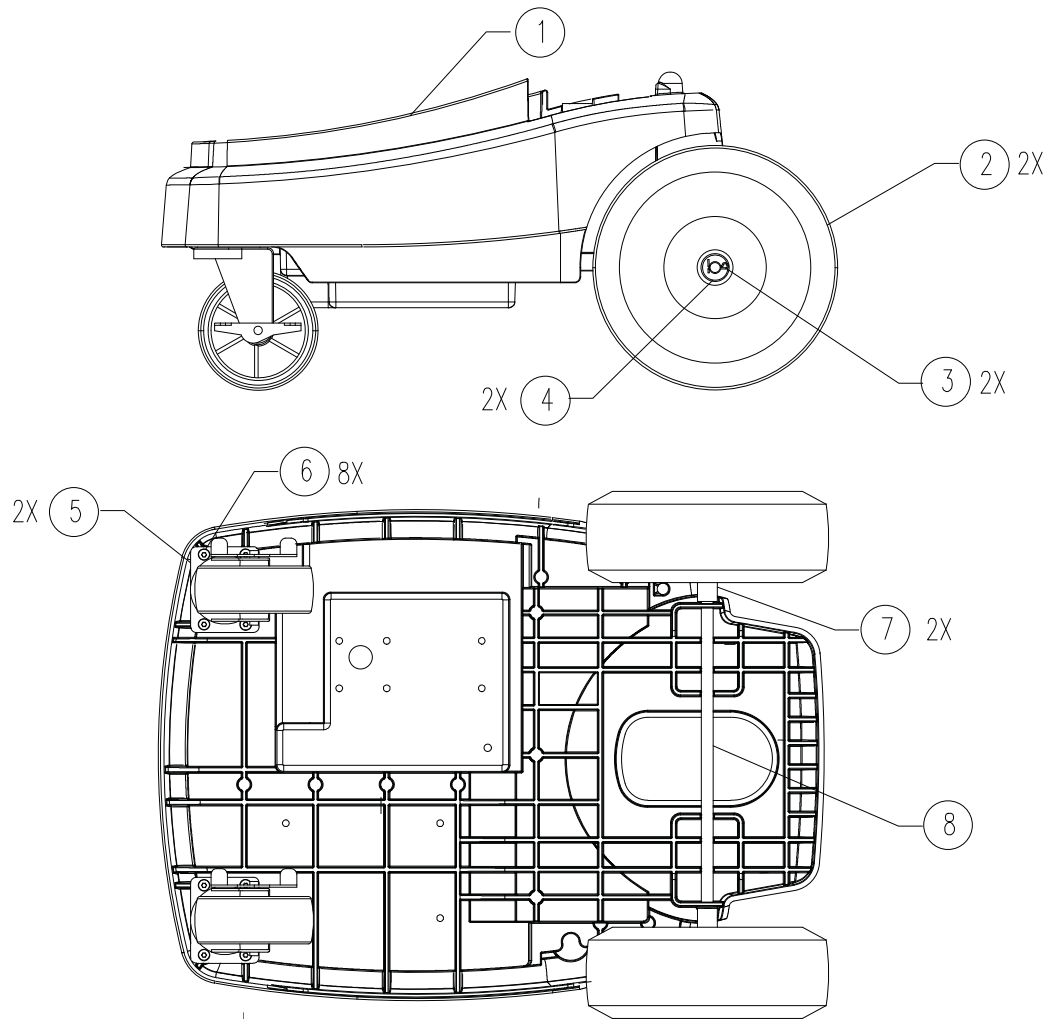


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34288 CONTROL PANEL ASSEMBLY			
No.	Description	Qty	Part No.
1	PANEL, 34288 CONTROL	1	
2	MANIFOLD	1	542746
3	OVERLAY, 34288	1	543177
4	SWITCH, ON-OFF	1	RA19343
5	NUT, PANEL	2	
6	KNOB, HIGH SIDE VALVE	1	518659
7	KNOB, LOW SIDE VALVE	1	518658

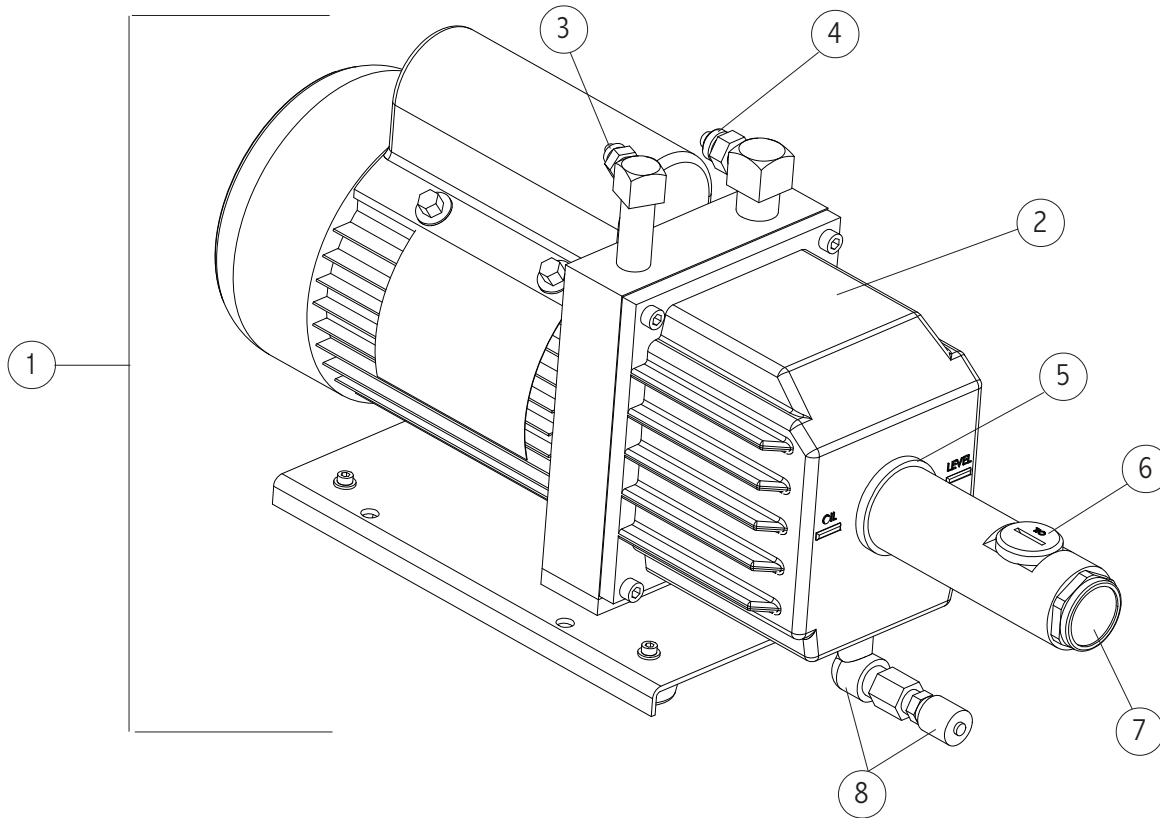
34288 CONTROL PANEL ASSEMBLY			
No.	Description	Qty	Part No.
8	SCREW, 6-32 X 1/2 PHL PAN HD	2	
9	PCB ASS'Y, CONTROL 34288	1	RA20033
10	SCREW, 6-32 X 3/8	4	
11	KEYPAD, 34288	1	RA20034
12	POWER SUPPLY, 12 VOLT	1	RA20035
13	SCREW, 4-40 X 3/8 P E H TORX	4	
14	GAUGE, HIGH-SIDE	1	524294
15	GAUGE, LOW-SIDE	1	524392

BASE ASSEMBLY 544094



BASE ASSEMBLY			
No.	Description	Qty.	Part No.
1	BASE	1	544022
2	WHEEL, PNEUMATIC 10" GRAY	2	19823
3	COTTER PIN	2	
4	WASHER, .500 I.D. FLAT	2	
5	CASTER, 5" DIA. X 2" WIDE	2	RA19631
6	SCREW, 1/4 X 1" PLASTITE	8	
7	BUSHING, WHEEL	2	
8	AXLE	1	

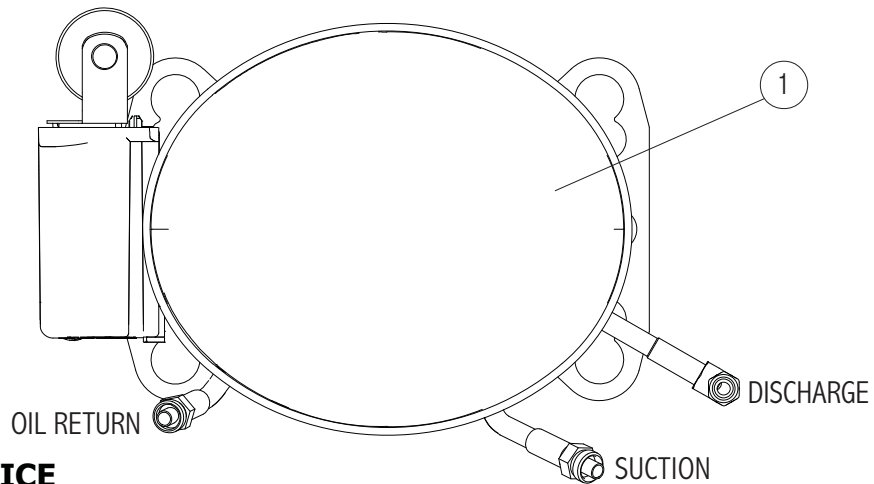
**STATION PUMP ASSEMBLY, 115V
RA20031**



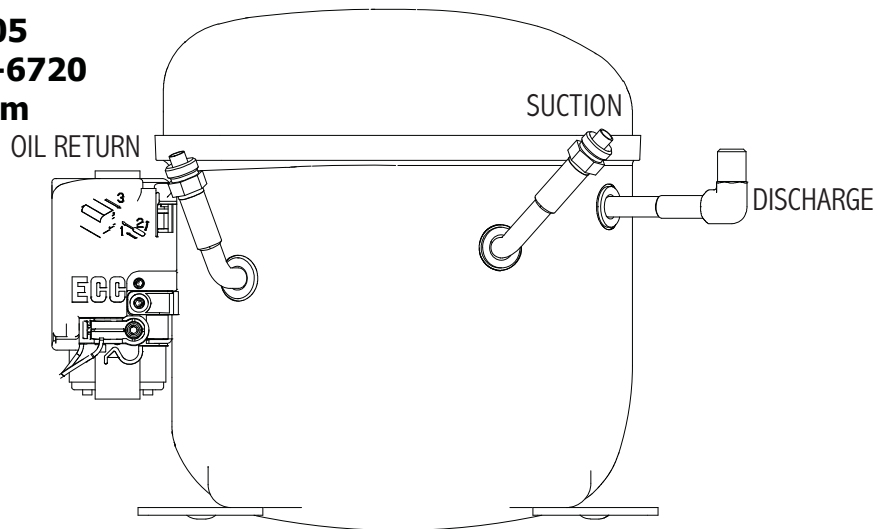
STATION PUMP ASSEMBLY, 115V			
No.	Description	Qty	Part No.
1	STATION PUMP ASSEMBLY	1	RA20031
2	RESERVOIR ASSEMBLY	1	TBD
3	BRASS DISCHARGE FITTING *	1	
4	BRASS INLET FITTING *	1	
5	SIGHT GLASS NUT *	1	
6	OIL FILL PLUG *	1	
7	SIGHT GLASS ASSEMBLY W/O-RING *	1	
8	OIL DRAIN ASSEMBLY W/CAP *	1	

* Items followed by an asterisk are part of the Reservoir Assembly Kit (TBD) and are not sold separately.

**COMPRESSOR ASSEMBLY, 115V
RA20036**

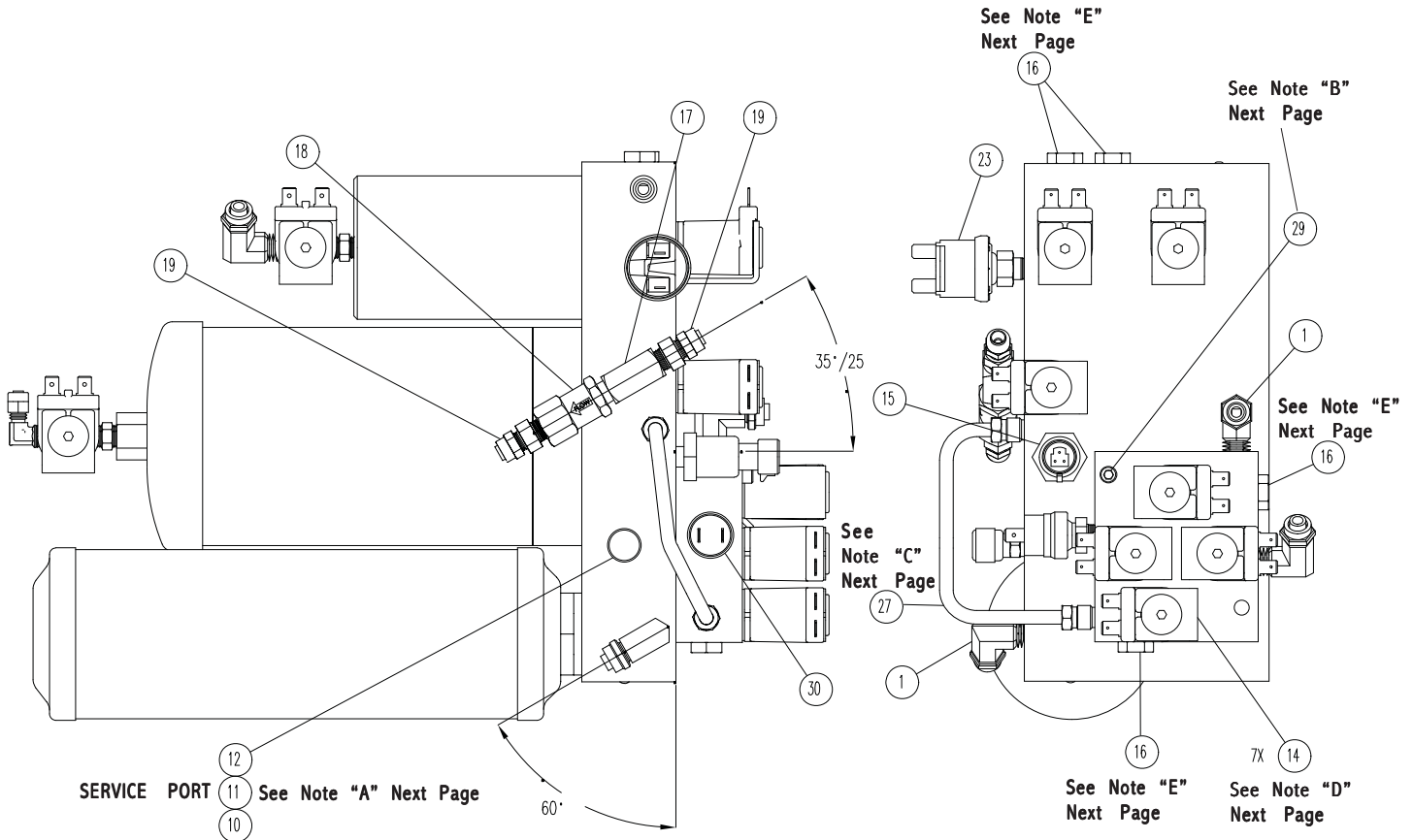


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COMPRESSOR ASSEMBLY, 115V			
No.	Description	Qty	Part No.
1	COMPRESSOR, 115V	1	RA20036
	RELAY	1	INC
	PROTECTOR	1	INC
	CAPACITOR	1	INC
	COVER	1	INC
	BAIL	1	INC
	BRACKETS	1	INC
	SCREW	1	INC
	SLEEVE	4	INC
	GROMMET	4	INC
	CAPACITOR WIRE	2	INC

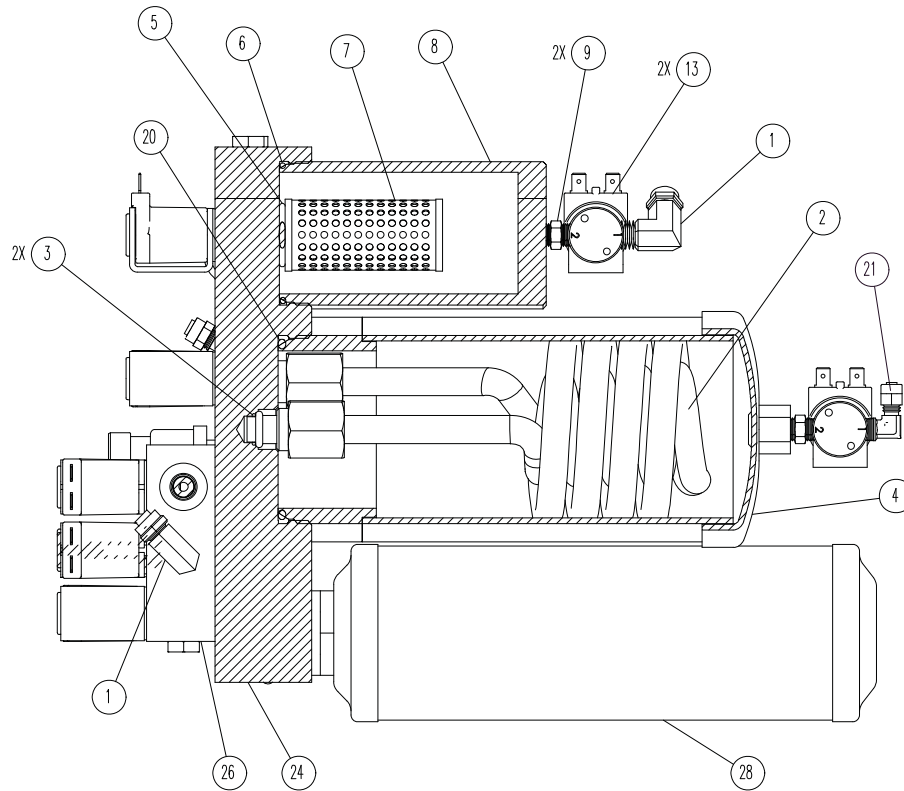
34288 MANIFOLD ASSEMBLY RA20032



34288 MANIFOLD ASSEMBLY			
No.	Description	Qty.	Part No.
1	ELBOW, 1/8MP X3/8PNEU COMP	4	
2	HEAT EXCHANGER	1	523477
3	O-RING	2	18190
4	ACCUMULATOR SHELL	1	529026
5	O-RING, PKR #SB17-119-7N	1	
6	O-RING, PKR #SB17-143-7N	1	
7	FILTER ELEMENT, COALESCING	1	34724
8	OIL SEPARATOR BOWL	1	529027
9	UNION, 1/8 MP X 1/8 MP X .97	2	
10	FITTING, 1/4 MFL X 1/8 NPTF	1	
11	SCHRADER CORE	1	
12	CAP, 1/4 FLARE W/O-RING	1	
13	SOLENOID, 12V DC DISCRETE	2	RA20009
14	SOLENOID, 12V DC MANIFOLD	7	RA20010
15	ACCUM TRANSDUCER	1	539228

34288 MANIFOLD ASSEMBLY			
No.	Description	Qty.	Part No.
16	CHECK VALVE	4	RA20016
17	TEE, MALE BRANCH 1/8 NPTF	1	
18	CHECK VALVE	1	RA20015
19	FITTING, 1/8 NPT X 1/4 COMP.	2	
20	O-RING CO873 2-240	1	
21	ELBOW, 1/8 MP X 1/8 PNEU	1	
23	SWITCH, HIGH PRESSURE CUTOUT	1	RA19427
24	BLOCK, LOWER MACHINED	1	
25	BALL, MANIFOLD PLUG	2	
26	MANIFOLD BLOCK, TOP	1	
27	TUBE, MANIFOLD CONNECTION	1	542331
28	FILTER DRIER, SPIN-ON	1	34724
29	SCREW, SOCKET HD 10-32 X 1.75	1	10001
30	SWITCH, VACUUM PROTECTION	1	RA19672

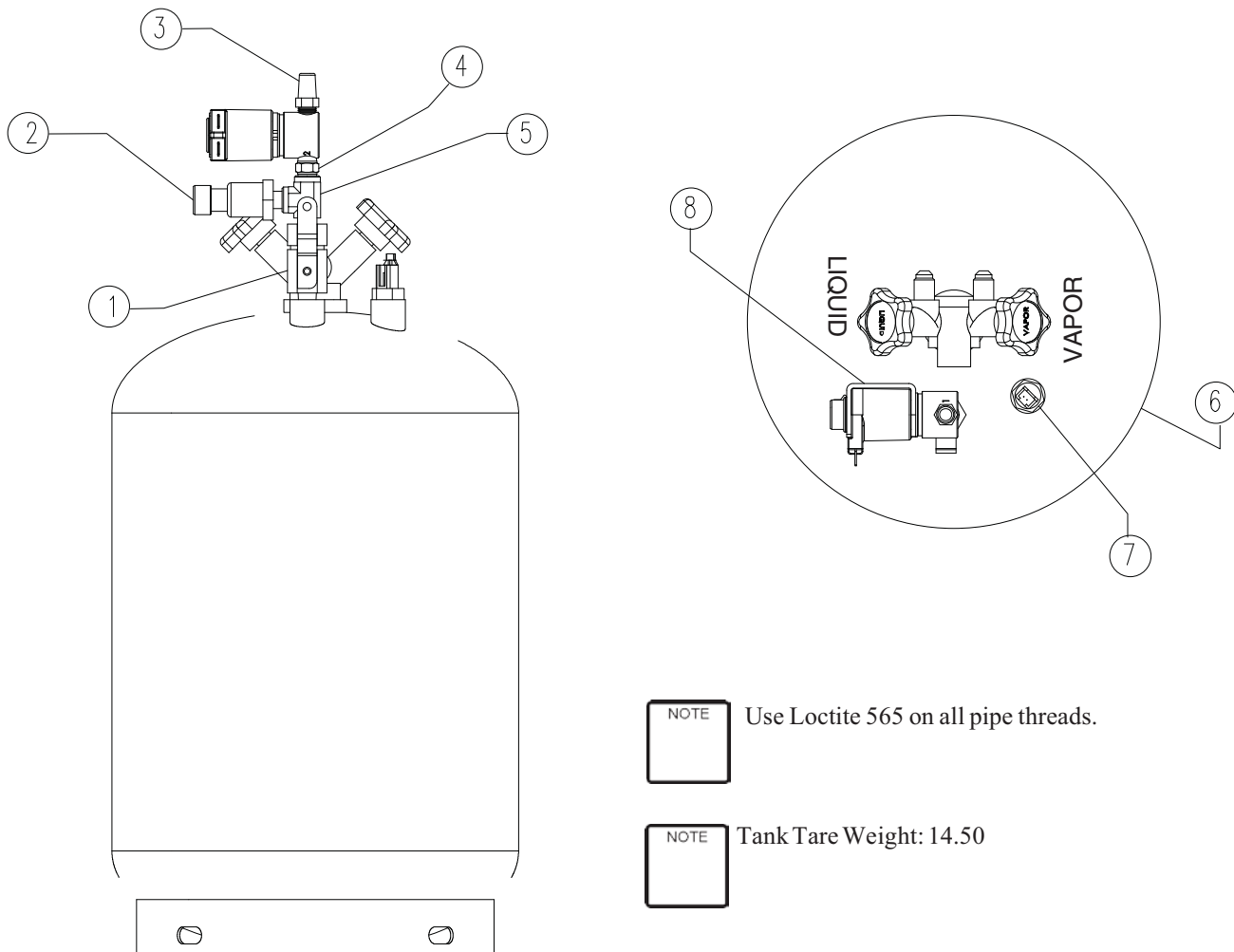
NOTE: The above parts listing may refer to manifold parts on following page.

**NOTE**

- A. Torque Schrader Core (item 11) to 1.5-3.0 IN. LBS.
- B. Torque to 30 IN LBS \pm 5.
- C. Apply Loctite 242 to threads of Manifold Connection Tube (item 27) and torque to 75 IN. LBS.
- D. Torque Manifold Solenoid (item 14) to manifold with 75 IN. LBS. \pm 5. Torque Fastener to 30 IN LBS \pm 5.
- E. Torque Checkvalve (item 16) to 75 IN. LBS. (4 places)
- F. Use (Loctite 565) on all pipe threads.
- G. Lubricate all O-rings on components before assembling.

NOTE: The above notes may refer to the manifold diagram on previous page.

INTERNAL STORAGE VESSEL ASSEMBLY

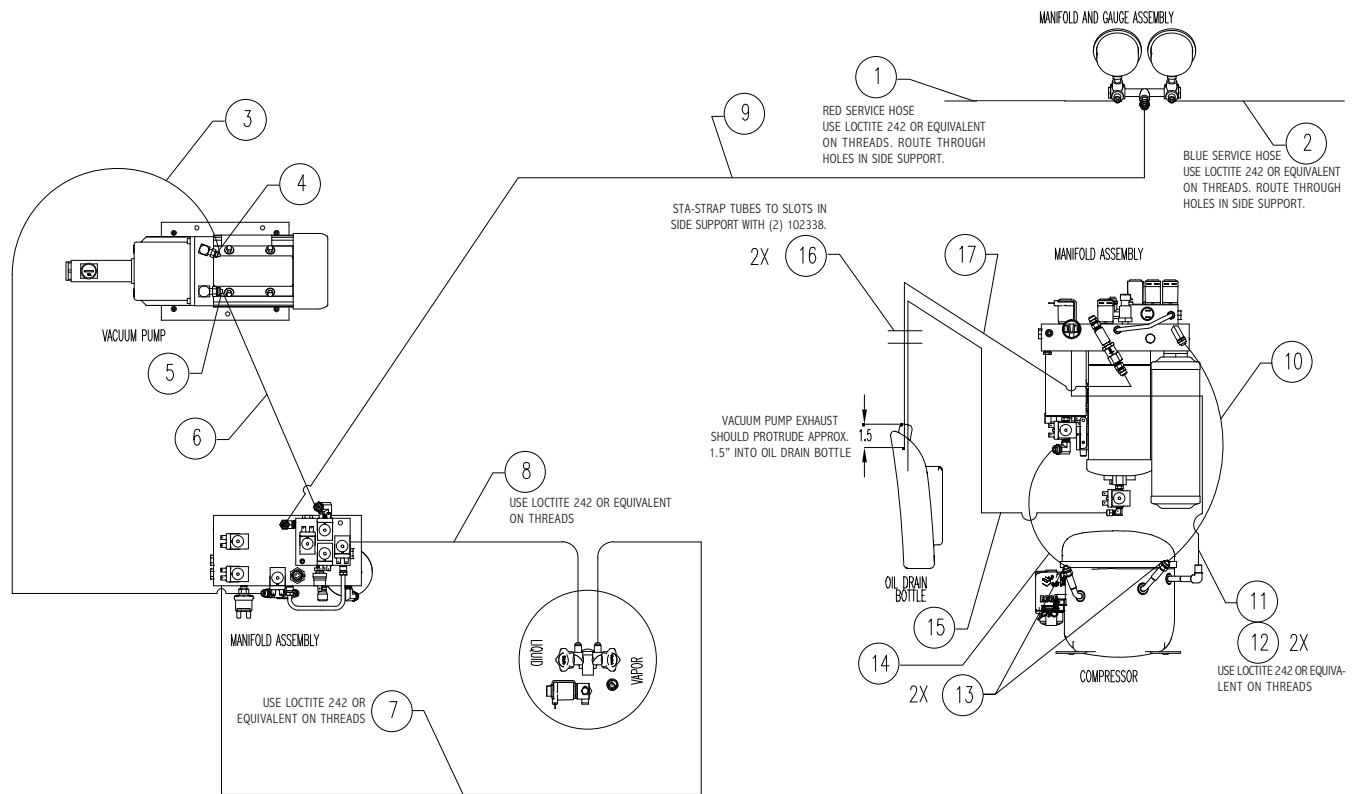


NOTE Use Loctite 565 on all pipe threads.

NOTE Tank Tare Weight: 14.50

ISV ASSEMBLY			
No.	Description	Qty	Part No.
1	BALL VALVE	1	544672
2	TRANSDUCER, AIR PURGE	1	539229
3	MUFFLER, AIR EXHAUST	1	519605
4	ORIFICE, UNION .026	1	
5	TEE, 1/8MP X 1/8 FP X 1/8FP	1	
6	ISV TANK	1	543184
7	TEMPERATURE PROBE	1	539472
8	SOLENOID, 12V, DISCRETE	1	RA20009

PLUMBING DIAGRAM



Plumbing Diagram Parts List			
No.	Description	Qty.	Part No.
1 & 2	SERVICE HOSE SET (HI & LOW) *	1	34722
3	TUBE, 1/4 OD X 0.040 WALL	19"	120225
4	NUT, COMPRESSION (1/4 TUBE)	1	RA20007
5	NUT, COMPRESSION (3/8 TUBE)	1	RA20006
6	TUBE, 3/8" HIGH PRESSURE	15"	RA20005
7	HOSE, 34288	1	544915
8	HOSE, ISV 34788	1	541533
9	TUBE, 3/8" HIGH PRESSURE	15"	RA20005
10	TUBE, 3/8" HIGH PRESSURE	15"	RA20005
11	TUBE, COMPRESSOR TO MANIFOLD	1	538469
12	O-RING, PKR #5-124) NEOPRENE	2	
13	NUT, COMPRESSION (3/8 TUBE)	2	RA20006
14	TUBE, 3/8" HIGH PRESSURE	11"	RA20005
15	TUBE, NYLON 1/8 OD X .075 ID	27"	121773
16	STA-STRAP 8" LONE X .18"	2	102338
17	TUBE, 1/4 OD X 0.040 WALL	28"	120225

NOTE

Part # RA20005 (tube, 3/8" high pressure) comes in a length of 1.5'. Cut hose to proper length as indicated in plumbing parts list.

NOTE

Part # 120225 (tube, 1/4 OD X 0.040 Wall) is ordered by the foot. If quantity 20 is ordered, you will receive 20 feet of tubing. The same is true for Part # 121773.

* High & Low Service Hose Set (34722) do not include service couplers.

34288 MAIN COMPONENT DESCRIPTIONS

12V POWER SUPPLY — Provides 12 volts to power the circuit boards, manifold block components, and the ISV air purge solenoid.

BOTTLE, OIL DRAIN — Recovers the used oil during the oil drain process.

BREAKER, 15 AMP — Protects the unit from drawing too much current. If blown, unit is completely inoperative.

CASTER — 5" x 2" wheels used for maneuvering unit.

CHECK VALVE — Allows flow in one direction only.

COMPRESSOR — Moves refrigerant from the A/C system being serviced into the internal tank on the unit.

COMPRESSOR CAPACITOR — Used for starting the compressor. Helps reduce the initial high current demand required by the compressor on start-up.

COMPRESSOR OIL SEPARATOR — Removes the compressor oil from the refrigerant that is leaving the compressor. The stored oil is returned to the compressor when the oil return solenoid receives power.

CONTROL BOARD — Front display panel and main control of the 34288.

CONTROL PANEL — User interface panel for controlling refrigerant recovery, recycling and recharging.

DOOR LATCH KIT — Used to replace spring-loaded latch, retainer, and door latch receptacle.

FAN, 115V — Keeps the compressor's electrical components cool.

FILTER DRIER, SPIN-ON — Used to remove moisture and particles from refrigerant. Must be changed every time 150 lbs of refrigerant is recovered.

GAUGE, HIGH SIDE — Monitor high-side pressure of the vehicle being serviced.

GAUGE, LOW SIDE — Monitors low-side pressure of the vehicle being serviced.

HIGH PRESSURE CUTOFF SWITCH — Switch opens at 435 ± 10 psi (2999 ± 69 kPa) and resets at 320 ± 20 psi (2066 ± 137 kPa). If pressure in the high side of the system exceeds 435 psi (2999 kPa), the switch opens stopping all functions.

INTERNAL STORAGE VESSEL (ISV) — Storage tank that the recovered and recycled refrigerant is stored. Vapor, liquid, and air purge access is on-top of tank.

KEYPAD — Touch-pad cover for the front of the control board.

MANIFOLD BLOCK ASSEMBLY — Internal block assembly that contains solenoids, check valves and switches. Refrigerant will flow through the manifold assembly for proper distribution.

MANIFOLD, GAUGE & VALVE ASSEMBLY — Manual valves and gauge assembly that controls the flow of refrigerant to or from the unit.

MUFFLER, AIR EXHAUST — Disperses excessive air from the ISV. Provides effective reduction of objectionable air exhaust noise.

ORIFICE, UNION — Fitting used to reduce the flow rate.

POWER CORD — Supplies main power to the unit.

PRESSURE RELIEF VALVE, 450 PSI — Spring loaded safety valve use to releases pressure from internal tank assembly if pressure exceeds 450 psi.

SCALE ASSEMBLY — Measures the amount of refrigerant being charged and recovered.

SIGHTGLASS — Used to view vacuum pump oil level.

SOLENOID (1), NORMAL DISCHARGE — When energized, allows refrigerant flow from the compressor to the system oil separator, then to the internal storage vessel.

SOLENOID (2), HIGH-SIDE DISCHARGE — Energized during the high-side clearing process.

SOLENOID (3), DEEP RECOVER — When energized, uses vacuum pump to perform “deep” recovery of refrigerant from the system being serviced.

SOLENOID (4), CHARGE — When energized, allows refrigerant from ISV to enter into the system being serviced.

SOLENOID (5), VACUUM — When energized, allows a vacuum or deep recovery to be pulled on the A/C system being serviced.

SOLENOID (6), RECOVERY — When energized, provides the primary pathway of removing refrigerant from the system being serviced.

SOLENOID (7), RECYCLE — Provides “feedback” pressure to assist the oil drain operation. Also, increases tank pressure to assist the charging function.

SOLENOID (8), OIL RETURN — When energized, it returns compressor oil from the compressor oil separator to the compressor and equalizes the pressure on the high and low side of the compressor.

SOLENOID (9), OIL DRAIN — Energized at the end of the Recover process to drain oil.

SOLENOID (10), AIR PURGE — Energized to allow excessive air to be removed from the internal tank.

SWITCH ON/OFF — Allows the unit to be turned ON and OFF.

SYSTEM OIL SEPARATOR — Heat exchanger with high-side coils that provide internal heat to the canister causing saturated vapor and accumulated liquid refrigerants to evaporate. This process prevents liquid refrigerant from entering the compressor and separates the refrigerant oil.

TEMPERATURE PROBE — Monitors the temperature inside the internal storage vessel (ISV).

TRANSDUCER, ACCUM (SYSTEM OIL SEPARATOR) — Measures the pressure within the system oil separator.

TRANSDUCER, AIR PURGE — Measures the pressure within the internal storage vessel (ISV).

VACUUM PROTECTION SWITCH — Is a normally closed switch designed to open when the switch pressure reaches 16 ± 3 psi. The switch will reset and close at 9 ± 3 psi. The switch is a two pin pressure switch with an orifice in the base of the switch.

VACUUM PUMP — 115V pump designed to remove moisture and air from an A/C system. Also aids in the recovery process by performing a deep recovery of A/C system.

WHEEL, PNEUMATIC 10” — Transport wheels.

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ALPHABETICAL PARTS LIST

DESCRIPTION	PART #	NOTES
34288 BASE, WHEELS & CASTORS ASSEMBLY	544094	
34288 FRONT PANEL ASSEMBLY	544023	
34288 REAR DOOR ASSEMBLY	121575	
34288 SIDE SUPPORT ASSEMBLY	544095	
34288 TOP COVER ASSEMBLY	544720	
AC POWER CORD	122770	
AIR EXHAUST MUFFLER	519605	ISV Assembly
AIR PURGE TRANSDUCER	539229	ISV Assembly
BALL VALVE	544672	ISV Assembly
BOTTLE, OIL DRAIN	17756	
BOWL, OIL SEPARATOR	529027	
BUSHING, HEYCO	100385	
CALIBRATION WEIGHT	542146	
CAP AND FILLER TUBE	17191	
CASTER, 5" DIA X 2" WIDE	RA19631	
CHECK VALVE, MANIFOLD BLOCK	RA20016	Pkg of 6
CHECK VALVE, VACUUM RELIEF	RA20015	
CIRCUIT BREAKER, 15 AMP	518638	
COMPRESSOR ASSEMBLY, 115V	RA20036	
COMPRESSOR OIL, MSDS-POLYOL ESTER OIL	RA17283	
CONDENSER COIL	523477	
CORE SCHRADER	RA19916	
COUPLER SET, SERVICE (HIGH & LOW SIDE COUPLERS)	18192	
COVER, LIGHT HOLE	122745	

DESCRIPTION	PART #	NOTES
DIVIDER, CENTER 34288	543170	
DOOR LATCH KIT	RA19632	
DUST COVER, VINYL	17492	Optional
FAN, 115V, 240 CFM	RA17416	
FILTER DRIER, SPIN-ON	34724	
GAUGE, LOW-SIDE	524293	PANZITTA SALES & SERVICE 72 George Avenue Wilkes-Barre, PA 18705 570-822-6720 800-822-6720 www.panzittasales.com
GAUGE, HIGH-SIDE	524294	
HARNESS, COMPRESSOR PIGTAIL WIRE	544997	
HARNESS, COMPRESSOR/FAN WIRE	543181	
HARNESS, POWER SUPPLY WIRE	543183	
HARNESS, POWER WIRE	543182	
HARNESS, SOLENOID WIRE	543179	
HARNESS, TRANSDUCER WIRE	543180	
HIGH PRESSURE CUT-OUT SWITCH	RA19427	
HOSE SET, SERVICE (HIGH & LOW-SIDE HOSES)	34722	
HOSE, ISV VAPOR	544915	
HOSE, HIGH SIDE ADAPTER	542824	
HOSE, LOW SIDE ADAPTER	542825	
HOSE, ISV LIQUID	541533	
ISV TANK	543184	Tank with valve
KEYPAD, 34288	RA20034	
KNOB, HIGH SIDE VALVE	518659	
KNOB, LOW SIDE VALVE	518658	
LOW SIDE CONN. PORT ASSY	16301	

DESCRIPTION	PART #	NOTES
MAINTENANCE KIT (SPIN-ON FILTER & OIL)	13172	
MANIFOLD, PANEL MOUNT, 34288	542746	
MANIFOLD ASSEMBLY, 34288	RA20032	
MANUAL, OWNERS 34288	543175	
MUFFLER, AIR EXHAUST	519605	ISV Assembly
NUT, COMPRESSION (1/4 TUBE)	RA20007	
NUT, COMPRESSION (3/8 TUBE)	RA20006	
OIL DRAIN BOTTLE	17756	
OIL, VACUUM PUMP, CASE OF 12 QTS.	13203	
OIL, VACUUM PUMP, CASE OF 4 GAL	13204	
OIL, COMPRESSOR, MSDS-POLYOL ESTER OIL	RA17283	
ORIFICE, UNION .026	539804	ISV Assembly
O-RING, NITRILE	18190	
OVERLAY, 34288	543177	
PCB ASSY, CONTROL, 34288	RA20033	
POWER SUPPLY, 12 VOLT	RA20035	
PROBE, TEMPERATURE	539472	ISV Assembly
REPROGRAMMING KIT, CIRCUIT BOARD	RA20011	
SCALE ASSEMBLY & MAGNET	RA20002	
SERVICE COUPLER LOW SIDE (R134A)	18190A	
SERVICE COUPLER HIGH SIDE (R134A)	18191A	
SERVICE COUPLER SET (HIGH & LOW-SIDE COUPLERS)	18192	
SERVICE HOSE SET (HIGH & LOW-SIDE HOSES)	34722	Less couplers
SHELF, VACUUM PUMP	543171	

DESCRIPTION	PART #	NOTES	
SHELL, ACCUMULATOR	529026		
SOLENOID, 12V DC DISCRETE	RA20009		
SOLENOID, 12V DC MANIFOLD	RA20010	PANZITTA SALES & SERVICE 72 George Avenue Wilkes-Barre, PA 18705 570-822-6720 800-822-6720 www.panzittasales.com	
STRAP, VELCRO 1.5" X 45"	121925		
SUPPORT, CONTROL PANEL	122268		
SWITCH, HIGH PRESS CUT-OUT	RA19427		
SWITCH, VACUUM PROTECTION	RA19672		
SWITCH, ON-OFF (I-O)	RA19343		
TEMPERATURE PROBE	539472		ISV Assembly
TRANSDUCER, ACCUM	539228		
TRANSDUCER, AIR PURGE	539229		ISV Assembly
TUBE, 1/4 OD X 0.040 WALL	120225		Ordered by the foot
TUBE, 3/8" HIGH PRESSURE	RA20005	1.5' sections	
TUBE, COMPRESSOR TO MANIFOLD	538469		
TUBE, MANIFOLD CONNECTION	542331		
TUBE, NYLON 1/8 OD X .075 ID ACR	121773	Ordered by the foot	
VACUUM PUMP, 115V, 1.5 CFM	RA20031		
VACUUM PUMP OIL, CASE OF 12 QTS.	13203		
VACUUM PUMP OIL, CASE OF 4 GAL	13204		
VALVE, BALL	544672	ISV Assembly	
WEIGHT, CALIBRATION	542146		
WHEEL, CASTER, 5" DIA X 2" WIDE	RA19631		
WHEEL, PNEUMATIC 10", GRAY	19823		